AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX

FINAL SITE PLAN (SDP-2025-_____)

(INITIAL SITE PLAN SDP-2025-00095)

RIO MAGISTERIAL DISTRICT
ALBEMARLE COUNTY, VIRGINIA

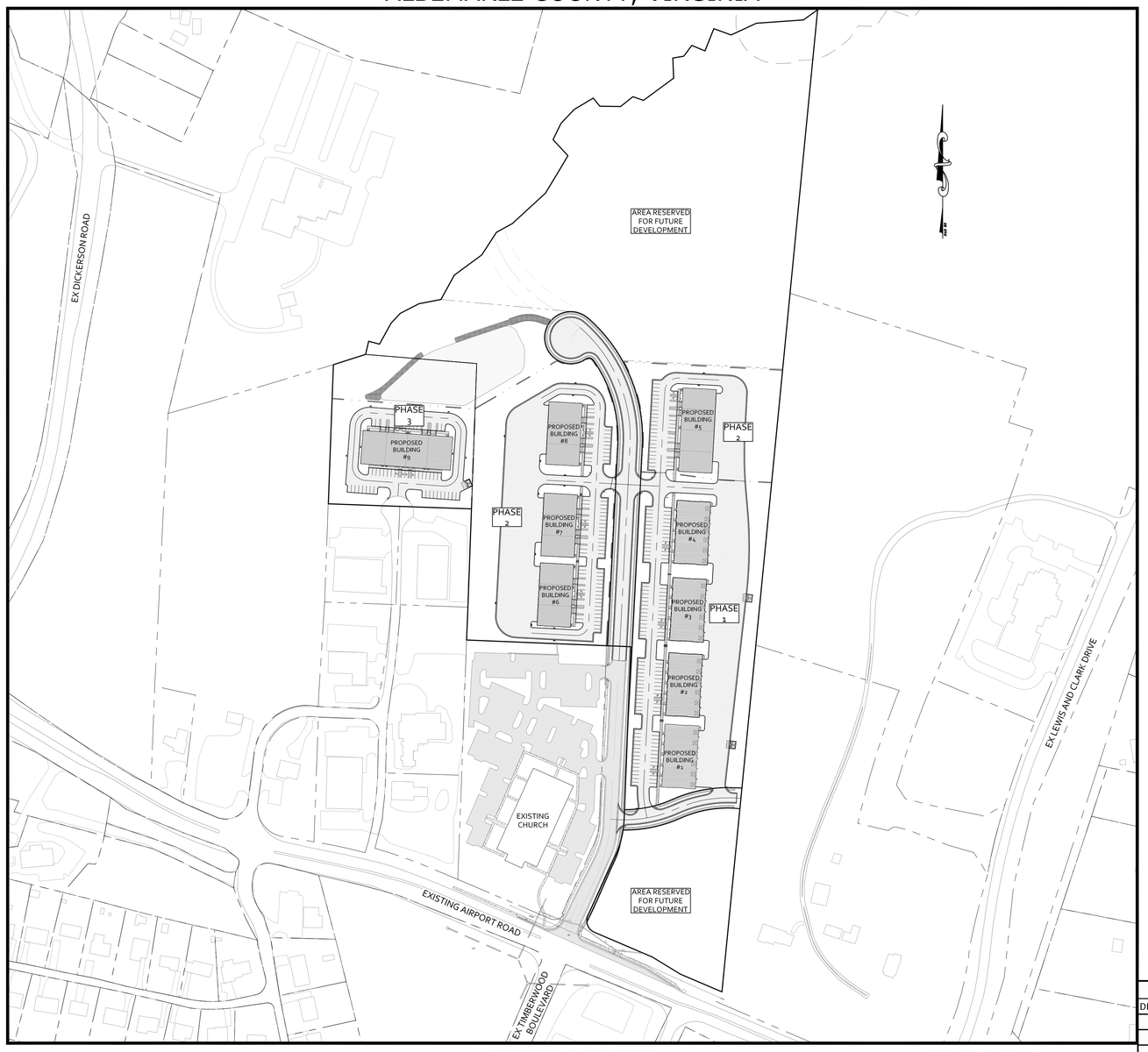
PROJECT SITE INFO:

LOCATION:	INTERSECTION OF AIRPORT ROAD & TIMBERWOOD BOULEVARD ALBEMARLE COUNTY - CHARLOTTESVILLE, VA
EXISTING USE:	VACANT LAND
PROPOSED USE:	STORAGE AND INDUSTRIAL OFFICES, WITH SUBORDINATE RETAIL SALES OR COMMERCIAL NOT TO EXCEED 25% OF THE GROSS FLOOR AREA
TOTAL ACREAGE:	29.58 ACRES
OWNER/DEVELOPER:	SIX STAR ASSOCIATES, LLC P.O. BOX 5548 CHARLOTTESVILLE, VA 22905 CONTACT: HUNTER WOOD EMAIL: ulcwww2@embarqmail.com PHONE: 434-975-3334
SURVEYOR:	LINCOLN SURVEYING 632 BERKMAR CIRCLE CHARLOTTESVILLE, VA 22901
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:

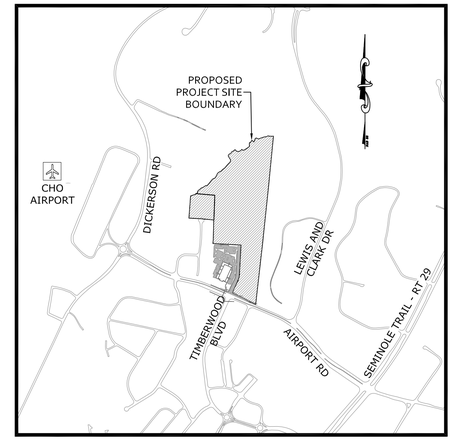
TMP:	03200-00-00-01700
ACREAGE:	28.06 ACRES
D.B./PG:	1745/696
ZONING:	LI (LIGHT INDUSTRIAL)

TMP:	03200-00-00-017E3
ACREAGE:	1.52 ACRES
D.B./PG:	1745/696
ZONING:	LI (LIGHT INDUSTRIAL)



SHEET LAYOUT
SCALE: 1" = 150'

GRAPHIC SCALE
150 0 75 150 300
(IN FEET)
1 inch = 150 ft.



VICINITY MAP
SCALE: 1" = 1,000'

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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
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN
SHEET: COVER

JOB NO. 102036
SCALE AS SHOWN
SHEET NO. 1

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GENERAL NOTES:

OWNER/DEVELOPER: SIX STAR ASSOCIATES, LLC
P.O. BOX 5548
CHARLOTTESVILLE, VA 22905
ENGINEER: COLLINS ENGINEERING, INC
200 GARRETT STREET, SUITE K
CHARLOTTESVILLE, VA 22902
CONTACT: (434) 293-3719 (SCOTT@COLLINS-ENGINEERING.COM)
SURVEYOR: LINCOLN SURVEYING
652 BERKMAR CIRCLE
CHARLOTTESVILLE, VA 22901
LOCATION OF PROJECT: INTERSECTION OF AIRPORT ROAD & TIMBERWOOD BOULEVARD
PROPERTY INFO: TMP 03200-00-00-01700 (28.06 AC)
TMP 03200-00-00-017E3 (1.52 AC)
TOTAL ACREAGE: 29.58 ACRES
ZONING: LIGHT INDUSTRIAL (LI) PER APPROVED REZONING ZMA1988000003. THE PROPOSED DEVELOPMENT SHALL ADHERE TO THE CONDITIONS FROM THE APPROVED ZMA1988000003.
OVERLAY DISTRICTS:
ENTRANCE CORRIDOR (EC)
AIRPORT IMPACT AREA (AIA)
MANAGED & PRESERVED STEEP SLOPES
BOUNDARY & TOPO: BOUNDARY AND TOPOGRAPHY ARE A COMPOSITION OF INFORMATION PROVIDED FROM COMMONWEALTH LAND SURVEYING, LINCOLN SURVEYING AND COUNTY GIS. COMMONWEALTH LAND SURVEYING INFORMATION IS FROM APRIL OF 2010 AND LINCOLN SURVEYING INFORMATION IS FROM JUNE OF 2025. SITE WAS FIELD VERIFIED BY COLLINS ENGINEERING IN JUNE OF 2025.
USGS DATUM: NAD 83 (1994)
EXISTING VEGETATION: MOSTLY WOODED
EXISTING USE: VACANT
ADJACENT OWNERS: SEE EXISTING CONDITIONS SHEET FOR ADJACENT OWNERS INFO.
PROPOSED USE: STORAGE AND INDUSTRIAL OFFICES, WITH SUBORDINATE RETAIL SALES OR COMMERCIAL NOT TO EXCEED 25% OF THE GROSS FLOOR AREA.
(8) 1-STORY BUILDINGS = 99,500 GROSS SF
(2) 1-STORY BUILDING W/ A BASEMENT = 34,400 GROSS SF
TOTAL = 133,900 GROSS SF
FLOOR AREA TO LOT COVERAGE RATIO: 116,700 SF / 29.58 AC = 0.091
PHASING: SITE CONSTRUCTION SHALL BE COMPLETED IN (3 OR 4) PHASES
BUILDING/LOT SETBACKS: FRONT: 10' MINIMUM AND NO MAXIMUM
SIDE: NONE (10' MIN. BUILDING SEPARATION)
REAR: NONE (10' MIN. BUILDING SEPARATION)
MAXIMUM HEIGHT ALLOWED: 3 STORIES AND SHALL NOT EXCEED 40 FEET
NOTE: FOR EACH STORY THAT BEGINS ABOVE 40 FEET IN HEIGHT OR FOR EACH STORY ABOVE THE THIRD STORY, WHICHEVER IS LESS, THE MINIMUM STEPBACK SHALL BE 15 FEET
PROPOSED HEIGHT: PHASE I BUILDING HEIGHTS PROPOSED ARE 22'-5".
WATERSHED: SOUTH FORK RIVANNA RIVER & NORTH FORK RIVANNA RIVER (JACOBS RUN)
FLOODPLAIN: THIS PROJECT IS NOT LOCATED WITHIN FLOODPLAIN LIMITS PER FEMA FLOOD INSURANCE RATE MAP#51003C, PANEL #0140D DATED FEBRUARY 4, 2005
STREAM BUFFER: THERE IS NO STREAM BUFFER LOCATED WITHIN THE PROJECT LIMITS
PUBLIC WATER SUPPLY RESERVOIR: THE SITE IS NOT LOCATED WITHIN A PUBLIC WATER SUPPLY RESERVOIR WATERSHED
DAM BREAK INUNDATION: THE SITE IS NOT LOCATED WITHIN A DAM BREAK INUNDATION ZONE
STEEP SLOPES: MANAGED AND PRESERVED STEEP SLOPES ARE WITHIN THE LIMITS OF THE PROJECT SITE - SEE THE EXISTING CONDITIONS SHEET FOR THE LOCATION OF THE STEEP SLOPES ON THE PROPERTY.
BURIAL SITES: THERE WERE NO CEMETERIES FOUND ON THE PROJECT SITE DURING THE FIELD INVESTIGATION OR SURVEY OF THE PROPERTY.
UTILITIES: COUNTY WATER & SEWER
FIRE & RESCUE: THE PROJECT SHALL CONFORM WITH ALBEMARLE COUNTY FIRE AND RESCUE REGULATIONS FOR FIRE PROTECTION AND ACCESS TO THE SITE.
INGRESS/EGRESS: THE PROPOSED DEVELOPMENT SHALL CONNECT AND EXTEND EXISTING TIMBERWOOD BOULEVARD OFF AIRPORT ROAD
LAND DEDICATED TO PUBLIC USE: SEE SITE PLAN FOR LAND TO BE DEDICATED PUBLIC RIGHT-OF-WAY
SIGNAGE: PROPOSED SIGNAGE FOR THE DEVELOPMENT WILL BE REVIEWED THROUGH A SEPARATE SIGN APPLICATION.
TRASH: DUMPSTERS ARE PROPOSED ON SITE - SEE SITE PLAN SHEET FOR LOCATIONS
RETAINING WALLS: NO RETAINING WALLS ARE PROPOSED WITHIN THIS PLAN. HOWEVER RETAINING WALLS WITH A MAXIMUM HEIGHT OF 10' IS ALLOWED IF ASBUILT CONDITIONS REQUIRE THEM OR FUTURE PHASES NECESSITATE WALLS.
RECREATION: N/A
LIGHTING: PROPOSED LIGHTING SHALL COMPLY WITH REQUIREMENTS OF SECTION 32.7.8 & SECTION 4.17 OF THE ZONING ORDINANCE. SEE LIGHTING PLAN ON SHEETS 26 & 27.
LANDSCAPING: PROPOSED LANDSCAPING SHALL COMPLY WITH REQUIREMENTS OF SECTION 32.7.9 OF THE ALBEMARLE COUNTY ZONING ORDINANCE. SEE LANDSCAPING PLAN ON SHEETS 24 & 25.
UTILITIES: THE DEVELOPMENT SHALL BE SERVED WITH PUBLIC WATER AND SEWER
FIRE FLOW/BUILDING CALCULATIONS: CLASS 3 OR 4 - NONCOMBUSTIBLE, CONSTRUCTION FACTOR = 0.8
BUILDING #9 GROSS FLOOR AREA = 17,200 SF (BASEMENT AREA IS NOT PART OF THE ISO NFF CALCS.)
OCCUPANCY C-2 COMBUSTIBLE, FACTOR = 0.85
REQUIRED ISO FIRE FLOW = 1,600 GPM
NEEDED FIRE FLOW (50% REDUCTION FOR AUTOMATIC SPRINKLER) = 800 GPM
MINIMUM NEEDED FIRE FLOW PER IFC SEC. B105.2 = 1,000 GPM FOR 2 HOURS.
NOTE, THE ACSA CONDUCTED A FIRE HYDRANT FLOW TEST ON 11/14/25. FLOW HYDRANT #12239 RELEASED 1,105 gpm FOR A DURATION OF 2 MINUTES. PRESSURE HYDRANT 12238 EXPERIENCED A 22.5 psi PRESSURE DROP WHEN HYDRANT #12239 WAS OPENED (87.5-65 psi). THE ACSA COMPUTED AWWA Q20 FLOW WAS 1,959 gpm. BOTH THE FIELD RECORDED FLOW AND THE COMPUTED AWWA FLOW EXCEED THE 1,000 gpm NFF DEMAND.
STORMWATER MANAGEMENT: THE PROPOSED WPO PLAN REMOVES EXISTING SWM FACILITY (0435.01) AND REPLACES IT WITH A NEW SWM FACILITY MEETING CURRENT MINIMUM COUNTY AND STATE REQUIREMENTS. A NEW LEVEL II P-BAS-02 WET POND IS PROPOSED.
OUTDOOR STORAGE ANY OUTDOOR STORAGE USE MUST COMPLY WITH THE REQUIREMENTS OF SECTION 5.1.52.

LAND AREAS

VDOT RIGHT-OF-WAY =	1.32 ACRES	
RESERVED FUTURE R/W=	0.32 ACRES	NOTE: THE AREA RESERVED FOR FUTURE TIMBERWOOD BOULEVARD R/W
OPEN SPACE =	17.41 ACRES	WILL BE DEDICATED UPON THE REQUEST OF ALBEMARLE COUNTY.
IMPERVIOUS AREA =	10.53 ACRES	
TOTAL =	29.58 ACRES	

IMPERVIOUS AREAS

	PHASE I	PHASE II	PHASE III	TOTAL
PROPOSED BUILDINGS =	47,500 SF	52,000 SF	34,400 SF	133,900 SF
PROPOSED SIDEWALKS =	21,000 SF	4,750 SF	2,225 SF	27,975 SF
PROPOSED ROADS & PARKING AREAS =	143,250 SF	122,675 SF	31,075 SF	297,000 SF
TOTAL IMPERVIOUS AREA =	211,750 SF	179,425 SF	67,700 SF	458,875 SF

TRAFFIC GENERATION CALCULATIONS
TRIP GENERATION CALCULATIONS BASED ON ITE TRIP GENERATION MANUAL (11TH EDITION)
LIGHT INDUSTRIAL BUILDINGS (CODE 110 - 4.87 TRIPS / 1,000 SF)
PROPOSED BUILDINGS = 133,900 GROSS SF
TOTAL ADT: 653 VPD (326.5 ENTER / 326.5 EXIT)
TOTAL AM PEAK: 99 VPH (87 ENTER / 12 EXIT)
TOTAL PM PEAK: 87 VPH (12 ENTER / 75 EXIT)

PARKING CALCULATIONS
PARKING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 18.4.12 OF THE ALBEMARLE COUNTY ZONING ORDINANCE FOR STORAGE AND INDUSTRIAL OFFICES, WITH RETAIL SALES OR COMMERCIAL NOT TO EXCEED 25% OF THE GROSS FLOOR AREA

PARKING REQUIRED

USE	ANTICIPATED GROSS FLOOR AREA	APPROXIMATE PERCENTAGE USE	80% OF GROSS FLOOR AREA	PARKING SPACES REQUIRED *
STORAGE	123,900	93%	99,120	228
INDUSTRIAL OFFICE	5,000	4%	4,000	20
RETAIL SALES OR COMMERCIAL	5,000	4%	4,000	40
TOTAL	133,900			286

PARKING PROVIDED

290 PARKING SPACES
(Includes 22 ADA Handicap Accessible Parking Spaces & 24 Loading Spaces)

* The following required parking spaces are in accordance with Section 18.4.12 of the Albemarle County Zoning Ordance:
STORAGE: "Industrial Use Not Otherwise Identified" is 1 space per employee on the largest shift plus one space per 500 square feet open to the public
1 sp x 3 employees x 9 buildings =27 spaces
1 sp x 99,120 sf / 500 sf = 199 spaces
INDUSTRIAL OFFICE: "Offices: is one space per 200 square feet of net office floor area
1 sp x 4,000 sf / 200 sf =20 spaces
RETAIL SALES OR COMMERCIAL: "Retail use not otherwise identified" is one space per each 100 square feet of retail sales area for the first 5,000 square feet and one space per each 200 square feet of retail sales area above 5,000 square feet
1 sp x 4,000 sf / 100 sf = 40 spaces

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.

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 DELINEATE 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 OFFICAL.
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 A VEHICLE LOADING OF 85,000 POUNDS UNDER ALL WEATHER CONDITIONS. VEHICLE ACCESS SHALL BE MAINTAINED UNTIL PERMANENT FIRE APPARATUS ACCESS ROADS ARE AVAILABLE.

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. CONTRACTOR SHALL ENSURE THE STREET NUMBERS ARE ALWAYS VISIBLE FROM THE FRONTAGE STREET DURING CONSTRUCTION PER THE VIRGINIA STATEWIDE FIRE CODE.
5. AN APPROVED WATER SUPPLY FOR FIREFIGHTING OPERATIONS SHALL BE IN PLACE AND AVAILABLE AS SOON AS COMBUSTIBLE MATERIALS ARRIVE ON SITE.
6. 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.
7. 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.
8. OPERATIONS INVOLVING THE USE OF CUTTING AND WELDING SHALL COMPLY WITH THE VIRGINIA STATEWIDE FIRE PREVENTION CODE AND SHALL REQUIRE A PERMIT FROM THE ALBEMARLE COUNTY FIRE MARSHAL'S OFFICE.

BUILDING CODE NOTES:

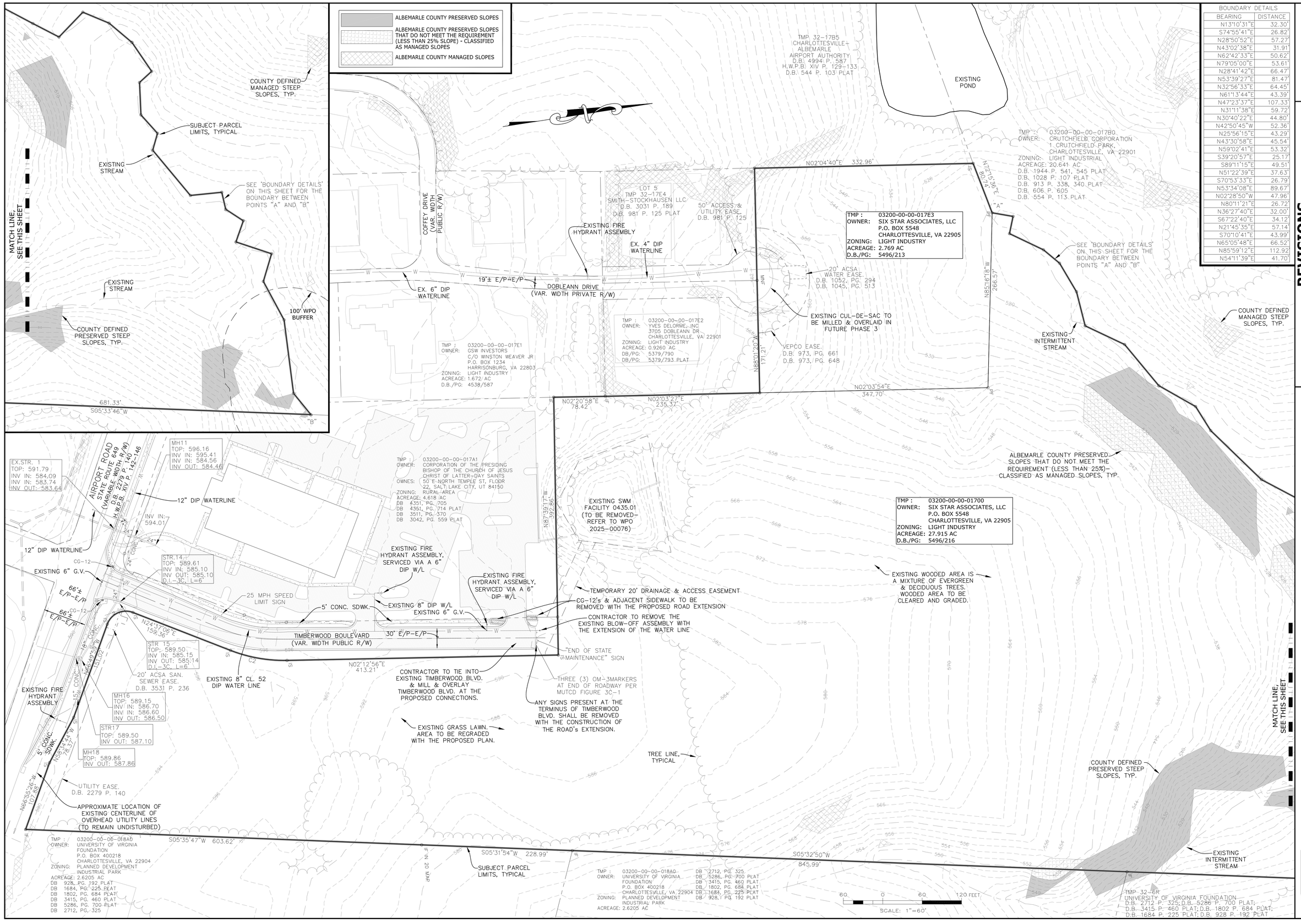
1. RETAINING WALLS GREATER THAN 3 FEET IN HEIGHT REQUIRE A SEPARATE BUILDING PERMIT. WALLS EXCEEDING 4 FEET IN HEIGHT REQUIRE A STAMPED ENGINEERED DESIGN ALSO. SEGMENTED WALLS REQUIRE RDP INSPECTIONS, OTHER WILL REQUIRE INSPECTIONS AS OUTLINED IN THE USBC.
2. ACCESSIBLE PARKING SPACES, ACCESS ISLES, AND ACCESSIBLE ROUTE SHALL BE INSTALLED IN ACCORDANCE WITH ICC ANSI A117.1-17 AND THE 2021 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 PROPERTY LINE 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.

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. 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.
4. 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.
5. 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.
6. CONTRACTOR SHALL NOTIFY LANDOWNERS, TENANTS, AND THE ENGINEER PRIOR TO THE INTERRUPTION OF ANY SERVICES. SERVICE INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
7. THE ADJUSTMENT OF ALL MANHOLE TOPES, WATER VALVE BOXES, GAS VALVE BOXES, AND WATER METER BOXES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COSTS ARE TO BE INCLUDED UNDER THE VARIOUS UNIT BID ITEMS. NO SEPARATE PAYMENT WILL BE MADE.
8. ALL WATER METER, VALVES, AND FIRE HYDRANT ADJUSTMENTS/RELOCATIONS SHALL BE PERFORMED BY THE CONTRACTOR.
9. 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.
10. MINIMUM DEPTH OF COVER FOR WATER LINES SHALL BE 3',
11. MINIMUM DEPTH OF COVER FOR SANITARY SEWER SHALL BE 3'.
12. 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.
13. 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.
14. GATE VALVES SHALL NOT BE CONSTRUCTED WITHIN THE CURBS, GUTTER PANS OR PAVERS.
15. 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.
16. ALL WATERLINE MATERIALS SHALL BE CONSTRUCTED OF CLASS 52 DIP.
17. A KNOX BOX WILL BE REQUIRED ON EACH BUILDING. THE LOCATION OF THE KNOX BOX CAN BE COORDINATED WITH THE FIRE MARSHAL'S OFFICE.
18. ALL PROPOSED SANITARY SEWER IS PUBLIC.
19. THE TYPE K COPPER WATER SERVICE LATERALS ARE ON THE PRIVATE SIDE OF THE METER. THE PUBLIC PORTION OF THE WATER SERVICE WILL BE IN ACCORDANCE WITH THE ACSA STANDARD DETAILS.
20. A PRESSURE REDUCING VALVE (PRV) AND AN RPZ BACKFLOW DEVICE ARE REQUIRED AT EACH BUILDING.
21. AN RWSA INSPECTOR IS REQUIRED FOR ALL WATERLINE TIE INS AND WORK WITHIN 10' OF RWSA UTILITIES.
22. RWSA WILL REQUIRE AN RWSA INSPECTOR ON SITE FOR THE PROPOSED 12" WATERLINE TAP, WITH THREE (3) DAYS NOTICE. RWSA WILL REVIEW THE T.S.&V., DISINFECTION, AND PRESSURE TESTS.
23. ALL FIRE HOSE THREADS SHALL BE C&O TYPE.
24. ARB: VISIBILITY OF ALL MECHANICAL EQUIPMENT FROM THE ENTRANCE CORRIDOR SHALL BE ELIMINATED.

SITE NOTES

1. PROPOSED MECHANICAL EQUIPMENT WILL BE LOCATED ON THE ROOF BEHIND THE PARAPET OF THE PROPOSED BUILDINGS OR ON THE GROUND. MECHANICAL EQUIPMENT LOCATED ON THE ROOF OF A BUILDING OR STRUCTURE SHALL BE FULLY SCREENED BEHIND A WALL OR OTHER SOLID ENCLOSURE, EXTENDING NO MORE THAN TWELVE (12) INCHES ABOVE THE HEIGHT OF SUCH EQUIPMENT, SUCH WALL TO BE CONSTRUCTED OF A MATERIAL HARMONIOUS WITH THE FACADE OF THE BUILDING OR STRUCTURE. MECHANICAL EQUIPMENT LOCATED ON THE GROUND SHALL BE FULLY SCREENED FROM VIEW FROM ALL PUBLIC RIGHTS-OF-WAY AND FROM ADJACENT RESIDENTIAL DISTRICTS; AN S-3 SCREEN SHALL BE PROVIDED, EXTENDING NO MORE THAN TWELVE (12) INCHES ABOVE THE HEIGHT OF SUCH EQUIPMENT. THE SCREENING MATERIALS SHALL BE LOCATED IN SUCH A MANNER TO MOST EFFECTIVELY REFLECT NOISE AWAY FROM ADJACENT RESIDENTIAL DISTRICTS.
2. EXISTING AND PROPOS



BOUNDARY DETAILS	
BEARING	DISTANCE
N13°10'31"E	32.30'
S74°55'41"E	26.82'
N28°50'52"E	57.27'
N43°02'38"E	31.91'
N62°42'33"E	50.62'
N79°05'00"E	53.61'
N28°41'42"E	66.47'
N53°39'27"E	81.47'
N32°56'33"E	64.45'
N61°13'44"E	43.39'
N47°23'37"E	107.33'
N31°11'38"E	59.72'
N30°40'22"E	44.80'
N42°50'45"W	52.36'
N25°56'15"E	43.29'
N43°30'58"E	45.54'
N59°02'41"E	53.32'
S39°20'57"E	25.17'
S89°11'15"E	49.51'
N51°22'39"E	37.63'
S70°53'33"E	26.79'
N53°34'08"E	89.67'
N02°28'50"W	47.96'
N80°11'21"E	26.72'
N36°27'40"E	32.00'
S67°22'40"E	34.12'
N21°45'35"E	57.14'
S70°10'41"E	43.99'
N65°05'48"E	66.52'
N85°59'12"E	112.92
N54°11'39"E	41.70'

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

COLLINS ENGINEERING

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: EXISTING CONDITIONS

JOB NO. 102036

SCALE 1"=60'

SHEET NO. 3

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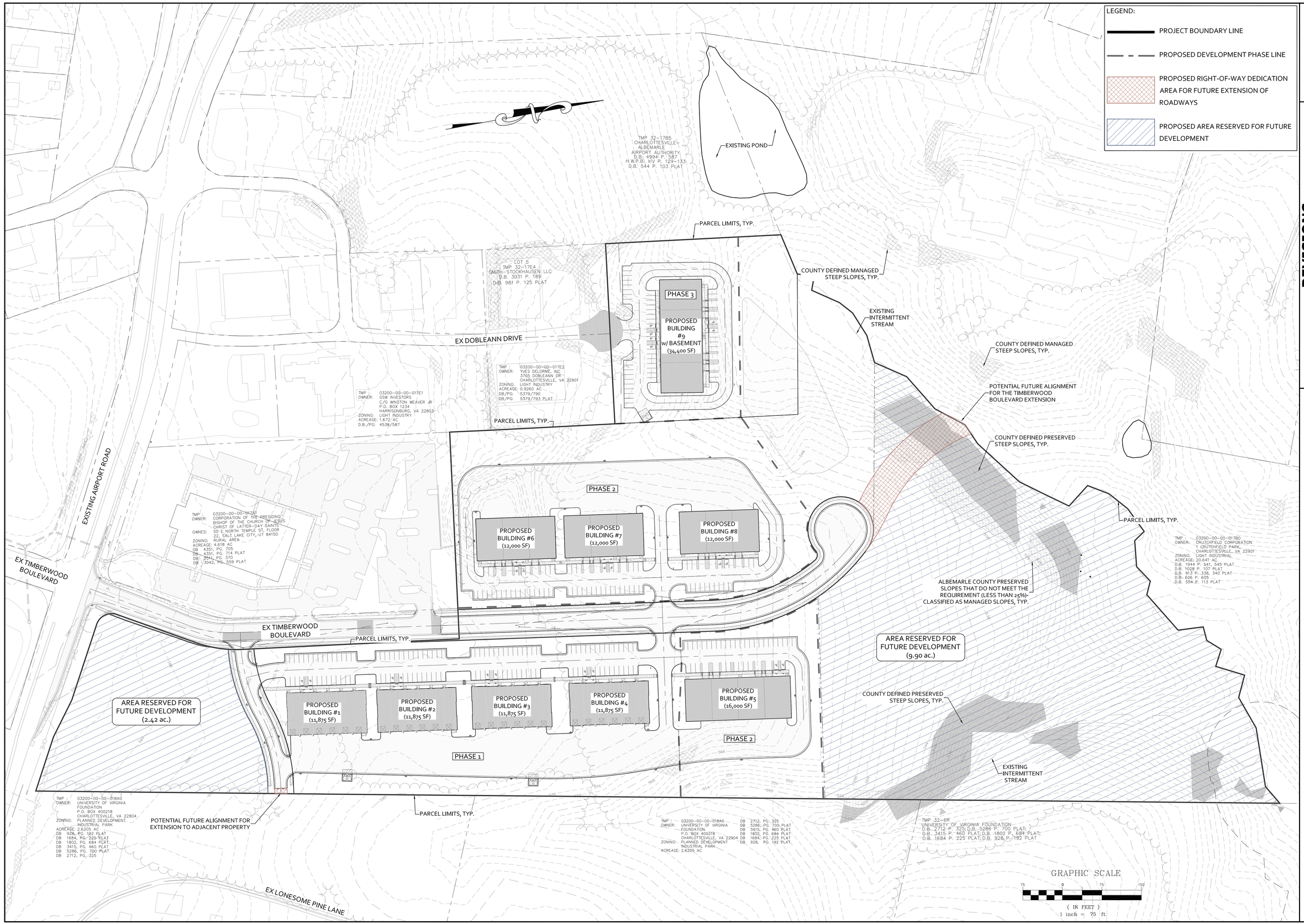

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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: OVERALL DEVELOPMENT PLAN

JOB NO. 102036

SCALE 1"=75'

SHEET NO. 4

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EXISTING CHURCH

EX TIMBERWOOD BOULEVARD
(58' PUBLIC R/W)

PROPOSED 304' CORNER CLEARANCE
(MIN. REQ'D=225'+12' OR 237')

280' SIGHT DISTANCE

AIRPORT ROAD
(VAR. WIDTH PUBLIC R/W)

SONGBIRD LANE
(49' PRIVATE TRAVELWAY & ACCESS EASEMENT)

AREA RESERVED FOR FUTURE DEVELOPMENT
(2.42 ac.)

