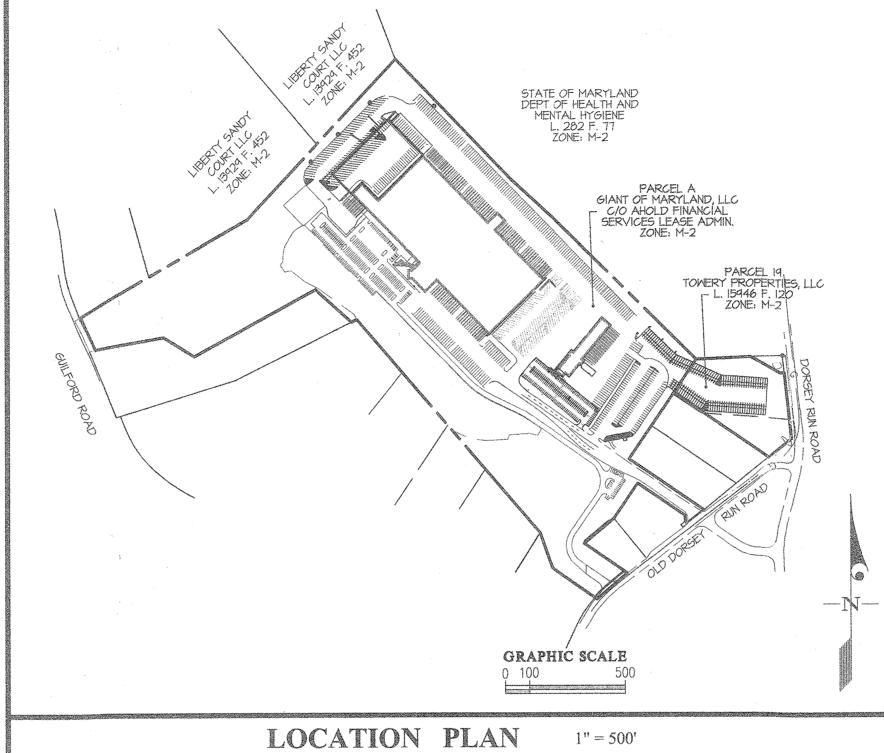
SITE DEVELOPMENT PLAN

GIANT DISTRIBUTION CENTER

Trailer Storage Surface Parking Addition

Exeter Industrial Park

Parcel A & Parcel 19 ASBUILT



SITE ANALYSIS DATA

- ZONING: M-2
- 2. GROSS AREA OF PARCEL 19 = 199,287 SF = 4.58 AC. PART OF PARCEL A = 67,953 SF = 1.56 AC
- 3. LIMIT OF DISTURBED AREA = 4.6 AC. (LIMIT OF PLAN SUBMISSION)
- 4. PROPOSED USE: TRACTOR TRAILER STORAGE
- 5. BUILDING COVERAGE (% OF GROSS SITE AREA): N/A
- 6. PARKING CALCULATIONS: N/A

VICINITY MAP

SCALE: 1'' = 2,000'ADC MAP 5054 GRID C9

HC CONTROL STATIONS

NORTHING: 536,575.672 ELEVATION: 238.887

(LATEST ADJ. FEB. 2014)

NORTHING: 534,290.456 EASTING: 1,371,119.513 ELEVATION: 209.058 (LATEST ADJ. FEB. 2014)

48DC

ASBUILT PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 17285, EXPIRATION DATE: MARCH 17, 2021.

BUILDING ADDRESS:

MARYLAND REG. NO. 17285

•				***
SUBDIVISION NAME: EXETER INDUSTRIAL PARK		SECTION/AREA:		PARCEL:
DEED REFERENCE: L. 15946 F. 120 (PARCEL 19) L. 6378 F. 250 (PARCEL A)	ZONE: M-2	TAX MAP: BLOCK:	ELECTION DIST.:	CENSUS TRACT: 6069.01
WATER & SEWER WATERSHEI LITTLE PATUXENT RIVER	D:	97		
		SCALE	ZONING	G. L. W. FILE No.
		AS SHOWN	M-2	12060
		DATE AUG., 2020	TAX MAP — GRID	ASBUILT SHEET SHEET I OF 4
HUMYDD CUINTA M	ADVI AND	JAN., 2020	48-8	1 0F 13

ADDRESS and PERMIT INFORMATION CHART

8580 OLD DORSEY RUN ROAD JESSUP, MD 20194 (PARCEL A)

SITE INDEX

- EXISTING CONDITIONS PLAN SITE DEVELOPMENT PLAN SITE PLAN DETAILS
- STORM DRAIN PROFILES STORMWATER MANAGEMENT PLAN STORMWATER MANAGEMENT DETAILS SEDIMENT CONTROL PLAN

- COVER SHEET
- FOREST CONSERVATION AND LANDSCAPE PLAN FOREST CONSERVATION AND LANDSCAPE DETAILS STORM DRAIN - DRAINAGE AREA MAP
- O IO STORMWATER MANAGEMENT PLAN SEDIMENT CONTROL - NOTES AND DETAILS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

APPROVAL, AND THE CONDITIONS OF APPROVAL.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF

WORKING DAYS PRIOR TO THE START OF WORK.

PRIOR TO ANY EXCAVATION WORK BEING DONE.

RECORDING REFERENCE: L. 15946 F. 120

6. PROPOSED USE: TRACTOR TRAILER STORAGE

DESIGN PLANS FOR CONSTRUCTION.

12. WATER AND SEWER SERVICE IS PUBLIC.

LOCATION:

ELECTION DISTRICT:

PARCEL AREA:

ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5)

4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT I-800-257-TTT7 AT LEAST 48 HOURS

TAX MAP #48, GRID 8

7. ALL PLAN DIMENSIONS ARE TO FACE OF BUILDING AND/OR FACE OF CURB UNLESS OTHERWISE

NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIALLY BETWEEN ITEMS UNLESS

EXISTING TOPOGRAPHY IS SHOWN PER FIELD RUN SURVEY PERFORMED BY GUTSCHICK, LITTLE & WEBER, P.A. IN FEBRUARY 2019 AND UPDATED IN JULY 2019 AS WELL AS GRADES TAKEN FROM

9. COORDINATES AND BEARINGS ARE BASED UPON THE '83 MD STATE COORDINATE SYSTEM (NAD

15. STORMWATER MANAGEMENT FOR QUALITY AND QUANTITY CONTROL IS BEING PROVIDED IN THE

16. EXISTING UTILITIES ARE BASED ON APPROVED DESIGN PLANS FOR CONSTRUCTION AND FIELD

17. THERE ARE NO KNOWN CEMETERIES, GRAVE SITES OR HISTORIC STRUCTURES LOCATED ON THE

(19-NT-3226/201961529) WHICH HAS BEEN ISSUED BY M.D.E. TO PERMIT DISTURBANCE IN THE

BOTH OF THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.

18. THERE ARE NO SCENIC ROADS WITHIN OR ADJACENT TO THE SUBJECT PROPERTY.

20. THERE ARE NON-TIDAL WETLANDS ON THE SITE. THERE IS AN AUTHORIZATION LETTER,

22. BUILDING SETBACKS AND BUILDING RESTRICTIONS ARE PER THE HOWARD COUNTY ZONING

23. BECAUSE THIS PLAN SUBMISSION IS NON-RESIDENTIAL, A NOISE STUDY IS NOT REQUIRED.

24. THIS PLAN IS PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 34 SHADE TREES, AND 13 EVERGREEN TREES. A ANDSCAPE SURETY IN THE AMOUNT OF \$12,150,00 WILL BE POSTED AS PART OF THE DPW

25. ALL EXTERIOR LIGHT FIXTURES SHALL BE FULLY OR PARTIALLY SHIELDED TO DIRECT LIGHT

26. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAM(S), OR THEIR REQUIRED

BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, OTHER THAN THE

GRADING WITHIN THE EXISTING WETLANDS ALLOWED PER THE ALTERNATIVE COMPLIANCE

27. THIS SITE IS SUBJECT TO HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS PER SECTION

16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. AN ADDITIONAL

28. A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON JULY 15, 2019 FOR THE PURPOSE OF THE

DEVELOPER AND THEIR CONSULTANTS TO PRESENT THIS DEVELOPMENT PROPOSAL TO THE

29. FUTURE IMPROVEMENTS ALONG DORSEY RUN ROAD ARE SHOWN PER DPW CAPITAL PROJECT J-4110 PHASE 2. THE PROJECT MANAGER FOR THIS CAPITAL PROJECT IS TOM WILKINS (410)-313-6145. THERE ARE NO IMPROVEMENTS WITHIN THE R/W OF DORSEY RUN ROAD

30. A TRAFFIC STUDY FOR THE GIANT DISTRIBUTION CENTER WAS COMPLETED BY THE TRAFFIC

31. AN ALTERNATIVE COMPLIANCE OF SECTION 16.116(a)(1), WP20-052, FOR THE DISTURBANCE WITHIN

THE WETLANDS WAS APPROVED ON DECEMBER 19, 2019 AND HAS THE FOLLOWING CONDITIONS:

I. COMPLIANCE WITH SRC COMMENTS FOR SDP-20-019 FOR THE PROPOSED SITE

3. PROVIDE A NOTE ON THE SDP-20-019 AND THE FINAL PLAT REGARDING THIS ALTERNATIVE COMPLIANCE PETITION APPROVAL. THIS NOTE SHALL INCLUDE THE REGULATION SECTION REQUESTED, THE DATE OF THE ALTERNATIVE COMPLIANCE

DEVELOPMENT OF THE STORAGE AREA AND ASSOCIATED PROPOSED IMPROVEMENTS.

2. THE REQUIRED MDE PERMITS FOR WETLAND DISTURBANCE MUST BE GRANTED PRIOR TO THE SIGNATURE APPROVAL OF SDP-20-019 AND NOTE REGARDING THESE PERMITS

FOREST PLANTING OBLIGATION OF I.22 ACRES IS REQUIRED FOR PARCEL A. THAT OBLIGATION

NUMBER, MP-20-052, AND THE FOREST CONSERVATION EASEMENT BEING ABANDONED PER PLAT

INMARDS AND DOWNWARDS AWAY FROM ALL ADJOINING RESIDENTIAL USE AREAS AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

REGULATIONS, SECTION 123: M-2 (MANUFACTURING - HEAVY) DISTRICT.

WILL BE SATISFIED AT AN OFFSITE BANK, CATTAIL CEEK 309-14-31.

COMMUNITY AND TO ANSWER QUESTIONS.

MUST BE INCLUDED ON THE SDP.

PROPOSED ON THESE PLANS.

GROUP DATED JULY 29, 2019.

10. PROPERTY IS ZONED M-2 PER THE 10/06/13 COMPREHENSIVE ZONING PLAN.

PREVIOUS DEPARTMENT OF PLANNING & ZONING FILE NUMBERS SDP 03-44, ECP 20-10, F-03-040, WP-20-052, F. 20-049

13. EXISTING WATER AND SEWER IS PER CONTRACT #20-3236-D.

14. ALL EXISTING PUBLIC STORM DRAIN IS PER SDP 03-44.

MICRO BIO-RETENTION FACILITY SUBMERGED GRAVEL WETLAND

LOCATION BY GUTSCHICK, LITTLE & WEBER, P.A.

21. THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.

19. THERE ARE NO FLOODPLAINS ON THIS SITE.

DEVELOPER AGREEMENT.

'83) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 48D8 AND 48DC.

M-2 (PER THE 10-06-2013 COMPREHENSIVE ZONING PLAN)

3. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 313-4900 AT LEAST FIVE (5) DAYS PRIOR TO STARTING ANY EXCAVATION

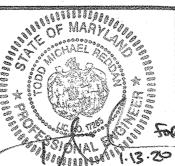
3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186

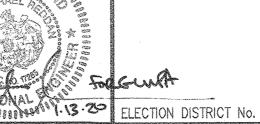
DEV DRAWN BY: DEV CHECKED BY REVISION

OWNER/DEVELOPER: GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR QUINCY, MA 02169 ATTN: REDAS ZAKALSKIS

TEL: 617-792-7880

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 17285 EXPIRATION DATE: MARCH 17, 2021



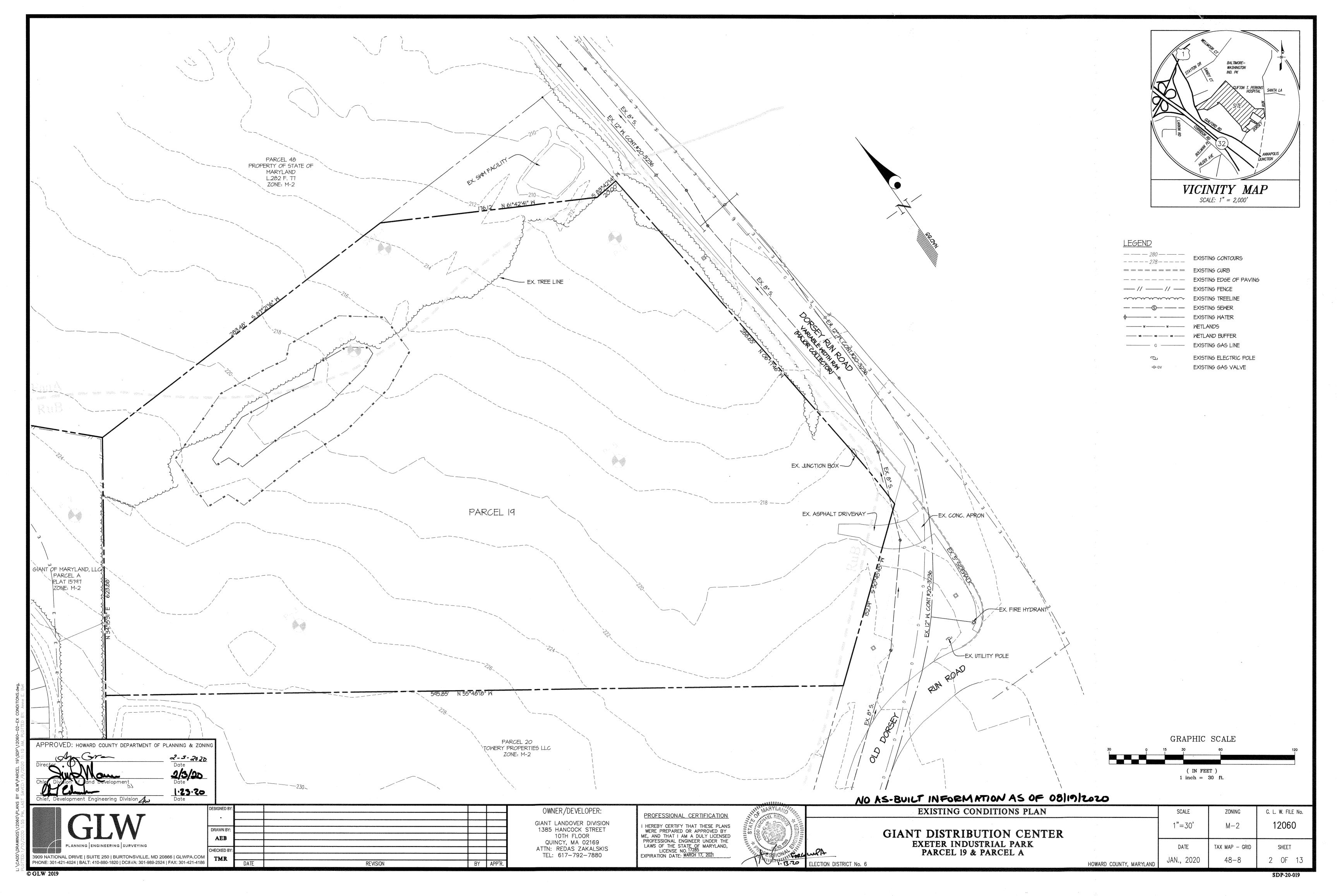


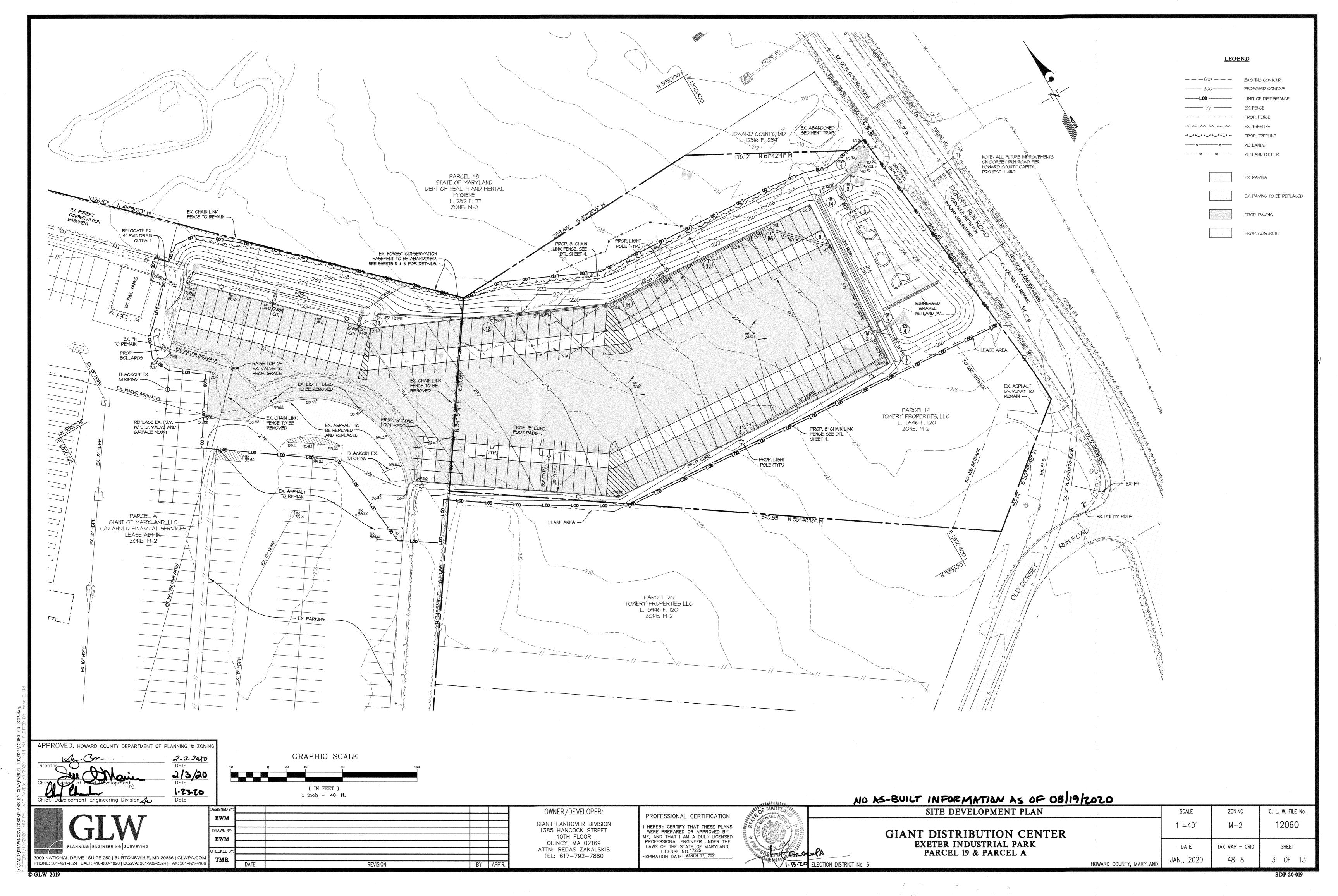
GIANT DISTRIBUTION CENTER EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A

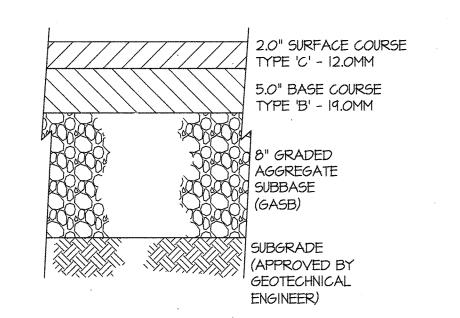
ASBUILT COVER SHEET

HOWARD COUNTY, MARYLAND !

