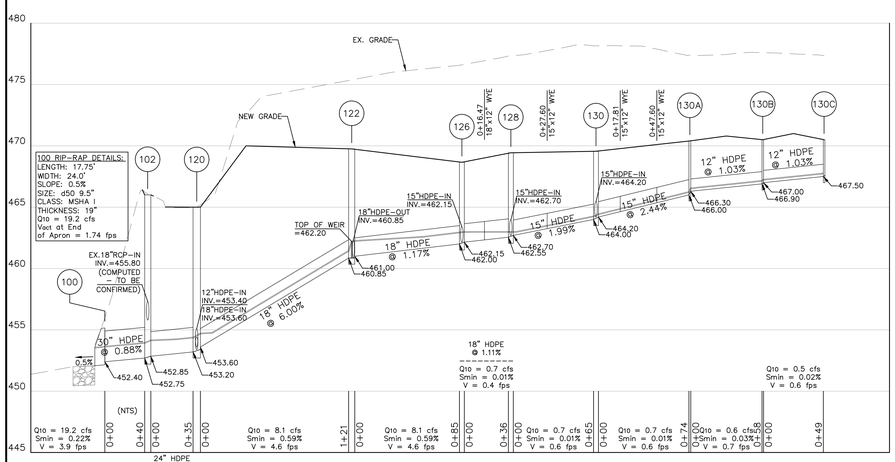
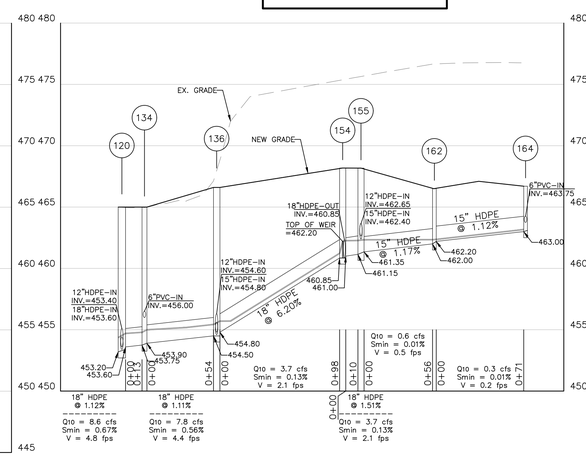
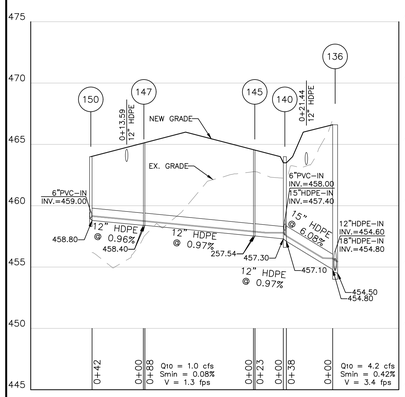
FOR UTILITY LOCATIONS
CONTACT "ONE CALL" AT 811
AT LEAST 48 HOURS
PRIOR TO CONSTRUCTION

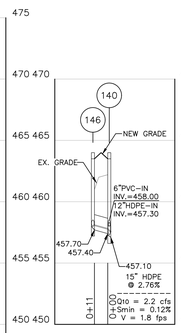
Know what's below. Call before you dig.

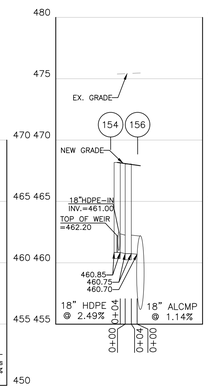
SD PROFILES:
HORZ. SCALE: 1"=50'
VERT. SCALE: 1"=5'