PROPOSED SONGBIRD LANE TRAVELWAY TO BE CONSTRUCTED TO THE STANDARDS OF A PRIVATE STREET

49' ACCESS ESMT.

24' F/C-F/C

20' E/P-E/P

CONTRACTOR TO REWORK THE EXISTING CG-12'S, AS SHOWN, AND THE ADJACENT SIDEWALK TO THE NEAREST JOINT

PARCEL LIMITS, TYP.

PROPOSED BUILDING #1
(11,875 SF)

PROPOSED BUILDING #2
(11,875 SF)

PROPOSED BUILDING #3
(11,875 SF)

UNMARKED LOADING SPACE BEHIND BLDG #1, 1 OF 6

UNMARKED LOADING SPACE BEHIND BLDG #2, 1 OF 6

UNMARKED LOADING SPACE BEHIND BLDG #3, 1 OF 6

POTENTIAL FUTURE ALIGNMENT FOR EXTENSION TO ADJACENT PROPERTY

MATCH LINE - SEE SHEET 7

MATCH LINE - SEE SHEET 6

24' DRIVE AISLE

26' F/C-F/C

36' DRIVE AISLE

62' F/C-F/C

59' R/W-R/W

34' F/C-F/C

30' E/P-E/P

9' TYP.

18' TYP.

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

SITE PLAN NOTE LEGEND:

- A PROPOSED PUBLIC RIGHT-OF-WAY, TO BE DEDICATED TO PUBLIC USE
- B TIE-IN TO EXISTING CURB
- C TIE-IN TO EXISTING SIDEWALK
- D PROPOSED MILL & OVERLAY (VDOT STD. WP-2) FOR ANY ROAD CONNECTION w/ PAVEMENT TOP COAT
- E PROPOSED LOW-VOLUME COMMERCIAL ENTRANCE
- F PROPOSED CURB (VDOT STD. CG-2)
- G PROPOSED CURB & GUTTER (VDOT STD. CG-6)
- H PROPOSED SIDEWALK RAMP (VDOT STD. CG-12)
- I PROPOSED 5' CONCRETE SIDEWALK
- J PROPOSED 6' CONCRETE SIDEWALK
- K PROPOSED 6' LANDSCAPING STRIP
- L PROPOSED STOP SIGN (R1-1)
- M PROPOSED STREET SIGN
- N PROPOSED HANDICAP PARKING SIGN (R7-8)
- O PROPOSED 'NO PARKING' SIGN (R7-4)
- P PROPOSED BUILDING ENTRANCE
- Q PROPOSED CONCRETE STEPS WITH HANDRAILS
- R PROPOSED CONCRETE DUMPSTER PAD w/ WALL ENCLOSURE & GATE
- S 49' PRIVATE ACCESS EASEMENT (INST. _____)
- T PROPOSED 12' WIDE GRASS LINED SWM ACCESS ROAD WITH 2' WIDE SHOULDERS
- U PROPOSED TYPE III BARRICADE WITH SIGNAGE (TO BE IN PLACE UNTIL THE STUB OUT's CONSTRUCTION HAS BEEN FINALIZED)
- V PROPOSED VDOT STD. CG-7 MOUNTABLE CURB
- W TIE INTO EXISTING PAVEMENT
- X CONCRETE BUMPER BLOCK
- Y PROPOSED PAVEMENT REPAIR FOR UTILITY CONNECTIONS

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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: SITE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 5

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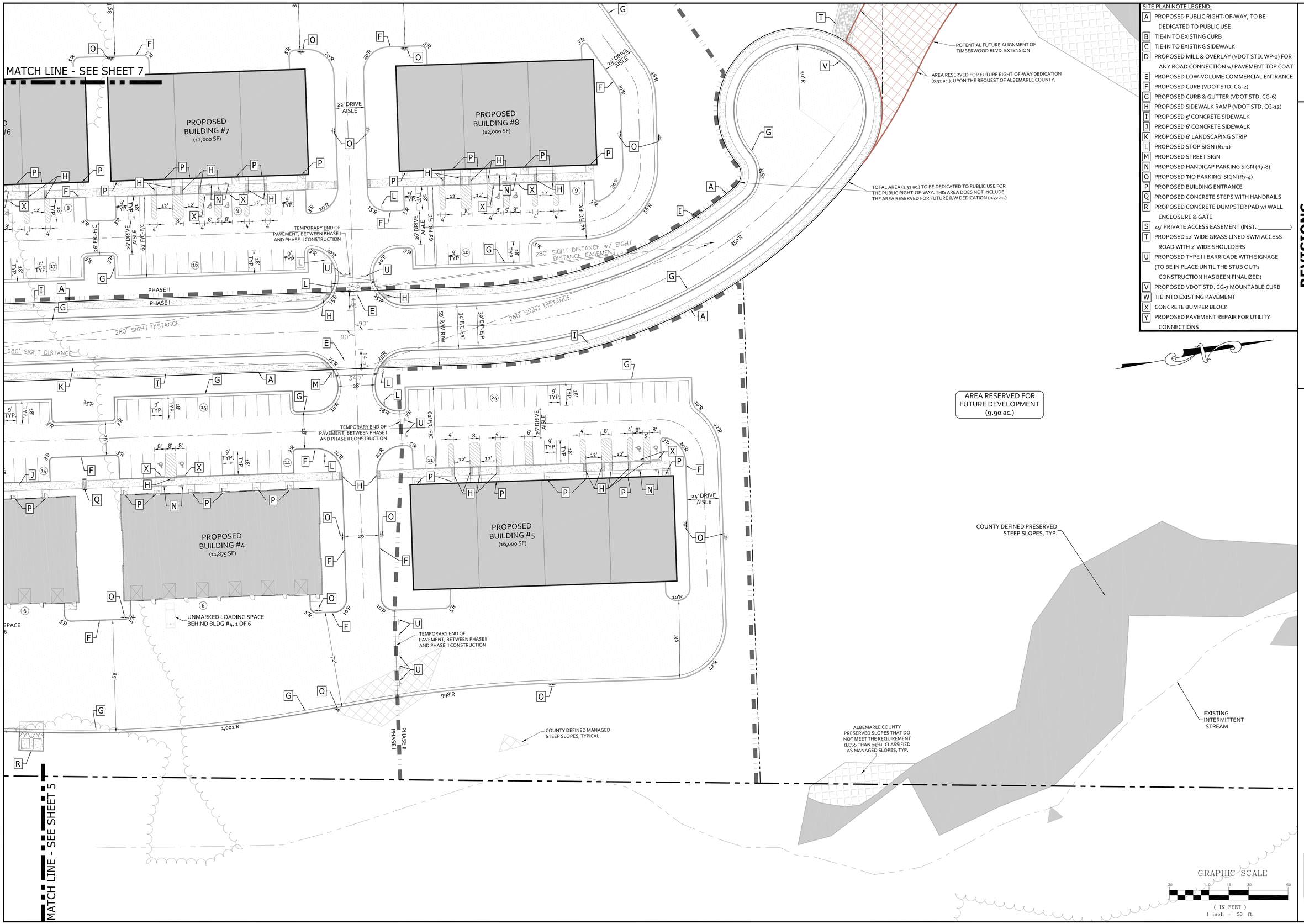

SITE PLAN NOTE LEGEND:

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- E PROPOSED LOW-VOLUME COMMERCIAL ENTRANCE
- F PROPOSED CURB (VDOT STD. CG-2)
- G PROPOSED CURB & GUTTER (VDOT STD. CG-6)
- H PROPOSED SIDEWALK RAMP (VDOT STD. CG-12)
- I PROPOSED 5' CONCRETE SIDEWALK
- J PROPOSED 6' CONCRETE SIDEWALK
- K PROPOSED 6' LANDSCAPING STRIP
- L PROPOSED STOP SIGN (R1-1)
- M PROPOSED STREET SIGN
- N PROPOSED HANDICAP PARKING SIGN (R7-8)
- O PROPOSED 'NO PARKING' SIGN (R7-4)
- P PROPOSED BUILDING ENTRANCE
- Q PROPOSED CONCRETE STEPS WITH HANDRAILS
- R PROPOSED CONCRETE DUMPSTER PAD w/ WALL ENCLOSURE & GATE
- S 49' PRIVATE ACCESS EASEMENT (INST. _____)
- T PROPOSED 12' WIDE GRASS LINED SWM ACCESS ROAD WITH 2' WIDE SHOULDERS
- U PROPOSED TYPE III BARRICADE WITH SIGNAGE (TO BE IN PLACE UNTIL THE STUB OUT's CONSTRUCTION HAS BEEN FINALIZED)
- V PROPOSED VDOT STD. CG-7 MOUNTABLE CURB
- W TIE INTO EXISTING PAVEMENT
- X CONCRETE BUMPER BLOCK
- Y PROPOSED PAVEMENT REPAIR FOR UTILITY CONNECTIONS

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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: SITE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 6

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GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

PARCEL LIMITS, TYP.

EX DOBLEANN DRIVE
(VAR. WIDTH PRIVATE R/W)

CONTRACTOR TO MILL & OVERLAY
EXISTING CUL DE SAC TO REMAIN

PROPOSED
BUILDING #9
W/BASEMENT
(34,400 SF)

26' DRIVE
AISLE

44' F/C-F/C

26' F/C-F/C

62' F/C-F/C

18' TYP.

9' TYP.

PARCEL LIMITS, TYP.

PHASE III
PHASE II

PROPOSED
SWM FACILITY

COUNTY DEFINED MANAGED
STEEP SLOPES, TYP.

EXISTING
INTERMITTENT
STREAM

COUNTY DEFINED PRESERVED
STEEP SLOPES, TYPICAL

ALBEMARLE COUNTY
PRESERVED SLOPES THAT DO
NOT MEET THE REQUIREMENT
(LESS THAN 25%)- CLASSIFIED
AS MANAGED SLOPES, TYP.

PHASE I
PHASE II

85' F/C-F/C

MATCH LINE - SEE SHEETS 5 & 6

24' DRIVE
AISLE

22' DRIVE
AISLE

PROPOSED

POTENTIAL FUTURE ALIGNMENT OF
TIMBERWOOD BLVD. EXTENSION

AREA RESERVED FOR FUTURE RIGHT-OF-WAY DEDICATION
(0.32 ac.), UPON THE REQUEST OF ALBEMARLE COUNTY.

SITE PLAN NOTE LEGEND:

- A PROPOSED PUBLIC RIGHT-OF-WAY, TO BE DEDICATED TO PUBLIC USE
- B TIE-IN TO EXISTING CURB
- C TIE-IN TO EXISTING SIDEWALK
- D PROPOSED MILL & OVERLAY (VDOT STD. WP-2) FOR ANY ROAD CONNECTION w/ PAVEMENT TOP COAT
- E PROPOSED LOW-VOLUME COMMERCIAL ENTRANCE
- F PROPOSED CURB (VDOT STD. CG-2)
- G PROPOSED CURB & GUTTER (VDOT STD. CG-6)
- H PROPOSED SIDEWALK RAMP (VDOT STD. CG-12)
- I PROPOSED 5' CONCRETE SIDEWALK
- J PROPOSED 6' CONCRETE SIDEWALK
- K PROPOSED 6' LANDSCAPING STRIP
- L PROPOSED STOP SIGN (R1-1)
- M PROPOSED STREET SIGN
- N PROPOSED HANDICAP PARKING SIGN (R7-8)
- O PROPOSED 'NO PARKING' SIGN (R7-4)
- P PROPOSED BUILDING ENTRANCE
- Q PROPOSED CONCRETE STEPS WITH HANDRAILS
- R PROPOSED CONCRETE DUMPSTER PAD w/ WALL ENCLOSURE & GATE
- S 49' PRIVATE ACCESS EASEMENT (INST. _____)
- T PROPOSED 12' WIDE GRASS LINED SWM ACCESS ROAD WITH 2' WIDE SHOULDERS
- U PROPOSED TYPE III BARRICADE WITH SIGNAGE (TO BE IN PLACE UNTIL THE STUB OUT's CONSTRUCTION HAS BEEN FINALIZED)
- V PROPOSED VDOT STD. CG-7 MOUNTABLE CURB
- W TIE INTO EXISTING PAVEMENT
- X CONCRETE BUMPER BLOCK
- Y PROPOSED PAVEMENT REPAIR FOR UTILITY CONNECTIONS

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SHEET: SITE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 7

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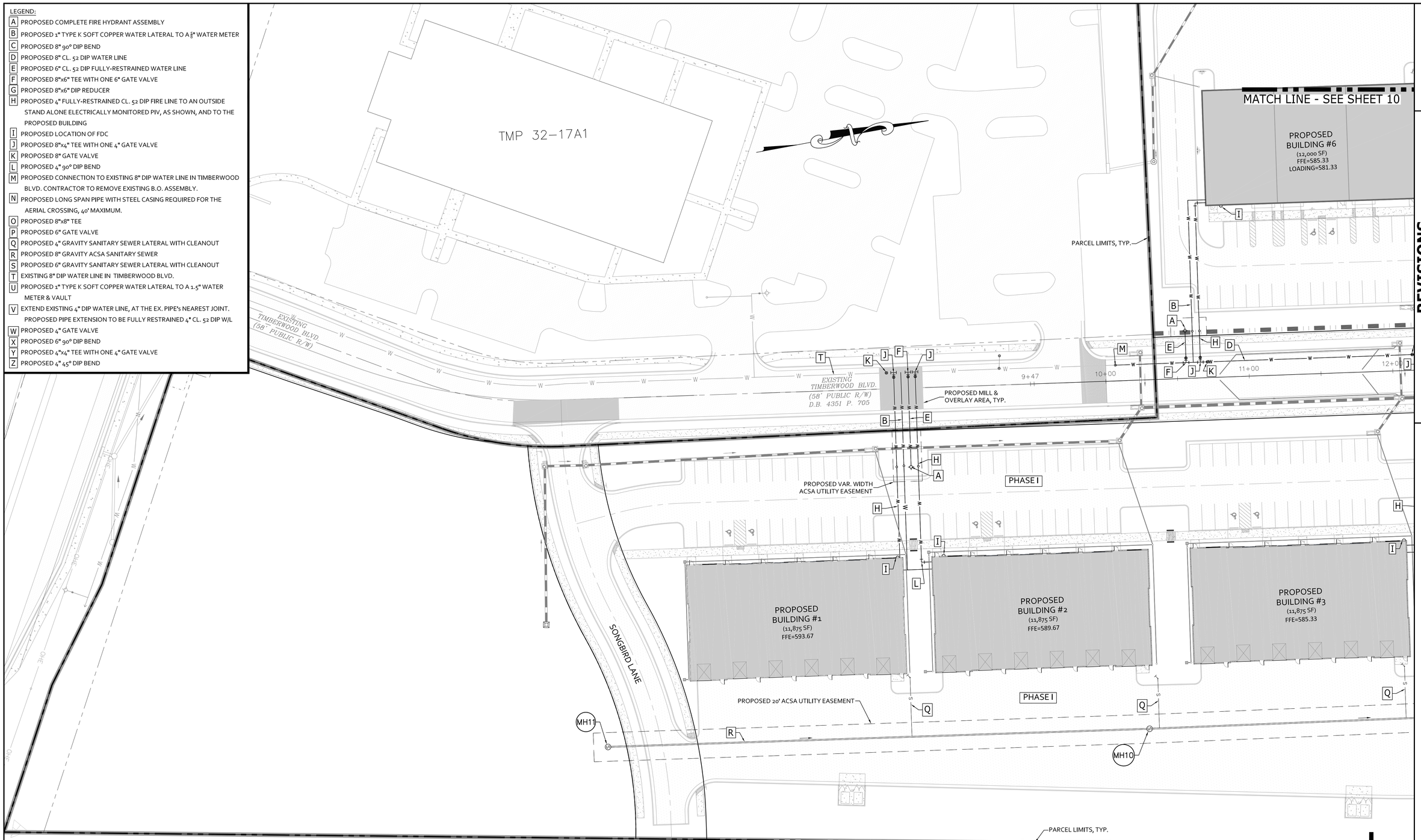
LEGEND:

- A PROPOSED COMPLETE FIRE HYDRANT ASSEMBLY
- B PROPOSED 1" TYPE K SOFT COPPER WATER LATERAL TO A 5/8" WATER METER
- C PROPOSED 8" 90° DIP BEND
- D PROPOSED 8" CL. 52 DIP WATER LINE
- E PROPOSED 6" CL. 52 DIP FULLY-RESTRAINED WATER LINE
- F PROPOSED 8"x6" TEE WITH ONE 6" GATE VALVE
- G PROPOSED 8"x6" DIP REDUCER
- H PROPOSED 4" FULLY-RESTRAINED CL. 52 DIP FIRE LINE TO AN OUTSIDE STAND ALONE ELECTRICALLY MONITORED PIV, AS SHOWN, AND TO THE PROPOSED BUILDING
- I PROPOSED LOCATION OF FDC
- J PROPOSED 8"x4" TEE WITH ONE 4" GATE VALVE
- K PROPOSED 8" GATE VALVE
- L PROPOSED 4" 90° DIP BEND
- M PROPOSED CONNECTION TO EXISTING 8" DIP WATER LINE IN TIMBERWOOD BLVD. CONTRACTOR TO REMOVE EXISTING B.O. ASSEMBLY.
- N PROPOSED LONG SPAN PIPE WITH STEEL CASING REQUIRED FOR THE AERIAL CROSSING, 40' MAXIMUM.
- O PROPOSED 8"x8" TEE
- P PROPOSED 6" GATE VALVE
- Q PROPOSED 4" GRAVITY SANITARY SEWER LATERAL WITH CLEANOUT
- R PROPOSED 8" GRAVITY ACSA SANITARY SEWER
- S PROPOSED 6" GRAVITY SANITARY SEWER LATERAL WITH CLEANOUT
- T EXISTING 8" DIP WATER LINE IN TIMBERWOOD BLVD.
- U PROPOSED 1" TYPE K SOFT COPPER WATER LATERAL TO A 1.5" WATER METER & VAULT
- V EXTEND EXISTING 4" DIP WATER LINE, AT THE EX. PIPE's NEAREST JOINT. PROPOSED PIPE EXTENSION TO BE FULLY RESTRAINED 4" CL. 52 DIP W/L
- W PROPOSED 4" GATE VALVE
- X PROPOSED 6" 90° DIP BEND
- Y PROPOSED 4"x4" TEE WITH ONE 4" GATE VALVE
- Z PROPOSED 4" 45° DIP BEND



GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

UTILITIES NOTES:

1. *PROPOSED PHASE I BUILDINGS 1-8 TO INCLUDE 112 WCs PER BAY + 2 LAVOROTIES.*
2. *PROPOSED PHASE III BUILDING TO INCLUDE 224 WCs + 4 LAVOROTIES.*
3. *CONCRETE STEPS ARE NOT PERMITTED WITHIN THE ACSA UTILITY EASEMENTS*

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SHEET: UTILITIES PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 8

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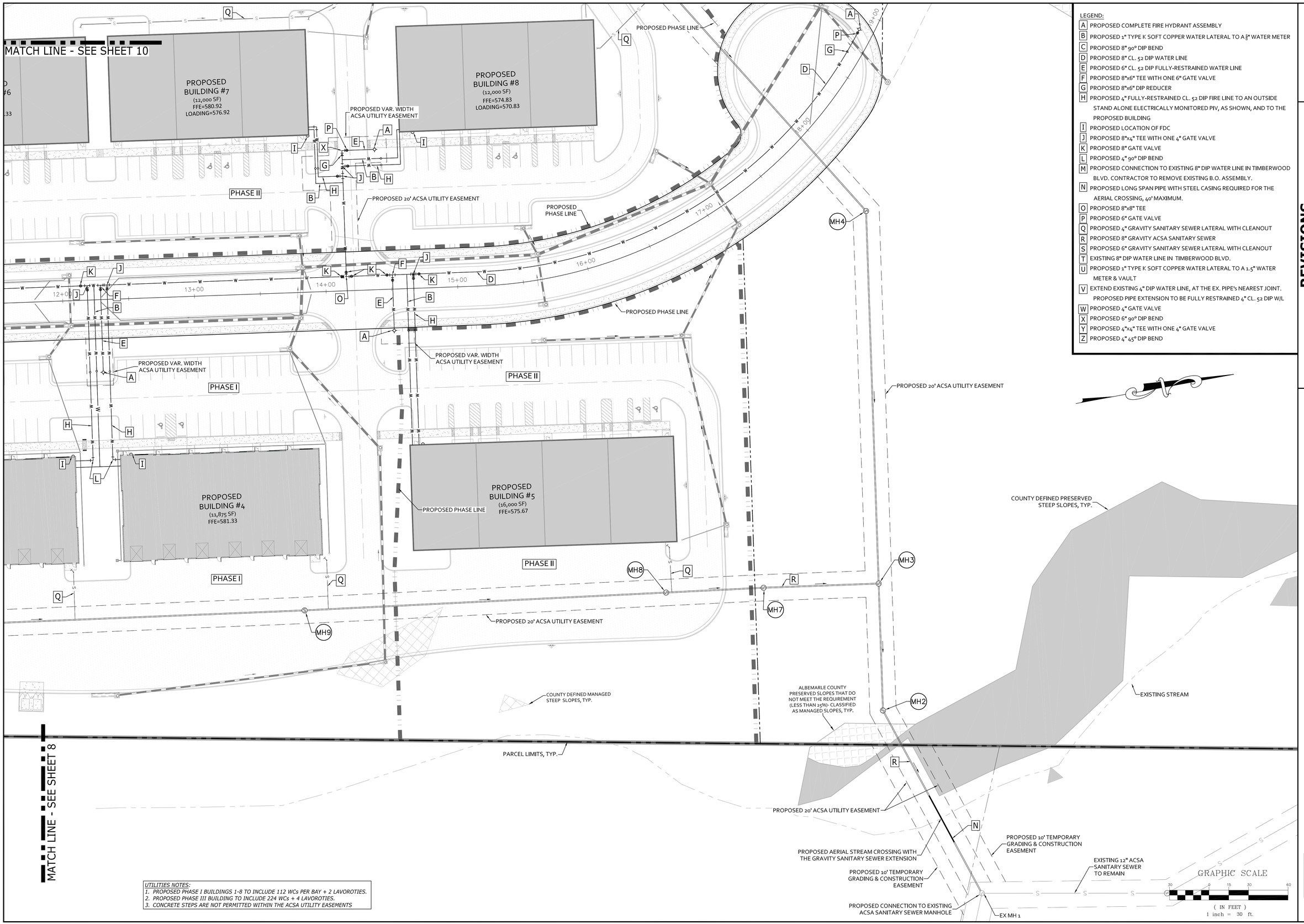

LEGEND:

- A PROPOSED COMPLETE FIRE HYDRANT ASSEMBLY
- B PROPOSED 1" TYPE K SOFT COPPER WATER LATERAL TO A 5/8" WATER METER
- C PROPOSED 8" 90° DIP BEND
- D PROPOSED 8" CL. 52 DIP WATER LINE
- E PROPOSED 6" CL. 52 DIP FULLY-RESTRAINED WATER LINE
- F PROPOSED 8"x6" TEE WITH ONE 6" GATE VALVE
- G PROPOSED 8"x6" DIP REDUCER
- H PROPOSED 4" FULLY-RESTRAINED CL. 52 DIP FIRE LINE TO AN OUTSIDE STAND ALONE ELECTRICALLY MONITORED PIV, AS SHOWN, AND TO THE PROPOSED BUILDING
- I PROPOSED LOCATION OF FDC
- J PROPOSED 8"x4" TEE WITH ONE 4" GATE VALVE
- K PROPOSED 8" GATE VALVE
- L PROPOSED 4" 90° DIP BEND
- M PROPOSED CONNECTION TO EXISTING 8" DIP WATER LINE IN TIMBERWOOD BLVD. CONTRACTOR TO REMOVE EXISTING B.O. ASSEMBLY.
- N PROPOSED LONG SPAN PIPE WITH STEEL CASING REQUIRED FOR THE AERIAL CROSSING, 40' MAXIMUM.
- O PROPOSED 8"x8" TEE
- P PROPOSED 6" GATE VALVE
- Q PROPOSED 4" GRAVITY SANITARY SEWER LATERAL WITH CLEANOUT
- R PROPOSED 8" GRAVITY ACSA SANITARY SEWER
- S PROPOSED 6" GRAVITY SANITARY SEWER LATERAL WITH CLEANOUT
- T EXISTING 8" DIP WATER LINE IN TIMBERWOOD BLVD.
- U PROPOSED 1" TYPE K SOFT COPPER WATER LATERAL TO A 1-5" WATER METER & VAULT
- V EXTEND EXISTING 4" DIP WATER LINE, AT THE EX. PIPE's NEAREST JOINT. PROPOSED PIPE EXTENSION TO BE FULLY RESTRAINED 4" CL. 52 DIP W/L
- W PROPOSED 4" GATE VALVE
- X PROPOSED 6" 90° DIP BEND
- Y PROPOSED 4"x4" TEE WITH ONE 4" GATE VALVE
- Z PROPOSED 4" 45° DIP BEND

UTILITIES NOTES:

1. *PROPOSED PHASE I BUILDINGS 1-8 TO INCLUDE 112 WCs PER BAY + 2 LAVOROTIES.*
2. *PROPOSED PHASE III BUILDING TO INCLUDE 224 WCs + 4 LAVOROTIES.*
3. *CONCRETE STEPS ARE NOT PERMITTED WITHIN THE ACSA UTILITY EASEMENTS*

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: UTILITIES PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 9

