

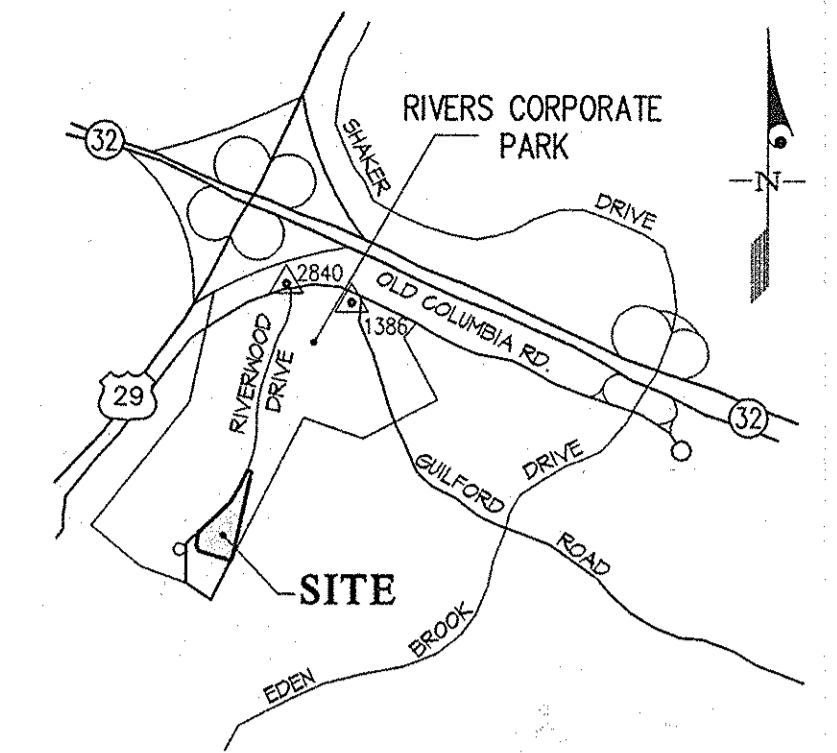
RIVERS CORPORATE PARK SITE DEVELOPMENT PLAN

PARCEL 'C-6' THE YOUNG SCHOOL SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-7777 AT LEAST 48-HOURS PRIOR TO ANY EXCAVATION WORK.
 - PROJECT BACKGROUND:
LOCATION: TAX MAP 3T
ZONING: NT-EC, IND
ELECTION DISTRICT: 6TH ELECTION DISTRICT
SECTION/AREA: 1/2
SITE AREA: 4.9± AC. FOR PARCEL C-6 PER PLAT No. 20428/24 and F-14-059
- APPROVED NAME AND DEPT. OF PLANNING & ZONING REF. FILE NOS.
FDP-184-A-III (2054-A-1151), FDP-184-A-IV, F-24-02, F-45-115, AND SDP-45-069.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 - ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIALLY BETWEEN ITEMS UNLESS OTHERWISE NOTED.
 - EXISTING TOPOGRAPHY AND FEATURES WERE DERIVED FROM SDP-45-069, AVAILABLE PUBLIC RECORDS AND FROM SURVEY BY GUTSCHICK, LITTLE & WEBER, P.A. DONE IN JANUARY, 2006.
 - COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL STA. Nos. 2840 AND 1386.
 - THE EXISTING IMPROVEMENTS ON THIS SITE IS CURRENTLY BEING SERVED BY PUBLIC WATER AND SEWER (AS SHOWN ON SDP-45-069).
 - STORMWATER MANAGEMENT (FOR QUANTITY AND QUALITY) IS PROVIDED BY THE EXISTING FACILITY LOCATED ON-SITE & BUILT UNDER SDP-45-069. THIS FACILITY WILL BE MODIFIED FOR THE ADDITIONAL NEW IMPROVEMENTS UNDER THIS SDP.
 - ALL ON-SITE STORM DRAINS PROPOSED UNDER THIS SDP ARE PRIVATE.
 - THE EXISTING UTILITIES SHOWN HEREIN WERE DERIVED FROM AVAILABLE PUBLIC RECORDS (SDP-45-069). THE CONTRACTOR MUST HAND DIG TEST PITS AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY EXACT LOCATION PRIOR TO ANY CONSTRUCTION.
 - ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE (2%) TWO PERCENT. PROVIDE A MINIMUM OF (5x5) FIVE BY FIVE FOOT LEVEL LANDING (2% MAX) AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING INGRESS/EGRESS POINTS.
 - ALL DRIVEWAYS AND PARKING ARE PRIVATELY OWNED AND MAINTAINED.
 - ANY DAMAGE TO COUNTY OWNED RIGHT-OF-WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
 - TRENCH BEDDING FOR STORM DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD G2.01, CLASS "C" BEDDING, UNLESS OTHERWISE NOTED.
 - CURB GUTTER PAN SHALL BE PITCHED TO CONFORM TO THE ADJACENT DRAINAGE PATTERN OF THE ADJOINING PAVING FOR VEHICULAR USE.
 - ALL CURB FILLETS ARE 5' RADIUS UNLESS NOTED OTHERWISE. SPOT ELEVATIONS ALONG CURB LINE ARE FOR THE FLOW LINE AT PTS, PGS & CORNERS, UNLESS NOTED OTHERWISE.
 - THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES ON THIS SITE.
 - ALL OUTSIDE LIGHTING SHALL COMPLY WITH ZONING REGULATION SECTION 134 WHICH REQUIRES LIGHTS TO BE INSTALLED TO DIRECT/REFLECT LIGHT DOWNWARDS AND INWARDS ON SITE AWAY FROM ALL ADJOINING PUBLIC STREETS AND RESIDENTIAL AREAS.
 - THE EXISTING HABITABLE BUILDING HAS AN AUTOMATIC FIRE PREVENTION SPRINKLER SYSTEM.
 - THIS SITE DEVELOPMENT PLAN IS EXEMPT FROM THE FOREST CONSERVATION ORDINANCE IN ACCORDANCE WITH SUBDIVISION SECTION 16.1202(B)(1)(iv), BECAUSE THIS PARCEL IS A PART OF A PLANNED UNIT DEVELOPMENT WHICH HAD PRELIMINARY DEVELOPMENT PLAN APPROVAL AND 50% OR MORE OF THE LAND WAS RECORDED AND SUBSTANTIALLY DEVELOPED BEFORE DECEMBER 31, 1992.
 - FINANCIAL SURETY (IN THE AMOUNT OF \$110,000 FOR THE REQUIRED LANDSCAPING AS SHOWN ON SHEET 7 & 8 HAS BEEN POSTED AS PART OF THE GRADING PERMIT SURETY.
 - PARCELS SHOWN HEREON ARE SUBJECT TO RESTRICTIVE COVENANTS RECORDED IN THE HOWARD COUNTY LAND RECORDS IN LIBER 1083 FOLIO 342.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED 8/1/06 AND WAS APPROVED ON 9/1/06.
 - PHASE 1 - COUNCIL RESOLUTION No. 108-2006 IS A RESOLUTION TO CLOSE A PORTION OF RIVERWOOD DRIVE (TO STATION 62+122.4), PASSED 10/3/2006.
PHASE 2 - COUNCIL RESOLUTION No. 156-2012 IS A RESOLUTION TO CLOSE A PORTION OF RIVERWOOD DRIVE (TO STATION 64+28.9), PASSED 12/3/2012.

CONTROL DESCRIPTIONS	
2840	CORN. MON.
N 484200	E 835400
E 835443.93	ELV. 942.21
1386	CORN. MON.
N 484553.51	E 836824.07
	ELV. 364.41



VICINITY MAP
1" = 2000'

SHEET INDEX

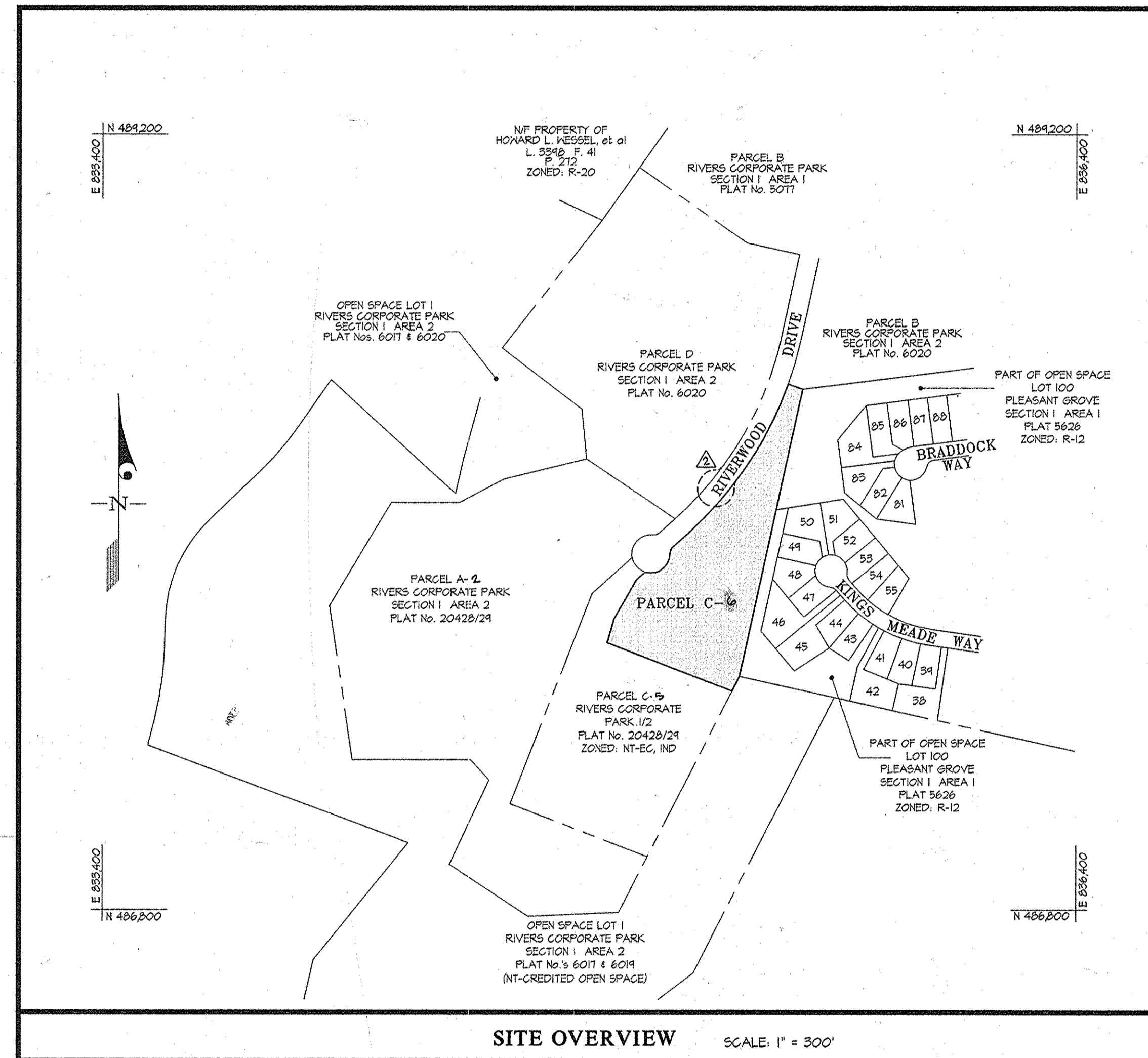
- COVER SHEET
- SITE DEVELOPMENT PLAN
- DEMOLITION PLAN / SITE DETAILS
- SEDIMENT CONTROL PLAN
- 4a SEDIMENT CONTROL NOTES & DETAILS
- STORMWATER MANAGEMENT DETAILS
- STORM DRAIN PROFILES / DRAINAGE AREA MAP
- LANDSCAPE PLAN
- PLANTING NOTES, SCHEDULES & DETAILS

SITE ANALYSIS DATA CHART

- GENERAL SITE DATA
 - PRESENT ZONING: NT-EC, IND PER FDP 184-A-III AND FDP 184-A-IV
 - PROPOSED USE OF SITE OR STRUCTURES: INSTITUTIONAL
Federal Government training facility (GENERAL OFFICE USE)
- AREA TABULATION
 - TOTAL PROJECT AREA: 4.9± ACRES (GROSS FOR PARCEL C-6)
 - AREA OF THIS PLAN SUBMISSION: 2.4± AC (LOD ON C-6)
 - LIMIT OF DISTURBED AREA BY THIS SDP: 2.4± ACRES
 - BUILDING AREA:
EX. BUILDING = 26,320 SF (PER SDP-45-69)
 - BUILDING COVERAGE OF SITE: 11.87% (PER SDP-45-69)
 - TOTAL PAVED SURFACES (BITUMINOUS PAVEMENTS, SIDEWALKS, ETC.) ON SITE: 59,622 SF = 1.35 ± AC (INCLUDING NEW PARKING LOT)
- OPEN SPACE DATA
 - OPEN SPACE REQUIRED ON SITE: N/A
 - OPEN SPACE PROPOSED: N/A

PARKING TABULATION

- PARKING REQUIRED: 3.3 x 26320/1000 = 87 SPACES
 30 EXISTING SPACES (to remain)
 85 NEW SPACES (INCLUDES 5-HC SPACES)
 PARKING PROVIDED: 115 SPACES (includes 5 accessible spaces)



SITE OVERVIEW SCALE: 1" = 300'

APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date: November 9, 2006

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Deborah A. Leight 12/6/12
 Director Date
Walter J. Lewis 12/6/12
 Chief, Division of Land Development Date
Chad Williams 11/30/12
 Chief, Development Engineering Division Date

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS 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. 12475, EXPIRATION DATE: MAY 26, 2014.



