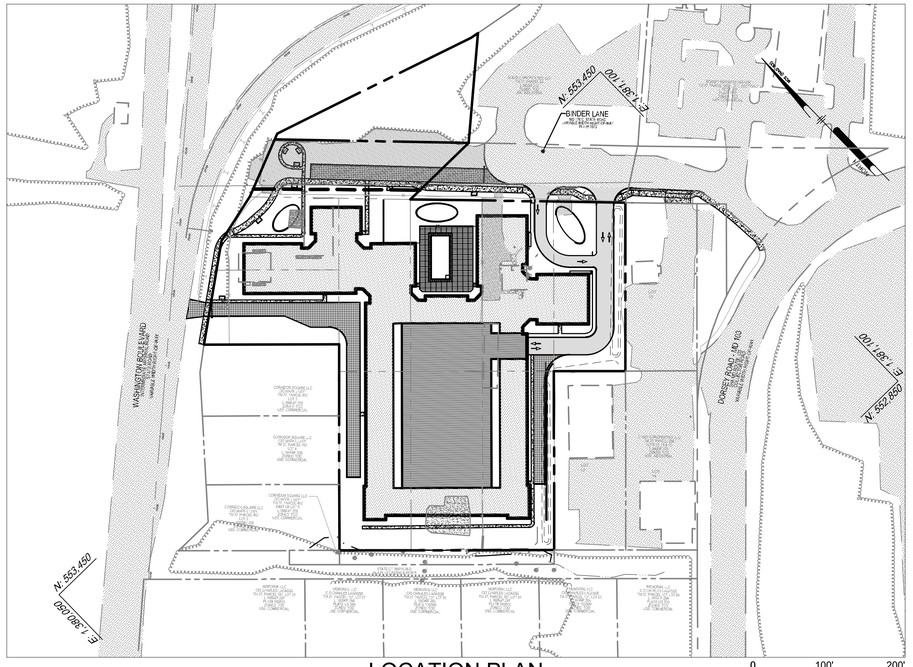

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SITE DEVELOPMENT PLAN

O'DONNELL PROPERTIES

6720 BINDER LANE
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

6. THE EXISTING TOPOGRAPHY IS PROVIDED BY VOGEL ENGINEERING+TIMMONS GROUP DATED FEBRUARY 2021.

7. THE BOUNDARY SURVEY IS PROVIDED BY VOGEL ENGINEERING+TIMMONS GROUP DATED FEBRUARY 2021.

8. THE COORDINATES SHOWN HEREON ARE IN MARYLAND COORDINATE SYSTEM NAD 83/91 BASED ON THE HOWARD COUNTY GEODETIC CONTROL. HOWARD COUNTY MONUMENT NOS. 42CA AND 0016 WERE USED FOR THIS PROJECT.

9. WATER IS PUBLIC, CONTRACT 44-4073.

10. SEWER IS PUBLIC, CONTRACT 24-1969.

11. EXISTING UTILITIES SHOWN ON THIS PLAN SET WERE DEVELOPED USING EXISTING RECORD DRAWINGS AND BASE FILES FROM THE UTILITY COMPANIES, FROM VISIBLE MARKINGS AND FEATURES WITHIN THE PROJECT LIMITS, FROM FIELD SURVEYS, AND FROM LIMITED TEST PITS. UTILITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. THE UTILITY INFORMATION SHOWN MAY BE INACCURATE OR INCOMPLETE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS OF WORK TO HIS OWN SATISFACTION PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, SHALL AVOID IMPACTS TO UTILITIES, AND SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE PROJECT DEVELOPER/OWNER IN COORDINATION WITH THE AFFECTED UTILITY COMPANIES. FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING SUCH WORK.

12. WETLANDS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS, AND STEEP SLOPES ARE PRESENT ON THE PROPERTY. ACCORDING TO FEMA FIRM PANEL 24027C0170D DATED NOVEMBER 6, 2013, THERE IS NO FLOODPLAIN ON THE PROPERTY.

13. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED NOVEMBER 3, 2022. THE MDE AUTHORIZATION NUMBER IS 23-NT-3228/202361472.

14. SUBJECT PROPERTY ZONED TOD (OFFICE/COMMERCIAL) AND CE-CLI (CORRIDOR EMPLOYMENT - CONTINUING LIGHT INDUSTRIAL) OVERLAY DISTRICT PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.

15. ALL ELEVATIONS SHOWN ARE BASED NAVD88.

16. ALL LIGHTING IS TO BE DIRECTED/REFLECTED DOWNWARD AWAY FROM ADJACENT PUBLIC ROADS. PROPOSED LIGHTING CONSISTS OF BUILDING MOUNTED LIGHTING. EXCEPT FOR SPOTLIGHTS AND LOW INTENSITY LIGHTS AS DEFINED IN SECTION 134.0. C.2. AND 134.0. C.3., OF THE HOWARD COUNTY ZONING REGULATIONS, ALL LIGHT FIXTURES SHALL BE FULLY OR PARTIALLY SHIELDED.

17. THE EXISTING BUILDINGS PRESENT ON THE PROPERTY WILL BE REMOVED.

18. BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.

19. APPLICABLE DPZ FILE REFERENCES: ECP-18-020, SDP-19-060, ECP-21-038, WP-24-009.

20. THIS PROJECT HAS BEEN PREPARED IN ACCORDANCE WITH THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 BY PAYING A FEE-IN-LIEU OF $16,335.00 FOR 0.3 ACRES (13,068 SF) OF REFORESTATION ($1.25 PER SF OF REFORESTATION).

21. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. LANDSCAPE PLANTINGS FOR 50 SHADE TREES, 75 ORNAMENTAL TREES, 76 EVERGREEN TREES AND 340 SHRUBS, HAVE BEEN PROVIDED UNDER THIS PLAN. A FINANCIAL SURETY IN THE AMOUNT OF $47,850.00 MUST BE POSTED WITH THE DEVELOPER AGREEMENT FOR THIS PROJECT.

22. STORMWATER MANAGEMENT FOR THIS PROJECT WILL BE PROVIDED BY 3 MICRO-BIORETENTION FACILITIES. ALL SWM DEVICES WILL BE PRIVATELY OWNED AND MAINTAINED.

23. A TRAFFIC NOISE STUDY WAS PREPARED FOR THIS PROJECT BY HUSH ACOUSTICS, LLC. DATED DECEMBER 5, 2022.

24. A TRAFFIC STUDY WAS PREPARED FOR THIS PROJECT BY THE TRAFFIC GROUP DATED NOVEMBER 16, 2022.

25. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT BY HILLIS-CARNES ENGINEERING ASSOCIATES DATED JANUARY 5, 2023.

26. A STREAM, STREAM BUFFER, WETLAND, AND WETLAND BUFFER ARE PRESENT ON THE SITE. THERE IS .40 ACRES OF FOREST ON-SITE. NO SPECIMEN TREES EXIST ON SITE. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES, SHALL BE PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.

27. PENNONI SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION, MEANS, METHODS, TECHNIQUES, OR PROCEDURES, UTILIZED BY THE CONTRACTOR, NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.

28. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

29. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE

30. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

31. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.

32. ALL FILL, COMMON BORROW, AND/OR TRENCH BACKFILL SHALL BE COMPACTED ACCORDING TO THE LATEST VERSION OF MSHA STANDARDS AND SPECIFICATIONS.

33. AN ACCESSIBLE ROUTE SHALL BE PROVIDED BETWEEN HANDICAPPED PARKING OR PUBLIC RIGHT-OF-WAYS TO THE MAIN BUILDING ENTRANCE IN ACCORDANCE WITH CURRENT ADA AND LOCAL STANDARDS. ALL HANDICAPPED RAMPS SHALL BE CONSTRUCTED ACCORDING TO CURRENT ADA AND LOCAL STANDARDS. EXCEPT AS SUPERCEDED IN CURRENT ADA AND LOCAL STANDARDS, THE FOLLOWING SHALL APPLY:
   a. MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2%.
   b. A MINIMUM 5'X5' LANDING AREA WITH A MAXIMUM SLOPE IN ANY DIRECTION OF 2% SHALL BE PROVIDED AT ALL CHANGES IN DIRECTION, TOPS AND BOTTOMS OF RAMPS, AND BUILDING EGRESS POINTS.
   c. ALL HANDICAPPED PARKING SHALL BE SLOPED NO GREATER THAN 2% IN ANY DIRECTION, INCLUDING A 5' WIDE AREA BEHIND THE PARKING SPACES.
   d. AN ACCESS ROUTE FROM THE PARKING SPACES TO THE MAIN BUILDING ENTRANCE SHALL BE PROVIDED. ALL SLOPES ALONG THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1:20 UNLESS THEY FALL UNDER CONDITION B ABOVE. SLOPES IN EXCESS OF 1:20 EXCEPT CURB RAMPS REQUIRE A HANDRAIL MEETING ADA REQUIREMENTS. SEE SITE DEVELOPMENT PLAN FOR A DETAIL OF THE HANDICAPPED PARKING.

34. THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.

35. DUMPSTERS WILL BE PROVIDED INTERNALLY IN THE PARKING STRUCTURE.

36. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN ON THESE DRAWINGS AND IN THE SPECIFICATION BOOKLET AS WELL AS STANDARD STATE AND LOCAL SPECIFICATIONS WHICHEVER IS MORE RESTRICTIVE.

37. DEVIATION FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT FROM THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.

38. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK ON THE PROJECT:
   I. BGE
   II. COMCAST
   III. VERIZON

39. CONTRACTOR SHALL CONTACT MISS UTILITY AT 1-800-257-777 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION WORK ON THE SITE. IN THE EVENT THAT MISS UTILITY WILL NOT MARK UTILITIES ON SITE, A PRIVATE UTILITY LOCATOR SHOULD BE ENGAGED FOR THIS PURPOSE AT THE CONTRACTOR'S EXPENSE.

40. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO BEGINNING WORK. HE SHALL VERIFY SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND EXCAVATE TEST PITS AT PROPOSED TIE IN LOCATIONS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WELL IN ADVANCE OF CONSTRUCTION START. START OF CONSTRUCTION BY THE CONTRACTOR SHALL CONSTITUTE FULL ACCEPTANCE OF ALL SITE CONDITIONS BY THE CONTRACTOR. TEST PITTING DEFINED: FOR THE PURPOSES OF THIS PROJECT, EXCAVATION OF UTILITY TRENCHES DOES NOT CONSTITUTE TEST PITTING. TEST PITTING IS A SEPARATE OPERATION COMPLETED AT LEAST SEVEN DAYS BEFORE UTILITY INSTALLATION IS SCHEDULED TO BEGIN. TEST PITTING MEANS EXCAVATION TO EXPOSE EXISTING UTILITIES IN TWO SITUATIONS: (I) WHERE PROPOSED IMPROVEMENTS CROSS EXISTING UTILITIES (PIPES, LINES, STRUCTURES, APPURTENANCES) AND; (II) WHERE PROPOSED UTILITIES ARE DESIGNED TO CONNECT TO EXISTING UTILITIES. TEST PITTING INCLUDES RECORDING THE TYPE, SIZE, LOCATION AND ELEVATION OF THE EXPOSED UTILITIES, AND PROVIDING THE RECORD TO PENNONI AND THE OWNER. THE RECORD MAY BE A LEGIBLE HAND-WRITTEN FIELD SKETCH.

41. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR CONSTRUCTION PRIOR TO BEGINNING WORK UNLESS PROVIDED BY OWNER. CONTRACTOR SHALL IDENTIFY ALL REQUIRED PERMITS AND ANTICIPATE OBTAINING ALL PERMITS NOT PROVIDED BY OWNER.

42. ALL UTILITIES ARE TO REMAIN UNLESS DESIGNATED TO BE REMOVED AND ALL APPURTENANCES SHALL BE ADJUSTED TO FINISH GRADE.

43. PRIOR TO START OF CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR REQUESTING CONTROL, CONSTRUCTION STAKE OUT AND VERIFYING LOCATIONS OF ALL IMPROVEMENTS AND UTILITY TIE IN LOCATIONS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES WELL IN ADVANCE OF START OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THE CONTRACTOR RETAIN THE DESIGN FIRM FOR STAKEOUT.

44. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS, THE FIGURED DIMENSIONS SHALL BE HELD.

LOCATION PLAN

SCALE: 1" = 100'

45. THE CONTRACTOR SHALL ENSURE THAT CURRENT AS-BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION AS-BUILT DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR. FIELD LOCATION OF UTILITIES SHALL BE COORDINATED WITH THE OWNER PRIOR TO COVERING THE LINES. CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF A LICENSED SURVEYOR AND CIVIL ENGINEER TO COMPLETE THE REQUIRED AS-BUILTS.

46. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING TREES DESIGNATED TO REMAIN OR WITHIN DESIGNATED TREE SAVE AREA.

47. MAXIMUM SLOPE ON GRASSED AREAS: 3:1, UNLESS OTHERWISE NOTED.

48. MINIMUM SLOPE ON GRASS AREAS: 2.5% (2% SWALES) , UNLESS OTHERWISE NOTED.

49. MINIMUM CONCRETE PAVEMENT SLOPE: 1% , UNLESS OTHERWISE NOTED.

50. MINIMUM ASPHALT PAVEMENT SLOPE: 2%, UNLESS OTHERWISE NOTED.

51. CONSTRUCTION OBSERVATION: CONTRACTOR IS RESPONSIBLE FOR RETAINING AND/OR COORDINATING A THIRD PARTY INSPECTOR TO OBSERVE THE SITE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO GRADING, PAVEMENT, UTILITIES, AND STORMWATER DEVICES. CONTRACTOR SHALL PROVIDE OBSERVATION REPORTS AND TESTING RESULTS TO OWNER AND PENNONI AS THEY ARE COMPLETED.

52. UNLESS OTHERWISE SPECIFIED, ALL FILL, COMMON BORROW, AND/OR TRENCH BACKFILL MATERIAL SHALL BE A MINIMUM OF 100 LBS/FT3 FOR THE MAXIMUM DRY DENSITY ACCORDING AASHTO T-180 AND SHALL NOT BE MH, CH, OH OR PT AS DETERMINED FROM ASTM D-2487.

53. SUB-BASE MATERIAL AND SUB-GRADE CONDITIONS ARE SPECIFICALLY DESIGNED FOR A GIVEN PAVING TYPE. ANY DEVIATION FROM THE DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS AND MAY IMPACT THE FUNCTION OF THE PAVING SURFACE.

54. AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED, ALL EQUIPMENT SECURED AND THE AREA LEFT IN A SAFE CONDITION. STEEL PLATES ARE ALLOWED TO REMAIN NO LONGER THAN SEVEN (7) DAYS. PLATES ARE TO BE NOTCHED (RECESSED) AND PINNED TO THE ROADWAY. PLATES MUST BE LARGE ENOUGH TO ALLOW A MINIMUM OF 1-FOOT BEARING ON ALL FOUR (4) SIDES OF THE PAVEMENT SURROUNDING THE EXCAVATION.

55. WHEN TYING INTO EXISTING PAVEMENT, SAW CUT EXISTING PAVING EDGE TO PROVIDE A CLEAN, STRAIGHT AND VERTICAL JOINT. ROTOMILL SURFACE COURSE TO PROVIDE TRANSITION BETWEEN EXISTING AND NEW PAVEMENT. WHEN REMOVING EXISTING CURB OR SIDEWALK, REMOVE TO THE NEAREST JOINT.

56. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PAVEMENT MARKINGS AND SIGNAGE IN ACCORDANCE WITH THE PAVEMENT MARKING AND SIGNAGE PLAN.

57. ALL UNPAVED AREAS BETWEEN ALL BUILDINGS SHALL BE LAWN AREAS.

58. KNOX BOXES SHALL BE LOCATED WITHIN 6 FEET TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT. THE CONTRACTOR SHOULD CONTACT THE OFFICE OF THE FIRE MARSHAL PRIOR TO PURCHASING AND INSTALLING THE KNOX BOXES TO DETERMINE THE NUMBER, AS WELL AS THE LOCATIONS WHERE THEY ARE TO BE MOUNTED.

59. THIS PROJECT IS LOCATED IN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED, MDE NO. 02130906.

60. THE 65DBA NOISE LINE ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPT OF HOUSING AND URBAN DEVELOPMENT

61. THE BUILDING SHALL BE PROTECTED BY A FIRE PROTECTION SYSTEM THAT WILL MEET FULL NFPA 13 REQUIREMENTS. FIRE PROTECTION WILL BE REQUIRED IN THE GARAGE TO ADDRESS INDOOR REFUSE CONTAINER STORAGE. FURTHER, THE BUILDING WILL BE SUBJECT TO THE REQUIREMENTS OF NFPA 241 CHAPTER 13.

62. THE OWNER SHALL DEISGNATE A PERSON WHO SHALL BE RESPONSIBLE FOR THE FIRE PREVENTION PROGRAM AND WHO SHALL ENSURE THAT IT IS CAREIED OUT TO COMPLETION. FURTHER, THE OWNER, OR HIS DESIGNEE, SHALL PROVIDE A LIFE SAFETY PLAN TO THE OFFICE OF THE FIRE MARSHAL.

63. 200 SF OF NON-TIDAL WETLANDS, 6,910SF OF WETLAND BUFFER, AND 1,442 SF OF STREAM BUFFER WILL BE DISTURBED WITH THIS PROJECT TO REMOVE IMPERVIOUS SURFACES. THE MDE AUTHORIZATION NUMBER FOR THIS DISTURBANCE IS 23-NT-3228/202361472.

64. MARYLAND STATE HIGHWAY ADMINISTRATION DETAILS USED ON THIS PROJECT: MD-655.11, MD-630.01, MD-620.02, MD-620.03, MD-104.03-02

65. FOR RESIDENTIAL MULTI-FAMILY BUILDINGS HAVING TWO OR MORE FLOORS, A UNIFORM NUMERIC SYSTEM SHALL BE UTILIZE TO IDENTIFY ALL DWELLING UNITS WITH A NUMBER THAT IS UNIQUE TO ONLY ONE UNIT. ALL UNITS IN A VERTICAL STACK OR COLUMN SHALL BE UNIFORMLY NUMBERED SUCH THAT THEY ALL SHARE A NUMERIC REFERENCE TO EACH OTHER IN THAT STACK OR COLUMN, AS APPROVED BY THE AHJ. FOR EXAMPLE, UNIT 301 SHALL BE DIRECTLY OVER UNIT 201, WHICH IS DIRECTLY OVER UNIT 101. IN THE EVENT AN OPEN OR AMENITY SPACE ON ANY FLOOR PREVENTS THIS UNIFORMITY, THE CORRESPONDING UNIT NUMBER SHALL BE OMITTED RATHER THAN MOVED OUTSIDE OF THE NUMERICALLY UNIFORM COLUMN OR STACK.

66. A FIRE DEPARTMENT CONNECTION FOR FIRE PROTECTION SYSTEMS SHALL BE LOCATED: (A.) TYPICALLY ON THE SIDE OF THE STRUCTURE DISPLAYING THE ADDRESS CLEARLY VISIBLE TO THE RESPONDING UNITS, (UNLESS AN ALTERNATE LOCATION IS APPROVED BY THE OFFICE OF THE FIRE MARSHAL); (B.) WITHIN 100 FT. OF A FIRE HYDRANT;(II) THE APPROPRIATE SIGN SHALL BE MOUNTED ON THE BUILDING'S WALL BETWEEN 8 AND 12 FEET ABOVE THE FIRE DEPARTMENT CONNECTION; (III) A FREE-STANDING FIRE DEPARTMENT CONNECTION SHALL HAVE THE SIGN MOUNTED ON A POLE DIRECTLY BEHIND THE CONNECTION APPROXIMATELY 6 FEET HIGH; (IV) SIGNS IDENTIFYING THE LOCATION SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH A RED REFLECTIVE BORDER, RED REFLECTIVE LETTERS AND A RED REFLECTIVE ARROW. THE BORDER SHALL HAVE A 3/8" STROKE. THE LETTERS SHALL BE 6" HIGH WITH A 1" STROKE. THE ARROW SHALL HAVE A STROKE NOTE LESS THAN 2". THE OVERALL SIGN MEASUREMENTS SHALL BE 12" BY 18"; (V) ANY OBSTRUCTION OR CONDITION THAT DETERS OR HINDERS ACCESS TO A FDC IS PROHIBITED. A MINIMUM CLEAR SPACE OF 15 FEET (7.5 FEET ON ALL SIDES) SHALL BE MAINTAINED

67. IF EV CHARGING STATIONS ARE PROVIDED IN THE PARKING GARAGES, PLEASE ENSURE THAT THEY ARE NOT IMMEDIATELY ADJACENT TO ELEVATORS AND STAIRWAYS TO THE INCREASE CONCERN OF ELECTRICAL VEHICLE FIRES.

68. ALL EXTERIOR STAIRWAYS MUST HAVE A UNIQUE IDENTIFIER AND BE MARKED WITH SUCH.

69. ANY ELECTRONIC GATES OR OVERHEAD ACCESS DOORS TO PARKING GARAGES MUST HAVE A KNOX OVERRIDE.

70. IN ACCORDANCE WITH NFPA 1 Â 11.10.1, RADIO ENHANCEMENTS MAY BE REQUIRED TO BE INCORPORATED INTO THE BUILDING TO ALLOW FOR RADIO COMMUNICATIONS THROUGHOUT THE BUILDING.

71. WAIVER PETITION WP-24-009: PURSUANT TO SECTION 16.116(D), THE DIRECTOR OF THE DEPARTMENT OF PLANNING ZONING, DIRECTOR OF THE DEPARTMENT OF PUBLIC WORKS AND THE ADMINISTRATOR OF THE OFFICE OF COMMUNITY SUSTAINABILITY CONSIDERED AND APPROVED THE APPLICANTS REQUEST FOR AN ALTERNATIVE COMPLIANCE WITH RESPECT TO SECTIONS 16.116(A)(1) AND 16.116(A)(2)(I) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE PURPOSE IS TO GRADE WITHIN THE WETLAND, WETLAND BUFFER AND STREAM BUFFER TO REMOVE EXISTING IMPERVIOUS AREA TO REDEVELOP THE PROPERTY INTO AN APARTMENT DEVELOPMENT. THE DIRECTORS DELIBERATED THE APPLICATION IN A MEETING ON NOVEMBER 21, 2023.

APPROVAL OF ALTERNATIVE COMPLIANCE OF SECTION 16.116(A)(1) & 16.116(A)(2)(I) IS SUBJECT TO THE FOLLOWING CONDITIONS:

1. THE IMPACT TO THE WETLAND, 25-FOOT WETLAND BUFFER AND 50-FOOT STREAM BUFFER SHALL BE LIMITED TO THE DISTURBANCE NECESSARY TO REMOVE THE EXISTING PAVING AND FENCING FROM THESE FEATURES, AS SHOWN ON THE SITE DEVELOPMENT PLAN, SDP-23-013.

2. ALL DISTURBANCES WITHIN THE WETLAND, WETLAND BUFFER AND STREAM BUFFER MUST BE RETURNED TO THEIR NATURAL CONDITIONS AND REVEGETATED IMMEDIATELY AFTER REMOVAL OF THE EXISTING IMPROVEMENTS. APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES MUST BE IN PLACE TO PROTECT THE ENVIRONMENTAL FEATURES FROM FURTHER DISTURBANCE DURING CONSTRUCTION OF THE APARTMENT DEVELOPMENT. TEMPORARY CONSTRUCTION TRAILERS, STAGING AREAS, EQUIPMENT AND STOCKPILES SHALL NOT BE LOCATED WITHIN THE STREAM BUFFER, WETLAND OR WETLAND BUFFER. DISPOSAL OF MATERIAL IS PROHIBITED WITHIN THE ENVIRONMENTAL FEATURES.

3. IN ADDITION TO THE PROPOSED PLANTINGS ALONG THE SOUTHWEST SIDE OF THE BUILDING, THE STREAM BUFFER, WETLAND AND WETLAND BUFFER MUST BE PLANTED WITH A ROW OF 10 NATIVE SHADE TREES, WITH A VARIETY OR 2 OR MORE SPECIES THAT ARE SUITABLE FOR GROWTH WITHIN A RIPARIAN BUFFER ZONE. FINANCIAL SURETY FOR THE REQUIRED PLANTINGS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT IN ACCORDANCE WITH THE DEPARTMENT OF PLANNING AND ZONING UNIT PRICES FOR LANDSCAPING SURETY.

4. THE APPLICANT SHALL OBTAIN ALL REQUIRED AUTHORIZATIONS AND PERMITS FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT OF THE U.S. ARMY CORPS OF ENGINEERS FOR DISTURBANCES WITHIN THE WETLAND AND WETLAND BUFFER. THE AUTHORIZATION NUMBER AND DATE SHALL BE INCLUDED IN A NOTE ON THE SITE DEVELOPMENT PLAN. THE AUTHORIZATION MUST REMAIN VALID AT THE TIME OF DEVELOPMENT.

SITE ANALYSIS DATA

AREA OF SITE:	5.63 ACRES (245,160 SF)
LIMIT OF DISTURBANCE:	5.65 ACRES (246,119 SF) (INCLUDES OFF-SITE DISTURBANCE)
PRESENT ZONING:	TOD (TRANSIT ORIENTED DEVELOPMENT) DISTRICT: 4.90 ACRES CE-CLI (CORRIDOR EMPLOYMENT - CONTINUING LIGHT INDUSTRIAL) OVERLAY DISTRICT: 0.73 ACRES
EXISTING USES:	COMMERCIAL/ INDUSTRIAL
PROPOSED USE:	APARTMENTS
TOTAL NUMBER OF UNITS PROPOSED	285 UNITS
PROPOSED FLOOR AREA:	±260,000 SF (5 FLOORS)
PROPOSED BUILDING HEIGHT:	52'
PARKING REQUIRED FOR PROPOSED USE:	513 SPACES AT 1.8 SPACES PER UNIT (285 UNITS x 1.8 = 513)
PARKING RATE FROM PARKING STUDY (THE TRAFFIC GROUP DATED DECEMBER 8, 2023):	1.6 SPACES PER UNIT (285 x 1.6 = 456) 456 SPACES REQUIRED PER THE PARKING STUDY DATED DECEMBER 8. 2023
PARKING PROVIDED:	514 GARAGE SPACES AT A RATE OF 1.8 SPACES PER UNIT (INCLUDES 12 EV SPACES AND 11 ADA SPACES)
AREA OF WETLANDS:	0.01 ACRES (352 SF)
AREA OF WETLAND BUFFERS:	0.17 ACRES (7,290 SF)
AREA OF STREAM BUFFERS:	0.03 ACRES (1,485 SF)
AREA OF FLOODPLAIN:	0 ACRES (0 SF)
EXISTING FOREST AREA:	0 ACRES (0 SF)
AREA OF STEEP SLOPES:	
15-25%:	0.20 ACRES± (8,851 SF ±)
25%+:	0.00 ACRES (0 SF)
AREA OF ERODIBLE SOILS:	0.00 ACRES (0 SF)
IMPERVIOUS AREA WITHIN LOD:	
EXISTING:	213,016 (4.89 ACRES)
PROPOSED:	143,968 (3.31 ACRES)
BUILDING COVERAGE:	143,130 SF/245,156 SF=58.38%
GREEN AREA WITHIN LOD:	
EXISTING:	29,571 SF
PROPOSED:	92,303 SF

PROPOSED OPEN SPACE ON SITE: 2.46 ACRES (42% OF GROSS AREA) (2.46 AC/5.63 AC = 44%)

PROPOSED AMENITY AREA REQUIRED (10%): 5.63 ACRES x 0.10 = 0.56 ACRES
PROPOSED AMENITY AREA PROVIDED: 0.56 ACRES (SEE SHEET 10 FOR DETAILS)

MINIMUM DENSITY:	113 UNITS (20 UNITS PER NET ACRE; 20 x 5.63 ACRES = 112.6)
DEVELOPABLE ACREAGE:	
MAXIMUM ALLOWED:	2.82 ACRES (4.90 ACRES(TOD ZONE AREA)/2 = 2.45)
PROPOSED:	2.45 ACRES

DEVELOPABLE AREA DEVOTED TO RESIDENTIAL BUILDINGS: 69,317 SF (32.4% OF DEVELOPABLE ACREAGE)

ZONE TOD BUILDING HEIGHT:
STRUCTURE WITH MINIMUM SETBACK FROM A PUBLIC STREET RIGHT-OF-WAY: 60'

STRUCTURE WITH AN ADDITIONAL 1 FOOT OF SETBACK FROM A PUBLIC STREET RIGHT-OF-WAY FOR THE PORTION OF THE STRUCTURE OVER 60 FEET FOR EVERY 2 FEET OF ADDITIONAL HEIGHT: 100'

ZONE TOD SETBACKS
FROM A RESIDENTIAL DISTRICT: 30'

FROM ALL OTHER ZONING DISTRICTS:
STRUCTURES CONTAINING RESIDENCES: 30'

ALL OTHER STRUCTURES AND USES: 0'

IF A TOD DISTRICT IS SEPARATED FROM ANOTHER ZONING DISTRICT BY A PUBLIC STREET RIGHT-OF-WAY, ONLY THE SETBACKS FROM A PUBLIC STREET RIGHT-OF-WAY SHALL APPLY.

FROM A PUBLIC STREET RIGHT-OF-WAY:
PRINCIPAL STRUCTURE FROM ARTERIAL ROAD: 20 FEET

ALL OTHER STRUCTURES AND USES FROM ARTERIAL ROAD: 30 FEET

ALL STRUCTURES AND USES (EXCEPT SURFACE PARKING) FROM OTHER PUBLIC STREET RIGHT-OF-WAY: 10 FEET

SURFACE PARKING FROM OTHER PUBLIC STREET RIGHT-OF-WAY: 20 FEET

ZONE CE BUILDING HEIGHT
STRUCTURE WITH MINIMUM SETBACK FROM A PUBLIC STREET RIGHT-OF-WAY: 60'

STRUCTURE WITH AN ADDITIONAL 1 FOOT OF SETBACK FROM A PUBLIC STREET RIGHT-OF-WAY FOR THE PORTION OF THE STRUCTURE OVER 60 FEET FOR EVERY 2 FEET OF ADDITIONAL HEIGHT: 100'

ZONE CE SETBACKS
FROM ROUTE 1 RIGHT-OF-WAY:
ALL STRUCTURES AND USES, EXCEPT AMENITY AREAS: 10'

AMENITY AREAS: 0'

FOR ALL OTHER USES:
STRUCTURES AND USES: 30'
(EXCEPT DRIVEWAYS)

MAXIMUM STRUCTURE SETBACK:
AS PROVIDED IN THE ROUTE 1 MANUAL, FOR LOTS ABUTTING U.S. ROUTE 1, THE BUILDING FACADE CLOSEST TO ROUTE 1 SHALL BE LOCATED NO MORE THAN 50 FEET FROM THE PUBLIC RIGHT-OF-WAY

SUMMARY OF FINDINGS FOR APFO TRAFFIC ANALYSIS:

A. DATE OF REPORT: NOVEMBER 16, 2022
B. DATE OF COUNT: SEPTEMBER 27, 2022
C. REPORT SUBMITTED AS PART OF PLAN NUMBER: SDP-23-013
D. HOWARD COUNTY SCHOOLS WERE IN SESSION AT THE TIME OF THE COUNTS.
E. INTERSECTIONS STUDIED ARE AS FOLLOWS:

1. US 1 AND MD 103, STATE INTERSECTION, DESIGN YEAR LOS "C" IN AM, D IN PM
2. MD 103 AND DORSEY RUN ROAD, STATE INTERSECTION, DESIGN YEAR LOS "A" IN AM AND PM
3. US 1 AND MD 100 EASTBOUND RAMPS, STATE INTERSECTION, DESIGN YEAR LOS "A" IN AM AND "B" IN PM
4. US 1 AND MD 100 WESTBOUND RAMPS, STATE INTERSECTION, DESIGN YEAR LOS "B" IN AM AND PM
5. MD 103 AND BINDER LANE, STATE INTERSECTION, DESIGN YEAR LOS "A" IN AM AND PM

F. NO MITIGATION IS REQUIRED. ALL INTERSECTIONS OPERATE AT ACCEPTABLE LEVELS OF SERVICE IN THE DESIGN YEAR.

ADDRESS CHART

PARCEL NUMBER	STREET ADDRESS
276	6720 BINDER LANE
277	6720 BINDER LANE
278	6720 BINDER LANE
280	6720 BINDER LANE
283	6720 BINDER LANE
289	NE DORSEY ROAD

SUBDIVISION NAME	SECT./AREA	PARCEL
WESLEY GROVE	-	276, 277, 278, 280 & 283

PLAT NO.	GRID #	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
BOOK 111 PAGE 600	23	TOD & CE-CLI	37	1	601203

VICINITY MAP

SCALE: 1"=2,000'
HOWARD COUNTY
ADC MAP 5054 GRID J-1

BENCHMARKS

HOWARD COUNTY MONUMENT NO: 37IA
ELEVATION 195.039
N 553,315.150 E 1,379,982.171

HOWARD COUNTY MONUMENT NO: 43CC
ELEVATION 163.697
N 553,201.436 E 1,381,152.910

PARCEL CHART

PARCEL NUMBER	LOT #	ACREAGE
276	LOT 10	0.57
277	LOT 11	0.55
278	LOTS 8 & 9	1.13
280	LOT 13	0.54
283	LOTS 1,2,6&7	1.91
289	Parcel 5 (Plat No. 61725)	0.48
BINDER LANE R.O.W.	Parcel 1 (Plat No. 61725)	0.45

MODERATE INCOME HOUSING UNITS (MIHU) ALLOCATION EXEMPTIONS TRACKING

TOTAL NUMBER OF LOTS/UNITS PROPOSED	285 UNITS
NUMBER OF MIHU REQUIRED	42.75 UNITS
NUMBER OF MIHU UNITS PROVIDED ONSITE (EXEMPT FROM APFO ALLOCATIONS)	43 UNITS
NUMBER OF APFO ALLOCATIONS REQUIRED (REMAINING LOTS/UNITS)	242 UNITS
MIHU FEE-IN-LIEU (INDICATE LOT/UNIT NUMBERS)	N/A

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR ____________ DATE ____

CHIEF, DEVELOPMENT ENGINEERING DIVISION ____________ DATE ____

CHIEF, DIVISION OF LAND DEVELOPMENT ____________ DATE ____

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
COVER SHEET

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

SEAL
JAMES A. PUFF

BY:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : 1" = 100'
DRAWING NO. 1 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP01 COVER.dwg

MDOT SHA TRACKING #23APHO006XX

SDP-23-013

LEGEND CTD.

EX. SRC EASEMENT AREA SRC PLAT #6950SHA PLAT 61725 VARIABLE WIDTH (TO REMAIN)

EX. 30' PUBLIC WATER, SEWER & UTILITY EASEMENT SHA PLAT #61725 (TO REMAIN)

EX. SHA EASEMENT AREA SHA PLAT #52806 VARIABLE WIDTH (TO REMAIN)

EX. 20' PUBLIC WATER, SEWER & UTILITY EASEMENT L. 487 F. 484 (TO REMAIN)

SOILS CHART

MAP SYMBOL	NAME	STRUCTURAL LIMITATIONS DWELLINGS W/ BASEMENTS	EROSION HAZARD	HYDRIC (Y/N)	SLOPE (%)	SOIL GROUP	Kw FACTOR
RuC	RUSSETT AND BELTSVILLE SOILS	VERY LIMITED	MODERATE	N	5-10	C	0.28
UaF	UDORTHENTS, HIGHWAY	NOT LIMIITED	HIGH	N	0-65	-	NOT RATED
UfA	URBAN LAND-FALLSINGTON	NOT LIMIITED	MODERATE	N	0-2	D	NOT RATED
UtD	URBAN LAND-UDORTHENTS	NOT LIMIITED	MODERATE	N	0-15	D	NOT RATED

SOURCE: NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY

LEGEND

- EXISTING SEWER MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING FLAG POLE
- EXISTING FENCE
- EXISTING WATER VALVE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC POLE
- EXISTING GAS METER
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- EXISTING CONCRETE
- EXISTING SIGN
- EXISTING ASPHALT
- EXISTING SOILS (SaB, UtD)
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING BUILDING
- EXISTING WATER
- EXISTING ZONING
- EXISTING GAS
- EXISTING OVERHEAD ELECTRIC
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING 15%-25% SLOPES
- EXISTING 25%+ SLOPES
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER (WB)
- EXISTING UNDERGROUND ELECTRIC
- EXISTING TREELINE
- EXISTING TREE
- EXISTING GRAVEL
- EXISTING PROPERTY LINE AND RIGHT-OF-WAY
- EXISTING STREAM
- EXISTING STREAM BUFFER (SB)

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

EXISTING CONDITIONS AND SOILS PLAN

Pennoni Associates Inc.
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SEAL

BY:
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DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	2 OF 27

MDOT SHA TRACKING #23APHO006XX SDP-23-013

SITE DEMOLITION NOTES

1. ALL CONSTRUCTION DEBRIS (THIS INCLUDES RECYCLABLE AND NON-RECYCLABLE) SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL JURISDICTION REQUIREMENTS.
2. DISPOSE OF ALL DEBRIS OFF-SITE UNLESS INDICATED TO BE SALVAGED.
3. NO SLAB OR LAND DISTURBANCE IS PERMITTED WITHOUT APPROVAL OF SEDIMENT CONTROL, AS SHOWN ON DRAWINGS.
4. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANY PRIOR TO REMOVAL OR RELOCATION OF ANY EXISTING UTILITIES.
5. EXISTING UTILITY LINES HAVE BEEN SHOWN USING THE BEST AVAILABLE RECORDS OBTAINED FROM UTILITY COMPANIES AND FIELD EVIDENCE. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL ENGAGE A PRIVATE UTILITY LOCATING COMPANY (AT CONTRACTORS EXPENSE) TO ENSURE THAT ALL EXISTING UTILITIES HAVE BEEN MARKED.
6. ONCE DEMOLITION IS COMPLETED, ALL AREAS OF EXPOSED EARTH SHALL BE STABILIZED WITH HYDRO-SEED AND MULCH.

LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EX. PROPERTY LINE AND RIGHT OF WAY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EXISTING SOILS
- EXISTING FIRE HYDRANT
- EXISTING CURB & GUTTER TO BE REMOVED
- EXISTING FENCE TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING ASPHALT TO BE REMOVED
- EXISTING GUARD RAIL TO BE REMOVED
- EXISTING BUILDING TO BE REMOVED
- EXISTING ZONING
- PROPOSED LIMIT OF DISTURBANCE
- ASPHALT SAWCUT LINE
- EXISTING CULVERT TO BE REMOVED

DEMOLITION KEY

1. REMOVE CURB & GUTTER
2. REMOVE CONCRETE
3. REMOVE FENCE
4. REMOVE EXISTING BUILDING
5. ABANDON EX. STORM DRAIN
6. REMOVE EX. INLET
7. REMOVE ASPHALT
8. REMOVE EX. ELECTRIC
9. REMOVE GRAVEL
10. REMOVE EX. GUARD RAIL
11. REMOVE EX. POWER POLE AND ASSOCIATED OVERHEAD LINES
12. REMOVE EX. CULVERT

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
DEMOLITION PLAN

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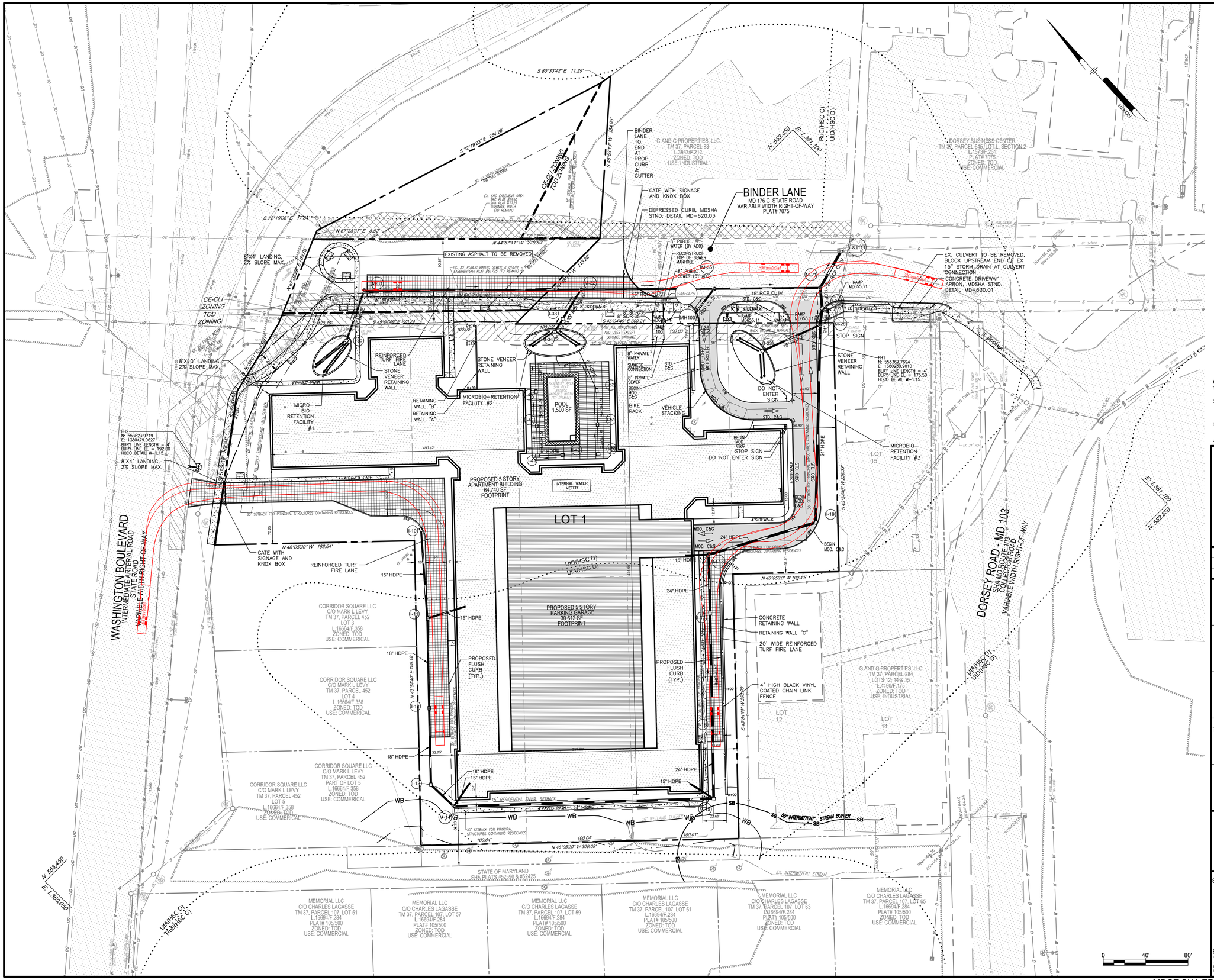
DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	3 OF 27

MDOT SHA TRACKING #23APHO006XX SDP-23-013



LEGEND

- EX. PROPERTY LINE AND RIGHT OF WAY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- EXISTING ZONING
- LIMIT OF DISTURBANCE
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED STORM DRAIN
- PROPOSED BUILDING
- PROPOSED GARAGE
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED FIRE LANE
- PROPOSED LIGHT
- BORING LOCATION
- EX. 20' PUBLIC WATER/ SEWER UTILITY EASEMENT
- EX. 30' PUBLIC WATER/ SEWER UTILITY EASEMENT
- EX. SRC EASEMENT AREA

GENERAL NOTES

1. SEE SHEETS 8, 9, AND 10 FOR SITE DETAILS.
2. THE INSTALLATION OF THE FIRE LANE SHALL BE CERTIFIED BY A QUALIFIED PROFESSIONAL ENGINEER AND THAT THE CERTIFICATION IS TO BE PROVIDED TO THE OFFICE OF THE FIRE MARSHAL PRIOR TO OCCUPANCY OF THE BUILDING.
3. THE TRUCK TURNING MOVEMENTS SHOWN ARE OF A 46' LONG, TRIPLE AXLE FIRE TRUCK VEHICLE WITH A MAXIMUM TURNING RADIUS OF 45'.
4. ALL PROPOSED SIDEWALKS SHALL HAVE A 2.0% MAXIMUM CROSS SLOPE.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
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OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

Pennoni Associates Inc.
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SEAL

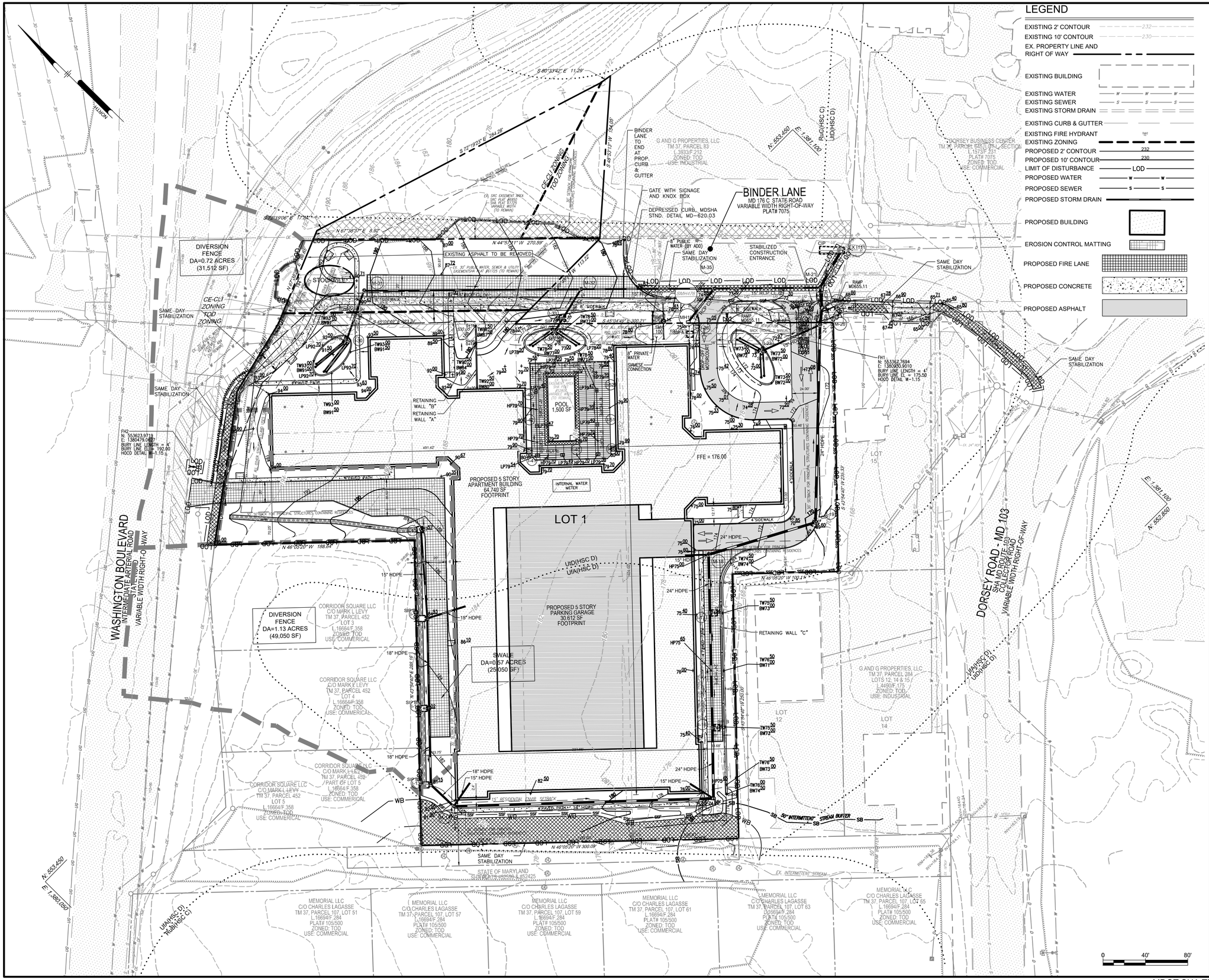
BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/30/25."

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	4 OF 27

MDOT SHA TRACKING #23APHO006XX

SDP-23-013



LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EX. PROPERTY LINE AND RIGHT OF WAY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- EXISTING ZONING
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- LIMIT OF DISTURBANCE
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED STORM DRAIN
- PROPOSED BUILDING
- EROSION CONTROL MATTING
- PROPOSED FIRE LANE
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- SAME-DAY STABILIZATION
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED SUPER SILT FENCE
- CURB INLET PROTECTION
- STANDARD INLET PROTECTION
- DRAINAGE AREA

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

DEVELOPER'S CERTIFICATE

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

GRADING, EROSION, AND SEDIMENT CONTROL PLAN

Pennoni Associates Inc.
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SEAL

BY:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21724, EXPIRATION DATE: 11/10/25."

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	5 OF 27

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

i. SOIL PH BETWEEN 6.0 AND 7.0.

ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.

iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2 INCHES IN DIAMETER.

b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION

a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.

b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

A. SEEDING

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE.

ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.

2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3):		6B			FERTILIZER RATE (10-20-20)	LIME RATE
SEED MIXTURE (FROM TABLE B.1):						
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS		
	ANNUAL RYEGRASS	40	MAR 1 TO MAY 15; AUG 1 TO OCT 15	0.5	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	BARLEY	96	MAR 1 TO MAY 15; AUG 1 TO OCT 15	1.0		
	OATS	72	MAR 1 TO MAY 15; AUG 1 TO OCT 15	1.0		
	PEARL MILLET	20	MAY 16 TO JULY 31	0.5		

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

A. SEED MIXTURES

1. GENERAL USE

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.

c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.

d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

2. TURFGRASS MIXTURES

a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.

i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.

iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

NOTES:

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)
CENTRAL

MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15
(HARDINESS ZONES: 7A, 7B)

d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 11/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): SEED MIXTURE (FROM TABLE B.3):		6B			FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P205	K_2O	
8	TALL FESCUE	100	MAR 1-MAY 15; AUG 15-OCT 15*	1/4-1/2 IN	45 POUNDS PER ACRE (1.0lb/1000 sf)	90 POUNDS PER ACRE (2 lb/1000 sf)	90 POUNDS PER ACRE (2 lb/1000 sf)	2 TONS PER ACRE (90 lb/1000 sf)
9	TALL FESCUE KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	60 40 20	MAR 1-MAY 15; AUG 15-OCT 15*	1/4-1/2 IN				
11	CREEPING RED FESCUE CHEWINGS FESCUE KENTUCKY BLUEGRASS	30 30 20	MAR 1-MAY 15; AUG 15-OCT 15*	1/4-1/2 IN				

* FOR MAY 1 TO AUGUST 14, PLANT WITH NURSE CROP OF PEARL MILLET BASED ON 5% OF THE PERMANENT SEED MIX APPLICATION RATE.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION

d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

2. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.

d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

3. SOD MAINTENANCE

a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

PURPOSE

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES

STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.

2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.

4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.

6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AND APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE SUED TO INTERCEPT THE DISCHARGE.

7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.

8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

NOTE TO CONTRACTOR

ALL SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND THE MDE INSPECTOR. ALL SEDIMENT CONTROL REQUIREMENTS SHALL BE STRICTLY ENFORCED.

ALL CONTROLS INTERCEPTED BY UTILITY INSTALLATIONS ARE TO BE REPAIRED IMMEDIATELY.

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

= =

DEVELOPER'S CERTIFICATE

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL NOTES

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

BY:

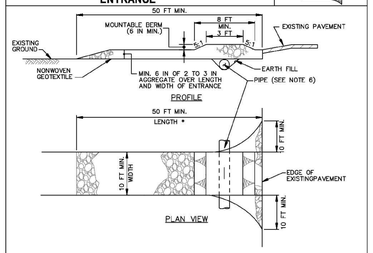
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

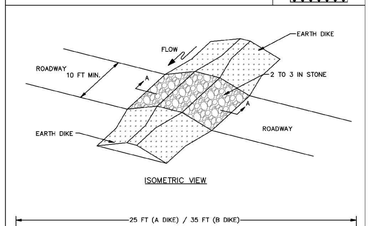
DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : NOT TO SCALE
DRAWING NO. 6 OF 27

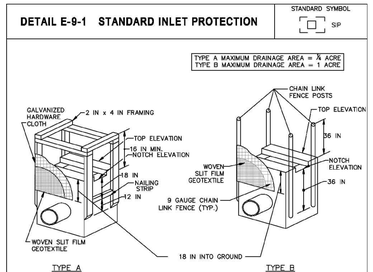
U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP06 SED CONTROL NOTES.dwg

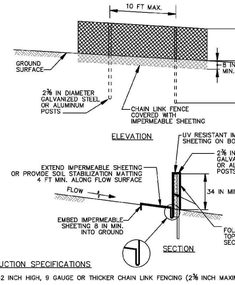
MDOT SHA TRACKING #23APHO006XX

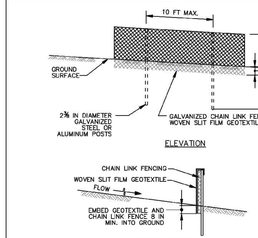
SDP-23-013

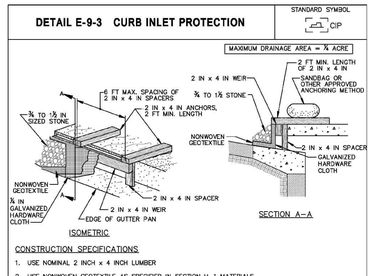


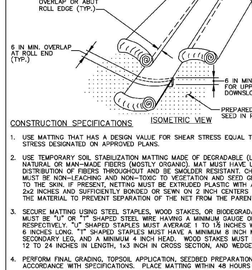












DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL

SCE

CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

H-5 STANDARDS AND SPECIFICATIONS

FOR

DUST CONTROL

Definition

Controlling the suspension of dust particles from construction activities.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

H.22

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL

—— DF ——

MAXIMUM DRAINAGE AREA = 2 ACRES

CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL

MB

CONSTRUCTION SPECIFICATIONS

1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL

├——SSF——┤

CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-4-6-A TEMPORARY SOIL STABILIZATION MATTING CHANNEL APPLICATION

STANDARD SYMBOL

1.01 psf

(* INCLUDE SHEAR STRESS)

CONSTRUCTION SPECIFICATIONS

1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.
7. OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL

SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL

CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

12-NT-0433/201261660
BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1) No excess fill, construction material, or debris shall be stockpiled or stored in nontid wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
2) Place materials in a location and manner which does not adversely impact surface c subsurface water flow into or out of nontidal wetlands, nontidal wetland buffer waterways, or the 100-year floodplain.
3) Do not use the excavated material as backfill if it contains waste metal product unsightly debris, toxic material, or any other deleterious substance. If additional backfi is required, use clean material free of waste metal products, unsightly debris, toxi material, or any other deleterious substance.
4) Place heavy equipment on mats or suitably operate the equipment to prevent damage t nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
5) Repair and maintain any serviceable structure or fill so there is no permanent loss c nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification c the 100-year floodplain in excess of that lost under the originally authorized structure c fill.
6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplai temporarily impacted by any construction.
7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of th following species: Annual Ryegrass (Lolium multiflorum), Millet (Setaria italica), Barle (Hordeum sp.), Oats (Uniola sp.), and/or Rye (Secale cereale). These species will allo for the stabilization of the site while also allowing for the voluntary revegetation c natural wetland species. Other non-persistent vegetation may be acceptable, but must b approved by the Nontidal Wetlands and Waterways Division. **Kentucky 31 fescue sha not be utilized in wetland or buffer areas.** The area should be seeded and mulched t reduce erosion after construction activities have been completed.
8) After installation has been completed, make post-construction grades and elevations th same as the original grades and elevations in temporarily impacted areas.
9) To protect aquatic species, in-stream work is prohibited as determined by th classification of the stream:

- Gwynns Falls Tributaries: Use III time of year restriction October 1 through April 30 inclusive of any year.
- North Branch Jones Falls (mainstem) and Tributaries: Use III time of year restriction October 1 through April 30 inclusive of any year.
- Beaverdam Run: Use III-P, time of year restriction October 1 through April 30 inclusive of any year.
- Baisman Run (mainstem) and Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Oregon Branch (mainstem) and Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Western Run (mainstem) and Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Gunpowder Falls (mainstem) and Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Carroll Branch Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Greene Branch Tributaries: Use III-P time of year restriction October 1 through April 30 inclusive of any year.
- Parker Branch (mainstem) and Tributaries: Use III time of year restriction October 1 through April 30 inclusive of any year.
- Little Gunpowder Falls (mainstem): Use III time of year restriction October through April 30 inclusive of any year.
- Yellow Branch (mainstem) and Tributaries: Use III time of year restriction October 1 through April 30 inclusive of any year.
- West Branch Winter Run Tributaries: Use IV-P time of year restriction March 1 through May 31 inclusive of any year.

10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL

SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B-4-8 STANDARDS AND SPECIFICATIONS

FOR

STOCKPILE AREA

Definition

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

Purpose

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

Conditions Where Practice Applies

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

Criteria

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

Maintenance

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

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
A. PRIOR TO THE START OF EARTH DISTURBANCE,
B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS. AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

6. SITE ANALYSIS:
TOTAL AREA OF SITE: 577 ACRES
AREA DISTURBED: 5.58 ACRES
AREA TO BE ROOFED OR PAVED WITHIN LOD: 3.31 ACRES
AREA TO BE VEGETATIVELY STABILIZED WITHIN LOD: 2.27 ACRES
TOTAL CUT: 20,000 CU. YDS.
TOTAL FILL: 20,000 CU. YDS.

7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
- OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH
CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.

10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.

11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.

13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.

14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.

15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 – JUNE 15
- USE III AND IIIP OCTOBER 1 – APRIL 30
- USE IV MARCH 1 – MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (1 DAY)
2. STAKEOUT LIMITS OF DISTURBANCE. (1 DAY)
3. CONDUCT A PRE-CONSTRUCTION MEETING WITH COUNTY INSPECTOR. (1 DAY)
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE. CLEAR AND GRUB AS NECESSARY TO INSTALL PERIMETER SUPER SILT FENCES. ALL SEDIMENT CONTROL DEVICES TO BE INSTALLED SIMULTANEOUSLY. (3 DAYS)
5. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, BEGIN CLEARING AND GRADING. FOLLOW DUST CONTROL PRACTICES PER MDE DETAIL. (3 MONTHS)
6. WITH COMPLETION OF BUILDING PAD, BEGIN BUILDING CONSTRUCTION. (9 MONTHS)
7. UPON ESTABLISHMENT OF SUBGRADE, INSTALL PRIVATE WATER AND SANITARY CONNECTIONS AND STORM DRAIN. ANY CONTROLS INTERCEPTED BY UTILITY INSTALLATION ARE TO BE REPAIRED THE SAME DAY. (2 MONTHS)
8. WITH COMPLETION OF SUBGRADE AND UTILITY INSTALLATION, INSTALL CURB AND GUTTER. BEGIN PARKING LOT CONSTRUCTION. CONSTRUCT THE STONE SUBGRADE OF THE ASPHALT AND CONCRETE PAVEMENT ON THE SITE. (1 WEEK)
9. INSTALL ASPHALT AND CONCRETE PAVEMENT. (1 WEEK)
10. PERFORM FINE GRADING, CONSTRUCT SIDEWALKS, AND ANY OTHER CONSTRUCTION ACTIVITY. MAINTAIN FLOWS DURING FINE GRADING AND PAVING OPERATIONS. (2 WEEKS)
11. STABILIZE ALL DISTURBED AREAS. (1 DAY)
12. CONSTRUCT MICRO BIORETENTION FACILITIES AND ALL ASSOCIATED UNDERDRAIN/OVERDRAINS. REFER TO SHEET 20 FOR MICROBIORENTION FACILITY SEQUENCE OF CONSTRUCTION. CONTACT PENNONI ENGINEER AND QUALIFIED GEOTECHNICAL ENGINEER TO OBSERVE INSTALLATION OF SWM FACILITY. UPON INSTALLATION OF FILTER MEDIA, INSTALL SILT FENCE AROUND FACILITIES, AND INLET PROTECTION AT OVERFLOW INLETS. (6 WEEKS)
13. COMPLETE PAVING AND LANDSCAPING ON THE SITE. (2 WEEKS)
14. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 DAYS)

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

= =

DEVELOPER'S CERTIFICATE

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL DETAILS

Pennoni
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

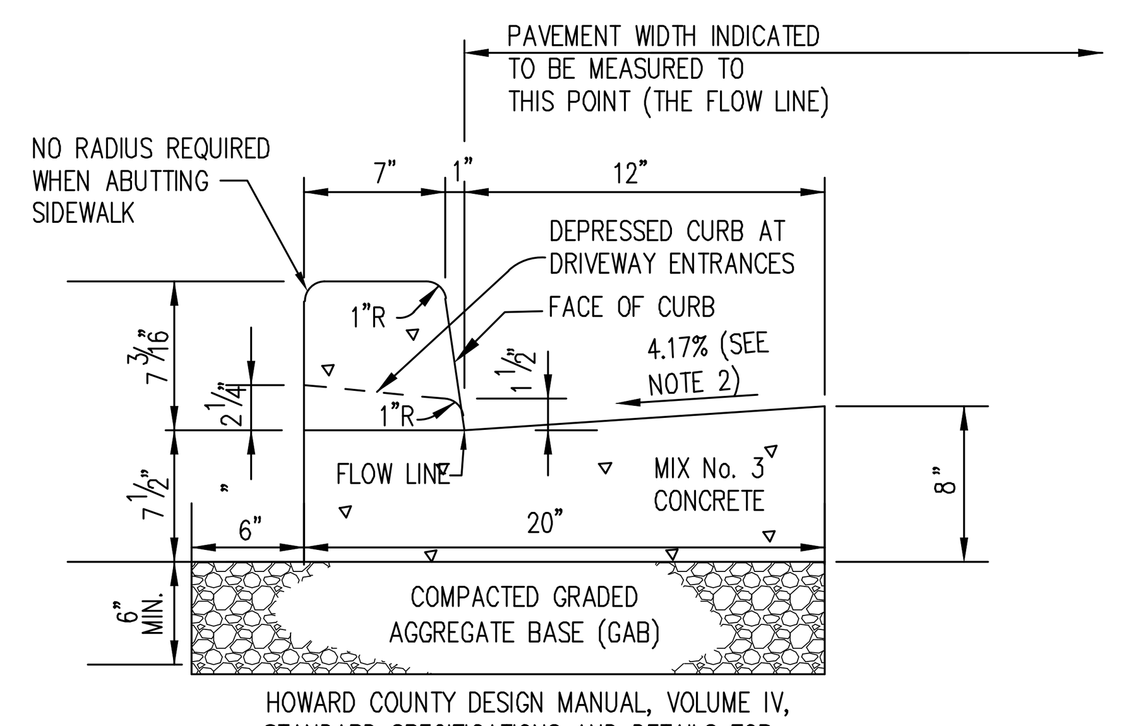
SEAL

BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : NOT TO SCALE
DRAWING NO. 7 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP07 SED CONTROL DETAILS.dwg



NOTES:

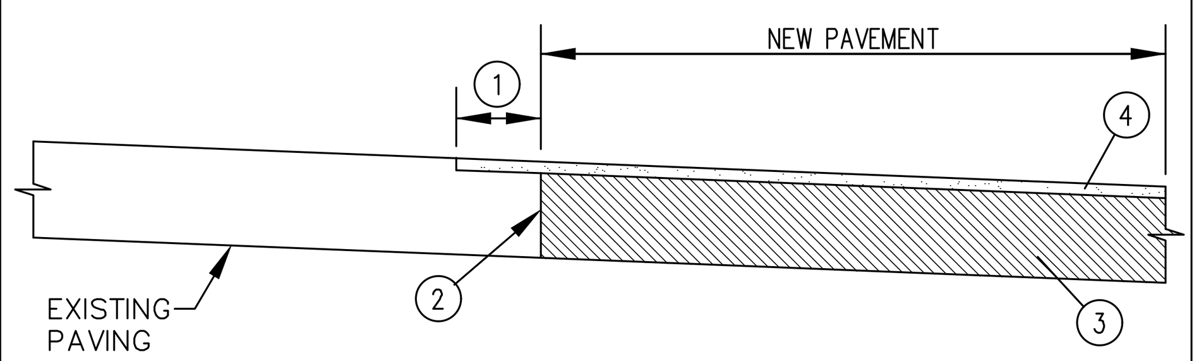
1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.

2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.

3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.

4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

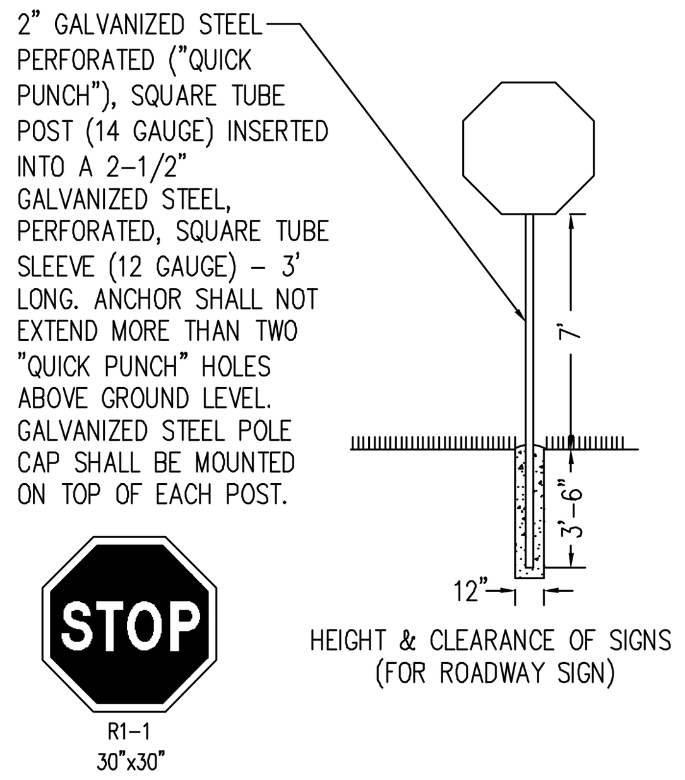
1/8 7" COMBINATION CURB AND GUTTER
NOT TO SCALE — HC DPW STD. R-3.01



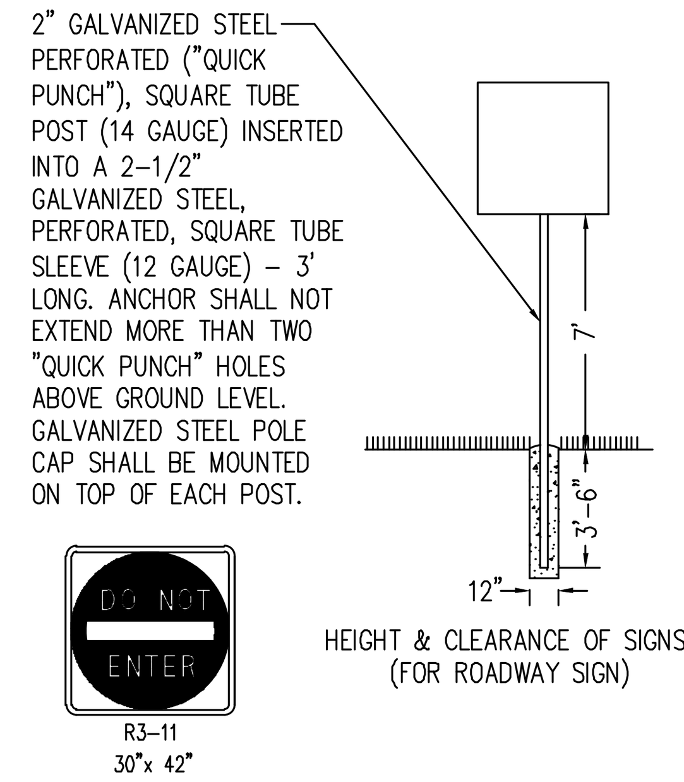
1. MILL A 1' WIDE X 1-1/2" DEEP STRIP
2. SAW-CUT THROUGH FULL DEPTH PAVING
3. INSTALL SUB BASE GRAVEL AND BASIC PAVEMENT PER THE TYPICAL PAVEMENT SECTION.
4. PROVIDE 1½" TOP SURFACE COARSE (HMA SUPERPAVE 9.5 MM, PG64S-22 LEVEL 2)*

*NOTE: LONGITUDINAL JOINTS FOR THE TOP SURFACE COARSE MUST NOT COINCIDE WITH THE FULL-DEPTH SAW-CUT JOINT

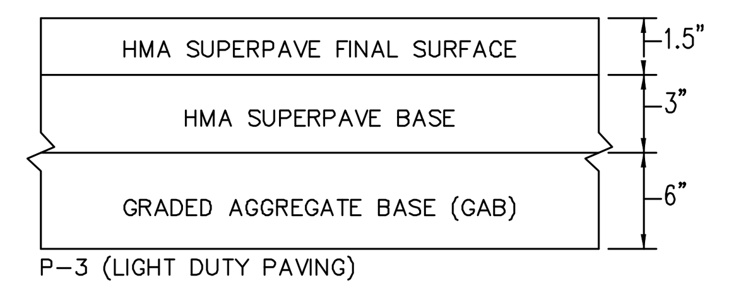
6/8 PAVEMENT CONNECTION
NOT TO SCALE



2/8 STOP SIGN
NOT TO SCALE

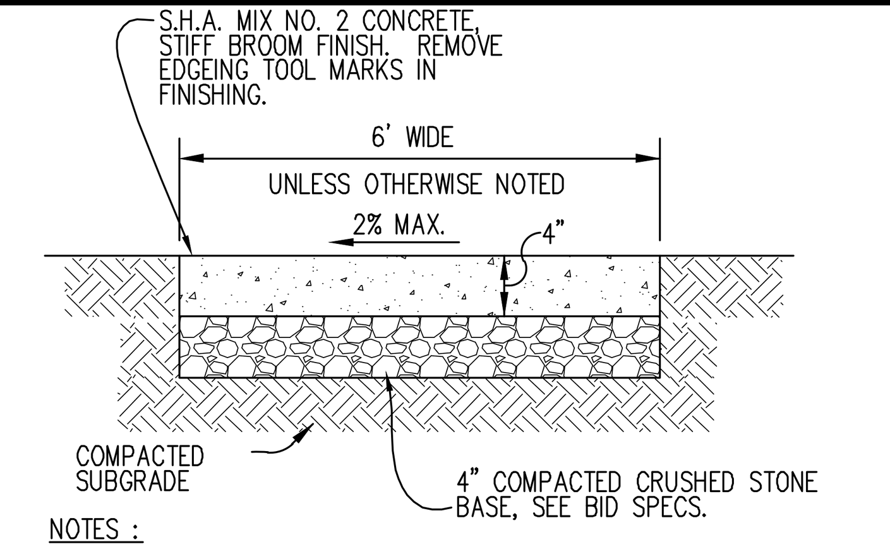


3/8 DO NOT ENTER SIGN
NOT TO SCALE



NOTE:
THE PAVING SECTION SHOWN HAS NOT BEEN DESIGNED FOR ACTUAL SOIL CONDITIONS, OR IN PLACE COMPACTION RESULTS. IT IS RECOMMENDED THAT THE USER CONSULT WITH A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER FOR A SPECIFIC PAVING DESIGN BASED ON THE APPROPRIATE PARAMETERS DURING CONSTRUCTION AND PRIOR TO INSTALLATION OF THIS PAVING SECTION.

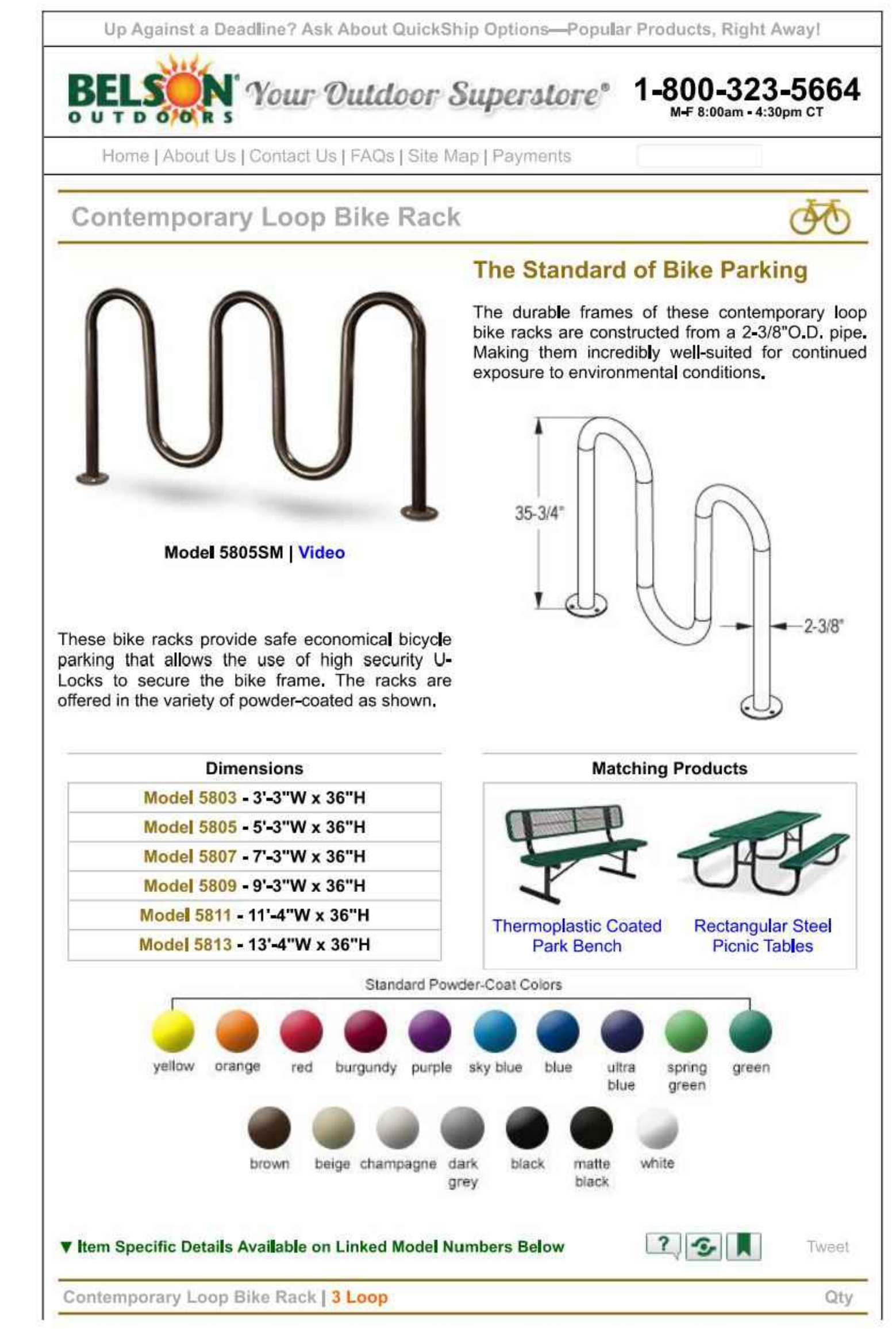
4/8 ASPHALT PAVING
NOT TO SCALE



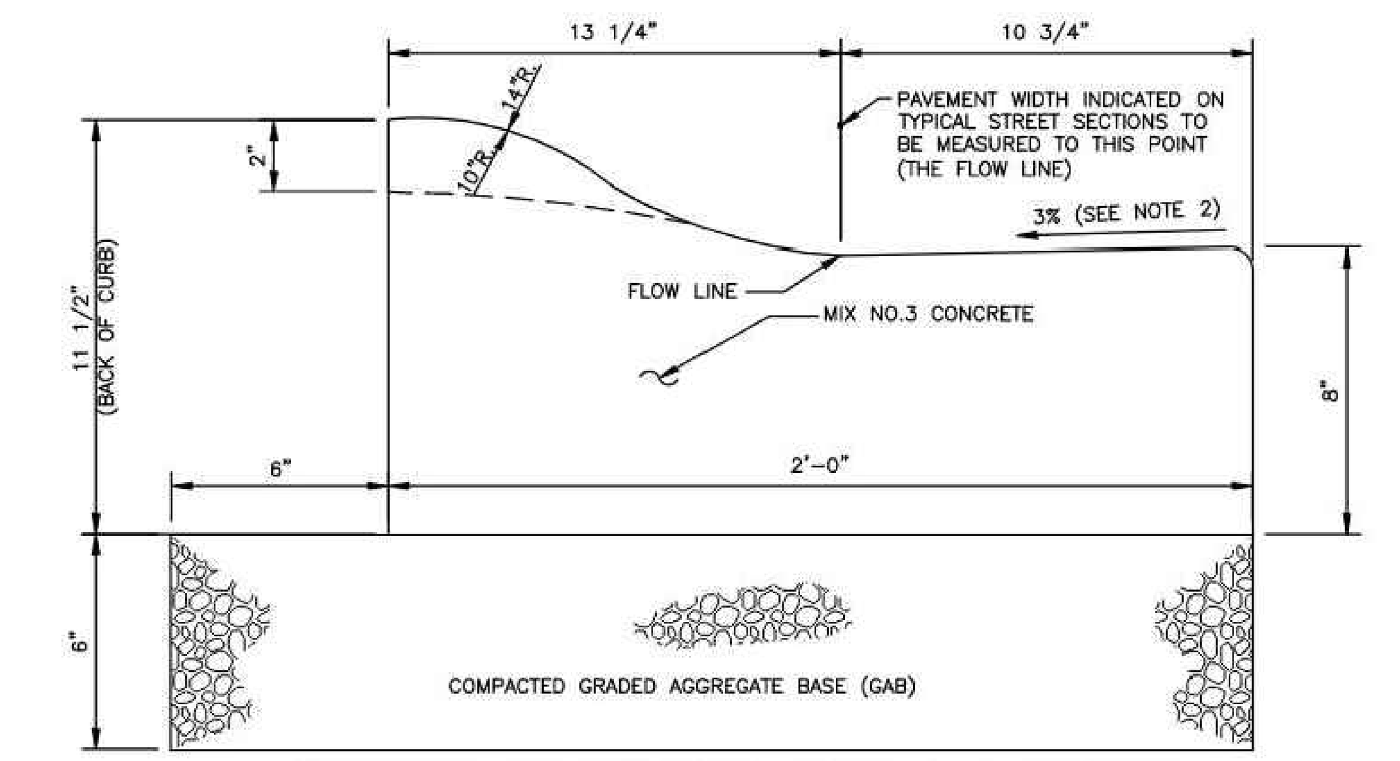
NOTES :

1. PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
2. PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES. CONTRACTOR TO AVOID THE CREATION OF SMALL SCORED AREAS THAT WILL CRACK AND BREAK OFF FROM SIDWALK.
3. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
4. CONCRETE SHALL BE 3,000 PSI.