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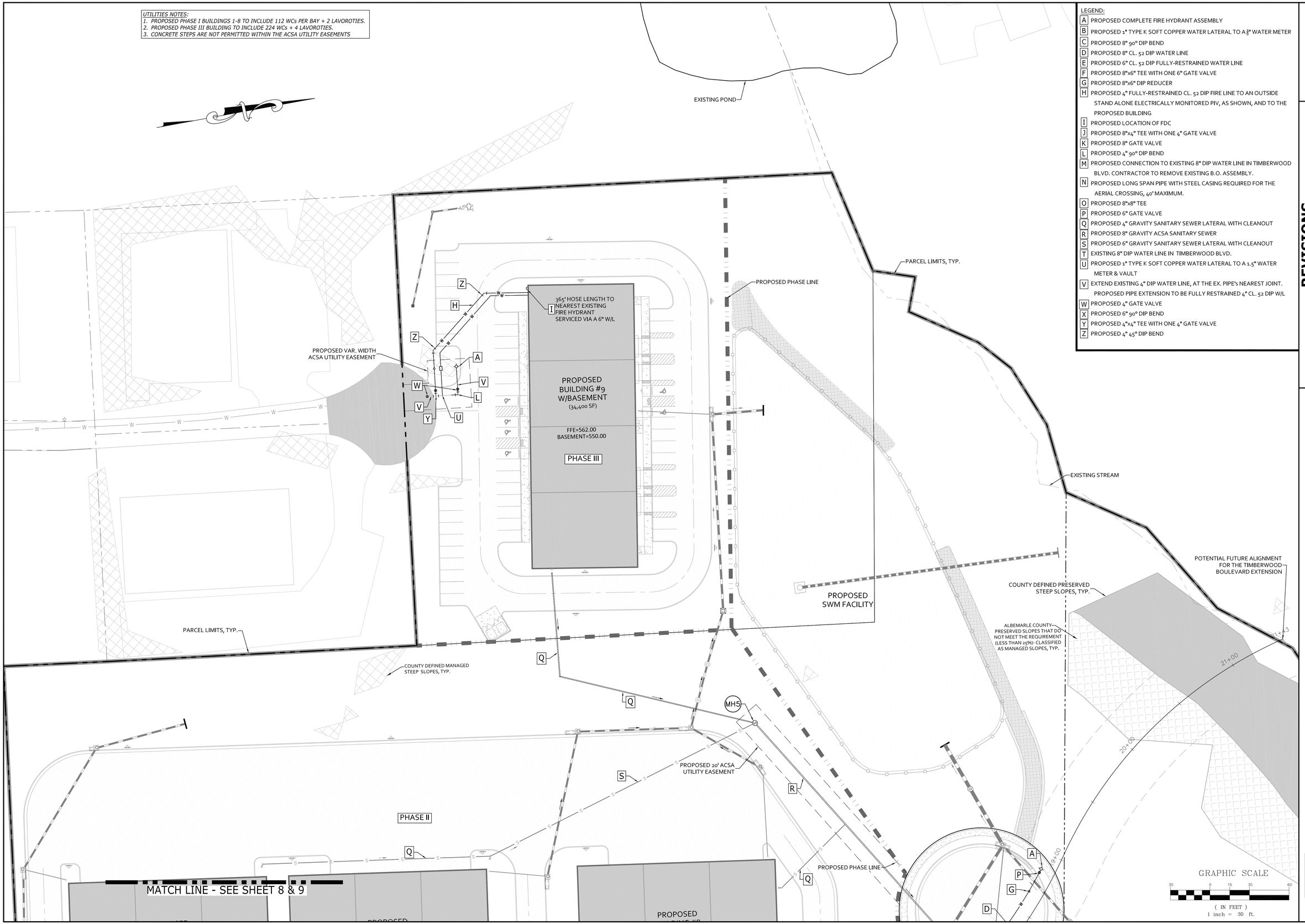
1. *PROPOSED PHASE I BUILDINGS 1-8 TO INCLUDE 112 WCs PER BAY + 2 LAVOROTIES.*
2. *PROPOSED PHASE III BUILDING TO INCLUDE 224 WCs + 4 LAVOROTIES.*
3. *CONCRETE STEPS ARE NOT PERMITTED WITHIN THE ACSA UTILITY EASEMENTS*



LEGEND:

- A PROPOSED COMPLETE FIRE HYDRANT ASSEMBLY
- B PROPOSED 1" TYPE K SOFT COPPER WATER LATERAL TO A $\frac{3}{4}$" WATER METER
- C PROPOSED 8" 90° DIP BEND
- D PROPOSED 8" CL. 52 DIP WATER LINE
- E PROPOSED 6" CL. 52 DIP FULLY-RESTRAINED WATER LINE
- F PROPOSED 8"x6" TEE WITH ONE 6" GATE VALVE
- G PROPOSED 8"x6" DIP REDUCER
- H PROPOSED 4" FULLY-RESTRAINED CL. 52 DIP FIRE LINE TO AN OUTSIDE STAND ALONE ELECTRICALLY MONITORED PIV, AS SHOWN, AND TO THE PROPOSED BUILDING
- I PROPOSED LOCATION OF FDC
- J PROPOSED 8"x4" TEE WITH ONE 4" GATE VALVE
- K PROPOSED 8" GATE VALVE
- L PROPOSED 4" 90° DIP BEND
- M PROPOSED CONNECTION TO EXISTING 8" DIP WATER LINE IN TIMBERWOOD BLVD. CONTRACTOR TO REMOVE EXISTING B.O. ASSEMBLY.
- N PROPOSED LONG SPAN PIPE WITH STEEL CASING REQUIRED FOR THE AERIAL CROSSING, 40' MAXIMUM.
- O PROPOSED 8"x8" TEE
- P PROPOSED 6" GATE VALVE
- Q PROPOSED 4" GRAVITY SANITARY SEWER LATERAL WITH CLEANOUT
- R PROPOSED 8" GRAVITY ACSA SANITARY SEWER
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COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: UTILITIES PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 10

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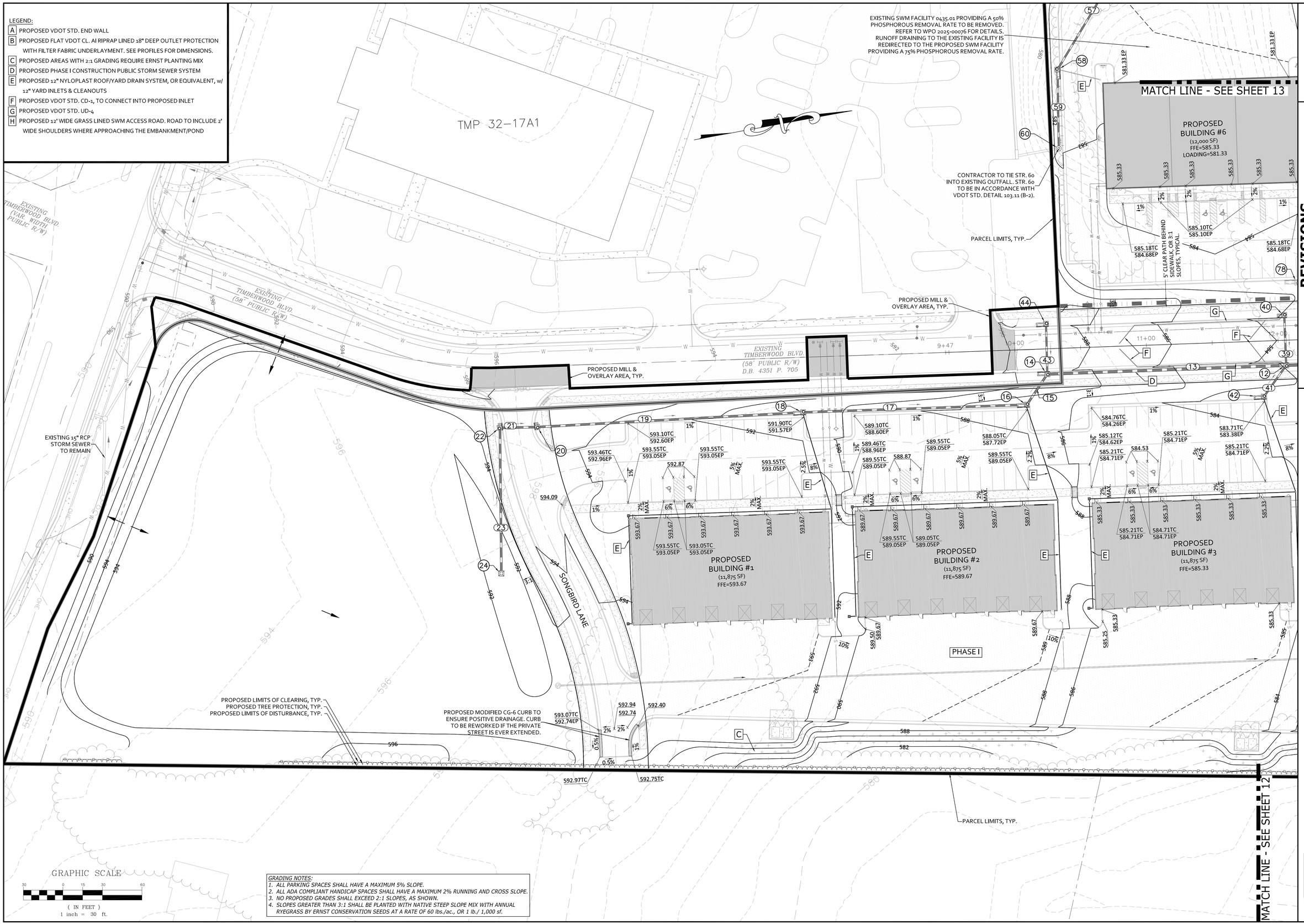
LEGEND:

- A PROPOSED VDOT STD. END WALL
- B PROPOSED FLAT VDOT CL. AI RIPRAP LINED 18" DEEP OUTLET PROTECTION WITH FILTER FABRIC UNDERLAYMENT. SEE PROFILES FOR DIMENSIONS.
- C PROPOSED AREAS WITH 2:1 GRADING REQUIRE ERNST PLANTING MIX
- D PROPOSED PHASE I CONSTRUCTION PUBLIC STORM SEWER SYSTEM
- E PROPOSED 12" NYLOPLAST ROOF/YARD DRAIN SYSTEM, OR EQUIVALENT, w/ 12" YARD INLETS & CLEANOUTS
- F PROPOSED VDOT STD. CD-1, TO CONNECT INTO PROPOSED INLET
- G PROPOSED VDOT STD. UD-4
- H PROPOSED 12' WIDE GRASS LINED SWM ACCESS ROAD. ROAD TO INCLUDE 2' WIDE SHOULDERS WHERE APPROACHING THE EMBANKMENT/POND



GRADING NOTES:

1. *ALL PARKING SPACES SHALL HAVE A MAXIMUM 5% SLOPE.*
2. *ALL ADA COMPLIANT HANDICAP SPACES SHALL HAVE A MAXIMUM 2% RUNNING AND CROSS SLOPE.*
3. *NO PROPOSED GRADES SHALL EXCEED 2:1 SLOPES, AS SHOWN.*
4. *SLOPES GREATER THAN 3:1 SHALL BE PLANTED WITH NATIVE STEEP SLOPE MIX WITH ANNUAL RYEGRASS BY ERNST CONSERVATION SEEDS AT A RATE OF 60 lbs./ac., OR 1 lb./ 1,000 sf.*

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN
SHEET: GRADING & DRAINAGE PLAN

JOB NO. 102036
SCALE 1"=30'
SHEET NO. 11

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LEGEND:

- A PROPOSED VDOT STD. END WALL
- B PROPOSED FLAT VDOT CL. AI RIPRAP LINED 18" DEEP OUTLET PROTECTION WITH FILTER FABRIC UNDERLAYMENT. SEE PROFILES FOR DIMENSIONS.
- C PROPOSED AREAS WITH 2:1 GRADING REQUIRE ERNST PLANTING MIX
- D PROPOSED PHASE I CONSTRUCTION PUBLIC STORM SEWER SYSTEM
- E PROPOSED 12" NYLOPLAST ROOF/YARD DRAIN SYSTEM, OR EQUIVALENT, w/ 12" YARD INLETS & CLEANOUTS
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- H PROPOSED 12' WIDE GRASS LINED SWM ACCESS ROAD. ROAD TO INCLUDE 2' WIDE SHOULDERS WHERE APPROACHING THE EMBANKMENT/POND

GRADING NOTES:

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2. ALL ADA COMPLIANT HANDICAP SPACES SHALL HAVE A MAXIMUM 2% RUNNING AND CROSS SLOPE.
3. NO PROPOSED GRADES SHALL EXCEED 2:1 SLOPES, AS SHOWN.
4. SLOPES GREATER THAN 3:1 SHALL BE PLANTED WITH NATIVE STEEP SLOPE MIX WITH ANNUAL RYEGRASS BY ERNST CONSERVATION SEEDS AT A RATE OF 60 lbs./ac., OR 1 lb./ 1,000 sf.

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COLLINS ENGINEERING

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: GRADING & DRAINAGE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 12

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

LEGEND:
- A PROPOSED VDOT STD. END WALL
- B PROPOSED FLAT VDOT CL. AI RIPRAP LINED 18" DEEP OUTLET PROTECTION WITH FILTER FABRIC UNDERLAYMENT. SEE PROFILES FOR DIMENSIONS.
- C PROPOSED AREAS WITH 2:1 GRADING REQUIRE ERNST PLANTING MIX
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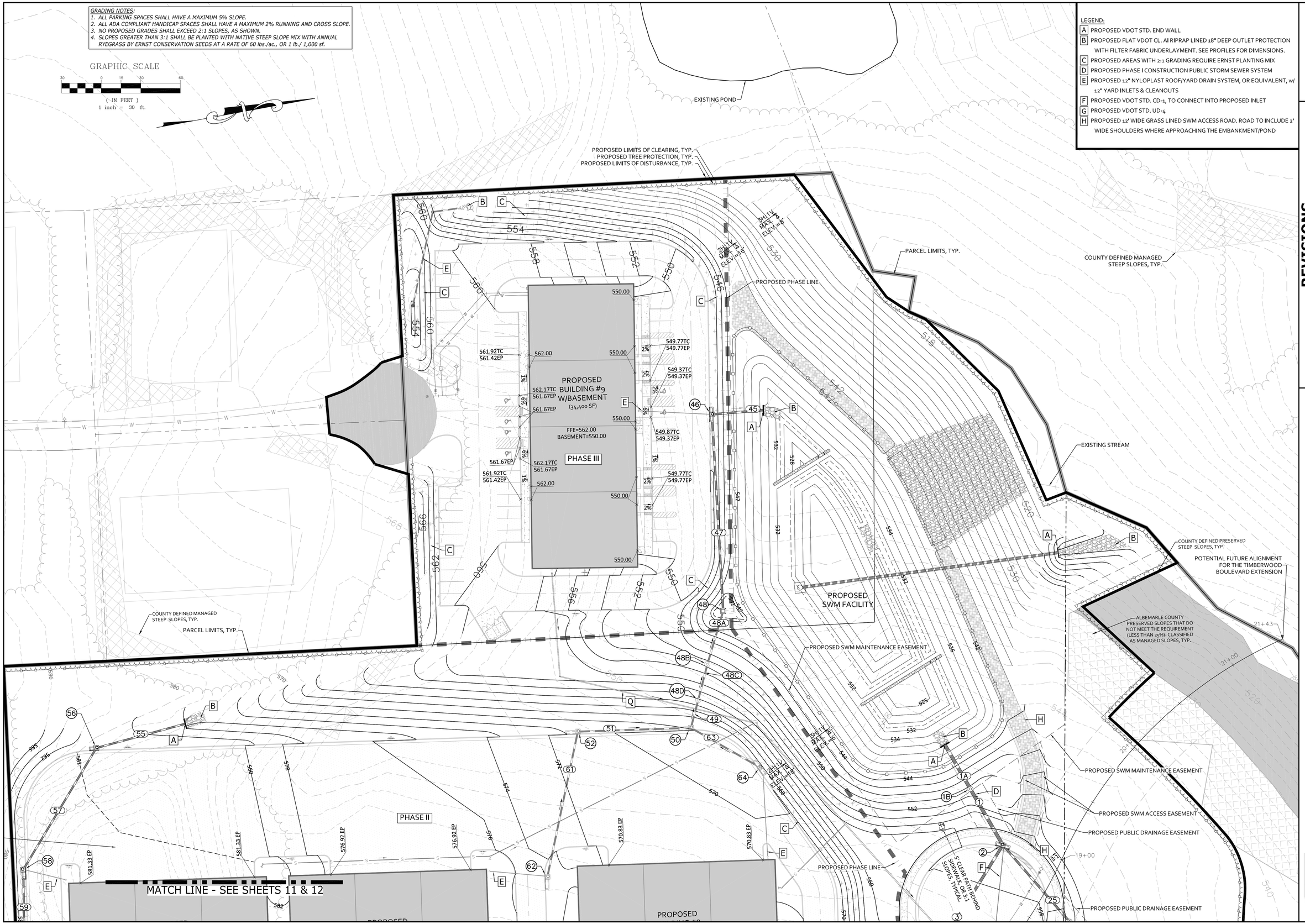

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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN
SHEET: GRADING & DRAINAGE PLAN

JOB NO. 102036
SCALE 1"=30'
SHEET NO. 13

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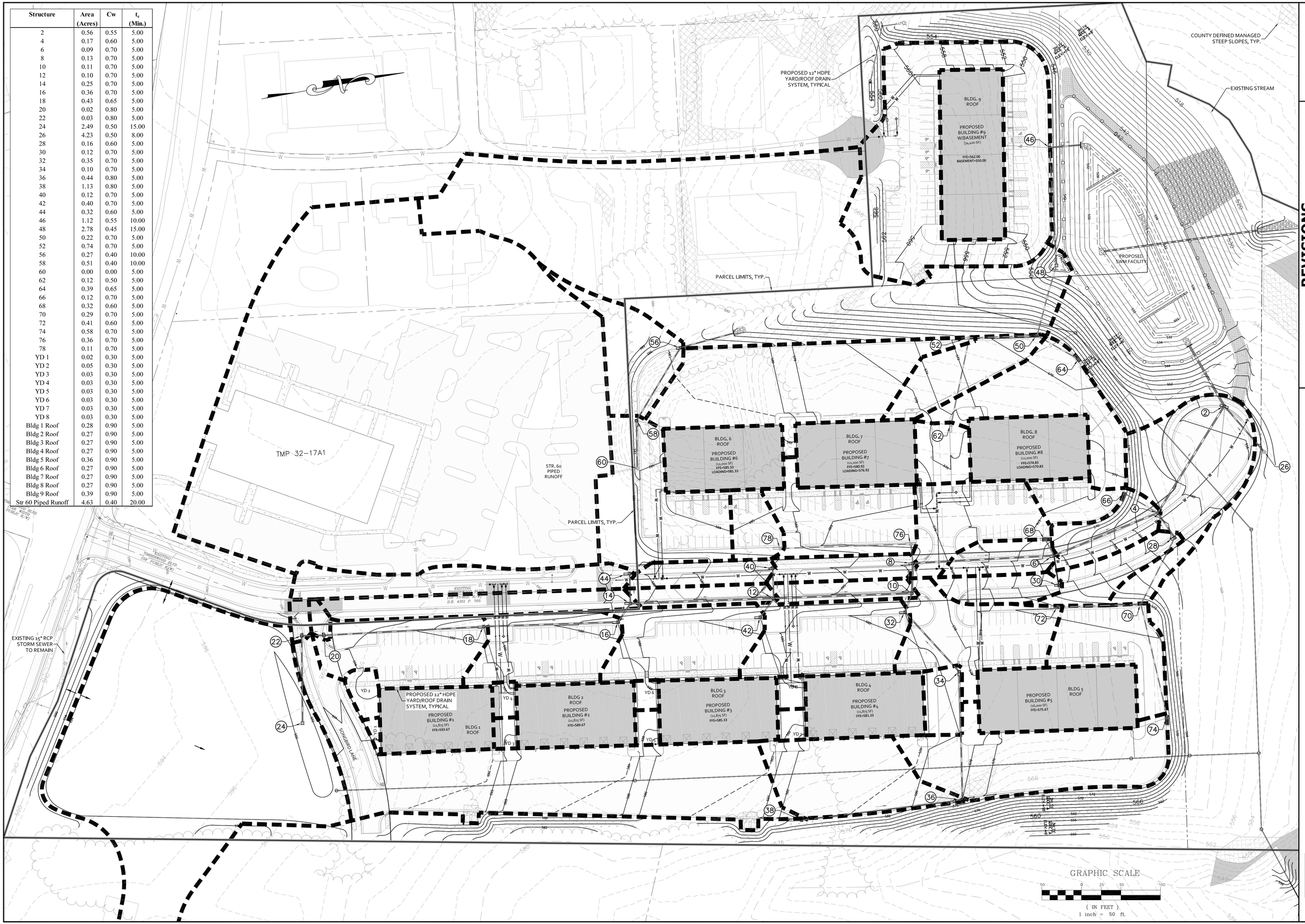
Structure	Area (Acres)	Cw	t_c (Min.)
2	0.56	0.55	5.00
4	0.17	0.60	5.00
6	0.09	0.70	5.00
8	0.13	0.70	5.00
10	0.11	0.70	5.00
12	0.10	0.70	5.00
14	0.25	0.70	5.00
16	0.36	0.70	5.00
18	0.43	0.65	5.00
20	0.02	0.80	5.00
22	0.03	0.80	5.00
24	2.49	0.50	15.00
26	4.23	0.50	8.00
28	0.16	0.60	5.00
30	0.12	0.70	5.00
32	0.35	0.70	5.00
34	0.10	0.70	5.00
36	0.44	0.80	5.00
38	1.13	0.80	5.00
40	0.12	0.70	5.00
42	0.40	0.70	5.00
44	0.32	0.60	5.00
46	1.12	0.55	10.00
48	2.78	0.45	15.00
50	0.22	0.70	5.00
52	0.74	0.70	5.00
56	0.27	0.40	10.00
58	0.51	0.40	10.00
60	0.00	0.00	5.00
62	0.12	0.50	5.00
64	0.39	0.65	5.00
66	0.12	0.70	5.00
68	0.32	0.60	5.00
70	0.29	0.70	5.00
72	0.41	0.60	5.00
74	0.58	0.70	5.00
76	0.36	0.70	5.00
78	0.11	0.70	5.00
YD 1	0.02	0.30	5.00
YD 2	0.05	0.30	5.00
YD 3	0.03	0.30	5.00
YD 4	0.03	0.30	5.00
YD 5	0.03	0.30	5.00
YD 6	0.03	0.30	5.00
YD 7	0.03	0.30	5.00
YD 8	0.03	0.30	5.00
Bldg 1 Roof	0.28	0.90	5.00
Bldg 2 Roof	0.27	0.90	5.00
Bldg 3 Roof	0.27	0.90	5.00
Bldg 4 Roof	0.27	0.90	5.00
Bldg 5 Roof	0.36	0.90	5.00
Bldg 6 Roof	0.27	0.90	5.00
Bldg 7 Roof	0.27	0.90	5.00
Bldg 8 Roof	0.27	0.90	5.00
Bldg 9 Roof	0.39	0.90	5.00
Str 60 Piped Runoff	4.63	0.40	20.00



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PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: DRAINAGE MAP

JOB NO. 102036
SCALE 1"=50'
SHEET NO. 14

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DRAINAGE DESCRIPTIONS

STR. NO.	PIPE INFORMATION						INLET INFORMATION			COMMENTS
	DIA. (in.)	LENGTH (ft.)	SLOPE (%)	INVERT IN	INVERT OUT	MATERIAL	INLET TYPE	SLOT LENGTH	RIM ELEVATION	
26							VDOT MH-1	-	558.24	VDOT STD. IS-1 REQ'D
25	18	77.04	1.50%	547.05	545.89	HDPE				
28							VDOT DI-3B	6'	562.19	VDOT STD. IS-1 REQ'D
27	18	38.00	0.50%	554.84	554.65	HDPE				
30							VDOT DI-3B	6'	571.10	VDOT STD. IS-1 REQ'D
29	15	38.19	0.50%	564.04	563.85	HDPE				
24							VDOT DI-7	-	591.50	VDOT STD. IS-1 REQ'D
23	18	110.51	0.50%	586.05	585.50	HDPE				
22							VDOT DI-3B	4'	596.05	VDOT STD. IS-1 REQ'D
21	18	30.24	0.50%	585.40	585.25	HDPE				
20							VDOT DI-3B	4'	595.46	VDOT STD. IS-1 REQ'D
19	18	200.18	0.52%	585.15	584.11	HDPE				
18							VDOT DI-3B	8'	591.90	VDOT STD. IS-1 REQ'D
17	18	170.02	0.98%	584.01	582.35	HDPE				
16							VDOT DI-3B	8'	588.05	VDOT STD. IS-1 REQ'D
15	18	27.91	0.61%	582.25	582.08	HDPE				
14							VDOT DI-3B	8'	589.14	VDOT STD. IS-1 REQ'D
13	24	181.43	2.01%	580.08	576.44	HDPE				
12							VDOT DI-3B	6'	583.95	VDOT STD. IS-1 REQ'D
11	24	174.69	2.06%	575.44	571.84	HDPE				
10							VDOT DI-3B	6'	580.11	VDOT STD. IS-1 REQ'D
9	24	38.09	0.75%	571.74	571.45	HDPE				
8							VDOT DI-3B	6'	580.03	VDOT STD. IS-1 REQ'D
7	24	178.58	1.37%	568.45	566.00	HDPE				
6							VDOT DI-3B	6'	571.12	VDOT STD. IS-1 REQ'D
5	24	141.83	1.30%	559.00	557.15	HDPE				
4							VDOT DI-3B	6'	562.25	VDOT STD. IS-1 REQ'D
3	24	159.23	1.20%	553.05	551.14	HDPE				
2							VDOT DI-3C	10'	556.88	VDOT STD. IS-1 REQ'D
1	30	49.16	0.98%	543.89	543.41	HDPE				
1B							VDOT MH-1	-	550.50	VDOT STD. IS-1 REQ'D
1A	30	38.65	0.95%	536.37	536.00	HDPE				
40							VDOT DI-3B	6'	583.91	VDOT STD. IS-1 REQ'D
39	15	38.05	0.50%	576.33	576.44	HDPE				
42							VDOT DI-3B	8'	583.71	VDOT STD. IS-1 REQ'D
41	15	29.20	5.34%	578.00	576.44	HDPE				
44							VDOT DI-3B	8'	589.10	VDOT STD. IS-1 REQ'D
43	15	38.07	0.50%	581.77	581.58	HDPE				
38							VDOT DI-3B	20'	582.25	VDOT STD. IS-1 REQ'D
37	15	205.09	1.83%	577.70	573.95	HDPE				
36							VDOT DI-3B	16'	578.33	VDOT STD. IS-1 REQ'D
35	18	162.18	0.60%	573.85	572.87	HDPE				
34							VDOT DI-3B	6'	580.14	VDOT STD. IS-1 REQ'D
33	18	101.80	0.61%	572.77	572.15	HDPE				
32							VDOT DI-3B	8'	579.71	VDOT STD. IS-1 REQ'D
31	18	25.41	0.84%	572.05	571.84	HDPE				
60							VDOT MH-1	-	582.40	VDOT STD. B-2 REQ'D
59	15	59.90	1.37%	577.85	577.03	HDPE				
58							VDOT DI-3B	8'	581.96	VDOT STD. IS-1 REQ'D
57	15	107.66	0.50%	576.93	576.39	HDPE				
56							VDOT DI-3B	6'	581.25	VDOT STD. IS-1 REQ'D
55	15	69.95	0.50%	576.29	575.94	HDPE				
62							VDOT DI-3B	6'	574.90	VDOT STD. IS-1 REQ'D
61	15	112.56	0.87%	568.00	567.02	HDPE				
52							VDOT DI-3B	20'	571.56	VDOT STD. IS-1 REQ'D
51	15	85.84	4.39%	563.27	559.50	HDPE				
50							VDOT DI-3B	8'	570.05	VDOT STD. IS-1 REQ'D
49	15	21.72	2.30%	553.50	553.00	HDPE				
48D							VDOT MH-1	-	562.25	VDOT STD. IS-1 REQ'D
48C	15	28.11	2.67%	546.50	545.75	HDPE				
48B							VDOT MH-1	-	552.75	VDOT STD. IS-1 REQ'D
48A	15	42.25	2.72%	537.75	536.60	HDPE				
48							VDOT DI-7	-	541.00	VDOT STD. IS-1 REQ'D
47	18	149.32	1.07%	536.35	534.75	HDPE				
46							VDOT DI-3C	10'	548.17	VDOT STD. IS-1 REQ'D
45	18	39.20	1.71%	532.67	532.00	HDPE				
64							VDOT DI-3C	8'	569.67	VDOT STD. IS-1 REQ'D
63	15	60.50	3.02%	553.50	561.33	HDPE				
66							VDOT DI-3B	8'	572.16	VDOT STD. IS-1 REQ'D
65	15	48.08	5.20%	559.65	557.15	HDPE				
68							VDOT DI-3C	6'	574.13	VDOT STD. IS-1 REQ'D
67	15	23.07	5.76%	568.08	566.75	HDPE				
78							VDOT DI-3B	4'	583.15	VDOT STD. IS-1 REQ'D
77	15	165.09	3.48%	578.75	573.00	HDPE				
76							VDOT DI-3B	8'	579.13	VDOT STD. IS-1 REQ'D
75	15	24.42	5.94%	572.90	571.45	HDPE				
72							VDOT DI-3B	10'	574.01	VDOT STD. IS-1 REQ'D
71	15	105.14	5.14%	569.40	564.00	HDPE				
70							VDOT DI-3C	6'	573.28	VDOT STD. IS-1 REQ'D
69	15	94.38	2.55%	560.25	557.84	HDPE				
74							VDOT DI-3B	10'	574.59	VDOT STD. IS-1 REQ'D
73	15	147.37	2.50%	569.93	566.25	HDPE				

