

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AIR SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING TOPOGRAPHIC INFORMATION FROM HOWARD COUNTY GIS, COUNTY RECORDS, AND A FIELD TOPOGRAPHICAL SURVEY WITH TWO FOOT CONTOUR INTERVALS PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JANUARY 2014. EXISTING UTILITIES WERE LOCATED FROM PREVIOUSLY APPROVED ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AIR SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS.
- COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM - NAD83(1991) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 301F AND 301C.
- THE PROPERTY LINES SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED JANUARY 2014.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- THE GEOTECHNICAL ENGINEER TO CONFORM BIDDING SECTION PRIOR TO CONSTRUCTION.
- ALL PAVING TO BE PER GEOTECHNICAL RECOMMENDATIONS.
- THE SUBJECT PROPERTY IS ZONED NT PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PUBLIC WATER AVAILABLE THROUGH CONTRACT #165-WAS PUBLIC SEWER AVAILABLE THROUGH CONTRACT #165-WAS AND #157-S.
- THERE ARE NO BURIAL CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- A FIELD INVESTIGATION BY MCCARTHY AND ASSOCIATES DATED AUGUST 2016 DETERMINED THAT THE PROPERTY DOES NOT CONTAIN ANY WETLANDS HOWEVER A PERENNIAL STREAM AND A PORTION OF THE 100 YEAR FLOODPLAIN EXTENDS INTO THE NT ZONING DISTRICT. APPROVAL OF NECESSARY DISTURBANCES FOR THE PROPOSED UTILITY CONNECTIONS WILL BE OBTAINED AT THE SITE DEVELOPMENT PLAN STAGE IN ACCORDANCE WITH SECTION 16.116(C) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- ANY EXISTING TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
- IN ACCORDANCE WITH SECTION 16.1202(B)(1)(G) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS THERE IS NO FOREST CONSERVATION REQUIREMENT FOR THIS PROJECT (ZONED NT).
- THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE LATEST EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, ALTERNATIVE COMPLIANCE APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- A KNOX BOX IS REQUIRED TO BE PROVIDED TO THE FRONT OF THE BUILDING IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. ITS LOCATION IS SHOWN ON THESE PLANS. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSSED (INTEGRATED WITH THE FIRE ALARM SYSTEM).
- LANDSCAPING NOT PERMITTED WITHIN 7'-1/2' OF EACH SIDE OF THE FIRE DEPARTMENT CONNECTION.
- LANDSCAPING SHALL BE PROVIDED TO THE FRONT OF THE BUILDING TO ALLOW EMERGENCY VEHICLE ACCESS. EITHER FIRE LANE SIGNAGE SHOULD BE INSTALLED, OR THE CURBS SHOULD BE PAINTED IN RED AND STENCILED TO IDENTIFY THE ROAD AS A FIRE LANE.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2'-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2'-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL EXTERIOR LIGHTING TO COMPLY WITH THE REQUIREMENTS FOUND IN ZONING SECTION 13.4.0 OF THE HOWARD COUNTY ZONING REGULATIONS.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- STORMWATER MANAGEMENT FOR THIS PROJECT IS BEING PROVIDED BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO-BIORETENTION FACILITIES AND MODULAR WETLAND SYSTEMS WITH 75% OF ESDV STORED AS PRE-TREATMENT TO ACCOMMODATE THE TOTAL ESDV VOLUME REQUIRED. SWM FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED.
- ALL ROOF LEADERS TO DRAIN INTO MODULAR WETLAND SYSTEM, BIORETENTION OR MICRO-BIORETENTION.
- TRASH AND RECYCLING CONTAINERS TO BE PRIVATELY OWNED AND MAINTAINED.
- THE PROPOSED BUILDING WILL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- SIQAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS, AND EACH SUITE SEPARATED BY LETTER.
- A SITE EVALUATION FOR THE PRESENCE OF WETLANDS WAS PERFORMED ON 7/28/16 AND WETLANDS REPORT WAS GENERATED BY MCCARTHY AND ASSOCIATES, INC. IN AUGUST 2016. IT WAS DETERMINED THAT NO WETLANDS EXIST WITHIN THE BOUNDARIES OF THIS SITE.
- REFERENCE ALTERNATIVE COMPLIANCE PETITION #16-154, APPROVED MARCH 15, 2017. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
  - APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION IS TO ESTABLISH THE USES FOR 9190 RED BRANCH ROAD, RE-STRIPES THE EXISTING PARKING LOT, AND PROVIDE 5' SIDEWALK AS INDICATED ON THE ALTERNATIVE COMPLIANCE PETITION. NO ADDITIONAL USES, NEW DEVELOPMENT, CONSTRUCTION, GRADING OR IMPROVEMENTS ARE PERMITTED UNDER THIS REQUEST.
  - APPROVAL OF THIS ALTERNATIVE COMPLIANCE PETITION DOES NOT AFFECT THE STATUS OF THE ACTIVE ZONING VIOLATION CASE #16-122 FOR THIS PROJECT.
  - COMPLIANCE WITH ALL APPLICABLE COUNTY AND STATE REGULATIONS AND OBTAIN ALL NECESSARY PERMITS FROM THE DEPARTMENT OF INSPECTIONS, LICENSES AND STANDARDS FOR THE PROPOSED DEVELOPMENT.
  - COMPLIANCE WITH AND OBTAIN APPROVAL FROM OAKLAND RIDGE INDUSTRIAL CENTER ARCHITECTURAL REVIEW COMMITTEE, IF APPLICABLE.
  - COMPLIANCE WITH FPD-03-A.
- REFERENCE ALTERNATIVE COMPLIANCE WP-14-037, DENIED DECEMBER 20, 2013. DENIAL WAS BASED ON THE FOLLOWING REASONS:
  - THE APPLICATION SUBMITTED DOES NOT CONTAIN SUFFICIENT JUSTIFICATIONS TO SUBSTANTIATE EXTRAORDINARY HARSH OR PRACTICAL DIFFICULTIES WITH PROVIDING A PROFESSIONALLY PREPARED SITE DEVELOPMENT PLAN.
  - THE APPLICATION AND JUSTIFICATION PROVIDED DOES NOT CONTAIN REASONING AS TO WHY THE WAIVER WOULD NOT BE DETRIMENTAL TO PUBLIC INTEREST.
  - THE WAIVER, IF APPROVED WOULD NULLIFY THE INTENT AND PURPOSE OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS STATED IN SECTION 16.101, WHICH IS TO ENSURE APPROPRIATE DEVELOPMENT WITH REGARD TO SITE'S NATURAL FEATURES, TO ASSIST IN THE ORDERLY AND EFFICIENT DEVELOPMENT OF LAND AND TO PROVIDE UNIFORM PROCEDURES AND STANDARDS FOR AREAS UNDER THIS PLAN AREA.
  - A REVISED WAIVER PETITION/CWMBT WAS NOT SUBMITTED PRIOR TO THE REQUESTED DEADLINE OF DECEMBER 12, 2013 (PER DPZ LETTER DATED OCT. 28, 2013 - SEE ATTACHED).
  - THE LIMIT OF DISTURBANCE WAS NOT ACCURATELY SHOWN ON THE PLAN EXHIBIT.
  - JUSTIFICATION WAS NOT PROVIDED EXPLAINING WHY THE DISTURBANCE WAS NECESSARY AND ANY FUTURE PLANS FOR THE SITE INCLUDING STABILIZATION AND RE-VEGETATION.