5/8 CONCRETE SIDEWALK
NOT TO SCALE



9/8 BIKE RACK
NOT TO SCALE



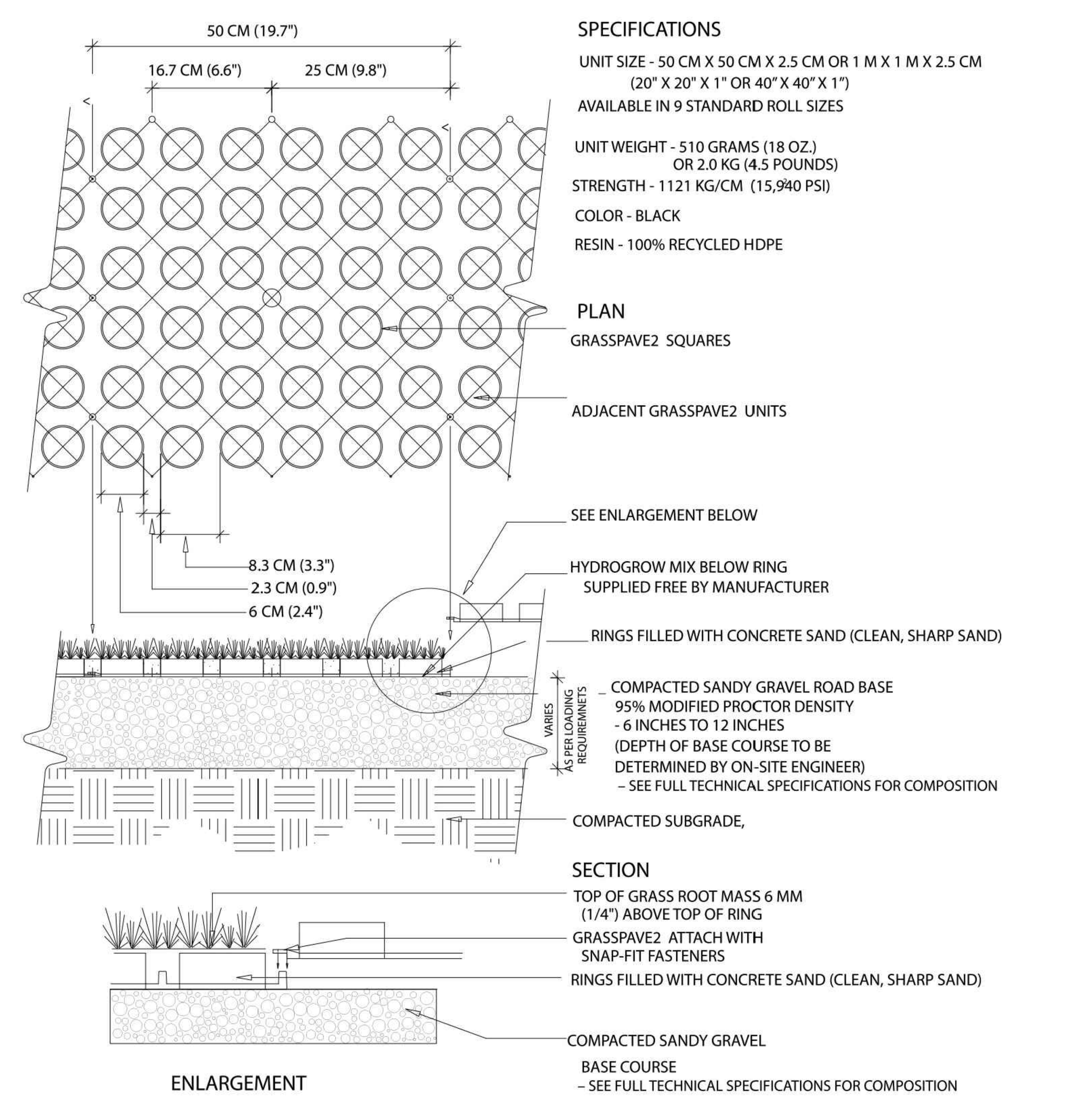
NOTE: MODIFIED COMBINATION CURB AND GUTTER

1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE, AND SHALL NOT BE USED WHERE THIS DRAINAGE CREATES A HAZARDOUS CONDITION.
2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.
3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EARTH, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

7/8 MODIFIED COMBINATION CURB AND GUTTER
NOT TO SCALE — HC DPW STD. R-3.01

TYPICAL GRASSPAVE2 DETAIL

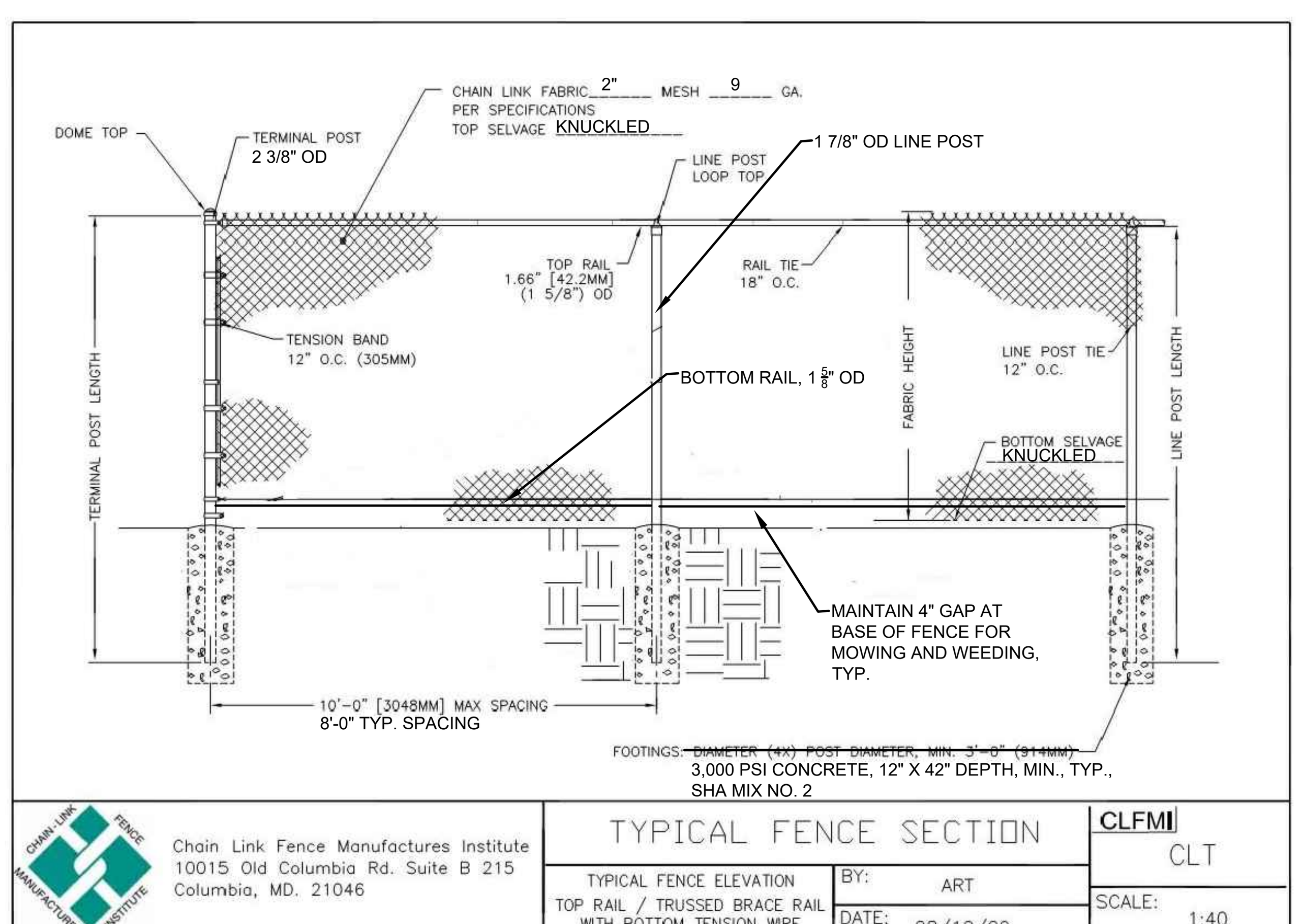
CHOOSE THIS PRODUCT FOR REINFORCING GRASS WEARING SURFACES

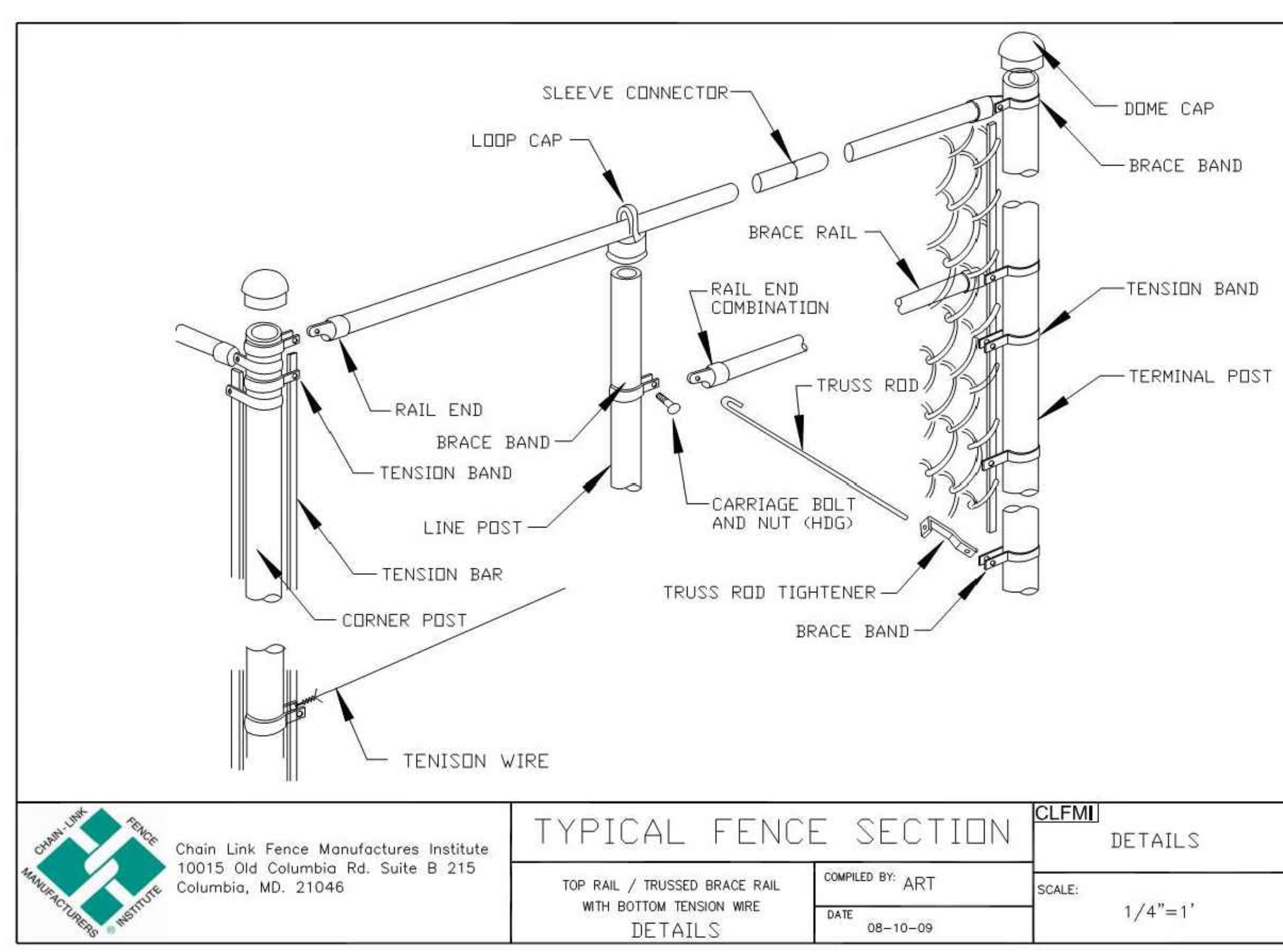


NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

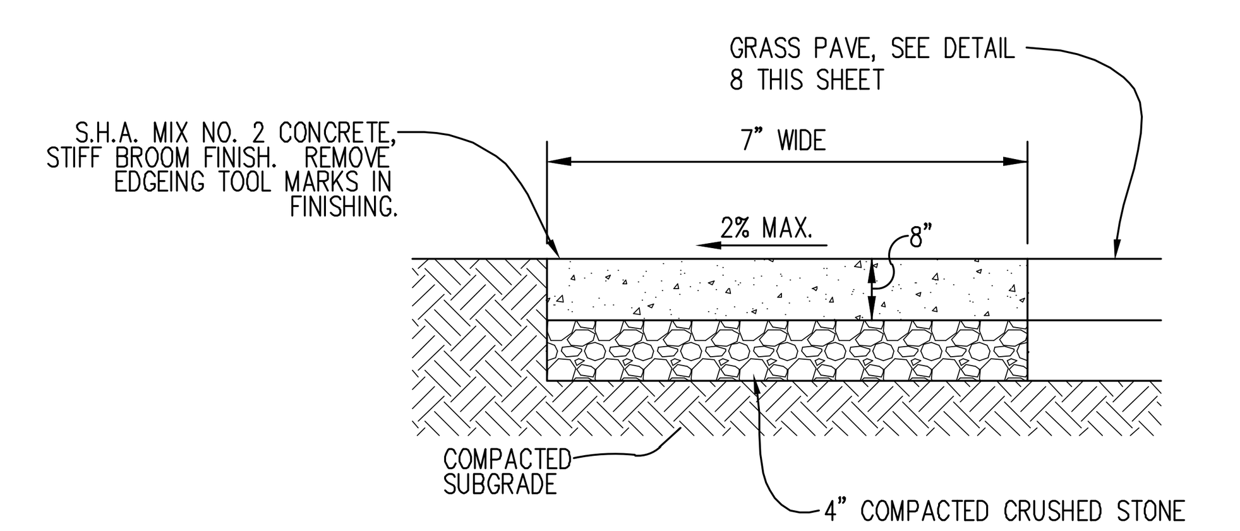
NOTE:
THE INSTALLATION OF THE FIRE LANE SHALL BE CERTIFIED BY A QUALIFIED PROFESSIONAL ENGINEER AND THAT THE CERTIFICATION IS TO BE PROVIDED TO THE OFFICE OF THE FIRE MARSHAL PRIOR TO OCCUPANCY OF THE BUILDING.

8/8 GRASS PAVE
NOT TO SCALE

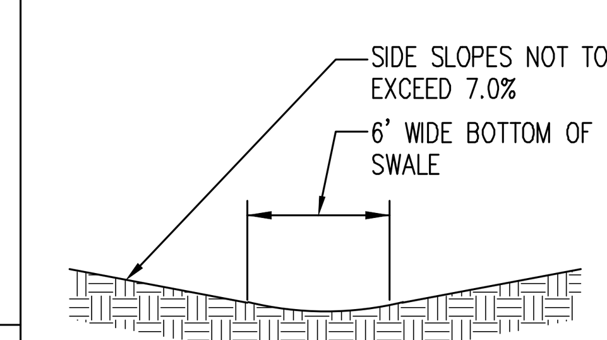




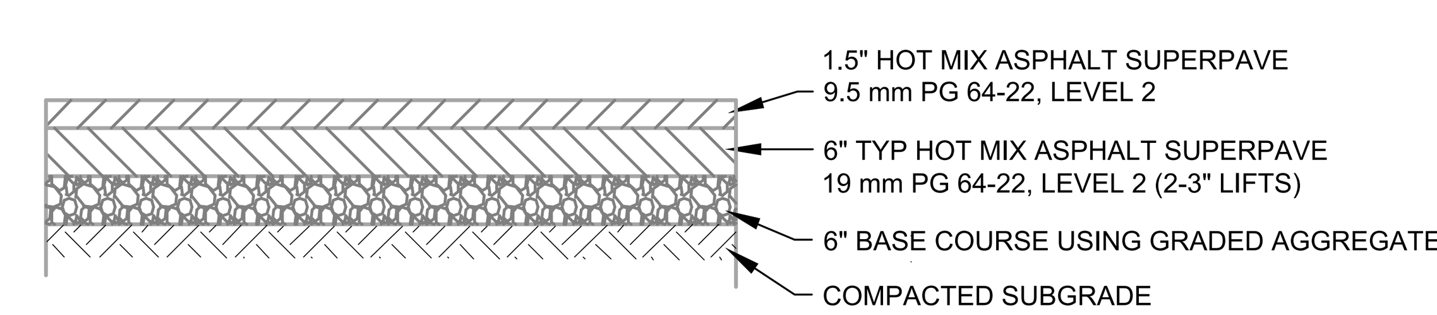
10/8 CHAIN LINK FENCE DETAILS
NOT TO SCALE



11/8 FLUSH CURB
NOT TO SCALE



12/8 SWALE
NOT TO SCALE



NOTE: ALL PAVING WITHIN R/W SHALL UTILIZE THIS PAVING SECTION

13/8 TYPICAL ROAD PAVING SECTION - MDOT SHA ACCESS MANUAL - LIGHT DUTY HMA PAVING SECTION
NOT TO SCALE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER: OLD TOWN CONSTRUCTION, 5304 DORSEY HALL DRIVE, ELLICOTT CITY, MD 21042, ATTN: JARED SPAHN, PHONE: 410-730-3725

OWNER: O'DONNELL PROPERTIES LLC, 5 LONGWOOD ROAD, BALTIMORE, MD 21210, ATTN: STEVE O'DONNELL, PHONE: 410-796-7968

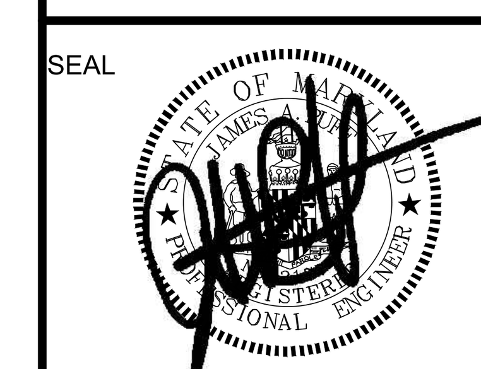
PROJECT: O'DONNELL PROPERTIES

AREA: TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13, ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT, 6720 BINDER LANE, ELKRIDGE, MARYLAND 21075, HOWARD COUNTY, MARYLAND

TITLE: SITE DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

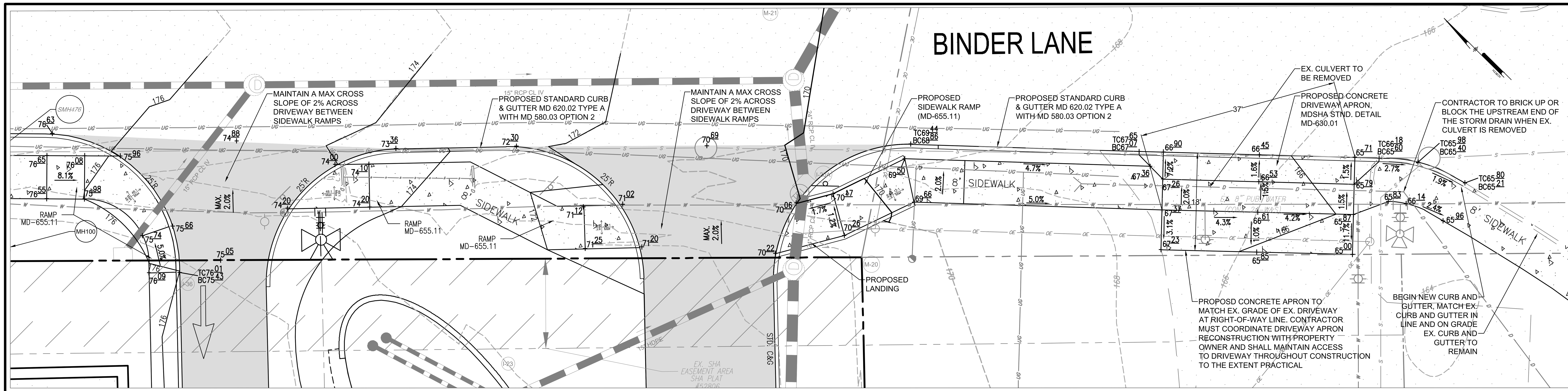
SEAL



BY:

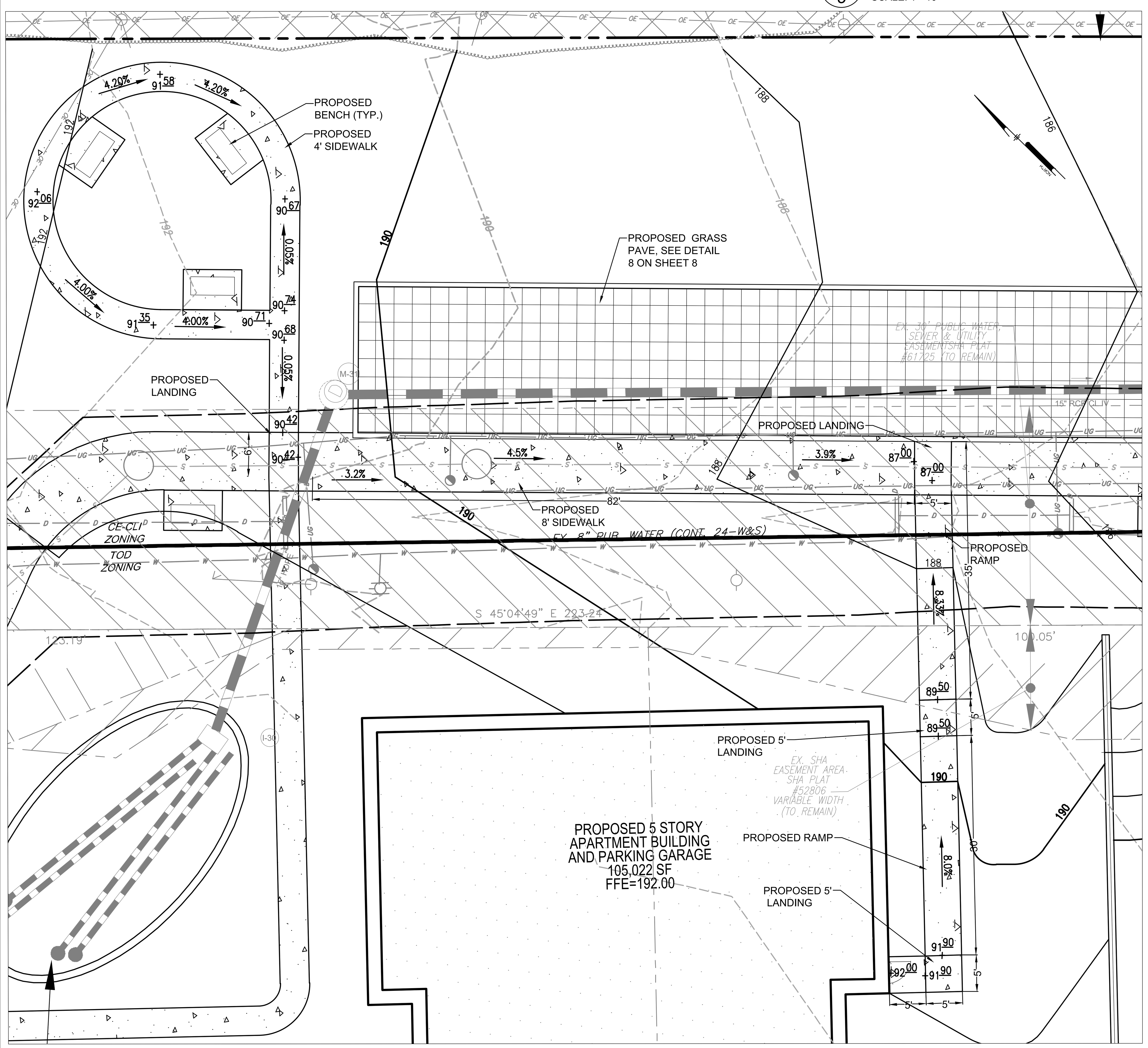
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21779, EXPIRATION DATE: 11/10/25."

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	AS SHOWN
DRAWING NO.	8 OF 27



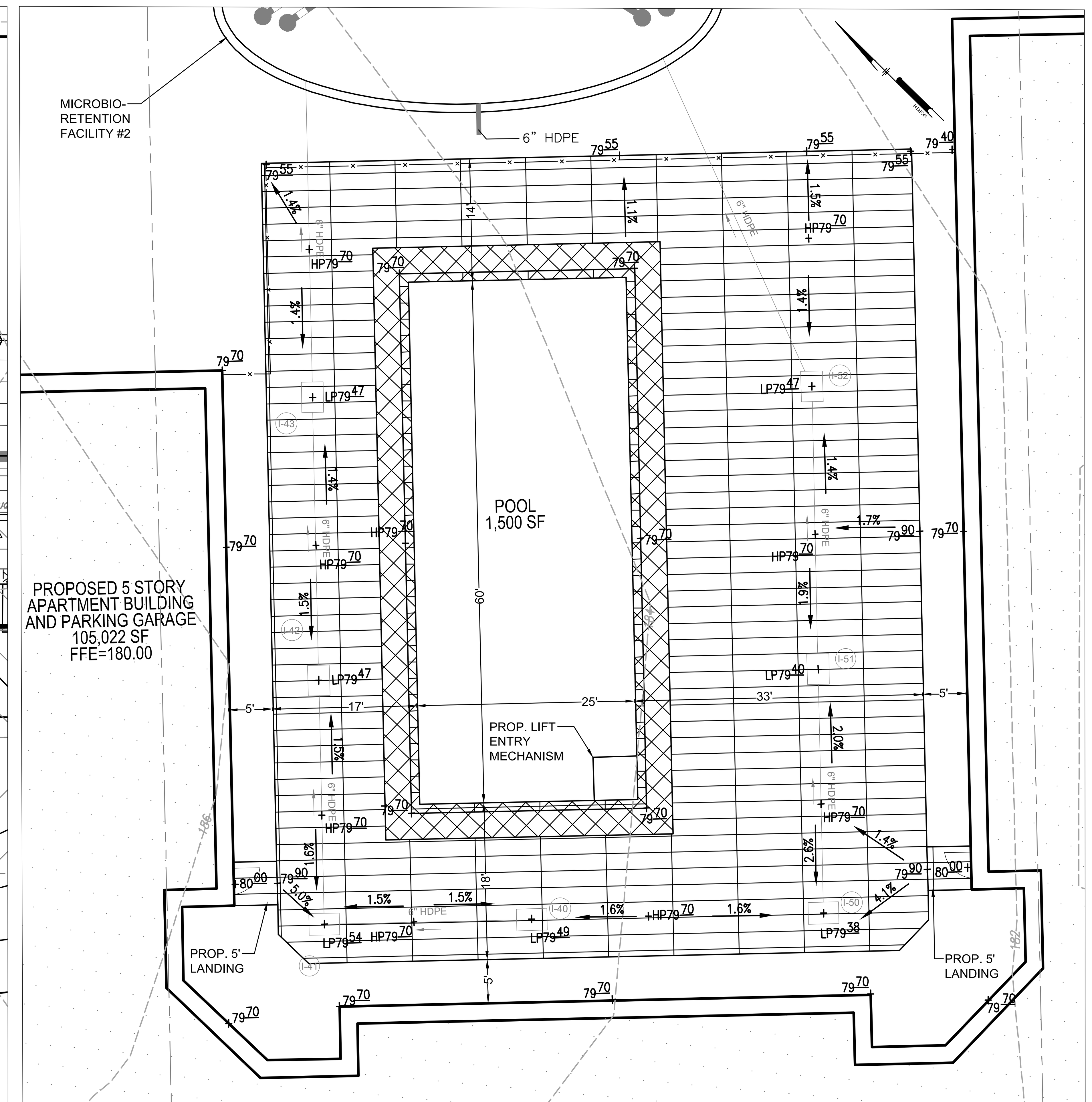
1/9 SIDEWALK AND DRIVEWAY APRONS ALONG BINDER LANE

SCALE: 1"=10'



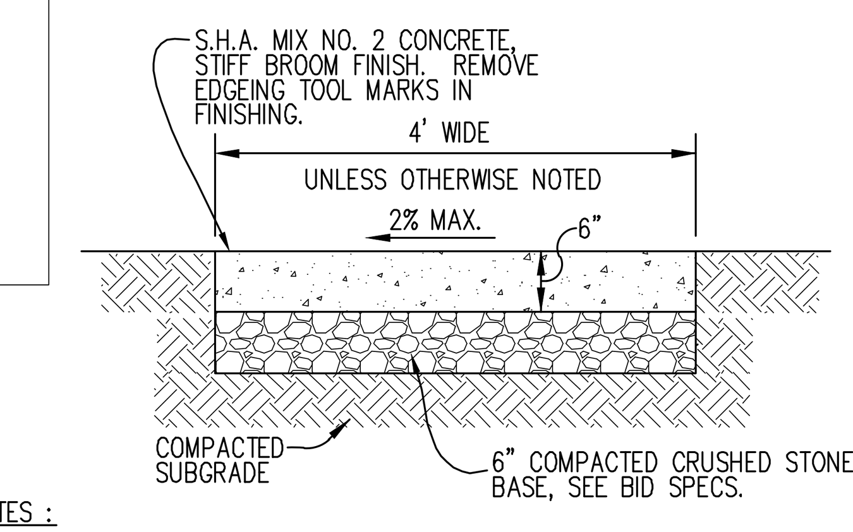
2/9 ACCESSIBLE ROUTE TO LOOP WALK

SCALE: 1"=10'



3/9 POOL AREA

SCALE: 1"=10'



NOTES :

1. PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.)
2. PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES. CONTRACTOR TO AVOID THE CREATION OF SMALL SCORED AREAS THAT WILL CRACK AND BREAK OFF FROM SIDWALK.
3. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
4. CONCRETE SHALL BE 3,000 PSI.