PIPE DESIGN

n = 0.013

Pipe		Hydrology								Pipe									
Starting Structure	Ending Structure	A, Drainage area (acres)	C, rational coeff.	CA, increment	CA, sum accumulated	Tc, time of conc. (min)	I, rainfall intensity	Q, flow incr. (cfs)	Qt, total flow	Invert in (ft)	Invert out (ft)	L, thrust 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 26 - STR 2																			
26	2	4.23	0.50	2.115	2.115	8.00	5.81	12.29	12.29	547.05	545.89	77.0	0.013	0.0150	18	13.94	8.88	0.14	
Pipe run: STR 28 - STR 4																			
28	4	0.16	0.60	0.096	0.951	5.51	6.51	0.62	6.19	554.84	554.65	38.0	0.013	0.0050	18	8.05	5.01	0.13	
Pipe run: STR 30 - STR 6																			
30	6	0.12	0.70	0.082	0.082	5.00	6.67	0.55	0.55	564.04	563.85	38.2	0.013	0.0050	15	4.95	2.62	0.24	
Pipe run: STR 24 - OUT																			
24	22	2.49	0.50	1.244	1.244	15.00	4.55	5.66	5.66	586.05	585.50	110.5	0.013	0.0050	18	8.05	4.91	0.38	
22	20	0.03	0.80	0.021	1.265	15.38	4.50	0.10	5.69	585.40	585.25	30.2	0.013	0.0050	18	8.05	4.94	0.10	
20	18	0.02	0.80	0.019	1.285	15.48	4.48	0.09	5.76	585.15	584.11	200.2	0.013	0.0052	18	8.21	5.01	0.67	
18	16	0.43	0.65	0.279	1.563	16.14	4.40	1.23	6.87	584.01	582.35	170.0	0.013	0.0098	18	11.27	6.67	0.42	
16	14	0.36	0.70	0.252	1.815	16.57	4.34	1.09	7.89	582.25	582.08	27.9	0.013	0.0061	18	8.89	5.68	0.08	
14	12	0.25	0.70	0.174	2.181	16.65	4.33	0.76	9.45	580.08	576.44	181.4	0.013	0.0201	24	34.75	9.32	0.32	
12	10	0.10	0.70	0.070	2.620	16.97	4.30	0.30	11.25	575.44	571.84	174.7	0.013	0.0206	24	35.18	9.85	0.30	
10	8	0.11	0.70	0.074	4.264	17.27	4.26	0.31	18.17	571.74	571.45	38.1	0.013	0.0075	24	21.22	7.59	0.08	
8	6	0.13	0.70	0.088	4.681	17.35	4.25	0.37	19.90	568.45	566.00	178.6	0.013	0.0137	24	28.69	9.85	0.30	
6	4	0.09	0.70	0.062	5.017	17.66	4.22	0.26	21.16	559.00	557.15	141.8	0.013	0.0130	24	27.94	9.78	0.24	
4	2	0.17	0.60	0.102	6.154	17.90	4.19	0.43	25.78	553.05	551.14	159.2	0.013	0.0120	24	26.85	9.73	0.27	
2	1B	0.56	0.55	0.307	8.577	18.17	4.16	1.28	35.67	543.89	543.41	49.2	0.013	0.0098	30	43.99	9.97	0.08	
1B	OUT	0.00	0.00	0.000	8.577	18.25	4.15	0.00	35.67	536.37	536.00	38.7	0.013	0.0095	30	43.31	9.85	0.07	
Pipe run: STR 40 - STR 12																			
40	12	0.12	0.70	0.086	0.086	5.00	6.67	0.58	0.58	576.33	576.44	38.1	0.013	0.0050	15	4.95	2.69	0.24	
Pipe run: STR 42 - STR 12																			
42	12	0.40	0.70	0.283	0.283	5.00	6.67	1.88	1.88	578.00	576.44	29.2	0.013	0.0534	15	16.17	8.80	0.06	
Pipe run: STR 44 - STR 14																			
44	14	0.32	0.60	0.191	0.191	5.00	6.67	1.27	1.27	581.77	581.58	38.1	0.013	0.0050	15	4.95	3.35	0.19	
Pipe run: STR 38 - STR 10																			
38	36	1.13	0.80	0.900	0.900	5.00	6.67	6.00	6.00	577.70	573.95	205.1	0.013	0.0183	15	9.47	8.13	0.42	
36	34	0.44	0.80	0.354	1.254	5.42	6.53	2.31	8.19	573.85	572.87	162.2	0.013	0.0060	18	8.81	5.66	0.48	
34	32	0.10	0.70	0.070	1.325	5.90	6.38	0.45	8.45	572.77	572.15	101.8	0.013	0.0061	18	8.89	5.72	0.30	
32	10	0.35	0.70	0.245	1.570	6.19	6.29	1.54	9.88	572.05	571.84	25.4	0.013	0.0084	18	10.43	6.71	0.06	
Pipe run: STR 60 - STR 48																			
60	58	0.00	0.00	0.000	0.000	5.00	6.67	0.00	0.00	577.85	577.03	59.9	0.013	0.0137	15	8.19	6.67	0.15	
58	56	0.51	0.40	0.202	0.202	10.00	5.37	1.09	1.09	576.93	576.39	107.7	0.013	0.0050	15	4.95	3.19	0.56	
56	48	0.27	0.40	0.110	0.312	10.56	5.26	0.58	1.64	576.29	575.94	70.0	0.013	0.0050	15	4.95	3.59	0.32	
Pipe run: STR 62 - OUT																			
62	52	0.12	0.50	0.060	0.060	5.00	6.67	0.40	0.40	568.00	567.02	112.6	0.013	0.0087	15	6.53	2.86	0.66	
52	50	0.74	0.70	0.518	0.578	5.66	6.46	3.35	3.73	563.27	559.50	85.8	0.013	0.0439	15	14.66	9.92	0.14	
50	48D	0.22	0.70	0.154	0.986	5.80	6.41	0.99	6.32	553.50	553.00	21.7	0.013	0.0230	15	10.61	8.99	0.04	
48D	48B	0.00	0.80	0.001	0.986	5.84	6.40	0.01	6.32	546.50	545.75	28.1	0.013	0.0267	15	11.44	9.54	0.05	
48B	48	0.00	0.80	0.001	0.987	5.89	6.38	0.01	6.32	537.75	536.60	42.3	0.013	0.0272	15	11.54	9.56	0.07	
48	46	2.78	0.45	1.250	2.549	15.00	4.55	5.68	11.59	536.35	534.75	149.3	0.013	0.0107	18	11.77	7.59	0.33	
46	OUT	1.12	0.55	0.616	3.165	15.33	4.50	2.77	14.25	532.67	532.00	39.2	0.013	0.0171	18	14.88	9.58	0.07	
Pipe run: STR 64 - STR 50																			
64	50	0.39	0.65	0.254	0.254	5.00	6.67	1.69	1.69	553.50	561.33	60.5	0.013	0.0302	15	12.16	6.94	0.15	
Pipe run: STR 66 - STR 4																			
66	4	0.12	0.70	0.084	0.084	5.00	6.67	0.56	0.56	559.65	557.15	48.1	0.013	0.0520	15	15.96	5.85	0.14	
Pipe run: STR 68 - STR 6																			
68	6	0.32	0.60	0.192	0.192	5.00	6.67	1.28	1.28	568.08	566.75	23.1	0.013	0.0576	15	16.80	7.90	0.05	
Pipe run: STR 78 - STR 8																			
78	76	0.11	0.70	0.077	0.077	5.00	6.67	0.51	0.51	578.75	573.00	165.1	0.013	0.0348	15	13.05	5.03	0.55	
76	8	0.36	0.70	0.252	0.329	5.55	6.49	1.64	2.14	572.90	571.45	24.4	0.013	0.0594	15	17.06	9.28	0.04	
Pipe run: STR 72 - STR 28																			
72	70	0.41	0.60	0.246	0.246	5.00	6.67	1.64	1.64	569.40	564.00	105.1	0.013	0.0514	15	15.87	8.19	0.21	
70	28	0.29	0.70	0.203	0.855	5.33	6.56	1.33	5.61	560.25	557.84	94.4	0.013	0.0255	15	11.18	9.11	0.17	
Pipe run: STR 74 - STR 70																			
74	70	0.58	0.70	0.406	0.406	5.00	6.67	2.71	2.71	569.93	566.25	147.4	0.013	0.0250	15	11.06	7.37	0.33	

Design Year: **10** Project: Airport Ind. Complex Job #: ##### Prepared by: FGM, PE

INLET STATION	OUTLET WATER SURFACE ELEV	L_P	D_P	Q_P ZW	S_{fo}	H_f	JUNCTION LOSS V_o	H_o	Q_{IN}	V_{IN}	$Q_{IN}*V_i$	$V_i^2/2g$	H_i	ANGLE	H_b	H_t	$1.3H_t$	$.5H_t$	FINAL H	INLET WATER SURFACE ELEV.	RIM ELEV
	567.25	147.37	15	2.71	0.001	0.22	2.2	0.0													
74													0.00	140	0	0.02	NA	0.01	0.23	**567.48**	**574.59**
	558.84	94.38	15	5.61	0.006	0.61	4.6	0.1													
70									2.7	7.4	19.9	0.8	0.30	119	0.59	0.97	NA	0.48	1.09	**559.93**	**573.28**
	565.00	105.14	15	1.64	0.001	0.06	1.3	0.0													
72													0.00	119	0	0.01	NA	0.00	0.06	**565.06**	**574.01**
	572.45	24.42	15	2.14	0.001	0.02	1.7	0.0													
76									0.5	0.4	0.21	0.0	0.00	94	0.002	0.01	NA	0.01	0.03	**572.48**	**579.13**
	574.00	165.09	15	0.51	0.000	0.01	0.4	0.0													
78													0.00	94	0	0.00	NA	0.00	0.01	**574.01**	**583.15**
	567.75	23.07	15	1.28	0.000	0.01	1.0	0.0													
68													0.00	96	0	0.00	NA	0.00	0.01	**567.76**	**574.13**
	558.15	48.08	15	0.56	0.000	0.00	0.5	0.0													
66													0.00	91	0	0.00	NA	0.00	0.00	**558.15**	**572.16**
	562.33	60.50	15	1.69	0.001	0.04	1.4	0.0													
64													0.00	105	0	0.01	NA	0.00	0.04	**562.37**	**569.67**
	533.20	39.20	18	14.25	0.016	0.61	8.1	0.3													
46									11.6	6.6	76	0.7	0.23	0	0	0.49	NA	0.24	0.86	**534.06**	**548.17**
	535.95	149.32	18	11.59	0.010	1.55	6.6	0.2													
48									6.3	5.1	32.5	0.4	0.14	92	0.288	0.60	NA	0.30	1.85	**537.80**	**541.00**
	537.80	42.25	15	6.32	0.008	0.34	5.1	0.1													
48B									6.3	5.1	32.5	0.4	0.14	160	0.288	0.54	NA	0.27	0.61	**538.41**	**552.75**
	546.75	28.11	15	6.32	0.008	0.23	5.1	0.1													
48D									6.3	5.1	32.5	0.4	0.14	177	0.288	0.54	NA	0.27	0.50	**547.25**	**562.25**
	554.00	21.72	15	6.32	0.008	0.18	5.1	0.1													
50									1.7	6.9	11.7	0.7	0.26	180	0.524	0.89	NA	0.44	0.62	**554.62**	**570.05**
	560.50	85.84	15	3.73	0.003	0.24	3.0	0.0													
52									0.4	0.3	0.13	0.0	0.00	106	0.001	0.04	NA	0.02	0.26	**560.76**	**571.56**
	568.02	112.56	15	0.40	0.000	0.00	0.3	0.0													
62													0.00	104	0	0.00	NA	0.00	0.00	**568.02**	**574.90**
	576.94	69.95	15	1.64	0.001	0.04	1.3	0.0													
56									1.1	0.9	0.96	0.0	0.00	0	0	0.01	NA	0.01	0.04	**576.98**	**581.25**
	577.39	107.66	15	1.09	0.000	0.03	0.9	0.0													
58									0.0	0.0	0	0.0	0.00	136	8E-11	0.00	NA	0.00	0.03	**577.42**	**581.96**
	578.03	59.90	15	0.00	0.000	0.00	0.0	0.0													
60													0.00	148	0	0.00	NA	N/A	0.00	**578.03**	**582.40**
	573.69	25.41	18	9.88	0.008	0.19	5.6	0.1													
32									8.5	4.8	40.4	0.4	0.12	156	0.249	0.49	NA	0.25	0.44	**574.13**	**579.71**
	574.13	101.80	18	8.45	0.006	0.56	4.8	0.1													
34									8.2	4.6	38	0.3	0.12	111	0.234	0.44	NA	0.22	0.78	**574.91**	**580.14**
	574.91	162.18	18	8.19	0.005	0.84	4.6	0.1													
36									6.0	4.9	29.3	0.4	0.13	138	0.26	0.47	NA	0.24	1.08	**575.99**	**578.33**
	575.99	205.09	15	6.00	0.007	1.51	4.9	0.1													
38													0.00	95	0	0.09	NA	0.05	1.55	**577.54**	**582.25**
	582.58	38.07	15	1.27	0.000	0.01	1.0	0.0													
44													0.00	90	0	0.00	NA	0.00	0.01	**582.59**	**589.10**
	577.44	29.20	15	1.88	0.001	0.02	1.5	0.0													
42													0.00	90	0	0.01	NA	0.00	0.03	**577.47**	**583.71**
	577.44	38.05	15	0.58	0.000	0.00	0.5	0.0													
40													0.00	90	0	0.00	NA	0.00	0.00	**577.44**	**583.91**
	538.00	38.65	30	35.67	0.006	0.25	7.3	0.2													
1B									35.7	7.3	259	0.8	0.29	0	0	0.49	NA	0.25	0.55	**538.55**	**550.50**
	545.41	49.16	30	35.67	0.006	0.32	7.3	0.2													
2									25.8	8.2	212	1.0	0.37	180	0.732	1.30	NA	0.65	0.97	**546.38**	**556.88**
	552.74	159.23	24	25.78	0.011	1.76	8.2	0.3													
4									21.2	6.7	143	0.7	0.25	118	0.493	1.00	NA	0.50	2.26	**555.00**	**562.25**
	558.75	141.83	24	21.16	0.007	1.06	6.7	0.2													
6									19.9	6.3	126	0.6	0.22	144	0.436	0.83	NA	0.42	1.47	**560.22**	**571.12**
	567.60	178.58	24	19.90	0.007	1.18	6.3	0.2													
8									18.2	5.8	105	0.5	0.18	161	0.364	0.70	NA	0.35	1.53	**569.13**	**580.03**
	573.05	38.09	24	18.17	0.005	0.21	5.8	0.1													
10									9.9	6.7	66.3	0.7	0.24	95	0.489	0.86	NA	0.43	0.64	**573.69**	**580.11**
	573.69	174.69	24	11.25	0.002	0.37	3.6	0.0													
12									9.5	3.0	28.4	0.1	0.05	94	0.098	0.20	NA	0.10	0.47	**574.16**	**583.95**
	578.04	181.43	24	9.45	0.001	0.27	3.0	0.0													
14									7.9	4.5	35.2	0.3	0.11	180	0.217	0.36	NA	0.18	0.45	**578.49**	**589.14**
	583.28	27.91	18	7.89	0.005	0.13	4.5	0.1													
16									6.9	3.9	26.7	0.2	0.08	106	0.164	0.32	NA	0.16	0.30	**583.58**	**588.05**
	583.58	170.02	18	6.87	0.004	0.62	3.9	0.1													
18									5.8	3.3	18.8	0.2	0.06	106	0.115	0.23	NA	0.12	0.74	**584.31**	**591.90**
	585.31	200.18	18	5.76	0.003	0.51	3.3	0.0													
20									5.7	3.2	18.3	0.2	0.06	179	0.113	0.21	NA	0.11	0.62	**585.93**	**595.46**
	586.45	30.24	18	5.69	0.002	0.08	3.2	0.0													
22									5.7	3.2	18.1	0.2	0.06	178	0.111	0.21	NA	0.10	0.18	**586.63**	**596.05**
	586.70	110.51	18	5.66	0.002	0.27	3.2	0.0													
24													0.00	90	0	0.04	NA	0.02	0.29	**586.99**	**591.50**
	564.85	38.19	15	0.55	0.000	0.00	0.4	0.0													
30													0.00	103	0	0.00	NA	0.00	0.00	**564.85**	**571.10**
	555.85	38.00	18	6.19	0.003	0.11	3.5	0.0													
28									5.6	9.1	51.1	1.3	0.45	114	0.901	1.40	NA	0.70	0.81	**556.66**	**562.19**
	547.09	77.04	18	12.29	0.012	0.90	7.0	0.2													
26													0.00	169	0	0.19	NA	0.09	0.99	**548.08**	**558.24**

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
11/21/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
11/21/25	INITIAL SUBMITTAL - FINAL SITE PLAN

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

AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

DRAINAGE CALCULATIONS

PROJECT

SHEET

JOB NO. 102036

SCALE N/A

SHEET NO. 15

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STRUCTURE				DRAINAGE						
INLET	TYPE	AREA (FT^2)	PERIMETER (FT)	A (ACRES)	C	I (IN/HR)	Q (CFS)	D (IN)	FLOW TYPE
YD 1	12" Nyloplast Yard Inlet	0.35	4.49	0.02	0.30	4.00	0.026	**0.19**	WEIR FLOW
YD 1	12" Nyloplast Yard Inlet	0.35	4.49	0.02	0.30	6.50	0.042	**0.26**	WEIR FLOW
YD 1	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.02	0.30	4.00	0.026	**0.30**	WEIR FLOW
YD 1	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.02	0.30	6.50	0.042	**0.41**	WEIR FLOW
YD 2	12" Nyloplast Yard Inlet	0.35	4.49	0.05	0.30	4.00	0.065	**0.34**	WEIR FLOW
YD 2	12" Nyloplast Yard Inlet	0.35	4.49	0.05	0.30	6.50	0.106	**0.47**	WEIR FLOW
YD 2	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.05	0.30	4.00	0.065	**0.54**	WEIR FLOW
YD 2	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.05	0.30	6.50	0.106	**0.75**	WEIR FLOW
YD 3	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.033	**0.22**	WEIR FLOW
YD 3	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.053	**0.30**	WEIR FLOW
YD 3	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.033	**0.34**	WEIR FLOW
YD 3	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.053	**0.47**	WEIR FLOW
YD 4	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.038	**0.24**	WEIR FLOW
YD 4	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.061	**0.33**	WEIR FLOW
YD 4	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.038	**0.38**	WEIR FLOW
YD 4	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.061	**0.52**	WEIR FLOW
YD 5	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.038	**0.24**	WEIR FLOW
YD 5	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.061	**0.33**	WEIR FLOW
YD 5	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.038	**0.38**	WEIR FLOW
YD 5	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.061	**0.52**	WEIR FLOW
YD 6	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.031	**0.21**	WEIR FLOW
YD 6	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.051	**0.29**	WEIR FLOW
YD 6	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.031	**0.33**	WEIR FLOW
YD 6	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.051	**0.46**	WEIR FLOW
YD 7	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.038	**0.24**	WEIR FLOW
YD 7	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.061	**0.33**	WEIR FLOW
YD 7	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.038	**0.38**	WEIR FLOW
YD 7	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.061	**0.52**	WEIR FLOW
YD 8	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	4.00	0.040	**0.25**	WEIR FLOW
YD 8	12" Nyloplast Yard Inlet	0.35	4.49	0.03	0.30	6.50	0.065	**0.34**	WEIR FLOW
YD 8	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	4.00	0.040	**0.39**	WEIR FLOW
YD 8	12" Nyloplast Yard Inlet - 50% clogged	0.18	2.25	0.03	0.30	6.50	0.065	**0.54**	WEIR FLOW
24	DI-7	6.00	12.80	2.49	0.50	4.00	4.977	**3.07**	WEIR FLOW
24	DI-7	6.00	12.80	2.49	0.50	6.50	8.088	**4.00**	ORIFICE FLOW
24	DI-7 - 50% clogged	3.00	6.40	2.49	0.50	4.00	4.977	**4.00**	ORIFICE FLOW
24	DI-7 - 50% clogged	3.00	6.40	2.49	0.50	6.50	8.088	**4.00**	ORIFICE FLOW
48	DI-7	6.00	12.80	2.78	0.45	4.00	5.000	**3.08**	WEIR FLOW
48	DI-7	6.00	12.80	2.78	0.45	6.50	8.125	**4.00**	ORIFICE FLOW
48	DI-7 - 50% clogged	3.00	6.40	2.78	0.45	4.00	5.000	**4.00**	ORIFICE FLOW
48	DI-7 - 50% clogged	3.00	6.40	2.78	0.45	6.50	8.125	**4.00**	ORIFICE FLOW

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			Hydrology							Curb and Gutter						Inlet			
Plan Label	VDOT DI type	L, throat length (ft)		A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	S, gutter longitudinal slope (ft/ft) *	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	SwSx	T, spread at curb (ft)	d, flow depth (ft)	d / h (height of opening, 6.5")	T, spread at inlet (ft)	Remarks
			left	0.29	0.55	0.160	0.64	0.003	0.64	0.0050	0.0200	2.0	0.0833	4.1665	6.42				
			right	0.27	0.55	0.148	0.59	0.00	0.59	0.0050	0.0200	2.0	0.0833	4.1667	6.24				
2	3C	**10.0**					combined flow		1.2							0.12	0.253	**5.79**	
			left	0.33	0.70	0.231	0.92	0.00	0.92	0.0050	0.0200	2.0	0.0833	4.1665	7.37				
			right	0.03	0.70	0.021	0.08	0.00	0.08	0.0050	0.0200	2.0	0.0833	4.1667	2.99				
16	3C	**8.0**					combined flow		1.0							0.11	0.246	**5.63**	
			left	0.39	0.65	0.254	1.01	0.00	1.01	0.0050	0.0200	2.0	0.0833	4.1665	7.63				
			right	0.04	0.65	0.025	0.10	0.00	0.10	0.0050	0.0200	2.0	0.0833	4.1667	3.22				
18	3C	**8.0**					combined flow		1.1							0.12	0.263	**6.02**	
			left	0.28	0.70	0.196	0.78	0.00	0.78	0.0050	0.0200	2.0	0.0833	4.1665	6.93				
			right	0.07	0.70	0.049	0.20	0.00	0.20	0.0050	0.0200	2.0	0.0833	4.1665	4.13				
32	3B	**8.0**					combined flow		1.0							0.11	0.241	**5.53**	
			left	0.31	0.70	0.217	0.87	0.00	0.87	0.0050	0.0200	2.0	0.0833	4.1665	7.20				
			right	0.09	0.70	0.066	0.26	0.00	0.26	0.0050	0.0200	2.0	0.0833	4.1665	4.60				
42	3B	**8.0**					combined flow		1.1							0.12	0.265	**6.08**	
			left	0.44	0.55	0.242	0.97	0.00	0.97	0.0050	0.0200	2.0	0.0200	1.0000	7.50				
			right	0.68	0.55	0.374	1.50	0.00	1.50	0.0050	0.0200	2.0	0.0200	1.0000	8.83				
46	3C	**10.0**					combined flow		2.5							0.18	0.401	**9.19**	
			left	0.21	0.65	0.137	0.55	0.00	0.55	0.0050	0.0200	2.0	0.0833	4.1665	6.05				
			right	0.18	0.65	0.117	0.47	0.00	0.47	0.0050	0.0200	2.0	0.0833	4.1665	5.71				
64	3C	**8.0**					combined flow		1.0							0.11	0.247	**5.65**	
			left	0.12	0.60	0.072	0.29	0.00	0.29	0.0050	0.0200	2.0	0.0833	4.1665	4.76				
			right	0.20	0.60	0.120	0.48	0.00	0.48	0.0050	0.0200	2.0	0.0833	4.1665	5.77				
68	3C	**6.0**					combined flow		0.8							0.11	0.232	**5.33**	
			left	0.18	0.70	0.126	0.50	0.00	0.50	0.0050	0.0200	2.0	0.0833	4.1665	5.87				
			right	0.11	0.70	0.077	0.31	0.10	0.41	0.0050	0.0200	2.0	0.0833	4.1665	4.88				
70	3C	**6.0**					combined flow		0.9							0.12	0.261	**5.98**	
			left	0.07	0.70	0.049	0.20	0.00	0.20	0.0050	0.0200	2.0	0.0833	4.1665	4.12				
			right	0.29	0.70	0.203	0.81	0.00	0.81	0.0050	0.0200	2.0	0.0833	4.1665	7.02				
76	3C	**8.0**					combined flow		1.0							0.11	0.246	**5.63**	
			left	0.04	0.70	0.028	0.11	0.00	0.11	0.0050	0.0200	2.0	0.0833	4.1665	3.34				
			right	0.07	0.70	0.049	0.20	0.00	0.20	0.0050	0.0200	2.0	0.0833	4.1650	4.12				
78	3C	**4.0**					combined flow		0.3							0.07	0.148	**3.39**	

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			Hydrology							Curb and Gutter						Inlet			
Plan Label	VDOT DI type	L, throat length (ft)		A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	S, gutter longitudinal slope (ft/ft) *	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	SwSx	T, spread at curb (ft)	d, flow depth (ft)	d / h (height of opening, 6.5")	T, spread at inlet (ft)	Remarks
			left	0.29	0.55	0.160	1.04	0.16	1.20	0.0050	0.0200	2.0	0.0833	4.1665	7.70				
			right	0.27	0.55	0.148	0.96	0.18	1.14	0.0050	0.0200	2.0	0.0833	4.1667	7.48				
2	3C	**10.0**					combined flow		2.3							0.18	0.387	**8.88**	
			left	0.33	0.70	0.231	1.50	0.00	1.50	0.0050	0.0200	2.0	0.0833	4.1665	8.84				
			right	0.03	0.70	0.021	0.14	0.00	0.14	0.0050	0.0200	2.0	0.0833	4.1667	3.59				
16	3C	**8.0**					combined flow		1.6							0.16	0.339	**7.78**	
			left	0.39	0.65	0.254	1.65	0.00	1.65	0.0050	0.0200	2.0	0.0833	4.1665	9.16				
			right	0.04	0.65	0.025	0.16	0.00	0.16	0.0050	0.0200	2.0	0.0833	4.1667	3.86				
18	3C	**8.0**					combined flow		1.8							0.17	0.363	**8.32**	
			left	0.28	0.70	0.196	1.27	0.00	1.27	0.0050	0.0200	2.0	0.0833	4.1665	8.32				
			right	0.07	0.70	0.049	0.32	0.00	0.32	0.0050	0.0200	2.0	0.0833	4.1665	4.95				
32	3B	**8.0**					combined flow		1.6							0.15	0.333	**7.64**	
			left	0.31	0.70	0.217	1.41	0.00	1.41	0.0050	0.0200	2.0	0.0833	4.1665	8.64				
			right	0.09	0.70	0.066	0.43	0.00	0.43	0.0050	0.0200	2.0	0.0833	4.1665	5.52				
42	3B	**8.0**					combined flow		1.8							0.17	0.367	**8.40**	
			left	0.44	0.55	0.242	1.57	0.00	1.57	0.0050	0.0200	2.0	0.0200	1.0000	9.00				
			right	0.68	0.55	0.374	2.43	0.00	2.43	0.0050	0.0200	2.0	0.0200	1.0000	10.60				
46	3C	**10.0**					combined flow		4.0							0.25	0.554	**12.70**	
			left	0.21	0.65	0.137	0.89	0.64	1.53	0.0050	0.0200	2.0	0.0833	4.1665	7.26				
			right	0.18	0.65	0.117	0.76	0.09	0.85	0.0050	0.0200	2.0	0.0833	4.1665	6.85				
64	3C	**8.0**					combined flow		2.4							0.20	0.436	**9.99**	
			left	0.12	0.60	0.072	0.47	0.00	0.47	0.0050	0.0200	2.0	0.0833	4.1665	5.71				
			right	0.20	0.60	0.120	0.78	0.10	0.88	0.0050	0.0200	2.0	0.0833	4.1665	6.92				
68	3C	**6.0**					combined flow		1.3							0.15	0.338	**7.74**	
			left	0.18	0.70	0.126	0.82	0.23	1.05	0.0050	0.0200	2.0	0.0833	4.1665	7.05				
			right	0.11	0.70	0.077	0.50	1.51	2.01	0.0050	0.0200	2.0	0.0833	4.1665	5.86				
70	3C	**6.0**					combined flow		3.1							0.27	0.585	**13.40**	
			left	0.07	0.70	0.049	0.32	0.00	0.32	0.0050	0.0200	2.0	0.0833	4.1665	4.94				
			right	0.29	0.70	0.203	1.32	0.00	1.32	0.0050	0.0200	2.0	0.0833	4.1665	8.43				
76	3C	**8.0**					combined flow		1.6							0.16	0.340	**7.78**	
			left	0.04	0.70	0.028	0.18	0.00	0.18	0.0050	0.0200	2.0	0.0833	4.1665	4.01				
			right	0.07	0.70	0.049	0.32	0.00	0.32	0.0050	0.0200	2.0	0.0833	4.1650	4.94				
78	3C	**4.0**					combined flow		0.5							0.09	0.204	**4.68**	

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

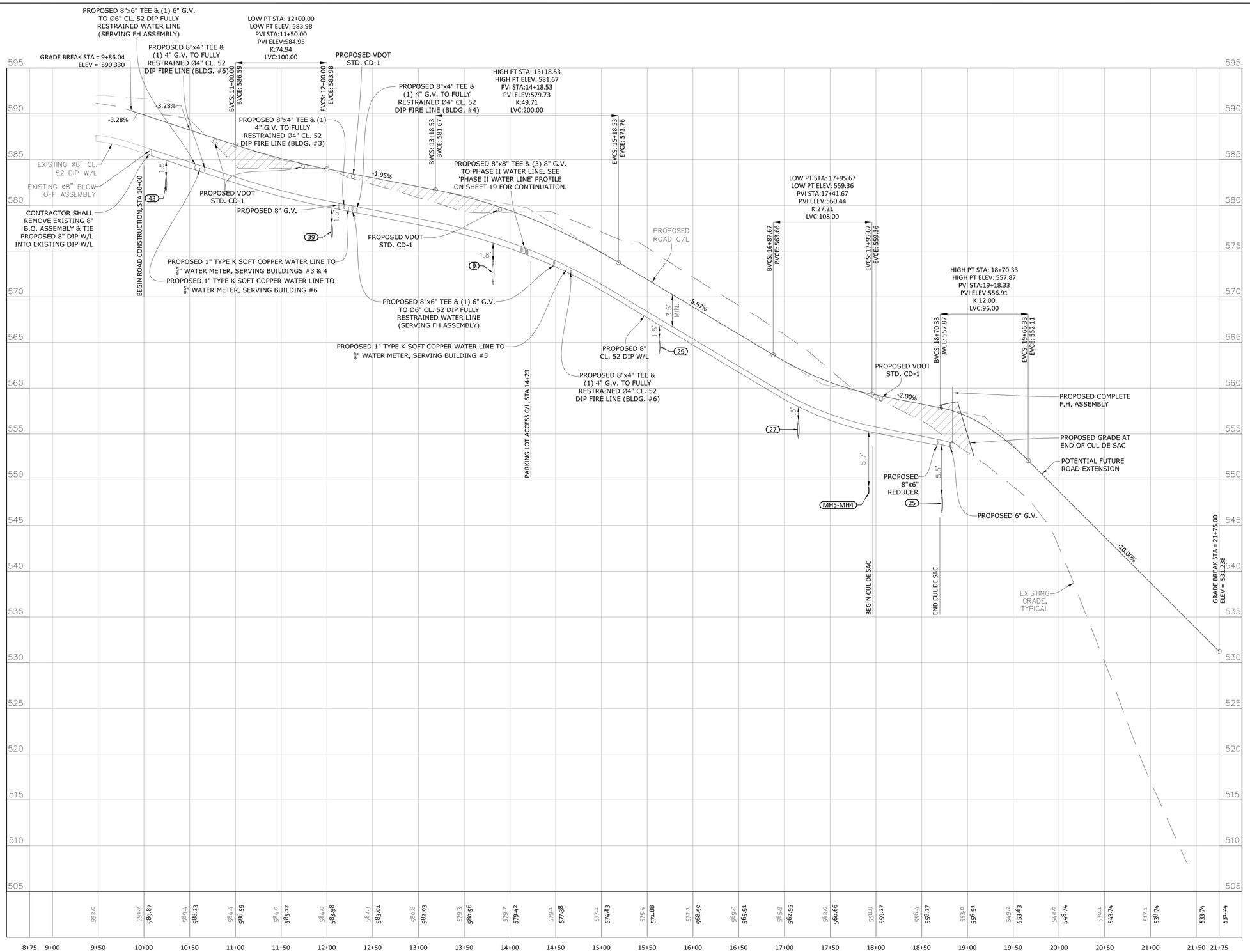
Intensity 6.50 (Intensity is 4 in/hr for spread, and 6.5 in/hr for capacity and depth)
Mannings Coefficient, n is 0.013