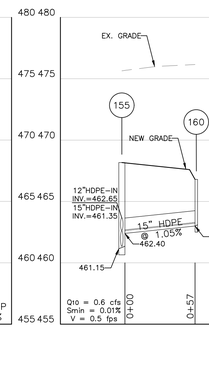


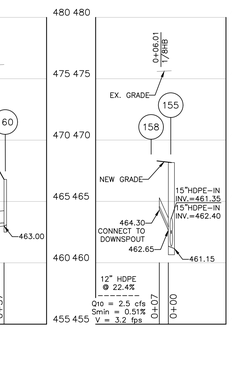


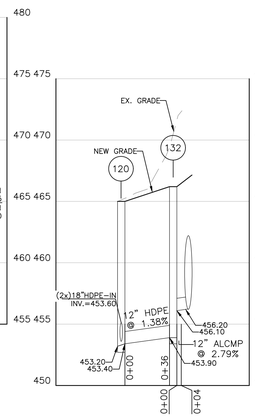


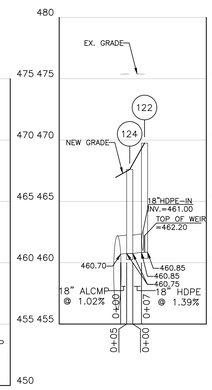


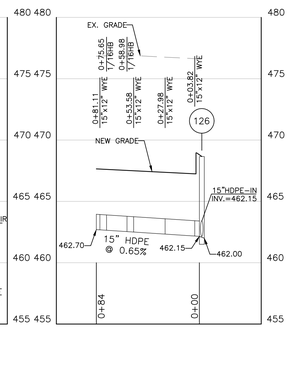


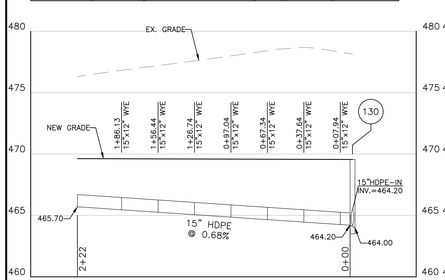


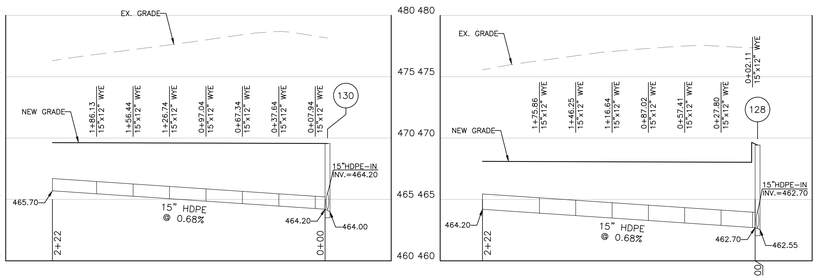


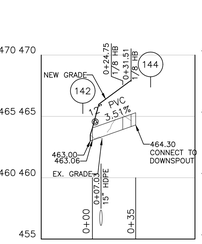


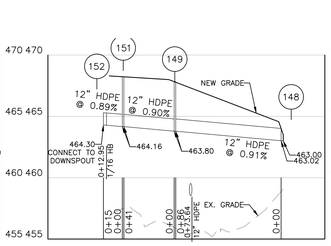


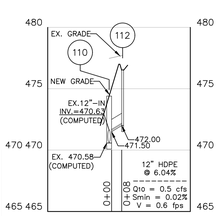


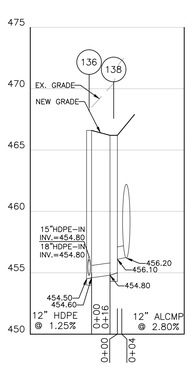












GENERAL NOTES FOR SMOOTH WALL HDPE STORM DRAIN

1. THE PIPE SHALL BE ADVANCE DRAINAGE SYSTEMS, INC. N12 PIPE OR HANCOR HI-Q OR HANCOR HI-Q SURE-LOK PIPE AND SHALL BE SOLID PIPE MEETING THE REQUIREMENTS OF AASHTO M 252, TYPE S AND AASHTO M 294, TYPE S. THE JOINTS SHALL BE SOIL TIGHT UNLESS RUBBER GASKETED JOINTS ARE SPECIFIED, THEN HDPE MUST HAVE WATER TIGHT GASKETED JOINTS. THE CONTRACTOR SHALL PROVIDE CERTIFICATION FOR THE HDPE PIPE IN ACCORDANCE WITH THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION (SHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (STD. SPECS.) SECTION 906.01.