**SITE DATA**

LOCATION : 9190 RED BRANCH ROAD, COLUMBIA, MD. ;  
 TAX MAP 30, BLOCK 17, PARCEL 239, LOT 2  
 2ND ELECTION DISTRICT  
 PRESENT ZONING : NT  
 PARCEL AREA : 7.00 AC.  
 DPZ REFERENCES: L1207/F.376, WP-14-037, WP-16-154, WP-20-30,  
 WP-20-056, FDP-03-A, PB.12 / F. 24, CE-16-128,  
 SDP-19-034.

USE OF STRUCTURES:  
 BUILDING A: FLEX WAREHOUSE  
 BUILDING B: FLEX WAREHOUSE

BUILDING COVERAGE:  
 BUILDING A: 39,624 SF (0.9096 AC. OR 12.99%)  
 BUILDING B: 38,000 SF (0.8724 AC. OR 12.46%)

TOTAL BUILDING: 77,624 SF (1.782 OR 25.46% OF GROSS AREA)

PAVED DRIVEWAYS/PARKING LOT: 129,899 SF (2.9821 AC. OR 42.80% OF GROSS AREA)  
 AREA OF LANDSCAPE ISLAND: 8,228 SF (0.19 AC. OR 2.70% OF GROSS AREA)  
 LIMIT OF DISTURBED AREA: 295,383 SF / 6.78 AC.  
 WETLANDS ON SITE: 0.00 AC.  
 WETLAND BUFFERS ON SITE: 0.00 AC.  
 STREAMS AND THEIR BUFFERS ON SITE: 0.50 AC.  
 AREA ON-SITE 100 YEAR FLOODPLAIN: 0.03 AC.  
 AREA OF EXISTING FOREST ON SITE: 3.33 AC.  
 AREA OF MDE STEEP SLOPES (20% OR GREATER, NON-CONTIGUOUS): 0.08 AC.  
 AREA OF ERODIBLE SOILS: 0.00 AC.  
 AREA MANAGED BY ESDV (THIS PLAN): 6.74 AC.  
 EXISTING IMPERVIOUS AREA : 1.79 AC, 25.57% OF ENTIRE PARCEL  
 IMPERVIOUS AREA : 5.07 AC. (74.76%)  
 KOREAN ANGLE

