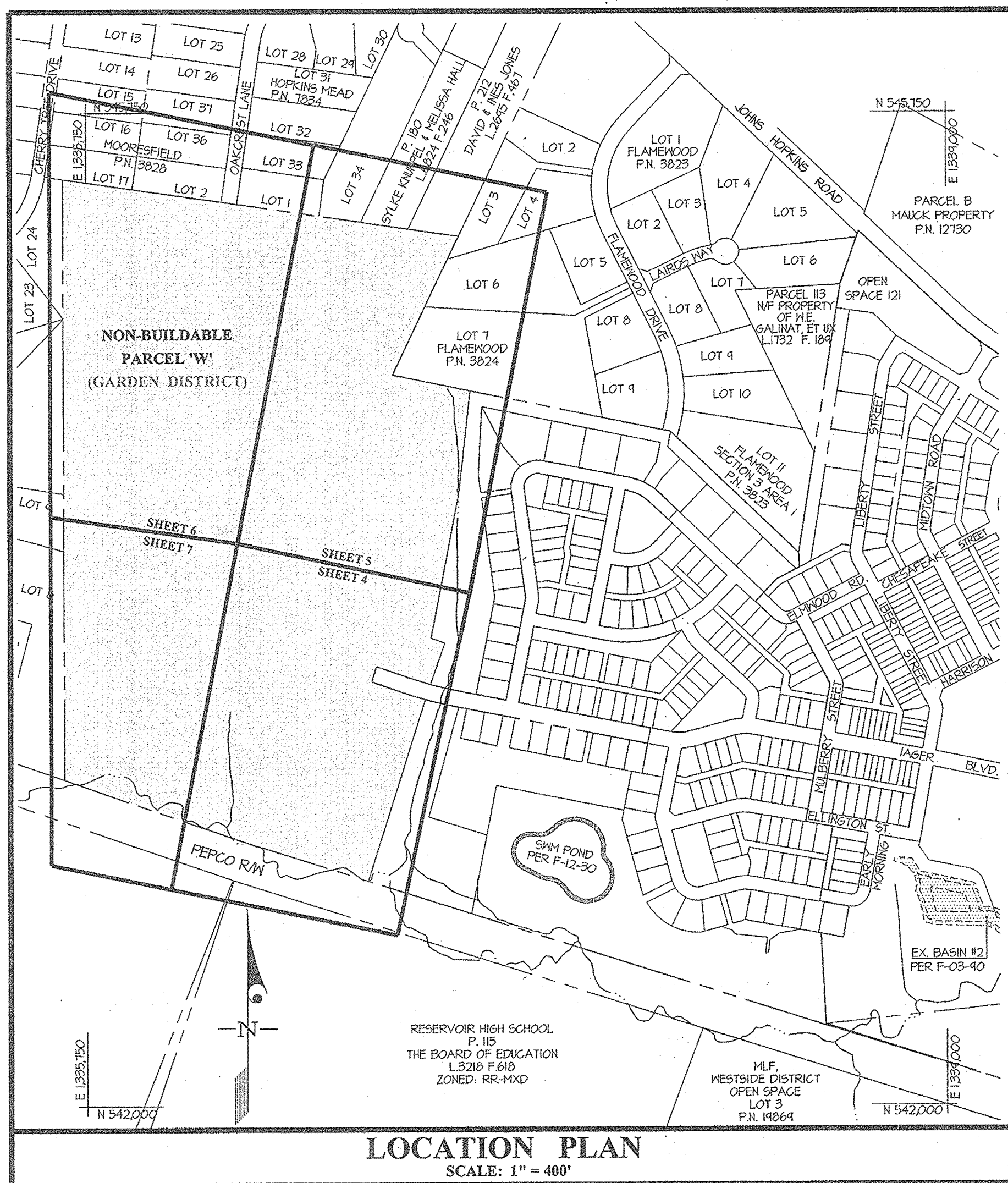


CONSTRUCTION PLANS

STORMWATER MANAGEMENT and SEDIMENT CONTROL

MAPLE LAWN FARMS GARDEN DISTRICT NON-BUILDABLE PARCEL 'W'



GENERAL NOTES (cont.):

31. THE ORIGINAL FOREST CONSERVATION OBLIGATION THAT WAS ESTIMATED FOR ALL OF MAPLE LAWN FARMS HAS BEEN FILLED WITH THE FOREST CONSERVATION EASEMENTS CREATED UNDER P-12-002 AND SUBSEQUENT PLATS.

32. THE '5' TREE CONFLICT EASEMENT SHOWN ON THESE PLANS GRANTS THE RIGHT TO ENTER THE EASEMENT FOR THE PURPOSE OF CUTTING DOWN, TRIMMING, REMOVING AND/OR KEEPING CUT ALL TREES WHICH MAY INTERFERE WITH ANY TOWERS, POLES, STRUCTURES, WRES, CABLES, CONDUITS OR OTHER IMPROVEMENTS WITHIN THE PERCO RUN, AS PER LIBER 2005 FOLIO 33.

33. ALL BUFFERING AND OTHER LANDSCAPING REQUIREMENTS/FEATURES WILL BE PROVIDED AT THE SITE DEVELOPMENT PLAN STAGE AND/OR THE FINAL PLAN STAGE AND WILL BE PROVIDED IN ACCORDANCE WITH THE COMPREHENSIVE SKETCH PLAN CRITERIA.

34. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II. IT WAS DETERMINED THAT THIS PROJECT MET THE CRITERIA OUTLINED IN THE MDC STORMWATER MANAGEMENT REGULATIONS, GUIDANCE FOR IMPLEMENTATION FOR ACCEPTANCE OF THE 2000 DESIGN CRITERIA AND THROUGH THE ADMINISTRATIVE WAIVER PROCESS, HAS GRANTED A WAIVER. THIS PLAN RECEIVED COMPREHENSIVE SKETCH PLAN APPROVAL (S 06-16) ON JANUARY 25, 2011. THIS PLAN IS ALSO SUBJECT TO THE EXPIRATION OF THIS WAIVER UNLESS ALL OF THE STORMWATER MANAGEMENT IS CONSTRUCTED BY MAY 4, 2011.

35. THE PATHWAY DISTURBANCE TO THE FLOODPLAINS, STREAM, WETLANDS AND THEIR BUFFERS WERE CONSIDERED ESSENTIAL DISTURBANCE, PER SECTION 16.16(C) OF THE REGULATIONS.

36. PRIOR TO COMMENCEMENT OF GRADING OPERATIONS ON THE AREA IDENTIFIED AS GARDEN DISTRICT, NON-BUILDABLE PARCEL 'W' (MAPLE LAWN FARMS, INC.), THE EXISTING WELL MUST BE SEALED AND THE EXISTING SEPTIC SYSTEM MUST BE ABANDONED AT THE RESIDENCE IDENTIFIED AS '1451 CHERRY TREE DRIVE' (WHICH IS ON THE SUBJECT PROPERTY). THE DRILLED WELL, NO. 73-4032, IS TO BE SEALED BY A LICENSED WELL DRILLER. THE WELL ABANDONMENT REPORT IS TO BE RECEIVED BY THE HEALTH DEPARTMENT PRIOR TO GRADING OPERATIONS. THE SEPTIC TANK IS TO BE PUMPED, CRUSHED, AND FILLED WITH CLEAN EARTH MATERIALS. THE CONTRACTOR ABANDONING THE SEPTIC SYSTEM IS TO SEND THE INVOICE FOR PUMPING THE TANK AND A WRITTEN REPORT WITH PHOTOS TO THE HEALTH DEPARTMENT.

37. AS STATED IN THE DECISION AND ORDER FOR THIS PLAN, THE PLANNING BOARD SHALL REVIEW AND APPROVE SITE DEVELOPMENT PLANS FOR ALL SINGLE FAMILY ATTACHED AND M.L.T.-FAMILY RESIDENTIAL USES, AND ALL EMPLOYMENT AND OPEN SPACE USE DEVELOPMENT FOR THE SUBJECT MAPLE LAWN FARMS PROJECT. ALL OF THE IMPROVEMENTS THAT WERE NECESSARY FOR THE MAPLE LAWN FARMS PROJECT TO BE IN COMPLIANCE WITH THE FUNDING TEST EVALUATION RESTRICTIONS ENACTED BY THE ZONING BOARD ON PAGE 22-23 OF ITS DECISION ON THE PDP HAVE BEEN CONSTRUCTED.

38. NO GRADINGS, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, AND 100 YEAR FLOOD PLAIN AREAS, EXCEPT AS PERMITTED UNDER NP-02-04, NP-09-02, AND NP-09-120.

39. OPEN SPACE LOTS MAY CONTAIN ACTIVE RECREATIONAL FACILITIES AS ALLOWED BY THE APPROVED COMPREHENSIVE DEVELOPMENT CRITERIA.

40. PHASING FOR THIS PROJECT IS IN ACCORDANCE WITH THE DECISION AND ORDER FOR ZONING BOARD CASE NO. ZB-19EM 4 ZB-109M AND THE DECISION AND ORDER FOR PB CASE NO. 353 COMPREHENSIVE SKETCH PLAN, S-01-11 AND NO. 310 COMPREHENSIVE SKETCH PLAN, S-06-16 AND THE DPZ APPD RE-PHASING LETTER DATED JULY 8, 2008.

41. DEVELOPMENT FOR THIS PHASE WILL BE DONE IN ACCORDANCE WITH THE COMPREHENSIVE DEVELOPMENT CRITERIA APPROVED WITH S-01-11, S-06-16, PB-353, AND PB-378.

42. THE TRANSPORTATION AND TRANSIT DESIGN WILL BE IMPLEMENTED AS OUTLINED IN THE PETITIONER'S EXHIBIT 55 AS SUBMITTED AS PART OF ZB94EM.

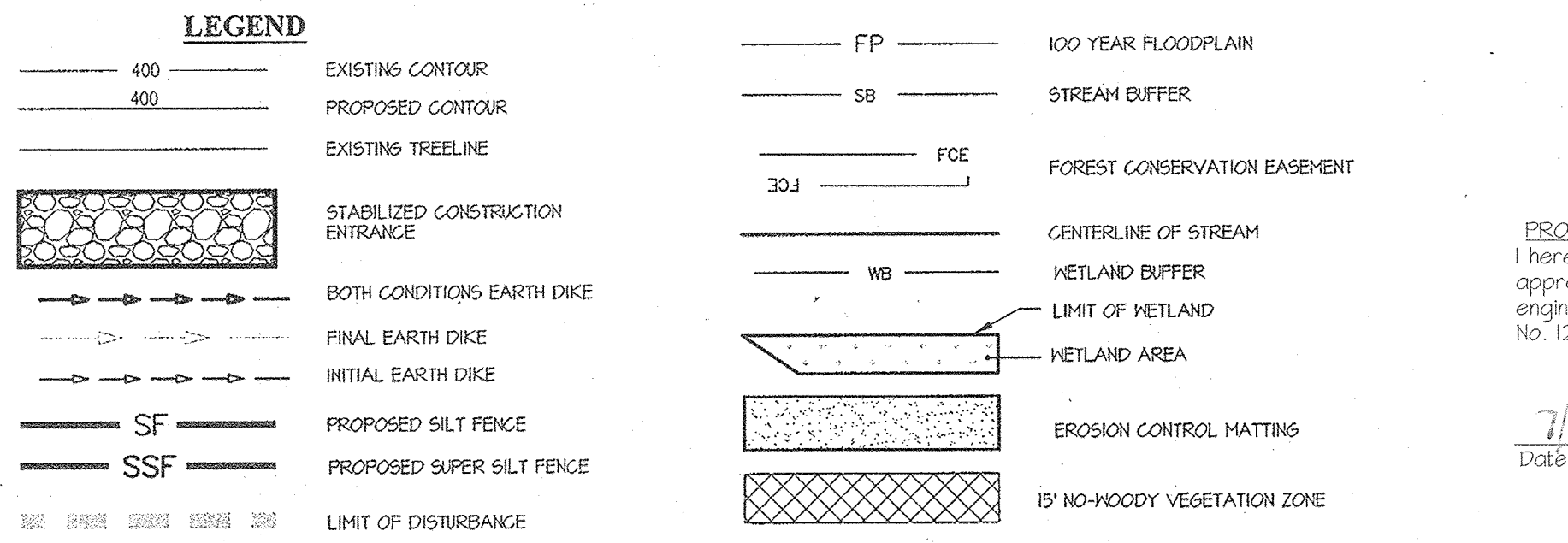
43. A NOISE STUDY WAS PREPARED BY HILDMAN & ASSOCIATES FOR S-01-11, APPROVED BY PLANNING BOARD ON AUGUST 8, 2001, AND UPDATED BY HILSON T. BALLARD COMPANY IN MAY 2006 FOR S-06-16 (APPROVED BY PLANNING BOARD ON FEBRUARY 20, 2007).

44. THE LIMITS OF THIS SUBMISSION DOES NOT INCLUDE MODERATE INCOME HOUSING UNITS.

45. FOR SOIL TYPES, DESCRIPTIONS AND LIMITATIONS, SEE S-01-11, AND S-06-16.

GENERAL NOTES:

1. ZONING: SITE IS BEING DEVELOPED UNDER MXD-3 REGULATIONS, PER ZB94EM, APPROVED ON 2/8/01 AND ZB-109M APPROVED 03/20/08 AND THE COMPREHENSIVE ZONING PLAN DATED 02/20/08. UNDERLYING ZONING IS REPEALED AND THE LOW DENSITY ZONING REGULATIONS AMENDMENTS DATED 07/29/08.
2. THE PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: S-01-11, S-06-16, ZB-19EM, ZB-109M, PB-353, PB-378, NP-01-11, NP-09-02, F-06-16, F-06-16-2, F-06-20, F-07-14, F-07-12, F-07-14O, F-07-21O, F-08-04, F-08-15, F-08-16, F-08-12, NP-03-120, F-12-24, F-12-30.
3. THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS OTHERWISE HAVE BEEN APPROVED.
4. THE CEMETERY INVENTORY MAPS DO NOT SHOW ANY CEMETERIES WITHIN THE PROJECT LIMITS. THE EXISTING CEMETERY ONCE LOCATED ON THE KESSSEL PROPERTY WAS RELOCATED UNDER NP-09-12.
5. THE SCENIC ROADS MAP DOES NOT INDICATE ANY SCENIC ROADS WITHIN OR ADJACENT TO THE PROJECT LIMITS.
6. THIS PROPERTY WAS BROUGHT INTO THE METROPOLITAN DISTRICT ON APRIL 26, 2011.
7. THIS AREA OF DEVELOPMENT DOES NOT CONTAIN ANY PUBLIC OR PRIVATE ROADS.
8. SITE ANALYSIS:
 - GROSS SITE AREA FOR PHASES 1 THROUGH 4D: 494.93 ACRES ±
 - AREA OF THIS PLAN SUBMISSION: 75.74 ACRES ±
 - DISTURBED AREA: 56.6 ACRES ±
 - AREA OF OPEN SPACE: 0 ACRES ±
 - AREA OF 100-YR FLOODPLAIN: 5.49 ACRES ±
 - AREA OF ROADWAY (PUBLIC): 0 ACRES ±
 - AREA OF ROADWAY (PRIVATE): 0 ACRES ±
 - AREA OF RESIDENTIAL LOTS: 0 ACRES ±
 - AREA OF OR LOTS/PARCELS: 0 ACRES ±
 - AREA OF SFD LOTS: 0 ACRES ±
 - TOTAL UNITS PER S-06-16 ALLOCATIONS: 0 LOTS
 - TOTAL NUMBER OF LOTS / PARCELS (THIS PLAN SUBMISSION): 1 LOTS
 - NO. OF LOTS/PARCELS: 1 LOTS
 - NO. OF SFD LOTS: 0 LOTS
 - AREA OF NON-BUILDABLE PARCELS: 75.74 ACRES ±
 - NON-BUILDABLE PARCELS: 1 PARCELS
9. OPEN SPACE REQUIREMENTS WILL BE CALCULATED AND PROVIDED WITH FUTURE PLAN SUBMISSIONS.
10. NO RESIDENTIAL UNITS ARE BEING BROUGHT INTO THE PROJECT WITH THIS PLAN SUBMISSION.
11. SOILS DATA WAS TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND ISSUED JULY 1960.
12. CONTOURS SHOWN WERE TAKEN FROM AERIAL TOPOGRAPHY PREPARED DURING MARCH 1991 BY SDI AND THEN UPDATED BY GRADE CHECKS PERFORMED BY GUTSCHICK, LITTLE & WEBER, P.A. AND BASED ON F-12-30. BOUNDARY INFORMATION SHOWN IS BASED UPON A FIELD SURVEY PREPARED BY GUTSCHICK, LITTLE AND WEBER, P.A. ON OR ABOUT JUNE, 2001.
13. WETLAND DELINEATION WAS DETERMINED BY EXPLORATION RESEARCH, INC. AND APPROVED BY THE CORPS OF ENGINEERS UNDER JD 63101-9 ON 05/4/98. IMPACTS TO WETLANDS AND WATERS OF THE STATE RESULTING FROM THIS DEVELOPMENT ARE AUTHORIZED BY MDE PERMIT NP-02-00005421.
14. THE 100-YEAR FLOOD PLAIN LIMITS WERE DETERMINED BY THE FLOODPLAIN STUDY PREPARED BY GUTSCHICK, LITTLE AND WEBER, P.A. AS PART OF F-02-12 AND P-11-02.
15. HORIZONTAL AND VERTICAL DATUM IS BASED ON HOWARD COUNTY STATION 46BC AND 46BD.
16. EXISTING UTILITIES WERE TAKEN FROM AVAILABLE HOWARD COUNTY RECORDS.
17. PUBLIC WATER AND SEWER TO BE UTILIZED:
 - EXISTING WATER CONTRACT NUMBER: 24-4103-D THRU 24-4104-D
 - EXISTING SEWER CONTRACT NUMBER: 24-4103-D THRU 24-4104-D
18. TRAFFIC STUDY WAS PREPARED AND SUBMITTED AS PART OF S-06-16, WHICH WAS SIGNED BY THE PLANNING BOARD ON 02/20/07.
19. PERENNIAL STREAM BUFFERS ARE DETERMINED BY LAND USE ADJOINING THE OPEN SPACE (I.E. EMPLOYMENT + 50' BUFFER, RESIDENTIAL + '5' BUFFER). ALL USES ADJOINING AN INTERMITTENT STREAM = 50' BUFFER.
20. STORMWATER MANAGEMENT, FOR BOTH QUALITY AND QUANTITY, FOR THE INFRASTRUCTURE AND RESIDENTIAL LOTS WILL BE SATISFIED THROUGH FACILITIES BEING CONSTRUCTED BY THESE PLANS. THE FACILITIES WILL BE 3 POND SYSTEM WITH EXTENDED DETENTION. THEY WILL BE PUBLICLY OWNED WITH JOINT MAINTENANCE. THE RECHARGE REQUIREMENTS FOR THIS AREA WILL BE PROVIDED IN PRIVATELY OWNED AND MAINTAINED FACILITIES TO BE LOCATED WITHIN OPEN SPACE LOTS. THE TWO P-3 PONDS WILL SERVE AS SEDIMENT BASINS FOR THE GRADING SHOWN BEFORE BEING CONVERTED. THE REV FACILITIES WILL BE DESIGNED WITH FUTURE ROAD CONSTRUCTION PLANS.
21. THE RESIDENTIAL LOTS, PARCELS AND EMPLOYMENT USE STRUCTURES DEVELOPED OR PROPOSED ON THE ORIGINAL 507 ACRE TRACT FOR MAPLE LAWN FARMS ARE GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS DEVELOPED UNDER S-01-11, PB CASE 353 AND ZB CASE NO. 19EM. HOWEVER, THE PROPOSED RESIDENTIAL AND EMPLOYMENT USES THAT ARE TO BE DEVELOPED UNDER THE AMENDED CSP, S-06-16 AND Z3 CASE NO. 109M FOR THE FORMER KESSSEL AND OLIVER PROPERTIES ARE SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS PER COUNCIL BILL NO. 75-2003.
22. AS STATED IN THE DECISION AND ORDER FOR THIS PLAN, THE PLANNING BOARD SHALL REVIEW AND APPROVE SITE DEVELOPMENT PLANS FOR ALL SINGLE FAMILY ATTACHED AND M.L.T.-FAMILY RESIDENTIAL USES, AND ALL EMPLOYMENT AND OPEN SPACE USE DEVELOPMENT FOR THE SUBJECT MAPLE LAWN FARMS PROJECT. ALL OF THE IMPROVEMENTS THAT WERE NECESSARY FOR THE MAPLE LAWN FARMS PROJECT TO BE IN COMPLIANCE WITH THE FUNDING TEST EVALUATION RESTRICTIONS ENACTED BY THE ZONING BOARD ON PAGE 22-23 OF ITS DECISION ON THE PDP HAVE BEEN CONSTRUCTED.
23. NO GRADINGS, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, AND 100 YEAR FLOOD PLAIN AREAS, EXCEPT AS PERMITTED UNDER NP-02-04, NP-09-02, AND NP-09-120.
24. OPEN SPACE LOTS MAY CONTAIN ACTIVE RECREATIONAL FACILITIES AS ALLOWED BY THE APPROVED COMPREHENSIVE DEVELOPMENT CRITERIA.
25. PHASING FOR THIS PROJECT IS IN ACCORDANCE WITH THE DECISION AND ORDER FOR ZONING BOARD CASE NO. ZB-19EM 4 ZB-109M AND THE DECISION AND ORDER FOR PB CASE NO. 353 COMPREHENSIVE SKETCH PLAN, S-01-11 AND NO. 310 COMPREHENSIVE SKETCH PLAN, S-06-16 AND THE DPZ APPD RE-PHASING LETTER DATED JULY 8, 2008.
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27. THE TRANSPORTATION AND TRANSIT DESIGN WILL BE IMPLEMENTED AS OUTLINED IN THE PETITIONER'S EXHIBIT 55 AS SUBMITTED AS PART OF ZB94EM.
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29. THE LIMITS OF THIS SUBMISSION DOES NOT INCLUDE MODERATE INCOME HOUSING UNITS.
30. FOR SOIL TYPES, DESCRIPTIONS AND LIMITATIONS, SEE S-01-11, AND S-06-16.



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. 12475, Expiration Date: May 26, 2020.

7/21/12
Date
Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12475

Approved: Howard County Department of Public Works
Willis R. M... 12-14-12
Date
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
K... 12/17/12
Date
Chief, Division of Land Development

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

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. DEV.	DRN. KLP.	CHK. CKG.	DATE	REVISION	BY	APPR.

PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

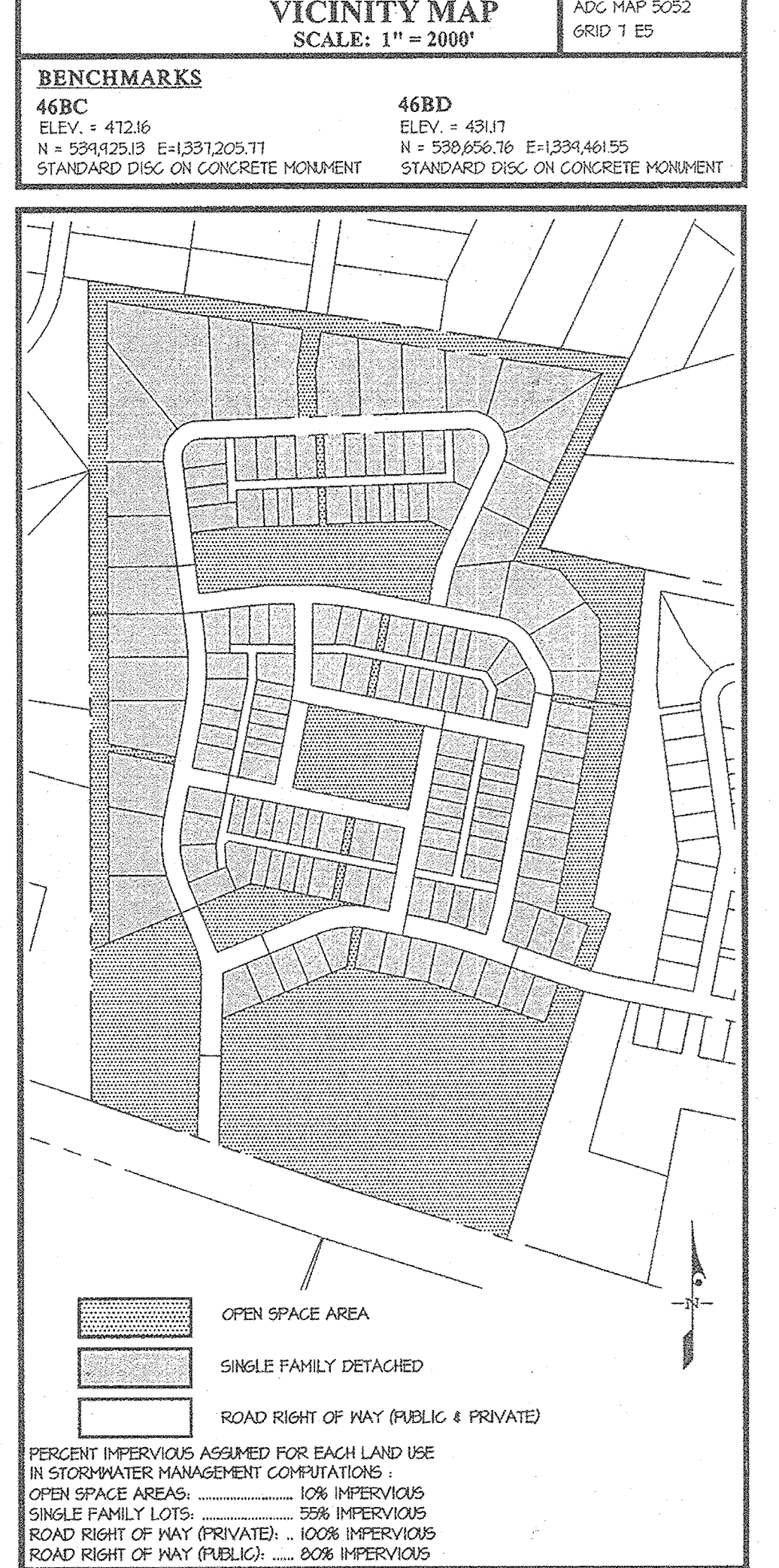
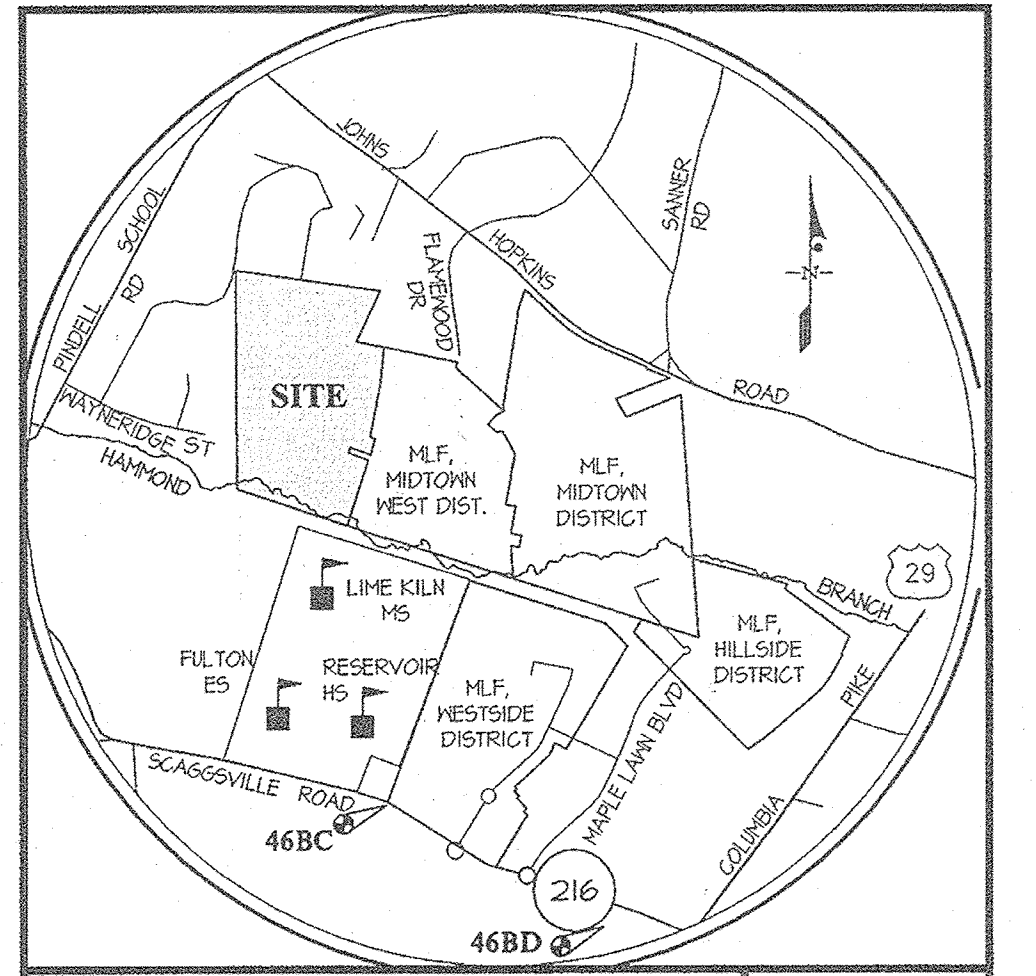
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 28, 2014.

11-20-12
ELECTION DISTRICT No. 5

ASBUILTS
COVER SHEET
MAPLE LAWN FARMS
GARDEN DISTRICT
NON-BUILDABLE PARCEL 'W'

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JULY 2012 NOV. 2012	41-21/46-3	1 OF 27

HOWARD COUNTY, MARYLAND



SHEET INDEX

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- 2 - OVERALL PROJECT CRITERIA AND INFORMATION
- 3 - OVERALL SEDIMENT CONTROL PLAN
- 4 - GRADING / SEDIMENT CONTROL PLAN
- 5 - GRADING / SEDIMENT CONTROL PLAN
- 6 - GRADING / SEDIMENT CONTROL PLAN
- 7 - GRADING / SEDIMENT CONTROL PLAN
- 8 - EARTH DIKE TREATMENT PLAN
- 9 - SEDIMENT CONTROL NOTES and DETAILS
- 10 - SEDIMENT CONTROL NOTES and DETAILS
- 11 - TEMPORARY SPM DRAINAGE AREA MAP - PRE-DEVELOPMENT
- 12 - TEMPORARY SPM DRAINAGE AREA MAP - POST-DEVELOPMENT
- 13 - ULTIMATE SPM DRAINAGE AREA MAP
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- 15 - POND 3 NOTES and DETAILS
- 16 - POND 4 NOTES and DETAILS
- 17 - POND 3 and 4 SOIL BORINGS
- 18 - POND 3 and 4 GRADING PLAN - AS BASINS
- 19 - PONDS 3 and 4 CONVERSION GRADES, POND SUMMARY and PLANTING DETAILS
- 20 - POND NOTES, DETAILS and GEO-TECH RECOMMENDATIONS
- 21 - PONDS 3 and 4 CONVERSION GRADES, POND SUMMARY and PLANTING DETAILS
- 22 - PONDS 3 and 4 BASKET BASKET DETAILS
- 23 - LANDSCAPE PLAN / NOTES and DETAILS
- 24 - LANDSCAPE PLAN / NOTES and DETAILS
- 25 - FOREST CONSERVATION PLAN
- 26 - FOREST CONSERVATION PLAN
- 27 - FOREST CONSERVATION NOTES and DETAILS

SEDIMENT CONTROL LEGEND

- 400 EXISTING CONTOUR
- 400 PROPOSED CONTOUR
- EXISTING TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- BOTH CONDITIONS EARTH DIKE
- FINAL EARTH DIKE
- INITIAL EARTH DIKE
- SF PROPOSED SILT FENCE
- SSF PROPOSED SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- FP 100 YEAR FLOODPLAIN
- SB STREAM BUFFER
- FCE FOREST CONSERVATION EASEMENT
- CENTERLINE OF STREAM
- WETLAND BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- EROSION CONTROL MATTING
- 15' NO-WOODY VEGETATION ZONE
- SOIL BORING LOCATION

- ### NOTES
- EX STORM DRAIN SHOWN IS PER F-13-01.
 - WHERE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMIT OF DISTURBANCE.
 - CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION EVERY 25 FEET.
 - FOR DUST CONTROL INFORMATION, SEE SHEET 10.
 - FOR PLANS, PROFILES AND DETAILS FOR THE CONSTRUCTION OF SEDIMENT BASIN 3, SEE SHEETS 14 THROUGH 16, AND 21.
 - FOR PLANS, PROFILES AND DETAILS FOR THE CONSTRUCTION OF SEDIMENT BASIN 4, SEE SHEETS 11 THROUGH 13, AND 21.
 - FOR EARTH DIKE TREATMENT INFORMATION, SEE SHEET 8.
 - GEOTEXTILE GLASS G SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO THE PLACEMENT OF STONE. SECTIONS OF THE GEOTEXTILE FABRIC MUST OVERLAP AT LEAST 1' WITH THE SECTION NEAREST THE ENTRANCE PLACED ON TOP. THE GEOTEXTILE FABRIC SHALL BE EMBEDDED AT LEAST 6" INTO THE EXISTING GROUND AT THE ENTRANCE OF THE OUTLET CHANNEL.
 - FOR CONVERSION OF SEDIMENT BASINS 3 AND 4 TO FINAL STORMWATER MANAGEMENT PONDS, SEE SHEETS 20 & 21.

- ### SEQUENCE OF CONSTRUCTION
- OBTAIN GRADING PERMIT AND ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR. (1 DAY)
 - CONTRACTOR IS TO INSPECT THE EXISTING SEDIMENT CONTROL DEVICES CONSTRUCTED UNDER F-12-50 AND MAKE THE NECESSARY REPAIRS TO THE DEVICES. (2 WEEKS)
 - WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, INSTALL STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, AND SUPER SILT FENCE. (2 WEEKS)
 - ONCE ALL THE MATERIALS FOR THE CONSTRUCTION OF THE BASINS ARE ON SITE, BEGIN CONSTRUCTION OF THE SEDIMENT BASINS. INSTALL Baffles AND CONTRACTOR TO INSTALL BRICK TO PROVIDE TEMPORARY NEAR GREST ELEVATION IN RISER. (2 MONTHS)
 - ONCE THE FILL FOR THE SEDIMENT BASINS HAVE REACHED THE TOP OF DAM, INSTALL THE EARTH DIKES BEGINNING AT THE DOWNSTREAM END. INSTALL THE EARTH DIKES AS SHOWN IN ORDER TO PROVIDE POSITIVE DRAINAGE TO THE BASIN. THE CONTRACTOR MUST CONTINUE TO PROVIDE POSITIVE DRAINAGE ALONG THE DIKES AS THE FILL CONTINUES AND THE EARTH DIKES ARE RELOCATED. (1 MONTH)
 - ONCE PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR, BEGIN GRASS GRADING. THE CONTRACTOR MUST IMPLEMENT DUST CONTROL MEASURES PER SPECIFICATIONS SHOWN IN THIS PLAN SET AND AS REQUESTED BY THE SEDIMENT CONTROL INSPECTOR. (4 MONTHS)
 - FINE GRADE SITE AND STABILIZE DISTURBED AREAS PER THE TEMPORARY SEEDING NOTES IN THIS PLAN SET. (1 MONTH)
 - ONCE PERMISSION HAS BEEN OBTAINED FROM THE SEDIMENT CONTROL INSPECTOR, DEVICES MAY BE REMOVED. IMMEDIATELY STABILIZE ANY DISTURBANCE AS A RESULT OF THEIR REMOVAL. (1 MONTH)
 - ONCE ALL OF THE AREAS DRAINING TO THE BASINS HAVE BEEN STABILIZED AND PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR, CONTRACTOR IS TO BEGIN THE CONVERSION OF THE SEDIMENT BASINS TO SHM PONDS. (1 MONTH)
 - THE CONTRACTOR SHALL REMOVE ALL NON-NATURAL ITEMS (DEBRIS AND JUNK) FROM ALL SENSITIVE AREAS (FLOODPLAINS, FOREST, STREAMS, WETLANDS AND BUFFERS) ON THE SITE AND STABILIZE. (1 MONTH)
- WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CERTAIN ITEMS MAY BE PERFORMED CONCURRENTLY.

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John L. Robinson 7/31/14
 HARD S.C.D. DATE

BUILDER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Robert V. Pava 7/23/14
 SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Mark Bennett 7/22/14
 ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Kate Calver 8/1/14
 Chief, Division of Land Development Date

Mark Bennett 8/9/14
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12875, EXPIRATION DATE: MAY 28, 2016.

Mark Bennett 7/22/14

REVISED OVERALL SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

THIS PLAN SUPERCEDES THE PLAN SIGNED ON 12/13/12 AND IS INTENDED TO REVISE THE GRADING SO THAT THIS PORTION OF THE PROJECT CAN BALANCE WITHIN ITSELF.

FOR SPOT ELEVATIONS ALONG EARTH DIKES, SEE SHEETS 4 THRU 7

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JUNE, 2014	41-21/46-3	3 OF 27



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 PLOTTED: 7/17/2014 11:53 AM, LAST SAVED: 7/17/2014 11:28 AM, PLOTTED BY: Doug Young, P.E.

SEDIMENT CONTROL LEGEND

- 400 EXISTING CONTOUR
- 400 PROPOSED CONTOUR
- EXISTING TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- BOTH CONDITIONS EARTH DIKE
- FINAL EARTH DIKE
- INITIAL EARTH DIKE
- SF PROPOSED SALT FENCE
- SSF PROPOSED SUPER SALT FENCE
- LIMIT OF DISTURBANCE
- FP 100 YEAR FLOODPLAIN
- SB STREAM BUFFER
- FCE FOREST CONSERVATION EASEMENT
- 30J CENTERLINE OF STREAM
- WB WETLAND BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- EROSION CONTROL MATTING
- 15' NO-WOODY VEGETATION ZONE
- SOIL BORING LOCATION
- GABION INFLOW PROTECTION
- RRP RIP-RAP INFLOW PROTECTION

100 YEAR FLOODPLAIN STUDY
CROSS SECTION 1' LEVEL FT.

STREAM 'A'	STREAM 'B'
240	344.32
650	409.60
1411	409.60
8165	404.42
4150	410.60
10000	416.60
HARVARD BRANCH	
13461	341.04
11400	344.32
13400	344.51
8168	345.20
8410	345.81
STREAM 'B'	
3400	400.10
4400	400.13

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John Robinson 7/31/14
HOWARD S.C.D. DATE

BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A HAZARDLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

Mark Bennett 7/23/14
SIGNATURE OF DEVELOPER/BUILDER DATE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Mark Bennett 7/22/14
ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Kevin Delaney 8/14/14
Chief, Division of Land Development Date
Kevin Delaney 8/18/14
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTINSVILLE OFFICE PARK
BURTINSVILLE, MARYLAND 20868
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4188

DES. DEV DRN. KLP CHK. CKG

DATE	REVISION	BY	APPR.

PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

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. 12875, EXPIRATION DATE: MAY 28, 2016.



REVISED GRADING / SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS
GARDEN DISTRICT
NON-BUILDABLE PARCEL 'W'

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JUNE, 2014	41-21/46-3	4 OF 27

HOWARD COUNTY, MARYLAND







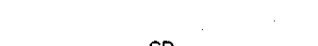

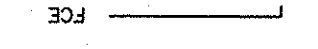


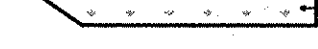
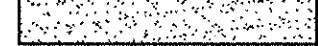






THIS PLAN SUPERCEDES THE PLAN SIGNED ON 12/13/12 AND IS INTENDED TO REVISE THE GRADING SO THAT THIS PORTION OF THE PROJECT CAN BALANCE WITHIN ITSELF.

MATCHLINE D-D (SEE SHEET 1)

MATCHLINE A-A (SEE SHEET 5)

SEDIMENT CONTROL LEGEND

- 400 ——— EXISTING CONTOUR
- 400 - - - - - PROPOSED CONTOUR
- — — — — EXISTING TREELINE
-  STABILIZED CONSTRUCTION ENTRANCE
-  BOTH CONDITIONS EARTH DIKE
-  FINAL EARTH DIKE
-  INITIAL EARTH DIKE
-  PROPOSED SILT FENCE
-  PROPOSED SUPER SILT FENCE
-  LIMIT OF DISTURBANCE
-  100 YEAR FLOODPLAIN
-  STREAM BUFFER
-  FOREST CONSERVATION EASEMENT
-  CENTERLINE OF STREAM
-  WETLAND BUFFER
-  LIMIT OF WETLAND
-  WETLAND AREA
-  EROSION CONTROL MATTING
-  15' NO-MOODY VEGETATION ZONE
-  SOIL BORINGS LOCATION

100 YEAR FLOODPLAIN STUDY	
CROSS SECTION	ELEV. FT.
1400	423.33
1400	435.24

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Robertson 7/31/14
 HOWARD S.C.D. DATE

BUILDER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A WETLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

M.D.R. H. v. Pina 7/23/14
 SIGNATURE OF DEVELOPER/BUILDER DATE

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Chris... 7/22/14
 ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Kate... 8/1/14
 Chief, Division of Land Development Date

[Signature] 8/8/14
 Chief, Development Engineering Division Date

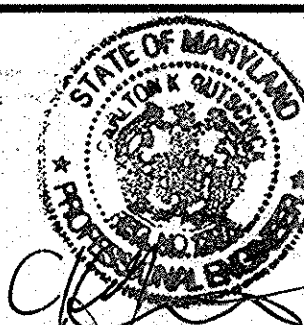
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK
 BURTOWNSVILLE, MARYLAND 20862
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-888-2524 FAX: 301-421-4186

DES. DEV	DRN. KLP	CHK. CKG	DATE	REVISION	BY	APPR.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12875 EXPIRATION DATE: MAY 28, 2015
 7/22/14



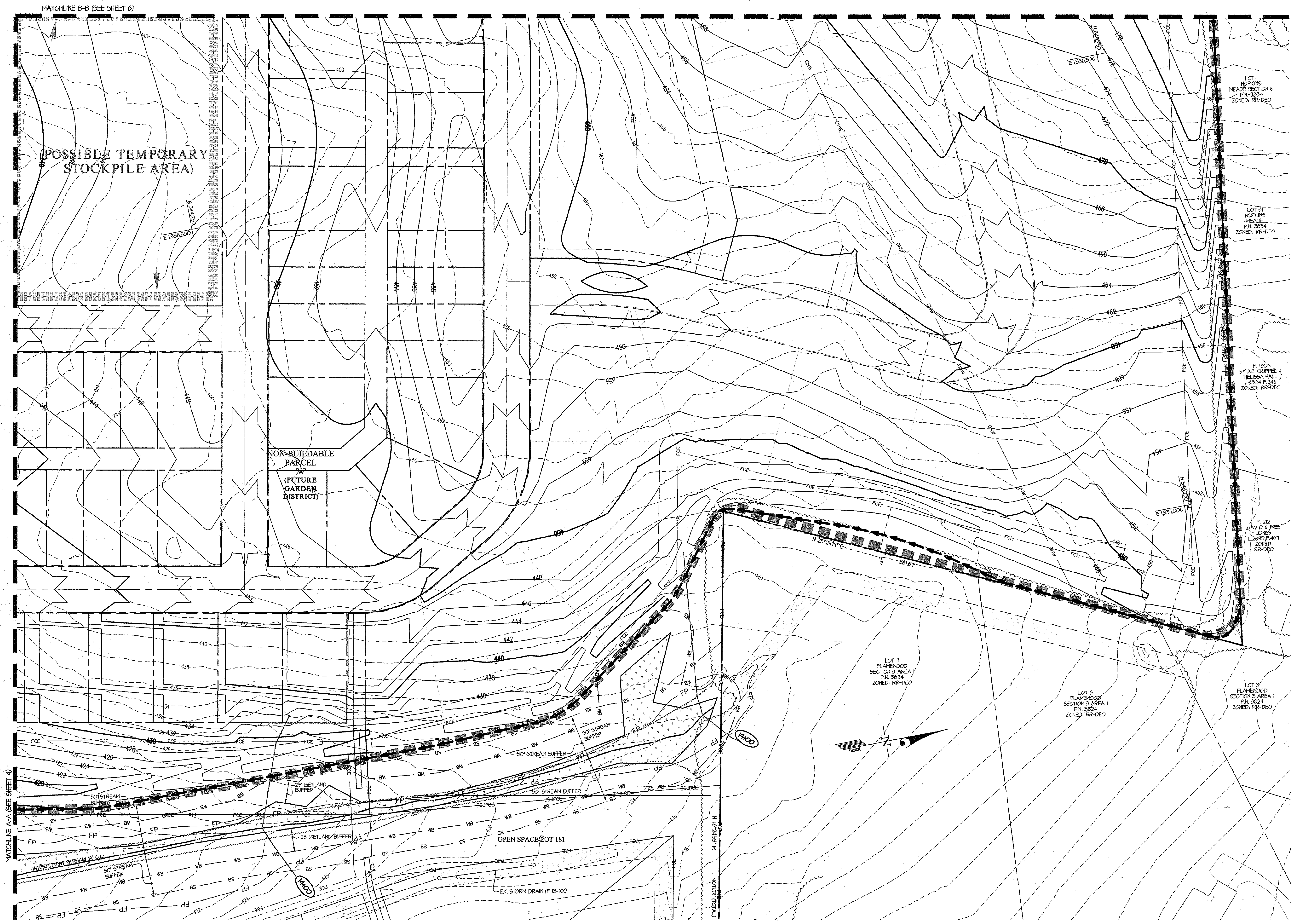
REVISED GRADING / SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JUNE, 2014	41-21/46-3	5 OF 27

HOWARD COUNTY, MARYLAND



THIS PLAN SUPERCEDES THE PLAN SIGNED ON 12/13/12 AND IS INTENDED TO REVISE THE GRADING SO THAT THIS PORTION OF THE PROJECT CAN BALANCE WITHIN ITSELF.

