HEALTH DEPARTMENT NOTE: NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PERMIT PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS SDP WILL REQUIRE REVIEW AND APPROVAL OF THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED O, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGE FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.

SITE DEVELOPMENT PLAN P/O PARCEL A THE WELLNESS CENTER OF OWARD COUNTY

TAX MAP NO.37 GRID NO.10 P/O PARCEL NO.687 FIRST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SITE ANALYSIS DATA

- 1. Area Tabulation:
- A. Total project area: 2.727 Ac+
- B. Total area of R/W dedication: O Ac. + C. Total area of site: 2.727 Ac. ±
- D. Building coverage: 0.16 Ac. ± (5.9%)
- E. Total area of floodplain: 0.67 Ac. ± F. Total area of slopes 15%-25%: 0.57 Ac+
- G. Total area of slopes 25% and greater: 0.23 Ac+
- H. There are no erodible soils on this site.
- I. Limit of disturbance: 1.51 Ac±
- J. Proposed use of site or structure: Restaurant and Daycare
- L. Building Floor Area: L.L. = 6,539 sq.ft.; F.F. = 6,950 sq.ft. M. Open Space Required: 25% x 2.727 AC \pm = 0.68 AC \pm Required; Open Space Provided = 2.05 AC \pm .
- N. Previous file numbers: ZB 877 R+M, ZB 1005 M, 5-93-02, P-93-11, F-94-26, F-94-96, F-96-115, F-97-95. F-02-29, F-03-64, 5-91-11, WP-02-47, SDP-05-063, F-09-010, WP-09-209, ECP-13-045 & SDP-07-005.
- 2. Parking Space Data: TOTAL MEADOWRIDGE CENTER SITE

DESCRIPTION

- A. Number of parking spaces required = 269 Per the shared parking analysis provided by The Traffic Group.
- B. Number of spaces on 5DP 07-005 = 289 (including 13 handicapped spaces). Number of parking spaces on
- 5DP 13-065 = 59 spaces (including 5 handicapped spaces.) See 5DP 07-005 for shared parking and complete site uses. C. Number of spaces proposed Total Plan = 348 (Including 18 handicapped spaces) Per the shared parking analysis provided by The Traffic Group.

	STREET LIGHT CHART	
LOCATION	FIXTURE/POLE TYPE	
PER PLAN, 5HT. 2	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.	

EXISTING 2' CONTOUR

EXISTING 10' CONTOUR

PROPOSED 2' CONTOUR

PROPOSED 10' CONTOUR

EXISTING SEWER LINE

EXISTING WATER LINE

PROPOSED FENCE

EXISTING STORM DRAIN LINE

BOUNDARY/RIGHT OF WAY LINE

STRUCTURE AND USE SETBACK

PROPOSED STORM DRAIN PIPE

PROPOSED WATER LINE

SUPER SILT FENCE

PROPOSED PAVING

PROPOSED LIGHT

EXISTING TREELINE

PROPOSED TREELINE

LIMIT OF DISTURBANCE

HANDICAP PARKING AREA

EXISTING WETLAND

50IL5

PROPOSED CONCRETE

LEGEND

SYMBOL

_ ---- -270- ----

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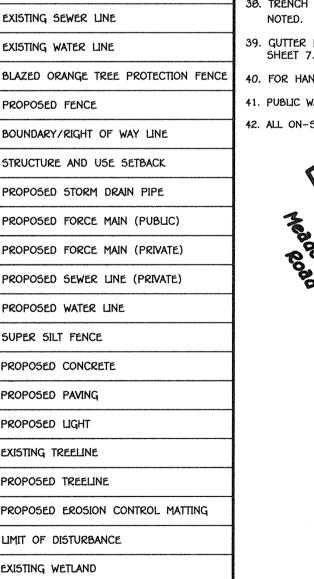
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IMPROVEMENT NOTE: WE HAVE EXHAUSTED THE 5,000 S.F. OF REDLINE DISTURBANCE

CREDIT FOR THIS PROJECT. ANY FURTHER EXPANSION VIA A REDLINE IMPROVEMENT WILL BE SUBJECT TO PROVIDING SWM FOR THE ADDITIONAL IMPERVIOUS AMOUNT.

GENERAL NOTES:(CONTINUED)

- PARCEL FOR DEVELOPMENT PURPOSES. THE STRUCTURE AND USE SETBACKS FROM LOT LINES INTERNAL TO THE DEVELOPMENT SHALL NOT APPLY
- 33. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. OF \$4,110.00.
- 35. ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A STANDARDS ACCESSIBILITY GUIDELINES. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE TWO AND EXITS. HANDRAILS SHALL BE PROVIDED ON ALL RAMPS IN ACCORDANCE WITH SECTION 4.8.5 OF THE A.D.A. STANDARDS ACCESSIBILITY GUIDELINES.
- 6. ALL DRIVEWAYS AND PARKING TO BE PRIVATELY OWNED AND MAINTAINED.
- 37. ANY DAMAGE TO STATE OWNED RIGHT OF WAY OR COUNTY OWNED RIGHT OF WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- 36. TRENCH BEDDING FOR STORM DRAIN STRUCTURES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD G2.01 CLASS 'C' BEDDING UNLESS OTHERWISE
- 39. GUTTER PAN OF CURBS SHALL BE PITCHED TO CONFORM TO THE ADJACENT DRAINAGE PATTERNS OF THE ADJOINING PAVING FOR VEHICULAR USE. SEE DETAIL ON 40. FOR HANDICAP PARKING AND CONSTRUCTION DETAILS, SEE SHEET 17.



LYNDWOOD SQUARE PARCELS A-1 THRU A-6, B-2 ADC MAP PAGE 4936 (E7) 41. PUBLIC WATER AND SEWER IS TO BE UTILIZED FOR THIS PROJECT. AND PARCEL Q-1 RESIDENTIAL USE PLAT NO. 12332 42. ALL ON-SITE STORM DRAINS UNDER THIS SITE DEVELOPMENT PLAN ARE PRIVATE. REVISION PLAT HE COURTYARDS AT THE TIMBERS THE COURTYARDS AT THE TIMBERS PARCELS 'A' AND 'B' RESIDENTIAL US PLAT NO.5 19516 & 19517 PLAT NO.5 16174 & 16175 TAX MAP NO. 37 ZONED: POR PLAT NO 22805 & 22806 6 3 AS CONFIGURED CURRENTLY BETWEEN THE TWO PLANS, THE REDLINING OF ONE PLAN THAT WOULD IMPACT PARKING OR USE CONFIGURATION WOULD TRIGGER THE REDLINING OF SITE BOUNDARY SOP 07-005 PROVIDES 209 TOTAL PARKING SPACES SCALE: 1" = 100 5DP 13-065 PROVIDES 59 TOTAL PARKING SPACES THE TOTAL AMOUNT OF PARKING SPACES IS 348 SPACES.

GENERAL NOTES:(CONTINUED)

(95)

- 43. THE EXISTING UTILITIES SHOWN HEREON WERE DERIVED FROM AVAILABLE PUBLIC RECORDS. THE CONTRACTOR MUST DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS AND CONNECTION POINTS TO VERIFY THE EXACT LOCATIONS.
- 44. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED MARCH 2013. 45. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20'
- 46. THE FOREST CONSERVATION OBLIGATION INCURRED BY THIS PROJECT HAS BEEN SATISFIED WITH THE RETENTION OF 0.60 OF AN ACRE CREDITED EASEMENT AND 0.6 ACRE OF NON-CREDITED EASEMENT WHICH MEETS OR EXCEEDS THE BREAK-EVEN POINT OBLIGATION OF 0.6 ACRES FOR THIS SITE. NO SURETY IS REQUIRED FOR FOREST RETENTION EASEMENTS
- 47. THIS PLAN IS IN ACCORDANCE WITH SECTION 116.0.B.33 TO ALLOW FOR A CARRYOUT RESTAURANT PROVIDED THAT USES LISTED WITH THAT SUBSECTION DO NOT EXCEED 20% FLOOR AREA OF ANY BUILDING.

PURPOSE NOTE: THE PURPOSE OF THE REVISED SITE DEVELOPMEN PLAN WAS TO INCREASE THE BUILDING SIZE,

CHANGE THE USE TO DAYCARE, OFFICE AND

RESTAURANT AND ADD A FENCED PLAY AREA.

Address Chart

GENERAL NOTES:

- 1. THIS PLAN IS SUBJECT TO THE AMENDED 5TH EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION, WAIVER PETITION APPLICATION AND THE COMP-LITE ZONING REGULATIONS DATED JULY 28, 2006.
- 2. THE SUBJECT PROPERTY IS ZONED PEC PER OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- 3. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) FIVE WORKING DAYS PRIOR TO
- 4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY DIGGING AND EXCAVATION WORK. 5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND
- 6. BOUNDARY SURVEY PERFORMED BY PATTON, HARRIS RUST & ASSOCIATES, Pc ON OR ABOUT MAY, 2004.
- 7. COORDINATES BASED ON NAVDØ3 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 378A AND NO. 378B: Station No. 37BA - (N 563,705.6572 E 1,376,343.2094) Station No. 3788 - (N 563,663.4500 E 1,378,040.5102)
- 8. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- 9. CONTRACTOR WILL CHECK SEWER CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- 10. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2000 MDE DESIGN MANUAL, 2007 REGULATIONS, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. GROUNDWATER RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A SINGLE STONE RESERVOIR LOCATED BENEATH THE PROPOSED BIO-SWALE FACILITY. THE REQUIRED ESD VOLUMES WILL BE PROVIDED BY AN UNDERGROUND SAND FILTER LOCATED BENEATH THE PROPOSED PARKING AREA AND 6 MICRO-BIORETENTION AREAS LOCATED WITHIN ISLAND AREAS. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITIES (MICRO-BIORETENTION AND UNDERGROUND SAND FILTER) WILL BE PRIVATELY OWNED BY THE H.O.A. AND MAINTAINED BY H.O.A.
- 11. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MdMUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- 12. THIS SUBDIMISION IS SUBJECT TO SECTION 10.1226 OF THE HOWARD COUNTY CODE, PUBLIC WATER AND SEWER SERVICE HAS BEEN PROVIDED BY CONTRACTS
- 14-4276-D, 14-1020-D AND 14-3360-D (5DP-07-005)
- 13. THIS PROPERTY IS RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AS PLAT NO. 20865. 14. THERE ARE NO HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
- 15. THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES LOCATED ON THE SUBJECT PROPERTY. BASED ON AN EXAMINATION OF THE HOWARD COUNTY CEMETERY
- 16. THE FLOODPLAIN DELINEATION SHOWN HEREON IS BASED ON A STUDY BY LAND DESIGN ENGINEERING, INC. APPROVED ON DECEMBER 31, 1991. P-93-11 AND F-94-26. IN ADDITION, A FEMA FLOODPLAIN HAS BEEN INDICATED ON THE PLAN BASED ON A REVISED STUDY BY FEMA, DATED 2013.
- 17. THE WETLAND DELINEATION SHOWN HEREON IS BASED ON A STUDY BY EXPLORATION RESEARCH DATED 04-19-02 AND RECORDED ON PLAT NO. 15725.
- 16. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180. 19. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- 20. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. 21. WAIVER PETITION WP-02-47 WAS APPROVED ON DECEMBER 28, 2001 WAIVING SECTION 16.120(c) (TO PERMIT THE REQUIRED ROAD FRONTAGE OF 60-FEET FOR A
- NON-RESIDENTIAL PARCEL (E-1) TO BE REDUCED TO ZERO FEET), SUBJECT TO THE FOLLOWING CONDITIONS: (a) ACCESS TO PARCEL E-1 SHALL BE PROVIDED BY A RECORDED VEHICULAR ACCESS EASEMENT THAT WAS SHOWN ON FINAL PLAT F-02-29
- (b) STATE HIGHWAY ADMINISTRATION WILL NOT BE RESPONSIBLE FOR ANY NOISE MITIGATION. 22. A. REFUSE COLLECTION TO BE PROVIDED BY PRIVATE CONTRACTOR. THERE WILL BE INTERNAL TRASH COLLECTION WITHIN THE
- BUILDING TO BE REMOVED BY A PRIVATE JANITORIAL SERVICE FOR CURBSIDE PICK-UP. B. SNOW REMOVAL AND ROAD MAINTENANCE TO BE PRIVATE.
- 23. "SIGN POSTS" ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12
- GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. 24. ALL CURB RETURNS ARE 5' UNLESS OTHERWISE NOTED.
- 25. OUTDOOR LIGHTING SHALL BE IN COMPLIANCE WITH THE OUTDOOR LIGHTING REQUIREMENTS STANDARDS SPECIFIED IN THE HOWARD COUNTY ZONING REGULATIONS. 26. LANDSCAPING WILL BE A MINIMUM OF 7-1/2' FROM EACH SIDE OF THE FIRE DEPARTMENT CONNECTION. PROVIDE A CLEAR UNOBSTRUCTED ACCESS PATH TO THE FIRE
- DEPARTMENT CONNECTION, NEPA-1 13.1.4. 27. NO CLEARING, GRADING, DISTURBANCE, REMOVAL OF VEGETATIVE COVER AND/OR TREES, DEVELOPMENT OR CONSTRUCTION IS PERMITTED WITHIN THE LIMITS OF THE
- FLOODPLAIN, WETLANDS STREAMS(s) AND THEIR BUFFERS. 28. THERE ARE NO EXISTING STRUCTURES/DWELLINGS LOCATED ON THE SUBJECT PROPERTY.

29. MAINTENANCE AGREEMENTS FOR THE USE-IN-COMMON ACCESS EASEMENTS FOR PARCELS A-1, A-2, A-6, A-7, A-0, A-9 AND E-1 ARE RECORDED IN LIBER 6166

- 30. SOILS INFORMATION TAKEN FROM HOWARD COUNTY SOIL SURVEY ISSUED BY HOWARD COUNTY, MARYLAND ON AUGUST 22, 2006.
- 31. THE TOPOGRAPHIC CONTOURS ARE BASED ON A FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS AND CARTER, INC. DATED OCTOBER, 2011.

Meadowridge Center

Shared Parking Analysis

	So,Ft. & Required		Wee	Wee	Night			
	Parking Spaces	Morning Sam Sam	Microby Bannson	Afternoon Spm-Spm	Evening Spm-mid	Daytime 6am-6pm	Evening 6pm mid	Migs
Retail ¹	15,962	20%	60%	60%	90%	100%	70%	59
(5 SP/1,000 S.F.)	72	15	44	44	65	72	51	4
Med. office	23,795	80%	100%	100%	10%	10%	5%	59
(5 SP/1,000 S.F.)	119	96	119	119	12	12	6	6
Office	14,085	80%	100%	100%	10%	10%	5%	59
(3.3 SP/1,000 S.F.)	47	38	47	47	5	5	3	3
Restaurant	1,950	50%	50%	50%	100%	100%	100%	10
(14 SP/1,000 S.F.)	28	14	14	14	28	18	78	2
Daycare	6,539	100%	100%	100%	100%	10%	10%	10
(3 SP/1,000 S.F.)	20	20	20	20	20	2	2	2
Carryout Restaurant	1,400	50%	50%	50%	100%	100%	100%	10
(6 SP/1,000 S.F.)	9	5	5	. 5	9	9	9	1
Animal Hompral	5,000	8 0%	100%	100%	10%	10%	5%	5
(4 <i>5P/</i> 1,000 5/ .)	20	16	20	20	ર	2	1	1
101AL	315	204	રહજ	% C?	141	130	100	u

- 1. 4,801 S.E. OF THIS RETAIL IS DAY SPAYS PARKING AT 3.3 SPACES PER 1,000 S.E., RESULTING IN A REDUCTION OF 8 SPACES (FROM 80 TO 72), C. THIS SHARED PAINKING ANALYSIS IS COMPRISED OF TWO SITES, SOP 07-005 AND SOP 13-005,
- 3. SEE SOP 07-005 FOR THE COMPLETE BUILDING LIGES.