**ENVIRONMENTAL SITE DESIGN NARRATIVE**

- THE PROPERTY DOES NOT CONTAIN ANY WETLANDS, HOWEVER THERE IS A PERENNIAL STREAM AND A PORTION OF THE 100 YEAR FLOODPLAIN IMPACTING THE NORTH EDGE OF THE PROPERTY. THERE DOES APPEAR TO BE SOME FOREST ON SITE, HOWEVER FOREST CONSERVATION IS NOT REQUIRED IN THE NT ZONING DISTRICT. IT SHOULD ALSO BE NOTED (BASED ON HISTORICAL RECORDS) THERE WAS PREVIOUS UN-PERMITTED DISTURBANCE TO THE STREAM AND STREAM BUFFER FOR EXTENSION OF A 36" PIPE AND NEW HEADWALL. THESE PREVIOUSLY DISTURBED ENVIRONMENTAL AREAS WILL BE RESTORED TO ORIGINAL CONDITION UNDER APPROVED SDP-19-034 PRIOR TO BEGINNING DEVELOPMENT WORK ON THIS PROJECT. ENVIRONMENTAL FEATURES WILL BE PROTECTED TO THE EXTENT POSSIBLE. THE ONLY DISTURBANCES PROPOSED WITHIN THE ENVIRONMENTAL AREAS UNDER THIS PLAN ARE NECESSARY DISTURBANCES FOR UTILITY CONNECTIONS. THE CONCEPT PLAN PROVIDES FOR THE SAFE DISCHARGE OF THE TREATED RUNOFF.
- THE SITE GENERALLY SLOPES FROM SOUTHWEST TO NORTHEAST. THE PROPOSED DEVELOPMENT WILL HAVE NO CHANGE IN THE EXISTING CHARACTER OF THE EXISTING NATURAL FLOW PATTERNS.
- THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE ESD CONCEPT PROPOSES THE USE OF 4 MICRO-BIORETENTION FACILITIES (M-6), 4 BMP BIORETENTION FACILITIES (F-6) AND TWELVE (12) MODULAR WETLAND SYSTEMS. THE MODULAR WETLAND SYSTEMS, BIORETENTION FACILITIES AND MBRS (M-6) WILL DISCHARGE INTO THE EXISTING STORM DRAIN SYSTEM. THE PROPOSED ESD PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF TWO SEDIMENT TRAPS AND PERIMETER CONTROLS (SILT FENCE, SUPER SILT FENCE FLOW PATTERNS, FENCE) AND INLET PROTECTION. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- AS STATED IN #3 ABOVE, STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF 4 MICRO-BIORETENTION FACILITIES (M-6), 4 BMP BIORETENTION FACILITIES (F-6) AND TWELVE (12) MODULAR WETLAND SYSTEMS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Robert H. Vogel* 10-7-20  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Robert H. Vogel* 8/14/2020  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

**NOTE:**

1. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE ANY APPROVALS OF ANY SUBSEQUENT SUBDIVISION PLANS, SITE DEVELOPMENT PLANS OR RED-LINE REVISIONS TO PREVIOUSLY APPROVED SDP PLANS, AND GRADING OR BUILDING PERMITS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE OR STRUCTURE LOCATION, GRADING, TREE CLEARING OR OTHER REQUIREMENTS AS THE DEVELOPMENT PROGRESSES THROUGH THE PLAN REVIEW AND/OR PERMIT APPLICATION PROCESS IN ACCORDANCE WITH THE SUBDIVISION, LAND DEVELOPMENT AND ZONING REGULATIONS.

