

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-267-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
3. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

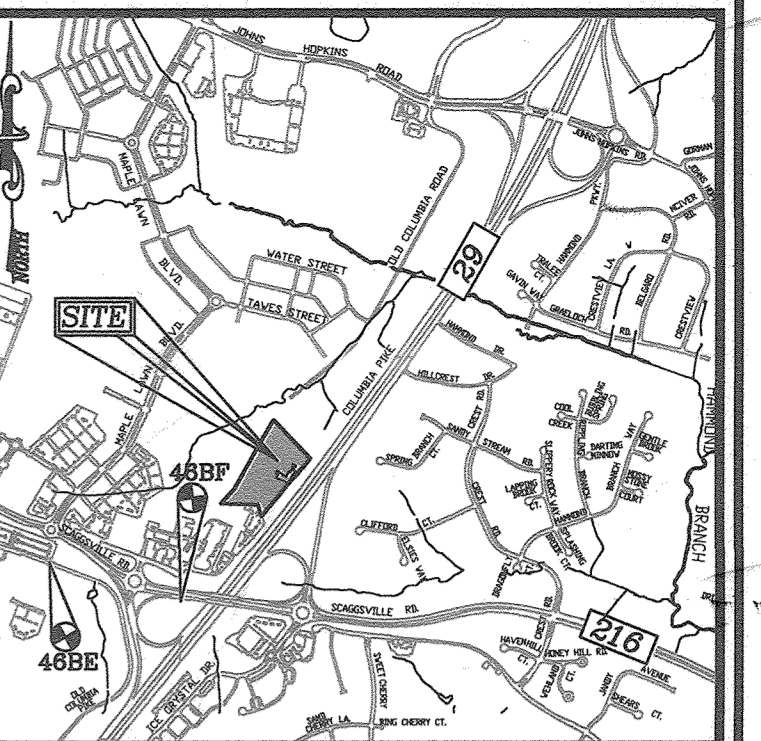
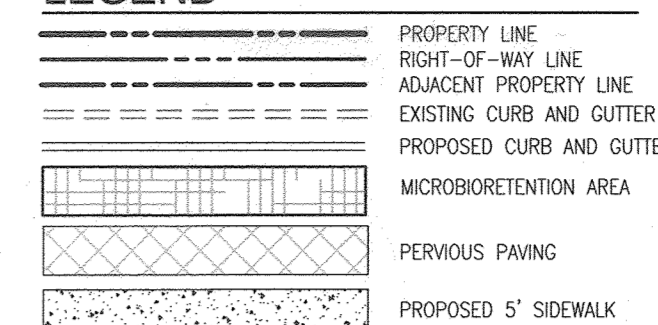
- 11. TRAFFIC CONTROL DEVICES:
A. THE R1-1 SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
B. THE TRAFFIC CONTROL DEVICES LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (1410-313-2930) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
C. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE 'MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' (MUMUCD).

SITE DEVELOPMENTAL PLAN THE VINE - BUCH APARTMENTS PARCEL 126 HOWARD COUNTY, MARYLAND

BENCHMARKS

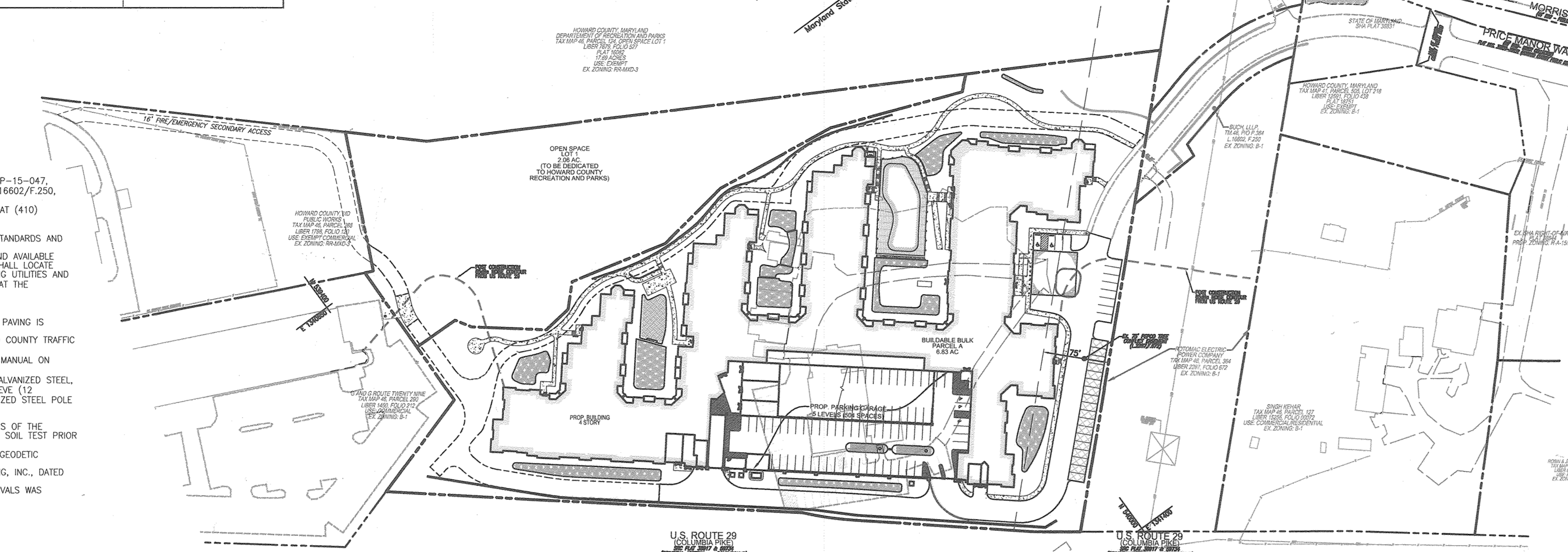
HOWARD COUNTY BENCHMARK - 468E (CONC. MONUMENT)
N 538853.83 E 1338643.54 ELEV. 443.345
LOCATION: OLD COLUMBIA PIKE AT SCAGGSVILLE PARK AND RIDE

LEGEND



VICINITY MAP

DENSITY RECEIVING TABULATION TABLE showing SECTION 12.1-C, SECTION 12B.0-A, and SECTION 12B.0-B details for THE VINE - BUCH APARTMENTS SITE DEVELOPMENT PLAN.



SHEET INDEX table listing various sheets such as COVER SHEET, LAYOUT SHEET, GRADING, and STORM DRAINAGE with their respective sheet numbers.

LOCATION MAP SCALE: 1"=100'

28. APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED AUGUST 6, 2014; APPROVED 06/29/15.
29. THE SUBJECT PROPERTY IS ZONED R-APT IN ACCORDANCE WITH THE 2009/11 COMPREHENSIVE ZONING PLAN.
30. NOISE STUDY PREPARED BY HUSS ACoustics, LLC DATED JULY 10, 2014, THE 65dB CONTOUR LINE HAS BEEN LOCATED IN CONFORMANCE WITH THE REQUIREMENTS OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.



BUILDING ELEVATION (WEST)

BUILDING ELEVATION (EAST)

BUILDING ELEVATION (NORTH)

BUILDING ELEVATION (SOUTH)



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE 'AS-BUILT' PLANS AND COMPLIES WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS.

DATE 3/12/19 NAME [Signature] PE # 16193

PARKING TABULATION table showing PROPOSED BUILDING, OVERFLOW PARKING, and PROVIDED PARKING (GARAGE SPACES, STREETS, HANDICAP) details.

PARKING NOTES table detailing rules for parking spaces, including handicapped and shared spaces.



BUILDING FOOTPRINT NOT TO SCALE

OWNER DEVELOPER

BUCH LLLP 10945 PRICE MANOR WAY LAUREL, MD 20723

Revision table with columns for NO., REVISION, and DATE.

SITE DEVELOPMENTAL PLAN COVER SHEET

THE VINE BUCH APARTMENTS

10945 PRICE MANOR WAY (FORMERLY 10345 JOHNS HOPKINS ROAD) ZONING: R-APT (L. 3192/F. 394) PARCEL 126 HOWARD COUNTY, MARYLAND

TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT

ROBERT H. VOGEL ENGINEERS, SURVEYORS & PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-8961

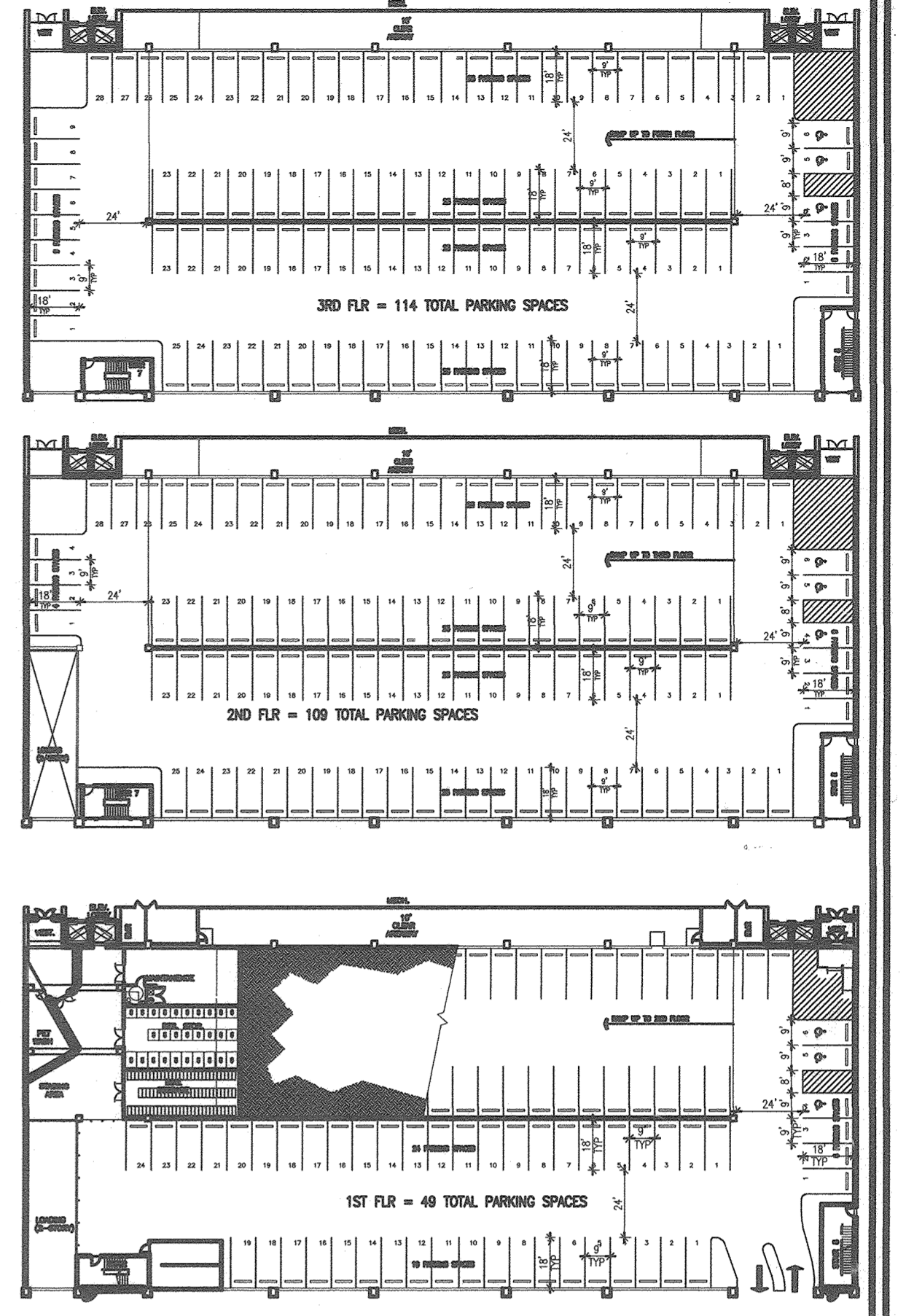
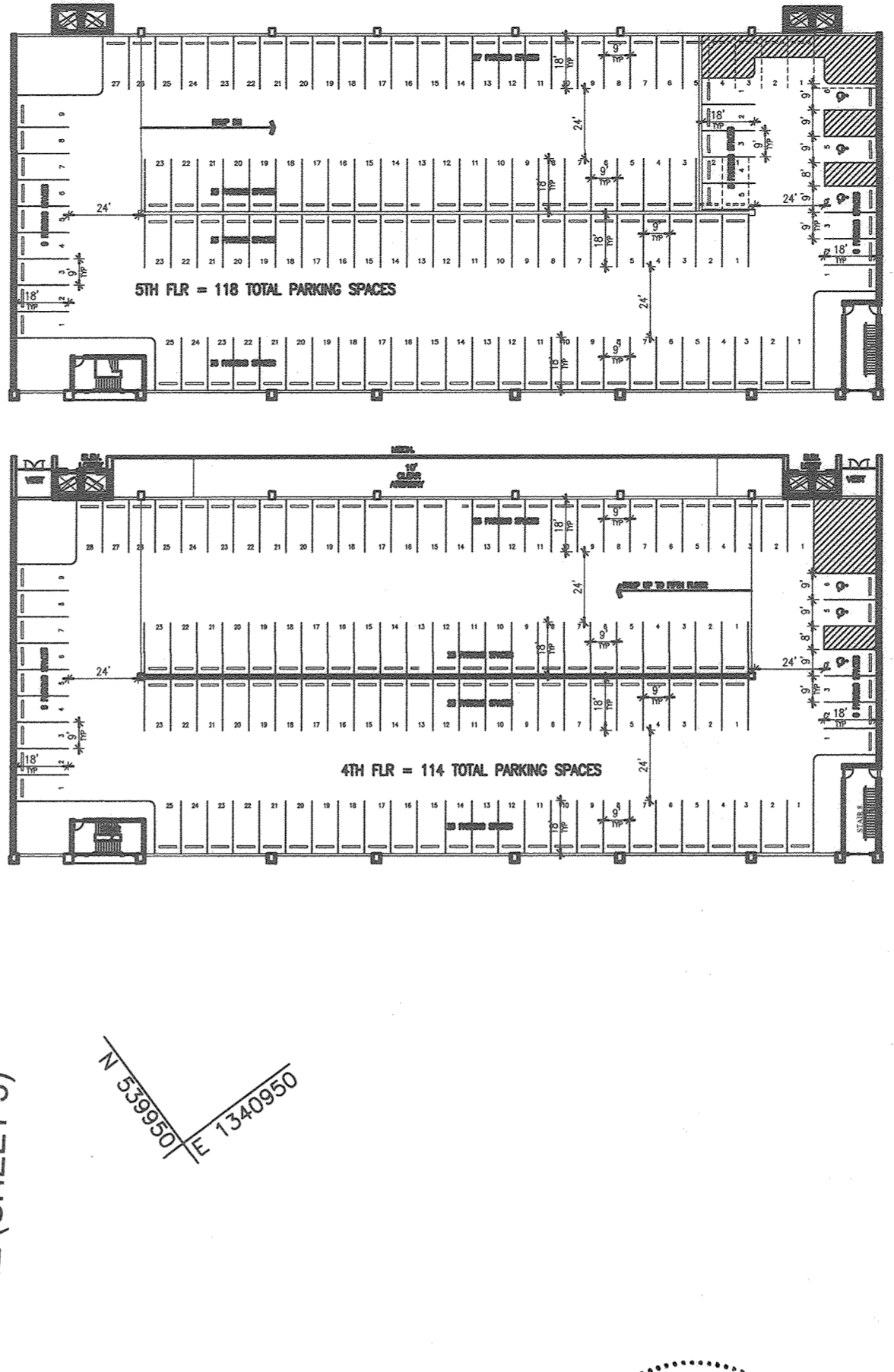
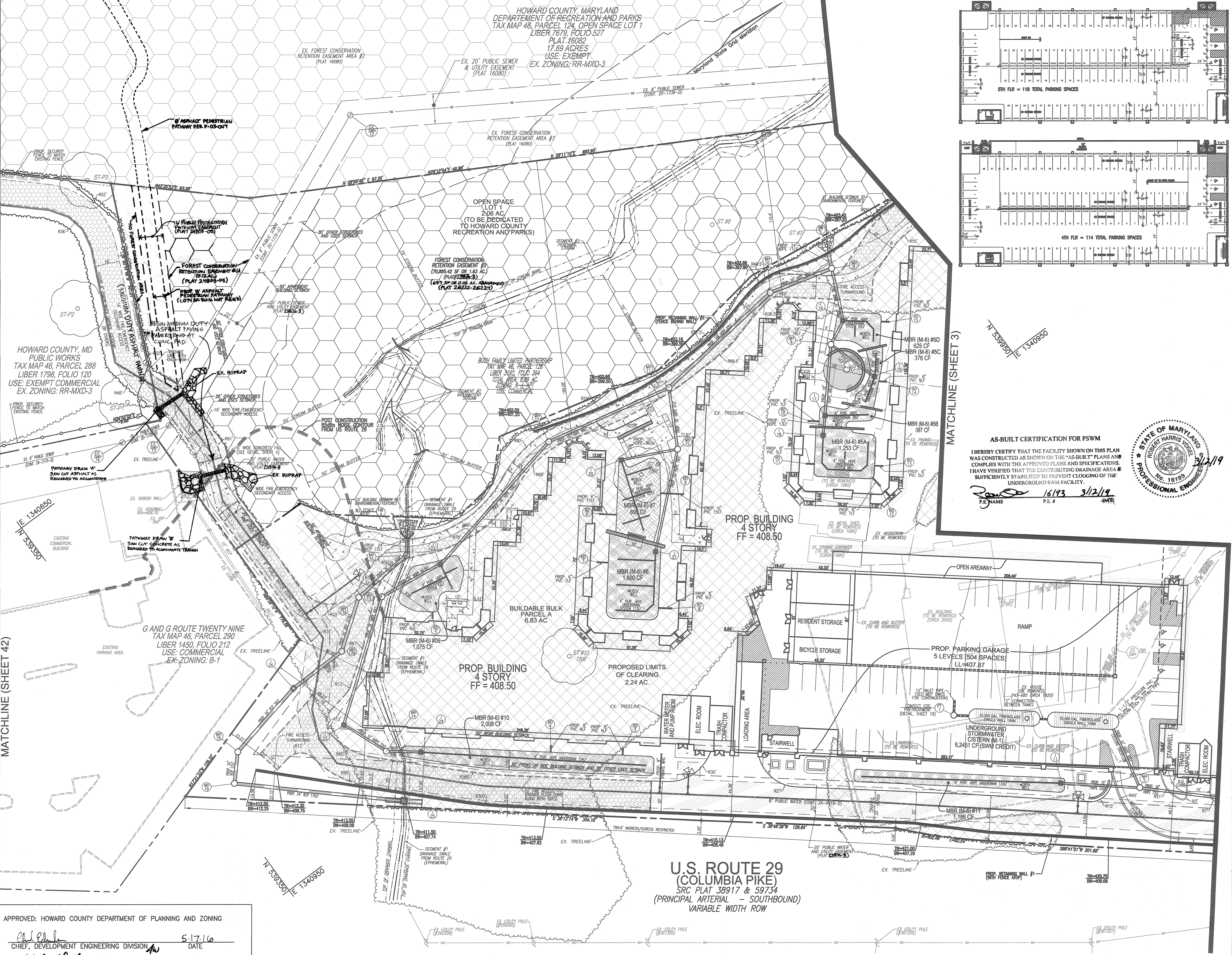


DESIGN BY: RHW/DZE DRAWN BY: DZE CHECKED BY: RHV DATE: APRIL 2016 SCALE: AS SHOWN W.O. NO.: 12-50.00

1 SHEET OF 44

AS-BUILT - OCT. 2018

HOWARD COUNTY, MARYLAND
DEPARTMENT OF RECREATION AND PARKS
TAX MAP 46, PARCEL 124, OPEN SPACE LOT 1
LIBER 7679, FOLIO 527
PLAT 16082
17.09 ACRES
USE: EXEMPT
EX. ZONING: RR-MXD-3



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

16193 3/12/19
P.E. NAME P.E. # DATE



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- CENTERLINE OF EXISTING STREAM
- EXISTING STREAM BUFFER
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FENCE
- EXISTING TREELINE
- PROPOSED STORMDRAIN
- PROPOSED STORMDRAIN INLET
- PROPOSED TREELINE
- PROPOSED CURB
- PROPOSED SIDEWALK
- PROP. 20' PUBLIC WATER AND UTILITY EASEMENT
- FIRE ACCESS GRASS PAVERS
- FOREST CONSERVATION EASEMENT RETENTION
- EX. FOREST CONSERVATION EASEMENT RETENTION
- MICROBIORETENTION AREA
- EXISTING SPECIMEN TREE
- POST CONSTRUCTION NOISE CONTOUR

OWNER/DEVELOPER

BUCH LLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE
4	REVISE PLAN TO SHOW ABANDONED EC EASEMENT	08-29-22
3	REVISE PLAN TO INCLUDE TWO DRAINAGE BOWLS UNDER THE EMERGENCY ACCESS ROAD	11-09-19
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-18
1	REVISE PLAN TO INCLUDE MATERIAL FOR SECONDARY ACCESS AND ADD A BIKE RAMP	11/22/17

SITE DEVELOPMENTAL PLAN

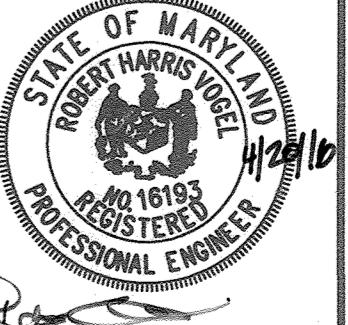
SITE LAYOUT PLAN

THE VINE
BUCH APARTMENTS

10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394)

TAX MAP 46 BLOCK 4 PARCEL 126
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET SUITE 21043 TEL: 410-461-7666
ELICOTT CITY, MD 21043 FAX: 410-461-8961

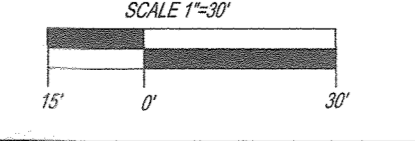


DESIGN BY: RHW/DZE
DRAWN BY: DZE
CHECKED BY: RHW
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE 03-27-2019

2 SHEET OF 44

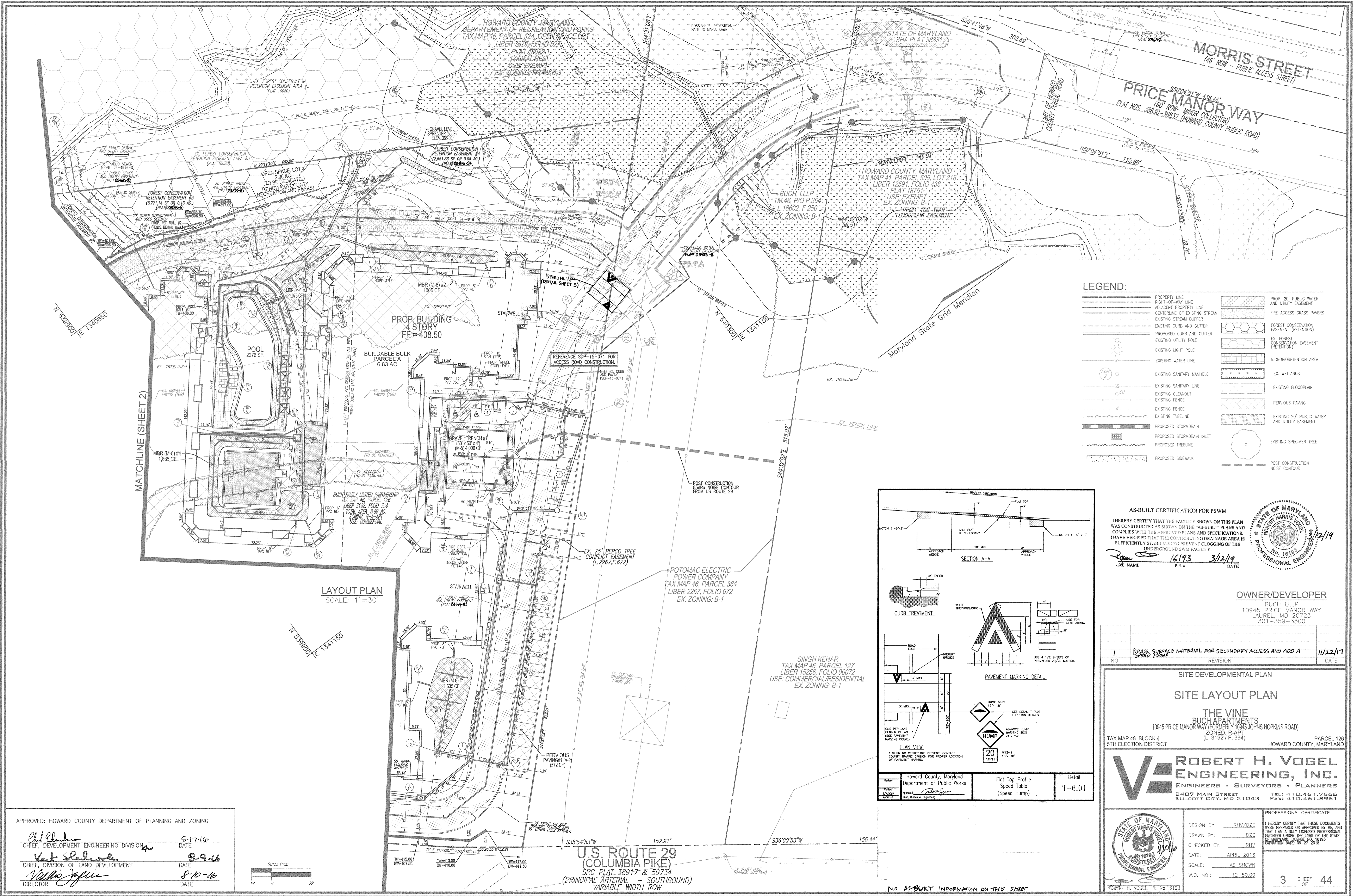
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
5-17-16 DATE
5-9-16 DATE
8-10-16 DATE



PLAN VIEW
SCALE: 1"=30'

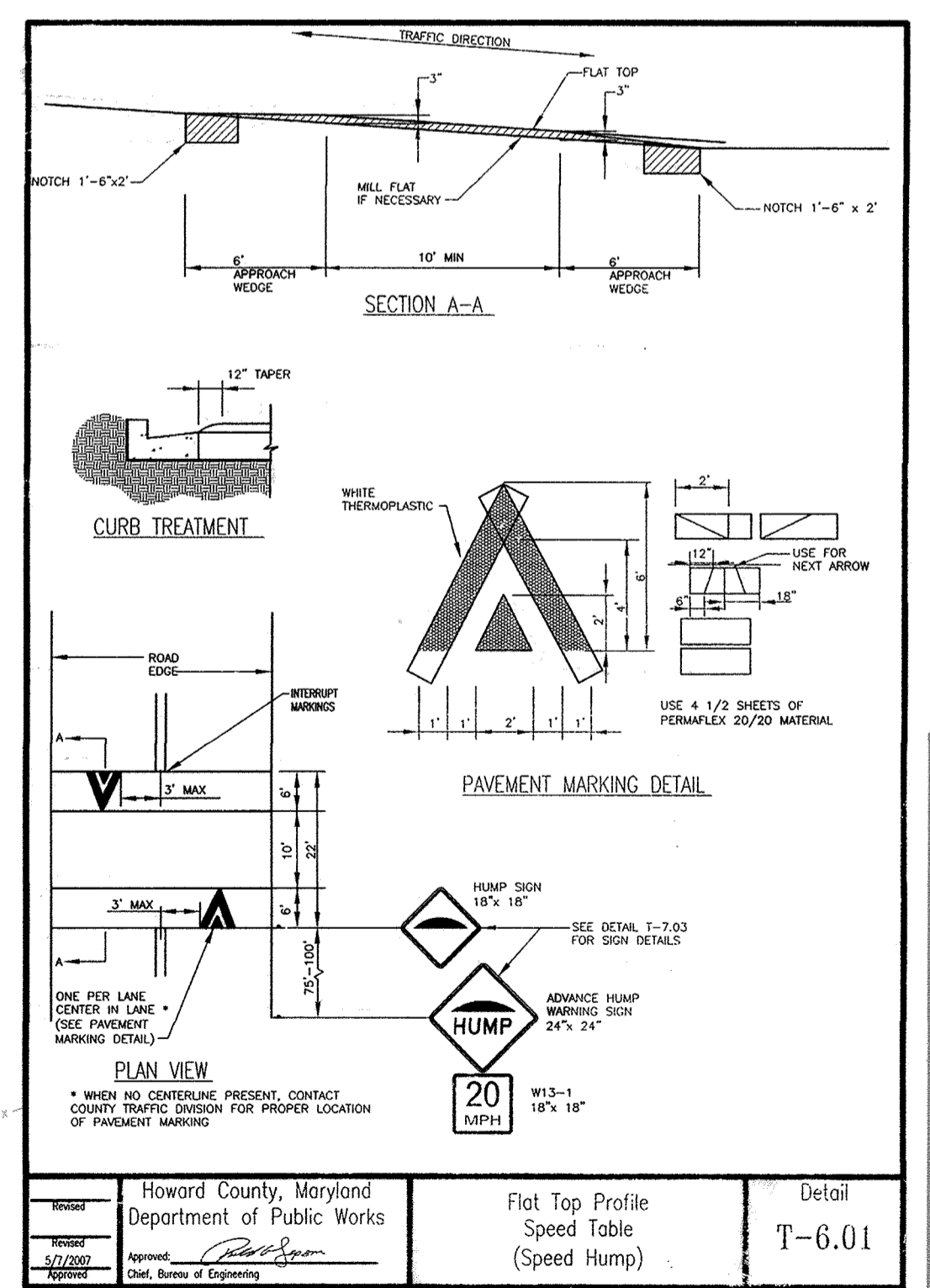
NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



LEGEND:

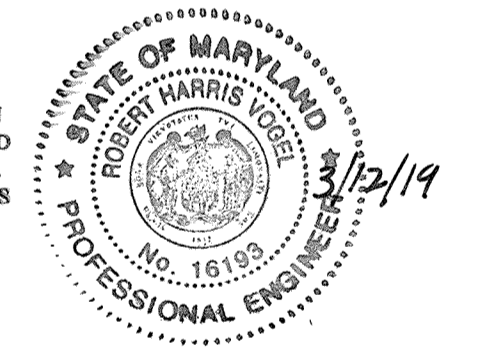
PROPERTY LINE	PROP. 20' PUBLIC WATER AND UTILITY EASEMENT
RIGHT-OF-WAY LINE	FIRE ACCESS GRASS PAVERS
ADJACENT PROPERTY LINE	FOREST CONSERVATION EASEMENT (RETENTION)
CENTERLINE OF EXISTING STREAM	EX. FOREST CONSERVATION EASEMENT (RETENTION)
EXISTING STREAM BUFFER	MICROBIORETENTION AREA
EXISTING CURB AND GUTTER	EX. WETLANDS
PROPOSED CURB AND GUTTER	EXISTING FLOODPLAIN
EXISTING UTILITY POLE	PERVIOUS PAVING
EXISTING LIGHT POLE	EXISTING 20' PUBLIC WATER AND UTILITY EASEMENT
EXISTING WATER LINE	EXISTING SPECIMEN TREE
EXISTING SANITARY MANHOLE	POST CONSTRUCTION NOISE CONTOUR
EXISTING SANITARY LINE	
EXISTING CLEANOUT	
EXISTING FENCE	
EXISTING TREELINE	
PROPOSED STORMDRAIN	
PROPOSED STORMDRAIN INLET	
PROPOSED TREELINE	
PROPOSED SIDEWALK	



AS-BUILT CERTIFICATION FOR PSM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 3/12/19
P.E. # 16193



OWNER/DEVELOPER
 BUCH LLLP
 10945 PRICE MANOR WAY
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE
1	REVISE SURFACE MATERIAL FOR SECONDARY ACCESS AND ADD A SPEED HUMP	11/22/17

SITE DEVELOPMENTAL PLAN
SITE LAYOUT PLAN
 THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT (L. 3192 / F. 394)
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

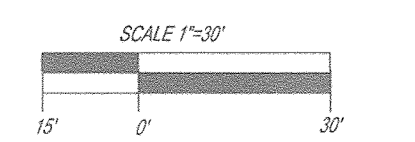
DESIGN BY: RHW/DZE
 DRAWN BY: DZE
 CHECKED BY: RHW
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 12-50.00

3 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

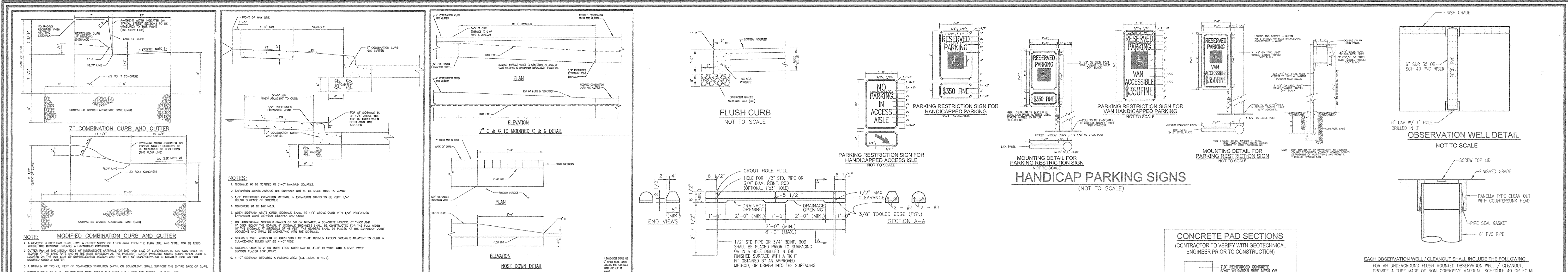
DATE: 5-17-16
 DATE: 8-9-16
 DATE: 8-10-16



U.S. ROUTE 29 (COLUMBIA PIKE)
 SRC PLAT 38917 & 59734
 (PRINCIPAL ARTERIAL - SOUTHBOUND)
 VARIABLE WIDTH ROW

NO AS-BUILT INFORMATION ON THIS STREET

AS-BUILT-OCT. 2018



NOTES:
 1. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 2. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 3. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 4. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 5. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 6. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
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 8. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 9. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 10. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.

CONCRETE PAD SECTIONS
 (CONTRACTOR TO VERIFY WITH GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION)
 1. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 2. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 3. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 4. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 5. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
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 8. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 9. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.
 10. FINISH CURB SHALL BE 12" HIGH AND 12" WIDE.

GEOTECHNICAL ANALYSES AND EVALUATIONS:
MASS GRADING CONSIDERATIONS
 Based upon the results of the provided grading information, cuts up to approximately 12 ft and fills up to approximately 12 ft will be required to establish planned grades. The entire footprint of the parking garage, as well as the eastern portions of the apartment building, will be located within cut areas. The majority of the residential building and some of the SWM facilities will be located in fill areas.

Based on the results of the test borings, the majority of the site soils in the cut areas should be suitable to reuse as structural fill; however, soils classified as plastic SILT (MH) or plastic CLAY (CH), are not considered suitable to reuse as structural fill without chemical (lime or cement) treatment. We recommend that caution be taken when excavating to mix the MH/CH soils with otherwise suitable structural fill soils. In addition, depending on the time of the year when mass grading is performed, the moisture content of the on-site soils may be above optimum and would require mechanical drying.

Within the apartment building in the vicinity of Borings B-11, B-16, B-19 and B-20, plastic (MH, CH) soils are anticipated to be encountered near subgrade levels. It may also be encountered at subgrade levels at other locations. Such material is very sensitive to moisture changes and may exhibit swell/shrinkage potential. It is our opinion that such material is not suitable to directly support the slab-on-grade or pavements. Where MH/CH soils are encountered at slab-on-grade or pavement subgrade levels, the upper 12 inches of the subgrade should be undercut and replaced with suitable structural fill or chemically treated with lime or cement.

FOUNDATION CONSIDERATIONS
 Based upon the results of the borings and our understanding of the anticipated construction, it is EGS' opinion that conventional footings can be used for support of the proposed residential building and parking garage. The foundations can be supported on approved natural soils, or on new engineered fill constructed over approved natural soils. However, where plastic SILT (MH) or plastic CLAY (CH) soils are encountered within 2 feet below the footing subgrades, it is recommended that exterior footings be lowered to at least 4 feet below final exterior grades, i.e., below levels where the MH/CH soils might be impacted by seasonal fluctuations in moisture contents. Based on the soil test boring results, it is anticipated that MH/CH soils exist at planned footing subgrade levels for the apartment building in the vicinity of Borings B-11, B, B-19 and B-20. Therefore, for the aforementioned area, lowering of the footings and underfoot slab-on-grade should be anticipated. Such material may also be encountered in other areas of the site. Representative samples should be tested for Atterberg Limits at the time of construction to verify the soil classification.

Considering the results of the soil borings and the anticipated structural loads, it is EGS' recommendation that the residential building footings can be designed for a net allowable soil bearing pressure of 3,000 psf and the parking garage footings can be designed for a net allowable bearing pressure of 3,000 psf. The net allowable soil bearing pressure refers to the pressure which can be transmitted to the foundation bearing soils in excess of the final overburden pressure at the base of a footing.

Prior to the placement of reinforcement and concrete for footings, the bases of the footing excavations should be observed, tested and approved by a qualified representative of the Geotechnical Engineer to verify that soil conditions at each footing location are suitable for the design bearing pressure. If soft or unsuitable soils are encountered at planned subgrade levels for any footing, the unsuitable soils should be undercut down to suitable bearing materials. The footing can then be directly supported on competent suitable soils at a greater depth or, alternatively, the design footing bearing level can be retained through placement of lean concrete or engineered granular fill materials. If the design bearing level is restored using granular engineered fill, then the excavation to remove the unsuitable soils should extend at least 0.5 ft laterally beyond the bottom edges of the footing for each 1 ft of vertical undercut below the footing bearing level. The engineered granular fill materials should be placed and compacted as discussed in a later report section.

Based on our experience with similar projects, the results of the borings, and empirical correlations, we estimate that individual footings should be less than 1 inch of settlement. We estimate differential settlements within the proposed structure are not expected to be greater than approximately 1/8 inch over a horizontal distance of 30 feet.

In order to reduce the possibility of excessive settlement due to local shear or "punching" action, we recommend that column footings have a minimum lateral dimension of 2.5 feet and continuous wall footings have a minimum width of 2.5 feet. In addition, footings should be placed at sufficient depths to provide adequate protection against frost heave. It is recommended that exterior footings or footings in unheated areas should be placed at minimum depths of 30 inches below finished exterior grades for frost protection. Interior footings in heated areas can be located at minimum depths of 18 inches below finished floor grades, provided that architectural and structural considerations are satisfied. However, if interior footings in heated areas are constructed at levels less than 30 inches below surface grades and subsequently are subjected to freezing temperatures, there is a possibility for frost heave of those footings. Therefore, the contractor should take adequate measures to maintain temperatures above freezing around any shallow interior footings prior to enclosure and heating of the buildings.

All load-bearing wall foundations should be suitably reinforced with continuous longitudinal steel. To provide continuity and to minimize the effects of differential movements, the foundations should be constructed as continuous units to the greatest extent possible. Where top-down design is provided in continuous wall foundations, a minimum footing thickness of 12 inches should be provided.

GROUND-SUPPORTED FLOOR SLABS
 Building floor slabs may be ground-supported on natural soils or new engineered fill soils, provided that the subgrade are prepared in accordance with the recommendations in the sections entitled Subgrade Preparation and Fill Placement. It is important that the slab subgrade be firm and stable before the placement of the granular subbase materials, the moisture barrier, and the concrete. For areas where MH/CH soils are encountered at slab subgrade level, the upper 1 ft of the slab subgrade should be undercut and replaced with approved structural fill. For estimating design purposes, a modulus of subgrade reaction (k) of 120 pounds per cubic inch (pci) should be anticipated for the structural design of slabs, provided that a minimum of 4 inches of aggregate subbase materials are provided and the subgrade has been prepared in accordance with this report.

The slab subgrade should be thoroughly preloaded with suitable equipment and/or probed and observed by a qualified representative of the Geotechnical Engineer in an effort to detect unstable or otherwise unacceptable soil conditions. Preloading should be concentrated in those areas where any wall or footing backfill has been placed. Soils in any excessively unstable areas should be undercut and replaced with engineered fill, as determined by the Geotechnical Engineer. Recommendations for construction of engineered fill are presented in a later report section.

It is recommended that ground-supported slabs be underlain by a minimum of 4 inches (for the apartment building) and 6 inches (for the parking garage) of CR-6 or CA 5/B dense-graded aggregate or approved equivalents. Acceptable granular subbase materials should have no aggregate size greater than 1.5 inches, 95 to 100 percent passing the 1/2 inch sieve, and less than 12 percent passing the Number 200 sieve. The granular subbase materials will provide a capillary break between the subgrade and the concrete slab, a higher modulus of subgrade reaction, and more uniform surface conditions. If granular aggregate materials should be compacted to a minimum of 95 percent of the maximum dry density, as determined by the Modified Proctor compaction test method (ASTM D 1557).

In the event there is a significant time lag between the site grading work and the fine grading of concrete areas prior to the placement of the subbase slabs or concrete, the Geotechnical Engineer should verify the condition of the prepared subgrade. Prior to final slab construction, the subgrade may require scarification and re-compaction to provide firm and stable conditions.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

CONSTRUCTION CONSIDERATIONS
 The near-surface, on-site soils contain appreciable amounts of fines and will be very sensitive to moisture increases and to construction disturbance. Construction activities in the presence of excessive moisture can lead to softening of the subgrade soils and loss of bearing capacity. Therefore, it will be prudent to schedule earthwork operations during the warmer and drier seasons of the year that generally occur from late spring to early fall. Measures should also be taken to limit site disturbance, especially from rubber-tired heavy construction equipment, and to provide for drainage of surface water away from areas being constructed. It will be advisable to designate construction traffic areas to limit areas of disturbance and to prevent construction traffic from excessively degrading sensitive subgrade soils over large portions of the site.

A firm working surface for the placement of engineered fill should be established prior to construction of new fills. The moisture content of the fill soils at the time of placement should be carefully controlled to ensure that the required compaction effort can be achieved without excessive pumping or movement of the fill mass. In the event that the earthwork operations are accomplished during the cooler and wetter periods of the year, delays and additional costs should be anticipated. At these times, reduction of soil moisture may need to be accomplished by a combination of mechanical manipulation and the use of chemical additives, such as lime or cement, in order to lower moisture contents to levels appropriate for compaction.

Because the on-site soils are moisture-sensitive and are susceptible to loss of strength upon exposure to precipitation during construction activity, all foundation excavations must be protected to prevent the disturbance of the subgrade materials and to minimize any potential loss of support capacity. Foundation concrete generally should be placed for foundations during the same dry that the foundation excavations are made and approved. Should wetting and placing the foundation concrete the same day not be possible, we recommend that a concrete mud mat, 2 to 3 inches thick, be placed to protect the subgrade soils from moisture changes and disturbance. If protection of the soils is not provided, then undercutting of softened or loosened soils may be necessary prior to the placement of reinforcing steel and foundation concrete.

Prior to the placement of any foundation concrete or mud mat, the subgrade soils must be carefully examined and tested by a qualified representative of the Geotechnical Engineer to confirm the availability of the design bearing capacity. To minimize disturbance to the subgrade soils during excavation, we recommend that a bucket without scarifying teeth, in addition to hand excavation methods, be used during the final phases of the excavation for the foundations of the buildings.

Any cuts or excavations associated with building and utility excavations may require forming or bracing, slope flattening or other physical measures to control sloughing and/or to prevent slope failures. An examination of the applicable codes (e.g., EGS) should be made by the appropriate Contractor to ensure that adequate protection of the excavations and trench walls is provided.

The surface soils contain fines and are considered erodible. The Contractor should provide and maintain good site drainage during earthwork operations to help to maintain the integrity of the surface soils. All erosion and sedimentation control measures should be installed and maintained in accordance with current local requirements. Surface water should be directed away from the construction area, and the work area should be sloped at a maximum of 1 to 2 percent to reduce the potential for ponding water and the subsequent saturation of the surface soils.

Based on the results of the soil test borings and our understanding of the anticipated construction, it is EGS' opinion that conventional footings can be used for support of the proposed residential building and parking garage. The foundations can be supported on approved natural soils, or on new engineered fill constructed over approved natural soils. However, where plastic SILT (MH) or plastic CLAY (CH) soils are encountered within 2 feet below the footing subgrades, it is recommended that exterior footings be lowered to at least 4 feet below final exterior grades, i.e., below levels where the MH/CH soils might be impacted by seasonal fluctuations in moisture contents. Based on the soil test boring results, it is anticipated that MH/CH soils exist at planned footing subgrade levels for the apartment building in the vicinity of Borings B-11, B, B-19 and B-20. Therefore, for the aforementioned area, lowering of the footings and underfoot slab-on-grade should be anticipated. Such material may also be encountered in other areas of the site. Representative samples should be tested for Atterberg Limits at the time of construction to verify the soil classification.

Considering the results of the soil borings and the anticipated structural loads, it is EGS' recommendation that the residential building footings can be designed for a net allowable soil bearing pressure of 3,000 psf and the parking garage footings can be designed for a net allowable bearing pressure of 3,000 psf. The net allowable soil bearing pressure refers to the pressure which can be transmitted to the foundation bearing soils in excess of the final overburden pressure at the base of a footing.

Prior to the placement of reinforcement and concrete for footings, the bases of the footing excavations should be observed, tested and approved by a qualified representative of the Geotechnical Engineer to verify that soil conditions at each footing location are suitable for the design bearing pressure. If soft or unsuitable soils are encountered at planned subgrade levels for any footing, the unsuitable soils should be undercut down to suitable bearing materials. The footing can then be directly supported on competent suitable soils at a greater depth or, alternatively, the design footing bearing level can be retained through placement of lean concrete or engineered granular fill materials. If the design bearing level is restored using granular engineered fill, then the excavation to remove the unsuitable soils should extend at least 0.5 ft laterally beyond the bottom edges of the footing for each 1 ft of vertical undercut below the footing bearing level. The engineered granular fill materials should be placed and compacted as discussed in a later report section.

Based on our experience with similar projects, the results of the borings, and empirical correlations, we estimate that individual footings should be less than 1 inch of settlement. We estimate differential settlements within the proposed structure are not expected to be greater than approximately 1/8 inch over a horizontal distance of 30 feet.

In order to reduce the possibility of excessive settlement due to local shear or "punching" action, we recommend that column footings have a minimum lateral dimension of 2.5 feet and continuous wall footings have a minimum width of 2.5 feet. In addition, footings should be placed at sufficient depths to provide adequate protection against frost heave. It is recommended that exterior footings or footings in unheated areas should be placed at minimum depths of 30 inches below finished exterior grades for frost protection. Interior footings in heated areas can be located at minimum depths of 18 inches below finished floor grades, provided that architectural and structural considerations are satisfied. However, if interior footings in heated areas are constructed at levels less than 30 inches below surface grades and subsequently are subjected to freezing temperatures, there is a possibility for frost heave of those footings. Therefore, the contractor should take adequate measures to maintain temperatures above freezing around any shallow interior footings prior to enclosure and heating of the buildings.

All load-bearing wall foundations should be suitably reinforced with continuous longitudinal steel. To provide continuity and to minimize the effects of differential movements, the foundations should be constructed as continuous units to the greatest extent possible. Where top-down design is provided in continuous wall foundations, a minimum footing thickness of 12 inches should be provided.

GROUND-SUPPORTED FLOOR SLABS
 Building floor slabs may be ground-supported on natural soils or new engineered fill soils, provided that the subgrade are prepared in accordance with the recommendations in the sections entitled Subgrade Preparation and Fill Placement. It is important that the slab subgrade be firm and stable before the placement of the granular subbase materials, the moisture barrier, and the concrete. For areas where MH/CH soils are encountered at slab subgrade level, the upper 1 ft of the slab subgrade should be undercut and replaced with approved structural fill. For estimating design purposes, a modulus of subgrade reaction (k) of 120 pounds per cubic inch (pci) should be anticipated for the structural design of slabs, provided that a minimum of 4 inches of aggregate subbase materials are provided and the subgrade has been prepared in accordance with this report.

The slab subgrade should be thoroughly preloaded with suitable equipment and/or probed and observed by a qualified representative of the Geotechnical Engineer in an effort to detect unstable or otherwise unacceptable soil conditions. Preloading should be concentrated in those areas where any wall or footing backfill has been placed. Soils in any excessively unstable areas should be undercut and replaced with engineered fill, as determined by the Geotechnical Engineer. Recommendations for construction of engineered fill are presented in a later report section.

It is recommended that ground-supported slabs be underlain by a minimum of 4 inches (for the apartment building) and 6 inches (for the parking garage) of CR-6 or CA 5/B dense-graded aggregate or approved equivalents. Acceptable granular subbase materials should have no aggregate size greater than 1.5 inches, 95 to 100 percent passing the 1/2 inch sieve, and less than 12 percent passing the Number 200 sieve. The granular subbase materials will provide a capillary break between the subgrade and the concrete slab, a higher modulus of subgrade reaction, and more uniform surface conditions. If granular aggregate materials should be compacted to a minimum of 95 percent of the maximum dry density, as determined by the Modified Proctor compaction test method (ASTM D 1557).

In the event there is a significant time lag between the site grading work and the fine grading of concrete areas prior to the placement of the subbase slabs or concrete, the Geotechnical Engineer should verify the condition of the prepared subgrade. Prior to final slab construction, the subgrade may require scarification and re-compaction to provide firm and stable conditions.

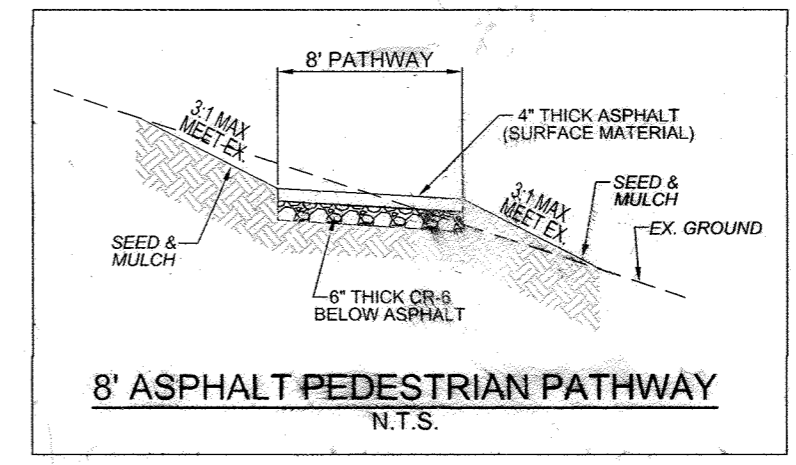


LEGEND:

[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	CENTERLINE OF EXISTING STREAM
[Symbol]	EXISTING STREAM BUFFER
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	PROPOSED CURB AND GUTTER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TREELINE
[Symbol]	PROPOSED STORMDRAIN
[Symbol]	PROPOSED STORMDRAIN INLET
[Symbol]	PROPOSED TRENCH
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROP. 20' PUBLIC WATER AND UTILITY EASEMENT
[Symbol]	FIRE ACCESS GRASS PAVERS
[Symbol]	FOREST CONSERVATION EASEMENT (RETENTION)
[Symbol]	EX. FOREST CONSERVATION EASEMENT (RETENTION)
[Symbol]	MICRORETENTION AREA
[Symbol]	EXISTING SPECIMEN TREE
[Symbol]	POST CONSTRUCTION NOISE CONTOUR
[Symbol]	PROPOSED 10' CONTOUR
[Symbol]	PROPOSED 2' CONTOUR
[Symbol]	PROPOSED SILT FENCE
[Symbol]	PROPOSED SUPER SILT FENCE
[Symbol]	PROPOSED LIMIT OF DISTURBANCE
[Symbol]	PROPOSED COMBINATION INLET PROTECTION
[Symbol]	PROPOSED STANDARD INLET PROTECTION
[Symbol]	PROPOSED EARTH DIKE
[Symbol]	EXISTING SLOPE (MODERATE)
[Symbol]	M1B2
[Symbol]	M103
[Symbol]	CRITICAL ROOT ZONE
[Symbol]	ROOT PRUNING

SEDIMENT CONTROL NOTES:

1. SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.
2. A DOUBLE ROW OF "SUPER" SILT FENCE IS TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
3. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.
4. SILT FENCE SHALL BE CURLED UPHILL WHEREVER IT RUNS DOWNHILL.
5. EITHER TEMPORARY OR PERMANENT SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS PROVIDED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, WHICHEVER IS MORE STRINGENT.



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 3/12/19
 P.E. NAME: [Signature]
 P.E. NO.: 16193

OWNER/DEVELOPER
 BUCH LLLP
 10945 PRICE MANOR WAY
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE
4	REVISE PLAN TO SHOW ABANDONED FC BASEMENT	09-29-22
3	REVISE PLANS TO INCLUDE TWO DRAINAGE BONES UNDER THE EMERGENCY ACCESS ROAD	11-09-19
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-18
1	REVISE SURFACE MATERIAL FOR SECONDARY ACCESS AND ADD A TRUCK DRIVE	11/22/17

**SITE DEVELOPMENTAL PLAN
 GRADING, SOIL EROSION, AND
 SEDIMENT CONTROL PLAN**

**THE VINE
 BUCH APARTMENTS**
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT
 PARCEL 126 HOWARD COUNTY, MARYLAND
 (L. 3192 / F. 394)

**ROBERT H. VOGEL
 ENGINEERS - SURVEYORS - PLANNERS**
 8407 MAIN STREET ELLIOTT CITY, MD 21043 TEL: 410-461-7666 FAX: 410-461-18961

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 4w
 DATE

[Signature] 5-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

[Signature] 8-10-16
 DIRECTOR
 DATE

BY THE DEVELOPER:

"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."

[Signature] 4-20-16
 SIGNATURE OF DEVELOPER
 DATE

BY THE ENGINEER:

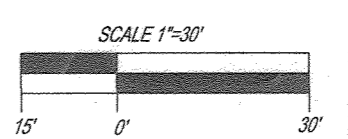
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

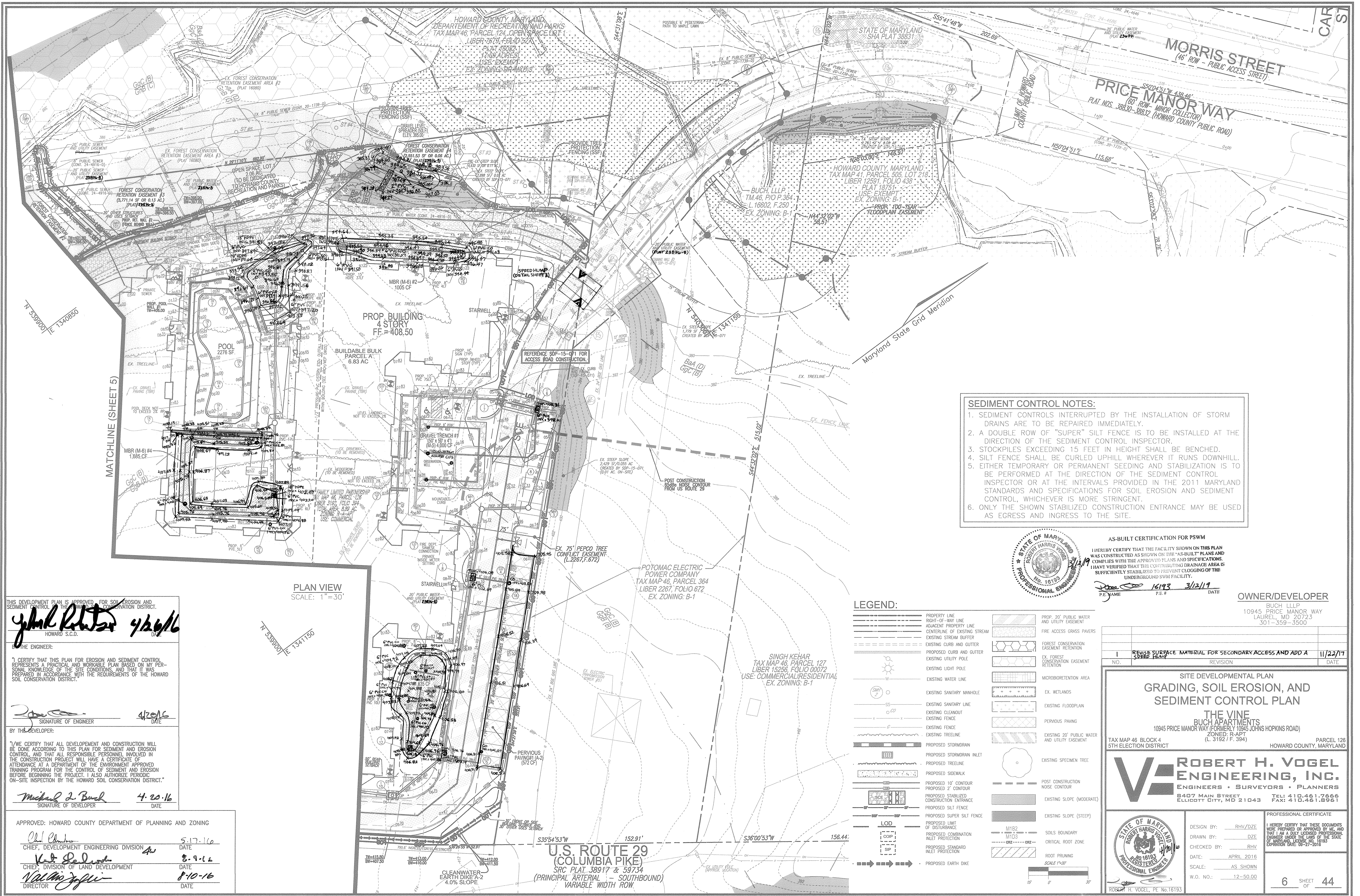
[Signature] 4/20/16
 SIGNATURE OF ENGINEER
 DATE

PLAN VIEW
 SCALE: 1"=30'

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

[Signature] 4/20/16
 HOWARD S.C.D. DATE





SEDIMENT CONTROL NOTES:

1. SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.
2. A DOUBLE ROW OF "SUPER" SILT FENCE IS TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
3. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.
4. SILT FENCE SHALL BE CURLED UPHILL WHEREVER IT RUNS DOWNHILL.
5. EITHER TEMPORARY OR PERMANENT SEEDING AND STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS PROVIDED IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, WHICHEVER IS MORE STRINGENT.
6. ONLY THE SHOWN STABILIZED CONSTRUCTION ENTRANCE MAY BE USED AS EGRESS AND INGRESS TO THE SITE.



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRACTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 3/12/19
 P.E. NAME: [Signature] P.E. # 16193

OWNER/DEVELOPER
 BUCH LLLP
 10945 PRICE MANOR WAY
 LAUREL, MD 20723
 301-359-3500

LEGEND:

PROPERTY LINE	PROPOSED 20' PUBLIC WATER AND UTILITY EASEMENT
RIGHT-OF-WAY LINE	FIRE ACCESS GRASS PAVERS
ADJACENT PROPERTY LINE	FOREST CONSERVATION EASEMENT RETENTION
CENTERLINE OF EXISTING STREAM	EX. FOREST CONSERVATION EASEMENT RETENTION
EXISTING STREAM BUFFER	MICROBIORETENTION AREA
EXISTING CURB AND GUTTER	EX. WETLANDS
PROPOSED CURB AND GUTTER	EXISTING FLOODPLAIN
EXISTING UTILITY POLE	PERVIOUS PAVING
EXISTING LIGHT POLE	EXISTING 20' PUBLIC WATER AND UTILITY EASEMENT
EXISTING WATER LINE	EXISTING SPECIMEN TREE
EXISTING SANITARY MANHOLE	POST CONSTRUCTION NOISE CONTOUR
EXISTING SANITARY LINE	EXISTING SLOPE (MODERATE)
EXISTING CLEANOUT	EXISTING SLOPE (STEEP)
EXISTING FENCE	M1B2 SOILS BOUNDARY
EXISTING TREELINE	MTD3 CRITICAL ROOT ZONE
PROPOSED STORMDRAIN	ROOT PRUNING SCALE 1"=8"
PROPOSED STORMDRAIN INLET	PROPOSED EARTH DIKE
PROPOSED TREELINE	
PROPOSED SIDEWALK	
PROPOSED 10' CONTOUR	
PROPOSED 2' CONTOUR	
PROPOSED STABILIZED CONSTRUCTION ENTRANCE	
PROPOSED SILT FENCE	
PROPOSED SUPER SILT FENCE	
PROPOSED LIMIT OF DISTURBANCE	
PROPOSED COMBINATION INLET PROTECTION	
PROPOSED STANDARD INLET PROTECTION	

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

[Signature] 4/26/16
 HOWARD S.C.D. DATE

BY THE ENGINEER:

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.

[Signature] 4/20/16
 SIGNATURE OF ENGINEER DATE

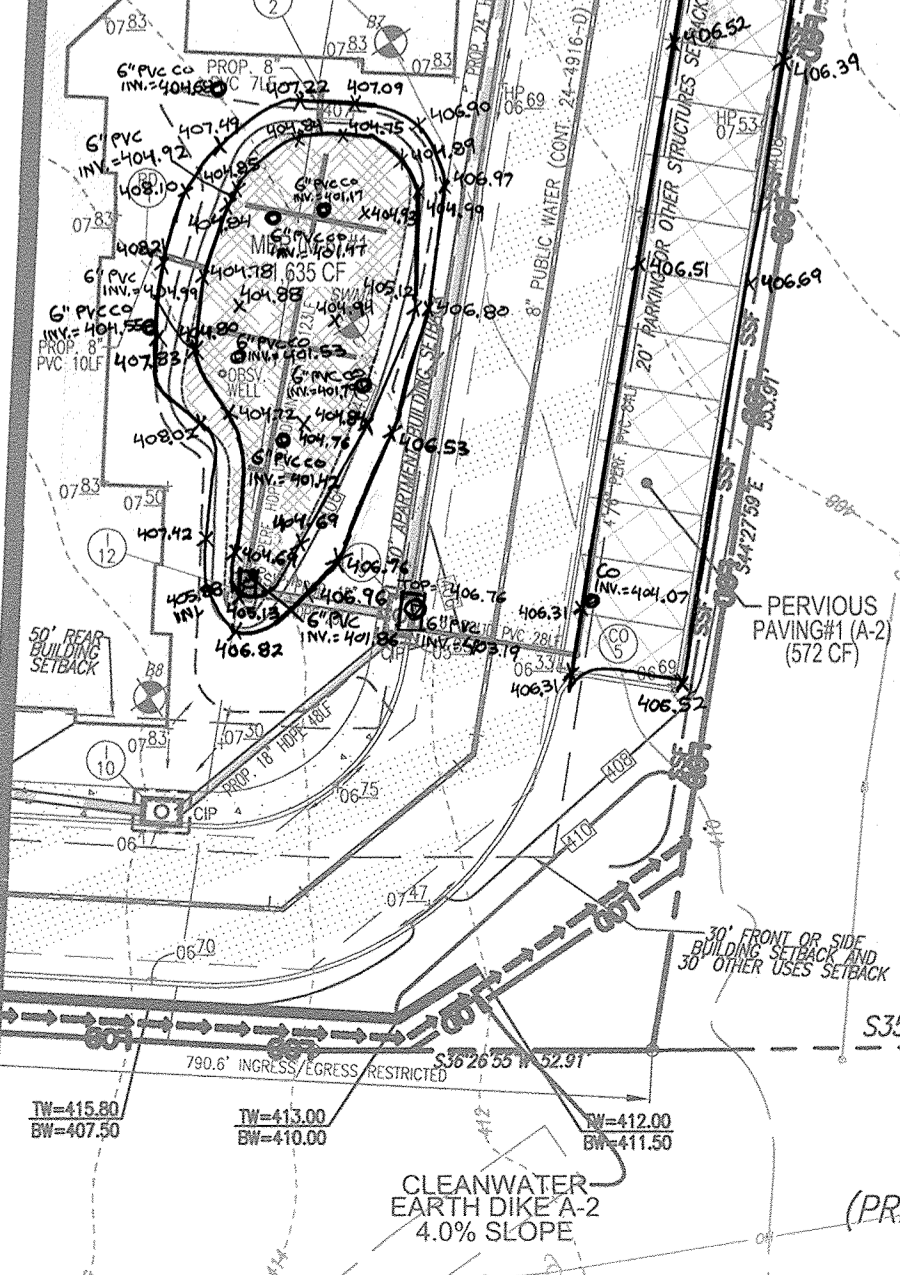
BY THE DEVELOPER:

I HEREBY 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.