4/9 HEAVY DUTY CONCRETE SIDEWALK

NOT TO SCALE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION	BY

DEVELOPER: OLD TOWN CONSTRUCTION, 5304 DORSEY HALL DRIVE, ELLICOTT CITY, MD 21042, ATTN: JARED SPAHN, PHONE: 410-730-3725

OWNER: O'DONNELL PROPERTIES LLC, 5 LONGWOOD ROAD, BALTIMORE, MD 21210, ATTN: STEVE O'DONNELL, PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA

TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

SITE DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

BY:

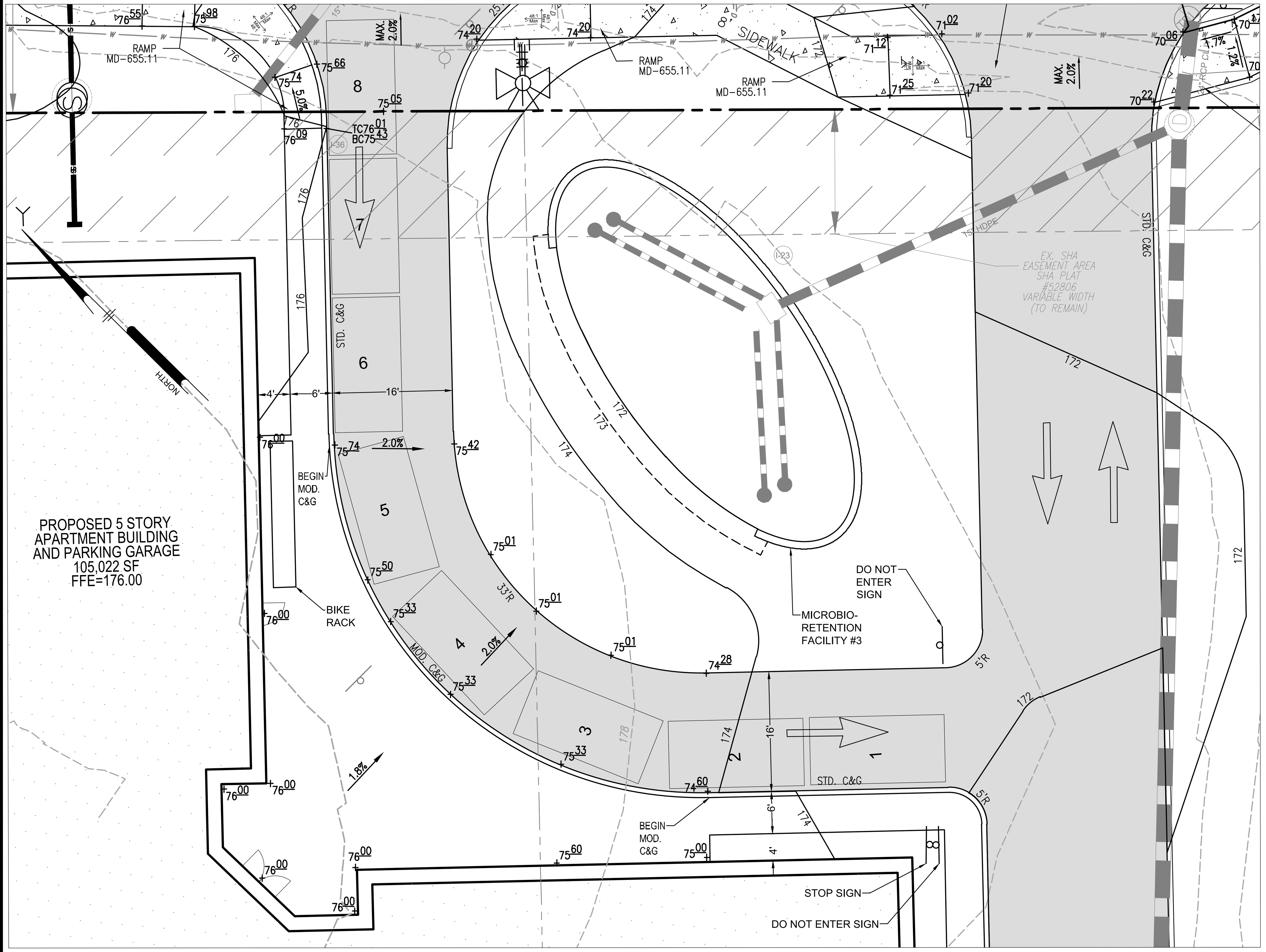
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	AS SHOWN
DRAWING NO.	9 OF 27

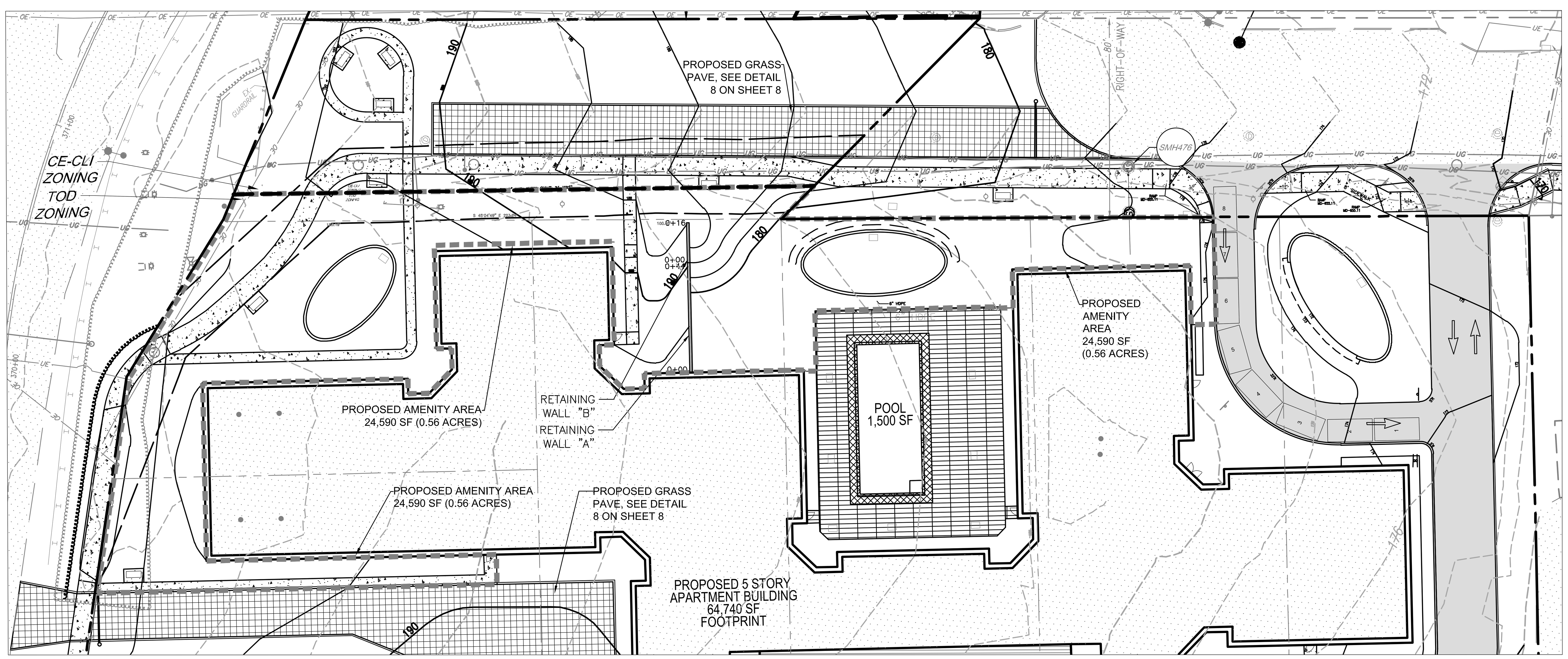
0 10' 20'

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP09-10 SITE DETAILS.dwg

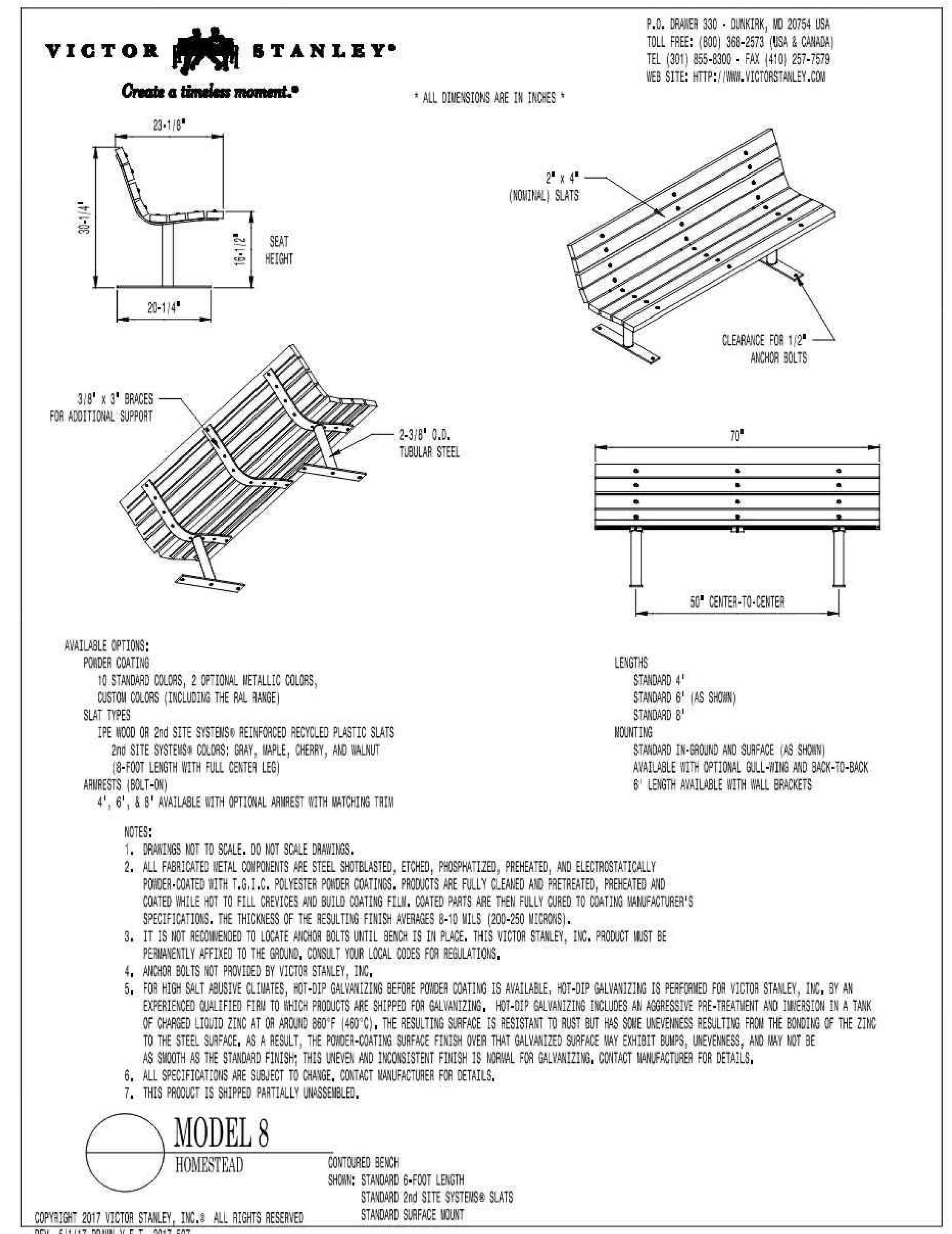
MDOT SHA TRACKING #23APHO006XX SDP-23-013

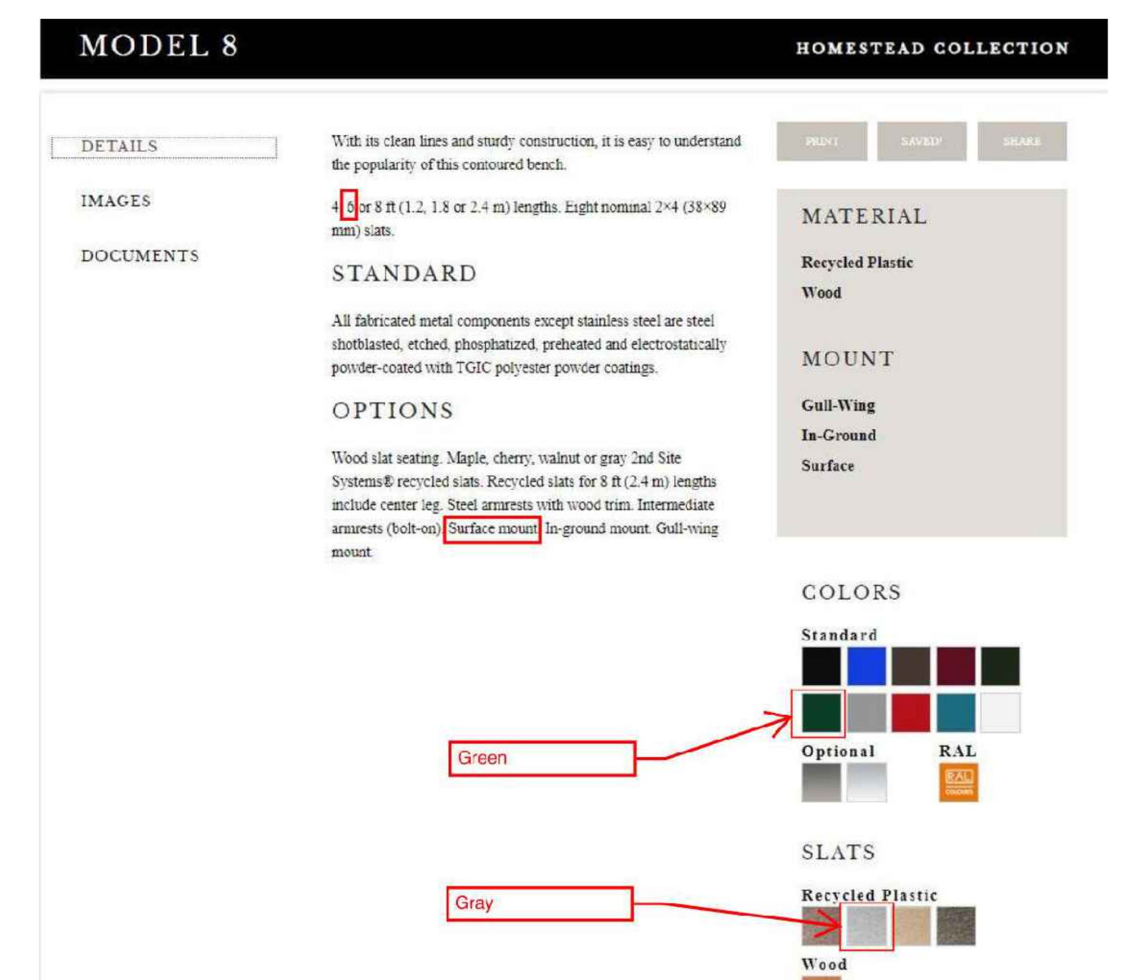


1/10 DROP-OFF AREA
SCALE: 1"=10'

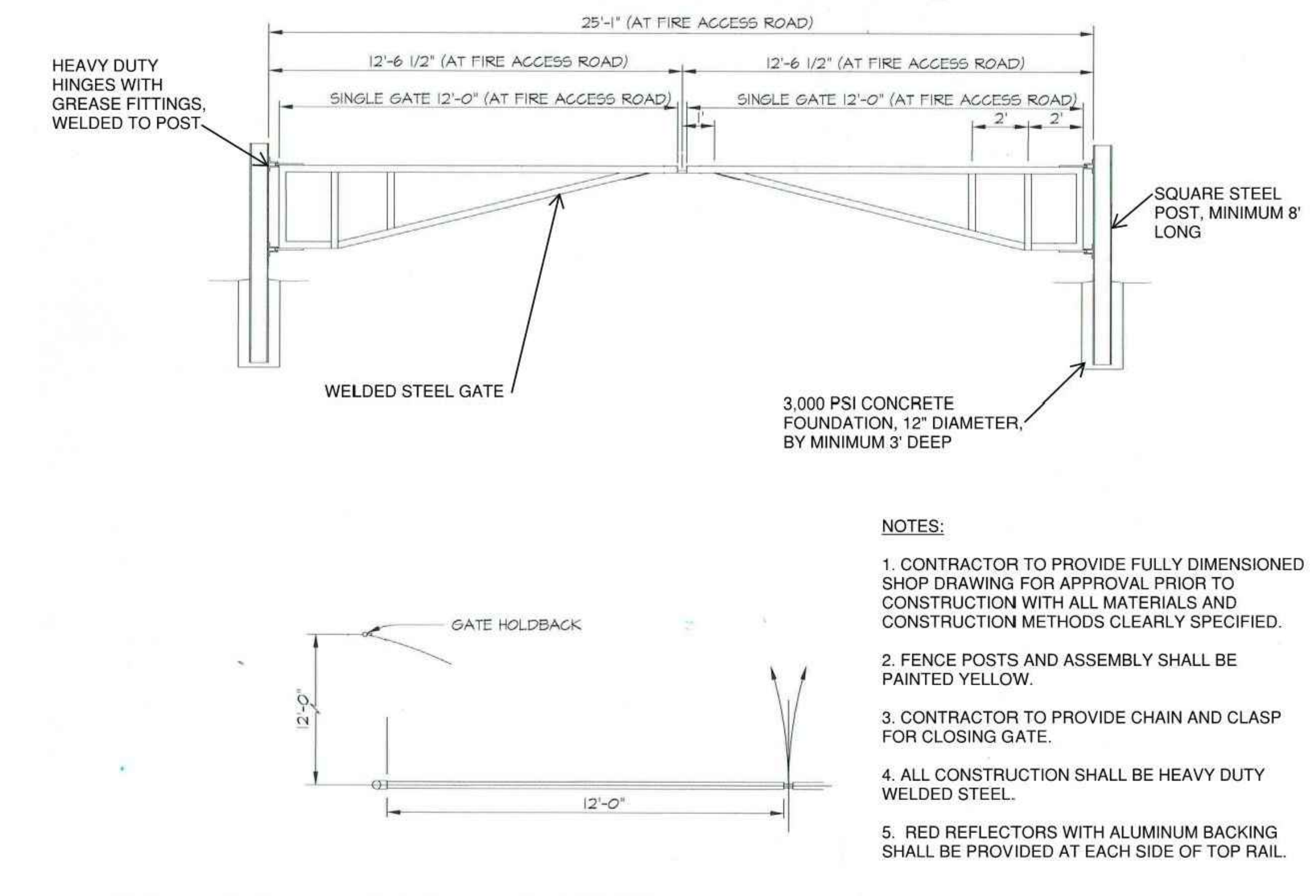


2/10 AMENITY AREA
SCALE: 1"=30'





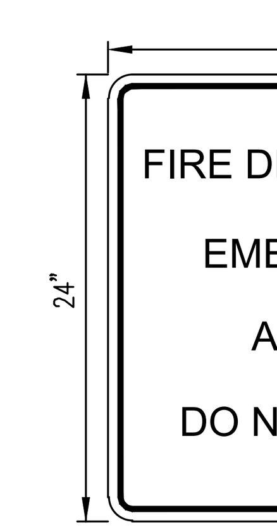
3/10 BENCH
NOT TO SCALE



NOTES:

1. CONTRACTOR TO PROVIDE FULLY DIMENSIONED SHOP DRAWING FOR APPROVAL PRIOR TO CONSTRUCTION WITH ALL MATERIALS AND CONSTRUCTION METHODS CLEARLY SPECIFIED.
2. FENCE POSTS AND ASSEMBLY SHALL BE PAINTED YELLOW.
3. CONTRACTOR TO PROVIDE CHAIN AND CLASP FOR CLOSING GATE.
4. ALL CONSTRUCTION SHALL BE HEAVY DUTY WELDED STEEL.
5. RED REFLECTORS WITH ALUMINUM BACKING SHALL BE PROVIDED AT EACH SIDE OF TOP RAIL.

4/10 FIRE LANE GATE
NOT TO SCALE



BORDER – WHITE
TEXT – WHITE ON RED BACKGROUND
BACKGROUND – RED

NOTES
1. SIGN TO BE MOUNTED ON BOTH ARMS OF DOUBLE SWING GATE, SEE DETAIL 5 ON THIS SHEET.

5/10 FIRE LANE SIGN
NOT TO SCALE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER: OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER: O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

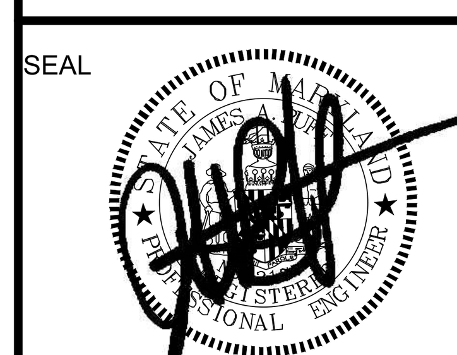
AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

SITE DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL



BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 10 OF 27

0 10' 20'

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP09-10 SITE DETAILS.dwg

LEGEND

- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EX. PROPERTY LINE AND RIGHT OF WAY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- EXISTING CURB & GUTTER
- EXISTING FIRE HYDRANT
- EXISTING ZONING
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- LIMIT OF DISTURBANCE
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED STORM DRAIN
- PROPOSED BUILDING
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED FIRE LANE
- STORM DRAIN DRAINAGE AREA

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

STORM DRAIN DRAINAGE AREA MAP

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

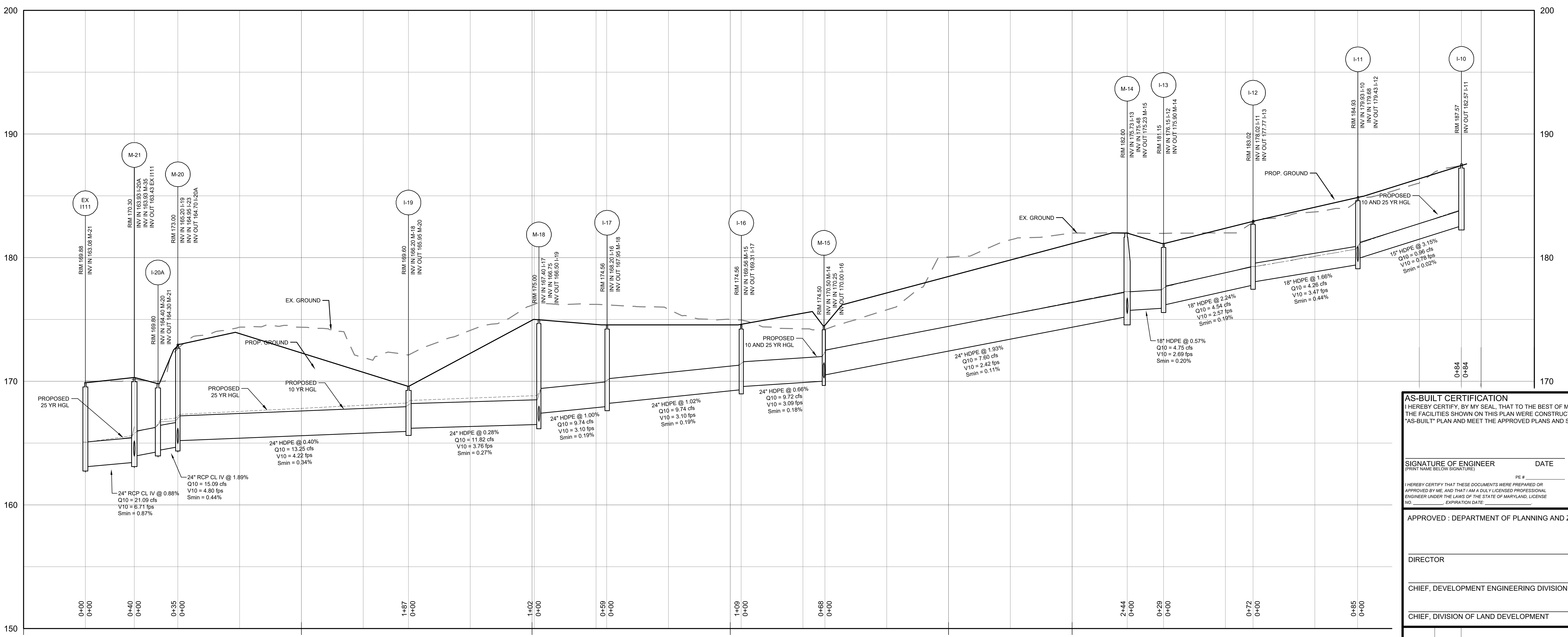
SEAL

BY:

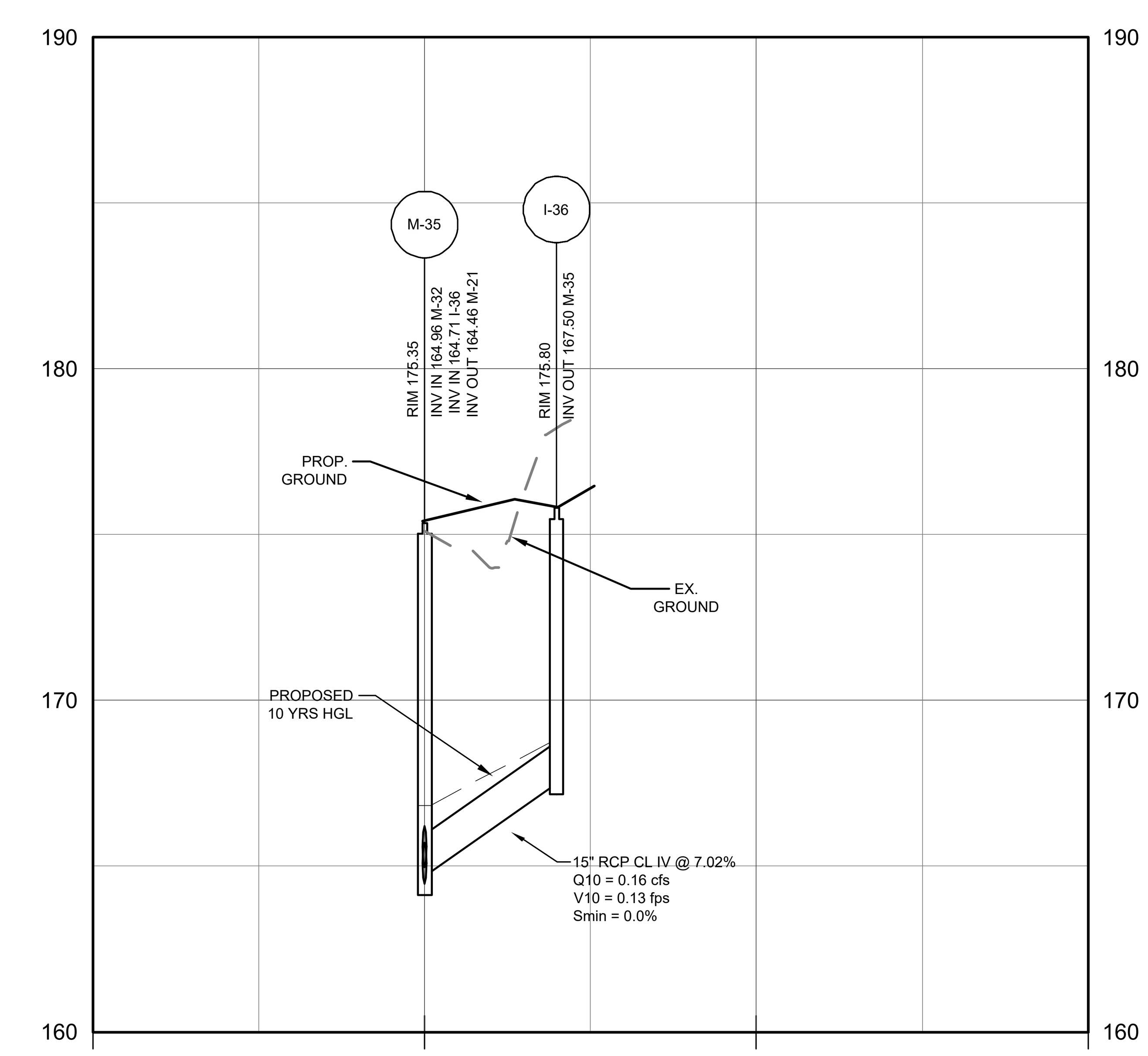
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21724, EXPIRATION DATE: 11/10/25."

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	11 OF 27

MDOT SHA TRACKING #23APHO006XX SDP-23-013



I10 TO I22
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



I35 TO I 36 3+00
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

PUBLIC STORM DRAIN STRUCTURE SCHEDULE									
ID	RIM ELEVATION	AS-BUILT	INV IN (FROM)	AS-BUILT	INV OUT (TO)	AS-BUILT	TYPE	NORTHING	EASTING
EX I111	169.88		163.08 (24" RCP CL IV @ 0.88%) M-21				EX. PRECAST INLET	553336.7378	1381051.8824
I-20A	169.80		164.40 (24" RCP CL IV @ 1.89%) M-20		164.30 (24" RCP CL IV) M-21		SINGLE WR INLET, MD-374.21	553311.6376	1381001.4712
I-33	177.69		171.92 (15" RCP CL IV @ 0.54%) I-34		171.67 (15" RCP CL IV) M-32		PRECAST YARD INLET, MD-381.02	553478.2014	1380821.8737
I-36	175.80				167.50 (15" RCP CL IV) M-35		PRECAST YARD INLET MD-381.02	553391.8910	1380903.1232
M-21	170.30		163.93 (24" RCP CL IV @ 1.93%) I-20A 163.93 (15" RCP CL IV @ 0.53%) M-35		163.43 (24" RCP CL IV) EX I111		48" PRECAST MANHOLE, MD-384.01	553326.4814	1381013.6459
M-32	181.50		171.45 (15" RCP CL IV @ 6.49%) M-31 171.47 (15" RCP CL IV @ 0.62%) I-33		171.23 (15" RCP CL IV) M-35		48" PRECAST MANHOLE, MD-384.01	553485.6165	1380853.4535
M-35	175.35		164.96 (15" RCP CL IV @ 4.98%) M-32 164.71 (15" RCP CL IV @ 7.02%) I-36		164.46 (15" RCP CL IV) M-21		48" PRECAST MANHOLE, MD-384.01	553396.7867	1380942.5812

PUBLIC STORM DRAIN PIPE TABLE							
MATERIAL	DIAMETER (in)	LENGTH (ft)	FROM STRUCTURE	TO STRUCTURE	INV IN	INV OUT	SLOPE
RCP CL IV	15"	32'**	I-33	M-32	171.47	171.67	0.62%
RCP CL IV	15"	15'	I-34	I-33	171.92	172.00	0.54%
RCP CL IV	15"	40'	I-36	M-35	164.71	167.50	7.02%
RCP CL IV	15"	100'	M-35	M-21	163.93	164.46	0.53%
RCP CL IV	15"	126'	M-32	M-35	164.96	171.23	4.98%
RCP CL IV	24"	40'	M-21	EX I111	163.08	163.43	0.88%
RCP CL IV	24"	16'	M-20	I-20A	164.40	164.70	1.89%

** NOTE: THIS TOTAL INCLUDES 12' PRIVATE STORM DRAIN PIPE & 36' PUBLIC STORM DRAIN PIPE

PUBLIC STORM DRAIN PIPE SCHEDULE			
USE	TYPE	SIZE	LENGTH
STORM DRAIN	RCP CL IV	15"	130'
STORM DRAIN	RCP CL IV	24"	111'

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)

PE # ________________

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ____________, EXPIRATION DATE: ________________.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

STORM DRAIN PROFILES AND SCHEDULES

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

SEAL

BY:_______________

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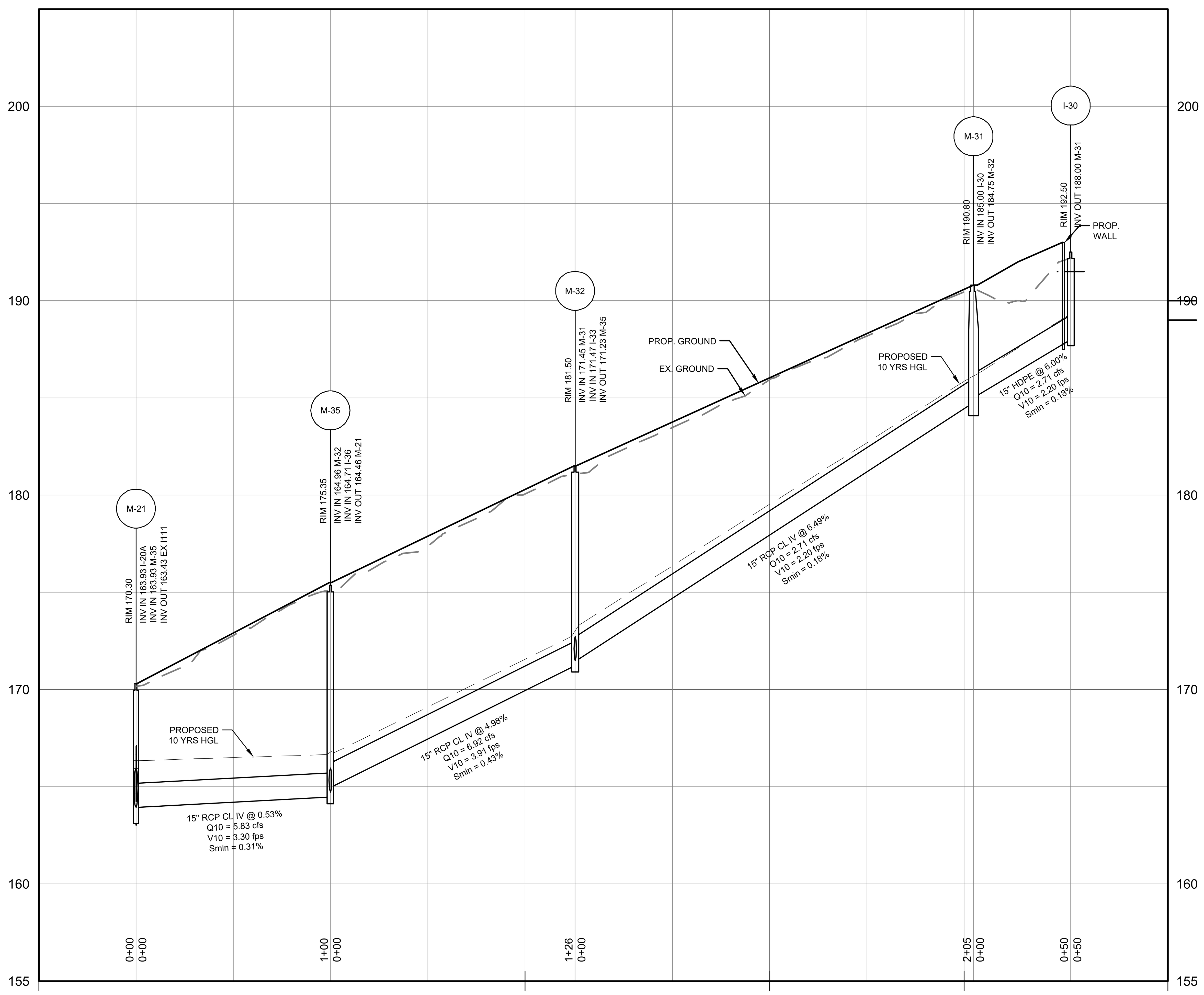
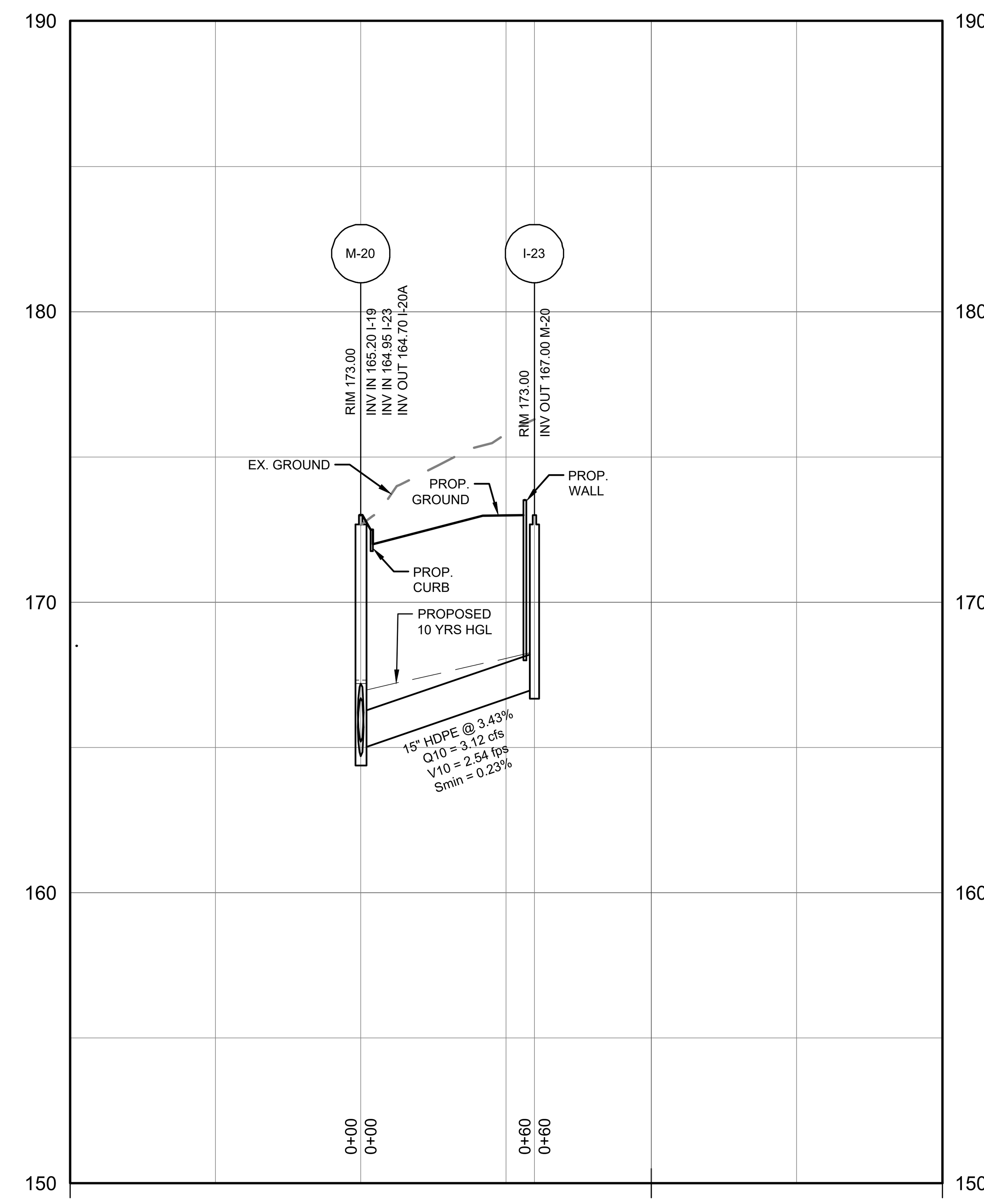
DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 12 OF 27

0 40' 80'

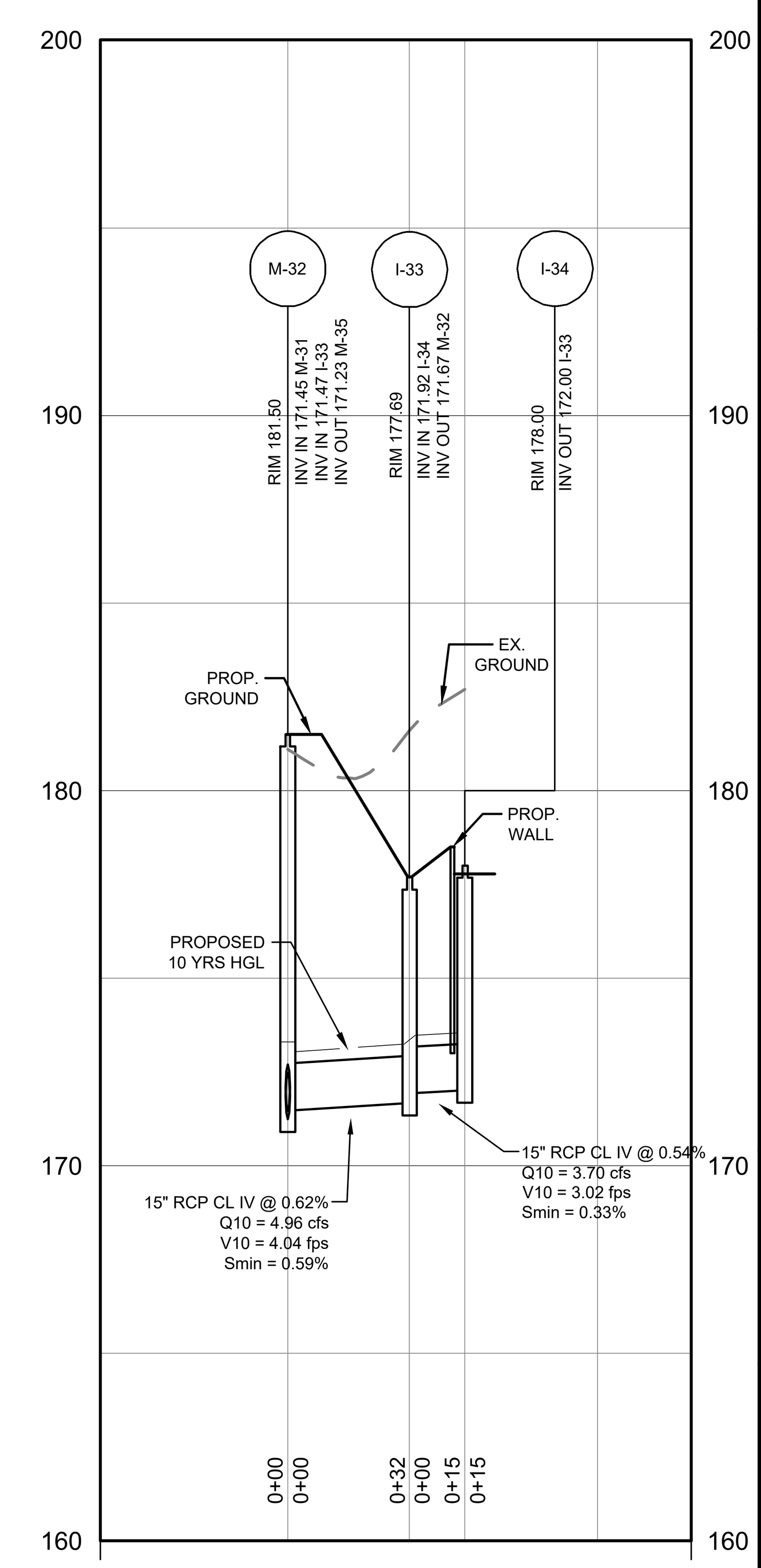
U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP12 SD PROFILE.dwg



I30 T M24
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



I-23 TO M-20
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



I32 TO I34 3+00
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

PRIVATE STORM DRAIN STRUCTURE SCHEDULE

ID	RIM ELEVATION	AS-BUILT	INV IN (FROM)	AS-BUILT	INV OUT (TO)	AS-BUILT	TYPE	NORTHING	EASTING
I-10	187.57				182.57 (15" HDPE) I-11		PRECAST YARD INLET D-4.12	553432.4815	1380585.9333
I-11	184.93		179.93 (15" HDPE @ 3.15%) I-10 179.68 (15" HDPE @ 3.51%)		179.43 (18" HDPE) I-12		PRECAST YARD INLET D-4.12	553369.3318	1380530.7558
I-12	183.02		178.02 (18" HDPE @ 1.66%) I-11		177.77 (18" HDPE) I-13		PRECAST YARD INLET D-4.12	553308.3236	1380471.8339
I-13	181.15		176.15 (18" HDPE @ 2.24%) I-12		175.90 (18" HDPE) M-14		PRECAST YARD INLET D-4.12	553256.1523	1380421.6762
I-16	174.56		169.56 (24" HDPE @ 0.66%) M-15		169.31 (24" HDPE) I-17		PRECAST YARD INLET D-4.12	553105.4907	1380647.2057
I-17	174.56		168.20 (24" HDPE @ 1.02%) I-16		167.95 (24" HDPE) M-18		PRECAST YARD INLET D-4.12	553183.6762	1380722.4745
I-19	169.60		166.20 (24" HDPE @ 0.28%) M-18		165.95 (24" HDPE) M-20		PRECAST WR INLET D-4.32	553173.1877	1380853.5941
I-23	173.00				167.00 (15" HDPE) M-20		24" NYLOPLAST DRAIN BASIN	553323.0738	1380932.9871
I-30	192.50				188.00 (15" HDPE) M-31		24" NYLOPLAST DRAIN BASIN	553608.4622	1380662.9816
I-34	178.00				172.00 (15" RCP CL IV) I-33		24" NYLOPLAST DRAIN BASIN	553474.8456	1380807.5143
M-14	182.00		175.73 (18" HDPE @ 0.57%) I-13 175.48 (15" HDPE @ 16.93%)		175.23 (24" HDPE) M-15		4' PRECAST MANHOLE HOCO DPW G-5.12	553226.5236	1380422.3687
M-15	174.50		170.50 (24" HDPE @ 1.93%) M-14 170.25 (15" HDPE @ 6.75%)		170.00 (24" HDPE) I-16		2' X 4'	553057.6362	1380600.5887
M-18	175.00		167.40 (24" HDPE @ 1.00%) I-17 166.75 (15" HDPE @ 28.45%)		166.50 (24" HDPE) I-19		4' PRECAST MANHOLE HOCO DPW G-5.12	553223.3833	1380760.7731
M-20	173.00		165.20 (24" HDPE @ 0.40%) I-19 164.95 (15" HDPE @ 3.43%) I-23		164.70 (24" RCP CL IV) I-20A		4' PRECAST MANHOLE HOCO DPW G-5.12	553301.7234	1380988.7775
M-31	190.80		185.00 (15" HDPE @ 6.00%) I-30		184.75 (15" RCP CL IV) M-32		4' PRECAST MANHOLE HOCO DPW G-5.12	553629.9235	1380708.1235

PRIVATE STORM DRAIN PIPE TABLE

MATERIAL	DIAMETER (in)	LENGTH (ft)	FROM STRUCTURE	TO STRUCTURE	INV IN	INV OUT	SLOPE
HDPE	24"	187'	I-19	M-20	165.20	165.95	0.40%
HDPE	24"	106'	M-18	I-19	166.20	166.50	0.28%
HDPE	24"	109'	I-16	I-17	168.20	169.31	1.02%
HDPE	18"	30'	I-13	M-14	175.73	175.90	0.57%
HDPE	15"	84'	I-10	I-11	179.93	182.57	3.15%
HDPE	24"	246'	M-14	M-15	170.50	175.23	1.93%
HDPE	24"	67' **	M-15	I-16	169.56	170.00	0.66%
HDPE	15"	60'	I-23	M-20	164.95	167.00	3.43%
HDPE	15"	50'	I-30	M-31	185.00	188.00	6.00%
HDPE	18"	85'	I-11	I-12	178.02	179.43	1.66%
HDPE	18"	72'	I-12	I-13	176.15	177.77	2.24%
HDPE	24"	55'	I-17	M-18	167.40	167.95	1.00%
RCP CL IV	15"	205'	M-31	M-32	171.45	184.75	6.49%

** NOTE: THIS TOTAL INCLUDES 175' PRIVATE STORM DRAIN PIPE & 30' PUBLIC STORM DRAIN PIPE

PRIVATE STORM DRAIN PIPE SCHEDULE

USE	TYPE	SIZE	LENGTH
STORM DRAIN	HDPE	15"	309'
STORM DRAIN	HDPE	18"	190'
STORM DRAIN	HDPE	24"	771'

0 40' 80'

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)
PE #
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ______ EXPIRATION DATE: ______

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
STORM DRAIN PROFILES AND SCHEDULES

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

BY:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 13 OF 27

MDOT SHA TRACKING #23APHO006XX SDP-23-013

GENERAL NOTES

1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN JANUARY 2018 BY PENNONI ASSOCIATES THE BOUNDARY SURVEY IS PROVIDED BY PENNONI ASSOCIATES, INC., DATED JANUARY 2018.