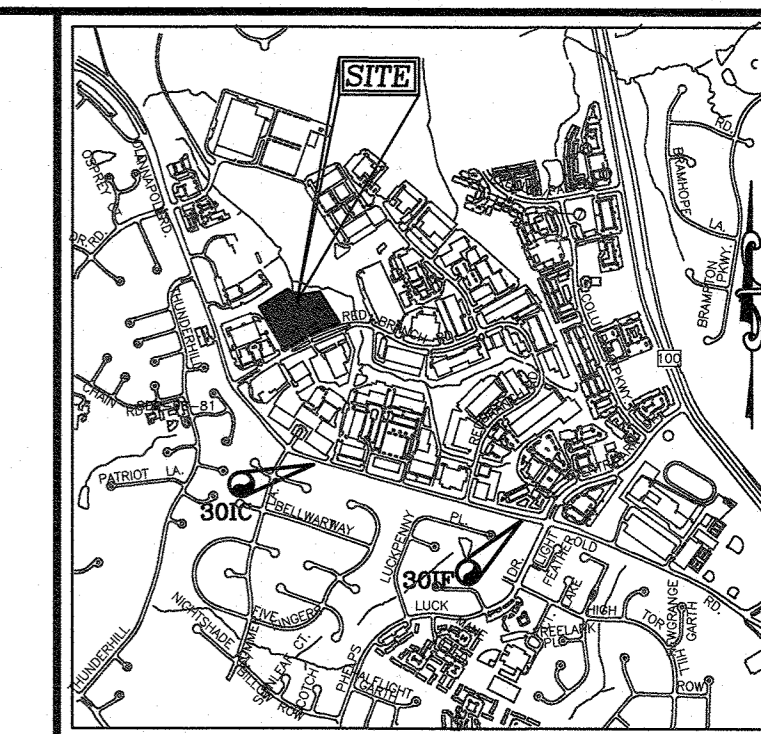
# ENVIRONMENTAL CONCEPT PLAN

## OAKLAND RIDGE INDUSTRIAL PARK

### SECTION 1, LOT 2

LOT 1 00.07  
 PARCEL 287  
 L5288 / F.00872  
 HONEYLAND 488, LLC  
 ZONING: NT - INDUSTRIAL  
 15.550 AC

**BENCHMARKS**  
 HOWARD COUNTY GEODETIC SURVEY CONTROL 301F  
 N 568,035.070 E 1,363,934.332 ELEV. 473.359  
 HOWARD COUNTY GEODETIC SURVEY CONTROL 301C  
 N 568,998.518 E 1,361,633.753 ELEV. 441.456



**VICINITY MAP**

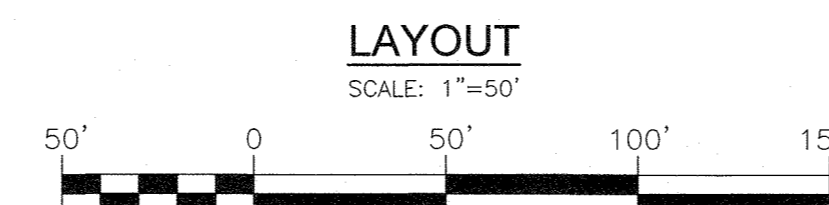
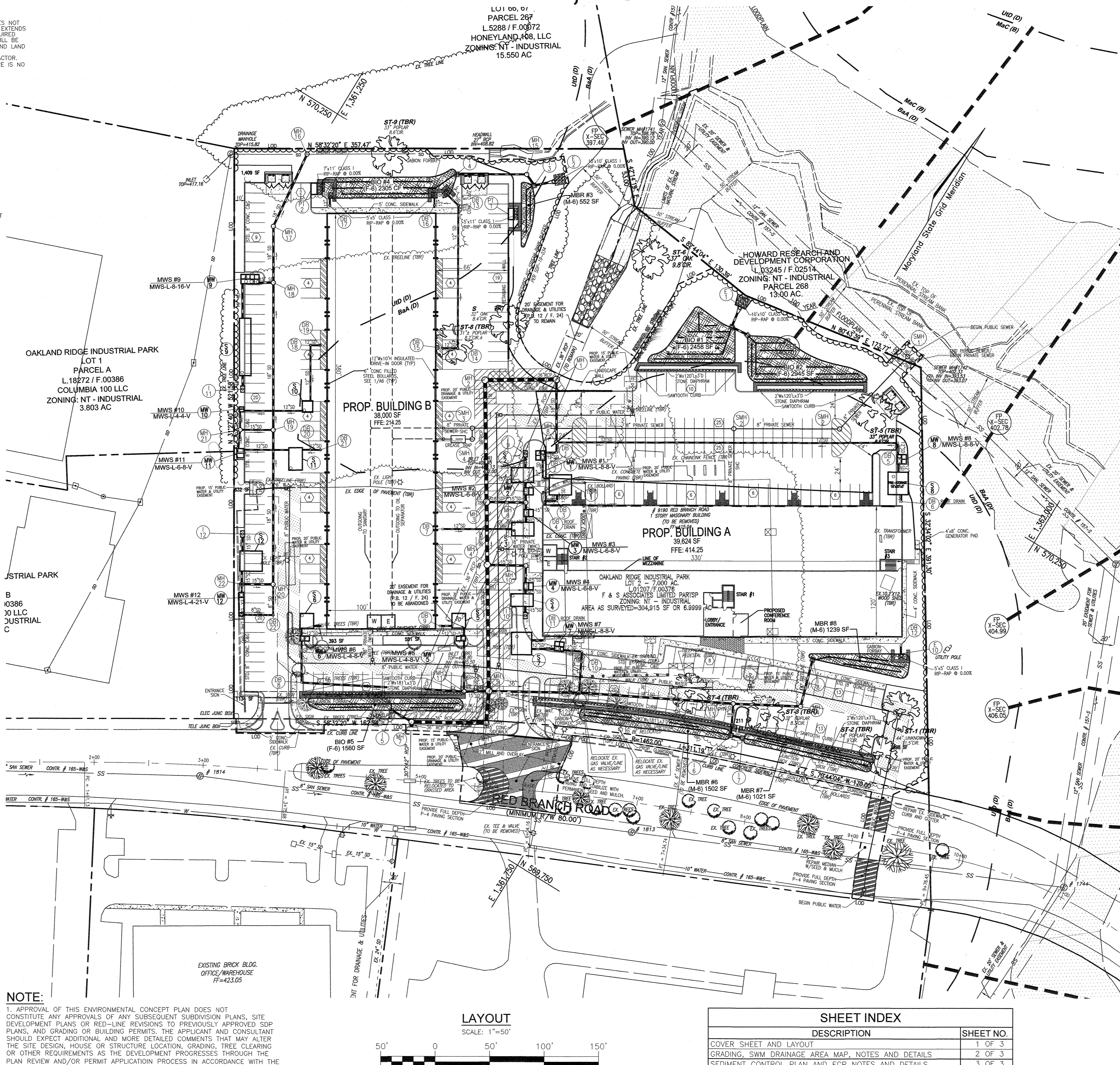
SCALE = 1"=200'  
 ADC MAP COORDINATE: 49.35/43