[Signature] 4.20.16
 SIGNATURE OF DEVELOPER DATE

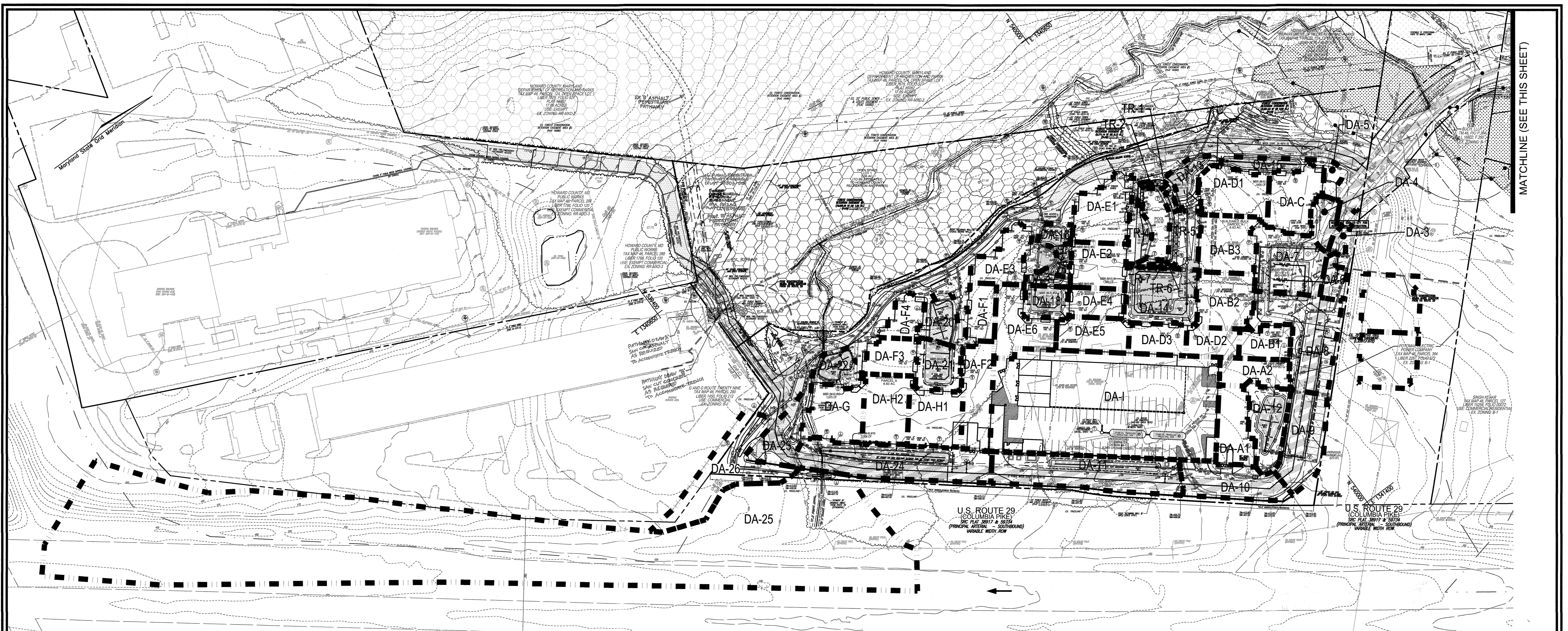
PLAN VIEW
 SCALE: 1"=30'

N 53°39'00" E 134°11'50"

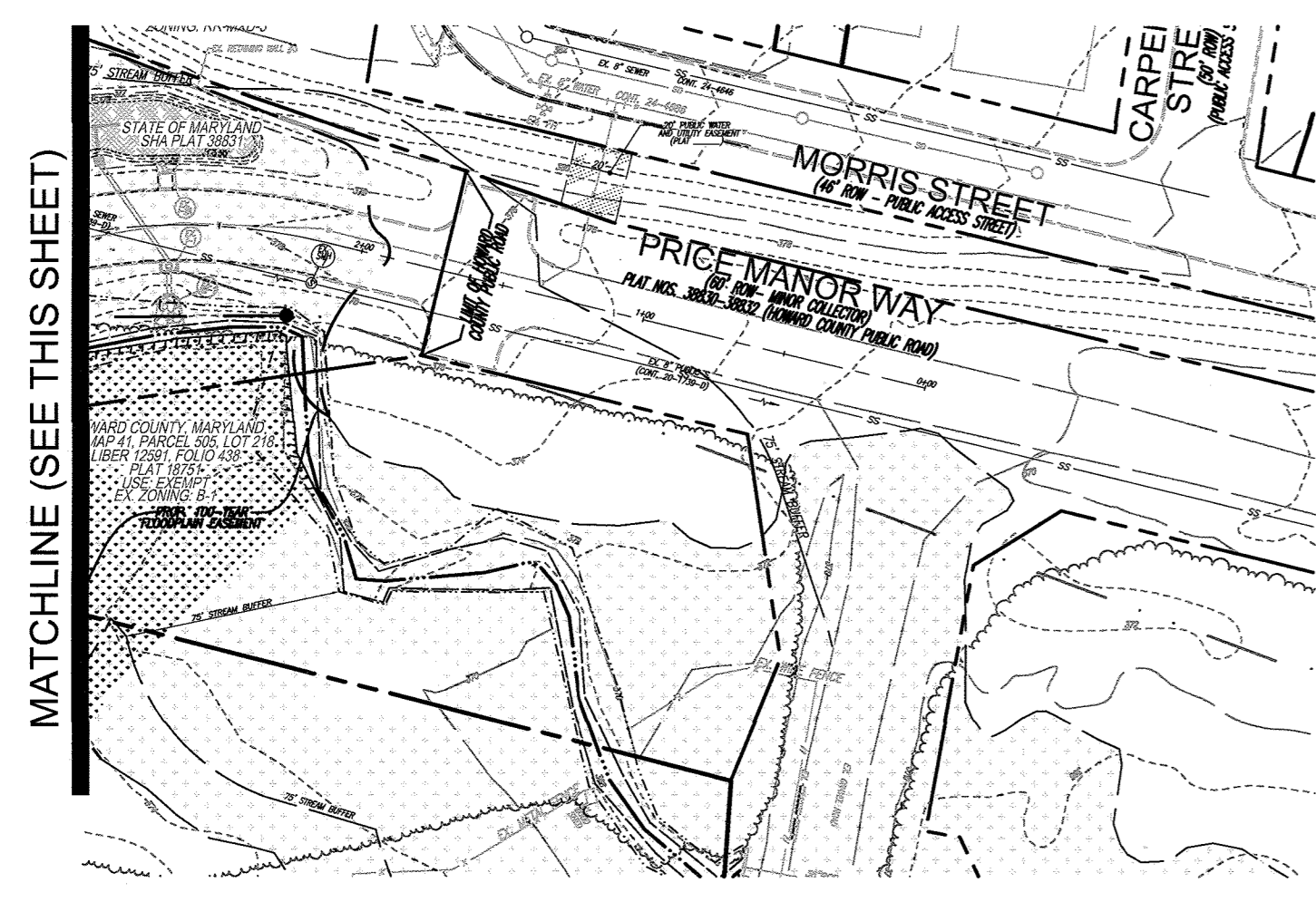


U.S. ROUTE 29 (COLUMBIA PIKE)
 SRC PLAT 38917 & 59734
 (PRINCIPAL ARTERIAL - SOUTHBOUND)
 VARIABLE WIDTH ROW

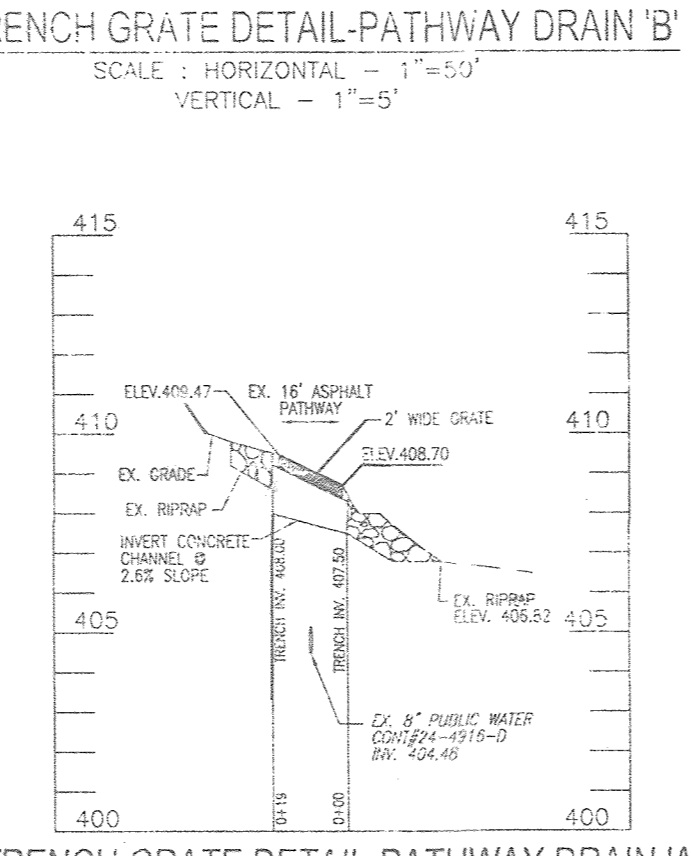
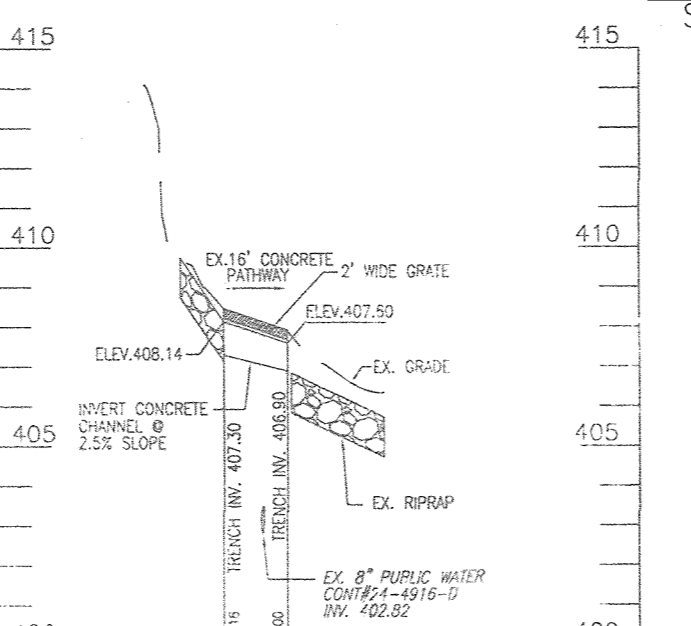
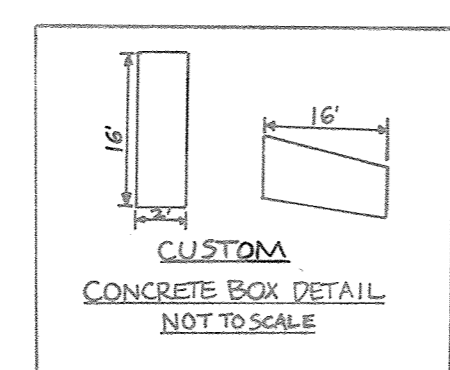
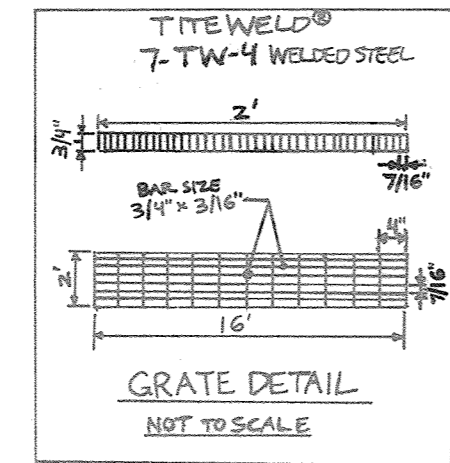
AS-BUILT - OCT. 2018



PLAN VIEW
SCALE: 1" = 60'



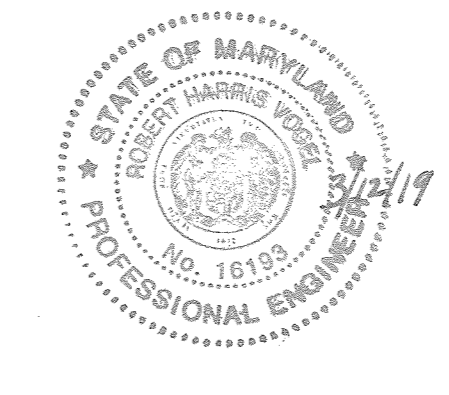
TRENCH GRATE SPECIFICATIONS:
TITWELD® WELDED STEEL
(24" WIDE CHANNEL) OR EQUIVALENT
REFER TO TITWELD® SPECIFICATIONS
FOR DETAIL.



SD Drainage Area Chart							
DRAINAGE AREA	AREA AC	C	IMP %	DRAINAGE AREA	AREA AC	C	IMP %
DA-3	0.03	0.51	60%	DA-A1	0.10	0.86	100%
DA-4	0.05	0.56	56%	DA-A2	0.07	0.86	100%
DA-5	0.02	0.16	0%	DA-B1	0.06	0.86	100%
DA-6	0.03	0.86	100%	DA-B2	0.12	0.86	100%
DA-7	0.16	0.80	83%	DA-B3	0.13	0.86	100%
DA-8	0.22	0.70	78%	DA-C	0.12	0.86	100%
DA-9	0.15	0.74	82%	DA-D1	0.13	0.86	100%
DA-10	0.13	0.75	84%	DA-D2	0.06	0.86	100%
DA-11	0.25	0.55	56%	DA-D3	0.07	0.86	100%
DA-12	0.11	0.16	0%	DA-E1	0.13	0.86	100%
DA-13	0.05	0.18	2%	DA-E2	0.10	0.86	100%
DA-14	0.16	0.41	36%	DA-E3	0.09	0.86	100%
DA-15	0.04	0.16	0%	DA-E4	0.06	0.86	100%
DA-16	0.03	0.17	0%	DA-E5	0.10	0.86	100%
DA-17	0.02	0.16	0%	DA-E6	0.12	0.86	100%
DA-18	0.06	0.16	0%	DA-F1	0.06	0.86	100%
DA-19	0.02	0.16	0%	DA-F2	0.13	0.86	100%
DA-20	0.07	0.25	9%	DA-F3	0.07	0.86	100%
DA-21	0.08	0.19	0%	DA-F4	0.05	0.86	100%
DA-22	0.06	0.27	12%	DA-G	0.12	0.86	100%
DA-23	0.09	0.17	0%	DA-H1	0.12	0.86	100%
DA-24	0.25	0.29	16%	DA-H2	0.13	0.86	100%
DA-25	2.84	0.44	36%	DA-I	0.91	0.86	100%
DA-26	0.21	0.24	0%				
TR-1	0.01	0.86	100%				
TR-2	0.01	0.86	100%				
TR-3	0.01	0.86	100%				
TR-4	0.04	0.80	82%				
TR-5	0.07	0.82	86%				
TR-6	0.01	0.86	100%				
TR-7	0.01	0.43	38%				

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING FENCE
- EXISTING TREELINE
- PROPOSED STORMDRAIN
- PROPOSED STORMDRAIN INLET
- PROPOSED TREELINE
- PROPOSED CURB
- PROPOSED SIDEWALK
- EXISTING FLOODPLAIN
- EXISTING WETLANDS
- PROP. 20" PUBLIC WATER AND UTILITY EASEMENT
- PROPOSED PUBLIC STORM DRAIN EASEMENT
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- DRAINAGE AREA
- M1B2
- M1D3
- SOILS BOUNDARY
- FIRE ACCESS GRASS PAVERS
- FOREST CONSERVATION EASEMENT (RETENTION)
- EX. FOREST CONSERVATION EASEMENT (RETENTION)
- MICROBIORETENTION AREA
- EXISTING SPECIMEN TREE
- POST CONSTRUCTION NOISE CONTOUR
- PROPOSED LIMIT OF DISTURBANCE
- LOD



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUBSTANTIALLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
R.H.V. 16193 3/12/19 DATE

OWNER/DEVELOPER

BUCH LLLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

3	REVISE PLAN TO INCLUDE TWO DRAINAGE BONES UNDER THE EMERGENCY ACCESS ROAD	11-09-19
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-18
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
STORM DRAIN DRAINAGE AREA MAP

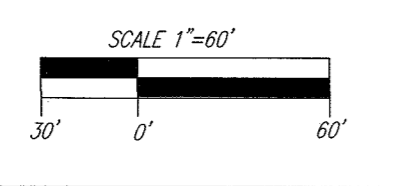
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT
(L. 3152-F, 394) PARCEL 126
HOWARD COUNTY, MARYLAND

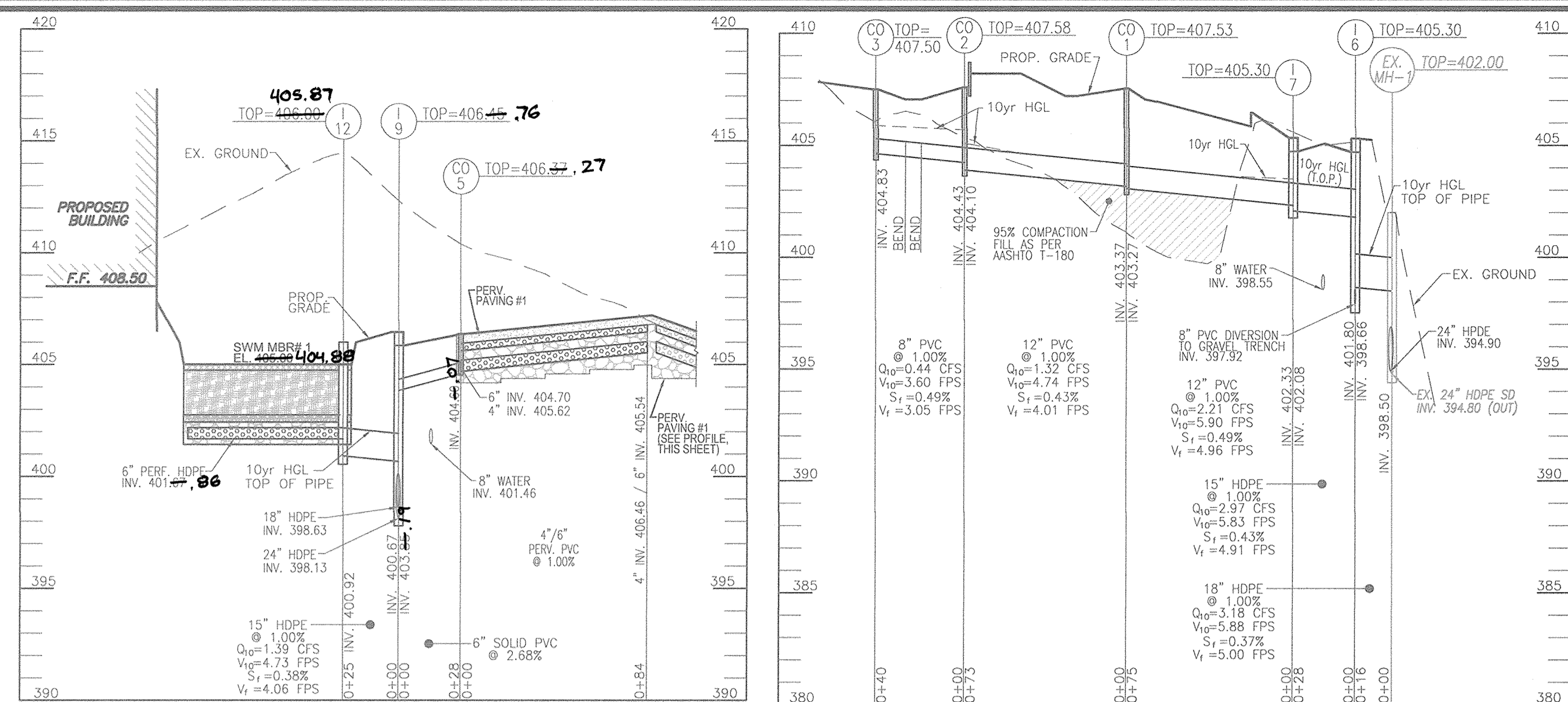
ROBERT H. VOGEL ENGINEERS, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELIGOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHW/DZE
DRAWN BY: DZE
CHECKED BY: RHW
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRES ON 09-27-2018

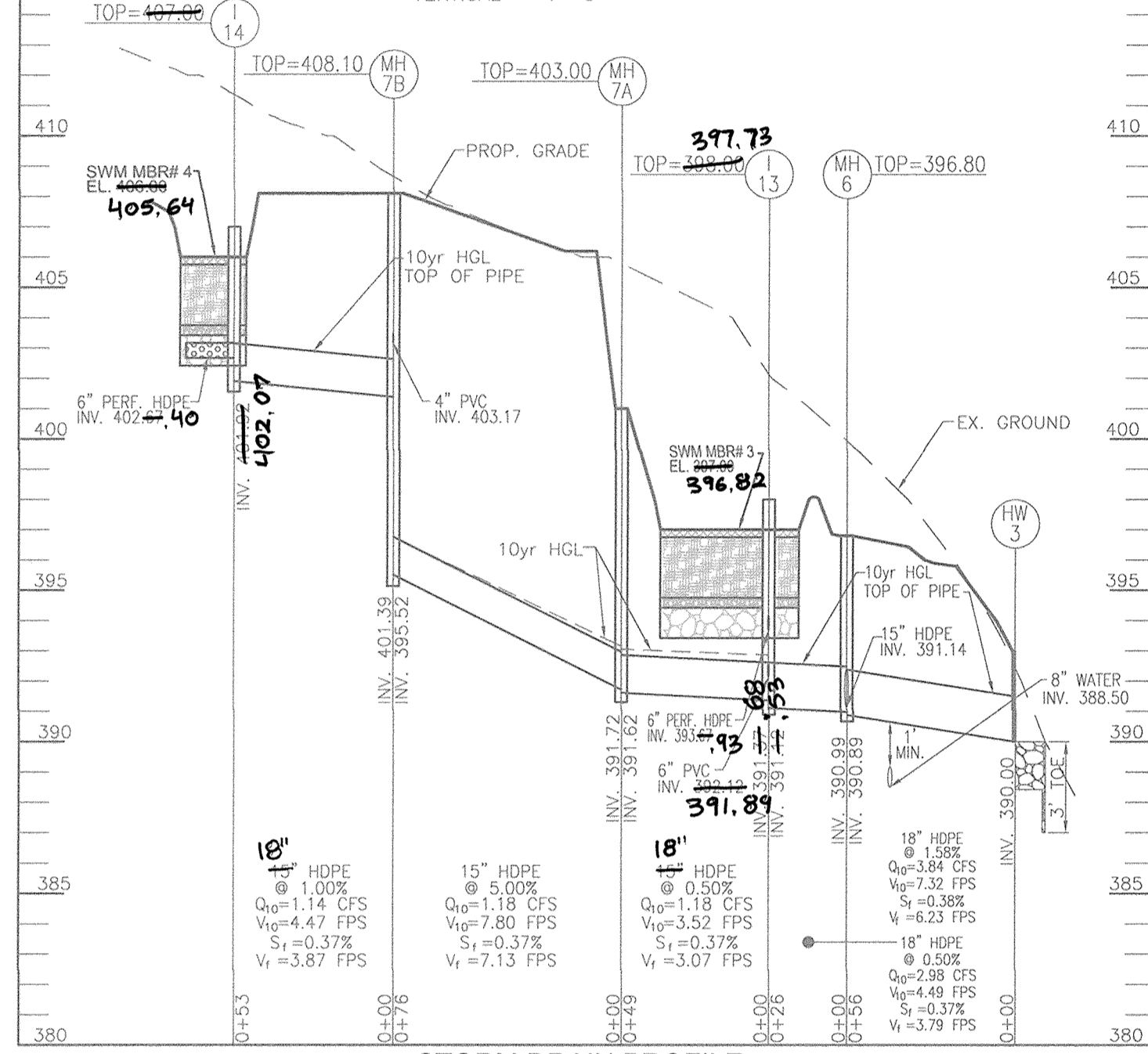
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 5.19.16 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 9.9.16 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 8.10.16 DATE
DIRECTOR



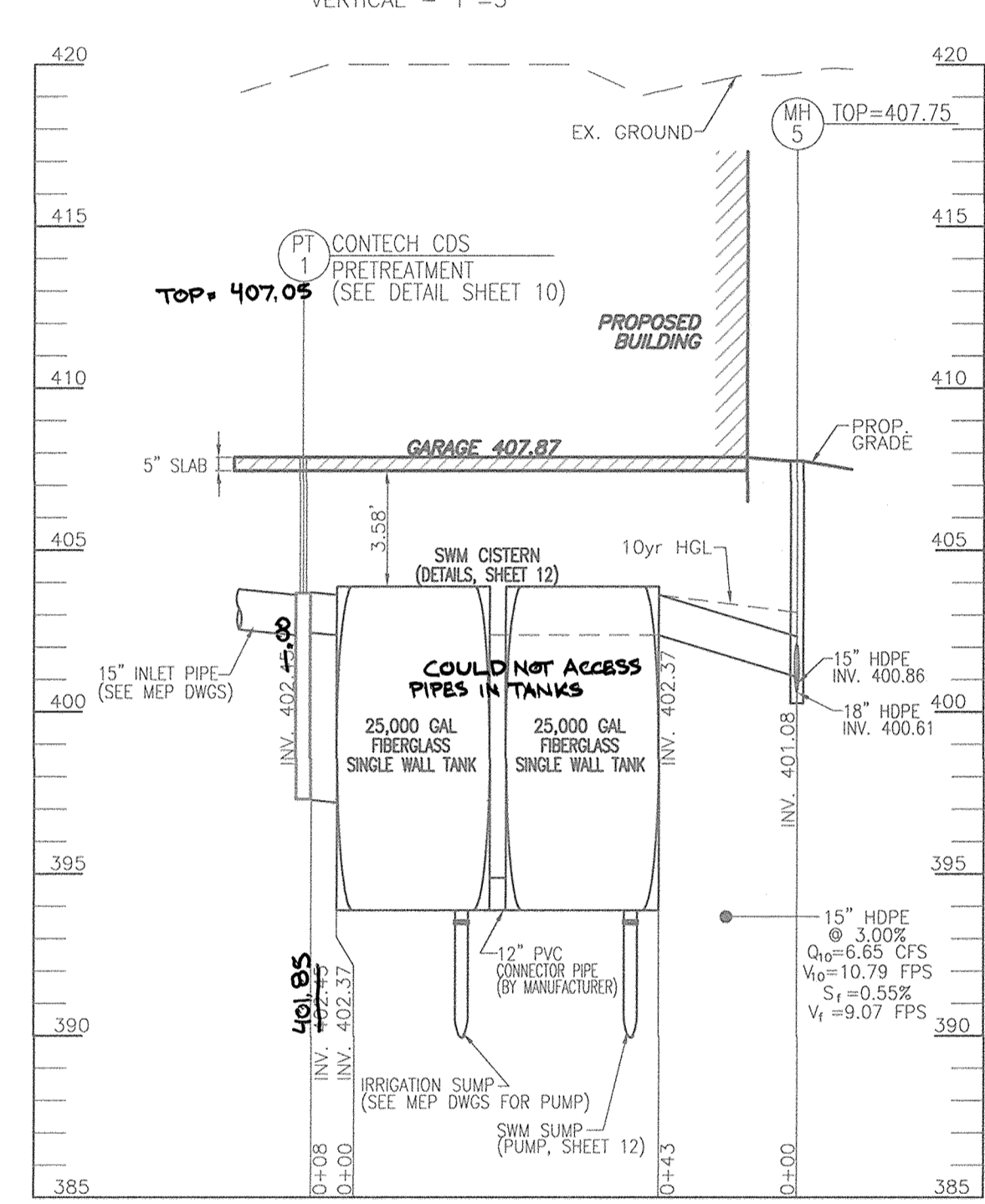


STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

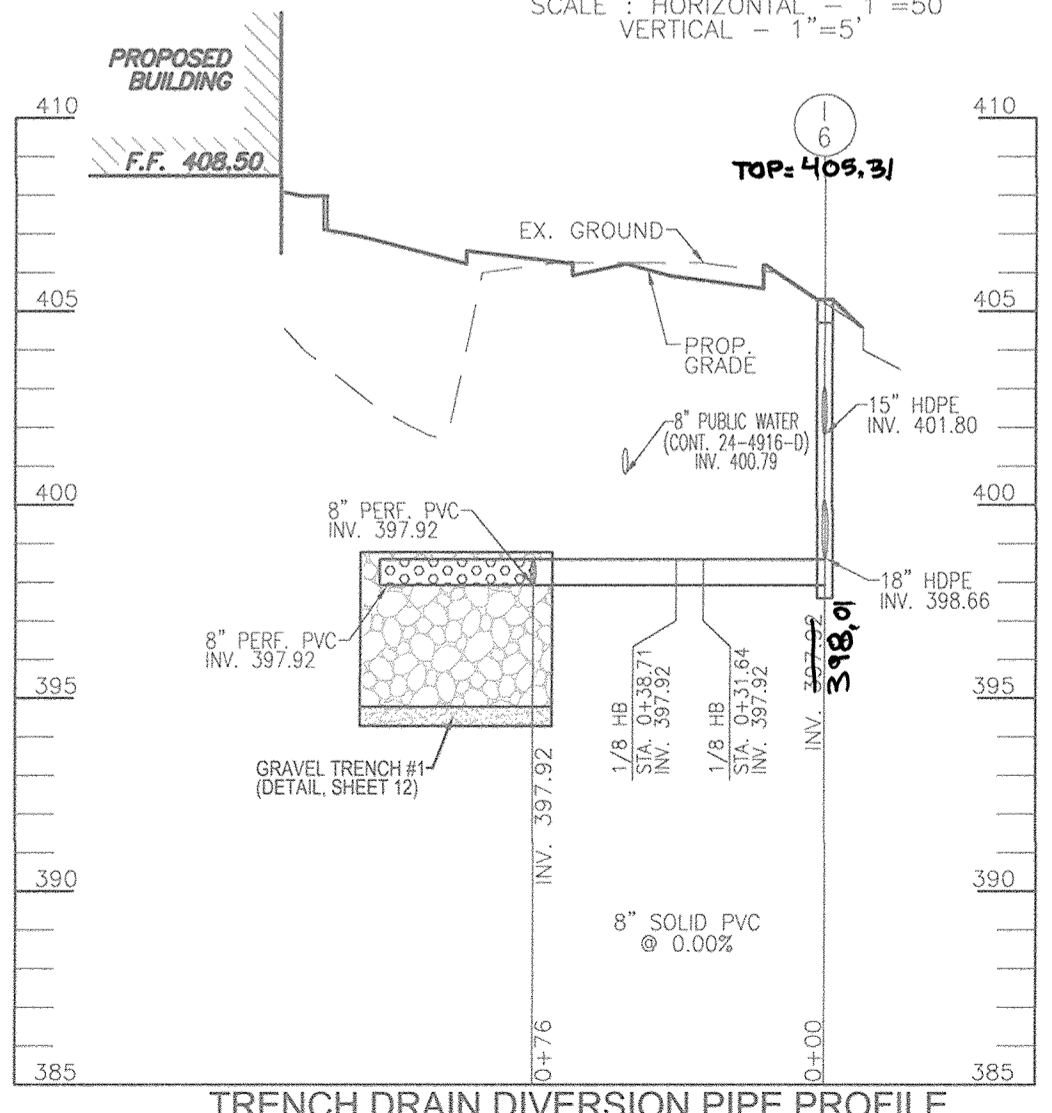
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



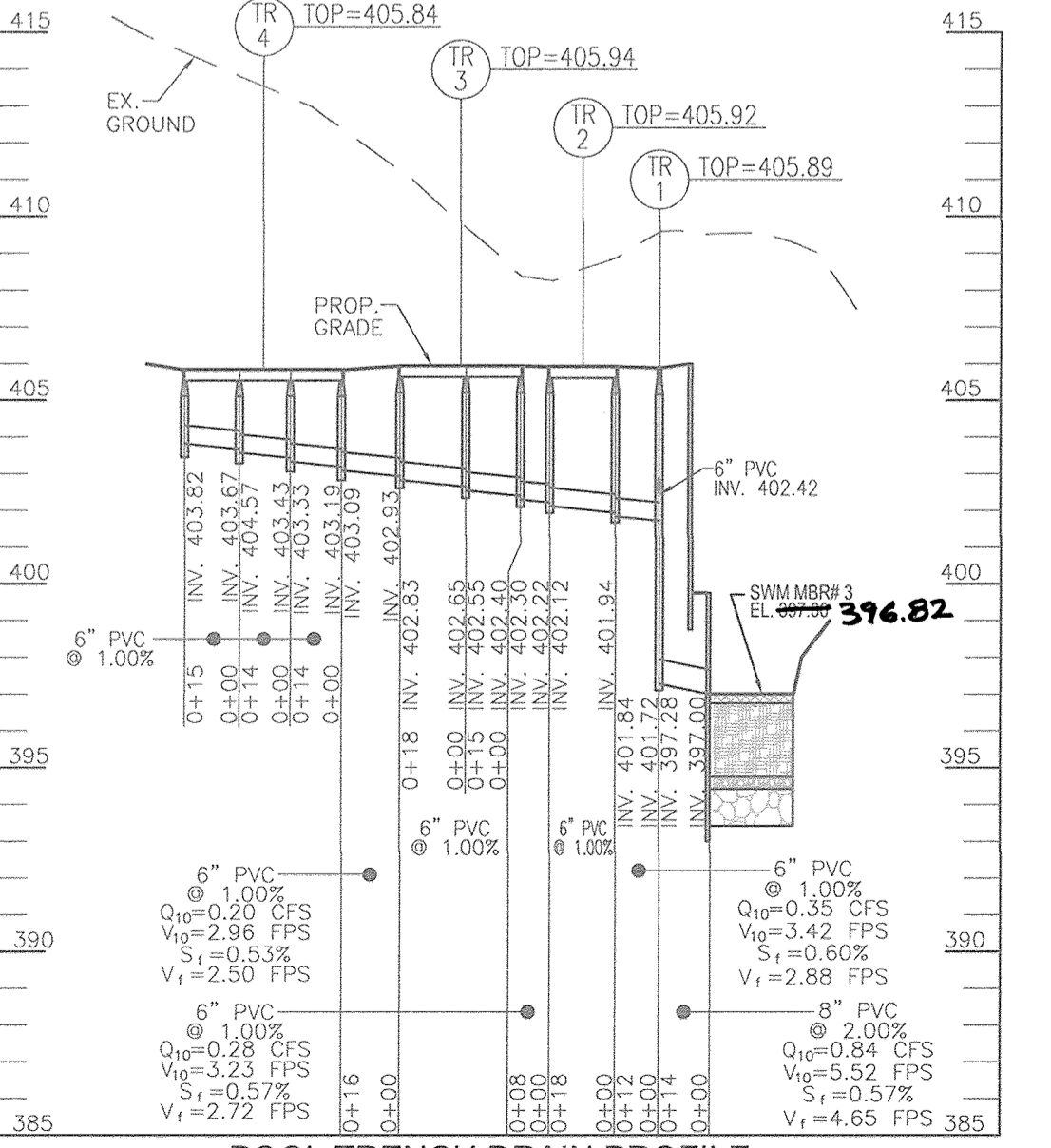
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



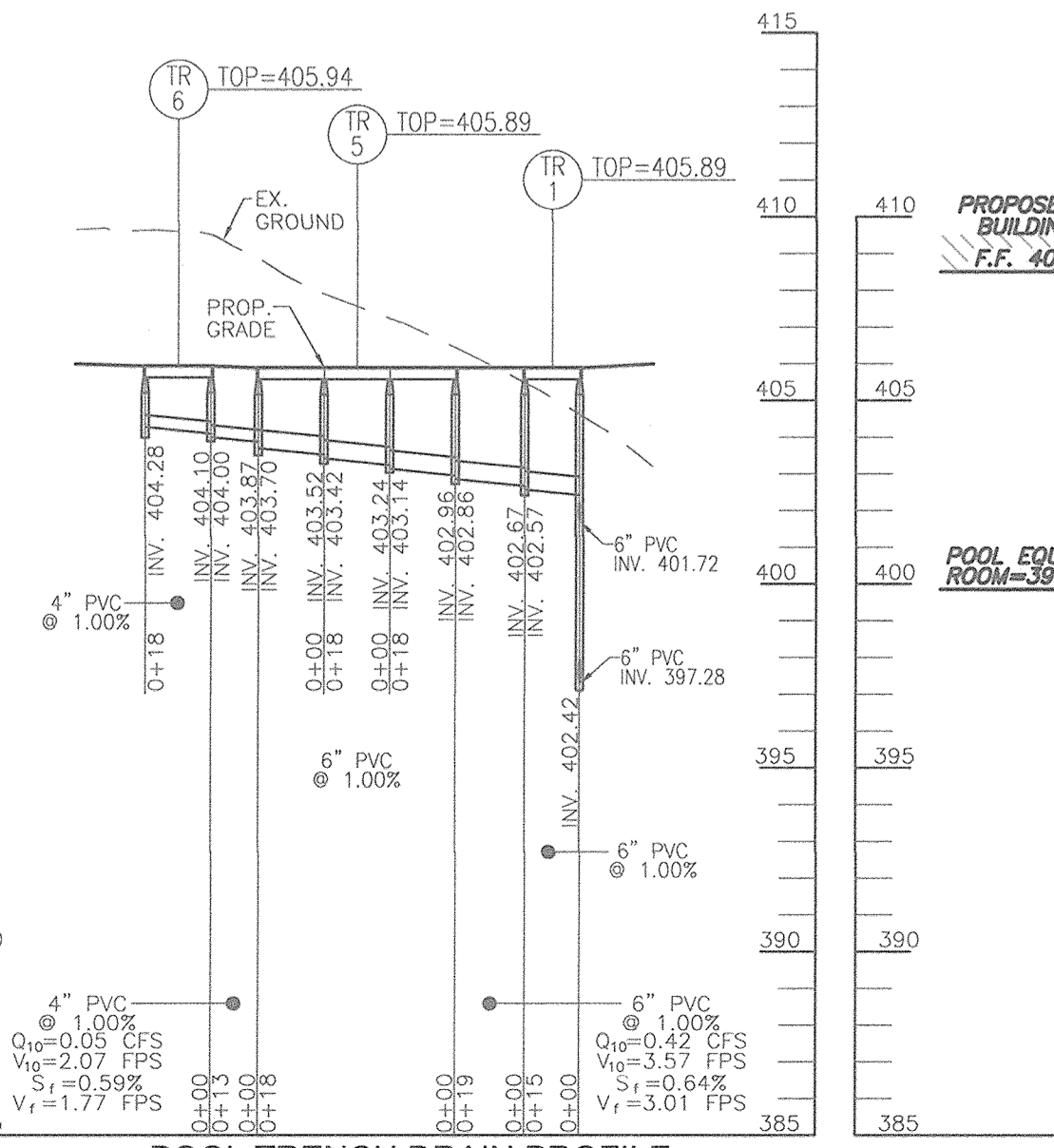
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



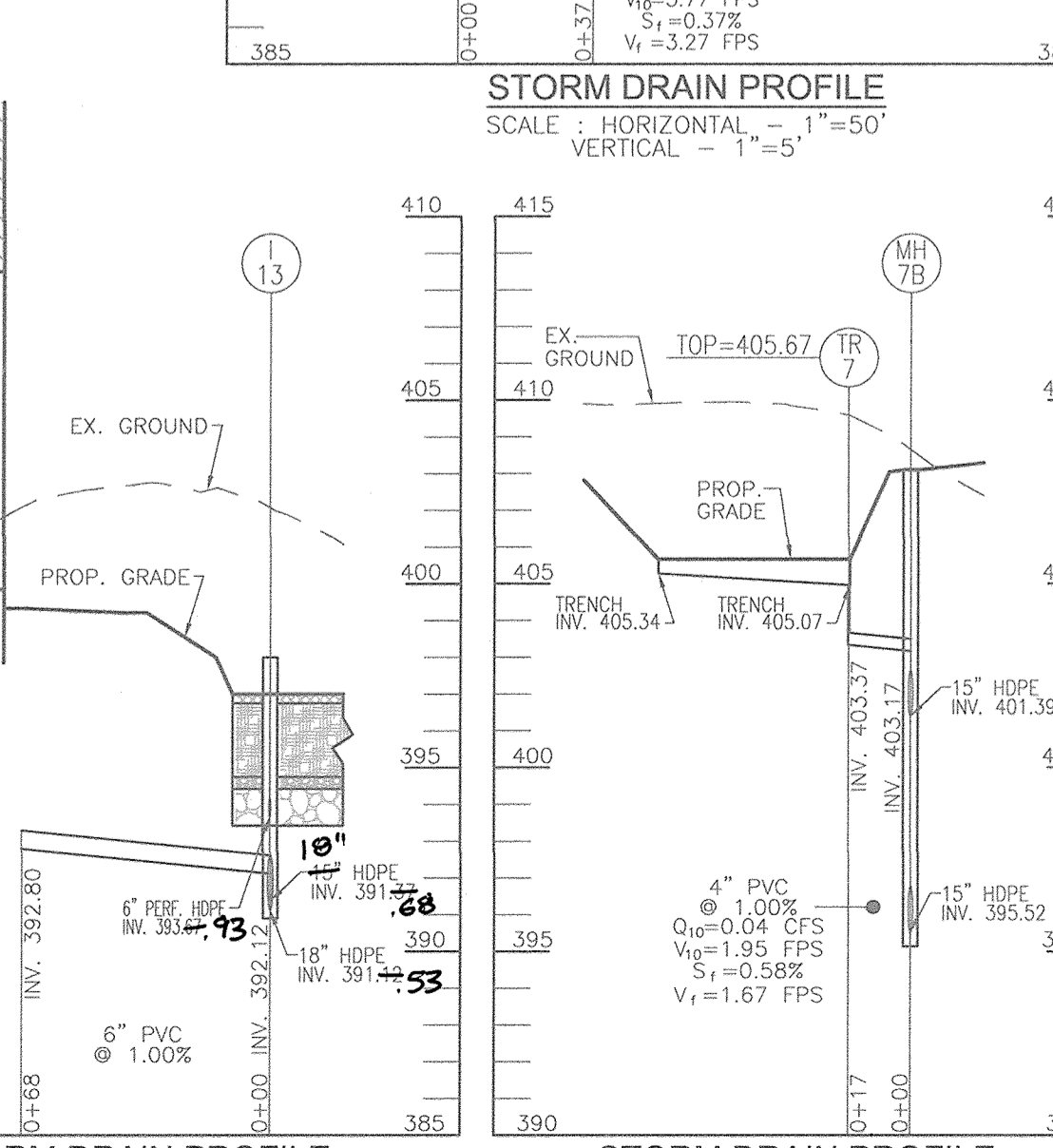
TRENCH DRAIN DIVERSION PIPE PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



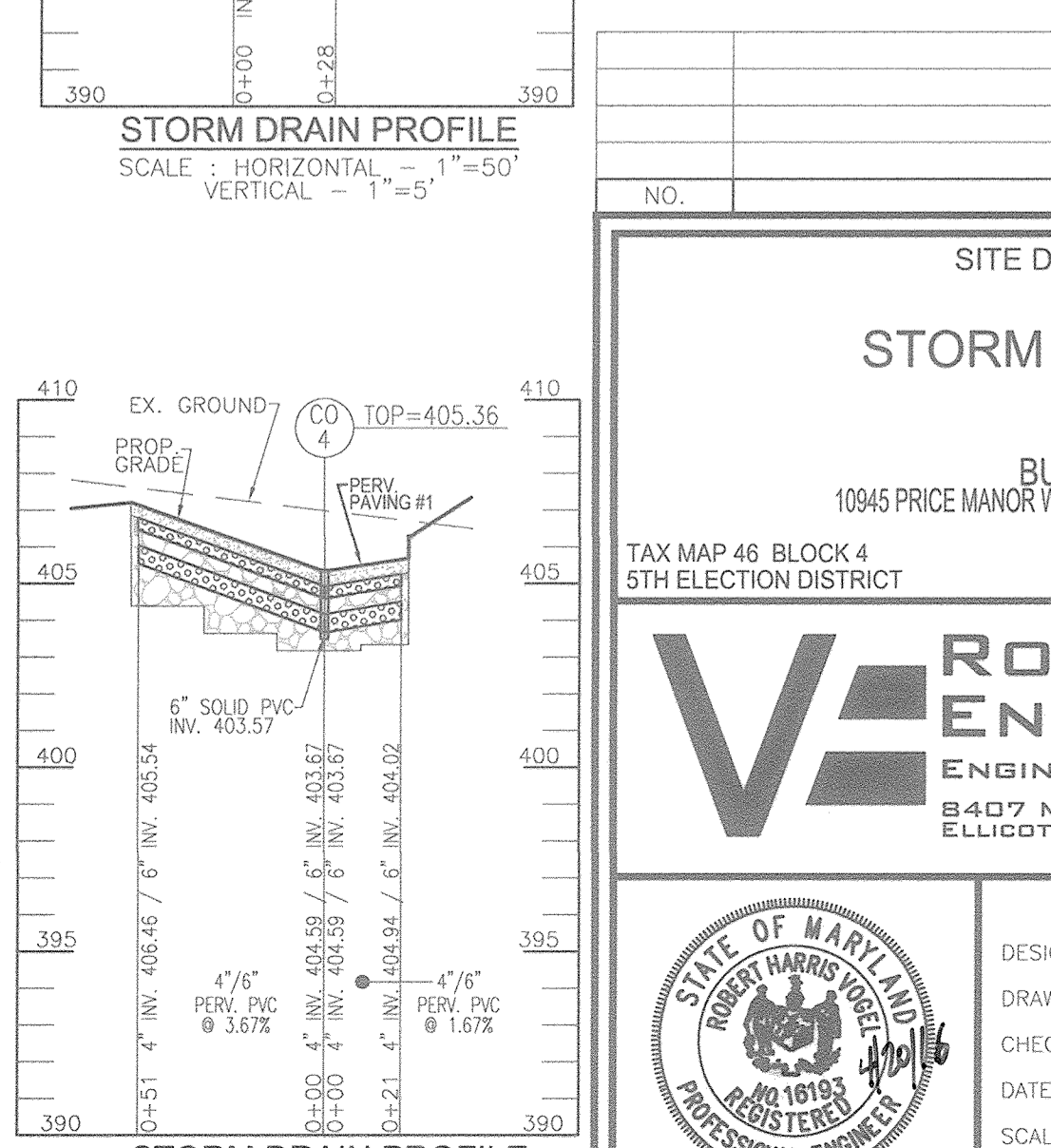
POOL TRENCH DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



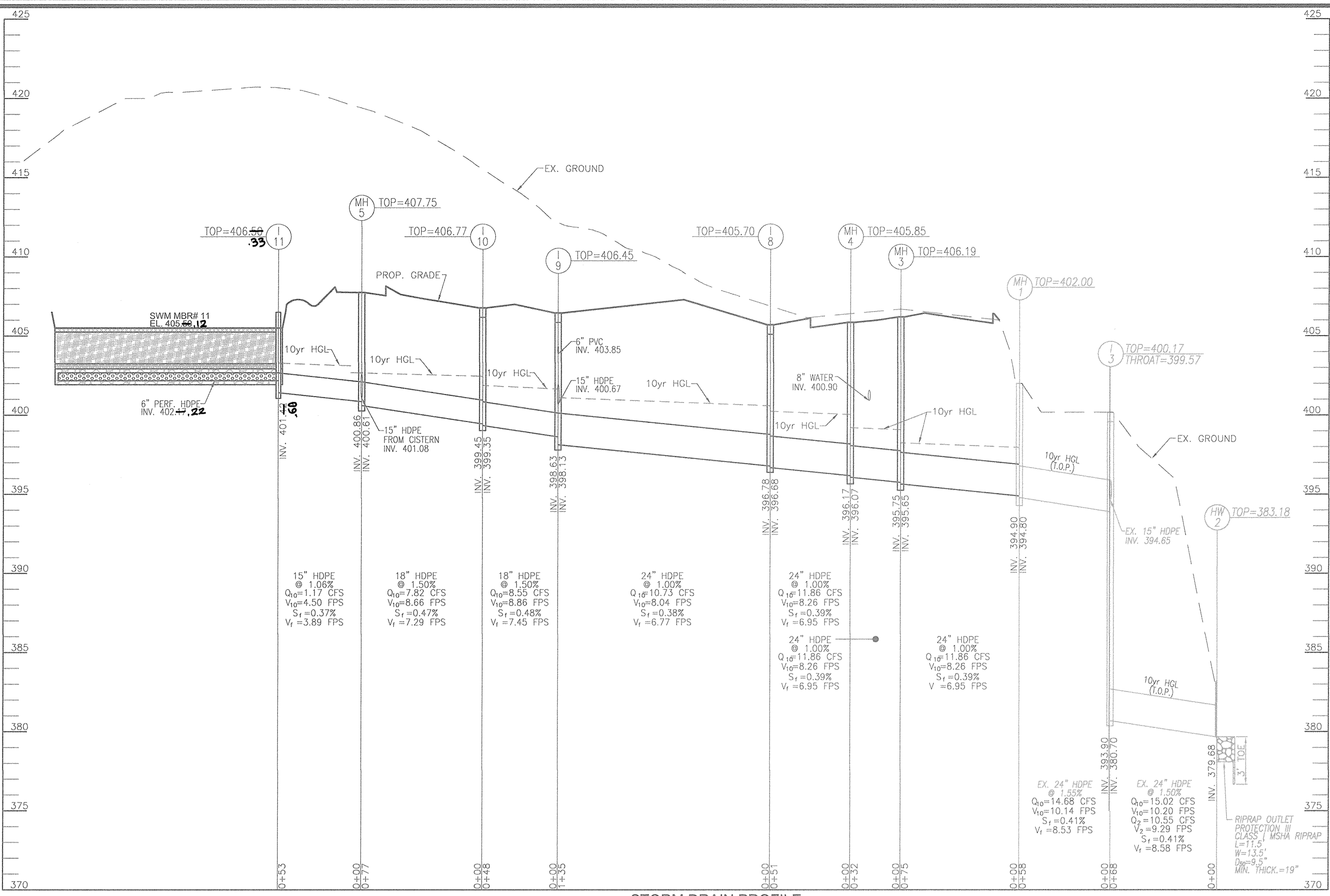
POOL TRENCH DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND SPECIFICATIONS.
I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
P.E. NAME: 16193 DATE: 3/23/18



OWNER/DEVELOPER
BUCH LLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division A
DATE: 5-17-16
Chief, Division of Land Development
DATE: 8-9-16
Director
DATE: 8-10-16

NO. REVISION DATE

SITE DEVELOPMENTAL PLAN
STORM DRAIN PROFILES
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394)
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT
PARCEL 126 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHW/DZE
DRAWN BY: DZE
CHECKED BY: RHW
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE 09-27-2018

9 SHEET OF 44



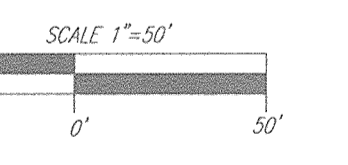
AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

P.E. NAME: Robert H. Vogel P.E. # 16193 DATE: 3/12/19

OWNER/DEVELOPER
 BUCH LLP
 10945 PRICE MANOR WAY
 LAUREL, MD 20723
 301-359-3500

LEGEND:

PROPERTY LINE	FIRE ACCESS GRASS PAVERS
RIGHT-OF-WAY LINE	FOREST CONSERVATION EASEMENT (RETENTION)
ADJACENT PROPERTY LINE	EX. FOREST CONSERVATION EASEMENT (RETENTION)
CENTERLINE OF EXISTING STREAM	MICROBIORETENTION AREA
EXISTING STREAM BUFFER	EXISTING SANITARY MANHOLE
EXISTING CURB AND GUTTER	EXISTING SANITARY LINE
PROPOSED CURB AND GUTTER	EXISTING CLEANOUT
EXISTING UTILITY POLE	EXISTING FENCE
EXISTING LIGHT POLE	EXISTING TREELINE
	PROPOSED STORMDRAIN
	PROPOSED STORMDRAIN INLET
	PROPOSED TRENCH
	PROPOSED CURB
	PROPOSED SIDEWALK
	PROP. 20' PUBLIC WATER AND UTILITY EASEMENT
	POST CONSTRUCTION NOISE CONTOUR
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	SOILS BOUNDARY
	DRAINAGE DIVIDE

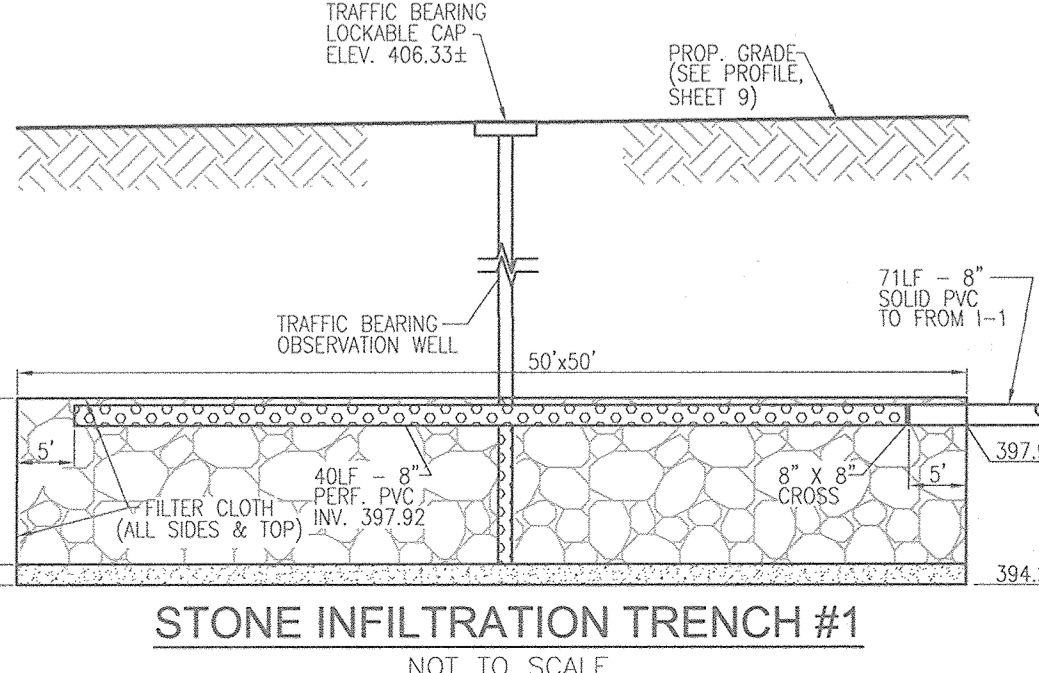


SWM DRAINAGE AREA MAP
 SCALE: 1"=50'

- APPENDIX B.2. CONSTRUCTION SPECIFICATIONS FOR INFILTRATION PRACTICES B.2.A INFILTRATION TRENCH**
- GENERAL NOTES AND SPECIFICATIONS**
- AN INFILTRATION TRENCH MAY NOT RECEIVE RUN-OFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE INFILTRATION TRENCH OF MINOR COMPARISON OF THE SOIL.
 - HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM TRAVELING OVER THE PROPOSED LOCATION OF THE INFILTRATION TRENCH TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE TRENCH SIDES TO ENHANCE TRENCH WALL STABILITY, LARGE TREE ROOTS MUST BE TRIMMED FLUSH WITH THE TRENCH SIDES IN ORDER TO PREVENT FABRIC PUNCTURING OR TEARING OF THE FILTER FABRIC DURING SUBSEQUENT INSTALLATION PROCEDURES. THE SIDE WALLS OF THE TRENCH SHALL BE ROUGHENED WHERE SHEARED AND SEALED BY HEAVY EQUIPMENT.
 - A CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 6.0.0 MATERIAL SPECIFICATIONS, 1984 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, MDE, 1984) SHALL INTERFACE BETWEEN THE TRENCH SIDE WALLS AND BETWEEN THE STONE RESERVOIR AND GRAVEL FILTER LAYERS. A PARTIAL LIST OF NON-WOVEN FILTER FABRICS THAT MEET THE CLASS "C" CRITERIA FOLLOWING ANY ALTERNATIVE FILTER FABRIC MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
 ANCO 4552
 SCSOON 470
 WERTEC 100
 WERTEC 100
 - IF A 6 INCH SAND FILTER LAYER IS PLACED ON THE BOTTOM OF THE INFILTRATION TRENCH, THE SAND FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ASHTO-M-43, SIZE NO. 9 OR NO. 10. ANY ALTERNATIVE SAND GRAVATION MUST BE APPROVED BY THE PLAN APPROVAL AUTHORITY.
 - THE STONE AGGREGATE SHOULD BE PLACED IN A MAXIMUM LOOSE LIFT THICKNESS OF 12 INCHES. THE GRAVEL (ROUNDED "BANK RUN" GRAVEL IS PREFERRED) FOR THE INFILTRATION TRENCH SHALL BE WASHED AND MEET ON OF THE FOLLOWING:
 ASHTO-M-43, SIZE NO. 2 OR NO. 3.
 - FOLLOWING THE STONE AGGREGATE PLACEMENT, THE FILTER FABRIC SHALL BE FOLDED OVER THE STONE AGGREGATE TO FORM A 6-INCH MINIMUM LONGITUDINAL LAP. THE DESIRED FILT. SOIL OR STONE AGGREGATE SHALL BE PLACED OVER THE LAP AT SUFFICIENT INTERVALS TO MAINTAIN THE LAP DURING SUBSEQUENT BACKFILLING.
 - CARE SHALL BE EXERCISED TO PREVENT NATURAL OR FILL SOILS FROM INTERFERING WITH THE STONE AGGREGATE OR OTHER UNCONTAMINATED STONE AGGREGATE SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED STONE AGGREGATE.
 - VOIDS MAY OCCUR BETWEEN THE FABRIC AND THE EXCAVATION SIDES SHALL BE PACKED, REMOVING SOILS OR OTHER OBSTACLES FROM THE TRENCH WALLS IS ONE SOURCE OF SUCH VOIDS. THEREFORE, NATURAL SOILS SHOULD BE PLACED IN THESE VOIDS AT THE MOST CONVENIENT TIME DURING CONSTRUCTION TO ENSURE FABRIC CONFORMITY TO THE EXCAVATION SIDES.
 - VERTICALLY EXCAVATED WALLS MAY BE DIFFICULT TO MAINTAIN IN AREAS WHERE SOIL MOISTURE IS HIGH OR WHERE SOFT COHESIVE OR COHESIONLESS SOILS ARE DOMINANT. THESE CONDITIONS MAY REQUIRE LAYING BACK OF THE SIDE SLOPE TO MAINTAIN STABILITY.
 - PVC DISTRIBUTION PIPES SHALL BE SCHEDULE 40 AND MEET ASTM-D-1785, ALL FITTINGS SHALL MEET ASTM-D-2729. PERFORATIONS SHALL BE 3/8 INCH IN DIAMETER. A PERFORATED PIPE SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. THE END OF THE PVC PIPE SHALL BE CAPPED. NOTE: PVC PIPE WITH A WALL THICKNESS CLASSIFICATION OF DSR-35 MEETING ASTM-D-3034 IS AN ACCEPTABLE SUBSTITUTE FOR THE SCHEDULE 40 PIPE.
 - THE OBSERVATION WELL IS TO CONSIST OF 6-INCH DIAMETER PERFORATED PVC SCHEDULE 40 PIPE (M 278 OR F758, TYPE PS 28) WITH A CAP SET 6 INCHES ABOVE GROUND LEVEL AND IS TO BE LOCATED NEAR THE LONGITUDINAL CENTER OF THE INFILTRATION TRENCH. THE PIPE SHALL HAVE A PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING THE CAP. THE SCREW TOP LID SHALL BE A CLEANOUT WITH A LOCKING MECHANISM OR SPECIAL BOLT TO DISCOURAGE VANDALISM. THE DEPTH TO THE INLET SHALL BE MARKED ON THE LID. THE PIPE SHALL BE PLACED VERTICALLY WITHIN THE GRAVEL PORTION OF THE INFILTRATION TRENCH AND A COP PROVIDED AT THE BOTTOM OF THE PIPE. THE BOTTOM OF THE CAP SHALL REST ON THE INFILTRATION TRENCH BOTTOM.
 - CORRODED METAL DISTRIBUTION PIPES SHALL CONFORM TO ASHTO-M-36, AND SHALL BE ALUMINIZED IN ACCORDANCE WITH ASHTO-M-274. ALUMINIZED PIPE CONTACT WITH CONCRETE SHALL BE COATED WITH AND MUST BE CAPABLE OF PREVENTING THE ALLELOPATHIC EFFECT OF THE ALUMINUM ON THE CONCRETE. PERFORATED DISTRIBUTION PIPES SHALL CONFORM TO ASHTO-M-36, CLASS 2 AND SHALL BE PROVIDED ONLY WITHIN THE INFILTRATION TRENCH AND SHALL TERMINATE 1 FOOT SHORT OF THE INFILTRATION TRENCH WALL. AN ALUMINIZED METAL PLATE SHALL BE WELDED TO THE END OF THE PIPE.
 - IF A DISTRIBUTION STRUCTURE WITH A WET WELLS USED, A 4-INCH DRAIN PIPE SHALL BE PROVIDED AT OPPOSITE ENDS OF THE INFILTRATION TRENCH DISTRIBUTION STRUCTURE. TWO (2) CUBIC FEET OF POROUS BACKFILL MEETING ASHTO-M-43, SIZE NO. 57 SHALL BE PROVIDED AT EACH DRAIN.
 - IF A DISTRIBUTION STRUCTURE IS USED, THE MANHOLE COVER SHALL BE BOLTED TO THE FRAME.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER INFILTRATION TRENCHES (M-5)

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
- WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE xxx HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



STONE INFILTRATION TRENCH #1
 NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Anderson
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5-12-16

Kurt S. ...
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 8-9-16

William J. ...
 DIRECTOR
 DATE: 8-10-16

2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-01-18
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
STORMWATER MANAGEMENT DRAINAGE AREA MAP
 THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT
 (L. 3192 / F. 394)

TAX MAP 46 BLOCK 4
 5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
 PARCEL 126

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

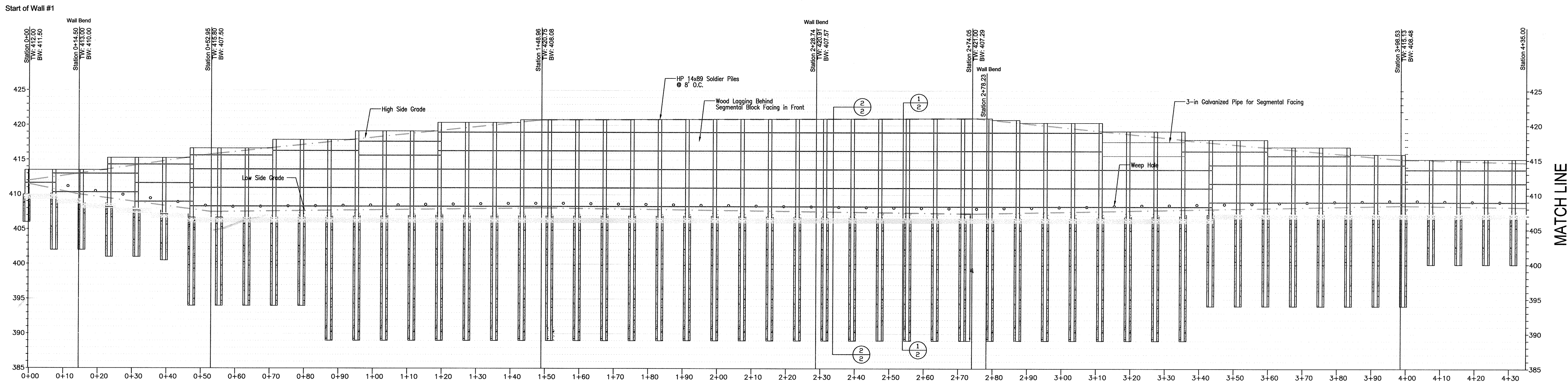
DESIGN BY: RHV/DZE
 DRAWN BY: DZE
 CHECKED BY: RHV
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE
 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. 16193
 EXPIRATION DATE: 08-27-2018