2. THE HDPE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321 AND SHA STD. SPECS. SECTION 303-PIPE CULVERTS, EXCEPTING ANY REFERENCE TO MEASUREMENT AND PAYMENT.

3. THE TRENCH BOTTOM RECEIVING HDPE PIPE SHALL BE INSPECTED AND TESTED BY THE GEOTECHNICAL ENGINEER EVERY 400 LINEAR FEET, BUT NO FEWER THAN ONCE PER PIPE RUN FOR SUITABLE BEARING.

4. THE HDPE PIPE SHALL BE BEDDED ON A MINIMUM 4" LAYER OF COARSE AGGREGATE MEETING THE REQUIREMENTS OF SHA STD. SPECS. SECTION 901- AGGREGATES, TABLE 901 A, NO. 57, COMPACTED IN ACCORDANCE WITH ASTM D 2321.

5. THE HDPE PIPE HAUNCH ZONE AND INITIAL BACKFILL ZONE SHALL BE BACKFILLED WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SHA STD. SPECS. SECTION 901-AGGREGATES, TABLE 901 A, NO. 57 OR OTHER MATERIALS IN ACCORDANCE WITH ASTM D 2321 AND ACCEPTABLE TO THE GEOTECHNICAL ENGINEER. THE COMPACTION SHALL BE IN ACCORDANCE WITH ASTM D 2321 AND SHALL BE MONITORED BY THE GEOTECHNICAL ENGINEER.

6. THE TRENCH RECEIVING HDPE PIPE SHALL BE BACKFILLED WITH SELECT BORROW MATERIAL MEETING THE REQUIREMENTS OF SHA STD. SPECS. SECTION 916-SOIL AND SOIL-AGGREGATE BORROW OR OTHER MATERIALS ACCEPTABLE TO THE GEOTECHNICAL ENGINEER. THE BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH SHA STD. SPECS. SECTION 210-TAMPED FILL. THE COMPACTION SHALL BE IN ACCORDANCE WITH ASTM D 2321 AND SHALL BE MONITORED BY THE GEOTECHNICAL ENGINEER.

7. THE HDPE PIPE DEFLECTION SHALL BE MEASURED NO SOONER THAN THIRTY (30) DAYS AFTER INSTALLATION USING A NINE (9) POINT MANDREL. REMOVE, REPLACE AND RETEST ANY PIPE WITH A DEFLECTION GREATER THAN 5%.

GENERAL NOTES FOR STORM DRAIN AND PAVING CONSTRUCTION: MONTGOMERY COUNTY DPS

1. ALL STORM DRAIN AND PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF MONTGOMERY COUNTY STANDARDS AND SPECIFICATIONS, AND THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS, LATEST EDITION, AND ALL ADDENDA THERETO.

2. TYPE OF STRUCTURE OR DETAIL REFERS TO THE LATEST DESIGN STANDARDS OF THE BOOK OF STANDARDS OF MONTGOMERY COUNTY DOT, STANDARD DETAILS OF THE WSSC, AND THE BOOK OF STANDARDS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, UNLESS OTHERWISE NOTED.

3. WHERE THE DROP ON THE MAIN LINE THROUGH A STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5 TO 1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES.

4. INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED OR LESS THAN 12" WHEN NOT SPECIFIED, CONTACT THE DESIGN ENGINEER. THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION; AND THE MCDPS ROW INSPECTOR. ANY UTILITY (WHETHER SHOWN OR NOT) DAMAGED DUE TO CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

5. CONTRACTOR SHALL TEST PIT IN THE AREA OF KNOWN UTILITIES TO VERIFY THE SIZE, LOCATION AND TYPE OF UTILITY PRIOR TO PERFORMING ANY WORK. ALL UTILITY RELOCATIONS, WHETHER SHOWN ON THESE PLANS OR DISCOVERED IN THE FIELD, ARE THE RESPONSIBILITY OF THE OWNER. PRIOR TO PERFORMING ANY WORK, THE OWNER AND THE CONTRACTOR SHALL NEGOTIATE A COST FOR ANY DISCOVERED UTILITY WORK.

6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF EXCESS EARTH, DEMOLISHED CONCRETE, BITUMINOUS MATERIAL, RUBBISH, TRASH, FALLEN TREES, AND DEBRIS OFF SITE. BORROW FOR THE SITE SHALL BE OBTAINED IN A MANNER WHICH CONFORMS WITH NATURAL RESOURCES CONSERVATION SERVICE.

7. WHERE ANY PART OF THE STORM DRAIN SYSTEM IS LOCATED IN A FILL SECTION, PROVIDE SELECT FILL MATERIAL COMPACTED TO 95% ASSHTO T-99 DENSITY FROM APPROVED SUBGRADE TO THE STRUCTURE BOTTOM SLABS AND/OR THE PIPE BEDDING.

8. ALL STORM DRAIN PIPES SHALL BE INSTALLED WITH CLASS "C" BEDDING, AS SHOWN ON MCDOT, "RCP SUPPORTING STRENGTH" LOADING CHARTS IN APPENDIX C..

9. ALL ROADWAY PAVEMENT AFFECTED BY UTILITY TRENCHING OPERATIONS SHALL BE REPAIRED PER STANDARD MC-801.02.

10. CALL "MISS UTILITY" AT 811 AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE LOCATION OF EXISTING UTILITIES.

11. ALL STANDARD STORM DRAIN STRUCTURES ARE SUBJECT TO MODIFICATIONS BY THE DESIGN ENGINEER TO MEET FIELD CONDITIONS HOWEVER, IF THIS IS A PUBLIC STRUCTURE, IT NEEDS COUNTY'S APPROVAL.

12. ALL PRECAST STRUCTURES AND SUPPLIERS OF "ALTERNATE EQUAL STRUCTURES" ARE TO BE PREVIOUSLY APPROVED BY MCDOT.

13. ALL INLETS SHALL BE PROVIDED WITH WEEP HOLES AND FOUNDATION DRAINAGE MATERIALS PER MC STANDARDS.

14. ALL WORK WITHIN THE PUBLIC RIGHTS-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATIONS STANDARDS AND SPECIFICATIONS AND THE MONTGOMERY COUNTY ROAD CODE AND THE STATE HIGHWAY ADMINISTRATION STANDARDS AND SPECIFICATIONS AND DETAILS, LATEST EDITIONS.

15. CONTRACTOR SHALL NOTIFY W.S.S.C. CUSTOMER CARE SECTION HEAD AT 301-206-8043 FORTY-EIGHT HOURS (48) IN ADVANCE OF BEGINNING ANY WORK IN THE VICINITY OF W.S.S.C. UTILITIES TO ARRANGE FOR INSPECTION AND, IF DESIRED, PROCUREMENT OF REQUIRED MATERIALS FROM W.S.S.C.

16. ALL PAVEMENT MARKING AND SIGNING SHALL BE DONE PER THE SEPARATE FINAL APPROVED AND PERMITTED PAVEMENT MARKING AND SIGNING PLAN.

17. ALL PUBLIC STREET TREE REMOVALS AND/OR PLANTINGS SHALL BE DONE PER THE LATEST SEPARATE APPROVED RIGHT OF WAY - TREE PROTECTION PLAN.