**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING CURB AND GUTTER
- PRE-2014 PIPE AND HEADWALL
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY LINE
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING FENCE
- EXISTING STREAM BANK
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- PROPOSED SIDEWALK
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN
- DRAIN INLETS
- PROP. MODULAR WETLAND SYSTEM
- PRE-2014 CL. STREAM CHANNEL
- PROPOSED BOLLARD
- PROPOSED CURB AND GUTTER
- 100 YEAR FLOODPLAIN
- MICRO-BIORETENTION
- 20' PUBLIC WATER AND UTILITY EASEMENT
- 20' PUBLIC DRAINAGE AND UTILITY EASEMENT
- 30' PUBLIC WATER, DRAINAGE AND UTILITY EASEMENT
- LIMIT OF DISTURBANCE
- PROPOSED GABION FORSY

**OWNER / DEVELOPER**

9190 LLC  
 C/O NICHOLS CONTRACTING, INC.  
 FRED NICHOLS, PRESIDENT  
 508 OLNEY SANDY SPRING ROAD  
 SUITE 200  
 SANDY SPRING, MARYLAND 20860  
 (301) 924-5258



SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET AND LAYOUT	1 OF 3
GRADING, SWM DRAINAGE AREA MAP, NOTES AND DETAILS	2 OF 3
SEDIMENT CONTROL PLAN AND ECP NOTES AND DETAILS	3 OF 3

NO.	REVISION	DATE

**ENVIRONMENTAL CONCEPT PLAN**  
**COVER SHEET AND LAYOUT**  
 OAKLAND RIDGE INDUSTRIAL PARK  
 SECTION 1, LOT 2  
 9190 RED BRANCH ROAD

