COLLINS ENGINEERING

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February 16, 2025

Rebecca Ragsdale
Development Process Manager
Department of Community Development
401 McIntire Road, Room 227
Charlottesville, VA 22902

RE: Avon Court Industrial Building– ***Exception Request for Relief from the Building Stepback Requirement for Buildings higher than 3 stories or 40 feet in height***

Dear Rebecca Ragsdale:
Please allow this letter to serve as our official request for a special exception request for relief of the stepback requirements for the proposed Industrial building within the Avon Court Industrial site. The special exception request is in accordance with Chapter 18, Section 4.19 of the Albemarle County Zoning Ordinance. This section of the code allows for a reduction of the stepback requirement for buildings that are over 3 stories in height or taller than 40 feet. The proposed industrial building for the Avon Court light industrial project is 4 stories with a basement floor, and the overall height will be approximately 64 feet.

The property is located at the end of the cul-de-sac, and the closest corner of the building is over 64 feet from the nearest right of way (improved roadway), which is Avon Court. In addition, the site terrain and shape of the property dictates the location of the building on the property, and the majority of the building is located much further back from the Avon Court Right of way. With the shape of the site along the cul-de-sac, the property extends out and becomes wider further away from the right of way. The building has to be located away from the front of the property, due to this constraint. Also, there is tremendous grade elevation variation across the site. The site elevation change is approximately 40 feet over about 800 horizontal feet. The proposed location of the building helps step the development within the property, working the existing site topography and the proposed basement with the building. These factors require the building to be placed further back from the street right of way. With this location of the building due to the site constraints, the building stepback is not necessary for this project.

For the reasons detailed above, the project design is consistent with the Neighborhood Model Principles and the proposed building elevation is consistent with the Buildings and Spaces of Human Scale, without the requirement of the stepback. Due to site constraints, the building is set well back from the roadway and will not create a disproportional design by eliminating the requirement of the building stepback. In addition, by placing the building in this location, the building helps tie-in the proposed improvements into the step site terrain, creating a development plan that is consistent with the natural terrain on the property. The site plan illustrates the location of the building, the grading of the site, and a proposed section of the building on the site. Based on the existing grades, the finished floor of the building is approximately 12 feet below Avon Court at the northeast corner of the site. This elevation different helps mitigate the overall height of the building in relationship to the proposed right of way.

The overall reduction of the stepback also allow for the maximum use of the property for the proposed Light Industrial use, which is consistent with the goals of the comprehensive plan for the property. Providing additional Light Industrial space within Albemarle County is an overall benefit to the community.

Thank you again for the consideration of this special exception request, and please contact me if you have any questions or require any further information.

Sincerely,
Scott Collins
Scott Collins

AVON COURT INDUSTRIAL BUILDING

FINAL SITE PLAN (SDP2023-00047)

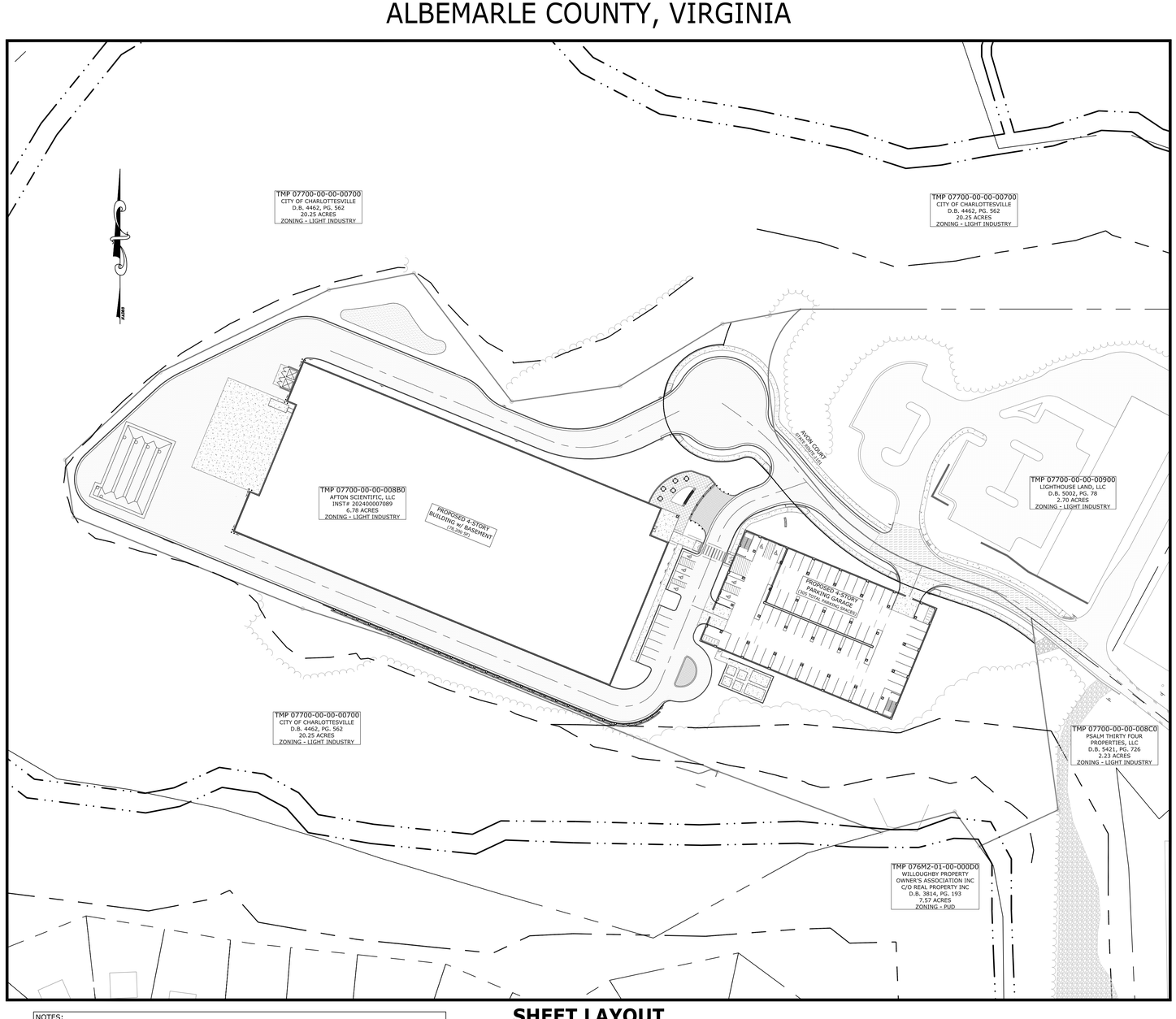
SCOTTSVILLE DISTRICT
ALBEMARLE COUNTY, VIRGINIA

PROJECT SITE INFO:

LOCATION:	AVON COURT
	ALBEMARLE COUNTY - CHARLOTTESVILLE, VA
EXISTING USE:	VACANT LAND
PROPOSED USE:	INDUSTRIAL BUILDING
TOTAL ACREAGE:	6.78 ACRES
OWNER/DEVELOPER:	AFTON SCIENTIFIC, LLC
	2020 AVON COURT
	CHARLOTTESVILLE, VA 22902
	CONTACT:
	EMAIL:
	PHONE:
SURVEYOR:	ROUNDABUSH, GALE AND ASSOCIATES
	999 2ND STREET, SE
	CHARLOTTESVILLE, VA 22902
ENGINEER:	COLLINS ENGINEERING
	200 GARRETT STREET, SUITE K
	CHARLOTTESVILLE, VA 22902
	CONTACT: SCOTT COLLINS
	EMAIL: SCOTT@COLLINS-ENGINEERING.COM
	PHONE: 434-293-3719

PARCEL INFORMATION:

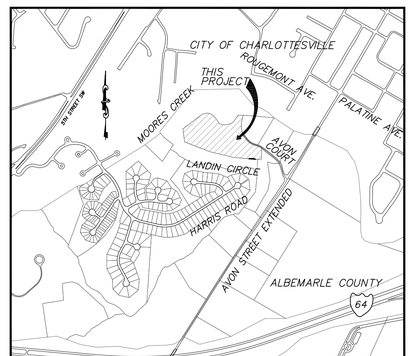
OWNER:	07700-00-00-008B0 (D.B. 3211, PG. 589)
ACREAGE:	6.78 ACRES
INST NO.:	202400007089
ZONING:	LIGHT INDUSTRY (LI)



SHEET LAYOUT
SCALE: 1" = 60'

NOTES:
- CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLANS. IF THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS. THE CONTRACTOR MUST LOCATE ALL SURFACE AND SUB-SURFACE UTILITIES PRIOR TO ANY WORK ONSITE.
- ANY SIDEWALK AND/OR CURB DAMAGE IDENTIFIED IN THE SITE VICINITY DUE TO PROJECT CONSTRUCTION ACTIVITIES AS DETERMINED BY THE VDOT INSPECTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. SIDEWALK WILL BE REPLACED AT THE DIRECTION OF THE VDOT INSPECTOR. ANY EXISTING SIDEWALK THAT IS CURRENTLY DAMAGED AND IN NEED OF REPAIR OR NOT IN COMPLIANCE WITH CURRENT STANDARDS SHOULD BE REPLACED AS PART OF THIS PROJECT AS WELL. IN ADDITION, ANY EXISTING CG-12S ALONG THE PERIMETER OF THE SITE SHOULD BE UPGRADED TO MEET CURRENT STANDARDS IF NEEDED. ALL SIGNING AND PAVEMENT MARKERS SHALL BE CONSISTENT WITH THE MUTCD.
- CONTRACTOR SHALL OBTAIN ENTRANCE PERMITS FROM VDOT PRIOR TO CONSTRUCTION.

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1 inch = 60 ft.



VICINITY MAP
SCALE: 1" = 1000'

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BUILDING CODE NOTES:
1. RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT REQUIRE A SEPARATE BUILDING PERMIT. WALLS EXCEEDING 4 FEET IN HEIGHT REQUIRE A STAMPED ENGINEERED DESIGN ALSO. SEGMENTED WALLS REQUIRE RDP INSPECTIONS, OTHERS WILL REQUIRE INSPECTIONS AS OUTLINED IN THE USBC.
2. ACCESSIBLE PARKING SPACES, ACCESS ISLES, AND ACCESSIBLE ROUTE SHALL BE INSTALLED IN ACCORDANCE WITH ICC ANSI A117.1-09 AND THE 2015 VIRGINIA CONSTRUCTION CODE.
3. WHERE THE FLOOD LEVEL RIMS OF PLUMBING FIXTURES ARE BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER, THE FIXTURE SHALL BE PROTECTED BY A BACKWATER VALVE INSTALLED IN THE BUILDING DRAIN, BRANCH OF THE BUILDING DRAIN, OR HORIZONTAL BRANCH SERVING SUCH FIXTURES. PLUMBING FIXTURES HAVING FLOOD LEVEL RIMS ABOVE THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER SHALL NOT DISCHARGE THROUGH A BACKWATER VALVE.
4. ALL ROOF DRAINS SHALL DISCHARGE IN A MANNER NOT TO CAUSE A PUBLIC NUISANCE AND NOT OVER SIDEWALKS.
5. BUILDINGS OR STRUCTURES BUILT BEFORE JANUARY 1, 1985 MUST HAVE AN ASBESTOS SURVEY PERFORMED IN ORDER TO APPLY FOR A DEMOLITION PERMIT. ASBESTOS REMOVAL PERMITS ARE REQUIRED IF POSITIVE FOR SUCH FROM ALBEMARLE COUNTY AND VDOLI. CONTACT VDOLI FOR THEIR ADDITIONAL REQUIREMENTS AND PERMITS FOR DEMOLITION PROJECTS AT 540-562-3850 x131.
6. ALL WATER, SEWER, AND FIRE LINES REQUIRE NEW INSPECTION AND TESTING PROCEDURES. THE ACSA PERFORMS ANY TESTING AND INSPECTIONS OF THE PUBLIC SEWER AND WATER MAIN(S). THE ALBEMARLE COUNTY BUILDING INSPECTIONS DEPARTMENT (ACBID) DOES A VISUAL INSPECTION AND WITNESSES THE TESTING OF THE BUILDING DRAIN, WATER SERVICE PIPE AND THE SPRINKLER LEAD-IN CONNECTION.
7. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE TO RETAIN A SPECIAL INSPECTOR AS OUTLINED IN THE UPDATED ALBEMARLE COUNTY POLICY FOR SITE UTILITIES TO PERFORM THE VISUAL INSPECTION AND TESTING OF ALL UTILITIES NOT COVERED BY THE ACSA OR ACBID. THIS INCLUDES BUILDING SEWERS, WATER AND FIRE LINE BRANCHES BETWEEN THE MAIN AND THE METER(S)/BUILDING(S).
8. THE SPECIAL INSPECTOR'S REPORT MUST BE SUBMITTED AND APPROVED BY THE ALBEMARLE COUNTY ENGINEERING DEPARTMENT PRIOR TO A CERTIFICATE OF OCCUPANCY BEING ISSUED.
9. NOTE, DUE TO REQUIRED DISTANCES FROM LOT LINES AND STRUCTURES AS REQUIRED BY THE NFPA, UNDERGROUND PROPANE TANKS MAY BE PROHIBITED.

APPROVALS	DATE
DEPARTMENT OF COMMUNITY DEVELOPMENT	
PLANNER/ZONING	
ENGINEER	
INSPECTIONS	
ARB	
DEPARTMENT OF FIRE RESCUE	
ALBEMARLE COUNTY SERVICE AUTHORITY	
VIRGINIA DEPARTMENT OF TRANSPORTATION	
HEALTH DEPARTMENT	

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
02/17/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN
SHEET: COVER

JOB NO. 202193
SCALE AS SHOWN
SHEET NO. 1

GENERAL NOTES:

OWNER/DEVELOPER: AFTON SCIENTIFIC, LLC
2020 AVON COURT
CHARLOTTESVILLE, VA 22902

ENGINEER: COLLINS ENGINEERING, INC
200 GARRETT STREET, SUITE K
CHARLOTTESVILLE, VA 22902

LOCATION OF PROJECT: END OF AVON COURT

PROPERTY INFO: TMP 07700-00-00-008B0
INSTRUMENT #202400007089
6.78 ACRES

OWNER: LIGHT INDUSTRY (LI). THE PROPERTY IS ALSO SUBJECT TO THE FOLLOWING OVERLAY DISTRICTS: AIRPORT IMPACT AREA (AIA), ENTRANCE CORRIDOR (EC), MANAGED STEEP SLOPES & PRESERVED STEEP SLOPES OVERLAY, AND FLOODPLAIN HAZARD OVERLAY DISTRICT AS DESCRIBED IN SECTION 30 OF THE ZONING ORDINANCE.

BOUNDARY & TOPO: SURVEY AND TOPOGRAPHY PROVIDED BY ROUDABUSH, GALE AND ASSOCIATES IN JANUARY 2018 AND UPDATED IN JULY 2020. TOPOGRAPHIC FIELD SURVEY OF THE PROPERTY HAS BEEN FIELD VERIFIED BY COLLINS ENGINEERING IN DECEMBER 2024.

USGS DATUM: NAD83, NAVD 88

EXISTING USE: VACANT

EXISTING VEGETATION: PARTIALLY WOODED LOT WITH HARDWOOD TREES. THIS PROPERTY IS NOT LOCATED WITHIN AN ALBEMARLE COUNTY AGRICULTURAL OR FORESTAL DISTRICT.

BURIAL SITES: THERE WERE NO CEMETERIES FOUND ON SITE DURING THE FIELD INVESTIGATION OR SURVEY OF THE PROPERTY.

STEEP SLOPES: BOTH PRESERVED AND MANAGED STEEP SLOPES EXIST ON THE PROPERTY. SEE EXISTING CONDITIONS SHEET FOR THE LOCATION OF THE STEEP SLOPES. THE PRESERVED SLOPES SHALL REMAIN UNDISTURBED AND THE MANAGED SLOPES WILL BE DEVELOPED IN ACCORDANCE WITH ALBEMARLE COUNTY REQUIREMENTS.

WATERSHED: MOORES CREEK WATERSHED AND DOWNSTREAM OF THE SOUTH FORK RIVANNA RIVER SUPPLY WATERSHED

STREAM BUFFER: 100' WPO STREAM BUFFER EXIST ON THE PROPERTY. SEE EXISTING CONDITIONS SHEET FOR THE LOCATION OF THE STREAM BUFFER. THESE BUFFERS SHALL BE MANAGED IN ACCORDANCE WITH THE ALBEMARLE COUNTY WATER PROTECTION ORDINANCE.

FLOODPLAIN: THIS PROPERTY IS LOCATED IN ZONES 'AE' & 'X' AS SHOWN ON FEMA MAP ID 51003C0288D, DATED FEBRUARY 4, 2005 TO THE NORTH AND LOMR 14-03-0863P DATED SEPTEMBER 24, 2014 TO THE SOUTH. SEE EXISTING CONDITIONS SHEET FOR THE LOCATION OF THE FLOODPLAIN WITHIN THE PROPERTY.

DAM INUNDATION ZONE: THIS PROPERTY IS LOCATED WITHIN BOTH FEDERAL AND STATE DAM INUNDATION ZONE.

WETLANDS: THERE ARE NO WETLANDS PRESENT ON THE SITE PER FIELD INVESTIGATION.

AGRICULTURAL/FORESTAL DISTRICT: NONE

FIRE & RESCUE: THE PROJECT SHALL CONFORM WITH THE ALBEMARLE COUNTY FIRE AND RESCUE REGULATIONS FOR FIRE PROTECTION AND ACCESS TO THE SITE. A MINIMUM OF (1) DRIVE LANE ADJACENT TO EACH OF THE BUILDING SHALL BE AT LEAST 26' IN WIDTH FOR FIRE PROTECTION.

INGRESS/EGRESS: ACCESS TO THE DEVELOPMENT WILL INCLUDE THE EXTENSION OF AVON COURT TO A PROPOSED CUL-DE-SAC ON THE PROPERTY. TWO (2) ACCESS POINTS INTO THE PROPERTY ARE PROPOSED FROM THE EXTENSION OF AVON COURT.

LAND DEDICATED TO PUBLIC USE: RIGHT OF WAY SHALL BE DEDICATED TO PUBLIC USE FOR THE AVON CT EXTENSION, SEE SHEET 4 FOR ACREAGE OF THE RIGHT OF WAY DEDICATION.

SIGNAGE: PROPOSED SIGNAGE FOR THE DEVELOPMENT WILL BE REVIEWED THROUGH A SEPARATE SIGN APPLICATION.

PROPOSED USE: FOUR (4) STORY INDUSTRIAL BUILDING WITH BASEMENT AND FOUR(4) STORY PARKING DECK
(NOTS: BUILDING AND BASEMENT FOOTPRINT HAVE A 392,800 SF GROSS FOOTPRINT AND AN ADDITIONAL 6,000 SF FOOTPRINT FOR LOADING, DUMPSTER, & MECHANICAL EQUIPMENT)
THE PROPOSED USE WILL BE IN COMPLIANCE WITH LOD202-00014 FOR MANUFACTURING, PROCESSING, ASSEMBLY, FABRICATION, & RECYCLING.

BUILDING HEIGHTS: THE MAXIMUM BUILDING HEIGHT FOR THIS DEVELOPMENT SHALL BE 65 FEET AND THE PROPOSED BULDING HEIGHT IS 64+/- FEET, SEE DIAGRAM ON SHEET 13. A SPECIAL EXCEPTION REQUEST (SE2025-00006) IS UNDER REVIEW FOR BOARD APPROVAL FOR A WAIVER OF THE STEPBACK REQUIREMENT PER SECTION 4.19, REQUIRING A STEPBACK FOR ANY BUILDING OVER 3 STORIES IN HEIGHT OR TALLER THAN 40 FEET.

FLOOR AREA TO LOT COVERAGE RATIO: 79,000 BUILDING SF + 26,500 PARKING DECK SF / 6.78 ACRES = 0.36

SETBACKS: FRONT YARD = 10' MIN. (REDUCED FROM 50' PER BZA APPROVAL OF VA20090004 ON 7/7/2009)
INTERIOR SETBACKS FROM PARCELS OF THE SAME ZONING = NONE
BUILDINGS CAN SHARE A LOT LINE, PROVIDED THE BUILDING MEETS FIRE REGULATIONS
SETBACKS FROM ADJACENT PARCELS WITH DIFFERENT ZONINGS:
50' BUILDING SETBACK & 10' PARKING SETBACK
30' UNDISTURBED SETBACK

RETAINING WALLS: RETAINING WALLS ARE PROPOSED WITH THIS DEVELOPMENT. SEE GRADING & DRAINAGE PLAN SHEETS FOR WALL LOCATIONS.

LANDSCAPING: PROPOSED LANDSCAPING PLAN SHALL COMPLY WITH REQUIREMENTS OF SECTION 32.7.9 OF THE ALBEMARLE COUNTY ZONING ORDINANCE. STREET TREES ALONG AVON COURT SHALL BE INCLUDED WITH THE DESIGN. SEE LANDSCAPING PLAN INCLUDED IN THIS SET.

LIGHTING: PROPOSED LIGHTING PLAN SHALL COMPLY WITH REQUIREMENTS OF SECTION 32.7.8 & SECTION 4.17 OF THE ZONING ORDINANCE. SEE LIGHTING PLAN INCLUDED IN THIS SET.

TRASH: A DUMPSTER AND A TRASH COMPACTOR ARE PROPOSED ON SITE.

MAXIMUM EMPLOYEES: 300 EMPLOYEES DURING THE LARGEST SHIFT ON THE SITE.

PARKING: PARKING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 18.4.12 OF THE ALBEMARLE COUNTY ZONING ORDINANCE.
REQUIRED
1 SPACE / EMPLOYEE ON THE LARGEST SHIFT (300 EMPLOYEES) = 300 PARKING SPACES
TOTAL PARKING REQUIRED = 300 SPACES
PROPOSED
(11) PARKING SPACES OFF STREET AND 305 PARKING SPACES IN PARKING GARAGE = 316
TOTAL PARKING SPACES PROPOSED (THIS INCLUDES 8 HANDICAP PARKING SPACES)
NOTE: (6) OF THE PARKING SPACES SHALL BE VAN ACCESSIBLE PARKING SPACES AND (2) OF THE PARKING SPACES SHALL BE ADA HANDICAP ACCESSIBLE PARKING SPACES.

UTILITIES: COUNTY PUBLIC WATER & SEWER

STORMWATER MANAGEMENT: SEE VSMP PLAN WPO2024000041 FOR THE PROPOSED STORMWATER MANAGEMENT DESIGN FOR THIS DEVELOPMENT.

FIRE FLOW CALCULATIONS: CLASS 3 - NONCOMBUSTIBLE CONSTRUCTION (ICC TYPE II-B)
FACTOR = 0.8
TOTAL GROSS BUILDING AREA = 79,000 SF
OCCUPANCY C-3 COMBUSTIBLE, FACTOR = 1.00
REQUIRED ISO FIRE FLOW = 4047 GPM
NEEDED FIRE FLOW (50% REDUCTION FOR AUTOMATIC SPRINKLER) = 2,000 GPM
AVAILABLE FIRE FLOW AT HYDRANT PER ATTACHED REPORT = 2304 GPM

TRAFFIC GENERATION: TRIP GENERATION CALCULATIONS BASED ON ITE TRIP GENERATION MANUAL (11TH EDITION)
LIGHT INDUSTRIAL BUILDING (CODE 110 - 4.87 TRIPS/1,000 SF)
PROPOSED 4-STORY BUILDING w/ BASEMENT = 392,800 GROSS SF
TOTAL ADT: 1,913 VPD (956.5 ENTER / 956.5 EXIT)
TOTAL AM PEAK: 291 VPH (256 ENTER / 35 EXIT)
TOTAL PM PEAK: 255 VPH (36 ENTER / 219 EXIT)
DESIGN VEHICLE = WB-67, SEE SHEET 13 FOR TRUCK CIRCULATION THROUGH THE SITE.

LAND AREAS/IMPERVIOUS AREA:
PROPOSED BUILDING & PARKING DECK: 112,975 SF
PROPOSED SIDEWALKS & CONCRETE: 3,150 SF
PROPOSED PAVED ROADS & PARKING AREA: 57,125 SF
TOTAL IMPERVIOUS AREA: 173,250 SF

PAVED PARKING AND CIRCULATION AREA: 57,125 SF

PHASING: THIS SITE SHALL BE DEVELOPED IN ONE PHASE.

PUBLIC ROADS: THIS SITE INCLUDES THE EXTENSION OF AVON COURT WITH CURB AND GUTTER.

FIRE DEPARTMENT NOTES

1. PROGRAM SUPERINTENDENT. THE OWNER SHALL DESIGNATE A PERSON TO BE THE FIRE PREVENTION PROGRAM SUPERINTENDENT WHO SHALL BE RESPONSIBLE FOR THE FIRE PREVENTION PROGRAM AND ENSURE THAT IT IS CARRIED OUT THROUGH COMPLETION OF THE PROJECT. THE FIRE PREVENTION PROGRAM SUPERINTENDENT SHALL HAVE THE AUTHORITY TO ENFORCE THE PROVISIONS OF THIS CHAPTER AND OTHER PROVISIONS AS NECESSARY TO SECURE THE INTENT OF THIS CHAPTER. WHERE GUARD SERVICE IS PROVIDED, THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE GUARD SERVICE.
2. PREFIRE PLANS. THE FIRE PREVENTION PROGRAM SUPERINTENDENT SHALL DEVELOP AND MAINTAIN AN APPROVED PREFIRE PLAN IN COOPERATION WITH THE FIRE CHIEF. THE FIRE CHIEF AND THE FIRE CODE OFFICIAL SHALL BE NOTIFIED OF CHANGES AFFECTING THE UTILIZATION OF INFORMATION CONTAINED IN SUCH PREFIRE PLANS.
3. A SITE SPECIFIC FIRE PREVENTION PLAN SHALL BE SUBMITTED TO THE FIRE MARSHAL'S OFFICE PRIOR TO COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION.
4. AN APPROVED KEY BOX SHALL BE MOUNTED TO THE SIDE OF THE FRONT OR MAIN ENTRANCE. ALBEMARLE FIRE AND RESCUE CARRIES THE KNOX BOX MASTER KEY. A KNOX BOX KEY BOX CAN BE ORDERED BY GOING ONLINE TO WWW.KNOXBOX.COM. THE KNOX BOX ALLOWS ENTRY TO THE BUILDING WITHOUT DAMAGING THE LOCK AND DOOR SYSTEM.
5. ACCESS TO THE BUILDING DURING DEMOLITION AND CONSTRUCTION SHALL BE MAINTAINED.
6. FIRE HYDRANTS, FIRE PUMP TEST HEADER, FIRE DEPARTMENT CONNECTIONS OR FIRE SUPPRESSION SYSTEM CONTROL VALVES SHALL REMAIN CLEAR AND UNOBSTRUCTED BY LANDSCAPING, PARKING OR OTHER OBJECTS. THE FIRE MARSHAL'S OFFICE NO LONGER ALLOWS ANY TYPE OF LANDSCAPING TO BE PLACED IN FRONT OF AND WITHIN 5 FEET OF FIRE HYDRANTS, FIRE PUMP TEST HEADERS, FIRE DEPARTMENT CONNECTIONS OR FIRE SUPPRESSION SYSTEM CONTROL VALVES.
7. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
8. ALL PAVEMENT SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS WEIGHTING 85,000 LBS.
9. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE CONSISTENT WITH THE MUTCD.
10. THE MINIMUM REQUIRED FIRE FLOW FOR ALL BUILDINGS IS 1,500 GALLONS PER MINUTE.
11. LANDSCAPING IN THE AREA FIRE HYDRANTS, FIRE PUP TEST HEADER, FIRE DEPARTMENT CONNECTIONS OR FIRE SUPPRESSION SYSTEM CONTROL VALVES SHALL BE OF THE TYPE THAT WILL NOT ENCROACH ON THE REQUIRED FIVE FT RADIUS ON MATURITY OF THE LANDSCAPING.
12. FIRE LANES SHALL BE A MINIMUM OF 20 FEET IN WIDTH. SIGNS AND MARKINGS TO DELINATE FIRE LANES AS DESIGNATED BY THE FIRE OFFICIAL SHALL BE PROVIDED AND INSTALLED BY THE OWNER OR HIS/HER AGENT OF THE PROPERTY. FIRE APPARATUS ROADS 20' TO 26' IN WIDTH SHALL BE POSTED OR MARKED ON BOTH SIDES "NO PARKING - FIRE LANE".
13. THE BUILDING STREET NUMBER TO BE PLAINLY VISIBLE FROM THE STREET FOR EMERGENCY RESPONDERS.
14. HYDRANT FOR STANDPIPE SYSTEM-BUILDINGS EQUIPPED WITH A STANDPIPE SYSTEM INSTALLED IN ACCORDANCE WITH FIRE DEPARTMENT CONNECTIONS AND FOR STANDPIPES AND SPRINKLERS AND SHALL HAVE A FIRE HYDRANT WITHIN 100 FT OF THE FIRE DEPARTMENT CONNECTIONS. THE DISTANCE SHALL BE PERMITTED TO EXCEED 100 FT WHERE APPROVED BY THE FIRE CODE OFFICIAL.
15. OVERHEAD WIRING OR OTHER OBSTRUCTIONS SHALL BE HIGHER THAN 13 FEET-6 INCHES.
16. AN APPROVED WATER SUPPLY FOR FIRE PROTECTION SHALL BE MADE AVAILABLE AS SOON AS COMBUSTIBLE MATERIAL ARRIVES ON THE SITE.
17. NO VEHICLES/MACHINERY OF ANY TYPE, CONSTRUCTION MATERIALS OR CONSTRUCTION DEBRIS ARE TO BE PARKED, PLACED OR STORED EITHER IN FRONT OF AND WITHIN 15 FEET OF A FIRE HYDRANT.
18. NO SMOKING OR VAPING WITHIN THE CONSTRUCTION SAFETY FENCE. NO SMOKING SIGNS SHALL BE POSTED THROUGHOUT EACH BUILDING UNDER CONSTRUCTION AS WELL AS OUTSIDE THE BUILDING.
19. WASTE DISPOSAL OF COMBUSTIBLE DEBRIS SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH WORKDAY.
20. CUTTING AND WELDING-OPERATIONS INVOLVING THE USE OF CUTTING AND WELDING SHALL BE DONE IN ACCORDANCE WITH CHAPTER 35, OF THE VIRGINIA STATEWIDE FIRE PREVENTION CODE, ADDRESSING WELDING AND HOTWORK OPERATIONS.
21. FIRE EXTINGUISHERS SHALL BE PROVIDED WITH NOT LESS THAN ONE APPROVED PORTABLE FIRE EXTINGUISHER AT EACH STAIRWAY ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED.
22. REQUIRED VEHICLE ACCESS FOR FIREFIGHTING SHALL BE PROVIDED TO ALL CONSTRUCTION OR DEMOLITION SITES. VEHICLE ACCESS SHALL BE PROVIDED TO WITHIN 100 FEET OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS. VEHICLE ACCESS SHALL BE PROVIDED BY EITHER TEMPORARY OR PERMANENT ROADS, CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS ROADS ARE AVAILABLE.