SEDIMENT CONTROL LEGEND

- 400 EXISTING CONTOUR
- 400 PROPOSED CONTOUR
- EXISTING TREELINE
- STABILIZED CONSTRUCTION ENTRANCE
- BOTH CONDITIONS EARTH DIKE
- FINAL EARTH DIKE
- INITIAL EARTH DIKE
- SF PROPOSED SILT FENCE
- SSF PROPOSED SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- FP 100 YEAR FLOODPLAIN
- SB STREAM BUFFER
- FCE FOREST CONSERVATION EASEMENT
- 30.4 CENTERLINE OF STREAM
- WB WETLAND BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- EROSION CONTROL MATTING
- 15' NO-WOODY VEGETATION ZONE
- SOIL BORING LOCATION



THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John P. Roberts 7/31/14
 HOWARD S.C.D. DATE

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M.D. B. v. P. 7/23/14
 SIGNATURE OF DEVELOPER/BUILDER DATE

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Mark Bennett 7/22/14
 ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kate Schumacher 8/11/14
 Chief, Division of Land Development Date
[Signature] 8/9/14
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK
 BURTOWNSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

PROFESSIONAL CERTIFICATION
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 EXPIRATION DATE: MAY 28, 2016
 7/22/14



ELECTION DISTRICT No. 5

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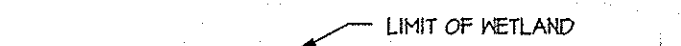
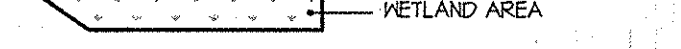

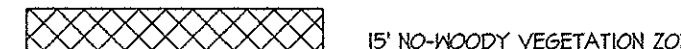




REVISED GRADING / SEDIMENT CONTROL PLAN
MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JUNE, 2014	41-21/46-3	6 OF 27

HOWARD COUNTY, MARYLAND

L:\CADD\WORKINGS\11001\FINALS\SWM-SC-2014-08-25 REPLACEMENT SHEETS\1001_04-07-SC-CF (Replacement).dwg
 PLOTTED: 7/17/2014 1:14 PM. LAST SAVED: 7/10/2014 5:41 PM. PLOTTED BY: Doug Vande Pyl
 © GLW 2012

SEDIMENT CONTROL LEGEND

- 400 --- EXISTING CONTOUR
- 400 --- PROPOSED CONTOUR
- --- EXISTING TREELINE
-  STABILIZED CONSTRUCTION ENTRANCE
-  BOTH CONDITIONS EARTH DIKE
-  FINAL EARTH DIKE
-  INITIAL EARTH DIKE
-  PROPOSED SILT FENCE
-  PROPOSED SUPER SILT FENCE
-  LIMIT OF DISTURBANCE
-  100 YEAR FLOODPLAIN
-  STREAM BUFFER
-  FOREST CONSERVATION EASEMENT
-  CENTERLINE OF STREAM
-  KETLAND BUFFER
-  LIMIT OF WETLAND
-  WETLAND AREA
-  EROSION CONTROL MATTING
-  15' NO-WOODY VEGETATION ZONE
-  SOIL BORING LOCATION
-  GABION INFLOW PROTECTION

100 YEAR FLOODPLAIN STUDY	
CROSS SECTION	INSEL. FT.
HAMMOND BRANCH	
8723	398.92
8439	400.04
8082	401.11
8245	402.25
STREAM HB-II	
3431	406.50
1450	415.34

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts 7/31/14
 HORD S.C.D. DATE

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M.D. v. Rao 7/23/14
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[Signature] 7/22/14
 ENGINEER'S SIGNATURE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 8/11/14
 Chief, Division of Land Development Date

[Signature] 8/8/14
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20867
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DES. DEV DRN. KLP CHK. CKG

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
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PROFESSIONAL CERTIFICATION

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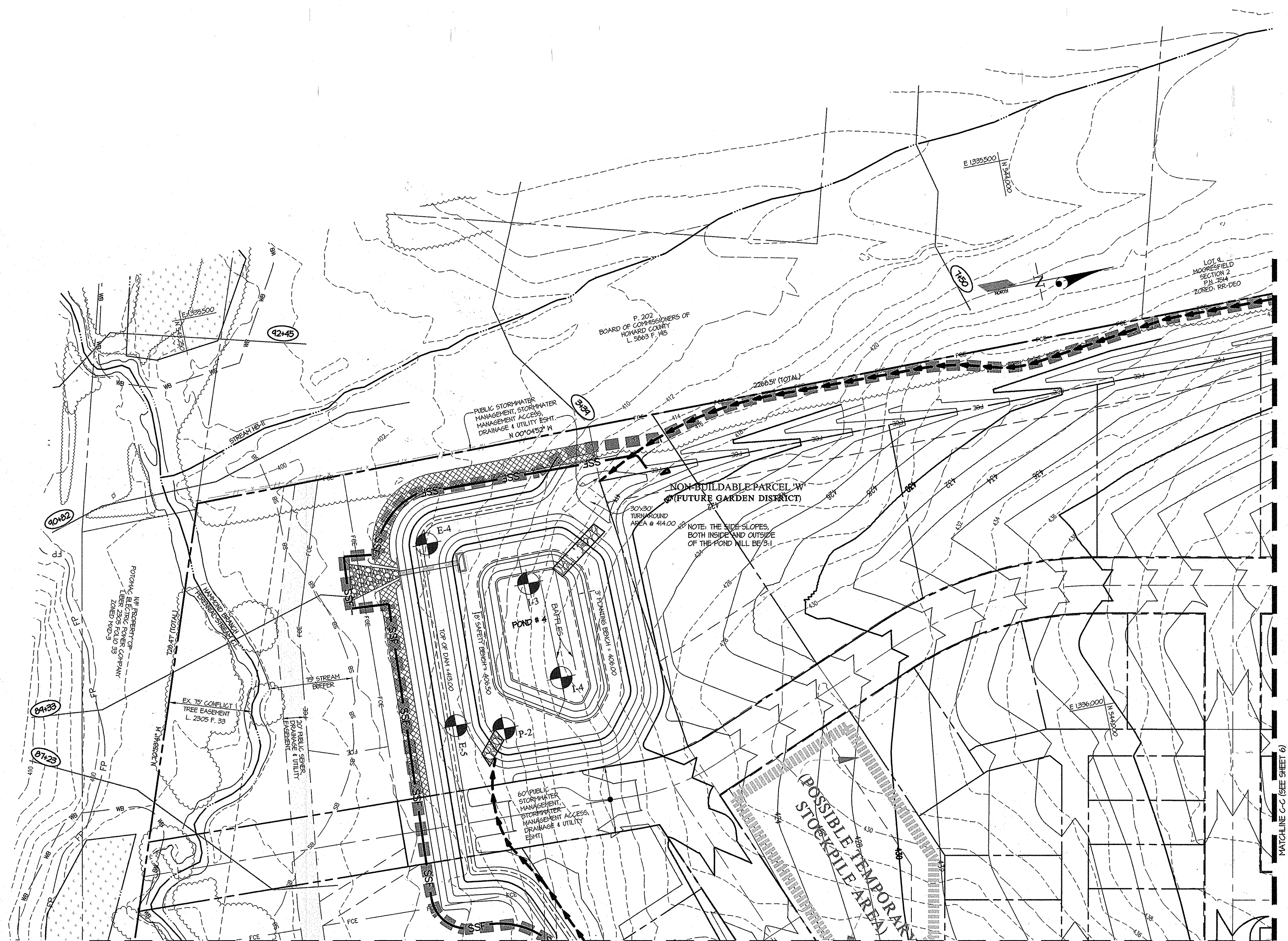


REVISED GRADING / SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

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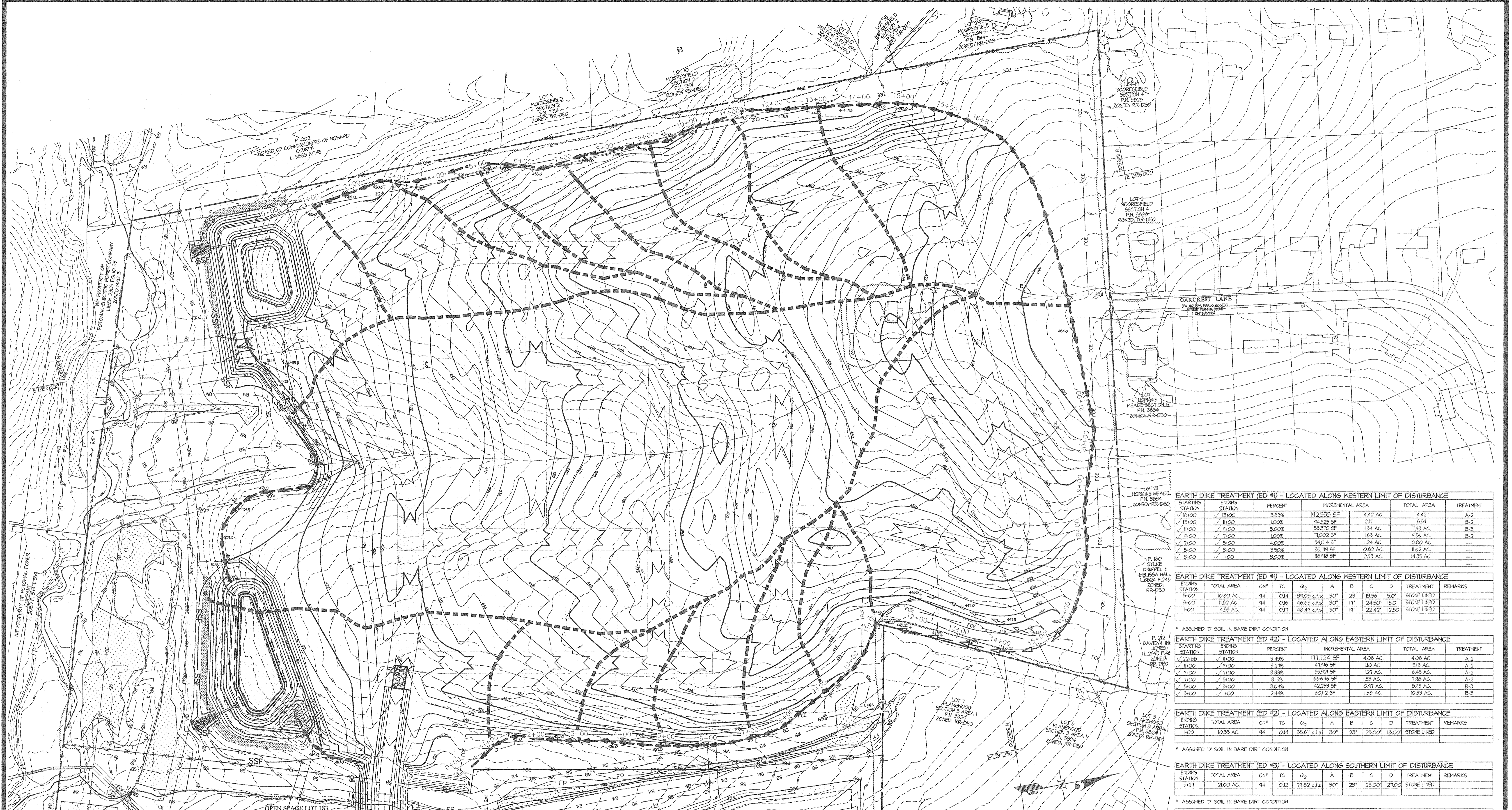
SCALE 1" = 50'	ZONING MXD-3	G. L. W. FILE No. 11001
DATE JUNE, 2014	TAX MAP - GRID 41-21/46-3	SHEET 7 OF 27



MATCHLINE D-D (SEE SHEET 4)

MATCHLINE C-C (SEE SHEET 6)

L:\CAD\DRAWINGS\11001\PLANS\SW-SC-2014-06-25 REPLACEMENT SHEETS\1001_04-07-SC-CP (Replacement).dwg, PLOTTED: 7/17/2014 1:15 PM, LIST SAVED: 7/10/2014 5:41 PM, PLOTTED BY: Doug Vande Ryk



EARTH DIKE TREATMENT (ED #1) - LOCATED ALONG WESTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA	TOTAL AREA	TREATMENT
18+00	19+00	3.88%	142,535 SF	4.42 AC.	A-2
19+00	11+00	1.00%	44,525 SF	2.17	B-2
11+00	4+00	5.00%	50,310 SF	1.54 AC.	B-3
4+00	1+00	1.00%	11,002 SF	1.63 AC.	B-2
1+00	5+00	4.00%	54,014 SF	1.24 AC.	---
5+00	3+00	3.50%	35,194 SF	0.82 AC.	---
3+00	1+00	3.00%	18,918 SF	2.13 AC.	---

EARTH DIKE TREATMENT (ED #1) - LOCATED ALONG WESTERN LIMIT OF DISTURBANCE

ENDING STATION	TOTAL AREA	CN*	TC	Q ₂	A	B	C	D	TREATMENT	REMARKS
5+00	10.80 AC.	44	0.14	34.05 c.f.s.	30"	23"	13.56'	5.0'	STONE LINED	
3+00	11.62 AC.	44	0.16	46.65 c.f.s.	30"	11"	24.50'	15.0'	STONE LINED	
1+00	14.35 AC.	44	0.11	48.44 c.f.s.	30"	14"	22.42'	12.50'	STONE LINED	

EARTH DIKE TREATMENT (ED #2) - LOCATED ALONG EASTERN LIMIT OF DISTURBANCE

STARTING STATION	ENDING STATION	PERCENT	INCREMENTAL AREA	TOTAL AREA	TREATMENT
22+60	11+00	3.43%	171,124 SF	4.08 AC.	A-2
11+00	4+00	3.21%	47,916 SF	3.18 AC.	A-2
4+00	1+00	3.33%	55,321 SF	1.27 AC.	A-2
1+00	3+00	3.15%	49,618 SF	1.53 AC.	B-3
3+00	2+00	3.24%	42,253 SF	0.91 AC.	B-3
2+00	1+00	2.48%	60,112 SF	1.38 AC.	B-3

EARTH DIKE TREATMENT (ED #2) - LOCATED ALONG EASTERN LIMIT OF DISTURBANCE

ENDING STATION	TOTAL AREA	CN*	TC	Q ₂	A	B	C	D	TREATMENT	REMARKS
1+00	10.33 AC.	44	0.14	35.67 c.f.s.	30"	23"	25.00'	18.00'	STONE LINED	

EARTH DIKE TREATMENT (ED #3) - LOCATED ALONG SOUTHERN LIMIT OF DISTURBANCE

ENDING STATION	TOTAL AREA	CN*	TC	Q ₂	A	B	C	D	TREATMENT	REMARKS
5+21	21.00 AC.	44	0.12	14.82 c.f.s.	30"	23"	25.00'	21.00'	STONE LINED	

EARTH DIKE TREATMENT (ED #4) - LOCATED ALONG NORTHWESTERN LIMIT OF DISTURBANCE

ENDING STATION	TOTAL AREA	CN*	TC	Q ₂	A	B	C	D	TREATMENT	REMARKS
5+50	230 AC.	44	0.28	157 c.f.s.	5"	4"	8.0'	18.00'	STONE LINED	

EARTH DIKE TREATMENT (ED #5) - LOCATED ALONG EASTERN LIMIT OF DISTURBANCE

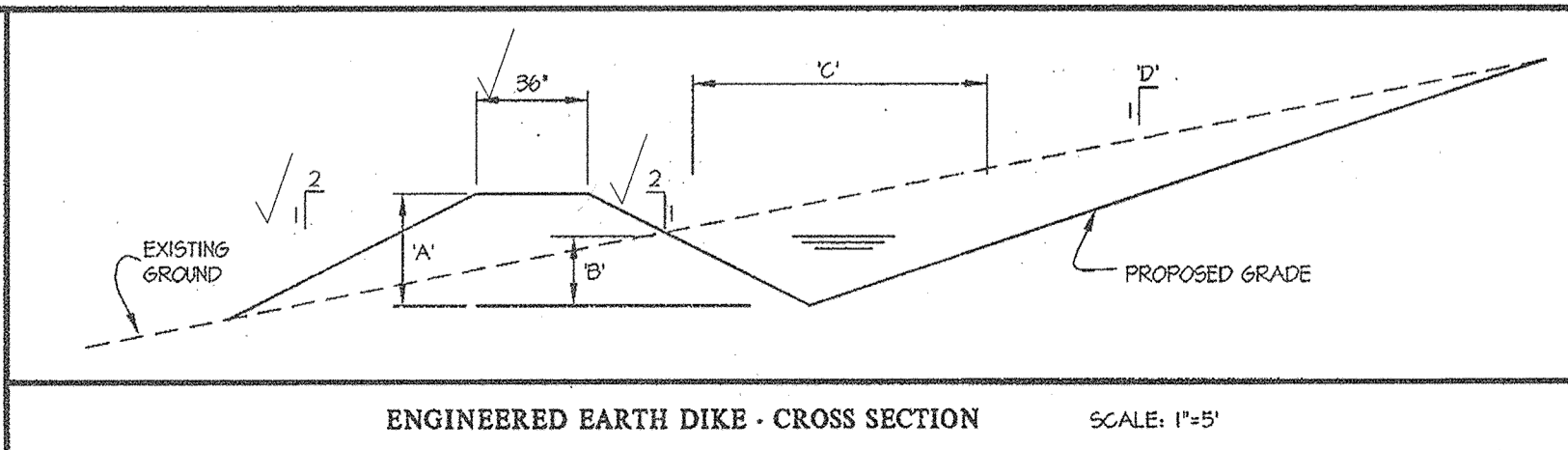
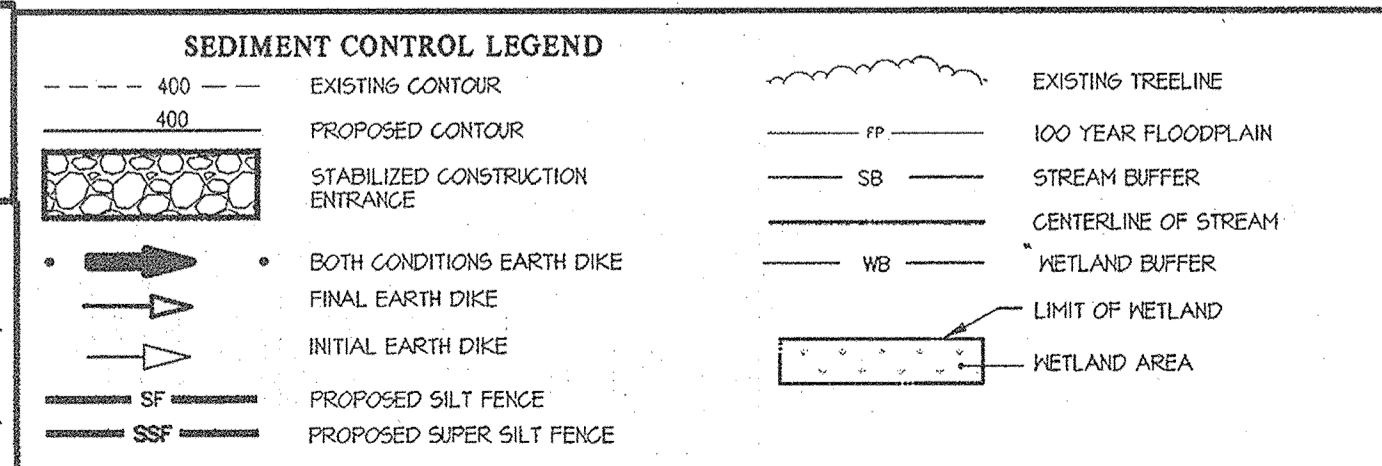
ENDING STATION	TOTAL AREA	CN*	TC	Q ₂	A	B	C	D	TREATMENT	REMARKS
2+11	180 AC.	44	0.33	118 c.f.s.	5"	4"	8.0'	18.00'	STONE LINED	

Approved: **Howard County Department of Public Works**
Wade R. Smith 12-14-12
 Chief, Bureau of Highways
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kate Sheehan 12/12/12
 Chief, Division of Land Development
 Date

Mark Bennett 12/12/12
 Chief, Development Engineering Division
 Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3509 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND, 20886
 TEL: 301-421-4224 FAX: 301-421-4188



PREPARED FOR:
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 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
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 ATTN: MARK BENNETT
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 EXPIRATION DATE: MAY 28, 2014

Mark Bennett
 PROFESSIONAL ENGINEER
 Maryland Reg. No. 12975

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. 12915, Expiration Date: May 26, 2020.

Carl K. Gutschick
 PROFESSIONAL ENGINEER
 Maryland Reg. No. 12915

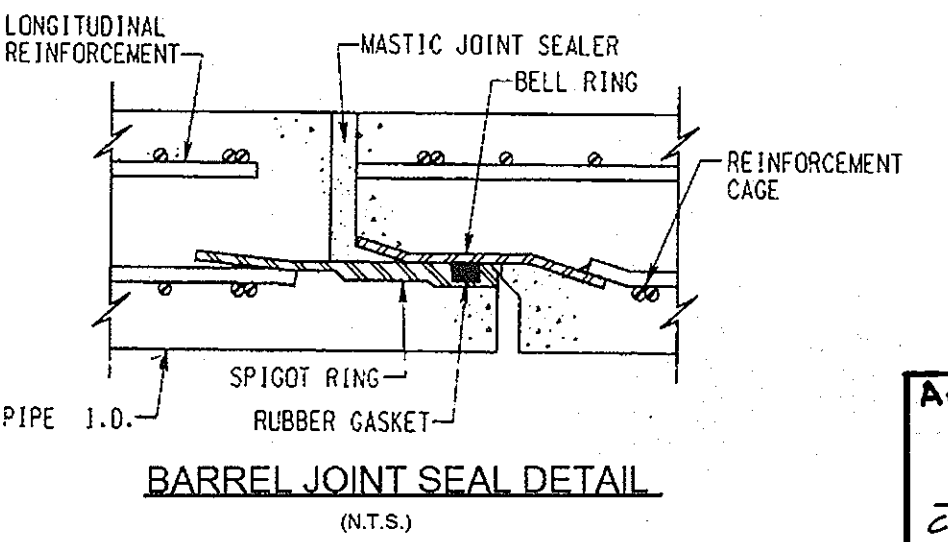
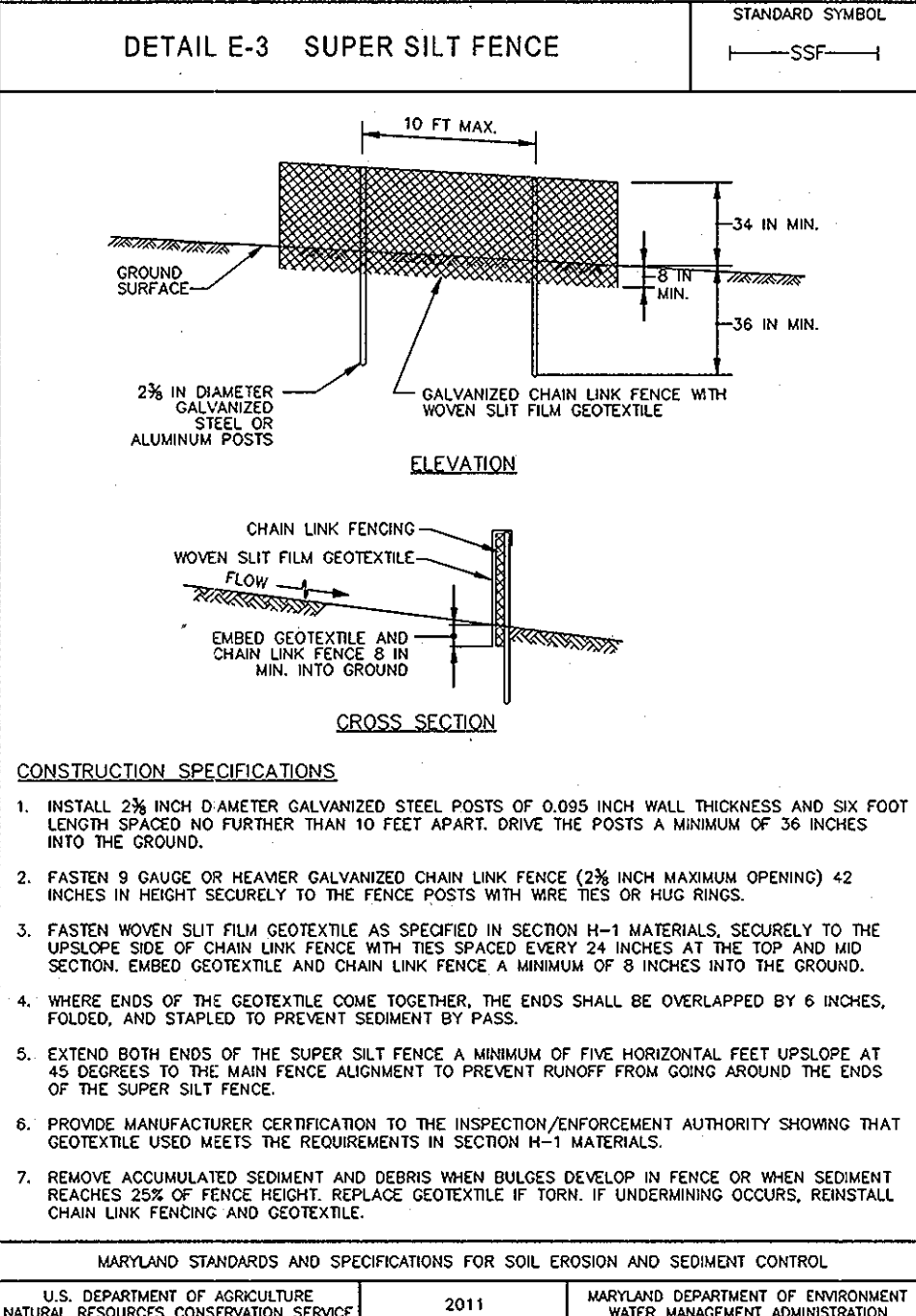
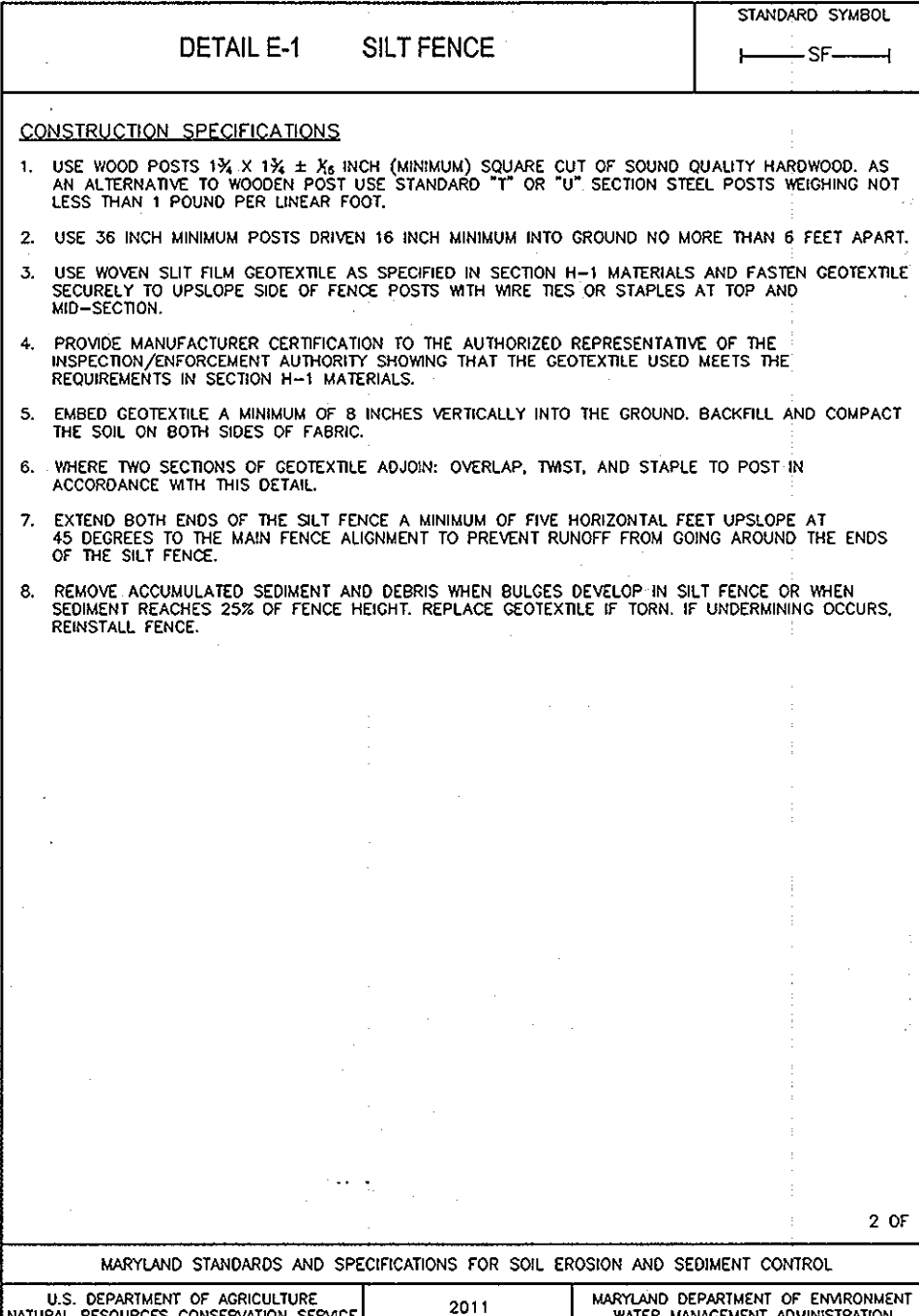
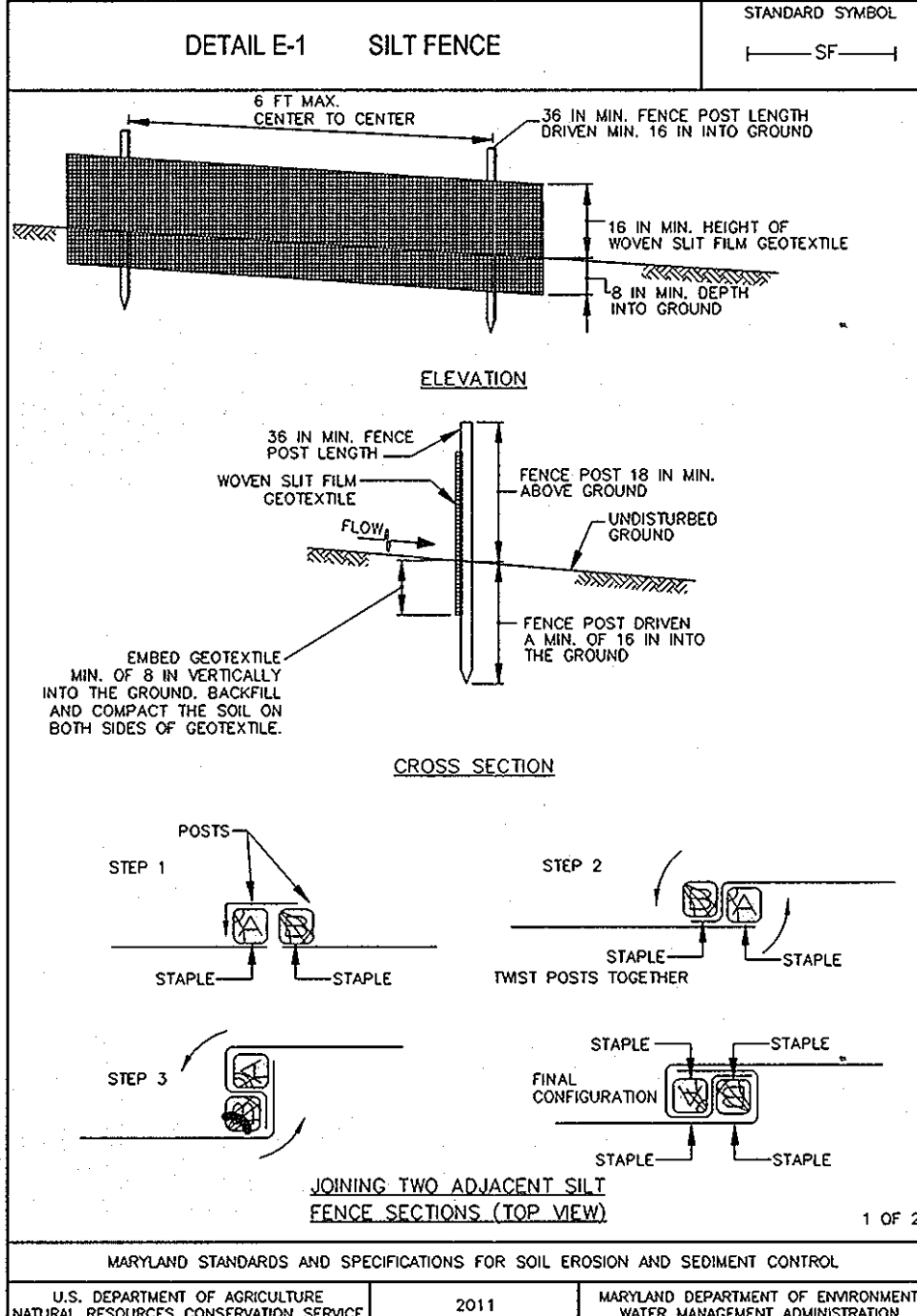
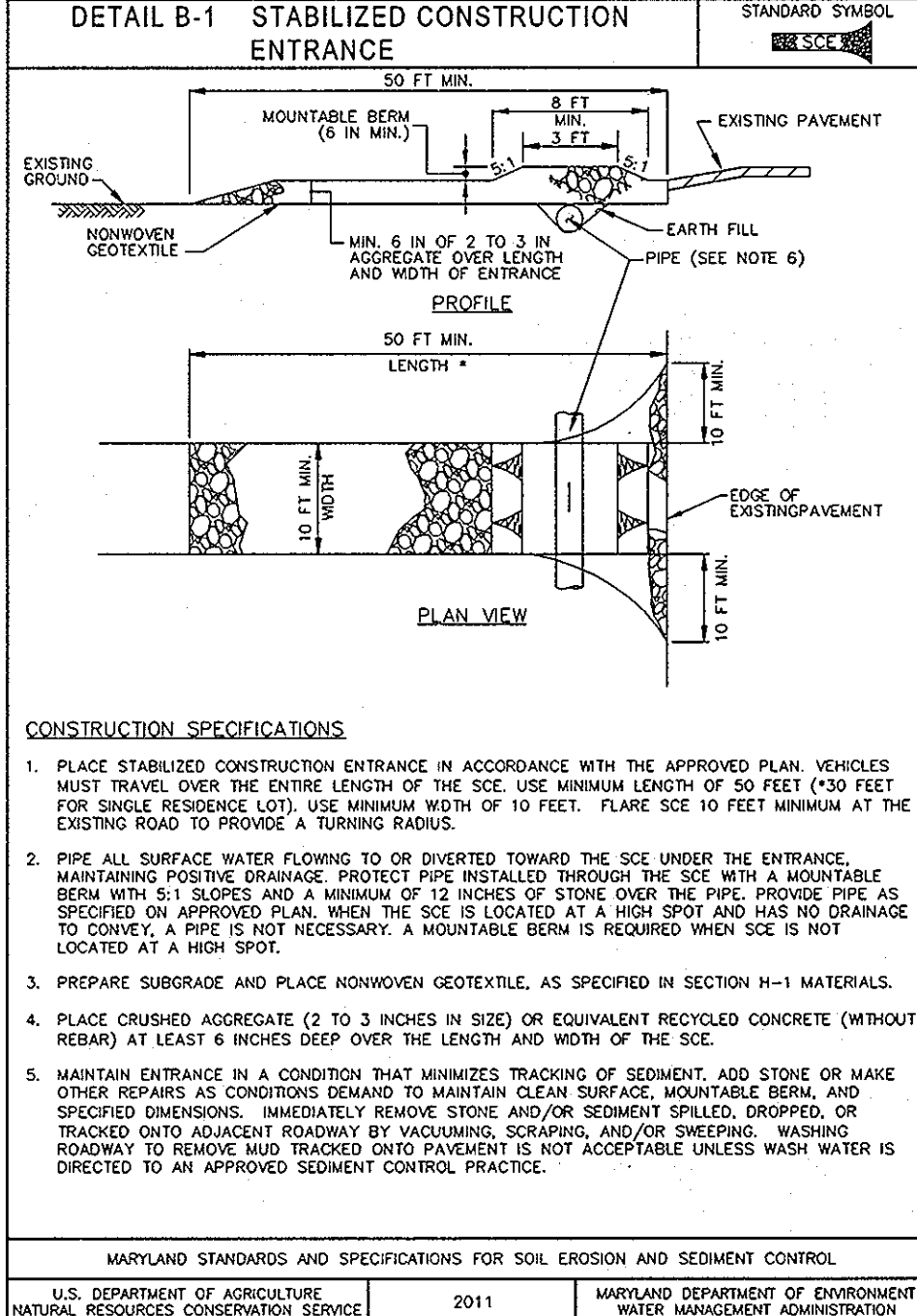
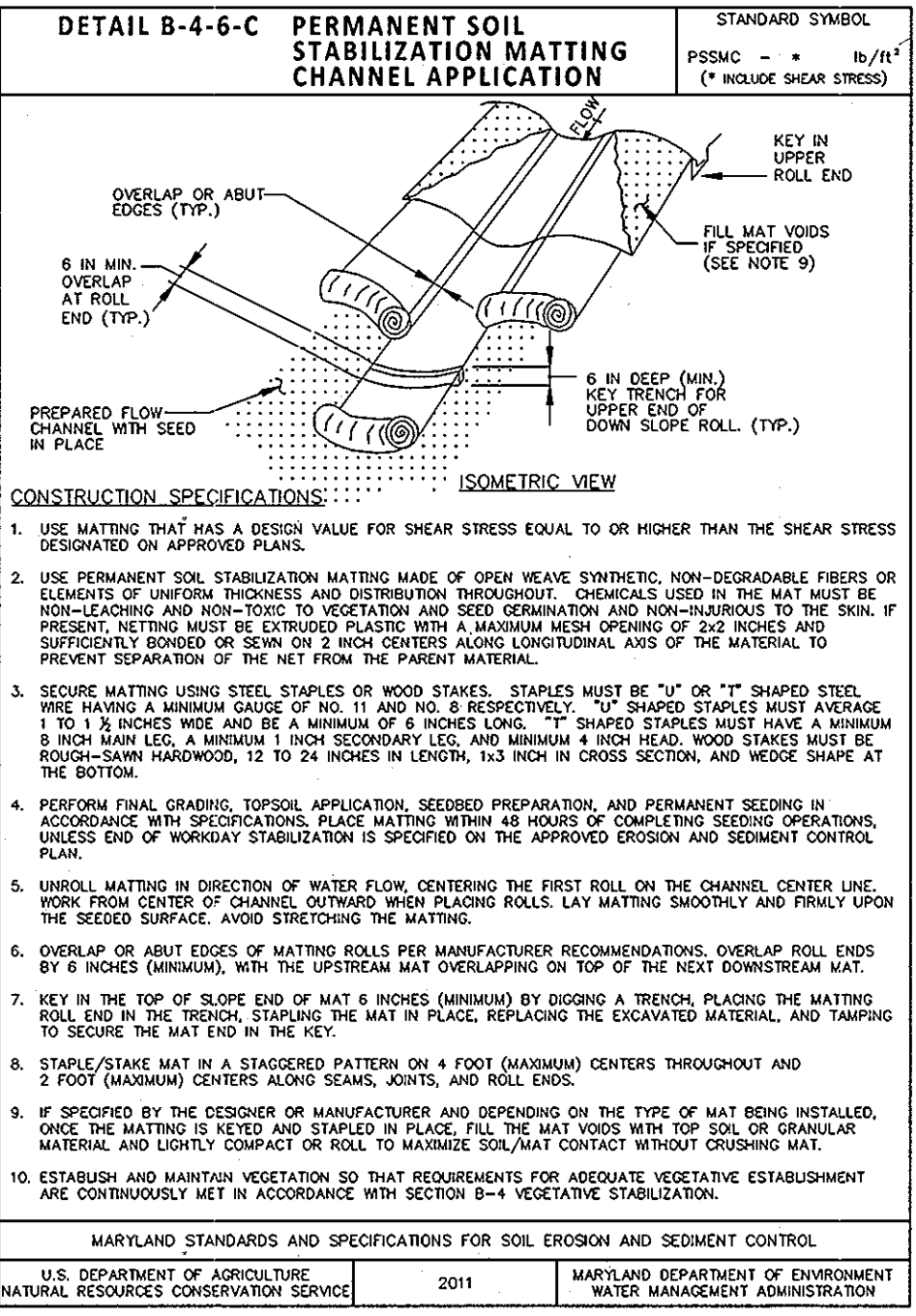
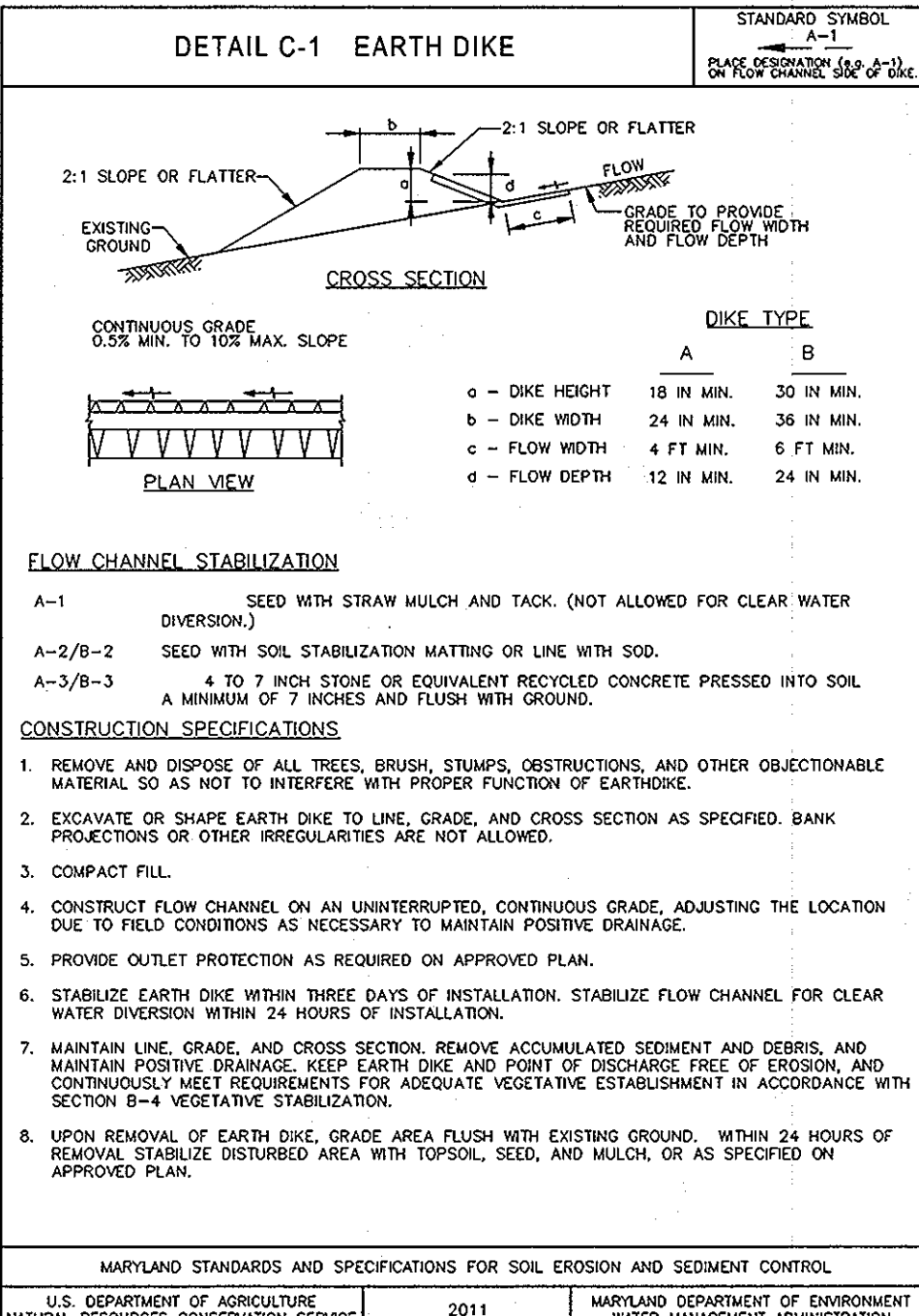
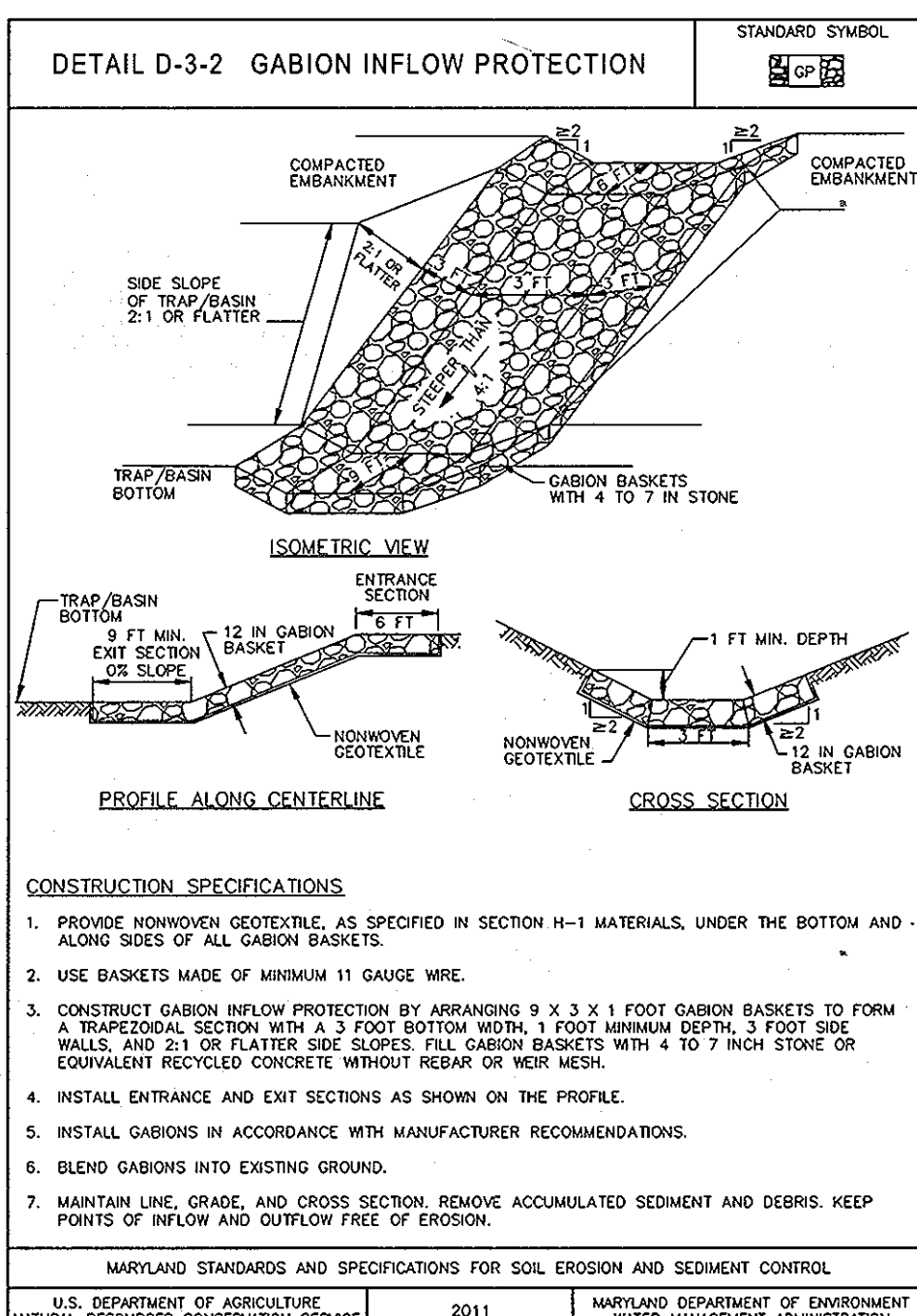
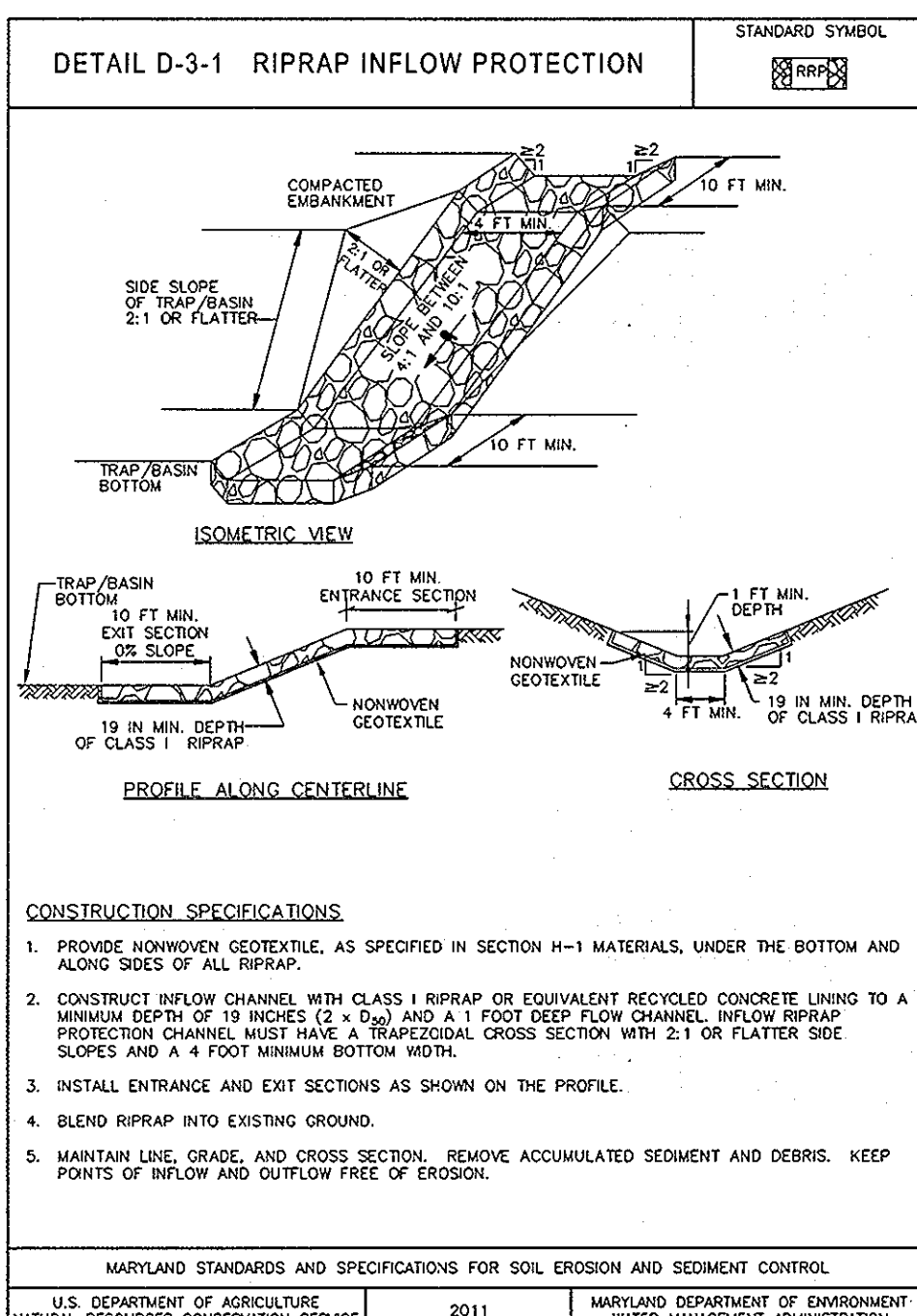
ASBULTS
 FOR SPOT ELEVATIONS ALONG EARTH DIKES, SEE SHEETS 4 THRU 7.