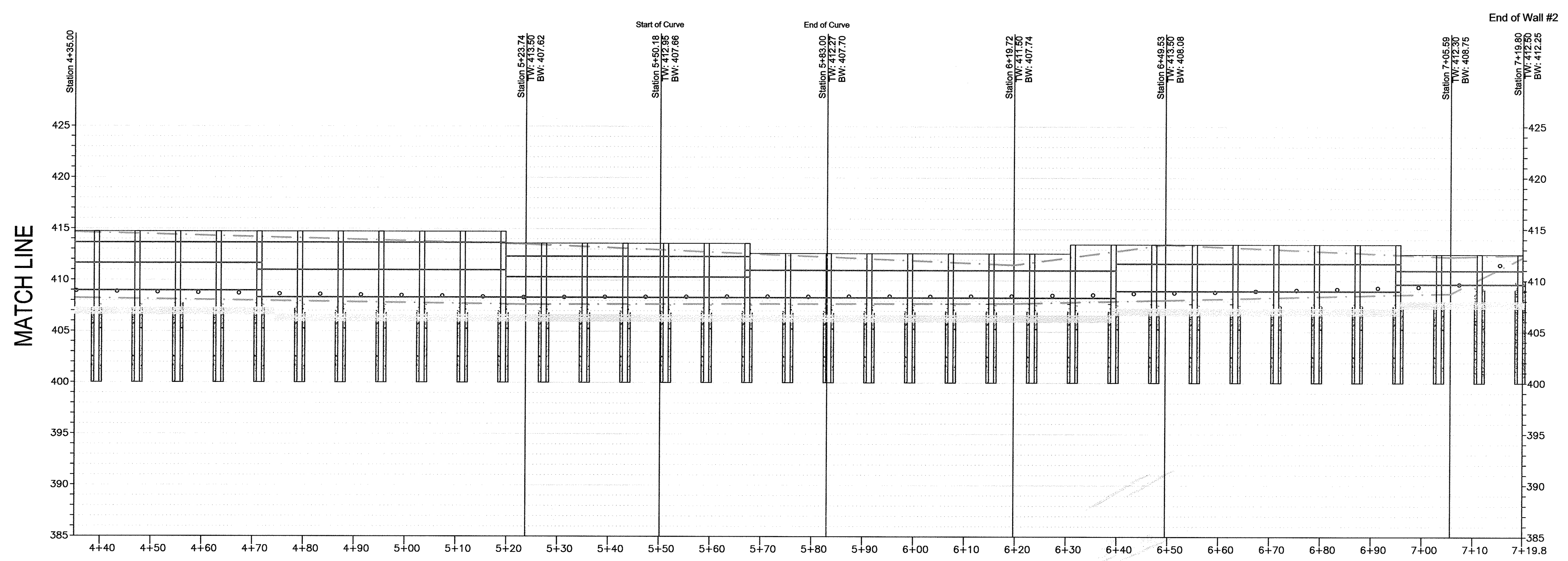
11 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT-OCT. 2018



RETAINING WALL #1 PROFILE
 HORIZONTAL SCALE: 1"=15'
 VERTICAL SCALE: 1"=7.5'



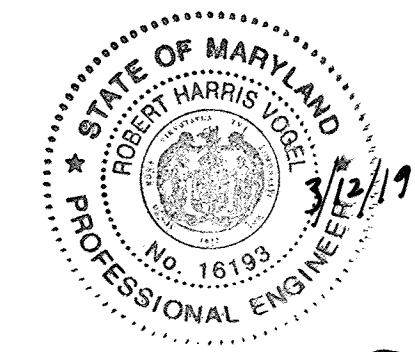
RETAINING WALL #1 PROFILE
 HORIZONTAL SCALE: 1"=15'
 VERTICAL SCALE: 1"=7.5'

OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
 SITE RETAINING WALLS
 WALL #1 PROFILE
 THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 TAX MAP 46 BLOCK 4 ZONED: RR-APT PARCEL 126
 5TH ELECTION DISTRICT (L. 3192 / F. 394) HOWARD COUNTY, MARYLAND

ECS
 1340 CHARWOOD ROAD
 SUITE A
 HANOVER, MARYLAND 21076
 PHONE: (410) 859-4300
 FAX: (410) 859-4324

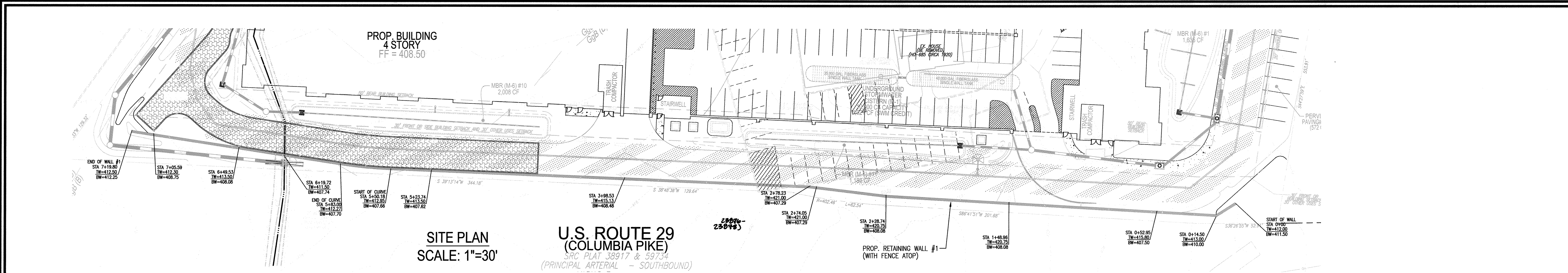


AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: HASAN M. ABOUMATAR, NO. 16193, DATE: 3/12/19

PROFESSIONAL CERTIFICATE
 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. 29553, EXPIRATION DATE: 12-31-2017.
 DESIGN BY: DMA
 DRAWN BY: DMA
 CHECKED BY: HMA
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 7272-B
 HASAN M. ABOUMATAR, P.E.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: 5-17-16
 Chief, Division of Land Development: 8-9-16
 Director: 8-10-16

NO AS-BUILT INFORMATION ON THIS SHEET

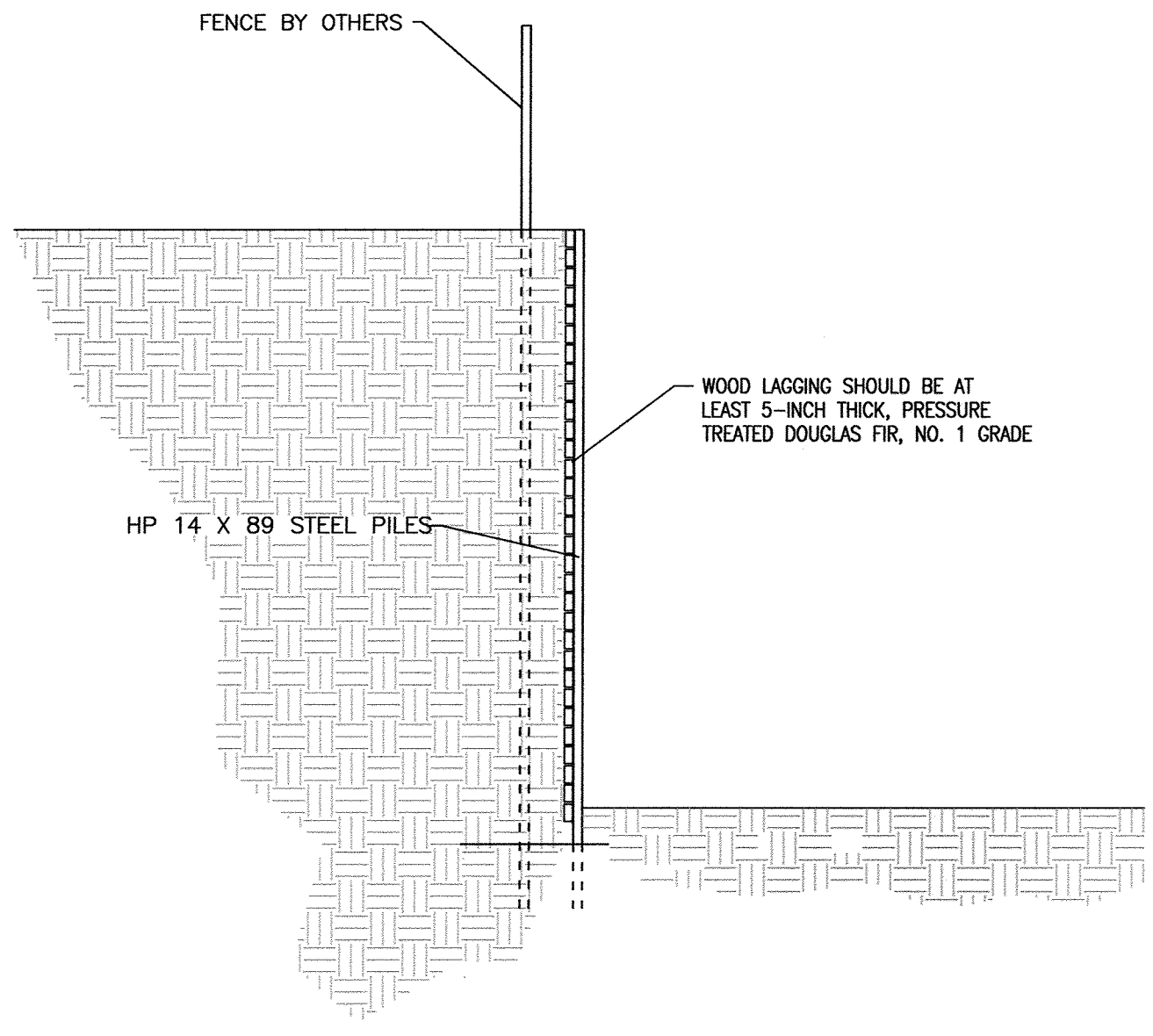
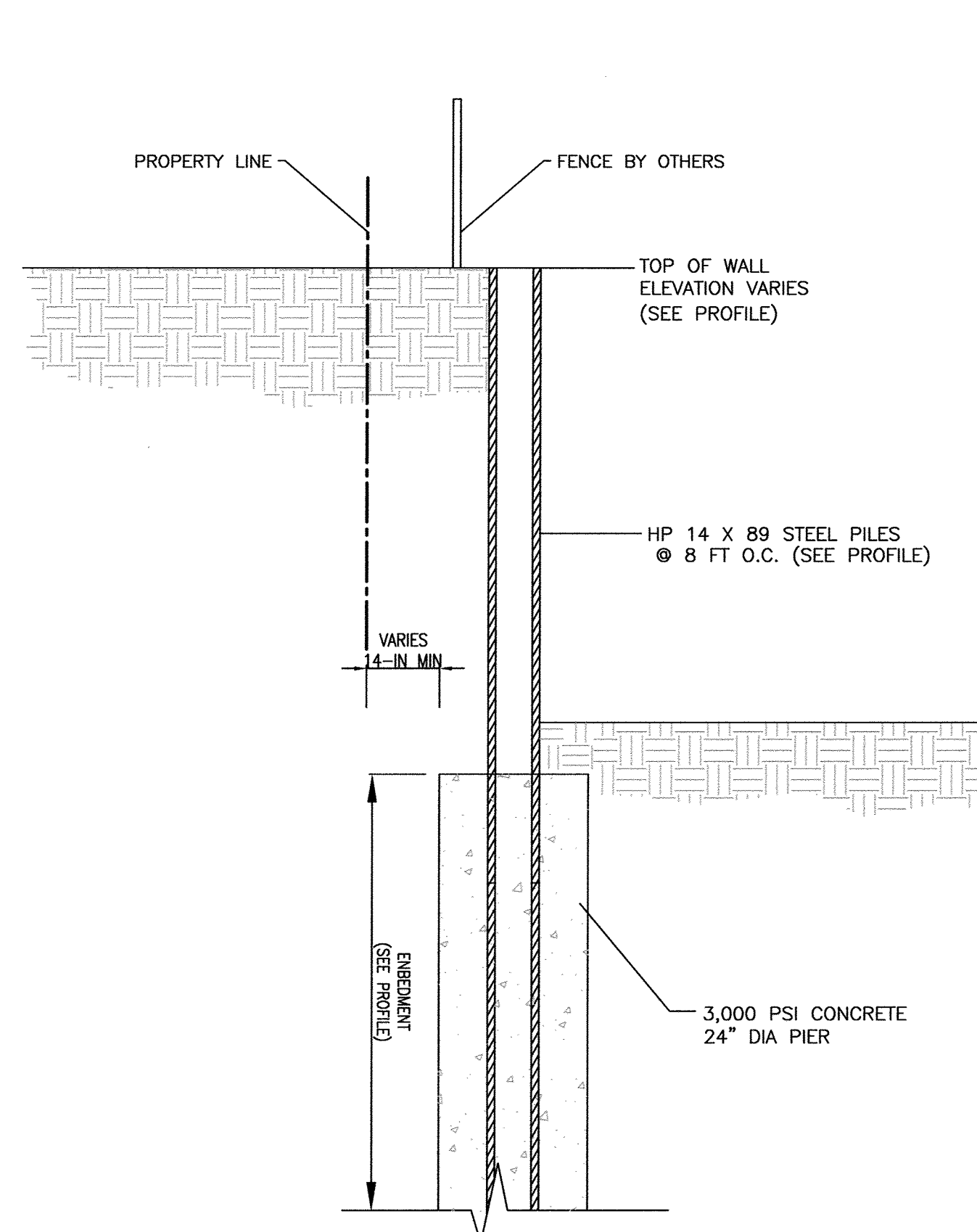


**U.S. ROUTE 29
(COLUMBIA PIKE)**
SRC PLAT 38917 & 59734
(PRINCIPAL ARTERIAL - SOUTHBOUND)

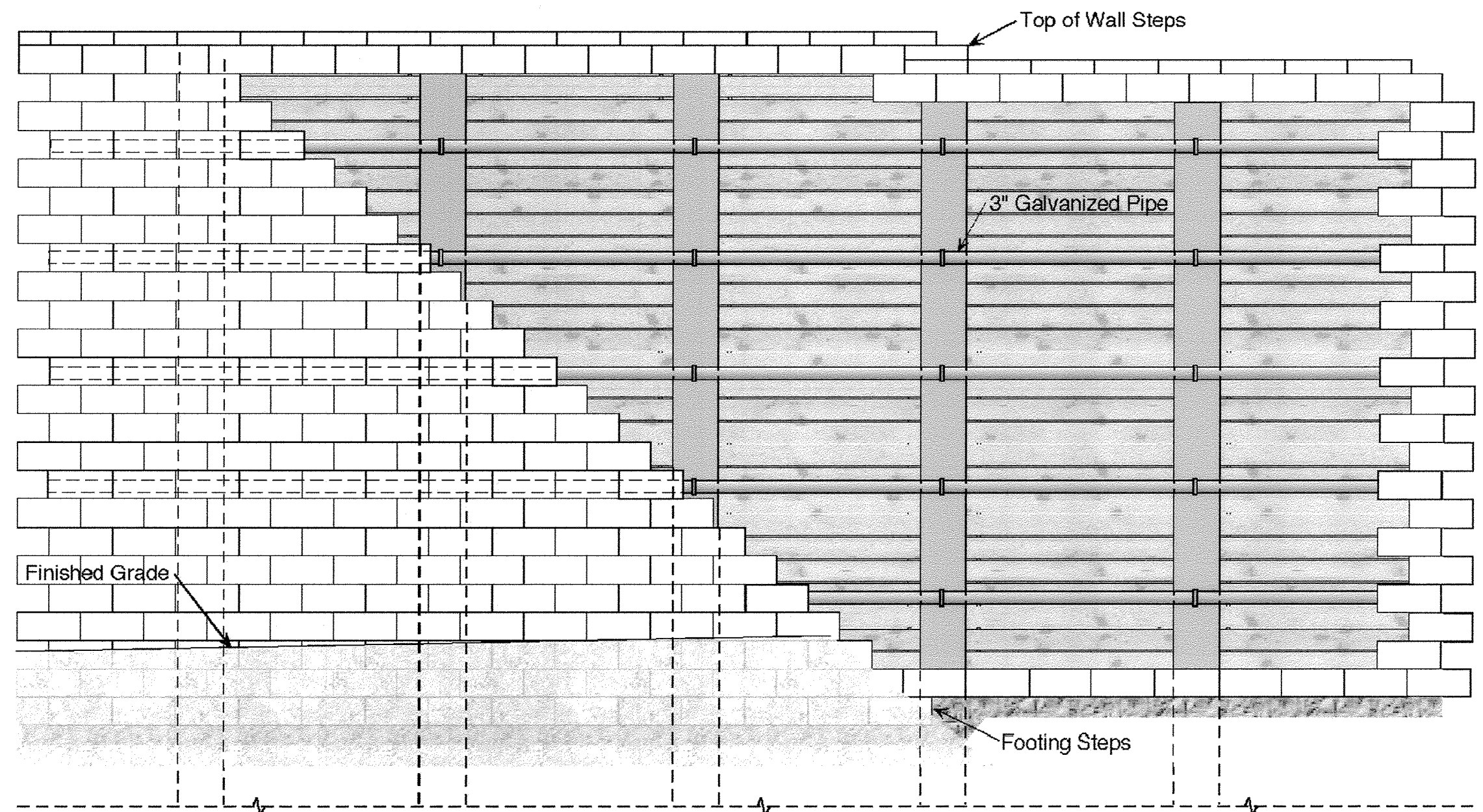
**SITE PLAN
SCALE: 1"=30'**

CONSTRUCTION NOTES FOR WALL 1:

1. CONTRACTOR WILL BORE A 24-IN DIA. OPEN HOLE WITH A CONTINUOUS FLIGHT AUGER TO THE REQUIRED DEPTH. INSERT THE FULL-LENGTH SOLDIER PILE AND BACKFILL WITH FLOWABLE FILL UTILIZING A DRILL RIG THAT WILL ACCESS ALL PILE LOCATIONS FROM THE BUCH LLLP PROPERTY. THE EDGE OF THE PIER WILL BE NO LESS THAN 14 IN FROM PROPERTY LINE.
2. AFTER PILE INSTALLATION, THE FRONT FACE OF THE WALL WILL BE EXCAVATED IN 5-FT LIFTS IN ORDER TO INSTALL WOOD LAGGING. THE EXCAVATION WILL NOT EXTEND BEYOND THE PILES. ALL EXCAVATION WILL TAKE PLACE FROM THE BUCH LLLP PROPERTY.
3. AFTER WOOD LAGGING INSTALLATION IS COMPLETE, A WALL FACING CONSISTING OF SEGMENTAL BLOCK AND GEOGRID WILL BE INSTALLED ON THE FRONT FACE OF THE WALL FROM THE BUCH LLLP PROPERTY.
4. WALL MAINTENANCE WILL BE PERFORMED FROM THE FRONT SIDE OF THE WALL FROM THE BUCH LLLP PROPERTY.

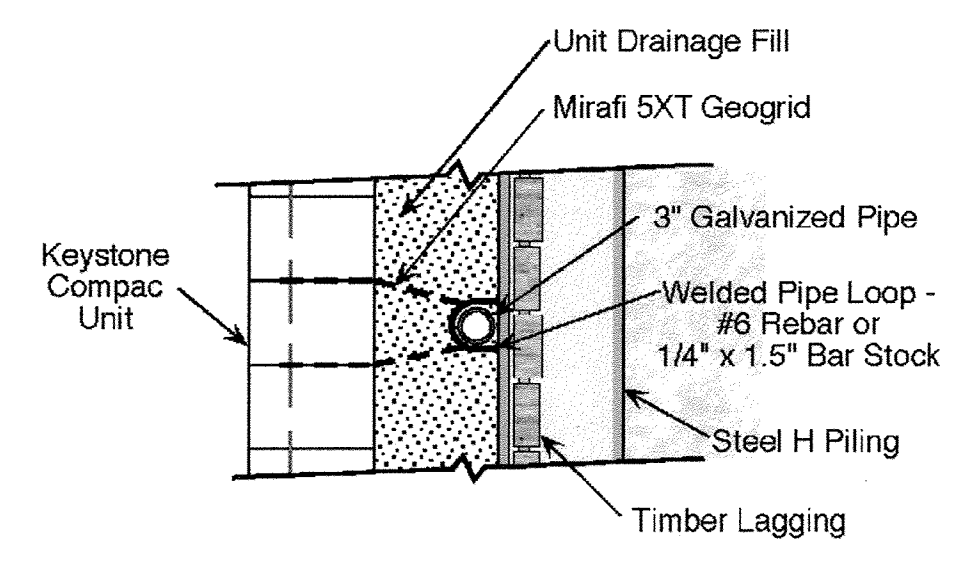


**TYPICAL PANEL CROSS SECTION
N.T.S.**

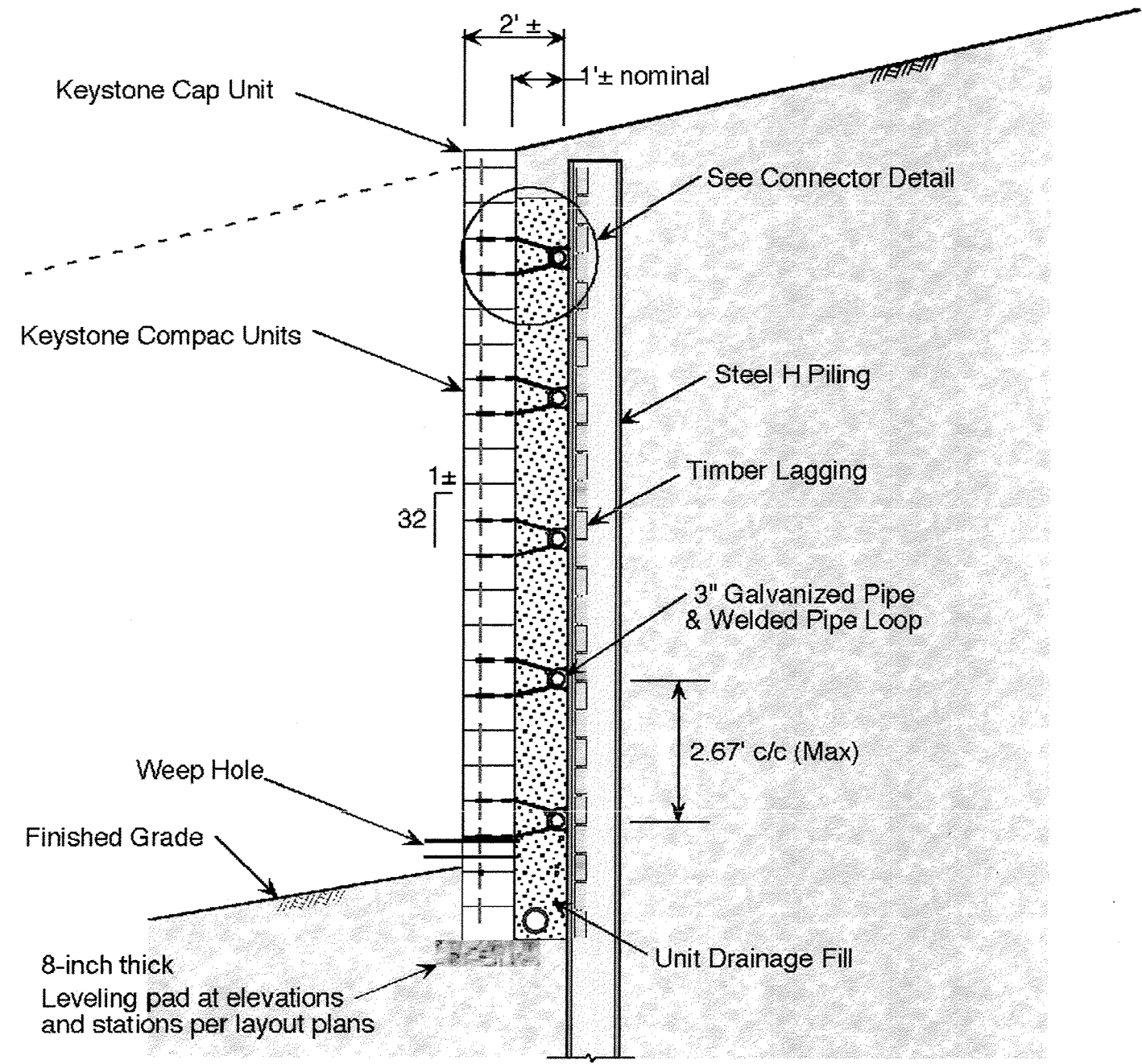


Typical Wall Elevation

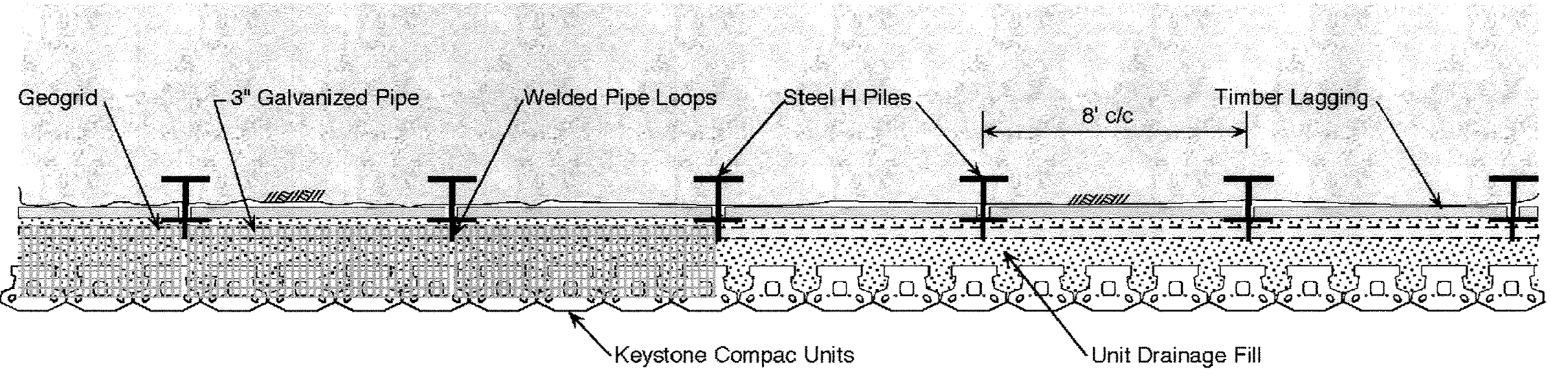
**TYPICAL SOLDIER PILE DETAIL
N.T.S.**



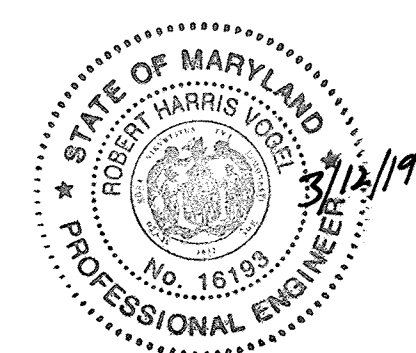
Typical Connector Detail



Typical Pile & Lagging Wall Section



Typical Plan View

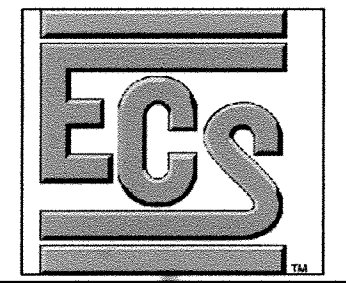


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P.E. NAME: *Robert Harris* P.E. # 16193 DATE: 3/12/19

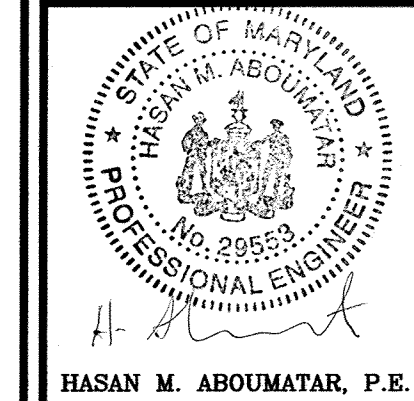
OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

**SITE DEVELOPMENTAL PLAN
SITE RETAINING WALLS
WALL #1 PLAN & DETAILS
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
TAX MAP 46 BLOCK 4 ZONED: RR-APT (L 3192 / F 394) PARCEL 128
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND**



1340 CHARWOOD ROAD
SUITE A
HANOVER, MARYLAND 21076
PHONE: (410) 859-4300
FAX: (410) 859-4324



DESIGN BY: DMA
DRAWN BY: DMA
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DATE: APRIL 2016
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W.O. NO.: 7272-B

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14 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Ch. Charles 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kat Salovei 8-9-16
CHIEF, DIVISION OF LAND DEVELOPMENT
Valerie Jaffee 8-10-16
DIRECTOR

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018

SDP-15-044

GENERAL NOTES FOR RETAINING WALL #1

DESIGN:

1. BUILDING CODE – INTERNATIONAL BUILDING CODE 2012 EDITION

FOUNDATIONS – GENERAL:

1. DRILLED PIERS SHALL BE INSTALLED TO THE DEPTHS AND SIZE INDICATED BY THE PROFILES AND SECTIONS.
2. DRILLED PIERS SHALL BE TEMPORARILY CASED WITH APPROVED STEEL CASING, OR SLURRY BENTONITE SHOULD BE USED IF GROUNDWATER IS ENCOUNTERED OR IF SIDE WALLS COLLAPSE.
3. ALL DRILLED PIERS SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE DRILLED PIER EMBEDMENT. EMBEDMENT ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.

PIER CONCRETE AND REINFORCING STEEL:

1. CONCRETE SHALL CONFORM TO ACI BUILDING CODE (318R-95) AND SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH AND DENSITY IN ACCORDANCE WITH THE FOLLOWING:

STRENGTH PSI	MIN. DENSITY PCF	MAX W/C RATIO
3000	145	0.55

2. REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.
3. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE:
UNFORMED SURFACE IN CONTACT WITH THE GROUND. 3 IN.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER. #6 BARS AND SMALLER 1 1/2 IN.

STRUCTURAL STEEL SOLDIER PILES:

1. STEEL SHALL CONFORM TO GRADE A992 (Fy=50 KSI)
2. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE (1992), EXCEPT AS MODIFIED IN THESE NOTES AND THE PROJECT SPECIFICATIONS.
3. STEEL SHALL BE PROVIDED WITH CORROSION PROTECTION, SUCH AS GALVANIZATION OR OTHER EQUIVALENT METHODS.
4. STRUCTURAL STEEL SOLDIER PILES SHALL BE FINISHED IN ACCORDANCE WITH ANY ARCHITECT'S SPECIFICATIONS.
5. STEEL SOLDIER PILES SHALL BE SET WITHIN 1-INCH ± OF THEIR VERTICAL ALIGNMENT.

WOOD LAGGING:

1. WOOD LAGGING SHALL BE AT LEAST 5 INCHES THICK.
2. WOOD LAGGING SHALL BE PRESSURE TREATED DOUGLAS FIR, NO. 1 GRADE.

INSTALLATION:

1. THE WOOD LAGGING SHALL BE INSTALLED AGAINST THE FRONT FLANGE OF THE STEEL PILES.
2. 4" DIAMETER WEEP HOLES SHALL BE CORED THROUGH THE SEGMENTAL BLOCK FACING ABOUT 4 INCHES ABOVE GRADE, AT THE MIDPOINT BETWEEN THE STEEL PILES.

SEGMENTAL BLOCK FACING SPECIFICATION GUIDELINES

PART 1: MATERIALS

1.01 Definitions

- A. Modular Wall Units – KEYSTONE modular concrete facing and corner units, machine made from portland cement, water, and mineral aggregates.
- B. Structural Geogrid – a structural geogrid formed by a regular network of integrity connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.
- C. Unit Fill/Drainage Aggregate – drainage aggregate, such as No. 57 Stone, which is placed within the cells of the modular concrete units and immediately behind the units to a width of at least 12 inches.

1.02 Concrete Units

- A. Concrete segmental units shall conform to the requirements of NCMA TEK 2-4 and have a minimum 28-day compression strength of 4,000 psi. The units shall also pass 150 freeze thaw cycles in water with less than 1% weight loss for samples tested in accordance with ASTM C-1262.
- B. Wall Face Units for general wall construction shall be KEYSTONE Compac III Units. Sculptured face or straight (flat) face may be used.
- C. Top of wall Cap Units shall be KEYSTONE Cap Units with fiberglass connecting pins.
- D. KEYSTONE Compac III Units shall be tan in color, based on manufacturer's availability.

1.03 Fiberglass Connecting Pins

- A. Connecting pins shall be 1/2" diameter thermoset isophathalic polyester resin-pultruded fiberglass reinforcement rods supplied by the unit manufacturer.

1.04 Construction Adhesive

- A. Construction adhesive for top of wall cap blocks shall be KEYSTONE KapSealTM. Material shall conform to ASTM 2339 and shall be supplied by the block unit supplier.

1.05 Soil Fill Materials

- A. Base Leveling and Pad Material
 1. Material shall consist of crushed stone (GA S/B) as shown on the construction drawing. The leveling pad shall be, at a minimum, 6-inches thick. MSHA No. 57 Stone or pea gravel is not permitted.
- B. Unit Fill/Drainage Aggregate
 1. Fill for units shall be free draining crushed stone or gravel, with a maximum aggregate size of 1/2" to 3/4" and no more than 5% passing the No. 50 sieve and conforming to ASTM D 448. Gradation of the unit fill shall be approved by the Geotechnical Engineer. Pea gravel shall not be used. MSHA No. 57 stone may be used.

1.06 Structural Geogrid

- A. The geogrid identified for the retaining wall consists of the following:
Mirafi 5XT.
- B. The material shall be protected from sunlight and weather while stored on site in accordance with the manufacturer's recommendation.

PART 2: INSTALLATION

2.01 Foundation Preparation

- A. Foundation shall be excavated as required for leveling pad dimensions shown on the construction drawings, or as directed by the Geotechnical Engineer.
- B. The required bearing pressure beneath the footing of the wall must be verified in the field by a Geotechnical Engineer.
- C. Unsuitable soils shall be removed and replaced with approved material.
- D. Over-excavated areas shall be backfilled with approved, compacted backfill material or as approved by the Geotechnical Engineer.

2.02 Base Leveling Pad

- A. Leveling pad materials shall be placed upon an approved foundation as shown on the construction drawings to a minimum thickness of 6 inches.
- B. Aggregate material shall be compacted to provide a dense, level surface on which to place the first course of modular units. Compaction shall be to at least 95% of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). Leveling pad shall be prepared and leveled to ensure complete contact of retaining wall unit with base.

2.03 Unit Installation

- A. The first course of concrete modular units shall be carefully placed on the base leveling pad. Each unit shall be checked for level (in both directions) and alignment.
- B. Install fiberglass connecting pins and fill all voids in and around the modular units with unit fill material. Tamp or rod unit fill to ensure that all voids are completely filled.
- C. Sweep excess material from top of units and install the next course. Ensure that the units of each course are completely filled, backfilled and compacted prior to proceeding to next course.
- D. Place each subsequent course, ensuring that pins protrude into adjoining courses a minimum of 1 inch. Two pins are required per unit. Pull each unit forward to obtain the desired offset (as noted on the plans), away from the fill zone, locking against the pins in the previous course and backfill as the course is completed. Repeat procedure to the extent of wall height. Wall construction shall not exceed 2 courses in height before reinforced backfill is placed.
- F. Follow wall erection and unit fill placement closely with any other backfilling required. Compaction of all soils shall be to 95% of the maximum dry density as determined in accordance with ASTM D 698.
- G. As appropriate where the wall changes elevation, units can be stepped with the grade or turned into the embankment with a convex return end. Provide appropriate buried units on compacted leveling pad in area of convex return end.

2.04 Geogrid Installation

- A. The geogrid type and length (direction perpendicular to the wall face) shall conform to those indicated on the construction drawings. Geogrid shall be laid continuously at the proper elevations and orientation as shown on the construction drawings or as directed by the Geotechnical Engineer.
- B. Correct orientation (roll direction) of the geogrid shall be verified by the Contractor.
- C. The geogrid shall be connected to the modular wall units by placing the geogrid over fiberglass pins and laying the grid back to the fill side.
- D. A filtering, non-woven geotextile shall be located between the drainage aggregate/unit fill and the reinforced backfill. The geotextile shall be folded back parallel, above and below the geogrid as necessary to ensure continuous grid placement.
- E. The geogrid shall be pulled taut to set the geogrid against the fiberglass pins and to eliminate loose folds in the material.

2.05 Drainage Installation

- A. Provide 4-inch weep holes every 8 feet along the wall.

2.06 Cap Installation

- A. Provide permanent mechanical connection to wall units with KEYSTONE KapSealTM. Apply adhesive to top surface of lower unit and place cap unit atop adhesive.
- B. Place Cap Units over projecting pins from the units below. Pull forward to setback position.
- C. Backfill and compact to finished grade.

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWISS FACILITY.

[Signature] 16195 3/12/19
P.E. # DATE

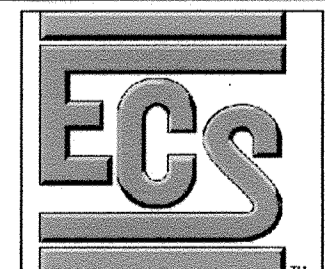


OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

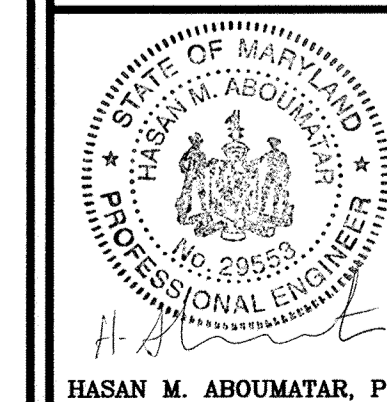
NO.	REVISION	DATE

**SITE DEVELOPMENTAL PLAN
SITE RETAINING WALLS
WALL #1 SPECIFICATIONS**

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
TAX MAP 46 BLOCK 4 ZONED RR-APT (L. 3192 / F. 394) PARCEL 128
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



1340 CHARWOOD ROAD
SUITE A
HANOVER, MARYLAND 21076
PHONE: (410) 859-4300
FAX: (410) 859-4324



DESIGN BY: DMA
DRAWN BY: DMA
CHECKED BY: HMA
DATE: APRIL 2015
SCALE: AS SHOWN
W.O. NO.: 7272-B

PROFESSIONAL CERTIFICATE
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. 29553, EXPIRATION DATE: 12-31-2018

15 SHEET OF 43

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

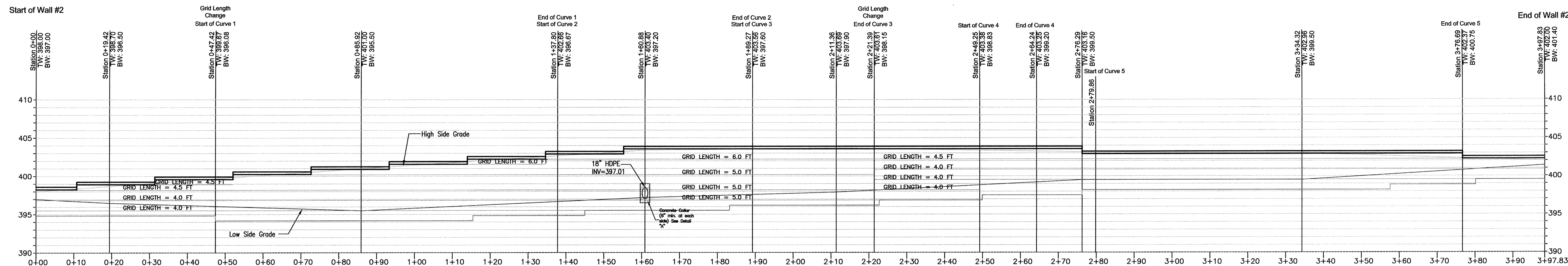
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CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 8-10-16
DIRECTOR DATE

NO AS-BUILT INFORMATION ON THIS SHEET

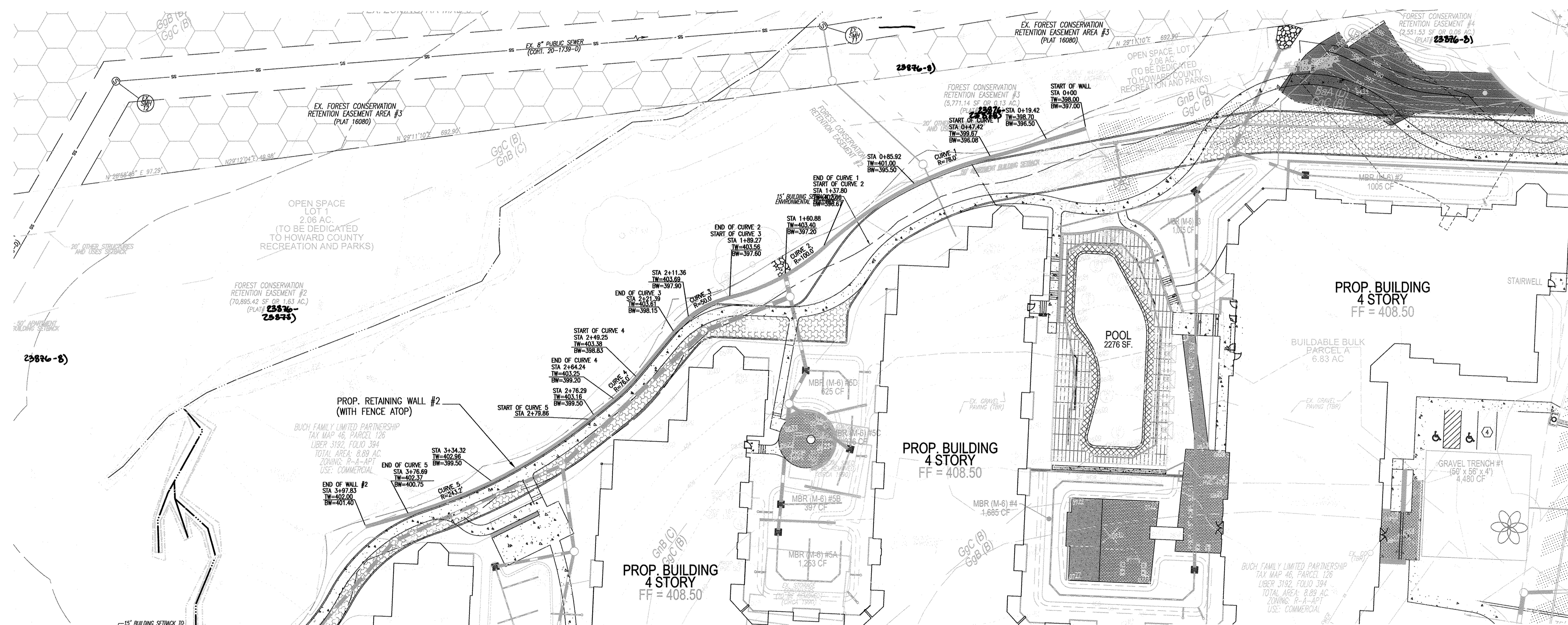
AS-BUILT- OCT. 2018

SDP-15-064



RETAINING WALL #2 PROFILE
 HORIZONTAL SCALE: 1"=15'
 VERTICAL SCALE: 1"=7.5'

NOTES:
 TW: Proposed Top Grade EL
 BW: Proposed Bottom Grade EL
 ALL GEOGRIDS ARE MIRAFI 5XT



SITE PLAN
 SCALE: 1"=30'

CONSTRUCTION NOTES FOR WALL 2:

1. WALL 2 IS A SEGMENTAL BLOCK AND GEOGRID WALL THAT WILL BE CONSTRUCTED MAINLY IN FILL AREA.
2. CONSTRUCTION ACTIVITIES SHOULD NOT TAKE PLACE IN FRONT OF WALL FACE IN BUFFER AREA.
3. WALL CONSTRUCTION WILL TAKE PLACE FROM THE BACK SIDE OF WALL, WORKING FROM THE FACE OF WALL AND EXTENDING BACK WITH THE GEOGRIDS FROM THE BUCH LLLP PROPERTY. NO DISTURBANCE SHOULD TAKE PLACE BEYOND FACE OF WALL.
4. WALL MAINTENANCE WILL BE PERFORMED FROM THE BACK SIDE OF THE WALL FROM THE BUCH LLLP PROPERTY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 8-10-16
 DIRECTOR

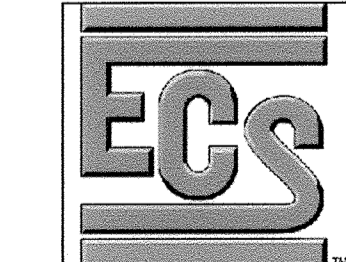
AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 [Signature] 16193 3/12/19
 P.E. # DATE



OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
SITE RETAINING WALL #2
PLAN & PROFILE
THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT
 ZONED: RR-APT (L. 3192 / F. 394)
 PARCEL 126 HOWARD COUNTY, MARYLAND



1340 CHARWOOD ROAD
 SUITE A
 HANOVER, MARYLAND 21076
 PHONE: (410) 859-4300
 FAX: (410) 859-4324

DESIGN BY: DMA
 DRAWN BY: DMA
 CHECKED BY: HMA
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 7272-B

PROFESSIONAL CERTIFICATE
 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. 28559, EXPIRATION DATE: 12-31-2017

16 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

MSE RETAINING WALL SPECIFICATION GUIDELINES

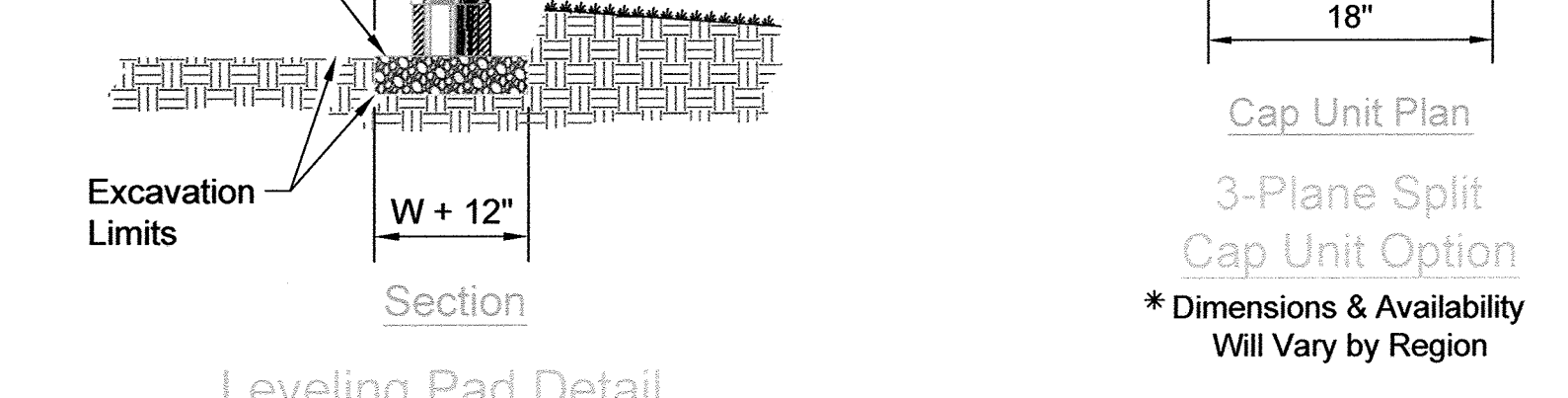
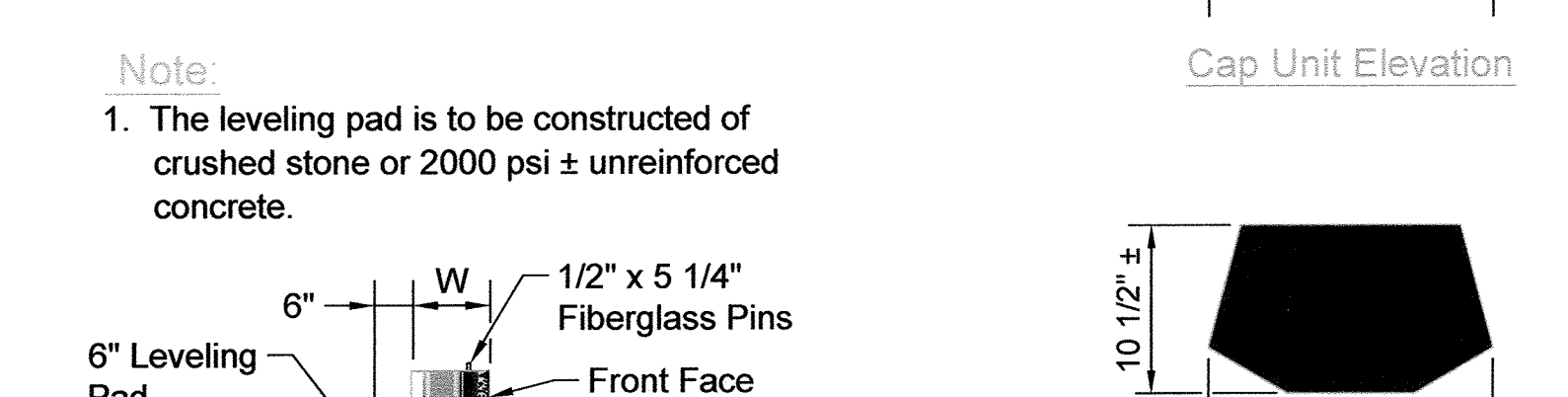
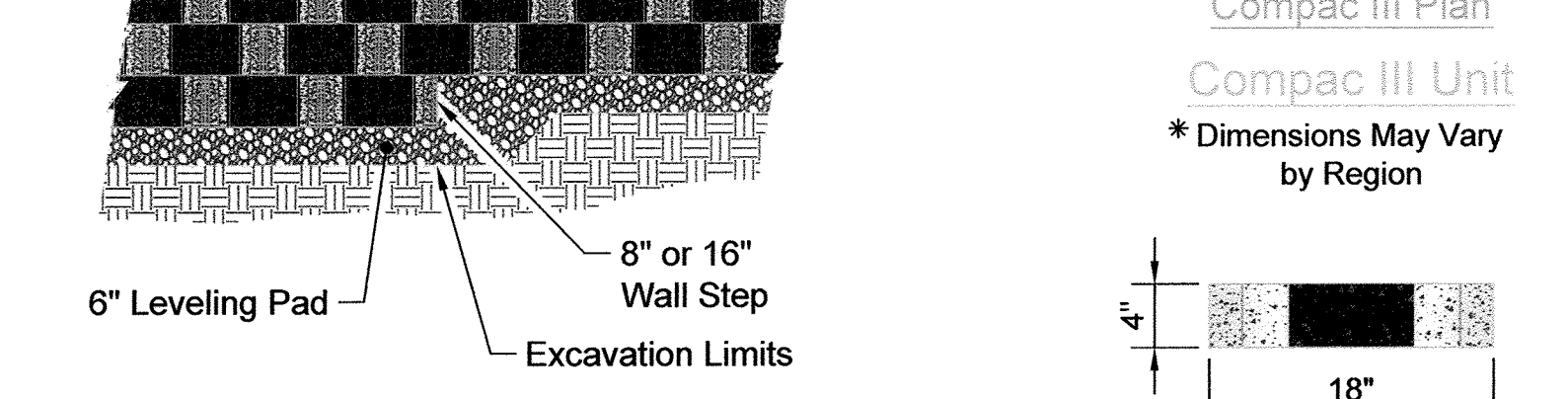
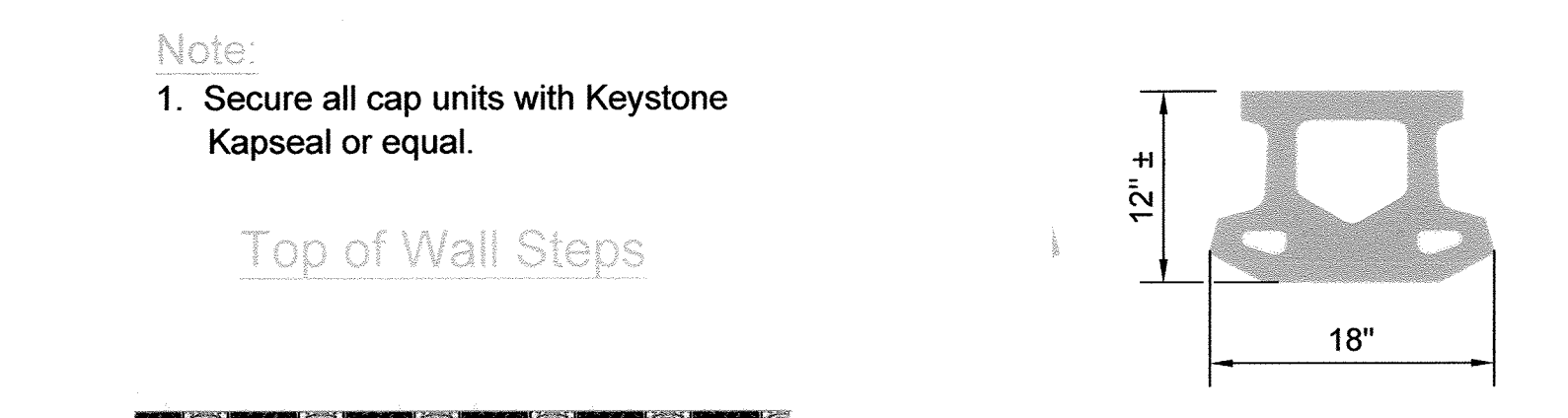
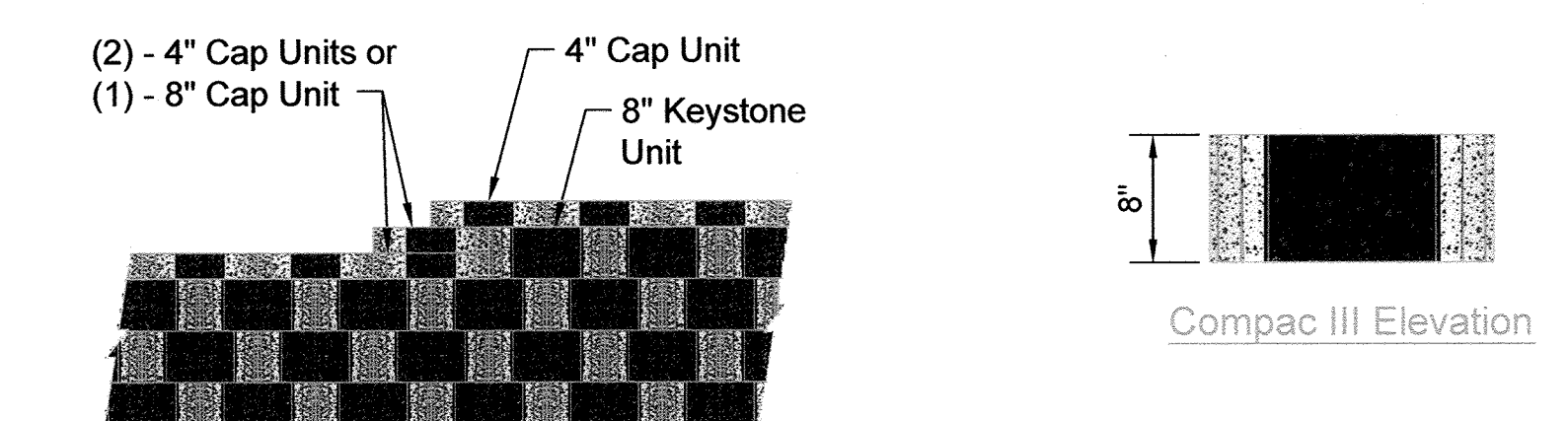
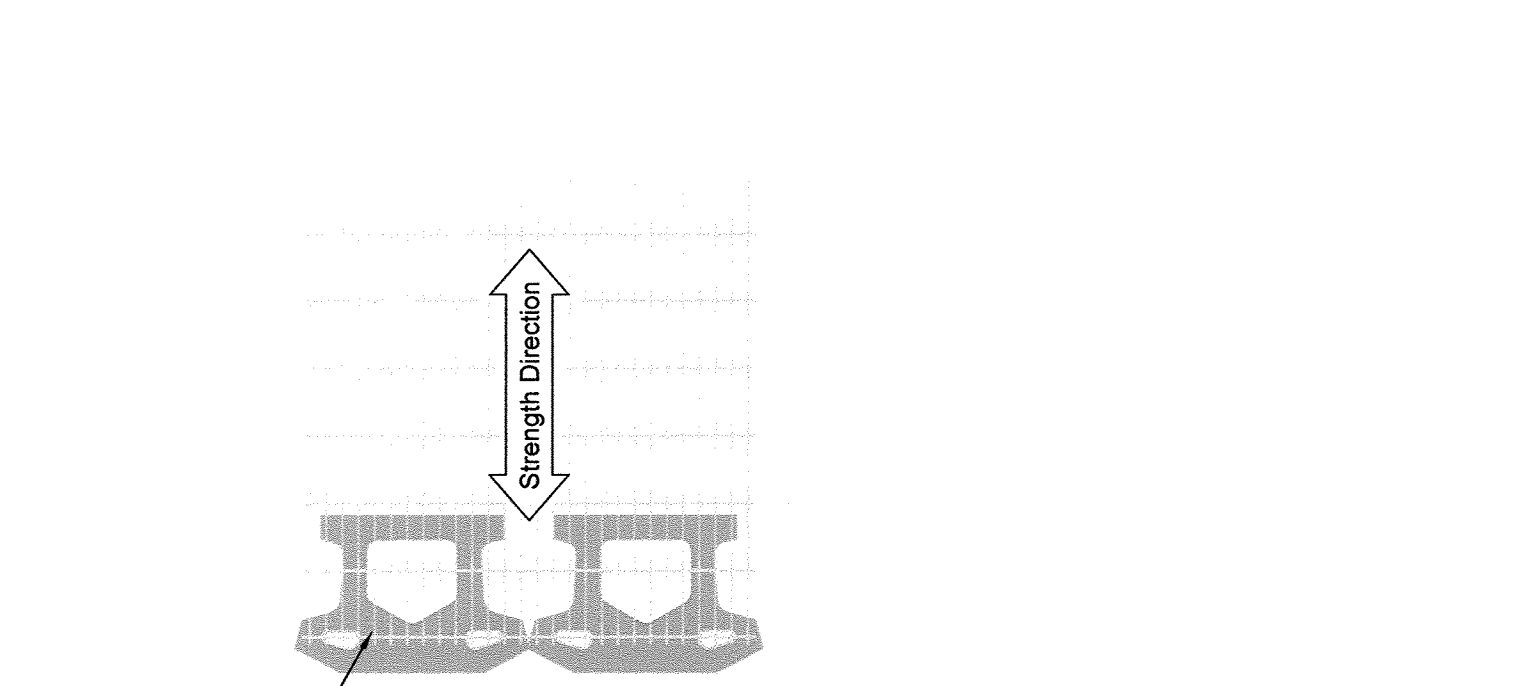
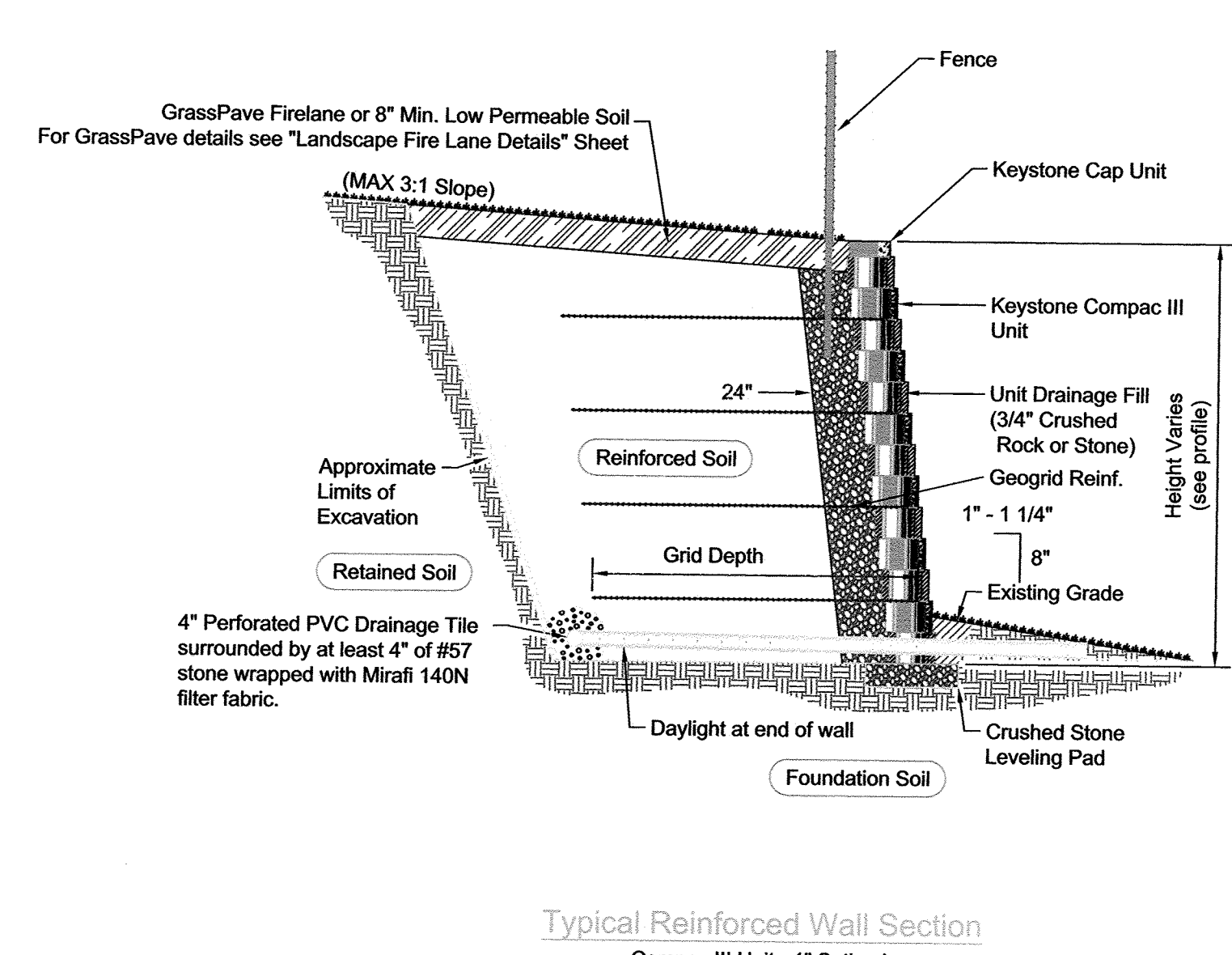
PART 1: GENERAL
 1.01 Description
 A. Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.
 B. Work includes furnishing and installing concrete modular block retaining wall units to the lines and grades shown on the construction drawings and as specified herein.
 C. Work includes preparing foundation soil, furnishing and installing leveling pad, unit fill and reinforced backfill to the lines and grades shown on the construction drawings.
 D. Work includes furnishing and installing all related materials required for construction of the retaining wall as shown on the construction drawings.
 1.02 Reference Standards
 A. ASTM C 90 Lead Bearing Concrete Masonry Units.
 B. ASTM C 140 Sampling and Testing Concrete Masonry Units.
 C. ASTM D 448 Sizes of Aggregate for Road and Bridge Construction.
 D. ASTM D 698 Laboratory Compaction Characteristics using Standard Effort.
 1.03 Delivery, Storage and Handling
 A. Contractor shall check the materials upon delivery to assure that proper materials have been received.
 B. Contractor shall prevent excessive mud, wet cement, epoxy, and similar materials (which may affect themselves) from coming in contact with the materials.
 C. Contractor shall protect the materials from damage and exposure to sunlight. Damaged materials shall not be incorporated into the retaining wall structure and backfill.
 1.04 Quality Assurance
 A. Owner will be responsible for soil testing and construction observations for quality control during earthwork and retaining wall construction operations.