ROADWAY CONSTRUCTION

GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION INSPECTION OF ALL PROPOSED ROADS WITHIN THE DEVELOPMENT WILL BE MADE BY THE COUNTY. THE CONTRACTOR MUST NOTIFY THE DEPARTMENT OF COMMUNITY DEVELOPMENT (296-5832) 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION.
2. UPON COMPLETION OF FINE GRADING AND PREPARATION OF THE ROADBED SUBGRADE, THE CONTRACTOR SHALL HAVE CBR TESTS PERFORMED ON THE SUBGRADE SOIL. THREE (3) COPIES OF THE TEST RESULTS SHALL BE SUBMITTED TO THE COUNTY. IF A SUBGRADE SOIL CBR OF 10 OR GREATER IS NOT OBTAINABLE, A REVISED PAVEMENT DESIGN SHALL BE MADE BY THE DESIGN ENGINEER AND SUBMITTED WITH THE TEST RESULTS FOR APPROVAL.
3. SURFACE DRAINAGE AND PIPE DISCHARGE MUST BE RETAINED WITHIN THE PUBLIC RIGHT-OF-WAY OR WITHIN EASEMENTS PRIOR TO ACCEPTANCE BY THE COUNTY. ALL DRAINAGE OUTFALL EASEMENTS ARE TO BE EXTENDED TO A BOUNDARY LINE OR A NATURAL WATERCOURSE.
4. GUARDRAIL LOCATIONS ARE APPROXIMATE. EXACT LENGTH, LOCATION AND APPROPRIATE END TREATMENTS WILL BE FIELD VERIFIED AT THE TIME OF CONSTRUCTION. ADDITIONAL GUARDRAIL MAY BE REQUIRED AT LOCATIONS NOT SHOWN WHEN, IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, IT IS DEEMED NECESSARY. WHEN GUARDRAIL IS REQUIRED, IT SHALL BE INSTALLED FOUR (4) FEET OFFSET FROM THE EDGE OF PAVEMENT TO THE FACE OF GUARDRAIL, AND ROADWAY SHOULDER WIDTHS SHALL BE INCREASED TO SEVEN (7) FEET.
5. WHERE URBAN CROSS SECTIONS ARE INSTALLED, ALL RESIDENTIAL DRIVEWAY ENTRANCES SHALL CONFORM TO VDOT CG-9(A, B OR C).
6. WHERE RURAL CROSS SECTIONS ARE INSTALLED, ALL RESIDENTIAL DRIVEWAY ENTRANCES SHALL CONFORM TO VDOT STANDARD PE-1.
7. COMPLIANCE WITH THE MINIMUM PAVEMENT WIDTH, SHOULDER WIDTH AND DITCH SECTIONS, AS SHOWN ON THE TYPICAL PAVEMENT SECTION DETAIL, SHALL BE STRICTLY ADHERED TO.
8. ROAD PLAN APPROVAL FOR SUBDIVISIONS IS SUBJECT TO FINAL SUBDIVISION PLAT VALIDATION. SHOULD THE FINAL PLAT FOR THIS PROJECT EXPIRE PRIOR TO SIGNING AND RECORDATION, THEN APPROVAL OF THESE PLANS SHALL BE NULL AND VOID.
9. ALL SIGNS OR OTHER REGULATORY DEVICES SHALL CONFORM WITH THE VIRGINIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE ALBEMARLE COUNTY ROAD NAMING AND PROPERTY NUMBERING ORDINANCE AND MANUAL.
10. TRAFFIC CONTROL OR OTHER REGULATORY SIGNS OR BARRICADES SHALL BE INSTALLED BY THE DEVELOPER WHEN, IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, THEY ARE DEEMED NECESSARY IN ORDER TO PROVIDE SAFE AND CONVENIENT ACCESS.
11. THE SPEED LIMITS TO BE POSTED ON SPEED LIMIT SIGNS ARE 5 MPH BELOW THE DESIGN SPEED, OR AS DETERMINED BY VDOT FOR PUBLIC ROADS.
12. VDOT STANDARD CD-1 OR CD-2 CROSS-DRAINS UNDER TO BE INSTALLED UNDER THE SUBBASE MATERIAL AT ALL CUT AND FILL TRANSITIONS AND GRADE SAG POINTS AS SHOWN ON THE ROAD PROFILES.
13. A VIDEO CAMERA INSPECTION IS REQUIRED FOR ALL STORM SEWERS AND CULVERTS THAT ARE DEEMED INACCESSIBLE TO VDOT OR COUNTY INSPECTIONS. THE VIDEO INSPECTION SHALL BE CONDUCTED IN ACCORDANCE WITH VDOT'S VIDEO CAMERA INSPECTION PROCEDURE AND WITH A VDOT OR COUNTY INSPECTOR PRESENT.

SITE NOTES

1. ALL SIDEWALK WITHIN THE LIMITS OF THE DEVELOPMENT SHALL BE PRIVATE SIDEWALKS AND SHALL BE PRIVATELY MAINTAINED.
2. ALL SIDEWALKS AND WALKWAYS SHALL HAVE A MINIMUM CLEAR WIDTH OF 5'.
3. ALL WALKWAY CROSSINGS SHALL MEET MINIMUM ADA ACCESSIBILITY STANDARDS AND SHALL HAVE A CROSS SLOPES OF 2% OR LESS.
4. ALL SIGNING AND PAVEMENT MARKINGS SHALL BE INSTALLED CONSISTENT WITH MUTCD STANDARDS.
5. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE FROM PARKING TO AN ACCESSIBLE ENTRANCE.
6. ALL SIGNS IDENTIFYING ACCESSIBLE PARKING SPACES SHALL BE AT LEAST 60 INCHES ABOVE THE GROUND/SURFACE (FROM BOTTOM OF SIGN) AND INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. ACCESSIBLE VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION 'VAN ACCESSIBLE'.
7. RAMPS OVER 30" IN ELEVATION CHANGE REQUIRE HANDRAILS.
8. ALL SITE AND BUILDING CONSTRUCTION SHALL MEET 2006 IBC SECTION 3409 REQUIREMENTS FOR ACCESSIBILITY AND VA USBC 103.3 FOR CHANGE OF OCCUPANCY.
9. ACCESSIBLE PARKING SPACES, ACCESSIBLE ISLES, AND ACCESSIBLE ROUTES SHALL BE IN ACCORDANCE WITH ICC ANSI A117.1-17 AND THE 2021 VIRGINIA CONSTRUCTION CODE.
10. PER 502.6 OF THE 2010 ADA DESIGN STANDARDS ACCESSIBLE PARKING SPACE IDENTIFICATION SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY COMPLYING WITH 703.7.2.1, AND SIGNS IDENTIFYING VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION "VAN ACCESSIBLE".
11. PER ADA 502.4 PARKING SPACES AND ACCESS AISLES SHALL COMPLY WITH 302, SLOPES NOT STEEPER THAN 2% SHALL BE PERMITTED.
12. PER ADA 403.3 THE RUNNING SLOPE OF AN ACCESSIBLE ROUTE SHALL BE 5% OR LESS. SLOPES OVER 5% WILL REQUIRE A RAMP.
13. PER ADA 206.2.2 AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, FACILITIES, ELEMENTS AND SPACES ON THE SAME SITE.
14. ALL PARKING SPACES SHALL BE 9'x18', EXCEPT AS NOTED.
15. HANDICAP PARKING SPACES SHALL BE 8'x18', EXCEPT AS NOTED.
16. ALL HANDICAP PARKING SPACES SHALL BE INDICATED WITH A SIGN.

UTILITY NOTES

1. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR OR ITS SUBCONTRACTORS SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY AND REPAIRED AT CONTRACTOR'S EXPENSE.
2. THE CONTRACT DOCUMENTS DO NOT GUARANTEE THE EXISTENCE, NON-EXISTENCE OR LOCATION OF UTILITIES. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OR THE NON-EXISTENCE OF UTILITIES. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION, CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-552-7001) AND/OR THE RESPECTIVE UTILITY COMPANIES FOR GAS, WATER, SEWER, POWER, PHONE, AND CABLE. CONTRACTOR SHALL TIMELY ARRANGE TO HAVE THE VARIOUS UTILITIES LOCATED, AND TO HAVE THEM REMOVED OR RELOCATED, OR TO DETERMINE THE METHOD OF PROTECTION ACCEPTABLE TO THE RESPECTIVE OWNER, IF UTILITIES IN ACCORDANCE WITH THE RESPECTIVE UTILITY'S RULES AND REGULATIONS.
3. NO BUILDING OR WALL FOUNDATION SHALL BE CONSTRUCTED WITHIN 10 FEET OF ANY STORM, SANITARY, WATER, OR GAS LINE. ANY COST INCURRED FOR REMOVING, RELOCATIONS, OR PROTECTING UTILITIES SHALL BE BORNE BY CONTRACTOR UNLESS INDICATED OTHERWISE.
4. CONTRACTOR SHALL EXCAVATE TO LOCATE BURIED UTILITIES FAR ENOUGH IN ADVANCE OF ITS WORK TO ALLOW FOR HORIZONTAL AND/OR VERTICAL ADJUSTMENTS TO ITS WORK AND/OR THE UTILITIES. NO ADJUSTMENT IN COMPENSATION OR SCHEDULE WILL BE ALLOWED FOR DELAYS RESULTING FROM CONTRACTOR'S FAILURE TO CONTACT AND COORDINATE WITH UTILITIES.
5. WHEN THE WORK CROSSES EXISTING UTILITIES, THE EXISTING UTILITIES SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM DAMAGE DUE TO THE WORK. ALL METHODS FOR SUPPORTING AND MAINTAINING THE EXISTING UTILITIES SHALL BE APPROVED BY THE RESPECTIVE UTILITY COMPANY AND/OR THE ENGINEER.
6. CONTRACTOR SHALL EXERCISE CARE TO ENSURE THAT THE GRADE AND ALIGNMENT OF EXISTING UTILITIES ARE MAINTAINED AND THAT NO JOINTS OR CONNECTIONS ARE DISPLACED. BACKFILL SHALL BE CAREFULLY PLACED AND COMPACTED TO PREVENT FUTURE DAMAGE OR SETTLEMENT TO EXISTING UTILITIES. ANY UTILITIES REMOVED AS PART OF THE WORK, AND NOT INDICATED TO BE REMOVED OR ABANDONED, SHALL BE RESTORED USING MATERIALS AND INSTALLATION EQUAL TO THE UTILITY STANDARDS.
7. CONTRACTOR SHALL NOTIFY LANDOWNERS, TENANTS, AND THE ENGINEER PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
8. THE ADJUSTMENT OF ALL MANHOLE TOPES, WATER VALVE BOXES, GAS VALVE BOXES, AND WATER METER BOXES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL WATER METER, VALVES, AND FIRE HYDRANT ADJUSTMENTS/RELOCATIONS SHALL BE PERFORMED BY THE CONTRACTOR.
10. A MINIMUM OF 18" VERTICAL & 10' HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER LINES & SANITARY SEWER. A MINIMUM OF 12" VERTICAL AND 5' HORIZONTAL SHALL BE MAINTAINED BETWEEN PARALLEL SANITARY AND STORM SEWER.
11. MINIMUM DEPTH OF COVER FOR WATER LINES SHALL BE 3',
12. MINIMUM DEPTH OF COVER FOR SANITARY SEWER SHALL BE 2'.
13. AT ALL UTILITY CROSSINGS A MINIMUM VERTICAL SEPARATION OF 12" SHALL BE MAINTAINED. A MINIMUM VERTICAL SEPARATION OF 18" IS REQUIRED BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE SANITARY SEWER LINE.
14. CONTRACTOR SHALL VERIFY ALL UTILITY TIE-IN CONNECTIONS TO EXISTING OR UNDER CONSTRUCTION INFRASTRUCTURE. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE EXISTING UTILITIES AND THE PROPOSED UTILITIES.
15. GATE VALVES SHALL NOT BE CONSTRUCTED WITHIN THE CURBS, GUTTER PANS OR PAVERS.
16. SIGNS AND MARKINGS TO DELINEATE FIRE LANES, AS DESIGNATED BY THE FIRE OFFICIAL, SHALL BE PROVIDED AND INSTALLED BY THE OWNER OR HIS/HER AGENT OF THE PROPERTY INVOLVED.
17. ALL WATERLINE MATERIALS SHALL BE CONSTRUCTED OF CLASS 52 DIP.
18. ALL PAVEMENT SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS WEIGHING 85,000 LBS.
19. ALL CURB & GUTTER MUST BE INSTALLED AND FINAL GRADE MUST BE WITHIN 6" PRIOR TO THE INSTALLATION OF ANY GAS MAIN.

DEMOLITION NOTES

1. PRIOR TO DEMOLITION AND CONSTRUCTION, A FIRE PREVENTION PLAN MEETING MUST OCCUR AND A FIRE PREVENTION PLAN MUST BE SUBMITTED TO AND APPROVED BY THE FIRE MARSHAL.
2. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL UNDERGROUND UTILITIES NOT SHOWN ON THIS PLAN SHEET AND SHALL DEMOLISH ALL DISCOVERED UTILITIES AS REQUIRED.
3. THE CONTRACTOR SHALL VIDEO AND INSPECT ALL SANITARY SEWER PIPES AND MANHOLES SLATED TO REMAIN TO DETERMINE ADEQUATE STRUCTURAL INTEGRITY. IF EXISTING SANITARY SEWER IS DAMAGED, THE CONTRACTOR SHALL CONTACT THE ENGINEER.
4. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL INTEGRITY OF EXISTING STORM SEWER STRUCTURES TO REMAIN AND REPLACE TOPS AS NECESSARY; THIS SHALL BE REFLECTED IN THE CONTRACTOR BID.
5. ALL EXISTING WATER, SANITARY, AND STORM SEWER SLATED FOR DEMOLITION SHALL BE REMOVED FROM THE BUILDING TO THE PROPERTY LINE, UNLESS MARKED AS TO REMAIN.
6. UTILITIES THAT ARE DISCONNECTED SHALL BE PROPERLY ABANDONED AT THE MAIN LINE. FOR WATER SERVICE LINES, THE CORP STOP MUST BE TURNED OFF AT THE MAIN LINE AND THE SERVICE DISCONNECTED FROM THE MAIN. FOR SEWER LATERALS, THE LATERAL TAP MUST BE SEALED AT THE MAIN LINE SO THAT IT IS WATER TIGHT AND THE LATERAL REMOVED FROM THE MAIN LINE. FOR SANITARY MANHOLES TO BE ABANDONED THE TOP 2' OF THE MANHOLE STRUCTURE SHALL BE REMOVED, ALL LINES DISCONNECTED, AND THE MANHOLE SHOULD BE FILLED WITH STONE AND COVERED, ALL TAPS MUST BE LOCATED AND DISCONNECTED PER PROCEDURE ABOVE.
7. EXISTING ROOF DRAINS SLATED TO BE DEMOLISHED SHALL BE DISCONNECTED AND REMOVED; ROOFDRAINS TO BE REROUTED AS SHOWN ON THE ARCHITECTURAL PLANS.
8. EXISTING DOMINION OVERHEAD/UNDERGROUND ELECTRIC LINES AND OVERHEAD UTILITIES TO THE EXISTING BUILDING SHALL BE DISCONNECTED AND REROUTED AS PROPOSED ON THE UTILITY PLAN SHEET.
9. ANY EXISTING UNDERGROUND STORAGE TANKS SHALL BE DRAINED BY THE OWNER, AND THE CONTRACTOR SHALL FILL AND TANKS SHALL REMAIN.
10. BUILDINGS BEING DEMOLISHED. WHERE A BUILDING IS BEING DEMOLISHED AND A STANDPIPE IS EXISTING WITHIN SUCH A BUILDING, SUCH STANDPIPE SHALL BE MAINTAINED IN AN OPERABLE CONDITION SO AS TO BE AVAILABLE FOR USE BY THE FIRE DEPARTMENT. SUCH STANDPIPE SHALL BE DEMOLISHED WITH THE BUILDING BUT SHALL NOT BE DEMOLISHED MORE THAN ONE FLOOR BELOW THE FLOOR BEING DEMOLISHED.

ALBEMARLE COUNTY

GENERAL CONSTRUCTION NOTES

1. PRIOR TO ANY CONSTRUCTION WITHIN ANY EXISTING PUBLIC RIGHT-OF-WAY, INCLUDING CONNECTION TO ANY EXISTING ROAD, A PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT). THIS PLAN AS DRAWN MAY NOT ACCURATELY REFLECT THE REQUIREMENTS OF THE PERMIT. WHERE ANY DISCREPANCIES OCCUR THE REQUIREMENTS OF THE PERMIT SHALL GOVERN.
2. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO CURRENT SPECIFICATIONS AND STANDARDS OF VDOT UNLESS OTHERWISE NOTED.
3. EROSION AND SILTATION CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN AND SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING OR OTHER CONSTRUCTION.
4. ALL SLOPES AND DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED, AND MULCHED.
5. THE MAXIMUM ALLOWABLE SLOPE IS 2:1 (HORIZONTAL:VERTICAL). WHERE REASONABLY OBTAINABLE, LESSER SLOPES OF 3:1 OR BETTER TO BE ACHIEVED.
6. PAVED, RIP-RAP, OR STABILIZATION MAT LINED DITCH MAY BE REQUIRED WHEN IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, IT IS DEEMED NECESSARY IN ORDER TO STABILIZE A DRAINAGE CHANNEL.
7. ALL TRAFFIC CONTROL SIGNS SHALL CONFORM WITH THE VIRGINIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES.
8. UNLESS OTHERWISE NOTED, ALL CONCRETE PIPES SHALL BE REINFORCED CONCRETE PIPE-CLASS III.
9. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29 CFE PART 1926).

CONSTRUCTION FIRE PREVENTION NOTES

1. SMOKING SHALL BE PROHIBITED IN AREAS WHERE SMOKING MAKES CONDITIONS SUCH AS TO MAKE SMOKING A HAZARD AND THESE AREAS SHALL BE DESIGNATED WITH NO SMOKING SIGNS PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
2. AREAS WHERE SMOKING CAN OCCUR, SHALL HAVE APPROPRIATE RECEPTACLES FOR DISCARDED SMOKING MATERIALS PER VIRGINIA STATEWIDE FIRE PREVENTION CODE.
3. PER THE VIRGINIA STATEWIDE FIRE PREVENTION CODE, VEHICULAR ACCESS FOR FIREFIGHTING SHALL BE PROVIDED AT ALL CONSTRUCTION AND DEMOLITION SITES, PROVIDE ACCESS TO WITHIN 100 FT. OF TEMPORARY OR PERMANENT FIRE DEPARTMENT CONNECTIONS, AND HAVE NO OVERHEAD WIRING OR OTHER OVERHEAD OBSTRUCTIONS LOWER THAN 13FT 6 INCHES; THIS ACCESS MAY BE VIA PERMANENT OR TEMPORARY ROAD, BUT SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS IN ALL WEATHER CONDITIONS.
4. WASTE AND COMBUSTIBLE DEBRIS SHALL BE REMOVED FROM THE BUILDING AT THE END OF EACH DAY AND DISPOSED OF IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE CODE.
5. FIRE EXTINGUISHERS SHALL BE PROVIDED, WITH NOT LESS THAN ONE APPROVED FIRE EXTINGUISHER AT EACH STAIRWELL, ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED, IN EVERY STORAGE AND CONSTRUCTION SHED AND IN ARES OF SPECIAL; HAZARD, SUCH AS WHERE FLAMMABLE AND COMBUSTIBLE LIQUIDS ARE STORED OR USED, IN ACCORDANCE WITH THE VIRGINIA STATEWIDE FIRE CODE.

DRAINAGE

1. ALL PIPE CULVERTS, EXCEPT PRIVATE ENTRANCES, SHOWN HEREON ARE TO BE RCP WITH A MINIMUM COVER OF ONE (1) FOOT.
2. STANDARD UNDERDRAINS (CD-1 OR CD-2 OR UD-4'S) TO BE PROVIDED AS INDICATED ON THE PLANS, OR WHERE FIELD CONDITIONS INDICATE.
3. ALL DRIVEWAY ENTRANCE PIPES SHALL BE A MINIMUM OF TWENTY (20) FEET IN LENGTH AND HAVE A MINIMUM DIAMETER OF FIFTEEN (15) INCHES AND SHALL BE PLACED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTAION SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS.
4. ALL DRAINAGE EASEMENT SHALL BE CLEARED AND GRADED TO THE SATISFACTION OF THE ENGINEER. DRAINAGE EASEMENTS SHALL EXTEND TO A POINT DEEMED AS NATURAL WATER COURSE.

PAVEMENT

1. AN ACTUAL COPY OF THE CBR REPORT IS TO BE SUBMITTED PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE MATERIAL. IF THE SSV VALUES ARE LESS THAN 10, THE DEVELOPER WILL BE REQUIRED TO SUBMIT FOR ENGINEERS APPROVAL THE PROPOSED METHOD OF CORRECTION.
2. SUBGRADE MUST BE APPROVED BY THE ENGINEER FOR GRADE, TEMPLATE AND COMPACTION BEFORE BASE IS PLACED.
3. TEST REPORTS ON SELECT MATERIALS MUST BE SUBMITTED SHOWING THE MATERIAL MEETS REQUIRED GRADATION FOR TYPE I, II, OR III PRIOR TO PLACING AGGREGATE BASE.
4. THE REQUIREMENTS TO PUGMILL AGGREGATE BASE WILL BE WAIVED IN THE EVENT THAT THE SURFACE COURSE IS BEGINNING AT THE COMPLETION OF THE INSTALLATION OF THE AGGREGATE BASE. IN THE EVENT THAT THE SURFACE COURSE IS APPLIED PRIOR TO 60 DAYS, THE PUGMILL REQUIREMENT WILL APPLY.
5. THE USE OF AN AGGREGATE SPREADER IS REQUIRED WHEN PLACING AGGREGATE BASE.
6. BASE MUST BE APPROVED BY ENGINEER FOR DEPTH, TEMPLATE, AND COMPACTION BEFORE SURFACE TREATMENT IS APPLIED.
7. PRIME COAT MUST BE APPLIED TO BASE MATERIAL PRIOR TO PLACEMENT OF ASPHALT (PRIME COAT RC-250 @ 0.3 GAL./SQ. YD.).
8. BITUMINOUS SURFACE TO BE APPLIED IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
9. ENCROACHMENT: POSTS, WALLS, SIGNS, OR SIMILAR ORNAMENTAL STRUCTURES THAT DO NOT ENHANCE A ROADWAY'S CAPACITY OR TRAFFIC SAFETY, SHALL NOT BE PERMITTED WITHIN THE RIGHT OF WAY. ONLY THOSE STRUCTURES SPECIFICALLY AUTHORIZED BY PERMIT ISSUED BY VIRGINIA DEPARTMENT OF TRANSPORTATION MAY BE LOCATED WITHIN THE STREETS RIGHT OF WAY.

INSPECTIONS

NOTE - MANDATORY INSPECTIONS ARE REQUIRED AT THE FOLLOWING PHASES:

i. INSTALLATION OF ANY ENCLOSED DRAINAGE SYSTEM BEFORE IT IS COVERED.
ii. INSTALLATION OF ANY ENCLOSED UTILITY PLACEMENTS WITHIN THE RIGHT-OF-WAY BEFORE BEING COVERED.
iii. CONSTRUCTION OF THE CUTS AND FILLS, INCLUDING FIELD DENSITY TESTS, BEFORE PLACEMENT OF ROADBED BASE MATERIALS.
iv. A FINAL PAVEMENT DESIGN, BASED ON ACTUAL SOIL CHARACTERISTICS AND CERTIFIED TESTS, SHALL BE COMPLETED AND APPROVED BEFORE THE PAVEMENT STRUCTURE IS PLACED.
v. PLACEMENT OF BASE MATERIALS, INCLUDING STONE DEPTHS, CONSISTENT WITH THE APPROVED PAVEMENT DESIGN, PRIOR TO PLACEMENT OF THE PAVING COURSE OR COURSES, FOLLOWED BY FIELD DENSITY AND MOISTURE TESTS AND THE PLACEMENT OF A PAVING COURSE AS SOON AS POSSIBLE.
vi. CONSTRUCTION OF PAVEMENT, INCLUDING DEPTH AND DENSITY, UPON COMPLETION AS PART OF THE FINAL INSPECTION.
vii. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING VDOT A MINIMUM OF ONE WEEK PRIOR TO EACH OF THE ABOVE PHASES OF CONSTRUCTION TO SCHEDULE AN INSPECTION.
viii. FAILURE OF THE CONTRACTOR TO SCHEDULE THESE INSPECTIONS WILL REQUIRE ADDITIONAL TESTING OF THE ROADS AT THE DISCRETION OF VDOT OR MAY LEAD TO THE ROADS NOT BEING ELIGIBLE FOR STATE MAINTENANCE.

GRADING

1. THE LATEST EDITION OF THE ROAD & BRIDGE SPECIFICATIONS, THE ROAD & BRIDGE STANDARDS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS SHALL GOVERN THE MATERIAL AND CONSTRUCTION METHODS OF THIS PROJECT.
2. WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN THE ROADWAY, IT SHALL BE REMOVED FROM THE ENTIRE ROAD RIGHT OF WAY WIDTH AND REPLACED WHERE NECESSARY WITH SUITABLE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
3. ALL GROWTH OF TREES AND VEGETATION SHALL BE CLEARED AND GRUBBED FOR THE ENTIRE EASEMENT. OTHER TREES AND VEGETATION WHICH OBSTRUCT SIGHT DISTANCES AT ROAD INTERSECTIONS SHALL BE REMOVED.
4. ALL VEGETATION AND OVERBURDEN TO BE REMOVED FROM SHOULDER TO SHOULDER PRIOR TO THE CONSTRUCTION OF THE SUBGRADE..

SITE PLAN LEGEND

EXISTING CONDITIONS & DEMOLITION

- EXISTING RIGHT-OF-WAY
- EXISTING BUILDING
- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE
- EXISTING CONTOURS
- EXISTING CURBING
- EXISTING VEGETATION
- EXISTING FIRE HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER STRUCTURE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE
- EXISTING CONCRETE CURB, SIDEWALK, AND/OR ASPHALT PAVEMENT TO BE REMOVED
- EXISTING ASPHALT PAVEMENT FOR MILL & OVERLAY
- EXISTING VEGETATION TO BE REMOVED
- W — EXISTING WATERLINE
- S — EXISTING SANITARY SEWER PIPE
- EXISTING STORM SEWER PIPE
- OHE — EXISTING OVERHEAD ELECTRIC
- UGE — EXISTING UNDERGROUND ELECTRIC
- GAS — EXISTING GASLINE
- EXISTING UTILITIES TO BE REMOVED

PROPOSED

- PROPOSED PROJECT BOUNDARY
- PROPOSED CONTOUR
- PROPOSED CURB
- PROPOSED RIGHT-OF-WAY DEDICATION AREA
- PROPOSED BUILDING
- EXISTING BUILDING
- PROPOSED ASPHALT
- PROPOSED CONCRETE
- PROPOSED PAVERS
- PROPOSED SEGMENTED RETAINING WALL
- PROPOSED SIGN
- PROPOSED LIGHT POLE
- PROPOSED BIKE RACK
- PROPOSED STORM SEWER PIPE
- PROPOSED YARD DRAINAGE SYSTEM
- PROPOSED STORM SEWER STRUCTURE
- S — PROPOSED SANITARY SEWER LATERAL
- W — PROPOSED FIRE & WATER LINE
- PROPOSED WATER METER
- GAS — PROPOSED GASLINE
- UGP — PROPOSED UNDERGROUND POWER

EROSION & SEDIMENT CONTROL

- LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE
- SAFETY FENCE
- CONSTRUCTION ENTRANCE
- CRS — CONSTRUCTION ROAD & STABILIZATION
- SILT FENCE
- STORM DRAIN INLET PROTECTION
- TEMPORARY DIVERSION DIKE
- TEMPORARY RIGHT-OF-WAY DIVERSION
- SEDIMENT TRAP
- BLANKET MATTING
- OUTLET PROTECTION
- TS — TEMPORARY SEEDING
- PS — PERMANENT SEEDING
- SODDING
- BLANKET MATTING
- TREE PROTECTION
- DC — DUST CONTROL

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
02/17/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K.-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: GENERAL PROJECT NOTES

JOB NO. 202193
SCALE N/A
SHEET NO. 2

MOORES CREEK

BENCHMARK
TOP OF MANHOLE
ELEV.=351.84'

EX SAN MH
TOP=351.84'
INV IN=341.39'
INV OUT=341.29'

EXISTING 30' SANITARY SEWER EASEMENT D.B. 669, PG.248

EXISTING RWSA SANITARY SEWER

EXISTING SANITARY SEWER

BENCHMARK
TOP OF MANHOLE
ELEV.=351.32'

EX SAN MH
TOP=351.32'
INV IN=340.93'
INV OUT=340.76'

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE
D.B. 4462, PG. 562
20.25 ACRES
ZONING - LIGHT INDUSTRY

EXISTING DIRT ROAD TO BE REMOVED

EXISTING 100 YR FLOODPLAIN

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE
D.B. 4462, PG. 562
20.25 ACRES
ZONING - LIGHT INDUSTRY

EXISTING SANITARY SEWER

PROPERTY BOUNDARY

EXISTING 100 YR FLOODPLAIN

N79° 01' 34.74"E
89.500

ZONE 'AE'
ZONE 'X'
N63° 54' 34.74"E
193.500

S37° 17' 25.26"E
186.400

N79° 19' 34.74"E
82.000

N58° 38' 34.74"E
123.500

N81° 53' 34.74"E
113.200

ALBEMARLE COUNTY MANAGED SLOPES

EXISTING TREELINE

N47° 17' 34.74"E
133.500

EXISTING OVERHEAD POWER LINES TO BE REMOVED ALONG WITH THE EXISTING POWER POLES (TYP.

EXISTING 10' WIDE AREA RESERVED FOR FUTURE DEDICATION TO PUBLIC USE, DB. 5332, PG. 214

EXISTING 21.5' WIDE AREA RESERVED FOR FUTURE DEDICATION FOR PUBLIC USE DB. 5332, PG. 214

EXISTING 30' PRESCRIPTIVE EASEMENT

EXISTING GRADING AND DRAINAGE EASEMENT D.B. 3570, PG. 510

C1 C2 C3 C4 C5 C6 C7

10'

21.5'

30'

S39° 07' 57.29"E
72.168

TMP 07700-00-00-00900
LIGHTHOUSE LAND, LLC
D.B. 5002, PG. 78
2.70 ACRES
ZONING - LIGHT INDUSTRY

EXISTING GRAVEL ROAD TO BE REMOVED

EXISTING SIGHT DISTANCE EASEMENT DB. 5332, PG.355

EXISTING DRAINAGE EASEMENT DB. 5332, PG. 169

EXISTING STORM SEWER AND INLET TO BE REMOVED

EXISTING STORM SEWER

EXISTING PAVEMENT TO BE REPAIRED WITH EXTENSION OF WATERLINE ALONG AVON COURT

EXISTING VARIABLE WIDTH PAVED ROAD

S70° 24' 25.26"E
86.000

S53° 58' 25.26"E
45.431

EXISTING 8" P.I. WATERLINE EXTENSION WITH PLUG

EXISTING FIRE HYDRANT

EXISTING SIGHT DISTANCE EASEMENT DB. 5332, PG.352

EXISTING VARIABLE WIDTH GRADING, DRAINAGE, & UTILITY EASEMENT D.B. 3535, PG. 530

EXISTING TEMPORARY GRADING EASEMENT D.B. 3568, PG. 347

AVON COURT
STATE ROUTE 1101

TMP 07700-00-00-008B0
AFTON SCIENTIFIC, LLC
INST# 202400007089
6.78 ACRES
ZONING - LIGHT INDUSTRY

N68° 11' 25.26"W
254.400

EXISTING VARIABLE WIDTH UTILITY EASEMENT D.B. 3575, PG. 28

EXISTING GRAVEL AREA TO BE REMOVED

EXISTING WELL TO BE ABANDONED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS

EXISTING MIXTURE OF DECIDUOUS AND EVERGREEN TREES & VEGETATION TO BE REMOVED (TYP.)

N72° 04' 25.26"W
94.200

EXISTING TREES TO BE REMOVED (TYP.)