EARTH DIKE TREATMENT PLAN
 MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

SCALE: 1" = 100'
 ZONING: MXD-3
 G. L. W. FILE NO.: 11001

DATE: JULY 2018
 NOV. 2012
 TAX MAP - GRID: 41-21/46-3
 SHEET: 8 OF 27

ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND



Approved: Howard County Department of Public Works
William R. Smith 12-14-12
 Chief, Bureau of Highways

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Blunt 12/12/12
 HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kevin DeLeon 12/17/12
 Chief, Division of Land Development DATE
Mark Bennett 12/17/12
 Chief, Development Engineering Division DATE

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
CKJ 11-20-12
 ENGINEER'S SIGNATURE DATE

BUILDER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
William R. Smith 11-20-12
 SIGNATURE OF DEVELOPER/BUILDER DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975.
 EXPIRATION DATE: MAY 26, 2014
 11-20-12
 STATE OF MARYLAND PROFESSIONAL ENGINEER

SEDIMENT CONTROL NOTES and DETAILS
MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"
 SCALE: AS SHOWN
 ZONING: MXD-3
 G. L. W. FILE NO.: 11001
 DATE: NOV. 2012
 TAX MAP - GRID: 41-21/46-3
 SHEET: 9 OF 27
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	9 OF 27

B-4.2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES: WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA:

- SOIL PREPARATION**
 - TEMPORARY STABILIZATION
 - SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT SUCH AS CASE, LAWS, OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE, THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A WATER FILLED SOIL. IF THIS CAPACITY IS NOT MET, LOESS OR LOESS-LIKE SOILS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1% PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
 - GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARPED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
 - APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. SMOKE LAWN AREAS, THE SURFACE, REMOVE LARGE ROCKS, LIMES AND BRANCHES FROM THE AREA. AFTER THE SURFACE IS LOOSENED, APPLY LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. UNDER THE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 3 TO 5 INCHES OF SOIL LOOSE AND AVAILABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

- TOPSOILING**
- TOPSOIL IS PLACED OVER PREPARED SEEDBED PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR USE SHOULD BE 2 TO 3 FEET. A REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES HERE.
- THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. OTHER SOILS MAY BE USED IF PROVEN TO BE SUITABLE.
- 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.
- THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
 - TOPSOIL MUST BE A LOAM SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF PROVEN TO BE SUITABLE BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINNERS, STONES, CLAGS, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/8 INCHES IN DIAMETER.
 - TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERBERIS, GRASS GRASS, JOHNSON GRASS, NET SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
- TOPSOIL APPLICATION
 - EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
 - UNIFORMITY OF DISTRIBUTION: TOPSOIL IS TO 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 MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL IS TO BE PLACED IN THE TOPSOIL OR SUBSOIL IN A FROZEN OR MOIST CONDITION WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**
- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR THE SOILS HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. HANDBE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAK THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
- LINE MATERIALS MUST BE GRANULAR LIME (HYDRATED OR BURNT LIME) MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GRANULAR (3/4 INCH FINENESS) THAT WILL PASS THROUGH A #10 MESH AND 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
- LIME AND FERTILIZER IS TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. WHERE THE SUBSOIL IS EITHER HEAVY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD AROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (800 TO 1,600 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development

Chief, Development Engineering Division

B-4.3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES: TO THE SURFACE OF ALL PERIMETER CONTOURS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA:

- SEEDING**
 - ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LABORATORY. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEED RATES.
 - MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GRASSING IS PROZED. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GRASSING IS PROZED.
 - INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURE MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA. A PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN KILL BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
 - SOD SEEDS MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL. UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSOLUTION OF PHITO-TOXIC MATERIALS.
- APPLICATION**
 - DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DRAP OR BROADCAST SPREADERS.
 - INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.3. OR PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - APPLY SEED IN STRIPES PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDS AGAIN WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
 - DRILL OR CULTPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - CULTPACKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A MANNER AS TO PROTECT IT FROM THE WIND AND NOT TO COVER. SEEDING MUST BE FIRM AFTER PLANTING.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 - HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY MIXTURE).
 - IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN P2O5 (PHOSPHORUS), 200 POUNDS PER ACRE, K2O (POTASSIUM), 200 POUNDS PER ACRE.
 - LIME USE ONLY GRADED AGRICULTURAL LIMESTONE UP TO 3 TONS PER ACRE. APPLICATION OF FERTILIZERS NORMALLY NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.
- MULCHING**
 - MULCH MATERIALS (IN ORDER OF PREFERENCE)
 - STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS WELL AS THE WIND AND NOT MOIST, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
 - WOOD CELLULOSE FIBER MULCH (IN ANIMAL CONSISTENCY OF STRAW). PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 - KCFP TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE SITE AND SPREAD SLURRY.
 - KCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - KCFM MATERIALS MUST BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH OTHER FERTILIZERS AND OTHER ADJUTANTS TO FORM A BLOTTER-LIKE SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND RETENTION CAPABILITY AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLING.
 - KCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - KCFM MUST COMPLY WITH THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 10 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 40 PERCENT MINIMUM.
 - APPLICATION
 - APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
 - WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 25 TONS PER ACRE.
 - WOOD CELLULOSE FIBER MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - ANCHORING
 - PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDS UPON THE SIZE OF THE AREA AND EROSION HAZARD.
 - MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS ANCHOR IS MOST EFFECTIVE ON LARGE AREAS, BUT IS SUITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - WOOD CELLULOSE FIBER MULCH IS USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 150 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER MULCH WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-TO, PEROXID, TERRA TAC, TERRA MANUFACTURER, APPLICATION OF LIQUID BINDERS TO THE MULCH SURFACE WILL SETTING MAY BE APPLIED TO THE MULCH SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - ANCHORING OF MULCH MUST BE STARTLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3000 FEET LONG.

B-4.4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

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

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

CRITERIA:

- SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES, AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT FIT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE FIT ON THE PLAN.
- ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SLOPES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS HILLSIDE OR AESTHETIC TREATMENT MAY BE FOUND IN US-DA-NRCS TECHNICAL FIELD GUIDE SECTION B.4.2 - CRITICAL AREA PLANTINGS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES, USE AND SHOW THE RATES BY THE TESTING AGENCY SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
- WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3 A, B, D AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY						
No.	SPECIES	APPLICATION RATE (lb/acre)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
2	PEARL MILLET	20 lb/acre	May 16 to July 31	0.5 INCHES		

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (410) 313-1055
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE '2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 3 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND
 - 7 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- ALL SEDIMENT TRAP/SIGNS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER AND ACCORDING TO VOLUME 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE '2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL' FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDINGS AND MULCHING (SEC. B). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIONAL CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:

WESTERN/MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDNESS ZONES: 5B, 6A)

CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 6B)

SOUTHERN/MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 7A)

JULI AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES LEVEL AND BAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1/2 INCHES IN DIAMETER. THE SEEDING RATE MUST BE IN SUCH A CONDITION THAT FUTURE WINDING OF GRASSES WILL REMOVE NO DIFFICULTY.

IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (0.2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE AT THE END OF THE PLANTING SEASON. AN ADEQUATELY TRUE HOT SPOT OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY						
No.	SPECIES	APPLICATION RATE	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
8	Certified Tall Fescue blend (Equal amounts of Falon IV, Penn 1904 & Rebel Extra)	6-8 lb/1000 s.f.	Mar. 1 to May 15, Aug. 15 to Oct. 15	1/4 - 1/2 IN.	1.0 lb/1000 sq 900 lb/1000 s.f. (45 lb/acre)	

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION: CONTROLLING THE SUSPENSION OF DUST PARTICLES FROM CONSTRUCTION ACTIVITIES.

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

CONDITIONS WHERE PRACTICE APPLIES: AREAS SUBJECT TO DUST BLOWNS FROM CONSTRUCTION AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

CRITERIA:

- CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
- SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH PLUS OR MINUS 1/4 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASS ON THE UPPER 10 PERCENT OF THE SECTION.
- SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 30 HOURS; SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

SOD INSTALLATION

- DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SURFACES, THE SLIGHTLY IRREGULAR SURFACE SHOULD BE PREPARED TO A DEPTH OF 1/4 INCH. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY MEDGED AGAINST EACH OTHER. STagger LATERAL JOINTS TO PREVENT UNIFORM WEAR AND TO PROMOTE THE UNIFORM GROWTH OF GRASS. DO NOT STRETCH OR OVERLAP SOD AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDING. HAVING CAREFULLY CHECKED EACH END TO DETERMINE IF SOD IS PLACED PARALLEL TO THE SOIL SURFACE, THE SOIL SURFACE SHOULD BE PREPARED TO A DEPTH OF 1/4 INCH. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY MEDGED AGAINST EACH OTHER. STagger LATERAL JOINTS TO PREVENT UNIFORM WEAR AND TO PROMOTE THE UNIFORM GROWTH OF GRASS. DO NOT STRETCH OR OVERLAP SOD AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDING. 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Approved: Howard County Department of Public Works
Walter J. M... 12-14-12
 Chief, Bureau of Highways Date

LEGEND

B SOILS	DRAINAGE DIVIDE
C SOILS	TC PATH
D SOILS	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Walter J. M... 12/17/12
 Chief, Division of Land Development Date
Walter J. M... 12/17/12
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APPR.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12378, EXPIRATION DATE: MAY 26, 2014

11-20-12

TEMPORARY SWM DRAINAGE AREA MAP -- PRE-DEVELOPMENT

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 MARK BENNETT
 LICENSE NO. 12378
 EXPIRATION DATE: MAY 26, 2014

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	11 OF 27

HOWARD COUNTY, MARYLAND

TEMPORARY STORMWATER MANAGEMENT VOLUMES				
DESIGN CRITERIA ITEM	BASIN 3		BASIN 4	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
NET VOLUME	12,120 c.f.	73,180 c.f. @ 404.00	35,460 c.f.	31,026 c.f. @ 406.00
1 YEAR MANAGEMENT	12,120 c.f.	155,291 c.f. @ 404.00	35,460 c.f.	115,618 c.f. @ 410.88
TOP OF DAM	408.50	---	414.00	---

TEMPORARY STORMWATER MANAGEMENT SUMMARY				
DESIGN CRITERIA ITEM	POND 3		POND 4	
	BEFORE DEV.	AFTER DEV.	BEFORE DEV.	AFTER DEV.
DRAINAGE AREA	40.50 ac.	38.10 ac.	17.30 ac.	14.70 ac.
CURVE NUMBER	54	91	58	91
TIME OF CONCENTRATION	0.33 Hr.	0.17 Hr.	0.24 Hr.	0.17 Hr.

	BASIN 3			BASIN 4		
	BEFORE	UNMANAGED	MANAGED	BEFORE	UNMANAGED	MANAGED
1 YR	2.67 c.f.s.	80.80 c.f.s.	2.50 c.f.s. @ 405.00	0.87 c.f.s.	54.25 c.f.s.	0.85 c.f.s. @ 410.88
2 YR	4.50 c.f.s.	105.43 c.f.s.	16.44 c.f.s. @ 405.43	3.82 c.f.s.	111.0 c.f.s.	6.95 c.f.s. @ 411.21
10 YR	44.81 c.f.s.	185.26 c.f.s.	143.02 c.f.s. @ 406.50	21.22 c.f.s.	124.24 c.f.s.	106.82 c.f.s. @ 412.00



Approved: Howard County Department of Public Works
W. R. M. A. 12-14-12
 Chief, Bureau of Highways Date

LEGEND	
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	DRAINAGE DIVIDE
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Drawings\09001\FINALS\SMI-SC\09001 SWM DAM.dwg DRN. CHK. CKG. DATE REVISION BY APPR.

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TEMPORARY SWM DRAINAGE AREA MAP -- POST-DEVELOPMENT
MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	12 OF 27

DESIGN CRITERIA ITEM	POND 3		POND 4	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
WATER QUALITY VOLUME	53,143 c.f.	54,014 c.f. @ 400/50	32,234 c.f.	36,155 c.f. @ 406/00
RECHARGE VOLUME	17,260 c.f.	SEE NOTE 4 BELOW	11,226 c.f.	SEE NOTE 4 BELOW
CHANNEL PROTECTION	84,942 c.f.	105,154 c.f. @ 403/26	55,151 c.f.	61,855 c.f. @ 404/88
TOP OF DAM	406.00	---	414.00	---

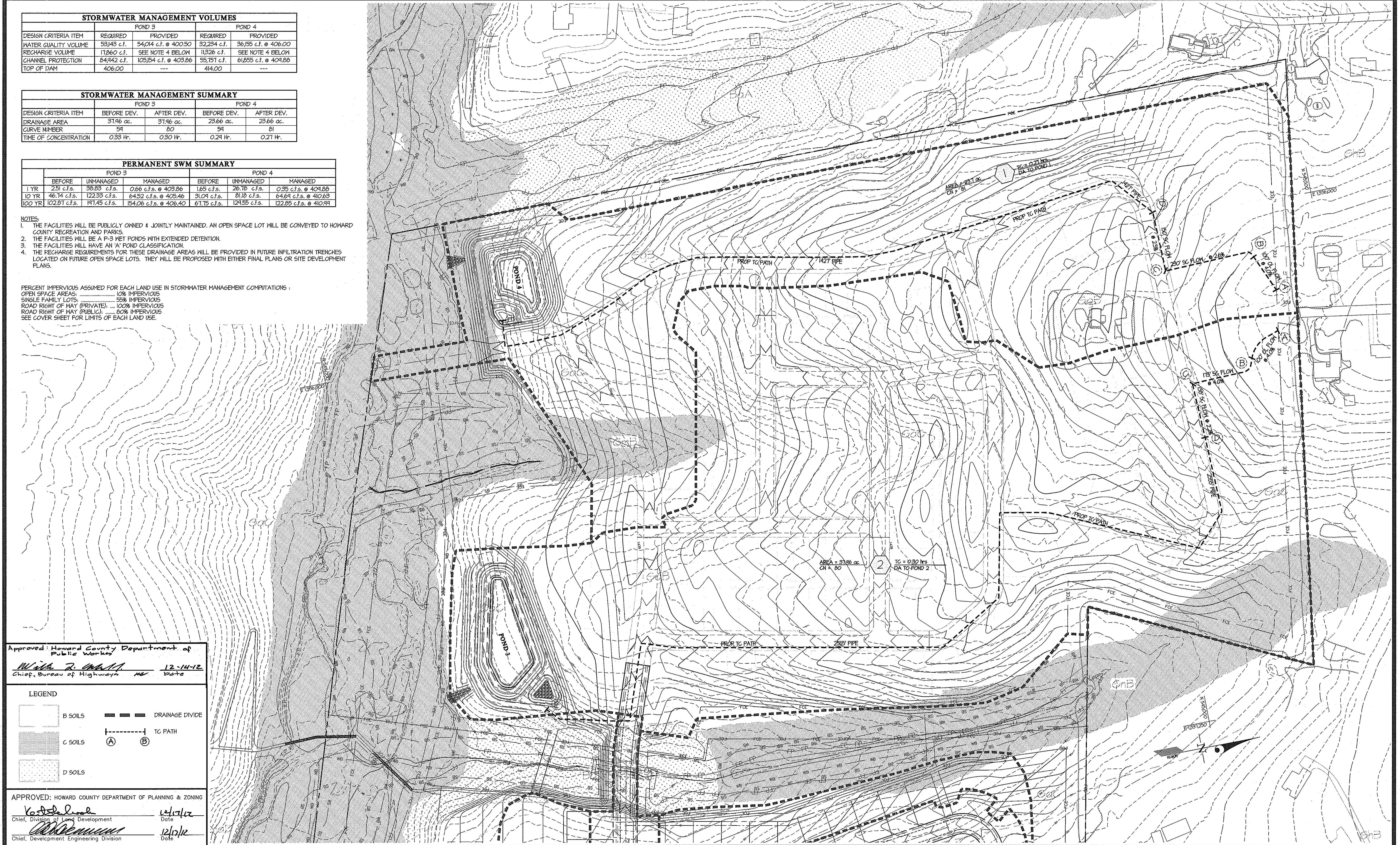
DESIGN CRITERIA ITEM	POND 3		POND 4	
	BEFORE DEV.	AFTER DEV.	BEFORE DEV.	AFTER DEV.
DRAINAGE AREA	31.96 ac.	31.96 ac.	23.66 ac.	23.66 ac.
CURVE NUMBER	54	80	54	81
TIME OF CONCENTRATION	0.33 Hr.	0.30 Hr.	0.24 Hr.	0.21 Hr.

	POND 3			POND 4		
	BEFORE	UNMANAGED	MANAGED	BEFORE	UNMANAGED	MANAGED
1 YR	231 c.f.s.	38,823 c.f.s.	0.66 c.f.s. @ 403/86	1.65 c.f.s.	26.78 c.f.s.	0.35 c.f.s. @ 404/88
10 YR	46.74 c.f.s.	122.33 c.f.s.	64.52 c.f.s. @ 405/46	31.04 c.f.s.	8.18 c.f.s.	64.64 c.f.s. @ 410/63
100 YR	102.87 c.f.s.	141.43 c.f.s.	154.06 c.f.s. @ 406/40	67.75 c.f.s.	124.55 c.f.s.	122.85 c.f.s. @ 410/41

- NOTES:
- THE FACILITIES WILL BE PUBLICLY OWNED & JOINTLY MAINTAINED. AN OPEN SPACE LOT WILL BE CONVEYED TO HOWARD COUNTY RECREATION AND PARKS.
 - THE FACILITIES WILL BE A P-3 MET POND WITH EXTENDED DETENTION.
 - THE FACILITIES WILL HAVE AN 'A' POND CLASSIFICATION.
 - THE RECHARGE REQUIREMENTS FOR THESE DRAINAGE AREAS WILL BE PROVIDED IN FUTURE INFILTRATION TRENCHES LOCATED ON FUTURE OPEN SPACE LOTS. THEY WILL BE PROPOSED WITH EITHER FINAL PLANS OR SITE DEVELOPMENT PLANS.

PERCENT IMPERVIOUS ASSUMED FOR EACH LAND USE IN STORMWATER MANAGEMENT COMPUTATIONS:

OPEN SPACE AREAS: 10% IMPERVIOUS
 SINGLE FAMILY LOTS: 35% IMPERVIOUS
 ROAD RIGHT OF WAY (PRIVATE): 100% IMPERVIOUS
 ROAD RIGHT OF WAY (PUBLIC): 80% IMPERVIOUS
 SEE COVER SHEET FOR LIMITS OF EACH LAND USE.



Approved: Howard County Department of Public Works
Walter R. Smith 12-14-12
 Chief, Bureau of Highways Date

LEGEND	
	B SOILS
	C SOILS
	D SOILS
	DRAINAGE DIVIDE
	TC PATH
	(A)
	(B)

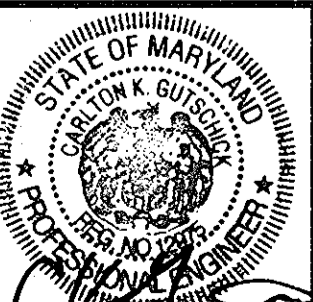
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Robert L. Smith 12/17/12
 Chief, Division of Land Development Date
Robert L. Smith 12/17/12
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

D:\Drawings\09001\FINALS\SWM-SC\09001 SWM DAM.dwg DRN. CHK. CKG DATE REVISION BY APPR.

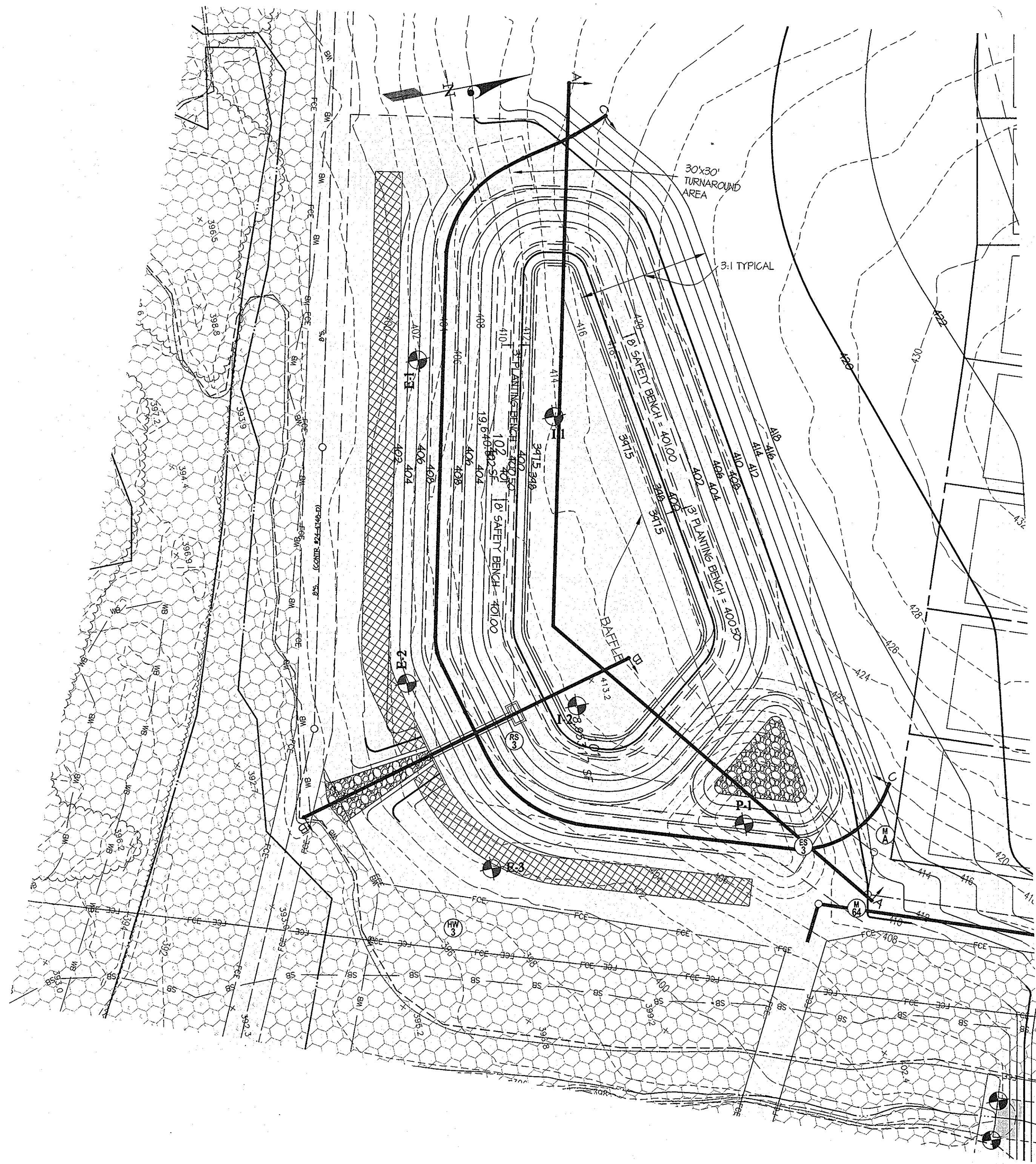
PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12878
 EXPIRATION DATE: MAY 26, 2014



ULTIMATE SWM DRAINAGE AREA MAP
MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	13 OF 27



POND 3 (BASIN GRADING) SCALE: 1" = 40'



POND 4 (BASIN GRADING) SCALE: 1" = 40'

Approved: Howard County Department of Public Works
With 2.0001 12-14-12
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Krista Lunde 12/17/12
 Chief, Division of Land Development Date
William 12/17/12
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

L:\CAD\DRAWINGS\2012\2012-11-14-16_S&M DETAILS.dwg DES. DEV DRN. JRD CHK. CKG DATE REVISION BY APPR.

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

CKG 11-20-12
 ENGINEER'S SIGNATURE DATE

BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mark Bennett 11-20-12
 SIGNATURE OF DEVELOPER/BUILDER DATE

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John K. Weston 11/29/12
 HOWARD S.C.D. DATE

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. 12875, EXPIRATION DATE: MAY 26, 2014.



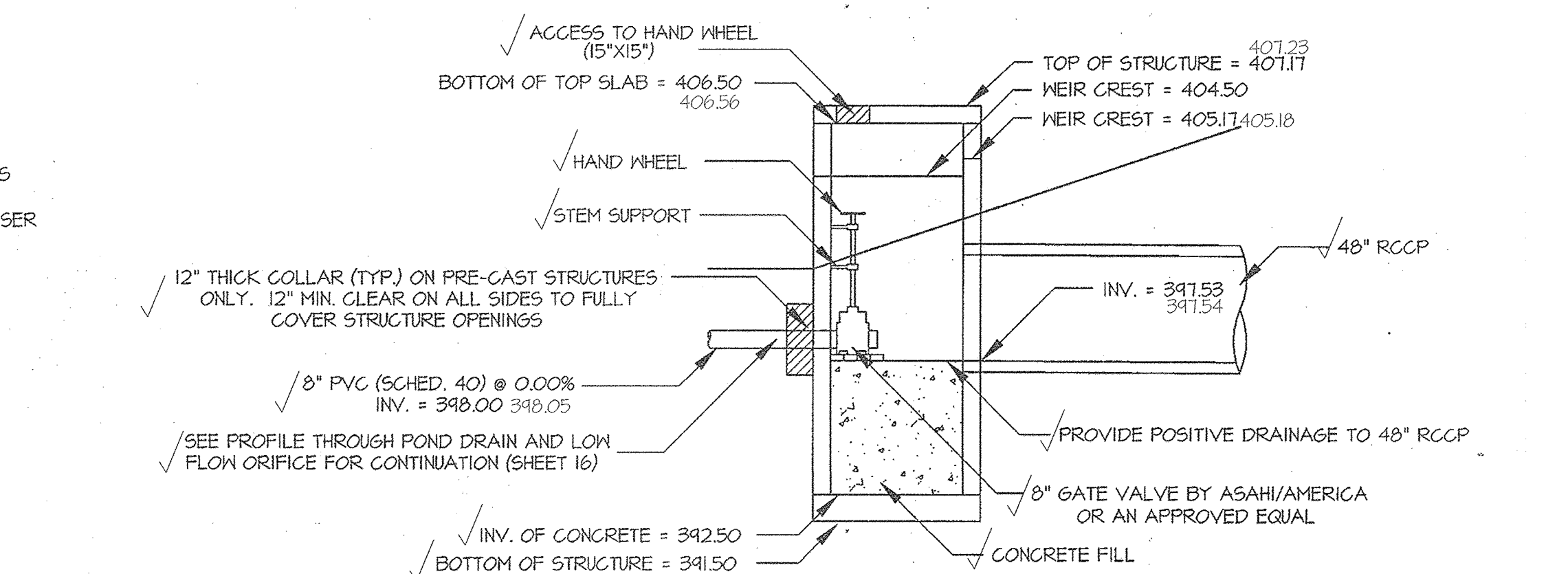
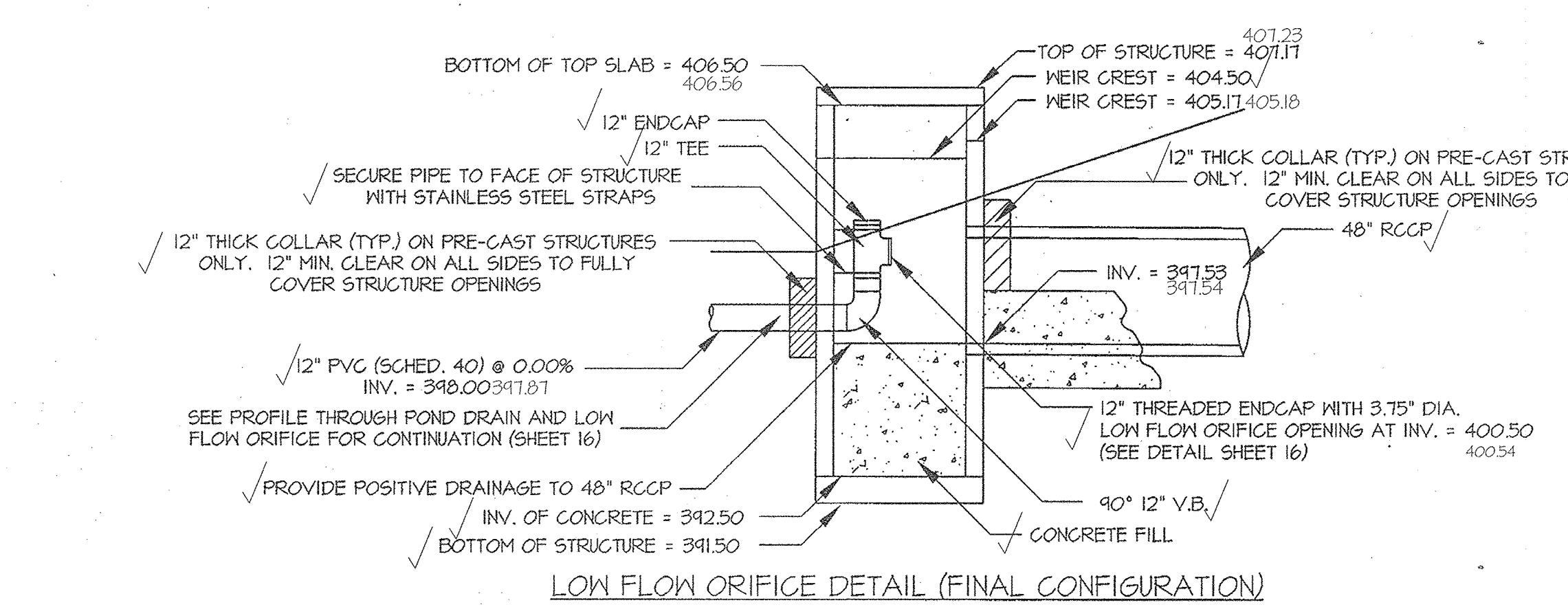
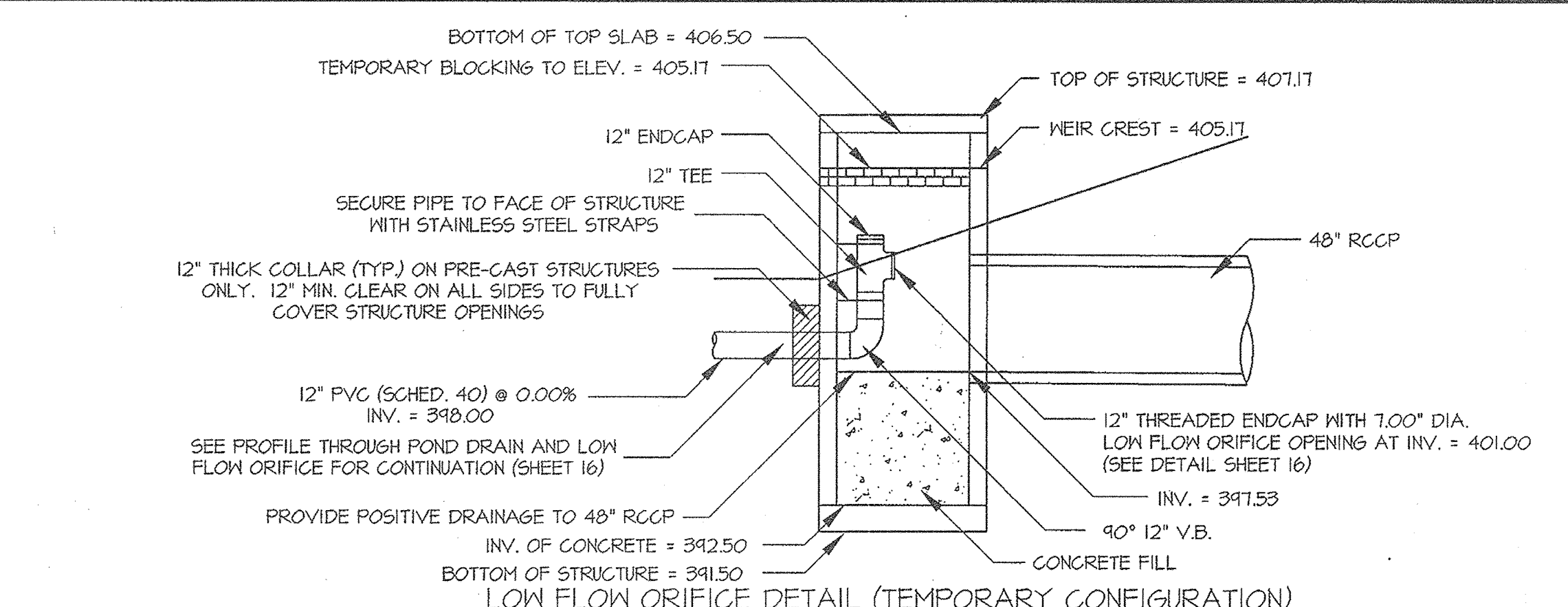
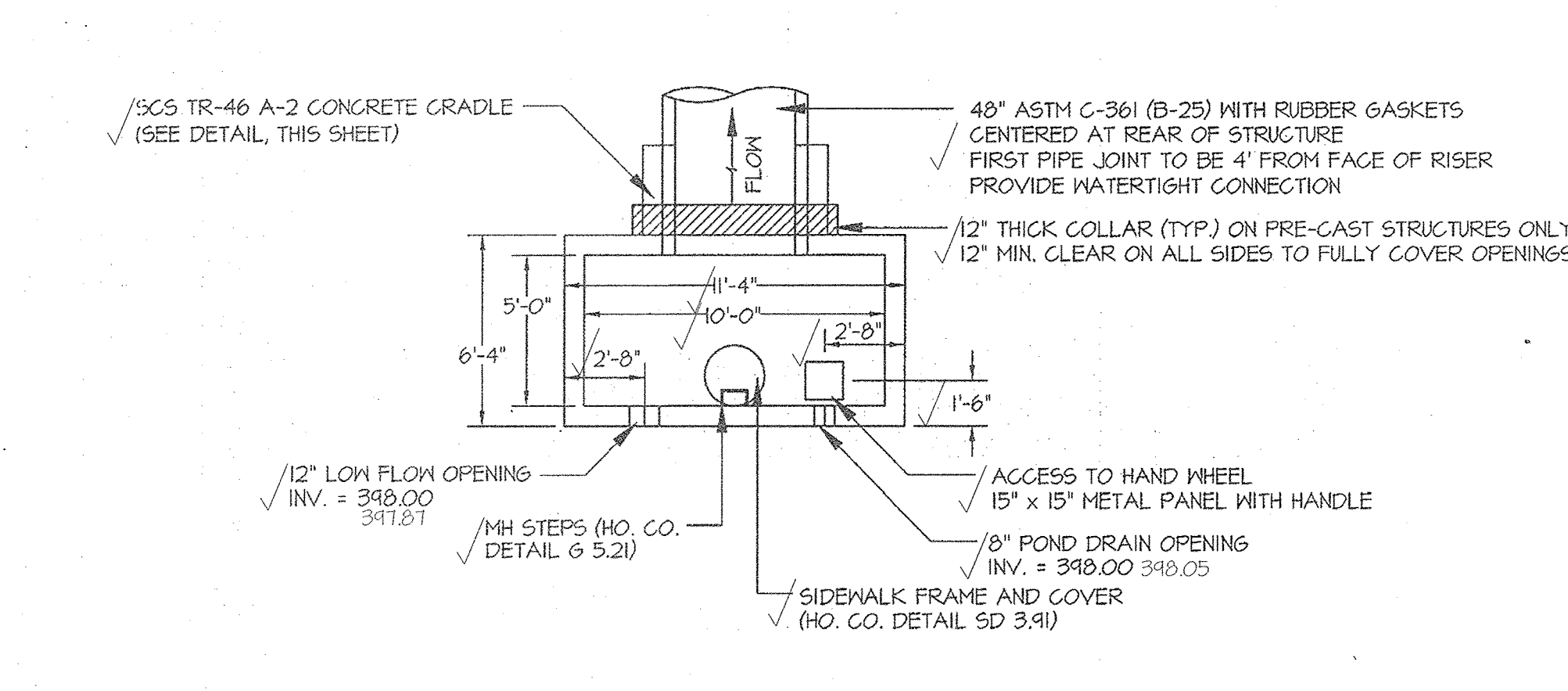
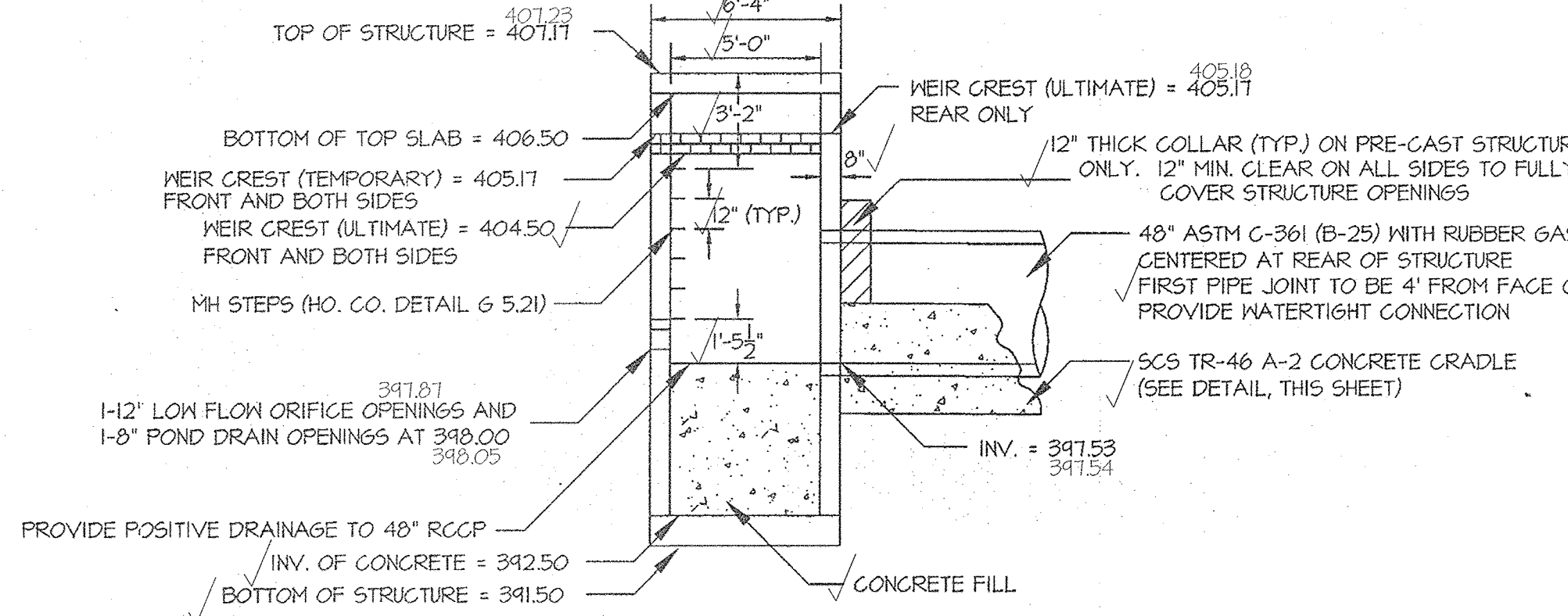
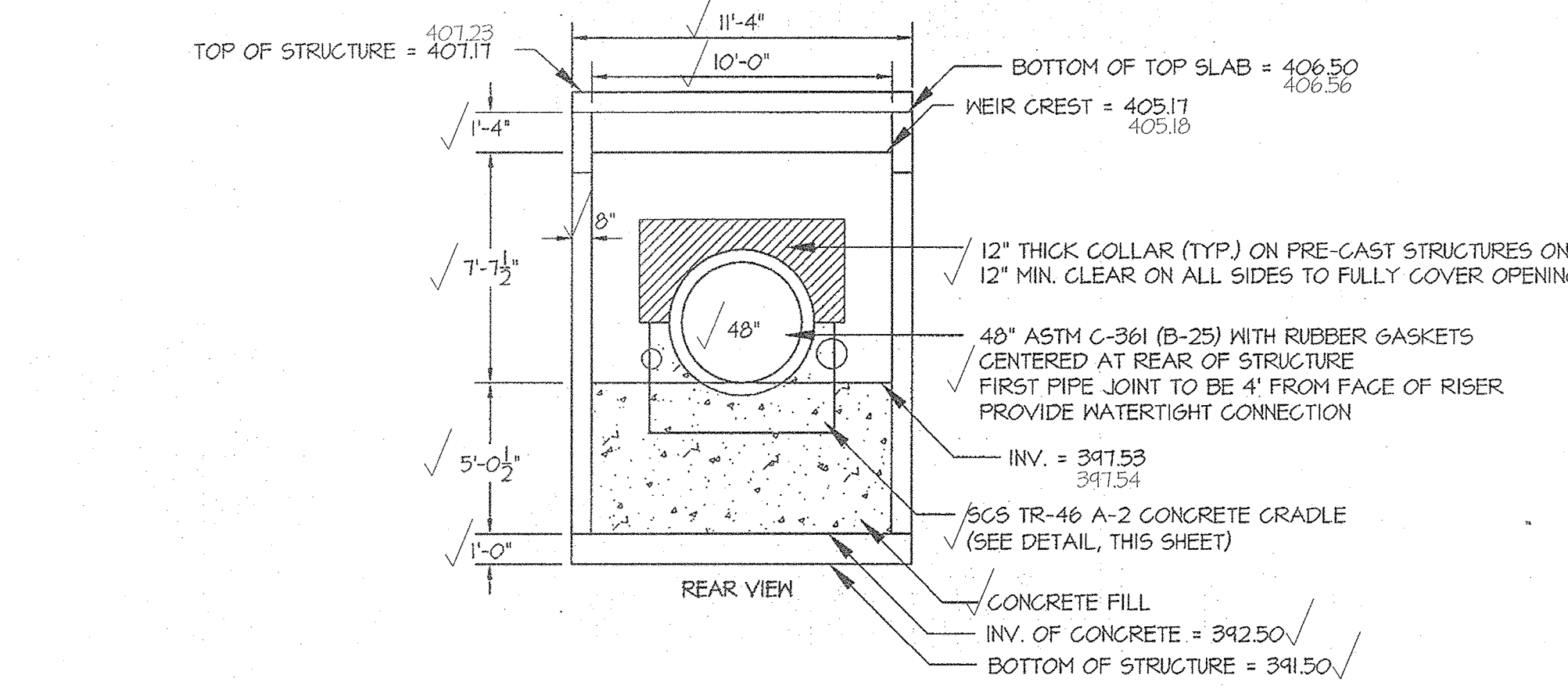
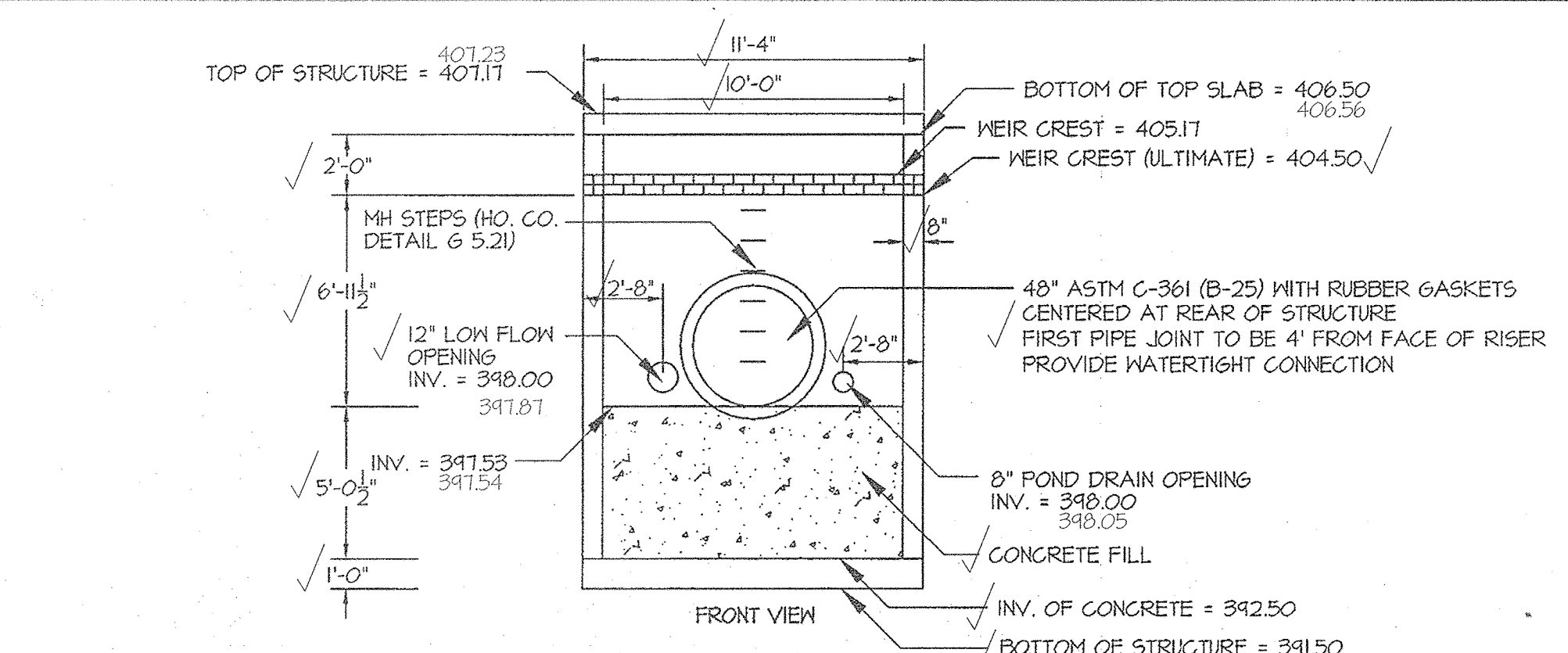
PONDS 3 & 4 GRADING PLANS (AS BASINS)

