

# REVISED SITE DEVELOPMENT PLAN ELLICOTT SQUARE

TOWNHOUSE CONDOMINIUMS

ZONED : R-5A-8

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63

### GENERAL NOTES:

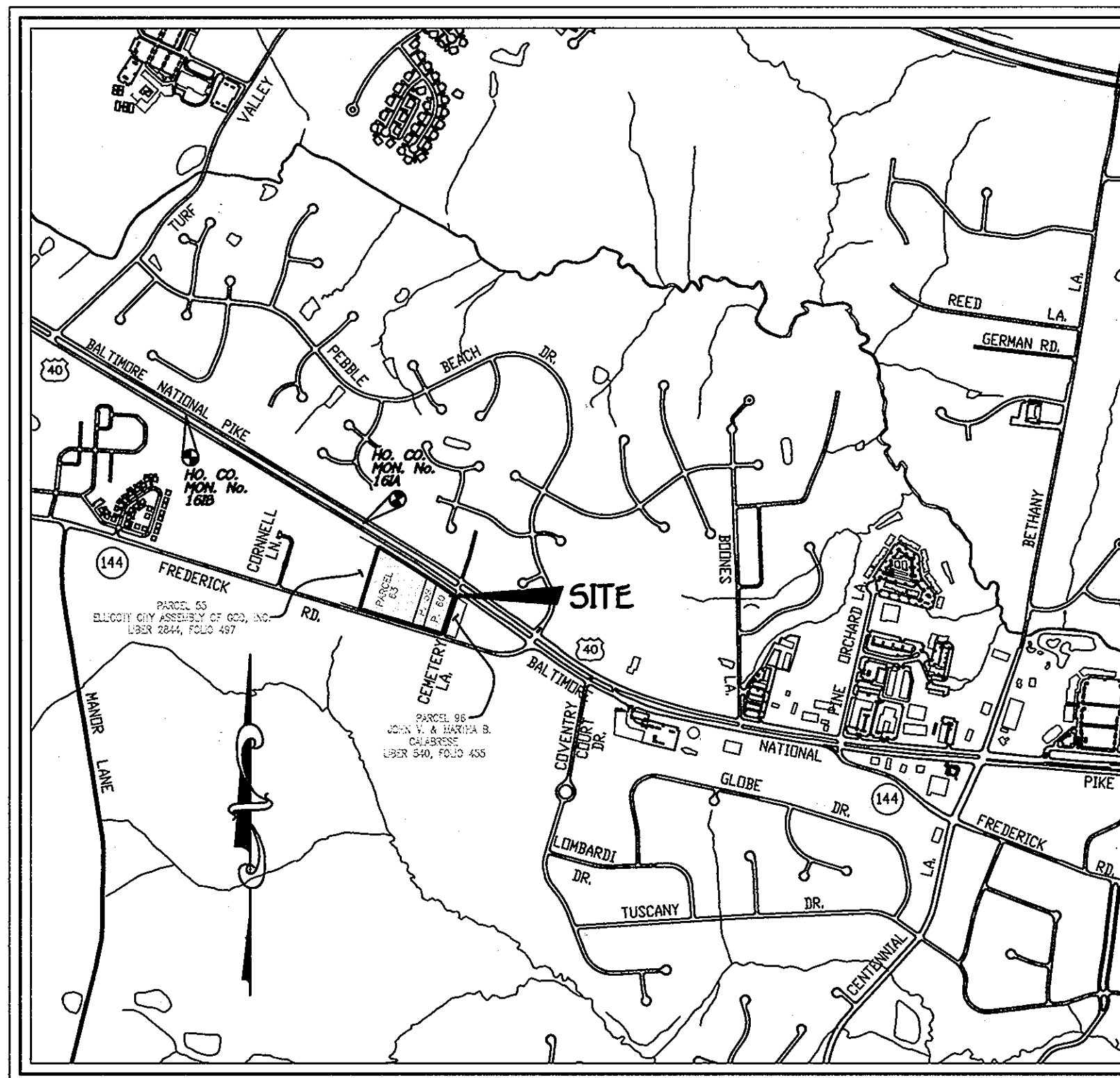
- THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, COUNCIL BILL 45-2003.
- THE SUBJECT PROPERTY IS ZONED R-5A-8 PER 2/2/2004 COMPREHENSIVE ZONING PLAN.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS AND CARTER, INC. ON OR ABOUT FEBRUARY, 2009.
- IN ACCORDANCE WITH SECTION 12B OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
- HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS:  
HOWARD COUNTY MONUMENT 161A N 589509.309 ELEV. = 463.672  
E 1346343.656  
HOWARD COUNTY MONUMENT 161B N 590475.202 ELEV. = 470.575  
E 1347753.964
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND SPECIFICATIONS. RECHARGE VOLUME WILL BE PROVIDED THROUGH WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY B.M.P. No. 1: TYPE - POCKET POND W/ MICRO-POOL FACILITY PRIVATELY OWNED AND MAINTAINED BY H.O.A.
- THIS SITE WILL UTILIZE PUBLIC WATER AND PRIVATE SEWER. THE ON-SITE WATER MAIN IS PUBLIC, AND WAS CONSTRUCTED UNDER CONTRACT No. 24-1266-0.
- SITE ANALYSIS DATA:  
A. TOTAL PROJECT AREA: 0.607 AC.  
B. AREA OF PLAN SUBMISSION: 0.84 AC.  
C. LIMIT OF DISTURBED AREA: 0.84 AC.  
D. PRESENT ZONING: R-5A-8  
E. BUILDING COVERAGE OF SITE: 1.66 AC.  
F. OPEN SPACE REQUIRED = 25% OF GROSS ACREAGE = 2.15 AC.  
G. OPEN SPACE PROVIDED = 2.20 AC.  
H. RECREATIONAL OPEN SPACE REQUIRED = 400 SQ.FT. PER UNIT (60 x 400 = 27,200 SQ.FT.)  
I. RECREATIONAL OPEN SPACE PROVIDED:  
CREDIT AREA = 17,402 SQ.FT.  
CREDIT FOR PEDESTRIAN WALKWAYS = 4,480 SQ.FT. x 3 SQ.FT. PER 1 SQ.FT. = 13,644 SQ.FT.  
CREDIT FOR GAZEBO AND FOUR (4) BENCHES = 1,000 SQ.FT.  
TOTAL RECREATIONAL OPEN SPACE PROVIDED = 31,066 SQ.FT.
- THIS PROJECT IS SUBJECT TO HOWARD COUNTY DPZ FILE # F-05-192
- PARKING REQUIREMENTS:  
NO. OF SPACES REQUIRED NO. OF SPACES PROVIDED  
TOWNHOUSES 2 PER UNIT (2 x 60 UNITS) = 136 47 DOUBLE CAR GARAGE UNITS (UNITS 1-8, 19-30, 33, 37, 45-70) = 180 SPACES  