11-15-12

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
1-2014	dash in new Riverwood Drive cul-de-sac		
10-2012	(REPLACEMENT SHEET) Added sheet 4a to sheet index; rev. Site Analysis and Parking Tabulation	KLP	
		BY	APPR.

PREPARED FOR:
 OWNER/DEVELOPER
COPT Riverwood, LLC
 c/o COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 8711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 Attn: LAUREN TAYLOR

(REVISED) COVER SHEET

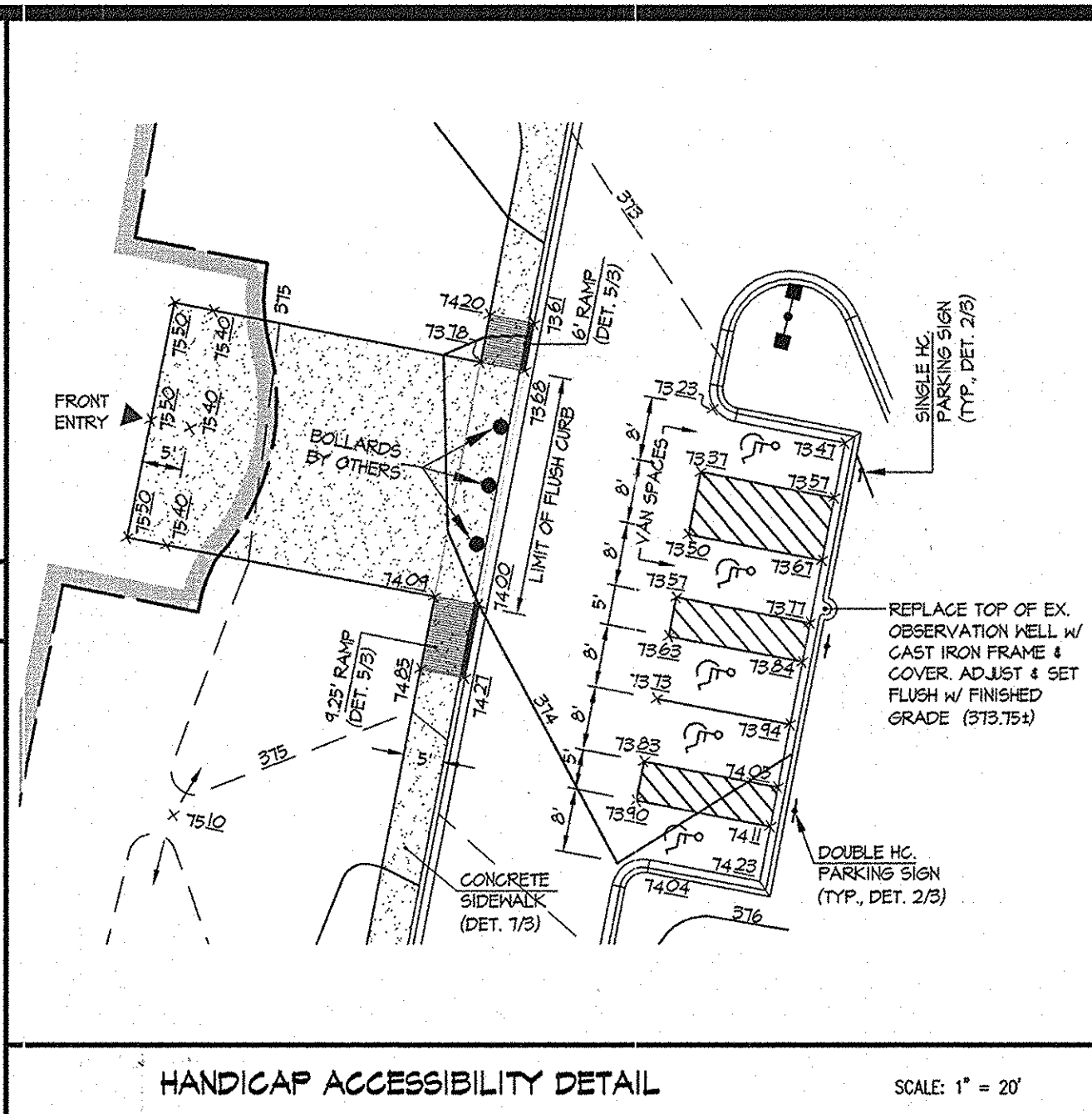
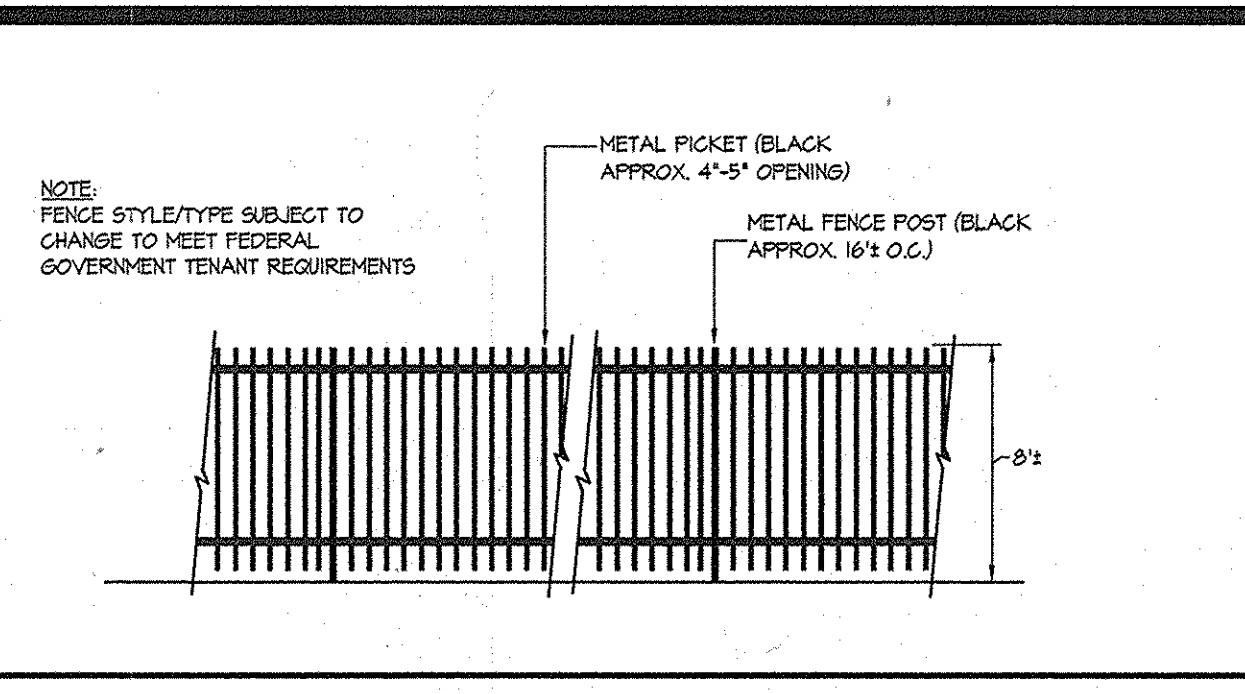
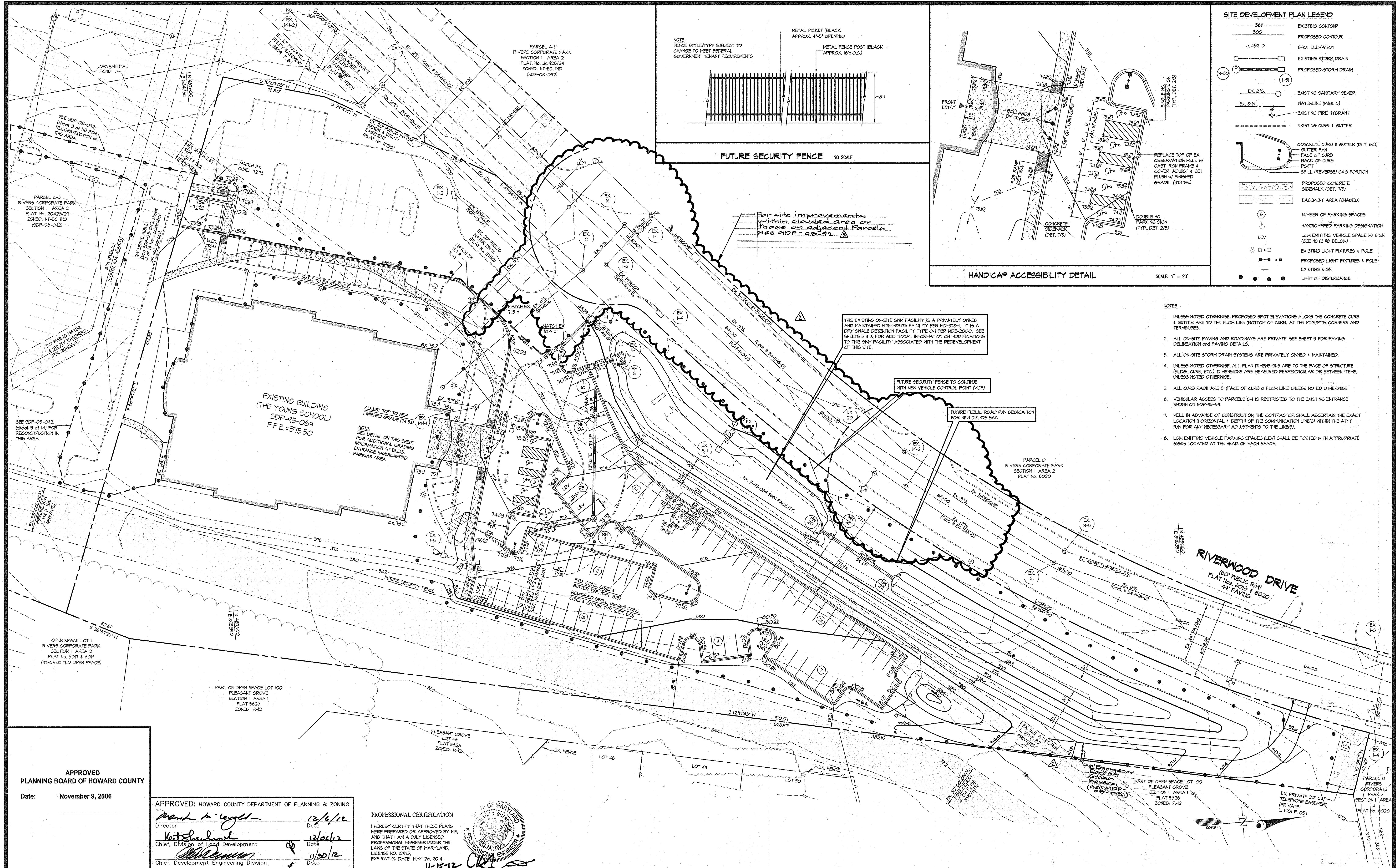
**RIVERS CORPORATE PARK
SECTION 1, AREA 2
THE YOUNG SCHOOL**

PARCEL C-6, PLAT No. 11730 and 20428-20429 and F-14-059

STREET ADDRESS		SECTION/AREA		PARCEL(S)	
1175 RIVERWOOD DRIVE		1/2		C-6	
WATER CODE: E16	SEWER CODE: 6440000	PLAT	ZONE	TAX MAP	BLOCK
		11730 & 20428/29	NT-EC-IND	41	12
		ELEC. DIST.	CENSUS TRACT		
		6	6062		
SCALE	ZONING	G. L. W. FILE No.			
AS SHOWN	NT-EC, IND	05090			
DATE	TAX MAP - GRID	SHEET			
APRIL/2007	41 - 12	1 OF 8			