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

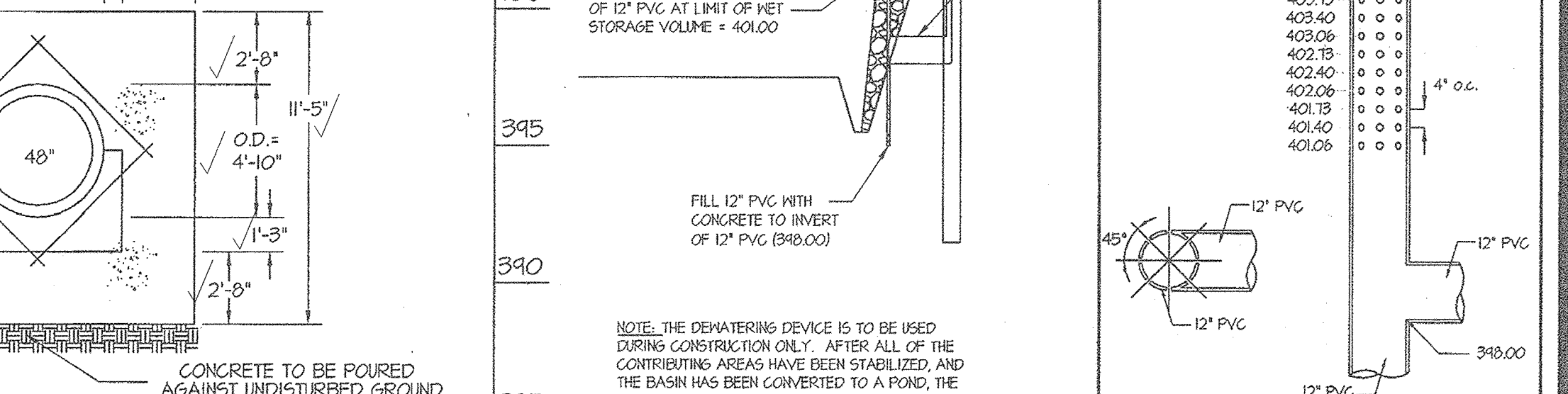
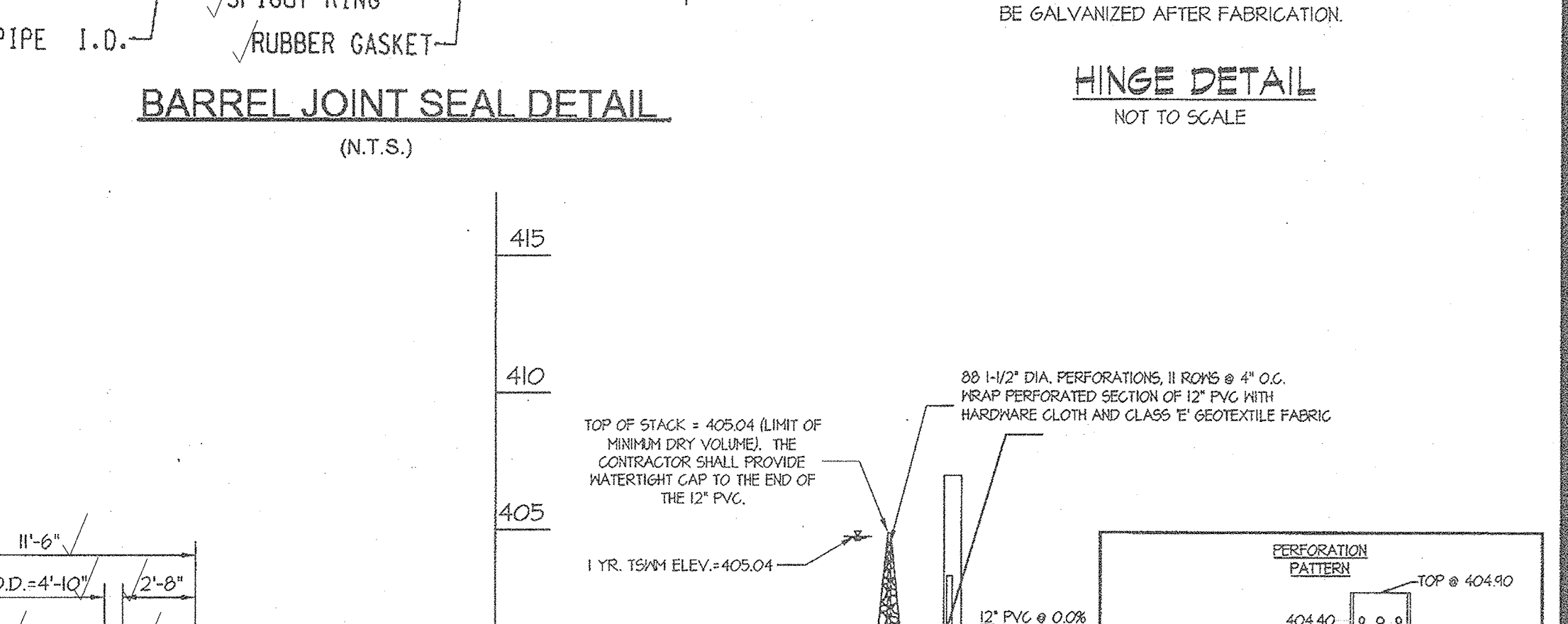
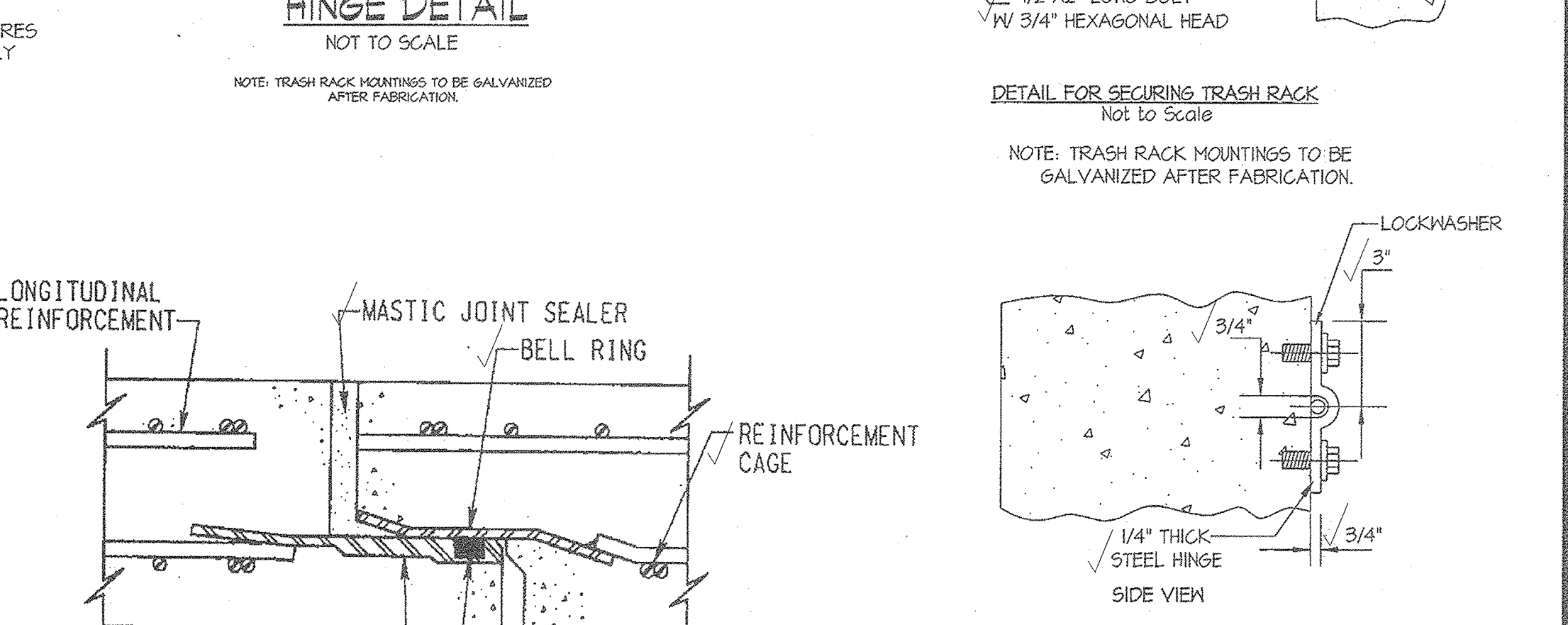
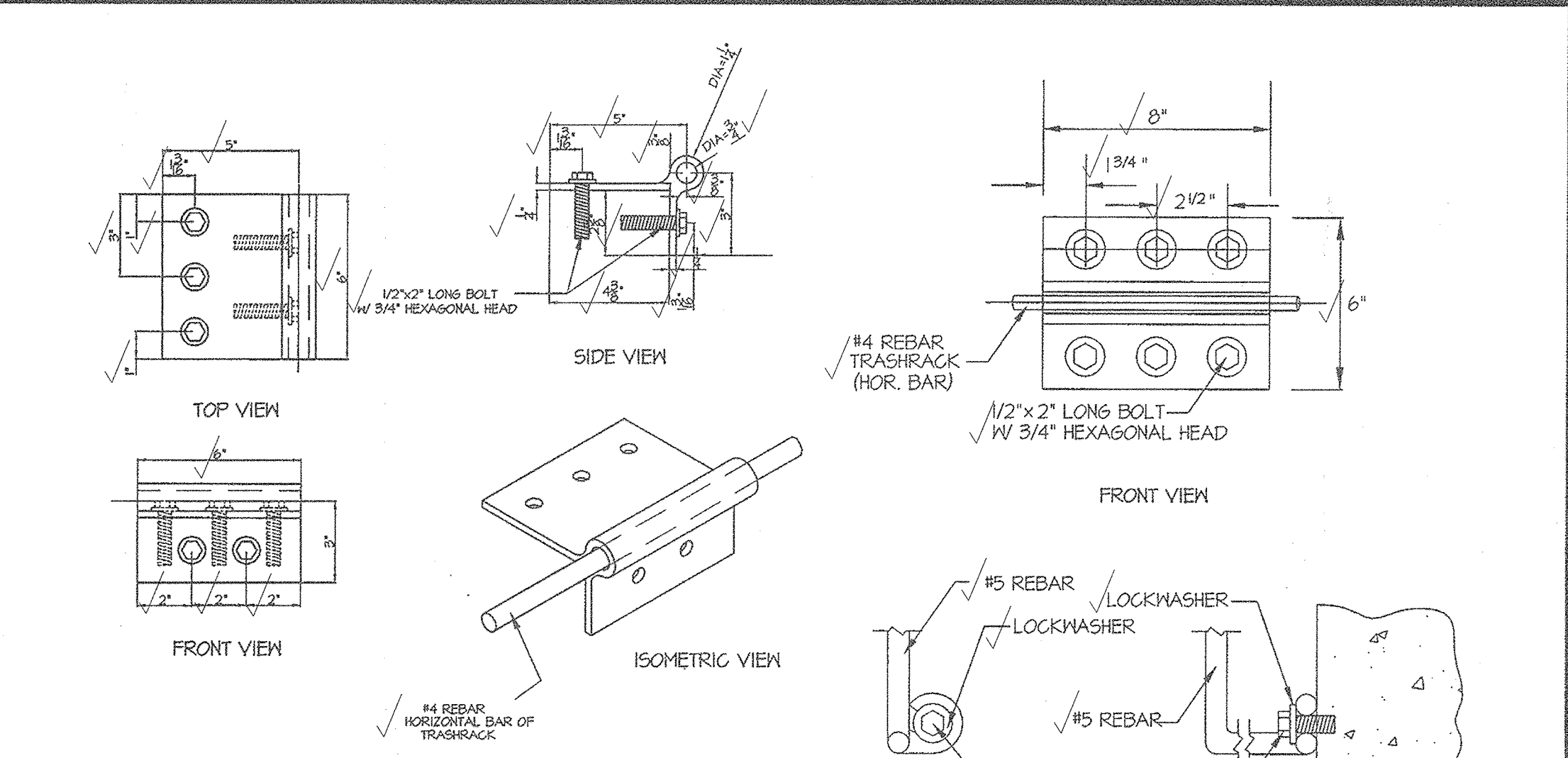
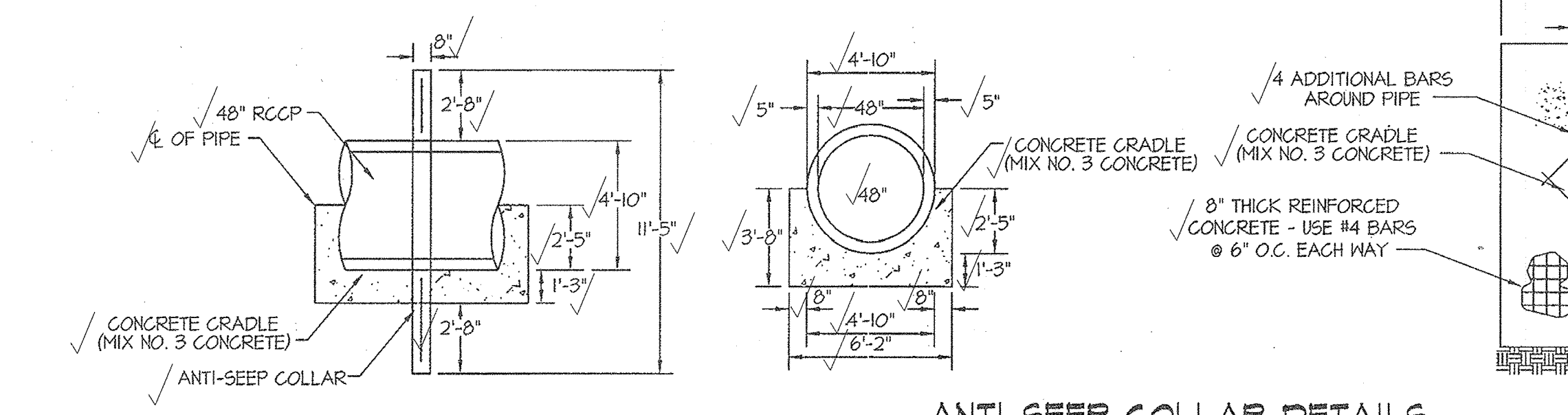
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	14 OF 27

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND



SCALE FOR DETAILS IS 1"=5'
UNLESS NOTED OTHERWISE



Approved: Howard County Department of Public Works
 Chief, Bureau of Highways
 Date: 12-14-12

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT THESE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 Date: 11-20-12

BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Date: 11-20-12

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 26, 2020.
 Date: 11/29/12

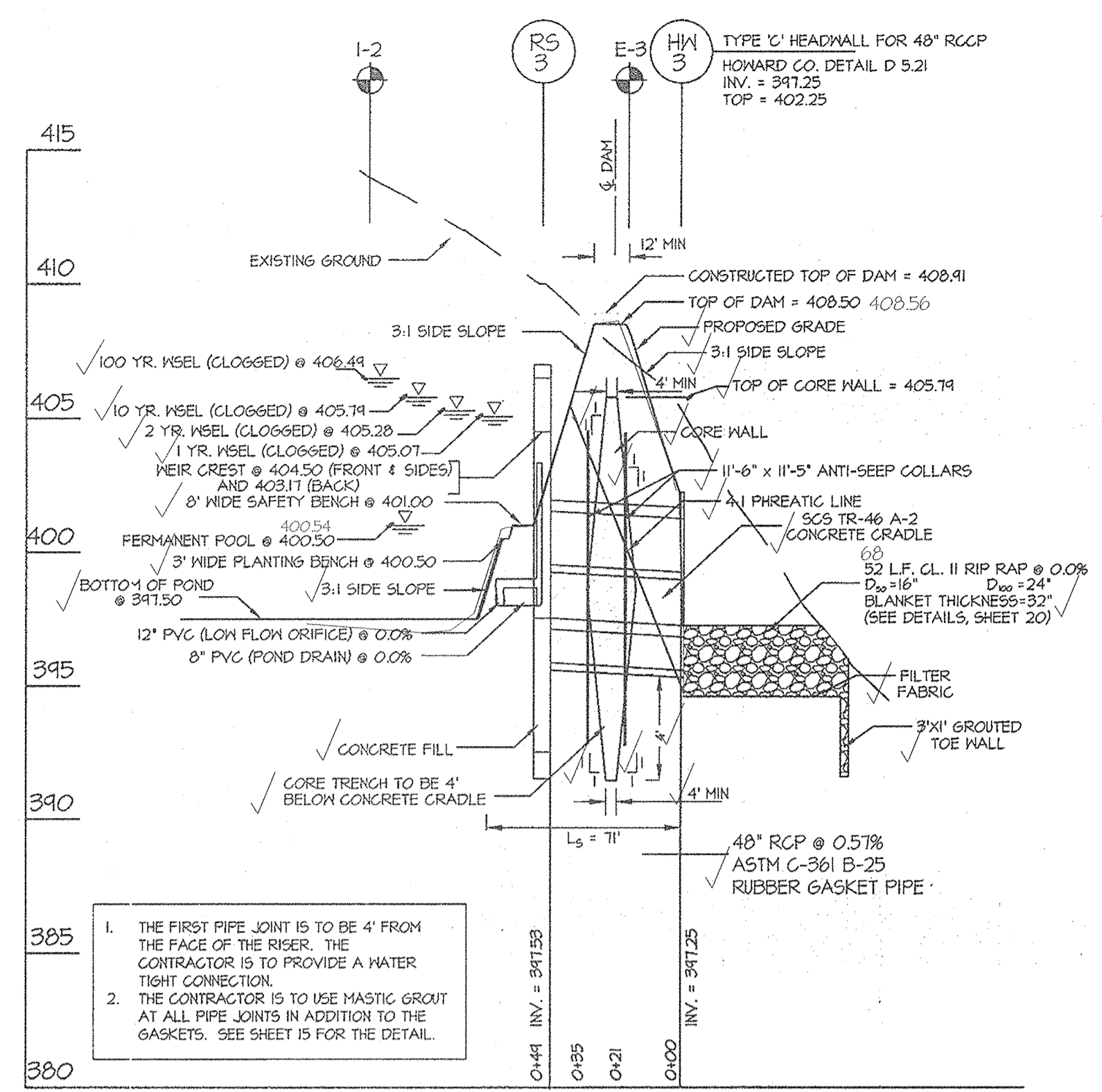
NOTES:
 1. RISER STRUCTURE IS TO BE A PRE-CAST RISER. SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION OF THE RISER. THE RISER MAY BE CAST IN PLACE, PROVIDE THE APPROPRIATE SHOP DRAWINGS HAVE BEEN SUBMITTED TO THE ENGINEER.
 2. PROVIDE WATER-TIGHT CONNECTIONS AT ALL ORIFICE OPENINGS. USE NON-SHRINK GROUT WHERE NECESSARY.
 3. THE RISER WILL BE OPEN ALL FOUR SIDES FOR A TOTAL WEIR LENGTH OF 30 FEET.
 4. CONTRACTOR IS TO PROVIDE WATER-TIGHT JOINTS BETWEEN RISER SECTIONS. SECTIONS ARE TO BE SECURED WITH METAL STRAPS.
 5. THE FIRST PIPE JOINT MUST BE WITHIN FOUR FEET OF THE RISER FACE. PROVIDE WATER-TIGHT CONNECTION BETWEEN RISER AND BARREL.
 ASBUILTS SHEET 3 OF 8

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALTO: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

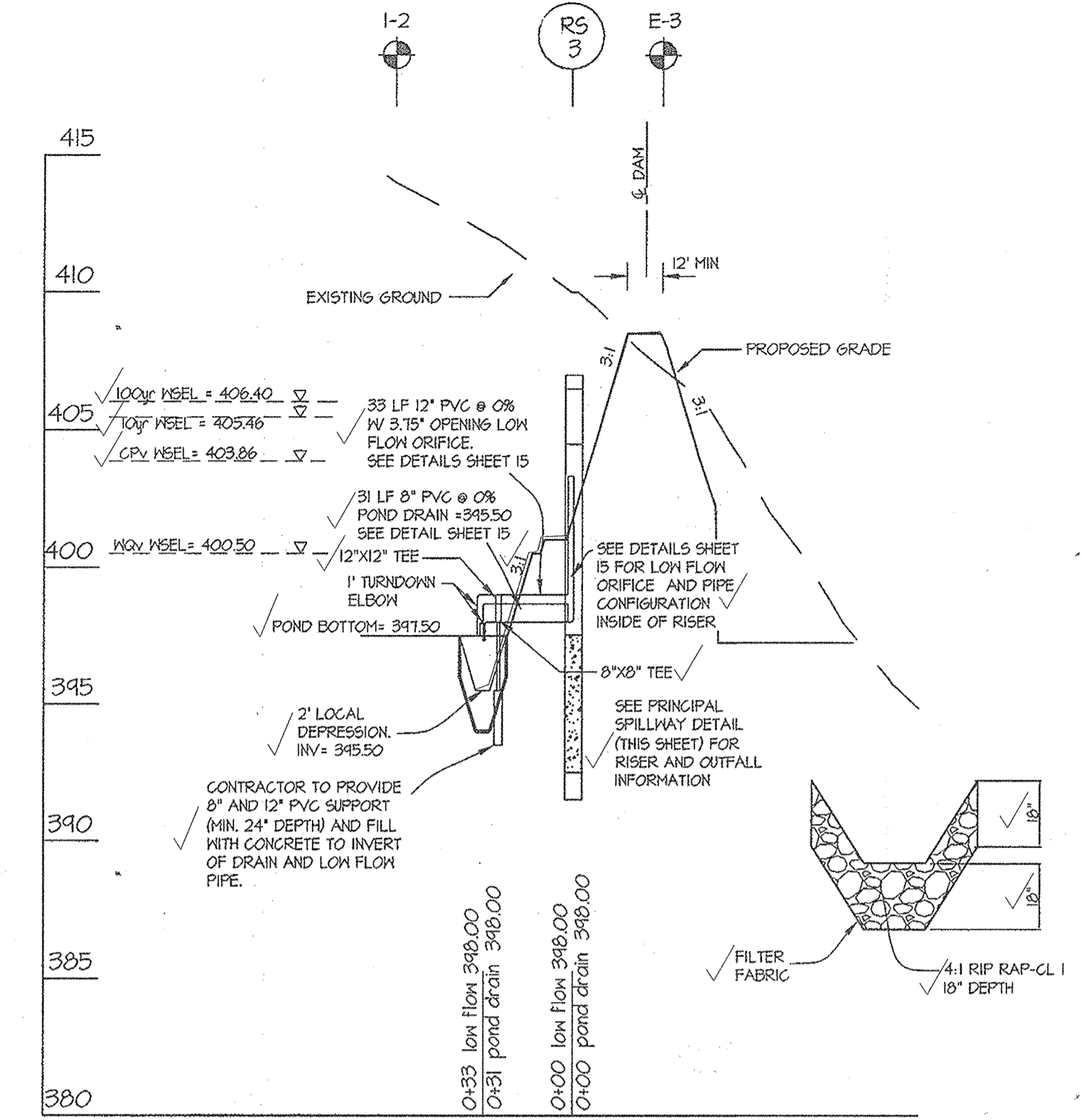
DES. DEV	DRN. JRD	CHK. CKG	DATE	REVISION	BY	APP'R.

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

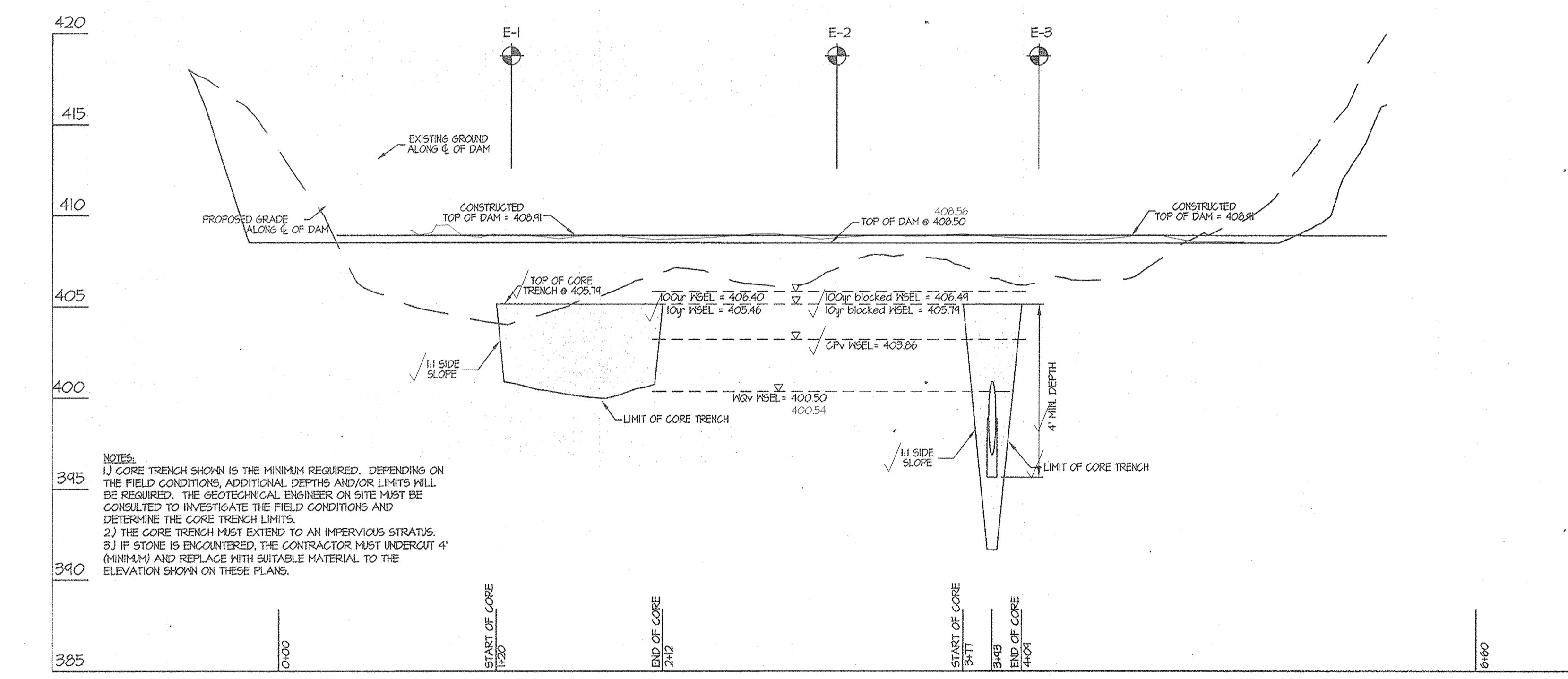
SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
11/1/2018 NOV. 2012	41-21/46-3	15 OF 27



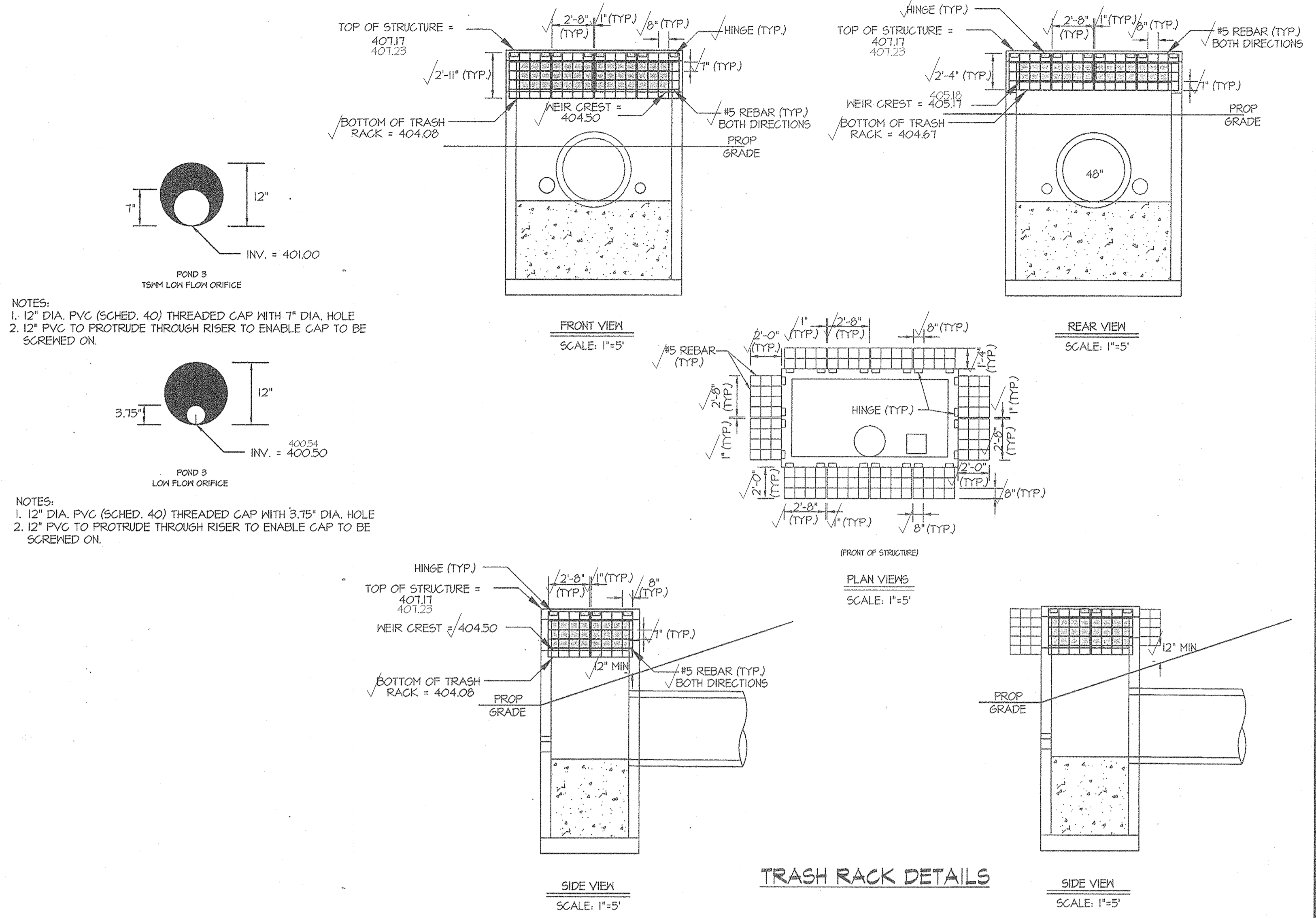
PROFILE THROUGH PRINCIPAL SPILLWAY SCALE: 1" = 5' (V)
 1" = 50' (H)



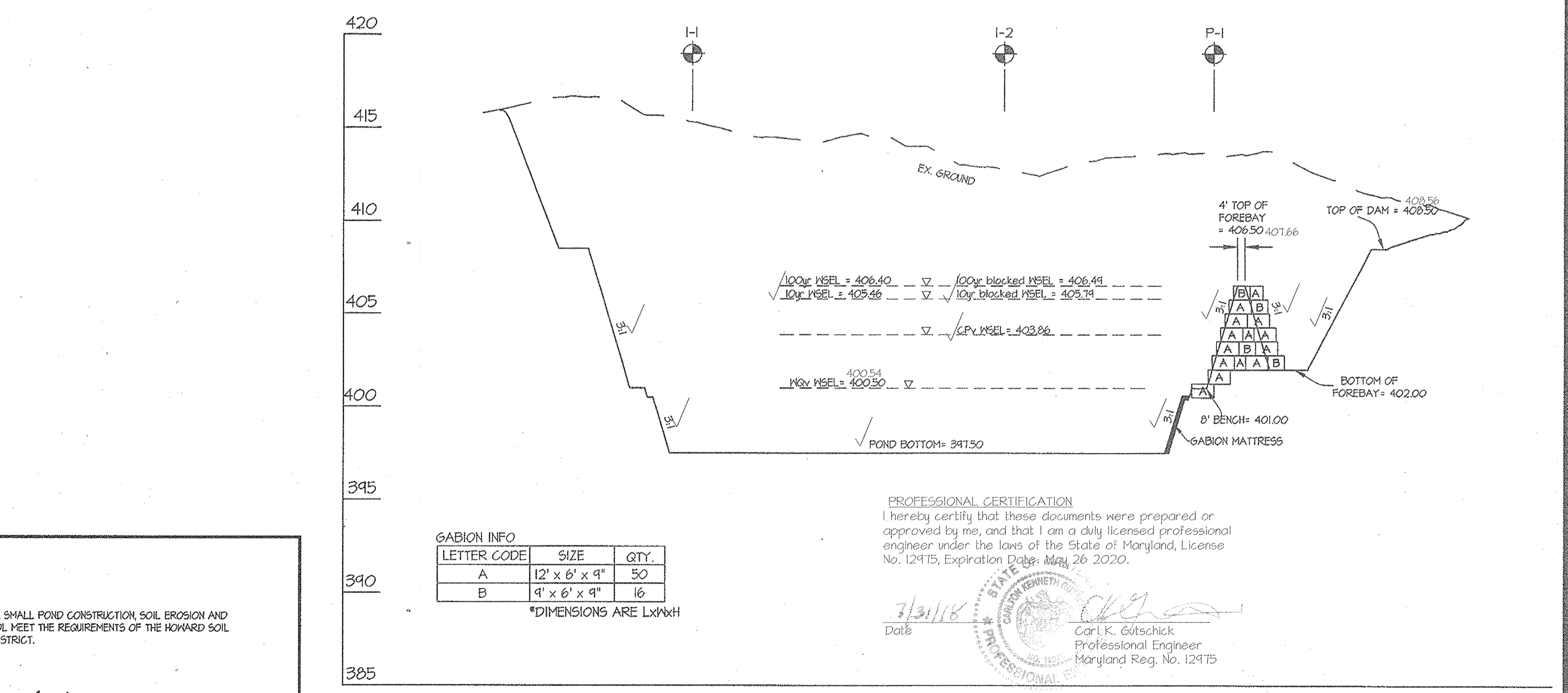
PROFILE THROUGH POND DRAIN AND LOW FLOW RELEASE SCALE: 1" = 5' (V)
 1" = 50' (H)



CROSS SECTION OF DAM ALONG CENTERLINE SCALE: 1" = 5' (V)
 1" = 50' (H)



TRASH RACK DETAILS SCALE: 1" = 5'



PROFILE THROUGH FOREBAYS SCALE: 1" = 5' (V)
 1" = 50' (H)

Approved: Howard County Department of Public Works
 Mike R. M... 12-14-12
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 12/17/12
 Chief, Development Engineering Division

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

[Signature] 11-20-12
 ENGINEER'S SIGNATURE DATE

BUILDER'S CERTIFICATE
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11-20-12
 SIGNATURE OF DEVELOPER/BUILDER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/29/12
 HOWARD S.C.D. DATE

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

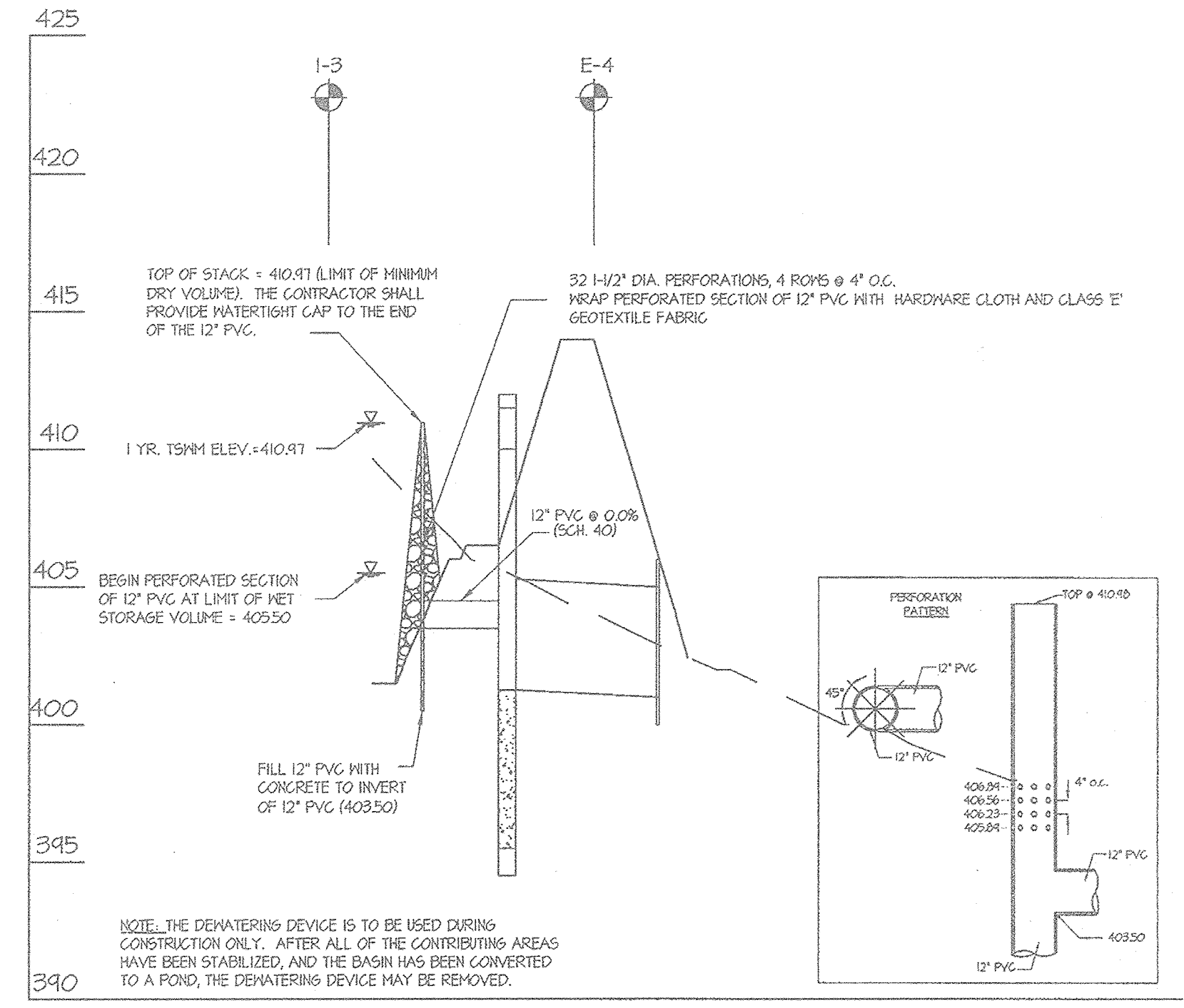
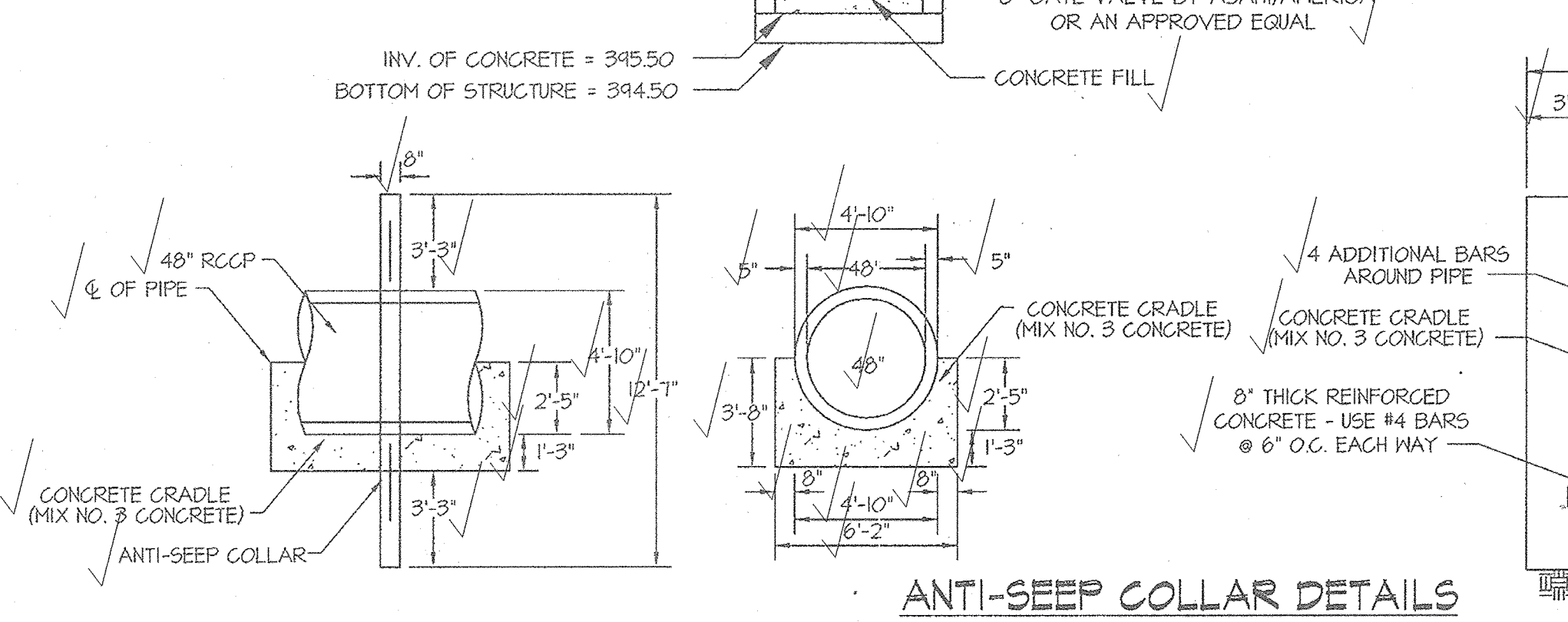
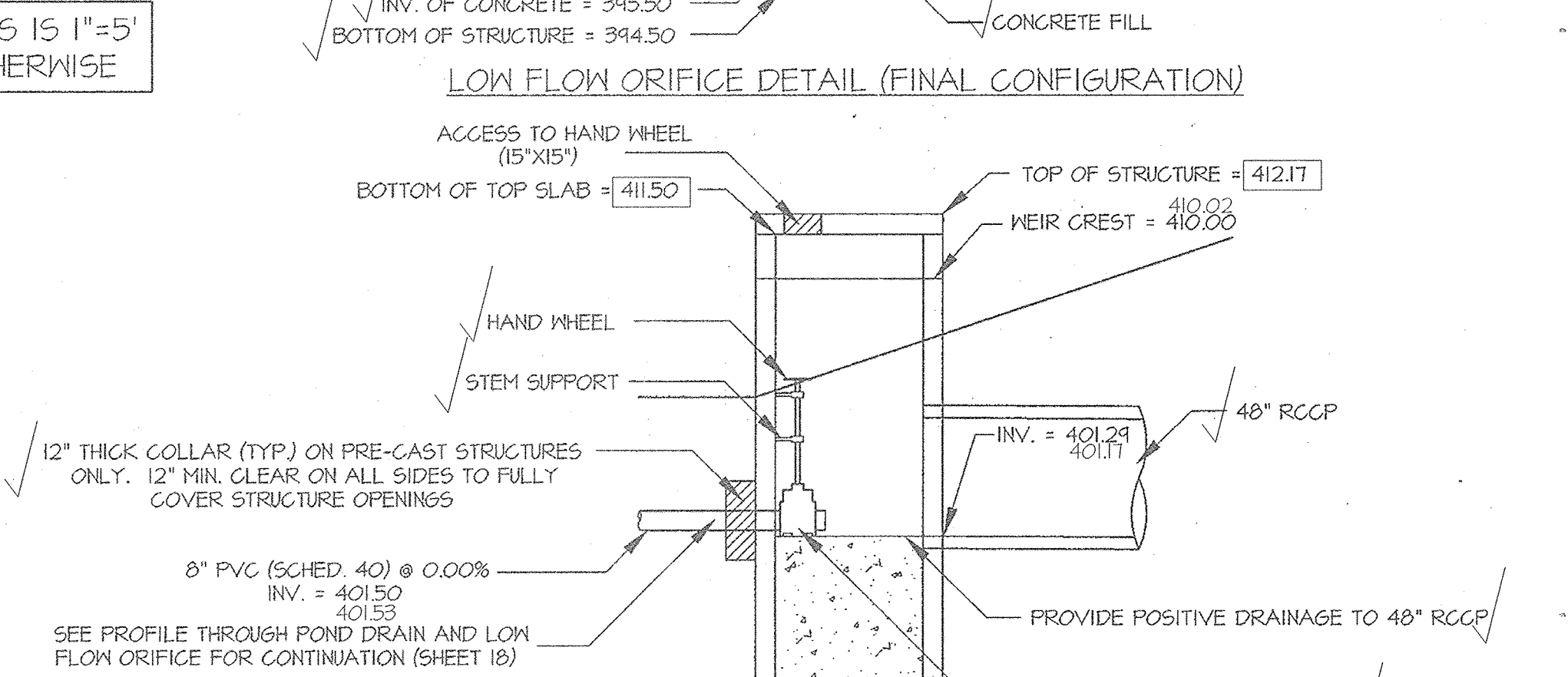
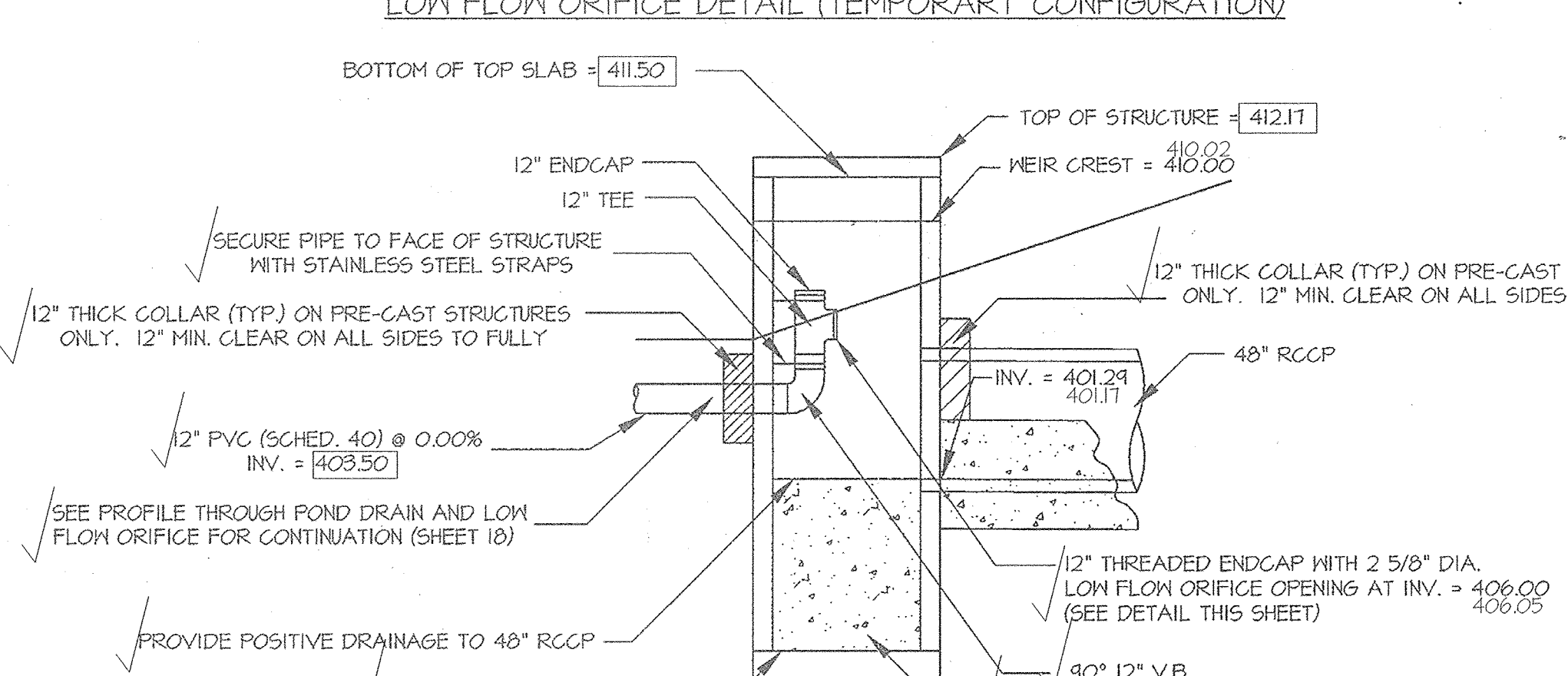
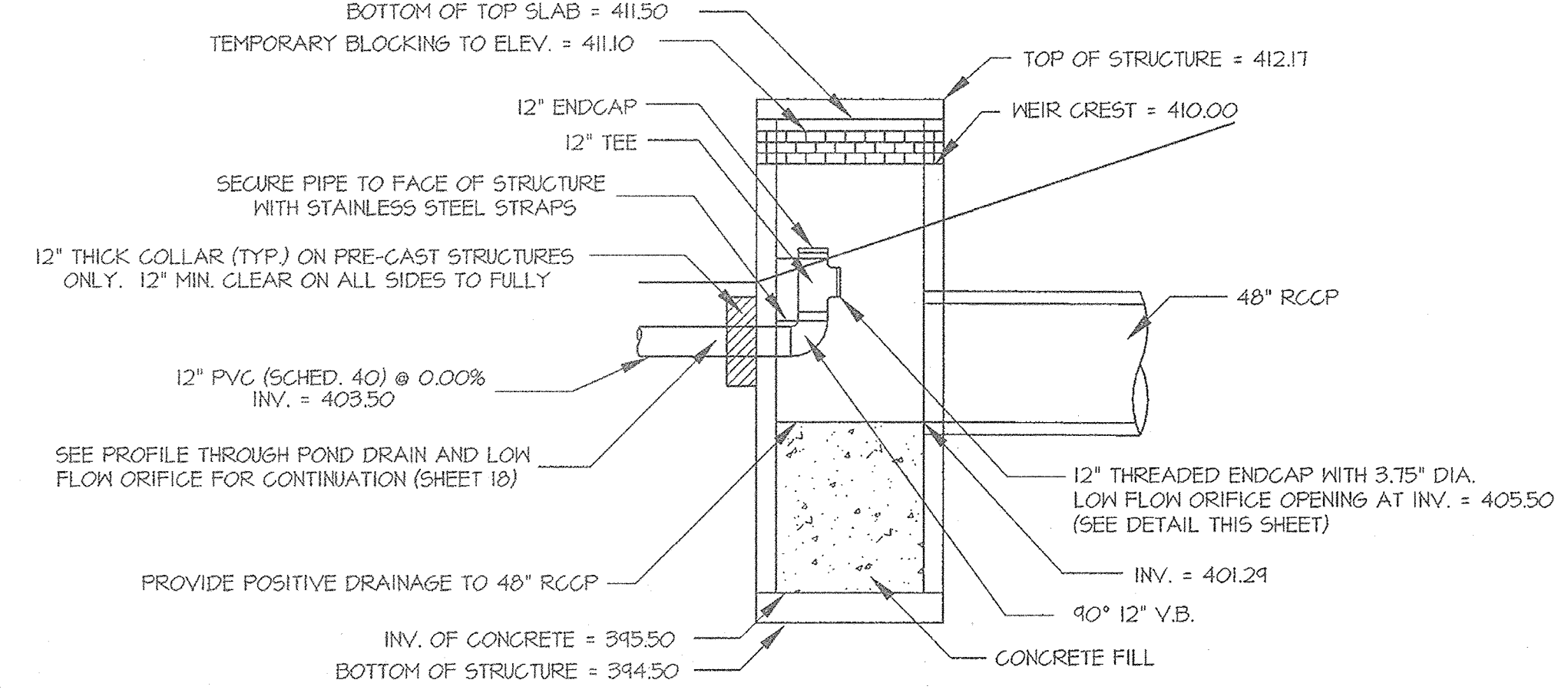
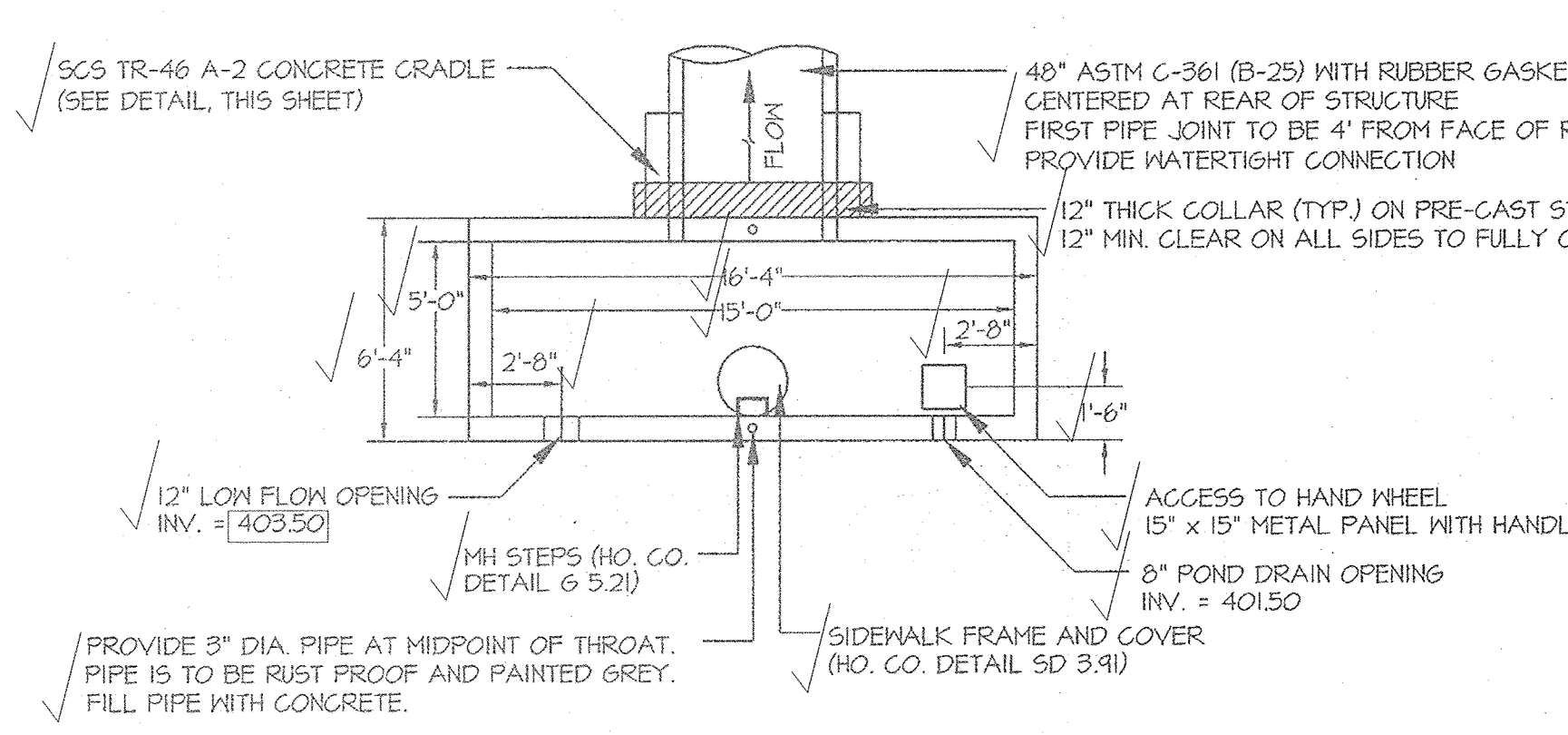
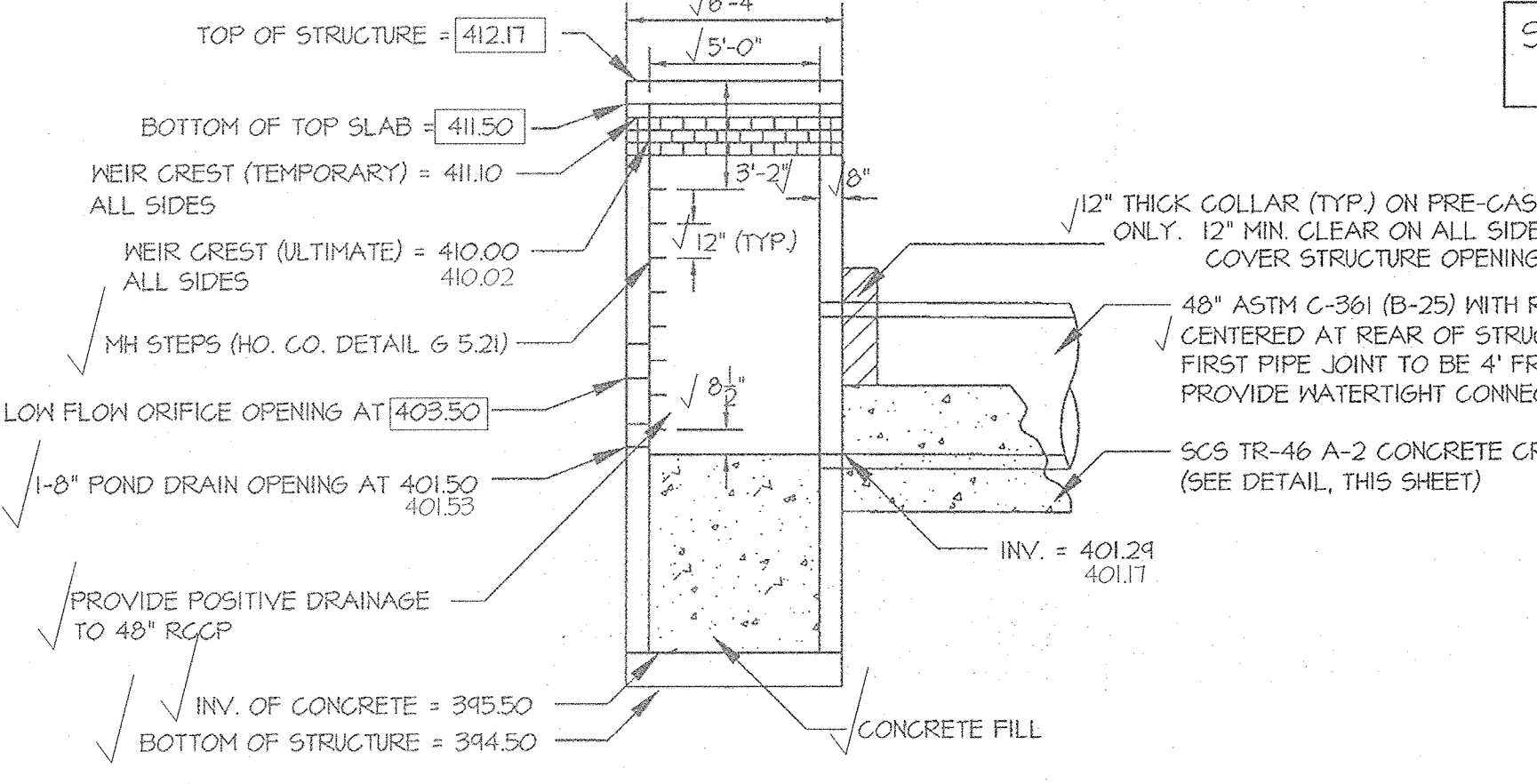
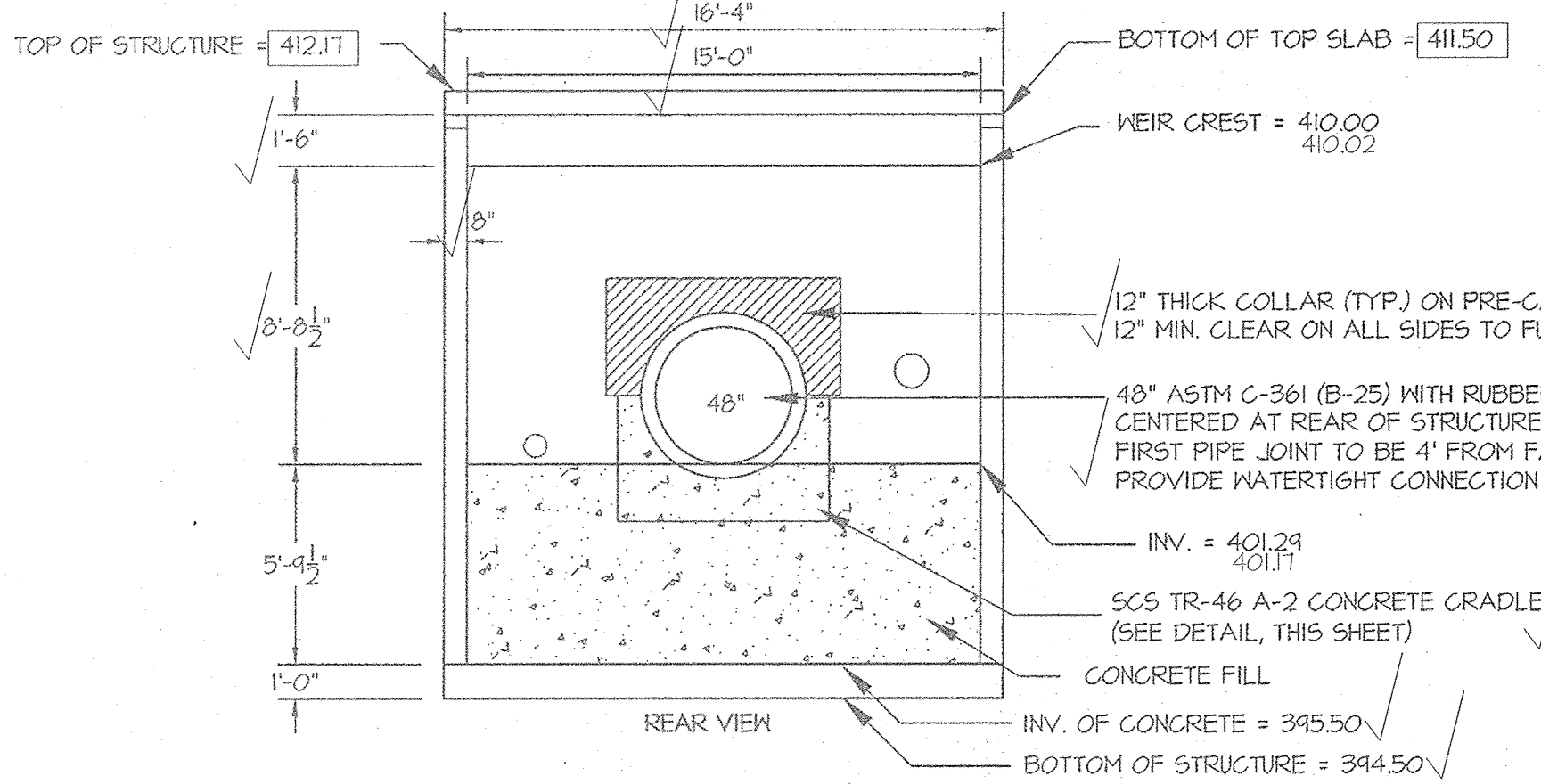
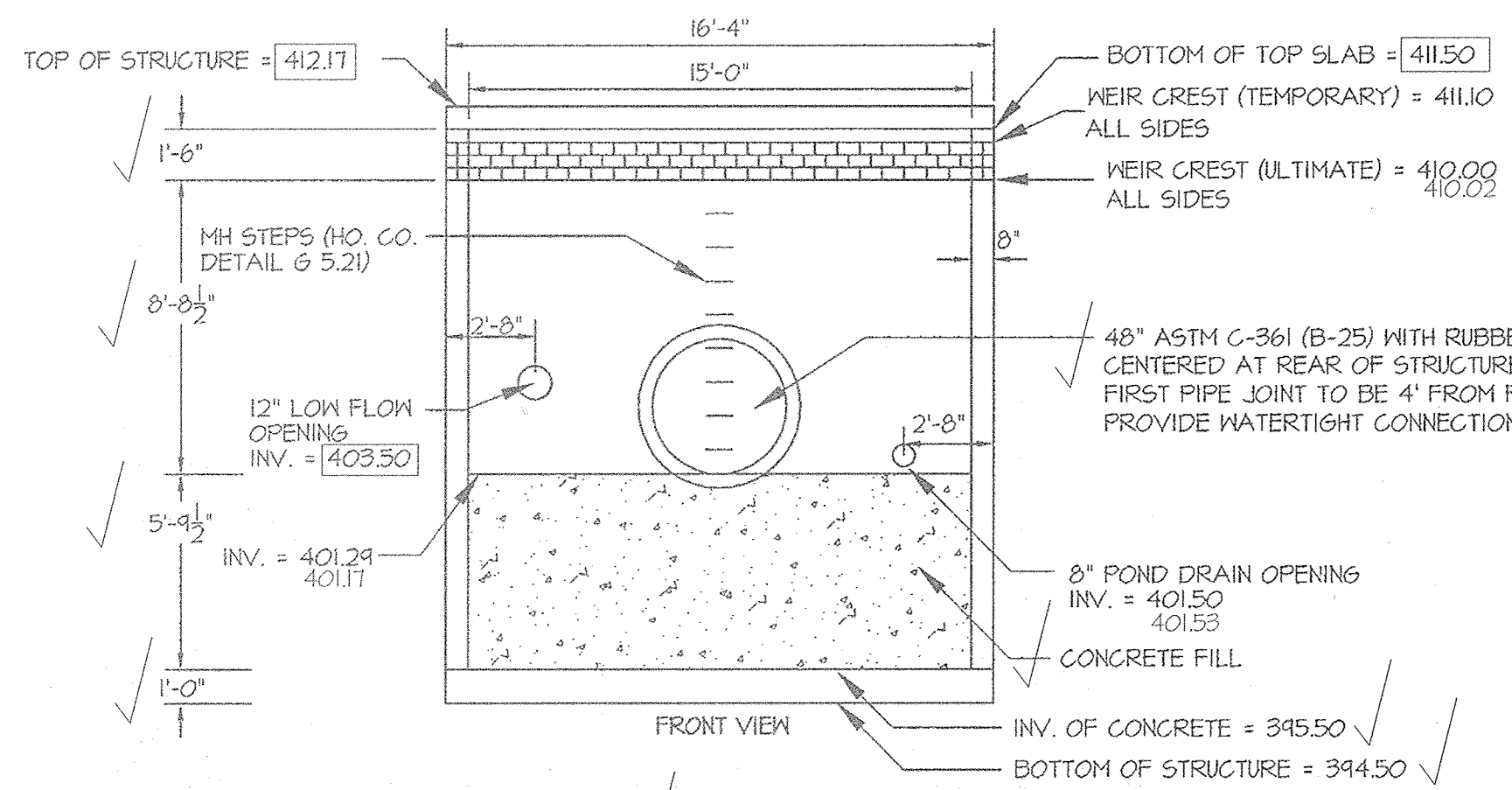
PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975.
 EXPIRATION DATE: MAY 28, 2014