PRESERVED STEEP SLOPES CLASSIFIED AS MANAGED SLOPES BASED ON FIELD-RUN TOPOGRAPHIC ELEVATIONS

EXISTING 100' STREAM BUFFER

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE
D.B. 4462, PG. 562
20.25 ACRES
ZONING - LIGHT INDUSTRY

ALBEMARLE COUNTY PRESERVED SLOPES

N67° 42' 25.26"W
363.100

ZONE 'AE'
ZONE 'X'
ZONE 'AE'

EXISTING 100 YR FLOODPLAIN

N69° 27' 25.26"W
182.800

TMP 07700-00-00-008C0
PSALM THIRTY FOUR PROPERTIES, LLC
D.B. 5421, PG. 726
2.23 ACRES
ZONING - LIGHT INDUSTRY

S07° 55' 30.93"E
200.000

EXISTING UTILITY EASEMENT D.B. 3535, PG. 530

EXISTING 100' STREAM BUFFER

S74° 21' 34.74"W
79.000

N15° 38' 25.26"W
41.900

S65° 05' 34.74"W
89.400

MOORES CREEK

PROPERTY BOUNDARY

TMP 076M2-01-00-000D0
WILLOUGHBY PROPERTY OWNER'S ASSOCIATION INC
C/O REAL PROPERTY INC
D.B. 3814, PG. 193
7.57 ACRES
ZONING - PUD

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

EXISTING CONDITIONS LEGEND

- ALBEMARLE COUNTY PRESERVED SLOPES
- ALBEMARLE COUNTY MANAGED SLOPES
- PRESERVED SLOPES CLASSIFIED AS MANAGED SLOPES BASED ON FIELD RUN TOPO ANALYSIS
- EXISTING TREELINE

NOTE:
1. PRESERVED STEEP SLOPES ON THE SUBJECT PARCEL SHALL BE FLAGGED PRIOR TO CONSTRUCTION AS REQUIRED.
2. PRESERVED SLOPE HAVE BEEN FIELD SURVEYED BY ROUDABUSH, GALE AND ASSOCIATES IN MARCH 2021. ANALYSIS AS SHOWN IS BASED ON THE FIELD RUN SURVEY DATA, WHICH WAS USED TO CONFIRM THE LIMITS OF THE PRESERVED SLOPES ON THE SITE.

BOUNDARY CURVE TABLE

TAG	LENGTH	RADIUS	TANGENT	CHORD	CHORD BEARING
C1	31.45'	95.20'	15.87'	31.31'	S40°54'21.89"W
C2	54.66'	90.52'	28.19'	53.83'	S13°35'20.44"W
C3	14.31'	226.11'	7.16'	14.31'	S05°57'41.72"E
C4	25.23'	1397.31'	12.62'	25.23'	S06°55'49.05"E
C5	29.44'	48.02'	15.20'	28.98'	S22°36'38.26"E
C6	43.72'	154.20'	22.01'	43.57'	S46°08'09.35"E
C7	70.55'	204.35'	35.63'	70.20'	S60°05'25.26"E

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET
EXISTING CONDITIONS

JOB NO. 202193
SCALE 1" = 40'
SHEET NO. 3

SITE PLAN NOTE LEGEND

- A TIE-IN TO EXISTING CURB
- B PROPOSED VDOT STD. CG-11 ENTRANCE
- C PROPOSED VDOT STD. CG-6 CURB
- D PROPOSED VDOT STD. CG-2 CURB
- E PROPOSED VDOT STD. ROLL TOP CURB
- F PROPOSED VDOT STD. CG-12 RAMP TYPE B
- G PROPOSED CONCRETE SIDEWALK
- H PROPOSED 6' PLANTING STRIP
- I PROPOSED 3' PLANTING STRIP
- J PROPOSED RETAINING WALL (MAX. HEIGHT = 6')
- K PROPOSED STOP SIGN
- L PROPOSED SIGN
- M PROPOSED HANDICAP PARKING SIGN
- N PROPOSED 'NO PARKING - FIRE LANE' SIGN
- O PROPOSED 'NO PARKING' SIGN
- P PROPOSED BLACK STEEL BOLLARD
- Q PROPOSED BIKE RACK
- R PROPOSED GR-2 GUARDRAIL RUSTIC COLOR
- S PROPOSED RED CURB MARKED NO PARKING FIRE LANE
- T PROPOSED CONCRETE PRIVATE CG-9 ENTRANCE
- U HANDICAP ACCESSIBLE ADA PARKING SPACE
- V VAN ACCESSIBLE ADA PARKING SPACE
- W 24" SEAT WALL
- X "NO PARKING - FIRE LANE" SIGN

NOTE:
1. CONTRACTOR SHALL VERIFY ALL ROAD CONNECTIONS, INCLUDING RECENTLY CONSTRUCTED AREAS, VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL CONFIRM ALL UTILITY, DRAINAGE, AND ROAD CONNECTIONS, AND SHALL NOTIFY ENGINEER OF ANY TIE-IN ISSUES OR DISCREPANCIES.
3. ① REPRESENTS ONE PROPOSED PARKING SPACE.
4. OVERHEAD WIRING OR OTHER OBSTRUCTIONS SHALL BE HIGHER THAN 13'-6".
5. ALL PAVEMENT SHALL BE CAPABLE OF SUPPORTING FIRE APPARATUS WEIGHING 85,000 LBS.
6. CONTRACTOR SHALL ENSURE ALL ON-SITE UTILITIES, ABOVE AND BELOW GROUND, SERVICING ADJACENT PROPERTIES SHALL CONTINUE TO SERVICE THE ADJACENT PROPERTIES THROUGHOUT CONSTRUCTION AND UPON COMPLETION OF THE PROJECT TO THE FULLEST EXTENT POSSIBLE.
7. CURB RADII SHOWN, REPRESENTED WITH AN 'R', DIMENSION THE FACE OF CURB.
8. ANY RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT REQUIRE A SEPARATE BUILDING PERMIT. WALLS EXCEEDING 4 FEET IN HEIGHT REQUIRE A STAMPED ENGINEERED DESIGN FOR THE WALLS SYSTEM.
9. BUILDINGS OR STRUCTURES BUILT BEFORE JANUARY 1, 1985 MUST HAVE AN ASBESTOS SURVEY PERFORMED IN ORDER TO APPLY FOR A DEMOLITION PERMIT. ASBESTOS REMOVAL PERMITS ARE REQUIRED IF POSITIVE FOR SUCH. CONTACT VDOLI FOR ADDITIONAL REQUIREMENTS AND PERMITS FOR DEMOLITION PROJECTS.
10. ALL PRIVATE TRAVELWAYS SHALL BE OWNED AND MAINTAINED BY THE OWNER. NO PUBLIC AGENCY, INCLUDING VDOT AND THE COUNTY OF ALBEMARLE WILL BE RESPONSIBLE FOR MAINTAINING THE TRAVELWAYS ON THE PROPERTY.
11. ALL PUBLIC WATER AND SANITARY SEWER FACILITIES SHALL BE DEDICATED TO PUBLIC USE AND THE EASEMENTS FOR THOSE FACILITIES, AS IDENTIFIED ON THIS PLAN, SHALL BE DEDICATED TO THE ALBEMARLE COUNTY SERVICE AUTHORITY AND/OR RWSA AS NOTED.

SITE PLAN NOTES:
1. SEE SHEET 3 FOR BOUNDARY DIMENSIONS, METES AND BOUNDS, AND SURVEY INFORMATION.
2. TRASH SHALL BE STORED & COLLECTED IN DUMPSTERS SHOWN ON THIS PLAN.
3. CONTRACTOR SHALL VERIFY ALL ROAD, STORM & UTILITY CONNECTIONS VERTICALLY AND HORIZONTALLY PRIOR TO CONSTRUCTION AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. THE PROPOSED BUILDINGS SHALL BE A SLAB ON GRADE FOUNDATION.
5. A MINIMUM 26' DRIVE LANE (CLEAR OF PARKED CARS) SHALL BE MAINTAINED AROUND THE BUILDING.
6. CONTRACTOR SHALL RELOCATE OVERHEAD UTILITIES AND/OR LIGHT POLES AS NECESSARY. CONTRACTOR TO WORK WITH UTILITY COMPANY FOR THE DESIRED LOCATIONS.
7. INDIVIDUAL SIGNS WILL REQUIRE SIGN APPLICATIONS AND SIGN DESIGNS WILL BE REQUIRED TO MEET STANDARD SIGN GUIDELINES REGARDING SIZE, SCALE AND PROPORTION RELATIVE TO THE SIGN BAND AND THE OVERALL BUILDING.
8. VISIBILITY OF ALL MECHANICAL EQUIPMENT FROM THE ENTRANCE CORRIDOR SHALL BE ELIMINATED.
9. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT HAVE A SURFACE SLOPE GREATER THAN 1:48. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACE THEY SERVE.

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

TMP 07700-00-00-008C0
PSALM THIRTY FOUR PROPERTIES, LLC

TMP 07700-00-00-00900
LIGHTHOUSE LAND, LLC

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

TMP 076M2-01-00-000D0
WILLOUGHBY PROPERTY OWNERS ASSOCIATION INC
C/O REAL PROPERTY INC

MATCHLINE SEE THIS SHEET

AVON COURT
STATE ROUTE 1101
30' PRESCRIPTIVE R/W
PROPOSED VAR. WIDTH R/W

PROPOSED 4-STORY BUILDING w/ BASEMENT
(78,200 SF)

PROPOSED 4-STORY PARKING GARAGE
(305 TOTAL PARKING SPACES)

PROPOSED 12' x 22' DUMPSTER PAD w/ ENCLOSURE & 10' x 22' CONCRETE APRON

PROPOSED TRASH COMPACTOR ON CONCRETE PAD

PROPOSED CONCRETE LOADING AREA (8 SPACES - 11' x 75')

PROPOSED HEAVY DUTY ASPHALT TRAVELWAY

PROPOSED SWM FACILITY

PROPOSED RIGHT-OF-WAY DEDICATION AREA FOR THE EXTENSION OF AVON COURT 0.50 ACRES

PROPOSED RIGHT-OF-WAY DEDICATION TO EXTEND TO PROPERTY LINE FOR FUTURE INTERPARCEL CONNECTION

21.5' WIDE AREA RESERVED FOR FUTURE DEDICATION FOR PUBLIC USE DB. 5332, PG. 214

10' WIDE AREA RESERVED FOR FUTURE DEDICATION FOR PUBLIC USE (FOR GRADING PURPOSES) DB. 5332, PG. 214

EXISTING 30' PRESCRIPTIVE EASEMENT

EXISTING 100 YR FLOODPLAIN

PROPERTY BOUNDARY

PROP. VAR. WIDTH SIGHT DISTANCE ESMT D.B.____ P.G.____

PROPERTY LINE

EXISTING SIDEWALK

EXISTING SITE DISTANCE EASEMENT DB. 5332, PG. 329

EXISTING GRADING AND DRAINAGE EASEMENT D.B. 5332, PG. 169

R/W DEDICATED TO PUBLIC USE DB. 5332, PG.214

REPAIR PAVEMENT & MILL/OVERLAY AVON COURT FOR UTILITY & STORM INSTALLATION

708' TO NEAREST INTERSECTION (INTERSECTION OF AVON COURT & AVON STREET EXTENDED)

PROPOSED R/W DEDICATION

EXISTING TEMPORARY CONSTRUCTION EASEMENT DB. 5332, PG.349

EXISTING STREAM BUFFER

PROPOSED CONCRETE PAD w/ ENCLOSURE FOR GENERATORS, TRANSFORMERS, HVAC, ETC.

BEGIN 6' PLANTING STRIP

TRANSITION FROM 6' TO 3' PLANTING STRIP

BEGIN 3' PLANTING STRIP

10' FRONT SETBACK

30' FRONT SETBACK

MOORE'S CREEK

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: LAYOUT PLAN

JOB NO. 202193

SCALE 1" = 30'

SHEET NO. 4

MOORES CREEK

EXISTING 30' SANITARY SEWER EASEMENT D.B. 669, PG.248

PROPOSED 20' WIDE DRAINAGE EASEMENT D.B.____, PG.____

PROPOSED 30' WIDE DRAINAGE EASEMENT D.B.____, PG.____

MATCHLINE SEE THIS SHEET

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

EXISTING SANITARY SEWER

EXISTING VARIABLE WIDTH UTILITY EASEMENT TO BE DEDICATED TO THE ACSA D.B. 3575, PG. 28

EX SAN MH
TOP=352.74'
INV IN=342.39'
INV OUT=342.28'

PROPOSED 8" PVC SANITARY SEWER AND MANHOLE, TIE INTO EXISTING SANITARY SEWER MANHOLE

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

EX SAN MH
TOP=351.32'
INV IN=340.93'
INV OUT=340.76'

EXISTING 30' SANITARY SEWER EASEMENT D.B. 669, PG.248

OHE

PROPOSED 20' WIDE DRAINAGE EASEMENT D.B.____, PG.____

EXISTING 100-YEAR FLOODPLAIN

PROPOSED PUBLIC VAR. WIDTH SWM AND UTILITY AND ACCESS AND MAINTENANCE EASEMENT D.B.____, PG.____

PROPOSED DRAINAGE EASEMENT D.B.____, PG.____

PROPOSED PUBLIC VAR. WIDTH SWM AND UTILITY AND ACCESS AND MAINTENANCE EASEMENT D.B.____, PG.____

PROPOSED 8"x4" TEE, 4" G.V. 4" WATER LATERAL

PROPOSED 8"x6" TEE, 6" G.V. 6" D.I. FIRE LINE

PROPOSED 8"-45° BEND

PROPOSED 8"x6" REDUCER

PROPOSED 6"-45° BEND

PROPOSED SWM FACILITY

WATERLINE 1

PROPOSED 8"x6" TEE, 6" G.V. FIRE HYDRANT ASSEMBLY

PROPOSED 8" D.I. WATERLINE

PROPOSED 20' ACSA UTILITY EASEMENT D.B.____, PG.____

PROPOSED 8"x6" TEE, 6" G.V. FIRE HYDRANT ASSEMBLY

PROPOSED 6"-45° BEND

PROPOSED FDC

PROPOSED 3" WATER METER BOX

PROPOSED 2" TYPE K COPPER WATER SERVICE LATERAL

PROPOSED 4"-45° BEND

PROPOSED 8"-22.5° BEND

PROPOSED 8"x6" TEE
2-8" G.V., 1-6" G.V.
(TO WATERLINE 2)

AVON COURT
STATE ROUTE 1101

PROPOSED 8" D.I. WATERLINE

PROPOSED 20' WIDE DRAINAGE EASEMENT D.B.____, PG.____

PROPOSED 6"-22.5° BEND

PROPOSED 6"-45° BEND

WATERLINE 2

PROPOSED 4-STORY PARKING GARAGE
(305 TOTAL PARKING SPACES)

PROPOSED 4-STORY BUILDING w/ BASEMENT
(78,200 SF)

PROPOSED 20' ACSA UTILITY EASEMENT D.B.____, PG.____

PROPOSED 6" D.I. WATERLINE

PROPOSED 6" -90° BEND, 6" G.V., FIRE HYDRANT ASSEMBLY

PROPOSED 20' WIDE DRAINAGE EASEMENT D.B.____, PG.____

PROPOSED 20' ACSA AND RWSA ACCESS & UTILITY EASEMENT D.B.____, PG.____

PROPOSED 6"-90° BEND

PROPOSED FIRE HYDRANT ASSEMBLY, 6" G.V.

PROPOSED 20' WIDE DRAINAGE EASEMENT D.B.____, PG.____

PROPOSED 6" D.I. WATERLINE

PROPOSED PUBLIC VAR. WIDTH SWM AND UTILITY AND ACCESS AND MAINTENANCE EASEMENT D.B.____, PG.____

PROPOSED 20' ACSA UTILITY EASEMENT D.B.____, PG.____

EXISTING VARIABLE WIDTH UTILITY EASEMENT TO BE DEDICATED TO THE ACSA D.B. 3575, PG. 28

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

EXISTING 100' STREAM BUFFER

EXISTING 100-YEAR FLOODPLAIN

TMP 076M2-01-00-000D0
WILLOUGHBY PROPERTY OWNERS ASSOCIATION INC
C/O REAL PROPERTY INC

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

TMP 07700-00-00-00900
LIGHTHOUSE LAND, LLC

MATCHLINE SEE THIS SHEET

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

CONTRACTOR TO REPAIR ROADWAY FOR WATERLINE CONNECTION

REMOVE EXISTING 8" WATERLINE PLUG AND TIE INTO EXISTING ACSA 8" D.I. WATERLINE WITH PROPOSED 8" D.I. WATERLINE

EXISTING FIRE HYDRANT

EXISTING TEE

EXISTING TEMPORARY GRADING EASEMENT, D.B. 3568, PG. 347

EXISTING 8" D.I. WATERLINE

AVON COURT
STATE ROUTE 1101

WATERLINE 1

PROPOSED 8" 11.25° BEND

PROPOSED 8" D.I. WATERLINE

EXISTING 8" GATE VALVE

EXISTING UTILITY EASEMENT D.B. 3535, PG. 530

EXISTING VARIABLE WIDTH GRADING, DRAINAGE, & UTILITY EASEMENT D.B. 3535, PG. 530

TMP 07700-00-00-008C0
PSALM THIRTY FOUR PROPERTIES, LLC

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

DATE	REVISION DESCRIPTION
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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

UTILITY PLAN

PROJECT

SHEET

JOB NO. 202193

SCALE 1" = 30'

SHEET NO. 5

MATCHLINE SEE THIS SHEET

MOORES CREEK

PROPOSED RIPRAP TO EXTEND TO MOORE'S CREEK CHANNEL BANK

PROPOSED FLAT VDOT CL. A1 RIPRAP LINED OUTLET PROTECTION WITH FILTER FABRIC UNDERLAYMENT TO EXTEND TO MOORE'S CREEK (MIN. L=75', W1=6', W2=20', D=18"). RIPRAP OUTLET PROTECTION SHALL MEET MIN. EC-1 REQUIREMENTS

EXISTING VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT INST. #: 20230000460

CONTRACTOR TO INSTALL A VDOT STD. ES-1 AT THE PIPE'S OUTLET

364.08 TC
363.75 EP

EX SAN MH
TOP=352.74'
INV IN=342.39'
INV OUT=342.28'

MOORE'S CREEK

PROPOSED RIPRAP TO EXTEND TO MOORE'S CREEK CHANNEL BANK

PROPOSED FLAT VDOT CL. A1 RIPRAP LINED OUTLET PROTECTION WITH FILTER FABRIC UNDERLAYMENT TO EXTEND TO MOORE'S CREEK (MIN. L=50', W1=6', W2=10', D=18"). RIPRAP OUTLET PROTECTION SHALL MEET MIN. EC-1 REQUIREMENTS

NOTE: VDOT SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF ANY STORM WATER MANAGEMENT FACILITY OR OUTFALL STRUCTURE LOCATED OUTSIDE OF STATE MAINTAINED RIGHT OF WAY AND SHALL BE ABSOLVED FROM ALL RESPONSIBILITIES, DAMAGES, AND LIABILITIES BECAUSE OF SUCH.

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

CONTRACTOR TO INSTALL A VDOT STD. ES-1 AT THE PIPE'S OUTLET ET

EXISTING VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT P.INST. #: 20230000460

PUBLIC DRAINAGE & UTILITY EASEMENT, D.B.____, PG.____

EXISTING RWSA SANITARY SEWER

EX SAN MH
TOP=351.32'
INV IN=340.93'
INV OUT=340.76'

MATCHLINE SEE THIS SHEET

EXISTING STORM SEWER TO REMAIN

AVON COURT
STATE ROUTE 1101

TMP 07700-00-00-008C0
PSALM THIRTY FOUR PROPERTIES, LLC

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

EXISTING 21.5' WIDE AREA RESERVED FOR FUTURE DEDICATION TO PUBLIC USE DB. 5332, PG.214

PROPOSED RIGHT-OF-WAY DEDICATION AND RIGHT-OF-WAY EXTENSION TO PROPERTY LINE FOR INTERPARCEL CONNECTION

ALBEMARLE COUNTY MANAGED STEEP SLOPES (TYP.)

PROPOSED GRADING STEEPER THAN 3:1 SLOPE, ERNMX-866 NATIVE SEED MIX REQUIRED, SEE LANDSCAPING (TYP.)

WEST ENTRANCE ALIGNMENT

PROPOSED PUBLIC VAR. WIDTH DRAINAGE EASEMENT

EXISTING 10' WIDE AREA RESERVED FOR FUTURE DEDICATION FOR PUBLIC USE (FOR GRADING PURPOSES) DB, 5332, PG.214

TMP 07700-00-00-00900
LIGHTHOUSE LAND, LLC

RIGHT OF WAY DEDICATED TO PUBLIC USE, D.B.5332, PG.214

AVON COURT
STATE ROUTE 1101

BEGIN PROPOSED ROADWAY EXTENSION AVON COURT STA. 13+37

PROPOSED TRENCH DRAIN

MATCHLINE SEE THIS SHEET

EX 12B

PROPOSED DRY DETENTION BASIN 'A'

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

PROPOSED PUBLIC VAR. WIDTH SWM MAINTENANCE EASEMENT

ALBEMARLE COUNTY MANAGED STEEP SLOPES (TYP.)

PROPOSED SWM FACILITY

378.67

375.22
HIGH POINT

379.00
379.11 TC
378.78 EP

WALL 'B' SITTING WALL 30" MAX. HT.

389 SW
387TW
387BG
385BW

387.4
387.5
387.8

388.00

390 SW
388TW
388BG
386BW

WALL 'C' SITTING WALL 24" MAX. HT.

387.64 TC
387.69 EP

388.38 TC
388.43 EP

388.9

387.85 TC
387.52 EP

387.40 TC
387.07 EP

387.22 TC
386.89 EP

386.69 TC
386.26 EP

384.00 EP

MIDDLE ENTRANCE ALIGNMENT

EAST ENTRANCE ALIGNMENT

PROPOSED 4-STORY PARKING GARAGE
(305 TOTAL PARKING SPACES)

PROPOSED PRIVATE VAR. WIDTH DRAINAGE EASEMENT D.B.____ PG.____

EXISTING TEMPORARY GRADING & DRAINAGE EASEMENT TO BE VACATED

PROPOSED 4-STORY BUILDING w/ BASEMENT
(78,200 SF)

370.00TW
367.00 BG
365.00 BW

4' MAX. HT. INTERNAL TO BLDG.

370.00TW
370.00 BG
368.00 BW

370.00TW
366.00 BG
364.00 BW

PROPOSED 12" ROOF DRAIN LINE FROM BLDG

PROPOSED PUBLIC VAR. WIDTH SWM MAINTENANCE EASEMENT

PROPOSED UNDERGROUND DETENTION SYSTEM 'B'

PROPOSED 12" ROOF DRAIN LINE FROM BLDG

365.08 TC
364.75 EP

364.08 TC
363.75 EP

365.33 TC
364.82 EP

364.71 TC
364.38 EP

PROPOSED SWM FACILITY

PROPOSED GUARDRAIL INSTALLED AT BACK OF CURB

PROPOSED SEGMENTED RETAINING WALL WITH HANDRAIL

PROPOSED PUBLIC VAR. WIDTH DRAINAGE EASEMENT

EXISTING 100' STREAM BUFFER

EXISTING 100 YEAR FLOODPLAIN

EXISTING 100 YEAR FLOODPLAIN

371TW
371BG
368BW

372TW
370BG
368BW

374TW
370BG
368BW

376TW
370BG
368BW

378TW
371BG
369BW

380TW
372BG
370BW

382TW
372BG
370BW

384TW
376BG
372BW

380TW
380BG
378BW

WALL 'A' 10' MAX. HT.

EXISTING PRESERVED STEEP SLOPES

PRESERVED STEEP SLOPES CLASSIFIED AS MANAGED SLOPES BASED ON FIELD RUN TOPO ELEVATIONS PER ALBEMARLE COUNTY CODE SECTION 18-30.7(4)B.1.H. (TYP.)

TMP 076M2-01-00-000D0
WILLOUGHBY PROPERTY OWNERS ASSOCIATION INC
C/O REAL PROPERTY INC

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: GRADING & DRAINAGE PLAN

JOB NO. 202193
SCALE 1" = 30'
SHEET NO. 6

Structure	Area (Acres)	Cw	Total t_c (Min.)
2	0.00	0.90	5.0
4	0.09	0.77	5.0
6	0.00	0.90	5.0
8	0.16	0.63	5.0
10	0.01	0.90	5.0
12	0.23	0.84	5.0
14	0.15	0.79	5.0
16	0.10	0.47	5.0
18	0.23	0.87	5.0
20	0.21	0.90	5.0
22	0.30	0.86	5.0
24	0.00	0.90	5.0
26	0.00	0.90	5.0
28	0.10	0.73	5.0
30	0.07	0.79	5.0
32	0.00	0.90	5.0
34	0.16	0.80	5.0
36	0.06	0.84	5.0
38	0.10	0.47	5.3
40	0.13	0.72	5.0
42	0.20	0.55	5.5
44	0.13	0.66	5.0
46	0.46	0.90	5.0
BLDG	1.80	0.90	5.0
GAR	0.61	0.90	5.0
EX126	0.00	0.90	5.0
48	0.11	0.56	5.0

MOORE'S CREEK

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

EX SAN MH
TOP=351.32'
INV IN=340.93'
INV OUT=340.76'

EX SAN MH
TOP=351.84'
INV IN=341.39'
INV OUT=341.29'

AVON COURT
STATE ROUTE 1101

TMP 07700-00-00-00900
LIGHTHOUSE LAND, LLC

PROPOSED 4-STORY
BUILDING w/ BASEMENT
(78,200 SF)

PROPOSED 4-STORY
PARKING GARAGE
(305 TOTAL PARKING SPACES)

TMP 07700-00-00-00700
CITY OF CHARLOTTESVILLE

TMP 076M2-01-00-000D0
WILLOUGHBY PROPERTY
OWNERS ASSOCIATION INC
C/O REAL PROPERTY INC

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET
DRAINAGE MAP

JOB NO. 202193
SCALE 1" = 30'
SHEET NO. 7

10-YEAR STORM SEWER CAPACITY CALCULATIONS

Design Storm Year = 10

POINT	DOWNSTREAM STRUCTURE	DRAIN AREA ACRES	RUNOFF COEFF. C	CA INCR	CA ACCUM	INLET TIME MIN	RAIN FALL MIN	RUNOFF Q C.F.S.	INVERT ELEVATIONS UPPER	INVERT ELEVATIONS LOWER	LENGTH FEET	SLOPE FT./FT.	DIA INCHES	CAPA-CITY C.F.S.	VEL F.P.S.	FLOW TIME SEC
12		0.23	0.84	0.19	0.19	5.00	6.67	1.3								
	10								372.95	371.97	72.52	0.0135	15	8.1	4.7	15.3
10		0.01	0.90	0.01	0.34	6.07	6.33	2.2								
	8								371.87	368.70	125.94	0.0252	15	11.1	6.9	18.3
8		0.16	0.63	0.10	0.44	6.37	6.24	2.8								
	6								368.60	367.22	62.23	0.0222	15	10.4	7.2	8.7
6		0.00	0.90	0.00	0.44	6.52	6.20	2.8								
	4								367.12	364.56	47.35	0.0541	15	16.3	9.7	4.9
4		0.09	0.77	0.07	0.51	6.60	6.18	3.2								
	2								364.46	364.28	18.17	0.0099	15	7.0	5.5	3.3
2		0.00	0.90	0.00	0.51	6.65	6.16	3.2								
	BASIN								364.18	364.00	35.49	0.0051	15	5.0	4.3	8.3
14		0.15	0.79	0.12	0.12	5.00	6.67	0.8								
	BASIN								363.31	363.00	39.38	0.0079	15	6.2	3.4	11.7
18		0.23	0.87	0.20	0.20	5.00	6.67	1.3								
	UGD								360.00	359.30	42.59	0.0164	15	9.0	5.2	8.1
44		0.13	0.66	0.09	0.09	5.00	6.67	0.6								
	42								378.01	377.76	48.75	0.0051	15	5.0	2.7	18.3
42		0.20	0.55	0.11	0.20	5.49	6.51	1.3								
	34								377.66	377.42	37.17	0.0065	15	5.6	3.7	10.1
34		0.16	0.80	0.13	0.32	5.66	6.46	2.1								
	32								377.32	377.13	31.94	0.0059	15	5.4	4.1	7.8
32		0.00	0.90	0.00	0.32	5.79	6.41	2.1								
	30								377.03	376.32	117.97	0.0060	15	5.4	4.1	28.5
30		0.07	0.79	0.06	0.93	6.27	6.27	5.8								
	28								376.22	375.65	80.99	0.0070	15	5.9	5.5	14.9
28		0.10	0.73	0.08	1.01	6.51	6.20	6.2								
	26								375.55	375.10	57.40	0.0078	15	LOW	5.1	11.3
26		0.00	0.90	0.00	1.10	6.70	6.15	6.7								
	24								375.00	366.21	294.45	0.0299	15	12.1	10.1	29.2
24		0.00	0.90	0.00	1.10	7.19	6.02	6.7								
	22								366.11	363.42	54.56	0.0493	15	15.5	12.2	4.5
22		0.30	0.86	0.26	1.36	7.26	6.00	8.1								
	20								361.65	360.60	187.45	0.0056	18	8.5	5.5	34.2
20		0.21	0.90	0.19	1.55	7.83	5.85	9.0								
	UGD								360.50	360.25	16.29	0.0153	18	14.1	8.5	1.9
38		0.10	0.47	0.05	0.05	5.27	6.58	0.3								
	36								374.40	374.23	28.57	0.0060	15	5.4	2.4	12.1
36		0.06	0.84	0.05	0.10	5.47	6.52	0.6								
	16								374.13	372.41	99.36	0.0173	15	9.2	4.2	23.7
16		0.10	0.47	0.05	0.14	5.87	6.39	0.9								
	10								372.31	371.97	42.71	0.0080	15	6.2	3.6	12.0
40		0.13	0.72	0.09	0.09	5.00	6.67	0.6								
	26								378.64	378.33	48.67	0.0064	15	5.6	3.0	16.4
46		0.46	0.90	0.41	0.41	5.00	6.67	2.8								
	UGD								359.54	359.30	26.75	0.0090	15	6.6	5.1	5.2
48		0.11	0.56	0.06	0.06	5.00	6.67	0.4								
	EX126								392.68	392.31	26.92	0.0137	15	8.2	3.5	7.8
GAR		0.61	0.90	0.55	0.55	5.00	6.67	3.7								
	30								384.00	378.40	52.05	0.1076	12	12.7	13.8	3.8

Design Year: **10** Project: Avon Court Industrial Job #: 202193 Prepared by: KKW, PE