"REVISED SITE DEVELOPMENT PLAN"

FISHER, COLLINS & CARTER, INC (410) 461 - 2055

AS-BUILT CERTIFICATION lote: There is no "AS BUILT" information CHARLES J.CKOLO, GR. NO. 13204

of MAD were prepared or approved by me, and hat I am a duly licensed professional xpiration Date: November 3, 2018." CHARLES J. CROVO, SR., P.E. APPROVED: FOR RIBLIC WATER AND SOME

County Health Officer

Howard County Health Department

der ander the laws of the State of Maryland, License No. 13204

3/1/2017

G/19/17 REVISED SHARED PARKING ANALYSIS CHART FOR ANIMAL HOSPITAL USE 9/22/15 ADDED PARKING TO SITE BOUNDARY. REVISE LANDSCAPE SURETY AND ADD GENERAL NOTE #4: ADD NOTES TO THE SHARED PARKING ANALYSIS. REVISE PARKING SPACE DATA. 16/15 ADDED 50P-07-005 TO THE ANALYSIS. CHANGED THE TITLE TO REFLECT RESTAURANT/OFFICE AND REMOVED THE RETAIL REFERENCE. REVISION BLOCK

Chief, Development Engineering Division

3-19-1 of Planning and Zoning Chief, Division of Land Development (MF

VICINITY MAP

5CALE: 1"= 1200"

100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21043 443-367-0422

Date

DEVELOPER/OWNER

E WELLNESS CENTER OF HOWARD COUNTY PLAT #22805-22806

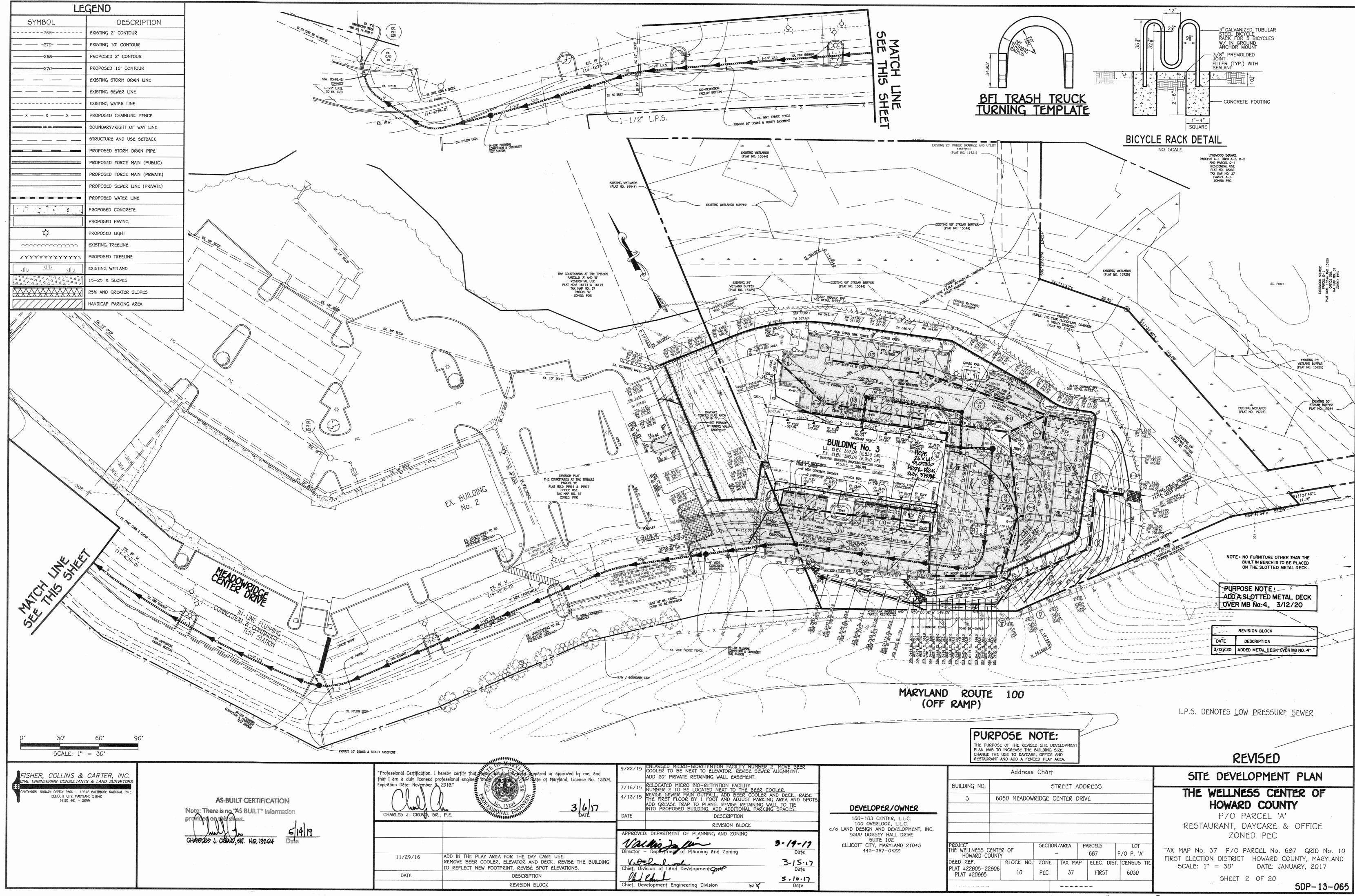
BUILDING NO. STREET ADDRESS 6050 MEADOWRIDGE CENTER DRIVE BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS PEC FIRST 6030 PLAT #20885

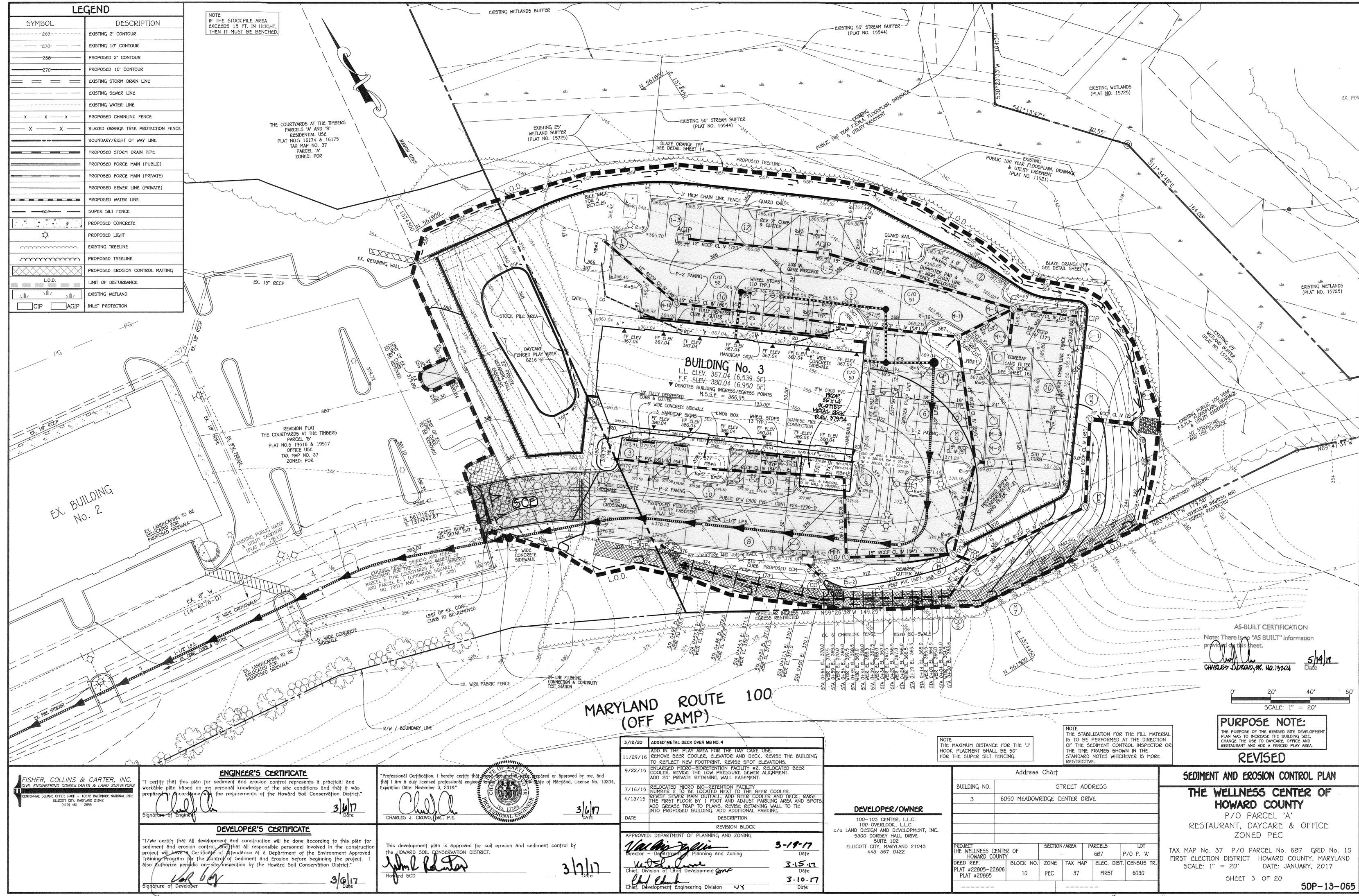
TITLE SHEET THE WELLNESS CENTER OF HOWARD COUNTY P/O PARCEL 'A' RESTAURANT, OFFICE & DAYCARE

ZONED PEC TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

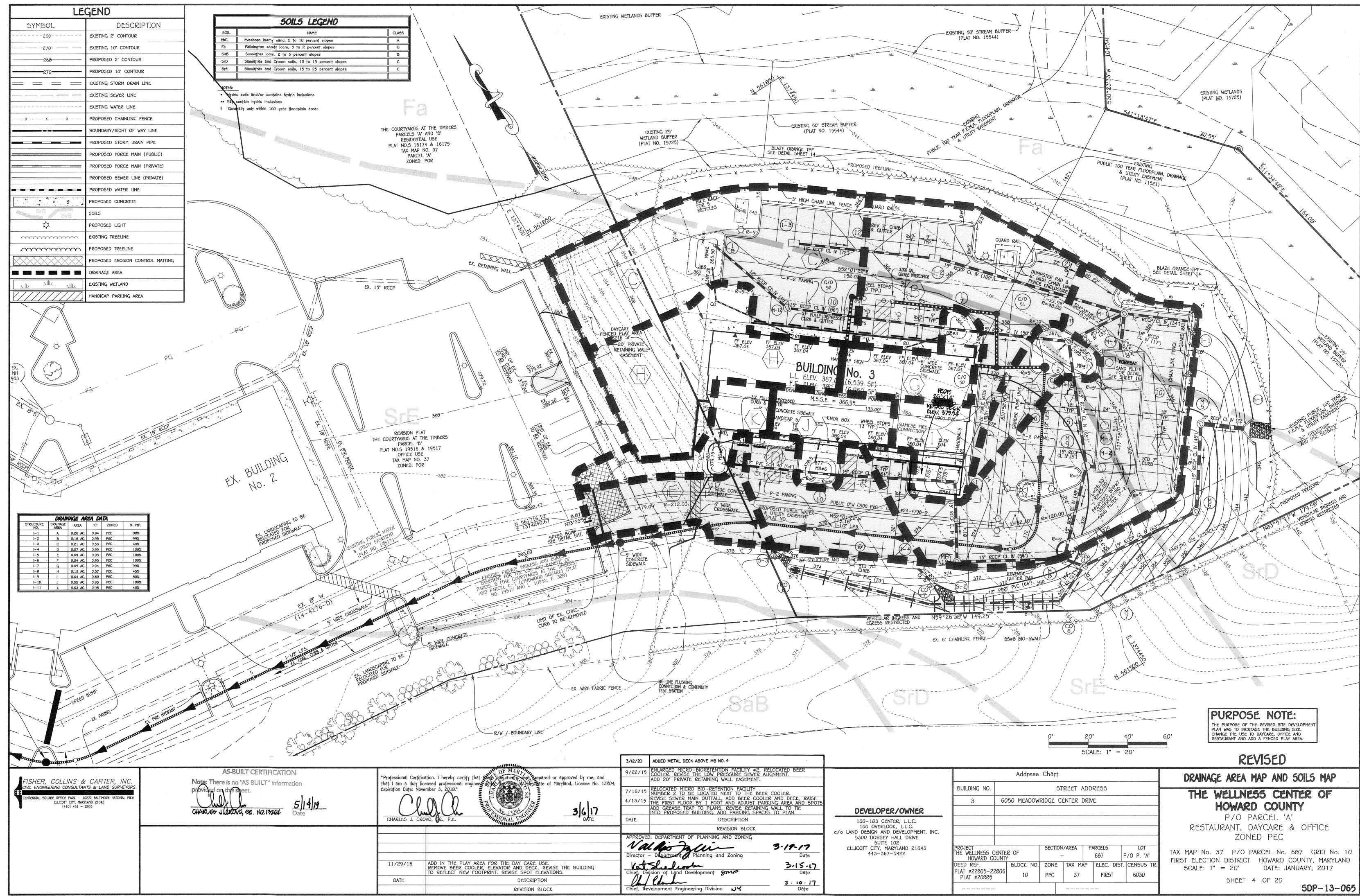
> SCALE: AS SHOWN DATE: JANUARY, 2017 SHEET 1 OF 20

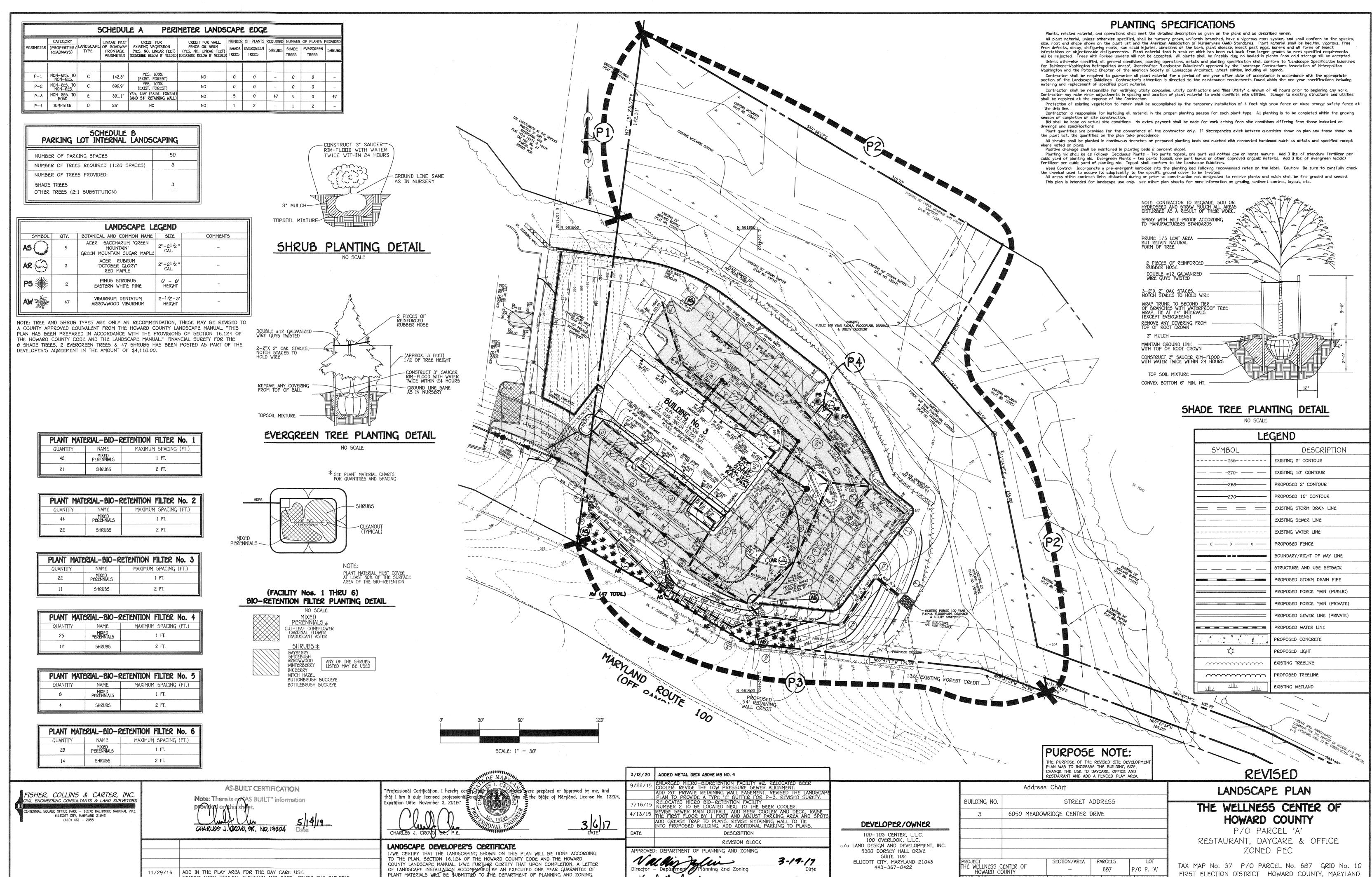
5DP-13-065





THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET





Chief, Development Engineering Division N'

3-15-67

3.10.17 Date DEED REF.

PLAT #22805-22806

PLAT #20885

BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS

FIR5T

PEC

6030

24008\dwg\LYNDWOOD SQUARE\Redline Revision for New Build

REMOVE BEER COOLER, ELEVATOR AND DECK. REVISE THE BUILDING

REVISION BLOCK

TO REFLECT NEW FOOTPRINT. REVISE SPOT ELEVATIONS.

THERE IS NO "AS-BUILT" INFORMATION PROJUGO ON THIS SHEET

SCALE: 1" = 30' DATE: JANUARY, 2017

SHEET 5 OF 20

A. Soil Preparation

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.

.. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

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:

. Soil pH between 6.0 and 7.0. . Soluble salts less than 500 parts per million (ppm). ii. 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. v. Soil contains 1.5 percent minimum organic matter by weight. 1. Soil contains sufficient pore space to permit adequate root penetration

. Application of amendments or topsoil is required if on-site soils do not meet the above conditions. . 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.

inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

I. 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

. 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 unaccentable 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 epresentative soil profile section in the Soil Survey published by USDA-NRCS.