PART 2: MATERIALS
 2.01 Definitions
 A. Modular Wall Units - KEYSTONE modular concrete facing and corner units, machine made from portland cement, water, and mineral aggregates.
 B. Structural Geogrid - a structural geogrid formed by a regular pattern of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.
 C. Unit Fill/Drainage Aggregate - drainage aggregate, such as No. 57 Stone, which is placed within the cells of the modular concrete units and immediately behind the units to a width of at least 12 inches.
 D. Reinforced Backfill - compacted soil which is within the reinforced soil volume as shown on the plans.
 E. Excavation Face - the interface between the reinforced backfill and the retained fill. During construction, measures shall be taken to avoid developing a shear plane at this interface.
 F. Retained Backfill - On-site material located behind the reinforced zone of soil.
 2.02 Concrete Units
 A. Concrete segmental units shall conform to the requirements of NCMAT TEK 2-4 and have a minimum 28-day compressive strength of 4,000 psi. The units shall also pass 150 freeze thaw cycles in water with less than 1% weight loss for samples tested in accordance with ASTM C-1262.
 B. Wall Face Units for general wall construction shall be KEYSTONE Compac III Units. Sculptured face or straight (flat) face may be used.
 C. Top of Wall Cap Units shall be KEYSTONE Cap Units with fiberglass connecting pins.
 D. KEYSTONE Compac III Units shall be tan in color, based on manufacturer's availability.
 2.03 Fiberglass Connecting Pins
 A. Connecting pins shall be 1/2" diameter thermoset isophthalic polyester resin-pultruded fiberglass reinforcement rods supplied by the unit manufacturer.
 2.04 Construction Adhesive
 A. Construction adhesive for top of wall cap blocks shall be KEYSTONE KapSealTM. Material shall conform to ASTM 2339 and shall be supplied by the block unit supplier.
 2.06 Soil Fill Materials
 A. Base Leveling and Pad Material
 1. Material shall consist of crushed stone (GA S/B) as shown on the construction drawing. The leveling pad shall be, at a minimum, 6-inches thick. MSHA No. 57 Stone or pea gravel is not permitted.
 B. Unit Fill/Drainage Aggregate
 1. Fill for units shall be free draining crushed stone or gravel, with a maximum aggregate size of 1/2" to 3/4" and no more than 5% passing the No. 50 sieve and conforming to ASTM D 448. Gradation of the unit fill shall be approved by the Geotechnical Engineer. Pea gravel shall not be used. MSHA No. 57 stone may be used.
 C. Reinforced Backfill
 1. Material shall consist of soil classified as SM or more granular soils per USCS with minimum soil parameters as indicated under design parameters. The backfill material shall contain no particles greater than 2.5 inches in diameter. The backfill material shall contain no more than 30 percent by weight retained on the US Standard No. 200 sieve. Other backfill materials may be approved by the Geotechnical Engineer.
 D. Impervious Soil
 1. Material may be imported or site excavated soils exhibiting a USCS designation of a lean clay (CL) or clayey sand (SC). The material shall contain no less than 40 percent by weight passing the US Standard No. 200 sieve and exhibit a plasticity index no less than 4 and no greater than 20. Other materials may be approved by the Geotechnical Engineer.
 E. Sample Submittal
 1. The contractor shall submit samples and material specifications of the proposed backfill soils (unit fill, pad material, reinforced backfill) to the Geotechnical Engineer for approval.
 2. Soil must meet or exceed the friction angle specified in design parameters.
 2.07 Structural Geogrid
 A. The geogrid identified for the retaining wall consists of the following:
 Mirafi 51T.
 B. The material shall be protected from sunlight and weather while stored on site in accordance with the manufacturer's recommendation.
 2.08 Geotextile
 A. A non-woven geotextile shall be utilized as shown on the plans to provide a filter between the unit fill/drainage aggregate and the reinforced backfill.
 B. The geotextile shall consist of a Mirafi 140N.
 C. Where geogrids are located, the geotextile shall be placed as illustrated on the plans. At junctions and ends, the geotextile shall be overlapped at least 12 inches. The geotextile shall be placed so that intimate contact is made between the geotextile and the backfill material.
 D. Rippled or otherwise damaged material shall not be used. The material shall be protected from sunlight and weather while stored on site in accordance with the manufacturer's recommendation.

PART 3: INSTALLATION
 3.01 Excavation
 A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall be careful not to disturb embankment and foundation materials beyond lines shown.
 B. All existing topsoil, rootstock and other soft or unstable materials shall, at a minimum, be removed from the footprint of the retained soil mass.
 C. If groundwater is encountered during the excavation of the backslope, a backslope drainage system shall be utilized. The system shall tie into the internal wall drainage system to provide adequate release of any water which accumulates behind the reinforced zone.
 3.02 Foundation Preparation
 A. Foundation shall be excavated as required for leveling pad dimensions shown on the construction drawings, or as directed by the Geotechnical Engineer.
 B. The required bearing pressure beneath the footing of the wall must be verified in the field by a Geotechnical Engineer.
 C. Unsuitable soils shall be removed and replaced with approved material.
 D. Over-excavated areas shall be backfilled with approved, compacted backfill material or as approved by the Geotechnical Engineer.
 3.03 Base Leveling Pad
 A. Leveling pad materials shall be placed upon an approved foundation as shown on the construction drawings to a minimum thickness of 6 inches.
 B. Aggregate material shall be compacted to provide a dense, level surface on which to place the first course of modular units. Compaction shall be to at least 95% of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). Leveling pad shall be prepared and leveled to ensure complete contact of retaining wall unit with base.
 3.04 Unit Installation
 A. The first course of concrete modular units shall be carefully placed on the base leveling pad. Each unit shall be checked for level (in both directions) and alignment.
 B. Install fiberglass connecting pins and fill all voids in and around the modular units with unit fill material. Tamp or rod unit fill to ensure that all voids are completely filled.
 C. Sweep excess material from top of units and install the next course. Ensure that the units of each course are completely filled, backfilled and compacted prior to proceeding to next course.
 D. Place each subsequent course, ensuring that pins protrude into adjoining courses a minimum of 1 inch. Two pins are required per unit. Pull each unit forward to obtain the desired offset (as noted on the plans), away from the fill zone, locking against the pins in the previous course and backfill as the course is completed.
 E. Repeat procedure to the extent of wall height. Wall construction shall not exceed 2 courses in height before reinforced backfill is placed.
 F. Follow wall erection and unit fill placement closely with any other backfilling required. Compaction of all soils shall be to 95% of the maximum dry density as determined in accordance with ASTM D 698.
 G. The geogrid shall be connected to the modular wall units by placing the geogrid over fiberglass pins and laying the grid back to the fill side.
 H. A hand-operated compaction equipment shall be allowed within 5 feet of the back surface of the KEYSTONE or equivalent units.
 I. Backfill shall be placed from immediately behind the wall towards the excavation face/retained soils and compacted to the specifications presented herein with appropriate compaction equipment.
 J. Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles shall not be permitted over the geogrid.
 K. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds (less than 10 mph). Avoid sudden braking and sharp turning.
 L. The suitability of the fill material must be confirmed by a Geotechnical Engineer.
 M. The upper 8 inches of wall backfill shall consist of impervious soil, compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of at the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.
 3.05 Geogrid Installation
 A. The geogrid type and length (direction perpendicular to the wall face) shall conform to those indicated on the construction drawings. Geogrid shall be laid continuously at the proper elevations and orientation as shown on the construction drawings or as directed by the Geotechnical Engineer.
 B. Correct orientation (roll direction) of the geogrid shall be verified by the Contractor.
 C. The geogrid shall be connected to the modular wall units by placing the geogrid over fiberglass pins and laying the grid back to the fill side.
 D. A hand-operated geotextile shall be located between the drainage aggregate/unit fill and the reinforced backfill. The geotextile shall be folded back parallel, above and below the geogrid as necessary to ensure continuous grid placement.
 E. The geogrid shall be pulled taut to set the geogrid against the fiberglass pins and to eliminate loose folds in the material. The fill surface shall be level. To tension the geogrid, backfill shall be placed over the geogrid from immediately behind the wall to the back end of the geogrid.
 F. No geogrid overlap will be allowed in any length of geogrid perpendicular to the wall face except at corners or angled locations. The geogrid shall overlap rather than provide no coverage. A minimum of 3 inches of soil cover is required between over lapping layers of geogrid.
 3.06 Drainage Installation
 A. Provide 4-inch weep holes every 8 feet along the wall.
 3.07 Fill Placement
 A. Backfill material shall be placed in 8 inch loose lifts and compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of at the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.
 B. Backfill shall be placed, spread and compacted in such a manner that minimizes the development of slacks or loss of pretension of the geogrid. Backfill shall be placed in horizontal layers. The excavation face shall be stepped or notched to provide compaction of backfill on a level surface and to increase the interlock between the retained soils and the reinforced backfill.
 C. Only hand-operated compaction equipment shall be allowed within 5 feet of the back surface of the KEYSTONE or equivalent units.
 D. Backfill shall be placed from immediately behind the wall towards the excavation face/retained soils and compacted to the specifications presented herein with appropriate compaction equipment.
 E. Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles shall not be permitted over the geogrid.
 F. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds (less than 10 mph). Avoid sudden braking and sharp turning.
 G. The suitability of the fill material must be confirmed by a Geotechnical Engineer.
 H. The upper 8 inches of wall backfill shall consist of impervious soil, compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of at the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.
 3.08 Cap Installation
 A. Provide permanent mechanical connection to wall units with KEYSTONE KapSealTM.
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 D. Backfill and compact to finished grade.

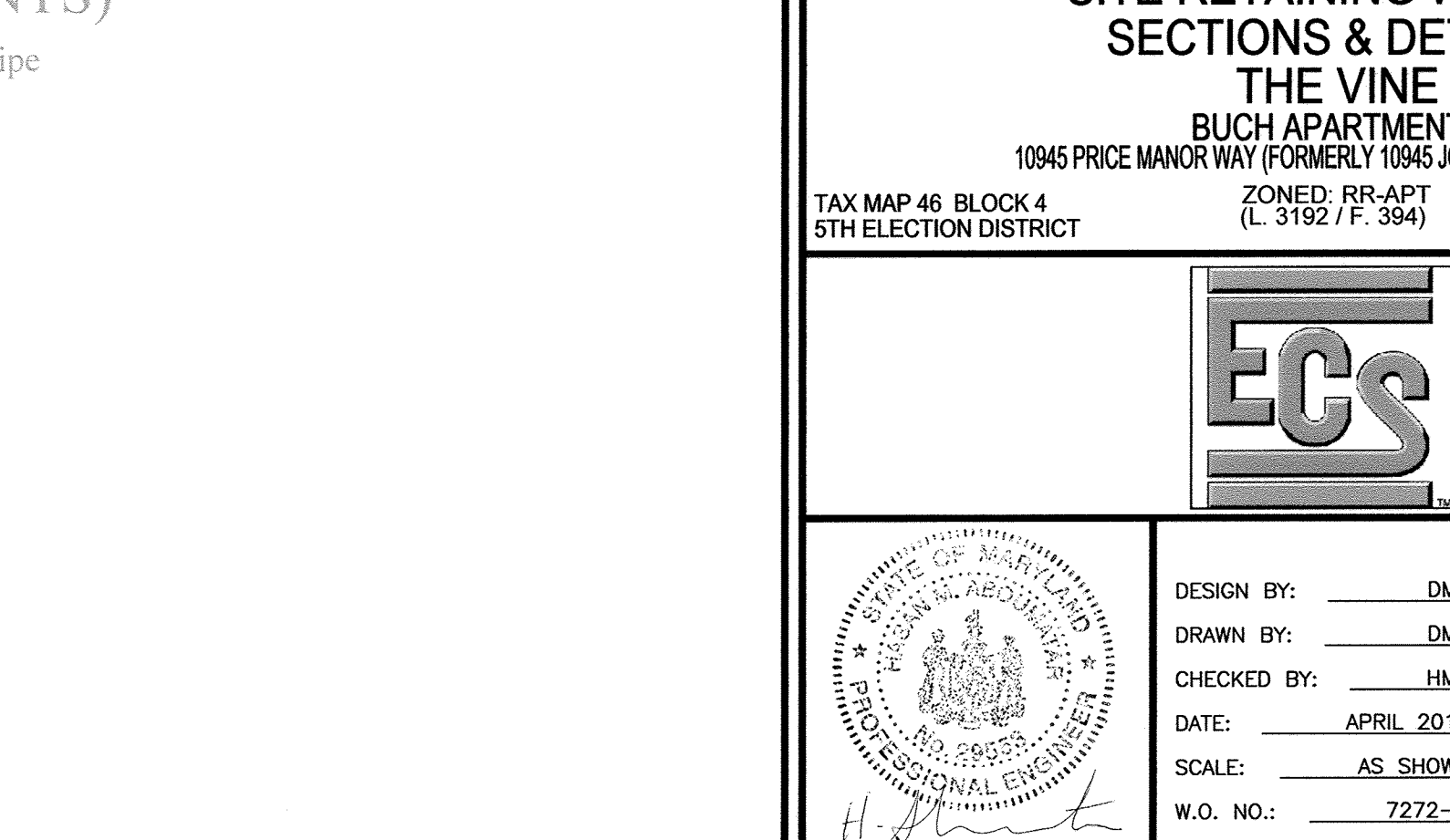
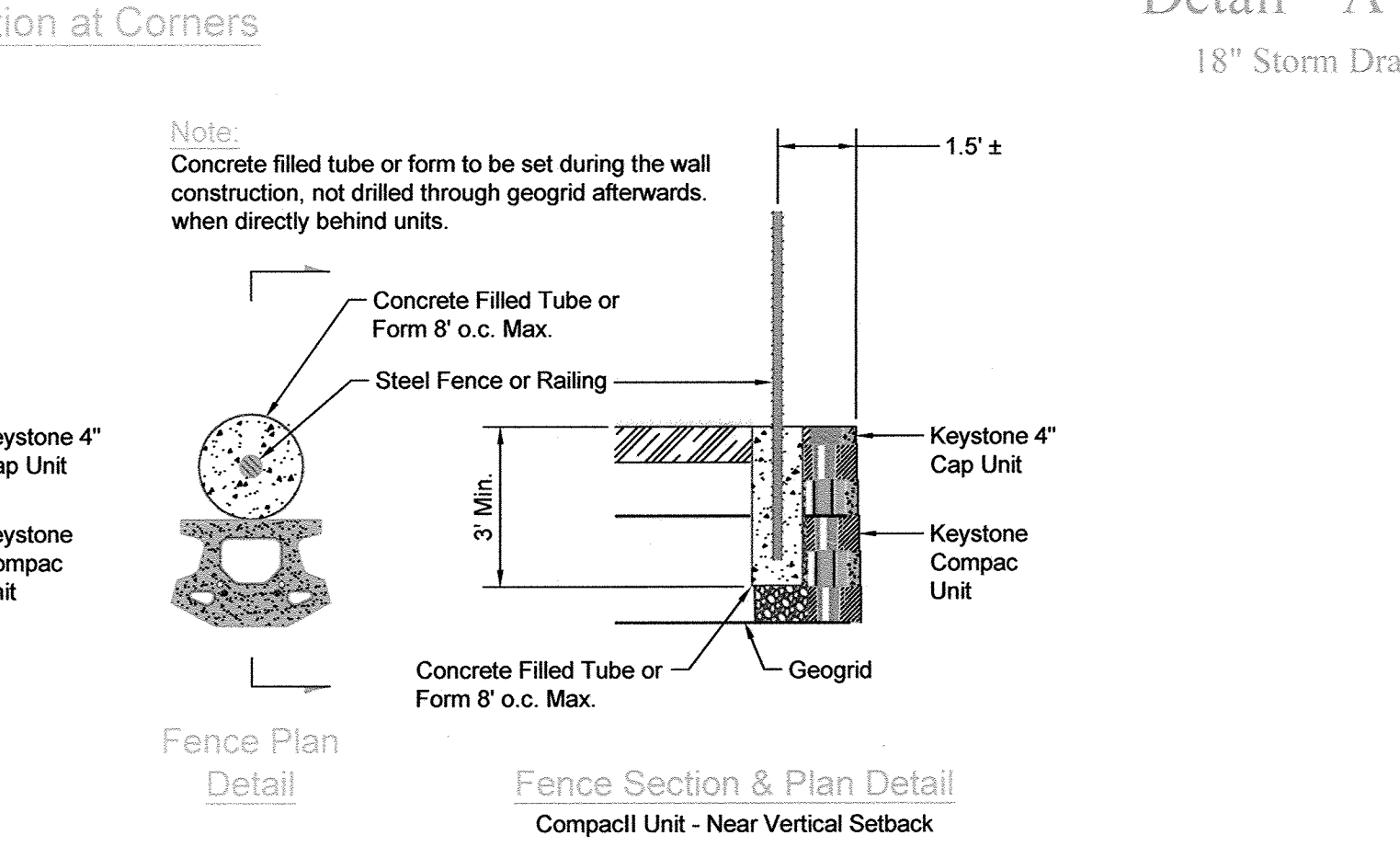
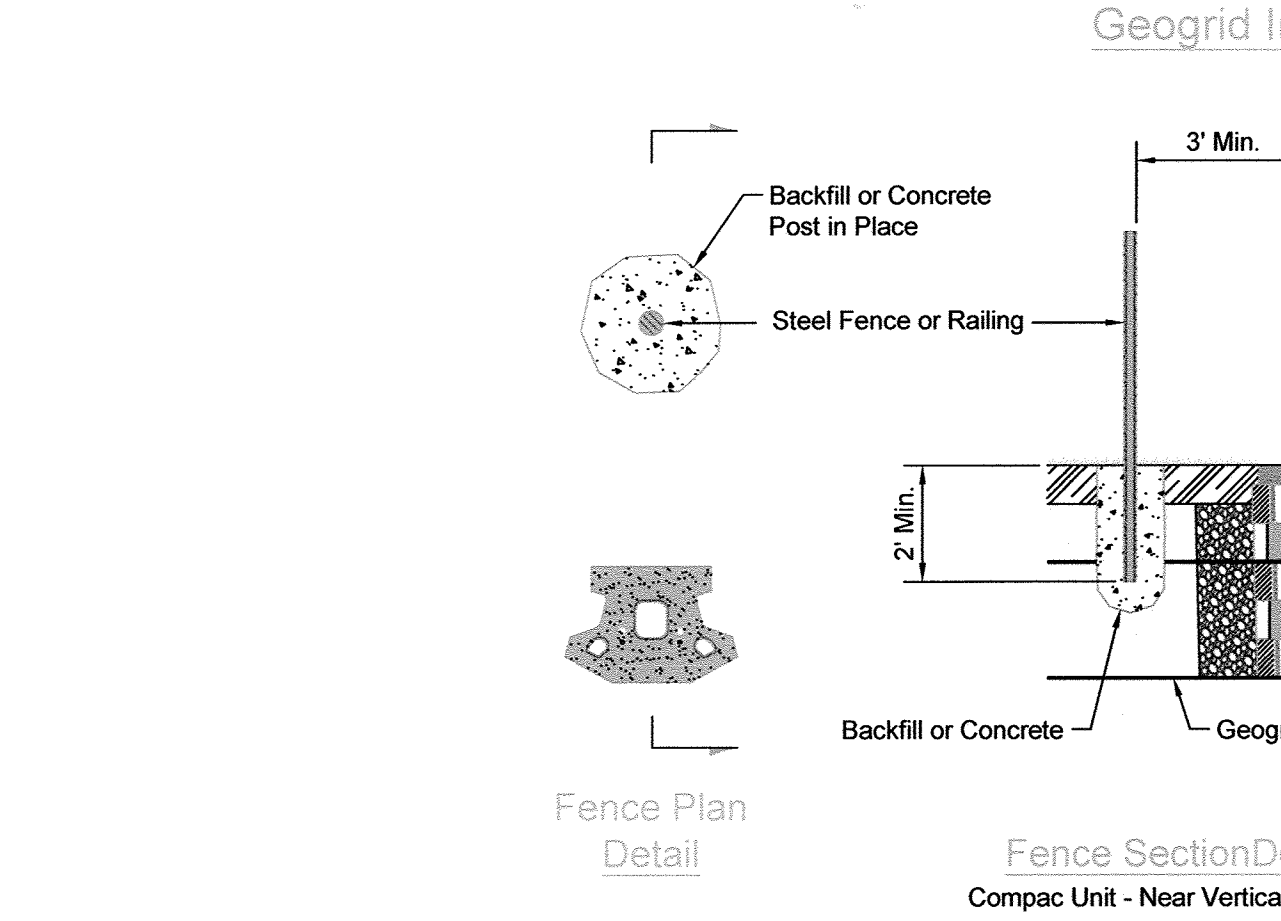
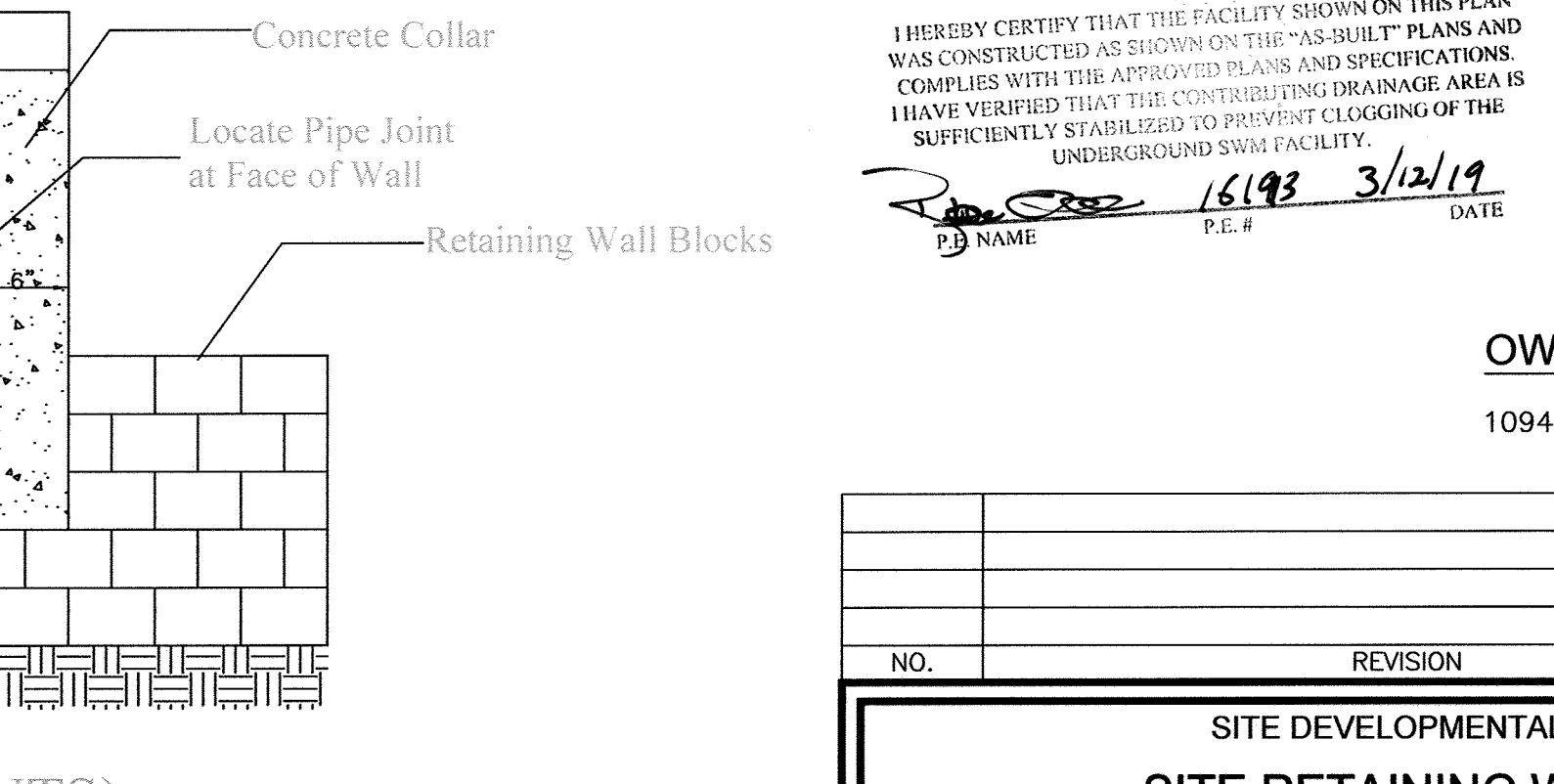
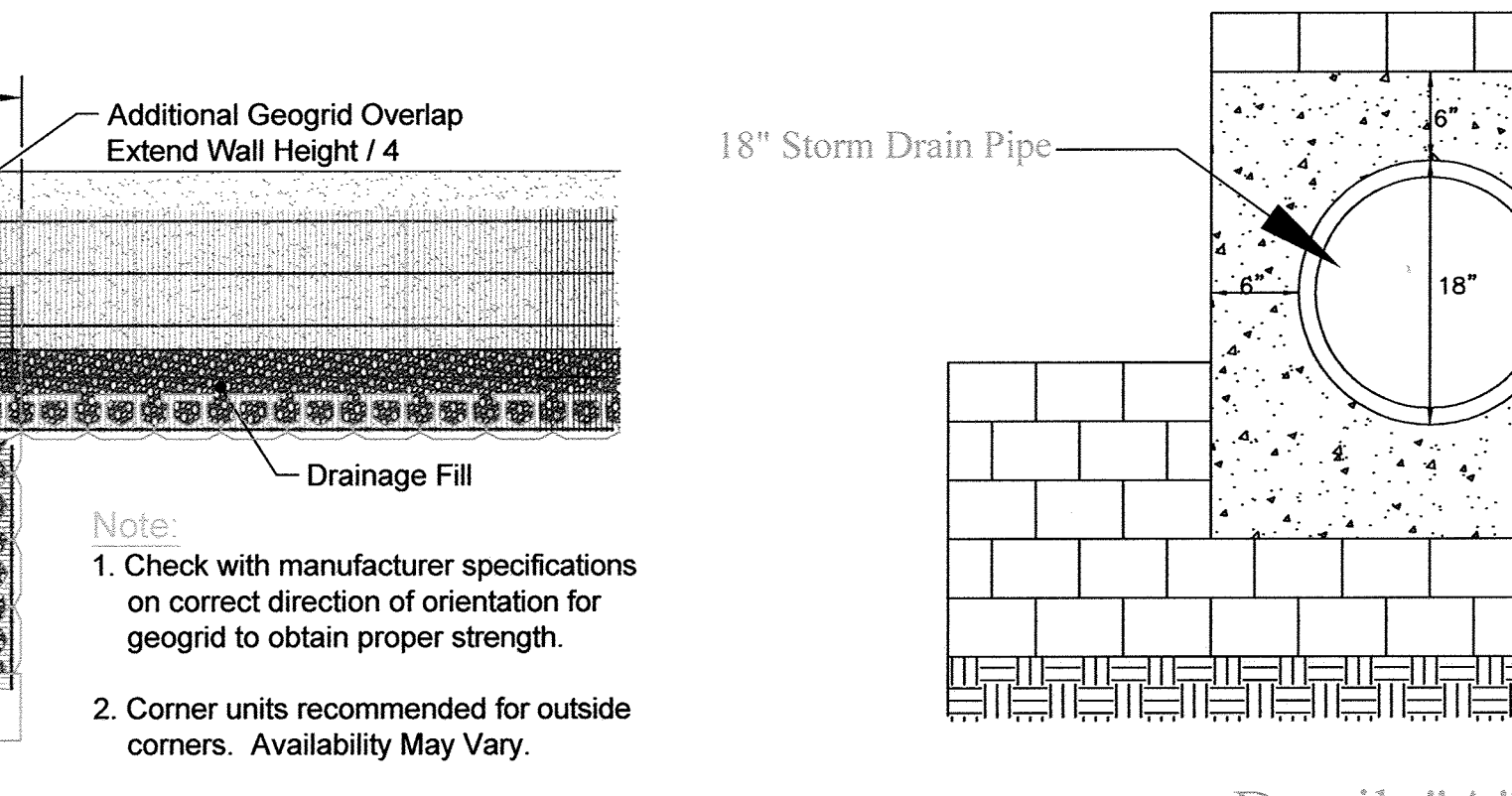
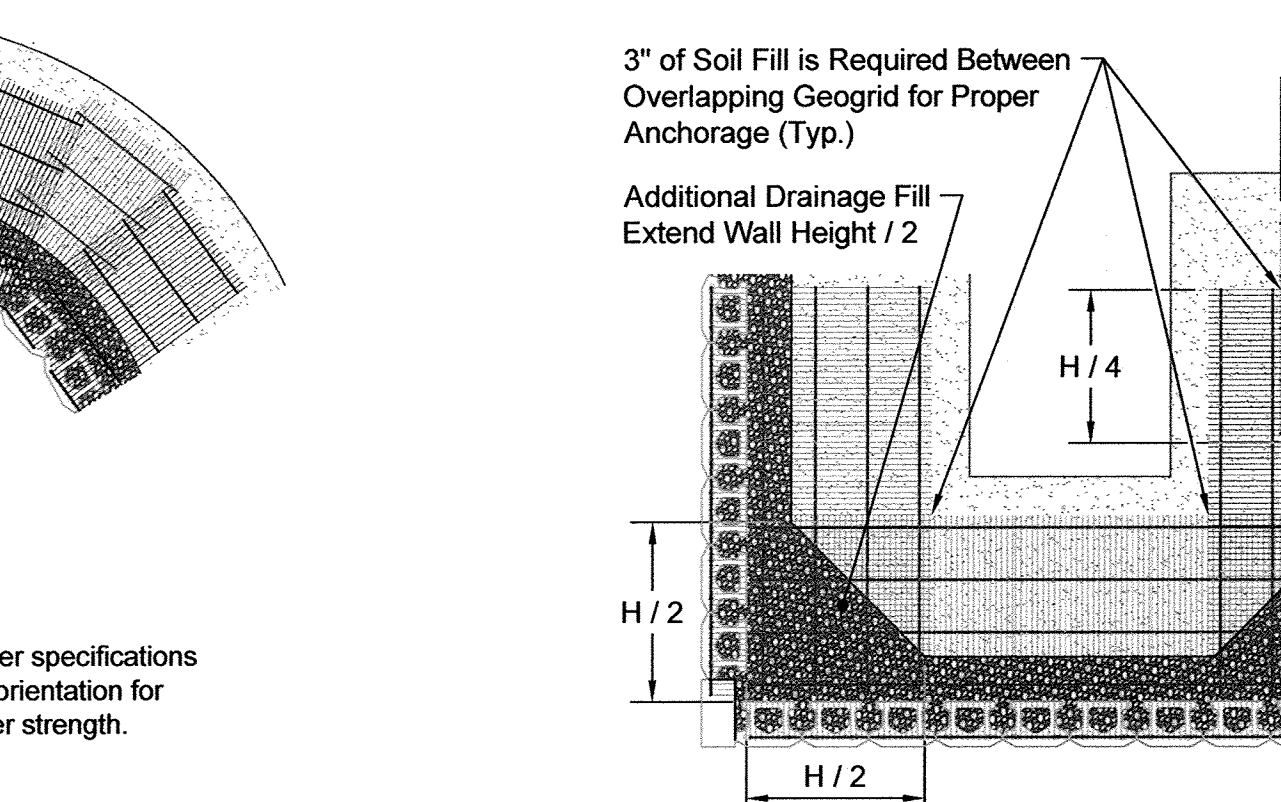
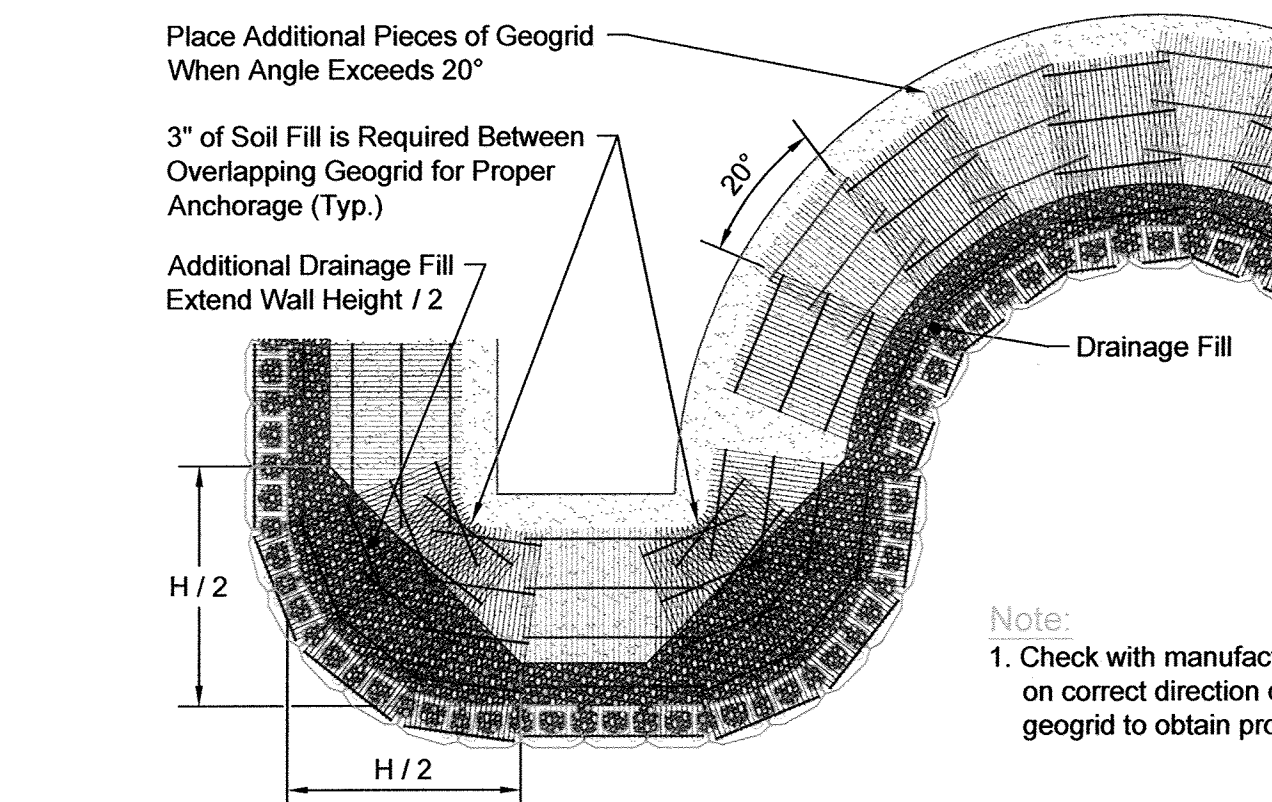
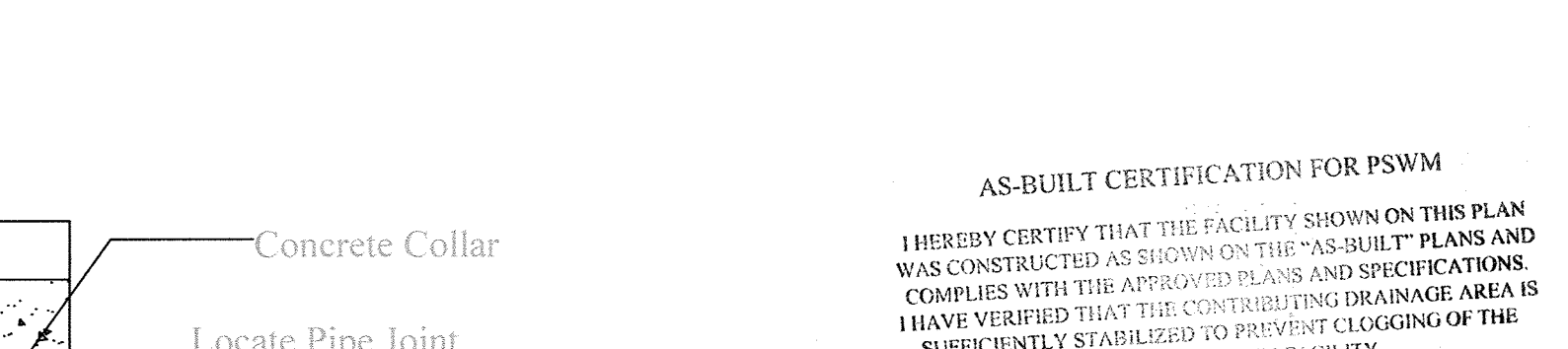
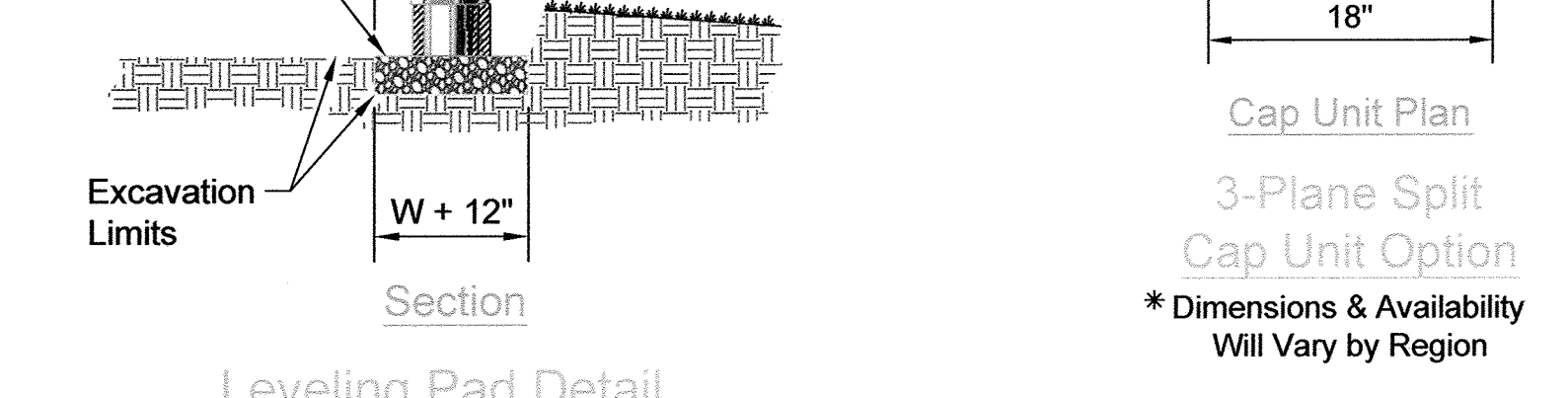
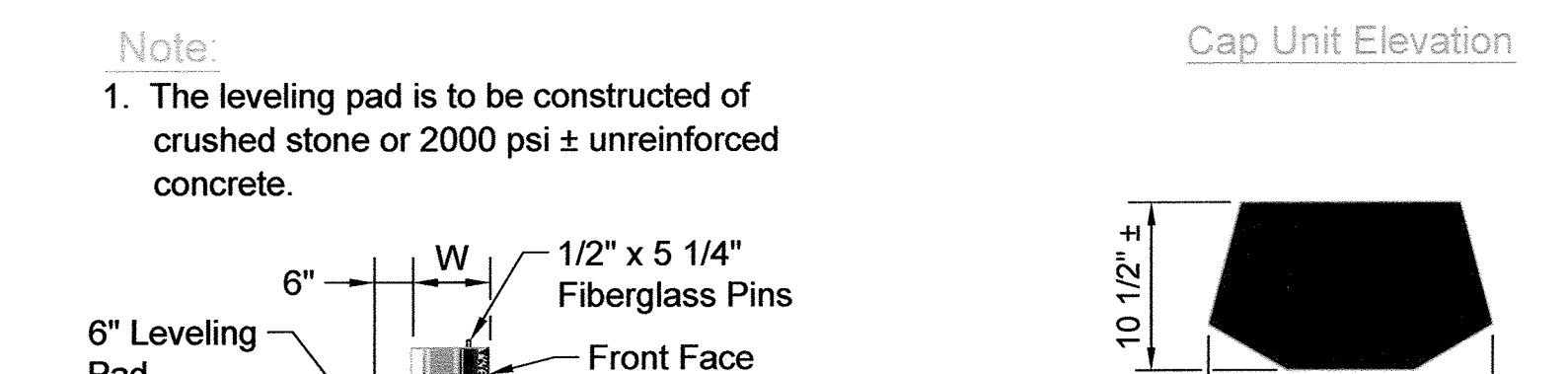
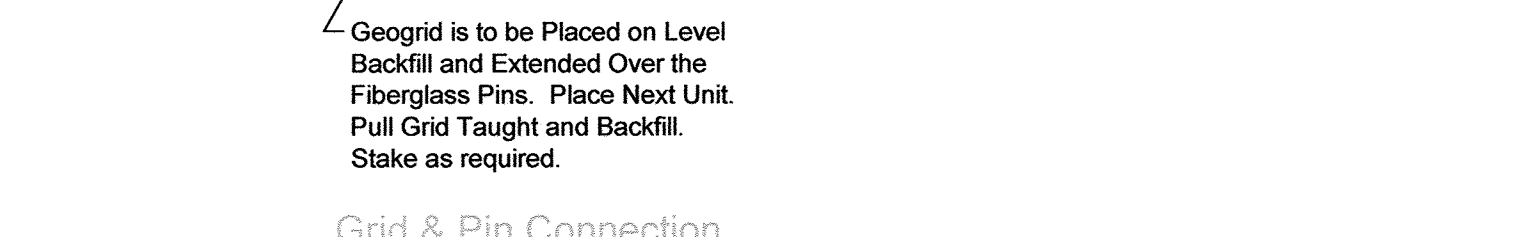
DESIGN PARAMETERS

Characteristics:	Soil Parameters:	Minimum Friction Angle	Minimum Unit Weight (pcf)
Configuration:	Soil Type		
Battered face wall (4 DEG.)	Reinforced fill (see notes)	28	120
4'-8" / 1,500	Retained soils	28	120
Maximum Exposed Wall Height / Minimum Allowable Bearing Pressure (psf):	Foundation soils	28	120
Backslope Angle:			
Varies (3H:1V maximum)			
Toe Slope Angle:			
Varies (3H:1V maximum)			
Wall Embedment:			
Varies (12 inches minimum) (See Profile)			



DESIGN PARAMETERS

Characteristics:	Soil Parameters:	Minimum Friction Angle	Minimum Unit Weight (pcf)
Configuration:	Soil Type		
Battered face wall (4 DEG.)	Reinforced fill (see notes)	28	120
4'-8" / 1,500	Retained soils	28	120
Maximum Exposed Wall Height / Minimum Allowable Bearing Pressure (psf):	Foundation soils	28	120
Backslope Angle:			
Varies (3H:1V maximum)			
Toe Slope Angle:			
Varies (3H:1V maximum)			
Wall Embedment:			
Varies (12 inches minimum) (See Profile)			



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Olaf Blum 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter Wood 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Nadine Joffe 8-10-16
 DIRECTOR DATE

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE APPROVED DRAINAGE AREA IS HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

[Signature] 16193 3/2/19
 P.E. NAME DATE

OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

SITE DEVELOPMENTAL PLAN
SITE RETAINING WALL #2
SECTIONS & DETAILS
THE VINE
BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 TAX MAP 46 BLOCK 4 ZONED: RR-AP (L 3192 / F-394) PARCEL 128
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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DESIGN BY: DMA
 DRAWN BY: DMA
 CHECKED BY: HMA
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 7272-B

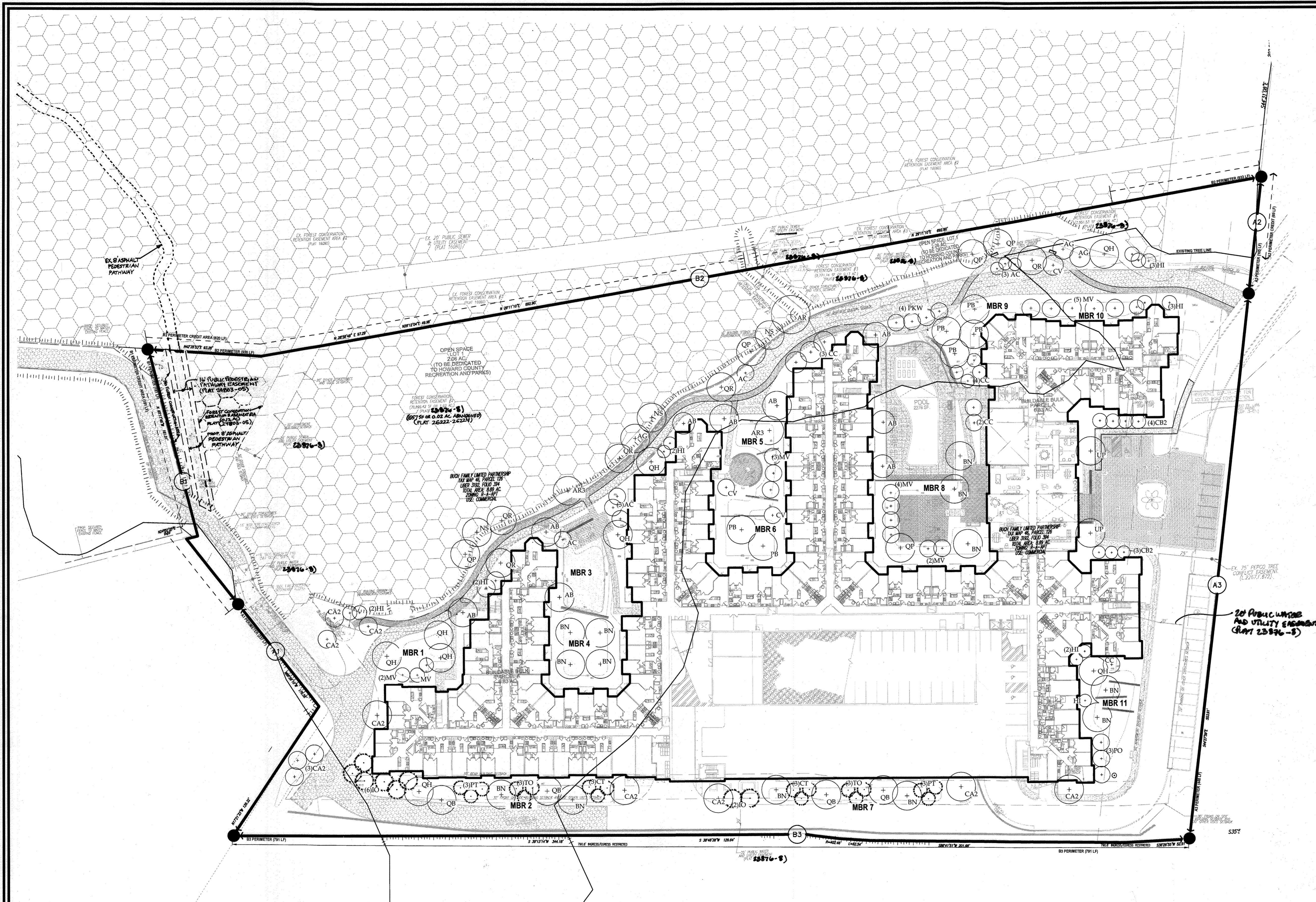
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 151053, EXPIRATION DATE: 12-31-2017

HASAN M. ABOUMATAR, P.E.

NO AS-BUILT INFORMATION ON THIS SHEET

17 SHEET OF 44

SDP-15-044



LEGEND

- (+) LARGE TREE
- (+) SMALL TREE
- (@) SHRUB
- (⊙) EVERGREEN
- QH TREE LABEL (REF. SHEET 19 FOR NAME)
- (A2) BOUNDARY LABEL
- (●) BOUNDARY MARKER
- PROPERTY LINE
- - - BOUNDARY CREDIT AREA
- - - EXISTING TREE LINE

TREE CATEGORY KEY LEGEND

- (○) PERIMETER A
- (○) PERIMETER B
- (○) APARTMENT AND PARKING
- (○) SPECIMEN TREE MITIGATION

AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: 16193 P.E.#: 3/12/19 DATE



OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

4	REVISE PLAN TO SHOW ABANDONED FC BASEMENT	08-21-22
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-18
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
LANDSCAPE PLAN
THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT (L 3192 / F 394)
 TAX MAP 46 BLOCK 4 PARCEL 126
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
 ARCHITECTURE, PLANNING, INTERIORS
 603 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202
 T: 410.685.6655 F: 410.539.6242
 312 BLACKWELL STREET, SUITE 1005 DURHAM, NORTH CAROLINA 27703
 T: 919.381.9322 F: 919.381.9323

	DESIGN BY: BR	PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 06-12-2018
	DRAWN BY: ECC	
	CHECKED BY: BR	
	DATE: APRIL 2016	
SCALE: 1"=40'-0"	W.O. NO.: 12-50.00	18 SHEET OF 44

- GENERAL NOTES:**
- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
 - FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
 - FOR AMENITY SPACES, SEE SHEET 20.
 - FOR PLANTING PLANS, SEE SHEETS 26 - 39.
 - MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEET 19.
 - SEE SHEET 19 FOR OVERALL PLANT LIST.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Clark 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kristi Shalaska 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
Valerio Joffe 8-10-16
 DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
Michael J. Buch 4-20-16
 SIGNATURE OF DEVELOPER DATE

AS-BUILT - OCT. 2018

REFERENCE 18 FOR SCHEDULES A, B, AND C

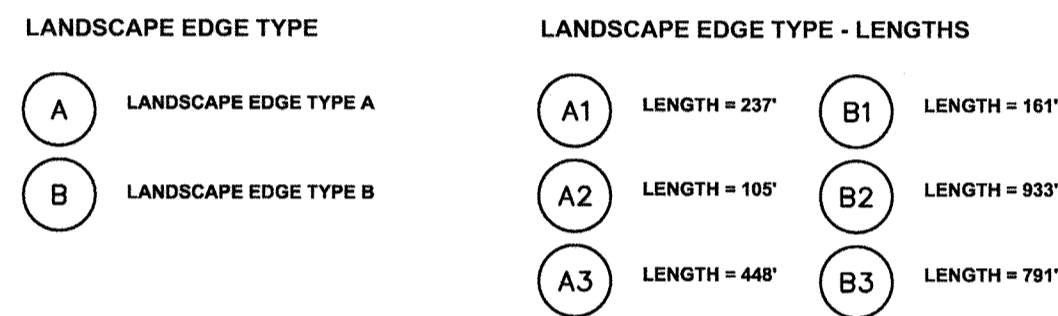
SCHEDULE A - PERIMETER LANDSCAPE EDGE							
CATEGORY	A1	A2	A3	B1	B2	B3	TOTAL
PERIMETER/FRONTAGE DESIGNATION							
LANDSCAPE TYPE							
LINEAR FEET OF ROADWAY	237'	105'	448'	161'	933'	791'	
FRONTAGE/PERIMETER							
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	YES 69'	NO	YES 161'	YES 620'	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS PROVIDED							
SHADE TREES	1-60 (4)	1-60 (1)	1-60 (7)	N/A	1-50 (6)	1-50 (16)	34
EVERGREEN TREES	0 (0)	0 (0)	0 (0)		1-40 (8)	1-40 (20)	28
SHRUBS	0 (0)	0 (0)	0 (0)		80 (8)	0 (0)	8
NUMBER OF PLANTS PROVIDED							
SHADE TREES	(4)	(1)	(7)	(*)	6 (6)	(13)	31
EVERGREEN TREES	(*)	(*)	(*)	(*)	0 (0)	26 (23)	23
OTHER TREES (2:1 SUBSTITUTION)	(*)	(*)	(*)	(*)	0 (0)	0 (0)	0
SHRUBS (2:1 SUBSTITUTION)	(*)	(*)	(*)	(*)	0 (0)	0 (0)	0
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)							

(*) PERIMETER LANDSCAPE EDGE TYPE A2, B1 AND B2 CREDITED (NOT REQUIRED) AS A RESULT OF EXISTING VEGETATION (FOREST).

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	30
NUMBER OF TREES REQUIRED (1 TREE PER 10 SPACES)	3
NUMBER OF TREES PROVIDED	3
SHADE TREES	0 (0)
OTHER TREES (2:1 SUBSTITUTION)	0 (0)
ISLAND REQUIREMENT - 200 SF MIN. (1 TREE @ 200 SF)	
ISLAND SPACE PROVIDED - 355 SF = 355 SF PER TREE	

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
CATEGORY	APARTMENT
NUMBER OF DWELLING UNITS	283
NUMBER OF TREES / ISLANDS REQUIRED	1:3 DU 94
NUMBER OF PLANTS PROVIDED	
SHADE TREES	51
EVERGREEN TREES (2:1 SUB)	0 (0)
OTHER TREES (2:1 SUB)	40 (20)
SHRUB (10:1 SUB)	230 (23)

SCHEDULE D - SPECIMEN TREE REPLACEMENT	
NUMBER OF SPECIMEN TREES TO BE REMOVED	7
NUMBER OF REPLACEMENT TREES REQUIRED (2.5-3" CAL)	1:2 PU 14
NUMBER OF PLANTS PROVIDED	
SHADE TREES	14



LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$47,700 FOR THE REQUIRED 131 SHADE TREES (\$300ea), 14 SPECIMEN MITIGATION TREES (\$300ea), AND 28 EVERGREEN TREES (\$150ea). ALL LANDSCAPING AND AMENITY FEATURES MUST BE IN PLACE BEFORE BOND IS RELEASED FOR SDP-15-044.
- MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS LISTED HEREWITH AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DUE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES, AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION WHEN NECESSARY, REPAIRED OR REPLACED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-18
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 8-10-16
 DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 4-20-16
 SIGNATURE OF DEVELOPER DATE

REFERENCE 18 FOR PLANT LABELS

PLANT LIST

SHADE TREES						
Qty.	Key	Botanical/Common Name	Size	Root	Comments	
3	AG	Acer griseum Paperbark Maple	2.5" Cal.	B&B		
12	AB	Acer rubrum ('Bowhall Red') Bowhall Red Maple	4" Cal.	B&B		
13	BN	Betula nigra 'Cully' Heritage River Birch	12' Ht.	B&B	Single Stem	
7	CB2	Carpinus betulus 'Fastigiata' Upright European Hornbeam	2.5" Cal.	B&B		
11	CA2	Carpinus caroliniana American Hornbeam	4" Cal.	B&B		
3	CV	Crataegus virdis 'Winter King' Winter King Hawthorn	1.5" Cal.	B&B		
17	MV	Magnolia virginiana Sweet Bay Magnolia	10' Ht.	B&B	Specimen	
3	NS	Nyssa sylvatica Black Gum	2.5" Cal.	B&B		
6	PB	Platanus x acerifolia 'Bloodgood' London Plane Tree	4" Cal.	B&B	Specimen Quality Straight Leader	
4	QB	Quercus bicolor Swamp White Oak	4" Cal.	B&B		
5	QP	Quercus palustris Pin Oak	4" Cal.	B&B		
8	QH	Quercus phellos Willow Oak	4" Cal.	B&B		
5	QR	Quercus rubra Red Oak	4" Cal.	B&B		
2	UA	Ulmus americana 'Princeton' American Princeton Elm	4" Cal.	B&B		

TOTAL SHADE TREES: 99

REFERENCE 18 FOR MICRO BIO-RETENTION AREAS

MBR 2, 7

SEED MIX

ERNST Custom Bio-retention Seed Mix

*NOTE: THE FOLLOWING MIXTURE AMOUNTS ARE FOR 1 LB. OF SEED MIX.

.02 lb	Agrostis perennans	Autumn Bentgrass
.08 lb	Carex vulpinoidea	Fox Sedge
.30 lb	Chasmanthium latifolium	River Oats
.07 lb	Chasmanthium laxum	Slender Woodoats
.14 lb	Elymus virginicus	Virginia Wildrye
.01 lb	Juncus effusus	Soft Rush
.01 lb	Juncus tenuis	Path Rush
.11 lb	Panicum anceps	Beaked Panicgrass
.02 lb	Sisyrinchium angustifolium	Narrowleaf Blue Eyed Grass
.015 lb	Asclepias incarnata	Swamp milkweed
.02 lb	Aster laevis	Smooth Aster
.003 lb	Baptisia australis	Blue False Indigo
.025 lb	Chamaecrista fasciculata	Partridge Pea
.015 lb	Coreopsis lanceolata	Lance Leaf Coreopsis
.03 lb	Echinacea purpurea	Purple Coneflower
.01 lb	Eupatorium coelestinum	Mistflower
.015 lb	Helopsis helianthoides	Ox-Eye Sunflower
.01 lb	Liatris spicata	Spiked Gayfeather
.005 lb	Monarda fistulosa	Wild Bergamot
.025 lb	Penstemon digitalis	Tall White Beardtongue
.014 lb	Penstemon laevigatus	Appalachian Beardtongue
.001 lb	Pycnanthemum incanum	Hoary Mountain Mint
.002 lb	Pycnanthemum tenuifolium	Narrowleaf Mountain Mint
.02 lb	Rudbeckia hirta	Blackeyed Susan
.005 lb	Senna hebecarpa	Wild Senna
.005 lb	Solidago juncea	Early Goldenrod
.005 lb	Solidago odora	Licorice Scented Goldenrod
.015 lb	Tradescantia virginiana	Virginia Spiderwort

NOTES:

- *As suggested by Ernst Seeds. Apply this mix at 20 lbs/acre.
- If seed of any wildflower is not available, add its percentage to the following species; Chasmanthium latifolium, Chasmanthium laxum, and/or Panicum anceps.
- For a cover crop, use 30 lbs/acre of grain rye

EVERGREEN TREES						
Qty.	Key	Botanical/Common Name	Size	Root	Comments	
6	CT	Chamaecyparis thyoides Atlantic White Cedar	8' Ht.	B&B		
8	IO	Ilex opaca American Holly	10' Ht.	B&B		
6	PT	Pinus taeda Loblolly Pine	8' Ht.	B&B		
6	TO	Thuja occidentalis American Arborvitae	8' Ht.	B&B		

TOTAL EVERGREEN TREES: 26 (23)

FLOWERING TREES						
Qty.	Key	Botanical/Common Name	Size	Root	Comments	
8	AC	Amelanchier canadensis American Serviceberry	8-10' Ht.	B&B		
10	CC	Cercis canadensis Red Bud	2.5" Cal.	B&B		
15	HI	Hamamelis x intermedia 'Arnold Promise' Arnold Promise Witch Hazel	8' Ht.	B&B	Specimen	
3	PO	Prunus x 'Okame' Okame Cherry	2.5" Cal.	B&B	Specimen Quality Matched	
4	PKW	Prunus serrulata 'Kwanzan' Kwanzan Cherry	12' Ht.	B&B	Specimen Quality Matched	

TOTAL FLOWERING TREES: 40 (20)

MBR 1, 4, 5, 6, 8, 9, 10, 11

- MBR 1 For planting list, see sheet 31
- MBR 4 For planting list, see sheet 30
- MBR 5 For planting list, see sheet 29
- MBR 6 For planting list, see sheet 29
- MBR 8 For planting list, see sheet 28
- MBR 9 For planting list, see sheet 27
- MBR 10 For planting list, see sheet 34
- MBR 11 For planting list, see sheet 33

MBR 3

LAWN

Planted Sod

MICROBIORETENTION PLANTING REQUIREMENTS			
MBR	AREA	STEMS REQUIRED	STEMS PROVIDED
#1	1635 SF	37	41
#2	1005 SF	23	SEEDED
#3	1075 SF	25	LAWN
#4	1685 SF	39	40
#5A	397 SF	9	13
#5B	376 SF	9	9
#5C	625 SF	14	14
6	1253 SF	29	31
#7	685 SF	32	SEEDED
#8	1800 SF	41	43
#9	1075 SF	25	28
#10	2008 SF	46	48
#11	1186 SF	27	28

NOTE: STEMS PROVIDED AS CALCULATED BASED ON QUANTITY OF SHRUBS PLANTED WITHIN THE LIMITS OF THE MICROBIORETENTION. TREES, PERENNIALS AND GROUNDCOVERS NOT INCLUDED IN ABOVE CALCULATIONS.

BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0229 STEMS PER SQUARE FOOT).

SHRUBS						
Qty.	Key	Botanical/Common Name	Size	Root	Comments	
15	AX	Abelia x grandiflora Glossy Abelia	5 Gal.	Cont.	30" O.C.	
35	CE	Callicarpa dichotoma 'Early Amethyst' Early Amethyst Beautyberry	5 Gal.	Cont.		
85	CB	Cornus sericea 'Bailey' Red Twig Dogwood	5 Gal.	Cont.		
22	FG	Fothergilla gardenii Dwarf Fothergilla	5 Gal.	Cont.	30" O.C.	
51	HQ	Hydrangea quercifolia Oakleaf Hydrangea	7 Gal.	Cont.		
64	RG	Rhus aromatica 'Gro-Low' Gro Low Sumac	5 Gal.	Cont.		
3	RT	Rhus typhina 'Tiger Eyes' Tiger Eyes Staghorn Sumac	5 Gal.	Cont.		
10	VC	Viburnum carlesii Korean Spice Viburnum	7 Gal.	Cont.		
25	VD2	Viburnum plicatum tom. 'Maresii' Double File Viburnum	5 Gal.	Cont.		

TOTAL SHRUBS: 310 (31)

NOTE:

ABOVE TOTAL QUANTITIES SATISFY REQUIREMENTS OF MINIMUM LANDSCAPE PLANS. FINAL QUANTITIES AND PLANTING LOCATIONS FOR PRICING ARE TO BE GENERATED FROM PLANTING SHEETS 26 THROUGH 39 AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

[Signature] 1/5/19 3/12/19
 P.E. NAME P.E.# DATE



OWNER/DEVELOPER

BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
LANDSCAPE CALCS AND PLANT LIST
 THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-PT (L. 3192 / F. 394) PARCEL 126
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
 ARCHITECTURE, PLANNING, INTERIORS
 WWW.DESIGNCOLLECTIVE.COM
 601 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202 T: 410.685.6655 F: 410.539.6242
 312 BLACKWELL STREET, SUITE 100 DURHAM, NORTH CAROLINA 27703 T: 919.381.9322 F: 919.381.9353

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 1039 EXPIRATION DATE: 08-12-2016

DESIGN BY: BR
 DRAWN BY: ECC
 CHECKED BY: BR
 DATE: APRIL 2016
 SCALE: 1" = 30'-0"
 W.O. NO.: 12-50.00

MATTHEW D'AMICO, RLA No.1039

19 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018

SITE AMENITIES LIST

COURTYARD 'A1'
(6,433 SF)

- A. SEATING AND GATHERING SPACE
- B. FREESTANDING GRILL (2)
- C. OUTDOOR KITCHEN
- D. FIRE PLACE

COURTYARD 'A2'
(9,921 SF)

- A. POOL AND POOL TERRACE
- B. SEATING AND GATHERING SPACE

COURTYARD 'B'
(4,300 SF)

- A. SEATING AND GATHERING SPACE
- B. FREESTANDING GRILL (2)
- C. DOG WALKING STATION

COURTYARD 'C'
(5,352 SF)

- A. OPEN LAWN
- B. SEATING AND GATHERING SPACE
- C. FREESTANDING GRILL (1)
- D. DOG WALKING STATION

COURTYARD 'D'
(3,729 SF)

- A. SEATING AND GATHERING SPACE
- B. FREESTANDING GRILL (1)
- C. DOG WALKING STATION

TRAIL
(17,025 SF)

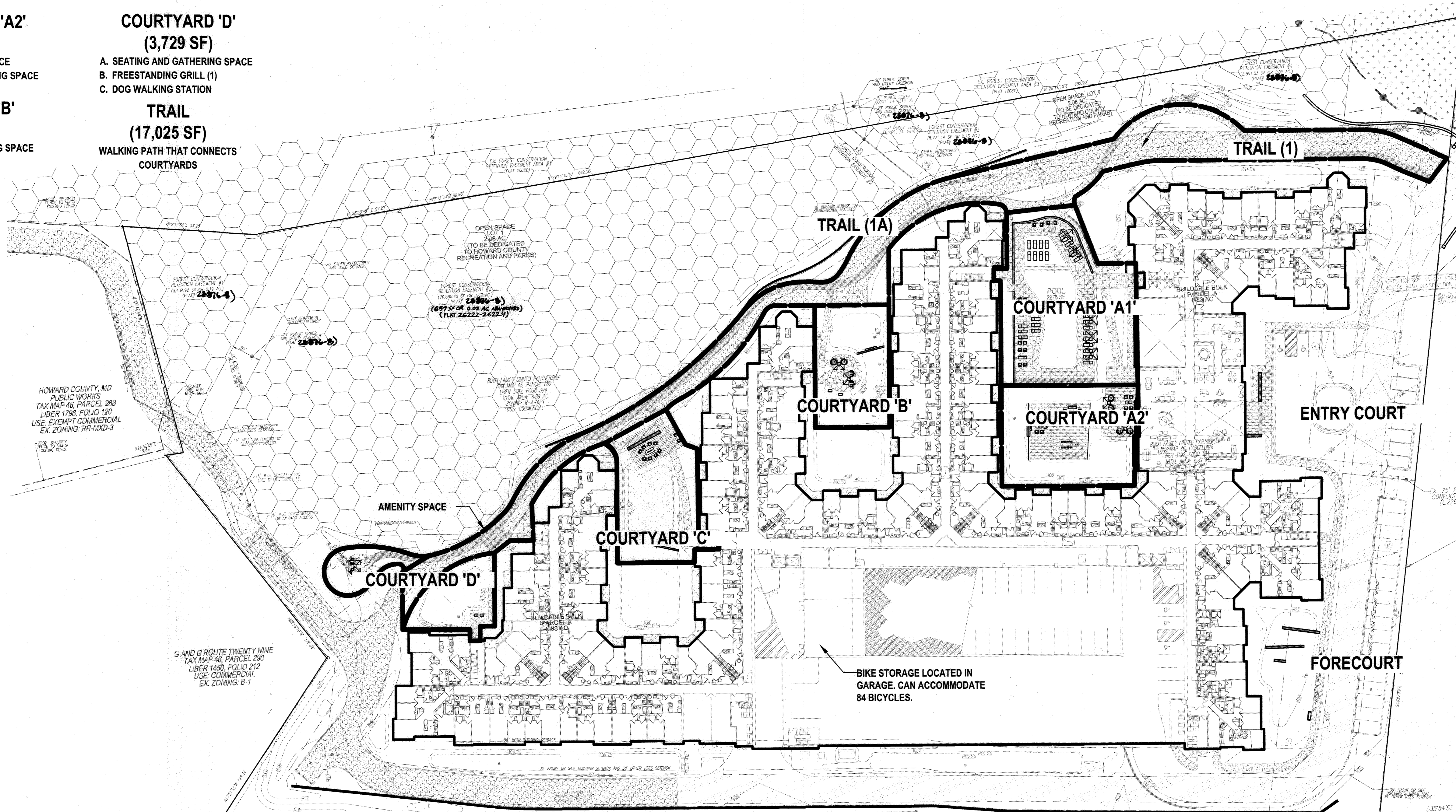
- WALKING PATH THAT CONNECTS COURTYARDS

TOTAL AREA:
46,760 SF

NOTE: AMENITIES ARE LABELED ON SHEETS 26 - 34.