ASBUILT SDP-20-019



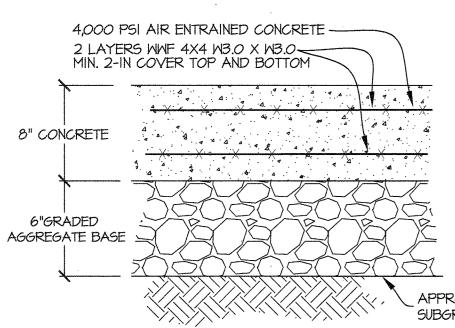




ASPHALT PAVING SECTION

SCALE: N.T.S.

NOTE: PAVING SECTION PER ECS GEOTECHNICAL REPORT DATED APRIL 16, 2019. REFER TO GEOTECHINCAL REPORT FOR PAVING CONDITIONS AND ASSUMPTIONS



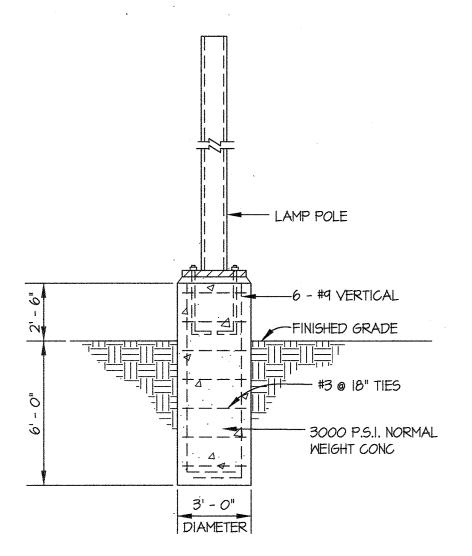
SUBGRADE CONCRETE SECTION FOR FOOTPAD PAVEMENT

NOTE: PROVIDE EXPANSION JOINT EVERY 30 FT.

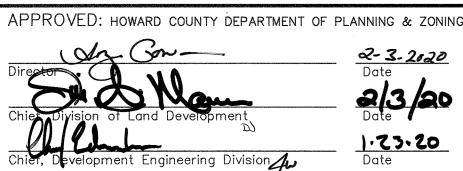
CONTROL JOINT EVERY 5 FT

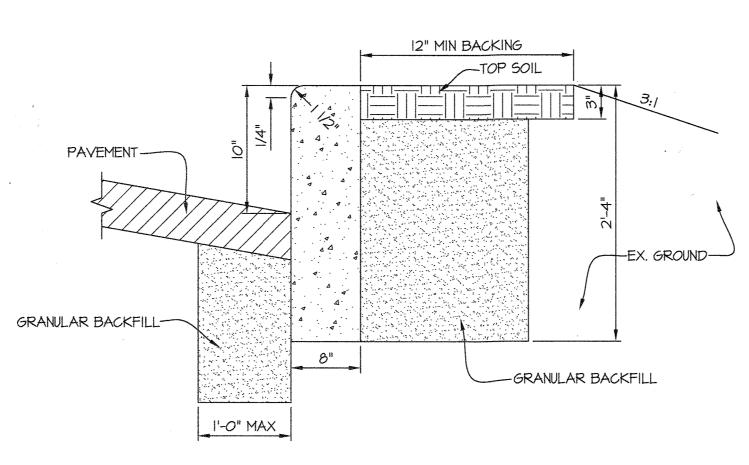
IN CONCRETE FOOTPAD

NOTE: REFER TO GEOTECHINCAL REPORT REFERENCED ABOVE FOR PAVING CONDITIONS AND ASSUMPTIONS.

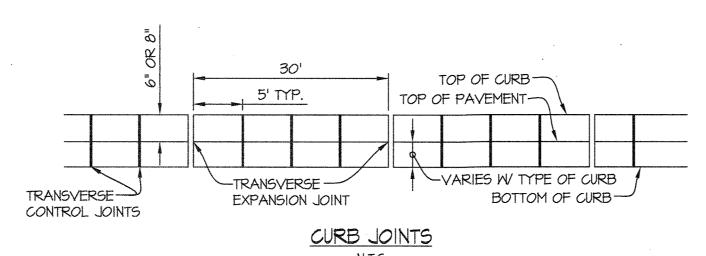


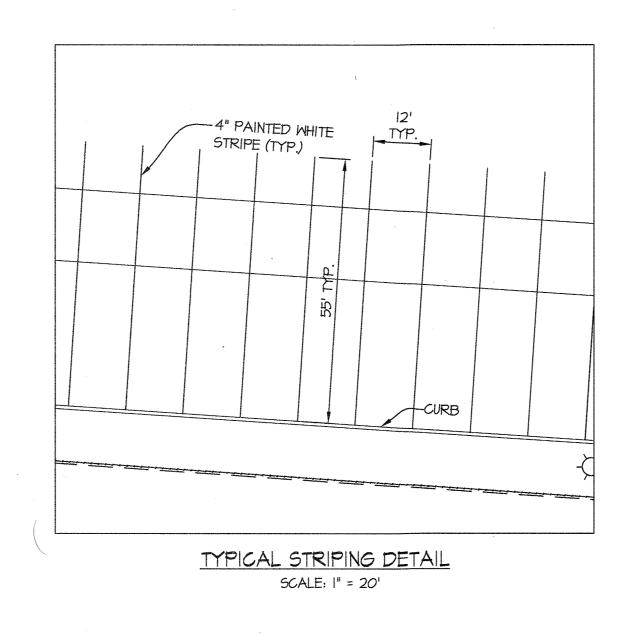
LAMP POLE BASE DETAIL N.T.S.

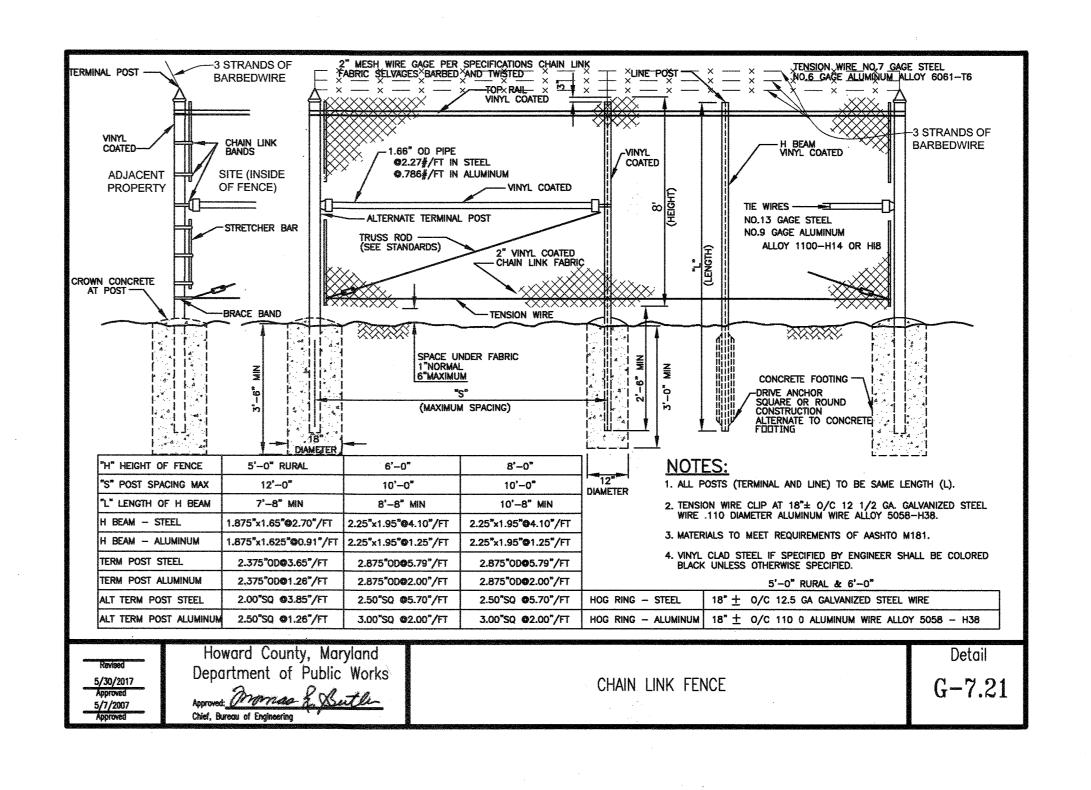


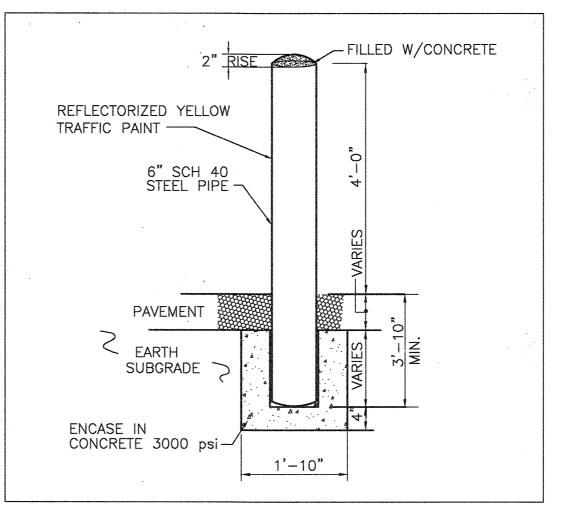


10" STRAIGHT CONCRETE CURB AND BACKING DETAIL

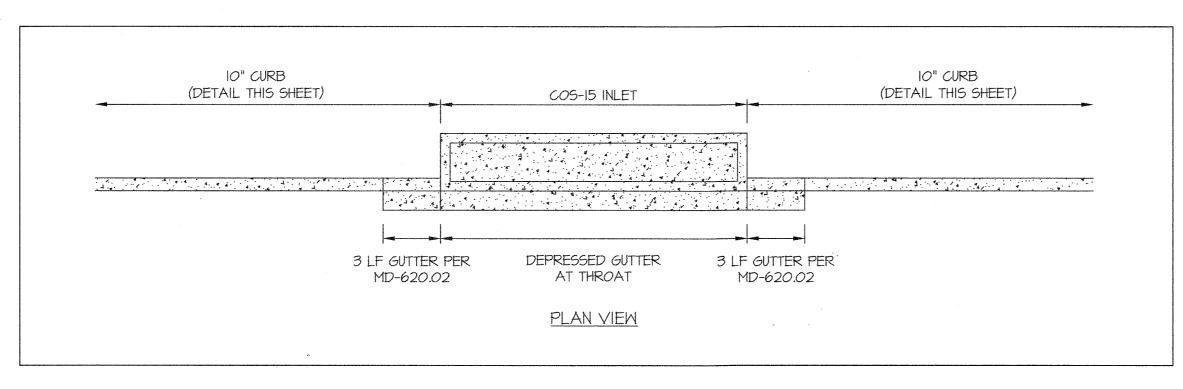








TYPICAL BOLLARD DETAIL SCALE: N.T.S.



TRANSITION FOR CURB OPENING INLETS SCALE: I" = 5'



© GLW 2019

	EWM
	DRAWN BY:
	EWM
PLANNING ENGINEERING SURVEYING	
	CHECKED BY:
3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE, MD 20866 GLWPA.COM	TMR
PHONE: 301-421-4024 BALT: 410-880-1820 DC&VA: 301-989-2524 FAX: 301-421-4186	11/11
CIW 2010	

	DESIGNED BY:					
	EWM					
	DRAWN BY:					
	EWM					
	CHECKED BY:				 	
OM 186	TMR	DATE	REVISION	BY	APP'R.	
	and the state of t					

OWNER/DEVELOPER:	
GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR QUINCY, MA 02169 ATTN: REDAS ZAKALSKIS TEL: 617-792-7880	

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975 EXPIRATION DATE: MAY 26, 2020	STATE OF STA
EXPINATION DATE. MINT BY ESTE	

,	/4
NARYLAND OF THE RESIDENT	
STORY OF THE STORY	
O LEON FORG	cours.
1/4/1/4/1.B. 20	ELECTION DISTRICT No. 6

NO AS-BULT INFORMATION AS OF OB	119/2020			
SITE PLAN DETAILS		SCALE	ZONING	G. L. W. FILE No
GIANT DISTRIBUTION CENTER		AS SHOWN	M-2	12060
EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A		DATE	TAX MAP — GRID	SHEET
o. 6	HOWARD COUNTY, MARYLAND	JAN., 2020	48–8	4 OF 13

FOREST CONSERVATION GENERAL NOTES FOREST CONSERVATION WORKSHEET FOREST CONSERVATION NARRATIVE FOREST CONSERVATION OBLIGATION SUMMARY PLANT LIST THIS FOREST CONSERVATION PLAN IS PROVIDED IN ACCORDANCE WITH THE SITE: Exeter Industrial Park (Parcel-19) SDP-20-019 THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION THE PROPOSED TRAILER STORAGE YARD EXPANSION ON PARCEL-A AND INTO PARCEL-19 WOULD REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY SYMBOL QTY. NAMES (Common/Botanical) MINIMUN SIZE ROOT/COMMENTS IMPACT AN EXISTING FOREST EASEMENT AREA (FCE#3) ON PARCEL-A AND A REMNANT OF AN Site Data Acreage DECIDUOUS TREES EXISTING FOREST ON PARCEL-19 WHICH WAS PREVIOUSLY DEVELOPED BUT THE IMPROVEMENTS ON PARCEL-19 HAVE BEEN RAZED SINCE 2006. THE FOREST ON PARCEL-19 IS CONTIGUOUS WITH THE FOR PARCEL-A, RECORD F-20-049 AS A REVISION PLAT FOR THE REDUCTION OF FCE#3 (RECORDED ON PN.15798) FROM IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS GINKGO BILOBA 'FASTIGIATA'/ 2 1/2-3" CAL | B&B A. Gross Site Area 4.57 ONE IN FCE#3 AND THEY ARE NOT A HIGH PRIORITY FOREST. TO ALLOW FOR POSSIBLE FUTURE 1.28 ACRES TO 0.303 OF AN ACRE FOR ABANDONING 42,549 S.F OF FOREST CONSERVATION EASEMENT. A FOREST KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION FASTIGIATA MAIDENHAIR TREE EXPANSION OR IMPROVEMENTS ON PARCEL-19, ALL OF THE EXISTING FOREST AREA ON PARCEL-19.15 CONSERVATION EASEMENT ABANDONMENT FEE OF \$2.00 PER SQUARE FEET (PER CR142-2019) FOR ABANDONING 42,549 TECHNIQUES AND PRACTICES. B. Area within 100-yr floodplain, if any 0.00 S.F. OF FOREST CONSERVATION EASEMENT SHALL BE PAID TO THE HOWARD COUNTY FOREST CONSERVATION FUND TO ACCOUNTED AS BEING CLEARED BECAUSE THE PORTION OF THE EXISTING FOREST THAT IS OUTSIDE THE LIMIT OF DISTURBANCE FOR THIS SOP WILL NOT BE ENCUMBERED BY A FOREST CONSERVATION SATISFIED THE FOREST CONSERVATION OBLIGATION ASSOCIATED WITH PARCEL-A. THE TOTAL ABANDONMENT FEE AMOUNT THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN.) POST-CONSTRUCTION QUERCUS PALUSTRIS / 2 1/2-3" CAL B&B C. Area of existing easement for major utility transmission lines, if any 0.00 EASEMENT. THE ACREAGE OF FOREST CONSERVATION OBLIGATION FOR THIS PROJECT WILL BE MET MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE PIN OAK AT AN OFF-SITE FOREST CONSERVATION BANK. THOUGH THE ENTIRE FOREST ON PARCEL-19 IS SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER ACCOUNTED AS CLEARING, THE ACTUAL CLEARING ON PARCEL-A WOULD BE AT THE L.O.D.; HOWEVER, D. Net Tract Area FOR PARCEL-19, 1.22 ACRES OF FOREST CONSERVATION EASEMENT RIGHTS SHALL BE PURCHASED FROM AN OFF-SITE YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING THE ACREAGE OF PURCHASED FOREST CONSERVATION EASEMENT AT THE OFF-SITE BANK IS TO FOREST MITIGATION BANK. THAT BANK IS AT: CATTAIL CREEK, SDP-14-031 WHICH WAS AMENDED ON 1/13/20 BY SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS 2 1/2-3" CAL B&B SATISFY THE OBLIGATION FOR CLEARING ALL THE FOREST ON PARCEL-19. QUERCUS PHELLOS / Industrial E. Land Use Category REDLINE-REVISION FOR THE OBLIGATION OF 1.22 ACRES FROM THIS SDP-20-019. NECESSARY, IE. AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (IF APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. Input Data EVERGREEN TREES THE DEVELOPER/BUILDER SHALL NOTIFY (IN WRITING) ALL PROPERTY OWNERS A. Net Tract Area 4.57 PINUS STROBUS / EASTERN BORDERING THE FOREST CONSERVATION EASEMENT AREAS OF THIS PROJECT OF B&B, Single intact leader THE EXISTENCE OF SUCH EASEMENTS AND THAT DISTURBANCE TO THE FOREST B. Reforestation Threshold (percent of net tract = 15 %) 0.69 CONSERVATION AREAS OR THE REMOVAL OF FOREST CONSERVATION SIGNS ARE * IN LIEU OF PLANTING THE 6 PIN OAKS, 6 EXISTING TREES LOCATED OUTSIDE THE LOD MAY C. Afforestation Threshold (percent of net tract = 15 %) 0.69 BE USED AS CREDIT FOR THE 6 PIN OAKS TO BE PLANTED. TO USE THE "EXISTING TREE CREDIT", 6 NATIVE EXISTING TREES (AT LEAST 2.5" DBH) LOCATED OUTSIDE THE LOD MUST BE AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, D. Existing Forest on Net Tract Area 0.54 SEE SHEET-6 FOR IDENTIFIED ON THIS PLAN; OTHERWISE, THE 6 PIN OAKS MUST BE PLANTED. CONTACT THE HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING TO SCHEDULE INSPECTION FOR THE RELEASE OF THE FOREST CONSERVATION SURETY 0.54 E. Forest Clearing on Net Tract Area LANDSCAPE (IF ANY) AND OBLIGATIONS. PLAN LEGEND: F. Forest Retention on Net Tract Area 0.00 REFORESTATION/AFFORESTATION TREE PLANTINGS (IF REQUIRED) SHOULD BE SCHEDULE-A CHART PROPERTY LINE Reforestation and/or Afforestation Calculations INSTALLED IN A CURVILINEAR PATTERN TO FACILITATE MAINTENANCE BUT AVOID ----- EXISTING TREE CANOPY LINE A GRID APPEARANCE, EACH SPECIES OF TREE SHALL BE DISTRIBUTED EVENLY WITHIN EACH FOREST CONSERVATION EASEMENT AREA. A. Net tract forest clearing above reforestation threshold, if applicable 0.00 EXISTING FORESTED TREE LINE THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT IS SATISFIED BY B. Net tract forest clearing **below** reforestation threshold, if applicable 0.54 PURCHASING 1.22 ACRES OF PLANTED FOREST CONSERVATION AREA AT AN ---- 252--- EXISTING CONTOUR C. Planting up to afforestation threshold, if applicable 0.15 OFF-SITE FOREST CONSERVATION BANK (SEE THE "FOREST CONSERVATION OBLIGATION SUMMARY" ON THIS SHEET). ----- PROPOSED CONTOUR D. Reforestation planting required for clearing **above** threshold (3A x 0.25) 0.00 NO FOREST CONSERVATION SURETY IS REQUIRED FOR THIS PROJECT AS ALL OF GRADING LIMIT OF DISTURBANCE (L.O.D.) 1.07 E, Reforestation planting required for clearing **below** threshold (3B x 2.0) THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT IS MET BY AN OFF-SITE FOREST CONSERVATION BANK AND THERE IS NO ON-SITE FOREST FOREST CONSERVATION EASEMENT AREA F. Net tract forest retention above reforestation threshold (2F-2B, available credit) 0.00 (honeycomb pattern) 1.22 G. Total reforestation planting required (3C+3D+3E - 3F) THIS SITE IS LOCATED IN LITTLE PATUXENT RIVER WATERSHED, CODE 02/3/105. Break Even Point (BEP) Calculations FOREST AREA ACCOUNTED AS CLEARING (square netting pattern) LANDSCAPE NOTES Not Applicable A. Maximum clearing allowed with no reforestation planting (2D-2B)/1.25 THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD Not Applicable B. Minimum net tract retention at BEP 0.20(2D-2B)+2B or 2D-4A COUNTY CODE & THE HOWARD COUNTY LANDSCAPE MANUAL SOIL DELINEATION & TYPE 5 Forest Conservation Required CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING RuB WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET NO.1 A. Forest Retention Area (2F) 0.00 FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE B. Forest Planting Area (3G) 1.22 STARTING PLANTING WORK. CONTACT CONSTRUCTION MANAGER OR OWNER IF ANY RELOCATIONS ARE C. Total minimum FCE required for retention and reforestation 1.22 HOWARD COUNTY, MID L. 12316 F. 239 PLANT QUANTITIES SHOWN ON THE PLANT LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN SHALL TAKE ALL PLANT MATERIAL SHALL BE FULL, HEAVY, WELL FORMED, SYMMETRICAL, AND AREA of FCE #3 TO REMAIN CONFORM TO THE AMERICAN STD. FOR NURSERY STOCK (ANSI ZO6.1-Latest Edition) ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE HOWARD COUNTY 55,753 S.F. or 1.28 AC. Per PN 15798 LESS STATE OF MARYLAND AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED 42,549 S.F. (0.977±AC.) TO BE ABANDONED = DEPT OF HEALTH AND MENTAL HYGIENE ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO 13,204 S.F. or 0.303 AC. (SEE PN for F-20-049) SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. AN DEVIATION FROM THE 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 PARCEL-19: REVISIONS ARE MADE TO THE APPLICABLE PLANS. PARCEL-A: ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED. ALL OF THE 24,382 S.F. (or 0.56± ac.) OF PAVED, OR MULCHED SHALL BE SODDED OR SEEDED IN ACCORDANCE WITH THE 42,549 S.F. (0.977±AC.) OF EXISTING FCE#3 PERMANENT SEEDING SPECIFICATION. A MINIMUM OF 4" OF TOPSOIL SHALL BE EXISTING FOREST ON THIS PARCEL ARE PROVIDED TO ALL PLANTING AREAS (FOR TOPSOIL SPEC. SEE SHEET 13) (PN 15798) TO BE ABANDONED (by PN for ACCOUNTED AS CLEARING AS A FOREST THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL F-20-049) AS THE SAME AREA IS TO BE CONSERVATION EASEMENT IS NOT CREATED DRAINAGE CONDITIONS THAT MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS. CLEARED TO ACCOMMODATE THE EXPANSION ON PARCEL-19 FOR THE FOREST OUTSIDE ALL EXPOSED FARTH WITHIN THE LIMITS OF PLANTING BEDS SHALL BE MILLCHED WITH OF THE TRAILER STORAGE AREA. D. DO NOT PLANT WITHIN THE PUBLIC WATER, SEWER AND UTILITY EASEMENT, IF ANY. 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 ENGIRE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED SCHEDLULE "A" (ON SHEET 6) IS PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED WITH THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 12.150.00 AS FOLLOWS: 34 SHADE TREES AT \$300/TREE 13 EVERGREEN TREES @ \$150/TREE FOR LANDSCAPE INSPECTION TO OBTAIN THE RELEASE OF THE LANDSCAPE SURETY CONTACT HOWARD COUNTY DEPT. OF PLANNING & ZONING AT 410-313-2350. SEE SHEETS 9 & 10 FOR THE MICRO BIO-RETENTION AND THE SUBMERGED GRAVEL WETLAND PLANTINGS (as they are bonded with the DPW-PSWM surety and not with DPZ-DLD Landscape Surety above). SYMBOL SOIL NAME Russett and Beltsville soils, 2 to 5 percent slope TOWERY PROPERTIES, LLC Fallsington sandy loam, 0 to 2 percent slope ZONE: M-2 **GRAPHIC SCALE** PARCEL A GUILFORD DORSEY LL C/O AHOLD FINANCIAL SERVICES LEASE DEVELOPER'S/BULDER'S CERTIFICATE ZONE: M-2 (SDP-03-04) 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 LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING PERIMETER-1 PARCEL 20 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONIN TOWERY PROPERTIES LLC L. 15946 F. 120 ZONE: M-2 1.23.20 NO AS-BUILT INFORMATION AS OF 08/19/2020 FOREST CONSERVATION and LANDSCAPE PLAN OWNER/DEVELOPER: SCALE G. L. W. FILE No. 12060 GIANT LANDOVER DIVISION 1"=40' 1385 HANCOCK STREET DRAWN BY: GIANT DISTRIBUTION CENTER 10TH FLOOR EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A QUINCY, MA 02169 DATE TAX MAP - GRID SHEET ATTN: REDAS ZAKALSKIS CHECKED BY TEL: 617-792-7880 3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM 5 OF 13 PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186 LECTION DISTRICT No. 6 HOWARD COUNTY, MARYLANI DATE REVISION BY APP'R SDP-20-019