1. 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 nutrient

. The original soil to be vegetated contains material toxic to plant growth.

l. 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 1

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.

. 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

. 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

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.

TEMPORARY SEEDING NOTES (8-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

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.

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

ardiness Zon eed Mixture	e (from Figure B.3) (from Table B.1):	:6b		Fertilizer Rate (10-20-20)	Lime Rate	
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths			
BARLEY	96	3/1 - 5/15,	1"	436 lb/ac	2 tons/ac	
OAT5	72	8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)	
RYE	112		1"			

PERMANENT SEEDING NOTES (8-4-5)

A. Seed Mixtures General Use

a. Select one or more of the species or mixtures listed in Table 8.3 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

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 2000 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

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: 1 1/2 to 3 pounds per 1000 square feet

Select turfgrass varieties from those listed in the most current University of Maryland

certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides

Publication, Agronomy Memo •77. "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best quarantee of cultivar purity. The

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

a reliable means of consumer protection and assures a pure genetic line

(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 1 1/2 inches in

diameter. The resulting seedbed must be in such condition that future moving of grasses will pose no

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

Permanent Seeding Summary

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 15-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION 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 MOST CURRENT 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 SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 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 PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MUI CHING (SEC. 8-4-3). TEMPORARY STABILIZATION WITH MUI CH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF

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 HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

6) SITE ANALYSIS:

2.73 ACRES

TOTAL AREA OF SITE AREA DISTURBED

ENGINEER'S CERTIFICATE

certify that this plan for sediment and erosion control represents a practical and workable

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for

sediment and erosion control, and that all responsible personnel involved in the construction

project will have a Certificate of Attendance at a 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 Howard Soil Conservation District."

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."

Signature of Engineer

1.51 ACRES AREA TO BE ROOFED OR PAVED 0.79 ACRES AREA TO BE VEGETATIVELY STABILIZED 1.94 ACRES 0000 CU.YDS.

TOTAL CUT TOTAL FILL OFFSITE WASTE/BORROW AREA LOCATION

ELLICOTT CROSSING 7) ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 6) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY

26,000 CU.YDS.

SEDIMENT CONTROL INSPECTOR. 9) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE

10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER 11) ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION. 12) A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 ACRE 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 PROCEEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

AS-BUILT CERTIFICATION

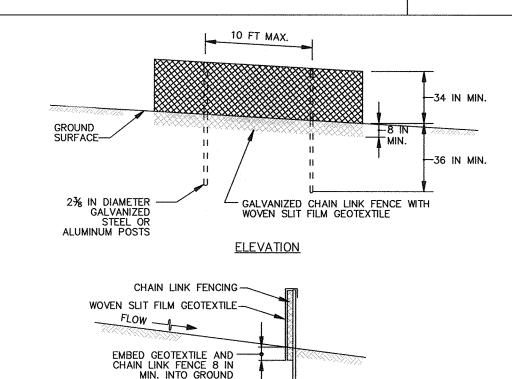


Note: There is no "AS BUILT" information

CHARLES J. CROVO, SR., P.E.

Date: November 3, 2014."





H-SSF-----

WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

AGGREGATE OVER LENGTH AND WIDTH OF ENTRANCE

50 FT MIN.

LENGTH *

PROFILE

PLAN VIEW

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

MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE

CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE

ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

PLACE CRUSHED ACCRECATE (2 TO 3 INCHES IN SIZE) OR FOLIVALENT RECYCLED CONCRETE

(WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.

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

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE,

FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE

CONSTRUCTION SPECIFICATIONS

NATURAL RESOURCES CONSERVATION SERVICE

DETAIL B-1

EXISTING GROUND —

NONWOVEN

CONSTRUCTION SPECIFICATIONS

LOCATED AT A HIGH SPOT

U.S. DEPARTMENT OF AGRICULTURE

rofessional Certification. I hereby certify that these documents were prepared or approved by me, and that l

am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration

This development plan is approved for soil erosion and sediment control by

TURAL RESOURCES CONSERVATION SERVICE

EXISTING ROAD TO PROVIDE A TURNING RADIUS.

DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

INSTALL 2% 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

CROSS SECTION

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. 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.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. 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 PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT

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.

GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT 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

USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.

PLAN / CUT AWAY VIEW

—¼ IN HARDWARE CLOTH

6 IN OVERLAP

CROSS SECTION

. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE

PLACE CLEAN 1/4 TO 11/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE

STORM DRAIN IN ET PROTECTION REQUIRES FREQUENT MAINTENANCE REMOVE ACCUMULATED

DETAIL E-9-2 AT-GRADE INLET PROTECTION

NONWOVEN GEOTEXTILE

CONSTRUCTION SPECIFICATIONS

STANDARD SYMBOL

SCE

- EXISTING PAVEMENT

-EDGE OF EXISTINGPAVEMENT

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

DESCRIPTION

REVISION BLOCK

PPROVED: DEPARTMENT OF PLANNING AND ZONING

Development Engineering Division

-FARTH FIL

PIPE (SEE NOTE 6)

WITH WIRE TIES AND SET GRATE BACK IN PLACE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

- ANCHOR POST SHOULD BE

MINIMUM 2" STEEL "U" CHANNEL

OR 2" x 2" TIMBER 6' IN LENGTH

ANCHOR POST MUST BE INSTALLED

O A DEPTH OF NO LESS THAN 1/3

OF THE TOTAL HEIGHT OF POST

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.

TREE PROTECTION DETAIL

STANDARD STABILIZATION NOTE

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES,

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR

SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED

TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

6-12-14

3.27.14

HORIZONTAL TO 1 VERTICAL (3:1); AND

FOREST PROTECTION DEVICE ONLY

ROOT DAMAGE SHOULD BE AVOIDED

PROTECTIVE SIGNAGE MAY ALSO BE USED.

MAXIMUM DRAINAGE AREA = 1/4 ACRE MAXIMUM DRAINAGE AREA = 1 ACRE -2 FT MIN. LENGTH OF 2 IN x 4 IN SANDBAG OR
OTHER APPROVED 2 IN x 4 IN WEIR-ANCHORING METHOD -6 FT MAX. SPACING OF 2 IN x 4 IN SPACERS ¾ TO 1½ STONE -2 IN x 4 IN ANCHORS, - GALVANIZED HARDWARE **GEOTEXTILE** ──2 IN x 4 IN SPACER GALVANIZED/ ∠2 IN x 4 IN WEIR SECTION A-A HARDWARE. LEDGE OF GUTTER PAN **ISOMETRIC**

DETAIL E-9-3 CURB INLET PROTECTION

CONSTRUCTION SPECIFICATIONS USE NOMINAL 2 INCH x 4 INCH LUMBER

AGIP

— ¾ TO 1½ IN STONE

NONWOVEN GEOTEXTILE

-INLET GRATE

BLAZE ORANGE PLASTIC MESH

HIGHLY VISIABLE FLAGGING

MAXIMUM & FEET

--- ¾ TO 1½ IN STONE

. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.

5. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).

ATTACH A CONTINUOUS PIECE OF 1/4 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.

. 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. . 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 INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.

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 34 TO 11/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.

AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET

). 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 MARYLAND DEPARTMENT OF ENVIRONMENT

U.S. DEPARTMENT OF AGRICULTURE

USE 2" x 4"

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (1 DAY)

2. NOTIFY MISS UTILITY (1-800-257-7777) 48 HOURS BEFORE STARTING WORK NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1855) 24 HOURS BEFORE STARTING WORK, AND NOTIFY THE BALTIMORE GAS ELECTRIC CO. (410-291-5739) FIVE (5) WORKING DAYS PRIOR TO STARTING WORK. (1 WEEK)

CROSS BACKING 3. CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (2 DAYS)

> 4. INSTALL ALL REMAINING PERIMETER CONTROLS: SUPER SILT FENCE AND TREE PROTECTION FENCING. (1 WEEK) 5. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB

FOR THE REMAINDER OF THE SITE. (1 WEEK) 6. CONSTRUCT RETAINING WALLS AND GRADE SITE TO THE PROPOSED SUBGRADE.

7. CONSTRUCT THE UNDERGROUND SWM FACILITY AND CONTROL STRUCTURES INSTALL THE STORM DRAIN SYSTEM AND ASSOCIATED WATER AND SEWER UTILITIES. STABILIZE ALL SLOPES INCLUDING CHANNEL IMMEDIATELY UPON COMPLETION OF GRADING AS SHOWN.

8. BEGIN CONSTRUCTION OF BUILDING. (8 MONTHS)

9. INSTALL STORM DRAIN AND INLETS, ROOF DRAINS, AND INSTALL INLET PROTECTION ON EACH INLET. (1 WEEK)

10. INSTALL CURB AND GUTTER AND BASE PAVING. (2 WEEKS)

11. INSTALL SIDEWALKS, LIGHTING AND LANDSCAPING. (2 WEEKS)

12. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (1 DAY)

13. INSTALL SURFACE COURSE PAVING. (1 WEEK)

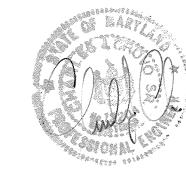
TYP. MARKING DETAIL

14. THOROUGHLY CLEAN (FLUSH) THE STORM DRAIN SYSTEMS. (1 DAY)

15. WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROLS, FINE GRADE ALL DISTURBED AREAS AND STABILIZE IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATIONS. (1 WEEK)

EROSION AND SEDIMENT CONTROL NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON ALL SEDIMENT CONTROL DEVICES/PRACTICES ON A DAILY BASIS, AND IMMEDIATELY AFTER EACH RAINFALL. -SPEED CURB TREATMENT HUMP 0 1 2 3 4 5 APPROACH ARC DETAIL SEE VERTICAL DIMENSIONS CHART FLAT TOP PROFILE SPEED HUMP





DATE

DEVELOPER/OWNER

USE 3' WIRE

"U" TO SECURE

FENCE BOTTOM

100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21043 443-367-0422

BUILDING NO. STREET ADDRESS 6050 MEADOWRIDGE CENTER DRIVE ECTION/AREA HE WELLNESS CENTER OF 687 P/O P. 'A HOWARD COUNTY BLOCK NO. | ZONE | TAX MAP | ELEC. DIST. CENSUS PEC FIRST 6030 10 RAT# 22805 4 2280G

Address Chart

Purpo<u>se</u> Conditions Where Practice Applies

B-4-8 STANDARDS AND SPECIFICATIONS

STOCKPILE AREA

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

Definition

크 CIP

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

with Section B-3 Land Grading. 2 IN x 4 IN SPACER 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. i. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment

> 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

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

DUST CONTROL

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE

MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING. 2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE

SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. 4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW. 5. BARRIERS - SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS

ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING. MOIST. MAY NEED RETREATMENT.

PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF

VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT

STANDARDS FOR TOPSOILING. 3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVE

SPEED HUMP PROFILE

r = 4b - c = 72.125b = height = (0.25)c = cord distance = (12') γ - (b - r) x $\sqrt{r^1 - x^1}$ x(ft.) Y(ft.) = inches

0.243 = 0.222 = 0.188 = 0.139 = 0.077 = VERTICAL DIMENSIONS CHART

SEDIMENT AND EROSION CONTROL

HOWARD COUNTY P/O PARCEL 'A' DAY CARE BUILDING

TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: SEPTEMBER 30, 2013

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

FISHER, COLLINS & CARTER. INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYOR ELLICOTT CITY, MARYLAND 21042

To provide a designated location for the temporary storage of soil that controls the potential for erosion, stockpile areas are utilized when it is necessary to salvage and store soil for later use.

and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance

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

Mainte<u>nance</u> The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in

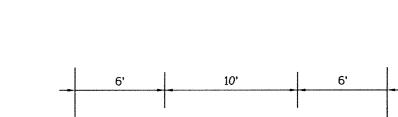
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL

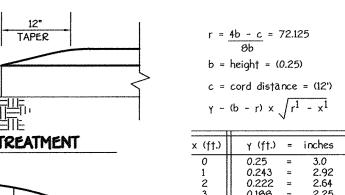
TEMPORARY METHODS 1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH

6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE PERMANENT METHODS

1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT

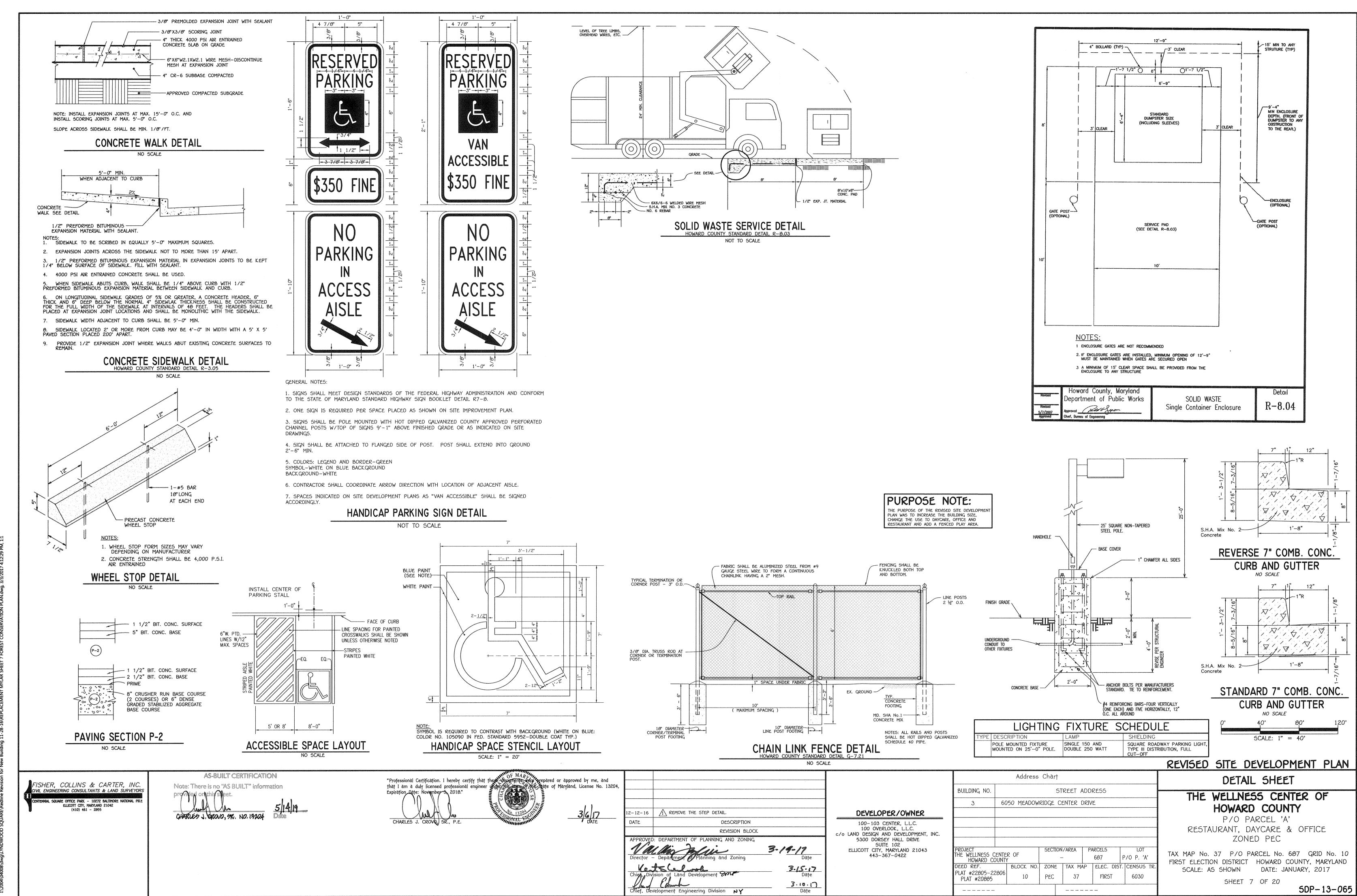
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE

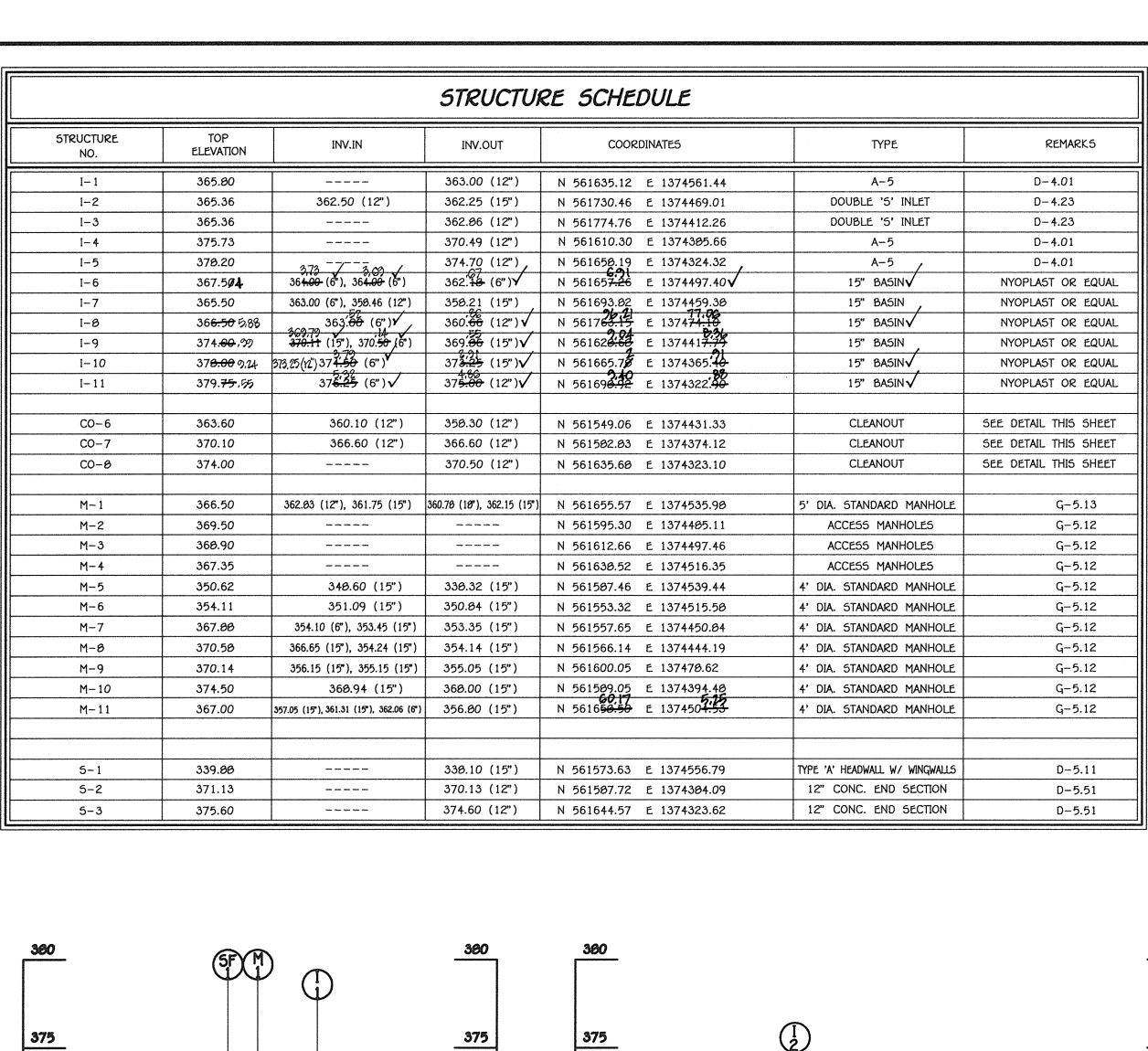


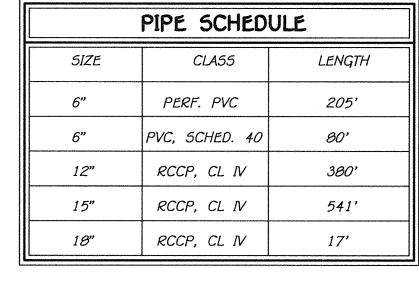


NOTES AND DETAILS THE WELLNESS CENTER OF

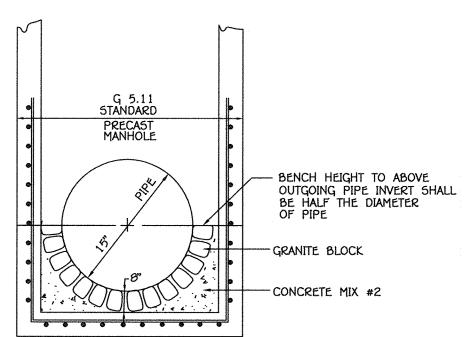
ZONED PEC

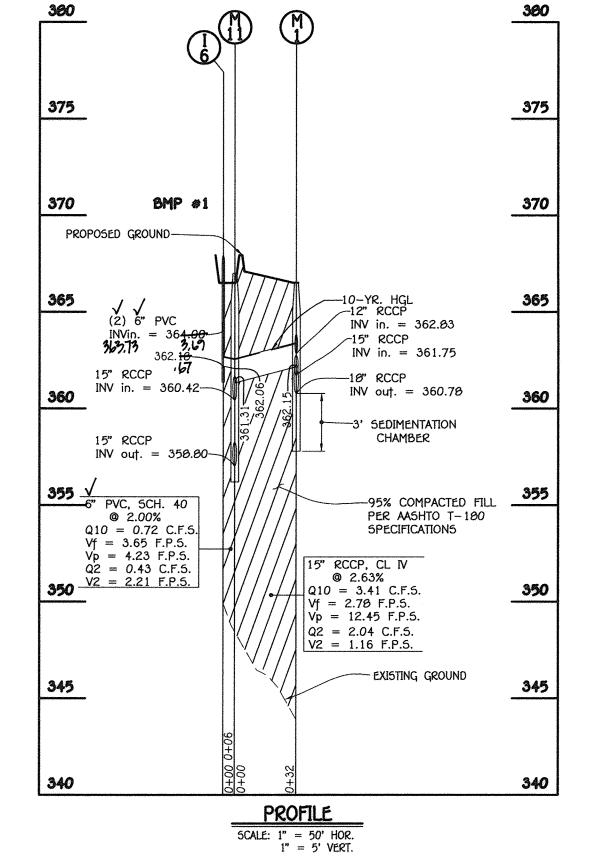


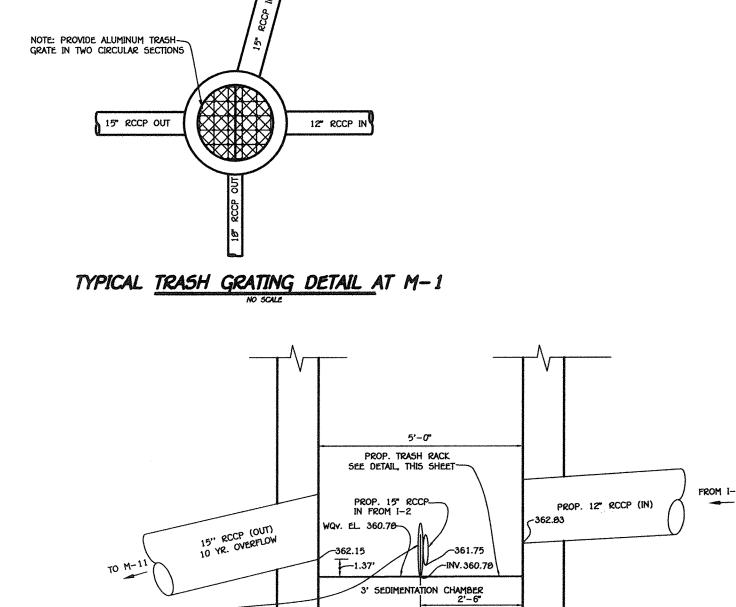




GRANITE BLOCK DETAIL







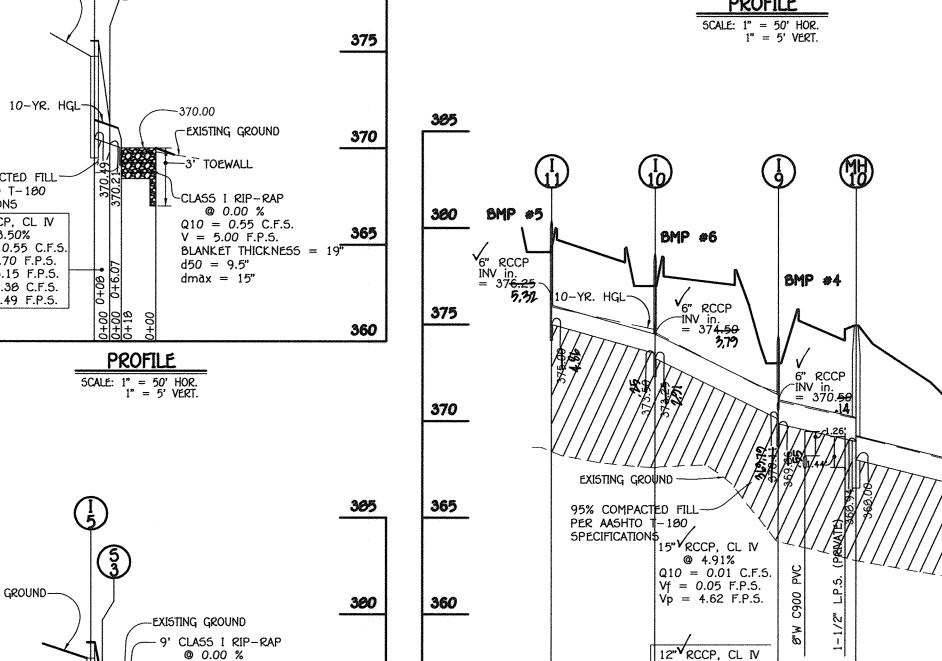
TYPICAL SPLITTER DETAIL AT M-1

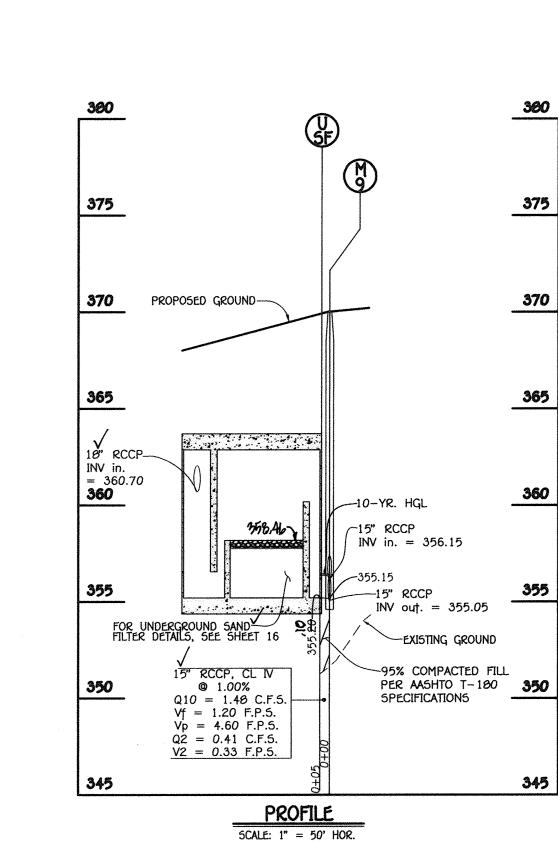
NOT TO SCALE

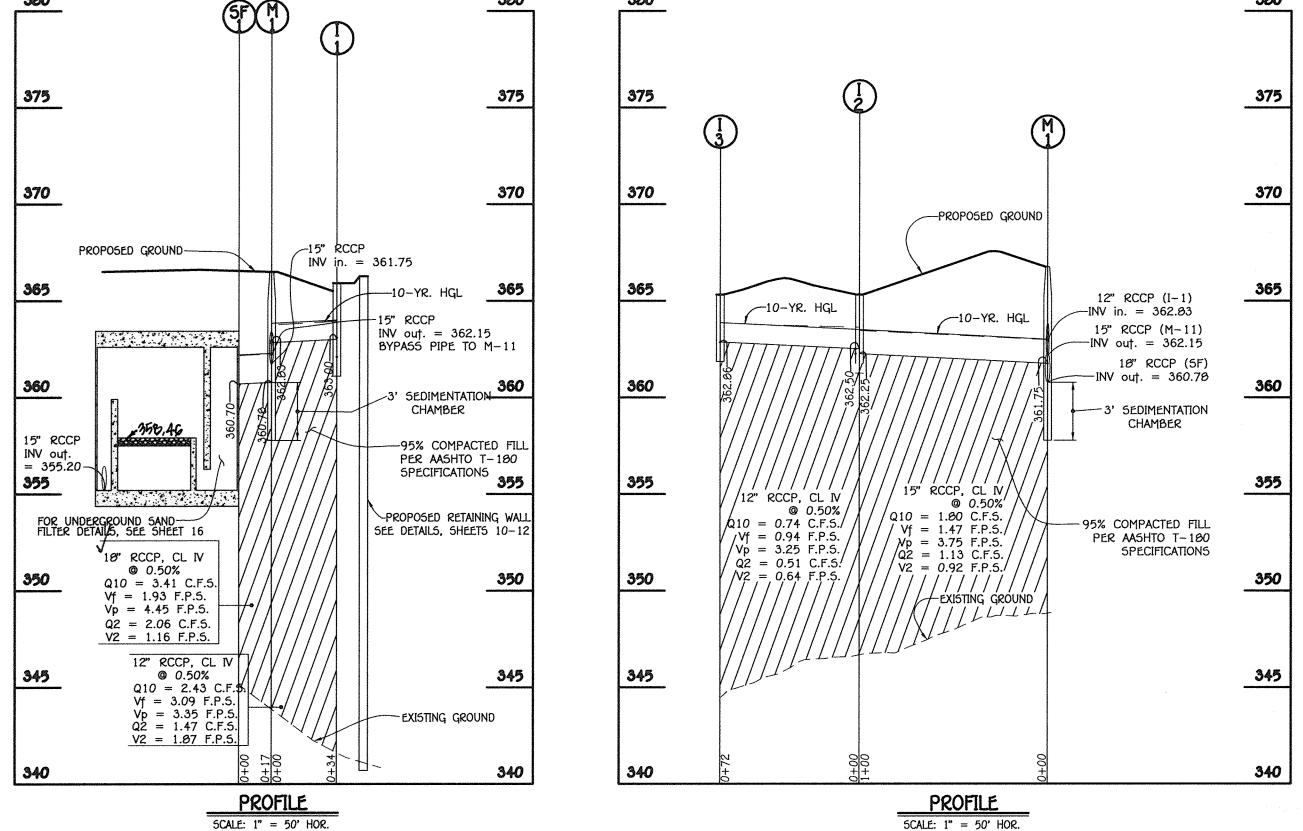
PROP. 18" RCCP-

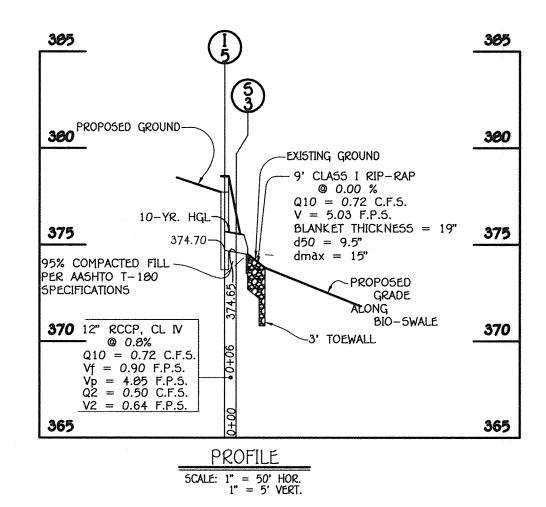
TO UNDERGROUND SAND FILTER NO.

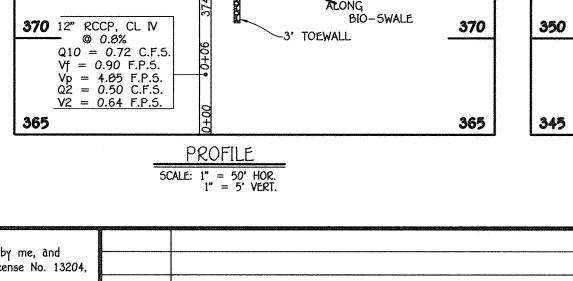
PROPOSED GROUND-375 370 95% COMPACTED FILL-PER AASHTO T-180 SPECIFICATIONS 12" RCCP, CL IV **365** @ 3.50% Q10 = 0.55 C.F.S.Vf = 0.70 F.P.5.Vp = 5.15 F.P.5. $Q^2 = 0.38$ C.F.5. V2 = 0.49 F.P.5. 370

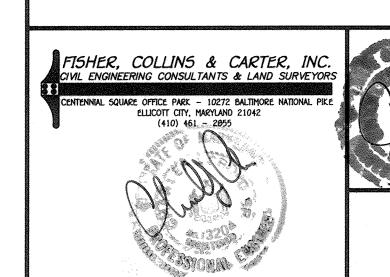












1" = 5' VERT.

AS-BUILT CERTIFICATION hereby certify, by my seal, that the facilities Shown on this plan were constructed as shown on is "AS BUILT" planmeet the approved plans and CHARTES J. CROVO, 98. NO. 13204

'Professional Certification. 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. 13204, Expiration Date: November 3, 2016"

1" = 5' VERT.

CHARLES J. CROVO, SR., P.E.

7/16/15 add M-12 to the structure schedule. Revise the PIPE schedul REVISE I-4 AND I-5 DUE TO THE PARKING ADDITION. REVISE STRUCTURE TO CHANGE INVERTS OF 5-1 AND 5-2. 2 24 16 DATE DATE DESCRIPTION REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING Director - Department of Planning and Zoning 4.4-16 Vet Eline Chief, Division of Land Development &

DEVELOPER/OWNER 100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21043 443-367-0422

3.28.16 Date

© 2.78%

Vf = 0.06 F.P.5.