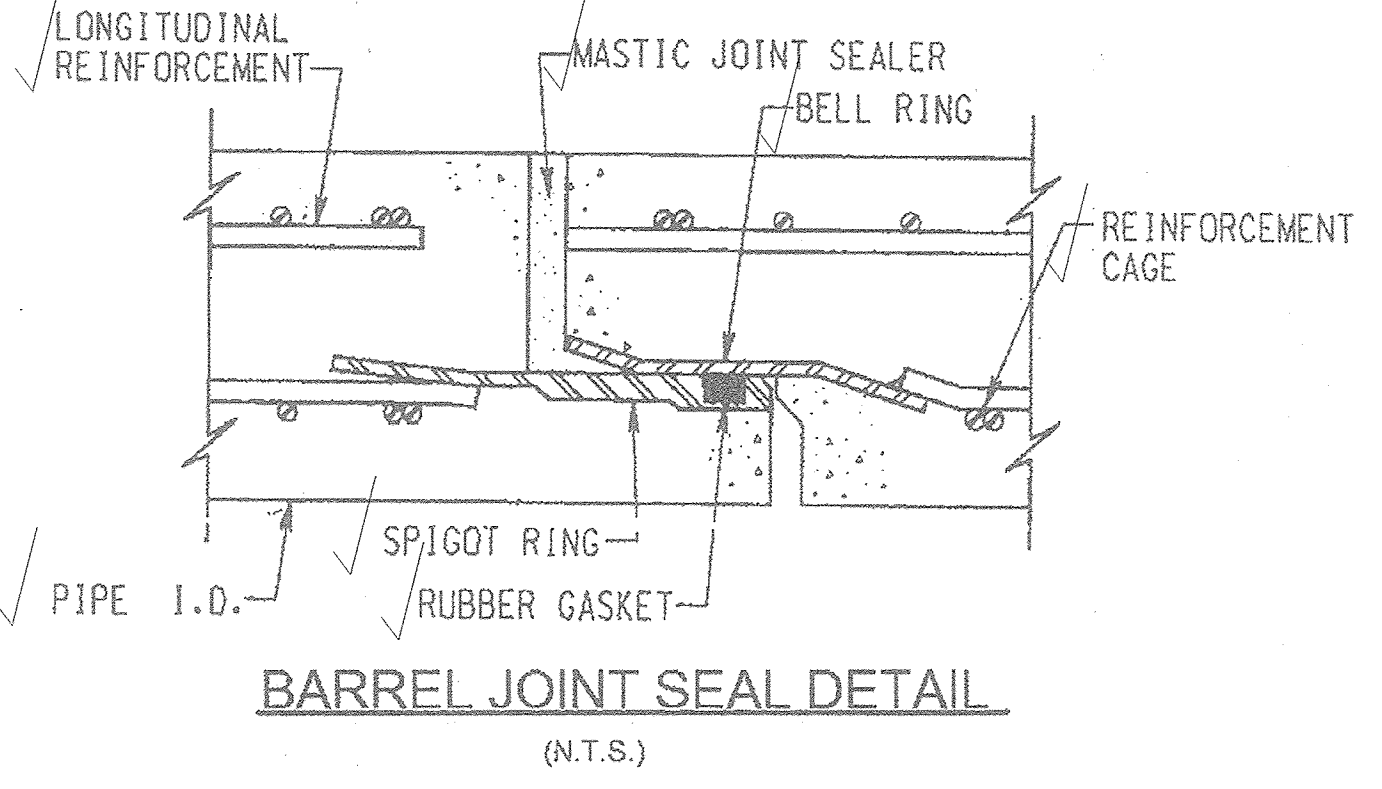
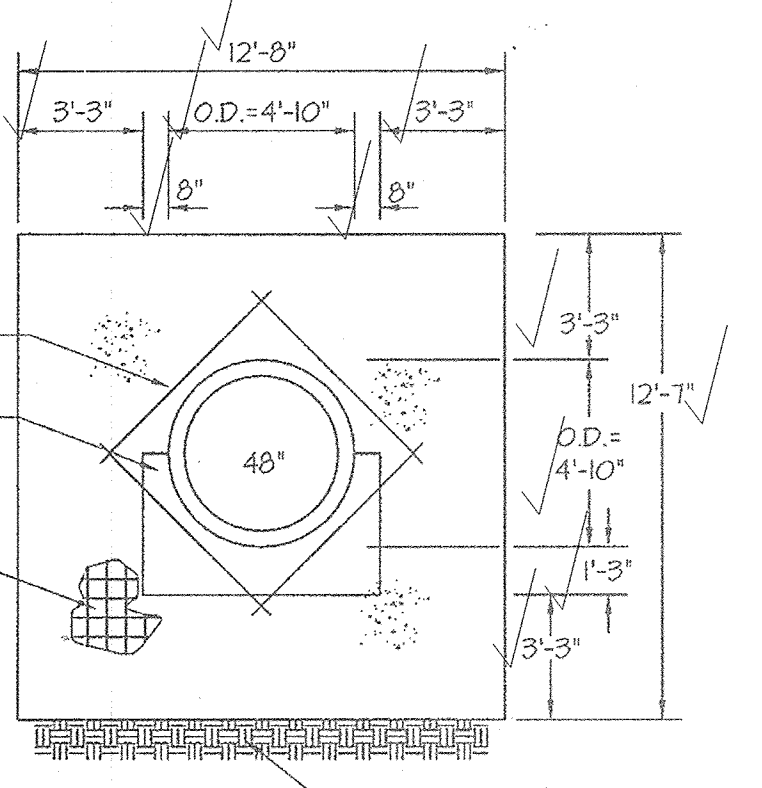
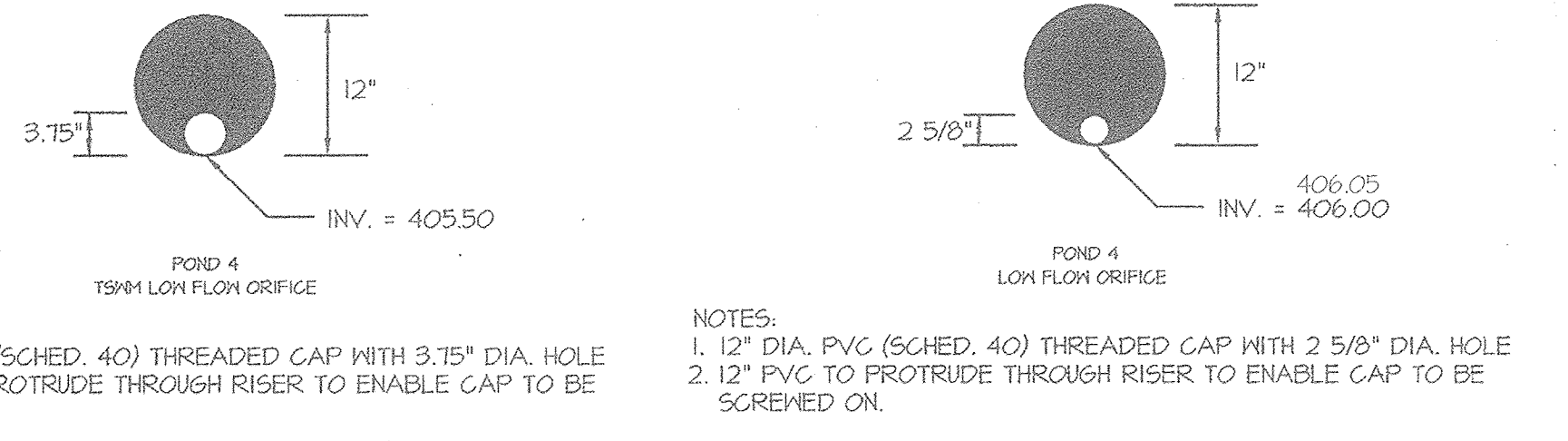
[Signature] 11-20-12
 ELECTION DISTRICT No. 5

ASBULTS
 POND 3 NOTES and DETAILS
MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL "W"

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JULY 2012 NOV. 2012	41-21/46-3	16 OF 27



SCALE FOR DETAILS IS 1"=5'
UNLESS NOTED OTHERWISE



Approved: Howard County Dept. of Public Works
Will R. Smith 12-14-12
Chief, Bureau of Highways
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kurt R. ... 12/17/12
Chief, Division of Land Development
Date

... 12/17/12
Chief, Development Engineering Division
Date

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND POSSIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT THESE MOST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

... 11-20-12
DATE

BUILDER'S CERTIFICATE
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... 11-20-12
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, LICENSE NO. 12915, EXPIRATION DATE: MAY 26, 2020.

... 4/29/12
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, LICENSE NO. 12915, EXPIRATION DATE: MAY 26, 2020.

... 4/29/12
DATE

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-400-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.

PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

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. 12915, EXPIRATION DATE: MAY 26, 2020.

... 11-20-12
DATE

PROFESSIONAL CERTIFICATION
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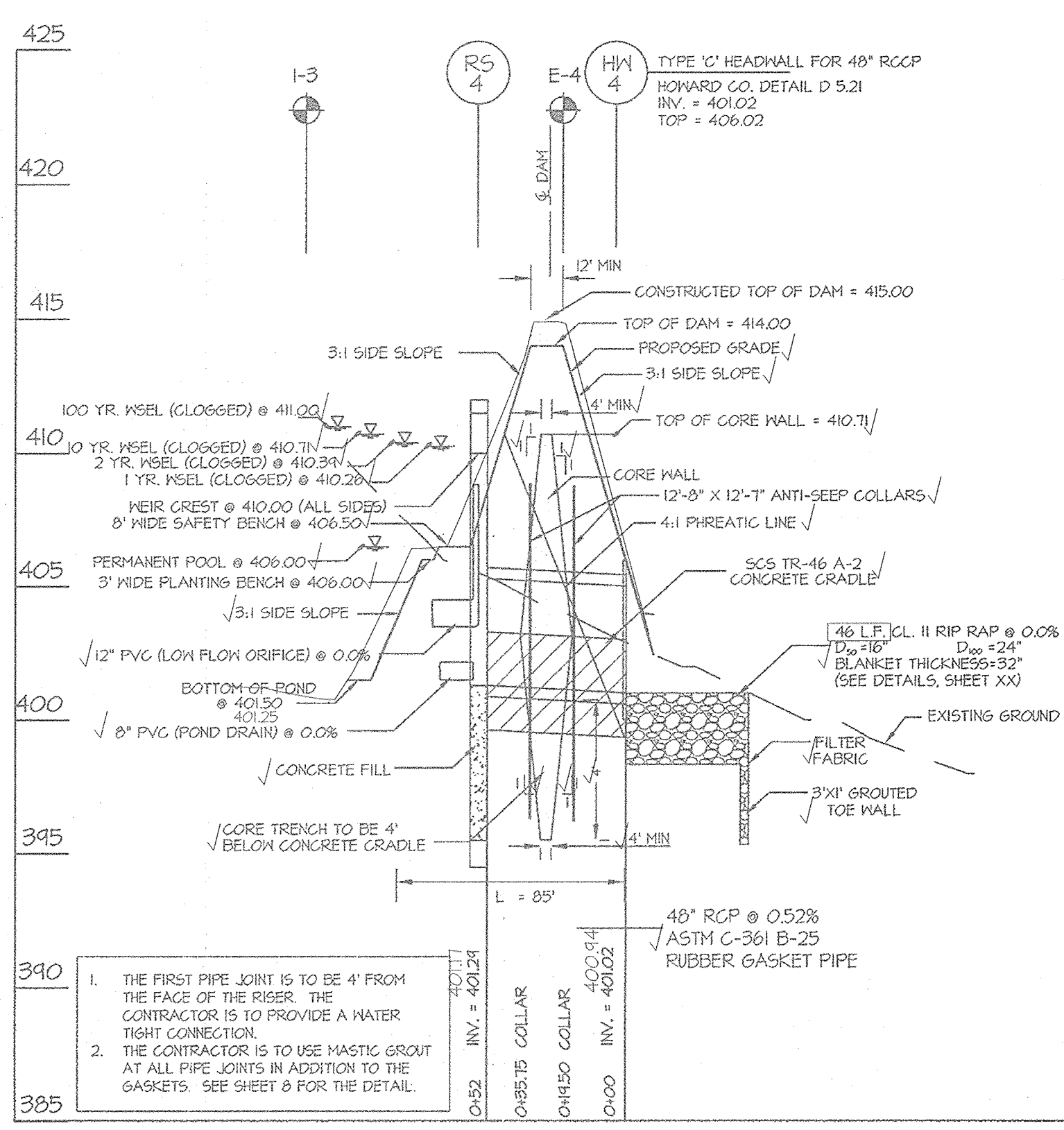
ASBUILTS
(N.T.S.)

NOTES:
1. RISER STRUCTURE IS TO BE A PRE-CAST RISER. SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION OF THE RISER. THE RISER MAY BE CAST IN PLACE, PROVIDED THE APPROPRIATE SHOP DRAWINGS HAVE BEEN SUBMITTED TO THE ENGINEER.
2. PROVIDE WATERTIGHT CONNECTIONS AT ALL ORIFICE OPENINGS. USE NON-SHRINK GROUT WHERE NECESSARY.
3. THE RISER WILL BE OPEN ALL FOUR SIDES FOR A TOTAL WEIR LENGTH OF 40 FEET.
4. CONTRACTOR IS TO PROVIDE WATERTIGHT JOINTS BETWEEN RISER SECTIONS. SECTIONS ARE TO BE SECURED WITH METAL STRAPS.
5. THE FIRST PIPE JOINT MUST BE WITHIN FOUR FEET OF THE RISER FACE. PROVIDE WATERTIGHT CONNECTION BETWEEN RISER AND BARREL.

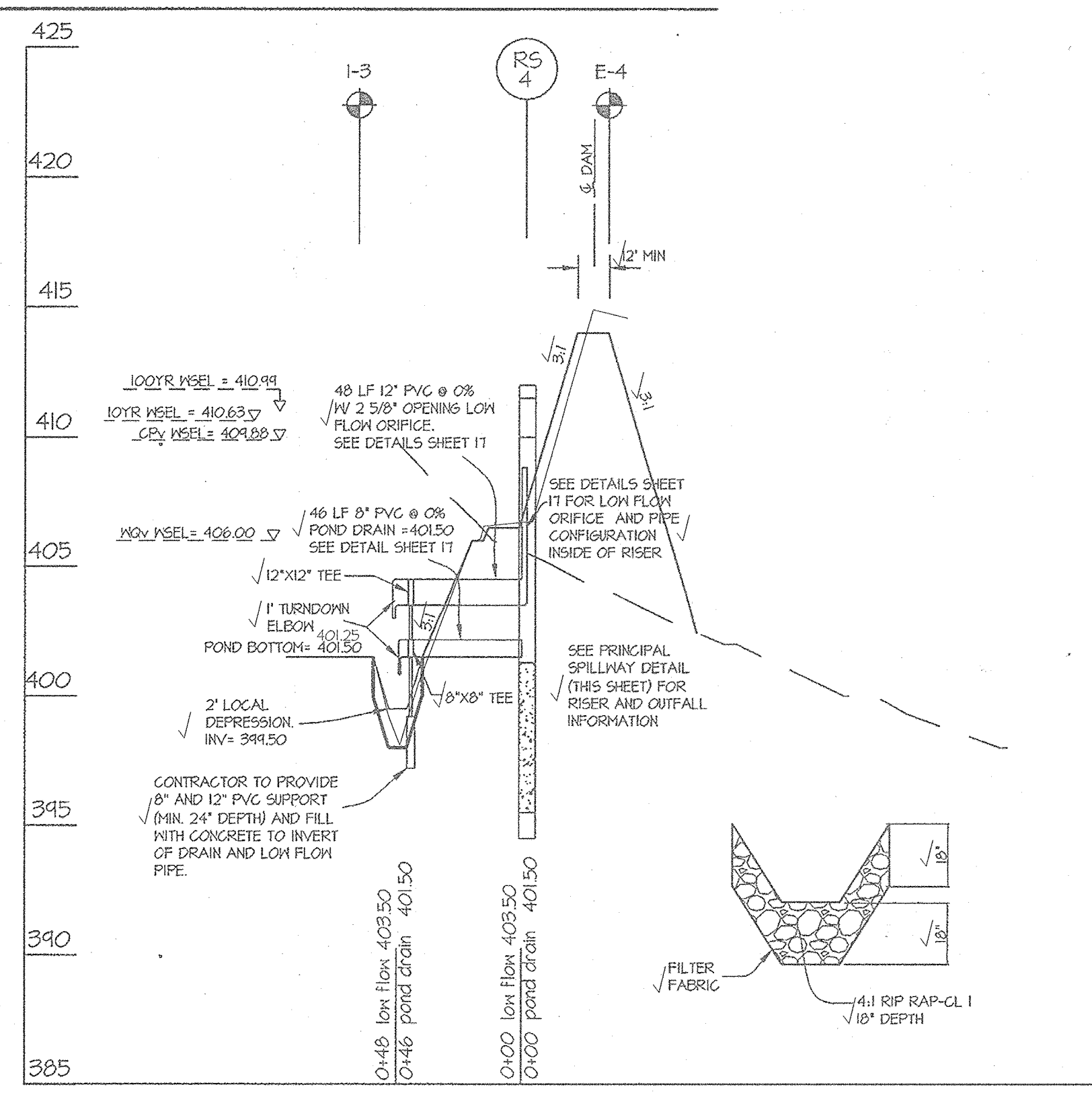
ASBUILT SHEET 5 OF 8

POND 4 NOTES and DETAILS		SCALE	ZONING	G. L. W. FILE NO.
MAPLE LAWN FARMS GARDEN DISTRICT NON-BUILDABLE PARCEL 'W'		AS SHOWN	MXD-3	11001
DATE JULY 2018 NOV. 2012	TAX MAP - GRID 41-21/46-3	SHEET 17 OF 27		

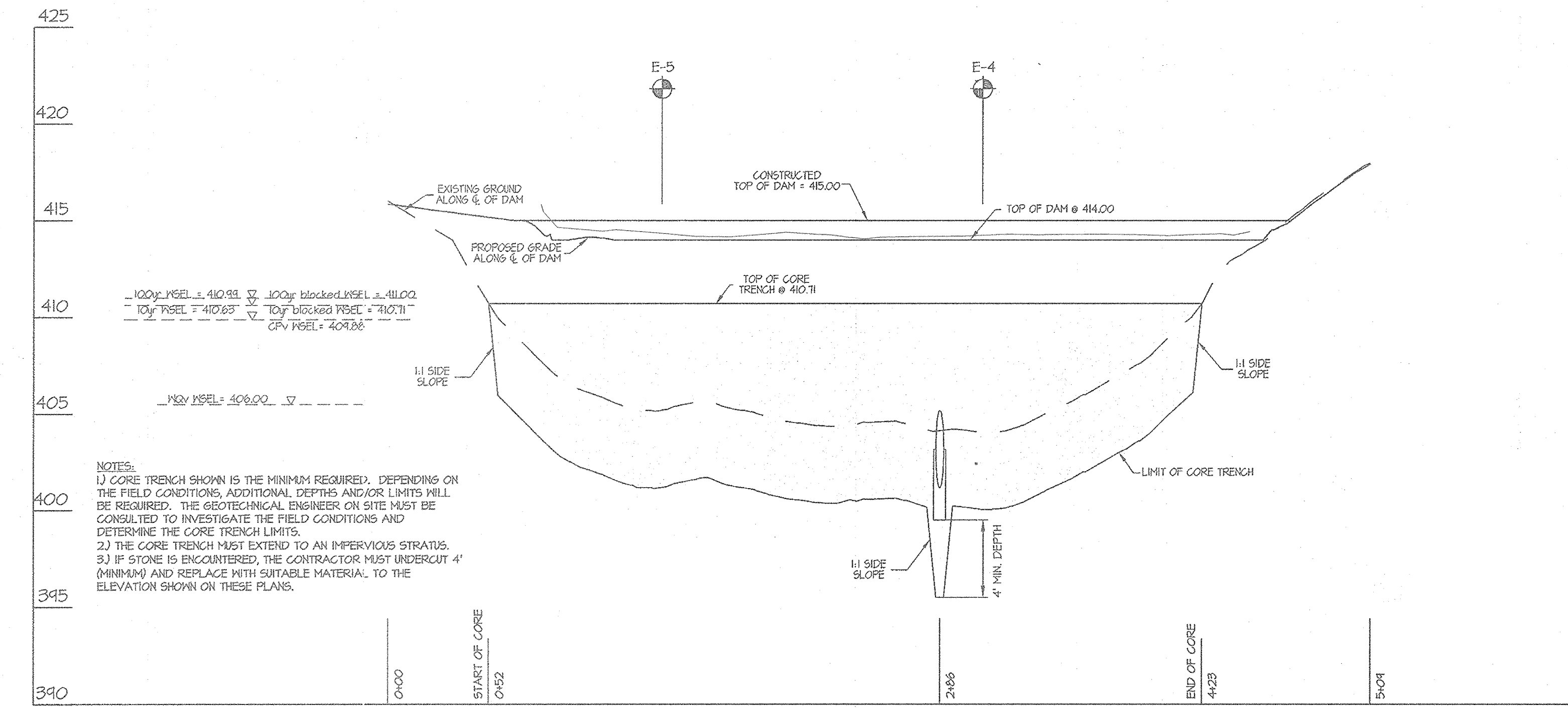
HOWARD COUNTY, MARYLAND



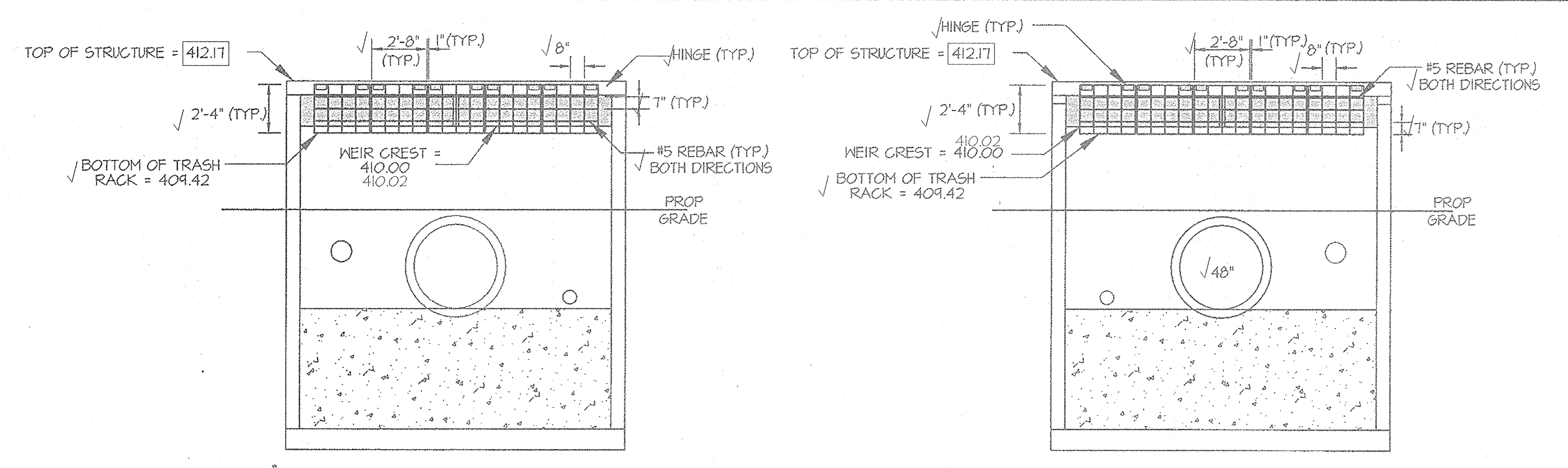
PROFILE THROUGH PRINCIPAL SPILLWAY SCALE: 1" = 5' (V)
1" = 50' (H)



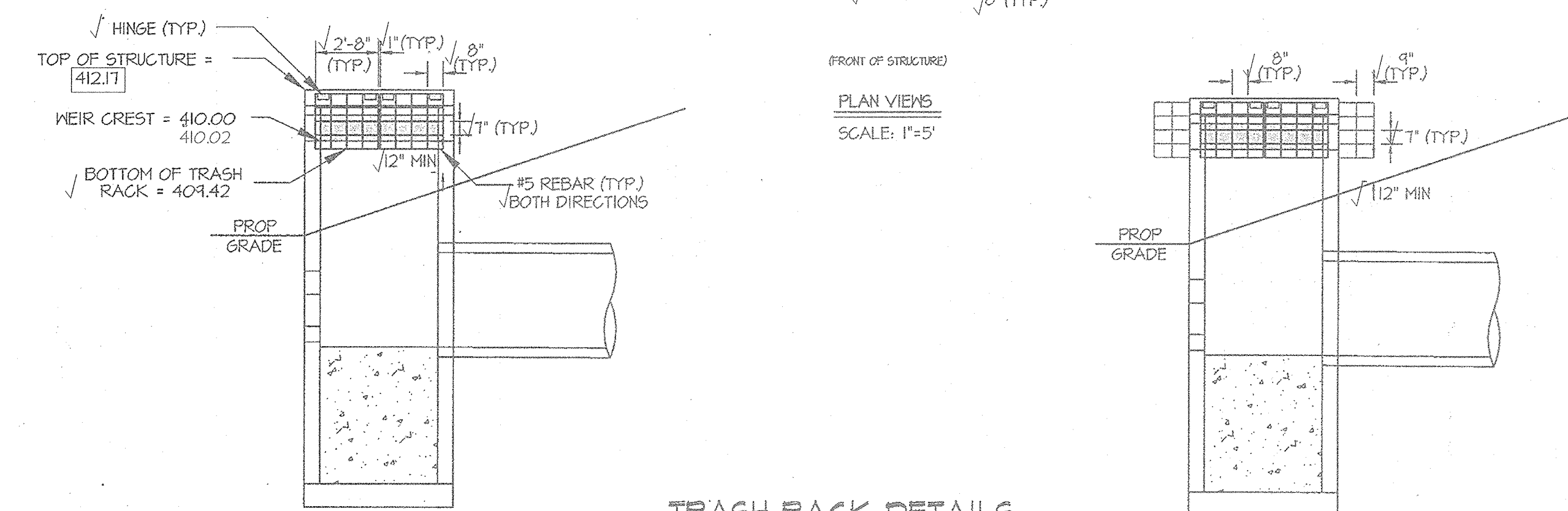
PROFILE THROUGH POND DRAIN AND LOW FLOW RELEASE SCALE: 1" = 5' (V)
1" = 50' (H)



CROSS SECTION OF DAM ALONG CENTERLINE SCALE: 1" = 5' (V)
1" = 50' (H)



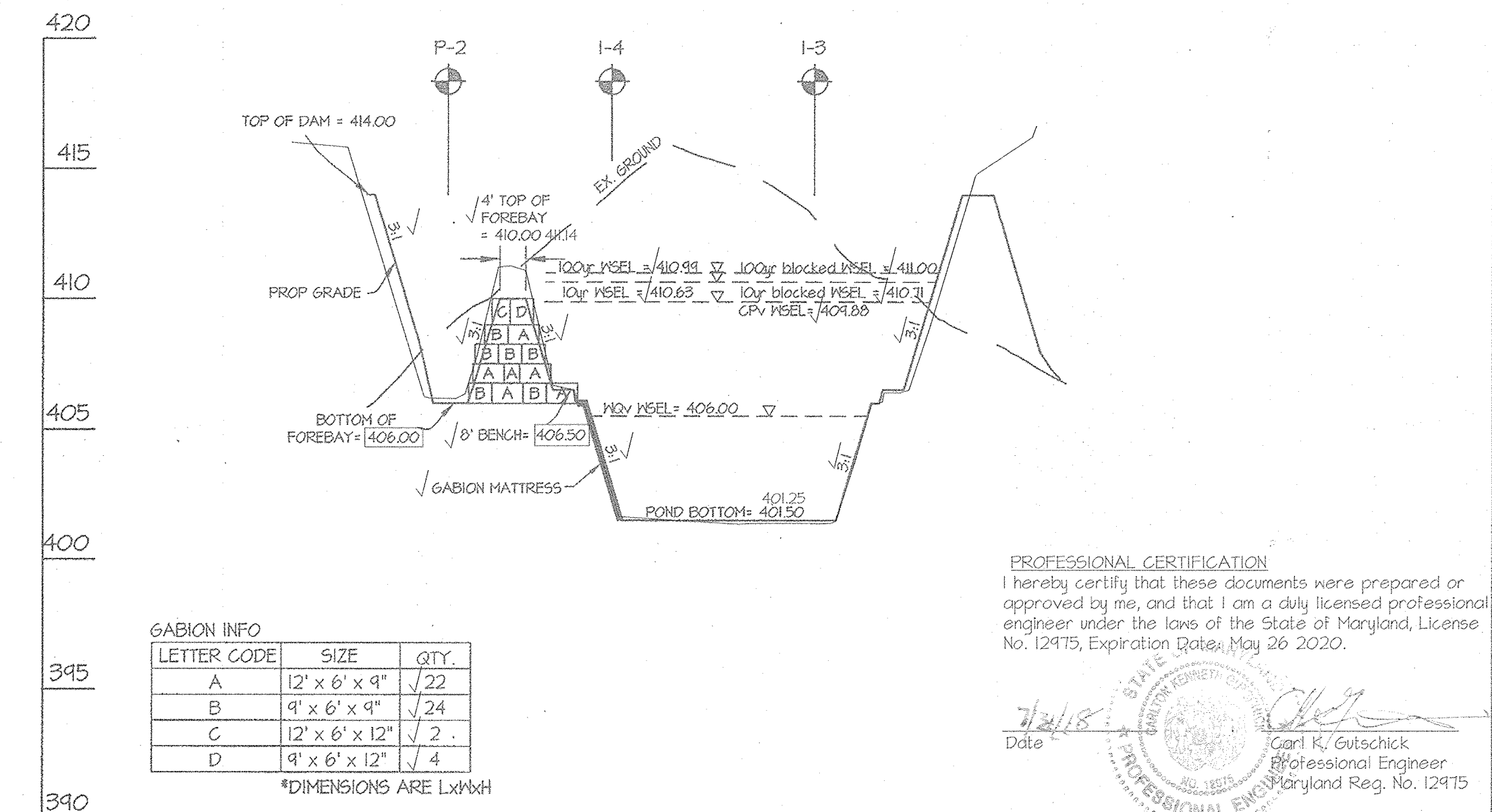
FRONT VIEW SCALE: 1" = 5'
REAR VIEW SCALE: 1" = 5'



TRASH RACK DETAILS

- NOTES:
1. TRASH RACK MOUNTINGS TO BE GALVANIZED AFTER FABRICATION.
2. REBAR MUST BE GALVANIZED AND PAINTED BATTLESHIP GRAY.
3. SEE SHEET 15 FOR HINGE DETAILS.