3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 43CE AND NO. 43FC.

4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

5. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.

6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.

7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.

8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T	1-800-252-1133
BGE (CONTRACTOR SERVICES)	410-637-8713
BGE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033

9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.

10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS, AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.

11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.

12. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION (C.I.D.) AT (410) 313.1800 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF ANY ADO CONSTRUCTION ACTIVITIES TO SCHEDULE A PRE-CONSTRUCTION SITE MEETING AND INSPECTION. ALL WORK MUST BE PERFORMED UNDER THE CONTINUOUS INSPECTION OF DEPARTMENT OF PUBLIC WORKS C.I.D.

WATER NOTES

1. ALL WATER MAINS TO BE C900 PVC WITH MINIMUM WALL THICKNESS SDR 18 UNLESS OTHERWISE NOTED.

2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.

3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.

4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.

5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.

6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

7. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.

9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. TWELVE (12) POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.

10. PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE.

11. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ON FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THAT CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2 -DEGREE ON EITHER END OF THE COUPLING.), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.

12. WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

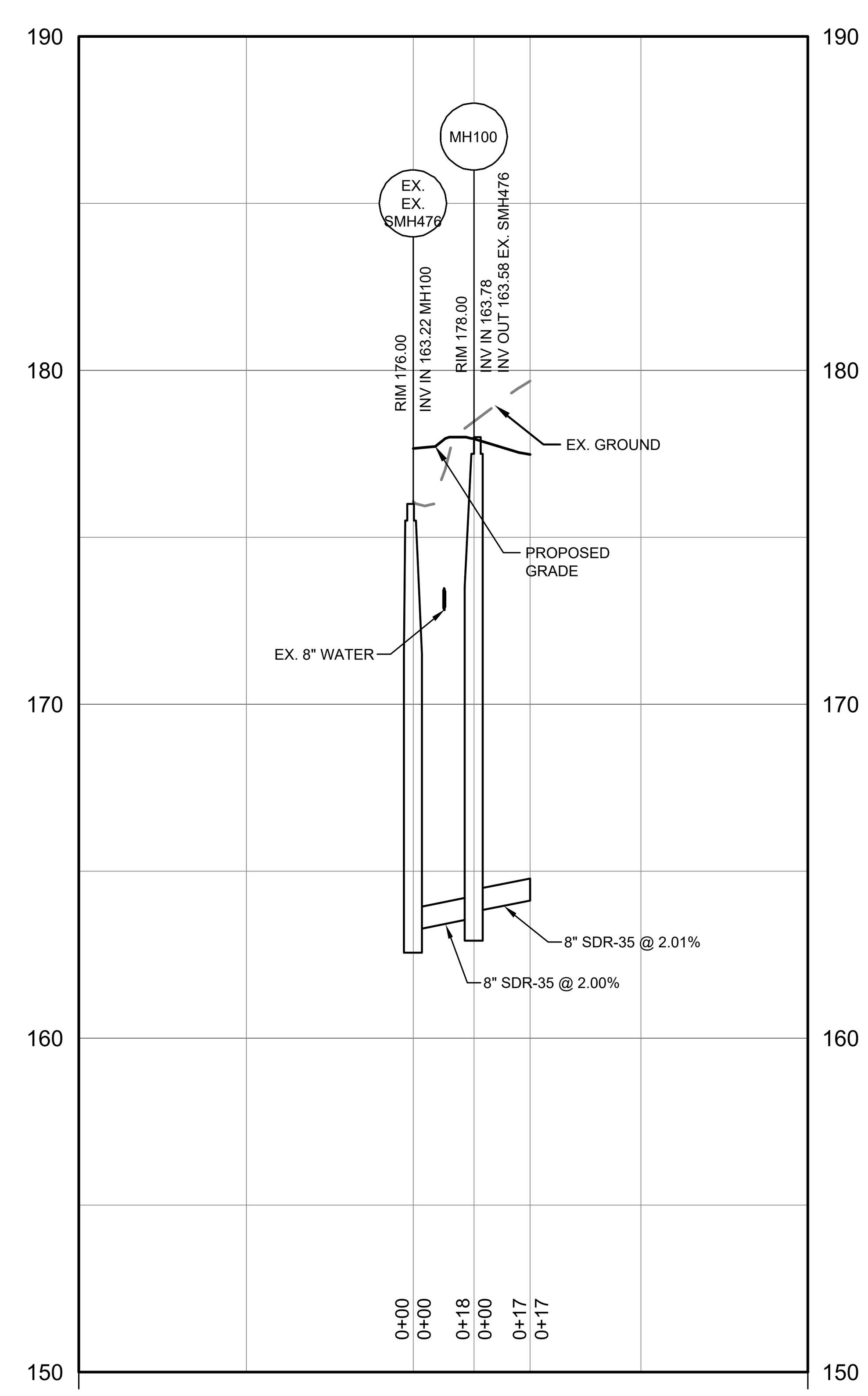
SEWER NOTES

1. ALL SEWER MAINS SHALL BE P.V.C. WITH MINIMUM WALL THICKNESS OF SDR 35 UNLESS OTHERWISE NOTED.

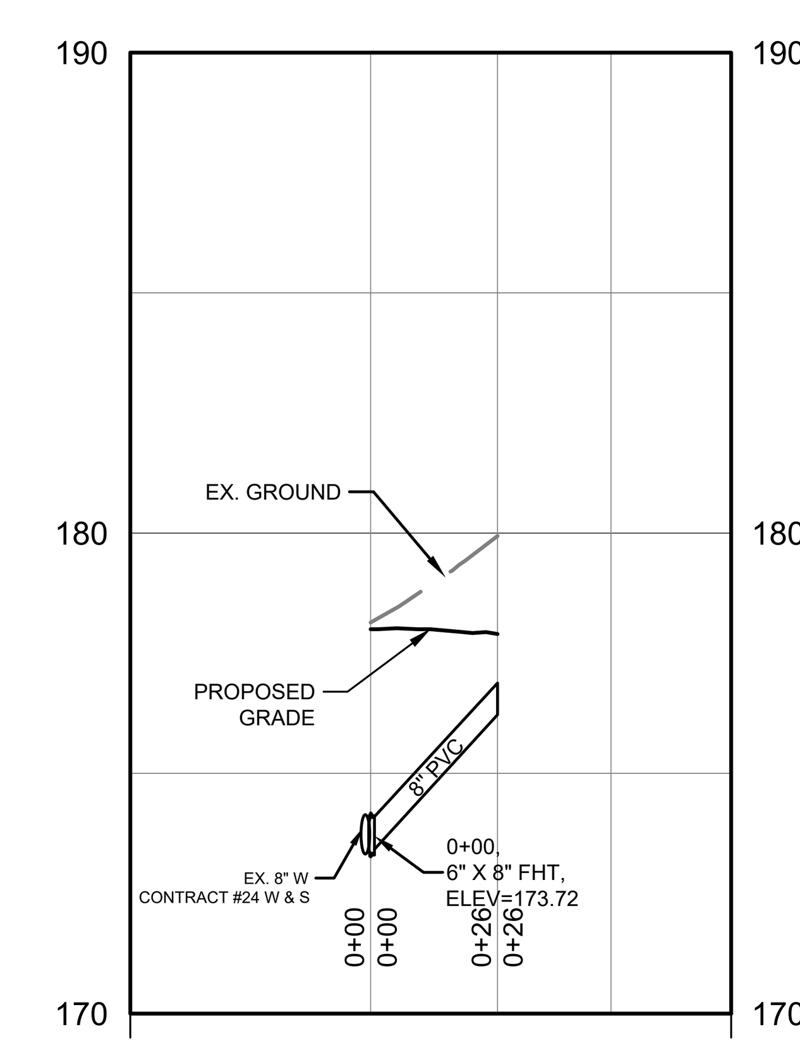
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

NOTE:

1. PRIOR TO ANY UTILITY INSTALLATION OR EXCAVATION, ALL UTILITY CROSSINGS SHALL REQUIRE HAND DUG TEST PIT PROCEDURES TO CONFIRM DEPTH AND LOCATION OF EXISTING UTILITIES ON SITE.



CO-1 TO EX SMH476
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



8 IN WATER
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

SANITARY SEWER STRUCTURE TABLE									
ID	RIM ELEVATION	AS-BUILT	INV IN (FROM)	AS-BUILT	INV OUT (TO)	AS-BUILT	TYPE	NORTHING	EASTING
EX. SMH476	176.00		163.22 (8" SDR-35 @ 2.00%) MH100				(4')	553422.2429	1380899.7415
MH100	178.00		163.78 (8" SDR-35 @ 2.01%)		163.58 (8" SDR-35) EX. SMH476		48" (4')	553409.1054	1380887.0941

SANITARY SEWER PIPE TABLE		
DIAMETER (in)	MATERIAL	LENGTH (ft)
8"	SDR-35	35'

0 40' 80'

AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)
PE # ________

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ________, EXPIRATION DATE: ________.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

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HOWARD COUNTY, MARYLAND

TITLE
PRIVATE UTILITY - SANITARY SEWER/ WATER PROFILES AND SCHEDULES

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
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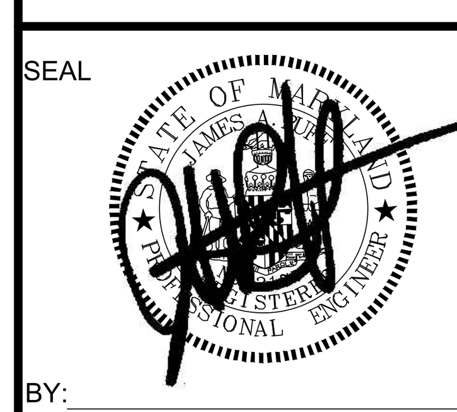
SEAL



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DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 14 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP14 WS PROFILES.dwg

CONCRETE NOTES

1 CONCRETE FOR FOUNDATIONS, FLOOR SLABS, AND SLAB-ON-GRADE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL DEVELOP A COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 3/4", MINIMUM CEMENT CONTENT OF 560 LBS/CU YD., AND A MAXIMUM SLUMP OF 4 INCHES.

2 CONCRETE EXPOSED TO THE WEATHER, SUCH AS THAT USED IN FOUNDATION WALLS AND EXTERIOR SLABS, SHALL CONTAIN 6% ENTRAINED AIR.

3 REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.

4 PROVIDE 1 1/8"X 1 1/4" DEEP SAW CUT CONTROL JOINTS AT 20' O/C MAXIMUM EACH WAY IN ALL BASEMENT, PORCH, AND GARAGE SLABS ON GRADE. CUT JOINTS WITHIN 24 HOURS OF PLACING THE SLAB.

5 PROVIDE 2-#5 BARS OVER AND 2-#4 EACH SIDE OF ALL OPENING IN WALLS. BARS TO BE 1 1/2" CLEAR OF AND EXTEND 12 INCHES PAST OPENING.

6 CONCRETE USED FOR EXTERIOR WALKWAYS AND SLABS SHALL HAVE A MAXIMUM WATER TO CEMENT RATIO OF 0.45.

7 PROVIDE THE FOLLOWING CLEARANCES FOR REINFORCING STEEL TO:

CAST AGAINST SOIL	3"
EXPOSED TO WEATHER (FORMED)	1 1/2"
NOT EXPOSED TO WEATHER	1"

8. ALL WORK TO BE PERFORMED IN CONFORMANCE WITH THE LATEST STANDARDS FOR PLACEMENT OF CONCRETE AS SET BY THE A.C.I.

9. ALL CONCRETE OR MASONRY WORK SHALL BE DONE DURING TEMPERATURES OF 28 DEGREES F. AND RISING MIN.

10. NO CONCRETE SHALL BE PLACED ON FROZEN SURFACES.

11. NO ADDITIVES SHALL BE ALLOWED WITHOUT WRITTEN PERMISSION OF THE ARCHITECT.

12. ALL CONCRETE TO BE POURED MONOLITHICALLY, WITHOUT COLD JOINTS, UNLESS SHOWN OTHERWISE OR PERMISSION IS OBTAINED IN WRITING FROM THE ARCHITECT PRIOR TO PLACEMENT.

GENERAL NOTES

1. THE WORK SHOWN ON THIS DRAWING HAS BEEN DESIGNED IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE

2. SEE LANDSCAPING PLAN FOR WALL LOCATION AND TOP OF WALL AND FINISH GRADE ELEVATIONS.

3. SITE WALL A APPLIES TO WALLS WITH A 12'-0" MAX GRADE DIFFERENTIAL
SITE WALL B APPLIES TO WALLS WITH A 6'-0" MAX GRADE DIFFERENTIAL
SITE WALL C APPLIES TO WALLS WITH A 3'-0" MAX GRADE DIFFERENTIAL

FOUNDATION NOTES

1 THE FOUNDATIONS HAVE BEEN DESIGNED TO REST ON UNDISTURBED CLASS GW, GP, SW, SP, SM, SC, GM, and GC HAVING A PRESUMPTIVE BEARING VALUE OF 3,000 PSF. IF PREDOMINANTLY CLAYEY AND/OR SILTY SOILS OR FILL IS ENCOUNTERED BENEATH FOOTINGS, THE MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL.

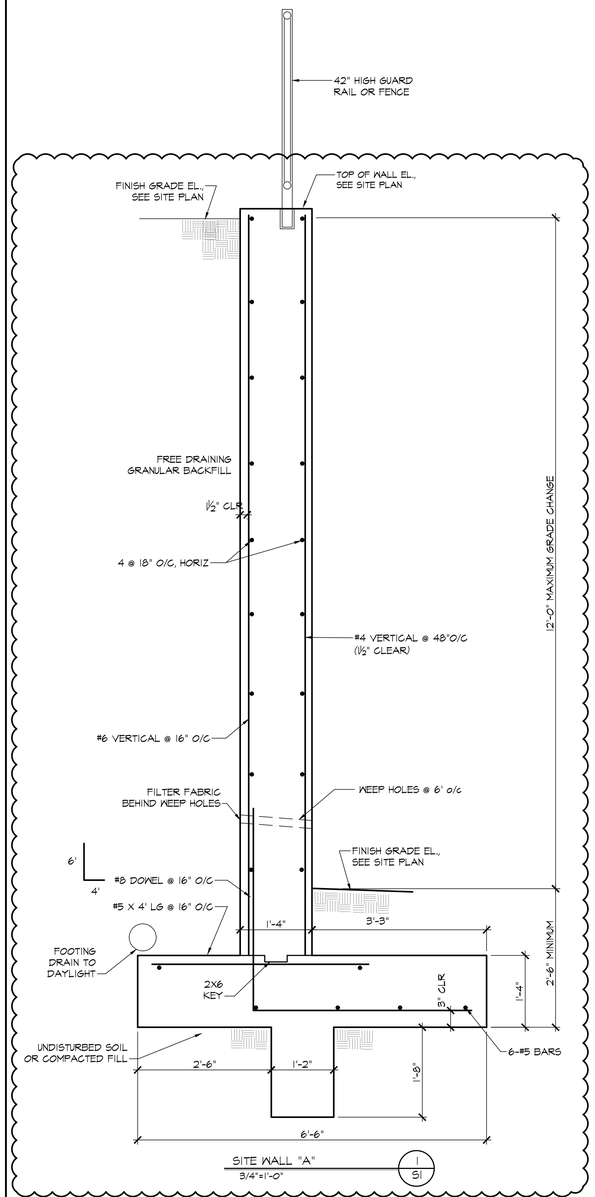
2 THE BOTTOM OF EXTERIOR FOOTINGS NOT ON SOLID ROCK SHALL BE AT LEAST 3'-6" BELOW FINISHED GRADE. FOOTINGS ON LEDGE SHALL REST ON BROOM CLEAN SOLID ROCK. IF THE SLOPE OF THE ROCK SURFACE EXCEEDS 1 ON 6, THE FOOTING SHALL BE DOWELED TO THE LEDGE WITH 3/4" STEEL RODS DRILLED 10 INCHES INTO THE ROCK SURFACE AT 2 FEET ON CENTER.

3 IN AREAS REQUIRING FILL, THE FILL MATERIAL SHALL BE A UNIFORMLY GRADED MIXTURE OF SAND AND GRAVEL WEIGHING NO LESS THAN 120 PCF DRY DENSITY AFTER COMPACTION IN PLACE. THIS MIXTURE SHALL BE UNIFORMLY GRADED HAVING NO STONE GREATER THAN 3 INCHES IN ANY ONE DIMENSION, AND WITH LESS THAN 10%, BY WEIGHT, PASSING A #100 SIEVE. THE FILL SHALL BE PLACED IN MAXIMUM LIFTS OF 8 INCHES BEFORE COMPACTION. EACH LIFT SHALL BE COMPACTED WITH APPROPRIATE EQUIPMENT TO A MINIMUM OF 95% OF ITS MAXIMUM DENSITY AT OR NEAR OPTIMUM MOISTURE. A SOILS TESTING LAB, HIRED BY THE OWNER, SHALL TEST THE MATERIAL BEFORE AND AFTER COMPACTION FOR CONFORMANCE WITH THIS SPECIFICATION. NO LIFTS SHALL BE PLACED WHEN WEATHER CONDITIONS ARE SUCH THAT THE MOISTURE CONTENT OF THE FILL CANNOT BE PROPERLY CONTROLLED. IN PLACING AND COMPACTING FILL AND BACKFILL MATERIAL, DO NOT DAMAGE NOR DISPLACE CONCRETE WORK ALREADY IN PLACE BY CONTACT FROM COMPACTION MACHINERY, BY SUBJECTING IT TO OVERTURNING FROM HEAVY COMPACTING LOADING, OR ANY OTHER CAUSE. BRING FILL AGAINST SUCH CONCRETE AT THE SAME RATE AS THE REMAINDER OF FILL, COMPACTING UNIFORMLY ON BOTH SIDES USING HAND OPERATED TAMPERS.

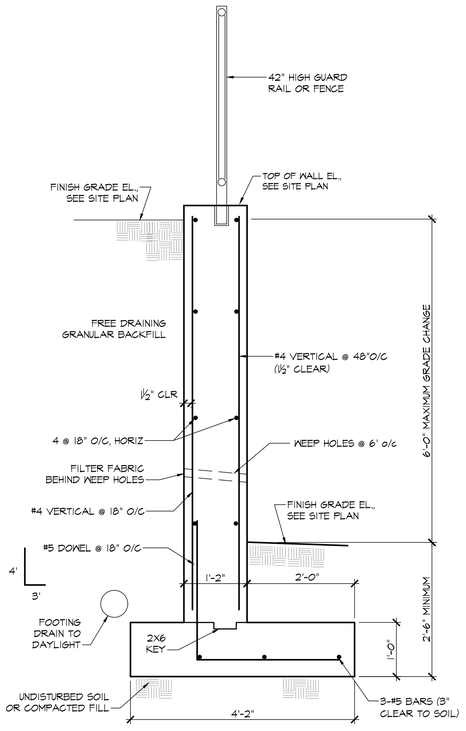
4 THE SLAB-ON-GRADE SUB-BASE SHALL BE STONE OR TRAP ROCK PASSING A 2 INCH SIEVE AND RETAINED ON A 1/2 INCH SIEVE.

5 THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING POURS TO MINIMIZE SHRINKAGE CRACKING. IN GENERAL, WALLS SHALL NOT BE POURED IN CONTINUOUS LENGTHS EXCEEDING 40 FEET AND SLABS NOT EXCEEDING 20 FEET WITHOUT CONTROL JOINTS. THE LOCATION AND CONFIGURATION OF JOINTS EXPOSED TO VIEW SHALL BE COORDINATED WITH THE ARCHITECT.

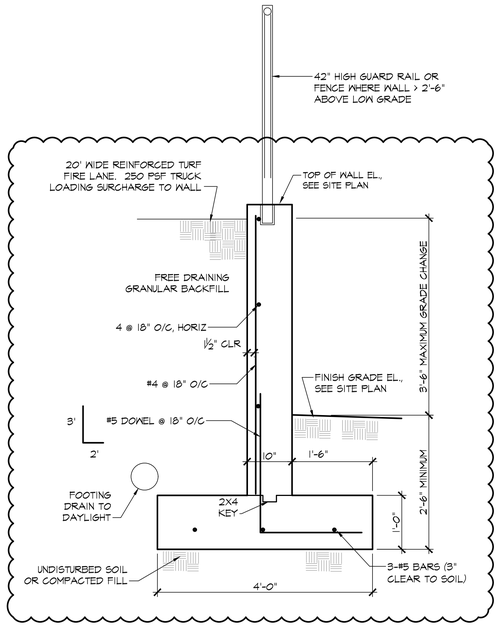
6 STEP FOOTING A MAXIMUM OF 1 FT VERTICAL ON 2 FT HORIZONTAL. PLACE LOWER FOOTING FIRST.



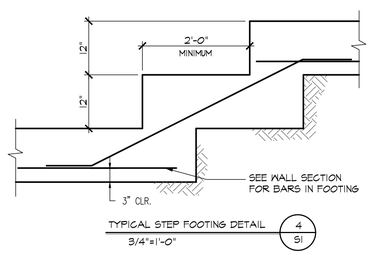
SITE WALL "A" 1 / S1
3/4"=1'-0"



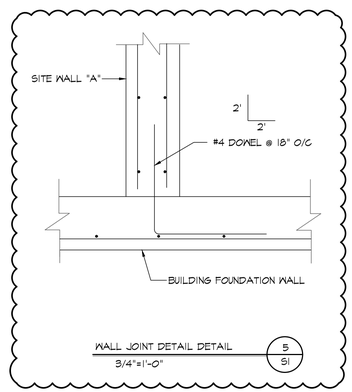
SITE WALL "B" 2 / S1
3/4"=1'-0"



SITE WALL "C" 3 / S1
3/4"=1'-0"



TYPICAL STEP FOOTING DETAIL 4 / S1
3/4"=1'-0"



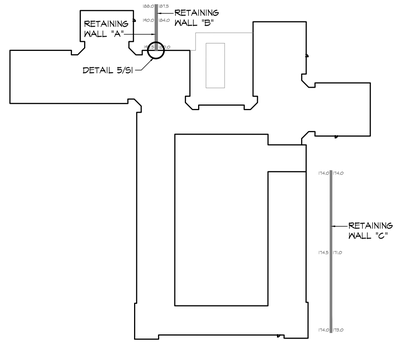
WALL JOINT DETAIL DETAIL 5 / S1
3/4"=1'-0"

NORTH:

BINDER LANE

WASHINGTON BLVD

DORSEY RD



SITE RETAINING WALL PLAN

NTS

SEE LANDSCAPE ARCHITECTS PLANS FOR ALL FINISH GRADES
SEE LANDSCAPE ARCHITECTS PLANS FOR ALL DIMENSIONS

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

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6724 W, 6728 DORSEY ROAD AND 6718 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
WALL DETAILS

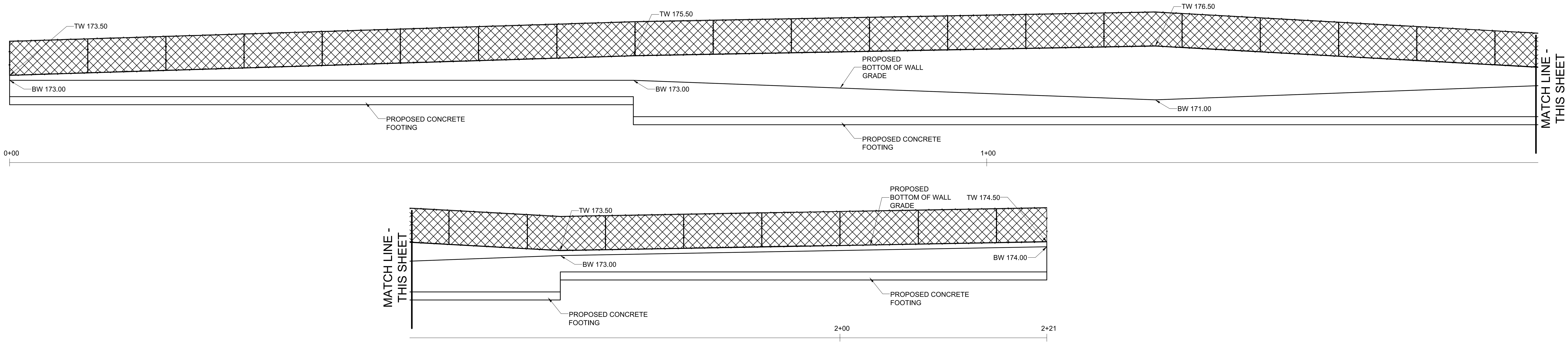
Prepared by:
Kelly Engineering
5 Flagship Ct
Palm Coast FL 32137
443-812-5153

SEAL

REVISED : NOVEMBER 2, 2023
DESIGNED BY : RJK
DRAWN BY: RJK
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : As Noted
DRAWING NO. 15 OF 27

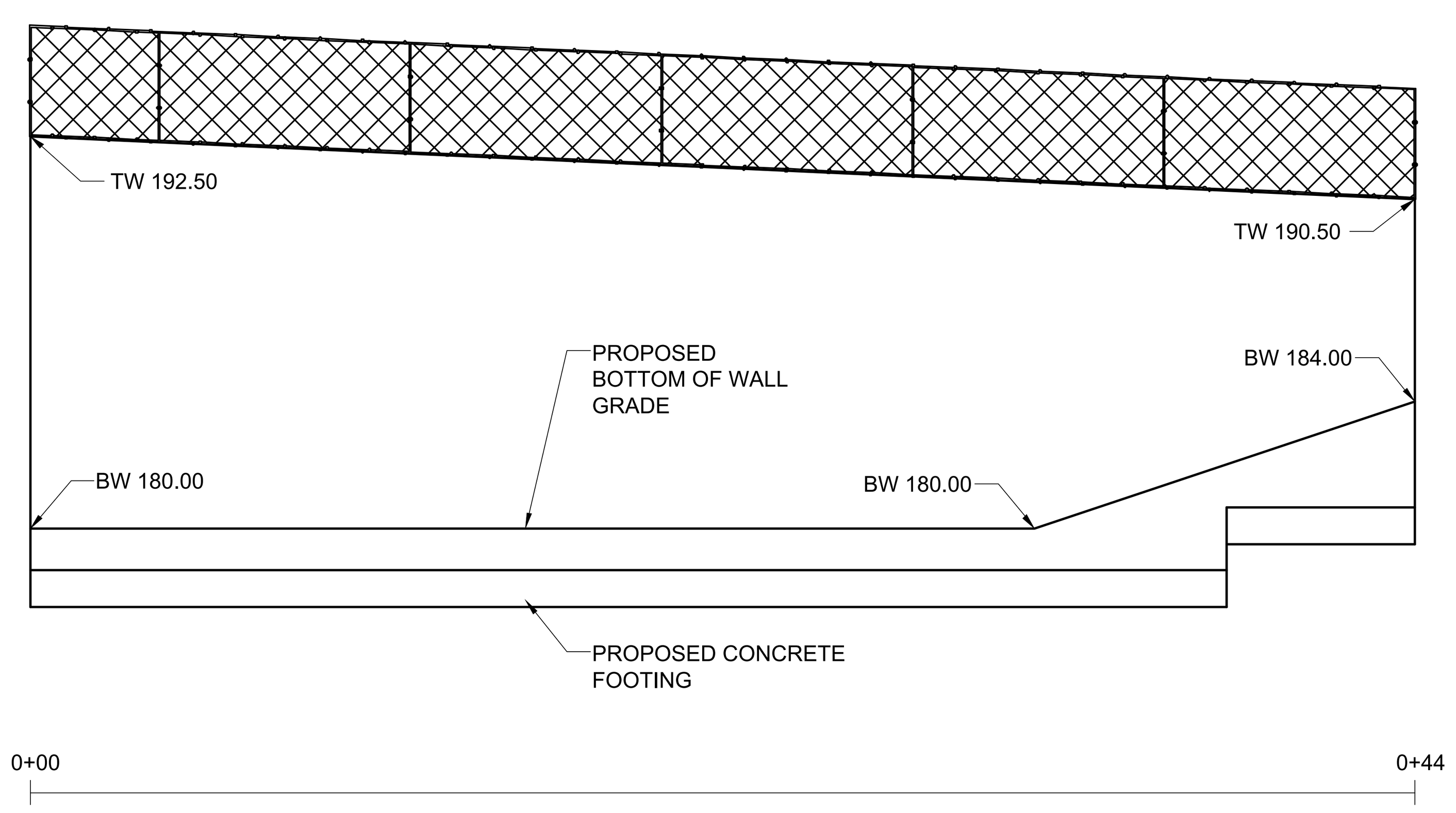
Professional Certification. I hereby certify that these documents were prepared by Ronald J Kelly PE, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 20303 , Expiration date 12-07-2023

MDOT SHA TRACKING #23APHO006XX SDP-23-013



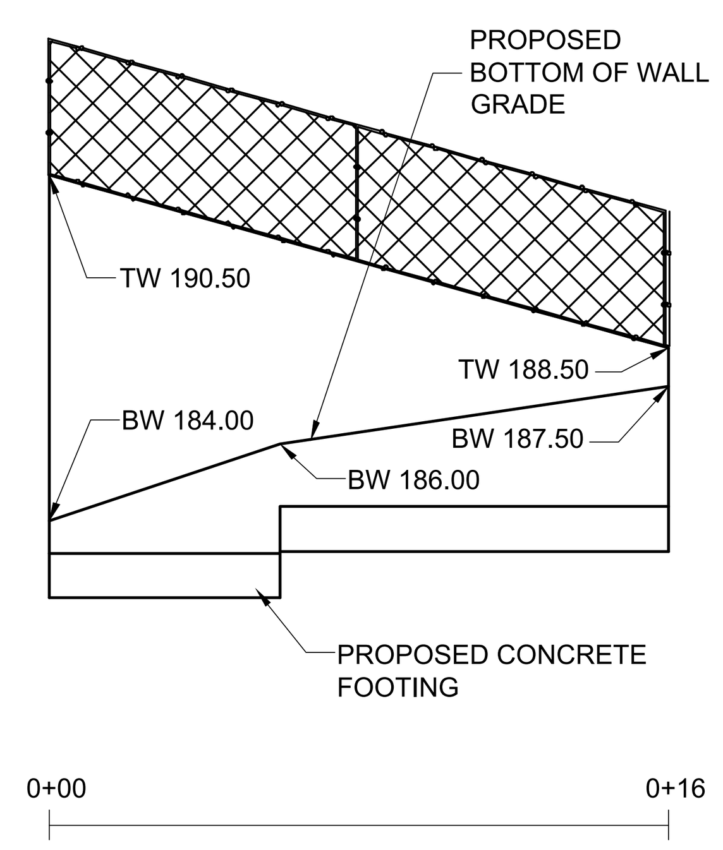
RETAINING WALL "C" ELEVATION

SCALE: 1"=5'



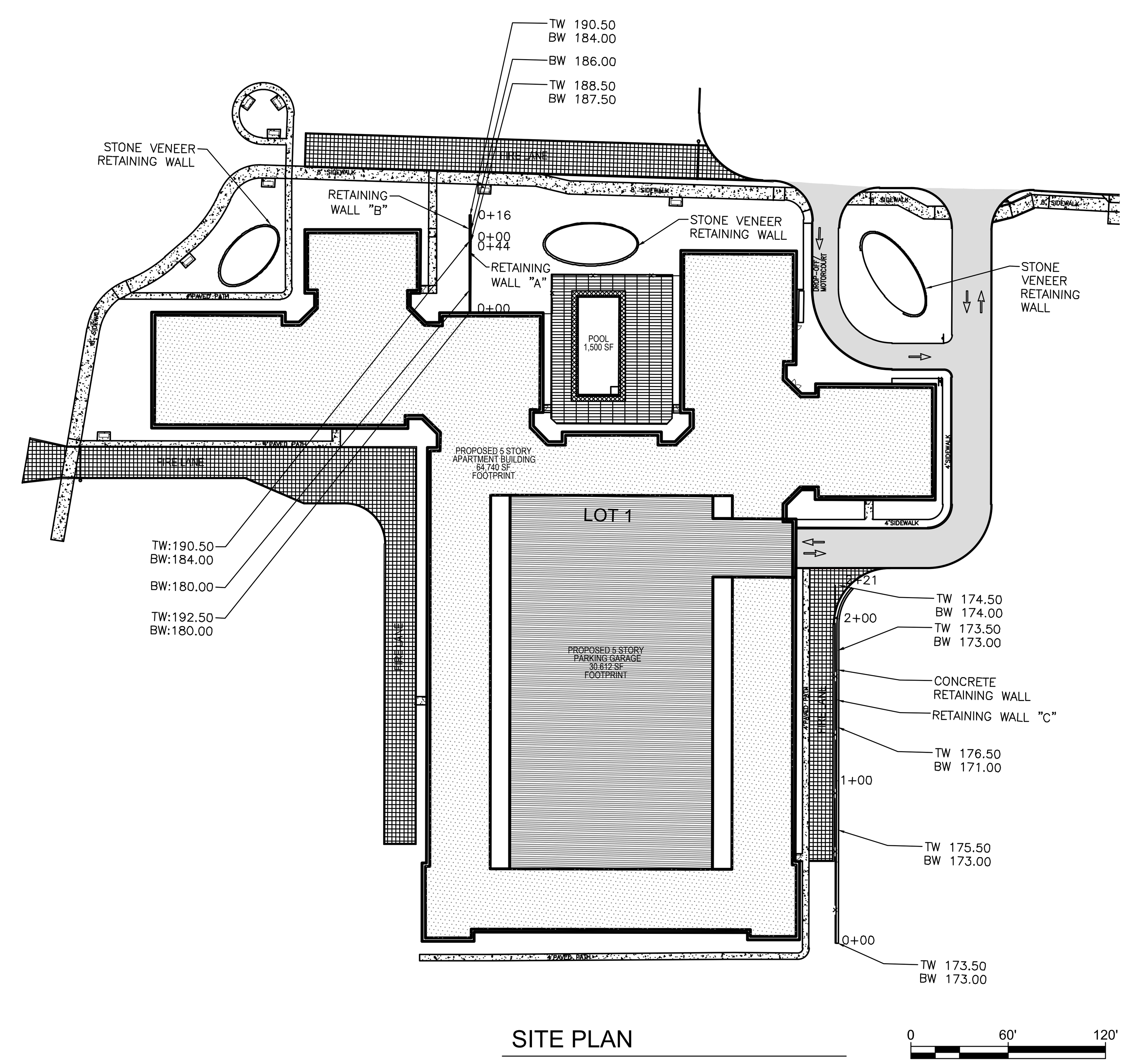
RETAINING WALL "A" ELEVATION

SCALE: 1"=5'