Vp = 5.20 F.P.5.

Q2 = 0.01 C.F.5.

V2 = 0.01 F.P.5.

15" RCCP, CL IV

@ 2.30%

Vf = 0.06 F.P.5.

Vp = 3.92 F.P.S. Q2 = 0.004 C.F.S.

V2 = 0.003 F.P.5.

PROFILE

Q10 = 0.01 C.F.5.

15" RCCP INV in. = 354.24

15" RCCP INV out. = 354.14___

Q10 = 0.01 C.F.5.

Address Chart BUILDING NO. STREET ADDRESS 6050 MEADOWRIDGE CENTER DRIVE HE WELLNESS CENTER OF HOWARD COUNTY 687 P/O P. 'A' BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS 1 PLAT #22805-22806 PEC **FIRST** 6030 PLAT #20885

375

370

365

360

355

350

15" RCCP, CL IV @ 3.17%

Vf = 0.02 F.P.5.

Vp = 4.02 F.P.5.

Q2 = 0.01 C.F.5. V2 = 0.01 F.P.5.

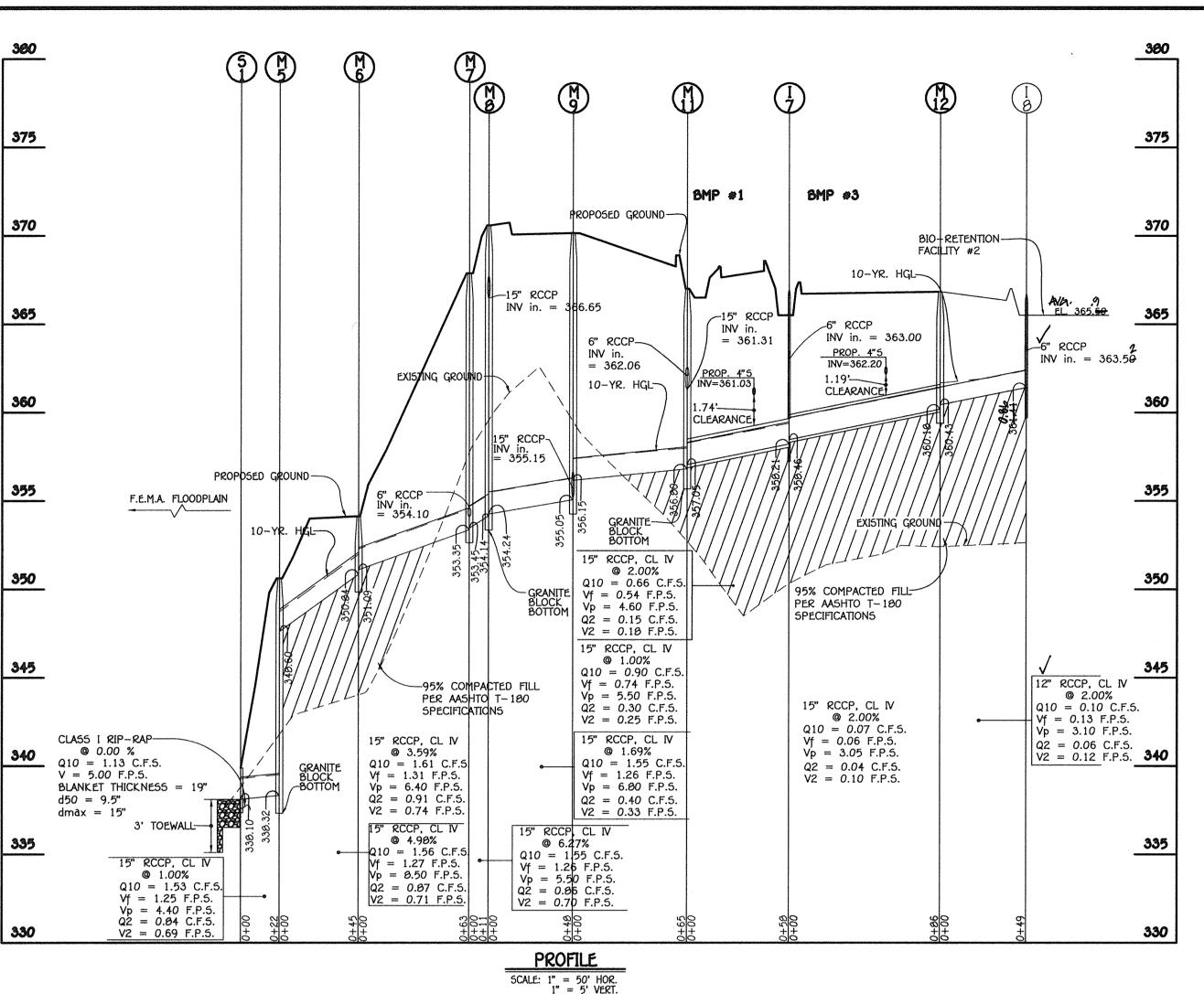
Q10 = 0.02 C.f.5.

REVISED STORM DRAIN PROFILES, STRUCTURE SCHEDULE & DETAILS THE WELLNESS CENTER OF HOWARD COUNTY P/O PARCEL 'A'

RESTAURANT / OFFICE ZONED PEC

TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: SEPTEMBER, 2015 SHEET 8 OF 20

5DP-13-065



375 375 370 -PROPOSED GROUND -EXISTING GROUND 355 -15" RCCP 2.73 /INV out. = $35\frac{3.35}{2.31}$ 15" RCCP 2.91 12" PVC, SCHED. 40 12" PVC, SCHED. 40 (PERFORATED) ----12" PVC, 5CHED. 40 Ø 5.23% @ *8.0*9% @ 14.39% Q10 = 0.07 C.F.5. Q10 = 0.05 C.F.5. Q10 = 0.08 C.F.5. Vf = 0.08 F.P.S.Vf = 0.06 F.P.5.Vf = 0.40 F.P.5.Vp = 3.04 F.P.5. Q2 = 0.05 C.F.5.Vp = 4.70 F.P.5.Vp = 5.50 F.P.S.Q2 = 0.03 C.f.5V2 = 0.06 F.P.5. Q2 = 0.02 C.F.5. 3|&V2 = 0.03 F.P.5.8|\(\tau\) V2 = 0.03 F.P.5. BIO-SWALE (M-8) PROFILE W/ UNDERDRAIN PIPE

3" MULCH AREA-10" PLANTING 50IL - RIVER ROCK V 12"W x 3"L x 12"D (BRIDGING LAYER) 8" NO. 2 WASHED STONE 40" NO. 2 WASHED STONE CHECK DAM 4" PERFORATED PIPE/GRAVEL UNDERDRAIN SYSTEM (WRAP THE CONCRETE CHECK DAM DETAIL PERF. PIPE w/ 1" MESH (4 x BIO-SWALE (M-B) SECTION 4) OR SMALLER GALVANIZED HARDWARE CLOTH. " PVC 5CH. 40, OBSERVATION WELL/CLEANOUT W/ 6" DIA. DOME GRATE. WEIR EL. INVERT @ d=9" 1/2" GAL STEEL BOLT-W/NUT PVC, SCHEDULE 40 CLEANOUT

LIMIT OF

PERFORATIONS -

ANCHOR

THIS SHEET

SECTION @

OBSERVATION WELL LOCATION

NOT TO SCALE

DETAIL,

UNDERDRAIN PIPE SHALL BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE P5 20 OR AASHTO-M- 270) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g.,

PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

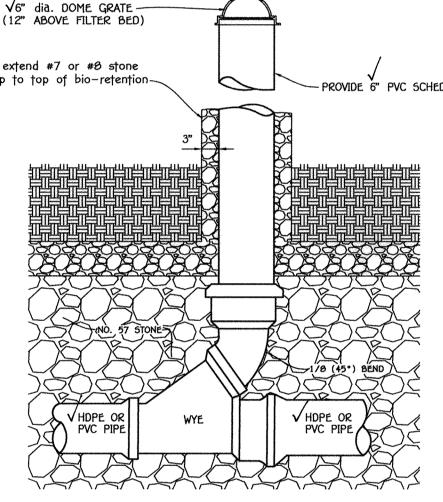
GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN. THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5%

A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE

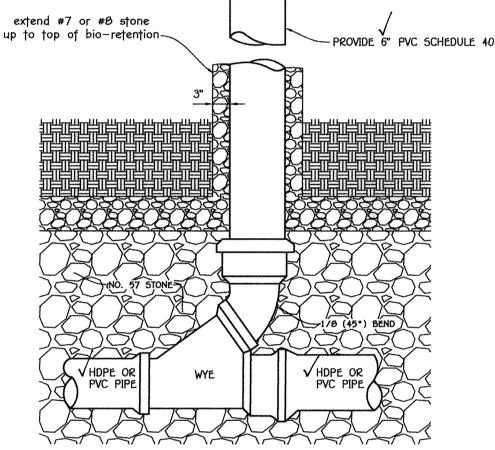
A 4" LAYER OF PEA GRAVEL (1/0" TO 3/0" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

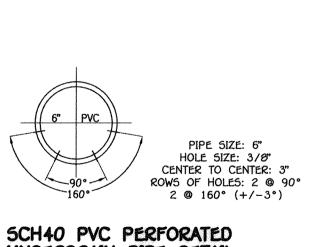
V15" DIA. DOME GRATE ASSEMBLY

ADS NYLOPLAST OR EQUAL -









18"x18"x1/2"

STEEL FOOT PLATE ___

anchor detail

UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE NO SCALE

ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE QUALITY: MATERIAL SHALL CONFORM TO ASTM A536 GRADE 70-50-05 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT LOCKING DEVICE AVAILABLE UPON REQUEST

15.30

Nyloplast 3130 VERONA AVE

SEE DRAWING NO.

7001-110-230

BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com

15" DOME GRATE ASSEMBLY NYLOPLAST OR EQUAL

SLOPE 2:1 MAX. TO MEET EX. GROUND __/ SEED AND MULCH BLANKET THICKNESS POLY-FILTER X - LOOSE LAID RIP RAP

The mulch layer plays an important role in the performance of the bioretention system. The

Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the

The mulch layer should be standard landscape style, single or double shredded hardwood mulch

or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months).

Planting Guidance
Plant material selection should be based on the goal of simulating a terrestrial forested

community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees,

The proper selection and installation of plant materials is key to a successful system. There

are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by

water. The outer edge is the highest elevation and generally supports plants adapted to dryer conditions. A sample of

appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5.

The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive

bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects.

uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a

mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments,

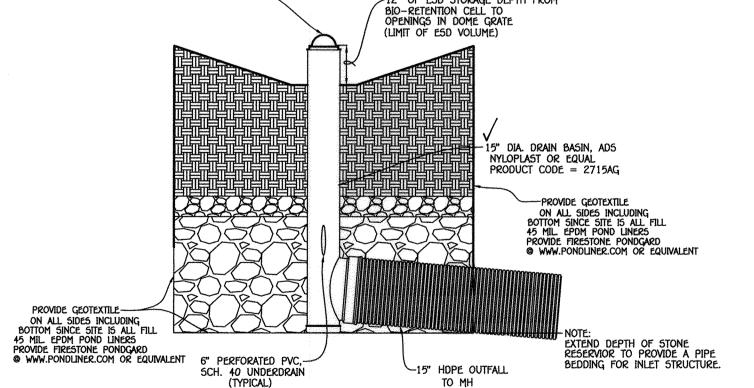
which remain suspended after the primary pretreatment.

disease, drought, temperature, wind, and exposure.

	RIP-RAP CHANNEL DESIGN DATA													
STRUCTURE	area	WETTED PERIMETER	R	R 2/3	5	5 1/2	W	d	N	V (f.p.s.)	Q (c.f.s.)	RIP-RA D 50	P SIZE D _{MAX}	BLANKET THICKNESS
5-1	1.35 sf	14.71'	0.0918	0.2018	0.005	0.0707	8.17	0.16'	0.04	0.78	1.13	9.5"	15"	19"
5-2	0.65 sf	12.71'	0.0511	0.1363	0.005	0.0707	6.10'	0.11'	0.04	0.58	0.55	9.5"	15"	19"
5-3	0.78 sf	12.71'	0.0614	0.1542	0.005	0.0707	6.13'	0.13'	0.04	5.03	0.72	9.5"	15"	19"
			<u> </u>	<u> </u>	<u> </u>			L				<u></u>		

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding
- 2. The rock or gravel shall conform to the specified grading limits when
- 3. Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- 4. Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



12" OF ESD STORAGE DEPTH FROM

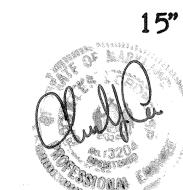
TYPICAL INLET STRUCTURE DETAIL @ BIO-RETENTION NO SCALE

4-4-16

8-46-6

3.28.16

NY



IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS INIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042

5.2 to 7.00

500 ppm

10 to 25 %

30 to 55 % 35 to 60%

1.5 to 4.0% (by weight)

35 lbs. per acre, minimum

75 lbs. per acre, minimum

85 lbs. per acre, minimum

AS-BUILT CERTIFICATION I hereby certify, by my seal, that the facilities shown on this play. Were constructed as shown on this "AS QUILT" plan meet the approved plans and specifications (HARTES J. GROVO, SR. NO. 13104

"Professional Certification. 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. 13204, Expiration Date: November 3, 2016."

CHARLES J. CROVO, SR., P.E.

REVISE STORM DRAIN TO RELOCATE I-0 PER THE RELOCATED MICRO BIO-RETENTION FACILITY. REVISE I-4 AND I-5 DUE TO PARKING. DATE REVISION BLOCK APPROVED: DEPARTMENT OF PLANNING AND ZONING ector - Department of Planning and Zoning Vestgeline Chief, Division of Land Development Smr Chief, Development Engineering Division

DEVELOPER/OWNER

100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21043 443-367-0422

Address Chart BUILDING NO. STREET ADDRESS 6050 MEADOWRIDGE CENTER DRIVE SECTION/AREA THE WELLNESS CENTER OF P/O P. 'A' 687 HOWARD COUNTY DEED REF. BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS T PLAT #22805-22806 37 FIR5T 6030 PEC PLAT #20885

REVISED PROFILES & DETAILS THE WELLNESS CENTER OF

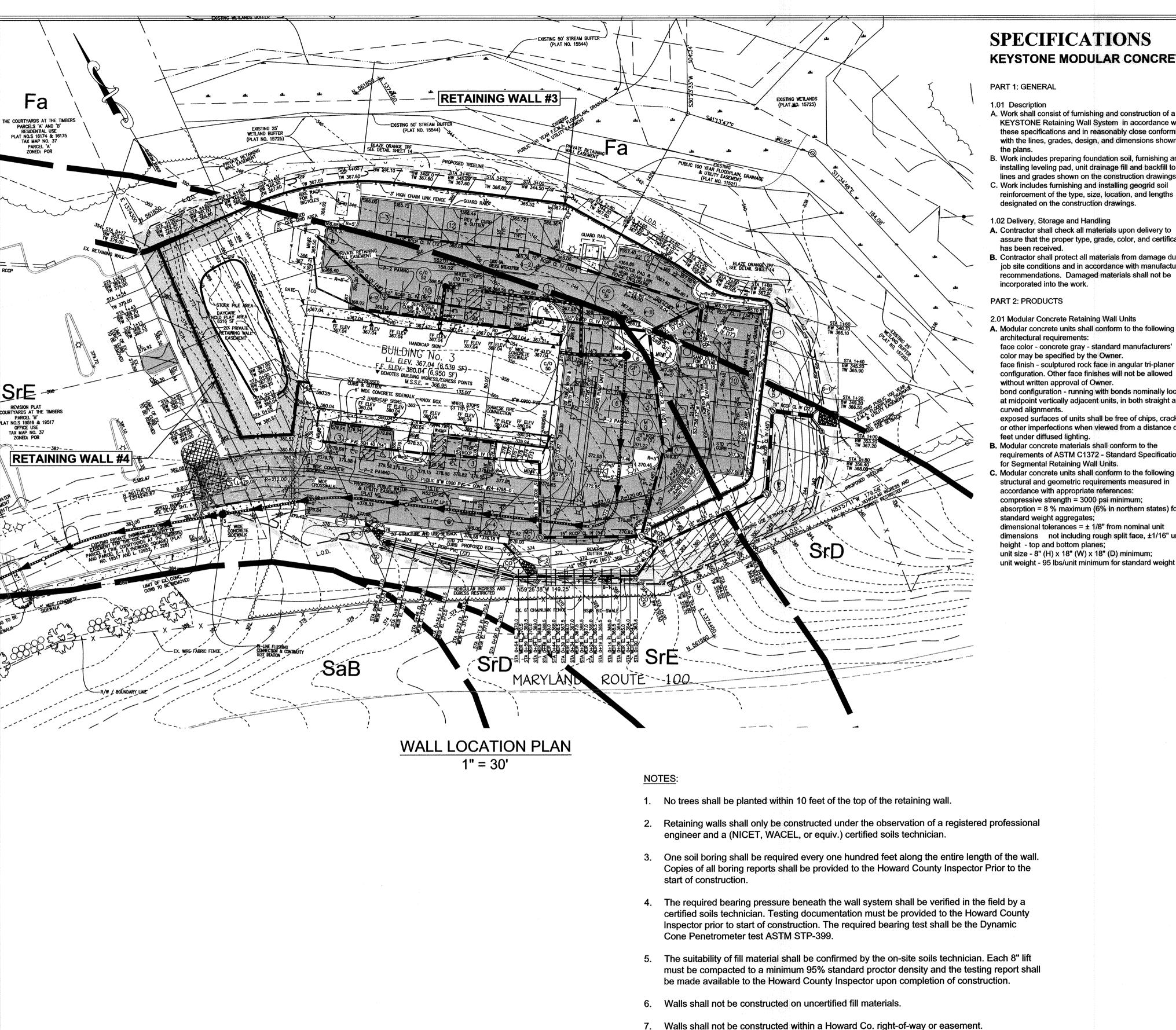
~6" PVC UNDERDRAIN

HOWARD COUNTY P/O PARCEL 'A' RESTAURANT: / OFFICE

ZONED PEC TAX MAP No. 37 P/O PARCEL No. 607 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: SEPTEMBER, 2014

SHEET 9 OF 20

5DP-13-065



Professional Certification: I hereby certify that these documents were prepared by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, Licence No. 14434,

Expiration Date: May 13, 2017."