L:\CADD\DRAWINGS\05090\SDP\05090-CS.dwg DES. DRN. KLP CHK. mbt

GUILFORD ELECTION DISTRICT No. 6



SITE DEVELOPMENT PLAN LEGEND

- 366 --- EXISTING CONTOUR
- 300 --- PROPOSED CONTOUR
- + 432.10 SPOT ELEVATION
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EX 8" S. EXISTING SANITARY SEWER
- EX 8" W. WATERLINE (PUBLIC)
- EX 4" EXISTING FIRE HYDRANT
- EXISTING CURB & GUTTER
- PROPOSED CONCRETE CURB & GUTTER (DET. 6/9)
- GUTTER PAN
- FACE OF CURB
- BACK OF CURB
- FC/PT
- SPILL (REVERSE) C&G PORTION
- PROPOSED CONCRETE SIDEWALK (DET. 1/9)
- EASEMENT AREA (SHADED)
- 6 NUMBER OF PARKING SPACES
- Handicapped Parking Designation
- LEV LOW EMITTING VEHICLE SPACING SIGN (SEE NOTE #8 BELOW)
- EXISTING LIGHT FIXTURES & POLE
- PROPOSED LIGHT FIXTURES & POLE
- EXISTING SIGN
- LIMIT OF DISTURBANCE

- NOTES:**
- UNLESS NOTED OTHERWISE, PROPOSED SPOT ELEVATIONS ALONG THE CONCRETE CURB & GUTTER ARE TO THE FLOW LINE (BOTTOM OF CURB) AT THE FC/S/PT, CORNERS AND TERMINUSES.
 - ALL ON-SITE PAVING AND ROADWAYS ARE PRIVATE. SEE SHEET 5 FOR PAVING DELINEATION AND PAVING DETAILS.
 - ALL ON-SITE STORM DRAIN SYSTEMS ARE PRIVATELY OWNED & MAINTAINED.
 - UNLESS NOTED OTHERWISE, ALL PLAN DIMENSIONS ARE TO THE FACE OF STRUCTURE (BLDG, CURB, ETC.). DIMENSIONS ARE MEASURED PERPENDICULAR OR BETWEEN ITEMS, UNLESS NOTED OTHERWISE.
 - ALL CURB RADII ARE 5' (FACE OF CURB @ FLOW LINE) UNLESS NOTED OTHERWISE.
 - VEHICULAR ACCESS TO PARCELS C-1 IS RESTRICTED TO THE EXISTING ENTRANCE SHOWN ON SDP-05-04.
 - WELL IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL ASCERTAIN THE EXACT LOCATION (HORIZONTAL & DEPTH) OF THE COMMUNICATION LINES) WITHIN THE AT&T R/W FOR ANY NECESSARY ADJUSTMENTS TO THE LINES).
 - LOW EMITTING VEHICLE PARKING SPACES (LEV) SHALL BE POSTED WITH APPROPRIATE SIGNS LOCATED AT THE HEAD OF EACH SPACE.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
Date: November 9, 2006

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *Mark A. Leggett* Date: 12/6/12
 Chief, Division of Land Development: *Walter Schuchman* Date: 12/6/12
 Chief, Development Engineering Division: *John Demaris* Date: 11/30/12

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12875, EXPIRATION DATE: MAY 26, 2014.
11-15-12

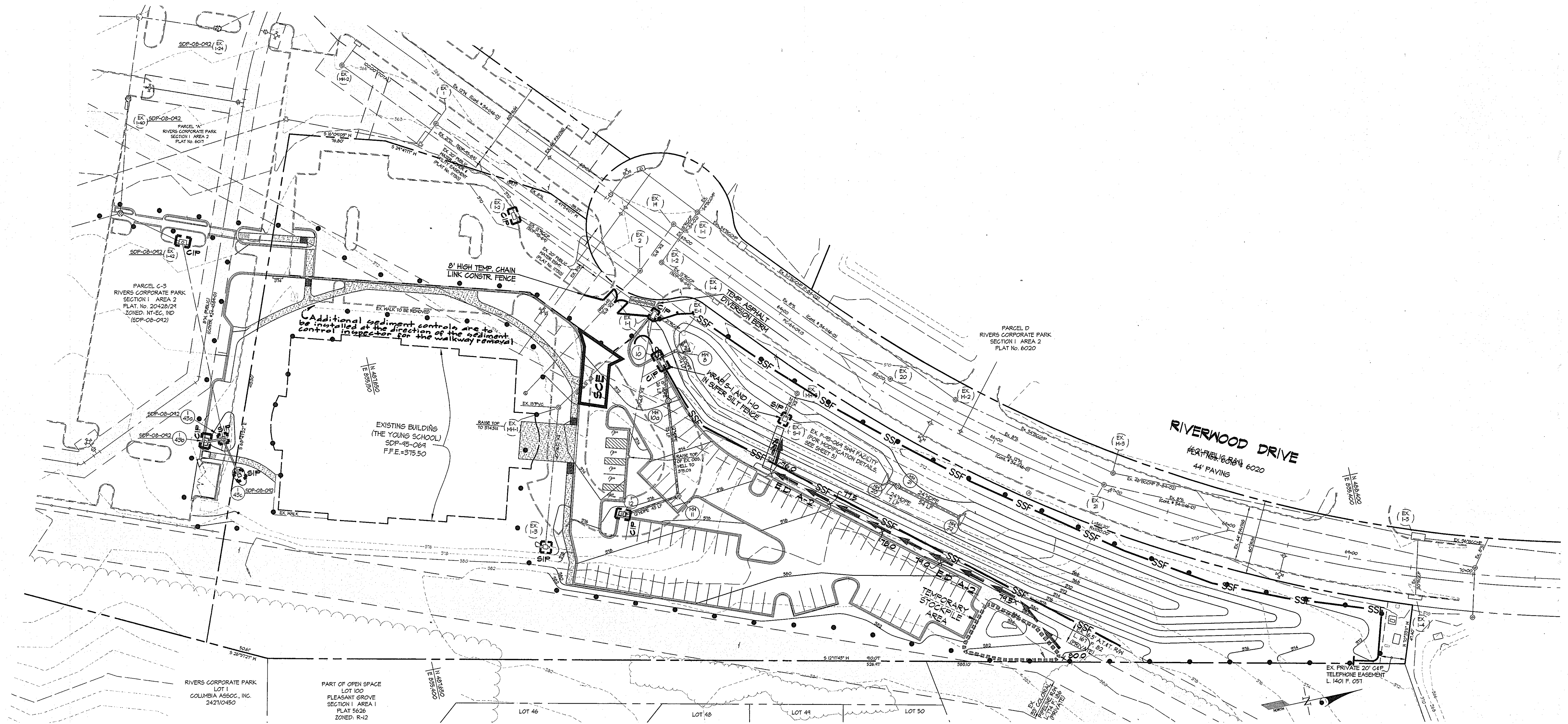
GLWGUTSCHICK LITTLE & WEBER, PA
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3959 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
1-2-2014	show emergency egress cloud area where site improvements are shown on SDP-05-02	JT	
SEPT/2012	Revised Parking Lot, update parcel lines and adjoining improvements		

PREPARED FOR:
 OWNER/DEVELOPER
 COPT RIVERWOOD, LLC
 c/o COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 8711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 ATTN: LAUREN TAYLOR

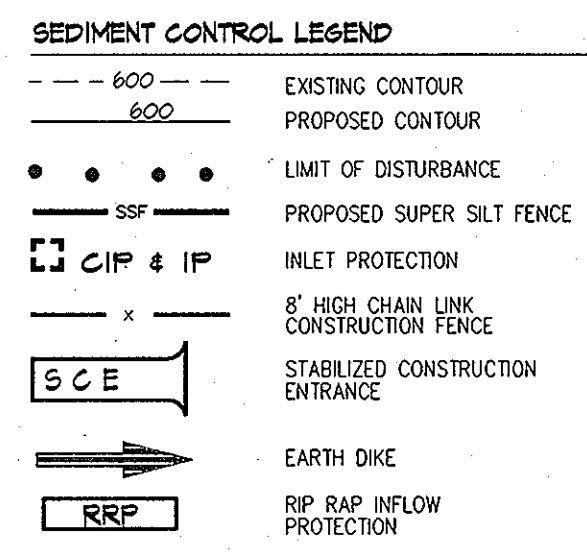
(REVISED) SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
 SECTION I, AREA 2
 THE YOUNG SCHOOL
 PARCEL C-6; PLAT NO. 11730 AND 20428-20429 AND F-14-059
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 30'	NT-EC, IND	05090
DATE	TAX MAP - GRID	SHEET
APRIL/2007	41 - 12	2 OF 8



THIS PLAN IS FOR SEDIMENT CONTROL PURPOSES ONLY

- SEQUENCE OF CONSTRUCTION**
1. APPLY FOR A GRADING PERMIT AND SCHEDULE A PRE-CONSTRUCTION MEETING. AT THIS MEETING, OBTAIN THE GRADING PERMIT FROM THE SEDIMENT CONTROL INSPECTOR (SCI).
 2. INSTALL THE TEMPORARY CHAIN LINK CONSTRUCTION FENCE, THE PERIMETER SUPER SILT FENCE (-SSF-), AND THE CURB INLET PROTECTION (CIP) & TEMPORARY ASPHALT BERM AT EXISTING I-1. DURATION: 1-2 DAYS.
 3. MODIFY THE RISER STRUCTURE THEN INSTALL A STANDARD INLET PROTECTION (SD) AROUND THIS RISER. DURATION: 1-2 DAYS.
 4. INSTALL THE EARTH DIKE (CLEAN WATER) DIVERSION AND RIP-RAP INFLOW PROTECTION (RRP) TO THE RISER STRUCTURE. DURATION: 1-2 DAYS.
 5. OBTAIN PERMISSION FROM THE SCI TO EXCAVATE AND ENLARGE THE PART OF THE SWIM POND ON THE NORTH SIDE OF THE RISER & BELOW THE EARTH DIKE. INSTALL THE CULVERT. ONCE THIS PORTION OF THE POND IS BROUGHT TO FINISH GRADE, IMMEDIATELY STABILIZE THIS AREA WITH SOD. DURATION: 2-3 CONSECUTIVE DAYS.
 6. OBTAIN PERMISSION FROM THE SCI TO COMPLETE REGRADING THE REMAINDER OF THE POND DURING A THREE (3) CONSECUTIVE DAYS OF CLEAR WEATHER BY HWS.
 - A. REMOVE THE EARTH DIKE AND RRP, THEN INSTALL THE SSF ALONG WEST SIDE OF THE AT&T EASEMENT.
 - B. GRADE THE PORTION OF THE POND BETWEEN THE EX. E-1 OUTFALL AND THE RISER, THEN IMMEDIATELY STABILIZE THIS AREA WITH SOD.
 7. S.O.C. 7 THRU 9 CAN BE CONCURRENT WITH S.O.C. 5 THRU 6.
 8. INSTALL THE S.I.D. AT EXISTING INLET I-3. THEN OBTAIN PERMISSION FROM THE SCI TO PERFORM THE DEMOLITION WORK (SHOWN SEE SHEET 3). ONCE THE DEMOLITION IS DONE, IMMEDIATELY ADD AN IMBRICATED SECTION OF SSF ON THE WEST SIDE OF NEW INLET I-10. DURATION: 1-2 CONSECUTIVE DAYS.
 9. OBTAIN PERMISSION FROM THE SCI TO GRADE THE AREA BETWEEN THE CHAIN LINK CONSTRUCTION FENCE, THE COLONIAL PIPE LINE R/W AND THE SSF ALONG THE AT&T EASEMENT. COORDINATE THE NEW STORM DRAIN INSTALLATION WITH THE GRADING OPERATION. PROVIDE INLET PROTECTION AT EACH INLET AS SOON AS THEY ARE INSTALLED. DURATION: 3-5 CONSECUTIVE DAYS.
 10. INSTALL THE NEW CURB & GUTTER, BITUMINOUS PAVING, AND SIDE WALK.
 11. INSTALL LANDSCAPE PLANTING AND STABILIZE ALL REMAINING BARE DIRT AREA WITHIN THE L.O.D. WITH PERMANENT SEEDING (OR WITH SOD).
 12. ONCE THE SITE IS STABILIZED, OBTAIN PERMISSION FROM THE SCI TO REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES.



ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

APPROVED: *[Signature]* 11-15-12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 12/6/12 Date

[Signature] 12/6/12 Date

[Signature] 11/30/12 Date

Chief, Development Engineering Division

PROFESSIONAL CERTIFICATION

STATE OF MARYLAND
 PROFESSIONAL ENGINEERING
 JOHN M. JAY
 11-15-12

I HEREBY CERTIFY THAT THESE PLANS 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. 12976, EXPIRATION DATE: MAY 26, 2014.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD."

[Signature] 11/13/12 DATE

Signature of Developer/Builder

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

[Signature] 11/20/12

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 9, 2006

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

10-2012	(REPLACEMENT SHEET) REVISE PARKING LAYOUT, ADD NEW WALKS; REV. SEDIMENT CONTROL ACCORDINGLY	KLP	
DATE	REVISION	BY	APP'R.

PREPARED FOR:
 OWNER/DEVELOPER **COPT RIVERWOOD, LLC**
 YOUNG SCHOOL PROPERTY, LLC
 c/o COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 8711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 Attn: LAUREN TAYLOR

(REVISED) SEDIMENT CONTROL PLAN
RIVERS CORPORATE PARK
SECTION 1, AREA 2
THE YOUNG SCHOOL
 PARCEL C-4, PLAT NO. 11730 AND 20428-20429
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 40'	NT-EC, IND	05090
DATE	TAX MAP - GRID	SHEET
APRIL/2007	41 - 12	4 OF 8

B-4-2 STANDARD 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.

CRITERIA: 1. TEMPORARY STABILIZATION. a. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

2. PERMANENT STABILIZATION. a. A SOIL TEST IS REQUIRED FOR EVERY FIFTY ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE: I. SOIL PH BETWEEN 6.0 AND 7.0.

b. SOIL CONTAINS LESS THAN 40 PERCENT PLY CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE...

3. TOPSOILING. a. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH...

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

5. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS). a. 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...

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.

CRITERIA: 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...

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...

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING...

3. MULCHING. a. MULCH MATERIALS (IN ORDER OF PREFERENCE). i. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR...

ii. WOOD CELLULOSE FIBER MULCH CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS STRUCTURE. i. WCM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR...

4. 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...

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.

CRITERIA: 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.1) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS...

TEMPORARY SEEDING SUMMARY table with columns: No., SPECIES, APPLICATION RATE (lb./ac), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-10-10), LIME RATE.

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 313-1855. 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'...

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a. 3 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); b. 7 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE CONSTRUCTION.

Table with 4 columns: TOTAL AREA OF SITE, AREA DISTURBED, AREA TO BE GRADED OR PAVED, AREA TO BE VEGETATIVELY STABILIZED.

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 MEASURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL STRUCTURES FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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.

CRITERIA: 1. GENERAL SPECIFICATIONS. a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE...

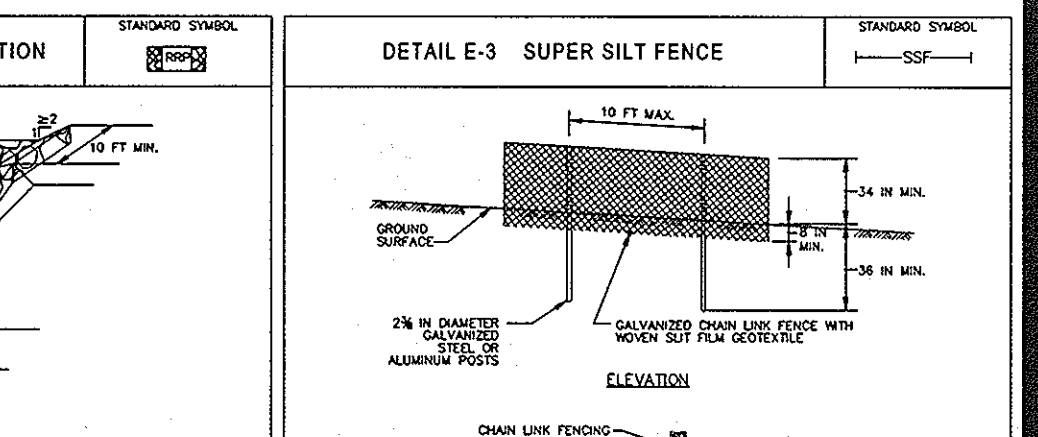
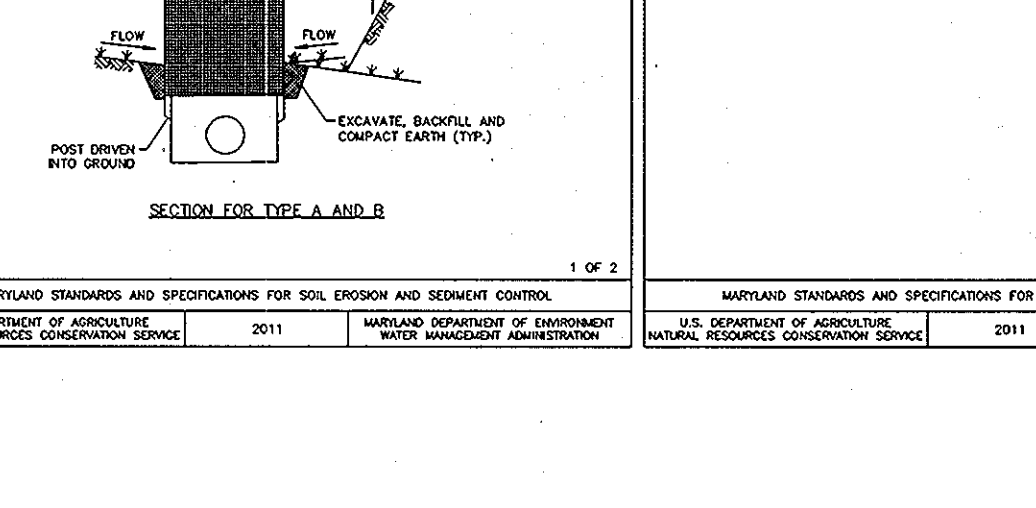
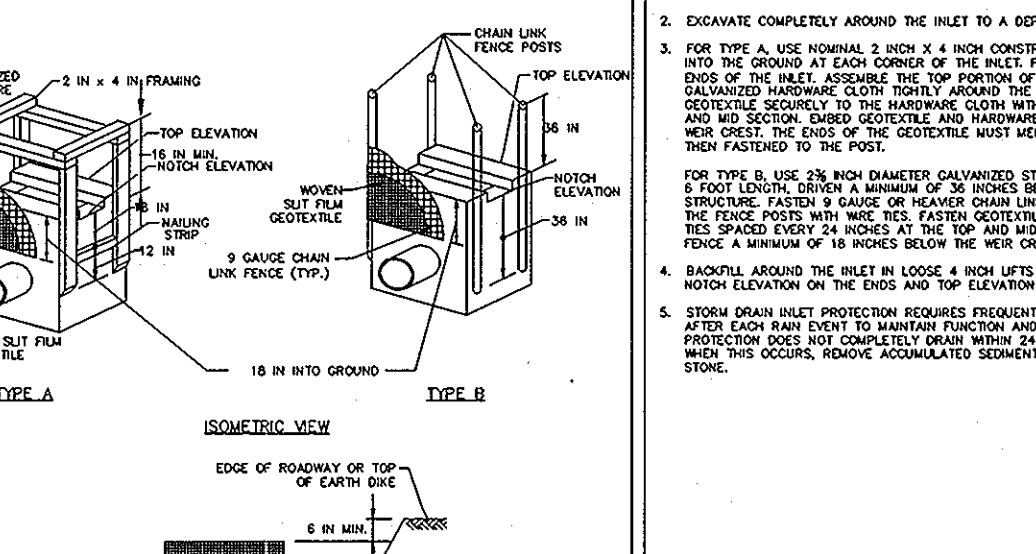
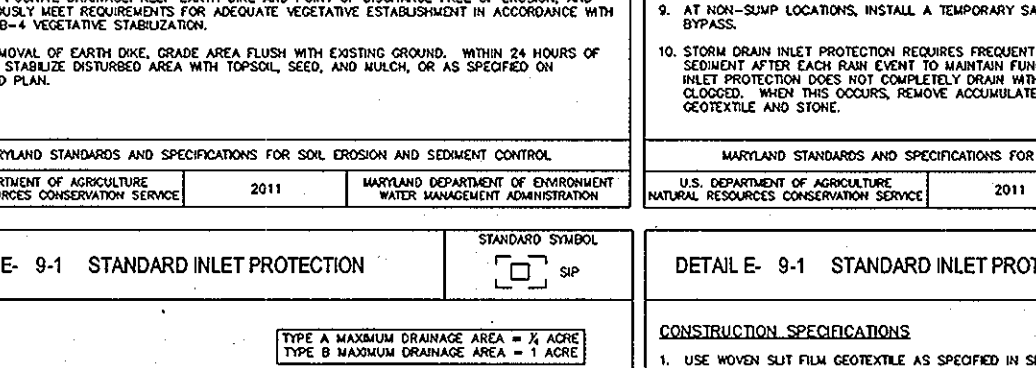
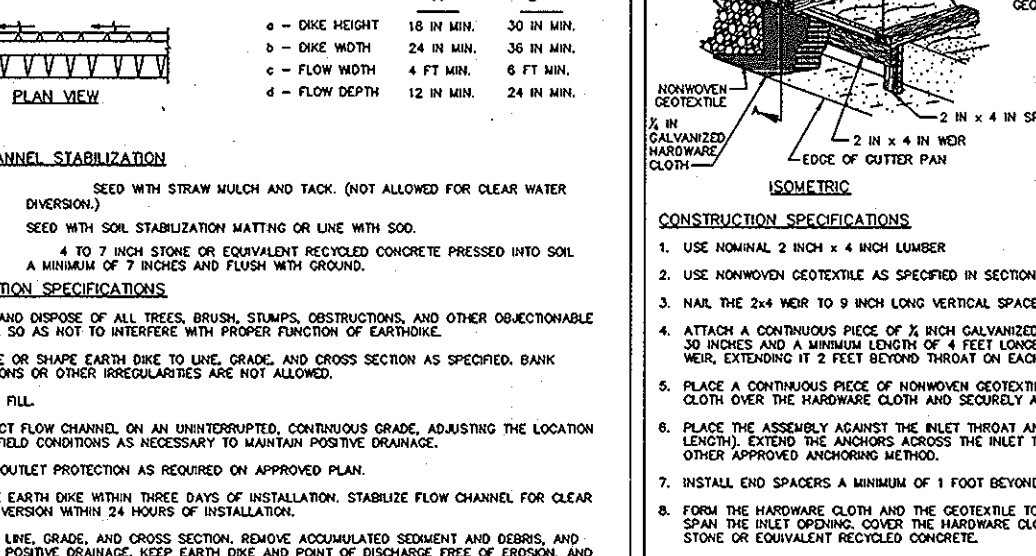
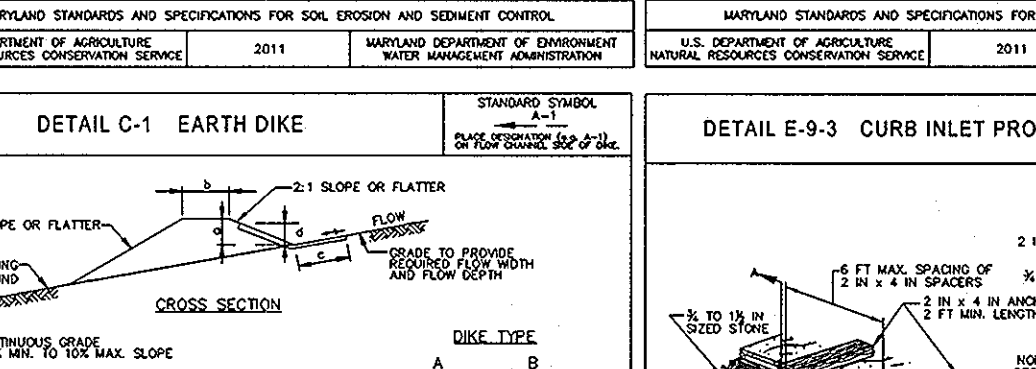
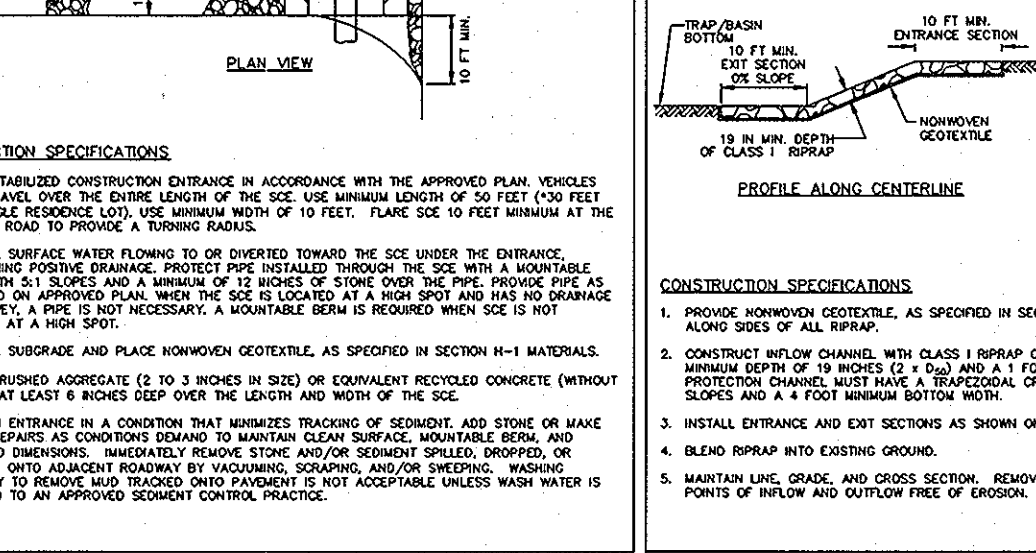
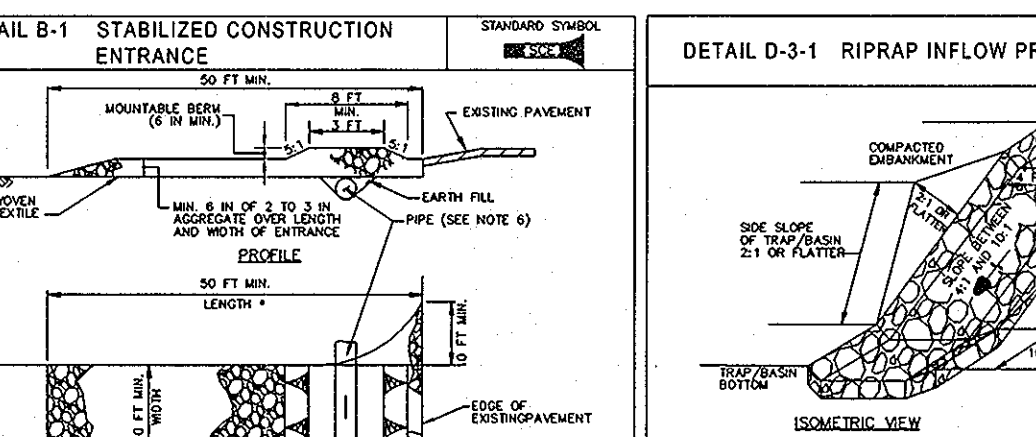
2. TURFGRASS MIXTURES. a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