SIDE VIEW SCALE: 1" = 5'
SIDE VIEW SCALE: 1" = 5'



PROFILE THROUGH FOREBAYS SCALE: 1" = 5' (V)
1" = 50' (H)

ASBUILT'S
POND 4 NOTES and DETAILS
MAPLE LAWN FARMS
GARDEN DISTRICT
NON-BUILDABLE PARCEL 'W'

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JULY 2012	41-21/46-3	18 OF 27

Approved: Howard County Dept. of Public Works
William R. Wall 12-19-12
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Robert J. Lamb 12/17/12
Chief, Division of Land Development

Mark Bennett 12/17/12
Chief, Development Engineering Division

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Carl K. Gutschick 11-20-12
DATE

BUILDER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mark Bennett 11-20-12
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John K. Robinson 11/21/12
DATE

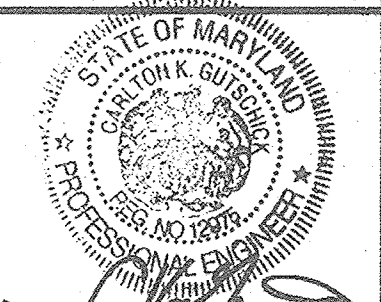
GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK
BURTONTOWN, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

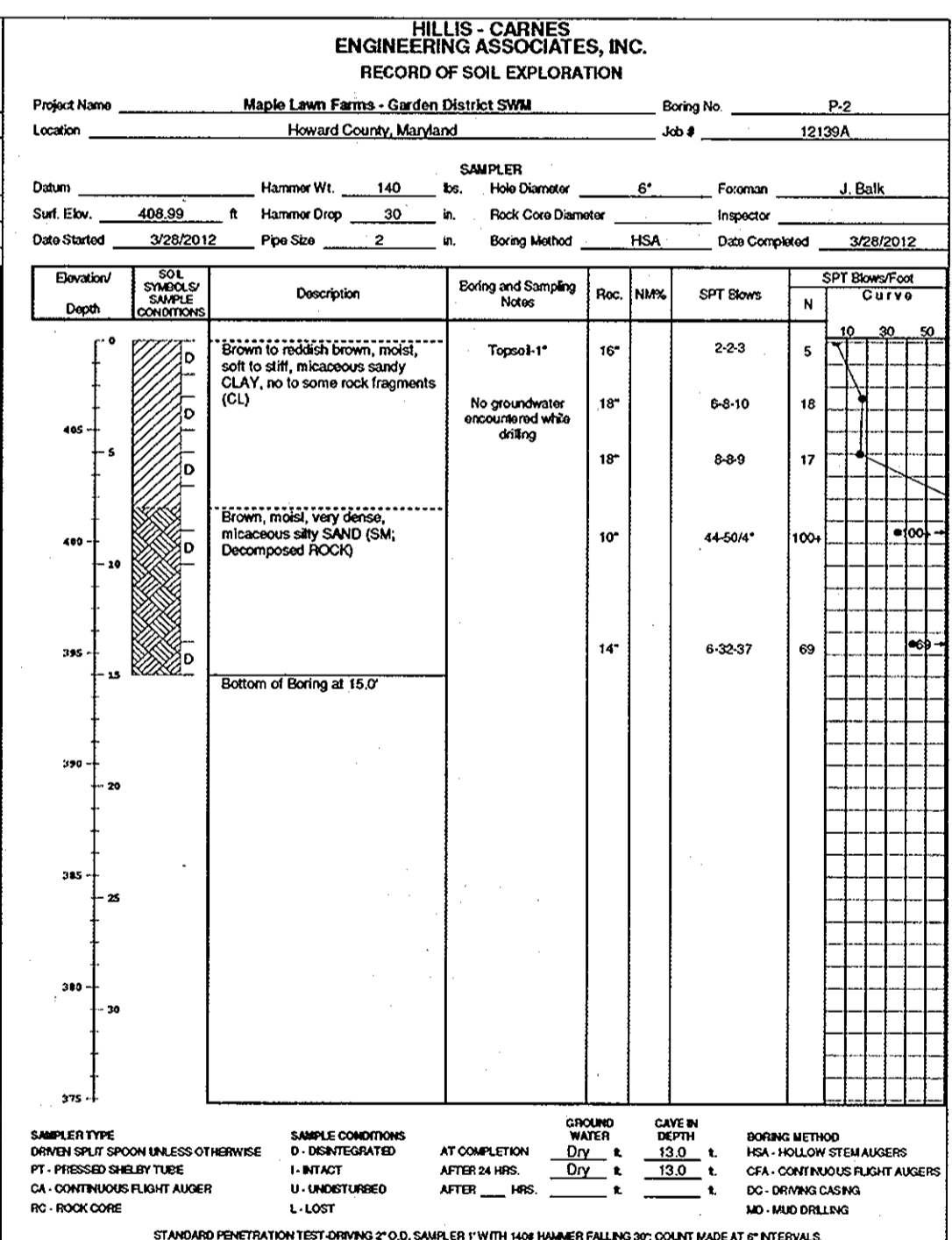
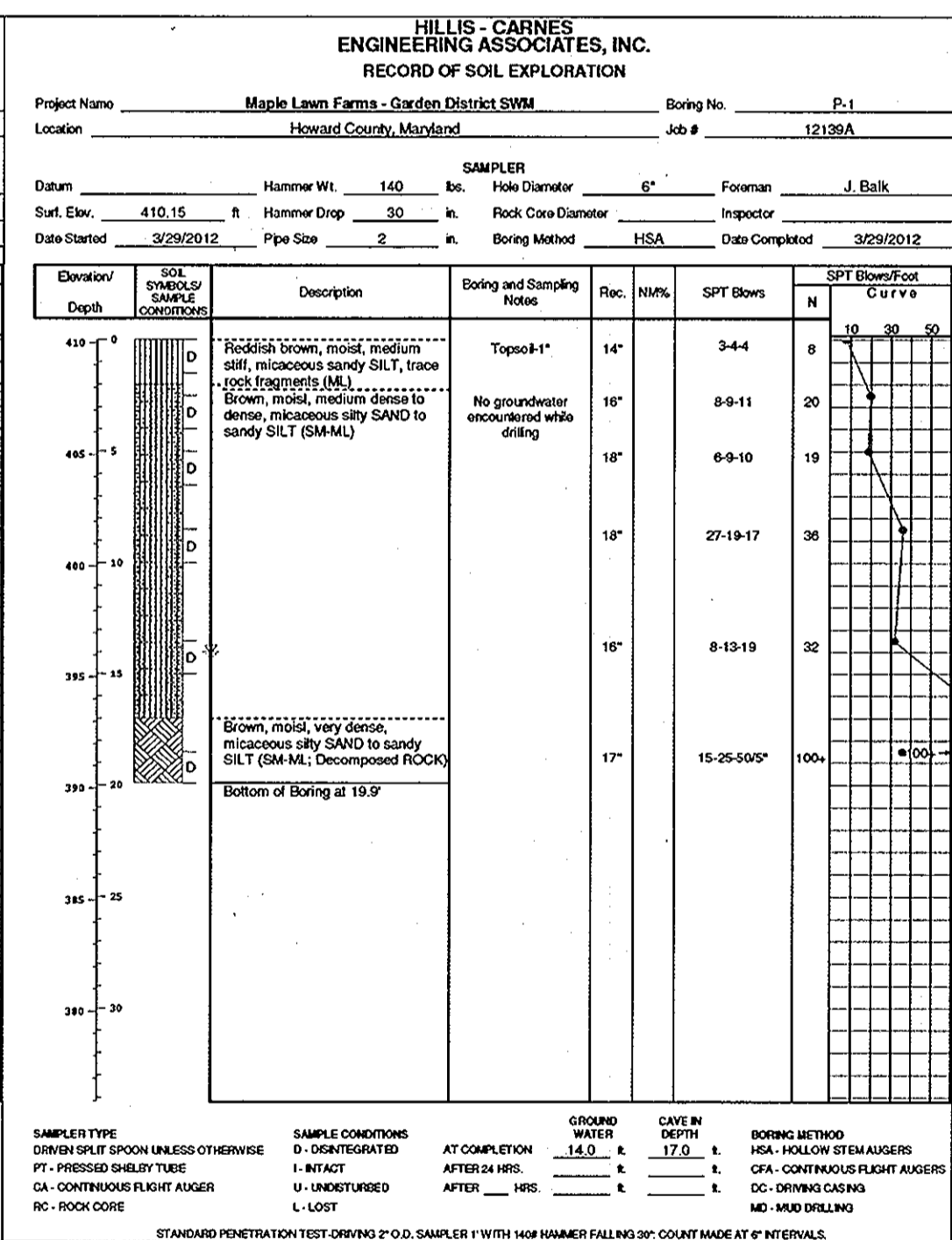
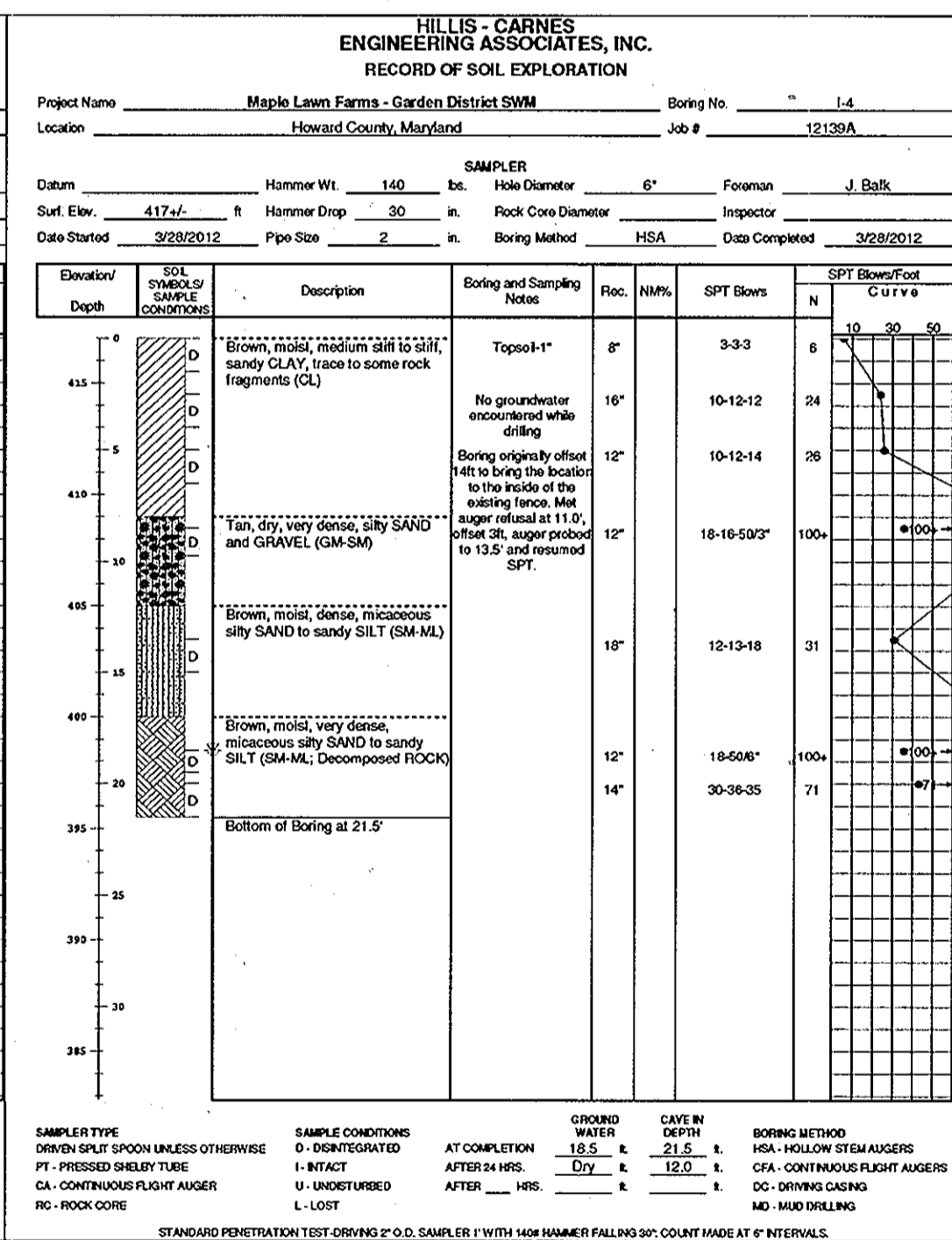
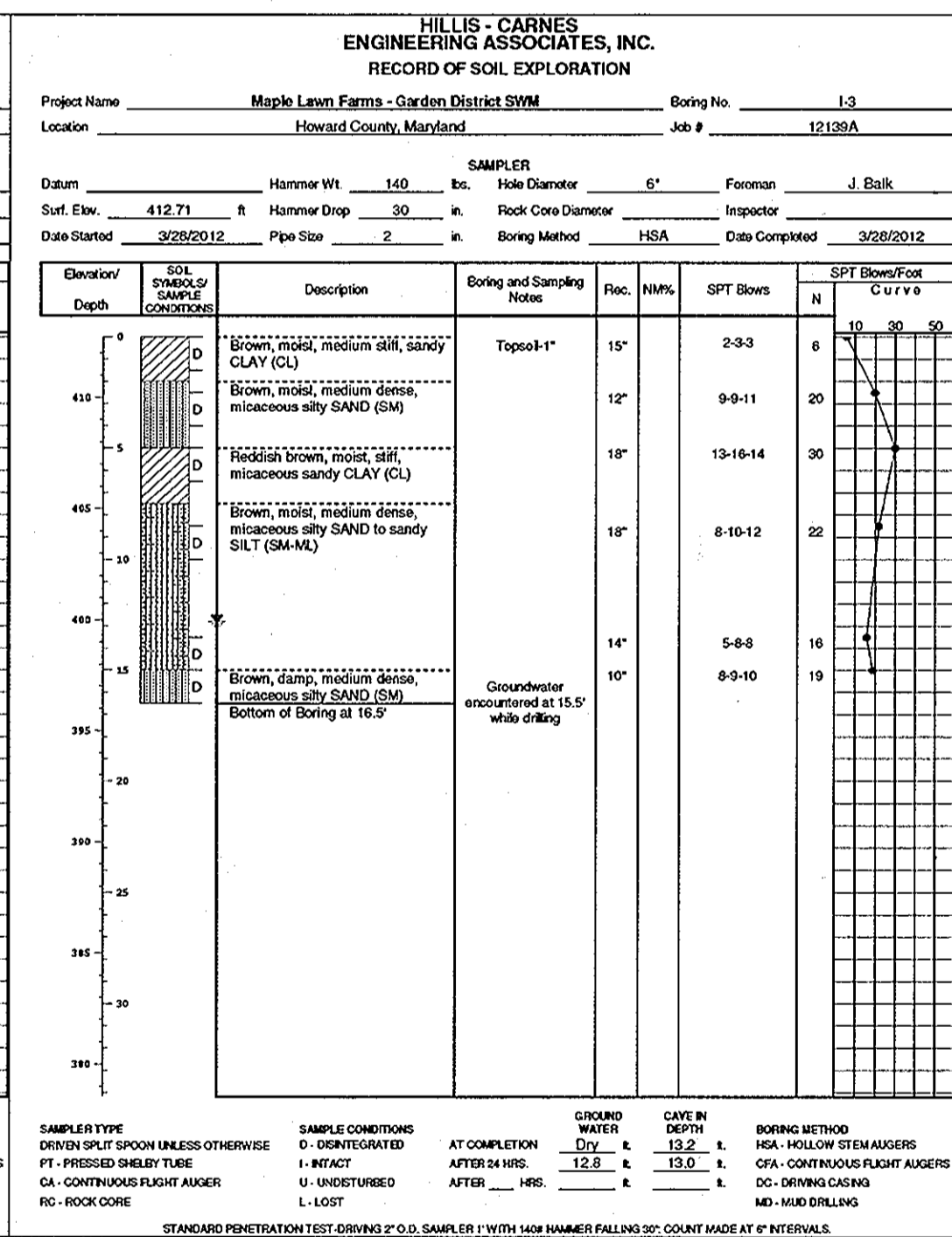
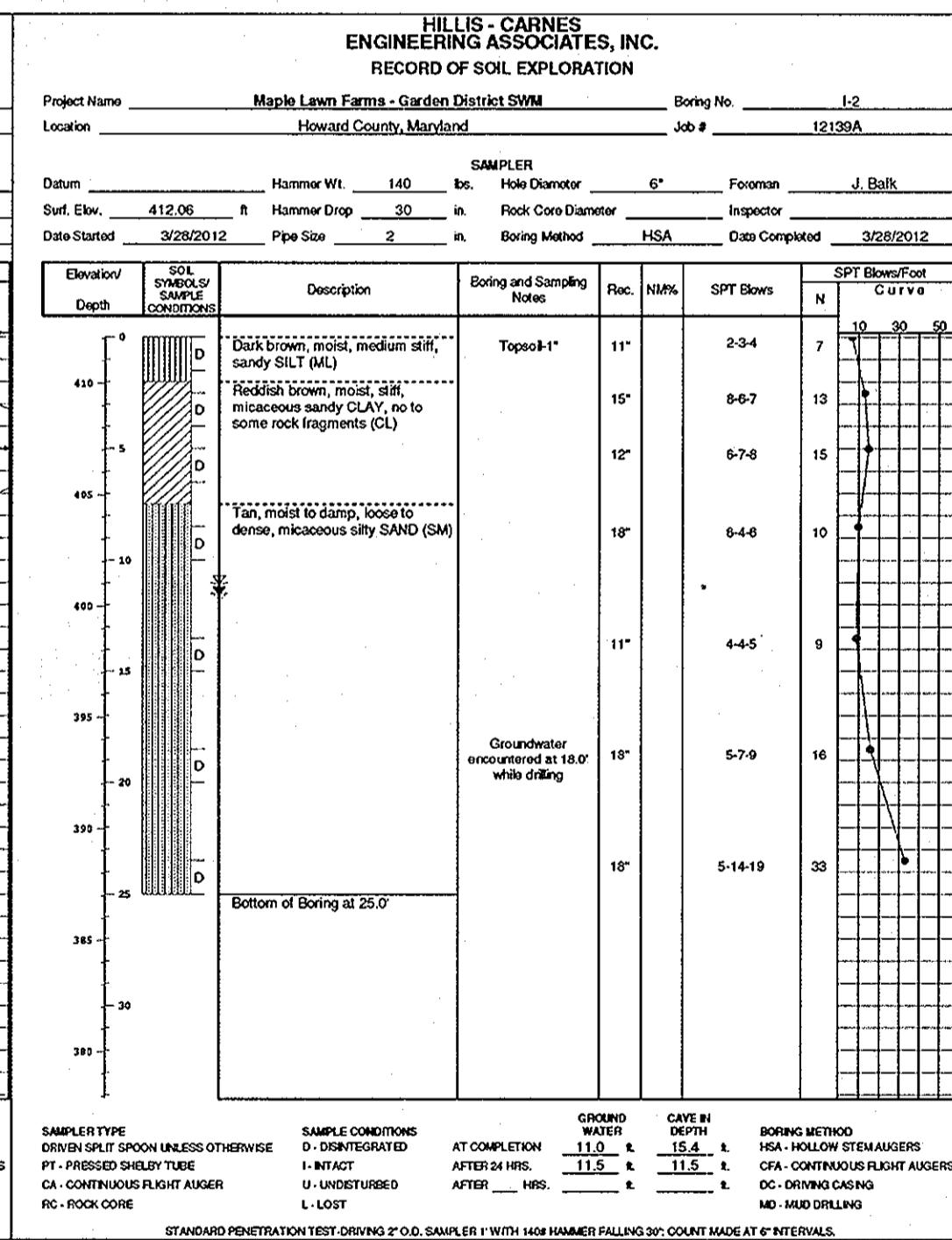
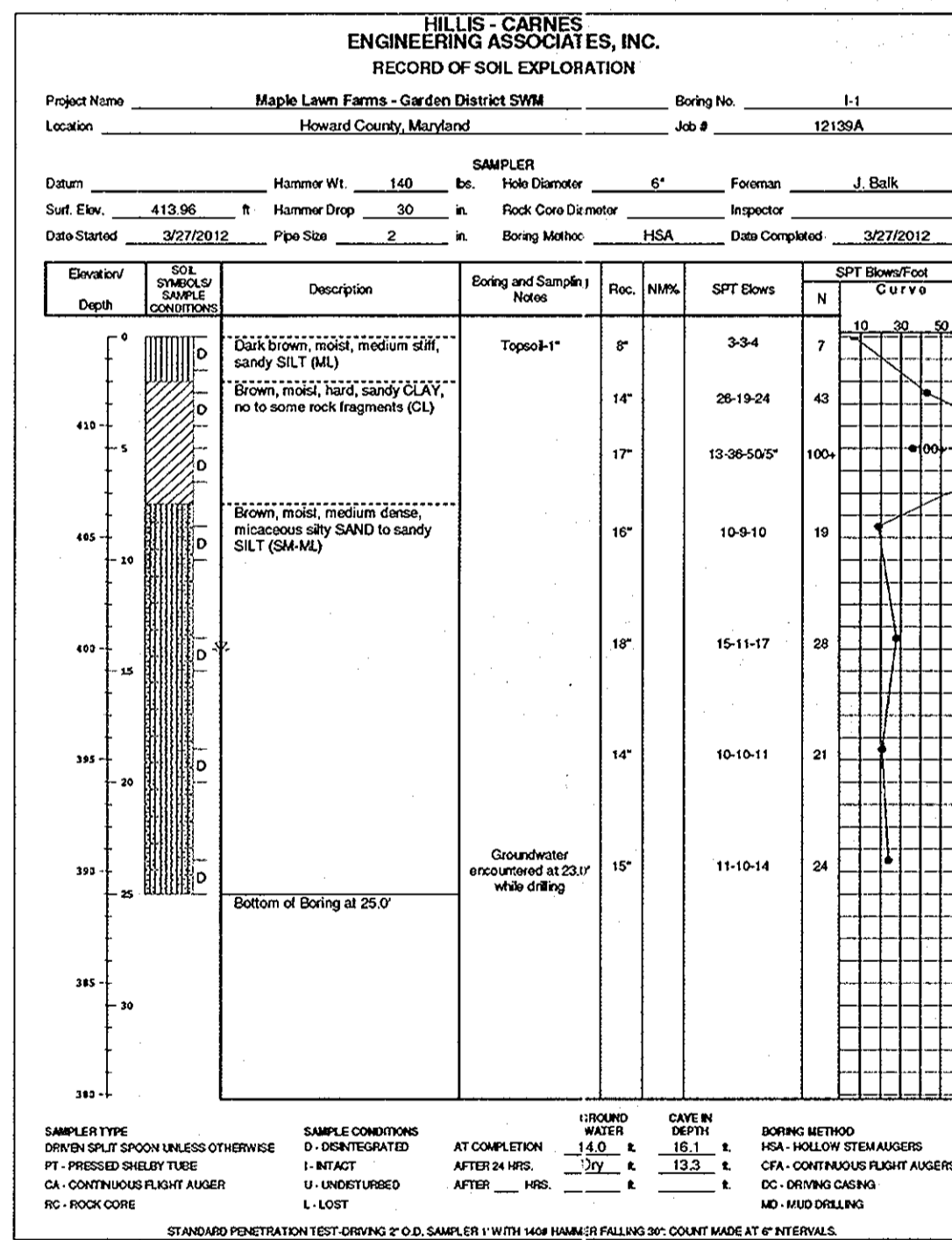
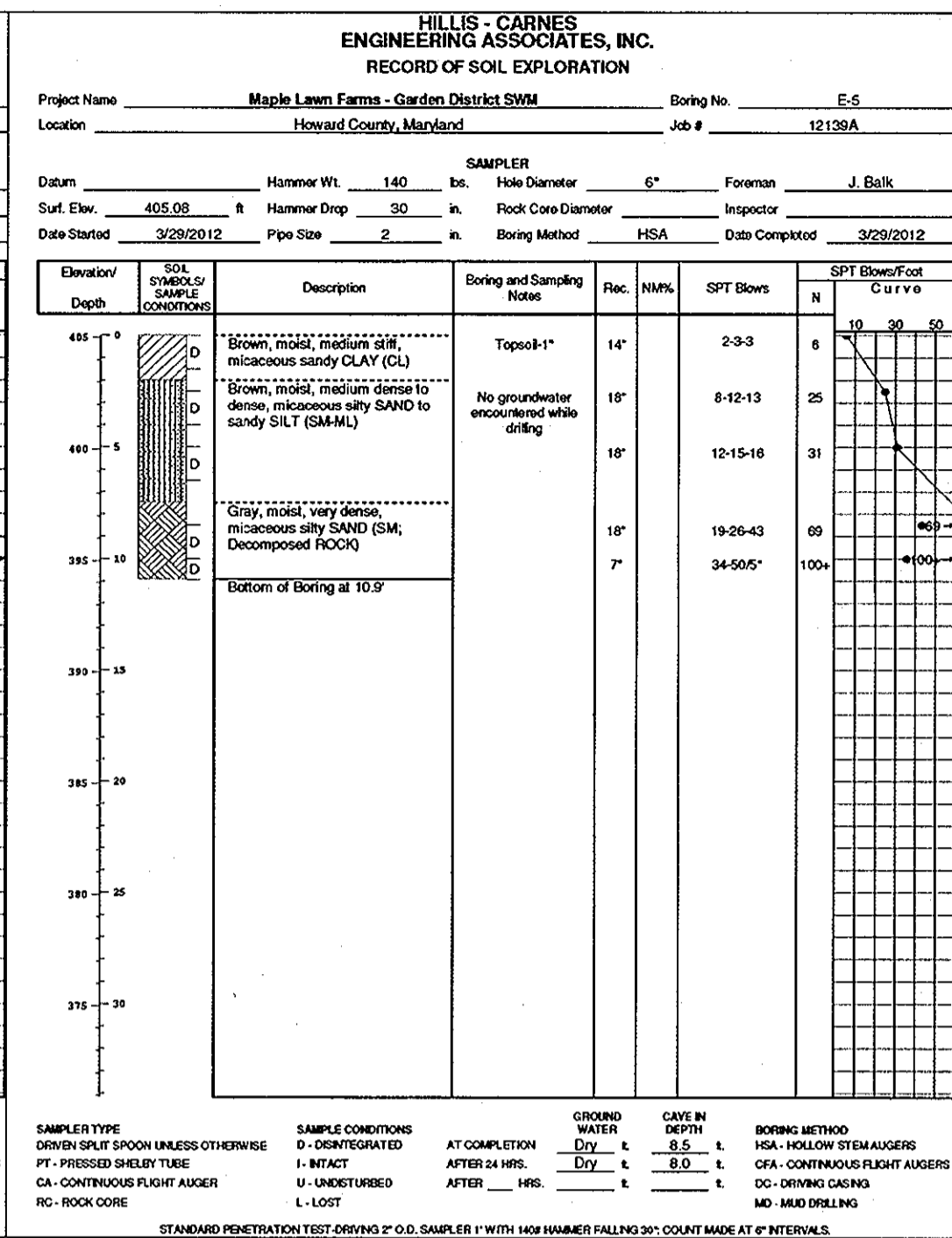
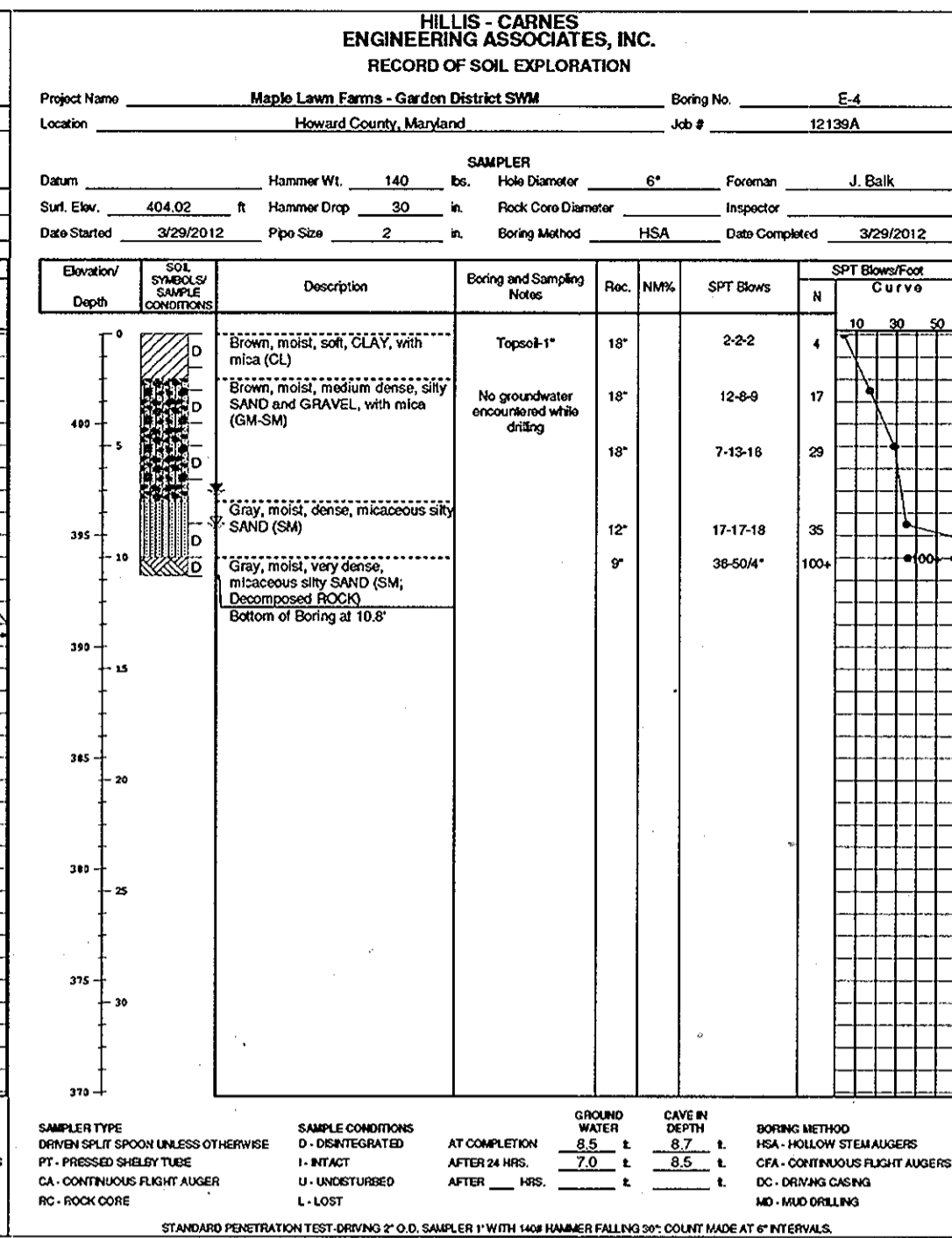
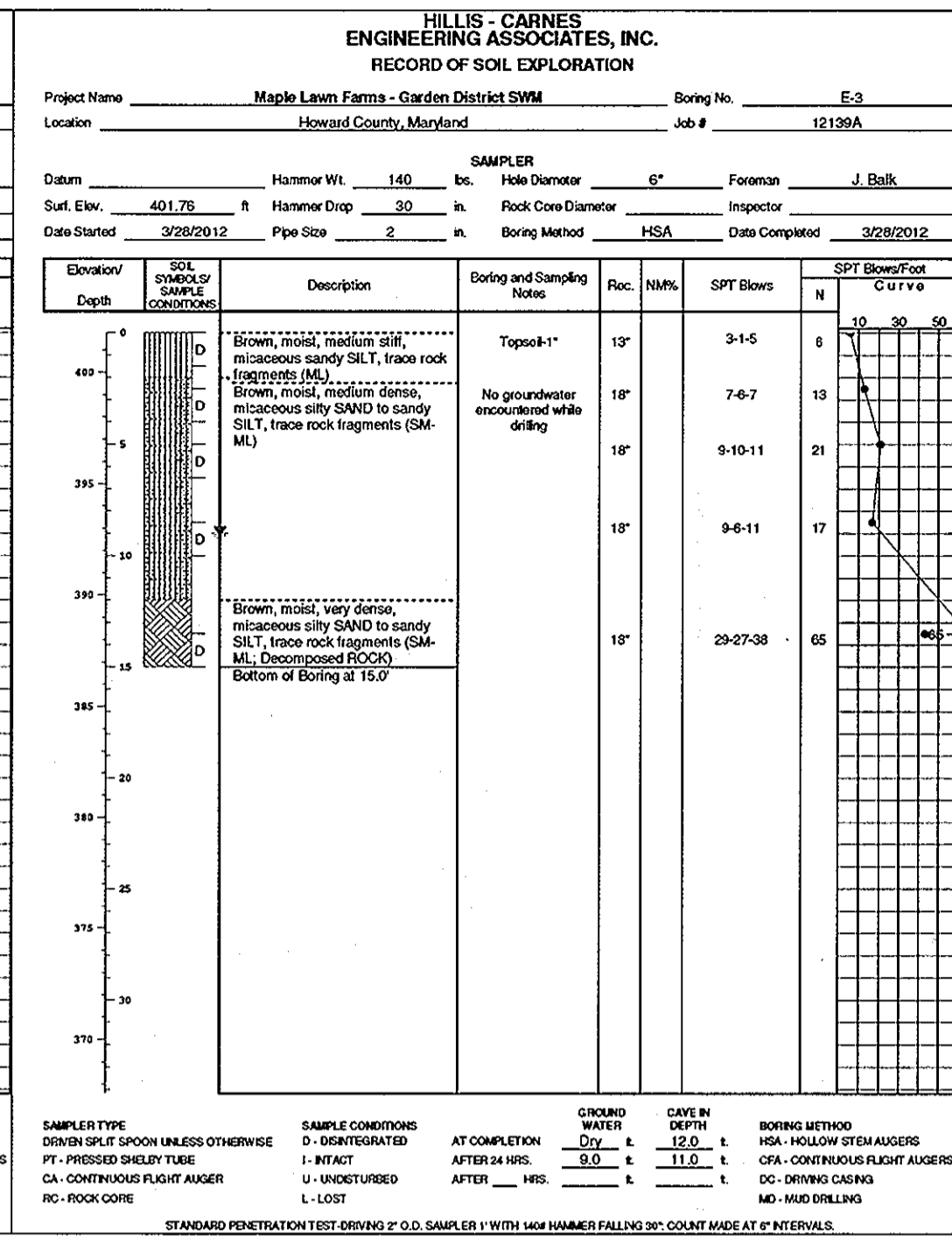
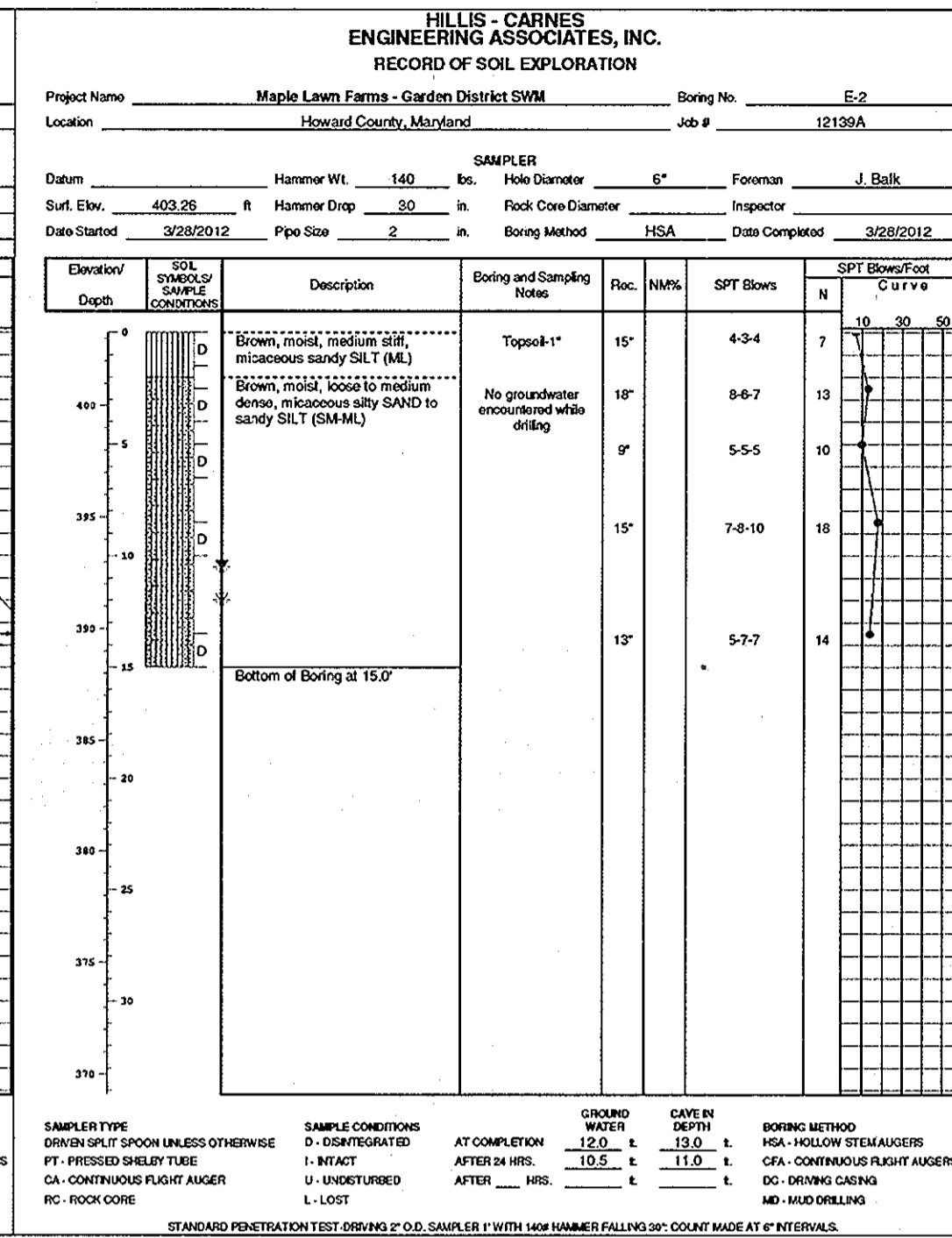
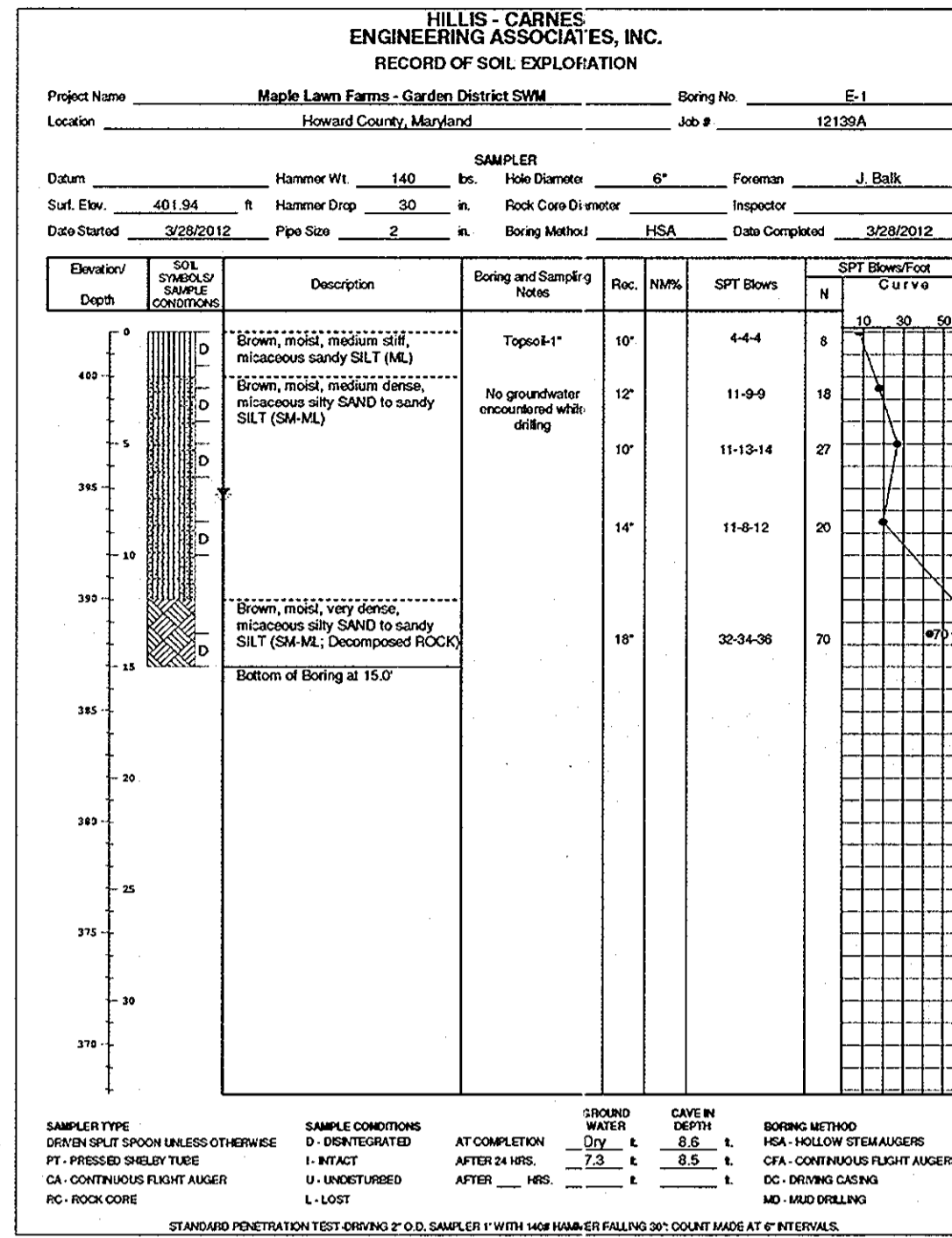
DES. DEV	DRN. JRD	CHK. CKG	DATE	REVISION	BY	APP'R.

PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 26, 2014.

Carl K. Gutschick 11-20-12
DATE





Approved: Howard County Dept. of Public Works
 With 2 M.C.T. 12-14-12
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development 12/17/12
 Chief, Development Engineering Division 12/17/12

1. I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

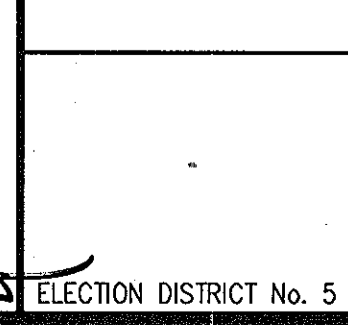
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THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3309 NATIONAL DRIVE - SUITE 220 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20865
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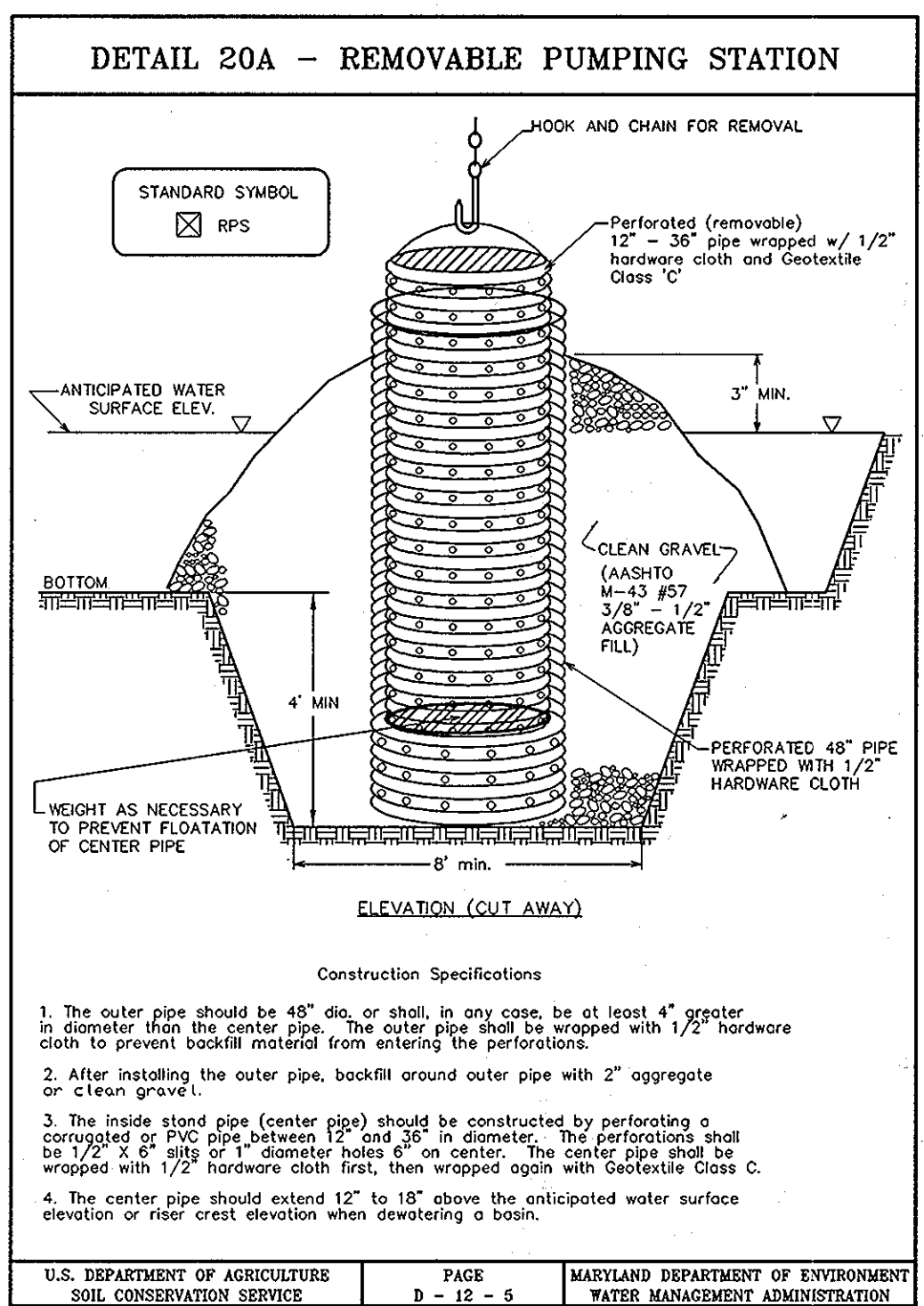
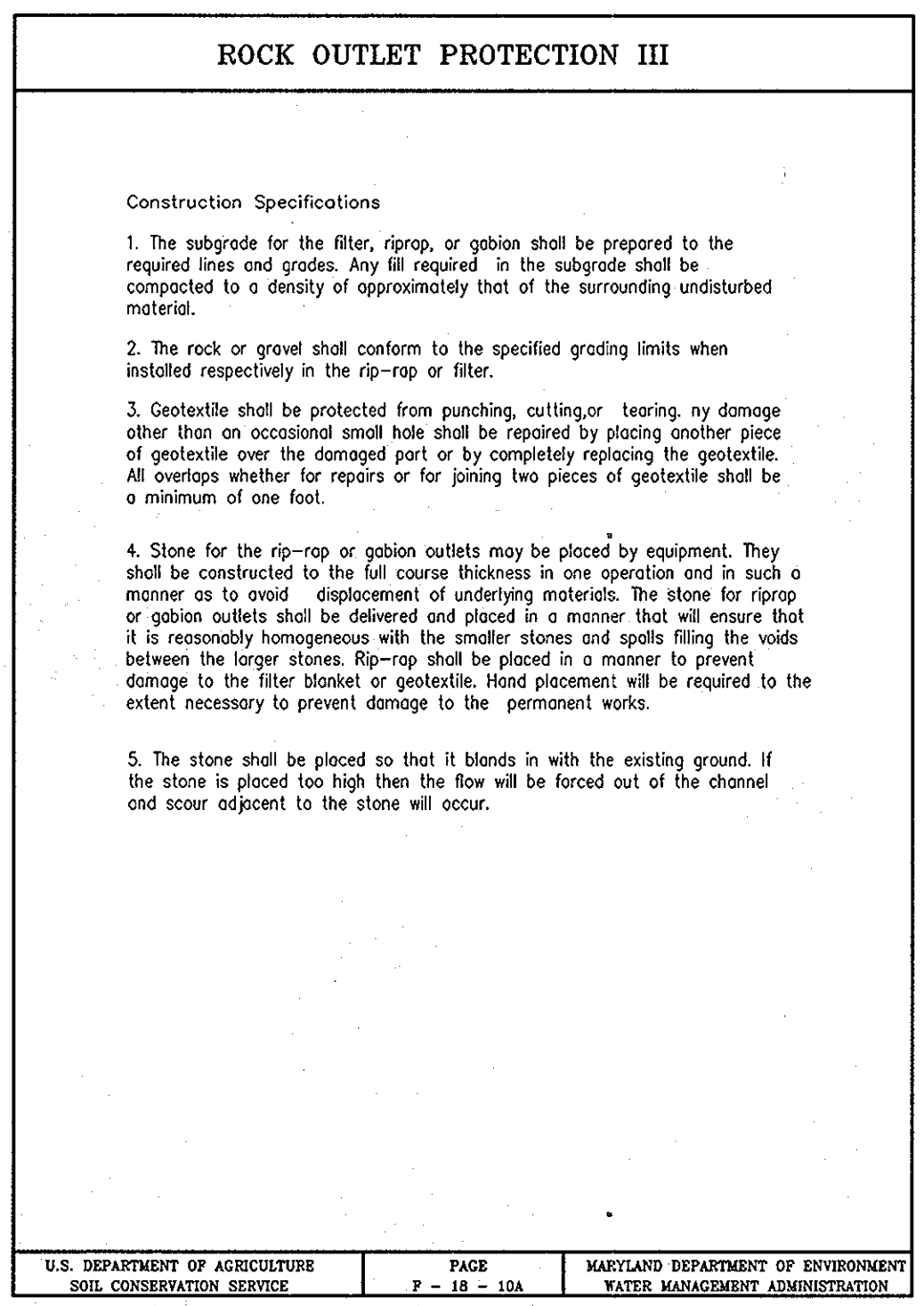
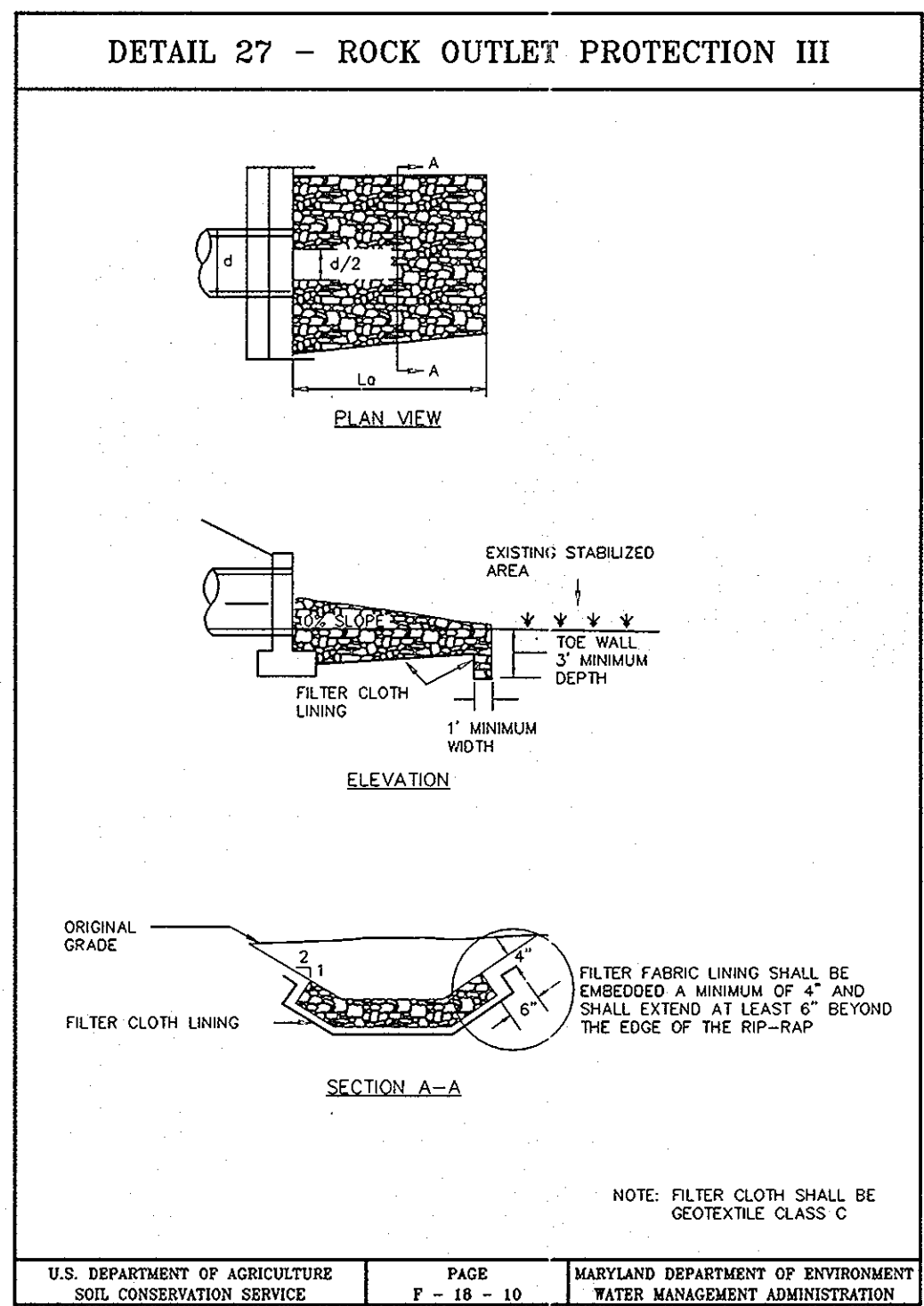
PREPARED FOR:
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 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12275
 EXPIRATION DATE: MAY 26, 2014



POND 3 & 4 GEO-TECH INFORMATION
 MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	19 OF 27



POUND CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS FACILITIES. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION ROOTS AND OTHER OBJECTABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 20 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR SHALL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STRIPS SHALL BE CUT APPROXIMATELY 12" BELOW THE GROUND SURFACE.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, HOOD, RUBBISH, STONES GREATER THAN 4" FROZEN OR OTHER OBJECTABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH OR CL AND MUST HAVE AT LEAST 50% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8-INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRE OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORCED INTO A BALL IT WILL NOT CRUMBLE, YET NOT SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10-YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER PIPE.

STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100-200 PSF, 20 DAY UNCONFINED COMPRESSIVE STRENGTH THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING) OVER AND ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDITIONS, AVERAGE SLUMP OF THE FILL SHALL BE 1" TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE WHEN USING FLOWABLE FILL. ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADJOINING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO OTHER EMBANKMENT MATERIALS.

PIPE CONDITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE.

- MATERIALS - (POLYMER COATED STEEL PIPE) - STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (0 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-245.4 & M-246 WITH WATER TIGHT COUPLING BANDS OR FLANGES.
- MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-274 TYPE A. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COATING CONFORMING TO THE ABOVE. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CARBOXYMETHYL PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.
- COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC. MUST BE COMPOSED OF THE SAME MATERIAL AND COATING AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.
- CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BANDWIDTH THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER. FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 3/8 INCH CLOSED CELL GEOTEXTILE GASKET, PRE-PINCHED TO THE FLANGE BOLT CIRCLE, SANDWICHED BETWEEN ADJACENT FLANGES, A 12-INCH WIDE STANDARD LAP TYPE BAND WITH 12-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET, AND A 12-INCH WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 12 INCH GREATER THAN THE CORRUGATION DEPTH. 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND WELDS, 2 ON EACH CONNECTING PIPE END. A 24-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED WITH 12 INCHES ON THE END OF EACH PIPE. FLANGED JOINTS WITH 3/8 INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGE IS ALSO ACCEPTABLE.

