SITE DEVELOPMENT PLAN SET

DORSEY RUN INDUSTRIAL CENTER
NORTH SIDE REDEVELOPMENT
MONTEVIDEO ROAD & FUTURE DORSEY RUN ROAD
ELKRIDGE, HOWARD COUNTY, MARYLAND
TAX PARCELS 97,344,346,441,572
1st ELECTION DISTRICT

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" FOR WORK IN THE COUNTY RIGHT-OF-WAY.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK. THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF HIGHWAYS AT (410) 313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER AND SEWER MAINS.
3. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE STATE HIGHWAY ADMINISTRATION (SHA). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
4. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE PER HOWARD COUNTY RECORDS.
5. THIS SITE IS LOCATED IN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED.
6. ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH AASHTO T-180--STANDARD.
7. CONTRACTOR SHALL MAINTAIN ALL SEDIMENT CONTROL DEVICES WITHIN THE LIMITS OF THE SITE DURING CONSTRUCTION OF THE SITE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS MAY BE NECESSARY DURING CONSTRUCTION AND/OR BY GOVERNING AGENCIES.
8. 100-YR FLOODPLAIN EXISTS ALONG NORTH AND NORTHEAST PROPERTY LINES WITHIN THE PROPERTY.
9. THERE ARE STEEP SLOPES AND SOME HIGHLY ERODIBLE SOILS ON THE SITE.
10. THERE ARE NO KNOWN CEMETERIES OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES, THE DEVELOPER WILL BE SUBJECT TO SECTION 16.1505 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
11. THE BOUNDARY INFORMATION FOR THIS SITE WAS PREPARED IN 2003. AERIAL TOPOGRAPHIC SURVEY HEREON WAS PERFORMED BY HINGS AERIAL MAPPING CO., INC. ON DECEMBER 30, 2003, AND PROVIDED BY THE RBA GROUP.
12. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. MONUMENT NUMBERS 42BB AND 42DA WERE USED FOR THIS PROJECT (NAD 83/91.)
13. ALL EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED. UTILITIES CONTRACTOR SHALL VERIFY THE SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND TEST PIT ALL UTILITIES, INCLUDING PROPOSED TIE IN LOCATIONS, AT LEAST 5 DAYS PRIOR TO STARTING ANY WORK ON THESE DRAWINGS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IN ADVANCE OF CONSTRUCTION START.
14. THE CONTRACTOR SHALL INSURE THAT CURRENT AS BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION, CERTIFIED (i.e. P.E. STAMPED) AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER.
15. THE SITE IS SUBJECT TO REDEVELOPMENT CRITERIA FOR STORMWATER MANAGEMENT. THE REDEVELOPMENT MANAGES THE WATER QUALITY FOR 20% (1.97 AC.) OF EXISTING IMPERVIOUS AREA, WHICH WILL BE PROVIDED BY A REDUCTION IN IMPERVIOUS COVERAGE (0.49) IN A BIORETENTION AREAS (1.48 AC.). RECHARGE WILL BE MET BY THE PLACEMENT OF STONE BENEATH THE BIORETENTION. IT HAS BEEN DESIGN IN ACCORDANCE WITH THE CRITERIA LISTED ON P 3.31 TO 3.41 OF THE 2000 MDE DESIGN REQUIREMENTS AND CONFORMS TO DETAIL F-6. THIS PLAN MET MDE CRITERIA FOR TECHNICALLY COMPLETE AND IS PERMITTED TO CONTINUE WITH THE 2000 REGULATIONS FOR REDEVELOPMENT.
16. THIS PROJECT COMPLIES WITH THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE WITH A TOTAL OBLIGATION OF A MINIMUM OF 1.88 ACRES. THIS REQUIREMENT HAS BEEN SATISFIED BY PROVIDING NINE ON-SITE RETENTION FOREST CONSERVATION EASEMENTS TOTALING 3.13 ACRES. OF THE 3.13 ACRES, 2.47 ACRES ARE CREDITED RETENTION, AND 0.66 ACRES ARE NON-CREDITED RETENTION.
17. REFERENCES: SDP-88-16 SDP-89-4 SDP-97-124 SDP-97-125 SP-70-12 SDP-73-83 SDP-74-116
SDP-75-45 SDP-86-151 R-3670 WP-05-125
WP-08-064 SDP-04-018 SDP-04-100
WP-08-064 - PETITION TO WAIVE SUBDIVISION SECTION 16.155(a)(1), TO PERMIT NON-RESIDENTIAL DEVELOPMENT.
WP-05-125 - PETITION TO WAIVE SECTIONS 16.122(a)(2) AND 16.155(a)(1) OF COUNTY SUBDIVISIONS & LAND DEVELOPMENT REGULATIONS TO PERMIT ISSUANCE OF A GRADING PERMIT, FOR A STOCKPILE WITHOUT AN APPROVED SITE DEVELOPMENT PLAN.
16-4602-D WATER & SEWER PLAN
SDP-08-146 (PC) - FOREST CONSERVATION AND UTILITY EASEMENTS PLAT 22131-22136
18. ALL HANDICAP PARKING SPACES SHALL HAVE A MAXIMUM 2% SLOPE IN ANY DIRECTION WITHIN THE HANDICAP PARKING AREA.
19. UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED AT FACE OF CURB.
20. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
21. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ON THESE PLANS.
-MISS UTILITY 1-800-257-7777
-HOWARD COUNTY DPWT, BUREAU OF UTILITIES (410) 313-4900
-BALTIMORE GAS AND ELECTRIC COMPANY CONTRACTOR SERVICES (410)850-4620
-BALTIMORE GAS AND ELECTRIC COMPANY UNDERGROUND DAMAGE CONTROL (410)787-9066
-VERIZON 1-800-446-5266
22. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS AS NECESSARY TO GRADE THE SITE AND COMPLETE ANY REQUIRED EXCAVATIONS.
23. christopher consultants, ltd. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION, MEANS, METHODS, TECHNIQUES, OR PROCEDURES, UTILIZED BY THE CONTRACTOR ,NOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
24. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES WHICH ARE TO REMAIN FREE FROM DAMAGE AND MAINTAIN UNINTERRUPTED SERVICE TO ALL USERS. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OR SUBCONTRACTOR'S ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
25. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS, THE FIGURED DIMENSIONS SHALL BE HELD.
26. T.B.R. = TO BE REMOVED
27. PROVIDE SIGNAGE ON THE BUILDING AND AT THE STREET IDENTIFYING THE BUILDING ADDRESS; IDENTIFY EACH SEPARATE SUITE BY LETTER.
28. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
29. PER HOWARD COUNTY BUILDING CODE SECTION 904.1.1 ALL BUILDINGS IN EXCESS OF 5,000 SF IN SIZE WILL HAVE A COMPLETE AUTOMATIC SPRINKLER DESIGNED IN ACCORDANCE WITH NFPA #13.
30. A KNOX BOX FOR FIRE DEPARTMENT ACCESS IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE APPROXIMATELY 4-5' IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED.
31. TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
32. NO GRADING, REMOVAL OF VEGATATION COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OF THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN, EXCEPT AS SHOWN ON THIS APPROVED PLAN.
33. THERE WILL BE NO IMPROVEMENTS TO THE WATER OR SEWER SYSTEMS, THEREFORE NO ALLOCATIONS WILL BE APPLIED FOR.
34. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $12,480.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (31 SHADE TREES AND 121 SHRUBS).
35. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL PUBLIC ROADS AND COMPLY WITH THE REQUIREMENTS OF SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
36. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
37. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
38. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH (MAXIMUM TWO FOOT) CONTOUR INTERVALS PREPARED BY christopher consultants ltd DATED July 30,2008.
39. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. WERE USED FOR THIS PROJECT.
40. WATER IS PUBLIC # PRIVATE.
41. SEWER IS PRIVATE.
42. IN ORDER TO MEET THE REDEVELOPMENT CRITERIA FOR SWM, A BIO-RETENTION SYSTEM IS PROPOSED AT THIS LOCATION. THIS BMP SHALL BE PRIVATELY OWNED AND MAINTAINED.
43. EXISTING UTILITIES ARE BASED ON THE LATEST ALTA SURVEY.
44. THERE IS FLOODPLAIN ON THIS SITE AS SHOWN AND IS TAKEN FROM A STUDY DONE BY HOWARD COUNTY DPWT
45. THERE ARE NO IMPACT TO WETLANDS ON THIS SITE.
46. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES LTD, ON APRIL 15,2008
47. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
48. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY ECS,LLC (MID-ATLANTIC), DATED MARCH 25,2008.
49. SEE THE CHARTS ON SHEET 33 FOR THE BEARINGS AND DISTANCES OF THE 25' WETLAND BUFFER AND EASEMENT LINES OF THE UTILITY EASEMENTS AND FOREST CONSERVATION EASEMENTS.
50. THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 3.13 ACRES OF ON-SITE RETENTION FOREST CONSERVATION EASEMENTS OF THE 3.13 ACRES OF ON-SITE RETENTION, 2.47 ACRES ARE LOCATED IN A CREDITED ON-SITE RETENTION FOREST CONSERVATION EASEMENT. THE REMAINING 0.66 ACRES OF FOREST RETENTION WILL REMAIN IN A NON-CREDITED EASEMENT. NO SURETY IS REQUIRED SINCE THE OBLIGATIONS HAS BEEN FULFILLED WITH THE RETENTION OF EXISTING FOREST.
51. PLEASE REFER TO THE GEOTECH REPORT PREPARED BY ECS, LTD DATED 03/25/08 FOR DETAILED INFORMATION OF SOIL BORINGS DEPICTED IN OVERALL PLAN VIEW THIS SHEET.
52. MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

PARKING TABULATION CHART

REQUIRED WAREHOUSE .05 SPACES PER 1,000 S.F.
OFFICE/MEZZANINE 3.3 SPACES PER 1,000 S.F.

EXISTING BUILDING "C"	275,000 S.F.		
WAREHOUSE	215,000	S.F.	108 SPACES
OFFICE	60,000	S.F.	198 SPACES
TOTAL REQUIRED SPACES			306 SPACES
TOTAL PROVIDED SPACES			402 SPACES
PROPOSED BUILDING "5"	82,800 S.F.		
WAREHOUSE	77,800	S.F.	39 SPACES
OFFICE	5,000	S.F.	10 SPACES
TOTAL REQUIRED SPACES			49 SPACES
TOTAL PROVIDED SPACES			58 SPACES
PROPOSED BUILDING "4"	75,504 S.F.		
WAREHOUSE	61,371	S.F.	31 SPACES
OFFICE	13,144	S.F.	47 SPACES
MEZZANINE	984	S.F.	4 SPACES
TOTAL REQUIRED SPACES			82 SPACES
TOTAL PROVIDED SPACES			98 SPACES
TOTAL REQUIRED SITE PARKING			437 SPACES
TOTAL PROVIDED SITE PARKING			615 SPACES

STORMWATER MANAGEMENT NOTE:

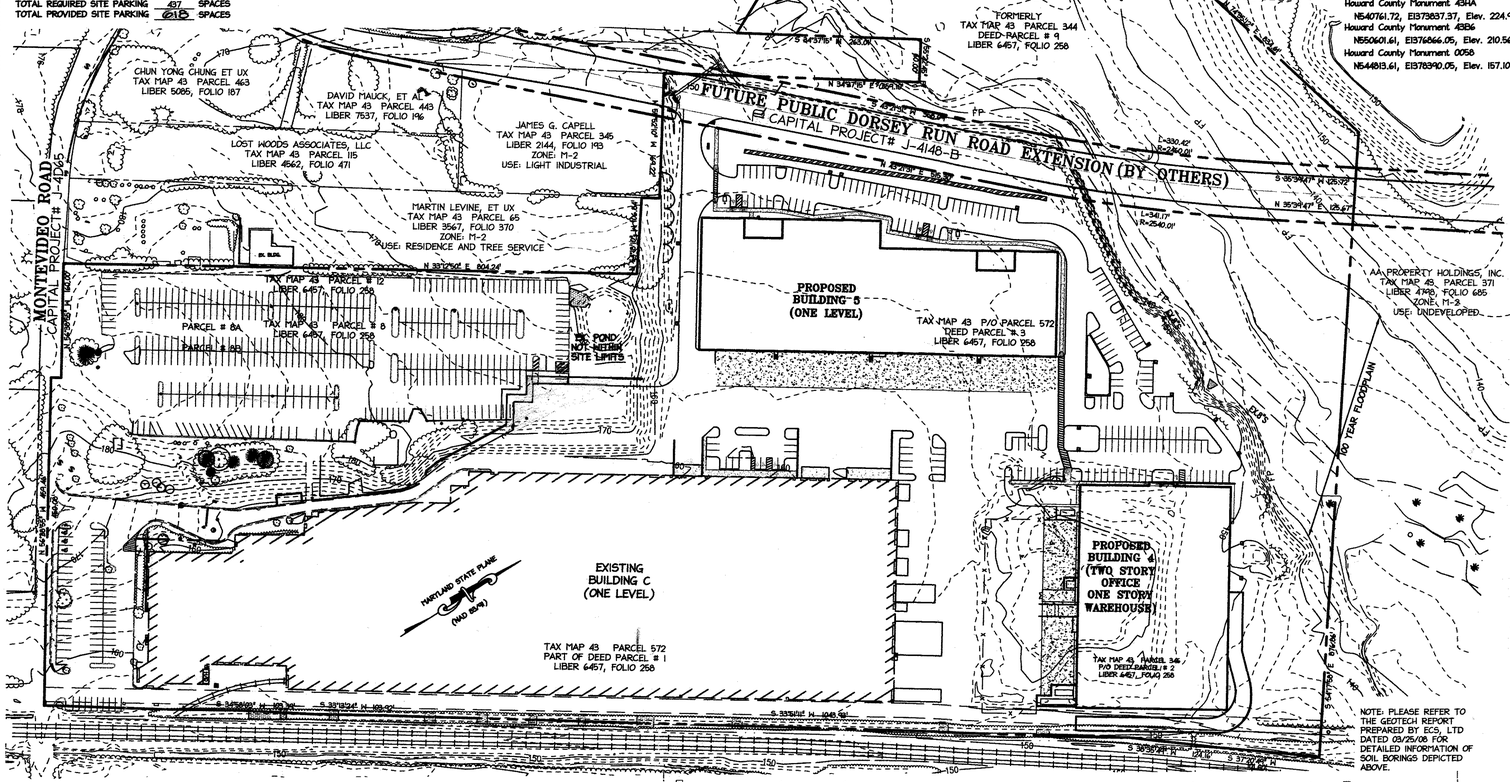
THE EXISTING POND LOCATED ON PARCEL 8A, 8B AND 12 IS NOT AN MDE 378 POND AS IT HAS AN EMBANKMENT 6 FEET OR LESS AND HAS A CAPACITY OF LESS THEN 40,000 CF AT THE EMBANKMENT HEIGHT (22,300 CF).

SITE ANALYSIS

1. TOTAL AREA OF PARCELS: 1,599,153 SQ. FT. (36.71 AC.)
2. ZONING: M-2 ("MANUACTURING HEAVY")
3. EXISTING USE: EX. BLDG "C" - ONE WAREHOUSE 286,732 SQ.FT.
4. PROPOSED USE: TWO (2) WAREHOUSES (MANUFACTURING/INDUSTRIAL USES)
5. BUILDING DATA: PROP. BLDG. "5"- 82,800 SF, PROP. BLDG. "4" - 75,504 SF
6. PARKING DATA: SEE PARKING TABULATION CHART (THIS SHEET)
7. IMPERVIOUS AREA: 9.36 ACRES (WITHIN THE L.O.D.) OPEN SPACE CALCULTIONS NOT REQUIRED FOR M-2 ZONE
8. DEED REFERENCE: 6457/258 PLAT REFERENCE: N/A
9. RELATED FILES FOR THIS SITE: SDP 04-18, GP-06-75
10. ELECTION DISTRICT NO. 1, HOWARD COUNTY MARYLAND
11. TAX MAP: 43, GRID: 16, TAX PARCELS: 97,344,346,441,& 572 (PARCEL # 1,2,3,6,9 & 12 AS REFERENCED DEED 6457/258)
12. AREA OF DISTURBANCE: 12.39 ACRES,
13. BOTH PUBLIC AND PRIVATE WATER/SEWER SYSTEMS ARE PROPOSED AS PART OF THIS RE-DEVELOPMENT PROJECT.
14. ZONING REGULATIONS:
MAXIMUM BUILDING HEIGHT (PRINCIPAL STRUCTURE): 50'
MINIMUM SETBACK REQUIREMENTS:
FROM PUBLIC STREET RIGHT-OF-WAY: 50'
FROM RESIDENTIAL DISTRICT:
FRONT: 150'
SIDE: 150'
REAR: 150'

BENCHMARK

Horizontal Datum: Maryland State Coordinates, NAD 83
Vertical Datum: NAD 29
Howard County Monument 43HA
N540761.72, E1378837.37, Elev. 224.90
Howard County Monument 43BA
N550601.61, E1376866.05, Elev. 210.56
Howard County Monument 0056
N544813.61, E1378340.05, Elev. 157.10



OVERALL PLAN VIEW
SCALE: 1"=100'

LOT/PARCEL #	TAX PARCEL	AREA (AC.)
1	572	26.51
3		
2	346	1.12
8	97	1.19
9	344	6.86
12	441	1.01

TOTAL SITE ACREAGE: 36.71 AC.

TYPE OF BUILDINGS: TWO (2) INDUSTRIAL WAREHOUSES
DRAINAGE AREA: 12.35 AC
TREATMENT PLANT: SAVAGE
WASTE WATER TREATMENT PLANT: PATAPSACO WWTP
NUMBER OF BUILDABLE LOTS: 4
NUMBER OF NON-BUILDABLE LOTS: 0
NUMBER OF W.H.C.: 2 (BLDG)
NUMBER OF S.H.C.: 2 (BLDG)

PROFESSIONAL CERTIFICATION

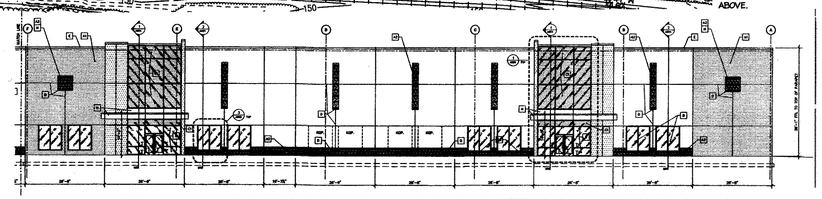
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

SIGNATURE OF ENGINEER 9.6.12 DATE

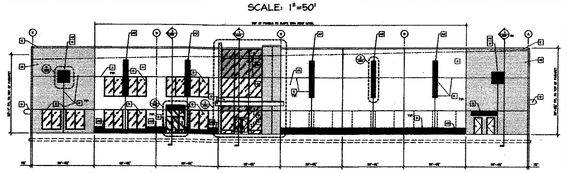
WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

SOIL BORING LOCATIONS

BORING #	NORTHING	EASTING
12	546421.64	1378959.37
13	546228.96	1378727.63
14	546393.46	1378891.53
15	546256.45	1378908.31
17	546300.29	1379030.11
21	546332.86	1379225.98
22	546343.67	1379106.80
23	546398.27	1379017.54



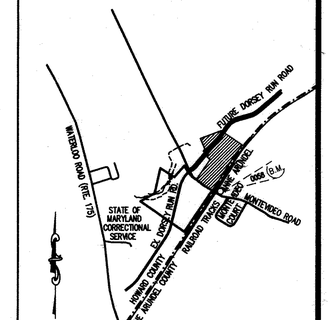
FRONT GENERIC BUILDING 5 ELEVATION- VIEW FROM FUTURE DORSEY RUN ROAD
SCALE: 1"=50'



FRONT BUILDING 4 ELEVATION- VIEW FROM FUTURE DORSEY RUN ROAD
SCALE: 1"=50'

9.6.12 DATE
10.6.12

STATE OF MARYLAND WILLIAM RANDOLPH ZINK No. 20587 REGISTERED PROFESSIONAL ENGINEER



ADC# 20703123

VICINITY MAP
SCALE 1"=2000'

HOWARD COUNTY MAP PAGE 20 - GRID K-1

SHEET INDEX

NO.	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	EXISTING CONDITIONS AND DEMOLITION PLAN
4	EXISTING CONDITIONS AND DEMOLITION PLAN
5	SITE LAYOUT PLAN
6	SITE LAYOUT PLAN
7	SITE LAYOUT PLAN
8	GRADING AND STORMDRAIN PLAN
9	GRADING AND STORMDRAIN PLAN
10	GRADING AND STORMDRAIN PLAN
11	UTILITY PLAN
12	UTILITY PLAN
13	UTILITY PLAN
14	STORMDRAIN PROFILES
15	UTILITY PROFILES
16	SITE NOTES AND DETAILS
17	BIO-RETENTION NOTES AND DETAILS
18	GRASS CHANNEL NOTES AND DETAILS
19	SEDIMENT & EROSION CONTROL PLANS
20	SEDIMENT & EROSION CONTROL PLANS
21	SEDIMENT & EROSION CONTROL PLANS
22	SEDIMENT & EROSION CONTROL NOTES AND DETAILS
23	STORM DRAINAGE AREA MAP
24	SOIL BORING PLAN
25	LANDSCAPE PLAN
26	LANDSCAPE PLAN
27	LANDSCAPE PLAN
28	LANDSCAPE DETAILS
29	FOREST CONSERVATION COVER SHEET
30	FOREST CONSERVATION PLAN
31	FOREST CONSERVATION PLAN
32	FOREST CONSERVATION PLAN
33	LANDSCAPE PLAN FOR BIO RETENTION
34	EASEMENTS AND ENVIRONMENTAL FEATURES PLAN
35	ARCHITECTURAL RETAINING WALL SYSTEM
36	ARCHITECTURE - BUILDING ELEVATIONS
37	ARCHITECTURE - BUILDING ELEVATIONS
38	ADA ACCESSIBLE ROUTE PLAN
39	RETAINING WALL SPECS
40	RETAINING WALL SPECS
41	RETAINING WALL SPECS
42	RETAINING WALL SPECS
43	RETAINING WALL SPECS
44	RETAINING WALL SPECS
45	RETAINING WALL SPECS

45A WALL SECTION
45B WALL ELEVATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/31/12
Director, Department of Planning and Zoning — Date 11/2/12

3	4/2014	DEMO EX. LOADING, CONS. NEW LOADING, RET WALL & GRADING. REV. PARKING LAYOUT/ CONT LOADING GRADING
2	11/2013	REDLINE REVISIONS - TRENCH DRN GRADING
	11/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY TRUST
C/O EXETER PROPERTY GROUP
140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0141 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT# 22131, L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

TITLE:

COVER SHEET

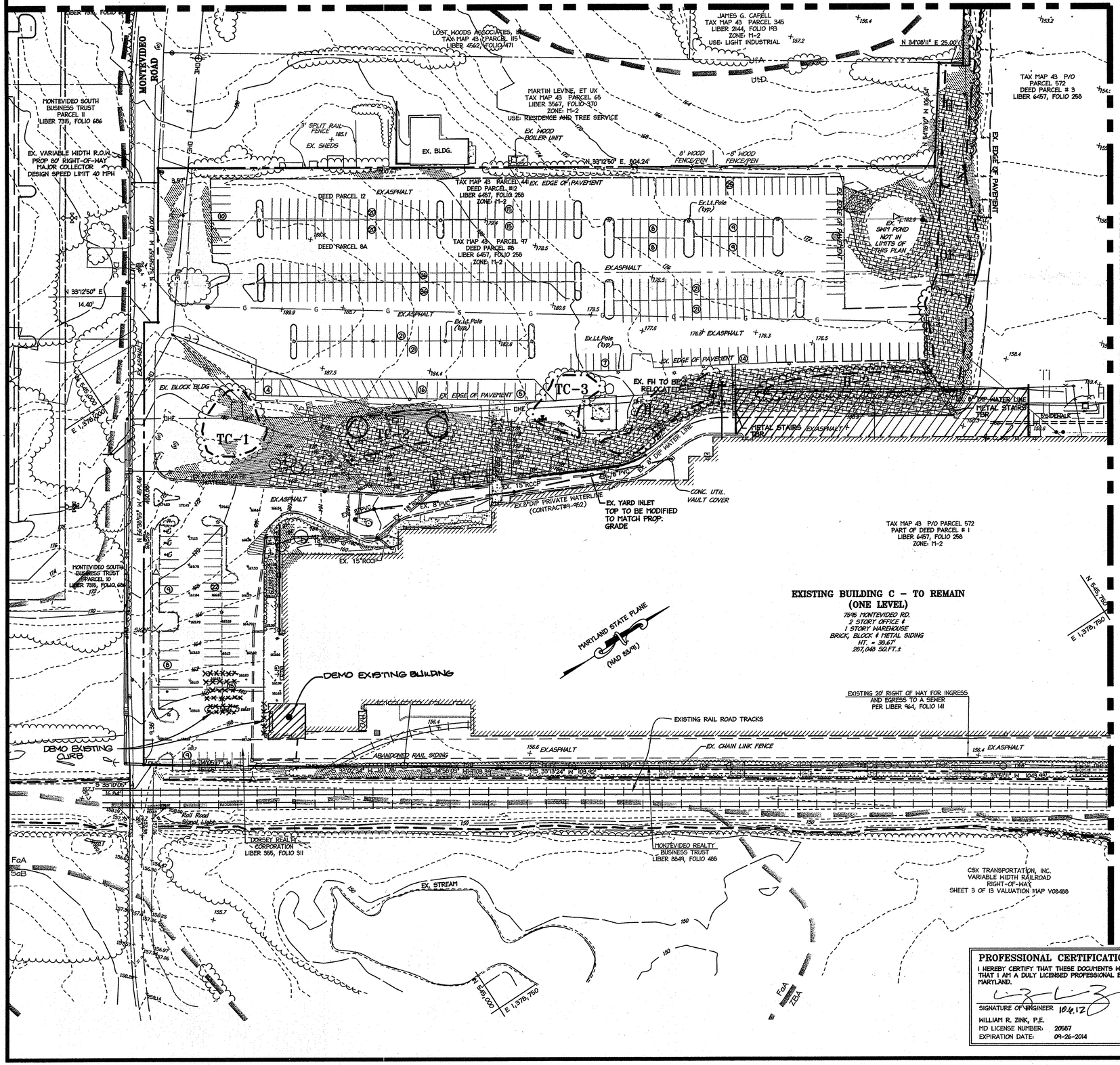
DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	1 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-116

MATCHLINE – SEE SHEET 4 FOR CONTINUATION

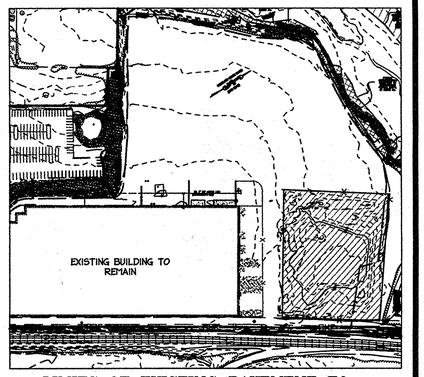
MATCHLINE – SEE SHEET 3 FOR CONTINUATION



LEGEND

- TO BE REMOVED UTILITIES, PAVEMENT, SITE FEATURES UNLESS OTHERWISE NOTED TO RELOCATE OR MODIFY
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- 248 — EXISTING INTER CONTOUR
- 250 — EXISTING INDEX CONTOUR
- +154.8 — EXISTING SPOT ELEVATION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- EX. 8" WATER — EXISTING WATER
- FIRE HYDRANT
- VALVE
- EX. 8" SAN. — EXISTING SANITARY SEWER
- EX. 24" RCP — EXISTING STORMDRAIN
- INLETS
- MANHOLE
- DHE — EXISTING OVERHEAD UTILITY
- G — G — EXISTING GSA LINE
- X — X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- EXISTING TREELINE
- BIA / SgE — SOILS LINE
- FP — 100YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- STEEP SLOPES 25% AND GREATER AREA: 73,045.39 SQ.FT = 1.677 AC.
- STEEP SLOPES 15% TO 25%
- H-1 — FOREST STAND BOUNDARIES AND DESIGNATION
- EXISTING LIGHT POLE
- EXISTING SIGN
- G — GAS METER
- STORM
- WM — WATER METER
- RAILROAD TRACKS

Miss Utility — Before You Dig Call "MISS UTILITY" Service Protection Center — MEMBER — 1-800-257-7777 — CALL TOLL FREE



LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

AREA TO BE REMOVED

AREA TO BE REMOVED (EX. BUILDING C)

NOTE

1. THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE DEPICTED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
3. SEE SHEET 4 FOR SOILS INFORMATION TABLE
4. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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.

SIGNATURE OF ENGINEER 10.4.12 — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

9.6.12 DATE

STATE OF MARYLAND — WILLIAM RANDOLPH ZINK — 20587 — REGISTERED PROFESSIONAL ENGINEER — 10.6.12

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/2/12

Director, Department of Planning and Zoning — Date 11/2/12

3	4/2014	DEMO, EX. LOADING DOCK; CONS. NEW LOADING DOCK RET. WALL; REV. PARKING LAYOUT & CONT.
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN
		LOADING DOCK GRADING
1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.6690 · metro 301.881.0148 · fax 410.872.6693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	2 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-113

MATCHLINE – SEE SHEET 4 FOR CONTINUATION

MATCHLINE – SEE SHEET 2 FOR CONTINUATION

MARYLAND STATE PLANE (NAD 83/91)

TAX MAP 43 P/O PARCEL 572
DEED PARCEL # 3
LIBER 6457, FOLIO 258
ZONE: M-2

EXISTING PAVEMENT TO BE REMOVED SEE NOTE #2

EX. CURB REFER TO NOTE #1 THIS SHEET

EX. ASPHALT T.B.R.

Ex. Storm Drain Manhole Inv. In (N)=148.89, Inv. In (N)=148.75, Rim Elev=155.10

EX. 24" HDPE

EX. RET. WALL

EXISTING ELECTRIC

EX. 8" DIP WATER LINE (CONTRACT #3-952)

EX. CONC. PAD (TYP. OF 4)

EXISTING PARKING AREA TO BE MODIFIED

TAX MAP 43 P/O PARCEL 572
PART OF DEED PARCEL # 1
LIBER 6457, FOLIO 258
ZONE: M-2

EXISTING BUILDING C – TO REMAIN (ONE LEVEL)

EXISTING BUILDING C TO REMAIN (ONE LEVEL)

EX. 24" HDPE

Ex. Storm Drain Manhole Inv. Out (E)=142.63 Rim Elev=154.42

EX. ASPHALT T.B.R.

17,641 S.F. OF CONTIGUOUS 25% SLOPES

EXISTING FENCE TO BE REMOVED

EXISTING ASPHALT PAVEMENT TO BE REMOVED SEE NOTE #2

LIMITS OF EX. EDGE OF PAVEMENT T.B.R. SEE NOTE #2

BEGIN LIMIT OF EX. EDGE OF PAVEMENT T.B.R.

EDGE OF PAVEMENT T.B.R.

GRAVEL

DIRT (TO BE REMOVED)

EXISTING 20' RIGHT OF WAY FOR INGRESS AND EGRESS TO A SEWER PER LIBER 964, FOLIO 141

EXISTING RAIL ROAD TRACKS

EX. CHAIN LINK FENCE

CSX TRANSPORTATION, INC. VARIABLE WIDTH RAILROAD RIGHT-OF-WAY SHEET 3 OF 13 VALUATION MAP V08488

F-2

F-3

EX. EDGE OF PAVEMENT T.B.R. U/D

EX. 24" RCP

EX. SAN MANHOLE 7870

EX. STREAM

WETLAND LIMITS

PERENNIAL

FCE

SOC

AA PROPERTY HOLDINGS, INC.
TAX MAP 43 PARCEL 371
LIBER 4796, FOLIO 695
ZONE: M-2
USE: UNDEVELOPED

PUBLIC 20' EX. SEWER EASEMENT
20'RIGHT-OF-WAY FOR SEWER
LIBER 693, FOLIO 440
LIBER 744, FOLIO 062
LIBER 716, FOLIO 724

EX. 12" ACP PUBLIC SEWER CONTRACT #90-3A

DELINEATION

TAX MAP 43 PARCEL 346
PART OF GROUP PARCEL 2
LIBER 4491, FOLIO 258
ZONE: M-2

1,880 S.F. OF CONTIGUOUS 25% SLOPES

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

LEGEND

- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORM
- WM WATER METER
- RAILROAD TRACKS
- TO BE REMOVED UTILITIES, PAVEMENT, SITE FEATURES UNLESS OTHERWISE NOTED TO RELOCATE OR MODIFY
- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SPOT ELEVATION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- EX. 8" WATER — EXISTING WATER — FIRE HYDRANT — VALVE
- EX. 8" SAN. — EXISTING SANITARY SEWER — INLET — MANHOLE
- EX. 24" RCP — EXISTING STORMDRAIN
- OHE — EXISTING OVERHEAD UTILITY
- G G — EXISTING GSA LINE
- X X X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- EXISTING TREELINE TO BE REMOVED
- EXISTING TREELINE
- BIA SgE — SOILS LINE
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- STEEP SLOPES 25% AND GREATER AREA= 73,045.34 SQ.FT = 1.677 AC.
- STEEP SLOPES 15% TO 25%
- H-1 — FOREST STAND BOUNDARIES AND DESIGNATION
- LOD — LIMITS OF DISTURBANCE
- LIMITS OF EX. STOCKPILE

NOTE

1. THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE DEPICTED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 2 FOR LIMITS OF REMOVED AND PAVING TO REMAIN FOR ENTIRE SITE
3. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
4. MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 10/5/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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410.872.6930 · metro 301.881.0140 · fax 410.872.6933

Miss Utility — Service Protection Center — MEMBER ONE CALL SYSTEMS INTERNATIONAL — CALL TOLL FREE 1-800-257-7777

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

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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.

SIGNATURE OF ENGINEER — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

9.6.12 DATE

10.4.12

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — 20587 — REGISTERED — PROFESSIONAL ENGINEER

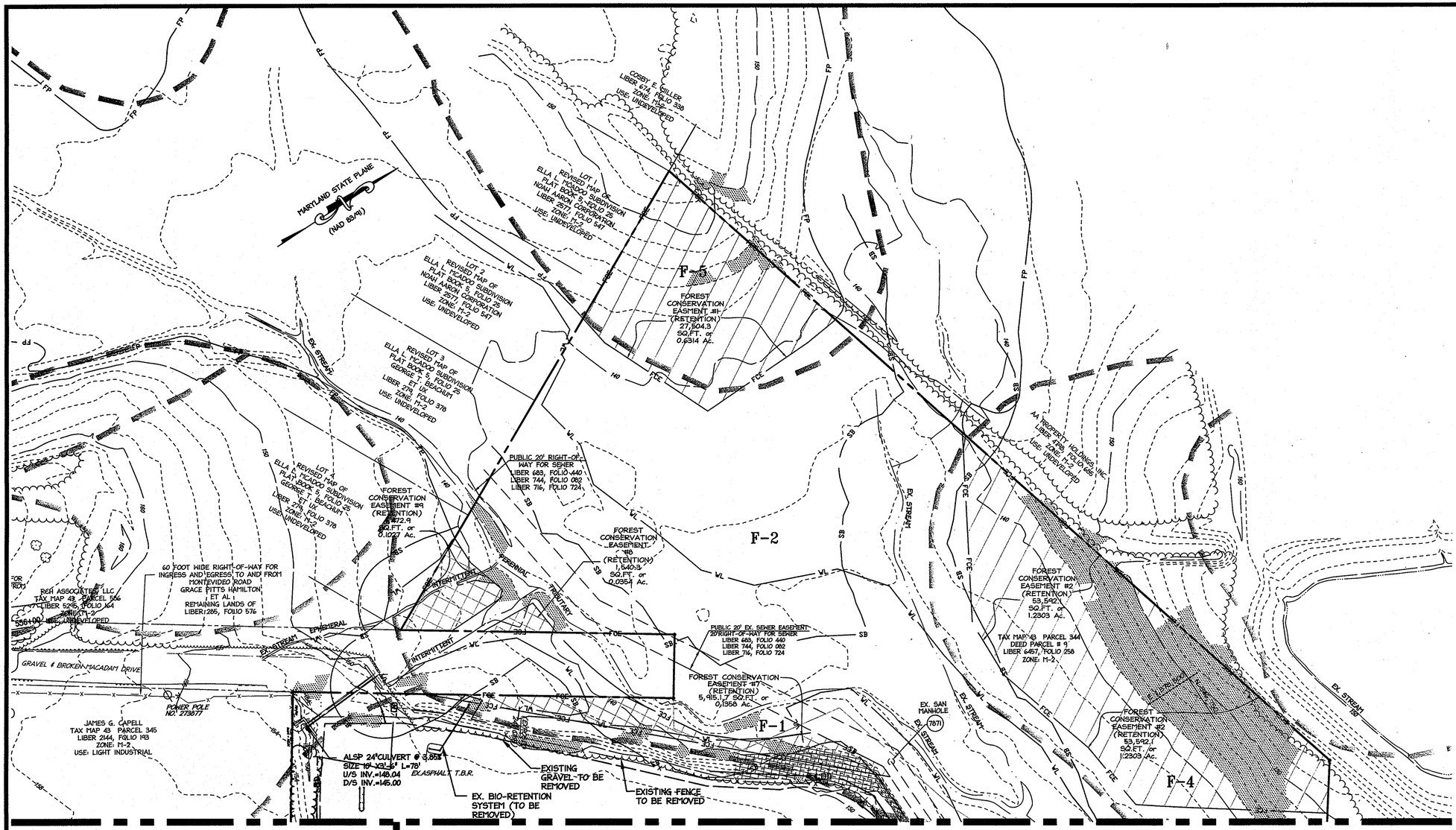
TITLE:

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	3 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-116



MATCHLINE – SEE SHEET 2 OF FOR CONTINUATION

MATCHLINE – SEE SHEET 3 FOR CONTINUATION

LEGEND

- TO BE REMOVED UTILITIES, PAVEMENT, SITE FEATURES UNLESS OTHERWISE NOTED TO RELOCATE OR MODIFY
- 248 — EXISTING INTER CONTOUR
- 250 — EXISTING INDEX CONTOUR
- +154.8 EXISTING SPOT ELEVATION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. 8" SAN. — EXISTING SANITARY SEWER
- OHE — EXISTING OVERHEAD UTILITY
- X — X — X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- EXISTING TREELINE TO BE REMOVED
- EXISTING TREELINE
- BIA / SgE — SOILS LINE
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- STEEP SLOPES 25% AND GREATER AREA: 73,045.39 SQ.FT = 1.677 AC.
- STEEP SLOPES 15% TO 25%
- FOREST STAND BOUNDARIES

NOTE

1. THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE DEPICTED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SEET 2 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
3. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

Key	A. Type of Community	B. Area (acres)	C. Soil Information: Soil Type	C. Soil Information: Typical Forest Cover for soil type	C. Soil Information: Woodland Sustainability Index	D. Existing Vegetation (Dominant Species Approximate %)	E. Stand Characteristics: Avg. Size (DBH)	E. Stand Characteristics: Age (Yrs)	E. Stand Characteristics: General Conditions	F. Forest Area in Sensitive Environments (acres)	G. Habitat Value
F-1	Forest	0.48	Ha UtD	-Mixed Hardwoods, mainly Oaks -	2 -	50% Sweetgum 25% White Oak 10% Tulip Poplar	10"	30	Good	0.40	1 -
F-2	Forest	6.26	Ha CaC ZBA	-Mixed Hardwoods, mainly Oaks -Upland Hardwoods & Virginia Pine -Wetland Species (hydric soil)	2 17 -	45% Sweet Gum 30% Red Maple 15% Birch 10% Sycamore	10 - 14"	30+	Good	6.14	2 4 -
F-3	Forest	0.80	CaC	-Upland Hardwoods & Virginia Pine	17	50% White Oak 30% Red Oak 15% Black Gum 5% Virginia Pine	10 - 14"	30+	Good	0.04	2
F-4	Forest	1.69	SaC	-Upland Hardwoods, Mostly Oaks	8	35% White Oak 35% Red Oak 20% Red Maple 10% Gums	16 - 20"	45+	Good	0.00	1
F-5	Forest	0.68	RuC	-Mixed Oaks and Pines	-	30% White Oak 30% Red Oak 20% Red Maple 20% Gums	12 - 16"	40+	Good	0.06	-
H-1	Hedgerow	0.29	UtD	-	-	30% Virginia Pine 25% Sweet Gum 25% Red Maple 20% Birch	4 - 10"	20-	Good	0.15	-
H-2	Hedgerow	0.68	UtD	-	-	50% Virginia Pine 30% Sweet Gum 20% Black Locust	4 - 6"	10-15	Good	0.00	-
OF-1	Open Field	0.11	UtD	-	-	Oaks, Birch, Gums, Pines, and Maples Likely In Future	less than 2"	5-	-	0.00	-
TC-1	Tree Cluster	0.10	UtD	-	-	35% Tulip Poplar 35% White Pine 30% Sweet Gum	15 - 22"	45+	Good	0.00	-
TC-2	Tree Cluster	0.11	UtD	-	-	75% White Pine 25% Pin Oak	15 - 24"	45+	Good	0.00	-
TC-3	Tree Cluster	0.08	UtD	-	-	100% Virginia Pine	8 - 12"	15-20	Fair	0.00	-

NOTES: 1. INFORMATION FOR NEWLY CLASSIFIED UtD SOILS NOT AVAILABLE.
2. THERE WERE NO SPECIMEN TREES FOUND ON THE PROPERTY.

SOIL ANALYSIS

SYMBOL	SOIL	K FACTOR	ERODIBLE	HYDRIC	COUNTY	TAXONOMIC CLASS
CaC	CHILLUM	0.37	YES	NO	AA	TYPIC HAPLUDULTS
Ha	HATBORO-CODORUS	0.37	YES	YES	HOW	FLUVAQUENTIC ENDOAQUEP
RuC	RUSSETT AND BELTSVILLE	0.24	NO	NO	HOW	AQUIC HAPLUDULTS
Sac	SASSAFRAS LOAM	0.24	NO	NO	HOW	TYPIC HAPLUDULTS
Ufa	URBAN LAND-FALLSINGTON COMPLEX	0.02	NO	YES	HOW	-
UtD	URBAN LAND-UDORTHENTS COMPLEX	0.28	NO	NO	HOW	-

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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SIGNATURE OF ENGINEER — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

Before You Dig Call "MISS UTILITY" Service Protection Center
MEMBER ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE 1-800-257-7777

9.6.12 DATE — 10.6.12

STATE OF MARYLAND WILLIAM RANDOLPH ZINK 20587 REGISTERED PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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410.872.9550 · metro 301.881.0149 · fax 410.872.9553

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG.C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

EXISTING CONDITIONS AND DEMOLITION PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: SEPT 06 2012		
CHECKED: ENJ	APPROVED: WRZ	4 OF 45	

MDC-855

SDP-08-116

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPOSED CURBLINE
- PROPOSED BUILDINGS
- PROPOSED PARKING SPACE COUNT
- LIMITS OF DISTURBANCE (LOD)
- 50' BUILDING RESTRICTION LINES
- 30' PARKING RESTRICTION LINES
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- FIRE HYDRANT / EX. 8" WATER — EXISTING WATER
- EX. 8" SAN. — EXISTING SANITARY SEWER
- EX. 24" RCP — EXISTING STORMDRAIN
- OHE — EXISTING OVERHEAD UTILITY
- FENCE
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- PROPOSED TREELINE
- EXISTING TREELINE
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- FCE — FOREST CONSERVATION EASEMENT
- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORMDRAIN
- WATER METER
- RAILROAD TRACKS
- PROPOSED LIGHT
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- LIGHT DUTY PAVING
- HEAVY DUTY PAVING
- CONC PAD

RETAINING WALL NOTE:
PORTIONS OF AN EXISTING RETAINING WALL AND GEOGRID ARE TO BE ABANDONED IN PLACE AND ARE DEEMED NON-STRUCTURAL

- *NON-STRUCTURAL GEOGRID*
- *STRUCTURAL GEOGRID*

SITE NOTES

1. ALL CURB RADII IS 5' UNLESS OTHERWISE NOTED
2. ALL PROPOSED BUILDINGS (PROPOSED BUILDING 4 AND 5) ARE SINGLE FLOOR STRUCTURES.
3. THE CONTRACTOR SHALL PROVIDE FIRE LANE SIGNS IN THE HATCHED AREA AS REQUIRED BY NFDA CODE-SECTION-1:18.2.3.5 (AMENDED IN TITLE 17) SEE SHEET 6
4. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
5. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 7 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
6. THE LOADING BAYS WILL BE ENCLOSED WITH ROLLING DOORS IN A COLOR COMPLIMENTARY TO THE BUILDING SIDING WHEN THE BAY IS NOT IN USE. OVERALL, THE FACT THE LOADING DOCK IS ACTUALLY RECESSED BACK FROM THE BUILDING AND IMPROVES AN EXISTING CONDITION ALLEVIATES THE SCREENING CONCERNS BEYOND THIS.

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
MEMBER ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE 1-800-257-7777

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 10/31/12
Chief, Division of Land Development — Date

[signature] 10/17/12
Chief, Development Engineering Division — Date

[signature] 11/2/12
Director, Department of Planning and Zoning — Date

3	4/2014	DEMO EX. LOADING DOCK, CONS. NEW LOADING DOCK, RET. WALL AND GRADING, REV. PARKING & COUNT
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN, LOADING DOCKS, GRADING
1	11/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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C/O EXETER PROPERTY GROUP
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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

9.6.12
DATE
[signature] 10.6.12

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — No. 20587 — REGISTERED PROFESSIONAL ENGINEER

TITLE:

SITE LAYOUT PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	5 OF 45
CHECKED: ENJ	APPROVED: WRZ	

PROFESSIONAL CERTIFICATION

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[signature] 10.6.12 — 9.6.12

SIGNATURE OF ENGINEER — DATE

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPOSED CURBLINE
- PROPOSED BUILDINGS
- PROPOSED PARKING SPACE COUNT
- LIMITS OF DISTURBANCE
- 50' BUILDING RESTRICTION LINES
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- OHE — EXISTING OVERHEAD UTILITY
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- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
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- LIGHT DUTY PAVING
- HEAVY DUTY PAVING
- HEAVY DUTY PAVERS
- LOADING DOCK

NOTES

1. ALL CURB RADII IS 5' UNLESS OTHERWISE NOTED
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3. THE CONTRACTOR SHALL PROVIDE FIRE LANE SIGNS IN THE HATCHED AREA AS REQUIRED BY NFDA CODE-SECTION-1:18.2.3.5 (AMENDED IN TITLE 17)
4. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
5. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 7 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
6. PLEASE REFER TO SHEET 30 FOR FLOODPLAIN ELEVATIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
MEMBER ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE 1-800-257-7777

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT# L6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

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.

SIGNATURE OF ENGINEER 10.6.12 — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

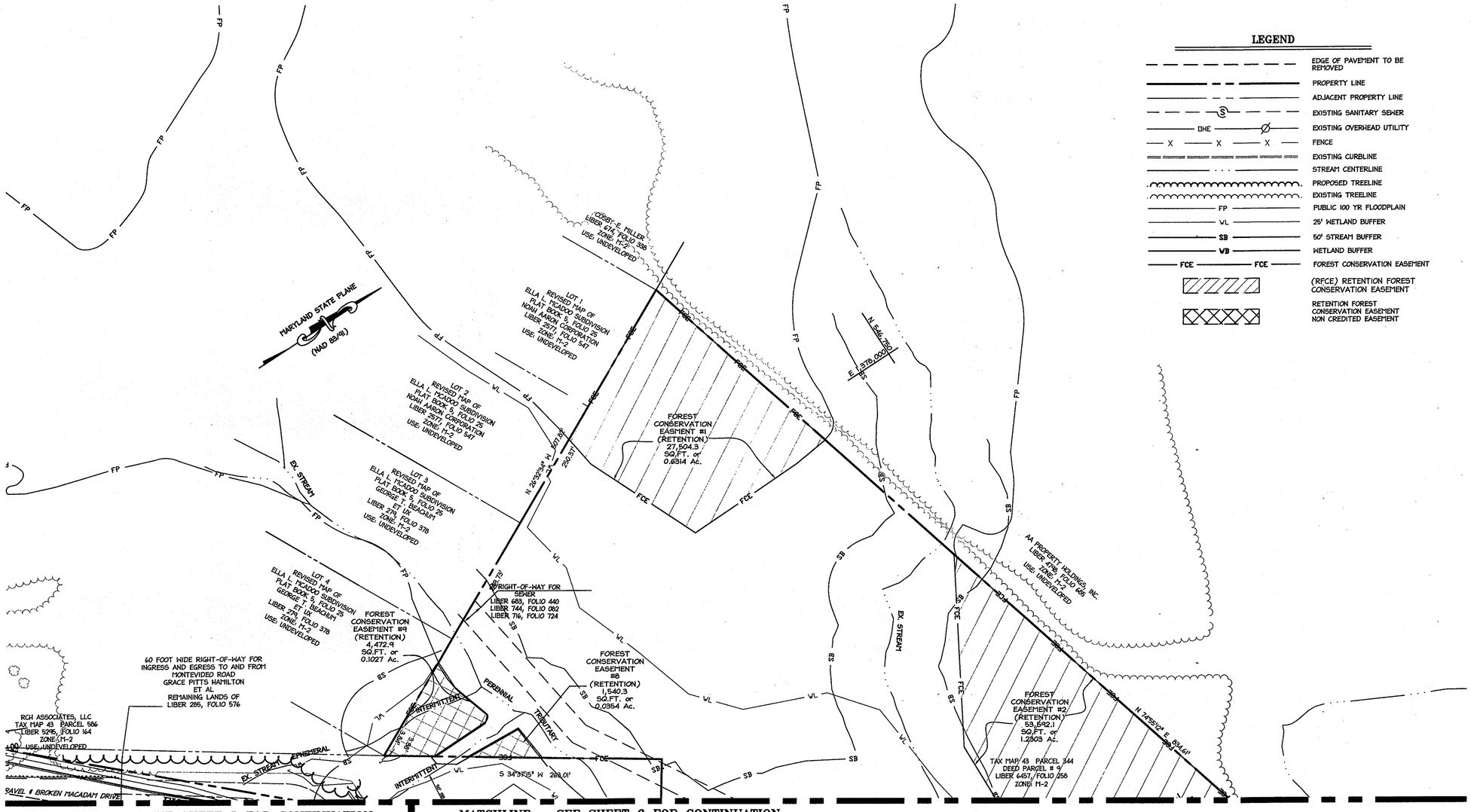
9.6.12 DATE 10.6.12

STATE OF MARYLAND — WILLIAM RAMON ZINK — No. 20587 REGISTERED — PROFESSIONAL ENGINEER

TITLE:

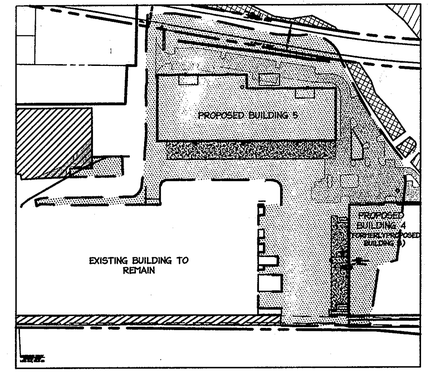
SITE LAYOUT PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	6 OF 45
CHECKED: ENJ	APPROVED: WRZ	



LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SANITARY SEWER
- OHE — EXISTING OVERHEAD UTILITY
- FENCE
- EXISTING CURBLINE
- STREAM CENTERLINE
- PROPOSED TREELINE
- EXISTING TREELINE
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — 25' WETLAND BUFFER
- SB — 50' STREAM BUFFER
- WB — WETLAND BUFFER
- FCE — FOREST CONSERVATION EASEMENT
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT



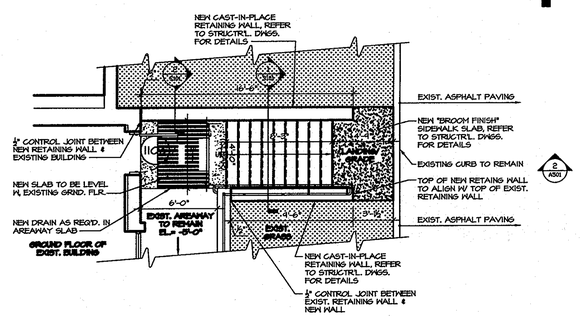
LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

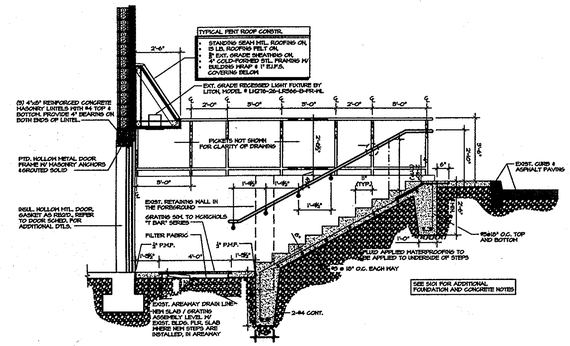
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING PAVEMENT TO BE REMAIN

NOTES

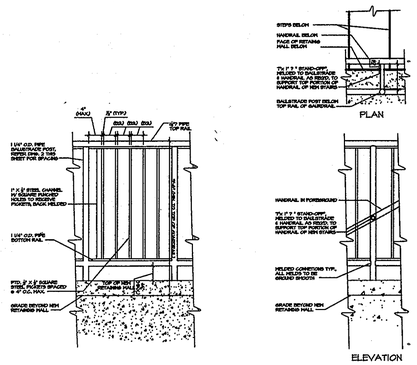
1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE



STAIRS PLAN VIEW



STAIRS PROFILE VIEW



TYPICAL RAILING DETAILS

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

48 Hours
Before You Dig
Call
"MISS UTILITY"
Service Protection Center
CALL TOLL FREE
1-800-257-7777

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WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/17/12
Director, Department of Planning and Zoning — Date 10/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

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410.872.8660 · metro 301.881.0140 · fax 410.872.8663

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE: 400 (TG 550)			SEWER CODE:	B01	

9.6.12
DATE

STATE OF MARYLAND — WILLIAM RICHARD ZINK — 20587 — REGISTERED PROFESSIONAL ENGINEER

TITLE:

SITE LAYOUT PLAN

DESIGN:	NM	SCALE:	1" = 50'	PROJECT:	03067.008.07
DRAWN:	DAM	DATE:	SEPT 06 2012		
CHECKED:	ENJ	APPROVED:	WRZ	7 OF 45	

MDC-855

SDP-08-116

MATCHLINE – SEE SHEET 10 FOR CONTINUATION

MATCHLINE – SEE SHEET 9 FOR CONTINUATION

CHUN YONG CHUNG ET UX
TAX MAP 43 PARCEL 463
LIBER 5085, FOLIO 187

DAVID MAUCK, ET AL
TAX MAP 43 PARCEL 443
LIBER 7537, FOLIO 196

JAMES G. CAPELL
TAX MAP 43 PARCEL 345
LIBER 2144, FOLIO 193
ZONE: M-2
USE: LIGHT INDUSTRIAL

LOST WOODS ASSOCIATES, LLC
TAX MAP 43 PARCEL 115
LIBER 4562, FOLIO 471

MARTIN LEVINE, ET UX
TAX MAP 43 PARCEL 65
LIBER 3567, FOLIO 370
ZONE: M-2
USE: RESIDENCE AND TREE SERVICE

MONTEVIDEO SOUTH BUSINESS TRUST
PARCEL 7
LIBER 7315, FOLIO 686

MONTEVIDEO SOUTH BUSINESS TRUST
PARCEL 11
LIBER 7315, FOLIO 686

MONTEVIDEO SOUTH BUSINESS TRUST
PARCEL 10
LIBER 7315, FOLIO 686

TAX MAP 43 PARCEL 441
DEED PARCEL #12
LIBER 6457, FOLIO 258
ZONE: M-2

TAX MAP 43 PARCEL 97
DEED PARCEL #8
LIBER 6457, FOLIO 256
ZONE: M-2

FORMERLY
TAX MAP 43 P/O
PARCEL 572
DEED PARCEL # 3
LIBER 6457, FOLIO
258
F.F.E. = 160.42

MARYLAND STATE PLANE
(NAD 83/91)

N 545,750
E 1,376,000

N 545,750
E 1,378,750

POWER POLE NO. 240546

POWER POLE NO. 240547

POWER POLE NO. 273877

FUTURE PUBLIC DORSEY RUN ROAD

PROP. CURB

PROP. 12" RCP
CROSS PIPE
PROVIDE BITUMINOUS CURB UP TO THE R/W

PROP. ON-SITE SIDEWALK UP TO R/W (BY DEVELOPER)

SEE HANDICAP GRADING AND DIMENSIONS DETAIL ⑤ ON SHEET 9

CONTRACTOR TO RAISE TOP OF SWM 1.0' TO EL. 171. NO IMPROVEMENTS TO THE CORE. CONTRACTOR TO STABILIZE DISTRIBUTED AREA.