Inlet			Hydrology						Curb and Gutter							Inlet									
Plan Label	VDOT DI type	L, throat length (ft)	A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	S, gutter longitudinal slope (ft/ft)	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	SwSx	T, spread at curb (ft)	Eo, frontal flow ratio in gutter W	a, 12W(Sw-Sx)+ 2*local depr. (in)	Sw = 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	Remarks
4	3B	**6**	0.17	0.60	0.102	0.66	0.04	0.70	0.0435	0.0200	2.0	0.0833	4.1650	**4.44**	0.93	3.5192	0.1466	0.1564	**7.78**	0.77	1.00	0.54	0.16	2	
6	3B	**6**	0.09	0.70	0.062	0.41	0.00	0.41	0.0625	0.0200	2.0	0.0833	4.1650	3.37	0.98	3.5192	0.1466	0.1637	**6.70**	0.90	1.00	0.36	0.04	4	
8	3B	**6**	0.13	0.70	0.088	0.57	0.07	0.64	0.0362	0.0200	2.0	0.0833	4.1650	**4.44**	0.94	3.5192	0.1466	0.1578	**7.05**	0.85	1.00	0.55	0.10	68	
10	3B	**6**	0.11	0.70	0.074	0.48	0.00	0.48	0.0362	0.0200	2.0	0.0833	4.1650	3.98	0.95	3.5192	0.1466	0.1593	**6.19**	0.97	1.00	0.46	0.01	30	
12	3B	**6**	0.10	0.70	0.070	0.46	0.17	0.63	0.0200	0.0200	2.0	0.0833	4.1650	4.92	0.92	3.5192	0.1466	0.1549	**5.91**	1.02	1.00	0.63	0.00		
14	3B	**8**	0.25	0.70	0.174	1.13	0.00	1.13	0.0362	0.0200	2.0	0.0833	4.1650	5.49	0.85	3.5192	0.1466	0.1446	**9.42**	0.85	1.00	0.96	0.17	12	
20	3B	**4**	0.02	0.80	0.019	0.12	0.00	0.12	0.0210	0.0200	2.0	0.0833	4.1650	2.66	0.99	3.5192	0.1466	0.1652	**2.92**	1.37	1.00	0.12	0.00		
22	3B	**4**	0.03	0.80	0.021	0.14	0.00	0.14	0.0164	0.0200	2.0	0.0833	4.1650	2.89	0.99	3.5192	0.1466	0.1652	**2.83**	1.41	1.00	0.14	0.00		
28	3B	**6**	0.16	0.60	0.096	0.62	0.12	0.75	0.0435	0.0200	2.0	0.0833	4.1650	4.54	0.94	3.5192	0.1466	0.1578	**7.93**	0.76	1.00	0.57	0.18	2	
30	3B	**6**	0.12	0.70	0.082	0.54	0.01	0.55	0.0625	0.0200	2.0	0.0833	4.1650	3.78	0.95	3.5192	0.1466	0.1593	**7.73**	0.78	1.00	0.43	0.12	28	
34	3B	**6**	0.10	0.70	0.070	0.46	0.00	0.46	0.0160	0.0200	2.0	0.0200	1.0000	4.55	0.79	2.0000	0.0833	0.0858	**6.88**	0.87	1.00	0.40	0.06	72	
36	3B	**16**	0.44	0.80	0.354	2.30	1.16	3.46	0.0480	0.0210	2.0	0.0210	1.0000	7.68	0.62	2.0000	0.0833	0.0727	**24.77**	0.65	1.00	2.24	1.23	74	
38	3B	**20**	1.13	0.80	0.900	5.85	0.00	5.85	0.0160	0.0240	2.0	0.0240	1.0000	10.57	0.43	2.0000	0.0833	0.0598	**24.96**	0.80	2.00	4.69	1.16	36	
40	3B	**6**	0.12	0.70	0.086	0.56	0.23	0.79	0.0200	0.0200	2.0	0.0833	4.1665	5.37	0.90	3.5199	0.1467	0.1520	**6.59**	0.91	3.00	0.72	0.07	8	
44	3B	**8**	0.32	0.60	0.191	1.24	0.00	1.24	0.0362	0.0200	2.0	0.0833	4.1667	5.68	0.84	3.5200	0.1467	0.1432	**9.84**	0.81	4.00	1.01	0.23	40	
50	3B	**8**	0.22	0.70	0.154	1.00	0.78	1.78	0.0060	0.0200	2.0	0.0200	1.0000	9.11	0.41	2.0000	0.0833	0.0542	**11.97**	0.67	5.00	1.19	0.59	64	
52	3B	**20**	0.74	0.70	0.518	3.37	0.20	3.56	0.0380	0.0200	2.0	0.0200	1.0000	8.36	0.51	2.0000	0.0833	0.0625	**25.59**	0.78	6.00	2.79	0.78	50	
56	3B	**6**	0.27	0.40	0.110	0.71	0.21	0.92	0.0060	0.0200	2.0	0.0200	1.0000	7.12	0.63	2.0000	0.0833	0.0725	**7.63**	0.79	5.00	0.73	0.20	52	
58	3B	**8**	0.51	0.40	0.202	1.32	0.00	1.32	0.0060	0.0200	2.0	0.0200	1.0000	8.13	0.53	2.0000	0.0833	0.0642	**9.53**	0.84	6.00	1.10	0.21	56	
62	3B	**6**	0.12	0.50	0.060	0.39	0.00	0.39	0.0220	0.0200	2.0	0.0200	1.0000	4.04	0.84	2.0000	0.0833	0.0900	**6.89**	0.87	6.00	0.34	0.05	64	
66	3B	**8**	0.12	0.70	0.084	0.55	0.00	0.55	0.0420	0.0200	2.0	0.0200	1.0000	4.06	0.84	2.0000	0.0833	0.0900	**9.64**	0.83	6.00	0.45	0.09	64	
72	3B	**10**	0.41	0.60	0.246	1.60	0.06	1.66	0.0080	0.0200	2.0	0.0200	1.0000	8.40	0.51	2.0000	0.0833	0.0625	**11.62**	0.86	6.00	1.43	0.23	70	
74	3B	**10**	0.58	0.70	0.406	2.64	1.23	3.87	0.0060	0.0200	2.0	0.0200	1.0000	12.19	0.42	2.0000	0.0833	0.0550	**16.43**	0.61	6.00	2.35	1.51	70	

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			Hydrology						Curb and Gutter							Inlet									
Plan Label	VDOT DI type	L, throat length (ft)	A, Drainage area (acres)	C, rational coeff.	CA	Q, flow incr. (cfs)	Qb, carry-over (cfs)	Qt, total flow	S, gutter longitudinal slope (ft/ft)	Sx, lane cross slope (ft/ft)	W, gutter width (ft)	Sw, gutter cross-slope (ft/ft)	SwSx	T, spread at curb (ft)	Eo, frontal flow ratio in gutter W	a, 12W(Sw-Sx)+ 2*local depr. (in)	Sw = 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	Remarks
4	3B	**6**	0.17	0.60	0.102	0.41	0.00	0.41	0.0435	0.0200	2.0	0.0833	4.1650	3.62	0.97	3.5192	0.1466	0.1622	**6.05**	0.99	1.00	0.40	0.003	2	
6	3B	**6**	0.09	0.70	0.062	0.25	0.00	0.25	0.0625	0.0200	2.0	0.0833	4.1650	2.81	0.99	3.5192	0.1466	0.1652	**5.43**	1.10	1.00	0.25	0.00		
8	3B	**6**	0.13	0.70	0.088	0.35	0.00	0.35	0.0362	0.0200	2.0	0.0833	4.1650	3.54	0.98	3.5192	0.1466	0.1637	**5.35**	1.12	1.00	0.35	0.00		
10	3B	**6**	0.11	0.70	0.074	0.29	0.00	0.29	0.0362	0.0200	2.0	0.0833	4.1650	3.31	0.98	3.5192	0.1466	0.1637	**4.97**	1.21	1.00	0.29	0.00		
12	3B	**6**	0.10	0.70	0.070	0.28	0.00	0.28	0.0200	0.0200	2.0	0.0833	4.1650	3.64	0.91	3.5192	0.1466	0.1534	**4.24**	1.41	1.00	0.28	0.00		
14	3B	**8**	0.25	0.70	0.174	0.70	0.00	0.70	0.0362	0.0200	2.0	0.0833	4.1650	4.58	0.91	3.5192	0.1466	0.1534	**7.42**	1.08	1.00	0.70	0.00		
20	3B	**4**	0.02	0.80	0.019	0.08	0.00	0.08	0.0210	0.0200	2.0	0.0833	4.1650	2.21	1.00	3.5192	0.1466	0.1666	**2.37**	1.69	1.00	0.08	0.00		
22	3B	**4**	0.03	0.80	0.021	0.08	0.00	0.08	0.0164	0.0200	2.0	0.0833	4.1650	2.41	1.00	3.5192	0.1466	0.1666	**2.30**	1.74	1.00	0.08	0.00		
28	3B	**6**	0.16	0.60	0.096	0.38	0.01	0.39	0.0435	0.0200	2.0	0.0833	4.1650	3.55	0.98	3.5192	0.1466	0.1637	**5.90**	1.02	1.00	0.39	0.00		
30	3B	**6**	0.12	0.70	0.082	0.33	0.00	0.33	0.0625	0.0200	2.0	0.0833	4.1650	3.12	0.99	3.5192	0.1466	0.1652	**6.10**	0.98	1.00	0.32	0.01	28	
34	3B	**6**	0.10	0.70	0.070	0.28	0.00	0.28	0.0160	0.0200	2.0	0.0200	1.0000	3.79	0.86	2.0000	0.0833	0.0917	**5.39**	1.11	1.00	0.28	0.00		
36	3B	**16**	0.44	0.80	0.354	1.42	0.00	1.42	0.0480	0.0210	2.0	0.0210	1.0000	5.49	0.70	2.0000	0.0833	0.0793	**16.14**	0.99	1.00	1.42	0.00		
38	3B	**20**	1.13	0.80	0.900	3.60	0.00	3.60	0.0160	0.0240	2.0	0.0240	1.0000	8.81	0.50	2.0000	0.0833	0.0657	**19.25**	1.04	2.00	3.60	0.00		
40	3B	**6**	0.12	0.70	0.086	0.35	0.00	0.35	0.0200	0.0200	2.0	0.0833	4.1665	3.93	0.96	3.5199	0.1467	0.1608	**4.49**	1.34	3.00	0.35	0.00		
44	3B	**8**	0.32	0.60	0.191	0.76	0.00	0.76	0.0362	0.0200	2.0	0.0833	4.1667	4.74	0.90	3.5200	0.1467	0.1520	**7.75**	1.03	4.00	0.76	0.00		
50	3B	**8**	0.22	0.70	0.154	0.62	0.00	0.62	0.0060	0.0200	2.0	0.0200	1.0000	6.12	0.66	2.0000	0.0833	0.0750	**6.31**	1.27



TIMBERWOOD BOULEVARD

DESIGN SPEED 25 MPH

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10

(IN FEET)
1 inch = 5 ft.

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.

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".

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: ROAD PROFILES

JOB NO. 102036

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

SHEET NO. 17

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VERTICAL GRAPHIC SCALE

5 0 2.5 5 10

(IN FEET)
1 inch = 5 ft.

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

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.

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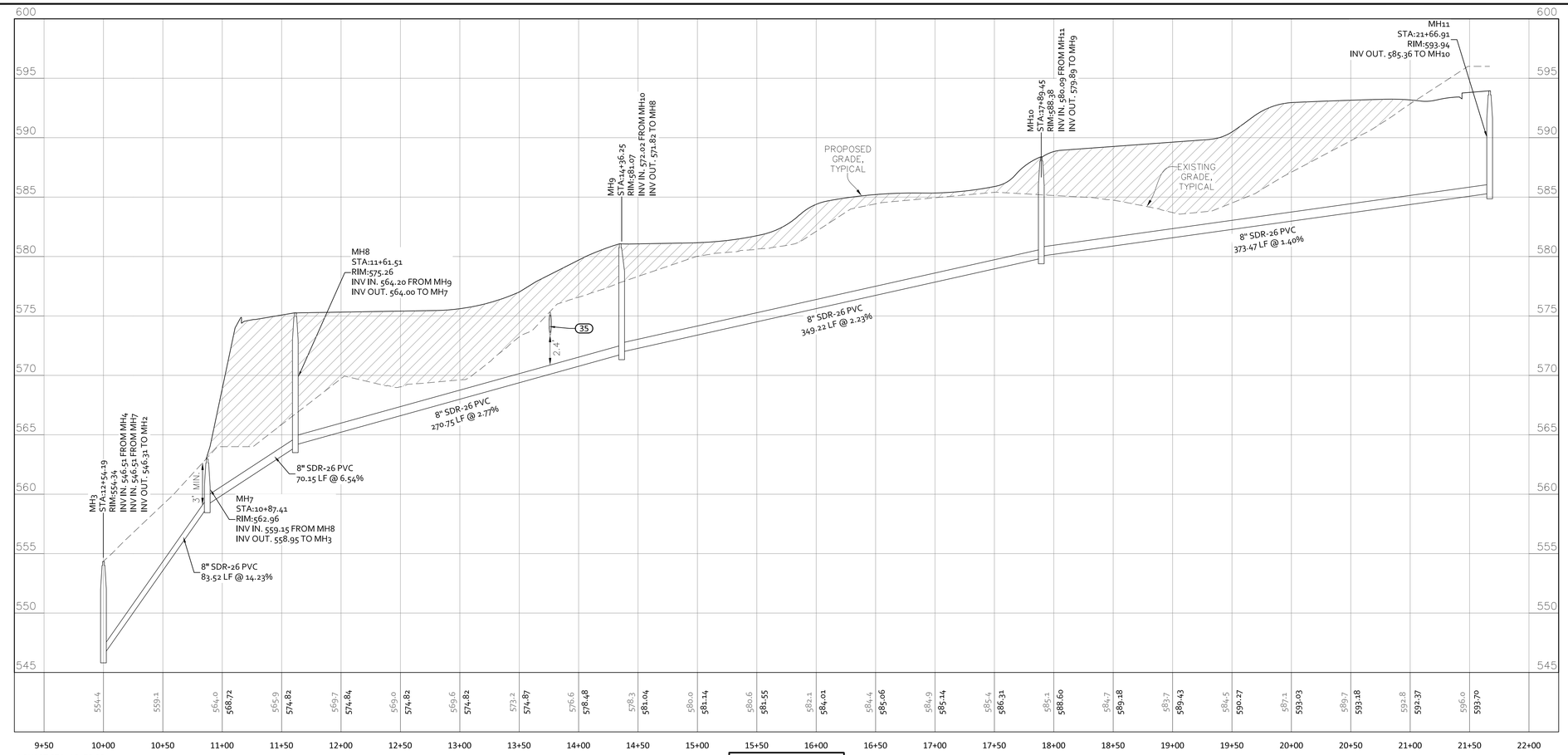
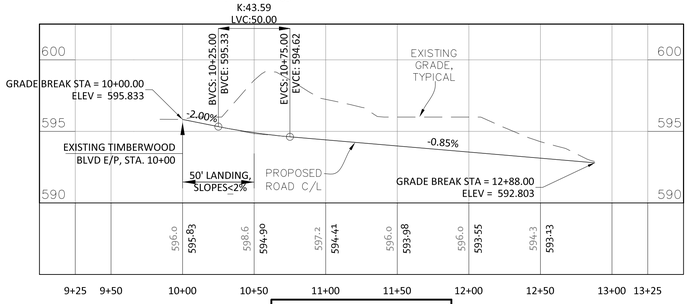
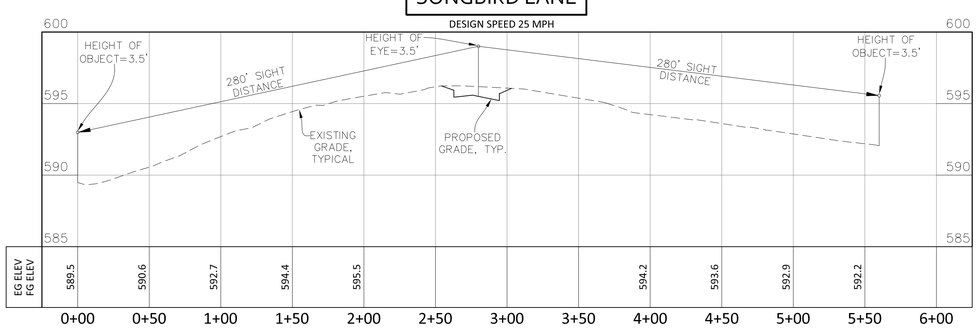


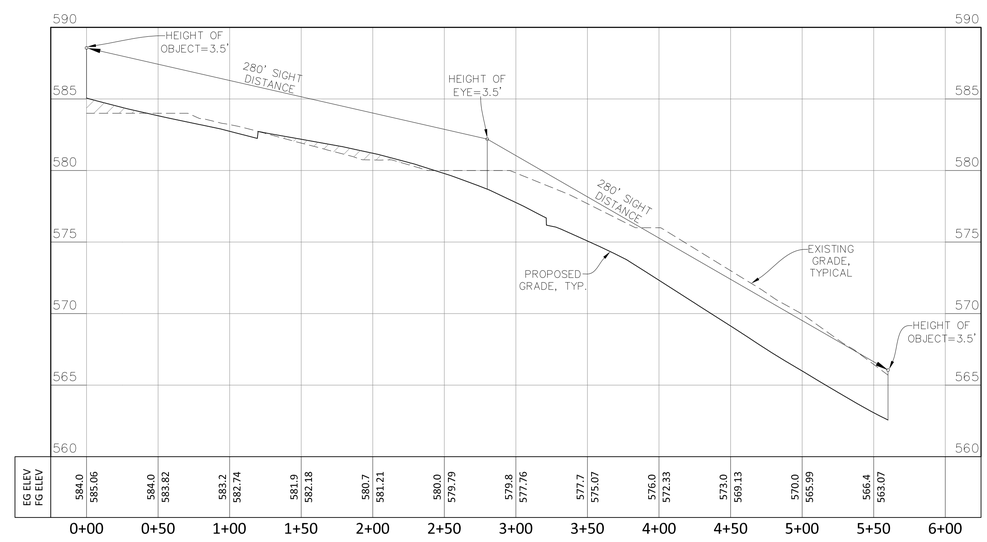
MH 11 - MH 3



SONGBIRD LANE



TIMBERWOOD BLVD & SONGBIRD LANE INTERSECTION SIGHT DISTANCE



TIMBERWOOD BLVD & PHASE I PARKING LOT ENTRANCE INTERSECTION SIGHT DISTANCE

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: ROAD & UTILITIES PROFILES

JOB NO. 102036

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

SHEET NO. 18

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VERTICAL GRAPHIC SCALE

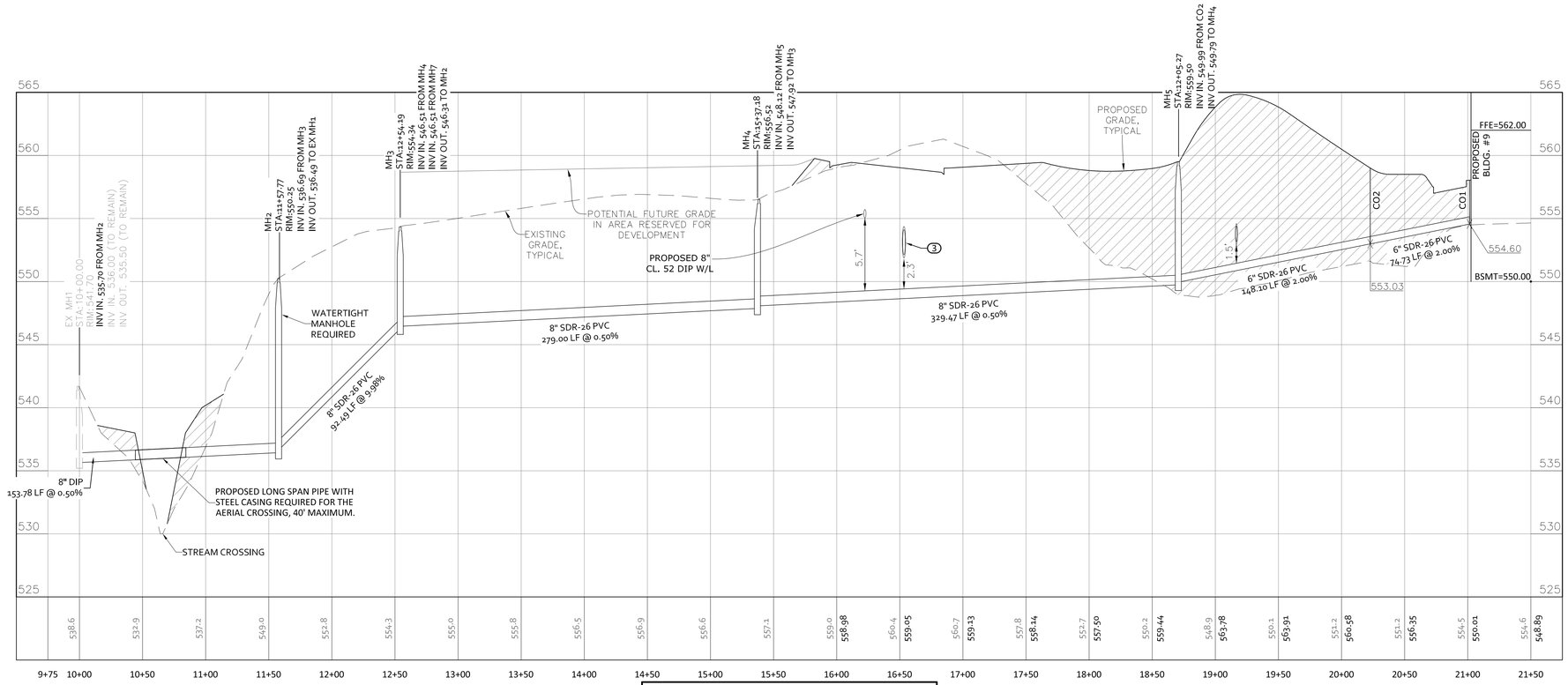
5 0 2.5 5 10

(IN FEET)
1 inch = 5 ft.

HORIZONTAL GRAPHIC SCALE

50 0 25 50 100

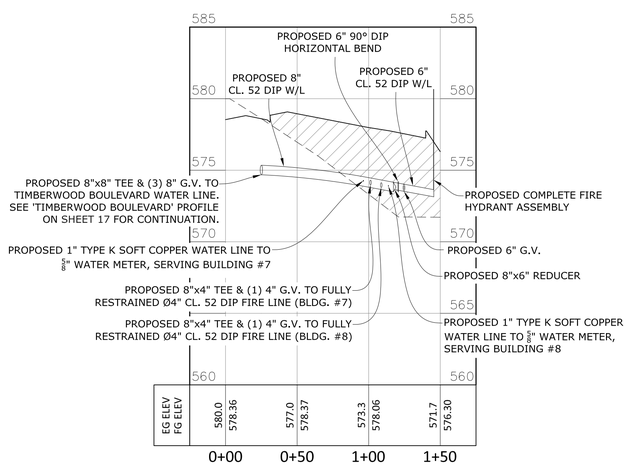
(IN FEET)
1 inch = 50 ft.



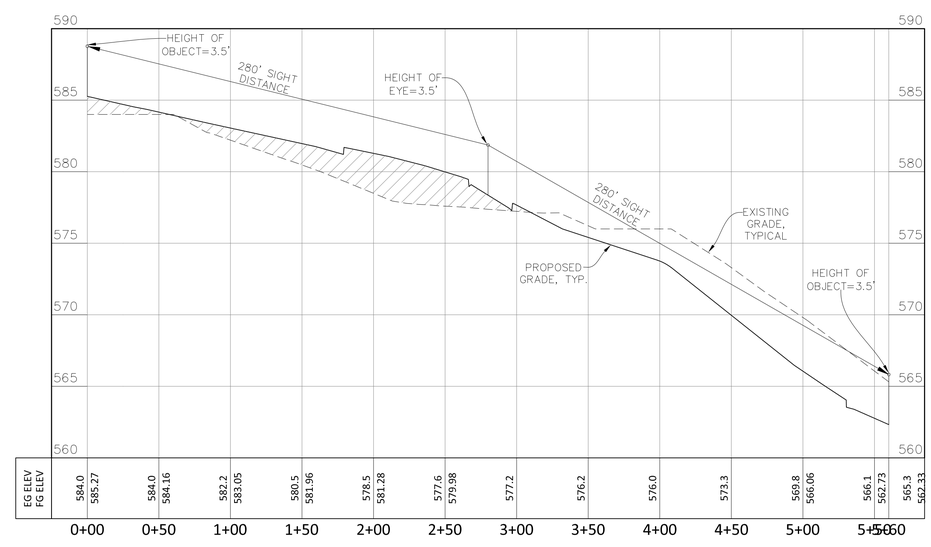
BUILDING 9 CLEAN OUT - EX MH1

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.

NOTE: CLASS I BACKFILL MATERIAL SHALL BE CRUSHER RUN AGGREGATE SIZE NO. 25 OR 26, AGGREGATE BASE MATERIAL SIZE 21A OR 21B, FLOWABLE FILL, OR CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26, PER VDOT ROAD AND BRIDGE SPECIFICATIONS, SECTION 302.03G.



PHASE II WATER LINE



TIMBERWOOD BLVD & PHASE II PARKING LOT ENTRANCE INTERSECTION SIGHT DISTANCE

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN
SHEET: ROAD & UTILITIES PROFILES

JOB NO. 102036
SCALE V: 1"=5' H: 1"=50'
SHEET NO. 19

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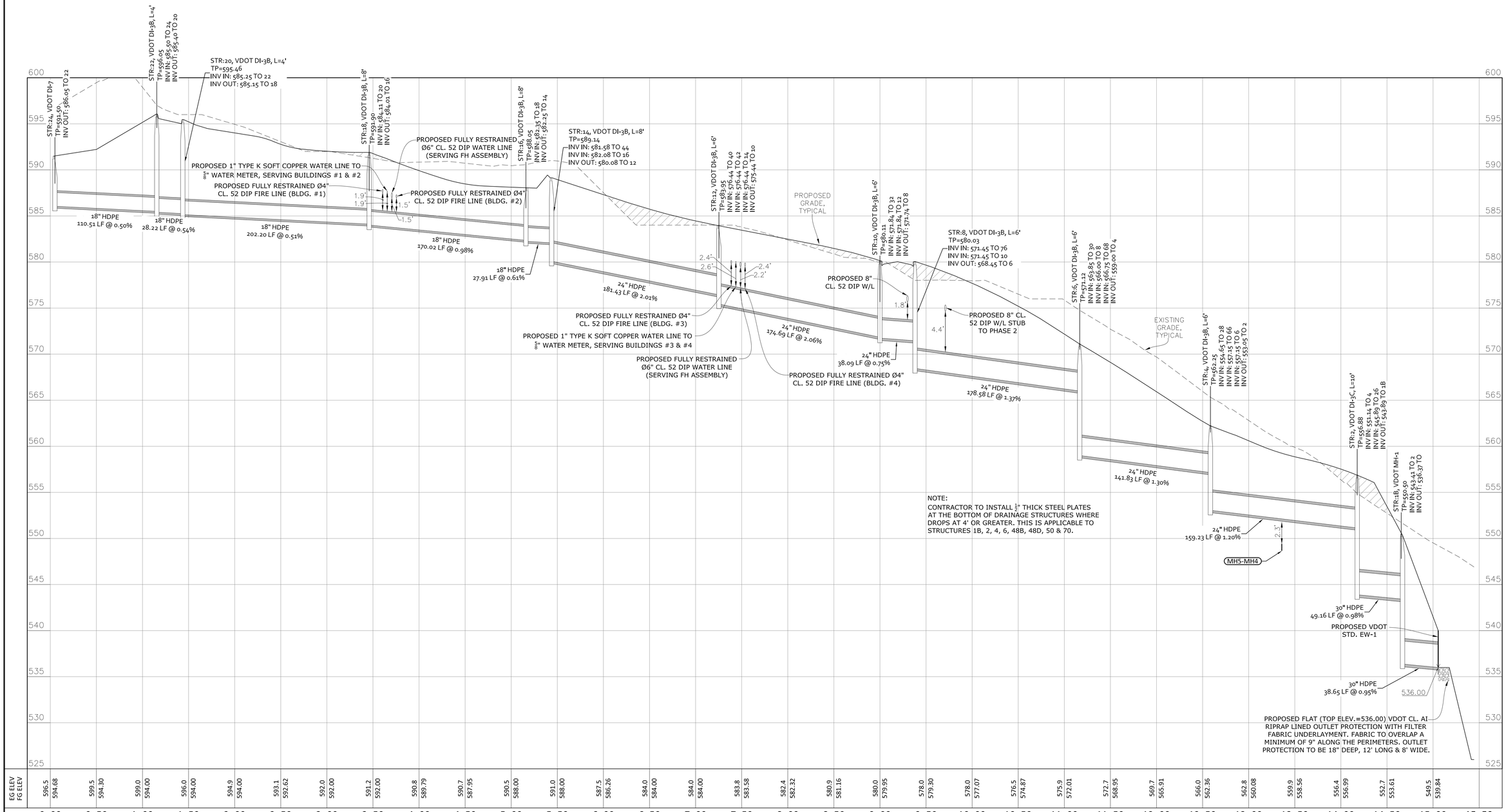

NOTE:
CONTRACTOR TO INSTALL 1/2" THICK STEEL PLATES AT THE BOTTOM OF DRAINAGE STRUCTURES WHERE DROPS AT 4' OR GREATER. THIS IS APPLICABLE TO STRUCTURES 1B, 2, 4, 6, 48B, 48D, 50 & 70.