TAX MAP 30 BLOCK 17  
 2ND ELECTION DISTRICT

LOT 2 / PARCEL 239  
 HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**TIMMONS GROUP**  
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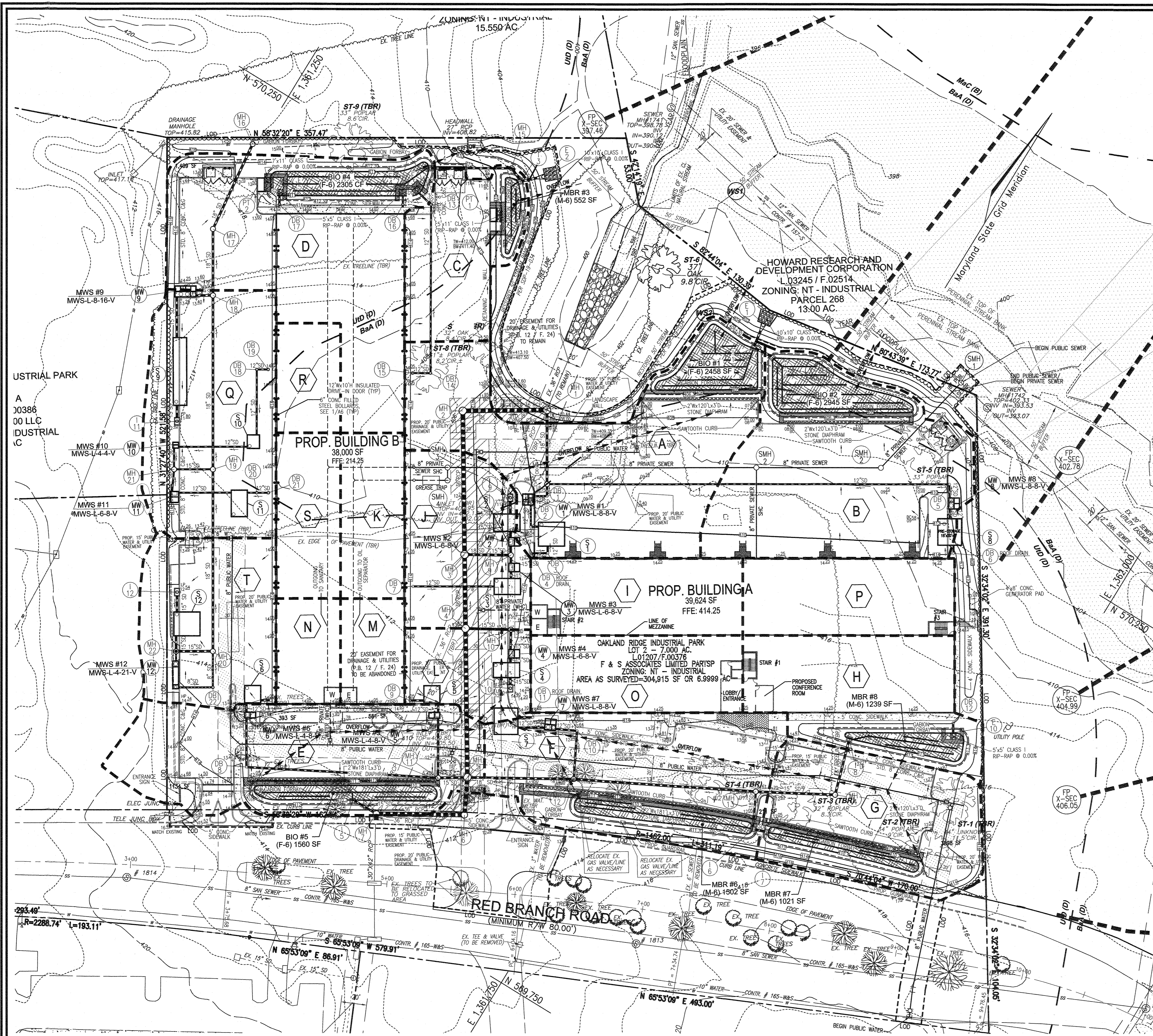
PROFESSIONAL CERTIFICATE

DESIGN BY: RHV/GAH  
 DRAWN BY: GAH  
 CHECKED BY: RHV  
 DATE: JULY 2020  
 SCALE: AS SHOWN  
 W.O. NO.: 13-07

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: 09-27-2020.