EX. SWM POND NOT IN LIMITS OF THIS PLAN

TIE TO EX. CURB PROP. ROOF DRAINS (TYP.)

MONTEVIDEO ROAD
EX. VARIABLE WIDTH R.O.W.
PROP 80' RIGHT-OF-WAY
MAJOR COLLECTOR/
DESIGN SPEED LIMIT 40 MPH

VARIABLE WIDTH PUBLIC SEWER, WATER, AND UTILITY EASEMENT

EX. BLOCK BLDG

EX. 8"CMP

EX. 18"RCCP

EX. 15" RCP

EX. 12" RCP

EX. FH

EX. SHED

EX. BLDG.

EX. WOOD BOILER UNIT

3' SPLIT RAIL FENCE

8' WOOD FENCE/PEN

8' WOOD FENCE/PEN

EX. 15" ALLEY

EX. 50' PUBLIC R/W

EX. Lt. Pole (typ)

PROP. RETAINING WALL

AREA OF EXISTING PAVING TO BE REMOVED SEE NOTE 1

CONNECT PROPOSED EDGE OF PAVEMENT TO EXISTING PAVING

END PROPOSED EDGE OF PAVEMENT

PROP CURB

PROP. 11 LOADING DOCKS

PROP. RET. WALL

PROP. 8" HDPE PIPE

PROP. TRENCH DRAIN W/802 SERIES HIGH INTAKE SLOTTED GRATE (H20 LOADED)

CURRENTLY INSTALLED NEW DOOR LOCATION

EX. RETAINING WALL (TO BE REMOVED)

PROP. RET. WALL

CONC. UTIL. VAULT COVER

PROP. CONC. LOADING DOCK

PROP. RET. WALL

EXISTING RAIL ROAD TRACKS

ABANDONED RAIL SIDING

Rail Road Signal Light

EX STREAM

RETAINING WALL NOTE:
PORTIONS OF AN EXISTING RETAINING WALL AND GEOGRID ARE TO BE ABANDONED IN PLACE AND ARE DEEMED NON-STRUCTURAL

NON-STRUCTURAL GEOGRID

STRUCTURAL GEOGRID

TAX MAP 43 P/O PARCEL 572
PART OF DEED PARCEL # 1
LIBER 6457, FOLIO 258
ZONE: M-2

EXISTING BUILDING C – TO REMAIN
(ONE LEVEL)
7595 MONTEVIDEO RD.
2 STORY OFFICE &
1 STORY WAREHOUSE
BRICK, BLOCK & METAL SIDING
HT. = 38.67'
287,048 SQ.FT.±
F.F.E. = 160.00

EXISTING 20' RIGHT OF WAY FOR INGRESS AND EGRESS TO A SEWER PER LIBER 964, FOLIO 141

DORSEY REALTY CORPORATION
LIBER 355, FOLIO 311

MONTEVIDEO REALTY BUSINESS TRUST
LIBER 8849, FOLIO 488

CSX TRANSPORTATION, INC.
VARIABLE WIDTH RAILROAD
RIGHT-OF-WAY
SHEET 3 OF 13 VALUATION MAP V08488

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

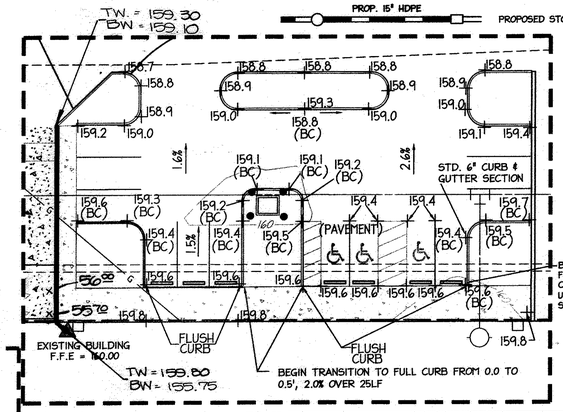
LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING OVERHEAD UTILITY
- FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- PROPOSED TREELINE
- EXISTING TREELINE
- PUBLIC 100 YR FLOODPLAIN
- 25' WETLAND BUFFER
- 50' STREAM BUFFER
- WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- PROPOSED INDEX CONTOUR
- PROPOSED INTER CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING WATER VALVE & HYDRANT
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORMDRAIN
- EXISTING GAS LINE
- PROP. 15" HDPE — PROPOSED STORM DRAIN

CONCRETE PAD

NOTE

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 10 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE



HANDICAP AND PARKING DETAIL
1" = 20'

NOTE: ALL SPOTS ARE TOP OF CURB UNLESS NOTED OTHERWISE.

SEE HANDICAP GRADING AND DIMENSIONS DETAIL ON THIS SHEET

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
MEMBER ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE 1-800-257-7777

PROFESSIONAL CERTIFICATION

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SIGNATURE OF ENGINEER — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

9.6.12 DATE

STATE OF MARYLAND WILLIAM RANDOLPH ZINK NO. 20587 REGISTERED PROFESSIONAL ENGINEER 10.4.12

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 10/2/12

3	4/2014	DEMO EX. LOADING DOCK, NEW LOADING DOCK, RET. WALL AND GRADING, REV. PARKING COUNTS
2	11/2013	REDLINE REVISIONS - TRENCH DRAIN
		LOADING DOCK, GRADING
1	8/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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410.872.8990 · metro 301.861.0140 · fax 410.872.8993

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

GRADING AND STORMDRAIN PLAN

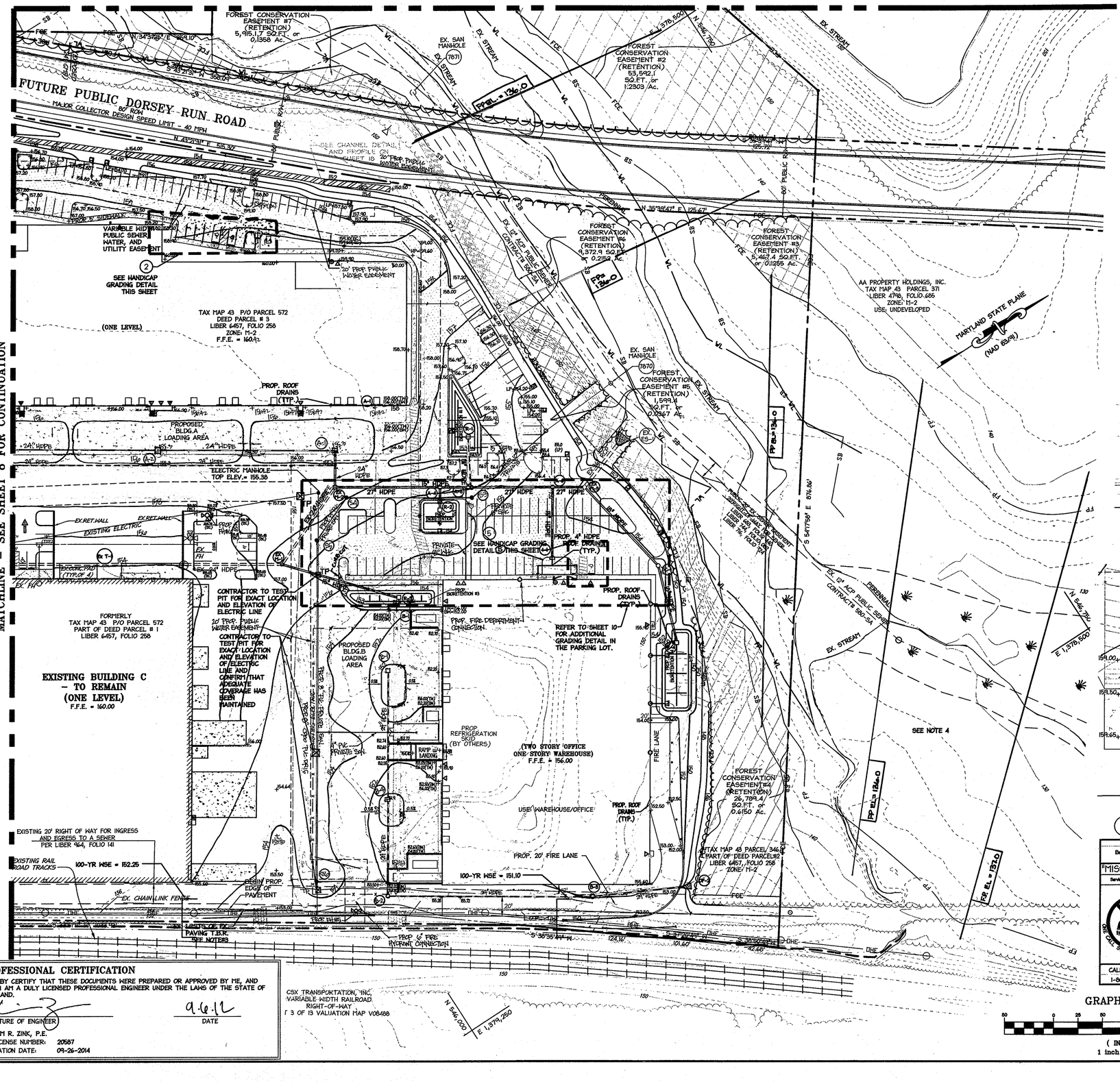
DESIGN: NM	SCALE: 1" = 50'		PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012		8 OF 45
CHECKED: ENJ	APPROVED: WRZ		

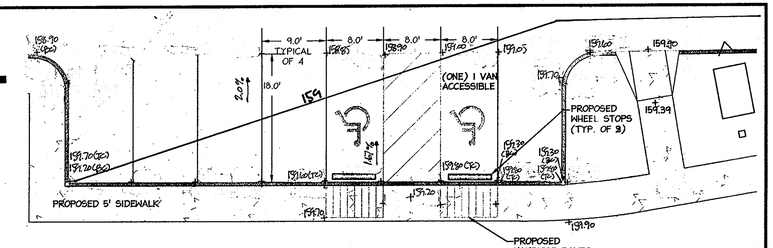
MDC-855

SDP-08-116

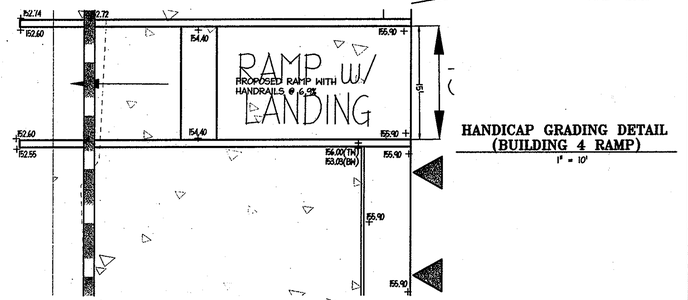
MATCHLINE – SEE SHEET 10 FOR CONTINUATION

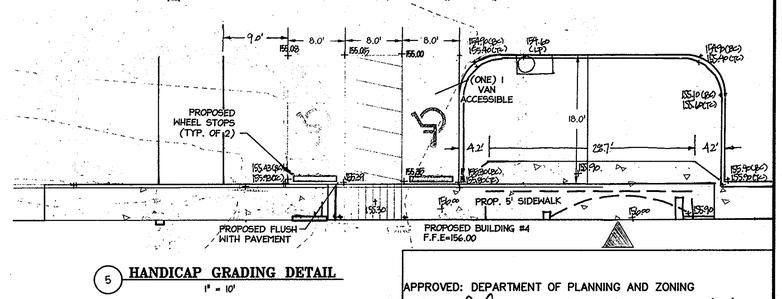
MATCHLINE – SEE SHEET 8 FOR CONTINUATION



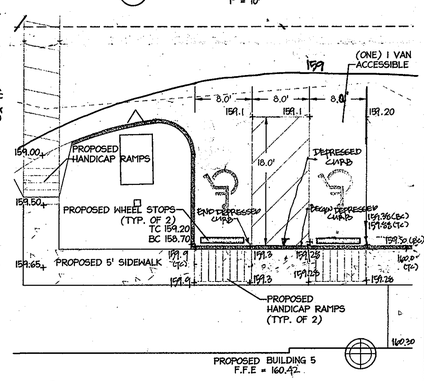


2 **HANDICAP GRADING DETAIL**
1" = 10'





5 **HANDICAP GRADING DETAIL**
1" = 10'



3 **HANDICAP GRADING DETAIL**
1" = 10'

Miss Utility
Before You Dig Call
"MISS UTILITY"
Service Protection Center
MEMBER
ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE
1-800-257-7777

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

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SIGNATURE OF ENGINEER — DATE: 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

9.6.12
DATE

STATE OF MARYLAND WILLIAM RAYMOND ZINK No. 20587 REGISTERED PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/26/12	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.6600 · metro 301.601.0148 · fax 410.872.6693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

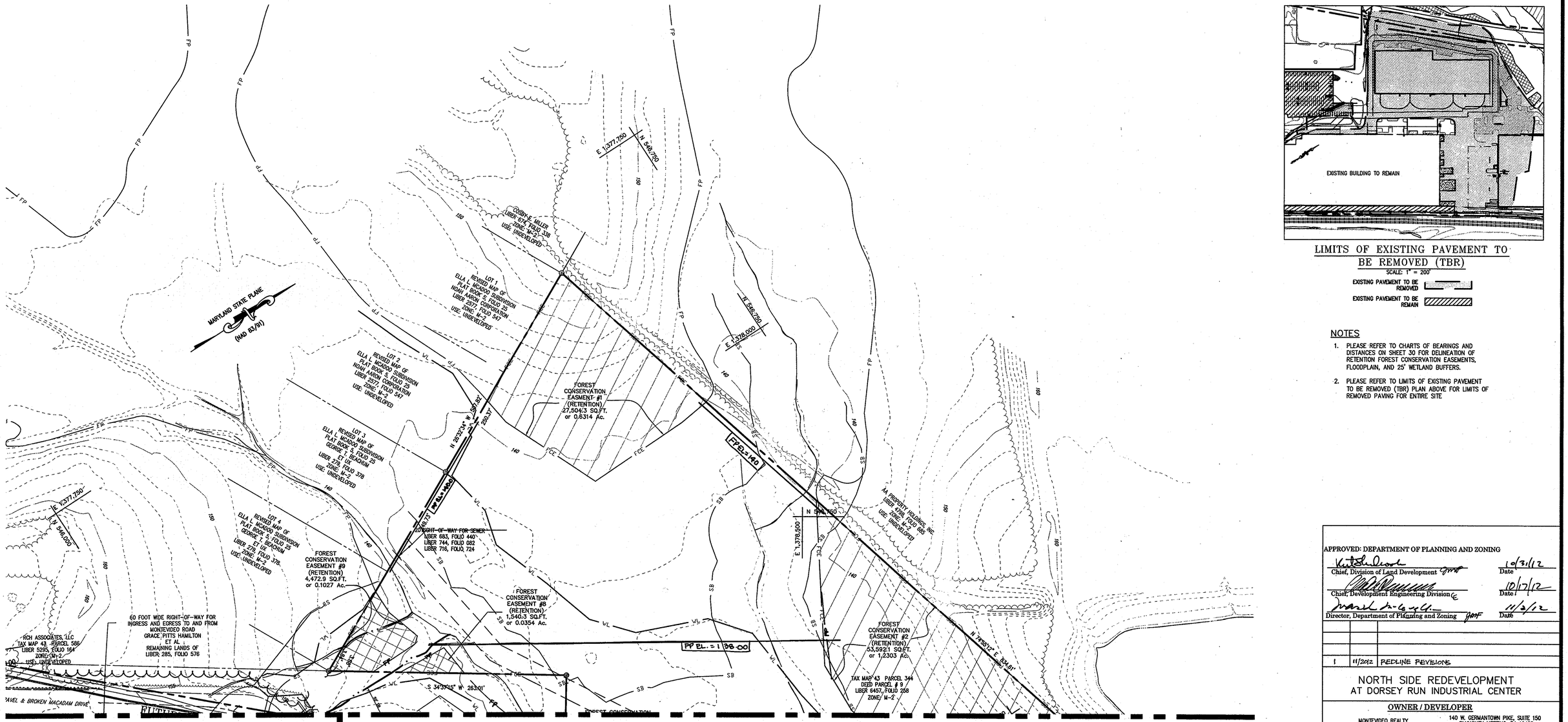
PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA			LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02	
WATER CODE: 400 (TC 550)			SEWER CODE: B01			

TITLE:

GRADING AND STORMDRAIN PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: SEPT 06 2012	9 OF 45	
CHECKED: ENJ	APPROVED: WRZ		



LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

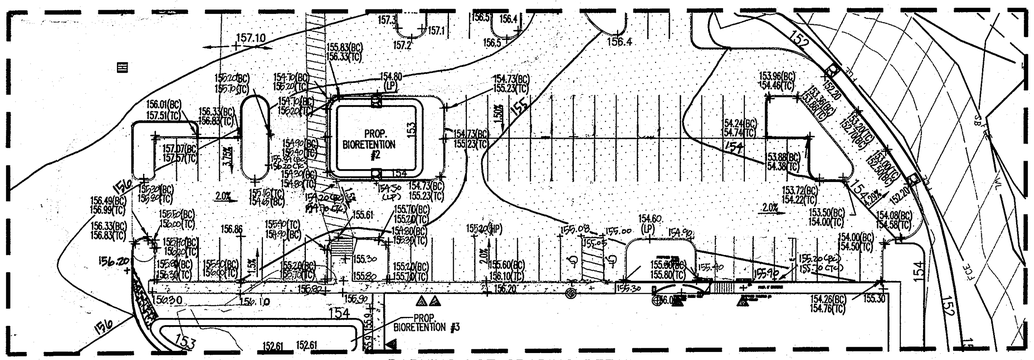
SCALE: 1" = 200'

EXISTING PAVEMENT TO BE REMOVED

EXISTING PAVEMENT TO BE REMAIN

NOTES

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE



PARKING LOT GRADING DETAIL

SCALE: 1"=30'

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING OVERHEAD UTILITY
- FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- PROPOSED TREELINE
- EXISTING TREELINE
- PUBLIC 100 YR FLOODPLAIN
- 25' WETLAND BUFFER
- 50' STREAM BUFFER
- WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 '

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WILLIAM R. ZINK, P.E.

MD LICENSE NUMBER: 20587

EXPIRATION DATE: 09-26-2014

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9.6.12 DATE

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — 20587 — REGISTERED — PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/10/12

Director, Department of Planning and Zoning — Date 11/5/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
c/o EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8850 · metro 301.861.0148 · fax 410.872.8893

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

GRADING AND STORMDRAIN PLAN

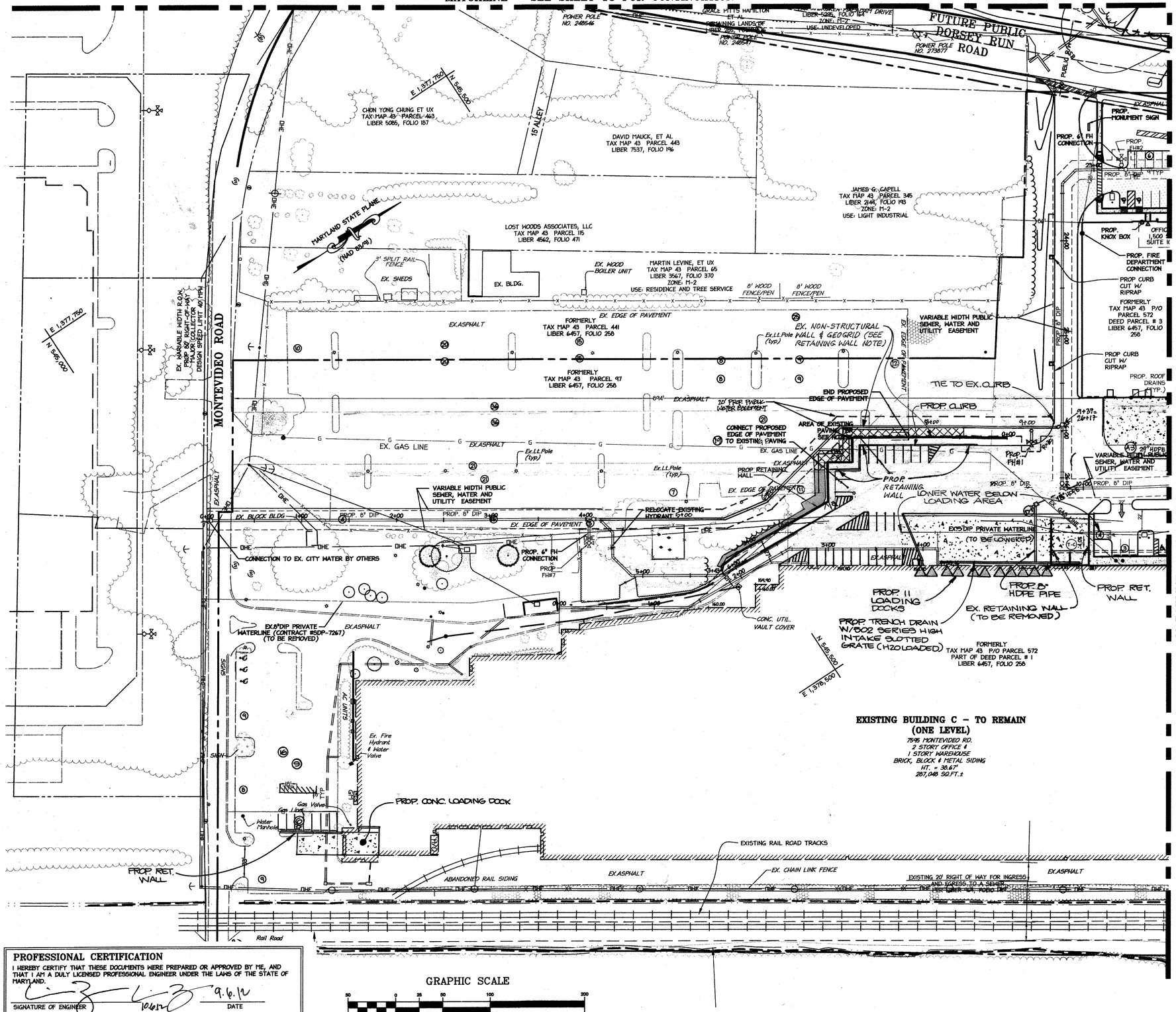
DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	10 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-116

MATCHLINE – SEE SHEET 13 FOR CONTINUATION

MATCHLINE – SEE SHEET 12 FOR CONTINUATION



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

- PROPOSED STORM DRAIN
- PROP.8"DIP — PUBLIC WATERLINE
- PROP.8"PVC — PUBLIC SANITARY LINE
- PROP.8"DIP — PROPOSED PRIVATE WATERLINE
- PROP.8"PVC — PROPOSED PRIVATE SANITARY LINE
- PROPOSED FIRE DEPARTMENT CONNECTION
- LOD — LIMITS OF DISTURBANCE
- 50' BUILDING RESTRICTION LINES
- 30' PARKING RESTRICTION LINES
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- EX. 8" WATER — EXISTING WATER
- EX. 8" SAN. — EXISTING SANITARY SEWER
- EX. 24" RCP — EXISTING STORMDRAIN
- OHE — EXISTING OVERHEAD UTILITY
- X X X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- RAILROAD DITCH
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORM
- WM — WATER METER
- WATER METER
- FFIRE HYDRANT
- RAILROAD TRACKS
- PROPOSED TREELINE
- EXISTING TREELINE
- EXISTING BUILDING
- CONC. PAD

RETAINING WALL NOTE: PORTIONS OF AN EXISTING RETAINING WALL AND GEOGRID ARE TO BE ABANDONED IN PLACE AND ARE DEEMED NON-STRUCTURAL

- NON-STRUCTURAL GEOGRID
- STRUCTURAL GEOGRID

NOTE

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 13 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

3	4/2014	ADD'D EX. LOADING, CONS. NEW LOADING DOCK, RET. WALLS & GRADING, REV. PARKING AND COUNTS
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN
		LOADING DOCK, GRADING
1	11/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

UTILITY PLAN

DESIGN: NM	SCALE: 1" = 50'		PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012		11 OF 45
CHECKED: ENJ	APPROVED: WRZ		

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.

SIGNATURE OF ENGINEER — DATE 9.6.12

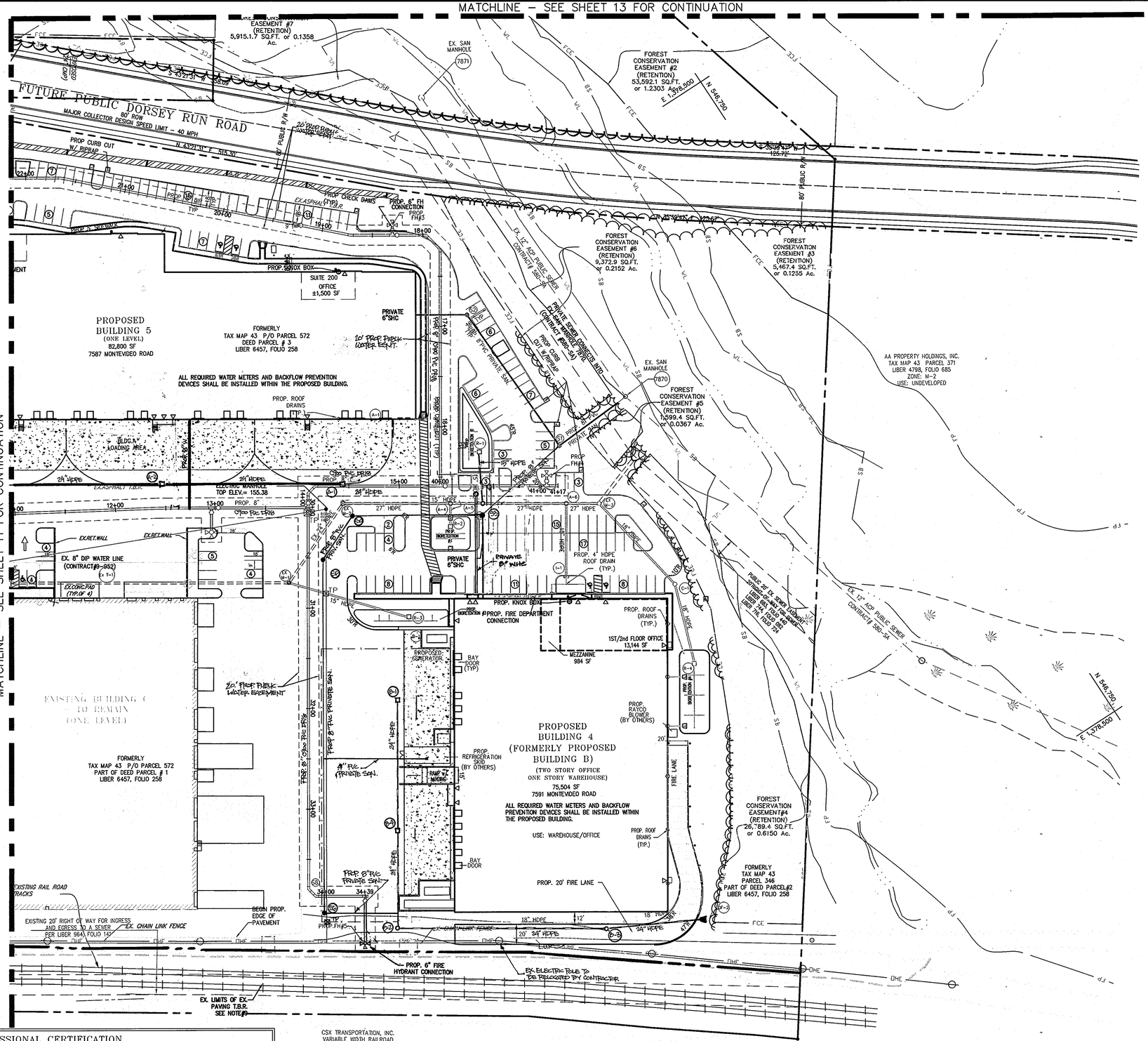
WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

9.6.12 DATE

STATE OF MARYLAND — WILLIAM RANDOLPH ZINK — 20587 — REGISTERED PROFESSIONAL ENGINEER — 10.6.12

MATCHLINE – SEE SHEET 13 FOR CONTINUATION

MATCHLINE – SEE SHEET 11 FOR CONTINUATION



LEGEND

- PROPOSED STORM DRAIN
- PROP.8"DIP — PUBLIC WATERLINE
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- FCE — FCE — FOREST CONSERVATION EASEMENT
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- EXISTING SIGN
- GAS METER
- STORM
- WM — WATER METER
- TP — TEST PIT
- FIRE HYDRANT
- VALVE
- EX FIRE HYDRANT
- EX VALVE
- EX INLET
- EX MANHOLE
- RAILROAD TRACKS
- PROPOSED TREELINE
- EXISTING TREELINE
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT – CREDIT
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT – NON-CREDIT

GENERAL NOTES:

1. ALL WATER MAINS AND 8" SEWER MAINS ASSOCIATED WITH THIS REDEVELOPMENT PROJECT SHALL BE D.I.P. CLASS 54 (C-900 PVC IN CORROSIVE "HOT-SPOT" ONLY)
2. THE VERTICAL AND HORIZONTAL LOCATION OF THE EXISTING 8" WATERMAIN HAS NOT BEEN FIELD VERIFIED SO, THE GENERAL CONTRACTOR SHALL PROVIDE TEST PITS TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING WATERMAIN PRIOR TO MAKING NEW CONNECTIONS FOR EXTENSIONS.
3. ALL REQUIRED WATER METERS AND BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN THE PROPOSED BUILDING.
4. THE PURPOSE OF THIS PLAN IS TO DEPICT THE DESIGN LAYOUT OF PUBLIC WATER AND SEWER LINES ONLY. ALL OTHER PROPOSED IMPROVEMENTS DEPICTED ON THIS PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND WILL BE CONSTRUCTED BY OTHERS AS PART OF A SITE DEVELOPMENT PLAN.
5. ANY FILL REQUIRED UNDER A PROPOSED WATERMAIN SHALL BE 95% COMPACTED PER AASHTO STANDARD T-180.
6. EXISTING VALVES SHALL BE CLOSED TEMPORARILY WHEN A NEW WATERMAIN CONNECTION IS MADE TO THE EXISTING LINES. THE SERVICE TO EXISTING FIRE HYDRANT LOCATED TO THE NORTH OF THE EXISTING BUILDING WILL BE INTERRUPTED BY CLOSING EXISTING VALVE WHILE THIS CONNECTION IS MADE. USE TAPING SLEEVE AND VALVES FOR CONNECTION TO EXISTING WATER MAIN.
7. THE PUBLIC SEWER MANHOLES PROPOSED AS PART OF THIS PLAN SET SHALL BE STANDARD PRECAST MANHOLES PER COUNTY DETAIL G5.11 AND THE DROP MANHOLES SHALL BE TYPE "A" STANDARD COUNTY DETAIL S1.32
8. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
9. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 13 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.
10. PLEASE REFER TO SHEET 34 FOR FLOODPLAIN ELEVATIONS
11. CONTRACTOR TO TEST PIT FOR EXACT LOCATION (HORIZONTAL AND VERTICAL) OF EXISTING PRIVATE WATER LINE AND SEWER LINE. IF THE ELEVATION PROVIDED IS GREATER THAN 1.0' CONTACT THE ENGINEER IMMEDIATELY TO CONFIRM PROPOSED ALIGNMENT.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/3/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 10/12/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

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PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL# 572,346,97,344,441
PLAT# L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

9.6.12 — DATE

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — REG. NO. 20587 — PROFESSIONAL ENGINEER

TITLE: UTILITY PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012		
CHECKED: ENJ	APPROVED: WRZ	12 OF 45	

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.

SIGNATURE OF ENGINEER 10.6.12 — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

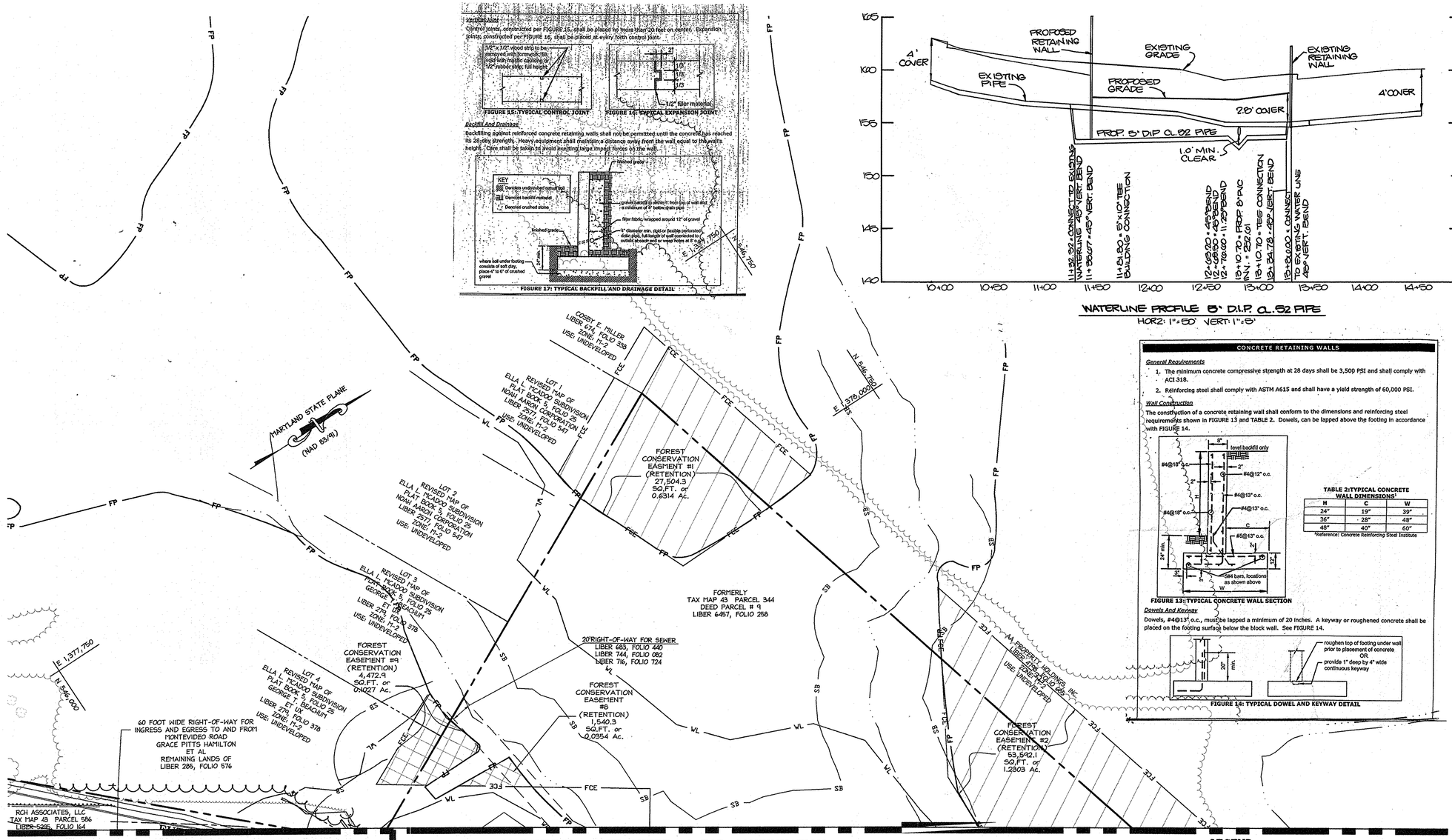
SDP-08-116

MDC-855

FIGURE 15: TYPICAL CONTROL JOINT

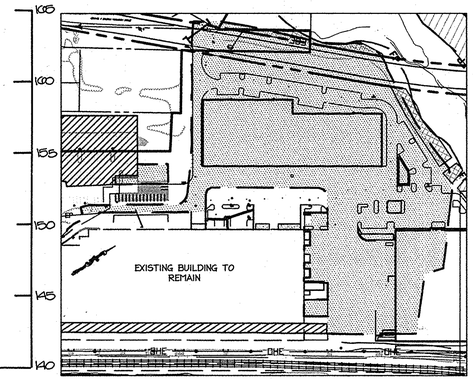
FIGURE 16: TYPICAL EXPANSION JOINT

FIGURE 17: TYPICAL BACKFILL AND DRAINAGE DETAIL



WATERLINE PROFILE 8" D.I.P. CL.52 PIPE

HORZ: 1"=50' VERT: 1"=5'



LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

EXISTING PAVEMENT TO BE REMOVED

EXISTING PAVEMENT TO BE REMAIN

NOTES

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
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CONCRETE RETAINING WALLS

General Requirements

1. The minimum concrete compressive strength at 28 days shall be 3,500 PSI and shall comply with ACI 318.
2. Reinforcing steel shall comply with ASTM A615 and shall have a yield strength of 60,000 PSI.

Wall Construction

The construction of a concrete retaining wall shall conform to the dimensions and reinforcing steel requirements shown in FIGURE 13 and TABLE 2. Dowels, can be lapped above the footing in accordance with FIGURE 14.

FIGURE 13: TYPICAL CONCRETE WALL SECTION

TABLE 2:TYPICAL CONCRETE WALL DIMENSIONS[1]

H	C	W
24"	19"	39"
36"	28"	48"
48"	40"	60"

*Reference: Concrete Reinforcing Steel Institute

Dowels And Keyway

Dowels, #4@13" o.c., must be lapped a minimum of 20 inches. A keyway or roughened concrete shall be placed on the footing surface below the block wall. See FIGURE 14.

FIGURE 14: TYPICAL DOWEL AND KEYWAY DETAIL

PROFESSIONAL CERTIFICATION

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SIGNATURE OF ENGINEER — DATE: 5/9/13

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date: 6/07/13

Chief, Development Engineering Division — Date: 6/3/13

Director, Department of Planning and Zoning — Date: 6/7/13

3	4/2014	REVISED EX. LOADING DOCK, ADDED NEW LOADING DOCK, RETAINING WALLS, REVISED GRADING
2	11/2013	REVISE REVISIONS - TRENCH DRAIN, LOADING DOCK, GRADING
1	11/2012	REVISE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

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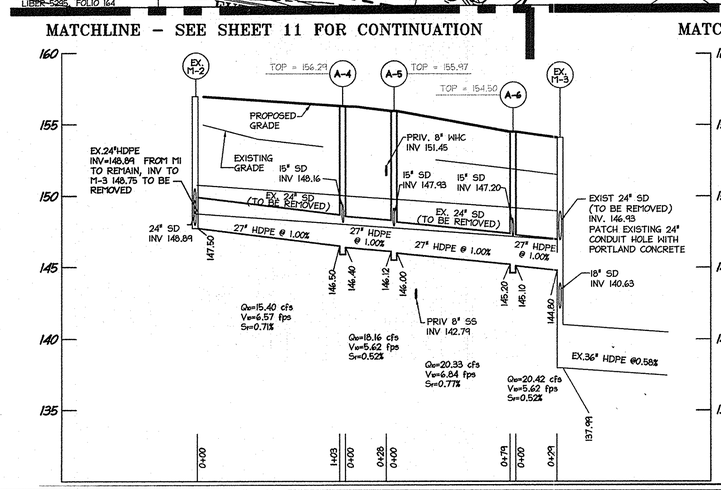

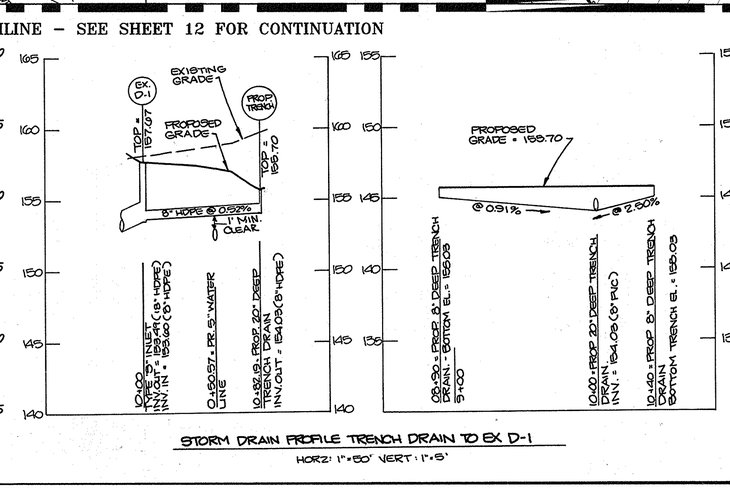

STORM DRAIN PROFILE TRENCH DRAIN TO EX D-1

HORZ: 1"=50' VERT: 1"=5'

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT - CREDIT
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT - NON-CREDIT
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. 8" SAN. — EXISTING SANITARY SEWER
- OHE — EXISTING OVERHEAD UTILITY
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- FP — PUBLIC 100 YR FLOODPLAIN
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- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- FCE — FOREST CONSERVATION EASEMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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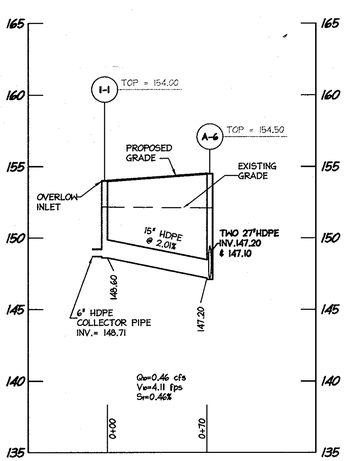
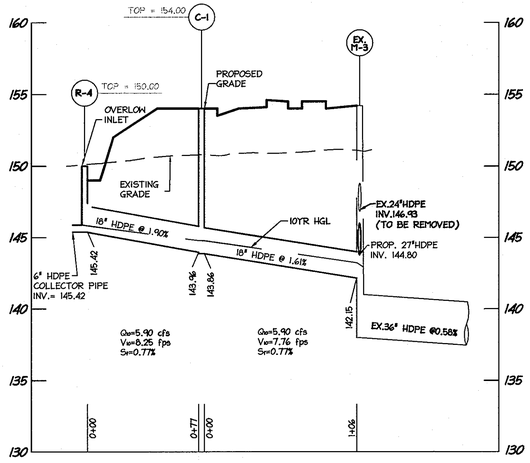
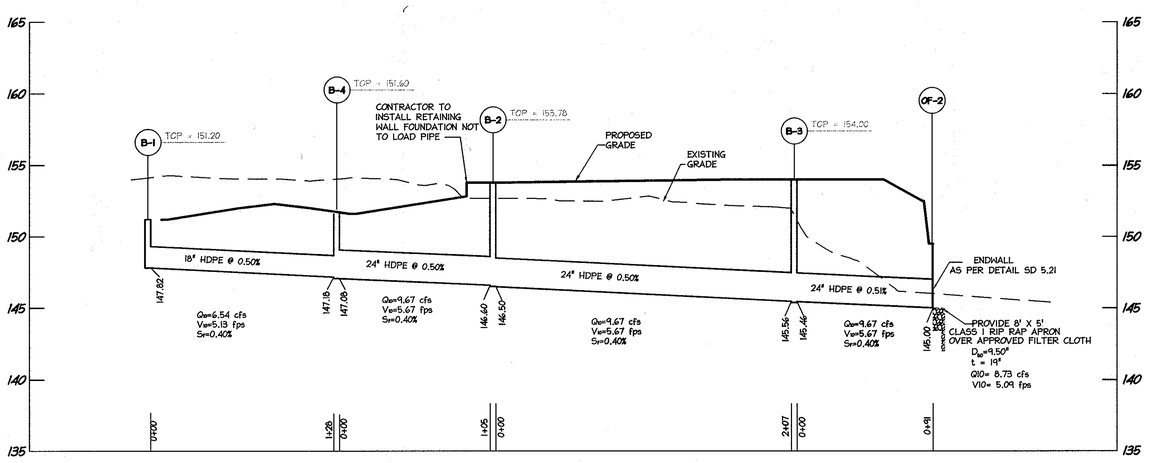
5/9/13 DATE

STATE OF MARYLAND — WILLIAM RICHMOND ZINK — 20587 — REGISTERED PROFESSIONAL ENGINEER

MDC-855







STORMDRAIN PROFILE I-1 TO A-6

HORZ: 1"=50'
VERT: 1"=5'

STORMDRAIN PROFILE R-4 TO EX.M-3

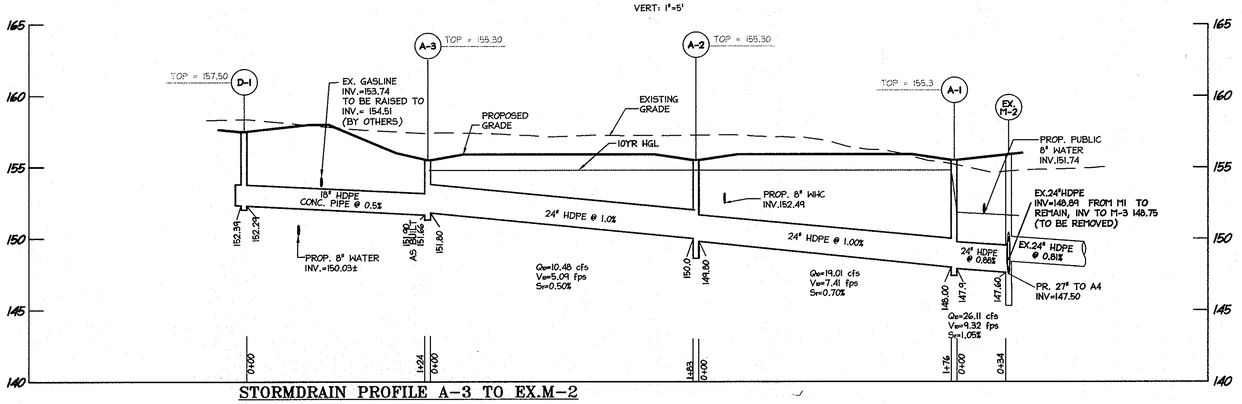
HORZ: 1"=50'
VERT: 1"=5'

STORMDRAIN PROFILE B-1 TO OF-2

HORZ: 1"=50'
VERT: 1"=5'

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH
A-3	A-2	24"	H.D.P.E	183'
A-2	A-1	24"	H.D.P.E	176'
A-1	M-2	24"	H.D.P.E	18'
B-1	B-4	22"	H.D.P.E	128'
B-2	B-3	24"	H.D.P.E	206'
B-3	OF-2	24"	H.D.P.E	91'
R-4	C-1	18"	H.D.P.E	77'
C-1	M-3	18"	H.D.P.E	106'
R-1	A-5	15"	H.D.P.E	48'
R-2	A-4	15"	H.D.P.E	19'
R-3	M-1	12"	H.D.P.E	120'
M-2	A-4	27"	H.D.P.E	103'
A-4	A-5	27"	H.D.P.E	28'
A-5	A-6	27"	H.D.P.E	79'
A-6	M-3	27"	H.D.P.E	29'
I-1	A-6	15"	H.D.P.E	70'
D-1	A-3	18"	H.D.P.E	124'



STORMDRAIN PROFILE A-3 TO EX.M-2

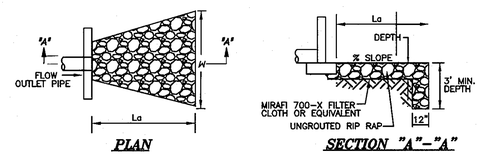
HORZ: 1"=50'
VERT: 1"=5'

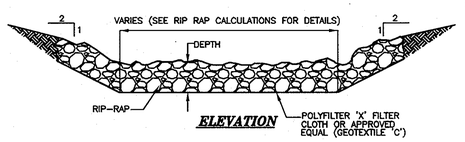
STORMDRAIN STRUCTURE SCHEDULE

STR NO.	TYPE	WITDTH/ DIAMTER	INV. ELEVATION	TOP ELEVATION	STANDARD DETAIL	NOTES:
A-4	STANDARD PRECAST MANHOLE	5'-0"	FROM M2- 146.5, TO A-5 =145.4	156.3	G.S.13	
A-5	STANDARD PRECAST MANHOLE	5'-0"	FROM A4- 146.12, TO A-6 =146.0	156	G.S.13	
A-6	STANDARD PRECAST MANHOLE	5'-0"	FROM A5- 145.2 TO EX. M-3= 145.1	154.5	G.S.13	
A-3	TYPE 'S' INLET	2'-7 1/2"	151.8	155.3	SD.4.22	
A-2	TYPE 'S' INLET	2'-7 1/2"	FROM A-3 = 150.0 TO A-1 =148.90	155.3	SD.4.22	
A-1	TYPE 'S' INLET	2'-7 1/2"	FROM A-2= 148.0 TO EX M-2 147.90	155.3	SD.4.22	
C-1	STANDARD PRECAST MANHOLE	4'-0"			G.S.12	
R-1	TYPE 'D' INLET	2'-8"	148.71	154	SD.4.11	WITH A GRATE TOP , OPENING ON 2 SIDES
R-2	TYPE 'D' INLET	2'-8"	148.26	154	SD.4.11	WITH A GRATE TOP , OPENING ON 2 SIDES
R-3	TYPE 'D' INLET	2'-8"	150.33	154.5	SD.4.11	WITH A GRATE TOP , OPENING ON 2 SIDES
R-4	TYPE 'D' INLET	2'-8"	145.42	150.6	SD.4.11	
I-1	TYPE 'A-5' INLET	5'-0"	148.6	154	SD.4.01	
B-1	TYPE 'S' INLET	2'-7 1/2"	147.82	151.2	SD.4.22	WITH A GRATE TOP
B-2	STANDARD PRECAST MANHOLE	4'-0"	FROM M-4 INV = 147.61, TO B-3 INV= 147.51	153.78	G.S.12	
B-3	STANDARD PRECAST MANHOLE	4'-0"	FROM B-2 INV = 146.56 TO OF-2 INV= 146.46	154	G.S.12	
B-4	TYPE 'S' INLET	2'-7 1/2"	147.08	151.6	SD.4.22	WITH A GRATE TOP
EX- M2	STANDARD PRECAST MANHOLE	5'-0"	EX 24" TO BE REMOVED INV= 148.75, FROM M-1 INV= 148.89 FROM A1 INV= 147.60 TO A4 INV= 147.50		G.S.13	TO BE REMOVED AND REPLACED
EX-M3	N/A	N/A	EX 24" TO BE REMOVED INV= 146.93, FROM A-6 INV=142.21 TO EX 36" TO REMAIN INV= 137.99			REMOVE OR PATCH HOLE FROM 24" THAT HAS BEN REMOVED
OF-2	ENDWALL	24"			SD.5.21	
D-1	TYPE 'S' INLET	2' 7 1/2"		157.5	SD.4.22	

TRENCH DIMENSIONAL DATA

TRENCH #	TRENCH TYPE	SHALLOW INVERT (IN.)	DEEP INVERT (IN.)	FLOW RATE (CFS)
T-A	1213 P	19.234	20.066	10.90
T-B	1210 P	16.738	17.570	8.73
T-C	1203 P	10.914	11.746	4.29





RIPRAP DETAILS

STRUCTURE NO.	PIPE DIAMETER (INCHES)	DISCHARGE (CFS)	PIPE SLOPE (%)	10-YR PIPE VELOCITY (FT/S)	RIPRAP SLOPE (%)	10-YR DOWNSTREAM OF RIPRAP VELOCITY (FT/S)	RIPRAP			DIMENSIONS	
							CLASS	d50	DEPTH	La	W
OF-2	24	8.73	0.51	5.14	0.00	5.09	Class 1	9.5"	19"	8'	5'
CURB CUT (TYPICAL)							Class 1	9.5"	19"	5'	4'

* INVERTS AND LOCATION OF EXISTING PRIVATE WATER AND EXISTING PRIVATE SEWER ARE APPROXIMATE BASED ON "AUTOMATIC" SPRINKLER CORPORATION OF AMERICA'S PLANS, DATED 3.18.1970 PREPARED FOR THE ORIGINAL DEVELOPER OF BUILDING C. CONTRACTOR TO TEST FOR EXACT LOCATION AND ELEVATION.