STR. 24 - WET POND

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.

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".

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)

HORIZONTAL GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

VERTICAL GRAPHIC SCALE
5 0 2.5 5 10
(IN FEET)
1 inch = 5 ft.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: DRAINAGE PROFILES

JOB NO. 102036

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

SHEET NO. 20

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VERTICAL GRAPHIC SCALE

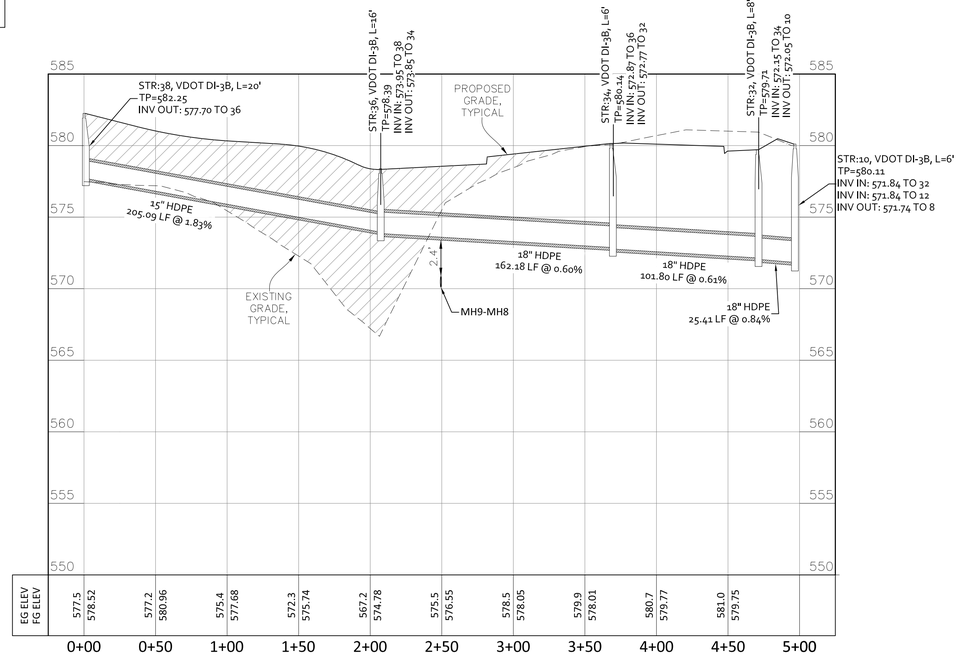
5 0 2.5 5 10

(IN FEET)
1 inch = 5 ft.

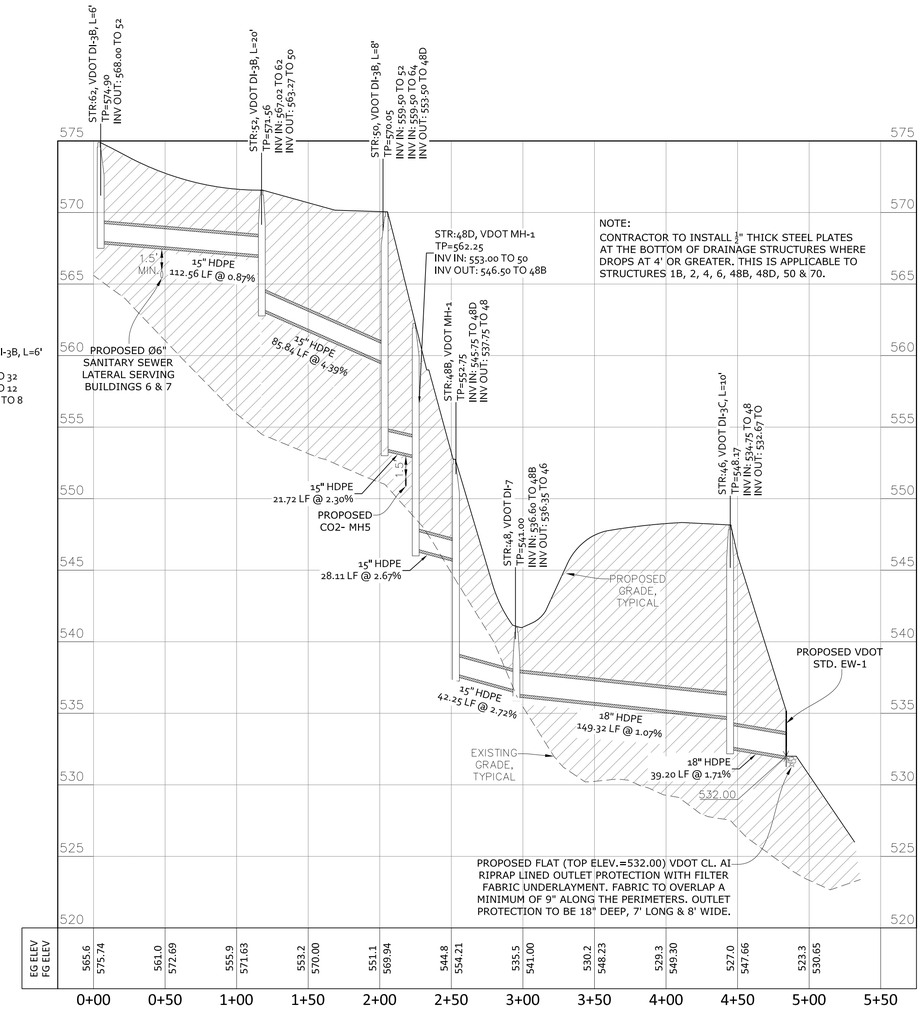
HORIZONTAL GRAPHIC SCALE

50 0 25 50 100

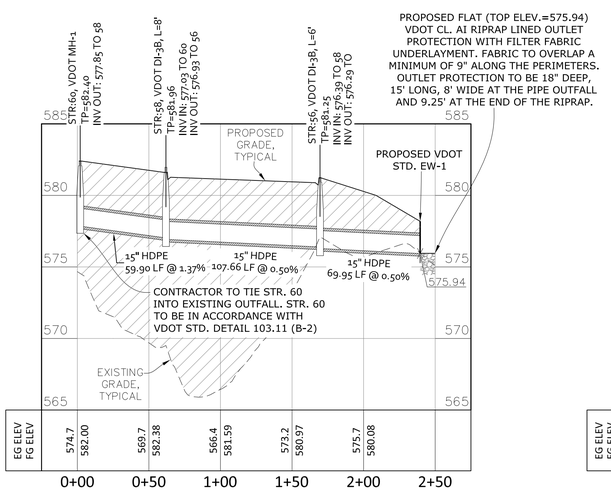
(IN FEET)
1 inch = 50 ft.



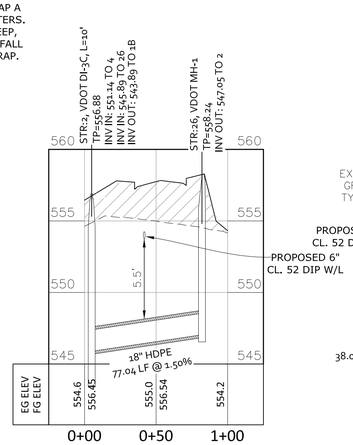
STR. 38 - STR 10



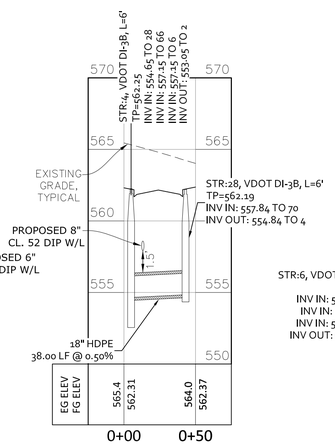
STR. 62 - WET POND



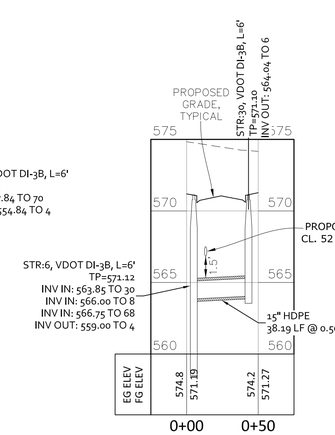
STR. 60 - OUT



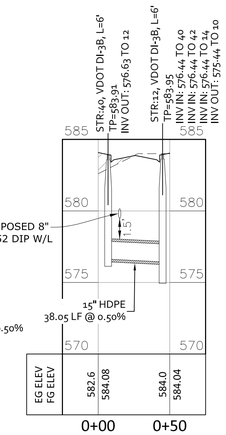
STR. 26 - STR 2



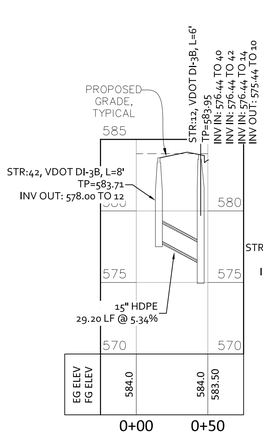
STR. 28 - STR 4



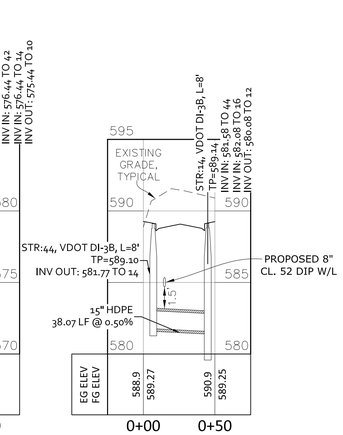
STR. 30 - STR 6



STR. 40 - STR 12



STR. 42 - STR 12



STR. 44 - STR 14

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

DRAINAGE PROFILES

PROJECT
SHEET
JOB NO. 102036
SCALE V: 1"=5' H: 1"=50'
SHEET NO. 21

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NOTES:
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VERTICAL GRAPHIC SCALE

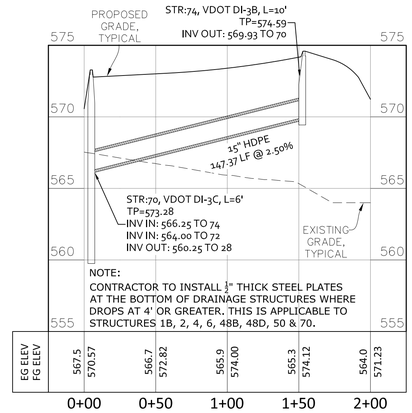
5 0 2.5 5 10

(IN FEET)
1 inch = 5 ft.

HORIZONTAL GRAPHIC SCALE

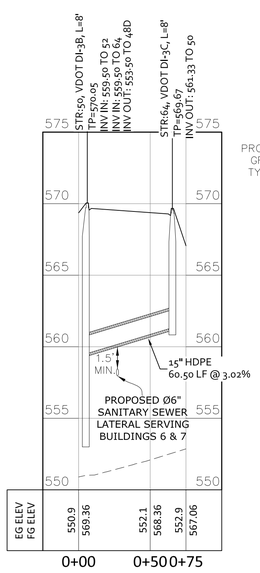
50 0 25 50 100

(IN FEET)
1 inch = 50 ft.

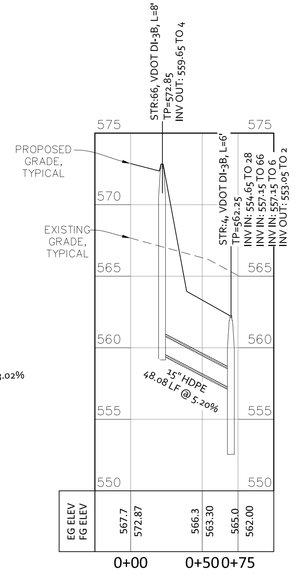


NOTE:
CONTRACTOR TO INSTALL ½" THICK STEEL PLATES AT THE BOTTOM OF DRAINAGE STRUCTURES WHERE DROPS AT 4' OR GREATER. THIS IS APPLICABLE TO STRUCTURES 1B, 2, 4, 6, 48B, 48D, 50 & 70.

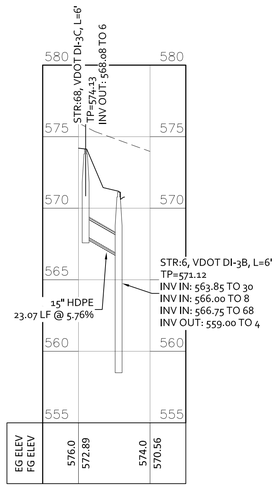
STR. 74 - STR. 70



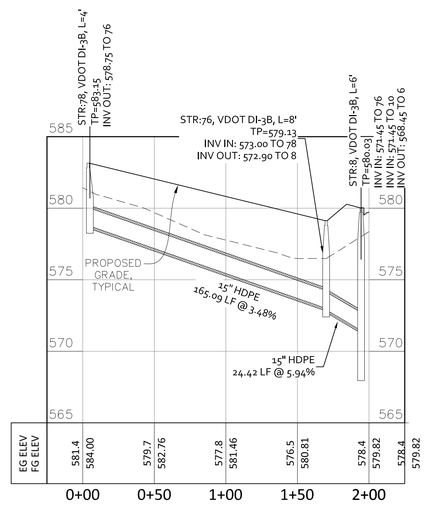
STR. 64 - STR. 50



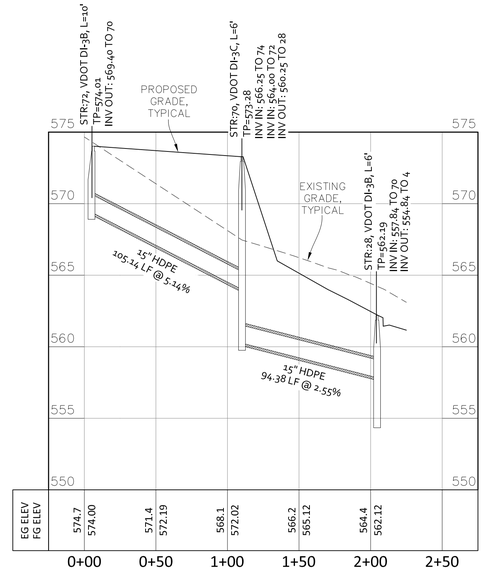
STR. 66 - STR. 4



STR. 68 - STR. 6



STR. 78 - STR. 8



STR. 72 - STR. 28

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

DRAINAGE PROFILES

PROJECT
SHEET
JOB NO. 102036
SCALE V: 1"=5' H: 1"=50'
SHEET NO. 22

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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.

ALBEMARLE COUNTY

GENERAL CONSTRUCTION NOTES

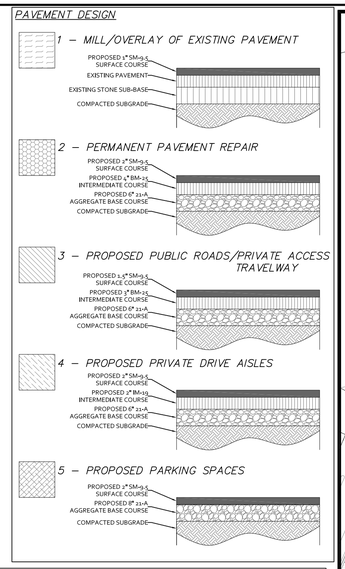
1. PRIOR TO ANY CONSTRUCTION WITHIN ANY EXISTING PUBLIC RIGHT-OF-WAY, INCLUDING CONNECTION TO ANY EXISTING ROAD, A PERMIT SHALL BE OBTAINED FROM THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT). THIS PLAN AS DRAWN MAY NOT ACCURATELY REFLECT THE REQUIREMENTS OF THE PERMIT. WHERE ANY DISCREPANCIES OCCUR 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).

GENERAL CONSTRUCTION - 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.

PAVEMENT DESIGN



VDOT NOTES:

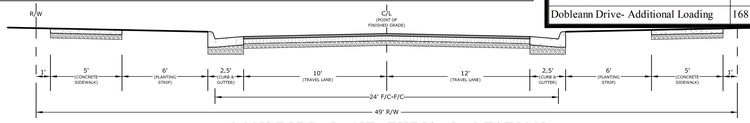
1. A TEMPORARY TRAFFIC CONTROL PLAN (TTC) IS REQUIRED TO OBTAIN A PERMIT TO WORK WITHIN VDOT RIGHT OF WAY. THE TTC SHALL BE PREPARED BY AN ADVANCED WORK ZONE CERTIFIED PERSON, CERTIFICATION CARD AND VERIFICATION NUMBER IS REQUIRED ON THE TTC SUBMITTAL. SEE VDOT'S WEBSITE FOR ADDITIONAL INFORMATION.
2. THE STANDARD DRAWINGS CONTAINED IN THE VDOT ROAD & BRIDGE STANDARDS ARE SIGNED AND SEALED ENGINEERING DRAWINGS THAT ARE COPYRIGHTED MATERIALS OF VDOT AND THE COMMONWEALTH OF VIRGINIA. VDOT'S POLICY IS TO OFFER THE STANDARD DRAWINGS IN A SECURE ELECTRONIC FORMAT AND EACH STANDARD IS AVAILABLE ON THEIR WEBSITE. THIS PLAN SPECIFIES THE USE OF THE ROAD & BRIDGE STANDARDS.

PAVEMENT DESIGN NOTES:

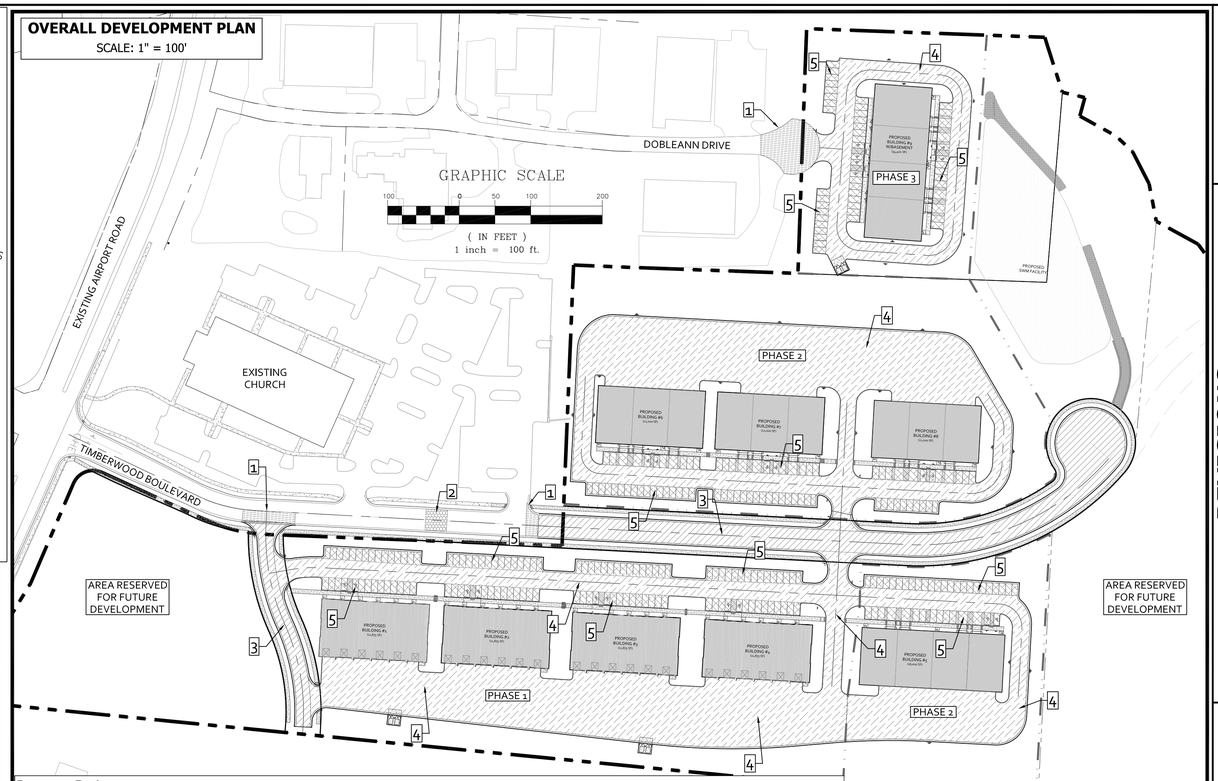
1. PAVEMENT DESIGN FOR NEW SUBDIVISION STREETS SHALL BE DEVELOPED USING THE PAVEMENT DESIGN GUIDE FOR SUBDIVISION AND SECONDARY ROADS IN VIRGINIA AND MUST BE BASED ON IN PLACE MATERIAL AT THE TIME OF CONSTRUCTION.
2. ACTUAL PAVEMENT DESIGNS SHOULD BE BASED ON CBR VALUES OF THE ACTUAL SUBGRADE MATERIAL. 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.



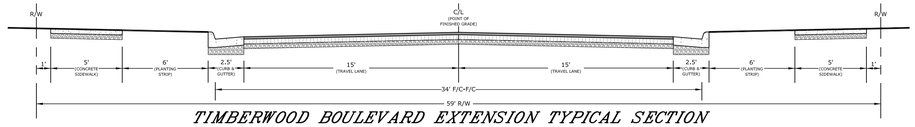
SONGBIRD LANE TYPICAL SECTION
49' PRIVATE ACCESS EASEMENT / TRAVELWAY
25 MPH DESIGN SPEED
(SCALE: 1"=5')



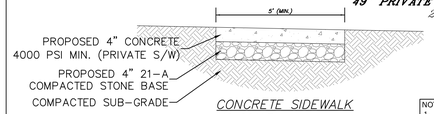
Pavement Design

RF= 1.0

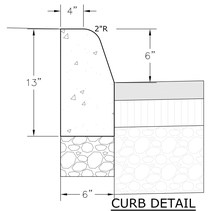
Location	ADT	HCV	Design ADT	CBR	SSV	Dr	Surface	h	a	Base	b	a	Sub-base	h	a	Dp
Timberwood Blvd.	485	5	535	5	5	12.25	SM-9.5	1.5	2.25	BM-25	3	2.15	21A	6	0.6	13.43
Dobleann Drive- Additional Loading	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



TIMBERWOOD BOULEVARD EXTENSION TYPICAL SECTION
59' PUBLIC ROAD R/W
25 MPH DESIGN SPEED
(SCALE: 1"=5')



CONCRETE SIDEWALK
NO SCALE

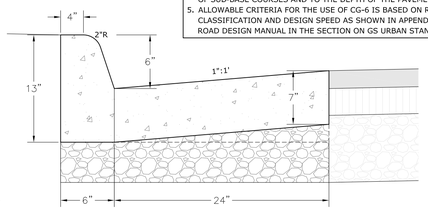


CURB DETAIL
PROPOSED VDOT STD. CG-2

NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4,000 PSI IF PRECAST.
3. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB-BASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
4. ALLOWABLE CRITERIA FOR THE USE OF CG-2 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

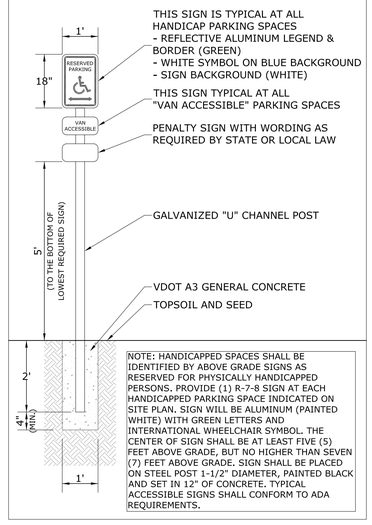
CURB & GUTTER DETAIL
PROPOSED VDOT STD. CG-6



NOTES:

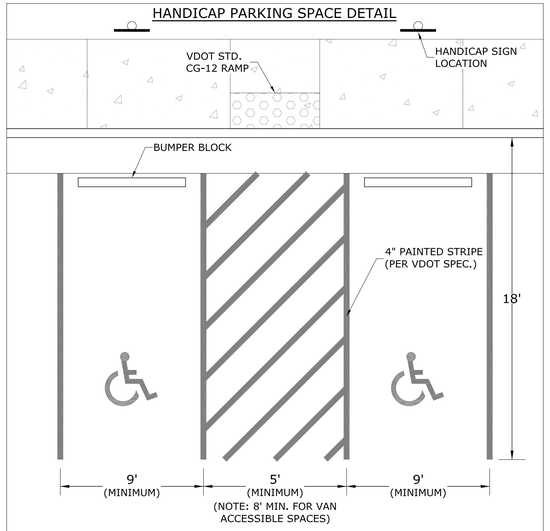
1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4,000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300' OR LESS (ALONG FACE OF CURB) SHALL BE PAID FOR AS RADIAL COMBINATION C&G.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB & GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUB-BASE COURSES AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-6 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE ROAD DESIGN MANUAL IN THE SECTION ON GS URBAN STANDARDS.

HANDICAP PARKING SIGN DETAIL



NOTE: HANDICAPPED SPACES SHALL BE IDENTIFIED BY ABOVE GRADE SIGNS AS RESERVED FOR PHYSICALLY HANDICAPPED PERSONS. PROVIDE (1) R-7-8 SIGN AT EACH HANDICAPPED PARKING SPACE INDICATED ON SITE PLAN. SIGN WILL BE ALUMINUM (PAINTED WHITE) WITH GREEN LETTERS AND INTERNATIONAL WHEELCHAIR SYMBOL. THE CENTER OF SIGN SHALL BE AT LEAST FIVE (5) FEET ABOVE GRADE, BUT NO HIGHER THAN SEVEN (7) FEET ABOVE GRADE. SIGN SHALL BE PLACED ON STEEL POST 1-1/2" DIAMETER, PAINTED BLACK AND SET IN 12" OF CONCRETE. TYPICAL ACCESSIBLE SIGNS SHALL CONFORM TO ADA REQUIREMENTS.

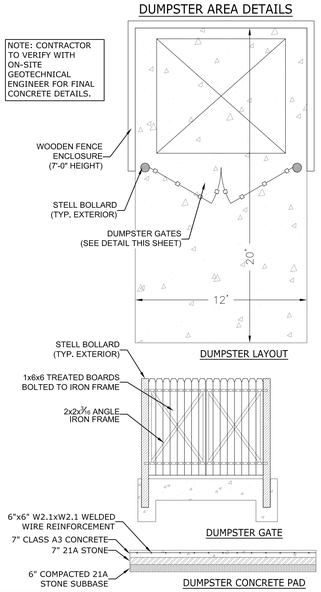
HANDICAP PARKING SPACE DETAIL



NOTE: ALL HANDICAPPED PARKING SPACES & ACCESSIBLE ROUTES SHALL BE COMPLIANT WITH ALL CURRENT ADA STANDARDS & LOCAL/STATE REQUIREMENTS.

DUMPSTER AREA DETAILS

NOTE: CONTRACTOR TO VERIFY WITH ON-SITE GEOTECHNICAL ENGINEER FOR FINAL CONCRETE DETAILS.



COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: NOTES & DETAILS

JOB NO. 102036
SCALE AS SHOWN
SHEET NO. 23

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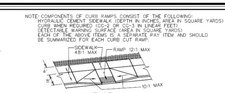
CG-12

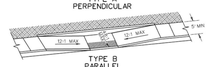
GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. ALL DETECTABLE WARNING SURFACE PRODUCTS SHALL MEET THE REQUIREMENTS OF SECTION 504 OF THE SPECIFICATIONS FOR CG-12 DETECTABLE WARNING SURFACE. ONLY PRODUCTS ON THE VDOT QUALIFIED PRODUCTS LIST (QPL) SHALL BE FROM THE MATERIALS APPROVED PRODUCT LIST NUMBER 121 (121 USED SHALL BE FROM THE MATERIALS APPROVED PRODUCT LIST NUMBER 121)
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS.
4. REQUIRED BARS ARE TO BE NO.3 X 8-FT-PLACED 6" CENTER TO CENTER ALONG CURB RAMP FLOOR, RAMP FLOOR MEDIANETTE OF RAMP FLOOR MINIMUM CONCRETE COVER IS 2".
5. ROADWAY CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
6. CURB RAMPS ARE REQUIRED FOR SIDEWALKS AND SHARED USE PATHS. THE WIDTH OF THE CURB RAMP SHALL MATCH SIDEWALK WIDTH WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.
7. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP / LANDING FLOOR.
8. CURB RAMPS WILL BE INSTALLED AND LOCATED WITHIN PEDESTRIAN CROSSWALKS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.CURB RAMPS SHOULD BE LOCATED BEHIND VEHICLE STOP LINES,LIGHT POLES,FIRE HYDRANTS,DROP INLETS,ETC.
9. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THEY ARE CENTERED OR PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THE RAMP OPENING IS IN CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
10. DETECTABLE WARNING SURFACE PANELS SHALL BE INSTALLED FLUSH WITH THE BACK OF CURB.
11. WHERE CURB RAMPS INTERSECT A RADIAL SECTION OF CURB AT ENTRANCES OR STREET CONNECTIONS, THE DETECTABLE WARNING SURFACE SHALL HAVE A 24" DEPTH ALONG THE CURB RAMP FLOOR. THE DETECTABLE WARNING MANUFACTURER TO MATCH THE BACK OF CURB.SEE CG-12-DND PAGES 204.05 AND 204.07 FOR METHODS OF INSTALLING DETECTABLE WARNINGS ON A RADIUS.

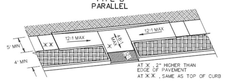
NOTE:COMPONENTS OF CURB RAMPS CONSIST OF THE FOLLOWING: HYDRAULIC CEMENT SIDEWALK DEPTH IN INCHES AREA IN SQUARE YARDS CURB RAMP LENGTH IN FEET AREA IN SQUARE YARDS DETECTABLE WARNING SURFACE AREA IN SQUARE YARDS EACH OF THE ABOVE ITEMS IS A SEPARATE PAY ITEM AND SHOULD BE SUMMARIZED FOR EACH CURB CUT RAMP.



