

Capital projects ~ District 1

B3831 - FY2007 RIVER ROAD BRIDGE-ROCKBURN (HO-6)
B3862 NEW CUT ROAD WALL
B3862 LOUDON AVE WALL
C0298 - FY2005 US 40 CORRIDOR ENHANCEMENT
C0331 - FY2014 ELLICOTT CITY PARKING LOT ENHANCEMENT
C0337 - FY2014 ELLICOTT CITY IMPROVEMENTS and ENHANCEMENTS
C0357 - FY2018 ELLICOTT CITY PARKING AND STREETScape IMPROVEMENTS
C0363 LINWOOD SCHOOL PARKING LOT
D1124 DRAINAGE IMPRV PGM: GLOBE DRIVE
D1124 DRAINAGE IMPRV PGM: MONTG RD PIPE EASEMENT
D1148 NPDES WATERSHED MGMT PGM
~~D1157 - FY2006 ST JOHNS LANE VICINITY DRAINAGE~~
D1158 WATERSHED MGMT CONSTRUCTION
D1159 STORMWATER MGMT FACILITY RECONSTRUCTION
D1165 FLOOD MITIGATION and STORMWATER/WATERWAY ENHANCEMENT
D1166 - FY2015 CHESTNUT HILLS DRAINAGE IMPROVEMENTS
D1167 - FY2015 GLENBROOK DRAINAGE IMPROVEMENTS
D1175 VALLEY MEDE/CHATHAM FLOOD MITIGATION
D1176 WATERSHED MANAGEMENT CONSTRUCTION
D1177 STORMWATER MANAGEMENT FACILITY RECONSTRUCTION
D1179 COURTHOUSE DRIVE CULVER 7 SLOPE REPAIR
E1028 - FY2016 NEW ELEMENTARY SCHOOL #42
E1037 - FY2022 ELLICOTT MILLS MIDDLE SCHOOL ADDITION
E1052 NEW HIGH SCHOOL #14
J4154 SYLVAN LANE RETAINING WALL
J4170 - FY2004 ROGER'S AVENUE IMPROVEMENTS
J4173 - FY2000 HANOVER ROAD IMPROVEMENTS
J4219 LANDING RD @ MONTGOMERY RD STUDY
J4225 - FY2008 ELLICOTT CENTER DR CONNECTION to ROGERS
J4231 ELKRIDGE MAIN ST IMPRV
J4252 SYSTEMIC INFRASTRUCTURE IMPR TO DNTN ELLICOTT CITY
K5035 CRESENT RD AT NORTHFIELD ROD PED IMPRV
K5035 MONTGOMERY RD ROWANBERRY- LAWYERS HILL
K5036 ROUNTINE SIDEWALK/WALKWAY EXT: OLD ANNAPOLIS RD OAK HILL TO WOODLAND
K5036 ROUNTINE SIDEWALK/WALKWAY EXT: MONTGOMERY @ BELLANCA SIDEWALK
K5064 - FY2017 MISSION ROAD SIDEWALK
K5065 DONCASTER DR SIDEWALK
L0015 - FY2008 ELKRIDGE BRANCH | SENIOR CENTER
N3107 - FY2000 ROCKBURN BRANCH PARK
S6282 - FY2013 BONNIE BRANCH | ROCKBURN INTERCEPTOR IMPROVEMENTS
S6283 - FY2013 TIBER | SUCKER BRANCH INTERCEPTOR IMPROVEMENTS
S6284 DEEP RUN/SHALLOW RUN INTERCEPTOR IMPRV
S6285 - FY2017 MD108 PUMP STATION OUTFALL IMPROVEMENTS
S6288 - FY2020 ROCKBURN PUMPING STATION UPGRADE
S6297 OLD FREDERICK RD PUMPING STATION UPGRADE

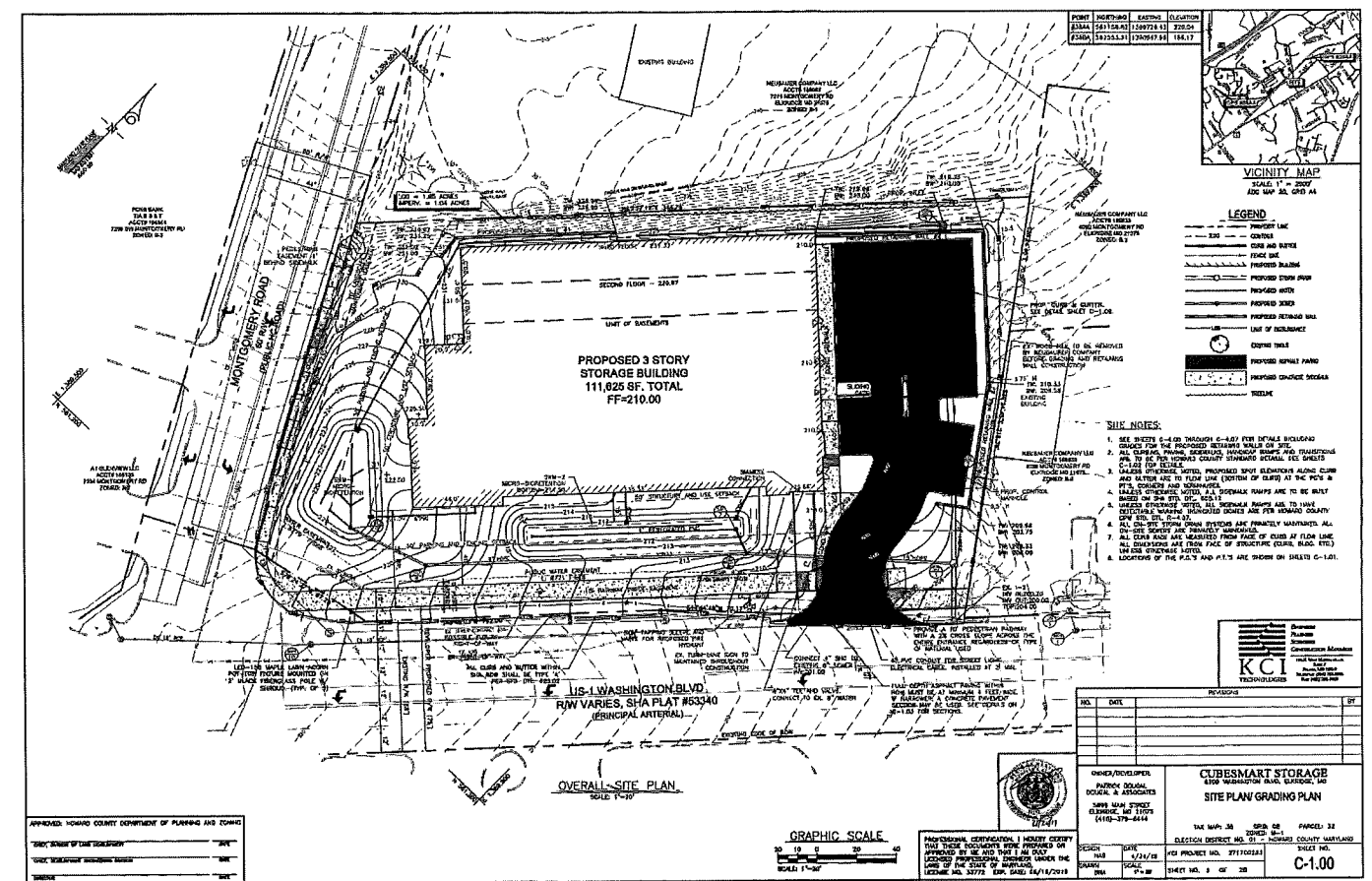
S6293 - FY2015 TURF VALLEY ROAD SEWER
W8300 - FY2011 LEVERING AVENUE WATER MAIN
W8303 - FY2018 ANDERSON AVE | MOUND STREET WATER MAIN
W8305 - FY2018 LANDING ROAD WATER MAIN LOOP
W8318 - FY2013 MONTGOMERY ROAD WATER MAIN REHABILITATION
W8327 - FY2015 OLD LAWYER HILL ROAD WATER SUPPLY MAIN REPLACEMENT
W8330 - FY2017 OLD COLUMBIA PIKE WATER MAIN REHABILITATION | REPLACEMENT
W8602 - New Cut WATERMAIN

Capital projects ~ District 2

B3853 O'CONNOR DR (AACO COST SHARE)
B3862 OLD STOCKBRIDGE WALL
D1158 WATERSHED MGMT CONSTRUCTION
D1159 STORMWATER MGMT FACILITY RECONSTRUCTION
D1174 - FY2016 SPRING GLEN DRAINAGE IMPROVEMENTS
D1176 WATERSHED MANAGEMENT CONSTRUCTION
D1177 STORMWATER MANAGEMENT FACILITY RECONSTRUCTION
F5975 - FY2010 ROUTE ONE FIRE STATION
J4148 - FY2000 DORSEY RUN ROAD EXTENSION
J4182 - FY2002 DORSEY RUN ROAD IMPROVEMENTS
J4206 - FY2007 MONTEVIDEO ROAD IMPROVEMENTS
J4212 US1 @ MD103
J4219 MARSHALEE DR @ MONTG RD STUDY
J4246 - FY2018 OLD MONTGOMERY ROAD AT BRIGHTFIELD ROAD INTERSECTION IMPROV
K5035 WATERLOO SIDEWALK DEEP RUN TO MAYFIELD
K5036 ROUNTINE SIDEWALK/WALKWAY EXTENSION: MONTG @ LYNN SIDEWALK EXT
K5036 ROUNTINE SIDEWALK/WALKWAY EXTENSION: MONTG @ BELLANCA SIDEWALK
N3102 - FY2000 Blandair Regional Park
N3957 - FY2003 TROY PARK & HISTORIC REHABILITATION
S6284 - FY2013 DEEP RUN | SHALLOW RUN INTERCEPTOR IMPROVEMENTS

CubeSmart SDP-19-004

	Under Current Regulations	Under CB 38
Project/file number	CubeSmart, U.S. Route 1, Elkridge SDP-19-004	
Zoning/land use	M-1 (Manufacturing-Light) Self-Storage Facility	
Number of units/ Bldg. SF Area	111,625 SF	
Gross site area	1.75 acres	
Net site area (defined as gross site area minus 100 yr floodplain and 25% steep slope)	1.75 acres (No steep slopes or floodplain)	
Environmental buffers and 25% slopes over 20K SF in area	None	N/A
Required open space	None	75% of Net Tract Area or 1.31 Acres
Forest Conservation	0.3 Acres Afforestation (Provided as Fee-In-Lieu)	50% Afforestation of Net Tract Area 0.87 Acres
Remaining Buildable area	Net Area 1.75 Acres	0.44 Acres (1.75 Acres - 1.31 Acres Open Space - Project No Longer Feasible)