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.

SIGNATURE OF ENGINEER — DATE 4/2/13

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 6/07/13

Chief, Development Engineering Division — Date 6/3/13

Director, Department of Planning and Zoning — Date 6/3/13

2	03/2013	REVISIONS TO STORM DRAIN & SEWER
1	11/2012	REDLINE REVISIONS

REVISED

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (s.ste 100) - columbia, md. 21046-2990
410.872.8500 - mero 301.261.1742 - fax 410.872.8593

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT# 16457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

3/28/13
DATE

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — NO. 20587 — REGISTERED PROFESSIONAL ENGINEER

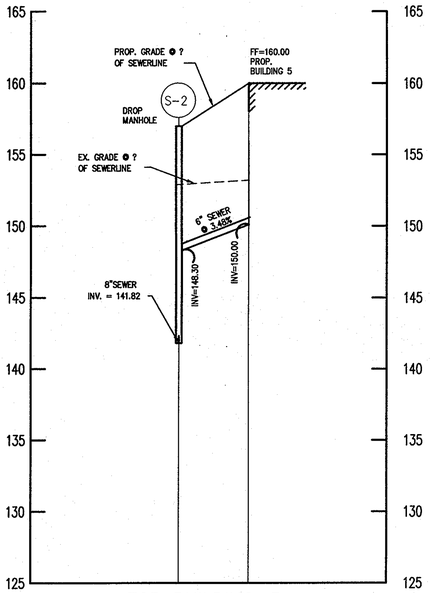
TITLE:

STORMDRAIN PROFILES

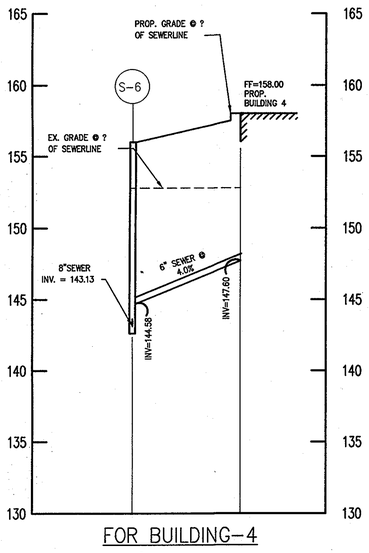
DESIGN: ENJ	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 26 2012	14 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

SDP-08-118

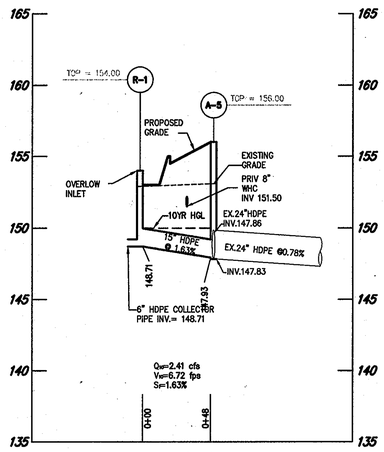
MDC-855



FOR BUILDING–5

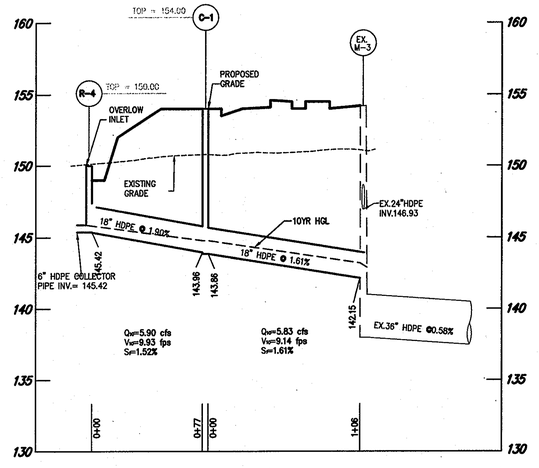


FOR BUILDING–4



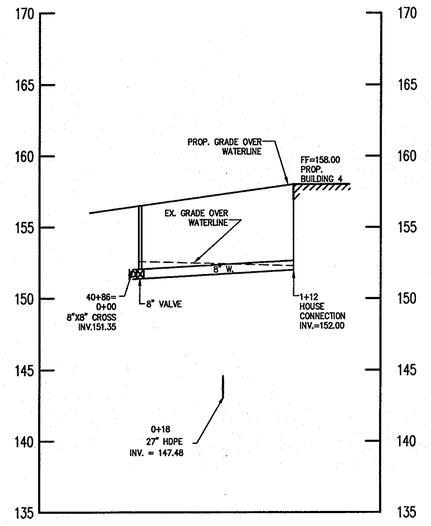
STORMDRAIN PROFILE R–1 TO PROPOSED A–5

HORZ: 1"=50'
VERT: 1"=5'

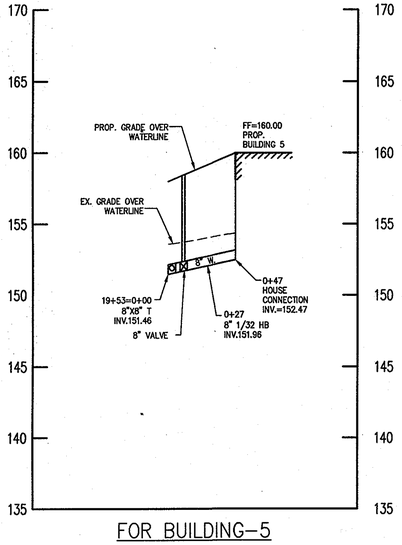


STORMDRAIN PROFILE R–4 TO EX.M–3

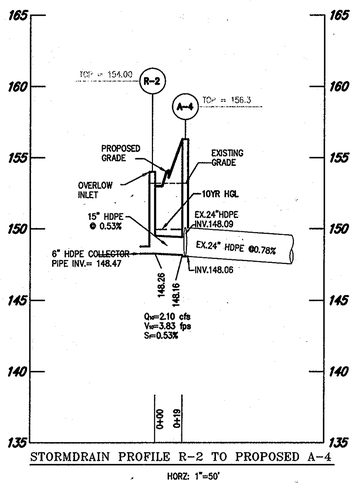
HORZ: 1"=50'
VERT: 1"=5'



FOR BUILDING–4

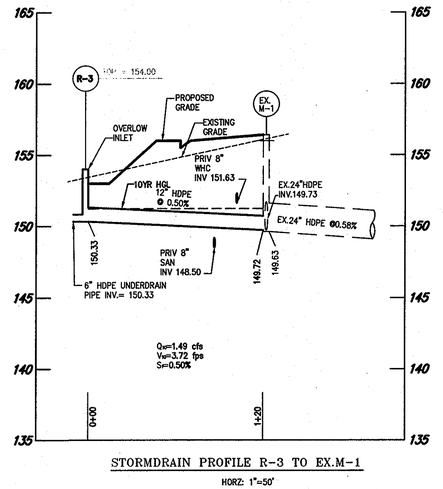


FOR BUILDING–5



STORMDRAIN PROFILE R–2 TO PROPOSED A–4

HORZ: 1"=50'
VERT: 1"=5'



STORMDRAIN PROFILE R–3 TO EX.M–1

HORZ: 1"=50'
VERT: 1"=5'

9.6.12
DATE

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.

SIGNATURE OF ENGINEER 10.6.12 — 9.6.12 DATE

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09–26–2014

10.6.12

STATE OF MARYLAND · WILLIAM RAYMOND ZINK · No. 20587 · REGISTERED · PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/7/12
Director, Department of Planning and Zoning — Date 11/2/12

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
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1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M–2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

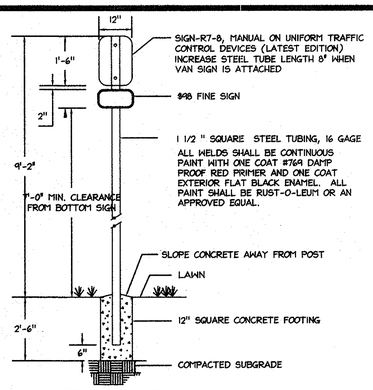
TITLE:

UTILITY PROFILES

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	15 OF 38	
CHECKED: ENJ	APPROVED: WRZ		

MDC–855

SDP–08–116



HANDICAP PARKING SIGN
NOT TO SCALE

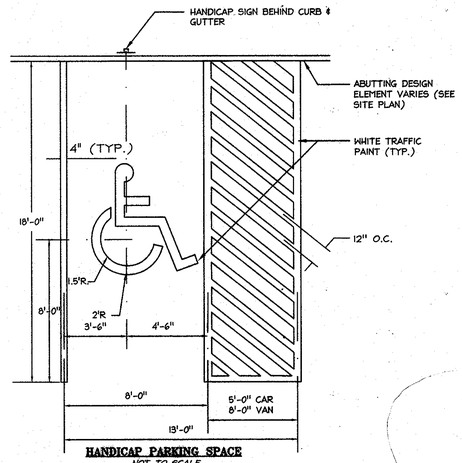
NOTES:
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'.
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAP SIGN.
3. SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

SIGN COLORS:
LETTERS AND BORDER - GREEN WHITE
H.C. SYMBOLS - WHITE
H.C. SYMBOLS BACKGROUND - BLUE
BACKGROUND - WHITE

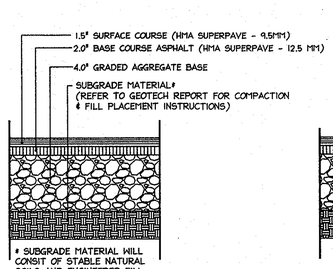
HANDICAP PARKING SIGN
NOT TO SCALE

SIGN COLORS:
LETTERS AND BORDER - GREEN WHITE
H.C. SYMBOLS - WHITE
H.C. SYMBOLS BACKGROUND - BLUE
BACKGROUND - WHITE

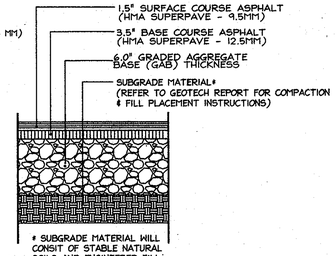
VAN ACCESSIBLE HANDICAP PARKING SIGN
NOT TO SCALE



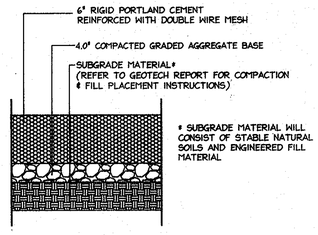
HANDICAP PARKING SPACE
NOT TO SCALE



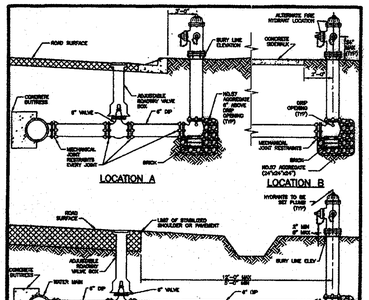
LIGHT DUTY ASPHALT PAVING
NOT TO SCALE



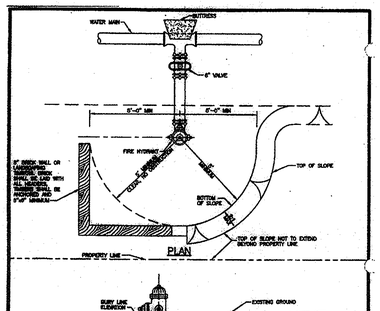
HEAVY DUTY ASPHALT PAVING
NOT TO SCALE



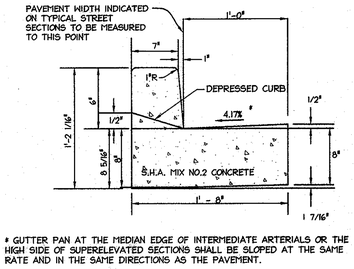
DUMPSTER STORAGE PAVING SECTION
NOT TO SCALE



Howard County, Maryland Department of Public Works	FIRE HYDRANT Settings	Detail W-1.11

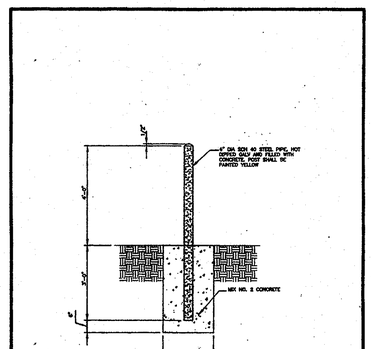


Howard County, Maryland Department of Public Works	FIRE HYDRANT Grading	Detail W-1.12

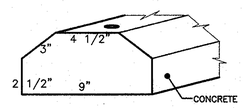


GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTIONS AS THE PAVEMENT.

STANDARD 6" COMBINATION CURB
N.T.S.

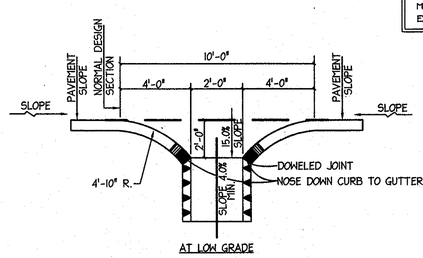


Howard County, Maryland Department of Public Works	Metal Bollard	Detail G-7.42

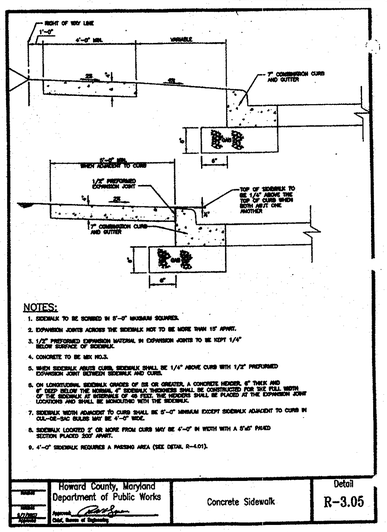


WHEELSTOP DETAIL
N.T.S.

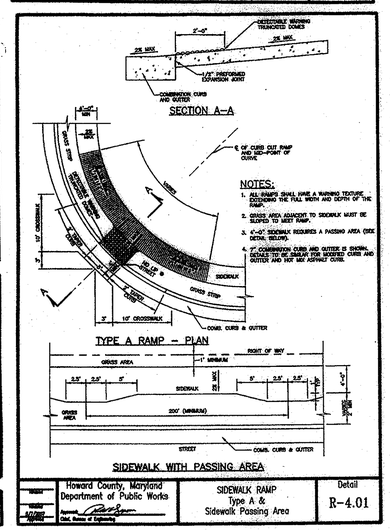
6 FT. - CONCRETE
9" WIDE
5" HIGH
2 STEEL BARS - REINFORCED
2 PRE-FORMED HOLES
APPROXIMATE WEIGHT - 210 LBS.



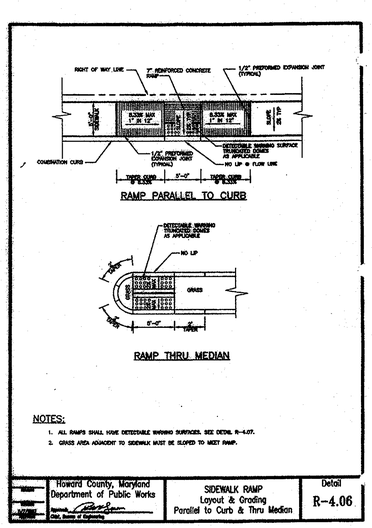
STANDARD CURB OPENING DETAIL
NTS



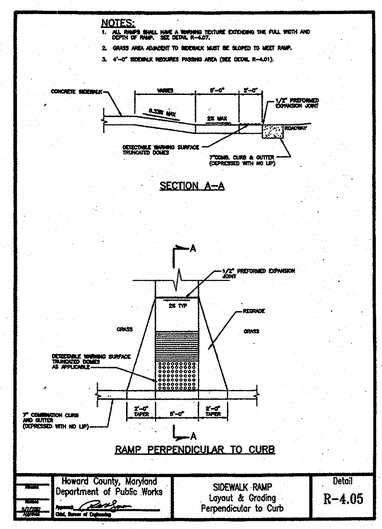
Howard County, Maryland Department of Public Works	Concrete Sidewalk	Detail R-3.05



Howard County, Maryland Department of Public Works	SIDEWALK RAMP Type A & Sidewalk Passing Area	Detail R-4.01



Howard County, Maryland Department of Public Works	SIDEWALK RAMP Layout & Grading Parallel to Curb & Thru Median	Detail R-4.06



Howard County, Maryland Department of Public Works	SIDEWALK RAMP Layout & Grading Perpendicular to Curb	Detail R-4.05

PROFESSIONAL CERTIFICATION

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SIGNATURE OF ENGINEER 10.6.12 — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/17/12
Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
CALL TOLL FREE 1-800-257-7777

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410.872.8650 · metro 301.881.0148 · fax 410.872.8653

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

9.6.12 — DATE
10.6.12

STATE OF MARYLAND — WILLIAM RUSSELL ZINK — REGISTERED PROFESSIONAL ENGINEER

TITLE:

SITE NOTES & DETAILS

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: SEPT 06 2012		
CHECKED: ENJ	APPROVED: WRZ	16 OF 45	

SDP-08-116

MDC-855

PLANTING SPECIFICATIONS FOR BIORETENTION

I. GENERAL NOTES

A. SCOPE: THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES OF PLANT MATERIAL SHOWN ON THE PLAN IN THE PLANT LIST, AND SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE ALL LANDSCAPE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.

B. UTILITIES: THE LANDSCAPE CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777) TO VERIFY THE LOCATION OF ALL MAIN UTILITIES AND SHALL ASK THE GENERAL CONTRACTOR TO LOCATE LIGHTING AND OTHER ON-SITE UTILITIES IN THE FIELD BEFORE PROCEEDING WITH THE INSTALLATION OF ANY PLANTING. IF CONDITIONS ARISE IN THE FIELD WHICH NECESSITATE THE SHIFTING OF A PLANT LOCATION MORE THAN 15', THE LANDSCAPE ARCHITECT IS TO BE CONSULTED.

C. SUBSTITUTIONS: ANY CHANGE IN THE TYPE, SIZE AND QUANTITY OF PLANT MATERIAL BY THE LANDSCAPE CONTRACTOR MUST BE APPROVED BY THE ENVIRONMENTAL CONSULTANT PRIOR TO INSTALLATION.

D. PLANT STANDARDS: PLANTS SUPPLIED SHALL CONFORM IN ALL RESPECTS TO THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1). THEY SHALL BE FIRST CLASS REPRESENTATIVES OF THEIR SPECIES AND VARIETIES, NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANT NAMES SHALL BE THOSE GIVEN IN THE LATEST EDITION OF STANDARD PLANT NAMES, AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.

PLANTS SHALL BE SOUND, VIGOROUS AND HEALTHY, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE AND INSECT PESTS AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SUBSTANCE. TRUNKS AND BRANCHES SHALL BE FREE OF CUTS AND ABRASIONS OVER ONE INCH (1") IN AND DIMENSION. PLANTS IN LEAF SHALL BE SPRAYED WITH ANTI-DESICCANT IMMEDIATELY BEFORE DIGGING TO FILM THE LEAVES, BRANCHES, AND THIGS.

SHADE TREES WITH BROKEN, DAMAGED OR MULTIPLE LEADERS WILL BE REJECTED.

BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH A FIRM NATURAL ROOT BALL. PLANTS WITH SOFT, BROKEN OR DAMAGED LIMBS WILL BE REJECTED.

PLANTS SHALL BE TAGGED WITH LABELS IDENTIFYING THE BOTANICAL AND COMMON NAMES OF THE PLANTS. NO CHANGE IN THE KIND, QUANTITY, QUALITY, OR SIZE OF PLANTS SPECIFIED SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE APPROVING AGENCY.

ALL PLANTS SHALL BE CERTIFIED PEST-FREE BY THE DEPARTMENT OF AGRICULTURE OF THEIR STATE OF ORIGIN.

MAJOR SHADE TREES SHALL BE 2-1/2" CALIPER OR LARGER (EXCEPT WHEN WITHIN 2 YEAR MOVE, THEN 1-1/4" - 1-1/2" CAL. WILL BE PERMITTED). ORNAMENTAL TREES SHALL HAVE A MINIMUM CALIPER OF 1-1/4", EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT OF 6' AND SHALL BE FULL TO THE GROUND AND HEAVILY BRANCHED. SHRUBS SHALL HAVE A SPREAD OF AT LEAST 18". NO BARE ROOT TREES OR SHRUBS WILL BE ACCEPTED WITHOUT WRITTEN APPROVAL OF THE APPROVING AGENCY.

E. PLANTING MATERIALS: TOPSOIL SHALL BE FERTILE, FRIABLE AND TYPICAL OF THE PROJECT SITE BEFORE DISTURBANCE. IT SHALL HAVE A MINIMUM ORGANIC CONTENT OF 2.5% BY VOLUME AND SHALL BE FREE OF STONES, LUMPS, ROOTS, STICKS, AND DEBRIS LARGER THAN 2" IN ANY DIMENSION. IT SHALL NOT BE LOADED, DELIVERED, SPREAD OR OTHERWISE HANDLED IN A MUDDY OR FROZEN CONDITION. (SEE BIORETENTION SPECS.)

PLANTING (BACKFILL) MIX SHALL BE COMPOSED OF THREE PARTS OF THE SOIL IMMEDIATELY ADJACENT TO THE PLANT PIT OR BED TO ONE PART APPROVED ORGANIC MATTER.

TREE STAKING MATERIALS SHALL BE ROUGH-SAWN HARDWOOD 2" BY 2" STOCK OF A LENGTH TO CONFORM TO THE REQUIREMENTS OF THE TREE PLANTING DETAIL SHOWN ON THE PLANTING PLAN.

STAKING TIES SHALL BE DOUBLE STRANDS OF 12 OR 14 GAUGE GALVANIZED STEEL WIRE, TWISTED, FURNISHED WITH PROTECTIVE SECTIONS OF CORDED 3/4" DIAMETER RUBBER HOSE OR NYLON WEBBING AT LEAST 1-1/2" WIDE OR POLYPROPYLENE CHAINLOCK STRAPPING MANUFACTURED FOR THE PURPOSE OR OTHER MATERIALS APPROVED BY THE APPROVING AGENCY.

ALL DIG PLANT MATERIAL SHALL HAVE BEEN DUG BEFORE BUD BREAK OR AFTER LEAF MATURATION. ANY PLANT MATERIAL EXHIBITING DROOPING NEW GROWTH WITHIN TWO (2) WEEKS OF BEING PLANTED WILL BE REJECTED AND MUST BE REMOVED FROM THE JOB.

F. POOR DRAINAGE: NO PLANT SHALL BE PLANTED IN SITUATIONS THAT SHOW OBVIOUS POOR DRAINAGE. SUCH SITUATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENVIRONMENTAL CONSULTANT AND OWNER, AND IF THEY DEEM NECESSARY, THE PLANTS SHALL BE RELOCATED OR THE CONTRACTOR SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE CORRECTION AT A NEGOTIATED COST.

G. SITE PREPARATION: IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PRESENT 'CLEAN' SOIL CONDITIONS TO THE LANDSCAPE CONTRACTOR PRIOR TO ANY LANDSCAPE INSTALLATION. 'CLEAN' SOIL MAY INCLUDE ON-SITE SOIL MUST BE FREE OF PAVEMENT MATERIALS, MUCK, ROOT SYSTEMS, PETROLEUM OR OTHER CHEMICAL SUBSTANCES, BLUE STONE, CONSTRUCTION DEBRIS AND OTHER MATERIALS LARGER THAN 2" IN DIAMETER. THE 'CLEAN' SOIL SHALL EXTEND TO THE FOLLOWING MINIMUM DEPTHS: 18" WHERE TREES ARE PROPOSED, 12" WHERE SHRUBS ARE PROPOSED AND 4" WHERE LAWN IS PROPOSED. IF THE LANDSCAPE CONTRACTOR ENCOUNTERS ANY AREA TO BE DEFICIENT REGARDING THESE 'CLEAN' SOIL SPECIFICATIONS, HE SHALL REPORT THIS CONDITION TO THE ENVIRONMENTAL CONSULTANT AND OWNER PRIOR TO PLANTING IN THOSE AREAS.

H. WORKMANSHIP: DURING PLANTING, ALL AREAS SHALL BE KEPT NEAT AND CLEAN, AND ALL REASONABLE PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING PLANTS, TURF AND STRUCTURES. UPON COMPLETION, ALL DEBRIS AND WASTE MATERIAL RESULTING FROM PLANTING OPERATIONS SHALL BE REMOVED FROM THE PROJECT AND THE AREA CLEANED UP. ANY DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.

I. WATER: IF AVAILABLE ON-SITE, THE OWNER SHALL SUPPLY WATER AT NO EXTRA COST. IT WILL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY WATER IF THERE IS NONE ON THE SITE.

II. PLANTING METHODS:

A. PLANTING BEDS: STAKE-OUT OUTLINES OF PLANTING BEDS AND CENTERS OF INDIVIDUAL PLANTING PITS. THESE LOCATIONS ARE TO BE APPROVED IN THE FIELD BY THE APPROVING AGENCY BEFORE PLANTING OPERATIONS BEGIN.

EXCAVATE STAKE OUT AREAS AND PREPARE PLANTING MIX (SEC. II & 2). ONLY PLANTING MIX SHALL BE USED TO BACKFILL THE PLANTING PITS AND BEDS.

B. TREE/SHRUB PIT: SET PLANTS SO THAT THE ROOTBALL REST ON FIRM GROUND AND THE ROOT CROWN IS 3"-4" HIGHER THEN THE SURROUNDING GRADE. BACKFILL WITH PLANTING MIX AND TAMP LIGHTLY IN EIGHT INCH (8") INCREMENTS. WATER THOROUGHLY TO ELIMINATE AIR POCKETS IN THE BACKFILL. REMOVE ALL MATERIALS OTHER THAN UNTREATED BURLAP, JUTE TWINE AND WIRE BASKET FROM THE TOP 1/3 OF THE BALL. COMPLETE BACKFILLING WITH PLANTING MIX TO BRING SOIL LEVEL TO SURROUNDING GRADE.

PROTECT PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS. PLANTS THAT CANNOT BE PLANTED IMMEDIATELY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH TOPSOIL, PEAT MOSS OR OTHER ACCEPTABLE MATERIAL AND SHALL BE KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED FOR MORE THEN THREE (3) CALENDAR DAYS.

PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANYTIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES AND THIGS. PLANTS SHALL BE LIFTED FROM THE BOTTOM OF THE BALL ONLY.

MULCH ALL BEDS AND PLANTING PITS WITH A THREE INCH (3") LAYER OF MULCH IMMEDIATELY AFTER PLANTING.

ALL PLANTS ARE TO BE WATERED THOROUGHLY ON THE DAY OF PLANTING, EVEN IF IT IS RAINING.

C. TREE BRACING: STAKE PLANTS IMMEDIATELY AFTER PLANTING, TAKING CARE THAT THEY STAND PLUMB AFTER STAKING. STAKED AND STAKING MATERIALS SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD AND DISPOSED OF OFF-SITE BY THE CONTRACTOR.

D. TREE WRAP: WRAP DECIDUOUS TREE TRUNKS STARTING AT THE BASE OF THE TREE UP TO THE SECOND BRANCH. REMOVE WRAPPING AT THE END OF THE GUARANTEE PERIOD.

E. PRUNING: PRUNE PLANT AT THE TIME OF PLANTING AS DIRECTED BY THE APPROVING AGENCY, TAKING CARE TO RETAIN THE NATURAL FORM AND CHARACTER OF THE PLANT.

F. MISC.: ANY ITEMS NOT ADDRESSED IN THIS SECTION SHALL BE IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF THE LANDSCAPE SPECIFICATION GUIDELINES OF THE LANDSCAPE CONTRACTORS ASSOCIATION, MD-DC-VA.

G. WETLAND PLANTING NOTES: CONTRACTOR SHALL PROVIDE A MINIMUM SOIL DEPTH OF 4" AT THE COMPLETION OF FINAL GRADING. ANY LARGE STONES, DEBRIS OR CONSTRUCTION MATERIALS SHALL BE REMOVED AT THIS TIME. COMPACTED SOILS SHALL BE DISKED TO A DEPTH NO LESS THAN 6" PRIOR TO BASIN PLANTING AND FLOODING.

A SPRING OR EARLY SUMMER PLANTING SHALL BE REQUIRED. PLANTING MATERIALS SHALL NOT BE STORED ON-SITE LONGER THAN 48 HOURS. PLANT ROOTS SHALL BE KEPT MOIST AT ALL TIMES. PLANTS SHALL BE STORED OUT OF DIRECT SUNLIGHT.
WETLAND SUBSTRATE IS AT THE SAME DEPTH (OR A LITTLE DEEPER) THAT THE SOIL LEVEL IN THE POT. THE POT SHALL BE REMOVED RIGHT BEFORE FOR PLANTING POTTED PLANTS, MAKE A HOLE IN THE SUBSTRATE WIDE ENOUGH TO TAKE THE POTTED PLANT, AND DEEP ENOUGH THAT THE WETLAND SUBSTRATE IS AT THE SAME DEPTH (OR A LITTLE DEEPER) THAT THE SOIL LEVEL IN THE POT. THE POT SHALL BE REMOVED RIGHT BEFORE PLANTING TO FACILITATE THE ROOT SPREADING. THE OVERALL DEPTH SHOULD BE APPROXIMATELY 4"-6". PRESS THE SUBSTRATE FIRMLY AROUND THE PEAT POT.

EACH PLANT IS TO BE SIDE DRESSED AT THE TIME OF PLANTING WITH 30 GRAMS OSMOCOTE 18-6-12 SLOW RELEASE FERTILIZER OR AN EQUIVALENT.

SOURCE OF AQUATIC PLANTS: RUPPERT ENVIRONMENTAL, ASHTON, MARYLAND (301)774-0400 AND ENVIRONMENTAL CONCERN, INC., ST. MICHAELS, MARYLAND (410)745-9620.

III. SEEDING AND SODDING

ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVEMENTS AND PLANTING BEDS ARE TO BE ESTABLISHED IN A LAWN OF KENTUCKY-31 TALL FESCUE EITHER BY SEEDING OR SOD, OR COMBINATION, DEPENDING ON THE TIME OF YEAR, AVAILABILITY OF MATERIALS AND OWNER'S PREFERENCE. THE STABILIZATION SHALL BE IN CONFORMANCE TO STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL, PUBLISHED BY THE STATE OF MARYLAND.

IV. GUARANTEE

ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN HEALTHY AND VIGOROUS CONDITION AT THE BEGINNING OF THE SECOND GROWING SEASON FOLLOWING ACCEPTANCE BY THE APPROVING AGENCY. PLANTS WITH GREATER THAN 33% DIEBACK, OR HAVE NOT GROWN SO AS TO EMERGE FROM THE WATER SURFACE, SHALL BE REPLACED AT THE NEXT PLANTING SEASON.

V. MAINTENANCE

REMOVE LITTER AND DEBRIS AS REQUIRED DURING THE FIRST GROWING SEASON AND AT THE BEGINNING OF THE SECOND GROWING SEASON.

REPLACE UNSUCCESSFUL TRANSPLANTS MONTHLY FOR 6 MONTHS AND AT THE BEGINNING OF THE SECOND GROWING SEASON.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES

ROUTINE MAINTENANCE:

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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 INFECTION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREE AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.
5. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
6. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND SHALL BE MOWED AS NEEDED.
7. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
8. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE:

1. STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE EMBANKMENT, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY.
THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE FACILITY OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

CONSTRUCTION SPECIFICATIONS FOR BIORETENTION

GENERAL PLANTING SPECIFICATIONS

ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.

WALLS OF PLANTING PITS SHALL BE DUG SO THAT THEY ARE VERTICAL.

THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THEN THE DIAMETER OF THE BALL OF THE TREE.

THE PLANTING PITS SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE EXISTING GRADE.

LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.

THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS' BALL (NEVER LIFT BY BRANCHES OR TRUNK).

SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE THE FINAL GRADE.

BACKFILL PLANTING PIT WITH EXISTING SOIL.

MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.

NEVER COVER THE TOP OF THE BALL WITH SOIL.

TREES SHALL BE BRACED BY USING 2" BY 2" WHITE OAK STAKES.
STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL, UTILIZING HOSE AND WIRE SO THE TREE IS BRACED TO THE STAKES.

PLANTING GRASS GROUND COVER

GRASSES AND LEGUME SEED SHALL BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST 2 INCHES BY WITHER HARROWING OR DISCING. FERTILIZER SHALL BE APPLIED AT THE SAME RATE AND UTILIZING THE SAME PROCESS FOR NON-GRASS GROUND COVER.

GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING TECHNIQUES.

FERTILIZER
ALL GROUND COVERS SHALL BE FERTILIZED WITH A 10-6-4 ANALYSIS FERTILIZER AS A WET APPLICATION AT THE RATE OF 3 LBS. PER 100 SQUARE FEET OF THE GRASS SEED GROUND COVER.

FERTILIZATION

TREE AND SHRUB FERTILIZER SHALL BE 21 GM. TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5:

TOTAL NITROGEN (N) 20%
WATER SOLUBLE ORGANIC NITROGEN 7%
WATER INSOLUBLE ORGANIC NITROGEN 5%
AVAILABLE PHOSPHORIC ACID (P2O5) 10%
SOLUBLE POTASH (K2O) 5%

FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIC FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:

1 GAL. CONTAINER 1 EA. 21 GM. TABLETS
3 GAL. CONTAINER 2 EA. 21 GM. TABLETS
5 GAL. CONTAINER 3 EA. 21 GM. TABLETS
7 GAL. CONTAINER 5 EA. 21 GM. TABLETS

PLANTING NON-GRASS GROUND COVER

THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASSES OR LEGUMES). SPACING SHALL BE 2' ON CENTER.

BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMBLED.

THE GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH, POTTED PLANTS SHALL BE SET SO THAT THE CROWN.

SPRAY THE MULCHED AND PLANTED GROUND COVER BED WITH A PRE-EMERGENT HERBICIDE.

THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

BIORETENTION SOIL & MATERIAL REQUIREMENTS

1. SOIL TEXTURE AND STRUCTURE:

TOPSOIL FOR BIORETENTION SHALL HAVE A SANDY LOAM, LOAMY TEXTURE PER USDA TEXTURAL TRIANGLE. MAXIMUM CLAY CONTENT IS 5%; SOIL MIXTURE SHALL BE 50-60% SAND, 20-30% LEAF MULCH, 20-30% TOPSOIL. 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 BIORETENTION 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, MUGHORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, TEARTHUB, OR OTHER NOXIOUS WEEDS.

2. SOIL TESTING:

PLANTING SOIL FOR BIORETENTION AREAS MUST BE TESTED PRIOR TO INSTALLATION FOR PH AND ORGANIC MATTER. THE SOIL SHOULD MEET THE FOLLOWING CRITERIA (LANDSCAPE CONTRACTORS ASSOCIATION, #856).

PH RANGE: 5.5-6.5
ORGANIC MATTER 1.5-3.0%

IT IS REQUIRED THAT A SEIVE ANALYSIS, PH, AND ORGANIC MATTER TEST BE PREFORMED PER EACH BIORETENTION AREA.

3. SOIL PLACEMENT:

PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 12 TO 18 INCHES AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR BACKHOE. REFER ALSO TO 'COMPACTION'.

4. MULCH SPECIFICATIONS:

INDIVIDUAL PLANTING SHALL BE MULCHED (REFER TO LANDSCAPING DETAILS). ACCEPTABLE MULCH SHALL BE SHREDDED HARDWOOD ONLY. MULCH MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.

5. SAND SPECIFICATIONS:

PROVIDE CLEAN SAND, FREE OF DELETERIOUS MATERIALS. SAND SHALL MEET AASHTO M-6 OR ASTM C-33 WITH GRAIN SIZE OF 0.02"-0.04".

6. GEOTEXTILE SPECIFICATIONS:

GEOTEXTILE FABRIC SHALL MEET ASTM D-751 (PUNCTURE STRENGTH - 125 LB)
ASTM D-1117 (TRULLEN BURST STRENGTH - 400 PSI)
ASTM D-1682 (TENSILE STRENGTH - 300 LB)
FABRIC SHALL HAVE 0.08" THICK E.O.S. OF #80 SLEVE, AND MAINTAIN 125 GPM PER SQ. FT. FLOW RATE.

7. GRAVEL FILTER SPECIFICATIONS:

UNDERDRAIN GRAVEL BLANKET SHALL BE DOUBLE WASHED, #57 STONE, 1-1/2" IN SIZE. PEA GRAVEL SHALL BE WASHED, RIVER-RUN, ROUND DIAMETER 1/4" -1/2" IN SIZE.

8. INSPECTION REQUIREMENTS:

( ) THE CONTRACTOR SHALL ARRANGE A 'PRECONSTRUCTION MEETING' WITH THE OWNER AND LANDSCAPE ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK IN THE BIORETENTION FACILITY.

( ) AT THE COMPLETION OF EXCAVATION TO INSPECT SUB GRADE PREPARATION.

( ) DURING UNDERDRAIN AND FILTER INSTALLATION

( ) BACK FILL OF SOIL INTO THE BIORETENTION AREAS. SOIL CERTIFICATIONS FOR BACK FILL ARE REQUIRED.

( ) THE FINAL TOPSOIL LAYERS SHOULD BE THOROUGHLY WETTED TO ACHIEVE SETTLEMENT OF THE SOIL/SAND BACKFILL MIX.

( ) THE WORK SHALL BE INSPECTED BY THE OWNER/LANDSCAPE ARCHITECT PRIOR TO FINAL STABILIZATION AND PLANTING.

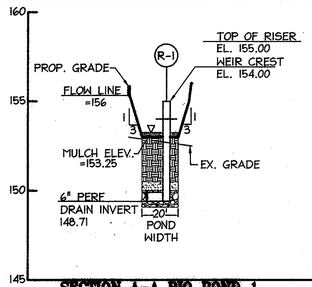
( ) SEDIMENT AND EROSION CONTROL PRACTICES MAY BE REMOVED UPON APPROVAL BY THE COUNTY INSPECTOR.

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.

SIGNATURE OF ENGINEER — 10.6.12 — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20567
EXPIRATION DATE: 09-26-2014



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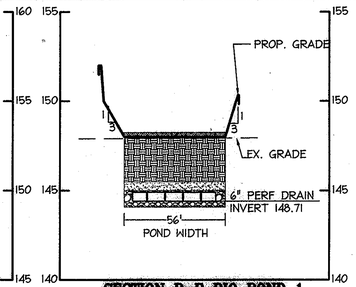
VER 1"= 4'



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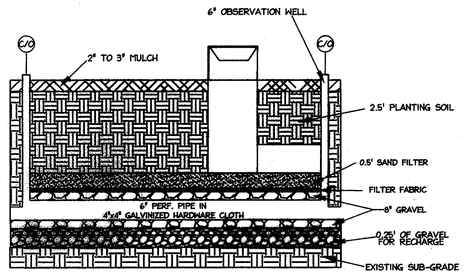

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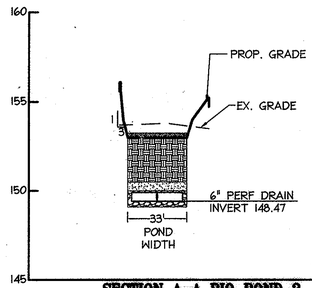

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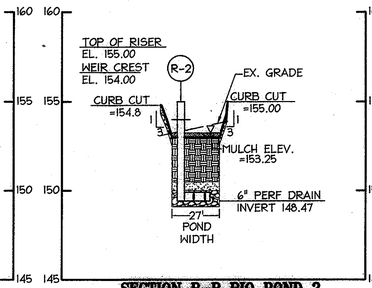

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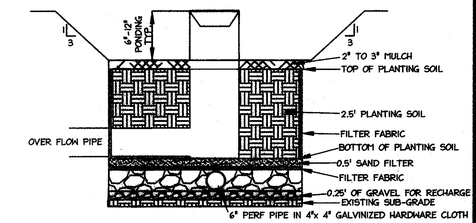

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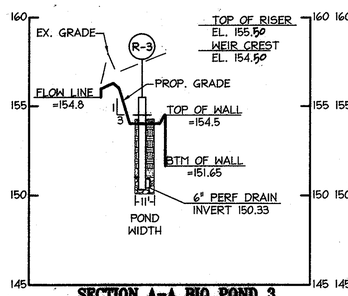

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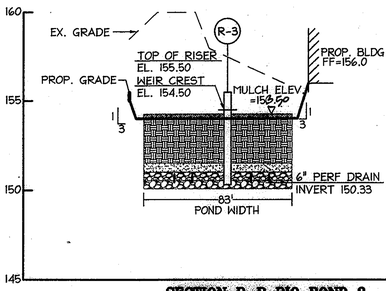

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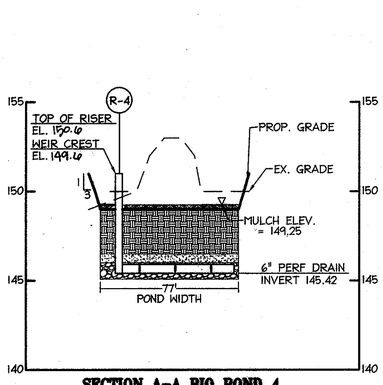

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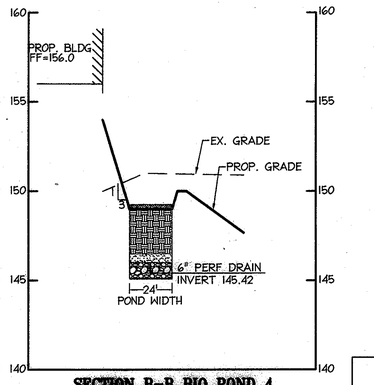

SECTION B-B BIO POND 4
HOR 1"=40'
VER 1"= 4'

9.6.12
DATE

10.6.12

STATE OF MARYLAND
WILLIAM RAYMOND ZINK
REGISTERED
PROFESSIONAL ENGINEER

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TC 550)			B01		

TITLE:

BIO-RETENTION NOTES & DETAILS

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012		
CHECKED: ENJ	APPROVED: WRZ	17 OF 45	

MDC-855

SDP-08-116

B.3.C Specifications for Open Channels and Filter Strips

1. Material Specifications

The recommended construction materials for open channels and filter strips are detailed in Table B.3.3.

2. Dry Swales

Permeable soil mixture (20" to 30" deep) should meet the bioretention specifications.

Check dams, if required, shall be placed as specified.

System to have 6" of freeboard, minimum above 2 year water surface elevation.

Side slopes to be 3:1 maximum; (4:1 or flatter is preferred).

No gravel or perforated pipe is to be placed under driveways.

Bottom of facility to be above the seasonally high water table per Table 2 of Appendix D.1.

Seed with flood/drought resistant grasses; see Appendix A, Section 2.4.

Longitudinal slope to be 4%, maximum.

Bottom width to be 8' maximum to avoid braiding; larger widths may be used if proper berming is supplied. Width to be 2' minimum.

3. Wet Swales

Follow above information for dry swales, with the following exceptions: the seasonally high water table may inundate the swale; but not above the design bottom of the channel [NOTE: if the water table is stable within the channel, the WQ_v storage may start at this point – see Figure 3.19]

Excavate into undisturbed soils; do not use an underdrain system.

4. Filter Strips

Construct pea gravel diaphragms 12" wide, minimum, and 24" deep minimum.

Pervious berms to be a sand/gravel mix [sand (35-60%), silt (30-55%), and gravel (10-25%)]. Berms to have overflow weirs with 6 inch minimum head.

Slope range to be 2% minimum to 6% maximum.

5. Plant Selection

Recommended grass species for use in establishing permanent ground cover are provided in Section 2.4 of Appendix A.

Table B.3.3 Open Channel Systems and Filter Strip Materials Specifications

Material	Specification	Size	Notes
dry swale soil	USCS: ML, SM, SC	n/a	soil with a higher percent organic content is preferred
dry swale sand	ASTM C-33 fine aggregate concrete sand	0.02" to 0.04"	
check dam (pressure treated)	AWPA Standard C6	6" by 6" or 8" by 8"	do not coat with creosote; embed at least 3' into side slopes
check dam (natural wood)	Black Locust, Red Mulberry, Cedars, Catalpa, White Oak, Chestnut Oak, Black Walnut	6" to 12" diameter; notch as necessary	do not use the following, as these species have a predisposition towards rot: Ash, Beech, Birch, Elm, Hackberry, hemlock, Hickories, Maples, Red and Black Oak, Pines, Poplar, Spruce, Sweetgum, Willow
filter strip sand/gravel pervious berm	sand: per dry swale sand gravel; AASHTO M-43	sand: 0.02" to 0.04" gravel: ¼ " to 1"	mix with approximately 25% loam soil to support grass cover crop; sand (35-60%), silt (30-55%), and gravel (10-25%) see Bioretention planting soil notes for more detail.
pea gravel diaphragm and curtain drain	ASTM D 448	varies (No. 6) or (1/8" to 3/8")	use clean bank-run gravel
underdrain gravel	AASHTO M-43	0.25" to 0.75"	
underdrain	F 758 Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4833)	n/a	
rip rap	per county criteria; if none given, use MSHA Standards and Specs Section 905	size per county DOT requirements based on 10-year design flows	

A.2.4 Open Channels

Consult Table A.7 for grass species that perform well in the stressful environment of an open channel. For more detailed information, please consult the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control. If a BMP is likely to receive excessive amounts of deicing salt, salt tolerant plants should be used.

A.2.5 Filter Strips and Stream Buffer

For design and plant selection of filter strips and stream buffers, please consult the USDA Natural Resources Conservation Service Maryland Conservation Practice Standard No. 391 "Riparian Stream Buffers."

Table A.7 Common Grass Species for Open Channels

Common Name	Botanical Name	Remarks
Big Bluestem	*Andropogon gerardii*	Warm, not for Wet Swale
Creeping Bentgrass	*Agrostis palustris*	Cool,
Red Fescue	*Festuca rubra*	Cool, not for Wet Swale
Reed Canary grass	*Phalaris arundinacea*	Cool, Wet Swale
Redtop	*Agrostis alba*	Cool,
Smooth Brome	*Bromus inermis*	Cool, not for Wet Swale
Switch grass	*Panicum virgatum*	Warm

Note 1: These grasses are sod-forming and can withstand frequent inundation, and are thus ideal for the swale or grass channel environment. Most are salt-tolerant, as well. Cool refers to cool season grasses that do well in the western part of the State, Warm refers to warm season grasses that work well in the eastern part of the State (see Table A.8).

Note 2: Where possible, one or more of these grasses should be in the seed mixes. For a more thorough listing of seed mixes, consult the 1994 Maryland Standard and Specifications for Soil Erosion and Sediment Control (MDE, 1994) or the MD NRCS Code 391 Riparian Forest Buffer Standard, Table 2 (Zone 3).

CONSTRUCTION SPECIFICATIONS:

1. SWALES AND DITCHES SHALL BE PREPARED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION A-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE.
2. THE CHECK DAM SHALL BE CONSTRUCTED OF 4" TO 7" STONE. THE STONE SHALL BE PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND KEYED INTO THE CHANNEL BANKS.
3. THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THAT THE CENTER IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES, FORMING A WEIR THAT WATER CAN FLOW ACROSS.
4. THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER SHALL NOT EXCEED 2'.
5. THE UPSTREAM SIDE OF THE CHECK DAM SHALL BE LINED WITH APPROXIMATELY 1' OF 3/4"-1 1/2" AGGREGATE.
6. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS BUILT UP TO 1/2" OF THE ORIGINAL HEIGHT OF THE WEIR CREST.

SEDIMENT REMOVAL

WHILE THIS PRACTICE IS NOT INTENDED TO BE USED FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE CHECK DAM. CHECK DAMS SHOULD BE CHECKED PERIODICALLY AND AFTER EACH SIGNIFICANT RAINFALL. ACCUMULATED SEDIMENT SHOULD BE REMOVED WHEN IT HAS REACHED 1/2 OF THE ORIGINAL HEIGHT OF THE WEIR CREST.