18. ALL ESD WORK IN THE PUBLIC RIGHT OF WAY SHALL BE PER THE LATEST SEPARATE APPROVED AND PERMITTED SOIL EROSION, SEDIMENT CONTROL AND SWM PLAN.

19. ALL SIDEWALK RAMPS ARE TO BE BUILT IN ACCORDANCE WITH MSHA STDS NO. MD 655.11, MD 655.12, OR MD 655.13. ALL SIDEWALK RAMPS IN RIGHT OF WAY TO HAVE DETECTABLE WARNING SURFACES (MD 655.40).

20. CUT AND PATCH WORK IS TO VERIFY THAT ALL UTILITIES, I.E. WATER, SEWER, GAS, ELECTRIC, ETC., ARE IN PLACE PRIOR TO CONSTRUCTION OF SUB-BASE AND/OR PAVING.

21. ALL UTILITIES ARE TO BE ADJUSTED TO GRADE AS NECESSARY BY THE CONTRACTOR.

22. FILLET PAVING AT INTERSECTIONS SHALL BE WARPED TO ASSURE POSITIVE DRAINAGE. ALL GUTTERS AND PAVING SHALL BE CONSTRUCTED TO HAVE POSITIVE DRAINAGE IN ALL AREAS.

23. JOINTS BETWEEN EXISTING BITUMINOUS PAVEMENT OR CONCRETE TO REMAIN AND PROPOSED PAVEMENT SHALL BE CLEAN, SMOOTH, UNBROKEN SAW CUT. SAW CUT JOINT SHALL BE TACKED PRIOR TO PLACEMENT OF NEW PAVEMENT AND FINAL JOINT SEALED.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE AVOIDANCE OF AND THE CLEAN UP OF DUST, DIRT, DEBRIS AND MUD ON ALL ROADS DUE TO VEHICLES ARRIVING AND LEAVING PROJECT SITES.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING SILT AND DEBRIS OUT OF THE EXISTING STORM DRAINAGE SYSTEM DURING CONSTRUCTION, AND SHALL CLEAN OUT THE STORM DRAINAGE SYSTEM THOROUGHLY PRIOR TO FINAL ACCEPTANCE BY THE MONTGOMERY COUNTY AND MARYLAND SHA.

26. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE LATEST EDITIONS OF THE MARYLAND SHA STANDARD SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. REFER TO SEPARATE TEMPORARY MAINTENANCE OF TRAFFIC PLANS.

27. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL WORK CORRECTLY, IN CONFORMANCE WITH ALL CODE REQUIREMENTS.

28. PROPOSED PAVING, SIDEWALK AND C&G TO MEET EXISTING; TRANSITION TO BE MADE IN LINE AND ON GRADE OR AS DIRECTED BY THE DPS PERMIT INSPECTOR AND THE SHA PERMIT INSPECTOR.

29. MACRIS, HENDRICKS AND GLASCOCK, P.A. MAKES NO GUARANTEE OR WARRANTY EITHER ASSUMED OR IMPLIED AS TO THE SUITABILITY OF THE PAVING SECTIONS SHOWN AND ASSUMES NO LIABILITY IN PROVIDING THE PAVING SECTIONS ON OUR DRAWINGS.

30. ALL DISTURBED AREAS (DUE TO CONTRACTOR'S ACTIVITIES) NOT UNDER PROPOSED PAVEMENTS SHALL BE STABILIZED BY PLACEMENT OR EXISTENCE OR MINIMUM OF 4 INCH DEPTH NATIVE TOPSOIL AND SEEDING AND MULCHING, PER THE SHA SPECIFICATIONS.