INLET STATION	OUTLET WATER SURFACE ELEV	L_o	D_o	Q_o ZW	S_{fo}	H_f	V_o	H_o	Q_{IN}	V_{IN}	Q_i*V_i	$V_i^2/2g$	H_i	ANGLE	H_Δ	H_t	$1.3H_t$	$.5H_t$	FINAL H	INLET WATER SURFACE ELEV.	RIM ELEV
	379.20	52.05	12	3.65	0.009	0.47	4.7	0.1													
GAR													0.00	0	0	0.08	N/A	N/A	0.55	**379.75**	**388.00**
	393.31	26.92	15	0.40	0.000	0.00	0.3	0.0													
48													0.00	0	0	0.00	NA	N/A	0.00	**393.31**	**396.68**
	362.00	26.75	15	2.76	0.002	0.04	2.2	0.0													
46													0.00	0	0	0.02	NA	0.01	0.05	**362.05**	**364.08**
	379.33	48.67	15	0.60	0.000	0.00	0.5	0.0													
40													0.00	25	0	0.00	NA	0.00	0.00	**379.33**	**384.28**
	372.97	42.71	15	0.91	0.000	0.01	0.7	0.0													
16									0.6	0.5	0.32	0.0	0.00	90	0.003	0.01	NA	0.00	0.01	**372.98**	**379.11**
	373.41	99.36	15	0.62	0.000	0.01	0.5	0.0													
36									0.3	0.3	0.08	0.0	0.00	71	6E-04	0.00	NA	0.00	0.01	**373.42**	**381.37**
	375.23	28.57	15	0.32	0.000	0.00	0.3	0.0													
38													0.00	64	0	0.00	NA	0.00	0.00	**375.23**	**381.18**
	362.00	16.29	18	9.04	0.006	0.10	5.1	0.1													
20									8.1	4.6	37.5	0.3	0.12	0	0	0.22	NA	0.11	0.27	**362.27**	**365.89**
	362.27	187.45	18	8.14	0.005	0.96	4.6	0.1													
22									6.7	5.5	37	0.5	0.16	89	0.309	0.56	NA	0.28	1.24	**363.51**	**369.50**
	364.42	54.56	15	6.74	0.009	0.51	5.5	0.1													
24									6.7	5.5	37	0.5	0.16	15	0.047	0.33	N/A	0.16	0.67	**365.09**	**371.82**
	367.21	294.45	15	6.74	0.009	2.73	5.5	0.1													
26									6.2	5.1	31.8	0.4	0.14	15	0.04	0.30	N/A	0.15	2.88	**370.09**	**384.51**
	376.10	57.40	15	6.24	0.008	0.46	5.1	0.1													
28									5.8	4.8	27.8	0.4	0.12	88	0.232	0.46	NA	0.23	0.68	**376.78**	**386.59**
	376.78	80.99	15	5.84	0.007	0.56	4.8	0.1													
30									3.7	13.8	50.4	3.0	1.03	2	0	1.12	NA	0.56	1.12	**377.91**	**387.40**
	377.91	117.97	15	2.09	0.001	0.11	1.7	0.0													
32									2.1	1.7	3.55	0.0	0.02	9	0	0.03	N/A	0.01	0.12	**378.03**	**385.90**
	378.13	31.94	15	2.09	0.001	0.03	1.7	0.0													
34									1.3	1.0	1.34	0.0	0.01	50	0.008	0.03	NA	0.01	0.04	**378.17**	**384.35**
	378.42	37.17	15	1.28	0.000	0.01	1.0	0.0													
42									0.6	0.5	0.27	0.0	0.00	47	0.001	0.01	NA	0.00	0.02	**378.44**	**385.29**
	378.76	48.75	15	0.58	0.000	0.00	0.5	0.0													
44													0.00	66	0	0.00	NA	0.00	0.00	**378.76**	**385.27**
	362.00	42.59	15	1.34	0.000	0.02	1.1	0.0													
18													0.00	0	0	0.00	NA	0.00	0.02	**362.02**	**365.08**
	364.00	39.38	15	0.77	0.000	0.00	0.6	0.0													
14													0.00	0	0	0.00	NA	0.00	0.01	**364.01**	**367.75**
	365.00	35.49	15	3.15	0.002	0.07	2.6	0.0													
2									3.2	2.6	8.1	0.1	0.04	0	0	0.06	N/A	0.03	0.10	**365.10**	**368.55**
	365.28	18.17	15	3.15	0.002	0.04	2.6	0.0													
4									2.8	2.2	6.17	0.1	0.03	89	0.052	0.10	NA	0.05	0.09	**365.37**	**370.02**
	365.56	47.35	15	2.75	0.002	0.07	2.2	0.0													
6									2.8	2.2	6.17	0.1	0.03	73	0.048	0.09	N/A	0.05	0.12	**365.68**	**371.85**
	368.22	62.23	15	2.75	0.002	0.10	2.2	0.0													
8									2.2	1.8	3.82	0.0	0.02	18	0.005	0.04	NA	0.02	0.12	**368.34**	**374.38**
	369.70	125.94	15	2.17	0.001	0.12	1.8	0.0													
10									0.9	3.6	3.24	0.2	0.07	32	0.055	0.14	NA	0.07	0.19	**369.89**	**377.68**
	372.97	72.52	15	1.30	0.000	0.02	1.1	0.0													
12													0.00	26	0	0.00	NA	0.00	0.03	**373.00**	**377.92**

INLETS IN SUMP CALCULATIONS

INLETS IN SUMP, DESIGN (CURB SPREAD AND INLET SPREAD AND DEPTH)

Intensity 4.00 (Intensity is 4 in/hr for spread, and 6.5 in/hr for capacity and depth)
Mannings Coefficient, n is 0.013

Inlet: Plan Label	VDOT DI type	L, throat length (ft)	Hydrology	A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	Curb and Gutter: S, gutter longitudinal slope (ft/ft) *	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	Sw/Sx	T, spread at curb (ft)	Inlet: d, flow depth (ft)	d / h (height of opening, 5.5")	T, spread at inlet (ft)	Remarks
										0.0010	0.0300	2.0	0.0500	1.6667	0.00				
			all	0.23	0.84	0.194	0.78	0.00	0.78	0.0010	0.0300	2.0	0.0500	1.6667	7.25				
12	3C	**8.0**						combined flow	0.8							0.09	0.207	**3.16**	
										0.0010	0.0200	2.0	0.0200	1.0000	0.00				
			all	0.10	0.47	0.047	0.19	0.00	0.19	0.0010	0.0200	2.0	0.0200	1.0000	5.48				
16	3C	**6.0**						combined flow	0.2							0.04	0.091	**2.08**	
										0.0010	0.0200	2.0	0.0200	1.0000	0.00				
			all	0.17	0.52	0.087	0.35	0.00	0.35	0.0010	0.0200	2.0	0.0200	1.0000	6.91				
42	3C	**6.0**						combined flow	0.3							0.06	0.137	**3.14**	
			all	0.46	0.90	0.414	1.65	0.00	1.65	0.0010	0.0150	2.0	0.0833	5.5533	14.85				
46	3C	**16.0**						combined flow	1.7							0.11	0.241	**7.36**	

* gutter longitudinal slope of 0.001 should be used in a sump condition
- grate inlets (DI-7) in open pavement areas will not have a curb spread, but will have inlet spread and depth
- for inlets draining to stormwater management facilities, the 6.5in/hr check storm will suffice for the 10yr conveyance to the facilities

NOTE: Inlet size for structures determined by overland flow. Pipes have been sized to include overland flow as well as yard inlet and roof drain drainage areas.

INLETS IN SUMP, DESIGN (CURB SPREAD AND INLET SPREAD AND DEPTH)

Intensity 6.50 (Intensity is 4 in/hr for spread, and 6.5 in/hr for capacity and depth)
Mannings Coefficient, n is 0.013

Inlet: Plan Label	VDOT DI type	L, throat length (ft)	Hydrology	A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	Curb and Gutter: S, gutter longitudinal slope (ft/ft) *	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	Sw/Sx	T, spread at curb (ft)	Inlet: d, flow depth (ft)	d / h (height of opening, 5.5")	T, spread at inlet (ft)	Remarks
										0.0010	0.0300	2.0	0.0500	1.6667	0.00				
			all	0.23	0.84	0.194	1.26	0.00	1.26	0.0010	0.0300	2.0	0.0500	1.6667	8.70				
12	3C	**8.0**						combined flow	1.3							0.13	0.286	**4.36**	
										0.0010	0.0200	2.0	0.0200	1.0000	0.00				
			all	0.10	0.47	0.047	0.30	0.00	0.30	0.0010	0.0200	2.0	0.0200	1.0000	6.57				
16	3C	**6.0**						combined flow	0.3							0.06	0.125	**2.87**	
										0.0010	0.0200	2.0	0.0200	1.0000	0.00				
			all	0.17	0.52	0.087	0.57	0.00	0.57	0.0010	0.0200	2.0	0.0200	1.0000	8.30				
42	3C	**6.0**						combined flow	0.6							0.09	0.190	**4.35**	
			all	0.46	0.90	0.414	2.69	0.00	2.69	0.0010	0.0150	2.0	0.0833	5.5533	17.81				
46	3C	**16.0**						combined flow	2.7							0.15	0.333	**10.18**	

* gutter longitudinal slope of 0.001 should be used in a sump condition
- grate inlets (DI-7) in open pavement areas will not have a curb spread, but will have inlet spread and depth
- for inlets draining to stormwater management facilities, the 6.5in/hr check storm will suffice for the 10yr conveyance to the facilities

NOTE: Inlet size for structures determined by overland flow. Pipes have been sized to include overland flow as well as yard inlet and roof drain drainage areas.

10-YEAR STORM SEWER HYDRAULIC GRADE CALCULATIONS

Table 8: Pipe Design Table

PIPE DESIGN

n = 0.013

Pipe: Starting Structure	Ending Structure	Hydrology: A, Drainage area (acres)	C, rational coeff.	CA increment	CA sum accumulated	Tc, time of conc. (min)	I, rainfall Intesity	Q, flow incr. (cfs)	Qt, total flow	Pipe: Invert in (ft)	Invert out (ft)	L, throat length (ft)	n, manning's coeff.	S, slope	D, Diameter (in)	Full Flow Capacity (cfs)	V, Velocity (fps)	Flow Time (min)	Remarks
Pipe run: STR 12 - BASIN																			
12	10	0.23	0.84	0.194	0.194	5.00	6.67	1.30	1.30	372.95	371.97	72.5	0.013	0.0135	15	8.14	4.75	0.25	
10	8	0.01	0.90	0.005	0.342	6.07	6.33	0.03	2.17	371.87	368.70	125.9	0.013	0.0252	15	11.10	6.89	0.30	
8	6	0.16	0.63	0.099	0.441	6.37	6.24	0.62	2.75	368.60	367.22	62.2	0.013	0.0222	15	10.42	7.16	0.14	
6	4	0.00	0.90	0.000	0.441	6.52	6.20	0.00	2.75	367.12	364.56	47.4	0.013	0.0541	15	16.27	9.71	0.08	
4	2	0.09	0.77	0.069	0.510	6.60	6.18	0.43	3.15	364.46	364.28	18.2	0.013	0.0099	15	6.97	5.52	0.05	
2	BASIN	0.00	0.90	0.000	0.510	6.65	6.16	0.00	3.15	364.18	364.00	35.5	0.013	0.0051	15	4.98	4.28	0.14	
Pipe run: STR 14 - STR 4																			
14	BASIN	0.15	0.79	0.115	0.115	5.00	6.67	0.77	0.77	363.31	363.00	39.4	0.013	0.0079	15	6.21	3.38	0.19	
Pipe run: STR 18 - STR 10																			
18	UGD	0.23	0.87	0.201	0.201	5.00	6.67	1.34	1.34	360.00	359.30	42.6	0.013	0.0164	15	8.97	5.24	0.14	
Pipe run: STR 38 - UGD																			
42	34	0.20	0.55	0.111	0.197	5.49	6.51	0.72	1.28	377.66	377.42	37.2	0.013	0.0065	15	5.62	3.68	0.17	
34	32	0.16	0.80	0.127	0.324	5.66	6.46	0.82	2.09	377.32	377.13	31.9	0.013	0.0059	15	5.40	4.11	0.13	
32	30	0.00	0.90	0.000	0.324	5.79	6.41	0.00	2.09	377.03	376.32	118.0	0.013	0.0060	15	5.43	4.13	0.48	
30	28	0.07	0.79	0.059	0.930	6.27	6.27	0.37	5.84	376.22	375.65	81.0	0.013	0.0070	15	5.87	5.45	0.25	
28	26	0.10	0.73	0.076	1.006	6.51	6.20	0.47	6.24	375.55	375.10	57.4	0.013	0.0078	15	LOW	5.09	0.19	
26	24	0.00	0.90	0.000	1.096	6.70	6.15	0.00	6.74	375.00	366.21	294.5	0.013	0.0299	15	12.09	10.09	0.49	
24	22	0.00	0.90	0.000	1.096	7.19	6.02	0.00	6.74	366.11	363.42	54.6	0.013	0.0493	15	15.54	12.21	0.07	
22	20	0.30	0.86	0.260	1.356	7.26	6.00	1.56	8.14	361.65	360.60	187.5	0.013	0.0056	18	8.52	5.49	0.57	
20	UGD	0.21	0.90	0.189	1.545	7.83	5.85	1.10	9.04	360.50	360.25	16.3	0.013	0.0153	18	14.10	8.46	0.03	
Pipe run: STR 42 - STR 30																			
36	16	0.06	0.84	0.048	0.096	5.47	6.52	0.31	0.62	374.13	372.41	99.4	0.013	0.0173	15	9.21	4.19	0.40	
16	10	0.10	0.47	0.047	0.142	5.87	6.39	0.30	0.91	372.31	371.97	42.7	0.013	0.0080	15	6.24	3.57	0.20	
Pipe run: STR 44 - STR 40																			
40	26	0.13	0.72	0.090	0.090	5.00	6.67	0.60	0.60	378.64	378.33	48.7	0.013	0.0064	15	5.59	2.96	0.27	
Pipe run: STR 46 - UGD																			
46	UGD	0.46	0.90	0.414	0.414	5.00	6.67	2.76	2.76	359.54	359.30	26.8	0.013	0.0090	15	6.63	5.10	0.09	
Pipe run: STR EX2 - EX140																			
48	EX126	0.11	0.56	0.060	0.060	5.00	6.67	0.40	0.40	392.68	392.31	26.9	0.013	0.0137	15	8.20	3.46	0.13	
GAR	30	0.61	0.90	0.548	0.548	5.00	6.67	3.65	3.65	384.00	378.40	52.1	0.013	0.1076	12	12.66	13.79	0.06	

INLETS ON GRADE CALCULATIONS

INLETS ON GRADE, DESIGN (CURB SPREAD AND INLET CAPTURE)

Intensity 4.00 (Intensity is 4 in/hr for spread, and 6.5 in/hr for capacity and depth)
Mannings Coefficient, n is 0.013

Inlet: Plan Label	VDOT DI type	L, throat length (ft)	Hydrology: A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	Curb and Gutter: S, gutter longitudinal slope (ft/ft)	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	Sw/Sx	T, spread at curb (ft)	Eo, frontal flow ratio in gutter W	Inlet: a, 12W(Sw-Sx)+ 2"local depr. (in)	S'w = a/(12W)	Se = Sx+S'w(Eo)	Lt, require throat length (ft)	L / Lt	E, inlet efficiency	Qi, flow intercepted	Qb, carry-over	carry-over to inlet	Maximum allowable spread
4	3B	**6.0**	0.09	0.77	0.069	0.28	0.00	0.28	0.0247	0.0200	2.0	0.0833	4.1650	3.48	0.97	3.5192	0.1466	0.1622	**4.34**	1.38	1.00	0.28	0.00		
8	3B	**8.0**	0.16	0.63	0.099	0.39	0.00	0.39	0.0500	0.0200	2.0	0.0833	4.1650	3.48	0.93	3.5192	0.1466	0.1564	**6.36**	1.26	1.00	0.39	0.00		
10	3B	**4.0**	0.01	0.90	0.005	0.02	0.00	0.02	0.0200	0.0200	2.0	0.0833	4.1650	1.38	0.99	3.5192	0.1466	0.1652	**1.37**	2.93	1.00	0.02	0.00		
14	3B	**6.0**	0.15	0.79	0.115	0.46	0.00	0.46	0.0132	0.0200	2.0	0.0833	4.1650	4.74	0.84	3.5192	0.1466	0.1432	**4.80**	1.25	1.00	0.46	0.00		
18	3B	**8.0**	0.23	0.87	0.201	0.81	0.00	0.81	0.0132	0.0100	2.0	0.0833	8.3300	9.01	0.73	3.7592	0.1566	0.1243	**6.60**	1.21	1.00	0.81	0.00		
20	3B	**8.0**	0.21	0.90	0.189	0.75	0.00	0.75	0.0104	0.0100	2.0	0.0833	8.3300	9.18	0.73	3.7592	0.1566	0.1243	**5.98**	1.34	1.00	0.75	0.00		
22	3B	**12.0**	0.30	0.86	0.260	1.04	0.00	1.04	0.0460	0.0200	2.0	0.0833	4.1650	5.09	0.81	3.5192	0.1466	0.1388	**10.01**	1.20	1.00	1.04	0.00		
28	2B	**6.0**	0.11	0.74	0.085	0.34	0.00	0.34	0.0200	0.0200	2.0	0.0833	4.1650	3.91	0.91	3.5192	0.1466	0.1534	**4.59**	1.31	1.00	0.34	0.00		
30	2B	**4.0**	0.07	0.79	0.059	0.23	0.00	0.23	0.0100	0.0200	2.0	0.0833	4.1650	3.87	0.91	3.5192	0.1466	0.1534	**3.19**	1.26	1.00	0.23	0.00		
34	3B	**8.0**	0.16	0.80	0.127	0.51	0.00	0.51	0.0367	0.0200	2.0	0.0833	4.1650	4.05	0.89	3.5192	0.1466	0.1505	**6.59**	1.21	1.00	0.51	0.00		
36	3B	**6.0**	0.06	0.84	0.048	0.19	0.00	0.19	0.0400	0.0200	2.0	0.0833	4.1650	2.76	0.98	3.5192	0.1466	0.1637	**4.26**	1.41	1.00	0.19	0.00		
38	3B	**6.0**	0.10	0.47	0.048	0.19	0.00	0.19	0.0400	0.0200	2.0	0.0833	4.1650	2.77	0.98	3.5192	0.1466	0.1637	**4.28**	1.40	1.00	0.19	0.00		
40	3B	**6.0**	0.13	0.72	0.090	0.36	0.00	0.36	0.0200	0.0200	2.0	0.0833	4.1650	3.99	0.90	3.5192	0.1466	0.1520	**4.72**	1.27	1.00	0.36	0.00		
44	3B	**8.0**	0.13	0.66	0.086	0.35	0.00	0.35	0.0667	0.0200	2.0	0.0833	4.1650	3.14	0.96	3.5192	0.1466	0.1608	**6.45**	1.24	1.00	0.35	0.00		

- for inlets draining to stormwater management facilities, where overland flow to facilities is not available, 100% capture is required at 6.5in/hr

INLETS ON GRADE, DESIGN (CURB SPREAD AND INLET CAPTURE)

Intensity 6.50 (Intensity is 4 in/hr for spread, and 6.5 in/hr for capacity and depth)
Mannings Coefficient, n is 0.013

Inlet: Plan Label	VDOT DI type	L, throat length (ft)	Hydrology: A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	Curb and Gutter: S, gutter longitudinal slope (ft/ft)	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	Sw/Sx	T, spread at curb (ft)	Eo, frontal flow ratio in gutter W	Inlet: a, 12W(Sw-Sx)+ 2"local depr. (in)	S'w = a/(12W)	Se = Sx+S'w(Eo)	Lt, require throat length (ft)	L / Lt	E, inlet efficiency	Qi, flow intercepted	Qb, carry-over	carry-over to inlet	Maximum allowable spread
4	3B	**6.0**	0.09	0.77	0.069	0.45	0.00	0.45	0.0247	0.0200	2.0	0.0833	4.1650	4.18	0.93	3.5192	0.1466	0.1564	**5.45**	1.10	1.00	0.45	0.00		
8	3B	**8.0**	0.16	0.63	0.099	0.64	0.00	0.64	0.0500	0.0200	2.0	0.0833	4.1650	4.17	0.93	3.5192	0.1466	0.1564	**7.80**	1.03	1.00	0.64	0.00		
10	3B	**4.0**	0.01	0.90	0.005	0.03	0.00	0.03	0.0200	0.0200	2.0	0.0833	4.1650	1.65	0.99	3.5192	0.1466	0.1652	**1.67**	2.39	1.00	0.03	0.00		
14	3B	**6.0**	0.15	0.79	0.115	0.75	0.00	0.75	0.0132	0.0200	2.0	0.0833	4.1650	5.68	0.84	3.5192	0.1466	0.1432	**5.88**	1.02	1.00	0.75	0.00		
18	3B	**8.0**	0.23	0.87	0.201	1.31	0.00	1.31	0.0132	0.0100	2.0	0.0833	8.3300	10.81	0.73	3.7592	0.1566	0.1243	**8.09**	0.99	1.00	1.31	0.00		
20	3B	**8.0**	0.21	0.90	0.189	1.23	0.00	1.23	0.0104	0.0100	2.0	0.0833	8.3300	11.02	0.73	3.7592	0.1566	0.1243	**7.34**	1.09	1.00	1.23	0.00		
22	3B	**12.0**	0.30	0.86	0.260	1.69	0.00	1.69	0.0460	0.0200	2.0	0.0833	4.1650	6.10	0.81	3.5192	0.1466	0.1388	**12.28**	0.98	1.00	1.69	0.00		
28	2B	**6.0**	0.11	0.74	0.085	0.55	0.00	0.55	0.0200	0.0200	2.0	0.0833	4.1650	4.69	0.91	3.5192	0.1466	0.1534	**5.62**	1.07	1.00	0.55	0.00		
30	2B	**4.0**	0.07	0.79	0.059	0.38	0.00	0.38	0.0100	0.0200	2.0	0.0833	4.1650	4.64	0.91	3.5192	0.1466	0.1534	**3.91**	1.02	1.00	0.38	0.00		
34	3B	**8.0**	0.16	0.80	0.127	0.82	0.00	0.82	0.0367	0.0200	2.0	0.0833	4.1650	4.86	0.89	3.5192	0.1466	0.1505	**8.08**	0.99	1.00	0.82	0.00		
36	3B	**6.0**	0.06	0.84	0.048	0.31	0.00	0.31	0.0400	0.0200	2.0	0.0833	4.1650	3.31	0.98	3.5192	0.1466	0.1637	**5.22**	1.15	1.00	0.31	0.00		
38	3B	**6.0**	0.10	0.47	0.048	0.31	0.00	0.31	0.0400	0.0200	2.0	0.0833	4.1650	3.33	0.98	3.5192	0.1466	0.1637	**5.25**	1.14	1.00	0.31	0.00		
40	3B	**6.0**	0.13	0.72	0.090	0.58	0.00	0.58	0.0200	0.0200	2.0	0.0833	4.1650	4.78	0.90	3.5192	0.1466	0.1520	**5.79**	1.04	1.00	0.58	0.00		
44	3B	**8.0**	0.13	0.66	0.086	0.56	0.00	0.56	0.0667	0.0200	2.0	0.0833	4.1650	3.76	0.96	3.5192	0.1466	0.1608	**7.91**	1.01	1.00	0.56	0.00		

- for inlets draining to stormwater management facilities, where overland flow to facilities is not available, 100% capture is required at 6.5in/hr

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
02/17/25
PROFESSIONAL ENGINEER

REVISIONS

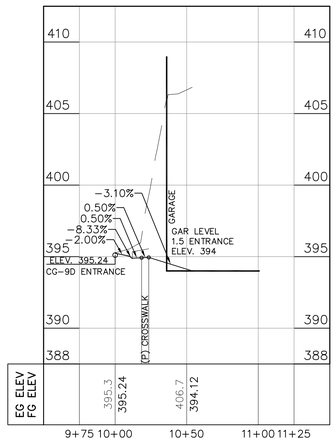
DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

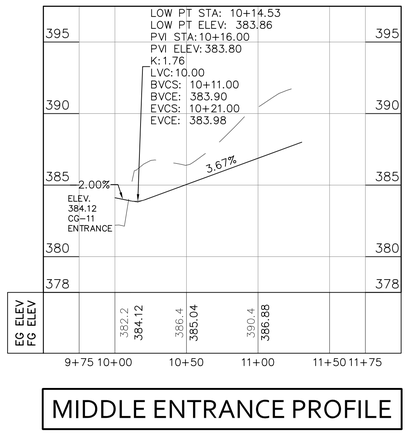
SHEET
DRAINAGE CALCULATIONS

JOB NO. 202193
SCALE 1" = 30'
SHEET NO. 8



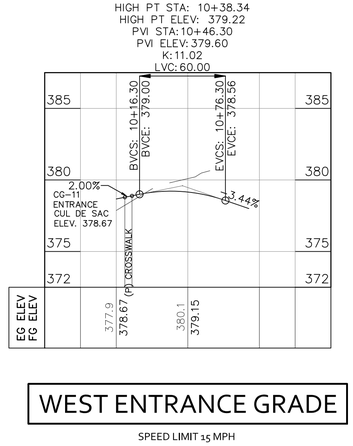
EAST ENTRANCE GRADE

SPEED LIMIT 10 MPH



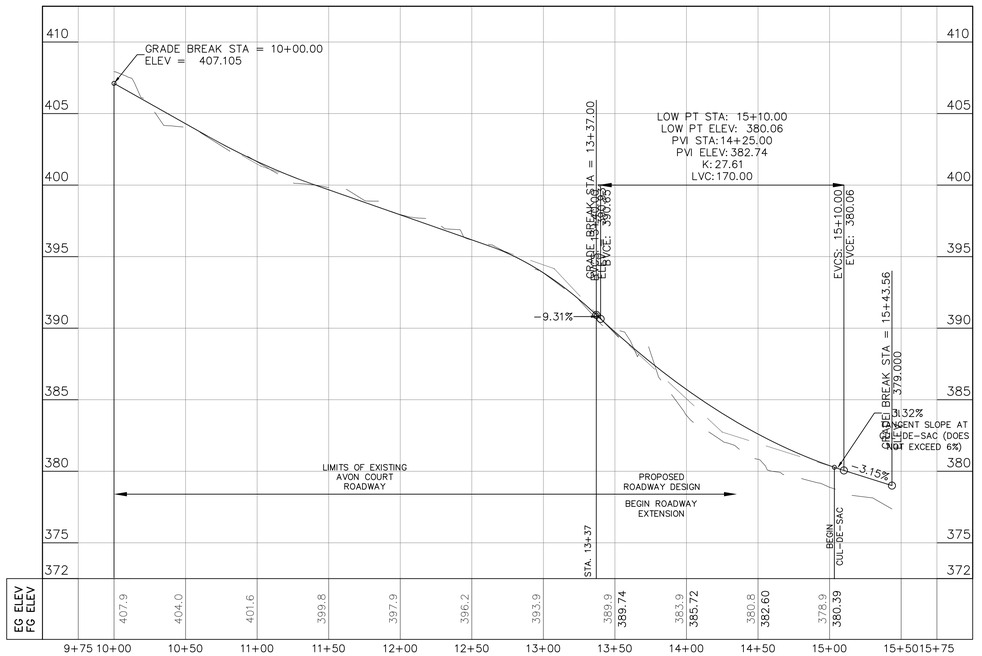
MIDDLE ENTRANCE PROFILE

SPEED LIMIT 15 MPH



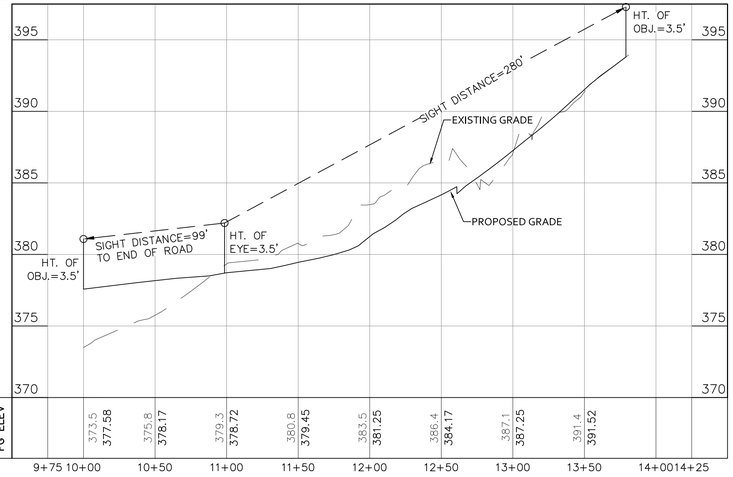
WEST ENTRANCE GRADE

SPEED LIMIT 15 MPH

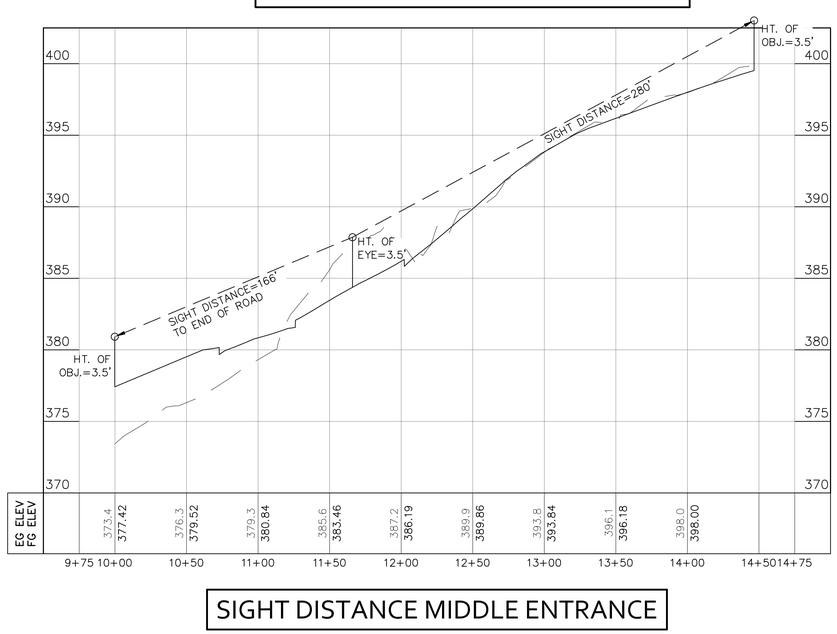


AVON COURT EXTENSION

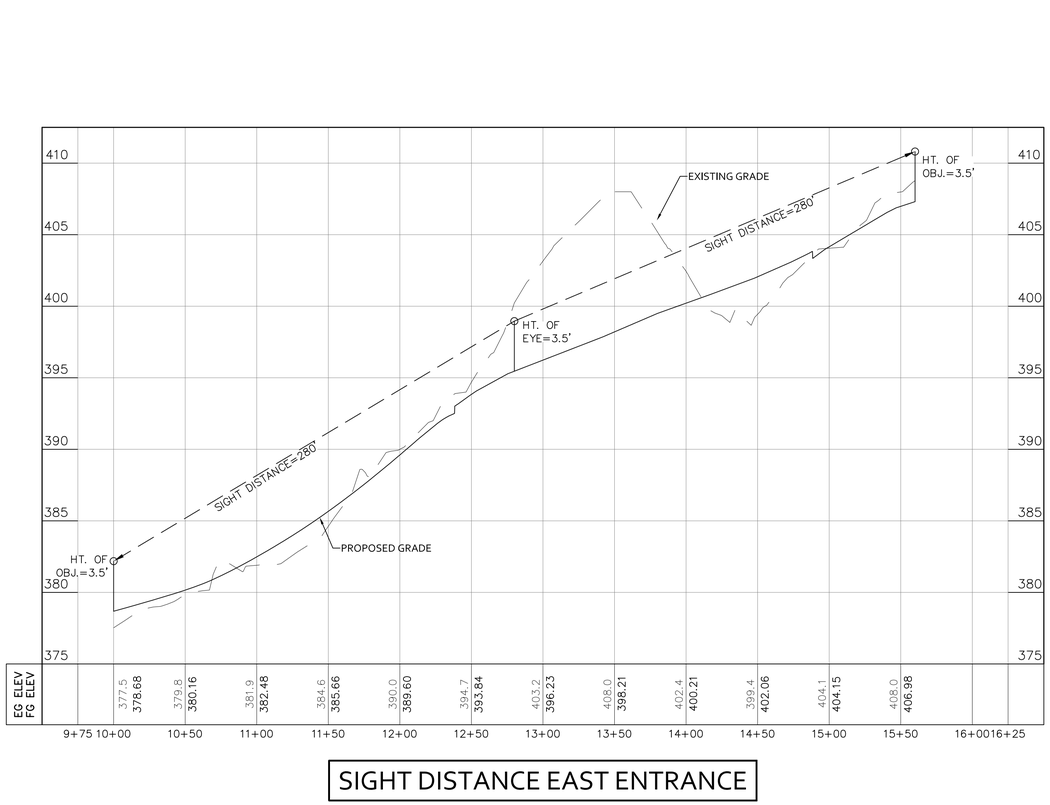
PUBLIC ROAD
SPEED LIMIT 25 MPH



SIGHT DISTANCE WEST ENTRANCE



SIGHT DISTANCE MIDDLE ENTRANCE



SIGHT DISTANCE EAST ENTRANCE

NOTE: ALL ROADWAY EMBANKMENT MATERIAL SHALL CONSIST OF SOIL AND BE PLACED IN SUCCESSIVE UNIFORM LAYERS NOT MORE THAN 18 INCHES IN THICKNESS BEFORE COMPACTION OVER THE ENTIRE ROADBED AREA IN ACCORDANCE WITH VDOT 2020 ROAD AND BRIDGE SPECIFICATION 303.04(h)

NOTE: CLASS I BACKFILL MATERIAL SHALL BE CRUSHER RUN AGGREGATE SIZE NO. 25 OR 26, AGGREGATE BASE MATERIAL SIZE 21A OR 21B, FLOWABLE FILL, CONFORMING TO SECTIONS 205, 208 OR 249 RESPECTIVELY, OR CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26, PER VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 302.03(a)2G "BACKFILLING".