RETAINING WALL "B" ELEVATION

SCALE: 1"=5'



SITE PLAN

SCALE: 1"=60'

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

RETAINING WALL ELEVATIONS

Pennoni
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN

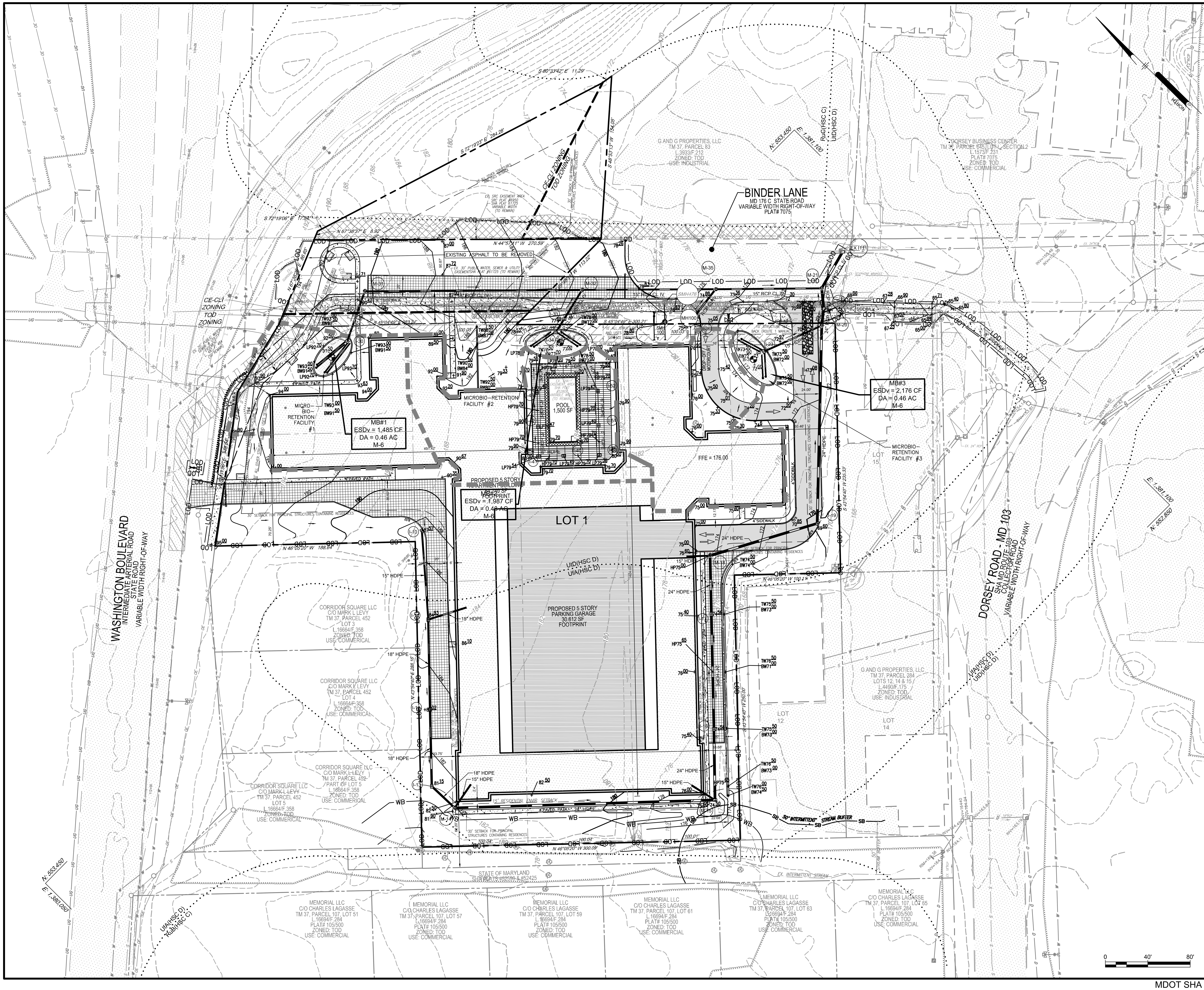
DRAWN BY: JSN/SVH/CR

PROJECT NO : ODONN21001

DATE : DECEMBER 20, 2024

SCALE : AS SHOWN

DRAWING NO. 16 OF 27



LEGEND

EXISTING 2' CONTOUR	232
EXISTING 10' CONTOUR	230
EX. PROPERTY LINE AND RIGHT OF WAY	
EXISTING BUILDING	
EXISTING WATER	W
EXISTING SEWER	S
EXISTING STORM DRAIN	
EXISTING CURB & GUTTER	
EXISTING FIRE HYDRANT	
EXISTING ZONING	
PROPOSED 2' CONTOUR	232
PROPOSED 10' CONTOUR	230
LIMIT OF DISTURBANCE	LOD
PROPOSED WATER	W
PROPOSED SEWER	S
PROPOSED STORM DRAIN	
PROPOSED BUILDING	
PROPOSED CONCRETE	
PROPOSED ASPHALT	
PROPOSED MICROBIORETENTION FACILITY	
PROPOSED FIRE LANE	
BORING LOCATION	
DRAINAGE AREA	

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)

PE # ____________

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APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

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ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

STORMWATER MANAGEMENT PLAN

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

SEAL

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DESIGNED BY : PJS/JSN

DRAWN BY: JSN/SVH/CR

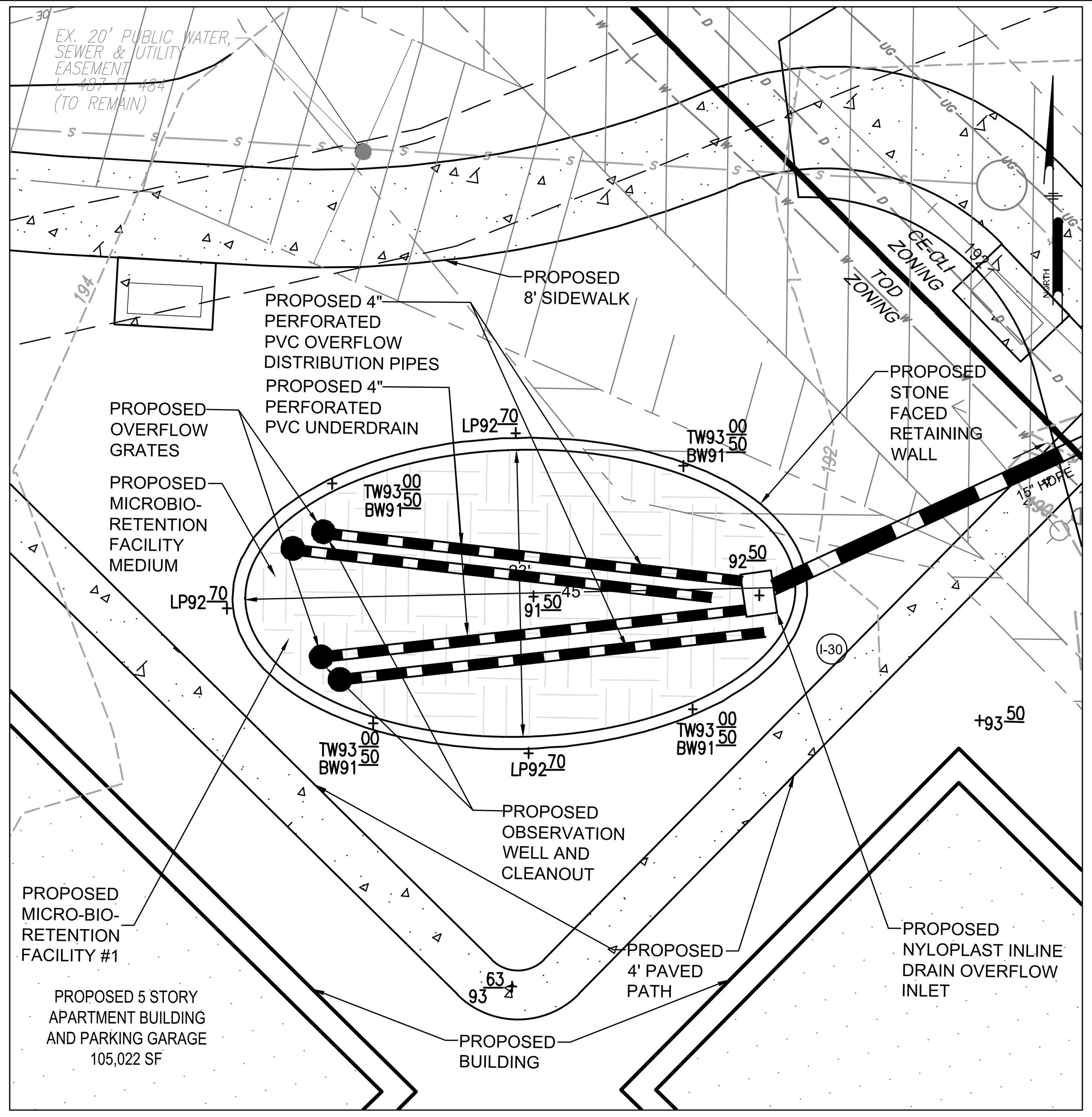
PROJECT NO : ODONN21001

DATE : DECEMBER 20, 2024

SCALE : 1" = 40'

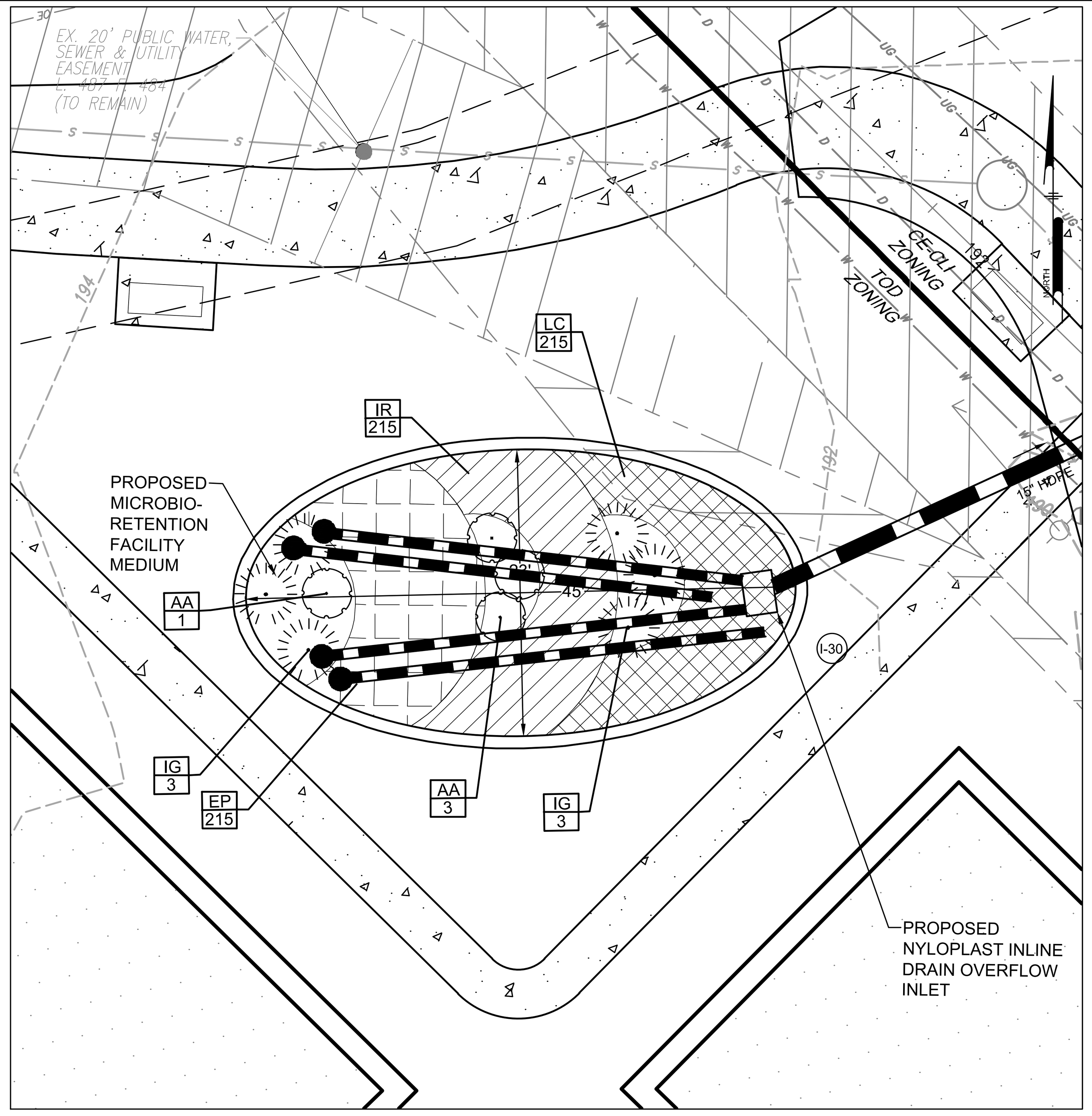
DRAWING NO. 17 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP17 SWM PLAN.dwg



MICROBIORETENTION FACILITY #1 DETAIL PLAN

SCALE: 1"=10'



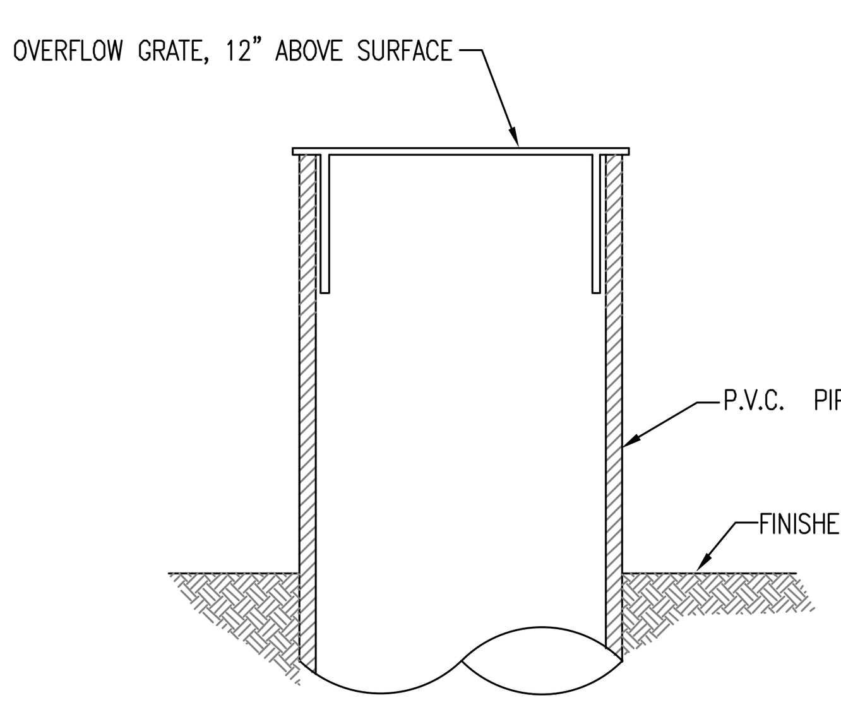
MICROBIORETENTION FACILITY #1 LANDSCAPE PLAN

SCALE: 1"=10'

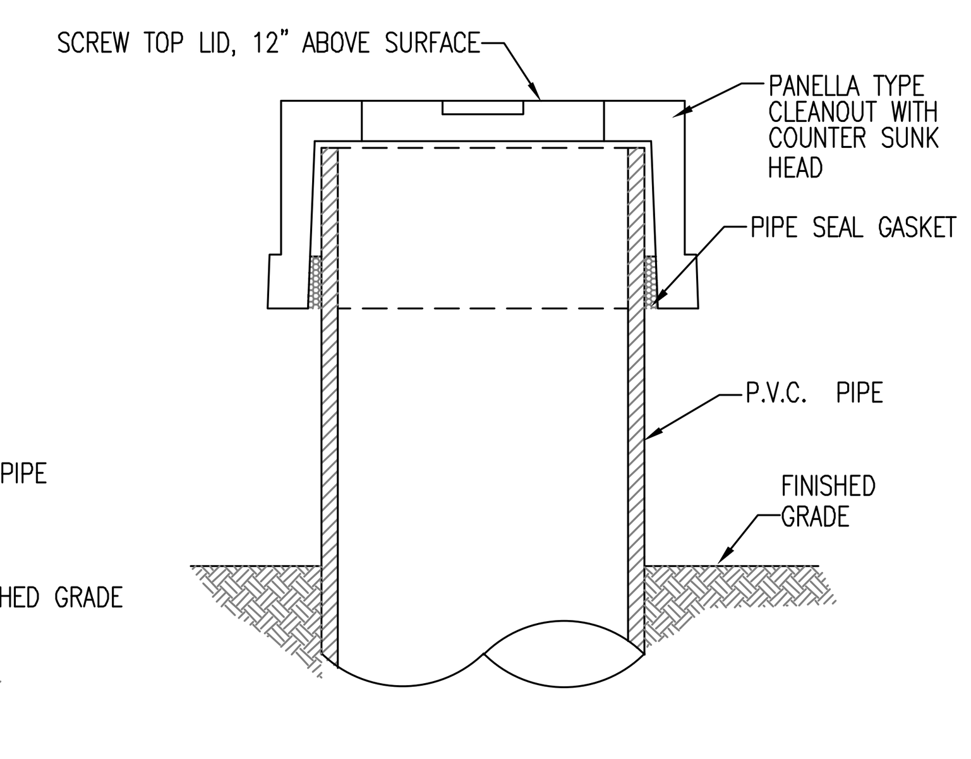
MICROBIORETENTION DESIGN DATA	#1	#1 AS-BUILT
ESDv ELEV	192.50	
FACILITY TOP ELEV A	191.50	
ELEV B	191.25	
ELEV C	189.25	
ELEV D	188.92	
ELEV E	188.59	
BOTTOM ELEV F	185.75	
SURFACE AREA AT 'F' (SF)	825	
OVERFLOW STRUCTURE	192.50	
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE	393.90	
UNDERDRAIN INVERT ELEV AT CLEANOUT	187.76	
DEPTH OF STONE BELOW UNDERDRAIN	2.01'	

MICROBIORETENTION #1 PLANT SCHEDULE

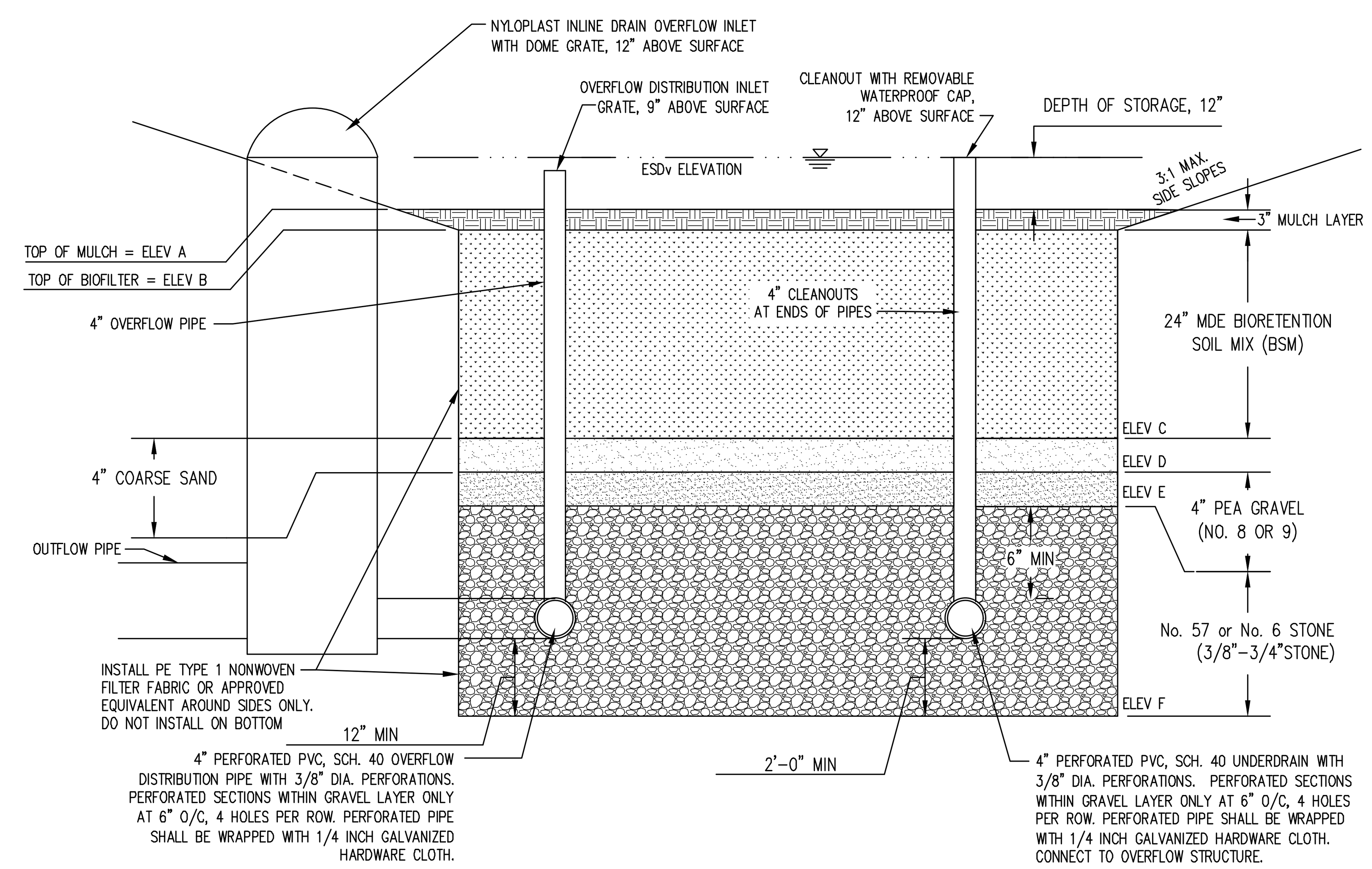
SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	4	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' BRILLIANTISSIMA RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
IG	6	ILEX GLABRA 'SHAMROCK' SHAMROCK INKBERRY	3 GAL.	CONT.	AS SHOWN
EP	215	EUPATORIUM PURPUREUM 'GATEWAY' GATEWAY JOE PYE WEED	1 GAL.	CONT.	24" ON CENTER
IR	215	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" ON CENTER
LC	215	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" ON CENTER



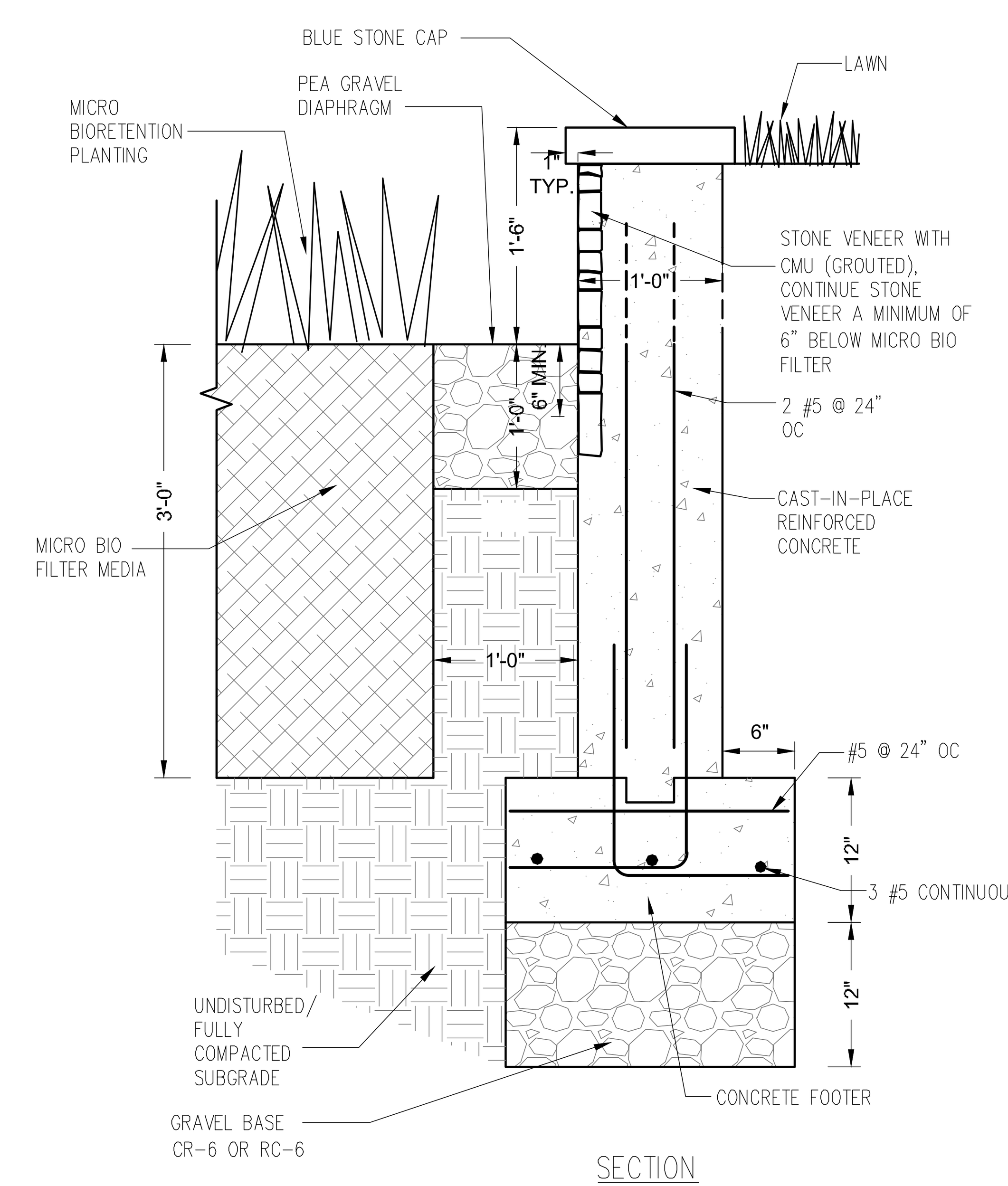
1/18 OVERFLOW GRATE
NOT TO SCALE



2/18 CLEAN-OUT OBSERVATION WELL CAP
NOT TO SCALE



3/18 MICROBIORETENTION TYPICAL SECTION
NOT TO SCALE



4/18 MICROBIORETENTION WALL
SCALE: 1"=1'-0"

STORMWATER MANAGEMENT INFORMATION

LOT/PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
LOT 1	MICRO-BIORETENTION #1	M-6 (1)		X	YES	
LOT 1	MICRO-BIORETENTION #2	M-6 (1)		X	YES	
LOT 1	MICRO-BIORETENTION #3	M-6 (1)		X	YES	

MICRO-BIORETENTION SUMMARY TABLE

FACILITY #	DRAINAGE AREA (SF)	IMPERVIOUS AREA (SF)	% IMPERVIOUS AREA	SOIL TYPE	PE REQUIRED (REDEVELOPMENT)	PE PROVIDED	ESDv REQUIRED (CF)	ESDv PROVIDED (CF)	FILTER SURFACE AREA (SF)	VOLUME ABOVE SURFACE (CF)	VOLUME IN STONE BELOW UNDERDRAIN (CF)	PONDING DEPTH (IN)	MEDIA DEPTH (FT)	MAINTENANCE
#1	18,274	12,433	68%	D	1.0	1.5	1,008	1,485	825	825	660	12"	2'	PRIVATE
#2	19,445	18,446	95%	D	1.0	1.4	1,104	1,987	1,104	1,104	883	12"	2'	PRIVATE
#3	16,940	15,426	91%	D	1.0	1.8	1,227	2,176	1,170	1,240	936	12"	2'	PRIVATE
ADDRESS: BINDER LANE							TOTAL	5,648						

SITE IMPERVIOUSNESS AND WATER QUALITY VOLUME (REDEVELOPMENT)

SITE AREA (ACRES)	5.58
EXISTING IMPERVIOUS SURFACE AREA (ACRES)	4.89
PROPOSED IMPERVIOUS SURFACE AREA (ACRES)	3.31
RAINFALL DEPTH (IN)	1.0
EXISTING IMPERVIOUSNESS	87.6%
PROPOSED IMPERVIOUSNESS	59.3%
WATER QUALITY CALCULATION FOR REDEVELOPMENT	
REQUIRED TREATMENT AREA (ACRES)	0.87
RUNOFF COEFFICIENT	0.95
WATER QUALITY VOLUME, WQv (CF)	3,701
RECHARGE VOLUME REQUIRED (CF)	2,479
TOTAL AREA OF SITE	5.58 ACRES (243,063 SF)

AS-BUILT CERTIFICATION
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SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)
PE #
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APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

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ATTN: STEVE O'DONNELL
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PROJECT
O'DONNELL PROPERTIES

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TITLE
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DESIGNED BY : PJS/JSN
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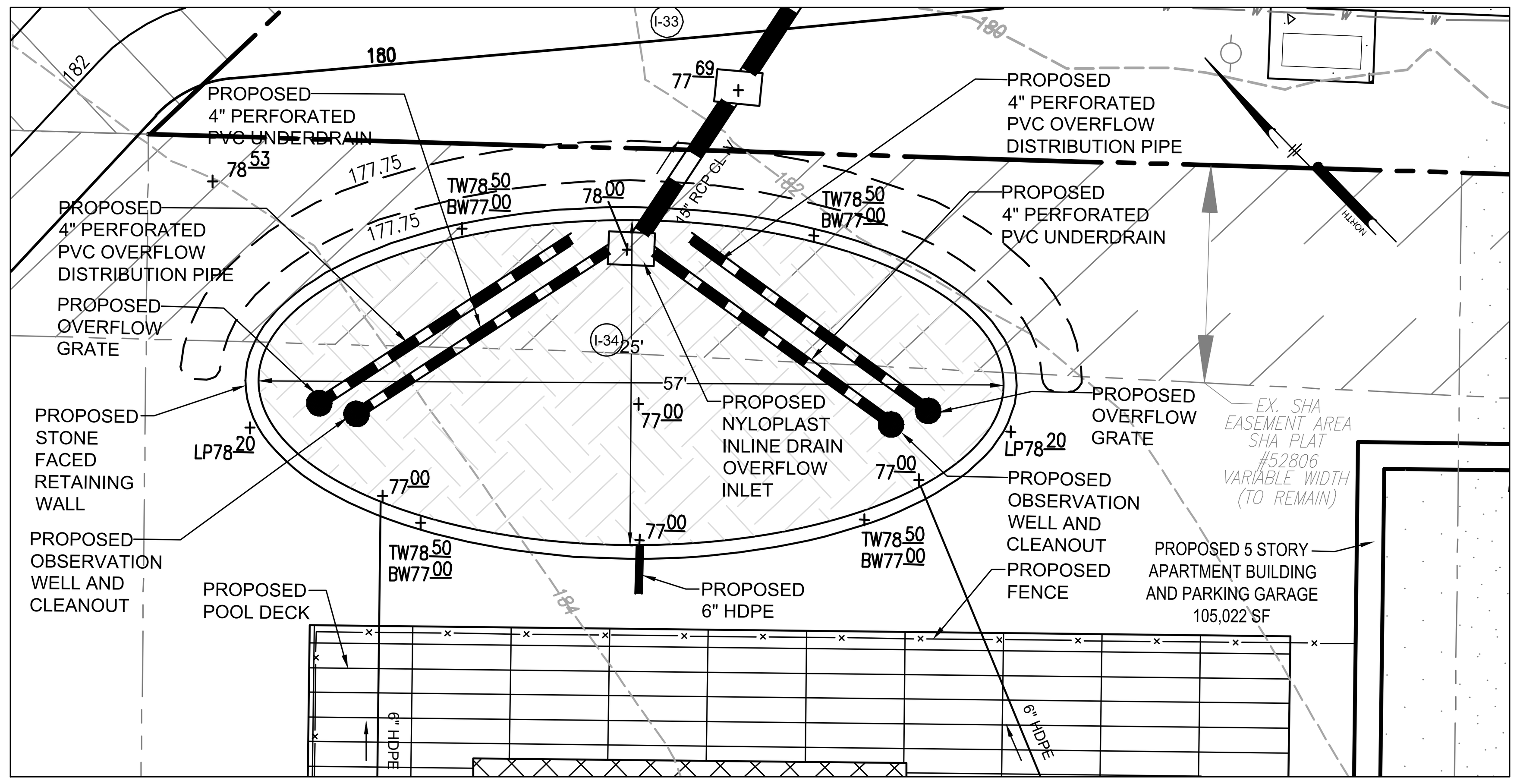
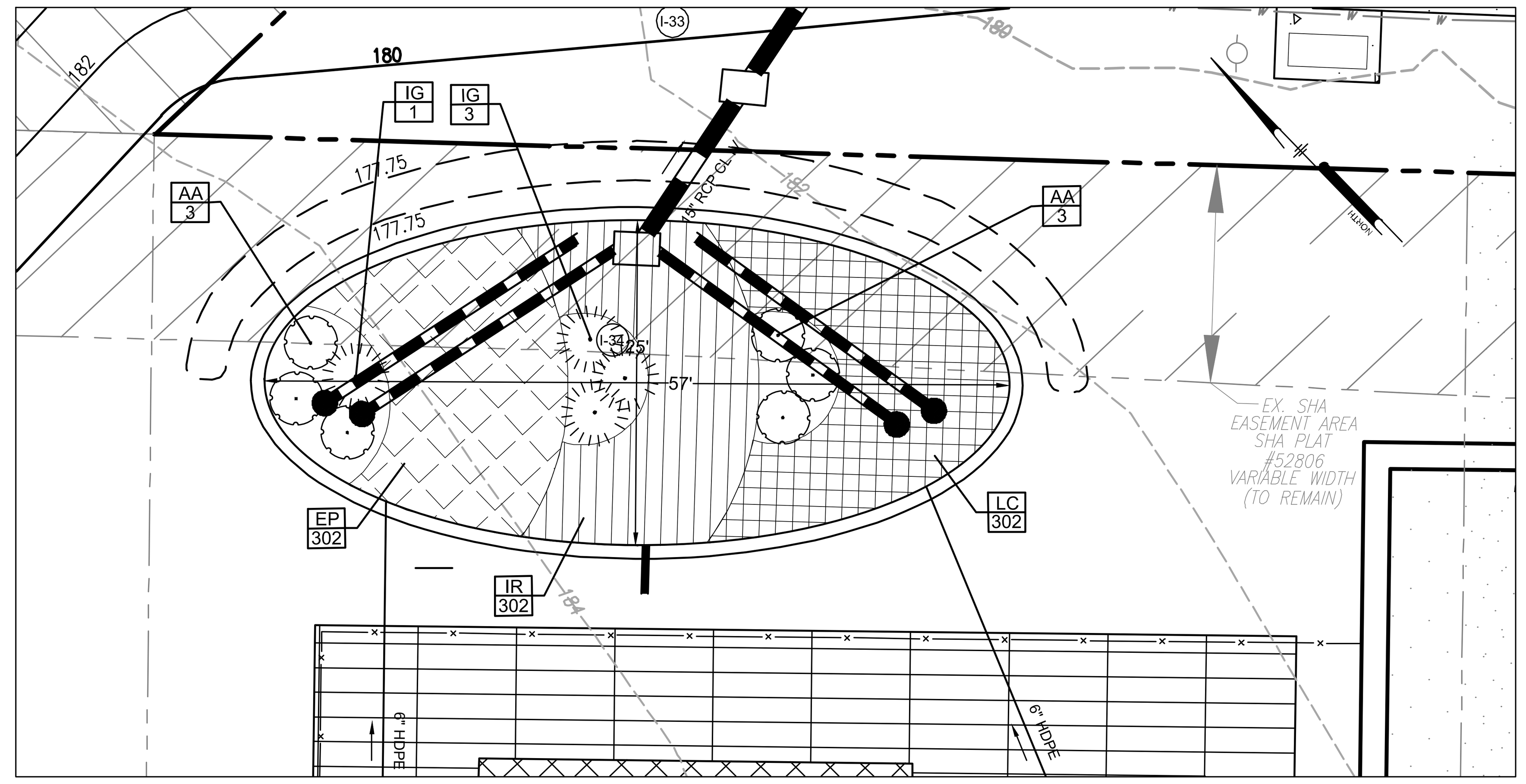
SCALE : AS SHOWN
DRAWING NO. 18 OF 27



MICROBIORETENTION FACILITY #2 DETAIL PLAN

SCALE: 1"=10'



MICROBIORETENTION FACILITY #2 LANDSCAPE PLAN

SCALE: 1"=10'

MICROBIORETENTION #2 PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	6	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' BRILLIANTISSIMA RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
IG	4	ILEX GLABRA 'SHAMROCK' SHAMROCK INKBERRY	3 GAL.	CONT.	AS SHOWN
EP	302	EUPATORIUM PURPUREUM 'GATEWAY' GATEWAY JOE PYE WEED	1 GAL.	CONT.	24" ON CENTER
IR	302	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" ON CENTER
LC	302	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" ON CENTER