FOREST CONSERVATION PROGRAM SEQUENCE

- OBTAIN ALL NECESSARY PERMITS
- STAKEOUT LIMITS OF DISTURBANCE.
- 3. FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE SITE GRADING AND CONSTRUCTION.
- 4. INSTALL FOREST CONSERVATION SIGNS AND FOREST PROTECTION DEVICES (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES).
- 5. COMMENCE SITE CONSTRUCTION.
- PREPARE SITE SOIL BY MULCHING AND REMOVAL OF TRASH AND WEEDS INCLUDING AN APPLICATION OF HERBICIDES TO CONTROL NOXIOUS WEEDS AND INVASIVE SPECIES WHERE NECESSARY.
- 7. INSTALL FOREST PLANTING (WHERE APPLICABLE) AND THE REMAINDER OF THE CONSERVATION SIGNS ALONG THE EDGE OF THE CONSERVATION
- EASEMENT. MOVE CONSERVATION SIGNS INSTALLED IN #4 (ABOVE) TO THE EDGE OF THE CONSERVATION EASEMENT. INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT
- 9. POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
- IO. FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION SURETY.

FOREST CONSERVATION CONSTRUCTION PERIOD PROTECTION PROGRAM

- I. THE LIMIT OF FOREST RETENTION SHALL BE STAKED AND FLAGGED.
- A PRE-CONSTRUCTION MEETING AT THE SITE SHOULD BE HELD TO CONFIRM THE LIMITS OF CLEARING SPECIFIED. THE MEETING SHOULD INCLUDE THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ON-SITE FOREMAN IN CHARGE OF LAND DISTURBANCE, THE ENVIRONMENTAL CONSULTANT AND THE
- FOREST PROTECTION DEVICES AND SIGNS (SEE DETAILS) SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. NONE OF THE DEVICES SHALL BE ANCHORED OR ATTACHED IN ANY
- EQUIPMENT, VEHICLES AND BUILDING MATERIALS SHALL NOT BE WITHIN THE PROTECTED AREA. ACTIVITIES STRICTLY TO IMPLEMENT ANY REFORESTATION PLANTING AND MAINTENANCE (I.E. WATERING, FERTILIZING THINNING, PRUNING, REMOVAL OF DEAD AND DISEASED TREES WHERE NECESSARY, ETC.) OF THE CONSERVATION AREA ARE PERMITTED. CLEARING FOR THE PURPOSE OF SODDING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREAS ONCE THEY'RE ESTABLISHED.
- AT THE END OF THE CONSTRUCTION PERIOD, THE DESIGNATED QUALIFIED PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST RETENTION AREAS HAVE BEEN PRESERVED, ALL REFORESTATION AND/OR AFFORESTATION PLANTINGS (IF APPLICABLE) HAVE BEEN INSTALLED AS REQUIRED BY THE FOREST CONSERVATION PLAN, AND THAT ALL DOCUMENT FOR COMPLETENESS AND ACCURACY, THE PROGRAM COORDINATOR WILL NOTIFY THE OWNER OF RELEASE FROM THE CONSTRUCTION PERIOD OBLIGATIONS. THE 2-YEAR (MIN.) POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD THEN COMMENCES.

FOREST CONSERVATION POST-CONSTRUCTION MANAGEMENT PRACTICES

MANY OF THE PROTECTION AND MANAGEMENT PRACTICES FOR THE CONSTRUCTION PERIOD MUST BE CONTINUED FOR AT LEAST 2 GROWING SEASONS FOLLONING OFFICIAL NOTIFICATION OF COMPLETION OF THE DEVELOPMENT (OR A SPECIFIC PHASE OF THE OVERALL DEVELOPMENT IF PHASING HAS BEEN APPROVED). THE RESPONSIBILITY TO MEET THE SURVIVAL STANDARDS REQUIRES ADEQUATE WATERING, REPLANTING, THINNING OR OTHER APPROPRIATI MEASURES. ALSO, INAPPROPRIATE USES OR INTRUSIONS MUST NOT OCCUR, A RESPONSIBILITY THAT REQUIRES THE KNOWLEDGE AND COOPERATION OF THE NEW OCCUPANTS OF THE DEVELOPMENT.

MINIMUM TWO GROWING SEASON POST-CONSTRUCTION MANAGEMENT PROGRAM

A POST-CONSTRUCTION MANAGEMENT PROGRAM MUST BE APPROVED AS PART OF THE ORIGINAL FOREST CONSERVATION PLAN AND REMAIN IN EFFECT FOR A MINIMUM OF TWO GROWING SEASONS. A LONGER PERIOD MAY BE REQUIRED FOR SPECIFIC STRATEGIES (E.G. NATURAL REGENERATION NEAR HIGH USE AREAS WHOSE LONG-TERM VIABILITY MAY TAKE LONGER TO CONFIRM.)

IMPLEMENTATION OF THE POST-CONSTRUCTION MANAGEMENT PROGRAM MUST BE SUPERVISED BY A QUALIFIED PROFESSIONAL WHO SHOULD INSPECT THE STATUS OF ALL FOREST RETENTION, REFORESTATION AND AFFORESTATION AREAS AT SPECIFIED TIMES DURING THE LIFE OF THE POST CONSTRUCTION AGREEMENT AND WHO MUST CERTIFY THAT THE REQUIRED SURVIVAL RATES HAVE BEEN ACHIEVED IN ACCORDANCE WITH THE AGREEMENT PRIOR TO RELEASE

THERE ARE FIVE PRIMARY COMPONENTS OF THE POST-CONSTRUCTION PROGRAM: INSPECTION, MANAGEMENT OF RETAINED OR NEW PLANTINGS, REPLACEMENT F DEAD OR DAMAGED MATERIAL WHEN NECESSARY, EDUCATION OF NEW OCCUPANTS OF THE DEVELOPMENT AND FINAL INSPECTION AND RELEASE OF DEVELOPER FROM ADDITIONAL RESPONSIBILITIES.

INSPECTIONS SHOULD 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. APPENDIX J HAS AN EXAMPLE OF AN INSPECTION REPORT CHECKLIST.

MANAGEMENT OF FOREST CONSERVATION AREAS

POST CONSTRUCTION MANAGEMENT INCLUDES: MAINTENANCE OF ALL FENCES, SIGNS OR OTHER DEVICES DELINEATING FOREST CONSERVATION AREAS AND OTHER MEASURES, SUCH OTHER MEASURES INCLUDE: NEEDED WATERING; REMOVAL OF DEAD OR DAMAGED MATERIAL AND CONTROL OF UNDESIRABLE COMPETING SPECIES, THINNING OR PRUNING TO ENCOURAGE PROPER GROWTH, FERTILIZING, IP NECESSARY; AND CONTROL OF PRESTS. SPECIFIC PRACTICES WILL DEPEND ON THE WEATHER PREVAILING DURING THE POST CONSTRUCTION PERIOD, THE TYPES OF PLANT MATERIAL AND PLANTING METHODS USED, AND SPECIFIC SITE CONDITIONS SUCH AS PROXIMITY TO HIGH USE AREAS. IT IS THE RESPONSIBILITY OF THE POST-CONSTRUCTION PLAN SUPERVISOR TO TAKE APPROPRIATE ACTIONS AS NEEDED. THIS MANUAL, THEREFORE, DOES NOT CITE REQUIRED MEASURES, SURVIVAL SUCCESS, NOT FULFILLMENT OF A GIVEN SERIES OF TASKS, WILL BE THE MEASURE OF CONFORMANCE TO THE NEEDS OF THE POST-CONSTRUCTION PROGRAM

NEWLY PLANTED TREES, WHETHER THEY ARE SEEDLINGS OR 4" CALIPER TRANSPLANTS, HAVE BASIC NEEDS, SOME OF THESE NEEDS CAN BE MET BY NATURE ALONE, OTHERS MAY REQUIRE HUMAN INTERVENTION. (THE THREE MOST LIKELY CAUSES OF DEATH FOR NEWLY PLANTED TREES ARE DROUGHT, COMPETING VEGETATION AND DEER.) THE BASIC MAINTENANCE REGIME SHOULD BE DETERMINED BY ON-SITE ENVIRONMENTAL CONDITIONS, STRUCTURE AND NUTRIENT CONTENT OF SOIL, AND RAINFALL UNDERSTANDING THESE FACTORS AND THE SPECIFIC NEEDS OF THE SPECIES AND SIZE OF PLANTS USED WILL RESULT IN A HEALTHY FORESTED AREA AT THE END OF THE MAINTENANCE PERIOD. APPENDIX H CONTAINS GUIDELINE SPECIFICATIONS FOR MAINTENANCE OF FOREST CONSERVATION AREAS AND FOCUSES ON THE FOLLOWING CRITICAL NEEDS:

• CONTROL OF COMPETING VEGETATION •PROTECTION FROM PESTS, DISEASES AND MECHANICAL INJURY.

REPLACEMENT OF PLANT MATERIAL

AN INSPECTION SHALL TAKE PLACE AT THE END OF YEAR ONE OR BEFORE THE SECOND GROWING SEASON TO EVALUATE SURVIVAL RATES WITH REFERENCE TO THE SURVIVAL REQUIRED AT THE END OF THE TWO YEAR PERIOD. THIS IS AN OPPORTUNITY TO AVOID THE PENALTY FOR VIOLATING SURVIVAL RATE STANDARDS. THIS INSPECTION SHOULD ESTIMATE SURVIVAL POTENTIAL BASED ON THE FOLLOWING:

·VIGOR AND THREAT OF COMPETING VEGETATION (I.E. IF SEEDLINGS ARE FREE TO GROW) · STRUCTURE

· GROWTH RATE TRUNK HEALTH

IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING WILL NOT MEET SURVIVAL STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. IF PLANT MORTALITY OF REFORESTATION OR AFFORESTATION EXCEEDS 10% OF PLANTED MATERIAL AT THE END OF THE FIRST GROWING SEASON, SUCH MATERIAL SHOULD BE REPLACED TO BRING THE TOTAL NUMBER OF TREES TO 90% OF THE ORIGINAL TOTAL. SUCH MATERIAL SHALL BE INSTALLED BY THE BEGINNING OF THE SECOND GROWING SEASON. IF AT THE END OF THE SECOND GROWING SEASON, SURVIVAL RATE DROPS BELOW 75%, SUCH MATERIAL AS NEEDED TO GUARANTEE AN 75% SURVIVAL RATE BY THE END OF THE THIRD GROWING SEASON SHALL BE INSTALLED.

EDUCATION OF NEW OCCUPANTS

THE OCCUPANTS OF A NEW DEVELOPMENT, WHETHER OWNERS OR TENANTS, MUST AVOID ACTIVITIES THAT DESTROY OR DEGRADE PROTECTED FOREST RESOURCES. THE POST-CONSTRUCTION MANAGEMENT PROGRAM MUST THEREFORE INCLUDE STEPS TO EDUCATE THE NEW OCCUPANTS ABOUT THE PROPER USE OF FOREST CONSERVATION AREAS, ABOUT THE NEED FOR THE DEVELOPER TO CARRY OUT THE POSTCONSTRUCTION MANAGEMENT PROGRAM, AND THE EVENTUAL TRANSFER OF LONG-TERM RESPONSIBILITIES TO THE OWNERS OR OCCUPANTS, SUCH EDUCATIONAL MATERIAL SHOULD INCLUDE A PLAN LOCATING ALL PROTECTED AREAS ON THE SITE AND A DESCRIPTION OF PERMITTED AND PROHIBITED ACTIVITIES WITHIN OR AFFECTING SUCH AREAS. THE FORMAT AND METHOD OF CONVEYING SUCH INFORMATION IS LEFT TO THE DISCRETION OF THE DEVELOPER.

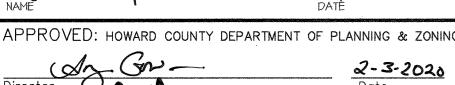
FINAL INSPECTION AND RELEASE OF OBLIGATIONS

AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DESIGNATED RESPONSIBLE PROFESSIONAL SHALL CONVEY TO THE DEPARTMENT OF PLANNING AND ZONING CERTIFICATION THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO THE APPROPRIATE CONDITION, THAT THE STIPULATED SURVIVAL RATES HAVE BEEN ACHIEVED, AND THAT ANY PERMANENT PROTECTION MEASURES REQUIRED BY THE PLAN ARE IN PLACE. APPENDIX J CONTAINS A SAMPLE FORMAT FOR SUCH CERTIFICATION.

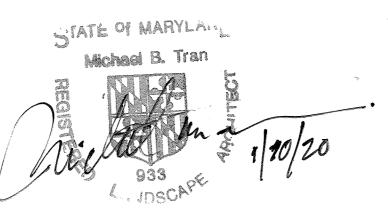
UPON REVIEW OF THE FINAL CERTIFICATION DOCUMENT FOR COMPLETENESS AND ACCURACY, THE COUNTY WILL NOTIFY THE DEVELOPER OF RELEASE OF SURETY AND ALL FUTURE OBLIGATIONS. THE DEVELOPER'S LAST OFFICIAL RESPONSIBILITY WILL BE TO TRANSMIT A COPY OF THIS NOTIFICATION TO THE OWNER(S) OF THE PROPERTY(IES). SUCH TRANSMITTAL WILL SERVE AS OFFICIAL NOTICE TO OWNERS OF THEIR ASSUMPTION OF FULL RESPONSIBILITY FOR ALL FUTURE FOREST

DEVELOPER'S/BULDER'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 LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANTAMATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.



2-3-2020



LANDSCAPE SPECIFICATIONS:

1.0 GENERAL CONDITIONS

- A. THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE ALL LANDSCAPE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.