LEGEND

- PROPERTY LINE
- AMENITY SPACE BOUNDARY

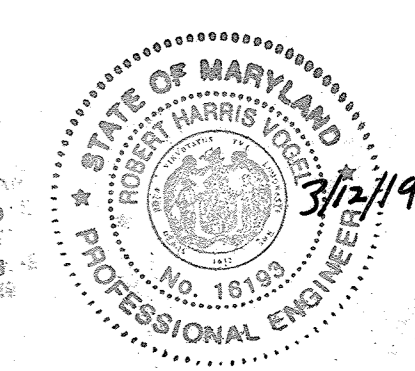


HOWARD COUNTY, MD
PUBLIC WORKS
TAX MAP 46, PARCEL 288
LIBER 1788, FOLIO 120
USE: EXEMPT COMMERCIAL
EX. ZONING: RR-MXD-3

G AND G ROUTE TWENTY NINE
TAX MAP 46, PARCEL 289
LIBER 1450, FOLIO 212
USE: COMMERCIAL
EX. ZONING: B-1

U.S. ROUTE 29
(COLUMBIA PIKE)
SRC PLAT 38917 & 39734
(PRINCIPAL ARTERIAL - SOUTHBOUND)
VARIABLE WIDTH ROW

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
DATE: 3/12/19
P.E.#: 16193



OWNER/DEVELOPER
BUCH LLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE
4	REVISE PLAN TO SHOW ABANDONED FC EASEMENT	08-29-22

SITE DEVELOPMENTAL PLAN
SITE AMENITY PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3152 / F. 304)
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 126

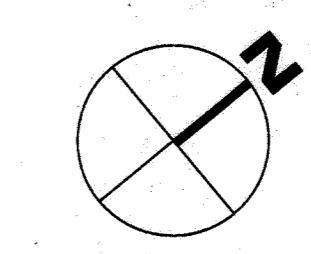
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ARCHITECTURE, PLANNING, INTERIORS
601 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202
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312 BLACKWELL STREET, SUITE 100 DURHAM, NORTH CAROLINA 27705
T: 919.381.9322 F: 919.381.9323

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 8-10-16
 DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 4-20-16
 SIGNATURE OF DEVELOPER DATE

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
 EXPIRATION DATE: 06-12-2018
 DESIGN BY: BR
 DRAWN BY: ECC
 CHECKED BY: BR
 DATE: APRIL 2016
 SCALE: 1"=40'-0"
 W.O. NO.: 12-50.00
 20 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET



AS-BUILT-OCT. 2018

GENERAL NOTES:

1. ALL LIGHTING FIXTURES, LAMPS AND RELATED DEVICES INSTALLED UNDER THIS CONTRACT SHALL CARRY THE APPROVAL LABEL OF UL OR ETL FOR THE SPECIFIC APPLICATION IN WHICH THEY ARE USED.
2. THE STATEMENT "FINISH TO BE SELECTED BY DESIGN PROFESSIONAL" SHALL BE INTERPRETED TO MEAN THAT THE FINISH OF THE LUMINAIRE SHALL MATCH THE APPEARANCE OF A PAINT CHIP, COLOR NUMBER, OR METAL SWATCH FURNISHED BY THE DESIGN PROFESSIONAL DURING THE PRELIMINARY REVIEW PROCESS.
3. WHITE LED'S SHALL MEET, AT A MINIMUM, CHROMATICITY STANDARDS SET BY ANSI/ANSI/ANSI/CIE S197-2011. LED LUMEN MAINTENANCE SHALL BE MEASURED IN ACCORDANCE WITH IESNA LM-80 STANDARDS. PHOTOMETRIC TESTING FOR SODIUM STATE LUMINAIRES SHALL BE IN ACCORDANCE WITH IESNA LM-79 STANDARDS.
4. UNLESS OTHERWISE NOTED, LAMP DESIGNATIONS ARE FOR LAMPS BY OSRAM/PHILIPS.
5. CONTRACTOR SHALL CONFIRM FIXTURE VOLTAGES, CEILING TRIM, AND MOUNTING HARDWARE ARE COMPATIBLE WITH THEIR APPLICATION AS DETERMINED BY THE DESIGN PROFESSIONAL PRIOR TO ORDERING FIXTURES.
6. CONTRACTOR SHALL SELECT, FURNISH AND INSTALL THE CORRECT SIZE OF SECONDARY WIRING FROM REMOTE TRANSFORMERS AND/OR REMOTE BALLASTS AS REQUIRED TO KEEP VOLTAGE DROP IN THE SECONDARY WIRING BELOW 3% OF RATED VOLTAGE.
7. ALL LED LAMPS SHALL BE BURNED CONTINUOUSLY FOR 100 HOURS AT FULL OUTPUT PRIOR TO FOCUSING OF FIXTURES AND COMMISSIONING OF CONTROL.
8. CONTRACTOR SHALL PROVIDE LABOR AND EQUIPMENT FOR FOCUSING OF ADJUSTABLE FIXTURES AND PRESETTING OF LIGHTING CONTROL SYSTEMS. FOCUSING AND PRESETTING SHALL BE DONE IN THE PRESENCE OF THE DESIGN PROFESSIONAL. CONTRACTOR SHALL FOCUS LIGHTING AFTER DARK IF DIRECTED BY THE OWNER'S REPRESENTATIVE. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PRESET AT LEAST ONE DAY OF A FACTORY-TRAINED AND CERTIFIED TECHNICIAN TO PROVIDE WARRANTY STATE UP AND PROGRAMMING FOR ALL LIGHTING CONTROL SYSTEMS AND PROGRAMMABLE LIGHTING FIXTURES.
9. CONTRACTOR SHALL PROVIDE THE FOLLOWING WITH THEIR BID:
 - A. THE UNIT PRICE WITHOUT LAMP FOR EACH LIGHTING FIXTURE TYPE LISTED WITHIN THE LIGHTING FIXTURE SCHEDULE. THE UNIT PRICE SHALL BE FOR ONE OF THE LEAD MANUFACTURERS FROM THE PARTICULAR CATEGORY OR CATEGORY MANUFACTURER SHALL BE IDENTIFIED. SUBSTITUTIONS FOR FIXTURES PROVIDED BY MANUFACTURERS NOT LISTED IN THE SCHEDULE ARE NOT ACCORDED SEE BELOW FOR REQUIREMENTS ASSOCIATED WITH SUBMITTING LIGHTING FIXTURE SUBSTITUTIONS.
 - B. THE TOTAL QUANTITY OF EACH FIXTURE TYPE WITH THE EXTENDED COST FOR THAT QUANTITY.
 - C. THE UNIT PRICE, TYPE, AND QUANTITY OF LAMPS.
10. WITHIN 21 DAYS OF CONTRACT AWARD, THE CONTRACTOR SHALL FURNISH SUBMITTALS FOR ALL SPECIFIED LIGHTING FIXTURES FOR REVIEW BY THE DESIGN PROFESSIONAL. SUBMITTALS SHALL BE MADE IN ACCORDANCE WITH THE FOLLOWING:
 - A. MANUFACTURER'S NAME AND COMPLETE CATALOG NUMBER
 - B. FIXTURE TYPE, DIMENSIONS AND CEILING TRIM
 - C. FIXTURE PHOTOMETRIC TEST DATA FROM AN INDEPENDENT TEST LABORATORY
 - D. FIXTURE ACCESSORIES, COMPONENTS AND HARDWARE WITH LEAD SHEETS
 - E. LAMP TYPE, QUANTITY, WATTAGE, LUMEN OUTPUT, RATED LIFE, COLOR TEMPERATURE, COLOR RENDERING INDEX, AND BEAM SPREAD AS APPLICABLE
 - F. BALLAST TYPE AND FIXTURE VOLTAGE
11. LIGHTING FIXTURE SUBSTITUTION REQUESTS MUST BE SENT TO AND RECEIVED BY THE LIGHTING DESIGNER FOR REVIEW 14 DAYS PRIOR TO BID DATE. FAILURE TO SUBMIT WITHIN THIS DEADLINE SHALL CONSTITUTE AS A WAIVER OF THE METHOD OF FIXTURES WILL BE SUPPLIED. THE SUBMITTAL SHALL INCLUDE THE FOLLOWING:
 - A. SIX HARD COPIES OF THE SUBMITTALS REQUIRED ABOVE FOR BOTH THE SPECIFIED FIXTURE AND THE PROPOSED SUBSTITUTION.
 - B. ONE NON-RETURNABLE WORKING SAMPLE OF THE PROPOSED SUBSTITUTION FIXTURE WITH CORD & PLUG CONNECTION FOR 120 VOLT OPERATION AND SPECIFIED LAMPS.
 - C. CONTRACTOR'S STATEMENT INDICATING THE EFFECT OF THE SUBSTITUTION ON THE OPERATION OF THE PROPOSED SUBSTITUTION.
 - D. CONTRACTOR'S STATEMENT OF THE PROPOSED SUBSTITUTION CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS IN EVERY RESPECT AND IS APPROPRIATE FOR THE APPLICATIONS AND CONDITIONS OF THE DOCUMENTS.
 - E. CONTRACTOR'S CERTIFICATION STATEMENT THAT ANY MODIFICATIONS TO ANY BUILDING SYSTEM OR EQUIPMENT THAT MAY RESULT FROM THE PROPOSED LIGHTING FIXTURE SUBSTITUTION WILL BE DESIGNED AND CONSTRUCTED AT THE CONTRACTOR'S EXPENSE.
 - F. CONTRACTOR'S WAIVER OF RIGHTS TO ADDITIONAL PAYMENT OF TIME THAT MAY BECOME NECESSARY SHOULD THE PROPOSED SUBSTITUTION FAIL TO PERFORM IN A MANNER THAT MATCHES THE SPECIFIED FIXTURE.
 - G. CONTRACTOR-NET UNIT PRICE FOR THE SPECIFIED FIXTURE AND FOR THE PROPOSED SUBSTITUTION FIXTURE.

THE LIGHTING DESIGNER SHALL BE REIMBURSED BY THE CONTRACTOR FOR ALL OF THE DESIGNER'S TIME ASSOCIATED WITH THE REVIEW OF THE PROPOSED SUBSTITUTION. PAYMENT SHALL BE MADE IN ADVANCE OF THE REVIEW, BASED ON THE DESIGNER'S ESTIMATE OF THE REQUIRED TIME. THE PAYMENT SHALL BE BASED ON THE DESIGNER'S STANDARD HOURLY RATES FOR THE PROFESSIONAL INVOLVED IN THE REVIEW.

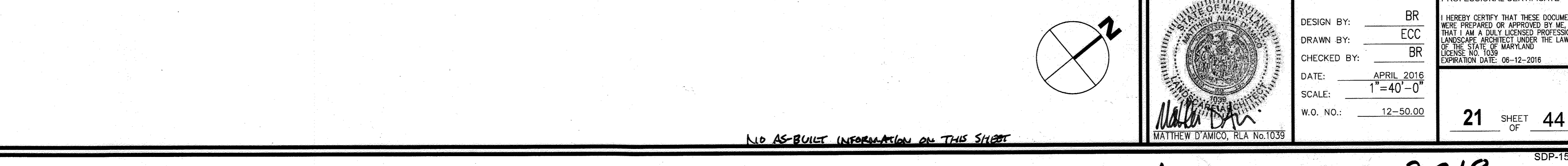
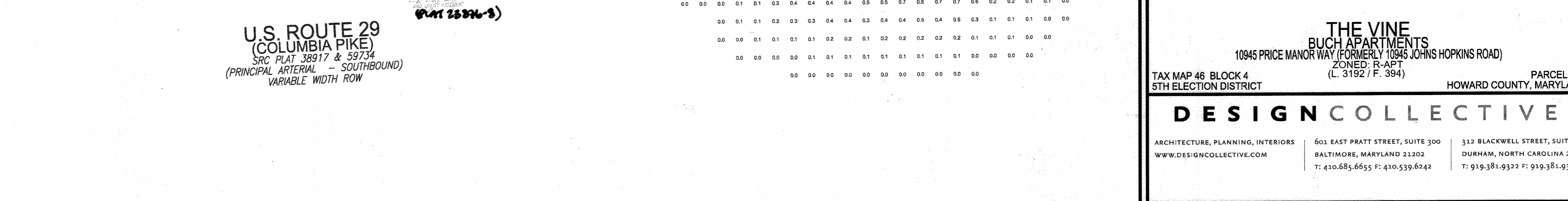
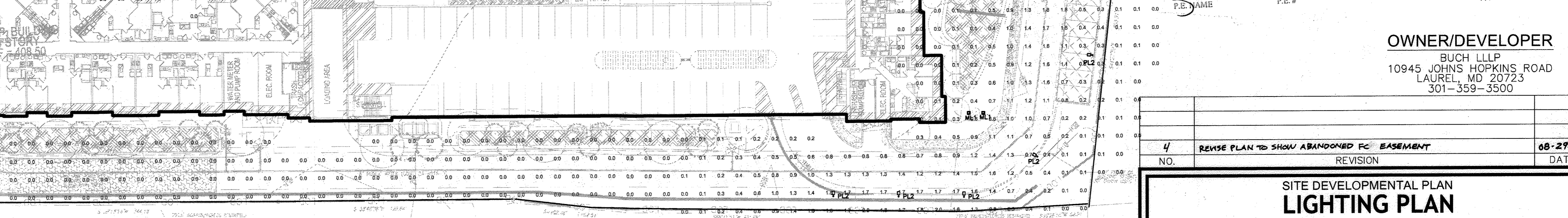
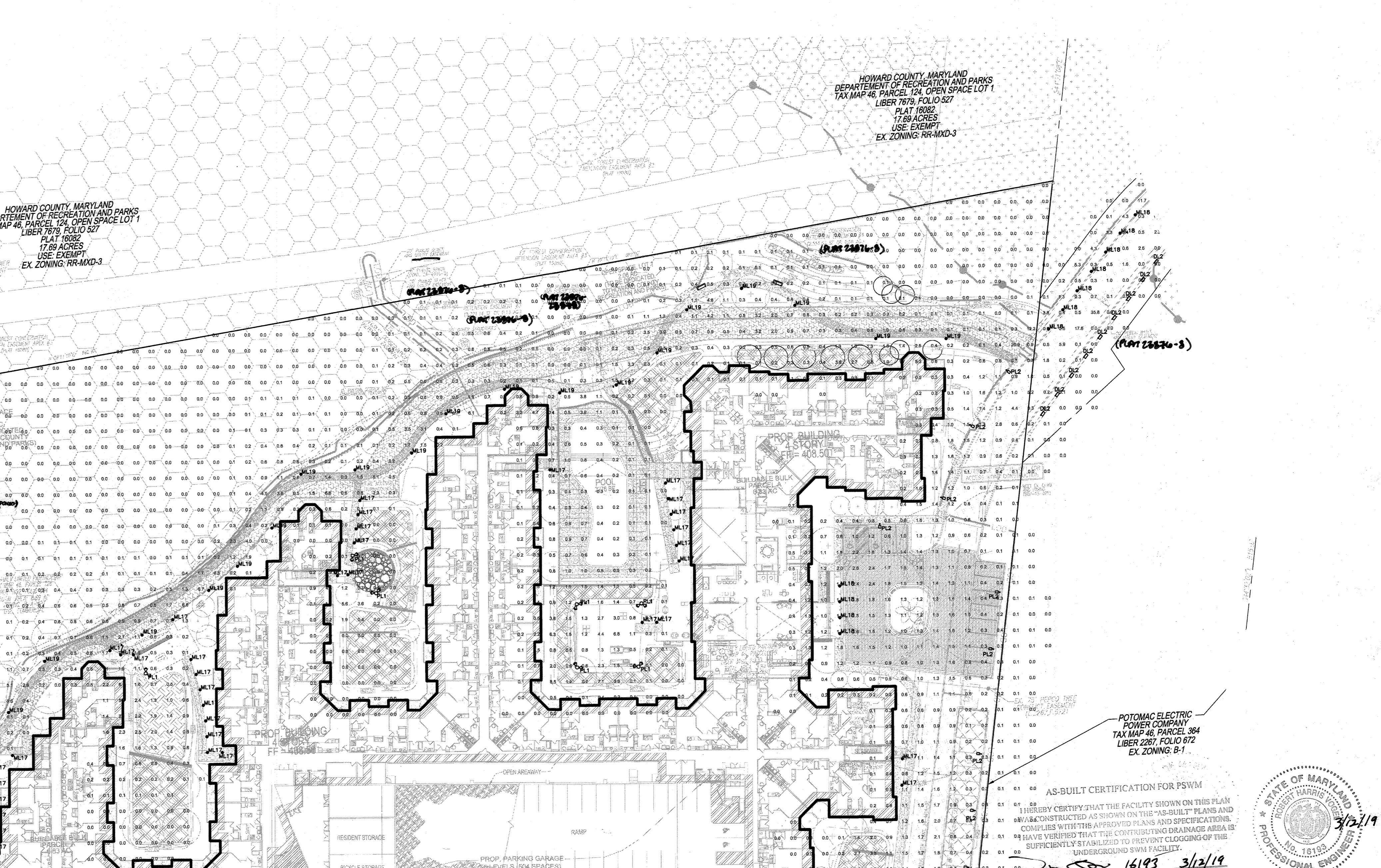
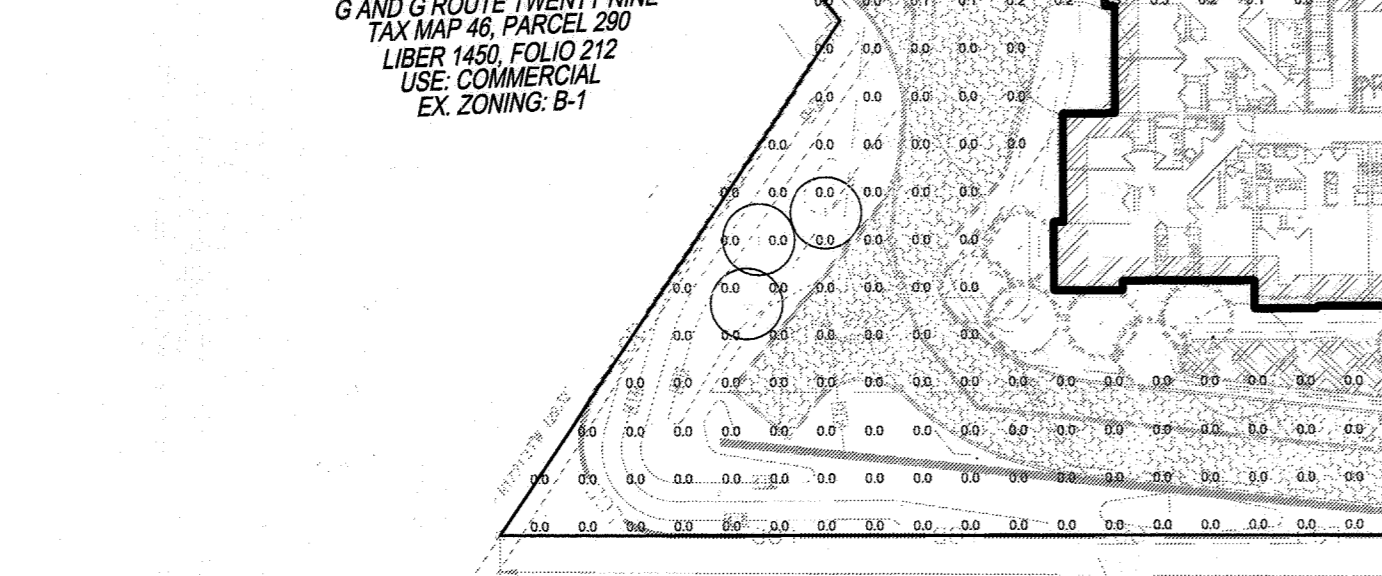
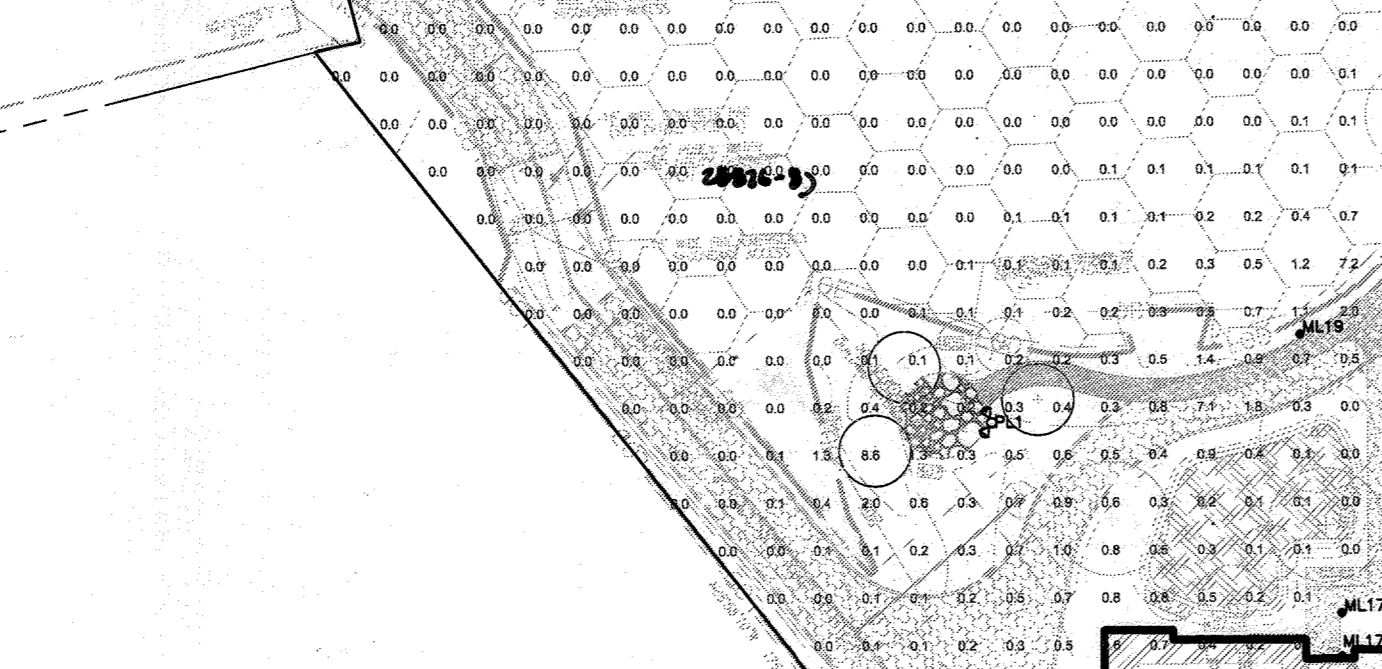
SELECT DEFINITIONS:

1. CORRELATED COLOR TEMPERATURE (CCT): THE ABSOLUTE TEMPERATURE, MEASURED IN DEGREES KELVIN, OF A BLACKBODY RADIATOR HAVING CHROMATICITY RESEMBLING THAT OF AN ELECTRIC LIGHT SOURCE. FOR LED SOURCES CCT SHALL NOT DEVIATE FROM THE REFERENCE COLOR TEMPERATURE BY NO MORE THAN THREE SIGNIFICANT FIGURES, AS DEFINED BY IESNA/ANSI/CIE S197-2011.
2. COLOR RENDERING INDEX (CRI): MEASURE OF COLOR SHIFT OBJECTS OBSERVED WHEN ILLUMINATED BY AN ELECTRIC LIGHT SOURCE AS COMPARED WITH THE COLOR OF THE SAME OBJECTS ILLUMINATED BY A REFERENCE SOURCE AT THE SAME COLOR TEMPERATURE. CRI VALUES FOR ELECTRIC LIGHT SOURCES RANGE FROM APPROXIMATELY 20 FOR LOW PRESSURE SODIUM TO 99 (INCANDESCENT). CRI VALUES FOR LED SOURCES SHALL BE MEASURED AFTER 5000 HOURS AND SHALL NOT DEVIATE MORE THAN 3 POINTS FROM THE RATED VALUE.
3. LED LIGHT ENGINE: THE COMBINED LED LIGHT SOURCE AND ITS ASSOCIATED ELECTRONIC DRIVER. THE LED LIGHT ENGINE MAY HAVE AN INTERNAL DRIVER OR THE DRIVER MAY BE HOUSED BY A SEPARATE ENCLOSURE.
4. LED DRIVER: CONTROL DEVICE THAT MAINTAINS CONSTANT AMOUNT OF CURRENT TO THE LED LIGHT SOURCE. LED DRIVERS GENERALLY OPERATE AT 12VDC OR 24VDC. SOME DRIVERS ARE DESIGNED TO ACCEPT BRANCH CIRCUIT VOLTAGE RANGING FROM 120VAC THROUGH 277VAC OR MAY REQUIRE A SEPARATE TRANSFORMER.
5. TRANSFORMER: ELECTROMAGNETIC OR ELECTRONIC DEVICE THAT STEPS DOWN PRIMARY VOLTAGE TO A LOWER SECONDARY VOLTAGE. GENERALLY SECONDARY VOLTAGE WILL BE 120 OR 24V.
6. DIMMING: THE REDUCTION OF LIGHT INTENSITY OF A LIGHT SOURCE. ALL SOURCES SHALL HAVE A SMOOTH, FLICKER-FREE AND CONTINUOUS DIMMING CURVE FROM FULL-ON TO 100% OFF. LED SOURCES MAY BE DIMMED BY EITHER CONSTANT CURRENT REDUCTION (CCR) OR BY PULSE WIDTH MODULATION (PWM) DIMMING FOR CONSTANT CURRENT DRIVERS.
7. RATED LUMEN MAINTENANCE LIFE: THE ELAPSED OPERATING TIME OVER WHICH AN LED LIGHT SOURCE WILL MAINTAIN THE PERFORMANCE OF ITS INITIAL LUMEN OUTPUT L70: TIME, IN HOURS TO 70% LUMEN MAINTENANCE; L50: TIME, IN HOURS, TO 50% LUMEN MAINTENANCE.

LAMP DESCRIPTION	LAMP		LUMENS (LM)	COLOR	CANDIES	MANUFACTURER	CANDIES NUMBER
	TYPE	WATTAGE (W)					
LED 3000K WIRE LED	3000	3000	3000	3000	3000	3000	3000
LED 4000K WIRE LED	4000	4000	4000	4000	4000	4000	4000
LED 5000K WIRE LED	5000	5000	5000	5000	5000	5000	5000

CALLOUT NOTES:

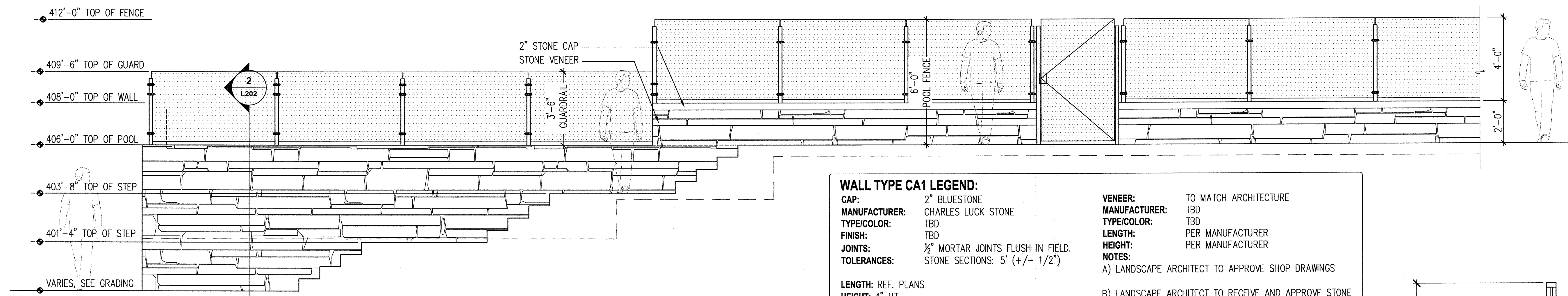
- VALUES REPORTED WERE CALCULATED AVERAGE MAINTAINED ILLUMINANCE LEVELS AT GRADE AND ATTEMPT TO ACCOUNT FOR LIGHT LOSS FACTORS, INCLUDING BUT NOT LIMITED TO LAMP LUMEN DEPRECIATION AND LUMINAIRE DIRT DEPOSITION.
- TREE LIGHTING, DECORATIVE PENDANTS, AND LIT SIGNAGE ARE NOT INCLUDED.
- PHOTOMETRIC DATA FOR ALL LUMINAIRES IS SOURCED FROM THE LUMINAIRE MANUFACTURER. WHERE POSSIBLE, THE DESIGNER HAS USED ACTUAL PHOTOMETRIC DATA, AS TESTED BY AN INDEPENDENT TESTING LABORATORY. IN THE EVENT ACTUAL PHOTOMETRIC TEST DATA WAS UNAVAILABLE, VIRTUAL PHOTOMETRIC FILES PROVIDED USING INDUSTRY STANDARD SOFTWARE (E.G. PHOTPA) HAVE BEEN USED TO PROVIDE AN APPROXIMATION OF EXPECTED ILLUMINANCE LEVELS.
- ACTUAL PHOTOMETRIC DATA IS COLLECTED IN A LABORATORY ENVIRONMENT, UNDER CONTROLLED CONDITIONS. LUMINAIRE PERFORMANCE MAY BE ADVERSELY AFFECTED DUE TO AMBIENT TEMPERATURE, HUMIDITY LEVELS, MAINTENANCE SCHEDULES, ETC.
- WHEN PHOTOMETRY IS UNAVAILABLE FOR A SPECIFIED LUMINAIRE, THE DESIGNER HAS USED PHOTOMETRY FOR A COMPARABLE LUMINAIRE TO APPROXIMATE ILLUMINANCE VALUES.
- LIGHTING CALCULATIONS DO NOT TAKE INTO CONSIDERATION ADDITIONAL LANDSCAPE ITEMS THAT MAY IMPACT ILLUMINANCE LEVELS. ADDITIONAL ITEMS INCLUDE TREES, SHRUBS, PLANTINGS.
- CONTRIBUTION FROM SUNLIGHT OR MOONLIGHT IS NOT INCLUDED IN THE CALCULATION.



AS-BUILT - OCT. 2018

NO AS-BUILT INFORMATION ON THIS SHEET

SDP-15-044



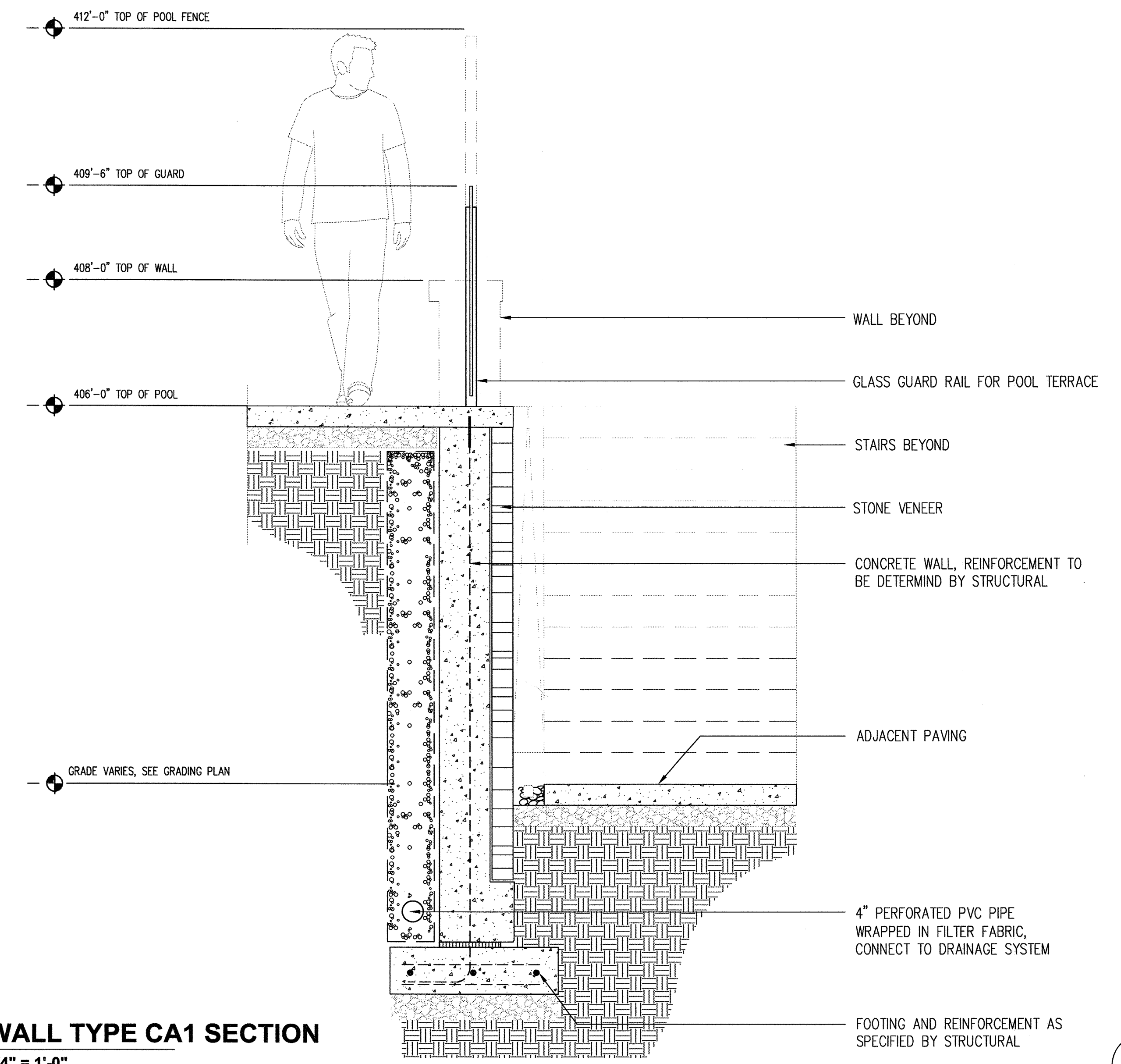
WALL TYPE CA1 LEGEND:

CAP: 2" BLUESTONE
MANUFACTURER: CHARLES LUCK STONE
TYPE/COLOR: TBD
FINISH: TBD
JOINTS: 1/2" MORTAR JOINTS FLUSH IN FIELD.
TOLERANCES: STONE SECTIONS: 5' (+/- 1/2")

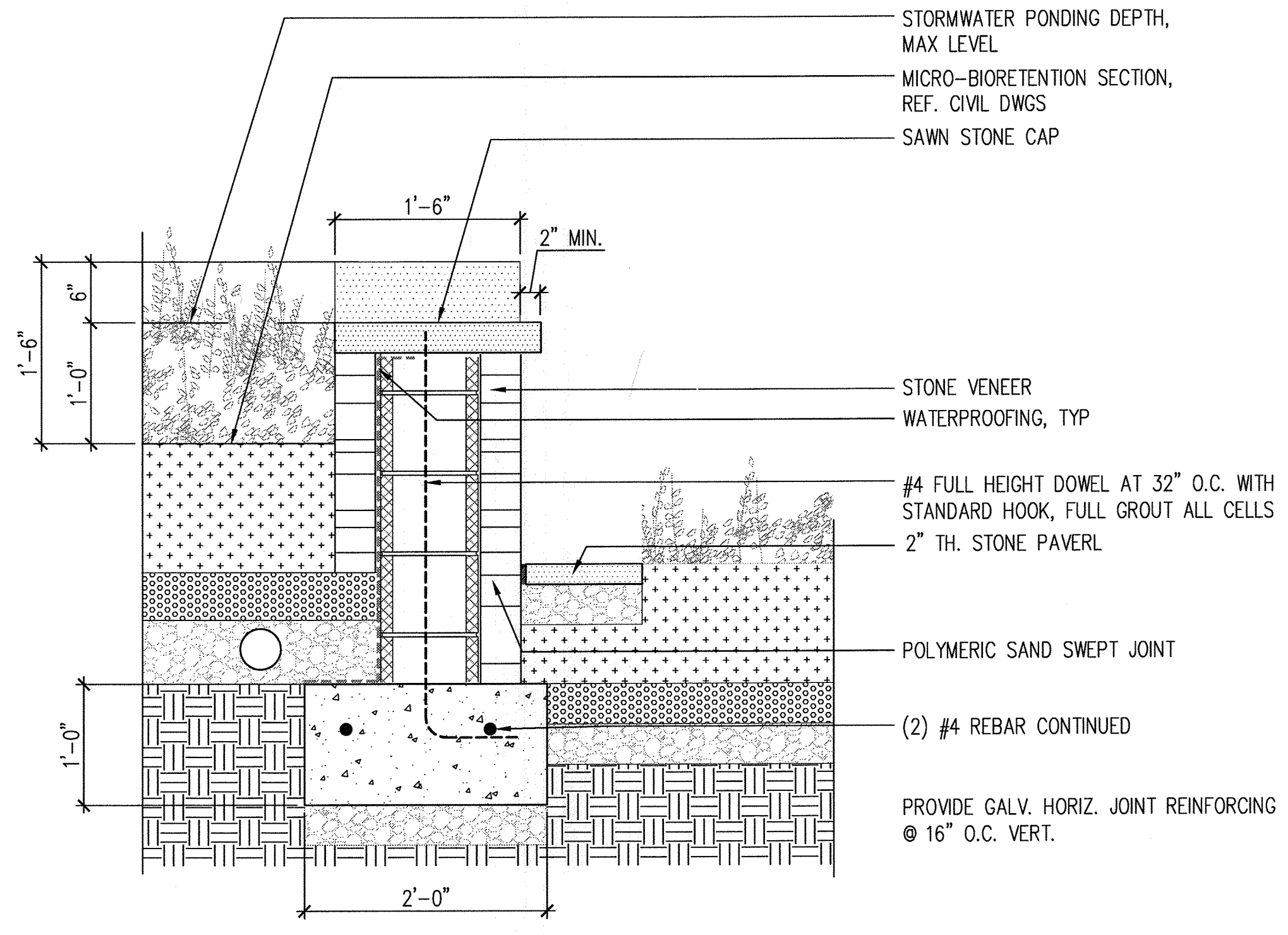
VENEER: TO MATCH ARCHITECTURE
MANUFACTURER: TBD
TYPE/COLOR: TBD
LENGTH: PER MANUFACTURER
HEIGHT: PER MANUFACTURER
NOTES:
 A) LANDSCAPE ARCHITECT TO APPROVE SHOP DRAWINGS
 B) LANDSCAPE ARCHITECT TO RECEIVE AND APPROVE STONE SAMPLES

LENGTH: REF. PLANS
HEIGHT: 4" HT.
NOTES:
 A) LANDSCAPE ARCHITECT TO APPROVE SHOP DRAWINGS

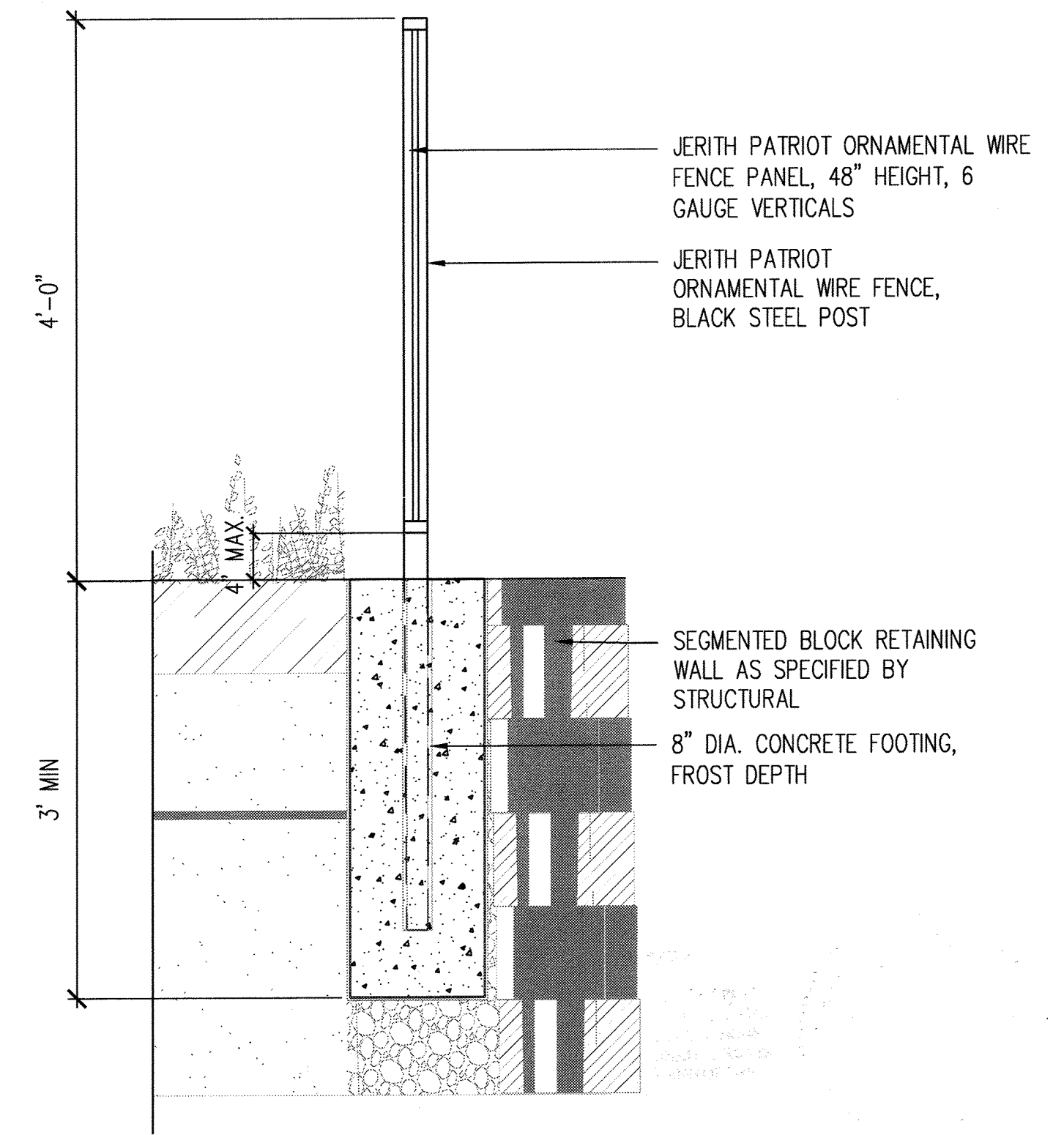
1 WALL TYPE CA1 ELEVATION
 3/8" = 1'-0"



2 WALL TYPE CA1 SECTION
 3/4" = 1'-0"



3 MICROBIORETENTION RETAINING WALL TYP
 1" = 1'-0"



4 FENCE AT SEGMENTED BLOCK WALL
 1" = 1'-0"

OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE
SITE DEVELOPMENTAL PLAN WALL DETAILS		
THE VINE BUCH APARTMENTS 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD) ZONED: R-APT (L. 3192 / F. 394) PARCEL 126 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
DESIGN COLLECTIVE		
ARCHITECTURE, PLANNING, INTERIORS WWW.DESIGNCOLLECTIVE.COM	601 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202 T: 410.685.6655 F: 410.539.6242	312 BLACKWELL STREET, SUITE 100 DURHAM, NORTH CAROLINA 27703 T: 919.381.9322 F: 919.381.9323



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

Matthew D'Amico 16193 3/12/19
 P.E. NAME P.L.# DATE

NO AS-BUILT INFORMATION ON THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Phil Edmon 5.17.16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 4th DATE

Vest Redwood 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Natalie Flynn 8-10-16
 DIRECTOR DATE

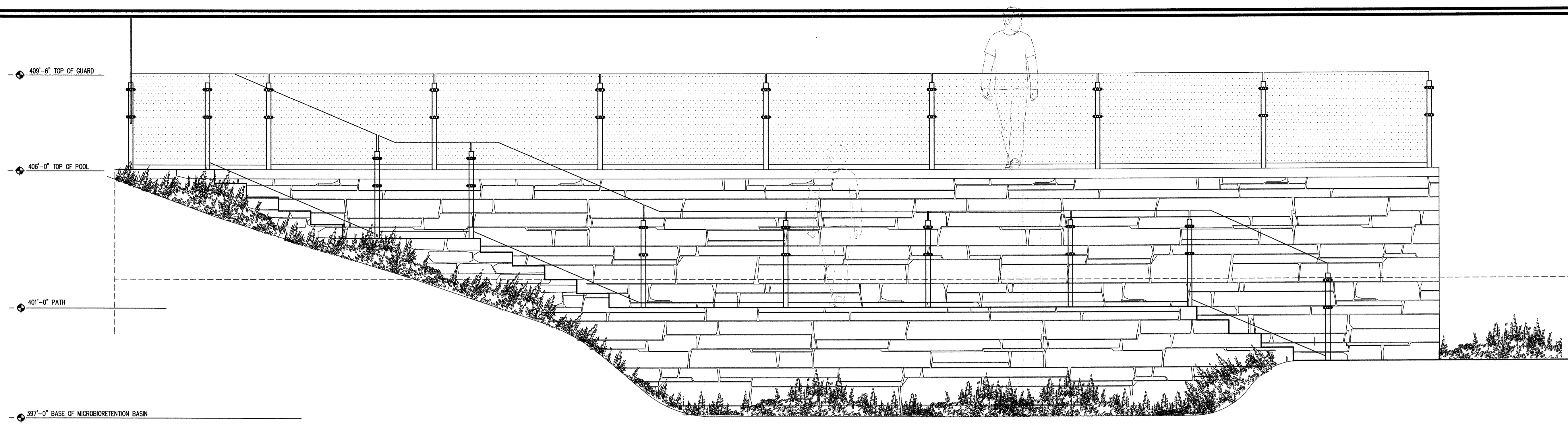
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

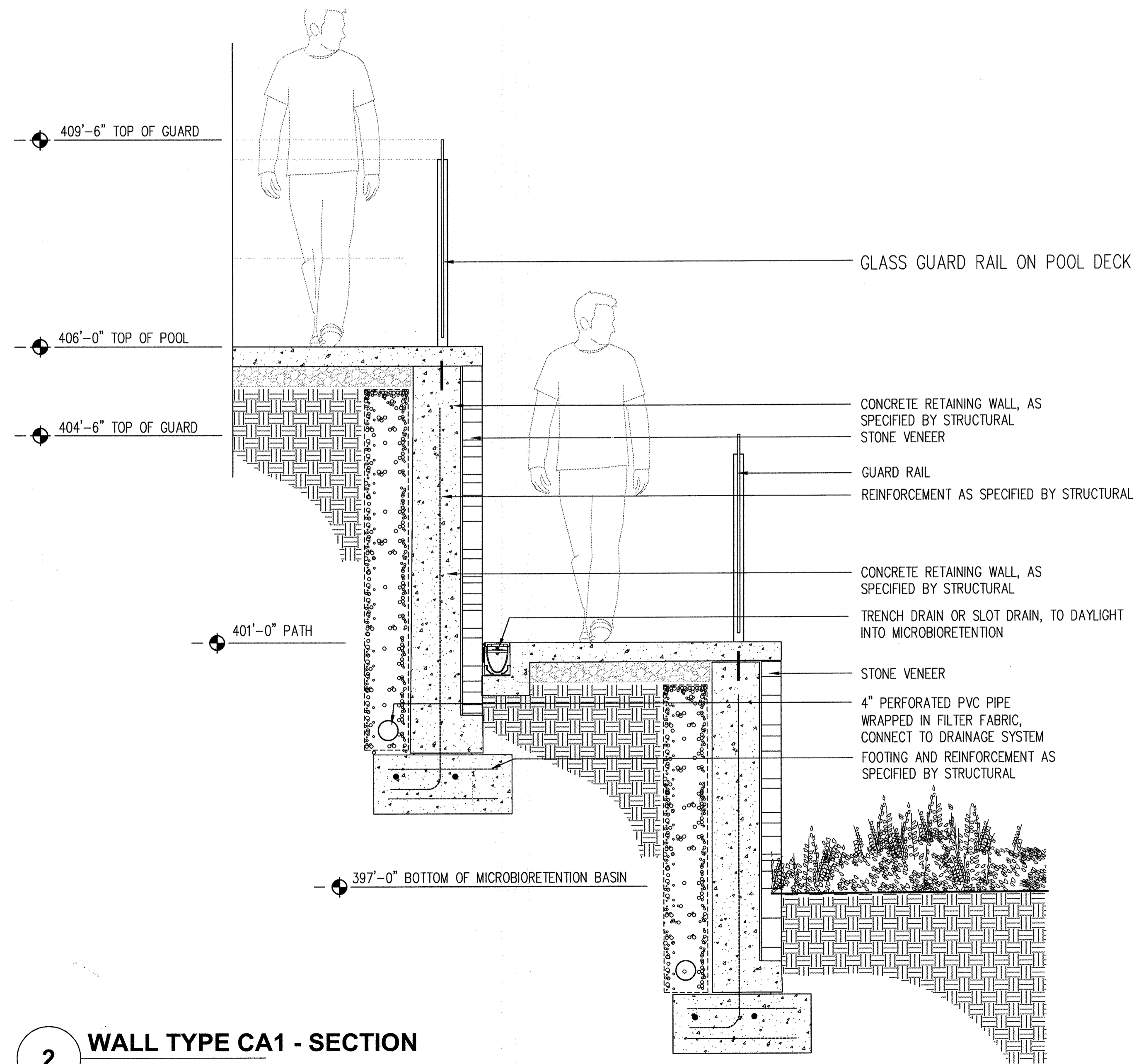
Michael J. Buch 4.20.16
 SIGNATURE OF DEVELOPER DATE

	DESIGN BY: BR	PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 1039 EXPIRATION DATE: 06-12-2016.
	DRAWN BY: ECC CHECKED BY: BR DATE: APRIL 2016 SCALE: AS SHOWN W.O. NO.: 12-50.00	
23 SHEET OF 44		

AS-BUILT - OCT. 2018



1 WALL TYPE CA1 - ELEVATION
1/2" = 1'-0"



2 WALL TYPE CA1 - SECTION
3/4" = 1'-0"

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWIM FACILITY.
Robert Harris 16193 3/12/19
P.E. # DATE



OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

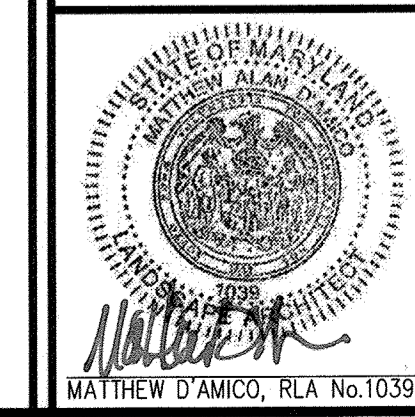
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
WALL DETAILS
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394) PARCEL 126
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
ARCHITECTURE, PLANNING, INTERIORS 601 EAST PRATT STREET, SUITE 300 312 BLACKWELL STREET, SUITE 300
WWW.DESIGNCOLLECTIVE.COM BALTIMORE, MARYLAND 21202 DURHAM, NORTH CAROLINA 27701
T: 410.685.6655 F: 410.539.6242 T: 919.381.9322 F: 919.381.9333

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Phil Clark 5.17.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Valdis J. J. J. 8.10.16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
DIRECTOR

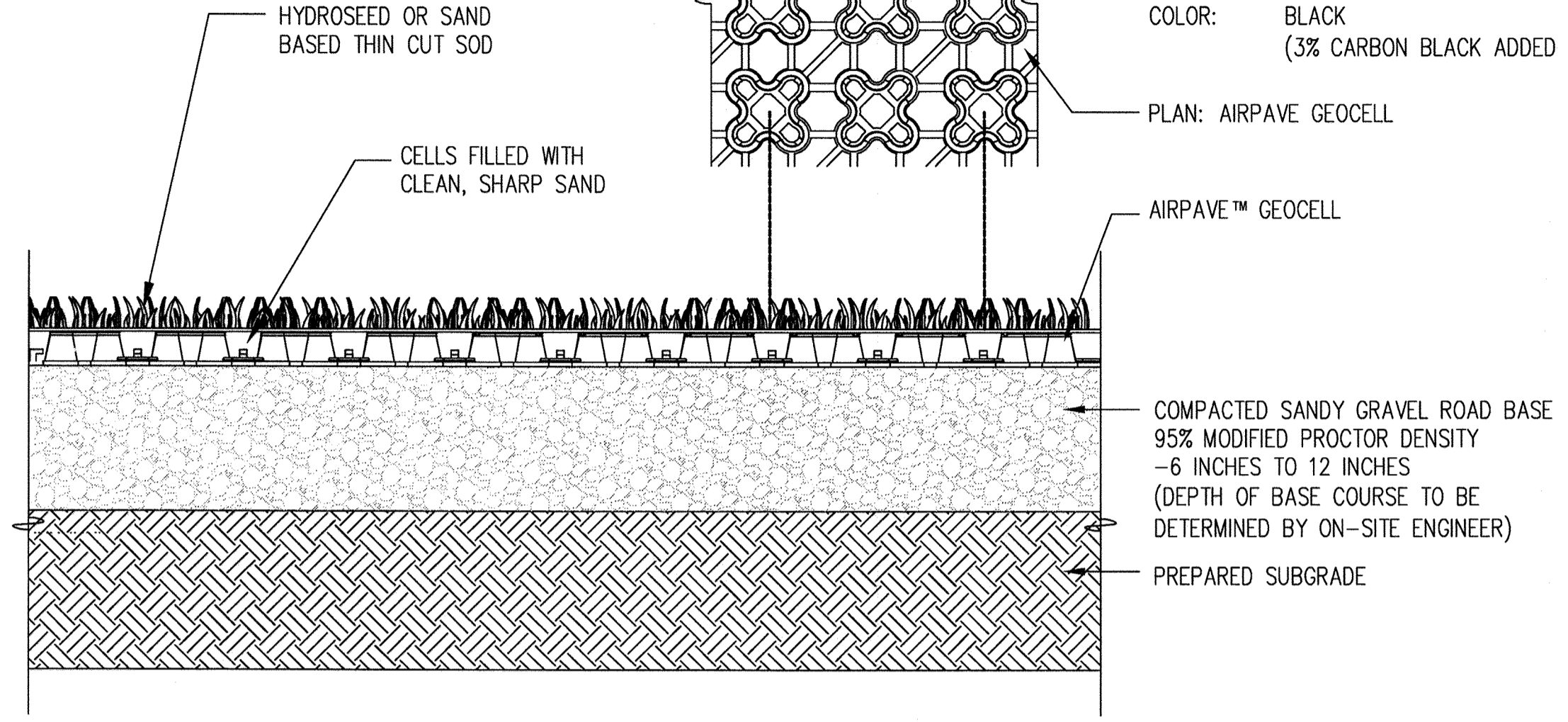
DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
Michael D. Buch 4.20.16
SIGNATURE OF DEVELOPER DATE



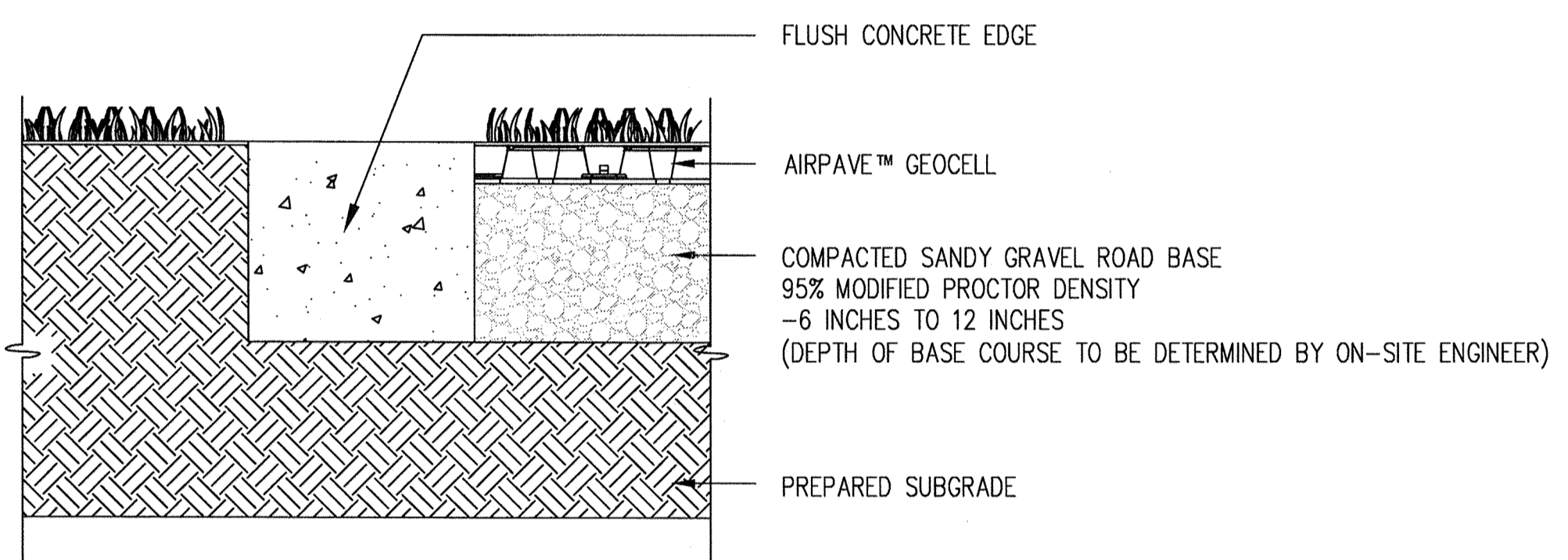
PROFESSIONAL CERTIFICATE
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DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: N.A.
W.O. NO.: 12-50.00
24 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

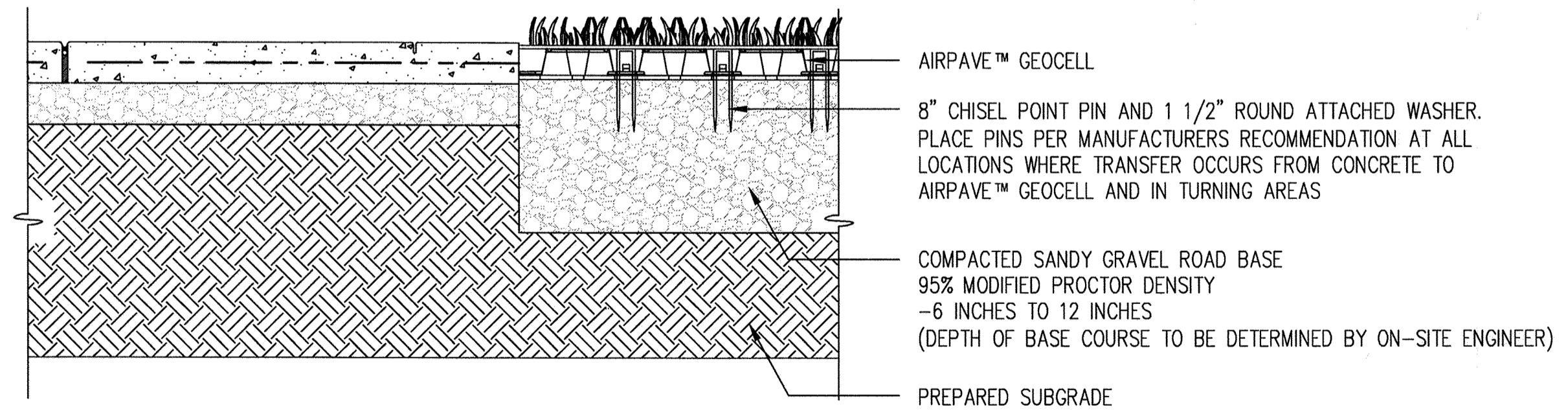
SPECIFICATIONS
 UNIT SIZE: 32" X 32" X 1"
 UNIT WEIGHT: 3.1 LB
 STRENGTH: 233 PSI (UNFILLED)
 6747 PSI (FILLED)
 100% RECYCLED (PIR)
 COPOLYMER WITH AN IMPACT
 MODIFIER "NO BREAK" POLYMER MATERIAL
 RESIN: BLACK
 COLOR: (3% CARBON BLACK ADDED FOR UV PROTECTION)



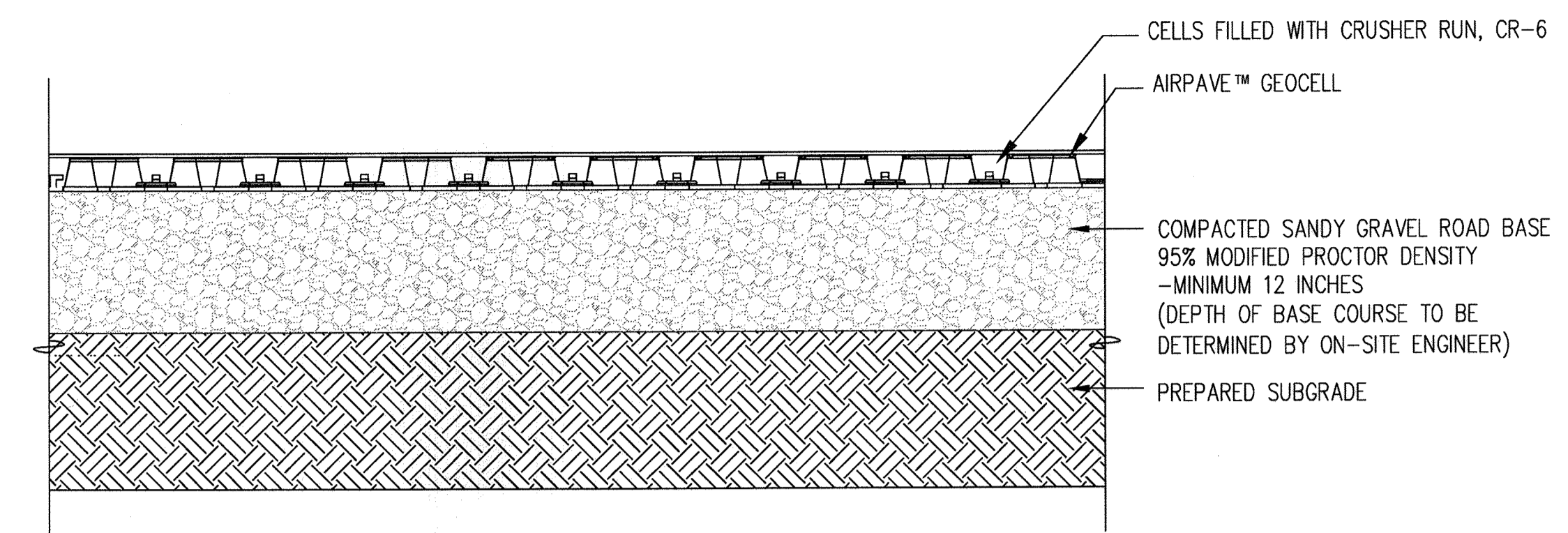
1 FIRELANE (GRASS PAVE)
 1" = 1'-0"



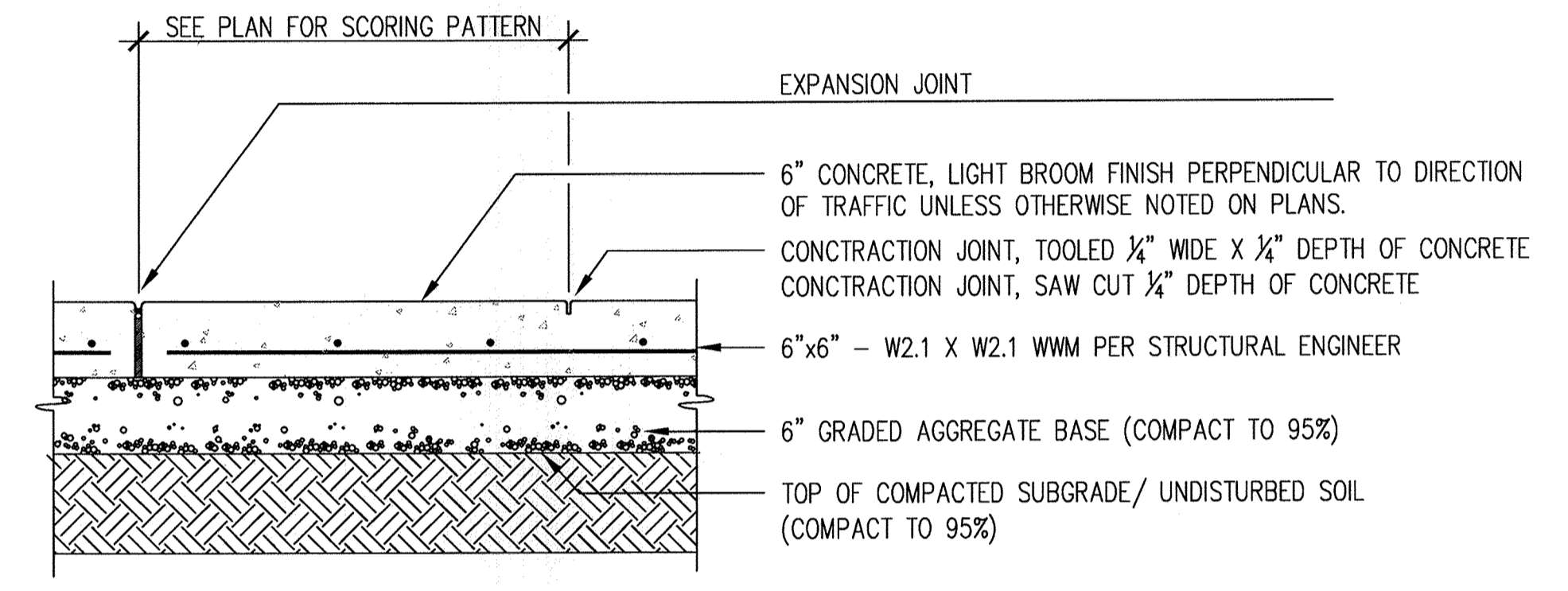
2 FIRELANE (GRASS PAVE EDGE)
 1" = 1'-0"



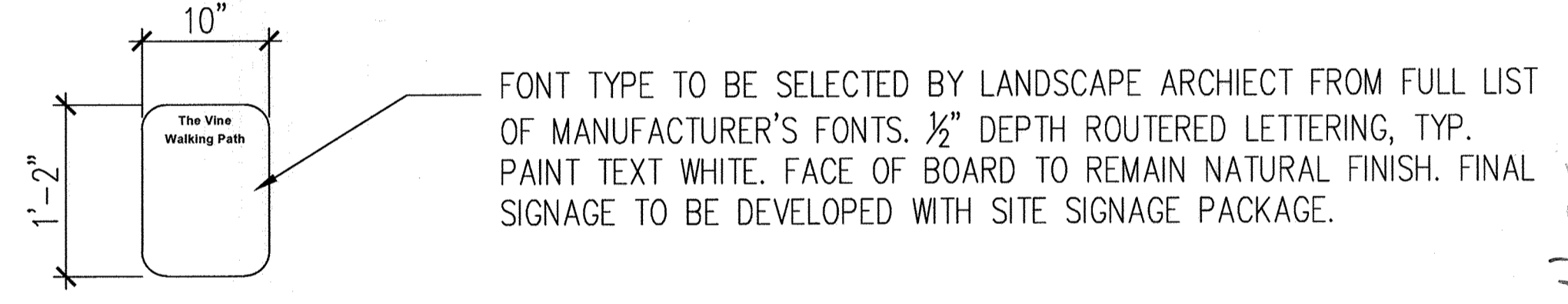
3 FIRELANE (GRASS PAVE - GRASS TO CONC. TRANSFER)
 1" = 1'-0"



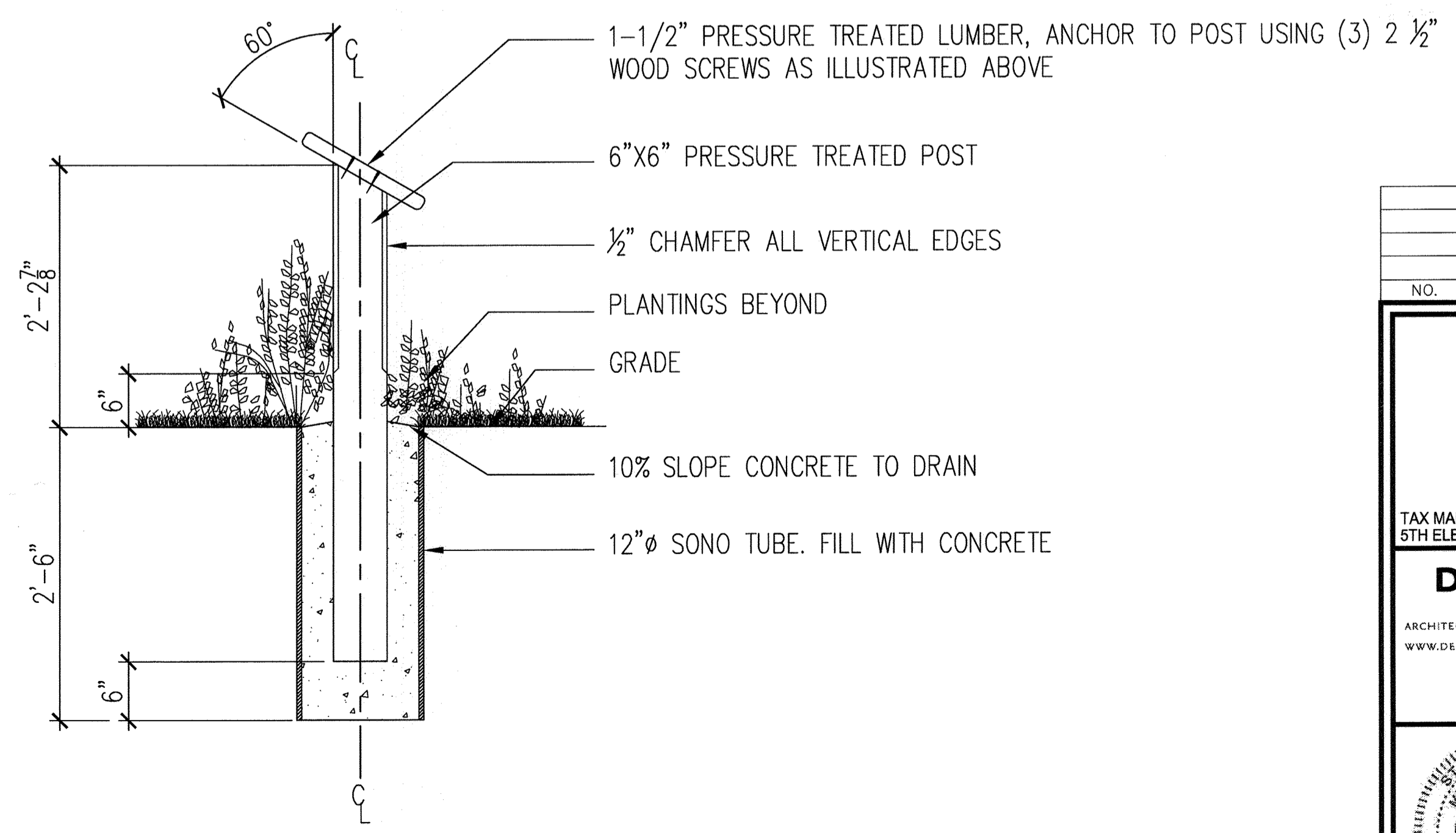
4 FIRELANE (EMERGENCY SECONDARY ACCESS)
 1" = 1'-0"



5 CONCRETE (VEHICULAR SECTION)
 1" = 1'-0"



FONT TYPE TO BE SELECTED BY LANDSCAPE ARCHIECT FROM FULL LIST OF MANUFACTURER'S FONTS. 1/2" DEPTH ROUTERED LETTERING, TYP. PAINT TEXT WHITE. FACE OF BOARD TO REMAIN NATURAL FINISH. FINAL SIGNAGE TO BE DEVELOPED WITH SITE SIGNAGE PACKAGE.