MICROBIORETENTION DESIGN DATA

	#2	#2 AS-BUILT
ESDv ELEV	178.00	
FACILITY TOP ELEV A	177.00	
ELEV B	176.75	
ELEV C	174.75	
ELEV D	174.42	
ELEV E	174.09	
BOTTOM ELEV F	171.25	
SURFACE AREA AT "F" (SF)	1,104	
OVERFLOW STRUCTURE	178.00	
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE	393.90	
UNDERDRAIN INVERT ELEV AT CLEANOUT	173.26	
DEPTH OF STONE BELOW UNDERDRAIN	2.01'	

AS-BUILT CERTIFICATION

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SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)

PE # ________

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APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

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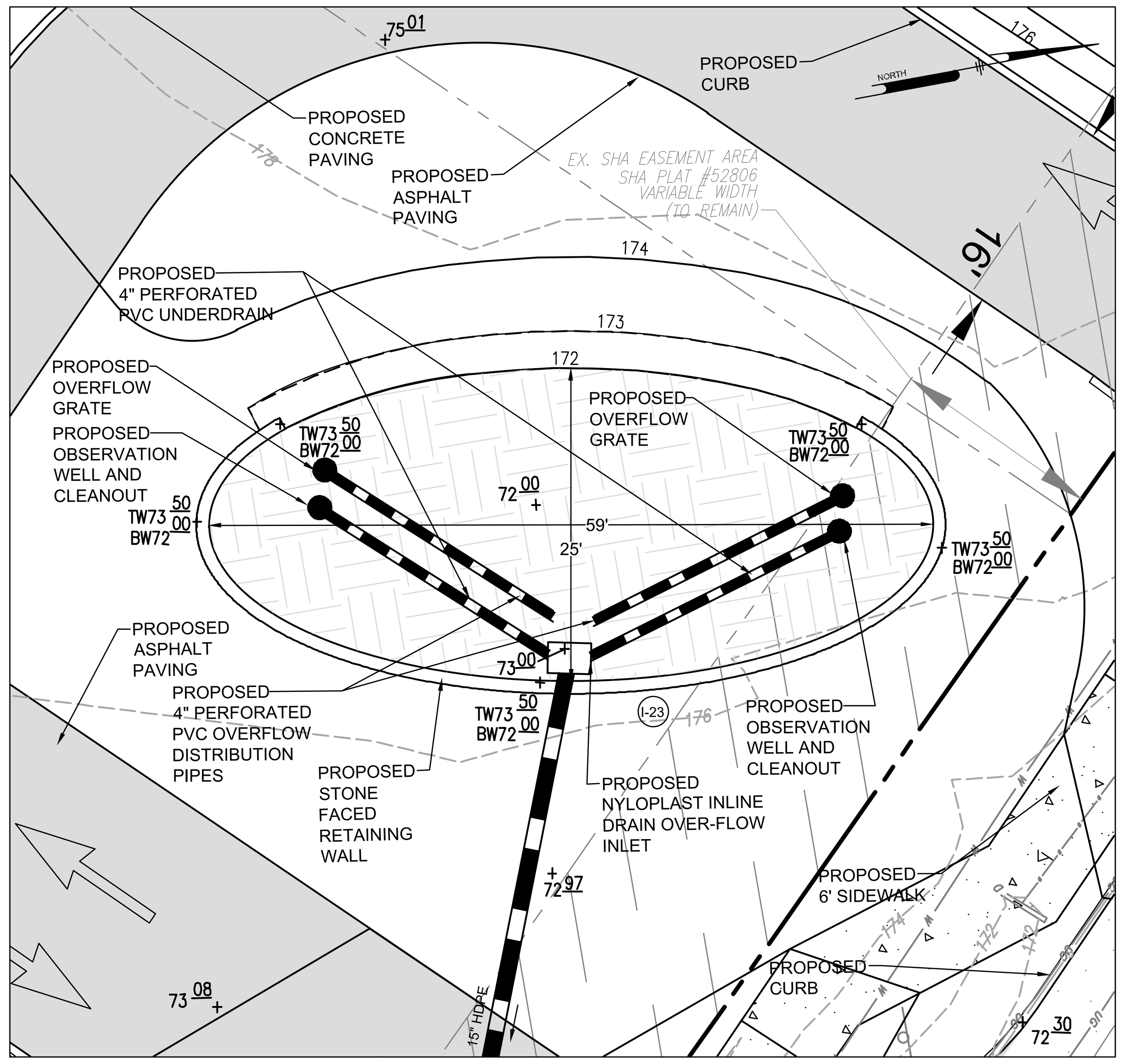
PROJECT NO : ODONN21001

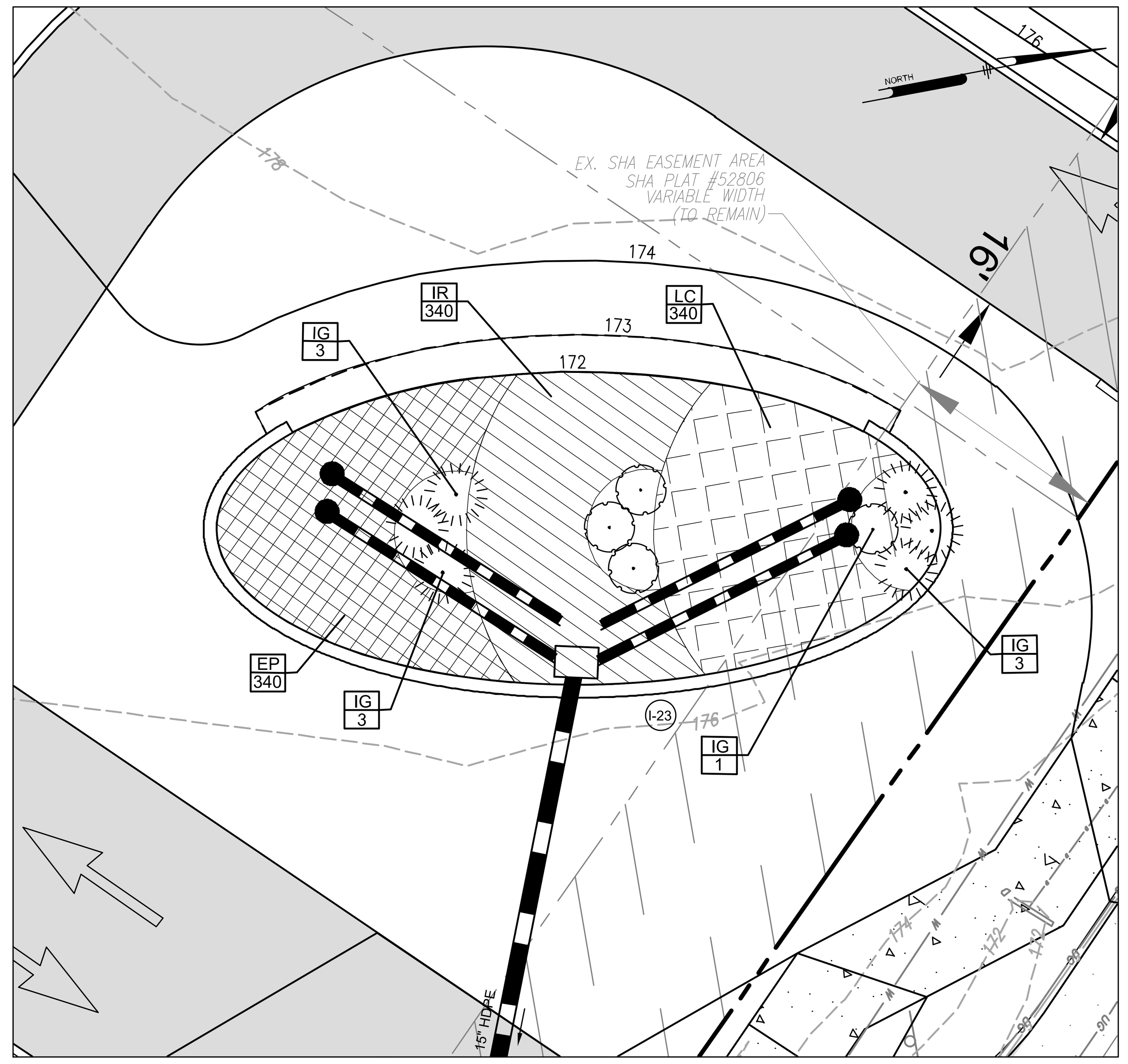
DATE : DECEMBER 20, 2024

SCALE : AS SHOWN



MICROBIORETENTION FACILITY #3 DETAIL PLAN

SCALE: 1"=10'



MICROBIORETENTION FACILITY #3 LANDSCAPE PLAN

SCALE: 1"=10'

MICROBIORETENTION DESIGN DATA	#3	#3 AS-BUILT
ESDv ELEV	173.00	
FACILITY TOP ELEV A	172.00	
ELEV B	171.75	
ELEV C	169.75	
ELEV D	169.42	
ELEV E	169.09	
BOTTOM ELEV F	166.25	
SURFACE AREA AT "F" (SF)	1170	
OVERFLOW STRUCTURE	173.00	
OUTFLOW PIPE INVERT ELEV FROM STRUCTURE		
UNDERDRAIN INVERT ELEV AT CLEANOUT	168.26	
DEPTH OF STONE BELOW UNDERDRAIN		

MICROBIORETENTION #3 PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
AA	4	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' BRILLIANTISSIMA RED CHOKEBERRY	3 GAL.	CONT.	AS SHOWN
IG	6	ILEX GLABRA 'SHAMROCK' SHAMROCK INKBERRY	3 GAL.	CONT.	AS SHOWN
EP	340	EUPATORIUM PURPUREUM 'GATEWAY' GATEWAY JOE PYE WEED	1 GAL.	CONT.	24" ON CENTER
IR	340	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	1 GAL.	CONT.	18" ON CENTER
LC	340	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" ON CENTER

OPERATION AND MAINTENANCE SCHEDULE FOR MICROBIORETENTION FACILITY (M-6)

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, CHECK DAMS, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

MICROBIORETENTION SPECIFICATIONS

1. THE UNDERDRAIN PIPE MUST BE 4-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE FOR THE MICROBIORETENTION FACILITIES. TWELVE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER, EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGIN AT LEAST 5FT. INSIDE THE FILTER MEDIA. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE.
2. 4" INCH CLEAN-OUTS SHOULD BE USED. CLEANOUTS FOR EACH PIPE SHOULD EXTEND 12 INCHES ABOVE THE TOP OF THE PLANTING MEDIA AND HAVE A REMOVABLE CAP. OVERFLOW PIPES SHALL HAVE A REMOVABLE RATE THAT FITS SNUGLY INSIDE THE PIPE.
3. THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPES MUST MEET MSHA SIZE #57 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE, AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED ANYWHERE WITHIN THE FILTER MEDIA (STONE OR SAND). FILTER FABRIC SHALL BE PLACED ALONG THE SIDES OF THE FACILITY, BUT NOT ON THE BOTTOM.
4. A MINIMUM 4-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE SOIL FILTER/PLANTING MEDIA. THE SAND MUST BE ASTM C33 FINE AGGREGATE CONCRETE SAND. MANUFACTURED SAND OR STONE DUST IS NOT ACCEPTABLE.
5. A MINIMUM 4-INCH PEA GRAVEL LAYER SHALL BE PROVIDED BETWEEN THE SAND AND THE STONE.
6. THE PLANTING MEDIA MIX SHALL MEET MDE BIORETENTION SOIL MIX STANDARDS. SOIL SHALL CONTAIN A MINIMUM ORGANIC MATTER PERCENTAGE OF 5%. THE PLANTING MATERIAL SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.
7. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD FINE SHREDDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLENISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

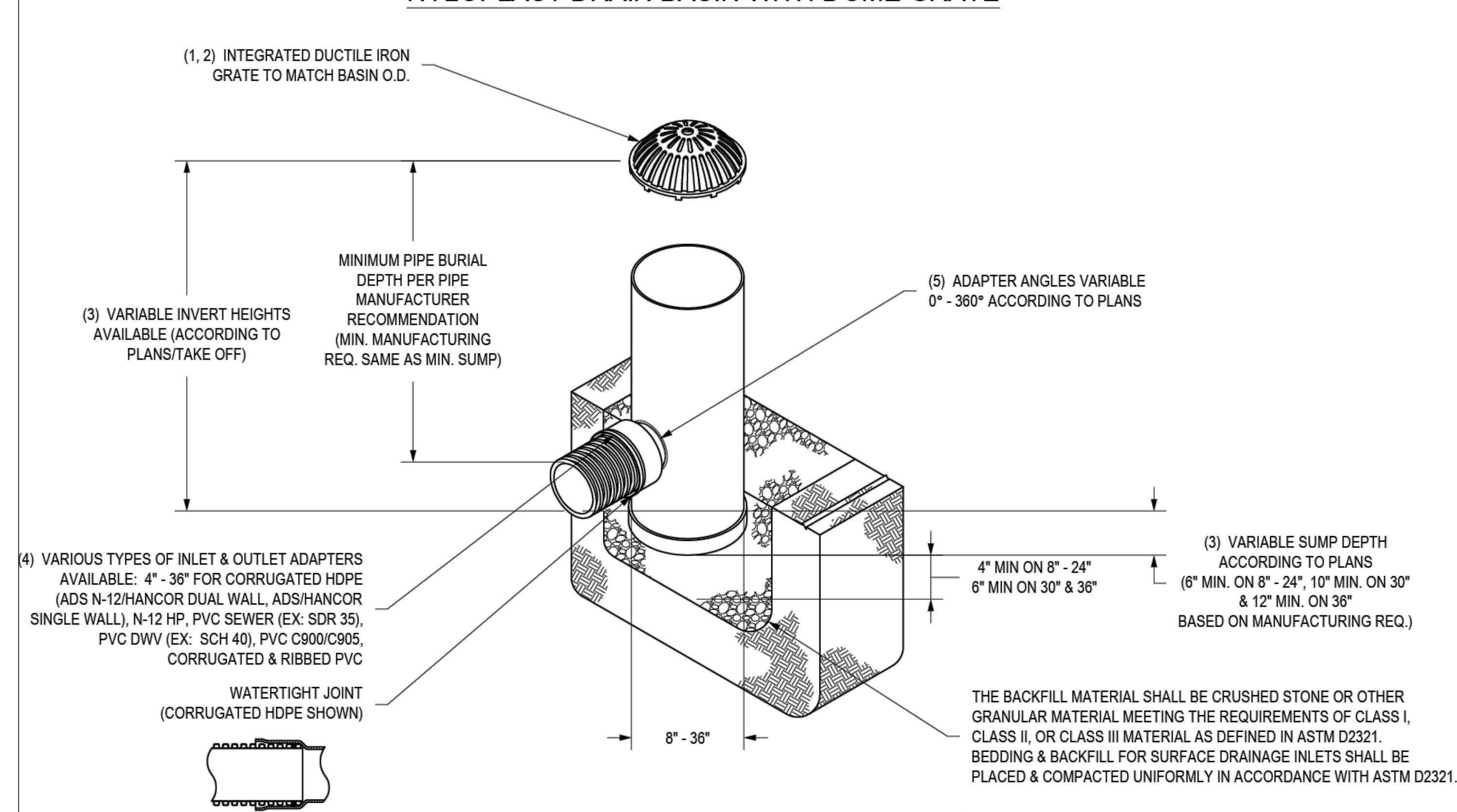
MICROBIORETENTION FACILITY SEQUENCE OF CONSTRUCTION

1. DO NOT BEGIN MICROBIORETENTION FACILITY INSTALLATION UNTIL SITE UPSTREAM OF MICROBIORETENTION FACILITY IS STABILIZED AND FINE GRADING HAS BEEN COMPLETED. IT IS THE RESPONSIBILITY OF THE OWNER TO ENGAGE A QUALIFIED GEOTECHNICAL ENGINEER TO OBSERVE THE CONSTRUCTION AND INSTALLATION OF THESE FACILITIES AND PROVIDE REPORTS AND CERTIFICATIONS THAT FACILITIES WERE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS.
2. STAKEOUT LIMITS OF FACILITY. COORDINATE WITH THE ENGINEER TO VERIFY DIMENSIONS AND ENSURE THAT ENOUGH STAKEOUT INFORMATION IS PROVIDED TO ACCURATELY CONSTRUCT FACILITY. (1 DAY)
3. EXCAVATE MICROBIORETENTION FACILITY. CONSTRUCTION SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. IT IS RECOMMENDED THAT THE ENGINEER BE CONTACTED TO VERIFY AND SURVEY LIMITS OF EXCAVATION UPON COMPLETION OF EXCAVATION, PRIOR TO PIPE AND UNDERDRAIN CONSTRUCTION AND MATERIAL BACKFILL. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA. (1 DAY)
4. CONSTRUCT AND BACKFILL WALLS (2WEEKS)
5. PLACE STONE AND UNDERDRAINS. (1 DAY).
6. PLACE SAND LAYER IN LIFTS OF THREE INCHES. (0.5 DAY)
7. PLACE PLANTING SOIL AND OBSERVATION WELLS. (1 DAY)
8. PLACE CHECK DAMS (1 DAY)
9. PLACE MULCH. (0.5 DAY)
10. INSTALL PLANT MATERIAL. (1 DAY)
11. STABILIZE MICROBIORETENTION FACILITY AREA. (0.5 DAY)
12. PREPARE AND SUBMIT AS-BUILTS TO COUNTY.

TABLE B.4.1 MATERIALS SPECIFICATIONS FOR MICRO-BIORETENTION FACILITIES

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE PLANTING NOTES	N/A	PLANTINGS ARE SITE SPECIFIC
PLANTING SOIL (2' TO 4' DEEP)	LOAMY SAND (60-65%) & COMPOST (35-40%) OR SANDY LOAM (30%) COARSE SAND (30%) & COMPOST (40%)	N/A	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM CLAY CONTENT <5%
ORGANIC CONTENT	MIN 10% BY DRY WEIGHT (ASTM D 2974)		
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, NO PINE OR WOOD CHIPS
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM D 448	No 8 OR No 9 (1/8" TO 3/8")	
CURTAIN DRAIN	ORNAMENTAL STONE: WASHED COBBLES	STONE: 2" TO 5"	
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	AASHTO M-43	No 57 OR No 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	SLOTTED OR PERFORATED PIPE; 3/8" PERF @ 6" ON CENTER, 4 HOLES PER ROW, MIN OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES. PERFORATED PIPE SHALL BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH
POURED IN PLACE CONCRETE (IF REQUIRED)	MSHA MIX No 3 f'c=3500 PSI @ 28 DAYS, NORMAL WEIGHT, AIR ENTRAINED, REINFORCING TO MEET ASTM 615-60	N/A	ON-SITE TESTING OF POURED IN PLACE CONCRETE REQUIRED: 28 DAY STRENGTH AND SLUMP TEST; ALL CONCRETE DESIGN (CAST IN PLACE OR PRE CAST) *NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS* REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 350 R/89; VERTICAL LOADING [H-10 OR H-20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING
SAND	AASHTO M-6 OR ASTM C 33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND

NYLOPLAST DRAIN BASIN WITH DOME GRATE



NOTE:
THE CONTRACTOR SHALL USE THIS PRODUCT OR APPROVED EQUAL, AND SHALL PROVIDE A SHOP DRAWING FOR APPROVAL PRIOR TO INSTALLATION.

DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536
E 70-50-05.
" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE
VC BODY TOP. SEE DRAWING NO. 7001-110-045.
BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN
LS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING
RICTIONS. SEE DRAWING NO. 7001-110-065

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER,

DRAWN BY EBC | DATE 03-25-10 | MATERIAL

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443

AS-BUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE OF ENGINEER DATE
(PRINT NAME BELOW SIGNATURE)

PE # ________________

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ____________, EXPIRATION DATE: __________________.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
STORMWATER MANAGEMENT DETAILS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
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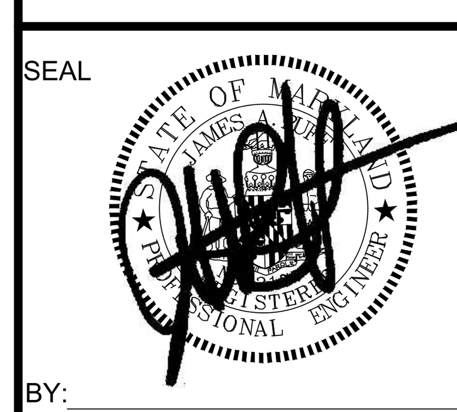
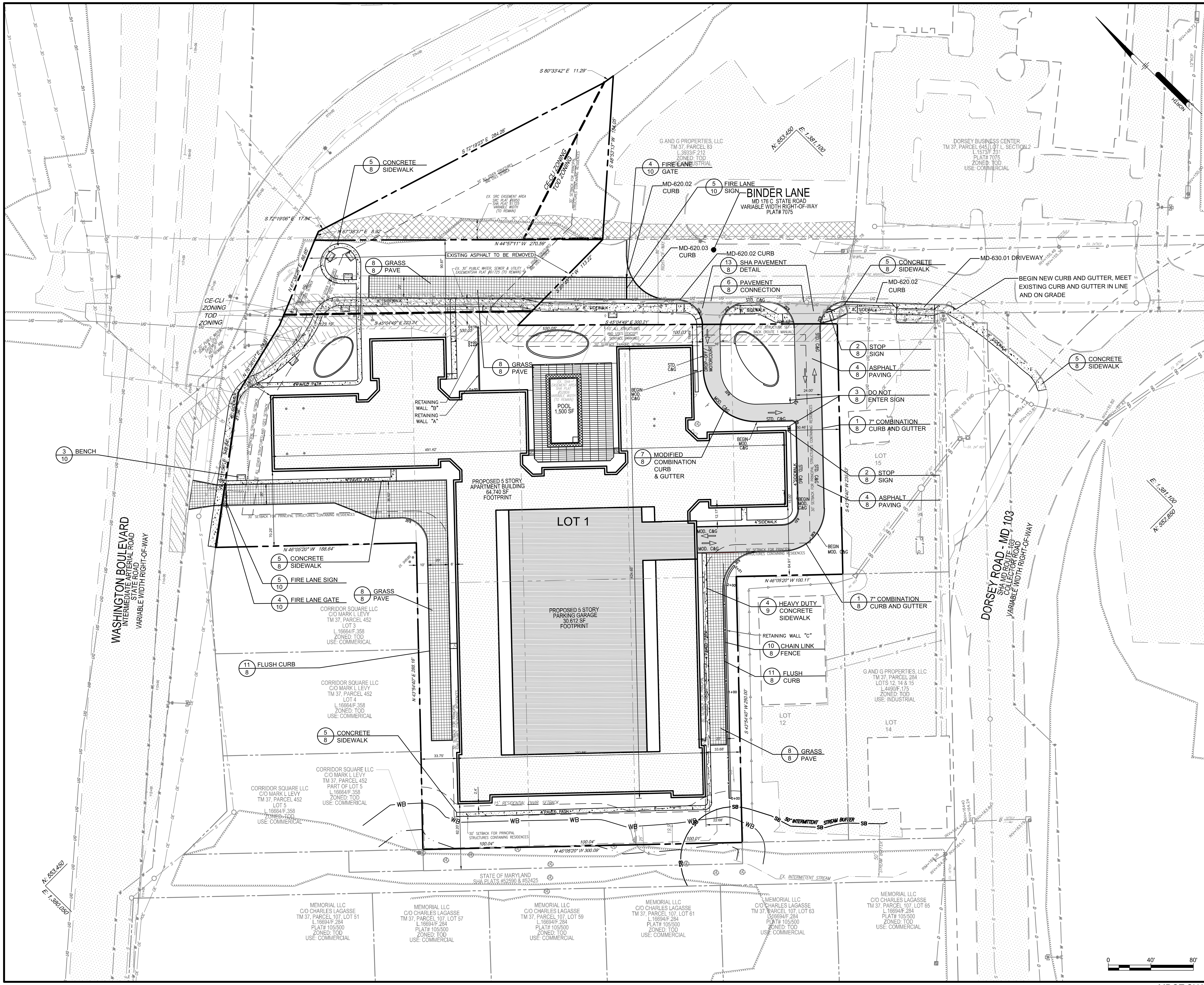
SEAL



BY:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 20 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP20 SWM DETAILS.dwg



LEGEND

EXISTING 2' CONTOUR	232
EXISTING 10' CONTOUR	230
EX. PROPERTY LINE AND RIGHT OF WAY	
EXISTING BUILDING	
EXISTING WATER	W
EXISTING SEWER	S
EXISTING STORM DRAIN	
EXISTING CURB & GUTTER	
EXISTING FIRE HYDRANT	
EXISTING ZONING	
PROPOSED 2' CONTOUR	232
PROPOSED 10' CONTOUR	230
LIMIT OF DISTURBANCE	LOD
PROPOSED WATER	W
PROPOSED SEWER	S
PROPOSED STORM DRAIN	
PROPOSED BUILDING	
PROPOSED CONCRETE	
PROPOSED ASPHALT	
PROPOSED FIRE LANE	

STRIPING AND SIGNAGE GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL CONFORM WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MDMUTCD).
2. ALL POSTS USED FOR TRAFFIC CONTROL SIGNS, INSTALLED IN THE COUNTY RIGHT-OF-WAY, SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

PAVING GENERAL NOTES

1. NEW PROPOSED PAVING IS TO BE COORDINATED WITH THE NEW AND EXISTING CONDITIONS. IF ADDITIONAL PAVING IS NECESSARY, THE CONTRACTOR IS TO PLACE ADDITIONAL PAVING TO MAKE THE DRAINAGE AND SLOPES WORK WITH THE EXISTING CONDITIONS.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT

O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE

PAVING, STRIPING, AND SIGNAGE PLAN

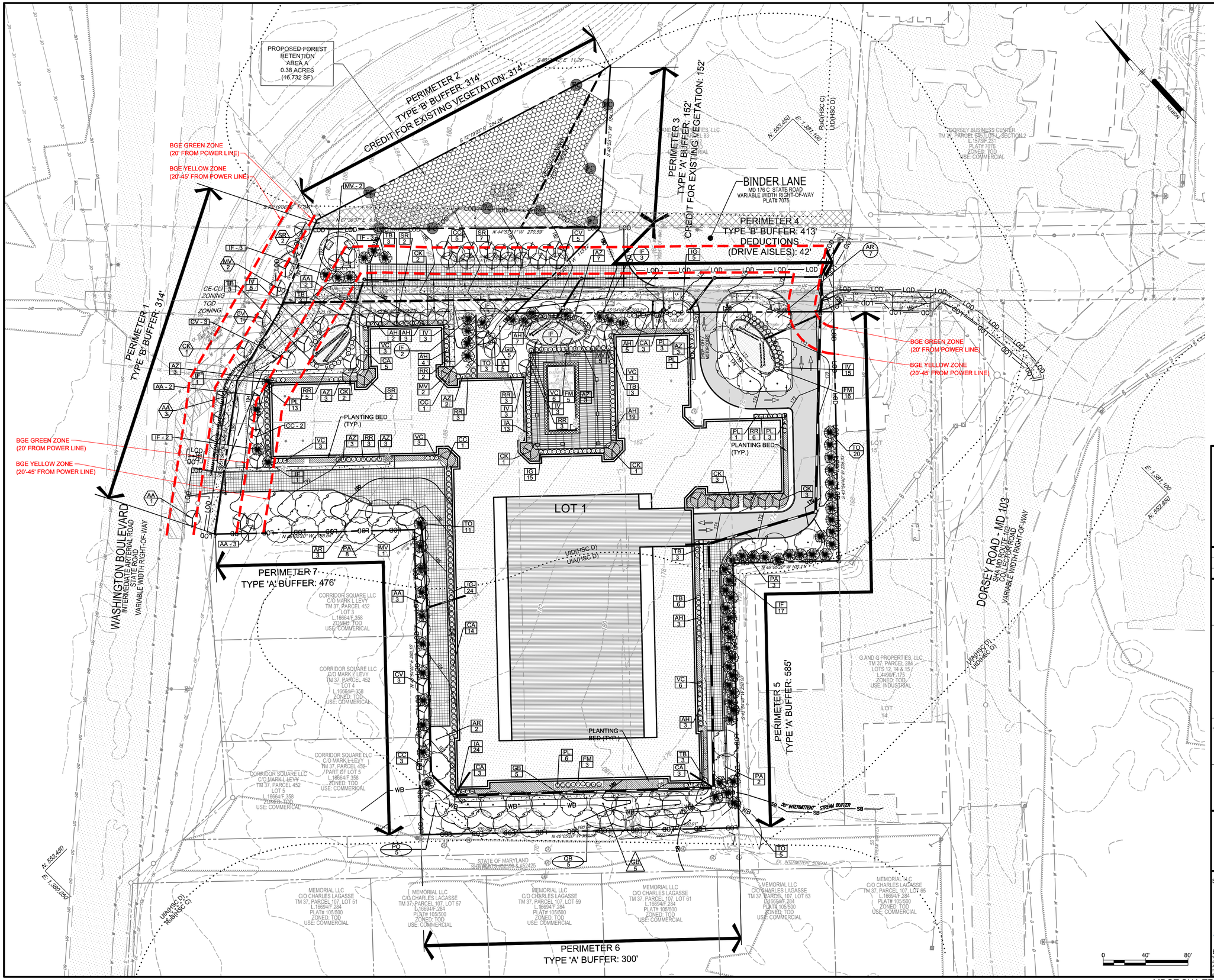
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

BY:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21776 EXPIRATION DATE: 11/10/25

DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	21 OF 27



LEGEND

- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED ORNAMENTAL/ FLOWERING TREE
- PROPOSED SHRUBS
- PROPOSED PLANTING BED
- PROPOSED INTERNAL LANDSCAPING — IF 3
- PROPOSED STREET TREES — AR 7
- PROPOSED PERIMETER 1 PLANTINGS — IF - 3
- PROPOSED PERIMETER 4 PLANTINGS — AR 7
- PROPOSED PERIMETER 5 PLANTINGS — AR 7
- PROPOSED PERIMETER 6 PLANTINGS — GB 5
- PROPOSED PERIMETER 7 PLANTINGS — PA 8
- RIPARIAN BUFFER PLANTINGS — PO 5
- PROPOSED LANDSCAPE PERIMETER
- PROPOSED FOREST RETENTION AREA
- PROPOSED FOREST CONSERVATION SIGNS — FC

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
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6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE AND FOREST CONSERVATION PLAN

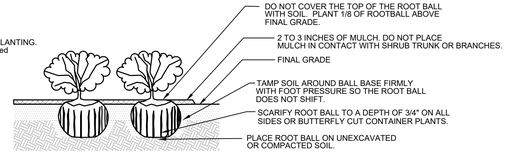
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

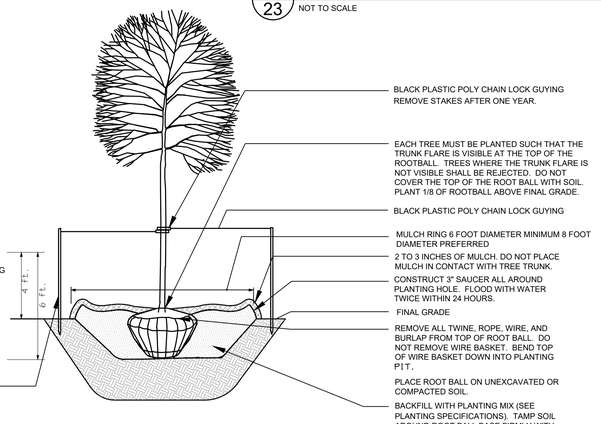
SEAL — STATE OF MARYLAND · JONATHAN STODDARD SOMMER · No. 4114 · LANDSCAPE ARCHITECT

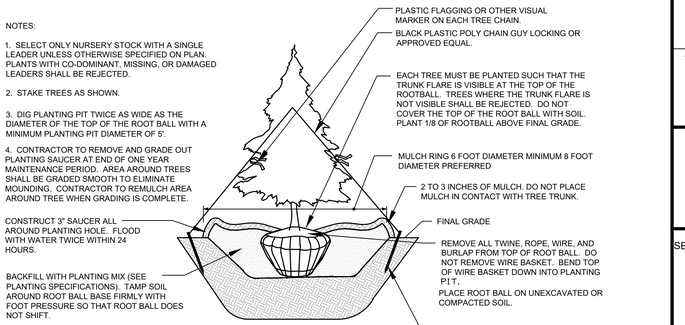
BY:

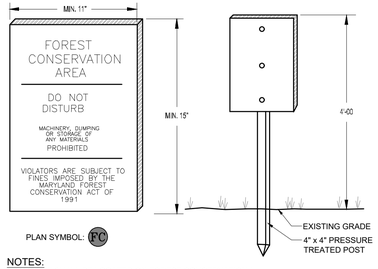
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 4114. EXPIRATION DATE: 09-26-2025"

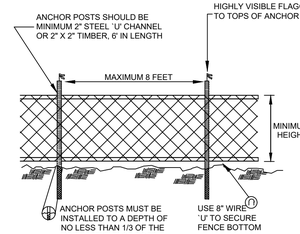
DESIGNED BY :	PJS/JSN
DRAWN BY:	JSN/SVH/CR
PROJECT NO :	ODONN21001
DATE :	DECEMBER 20, 2024
SCALE :	1" = 40'
DRAWING NO.	22 OF 27











SCHEDULE A - PERIMETER LANDSCAPE EDGE

	ADJACENT TO ROAD	ADJACENT TO ROAD	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO ROAD	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
PERIMETER	1	2	3	4	5	6	7
LANDSCAPE TYPE	B	B	A	B	A	A	A
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	314'	314'	152'	413'	585'	300'	476'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO -	YES 314'	YES 152'	NO -	NO -	NO -	NO -
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO -	NO -	NO -	YES 42'	NO -	NO -	NO -
LINEAR FEET REMAINING	314'	0'	0'	371'	585'	300'	476'
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	 6 8 0	 0 0 0	 0 0 0	 7 9 0	 10 0 0	 5 0 0	 8 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	 0 8 12 0	 0 0 0 0	 0 0 0 0	 7 9 0 0	 0 20 0 0	 5 0 0 0	 8 0 0 0

SUBSTITUTIONS:
PERIMETER 1: 12 FLOWERING TREES HAVE BEEN SUBSTITUTED FOR 6 SHADE TREES

STREET TREE CALCULATIONS

STREET	FRONTAGE (LF)	NUMBER OF TREES REQUIRED	NUMBER OF TREES PROVIDED
BINDER LANE	197	1/40 LF = 4.925	5 LARGE TREES
US ROUTE 1	314	1/30 LF = 10.47	10 SMALL TREES

NOTES:
1. SMALL TREES ARE PROPOSED ALONG US ROUTE 1 DUE TO THE PRESENCE OF EXISTING OVERHEAD UTILITIES.

2. AN ALTERNATIVE COMPLIANCE HAS BEEN SUBMITTED TO RELIEVE THE REQUIREMENT FOR STREET TREES ALONG BINDER LANE DUE TO UNDERGROUND UTILITIES.

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	285
NUMBER OF TREES REQUIRED (1:3 DU APTS)	95
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	 15 38 54 340

NOTE:
1. A LANDSCAPE ALTERNATIVE COMPLIANCE WAS APPROVED IN ACCORDANCE WITH CHAPTER VI OF THE LANDSCAPE MANUAL TO ALLOW SMALL DECIDUOUS TREES, EVERGREEN TREES OR SHRUBS TO BE SUBSTITUTED FOR MORE THAN 50% OF THE SHADE TREE REQUIREMENT.

PLANTING SPECIFICATIONS

1. PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION, AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN. WHERE DISCREPANCIES EXIST BETWEEN STANDARDS & GUIDELINES REFERENCED WITHIN THESE SPECIFICATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL, THE LATTER TAKES PRECEDENCE.

2. ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, THAT IS NOT NURSERY GROWN, UNIFORMLY BRANCHED, DOES NOT HAVE A VIGOROUS ROOT SYSTEM, AND DOES NOT CONFORM TO THE MOST RECENT EDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS WILL BE REJECTED. PLANT MATERIAL THAT IS NOT HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS WILL BE REJECTED. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL BE REJECTED. ALL B & B PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

3. UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO THE MOST RECENT EDITION OF THE "LANDSCAPE SPECIFICATION GUIDELINES BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MD, DC, & VA", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

4. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION ON THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL RELEVANT AND APPROPRIATE UTILITY COMPANIES, UTILITY CONTRACTORS, AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO THE BEGINNING OF ANY WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. MAJOR CHANGES WILL REQUIRE THE APPROVAL OF THE LANDSCAPE ARCHITECT. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

6. PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED VIA THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE AT THE DRIP LINE, SEE DETAIL.

7. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. ALL PLANTING IS TO BE COMPLETED WITHIN GROWING SEASON OF COMPLETION OF SITE CONSTRUCTION. DO NOT PLANT PINUS STROBUS OR XCUPRESSACYPARIS LEYLANDII BETWEEN NOVEMBER 15 AND MARCH 15. LANDSCAPE PLANTS ARE NOT TO BE INSTALLED BEFORE SITE IS GRADED TO FINAL GRADE.

8. CONTRACTOR TO REGRADE, FINE GRADE, SOD, HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED BY THEIR WORK.

9. BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM ACTUAL SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.

10. PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE. WHERE DISCREPANCIES ON THE PLAN EXIST BETWEEN THE SYMBOLS AND THE CALLOUT LEADER, THE NUMBER OF SYMBOLS TAKE PRECEDENCE.

11. ALL SHRUBS AND GROUNDCOVER AREAS SHALL BE PLANTED IN CONTINUOUS PLANTING BEDS, PREPARED AS SPECIFIED, UNLESS OTHERWISE INDICATED ON PLANS. (SEE SPECIFICATION 13). BEDS TO BE MULCHED WITH MINIMUM 2" AND MAXIMUM 3" OF COMPOSTED, DOUBLE-SHREDDED HARDWOOD MULCH THROUGHOUT.