CHECK DAM REMOVAL

IN TEMPORARY SWALES AND CHANNELS, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED IN WHEN IT IS NO LONGER NEEDED. IN PERMANENT CHANNEL STRUCTURES, CHECK DAMS MAY BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS LINED DITCHES, CHECK DAMS MAY BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE SWALE OR CHANNEL. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY SWALES

ROUTINE MAINTENAMCE:

1. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORMS EVENTS.
2. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
3. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

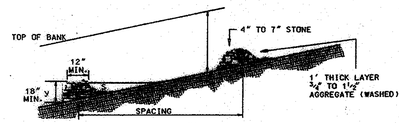
NON-ROUTINE MAINTENAMCE:

1. STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE EMBANKMENT, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY.
THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE FACILITY OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

DETAIL 7 – STONE CHECK DAM



DITCH PROFILE

CROSS SECTION

STANDARD SYMBOL

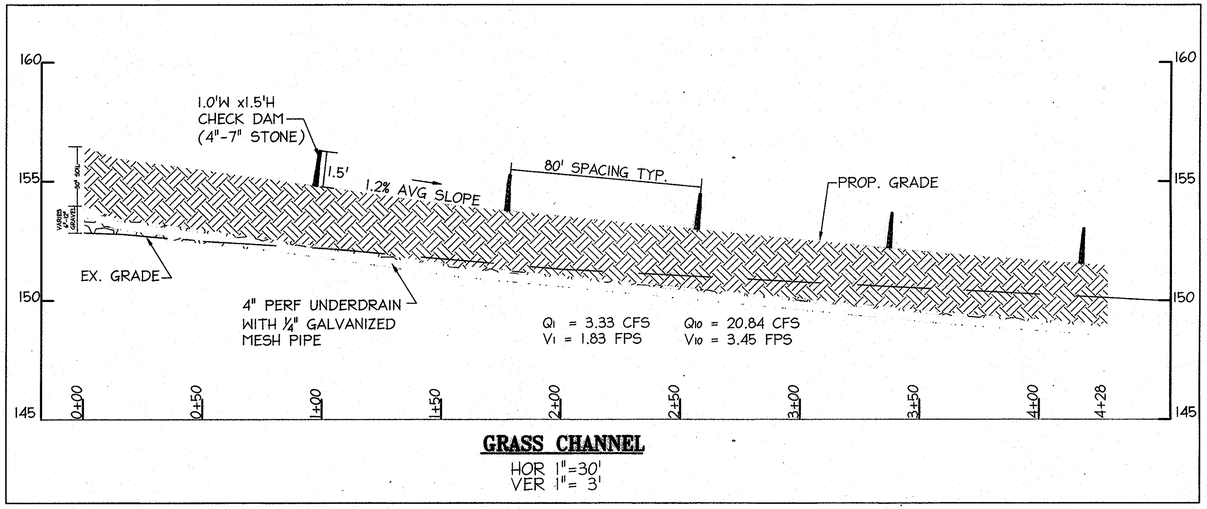
STANDARD STONE CHECK DAM DESIGN

SLOPE	SPACING
2% or less	80'
2.1% to 4%	40'
4.1% to 7%	25'
7.1% to 10%	15'
over 10%	use lined waterway design

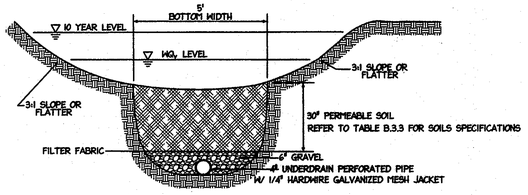
Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2. Standards and Specifications for Temporary Swale.
2. The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and is keyed into the channel banks.
3. The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges. forming a weir that water can flow across.
4. The maximum height of the check dam at the center shall not exceed 2'.
5. The upstream side of the check dam shall be lined with approximately 1' of ¾" to 1½" aggregate.
6. Accumulated sediment shall be removed when it has built up to ½ of the original height of the weir crest.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 8 - 8	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



GRASS CHANNEL
HOR 1"=30'
VER 1"= 3'



DRY SWALE DETAIL
N.T.S

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.

SIGNATURE OF ENGINEER 10.6.12 DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
CALL TOLL FREE 1-800-257-7777

9.6.12 DATE 10.6.12

STATE OF MARYLAND WILLIAM RANDOLPH ZINK REGISTERED PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 11/7/12
Director, Department of Planning and Zoning — Date 11/28/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL: (610) 828-0756
FAX: (610) 828-5950

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christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8080 · metro 301.861.0148 · fax 410.872.8083

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

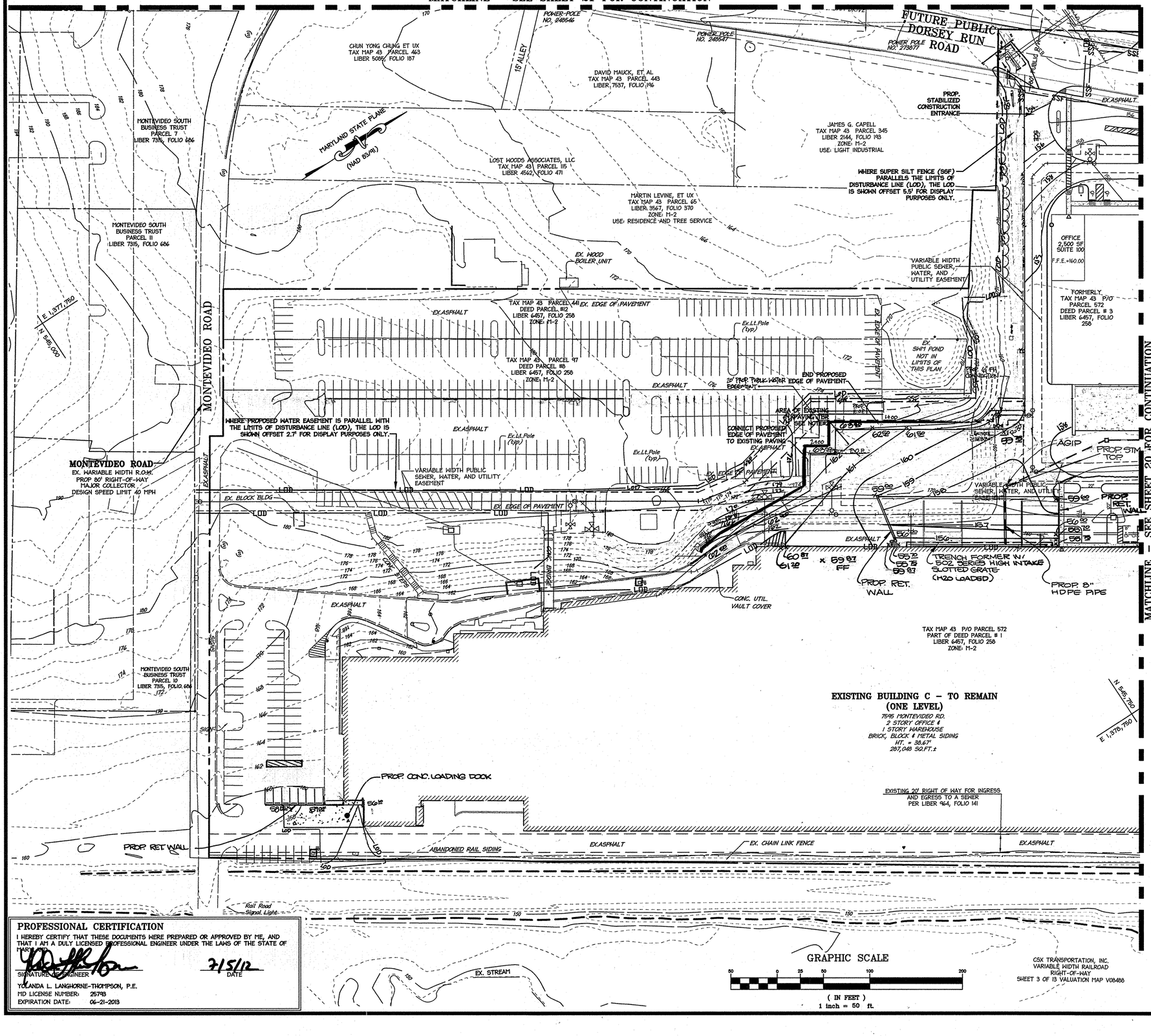
SWM NOTES & DETAILS

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 08067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	18 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

SDP-08-116

MDC-855

MATCHLINE – SEE SHEET 21 FOR CONTINUATION



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- LOD — LIMITS OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE

NOTE

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 21 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: Scott Dougherty — Date: 7/6/12

Print name below signature: Scott Dougherty

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date: 7/5/12

YOLANDA L. LANGHORNE THOMPSON
Print name below signature

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date: 7/10/12

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date: 10/31/12

Chief, Development Engineering Division — Date: 10/17/12

Director, Department of Planning and Zoning — Date: 11/2/12

3	4/2014	DEMO EXISTING DOCK/CONST. NEW LOADING DOCK RET. WALL, GRADING AND REV. PAVING & CONTOURS
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN
		LOADING DOCK, GRADING
1	11/20/12	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
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140 W. GERMANTOWN PIKE, SUITE 150
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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

SEDIMENT AND EROSION CONTROL PLANS

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JUNE 27, 2012	19 OF 45	
CHECKED: ENJ	APPROVED: YLL		

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.

SIGNATURE OF ENGINEER — DATE: 7/5/12

YOLANDA L. LANGHORNE-THOMPSON, P.E.
MD LICENSE NUMBER: 25793
EXPIRATION DATE: 06-21-2013

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center — MEMBER ONE CALL SYSTEMS INTERNATIONAL — CALL TOLL FREE 1-800-257-7777

7/5/12 DATE

STATE OF MARYLAND — YOLANDA LANGHORNE THOMPSON — No. 25793 — REGISTERED PROFESSIONAL ENGINEER

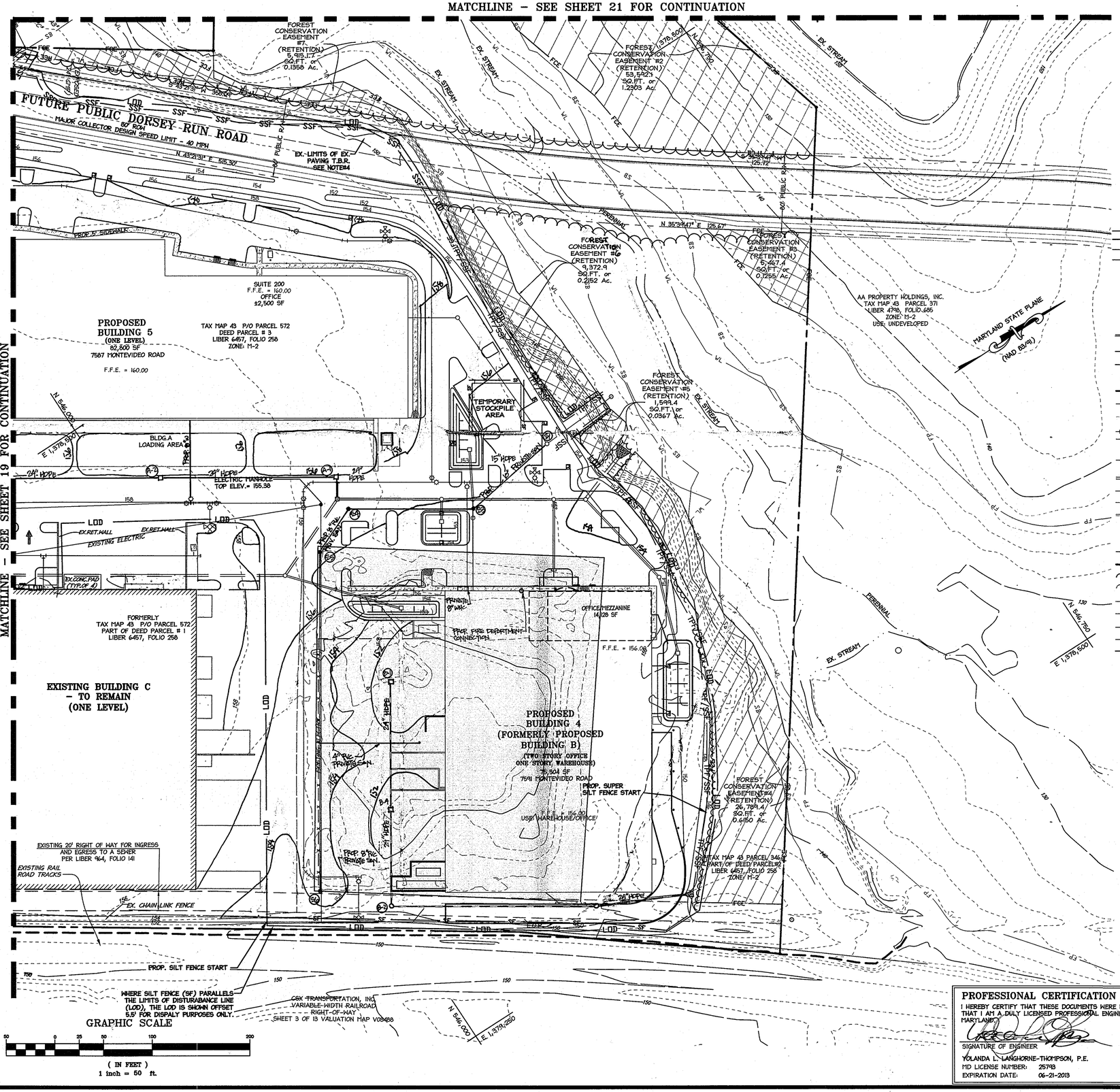
For Christopher Consultants

MDC-855

SDP-08-116

MATCHLINE – SEE SHEET 21 FOR CONTINUATION

MATCHLINE – SEE SHEET 19 FOR CONTINUATION



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Signature of Developer — Date 7/6/12

Scott Dougherty
Print name below signature

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature of Engineer — Date 7/5/12

Yolanda Langhorne Thompson
Print name below signature

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the Howard SOIL CONSERVATION DISTRICT.

Howard SCD — Date 7/6/12

LEGEND

SF	SILT FENCE
SSF	SUPER SILT FENCE
LOD	LIMITS OF DISTURBANCE
TPF/SSF	SILT FENCE TREE PROTECTION
IP	STANDARD INLET PROTECTION BLOCKING
CIP	CURB INLET PROTECTION BLOCKING
	STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED CURBLINE
	50' BUILDING RESTRICTION LINES
	30' PARKING RESTRICTION LINES
	SOILS LINE
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	FORMER PROPERTY LINE
EX. 8" WATER	EXISTING WATER
EX. 8" SAN. S	EXISTING SANITARY SEWER
EX. 24" RCP	EXISTING STORMDRAIN
OHE	EXISTING OVERHEAD UTILITY
X X X	FENCE (BARB WIRE)
	EXISTING CURBLINE
	EXISTING BUILDINGS
	STREAM CENTERLINE
	RAILROAD DITCH
	PROPOSED TREELINE
	EXISTING TREELINE
FP	PUBLIC 100YR FLOODPLAIN
WL	WETLANDS
SB	50' STREAM BUFFER
WB	25' WETLAND BUFFER
FCE FCE	FOREST CONSERVATION EASEMENT
	EXISTING LIGHT POLE
	EXISTING SIGN
G	GAS METER
	STORM
WM	WATER METER
	RAILROAD TRACKS
	GRASS CHANNEL
	STOCKPILE AREA
	RETENTION FOREST CONSERVATION EASEMENT(NONE ON THIS SHEET)
	RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT

NOTES

1. IT IS THE INTENT OF THIS PLAN TO PROVIDE A STOCKPILE AREA AT THE SHOWN LOCATION. THE STOCKPILE AREA WILL ONLY BE REMOVED DURING THE LATER STAGES OF CONSTRUCTION PRIOR TO INSTALLING THE BIO-RETENTION SYSTEM AT THE SAME LOCATION. ANY FIELD CHANGES OF THE STOCKPILE AREA LOCATION DURING CONSTRUCTION SHALL BE INFORMED TO THE COUNTY BY THE GENERAL CONTRACTOR AND OBTAIN A WRITTEN APPROVAL REQUIRED BY THE COUNTY. ANY CLEARING/DISTURBANCE ASSOCIATED WITH THE PROVISION OF A STOCK PILE AREA SHALL BE PERFORMED DURING THE INITIAL CONSTRUCTION ACTIVITY.
2. PLEASE NOTE THAT THESE EROSION AND SEDIMENT CONTROL PLANS REPRESENT ALL DEVELOPMENT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REFER TO THE SEQUENCE OF CONSTRUCTION ACTIVITIES ON SHEET#20 FOR FURTHER DETAILS.
3. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 31 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
4. PLEASE REFER TO DEMOLITION PLANS 2-4 AND SHET 19 FOR LIMITS OF EXISTING PAVEMENT TO BE REMOVED.
5. PLEASE REFER TO SHEET 31 FOR FLOODPLAIN ELEVATIONS.
6. MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/20/12	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
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PLYMOUTH MEETING, PA 19462
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1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

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.

SIGNATURE OF ENGINEER — DATE 7/5/12

YOLANDA L. LANGHORNE-THOMPSON, P.E.
MD LICENSE NUMBER: 25793
EXPIRATION DATE: 06-21-2013

7/5/12 DATE

STATE OF MARYLAND — YOLANDA LANGHORNE THOMPSON — No. 25793 — REGISTERED PROFESSIONAL ENGINEER

For Christopher Consultants

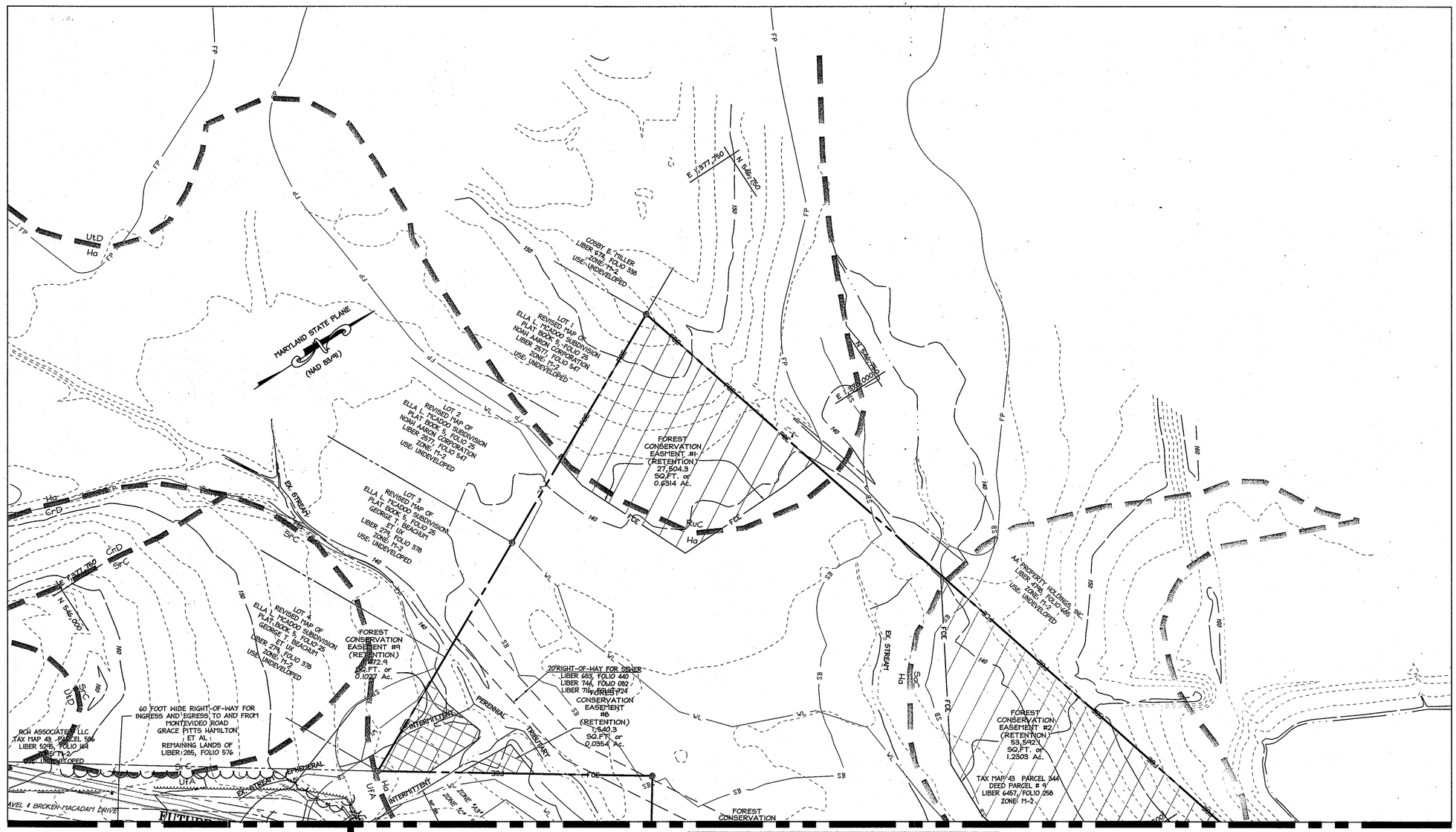
TITLE:

SEDIMENT AND EROSION CONTROL PLANS

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JUNE 27, 2012	20 OF 45	
CHECKED: ENJ	APPROVED: YLL		

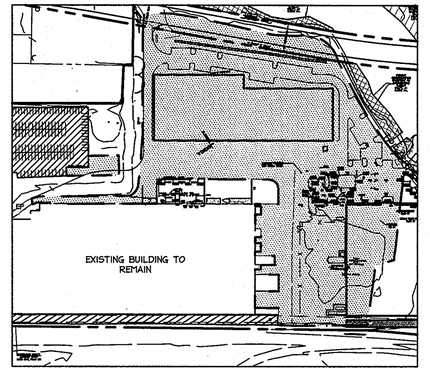
SDP-08-116

MDC-855



MATCHLINE – SEE SHEET 18 FOR CONTINUATION

MATCHLINE – SEE SHEET 20 FOR CONTINUATION



LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

EXISTING PAVEMENT TO BE REMOVED

EXISTING PAVEMENT TO BE REMAIN

NOTES

1. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
2. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE

LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- 248 — EXISTING INTER CONTOUR
- 250 — EXISTING INDEX CONTOUR
- EX. 8" SAN. — EXISTING SANITARY SEWER
- +154.8 — EXISTING SPOT ELEVATION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- OHE — EXISTING OVERHEAD UTILITY
- X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- EXISTING TREELINE TO BE REMOVED
- EXISTING TREELINE
- BIA / SgE — SOILS LINE
- FP — PUBLIC 100YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- FCE — FOREST CONSERVATION EASEMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

1 inch = 50 ft.

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Scott Dougherty — Signature of Developer — 7/6/12 Date

Scott Dougherty — Print name below signature

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — 7/5/12 Date

YOLANDA L. LANGHORNE THOMPSON

Print name below signature

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 7/10/12 Date

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

SIGNATURE OF ENGINEER — 7/5/12 DATE

YOLANDA L. LANGHORNE-THOMPSON, P.E.

MD LICENSE NUMBER: 25793

EXPIRATION DATE: 06-21-2013

48 Hours
Before You Dig
Call
"MISS UTILITY"
Service Protection Center
MEMBER
ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE
1-800-257-7777

7/5/12 DATE

STATE OF MARYLAND — YOLANDA LANGHORNE THOMPSON — No. 25793 — REGISTERED PROFESSIONAL ENGINEER

For Christopher Consultants

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 10/31/12 Date

Chief, Development Engineering Division — 10/17/12 Date

Director, Department of Planning and Zoning — 11/6/12 Date

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) - columbia, md. 21046-2990
410.872.6690 - metro 301.581.0140 - fax 410.872.6693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

SEDIMENT AND EROSION CONTROL PLANS

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.00B.07	
DRAWN: DAM	DATE: JUNE 27, 2012	21 OF 45	
CHECKED: ENJ	APPROVED: YLL		

SDP-08-116

MDC-855

19.0 Standards and Specifications
For Land Grading

Definitions

Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose

The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measured for drainage and water removal and vegetative treatment, etc.

Many countries have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they should be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (including grade and cross-section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safety conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper then 2:1. (Where the slope id to be mowed the slope should be no steeper then 3:1: 4:1 is preferred because of safety factors related to mowing steep slopes.

3. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1slopes exceeds 20 feet; for 3:1 slopes it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slopes face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

a. Benches shall be a minimum of six-feet wide to provide ease of maintenance.

b. Benches shall be designed with a reverse slope of 6:1 of flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

c. The flow length within a bench shall not exceed 800" unless accompanied by appropriate design and computations. For flow channel stabilization see temporary swales.

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designated structure, except where:

a. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected for surface runoff until they are stabilized.

b. The face of the slope shall not be subjected to any concentrated slows of surface water such as from natural drainways, graded swales, downspouts, etc.

c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

5. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut as nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Over land flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

6. Surface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created to close to property lines as the endanger adjoining properties without adequately protecting such properties against sediment, erosion, slippage, settlement, subsidence or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tempers over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subjected to the provisions of the Standard and Specifications.

All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

21.0 Standard and Specifications
For Topsoil

Definitions

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soild of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material in not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains materials toxic to plant growth
d. The soil is so acidic that treatment with limestone is not feasible.

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.

SIGNATURE OF ENGINEER   7/5/12 DATE

YOLANDA L. LANGHORNE-THOMPSON, P.E.
MD LICENSE NUMBER: 25793
EXPIRATION DATE: 06-21-2013

For the purpose of these Standards and Specification, areas having slopes steeper that 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper that 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall bot be a mixture of contrastinf textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials large than 1 ½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or other as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread to the rate of 4-8 tons/acre (200-400 pounds per 1,000square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked in to the soil in conjunction with tillage operations as described in the following procedures.

For sites having disturbed areas under 5 acres:

Place topsoil (if required) and apply soil amendments as specified in 20.0 vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

For sites having disturbed areas over 5 acres:

On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following.

a. pH for topsoil shall be between 6.0 and 7.5. If tested soil demonstrates a pH of less the 6.0, sufficient lime shall be prescribed to raise pH to 6.5 or higher.

b. Organic content of topsoil shall be not less then 1.5 percent by weight.

c. Topsoil having soluble salt content grater then 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 day min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments as recommended be a qualified agronomist or soil scientist approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Place topsoil (if required) and apply soil amendments as specified on 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

Topsoil Application

When topsoiling, maintain needed erosion and sediment control practiced such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fences and Sediment Traps and Basins.

Grades in the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

Topsoil shall be uniformy distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

Topsoil shall not be place while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil id excessively wet in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

Alternative for Permanent Seeding - Instead of applying the full amounts of like and commercial fertilizer, composted sludge and amendments mat be applied as specified below:

Composted Sludge Materials for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originated from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain as least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub #1, Cooperative Extention Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

30.0 Dust Control

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movement wher in and off-site damage is likely without treatment.

Specifications

Temporary Methods

1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.

2. Vegetative Cover - See standards for temporary vegetative cover.

3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12" apart, spring-toothed harrows, and similar plows are examples of equipment whicj may produce the desired effect.

4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.

5. Barriers - Soild board fences, silt fences, snow fences, burlap fences, staw bales, and similar materials can be used to control air currents and soil blowing. Barriers placed at right angles to [revailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.]

2. Topsoil - Covering with less erosive materials. See Standards for topsoilding.

3. Stone - Cover surface with crushed stone or coarse gravel.

References

1. Agriculture Handbook 346. Wind Erosion Forces in the United State and Their Use in Predicting Soil Loss.

2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA - ARS.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
1. Preferred--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq, ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq, ft.) before seeding. Harrow or disk into upper three inches of soil.
At time of seeding apply 400 lbs/acre 30-0-0 urea form fertilizer (9 lbs/1000 sq, ft.)
2. Acceptable--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq, ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq, ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the periods March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq, ft.) of Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq, ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by:
Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.
Option 2 - Use sod. Option 3 -- Seer: with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with
2 tons/acre well anchored straw.

Mulching -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq, ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq, ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq, ft.) for anchoring.

Maintenance -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES.

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation: -- Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq, ft.).

Seeding: -- For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq, ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq, ft.). For the period November 16 -- February 28 protect the site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: -- Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq, ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq, ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq, ft.)for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Scott Dougherty   7/6/12
Signature of Developer   Date

Scott Dougherty
Print name below signature

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer   7/5/12 Date

YOLANDA L. LANGHORNE THOMPSON
Print name below signature

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by THE HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD   7/10/12 Date

DETAIL 33 - SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft ²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE H - 26 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E - 15 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23A - STANDARD INLET PROTECTION

CONSTRUCTION SPECIFICATIONS

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
2. Drive the 2"x 4"construction grade lumber posts 1' into the ground at each corner of the inlet.Place nail strips between the posts on the ends of the inlet.Assemble the top portion of the 2"x 4" frame using the overlap joint shown on Detail 23A.The top of the frame (weir) must be 6"below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely.The ends must meet and overlap at a post.
4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation.Fasten the geotextile firmly to the frame.The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
6. If the inlet is not in a sump,construct a compacted earth dike across the ditch line directly below it.The top of the earth dike should be at least 6" higher than the top of the frame.
7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E - 16 - 5 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOTES:
1. SILT FENCE TO BE INSTALLED PER SCS DETAIL.
2. WIRE, SNOW FENCE, ETC. FOR TREE PROTECTION ONLY.
3. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
4. LIMITS OF DISTURBANCE SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
5. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS. (SEE ROOT PRUNING DETAIL)
6. DEVICE SHOULD BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION.
7. PROTECTION SIGNS MAY BE PLACED ON FENCE AS NOTED ON PLAN.
8. LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE.

COMBINATION SILT FENCE AND TREE PROTECTION DEVICE- TYPE II

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE F - 17 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. The contractor is responsible for obtaining all required permits prior to commencing any land disturbance activities. (1day)

2. An on-site preconstruction meeting shall be conducted with the contractor and the Howard County Inspector at least 48 hours prior to the start of construction. Contact the Howard County Department of Inspections, Licenses and Permits at (410) 313-1880 to schedule. (1 day)

3. Install the perimeter sediment control devices including silt fence, super silt fence, tree protection fence and the stabilized construction entrance (2 days).

4. The Ex. SWM pond shall be modified to raise the top to an elevation of 171.00 from its current elevation to meet the MDE-378 and county pond policy requirements. (1 day)

5. With the permission of the County sediment control inspector, Remove or Relocate the existing structures and utilities, and other site features which are located within the limit of disturbance. Clear & grub area site. The contractor shall at this time perform tree clearing activities to provide for stock pile area as indicated on the erosion and sediment control plans. The existing stockpile will be used as fill material for Building 5. Begin stockpile relocation to the Building 5 area. A temporary, as shown on Sheet 20, can be utilized of needed. (20 days)

6. Begin grading the site. (60 days)

7. Begin installation of storm drain, water and sewer and all other underground utility lines. (60 days)

8. Begin building construction. (110 days).

9. Begin site curb & gutter, parking lot, and entrance construction. (5 days)

10. Base pave and install the remainder of the driveway entrance and associated sidewalks. (6 days).

11. Install all light poles, traffic signs, and landscaping. Complete all other onsite improvements. (5 days)

12. Stabilize all disturbed areas and excavate Bioretention area to proposed invert depth and scarify the existing soil surfaces, taking care not to compact the in-situ materials. (2 days)

13. Install underdrain system. (2 days)

14. Backfill Bioretention area with planting soil as shown in the plans and detailed in the specifications. Overfilling is recommended to account for settlement. (2 days)

15. Presoak the planting soil prior to planting vegetation to allow for settlement. (1 day)

16. Excavate or fill to achieve proper design grade, leaving space for the upper layer of the mulch and/or topsoil that will bring the surface to final grade and ready for planting. (2 days)

17. Plant vegetation specified in the planting plan for Bioretention Area. (2 days)

18. Mulch and Install erosion protection at entrance points. (2 days)

19. Stabilize all remaining disturbed areas (3 days).

20. With the permission of the County sediment control inspector remove any remaining sediment control devices. (3 days)

TOTAL ESTIMATED TIME: 293 DAYS

HOWARD COUNTY
SOIL CONSERVATION DISTRICT

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (410-313-1855).

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol I, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specific above in accordance with the 1995 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Section 52). Temporary stabilization with mulch along can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

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 by the Howard County Sediment Control Inspector.

7. Site Analysis:
Total Area of Site 36.71 Acres
Area Disturbed 13.21 Acres
Area to be roofed 3.42 Acres
Area to be vegetatively stabilized 2.91 Acres
Offsite waste/borrow area location: N/A
Area to be Cut 21,466 Cubic Yards
Area to be Filled 9,204 Cubic Yards

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all site with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of instillation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized any construction as shown on these plans by the end of each work day, whichever is shorter.

7/5/12
DATE

STATE OF MARYLAND — YOLANDA LUISA LANGHORNE-THOMPSON — No. 25793 REGISTERED — PROFESSIONAL ENGINEER

For Christopher Consultants

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 10/31/12
Chief, Development Engineering Division	Date 10/17/12
Director, Department of Planning and Zoning	Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

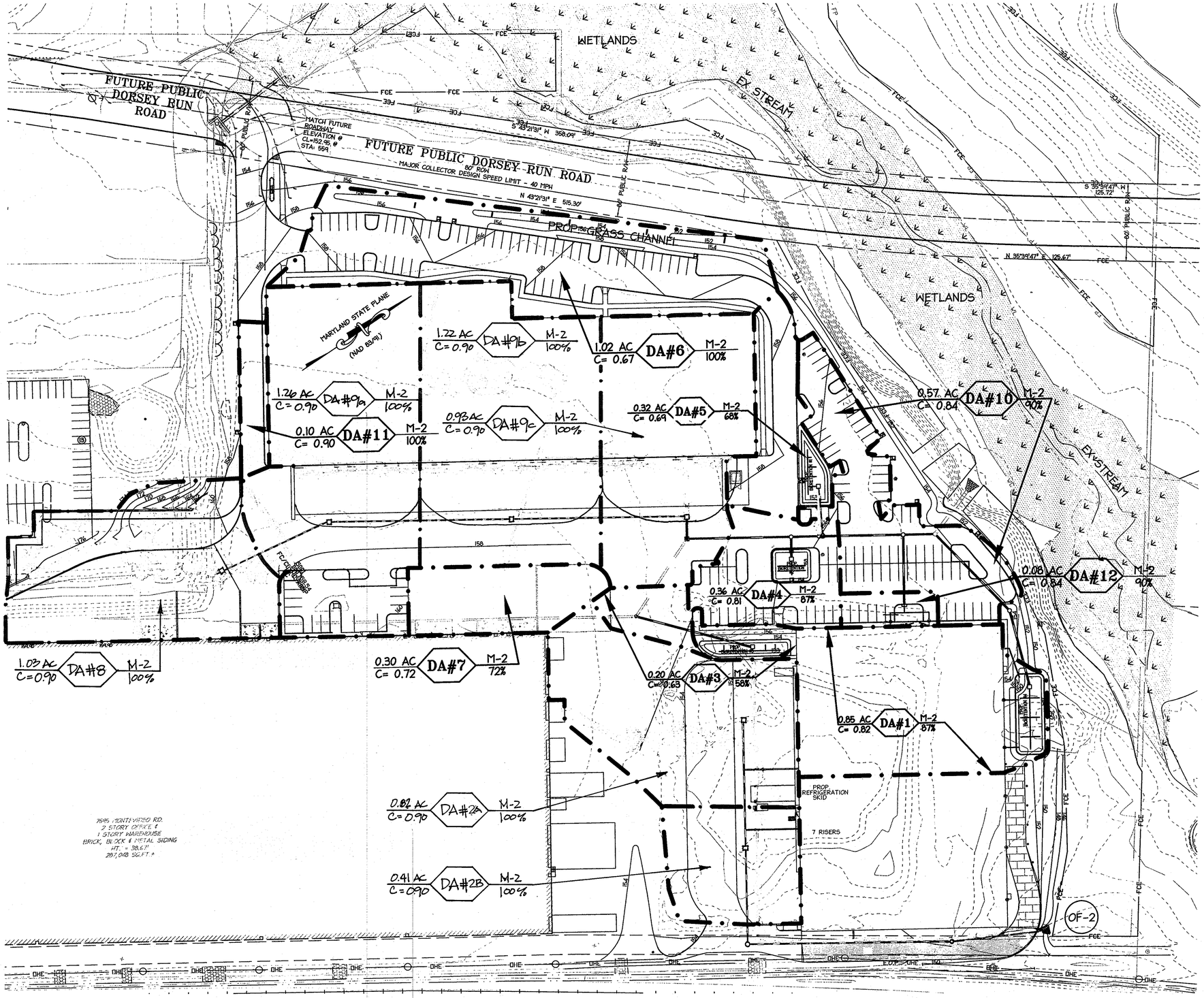
SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT# L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

TITLE:
EROSION AND SEDIMENT CONTROL NOTES & DETAILS

DESIGN: NM	SCALE: N/A	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JUNE 27, 2012	22 OF 45
CHECKED: ENJ	APPROVED: YLL	

MDC-855

SDP-08-116



SCALE
1" = 50'

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

DRAINAGE AREA SCHEDULE

DA	AREA	ACREAGE	% IMPERVIOUS	C
1	36,962 S.F.	0.85 Ac.	87	0.82
2	53,579 S.F.	1.23 Ac.	100	0.90
3	8,695 S.F.	0.20 Ac.	58	0.63
4	15,554 S.F.	0.36 Ac.	87	0.81
5	13,725 S.F.	0.32 Ac.	68	0.69
6	44,396 S.F.	1.02 Ac.	65	0.67
7	12,902 S.F.	0.30 Ac.	72	0.72
8	27,388 S.F.	0.63 Ac.	66	0.68
9	144,619 S.F.	3.32 Ac.	100	0.90
10	24,900 S.F.	0.57 Ac.	90	0.84
11	4,500 S.F.	0.10 Ac.	100	0.90
12	3,501 S.F.	0.08 Ac.	90	0.84

OUTFALL SUMMARY TABLE

DRAINAGE AREA	RECEIVING STRUCTURES
1	Bio-retention system through roof leaders and discharged to existing manhole (YH-3)
2	An 18" HDPE (Trench Drain) and outfall at OF-2 to existing stream.
3	Bioretention system through curb cuts and discharged to existing manhole (YH-1)
4	Bioretention system through curb cuts and discharged to existing stormdrain via manhole (A-4)
5	Bioretention system through curb cuts and discharged to existing stormdrain via manhole (A-5)
6	Drains through curb cuts to grase channel
7	An existing 24" HDPE Trench Drain (T-1) and discharged to existing manhole (YH-1)
8	An 15" HDPE (Trench Drain) and discharged to existing Trench Drain (T-1)
9	An 18" HDPE (Trench Drain) and discharged to existing manhole (YH-2)
10	Drains through curb cuts to existing stream
11	Drains through curb cuts to existing drainage ditch
12	Inlet to existing stormdrain via manhole (A-6)

LEGEND

WETLANDS

DRAINAGE AREA

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.

SIGNATURE OF ENGINEER — DATE 10.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 01-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date: 10/31/12

Chief, Development Engineering Division — Date: 10/7/12

Director, Department of Planning and Zoning — Date: 10/5/12

1	11/20/12	REDUNE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
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1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER		SECTION/AREA			LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

10.6.12 DATE

STATE OF MARYLAND — WILLIAM RUSSELL ZINK — 20587 — REGISTERED PROFESSIONAL ENGINEER

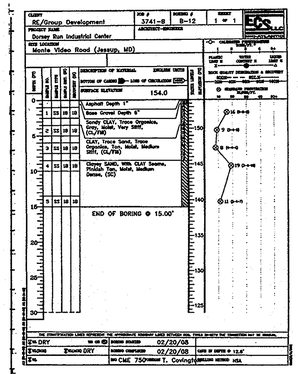
TITLE:

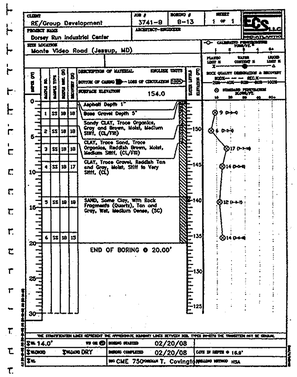
STORM DRAINAGE AREA MAP

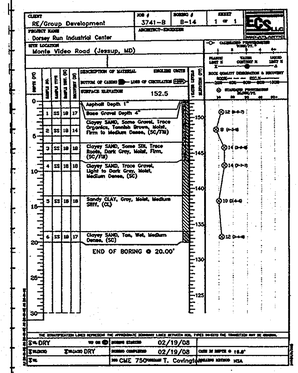
DESIGN: NM	SCALE: 1" = 50'		PROJECT: 03067.006.07
DRAWN: DAM	DATE: SEPT 06 2012		23 OF 45
CHECKED: ENJ	APPROVED: WRZ		

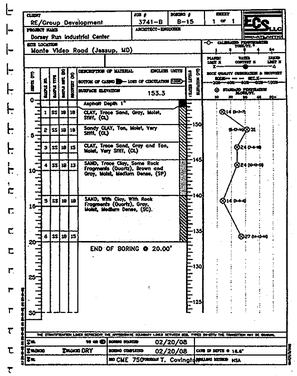
MDC-855

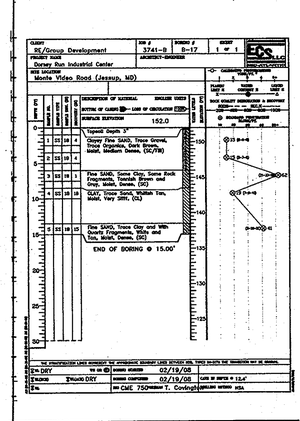
SDP-08-116

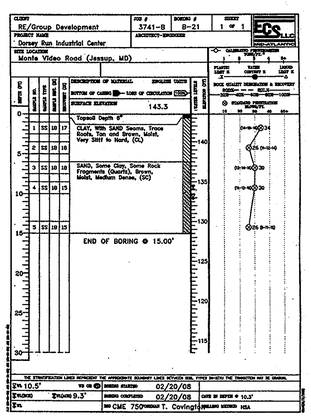


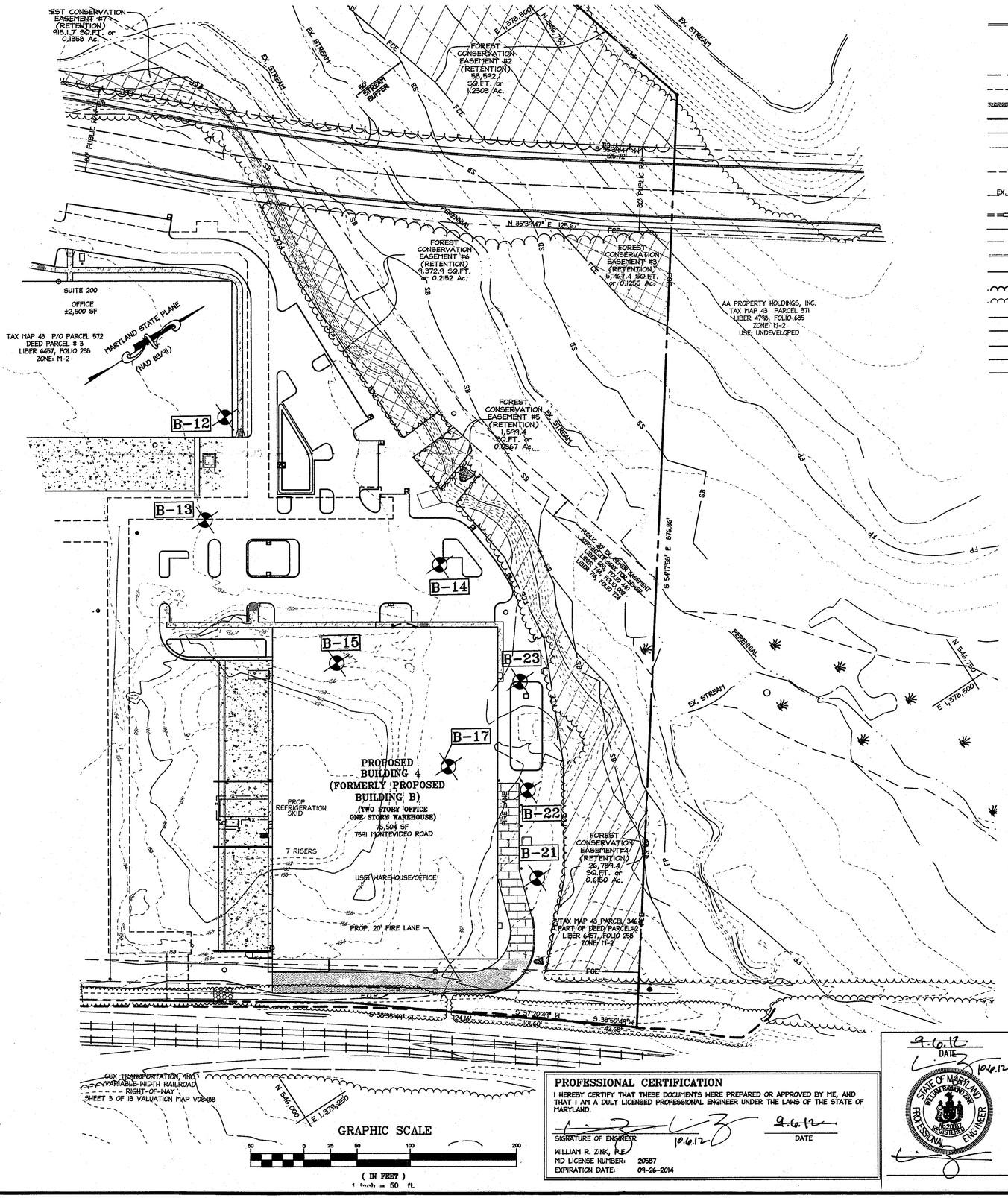












LEGEND

- PROPOSED CURBLINE
- PROPOSED BUILDINGS
- 50' BUILDING RESTRICTION LINES
- 30' PARKING RESTRICTION LINES
- SOILS LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- EX. 8" WATER — EXISTING WATER
- EX. 8" SAN. — EXISTING SANITARY SEWER
- EX. 24" RCP — EXISTING STORMDRAIN
- OHE — EXISTING OVERHEAD UTILITY
- X X X — FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- PROPOSED TREELINE
- EXISTING TREELINE
- FP — PUBLIC 100 YR FLOODPLAIN
- WL — WETLANDS
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- FCE — FCE — FOREST CONSERVATION EASEMENT
- RAILROAD TRACKS
- B-16 — SOIL BORING

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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410.872.8000 · metro 301.881.8149 · fax 410.872.8083

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER		SECTION/AREA			LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)		SEWER CODE: B01			

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.