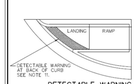
TYPE A
PERPENDICULAR



TYPE B
PARALLEL

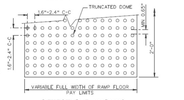


TYPE C
PARALLEL & PERPENDICULAR



DETECTABLE WARNING
INSTALLED ON A RADIUS

TRUNCATED DOME
DETAIL

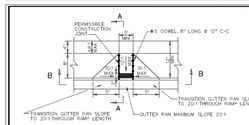


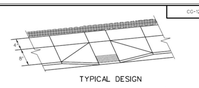
DETECTABLE WARNING
DETAIL

VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE (GENERAL NOTES) VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 5 204.01	REVISION DATE 04/19	105 502 504

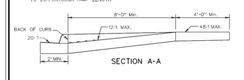
2016 ROAD & BRIDGE STANDARDS

CG-12

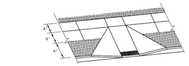




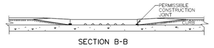
TYPICAL DESIGN



SECTION A-A



TYPE A
WITH BUFFER STRIP



SECTION B-B

NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE MINIMUM LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, SIDEWALK, LANDING TRANSITIONS REQUIRED AT TOP OF CURB RAMP. MINIMUM CURB RAMP LENGTH IS 7 FEET FOR NEW CONSTRUCTION.
3. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
4. DIAGONAL PLACEMENT IS NOT PERMITTED.

EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT

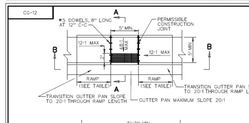
TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK

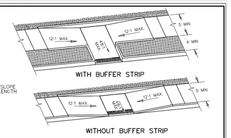
TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK (WITH BUFFER STRIP)

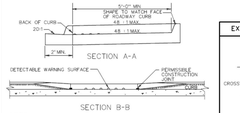
SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE TYPE A (PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
105 502 504		REVISION DATE 04/19 / SHEET 2 OF 5 204.02

2016 ROAD & BRIDGE STANDARDS

CG-12



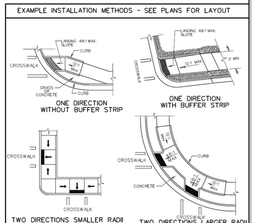




SECTION A-A

SECTION B-B

EXAMPLE INSTALLATION METHODS - SEE PLANS FOR LAYOUT



NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 5.
2. THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE BUFFER STRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS. THE ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE NOT NOTED.
3. THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN CAN BE USED WITH ADJOINING RAMPS WHEN THE RAMPS ARE LOCATED ON THE SAME CORNER AND THE RAMPS ARE OF DIMENSIONS THAT SHORT PERPENDICULAR BUS TO THE STREET CAN BE PROVIDED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.
4. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
5. DIAGONAL PLACEMENT IS NOT PERMITTED.

TYPE B PARALLEL APPLICATION

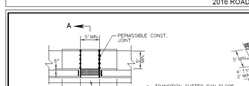
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET: 4" CURB	6" CURB
1	4	5
2	5	7
3	6	9
4	8	12
5	10	15

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET,REGARDLESS OF THE SLOPE.

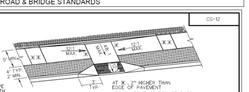
VDOT ROAD AND BRIDGE STANDARDS	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE TYPE B (PARALLEL) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 3 OF 5 204.03	REVISION DATE 04/19	105 502 504

2016 ROAD & BRIDGE STANDARDS

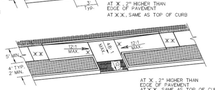
CG-12



TANGENT PLAN



SECTION A-A



EXAMPLE PLACEMENT AT INTERSECTION WITH BUFFER STRIP

NOTES:

1. FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE,SEE SHEET 1 OF 5.
2. THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE BUFFER STRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS. THE ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE NOT NOTED.
3. THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN CAN BE USED WITH ADJOINING RAMPS WHEN THE RAMPS ARE LOCATED ON THE SAME CORNER AND THE RAMPS ARE OF DIMENSIONS THAT SHORT PERPENDICULAR BUS TO THE STREET CAN BE PROVIDED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.
4. GUTTER PAN SHALL BE A MAXIMUM SLOPE OF 20:1 AT THE RAMP OPENING.
5. DIAGONAL PLACEMENT IS NOT PERMITTED.

TYPE C
PARALLEL & PERPENDICULAR APPLICATION

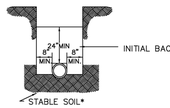
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET: 4" CURB	6" CURB
0	4	5
1	5	6
2	6	8
3	7	10
4	8	12
5	9	14
6	11	16
7	13	19
8	15	21

THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET,REGARDLESS OF THE SLOPE.

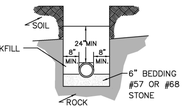
SPECIFICATION REFERENCE	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. CG-12 DETECTABLE WARNING SURFACE TYPE C (PARALLEL & PERPENDICULAR) APPLICATION VIRGINIA DEPARTMENT OF TRANSPORTATION	VDOT ROAD AND BRIDGE STANDARDS
105 502		REVISION DATE 04/19 / SHEET 4 OF 5 204.04

2016 ROAD & BRIDGE STANDARDS

GOOD FOUNDATION MATERIAL

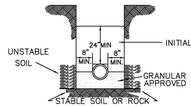


ROCKY FOUNDATION MATERIAL

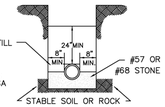


* SCRAPE THE BOTTOM OF THE TRENCH. REMOVE ALL STONES TO ENSURE THE PIPE DOESN'T REST ON ROCK AND THEN COMPACT THE SOIL OR PROVIDE A 4" BEDDING OF #57 OR #68 STONE.

FOUNDATION IN POOR SOIL



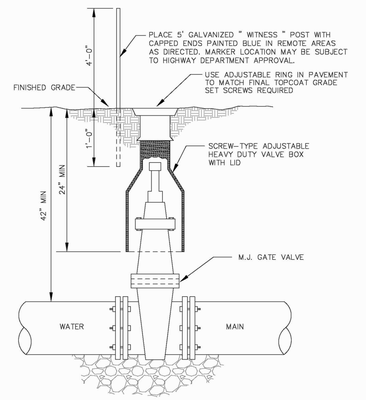
UNDER-CUT CONDITION



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.

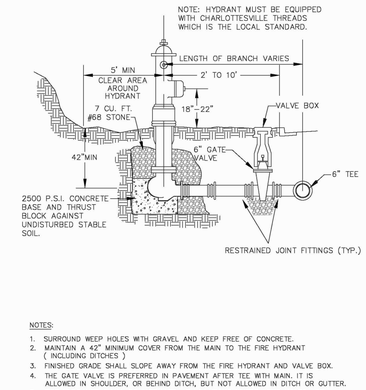
ALBEMARLE COUNTY SERVICE AUTHORITY	DUCTILE IRON WATER MAIN INSTALLATION AND BEDDING NOT TO SCALE	REV 8/6/2024 DETAIL W-1



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.

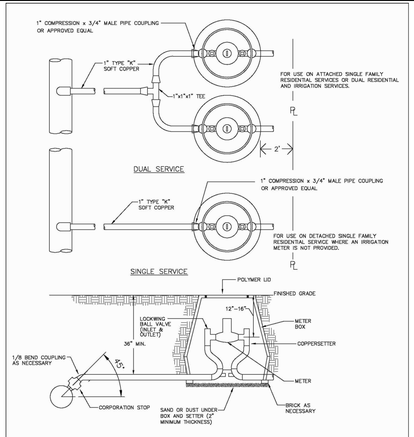
ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL GATE VALVE NOT TO SCALE	REV 8/6/2024 DETAIL W-2



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.

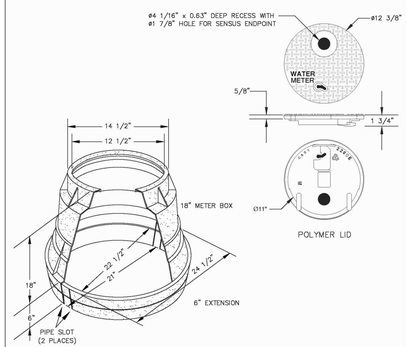
ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL FIRE HYDRANT ASSEMBLY DETAIL NOT TO SCALE	REV 8/6/2024 DETAIL W-3



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.

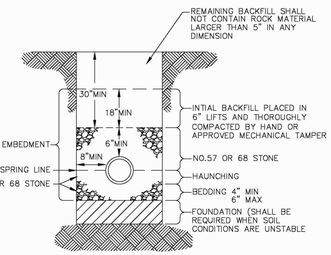
ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL SERVICE LATERAL INSTALLATION (3/4" AND 1" METERS) NOT TO SCALE	REV 8/6/2024 DETAIL W-4



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.

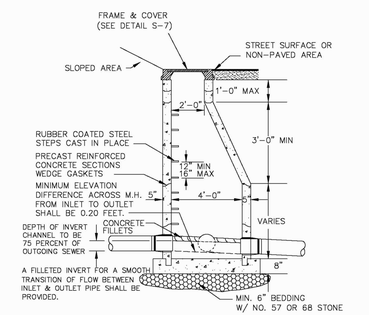
ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL METER BOXES (3/4" AND 1" METERS) NOT TO SCALE	REV 8/6/2024 DETAIL W-5



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.

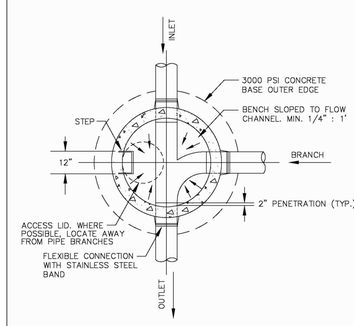
ALBEMARLE COUNTY SERVICE AUTHORITY	TYPICAL SEWER PIPE INSTALLATION IN TRENCH NOT TO SCALE	REV 8/6/2024 DETAIL S-1



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

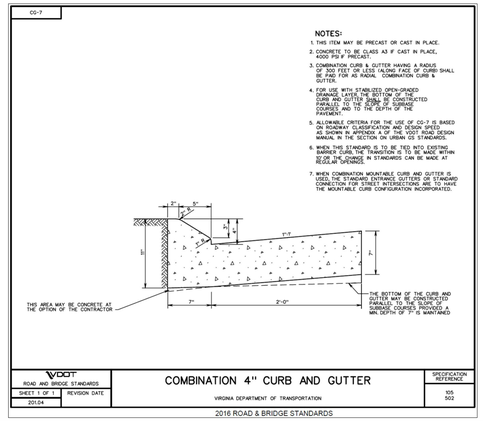


NOTES:

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

CG-7



NOTES:

1. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
2. CONCRETE TO BE CLASS A3 IF CAST IN PLACE, 4000 PSI IF PRECAST.
3. COMBINATION CURB & GUTTER HAVING A RADIUS OF 300 FEET OR LESS (ALONG FACE OF CURB) SHALL BE USED FOR AS RADIAL COMBINATION CURB & GUTTER.
4. FOR USE WITH STABILIZED OPEN-GRADED DRAINAGE LAYER THE BOTTOM OF THE CURB AND GUTTER SHALL BE CONSTRUCTED TO THE SAME DEPTH AS THE STONE COURSE, AND TO THE DEPTH OF THE PAVEMENT.
5. ALLOWABLE CRITERIA FOR THE USE OF CG-7 IS BASED ON ROADWAY CLASSIFICATION AND DESIGN SPEED AS SHOWN IN APPENDIX A OF THE VDOT ROAD DESIGN MANUAL IN THE SECTION ON URBAN GS STANDARDS.
6. WHEN THIS STANDARD IS TO BE TIED INTO EXISTING CURB AND GUTTER, THE TRANSITION OF THE CURB FACE FROM 30 OR THE CHANGE IN STANDARDS CAN BE MADE AT REGULAR OPENINGS.
7. WHERE COMBINATION MOUNTABLE CURB AND GUTTER IS USED, THE STANDARD ENTRANCE GUTTERS OR STANDARD CONNECTIONS FOR STREET INTERSECTIONS ARE TO HAVE THE MOUNTABLE CURB CONFIGURATION INCORPORATED.

VDOT ROAD AND BRIDGE STANDARDS	COMBINATION 4" CURB AND GUTTER VIRGINIA DEPARTMENT OF TRANSPORTATION	SPECIFICATION REFERENCE
SHEET 1 OF 1 201.04	REVISION DATE	105 502

2016 ROAD & BRIDGE STANDARDS

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 REQ

LANDSCAPING PLAN LEGEND:

TC	AR	UA
GT	BN	KT
LS	QW	AB
MV	CB	MG
IG	PL	PLO
TM	AG	IT
IC		

EXISTING CHURCH

EXISTING TIMBERWOOD BLVD. (VAR. WIDTH PUBLIC R/W)

EX TIMBERWOOD BOULEVARD (VAR. WIDTH PUBLIC R/W)

TIMB (58' PUBLIC R/W)

STREET TREES ALONG THIS SEGMENT OF AIRPORT RD AND TIMBERWOOD BLVD TO BE PROVIDED WITH FUTURE DEVELOPMENT SITE PLAN

PARCEL LIMITS, TYP.

EXISTING TIMBERWOOD BLVD (58' PUBLIC R/W) D.B. 4351 P. 705

MATCHLINE - SEE SHEET 25C

PROPOSED BUILDING #6 (12,000 SF)

PROPOSED BUILDING #1 (11,875 SF)

PROPOSED BUILDING #2 (11,875 SF)

PROPOSED BUILDING #3 (11,875 SF)

PARCEL LIMITS, TYP.

PROPOSED TREE LINE

TREE PROTECTIVE FENCING

LIMITS OF CLEARING

MATCHLINE - SEE SHEET 25B

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
11/24/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
11/24/25	INITIAL SUBMITTAL - FINAL SITE PLAN

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LANDSCAPE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 25A

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MATCHLINE - SEE SHEET 25C

PROPOSED BUILDING #7 (12,000 SF)

PROPOSED BUILDING #8 (12,000 SF)

PROPOSED BUILDING #4 (11,875 SF)

PROPOSED BUILDING #5 (16,000 SF)

MATCHLINE - SEE SHEET 25A

COUNTY DEFINED PRESERVED STEEP SLOPES, TYP.

EXISTING STREAM

LANDSCAPING PLAN LEGEND:

TC	AR	UA
GT	BN	KT
LS	QW	AB
MV	CB	MG
IG	PL	PLO
TM	AG	IT
IC		

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LANDSCAPE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 25B

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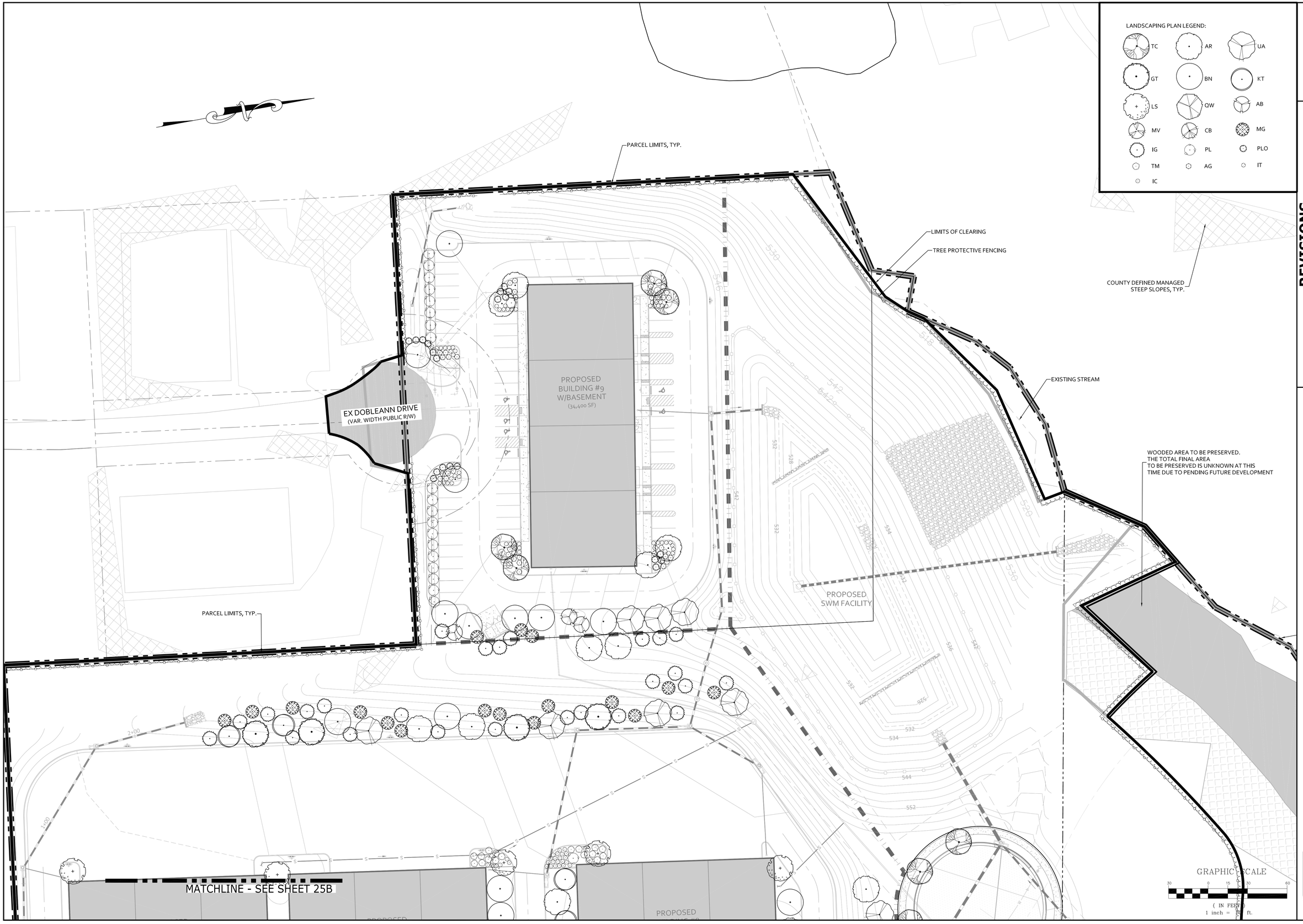

LANDSCAPING PLAN LEGEND:

TC	AR	UA
GT	BN	KT
LS	QW	AB
MV	CB	MG
IG	PL	PLO
TM	AG	IT
IC		

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

COLLINS ENGINEERING

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LANDSCAPE PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 25C

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LANDSCAPE TABULATION

STREETS

TIMBERWOOD BLVD:	1,172' TOTAL - 100' FOR ENTRANCES (1 @ 50' EACH) = 1,072'
REQUIRED STREET TREES:	1 LARGE SHADE TREE EVERY 50' PER SIDE
1,855 DIVIDED BY 50 =	37 LARGE SHADE TREES (TOTAL BOTH SIDES FOR LAST 783')
TOTAL TREES PROPOSED:	57 LARGE SHADE TREES

PARKING

REQUIRED LANDSCAPING:	5% OF TOTAL PARKING AND VEHICLE CIRCULATION AREA
PARKING AREA PHASE #1:	112,445 SQ. FT. @ 5% = 5,622 SQ. FT. REQUIRED
PARKING AREA PHASE #1 LANDSCAPING:	5,769 SQ. FT. PROVIDED
PARKING AREA PHASE #2:	122,636 SQ. FT. @ 5% = 6,132 SQ. FT. REQUIRED
PARKING AREA PHASE #2 LANDSCAPING:	6,829 SQ. FT. PROVIDED
PARKING AREA PHASE #3:	31,075 SQ. FT. @ 5% = 1,554 SQ. FT. REQUIRED
PARKING AREA PHASE #3 LANDSCAPING:	2,048 SQ. FT. PROVIDED
REQUIRED LANDSCAPING:	1 LARGE OR MEDIUM SHADE TREE PER 10 PARKING SPACES
TOTAL PROPOSED SPACES:	282 SPACES
REQUIRED PARKING AREA LANDSCAPING:	28 LARGE OR MEDIUM SHADE TREES
TOTAL PARKING AREA LANDSCAPING:	45 LARGE SHADE TREES

CANOPY

10% CANOPY REQUIREMENT FOR PROJECT	
TOTAL AREA (EXCLUDING FUTURE DEV AREAS):	781,946 SQ. FT.
10% CANOPY REQUIREMENT:	78,195 SQ. FT.
PROPOSED LANDSCAPE CANOPY:	78,197 SQ. FT.

PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SIZE	CANOPY (10 YR)	QUANTITY	TOTAL COVERAGE
TREES						
QW	QUERCUS X WAREI 'LONG'	REGAL PRINCE OAK	2" CAL	243	27	6561
AR	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	6-7' HT	397	27	10719
BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	2" CAL	397	23	9131
GT	GLEDISTA TRIACANTHOS VA. INERMIS 'SUNCOLE'	SUNBURST HONEYLOCUST	2" CAL	424	27	11448
CB	CARPINUS BETULUS 'FASTIGIATA'	EUROPEAN HORNBEAM	2" CAL	177	3	531
KT	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	2" CAL	222	29	6438
UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON ELM	2" CAL	397	16	6352
LS	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	SWEETGUM	2" CAL	249	34	8466
TC	TILIA CORDATA'GREENSPIRE'	GREENSPIRE LITTLE LEAF LINDEN	2" CAL	249	26	6474
ORNAMENTAL FLOWERING TREES						
AB	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	4-5' HT	130	6	780
MV	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	4-5' HT	79	5	395
EVERGREEN TREES						
IG	ILEX OPACA 'GREENLEAF'	GREEN LEAF AMERICAN HOLLY	4-5' HT	44	60	2640
MG	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM SOUTHERN MAGNOLIA	4-5' HT	54	43	2322
SHRUBS						
IC	ILEX CRENATA SOFT TOUCH	SOFT TOUCH HOLLY	3 GAL		131	
IT	ITEA VIRGINICA 'SPRICH'	LITTLE HENRY SWEETSPIRE	3 GAL		179	
AG	ABELIA GRANDIFLORA 'ROSE CREEK'	ROSE CREEK ABELIA	3 GAL	14	245	3430
PL	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	SKIP LAUREL	7 GAL	10	60	600
PLO	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN LAUREL	3 GAL	10	191	1910
TM	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	3 GAL		213	
				TOTAL:		**78197**

LANDSCAPING NOTES

APPLICABLE STANDARDS
AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1

AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE: STANDARDIZED PLANT NAMES

ALL PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS OTHERWISE NOTED. PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES AND SHALL BE HEALTHY, VIGOROUS AND EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE THE MINIMUM ACCEPTABLE SIZES. PLANTS SHALL BE MEASURED BEFORE PRUNING WITH BRANCHES IN NORMAL POSITION. ANY NECESSARY PRUNING SHALL BE DONE AT THE TIME OF PLANTING. REQUIREMENTS FOR MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALL AND BURLAPPING OF PLANTS IN THE PLANT LIST GENERALLY FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMEND BY THE AMERICAN STANDARD FOR NURSERY STOCK. PLANTS THAT MEET THE REQUIREMENTS SPECIFIED, BUT DO NOT HAVE THE NORMAL BALANCE OF HEIGHT AND SPREAD TYPICAL FOR THE RESPECTIVE PLANT, SHALL NOT BE ACCEPTED. ALL PLANTS SHALL BE FREE OF WEEDS AND OTHER OBJECTIONABLE VEGETATION.

PLANTS (GENERAL)
PLANTS SHALL BE NURSERY GROWN, HEALTHY, VIGOROUS, BUSHY, WELL-BALANCED, OF NORMAL HABIT OF GROWTH FOR THE SPECIES, AND SHALL BE FREE FROM DISEASE, INSECT EGGS AND LARVAE. THEY SHALL HAVE CROWN AND ROOT BALL SIZES THAT MEET OR EXCEED THE STANDARDS SET FORTH IN "AMERICAN ASSOCIATION OF NURSERYMEN, INC." THE SPECIFIED SIZES SHALL BE BEFORE PRUNING, AND PLANTS SHALL BE MEASURED WITH THEIR BRANCHES IN NORMAL POSITION. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY, EXCEPT UPON SPECIAL APPROVAL.

SHADE TREES SHALL BE HEALTHY, VIGOROUS, FULL-BRANCHED, WELL-SHAPED, AND SHALL MEET THE TRUNK DIAMETER, HEIGHT, AND SPREAD REQUIREMENTS OF THE PLANT LIST, AND MEET THE STANDARDS OF "THE AMERICAN ASSOCIATION OF NURSERYMEN." BALLS SHALL BE FIRM, NEAT, SLIGHTLY TAPERED AND WELL BURLAPPED. ANY TREE LOOSE IN THE BALL OR WITH BROKEN BALL A TIME OF PLANTING WILL BE REJECTED. BALLS SHALL BE SIZED IN ACCORDANCE WITH THE AAN STANDARDS.

TREE AND SHRUB PLANTING
PLANT TREES IN TREE-PITS GREATER IN DIAMETER THAN BALL AND AT A HEIGHT WHICH ASSURES PROPER DRAINAGE AND VIGOROUS GROWTH. FILL BOTTOM OF PIT (TO DEPTH OF ROOT BALL) WITH A MIXTURE OF SOIL. AFTER SETTLING THE TREE, THE PIT SHALL BE BACKFILLED WITH SOIL MIX, THEN CAREFULLY SETTLED BY WATERING TO PREVENT AIR POCKETS.

ALL PLANT BEDS PLUS AN AREA THREE FEET GREATER IN DIAMETER THAN THE BALL AROUND EACH TREE SHALL BE MULCHED WITH 3" OF CLEAN, HARDWOOD MULCH.

SHOULD THE CONTRACTOR ENCOUNTER SOIL CONDITIONS WHICH ARE INHOSPITABLE TO NORMAL PLANTING, IT IS HIS RESPONSIBILITY TO MODIFY THE SOIL SO THAT THE PLANTS WILL THRIVE. THESE MODIFICATIONS MAY INCLUDE PROVIDING DRAINAGE FOR TREES OR SHRUB BEDS AND PROVIDING ANY EXTRA SOIL AS MAY BE REQUIRED FOR PLANTING.

TREE PRESERVATION
1. CONTRACTOR TO USE EXTREME CARE AND CAUTION AS NOT TO DAMAGE ANY TREES SCHEDULED TO REMAIN OUTSIDE LIMITS OF CONSTRUCTION. PROPERTY LINE SERVES AS LIMITS OF CONSTRUCTION.
2. NO CONSTRUCTION EQUIPMENT OR STORAGE SHALL OCCUR WITHIN DRIPLINE OF EXISTING TREES.
3. CONTRACTOR TO MONITOR TREES FOR STRESS AND/OR DAMAGE AND ADVISE LANDSCAPE ARCHITECT IF ANY OCCUR.
4. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT 48-HOURS IN ADVANCEOF ANY CONSTRUCTION ACTIVITY NEEDED WITHIN ANY TREE PROTECTION MEASURE. ALL TREE PROTECTION MEASURES SHALL BE REPLACED IN ORIGINAL LOCATION ONCE WORK HAS BEEN COMPLETED. NO WORK SHALL BE DONE WITHIN DRIPLINE OF EXISTING TREES UNLESS APPROVED BY LANDSCAPE ARCHITECT PRIOR TO WORK.
5. ALL WORK TO BE PERFORMED BY THE CONTRACTOR WITHIN THE DRIPLINE OF ANY EXISTING TREE OR TREE PROTECTION AREA SHALL BE DONE IN A MANNER SENSITIVE TO ENSURING NO DAMAGE WILL BE DONE TO THE EXISTING TREES. THE PREFERRED METHOD FOR GRADING SMALL AREAS WITHIN THE DRIPLINE SHALL BE DONE BY HAND. LARGER AREAS TO BE GRADED MAY BE DONE WITH A SMALL BOBCAT/TRACT-HOE. CONTRACTOR TO DISCUSS METHODS OF GRADING WORK WITH LANDSCAPE ARCHITECT PRIOR TO COMMENCING ANY SUCH WORK WITHIN DESIGNATED TREE PROTECTION AREAS OR WITHIN EXISTING DRIPLINES.

PRE-CONSTRUCTION
1. CONTRACTOR IS RESPONSIBLE FOR CONTACTING "MISS UTILITY" AT 1.800.552.7001 FOR LOCATION OF ALL UTILITY LINES.TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.
2. VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING, PLANT LIST TOTALS ARE FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO BIDDING.
3. PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON PLANS. ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT OBTAINABLE, SUBMIT
4. PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL. PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.
5. SOIL TESTS SHALL BE PERFORMED TO DETERMINE SOIL CHARACTER AND QUALITY. NECESSARY SOIL AMENDMENTS SHALL BE PERFORMED PER TEST RESULTS TO ENSURE PLANT HEALTH.

CONSTRUCTION/INSTALLATION
1. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK"
2. LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
3. INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
4. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE.

INSPECTIONS/GUARANTEE
1. UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT.
2. ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLECT BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
3. REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.

LANDSCAPING NOTES

ALL PLANTINGS SHALL BE LOCATED A MINIMUM OF 3 FEET FROM THE BACK OF CURB OR PEDESTRIAN PATH. CARE SHOULD BE TAKEN TO ENSURE THAT LARGER PLANTING STRIPS DO NOT PUSH PEDESTRIAN CROSSING AREAS BACK FROM THE INTERSECTIONS BY REQUIRING A LARGER CURB RADIUS. TREES, VEGETATION, AND OTHER OBJECTS SHALL BE SPACED SO THAT THE SITE DISTANCE TRIANGLE FOR INTERSECTION SITE DISTANCE OR STOPPING SIGHT DISTANCE IS FREE OF ANY OBSTRUCTIONS THAT MAY BLOCK THE DRIVER'S VIEW OF POTENTIAL CONFLICTING VEHICLES OR PEDESTRIANS. TO MAINTAIN SIGHT LINES, TREES, VEGETATION AND OTHER OBJECTS HALL BE RESTRICTED FROM CORNERS FOR DISTANCES OF 30 FEET ON ALL SIDES MEASURE FROM THE END OF CURB RETURN RADII PER B (1) -44 RDM.

CARE SHOULD BE TAKEN TO ENSURE TREES HAVE SPACE FOR ADEQUATE ROOT DEVELOPMENT AND DO NOT DAMAGE CURB OR SIDEWALK UPON REACHING ADULT STAGE OF ITS LIFE.