NOTES:
1. ALL FILL TO BE PLACED AT 95% COMPACTION.
2. MINIMUM 3.5' OF COVER MUST BE MAINTAINED OVER W/L.
3. MINIMUM OF 1' OF VERTICAL SEPARATION FROM STORM SEWER & W/L AND 1.5' OF SEPARATION BETWEEN W/L & SANITARY SEWER MUST BE PROVIDED.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

1 INCH = 5 FEET

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100 200

1 INCH = 50 FEET

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

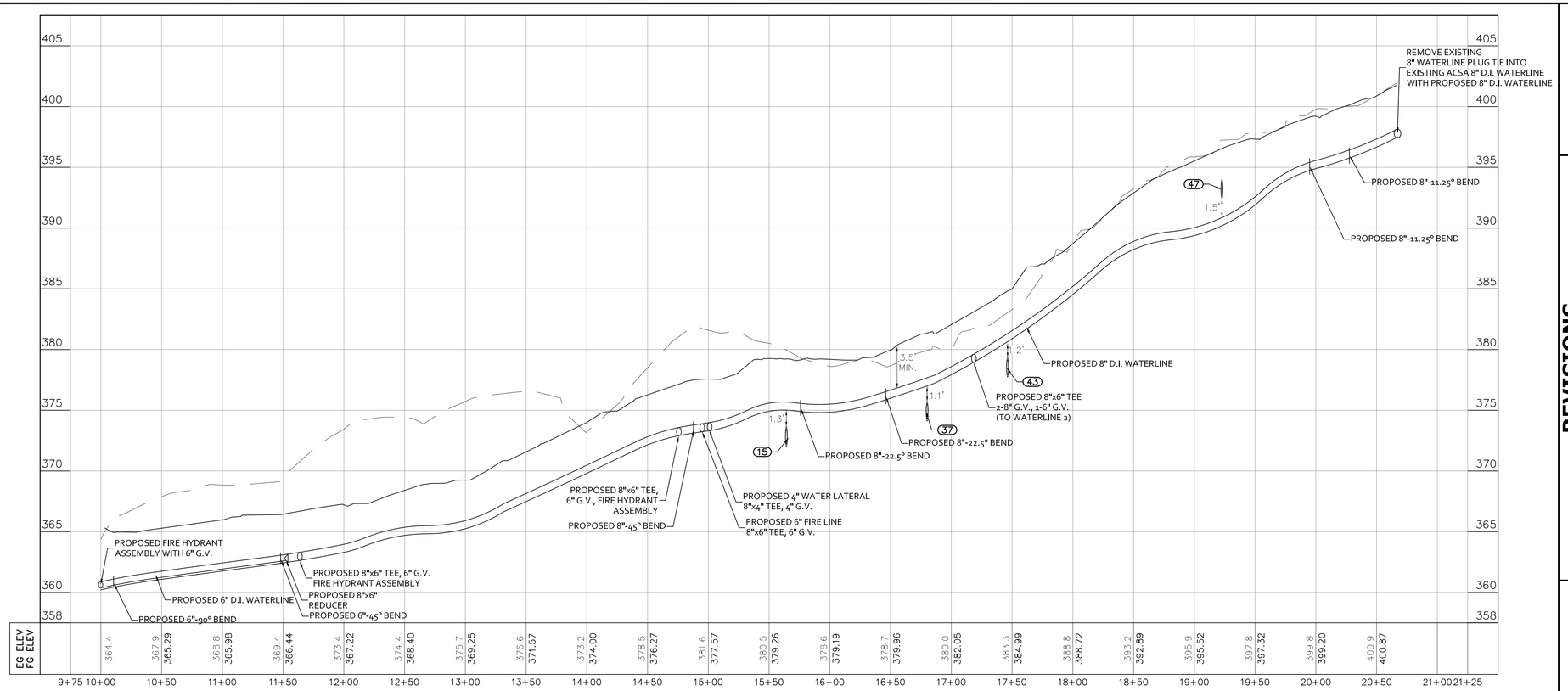
PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: ROAD & SIGHT DISTANCE PROFILES

JOB NO. 202193

SCALE V: 1" = 5' H: 1" = 50'

SHEET NO. 9



WATERLINE 1

PROPOSED SANITARY SEWER

NOTE: ALL ROADWAY EMBANKMENT MATERIAL SHALL CONSIST OF SOIL AND BE PLACED IN SUCCESSIVE UNIFORM LAYERS NOT MORE THAN 18 INCHES IN THICKNESS BEFORE COMPACTION OVER THE ENTIRE ROADBED AREA IN ACCORDANCE WITH VDOT 2020 ROAD AND BRIDGE SPECIFICATION 303.04(h)

NOTE: CLASS I BACKFILL MATERIAL SHALL BE CRUSHER RUN AGGREGATE SIZE NO. 25 OR 26, AGGREGATE BASE MATERIAL SIZE 21A OR 21B, FLOWABLE FILL, CONFORMING TO SECTIONS 205, 208 OR 249 RESPECTIVELY, OR CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26, PER VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 302.03(a)2G "BACKFILLING".

NOTES:
1. ALL FILL TO BE PLACED AT 95% COMPACTION.
2. MINIMUM 3.5' OF COVER MUST BE MAINTAINED OVER W/L.
3. MINIMUM OF 1' OF VERTICAL SEPARATION FROM STORM SEWER & W/L AND 1.5' OF SEPARATION BETWEEN W/L & SANITARY SEWER MUST BE PROVIDED.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

1 INCH = 5 FEET

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100 200

1 INCH = 50 FEET

WATERLINE 2

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

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2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

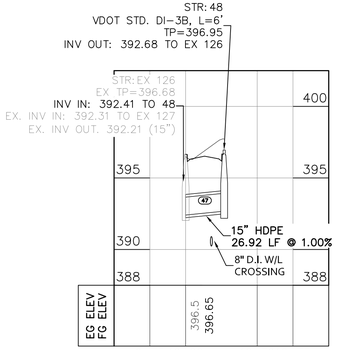
PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET
UTILITY PROFILES

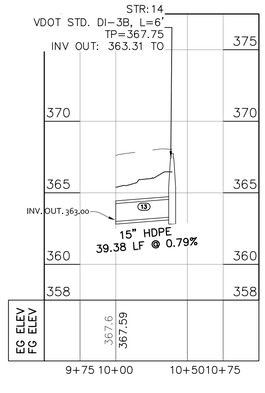
JOB NO. 202193

SCALE V: 1" = 5' H: 1" = 50'

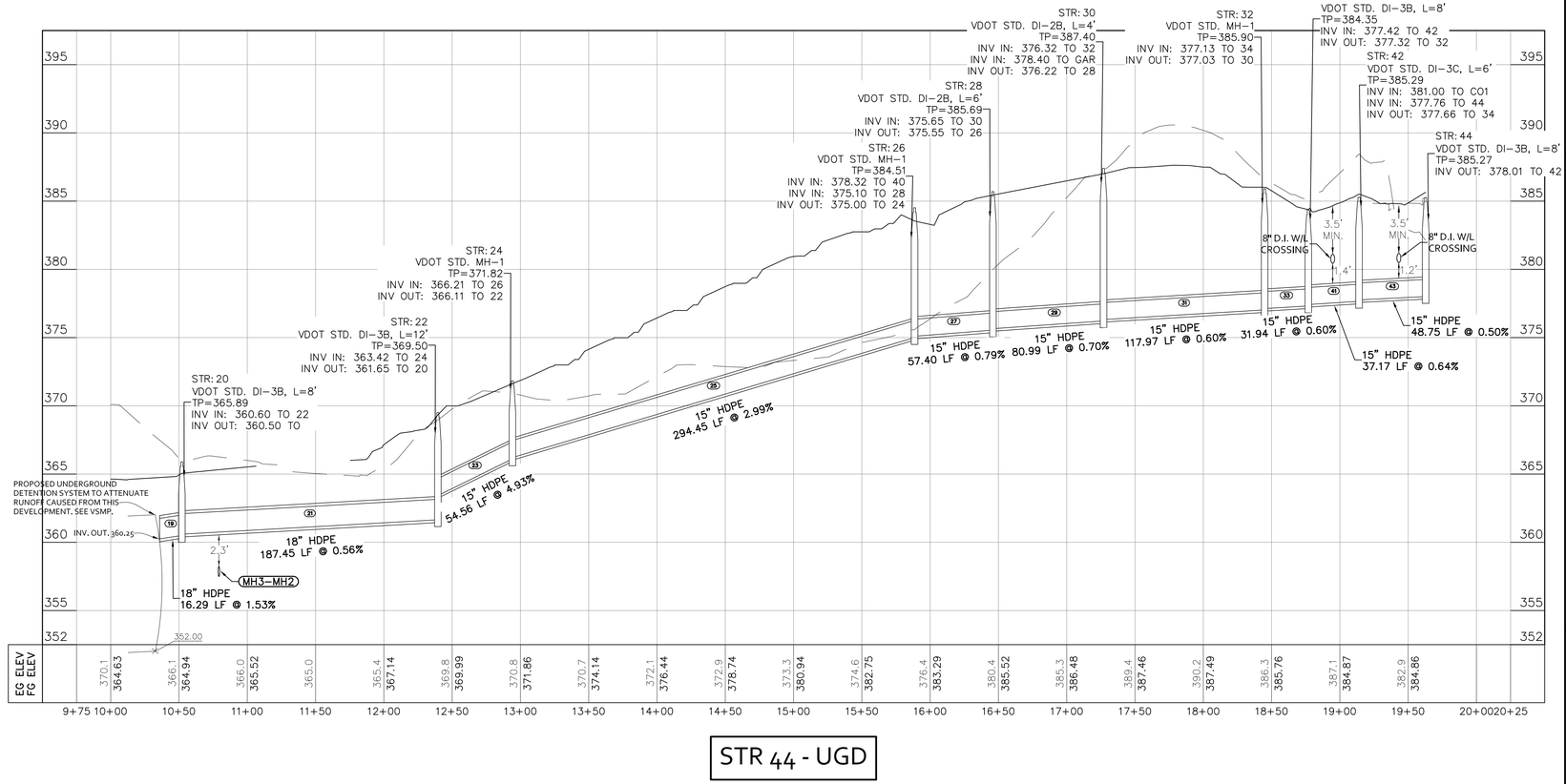
SHEET NO. 10



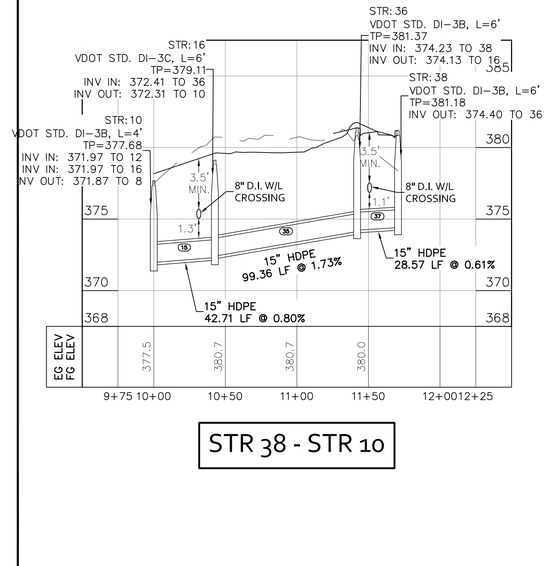
EXISTING STORM BOX RELOCATION



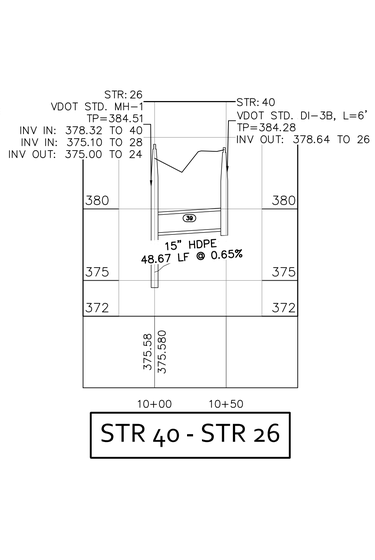
STR 14 - BASIN A



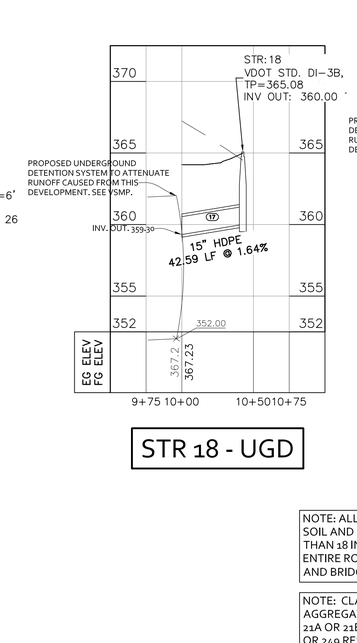
STR 44 - UGD



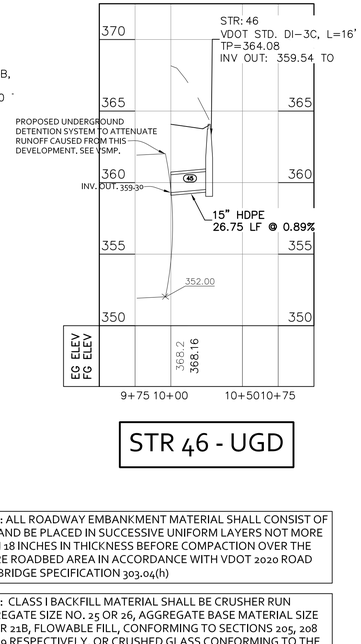
STR 38 - STR 10



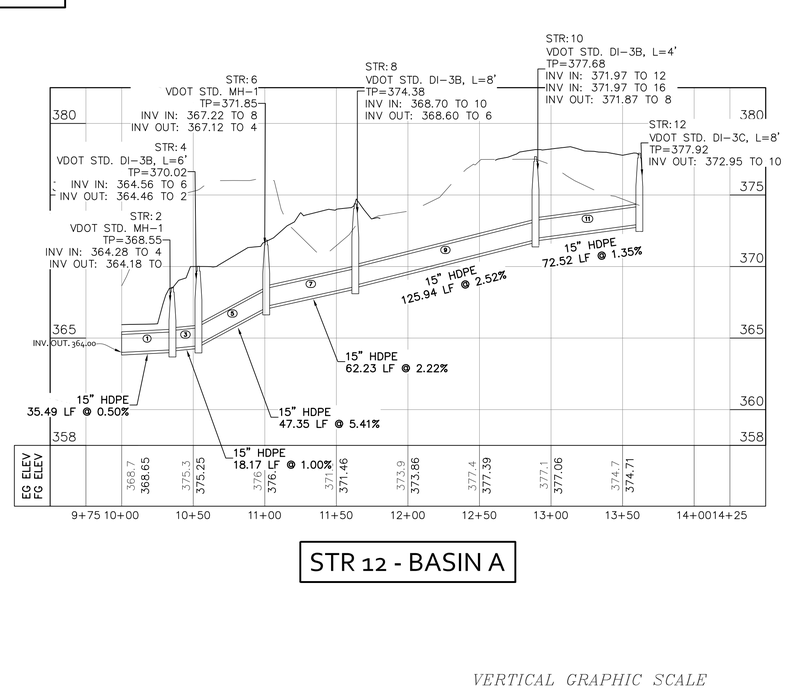
STR 40 - STR 26



STR 18 - UGD



STR 46 - UGD



STR 12 - BASIN A

NOTE: ALL ROADWAY EMBANKMENT MATERIAL SHALL CONSIST OF SOIL AND BE PLACED IN SUCCESSIVE UNIFORM LAYERS NOT MORE THAN 18 INCHES IN THICKNESS BEFORE COMPACTION OVER THE ENTIRE ROADBED AREA IN ACCORDANCE WITH VDOT 2020 ROAD AND BRIDGE SPECIFICATION 303.04(h)

NOTE: CLASS I BACKFILL MATERIAL SHALL BE CRUSHER RUN AGGREGATE SIZE NO. 25 OR 26, AGGREGATE BASE MATERIAL SIZE 21A OR 21B, FLOWABLE FILL, CONFORMING TO SECTIONS 205, 208 OR 249 RESPECTIVELY, OR CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26, PER VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 302.03(a)2G "BACKFILLING".

NOTES:
1. ALL FILL TO BE PLACED AT 95% COMPACTION.
2. MINIMUM 3.5' OF COVER MUST BE MAINTAINED OVER W/L.
3. MINIMUM OF 1' OF VERTICAL SEPARATION FROM STORM SEWER & W/L AND 1.5' OF SEPARATION BETWEEN W/L & SANITARY SEWER MUST BE PROVIDED.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

1 INCH = 5 FEET

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100 200

1 INCH = 50 FEET

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN
SHEET: DRAINAGE PROFILES

JOB NO. 202193
SCALE V: 1" = 5' H: 1" = 50'
SHEET NO. 11

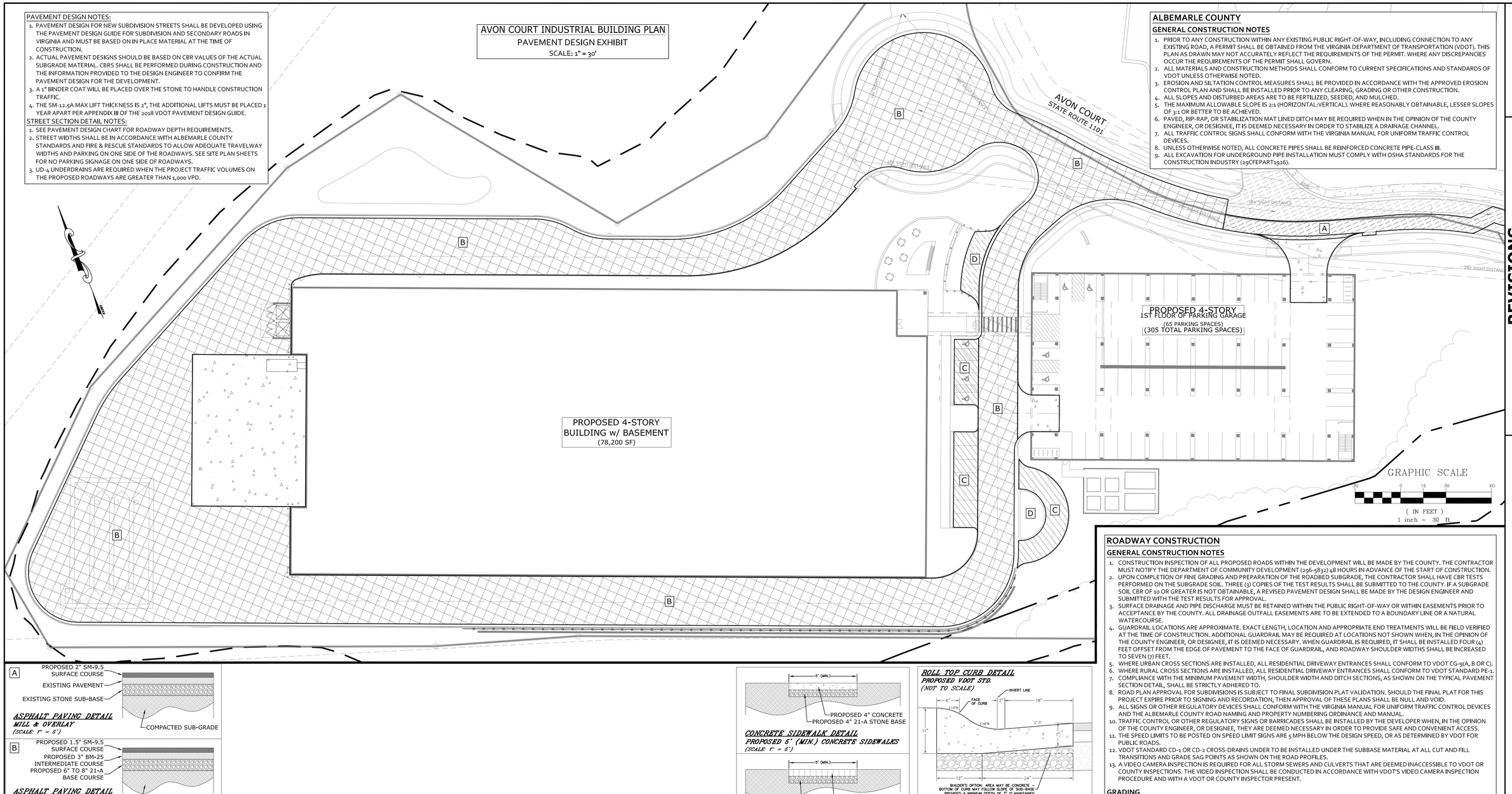
AVON COURT INDUSTRIAL BUILDING PLAN
PAVEMENT DESIGN EXHIBIT
SCALE: 1" = 30'

PAVEMENT DESIGN NOTES:

1. PAVEMENT DESIGN FOR NEW SUBDIVISION STREETS SHALL BE DEVELOPED USING THE PAVEMENT DESIGN GUIDE FOR SUBDIVISION AND SECONDARY ROADS IN VIRGINIA AND MUST BE BASED ON IN PLACE MATERIAL AT THE TIME OF CONSTRUCTION.
2. ACTUAL PAVEMENT DESIGNS SHOULD BE BASED ON CBR VALUES OF THE ACTUAL SUBGRADE MATERIAL. CBRS SHALL BE PERFORMED DURING CONSTRUCTION AND THE INFORMATION PROVIDED TO THE DESIGN ENGINEER TO CONFIRM THE PAVEMENT DESIGN FOR THE DEVELOPMENT.
3. A 1" BINDER COAT WILL BE PLACED OVER THE STONE TO HANDLE CONSTRUCTION TRAFFIC.
4. THE SM-12.5A MAX LIFT THICKNESS IS 2", THE ADDITIONAL LIFTS MUST BE PLACED 1 YEAR APART PER APPENDIX III OF THE 2018 VDOT PAVEMENT DESIGN GUIDE.

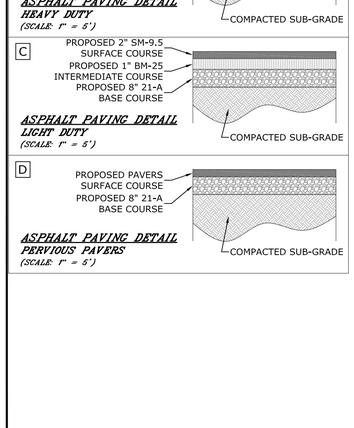
STREET SECTION DETAIL NOTES:

1. SEE PAVEMENT DESIGN CHART FOR ROADWAY DEPTH REQUIREMENTS.
2. STREET WIDTHS SHALL BE IN ACCORDANCE WITH ALBEMARLE COUNTY STANDARDS AND FIRE & RESCUE STANDARDS TO ALLOW ADEQUATE TRAVELWAY WIDTHS AND PARKING ON ONE SIDE OF THE ROADWAYS. SEE SITE PLAN SHEETS FOR NO PARKING SIGNAGE ON ONE SIDE OF ROADWAYS.
3. UD-4 UNDERDRAINS ARE REQUIRED WHEN THE PROJECT TRAFFIC VOLUMES ON THE PROPOSED ROADWAYS ARE GREATER THAN 1,000 VPD.



ALBEMARLE COUNTY
GENERAL CONSTRUCTION NOTES

1. PRIOR TO ANY CONSTRUCTION WITHIN ANY EXISTING PUBLIC RIGHT-OF-WAY, INCLUDING CONNECTION TO ANY EXISTING ROAD, A PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT). THIS PLAN AS DRAWN MAY NOT ACCURATELY REFLECT THE REQUIREMENTS OF THE PERMIT. WHERE ANY DISCREPANCIES OCCUR THE REQUIREMENTS OF THE PERMIT SHALL GOVERN.
2. ALL MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO CURRENT SPECIFICATIONS AND STANDARDS OF VDOT UNLESS OTHERWISE NOTED.
3. EROSION AND SILTATION CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN AND SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING OR OTHER CONSTRUCTION.
4. ALL SLOPES AND DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED, AND MULCHED.
5. THE MAXIMUM ALLOWABLE SLOPE IS 2:1 (HORIZONTAL:VERTICAL). WHERE REASONABLY OBTAINABLE, LESSER SLOPES OF 3:1 OR BETTER TO BE ACHIEVED.
6. PAVED, RIP-RAP, OR STABILIZATION MAT LINED DITCH MAY BE REQUIRED WHEN IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, IT IS DEEMED NECESSARY IN ORDER TO STABILIZE A DRAINAGE CHANNEL.
7. ALL TRAFFIC CONTROL SIGNS SHALL CONFORM WITH THE VIRGINIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES.
8. UNLESS OTHERWISE NOTED, ALL CONCRETE PIPES SHALL BE REINFORCED CONCRETE PIPE-CLASS III.
9. ALL EXCAVATION FOR UNDERGROUND PIPE INSTALLATION MUST COMPLY WITH OSHA STANDARDS FOR THE CONSTRUCTION INDUSTRY (29CFEPART1926).

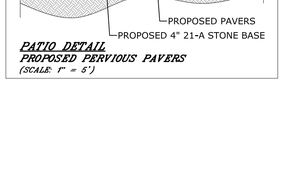


ASPHALT PAVING DETAIL
MILL & OVERLAY
(SCALE: 1" = 5')

ASPHALT PAVING DETAIL
HEAVY DUTY
(SCALE: 1" = 5')

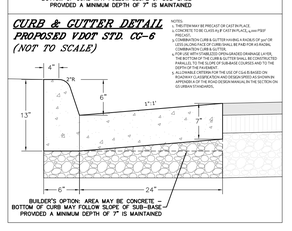
ASPHALT PAVING DETAIL
LIGHT DUTY
(SCALE: 1" = 5')

ASPHALT PAVING DETAIL
PERVIOUS PAVERS
(SCALE: 1" = 5')



CONCRETE SIDEWALK DETAIL
PROPOSED 5' (MIN.) CONCRETE SIDEWALKS
(SCALE: 1" = 5')

PATIO DETAIL
PROPOSED PERVIOUS PAVERS
(SCALE: 1" = 5')



ROLL TOP CURB DETAIL
PROPOSED VDOT STD.
(NOT TO SCALE)

CURB & GUTTER DETAIL
PROPOSED VDOT STD. CG-6
(NOT TO SCALE)

ROADWAY CONSTRUCTION
GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION INSPECTION OF ALL PROPOSED ROADS WITHIN THE DEVELOPMENT WILL BE MADE BY THE COUNTY. THE CONTRACTOR MUST NOTIFY THE DEPARTMENT OF COMMUNITY DEVELOPMENT (296-5832) 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION.
2. UPON COMPLETION OF FINE GRADING AND PREPARATION OF THE ROADBED SUBGRADE, THE CONTRACTOR SHALL HAVE CBR TESTS PERFORMED ON THE SUBGRADE SOIL. THREE (3) COPIES OF THE TEST RESULTS SHALL BE SUBMITTED TO THE COUNTY. IF A SUBGRADE SOIL CBR OF 10 OR GREATER IS NOT OBTAINABLE, A REVISED PAVEMENT DESIGN SHALL BE MADE BY THE DESIGN ENGINEER AND SUBMITTED WITH THE TEST RESULTS FOR APPROVAL.
3. SURFACE DRAINAGE AND PIPE DISCHARGE MUST BE RETAINED WITHIN THE PUBLIC RIGHT-OF-WAY OR WITHIN EASEMENTS PRIOR TO ACCEPTANCE BY THE COUNTY. ALL DRAINAGE OUTFALL EASEMENTS ARE TO BE EXTENDED TO A BOUNDARY LINE OR A NATURAL WATERCOURSE.
4. GUARDRAIL LOCATIONS ARE APPROXIMATE. EXACT LENGTH, LOCATION AND APPROPRIATE END TREATMENTS WILL BE FIELD VERIFIED AT THE TIME OF CONSTRUCTION. ADDITIONAL GUARDRAIL MAY BE REQUIRED AT LOCATIONS NOT SHOWN WHEN, IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, IT IS DEEMED NECESSARY. WHEN GUARDRAIL IS REQUIRED, IT SHALL BE INSTALLED FOUR (4) FEET OFFSET FROM THE EDGE OF PAVEMENT TO THE FACE OF GUARDRAIL, AND ROADWAY SHOULDER WIDTHS SHALL BE INCREASED TO SEVEN (7) FEET.
5. WHERE URBAN CROSS SECTIONS ARE INSTALLED, ALL RESIDENTIAL DRIVEWAY ENTRANCES SHALL CONFORM TO VDOT CG-9(A, B OR C).
6. WHERE RURAL CROSS SECTIONS ARE INSTALLED, ALL RESIDENTIAL DRIVEWAY ENTRANCES SHALL CONFORM TO VDOT STANDARD PE-1.
7. COMPLIANCE WITH THE MINIMUM PAVEMENT WIDTH, SHOULDER WIDTH AND DITCH SECTIONS, AS SHOWN ON THE TYPICAL PAVEMENT SECTION DETAIL, SHALL BE STRICTLY ADHERED TO.
8. ROAD PLAN APPROVAL FOR SUBDIVISIONS IS SUBJECT TO FINAL SUBDIVISION PLAT VALIDATION. SHOULD THE FINAL PLAT FOR THIS PROJECT EXPIRE PRIOR TO SIGNING AND RECORDATION, THEN APPROVAL OF THESE PLANS SHALL BE NULL AND VOID.
9. ALL SIGNS OR OTHER REGULATORY DEVICES SHALL CONFORM WITH THE VIRGINIA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES AND THE ALBEMARLE COUNTY ROAD NAMING AND PROPERTY NUMBERING ORDINANCE AND MANUAL.
10. TRAFFIC CONTROL OR OTHER REGULATORY SIGNS OR BARRICADES SHALL BE INSTALLED BY THE DEVELOPER WHEN, IN THE OPINION OF THE COUNTY ENGINEER, OR DESIGNEE, THEY ARE DEEMED NECESSARY IN ORDER TO PROVIDE SAFE AND CONVENIENT ACCESS.
11. THE SPEED LIMITS TO BE POSTED ON SPEED LIMIT SIGNS ARE 5 MPH BELOW THE DESIGN SPEED, OR AS DETERMINED BY VDOT FOR PUBLIC ROADS.
12. VDOT STANDARD CD-1 OR CD-2 CROSS-DRAINS UNDER TO BE INSTALLED UNDER THE SUBBASE MATERIAL AT ALL CUT AND FILL TRANSITIONS AND GRADE SAG POINTS AS SHOWN ON THE ROAD PROFILES.
13. A VIDEO CAMERA INSPECTION IS REQUIRED FOR ALL STORM SEWERS AND CULVERTS THAT ARE DEEMED INACCESSIBLE TO VDOT OR COUNTY INSPECTIONS. THE VIDEO INSPECTION SHALL BE CONDUCTED IN ACCORDANCE WITH VDOT'S VIDEO CAMERA INSPECTION PROCEDURE AND WITH A VDOT OR COUNTY INSPECTOR PRESENT.