3. 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 SUN. 4. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE. FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS...

5. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES. WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1. CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15. SOUTHERN MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15.

PERMANENT SEEDING SUMMARY table with columns: No., SPECIES, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE, LIME RATE.

6. SOO: TO PROVIDE COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER). 1. GENERAL SPECIFICATIONS. a. CLASS OF TURFGRASS SOO MUST BE MARYLAND STATE CERTIFIED. SOO LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.



CONSTRUCTION SPECIFICATIONS: 1. INSTALL 24 IN DIAMETER GALVANIZED STEEL POSTS OF 1/2 IN WALL THICKNESS AND 30 FEET LONG SPACING 10 FEET APART TO SUPPORT THE 18 IN WALL THICKNESS AND 30 FEET LONG SUPER SILT FENCE INTO THE GROUND.

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL. DEFINITION: CONTROL OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES. PURPOSE: TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE AIR AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

CRITERIA: 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, WHICH MUST BE ANCHORED TO PREVENT BLOWING.

2. VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION. 3. TILLAGE: TILL TO BREAKEN SURFACE AND BRING CLOSE TO THE SURFACE BEGIN PLOWING ON INWARD SIDE OF SITE. CHisel-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TENDED HARROWS, AND SIMILAR PLOWING USE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.

4. IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. 5. DRAINAGE: SOLO BOARD FENCES, SILT FENCES, SNOO FENCES, SWAPLAP FENCES, STRAW BARRIERS, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

6. APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY. CONSTRUCTION SPECIFICATIONS: 1. USE MINIMUM 24 INCH HIGH 1/2 IN WALL THICKNESS GALVANIZED STEEL POSTS OF 30 FEET LONG SPACING 10 FEET APART TO SUPPORT THE 18 IN WALL THICKNESS AND 30 FEET LONG SUPER SILT FENCE INTO THE GROUND.

ENGINEER'S CERTIFICATE: I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY CONSERVATION DISTRICT.

DEVELOPER'S/BUILDER'S CERTIFICATE: I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXPIRATION DATE: MAY 26, 2014.

PREPARED FOR: RIVERS CORPORATE PARK SECTION 1, AREA 2 THE YOUNG SCHOOL. OWNED/DEVELOPED BY: COTT B. NEWMAN, LLC. YOUNG SCHOOL PROPERTY, LLC.

SEDIMENT CONTROL NOTES & DETAILS. SCALE: NO SCALE. ZONING: NT-EC, IND. G. L. W. FILE NO.: 05090. DATE: APRIL/2007. TAX MAP: GRID 41-12. SHEET: 4a OF 8.

GLWGUTSCHICK LITTLE & WEBER, PA. CIVIL ENGINEERS, LAND PLANNERS, LANDSCAPE ARCHITECTS. 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK BURTNSVILLE, MARYLAND 20868.

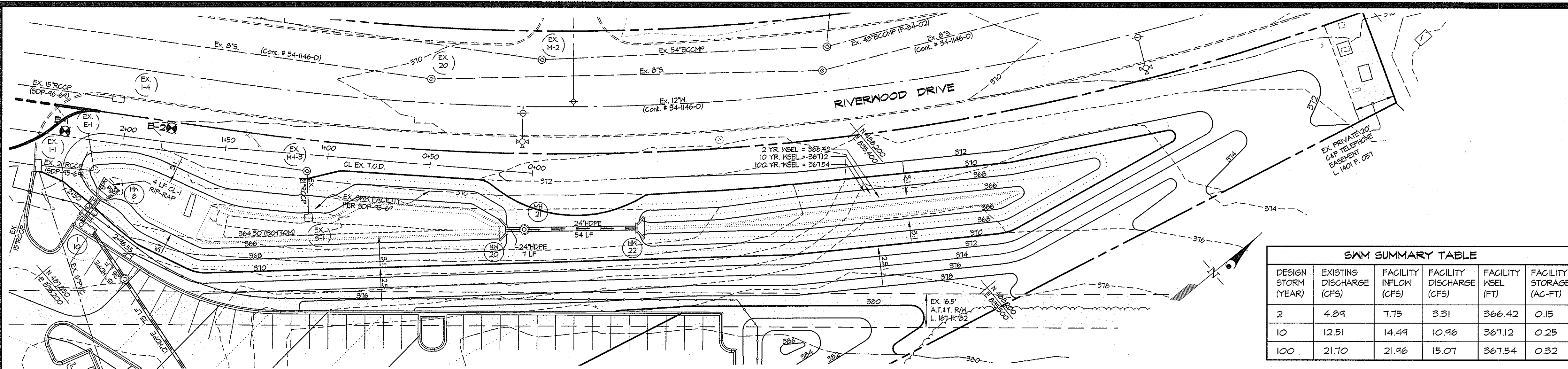
10-2012 DATE: NEW SHEET WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. DES. MBT. DRN. KLP. CHK.

APPROVED FOR: JOHN M. TAYLOR, CIVIL ENGINEER. DATE: 11/10/12.

APPROVED FOR: JOHN M. TAYLOR, CIVIL ENGINEER. DATE: 11/10/12.

APPROVED FOR: JOHN M. TAYLOR, CIVIL ENGINEER. DATE: 11/10/12.

APPROVED FOR: JOHN M. TAYLOR, CIVIL ENGINEER. DATE: 11/10/12.



MODIFICATION TO THE EXISTING STORMWATER MANAGEMENT POND SCALE: 1" = 30'

CONSTRUCTION SPECIFICATIONS

These specifications are applicable to all ponds. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and steep banks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 20 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When disposed in sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. Free of roots, slumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment conform to Unified Soil Classification CC, SC, CH, or CL and must have at least 3% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Horizontally corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes with a roller, vibrator, or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within 4% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10-year water elevation or as shown on the plans. The side slopes shall be 1:1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to ensure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 315 as modified. The mixture shall have a 100-200 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the structure) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent flooding the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

- Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (1 mil) on both sides of the pipe. The pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-146 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pitch of the surrounding soils shall be between 4 and 1.

- Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
- Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled on adequate number of corrugations to accommodate the bedding. The following type connections are acceptable for pipes less than 24 inches in diameter. Flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepared to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 1/2-inch wide by 5/8-inch thick closed cell drainer neoprene gasket; and a 12-inch wide lap type band with 1/2-inch wide by 5/8-inch wide minimum diameter of 1/2 inch gasket with the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long or larger corrugated band using a minimum of 4 flange rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 5/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Horizontally corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

Backfilling shall conform to "Structure Backfill".

Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe - The following criteria shall apply for plastic pipe:

- Materials - PVC pipe shall be PVC-1120 or PVC-1230 conforming to ASTM D-1185 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M-252 Type 5, and 12" through 24" inch shall meet the requirements of AASHTO M-254 Type 5.
- Joints and connections to anti-seep collars shall be completely watertight.
- Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
- Backfilling shall conform to "Structure Backfill".
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 421.04, Class C.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the fill flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water, pumps from which the water shall be pumped.

Stabilization

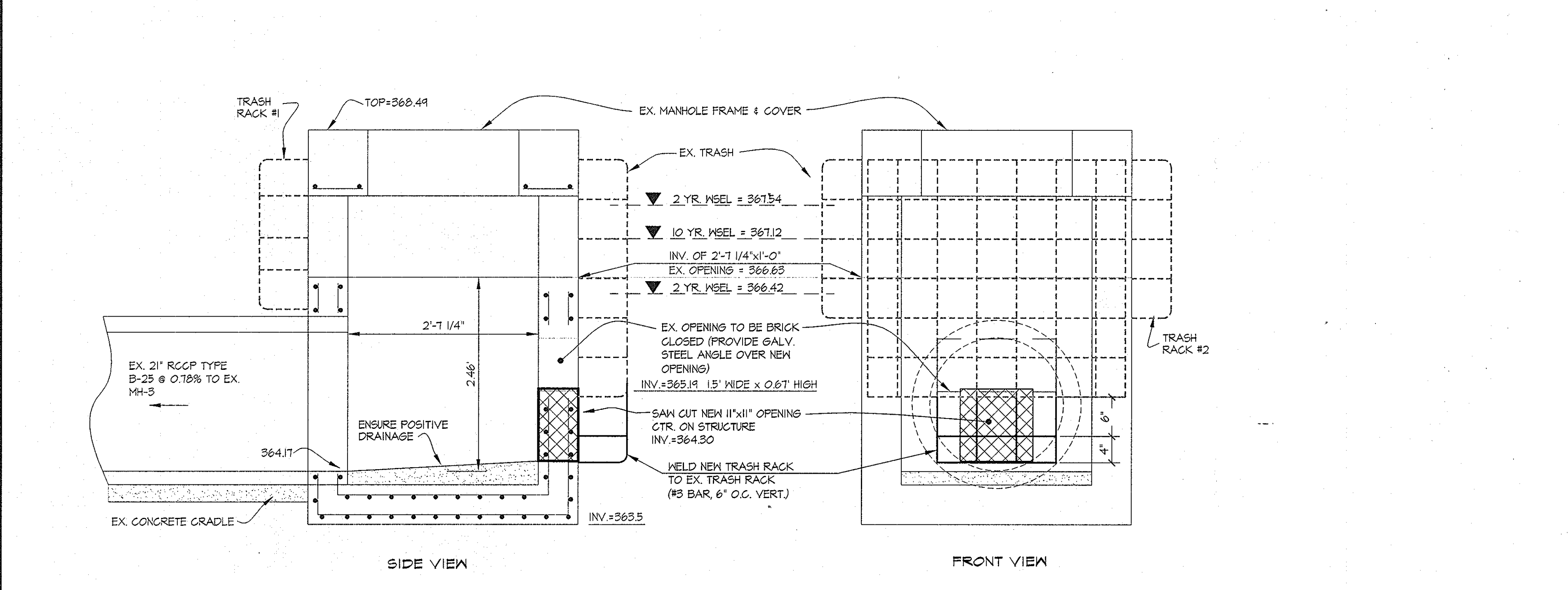
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching.