1 SHEET OF 3

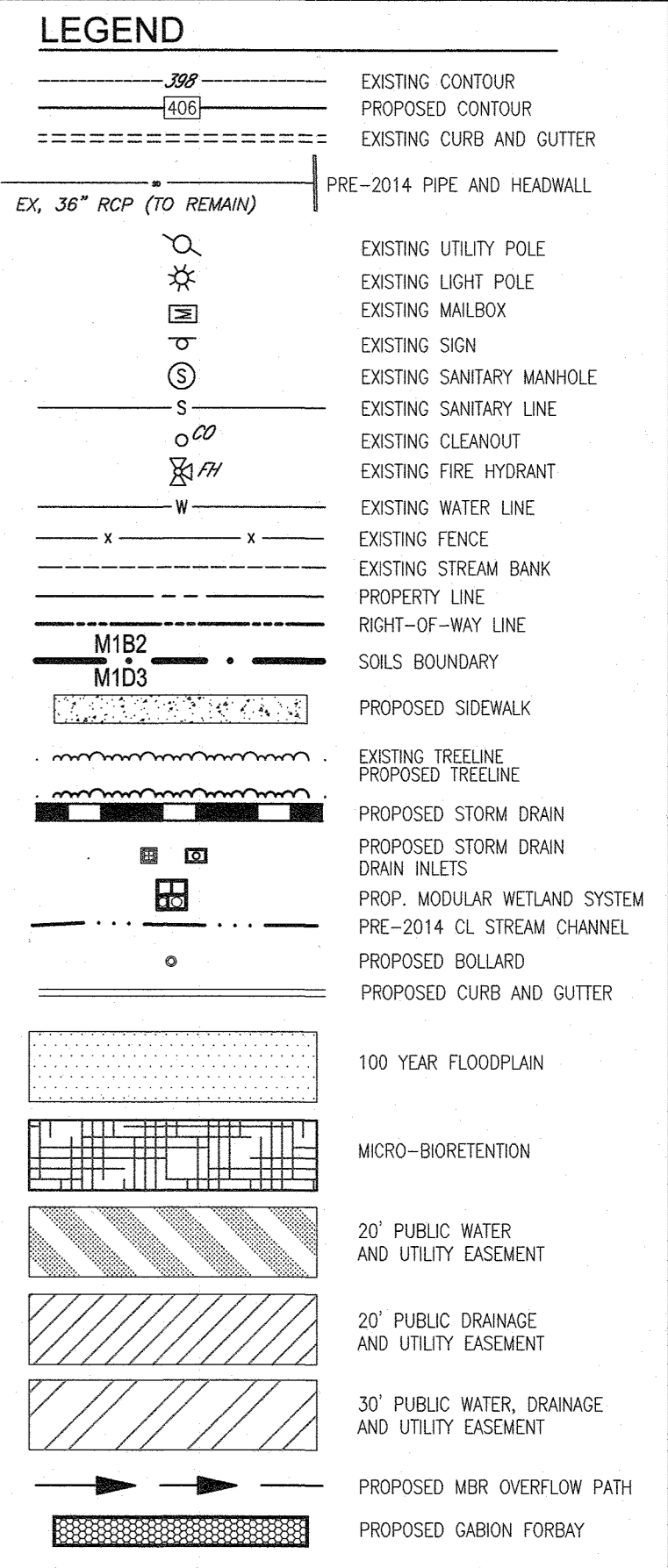




TOTAL ESDv REQUIRED:		31,810 c.f.	
<b>Modular Wetland Systems</b>			
Modular Wetland System #1	1411	c.f.	(F-6) Bio-retention #1: 3277
Modular Wetland System #2	965	c.f.	(F-6) Bio-retention #2: 3927
Modular Wetland System #3	915	c.f.	(M-6) Micro-Bio-retention #3: 736
Modular Wetland System #4	813	c.f.	(F-6) Bio-retention #4: 3073
Modular Wetland System #5	585	c.f.	(F-6) Bio-retention #5: 2080
Modular Wetland System #6	584	c.f.	(M-6) Micro-Bio-retention #6: 2003
Modular Wetland System #7	1411	c.f.	(M-6) Micro-Bio-retention #7: 1361
Modular Wetland System #8	1411	c.f.	(M-6) Micro-Bio-retention #8: 1652
Modular Wetland System #9	2719	c.f.	
Modular Wetland System #10	346	c.f.	
Modular Wetland System #11	916	c.f.	
Modular Wetland System #12	1928	c.f.	
<b>Filterra Total Provided</b>	<b>14,004</b>	<b>c.f.</b>	<b>Bio / Micro-bio-retention Total: 18,109</b>
		<b>TOTAL ESDv PROVIDED: 32,113 c.f.</b>	

DRAINAGE AREA #		FACILITY NUMBER		PERMEABLE PAVEMENT		ADD UNDER PERM. PAVE		ENVIRONMENTAL SITE DESIGN PRACTICE		Recharge		ESDv VOLUME	
A	29027	BIO #1	0	0	3277	0	0	0	0	0	819	3277	
B	25224	BIO #2	0	0	3927	0	0	0	0	0	982	3927	
C	10075	MWR #3	0	0	0	0	736	0	0	0	184	736	
D	26819	BIO #4	0	0	3073	0	0	0	0	0	768	3073	
E	27648	BIO #5	0	0	2080	0	0	0	0	0	520	2080	
F	20974	MWR #6	0	0	0	0	2003	0	0	0	501	2003	
G	16321	MWR #7	0	0	0	0	1361	0	0	0	340	1361	
H	15129	MWR #8	0	0	0	0	1652	0	0	0	413	1652	
I	9900	MWS #1	0	0	0	0	1411	0	0	0	353	1411	
J	7452	MWS #2	0	0	0	0	965	0	0	0	241	965	
K	6424	MWS #3	0	0	0	0	915	0	0	0	229	915	
L	5773	MWS #4	0	0	0	0	813	0	0	0	203	813	
M	4102	MWS #5	0	0	0	0	585	0	0	0	146	585	
N	4101	MWS #6	0	0	0	0	584	0	0	0	146	584	
O	9900	MWS #7	0	0	0	0	1411	0	0	0	353	1411	
P	9900	MWS #8	0	0	0	0	1411	0	0	0	353	1411	
Q	19083	MWS #9	0	0	0	0	2719	0	0	0	680	2719	
R	2429	MWS #10	0	0	0	0	346	0	0	0	87	346	
S	6429	MWS #11	0	0	0	0	916	0	0	0	229	916	
T	1928	MWS #12	0	0	0	0	1928	0	0	0	482	1928	
<b>SUBTOTAL 1</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>12357</b>	<b>14004</b>	<b>5752</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4880</b>	<b>19520</b>	
<b>TOTALS:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>12357</b>	<b>14004</b>	<b>5752</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4880</b>	<b>32113</b>	