31. NO PIPE SHALL BE CONSTRUCTED INTO THE CORNER OF A SQUARE OR RECTANGULAR STORM DRAIN STRUCTURE. A MINIMUM CLEARANCE OF 6 (SIX) INCHES MUST BE PROVIDED BETWEEN ANY INSIDE CORNER OF A STRUCTURE AND THE OUTSIDE DIAMETER OF THE PIPE. THIS REQUIREMENT APPLIES TO ALL STORM DRAIN STRUCTURES - WHETHER PRECAST, CAST IN PLACE, OR CONSTRUCTED OF BRICK.

32. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE CONTACTED IMMEDIATELY TO RESOLVE THE DISCREPANCY. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.

33. ALL UNPAVED AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL BE SEEDED OR SODDED AS DIRECTED.

34. CONTRACTOR SHALL REPAIR ALL DAMAGED IMPROVEMENTS AFFECTED BY ROADWAY WORK WITHIN THE RIGHT-OF-WAY. REPAIR WORK INCLUDES, BUT MAY NOT BE LIMITED TO, CURBS, PAVEMENT, SIDEWALKS, LANDSCAPING, ETC. ALL REPAIR WORK SHALL MEET CURRENT MONTGOMERY COUNTY SPECIFICATIONS.

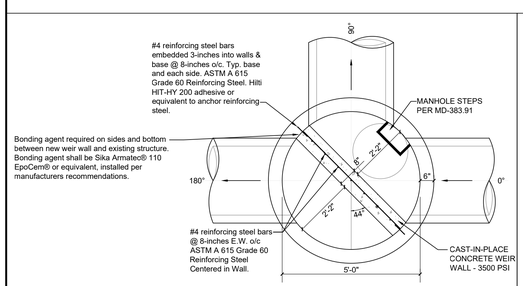
35. ALL SIDEWALK AND HANDICAP RAMPS TO BE ADA COMPLIANT AND BE FREE OF ALL NON-ADA SURFACE FEATURES.

36. PRIVATE STORM DRAIN SYSTEMS SHOWN ON THIS PLAN HAVE NOT BEEN REVIEWED BY THE COUNTY. THE ENGINEER SHALL BE RESPONSIBLE TO ENSURE THAT ALL PRIVATE STORM DRAIN FACILITIES MEET COUNTY STANDARDS AND SPECIFICATIONS.

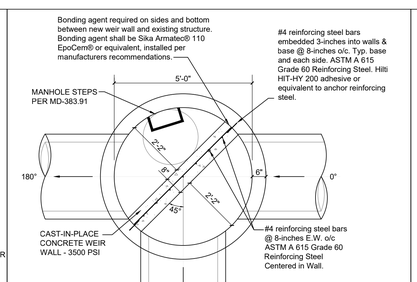
37. IT IS THE ENGINEER'S RESPONSIBILITY TO ENSURE ALL ELEVATION INFORMATION PROVIDED AGREES WITH APPROVED PLANS, GRADE ESTABLISHMENT PLAN, ROAD SECTIONS AND COUNTY REQUIREMENTS.

38. ALL STORM DRAIN CONSTRUCTION ON THE PLAN, EXCEPT DRIVEWAY CULVERTS, TO BE MAINTAINED BY MCDOT UNLESS OTHERWISE NOTED ON THE PLANS.

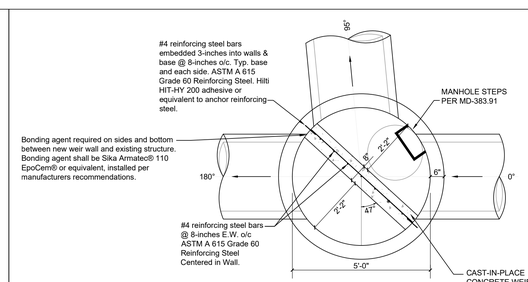
39. ALL FIELD MODIFICATIONS ARE SUBJECT TO MCDPS FIELD INSPECTOR APPROVAL.