GRADING

1. THE LATEST EDITION OF THE ROAD & BRIDGE SPECIFICATIONS, THE ROAD & BRIDGE STANDARDS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS SHALL GOVERN THE MATERIAL AND CONSTRUCTION METHODS OF THIS PROJECT.
2. WHERE UNSUITABLE MATERIAL IS ENCOUNTERED IN THE ROADWAY, IT SHALL BE REMOVED FROM THE ENTIRE ROAD RIGHT OF WAY WIDTH AND REPLACED WHERE NECESSARY WITH SUITABLE MATERIAL TO THE SATISFACTION OF THE ENGINEER.
3. ALL GROWTH OF TREES AND VEGETATION SHALL BE CLEARED AND GRUBBED FOR THE ENTIRE EASEMENT. OTHER TREES AND VEGETATION WHICH OBSTRUCT SIGHT DISTANCES AT ROAD INTERSECTIONS SHALL BE REMOVED.
4. ALL VEGETATION AND OVERBURDEN TO BE REMOVED FROM SHOULDER TO SHOULDER PRIOR TO THE CONSTRUCTION OF THE SUBGRADE.

DRAINAGE

1. ALL PIPE CULVERTS, EXCEPT PRIVATE ENTRANCES, SHOWN HEREON ARE TO BE RCP WITH A MINIMUM COVER OF ONE (1) FOOT.
2. STANDARD UNDERDRAINS (CD-1 OR CD-2 OR UD-4'S) TO BE PROVIDED AS INDICATED ON THE PLANS, OR WHERE FIELD CONDITIONS INDICATE.
3. ALL DRIVEWAY ENTRANCE PIPES SHALL BE A MINIMUM OF TWENTY (20) FEET IN LENGTH AND HAVE A MINIMUM DIAMETER OF FIFTEEN (15) INCHES AND SHALL BE PLACED IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF TRANSPORTAION SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS.
4. ALL DRAINAGE EASEMENT SHALL BE CLEARED AND GRADED TO THE SATISFACTION OF THE ENGINEER. DRAINAGE EASEMENTS SHALL EXTEND TO A POINT DEEMED AS NATURAL WATER COURSE.

PAVEMENT

1. AN ACTUAL COPY OF THE CBR REPORT IS TO BE SUBMITTED PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE MATERIAL. IF THE SSV VALUES ARE LESS THAN 10, THE DEVELOPER WILL BE REQUIRED TO SUBMIT FOR ENGINEERS APPROVAL THE PROPOSED METHOD OF CORRECTION.
2. SUBGRADE MUST BE APPROVED BY THE ENGINEER FOR GRADE, TEMPLATE AND COMPACTION BEFORE BASE IS PLACED.
3. TEST REPORTS ON SELECT MATERIALS MUST BE SUBMITTED SHOWING THE MATERIAL MEETS REQUIRED GRADATION FOR TYPE I, II, OR III PRIOR TO PLACING AGGREGATE BASE.
4. THE REQUIREMENTS TO PUGMILL AGGREGATE BASE WILL BE WAIVED IN THE EVENT THAT THE SURFACE COURSE IS BEGINNING AT THE COMPLETION OF THE INSTALLATION OF THE AGGREGATE BASE. IN THE EVENT THAT THE SURFACE COURSE IS APPLIED PRIOR TO 60 DAYS, THE PUGMILL REQUIREMENT WILL APPLY.
5. THE USE OF AN AGGREGATE SPREADER IS REQUIRED WHEN PLACING AGGREGATE BASE.
6. BASE MUST BE APPROVED BY ENGINEER FOR DEPTH, TEMPLATE, AND COMPACTION BEFORE SURFACE TREATMENT IS APPLIED.
7. PRIME COAT MUST BE APPLIED TO BASE MATERIAL PRIOR TO PLACEMENT OF ASPHALT (PRIME COAT RC-250 @ 0.3 GAL./SQ. YD.).
8. BITUMINOUS SURFACE TO BE APPLIED IN ACCORDANCE WITH CURRENT VIRGINIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
9. ENCROACHMENT: POSTS, WALLS, SIGNS, OR SIMILAR ORNAMENTAL STRUCTURES THAT DO NOT ENHANCE A ROADWAY'S CAPACITY OR TRAFFIC SAFETY, SHALL NOT BE PERMITTED WITHIN THE RIGHT OF WAY. ONLY THOSE STRUCTURES SPECIFICALLY AUTHORIZED BY PERMIT ISSUED BY VIRGINIA DEPARTMENT OF TRANSPORTATION MAY BE LOCATED WITHIN THE STREETS RIGHT OF WAY.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

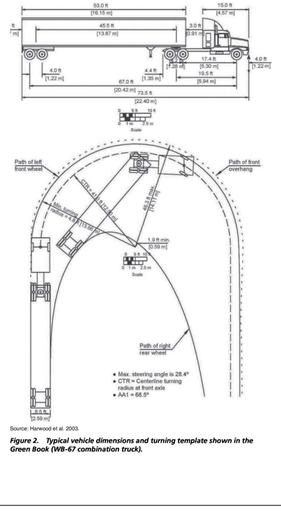
COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: NOTES & DETAILS

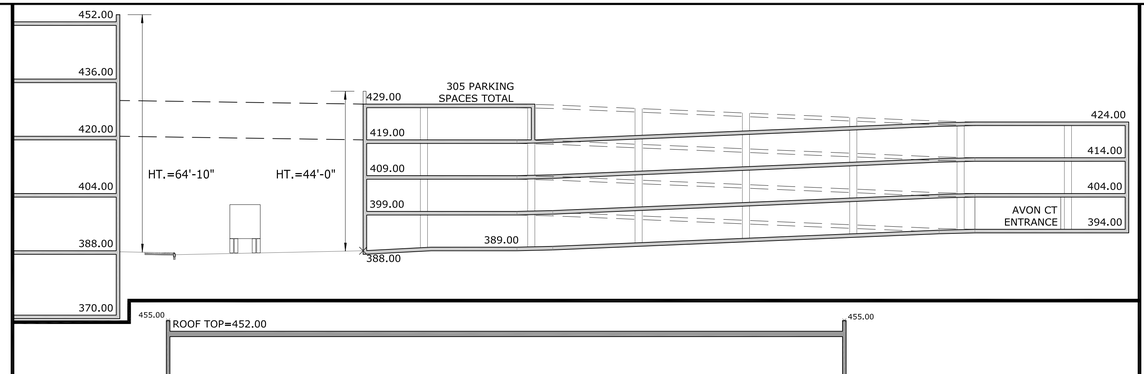
JOB NO. 202193
SCALE N/A
SHEET NO. 12

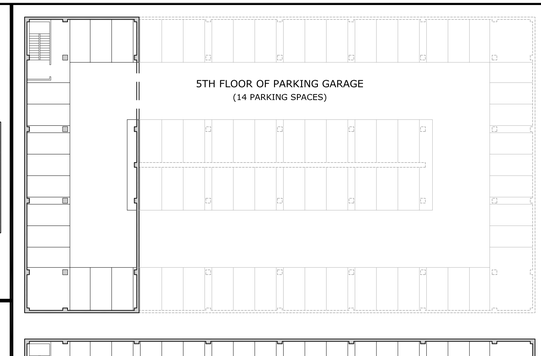
6 Highway and Street Design Vehicles: An Update

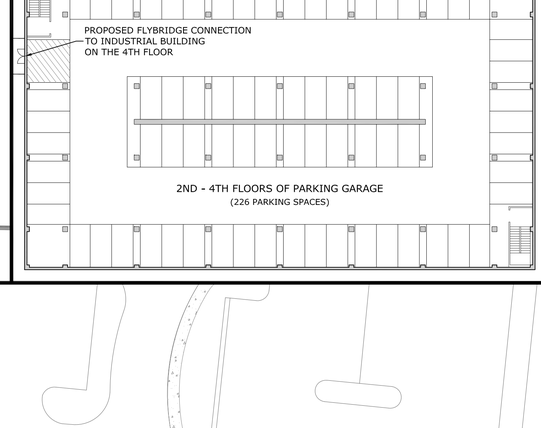


Source: Harwood et al. 2003.

Figure 2. Typical vehicle dimensions and turning template shown in the Green Book (WB-67 combination truck).





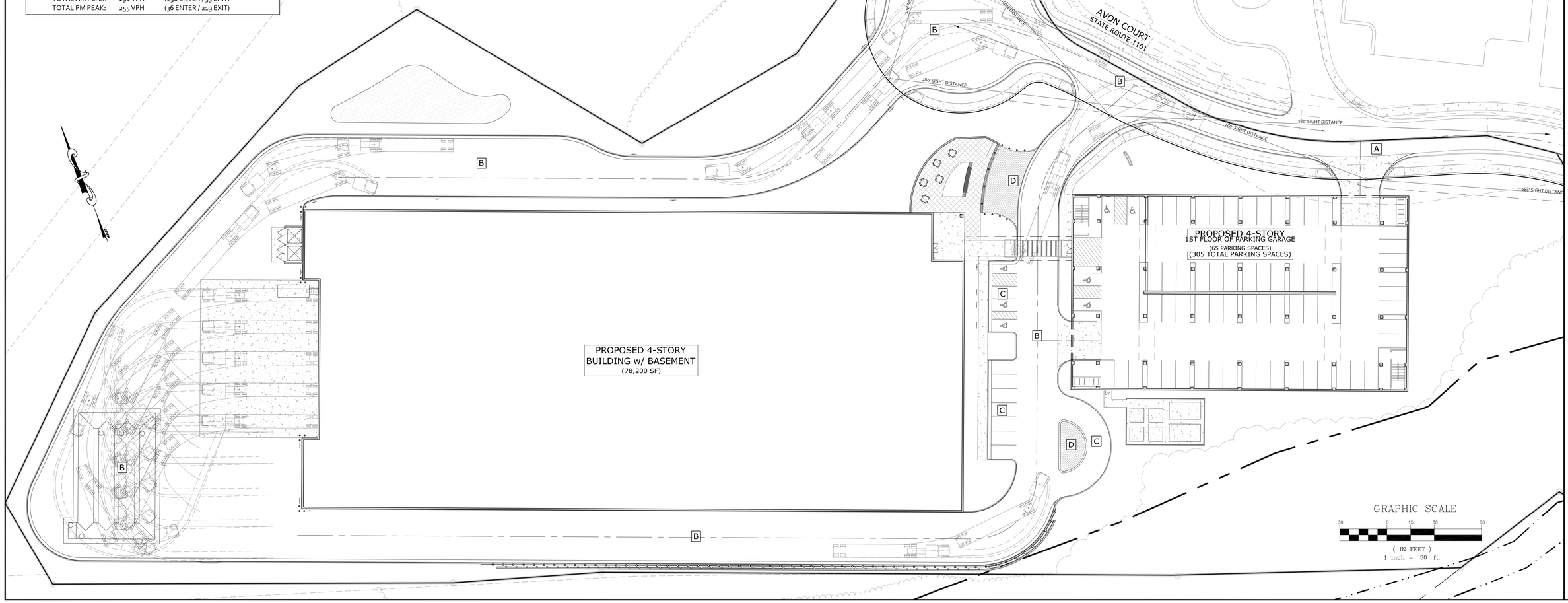


TRIP GENERATION CALCULATIONS

TRIP GENERATION BASED ON ITE TRIP GENERATION MANUAL (11TH EDITION):
LIGHT INDUSTRIAL BUILDING (CODE 110 - 4.87 TRIPS/1,000 SF)
PROPOSED 5 STORY BUILDING = 392,800 GROSS SF

TOTAL ADT:	1,913 VPD	(956.5 ENTER/ 956.5 EXIT)
TOTAL AM PEAK:	291 VPH	(256 ENTER / 35 EXIT)
TOTAL PM PEAK:	255 VPH	(36 ENTER / 219 EXIT)

AVON COURT INDUSTRIAL BUILDING PLAN
TRAFFIC FLOW MAP
SCALE: 1" = 30'



COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
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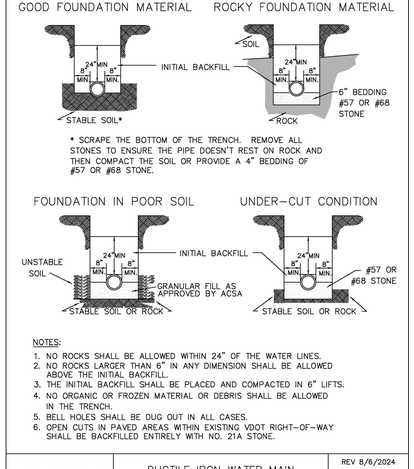
COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

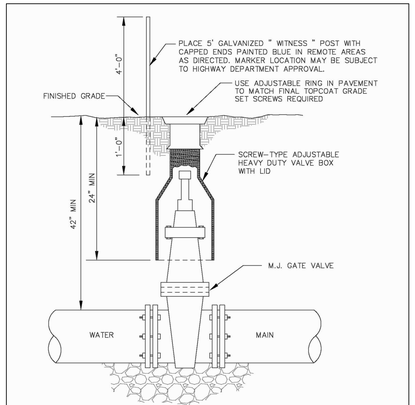
SHEET: NOTES & DETAILS

JOB NO. 202193
SCALE N/A
SHEET NO. 13



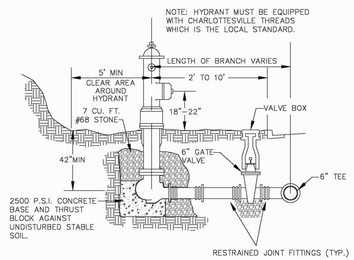
NOTES:
1. NO ROCKS SHALL BE ALLOWED WITHIN 24" OF THE WATER LINES.
2. NO ROCKS LARGER THAN 6" IN ANY DIMENSION SHALL BE ALLOWED ABOVE THE INITIAL BACKFILL.
3. THE INITIAL BACKFILL SHALL BE PLACED AND COMPACTED IN 6" LIFTS.
4. NO ORGANIC OR FROZEN MATERIAL OR DEBRIS SHALL BE ALLOWED IN THE TRENCH.
5. BELL HOLES SHALL BE DUG OUT IN ALL CASES.
6. OPEN CUTS IN PAVED AREAS WITHIN EXISTING VDOT RIGHT-OF-WAY SHALL BE BACKFILLED ENTIRELY WITH NO. 21A STONE.

ALBEMARLE COUNTY SERVICE AUTHORITY	DUCTILE IRON WATER MAIN INSTALLATION AND BEDDING NOT TO SCALE	REV 8/6/2024 DETAIL W-1



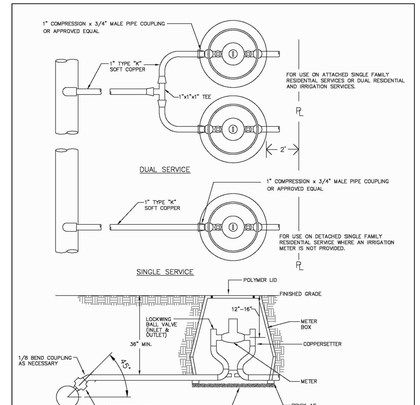
NOTES:
1. MINIMUM 6" OF #57 OR #68 STONE TO BE PLACED UNDER GATE VALVE.
2. IN REMOTE AREAS, VALVE BOXES SHALL EXTEND SIX (6) INCHES ABOVE GRADE.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL GATE VALVE NOT TO SCALE	REV 8/6/2024 DETAIL W-2



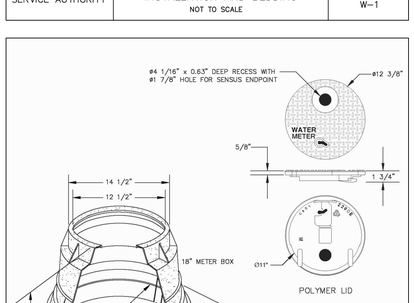
NOTES:
1. SURROUND WEEP HOLES WITH GRAVEL AND KEEP FREE OF CONCRETE.
2. MAINTAIN A 42" MINIMUM COVER FROM THE MAIN TO THE FIRE HYDRANT (INCLUDING DITCHES)
3. FINISHED GRADE SHALL SLOPE AWAY FROM THE FIRE HYDRANT AND VALVE BOX.
4. THE GATE VALVE IS PREFERRED IN PAVEMENT AFTER TEE WITH MAIN. IT IS ALLOWED IN SHOULDER, OR BEHIND DITCH, BUT NOT ALLOWED IN DITCH OR GUTTER.
5. FIRE HYDRANTS SHALL BE INSTALLED AT LOCATIONS WHERE WEEP HOLES ARE ABOVE THE PREVAILING GROUNDWATER ELEVATION. IF REQUIRED TO BE IN WET AREAS, THE 'WEEP HOLES' SHALL BE PLUGGED AND THE HYDRANT SHALL BE PUMPED DRY.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL FIRE HYDRANT ASSEMBLY DETAIL NOT TO SCALE	REV 8/6/2024 DETAIL W-3



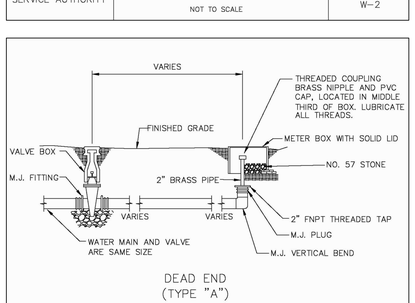
NOTES:
1. SADDLES SHALL BE USED TO TAP PLASTIC AND AC WATER MAINS.
2. NO SWEATED FITTINGS.
3. 36 INCHES OF COVER OVER SERVICE LINE SHALL BE MAINTAINED FOR UP TO 5 FEET BEFORE METER BOX. SERVICE LINE SHALL BE BROUGHT TO SETTER ELEVATION WITHIN THE LAST 5 FEET TO METER BOX.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL SERVICE LATERAL INSTALLATION (3/4" AND 1" METERS) NOT TO SCALE	REV 8/6/2024 DETAIL W-4

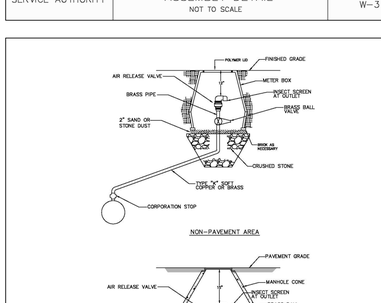


NOTES:
1. THE POLYMER LID SHALL HAVE A MOLDED KEYHOLE OR PICK BAR FOR LID REMOVAL.
2. THE POLYMER LID SHALL HAVE A MAGNET OR REBAR MOLDED WITHIN THE LID FOR LOCATING.
3. THE POLYMER LID SHALL BE BLACK.
4. BOX SHALL BE TRAFFIC RATED IF A 1" METER IS INSTALLED.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL METER BOXES (3/4" AND 1" METERS) NOT TO SCALE	REV 8/6/2024 DETAIL W-5

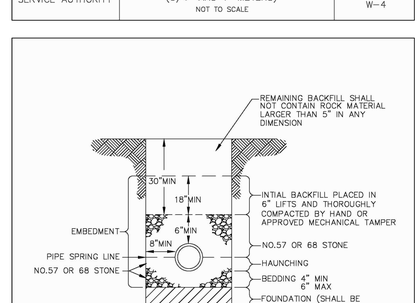


ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL BLOW-OFF ASSEMBLY (BOA) NOT TO SCALE	REV 8/6/2024 DETAIL W-13



NOTES:
1. USE PRECAST MANHOLE CONE AND COVER, WITH "WATER" CAST ON LID FOR TRAFFIC AREAS.
2. FOR WATER MAINS SMALLER THAN 12" USE A 1" ARV AND FITTINGS. FOR WATER MAINS 12" AND LARGER USE 2" ARV AND FITTINGS.
3. TWO INCH TAPS MUST USE SADDLE FOR CONNECTION TO WATER MAIN.
4. IN SITUATIONS WHERE THE ARV ASSEMBLY CANNOT BE OFFSET FROM THE MAIN, AN ADEQUATE FOUNDATION SHALL BE INSTALLED SO THE WATER LINE DOES NOT SUPPORT THE MANHOLE CONE.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL AIR RELEASE VALVE (ARV) NOT TO SCALE	REV 8/6/2024 DETAIL W-14

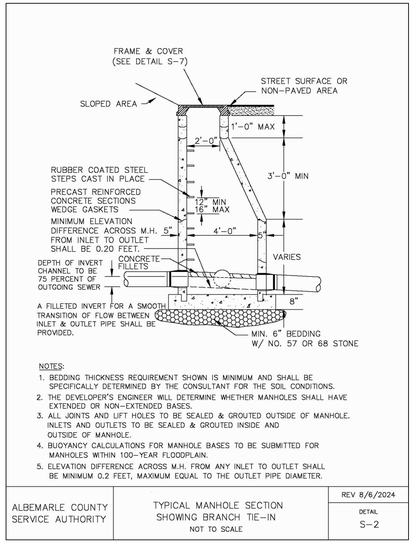


NOTES:
1. OPEN CUTS IN PAVED AREAS WITHIN EXISTING VDOT RIGHT-OF-WAY SHALL BE BACKFILLED ENTIRELY WITH NO. 21A STONE.
2. FOR DUCTILE IRON PIPE THE BOTTOM OF THE TRENCH SHALL BE SCRAPED AND COMPACTED, AND ALL STONES REMOVED OR A 4" BEDDING OF NO. 57 OR 68 STONE SHALL BE PROVIDED.
3. WHERE ROCK IS ENCOUNTERED PIPE SHALL BE INSTALLED ON A MINIMUM 6" BEDDING OF NO. 57 OR 68 STONE.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL SEWER PIPE INSTALLATION IN TRENCH NOT TO SCALE	REV 8/6/2024 DETAIL S-1

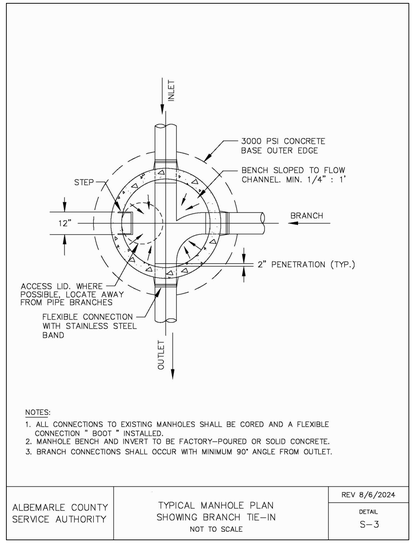
ALBEMARLE COUNTY SERVICE AUTHORITY (ACSA)
GENERAL WATER & SEWER CONDITIONS (September 14, 2021)

1. WORK SHALL BE SUBJECT TO INSPECTION BY ALBEMARLE COUNTY SERVICE AUTHORITY (ACSA) INSPECTORS. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING THE PROPER ACSA OFFICIALS AT THE START OF THE WORK.
2. THE ALBEMARLE COUNTY SERVICE AUTHORITY SHALL HAVE ACCESS TO USE THE AIRSPACE ABOVE THE LOCATIONS OF CONSTRUCTION FOR THE FLIGHT OF UNMANNED AERIAL VEHICLES FOR THE PURPOSE OF IMAGERY COLLECTION.
3. THE LOCATION OF EXISTING UTILITIES ACROSS THE LINE OF THE PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATELY CORRECT. THE CONTRACTOR SHALL, ON HIS OWN INITIATIVE, LOCATE ALL UNDERGROUND LINES AND STRUCTURES, AS NECESSARY.
4. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITION OF THE GENERAL WATER AND SEWER CONSTRUCTION SPECIFICATIONS, AS ADOPTED BY THE ACSA.
5. DATUM FOR ALL ELEVATIONS SHOWN IN NATIONAL GEODETIC SURVEY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY (1-800-552-7001).
7. ALL WATER AND SEWER PIPES SHALL HAVE A MINIMUM OF THREE AND A HALF (3.5) FEET OF COVER MEASURED FROM THE TOP OF PIPE, OVER THE CENTERLINE OF PIPE. THIS INCLUDES ALL FIRE HYDRANT LINES, SERVICE LATERALS AND WATER LINES, ETC.
8. ALL WATER AND SEWER APPURTENANCES ARE TO BE LOCATED OUTSIDE OF ROADSIDE DITCHES.
9. VALVES ON DEADEND LINES SHALL BE RODDED TO PROVIDE ADEQUATE RESTRAINT FOR THE VALVE DURING A FUTURE EXTENSION OF THE LINE.
10. TREES ARE NOT PERMITTED IN THE ACSA EASEMENT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH THE NO-LEAD REGULATION REGARDING BRASS FITTINGS EFFECTIVE JANUARY 4, 2014 (SENATE BILL 3874 WHICH AMENDS THE SAFE DRINKING WATER ACT).
12. THE SEWER LATERAL BEYOND THE CONNECTION AT THE SEWER MAIN SHALL BE PRIVATE. THE SEWER LATERAL STUB-OUT SHALL UNDERGO THE ACSA LOW-PRESSURE AIR TEST TO SATISFY COUNTY TESTING REQUIREMENTS. VISUAL INSPECTION OF THE SEWER LATERAL STUB-OUT SHALL BE WITNESSED BY THE COUNTY BUILDING INSPECTIONS DEPARTMENT. THIS INSPECTION SHALL OCCUR UNDER AN "OTHER PLUMBING" PERMIT WHICH MUST BE OBTAINED BY THE CONTRACTOR.
13. THE SEWER LATERAL BEYOND THE CONNECTION AT A MANHOLE SHALL BE PRIVATE. VISUAL INSPECTION AND PRESSURE TESTING OF THE SEWER LATERAL SHALL BE WITNESSED BY THE COUNTY BUILDING INSPECTIONS DEPARTMENT. THIS INSPECTION SHALL OCCUR UNDER AN "OTHER PLUMBING" PERMIT WHICH MUST BE OBTAINED BY THE CONTRACTOR.
14. THE FIRE SPRINKLER MAIN DOWNSTREAM OF THE GATE VALVE IS PRIVATE. VISUAL INSPECTION AND TESTING OF THE FIRE SPRINKLER MAIN DOWNSTREAM OF THE GATE VALVE SHALL BE WITNESSED BY THE COUNTY BUILDING INSPECTIONS DEPARTMENT. THIS INSPECTION SHALL OCCUR UNDER AN "OTHER PLUMBING" PERMIT WHICH MUST BE OBTAINED BY THE CONTRACTOR.
15. ALL FLUSHING OF FIRE SPRINKLER MAINS SHALL NOT OCCUR UNTIL APPROVAL IS GIVEN BY THE ACSA.
16. PRIOR TO BACKFLOW PREVENTION DEVICE TESTING AND THE ESTABLISHMENT OF WATER SERVICE, ALL BACKFLOW PREVENTION DEVICE INSTALLATIONS SHALL MEET THE ACSA BACKFLOW REQUIREMENTS AS DETAILED IN SECTION 8 OF THE MOST RECENT REVISION OF THE ACSA RULES AND REGAULTIONS.
17. A DEED OF EASEMENT AND EASEMENT PLAT FOR THE UTILITY EASEMENTS, APPROVED BY THE ACSA, SHALL BE RECORDED PRIOR TO ANY WATER AND/OR SEWER SERVICE BEING ESTABLISHED.



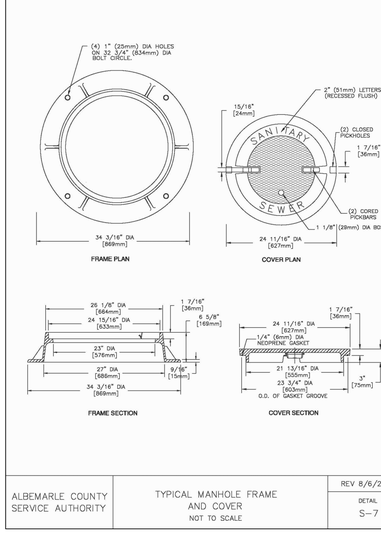
NOTES:
1. BEDDING THICKNESS REQUIREMENT SHOWN IS MINIMUM AND SHALL BE SPECIFICALLY DETERMINED BY THE CONSULTANT FOR THE SOIL CONDITIONS.
2. THE DEVELOPER'S ENGINEER WILL DETERMINE WHETHER MANHOLES SHALL HAVE EXTENDED OR NON-EXTENDED BASES.
3. ALL JOINTS AND LIFT HOLES TO BE SEALED & GROUTED OUTSIDE OF MANHOLE. INLETS AND OUTLETS TO BE SEALED & GROUTED INSIDE AND OUTSIDE OF MANHOLE.
4. BUOYANCY CALCULATIONS FOR MANHOLE BASES TO BE SUBMITTED FOR MANHOLES WITHIN 100-YEAR FLOODPLAIN.
5. ELEVATION DIFFERENCE ACROSS M.H. FROM ANY INLET TO OUTLET SHALL BE MINIMUM 0.2 FEET, MAXIMUM EQUAL TO THE OUTLET PIPE DIAMETER.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL MANHOLE SECTION SHOWING BRANCH TIE-IN NOT TO SCALE	REV 8/6/2024 DETAIL S-2

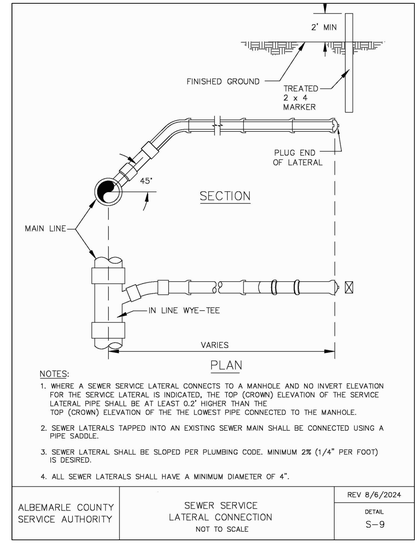


NOTES:
1. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE CORED AND A FLEXIBLE CONNECTION " BOOT " INSTALLED.
2. MANHOLE BENCH AND INVERT TO BE FACTORY-POURED OR SOLID CONCRETE.
3. BRANCH CONNECTIONS SHALL OCCUR WITH MINIMUM 90° ANGLE FROM OUTLET.

ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL MANHOLE PLAN SHOWING BRANCH TIE-IN NOT TO SCALE	REV 8/6/2024 DETAIL S-3



ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL MANHOLE FRAME AND COVER NOT TO SCALE	REV 8/6/2024 DETAIL S-7



NOTES:
1. WHERE A SEWER SERVICE LATERAL CONNECTS TO A MANHOLE AND NO INVERT ELEVATION FOR THE SERVICE LATERAL IS INDICATED, THE TOP (CROWN) ELEVATION OF THE SERVICE LATERAL PIPE SHALL BE AT LEAST 0.2' HIGHER THAN THE TOP (CROWN) ELEVATION OF THE THE LOWEST PIPE CONNECTED TO THE MANHOLE.
2. SEWER LATERALS TAPPED INTO AN EXISTING SEWER MAIN SHALL BE CONNECTED USING A PIPE SADDLE.
3. SEWER LATERAL SHALL BE SLOPED PER PLUMBING CODE. MINIMUM 2% (1/4" PER FOOT) IS DESIRED.
4. ALL SEWER LATERALS SHALL HAVE A MINIMUM DIAMETER OF 4".