APPROVED: HANCOCK COUNTY COMMISSIONER OF PLANNING AND ZONING
 DATE: 11/11/2019
 PROJECT NO. SDP-19-004

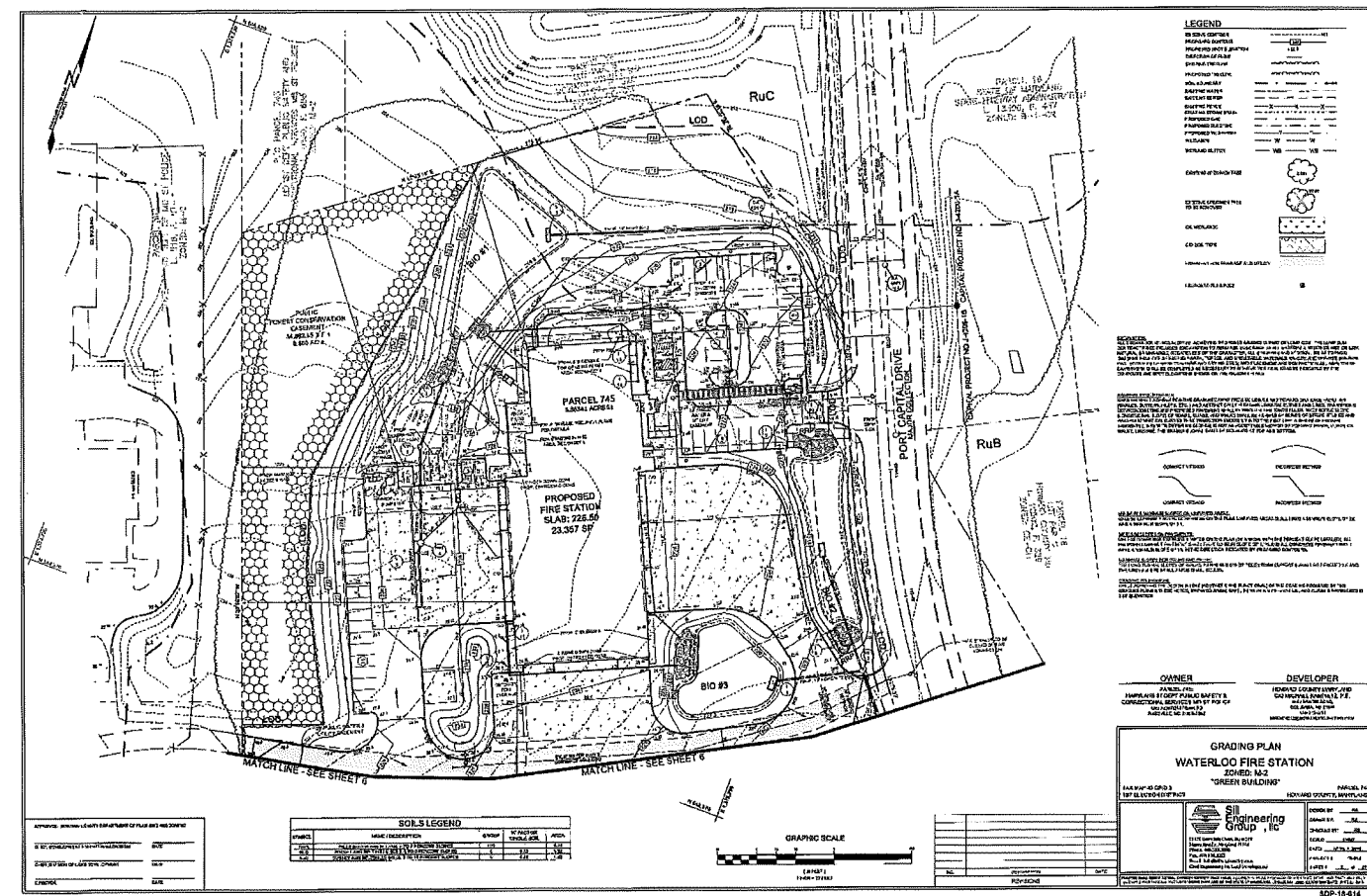
GRAPHIC SCALE
 0 10 20 30
 FEET

PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 14717
 DATE: 11/11/2019

PROJECT: CUBESMART STORAGE
 4500 WASHINGTON BLVD., ELK RIDGE, MD
 SHEET NO. 3 OF 38
 SCALE: C-1.00

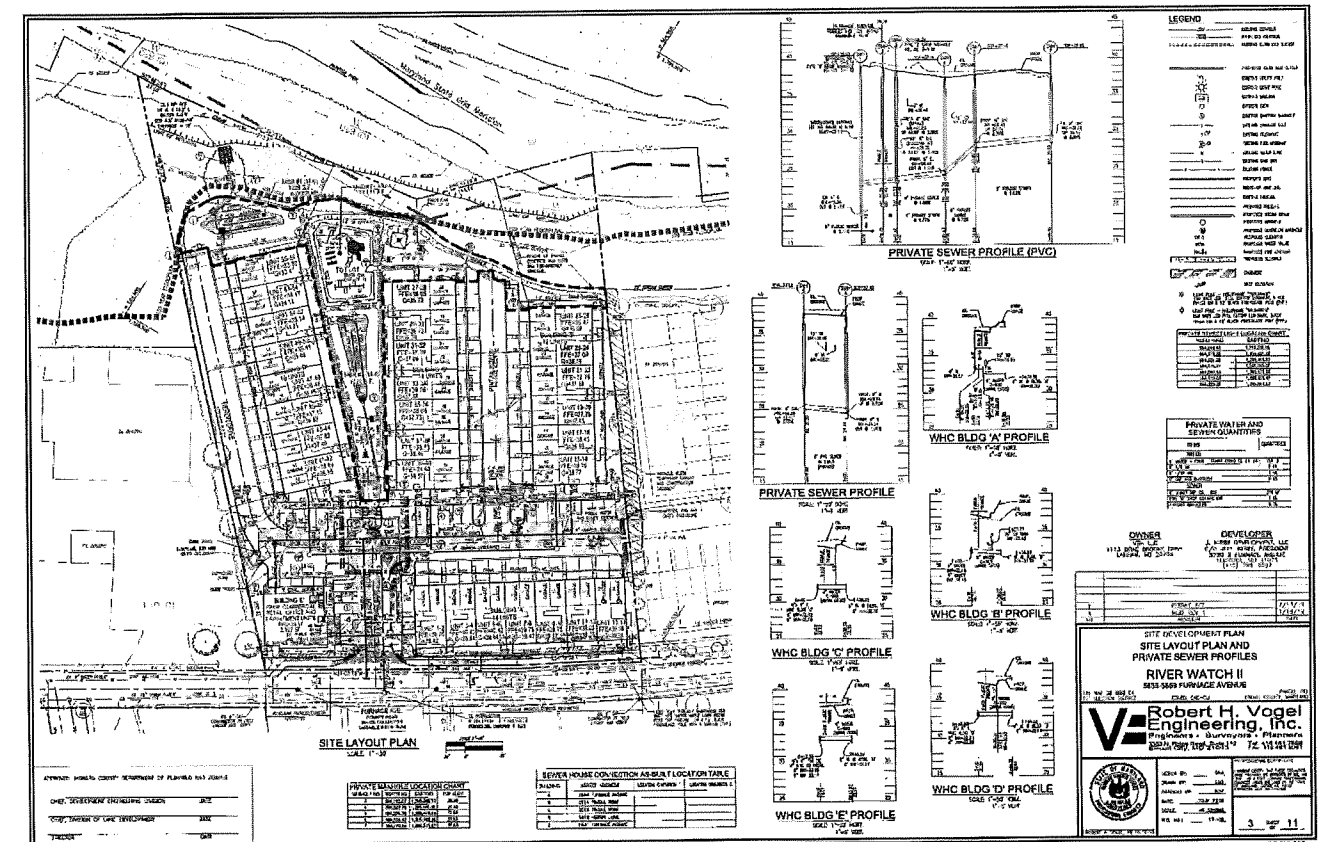
Waterloo Fire Station, Elkridge SDP-18-014

	Under Current Regulations	Under CB 38
Project/file number	Waterloo Fire Station, Elkridge SDP-18-014	
Zoning/land use	M-2 (Manufacturing-Heavy) Fire Station	
Number of units/ Bldg. SF Area	32,455 SF	
Gross site area	5.6834 acres	
Net site area (defined as gross site area minus 100 yr floodplain and 25% steep slope)	5.6834 acres (No floodplain or 25% steep slopes)	
Environmental buffers and 25% slopes over 20K SF in area	25' Wetlands Buffer	100' Wetlands Buffer Will Impact Proposed Driveway Access Causing Redesign of the Site Plan - No Waivers Allowed
Required open space	None	75% of Net Tract Area or 4.26 Acres
Forest Conservation	2.2 Acres Reforestation (Clearing 5.4 Acres of Ex. Forest) (0.7 Ac On-Site Retention & 1.5 Acres Credit at Forest Mitigation Bank)	Forest Clearing Limited to 25% of Net Tract Area (5.68 Acres) or 1.42 Acres
Remaining Buildable Area	4.98 Acres (Minus 0.7 Acres Forest Retention Easement On-Site)	1.42 Acres (5.6834 Acres - 4.26 Acres Open Space & 75% Forest Retention) Project no longer feasible.



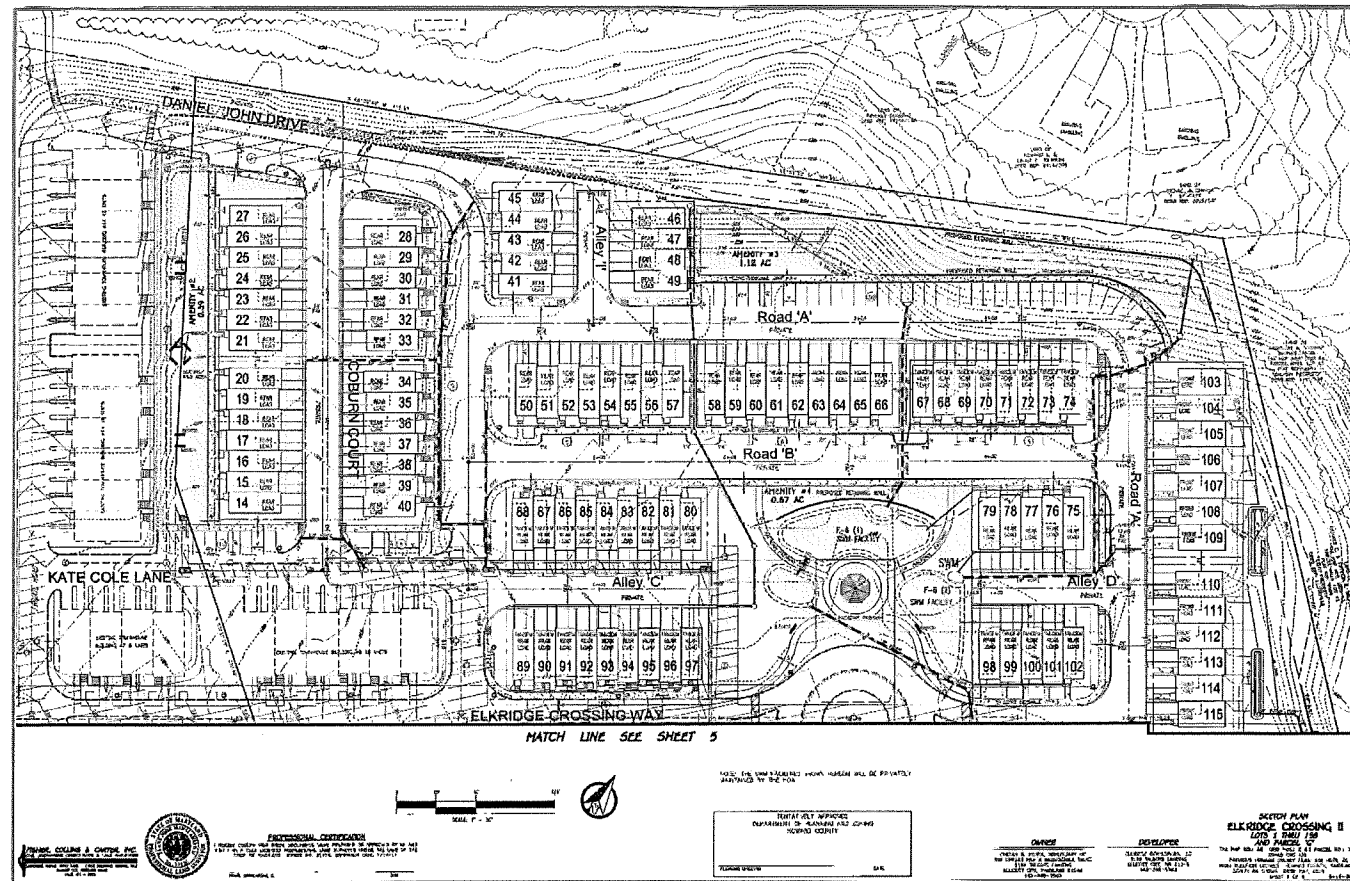
Riverwatch II, Furnace Avenue, Elkridge SDP-19-027

	Under Current Regulations	Under CB 38
Project/file number	Riverwatch II, Furnace Avenue, Elkridge SDP-19-027 – Housing Commission	
Zoning/land use	CAC (Corridor Activity Center) Residential Apartments & Office Space	
Number of units/ Bldg. SF Area	58 Apartment Units & 3,839 SF Office Space	
Gross site area	3.06 Acres	
Net site area (defined as gross site area minus 100 yr floodplain and 25% steep slope)	2.68 Acres (.3844 Acres Floodplain and no steep slope area)	
Environmental buffers and 25% slopes over 20K SF in area	25' Wetlands Buffer 75' Stream Buffer 100-Year Floodplain	100' Wetlands Buffer, Stream Buffer & Floodplain No Waivers Allowed - Will Cause Elimination of About 18 Units, Tot Lot, Gazebo and Picnic Area Amenities & SWM Facilities and Shortening of Private Internal Road
Required open space	10% of Net Area or 0.268 Acres	75% of Net Tract Area or 2.01 Acres
Forest Conservation	None (Exempt as Previously Developed Impervious Area)	50% Afforestation of Net Tract Area or 1.34 Acres
Remaining Buildable Area	2.68 Acres (Minus .3844 Acres 100-Year Floodplain)	1.06 Ac. (3.06 Ac. - 2.01 Ac. Open Space) Reduces units - may not be feasible.