 B. TOTAL NUMBER OF PLANTS SHALL BE DRAWN ON THE LANDSCAPE PLAN. IF THERE IS A DISCREPANCY BETWEEN THE DRAWING AND THE LIST ON THE PLANS, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE LANDSCAPE ARCHITECT.
- I.2 STANDARDS: A. ALL PLANT MATERIAL SHALL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI 260.1). ALL TREES TO BRANCH SYMMETRICALLY AROUND CENTRAL LEADER. NO FORKED LEADER STOCK WILL BE ACCEPTED
- PLANT MATERIAL MUST BE SELECTED FROM NURSERIES THAT HAVE BEEN INSPECTED AND CERTIFIED BY STATE PLANT INSPECTORS. NOMENCLATURE WILL BE IN ACCORDANCE WITH HORTUS III BY L.H. BAILEY.
- 1.3 SUBMITTALS: WHEN REQUESTED BY THE OWNER OR OWNER'S REPRESENTATIVE, SAMPLES OF ALL MATERIAL OTHER THAN PLANTS SHALL BE SUBMITTED TO THE OWNER'S DESIGNATED REPRESENTATIVE FOR APPROVAL.
- 1.4 APPROVALS: ALL APPROVALS WILL BE IN WRITING.
- IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO MAKE EVERY REASONABLE EFFORT TO FIND THE MATERIAL SPECIFIED BY THE LANDSCAPE ARCHITECT. THE LANDSCAPE CONTRACTOR MAY OFFER SUBSTITUTIONS TO THE LANDSCAPE ARCHITECT FOR HIS/HER CONSIDERATION. THE LANDSCAPE CONTRACTOR WILL NOTIFY THE LANDSCAPE ARCHITECT IF THERE ARE KNOWN DISEASE OR INSECT RESISTANT SPECIES THAT CAN BE SUBSTITUTED FOR A SELECTED PEST-PRONE PLANT. ALL SUBSTITUTIONS SHALL BE APPROVED BY HOWARD COUNTY GOVERNMENT.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AND/OR THE GENERAL CONTRACTOR IN ADVANCE OF CONSTRUCTION TO LOCATE 1.7 DRAINAGE
- IF PLANTS ARE TO BE INSTALLED IN AREAS THAT SHOW OBVIOUS POOR DRAINAGE, AND THE PLANTS ARE INAPPROPRIATE FOR THAT CONDITION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND OWNER. IF THEY DEEM NECESSARY, THE PLANTS SHALL BE RELOCATED, THE CONTRACT SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE CORRECTION AT A NEGOTIATED COST, OR THE PLANT SELECTION
- MODIFIED BY THE LANDSCAPE ARCHITECT TO ACCOMMODATE THE POOR DRAINAGE SITUATION. A. DURING DELIVERY AND INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL PERFORM IN A WORKMANLIKE MANNER, COORDINATING HIS/HER ACTIVITIES SO AS NOT TO INTERFERE UNDULY WITH THE WORK OF OTHER TRADES AND LEAVING HIS/HER WORK AREA(S) CLEAN OF LETTER
- AND DEBRIS AT THE CLOSE OF EACH WORKDAY. DURING PLANTING, ALL AREAS SHALL BE KEPT NEAT AND CLEAN; PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING PLANTS,
- LARGE TREES, TURF AND STRUCTURES. WHERE EXISTING TREES ARE TO BE PRESERVES, ADDITIONAL PRECAUTIONS SHOULD BE TAKEN TO AVOID UNNECESSARY ACCUMULATION OF EXCAVATED MATERIALS, SOIL COMPACTION OR ROOT DAMAGE. UPON COMPLETION, ALL DEBRIS AND WASTE MATERIAL RESULTING FROM PLANTING OPERATIONS SHALL BE REMOVED FROM THE PROJECT AND THE AREA OF FANED UP
- ANY DAMAGE TO THE EXISTING UTILITIES, BUILDINGS, PAVING, CURB AND WALLS, AND VEGETATION (NOT SO DESIGNATED FOR REMOVAL ON THESE PLANS) SHALL BE REPAIRED TO PREVIOUS CONDITION OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- A. THE OWNER SHALL SUPPLY WATER ON SITE AT NO COST. IF THE LANDSCAPE CONTRACTOR HAS TO SUPPLY WATER TO THE SITE, IT SHALL BE AT AN ADDITIONAL COST. I.IO PLANTING SEASONS
- RED OAK, WHITE OAK, WILLOW OAK, SCARLET OAKS, DOGWOOD, SWEET GUM, CONIFERS, AND BROAD LEAF EVERGREENS WILL NOT BE PLANTED BETWEEN NOVEMBER IS AND MARCH I, UNLESS THE LANDSCAPE CONTRACTOR STATES IN WRITING THAT HE/SHE WILL GUARANTEE PLANTS. INITIAL INSPECTION: PRIOR TO PLANTING, ALL PLANT LOCATIONS SHALL BE STAKED IN THE FIELD BY THE CONTRACTOR. THE LANDSCAPE
- ARCHITECT SHALL BE CONTACTED TO INSPECT AND APPROVE ALL PLANT LOCATIONS BEFORE PLANTING.

 B. FINAL ACCEPTANCE INSPECTION: A VERIFICATION OF PERFORMANCE FOR WORK BY CONTRACT DOCUMENTS, TO BE CONDUCTED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE ON-SITE AND IN THE PRESENCE OF THE LANDSCAPE CONTRACTOR FOR THE PURPOSE
- OF ACCEPTANCE. FINAL WARRANTY INSPECTION: THE LANDSCAPE CONTRACTOR SHALL CONDUCT A FINAL INSPECTION WITH THE OWNER OR OWNER'S REPRESENTATIVE AT THE END OF THE ONE YEAR PERIOD.
- A. THE STANDARD WARRANTY IS FOR ONE (I) YEAR PERIOD, EXCLUDING BULBS AND ANNUALS, COMMENCING ON THE DATE OF INITIAL ACCEPTANCE. ALL PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD.
- ANY MATERIAL THAT IS 25% DEAD OR MORE SHALL BE CONSIDERED DEAD AND MUST BE REPLACED AT NO CHARGE. A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR 25% OF THE CROWN IS DEAD.

PERENNIALS SHALL BE GUARANTEED FOR ONE YEAR AFTER INITIAL ACCEPTANCE.

- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL PLANT MATERIAL SHOWN ON THE DRAWINGS AND
- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE AT THE PLACE OF GROWTH (BEFORE DIGGING - TREES) OR HOLDING YARD (SHRUBS) FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AS TO QUALITY, SIZE, AND

3.0 PRODUCTS

- 3.1 QUALITY ASSURANCE MANUFACTURER'S CERTIFIED ANALYSIS SHALL ACCOMPANY PACKAGED STANDARD PRODUCTS.
- 3.2 ORGANIC MATTER: PEAT MOSS - TYPE I SPHAGNUM PEAT MOSS; FINELY DIVIDED WITH A PH OF 3.1 TO 5.0.
- SEDGE PEAT DECOMPOSES PEAT CONTAINING NO IDENTIFIABLE FIBERS. LEAF COMPOST - THAT IS SCREENED AND FREE TO TRASH.
- COMPOSTED SEWAGE SLUDGE APPROVED, SCREENED, POLYMER-DEWATERED SEWAGE SLUDGE WITH A PH OF 9.2 7.2.6 MA
- A. IT SHALL BE FREE OF STONES, LUMPS, PLANTS, ROOTS AND OTHER DEBRIS OVER 12". TOPSOIL MUST ALSO BE FREE OF PLANTS OR PLANT PARTS OF BERMUDAGRASS, QUACKGRASS, JOHNSONGRASS, MUGMORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE OR OTHERS AS SPECIFIED.
- IT SHALL NOT CONTAIN TOXIC SUBSTANCES HARMFUL TO PLANT GROWTH, I.E. PESTICIDE RESIDUÉS. 3.4 BACKFILL MIXTURE: BACKFILL MIXTURE FOR TREES AND SHRUBS SHALL BE 3/4 EXISTING SOIL MIXED WITH 1/4 ORGANIC MATERIAL, PLUS GRANULAR FERTILIZER.
- A. MATERIAL SHALL BE COMPOSTED, SHREDDED HARDWOOD BARK, WITH LESS THAN 10% SAPWOOD, DARK BROWN IN COLOR, OR APPROVED
- B. MATERIAL SHALL BE UNIFORM IN SIZE AND FREE OF FOREIGN MATTER.

4.0 PLANTING PROCEDURE FOR TREES

4.1 TREE PLANTING:

- WALL OF TREE PIT SHALL BE DUG SO THAT THEY ARE VERTICAL OR SLOPING OUTWARD IN HEAVY SOILS, BE AND SCARIFIED THE TREE PIT MUST BE A MINIMUM OF 9" LARGER ON EVERY SIDE THAN THE BALL OF THE TREE.
- PLACE THE TREE IN THE PIT CARRYING THE BALL AND THEN LOWERING IT INTO THE PIT. NEVER LIFT THE TREE BY THE TRUNK OR BRANCHES. SET THE TREE STRAIGHT AND IN THE CENTER OF THE PIT WITH THE MOST DESIRABLE SIDE FACING TOWARD THE PROMINENT VIEW. BACKFILL TREE PIT WITH A SOIL MIXTURE STATED IN THE SPECIFICATIONS. CUT AND REMOVE ROPE OR WIRE OFF THE TOP 50% OF ROOTBALL AND PULL BURLAP BACK TO THE EDGE OF THE BALL. REMOVE AS MUCH
- BURLAP, WOVEN PRODUCTS AND TWINE AS POSSIBLE. ALL PLASTIC OR SYNTHETIC FILM MUST BE REMOVED FROM THE ROOTBALL. CUT ALL FORM A SAUCER ABOVE EXISTING GRADE, AROUND THE OUTER RIM OF THE TREE PIT, ESPECIALLY ON SLOPES AND IN HEAVY SOILS
- MULCH TOP OF ROOT BALL AND SAUCER TO A MINIMUM DEPTH OF 2", NOT TO EXCEED 3". DO NOT PLACE MULCH AGAINST THE TRUNK WATER THOROUGHLY ON THE INTERIOR OF THE TREE SAUCER UNTIL IT IS FILLED, EVEN IF IT IS RAINING. A SECOND WATERING MAY BE NECESSARY TO INSURE SATURATION OF THE ROOT BALL AND FLIMINATION OF AIR POCKETS.
- PRUNING SHOULD BE RESTRICTED TO CORRECTIVE PRUNING TO IMPROVE FORM ONLY. STAKE TREE PER PLANTING DETAIL

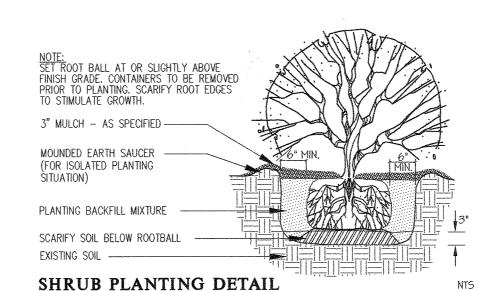
5.0 PLANTING PROCEDURES FOR SHRUBS

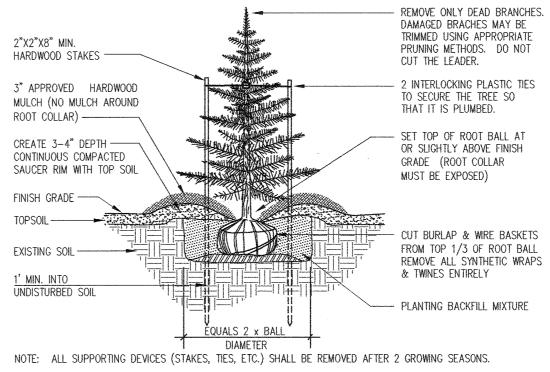
- 5.I PLANTING SHRUBS A. FOR A SINGLE SHRUB, THE PIT SHALL BE DUG I' WIDER THAN THE ROOTBALL AND DEEP ENOUGH TO ALLOW I/8TH OF THE ROOTBALL TO SET
 - ABOVE EXISTING GRADE. (SINGLE SHRUB PLANTINGS ONLY IF NOTED ON PLANS) FOR A SHRUB MASS PLANTING, THE ENTIRE BED AREA SHALL BE TILLED 4-6" DEEP. TILLING SHOULD ONLY BE DONE IN DRY SOIL TO AVOID COMPACTION. IF THE SOIL IS HEAVY IN CLAY AND SILT, ORGANIC MATERIAL SHOULD BE ADDED. EACH SHRUB PIT SHALL BE EXCAVATED FOR THE PROPER SETTING OF THE ROOTBALL.
- PLACE THE SHRUB IN THE PIT BY LIFTING AND CARRYING IT BY THE ROOTBALL. REMOVE CONTAINERS FROM ALL CONTAINER-GROWN SHRUBS; SLASH THE EDGES OF THE ROOTBALL FROM TOP TO BOTTOM, AT LEAST I" DEEP
- SET THE SHRUB AND IN THE CENTER OF THE PIT WITH THE MOST DESIRABLE SIDE FACING TOWARD THE PROMINENT VIEW. CUT AND REMOVE ROPE OR WIRE OFF THE TOP 50 % OF ROOTBALL AND PULL BURLAP BACK TO THE EDGE OF THE BALL. REMOVE AS MUCH BURLAP, WOYEN PRODUCTS AND TWINE AS POSSIBLE. ALL PLASTIC OR SYNTHETIC FILM MUST BE REMOVED FROM THE ROOTBALL. CUT ALL
- TWINE AWAY FROM TRUNK F. FORM A SAUCER ABOVE THE EXISTING GRADE AND COMPLETELY AROUND THE PLANTING PIT.
- 6 MILCH TOP OF ROOTBALL AND SAUCER A MAXIMUM DEPTH OF 2" WATER SHRUB MASS THOROUGHLY EVEN IF IT IS RAINING. A SECOND WATERING MAY BE NECESSARY TO INSURE SATURATION OF THE ROOT BALL AND ELIMINATION OF AIR POCKETS.

6.0 PLANTING PROCEDURES FOR GROUND COVER, PERENNIALS AND ANNUALS

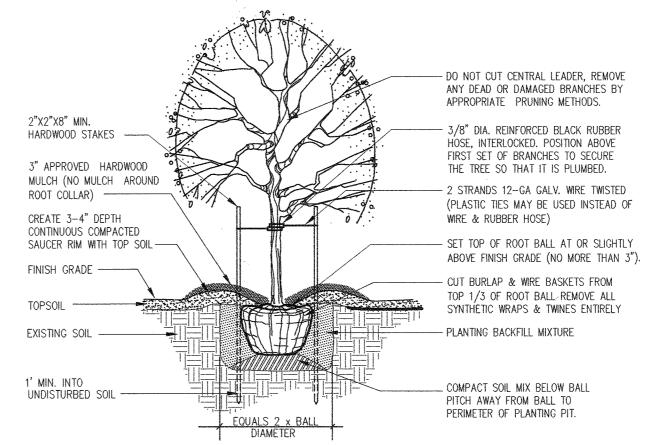
- 6.1 PLANTING GROUND COVER, PERENNIAL AND ANNUAL BEDS THE PLANTING BED SHALL BE LOOSENED WHEN THE SOIL IS DRY PRIOR TO PLANTING BY TILLING. SOIL SHALL BE LOOSENED TO A DEPTH OF 4
- ORGANIC MATTER SHALL BE SPREAD OVER THE BED TO A DEPTH OF 2" FOR PEAT MOSS OF I" DEEP FOR COMPOST. I.E. NOT TO EXCEED 4 CUBIC YARDS OF COMPOST/1000 SQUARE FEET, AFTER THE SOIL HAS BEEN LOOSENED. THE ORGANIC MATTER SHALL BE WORKED INTO THE
- FERTILIZER SHALL BE TOP-DRESSED OVER BED AREA.
 THE PLANT, EITHER POTTED OR BARE ROOT, SHALL BE INSTALLED SO THAT THE ROOTS ARE SURROUNDED BY SOIL BELOW THE MULCH. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH THE EXISTING GRADE. THE ROOTS OF BARE ROOT PLANTS SHALL BE
- SPACING OF PLANTS SHALL BE INSTALLED AS NOTED ON THE LANDSCAPE PLAN. THE ENTIRE BED SHALL BE MULCHED TO A MINIMUM DEPTH OF 1", 2" MAXIMUM, WITH APPROVED MULCH. THE ENTIRE PLANTING BED SHALL BE THOROUGHLY WATERED.

PRIOR TO PLANTING CUT POT-BOUND ROOTS. AFTER PLANTING, THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED. 3" MULCH BACKFILL WITH PREPARED-1/3 ORGANIC AMENDMENTS SCARIFY TO 3" DEPTH-UNDISTURBED SOIL GROUNDCOVER PLANTING DETAIL





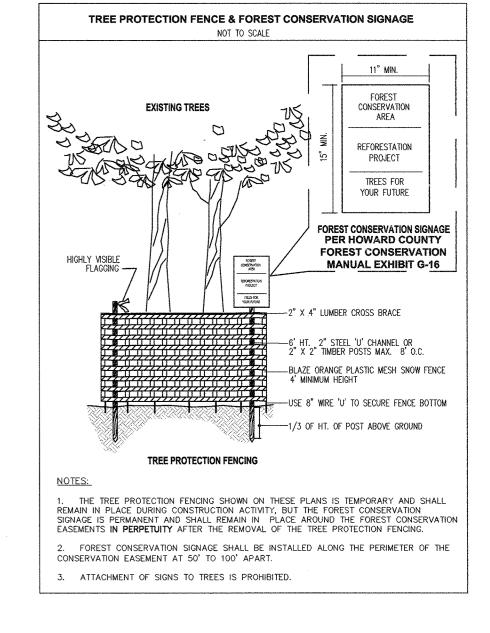
EVERGREEN TREE PLANTING DETAIL



NOTE: ALL SUPPORTING DEVICES (STAKES, WIRES, ETC.) SHALL BE REMOVED AFTER 2 GROWING SEASONS.