12. POSITIVE DRAINAGE SHALL BE MAINTAINED ON PLANTING BEDS (MINIMUM 2 PERCENT SLOPE).

13. BED PREPARATION SHALL BE AS FOLLOWS: TILL INTO A MINIMUM DEPTH OF 6" 1 YARD OF COMPRO OR LEAFGRO PER 200 SF OF PLANTING BED, AND 1 YARD OF TOPSOIL PER 100 SF OF BED. ADD 3 LBS OF STANDARD 5-10-5 FERTILIZER PER CUBIC YARD OF PLANTING MIX AND TILL. ERICACEOUS PLANTS (AZALEAS, RHODODENDRONS, ETC.): TOP DRESS AFTER PLANTING WITH IRON SULFATE OR COMPARABLE PRODUCT ACCORDING TO PACKAGE DIRECTIONS. TAXUS BACCATA 'REPANDENS' (ENGLISH WEEPING YEWS): TOP DRESS AFTER PLANTING WITH 1/4 TO 1/2 CUP LIME EACH.

14. PLANTING MIX: FOR TREES NOT IN A PREPARED BED, MIX 50% COMPRO OR LEAFGRO WITH 50% SOIL FROM TREE HOLE TO USE AS BACKFILL, SEE TREE PLANTING DETAIL.

15. WEED & INSECT CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. FOR TREE PLANTING, APPLY A PRE-EMERGENT ON TOP OF SOIL AND ROOT BALL BEFORE MULCHING. CAUTION: FOR AREAS TO BE PLANTED WITH A GROUND COVER, BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUNDCOVER TO BE TREATED. MAINTAIN THE MULCH WEED-FREE FOR THE EXTENT OF THE WARRANTY PERIOD. UNDER NO CIRCUMSTANCES IS A PESTICIDE CONTAINING CHLORPYRIFOS TO BE USED AS A MEANS OF PEST CONTROL.

16. WATER: ALL PLANT MATERIAL PLANTED SHALL BE WATERED THOROUGHLY THE DAY OF PLANTING. ALL PLANT MATERIAL NOT YET PLANTED SHALL BE PROPERLY PROTECTED FROM DRYING OUT UNTIL PLANTED. AT A MINIMUM, WATER UNPLANTED PLANT MATERIAL DAILY AND AS NECESSARY TO AVOID DESSICATION.

17. PRUNING: DO NOT HEAVILY PRUNE TREES AND SHRUBS AT PLANTING. PRUNE ONLY BROKEN, DEAD, OR DISEASED BRANCHES.

18. ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED, GRASS SEED PLANTED, AND COVERED WITH STRAW MULCH.

FOREST CONSERVATION NOTES

1. ALL TRASH AND DEBRIS OCCURRING WITHIN THE PROPOSED FOREST CONSERVATION EASEMENT MUST BE REMOVED BEFORE ACCEPTANCE.
2. INVASIVE AND EXOTIC SPECIES IN THE FOREST CONSERVATION EASEMENT SHALL BE REMOVED AND STUMPS TREATED WITH APPROPRIATE HERBICIDE.
3. IF THE CANOPY COVER IS REMOVED BY INVASIVE SPECIES REMOVAL, REPLACING WITH 1" CALIPER TREES AT 15 FOOT SPACING WILL BE REQUIRED.

FOREST CONSERVATION WORKSHEET FOR: **O'Donnell Properties**

Net Tract Area

A.	Total (Gross) Tract Area	A =	5.6
B.	Area within 100-year Floodplain	B =	0.0
C.	Other Deductions (Identify: PARCELS 276 & 280)	C =	1.1
D.	Net Tract Area	D =	4.5

Land Use Category

Insert the number "1" under the appropriate land use (limit to only one entry)

Resid. Rural LD	Resid. Rural MD	Resid. Suburban	Inst./ Linear	Retail/Ind./ Office	Mixed Use/ PUD
0	0	1	0	0	0

E.	Afforestation Threshold (Net Tract Area x 15%)	E =	0.7
F.	Reforestation Threshold (Net Tract Area x 20%)	F =	0.9
	Existing Forest Cover		
G.	Existing Forest Cover within the Net Tract Area	G =	0.4
H.	Area of Forest above Afforestation Threshold	H =	0.0
I.	Area of Forest above Reforestation Threshold	I =	0.0
	Break Even Point		
J.	Break Even Point	J =	0.0
K.	Forest Clearing Permitted without Mitigation	K =	0.0
	Proposed Forest Clearing		
L.	Total Area of Forest to be Cleared	L =	0.0
M.	Total Area of Forest to be Retained	M =	0.4
	Planting Requirements Inside Watershed		
N.	Reforestation for Clearing above the Reforestation Threshold	N =	0.0
P	Reforestation for Clearing below the Reforestation Threshold	P =	0.0
Q.	Credit for Retention above the Reforestation Threshold	Q =	0.0
R.	Total Reforestation Required	R =	0.0
S.	Total Afforestation Required	S =	0.3
T	Total Reforestation and Afforestation Requirement	T=	0.3
U	75% of Total Obligation (Retention + Planting)	U=	0.5
V	Planting Required Onsite to meet 75% Obligation	V=	0.1
	Planting Requirements Outside Watershed		
W.	Total Planting within Development Site Watershed	W=	0.0
X.	Total Afforestation Required	X=	0.3
Y.	Remaining Planting within Watershed for Reforestation Credit	Y=	0.0
Z.	Reforestation for Clearing above the Reforestation Threshold	Z=	0.0
AA.	Reforestation for Clearing below the Reforestation Threshold	AA=	0.0
BB.	Credit for Retention above the Reforestation Threshold	BB=	0.0
CC.	Total Reforestation Required	CC=	0.0
DD.	Total Afforestation and Reforestation Requirement	DD=	0.3

Date: DECEMBER 20, 2024

NOTES:
1. PARCELS 276 AND 280 HAVE BEEN REMOVED FROM THE TOTAL TRACT AREA OF THE FOREST CONSERVATION WORKSHEET. THESE PARCELS HAVE PREVIOUSLY ADDRESSED FOREST CONSERVATION UNDER SDP-19-060.

2. THIS PROJECT HAS BEEN PREPARED IN ACCORDANCE WITH THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1203 BY PAYING A FEE-IN-LIEU OF $16,335.00 FOR 0.3 ACRES (13,068 SF) OF REFORESTATION ($1.25 PER SF OF REFORESTATION).

PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
LANDSCAPE SHADE TREES					
AR	12	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2.5-3" CAL	B&B	PLANT AS SHOWN
GB	15	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2.5-3" CAL	B&B	PLANT AS SHOWN
PA	13	PLATANUS X ACERIFOLIA 'BLOODGOOD' BLOODGOOD LONDON PLANE TREE	2.5-3" CAL.	B&B	PLANT AS SHOWN
FLOWERING TREES					
AA	14	AMELANCHIER X 'AUTUMN BRILLIANCE' AUTUMN BRILLIANCE SERVICEBERRY	2.5-3" CAL.	B&B	PLANT AS SHOWN
CC	12	CERCIS CANADENSIS EASTERN REDBUD	1.5-2" CAL.	B&B	PLANT AS SHOWN
CK	13	CORNUS KOUSA KOUSA DOGWOOD	8-10' HT.	B&B	PLANT AS SHOWN
CV	12	CHIONANTHUS VIRGINICUS FRINGETREE	2.5-3" CAL.	B&B	PLANT AS SHOWN
MV	12	MAGNOLIA VIRGINIANA SWEETBAY MAGNOLIA	6-8' HT.	B&B	PLANT AS SHOWN
SR	13	SYRINGA RETICULATA 'IVORY SILK' IVORY SILK LILAC TREE	1.5-2" CAL.	B&B	PLANT AS SHOWN
EVERGREEN TREES					
IF	36	ILEX X ATTENUATA 'FOSTERI' FOSTER HOLLY	5-6' HT.	B&B	PLANT AS SHOWN
TO	39	THUJA OCCIDENTALIS 'SMARAGD' EMERALD GREEN ARBORVITAE	5-6' HT.	B&B	PLANT AS SHOWN
SHRUBS					
AH	46	AZALEA 'HERSHEY RED' HERSHEY RED AZALEA	18-24" SPREAD	CONT.	PLANT AS SHOWN
AZ	27	AZALEA 'DELAWARE VALLEY WHITE' DELAWARE VALLEY WHITE AZALEA	18-24" SPREAD	CONT.	PLANT AS SHOWN
CA	28	CLETHRA ALNIFOLIA SWEET PEPPERBUSH	2.5-3' HT.	CONT.	PLANT AS SHOWN
FM	24	FOTHERGILLA 'MOUNT AIRY' DWARF FOTHERGILLA	24-30"	CONT.	PLANT AS SHOWN
IA	42	ITEA VIRGINICA VIRGINIA SWEETSPIRE	24-30"	CONT.	PLANT AS SHOWN
IG	44	ILEX GLABRA INKBERRY HOLLY	2.5-3' HT.	CONT.	PLANT AS SHOWN
IV	29	ILEX VERTICILLATA WINTERBERRY HOLLY	3-4' HT.	CONT.	PLANT AS SHOWN
PL	27	PRUNUS LAUROCERASUS 'OTTO LUYKEN' OTTO LUYKEN CHERRYLAUREL	2.5-3' HT.	CONT.	PLANT AS SHOWN
RR	25	ROSA X 'RADRAZZ' RED KNOCK OUT ROSE	24-30"	CONT.	PLANT AS SHOWN
TB	24	TAXUS BACCATA 'REPANDENS' SPREADING ENGLISH YEW	18-24" SPREAD	CONT.	PLANT AS SHOWN
VC	24	VIBURNUM CARLESII KOREAN SPICE VIBURNUM	2.5-3' HT.	CONT.	PLANT AS SHOWN
RIPARIAN BUFFER SHADE TREES					
PO	5	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	2.5-3" CAL.	B&B	PLANT AS SHOWN
QB	5	QUERCUS BICOLOR SWAMP WHITE OAK	2.5-3" CAL.	B&B	PLANT AS SHOWN

NOTE:
1. *CONTRACTOR TO PLANT 1 MALE WINTERBERRY PER EVERY 6 WINTERBERRIES, AND ENSURE THAT 1 MALE WINTERBERRY IS LOCATED IN EVERY GROUPING OF PLANTINGS.

FOREST CONSERVATION AREAS

AREA	SF	ACRES	TYPE
A	16,732	0.38	RETENTION

NOTES:

1. SEE PLANTING SPECIFICATIONS FOR PREPARATION OF PLANTING BED.

2. DO NOT HEAVILY PRUNE THE SHRUB AT PLANTING. PRUNE ONLY BROKEN, DAMAGED, OR Diseased BRANCHES.

3. DIG PLANTING PIT 12" WIDER THAN THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 18".

4. FOR B&B SHRUBS: REMOVE ALL TWINE, ROPE, AND BURLAP FROM TOP OF ROOT BALL.

5. ALL CONTAINERS SHALL BE REMOVED BEFORE INSTALLATION.

3/23 SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS

NOT TO SCALE

NOTES:

1. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, AND BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

2. STAKE TREES AS SHOWN.

3. DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.

4. TIGHTEN GUYS ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. GUYS SHALL BE LONG ENOUGH TO ACCOMMODATE 1.5 IN. OF GROWTH AND BUFFER ALL BRANCHES.

5. TUCK ANY LOOSE ENDS OF THE GUY SO THAT NO LOOSE ENDS ARE EXPOSED.

6. CONTRACTOR TO REMOVE AND GRADE OUT PLANTING SAUCER AT END OF ONE YEAR MAINTENANCE PERIOD. AREA AROUND TREES SHALL BE GRADED SMOOTH TO ELIMINATE MOUNDING. CONTRACTOR TO REMULCH AREA AROUND TREE WHEN GRADING IS COMPLETE.

4/23 DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)

NOT TO SCALE

NOTES:
1. SIGNAGE SHALL BE LOCATED ON FOREST CONSERVATION / REFORESTATION / AFFORESTATION EASEMENT BORDER.
2. PLACE SIGNS AT 50' AT THE OUTER PERIMETER OF THE FOREST CONSERVATION AREAS. SEE PLAN FOR SPACING.

1/23 FOREST CONSERVATION SIGN DETAIL

NOT TO SCALE

NOTES:
1. BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE, ONLY.
2. SUPER SILT FENCE MAY BE SUBSTITUTED FOR TREE PROTECTION FENCING.
3. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
4. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
5. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
6. PROTECTION SIGNS ARE REQUIRED, SEE SIGN DETAIL.
7. FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

2/23 TREE PROTECTION FENCING

NOT TO SCALE

SITE AREA TABLE

	ACRES
TOTAL SITE AREA	5.63
ROAD DEDICATION	0.00
EXISTING FOREST	0.38
LAND WITHIN STREAM BUFFERS	0.03
LAND WITHIN WETLANDS & WETLAND BUFFERS	0.17
LAND WITHIN FLOODPLAIN	0.00
FOREST WITHIN STREAM BUFFERS	0.00
FOREST WITHIN WETLANDS & WETLAND BUFFERS	0.00
FOREST WITHIN FLOODPLAIN	0.00
CRITICAL AREA	0.00
FOREST WITHIN CRITICAL AREA	0.00

NOTES:

1. SELECT ONLY NURSERY STOCK WITH A SINGLE LEADER UNLESS OTHERWISE SPECIFIED ON PLAN. PLANTS WITH CO-DOMINANT, MISSING, OR DAMAGED LEADERS SHALL BE REJECTED.

2. STAKE TREES AS SHOWN.

3. DIG PLANTING PIT TWICE AS WIDE AS THE DIAMETER OF THE TOP OF THE ROOT BALL WITH A MINIMUM PLANTING PIT DIAMETER OF 5'.

4. CONTRACTOR TO REMOVE AND GRADE OUT PLANTING SAUCER AT END OF ONE YEAR MAINTENANCE PERIOD. AREA AROUND TREES SHALL BE GRADED SMOOTH TO ELIMINATE MOUNDING. CONTRACTOR TO REMULCH AREA AROUND TREE WHEN GRADING IS COMPLETE.

5/23 EVERGREEN B&B PLANTING DETAIL

NOT TO SCALE

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $47,850.00.

50 SHADE TREES @ $300	= $15,000.00
75 ORNAMENTAL TREES @ $150	= $11,250.00
76 EVERGREEN TREES @ $150	= $11,400.00
340 SHRUBS @ $30	= $10,200.00

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.

7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.

8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

9. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION AND WHEN NECESSARY, REPAIRED OR REPLACED.

10. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE DATE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE AND FOREST CONSERVATION NOTES AND DETAILS

Pennoni
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

SEAL
JONATHAN STODDARD NORMAN
No. 4114

BY:
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 4114, EXPIRATION DATE: 05-09-2025"

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 23 OF 27

U:\Accounts\ODONN\ZZR1601099 - O'Donnell Property\DESIGN_SHEETS\SITE DEVELOPMENT PLAN\ODONN21001-SDP23 LANDSCAPE FCON NOTES DETAILS.dwg

NORTHWEST, FROM BINDER LANE
NOT TO SCALE

SOUTHEAST, FROM RT 1
NOT TO SCALE

SOUTHWEST, FROM DORSEY RD + MEMORIAL PARK
NOT TO SCALE

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
BUILDING ELEVATIONS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL
BY:
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 24 OF 27

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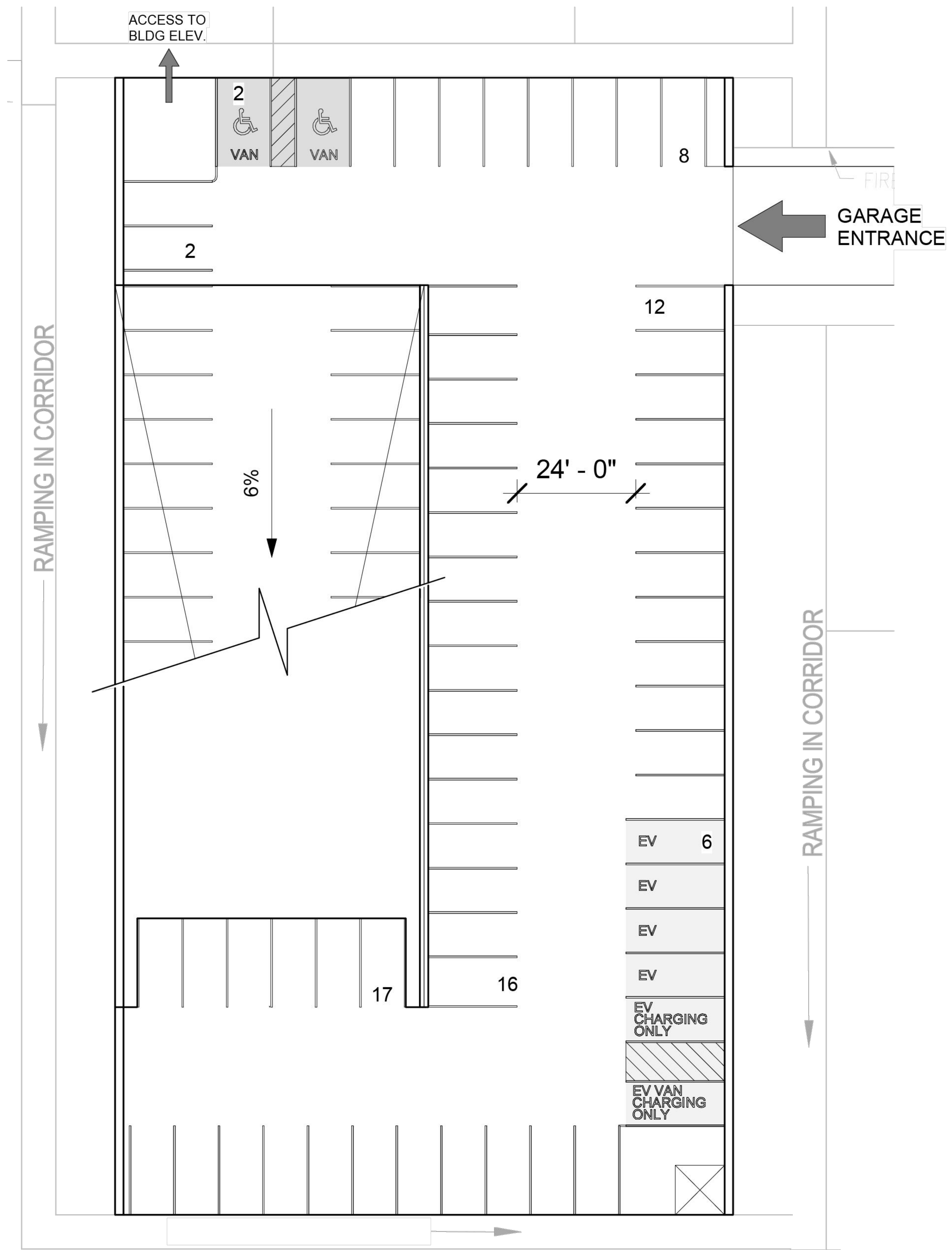
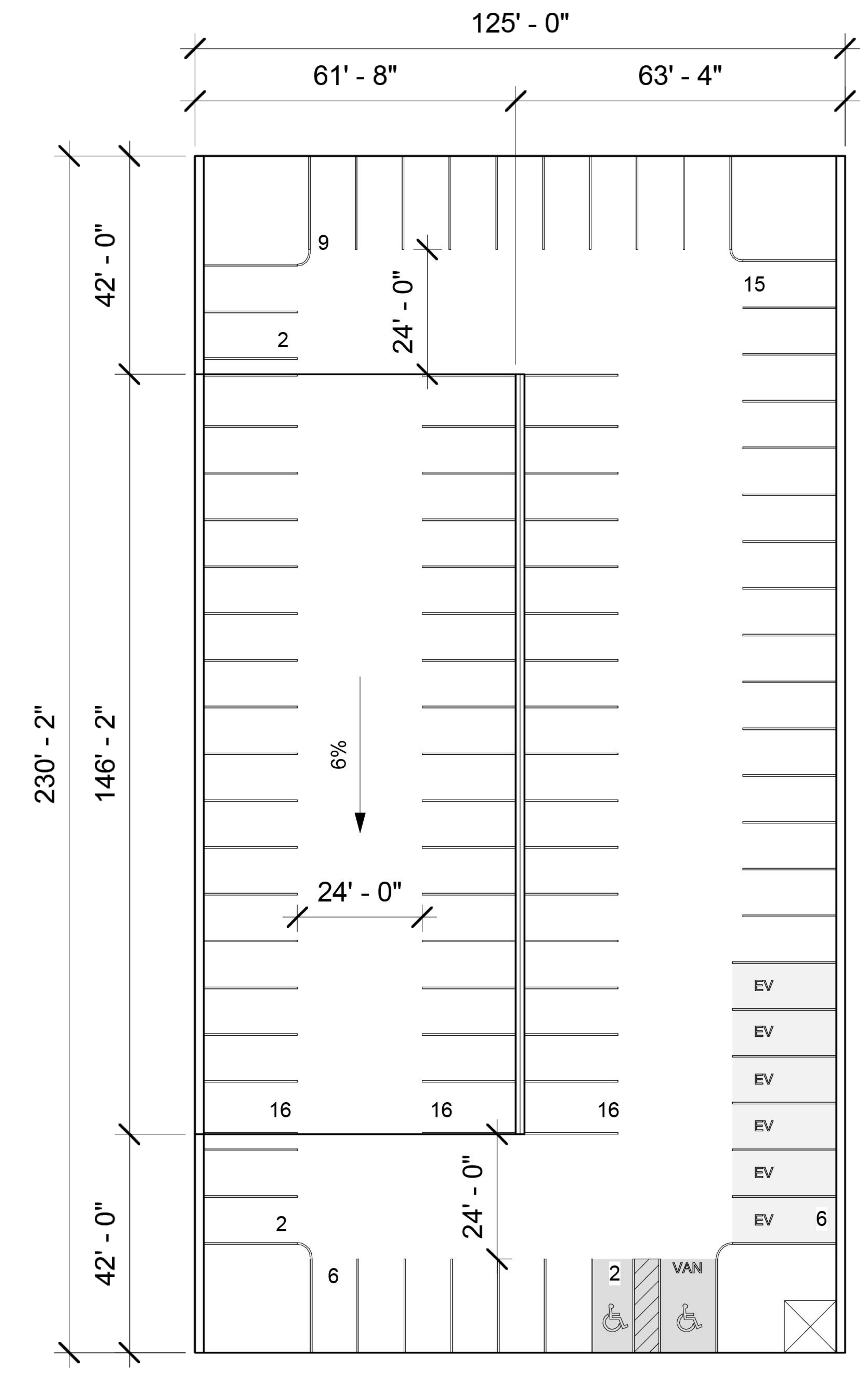


FIRST FLOOR PLAN



TYPICAL FLOOR PLAN

TOTAL UNITS: 285

REQUIRED PARKING: 513
(1.8 SPACES/UNIT)

REQUIRED ADA PARKING: 11
(2% OF TOTAL PARKING)
- 3 VAN PARKING (1 OF 4)
- 8 ACCESSIBLE PARKING

:2 ADA PARKING @ 1 THRU 5TH FLOOR
:1 ADA PARKING @ 6TH FLOOR

REQUIRED EV PARKING: 12
(1 SPACE/25UNITS)
- 1 VAN ACCESSIBLE
- 1 ACCESSIBLE PARKING
- 10 EV SPACES

:6 EV SPACES @ 1ST FLOOR
:6 EV SPACES @ 2ND FLOOR

PARKING COUNTS

1ST FLOOR : 95
2ND THRU 5TH FL : 90 X 4 = 360
6TH FLOOR : 59

TOTAL : 514 (+1)

NOTE:

THERE ARE 95 PARKING SPACES ON THE LOWER LEVEL. THIS INCLUDES 32 PARKING SPACES ON THE RAMP. THE RAMP IS CUT OFF TO ILLUSTRATE HOW SPACES ARE TUCKED BENEATH.

100 N. CHARLES ST.
FOURTEENTH FLOOR
BALTIMORE, MD 21201
(410) 576-0440

SCALE:1"=20'

QUINN EVANS

6718Binder
6718 Binder Ln, Elkridge, MD 21075

PARKING PLAN

42240150
Date: 9/25/2024
Sketch Number:
P100

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
GARAGE FLOOR PLAN

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects
8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 F 410.997.9282

SEAL

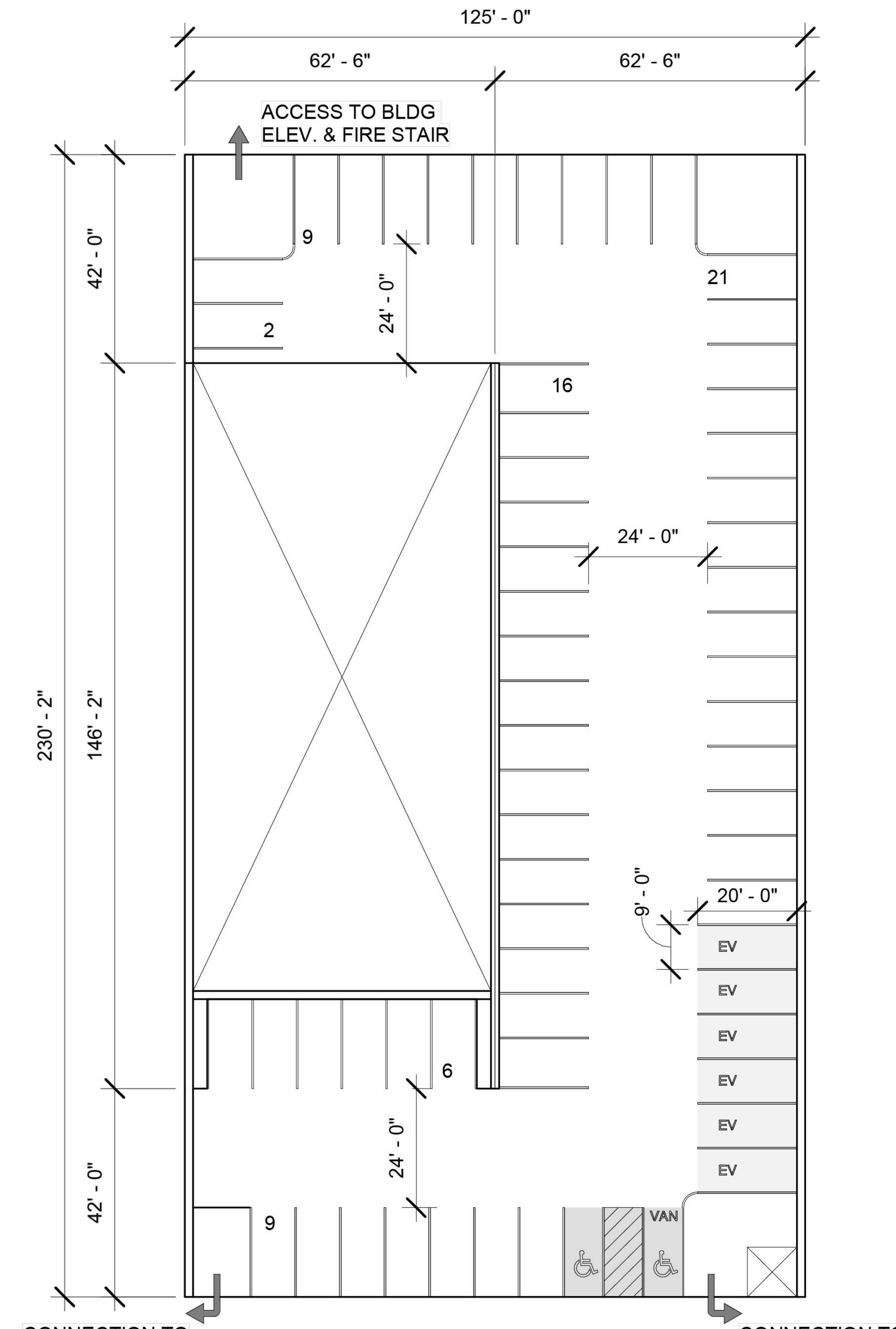
BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : 1"=20' SCALE
DRAWING NO. 25 OF 27

0 20' 40'

MDOT SHA TRACKING #23APHO006XX SDP-23-013



TOP FLOOR PLAN

TOTAL UNITS: 285

REQUIRED PARKING: 513
(1.8 SPACES/UNIT)

REQUIRED ADA PARKING: 11
(2% OF TOTAL PARKING)
- 3 VAN PARKING (1 OF 4)
- 8 ACCESSIBLE PARKING

:2 ADA PARKING @ 1 THRU 5TH FLOOR
:1 ADA PARKING @ 6TH FLOOR

REQUIRED EV PARKING: 12
(1 SPACE/25UNITS)
- 1 VAN ACCESSIBLE
- 1 ACCESSIBLE PARKING
- 10 EV SPACES

:6 EV SPACES @ 1ST FLOOR
:6 EV SPACES @ 2ND FLOOR

PARKING COUNTS

1ST FLOOR	: 95
2ND THRU 5TH FL	: 90 X 4 = 360
6TH FLOOR	: 59
TOTAL	: **514** (+1)

ADDITIONAL UNITS MAY NOT BE INCLUDED IN FINAL PROPOSAL

100 N. CHARLES ST.
FOURTEENTH FLOOR
BALTIMORE, MD 21201
(410) 576-0440

SCALE:1"=20'

QUINN EVANS

6718Binder
6718 Binder Ln, Elkridge, MD 21075

PARKING PLAN

42240150
Date: 9/25/2024
Sketch Number:
P101

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

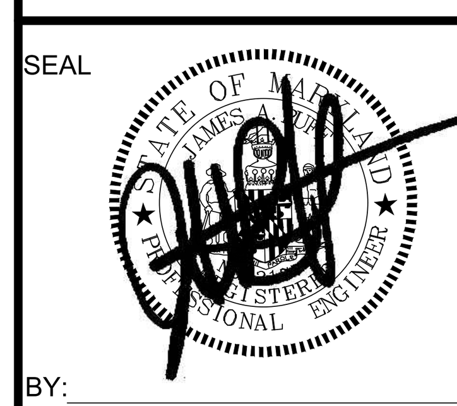
AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
GARAGE FLOOR PLAN

Pennoni
Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
T 410.997.8900 **F** 410.997.9282

SEAL



BY:

"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : 1"=20'
DRAWING NO. 26 OF 27

0 20' 40'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Project Name: O'Donnell Properties SWM — Boring No.: B-1
Location: Binder Lane, Elkridge, MD — Job #: 22751A

SAMPLER

Datum: ______ Hammer Wt.: 140 lbs. Hole Diameter: 3.25 in. Foreman: Tony
Surf. Elev.: 192 ft Hammer Drop: 30 in. Rock Core Diameter: NA Inspector: ______
Date Started: 12/16/2022 Pipe Size (O.D.): 2 in. Boring Method: HSA Date Completed: 12/16/2022

Elevation/ Depth (ft)	Soil Symbols/ Sample Conditions	Description	Boring and Sampling Notes	Sample No.	Rec. (in)	NM (%)	SPT Blows	N
0	D	Black, brown, moist, loose, clayey SAND, trace gravel (SC: Fill)	Base material - 6"	1	12		4-3-3	6
	I	Tan, brown, moist, medium stiff to stiff, CLAY, trace sand, trace gravel (CL)	Groundwater was not encountered while drilling	2	14		3-3-4	7
5	I			3	14		3-5-8	13
	D	Tan, light brown, moist, medium dense, silty SAND, trace gravel (SM)		4	12		4-8-9	17
	D	Light gray, moist, medium dense, silty SAND (SM)	Boring backfilled at completion	5	14		6-12-12	24
15		Boring terminated at 15 ft						

Elevation scale: 190, 185, 180, 175, 170, 165, 160; Depth scale: 0, 5, 10, 15, 20, 25, 30; SPT N (blows/ft): 10, 30, 50

SAMPLER TYPE	SAMPLE CONDITIONS		GROUND WATER	CAVE IN DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE	D - DISINTEGRATED	AT COMPLETION	Dry ft.	11.0 ft.	HSA - HOLLOW STEM AUGERS
PT - PRESSED SHELBY TUBE	I - INTACT	AFTER 24 HRS.	ft.	ft.	CFA - CONTINUOUS FLIGHT AUGERS
CA - CONTINUOUS FLIGHT AUGER	U - UNDISTURBED	AFTER ____ HRS.	ft.	ft.	DC - DRIVING CASING
RC - ROCK CORE	L - LOST				MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Project Name: O'Donnell Properties SWM — Boring No.: B-2
Location: Binder Lane, Elkridge, MD — Job #: 22751A

SAMPLER

Datum: ______ Hammer Wt.: 140 lbs. Hole Diameter: 3.25 in. Foreman: Tony
Surf. Elev.: 186 ft Hammer Drop: 30 in. Rock Core Diameter: NA Inspector: ______
Date Started: 12/16/2022 Pipe Size (O.D.): 2 in. Boring Method: HSA Date Completed: 12/16/2022

Elevation/ Depth (ft)	Soil Symbols/ Sample Conditions	Description	Boring and Sampling Notes	Sample No.	Rec. (in)	NM (%)	SPT Blows	N
0	D	Black, brown, moist, loose, clayey SAND, trace gravel (SC: Fill)	Asphalt - 4"	1	12		2-2-4	6
	D	Tan, brown, moist, medium stiff, sandy CLAY (SC: Fill)	Groundwater was not encountered while drilling	2	14		3-3-7	10
5	I	Tan, brown, gray, moist, stiff, CLAY (CL)		3	16		4-5-9	14
	D	Light gray to tan, moist, loose to medium dense, silty SAND (SM)		4	16		5-7-10	17
	D		Boring backfilled at completion	5	16		4-3-5	8
15	D			6	8		5-5-9	14
		Boring terminated at 18 ft						

Elevation scale: 185, 180, 175, 170, 165, 160, 155; Depth scale: 0, 5, 10, 15, 20, 25, 30; SPT N (blows/ft): 10, 30, 50

SAMPLER TYPE	SAMPLE CONDITIONS		GROUND WATER	CAVE IN DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE	D - DISINTEGRATED	AT COMPLETION	Dry ft.	15.5 ft.	HSA - HOLLOW STEM AUGERS
PT - PRESSED SHELBY TUBE	I - INTACT	AFTER 24 HRS.	ft.	ft.	CFA - CONTINUOUS FLIGHT AUGERS
CA - CONTINUOUS FLIGHT AUGER	U - UNDISTURBED	AFTER ____ HRS.	ft.	ft.	DC - DRIVING CASING
RC - ROCK CORE	L - LOST				MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
RECORD OF SOIL EXPLORATION

Project Name: O'Donnell Properties SWM — Boring No.: B-3
Location: Binder Lane, Elkridge, MD — Job #: 22751A

SAMPLER

Datum: ______ Hammer Wt.: 140 lbs. Hole Diameter: 3.25 in. Foreman: Tony
Surf. Elev.: 178 ft Hammer Drop: 30 in. Rock Core Diameter: NA Inspector: ______
Date Started: 12/16/2022 Pipe Size (O.D.): 2 in. Boring Method: HSA Date Completed: 12/16/2022

Elevation/ Depth (ft)	Soil Symbols/ Sample Conditions	Description	Boring and Sampling Notes	Sample No.	Rec. (in)	NM (%)	SPT Blows	N
0	D	Greenish gray, moist, medium dense, silty SAND, with root fibers(SM: Fill)	Base material - 6"	1	10		6-8-6	14
	D	Tan, brown, moist, stiff, sandy SILT, trace clay (ML)	Groundwater was not encountered while drilling	2	12		5-7-8	15
5	D			3	14		2-4-8	12
	D	Light gray, moist to wet, medium dense to loose, silty SAND (SM)		4	12		4-6-6	12
	D		Boring backfilled at completion	5	16		5-5-4	9
15		Boring terminated at 15 ft						

Elevation scale: 175, 170, 165, 160, 155, 150, 145; Depth scale: 0, 5, 10, 15, 20, 25, 30; SPT N (blows/ft): 10, 30, 50

SAMPLER TYPE	SAMPLE CONDITIONS		GROUND WATER	CAVE IN DEPTH	BORING METHOD
DRIVEN SPLIT SPOON UNLESS OTHERWISE	D - DISINTEGRATED	AT COMPLETION	Dry ft.	13.0 ft.	HSA - HOLLOW STEM AUGERS
PT - PRESSED SHELBY TUBE	I - INTACT	AFTER 24 HRS.	ft.	ft.	CFA - CONTINUOUS FLIGHT AUGERS
CA - CONTINUOUS FLIGHT AUGER	U - UNDISTURBED	AFTER ____ HRS.	ft.	ft.	DC - DRIVING CASING
RC - ROCK CORE	L - LOST				MD - MUD DRILLING

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS.

APPROVED : DEPARTMENT OF PLANNING AND ZONING

DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION	BY

DEVELOPER
OLD TOWN CONSTRUCTION
5304 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
ATTN: JARED SPAHN
PHONE: 410-730-3725

OWNER
O'DONNELL PROPERTIES LLC
5 LONGWOOD ROAD
BALTIMORE, MD 21210
ATTN: STEVE O'DONNELL
PHONE: 410-796-7968

PROJECT
O'DONNELL PROPERTIES

AREA
TAX MAP 37 PARCELS 276, 277, 278, 280, 283, & 289 LOTS 1, 2, 6-11 & 13
ZONED TOD GRID NO. 23 1ST ELECTION DISTRICT
6720 BINDER LANE
ELKRIDGE, MARYLAND 21075
HOWARD COUNTY, MARYLAND

TITLE
SOIL BORING LOGS

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

8890 McGaw Road, Suite 100 Columbia, MD 21045
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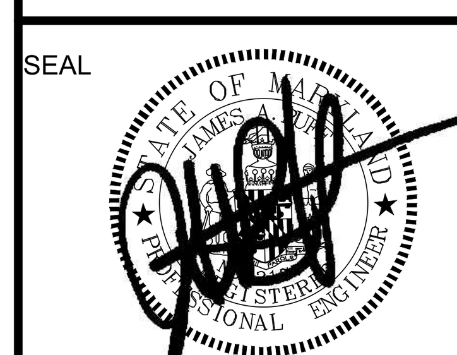
SEAL


BY: ______
"I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21774, EXPIRATION DATE: 11/10/25."

DESIGNED BY : PJS/JSN
DRAWN BY: JSN/SVH/CR
PROJECT NO : ODONN21001
DATE : DECEMBER 20, 2024
SCALE : AS SHOWN
DRAWING NO. 27 OF 27