Elkridge Crossing II, Route 1, Elkridge S-19-005

	Under Current Regulations	Under CB 38
Project/file number	Elkridge Crossing II, Route 1, Elkridge S-19-005	
Zoning/land use	CAC (Corridor Activity Center) Residential & Commercial Space	
Number of units/ Bldg. SF Area	206 Residential Units & 37,220 SF Commercial Space	
Gross site area	13.33 acres	
Net site area (defined as gross site area minus 100 yr floodplain and 25% steep slope)	11.53 Acres (1.80 Acres 25% Steep Slopes and no 100 yr. floodplain)	
Environmental buffers and 25% slopes over 20K SF in area	No Floodplain or Buffers 25% Steep Slopes	50' Steep Slope Buffer - No Waivers Allowed Will Cause Elimination of About 15 Units & 30 Parking Spaces
Required open space	10% of Net Area Or 1.153 Acres	75% of Net Tract Area Or 8.65 Acres
Forest Conservation	None (Previously Addressed Under SDP-04-017)	50% Afforestation of Net Tract Area or 5.77 Acres
Remaining Buildable Area	13.33 Acres (Alternative Compliance WP-19-086 Approved for Grading Man-Made Steep Slopes)	4.68 Acres (13.33 Acres-8.65 Acres Open Space) Project Would Lose about 150 Units





Howard County
Internal Memorandum

Subject: Review of Impacts of CB 38-2019 on Proposed Capital Projects
in the Patapsco Lower North Branch Watershed

To: Jim M. Irvin, P.E.
Director, DPW

From: Daniel L. Davis, P.E.
Chief – Utility Design Division

Date: September 19, 2019

County Council Bill No. 38-2019, The Patapsco Lower North Branch Bill seeks to prohibit certain waivers, prohibit certain disturbances of land, prohibit specified activities in certain buffers, etc. in the Patapsco Lower North Branch Watershed. The bill extends the protections put in place in the Tiber Branch Watershed under CB 80-2016 to the entirety of the Patapsco Lower North Branch and excludes the granting of waivers on certain protected features unless the improvement/project is intended for stormwater management infrastructure or flood control facilities. What follows is an impact review of the proposed bill on water and sewer capital projects currently under way or proposed in the subject area. The review information provided herein is representative of the concerns that the Utility Design Division has, along with those provided by our environmental consultant engineers, for projects already in development or typically undertaken by this office. The impact of the proposed legislation on DPW's sewer interceptor projects were the focus of our review because (1) there are several projects currently under development and (2) these [sewer] types of utility projects are those most often located in the areas targeted by the proposed legislation.

As a point of reference and understanding the proposed bill encompasses the Patapsco Lower North Branch Watershed which in turn is reflective of the DPW's Patapsco WWTP Basin – see attached mapping. As explained in The Master Plan for Water and Sewerage 2015 Amendment, the Patapsco WWTP Basin is one of two (2) sewer service areas in the County. DPW sub-drainage areas within the Patapsco Lower North Branch Watershed include the Sucker, Tiber, Bonnie, and Deep Run branches. In 2013 the annual average daily sewage contribution to the public system was determined to be 25.5 MGD; approximately 5.5 MGD was attributed to the Patapsco WWTP drainage basin. It is projected that by 2040 the Patapsco WWTP drainage basin will have an average daily flow of 6.7 MGD. *The Patapsco WWTP Basin therefore is not an insignificant portion of the County sewer drainage area and thus the proposed legislation has wide impacts to our work.*

Currently, within the County's Patapsco WWTP drainage basin there are several sewer interceptor improvement projects in various stages of development.

- S6282 Bonnie Branch | Rock Burn Interceptor
- S6283 Tiber | Sucker Branch Interceptor Improvements
- S6284 Deep | Shallow Run Interceptors
- S6285 MD 108 PS Outfall Improvements

The justification for each of these capital projects [except for S6285 which was approved in FY2017, approval of each project dates to FY2013] is that they are required to prevent potential overflows and surcharged flow conditions within the interceptor sewers under ultimate zoning densities. By design and necessity these interceptor sewers (definition: large sewer lines which collect and direct sewerage from smaller neighborhood distribution lines to treatment facilities) are located in low lying areas and typically parallel and/or cross river courses. Thus, the naming associated with each interceptor – Bonnie, Tiber, Deep Run, so forth and so on. In most cases our new sewers are being located adjacent to or in the same location as the existing sewer with favorable status being given to locations further from water courses to avoid impacts thereto and to guard against future bank erosion and migration. Our new sewers are larger, thus requiring greater width of easement for construction and maintenance. In many cases it is unavoidable that these interceptor sewers be/are located in areas which will conflict with existing forest conservation easements, wetlands, buffers, steep slopes, etc. – areas of additional protection targeted by the proposed legislation.

Section 16.104 Waivers – would not allow for the granting of waivers of forest conservation, floodplain wetland, stream or steep slope regulations in the watershed unless for stormwater management (SWM) or flood control. As such we interpret the proposed legislation would prohibit our capital projects because: waiver submission will occur past the grandfather date, our proposed limits of work are beyond that which is included in prior flood damage, and our projects are not intended for SWM or flood control purposes.

Without the relief afforded thru waivers, variances and alternative compliance our essential and necessary projects and their likewise essential and necessary impacts to these protected features are essentially not buildable.

Section 16.115 Floodplain preservation – the proposed legislation does not indicate or differentiate between permanent or temporary impacts. If neither temporary or permanent impacts are allowed to the floodplain our sewer projects would be severely altered or possibly unachievable. By way of example, on the S6285 project, the 100-year floodplain is wide in some areas and this project parallels and periodically crosses the stream. Another example is the S6283 project; a significant portion of the sewer interceptor (both existing and proposed) is within the 100-year floodplain.

Section 16.116 Protection of wetlands, streams and steep slopes – would not allow for the grading, removal of vegetative cover, including trees, in the watershed within 100' of any wetlands or waterways or within 50' of steep slopes. Our sewer interceptor projects cannot meet this requirement. We must

remove trees within the easement to construct and to maintain and access the utility post construction. We typically re-establish the existing grade post construction however, there is occasions when the grade needs to be modified to allow for safe construction and future access and maintenance.

Section 16.121 Public sites and open space – not applicable to our utility work.

Section 16.125 Protection of scenic roads – no new foreseen impacts to our work.

Section 16.127 Residential infill development – not applicable to our utility work.

Section 16.711 Floodplain Variances – would not allow issuance of variances for any property located in the watershed unless requested before November 7, 2016 or associated with SWM. This component of the proposed legislation could require alteration of the preferable or attainable alignment for a sewer utility. For example, if we could not obtain a variance on regulation protecting a specimen tree(s) the alignment of the sewer would need to be altered. This alteration could have design, environmental, or cost impacts that outweigh the intended good of not granting the variance requested.

Section 16.1204 Forest Conservation – by and large the protection provided here is already addressed within our designs. New is that this section seeks to expand current forest conservation regulations to the adjoining properties. More (than currently required) and extensive field and on-line research will be required to meet the proposed requirements. Thus, the engineering cost of our designs will increase.

Section 16.1206 Reforestation – would revise the reforestation conservation threshold to 25% of the existing forest cover. This limitation is problematic to a linear utility project and should not apply. If adopted on the Tiber and Sucker Brach projects, for example, it is estimated that the reforestation requirement for both projects would increase by 5% and thus increase the cost of each project.

Section 16.1207 Afforestation – would require afforestation mitigation of 50% of the net tract area – replanting 50% of the project area. Again, this is problematic to linear utility projects and should not apply. Also, as mentioned previously utility easements are not reforested. Utility easements need to remain clear to allow for access and maintenance. This is a common and widely held best practice for utility easements. Utilities such as water, sewer, gas, telephone, electric cannot be accessed or maintained in a forested easement. Specific to sewer utilities, the forestation of a sewer easement would promote root intrusion into the sewer thus leading to blockage and/or pipe damage.

Section 16.1210 Fee-in-lieu of afforestation or reforestation –we interpret this section to imply that fee-in-lieu would not be allowed for projects within the Patapsco WWTP watershed. Thus, our utility projects would be adversely impacted. As stated previously the nature of utility projects do not lend themselves to afforestation or reforestation. We rely primarily on the ability to pay fee-in-lieu to meet forest related requirements.

Section 16.1215 Waivers – would only allow waivers to the fee-in-lieu requirements for “necessary” and SWM related projects. This language is to vague and limiting to our utility projects.

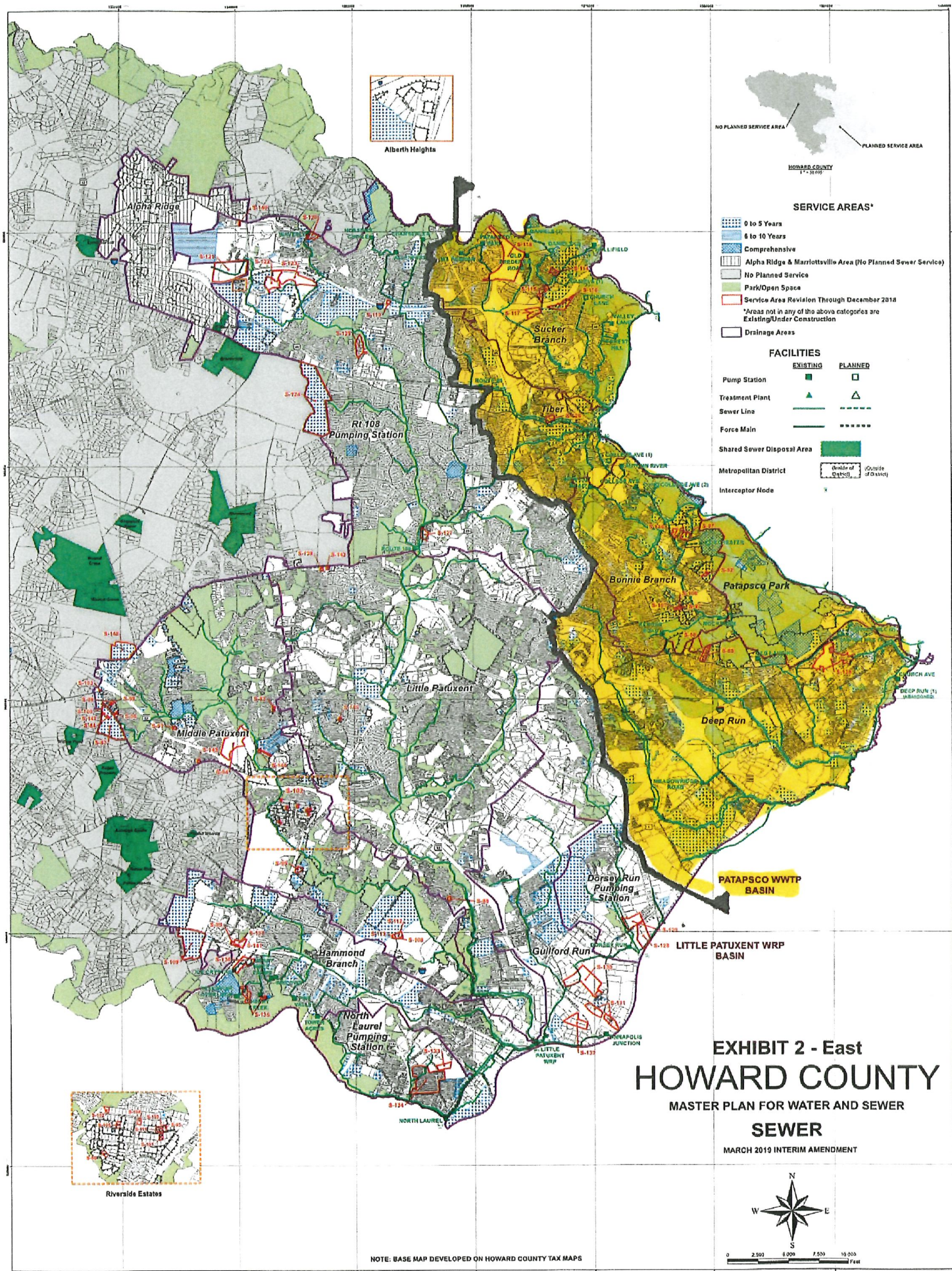
Provided as attachment to this review is a pending Alternative Compliance Request Submittal to DPZ

from UDD on the Tiber Branch Interceptor Improvement Project, Capital Project S6283. Within these attachments are the:

- Essential/Necessary Disturbance Request Determinization
- Alternative Compliance Request Submittal
- Fee-in-lieu Justification Letter Submittal for Forest Conservation Requirements

Note: the attachments referenced in the application package are too large and complex to print for attachment here. Select 8.5x11 design drawing (contract 10-5060) examples of the stream restoration work referenced in the compliance application are provided here in lieu of examples.