SIGNATURE OF ENGINEER — DATE 9.6.12

WILLIAM R. ZINK, P.E.
MD LICENSE NUMBER: 20567
EXPIRATION DATE: 09-26-2014

9.6.12 DATE

10.6.12

STATE OF MARYLAND WILLIAM ROBERT ZINK 20567 REGISTERED PROFESSIONAL ENGINEER

TITLE:

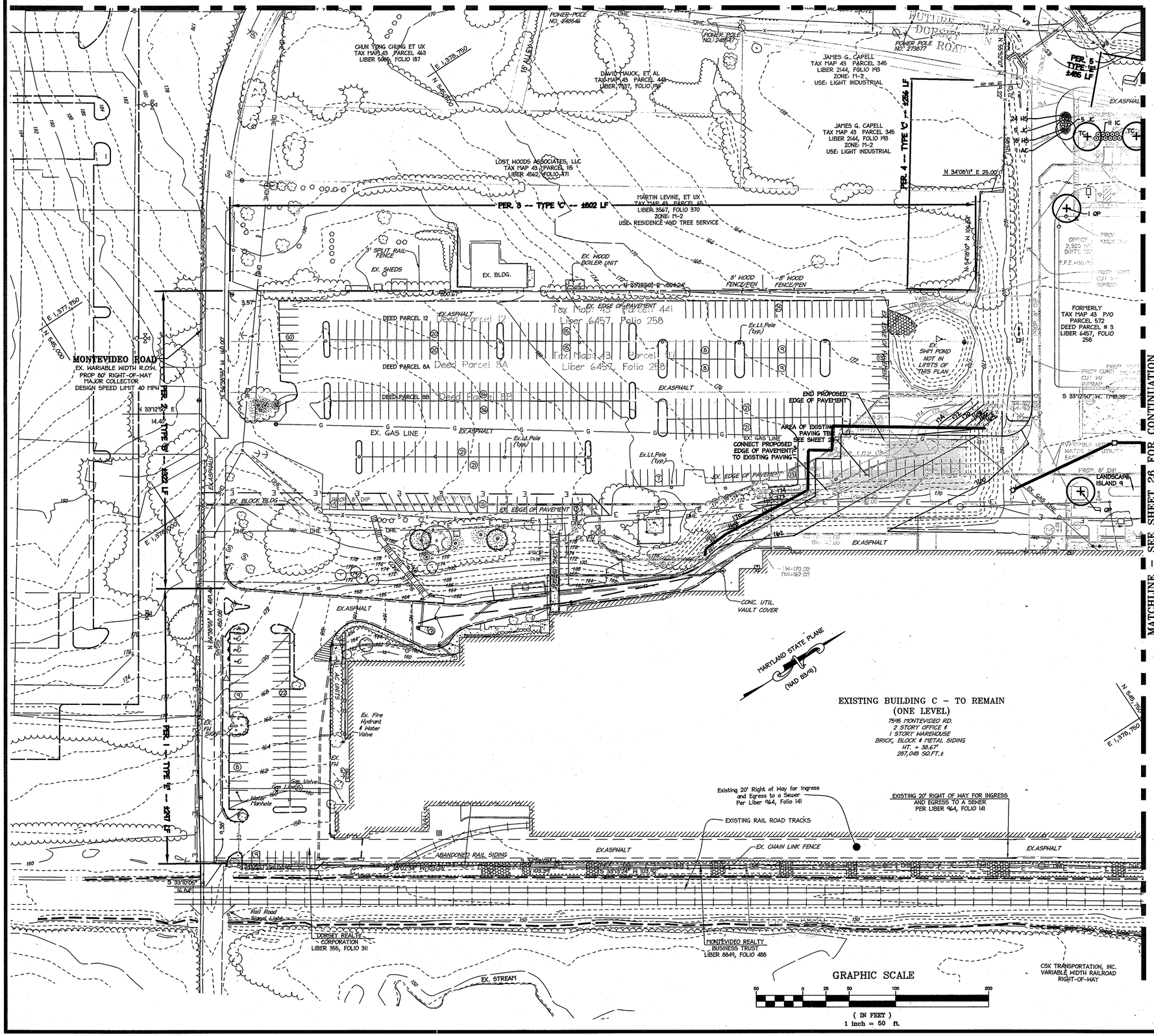
SOIL BORING PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012		
CHECKED: ENJ	APPROVED: WRZ	24 OF 45	

MDC-855

MATCHLINE – SEE SHEET 27 FOR CONTINUATION

MATCHLINE – SEE SHEET 26 FOR CONTINUATION



LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- EXISTING INTER CONTOUR
- 250 EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUBS

GENERAL NOTES

1. TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
2. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $12,300.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (30 SHADE TREES AND 110 SHRUBS).
3. PLEASE REFER TO TABLES ON SHEET 34 FOR BEARINGS AND DISTANCES, DELINEATION OF FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 10/31/12
Chief, Development Engineering Division	Date 10/17/12
Director, Department of Planning and Zoning	Date 11/6/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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ADDRESS CHART

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1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 LEEWANDA N. GIBBS STATE OF MARYLAND

TITLE:

LANDSCAPE PLAN

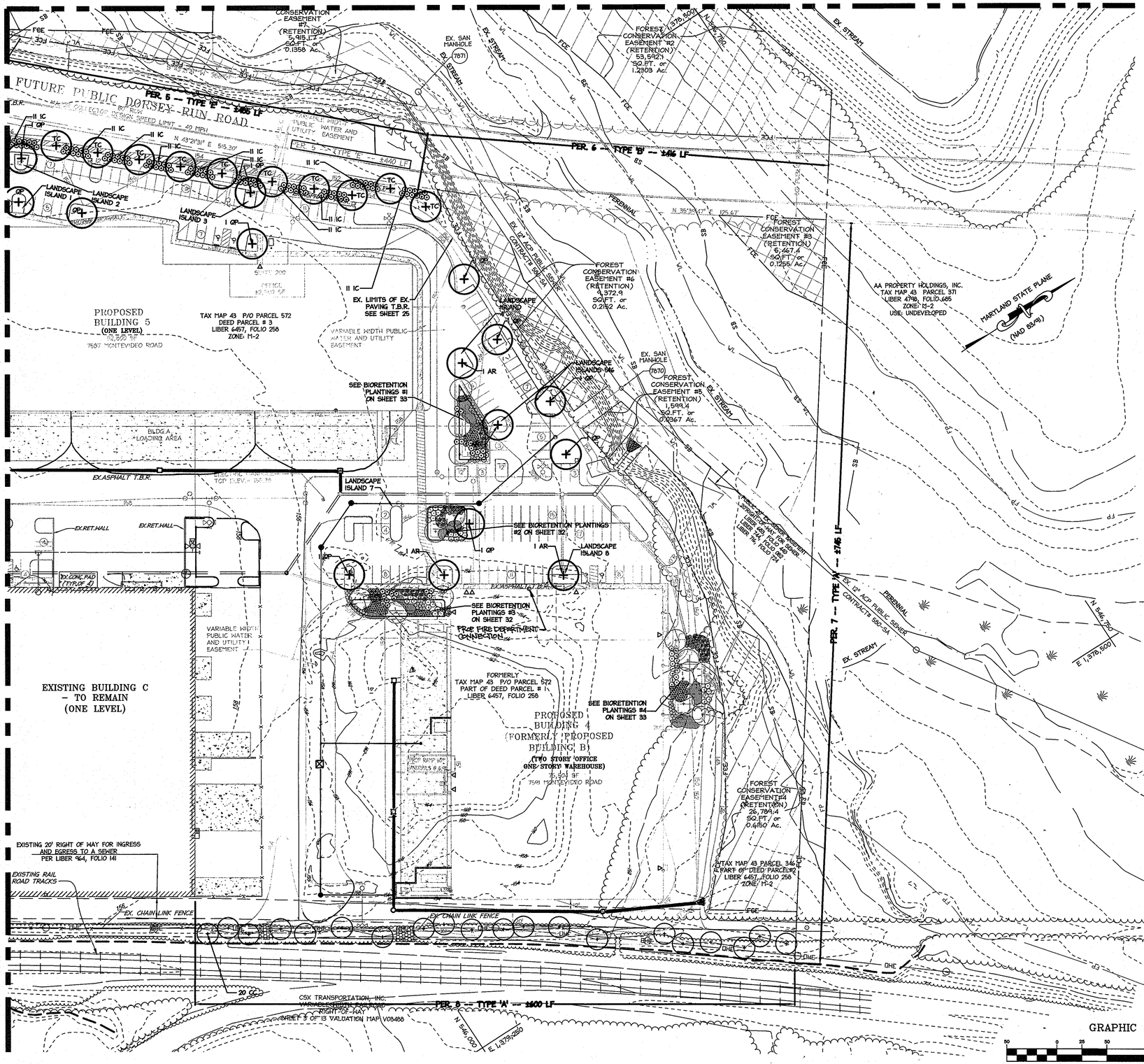
DESIGN: LNG	SCALE: 1" = 50'	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: JULY 2012	25 OF 45	
CHECKED: LNG	APPROVED: YLL		

SDP-08-116

MDC-855

MATCHLINE – SEE SHEET 25 FOR CONTINUATION

MATCHLINE – SEE SHEET 27 FOR CONTINUATION



LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUBS

GENERAL NOTES

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2. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $12,300.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (30 SHADE TREES AND 110 SHRUBS).
3. PLEASE REFER TO TABLES ON SHEET 34 FOR BEARINGS AND DISTANCES, DELINEATION OF FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

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1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT# L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 LEESHANDA N. GIBBS STATE OF MARYLAND

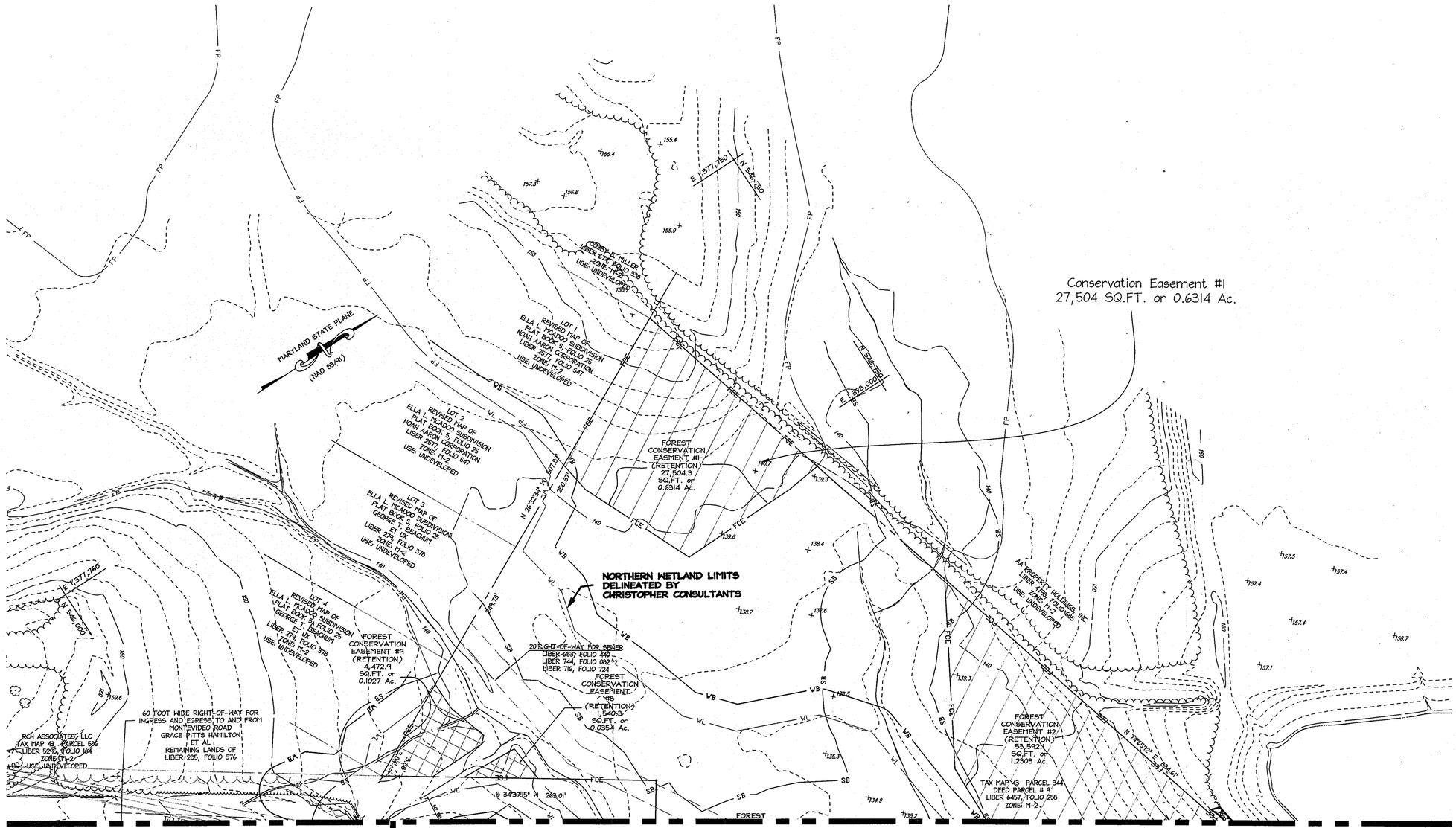
TITLE:

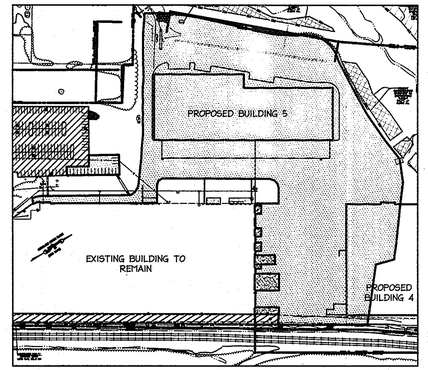
LANDSCAPE PLAN

DESIGN: LNG	SCALE: 1" = 50'	PROJECT: 05067.008.07	
DRAWN: DAM	DATE: JULY 2012	26 OF 45	
CHECKED: LNG	APPROVED: YLL		

SDP-08-116

MDC-855





LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

EXISTING PAVEMENT TO BE REMOVED

EXISTING PAVEMENT TO BE REMAIN

GENERAL NOTES

1. TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
2. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $12,300.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (30 SHADE TREES AND 110 SHRUBS).
3. PLEASE REFER TO TABLES ON SHEET 34 FOR BEARINGS AND DISTANCES, DELINEATION OF FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
4. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.581.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

LANDSCAPE PLAN

DESIGN: LNG	SCALE: 1" = 50'	PROJECT: 05067.008.07	
DRAWN: DAM	DATE: JULY 2012	27 OF 45	
CHECKED: LNG	APPROVED: YLL		

LEGEND

- EXISTING INTER CONTOUR
- 250 EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUBS
- RETENTION FOREST CONSERVATION EASEMENT(SEE SHEET 30)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

48 Hours Before You Dig Call "MISS UTILITY" Service Protection Center
MEMBER ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE 1-800-257-7777

10.4.2012
DATE

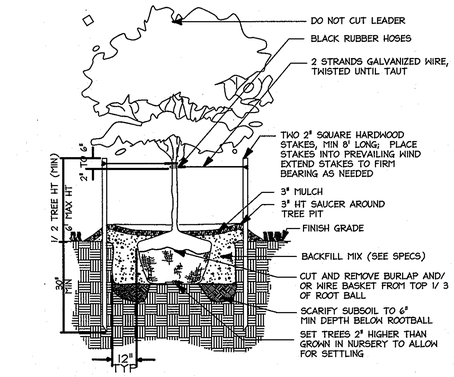
LANDSCAPE ARCHITECT 3444 DEBRANDA N. GIBBS STATE OF MARYLAND

MDC-855

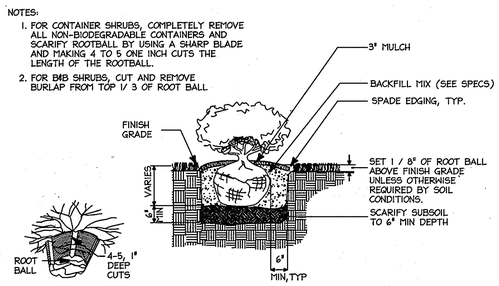
SDP-08-116

GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
2. LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LCAW.
3. NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
4. IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
5. ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
6. LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
7. LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL. AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
8. LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC,WATER,DRAINAGE, AND FOUNTAIN UTILITIES,AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDAMAGED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
9. CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
10. THE OWNER,TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
11. TOPSOIL MIX
    - A. PLANTING MIX SHALL BE PREPARED AT APPROVED ON-SITE STAGING AREA USING APPROVED ON-SITE EXISTING SOIL. MIX MINIMUM QUANTITIES OF 20 CUBIC YARDS OR SUFFICIENT MIX FOR ENTIRE JOB IF LESS THAN 20 CUBIC YARDS IS REQUIRED.
    - B. THOROUGHLY MIXED IN THE FOLLOWING PROPORTIONS FOR TREE AND SHRUB PLANTING MIX:
      .5 CY EXISTING SOIL
      .2 CY SHARP SAND
      .3 CY WOOD RESIDUALS
      4.5 LBS TREBLE SUPERPHOSPHATE
      5 LBS DOLMONITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
    - C. FOR BED PLANTING, SHRUBS AND GROUNDCOVER SPACES 24 INCHES OR CLOSER, INCORPORATE THE FOLLOWING INGREDIENTS PER 20 SF AND INCORPORATE INTO TOP 8 INCHES OF EXISTING SOILS BY ROTOTILLING OR SIMILAR METHOD OF INCORPORATION.
      .2 CY SHARP SAND
      .3 CY ORGANIC MATERIAL
      4.5 LBS TREBLE SUPERPHOSPHATE
      5 LBS DOLMONITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
12. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 31 SHADE TREES AND 121 SHRUBS PROVIDED WITH LANDSCAPE SURETY IN THE AMOUNT OF $12,950.00 (30 SHADE TREES @ $300.00 EA., AND 110 SHRUBS @ $30.00 EA)
13. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY 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 REVISIONS ARE MADE TO THE APPLICABLE PLANS.
14. TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.



A **Tree Planting Detail**
Not To Scale



B **SHRUB BED PLANTING DETAIL**
NOT TO SCALE

PLANT LIST (PLEASE REFER TO SHEETS 24-26):

SYMBOL	LATIN NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
QP	QUERCUS PHELLOS	WILLOW OAK	13	2½" - 3" caliper	B&B
AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	4	2½" - 3" caliper	B&B
TC	TILIA CORDOTA 'GREENSPIRE'	LITTLE LEAF LINDEN	12	2½" - 3" caliper	B&B
CC	CERCIS CANADENSIS	'FOREST PANSY' REDBUD	20	1½" - 2" caliper	B&B
AC	AMELANCHIER CANADENSIS	SERVICEBERRY	1	1½" - 2" caliper	B&B
IC	ILEX CRENATA	GREEN LUSTER HOLLY	121	24"-30" HT	3 GAL
JC	JUNIPERUS CHINENSIS 'SARGENTII'	SARGENTS JUNIPER	10	18"-24" HT	1 GAL
HS	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	42	1 GT.	18" O.C.

SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS					ADJ. TO PER. PROP.			
PERIMETER	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	
LANDSCAPE TYPE 'A' L.F. OF PER.						416 LF.	745 LF.	600 LF.	
LANDSCAPE TYPE 'B' L.F. OF PER.		322 LF.							
LANDSCAPE TYPE 'C' L.F. OF PER.			802 LF.	254 LF.					
LANDSCAPE TYPE 'E' L.F. OF PER.	297 LF.				485 LF.				
CREDIT FOR EX. VEG. BELOW IF NEEDED	EX. VEG. 297 LF.	EX. VEG. 322 LF.	N/A	EX. VEG.	N/A	EX. VEG.	EX. VEG.	N/A	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED) EXISTING BOARD ON BOARD FENCE	N/A	N/A	YES EX. 802 LF WOOD FENCE	N/A	N/A	N/A	N/A	N/A	802 LF
NO. OF PLANTS REQ.									
SHADE TREES	0	0	0	0	12	0	0	10	22
EVG. TREES	0	0	0	0	0	0	0	0	0
SHRUBS	0	0	0	0	121	0	0	0	110
NO. OF PLANTS PROV.									
SHADE TREES	0	0	0	0	12	0	0	0	12
EVG. TREES	0	0	0	0	0	0	0	0	0
OTHER TREES	0	0	0	0	0	0	0	20*	20
SHRUBS	0	0	0	0	121	0	0	0	121

NOTE: * TWENTY(20) 'FOREST PANSY' REDBUD WERE SUBSTITUTED FOR SHADE TREES DUE TO THE LOCATION OF OVERHEAD UTILITIES WITHIN THE LANDSCAPE PERIMETER.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF NEW PARKING SPACES PROPOSED	178
INTERNAL ISLANDS REQUIRED (1 ISLAND/ 20 PARKING SPACES)	9
INTERNAL ISLANDS PROVIDED (200 SQ. FT./ISLAND)	12
NUMBER OF TREES REQUIRED (1 SHADE TREE/ 20 PARKING SPACES)	9
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	12 0

LUMINAIRE SCHEDULE							
Symbol	Label	Qty	Catalog Number	Description	Lamp	Lumens	LLF
	SINGL	4	AU1 400 MH (VOLT) III LG PM AS4 (COLOR)	PAPPI LIGHTING AURAFORM POLE MOUNTED LUMINAIRE WITH SEGMENTED REFLECTOR AND FLAT TEMP. GLASS LENS	ONE 400W ED28 CLEAR METAL HELIDE LAMP.	32000	0.75

D **LIGHTING DETAIL AND SCHEDULE**
NOT TO SCALE

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN,SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPING MANUAL. I/WE FURTHER CERTIFY THAT UPON TREES 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.

NAME

8/1/12
DATE

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 STANDA N GIBBS STATE OF MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

LANDSCAPE DETAILS

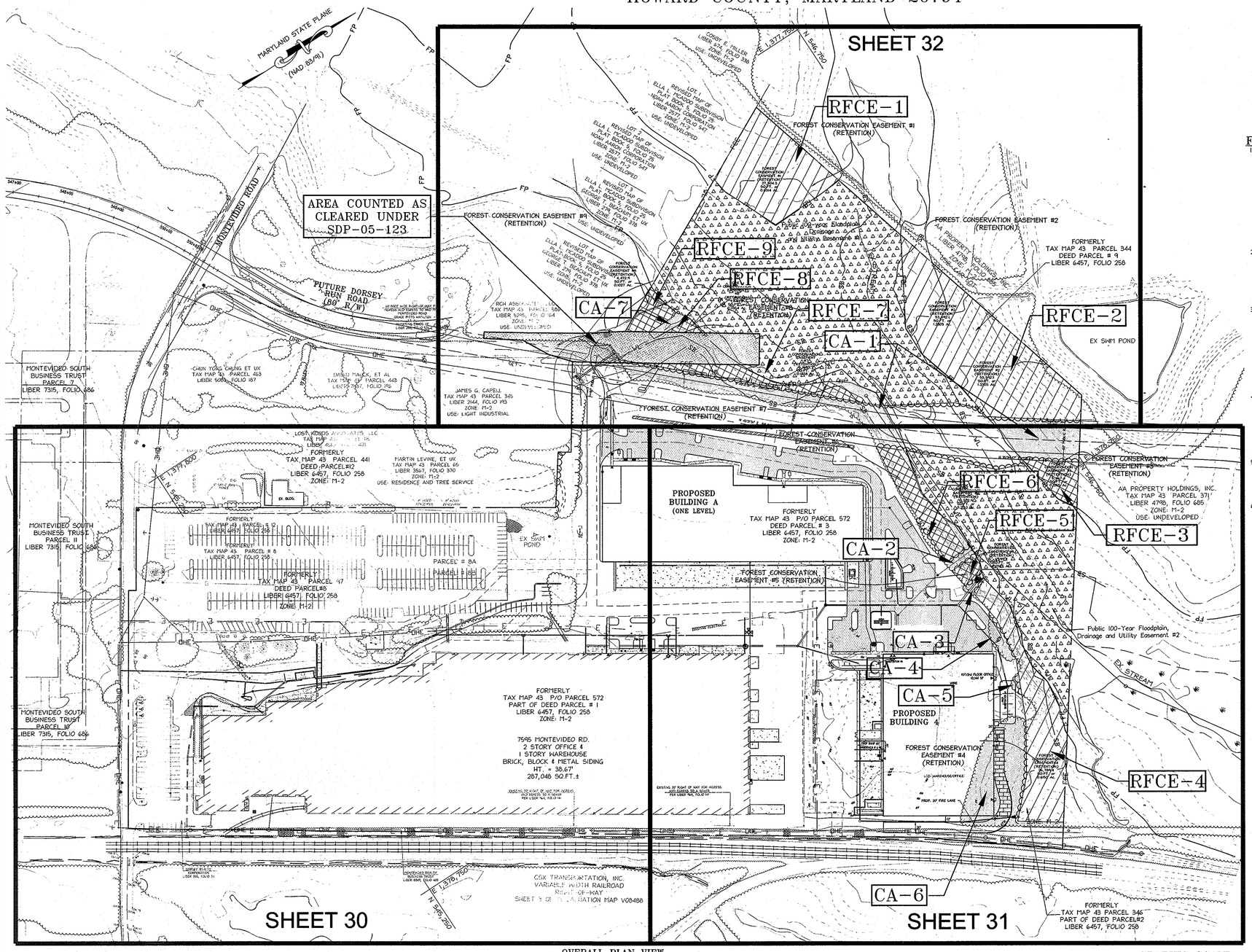
DESIGN: LNG	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JULY 2012		
CHECKED: LNG	APPROVED: YLL	28 OF 45	

SDP-08-116

MDC-855

FOREST CONSERVATION PLAN

DORSEY RUN INDUSTRIAL CENTER
NORTH SIDE REDEVELOPMENT
7595 MONTEVIDEO ROAD, JESSUP
PARCELS 1,2,3,8,9, & 12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND 20794



OVERALL PLAN VIEW
SCALE: 1"=100'

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

FOREST CONSERVATION SHEET INDEX

NO.	SHEET TITLE
28	COVER SHEET
29	FOREST CONSERVATION PLAN
30	FOREST CONSERVATION PLAN
31	FOREST CONSERVATION PLAN

WOODLAND CLEARING AREAS (NON-FLOODPLAIN ONLY)

AREA# (CA)	TOTAL AREA	
CA-1	27,556.2 SQ.FT.	0.63 AC.
CA-2	2,550.3 SQ.FT.	0.06 AC.
CA-3	781.7 SQ.FT.	0.02 AC.
CA-4	1,701.4 SQ.FT.	0.04 AC.
CA-5	380.9 SQ.FT.	0.00 AC.
CA-6	17,823.0 SQ.FT.	0.41 AC.
CA-7	1,173.3 SQ.FT.	0.03 AC.
SITE TOTAL WOODLAND CLEARING	51,966.8 SQ.FT.	1.19 AC.

FOREST CONSERVATION NOTES

1. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE PROVISION OF A MINIMUM OF AT LEAST 2.74 ACRES OF PRESERVATION IN A FOREST CONSERVATION EASEMENT. NINE RETENTION FOREST CONSERVATION EASEMENTS TOTALING 3.13 ACRES HAVE BEEN PROVIDED ON THIS SITE AS SHOWN ON THIS PLAN AND PLAT F-00-000 THAT IS RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MD. THIS PLAN COVERS CLEARING FOR THE PROPOSED DORSEY RUN ROAD (TO BE BUILT BY OTHERS), SITE IMPROVEMENTS, STORMWATER MANAGEMENT OUTFALL CONSTRUCTION AND SEWER LINE CONSTRUCTION NECESSARY FOR THE REDEVELOPMENT OF THE DORSEY RUN INDUSTRIAL PARK NORTH OF MONTEVIDEO ROAD.
2. IN JUNE 2006, SDP-05-123 WAS APPROVED FOR THE CONSTRUCTION OF THE PARCEL 3 ACCESS ON WHAT WAS THEN PROPERTY OF THE MONTEVIDEO SOUTH BUSINESS TRUST REPRESENTED BY TRAMMELL CROW COMPANY. THIS PLAN INCLUDED THE CLEARING OF 0.65 ACRES FOR THE CONSTRUCTION OF THE ACCESS ROAD, WITHIN AN EXISTING ACCESS EASEMENT THAT WAS PRESUMED TO BE THE RIGHT OF WAY FOR FUTURE DORSEY RUN ROAD.
3. SINCE THE TIME OF THE PREPARATION AND APPROVAL OF THESE SITE PLANS, THE PROPOSED ALIGNMENT OF DORSEY RUN ROAD HAS CHANGED. THIS ALIGNMENT IS FURTHER TO THE SOUTHEAST OF THE PREVIOUS ALIGNMENT, AND IS NO LONGER WITHIN THE ACCESS EASEMENT. SINCE THE CURRENT ROAD ALIGNMENT IS NOT IN THE PREVIOUS EASEMENT, IT IS FEASIBLE THAT THE SOME OF THE PREVIOUSLY PROPOSED CLEARING MAY NOT OCCUR. HOWEVER, THE FEE IN LIEU PAYMENT WAS MADE FOR ALL OF THIS CLEARING BY TRAMMEL CROW UNDER SDP-05-123, ESSENTIALLY MEANING THAT THIS AMOUNT OF CLEARING HAS BEEN PROPERLY ACCOUNTED FOR, SHOULD THE ROAD BE CONSTRUCTED.
4. A SMALL AMOUNT OF SITE WORK AND STORMWATER MANAGEMENT CONSTRUCTION HAS OCCURRED AS OF JUNE 2008, UNDER GP-08-75, WITH A WAIVER PETITION FILED (WP-08-064) THAT WAS APPROVED AND INDICATED THAT "THE AREA OF FOREST REMOVED FOR THE STORM DRAIN OUTFALL SHALL BE ACCOUNTED FOR ON ANY FUTURE SITE DEVELOPMENT PLAN SUBMITTED FOR THIS SITE." THIS CLEARING AREA IS SHOWN AS CA-3 AND HAS BEEN INCLUDED IN THE CALCULATIONS AS IF IT WAS NEWLY PROPOSED.
5. THIS PLAN SHOWS THE CLEARING OF 1.19 ACRES, PRESERVATION OF 3.13 ACRES OUTSIDE OF THE FLOODPLAIN, SEWER, AND ROAD EASEMENTS AND PRESERVATION ALL OF THE FLOODPLAIN AREAS, EXCEPT THOSE WITHIN THE GRADING LIMITS OF THE PROPOSED ROADWAY (DORSEY RUN ROAD - TO BE CONSTRUCTED BY OTHERS).
6. THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 2.47 ACRES OF CREDITED ON-SITE RETENTION FOREST CONSERVATION EASEMENT. FOR PURPOSES OF THE WOODLAND CONSERVATION WORKSHEET, RFCE AREAS 3 & 5-9 ARE COUNTED AS CLEARED. (0.66 ACRES) THE EX. WOODS ARE TO REMAIN IN A NON-CREDITED EASEMENT.

CREDITED RETENTION FOREST CONSERVATION EASEMENTS (RFCE)

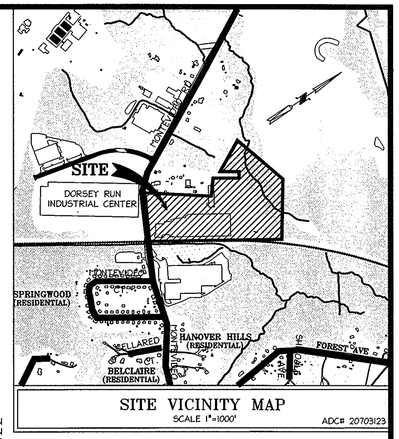
RFCE #	TOTAL AREA	
RFCE-1	27,504 SQ.FT.	0.6314 AC
RFCE-2	53,589 SQ.FT.	1.2302 AC
RFCE-4	26,788 SQ.FT.	0.6150 AC
SITE TOTAL FOREST CONSERVATION	107,881 SQ.FT.	(2.47 AC)

NON-CREDITED RETENTION FOREST CONSERVATION EASEMENTS (RFCE)

RFCE #	TOTAL AREA	
RFCE-3	5,467 SQ.FT.	0.1255 AC
RFCE-5	1,599 SQ.FT.	0.0367 AC
RFCE-6	9,372 SQ.FT.	0.2152 AC
RFCE-7	7,258 SQ.FT.	0.1666 AC
RFCE-8	953 SQ.FT.	0.0219 AC
RFCE-9	4,139 SQ.FT.	0.0950 AC
SITE TOTAL FOREST CONSERVATION	28,788 SQ.FT.	0.66 AC

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 SUSANNA N GIBSON STATE OF MARYLAND



SITE VICINITY MAP
SCALE 1"=1000'
ADC# 20709J23

LEGEND

- EXISTING TREELINE
- PROPOSED TREELINE
- WL — WETLAND LIMITS
- STREAM CENTERLINE
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- FCE — FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT (RFCE) CREDITED EASEMENT
- FOREST CLEARING AREA (CA)
- RETENTION FOREST CONSERVATION EASEMENT (RFCE) NON CREDITED EASEMENT
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 30 FOR INFORMATION)

SEE CHARTS ON SHEET 33 FOR BEARINGS AND DISTANCES OF FOREST CONSERVATION EASEMENT AREAS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME		SECTION/AREA			LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
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WATER CODE		SEWER CODE			
400 (TG 550)		B01			

TITLE:

COVER SHEET

DESIGN: NM	SCALE: 1" = 100'	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: JULY 2012	29 OF 45	
CHECKED: ENJ	APPROVED: YLL		

SDP-08-116

MDC-855

MATCHLINE – SEE SHEET 32 OF FOR CONTINUATION

MATCHLINE – SEE SHEET 31 FOR CONTINUATION

MONTEVIDEO SOUTH BUSINESS TRUST PARCEL 7 LIBER 7315, FOLIO 686

MONTEVIDEO SOUTH BUSINESS TRUST PARCEL 11 LIBER 7315, FOLIO 686

MONTEVIDEO SOUTH BUSINESS TRUST PARCEL 10 LIBER 7315, FOLIO 686

MARYLAND STATE PLANE (NAD 83/91)

LOST WOODS ASSOCIATES, LLC TAX MAP 43 PARCEL 115 LIBER 4562, FOLIO 471

MARTIN LEVINE, ET UX TAX MAP 43 PARCEL 65 LIBER 3567, FOLIO 370 ZONE: M-2 USE: RESIDENCE AND TREE SERVICE

ZONE: M-2 USE: LIGHT INDUSTRIAL

N 34°08'11" E 25.00'

N 54°51'07" W 190.43'

3' SPLIT RAIL FENCE

EX. SHEDS

EX. BLDG.

8' WOOD FENCE/PEN

N 33°19'50" E 604.24'

E 1,377,760 N 545,000

MONTEVIDEO ROAD

N 33°39'55" W 450.08'

N 33°12'50" E 14.40'

TAX MAP 43 PARCEL 441 DEED PARCEL #12 LIBER 6457, FOLIO 258 ZONE: M-2

DEED PARCEL 12

DEED PARCEL 8A

TAX MAP 43 PARCEL 47 DEED PARCEL #8 LIBER 6457, FOLIO 258 ZONE: M-2

Ex.Lt.Pole (typ.)

EX. SWM POND NOT IN LIMITS OF THIS PLAN

PROPOSED BUILDING A

PROPOSED PUBLIC 20' WIDTH WATER EASEMENT

MONTEVIDEO ROAD
EX. VARIABLE WIDTH R.O.W.
PROP. 80' RIGHT-OF-WAY
MAJOR COLLECTOR
DESIGN SPEED LIMIT 40 MPH

EX. BLOCK BLDG.

PROPOSED PUBLIC 20' WIDTH WATER EASEMENT

ROOF E.O.P. 178

TAX MAP 43 P/O PARCEL 572 PART OF DEED PARCEL # 1 LIBER 6457, FOLIO 258 ZONE: M-2

EXISTING BUILDING C – TO REMAIN
(ONE LEVEL)
7595 MONTEVIDEO RD.
2 STORY OFFICE &
1 STORY WAREHOUSE
BRICK, BLOCK & METAL SIDING
HT. = 38.67'
287,048 SQ.FT.±

N 545,750 E 1,378,150

EXISTING 20' RIGHT OF WAY FOR INGRESS AND EGRESS TO A SEWER PER LIBER 964, FOLIO 141

EXISTING RAIL ROAD TRACKS

ABANDONED RAIL SIDING

S 33°10'06" W 16.84'

Rail Road Signal Light

DORSEY REALTY CORPORATION LIBER 355, FOLIO 311

MONTEVIDEO REALTY BUSINESS TRUST LIBER 8849, FOLIO 488

CSX TRANSPORTATION, INC. VARIABLE WIDTH RAILROAD RIGHT-OF-WAY SHEET 3 OF 13 VALUATION MAP V08488

EX. STREAM

N 545,000 E 1,378,150

MONTEVIDEO SOUTH BUSINESS TRUST PARCEL 10 LIBER 7315, FOLIO 686

UtD FaA SaB SaC FoA ZBA

LEGEND

- 250 — EXISTING INTER CONTOUR
- 250 — EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- EXISTING CURBLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROP. 15" CMP — PROPOSED STORM DRAIN
- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- STREAM CENTERLINE
- SOILS LINE
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- TPF — TREE PROTECTION FENCE
- FCE — FCE — FOREST CONSERVATION EASEMENT
- WL — WETLAND LIMITS
- LIMITS OF DISTURBANCE
- RETENTION FOREST CONSERVATION EASEMENT(NONE ON THIS SHEET)
- FOREST CLEARING AREA (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- 25% AND GREATER STEEP SLOPES
- 15% TO 25% STEEP SLOPES
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/17/12

Director, Department of Planning and Zoning — Date 11/4/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8990 · metro 301.881.0148 · fax 410.872.8993

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	400 (TG 550)		SEWER CODE	B01	

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 TESHANDA N. GIBBS STATE OF MARYLAND

TITLE:

FOREST CONSERVATION PLAN

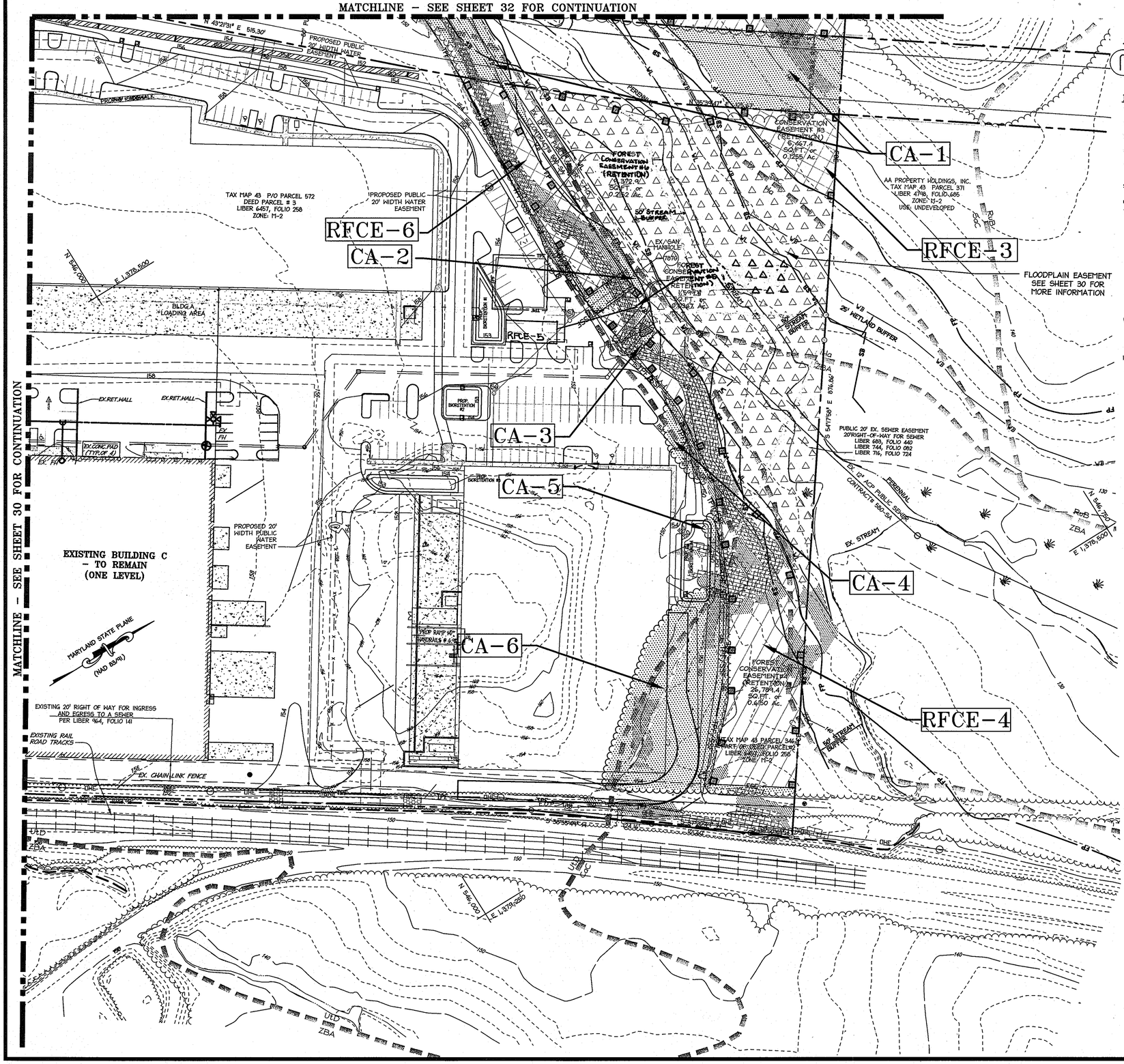
DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JULY 2012	30 OF 45	
CHECKED: ENJ	APPROVED: YLL		

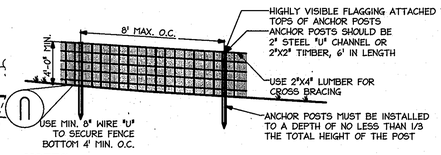
SDP-08-116

MDC-855

MATCHLINE – SEE SHEET 32 FOR CONTINUATION

MATCHLINE – SEE SHEET 30 FOR CONTINUATION





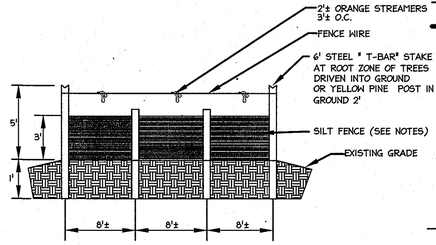
NOTES:

1. BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE, ONLY.
2. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
5. PROTECTION SIGNS ARE REQUIRED. 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

SOURCE: Adapted from Prince George's County, Maryland: Woodland Conservation Manual and Forest Conservation Manual, 1991.

Tree Protection Fence

Not To Scale



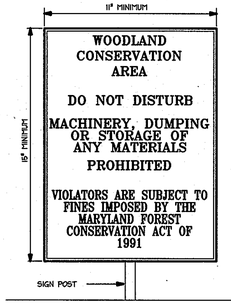
NOTES:

1. SILT FENCE TO BE INSTALLED PER SCS DETAIL.
2. WIRE, SNOW FENCE, ETC. FOR TREE PROTECTION ONLY.
3. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
4. LIMITS OF DISTURBANCE SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
5. AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS. (SEE ROOT PRUNING DETAIL)
6. DEVICE SHOULD BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION.
7. PROTECTION SIGNS MAY BE PLACED ON FENCE AS NOTED ON PLAN.
8. LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE.

COMBINATION SILT FENCE AND TREE PROTECTION DEVICE– TYPE II

Not To Scale

PERMANENT



NOTES

1. BOTTOM OF SIGNS TO BE 5'+/- ABOVE FINISHED GRADE OR ATTACHED TO THE PERMANENT TREE PROTECTION FENCE WITH SCREWS.
2. SIGN TO BE ATTACHED TO A 2" (MIN.) STEEL U-CHANNEL POST OR 2"x2" TIMBER AT LEAST 6' IN LENGTH. THE POST SHALL BE SUNK INTO THE GROUND TO A DEPTH OF AT LEAST 1/3 ITS LENGTH.
3. SIGNS TO PLACED APPROXIMATELY 50' APART. SITE CONDITIONS AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
4. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

Forest Retention Area Signage

Not To Scale

LEGEND

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- EXISTING CURBLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED STORM DRAIN (PROP. 15" CMP)
- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- STREAM CENTERLINE
- SOILS LINE
- SB — 50' STREAM BUFFER
- WB — 25' WETLAND BUFFER
- TPF — TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- RETENTION FOREST CONSERVATION EASEMENT(NONE ON THIS SHEET)
- FOREST CLEARING AREA (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- FCE — FCE — FOREST CONSERVATION EASEMENT
- WL — WETLAND LIMITS
- 25% AND GREATER STEEP SLOPES
- 15 TO 25% STEEP SLOPES
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 10/31/12
Chief, Development Engineering Division	Date 10/17/12
Director, Department of Planning and Zoning	Date 11/2/12

1	11/2012	PREDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
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410.872.8690 · metro 301.881.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 LESLIANDA N. GIBBS STATE OF MARYLAND

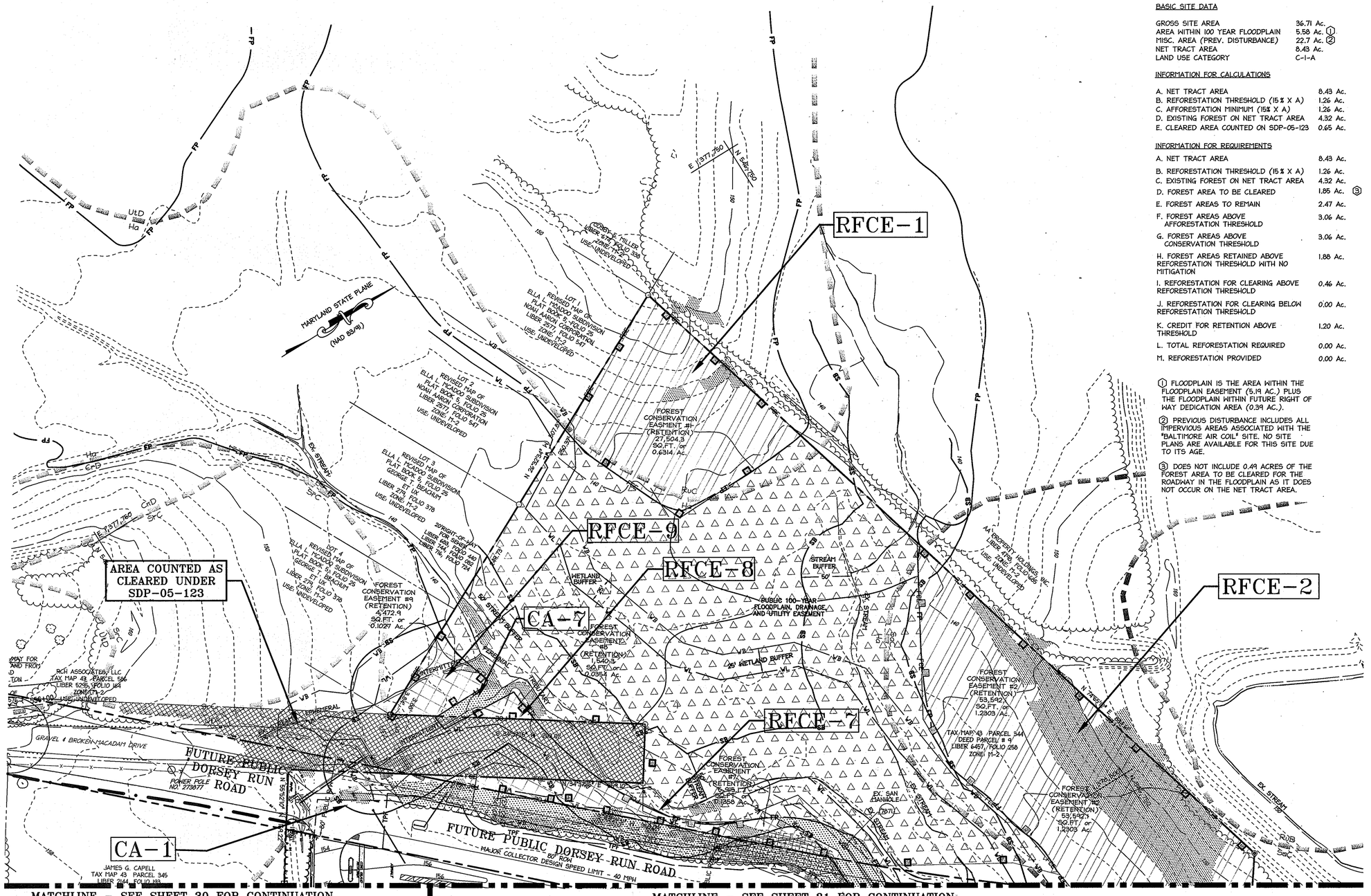
TITLE:

FOREST CONSERVATION PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JULY 2012	31 OF 45	
CHECKED: ENJ	APPROVED: YLL		

SDP-08-116

MDC-855



FOREST CONSERVATION CALCULATIONS

BASIC SITE DATA

GROSS SITE AREA	36.71 Ac.
AREA WITHIN 100 YEAR FLOODPLAIN	5.58 Ac. (1)
MISC. AREA (PREV. DISTURBANCE)	22.7 Ac. (2)
NET TRACT AREA	8.43 Ac.
LAND USE CATEGORY	C-1-A

INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	8.43 Ac.
B. REFORESTATION THRESHOLD (15% X A)	1.26 Ac.
C. AFFORESTATION MINIMUM (15% X A)	1.26 Ac.
D. EXISTING FOREST ON NET TRACT AREA	4.32 Ac.
E. CLEARED AREA COUNTED ON SDP-05-123	0.65 Ac.

INFORMATION FOR REQUIREMENTS

A. NET TRACT AREA	8.43 Ac.
B. REFORESTATION THRESHOLD (15% X A)	1.26 Ac.
C. EXISTING FOREST ON NET TRACT AREA	4.32 Ac.
D. FOREST AREA TO BE CLEARED	1.85 Ac. (3)
E. FOREST AREAS TO REMAIN	2.47 Ac.
F. FOREST AREAS ABOVE AFFORESTATION THRESHOLD	3.06 Ac.
G. FOREST AREAS ABOVE CONSERVATION THRESHOLD	3.06 Ac.
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD WITH NO MITIGATION	1.88 Ac.
I. REFORESTATION FOR CLEARING ABOVE REFORESTATION THRESHOLD	0.46 Ac.
J. REFORESTATION FOR CLEARING BELOW REFORESTATION THRESHOLD	0.00 Ac.
K. CREDIT FOR RETENTION ABOVE THRESHOLD	1.20 Ac.
L. TOTAL REFORESTATION REQUIRED	0.00 Ac.
M. REFORESTATION PROVIDED	0.00 Ac.

(1) FLOODPLAIN IS THE AREA WITHIN THE FLOODPLAIN EASEMENT (5.19 AC.) PLUS THE FLOODPLAIN WITHIN FUTURE RIGHT OF WAY DEDICATION AREA (0.39 AC.).

(2) PREVIOUS DISTURBANCE INCLUDES ALL IMPERVIOUS AREAS ASSOCIATED WITH THE "BALTIMORE AIR COIL" SITE. NO SITE PLANS ARE AVAILABLE FOR THIS SITE DUE TO ITS AGE.

(3) DOES NOT INCLUDE 0.49 ACRES OF THE FOREST AREA TO BE CLEARED FOR THE ROADWAY IN THE FLOODPLAIN AS IT DOES NOT OCCUR ON THE NET TRACT AREA.