(2 GARAGE & 2 DRIVEWAY SPACES)  
21 SINGLE CAR GARAGE UNITS = 42 SPACES  
(1 GARAGE & 1 DRIVEWAY SPACE)  
OFF-STREET PARKING = 48 SPACES  
2 HANDICAP SPACES  
280 PARKING SPACES PROVIDED
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 83 SHADE TREES, 13 EVERGREEN TREES AND 10 PRIVATE STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$50,000.00.
- UNMITIGATED 65 dBA NOISE LINE BASED ON LOCATION PROVIDED BY MARS GROUP IN A NOISE ANALYSIS REPORT DATED DECEMBER, 2004. THE MITIGATION FOR THE 65 dBA LINE WILL BE PROVIDED BY SOUND PROOF MATERIALS THAT ARE PROPOSED ARCHITECTURALLY. I.E. TRIPLE PANE GLASS, SOUND PROOF INSULATION, IN ADDITION, TWO INDIVIDUAL NOISE BARRIER WALLS ARE PROPOSED.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE TRAFFIC STUDY REQUIRED FOR THIS PROJECT WAS PREPARED BY MARS GROUP DATED NOVEMBER, 2004.
- THERE ARE NO HISTORIC STRUCTURES LOCATED ON THIS SITE.
- THERE ARE NO CEMETERIES ON-SITE OR ON ANY ADJOINING PROPERTIES.
- REFER TO THE MD. S.H.A. MANUAL ON UNIFORM TRAFFIC CONTROL (M.U.T.C.D.) FOR ROAD WIDENING WORK.
- WETLAND DELINEATION AND FOREST STAND DELINEATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY, 2005
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT AREAS.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURBS UNLESS OTHERWISE NOTED. ALL UNITS ARE ALIGNED SO THAT THE FRONT OF THE UNIT FACES OUTWARD TOWARDS THE EXISTING ROADWAYS.
- THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.102 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL FOR THIS PROJECT HAS BEEN FULFILLED BY THE 15% AFFORESTATION REQUIREMENT OF 1.3 ACRES. 0.55 ACRES WILL BE PROVIDED ON-SITE WITH THE REMAINING 0.75 ACRES BEING MET THROUGH A FEE-IN-LIEU PAYMENT OF \$261,136.00.
- REFUSE COLLECTION TO BE PROVIDED BY PRIVATE CONTRACTOR.
- SNOW REMOVAL AND ROAD MAINTENANCE TO BE PRIVATE.
- "SIGN POSTS" - ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (2 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- A HOME OCCUPATION PERMIT MUST BE ISSUED BY THE DIVISION OF ZONING ADMINISTRATION AND PUBLIC SERVICE BEFORE ANY BUSINESS IS CONDUCTED FROM THE HOME.