The attached submittal package provides the purpose of the project, resource impacts and the proposed alternative compliance steps taken by the DPW to minimize our project's impact to the maximum extent possible. The quality of work and protection of the environment shown in the pending submission example is typical of our work, our efforts to minimize our project impact and our efforts to leave the project area equal to or better than prior to our construction. CB 38-2019's proposed elimination of waivers, variances and fee-in-lieu provisions would detrimentally impact our capital projects and our thus ability to provide essential water and sewer services to County residents and to meet state mandated guidelines. These capital projects are regulated and reviewed by numerous agencies - the Maryland Department of the Environment (MDE), the United States Army Corp of Engineers, Howard Soil Conservation District amongst others – each of which is tasked with protecting our environment and natural resources as well.





HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 7125 Riverwood Drive, Suite B ■ Columbia, Maryland 21046 ■ 410-313-2414

Thomas E. Butler, P.E., Deputy Director of Public Works
 Engineering, Development and Construction
 www.howardcountymd.gov

FAX 410-313-6144
 TDD 410-313-2323

September 9, 2019

Kent Sheubrooks
 Howard County
 Division of Land
 3430 Courthouse
 Ellicott City, MD 21043

Subject: **Essential/Necessary Disturbance Request Determination**
 Tiber Branch Interceptor Improvements - Capital Project S-6283

Dear Mr. Sheubrooks:

This letter requests approval for essential or necessary stream, nontidal wetland, wetland buffer, 100-year floodplain, steep slopes, and highly erodible soils disturbances associated with the Tiber Branch Interceptor Improvements. The Howard County Department of Public Works (DPW) Utility Design Division (UDD) is performing a task under the Capital Project S-6283 to make improvements to approximately 6,150 linear feet (LF) of aging interceptor sewer and stabilization of two stream segments to protect existing and proposed infrastructure. The project is located along Hudson/Tiber Branch, between existing MH 912 at St. Johns Lane and US Route 40 to existing MH 725 along Main Street Ellicott paralleling Hudson/Tiber Branch, in Ellicott City, Maryland.

The project will result in the following impacts:

Resource	Temporary Impacts (SF)	Permanent Impacts (SF)
Vegetation	0	17,424
Nontidal Wetlands	134	0
25-foot Wetland Buffer	880	0
Waters of the US	2,472	7,842
100-year Floodplain	53,623	2,524
Steep Slopes	43,503	
Highly Erodible Soils	107,437	

Based on studies, metering, and computer modeling conducted between 2010 and 2015, the County identified segments of sanitary interceptors in need of improvements. The existing Tiber Branch Interceptor sewer was constructed in the mid-1960's and serves a 3.75 square mile area with a population of approximately 10,000 people. The primary goal of the project is to upgrade the existing Tiber Branch interceptor to address potential wastewater overflow conditions and potential surcharge flow conditions throughout the sewershed which parallels Hudson/Tiber Branch, a direct tributary of the Patapsco River. A Joint Permit Application is being submitted to the Maryland Department of the Environment concurrent with this submittal.

The above listed impacts are a result of vegetation clearing necessary for the open-cut installation and proposed stream stabilization work. In areas of open cut sewer construction and stream stabilization, topsoil and native herbaceous vegetation seed will be established to permanently stabilize the area and

Tiber Interceptor Improvements Project
Capital Project S-6283
September 9, 2019

Page 2 of 2

provide habitat. Where possible, trees are being replaced to reestablish woody vegetation. The proposed project impacts have been minimized to the maximum extent possible through the deviation from County preferred alternative of parallel interceptors. The project proposes a combination of same trench replacement, CIPP lining, and point repairs in lieu of a full parallel alignment. Additionally, sections of interceptor not requiring repair have been removed from the extent of the proposed project. The proposed stream stabilization will result in reduced sedimentation downstream and prevent future slope failure in the proposed area.

Approval of the project would allow the aforementioned sewer upgrades. Based on the information enclosed herein, I respectfully request approval of this necessary disturbance request. If you have any questions or desire further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Kerri Dinsmore". The signature is written in a cursive, flowing style.

Kerri Dinsmore, P.E.
Department of Public Works
Project Manager
(410) 313-5819

Enclosures:
Exhibit A – Impact Graphics
Exhibit B – Erosion & Sediment Control Plans
Exhibit C – Forest Stand Delineation/ Conservation Plans



HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

7125 Riverwood Drive, Suite B ■ Columbia, Maryland 21046 ■ 410-313-2414

Thomas E. Butler, P.E., Deputy Director of Public Works

Engineering, Development and Construction

www.howardcountymd.gov

FAX 410-313-6144

TDD 410-313-2323

September 9, 2019

Mr. Kent Sheut
Howard County
Division of Land
3430 Courthouse Drive
Ellicott City, MD 21043

Subject: **Alternative Compliance Request Submittal**
Tiber Branch Interceptor Improvements Project
(Waiver of Site Plan, Definition of Net Tract Area)
Capital Project S-6283

Dear Mr. Sheubrooks:

The Century Engineering Inc. is currently assisting the Howard County Department of Public Works (HCDPW) Utility Design Division (UDD), with the Tiber Branch Interceptor Improvements (Capitol Project S-6283) in Ellicott City, Howard County, Maryland.

The Tiber Branch Interceptor project area consists of a linear alignment located between between existing MH 912 at St. Johns Lane and US Route 40 to existing MH 725 along Main Street Ellicott paralleling Hudson/Tiber Branch. The study area encompasses forested and non-forested areas zoned commercial and residential. See the attached Site Location Map for details on project location.

The purpose of this project is to rehabilitate and upgrade 6,150 linear feet (LF) of the Tiber Branch Interceptor which is one of the interceptors in Howard County that convey wastewater to the Patapsco Interceptor for conveyance to treatment facilities. The existing Tiber Branch Interceptor sewer was constructed in the mid-1960's and serves a 3.75 square mile area with a population of approximately 10,000 people. Based on studies, metering, and computer modeling conducted between 2010 and 2015, the County identified segments of sanitary interceptors in need of improvements. These improvements are needed to prevent potential wastewater overflows and surcharge flow conditions under existing and future zoning densities. Benefits of these improvements will include improved water quality, and protection of public health within the entire sewershed. The proposed project involves same trench replacement of the existing interceptor pipe along the existing sewer easement, CIPP lining existing sewer, point repairs and manhole repairs. Two areas have been identified for stream stabilization in order to protect the exposed sewer infrastructure in areas of eroding stream banks and hillslope. The proposed project is phased into three phases. The proposed project phasing is as follows:

- Phase I – Same trench sewer replacement with upsized pipe from MH 730 to MH 725;
- Phase II – Approx. 1,915 LF of CIPP Lining and spot repairs from MH 730 to MH 736 with manholes MH 732, 733, 735, and 740 being repaired; and
- Phase III – Sewer realignment and upgrades from MH 743 to the terminus at MH 912 along MD RTE 40 including stream stabilization.

The table below contains descriptions and extents of proposed work:

Section	Work Proposed
MH 725-MH 730	Same Trench Replacement Upsizing
MH 730-MH 736	CIPP Lining
MH 743-MH 3(prop.)	New Alignment
MH 742A-MH 743	Stream Stabilization
MH 3- MH 902	Same Trench Upsizing
MH 947 –MH 902 (Spur)	Same Trench Replacement with Stream Stabilization
MH 903-MH 901A	Stream Stabilization
MH 905- MH 907	Same Trench Replacement Upsizing
MH 8-MH 4	Parallel Trench with jack and bore under Route 40 between MH 907 and MH 4

The proposed work impacts 30 parcels and portions of public roadway, covering 69.1 acres. A table of impacted parcels is attached in Exhibit G.

Four (4) Alternative Compliance Requests are being made for this project as follows:

1. Section 16.155(a)(1)(ii) – Waiver of site plan: The project being proposed is a linear sewer project and does not require review through the Site Development Plan (SDP) process. Additionally, this project will be reviewed by the Maryland Department of the Environment, the Army Corps of Engineers, Howard County Soil Conservation District, HCDPW and Howard County Recreation and Parks relative to meeting the County's design manual and all state and federal environmental regulations. Therefore, the capital improvement project will be subjected to thorough review even if the SDP review is waived.
2. Section 16.1201(n) – Definition of net tract area for forest conservation computations: Per Forest Conservation regulations (Subtitle 12) the entirety of all parcels impacted by the proposed work are to be used to define the net tract area for forest conservation computations. The sum of the area of the 30 parcels and impacted roadway is 69.1 acres; however, the proposed limit of disturbance (LOD) on those parcels is 4.8 acres. The remaining area after parcels where forest conservation has already been addressed, public roads and floodplain are netted out of the LOD, includes 1.2 acres. The purpose of the Alternative Compliance Request(s) is that the LOD of 4.8 acres be allowed as the initial project area, such that after netting out parcels where forest conservation has already been addressed and floodplain, the Net Tract Area for further calculations is 1.2 acres. The HCDPW further requests that it be allowed to pay fee-in-lieu to meet the unmet reforestation requirements of 0.5 acres of planting shown on the Forest Conservation Worksheet, attached in Exhibit C.
3. Section 16.1205(a)(7) – Removal of a specimen tree: There are 30 specimen trees within and/or adjacent to the proposed sewer upgrades. Installation of the sewer line and maintenance of the necessary easements will result in the removal of one specimen tree. The primary construction method proposed is open cut construction. The LOD was minimized to the maximum extent possible to complete the proposed project and to avoid damaging other specimen trees, however, due to the required slope and length of run required for this project to be viable and the minimum width of the required maintenance easement, the removal of the specimen tree is unavoidable. The open cut trench installation will cause cutting of roots and impact to greater than 30% of the critical

root zone of the tree. Due to safety concerns and viability of the tree following construction, the tree is proposed for removal. The following specimen tree will be removed:

- SP-7, a 37" DBH Black Walnut (*Juglans nigra*) in good condition.

4. Section 16.103(j) – Grant of Easement in lieu of Revision Plat: Per project coordination with DPZ in 2015 (meeting minutes attached), DPZ agreed to allow the revision plat requirement to be waived for this sewer interceptor project. In lieu of a Revision Plat, a Grant of Easement plat will be prepared

Approval of the Alternative Compliance Requests noted above would allow the project to move forward in a quick, cost-effective manner while still meeting the intent of County regulations.

The Alternative Compliance Request, Section III: Justification, includes items a through d in need of further clarification. The following addresses those items:

- a. Summarize any extraordinary hardships or practical difficulties which may result from strict compliance with the Regulations. This project is needed to address upgrades to the existing sewer system in order to accommodate future growth in the sewershed. Strict compliance to the four Regulation sections noted above would require additional time, effort, and cost to assess a large amount of land that is in no way affected by the proposed project. Full compliance with the Regulations and the expenditure of the design team's resources would not improve the final design or construction of the project and would take away valuable funds from the implementation of the project design and construction. Performing this extra work would also lengthen the schedule for this project.
- b. Verify that the intent of the Regulations will be served to a greater extent through the implementation of the alternative proposal. The County's Regulations are meant to assure that development occurs per County requirements and that environmental criteria are met, including the protection of existing forested areas to the extent practical, and where forest must be disturbed, reforestation of the project site occurs, per the forest conservation worksheet. The project has been designed with the forest conservation regulations in mind. The limit of disturbance has been minimized to only that area necessary for constructing the project and will utilize existing easements and access roads where possible. Areas that are temporarily disturbed will be replanted where possible.
- c. Substantiate that approval of the alternative compliance will not be detrimental to the public interest. Approval of this Alternative Compliance Request will not have a negative effect on public interests. The goal of the Alternative Compliance Request is not intended to exempt the project from County Regulations, but rather to more appropriately match the goals and resources of the project to the overall intent of the Regulations. By completing this project in a quick and efficient manner, taxpayer money will be conserved. Additionally, the ultimate use of the land is similar to the current uses of the land in this area therefore, the project would not change the nature and character of the surrounding areas.
- d. Confirm that approval of the alternative compliance will not nullify the intent of the Regulations. As stated above, approval of this Alternative Compliance Request will not nullify the intent of the Regulations. The project's purpose is to ensure adequate sewer amenities for current and future growth within the sewershed. The LOD has been minimized where possible and existing access roads and easements will be used where possible. Areas temporarily disturbed will be

replanted. No work being proposed by this project is in any way counter to County policy or regulation.

Approval of the Alternative Compliance Requests will allow the project to move forward in a quick, cost effective manner to resolve the existing problem. The project will still be in keeping with the intent of the County regulations if the Alternative Compliance Requests is approved.