DA	% IMPERV	Rv	DA	ESDv REQ	MINIMUM VOLUME	MAXIMUM VOLUME	VOLUME PROVIDED*	AREA SF	PERV AREA	IMP AREA
A	83.25	0.7993	0.67	3490	1933	5027	3277	29027	4862	24165
B	75.59	0.7303	0.58	2763	1535	3991	3927	25224	6158	19066
C	79.18	0.7626	0.23	1152	640	1665	736	10075	2098	7977
D	73.05	0.7074	0.62	2856	1586	4125	3073	26819	7253	19657
E	55.77	0.5519	0.52	1875	1042	2708	2080	22648	10018	12630
F	62.22	0.6100	0.48	1919	1066	2772	2003	20974	7923	13051
G	50.19	0.5017	0.37	1228	682	1774	1361	16321	8129	8192
H	70.60	0.6854	0.35	1555	864	2247	1652	15129	4448	10681
I	100.00	0.9500	0.23	1411	784	2038	1411	9900	0	9900
J	90.32	0.8629	0.17	965	536	1393	965	7452	721	6731
K	100.00	0.9500	0.15	915	509	1322	915	6424	0	6424
L	88.94	0.8504	0.15	813	452	1174	813	6373	705	5668
M	100.00	0.9500	0.09	585	325	844	585	4102	0	4102
N	100.00	0.9500	0.09	584	325	844	584	4101	0	4101
O	100.00	0.9500	0.23	1411	784	2038	1411	9900	0	9900
P	100.00	0.9500	0.23	1411	784	2038	1411	9900	0	9900
Q	75.19	0.7267	0.44	2080	1156	3005	2719	19083	4734	14349
R	100.00	0.9500	0.06	346	192	500	346	2429	0	2429
S	100.00	0.9500	0.15	916	509	1323	916	6429	0	6429
T	72.12	0.6990	0.31	1419	788	2049	1928	13531	3773	9758
<b>TOTAL ESDv BY SUBAREA</b>				<b>16491</b>	<b>42877</b>	<b>32113</b>	<b>265932</b>	<b>60822</b>	<b>205110</b>	



**OWNER / DEVELOPER**  
 9190 LLC  
 C/O NICHOLS CONTRACTING, INC.  
 FRED NICHOLS, PRESIDENT  
 508 OLNEY SANDY SPRING ROAD  
 SUITE 200  
 SANDY SPRING, MARYLAND 20860  
 (301) 924-5258

**SWM DRAINAGE AREA MAP**  
 SCALE: 1" = 40'

SYMBOL		NAME / DESCRIPTION		GROUP	HYDRIC	HYDRIC INCLUSIONS	PRIME FARMLAND	Kw	CLIFF SLOPE
BWA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	D	YES	NO	NO	NO	NO	4.9	NO
LHD	URBAN LAND-URBANS COMPLEX, 0 TO 15 PERCENT SLOPE	D	NO	NO	NO	NO	NO	NO	NO

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

**SPECIMEN TREE CHART**

NO.	SIZE	TYPE	REMARKS
ST-1	44"	UNKNOWN	TO BE REMOVED
ST-2	34"	POPLAR	TO BE REMOVED
ST-3	32"	POPLAR	TO BE REMOVED
ST-4	31"	POPLAR (DYING)	TO BE REMOVED
ST-5	33"	POPLAR	TO BE REMOVED
ST-6	37"	OAK	TO REMAIN
ST-7	32"	OAK	TO BE REMOVED
ST-8	31"	POPLAR	TO BE REMOVED
ST-9	33"	POPLAR	TO REMAIN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 10-7-20  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 10/7/20

ENVIRONMENTAL CONCEPT PLAN  
 GRADING, SWM DRAINAGE AREA MAP,  
 NOTES AND DETAILS

OAKLAND RIDGE INDUSTRIAL PARK  
 SECTION 1, LOT 2  
 9190 RED BRANCH ROAD

TAX MAP 30 BLOCK 17  
 2ND ELECTION DISTRICT

ZONED: NT  
 HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**  
 TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

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. 11819 EXPIRATION DATE: 08-27-2020

DESIGN BY: RHW/GAH  
 DRAWN BY: GAH  
 CHECKED BY: RHW  
 DATE: JULY 2020  
 SCALE: AS SHOWN  
 W.O. NO.: 13-07

2 SHEET OF 3