- TOTAL NUMBER OF "MODERATELY INCOME HOUSING UNITS" REQUIRED FOR THIS SITE PER THE R-5A-8 ZONING DISTRICT IS 10% OF THE TOTAL NUMBER OF UNITS.  
A) TOTAL NUMBER OF "MIHU" REQUIRED = 60 UNITS x 0.10 = 6.0 UNITS OR 7 UNITS  
B) TOTAL NUMBER OF "MIHU" PROVIDED = 13 UNITS  
C) "MIHU" TRANSFERRED AT A 1:1.75 RATIO FOR A TOTAL OF 13 UNITS AT THE ELLICOTT GARDENS SITE.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEM DRIVEWAY. Use-In-Common Driveways Shall be Provided Prior to Residential Occupancy To Ensure Safe Access For Fire And Emergency Vehicles Per The Following (Minimum) Requirements:  
a) Width - 12 Feet (4 Feet Serving More Than One Residence);  
b) Surface - Six (6) Inches Of Compacted Crusher Run Base With Tar And Chip Coating (1 -1/2" Minimum);  
c) Geometry - Maximum 15% Grade, Maximum 10% Grade Change And 45-Foot Turning Radius;  
d) Structures (Culverts/Bridges) - Capable Of Supporting 25 Gross Tons (255-loadings);  
e) Drainage Elements - Capable Of Safely Passing 100 Year Flood With No More Than 1 Foot Depth Over Surface;  
f) Structure Clearances - Minimum 12 Feet;  
g) Maintenance - Sufficient To Ensure All Weather Use.
- WITHIN ONE YEAR OF THE SIGNATURE APPROVAL OF THE SITE DEVELOPMENT PLAN ORIGINALS THE APPLICANT MUST APPLY TO THE DEPARTMENT OF INSPECTIONS, LICENSE & PERMITS FOR BUILDING PERMITS TO INITIATE CONSTRUCTION ON THE SITE. THE UNITS INCLUDE 0 THRU 12, 13 THRU 19, 19 THRU 24, 25 THRU 30, 30 THRU 40, 41 THRU 44, 53 THRU 58, 59 THRU 64 AND 65 THRU 70.
- ALL EXISTING ON-SITE WELLS AND SEPTIC AREAS WILL BE ABANDONED BY LICENSED WELL DRILLERS & STATE FORMS SUBMITTED AS DOCUMENTATION PRIOR TO FINAL RECORD PLAT SIGNATURE.
- THE REQUIREMENTS FOR THIS PROJECT, SEP 05-112, ARE FULFILLED BY THE DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT APPROVAL OF THE OFF-SITE TRANSFER OF THESE MIHU REQUIREMENTS TO SDP 07-038, ELLICOTT GARDENS, TM PARCEL 427, A HOUSING COMMISSION PROJECT.