ALBEMARLE COUNTY SERVICE AUTHORITY	SEWER SERVICE LATERAL CONNECTION NOT TO SCALE	REV 8/6/2024 DETAIL S-9

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: NOTES & DETAILS

JOB NO. 202193
SCALE N/A
SHEET NO. 14

TREES
'HERITAGE' RIVER BIRCH
ROTUNDILOBA SWEETGUM
SHUMARD OAK
GREENSPIRE LINDEN
SWEETBAY MAGNOLIA
SHRUBS
ROSE CREEK ABELIA
VANILLA SPICE SUMMERSWEET
SHAMROCK INKBERRY
LITTLE HENRY SWEETSPIRE

EX SAN MH
TOP=351.32'
INV IN=340.93'
INV OUT=340.76'

MATCHLINE
SEE THIS SHEET

MATCHLINE
SEE THIS SHEET

STEEP SLOPE MIX

STEEP SLOPE MIX

AVON COURT
STATE ROUTE 1101

280' SIGHT DISTANCE

280' SIGHT DISTANCE

280' SIGHT DISTANCE

280' SIGHT DISTANCE

PROPOSED
SWM FACILITY

PROPOSED 4-STORY
BUILDING w/ BASEMENT
(78,200 SF)

PROPOSED 4-STORY
PARKING GARAGE
(305 TOTAL PARKING SPACES)

STEEP SLOPE MIX

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
PROFESSIONAL ENGINEER
02/17/25

REVISIONS

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET
LANDSCAPING PLAN

JOB NO. 202193
SCALE 1" = 30'
SHEET NO. 15

LANDSCAPE TABULATION

SITE AREA CANOPY

REQUIREMENT: 10% OF PROJECT SITE AREA REQUIRED
6.78 ACRES (295,336 SQ. FT)
10% OF SITE = 29,533 SQ. FT OF TREE CANOPY REQUIRED

44,252 SF EXISTING CANOPY TO BE PRESERVED
3,729 SF OF PROPOSED CANOPY
47,981 SF OF TOTAL TREE CANOPY PROVIDED

STREETS

REQUIREMENT: 1 LARGE SHADE TREE EVERY 50' OR 1 MEDIUM SHADE TREE EVERY 40 ' ALONG AVON COURT

AVON COURT: 392 LF OF ROAD FRONTAGE
392 LF -150 LF OF ENTRANCES (75' PER ENTRANCE)
242/ 50' = 5 TREES REQUIRED
6 LARGE SHADE TREES PROPOSED

PARKING

REQUIREMENT: 5% OF TOTAL PARKING & CIRCULATION AREA

PARKING AREA #1: 3,419 SF
3,419 * 5% = 170 SF REQUIRED
708 SF PROPOSED

REQUIREMENT: 1 LARGE OR MEDIUM SHADE TREE PER 10 PARKING SPACES

PARKING AREA #1: 11 PARKING SPACES
1 SHADE TREE REQUIRED
2 SHADE TREES PROPOSED

GENERAL LANDSCAPE NOTES:

1. ALL LANDSCAPING SHALL BE INSTALLED BY THE FIRST PLANTING SEASON FOLLOWING THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY WITHIN THE DEVELOPMENT, OR A PHASE THEREOF.

2. ALL TREES SHALL BE PLANTED IN ACCORDANCE WITH EITHER THE STANDARDIZED LANDSCAPE SPECIFICATIONS JOINTLY ADOPTED BY THE VIRGINIA NURSERYMEN'S ASSOCIATION, THE VIRGINIA SOCIETY OF LANDSCAPE DESIGNERS AND THE VIRGINIA CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, OR THE ROAD AND BRIDGE SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION. PLANTING ISLANDS SHALL CONTAIN A MINIMUM OF 50 SQUARE FEET PER TREE, WITH A MINIMUM DIMENSION OF FIVE FEET IN ORDER TO PROTECT THE LANDSCAPING AND ALLOW FOR PROPER GROWTH. WHEEL STOPS, CURBING OR OTHER BARRIERS SHALL BE PROVIDED TO PREVENT DAMAGE TO LANDSCAPING BY VEHICLES. WHERE NECESSARY, TREES SHALL BE WELLED OR OTHERWISE PROTECTED AGAINST CHANGE OF GRADE. ALL PERVIOUS AREAS OF THE SITE SHALL BE PERMANENTLY PROTECTED FROM SOIL EROSION WITH GRASS OR OTHER GROUND COVER OR MULCH MATERIAL.

3. ALL LANDSCAPING AND SCREENING SHALL BE MAINTAINED IN A HEALTHY CONDITION BY THE CURRENT OWNER OR A PROPERTY OWNERS' ASSOCIATION, AND REPLACED WHEN NECESSARY. REPLACEMENT MATERIAL SHALL COMPLY WITH THE APPROVED LANDSCAPE PLAN.

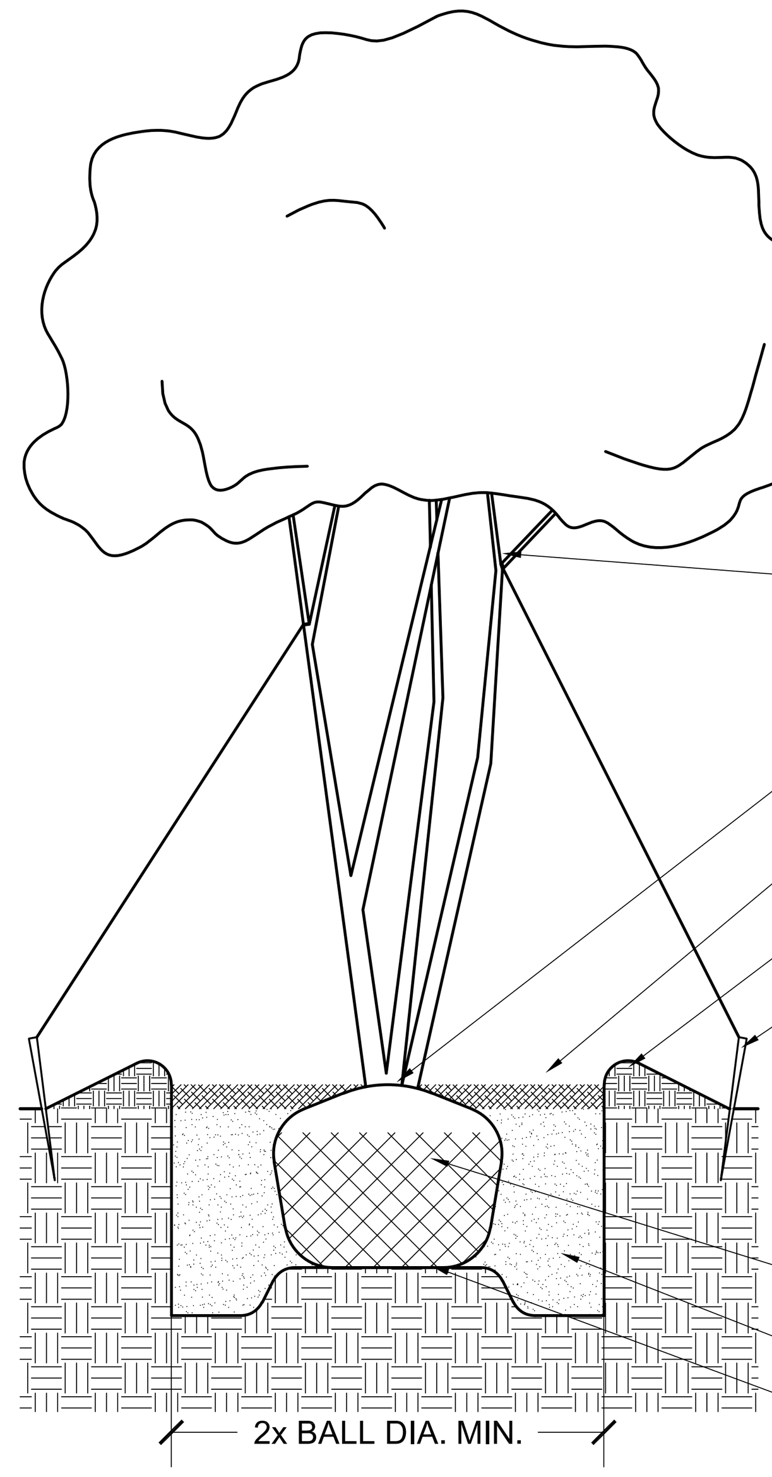
5. ALL TREES SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION AND/OR BY THE APARTMENT COMPLEX MANAGEMENT SERVICES.

6. IF STREET TREES ARE PLANTED WITHIN THE PUBLIC STREET RIGHT-OF-WAY, THE TREES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.

7. LANDSCAPING PLANTS AND TREES ADJACENT TO THE SIGHT DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINE AND ACCOMMODATE PEDESTRIANS.

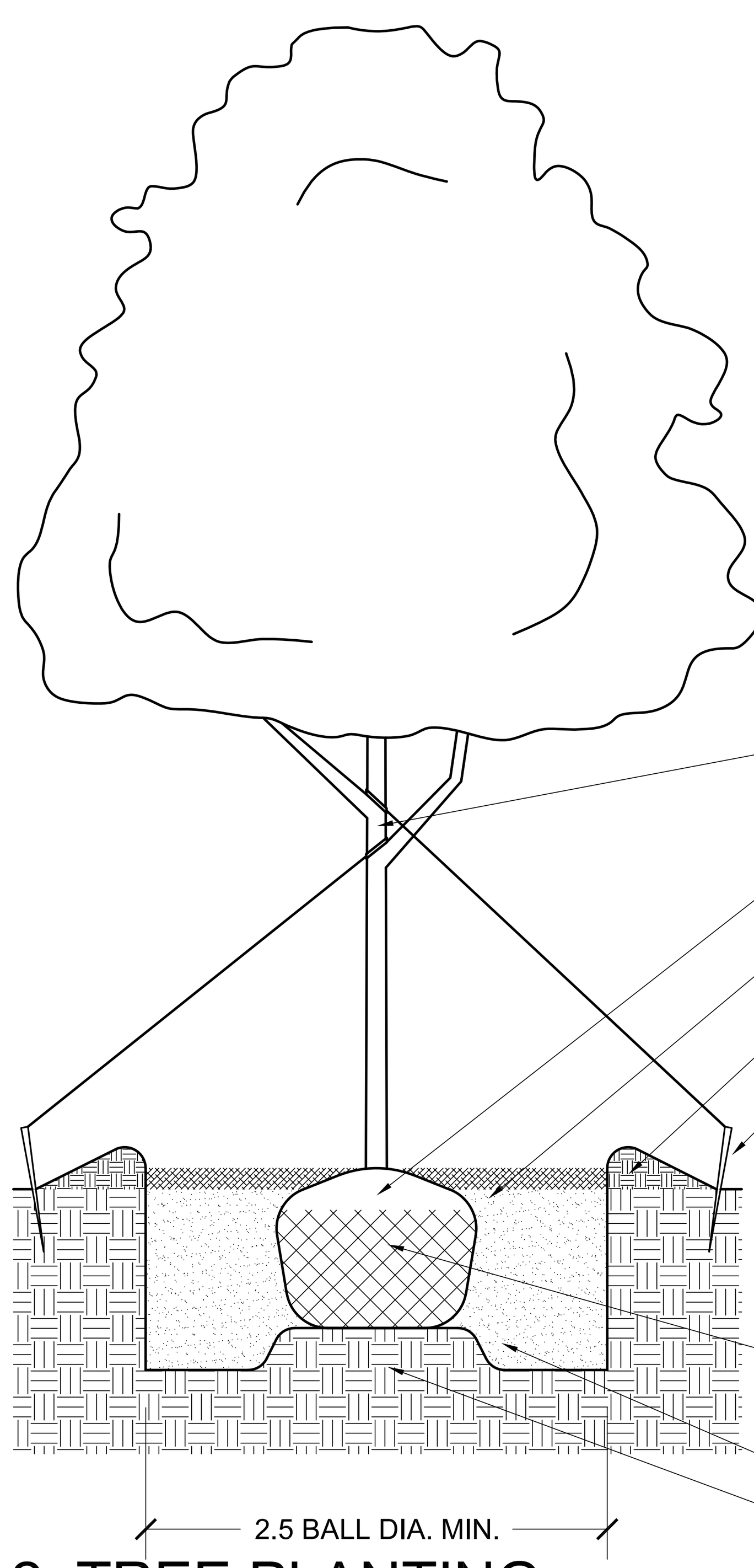
PLANT SCHEDULE - COUNTY MINIMUM

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	CANOPY
SHADE TREES						
	1	BETULA NIGRA 'HERITAGE'	'HERITAGE' RIVER BIRCH	2" CAL.	B&B	464
	3	LIQUIDAMBER STYRACIFLUA 'ROTUNDILOBA'	ROTUNDILOBA SWEETGUM	2" CAL.	B&B	714
	2	QUERCUS SHUMARDII	SHUMARD OAK	2" CAL.	B&B	744
	6	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	2" CAL.	B&B	1728
FLOWERING ORNAMENTAL TREES						
	1	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	6'-8' HT.	B&B	79
SHRUBS						
	26	ABELIA GRANDIFLORA 'ROSE CREEK'	ROSE CREEK ABELIA	3 GAL.	CONT.	
	4	CLETHRA ALNIFOLIA 'VANILLA SPICE'	VANILLA SPICE SUMMERSWEET	3 GAL.	CONT.	
	12	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	3 GAL.	CONT.	
	24	ITEA VIRGINIANA 'SPRICH'	LITTLE HENRY SWEETSPIRE	3 GAL.	CONT.	
						3729



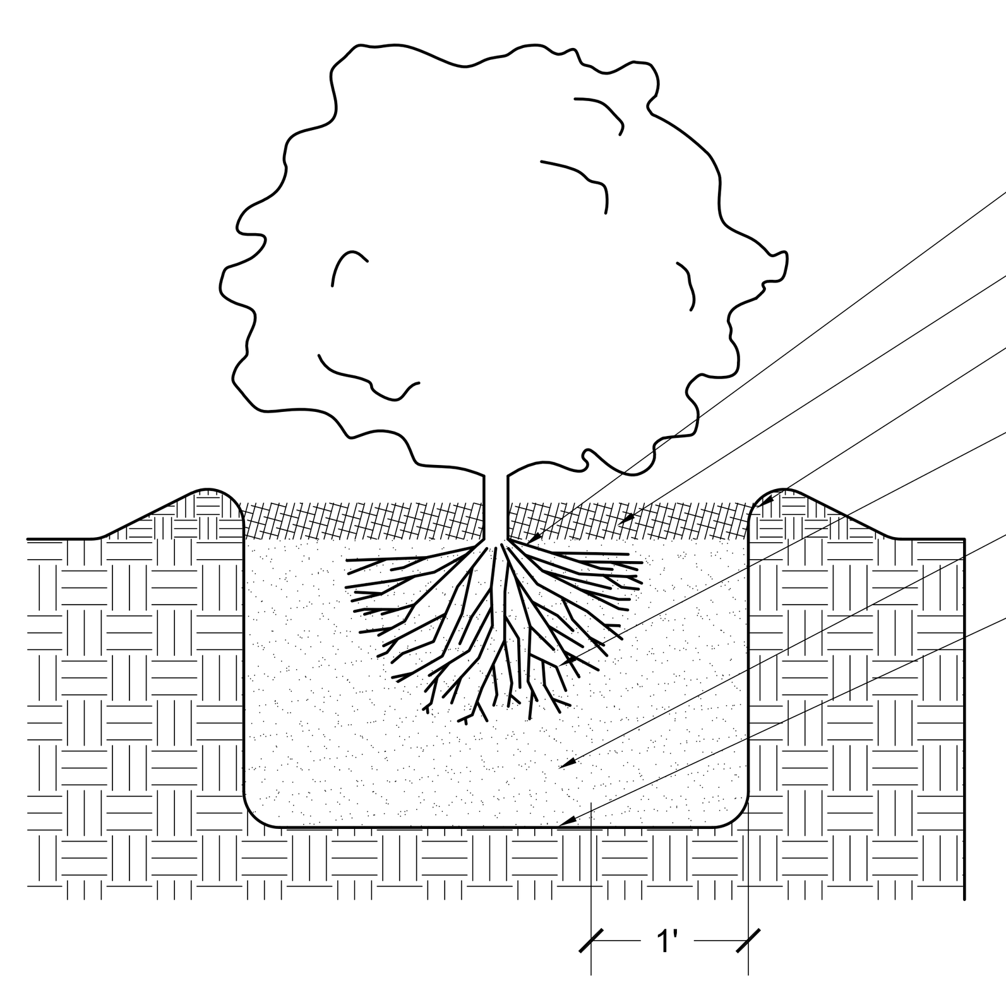
1. MULTI-STEM TREE PLANTING

SCALE: NTS



2. TREE PLANTING

SCALE: NTS



3. SHRUB PLANTING

SCALE: NTS

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

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

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

2/13/2025

OWNER SIGNATURE **(DATE)**

CONTRACT PURCHASER SIGNATURE **(DATE)**

5/1/06 Page 1 of 1

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: November 15, 2024

VA Southern Piedmont Steep Slope Mix - ERNMX-866

	Botanical Name	Common Name	Price/Lb
27.00 %	*Sorghastrum nutans, PA Ecotype*	Indiangrass, PA Ecotype	14.49
22.00 %	*Schizachyrium scoparium, 'Prairie View'-IN Ecotype*	Little Bluestem 'Prairie View'-IN Ecotype	9.82
18.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.46
15.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.27
5.00 %	*Agrostis hyemalis, Piedmont NC Ecotype*	Winter Bentgrass, Piedmont NC Ecotype	26.40
5.00 %	*Agrostis perennans, Albany Pine Bush-NY Ecotype*	Autumn Bentgrass, Albany Pine Bush-NY Ecotype	16.80
2.00 %	*Tridens flavus*	Purpletop	39.18
1.20 %	*Rudbeckia hirta*	Blackeyed Susan	31.20
1.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	28.80
1.00 %	*Eragrostis hirsuta*	Bigtop Lovegrass	82.57
0.50 %	*Asclepias syriaca*	Common Milkweed	96.00
0.50 %	*Eupatorium coelestinum, VA Ecotype*	Mistflower, VA Ecotype	480.00
0.50 %	*Lespedeza virginica, VA Ecotype*	Slender Lespedeza, VA Ecotype	216.00
0.50 %	*Penstemon laevigatus, PA Ecotype*	Appalachian Beardtongue, PA Ecotype	336.00
0.40 %	*Chamaecrista nictitans, NC Ecotype*	Sensitive Pea, NC Ecotype	57.60
0.20 %	*Liatris spicata, PA Ecotype*	Marsh Blazing Star, PA Ecotype	252.00
0.20 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	264.00
100.00 %		**Mix Price/Lb Bulk:**	**$22.63**

Seeding Rate: Seed at 45 lbs/acre with a cover crop. For a cover crop use one of the following: grain oats (30 lbs/acre; 1 Jan to 30 Apr), brown top millet (10 lbs/acre; 1 May to 31 Aug), or Grain Rye (30 lbs/acre; 1 Sep to 31 Dec).

Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Wet Meadows & Wetlands

This pollinator-friendly mix provides food and cover for wildlife. Mix forumulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com
for current pricing when placing orders.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
02/17/25
PROFESSIONAL ENGINEER

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COLLINS ENGINEERING
200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: LANDSCAPE NOTES & DETAILS

JOB NO. 202193

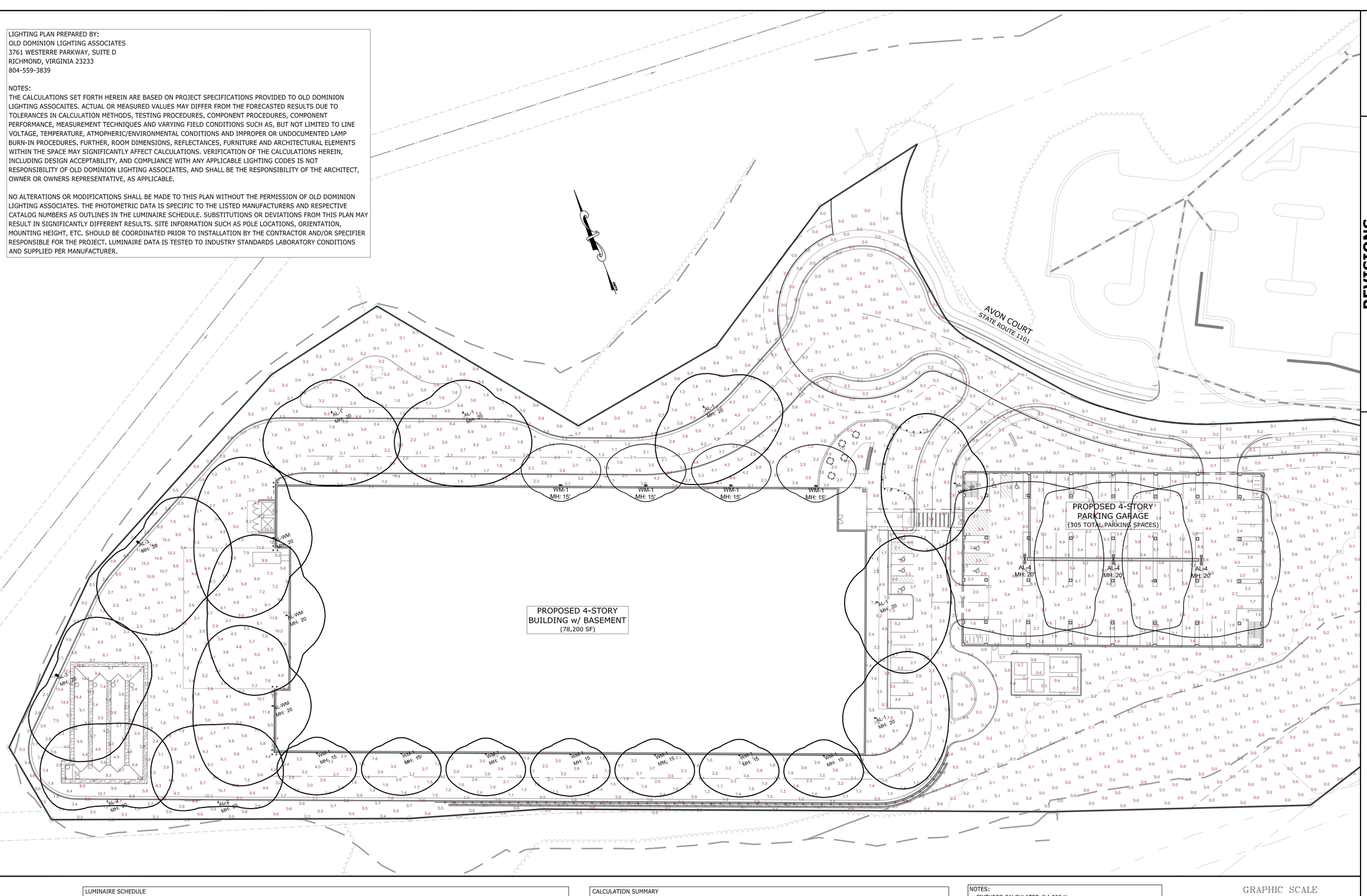
SCALE 1" = 30'

SHEET NO. 16

LIGHTING PLAN PREPARED BY:
OLD DOMINION LIGHTING ASSOCIATES
3761 WESTERRE PARKWAY, SUITE D
RICHMOND, VIRGINIA 23233
804-559-3839

NOTES:
THE CALCULATIONS SET FORTH HEREIN ARE BASED ON PROJECT SPECIFICATIONS PROVIDED TO OLD DOMINION LIGHTING ASSOCAITES. ACTUAL OR MEASURED VALUES MAY DIFFER FROM THE FORECASTED RESULTS DUE TO TOLERANCES IN CALCULATION METHODS, TESTING PROCEDURES, COMPONENT PROCEDURES, COMPONENT PERFORMANCE, MEASUREMENT TECHNIQUES AND VARYING FIELD CONDITIONS SUCH AS, BUT NOT LIMITED TO LINE VOLTAGE, TEMPERATURE, ATMOPHERIC/ENVIRONMENTAL CONDITIONS AND IMPROPER OR UNDOCUMENTED LAMP BURN-IN PROCEDURES. FURTHER, ROOM DIMENSIONS, REFLECTANCES, FURNITURE AND ARCHITECTURAL ELEMENTS WITHIN THE SPACE MAY SIGNIFICANTLY AFFECT CALCULATIONS. VERIFICATION OF THE CALCULATIONS HEREIN, INCLUDING DESIGN ACCEPTABILITY, AND COMPLIANCE WITH ANY APPLICABLE LIGHTING CODES IS NOT RESPONSIBILITY OF OLD DOMINION LIGHTING ASSOCIATES, AND SHALL BE THE RESPONSIBILITY OF THE ARCHITECT, OWNER OR OWNERS REPRESENTATIVE, AS APPLICABLE.

NO ALTERATIONS OR MODIFICATIONS SHALL BE MADE TO THIS PLAN WITHOUT THE PERMISSION OF OLD DOMINION LIGHTING ASSOCIATES. THE PHOTOMETRIC DATA IS SPECIFIC TO THE LISTED MANUFACTURERS AND RESPECTIVE CATALOG NUMBERS AS OUTLINES IN THE LUMINAIRE SCHEDULE. SUBSTITUTIONS OR DEVIATIONS FROM THIS PLAN MAY RESULT IN SIGNIFICANTLY DIFFERENT RESULTS. SITE INFORMATION SUCH AS POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC. SHOULD BE COORDINATED PRIOR TO INSTALLATION BY THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS LABORATORY CONDITIONS AND SUPPLIED PER MANUFACTURER.



LUMINAIRE SCHEDULE

SYMBOL	TAG	QTY	LABEL	DESCRIPTION	FIXTURE COLOR	ARRANGEMENT	LLF	LUMINAIRE LUMENS	LUMINAIRE WATTS	MOUNTING HEIGHT
	AL-1	6	AL-1 GARDCO OPTIFORM-M POLE MOUNT	OPF-M-A10-840-T4W	BLACK	SINGLE	1.00	19487	111.5	20 FT
	AL-2	2	AL-2 GARDCO OPTIFORM-M POLE MOUNT	OPF-M-A15-840-BLC	BLACK	SINGLE	1.00	20966	201.8	20 FT
	AL-3	2	AL-3 GARDCO OPTIFORM-L POLE MOUNT	OPF-L-A23-840-BLC	BLACK	SINGLE	1.00	35008	285.88	20 FT
	AL-4	3	AL-4 GARDCO OPTIFORM-M POLE MOUNT	OPF-M-A10-840-T5W	BLACK	BACK-BACK	1.00	17985	111.5	20 FT
	AL-WM	3	AL-WM GARDCO OPTIFORM-M WALL MOUNT	OPF-M-A15-840-T4W	BLACK	SINGLE	1.00	28785	201.8	20 FT
	WM-1	11	WM-1 GARDCO GEOFORM GBM WALL MOUNT	GBM-A09-840-T4M	BLACK	SINGLE	1.00	5848	38.7	15 FT

CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
PROPERTY LINE	ILLUMINANCE	FC	0.18	0.5	0.0	N.A.	N.A.
SITE	ILLUMINANCE	FC	1.94	16.6	0.0	N.A.	N.A.
FRONT DRIVE PARKING	ILLUMINANCE	FC	3.35	5.5	1.7	1.97	3.24
LOADING DOCK	ILLUMINANCE	FC	5.30	16.6	1.1	4.82	15.09
PARKING DECK	ILLUMINANCE	FC	3.65	7.7	1.1	3.32	7.00

NOTES:
- FIXTURES CALCULATED @4,000 K
- ISOLINES SHOWN @ 1 FC FOR REFERENCE ONLY
- FIXTURE TYPES & MOUNTING HEIGHTS SHOWN PER LOCATION
- ALL FIXTURES & POLES HAVE A BLACK POWDER COAT FINISH
- EACH OUTDOOR LUMINAIRE EQUIPPED WITH A LAMP THAT EMITS 4,000 OR MORE INITIAL LUMENS SHALL BE A FULL CUTOFF LUMINAIRE AND SHALL BE ARRANGED OR SHIELDED TO REFLECT LIGHT AWAY FROM ADJOINING DISTRICTS AND AWAY FROM ADJACENT ROADS. THE SPILLOVER OF LIGHTING SHALL NOT EXCEED ONE-HALF FOOTCANDLE.

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

SCOTT R. COLLINS
No. 35791
02/17/25
COMMONWEALTH OF VIRGINIA
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SHEET: LIGHTING PLAN
JOB NO. 202193
SCALE 1" = 30'
SHEET NO. 17

GARDCO

Site and Area

OptiForm

OPF-M Medium

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-1
Lamps: Qty:
Notes:

Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.

Ordering guide

example: OPF-M-A08-840-T4M-AR1-240-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)	Color Temperature	Distribution	Mounting	Voltage
OPF-M					
OPF-M OptiForm Medium Area	A08 13,500 lumens	827[1] 80CRI 2700K	AFR Autofront row	AR1[2,13] Arm mount (standard)	120 120V
	A09 17,000 lumens	830 80CRI 3000K	T2M Type 2 medium	MAR[3] Mast arm	208 208V
	A10 20,000 lumens	840 80CRI 4000K	T3M Type 3 medium	WAL Wall mount	240 240V
	A11 23,000 lumens	727[1] 70CRI 2700K	T4M Type 4 medium	MOS[4] Mounting ordered separately	277 277V
	A12 26,000 lumens	730 70CRI 3000K	T4W Type 4 wide		347 347V
	A13 30,000 lumens	740 70CRI 4000K	T5N Type 5 narrow		480 480V
	A14 32,000 lumens	750 70CRI 5000K	T5M Type 5 medium		UNV 120-277V
	A15 34,000 lumens		T5W Type 5 wide		HVU 347-480V
			LCL LEED corner optic left		
			LCR LEED corner optic right		
			BLC Back light control		
			2RL Type 2 rotated left 90°		
			2RR Type 2 rotated right 270°		
			3RL Type 3 rotated left 90°		
			3RR Type 3 rotated right 270°		
			4RL[1] Type 4 rotated left 90°		
			4RR[1] Type 4 rotated right 270°		

AS REQUIRED, IF REQUIRED

Dimming Controls	Sensing	Options (electrical, mechanical, etc)	Finish (SPECIFY)
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	**Standard textured finish**
none 0-10V dimming driver		SP2 Surge protector 20kV/10kA (option)	BK Black
DLEA[5] Dimming leads externally accessible (controls by others)		FS1[11] Single fuse (120, 277, or 347VAC)	WH White
FAWS[5,6] Field adjustable wattage selector		FS2[11] Double fuse (208, 240, or 480V)	BZ Bronze
BL50[5,7,12] Bi-level with motion sensor	L3 PIR sensor, #3 lens (Required if BL50 is selected)	PCB[10,11] Photocontrol button connected to 0-10V driver	DG Dark Gray
The following options include SR/DALI Driver	**WIAP sensor options**	TR5 5-pin twist lock receptacle connected to 0-10V driver	MG Medium Gray
WIAP[5,8] Wireless Interact (includes SR driver and SR receptacle)	LB Low (7'-15' mounting height) sensor, black color housing, wireless Interact, integral	TR7 7-pin twist lock receptacle connected to D4i compliant driver	**Customer specified**
SRDR[5,8] SR driver connected to Zhaga socket (D4i)	LW Low (7'-15' mounting height) sensor, white color housing	TLP[11] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin Photocell	OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HB High (15'-40' mounting height) sensor, black color housing	BAC[1,14] Meets the requirements of the Buy American Act of 1933 (BAA)	SC Special color (must supply color chip, requires factory quote)
CS50[5] Security 50% dimming, 7 hours	HW High (15'-40' mounting height) sensor, white color housing		
CM50[5] Median 50% dimming, 8 hours			
CS30[5] Security 30% dimming, 7 hours			
CM30[5] Median 30% dimming, 8 hours			

1. Extended lead time applies. Consult factory for details.
2. Mounts to a square pole with knockout for 4-5" OD round pole.
3. Mounts to a horizontal 2-3/8" OD x 5" Long tenon.
4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options.
5. Not available with other dimming control options (mutually exclusive).
6. Not available with motion sensor (physical restriction).
7. Must be specified with a motion sensor lens (L2 or L3).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB, HW, HB.
10. Not available in 347, 480, or HVU.
11. Must specify input voltage.
12. Not available with TR7, TLP.
13. OPF-RMB accessory recommended for retrofit applications.
14. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

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GARDCO

Site and Area

OptiForm

OPF-M Medium

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-2
Lamps: Qty:
Notes:

Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.