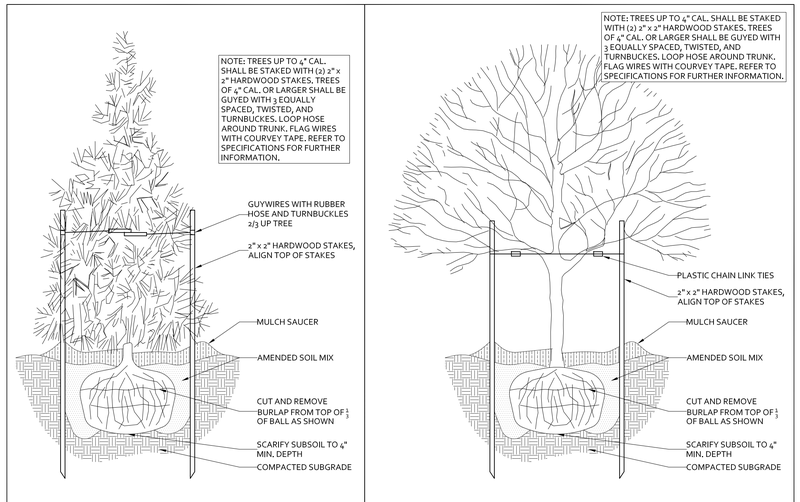
LANDSCAPING PLANTS AND TREES ADJACENT TO THE SIGHT DISTANCE TRIANGLE WILL NEED TO BE MAINTAINED IN AREA BETWEEN 2 AND 7 FEET ABOVE GROUND AS A CLEAR ZONE TO PRESERVE SIGHT LINES AND ACCOMMODATE PEDESTRIANS. THE HOA WILL BE RESPONSIBLE FOR THE MAINTENANCE OF SIGHT LINES.

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.

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

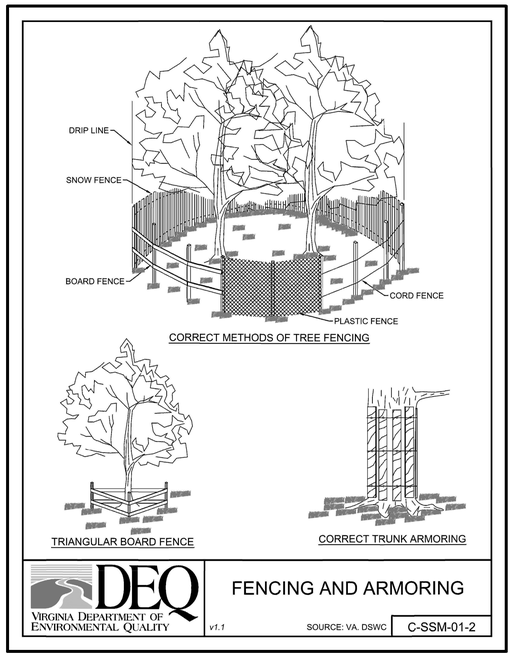
IF STREET TREES ARE PLANTED WITHIN THE PUBLIC STREET RIGHT-OF-WAY, THE TREES SHALL BE MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.

ALL SITE PLANTINGS OF TREES AND SHRUBS SHALL BE ALLOWED TO REACH, AND BE MAINTAINED AT, MATURE HEIGHT; THE TOPPING OF TREES IS PROHIBITED. SHRUBS AND TRESS SHALL BE PRUNED MINIMALLY AND ONLY TO SUPPORT THE OVERALL HEALTH OF THE PLANT.



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

TREE PLANTING & STAKING DETAIL
NOT TO SCALE



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.

OWNER SIGNATURE 11/18/2025 **(DATE)**

CONTRACT PURCHASER SIGNATURE **(DATE)**

5/1/06 Page 1 of 1

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
11/24/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
11/24/25	INITIAL SUBMITTAL - FINAL SITE PLAN

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LANDSCAPING NOTES & CALCULATIONS

JOB NO. 102036

SCALE AS SHOWN

SHEET NO. 26

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Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	66	GBM-A07-840-T4M	Single	GARDCO GEOFORM GBM	WM	1.000	3614	23	12
	23	OPF-S-A01-840-T4M	Single	GARDCO OPTIFORM-S T4M	PT-1	1.000	6626	41.88	20
	2	OPF-S-A01-840-T4M-HIS	Single	GARDCO OPTIFORM-S T4M-HIS	PT-2	1.000	5155	41.88	20

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
All Points	Illuminance	Fc	0.56	3.8	0.0	N.A.	N.A.
Typical Parking	Illuminance	Fc	1.87	3.0	1.0	1.87	3.00

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LIGHTING PLAN

JOB NO. 102036
SCALE 1"=30'
SHEET NO. 27A

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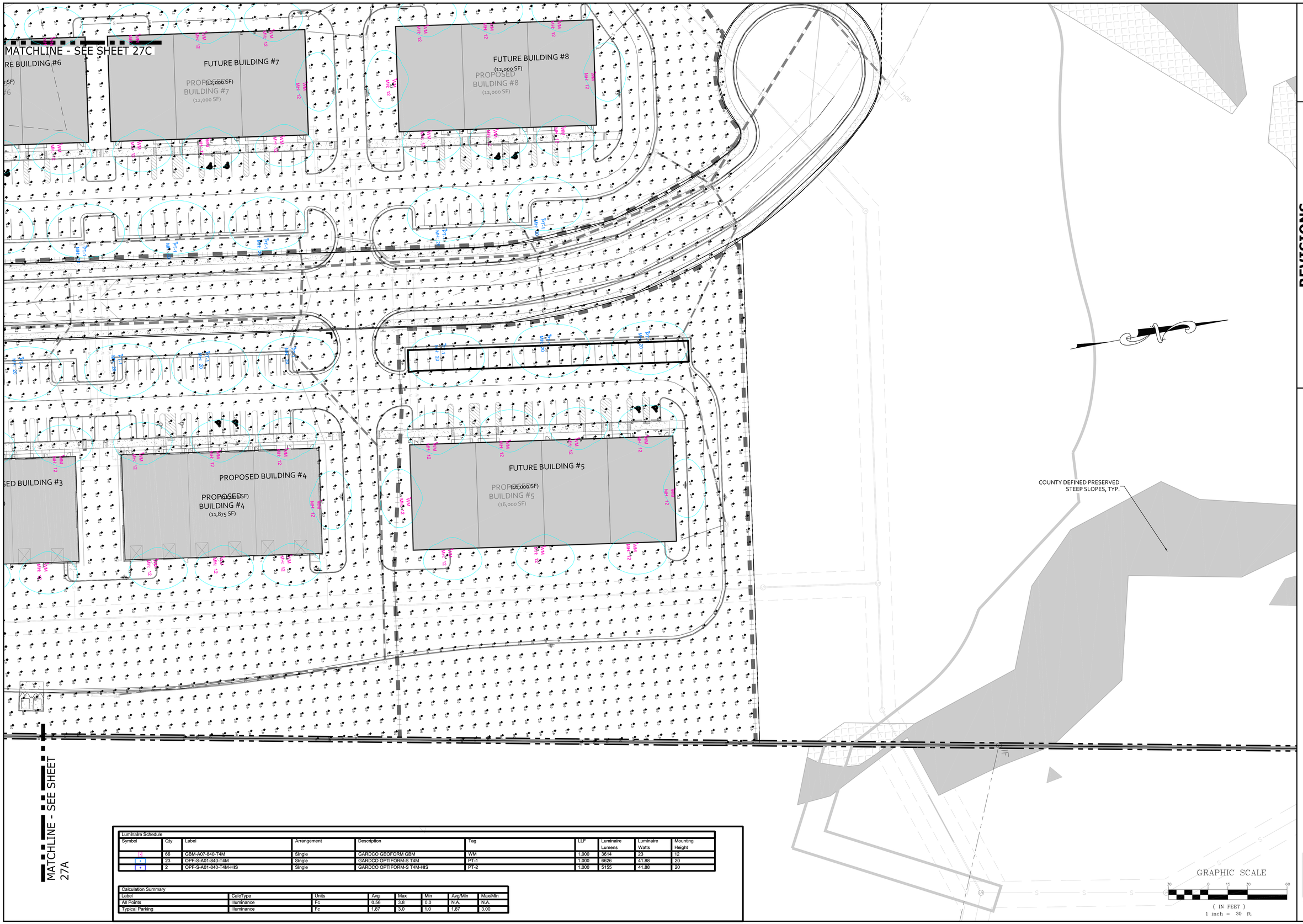

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	66	GBM-A07-840-T4M	Single	GARDCO GEOFORM GBM	WM	1.000	3814	23	12
	23	OPF-S-A01-840-T4M	Single	GARDCO OPTIFORM-S T4M	PT-1	1.000	6826	41.88	20
	2	OPF-S-A01-840-T4M-HIS	Single	GARDCO OPTIFORM-S T4M-HIS	PT-2	1.000	5155	41.88	20

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
All Points	Illuminance	Fc	0.56	3.8	0.0	N.A.	N.A.
Typical Parking	Illuminance	Fc	1.87	3.0	1.0	1.87	3.00

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LIGHTING PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 27B

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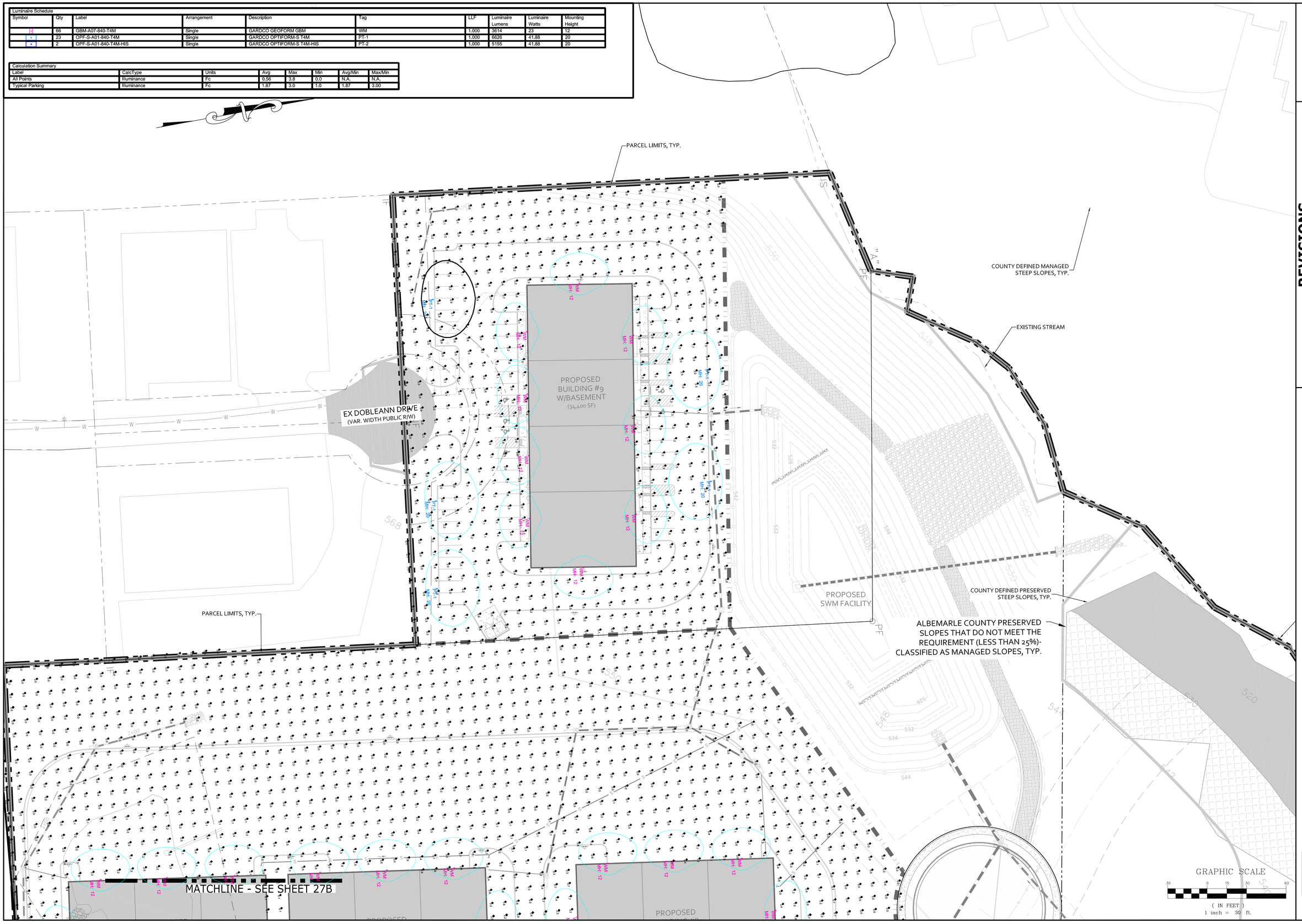
Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	66	GBM-A07-840-T4M	Single	GARDCO GEOFORM GBM	WM	1.000	3614	23	12
	23	OPF-S-A01-840-T4M	Single	GARDCO OPTIFORM-S T4M	PT-1	1.000	6626	41.88	20
	2	OPF-S-A01-840-T4M-HIS	Single	GARDCO OPTIFORM-S T4M-HIS	PT-2	1.000	5155	41.88	20

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
All Points	Illuminance	Fc	0.56	3.8	0.0	N.A.	N.A.
Typical Parking	Illuminance	Fc	1.87	3.0	1.0	1.87	3.00



COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
12/1/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
12/1/25	INITIAL SUBMITTAL

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LIGHTING PLAN

JOB NO. 102036

SCALE 1"=30'

SHEET NO. 27C

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Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Mounting Height
	66	GBM-A07-840-T4M	Single	GARDCO GEOFORM GBM	WM	1.000	3614	23	12
	23	OPF-S-A01-840-T4M	Single	GARDCO OPTIFORM-S T4M	PT-1	1.000	6626	41.88	20
	2	OPF-S-A01-840-T4M-HIS	Single	GARDCO OPTIFORM-S T4M-HIS	PT-2	1.000	5155	41.88	20

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
All Points	Illuminance	Fc	0.56	3.8	0.0	N.A.	N.A.
Typical Parking	Illuminance	Fc	1.87	3.0	1.0	1.87	3.00

NOTES:
ALL FIXTURES CALCULATED @ 4000K
ISOLINES SHOWN @ 1FC FOR REFERENCE ONLY
MOUNTING HEIGHTS SHOWN PER FIXTURE LOCATION
ALL FIXTURES ARE DARK SKY COMPLIANT - SEE SPECIFICATION SHEETS

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 ASSOCIATES. 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 TOLINE VOLTAGE, TEMPERATURE, ATMOSPHERIC/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 THE RESPONSIBILITY OF OLD DOMINION LIGHTING ASSOCIATES, AND SHALL BE THE RESPONSIBILITY OF THE ARCHITECT, OWNER OR OWNERS RESPRESENTATIVE, AS APPLICABLE.

NO ALTERATIONS OR MODIFICATIONS SHALL BE MADE TO THIS PLAN WITHOUT THE PERMISSION OF OLD DOMINION LIGHTING ASSOCIATES. THE PHOTMETRIC DATA IS SPECIFIC TO THE LISTED MANUFACTURERS AND RESPECTIVE CATALOG NUMBERS AS OUTLINED 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 UNDER LABORATORY CONDITIONS AND SUPPLIED PER MANUFACTURER.

GARDCO — OptiForm, OPF-S Small

Site and Area

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. OptiForm 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.

Project: HTC OFFICE
Location:
Cat.No:
Type: PT-1
Lamps: Qty:
Notes:

20' POLE

Ordering guide — example: OPF-S-A01-840-T4M-AR1-120-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)			Color Temperature	Distribution			Mounting		Voltage
OPF-S OptiForm Small Area	Site and Area	Precision Plus® (T2M, T3M, T4M, T5M only)		827° 80CRI 2700K	AFR Autofront row	LCL LEED corner optic left	AR1[7] Arm mount (standard)			120 120V
				830 80CRI 3000K	T2M Type 2 medium	LCR LEED corner optic right				208 208V
				840 80CRI 4000K	T3M Type 3 medium	BLC Back light control	MAR[7] Mast arm			240 240V
	A01 7,000 lumens	P01 2,500 lumens		740 70CRI 4000K	T4M Type 4 medium	2RL Type 2 rotated left 90°	WAL Wall mount			277 277V
	A02 9,000 lumens	P02 4,000 lumens		730 70CRI 3000K	T4V Type 4 wide	2RR Type 2 rotated right 270°	MOD[8] Mounting ordered separately			347 347V
	A03 11,000 lumens	P03 6,500 lumens		740 70CRI 4000K	T5N Type 5 narrow	3RL Type 3 rotated left 90°				480 480V
	A04 15,000 lumens	P04 9,000 lumens		750 70CRI 5000K	T5W Type 5 wide	3RR Type 3 rotated right 270°				UNV 120-277V
	A05 17,000 lumens	P05 11,500 lumens				4RL Type 4 rotated left 90°				HVU[9] 347-480V
	A06 19,000 lumens	P06 14,000 lumens				4RR Type 4 rotated right 270°				
	A07 20,000 lumens	P07 18,500 lumens								
		P08 19,000 lumens								
		P09 22,000 lumens								

Dimming Controls	Sensing	Options (electrical, mechanical, etc)		Emergency	Finish
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	EM[6,9,10] Emergency Battery Pack (0-40 °C)		Standard textured finish
none 0-10V dimming driver (includes SR drive and SR receptacle)		SP2 Surge protector 20kV/10kA (option)			BK Black
DLEA[1,2] Dimming leads externally accessible (controls by others)		FS1[1] Single fuse (120, 277, or 347VAC)		Available with precision plus optics P01-P03 only	WH White
FAWS[3,4,5] Field adjustable wattage selector		FS2[1] Double fuse (208, 240, or 480V)			BZ Bronze
BL50[4,7] Bi-level with motion sensor	L2 PIR sensor, #2 lens (Required if BL50 is selected)	PCB[1,10] Photocontrol button connected to 0-10V driver			DG Dark Gray
	L3 PIR sensor, #3 lens (Required if BL50 is selected)	TR5 NEMA Twist-lock 3-pin receptacle connected to 0-10V driver			MG Medium Gray
		TR7[10] 7-pin twist lock receptacle connected to D4i compliant driver			SPECIFY
The following options include SR/DALI Driver	WAP sensor options	TLP[9,10] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin photocell			
WAP[4,6,9] Wireless Interact (includes SR drive and SR receptacle)	LB Low (7-16' mounting height) sensor, black color housing, wireless Interact, integral	EHS Housing machined to accept external house side shield for field install. Must be combined with OPF-S-SHS-1 accessory.			Customer specified
SRDR[4,6,9] SR driver connected to Zhaga socket (D4i)	LW Low (7-16' mounting height) sensor, white color housing	BAC[1,9] Meets the requirements of the Buy American Act of 1933 (BAA)			OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HS' High (13'-40' mounting height) sensor, black color housing				SC Special color (must supply color chip, requires factory quote)
CBS0[4,9] Security 50% dimming, 7 hours	HW High (13'-40' mounting height) sensor, white color housing				
CMS0[4,9] Median 50% dimming, 8 hours					
CBS3[4,9] Security 30% dimming, 7 hours					
CMS3[4,9] 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 6" Long tenon.
4. Must be ordered with mounting accessory. Refer to mounting 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).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB.
10. Not available with TR7, TLP.
11. Must specify input voltage.
12. Not available in HVU [347-480V].
13. Not available with lumen packages P01, P02 in UNV [120-277] and with lumen packages A01-A03, P01-P05 in HVU [347-480].
14. Not available for lumen packages P04-P09.
15. Not available with Dynadimmer, SRDR, FAWS, FS1, FS2, DLEA, BL50 (physical restriction).
16. Precision Plus Optics (P01-P09) available only with T2M, T3M, T4M, and T5M optical distributions and are non-rotatable.
17. OPF-RMB accessory recommended for retrofit applications.
18. 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. The BAC designation hereunder does not address (1) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (2) 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.

interact

OPF-S-OptiForm-Small-en 04/25 page 1 of 9

GARDCO — OptiForm, OPF-S Small

Site and Area

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. OptiForm 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.

Project: HTC OFFICE
Location:
Cat.No:
Type: PT-2
Lamps: Qty:
Notes:

20' POLE

Ordering guide — example: OPF-S-A01-840-T4M-AR1-120-BL50-L3-BZ

Luminaire	Configuration (nom. lumens)			Color Temperature	Distribution			Mounting		Voltage
OPF-S OptiForm Small Area	Site and Area	Precision Plus® (T2M, T3M, T4M, T5M only)		827° 80CRI 2700K	AFR Autofront row	LCL LEED corner optic left	AR1[7] Arm mount (standard)			120 120V
				830 80CRI 3000K	T2M Type 2 medium	LCR LEED corner optic right				208 208V
				840 80CRI 4000K	T3M Type 3 medium	BLC Back light control	MAR[7] Mast arm			240 240V
	A01 7,000 lumens	P01 2,500 lumens		740 70CRI 4000K	T4M Type 4 medium	2RL Type 2 rotated left 90°	WAL Wall mount			277 277V
	A02 9,000 lumens	P02 4,000 lumens		730 70CRI 3000K	T4V Type 4 wide	2RR Type 2 rotated right 270°	MOD[8] Mounting ordered separately			347 347V
	A03 11,000 lumens	P03 6,500 lumens		740 70CRI 4000K	T5N Type 5 narrow	3RL Type 3 rotated left 90°				480 480V
	A04 15,000 lumens	P04 9,000 lumens		750 70CRI 5000K	T5W Type 5 wide	3RR Type 3 rotated right 270°				UNV 120-277V
	A05 17,000 lumens	P05 11,500 lumens				4RL Type 4 rotated left 90°				HVU[9] 347-480V
	A06 19,000 lumens	P06 14,000 lumens				4RR Type 4 rotated right 270°				
	A07 20,000 lumens	P07 18,500 lumens								
		P08 19,000 lumens								
		P09 22,000 lumens								

SEE HIS ON PG 2

Dimming Controls	Sensing	Options (electrical, mechanical, etc)		Emergency	Finish
The following options include 0-10V Driver		None Surge protector 10kV/10kA standard	EM[6,9,10] Emergency Battery Pack (0-40 °C)		Standard textured finish
none 0-10V dimming driver (includes SR drive and SR receptacle)		SP2 Surge protector 20kV/10kA (option)			BK Black
DLEA[1,2] Dimming leads externally accessible (controls by others)		FS1[1] Single fuse (120, 277, or 347VAC)		Available with precision plus optics P01-P03 only	WH White
FAWS[3,4,5] Field adjustable wattage selector		FS2[1] Double fuse (208, 240, or 480V)			BZ Bronze
BL50[4,7] Bi-level with motion sensor	L2 PIR sensor, #2 lens (Required if BL50 is selected)	PCB[1,10] Photocontrol button connected to 0-10V driver			DG Dark Gray
	L3 PIR sensor, #3 lens (Required if BL50 is selected)	TR5 NEMA Twist-lock 3-pin receptacle connected to 0-10V driver			MG Medium Gray
		TR7[10] 7-pin twist lock receptacle connected to D4i compliant driver			SPECIFY
The following options include SR/DALI Driver	WAP sensor options	TLP[9,10] 7-pin twist lock receptacle connected to D4i compliant driver w/ 3-pin photocell			
WAP[4,6,9] Wireless Interact (includes SR drive and SR receptacle)	LB Low (7-16' mounting height) sensor, black color housing, wireless Interact, integral	EHS Housing machined to accept external house side shield for field install. Must be combined with OPF-S-SHS-1 accessory.			Customer specified
SRDR[4,6,9] SR driver connected to Zhaga socket (D4i)	LW Low (7-16' mounting height) sensor, white color housing	BAC[1,9] Meets the requirements of the Buy American Act of 1933 (BAA)			OC Special optional color or RAL, consult factory
DynaDimmer: Automatic Profile Dimming	HS' High (13'-40' mounting height) sensor, black color housing				SC Special color (must supply color chip, requires factory quote)
CBS0[4,9] Security 50% dimming, 7 hours	HW High (13'-40' mounting height) sensor, white color housing				
CMS0[4,9] Median 50% dimming, 8 hours					
CBS3[4,9] Security 30% dimming, 7 hours					
CMS3[4,9] 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 6" Long tenon.
4. Must be ordered with mounting accessory. Refer to mounting 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).
8. Not available with PCB, TR5.
9. Must be specified with a motion sensor LW, LB.
10. Not available with TR7, TLP.
11. Must specify input voltage.
12. Not available in HVU [347-480V].
13. Not available with lumen packages P01, P02 in UNV [120-277] and with lumen packages A01-A03, P01-P05 in HVU [347-480].
14. Not available for lumen packages P04-P09.
15. Not available with Dynadimmer, SRDR, FAWS, FS1, FS2, DLEA, BL50 (physical restriction).
16. Precision Plus Optics (P01-P09) available only with T2M, T3M, T4M, and T5M optical distributions and are non-rotatable.
17. OPF-RMB accessory recommended for retrofit applications.
18. 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. The BAC designation hereunder does not address (1) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (2) 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.

interact

OPF-S-OptiForm-Small-en 04/25 page 1 of 9

GARDCO — Poles & Brackets, Site and Area Poles, Straight Square Steel

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.

Project: HTC OFFICE
Location:
Cat.No:
Type: PT-1/PT-2 POLE
Lumens: Qty:
Notes:

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

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

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 only one set will be shipped with the Legacy SSS design. Use the L/SSS family code whenever these options are specified.
5. Tenon size is for use with a round pole. Add "-S" to tenon option in fin. (ex. 11, 13) or to the trim as a decimal (ex. 13.33 = 13" x 1/3) or as "SWT-SR" 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. The BAC designation hereunder does not address (1) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (2) 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 Sigify to confirm whether specific accessories are BAA-compliant.

Accessories [10]

Service	Pole Size	12NC	Description (Diameter x Length x Hook)	AB Template Only
			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	(Template included w/ AB set)
	5" Poles (SS)	912401613107	AB 1x33x3-G DEC w/ 11 BC ABT	(Template included w/ AB set)
	5" Poles (L/SSS)	912400207384	AB 3/4x17x3 (SET OF 4 & HW)	912401482125 - ABT SSS5 ABT-DS330-5 w/ 11" BC
	6" Poles	912401597384	AB 1x33x3-G DEC w/ 12 BC ABT	(Template included w/ AB set)
For Pre-Ship service (order 1 per pole)	4" Poles	912401596529	AB 3/4x24x3-G DEC (SET OF 4 & HW)	912401482124 - ABT SSS4 ABT-DS330-4 w/ 8.5" BC
	5" Poles (SS)	912401596530	AB 1x33x3-G DEC (SET OF 4 & HW)	912401482125 - ABT SSS5 ABT-DS330-5 w/ 11" BC
	5" Poles (L/SSS)	912401596528	AB 3/4x17x3-G DEC (SET OF 4 & HW)	912401482125 - ABT SSS5 ABT-DS330-5 w/ 11" BC
	6" Poles	912401596530	AB 1x33x3-G DEC (SET OF 4 & HW)	912401482126 - ABT SSS6 ABT-DS330-6 w/ 12" BC

Part No.	Description
RLAR-1A-SQ4+ -{finish}	Cast aluminum mounting arm, 15" long with D76 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-SSS-spec-sheet-en 07/25 page 1 of 5

GARDCO — Wall Mount, GeoForm, GBM LED wall sconce

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.

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

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 GeoForm Block Medium	Precision Plus optics						120 120V
	A06 2,500 Lumens	A10' 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' 8,500 Lumens	840 80CRI 4000K	T3M Type 3 down only			240 240V
	A08 5,000 Lumens	A12' 9,500 Lumens	740 70CRI 4000K	T4M Type 4 down only			277 277V
	A09 6,000 Lumens	A13' 11,000 Lumens	750 70CRI 5000K				347 347V
		A14' 12,500 Lumens					480 480V
	Light Effects optics (up OR down)						UNV 120-277V (50/60Hz)
	B07' 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' 1,000 lumens		840 80CRI 4000K	BPT Spot			
	B03' 2,200 lumens			PEN Pencil Beam			
	Light Effects optics (up AND down)						
	B04' 1,400 lumens		830 80CRI 3000K	WAW Wall Wash	U Uplight configuration to match downlight configuration	WAW Wall Wash	
	B05' 2,000 lumens		840 80CRI 4000K	BPT Spot		BPT Spot	
	B06' 4,400 lumens			PEN Pencil Beam		PEN Pencil Beam	

Dimming Controls[1]	Electrical	Options	Finish
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[3] Emergency Battery Pack, Cold rated (-20°C to 40°C), 120 or 277V only.	BK Black
DUCO[2] Dual Circuit Control (Only available with AD6-AD9)	FS1 Single Fuse (120, 277, or 347VAC)		WH White
FAWS[4] Field Adjustable Wattage Selector	FS2 Double Fuse (208V, 240V, or 480V)	BAC[7] Meets the requirements of the Buy American Act of 1933 (BAA)	BZ Bronze
MWS0[5,6,8] 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 A06-A13	PCB[1] Photocontrol Button (120-277V only)		MG Medium Gray
CBS0[5,6,8] Safety 50% dimming, 7 hours			**Customer specified**
CMS0[5,6,8] Median 50% dimming, 8 hours			RAL Specify optional color or RAL (ex: OC-LDP or OC-RAL7024)
CBS3[5,6,8] Safety 30% dimming, 7 hours			OC Custom Color (must supply color chip, requires factory quote)
CMS3[5,6,8] Median 30% dimming, 8 hours			

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 - B05.
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 (1) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (2) 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 Sigify to confirm whether specific accessories are BAA-compliant.

Luminaire Accessories (order separately)[9]

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

GBM_GeoForm_Block_Medium 04/24 page 1 of 6

COMMONWEALTH OF VIRGINIA
SCOTT R. COLLINS
No. 35791
11/24/25
PROFESSIONAL ENGINEER

REVISIONS

DATE	REVISION DESCRIPTION
11/24/25	INITIAL SUBMITTAL - FINAL SITE PLAN

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

PROJECT: AIRPORT INDUSTRIAL DEVELOPMENT COMPLEX - FINAL SITE PLAN

SHEET: LIGHTING NOTES & CUT SHEETS

JOB NO. 102036
SCALE N/A
SHEET NO. 28

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