LEGEND

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
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- EXISTING TREELINE
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- WL — WETLAND LIMITS
- 25% AND GREATER STEEP SLOPES
- 15 TO 25% STEEP SLOPES
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)

SOIL ANALYSIS

SYMBOL	SOIL	K FACTOR	ERODIBLE	HYDRIC	COUNTY	TAXONOMIC CLASS
CaC	CHILLUM	0.37	YES	NO	AA	TYPIC HAPLUDULTS
Ha	HATBORO-CODORUS	0.37	YES	YES	HOW	FLUVAQUENTIC ENDOAQUEP
RuC	RUSSETT AND BELTSVILLE	0.24	NO	NO	HOW	AQUIC HAPLUDULTS
SaC	SASSAFRAS LOAM	0.24	NO	NO	HOW	TYPIC HAPLUDULTS
Ufa	URBAN LAND-FALLSINGTON COMPLEX	0.02	NO	YES	HOW	-
UtD	URBAN LAND-UDORTHENTS COMPLEX	0.28	NO	NO	HOW	-

OPTION 5: FOREST CONSERVATION OBLIGATION ADDRESSED ON-SITE		FOREST CONSERVATION DATA SUMMARY			
FILE NUMBER: SDP-08-116		PROJECT/SUBDIVISION NAME: NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER			
LAND USE MANUFACTURING/ WAREHOUSE	WATERSHED DEEP RUN	ON-SITE MD GRID N 76'46'30"	ON-SITE MD GRID E 34'09'45"	NET TRACT AREA 8.43 AC	TOTAL SITE DISTURBANCE (AC) 12.15 AC
PRIORITY DIST. WITHIN TOTAL DISTURBED AREA 22.70 AC	% PRIORITY DISTURBANCE 0%	EX. FOREST (AC) 4.32 AC	ON-SITE RETENTION (AC) 2.47 AC	OFF-SITE RETENTION (AC) N/A	CLEARED FOREST (AC) 1.85 AC
ON-SITE REFORESTATION (AC) 0.46 AC	OFF-SITE REFOREST. (AC) N/A	ON-SITE AFFORESTATION (AC) N/A	OFF-SITE AFFORESTATION (AC) N/A	OFF-SITE MD GRID N N/A	ON-SITE MD GRID E 34'09'45"
TOTAL AC. IN EASEMENT 3.13 AC	TOTAL AC. IN PRIOR. AREA WITHIN TOTAL EASEMENT N/A	% PRIORITY AREA WITHIN TOTAL EASEMENT N/A	AMOUNT OF SURETY POSTED N/A	AMOUNT OF FEE-IN-LIEU N/A	TOTAL AC. IN EASEMENT 3.13 AC	OFF-SITE SUBWATERSHED NUMBER N/A

10.4.2012
DATE

LANDSCAPE ARCHITECT 3449 VERNANDA N GIBBS STATE OF MARYLAND

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 10/31/12
Chief, Development Engineering Division	Date 10/7/12
Director, Department of Planning and Zoning	Date 11/5/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN · INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL# 572,346,97,344,441
PLAT# L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

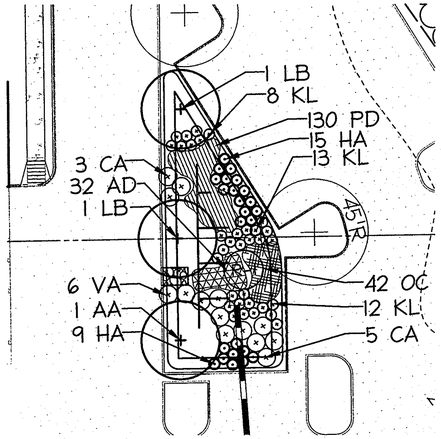
TITLE:

FOREST CONSERVATION PLAN

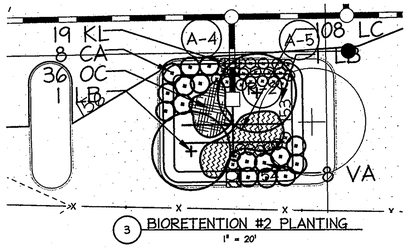
DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	32 OF 45
CHECKED: ENJ	APPROVED: YLL	

SDP-08-116

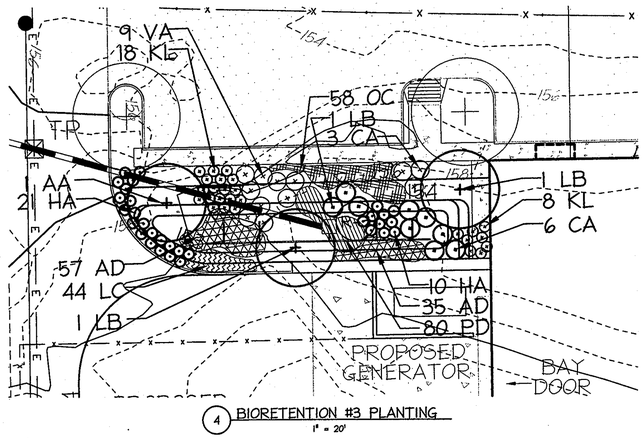
MDC-855



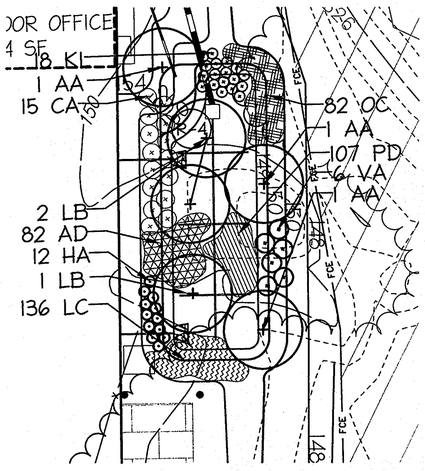
1 BIORETENTION #1 PLANTING
1" = 20'



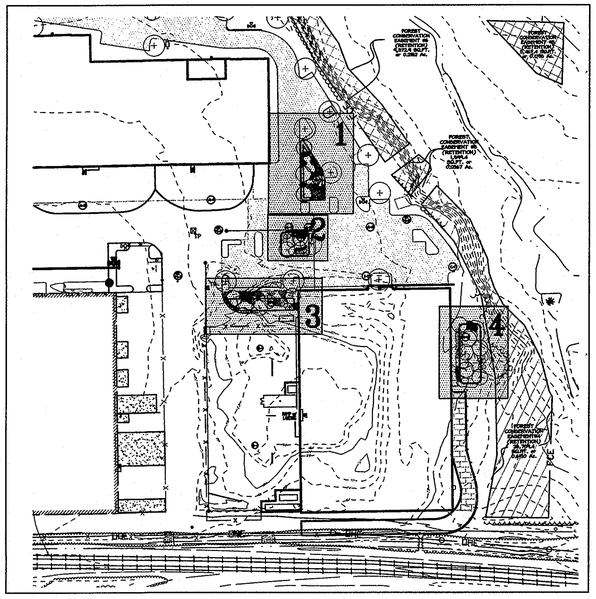
3 BIORETENTION #2 PLANTING
1" = 20'



4 BIORETENTION #3 PLANTING
1" = 20'

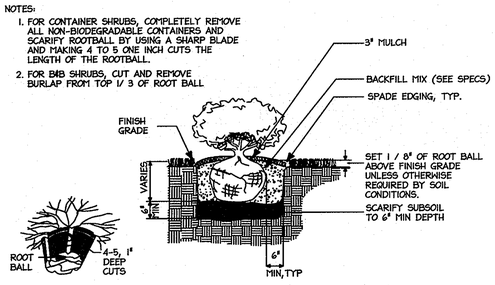


2 BIORETENTION #4 PLANTING
1" = 20'

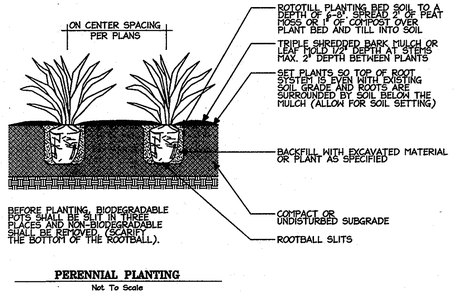


5 BIORETENTION AREAS
1" = 100'

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/ 3 OF ROOT BALL



1 SHRUB BED PLANTING DETAIL
NOT TO SCALE



PERENNIAL PLANTING
Not To Scale

BIORETENTION PLANTING PLANT LIST:

SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	NOTES
HA	67	HYDRANGEA ARBORESCEINS	ANNABELLE HYDRANGEA	3 GAL	3' O.C.
LB	10	LINDERA BENZOIN	SPLICEBUSH	3 GAL	6' O.C.
KL	96	KALMIA LATIFOLIA	MOUNTAIN LAUREL	3 GAL	3' O.C.
OC	218	OSMUNDA CINNAMOMEA	CINNAMON FERN	1 GAL	2' O.C.
AD	206	ASTER DIVARICATUS	WOOD'S ASTER	1 GAL	2' O.C.
AA	6	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1½" - 2" caliper	3' O.C.
LC	288	LOBELIA CARIONALIA	CARDINAL FLOWER	1 GAL	18' O.C.
CA	40	CLETHRA ALNIFOLIA	CLETHRA ALNIFOLIA 'RUBY SPICE' CLETHRA	3 GAL	6' O.C.
VA	29	VIBURNUM ACERFOLIUM	MAPLELEAF VIBURNUM	3 GAL	8' O.C.
PD	317	PHLOX DIVARICATA	WOODLAND PHLOX	QT.	18' O.C.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date: 10/31/12

Chief, Development Engineering Division — Date: 10/31/12

Director, Department of Planning and Zoning — Date: 11/1/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
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PERMIT INFORMATION CHART

SUBDIVISION NAME		SECTION/AREA			LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		43			572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	400 (TG 550)	SEWER CODE	B01		

Miss Utility — Service Protection Center — Know What's Below — Before You Dig Call — One Call Systems International — CALL TOLL FREE 1-800-257-7777

10.4.2012
DATE

LANDSCAPE ARCHITECT 3444 LESHANDA N. GIBBS STATE OF MARYLAND

TITLE:
LANDSCAPE PLAN FOR BIORETENTION AREAS

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.006.07	
DRAWN: DAM	DATE: SEPT 06 2012	33 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-116

VARIABLE WIDTH PUBLIC WATER AND UTILITY EASEMENT

LINE	BEARING	DISTANCE
U1	N 33°11'45" E	42.64'
U2	N 56°33'02" W	11.04'
U3	N 33°26'58" E	20.00'
U4	S 56°33'02" E	10.95'
U5	N 33°11'45" E	96.91'
U6	N 44°26'45" E	293.52'
U7	N 33°11'45" E	30.39'
U8	N 56°48'15" W	9.83'
U9	N 33°11'45" E	20.00'
U10	S 56°48'15" E	9.83'
U11	N 33°11'45" E	27.55'
U12	N 78°11'45" E	28.28'
U13	S 56°48'15" E	229.80'
U14	N 33°11'45" E	85.61'
U15	N 56°48'15" W	10.00'
U16	N 33°11'45" E	20.00'
U17	S 56°48'15" E	10.00'
U18	N 33°11'45" E	11.28'
U19	S 56°47'53" E	20.01'
U20	S 33°12'07" W	248.47'
U21	S 56°56'20" E	388.26'
U22	N 33°03'40" E	55.02'
U23	S 56°56'20" E	65.34'
U24	S 33°51'11" W	20.00'
U25	N 56°56'20" W	45.06'
U26	S 33°03'40" W	55.02'
U27	N 56°56'20" W	386.79'
U28	S 33°17'00" W	76.05'
U29	S 56°42'50" E	24.23'
U30	S 33°17'10" W	20.00'
U31	N 56°42'50" W	24.23'
U32	S 32°59'49" W	35.18'
U33	S 31°12'37" W	211.98'
U34	S 33°17'10" W	177.06'
U35	S 11°42'50" E	66.07'
U36	S 33°11'45" W	114.78'
U37	S 03°11'45" W	89.68'
U38	S 33°11'45" W	102.40'
U39	S 78°11'45" W	36.47'
U40	N 56°48'18" W	9.14'
U41	S 33°11'45" W	25.00'
U42	N 56°48'15" W	25.00'
U43	S 33°11'45" W	379.16'
U44	N 56°38'55" W	20.00'
U45	N 33°11'45" E	404.10'
U46	N 78°11'45" E	28.28'
U47	S 56°48'18" E	25.86'
U48	N 78°11'45" E	19.90'
U49	N 33°11'45" E	88.76'
U50	N 03°11'45" E	89.68'
U51	N 33°11'45" E	56.65'
U52	N 56°48'15" W	31.65'
U53	N 33°17'10" E	20.00'
U54	S 56°48'15" E	31.62'
U55	N 33°11'45" E	35.23'
U56	N 11°42'50" W	66.09'
U57	N 33°17'10" E	114.63'
U58	N 56°48'15" W	41.82'
U59	S 33°11'13" W	19.00'
U60	N 56°48'15" W	20.00'
U61	N 33°11'13" E	19.00'
U62	N 56°48'15" W	253.93'
U63	N 11°56'20" W	28.23'
U64	N 33°11'45" E	149.27'
U65	N 44°26'45" E	293.52'
U66	N 33°11'45" E	71.62'
U67	N 78°11'45" E	11.72'
U68	S 56°48'15" E	221.23'
U69	S 33°03'40" W	131.62'
U70	S 56°56'20" E	21.48'
U71	S 33°17'10" W	85.97'
U72	S 33°03'40" W	45.25'
U73	S 31°12'48" W	212.27'
U74	S 33°17'10" W	50.33'
U75	N 56°48'26" W	307.53'
U76	N 11°56'20" W	11.66'

WETLAND BUFFER DELIENATION

LINE	BEARING	DISTANCE
WB1	N 66°53'24" E	120.6761'
WB2	N 88°26'59" E	58.1350'
WB3	N 60°41'30" W	41.8124'
WB4	N 29°40'17" W	42.9818'
WB5	N 79°14'35" E	34.5866'
WB6	N 78°22'33" W	42.4134'
WB7	S 71°46'19" W	117.5947'
WB8	N 49°03'34" E	41.1143'
WB9	S 22°11'52" W	73.6906'
WB10	N 52°05'25" E	77.1109'
WB11	S 82°59'28" W	142.5066'
WB12	N 73°27'04" E	69.9142'
WB13	S 87°54'40" W	109.7075'
WB14	S 87°55'51" E	91.7859'
WB15	S 82°32'22" E	102.2065'
WB16	N 62°36'11" E	73.4951'
WB17	N 89°13'54" E	57.1275'
WB18	N 62°13'05" E	76.1404'
WB19	S 72°06'49" W	47.4884'
WB20	S 84°13'47" W	38.9945'
WB21	N 68°28'37" E	93.3764'
WB22	S 51°28'21" W	53.3612'
WB23	S 24°13'13" W	68.1423'
WB24	N 89°17'39" W	29.6858'
WB25	S 84°31'59" E	67.0277'
WB26	N 79°22'28" E	50.6842'
WB27	N 87°40'58" E	32.0878'
WB28	S 68°21'11" E	81.0784'
WB29	N 63°51'32" E	31.6440'
WB30	N 56°40'59" W	34.3760'
WB31	N 90°00'00" W	38.2683'
WB32	N 79°29'20" W	35.1241'
WB33	N 81°05'12" E	37.1104'
WB34	N 88°15'50" E	167.9996'
WB35	S 82°20'04" E	101.8508'
WB36	N 86°53'09" E	41.5882'
WB37	N 76°08'40" E	71.2267'
WB38	N 21°42'37" E	16.3518'
WB39	S 88°26'08" E	37.7203'
WB40	N 24°32'41" E	66.7748'
WB41	N 30°50'59" E	51.5859'
WB42	N 41°01'14" E	156.8024'
WB43	N 24°03'40" E	21.8811'
WB44	N 53°52'49" E	13.5932'
WB45	N 90°00'00" W	17.9791'
WB46	S 48°56'19" E	35.4259'
WB47	N 09°01'40" E	18.8941'
WB48	S 41°14'41" W	30.6900'
WB49	S 62°00'16" W	37.0616'
WB50	N 24°50'02" E	35.8563'
WB51	N 11°47'13" E	46.0866'
WB52	N 09°25'54" W	31.5883'
WB53	S 30°58'41" W	23.8177'
WB54	S 73°33'02" W	16.8188'
WB55	S 84°44'10" E	17.7136'
WB56	N 29°49'29" E	33.0487'
WB57	S 74°54'14" W	18.2118'
WB58	N 66°08'35" E	29.2926'
WB59	N 54°16'31" W	22.8252'
WB60	N 09°20'57" W	17.7560'
WB61	S 07°29'37" W	30.4710'
WB62	S 38°33'52" W	27.4199'
WB63	S 00°00'00" E	7.9313'
WB64	N 44°26'57" W	21.6195'
WB65	S 08°03'12" E	80.1499'

RETENTION FOREST CONSERVATION EASEMENT #1

LINE	BEARING	DISTANCE
FP4B	N 26°32'34" W	160.66'
FP4A	N 74°55'12" E	210.30'
FP4	S 06°34'15" E	34.02'
FP3	S 01°07'18" E	113.98'
FP2	S 66°40'09" W	116.42'
FP1	N 81°27'44" E	30.83'
AREA = 27,504 SQ.FT. OR 0.6314 AC.		

RETENTION FOREST CONSERVATION EASEMENT #2

LINE	BEARING	DISTANCE
FP8C	N 74°55'12" E	464.19'
FP8B	S 54°17'58" E	49.88'
FP8A	S 35°39'47" W	125.72'
C1	CURVE TABLE	
FP8	S 83°11'34" W	70.10'
FP7	S 73°53'46" W	104.74'
FP6	N 88°13'31" W	57.38'
FP5	N 59°50'32" W	179.69'
AREA = 53,589 SQ.FT. OR 1.2302 AC.		

RETENTION FOREST CONSERVATION EASEMENT #3

LINE	BEARING	DISTANCE
FP24C	N 35°39'47" E	107.45'
FP24B	S 54°17'58" E	87.24'
FP24	S 58°00'47" W	39.15'
FP23	S 81°07'47" W	101.50'
AREA = 5,467 SQ.FT. OR 0.1255 AC.		

RETENTION FOREST CONSERVATION EASEMENT #4

LINE	BEARING	DISTANCE
L8	N 79°23'17" E	66.42'
FP32	S 79°53'07" E	60.42'
FP31	S 62°27'21" E	20.45'
FP30	S 75°31'37" E	21.10'
FP29	S 83°33'27" E	26.71'
FP28	N 78°57'41" E	42.54'
FP27	S 82°06'07" E	52.59'
FP26	S 70°04'23" E	46.84'
FP25	S 86°08'03" E	8.61'
FP24D	S 54°17'58" E	169.78'
FP24E	S 34°34'05" W	87.67'
L9	N 45°46'22" W	88.67'
L10	N 57°23'46" W	108.65'
L11	N 65°42'42" W	117.36'
L12	N 82°37'32" W	85.18'
L13	S 82°19'05" W	68.64'
L14	N 16°59'01" W	34.07'
AREA = 26,788 SQ.FT. OR 0.6150 AC.		

RETENTION FOREST CONSERVATION EASEMENT #5

LINE	BEARING	DISTANCE
L15	N 74°49'06" E	20.38'
L16	S 70°47'01" E	8.56'
L17	S 16°59'01" E	46.05'
L18	S 81°28'11" W	39.08'
L19	N 03°05'45" W	47.39'
AREA = 1,599 SQ.FT. OR 0.0367 AC.		

RETENTION FOREST CONSERVATION EASEMENT #6

LINE	BEARING	DISTANCE
L20	N 89°10'39" E	58.75'
L21	S 76°18'45" E	38.06'
L22	N 81°10'32" E	68.51'
L23	N 89°10'39" E	67.91'
L24	S 03°05'45" E	42.08'
L25	S 89°29'40" W	173.87'
L26	N 83°52'30" W	87.26'
C2	CURVE TABLE	
AREA = 9,372 SQ.FT. OR 0.2152 AC.		

RETENTION FOREST CONSERVATION EASEMENT #7

LINE	BEARING	DISTANCE
L27	N 34°10'46" E	189.52'
FP14	N 58°49'57" E	79.24'
FP13	N 41°50'53" E	46.71'
FP12	N 25°10'32" E	60.45'
L28	N 89°52'51" E	72.12'
L29	N 89°10'39" E	11.59'
C4	CURVE TABLE	
L29A	S 43°21'31" W	402.46'
AREA =7,258 SQ.FT. OR 0.1666 AC.		

RETENTION FOREST CONSERVATION EASEMENT #8

LINE	BEARING	DISTANCE
L1	S 34°10'46" W	69.48'
L2	N 03°41'12" E	54.05'
FP18	N 84°19'21" E	35.73'
AREA = 953 SQ.FT. OR 0.0219 AC.		

RETENTION FOREST CONSERVATION EASEMENT #9

LINE	BEARING	DISTANCE
L3	S 34°10'46" W	48.08'
L4	N 26°32'34" W	100.03'
FP21	N 89°48'45" E	27.62'
FP20	N 73°04'36" E	39.39'
L5	S 43°26'51" E	8.56'
L6	S 00°32'50" E	55.05'
AREA = 4,139 SQ.FT. OR 0.095 AC.		

FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT #2

LINE	BEARING	DISTANCE	#ELEVATION
FP22	N 35°39'47" E	18.22'	140.65'
FP23	N 81°07'47" E	101.50'	136.26'
FP24	N 58°00'47" E	39.15'	135.76'
FP24A	S 54°17'58" E	438.23'	X
FP25	N 86°08'03" W	8.61'	136.26'
FP26	N 70°04'23" W	46.84'	136.80'
FP27	N 82°06'07" W	52.59'	134.37'
FP28	S 78°57'41" W	42.54'	134.96'
FP29	N 83°33'27" W	26.71'	135.04'
FP30	N 75°31'37" W	21.10'	X
FP31	N 62°27'21" W	20.45'	133.50'
FP32	N 79°53'07" W	60.42'	133.51'
FP33	S 79°23'17" W	70.36'	133.96'
FP34	N 70°47'01" W	32.42'	136.42'
FP35	N 87°31'11" W	77.94'	134.78'
FP36	S 62°09'42" W	29.27'	134.91'
FP37	S 81°10'32" W	68.51'	135.56'
FP38	N 76°18'45" W	87.49'	135.32'
FPC2	CURVE TABLE		
AREA = 75,605 SQ.FT. OR 1.7357 ACRES			

FLOODPLAIN, DRAINAGE AND UTILITY EASEMENT #1

LINE	BEARING	DISTANCE	#ELEVATION
FP1	N 81°27'44" E	30.83'	141.04'
FP2	N 66°40'09" E	116.42'	140.83'
FP3	N 01°07'18" W	113.98'	139.65'
FP4	N 06°34'15" W	34.02'	139.74'
FP4C	N 74°55'12" E	160.11'	X
FP5	S 59°50'32" E	179.69'	136.91'
FP6	S 88°13'31" E	57.38'	136.69'
FP7	N 73°53'46" E	104.74'	136.70'
FP8	N 83°11'34" E	70.10'	136.24'
FPC1	CURVE TABLE		X
FP9	N 88°06'26" W	29.28'	135.54'
FP10	S 55°56'01" W	53.63'	134.91'
FP11	S 35°26'15" W	40.98'	136.84'
FP12	S 25°10'32" W	60.45'	137.40'
FP13	S 41°50'53" W	46.71'	138.63'
FP14	S 58°49'57" W	79.24'	138.30'
FP15	N 34°10'46" E	44.33'	138.53'
FP16	N 55°49'14" W	60.00'	137.33'
FP17	S 34°10'46" W	110.84'	137.03'
FP18	S 84°19'21" W	35.73'	139.09'
FP19	S 57°13'03" W	31.42'	140.14'
FP20	S 73°04'36" W	39.39'	139.90'
FP21	S 89°48'45" W	27.62'	139.81'
FP22	N 26°32'34" W	239.65'	X
AREA = 150,419 SQ.FT. OR 3.4531 ACRES			

LIMITS OF WETLANDS

LINE	BEARING	DISTANCE
WL1	S 85°55'21" E	5.98'
WL2	S 29°40'17" E	47.48'
WL3	N 79°14'35" E	52.45'
WL4	S 75°01'30" E	39.24'
WL5	N 70°29'48" E	68.95'
WL6	N 73°10'58" E	60.60'
WL7	N 49°03'34" E	52.43'
WL8	N 22°11'52" E	79.66'
WL9	N 51°23'44" E	51.17'
WL10	N 84°46'57" E	83.70'
WL11	N 80°30'38" E	62.53'
WL12	N 72°18'41" E	63.47'
WL13	S 88°29'21" E	54.51'
WL14	N 84°23'57" E	55.65'
WL15	S 88°07'12" E	51.90'
WL38	N 82°18'46" W	102.08'
WL39	S 86°53'09" W	46.21'
WL40	S 76°04'49" W	85.87'
WL41	S 24°51'52" W	28.39'
WL42	S 09°10'59" W	35.34'
WL43	S 88°26'08" E	28.53'
WL44	S 24°32'41" W	27.64'
WL45	S 30°50'59" W	48.80'
WL46	S 37°19'25" W	14.79'
WL47	S 43°00'17" W	66.38'
WL48	S 37°27'17" W	32.55'
WL49	S 41°08'06" W	45.13'
WL50	S 37°02'56" W	24.08'
WL51	S 18°57'04" W	10.50'
WL52	N 49°17'28" W	11.27'
WL53	N 42°36'23" E	47.38'
WL54	N 23°38'30" E	17.58'
WL55	N 41°22'28" W	4.42'
WL56	N 79°03'25" W	11.15'
WL57	N 34°10'46" E	88.82'
WL58	N 55°49'14" W	60.00'
WL59	S 34°10'46" W	257.82'
WL60	N 26°32'34" W	300.42'

LIMITS OF WETLANDS

LINE	BEARING	DISTANCE
WL15	S 88°07'12" E	35.59'
WL16	S 79°08'28" E	65.19'
WL17	S 88°01'13" E	47.75'
WL18	N 62°36'11" E	80.05'
WL19	S 87°24'35" E	51.40'
WL20	N 61°53'00" E	2.74'
WL21	S 54°17'58" E	274.28'
WL22	N 89°39'05" W	11.96'
WL23	N 82°21'16" W	37.74'
WL24	N 87°24'22" W	31.99'
WL25	S 83°40'58" W	27.79'
WL26	S 75°30'13" W	25.88'
WL27	S 87°40'58" W	24.55'
WL28	N 70°15'42" W	26.31'
WL29	N 67°04'47" W	30.37'
WL30	N 11°39'12" W	28.15'
WL31	S 55°25'54" W	33.62'
WL32	S 63°51'32" W	21.97'
WL33	N 56°40'59" W	27.47'
WL34	N 89°31'32" W	43.55'
WL35	N 79°59'53" W	37.15'
WL36	S 81°05'12" W	39.57'
WL37	S 88°14'58" W	164.48'

LEGEND

WL / WB16	WETLANDS / WETLAND BUFFER (WB)
U16	VARIABLE WIDTH PUBLIC SEWER, WATER AND UTILITY EASEMENT
L16	RETENTION FOREST CONSERVATION EASEMENT
FP35	FLOODPLAIN, UTILITY AND DRAINAGE EASEMENT
135.04'	FLOODPLAIN ELEVATION

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

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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.

SIGNATURE OF ENGINEER 10.6.12 — DATE 9.6.12

WILLIAM R ZINK , P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

DATE 9.6.12 10.6.12

STATE OF MARYLAND — WILLIAM RAYMOND ZINK — No. 20587 REGISTERED — PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/7/12
Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

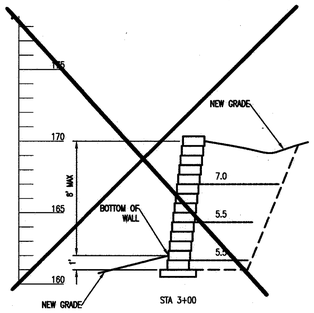
TITLE:

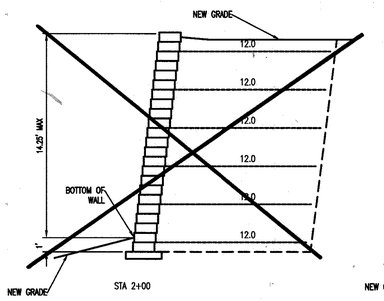
EASEMENTS AND ENVIRONMENTAL FEATURES PLAN

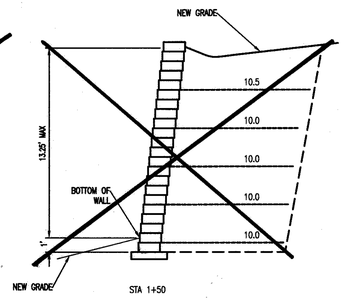
DESIGN: NM	SCALE: 1"=60'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	34 OF 45
CHECKED: ENJ	APPROVED: WRZ	

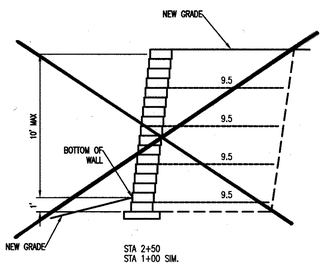
SDP-08-116

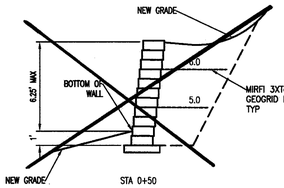
MDC-855

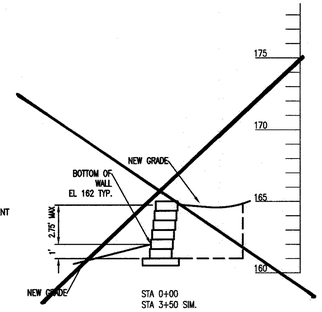






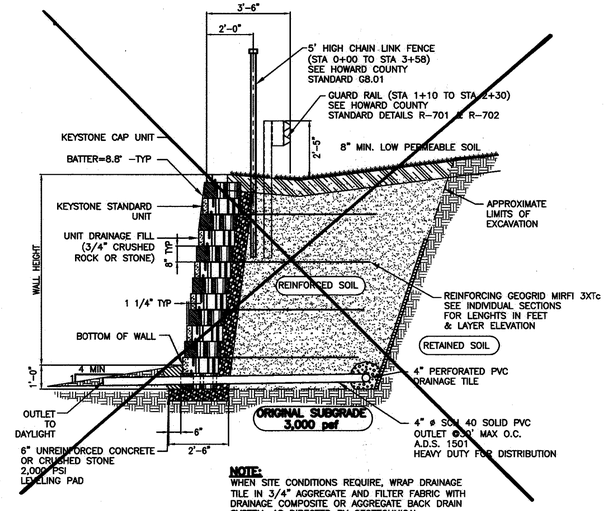






RETAINING WALL SECTIONS

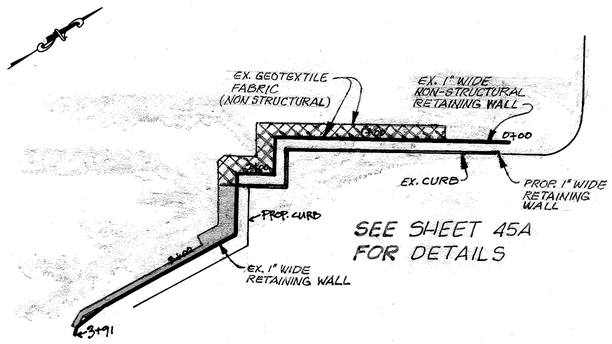
SCALE: 1"=5'



NOTE:
WHEN SITE CONDITIONS REQUIRE, WRAP DRAINAGE TILE IN 3/4" AGGREGATE AND FILTER FABRIC WITH DRAINAGE COMPOSITE OR AGGREGATE BACK DRAIN SYSTEM, AS DIRECTED BY GEOTECHNICAL ENGINEER.

TYPICAL SECTION-REINFORCED SEGMENTAL RETAINING WALL

SCALE: 1"=3'

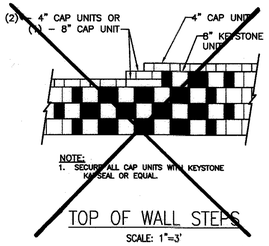


RETAINING WALL PLAN

SCALE: 1"=50'

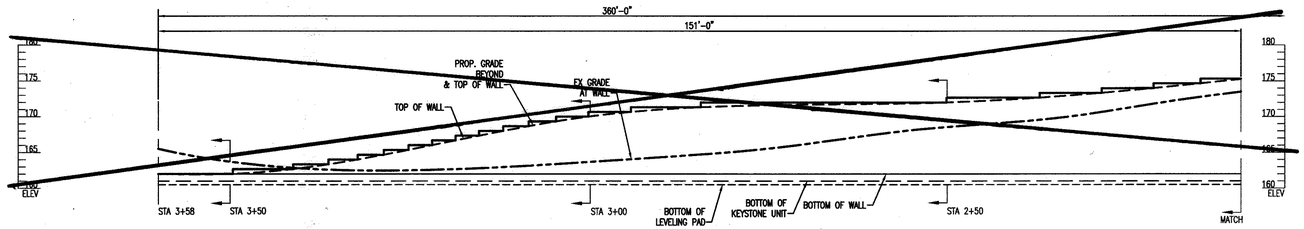
REFERENCE DRAWING:

CHRISTOPHER CONSULTANTS
DORSEY RUN INDUSTRIAL CENTER
GRADING AND DRAINAGE PLAN, MAY 2008



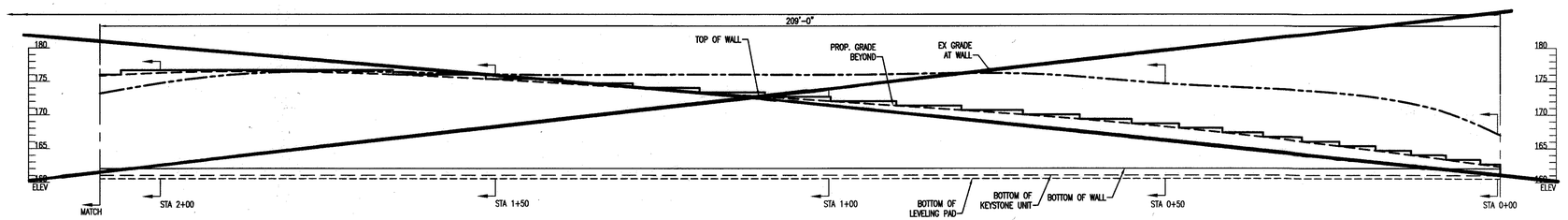
TOP OF WALL STEPS

SCALE: 1"=3'



RETAINING WALL ELEVATION STA 2+00 TO STA 3+58

SCALE: 1"=10'



RETAINING WALL ELEVATION STA 0+00 TO STA 2+00

SCALE: 1"=10'

GENERAL NOTES

GENERAL

1. ALL NOTES ON THE DRAWING SHALL BE ASSUMED TYPICAL UNLESS OTHERWISE SHOWN OR NOTED.
2. A GEOTECHNICAL REPORT OF SUBSURFACE EXPLORATION AND ENGINEERING ANALYSIS HAS BEEN PREPARED AND IS AVAILABLE FOR REVIEW.
3. RETAINING WALLS SHALL BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, III ACEL OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.
4. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN, TO BE A MINIMUM OF 3,000 psf. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
5. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH EIGHT INCH LIFT MUST BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTO DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.

COMPACTED FILL AND BACKFILLING

1. THE FILL MATERIAL SHALL BE CLEAN, COARSE-GRAINED, WELL GRADED, SAND WITH LITTLE OR NO FINES, IN ACCORDANCE WITH ASTM D2487, CLASSIFICATION SW. ON SITE MATERIAL MAY BE USED WITH THE CONCURRENCE OF THE GEOTECHNICAL ENGINEER.
2. THE FILL MATERIAL SHALL BE PLACED IN LAYERS, WHICH, BEFORE COMPACTION, SHALL NOT EXCEED 8". EACH LAYER SHALL BE SPREAD UNIFORMLY AND EVENLY AND SHALL BE THOROUGHLY MIXED DURING THE SPREAD TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER.
3. EACH LAYER OF THE FILL SHALL BE UNIFORMLY COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND TEST COMPACTED FILL.
4. WHERE BACKFILL OCCURS ON BOTH SIDES OF WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY.

SEGMENTAL RETAINING WALL SYSTEM

1. THE SEGMENTAL RETAINING WALL DESIGN SHOWN IS BASED ON KEYSTONE WALL SYSTEM.
2. THE SEGMENTAL RETAINING WALL SYSTEM, IF OTHER THAN KEYSTONE, SHALL BE DESIGNED IN ITS ENTIRETY IN ACCORDANCE WITH THE NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. DESIGN ASSUMPTIONS, PRODUCT MANUAL, CALCULATIONS AND FIELD DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
3. SECTIONS AND COMPONENTS SHOWN ON DRAWING AND NOTED HEREIN ARE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE THE MINIMUM TO BE USED. GEOGRID LAYERS SHALL NOT EXCEED 2 FEET.
4. BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNITS.
5. SRW CAPS ARE TO BE ADHERED TO UNDERLYING UNITS WITH A FLEXIBLE HIGH-STRENGTH CONCRETE ADHESIVE.
6. GUARD RAIL W. BEAM. GENERAL NOTES AND DETAILS. REF. HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. R-7.01 AND R-7.02 APPLY.

48 Hours
Before You Dig
Call
"MISS UTILITY"
Service Protection Center
MEMBER
ONE CALL SYSTEMS INTERNATIONAL
CALL TOLL FREE
1-800-257-7777

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. 12009, Expiration Date 8-11-2013

STATE OF MARYLAND
MICHAEL JULIAN WALKLEY
12009
REGISTERED PROFESSIONAL ENGINEER

MICHAEL J. WALKLEY, P.A.
Consulting Engineers
1700 Union Avenue
Baltimore, Maryland 21211
Telephone (410) 889-7700
Fax (410) 889-7786
PMS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12
Chief, Development Engineering Division — Date 10/7/12
Director, Department of Planning and Zoning — Date 11/6/12

4	4/13	RETAINING WALL + W/L STUB
1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8990 · metro 301.881.0149 · fax 410.872.8993

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL# 572,346,97,344,441
PLAT# L.6457, F.258	GRID# 16	ZONING M-2	TAX MAP# 43	ELECT DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)			SEWER CODE B01		

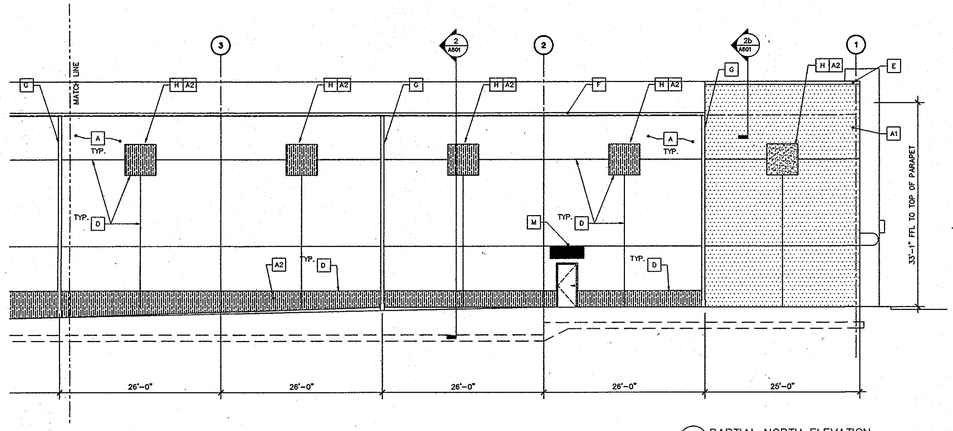
DATE

TITLE:
SEGMENTAL RETAINING WALL SYSTEM

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.006.07
DRAWN: DAM	DATE: JULY 2012	35 OF 45
CHECKED: ENJ	APPROVED: YLL	

MDC-855

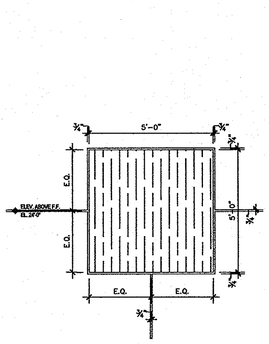
SDP-08-116



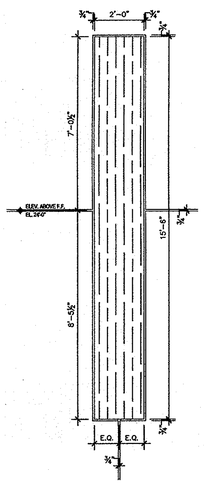
2 PARTIAL NORTH ELEVATION
SCALE: 1/8" = 1'-0"

EXT. FINISH MATERIAL KEY:

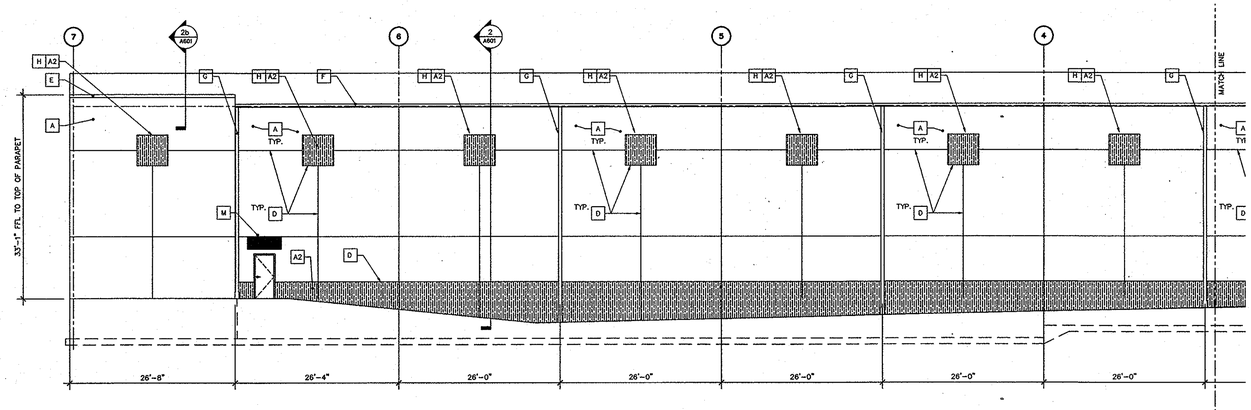
	A	AREA OF CONCRETE TILT-UP PANEL WITH SMOOTH FINISH ELASTOMERIC PAINT, COLOR TBD BY ARCHITECT
	A1	SAME AS "A" BUT, RENDERED IN ACCENT COLOR ELASTOMERIC PAINT, COLOR TBD BY ARCHITECT
	A2	SAME AS "A" BUT, CORRUGATED FORM TO CREATE TEXTURED FINISH W/ ELASTOMERIC PAINT, COLOR TO MATCH "A"
	B	THERMALLY BROKEN ALUM. WINDOW FRAMING SYSTEM, WITH 1" INSUL. GLAZING. FRAMING TO BE MED. BRONZE ANODIZED, GLAZING TO BE BRONZE TINTED WITH A .47 U VALUE AND .50 SHGC.
	C	THERMALLY BROKEN ALUM. CURTAINWALL ENTRANCE SYSTEM, FRAME AND GLAZING TINT TO MATCH "B". DOORS TO BE A" SINGLE PANE GLAZING TO MATCH "B".
	C1	(SAME AS "B" EXCEPT SPANDREL GLASS)
	D	3/4"x 3/4" 'V' GROOVE
	E	ALUMINUM COPING, COLOR TO BE SELECTED BY ARCHITECT
	F	.040 GAGE ALUMINUM BOX GUTTER, COLOR TO MATCH "E"
	G	RAIN WATER DOWNSPOUT TO GRADE, COLOR TO MATCH "E"
	H	KNOCKOUT PANEL (KOP)
D.L.		30,000 LB DOCK LEVELER BY 'SERCO'
	J	DOCK BUMPER, BY 'SERCO'
	K	DOCK SEALS, TBD BY OWNER
	M	PRE-MANUFACTURED METAL CANOPY TO MATCH EXISTING BUILDINGS
	N	METAL PANEL FASCIA AND SOFFIT - ROUT AND RETURN PANELS
T		TEMPERED GLASS UNIT WHERE INDICATED



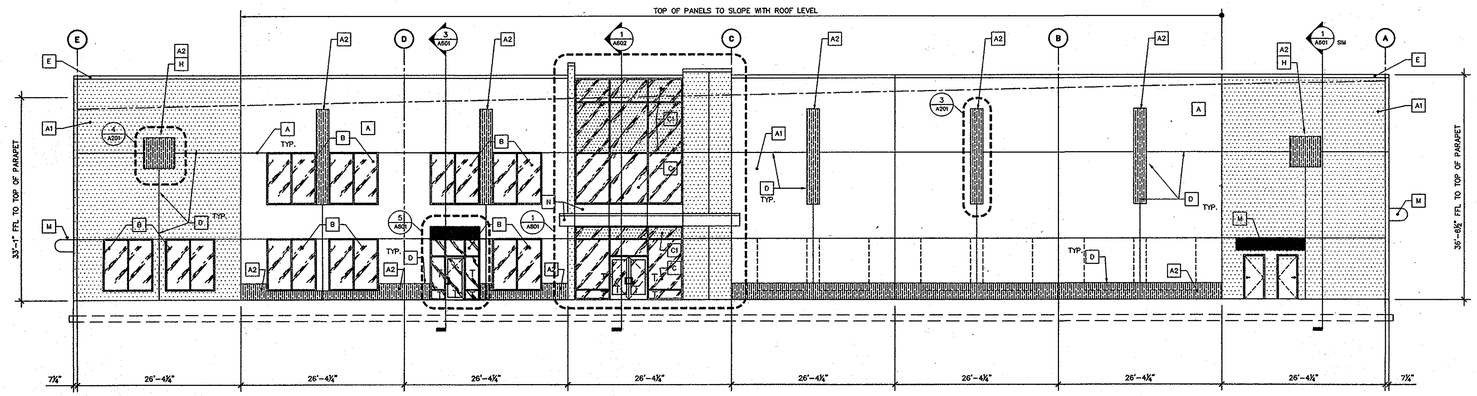
4 PANEL DETIAL ELEVATION 2
SCALE: 1/2" = 1'-0"



3 PANEL DETAIL ELEVATION 1
SCALE: 1/2" = 1'-0"



2a PARTIAL NORTH ELEVATION
SCALE: 1/8" = 1'-0"



1 WEST ELEVATION
SCALE: 1/8" = 1'-0"

Dorsey Commerce Center
Building 4
7591 Montevideo Drive
Jessup, Maryland 20794
CLIENT: Exeter Property Group

REV	DATE	DESCRIPTION

DESIGN DELIVERABLE: ISSUED FOR PERMIT
ISSUE DATE: 06/29/2012

PROJECT NUMBER: 12-102
DRAWN BY: GJS
CHECKED BY: GJS

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SHEET TITLE:
BUILDING 4 ELEVATIONS

SHEET NUMBER:
A201

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Designing Environments that Work
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Historic Ellicott City, MD 21043
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F: 410.465.6644
www.environetics-pa.com
Architecture • Interior Design • Engineering

CLIENT:
EXETER PROPERTY GROUP
7595 Montevideo Road, Suite 120
Jessup, MD 20794
410-799-3393

CONSULTANT:

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 10/31/12 Date
Chief, Development Engineering Division — 10/1/12 Date
Director, Department of Planning and Zoning — 11/1/12 Date

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
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PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.861.0145 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

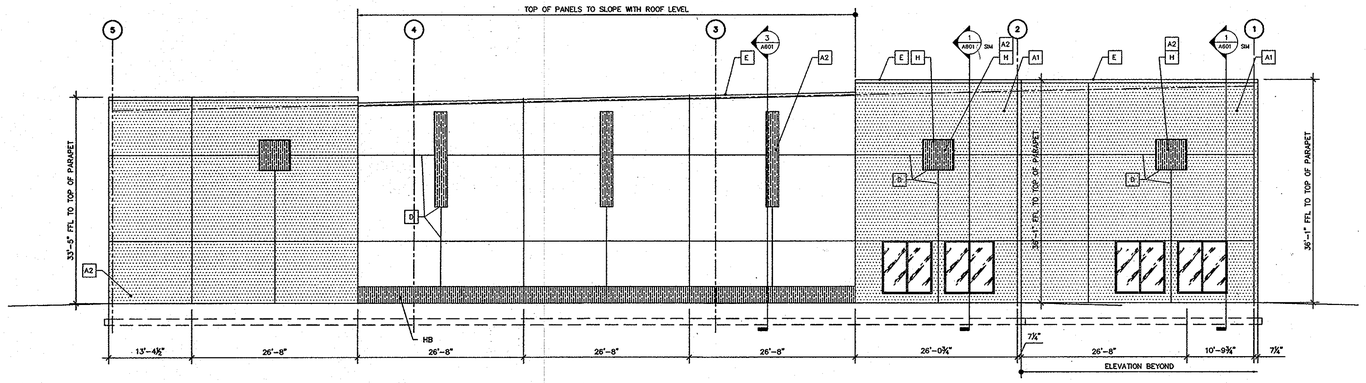
SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR.: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:
ARCHITECTURE

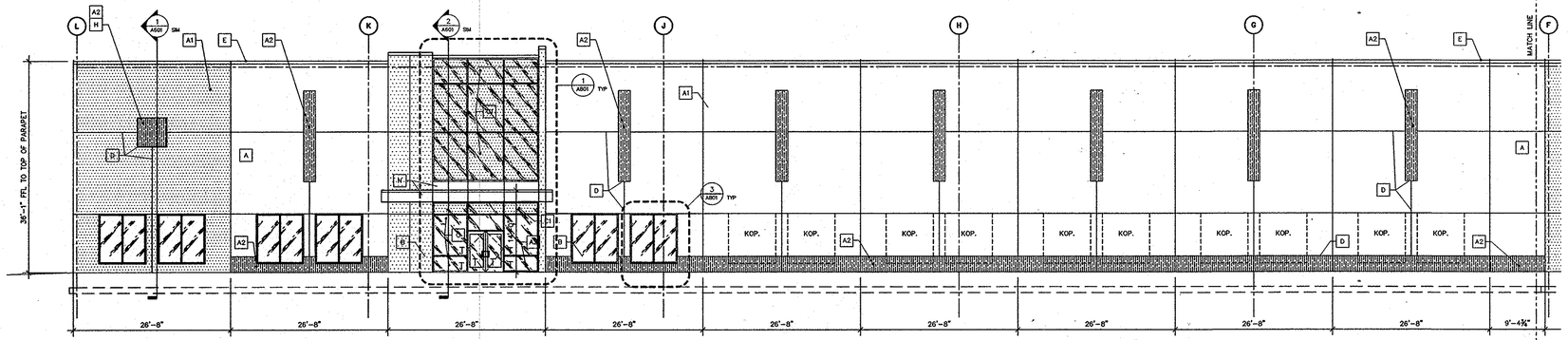
DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JULY 2[illegible]		
CHECKED: ENJ	APPROVED: [illegible]	36 OF 45	

SDP-08-116

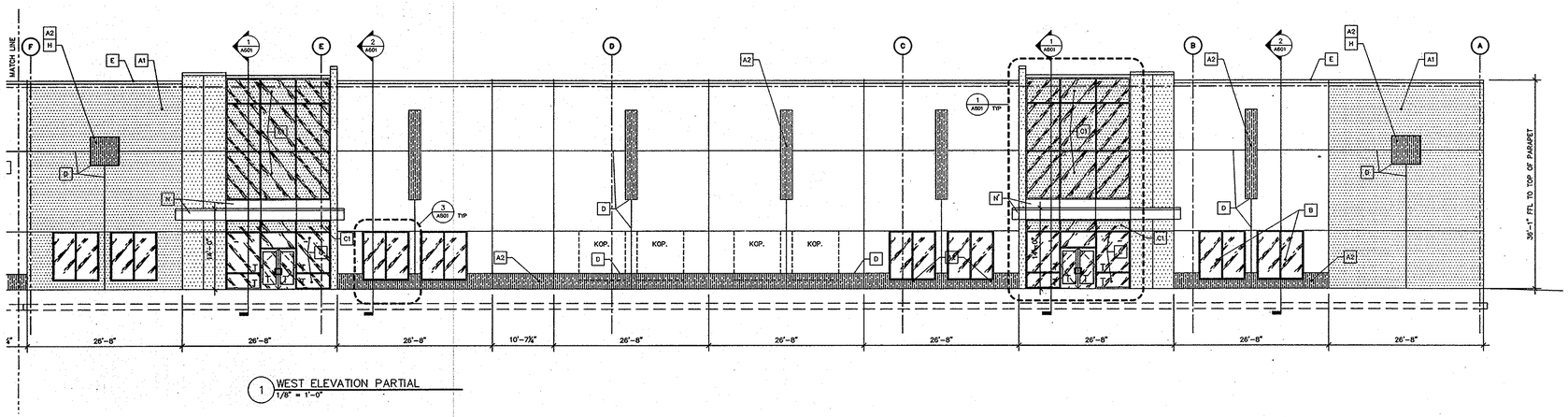
MDC-855



2 NORTH ELEVATION
1/8" = 1'-0"



1a WEST ELEVATION PARTIAL
1/8" = 1'-0"



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	N	METAL PANEL FASCIA AND SOFFIT – ROUT AND RETURN PANELS

T TEMPERED GLASS UNIT WHERE INDICATED

Dorsey Commerce Center Building 5
7591 Montevideo Drive
Jessup, Maryland 20794
CLIENT: Exeter Property Group

REV	DATE	DESCRIPTION

DESIGN DELIVERABLE: ISSUED FOR PERMIT
ISSUE DATE: 06/29/2012

PROJECT NUMBER: 12-102
DRAWN BY: GJS
CHECKED BY: GJS

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SHEET TITLE:
BUILDING ELEVATIONS NORTH & WEST

SHEET NUMBER:
A202

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www.environetics.com
Architecture • Urban Design
Engineering

CLIENT:
EXETER PROPERTY GROUP
7595 Montevideo Road, Suite 120
Jessup, MD 20794
410-799-3393

CONSULTANT:

SEAL

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/31/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 11/2/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8800 · metro 301.881.0140 · fax 410.872.8810

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER				572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	400 (TG 550)	SEWER CODE	B01		

TITLE:
ARCHITECTURE

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: JULY 2012	37 OF 45	
CHECKED: ENJ	APPROVED: YLL		

MDC-855

SDP-08-116

MONTEVIDEO ROAD
GRACE PITTS HAMILTON ET AL
REMAINING LANDS OF LIBER 285, FOLIO 576

S 34°37'15" W 263.01'

N 34°37'15" E 359.10'

ACADAM DRIVE

FUTURE PUBLIC DORSEY RUN ROAD

POWER POLE NO. 273877

PUBLIC R/W

MATCH FUTURE ROADWAY ELEVATION @ CL=155.25 STA: 594

S 43°21'31" W 358.00'

FUTURE PUBLIC DORSEY RUN ROAD
80' R/W
MA-106 COLLECTOR DESIGN SPEED LIMIT - 40 MPH

N 43°21'31" E 515.30'

PROVIDE BITUMINOUS CURB UP TO THE R/W

PROP. ON-SITE SIDEWALK UP TO R/W (BY DEVELOPER)

JAMES G. CAPELL
X MAP 43 PARCEL 345
LIBER 2144, FOLIO 198
ZONE: M-2
SE: LIGHT INDUSTRIAL

N 34°08'11" E 25.00'

N 54°18'10" W 104.24'

OFFICE
2,500 SF
SUITE 100

SUITE 200
OFFICE
±2,500 SF

PROPOSED
BUILDING 5
(ONE LEVEL)
62,800 SF
7587 MONTEVIDEO ROAD

FORMERLY
TAX MAP 43 P/O
PARCEL 572
DEED PARCEL # 3
LIBER 6457, FOLIO 258

TAX MAP 43 P/O PARCEL 572
DEED PARCEL # 3
LIBER 6457, FOLIO 258
ZONE: M-2

BLDG A
LOADING AREA

PROP. E.O.P.

TAX MAP 43 PARCEL 344
DEED PARCEL # 9
LIBER 6457, FOLIO 258
ZONE: M-2

N 76°53'28" E 884.61'

S 35°39'47" E 126.72'

N 35°39'47" E 126.67'

PUBLIC R/W

AA PROPERTY HOLDINGS, INC.
TAX MAP 43 PARCEL 371
LIBER 4708, FOLIO 685
ZONE: M-2
USE: UNDEVELOPED

S 54°17'55" E 876.86'

MARYLAND STATE PLANE
(NAD 83/91)

TAX MAP 43 PARCEL 346
PART OF DEED PARCEL #2
LIBER 6457, FOLIO 258
ZONE: M-2

PROPOSED
BUILDING 4
(FORMERLY PROPOSED BUILDING B)
(TWO STORY OFFICE
ONE STORY WAREHOUSE)
76,504 SF
7591 MONTEVIDEO ROAD

PROP. REFRIGERATION SKID

7 RISERS

USE: WAREHOUSE/OFFICE

PROP. 20' FIRE LANE

FIRE LANE

TAX MAP 43 P/O PARCEL 572
PART OF DEED PARCEL # 1
LIBER 6457, FOLIO 258
ZONE: M-2

EXISTING BUILDING C
– TO REMAIN
(ONE LEVEL)

TAX MAP 43 P/O PARCEL 572
PART OF DEED PARCEL # 1
LIBER 6457, FOLIO 258

EXISTING BUILDING C – TO REMAIN
(ONE LEVEL)
7545 MONTEVIDEO RD.
2 STORY OFFICE &
1 STORY WAREHOUSE
BRICK, BLOCK & METAL SIDING
HT. = 38.67'
287,048 SQ.FT.±

EXISTING 20' RIGHT OF WAY FOR INGRESS AND EGRESS TO A SEWER PER LIBER 964, FOLIO 141

EXISTING 20' RIGHT OF WAY FOR INGRESS AND EGRESS TO A SEWER PER LIBER 964, FOLIO 141

EXISTING RAIL ROAD TRACKS

S 33°51'11" W 1043.43'

S 35°30'54" W

S 37°20'49" W

S 38°50'49" W

LEGEND

- PROPOSED CURBLINE
- PROPOSED BUILDINGS
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- OHE — EXISTING OVERHEAD UTILITY
- FENCE
- EXISTING CURBLINE
- EXISTING BUILDINGS
- RAILROAD DITCH
- PROPOSED TREELINE
- EXISTING TREELINE
- EXISTING SIGN
- RAILROAD TRACKS
- PROPOSED LIGHT
- ADA ROUTE

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

48 Hours
Before You Dig
Call
"MISS UTILITY"
Service Protection Center
MEMBER
MISS UTILITY OF DELMARVA
CALL TOLL FREE
1-800-257-7777

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 10/3/12

Chief, Development Engineering Division — Date 10/7/12

Director, Department of Planning and Zoning — Date 10/4/12

1	11/2012	REDLINE REVISIONS

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

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PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2890
410.872.8800 · metro 301.861.0146 · fax 410.872.8803

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER			SECTION/AREA: 43		LOT/PARCEL#: 572,346,97,344,441
PLAT#: L.6457, F.258	GRID#: 16	ZONING: M-2	TAX MAP#: 43	ELECT DISTR: 1ST	CENSUS TRACT: 6012.02
WATER CODE: 400 (TG 550)			SEWER CODE: B01		

TITLE:

ADA ROUTE PLAN

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 06 2012	38 OF 45	
CHECKED: ENJ	APPROVED: WRZ		

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.