AS-BUILT CERTIFICATION

CHURLES J. GROVO, 98. NO. 1990 Date Date

HM

RWS

04198-B

Note: There is no VAS BUILT" information

HCEA JOB NO.:

DESIGNED BY:

APPROVED BY:

FISHER, COLLINS & CARTER, INC.

HILLIS-CARNES

ENGINEERING ASSOCIATES

10975 Guilford Road, Suite A Annapolis Junction, Maryland

(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

ENGINEERING CONSULTANTS & LAND SURVEYORS

SPECIFICATIONS

KEYSTONE MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

- A. Work shall consist of furnishing and construction of a KEYSTONE Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on
- B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.
- C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.
- 1.02 Delivery, Storage and Handling
- A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification
- B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

ADD NEW BUILDING AND REVISE THE USE TO DAYCARE. CHANGE BUILDING AREA AND REVISE SHARED PARKING ANALYSIS. ADD FENCED IN PLAY AREA AND GATE FOR DAYCARE. EXTEND SIDEWALK.

879-1

3-15-17

2:23:17 Date

DESCRIPTION

REVISION BLOCK

APPROYED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division

DATE

2.01 Modular Concrete Retaining Wall Units

- architectural requirements: face color - concrete gray - standard manufacturers' color may be specified by the Owner. face finish - sculptured rock face in angular tri-planer configuration. Other face finishes will not be allowed without written approval of Owner. bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.
- . Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
- structural and geometric requirements measured in accordance with appropriate references: compressive strength = 3000 psi minimum; absorption = 8 % maximum (6% in northern states) for standard weight aggregates; dimensional tolerances = ± 1/8" from nominal unit dimensions not including rough split face, ±1/16" unit height - top and bottom planes; unit size - 8" (H) x 18" (W) x 18" (D) minimum;

inter-unit shear strength - 1000 plf minimum at 2 psi

normal pressure; geogrid/unit peak connection strength - 1000 plf minimum at 2 psi normal force. D. Modular concrete units shall conform to the following constructability requirements: vertical setback = 1/8"± per course (near vertical) or 1"+

per course per the design; alignment and grid positioning mechanism - fiberglass pins, two per unit minimum; maximum horizontal gap between erected units shall be -1/2 inch.

- 2.02 Shear Connectors A. Shear connectors shall be 1/2 inch diameter thermoset isopthalic polyester resin-protruded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units.
- units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F. B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

Strength of shear connectors between vertical adjacent

2.03 Base Leveling Pad Material

- A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.
- 2.04 Unit Drainage Fill A. Unit drainage fill shall consist of #57crushed stone
- 2.05 Reinforced Backfill A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-35

ASTM D-422 and meet other properties shown on the

- Plasticity Index (PI) <7 and Liquid Limit <40 per ASTM D-4318.
- B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement

applications and shall be manufactured from high tenacity

2.07 Drainage Pipe

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill

3.02 Base Leveling Pad

- A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.
- B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

- A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.
- B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's
- recommendations. C. Install shear/connecting devices per manufacturer's recommendations.
- D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure
- E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

drawings or as directed by the Engineer.

- A. Geogrid shall be oriented with the highest strength axis
- perpendicular to the wall alignment. B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design
- C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to

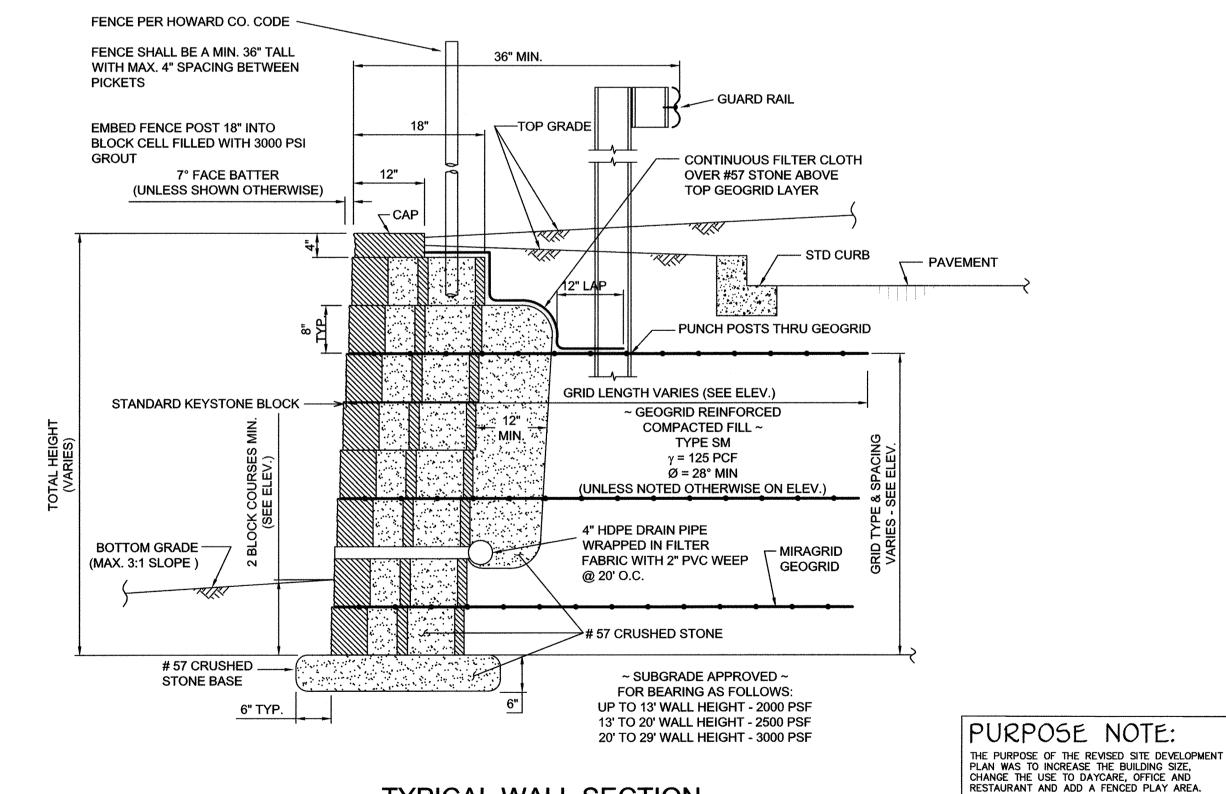
- backfill placement on the geogrid. D. Geogrid reinforcements shall be continuous throughout
 - their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

3.05 Reinforced Backfill Placement

- A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation
- damage. B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required
- density as required. C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each
- layer and shall be + 3% to 3% of optimum. D. Only lightweight hand-operated equipment shall be
- allowed within 3 feet from the tail of the modular concrete E. Tracked construction equipment shall not be operated
- directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
- F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.
- G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation A. Cap units shall be glued to underlying units with an

- all-weather adhesive recommended by the manufacturer.
- 3.07 Field Quality Control A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality
- assurance and testing services during construction. B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.



TYPICAL WALL SECTION

N.T.S.

FIRST

"REVISED SITE DEVELOPMENT PLAN"

Address Chart RETAINING WALL CONSTRUCTION DETAILS STREET ADDRESS BUILDING NO. 6050 MEADOWRIDGE CENTER DRIVE DEVELOPER/OWNER 100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE PROJECT
THE WELLNESS CENTER OF
HOWARD COUNTY ELLICOTT CITY, MARYLAND 21043 P/O P. 'A' DEED REF. BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS TR