Erosion and Sediment Control

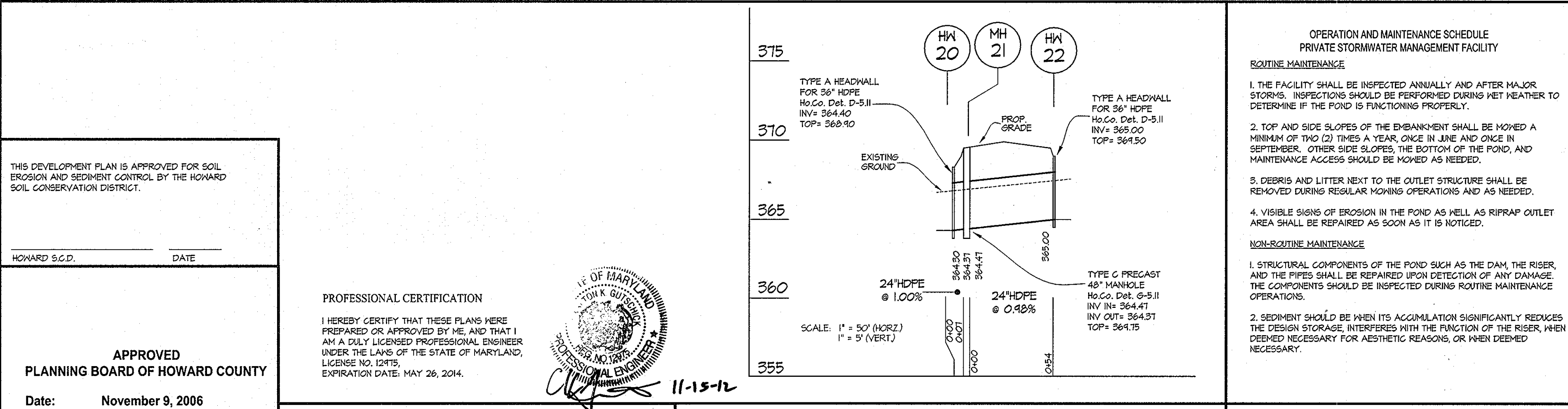
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



MODIFICATION TO EXISTING S-1 SCALE: 1" = 1'



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

HOWARD S.C.D. DATE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12475, EXPIRATION DATE: MAY 26, 2014.

APPROVED PLANNING BOARD OF HOWARD COUNTY

Date: November 9, 2006

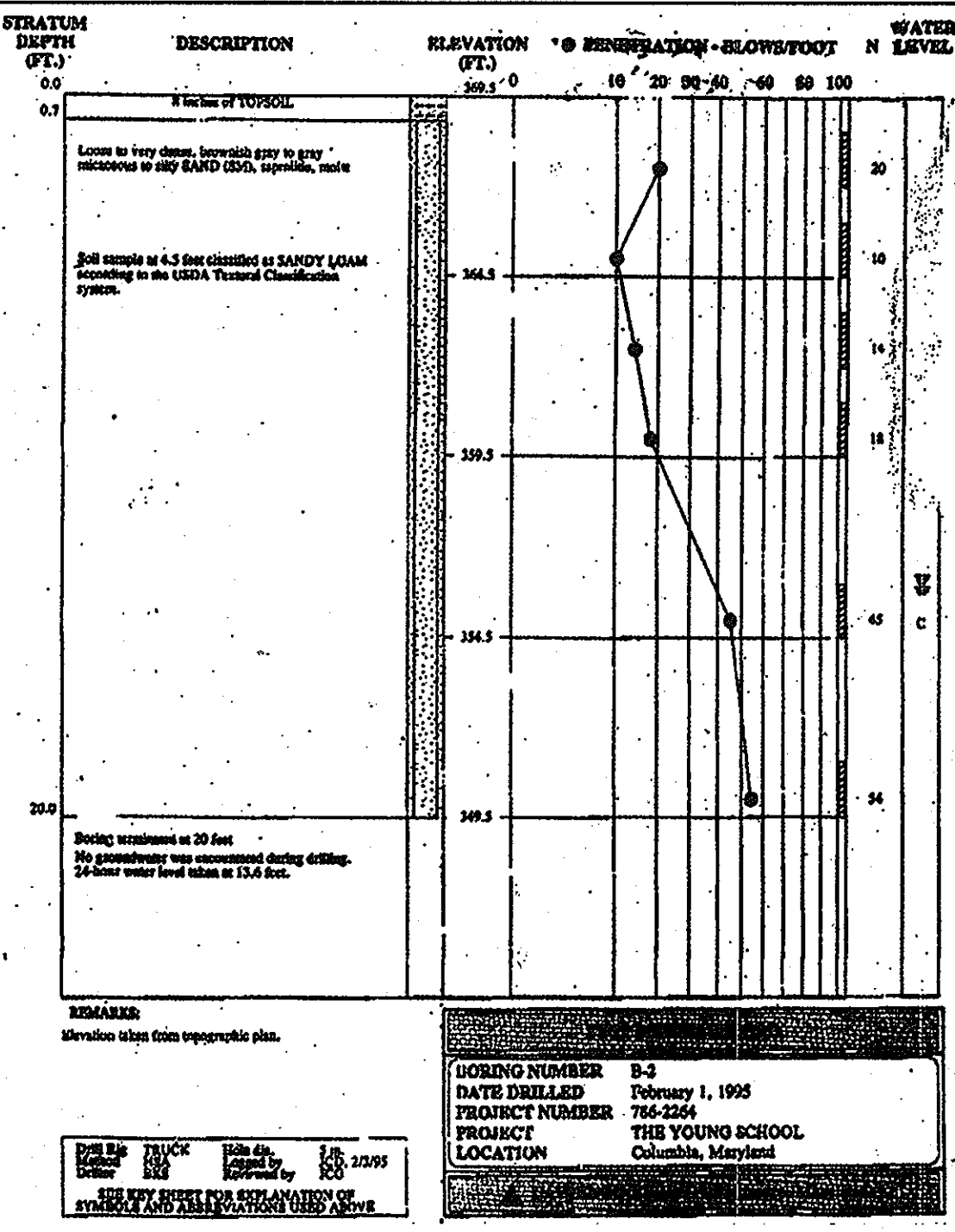
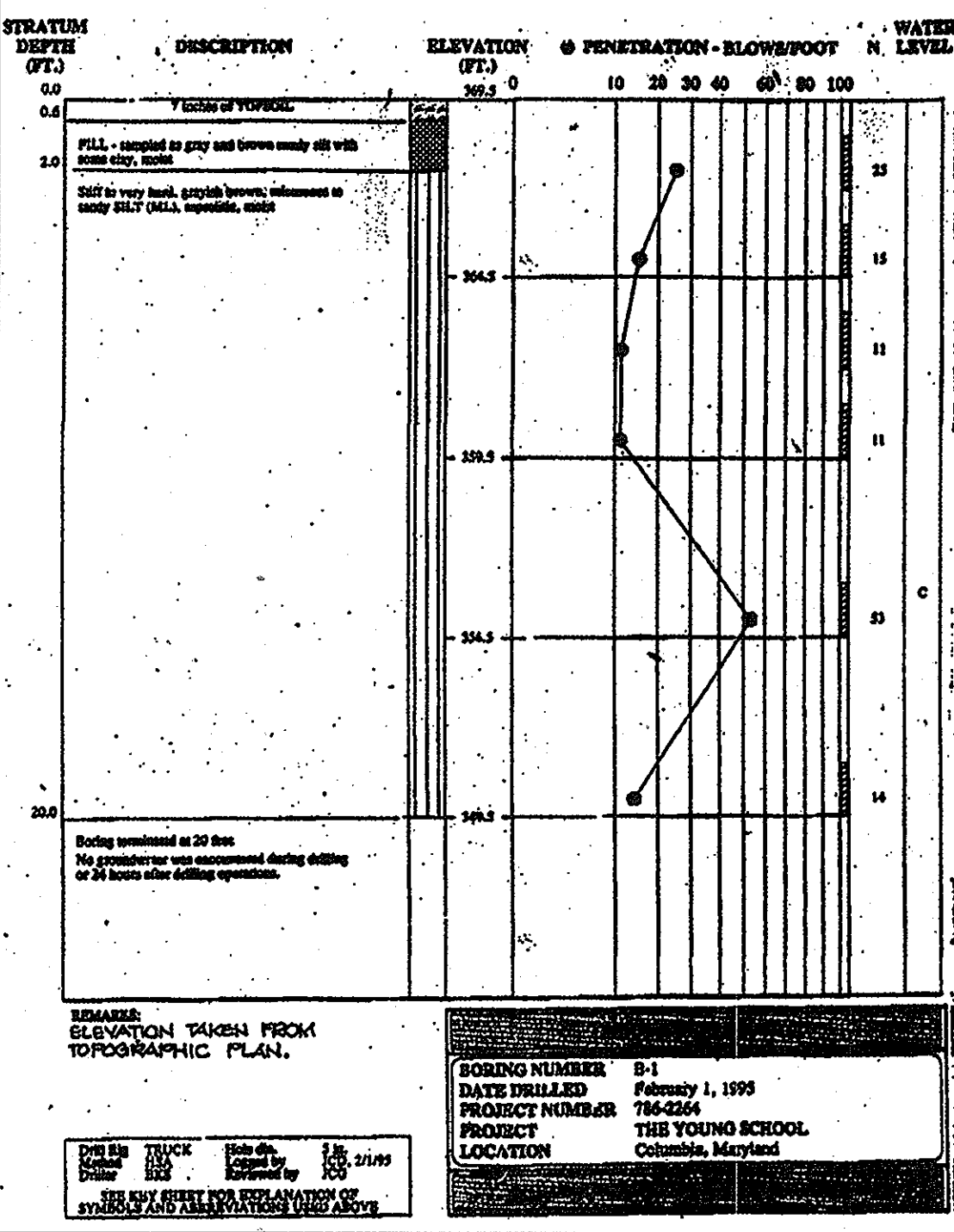
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD."

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."



GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK

BURTONVILLE, MARYLAND 20865

TEL: 301-421-4024 FAX: 301-421-4186

DES.	DRN.	CHK.	DATE	REVISION	BY	APPR.
			10/2012	(REPLACEMENT SHEET) REVISE GRADING AND ADD PROFILE HW-20 TO HW-22		

PREPARED FOR:

OWNER/DEVELOPER: RIVERWOOD, LLC

CONTRACTOR: COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC

A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST

8711 COLUMBIA GATEWAY DRIVE, SUITE 300

COLUMBIA, MD 21046

PHONE: 443-285-5400

ATTN: LAUREN TAYLOR

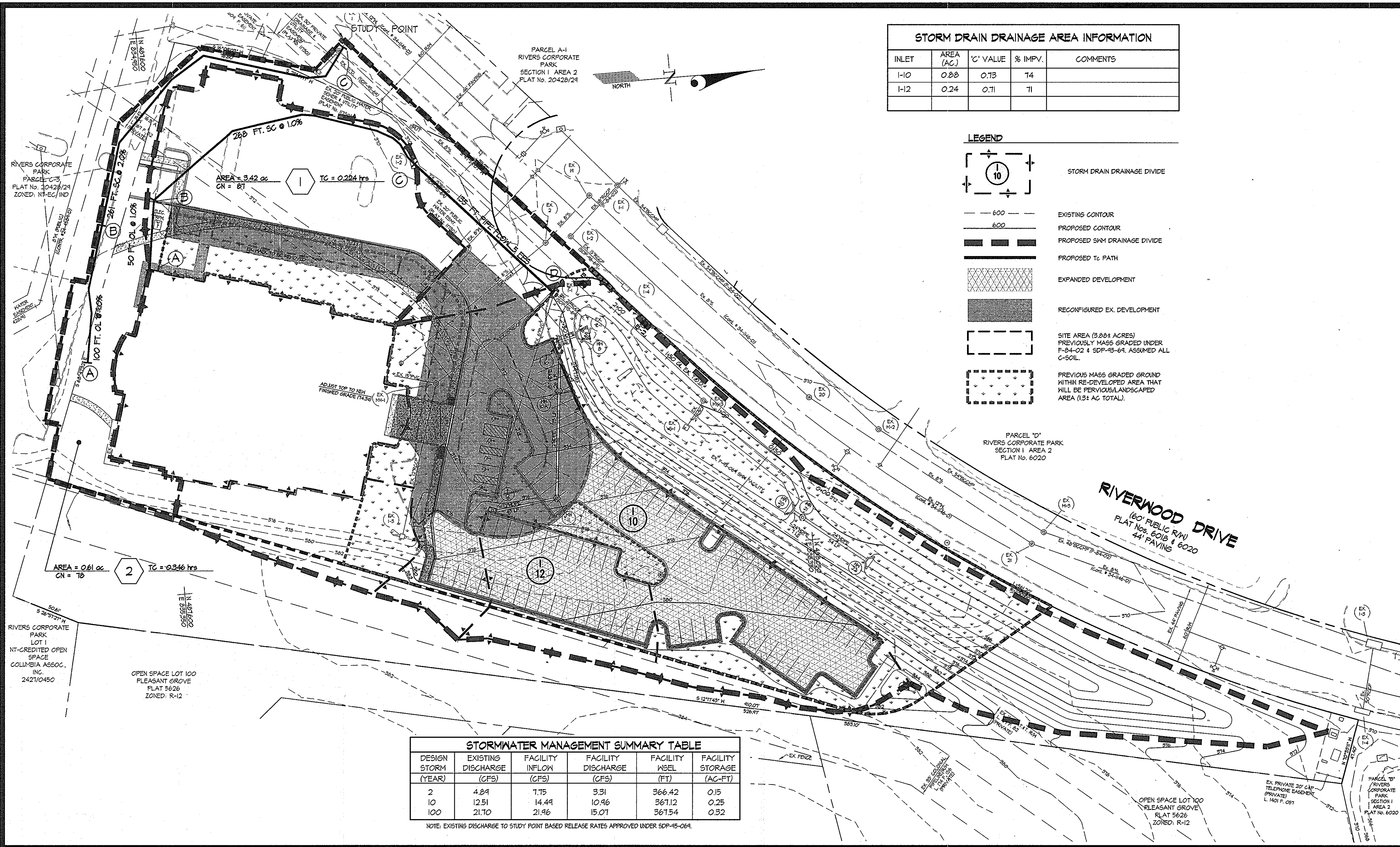
(REVISED) STORMWATER MANAGEMENT DETAILS

RIVERS CORPORATE PARK SECTION 1, AREA 2 THE YOUNG SCHOOL

PARCEL C-4, PLAT NO. 11730 AND 20428-20429

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	NT-EC, IND	05090
DATE	TAX MAP - GRID	SHEET
APRIL/2007	41 - 12	5 OF 8

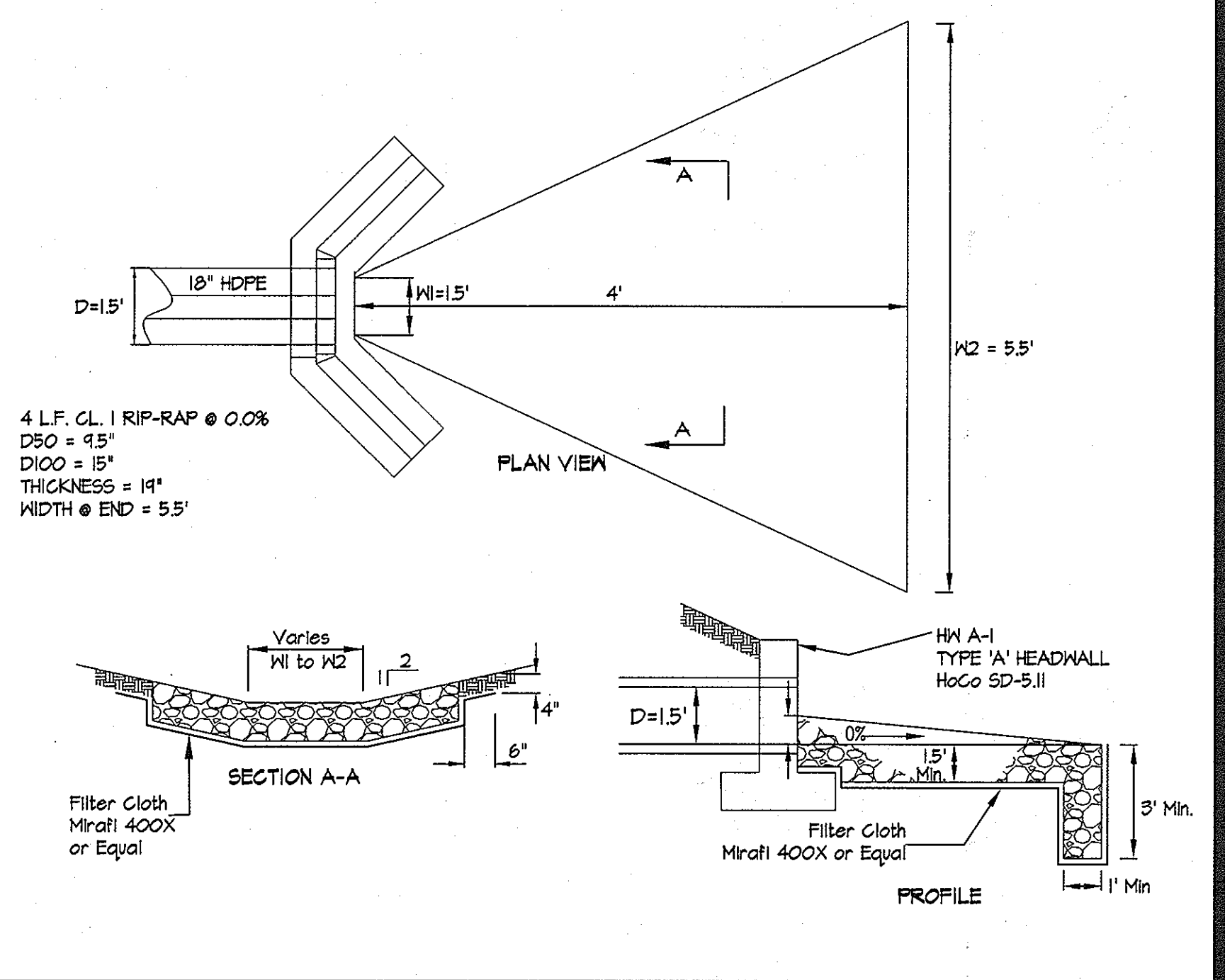


STORM DRAIN DRAINAGE AREA INFORMATION				
INLET	AREA (AC.)	C VALUE	% IMPV.	COMMENTS
I-10	0.88	0.73	74	
I-12	0.24	0.71	71	

LEGEND	
	STORM DRAIN DRAINAGE DIVIDE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SWM DRAINAGE DIVIDE
	PROPOSED TO PATH
	EXPANDED DEVELOPMENT
	RECONFIGURED EX. DEVELOPMENT
	SITE AREA (3.884 ACRES) PREVIOUSLY MASS GRADED UNDER F-84-02 & SDP-45-64. ASSUMED ALL C-SOIL.
	PREVIOUS MASS GRADED GROUND WITHIN RE-DEVELOPED AREA THAT WILL BE PERVIOUSLANDSCAPED AREA (1.81 AC TOTAL).

STORMWATER MANAGEMENT SUMMARY TABLE					
DESIGN STORM (YEAR)	EXISTING DISCHARGE (CFS)	FACILITY INFLOW (CFS)	FACILITY DISCHARGE (CFS)	FACILITY MSEL (FT)	FACILITY STORAGE (AC-FT)
2	4.84	1.75	3.31	366.42	0.15
10	12.51	14.44	10.96	367.12	0.25
100	21.70	21.46	15.07	367.54	0.32

NOTE: EXISTING DISCHARGE TO STUDY POINT BASED RELEASE RATES APPROVED UNDER SDP-45-064.



OUTLET PROTECTION DETAIL (HW-8) NTS

STORMWATER MANAGEMENT NOTES

QUALITY
THIS SITE WAS PREVIOUSLY MASSGRADED IN 1996. ALL SOILS HAVE BEEN ASSUMED TO BE GROUP C. THIS REDEVELOPMENT PROJECT RESULTS IN A NET DECREASE IN 'IMPERVIOUS' AREA IN EXCESS OF 20%. WHERE THE TERM 'IMPERVIOUS' IS APPLIED TO PAVEMENT, WALKS, AND EXISTING MASS GRADED GROUND. CONSEQUENTLY, THERE ARE NO WATER QUALITY VOLUME (WQV) REQUIREMENTS FOR THIS SITE.

EXISTING SITE IMPERVIOUS = 3.88 acres
REDEVELOPED PERVIOUS AREA = 1.24 acres
NET DECREASE IN IMPERVIOUS AREA = 33%
NO WQV REQUIRED

QUANTITY
THE 2-YR PEAK DISCHARGE FROM THE EXPANDED DEVELOPMENT IS LESS THEN 2 CFS AND THEREFORE REQUIRES NO CHANNEL PROTECTION (CPV) QUANTITY MANAGEMENT. THIS SITE WAS ORIGINALLY DEVELOPED UNDER SDP-45-064. STORMWATER QUANTITY CONTROL WAS PROVIDED IN THE FORM OF 2, 10, & 100-YR ATTENUATION. THIS REDEVELOPMENT PROJECT WILL ADHERE TO THE PREVIOUSLY APPROVED ATTENUATION REGIME BY EXPANDING THE EXISTING SWM FACILITY AND MODIFYING THE EXISTING RISER TO PROVIDE 2, 10, & 100-YR ATTENUATION.

STORMWATER FACILITY CLASSIFICATION

THIS POND WAS DESIGNED PRIOR TO ADOPTION OF THE CURRENT MDE-2000 GUIDELINES AND LOOSELY ADHERES TO BMP 0-1 (DRY SWALE). THIS STORMWATER MANAGEMENT FACILITY IS A NON MD-37B FACILITY IN BOTH THE EXISTING AND MODIFIED CONDITION. THIS IS AN EXCAVATED POND PER MD-37B-1, WHERE.....
BRIMMED CONDITION VOLUME @ 369.0 = 0.72 ac-ft = 31,269 cu-ft
PONDED DEPTH = 369 - 364.3 = 4.7 ft

STORM DRAIN AND STORMWATER MANAGEMENT DRAINAGE AREA MAP SCALE: 1" = 40'