DECIDUOUS TREE PLANTING DETAIL FOR PLANTING MATERIAL UP TO 3 1/2" CALIPER

LECTION DISTRICT No. 6



				SCHEDULE-A:	PERIMETER LANDSCAPE	EDGE						
		ADIACENT	TYPE OF	LINEAR FEET OF	CREDIT FOR EXISTING VEGETATION	CREDIT FOR WALL, FENCE OR	NUMBER	OF PLANTS R	EQUIRED.	NUMBER (OF PLANTS P	ROVIDED
PERIMETER	LAND USE	ADJACENT LAND USE	BUFFER	ROADWAY FRONTAGE/ PERIMETER (prior to credits, if any)	(YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	BERM (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
EXTERNAL PERIMETER I	NON-RESIDENTIAL	NON-RESIDENTIAL	'A' Buffer	798'	NO	NO	14	0	0	14	0	0
EXTERNAL PERIMETER 2	NON-RESIDENTIAL	ROADWAY (side)	'B' Buffer	497'	NO	NO	10	13	0	10.	13	0
EXTERNAL PERIMETER 3	NON-RESIDENTIAL	NON-RESIDENTIAL	'A' Buffer	596'	YES, SEE NOTE ON PLAN VIEW SHEET	NO	10	0	0	10	0	0

LAN	DSCAPE MANU	AL, CHAPTE	R IV, TABLE	-1
BUFFER TYPE	LANDSCAPE CHARACTE	R SHADE TREES/LI	EVERGREEN/LF	SHRUBS/LF
Α	LIGHT BUFFER	1:60	0	0
В	MODERATE BUFFER	1:50	1:40	0
C	HEAVY BUFFER	1:40	1:20	0

NO AS-BUILT INFORMATION AS OF OBLIGIZOZO FOREST CONSERVATION and LANDSCAPE DETAILS

SCALE ZONING G. L. W. FILE No. 12060 1'' = 40'M-2GIANT DISTRIBUTION CENTER EXETER INDUSTRIAL PARK TAX MAP - GRID SHEET PARCEL 19 & PARCEL A NOV. 2019 6 OF 13 HOWARD COUNTY, MARYLAND

PLANNING ENGINEERING SURVEYING

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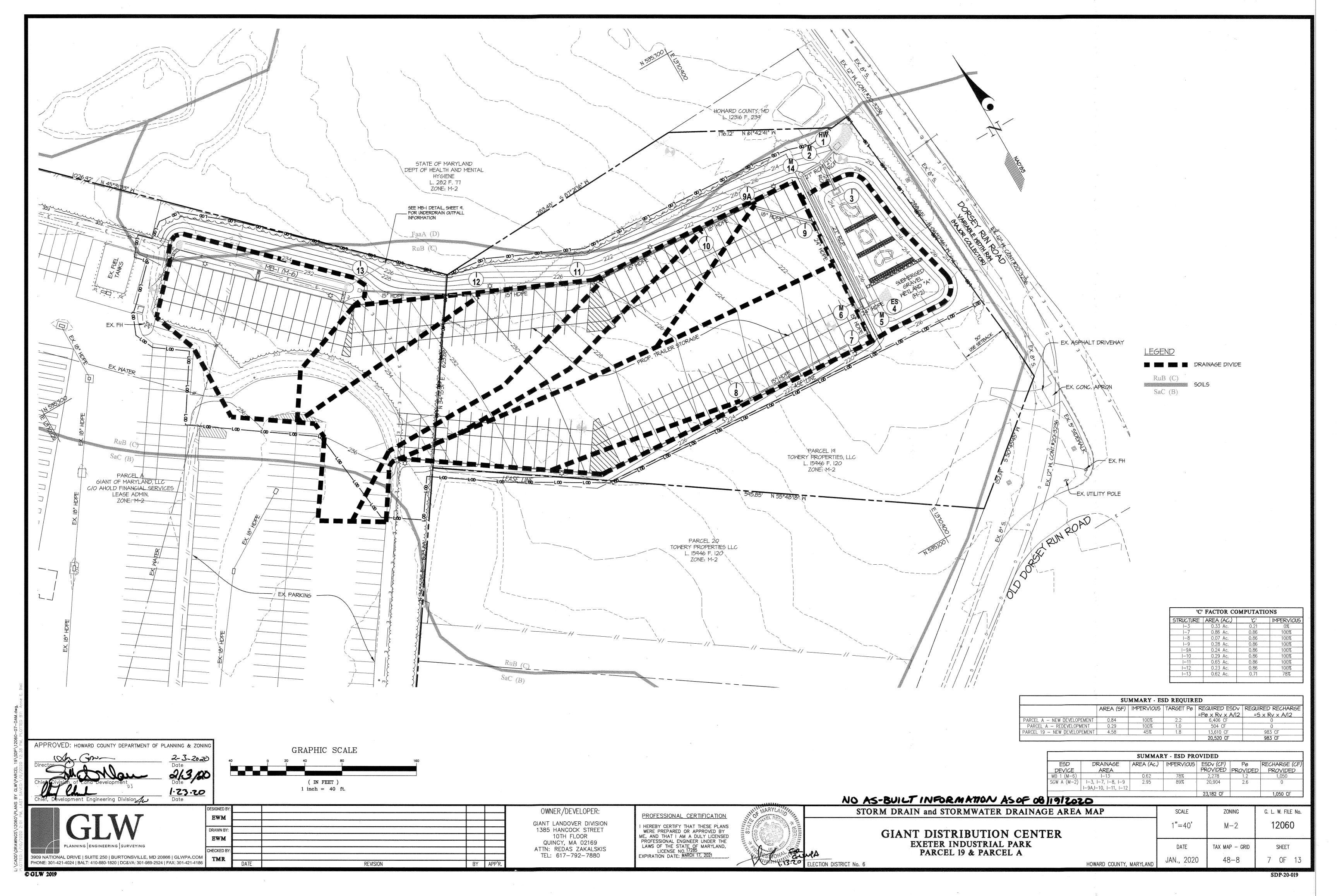
elopment Engineering Division

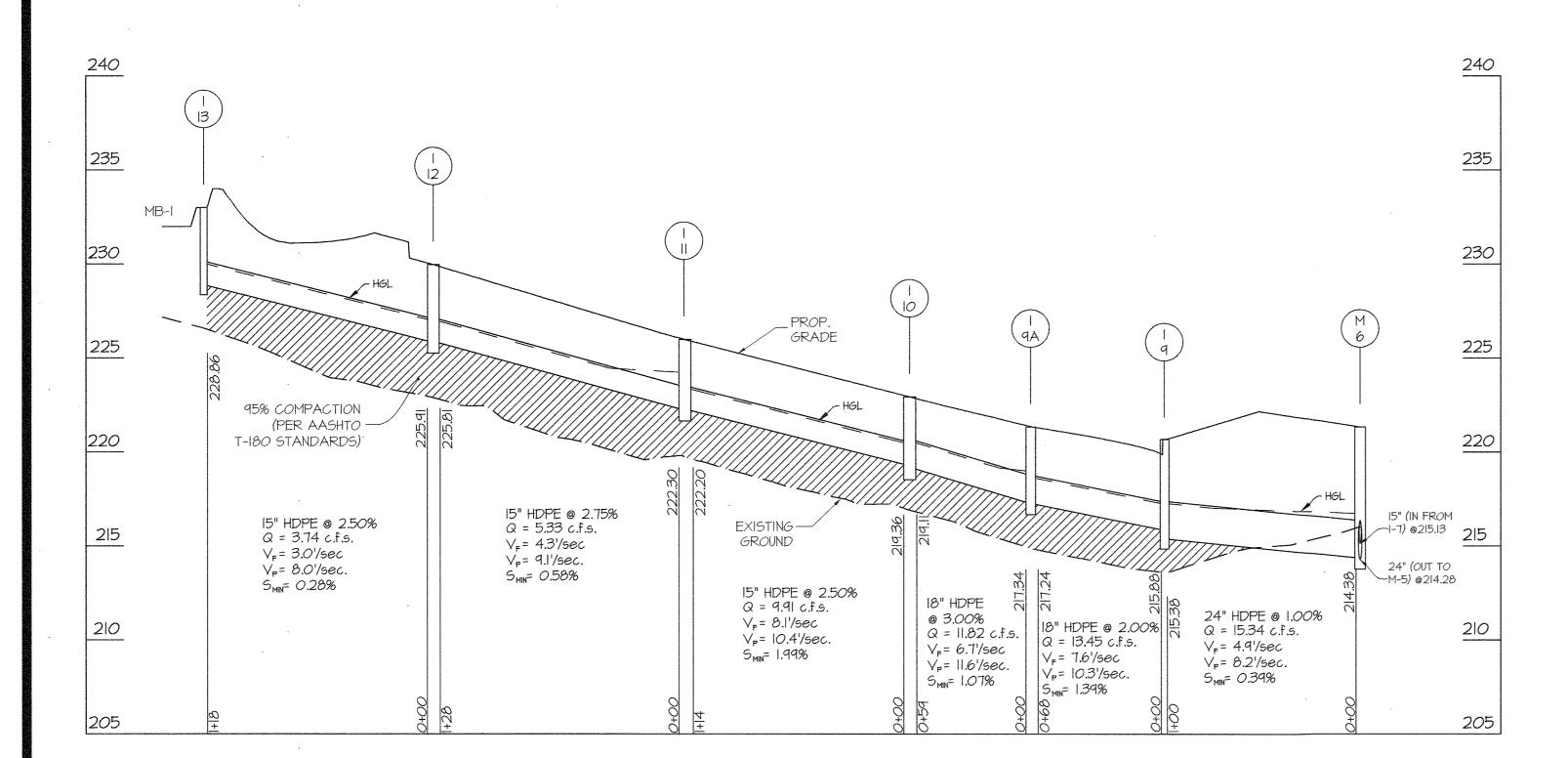
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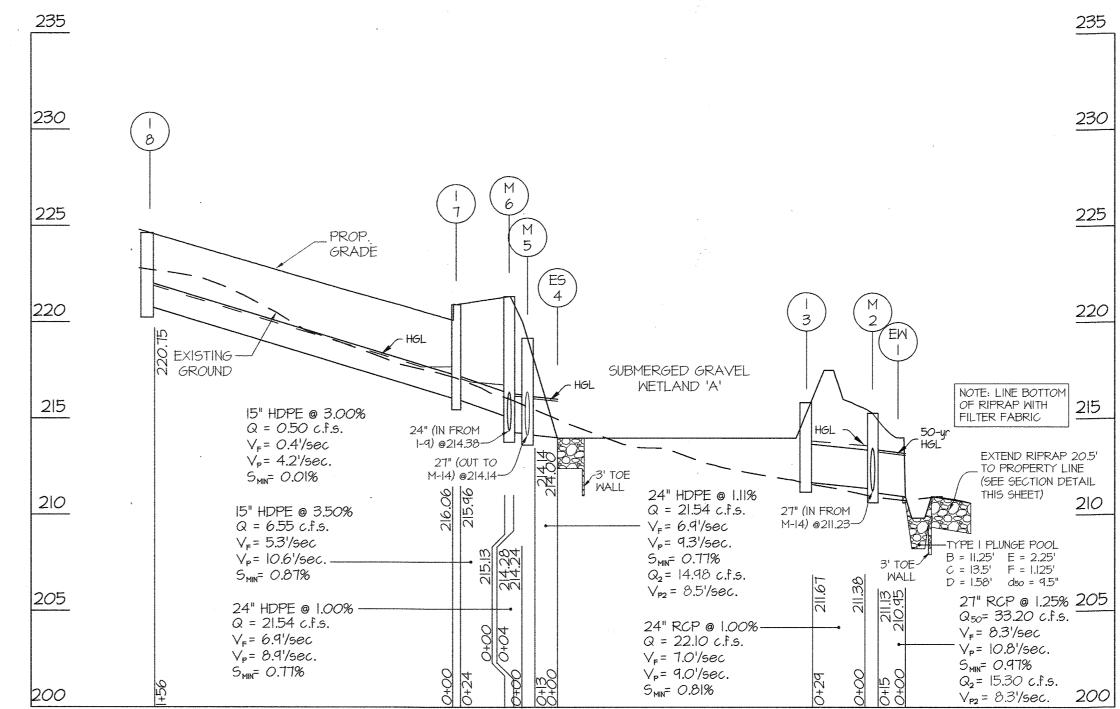
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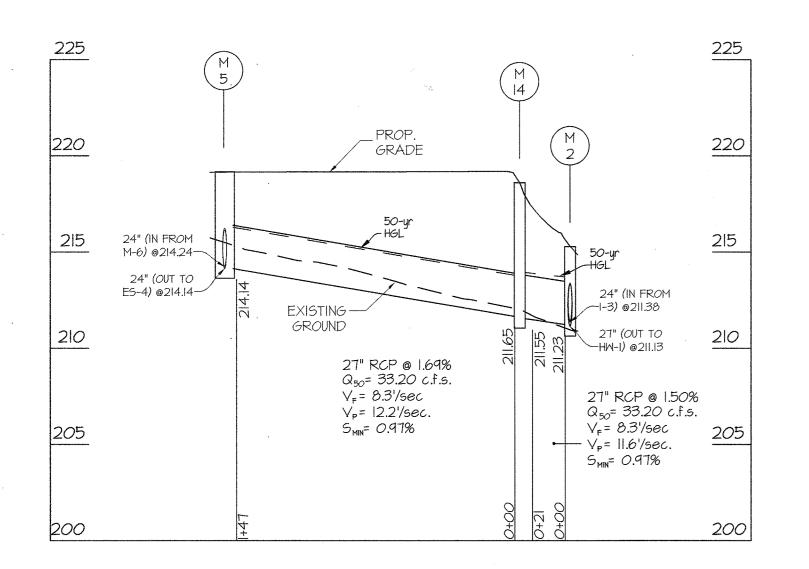
GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR QUINCY, MA 02169 ATTN: REDAS ZAKALSKIS TEL: 617-792-7880

OWNER/DEVELOPER:



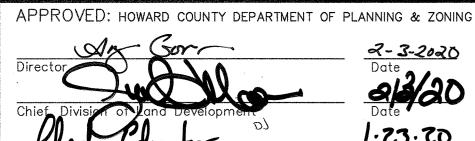


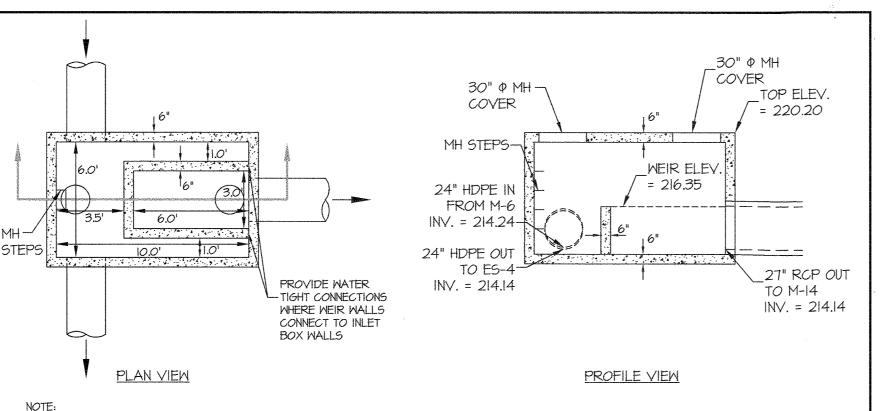




OPERATION AND MAINTENANCE SCHEDULE FOR M-5 (GRAVEL WETLAND CONTROL STRUCTURE - OWNED AND MAINTAINED BY THE GIANT DISTRIBUTION CENTER)

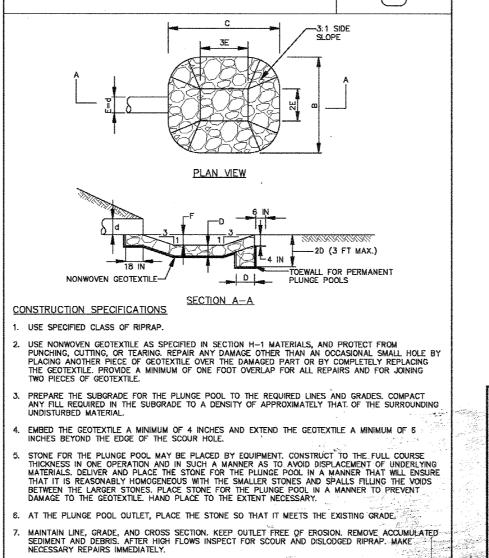
- A. INSPECTIONS SHALL BE PERFORMED SEMI-ANNUALLY AND AFTER HEAVY RAIN EVENTS BY THE OWNER TO CHECK FOR CLOGGING,
- DEBRIS, CRACKS, ETC. B. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR OBSTRUCTIONS. IF OBSTRUCTIONS ARE FOUND, THE OWNER
- SHALL HAVE THEM REMOVED. C. ALL PIPE CONNECTIONS AND JOINTS MUST REMAIN WATER TIGHT. ANY FAILURES IN GROUTING AND/OR SEALANTS MUST BE IMMEDIATELY REPAIRED
- . THE OUTFALL SHALL BE CHECKED FOR DAMAGE AND DEBRIS. . THE OUTFALL RIP-RAP AND BELOW SHALL BE CHECKED FOR



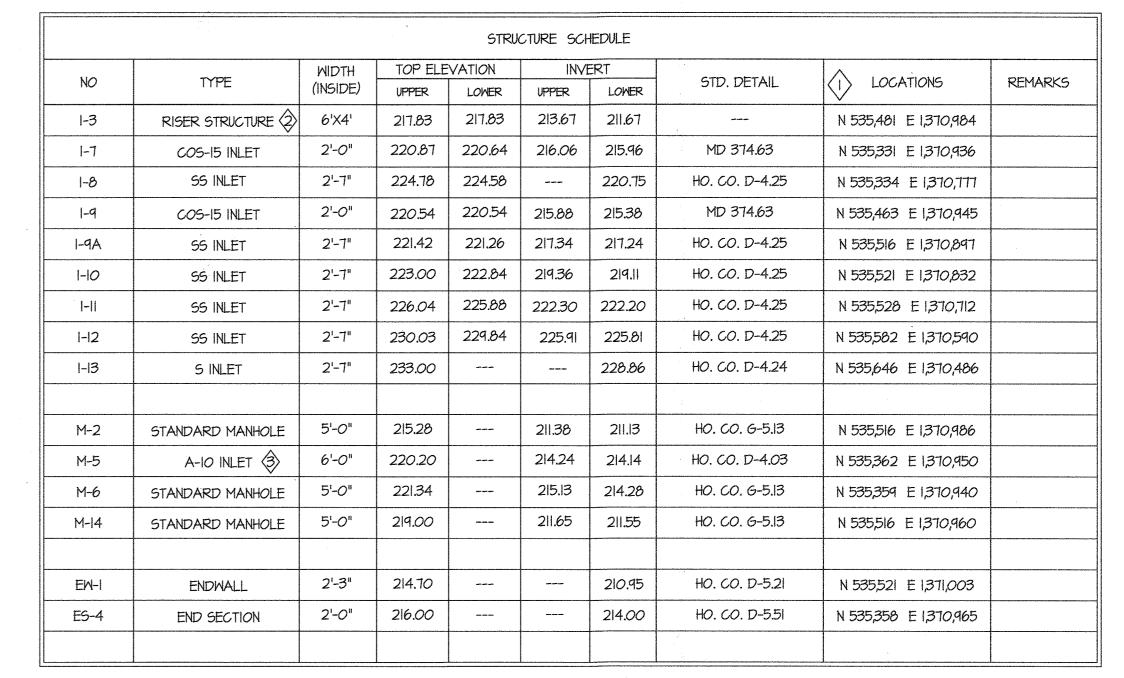


I. STRUCTURE IS TO BE A PRECAST A-IO INLET WITH A 6' WIDTH AND NO THROAT OPENING. SHOP DRAWINGS MUST BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION OF STRUCTURE. CONTRACTOR MAY CAST IN PLACE, PROVIDED THE APPROPRIATE DRAWINGS ARE SUBMITTED TO ENGINEER FOR APPROVAL. 2. STRUCTURE DESIGN AND REINFORCEMENT ARE PER SHOP DRAWINGS.

M-5 SPLITTER STRUCTURE SCALE: I"=5'



DETAIL D-4-2 PLUNGE POOL



- \Diamond COORDINATE POINT GIVEN IS TO THE CENTERLINE OF THE STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTER OF STRUCTURE FOR MANHOLES AND END SECTIONS.
- (2) SEE SHEET II FOR RISER STRUCTURE DETAILS
- 3 SEE DETAIL, THIS SHEET, FOR ADDITIONAL STRUCTURE INFORMATION

	PIPE	SCHEDULE	
SIZE	TYPE	QUANTITY (I.f.)	REMARKS
15"	HDPE	540	
18"	HDPE	127	
24"	HDPE	117	
24"	RCP IV	29	
27"	RCP IV	183	

: ·	II.25'	
	7.25'	
1.58'		
	RIPRAP EXTENSION SECTION	
	SCALE: I*=5'	

		RIP RAP INF	ORMATION		
STRUCTURE	CLA55	LENGTH	D ₅₀	D _{loo}	THICKNESS
EW-I	CLASS I	34'	95 "	15"	19"
ES-4	CLASS I	14'	45"	15"	19"

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EWM JRC CHECKED BY TMR DATE REVISION BY APP'R.

OWNER/DEVELOPER: GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR QUINCY, MA 02169 ATTN: REDAS ZAKALSKIS TEL: 617-792-7880

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 17285
EXPIRATION DATE: MARCH 17, 2021

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

ELECTION DISTRICT No. 6

NO AS-BULT INFORMATION AS OF 08/19/20	20			
STORM DRAIN PROFILES		SCALE	ZONING	G. L. W. FILE No.
GIANT DISTRIBUTION CENTER	R	1"=50' (H) 1"=5' (V)	M-2	12060
EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A		DATE	TAX MAP — GRID	SHEET
CTION DISTRICT No. 6	HOWARD COUNTY, MARYLAND	JAN., 2020	48–8	8 OF 13

- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING, ACCEPTABLE REPLACEMENT PLANT MATERIAL IS
- LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.I AND 2. THE OWNER SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND
- SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
- THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE UNDERDRAINS WITHIN THE BIO-RETENTION
- THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL STORM DRAIN PIPES AND STRUCTURES WITHIN PUBLIC EASEMENTS.