|PLAT #22805-22806|

PLAT #20885

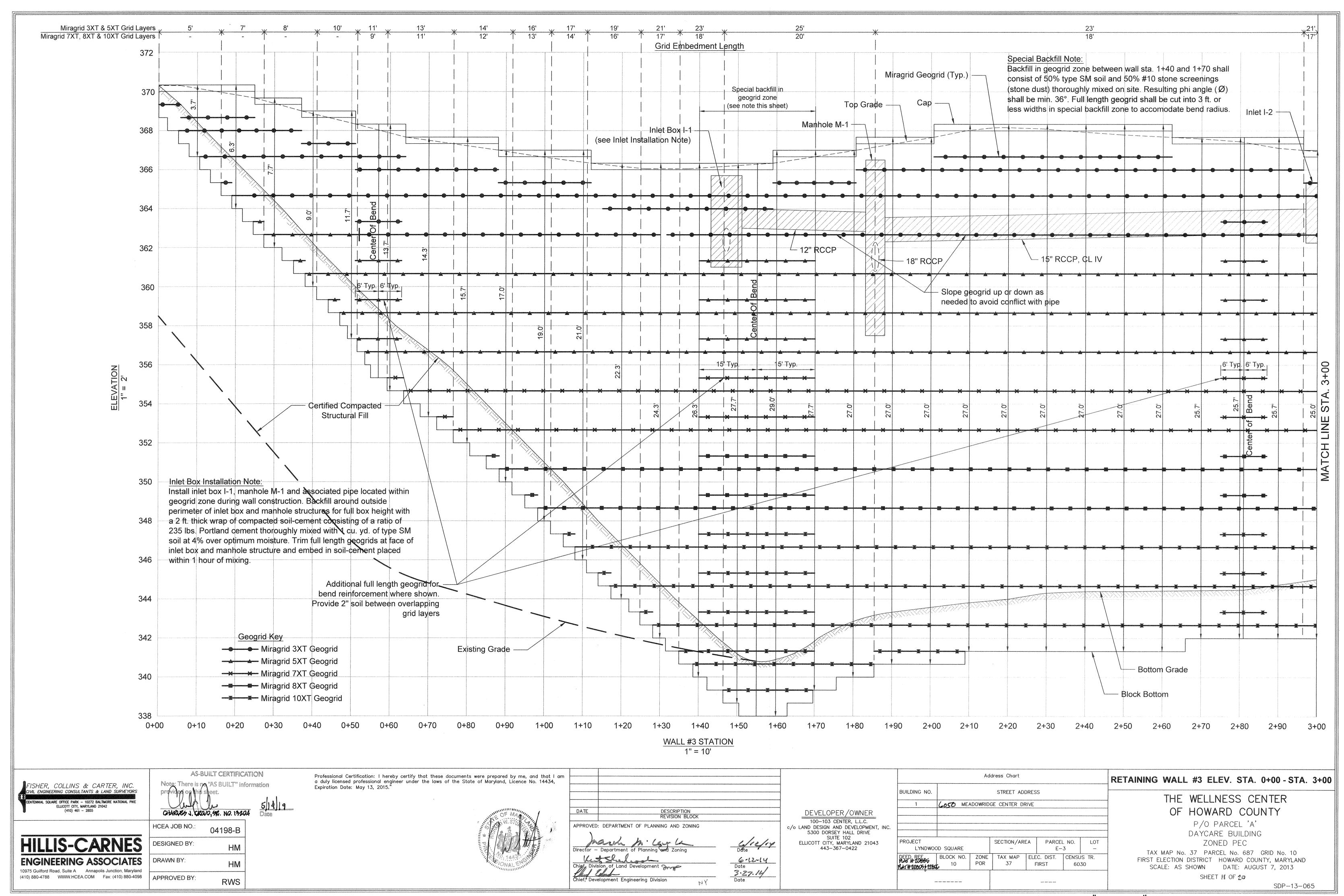
HOWARD COUNTY P/O PARCEL 'A' RESTAURANT, DAYCARE & OFFICE ZONED PEC

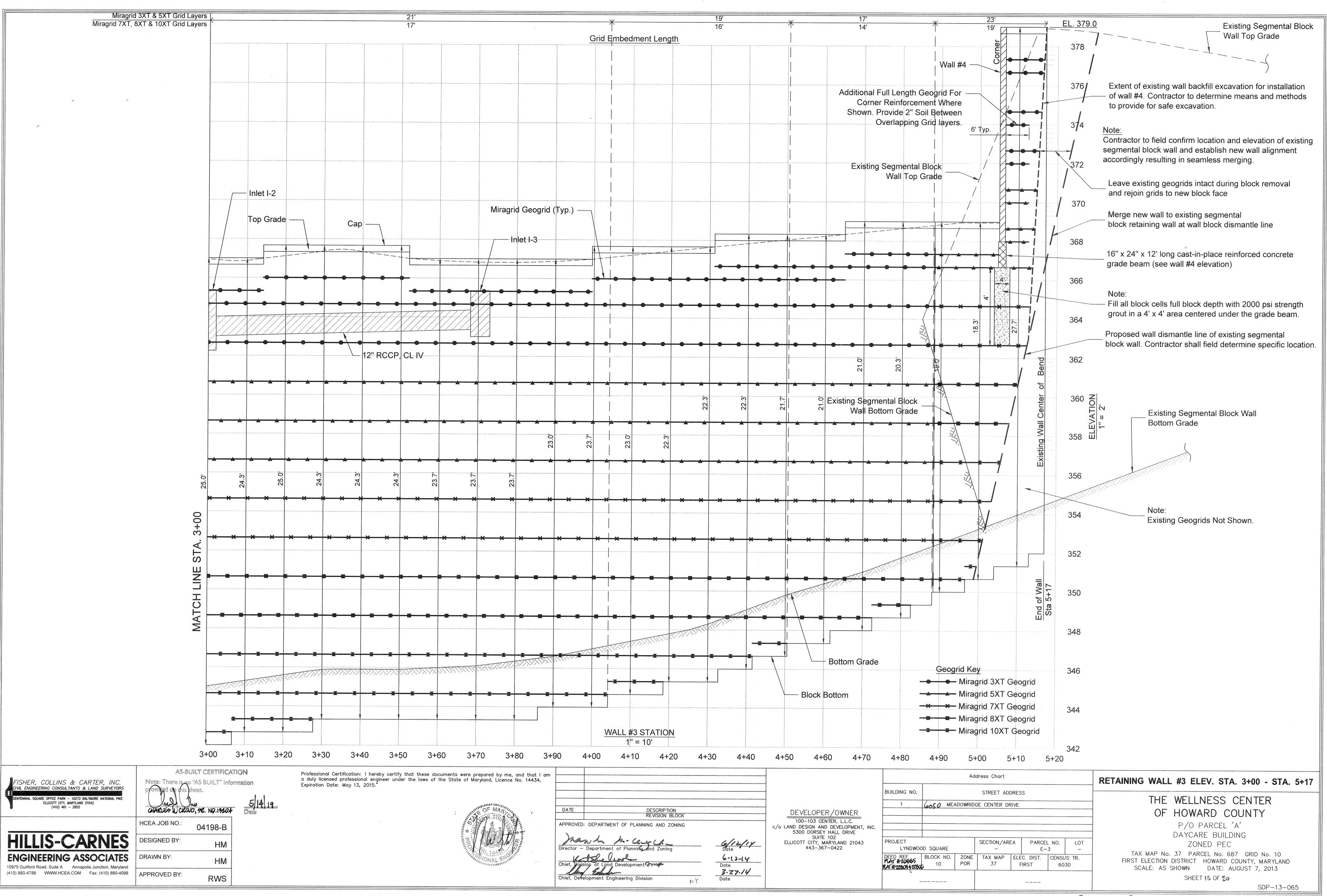
THE WELLNESS CENTER OF

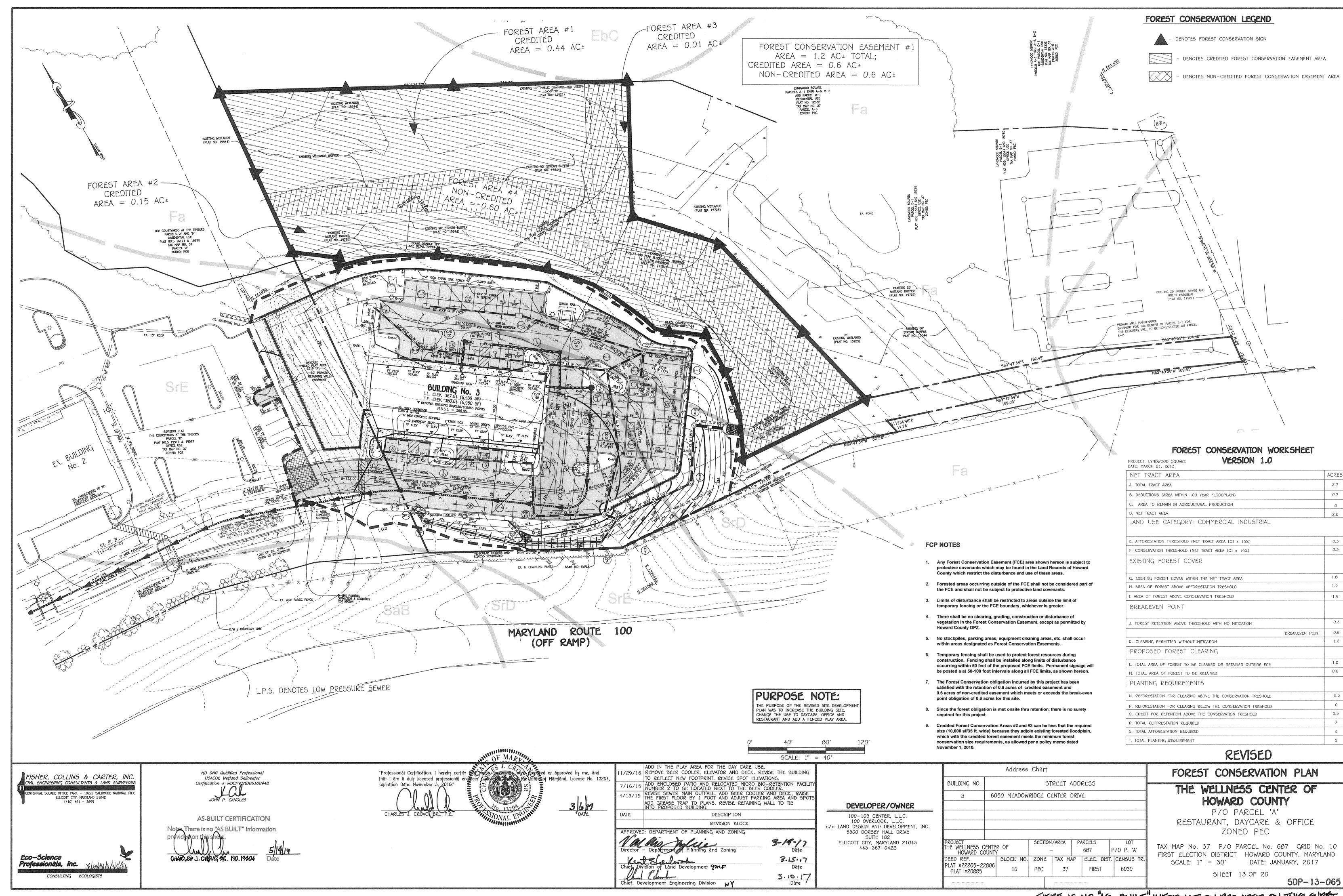
TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: JANUARY, 2017

SHEET 10 OF 20

SDP-13-065







THERE IS NO "AS-BUILT" INFORMATION PROMDED ON THIS SHEET

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. Forest Protection Techniques

1. Soil Protection Area (Critical Root Zone)

The soil protection area, or critical root zone, of a tree is that portion of the soil column where most of a its roots may be found. The majority of roots responsible for water and nutrient uptake are located just below the soil surface. Temporary fencing shall be placed around the critical root zone of the forest in areas where the forest limits occur within 50 feet of the limit of disturbance.

Fencing and Signage

Existing forest limits occurring within 50 feet of the limits of disturbance shall be protected using temporary protective fencing. Permanent signage shall be placed around the afforestation area prior to plant installation, as shown on the plan.

B. Pre-Construction Meeting

Upon staking of limits of disturbance a pre-construction meeting will be held between the developer, contractor and appropriate County inspector. The purpose of the meeting will be to verify that all sediment control is in order, and to notify the contractor of possible penalties for non-compliance with the FCP.

C. Storage Facilities/Equipment Cleaning

All equipment storage, parking, sanitary facilities, material stockpiling, etc. associated with construction of the project will be restricted to those areas outside of the proposed Forest Conservation Easement. Cleaning of equipment will be limited to area within the LOD of the proposed homesites. Wastewater resulting from equipment cleaning will be controlled to prevent runoff into environmentally sensitive areas.

D. Sequence of Construction

The following timetable represents the proposed timetable for development of the subject property. The items outlined in the Forest Conservation Plan will be enacted within two (2) years of subdivision approval.

Below find a proposed sequence of construction.

1. Install all signage, tree protection fencing and sediment control devices. 2. Hold pre-construction meeting between developer, contractor and County

3. Build access roads, install water and sewer, and construct houses. Stabilize all

disturbed areas accordingly. Remove sediment control.

5. Hold post-construction meeting with County inspectors to assure compliance with

FCP. Submit Certification of Retention.

E. Construction Monitoring

Eco-Science Professionals, or another qualified professional designated by the developer, will monitor construction of the project to ensure that all activities are in compliance with the Forest Conservation Plan.

F. Post-Construction Meeting

Upon completion of construction, Eco-Science Professionals, or another qualified professional designated by the developer, will notify the County that construction has been completed and arrange for a post-construction meeting to review the project site. The meeting will allow the County inspector to verify that forest retention requirements have been met

POST-CONSTRUCTION MANAGEMENT PLAN

Howard County requires a two year post-construction management plan be prepared as part of the Forest Conservation Plan. The plan goes into effect upon acceptance of the construction certification of completion by the County. Eco-Science Professionals, or another qualified professional designated by the developer, will be responsible for implementation of the post-construction management plan.

The following items will be incorporated into the plan for the subject property:

A. Fencing and Signage

Permanent signage indicating the limits of the retention/planting area shall be maintained.

B. General Site Inspections

Site inspections will be performed to insure that retention of the forest is met in accordance with this

plan and that the forest edge remains healthy and stable.

C. Education

Date

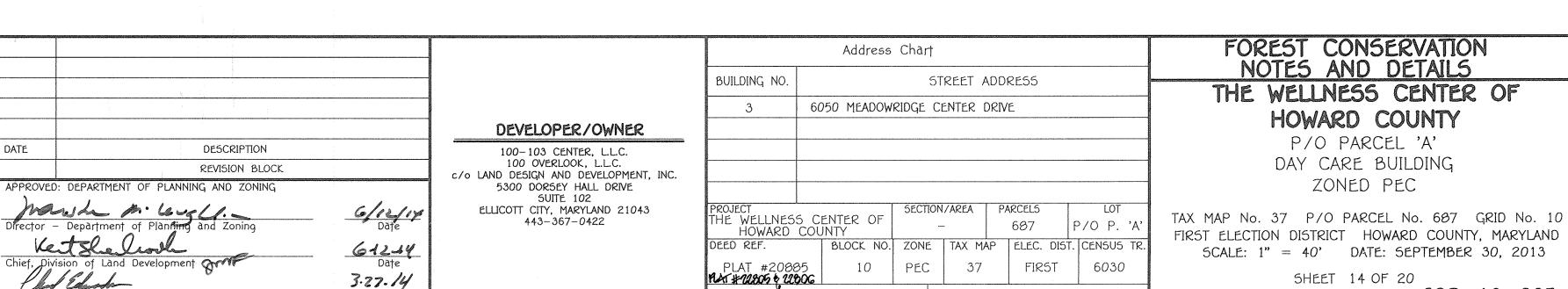
The developer will provide appropriate materials to property owners informing them of the location and purpose of the forest conservation easement. Materials may include site plans and information explaining the intent of the forest conservation law.

D. Final Inspection

At the end of the two year post-construction management period, Eco-Science Professionals, or another qualified professional, will submit to the administrator of the Howard County Forest Conservation Program certification that all retention/afforestation requirements have been met. Upon acceptance of this certification, the County will release the developer from all future obligations and release the developer's

FOREST CONSERVATION EASEMENTS

Easements are a legal means of providing permanent protection of forests, farmland and open space. In accordance with the criteria outlined in the Howard County Forest Conservation Manual, a forest conservation easement will be recorded for the retention areas the subject property. Submission of the easements for recordation will occur prior to commencement of construction activities.



State Forest Conservation Manual Appendix C: Sample Details and Specifications CONSERVATION AREA DO NOT DISTURB MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS PROHIBITED 1. Bottom of signs to be higher than top of tree protection fence.
2. Signs to be placed approximately 50' feet apart. Conditions on site affecting visibility may warrant placing signs closer or farther apart.
3. Attachment of signs to trees is prohibited. Source: Adapted from Forest Conservation Manual, 1991 Figure C-4 Construction Signs Final Draft

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July 1995

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

Eco-Science Professionals, Inc.

CONSULTING ECOLOGISTS

MD DNR Qualified Professional USACOE Wetland Delineator Certification # WDCP93MD0610044B JOHN P. CANOLES

AS-BUILT CERTIFICATION Note: There in o "AS BUILT" information

GHARLES JUCKOVO, SR. NO. 13204

that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2014."

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and

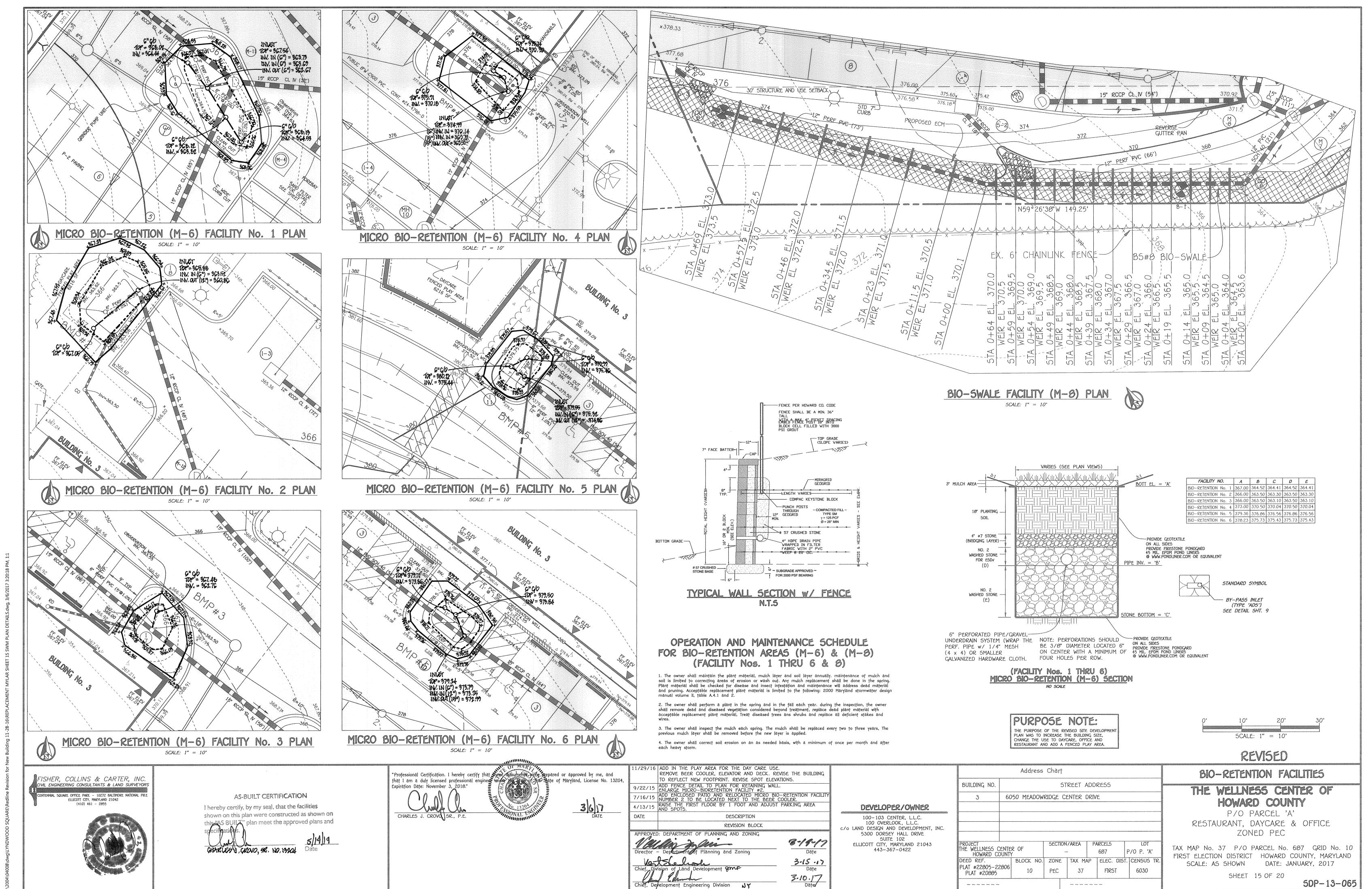
312/14

hief, Development Engineering Division

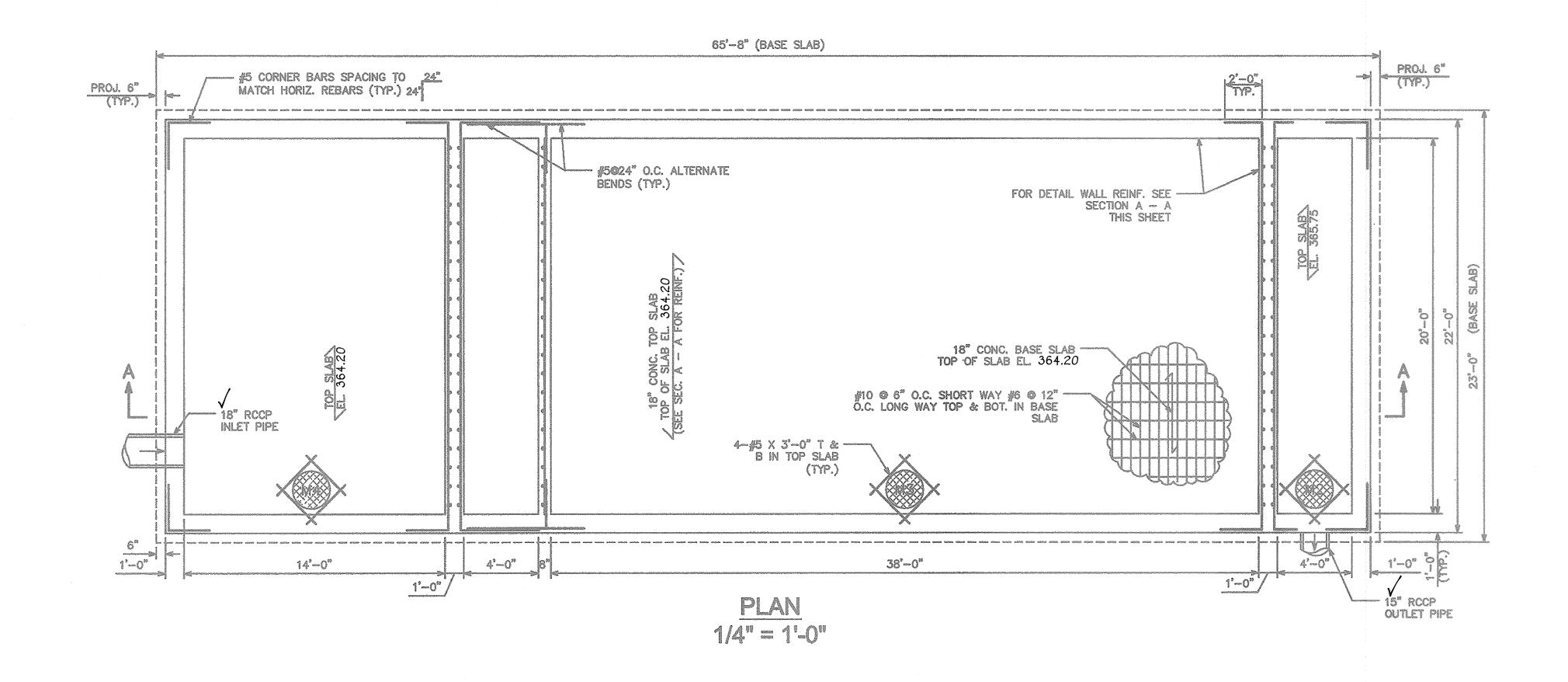
NOTES AND DETAILS THE WELLNESS CENTER OF HOWARD COUNTY P/O PARCEL 'A'