SIGNATURE OF ENGINEER 10.4.12 — DATE 9.6.12

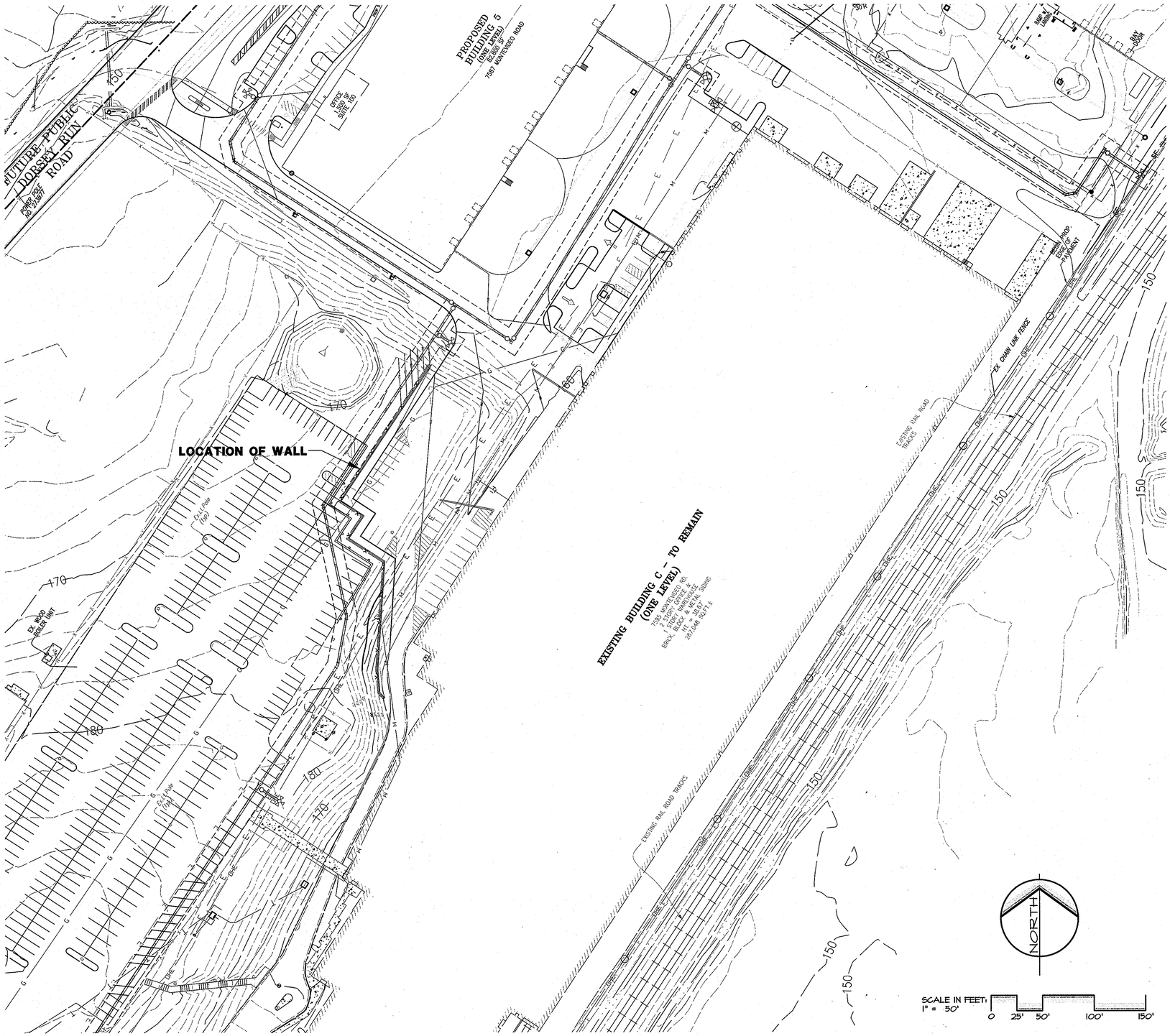
WILLIAM R ZINK, P.E.
MD LICENSE NUMBER: 20587
EXPIRATION DATE: 09-26-2014

DATE 9.6.12

STATE OF MARYLAND
WILLIAM ROBERT ZINK
No. 20587
REGISTERED
PROFESSIONAL ENGINEER

SDP-08-116

MDC-855



OVERALL PLAN

SCALE: 1" = 50'

NOTES:

1. THESE PLANS SHALL ONLY BE USED FOR THE CONSTRUCTION OF THE SEGMENTAL RETAINING WALL. THE CONTRACTOR SHALL VERIFY ALL GRADES, UTILITIES AND AMENITIES AND REPORT ANY DISCREPANCIES TO ELA GROUP, INC. IMMEDIATELY.

2. AUTOCAD FILES WERE PROVIDED BY: CHRISTOPHER CONSULTANTS, LTD. 7172 COLUMBIA GATEWAY DRIVE, SUITE 100 COLUMBIA, MARYLAND 21046

3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE WALL WITH ELA GROUP, INC., CHRISTOPHER CONSULTANTS, LTD., THE GENERAL CONTRACTOR AND THE PROJECT OWNER PRIOR TO CONSTRUCTION.

4. ALL WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER. ONLY COMPETENT CONTRACTORS WHO HAVE SIGNIFICANT EXPERIENCE AND HAVE DEMONSTRATED EXPERTISE IN SEGMENTAL RETAINING WALL CONSTRUCTION SHOULD CONSTRUCT THE WALL. THE CONTRACTOR IS REQUIRED TO PROVIDE CERTIFICATION FROM A LICENSED GEOTECHNICAL ENGINEER STATING THAT THE WALL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THIS PLAN.

5. SLOPE, SHORE, BRACE, UNDERPIN OR OTHERWISE PROTECT ALL EXCAVATIONS AND SURROUNDING STRUCTURES IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND OTHER STATE OR LOCAL REGULATIONS AS APPLICABLE.

6. CARE SHOULD BE TAKEN TO PROTECT ALL EXCAVATED AREAS FROM WATER PRIOR TO ESTABLISHING FINISHED GRADES. POSITIVE DRAINAGE AWAY FROM THE WORK AREA SHOULD BE MAINTAINED AT ALL TIMES. EROSION AND SEDIMENT CONTROLS ARE RECOMMENDED TO MANAGE SEDIMENT-LADEN RUNOFF.

7. IF GROUNDWATER IS ENCOUNTERED AT ANYTIME DURING CONSTRUCTION, THE EARTHWORK CONTRACTOR SHALL REMOVE THE WATER FROM THE WORK AREA AND CONTACT ELA GROUP, INC. AND THE GEOTECHNICAL ENGINEER IMMEDIATELY.

8. EXERCISE CARE DURING GRADING OPERATIONS TO PRESERVE THE COMPETENCY OF THE SUBGRADE SOILS. MINIMIZE CONSTRUCTION TRAFFIC ON PREPARED SUBGRADES.

9. STORMWATER SHALL NEITHER BE ENCOURAGED NOR ALLOWED TO INFILTRATE/SATURATE THE REINFORCING ZONE OF ALL WALLS WITHIN THESE SEGMENTAL RETAINING WALL PLANS.

10. THE CONTRACTOR TO MAINTAIN PROPER EMBEDMENT (TOE OF WALL BELOW GRADE) FOR THESE SEGMENTAL RETAINING WALLS.

11. KEYSTONE COMPAC III BLOCK AND STRATA GRID SG200 WERE UTILIZED IN THE DESIGN OF THE WALL. IF A CHANGE IN BLOCK AND GEOSYNTHETIC REINFORCEMENT IS REQUIRED, ELA GROUP, INC. SHALL BE CONTACTED IMMEDIATELY TO VERIFY THAT THE CHANGE IN BLOCK AND REINFORCEMENT IS ACCEPTABLE.

5/7/13
DATE

STATE OF MARYLAND
GRANT WILLIAM ZIMMERLY
#19530
PROFESSIONAL ENGINEER

RETAINING WALL ENGINEER

ELA group, inc.
ENGINEERS & LANDSCAPE ARCHITECTS
2203 SANDY DRIVE, SUITE 103
STATE COLLEGE, PA 16803
(814) 861-8320 FAX (814) 861-0505
www.elagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 6/07/13
Chief, Development Engineering Division	Date 10/3/13
Director, Department of Planning and Zoning	Date 6/7/13

2	03/2013	RETAINING WALL, STORM DRAIN & SEWER
1	11/2012	REDLINE REVISIONS

REVISED
NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 N. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.6930 · metro 301.861.0140 · fax 410.872.6933

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

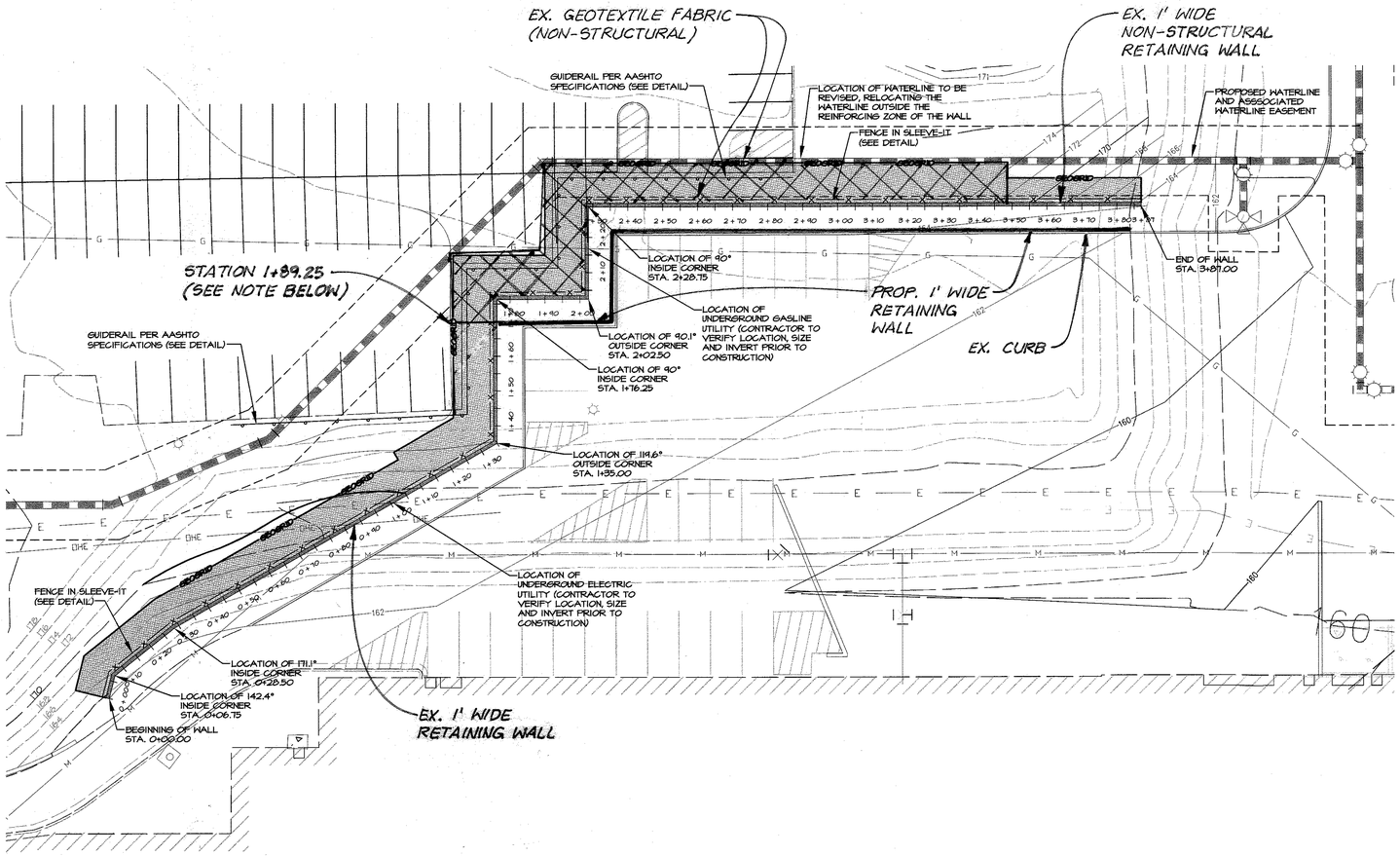
SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE 400 (TO 550)			SEWER CODE B01		

TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03067.00B.07	
DRAWN: DAM	DATE: SEPT 28 2012	39 OF 45	
CHECKED: ENJ	APPROVED: MRZ		

MDC-855

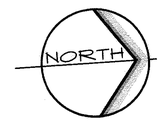
SDP-08-116



WALL LAYOUT PLAN

SCALE: 1" = 20'

NOTE: THE NON-STRUCTURAL RETAINING WALL AND GEOGRID BEGINS AT STATION 1+89.25



SCALE IN FEET: 1" = 20'

0 10' 20' 40' 60'

5/7/13
DATE

STATE OF MARYLAND
GRANT WILLIAM HUMMER
#15938
PROFESSIONAL ENGINEER

Grant W. Hummer

RETAINING WALL ENGINEER

EA group, inc.
ENGINEERS & LANDSCAPE ARCHITECTS
2013 SANDY DRIVE, SUITE 103
STATE COLLEGE, PA 16803
(814) 861-6328 FAX (814) 861-5503
www.eagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kat Shen Crooks — Chief, Division of Land Development — Date 6/07/13

Chief, Development Engineering Division — Date 6/3/13

Director, Department of Planning and Zoning — Date 6/3/13

4	4/15	RETAINING WALL + W/L STUB
2	03/2013	RETAINING WALL, STORM DRAIN & SEWER
1	11/2012	REDLINE REVISIONS

REVISED
NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
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1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

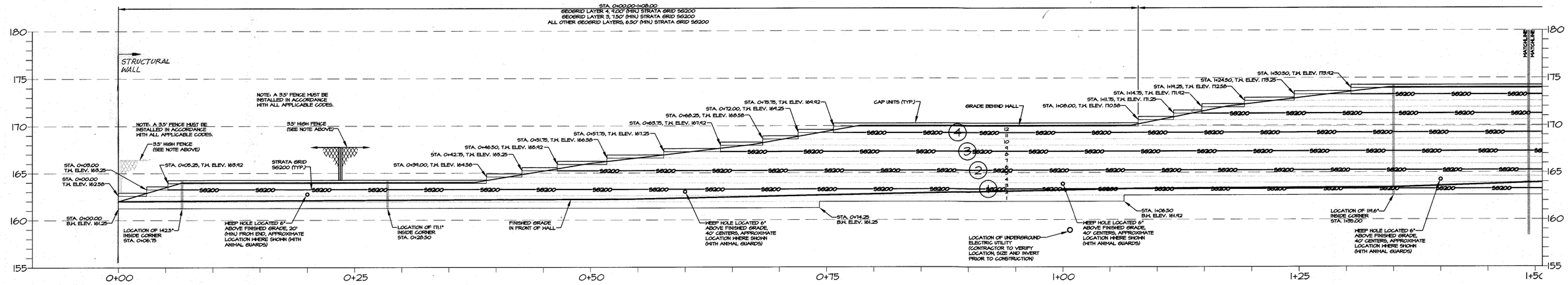
SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 26 2012		
CHECKED: ENJ	APPROVED: HRZ	40 OF 45	

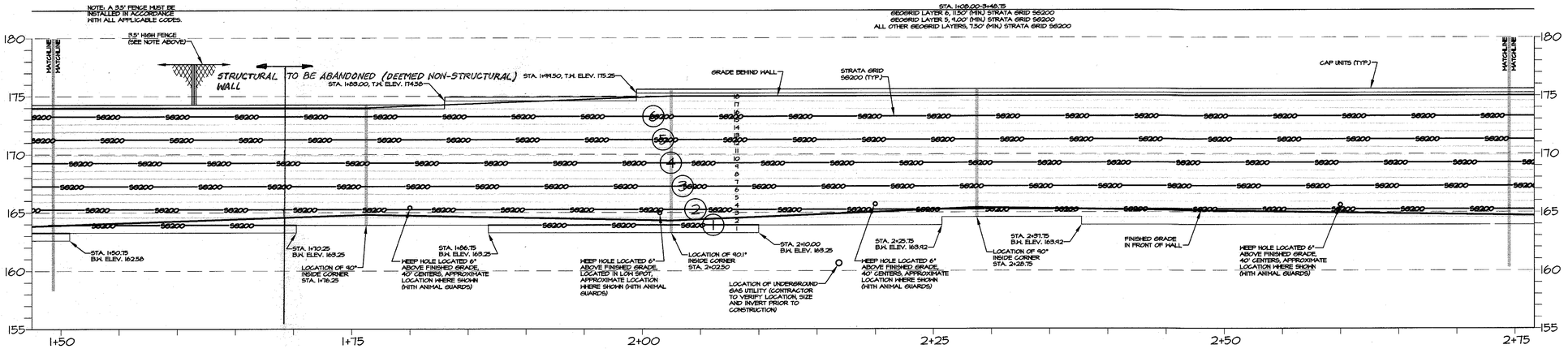
MDC-855

SDP-08-116



WALL ELEVATION

SCALE: 1/5" = 1'-0"



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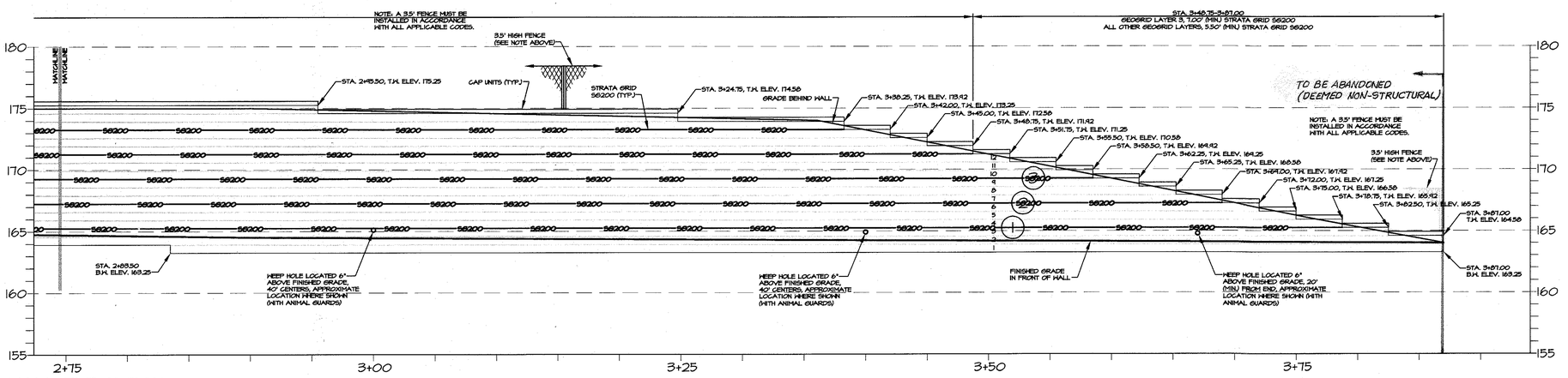

WALL ELEVATION

SCALE: 1/5" = 1'-0"

NOTE: EX. WALL TO BE STRUCTURAL FROM 0+00 TO 1+69.25 AND NON-STRUCTURAL FROM 1+69.25 TO 3+87

5/7/13
DATE

STATE OF MARYLAND
GRANT WILLIAM HUMMER
#15938
PROFESSIONAL ENGINEER

RETAINING WALL ENGINEER

EA group, inc.
ENGINEERS & LANDSCAPE ARCHITECTS
2013 SANDY DRIVE, SUITE 103
STATE COLLEGE, PA 16803
(814) 861-8228 FAX (814) 861-9508
www.eagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 6/07/13

Chief, Development Engineering Division — Date 6/3/13

Director, Department of Planning and Zoning — Date 6/7/13

4	4/15	RETAINING WALL + W/L STUB
2	03/2013	RETAINING WALL LOCATIONS
1	11/2012	REDLINE REVISIONS

REVISED NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
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PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03061.008.01	
DRAWN: DAM	DATE: SEPT 26 2012	41 OF 45	
CHECKED: ENJ	APPROVED: MRZ		

MDC-855

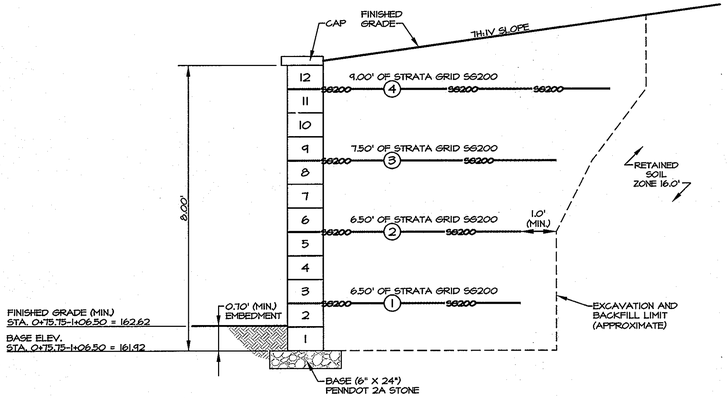
SDP-08-116

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

1. INTERNAL ANGLE OF FRICTION ≥ 28° (MIN.) (REINFORCING SOIL)
2. INTERNAL ANGLE OF FRICTION ≥ 28° (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE 1,811 PSF.
4. UNIT WEIGHT OF SOIL ≥ 120 PCF (MIN.) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL ≤ 120 PCF (MAX) (RETAINED SOIL)

BACK FILL, DRAIN PIPE, WEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



TYPICAL SECTION STA. 0+00.00-1+08.00 (SHOWN AT STA. 0+94.00)

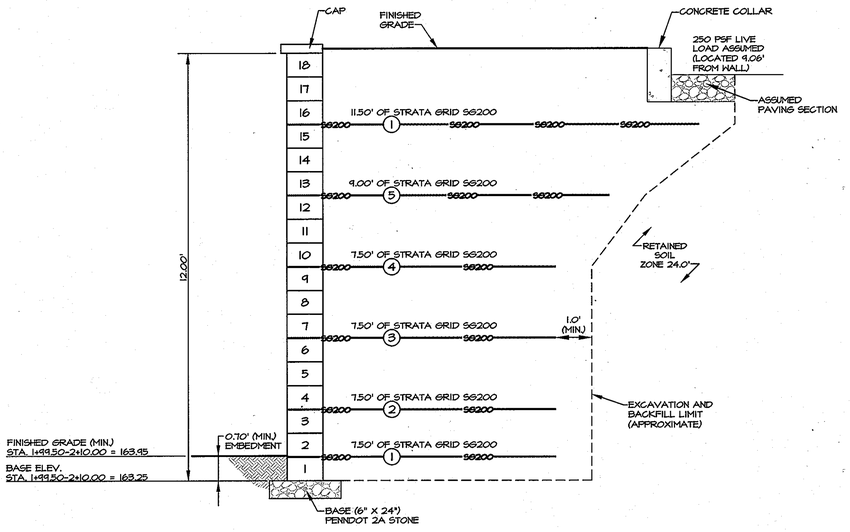
SCALE: 1/2" = 1'-0"

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

1. INTERNAL ANGLE OF FRICTION ≥ 28° (MIN.) (REINFORCING SOIL)
2. INTERNAL ANGLE OF FRICTION ≥ 28° (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE 2,611 PSF.
4. UNIT WEIGHT OF SOIL ≥ 120 PCF (MIN.) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL ≤ 120 PCF (MAX) (RETAINED SOIL)

BACK FILL, DRAIN PIPE, WEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



TYPICAL SECTION STA. 1+08.00-3+48.75 (SHOWN AT STA. 2+08.50)

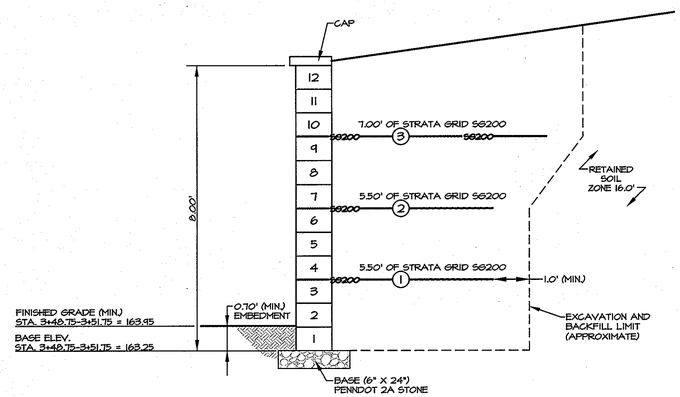
SCALE: 1/2" = 1'-0"

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

1. INTERNAL ANGLE OF FRICTION ≥ 28° (MIN.) (REINFORCING SOIL)
2. INTERNAL ANGLE OF FRICTION ≥ 28° (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE 1,931 PSF.
4. UNIT WEIGHT OF SOIL ≥ 120 PCF (MIN.) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL ≤ 120 PCF (MAX) (RETAINED SOIL)

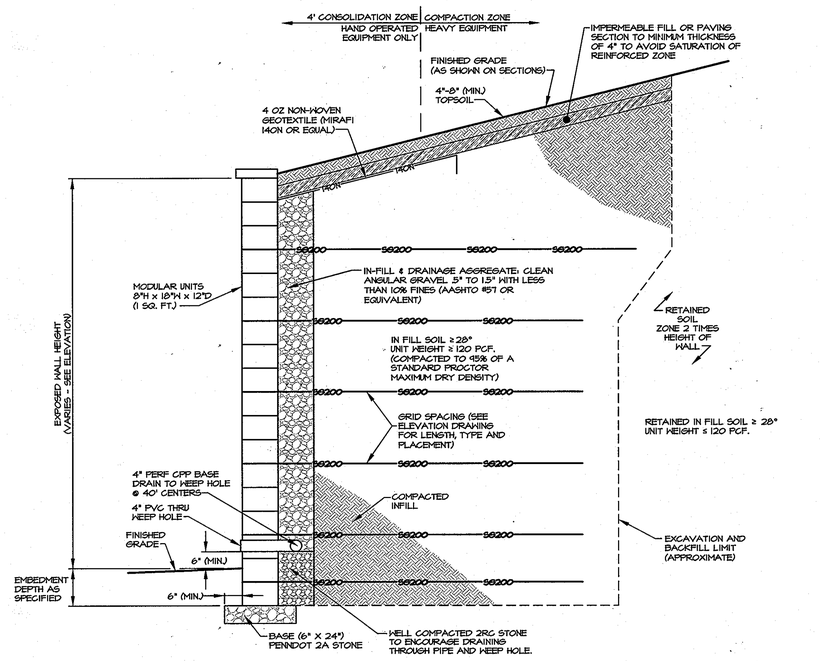
BACK FILL, DRAIN PIPE, WEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



TYPICAL SECTION STA. 3+48.75-3+87.00 (SHOWN AT STA. 3+50.50)

SCALE: 1/2" = 1'-0"



TYPICAL WALL SECTION (BACKFILL, COMPONENT MATERIALS AND NOTES)

NO SCALE

RETAINING WALL ENGINEER

EA group, inc.
ENGINEERS & LANDSCAPE ARCHITECTS
2129 SANDY DRIVE, SUITE 103
STATE COLLEGE, PA 16803
(814) 861-6520 FAX (814) 861-9505
www.eagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 6/07/13

Chief, Development Engineering Division — Date 6/2/13

Director, Department of Planning and Zoning — Date 6/3/13

2	03/2013	RETAINING WALL LOCATIONS
1	11/2012	REDLINE REVISIONS

REVISED NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

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410.872.6930 · metro 301.861.0140 · fax 410.872.9693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE			SEWER CODE		
400 (TG 550)			B01		

5/7/13 DATE

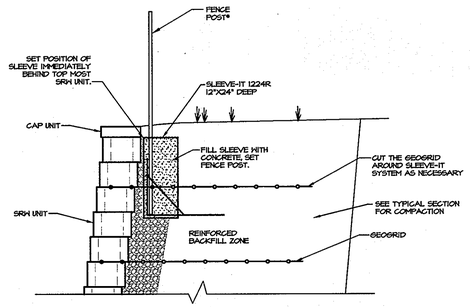
STATE OF MARYLAND — GRANT WILLIAM ZIMMERMAN — #15938 — PROFESSIONAL ENGINEER

TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 28 2012	42 OF 45	
CHECKED: ENJ	APPROVED: MRZ		

MDC-855

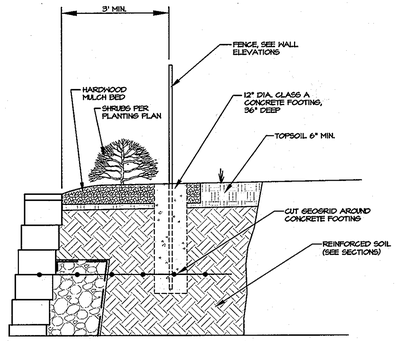
SDP-08-116



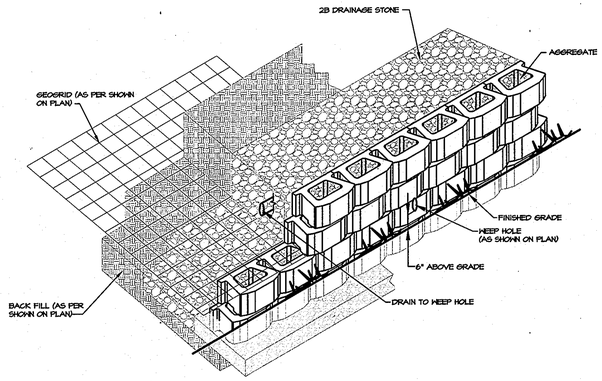
*FENCING SYSTEMS APPROVED FOR USE WITH SLEEVE-IT 1224R ARE LIMITED TO THE FOLLOWING HEIGHTS: CHAIN LINK - UP TO 5-FT, PRIVACY - UP TO 6-FT (WOODEN, PVC, METAL). POST SIZE 4"X4" MAX.

FOR NON-SLEEVE-IT FENCE INSTALLATION SEE SITE DETAILS

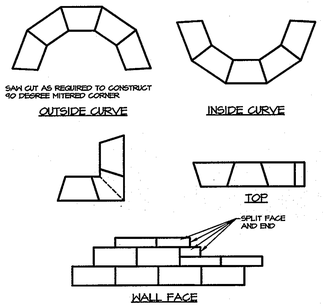
SLEEVE-IT FENCE DETAIL
NO SCALE



FENCE DETAIL
NO SCALE

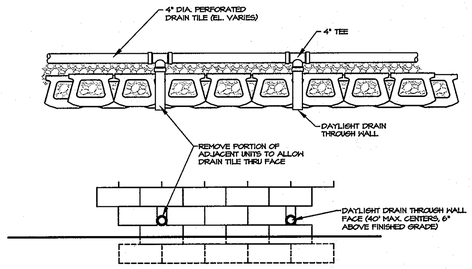


SRW INFILL DETAIL
NO SCALE

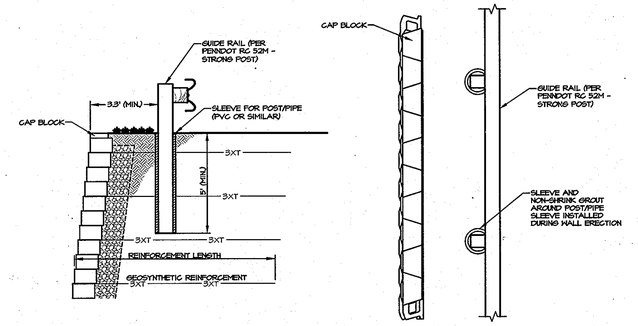


1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAYOUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADII GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT RUN OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.

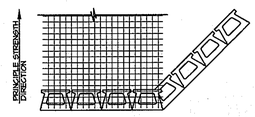
CAP BLOCK DETAIL
NOT TO SCALE



WEEP HOLE DAYLIGHT THRU WALL DETAIL
NOT TO SCALE



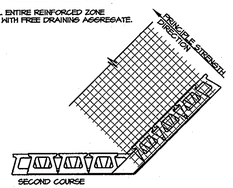
GUIDE RAIL DETAIL
NO SCALE

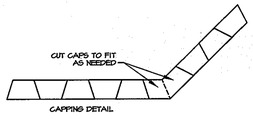


NOTES:

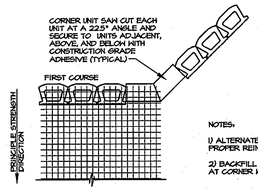
1) ALTERNATE COURSING TO ENSURE PROPER REINFORCEMENT COVERAGE

2) BACKFILL ENTIRE REINFORCED ZONE AT CORNER WITH FREE DRAINING AGGREGATE.





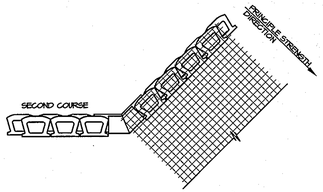
OUTSIDE ANGLE DETAIL WITH REINFORCEMENT
NO SCALE

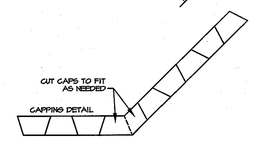


NOTES:

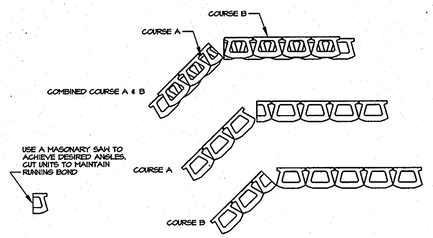
1) ALTERNATE COURSING TO ENSURE PROPER REINFORCEMENT COVERAGE

2) BACKFILL ENTIRE REINFORCED ZONE AT CORNER WITH FREE DRAINING AGGREGATE.





INSIDE ANGLE DETAIL
NO SCALE



INSIDE ANGLE DETAIL
NO SCALE

5/7/13
DATE

STATE OF MARYLAND
GRANT WILLIAM FRAUER
#15938
PROFESSIONAL ENGINEER

Grant W. Frauer

RETAINING WALL ENGINEER

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 6/07/13 Date

Chief, Development Engineering Division — 10/3/13 Date

Director, Department of Planning and Zoning — 6/7/13 Date

2	03/2013	RETAINING WALL LOCATION
1	11/2012	REDLINE REVISIONS

REVISED
NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

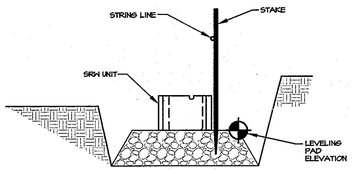
SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER				572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	400 (TG 550)	SEWER CODE	B01		

TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 26 2012		
CHECKED: ENJ	APPROVED: MRZ	43 OF 45	

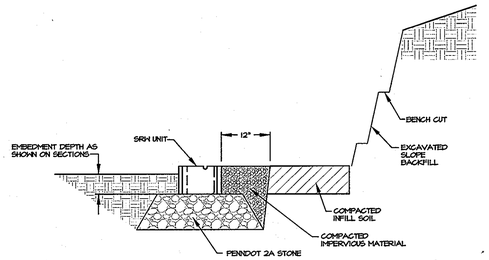
MDC-855

SDP-08-116



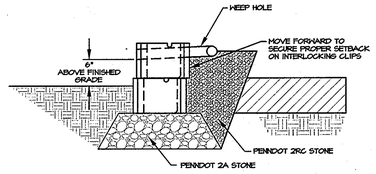
A. SETTING FIRST COURSE OF SRW UNITS

1. CHECK LEVELING PAD ELEVATION AND SMOOTH LEVELING PAD SURFACE.
2. VERIFY BEARING CAPACITY OF SOIL.
3. STAKE AND STRING LINE THE WALL LOCATION. PAY CLOSE ATTENTION TO EXACT LOCATION OF CURVES, CORNERS, VERTICAL AND HORIZONTAL STEPS. STRING LINE MUST BE ALONG A MOLDED FACE OF THE SRW UNIT, AND NOT ALONG A BROKEN BLOCK FINISH SURFACE.
4. INSTALL FIRST COURSE OF SRW UNITS, CHECKING LEVEL AS PLACED.



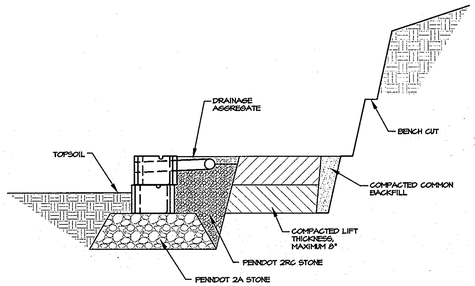
B. BACKFILLING FIRST COURSE OF SRW UNITS

1. RECHECK WALL LOCATION.
2. USE DRAINAGE AGGREGATE TO FILL ANY OPENINGS IN AND BETWEEN SRW UNITS.
3. CAREFULLY PLACE COMPACTED IMPERVIOUS MATERIAL BEHIND AND UP TO THE HEIGHT OF SRW UNIT TO ASSURE PROPER DRAINAGE TO DRAIN PIPE (NOT INCLUDED IN THIS STEP). INSTALL GEOTEXTILE IF REQUIRED.
4. PLACE AND COMPACT INFILL SOIL BEHIND WALL DRAIN.
5. PLACE FILL SOIL IN FRONT OF SRW UNIT.
6. COMPACT AGGREGATE AND INFILL SOIL.



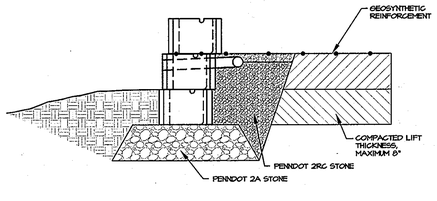
C. INSTALLING SUCCESSIVE COURSES OF SRW UNITS

1. INSTALL DRAIN PIPE AND WEEP HOLE AS SHOWN IN THE DETAILS.
2. ENSURE THE AGGREGATE IS LEVEL WITH, OR SLIGHTLY BELOW THE TOP OF SRW UNIT BELOW.
3. CLEAN DEBRIS OFF TOP OF UNIT.
4. MOVE SRW UNIT TO ENGAGE LIP AND ESTABLISH PROPER SETBACK.
5. PLACE AND COMPACT UP TO THE SPRING LINE OF THE DRAIN PIPE.
6. INSTALL WEEP HOLES THROUGH BLOCK FACE (6" ABOVE GRADE)



D. FILL PLACEMENT AND COMPACTION

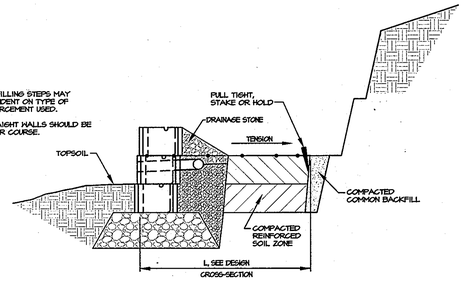
1. USE DRAINAGE AGGREGATE TO FILL OPENINGS IN AND BETWEEN SRW UNITS.
2. PLACE DRAINAGE AGGREGATE BEHIND AND UP TO HEIGHT OF SRW UNIT TO CONTINUE WALL FACE DRAIN. INSTALL GEOTEXTILE IF REQUIRED.
3. PLACE AND COMPACT INFILL SOIL BEHIND WALL DRAIN.
4. COMPACT DRAINAGE AGGREGATE AND INFILL SOIL.
5. VERIFY FILL COMPACTION AT EVERY LIFT OF FILL HEIGHT.



E. PLACEMENT OF GEOSYNTHETIC REINFORCEMENT

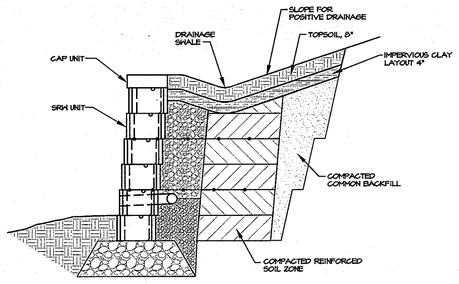
1. ENSURE WALL FACE DRAINAGE AGGREGATE IS LEVEL WITH, OR SLIGHTLY ABOVE THE TOP OF SRW UNIT.
2. CLEAN DEBRIS OFF TOP OF UNIT.
3. CUT GEOSYNTHETIC REINFORCEMENT TO DESIGN LENGTH "L" AS SHOWN ON PLANS AND INSTALL WITH STRENGTH DIRECTION PERPENDICULAR TO WALL FACE.
4. PLACE SRW UNIT ON TOP OF GEOSYNTHETIC.
5. MOVE SRW UNIT TO ENGAGE LIP AND ESTABLISH PROPER SETBACK.

NOTES:
1. SEQUENCE OF BACKFILLING STEPS MAY VARY AND ARE DEPENDENT ON TYPE OF GEOSYNTHETIC REINFORCEMENT USED.
2. ALIGNMENT OF STRAIGHT WALLS SHOULD BE CHECKED EVERY OTHER COURSE.



F. BACKFILLING OVER GEOSYNTHETIC REINFORCEMENT

1. PULL GEOSYNTHETIC REINFORCEMENT TAUT, USING UNIFORM TENSION, HOLD OR STAKE TO MAINTAIN TENSION THROUGHOUT FILL PLACEMENT PROCESS.
2. PLACE DRAINAGE AGGREGATE FOR WALL FACE DRAIN IN AND BETWEEN SRW UNITS.
3. PLACE INFILL SOIL.
4. COMPACT INFILL SOIL.
5. COMPACT DRAINAGE AGGREGATE.
6. PLACE REMAINDER OF AGGREGATE DRAIN.
7. VERIFY FILL COMPACTION AT EVERY LIFT OF FILL HEIGHT.



G. COMPLETED REINFORCED SRW

1. CONTINUE WALL TO FULL HEIGHT USING STEPS C THRU F.
2. INSTALL SRW CAP/COPING UNIT.
3. PLACE AND COMPACT FINAL BACKFILL.
4. FINISH GRADE FOR POSITIVE DRAINAGE AWAY FROM WALL FACE.
5. PLACE TOPSOIL AND VEGETATE SLOPES ABOVE AND AROUND WALL ENDS.

CONSTRUCTION SEQUENCE

5/7/13
DATE

STATE OF MARYLAND · GEORGE WILLIAM HOWARD III · #15903 · PROFESSIONAL ENGINEER

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 6/07/13

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Director, Department of Planning and Zoning — Date 6/7/13

2	03/2013	RETAINING WALL
1	11/2012	REDLINE REVISIONS REVISED RETAINING WALL

REVISED
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AT DORSEY RUN INDUSTRIAL CENTER

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG 6
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
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DESIGN: ENJ	SCALE:	PROJECT: 03067.008.07	
DRAWN: DAM	DATE: SEPT 28 2012	44 OF 45	
CHECKED: ENJ	APPROVED: MRZ		

SDP-08-116

MDC-855

SPECIFICATIONS FOR SEGMENTAL RETAINING WALL SYSTEMS:

PART 1: GENERAL

1.01 DESCRIPTION

WORK INCLUDES FURNISHING AND INSTALLING SEGMENTAL RETAINING WALL (SRW) UNITS TO THE LINES AND GRADES DESIGNATED ON THE CONSTRUCTION DRAWINGS. ALSO, INCLUDED IS FURNISHING AND INSTALLING APPURTENANT MATERIALS REQUIRED FOR CONSTRUCTION OF THE RETAINING WALL AS SHOWN ON THE CONSTRUCTION DRAWINGS.

1.02 REFERENCES

A. ENGINEERING DESIGN

1. NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, THIRD EDITION.

2. ASTM D 6638 - STANDARD TEST METHOD FOR DETERMINING THE CONNECTION STRENGTH BETWEEN GEOSYNTHETICS REINFORCEMENT AND SEGMENTAL CONCRETE UNITS

3. ASTM D 6916 - STANDARD TEST METHOD FOR DETERMINING THE SHEAR STRENGTH BETWEEN SEGMENTAL CONCRETE UNITS

B. SEGMENTAL RETAINING WALL UNITS

1. ASTM C 140 - STANDARD TEST METHODS FOR SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS

2. ASTM C 1262 - STANDARD TEST METHOD FOR EVALUATING THE FREEZE-THAW DURABILITY OF MANUFACTURED CONCRETE MASONRY UNITS AND RELATED CONCRETE UNITS

3. ASTM C 1372 - STANDARD SPECIFICATION FOR DRY-CAST SEGMENTAL RETAINING WALL UNITS

C. GEOSYNTHETIC REINFORCEMENT

1. ASTM D 4595 - STANDARD TEST METHOD FOR TENSILE PROPERTIES OF GEOTEXTILES BY THE WIDE-WIDTH STRIP METHOD

2. ASTM D 5262 - STANDARD TEST METHOD FOR EVALUATING THE UNCONFINED TENSION CREEP AND CREEP RUPTURE BEHAVIOR OF GEOSYNTHETICS

3. ASTM D 5321 - STANDARD TEST METHOD FOR DETERMINING THE COEFFICIENT OF SOIL AND GEOSYNTHETIC OR GEOSYNTHETIC FRICTION BY THE DIRECT SHEAR METHOD

4. ASTM D 5818 - STANDARD PRACTICE FOR EXPOSURE AND RETRIEVAL OF SAMPLES TO EVALUATE INSTALLATION DAMAGE OF GEOSYNTHETICS

5. ASTM D 6637 - STANDARD TEST METHOD FOR DETERMINING TENSILE PROPERTIES OF GEOGRIDS BY THE SINGLE OR MULTI-RIB TENSILE METHOD

6. ASTM D 6706 - STANDARD TEST METHOD FOR MEASURING GEOSYNTHETIC PULLOUT RESISTANCE IN SOIL

7. ASTM D 6992 - STANDARD TEST METHOD FOR ACCELERATED TENSILE CREEP AND CREEP-RUPTURE OF GEOSYNTHETIC MATERIALS BASED ON TIME-TEMPERATURE SUPERPOSITION USING STEPPED ISOTHERMAL METHOD

D. SOILS

1. ASTM D 422 - STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS OF SOILS

2. ASTM D 698 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT

3. ASTM D 1556 - STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL IN PLACE BY THE SAND-CONE METHOD

4. ASTM D 1557 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT

5. ASTM D 2487 - STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)

6. ASTM D 6938 - STANDARD TEST METHOD FOR IN-PLACE DENSITY AND WATER CONTENT OF SOIL AND SOIL-AGGREGATE BY NUCLEAR METHODS (SHALLOW DEPTH)

7. ASTM D 4318 - STANDARD TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS

8. ASTM D 6913 - STANDARD TEST METHODS FOR PARTICLE-SIZE DISTRIBUTION (GRADATION) OF SOILS USING SIEVE ANALYSIS

9. ASTM G 51 - STANDARD TEST METHOD FOR MEASURING pH OF SOIL FOR USE IN CORROSION TESTING

E. DRAINAGE PIPE

1. ASTM F 405 - STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE (PE) PIPE AND FITTINGS

2. ASTM F 758 - STANDARD SPECIFICATION FOR SMOOTH-WALL POLY(VINYL CHLORIDE) (PVC) PLASTIC UNDERDRAIN SYSTEMS FOR HIGHWAY, AIRPORT, AND SIMILAR DRAINAGE

1.03 DESIGN STANDARDS

A. ALL DESIGN METHODOLOGY IS IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION.

B. THE GEOSYNTHETIC REINFORCEMENT VERTICAL SPACING SHALL NOT EXCEED 2 FEET OR 3 BLOCK UNITS.

C. GEOSYNTHETIC REINFORCEMENT SHALL HAVE 100% HORIZONTAL COVERAGE PARALLEL TO THE LENGTH OF THE WALL.

D. THE SEGMENTAL RETAINING WALLS HAVE BEEN DESIGNED IN ACCORDANCE TO THE NCMA DESIGN MANUAL, LATEST EDITION. THE MINIMUM FACTORS OF SAFETY SHALL MEET OR EXCEED THE FOLLOWING:

DESIGN CRITERIA FOR EXTERNAL STABILITY ANALYSIS	
FOS SLIDING:	1.50
FOS OVERTURNING:	2.00
FOS BEARING CAPACITY:	2.00
BASE GEOSYNTHETIC RATIO (L/H):	0.60

DESIGN CRITERIA FOR INTERNAL STABILITY ANALYSIS	
FOS TENSILE OVERSTRESS:	1.50
FOS PULLOUT:	1.50
ANCHORAGE LENGTH (FT):	1.00

DESIGN CRITERIA FOR FACING STABILITY ANALYSIS	
FOS GEOSYNTHETIC-WALL CONNECTION:	1.50
FOS CREST TOPPLING:	1.50
MAX. REINFORCEMENT SPACING:	2.00

1.05 DELIVERY, STORAGE AND HANDLING

A. THE CONTRACTOR SHALL INSPECT ALL MATERIALS DELIVERED TO THE SITE TO ENSURE PROPER TYPE AND GRADE OF MATERIALS HAVE BEEN RECEIVED AS PER THESE SPECIFICATIONS AND THE SPECIFICATIONS FOUND IN THE ATTACHED RETAINING WALL REPORT.

B. THE CONTRACTOR SHALL ENSURE PROPER STORAGE, HANDLING AND PROTECTION FROM DAMAGE OF THE MATERIALS. DAMAGED MATERIALS SHALL NOT BE USED IN THE CONSTRUCTION OF THE SEGMENTAL RETAINING WALL.

C. THE CONTRACTOR SHALL PREVENT EXCESSIVE MUD, WET CONCRETE, AND LIKE MATERIALS FROM COMING IN CONTACT WITH THE WALL MATERIALS.

PART 2 MATERIALS

2.01 CONCRETE SEGMENTAL RETAINING WALL UNITS

A. SEGMENTAL RETAINING WALL UNITS SHALL BE MACHINE FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. THE SRW UNITS APPROVED FOR THIS PROJECT IS:

KEYSTONE COMPAC III AS MANUFACTURED BY YORK BUILDING PRODUCTS.

B. COLOR AND STYLE TO BE SELECTED BY OWNER.

C. ASTM C 1262 SHALL BE STANDARD FOR AREAS SUBJECT TO FREEZE-THAW CYCLES.

D. THE BLOCKS MUST BE 1.00 SQ. FT. AND HAVE DIMENSIONS OF 8 INCHES HIGH X 18 INCHES WIDE X 12 INCHES DEEP AND THE BLOCK WEIGHT SHALL BE APPROXIMATELY +/- 74 LBS WITH A COMBINED IN-FILL WEIGHT OF +/- 130 POUNDS PER CUBIC FOOT.

E. CONCRETE USED TO MANUFACTURE SRW UNITS SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 3,500 PSI AND A MAXIMUM MOISTURE ABSORPTION RATE, BY WEIGHT, OF 7% AS DETERMINED IN ACCORDANCE WITH ASTM C 140.

F. COMPRESSIVE STRENGTH TEST SPECIMENS SHALL CONFORM TO THE SAW-CUT COUPON PROVISIONS OF SECTION 5.2.4 OF ASTM C 140 WITH THE FOLLOWING EXCEPTION: COUPON SHALL BE TAKEN FROM THE LEAST DIMENSION OF THE UNIT OF A SIZE AND SHAPE REPRESENTING THE GEOMETRY OF THE UNIT AS A WHOLE.

G. SEGMENTAL RETAINING WALL UNITS MOLDED WITH DIMENSIONS SHALL NOT DIFFER MORE THAN +/- 1/8TH INCH FROM THAT SPECIFIED, EXCEPT HEIGHT WHICH SHALL BE +/- 1/16TH INCH AS MEASURED IN ACCORDANCE WITH ASTM C 140.