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL GALVANIZING OR A NEOPRENE BEAD.

4. BEDDINGS - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

- MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 24" INCH SHALL MEET THE REQUIREMENTS OF AASHTO M254 TYPE S.
- JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.
- BEDDINGS - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.
- BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 404, MIX NO. 3.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 421.01, CLASS C.

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DICES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY MANNER WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FILL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATION SURFACES AND BOTTOM REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTION OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SHOPS FROM WHICH THE WATER SHALL BE LIFTED.

STABILIZATION

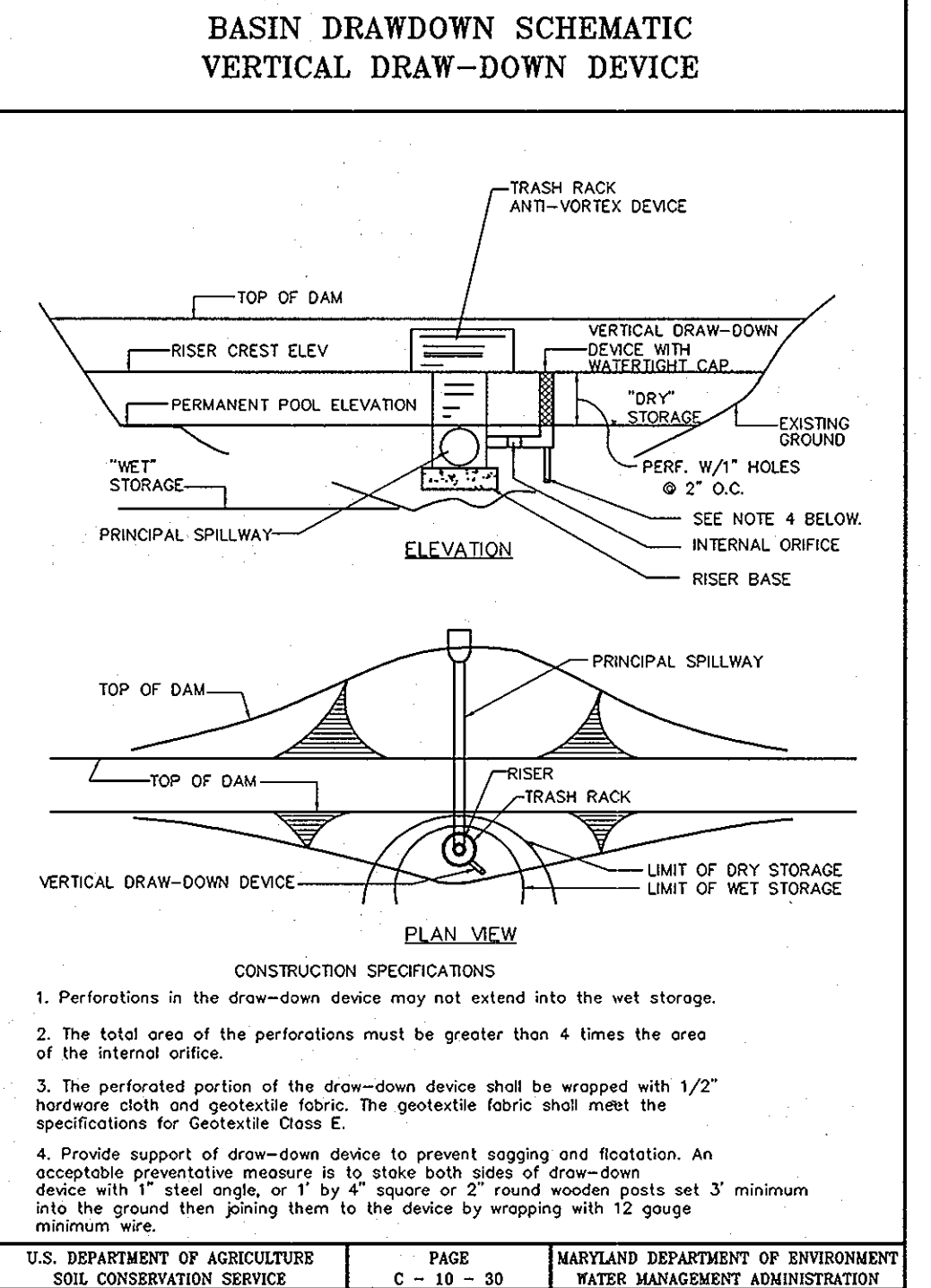
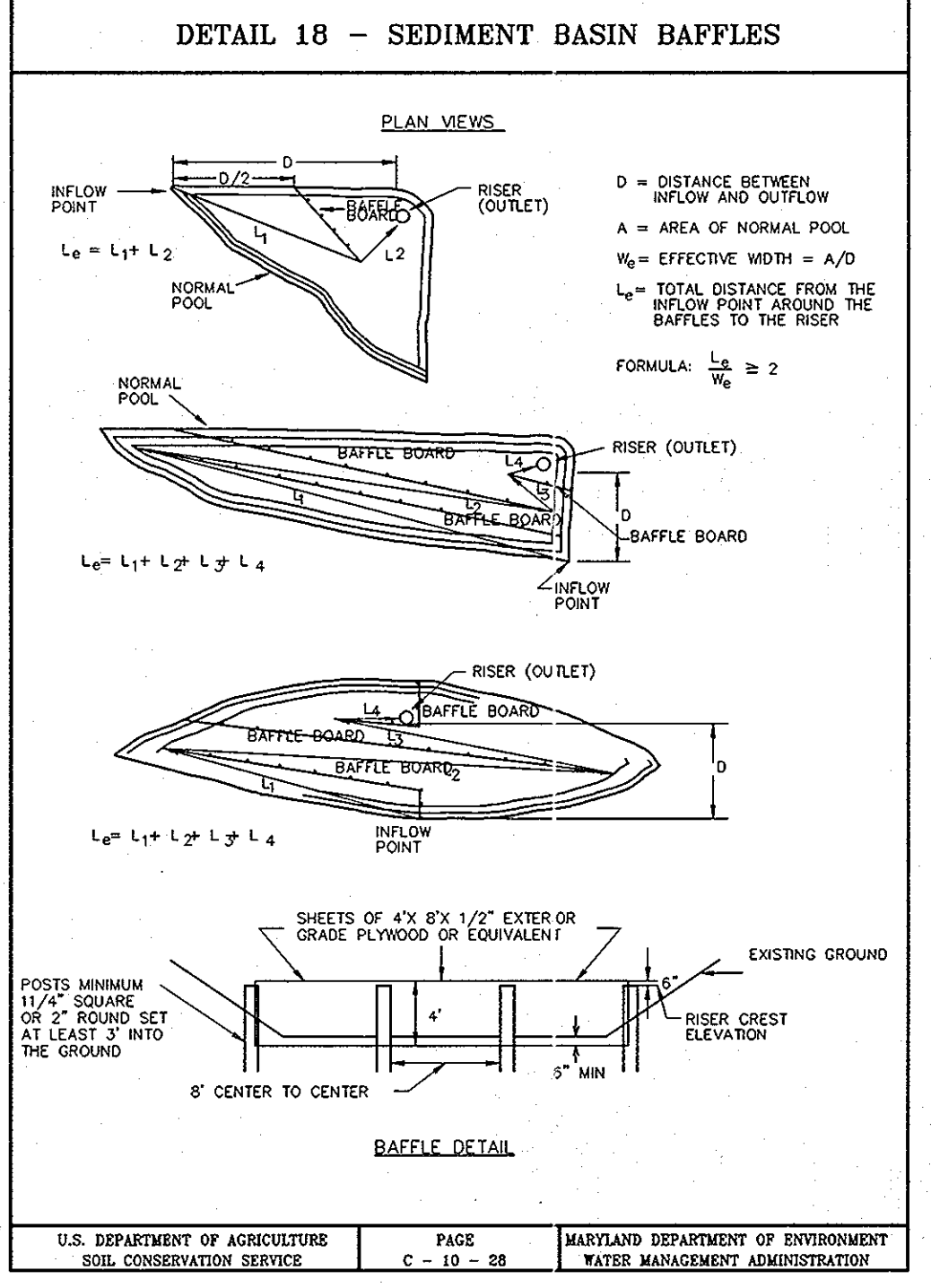
ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND BE LEFT IN A SATISFACTORY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES.

OPERATION AND MAINTENANCE

AN OPERATION AND MAINTENANCE PLAN IN ACCORDANCE WITH LOCAL OR STATE REGULATIONS WILL BE PREPARED FOR ALL PONDS. AS A MINIMUM THE DAM INSPECTION CHECKLIST LOCATED IN APPENDIX A SHALL BE INCLUDED AS PART OF THE OPERATION AND MAINTENANCE PLAN AND PERFORMED AT LEAST ANNUALLY. WRITTEN RECORDS OF MAINTENANCE AND MAJOR REPAIRS NEEDS TO BE RETAINED IN A FILE. THE ISSUANCE OF A MAINTENANCE AND REPAIR REPORT FOR ANY REPAIRS OR MAINTENANCE THAT INVOLVES THE MODIFICATION OF THE DAM OR SPILLWAY FROM ITS ORIGINAL DESIGN AND SPECIFICATIONS IS REQUIRED. A PERMIT IS ALSO REQUIRED FOR ANY REPAIRS OR RECONSTRUCTION THAT INVOLVE A SUBSTANTIAL PORTION OF THE STRUCTURE. ALL INDICATED REPAIRS ARE TO BE MADE AS SOON AS PRACTICAL.



EMBANKMENT AND CUT-OFF TRENCH CONSTRUCTION

The area of the pond facilities should be stripped of topsoil and any other undesirable materials from the embankment or structure areas in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be protected with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative using a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.

A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut-off trench. In accordance with NRCS-ND Code No. 378 Pond Standards/Specifications, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification GC, SC, CH or CL and must have at least 30% passing the #200 sieve.

It is the professional opinion that in addition to the soil materials described above a fine-grained soil, including silt (M) with a plasticity index of 10 or more can be utilized for the center of the embankment and core trench. All fill materials must be placed and compacted in accordance with NRCS-ND Code No. 378 specifications.

REMARKS

The evaluations contained in this report are based on our understanding of the proposed construction, the data obtained from our field exploration, and our experience with the soils and subsurface conditions in this area. If there are any changes to the project characteristics, this office should be advised so that the evaluations made in this report may be re-evaluated.

The reader is referred to the Records of Soil Exploration in the Appendix for details related to the subsurface conditions encountered in the borings. It should be noted that stratification lines shown on the Records of Soil Exploration represent approximate transitions between material types. In-situ strata changes could occur gradually or at slightly different levels. Also, it should be noted that the soil borings depict conditions at the particular locations and at the particular times indicated. Some conditions, particularly granular conditions, could change with time.

His appreciation having been of service to you in the subsurface exploration of this project and we are prepared to assist you during the construction phase as well. If you have any questions concerning the contents of this report or any of our consulting design, testing, and inspection services, please contact this office.

HOWARD SOIL CONSERVATION DISTRICT OPERATION, MAINTENANCE AND INSPECTION NOTE

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN THE USA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (M-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY INITIAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENANCE SCHEDULE FOR PUBLICLY OWNED AND MAINTAINED RETENTION POND

ROUTINE MAINTENANCE (BY HOMEOWNER'S ASSOCIATION)

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOVED AS NEEDED.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIP-RAP OR GABION OUTLET SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE (BY HOWARD COUNTY)

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEDIMENT SHALL BE REMOVED FROM THE POND AND FOREBAY NO LATER THAN WHEN THE CAPACITY OF THE POND IS HALF-FULL OF SEDIMENT OR WHEN DESIRED NECESSARY FOR AESTHETIC REASONS, UPON APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.

Approved: Howard County Dept. of Public Works

Mich 2. malk 12-14-12
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Kate B. Lohde 12/17/12
 Chief, Division of Land Development Date

Chris P. ... 12/17/12
 Chief, Development Engineering Division Date

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

C. K. ... 11-20-12
 ENGINEER'S SIGNATURE DATE

BUILDER'S CERTIFICATE

"WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

John L. ... 11-20-12
 SIGNATURE OF DEVELOPER/BUILDER DATE

PREPARED FOR:

MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLM CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

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. 12875

EXPIRATION DATE: MAY 26, 2014

John L. ... 11-20-12
 HOWARD S.C.D. DATE

POND NOTES AND DETAILS

MAPLE LAWN FARMS

GARDEN DISTRICT

NON-BUILDABLE PARCEL 'W'

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	20 OF 27

HOWARD COUNTY, MARYLAND

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BIRTONVILLE OFFICE PARK
 BIRTONVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. DEV. DRN. JRD. CHK. CKG.

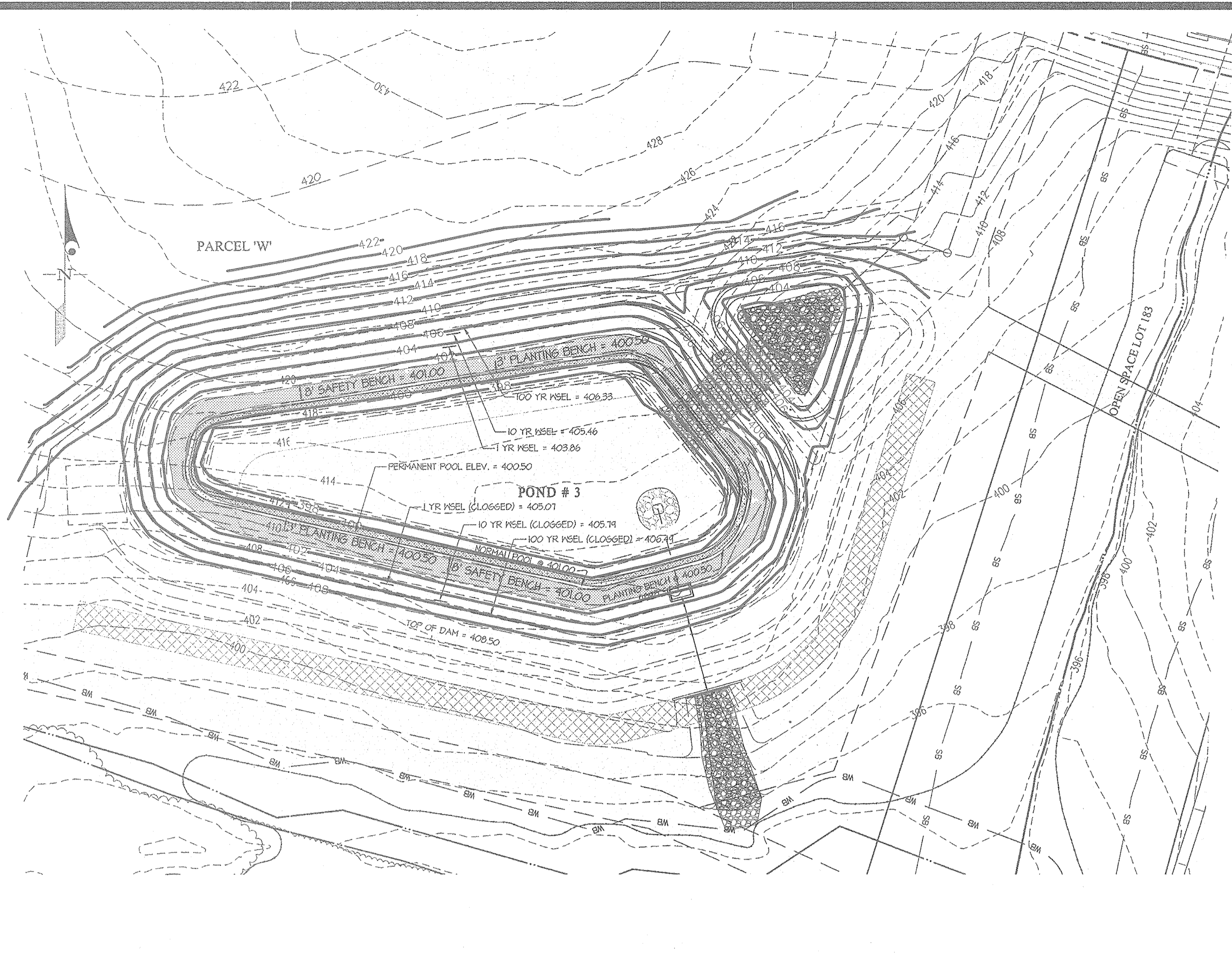
DATE	REVISION	BY	APP'R.

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JOHN L. ...
 LICENSE NO. 12875
 EXPIRES MAY 26, 2014

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JOHN L. ...
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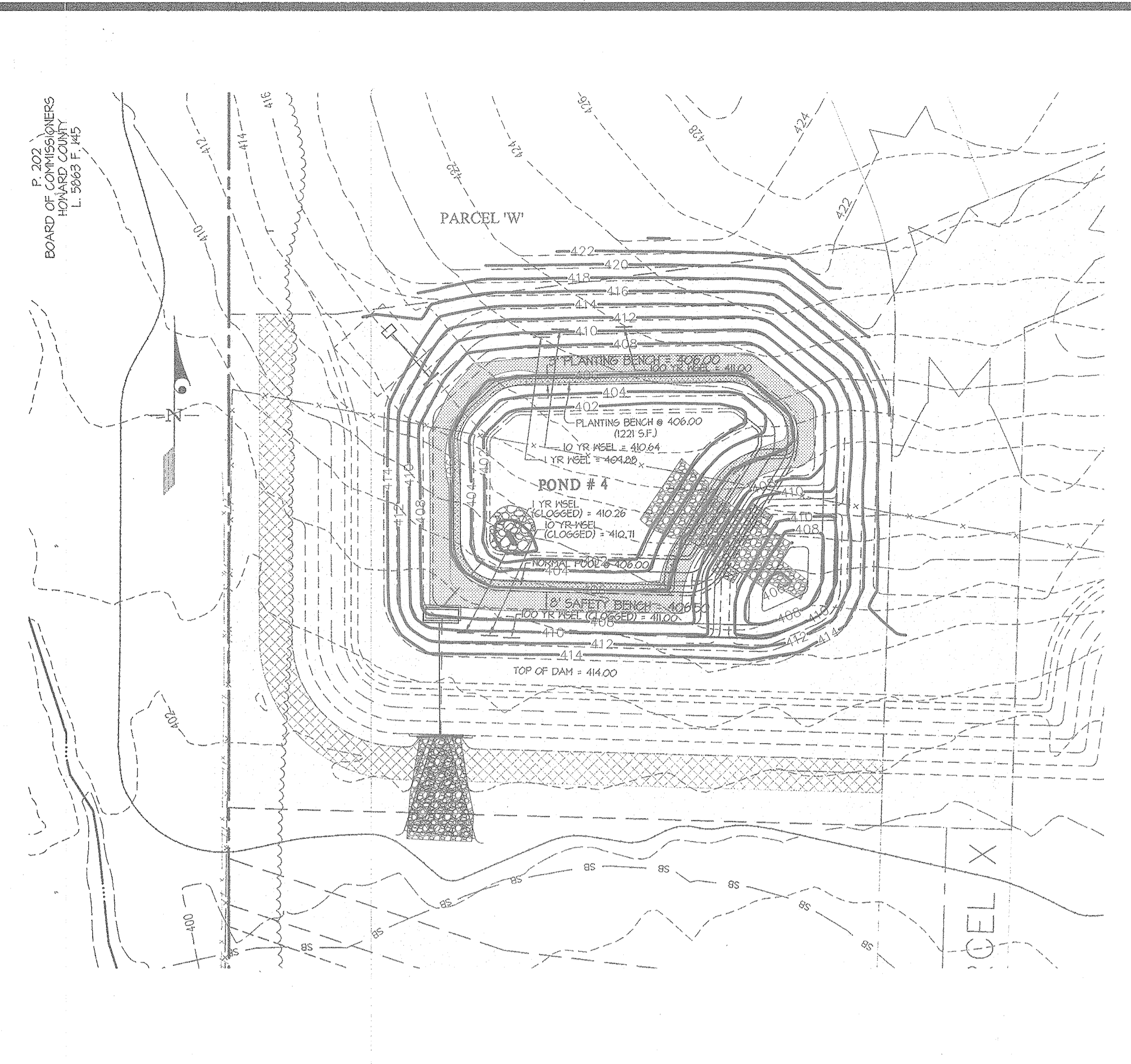
STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 JOHN L. ...
 LICENSE NO. 12875
 EXPIRES MAY 26, 2014



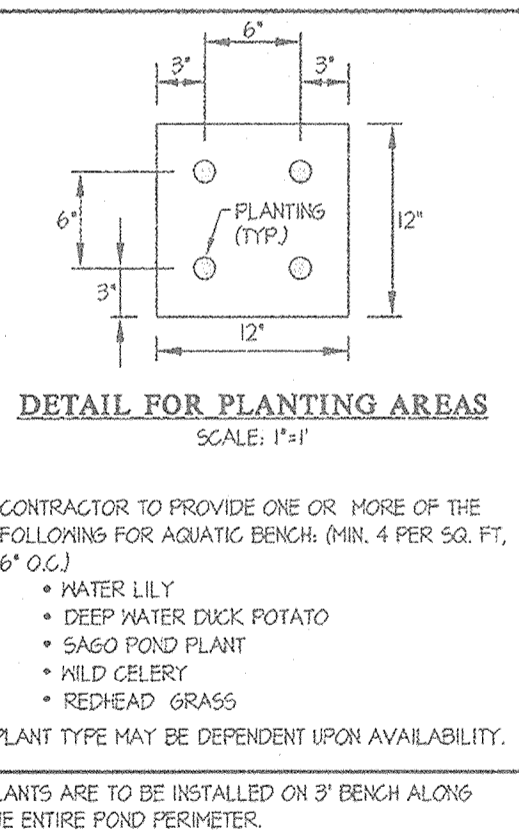
STORMWATER MANAGEMENT POND 3 ENLARGEMENT / PLANTING PLAN SCALE: 1" = 40'

STORMWATER MANAGEMENT POND 3
 STORMWATER MANAGEMENT POND 3 PROVIDES QUALITY CONTROL (M&V) AND QUANTITY CONTROL FOR 31.96 ACRES OF THE PROPOSED DEVELOPMENT. M&V IS PROVIDED VIA A PERMANENT POOL. CPV IS PROVIDED VIA EXTENDED DETENTION. SAFE PASSAGE OF THE 100-YEAR DESIGN STORM HAS BEEN ANALYZED FOR THE BLOCKED CONDITION AND A MINIMUM 2-FEET OF FREEBOARD HAS BEEN PROVIDED.
 TYPE (PER MDE) : NET POND (P2)
 MD-318 HAZARD CLASS A FACILITY
 TOTAL DRAINAGE AREA TO FACILITY = 31.96 ACRES (AREA I)
 CA = 80
 ZONING: MXD-3, 55% IMPERVIOUS
 TC = 0.30 HRS.
 M&V REQUIRED = 122 AC-FT
 M&V PROVIDED = 124 AC-FT
 M&V/PERMANENT POOL MSEL = 400.50
 CPV REQUIRED = 185
 CPV PROVIDED = 212
 CPV MSEL = 403.81
 REV REQUIREMENT = 122 AC-FT
 REV TO BE PROVIDED BY INFILTRATION TRENCHES (SEE BELOW)
 1-YR DISCHARGE = 0.89 CFS @ 405.51
 10-YR DISCHARGE = 64.41 CFS @ 405.46
 100-YR BLOCKED DISCHARGE = 107.94 CFS @ 405.71
 100-YR DISCHARGE = 65.94 CFS @ 406.33
 100-YR BLOCKED DISCHARGE = 151.59 CFS @ 406.44
 LAG: 18 HOURS
 8 FT. SAFETY BENCH = 400.00
 3 FT. AQUATIC BENCH = 400.50
 OUTFALL: PRECAST RISER STRUCTURE TO 48" RCP TO STREAM BUFFER
 TOP OF DAM = 408.50
 *THE RECHARGE REQUIREMENT FOR THIS DRAINAGE AREA I WILL BE PROVIDED BY INFILTRATION TRENCHES ON FUTURE OPEN SPACE LOTS.

STORMWATER MANAGEMENT POND 4
 STORMWATER MANAGEMENT POND 4 PROVIDES QUALITY CONTROL (M&V) AND QUANTITY CONTROL FOR 29.66 ACRES OF THE PROPOSED DEVELOPMENT. M&V IS PROVIDED VIA A PERMANENT POOL. CPV IS PROVIDED VIA EXTENDED DETENTION. SAFE PASSAGE OF THE 100-YEAR DESIGN STORM HAS BEEN ANALYZED FOR THE BLOCKED CONDITION AND A MINIMUM 2-FEET OF FREEBOARD HAS BEEN PROVIDED.
 TYPE (PER MDE) : NET POND (P2)
 MD-318 HAZARD CLASS A FACILITY
 TOTAL DRAINAGE AREA TO FACILITY = 29.66 ACRES (AREA I)
 CA = 81
 ZONING: MXD-3, 55% IMPERVIOUS
 TC = 0.21 HRS.
 M&V REQUIRED = 0.74 AC-FT
 M&V PROVIDED = 0.93 AC-FT
 M&V/PERMANENT POOL MSEL = 406.00
 CPV REQUIRED = 128
 CPV PROVIDED = 146
 CPV MSEL = 404.45
 REV REQUIREMENT = 0.26 AC-FT
 REV TO BE PROVIDED BY INFILTRATION TRENCHES (SEE BELOW)
 1-YR DISCHARGE = 0.29 CFS @ 404.89
 10-YR DISCHARGE = 61.21 CFS @ 410.64
 100-YR BLOCKED DISCHARGE = 71.86 CFS @ 410.71
 100-YR DISCHARGE = 124.20 CFS @ 410.00
 100-YR BLOCKED DISCHARGE = 124.06 CFS @ 411.00
 18 HOURS
 8 FT. SAFETY BENCH = 406.00
 3 FT. AQUATIC BENCH = 406.00
 OUTFALL: PRECAST RISER STRUCTURE TO 48" RCP TO STREAM BUFFER
 TOP OF DAM = 414.00
 *THE RECHARGE REQUIREMENT FOR THIS DRAINAGE AREA I WILL BE PROVIDED BY INFILTRATION TRENCHES ON FUTURE OPEN SPACE LOTS.



STORMWATER MANAGEMENT POND 4 ENLARGEMENT / PLANTING PLAN SCALE: 1" = 40'



PLANT LIST FOR STORMWATER MANAGEMENT POND 3

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	NOTES
PERENNIALS/GROUND COVER				
SL	1866	Sagittaria latifolia Duck Potato	1 PINT CONT. OR BARE ROOT	12" o.c.
SP	1866	Scirpus pungens Three-Square Bulrush	1 PINT CONT. OR BARE ROOT	12" o.c.
PR	1866	Polygonum reptans Jacob's Ladder	1 PINT CONT. OR BARE ROOT	12" o.c.
PV	1866	Peltandra virginica Arrow Arum	1 PINT CONT. OR BARE ROOT	12" o.c.

NOTE: STORMWATER MANAGEMENT POND PLANTINGS ARE PER MDE 2000 REQUIREMENTS

1864 PLANTS IS REQUIRED FOR POND 3. THE NUMBER OF EACH SPECIES PLANTED WILL BE DETERMINED AT THE TIME OF CONVERSION DEPENDING ON AVAILABILITY.

PLANT LIST FOR STORMWATER MANAGEMENT POND 4

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	NOTES
PERENNIALS/GROUND COVER				
SL	1296	Sagittaria latifolia Duck Potato	1 PINT CONT. OR BARE ROOT	12" o.c.
SP	1296	Scirpus pungens Three-Square Bulrush	1 PINT CONT. OR BARE ROOT	12" o.c.
PR	1296	Polygonum reptans Jacob's Ladder	1 PINT CONT. OR BARE ROOT	12" o.c.
PV	1296	Peltandra virginica Arrow Arum	1 PINT CONT. OR BARE ROOT	12" o.c.

NOTE: STORMWATER MANAGEMENT POND PLANTINGS ARE PER MDE 2000 REQUIREMENTS

5104 PLANTS IS REQUIRED FOR POND 4. THE NUMBER OF EACH SPECIES PLANTED WILL BE DETERMINED AT THE TIME OF CONVERSION BASED ON AVAILABILITY.

Approved: Howard County Dept. of Public Works
 [Signature] 12-14-12
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 12/17/12
 Chief, Division of Land Development
 [Signature] 12/17/12
 Chief, Development Engineering Division

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
 [Signature] 11-20-12
 ENGINEER'S SIGNATURE DATE

BUILDER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 11-20-12
 SIGNATURE OF DEVELOPER/BUILDER DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 11/29/12
 HOWARD S.C.D. DATE

ASBUILTS
 ASBUILT SHEET 7 OF 8
 POND 3 & 4 CONVERSION GRADES, POND SUMMARIES, and PLANTING DETAILS
 SCALE AS SHOWN ZONING MXD-3 G. L. W. FILE NO. 11001
 DATE JULY, 2018 TAX MAP - GRID SHEET 41-21/46-3 21 OF 27
 NOV. 2012
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT No. 5

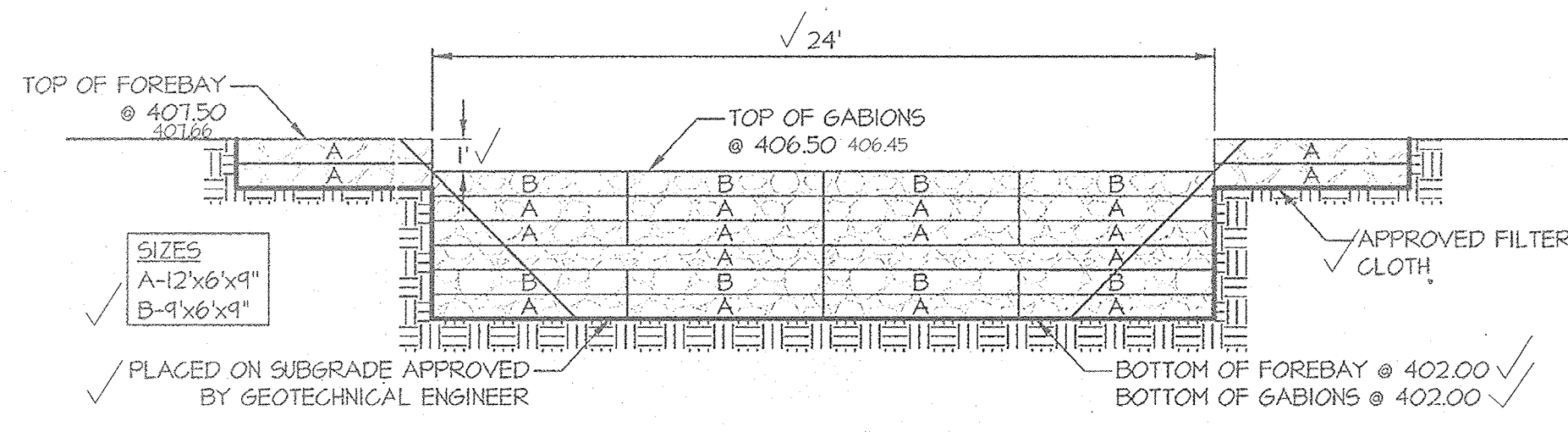
PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 12475, Expiration Date: May 26 2020.
 [Signature] 7/24/18
 Date
 [Seal] Carl K. Gutschick
 Professional Engineer
 Maryland Reg. No. 12475

1: ASBUILT SHEET 7 OF 8 (POND 3 & 4 CONVERSION GRADES, POND SUMMARIES, and PLANTING DETAILS) PLANTED 11/20/2012 3:27 PM, LAST SAVED: 11/20/2012 3:26 PM, REQUITED BY: Doug Vande Pyl

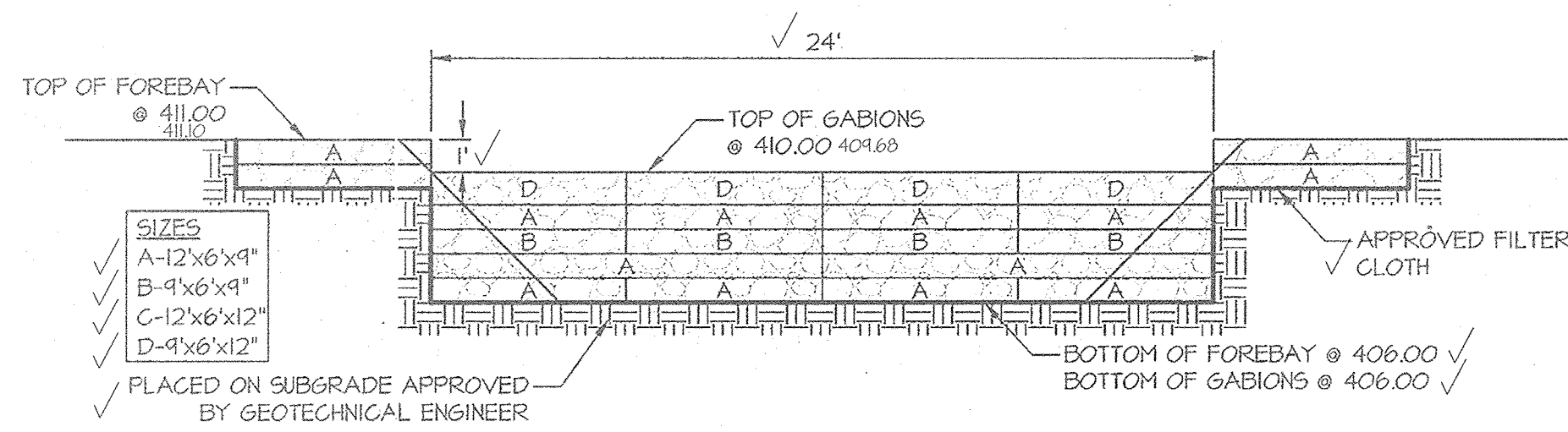
GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20865
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-959-2524 FAX: 301-421-4158

DATE	REVISION	BY	APP'R.

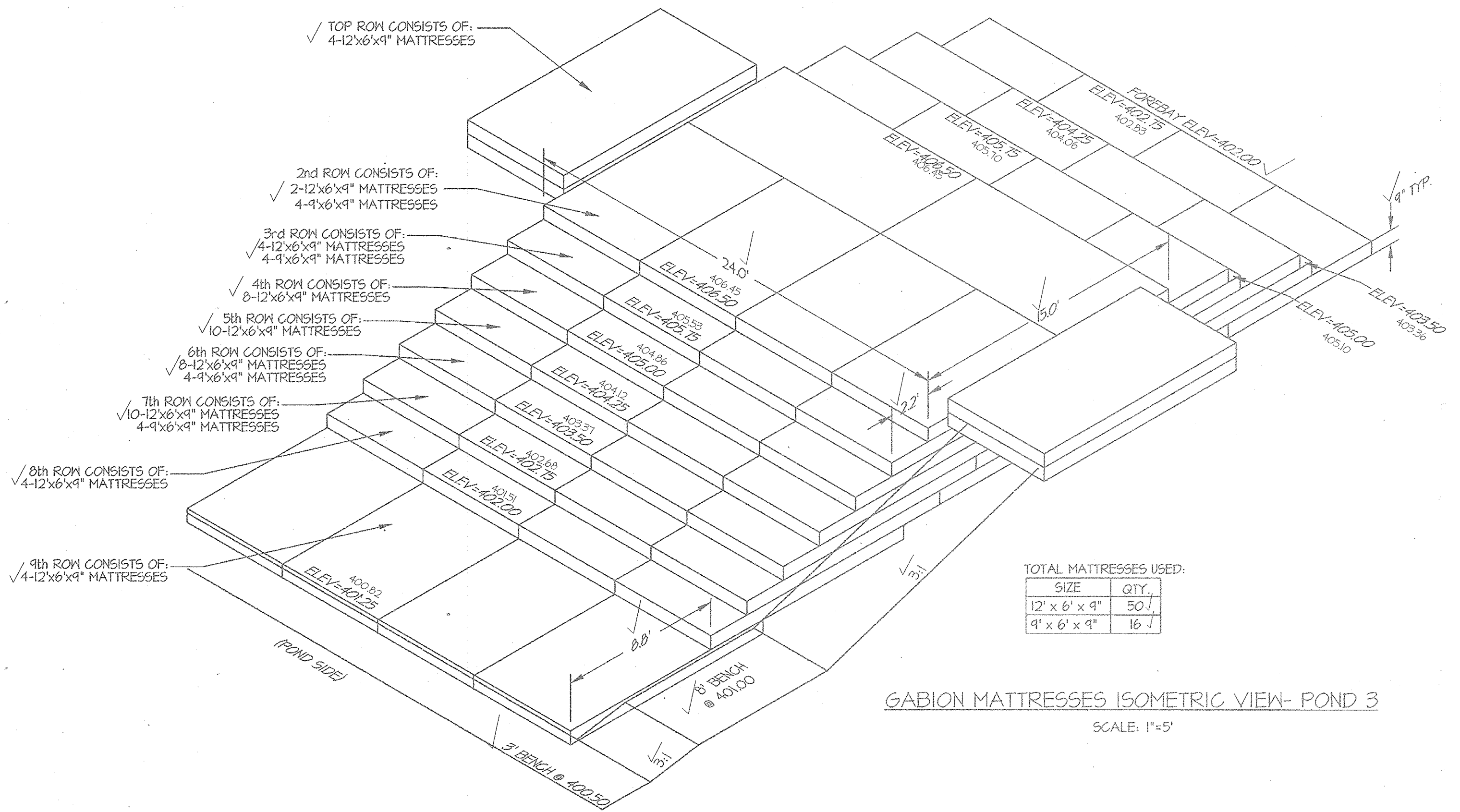
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12475, EXPIRATION DATE: MAY 26, 2020.
 [Signature] 11-20-12



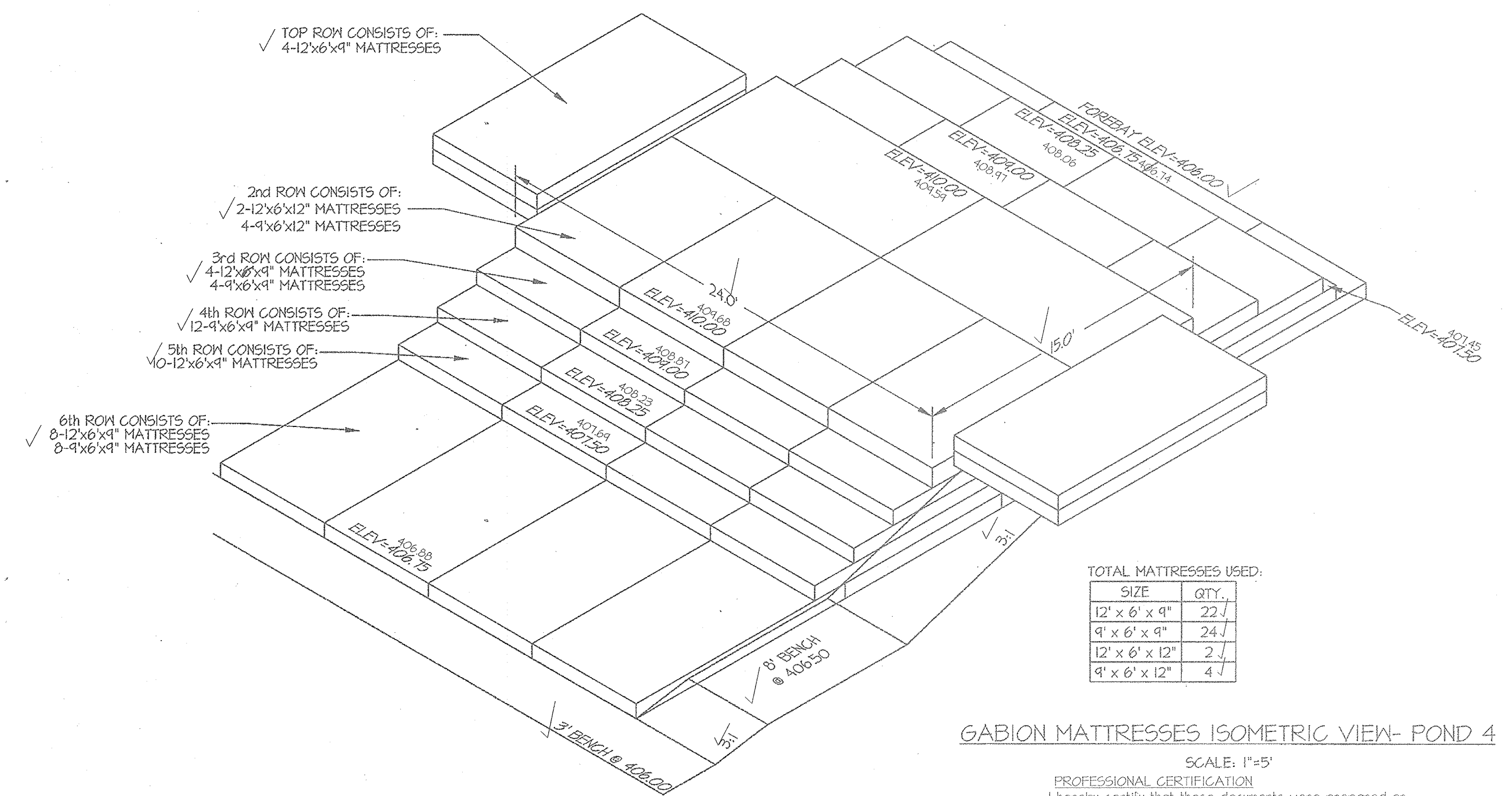
FOREBAY SPILLWAY DETAIL- POND 3
SCALE: 1"=5'



FOREBAY SPILLWAY DETAIL- POND 4
SCALE: 1"=5'



GABION MATTRESSES ISOMETRIC VIEW- POND 3
SCALE: 1"=5'



GABION MATTRESSES ISOMETRIC VIEW- POND 4
SCALE: 1"=5'

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. 12475, Expiration Date: May 26, 2020.

Date: 12/17/12
Signature: Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12475

Approved: Howard County Dept. of Public Works
Signature: [Signature]
Date: 12-14-12
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Signature: [Signature]
Date: 12/17/12
Chief, Division of Land Development

Signature: [Signature]
Date: 12/17/12
Chief, Development Engineering Division

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
2909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1920 DC/VA: 301-589-2524 FAX: 301-421-4185

DATE	REVISION	BY	APP'R.

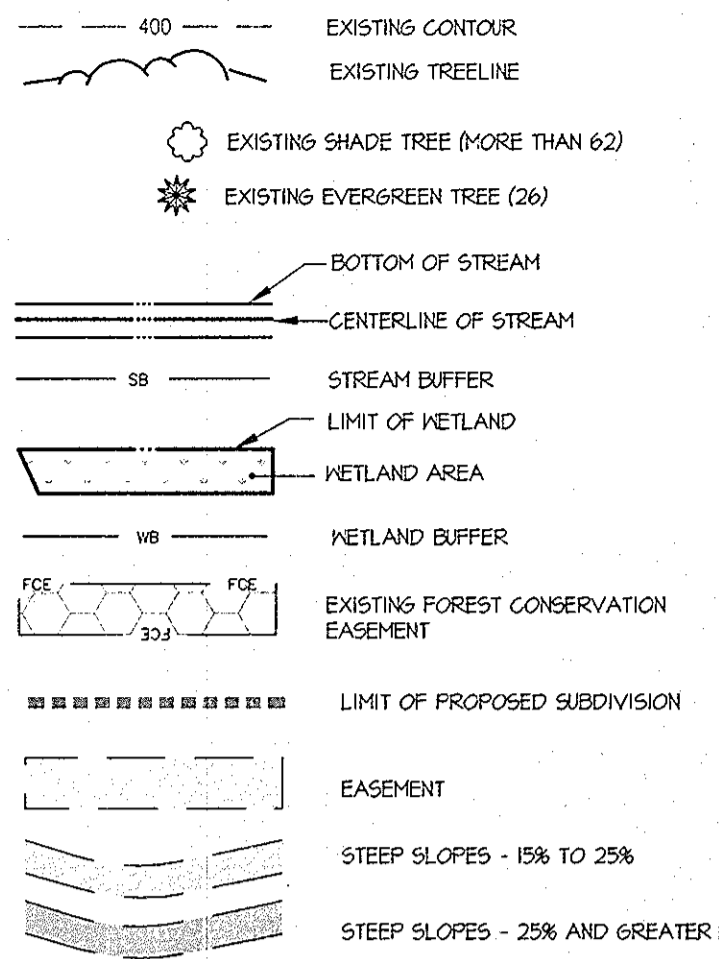
PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXPIRATION DATE: MAY 26, 2014.
Signature: [Signature]
Date: 11-20-12

ASBUILTS
POND 3 & 4 GABION BASKET DETAILS
MAPLE LAWN FARMS
GARDEN DISTRICT
NON-BUILDABLE PARCEL 'W'
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
JULY, 2018 NOV. 2012	41-21/46-3	22 OF 27

LANDSCAPE LEGEND



LANDSCAPING NOTES

- THERE ARE NO STREET TREE REQUIREMENTS.
- INTERNAL PLANTINGS WILL BE PROVIDED WITH THE SITE DEVELOPMENT PLANS AND FINAL PLANS.
- THE BUFFERS SHOWN IN THE SCHEDULES ARE IN ACCORDANCE WITH THE LANDSCAPE MANUAL, ACCORDING TO THE COMPREHENSIVE SKETCH PLAN CRITERIA. THE FOLLOWING ARE THE MINIMUM PLANTINGS TO BE PROVIDED ALONG A PERIMETER EDGE.
 SHADE TREE: 1:80 LINEAR FEET OF MEASURED PERIMETER EDGE
 SMALL ORNAMENTAL DECIDUOUS TREE: 1:60 LINEAR FEET OF MEASURED PERIMETER EDGE
 EVERGREEN TREE: 1:20 LINEAR FEET OF MEASURED PERIMETER EDGE
- AFFORESTATION PLANTING SIZE SHALL BE LARGE ENOUGH TO MEET THE LANDSCAPE BUFFERING REQUIREMENT ALONG EXTERNAL PERIMETERS WHERE APPLICABLE.
- UNLESS NOTED, ALL STEEP SLOPES AREAS WITHIN THE LIMITS OF SUBDIVISION ARE LESS THAN 5,000 SF.

NOTES

- 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 AND THE MLF LANDSCAPE DESIGN CRITERIA. IN ADDITION NO SUBSTITUTIONS OR REALLOCATIONS 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 THE 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.
- THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERRIES, 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.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, THE LANDSCAPE MANUAL, AND THE MLF LANDSCAPE DESIGN CRITERIA WITH 61 SHADE TREES, 33 ORNAMENTALS, AND 162 EVERGREEN TREES REQUIRED. A LANDSCAPE SURETY IN THE AMOUNT OF \$47,550.00 WILL BE POSTED TO DPW WITH THE DEVELOPER'S AGREEMENT.

DEVELOPER'S/OWNER'S LANDSCAPE 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 LANDSCAPE MANUAL AND THE MLF LANDSCAPE DESIGN CRITERIA. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

John B. Smith *Vice Pres* 11-20-12
 DEVELOPER'S/OWNER'S NAME

Approved: Howard County Dept. of Public Works

William R. Smith 12-14-12
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John Salvo 12/17/12
 Chief, Division of Land Development Date

Mark Bennett 12/17/12
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-380-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DATE REVISION BY APPR.