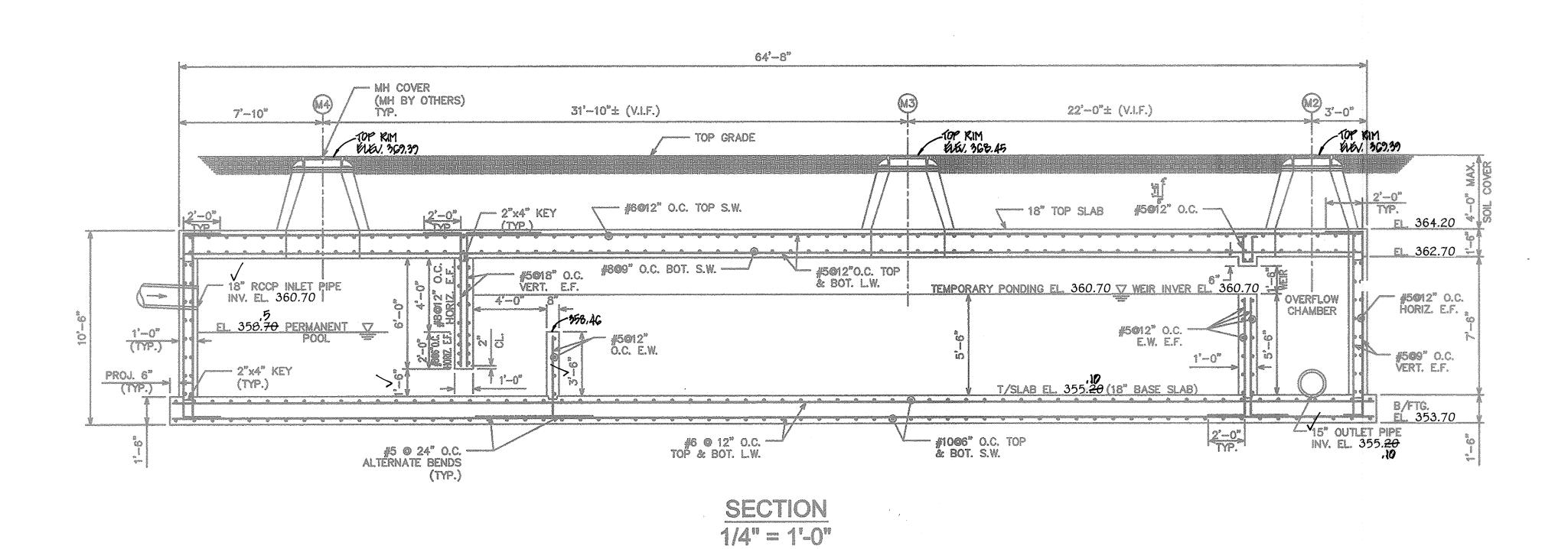
DAY CARE BUILDING ZONED PEC

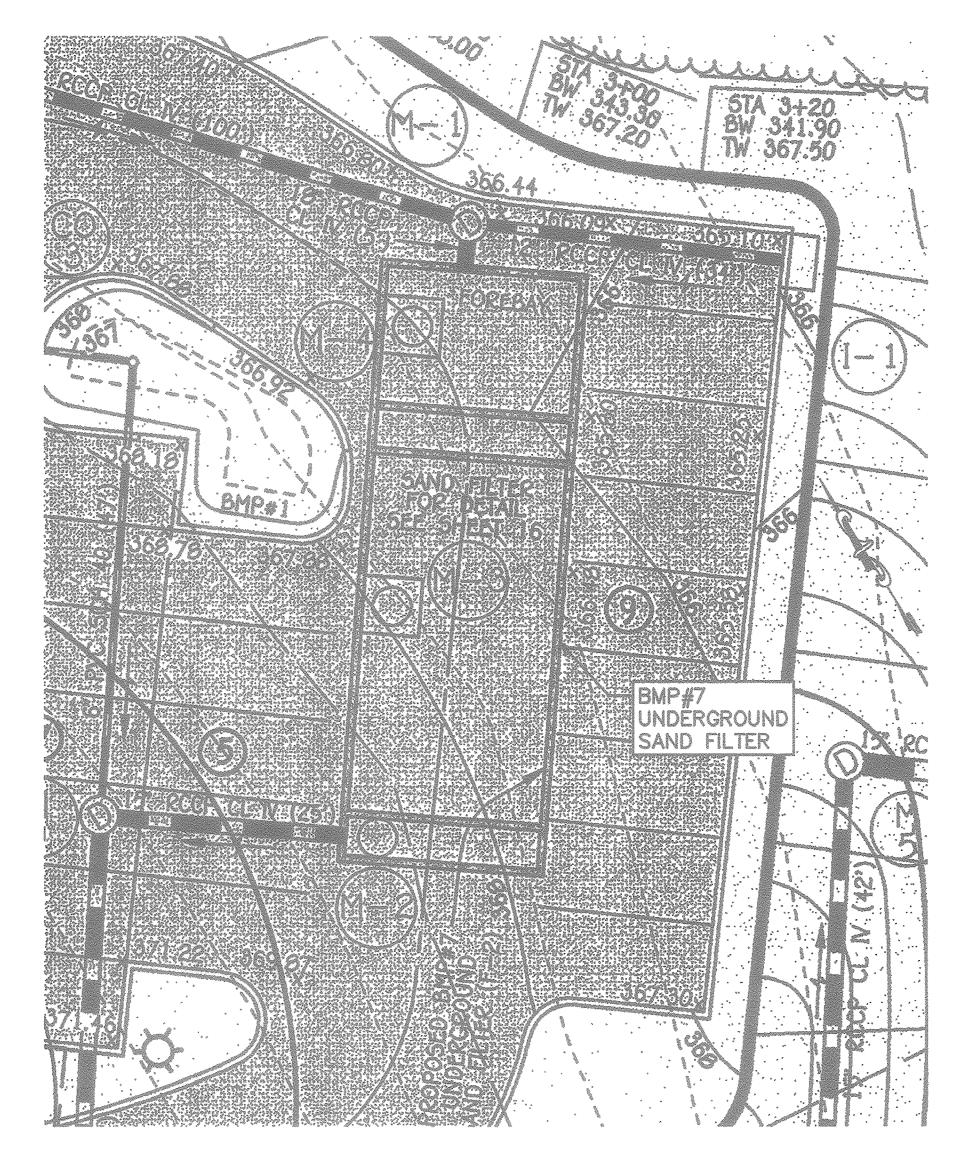
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 40' DATE: SEPTEMBER 30, 2013 SHEET 14 OF 20



" 46-BUILT"

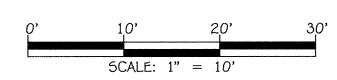






SITEPLAN 1"=10"

- 1. ALL CONCRETE SHALL BE 4000 PSI (fc') AIR ENTRAINED.
- 2. ALL REINFORGEMENT STEEL SHALL BE ASTM A615 GRADE
- 3. BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- 4. CONCRETE WORK SHALL
 COMPLY WITH THE LATEST ACI
 318 BUILDING CODE
 REQUIREMENTS FOR STRUCTURAL CONCRETE.
- 5. ALL REBAR SPLICES NOT SHOWN SHALL BE A MINIMUM 40 BAR DIAMETER.
- 6. SEE PROJECT DRAWINGS BY FCC FOR SPECIFIC SAND FILTER DETAILS





HILLIS-CARNES ENGINEERING ASSOCIATES DRAWN BY: 10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4786 WWW.HCEA.COM Fax: (410) 880-4098 APPROVED BY:

HCEA JOB NO: 04198-5 designed by: CHARLES & CROJO, 9R. NO. 13204



AS-BUILT CERTIFICATION I hereby certify, by my seal, that the facilities shown on this plan were constructed as shown on this "AS BUILT" plan meet the approved plans and specifications. FOR ONLY BUSINESS

"Professional Certification. I hereby certify that the agree of the professional control of the professional engineer under the part of the professional engineer under the part of the pa Expination Date: MAY 13, 2015 RICHARD W. STURTEVANT, P.E.

3/13/14 DATE

DESCRIPTION REVISION BLOCK ARPROVED: DEPARTMENT OF PLANNING AND ZONING Director - Department of Planning and Zoning bate Date 6-12-14 Date **3.27.64**Date Chief, Development Engineering Division

DEVELOPER/OWNER

100-103 CENTER, L.L.C. 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE SUITE 102 ELLICOTT CITY, MARYLAND 21043 443-367-0422

BUILDING NO.		STREET ADDRESS								
3	60	50 MEADOW	RIDGE	Cı	ENTER (ORIV	E			
PROJECT THE WELLNES: HOWARD	5 CI	ENTER OF	SECTION/AREA —			PARCELS 687			LOT P/O P. 'A'	
DEED REF.		BLOCK NO.	ZONI	Ē	TAX MA	/P	ELEC.	DIST.	CENSUS	TR.
PLAT #2088 12T#11805611	35 80 6	10	PEC	;	37		FIRST		6030	

Address Chart

UNDERGROUND SAND FILTER DESIGN THE WELLNESS CENTER OF

> HOWARD COUNTY P/O PARCEL 'A' DAY CARE BUILDING

ZONED PEC TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: MARCH, 2014

> 5HEET 16 OF 20 5DP-13-065

Table B.3.1 Material Specifications for Sand filters

Material	Specifications/Test Method	Size	Notes
sand	clean AASHTO-M-6 of ASTM-Cconcrete sand	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are note acceptable. No calcium carbonated or dolomitic sand substitutions are: acceptable. No "rock dust" can be used for sand:
peat	ash content: < 15% pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc	N/a	The material must be reed—sedge hemic peat, shredded, uncompacted, uniform, and clean.
leaf compost		N/a	
underdrain gravel	AA5HTO-M-43	0.375" to 0.75"	
geotextile fabric (if required)	ASTM-D-4833 (puncture strength lb.) ASTM-D-4632 (Tensile Strength lb.)	0.08" thick equivalent opening size of #80 sieve	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextiles meant to "separate" sand filter layers.
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance — 150 lb./in) ASTM-D-471 (water adsorption: +8 to -2% mass)	30 mil †hickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F 758, Type P5 28 or AASHTO-M-278	4" — 6" rigid schedule 40 PVC or 5DR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
concrete (cast-in-place)	MSHA Standards and Specs. Section 902, Mix No. 3, f'c = 3500 psi, 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 precast) 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
concrete (pre-cast)	per pre-cast manufacturer	N/a	SEE ABOVE NOTE
non-rebar steel	A5TM A-36	N/a	structural steel to be hot-dipped galvanized ASTM-A-123

Sand Filter Specifications

1. Material Specifications for Sand Filters

The allowable materials for sand filter construction are detailed in Table B.3.1. 2. Sand Filter Testing Specifications

Underground sand filters, facilities within sensitive groundwater aquifers, and filters designed to serve urban hot spots are to be tested for water tightness prior to placement of filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.

All overflow weirs, multiple orifices and flow distribution slots are to be field-tested to verify adequate distribution of flows.

3. Sand Filter Construction Specifications

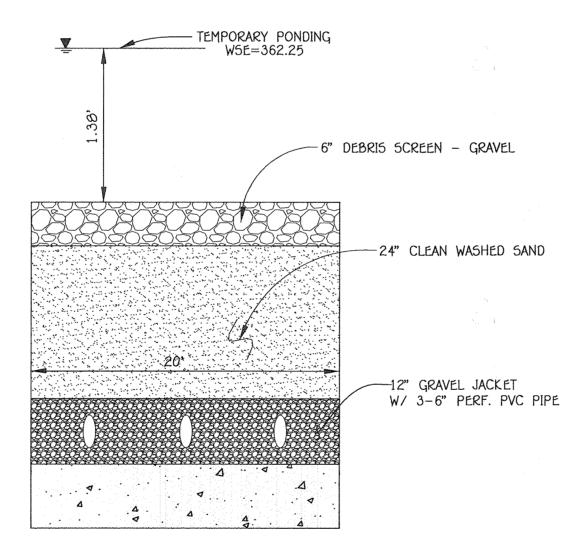
Provide sufficient maintenance access (i.e., 12-foot-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10%; gravel slopes to 15%; paved slopes to

Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized. Surface of filter bed is to be level.

All underground sand filters should be clearly delineated with signs so that they may be located when maintenance is due.

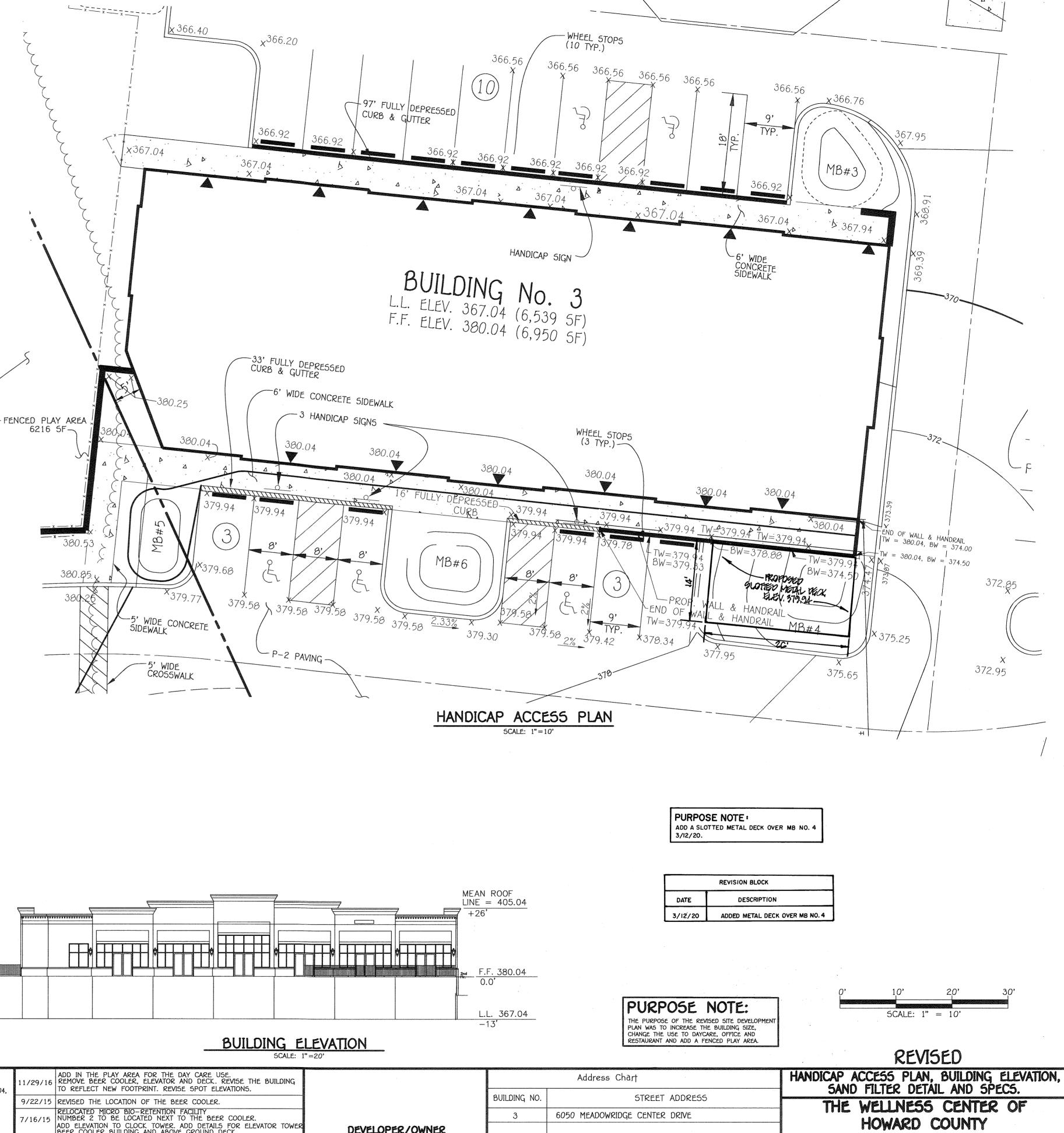
Surface sand filters may be planted with appropriate grasses; see Appendix A.

"Pocket" sandfilters (and residential bio-retention facilities treating areas larger than an acre) shall be sized with a' stone "window" that covers approximately 10% of the filter area. This "window" shall be filled pea gravel (3/4 inch stone).



UNDERGROUND SAND FILTER FACILITY (F-2) SECTION A-A

SCALE: NOT TO SCALE



FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS (410) 461 - 2055

AS-BUILT CERTIFICATION Note: There is no "AS BUILT" information CHARLES JEROVO, 9R. NO. 19204

Professional Certification. I hereby certify

t his a document were prepared or approved by me, and independent to State of Maryland, License No. 13204, DATE

ADD ELEVATION TO CLOCK TOWER. ADD DETAILS FOR ELEVATOR TOWER BEER COOLER BUILDING AND ABOVE GROUND DECK. REVISION BLOCK 3-19-17

Chief, Development Engineering Division

3-15-17

3.10.17

DEVELOPER/OWNER 100 OVERLOOK, L.L.C. c/o LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21043 443-367-0422

THE WELLNESS CENTER OF HOWARD COUNTY 687 P/O P. 'A' BLOCK NO. ZONE TAX MAP ELEC. DIST. CENSUS T PLAT #22805-22806 **FIRST** PLAT #20885

P/O PARCEL 'A' RESTAURANT, DAYCARE & OFFICE ZONED PEC

TAX MAP No. 37 P/O PARCEL No. 687 GRID No. 10 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND 5CALE: 1" = 10' DATE: JANUARY, 2017

SHEET 17 OF 20

50P-13-065 THERE IS NO "AS-BUILT" INFORMATION PROJUED ON THIS SHEET