STORMWATER MANAGEMENT GENERAL NOTES:

THE STORMWATER MANAGEMENT OBLIGATION WAS MET WITH ESD PRACTICES INCLUDING: MICRO-BIORETENTION (M-6) AND SUBMERGED GRAVEL WETLAND (M-2).

2. THE ESD PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE GIANT DISTRIBUTION CENTER.

THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

3. IN ADDITION TO STANDARD MDE REQUIREMENTS, THE CONTRACTOR SHOULD BE PREPARED TO DEWATER EXCAVATIONS AND MAINTAIN TRAFFICABILITY OF THE SWM AREAS DURING CONSTRUCTION, ALL EXCAVATIONS SHOULD BE PROPERLY SHORED AND SUPPORTED IN ACCORDANCE WITH THE LATEST OSHA REQUIREMENTS. IF INFILTRATION FACILITY AREAS ARE EXCAVATED USING A LOADER. THE CONTRACTOR SHOULD USE WIDE-TRACK OR LIGHTWEIGHT EQUIPMENT WITH TURE TIRES TO MINIMIZE COMPACTION OF THE SUBGRADE SOILS. EXCESSIVE COMPACTION WITHIN THE INFILTRATION AREA WILL RESULT IN POOR PERFORMANCE OF THE FACILITIES. THE BASE OF THE INFILTRATION FACILITIES SHOULD BE TILLED TO A DEPTH OF 12 INCHES TO ALLEVIATE ANY COMPACTION OF THE SUBGRADE BY EXCAVATION EQUIPMENT, BACKFILL OF THE INFILTRATION FACILITIES SHOULD BE PERFORMED N ACCORDANCE WITH MDE GUIDELINES.

GENERAL NOTES . MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.I.

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA: SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)ORGANIC MATTER 1.5 - 4% (BY

- WEIGHT) ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY
- SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%). CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%. PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE
- SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

T IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER, THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE, SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER, ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER, PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE.

WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 124 TO 184. DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

. UNDERDRAINS UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

- PIPE- SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28, OR
- AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE). PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A
- MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4X4) GALVANIZED HARDWARE CLOTH GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 34 THICK ABOVE AND BELOW THE
- UNDERDRAIN. THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 44 LAYER OF PEA GRAVEL (1/84 TO 3/84 STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 244

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

EWM

DRAWN B'

EWM

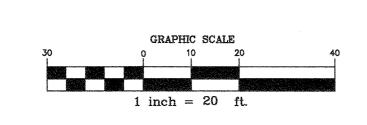
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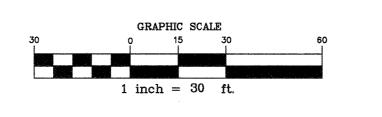
TMR

DATE

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 1.23.20





BY APP'R.

REVISION

APPENDIX B.I.I. - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)

SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)

THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTIONS AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERCEDE.

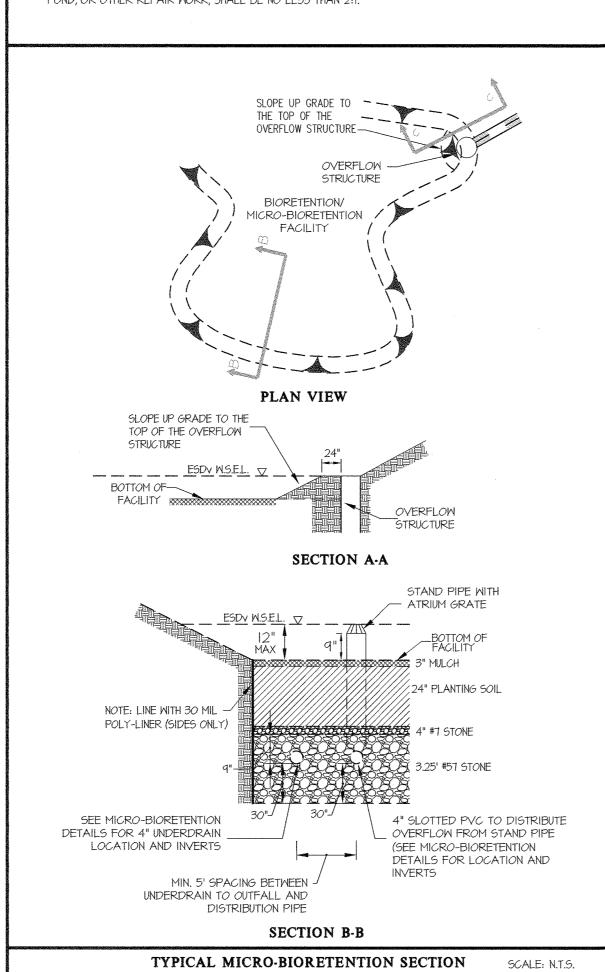
- IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, I DAM CORE WITH A SHELL MAY BE USED. THE CROSS-SECTION OF THE STORMWATER FACILITY SHOULD SHOW THE LIMITS OF THE DAM CORE (UP TO IO-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
- IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-180), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 92% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM.
- FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIEY COMPACTION IN ACCORDANCE WITH THE SELECTED TEST METHOD. THIS INFORMATION NEEDS TO BE PROVIDED IN A REPORT TO THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS,
- A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SERVICE MD-342 OR THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PERMANENT SEEDING, SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL
- GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MDE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA

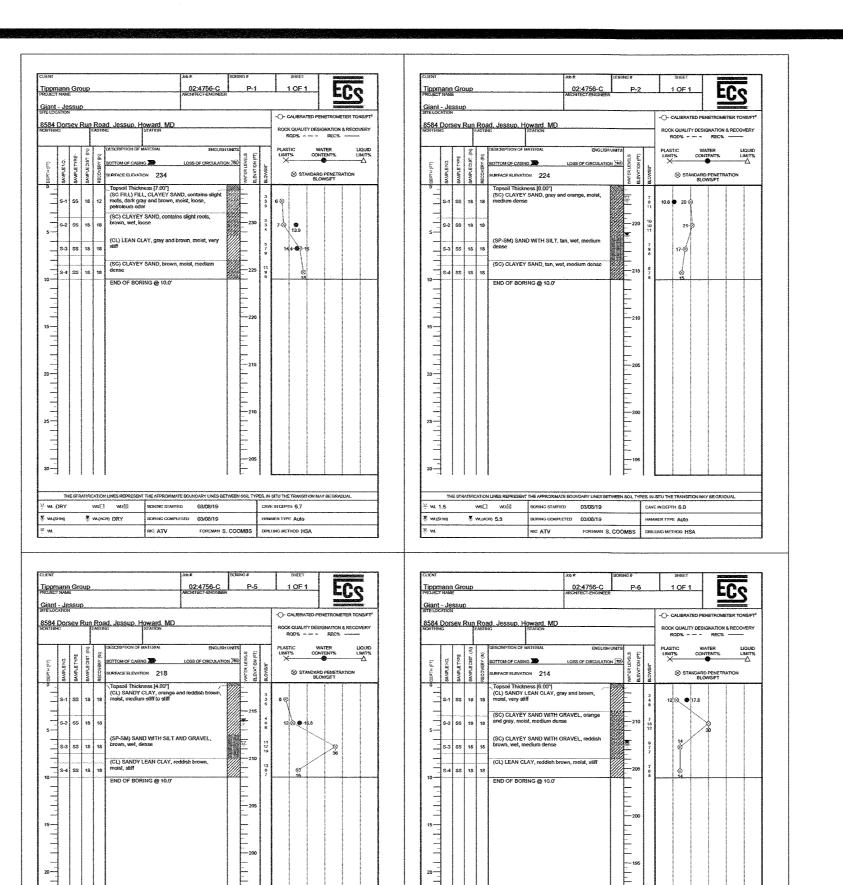
AMOCO 4552 CARTHAGE FX-70S GEOLON NTO MIRAFI 180-N WEBTEC NOT

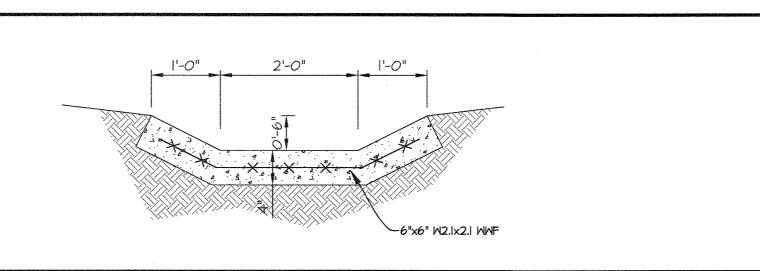
ENTIRE LENGTH OF THE EMBANKMENT.

THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURES OF THE 1997 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED

- A RULE OF THUMB TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMENT POND IS AS FOLLOWS: PROVIDE CALCULATION OF 10H + 20 FEET = L. WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L. DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE
- EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%. THE DESIGN ENGINEER AND GEOTECHINCAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE
- SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION, FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NRCE PUBLICATION TR-18. FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE
- THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1
- . THE SIDE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1



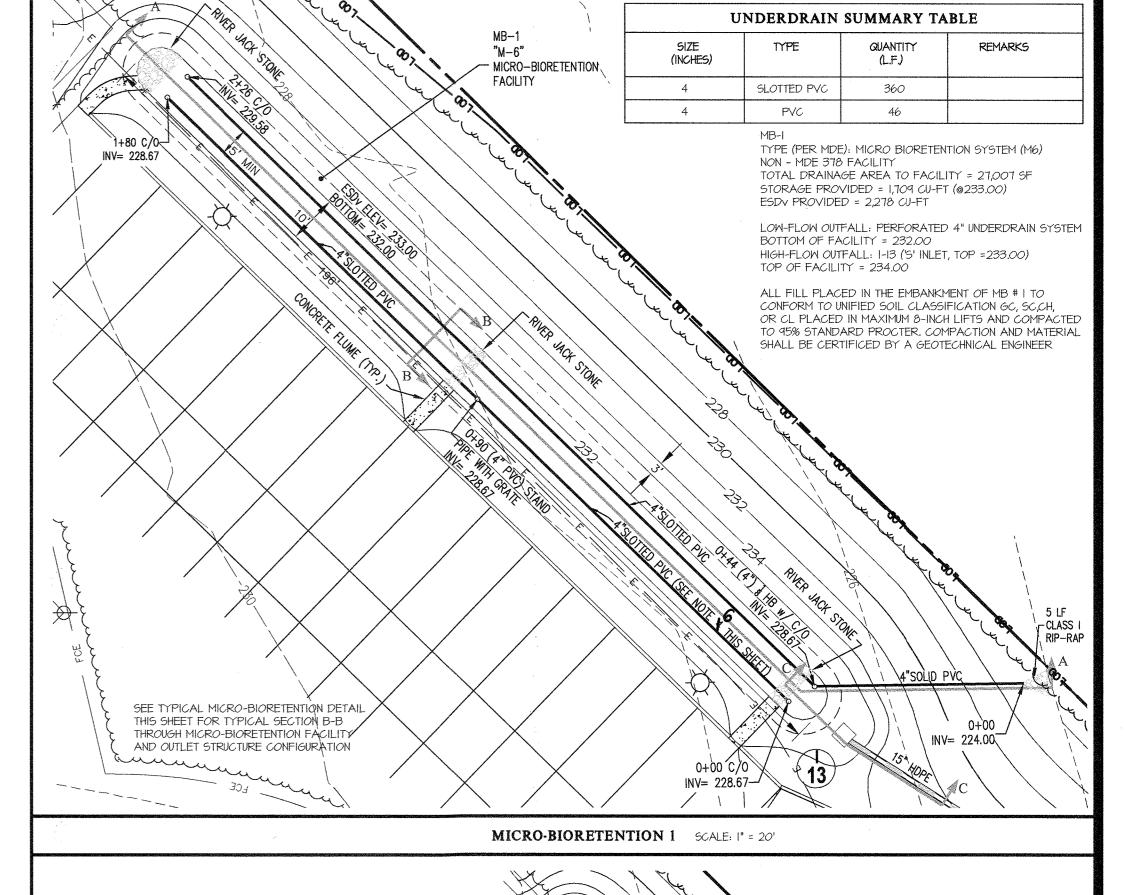


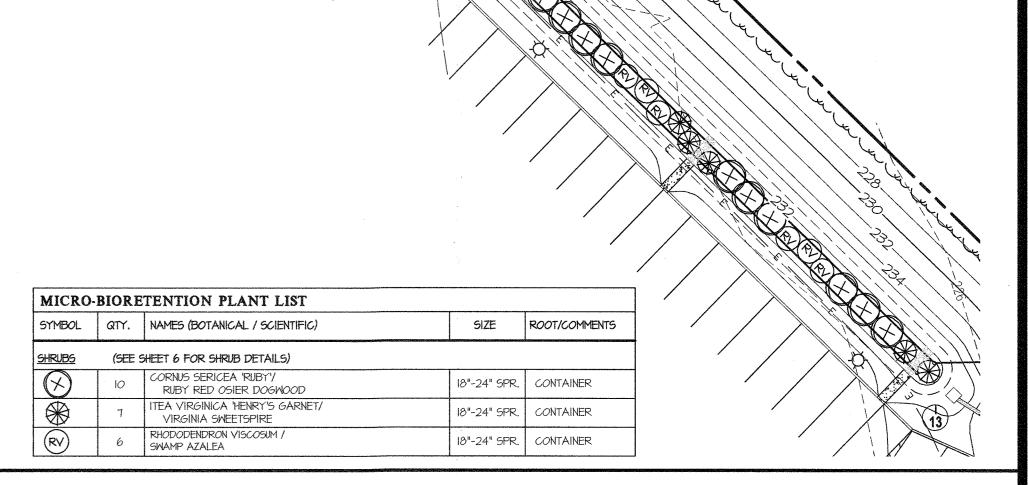


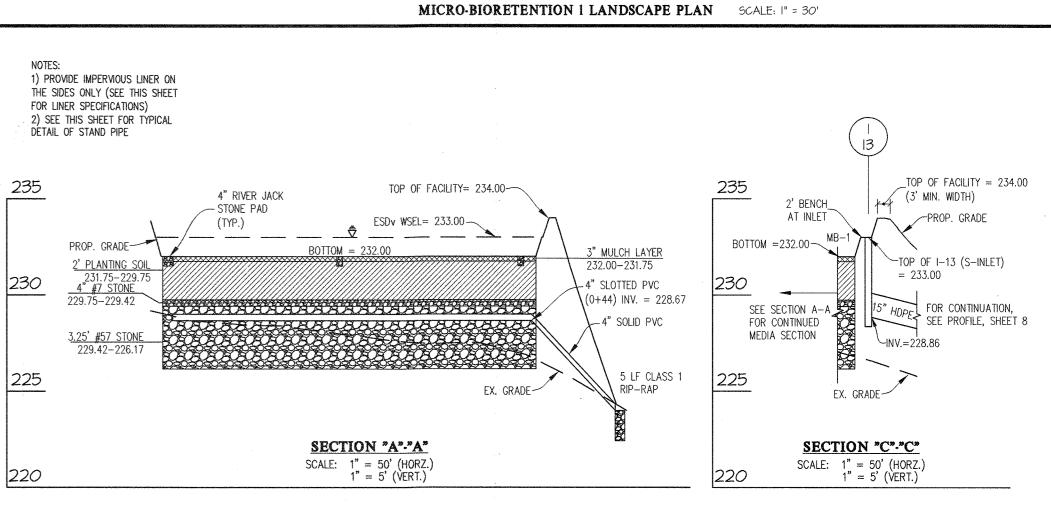
WS□ WOW SORING STARTED 03/09/19

RING COMPLETED 03/09/19

SCALE: N.T.S.







SEE AS-BUILT SHEET ZOF 4 08/19/2020

ECTION DISTRICT No.

MICE	O-BIORETENTION 1 (M-6) DI	ETAILS		
STORMWATER MANAGEMENT PLAN		SCALE	ZONING	G. L. W. FILE No.
GIANT DISTRIBUTION CENTER		1"=40'	M-2	12060
EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A		DATE	TAX MAP — GRID	SHEET
	HOWARD COUNTY, MARYLAND	JAN., 2020	48-8	9 OF 13

OWNER/DEVELOPER: PROFESSIONAL CERTIFICATION GIANT LANDOVER DIVISION HEREBY CERTIFY THAT THESE PLANS 1385 HANCOCK STREET WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, ATTN: REDAS ZAKALSKIS TEL: 617-792-7880

10TH FLOOR

QUINCY, MA 02169

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES, IN SITU THE TRANSITION MAY BE GRADUAL.

BORING COMPLETED 03/08/19

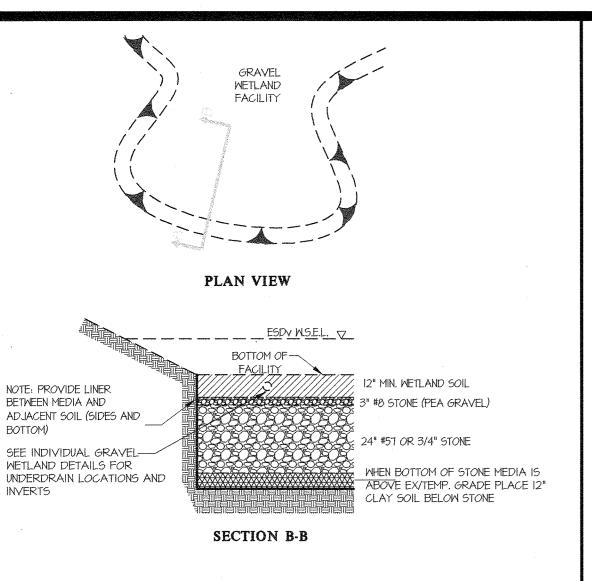
HAMMER TYPE ALEO

TYPICAL CONCRETE FLUME SECTION

WSC WO⊠ BORING STARTED 03/08/19

LICENSE NO. 17285 EXPIRATION DATE: MARCH 17, 2021

909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186



GENERAL NOTES

I. WETLAND SOIL SEE SPECIFICATIONS, THIS SHEET.

2. POND LINER IF GEOTECHNICAL TESTS CONFIRM THE UNDERLYING EXISTING SOIL CANNOT SUSTAIN A PERMANENT POOL OF WATER, A LINER MAY BE NEEDED. ACCEPTABLE LINER OPTIONS INCLUDE: (A) 6 TO 12 INCHES OF CLAY SOIL (MINIMUM 15% PASSING THE #200 SIEVE AND A MAXIMUM PERMEABILITY OF IXIO-5 CM/SEC, (B) A 30 MIL POLY-LINER, OR (C) BENTONITE.

TVDICAL CDAVEL	WETLAND SECTION	CCALE NIEC
TITICAL ORAYEL	WEILAND SECTION	SCALE: N.T.S.

SUBMERGED WETLAND GENERAL NOTES

1. <u>WETLAND SOIL</u>
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES, NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE GRAVEL WETLAND PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE WETLAND SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

- THE WETLAND SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA: • SOIL COMPONENT - SILTY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT MINIMUM 15% BY DRY WEIGHT (ASTM D 2974). THIS CAN BE MET BY USING LEAFGRO COMPOST (LEAFGRO.COM), LEAFGRO GOLD, OR SIMILAR CERTIFIED PRODUCT.
- CLAY CONTENT MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 15%. • PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

2. <u>PLANT MATERIAL</u> SEE PLANT LIST, THIS SHEET, FOR RECOMMENDED SUBMERGED GRAVEL WETLAND PLANTING.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT CONSISTENTLY MOIST AND IN A SHADED AREA UNTIL PLANTED. PLANTS DELIVERED TO THE SITE SHOULD BE PLANTED THE SAME DAY. PLANTING HOLES SHALL BE OF PROPER DEPTH SHALL BE PLANTED LEVEL WITH EXISTING SOIL GRADE. BE CERTAIN THAT SOIL IS PLACED AROUND EACH PLANT AND FIRMED INTO PLACE TO FILL IN AIR POCKETS NEAT THE ROOTS TO PREVENT THE ROOTS FROM DRYING OUT. PLANTS ALLOWED TO FLOAT TO THE SURFACE FOLLOWING INSTALLATION SHALL RESULT IN REJECTION OF THE INSTALLATION. THOROUGHLY SOAK PLANTED AREA WITH WATER UNTIL SOIL IS MOIST TO A DEPTH OF 4 INCHES.