Based on the waiver request enclosed herein, including all exhibits referenced below, I hereby request approval of this Alternative Compliance Requests.

If you have any questions or desire further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Kerri Dinsmore". The signature is written in a cursive, flowing style.

Kerri Dinsmore, P.E.
Department of Public Works
Project Manager
(410) 313-5819

Enclosures:

- Exhibit A – Site Location Map
- Exhibit B – Site Aerial Map
- Exhibit C – Forest Conservation Worksheet
- Exhibit D – Natural Resource Inventory
- Exhibit E – Design Plan Sheets
- Exhibit F – List of Impacted Parcels
- Exhibit G – Deeds



HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

7125 Riverwood Drive, Suite B ■ Columbia, Maryland 21046 ■ 410-313-2414

Thomas E. Butler, P.E., Deputy Director of Public Works
Engineering, Development and Construction
www.howardcountymd.gov

FAX 410-313-6144
TDD 410-313-2323

September 9, 2019

Kent Sheubroo
Howard County
Division of Land Development
3430 Courthouse Drive
Ellicott City, MD 21043

Subject: **Fee-in-Lieu Justification Letter Submittal for Forest Conservation Requirements**
Tiber Branch Interceptor Improvements Project
Capital Project S-6283

Dear Mr. Sheubrooks:

Please find enclosed one (1) original and three (3) copies of the fee-in-lieu Justification Letter submitted on behalf of the Howard County Department of Public Works (HCDPW) Utility Design Division (UDD) for the above-mentioned project. This letter is being submitted concurrently with an alternative compliance petition for sections 16.155(a)(1)(ii), 16.1201(n), 16.1205(a)(7), and 16.103(j) of the Howard County Code.

Project Description

Century Engineering, Inc. (Century) is currently assisting the HCDPW UDD, with the Tiber Branch Interceptor Sewer Improvements Project (Capitol Project S-6283) in Ellicott City within Howard County, Maryland.

The Tiber Branch Interceptor project area consists of a linear alignment located between existing MH 912 at St. Johns Lane and US Route 40 to existing MH 725 along Main Street Ellicott paralleling Hudson/Tiber Branch. The study area encompasses forested and non-forested areas zoned commercial and residential. See the attached Site Location Map for details on project location.

The purpose of this project is to rehabilitate and upgrade 6,150 linear feet (LF) of the Tiber Branch Interceptor which is one of the interceptors in Howard County that convey wastewater to the Patapsco Interceptor for conveyance to treatment facilities. The existing Tiber Branch Interceptor sewer was constructed in the mid-1960's and serves a 3.75 square mile area with a population of approximately 10,000 people. Based on studies, metering, and computer modeling conducted between 2010 and 2015, the County identified segments of sanitary interceptors in need of improvements. These improvements are needed to prevent potential wastewater overflows and surcharge flow conditions under existing and future zoning densities. Benefits of these improvements will include improved water quality, and protection of public health within the entire sewershed. The proposed project involves same trench replacement of the existing interceptor pipe along the existing sewer easement, CIPP lining existing sewer, point repairs and manhole repairs. Two areas have been identified for stream stabilization in order to protect the exposed sewer infrastructure in areas of eroding stream banks and hillslope. The proposed project is phased into three phases. The proposed project phasing is as follows:

- Phase I – Same trench sewer replacement with upsized pipe from MH 730 to MH 725;

- Phase II – Approx. 1,915 LF of CIPP Lining and spot repairs from MH 730 to MH 736 with manholes MH 732, 733, 735, and 740 being repaired; and
- Phase III – Sewer realignment and upgrades from MH 743 to the terminus at MH 912 along MD RTE 40 including stream stabilization.

The table below contains descriptions and extents of proposed work:

Section	Work Proposed
MH 725-MH 730	Same Trench Replacement Upsizing
MH 730-MH 736	CIPP Lining
MH 743-MH 3(prop.)	New Alignment
MH 742A-MH 743	Stream Stabilization
MH 3- MH 902	Same Trench Upsizing
MH 947 –MH 902 (Spur)	Same Trench Replacement with Stream Stabilization
MH 903-MH 901A	Stream Stabilization
MH 905- MH 907	Same Trench Replacement Upsizing
MH 8-MH 4	Parallel Trench with jack and bore under Route 40 between MH 907 and MH 4

Fee-in-lieu Justification

Century on behalf of HCDPW UDD, is pursuing the necessary permits for impacts to regulated resources beyond those regulated by Howard County Department of Planning and Zoning. Coordination between HCDPW, Century and all other regulatory agencies has been on-going since 2013. As part of these efforts, a forest stand delineation was conducted by Century in late Fall 2013 for the areas of anticipated impact. A copy of the *Natural Resource Inventory and Forest Stand Delineation Report* is enclosed in Exhibit C.

The justification herein is to request a waiver of the current acreage limitations for fee-in-lieu mitigation as specified in the Howard County Forest Conservation Manual.

Net Tract Area

Per Howard County Forest Conservation Regulation Subtitle 12, the entire parcel boundaries of areas affected by the proposed work are to be used as the net tract area for forest conservation calculations. According to the Howard County Forest Conservation Manual (1999), the portions of the project area that are within the 100-Year Floodplain, public roadways, and public easements are to be netted out of forest conservation calculations. A copy of the Forest Conservation Worksheet is included as Exhibit D.

In general, most of the proposed work is within the floodplain and public roadway; however, portions of the work will occur in areas outside of the floodplain. Zoning boundaries, floodplain and parcel boundaries are shown on the Forest Conservation Plan enclosed as Exhibit E. For this project, the total area of affected parcels and public roadway is 69.1 acres, while the limit of disturbance on those parcels totals 4.8 acres. After the floodplain areas and easements are netted out of the LOD, the net tract area of the LOD is 1.2 acres.

Minimization of Impacts

The proposed easement areas are to be kept as narrow as possible to minimize impacts to regulated features. Based on current design guidance for utility lines of this size, HCDPW UDD is requesting a

20-foot sewer maintenance easement and a 10-foot temporary construction easement which will need to be cleared to install the sewer lines and conduct repair activities. Some replanting will take place in areas temporarily impacted for construction; however, it is imprudent to use this revegetation as reforestation or afforestation as it may need to be removed for future maintenance.

Impacts to forest resources are considered unavoidable in the construction of the proposed sewer interceptor. Impacts to forest resources were minimized by reducing the required easement, replacing in the same trench and doing pipe lining where feasible, adjusting the LOD and retaining vegetation where possible. Permanent impacts to forest resources will be limited to the acquired utility easement that will be maintained after that completion of construction. All construction access roads and staging areas will not be mowed and maintained after the construction of the interceptor to allow for the regeneration of forest resources in these areas.

Anticipated Impacts and Mitigation Requirements

During the field investigation of applicable forested areas in proximity to the project, eight forest stands were identified along the Tiber Branch Interceptor Sewer. Of the forested areas, 0.4 acres fall within the LOD. Limits of disturbance and forest clearing are depicted on the Forest Conservation Plan.

The entire 0.4 acres of forested resources within the LOD will be cleared for the construction and staging of this project. Based on the Forest Conservation Worksheet calculations, 1.0 acres are required to mitigate for the clearing of 0.4 acres of forest.

Due to the linear nature of this project and the capital funds available for mitigation, options are limited. The nearly 6,150 LF of sewer crosses 30 parcels and roadways owned by many different entities. Gaining property rights to additional parcels within the project area in order to reforest would be prohibitively expensive and could cause project delays in property easement acquisition, given the capital funds available for this project.

Conclusion

We trust that the enclosed information is sufficient to justify the fee-in-lieu for the forest conservation requirements for this project. Century personnel and representatives of HCDPW UDD are available to discuss this application should any questions or concerns arise.

If you have any questions or desire further information, please do not hesitate to contact me.

Sincerely,



Kerri Dinsmore, P.E.
Department of Public Works
Project Manager
(410) 313-5819

Tiber Branch Interceptor Improvements Project
Capital Project S-6283
September 9, 2019

Page 4 of 4

Enclosures:

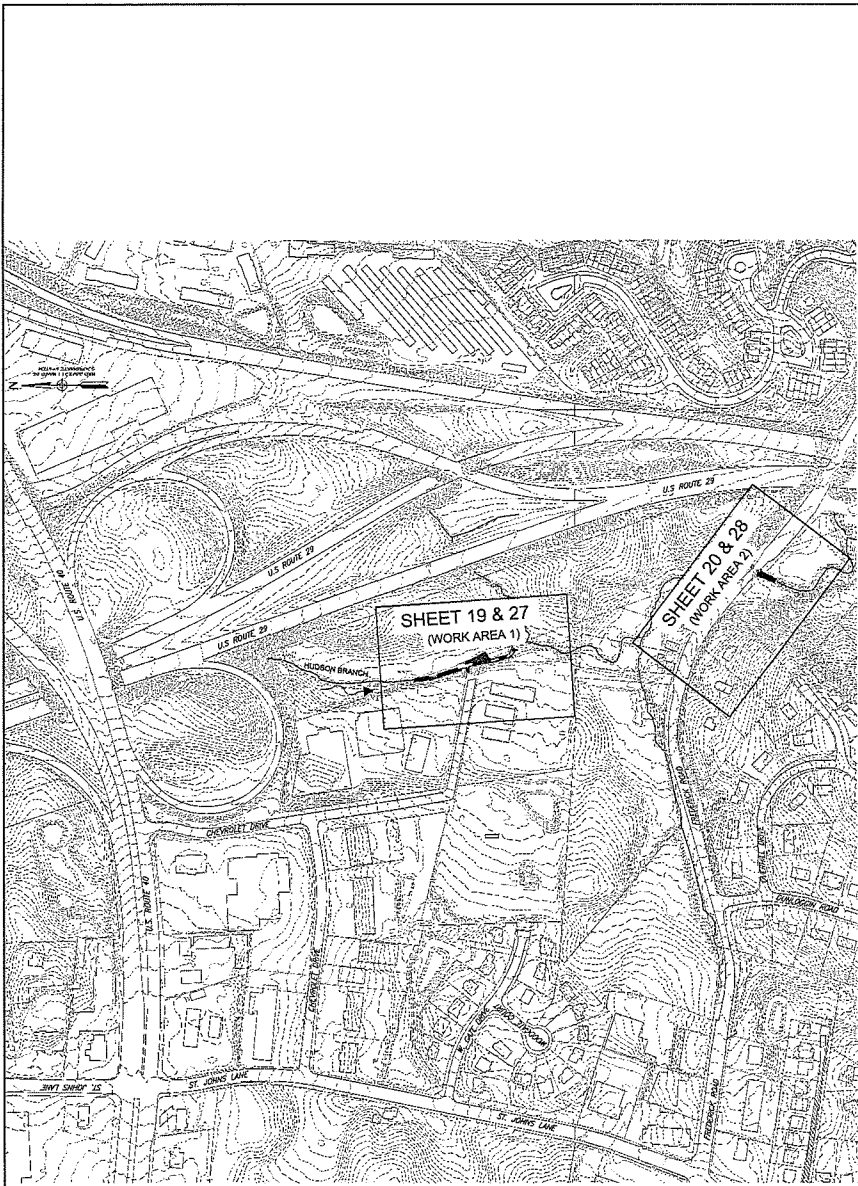
Exhibit A – Site Location Map

Exhibit B – Site Aerial Map

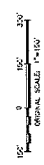
Exhibit C – Natural Resource Inventory Report