H. SEGMENTAL RETAINING WALL UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE STRUCTURE. CRACKING OR EXCESSIVE CHIPPING SHALL BE GROUNDS FOR REJECTION. UNITS SHOWING CRACKS LONGER THAN 1/2 OF AN INCH SHALL NOT BE USED WITHIN THE WALL. UNITS SHOWING CHIPS VISIBLE AT A DISTANCE OF 30 FEET FROM THE WALL SHALL NOT BE USED IN THE WALL CONSTRUCTION.

I. CAP UNITS SHALL BE SECURED BY USING HIGH STRENGTH EXTERIOR GRADE CONCRETE ADHESIVE AND SHALL BE FREE OF DUST, DIRT AND STANDING WATER BEFORE APPLYING THE CONCRETE ADHESIVE.

2.02 GEOSYNTHETIC REINFORCEMENTS

A. GEOSYNTHETICS ARE WOVEN FABRICS PRODUCED FOR THE USE OF SOIL REINFORCEMENT.

B. GEOSYNTHETIC REINFORCEMENTS SHALL BE HIGH TENSILE GEOSYNTHETIC OR GEOTEXTILE AS MANUFACTURED FOR SOILS REINFORCEMENT APPLICATIONS AND AS INDICATED ON THESE PLANS.

C. NO OTHER GEOSYNTHETIC SUBSTITUTIONS SHALL BE PERMITTED WITHOUT THE PRIOR APPROVAL OF ELA GROUP, INC.

2.03 BACKFILL ZONES

A. REINFORCED SOIL: THE REINFORCED GEOSYNTHETIC ZONE

1. THE SOILS USED MUST MEET OR EXCEED THE DESIGN FRICTION ANGLE STATED IN THE PROJECT'S GENERAL NOTES AND NOTED ON THE TYPICAL WALL SECTION AND DESIGN CROSS-SECTIONS. THE OWNER'S GEOTECHNICAL ENGINEER MUST VERIFY THESE PARAMETERS PRIOR TO CONSTRUCTION. THE OWNER'S GEOTECHNICAL ENGINEER MUST VERIFY ALL DESIGN PARAMETERS INCLUDING, BUT NOT LIMITED TO: FRICTION ANGLE, UNIT WEIGHT OF SOILS, BEARING CAPACITY, COMPACTION AND PLACEMENT. THE REINFORCED MATERIAL SHALL BE FREE OF DEBRIS AND ORGANIC MATERIAL (I.E. - NO TRASH, PLANTS, ROOT MATTER, TOP SOIL, ETC.). THE REINFORCED ZONE MATERIAL SHALL NOT CONSIST OF CH (FAT CLAY), CL (LEAN CLAY), MH (ELASTIC SILT) OR OH/OL/PT (ORGANIC) SOILS. THE EXISTING SOIL IN THE AREA OF THE WALLS IS SUITABLE TO BE USED IN THE REINFORCED ZONE. NO CONSTRUCTION SHALL BE PERFORMED UNTIL THE OWNER'S GEOTECHNICAL ENGINEER VERIFIES THE PARAMETERS AND REPORTS THE RESULTS TO ELA GROUP, INC., ELA GROUP, INC. MAY AT THEIR DISCRETION MAKE ANY CHANGES, RECOMMENDATIONS OR EVEN REDESIGN THE WALL BASED UPON THE UPDATED GEOTECHNICAL INFORMATION. THIS MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY THE STANDARD PROCTOR METHOD OR AS APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER.

2. GRANULAR IN-FILL MATERIAL MAY BE USED AS LONG AS IT MEETS THE SPECIFICATIONS FOUND BELOW. THE SPECIFICATIONS BELOW ARE GRADATIONS MEETING SPECIFICATIONS FOR PENNDOT 2A STONE.

SIEVE SIZE	PERCENT PASSING
2 INCH	100
3/4 INCH	52-100
3/8 INCH	36-70
NO. 4	24-50
NO. 16	10-30

B. RETAINED SOIL: THE AREA BEYOND THE REINFORCED SOIL AND EXTENDING TO A DISTANCE OF TWICE THE EXPOSED WALL HEIGHT

1. THE OWNER'S GEOTECHNICAL ENGINEER SHALL VERIFY THE RETAINED SOIL. VERIFYING THAT THE RETAINED SOIL MEETS OR EXCEEDS THE DESIGN PARAMETERS AS LISTED IN THE GENERAL NOTES AND SHOWN ON THE SECTIONS. NO CONSTRUCTION SHALL BE PERFORMED UNTIL THE OWNER'S GEOTECHNICAL ENGINEER VERIFIES THESE PARAMETERS AND REPORTS THE RESULTS TO ELA GROUP, INC.

2. ONCE EXCAVATED BACK TO THE DEPTH REQUIRED FOR THE INSTALLATION OF THE GEOSYNTHETICS THE OWNER'S GEOTECHNICAL ENGINEER SHALL CONFIRM OR DENY THE USE OF EXISTING MATERIAL WITHIN THIS ZONE. THE SOILS IN THE RETAINED ZONE OR APPROVE ALTERNATE FILL MATERIAL WITHIN THIS ZONE. THE SOILS IN THE RETAINED ZONE MUST MEET THE MINIMUM CRITERIA AS SPECIFIED ON THE RESPECTIVE CROSS-SECTIONS AND IN THE GENERAL NOTES. IF THE SOIL DOES NOT MEET THE SPECIFIED PROPERTIES, ELA GROUP, INC. MUST BE CONTACTED IMMEDIATELY AND IN COOPERATION WITH THE OWNER'S GEOTECHNICAL ENGINEER EITHER REANALYZE THE WALL OR RECOMMEND ALTERNATE MEASURES. THE RETAINED ZONE IS IDENTIFIED AS THE HORIZONTAL DISTANCE OF TWO TIMES THE HEIGHT OF THE WALL.

3. THIS SOILS MUST MEET OR EXCEED THE DESIGN FRICTION ANGLE STATED IN THE PROJECT'S GENERAL NOTES AND NOTED ON THE TYPICAL WALL SECTION AND DESIGN CROSS-SECTIONS AND BE VERIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER. THIS SOIL MUST BE COMPACTED TO 95% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY. THE SOIL WITHIN THE RETAINED ZONE MUST BE TESTED AND MUST MEET OR EXCEED THE DESIGN PARAMETERS AS STATED ON THE CROSS-SECTIONS AND WITHIN THE GENERAL NOTES.

C. FOUNDATION SOIL: THE AREA UNDER THE WALLS FOOTING AND UNDER THE REINFORCING GEOSYNTHETIC ZONE

1. THE FOUNDATION SOIL MUST MEET OR EXCEED THE ANTICIPATED BEARING PRESSURE AS LISTED ON THESE PLANS. THE SUB-GRADE MUST BE VIRGIN (NATURAL UNDISTURBED) OR FILL (MEETING THE SPECIFICATIONS OF THE RETAINED SOIL) COMPACTED TO 95% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY. THE CONTRACTOR MUST TEST THE FOUNDATION SOIL AND PROVE THAT THE BEARING CAPACITY EXCEEDS THE ANTICIPATED BEARING PRESSURE. IF THE FOUNDATION SOIL DOES NOT HAVE AN ALLOWABLE BEARING CAPACITY AS STATED IN THE PLANS, THE CONTRACTOR SHALL CONTACT ELA GROUP, INC. IMMEDIATELY AND IN RECOMMENDATION WILL BE MADE AS TO ADDITIONAL STEPS TO REMEDY THE SITUATION.

D. SOIL DESIGN STANDARDS

1. THE FOLLOWING SOIL PARAMETERS, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER SHALL BE USED FOR THE PREPARATION OF THE FINAL DESIGN:

	UNIT WEIGHT (PCF)	INTERNAL FRICTION ANGLE (DEGREES)	COHESION (C) (PSF)
REINFORCED FILL	120	28	0
RETAINED SOIL	120	28	0
FOUNDATION SOIL	120	28	0

2. SHOULD THE OWNER'S GEOTECHNICAL ENGINEER FIND THAT THE ACTUAL SOIL CONDITIONS OBSERVED DURING CONSTRUCTION DIFFER FROM THOSE ASSUMED FOR THE DESIGN, THE DESIGN SHALL BE REVIEWED BY ELA GROUP, INC. AT THE OWNER'S DIRECTION.

2.04 BASE LEVELING PAD MATERIALS

A. MATERIAL FOR THE LEVELING PAD SHALL CONSIST OF COMPACTED GRAVEL. THIS GRAVEL SHALL BE PENNDOT 2A STONE AND SHALL MEET THE FOLLOWING CRITERIA:

SIEVE SIZE	PERCENT PASSING
2 INCH	100
3/4 INCH	52-100
3/8 INCH	36-70
NO. 4	24-50
NO. 16	10-30

2.05 DRAINAGE AND UNIT INFILL AGGREGATE

A. DRAINAGE AGGREGATE SHALL BE CLEAN CRUSHED GRAVEL CONSISTING OF AASHTO #57 STONE OR EQUIVALENT STONE (I.E. - MEDIAN STONE SIZE 1/2 INCH TO 1+1/2 INCH).

B. DRAINAGE AGGREGATES SHALL BE PLACED IN ALL UNIT VOIDS AND 6 INCHES TO 12 INCHES BEHIND THE WALL UNITS WITH UNIFORM PARTICLE SIZE LESS THAN 1 INCH AND NOT MORE THAN 5% PASSING THROUGH THE NO. 200 SIEVE.

C. ROUNDED "PEA GRAVEL TYPE AGGREGATE IS NOT PERMISSIBLE SINCE IT DOES NOT HAVE THE NECESSARY FRICTIONAL PROPERTIES.

D. RECYCLED STONE MAY BE UTILIZED; HOWEVER, IT MUST HAVE LESS THAN 10% FINES.

2.06 DRAINAGE PIPE

A. DRAINAGE PIPE SHALL BE PERFORATED PVC OR CORRUGATED HDPE PIPE WITH A MINIMUM SIZE OF 4" IN DIAMETER.

2.07 GEOTEXTILE FABRIC

A. THE GEOTEXTILES SHALL BE A 4 OZ NON-WOVEN GEOTEXTILE.

B. THE GEOTEXTILES WHEN USED AS A SOIL SEPARATOR SHALL BE PERMEABLE ALLOWING WATER TO EFFECTIVELY PASS THROUGH THE FABRIC OPENINGS.

2.08 CONCRETE ADHESIVE: FOR INSTALLATION OF CAPPING UNITS

A. THE ADHESIVE SHALL BE HIGH STRENGTH EXTERIOR GRADE CONCRETE ADHESIVE THAT WILL PERMANENTLY SECURE THE CONCRETE CAP UNITS TO THE TOP UNITS OR STEPS.

B. CONCRETE ADHESIVE SHALL ONLY BE UTILIZED IN SECURING CAPPING UNITS TO THE SEGMENTAL RETAINING WALL BLOCK. NO ADHESIVE SHALL BE USED TO SECURE BLOCK TO BLOCK CONNECTIONS.

PART 3: CONSTRUCTION

3.01 INSPECTION

A. THE OWNER OR OWNER'S GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING THAT THE WALL INSTALLER MEETS ALL OF THE REQUIREMENTS OF THIS SPECIFICATIONS. THIS INCLUDES ALL SUBMITTALS FOR MATERIALS, QUALIFICATIONS, PROPER INSTALLATION OF THE WALL SYSTEM AND SOIL PARAMETERS. ALL WALLS MUST HAVE THE CONSTRUCTION CERTIFIED BY A LICENSED GEOTECHNICAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.

B. THE WALL INSTALLER'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.

3.02 EXCAVATION

A. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS. THE WALL INSTALLER SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED IN-FILL MATERIALS OR AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.

B. BACK EXCAVATED CUT SHALL NOTCHED BENCHES OF 5 FEET VERTICAL FOR EVERY 2 FEET HORIZONTAL BENCH OR AS PER THE OWNER'S GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

C. ALL EXCAVATED MATERIALS THAT ARE USED FOR BACKFILLING REINFORCEMENT ZONE SHALL BE PROTECTED FROM THE WEATHER.

D. THE WALL INSTALLER SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. THE WALL INSTALLER SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT (SHORING), IF REQUIRED, IS THE RESPONSIBILITY OF THE WALL INSTALLER.

3.03 FOUNDATION PREPARATION

A. FOUNDATION TRENCH SHALL BE EXCAVATED TO THE DIMENSIONS INDICATED ON THESE PLANS.

B. FOLLOWING EXCAVATION, THE FOUNDATION SOILS SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ALLOWABLE DESIGN BEARING CAPACITY.

C. SOILS NOT MEETING REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH APPROVED SELECT STRUCTURAL FILL OR GRAVEL AND COMPACTED TO 95% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY FOR THE FULL DEPTH.

D. FOUNDATION MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DRY DENSITY OR GREATER, BEFORE PLACING LEVELING PAD.

E. IN CASES OF POOR BEARING CAPACITY OR FILL SOILS, AN ALTERNATE BASE SHALL BE REQUIRED BASED UPON THE OWNER'S GEOTECHNICAL ENGINEER'S RECOMMENDATION. ANY CHANGE IN FOOTING DESIGN DUE TO POOR ON-SITE SOIL CONDITIONS MUST BE REQUESTED THROUGH ELA GROUP, INC. ELA GROUP, INC. WILL FORWARD THE REQUESTED CHANGES TO THE APPROPRIATE AUTHORITY. THE SUB-GRADE MUST BE COMPACTED WITH A "J-TAMP" OR "JUMPING JACK" TYPE COMPACTOR WITH A MINIMUM OF THREE PASSES PRIOR TO GEOSYNTHETIC REINFORCEMENT.

3.04 BASE LEVELING PAD

A. THE LEVELING PAD SHALL BE PLACED AS SHOWN N THESE PLANS WITH A MINIMUM THICKNESS OF 6 INCHES AND A MINIMUM WIDTH OF 24 INCHES. THE LEVELING PAD SHALL BE AT A MINIMUM EXTENDED LATERALLY AT LEAST A DISTANCE OF 6" FROM THE TOE AND HEEL OF THE FIRST COURSE OF SEGMENTAL RETAINING WALL BLOCKS.

B. THE BASE LEVELING PAD SHALL BE LEVEL HORIZONTALLY AND BACK TO FRONT TO ENSURE THE FIRST COURSE OF UNITS ARE LEVEL.

C. THE LEVELING PAD MATERIAL SHALL BE COMPACTED WITH A VIBRATORY PLATE COMPACTOR TO PROVIDE A FIRM LEVEL-BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF SEGMENTAL RETAINING WALL UNITS.

D. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 95% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY.

E. A THIN LAYER NOT EXCEEDING 1/4 OF AN INCH OF WELL GRADED SAND OR STONE DUST SHALL BE USED TO SMOOTH THE TOP OF THE LEVELING PAD.

3.05 UNIT INSTALLATION

A. ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE WALL PROFILES AND DETAILS ON THESES PLANS.

B. THE SEGMENTAL RETAINING WALL UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION, AND IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.

C. THE DESIGN ENGINEER OR RECORD ENGINEER, ELA GROUP, INC., SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE NCMA AND MANUFACTURERS REQUIREMENTS.

D. THE FIRST COURSE OF SEGMENTAL RETAINING WALL UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE SUFFICIENT CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSETS FROM THE BASE LINE TO THE BACK OF THE UNITS. SRW UNITS SHALL HAVE A MINIMUM 4 INCHES OVERLAP OF UNITS ON EACH SUCCESSIVE COURSE SO THAT THE WALL IS INTERLOCKED AND CONTINUOUS. NO GAPS GREATER THAN 1/4 OF AN INCH BETWEEN THE FACES OF ADJACENT UNITS ARE PERMITTED.

E. LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLAN DETAILS OR IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION, AND IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS.

F. USE THE SMOOTH BACK OF THE UNITS FOR ALIGNMENT AND MEASURING TO ENSURE SMOOTH CURVES AND STRAIGHT WALLS.

G. THE SECOND COURSE OF SEGMENTAL RETAINING WALL UNITS SHALL BE PLACED TO ENSURE THE PROPER SETBACK (I.E. LUGS, LIPS OR PINS).

H. ALL UNITS SHALL BE LAID SNUGLY TOGETHER AND PARALLEL TO THE STRAIGHT OR CURVED LINES.

I. THE SEGMENTAL RETAINING WALL UNITS SHALL BE SWEPT CLEAN OF ALL DIRT OR ROCKS BEFORE INSTALLING THE NEXT LAYER OF UNITS OR PLACING THE GEOSYNTHETICS.

J. AFTER LAYING EACH COURSE, PERFORM A VISUAL OR STRING LINE STRAIGHTNESS CHECK.

3.06 GEOSYNTHETIC INSTALLATION

A. THE GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED PER THE NATIONAL CONCRETE ASSOCIATION (NCMA), LATEST EDITION AS WELL AS MANUFACTURERS REQUIREMENTS AND PROCEDURES.

B. THE GEOSYNTHETICS SHALL BE CUT TO THE CORRECT LENGTH AND LAID IN THE ORIENTATION AS REQUIRED BY THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND THE MANUFACTURERS REQUIREMENTS.

C. SEGMENTAL RETAINING WALL UNIT VOIDS, DRAINAGE COLUMN AND REINFORCED BACKFILL ZONE SHALL BE FILLED, COMPACTED AND LEVELED PROPERLY PRIOR TO PLACING THE GEOSYNTHETIC.

D. ENSURE THAT THE DRAINAGE MATERIALS DIRECTLY BEHIND THE SEGMENTAL RETAINING WALL UNITS ARE FLUSH OR SLIGHTLY HIGHER THAN THE TOP OF THE UNITS SO THAT THE GEOSYNTHETICS WILL NOT BE SHEARED ON THE BACK OF THE UNIT'S SHARP EDGE.

E. THE SEGMENTAL RETAINING WALL UNITS SHALL BE SWEEP CLEAN OF ALL DIRT OR ROCK PRIOR TO PLACING THE GEOSYNTHETIC.

F. SHIMMING OR UNITS SHALL NOT BE ALLOWED ON THE GEOSYNTHETIC LAYERS.

G. THE GEOSYNTHETIC SHALL BE PLACED AS FAR FORWARD ON THE SEGMENTAL RETAINING WALL UNITS AS POSSIBLE WITHOUT REVEALING MATERIALS ON THE FACE OF THE WALL.

H. LOOSELY LAY GEOSYNTHETICS TOWARD THE BACK OF THE COMPACTED REINFORCED BACKFILL ZONE.

I. GENTLY PULL THE GEOSYNTHETICS TOWARDS THE BACK OF THE COMPACTED REINFORCED ZONE AFTER PLACING THE NEXT ROW OF SEGMENTAL RETAINING WALL BLOCKS ON TOP OF THE GEOSYNTHETICS AND ON TOP OF THE LOWER COURSE OF SEGMENTAL RETAINING WALL UNITS.

J. USE STAKES TO MAINTAIN TENSION ON THE GEOSYNTHETICS.

K. CONTRACTOR TO TAKE CARE WHEN APPLYING TENSION ON THE GEOSYNTHETICS DUE TO EXCESSIVE TENSION ALTERING THE ALIGNMENT OF THE WALL UNITS.

L. NO EQUIPMENT OTHER THAN HAND OPERATED COMPACTION DEVISES SHALL BE PERMISSIBLE ON THE EXPOSED GEOSYNTHETICS.

3.07 DRAINAGE GRAVEL

A. ALL DRAINAGE AGGREGATE SHALL BE AASHTO #57 STONE OR EQUIVALENT AND DOES NOT NEED MECHANICAL COMPACTION.

B. DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THESE PLANS. THE DRAINAGE GRAVEL SHALL BE PLACED TO A MINIMUM THICKNESS OF 12 INCHES BEHIND THE SEGMENTAL RETAINING WALL UNITS.

C. DRAINAGE GRAVEL SHALL ALSO FILL ALL VOIDS BETWEEN AND WITHIN THE UNITS. SEGMENTAL RETAINING WALL UNITS SHALL BE FILLED WITH DRAINAGE AGGREGATE IN ONE COURSE LIFTS, UNITS MAY NOT BE STAKED IN TWO OR THREE COURSE LIFTS THEN FILLED.

D. DRAINAGE PIPES ARE MANDATORY AND SHALL BE VENTED TO DAYLIGHT AT THE END(S) OF THE WALL, AT A CENTRAL LOW POINT OF THE WALL, OR THROUGH THE WALL FACE AT MAXIMUM INTERVALS OF 40 FEET ON CENTER, NO MORE THAN 6 INCHES ABOVE FINISHED GRADE WHEN VENTED THROUGH THE WALL FACE.

E. THE DRAINAGE PIPES SHALL MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED GEOSYNTHETIC ZONE. THE DRAINAGE PIPES SHALL DAYLIGHT INTO A STORM SEWER OR ALONG A SLOPE AT AN ELEVATION LOWER THAN THE LOWEST POINT OF THE DRAINAGE PIPE WITHIN THE DRAINAGE AGGREGATE.

F. CHIMNEY DRAINS ARE ONLY REQUIRED WHEN GROUNDWATER IS ENCOUNTERED OR WHEN DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.

G. FILTER FABRIC IS NEITHER REQUIRED NOR RECOMMENDED BETWEEN THE 12 INCH DRAINAGE LAYER AND THE COMPACTED REINFORCED SOIL. THE EXCEPTION IS WHEN THE REINFORCED SOIL IS CLASSIFIED AS POORLY GRADED OR WELL GRADED SAND (SP OR SW) SINCE THESE SOILS ARE NON-COHESIVE AND COULD POTENTIALLY SLOUGH, CLOGGING THE DRAINAGE LAYER.

3.08 BACKFILL PLACEMENT

A. THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THESE PLANS IN THE MAXIMUM COMPACTED LIFT THICKNESS OF 8 INCHES AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY AND AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.

B. BACKFILL THE REINFORCED GEOSYNTHETIC ZONE BY PLACING MATERIALS FROM THE BACK OF THE WALL TOWARDS THE END OF THE GEOSYNTHETICS IN ORDER TO MAINTAIN TENSION ON THE REINFORCEMENT.

C. CONTRACTOR SHALL LEAVE A 12 INCH TRENCH BETWEEN THE BACK OF THE WALL AND THE REINFORCED ZONE MATERIALS TO ALLOW FOR CLEAN GRAVEL DRAINAGE MATERIALS. THIS PROCESS WILL PREVENT UNDUE SOIL PRESSURES THAT COULD ROTATE THE SEGMENTAL RETAINING WALL UNITS FORWARD AND REDUCE THE SET BACK OF THE WALL WILL COMPACTING THE REINFORCED ZONE.

D. THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE ANY IRREGULARITIES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SEGMENTAL RETAINING WALL UNITS.

E. COMPACTION TESTING SHALL BE DONE AT EVERY VERTICAL FOOT OF THE WALL HEIGHT AND EVERY 2,500 HORIZONTAL SQUARE FOOT OR AS SPECIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER.

F. ONLY A VIBRATORY PLATE OR SMALL-SCALE VIBRATORY SMOOTH DRUM COMPACTOR EQUIPMENT SHALL BE ALLOWED WITHIN 4 FEET OF THE FRONT OF THE WALL FACE. COMPACTION WITHIN THE 4 FEET BEHIND THE WALL FACE SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT MECHANICAL PLATE COMPACTOR OR ROLLER.

G. AT THE END OF EACH DAY OF OPERATION, THE WALL CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING TO DIRECT WATER RUNOFF AWAY FROM THE WALL FACE.

H. SOIL DENSITY TESTING SHALL NOT BE TAKEN WITHIN THE 2 FOOT AREA DIRECTLY BEHIND THE SEGMENTAL RETAINING WALL BLOCKS TO AVOID TESTING METHODS CONFLICTING WITH THE DRAINAGE COLUMN OF THE WALL.

I. AT COMPLETION OF WALL CONSTRUCTION IF FINAL GRADING, PAVING, LANDSCAPING AND/OR STORM DRAINAGE INSTALLATION ADJACENT TO THE WALL IS NOT PLACED IMMEDIATELY AFTER WALL COMPLETION, TEMPORARY GRADING SHALL BE PROVIDED TO ENSURE WATER RUNOFF IS NOT ALLOWED TO COLLECT OR POND BEHIND THE WALL UNTIL FINAL CONSTRUCTION ADJACENT TO THE WALL IS COMPLETED.

J. THE TOE OF THE WALL SHALL BE FILLED AND COMPACTED AS THE WALL IS BEING CONSTRUCTED.

K. WHEN COMPLETING THE FINAL LAYER OF BACKFILL MATERIALS AND DRAINAGE GRAVEL, AND BEFORE PLACING THE IMPERVIOUS MATERIAL AND THE PLANTING SOIL, PLACE A LAYER OF GEOSYNTHETIC SOIL SEPARATION FABRIC (4 OZ NON-WOVEN GEOTEXTILE) TO NO LESS THAN 5 FEET FROM THE TOP FACE OF THE SEGMENTAL RETAINING WALL UNIT. THE NON-WOVEN GEOTEXTILE SHALL WRAP UP THE BACK SIDE OF THE SEGMENTAL RETAINING WALL BLOCK TO THE BOTTOM OF THE CAPPING UNIT. THE FABRIC WILL PREVENT THE PLANTING SOIL FINES FROM MIGRATING INTO THE DRAINAGE GRAVEL AND FROM STAINING THE WALL FACE.

3.09 CAP INSTALLATION

A. SEGMENTAL RETAINING WALL CAPS SHALL BE PROPERLY ALIGNED AND SECURED TO THE UNDERLYING SEGMENTAL RETAINING WALL UNITS.

B. STRING LINES FOR STRAIGHT WALLS OR FLEX PIPES FOR CURVED WALLS SHALL BE USED TO ALIGN CAPPING UNITS.

C. THE CORNERSTONE STRAIGHT OR REVERSIBLE CAPS SHALL BE SECURED WITH AN ALL WEATHER EXTERIOR GRADE HIGH STRENGTH CONCRETE ADHESIVE.

D. SEGMENTAL RETAINING WALL CAPS UNITS SHALL BE PLACED WITH AN OVERHANG.

E. CAPS AND WALL UNITS SHALL BE CLEAR OR ALL DIRT, DUST AND STANDING WATER BEFORE PLACING THE CONCRETE ADHESIVE.

3.10 FENCE INSTALLATION

A. ELA GROUP, INC. SHALL NOT BE LIABLE FOR PERSONAL PROTECTION AROUND THE STRUCTURE.

B. ALL FENCES SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA AND IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.

C. FENCES AS SHOWN ON THESE PLANS AND IN THE DETAILS SHALL BE INSTALLED IN SLEEVE-ITS.

D. ALL FENCES SHALL MEET ALL LOCAL CODE REGULATIONS. IT IS THE RESPONSIBILITY OF THE WALL CONTRACTOR TO VERIFY THAT THE FENCE AS SHOWN ON THESE PLANS AND IN THE DETAILS MEETS THE LOCAL CODE REGULATIONS AND REPORT ANY DISCREPANCIES TO ELA GROUP, INC. IMMEDIATELY.

3.11 GUIDERAIL INSTALLATION

A. ELA GROUP, INC. SHALL NOT BE LIABLE FOR PERSONAL PROTECTION AROUND THE STRUCTURE.

B. ALL GUIDERAILS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS AND THE AASHTO SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

C. GUIDERAILS SHALL BE INSTALLED AT A MINIMUM DISTANCE OF 3.3 FEET FROM FRONT FACE OF THE WALL.

D. IN CASES WHERE AASHTO SPECIFICATIONS ARE NOT APPLICABLE DUE TO SITE CONDITIONS, THE GUIDERAIL SHALL BE INSTALLED IN ACCORDANCE WITH THE PENNDOT SPECIFICATION, RC-52M.

3.12 OTHER STRUCTURES

A. LIGHT POST FOUNDATIONS, SIGN FOUNDATIONS AND SIMILAR STRUCTURES SUBJECT TO WIND LOADINGS SHALL BE INSTALLED AT A MINIMUM OF 3 FEET TO PREVENT LOADING OF THE WALL.

B. IN CASES WHERE 3 FEET MINIMUM DISTANCES CANNOT BE MET DUE TO RESTRAINTS ON THE SITE, ADDITIONAL ANALYSES WILL BE PERFORMED TO DETERMINE METHODS OF STABILIZATION.

3.13 STORM STRUCTURES & UTILITIES

A. THE WALL MAY NOT BEAR ON METAL OR PLASTIC PIPES (ADS, CMP, HDPE, PVC, SLCPP, ETC.) OR UTILITIES (ELECTRIC, GAS OR WATER LINES, ETC.) GRADE BEAMS OR LINTELS MUST BE USED TO BRIDGE THESE NON-LOAD BEARING STRUCTURES. ELA GROUP, INC. SHALL BE CONSULTED TO DETERMINE THE SIZE, STRENGTH AND REINFORCING OF THE BEAM OR LINTEL.

B. IF THESE NON-LOADING BEARING PIPES OR UTILITIES ARE LOCATED AT LEAST 42 INCHES BELOW THE WALL LEVELING PAD, A GRADE BEAM OR LINTEL MAY NOT NECESSARY.

C. CONCRETE STORM STRUCTURES ARE ACCEPTABLE BEHIND THE WALL AND WITHIN THE REINFORCED ZONE AS DICTATED BY THE PROJECT'S CIVIL PLANS.

D. IN CASES WHERE STORM SEWER PIPES ARE PARALLEL WITH THE WALL FOR LONG DISTANCES, ELA GROUP, INC. SHALL BE CONSULTED TO DETERMINE THE IMPACT ON THE WALL PRIOR TO CONSTRUCTION.

E. ALL STORM SEWER PIPE JOINTS LOCATED WITHIN THE REINFORCED ZONE SHALL BE WATERTIGHT.

F. THE WALL STRUCTURAL INTEGRITY MAY BE COMPROMISED IF STORM SEWER PIPES OR STRUCTURES DEVELOP LEAKS AND CAUSES SATURATION OF THE REINFORCED ZONE.

G. ELA GROUP, INC. WILL NOT BE LIABLE FOR WALL FAILURE THAT RESULTS FROM STORM STRUCTURES OR UTILITIES THAT ALLOW WATER TO LEAK INTO THE REINFORCED ZONE CAUSING SATURATATION AND DISRUPTION OF THE REINFORCED SOIL.

H. THE OWNER'S GEOTECHNICAL ENGINEER SHALL SPECIFY IF A CHIMNEY DRAIN, DRAIN BEHIND THE REINFORCED ZONE, SHALL BE REQUIRED.

3.14 CONSTRUCTION ADJACENT TO COMPLETED WALL

A. THE OWNER OR OWNER'S GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION ADJACENT TO THE WALL BYOTHERS DOES NOT DISTURB THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL THAT EXCEED DESIGN LOADS, INCLUDING LOADS SUCH AS WATER PRESSURE, TEMPORARY GRADES, OR EQUIPMENT LOADING.

B. HEAVY PAVING OR GRADING EQUIPMENT SHALL BE KEPT A MINIMUM OF THREE FEET BEHIND THE BACK OF THE WALL FACE.

C. EQUIPMENT WITH WHEEL LOADS IN EXCESS OF 150 PSF LIVE LOAD SHALL NOT BE OPERATED WITHIN 10 FEET OF THE WALL FACE DURING ADJACENT WALL CONSTRUCTION.

D. CARE SHALL BE TAKEN BY THE GENERAL CONTRACTOR OR OWNER TO ENSURE WATER RUNOFF IS DIRECTED AWAY FROM THE WALL STRUCTURE UNTIL FINAL GRADING AND SURFACE DRAINAGE COLLECTION SYSTEMS ARE COMPLETED.

E. CARE SHALL BE TAKEN WHEN INSTALLING APPURTENANCES (SUCH AS TRANSFORMERS, GENERATORS, ETC.) WITHIN THE REINFORCED ZONE OF THE WALL. THE COMPACTION INTEGRITY OF THE REINFORCED ZONE SHALL BE MAINTAINED, BOTH BELOW AND BESIDE (AROUND) THE APPURTENANCE. NEGLECTING TO DO SO MAY CAUSE HYDROSTATIC PRESSURE AND WALL FAILURE.

PART 4: CONSTRUCTION QUALITY CONTROL AND ASSURANCE

4.01 CONSTRUCTION QUALITY CONTROL

A. THE WALL PROJECT INSTALLER IS RESPONSIBLE TO ENSURE THAT ALL INSTALLATION AND MATERIALS MEET THE QUALITY SPECIFIED IN THE CONSTRUCTION DRAWINGS.

B. A QUALIFIED INDEPENDENT PARTY WILL BE RESPONSIBLE TO VERIFY THAT INSTALLATION PROCEDURES HAVE BEEN INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS.

C. ALL SITE CONSTRUCTION TOLERANCES FOR VERTICAL ALIGNMENT, HORIZONTAL LOCATIONS FOR ELEVATIONS, CORNER AND RADIUS LOCATIONS, WALL BATTER AND MINIMUM BULGING WILL BE WITHIN THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) SPECIFICATIONS.

4.02 QUALITY ASSURANCE

A. THE OWNER IS RESPONSIBLE TO ENGAGE TESTING AND INSPECTION SERVICES TO PROVIDE INDEPENDENT QUALITY CONSTRUCTION ASSURANCE.

B. COMPACTION TESTING OF THE REINFORCEMENT BACKFILL SOILS SHALL BE PERFORMED EVERY 2 VERTICAL FEET OF MATERIAL INSTALLATION.

C. THE TESTS SHALL BE DONE A MINIMUM OF EVERY 50 LINEAL FEET ALONG THE WALL AT EACH LEVEL OF TESTING.

D. TESTING SHALL NOT BE CLOSER THAN 2 FEET FROM THE BACK OF THE WALL AND DONE AT A VARIETY OF LOCATIONS TO COVER THE ENTIRE REINFORCED SOIL ZONE.

E. INDEPENDENT INSPECTION PROFESSIONALS SHALL ENSURE ALL PARAMETERS AND CONSTRUCTION SPECIFICATIONS HAVE BEEN FOLLOWED IN ACCORDANCE TO THE DESIGN DRAWINGS AND SPECIFICATIONS.

5/7/13
DATE

STATE OF MARYLAND
GRANT WILLIAM HUMMER
#15933
PROFESSIONAL ENGINEER

RETAINING WALL ENGINEER

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date 6/07/13
Chief, Development Engineering Division	Date 6/3/13
Director, Department of Planning and Zoning	Date 6/7/13

2	03/2013	RETAINING WALL LOCATION
1	11/2012	REDLINE REVISIONS

REVISED
NORTH SIDE REDEVELOPMENT
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
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1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
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PERMIT INFORMATION CHART

SUBDIVISION NAME			SECTION/AREA		LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER					572,346,97,344,441
PLAT#	GRID#	ZONING	TAX MAP#	ELECT DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	400 (TG 550)		SEWER CODE	B01	

TITLE:

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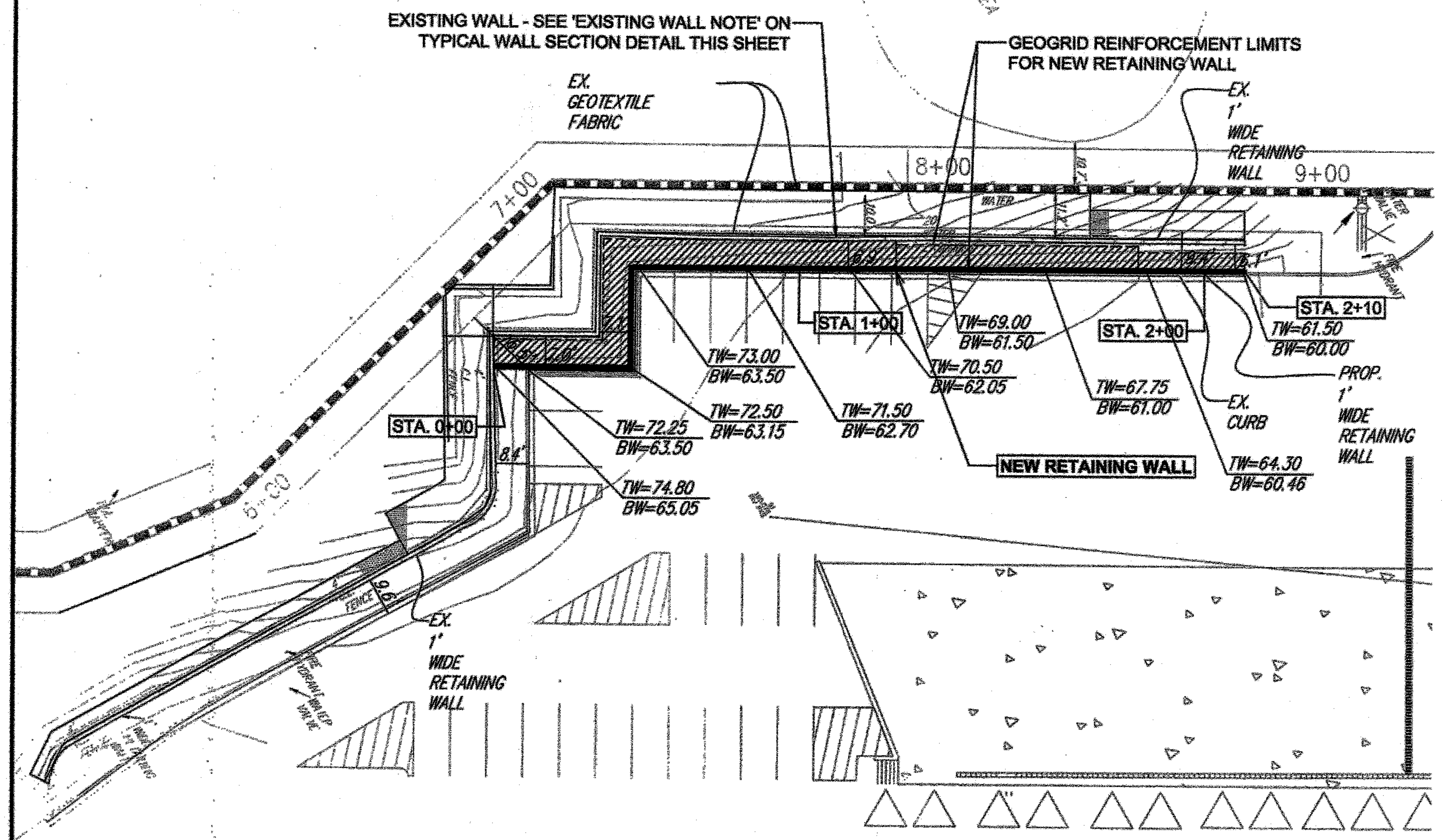
DRAWN: DAM	DATE: SEPT 26 2012		45 OF 45
CHECKED: ENJ	APPROVED: WRZ		

MDC-855

SDP-08-116



NEW WALL LOCATION PLAN

~~1" = 20'~~

(N.T.S.)

SPECIFICATIONS

MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 DESCRIPTION

A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.

B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.

C. WORK INCLUDES FURNISHING AND INSTALLING GEOGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.

1.02 DELIVERY, STORAGE AND HANDLING

A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.

B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

PART 2: PRODUCTS

2.01 MODULAR CONCRETE RETAINING WALL UNITS

A. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:

FACE COLOR - COLOR MAY BE SPECIFIED BY THE OWNER.

FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR TRI-PLANER OR FLAT CONFIGURATION. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.

BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS.

EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER DIFFUSED LIGHTING.

B. MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.

C. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCES:

COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 8% MAXIMUM (6% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;

DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE, ±1/16"

UNIT HEIGHT - TOP AND BOTTOM PLANES; UNIT SIZE - 8" (H) X 18" (W) X 12" (D) MINIMUM;

UNIT WEIGHT - 75 LBS/UNIT MINIMUM FOR STANDARD WEIGHT AGGREGATES;

INTER-UNIT SHEAR STRENGTH - 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE.

GEOGRID/UNIT PEAK CONNECTION STRENGTH - 1000 PLF MINIMUM

D. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING CONSTRUCTABILITY REQUIREMENTS:

VERTICAL SETBACK = 1/8"± PER COURSE (NEAR VERTICAL) OR 1"+ PER COURSE PER THE DESIGN; ALIGNMENT AND GRID POSITIONING MECHANISM - FIBERGLASS PINS, TWO PER UNIT MINIMUM;

MAXIMUM HORIZONTAL GAP BETWEEN ERECTED UNITS SHALL BE - 1/2 INCH.

2.02 SHEAR CONNECTORS

A. SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER THERMOSET ISOPTHALIC POLYESTER RESIN-PROTRUDED FIBERGLASS REINFORCEMENT RODS OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN VERTICALLY AND HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO + 100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEOGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.

2.03 BASE LEVELING PAD MATERIAL

A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE BASE AS SHOWN ON THE CONSTRUCTION DRAWINGS.

2.04 UNIT DRAINAGE FILL

A. UNIT DRAINAGE FILL SHALL CONSIST OF #57CRUSHED STONE

2.05 REINFORCED BACKFILL

A. REINFORCED BACKFILL SHALL TYPE SM, BE FREE OF DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN:

SIEVE SIZE	PERCENT PASSING
2 INCH	100-75
3/4 INCH	100-75
NO. 40	0-60
NO. 200	0-35

PLASTICITY INDEX (PI) <10 AND LIQUID LIMIT <35 PER ASTM D-4318.

B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.

2.06 GEOGRID SOIL REINFORCEMENT

A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE MANUFACTURED FROM HIGH TENACITY POLYESTER YARN.

2.07 DRAINAGE PIPE

A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-1248.

PART 3 EXECUTION

3.01 EXCAVATION

A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.

3.02 BASE LEVELING PAD

A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 6 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.

B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.

3.03 MODULAR UNIT INSTALLATION

A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.

B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

C. INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.

D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.

E. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED THREE COURSES.

3.04 STRUCTURAL GEOGRID INSTALLATION

A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.

B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.

C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEOGRID. THE GEOGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEOGRID.

D. GEOGRID REINFORCEMENTS SHALL BE CONTINUOUS THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL. SPLICED CONNECTIONS BETWEEN SHORTER PIECES OF GEOGRID OR GAPS BETWEEN ADJACENT PIECES OF GEOGRID ARE NOT PERMITTED.

3.05 REINFORCED BACKFILL PLACEMENT

A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE.

B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 6 INCHES WHERE HAND COMPACTION IS USED, OR 8 - 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.

C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO - 3% OF OPTIMUM.

D. ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.

E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.

F. RUBBER TIRED EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.

G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.

3.06 CAP INSTALLATION

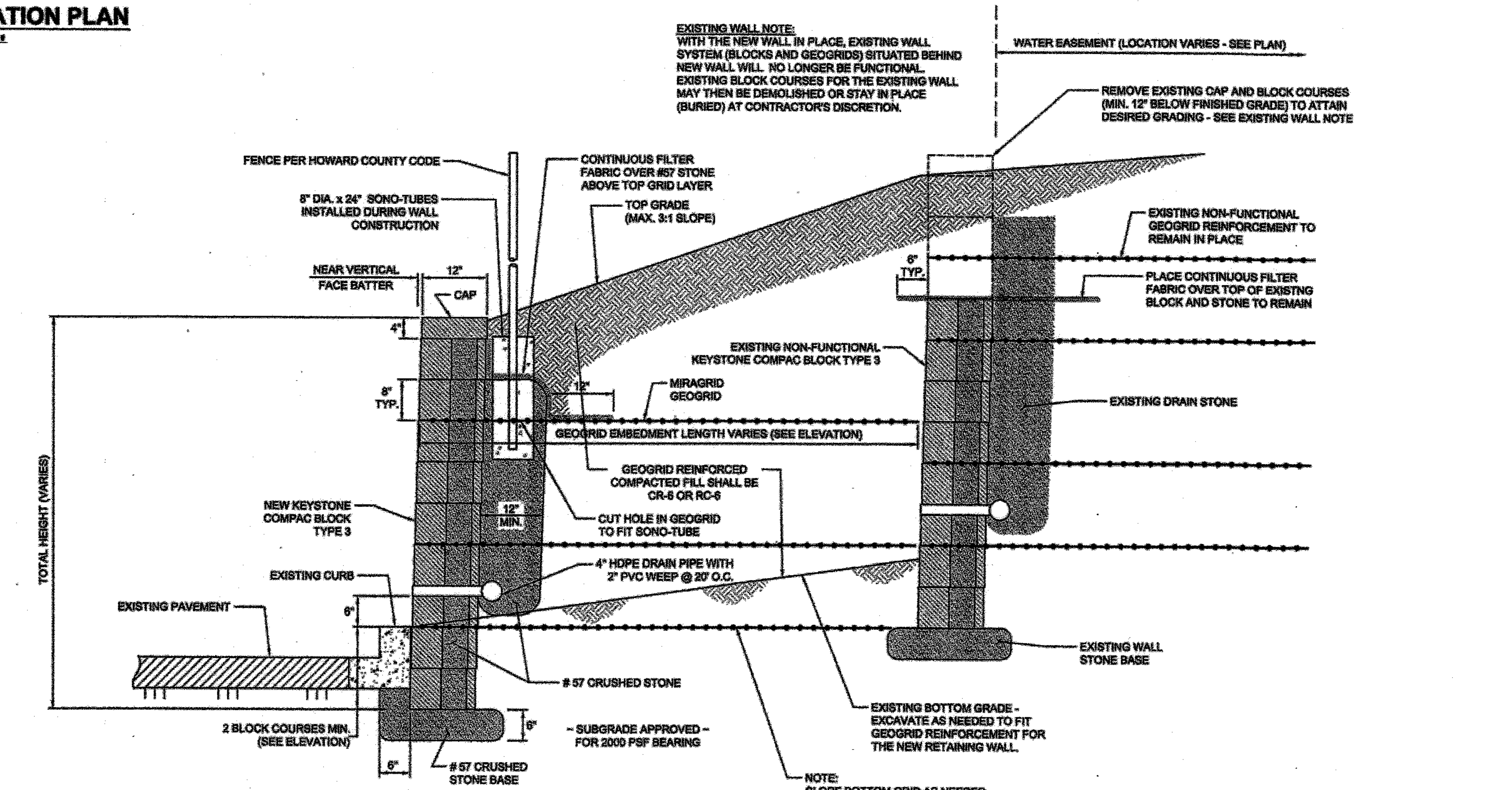
A. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.

3.07 FIELD QUALITY CONTROL

A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.

B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

EXISTING WALL NOTE:
WITH THE NEW WALL IN PLACE, EXISTING WALL SYSTEM (BLOCKS AND GEOGRIDS) SITUATED BEHIND NEW WALL WILL NO LONGER BE FUNCTIONAL. EXISTING BLOCK COURSES FOR THE EXISTING WALL MAY THEN BE DEMOLISHED OR STAY IN PLACE (BURIED) AT CONTRACTOR'S DISCRETION.



TYPICAL WALL SECTION

N.T.S.

HOWARD COUNTY NOTES:

1. NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL.
2. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN .
3. ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
4. THE REQUIRED BEARING PRESSURE BENEATH THE WALL SYSTEM SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO START OF CONSTRUCTION. THE REQUIRED BEARING TEST SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
5. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH 8" LIFT MUST BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
6. WALLS SHALL NOT BE CONSTRUCTED ON UNCERTIFIED FILL MATERIALS.
7. WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD COUNTY RIGHT-OF-WAY OR EASEMENT.

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. 14434. EXPIRATION DATE: 05/13/17.

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NEW RETAINING WALL PLAN & CONSTRUCTION DETAILS
DORSEY RUN INDUSTRIAL CENTER
HOWARD COUNTY, MARYLAND

REVISION NO.	DESCRIPTION	DATE

JOB NUMBER: 15439-A	DESIGNED BY: HM	1 of 2 SHEET
SCALE: AS SHOWN	DRAWN BY: HM	
DATE: 10/19/2015	APPROVED BY: RWS	

DATE PLOTTED: 10/19/2015 5:10 PM

7/28/16
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development (signed) JMF	Date 9-28-16
Chief, Development Engineering Division (signed) JP	Date 9-26-16
Director, Department of Planning and Zoning (signed)	Date 9-30-16

4	4/15	RETAINING WALL + W/L STUB

NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST
C/O EXETER PROPERTY GROUP
140 W. GERMANTOWN PIKE, SUITE 150
PLYMOUTH MEETING, PA 19462
TEL. (610) 828-0756
FAX (610) 828-5550

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7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
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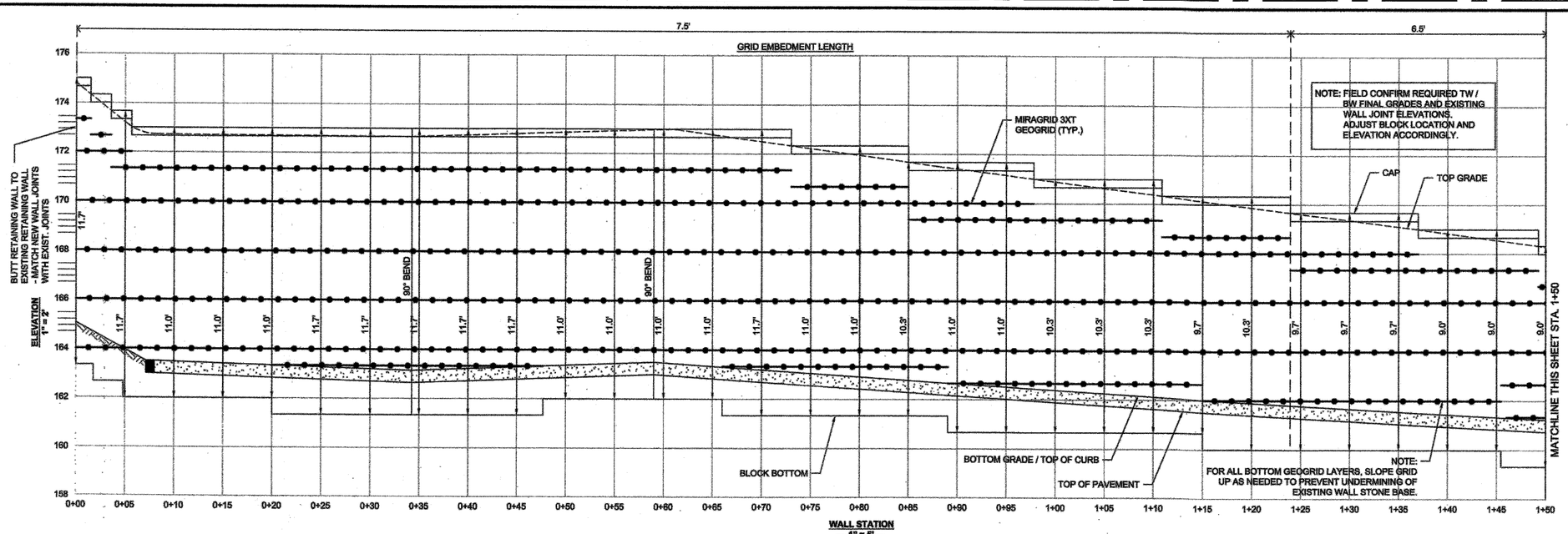
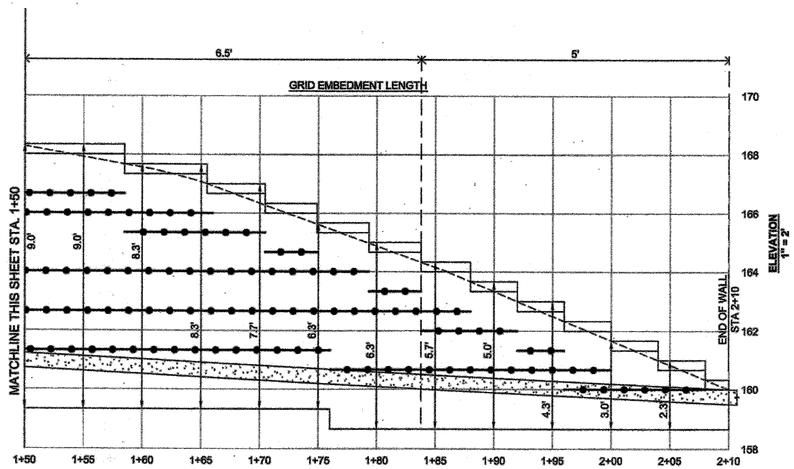


WALL ELEVATION



WALL ELEVATION

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STATE OF MARYLAND · RICHARD W. STURM · No. 14434 · PROFESSIONAL ENGINEER

7/28/16
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	9-28-16 Date
Chief, Development Engineering Division JP	9-26-16 Date
Director, Department of Planning and Zoning	9-30-16 Date

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