THIS PLAN IS FOR PLANTING PURPOSES ONLY

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

STATE OF MARYLAND
 Michael B. Tran
 933 LANDSCAPE ARCHITECT
 11-21-12

EXTERNAL PERIMETER PLANTING SCHEDULE - SCHEDULE A

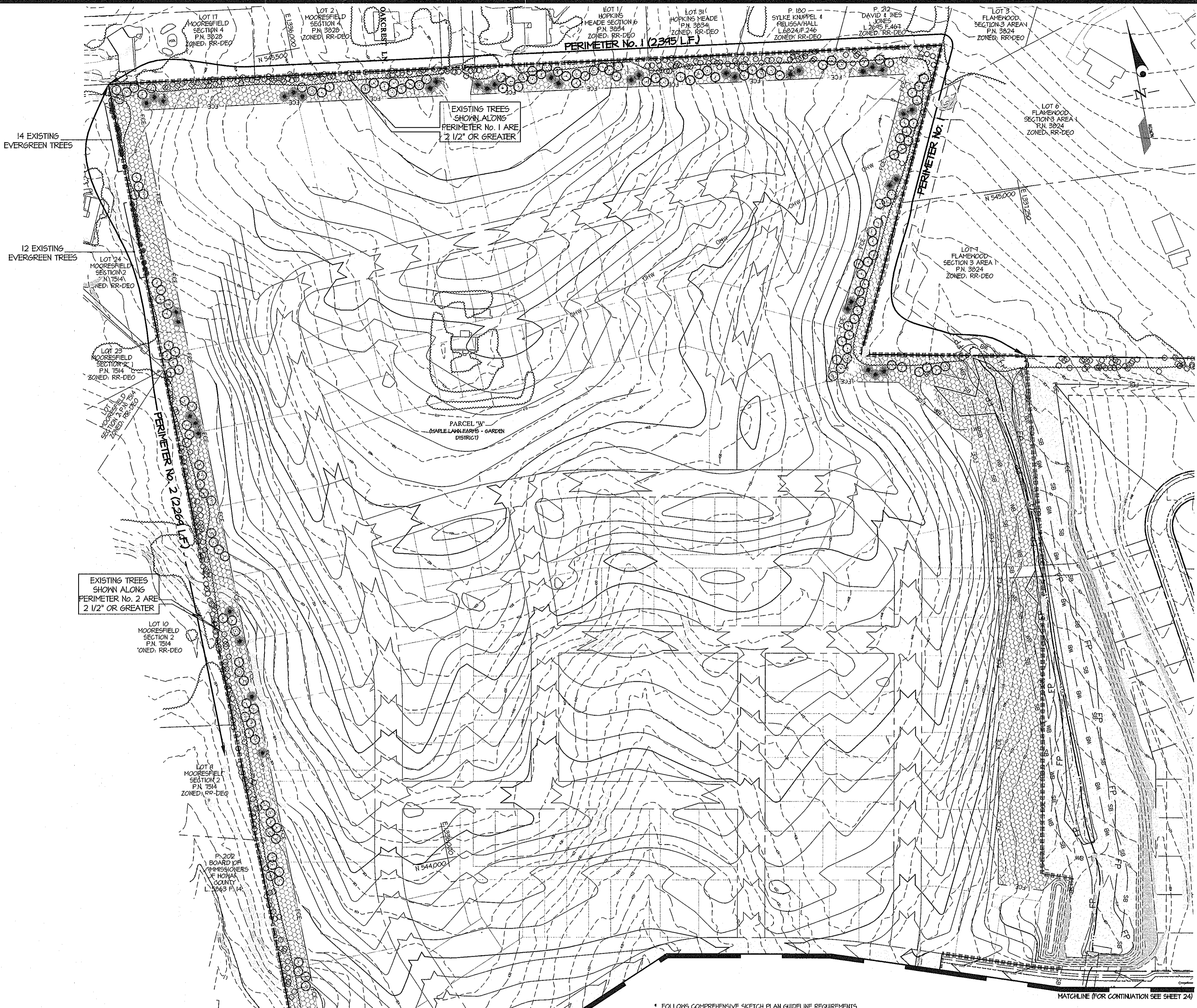
PERIMETER	LAND USE	ADJACENT LAND USE	TYPE OF BUFFER	LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	NUMBER OF PLANTS REQUIRED			CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	NUMBER OF PLANTS PROVIDED		
					SHADE TREES	ORNAMENTALS TREES	EVERGREEN TREES			SHADE TREES	ORNAMENTALS TREES	EVERGREEN TREES
PERIMETER 1	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer *	2,345'	30	40	120	YES ②	NO	SEE NOTE ②	SEE NOTE ②	120
PERIMETER 2	SFD RESIDENTIAL	SFD RESIDENTIAL	'A' Buffer *	2,044' (2,264'-2,25')	26	34	102	YES ②	NO	SEE NOTE ②	SEE NOTE ②	76 ②
PERIMETER 3	SFD RESIDENTIAL	INSTITUTIONAL	'A' Buffer *	483'	6	8	24	YES, 100% ①	NO	EXISTING WOODLAND ①		

LANDSCAPE PLAN / NOTES and DETAILS

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	23 OF 27

ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

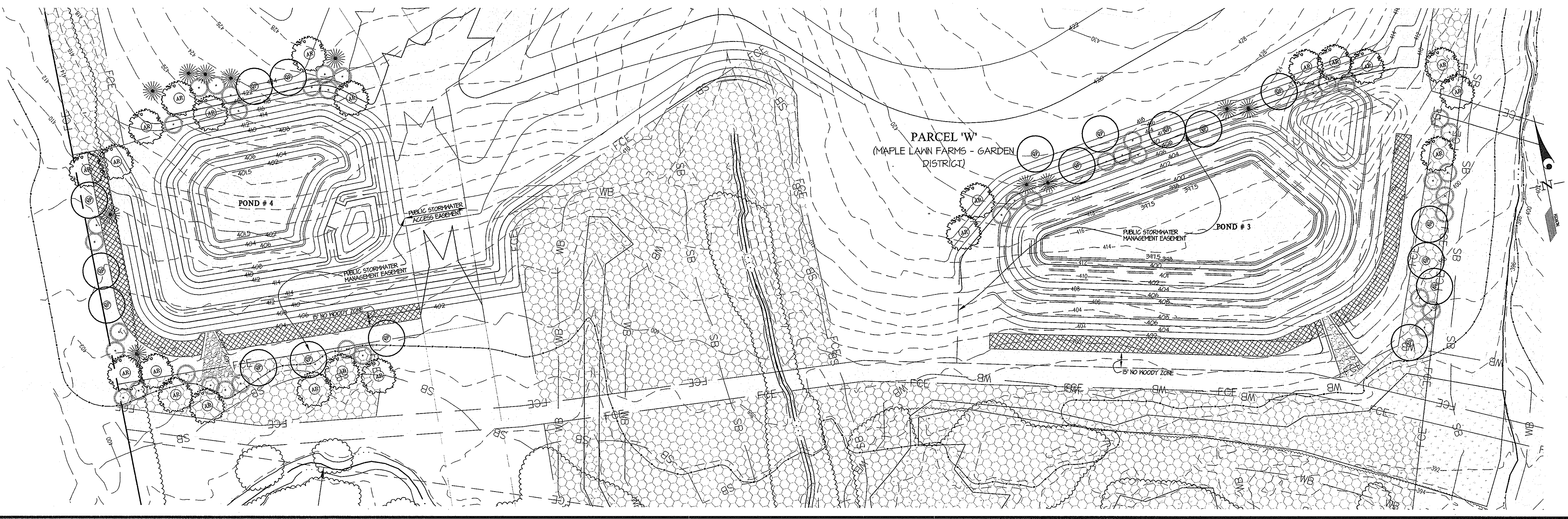


- * FOLLOWS COMPREHENSIVE SKETCH PLAN GUIDELINE REQUIREMENTS
- ① CREDIT FOR FOREST RETENTION ALONG THIS PERIMETER.
- ② CREDIT FOR EXISTING TREES RETAINED ALONG THIS PERIMETER.

MATCHLINE (FOR CONTINUATION SEE SHEET 24)

MATCHLINE (FOR CONTINUATION SEE SHEET 24)

L:\CADD\DRAWINGS\11001\11001\11001-23-24-LS.dwg DES. DEV ORN. KLP CHK. CKG DATE REVISION BY APPR.



STORMWATER MANAGEMENT PERIMETER Nos. 1 thru 5 PLANTING PLAN SCALE: 1" = 50'

STORMWATER MANAGEMENT AREA LANDSCAPING - SCHEDULE D

PERIMETER	PROPOSED LAND USE	TYPE OF BUFFER	ADJACENT LAND USE	LINEAR FEET OF PERIMETER	NUMBER OF PLANTS REQUIRED SHADE TREES	NUMBER OF PLANTS PROVIDED EVERGREEN TREES	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR-FEET) DESCRIBE BELOW IF NEEDED.	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR-FEET) DESCRIBE BELOW IF NEEDED.	SHADE TREES	EVERGREEN TREES
SM-1	SM	3' BUFFER *	RESIDENTIAL (SFD)	351 L.F.	7	4	NO	NO	7	4
SM-2	SM	PER EXTERNAL PERIMETER #3	INSTITUTIONAL	362 L.F.	7	4	PER EXTERNAL PERIMETER #3	NO	SEE NOTE 1	SEE NOTE 1
SM-3	SM	3' BUFFER *	RESIDENTIAL (SFD)	512 L.F.	11	14	NO	NO	11	14
SM-4	SM	3' BUFFER *	RESIDENTIAL (SFD)	867 L.F.	17	22	NO	NO	17	22
SM-5	SM	3' BUFFER *	RESIDENTIAL (SFD)	225 L.F.	5	6	NO	NO	5	6

* FOLLOWS COMPREHENSIVE SKETCH PLAN GUIDELINE REQUIREMENTS
 ① CREDIT FOR FOREST RETENTION ALONG THIS PERIMETER.

PLANT LIST

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT	COMMENTS
SHADE TREES					
(Symbol)	22	ACER RUBRUM 'AUTUMN FLAME' / AUTUMN FLAME MAPLE	2 1/2"-3" Cal.	B4B	
(Symbol)	18	QUERCUS PALUSTRIS / PIN OAK	2 1/2"-3" Cal.	B4B	
EVERGREEN TREES					
(Symbol)	15	PINUS STROBILIS / WHITE PINE	6'-8" Ht.	B4B	
(Symbol)	52	ILEX OPACA / AMERICAN HOLLY	6'-8" Ht.	B4B	

Approved: Howard County Dept. of Public Works

Will R. Smith 12-14-12
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

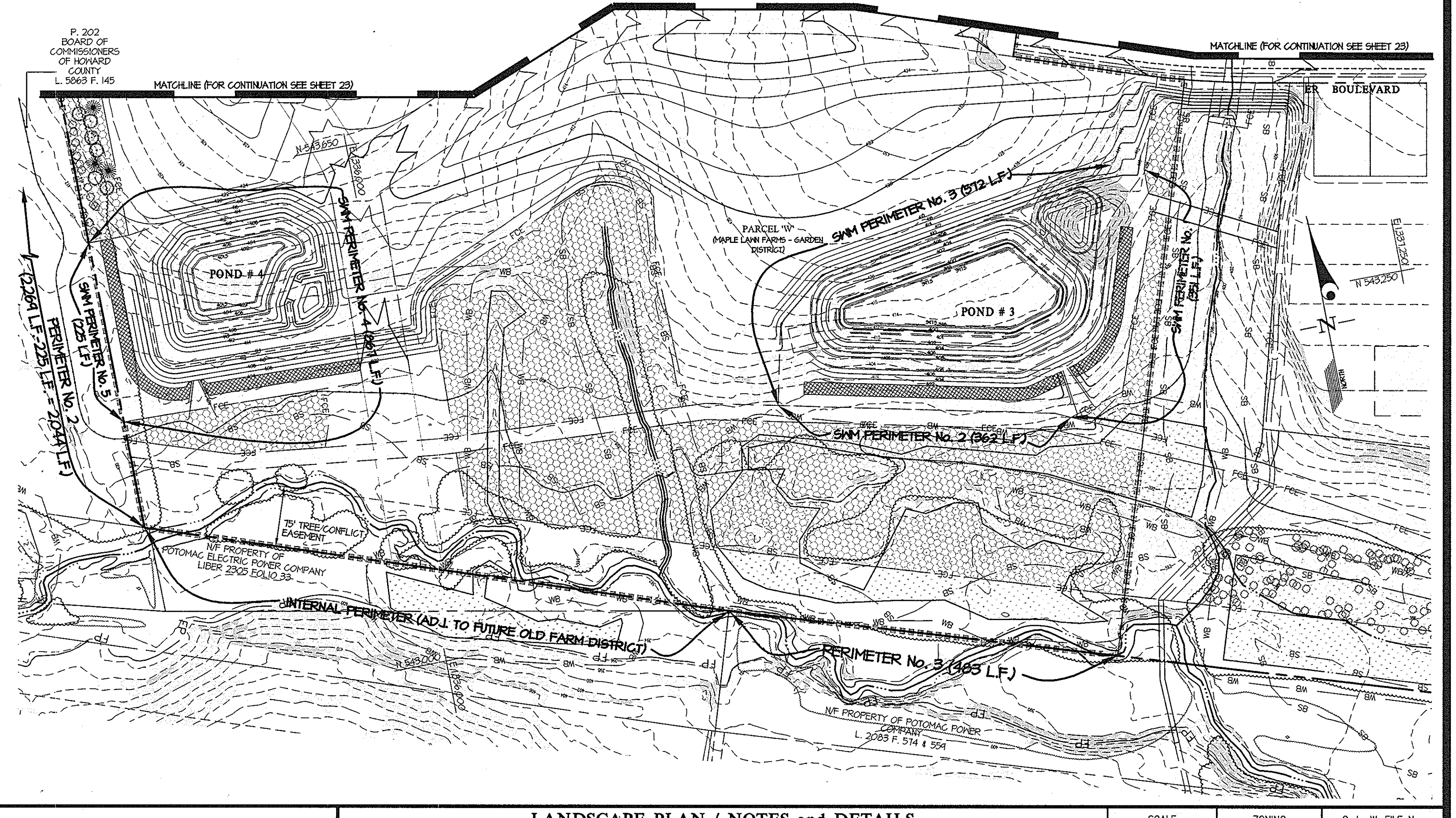
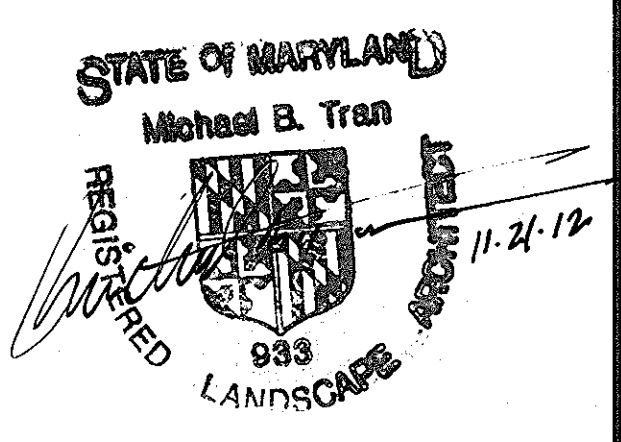
Kat Shilow 12/12
 Chief, Division of Land Development Date

Michael B. Tren 12/12
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1800 DC/VA: 301-989-2524 FAX: 301-421-4186

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THIS PLAN IS FOR PLANTING PURPOSES ONLY



LANDSCAPE PLAN / NOTES and DETAILS

MAPLE LAWN FARMS

GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

SCALE	ZONING	G. L. W. FILE No.
1" = 100'	MXD-3	11001
DATE	TAX MAP - GRID	SHEET
NOV. 2012	41-21/46-3	24 OF 27

PREPARED FOR:
 MAPLE LAWN FARMS 1, LLC
 SUITE 300 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: MARK BENNETT
 410-484-8400

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

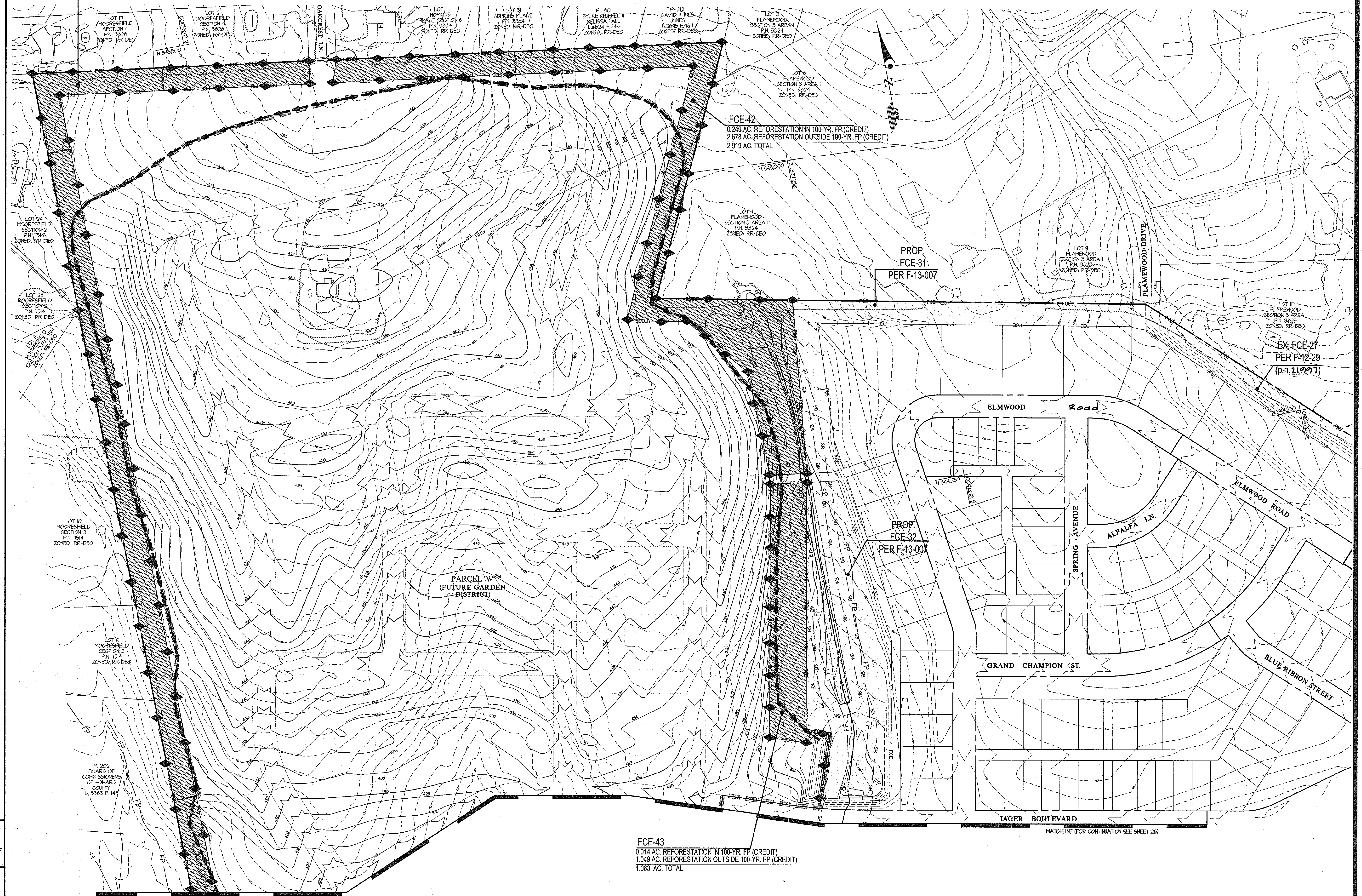
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 PLOTTED: 11/21/12 1:18 PM LCAI SHILOW 11/21/2012 1:17 PM PLOTTED BY: Kirby Pierce

FOREST CONSERVATION LEGEND

- 400 ——— EXISTING CONTOUR
- EXISTING TREELINE
- CENTERLINE OF STREAM
- FP ——— FLOODPLAIN
- SB ——— STREAM BUFFER
- LIMIT OF WETLAND
- WETLAND AREA
- WETLAND BUFFER
- FCE ——— FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGN
- FCE ——— PROPOSED FOREST CONSERVATION EASEMENT
- NON-CREDITED FOREST RETENTION
- CREDITED FOREST RETENTION
- FOREST CLEARING
- PLANTING AREA (AFFORESTATION AND REFORESTATION)
- TREE PROTECTION FENCE
- AREA OF PLAN SUBMISSION TO BE PLATTED AT F-PLAN STAGE
- LIMIT OF DISTURBANCE

NOTE: FOR STEEP SLOPES SEE LANDSCAPE PLANS, SHEETS 17-18.

FCE-41
2.821 AC. ALL REFORESTATION PLANTING



STATE OF MARYLAND
Michael B. Tran
11.21.12
933 LANDSCAPE ARCHITECT

Approved: Howard County Dept. of Public Works
Wade 2 12-14-12
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Val St. Louis 12/17/12
Chief, Division of Land Development Date
W. R. ... 12/17/12
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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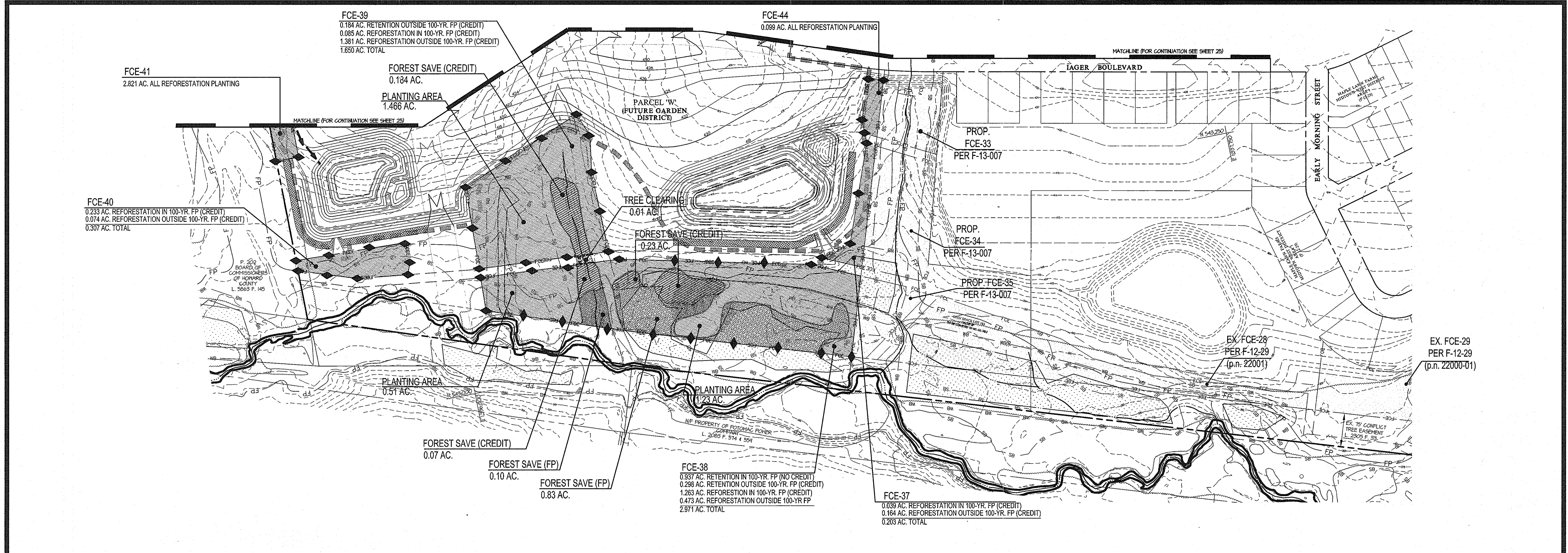
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DATE	REVISION	BY	APPR.

PREPARED FOR:
MAPLE LAWN FARMS 1, LLC
SUITE 300 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: MARK BENNETT
410-484-8400

FOREST CONSERVATION PLAN
MAPLE LAWN FARMS
GARDEN DISTRICT
NON-BUILDABLE PARCEL W
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
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TREE PLANTING AND MAINTENANCE CALENDAR

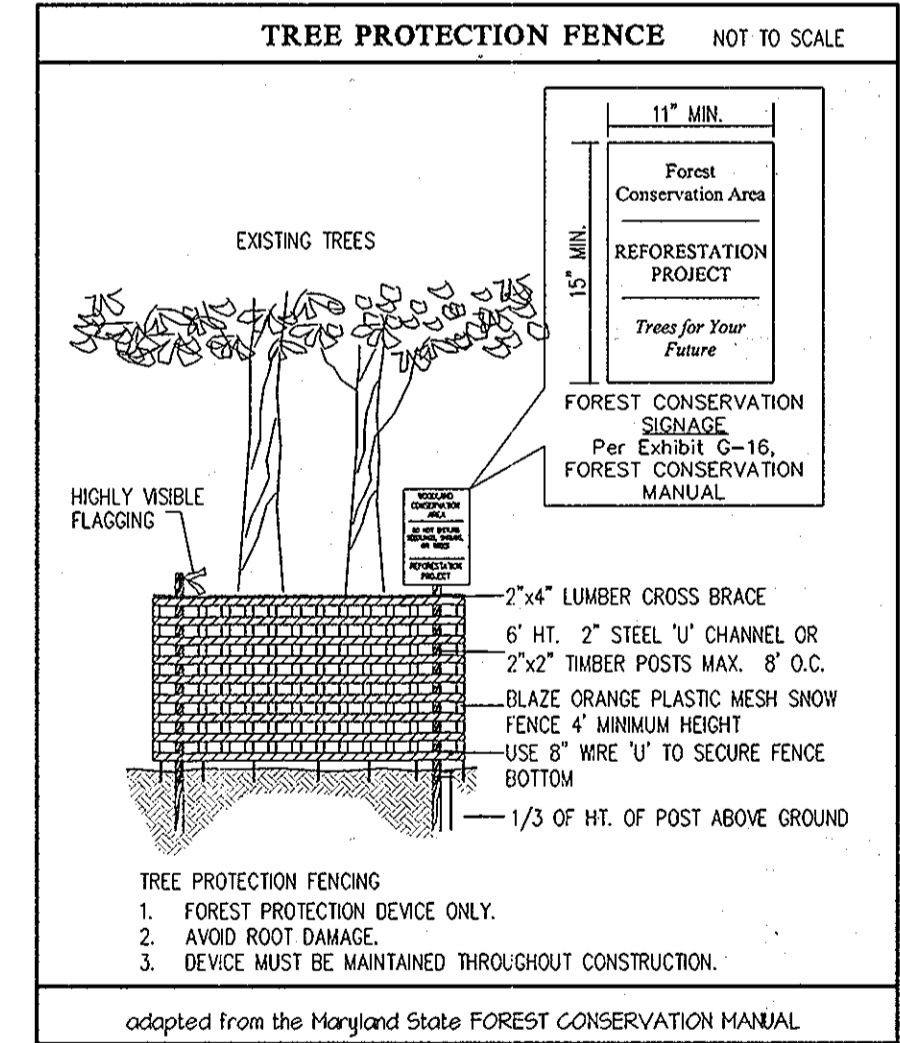
TASKS	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TRANSPLANT OF 2" DBH OR GREATER												
PLANTING SEEDLINGS, WHIPS												
MINIMUM MONITORING		*				*				*		
FERTILIZER (IF NEEDED)												
WATER **												
PRUNING												

KEY

- * ACTIVITIES DURING THESE MONTHS ARE DEPENDANT UPON GROUND CONDITIONS
- █ GREATLY RECOMMENDED
- ▨ RECOMMENDED WITH ADDITIONAL CARE
- ▩ RECOMMENDED
- + DEPENDANT UPON SITE CONDITIONS
- ** DEPENDANT UPON SITE CONDITIONS, WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

NOTE: The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

SOURCE: adopted from the Maryland State FOREST CONSERVATION MANUAL



FOREST CONSERVATION PLANTING QUANTITY SCHEDULE

FOREST PLANTING LOCATION NO.	FCE-37	FCE-38	FCE-39	FCE-40	FCE-41	FCE-42	FCE-43	FCE-44	TOTAL
AREA TO BE PLANTED (IN AC.)	0.20	1.74	1.47	0.31	2.82	2.42	1.06	0.10	10.62
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	20	174	147	31	282	242	106	10	1,062
CREDIT FOR LANDSCAPE TREES TO BE PLANTED	14	---	---	15	94	102	---	2	227
REQUIRED QUANTITY OF 2" CAL. TREES TO BE PLANTED	6	174	147	16	188	190	106	8	835

FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	FOREST PLANTING AREA								
	FCE-37	FCE-38	FCE-39	FCE-40	FCE-41	FCE-42	FCE-43	FCE-44	TOTAL
AMELANCHIER CANADENSIS/SERVICEBERRY		15	25			17	16		73
ACER RUBRUM/RED MAPLE	6	64	11	7	45	20	24	4	181
CERCIS CANADENSIS/EASTERN REDBUD		15	26		53	25	16	4	134
LIRIODENDRON TULIFERA/TULIP TREE		16	37	3		25	25		106
PLATANUS OCCIDENTALIS/AMERICAN SYCAMORE (PLANETREE)		64	11	6		18	25		124
QUERCUS PALUSTRIS/PIN OAK					45	25			70
QUERCUS RUBRUM/RED OAK					45	25			70
PINUS STROBILUS/WHITE PINE			37			35			72
TOTAL	6	174	147	16	188	190	106	8	835

NOTES:

- THE QUANTITY SHOWN ABOVE IS FOR PLANTING WITH 2 1/2" CAL. TREES AT 20' X 20' SPACINGS. EVERGREEN TREES SHALL BE 6'-8" HT.
- LANDSCAPE TREES WITH THE FCE AREAS WOULD REDUCE THE ABOVE QUANTITIES ACCORDINGLY.

Approved: Howard County Dept. of Public Works
 With R. Maltz 12-14-12
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Kest Schulze 12/11/12
 Chief, Division of Land Development Date

Chief, Development Engineering Division Date

STATE OF MARYLAND
 Michael B. Tran
 933 LANDSCAPE
 11-21-12

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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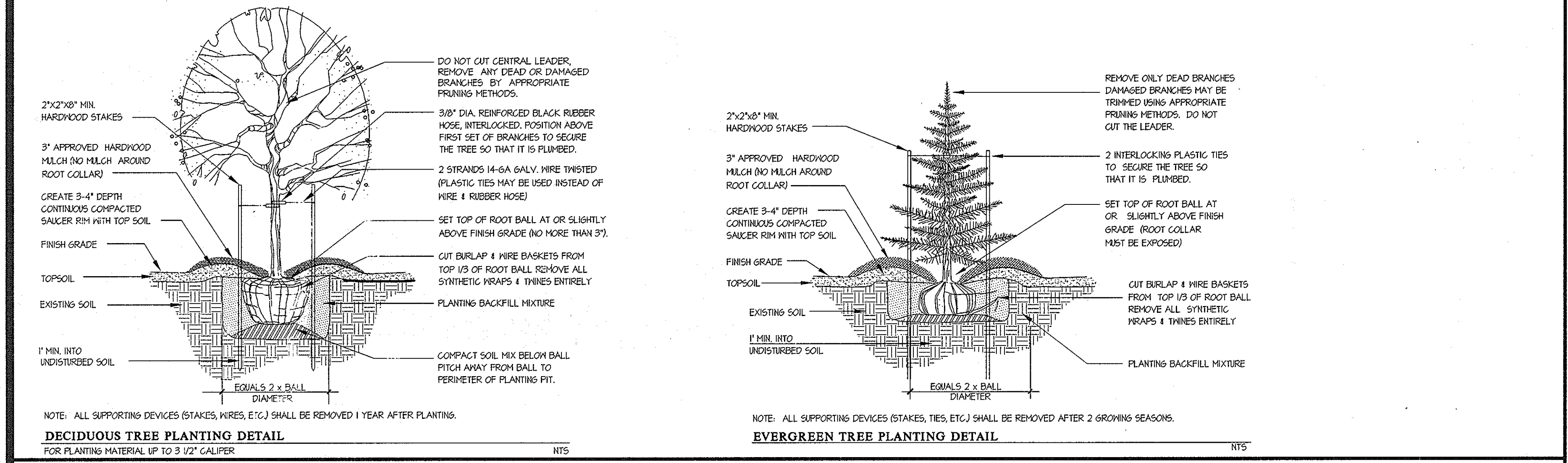
DATE	REVISION	BY	APPR.

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FOREST CONSERVATION PLAN / NOTES and DETAILS

MAPLE LAWN FARMS
 GARDEN DISTRICT
 NON-BUILDABLE PARCEL 'W'

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PHASE	NEW GROSS ACRES	FLOODPLAIN AREA (Ac.)	NET TRACT AREA (Ac.)	EX. FOREST AREA (Ac.)	FOREST CLEARED	FOREST RETAINED	EXCESS RETENTION	REAFF. REQUIRED	CREDITED PLANTING PROVIDED	EXCESS FOREST CONSERVATION (Planting & Retention)	COMMENTS
1	51.98	3.40	48.58	9.45	0.51	8.94	0.63	-1.14	4.56	5.70	F-03-07 (created FCE 1-3)
2	75.20 (1)	2.38	72.82	0.00	0.00	0.00	0.00	10.92	6.97	-3.95	F-03-90 (created FCE 4&5)
	5.70 (1)	0.00	5.70	0.00	0.00	0.00	0.00	0.86	0.00	-0.86	SDP-03-140 (for mass grading)
3	19.09 (2)	14.55	4.24	0.21	0.00	0.21	0.00	0.43	10.49	-10.16	F-04-79 (adjusted FCE 4)
											F-04-88 (adjusted FCE 5)
											F-04-92 (adjusted FCE 6 & 7)
4A	15.48	3.00	12.48	1.92	1.65	0.27	0.00	3.25	0.90	-2.35	F-05-81 (created FCE 14-16)
4B	3.12 (3)	0.35	2.77	0.00	0.00	0.00	0.00	0.42	-0.12	-0.54	F-05-139 (adjusted FCE 11)
											F-06-239 (decreased FCE 8-9 and increased FCE 10 by same, net = 0)
4C	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.45	0.00	-0.45	F-05-1121-13 (Created ML Blvd RW to connect Hillside & Business Distr.)
4D	54.61 (4)	7.27	47.34	3.76	0.51	3.25	0.00	4.36	5.75	1.39	F-06-43 (re-subdivided Parcels from F-05-81)
5A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	F-06-161 (created FCE 17-20)
5B	4.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	F-06-162 (adjusted FCE 15)
6A	10.30 (5)	3.84	6.46	0.00	0.00	0.00	0.00	0.97	1.70	0.73	F-06-72 (created FCE 21-23)
6B	69.88 (6)	1.22	68.66	4.59	2.10	2.49	0.00	9.91	11.22	1.31	F-06-84 (created FCE 24-26)
	25.06	0.00	25.06	0.00	0.00	0.00	0.00	3.76	0.00	-3.76	SDP-07-43 (for mass grading)
											F-10-64
Forestation Planting to be used to fulfill obligation for "Rockland at Rogers" (F-10-64)											
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	F-10-61 (re-subdivided area from F-06-161)
8A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	F-11-27 (re-subdivided area from F-06-161)
8B	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	F-12-21 (re-subdivided area from F-08-54)
F-12-015 (No Phases)	9.37	0.00	9.37	0.00	0.00	0.00	0.00	1.40	0.00	-1.40	B-974 (area of C-27 + area of Parcel P) less area of B-1 from PA 19870
Part of 8C (F-12-20)	1.66	0.00	1.66	0.00	0.00	0.00	0.00	0.25	0.00	-0.25	1.6583 ac = area of subdivision to be recorded by the plat for F-12-020
Part of 8C (F-12-20)	56.14 (7)	2.44	53.70	2.34	0.19	2.15	0.00	6.10	1.22	-4.88	F-12-029 (created FCE 27-30)
Part of 8C (F-13-007)	9.85	4.04	5.80	0.01	0.00	0.01	0.00	0.86	5.52	-4.66	F-13-007 (created FCE 31-36)
Forestation Planting to fulfill additional obligation for the construction of a WHC to a lot adjacent to "Rockland at Rogers" (F-13-014)											
Subtotal	410.41	42.79	367.62	22.28	4.96	17.32	0.63	44.88	46.74	1.85	
Business Distr. Residual Area	10.45 (8)	0	10.45	0	0	0	0	1.57	0	-1.57	
This Final Plan (F-13-038)	74.04	5.68	68.36	0.50	0.01	0.48	0.00	9.79	10.61	0.83	F-13-008 (creates FCE 37-44)
Total	494.93 (9)	48.47	446.45	22.78	4.97	17.80	0.63	58.24	57.35	1.11	

GENERAL NOTES:

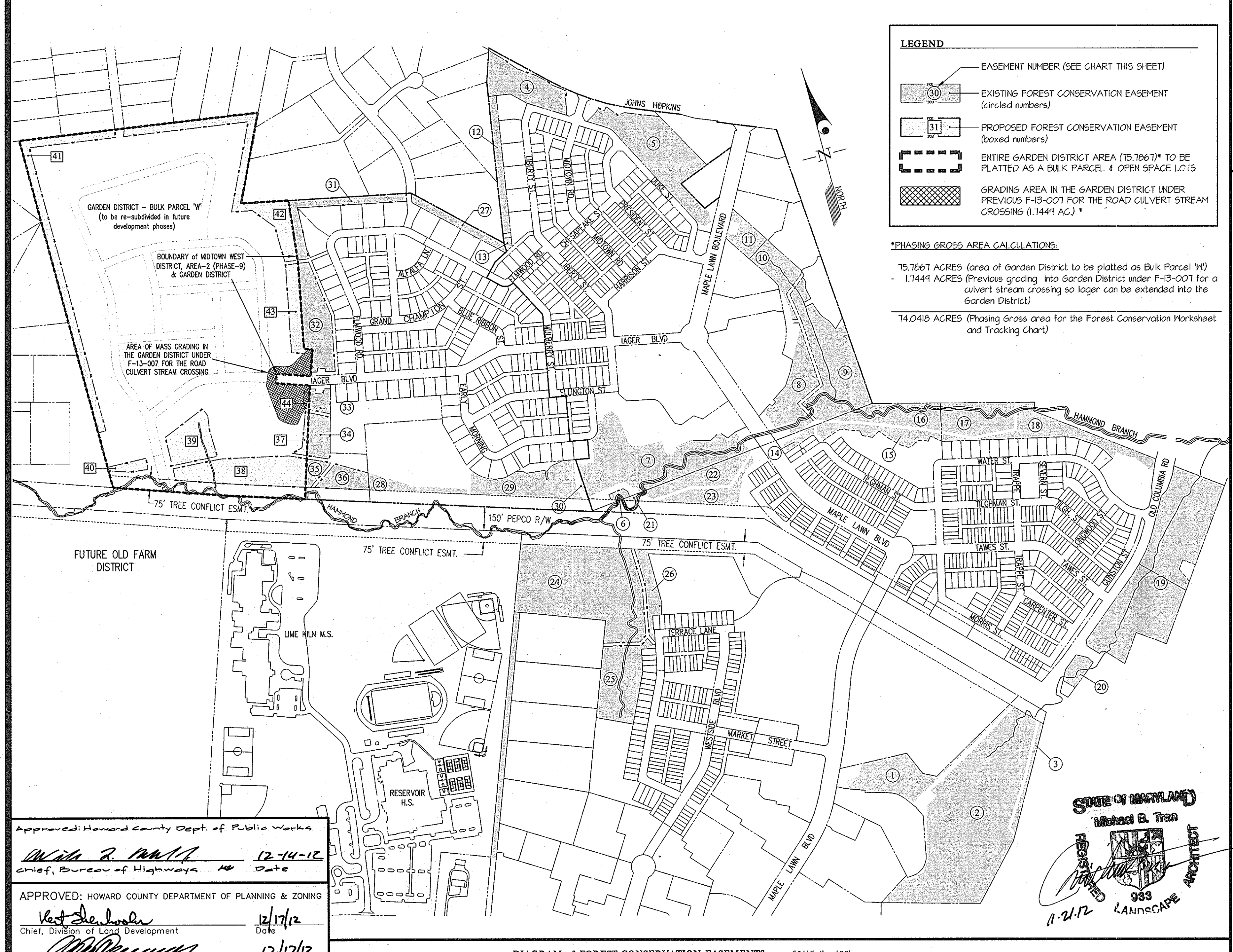
- THIS AFFORESTATION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE.
- IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PRACTICES.
- THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY. IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (WHICH IS APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS.
- AT THE END OF THE POST-CONSTRUCTION MAINTENANCE AND PROTECTION PERIOD, CERTIFICATION BY A QUALIFIED CONSULTANT WILL BE REQUIRED BEFORE THE OWNER CAN BE RELEASED FROM HIS/HER FOREST CONSERVATION OBLIGATION TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.
- THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF ANY EXISTING UTILITIES THE REPAIR OF ANY UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE FOREST CONSERVATION EASEMENTS SHOWN ON THIS PLAN WILL BE ESTABLISHED TO FULFILL THE REQUIREMENTS OF THE FOREST CONSERVATION PROGRAM. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 161202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS PARTICULAR PHASED SUBMISSION OF THE MLF PROJECT ARE:

0.49 ACRES OF CREDITED RETENTION
4.33 ACRES OF AFFORESTATION PLANTING
10.71 ACRES OF FCE REQUIRED FOR THIS PHASE

A TOTAL OF 10.61 ACRES OF CREDITED FOREST PLANTING WILL BE ESTABLISHED IN THE NEW FCE-37 THRU FCE-44 TO SATISFY THE 17.81 ACRES OF REQUIRED FOREST PLANTING OBLIGATIONS FOR THIS PHASE OF THE PROJECT.

A FOREST CONSERVATION SURETY OF \$200,000 FOR THE REQUIRED FOREST PLANTING SHALL BE POSTED WITH THE DEVELOPER AGREEMENT AS CALCULATED BELOW:

(1.71 AC x \$43,560 SF/AC @ \$0.50/SF) = \$212,226.00 (rounded)



LEGEND

- EASEMENT NUMBER (SEE CHART THIS SHEET)
- EXISTING FOREST CONSERVATION EASEMENT (circled numbers)
- PROPOSED FOREST CONSERVATION EASEMENT (boxed numbers)
- ENTIRE GARDEN DISTRICT AREA (75.1861)* TO BE PLATTED AS A BULK PARCEL & OPEN SPACE LG-75
- GRADING AREA IN THE GARDEN DISTRICT UNDER PREVIOUS F-13-007 FOR THE ROAD CULVERT STREAM CROSSING (1.7444 AC)*

***PHASING GROSS AREA CALCULATIONS:**

75.1861 ACRES (area of Garden District to be platted as Bulk Parcel 1Y)
- 1.7444 ACRES (Previous grading into Garden District under F-13-007 for the road culvert stream crossing so longer can be extended into the Garden District)
= 73.4417 ACRES (Phasing Gross area for the Forest Conservation Worksheet and Tracking Chart)

FOREST CONSERVATION WORKSHEET

1 Site Data	Acres
A. Gross Site Area (of the Garden District, adjusted for phased development)	74.042
B. Area within 100-yr floodplain	5.681
C. Net Tract Area	68.361
E. Land Use Category	RR-MXD3
2 Input Data	68.361
A. Net Tract Area	10.254
B. Reforestation Threshold (percent of net tract = 15%)	10.254
C. Afforestation Threshold (percent of net tract = 15%)	0.497
D. Existing Forest on Net Tract Area	0.015
F. Forest Retention on Net Tract Area	0.482
3 Reforestation and/or Afforestation Calculations	
A. Net tract forest clearing above reforestation threshold, if applicable	0.00
B. Net tract forest clearing below reforestation threshold, if applicable	0.02
C. Planting up to afforestation threshold, if applicable	9.76
D. Reforestation planting required for clearing above threshold (3A x 0.25)	0.00
E. Reforestation planting required for clearing below threshold (3B x 2.0)	0.03
F. Net tract forest retention above reforestation threshold (2F-2B, available credit)	0.00
G. Total reforestation planting required for MLF (3C+3D+3E-3F)	9.79
4 Break Even Point (BEP) Calculations	
A. Maximum clearing allowed with no reforestation planting (2D-2B)/1.25	Not Applicable
B. Minimum net tract retention at BEP 0.20(2D-2B)+2B or 2D-4A	Not Applicable
5 Forest Conservation Required	
A. Forest Retention Area (2F)	0.48
B. Forest Planting Area (3G)	9.79
C. Total minimum FCE required for retention and reforestation	10.27

FOREST CONSERVATION WORKSHEET

1 Site Data	Acres
A. Gross Site Area (all MLF Districts except 'Old Farm')	494.927
B. Area within 100-yr floodplain	48.473
C. Net Tract Area	446.453
E. Land Use Category	RR-MXD3
2 Input Data	446.453
A. Net Tract Area	66.968
B. Reforestation Threshold (percent of net tract = 15%)	66.968
C. Afforestation Threshold (percent of net tract = 15%)	22.775
D. Existing Forest on Net Tract Area	4.975
F. Forest Retention on Net Tract Area	17.800
3 Reforestation and/or Afforestation Calculations	
A. Net tract forest clearing above reforestation threshold, if applicable	0.00
B. Net tract forest clearing below reforestation threshold, if applicable	4.97
C. Planting up to afforestation threshold, if applicable	44.19
D. Reforestation planting required for clearing above threshold (3A x 0.25)	0.00
E. Reforestation planting required for clearing below threshold (3B x 2.0)	9.95
F. Net tract forest retention above reforestation threshold (2F-2B, available credit)	0.00
G. Total reforestation planting required for MLF (3C+3D+3E-3F)	54.14
H. Forest Planting at MLF to satisfy Rockland at Roger's FC obligations	2.10
I. Total MLF & Rocklands at Roger's FC planting obligations	56.24
4 Break Even Point (BEP) Calculations	
A. Maximum clearing allowed with no reforestation planting (2D-2B)/1.25	Not Applicable
B. Minimum net tract retention at BEP 0.20(2D-2B)+2B or 2D-4A	Not Applicable
5 Forest Conservation Required	
A. Forest Retention Area (2F)	17.80
B. Forest Planting Area (3I)	56.24
C. Total minimum FCE required for retention and reforestation	74.04

FOREST CONSERVATION EASEMENT AREAS

District	Phase	File No.	Easement	Forest Retention on Net Tract	Forest Retention in Floodplain (Non-Critical)	Forest Retention on Net Tract	Forest Planting in Floodplain	Total
Business	1	F-03-07	1	0.58	0.21	1.27	0.03	2.09
			2	2.60	2.02	2.06	0.80	12.93
			3	0.00	0.00	0.00	0.00	0.00
			4	0.00	0.00	2.40	0.00	2.40
			5	0.00	0.00	2.16	0.00	2.16
			6	0.00	0.00	0.00	0.00	0.00
			7	0.00	0.00	0.00	0.00	0.00
			8	0.00	0.00	0.00	0.00	0.00
			9	0.00	0.00	0.00	0.00	0.00
			10	0.00	0.00	0.00	0.00	0.00
			11	0.00	0.00	0.00	0.00	0.00
Midtown and Inside	3	F-04-82	1	0.00	0.00	0.00	0.00	0.00
			2	0.00	0.00	0.00	0.00	0.00
			3	0.00	0.00	0.00	0.00	0.00
			4	0.00	0.00	0.00	0.00	0.00
			5	0.00	0.00	0.00	0.00	0.00
			6	0.00	0.00	0.00	0.00	0.00
			7	0.00	0.00	0.00	0.00	0.00
			8	0.00	0.00	0.00	0.00	0.00
			9	0.00	0.00	0.00	0.00	0.00
			10	0.00	0.00	0.00	0.00	0.00
			11	0.00	0.00	0.00	0.00	0.00
Westside	4	F-05-81	1	0.00	0.00	0.00	0.00	0.00
			2	0.00	0.00	0.00	0.00	0.00
			3	0.00	0.00	0.00	0.00	0.00
			4	0.00	0.00	0.00	0.00	0.00
			5	0.00	0.00	0.00	0.00	0.00
			6	0.00	0.00	0.00	0.00	0.00
			7	0.00	0.00	0.00	0.00	0.00
			8	0.00	0.00	0.00	0.00	0.00
			9	0.00	0.00	0.00	0.00	0.00
			10	0.00	0.00	0.00	0.00	0.00
			11	0.00	0.00	0.00	0.00	0.00
Midtown West	6	F-06-54	1	0.00	0.00	0.00	0.00	0.00
			2	0.00	0.00	0.00	0.00	0.00
			3	0.00	0.00	0.00	0.00	0.00
			4	0.00	0.00	0.00	0.00	0.00
			5	0.00	0.00	0.00	0.00	0.00
			6	0.00	0.00	0.00	0.00	0.00
			7	0.00	0.00	0.00	0.00	0.00
			8	0.00	0.00	0.00	0.00	0.00
			9	0.00	0.00	0.00	0.00	0.00
			10	0.00	0.00	0.00	0.00	0.00
			11	0.00	0.00	0.00	0.00	0.00
Midtown West	9	F-10-07	1	0.00	0.00	0.00	0.00	0.00
			2	0.00	0.00	0.00	0.00	0.00
			3	0.00	0.00	0.00	0.00	0.00
			4	0.00	0.00	0.00	0.00	0.00
			5	0.00	0.00	0.00	0.00	0.00
			6	0.00	0.00	0.00	0.00	0.00
			7	0.00	0.00	0.00	0.00	0.00
			8	0.00	0.00	0.00	0.00	0.00
			9	0.00	0.00	0.00	0.00	0.00
			10	0.00	0.00	0.00	0.00	0.00
			11	0.00	0.00	0.00	0.00	0.00
SUB-TOTAL FOR FCE-1 thru FCE-44								
17.31 18.32 31.97 18.37 85.03								
SUB-TOTAL FOR FCE-37 thru FCE-44								
17.79 18.26 48.11 17.24 101.40								
TOTAL CREDITED FOREST CONSERVATION PLANTING FOR FCE-37 thru 44 18.61								
TOTAL CREDITED FOREST CONSERVATION PLANTING FOR FCE-01 thru 44 57.35								
TOTAL FOREST CONSERVATION PLANTING REQUIRED OVERALL 66.41								
DELTA (EXCESS) 1.11								

NOTES:

- THE TOP WORKSHEET IS FOR THE INITIAL PHASED DEVELOPMENT WORK IN THE GARDEN DISTRICT UNDER THIS PLAN (F-13-007). FOR THE GROSS AREA FOR THIS PARTICULAR PHASE, SEE THE "PHASING GROSS AREA CALCULATIONS" UNDER THE LEGEND FOR THE DIAGRAM TO LEFT OF THE TWO WORKSHEETS.
- THE BOTTOM WORKSHEET IS AN OVERALL CALCULATION FOR ALL THE AREAS OF THE BUSINESS, MIDTOWN, HILLSIDE, WESTSIDE, MIDTOWN WEST AND GARDEN DISTRICTS OF MLF. THE OLD FARM DISTRICT IS NOT INCLUDED. A SEPARATE CALCULATION WOULD BE PREPARED FOR THE OLD FARM DISTRICT WHEN THAT IS DEVELOPED.

Approved: Howard County Dept. of Public Works
 12-14-12
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Chief, Development Engineering Division

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 21086
 TEL: 301-421-4024 BALT: 410-580-1820 DC/VA: 301-999-2524 FAX: 301-421-4186

DIAGRAM OF FOREST CONSERVATION EASEMENTS SCALE: 1" = 400'

DATE	REVISION	BY	APPR.
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