Exhibit D – Forest Conservation Worksheet

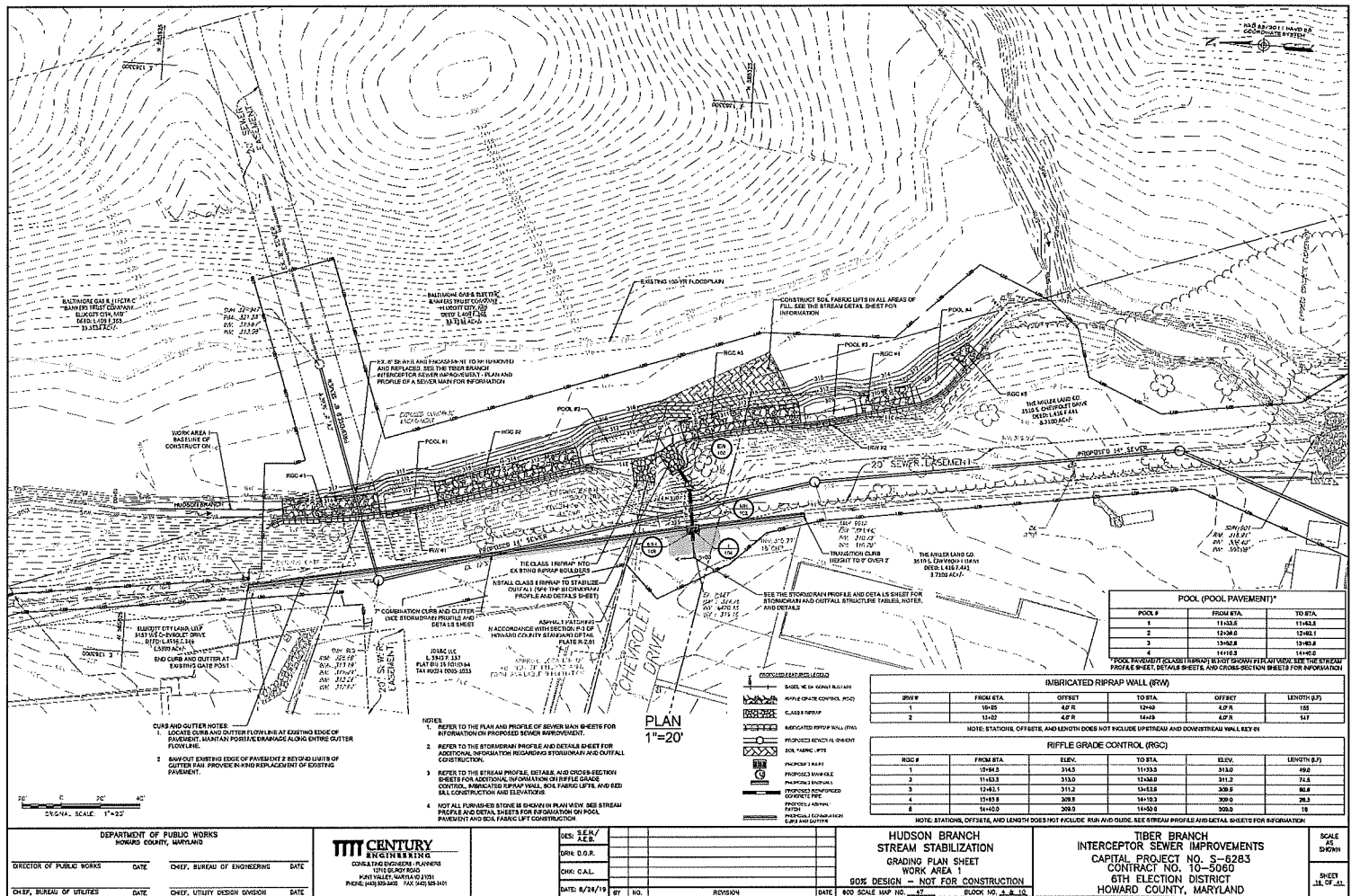
Exhibit E – Forest Stand Delineation/ Forest Conservation Plan



STREAM STABILIZATION OVERVIEW SHEET
1"=150'



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF ENGINEER _____ DATE _____		THIRD CENTURY INCORPORATING CONSULTING ENGINEERS AND ARCHITECTS 1000 WASHINGTON BLVD. FORT BELLEVILLE, MD 21038-1101 PHONE: 410/326-1100 FAX: 410/326-1101		URSOHN BRANCH STREAM STABILIZATION OVERVIEW SHEET DATE DESIGN - NOT FOR CONSTRUCTION DATE AS BUILT 12/15/04		TIBBS BRANCH INTERCEPTOR SEWER IMPROVEMENTS CAPITAL PROJECT NO. S-6283 CONTRACT NO. 10-5680 HOWARD COUNTY, MARYLAND		SHEET NO. 19 OF 21
---	--	---	--	---	--	---	--	-----------------------



POOL (POOL PAVEMENT)

POOL #	FROM STA.	TO STA.
1	11+45.8	11+46.8
2	13+36.5	13+40.1
3	13+42.8	13+43.8
4	13+46.2	13+46.2

SMOOTHED RIPRAP WALL (SRW)

WALL #	FROM STA.	OFFSET	TO STA.	OFFSET	LENGTH (LF)
1	10+85	4.0' R	10+88	4.0' R	105
2	11+07	4.0' R	11+08	4.0' R	147

RIFLE GRADE CONTROL (RGC)

RIFLE #	FROM STA.	ELEV.	TO STA.	ELEV.	LENGTH (LF)
1	10+85	314.5	11+03	314.0	495
2	11+03	313.0	11+08	311.2	74.8
3	11+03	311.2	11+08	308.8	86.8
4	11+03	308.8	11+03	308.8	28.2
5	11+03	308.8	11+03	308.8	18

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE
CHIEF, BUREAU OF ENGINEERING DATE
CHIEF, BUREAU OF UTILITIES DATE

TRITY CENTURY
ENGINEERS
CONSULTING ENGINEERS
10701 BELMONT AVENUE
NORTH WALKERSVILLE, MD
PHONE: (410) 853-5400 FAX: (410) 853-5401

DESIGNER: S.E.N./J.E.B.
DRAWN: D.D.R.
CHECKED: C.A.L.
DATE: 8/24/19

HUDSON BRANCH
STREAM STABILIZATION
GRADING PLAN SHEET
WORK AREA 1
80% DESIGN - NOT FOR CONSTRUCTION

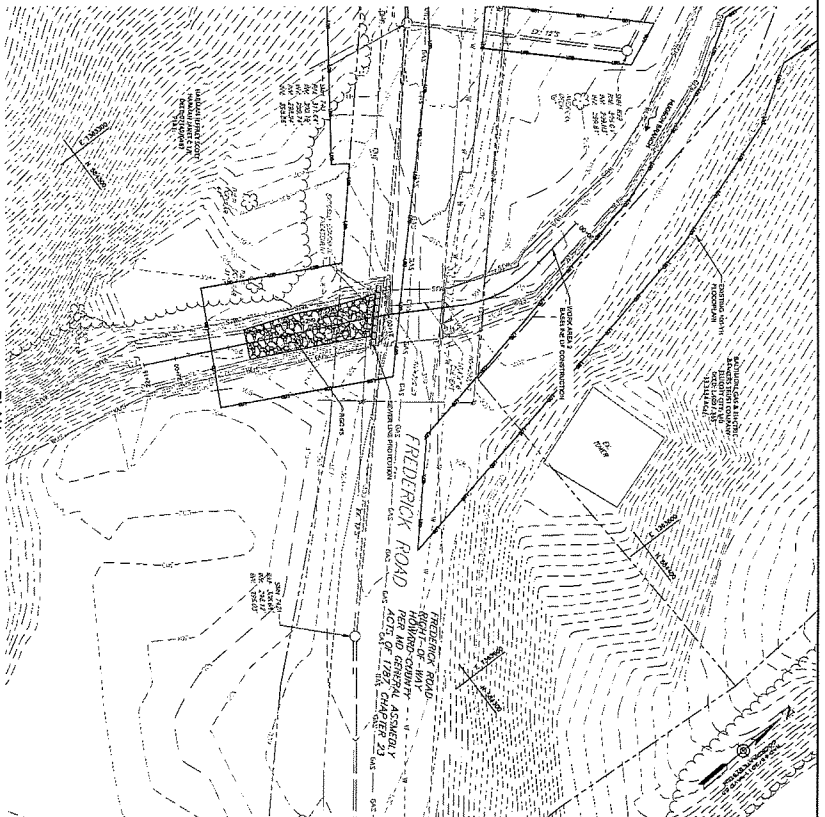
TIBER BRANCH
INTERCEPTOR SEWER IMPROVEMENTS
CAPITAL PROJECT NO. S-6283
CONTRACT NO. 10-5060
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
SHEET 11 OF 11

SEWER LINE PROTECTION	
PROVIDE	EXIST
1" DIA.	1" DIA.
2" DIA.	2" DIA.

RIFLE GRADE CONTROL, ROAD					
NO.	INVERT	OUTLET	INVERT	OUTLET	LENGTH
1	210.7	210.7	210.7	210.7	10.0
2	210.7	210.7	210.7	210.7	10.0

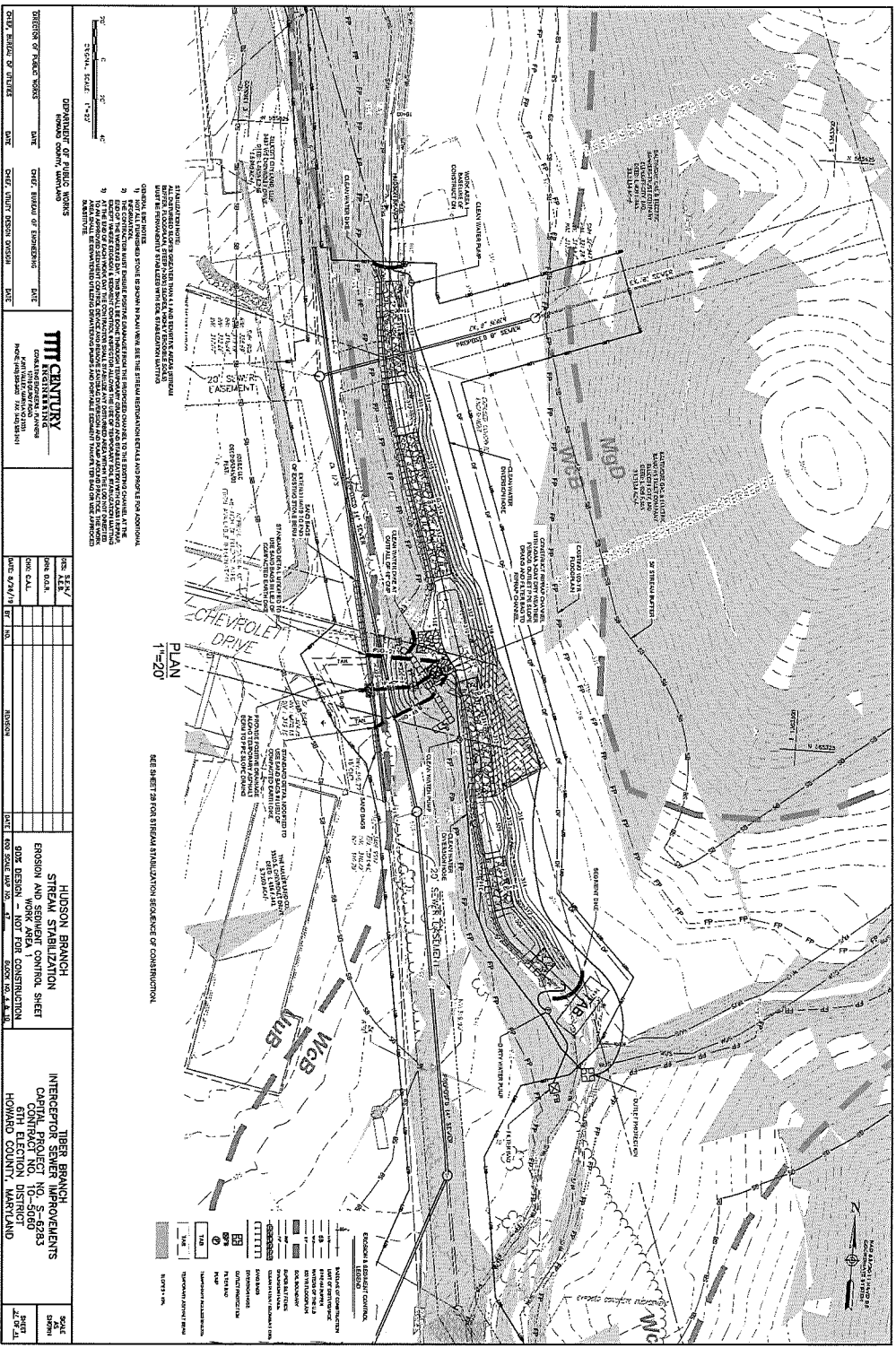
NOTE: EXISTING GRADE AND ELEVATION DATA FOR HOUSE FOUNDATIONS SEE EXISTING RECORD AND SURVEY BATTERIES INFORMATION.



PLAN
1"=20'

NOTES:
1. SEE THE PLAN AND PROFILE OF GROUND DATA SHEETS FOR INFORMATION OF PROPOSED SEWER IMPROVEMENTS.
2. CONTRACTOR TO VERIFY ALL EXISTING AND PROPOSED DIMENSIONS AND ELEVATIONS.