6 TRAIL SIGNAGE
 1" = 1'-0"

AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: 16193 DATE: 3/12/19



OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
FIRE LANE DETAILS
THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY FORMERLY 10945 JOHNS HOPKINS ROAD
 ZONED: R-APT (L. 3192 / F. 394)
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT PARCEL 126 HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
 ARCHITECTURE, PLANNING, INTERIORS
 601 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202
 T: 410.685.6655 F: 410.539.6242
 332 BLACKWELL STREET, SUITE 100 DURHAM, NORTH CAROLINA 27703
 T: 919.381.9327 F: 919.381.9323

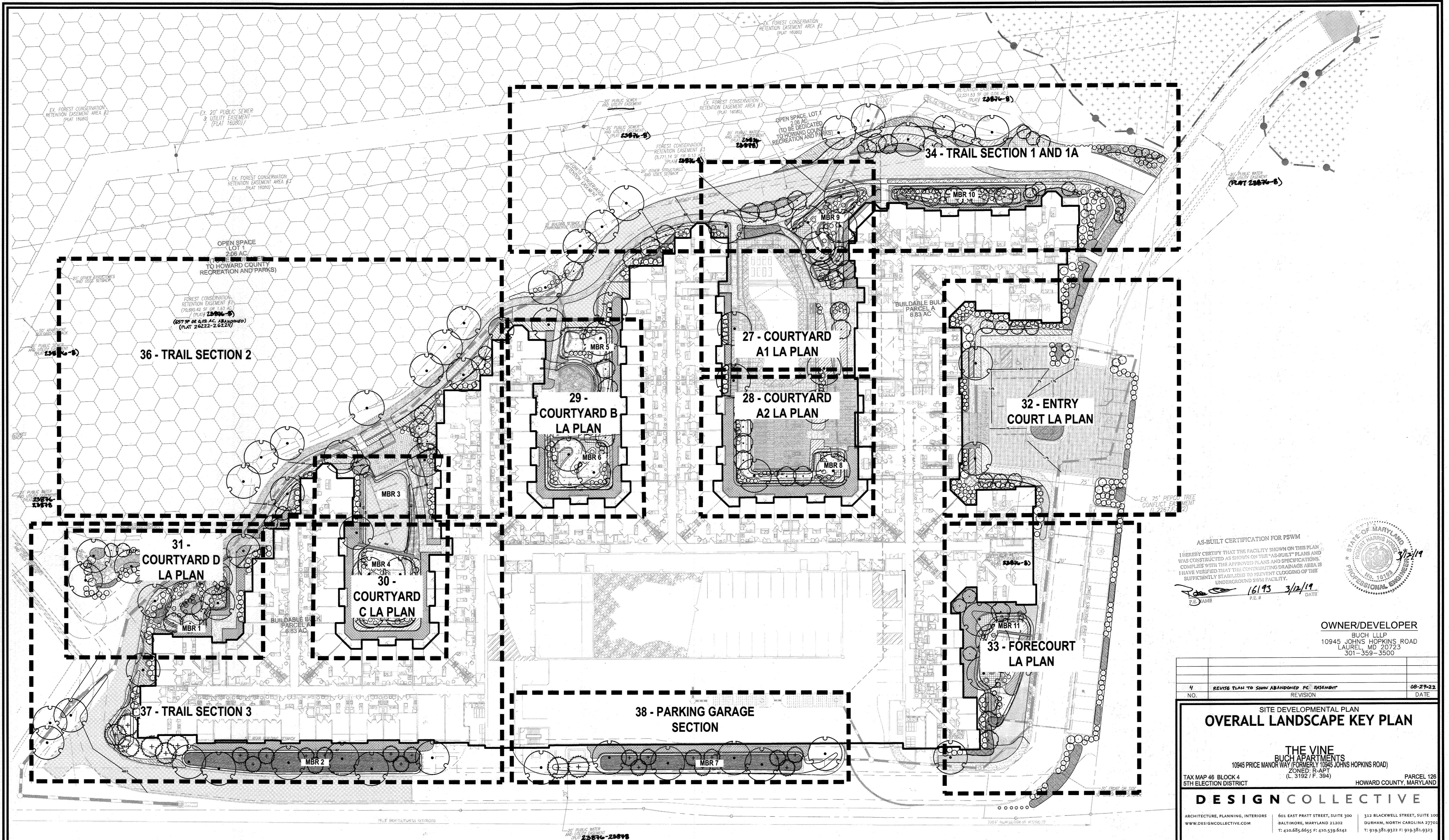
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 LICENSE NO. 1039 EXPIRATION DATE: 06-12-2016
 DESIGN BY: BR
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 W.O. NO.: 12-50-00
 25 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 18.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 Signature of Developer: Michael L. Bush
 Date: 4.20.16

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

[Signature] 16193 3/12/19
 P.E. # DATE



OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

4	REVISE PLAN TO SHOW ABANDONED FC EASEMENT	08-29-22
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
OVERALL LANDSCAPE KEY PLAN

THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT (L 3152 / F 384)

TAX MAP 46 BLOCK 4 HOWARD COUNTY, MARYLAND
 5TH ELECTION DISTRICT PARCEL 126

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS 503 EAST PRATT STREET, SUITE 300 312 BLACKWELL STREET, SUITE 100
 WWW.DESIGNCOLLECTIVE.COM BALTIMORE, MARYLAND 21202 DURHAM, NORTH CAROLINA 27701
 T: 410.685.6655 F: 410.539.6242 T: 919.381.9322 F: 919.381.9323

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 8-10-16
 DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 4-20-16
 SIGNATURE OF DEVELOPER DATE

PROFESSIONAL CERTIFICATE

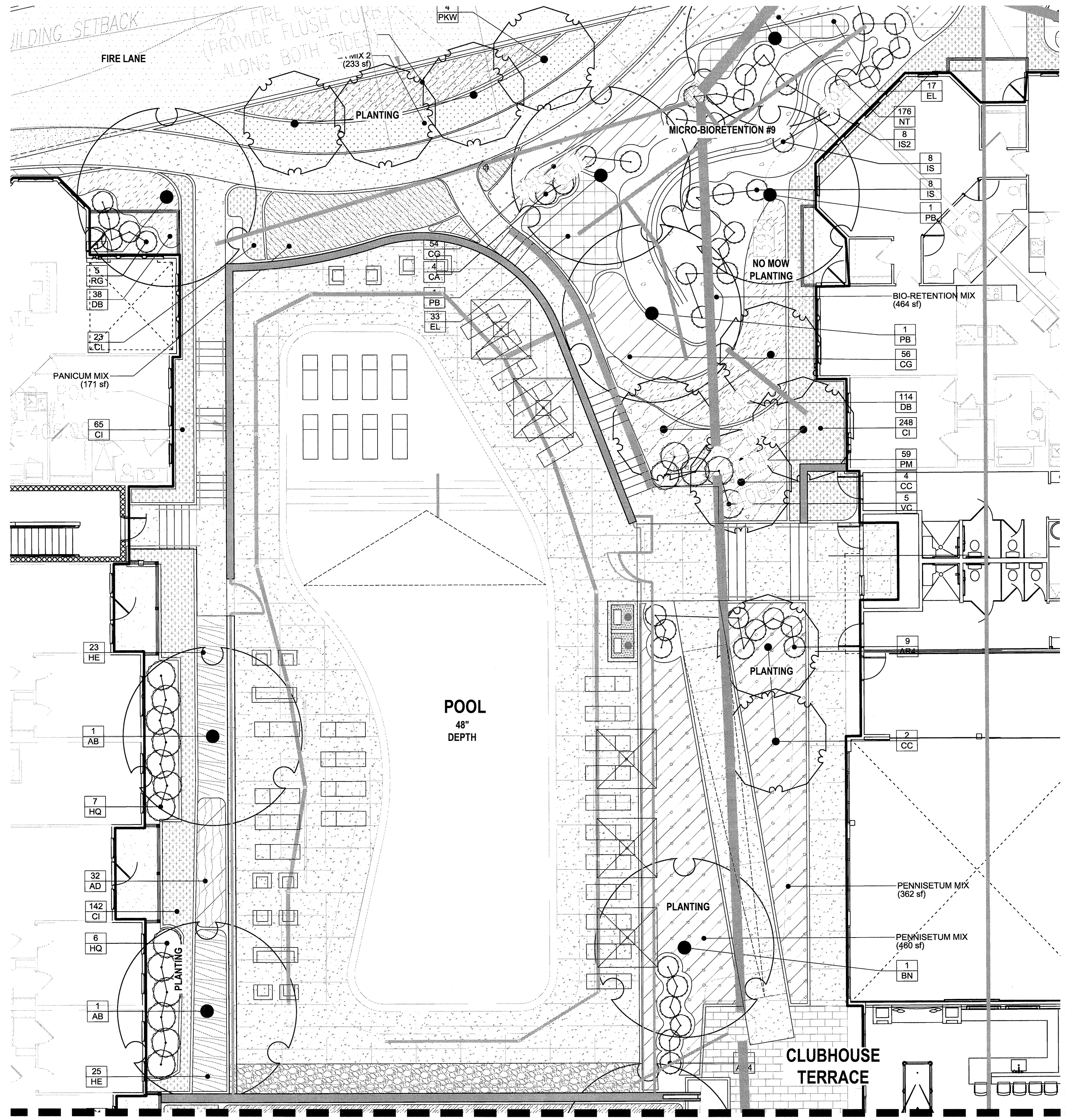
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 1039 EXPIRATION DATE: 06-12-2018

DESIGN BY: BR
 DRAWN BY: ECC
 CHECKED BY: BR
 DATE: APRIL 2016
 SCALE: 1" = 30'-0"
 W.O. NO.: 12-50.00

26 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



PLANT SCHEDULE COURTYARD A1

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
AB	3	Acer rubrum 'Bowhall Red'	Red Maple	4" cal.		
BN	1	Betula nigra 'Cully' TM	Heritage Birch	4" cal.	Single Stem	
CC	6	Cercis canadensis	Eastern Redbud	2.5" cal.		
PB	4	Platanus x acerifolia 'Bloodgood'	London Plane Tree	4" cal.		
PKW	4	Prunus serrulata 'Kwanzan'	Flowering Cherry	2.5" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
AR4	15	Abelia x grandiflora 'Rose Creek'	Rose Creek Abelia	5 gal	36" o.c.	
CA	4	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
HQ	13	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.	
IS2	8	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IS	16	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
RG	5	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal	48" o.c.	
VC	5	Viburnum carlesii	Korean Spice Viburnum	7 gal	48" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
AD	32	Astilbe x arendsii 'Deutschland'	Deutschland False Spiraea	1 gal	18" o.c.	
CI	478	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	110	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
DB	152	Dryopteris erythrosora 'Brilliance'	Autumn Fern	1 qt	18" o.c.	
EL	50	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
HE	48	Hosta x 'Elegans'	Plantain Lily	1 gal	24" o.c.	
NT	181	Nassella tenuissima	Texas Needle Grass	1 qt	18" o.c.	
PM	59	Pycnanthemum muticum	Clustered Mountainmint	1 qt	24" o.c.	

CONCEPT PLANT SCHEDULE COURTYARD A1

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	464 sf 43 65 65 43	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	NASELLA MIX 2 Echinacea purpurea 'Magnus' / Magnus Purple Coneflower Nassella tenuissima / Texas Needle Grass	233 sf 20 81	25% @ 21" oc 75% @ 18" oc
	PANICUM MIX Panicum virgatum 'Shenendoah' / Burgundy Switch Grass Solidago rugosa 'Fireworks' / Wrinkleleaf Goldenrod	186 sf 24 22	75% @ 30" oc 25% @ 18" oc
	PENNISETUM MIX Allium giganteum / Giant Allium Pennisetum alopecuroides 'Karl Rose' / Fountain Grass	1,745 sf 202 341	25% @ 18" oc 75% @ 24" oc
	PYCNANTHEMUM MIX Aclaea racemosa / Black Cohosh Pycnanthemum muticum / Clustered Mountainmint	164 sf 19 57	25% @ 18" oc 75% @ 18" oc

NOTE:
FOR ALL TREE LOCATIONS, ALSO SEE SHEET 18.

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND SPECIFICATIONS, COMPLIES WITH THE APPROVAL OF THE PLANS AND SPECIFICATIONS, AND I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABLE TO PREVENT CLOGGING OF THE UNDERGROUND SWIM FACILITY.
DATE: 3/12/19
P.E. # 16193



OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
COURTYARD A1 LANDSCAPE PLAN
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
(L. 3192 / F. 394)
TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT
PARCEL 126
HOWARD COUNTY, MARYLAND

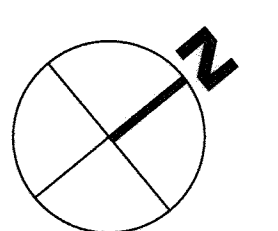
DESIGN COLLECTIVE
ARCHITECTURE, PLANNING, INTERIORS
WWW.DESIGNCOLLECTIVE.COM
601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242
312 BLACKWELL STREET, SUITE 105
DURHAM, NORTH CAROLINA 27703
T: 919.381.9322 F: 919.381.9323

DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 8"=1'-0"
W.O. NO.: 12-50.00
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 1039
EXPIRATION DATE: 06-12-2016
27 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8-9-16
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-10-16
DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 18.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
SIGNATURE OF DEVELOPER: Michael J. Buch
DATE: 4-20-16

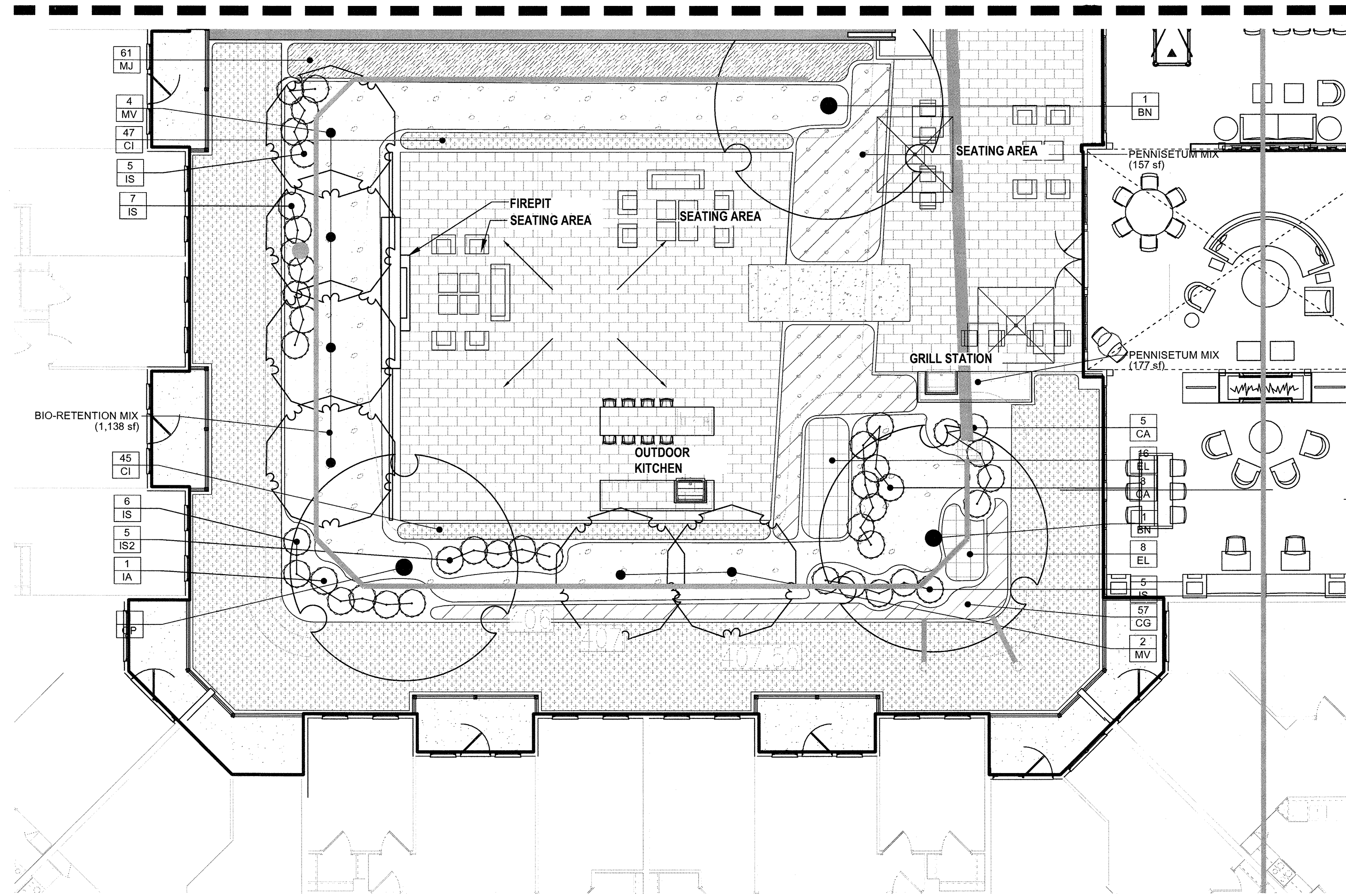
- GENERAL NOTES:**
- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
 - FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
 - FOR COMPLETE PLANT SCHEDULE, PLEASE SEE SHEET 39.
 - MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018

MATCHLINE - SEE SHEET 27



PLANT SCHEDULE COURTYARD A2

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
BN	2	Betula nigra 'Cully' TM	Heritage Birch	4" cal.	Single Stem	
MV	6	Magnolia virginiana	Sweet Bay	10' ht.		
QP	1	Quercus palustris	Pin Oak	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CA	13	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
IS2	5	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IA	1	Ilex verticillata 'Apollo'	Winterberry	5 gal	36" o.c.	
IS	23	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	1,139	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	57	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
EL	24	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
MJ	61	Monarda didyma 'Jacob Cline'	Jacob Cline Bee Balm	1 gal	24" o.c.	

CONCEPT PLANT SCHEDULE COURTYARD A2

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	1,138 sf 106 158 158 106	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	PENNISETUM MIX Allium giganteum / Giant Allium Pennisetum alopecuroides 'Karlay Rose' / Fountain Grass	335 sf 39 66	25% @ 18" oc 75% @ 24" oc

NOTE:
FOR ALL TREE LOCATIONS, SEE SHEET 18.

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
P.E. NAME: Matthew D'Amico P.E.#: 16193 DATE: 3/14/19

OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-559-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
COURTYARD A2 LANDSCAPE PLAN
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT
(L. 3192 / F. 394)
TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT
PARCEL 126
HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
ARCHITECTURE, PLANNING, INTERIORS
WWW.DESIGNCOLLECTIVE.COM
601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242
312 BLACKWELL STREET, SUITE 100
DURHAM, NORTH CAROLINA 27703
T: 919.381.9372 F: 919.381.9373

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 1039
EXPIRATION DATE: 06-12-2016
DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 8" = 1'-0"
W.O. NO.: 12-50.00
28 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Chandler 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Naomi J. Allen 8-9-16
CHIEF, DIVISION OF LAND DEVELOPMENT
Naomi J. Allen 8-10-16
DIRECTOR

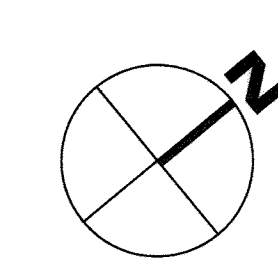
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Buch 4-20-16
SIGNATURE OF DEVELOPER

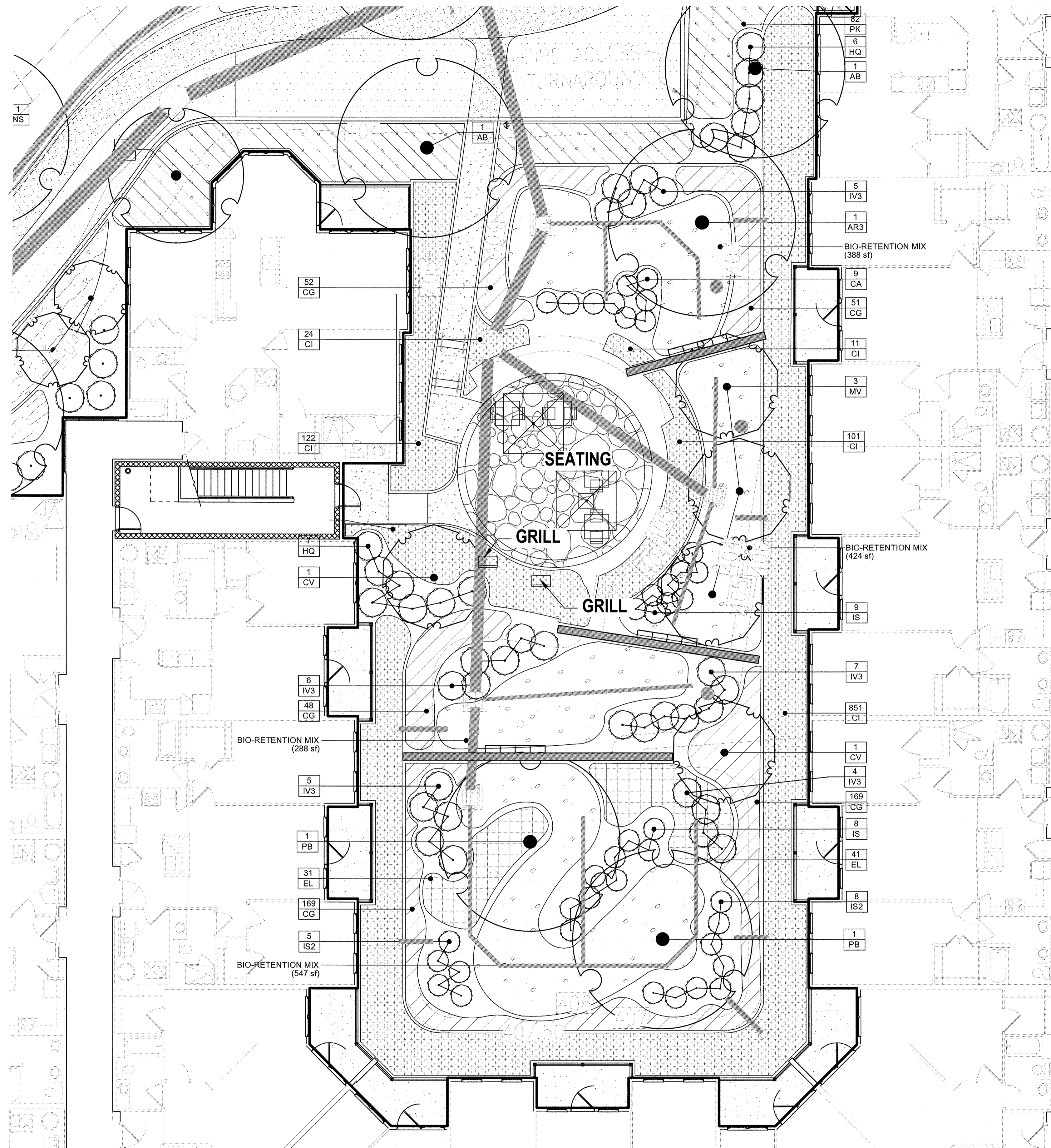
GENERAL NOTES:

1. THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
2. FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
3. FOR COMPLETE SITE PLANT SCHEDULE, PLEASE SEE SHEET 39.
4. MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



PLANT SCHEDULE COURTYARD B

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
AR3	1	Acer rubrum	Red Maple	4" cal.		
AB	2	Acer rubrum 'Bowhall Red'	Red Maple	4" cal.		
CV	2	Crataegus viridis 'Winter King'	'Winter King' Hawthorn	2.5" cal.		
MV	3	Magnolia virginiana	Sweet Bay	10' ht.		
PB	2	Platanus x acerifolia 'Bloodgood'	London Plane Tree	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CA	9	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
HQ	13	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.	
IS2	13	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IA	1	Ilex verticillata 'Apollo'	Winterberry	5 gal	36" o.c.	
IS	17	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
IV3	27	Itea virginica	Virginia Willow	5 gal	48" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	1,227	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	320	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
EL	72	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
PK	120	Pennisetum alopecuroides 'Karley Rose'	Fountain Grass	1 qt	24" o.c.	

CONCEPT PLANT SCHEDULE COURTYARD B

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	1,648 sf 153 229 229 153	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	LAWN/SOD	346 sf	

NOTE:
FOR ALL TREE LOCATIONS, SEE SHEET 18.

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT EROSION OF THE UNDERGROUND SWM FACILITY.

DATE: 3/12/19



OWNER/DEVELOPER
BUCH LLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
COURTYARD B LANDSCAPE PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT
TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT
PARCEL 126
HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS
WWW.DESIGNCOLLECTIVE.COM

601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242

312 BLACKWELL STREET, SUITE 100
DURHAM, NORTH CAROLINA 27701
T: 919.381.9322 F: 919.381.9333

PROFESSIONAL CERTIFICATE

DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BCC

DATE: APRIL 2016
SCALE: 8"=1'-0"
W.O. NO.: 12-50.00

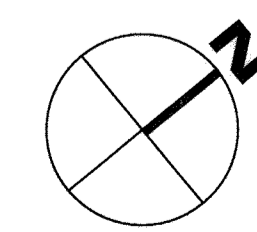
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 1038
EXPIRATION DATE: 06-12-2018

29 SHEET OF **44**

NO AS-BUILT INFORMATION ON THIS SHEET

GENERAL NOTES:

- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
- FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
- FOR COMPLETE SITE PLANTING SCHEDULE, PLEASE SEE SHEET 39.
- MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 4
DATE: 5-17-16

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-9-16

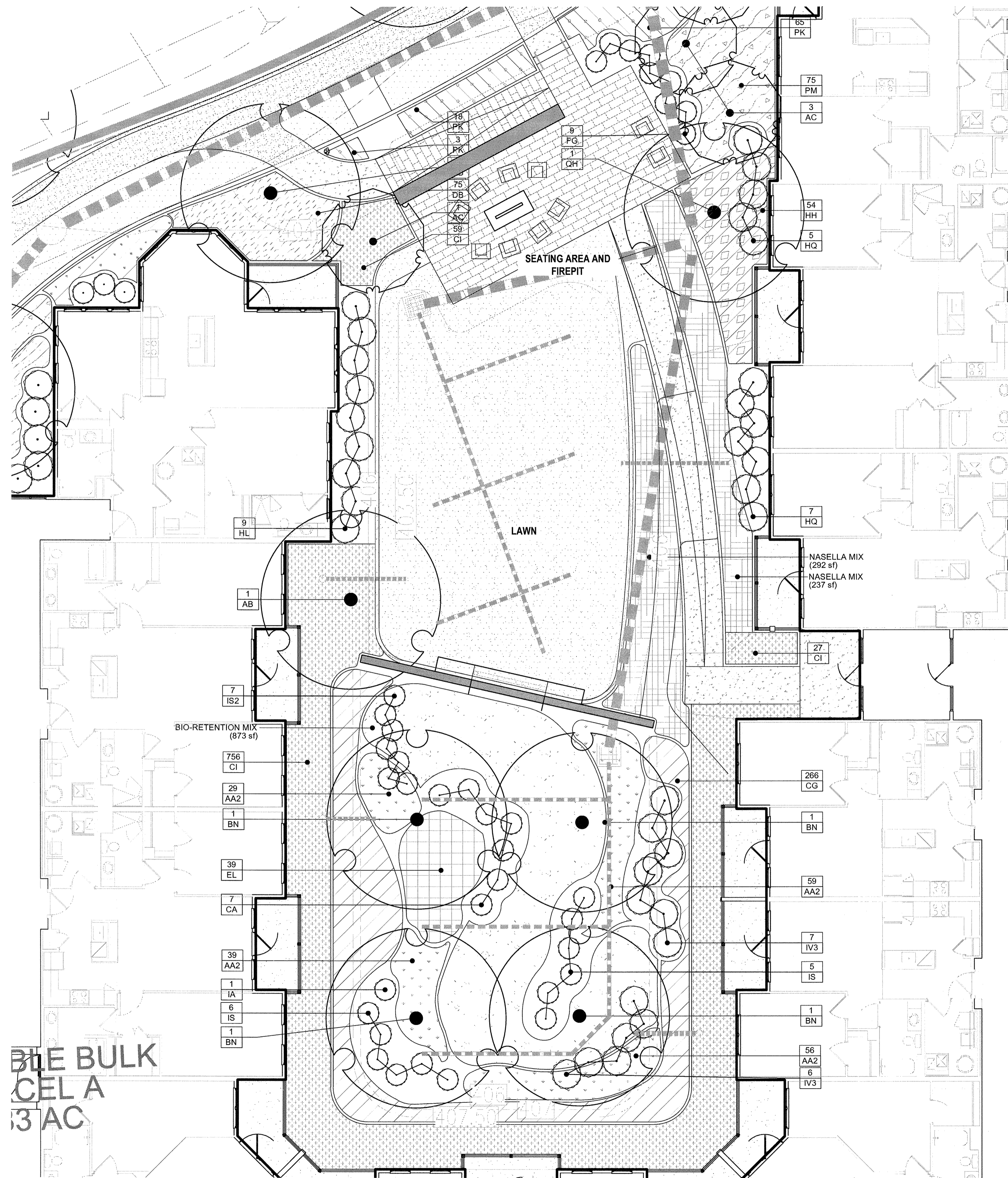
DIRECTOR
DATE: 8-10-16

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER
DATE: 4-20-16

AS-BUILT-OCT. 2018



PLANT SCHEDULE COURTYARD C

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
AB	2	Acer rubrum 'Bowhall Red'	Red Maple	4" cal.		
AC	4	Amelanchier canadensis	Shadblow Serviceberry	10' ht.		
BN	4	Betula nigra 'Gully' TM	Heritage Birch	4" cal.	Single Stem	
QH	1	Quercus phellos	Willow Oak	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CA	7	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
FG	9	Fothergilla gardenii	Dwarf Fothergilla	5 gal	36" o.c.	
HL	9	Hydrangea paniculata 'Little Lime'	Hardy Hydrangea	5 gal	48" o.c.	
HQ	12	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.	
IS2	7	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IA	2	Ilex verticillata 'Apollo'	Winterberry	5 gal	36" o.c.	
IS	11	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
IV3	13	Itea virginica	Virginia Willow	5 gal	48" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
AA2	183	Acorus americanus	Sweet Flag	1 qt	18" o.c.	
CI	842	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	266	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
DB	75	Dryopteris erythrosora 'Brilliance'	Autumn Fern	1 qt	18" o.c.	
EL	39	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
HH	54	Hypericum patulum 'Hidcote'	St. John's Wort	1 qt	24" o.c.	
PK	86	Pennisetum alopecuroides 'Karley Rose'	Fountain Grass	1 qt	24" o.c.	
PM	75	Pycnanthemum muticum	Clustered Mountainmint	1 qt	24" o.c.	

CONCEPT PLANT SCHEDULE COURTYARD C

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	873 sf 81 121 121 81	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	LAWN/SOD	1,922 sf	
	NASELLA MIX Allium sphaerocephalon / Drumstick Allium Nassella tenuissima / Texas Needle Grass Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage Salvia nemorosa 'Caradonna' / Cardonna Perennial Salvia	529 sf 62 62 62 62	25% @ 18" oc 25% @ 18" oc 25% @ 18" oc 25% @ 18" oc

NOTE:
FOR ALL TREE LOCATIONS, SEE 18.

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

[Signature] 16193 3/12/19 DATE

STATE OF MARYLAND
PROFESSIONAL ENGINEER

OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
COURTYARD C LANDSCAPE PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394) PARCEL 126
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS
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512 BLACKWELL STREET, SUITE 100
DURHAM, NORTH CAROLINA 27701
T: 919.381.9322 F: 919.381.9323

PROFESSIONAL CERTIFICATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND
LICENSE NO. 1039 EXPIRATION DATE: 06-12-2016

DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 1" = 1'-0"
W.O. NO.: 12-50.00

30 SHEET OF **44**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 8-9-16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

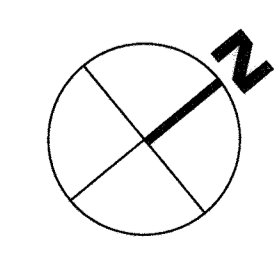
[Signature] 8-10-16
DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

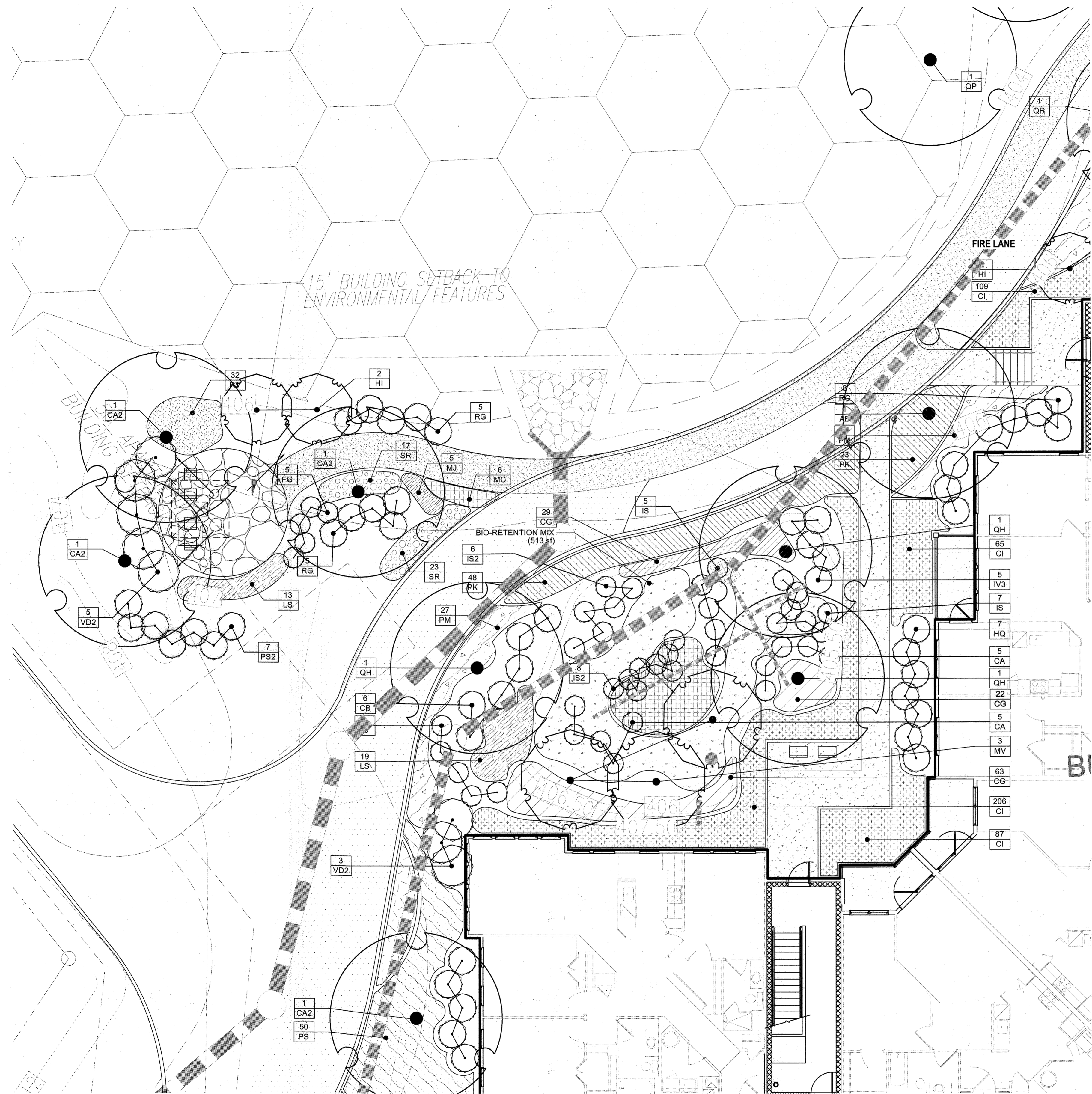
[Signature] 4.20.16
SIGNATURE OF DEVELOPER DATE

- GENERAL NOTES:**
- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
 - FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
 - FOR COMPLETE SITE PLANT SCHEDULE, SEE SHEET 39.
 - MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



PLANT SCHEDULE COURTYARD D

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	REMARKS
AB	1	Acer rubrum 'Bowhall Red'	Red Maple	4"	cal.	
CA2	3	Carpinus caroliniana	American Hornbeam	4"	cal.	
HI	2	Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Hybrid Witch Hazel	8'	ht.	
MV	3	Magnolia virginiana	Sweet Bay	10'	ht.	
QH	3	Quercus phellos	Willow Oak	4"	cal.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CA	10	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
CB	6	Cornus sericea 'Bailey's Redtwig'	Red Twig Dogwood	5 gal	48" o.c.	
FG	5	Fothergilla gardenii	Dwarf Fothergilla	5 gal	36" o.c.	
HQ	7	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.	
IS2	14	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IS	17	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
IV3	5	Itea virginica	Virginia Willow	5 gal	48" o.c.	
PS2	7	Prunus laurocerasus 'Schipkaensis'	Schipka Laurel	5 gal	48" o.c.	
RG	18	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal	48" o.c.	
VD2	8	Viburnum plicatum tomentosum 'Mariesii'	Mariesii Double File Viburnum	5 gal	72" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	358	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	114	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
EL	36	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
LS	32	Ligularia stenocephala 'Little Rocket'	Little Rocket Ligularia	1 qt	24" o.c.	
MJ	5	Monarda didyma 'Jacob Cline'	Jacob Cline Bee Balm	1 gal	24" o.c.	
MC	6	Muhlenbergia capillaris	Pink Muhly	1 qt	24" o.c.	
PK	71	Pennisetum alopecuroides 'Karley Rose'	Fountain Grass	1 qt	24" o.c.	
PM	44	Pycnanthemum muticum	Clustered Mountainmint	1 qt	24" o.c.	
RV	32	Rudbeckia fulgida fulgida	Orange Coneflower	1 qt	18" o.c.	
SR	40	Solidago rugosa 'Fireworks'	Wrinkleleaf Goldenrod	1 qt	18" O.C.	18" o.c.

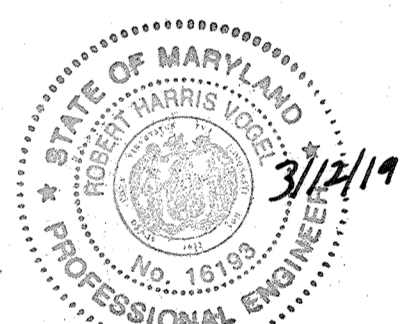
CONCEPT PLANT SCHEDULE COURTYARD D

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	513 sf 48 72 72 48	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	LAWN/SOD	212 sf	

NOTE:
FOR ALL TREE LOCATIONS, SEE SHEET 18.

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWIM FACILITY.

6/19/19 3/12/19
P.E. # DATE



OWNER/DEVELOPER
BUCH LLLP
10945 JOHN'S HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE
4	REVISE PLAN TO SHOW ABANDONED FC BASEMENT	08-29-22

SITE DEVELOPMENTAL PLAN
COURTYARD D LANDSCAPE PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHN'S HOPKINS ROAD)
ZONED: R-APT
(L. 3192 / F. 394)

TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT

PARCEL 126
HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS
WWW.DESIGNCOLLECTIVE.COM

601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242

312 BLACKWELL STREET, SUITE 105
DURHAM, NORTH CAROLINA 27701
T: 919.381.9322 F: 919.381.9323

DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR

DATE: APRIL 2016
SCALE: 8"=1'-0"

W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
EXPIRATION DATE: 06-12-2016

31 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edman
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4
DATE: 5-17-16

Walter D. Duvall
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-9-16

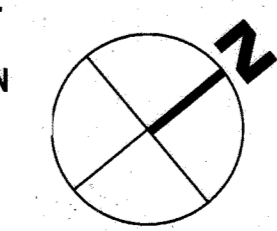
Valerie J. Davis
DIRECTOR
DATE: 8-10-16

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

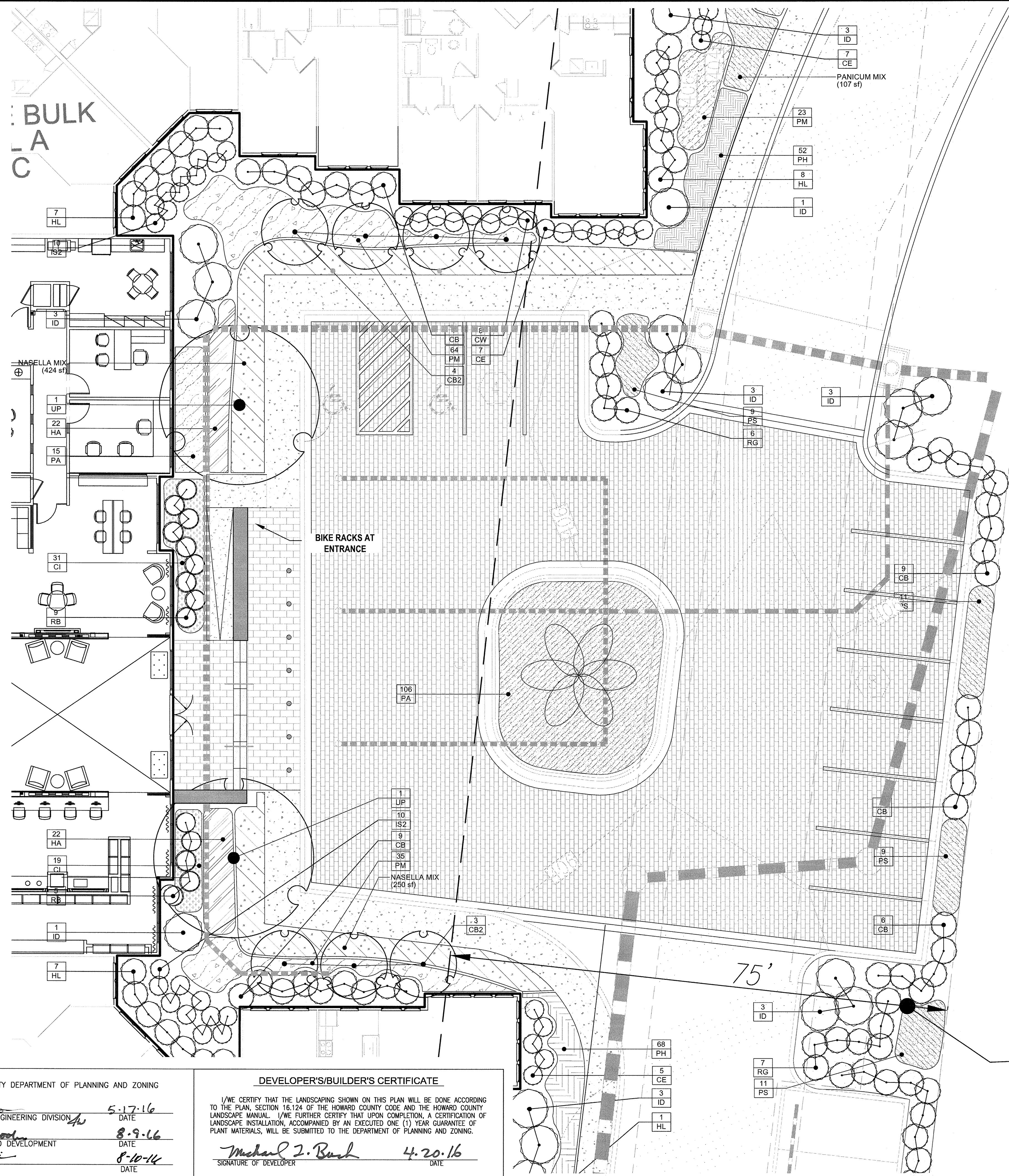
Michael J. Buch
SIGNATURE OF DEVELOPER
DATE: 4-20-16

- GENERAL NOTES:**
- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
 - FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
 - FOR COMPLETE SITE PLANT SCHEDULE, PLEASE SEE SHEET 39.
 - MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018



PLANT SCHEDULE ENTRY COURT

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
CB2	7	Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	2.5' cal.		
UP	2	Ulmus americana 'Princeton'	American Elm	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CE	18	Callicarpa dichotoma 'Early Amethyst'	Beautyberry	5 gal	36" o.c.	
CW	8	Camellia x 'Winter's Showman'	Camellia	5 gal	36" o.c.	
CB	46	Cornus sericea 'Bailey's Redtwig'	Red Twig Dogwood	5 gal	48" o.c.	
HL	23	Hydrangea paniculata 'Little Lime'	Hardy Hydrangea	5 gal	48" o.c.	
ID	19	Ilex aquipernyi 'Dragon Lady'	'Dragon Lady' Holly	5' Ht.	72" o.c.	
IS2	20	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
RG	13	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal	48" o.c.	
RB	14	Rosa x 'Blushing Knockout'	Rose	7 gal	36" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	50	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
HA	44	Hosta x 'Sum and Substance'	Plantain Lily	1 gal	24" o.c.	
PS	40	Panicum virgatum 'Shenendoah'	Burgundy Switch Grass	1 gal	30" o.c.	
PA	121	Pennisetum alopecuroides	Fountain Grass	1 qt	30" o.c.	
PH	120	Pennisetum alopecuroides 'Hameln'	Hamel Dwarf Fountain Grass	1 qt	18" o.c.	
PM	122	Pycnanthemum muticum	Clustered Mountainmint	1 qt	24" o.c.	

CONCEPT PLANT SCHEDULE ENTRY COURT

	NASELLA MIX Allium sphaerocephalon / Drumstick Allium Nassella tenuissima / Texas Needle Grass Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage Salvia nemorosa 'Caradonna' / Cardonna Perennial Salvia	674 sf 78 78 78 78	25% @ 18" oc 25% @ 18" oc 25% @ 18" oc 25% @ 18" oc
	PANICUM MIX Panicum virgatum 'Shenendoah' / Burgundy Switch Grass Solidago rugosa 'Fireworks' / Wrinkleleaf Goldenrod	107 sf 14 13	75% @ 30" oc 25% @ 18" oc

NOTE:
FOR ALL TREE LOCATIONS, SEE 18.

AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONSTRUCTION DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: [Signature] 16193 DATE: 3/12/19



OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

**SITE DEVELOPMENTAL PLAN
ENTRY COURT LANDSCAPE PLAN**

**THE VINE
BUCH APARTMENTS**
 10945 PRICE MANOR WAY, FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT
 (L. 3192 / F. 394)

TAX MAP 46 BLOCK 4 PARCEL 128
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS 601 EAST PRATT STREET, SUITE 300 312 BLACKWELL STREET, SUITE 105
 WWW.DESIGNCOLLECTIVE.COM BALTIMORE, MARYLAND 21202 DURHAM, NORTH CAROLINA 27703
 T: 410.685.6555 F: 410.539.6242 T: 919.381.9372 F: 919.381.9373

DESIGN BY: BR	PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 103 EXPIRATION DATE: 06-12-2016
DRAWN BY: ECC	
CHECKED BY: BR	
DATE: APRIL 2016	
SCALE: 8"=1'-0"	32 SHEET OF 44
W.O. NO.: 12-50.00	

MATTHEW D AMICO, RLA No.1039

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 8-10-14
 DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 4-20-16
 SIGNATURE OF DEVELOPER DATE

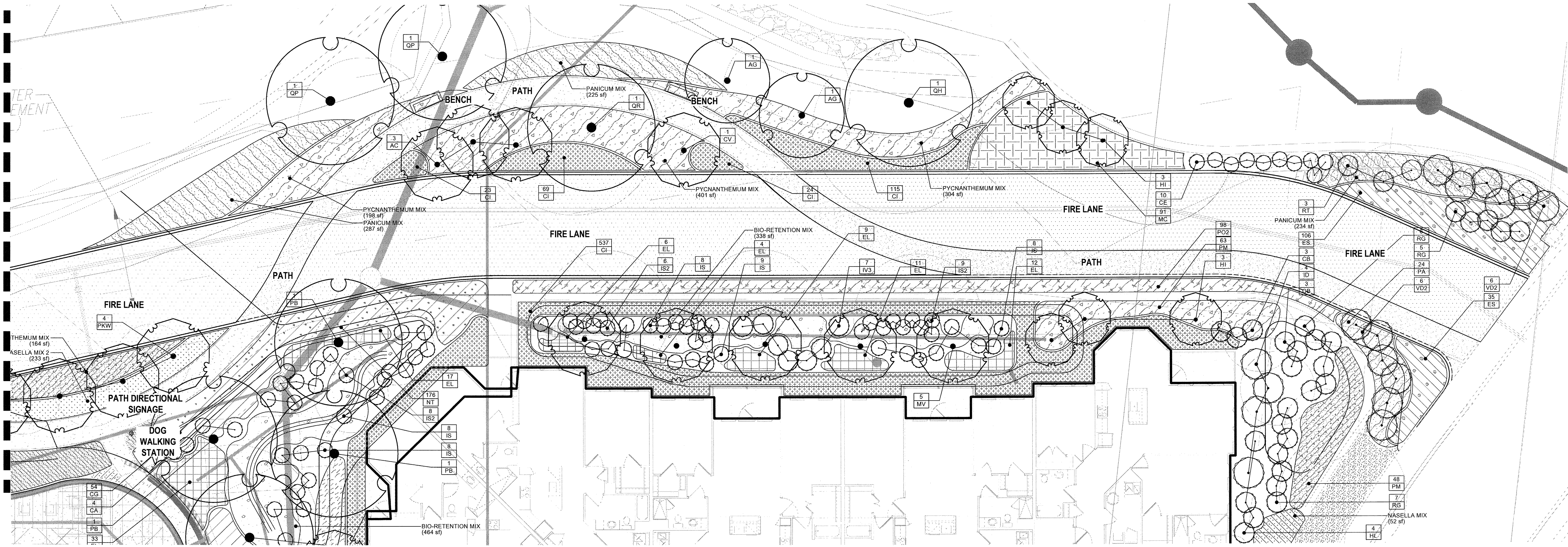
GENERAL NOTES:

1. THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
2. FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
3. FOR COMPLETE PLANT SCHEDULE, PLEASE SEE SHEET 39.
4. MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.

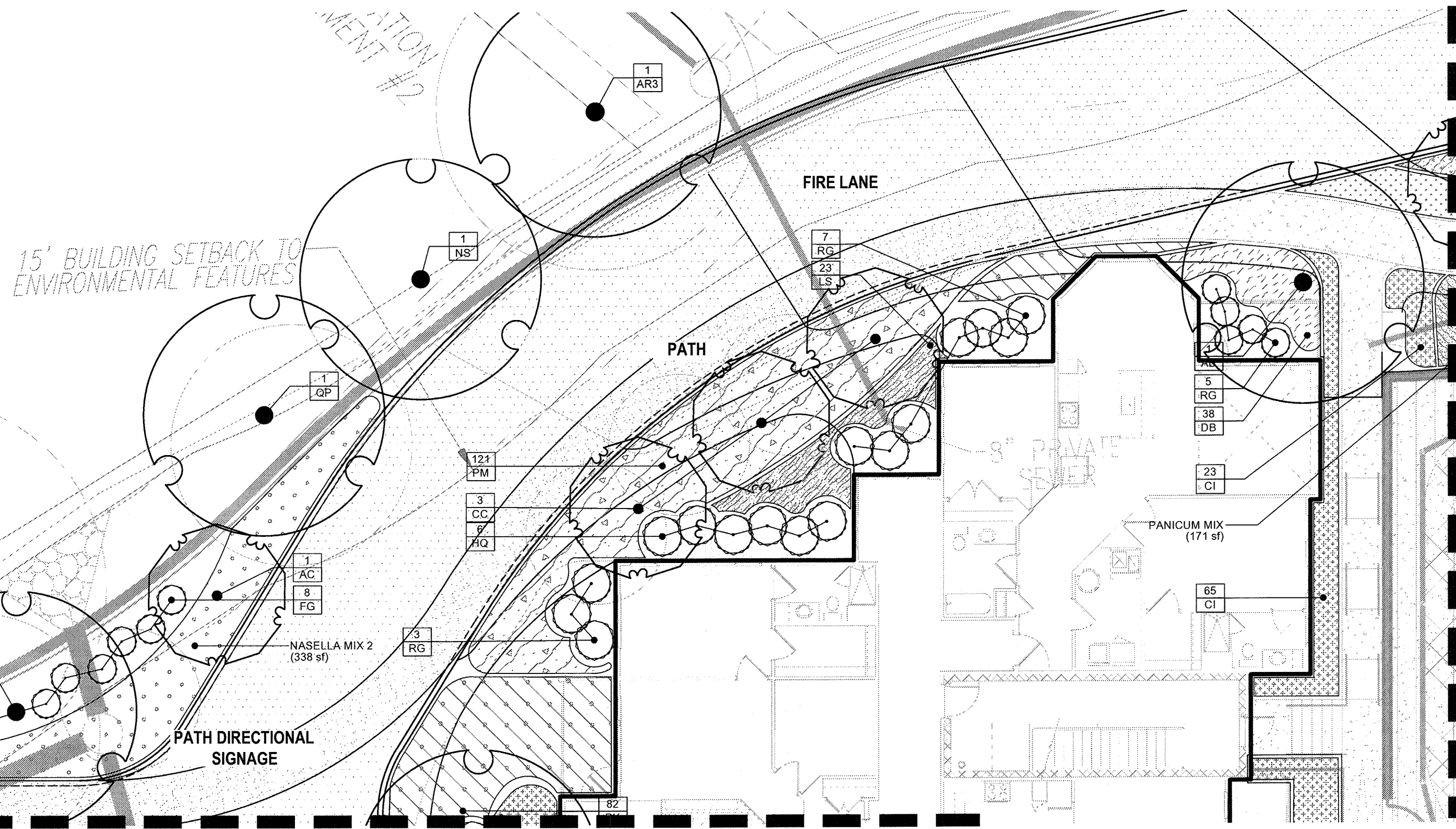
NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT-OCT. 2018

MATCHLINE - SEE THIS SHEET



1 TRAIL SECTION 1 AS NOTED



MATCHLINE - SEE SHEET 36

2 TRAIL SECTION 1A AS NOTED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature and name of Chief, Development Engineering Division, dated 5-17-16. Signature and name of Chief, Division of Land Development, dated 8-10-16.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature and name of Michael J. Bush, dated 4-20-16.

NOTE: FOR PLANT SCHEDULE, SEE SHEET 35

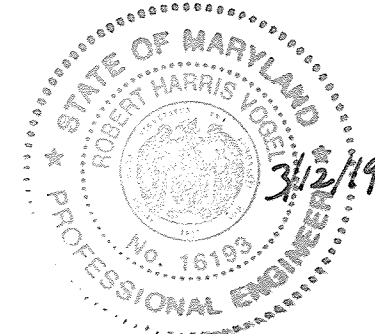
FOR FULL SITE PLANT SCHEDULE, PLEASE REFER TO SHEET 39.

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONSTRUCTION DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

Signature and name of P.E., dated 3/12/19.



OWNER/DEVELOPER

BUCH LLLP, 10945 JOHNS HOPKINS ROAD, LAUREL, MD 20723, 301-339-3500

Table with columns for NO., REVISION, and DATE.