4. <u>UNDERDRAINS</u> UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

BED WHEN BED THICKNESS EXCEEDS 24"

- PIPE- SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 158, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR
- PERFORATIONS IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4X4)
- GALVANIZED HARDWARE CLOTH GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO
- PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER. A 4" LAYER OF PEA GRAVEL (&" TO 3" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF

MISCELL ANEOUS THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

TOTAL DRAINAGE AREA TO FACILITY (I-YR) = 2.95 AC UNDERDRAIN SUMMARY TABLE TOTAL DRAINAGE AREA TO FACILITY (IO-YR) = 3.57 AC TOTAL ESDV PROVIDED = 19,944 CU-FT REMARKS (INCHES) LOW-FLOW OUTFALL: SLOTTED 6" UNDERDRAIN SYSTEM W 4" ORIFICE 6 SLOTTED PVC 202 BOTTOM OF FACILITY = 214.00 HIGH-FLOW OUTFALL: RISER STRUCTURE (1-3) PVC 10 YR WSEL = 216.46 TOP OF FACILITY = 217.50 **EXTENDED** TO PROPERTY LINE PLUNGE POOL END CORE 5' WIDE PEA GRAVEL WINDOW__ 6. C/O 7 DARAGES SGW-A SUBMERGED GRAVEL WETLAND BEGIN CORE -TRENCH

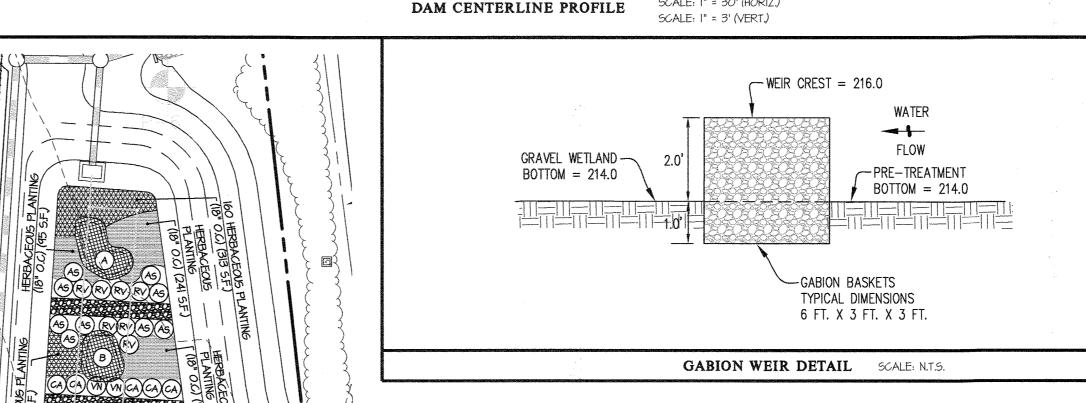
SUBMERGED GRAVEL WETLAND A SCALE: I" = 20'

TYPE (PER MDE): SUBMERGED GRAVEL WETLAND (M-2)

NON - MDE 378 FACILITY

220 FACILITY=217.50 TOP OF STRUCTURE=217.83 -GABION LEVEL SPREADER -215 GRAVEL EMBANKMENT FILL AND CORE TRENCH TO CONFORM TO 12" MIN. WETLAND SOIL UNIFIED SOIL CLASSIFICATION (SEE PLAN FOR LOCATIONS) 214.00-213.00 GC, SC, CH, OR CL AND PLACED IN A MAXIMUM 8-INCH LIFT, 3" #8 PEA GRAVEL 213.00-212.75 / AND COMPACTED TO NOT LESS THAN 95% STANDARD PROCTER. 24" #57 STONE 212.75-210.75 IT SHALL BE WITNESSED BY AS GEOTECHNICAL ENGINEER 210 IMPERVIOUS LINER -(SEE DETAILS THIS --- ANTI-SEEP COLLAR VERTICAL COLLECTION PIPE -SEE DTL. SHEET 11 SLOTTED IN GRAVEL ONLY 6" SLOTTED PVC (HORIZONTAL COLLECTION) CLAY CORE TRENCH

SCALE: I" = 30' (HORIZ.) SECTION 'A'-'A' SCALE: I" = 3' (VERT.) 220 TOP OF DAM=217.50 $\sqrt{}$ 10-YR. WSEL=TOP OF CORE=216.46 $\overline{\nabla}$ ESDv WSEL= 216.00 215 210 NOTE: FILL MATERIAL FOR THE EMBANKMENT SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. 0+00



	SYMBOL	QUANT.	NAME (Botanical/Common)	Comments
		273	Carex stricta / Tussock Sedge	Mixture of 80% Carex & 20% Lobelia
		68	Lobelia cardinalis / Cardinal Flower	evenly distributed. Total of 341 plugs at 18"o.c. evenly spaced.
		100	Helianthus angustifolius / Swamp Sunflower	Plugs @ 18" o.c. (evenly spaced)
		298	Iris veriscolor / Blue Flag Iris	4"pot @ 18" o.c. (evenly spaced)
	A	112	Scirpus pungens / Common Three-square	Plugs @ 18" o.c. (evenly spaced)
`\	В	89	Scirpus tabernaemontani (S. validus) / Soft Stem Bulrush	Plugs @ 18" o.c. (evenly spaced)
	AS	17	Alnus serrulata / Smooth Alder	#1 container
	(CA)	10	Clethra alnifolia / Sweet Pepperbush	#1 container
ک ۲	RV	10	Rhododendron viscosum / Swamp Azalea	#1 container
7	(VN)	5	Viburnum nudum / Possumhaw Viburnum	#1 container

SUBMERGED GRAVEL WETLAND LANDSCAPE PLAN SEE AS-BUILT SHEET 3 OF 4 08/19/2020

SCALE: I" = 30'

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SUBMERGED GRAVEL WETLANDS (M-2)

- DURING THE FIRST YEAR OF OPERATION, THE OWNER SHALL INSPECT THE FACILITY AFTER EVERY HEAVY STORM AND REPLACE VEGETATION AS NEEDED.
- THE OWNER SHALL REMOVE SEDIMENT ACCUMULATED IN THE PRETREATMENT AREAS AS
- SIGNS OF UNEVEN FLOW WITHIN THE WETLAND MAY MEAN THAT THE GRAVEL OR
- UNDERDRAIN IS CLOGGED. THE GRAVEL OR UNDERDRAIN SHALL BE REMOVED, CLEANED, AND REPLACED, AS NEEDED BY THE OWNER.
- THE OWNER SHALL ENSURE A DENSE STAND OF WETLAND VEGETATION IS MAINTAINED THROUGH THE LIFE OF THE FACILITY AND REPLACE VEGETATION AS NEEDED.
- THE OWNER SHALL ENSURE THE INLETS AND OUTLETS TO EACH GRAVEL WETLAND CELL ARE FREE FROM DEBRIS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 2-3-20-20



OPERATION AND MAINTENANCE SCHEDULE FOR 1-3 (GRAVEL WETLAND CONTROL STRUCTURE)

- A. INSPECTIONS SHALL BE PERFORMED SEMI-ANNUALLY AND AFTER ANY HEAVY RAIN EVENTS BY THE OWNER TO CHECK FOR CLOGGING, DEBRIS, CRACKS, ETC.
- B. ALL PIPE CONNECTIONS AND JOINTS MUST REMAIN WATERTIGHT. ANY FAILURES IN
- GROUTING AND/OR SEALANTS MUST BE IMMEDIATELY REPAIRED.
- C. THE AREA ON AND AROUND THE STRUCTURE SHALL BE CLEANED, CLEARED, AND MOWED. D. THE OUTFALL SHALL BE CHECKED FOR DAMAGE AND DEBRIS.
- E. THE OUTFALL RIP-RAP AND BELOW SHALL BE CHECKED FOR EROSION.



1.23.20

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4186

EWM EWM CHECKED BY TMR REVISION DATE BY APP'R.

OWNER/DEVELOPER: GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR QUINCY, MA 02169 ATTN: REDAS ZAKALSKIS TEL: 617-792-7880

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 17285
EXPIRATION DATE: MARCH 17, 2021

(18" O.C) (136 S.F.)

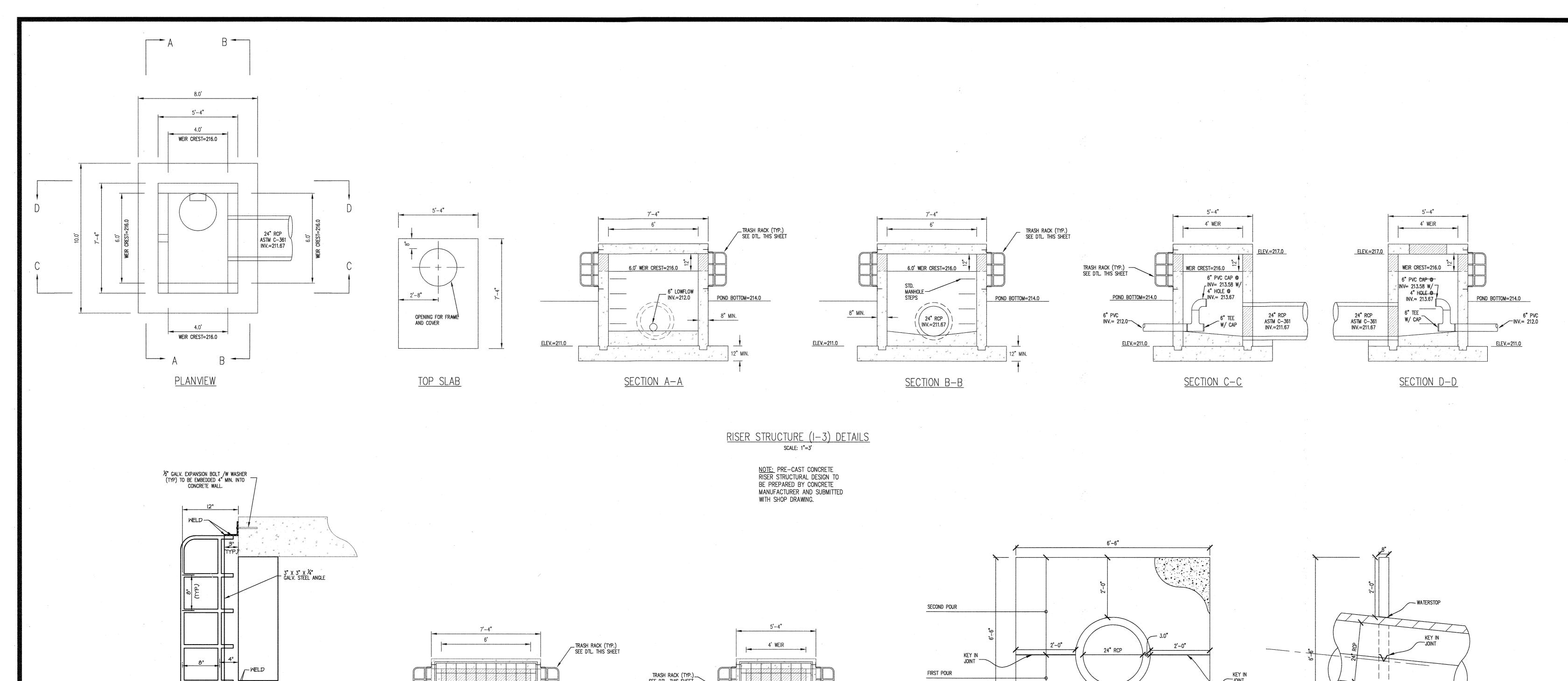
ELECTION DISTRICT No. 6

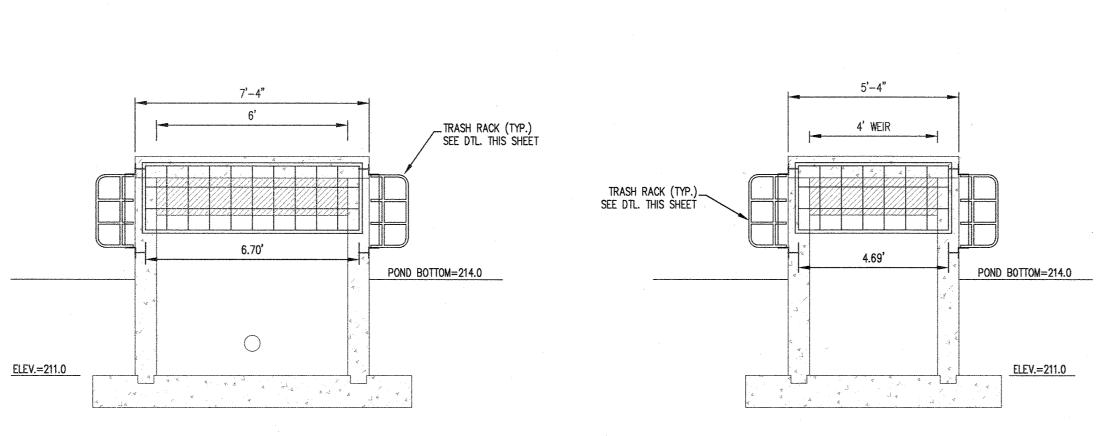
STORMWATER MANAGEMENT PLAN

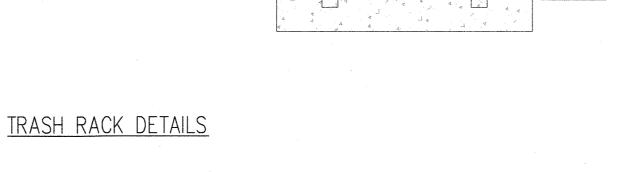
GIANT DISTRIBUTION CENTER EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A

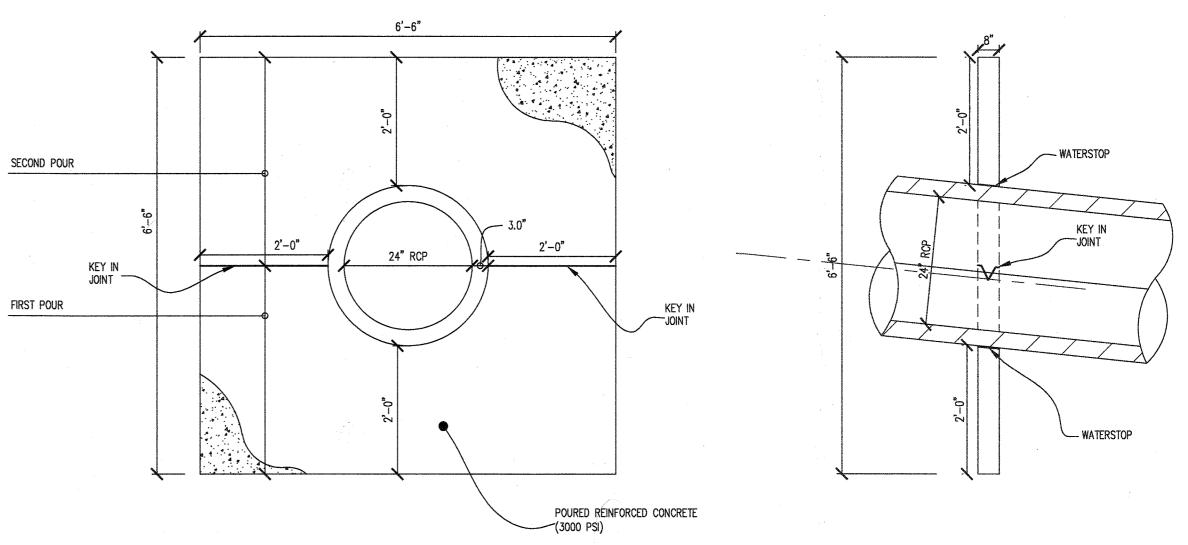
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·	SCALE	ZONING	G. L. W. FILE No.
	AS SHOWN	M-2	12060
	DATE	TAX MAP — GRID	SHEET
HOWARD COUNTY, MARYLAND	JAN., 2020	48-8	10 OF 13

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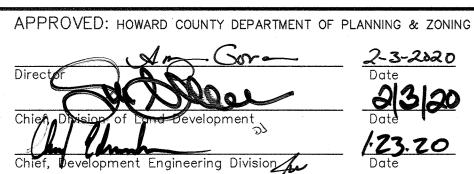








ANTI-SEEP COLLAR DETAIL



EX. 3" X 3" X ¼"——/ GALV. STEEL ANGLE

TRASH RACK DETAIL (TYPICAL)

N.T.S.

½" GALV. EXPANSION BOLT /W ―/ WASHER (TYP) TO BE EMBEDDED 4" MIN. INTO CONCRETE WALL.