DEPARTMENT OF PUBLIC WORKS CHIEF ENGINEER DATE: _____		THIRTY CONSULTING ENGINEERS 1000 W. BROADWAY BALTIMORE, MD 21201 PHONE: (410) 528-1100 FAX: (410) 528-1101 WWW: WWW.THIRTYENGINEERS.COM		HOUSON BRANCH SEWER STABILIZATION GROUND DATA SHEET CONTRACT NO. 10-2060 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		SOIL SHEET NO. 10 OF 14	
CHIEF PROJECT ENGINEER DATE: _____	CHIEF DESIGNER DATE: _____	CHIEF ENGINEER DATE: _____	CHIEF DESIGNER DATE: _____	CHIEF ENGINEER DATE: _____	CHIEF DESIGNER DATE: _____	CHIEF ENGINEER DATE: _____	CHIEF DESIGNER DATE: _____



THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND STANDARD DRAWINGS FOR THE DESIGN AND CONSTRUCTION OF THE SEWERAGE SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND LANDSCAPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ROADS AND HIGHWAYS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND LANDSCAPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ROADS AND HIGHWAYS.

STANDARD SYMBOLS AND ABBREVIATIONS OF CONSTRUCTION

1. ALL DIMENSIONS SHALL BE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
6. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
7. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
8. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
9. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
10. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
11. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
12. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
13. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
14. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
15. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
16. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
17. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
18. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
19. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE SPECIFIED.
20. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.

- LEGEND**
- 1. 1" = 1" (1:1)
 - 2. 1" = 2" (1:2)
 - 3. 1" = 4" (1:4)
 - 4. 1" = 8" (1:8)
 - 5. 1" = 16" (1:16)
 - 6. 1" = 32" (1:32)
 - 7. 1" = 64" (1:64)
 - 8. 1" = 128" (1:128)
 - 9. 1" = 256" (1:256)
 - 10. 1" = 512" (1:512)
 - 11. 1" = 1024" (1:1024)
 - 12. 1" = 2048" (1:2048)
 - 13. 1" = 4096" (1:4096)
 - 14. 1" = 8192" (1:8192)
 - 15. 1" = 16384" (1:16384)
 - 16. 1" = 32768" (1:32768)
 - 17. 1" = 65536" (1:65536)
 - 18. 1" = 131072" (1:131072)
 - 19. 1" = 262144" (1:262144)
 - 20. 1" = 524288" (1:524288)
 - 21. 1" = 1048576" (1:1048576)
 - 22. 1" = 2097152" (1:2097152)
 - 23. 1" = 4194304" (1:4194304)
 - 24. 1" = 8388608" (1:8388608)
 - 25. 1" = 16777216" (1:16777216)
 - 26. 1" = 33554432" (1:33554432)
 - 27. 1" = 67108864" (1:67108864)
 - 28. 1" = 134217728" (1:134217728)
 - 29. 1" = 268435456" (1:268435456)
 - 30. 1" = 536870912" (1:536870912)
 - 31. 1" = 1073741824" (1:1073741824)
 - 32. 1" = 2147483648" (1:2147483648)
 - 33. 1" = 4294967296" (1:4294967296)
 - 34. 1" = 8589934592" (1:8589934592)
 - 35. 1" = 17179869184" (1:17179869184)
 - 36. 1" = 34359738368" (1:34359738368)
 - 37. 1" = 68719476736" (1:68719476736)
 - 38. 1" = 137438953472" (1:137438953472)
 - 39. 1" = 274877906944" (1:274877906944)
 - 40. 1" = 549755813888" (1:549755813888)
 - 41. 1" = 1099511627776" (1:1099511627776)
 - 42. 1" = 2199023255552" (1:2199023255552)
 - 43. 1" = 4398046511104" (1:4398046511104)
 - 44. 1" = 8796093022208" (1:8796093022208)
 - 45. 1" = 17592186044416" (1:17592186044416)
 - 46. 1" = 35184372088832" (1:35184372088832)
 - 47. 1" = 70368744177664" (1:70368744177664)
 - 48. 1" = 140737488355328" (1:140737488355328)
 - 49. 1" = 281474976710656" (1:281474976710656)
 - 50. 1" = 562949953421312" (1:562949953421312)
 - 51. 1" = 1125899906842624" (1:1125899906842624)
 - 52. 1" = 2251799813685248" (1:2251799813685248)
 - 53. 1" = 4503599627370496" (1:4503599627370496)
 - 54. 1" = 9007199254740992" (1:9007199254740992)
 - 55. 1" = 18014398509481984" (1:18014398509481984)
 - 56. 1" = 36028797018963968" (1:36028797018963968)
 - 57. 1" = 72057594037927936" (1:72057594037927936)
 - 58. 1" = 144115188075855872" (1:144115188075855872)
 - 59. 1" = 288230376151711744" (1:288230376151711744)
 - 60. 1" = 576460752303423488" (1:576460752303423488)
 - 61. 1" = 1152921504606846976" (1:1152921504606846976)
 - 62. 1" = 2305843009213693952" (1:2305843009213693952)
 - 63. 1" = 4611686018427387904" (1:4611686018427387904)
 - 64. 1" = 9223372036854775808" (1:9223372036854775808)
 - 65. 1" = 18446744073709551616" (1:18446744073709551616)
 - 66. 1" = 36893488147419103232" (1:36893488147419103232)
 - 67. 1" = 73786976294838206464" (1:73786976294838206464)
 - 68. 1" = 147573952589676412928" (1:147573952589676412928)
 - 69. 1" = 295147905179352825856" (1:295147905179352825856)
 - 70. 1" = 590295810358705651712" (1:590295810358705651712)
 - 71. 1" = 1180591620717411303424" (1:1180591620717411303424)
 - 72. 1" = 2361183241434822606848" (1:2361183241434822606848)
 - 73. 1" = 4722366482869645213696" (1:4722366482869645213696)
 - 74. 1" = 9444732965739290427392" (1:9444732965739290427392)
 - 75. 1" = 18889465931478580854784" (1:18889465931478580854784)
 - 76. 1" = 37778931862957161709568" (1:37778931862957161709568)
 - 77. 1" = 75557863725914323419136" (1:75557863725914323419136)
 - 78. 1" = 151115727451828646838272" (1:151115727451828646838272)
 - 79. 1" = 302231454903657293676544" (1:302231454903657293676544)
 - 80. 1" = 604462909807314587353088" (1:604462909807314587353088)
 - 81. 1" = 1208925819614629174706176" (1:1208925819614629174706176)
 - 82. 1" = 2417851639229258349412352" (1:2417851639229258349412352)
 - 83. 1" = 4835703278458516698824704" (1:4835703278458516698824704)
 - 84. 1" = 9671406556917033397649408" (1:9671406556917033397649408)
 - 85. 1" = 19342813113834066795298816" (1:19342813113834066795298816)
 - 86. 1" = 38685626227668133590597632" (1:38685626227668133590597632)
 - 87. 1" = 77371252455336267181195264" (1:77371252455336267181195264)
 - 88. 1" = 154742504910672534362390528" (1:154742504910672534362390528)
 - 89. 1" = 309485009821345068724781056" (1:309485009821345068724781056)
 - 90. 1" = 618970019642690137449562112" (1:618970019642690137449562112)
 - 91. 1" = 1237940039285380274899124224" (1:1237940039285380274899124224)
 - 92. 1" = 2475880078570760549798248448" (1:2475880078570760549798248448)
 - 93. 1" = 4951760157141521099596496896" (1:4951760157141521099596496896)
 - 94. 1" = 9903520314283042199192993792" (1:9903520314283042199192993792)
 - 95. 1" = 19807040628566084398385987584" (1:19807040628566084398385987584)
 - 96. 1" = 39614081257132168796771975168" (1:39614081257132168796771975168)
 - 97. 1" = 79228162514264337593543950336" (1:79228162514264337593543950336)
 - 98. 1" = 158456325028528675187087900672" (1:158456325028528675187087900672)
 - 99. 1" = 316912650057057350374175801344" (1:316912650057057350374175801344)
 - 100. 1" = 633825300114114700748351602688" (1:633825300114114700748351602688)
 - 101. 1" = 1267650600228229401496703205376" (1:1267650600228229401496703205376)
 - 102. 1" = 2535301200456458802993406410752" (1:2535301200456458802993406410752)
 - 103. 1" = 5070602400912917605986812821504" (1:5070602400912917605986812821504)
 - 104. 1" = 10141204801825835211973625643008" (1:10141204801825835211973625643008)
 - 105. 1" = 20282409603651670423947251286016" (1:20282409603651670423947251286016)
 - 106. 1" = 40564819207303340847894502572032" (1:40564819207303340847894502572032)
 - 107. 1" = 81129638414606681695789005144064" (1:81129638414606681695789005144064)
 - 108. 1" = 162259276829213363391578010288128" (1:162259276829213363391578010288128)
 - 109. 1" = 324518553658426726783156020576256" (1:324518553658426726783156020576256)
 - 110. 1" = 649037107316853453566312041152512" (1:649037107316853453566312041152512)
 - 111. 1" = 1298074214633706907132624082305024" (1:1298074214633706907132624082305024)
 - 112. 1" = 2596148429267413814265248164610048" (1:2596148429267413814265248164610048)
 - 113. 1" = 5192296858534827628530496329220096" (1:5192296858534827628530496329220096)
 - 114. 1" = 10384593717069655257060992658440192" (1:10384593717069655257060992658440192)
 - 115. 1" = 20769187434139310514121985316880384" (1:20769187434139310514121985316880384)
 - 116. 1" = 41538374868278621028243970633760768" (1:41538374868278621028243970633760768)
 - 117. 1" = 83076749736557242056487941267521536" (1:83076749736557242056487941267521536)
 - 118. 1" = 166153499473114484112975882535043072" (1:166153499473114484112975882535043072)
 - 119. 1" = 332306998946228968225951765070086144" (1:332306998946228968225951765070086144)
 - 120. 1" = 664613997892457936451903530140172288" (1:664613997892457936451903530140172288)
 - 121. 1" = 1329227995784915872903807060280344576" (1:1329227995784915872903807060280344576)
 - 122. 1" = 2658455991569831745807614120560689152" (1:2658455991569831745807614120560689152)
 - 123. 1" = 5316911983139663491615228241121378304" (1:5316911983139663491615228241121378304)
 - 124. 1" = 10633823966279326983230456482242756608" (1:10633823966279326983230456482242756608)
 - 125. 1" = 21267647932558653966460912964485513216" (1:21267647932558653966460912964485513216)
 - 126. 1" = 42535295865117307932921825928971026432" (1:42535295865117307932921825928971026432)
 - 127. 1" = 85070591730234615865843651857942052864" (1:85070591730234615865843651857942052864)
 - 128. 1" = 170141183460469231731687303715884105728" (1:170141183460469231731687303715884105728)
 - 129. 1" = 340282366920938463463374607431768211456" (1:340282366920938463463374607431768211456)
 - 130. 1" = 680564733841876926926749214863536422912" (1:680564733841876926926749214863536422912)
 - 131. 1" = 1361129467683753853853498429727072845824" (1:1361129467683753853853498429727072845824)
 - 132. 1" = 2722258935367507707706996859454145691648" (1:2722258935367507707706996859454145691648)
 - 133. 1" = 5444517870735015415413993718908291383296" (1:5444517870735015415413993718908291383296)
 - 134. 1" = 10889035741470030830827987437816582766592" (1:10889035741470030830827987437816582766592)
 - 135. 1" = 21778071482940061661655974875633165533184" (1:21778071482940061661655974875633165533184)
 - 136. 1" = 43556142965880123323311949751266331066368" (1:43556142965880123323311949751266331066368)
 - 137. 1" = 87112285931760246646623899502532662132736" (1:87112285931760246646623899502532662132736)
 - 138. 1" = 174224571863520493293247799005065244265472" (1:174224571863520493293247799005065244265472)
 - 139. 1" = 348449143727040986586495598010130488530944" (1:348449143727040986586495598010130488530944)
 - 140. 1" = 696898287454081973172991196020260977061888" (1:696898287454081973172991196020260977061888)
 - 141. 1" = 1393796574908163946345982392040521954123776" (1:1393796574908163946345982392040521954123776)
 - 142. 1" = 2787593149816327892691964784081043908247552" (1:2787593149816327892691964784081043908247552)
 - 143. 1" = 5575186299632655785383929568162087816495104" (1:5575186299632655785383929568162087816495104)
 - 144. 1" = 11150372599265311570767859136324173632990208" (1:11150372599265311570767859136324173632990208)
 - 145. 1" = 22300745198530623141535718272648347265980416" (1:22300745198530623141535718272648347265980416)
 - 146. 1" = 44601490397061246283071436545296694531960832" (1:44601490397061246283071436545296694531960832)
 - 147. 1" = 89202980794122492566142873090593389063921664" (1:89202980794122492566142873090593389063921664)
 - 148. 1" = 178405961588244985132285746181186778127843328" (1:178405961588244985132285746181186778127843328)
 - 149. 1" = 356811923176489970264571492362373562555686656" (1:356811923176489970264571492362373562555686656)
 - 150. 1" = 713623846352979940529142984724747125111373312" (1:713623846352979940529142984724747125111373312)
 - 151. 1" = 1427247692705959881058285969449494250222746624" (1:1427247692705959881058285969449494250222746624)
 - 152. 1" = 2854495385411919762116571938898988500445493248" (1:2854495385411919762116571938898988500445493248)
 - 153. 1" = 5708990770823839524233143877797977000890986496" (1:5708990770823839524233143877797977000890986496)
 - 154. 1" = 11417981541647679048466287755595954001781972992" (1:11417981541647679048466287755595954001781972992)
 - 155. 1" = 22835963083295358096932575511191908003563945984" (1:22835963083295358096932575511191908003563945984)
 - 156. 1" = 45671926166590716193865151022383816007127891968" (1:45671926166590716193865151022383816007127891968)
 - 157. 1" = 91343852333181432387730302044767632014255783936" (1:91343852333181432387730302044767632014255783936)
 - 158. 1" = 182687704666362864775460604089535264028511567872" (1:182687704666362864775460604089535264028511567872)
 - 159. 1" = 365375409332725729550921208179070528057023135744" (1:365375409332725729550921208179070528057023135744)
 - 160. 1" = 730750818665451459101842416358141056114046271488" (1:730750818665451459101842416358141056114046271488)
 - 161. 1" = 1461501637330902918203684832716282112228092542976" (1:1461501637330902918203684832716282112228092542976)
 - 162. 1" = 2923003274661805836407369665432564224456185085952" (1:2923003274661805836407369665432564224456185085952)
 - 163. 1" = 5846006549323611672814739330865128448912370171904" (1:5846006549323611672814739330865128448912370171904)
 - 164. 1" = 11692013098647223345629478661730256897824740343808" (1:11692013098647223345629478661730256897824740343808)
 - 165. 1" = 23384026197294446691258957323460513795649480687616" (1:23384026197294446691258957323460513795649480687616)
 - 166. 1" = 46768052394588893382517914646921027591298961375232" (1:46768052394588893382517914646921027591298961375232)
 - 167. 1" = 93536104789177786765035829293842055182597922750464" (1:935361047891777867650358292938420551