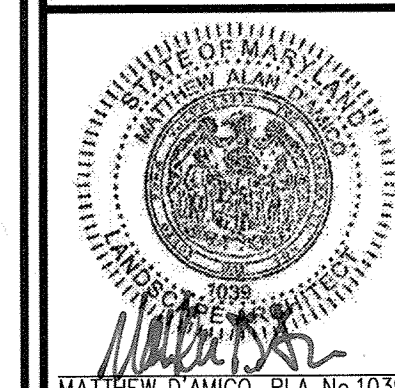
SITE DEVELOPMENTAL PLAN TRAIL - SECTION 1 AND 1A

THE VINE BUCH APARTMENTS, 10945 PRICE MANOR WAY FORMERLY 10945 JOHNS HOPKINS ROAD, ZONED: R-APT (L. 3192 / F. 394)

TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT, PARCEL 126 HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS, 603 EAST PRATT STREET, SUITE 300 BALTIMORE, MARYLAND 21202 WWW.DESIGNCOLLECTIVE.COM T: 410-685-6655 F: 410-539-6242 332 BLACKWELL STERIOS, 100 DURHAM, NORTH CAROLINA 27705 T: 919-381-9322 F: 919-381-9323



DESIGN BY: BR, DRAWN BY: ECC, CHECKED BY: BR, DATE: APRIL 2016, SCALE: 1"=10'-0", W.O. NO.: 12-50.00

PROFESSIONAL CERTIFICATE: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 08-12-2016

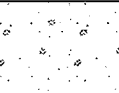


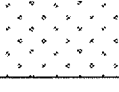
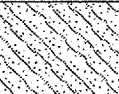
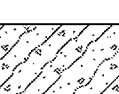
34 SHEET OF 44

AS-BUILT-OCT. 2018

PLANT SCHEDULE TRAIL SECTION 1 & 1A

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	
AG	2	Acer griseum	Paperbark Maple	2.5" cal.	
AR3	1	Acer rubrum	Red Maple	4" cal.	
AC	4	Amelanchier canadensis	Shadblow Serviceberry	10' ht.	
CC	3	Cercis canadensis	Eastern Redbud	2.5" cal.	
CV	1	Crataegus viridis 'Winter King'	'Winter King' Hawthorn	2.5" cal.	
HI	6	Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Hybrid Witch Hazel	8' ht.	
MV	5	Magnolia virginiana	Sweet Bay	10' ht.	
NS	1	Nyssa sylvatica	Black Gum	2.5" cal.	
QP	3	Quercus palustris	Pin Oak	4" cal.	
QH	1	Quercus phellos	Willow Oak	4" cal.	
QR	2	Quercus rubra	Red Oak	4" cal.	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
CE	10	Callicarpa dichotoma 'Early Amethyst'	Beautyberry	5 gal	36" o.c.
CB	6	Cornus sericea 'Bailey's Redtwig'	Red Twig Dogwood	5 gal	48" o.c.
FG	8	Fothergilla gardenii	Dwarf Fothergilla	5 gal	36" o.c.
HL	4	Hydrangea paniculata 'Little Lime'	Hardy Hydrangea	5 gal	48" o.c.
HQ	6	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.
ID	4	Ilex aquipernyi 'Dragon Lady'	'Dragon Lady' Holly	5' HT.	72" o.c.
IS2	15	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.
IS	25	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.
IV3	7	Itea virginica	Virginia Willow	5 gal	48" o.c.
RG	28	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal	48" o.c.
RT	3	Rhus typhina 'Tiger Eyes'	Tiger Eyes Sumac	5 gal	48" o.c.
VD2	12	Viburnum plicatum tomentosum 'Mariesii'	Mariesii Double File Viburnum	5 gal	72" o.c.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
CI	768	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.
ES	141	Eragrostis spectabilis	Purple Love Grass	1 qt	21" o.c.
EL	42	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.
LS	23	Ligularia stenocephala 'Little Rocket'	Little Rocket Ligularia	1 qt	24" o.c.
MC	91	Muhlenbergia capillaris	Pink Muhly	1 qt	24" o.c.
PA	24	Pennisetum alopecuroides	Fountain Grass	1 qt	30" o.c.
PK	13	Pennisetum alopecuroides 'Karley Rose'	Fountain Grass	1 qt	24" o.c.
PO2	98	Pennisetum orientale	Oriental Fountain Grass	1 qt	24" o.c.
PM	255	Pycnanthemum muticum	Clustered Mountainmint	1 qt	24" o.c.
RV	92	Rudbeckia fulgida fulgida	Orange Coneflower	1 qt	18" o.c.

CONCEPT PLANT SCHEDULE TRAIL SECTION 1

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	338 sf 32 47 47 32	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	LAWN/SOD	6,974 sf	
	NASELLA MIX Allium sphaerocephalon / Drumstick Allium Nassella tenuissima / Texas Needle Grass Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage Salvia nemorosa 'Caradonna' / Caradonna Perennial Salvia	52 sf 6 6 6 6	25% @ 18" oc 25% @ 18" oc 25% @ 18" oc 25% @ 18" oc
	NASELLA MIX 2 Echinacea purpurea 'Magnus' / Magnus Purple Coneflower Nassella tenuissima / Texas Needle Grass	675 sf 58 234	25% @ 21" oc 75% @ 18" oc
	PANICUM MIX Panicum virgatum 'Shenendoah' / Burgundy Switch Grass Solidago rugosa 'Fireworks' / Winkieleaf Goldenrod	745 sf 93 87	75% @ 30" oc 25% @ 18" oc
	PYCNANTHEMUM MIX Actaea racemosa / Black Cohosh Pycnanthemum muticum / Clustered Mountainmint	903 sf 105 313	25% @ 18" oc 75% @ 18" oc

OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
TRAIL SECTION 1 AND 1A PLANT SCHEDULE
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-AFT (L. 3192 / F. 394)
TAX MAP 46 BLOCK 4 PARCEL 126
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

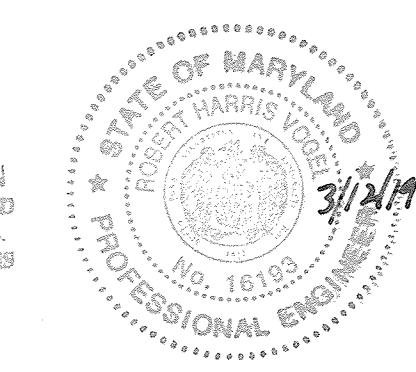
DESIGN COLLECTIVE
ARCHITECTURE, PLANNING, INTERIORS
WWW.DESIGNCOLLECTIVE.COM
601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242
332 BLACKWELL STREET, SUITE 100
DURHAM, NORTH CAROLINA 27701
T: 919.381.9322 F: 919.381.9323

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 1039
EXPIRATION DATE: 06-12-2016

DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 8"=1'-0"
W.O. NO.: 12-50.00

35 SHEET OF 44

AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
NAME: [Signature] P.E.#: 16193 DATE: 3/12/19



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] DATE: 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] DATE: 5-16-16
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] DATE: 8-10-16
DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
[Signature] DATE: 4-20-16
SIGNATURE OF DEVELOPER

NOTE: FOR FULL SITE PLANT SCHEDULE, PLEASE REFER TO SHEET 39.

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT - OCT. 2018

MATCHLINE - SEE SHEET 34

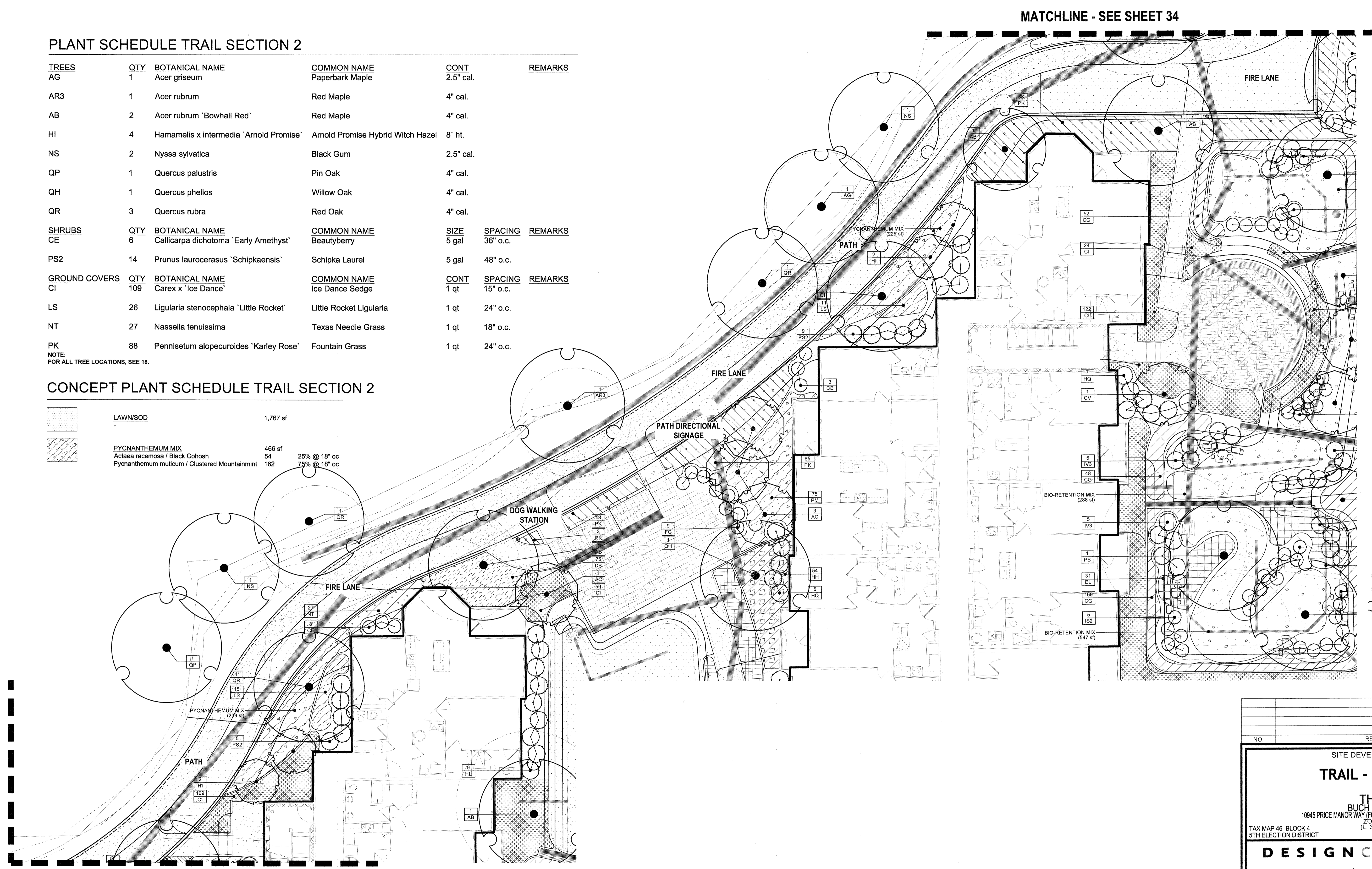
PLANT SCHEDULE TRAIL SECTION 2

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
AG	1	Acer griseum	Paperbark Maple	2.5" cal.		
AR3	1	Acer rubrum	Red Maple	4" cal.		
AB	2	Acer rubrum 'Bowhall Red'	Red Maple	4" cal.		
HI	4	Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Hybrid Witch Hazel	8' ht.		
NS	2	Nyssa sylvatica	Black Gum	2.5" cal.		
QP	1	Quercus palustris	Pin Oak	4" cal.		
QH	1	Quercus phellos	Willow Oak	4" cal.		
QR	3	Quercus rubra	Red Oak	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
CE	6	Calliandra dichotoma 'Early Amethyst'	Beautyberry	36" o.c.		
PS2	14	Prunus laurocerasus 'Schipkaensis'	Schipka Laurel	5 gal	48" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	109	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
LS	26	Ligularia stenocephala 'Little Rocket'	Little Rocket Ligularia	1 qt	24" o.c.	
NT	27	Nassella tenuissima	Texas Needle Grass	1 qt	18" o.c.	
PK	88	Pennisetum alopecuroides 'Karley Rose'	Fountain Grass	1 qt	24" o.c.	

NOTE:
FOR ALL TREE LOCATIONS, SEE 18.

CONCEPT PLANT SCHEDULE TRAIL SECTION 2

	LAWN/SOD	1,767 sf
	PYCNANTHEMUM MIX Actaea racemosa / Black Cohosh Pycnanthemum muticum / Clustered Mountainmint	466 sf 54 25% @ 18" oc 162 75% @ 18" oc



MATCHLINE - SEE SHEET 37



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE ASSUMED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
 P.E. NAME: 16193 DATE: 3/12/19

OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
TRAIL - SECTION 2
 THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-AP (L. 3192 / F. 394) PARCEL 126
 TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
 ARCHITECTURE, PLANNING, INTERIORS 601 EAST PRATT STREET, SUITE 300 312 BLACKWELL STREET, SUITE 100
 BALTIMORE, MARYLAND 21202 DURHAM, NORTH CAROLINA 27705
 WWW.DESIGNCOLLECTIVE.COM T: 410.685.6655 F: 410.539.6242 T: 919.381.9332 F: 919.381.9333

	DESIGN BY: BR	PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 1032 EXPIRATION DATE: 08-12-2016
	DRAWN BY: ECC	
	CHECKED BY: BR	
	DATE: APRIL 2016	
SCALE: 1"=10'-0"	W.O. NO.: 12-50.00	36 SHEET OF 44

- GENERAL NOTES:**
- THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
 - FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
 - FOR COMPLETE PLANT SCHEDULE, PLEASE SEE SHEET 39.
 - MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.

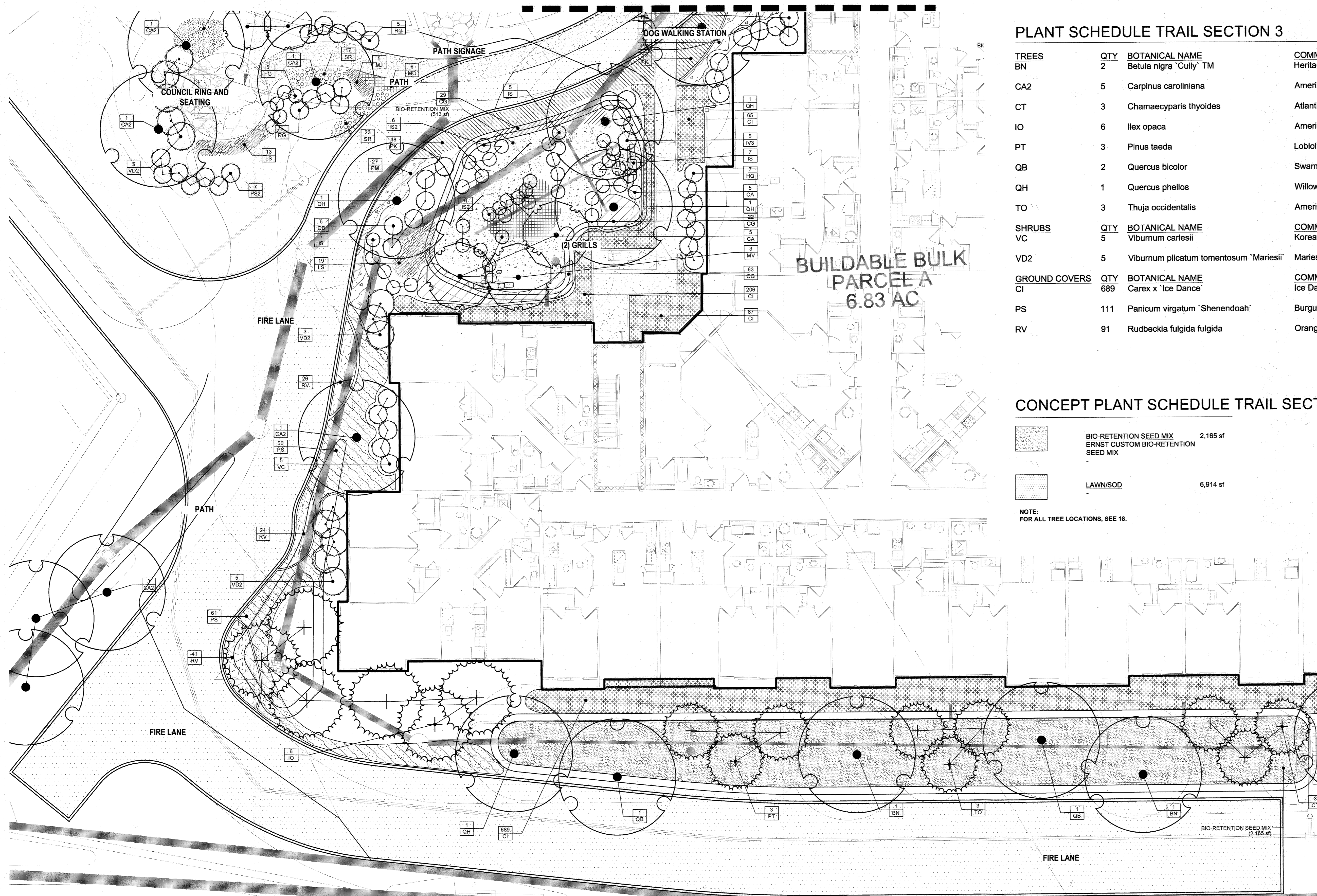
NO AS-BUILT INFORMATION ON THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 Signature of Developer: Michael Z. Buch
 Date: 4.20.16

AS-BUILT - OCT. 2018

MATCHLINE - SEE SHEET 36



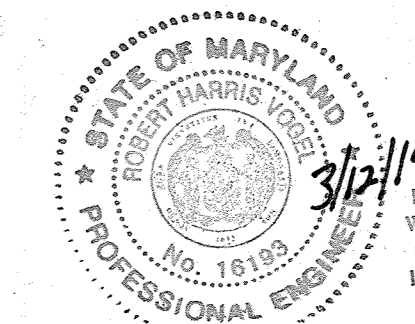
PLANT SCHEDULE TRAIL SECTION 3

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
BN	2	Betula nigra 'Cully'™	Heritage Birch	4" cal.	Single Stem	
CA2	5	Carpinus caroliniana	American Hornbeam	4" cal.		
CT	3	Chamaecyparis thyoides	Atlantic White Cedar	8' ht.		
IO	6	Ilex opaca	American Holly	10' ht.		
PT	3	Pinus taeda	Loblolly Pine	8' ht.		
QB	2	Quercus bicolor	Swamp White Oak	4" cal.		
QH	1	Quercus phellos	Willow Oak	4" cal.		
TO	3	Thuja occidentalis	American Arborvitae	8' ht.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
VC	5	Viburnum carlesii	Korean Spice Viburnum	7 gal	48" o.c.	
VD2	5	Viburnum plicatum tomentosum 'Mariesii'	Mariesii Double File Viburnum	5 gal	72" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	689	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
PS	111	Panicum virgatum 'Shenendoah'	Burgundy Switch Grass	1 gal	30" o.c.	
RV	91	Rudbeckia fulgida fulgida	Orange Coneflower	1 qt	18" o.c.	

CONCEPT PLANT SCHEDULE TRAIL SECTION 3

	BIO-RETENTION SEED MIX ERNST CUSTOM BIO-RETENTION SEED MIX	2,165 sf
	LAWN/SOD	6,914 sf

NOTE:
FOR ALL TREE LOCATIONS, SEE 18.



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN
WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND
COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.
I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS
SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE
UNDERGROUND SWM FACILITY.
P.E. NAME: Robert Harris P.E. # 16193 DATE: 3/12/19

NO AS-BUILT INFORMATION ON THIS SHEET

OWNER/DEVELOPER
BUCH LLP
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE
4	REVISE PLAN TO SHOW ABANDONED FC BASEMENT	08-29-22

SITE DEVELOPMENTAL PLAN
TRAIL - SECTION 3

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT
(L. 3152 / F. 384)

TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS
601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.535.6242

312 BLACKWELL STREET, SUITE 100
DURHAM, NORTH CAROLINA 27701
T: 919.381.9322 F: 919.381.9323

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John Edinger
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5-17-16

Vest Schenck
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-9-16

Michael J. Jellie
DIRECTOR
DATE: 8-10-16

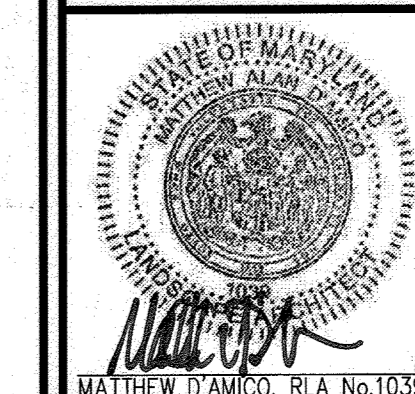
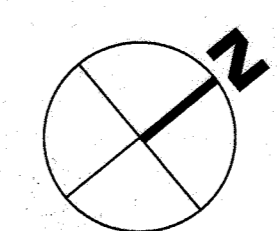
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Buch
SIGNATURE OF DEVELOPER
DATE: 4-20-16

GENERAL NOTES:

1. THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
2. FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
3. FOR COMPLETE PLANT SCHEDULE, PLEASE SEE SHEET 39.
4. MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



PROFESSIONAL CERTIFICATE

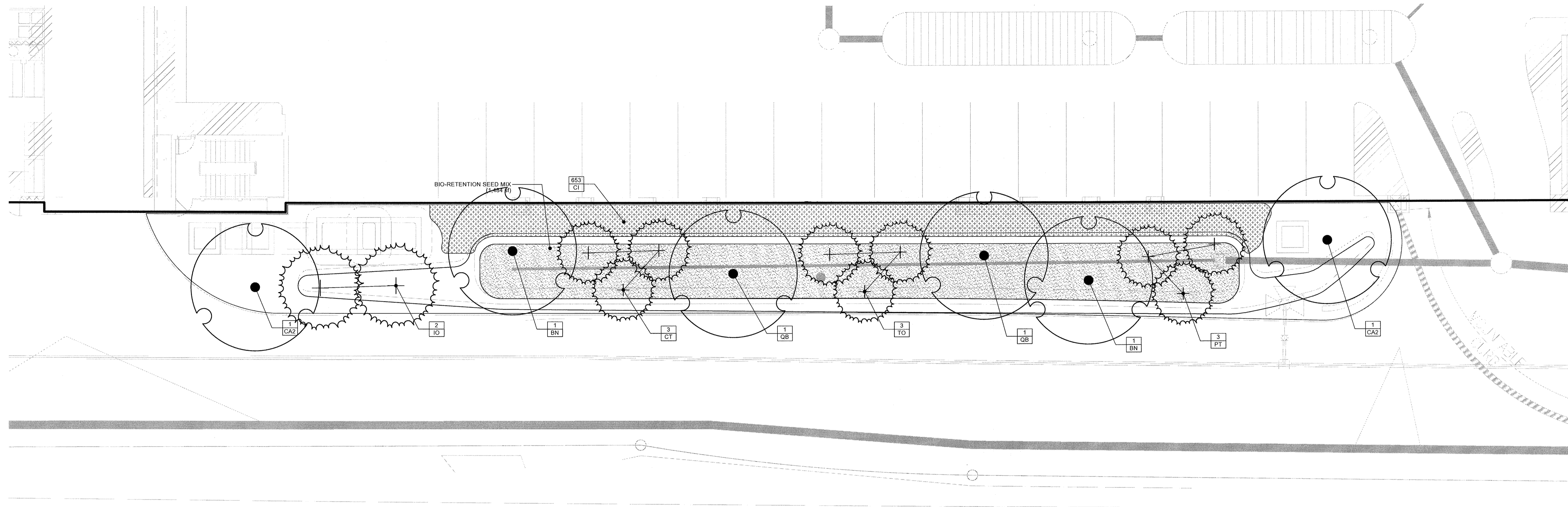
DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 1"=10'-0"
W.O. NO.: 12-50-00

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 10239
EXPIRATION DATE: 06-12-2016

Matthew D'Amico
MATTHEW D'AMICO, RLA No. 10239

37 SHEET OF 44

AS-BUILT - OCT. 2018



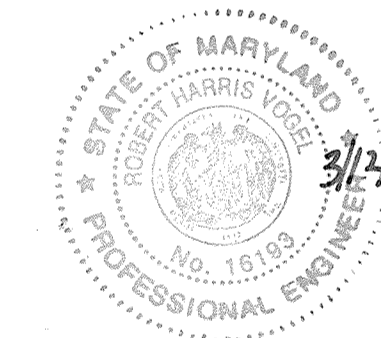
PLANT SCHEDULE GARAGE SECTION

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	REMARKS	
BN	2	Betula nigra 'Cully' TM	Heritage Birch	4" cal.	Single Stem	
CA2	2	Carpinus caroliniana	American Hornbeam	4" cal.		
CT	3	Chamaecyparis thyoides	Atlantic White Cedar	8' ht.		
IO	2	Ilex opaca	American Holly	10' ht.		
PT	3	Pinus taeda	Loblolly Pine	8' ht.		
QB	2	Quercus bicolor	Swamp White Oak	4" cal.		
TO	3	Thuja occidentalis	American Arborvitae	8' ht.		
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CI	653	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	

NOTE:
FOR ALL TREE LOCATIONS, SEE SHEET 17.

CONCEPT PLANT SCHEDULE GARAGE SECTION

 BIO-RETENTION SEED MIX 1,484 sf
ERNST CUSTOM BIO-RETENTION SEED MIX



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
DATE: 16/93 3/12/19

OWNER/DEVELOPER
BUCH LLLP
10945 JOHNS HOPKINS ROAD
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE

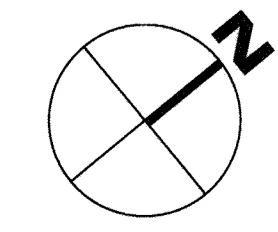
SITE DEVELOPMENTAL PLAN
PARKING GARAGE SECTION
THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT
(L. 3192 / F. 394)
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT
PARCEL 126
HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE
ARCHITECTURE, PLANNING, INTERIORS
601 EAST PRATT STREET, SUITE 300
BALTIMORE, MARYLAND 21202
T: 410.685.6655 F: 410.539.6242
WWW.DESIGNCOLLECTIVE.COM
312 BLACKWELL STREET, SUITE 105
CURNHAM, NORTH CAROLINA 27705
T: 919.381.9322 F: 919.381.9323

No AS-BUILT INFORMATION ON THIS SHEET

GENERAL NOTES:

1. THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY.
2. FOR OVERALL SITE LAYOUT AND GRADING, SEE CIVIL DRAWINGS.
3. FOR COMPLETE PLANT SCHEDULE, PLEASE SEE SHEET 39.
4. MBR PLANTING AND MINIMUM LANDSCAPE REQUIREMENTS CAN BE FOUND ON SHEETS 18 AND 19.



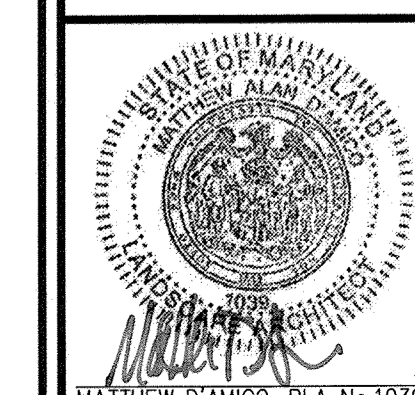
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Phil Edman 5.17.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kathleen 8.2.16
CHIEF, DIVISION OF LAND DEVELOPMENT
Matthew Joffe 8.10.16
DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Buch 4.20.16
SIGNATURE OF DEVELOPER DATE




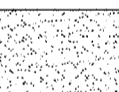
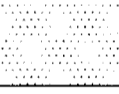
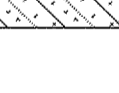
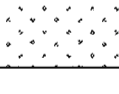
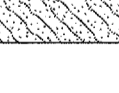
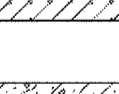

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
DESIGN NO. 1039
EXPIRATION DATE: 08-12-2016
DESIGN BY: BR
DRAWN BY: ECC
CHECKED BY: BR
DATE: APRIL 2016
SCALE: 1"=10'-0"
W.O. NO.: 12-50.00
38 SHEET OF **44**

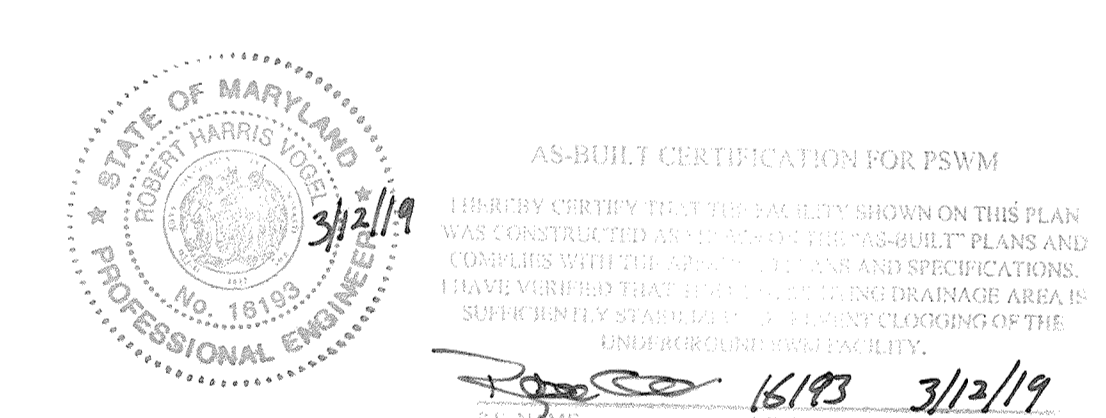
AS-BUILT - OCT. 2018

PLANT SCHEDULE OVERALL

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	REMARKS
AG	3	Acer griseum	Paperbark Maple	2.5" cal.		
AR3	3	Acer rubrum	Red Maple	4" cal.		
AB	9	Acer rubrum 'Bowhall Red'	Red Maple	4" cal.		
AC	8	Amelanchier canadensis	Shadblow Serviceberry	10' ht.		
BN	13	Betula nigra 'Cully' TM	Heritage Birch	4" cal.		Single Stem
CB2	7	Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	2.5" cal.		
CA2	11	Carpinus caroliniana	American Hornbeam	4" cal.		
CC	10	Cercis canadensis	Eastern Redbud	2.5" cal.		
CT	6	Chamaecyparis thyoides	Atlantic White Cedar	8' ht.		
CV	3	Crataegus viridis 'Winter King'	'Winter King' Hawthorn	2.5" cal.		
HI	15	Hamamelis x intermedia 'Arnold Promise'	Arnold Promise Hybrid Witch Hazel	8' ht.		
IO	8	Ilex opaca	American Holly	10' ht.		
MV	17	Magnolia virginiana	Sweet Bay	10' ht.		
NS	3	Nyssa sylvatica	Black Gum	2.5" cal.		
PT	6	Pinus taeda	Loblolly Pine	8' ht.		
PB	6	Platanus x acerifolia 'Bloodgood'	London Plane Tree	4" cal.		
PKW	4	Prunus serrulata 'Kwanzan'	Flowering Cherry	2.5" cal.		
PO	3	Prunus x okame	Okame Cherry	2.5" cal.		
QB	4	Quercus bicolor	Swamp White Oak	4" cal.		
QP	5	Quercus palustris	Pin Oak	4" cal.		
QH	8	Quercus phellos	Willow Oak	4" cal.		
QR	5	Quercus rubra	Red Oak	4" cal.		
TO	6	Thuja occidentalis	American Arborvitae	8' ht.		
UP	2	Ulmus americana 'Princeton'	American Elm	4" cal.		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	REMARKS
AE	10	Abelia x grandiflora 'Edward Goucher'	Glossy Abelia	5 gal	48" o.c.	
AR4	15	Abelia x grandiflora 'Rose Creek'	Rose Creek Abelia	5 gal	36" o.c.	
CE	35	Callicarpa dichotoma 'Early Amethyst'	Beautyberry	5 gal	36" o.c.	
CW	8	Camellia x 'Winter's Snowman'	Camellia	5 gal	36" o.c.	
CA	43	Clethra alnifolia	Summersweet Clethra	5 gal	36" o.c.	
CB	93	Cornus sericea 'Bailey's Redtwig'	Red Twig Dogwood	5 gal	48" o.c.	
FG	22	Fothergilla gardenii	Dwarf Fothergilla	5 gal	36" o.c.	
HA3	6	Hydrangea anomala petiolaris	Climbing Hydrangea	5 gal	24" o.c.	
HL	41	Hydrangea paniculata 'Little Lime'	Hardy Hydrangea	5 gal	48" o.c.	
HQ	51	Hydrangea quercifolia	Oakleaf Hydrangea	7 gal	48" o.c.	
ID	27	Ilex aquipernyi 'Dragon Lady'	'Dragon Lady' Holly	5' Ht.	72" o.c.	
IS2	99	Ilex glabra 'Shamrock'	Inkberry	5 gal	36" o.c.	
IA	5	Ilex verticillata 'Apollo'	Winterberry	5 gal	36" o.c.	
IS	120	Ilex verticillata 'Sparkleberry'	Winterberry	5 gal	36" o.c.	
IV3	52	Itea virginica	Virginia Willow	5 gal	48" o.c.	
PS2	21	Prunus laurocerasus 'Schipkaensis'	Schipka Laurel	5 gal	48" o.c.	
RG	64	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal	48" o.c.	
RT	3	Rhus typhina 'Tiger Eyes'	Tiger Eyes Sumac	5 gal	48" o.c.	
RB	14	Rosa x 'Blushing Knockout'	Rose	7 gal	36" o.c.	
VC	10	Viburnum carlesii	Korean Spice Viburnum	7 gal	48" o.c.	
VD2	25	Viburnum plicatum tomentosum 'Mariesii'	Mariesii Double File Viburnum	5 gal	72" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
AA2	255	Acorus americanus	Sweet Flag	1 qt	18" o.c.	
AD	32	Astilbe x arendsii 'Deutschland'	Deutschland False Spiraea	1 gal	18" o.c.	
CI	7,102	Carex x 'Ice Dance'	Ice Dance Sedge	1 qt	15" o.c.	
CG	1,028	Chelone glabra	White Turtle-head	1 qt	18" o.c.	
DB	227	Dryopteris erythrosora 'Brilliance'	Autumn Fern	1 qt	18" o.c.	
ES	141	Eragrostis spectabilis	Purple Love Grass	1 qt	21" o.c.	
EL	333	Eupatorium dubium 'Little Joe'	Joe-Pye Weed	1 qt	24" o.c.	
HA2	59	Heuchera villosa 'Autumn Bride'	Autumn Bride Heuchera	1 qt	18" o.c.	
HE	48	Hosta x 'Elegans'	Plantain Lily	1 gal	24" o.c.	
HA	44	Hosta x 'Sum and Substance'	Plantain Lily	1 gal	24" o.c.	
HH	54	Hypericum patulum 'Hidcole'	St. John's Wort	1 qt	24" o.c.	

CONCEPT PLANT SCHEDULE OVERALL

	BIO-RETENTION MIX Asclepias incarnata / Swamp Milkweed Chasmanthium latifolium / Wood Oats Iris versicolor / Blue Flag Lobelia cardinalis / Cardinal Flower	5,584 sf	20% @ 18" oc 30% @ 18" oc 30% @ 18" oc 20% @ 18" oc
	BIO-RETENTION SEED MIX ERNST CUSTOM BIO-RETENTION SEED MIX	3,649 sf	0%
	LAWN/SOD	19,516 sf	0%
	NASELLA MIX Allium sphaerocephalon / Drumstick Allium Nassella tenuissima / Texas Needle Grass Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage Salvia nemorosa 'Caradonna' / Caradonna Perennial Salvia	1,347 sf	156 @ 18" oc 156 @ 18" oc 156 @ 18" oc 156 @ 18" oc
	NASELLA MIX 2 Echinacea purpurea 'Magnus' / Magnus Purple Coneflower Nassella tenuissima / Texas Needle Grass	909 sf	78 @ 21" oc 315 @ 18" oc
	PANICUM MIX Panicum virgatum 'Shenendoah' / Burgundy Switch Grass Solidago rugosa 'Fireworks' / Wrinkleleaf Goldenrod	1,038 sf	130 @ 30" oc 120 @ 18" oc
	PENNISETUM MIX Allium giganteum / Giant Allium Pennisetum alopecuroides 'Karlay Rose' / Fountain Grass	2,080 sf	241 @ 18" oc 406 @ 24" oc
	PYCNANTHEMUM MIX Actaea racemosa / Black Cohosh Pycnanthemum muticum / Clustered Mountainmint	1,532 sf	177 @ 18" oc 531 @ 18" oc



AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE PLAN SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND I HAVE VERIFIED THAT THE CONSTRUCTION IS IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE ENGINEERING PROFESSION.
 DATE: 16/193 3/12/19
OWNER/DEVELOPER
 BUCH LLLP
 10945 JOHNS HOPKINS ROAD
 LAUREL, MD 20723
 301-359-3500

NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
OVERALL PLANT SCHEDULE

THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT (L. 3152 / F. 394)

TAX MAP 46 BLOCK 4 PARCEL 126
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGN COLLECTIVE

ARCHITECTURE, PLANNING, INTERIORS 601 EAST PRATT STREET, SUITE 300 312 BLACKWELL STREET, SUITE 100
 WWW.DESIGNCOLLECTIVE.COM BALTIMORE, MARYLAND 21202 DURHAM, NORTH CAROLINA 27701
 T: 410.685.6655 F: 410.539.6242 T: 919.381.9322 F: 919.381.9333

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Chamberlain 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kate Schaefer 3-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

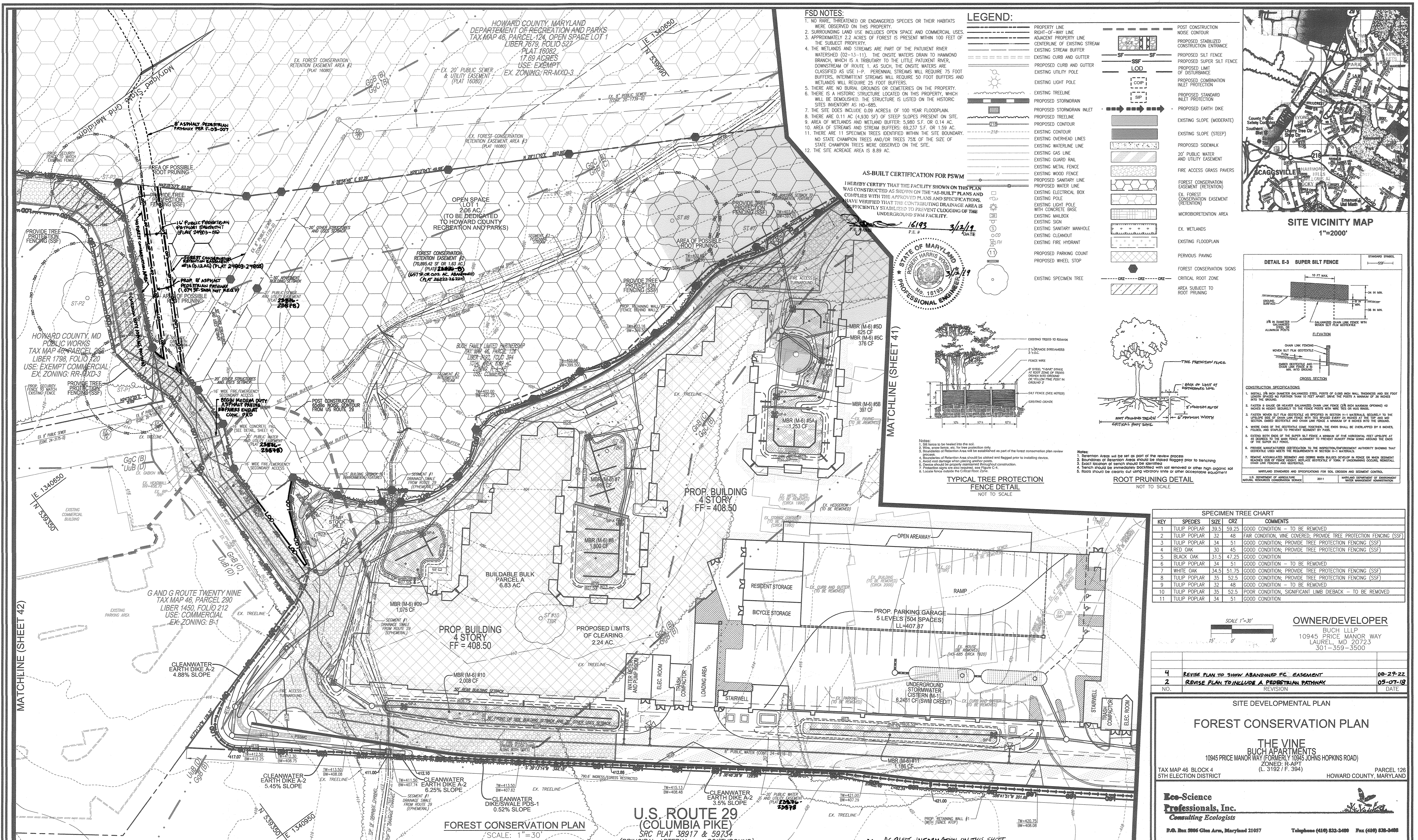
Valerie J. Allen 8-10-16
 DIRECTOR DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Bush 4-20-16
 SIGNATURE OF DEVELOPER DATE

No AS-BUILT INFORMATION ON THIS SHEET



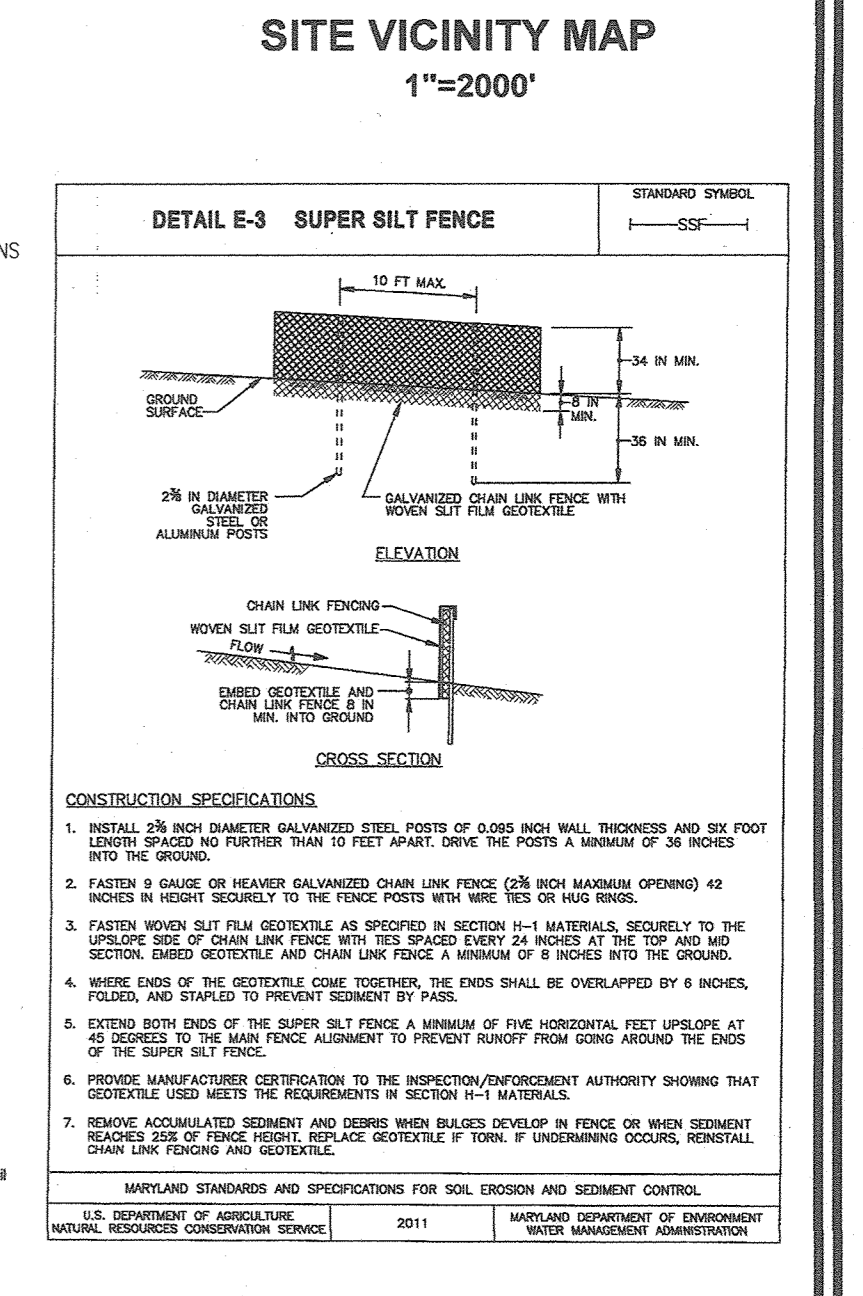
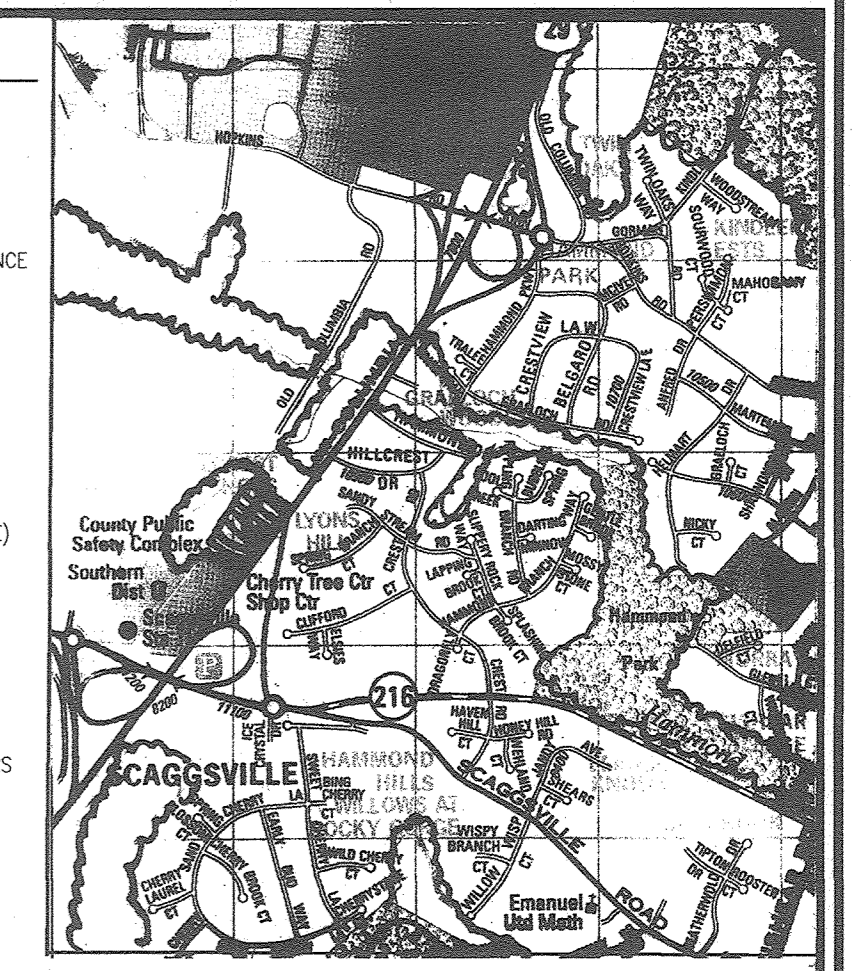
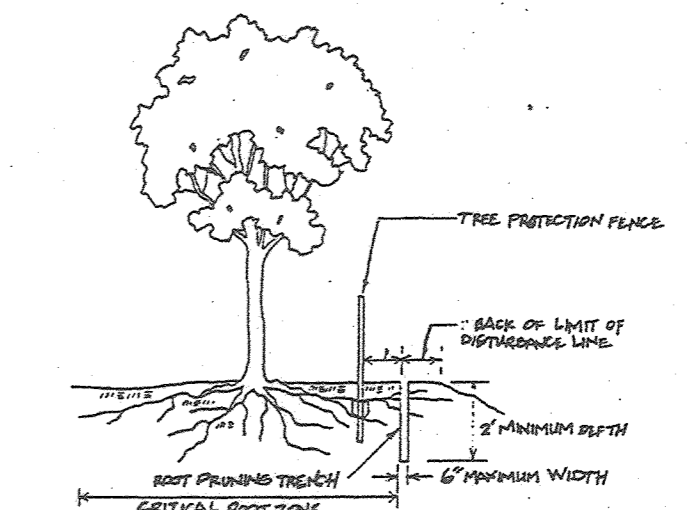
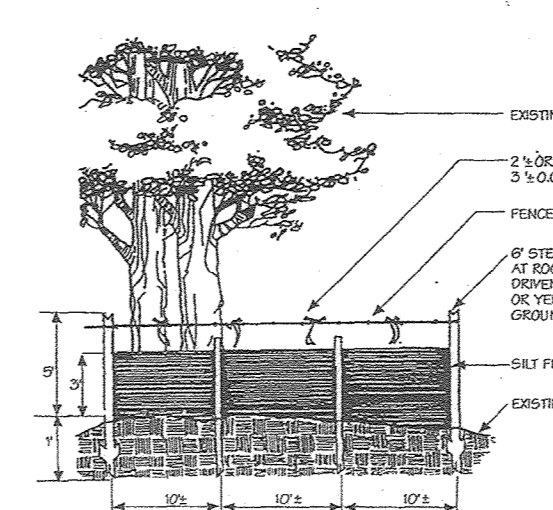
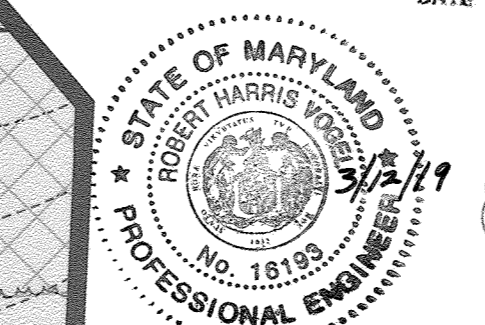
- FSD NOTES:**
- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THIS PROPERTY.
 - SURROUNDING LAND USE INCLUDES OPEN SPACE AND COMMERCIAL USES. APPROXIMATELY 2.2 ACRES OF FOREST IS PRESENT WITHIN 100 FEET OF THE SUBJECT PROPERTY.
 - THE WETLANDS AND STREAMS ARE PART OF THE PATUXENT RIVER WATERSHED (02-13-11). THE ONSITE WATERS DRAIN TO HAMMOND BRANCH, WHICH IS A TRIBUTARY TO THE LITTLE PATUXENT RIVER, DOWNSTREAM OF ROUTE 1. AS SUCH, THE ONSITE WATERS ARE CLASSIFIED AS USE 1-P. PERENNIAL STREAMS WILL REQUIRE 75 FOOT BUFFERS, INTERMITTENT STREAMS WILL REQUIRE 50 FOOT BUFFERS AND WETLANDS WILL REQUIRE 25 FOOT BUFFERS.
 - THERE ARE NO BURIAL GROUNDS OR CEMETERIES ON THE PROPERTY.
 - THERE IS A HISTORIC STRUCTURE LOCATED ON THIS PROPERTY, WHICH WILL BE DEMOLISHED. THE STRUCTURE IS LISTED ON THE HISTORIC SITES INVENTORY AS HO-685.
 - THE SITE DOES INCLUDE 0.09 ACRES OF 100 YEAR FLOODPLAIN.
 - THERE ARE 0.11 AC (4,930 SF) OF STEEP SLOPES PRESENT ON SITE.
 - AREA OF WETLANDS AND WETLAND BUFFERS: 5,980 S.F. OR 0.14 AC.
 - AREA OF STREAMS AND STREAM BUFFERS: 69,237 S.F. OR 1.59 AC.
 - THERE ARE 11 SPECIMEN TREES IDENTIFIED WITHIN THE SITE BOUNDARY. NO STATE CHAMPION TREES AND/OR TREES 75% OF THE SIZE OF STATE CHAMPION TREES WERE OBSERVED ON THE SITE.
 - THE SITE ACREAGE AREA IS 8.89 AC.

- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - CENTERLINE OF EXISTING STREAM
 - EXISTING STREAM BUFFER
 - EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING TREELINE
 - PROPOSED STORMWATER INLET
 - PROPOSED TRENCH
 - PROPOSED CONTOUR
 - EXISTING CONTOUR
 - EXISTING OVERHEAD LINES
 - EXISTING WATERLINE LINE
 - EXISTING GAS LINE
 - EXISTING GUARD RAIL
 - EXISTING METAL FENCE
 - EXISTING WOOD FENCE
 - PROPOSED SANITARY LINE
 - PROPOSED WATER LINE
 - EXISTING ELECTRICAL BOX
 - EXISTING POLE
 - EXISTING LIGHT POLE WITH CONCRETE BASE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - PROPOSED PARKING COUNTP
 - PROPOSED WHEEL STOP
 - EXISTING SPECIMEN TREE

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABLE TO PREVENT CLOGGING OF THE UNDERGROUND SWAI FACILITY.

16193 3/12/19
P.E. # DATE



SPECIMEN TREE CHART

KEY	SPECIES	SIZE	CRZ	COMMENTS
1	TULIP POPLAR	39.5	59.25	GOOD CONDITION - TO BE REMOVED
2	TULIP POPLAR	32	48	FAIR CONDITION, VINE COVERED; PROVIDE TREE PROTECTION FENCING (SSF)
3	TULIP POPLAR	34	51	GOOD CONDITION; PROVIDE TREE PROTECTION FENCING (SSF)
4	RED OAK	30	45	GOOD CONDITION; PROVIDE TREE PROTECTION FENCING (SSF)
5	BLACK OAK	31.5	47.25	GOOD CONDITION
6	TULIP POPLAR	34	51	GOOD CONDITION - TO BE REMOVED
7	WHITE OAK	34.5	51.75	GOOD CONDITION; PROVIDE TREE PROTECTION FENCING (SSF)
8	TULIP POPLAR	35	52.5	GOOD CONDITION; PROVIDE TREE PROTECTION FENCING (SSF)
9	TULIP POPLAR	32	48	GOOD CONDITION - TO BE REMOVED
10	TULIP POPLAR	35	52.5	POOR CONDITION, SIGNIFICANT LIMB DIEBACK - TO BE REMOVED
11	TULIP POPLAR	34	51	GOOD CONDITION

OWNER/DEVELOPER
BUCH LLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

4	REVISE PLAN TO SHOW ABANDONED FC EASEMENT	08-29-22
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-19
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN

FOREST CONSERVATION PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
(L. 3192 / F. 394)

TAX MAP 46 BLOCK 4
5TH ELECTION DISTRICT
PARCEL 126
HOWARD COUNTY, MARYLAND

Eco-Science Professionals, Inc.
Consulting Ecologists

P.O. Box 2086 Glen Arm, Maryland 21057 Telephone (410) 632-3480 Fax (410) 632-3488

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Edmister 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

Valmjo Jelic 8-10-16
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

Valmjo Jelic
DIRECTOR

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Michael J. Buch 4-20-16
SIGNATURE OF DEVELOPER DATE

FOREST STAND DATA

KEY	COMMUNITY TYPE	ACREAGE (NTA)	DOMINANT VEGETATION	GENERAL CONDITION	PRIORITY ACREAGE	REMARKS
F1	OAK POPLAR	4.73	LIRIODENDRON NERANDRO, TULIPERA, QUERCUS ALBA, QUERCUS RUBRA, AEGILUS, PERNIX, SORGHUM, SORGHUM	GOOD	2.48	BUFFER/WETLANDS

SEE ACCOMPANYING REPORT FOR COMPLETE STAND DESCRIPTIONS

WETLAND DATA

WETLAND SYSTEM	COWardin CLASSIFICATION	DOMINANT VEGETATION
A	PROFIC R3/4UB	ACTINORRHIZON FRAGRIS PENSYLVANICA, VIBURNUM EDULICUM, SNAKEDORCHIS, PERILLA, RORIPHUM, CYNODON, ONYX, ONYX, ONYX, ONYX, ONYX, ONYX

SOILS LEGEND

SYMBOL	DESCRIPTION	TYPE	HYDRIC	WATER LOGGING	K FACTOR	PERCENT SLOPE	PERCENT SLOPE
BaA	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	NO	YES	0.32	NO	YES
GgB	GLENNELG LOAM, 3 TO 8 PERCENT SLOPES	B	NO	NO	0.20	NO	NO
GgC	GLENNELG LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.20	NO	NO
GnB	GLENNVILLE-BAILE SILT LOAMS, 0-8 PERCENT	C PARTIAL*	PARTIAL*	0.37	0.37	PARTIAL*	PARTIAL*
UuB	URBAN LAND-UDORHENTS COMPLEX, 0-8 PERCENT D	NO	NO	0.37	0.37	NO	NO

TAKEN FROM: USDA, SCS-MEB SOIL SURVEY, HOWARD COUNTY
POSSIBLE COMPONENT OF GgB, ERODIBILITY FACTOR IS 0.32 AND IS CONSIDERED HYDRIC
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/DZE
DRAWN BY: RHW
CHECKED BY: RHW
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

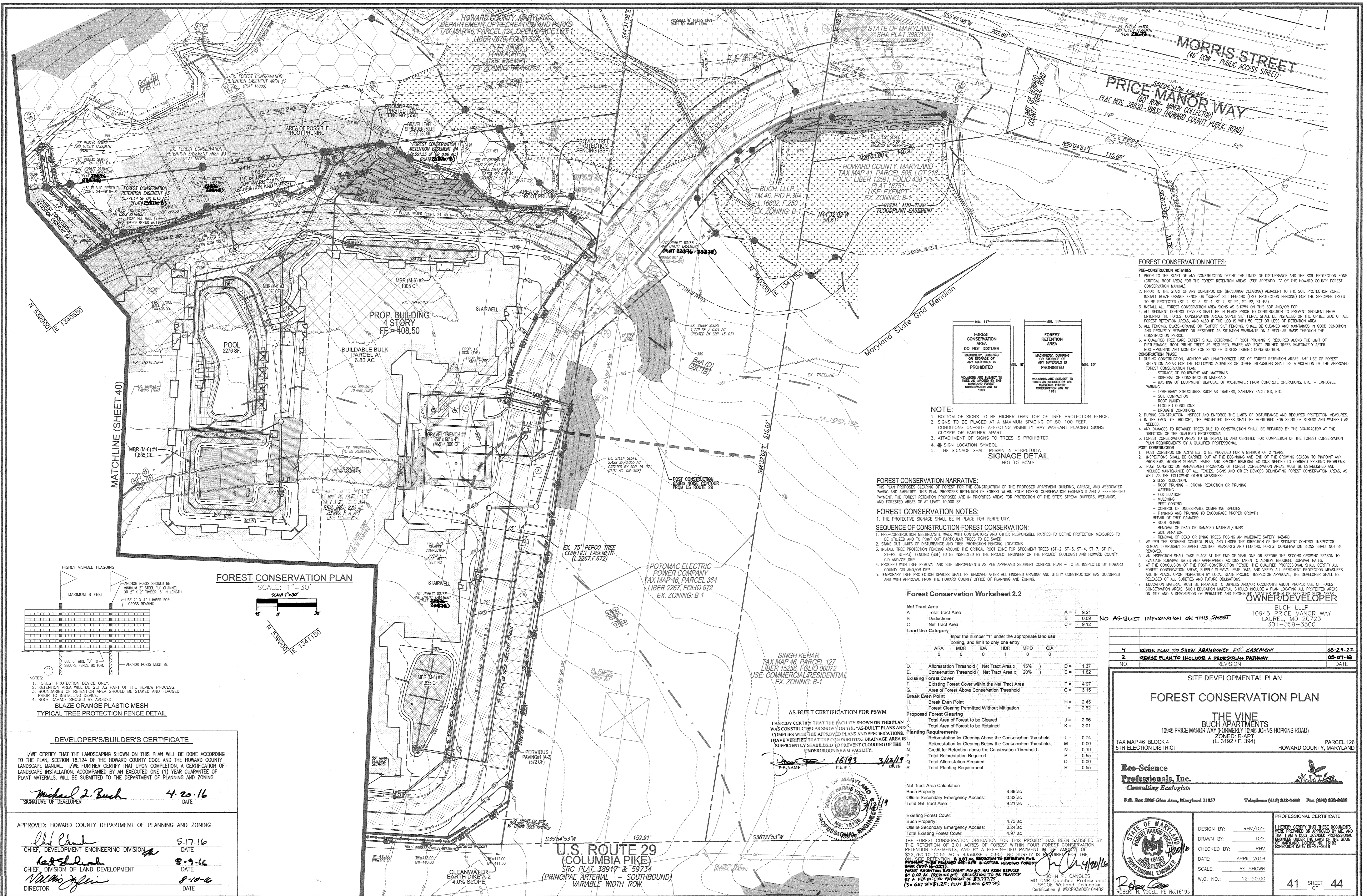
John P. Canoles 4/20/16
JOHN P. CANOLES
MD DNR Qualified Professional
USACE Wetland Delinquent
Certification # WDPS93MD0610482

Robert H. Vogel 4/20/16
ROBERT H. VOGEL, PE No. 16193

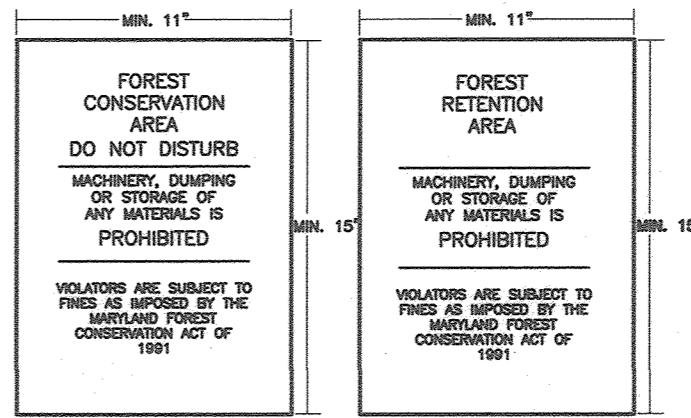
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2018.

40 SHEET OF 44

AS-BUILT - OCT. 2018



- FOREST CONSERVATION NOTES:**
- PRE-CONSTRUCTION ACTIVITIES**
- PRIOR TO THE START OF ANY CONSTRUCTION DEFINE THE LIMITS OF DISTURBANCE AND THE SOIL PROTECTION ZONE (CRITICAL ROOT AREA) FOR THE FOREST RETENTION AREAS. (SEE APPENDIX 'C' OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL).
 - PRIOR TO THE START OF ANY CONSTRUCTION (INCLUDING CLEARING) ADJACENT TO THE SOIL PROTECTION ZONE, INSTALL BLAZE ORANGE FENCE OR "SUPER" SILT FENCING (TREE PROTECTION FENCING) FOR THE SPECIMEN TREES TO BE PROTECTED (ST-2, ST-3, ST-4, ST-5, ST-6, ST-7, ST-8, ST-9, ST-10).
 - INSTALL ALL FOREST CONSERVATION AREA SIGNS AS SHOWN ON THIS SDP AND/OR FOR.
 - ALL SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PRIOR TO CONSTRUCTION TO PREVENT SEDIMENT FROM ENTERING THE FOREST CONSERVATION AREAS. SUPER SILT FENCE SHALL BE INSTALLED ON THE UPHILL SIDE OF ALL FOREST RETENTION AREAS, AND ALSO IF THE LOT IS WITH 50 FEET OR LESS OF RETENTION AREA.
 - ALL FENCING, BLAZE-ORANGE OR "SUPER" SILT FENCING, SHALL BE CLEANED AND MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS SITUATION WARRANTS ON A REGULAR BASIS THROUGHOUT THE CONSTRUCTION PERIOD.
 - A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING SHALL BE LIMITED TO THE NECESSARY MINIMUM TO MAINTAIN THE STRENGTH OF THE TREE. ROOT PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE**
- DURING CONSTRUCTION, MONITOR ANY UNAUTHORIZED USE OF FOREST RETENTION AREAS ANY USE OF FOREST RETENTION AREAS FOR THE FOLLOWING ACTIVITIES OR OTHER INTRUSIONS SHALL BE A VIOLATION OF THE APPROVED FOREST CONSERVATION PLAN:
 - DISPOSAL OF CONSTRUCTION MATERIALS
 - WASHING OF EQUIPMENT, DISPOSAL OF WASTEWATER FROM CONCRETE OPERATIONS, ETC. - EMPLOYEE PARKING
 - TEMPORARY STRUCTURES SUCH AS TRAILERS, SANITARY FACILITIES, ETC.
 - SOIL CONSTRUCTION
 - ROOT INJURY
 - FLOODED CONDITIONS
 - DROUGHT CONDITIONS
 - DURING CONSTRUCTION, INSPECT AND ENFORCE THE LIMITS OF DISTURBANCE AND REQUIRED PROTECTION MEASURES.
 - IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
 - ANY DAMAGES TO RETAINED TREES DUE TO CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT THE DISCRETION OF THE QUALIFIED PROFESSIONAL.
 - FOREST CONSERVATION AREAS TO BE INSPECTED AND CERTIFIED FOR COMPLETION OF THE FOREST CONSERVATION PLAN REQUIREMENTS BY A QUALIFIED PROFESSIONAL.
- POST CONSTRUCTION**
- POST CONSTRUCTION ACTIVITIES TO BE PROVIDED FOR A MINIMUM OF 2 YEARS.
 - INSPECTIONS SHALL BE CARRIED OUT AT THE BEGINNING AND END OF THE GROWING SEASON TO PINPOINT ANY PROBLEMS, MONITOR SURVIVAL RATES, AND SPECIFY REMEDIAL ACTIONS NEEDED TO CORRECT EXISTING PROBLEMS.
 - POST CONSTRUCTION MANAGEMENT PROGRAMS OF FOREST CONSERVATION AREAS MUST BE ESTABLISHED AND INCLUDE MAINTENANCE OF ALL FENCES, SIGNS AND OTHER DEVICES DELINEATING FOREST CONSERVATION AREAS, AS WELL AS THE FOLLOWING OTHER MEASURES:
 - STRESS REDUCTION:
 - ROOT PRUNING - CROWN REDUCTION OR PRUNING
 - WATERING
 - FERTILIZATION
 - MULCHING
 - PEST CONTROL
 - CONTROL OF UNDESIRABLE COMPETING SPECIES
 - THINNING AND PRUNING TO ENCOURAGE PROPER GROWTH
 - REPAIR OF TREE DAMAGES:
 - ROOT REPAIR
 - REMOVAL OF DEAD OR DAMAGED MATERIALS/LIMBS
 - SOIL AERATION
 - REMOVAL OF DEAD OR DYING TREES POSING AN IMMEDIATE SAFETY HAZARD
 - AS PER THE SEDIMENT CONTROL PLAN, AND UNDER THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE TEMPORARY SEDIMENT CONTROL MEASURES AND FENCING. FOREST CONSERVATION SIGNS SHALL NOT BE REMOVED.
 - AN INSPECTION SHALL TAKE PLACE AT THE END OF YEAR ONE OR BEFORE THE SECOND GROWING SEASON TO EVALUATE SURVIVAL RATES AND APPROPRIATE ACTIONS TAKEN TO ACHIEVE REQUIRED SURVIVAL RATES.
 - AT THE CONCLUSION OF THE POST-CONSTRUCTION PERIOD, THE QUALIFIED PROFESSIONAL SHALL CERTIFY ALL FOREST CONSERVATION AREAS, SURVEY SURVIVAL RATE DATA, AND VERIFY ALL PERMANENT PROTECTION MEASURES ARE IN PLACE UPON INSPECTION BY LOCAL STATE PROJECT INSPECTOR APPROVAL. THE DEVELOPER SHALL BE RELEASED OF ALL CURRENT AND FUTURE OBLIGATIONS.
 - EDUCATION MATERIAL MUST BE PROVIDED TO OWNERS AND/OR OCCUPANTS ABOUT PROPER USE OF FOREST CONSERVATION AREAS. SUCH EDUCATION MATERIAL SHOULD INCLUDE A PLAN LOCATING ALL PROTECTED AREAS ON-SITE AND A DESCRIPTION OF PERMITTED AND PROHIBITED ACTIVITIES.