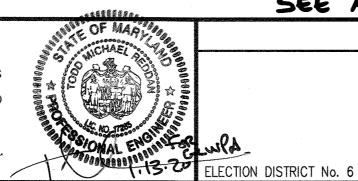
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3909 NATIONAL DRIVE SUITE 250 BURTONSVILLE, MD 20866 GLWPA.C PHONE: 301-421-4024 BALT: 410-880-1820 DC&VA: 301-989-2524 FAX: 301-421-	\$ 1.1VL 1

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	DESIGNED BY			Commence		
	EWM					
	DRAWN BY:					
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1186	2 2122	DATE	REVISION	BY	APP'R.	
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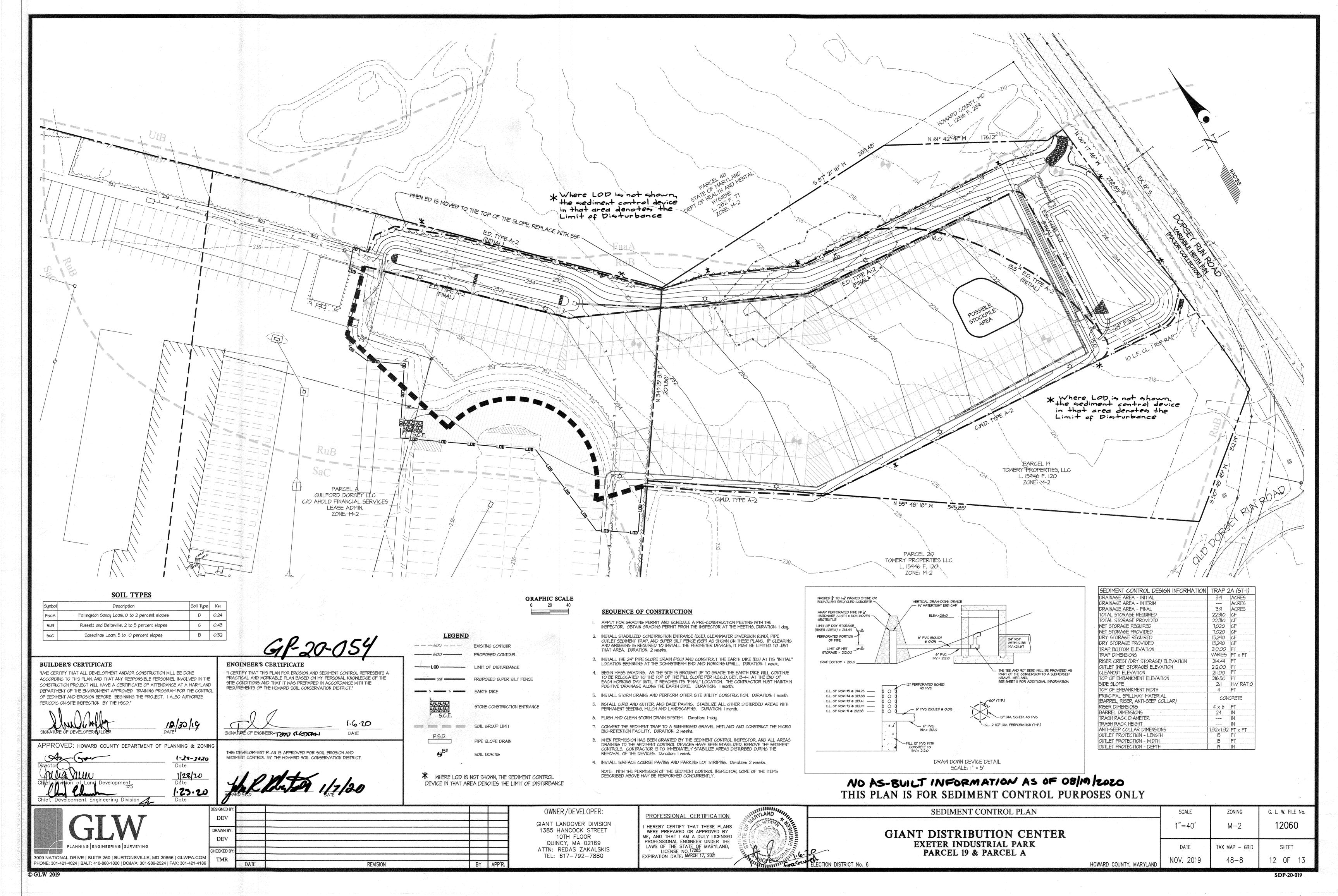
OWNER/DEVELOPER:
GIANT LANDOVER DIVISION 1385 HANCOCK STREET
10TH FLOOR
QUINCY, MA 02169
ATTN: REDAS ZAKALSKIS TEL: 617-792-7880
ILL. 01/-/92-/000

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS
WERE PREPARED OR APPROVED BY
ME, AND THAT I AM A DULY LICENSED
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SEE AS BUILT SHEET 40F4 08/19/2020				
STORMWATER MANAGEMENT DETAILS		SCALE	ZONING	G. L. W. FILE No
GIANT DISTRIBUTION CENTER		AS SHOWN	M-2	12060
EXETER INDUSTRIAL PARK PARCEL 19 & PARCEL A		DATE	TAX MAP - GRID	SHEET
N DISTRICT No. 6	HOWARD COUNTY, MARYLAND	JAN., 2020	48-8	11 OF 13



B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING and B-4-2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION. THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONDITIONS WHERE PRACTICE APPLIES WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA A. SOIL PREPARATION I. TEMPORARY STABILIZATION A. SEEDING SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROW OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS . ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAY LOOSENED. IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED ALL SEED MUST BE SUBJECT TO RE—TESTING BY A RECOGNIZED SEED LABORATORY CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY) THE CONTOUR OF THE SLOPE PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER T TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS. . INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES OTHER SUITABLE MEANS. ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST E . PERMANENT STABILIZATION INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURE a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE: FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DAY INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE I. SOIL PH BETWEEN 6.0 AND 7.0. PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM). AND MAKE THE INOCULANT LESS EFFECTIVE. III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS. A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE. . APPLICATION IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED OF TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE—SPECIFIC SEEDING SUMMARIES. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON TH HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT. APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED SUITABLE MEANS RAKE LAWN AREAS TO SMOOTH THE SURFACE REMOVE LARGE OBJECTS MUST BE FIRM AFTER PLANTING. ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY LIKE STONES AND BRANCHES. AND READY THE AREA FOR SEED APPLICATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN T HALF THE SEEDING RATE IN EACH DIRECTION. SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE SEED AND FERTILIZER) TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION UNNECESSARY ON NEWLY DISTURBED AREAS. RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE. ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION. iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS TH ANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFIL B. MULCHING ECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS. E ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. HE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM. OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL CIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, TOPSOIL MUST NOT A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER. . TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OF SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL. TOPSOIL APPLICATION 2. APPLICATION . EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. . UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A

MINIMUM THICKNESS OF 4 INCHES, SPREADING IS TO BE PERFORMED IN SUCH A MANNER

HAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL

FORMATION OF DEPRESSIONS OR WATER POCKET

SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

10W___

TO THE PLACEMENT OF TOPSOIL.

REPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM

CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY

SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION

MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL

FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR

FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY

LIME MATERIALS MUST BE GROUND HIMESTONE (HYDRATED OR BURNT LIME MAY BE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT

RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OF

LABORATORY, SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR

CCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR

APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY

SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL

OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH

LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3

EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE

AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR

) 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. WHERE THE SUBSOIL IS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Development

nent Engineering Division

1-29-2020

.23.20

Date

FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO

FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE

OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE

TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY

. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYF. OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. . WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE

MULCHING

<u>DEFINITION</u>

CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

APPROPRIATE COLOR TO FACILITATE VISUAL THAT WILL PROVIDE AN INSPECTION OF THE UNIFORMLY SPREAD SLURRY. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM USPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEF FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON

AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS. WORM MATERIAL MUST NOT CONTAIN FLEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER

APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

1. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE TH APPLICATION RATE TO 2.5 TONS PER ACRE.

:: WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER . ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST FFFECTIVE ON LARGE AREAS. BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, HIS PRACTICE SHOULD FOLLOW THE CONTOUR. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD ELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD

CELLULOSE FIBER PER 100 GALLONS OF WATER. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-7 PETROSET, TERRA TAX II, TERRA MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

"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."

ENGINEER'S CERTIFICATE

SIGNATURE OF ENGINEER

TODO LEDDIAN

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:

B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES

OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE THORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGAENCY IS

ELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE OORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO TH PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE

ACCORDANCE WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). ÎFMPORARY ŜTABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIÊD BETWEFN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN, INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).

ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID. SITE ANALYSIS:

4.3± Acres

2.8± Acres

1.5± Acres

314 Cu. Yds.

28,285 Cu. Yds.

AREA DISTURBED

RECORDED PRECIPITATION'

PHOTOGRAPHS

EVIDENCE OF SEDIMENT DISCHARGES

IDENTIFICATION OF PLAN DEFICIENCIE

WORKDAY, WHICHEVER IS SHORTER.

HSCD-APPROVED FIELD CHANGES

PERIODS (INCLUSIVE):

USF I AND IP MARCH 1 - JUNE

USE IV MARCH 1 - MAY 3

USE III AND IIIP OCTOBER 1 - APRIL 30

AVAILABLE WHEN THE SITE IS ACTIVE

BUILDER'S CERTIFICATE

INSPECTION BY THE HSCD."

TOTAL CUT

AREA TO BE ROOFED OR PAVED

AREA TO BE VEGETATIVELY STABILIZED

OFF-SITE WASTE/BORROW AREA LOCATION : to be determined

INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)

IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE

MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED

ASSOCIATED WITH CONSTRUCTION ACTIVITIES" (NPDES, MDE).

IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS

ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR

ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID.

AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST

BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND /OR CURRENT

COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION

OTHER INSPECTION ITEMS AS REQUIRED BY THE "GENERAL PERMIT FOR STORMWATER

TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR

THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH

ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION

CONSTRUCTION. MINOR REVISIONS MAY BE ALLOWED BY THE CID PER THE LIST OF

DISTURBANCE SHALL NOT OCCUR OUTSIDE THE LOD, A PROJECT IS TO BE SEQUENCED SO

THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC.

PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT

HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND

A COPY OF THIS PLAN. THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL

EROSION AND SEDIMENT CONTROL," AND ASSOCIATED PERMITS SHALL BE ON-SITE AND

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING

PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF

EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE

THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND

TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION

WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT

MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH

THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY: AND

THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE

4.3± Acres (LIMIT OF DISTURBANCE)

KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. iii. Tall Fescue/Kentucky Bluegrass: Full sun Mixture: For USE in Drough'

<u>DEFINITION</u>

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER

ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE

APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE

ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES

FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES

CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION

ATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO

STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC

TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342

FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3

IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.

AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND

SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE

CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING

DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE

KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE

INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND

AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35

COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.

1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING

SEED MIXTURES

TURFGRASS MIXTURES

CRITICAL AREA PLANTING.

RECOMMENDED BY THE SOIL TESTING AGENCY.

PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE

SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE. TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15

TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH O 2 TO 4 INCHES LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDED, REMOVE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY

k. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY re firmly established. This is especially true when seedings are mâde late It THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

	HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.		ARDINESS ZONE: 6b EED MIXTURE: #9 (Tall Fescue/	' Kentucky Bl	uegrass)		FERTILIZER	-
2.	WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.	No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	RATE (10-20-20)	LIME RATE
3.	TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON—SITE FOR REDISTRIBUTION ONTO FINAL GRADE.	9	*Certified Tall Fescue blend (95% by weight): Falcon IV, Penn 1901 & Rebel Exeda	6-8 lb/	Mar. 1 to May 15,	1/4 –	1.0 lb/ 1000	90 lb/
1.	ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON—THE—CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.		and Certified Kentucky Bluegrass blend (5% by weight):	1000 of	Aug. 15 to Oct. 15	1/2 IN.		1000 s.f.
Ō.	STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):		Courtyard, Raven & Yankee					

* Other cultivars listed as "proven" in the most current UMD TT-77 may also be used B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH, BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE

STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION. d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY

DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL. e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS

WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND HE UNDERLYING SOIL SURFACE. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF HE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE HE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT

DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

DETAIL E-3 SUPER SILT FENCE -----SSF----ENTRANCI MOUNTABLE BERM (6 IN MIN.) -PIPE (SEE NOTE 6) PROFILE GALVANIZED CHAIN LINK FENCE WITH WOVEN SUIT FILM GEOTEXTILE WOVEN SLIT FILM GEOTEXTILE-FLOW EMBED GEOTEXTILE AND — CHAIN LINK FENCE 8 IN MIN. INTO GROUND PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOL LENGTH SPACED NO FURTHER THAN 10 FEET APART, DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE ROCKING FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THI UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 8 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF ENCE HEIGHT, REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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DETAIL C-1 EARTH DIKE ____2:1 SLOPE OR FLATTER CROSS SECTION DIKE TYPE CONTINUOUS GRADE 0.5% MIN. TO 10% MAX. SLOPE a - DIKE HEIGHT 18 IN MIN. 30 IN MIN. b - DIKE WIDTH 24 IN MIN. 36 IN MIN. c - FLOW WIDTH 4 FT MIN. 6 FT MIN. PLAN VIEW FLOW CHANNEL STABILIZATION A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.

. EXCAVATE OR SHAPE EARTH-DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATIO DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE. . PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN. . STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.

UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON ADDRONISED AND ADDRONISED ADDRONISED AND ADDRONISED ADDRONISED ADDRONISED AND ADDRONISED ADDRONISED AND ADDRONISED ADDRONISE

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STANDARD SYMBOL

VDDD

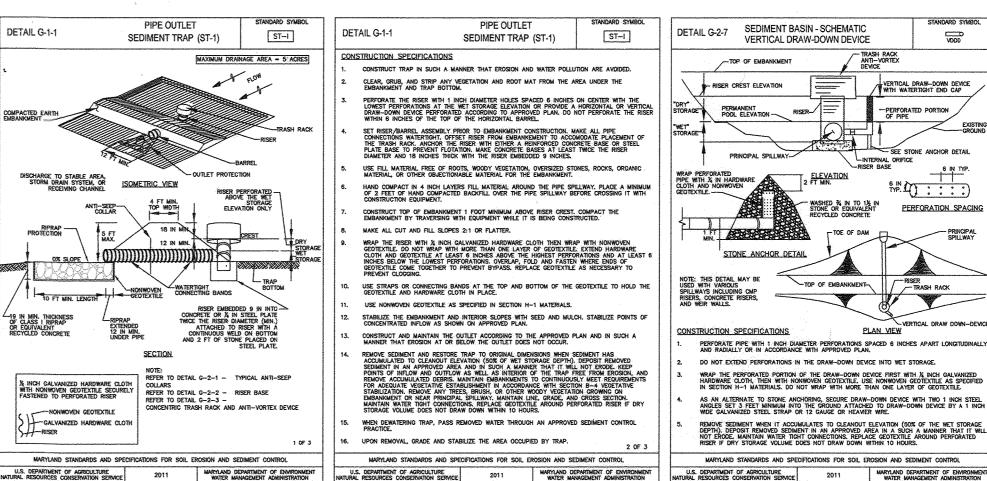
ROPIII 4 IN SECTION A-A SECTION B-B ONSTRUCTION SPECIFICATIONS 3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (% TO 1½ INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.

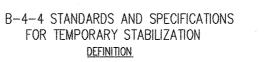
DETAIL D-4-1-C ROCK OUTLET PROTECTION III

EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPPAP WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IT TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIBILIN OF 18 INCHES. CONSTRUCT APRON WITH O'S SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SCITHAT IT BLENDS IN WITH EXISTING GROUND. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMUL SEDIMENT AND DEBRIS., AFTER HIGH FLOWS INSPECT FOR SCOUR AND RIPRAP DISLODGED RIPRAP, MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

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

MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND

SPECIFIED DIMENSIONS. IMMEDIATELY TRANSPORT STATE TO THE STATE OF THE

COMPACTED EARTH

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TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN FOR SITES HAVING SOIL TESTS PERFORMED. USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

HARDINESS 2 SEED MIXTUR				FERTILIZER RATE LIME RA			
SPECIES	APPLICATION RATE (lb/ac.)	SEEDING DATES	SEEDING DEPTHS	(10-10-10)	LIME NATE		
ANNUAL RYEGRASS	40 lb/ac	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 lb./ac. (10 lb./	2 tons/ac. (90 lb./		
PEARL MILLET	20 lb/ac	May 16 to July 31	0.5 INCHES	1,000 sf)	1,000 sf)		
STANDARDS AND SPECIFICATIONS							

FOR DUST CONTROL <u>DEFINITION</u>

CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE INCLUDING HEALTH AND TRAFFIC HAZARDS.

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

B-4-3 SEEDING AND MULCHING, AND SECTION B-4-4 TEMPORARY STABILIZATION. MULCH MUST BE ANCHORED TO PREVENT BLOWING VEGETATIVE COVER: SEE SECTION B-4-4 TEMPORARY STABILIZATION. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE, BEGIN PLOWING ON WINDWARD SIDE OF SITE, CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED

SPECIFICATIONS 1

MULCHES: SEE SECTION B-4-2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS, SECTION

IRRIGATION: SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST, REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS. BARRIERS: SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT REQUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

DETAIL D-1 PIPE SLOPE DRAIN DESIGNATION PSD-12 REFERS T 12 IN PIPE SLOPE DRAIL ANCHORS EVERY 10 FT ISOMETRIC VIEW DISCHARGES TO TRAPS AND BASINS MUST ENTER AT OR ABOVE WET POOL. HEIGHT = PIPE DIAMETER X 2 (MAX. 4 FT) 3% SLOPE OR GREATER -NONWOVEN GEOTEXTILE 4 TO 7 IN STONE STANDARD FLARED MINIMUM LENGTH AT LESS THAN 1% SLOPE NONWOVEN GEOTEXTILE

THE HEIGHT OF THE EARTH DIKE MUST BE AT LEAST 2 TIMES THE PIPE DIAMETER MEASURED FROM THE INVERT OF THE PIPE. EXTEND THE TOP ELEVATION OF DIKE AT ZERO PERCENT GRADE UNTIL IT INTERCEPTS THE TOP OF THE ADJOINING EARTH DIKE. FLEXIBLE PIPE IS PREFERRED. HOWEVER, CORRUGATED METAL PIPE OR EQUIVALENT PVC PIPE CAN BE USED. ALL CONNECTIONS MUST BE WATERTIGHT. ATTACH A FLARED END SECTION TO THE INLET END OF PIPE WITH A WATERTICHT CONNECTION. AT THE INLET OF THE PIPE SLOPE DRAIN, INSTALL 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PLACED 12 INCHES IN DEPTH ON NOWWOVEN GEOTEXITIE AND EXTEND OUT 5 FEET FROM PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP. 5. SECURILY ANCHOR THE PIPE SLOPE DRAIN (PSD) TO THE SLOPE. SPACE THE ANCHORS EVERY 10 6. HAND TAMP THE SOIL AROUND AND UNDER THE PIPE AND END SECTION IN 4 INCH LIFTS TO THE TOP OF THE EARTH DIKE. UPON COMPLETING INSTALLATION OF THE PSO, STABILIZE ASSOCIATED DISTURBANCES WITH SEED, MULCH. AND TACK. 8. INSTALL OUTLET PROTECTION AS SPECIFIED ON APPROVED PLAN. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION. MAINTAIN WATER TIGHT CONNECTIONS AND POSITIVE DRAINAGE. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE
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DETAIL D-1 PIPE SLOPE DRAIN

B-4-1 STANDARDS AND SPECIFICATIONS FOR NCREMENTAL STABILIZATION Establishment of vegetative cover on cut and fill slopes.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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PROVIDE ROCK OUTLET PROTECTION AS REQUIRED

To provide timely vegetative cover on cut and fill slopes as work progresse Conditions Where Practice Applies Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpil

Incremental Stabilization - Cut Slopes Excavate and stabilize out slopes in increments not to exceed 15 apply seed and mulch on all out slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1): Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. Perform Phase 1 excavation, prepare seedbed, and stabilize

c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded Note: Once excavation has begun the operation should be continuous from grubbing through the n of grading and placement of topsoil (if required) and permanent seed and mulch. Ar ons in the operation or completing the operation out of the seeding season will necessita the application of temporary stabilization EXISTING CROUND (*) -EXISTING GROUND -PHASE 1 EXCAVATION PHASE 2 EXCAVATION

-PHASE 3 EXCAVATION Figure B.1: Incremental Stabilization Cut

Construct and stabilize fill slopes in increments not to exceed 15 feet, in height. Prepare seedhed and apply seed and mulch on all slopes as the work progresses. . Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the gradin operation ceases as prescribed in the plans. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-crosive manner. 4. Construction sequence example (Refer to Figure B.2): a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around fill. Construct silt fence on low side of fill unless other methods shown on the plans add At the end of each day, install temporary water conveya intercept surface runoff and convey it down the slope in c. Place Phase 1 fill, prepare seedbed, and stabilize. d. Place Phase 2 fill, prepare seedbed, and stabilize. Place final phase fill, prepare seedbed, and stabilize. Overseed pre-necessary. Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and match. Air interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization. SLT FENCE / SUPER SILT FENCE EXISTING GROUND ---

B. Incremental Stabilization - Fill Slopes

NO AS-BUILT INFORMATION AS OF 08/19/2020 SEDIMENT CONTROL NOTES and DETAILS

GIANT DISTRIBUTION CENTER EXETER INDUSTRIAL PARK

SCALE ZONING G. L. W. FILE No. 12060 AS SHOWN TAX MAP - GRIE SHEET NOV. 2019

PLANNING ENGINEERING SURVEYING

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DEV DRAWN B DEV CHECKED I DEV DATE REVISION

(.6.20

DATE

OWNER / DEVELOPER: GIANT LANDOVER DIVISION 1385 HANCOCK STREET 10TH FLOOR

QUINCY, MA 02169

ATTN: REDAS ZAKALSKIS

TEL: 617-792-7880

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 17285 EXPIRATION DATE: MARCH 17, 2021

MAYLAND ECTION DISTRICT No. 6

PARCEL 19 & PARCEL A

13 OF 13 HOWARD COUNTY, MARYLAND