DORSEY'S RIDGE IS A UNIQUE COMMUNITY ENHANCEMENT PROJECT.

THE DORSY'S RIDGE COMMUNITY WAS APPROVED UNANIMOUSLY BY THE PLANNING BOARD AND ZONING BOARD IN OCTOBER OF 2016.I RELIED ON THE ZONING BOARD DECISION IN ORDER AND BORROWED APPROXIMATELY \$3,000,000 TO PURCHASE THE LAND.

I NEED TO GIVE YOU INSIGHT INTO THE ECONOMICS OF THE PROJECT, BECAUSE I LEARNED IN THE LAST FEW DAYS WHAT THE AFFECTS OF BILL 38 WILL BE.

IN ADDITION TO PURCHASING THE LAND, MY FAMILY AND I COMMITTED TO REBUILDING COOKS LANE, REBUILDING AND DONATING THE PUE FULTON HOUSE TO THE HOWARD COUNTY HISTORIC SOCIETY, AND BUILDING 2100 FEET OF SIDEWALKS AND PATHWAYS OFF SITE.

I EXECUTED AGREEMENTS WITH THE HISTORIC SOCIETY THAT I WILL DEFAULT ON. I HAVE AGREEMENTS WITH BGE FOR 1000 FEET OF EASEMENT FOR PATHWAYS THAT I CANNOT BUILD. I HAVE STARTED THE RENOVATIONS TO THE PUE FULTON HOUSE, THAT I CANNOT FINISH.

TOTAL COSTS	LAND	\$3,000,000
	ENHANCEMENTS.....	\$1,500,000
	HARD COSTS.....	\$2,200,000
	TOTAL COSTS.....	\$6,700,000

DORSEY'S RIDGE WAS ORIGINAL PROPOSED TO BE 92 HOMES. I WORKED WITH MY NEIGHBORS OVER A PERIOD OF MONTHS AND AGREED TO REDUCE IT TO 55.BILL 38 WILL REDUCE THE NUMBER OF HOMES FROM 55 TO 15 .

15 HOMES COULDN'T POSSIBLY BE SUPPORT THE OVERWHELMING COSTS.

THE BANK WILL FORCLOSE ON ME AND THE PROJECT WILL IMplode.

SEE MAP#1 SHOWING 40 OF THE 55 HOMES COVERTED TO OPEN SPACE

SEE TABLE #1 SHOWING THE TAKING OF 92 PERCENT OF THE PROPERTY



**TABLE #1
DORSEY'S RIDGE
SITE ANALYSIS**

<u>SITE DATA</u>	<u>CURRENT REGS.</u>	<u>BILL 38 REGS.</u>
SITE AREA	10.9 AC	10.9 AC
ROAD DEDICATION	1.61 AC (15%)	1.61 AC (15%)
OPEN SPACE	5.45 AC (50%)	8.47 AC (78%)
BUILDING AREA	3.84 AC (35%)	0.82 AC (7%)
DEDICATED LAND	7.06 (65%)	10.08 AC (92%)
PROPOSED HOMES	55	15*

***15 HOMES CANNOT SUPPORT THE LAND COSTS, CONSTRUCTION COSTS, COUNTY FEES , AND EHANCEMENT COSTS.**

**TABLE #2
DORSEY'S RIDGE
BILL 38 COMPARISON**

<u>GOALS ACHIEVED</u>	<u>CURRENT REGS.</u>	<u>BILL 38 REGS.*</u>
SITE AREA	10.9 ACRES	10.9 ACRES
MIHU'S	6	0
OPEN SPACE	5.45ACRES (50%)	0
FOREST CONSERVED	2.95 ACRES (27%)	0
FLOOD CONTROL	1000 YEAR SWM	0
ENHANCEMENTS	PUE FULTON HOUSE	NONE
	2000 FEET SIDEWALKS	NONE
	REBUILD COOKS LANE	NONE
OFF SITE SWM	KEYWADEN POND	NONE

IRONICALLY, BECAUSE I AM CEF SITE PLAN ZONING, I CANNOT BUILD ANYTHING OTHER THEN WHAT MY PLAN SHOWS, AT THE SAME TIME BILL 38 WILL NOT ALLOW ME TO BUILD WHAT MY PLAN REQUIRES. BILL 38 REQUIRES DEDICATION OF 92% OF MY LAND TO THE COUNTY, BUT BECAUSE OF MY ZONING , IT HAS THE AFFECT OF TAKING 100% OF MY LANDS VALUE.

AND WHAT IS ACHIEVED, MY PROPERTY WILL REMAIN AS IT IS, ACRES OF IMPERVIOUS SENDING RUNOFF TO MAIN STREET, FOREST NOT PROTECTED IN EASEMENTS, OPEN SPACE NOT GRANTED TO RECREATION AND PARKS, 1000 YEAR FLOOD CONTROLS NOT BUILT. BILL 38 WILL NOT CREATE ONE SQUARE FOOT OF OPEN SPACE, AND WILL NOT CAUSE ONE SQUARE FOOT OF FOREST TO BE PLANTED. IT WILL ELIMINATE THE POSSIBILITY OF BUILDING 1000 YEAR SWM BOTH ON SITE AND IT WILL MAKE OFF SITE POND IMPROVEMENTS IMPOSSIBLE, SO FLOODING WILL INCREASE.

SEE MAP #2 SHOWING EXISTING IMPERVIOUS WITHOUT SWM

SEE TABLE #2 ZERO BENEFITS ACHIEVED BY BILL38

THAT'S THE OTHER GREAT IRONY. I WENT OUT AND BOUGHT THE KEYWADEN OPEN SPACE LOT 37 BECAUSE IT HAD A SWM POND ON IT. LET ME REPEAT THAT. I SPENT MY OWN FAMILY'S MONEY TO BUY A PRIVATELY OWNED SWM POND THAT WAS UNDERSIZED. I WANTED TO SHOW THAT I COULD UPGRADE THE POND, AT MY EXPENSE, FOR ANOTHER COMMUNITY, AND PROVIDE FLOOD PROTECTION.MY GOAL WAS TO LEAD BY EXAMPLE, AS OPPOSED TO ENDLESS STUDIES. BILL 38 WILL NOT ALLOW WAIVERS TO UPGRADE PRIVATE PONDS, SO KEYWADIN WILL CONTINUE TO ADD TO THE FLOODING

THE PROBLEMS WITH BILL 38 ARE CLEAR.

BANKS WILL NOT FINANCE PROJECTS WHEN THE COUNTY TAKES 75% OF THE BUIDABLE LAND, IN ADDITION TO THE SENSITIVE LAND THAT THE SUBDIVISION REGULATIONS ALREADY PROTECT. **IN THE CASE OF DORSEY'S RIDGE, THE TOTAL TAKING IS 92 PERCENT.**

EVERY PROPERTY IN THE DRAINAGE AREA HAS THE SAME ISSUE. BILL 38 WILL NOT ACHIEVE ANY OF ITS STATED GOALS, IT WILL ELIMINATE ALL BUILDING, IT WILL ELIMINATE ANY POSSIBILITY TO BUILD 1000 YEAR FLOOD PROTECTION, AND IT WILL INCREASE FLOODING OF ELLICOTT CITY.

EVERYONE AGREES THAT SAFETY HAS TO BE OUR HIGHEST PRIORITY. WHEN IT COMES TO SAFETY, OTHER GOALS AND AMBITIONS SHOULD TAKE A BACK SEAT.

BILL 38 MAKES ELLICOTT CITY LESS SAFE.

WE HAVE WAITED YEARS FOR OUR CHANCE TO TAKE ACTION TO PROTECT ELLICOTT CITY.

WE HAVE DECIDED THAT THE MOST RIGOROUS STORM WATR MANAGEMENT REQUIREMENTS IN THE NATION ARE NEEDED.

LET US DO THE HEAVY LIFTING NEEDED TO IMPLIMENT THOSE RULES.

BILL 38 STOPS US IN OUR TRACKS.

IT MAKES NEW POND CONSTRUCTION IMPOSSIBLE , AND MAKES UPGRADES OF EXISTING PONDS IMPOSSIBE NY RESTRICTING WAIVERS.

ELICOTT CITY WILL FLOOD AGAIN, AND IF BILL 38 IS ADOPTED, WE WILL HAVE AGAIN, DONE NOTHING .

THANK YOU FOR LISTENING

DAVE WOESSNER

240-319-1735

Dwoessner2012@gmail.com

WHAT SHOULD BE DONE.

- 1. REQUIRE ALL NEW PROJECTS IN THE DRAINAGE AREA OF ELLICOTT CITY TO MANAGE THE 1000 YEAR STORM AS REQUIRED IN CR123**
- 2. IF A PROJECT CAN MANAGE THE 100 YEAR STORM BUT CANNOT MANAGE THE 1000 YEAR, REQUIRE THEM TO MAKE A CAPITAL CONTRIBUTION OF \$5000 PER HOME TO THE TIBER ONE REGIONAL FACILITY**
- 3. ALLOW WAIVERS TO BE GRANTED TO FACILITATE THE CONSTRUCTION OF SWM FACILITIES AND RELATED STRUCTURES , AND FOR THE CONNECTION TO EXISTING UTILITIES.**
- 4. IMPOSE \$10,000 FEE FOR EACH HEALTHY SPECIMEN TREE LOST FOR REASONS OTHER THAN NUMBER 3.**



Master Phasing Plan Troy Park At Elkrige, 6500 Mansion Lane, Elkrige, MD

Phase 1 (Completed in 2015)

- Entrance road and mass grading
- Two lighted synthetic turf multi-purpose fields located near Maryland Route 100
- Playground
- Parking
- Pathways

Phase 2 (Opening March 2018)

- One lighted synthetic turf multi-purpose field located at the northern area of the park
- Two combination comfort stations (restroom and storage) and pavilions
- One pavilion
- One comfort station building (restroom and storage)
- Parking
- Pathways
- Benches, sitting walls and bike racks
- Bio-retention areas for storm water management

Phase 2B

- Stadium field
- Restrooms
- Storage building

Phase 3

- Maintenance shop

Phase 4

- Lighted baseball field
- Parking
- Pathways

Phase 5

- Community center



Troy Park At Elkrige: Phasing Plan







Patapsco Lower North Branch Watershed



**Howard
County**

RECREATION & PARKS



-  County Open Space = 1,412.34 acres
-  Home Owners Association = 620.70 acres
-  Howard County Conservancy = 186.515 acres
-  Parks = 1,027.44 acres
-  State Owned Land = 3,687.00
-  North Lower Patapsco Watershed = 24,450 acres

Scale: 1" = 5,800'