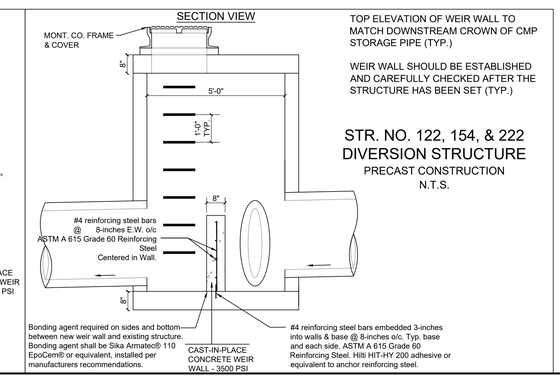
122: PLAN VIEW
(TOP SLAB REMOVED)



154: PLAN VIEW
(TOP SLAB REMOVED)



222: PLAN VIEW
(TOP SLAB REMOVED)



TOP ELEVATION OF WEIR WALL TO MATCH DOWNSTREAM CROWN OF CMP STORAGE PIPE (TYP.)

WEIR WALL SHOULD BE ESTABLISHED AND CAREFULLY CHECKED AFTER THE STRUCTURE HAS BEEN SET (TYP.)

STR. NO. 122, 154, & 222
DIVERSION STRUCTURE
PRECAST CONSTRUCTION
N.T.S.

ARCHITECT
SMOLEN • EMR • ILKOVITCH ARCHITECTS
9211 CORPORATE BLVD, SUITE 340
ROCKVILLE, MD 20850
301-770-0177(P) 301-330-3224(F)

CIVIL
MACRIS, HENDRICKS & GLASCOCK
9220 WIGHTMAN RD, SUITE 120
MONTGOMERY VILLAGE, MD 20886
301-670-0840(P)

STRUCTURAL
COMPREHENSIVE STRUCTURAL SOLUTIONS
9220 WIGHTMAN RD, SUITE 120
MONTGOMERY VILLAGE, MD 20886
240-200-5599(P)

MECH./ELECTRICAL/PLUMBING
JAMES POSEY ASSOCIATES
11155 RED RUN BLVD, SUITE 310
BALTIMORE, MD 21117
410-265-6100(P)

KITCHEN
NYIKOS-GARCIA FOODSERVICE DESIGN, INC
18219-A FLOWER HILL WAY
GAITHERSBURG, MD 20879
240-683-9530 (P)

SUSTAINABILITY
DOO CONSULTING, LLC
531 PICCADILLY ROAD
BALTIMORE, MD 21204
443-653-3792 (P)

CONSTRUCTION MANAGER
SKANSKA USA BUILDING INC.
700 KING FARM BLVD, SUITE 200
ROCKVILLE, MD 20850
301-795-3100 (P)

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engeineer under the laws of the State of Maryland, License No.: 16905, Expiration Date: 4.21.2022.

PROFESSIONAL SEAL:

PRINTS ISSUED

NO:	DESCRIPTION:	DATE:
1	BID DOCUMENTS	10/21/2020
2	ADDENDUM #2	11/25/2020
3	ADDENDUM #3	12/01/2020
4	ADDENDUM #4	12/03/2020
5		

TAX MAP FT62 WSSC 224NW09
PLAT 12762
9TH ELECTION DISTRICT
CITY OF GAITHERSBURG, MD

GAITHERSBURG CLUSTER ELEMENTARY SCHOOL #8

MONTGOMERY COUNTY PUBLIC SCHOOLS

SHEET TITLE:
SOIL EROSION, SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN

PROJECT NO: 19007
DATE: 12/04/20
SCALE: AS NOTED
SHEET NO: C4.31
Sheet 23 of 28

HUDSON WORKING

SM#285890
SC023SDPROFILE
SC#286335

STORM DRAIN PROFILES, NOTES & DETAILS

I:\19111\dwg\SD_21_01.dwg C4.31 STORM DRAIN PROFILES NOTES & DETAILS SC023SDPROFILE, 12/10/2020 6:56:54 PM, Copyright © 2017 Macris, Hendricks & Glascock, P.A.