Ordering guide

example: OPF-M-A08-840-T4M-AR1-240-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)	Color Temperature	Distribution	Mounting	Voltage
OPF-M					
OPF-M OptiForm Medium Area	A08 13,500 lumens	827[1] 80CRI 2700K	AFR Autofront row	AR1[2,13] Arm mount (standard)	120 120V
	A09 17,000 lumens	830 80CRI 3000K	T2M Type 2 medium	MAR[3] Mast arm	208 208V
	A10 20,000 lumens	840 80CRI 4000K	T3M Type 3 medium	WAL Wall mount	240 240V
	A11 23,000 lumens	727[1] 70CRI 2700K	T4M Type 4 medium	MOS[4] Mounting ordered separately	277 277V
	A12 26,000 lumens	730 70CRI 3000K	T4W Type 4 wide		347 347V
	A13 30,000 lumens	740 70CRI 4000K	T5N Type 5 narrow		480 480V
	A14 32,000 lumens	750 70CRI 5000K	T5M Type 5 medium		UNV 120-277V
	A15 34,000 lumens		T5W Type 5 wide		HVU 347-480V
			LCL LEED corner optic left		
			LCR LEED corner optic right		
			BLC Back light control		
			2RL Type 2 rotated left 90°		
			2RR Type 2 rotated right 270°		
			3RL Type 3 rotated left 90°		
			3RR Type 3 rotated right 270°		
			4RL[1] Type 4 rotated left 90°		
			4RR[1] Type 4 rotated right 270°		

AS REQUIRED, IF REQUIRED

Dimming Controls	Sensing	Options (electrical, mechanical, etc)	Finish (SPECIFY)
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	**Standard textured finish**
none 0-10V dimming driver		SP2 Surge protector 20kV/10kA (option)	BK Black
DLEA[5] Dimming leads externally accessible (controls by others)		FS1[11] Single fuse (120, 277, or 347VAC)	WH White
FAWS[5,6] Field adjustable wattage selector		FS2[11] Double fuse (208, 240, or 480V)	BZ Bronze
BL50[5,7,12] Bi-level with motion sensor	L3 PIR sensor, #3 lens (Required if BL50 is selected)	PCB[10,11] Photocontrol button connected to 0-10V driver	DG Dark Gray
The following options include SR/DALI Driver	**WIAP sensor options**	TR5 5-pin twist lock receptacle connected to 0-10V driver	MG Medium Gray
WIAP[5,8] Wireless Interact (includes SR driver and SR receptacle)	LB Low (7'-15' mounting height) sensor, black color housing, wireless Interact, integral	TR7 7-pin twist lock receptacle connected to D4i compliant driver	**Customer specified**
SRDR[5,8] SR driver connected to Zhaga socket (D4i)	LW Low (7'-15' mounting height) sensor, white color housing	TLP[11] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin Photocell	OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HB High (15'-40' mounting height) sensor, black color housing	BAC[1,14] Meets the requirements of the Buy American Act of 1933 (BAA)	SC Special color (must supply color chip, requires factory quote)
CS50[5] Security 50% dimming, 7 hours	HW High (15'-40' mounting height) sensor, white color housing		
CM50[5] Median 50% dimming, 8 hours			
CS30[5] Security 30% dimming, 7 hours			
CM30[5] Median 30% dimming, 8 hours			

1. Extended lead time applies. Consult factory for details.
2. Mounts to a square pole with knockout for 4-5" OD round pole.
3. Mounts to a horizontal 2-3/8" OD x 5" Long tenon.
4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options.
5. Not available with other dimming control options (mutually exclusive).
6. Not available with motion sensor (physical restriction).
7. Must be specified with a motion sensor lens (L2 or L3).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB, HW, HB.
10. Not available in 347, 480, or HVU.
11. Must specify input voltage.
12. Not available with TR7, TLP.
13. OPF-RMB accessory recommended for retrofit applications.
14. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

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GARDCO

Site and Area

OptiForm

OPF-L Large

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-3
Lamps: Qty:
Notes:

Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.

Ordering guide

example: OPF-L-A16-840-T4M-AR1-240-BL50-L3-TR7-BZ

Luminaire	Configuration (nom. lumens)		Color Temperature	Distribution	Mounting	Voltage
OPF-L						
OPF-L OptiForm Large Area	A16 35,000 lumens	A24 50,000 lumens	827[1] 80CRI 2700K	AFR Autofront row	AR1[2,13] Arm mount (standard)	120 120V
	A17 36,000 lumens	A25 52,000 lumens	830 80CRI 3000K	T2M Type 2 medium	MAR[3] Mast arm	208 208V
	A18 38,000 lumens	A26 54,000 lumens	840 80CRI 4000K	T3M Type 3 medium	WAL Wall mount	240 240V
	A19 40,000 lumens	A27 56,000 lumens	727[1] 70CRI 2700K	T4M Type 4 medium	MOS[4] Mounting ordered separately	277 277V
	A20 42,000 lumens	A28 58,000 lumens	730 70CRI 3000K	T4W Type 4 wide		347 347V
	A21 44,000 lumens	A29 61,000 lumens	740 70CRI 4000K	T5N Type 5 narrow		480 480V
	A22 46,000 lumens	A30 63,000 lumens	750 70CRI 5000K	T5M Type 5 medium		UNV 120-277V
	A23 48,000 lumens			T5W Type 5 wide		HVU 347-480V
				LCL LEED corner optic left		
				LCR LEED corner optic right		
				BLC Back light control		
				2RL Type 2 rotated left 90°		
				2RR Type 2 rotated right 270°		
				3RL Type 3 rotated left 90°		
				3RR Type 3 rotated right 270°		
				4RL[1] Type 4 rotated left 90°		
				4RR[1] Type 4 rotated right 270°		

Dimming Controls	Sensing	Options (electrical, mechanical, etc)	Finish (SPECIFY)
The following options include 0-10V Driver		None Surge protector 10kV standard	**Standard textured finish**
none 0-10V dimming driver		SP2 Surge protector 20kV (option)	BK Black
DLEA[5] Dimming leads externally accessible (controls by others)		FS1[11] Single fuse (120, 277, or 347VAC)	WH White
FAWS[5,6] Field adjustable wattage selector		FS2[11] Double fuse (208, 240, or 480V)	BZ Bronze
BL50[5,7,12] Bi-level with motion sensor	L3 PIR sensor, #3 lens (Required if BL50 is selected)	PCB[10,11] Photocontrol button connected to 0-10V driver	DG Dark Gray
	L7 PIR sensor, #7 lens (Required if BL50 is selected)	TR5 5-pin twist lock receptacle connected to 0-10V driver	MG Medium Gray
The following options include SR/DALI Driver	**WIAP sensor options**	TR7 7-pin twist lock receptacle connected to D4i compliant driver	**Customer specified**
WIAP[5,8] Wireless Interact (includes SR drive and SR receptacle)	HB High (20'-40' mounting height) sensor, black color housing	TLP[11] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin Photocell	OC Special optional color or RAL, consult factory
SRDR[5,8] SR driver connected to Zhaga socket (D4i)	HW High (20'-40' mounting height) sensor, white color housing	BAC[1,15] Meets the requirements of the Buy American Act of 1933 (BAA)	SC Special color (must supply color chip, requires factory quote)
DynaDimmer: Automatic Profile Dimming			
CS50[5] Security 50% dimming, 7 hours			
CM50[5] Median 50% dimming, 8 hours			
CS30[5] Security 30% dimming, 7 hours			
CM30[5] Median 30% dimming, 8 hours			

AS REQUIRED, IF REQUIRED

1. Extended leadtime applies. Consult factory for details.
2. Mounts to a square pole with knockout for 4-5" OD round pole.
3. Mounts to a horizontal 2-3/8" OD x 5" long tenon.
4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options.
5. Not available with other dimming control options (mutually exclusive).
6. Not available with motion sensor (physical restriction).
7. Must be specified with a motion sensor lens (L2 or L3).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB, HW, HB.
10. Not available in 347, 480, or HVU.
11. Must specify input voltage.
12. Not available with TR7, TLP.
13. OPF-RMB accessory recommended for retrofit applications.
14. Consult factory for shielding for with T5M and T5W.
15. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

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GARDCO

Site and Area

OptiForm

OPF-M Medium

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-1
Lamps: Qty:
Notes:

Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.

Ordering guide

example: OPF-M-A08-840-T4M-AR1-240-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)	Color Temperature	Distribution	Mounting	Voltage
OPF-M					
OPF-M OptiForm Medium Area	A08 13,500 lumens	827[1] 80CRI 2700K	AFR Autofront row	AR1[2,13] Arm mount (standard)	120 120V
	A09 17,000 lumens	830 80CRI 3000K	T2M Type 2 medium	MAR[3] Mast arm	208 208V
	A10 20,000 lumens	840 80CRI 4000K	T3M Type 3 medium	WAL Wall mount	240 240V
	A11 23,000 lumens	727[1] 70CRI 2700K	T4M Type 4 medium	MOS[4] Mounting ordered separately	277 277V
	A12 26,000 lumens	730 70CRI 3000K	T4W Type 4 wide		347 347V
	A13 30,000 lumens	740 70CRI 4000K	T5N Type 5 narrow		480 480V
	A14 32,000 lumens	750 70CRI 5000K	T5M Type 5 medium		UNV 120-277V
	A15 34,000 lumens		T5W Type 5 wide		HVU 347-480V
			LCL LEED corner optic left		
			LCR LEED corner optic right		
			BLC Back light control		
			2RL Type 2 rotated left 90°		
			2RR Type 2 rotated right 270°		
			3RL Type 3 rotated left 90°		
			3RR Type 3 rotated right 270°		
			4RL[1] Type 4 rotated left 90°		
			4RR[1] Type 4 rotated right 270°		

AS REQUIRED, IF REQUIRED

Dimming Controls	Sensing	Options (electrical, mechanical, etc)	Finish (SPECIFY)
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	**Standard textured finish**
none 0-10V dimming driver		SP2 Surge protector 20kV/10kA (option)	BK Black
DLEA[5] Dimming leads externally accessible (controls by others)		FS1[11] Single fuse (120, 277, or 347VAC)	WH White
FAWS[5,6] Field adjustable wattage selector		FS2[11] Double fuse (208, 240, or 480V)	BZ Bronze
BL50[5,7,12] Bi-level with motion sensor	L3 PIR sensor, #3 lens (Required if BL50 is selected)	PCB[10,11] Photocontrol button connected to 0-10V driver	DG Dark Gray
The following options include SR/DALI Driver	**WIAP sensor options**	TR5 5-pin twist lock receptacle connected to 0-10V driver	MG Medium Gray
WIAP[5,8] Wireless Interact (includes SR driver and SR receptacle)	LB Low (7'-15' mounting height) sensor, black color housing, wireless Interact, integral	TR7 7-pin twist lock receptacle connected to D4i compliant driver	**Customer specified**
SRDR[5,8] SR driver connected to Zhaga socket (D4i)	LW Low (7'-15' mounting height) sensor, white color housing	TLP[11] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin Photocell	OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HB High (15'-40' mounting height) sensor, black color housing	BAC[1,14] Meets the requirements of the Buy American Act of 1933 (BAA)	SC Special color (must supply color chip, requires factory quote)
CS50[5] Security 50% dimming, 7 hours	HW High (15'-40' mounting height) sensor, white color housing		
CM50[5] Median 50% dimming, 8 hours			
CS30[5] Security 30% dimming, 7 hours			
CM30[5] Median 30% dimming, 8 hours			

1. Extended lead time applies. Consult factory for details.
2. Mounts to a square pole with knockout for 4-5" OD round pole.
3. Mounts to a horizontal 2-3/8" OD x 5" Long tenon.
4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options.
5. Not available with other dimming control options (mutually exclusive).
6. Not available with motion sensor (physical restriction).
7. Must be specified with a motion sensor lens (L2 or L3).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB, HW, HB.
10. Not available in 347, 480, or HVU.
11. Must specify input voltage.
12. Not available with TR7, TLP.
13. OPF-RMB accessory recommended for retrofit applications.
14. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

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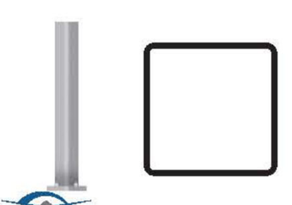
GARDCO

Poles & Brackets

Site and Area Poles

Straight Square Steel



Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-1, AL-2, AL-3, AL-4 POLE
Lumens: Qty:
Notes:

The **Gardco SSS Straight Square Steel** pole consists of a one-piece high tensile carbon steel tube welded and secured to the carbon steel base plate providing excellent strength and integrity. The poles are finished with an electrostatically applied, thermally cured polyester powdercoat. All poles include base cover, hand hole, ground lug and top cap. Anchor bolts and templates are ordered as a separate accessory.

20'

AL-1, AL-2, AL-3 = D1
AL-4 = D2

Ordering guide

example: SSS-CB-4-11-12-D1-DT1-BK-FES

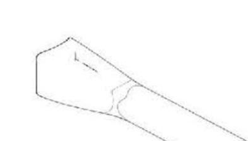
Family	Base	Pole Shaft Size (in.)	Pole Gauge/ Wall Thickness	Height (ft)[5]	Drilling/Tenon Configurations[1]	Drilling Template[2]	Finish (SPECIFY)	Options[3]
	CB							
SSS	CB Carbon Steel Base w/ Base Cover	4	11 11 ga./ 0.120"	10, 12, 14, 15, 16, 18, 20, 25	**Drilling**		BK Black	FES[6] Festoon Outlet
					D1 1 Way	DT1 Drill Template 1	BZ Bronze	VDA Vibration Dampener
					D1@180 1 Way @ 180	DT2 Drill Template 2	WH White	AHH[6] Additional Hand Hole
					D2 2 Way @ 180	DT3 Drill Template 3	DG Dark Grey	DR[6,8] Duplex Receptacle
					D2@90 2 Way @ 90	DT4 Drill Template 4	MG Medium Grey	VPA Vandalproof Screws
					D3 3 Way @ 90	DT5 Drill Template 5	GY3[8] Light Grey, Smooth	GFI[6,8] DR with GFI (120V only)
					D4 4 Way @ 90	DT6 Drill Template 6	SSDGY[8] SolarForm Dark Grey (RAL 7011)	BAC[9] Buy American Compliant
						[DTX-xxx][6,7] Custom Template; See drill template chart for details.	GV Galvanized (No Paint)	CL1/2[6] Coupling 1/2"
			7 7 ga./ 0.180"	20, 25, 30	**Tenons**		FP/GV Finished Textured Paint over Galvanized (Specify, ex: MG/GV)	CL3/4[6] Coupling 3/4"
		5	11 11 ga./ 0.120"	20, 25, 30	T2D4L 2-3/8" OD x 4" length	N No Drilling Template (for Tenon and Plain Top Options)	OC Optional Color Paint (ex: RAL7024)	CL1[6] Coupling 1"
					T2D6L[8] 2-3/8" OD x 6" length		SC[6] Special/Custom Color (Specify, must supply color chip)	CL1-1/4[6] Coupling 1-1/4"
			7 7 ga./ 0.180"	20, 25, 30, 35	T3D4L 3" OD x 4" length			CL1-1/2[6] Coupling 1-1/2"
					T4D6L 4" OD x 6" length			NL1/2[6] Nipple 1/2"
L/SSS		6	7 7 ga./ 0.180"	30, 35, 40	**No Drilling/No Tenon**			NL3/4[6] Nipple 3/4"
					P Plain Top			NL1[6] Nipple 1"
								NL1-1/4[6] Nipple 1-1/4"
								NL1-1/2[6] Nipple 1-1/2"
								For FES, AHH, DR, GFI, CL*, and NL* options, indicate height in inches above base and orientation to handhole (ex. GFI-36@180). See page 2 and 3 for details.

1. See Drilling Configurations on Page 3.
2. See Luminaire Drilling Templates on Page 3
3. Not all options available with all configurations. Consult factory for more details
4. Options listed with gray text will be shipped with the Legacy SSS design. Use the L/SSS family code whenever these options are specified.
5. Pole heights can be cut to length. Specify as a whole number in ft. (ex. 11, 13) or to the inch as a decimal (ex. 15.33 = 15' 4") or as "15FT 4IN" for Legacy designs.
6. Option must be specified, including install location, by the customer before order release. FES, DR, GFI, AHH options typically must be placed 12-18" away from standard hand hole (20" or 12" above base).
7. Custom drill templates (DTX) require factory quote.
8. Option not available with Legacy SSS designs.
9. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
10. Consult Signify to confirm whether specific accessories are BAA-compliant.

Accessories [10]

Service	Pole Size	12NC	Description (Diameter x Length x Hook)
		Anchor Bolts + Templates	
For shipment with the pole (order 1 per pole)	4" Poles	912401597397	AB 3/4x24x3-G DEC w/ 8.5 BC ABT
	5" Poles (SSS)	912401613107	AB 1x33x3-G DEC w/ 11 BC ABT
	5" Poles (L/SSS)	912400207384	3/4-18-3.75 (SETOF4)
	6" Poles	912401597401	AB 1x33x3-G DEC w/ 12 BC ABT
For Pre-Ship service (order 1 per pole)	4" Poles	912401597405	AB 3/4x24x3-G DEC w/ 8.5 BC ABT-RS
	5" Poles (SSS)	912401613106	AB 1x33x3-G DEC w/ 11 BC ABT-RS
	5" Poles (L/SSS)	912400215786	3/4 x 18 x 3.75 (order 4/pole)
	6" Poles	912401597408	AB 1x33x3-G DEC w/ 12 BC ABT-RS

Part No.	Description
RLAR-1A-SQ4+ -(finish)	Cast aluminum mounting arm, 15" long with DT6 drill pattern (order 1 per luminaire). For use with Lumec Roadway and Gardco SolarForm luminaires (for SolarForm: use RLAR bracket to mount horizontally, use T2D6L tenon to mount vertically). Specify finish to match pole.



RLAR

GARDCO

Wall Mount

GeoForm

GBM LED wall sconce

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: WM-1
Lamps: Qty:
Notes:

Gardco GeoForm block medium LED wall sconce features a rectangular geometric shape that will complement a range of architectural styles. GeoForm block medium is available with two light engines: precision optics which feature type 2, 3, and 4 distributions, as well as light effects optics which offer wall wash, spot, and pencil beam distributions. GeoForm with light effects can be used in up, down, or up and down configurations. Emergency battery backup option provides path-of-egress illumination. Multiple control options, including wireless Interact Pro outdoor, further enhance energy savings.

Ordering guide

example: GBM-A06-840-T3M-UNV-FAWS-MG

Luminaire	Configuration Down (nom. lumens)		Color Temperature	Distribution Down	Configuration Up	Distribution Up	Voltage
GBM							
GBM GeoForm Block Medium	**Precision Plus optics**						120 120V
	A06 2,500 lumens	A10[1] 7,500 lumens	830 80CRI 3000K	T2M Type 2 down only	None Leave blank for down only	None Leave blank for down only	208 208V
	A07 4,000 lumens	A11[1] 8,500 lumens	840 80CRI 4000K	T3M Type 3 down only			240 240V
	A08 5,000 lumens	A12[1] 9,500 lumens	740 70CRI 4000K	T4M Type 4 down only			277 277V
	A09 6,000 lumens	A13[1] 11,000 lumens	750 70CRI 5000K				347 347V
		A14[1] 12,500 lumens					480 480V
	Light Effects optics (up OR down)						UNV 120-277V (50/60Hz)
	B01[1] 700 lumens		830 80CRI 3000K	WAW Wall Wash	None Leave blank for down only	None Leave blank for down only	HVU 347-480V (50/60Hz)
	B02[1] 1,000 lumens		840 80CRI 4000K	SPT Spot			
	B03[1] 2,200 lumens			PEN Pencil Beam			
	Light Effects optics (up AND down)						
	B04[1] 1,400 lumens		830 80CRI 3000K	WAW Wall Wash	U Uplight configuration to match downlight configuration	WAW Wall Wash	
	B05[1] 2,000 lumens		840 80CRI 4000K	SPT Spot		SPT Spot	
	B06[1] 4,400 lumens			PEN Pencil Beam		PEN Pencil Beam	

Dimming Controls[2]	Electrical	Options	Finish (SPECIFY)
none Leave blank (10kV kA dimming driver standard)	none Leave blank (10kV kA surge protection standard)	none Leave blank	**Textured**
DLEA[2] Dimming Leads Externally Accessible (controls by others)	SP2 Surge Protector 20kV/10kA (option)	EC[6] Emergency Battery Pack, Cold rated (-20°C to 40°C). 120 or 277V only.	BK Black
DUCC[1,2] Dual Circuit Control (Only available with A06-A09)	FS1 Single Fuse (120, 277, or 347VAC)	BAC[7] Meets the requirements of the Buy American Act of 1933 (BAA)	WH White
FAWS[2] Field Adjustable Wattage Selector	FS2 Double Fuse (208V, 240V, or 480V)		BZ Bronze
MW30[1,2,3,6] Microwave motion sensor factory set at 30% dimming	FS3 Double fuse Canadian double pull (208V, 240V, or 480V)		DG Dark Gray
DynaDimmer: Automatic Profile Dimming Only offered with A08-A13	PCB[5] Photocontrol Button (120-277V only)		MG Medium Gray
CS50[1,2,4,6] Safety 50% dimming, 7 hours			**Customer specified**
CM50[1,2,4,6] Median 50% dimming, 8 hours			RAL Specify optional color or RAL, (ex: OC-LGP or OC-RAL7024)
CS30[1,2,4,6] Safety 30% dimming, 7 hours			CC Custom Color (must supply color chip, requires factory quote)
CM30[1,2,4,6] Median 30% dimming, 8 hours			

AS REQUIRED, IF REQUIRED

1. Emergency Battery Pack not available.
2. Only one option can be selected from Dimming Controls column.
3. Not available in 480V.
4. Only available from 120-277V, or in UNV.
5. Only available from 120-277V, must specify voltage.
6. Not available with "Light Effects" B01 - B06.
7. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.
8. Consult Signify to confirm whether specific accessories are BAA-compliant.

Luminaire Accessories (order separately)[8]

GF-WS-BK	Wall Mounted Box for surface conduit, painted black
GF-INV	Inversion Mounting kit (required with inverted mounting)

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GARDCO

Site and Area

OptiForm

OPF-M Medium

Old Dominion Lighting Associates

Project: AVON INDUSTRIAL
Location:
Cat.No:
Type: AL-WM
Lamps: Qty:
Notes:

Gardco OptiForm site and area luminaires are available in three sizes: small, medium and large. Featuring the latest in LED technology, OptiForm achieves up to 192 lumens per watt. Eleven optical distributions are available, suitable for a range of outdoor lighting applications. OptForm features a unique mounting system with a two-piece housing for hassle-free installation. Mounting options include a standard arm, mast arm, and wall mount bracket. Service Tag is a standard feature with every OptiForm luminaire, providing maintenance or upgrade assistance throughout the life of the product.

Ordering guide

example: OPF-M-A08-840-T4M-AR1-240-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)	Color Temperature	Distribution	Mounting	Voltage
OPF-M					
OPF-M OptiForm Medium Area	A08 13,500 lumens	827[1] 80CRI 2700K	AFR Autofront row	AR1[2,13] Arm mount (standard)	120 120V
	A09 17,000 lumens	830 80CRI 3000K	T2M Type 2 medium	MAR[3] Mast arm	208 208V
	A10 20,000 lumens	840 80CRI 4000K	T3M Type 3 medium	WAL Wall mount	240 240V
	A11 23,000 lumens	727[1] 70CRI 2700K	T4M Type 4 medium	MOS[4] Mounting ordered separately	277 277V
	A12 26,000 lumens	730 70CRI 3000K	T4W Type 4 wide		347 347V
	A13 30,000 lumens	740 70CRI 4000K	T5N Type 5 narrow		480 480V
	A14 32,000 lumens	750 70CRI 5000K	T5M Type 5 medium		UNV 120-277V
	A15 34,000 lumens		T5W Type 5 wide		HVU 347-480V
			LCL LEED corner optic left		
			LCR LEED corner optic right		
			BLC Back light control		
			2RL Type 2 rotated left 90°		
			2RR Type 2 rotated right 270°		
			3RL Type 3 rotated left 90°		
			3RR Type 3 rotated right 270°		
			4RL[1] Type 4 rotated left 90°		
			4RR[1] Type 4 rotated right 270°		

AS REQUIRED, IF REQUIRED

Dimming Controls	Sensing	Options (electrical, mechanical, etc)	Finish (SPECIFY)
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	**Standard textured finish**
none 0-10V dimming driver		SP2 Surge protector 20kV/10kA (option)	BK Black
DLEA[5] Dimming leads externally accessible (controls by others)		FS1[11] Single fuse (120, 277, or 347VAC)	WH White
FAWS[5,6] Field adjustable wattage selector		FS2[11] Double fuse (208, 240, or 480V)	BZ Bronze
BL50[5,7,12] Bi-level with motion sensor	L3 PIR sensor, #3 lens (Required if BL50 is selected)	PCB[10,11] Photocontrol button connected to 0-10V driver	DG Dark Gray
The following options include SR/DALI Driver	**WIAP sensor options**	TR5 5-pin twist lock receptacle connected to 0-10V driver	MG Medium Gray
WIAP[5,8] Wireless Interact (includes SR driver and SR receptacle)	LB Low (7'-15' mounting height) sensor, black color housing, wireless Interact, integral	TR7 7-pin twist lock receptacle connected to D4i compliant driver	**Customer specified**
SRDR[5,8] SR driver connected to Zhaga socket (D4i)	LW Low (7'-15' mounting height) sensor, white color housing	TLP[11] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin Photocell	OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HB High (15'-40' mounting height) sensor, black color housing	BAC[1,14] Meets the requirements of the Buy American Act of 1933 (BAA)	SC Special color (must supply color chip, requires factory quote)
CS50[5] Security 50% dimming, 7 hours	HW High (15'-40' mounting height) sensor, white color housing		
CM50[5] Median 50% dimming, 8 hours			
CS30[5] Security 30% dimming, 7 hours			
CM30[5] Median 30% dimming, 8 hours			

1. Extended lead time applies. Consult factory for details.
2. Mounts to a square pole with knockout for 4-5" OD round pole.
3. Mounts to a horizontal 2-3/8" OD x 5" Long tenon.
4. Must be ordered with mounting accessory. Photocell option (TR7) must be selected with mounting accessory. See Page 2 for options.
5. Not available with other dimming control options (mutually exclusive).
6. Not available with motion sensor (physical restriction).
7. Must be specified with a motion sensor lens (L2 or L3).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB, HW, HB.
10. Not available in 347, 480, or HVU.
11. Must specify input voltage.
12. Not available with TR7, TLP.
13. OPF-RMB accessory recommended for retrofit applications.
14. Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.

OPF-M_OptiForm_Medium 04/24 page 1 of 8

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COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
02/17/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
7/13/23	FINAL SITE PLAN SUBMITTAL
3/4/24	REVISED FOR COUNTY COMMENTS - 2ND SUBMITTAL
2/17/25	CLIENT REVISIONS AND FINAL COUNTY REVISIONS - 3RD SUBMISSION

COLLINS ENGINEERING

200 GARRETT STREET, SUITE K-CHARLOTTESVILLE, VA 22902 -434.293.3719

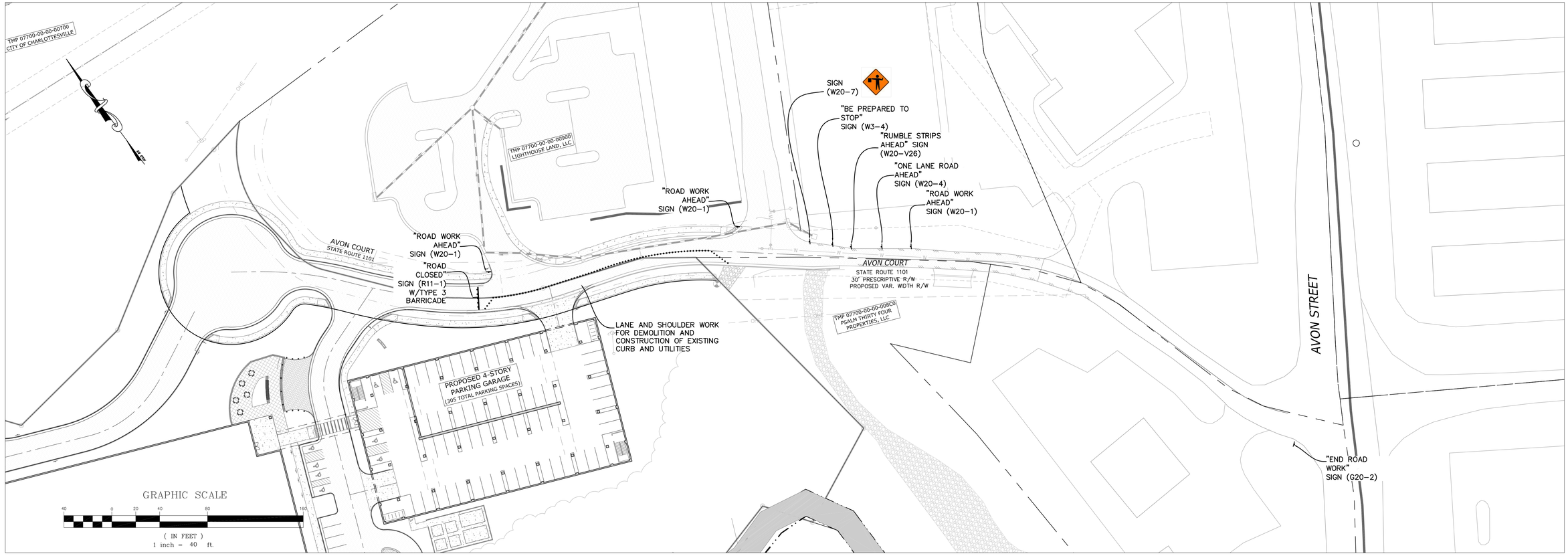
PROJECT: AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN

SHEET: LIGHTING PLAN NOTES & DETAILS

JOB NO. 202193

SCALE N/A

SHEET NO. 18



Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.*[2]

Standard:

4. **Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.**[1]
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or**[1] **oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21-V10) sign[2] may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the* PTRS[1] *should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

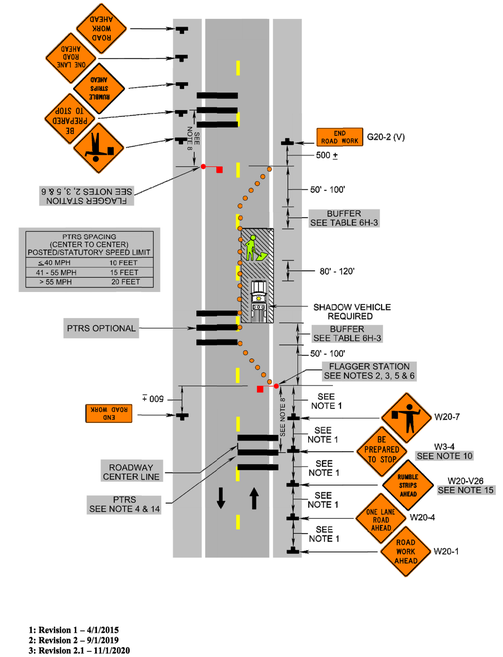
12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:[1]

14. **When used**[2]**, three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper placement on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

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PROJECT
AVON COURT INDUSTRIAL BUILDING - FINAL SITE PLAN
SHEET
MAINTENANCE OF TRAFFIC PLAN

JOB NO. 202193
SCALE 1"=40'
SHEET NO. 19