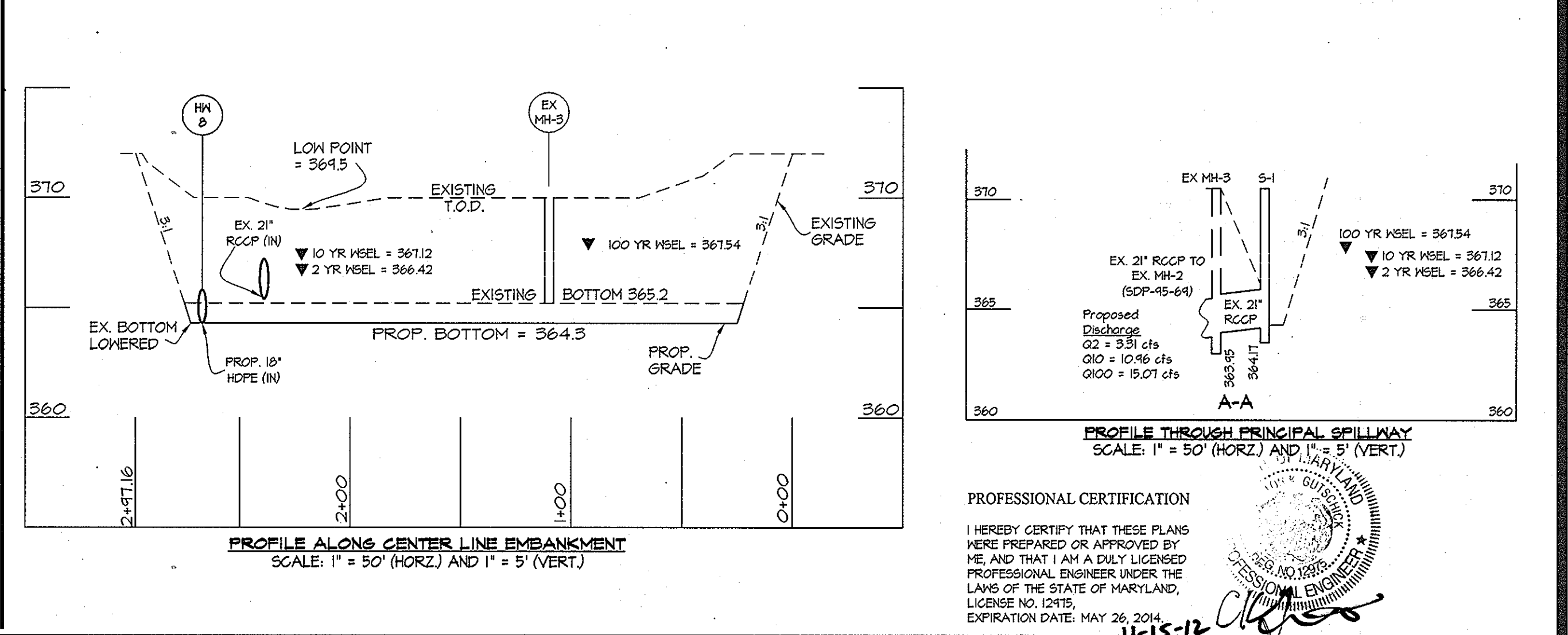
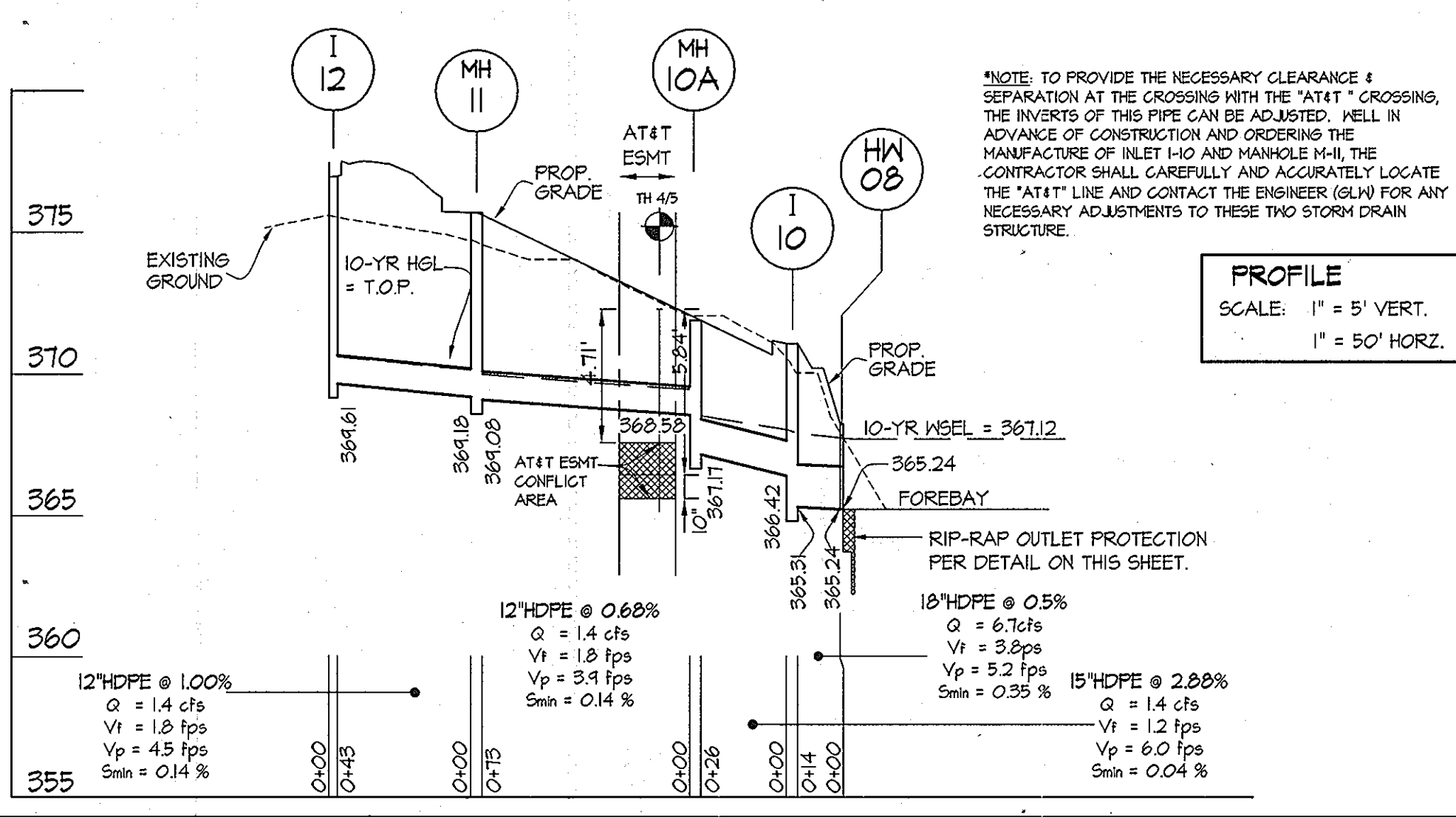
STORM DRAIN STRUCTURE SCHEDULE						
NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION	INVERT ELEVATION	STANDARD DETAIL	LOCATIONS & REMARKS
I-10	A-10 INLET	2'-6"	371.00	366.42	D-4.03	SEE PLANS
M-10A	4' MANHOLE	4'-0"	371.90	368.50	G-5.11	SEE PLANS
M-11	4' MANHOLE	4'-0"	375.56	369.10	G-5.11	SEE PLANS
I-12	A-5 INLET	3'-0"	371.41	369.61	D-4.01	SEE PLANS
HW-08	TYPE 'A' HEADWALL	N/A	368.24	terminal	D-5.11	SEE PLANS

NOTE: ALL STRUCTURES TO BE PRECAST.

APPROVED PLANNING BOARD OF HOWARD COUNTY
Date: November 9, 2006

PIPE SCHEDULE		
SIZE & TYPE	QUANTITY (LF)	REMARKS
15" HDPE	160	
18" HDPE	14	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* Date: 12/6/12
 Chief, Division of Land Development: *[Signature]* Date: 12/6/12
 Chief, Development Engineering Division: *[Signature]* Date: 11/20/12



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186








NO.	DATE	REVISION	BY	APP'R.
10-2012		(REPLACEMENT SHEET) REVISE DRAINAGE AREA MAP, STORM DRAIN PROFILES and SCHEDULES	KLP	
		REVISION	BY	APP'R.

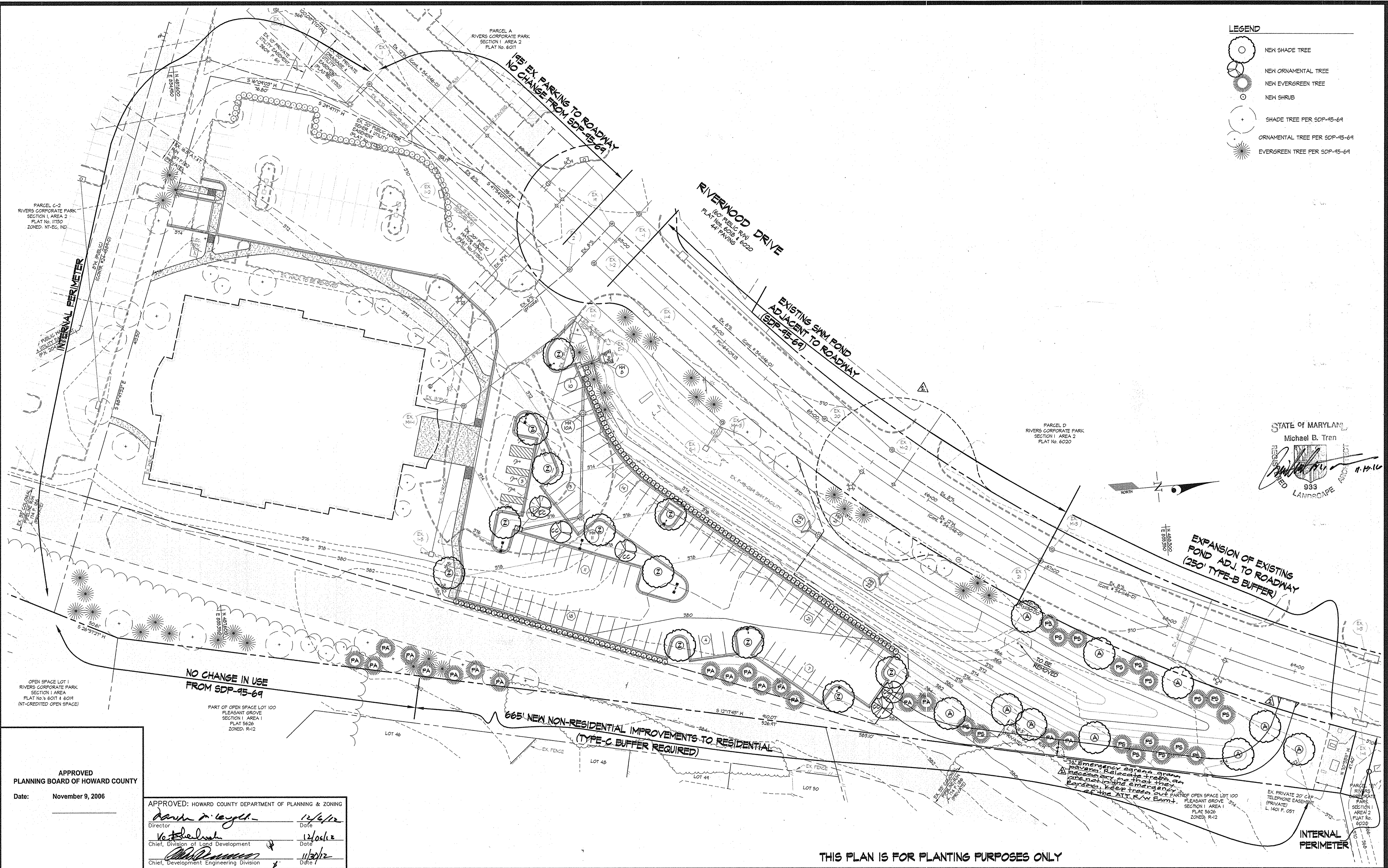
PREPARED FOR:
 OWNER/DEVELOPER
COPT Riverwood, LLC
 c/o COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 8711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 ATTN: LAUREN TAYLOR

(REVISED) DRAINAGE AREA MAP / STORM DRAIN PROFILES
RIVERS CORPORATE PARK
 SECTION 1, AREA 2
 THE YOUNG SCHOOL
 PARCEL C-4, PLAT No. 11730 and 20428-20429
 GUILFORD ELECTION DISTRICT No. 6
 HOWARD COUNTY, MARYLAND

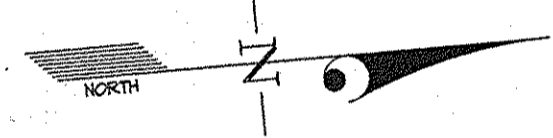
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT-EC, IND	05090
DATE	TAX MAP - GRID	SHEET
APRIL/2007	41 - 12	6 OF 8

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12475, EXPIRATION DATE: MAY 26, 2014.
[Signature]

- LEGEND**
-  NEW SHADE TREE
 -  NEW ORNAMENTAL TREE
 -  NEW EVERGREEN TREE
 -  NEW SHRUB
 -  SHADE TREE PER SDP-95-69
 -  ORNAMENTAL TREE PER SDP-95-69
 -  EVERGREEN TREE PER SDP-95-69



STATE OF MARYLAND
 Michael B. Tran
 933 LANDSCAPE ARCHITECT
 11.19.10



APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 Date: November 9, 2006

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David A. Leight 12/6/12
 Director Date

Victor J. Schuchman 12/06/12
 Chief, Division of Land Development Date

Michael Pennington 11/30/12
 Chief, Development Engineering Division Date

THIS PLAN IS FOR PLANTING PURPOSES ONLY

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
1-2014	show 12' emergency easement in future Riverwood Dr. cul-de-sac		gt.
10-2012	(REPLACEMENT SHEET) COORDINATE TREE LOCATIONS w/NEW CURB & REDUCE # OF TREES EXCEEDING QUANTITY REQUIRED		

PREPARED FOR:
 OWNER/DEVELOPER
COPT Riverwood, LLC
 c/o COPT DEVELOPMENT & CONSTRUCTION SERVICES, LLC
 A DIVISION OF CORPORATE OFFICE PROPERTIES TRUST
 6711 COLUMBIA GATEWAY DRIVE, SUITE 300
 COLUMBIA, MD 21046
 PHONE: 443-285-5400
 Attn: LAUREN TAYLOR

(REVISED) LANDSCAPE PLAN
RIVERS CORPORATE PARK
 SECTION 1, AREA 2
 THE YOUNG SCHOOL
 PARCEL C-6, PLAT No. 17730 and 20428-20429 and F14-05A
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1" = 30'	NT-EC, IND	05090
DATE	TAX MAP - GRID	SHEET
APRIL/2007	41 - 12	7 OF 8