- NOTE:**
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 - SIGNS TO BE PLACED AT A MAXIMUM SPACING OF 50-100 FEET.
 - CONDITIONS ON-SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 - SIGN LOCATION SYMBOL.
- FOREST CONSERVATION SIGNAGE DETAIL**
NOT TO SCALE

FOREST CONSERVATION NARRATIVE:
THIS PLAN PROPOSES CLEARING OF FOREST FOR THE CONSTRUCTION OF THE PROPOSED APARTMENT BUILDING, GARAGE, AND ASSOCIATED PAVING AND UTILITIES. THIS PLAN PROPOSES RETENTION OF FOREST WITHIN FOUR FOREST CONSERVATION EASEMENTS AND A FEE-IN-LIEU PAYMENT. THE FOREST RETENTION PROPOSED ARE IN PRIORITIES AREAS FOR PROTECTION OF THE SITE'S STREAM BUFFERS, WETLANDS, AND FORESTED AREAS OF AT LEAST 10,000 SF.

FOREST CONSERVATION NOTES:
1. THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION:

- PRE-CONSTRUCTION MEETINGS/SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
- STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
- INSTALL TREE PROTECTION FENCING AROUND THE CRITICAL ROOT ZONE FOR SPECIMEN TREES (ST-2, ST-3, ST-4, ST-5, ST-6, ST-7, ST-8, ST-9, ST-10). FENCING (SSP) TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY CID AND/OR DRP.
- PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY CID AND/OR DRP.
- TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

Forest Conservation Worksheet 2.2

Net Tract Area	A = 9.21
A. Total Tract Area	B = 0.09
B. Deductions	C = 9.12
C. Net Tract Area	
Land Use Category	
ARA	0
MDR	0
IDA	1
HDR	0
MPD	0
CIA	0
D. Afforestation Threshold (Net Tract Area x 15%)	D = 1.37
E. Conservation Threshold (Net Tract Area x 20%)	E = 1.82
Existing Forest Cover	
F. Existing Forest Cover within the Net Tract Area	F = 4.97
G. Area of Forest Above Conservation Threshold	G = 3.15
Break Even Point	
H. Break Even Point	H = 2.45
I. Forest Clearing Permitted Without Mitigation	I = 2.52
Proposed Forest Clearing	
J. Total Area of Forest to be Cleared	J = 2.96
K. Total Area of Forest to be Retained	K = 2.01
Planting Requirements	
L. Reforestation for Clearing Above the Conservation Threshold	L = 0.74
M. Reforestation for Clearing Below the Conservation Threshold	M = 0.00
N. Credit for Retention above the Conservation Threshold	N = 0.19
O. Total Reforestation Required	O = 0.55
P. Total Afforestation Required	P = 0.00
Q. Total Planting Requirement	Q = 0.55

Net Tract Area Calculation:
 Buch Property: 8.89 ac
 Offsite Secondary Emergency Access: 0.32 ac
 Total Net Tract Area: 9.21 ac

Existing Forest Cover:
 Buch Property: 4.73 ac
 Offsite Secondary Emergency Access: 0.24 ac
 Total Existing Forest Cover: 4.97 ac

THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT HAS BEEN SATISFIED BY THE RETENTION OF 2.01 ACRES OF FOREST WITHIN FOUR FOREST CONSERVATION RETENTION EASEMENTS, AND BY A FEE-IN-LIEU PAYMENT IN THE AMOUNT OF \$22,760.10 (0.55 AC x \$41,382.00). NET SURETY IS \$41,382.00. THE FEE-IN-LIEU PAYMENT IS \$22,760.10 (0.55 AC x \$41,382.00). NET SURETY IS \$41,382.00. THE FEE-IN-LIEU PAYMENT IS \$22,760.10 (0.55 AC x \$41,382.00). NET SURETY IS \$41,382.00.

AS-BUILT CERTIFICATION FOR PSM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWIM FACILITY.

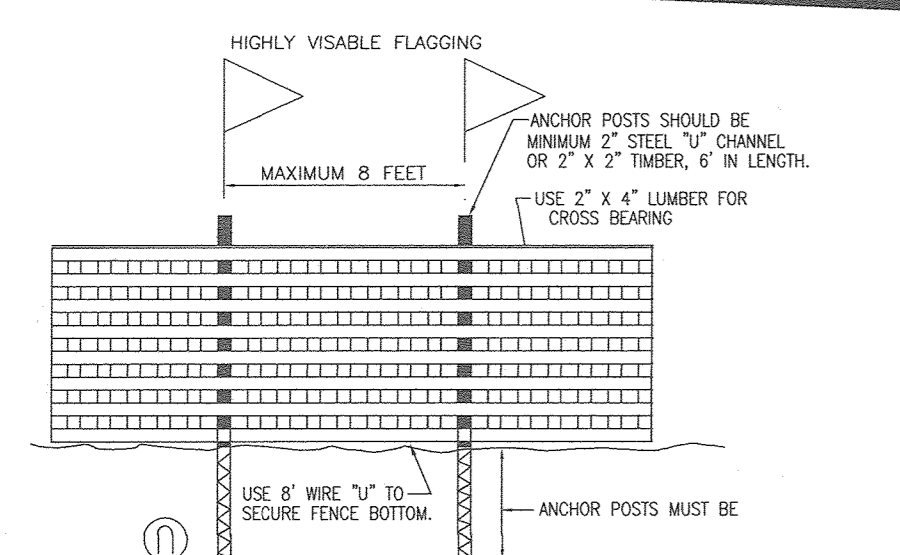
P.E. NAME: 16193 DATE: 3/21/19



U.S. ROUTE 29 (COLUMBIA PIKE)
 SRC PLAT 38917 & 59734
 (PRINCIPAL ARTERIAL - SOUTHBOUND)
 VARIABLE WIDTH ROW

FOREST CONSERVATION PLAN

SCALE: 1" = 30'
 SCALE: 1" = 30'



- NOTES:**
- FOREST PROTECTION DEVICE ONLY.
 - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 - ROOT DAMAGE SHOULD BE AVOIDED.
- BLAZE ORANGE PLASTIC MESH**
TYPICAL TREE PROTECTION FENCE DETAIL

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Signature: Michael J. Buch DATE: 4-20-16
 SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: [Signature] DATE: 5-17-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Signature: [Signature] DATE: 8-9-16
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Signature: [Signature] DATE: 8-10-16
 DIRECTOR DATE

OWNER/DEVELOPER
 BUCH LLLP
 10945 PRICE MANOR WAY
 LAUREL, MD 20723
 301-359-3500

4	REVISE PLAN TO SHOW ABANDONED FC EASEMENT	08-29-22
2	REVISE PLAN TO INCLUDE A PEDESTRIAN PATHWAY	05-07-18
NO.	REVISION	DATE

SITE DEVELOPMENTAL PLAN
FOREST CONSERVATION PLAN

THE VINE
 BUCH APARTMENTS
 10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
 ZONED: R-APT
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TAX MAP 46 BLOCK 4
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

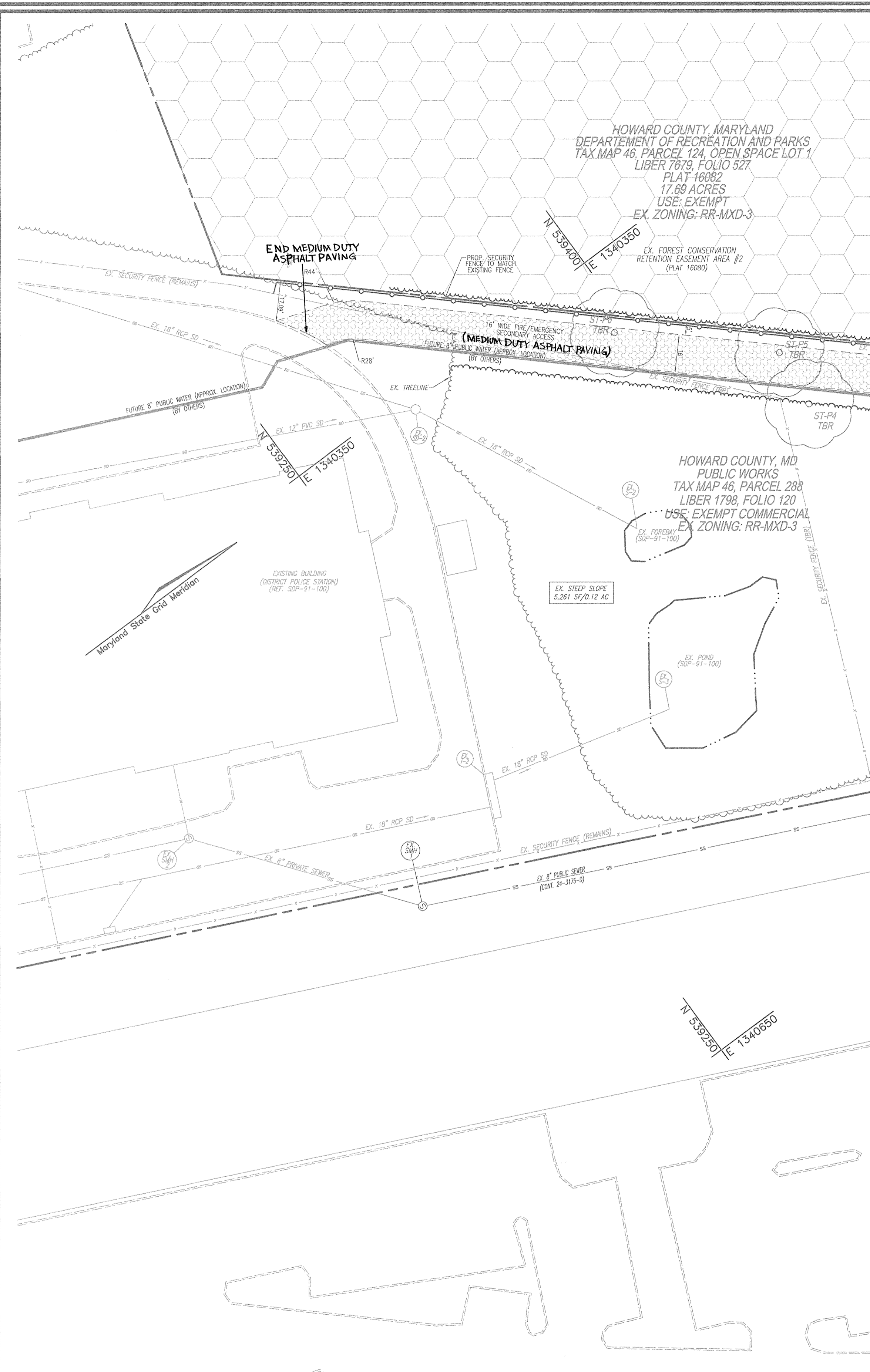
Eco-Science Professionals, Inc.
 Consulting Ecologists
 P.O. Box 2086 Glen Arm, Maryland 21057 Telephone (410) 832-2480 Fax (410) 838-2480

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/DZE
 DRAWN BY: DZE
 CHECKED BY: RHW
 DATE: APRIL 2016
 SCALE: AS SHOWN
 W.O. NO.: 12-50.00

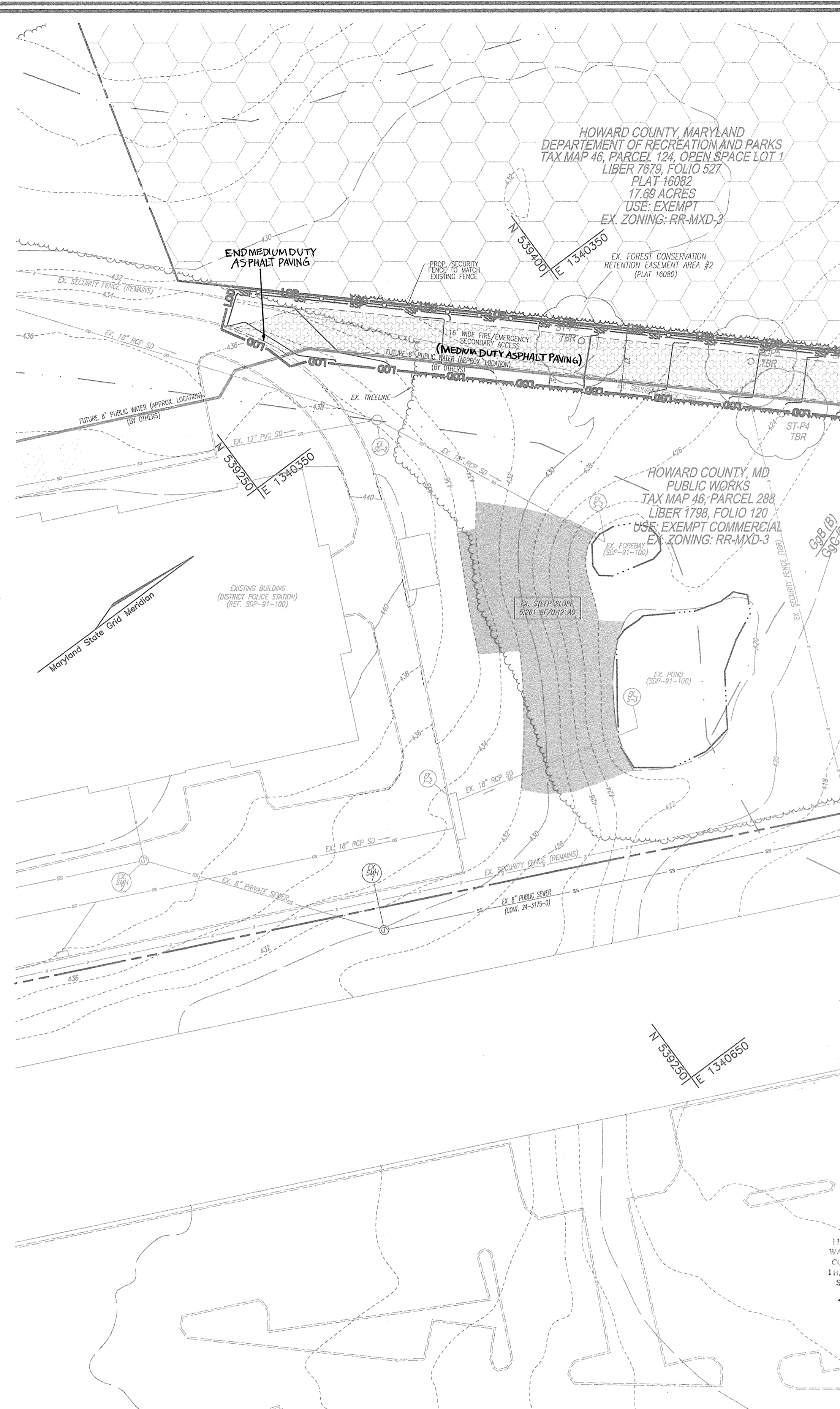
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16193 EXPIRES ON 03-27-2019

Signature: [Signature]
 ROBERT H. VOGEL, P.E. No. 16193



LAYOUT PLAN
SCALE: 1"=30'

MATCHLINE (SHEET 02)



GRADING AND SEDIMENT CONTROL PLAN AND FOREST CONSERVATION PLAN
SCALE: 1"=30'

MATCHLINE (SHEET 5 AND 40)

FSD NOTES:

- THIS PLAN HAS BEEN PREPARED TO SUPPLEMENT THE FOREST STAND DELINEATION ON THE BUCH PROPERTY AND INCLUDES A 0.32 ACRE OFFSITE AREA TO BE UTILIZED FOR EMERGENCY ACCESS.
- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THIS PROPERTY.
- SURROUNDING LAND USE INCLUDES HIGH DENSITY RESIDENTIAL DEVELOPMENT AND COMMERCIAL USES AGRICULTURE.
- THE WETLANDS AND STREAMS ON THE BUCH PROPERTY ARE PART OF THE PATUXENT RIVER WATERSHED (02-13-11). THE ONSITE WATERS DRAIN TO HAMMOND BRANCH, WHICH IS A TRIBUTARY TO THE LITTLE PATUXENT RIVER, DOWNSTREAM OF ROUTE 1. AS SUCH, THE ONSITE WATERS ARE CLASSIFIED AS USE 1-P. PERENNIAL STREAMS WILL REQUIRE 75 FOOT BUFFERS, INTERMITTENT STREAMS WILL REQUIRE 50 FOOT BUFFERS AND WETLANDS WILL REQUIRE 25 FOOT BUFFERS. NO WETLANDS, STREAMS OR BUFFERS ARE PRESENT ON THE 0.32 ACRE OFFSITE EMERGENCY ACCESS.
- NO HISTORIC ELEMENTS OR CEMETERIES ARE KNOWN TO OCCUR ON THE PROPERTY.
- THE BUCH PROPERTY INCLUDES 0.09 ACRES +/- OF 100 YEAR FLOODPLAIN. NO FLOODPLAIN IS PRESENT ON THE OFFSITE EMERGENCY ACCESS.
- THE OFFSITE EMERGENCY ACCESS INCLUDES 0.24 ACRES OF FOREST.
- THERE ARE 6 SPECIMEN TREES IDENTIFIED WITHIN LIMITS OF DISTURBANCE FOR THE OFFSITE EMERGENCY ACCESS. NO STATE CHAMPION TREES AND/OR TREES 75% OF THE SIZE OF STATE CHAMPION TREES WERE OBSERVED.
- THE ACREAGE OF THE OFFSITE EMERGENCY ACCESS AND THE EXISTING FOREST WITHIN THE LIMITS OF DISTURBANCE WILL BE ADDED TO THE FOREST CONSERVATION ACT CALCULATIONS/REQUIREMENTS FOR THE OVERALL BUCH PROPERTY. ADDING THIS ACREAGE TO THE ONSITE PROPERTY CREATES A NET TRACT AREA OF 9.23 AC. WITH 4.97 AC. OF EXISTING FOREST. THE BREAK EVEN POINT HAS BEEN CALCULATED TO BE 2.46 ACRES.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FENCE
- EXISTING TREELINE
- PROPOSED STORMDRAIN
- PROPOSED STORMDRAIN INLET
- PROPOSED TREELINE
- PROPOSED SIDEWALK
- PROP. 20' PUBLIC WATER AND UTILITY EASEMENT
- FIRE ACCESS GRASS PAVERS
- FOREST CONSERVATION EASEMENT (RETENTION)
- EX. FOREST CONSERVATION EASEMENT (RETENTION)
- MICROBIORETENTION AREA
- EXISTING SPECIMEN TREE
- POST CONSTRUCTION NOISE CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SUPER SILT FENCE
- PROPOSED LIMIT OF DISTURBANCE
- EXISTING SLOPE (MODERATE)
- M1B2
- M103
- SOILS BOUNDARY

SPECIMEN TREE CHART

Key	Species	Size (in dbh)	CRZ (feet radius)	Comments	Remove or Remain
ST-P1	Tulip poplar	35.5	35.5	fair condition, limb damage noted	Remain
ST-P2	Tulip poplar	40.5	40.5	good condition	Remain
ST-P3	Tulip poplar	33	33	good condition	Remain
ST-P4	Tulip poplar	38	38	good condition	Remove
ST-P5	White oak	34	34	good condition	Remove
ST-P6	Tulip poplar	46	46	good condition	Remove

FOREST STAND DATA

KEY	COMMUNITY TYPE	ACREAGE (NTA)	DOMINANT VEGETATION	GENERAL CONDITION	PRIORITY ACREAGE
F1	OAK-POPLAR	0.24	LIRIODENDRON CER TULIPIFERA, QUERCUS ALBA, QUERCUS RUBRA, ACER RUBRUM, PRUNUS SEROTINA	GOOD	0
	W/IN OFFSITE EMERGENCY ACCESS	4.97			2.46
	TOTAL SITE				2.46

SEE ACCOMPANYING REPORT FOR COMPLETE STAND DESCRIPTIONS



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREAS ARE SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 4/20/16
P.E. # 16193

Eco-Science Professionals, Inc.
Consulting Ecologists

P.O. Box 2096 Glen Arden, Maryland 21057 Telephone (410) 632-3400 Fax (410) 632-3400

OWNER/DEVELOPER

BUCH LLLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

NO.	REVISION	DATE
1	REMOVE SURFACE MATERIAL FOR SECONDARY ACCESS AND ADD A SPEED HUMP	11/22/17

SITE DEVELOPMENTAL PLAN

SECONDARY EMERGENCY ACCESS AND FOREST CONSERVATION PLAN

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394)

TAX MAP 46 BLOCK 4 PARCEL 126
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHW/DZE
DRAWN BY: DZE
CHECKED BY: RHW
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

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. EXPIRATION DATE: 08-27-2018

42 SHEET OF 44

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

5.17.16
8.9.16
8-10-16

BY THE DEVELOPER:

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.

Michael J. Bush 4.20.16

BY THE ENGINEER:

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.

4/20/16

SCALE 1"=30'

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

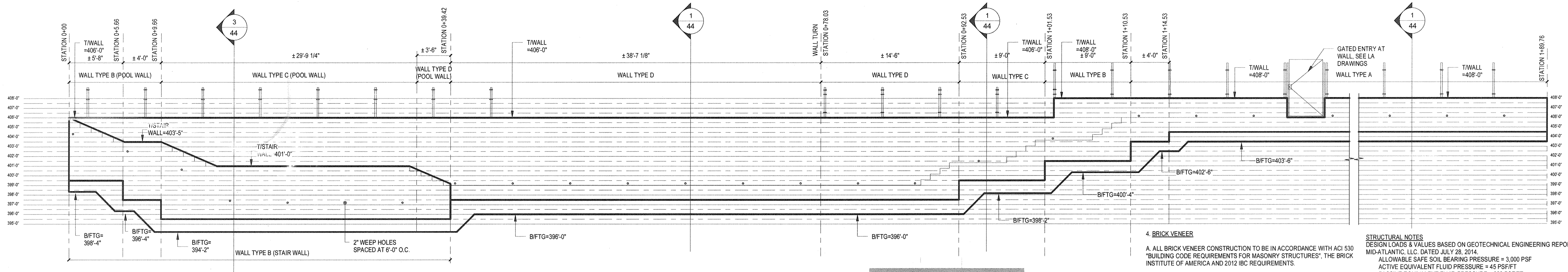
4/20/16

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

4.20.16

NO AS-BUILT INFORMATION ON THIS SHEET

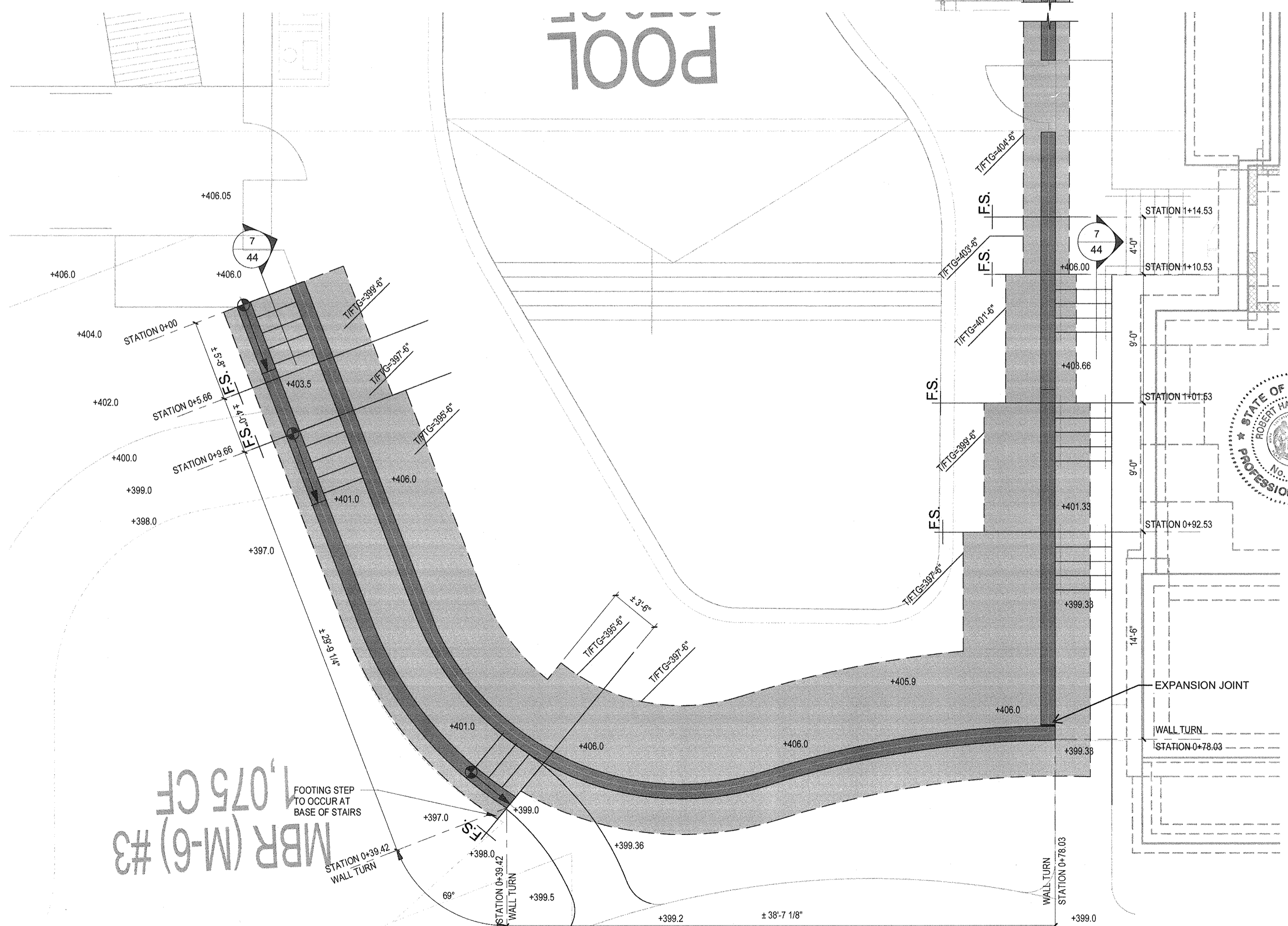


POOL RETAINING WALL ELEVATION
SCALE: 3/16" = 1'-0"

4. BRICK VENEER
A. ALL BRICK VENEER CONSTRUCTION TO BE IN ACCORDANCE WITH ACI 530 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", THE BRICK INSTITUTE OF AMERICA AND 2012 IBC REQUIREMENTS.
VENNER BRICK ASTM C216, GRADE SW
MORTAR ASTM C270, TYPE S EXT. OR BELOW GRADE

STRUCTURAL NOTES
DESIGN LOADS & VALUES BASED ON GEOTECHNICAL ENGINEERING REPORT PREPARED BY ECS MID-ATLANTIC, LLC, DATED JULY 28, 2014.
ALLOWABLE SAFE SOIL BEARING PRESSURE = 3,000 PSF
ACTIVE EQUIVALENT FLUID PRESSURE = 45 PSF/FT
PASSIVE EQUIVALENT FLUID PRESSURE = 250 PSF/FT
SOIL WEIGHT = 120 PCF
COEFFICIENT OF FRICTION = 0.35

1. GENERAL
A. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE PROVISIONS OF THE 2012 IBC, STATE AND LOCAL COUNTY REQUIREMENTS, AND THE FOLLOWING CRITERIA:
2. FOUNDATIONS
A. THE ASSUMED ALLOWABLE SAFE BEARING PRESSURE IS 3,000 PSF. TO BE VERIFIED BY AN ON-SITE GEOTECHNICAL ENGINEER OR BUILDING OFFICIAL. ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL.
B. BOTTOMS OF FOOTINGS TO BE AT LEAST 2'-6" BELOW FINISHED GRADE OR TO FROST LINE DETERMINED BY BUILDING OFFICIAL. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE PLACING CONCRETE. NO EXCAVATION SHALL BE CLOSER THAN AT LEAST A SLOPE OF TWO HORIZONTAL TO ONE VERTICAL (2 HORIZ:1 VERT) TO UNDERSIDE EDGE OF ANY EXISTING FOOTINGS WITHOUT THE WRITTEN AND CERTIFIED PERMISSION OF A GEOTECHNICAL ENGINEER. STEP FOOTINGS WITH A RATIO OF TWO HORIZ. TO ONE VERTICAL.
C. PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PREVENT CAVING AND COMPLY WITH ALL APPLICABLE OSHA RULES AND REGULATIONS.
3. CONCRETE
A. CONCRETE MATERIAL, QUALITY CONTROL, DESIGN AND CONSTRUCTION SHALL CONFIRM WITH REQUIREMENTS OF CHAPTER 19, INTERNATIONAL BUILDING CODE (IBC), AND WITH BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI-318).
B. MINIMUM SPECIFIED 28 DAYS CONCRETE DESIGN STRENGTH SHALL BE AS SHOWN ON THE CONCRETE STRENGTH AND DURABILITY REQUIREMENTS TABLE LOCATED BELOW UNLESS A HIGHER STRENGTH IS SHOWN ON THE CONSTRUCTION DRAWINGS. EXPOSURE CATEGORIES ARE PER ACI-318, CHAPTER 4. CEMENTITIOUS MATERIALS CONTENT SHALL BE LIMITED AS PER ACI-318, TABLE 2.2.2. ALL CEMENTITIOUS MATERIALS SHALL BE INCLUDED IN CALCULATING WATER/CEMENT RATIO.
C. MIXING, TRANSPORTING, AND PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 301.
D. HIGH STRENGTH GROUT SHALL BE NON-SHRINK, NON-METALLIC CONFORMING TO ASTM C 827 AND SHALL HAVE A COMPRESSIVE STRENGTH OF 5000 PSI AT 28 DAYS.
E. ALL REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60 (60,000 PSI). WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A-185. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE ACI'S "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-315). DETAILS OF REINFORCEMENT SHALL CONFORM TO ACI 315-LATEST EDITION, ACI 315 AND CRS STANDARDS.
F. CONCRETE PROTECTION FOR REINFORCEMENT: PROVIDE THE MINIMUM CLEARANCES (COVER) FOR REINFORCEMENT AS FOLLOWS:
FOOTINGS AND OTHER CONCRETE POURED AGAINST EARTH 3"
FORMED CONCRETE EXPOSED TO EARTH 2"
SLABS ON GROUND, UNLESS OTHERWISE NOTED MID-DEPTH
G. PROVIDE 3' x 3' CORNER AND "T" BARS TO MATCH ALL HORIZONTAL REINFORCING IN WALLS AND FOOTINGS. ALL LAPS SHALL BE A MINIMUM OF 30 BAR DIAMETERS. PROVIDE DOVELS BETWEEN ALL FOOTINGS, WALLS AND PIERS TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.
H. WALL TO HAVE VERTICAL CONTROL JOINTS SPACED AT NO MORE THAN 25'-0" HORIZONTALLY AS REQUIRED AND EXPANSION JOINTS AT 75'-0" O.C. OR WHERE SHOWN ON PLAN.
I. CHAMFER ALL EXPOSED CONCRETE CORNERS, 3/4"x3/4" UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
J. MAXIMUM PERMISSIBLE WATER/CEMENT RATIO FOR CONCRETE WHEN STRENGTH DATA FROM FIELD EXPERIENCE OR TRIAL MIXTURES ARE NOT AVAILABLE SHALL BE IN ACCORDANCE WITH ACI 318.
K. PLACE CONCRETE FOR FOUNDATIONS ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.
L. PROTECT CONCRETE FROM FREEZING DURING PLACING AND FOR A PERIOD OF NOT LESS THAN FIVE DAYS AFTERWARD.
M. CAST IN PLACE ALL SLEEVES AND INSERTS.



POOL RETAINING WALL PLAN
SCALE: 3/16" = 1'-0"



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
P.E. NAME: [Signature] 16193 3/12/19 DATE: [Signature]

OWNER/DEVELOPER
BUCH LLLP
10945 PRICE MANOR WAY
LAUREL, MD 20723
301-359-3500

CONCRETE STRENGTH AND DURABILITY REQUIREMENTS

LOC.	STRUCTURAL MEMBERS	EXPOSURE CLASS(1)	MINIMUM 28 DAY COMPRESSIVE STRENGTH (PSI) (3)	MAXIMUM WATER/CEMENT RATIO (PERCENT)	RECOMMENDED MINIMUM SLUMP (INCHES)(4)
BELOW GRADE	FOOTINGS				
	WITH BOTTOM OF FOOTINGS POURED AT REQUIRED FROST DEPTH	F2	4500	0.45	3
	UNPROTECTED WALLS IN CONTACT WITH SOIL	F2	4500	0.45	3
SLABS ON GRADE AND SOIL SUPPORTED STAIRS					
	EXTERIOR, IN DIRECT CONTACT WITH SOIL, EXPOSED TO DEICING CHEMICALS	F3C2	5000	0.40	3

1. EXPOSURE CLASS DESCRIPTIONS:
F0: CONCRETE NOT EXPOSED TO FREEZING AND THAWING CYCLES AND PROTECTED FROM MOISTURE.
F1: CONCRETE EXPOSED TO FREEZING AND THAWING CYCLES AND OCCASIONAL EXPOSURE TO MOISTURE.
F2: CONCRETE EXPOSED TO FREEZING AND THAWING CYCLES AND IN CONTINUOUS CONTACT WITH MOISTURE.
F3: CONCRETE EXPOSED TO FREEZING AND THAWING CYCLES AND IN CONTINUOUS CONTACT WITH MOISTURE AND EXPOSED TO DEICING CHEMICALS.
C2: CONCRETE EXPOSED TO MOISTURE AND DEICING CHEMICALS.
CONCRETE WHICH CAN BE EXPOSED TO CYCLES OF FREEZING-AND-THAWING DURING CONSTRUCTION SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH THE TABLE BELOW WITH THE SAME AIR CONTENT AS FOR EXPOSURE CLASS F1.
3. THE CONCRETE STRENGTHS SPECIFIED ARE THE CODE REQUIRED MINIMUM. SEE THE PLANS AND DETAILS FOR HIGHER CONCRETE STRENGTH REQUIREMENTS.
4. RECOMMENDED SLUMP APPLY WHEN VIBRATION IS USED TO CONSOLIDATE THE CONCRETE AND MAY BE INCREASED BY 1" FOR OTHER CONSOLIDATION METHODS. SLUMP MAY BE INCREASED WHEN CHEMICAL ADMIXTURES ARE USED. PROVIDED THAT THE ADMIXTURE TREATED CONCRETE HAS THE SAME OR LOWER WATER/CEMENT RATIO AND DOES NOT SHOW SEGREGATION POTENTIAL OR EXCESSIVE BLEEDING. CONCRETE SLUMP SHALL NOT BE LESS THAN 1 INCH. MEASURED SLUMP TOLERANCE SHALL BE +/- 1.5 MAXIMUM.

CONCRETE STRENGTH AND DURABILITY REQUIREMENTS (cont.)

TOTAL AIR CONTENT FOR CONCRETE EXPOSED TO CYCLES OF FREEZING-AND-THAWING

NOMINAL MAXIMUM AGGREGATE SIZE (INCHES)	AIR CONTENT, PERCENT	
	EXPOSURE CLASS, F1	EXPOSURE CLASSES, F2 AND F3
3/8	6.0%	7.5%
1/2	5.5%	7.0%
3/4	5.0%	6.0%
1	4.5%	6.0%

AGGREGATE SHALL CONFORM TO ASTM C33 AND MAY RANGE FROM 3/8" TO 3/4" IN SIZE. CONCRETE IN EXPOSURE CLASSES F1, F2, OR F3 SHALL BE AIR ENTRAINED ACCORDING TO TABLE 4.11, ACI 318. THIS TABLE SHOWN IS FOR USUSL MAXIMUM AGGREGATE SIZES USED IN STRUCTURAL CONCRETE. MEASURED AIR CONTENT TOLERANCE SHALL BE +/- 1.5 MAXIMUM.

THIS SIGNATURE BLOCK REQUIRED ON BOTH SHEETS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 5-17-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE

[Signature] 8-9-16
CHIEF, DIVISION OF LAND DEVELOPMENT, DATE

[Signature] 8-10-16
DIRECTOR, DATE

NO. REVISION DATE

SITE DEVELOPMENTAL PLAN
POOL RETAINING WALL

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT (L. 3192 / F. 394) PARCEL 126
TAX MAP 46 BLOCK 4 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CATES ENGINEERING CONSULTING
13171 Heisterkamp Blvd. Suite 110 Gaithersburg, VA 20855
Tel: 571.261.9280 Fax: 571.261.9286 www.cateseng.com

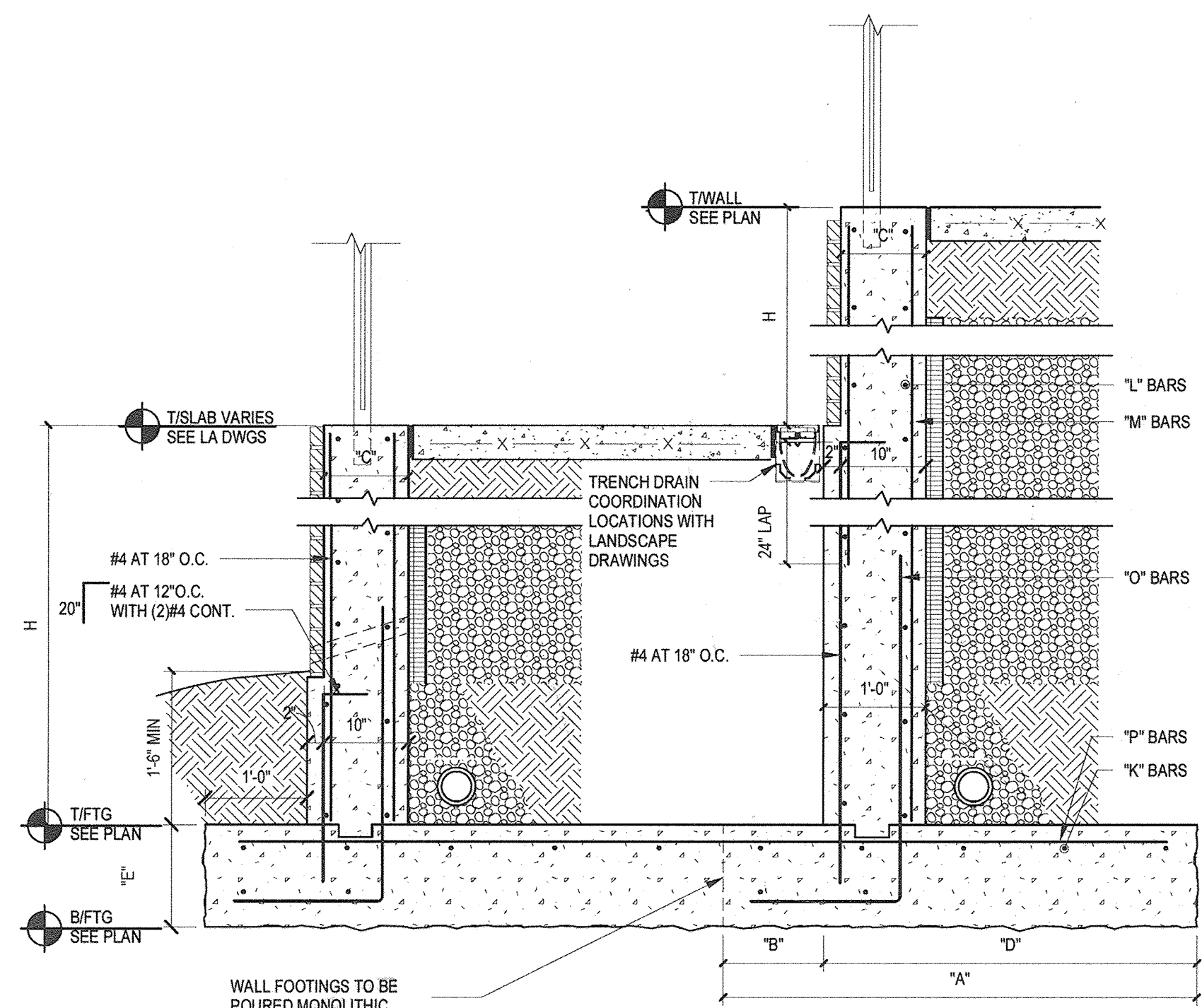
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DESIGN BY: MRP
DRAWN BY: MRP
CHECKED BY: BLC
DATE: APRIL 2016
SCALE: AS SHOWN
W.O. NO.: 12-50.00

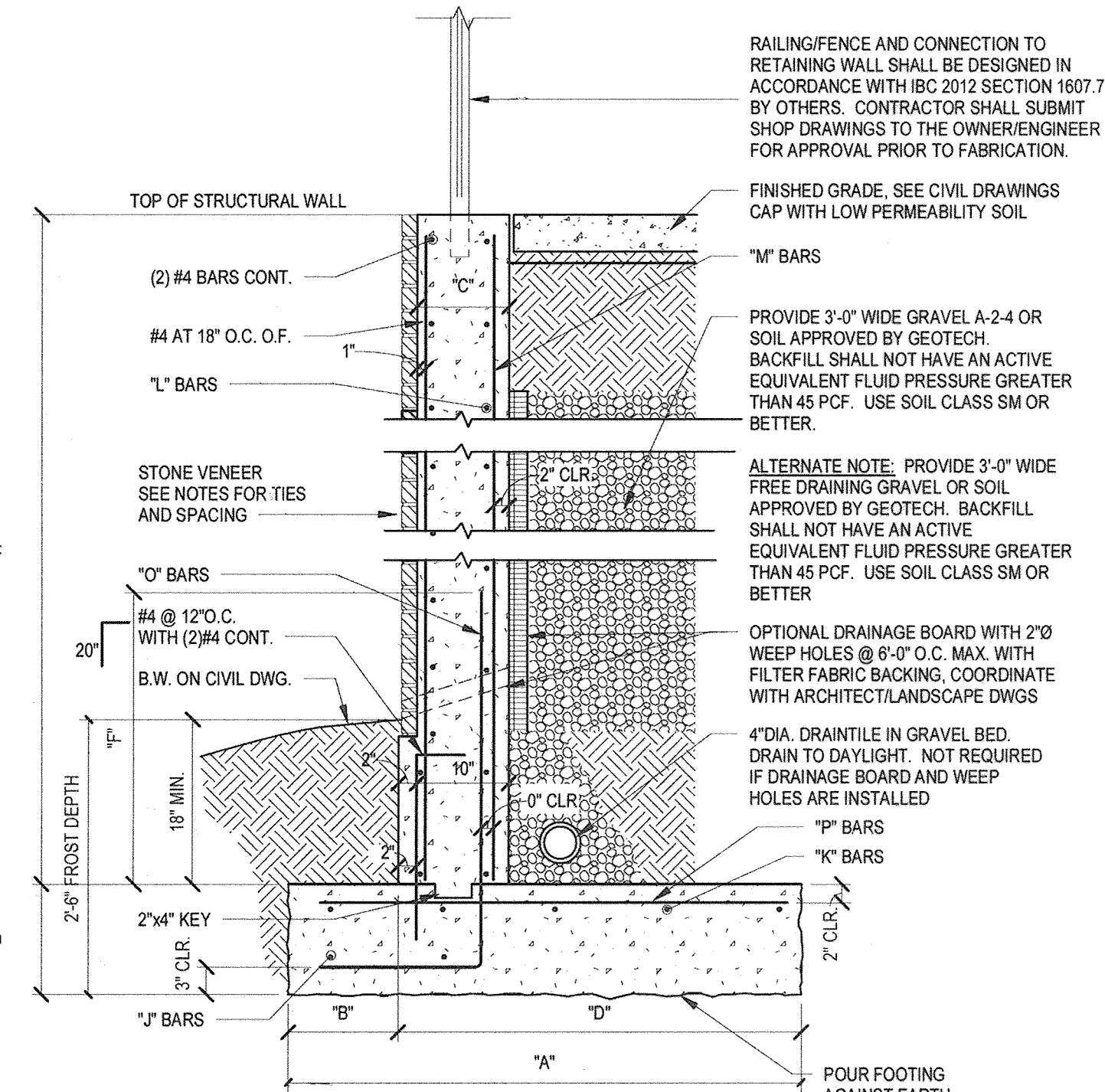
43 SHEET OF 44

NO AS-BUILT INFORMATION ON THIS SHEET

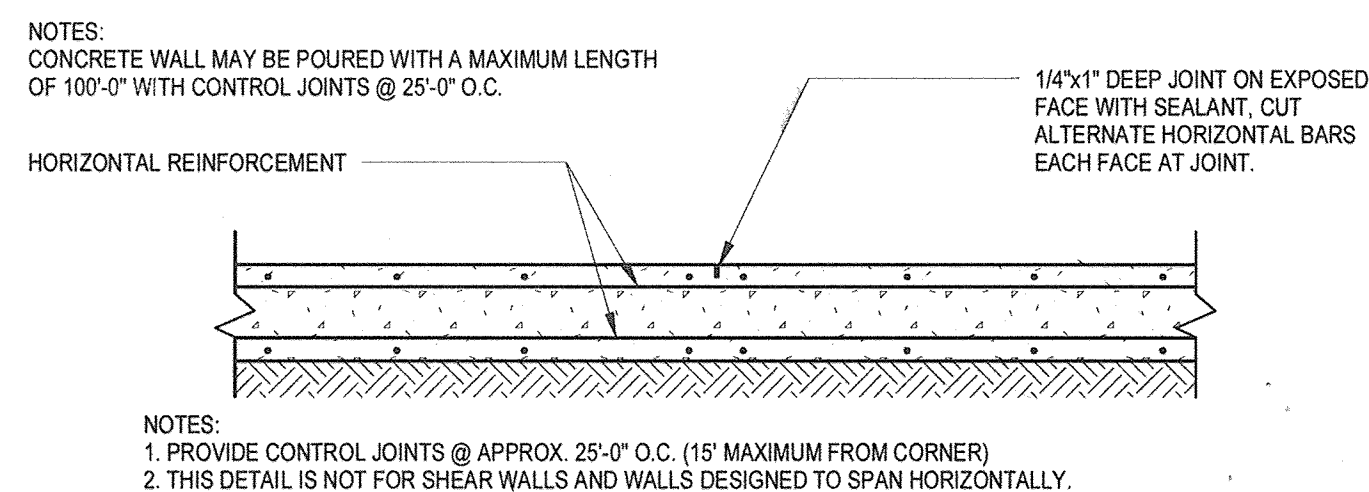
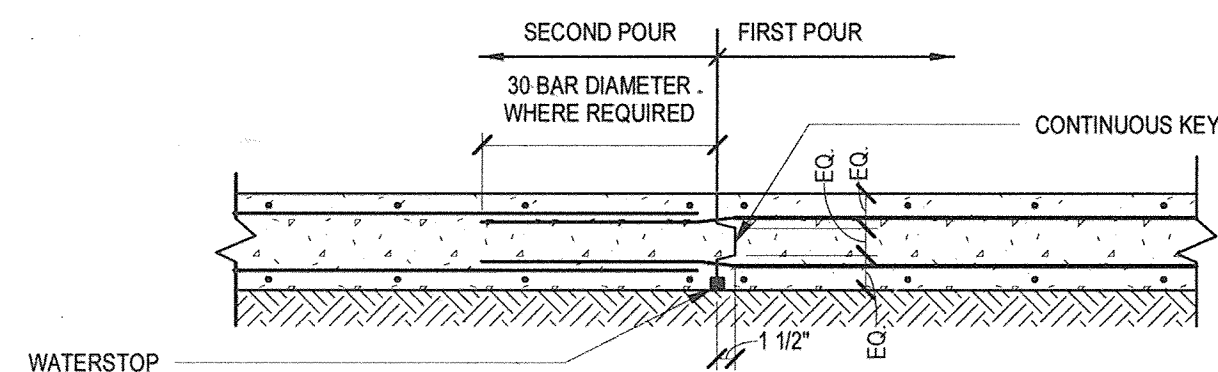
AS-BUILT - OCT, 2018



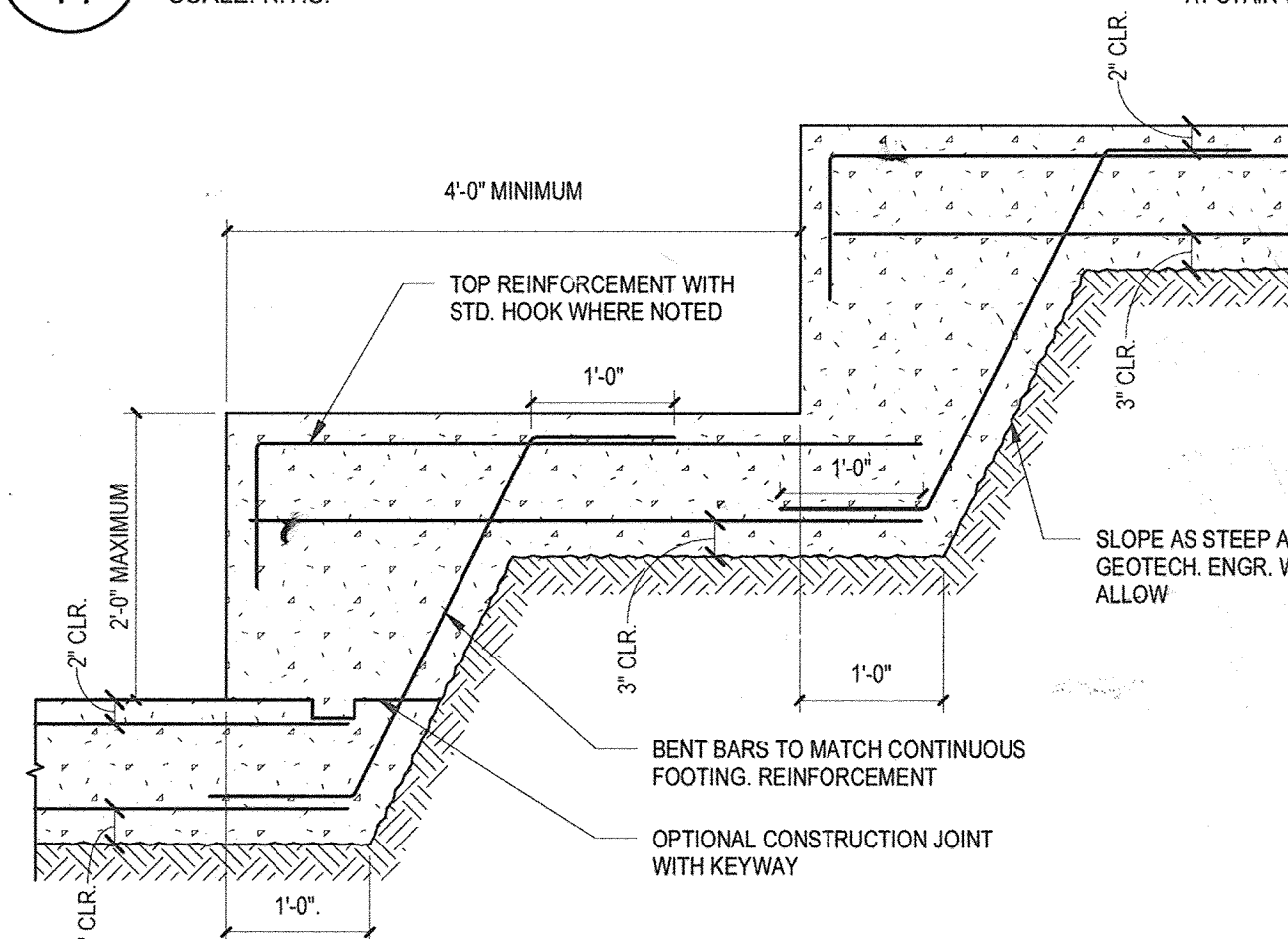
3 CONCRETE CANTILEVERED RETAINING WALL
44 SCALE: N.T.S.



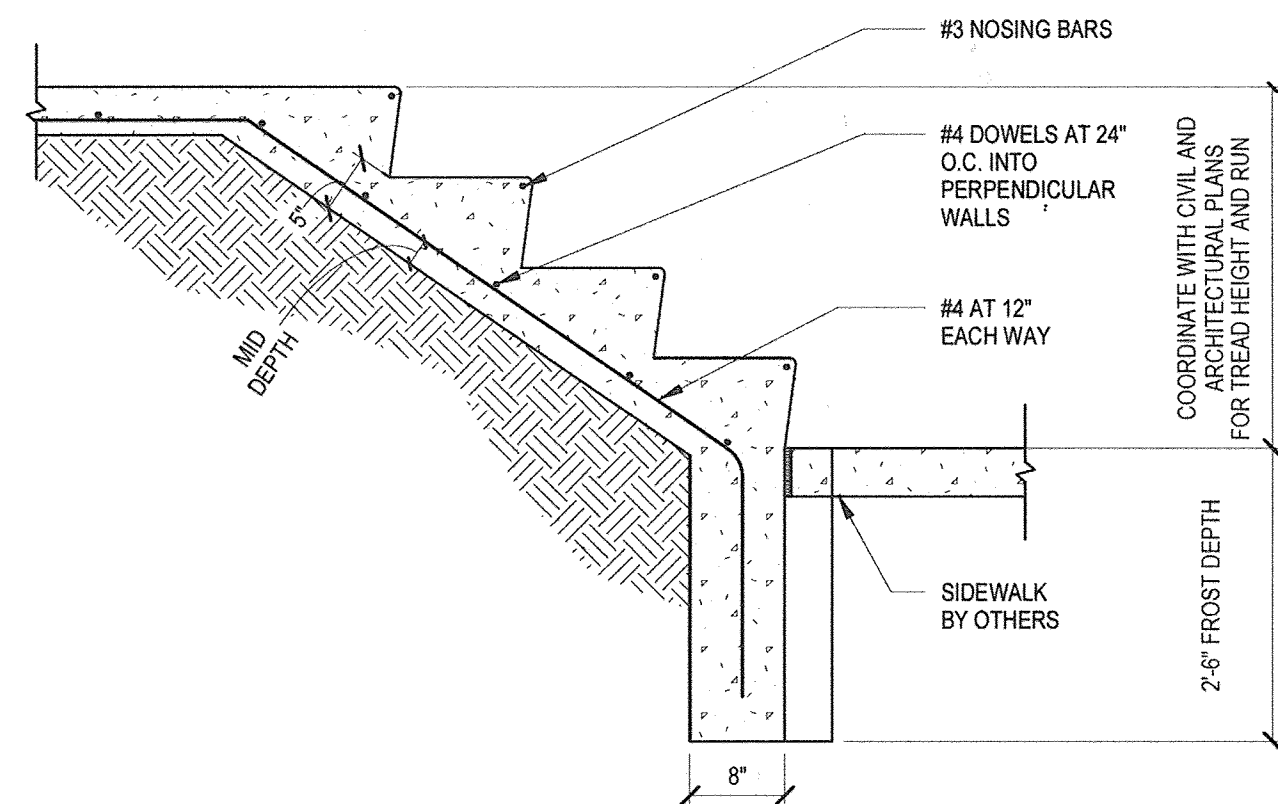
1 CONCRETE CANTILEVERED RETAINING WALL
44 SCALE: N.T.S.



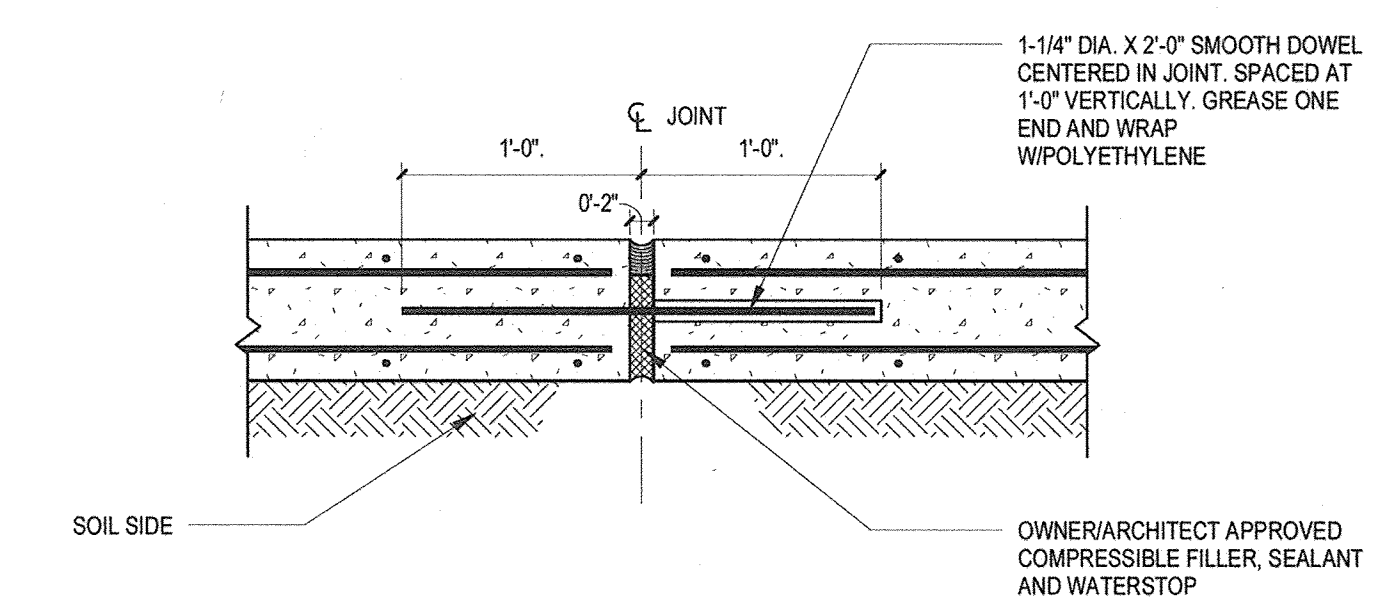
6 WALL CONSTRUCTION AND CONTROL JOINTS
44 SCALE: N.T.S.



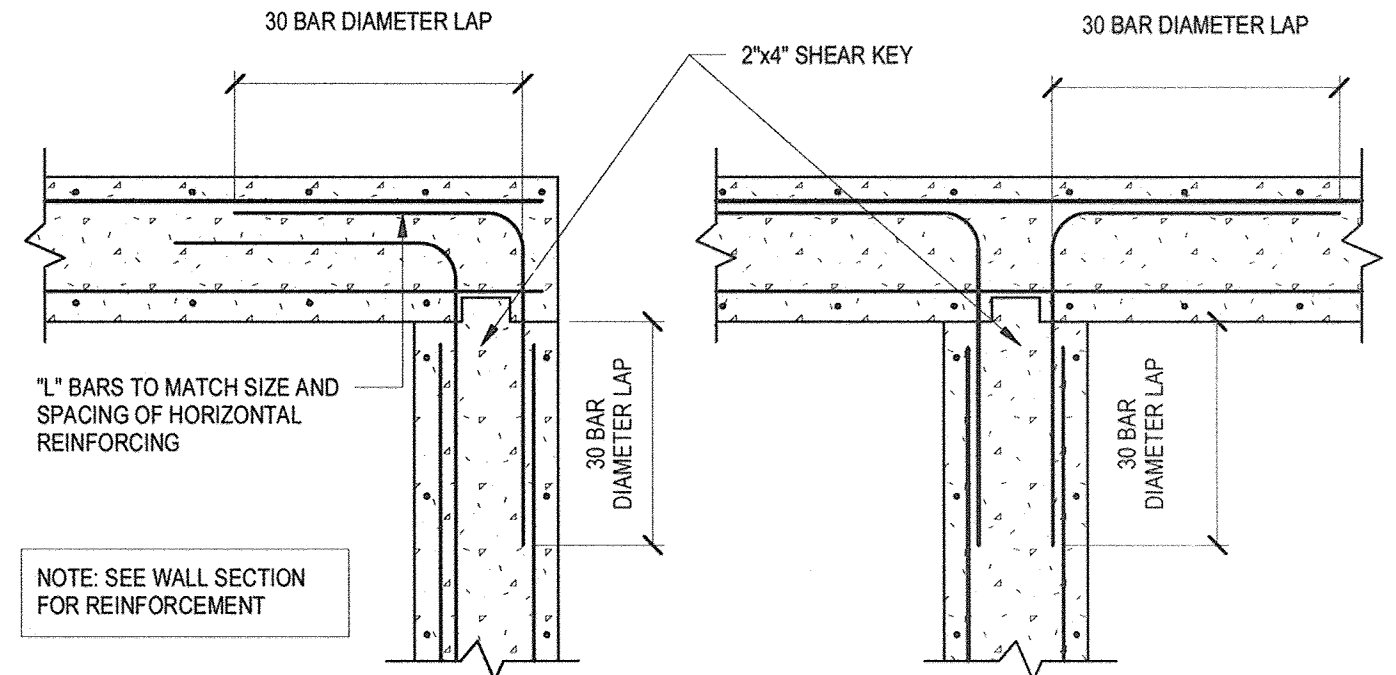
4 STEPPED FOOTING DETAIL
44 SCALE: N.T.S.



7 TYPICAL SOIL SUPPORTED STAIR
44 SCALE: N.T.S.



5 CONCRETE WALL EXPANSION JOINT
44 SCALE: N.T.S.



2 TYPICAL REINFORCING AT WALL CORNERS
44 SCALE: N.T.S.

WALL HEIGHT	DIMENSIONS					
	A	B	C	D	E	F
WALL TYPE A 0'-0" TO 4'-0"	3'-6"	1'-0"	10"	2'-6"	1'-0"	1'-3"
WALL TYPE B 4'-1" TO 6'-0"	6'-0"	2'-0"	10"	4'-0"	1'-2"	2'-0"
WALL TYPE C 6'-1" TO 7'-5"	7'-0"	2'-0"	10"	5'-0"	1'-4"	2'-6"
WALL TYPE D 7'-1" TO 8'-6"	9'-0"	2'-6"	10"	6'-6"	1'-6"	3'-0"
WALL HEIGHT	REINFORCING					
H	J	K	L	M	O	P
WALL TYPE A 0'-0" TO 4'-0"	2 #4	3 #4	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 18"
WALL TYPE B 4'-1" TO 6'-0"	2 #4	5 #4	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 18"
WALL TYPE C 6'-1" TO 7'-5"	3 #4	6 #5	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 18"
WALL TYPE D 7'-1" TO 8'-6"	3 #4	9 #5	#4 @ 12"	#5 @ 12"	#6 @ 12"	#5 @ 12"



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
DATE: 3/12/19
P.E. #

OWNER/DEVELOPER
BUCH LLLP
10945 PRICE MANOR WAY
LAUREL, MD 20724
301-355-3500

NO. _____ REVISION _____ DATE _____

SITE DEVELOPMENTAL PLAN
POOL RETAINING WALL

THE VINE
BUCH APARTMENTS
10945 PRICE MANOR WAY (FORMERLY 10945 JOHNS HOPKINS ROAD)
ZONED: R-APT PARCEL 126
TAX MAP 46 BLOCK 4 (L. 3192 / F. 394) HOWARD COUNTY, MARYLAND
5TH ELECTION DISTRICT

CATES ENGINEERING
STRUCTURAL CONSULTING
13575 Heisterlee Blvd. Suite 170 Glencoke, VA 20155
Tel: 571.261.9280 Fax: 571.9286 www.cateseng.com

PROFESSIONAL CERTIFICATE

DESIGN BY: MRP
DRAWN BY: MRP
CHECKED BY: BLC
DATE: APRIL 2016
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44 SHEET OF 44

THIS SIGNATURE BLOCK REQUIRED ON BOTH SHEETS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John Clendenen 5.17.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

John Clendenen 3.9.16
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Walter J. J. J. 870-10
DIRECTOR DATE

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT-OCT. 2018