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	SITE DEVELOPMENT, GRADING AND SEDIMENT CONTROL PLAN
4	STREET TREE & LANDSCAPE PLAN
5	MARYLAND ROUTE 144 (FREDERICK ROAD) WIDENING PLAN
6	BUILDING FOOTPRINTS & ROADWAY DETAIL SHEET
7	SEDIMENT CONTROL NOTES AND DETAILS
8	BORING LOGS
9-10	STORM DRAIN PROFILES
11	STORMWATER MANAGEMENT NOTES AND DETAILS
12	STORMWATER MANAGEMENT & SEDIMENT CONTROL PROFILES & DETAILS
13	STORM DRAIN DRAINAGE AREA MAP & SOILS MAP
14	MARYLAND ROUTE 144 (FREDERICK ROAD) CROSS-SECTIONS & STRIPING PLAN
15-17	PRIVATE SEWER MAIN PROFILES
18	FOREST CONSERVATION PLAN
19	CEMETERY LANE WIDENING PLAN
20	CEMETERY LANE CROSS-SECTIONS AND HANDICAP PARKING PLAN
21	DEMOLITION PLAN
22	NOISE BARRIER DETAIL SHEET

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE	COMMENTS
FREDERICK ROAD	3+73	51R	150-WATT H.P.S. VAPOR PENDANT (CUT-OFF) MOUNTED AT 30-FOOT ON A BRONZE FIBERGLASS POLE USING A 12" ARM	ANGLE ARM AS SHOWN ON PLAN VIEW
OLD ELLICOTT CIRCLE	0+40	23.5L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
"ALLEY"	0+30	23R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
"ALLEY"	4+55	20R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
OLD ELLICOTT CIRCLE	3+50	14R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
OLD ELLICOTT CIRCLE	7+20	14R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
OLD ELLICOTT CIRCLE	10+65	40L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---
OLD ELLICOTT CIRCLE	12+65	14L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR COLONIAL POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE	---

STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
OLD ELLICOTT CIRCLE	0+49	34L	STOP	R1-1
OLD ELLICOTT CIRCLE	1+21	30R	STOP	R1-1
OLD ELLICOTT CIRCLE	15+37	17R	STOP	R1-1
"ALLEY"	0+27	19L	STOP	R1-1
"ALLEY"	4+57	19R	STOP	R1-1
OLD ELLICOTT CIRCLE	12+50	17R	STOP	R1-1
OLD ELLICOTT CIRCLE	0+36	---	KEEP RIGHT	R4-7
OLD ELLICOTT CIRCLE	1+25	---	KEEP RIGHT	R4-7
FREDERICK ROAD	0+50	26R	ADVANCE STREET SIGN	W2-1 w/ D-3D
FREDERICK ROAD	7+91	20L	ADVANCE STREET SIGN	W2-1 w/ D-3D

UNIT No.	STREET ADDRESS	UNIT No.	STREET ADDRESS
1	10634 OLD ELLICOTT CIRCLE	38	10536 OLD ELLICOTT CIRCLE
2	10632 OLD ELLICOTT CIRCLE	39	10534 OLD ELLICOTT CIRCLE
3	10630 OLD ELLICOTT CIRCLE	40	10532 OLD ELLICOTT CIRCLE
4	10628 OLD ELLICOTT CIRCLE	41	10528 OLD ELLICOTT CIRCLE
5	10624 OLD ELLICOTT CIRCLE	42	10526 OLD ELLICOTT CIRCLE
6	10622 OLD ELLICOTT CIRCLE	43	10524 OLD ELLICOTT CIRCLE
7	10620 OLD ELLICOTT CIRCLE	44	10522 OLD ELLICOTT CIRCLE
8	10614 OLD ELLICOTT CIRCLE	45	10518 OLD ELLICOTT CIRCLE
9	10612 OLD ELLICOTT CIRCLE	46	10516 OLD ELLICOTT CIRCLE
10	10610 OLD ELLICOTT CIRCLE	47	10514 OLD ELLICOTT CIRCLE
11	10608 OLD ELLICOTT CIRCLE	48	10512 OLD ELLICOTT CIRCLE
12	10606 OLD ELLICOTT CIRCLE	49	10508 OLD ELLICOTT CIRCLE
13	10602 OLD ELLICOTT CIRCLE	50	10506 OLD ELLICOTT CIRCLE
14	10600 OLD ELLICOTT CIRCLE	51	10504 OLD ELLICOTT CIRCLE
15	10598 OLD ELLICOTT CIRCLE	52	10502 OLD ELLICOTT CIRCLE
16	10596 OLD ELLICOTT CIRCLE	53	10498 OLD ELLICOTT CIRCLE
17	10594 OLD ELLICOTT CIRCLE	54	10497 OLD ELLICOTT CIRCLE
18	10592 OLD ELLICOTT CIRCLE	55	10494 OLD ELLICOTT CIRCLE
19	10589 OLD ELLICOTT CIRCLE	56	10491 OLD ELLICOTT CIRCLE
20	10587 OLD ELLICOTT CIRCLE	57	10489 OLD ELLICOTT CIRCLE
21	10585 OLD ELLICOTT CIRCLE	58	10485 OLD ELLICOTT CIRCLE
22	10583 OLD ELLICOTT CIRCLE	59	10489 OLD ELLICOTT CIRCLE
23	10581 OLD ELLICOTT CIRCLE	60	10483 OLD ELLICOTT CIRCLE
24	10579 OLD ELLICOTT CIRCLE	61	10483 OLD ELLICOTT CIRCLE
25	10575 OLD ELLICOTT CIRCLE	62	10501 OLD ELLICOTT CIRCLE
26	10573 OLD ELLICOTT CIRCLE	63	10503 OLD ELLICOTT CIRCLE
27	10571 OLD ELLICOTT CIRCLE	64	10505 OLD ELLICOTT CIRCLE
28	10569 OLD ELLICOTT CIRCLE	65	10509 OLD ELLICOTT CIRCLE
29	10567 OLD ELLICOTT CIRCLE	66	10511 OLD ELLICOTT CIRCLE
30	10565 OLD ELLICOTT CIRCLE	67	10513 OLD ELLICOTT CIRCLE
31	10563 OLD ELLICOTT CIRCLE	68	10515 OLD ELLICOTT CIRCLE
32	10561 OLD ELLICOTT CIRCLE	69	10517 OLD ELLICOTT CIRCLE
33	10548 OLD ELLICOTT CIRCLE	70	10519 OLD ELLICOTT CIRCLE
34	10546 OLD ELLICOTT CIRCLE	71	10521 OLD ELLICOTT CIRCLE
35	10544 OLD ELLICOTT CIRCLE	72	10523 OLD ELLICOTT CIRCLE
36	10542 OLD ELLICOTT CIRCLE	73	10525 OLD ELLICOTT CIRCLE
37	10540 OLD ELLICOTT CIRCLE	74	10527 OLD ELLICOTT CIRCLE



## SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

### BUILDER

N.V. HOMES  
6005 MARSHALEE DR. #130  
ELKEDICE, MARYLAND 21075  
(410) 379-9596

### BUILDER

WAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DR.  
ELLICOTT CITY, MARYLAND 21042  
(410) 367-0422

### DENSITY TABULATION

1. BASE DENSITY: 0.607 ACRES / 8.0 DWELLING UNITS PER NET ACRE = 69.696 UNITS OR 69 SINGLE FAMILY ATTACHED HOMES

### ROAD CLASSIFICATION CHART

ROAD NAME	CLASSIFICATION	R/W WIDTH
OLD ELLICOTT CIRCLE	PRIVATE ACCESS STREET	N/A
N/A - "ALLEY"	PRIVATE ACCESS PLACE	N/A

### ENGINEER'S CERTIFICATE

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

Signature of Engineer: *[Signature]* Date: 5-5-09

### DEVELOPER'S CERTIFICATE

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

Signature of Developer: *[Signature]* Date: 5-5-09

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *[Signature]* Date: 5-5-09

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* Date: 5/12/09  
Chief, Department of Planning and Zoning  
Chief, Department of Planning and Zoning  
Chief, Development Engineering Division

SUBDIVISION: ELLICOTT SQUARE SECTION/AREA: N/A UNIT Nos.: 1-30 AND 33-70  
PLAT NO.: 10173-10174 BLOCK NO.: 24 ZONE: R-5A-8 TAX/ZONE: 16 ELEC. DIST.: 2nd CENSUS TR.: 6022.00  
WATER CODE: H 07 SEWER CODE: 5803400

### REVISED TITLE SHEET

## ELLICOTT SQUARE TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63

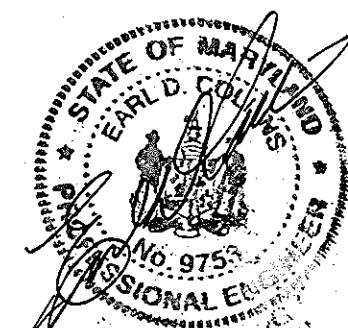
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2009

SHEET 1 OF 22

SDP 05-112

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENARY SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
410.461.2959



NO.	REVISION	DATE
1	ADD BUILDERS' NAMES & ADDRESSES	05/02/09
2	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09

K:\SDP\PROJ\30706\SDP REPLACEMENT SHEETS\30706 REPLACEMENT SHEET 1 SDP TITLE SHEET.dwg, 4/28/2009 10:35:59 AM, WBYD



MATCH LINE - SEE SHEET 3

NOTE: SEE SHEET 20 FOR HANDICAPPED PARKING AND SIDEWALK DETAIL.

NOTE: PROVIDE GEOTEXTILE CLASS "C" LINING ALONG UPSTREAM INSIDE FACE OF RIP-RAP WEIR.

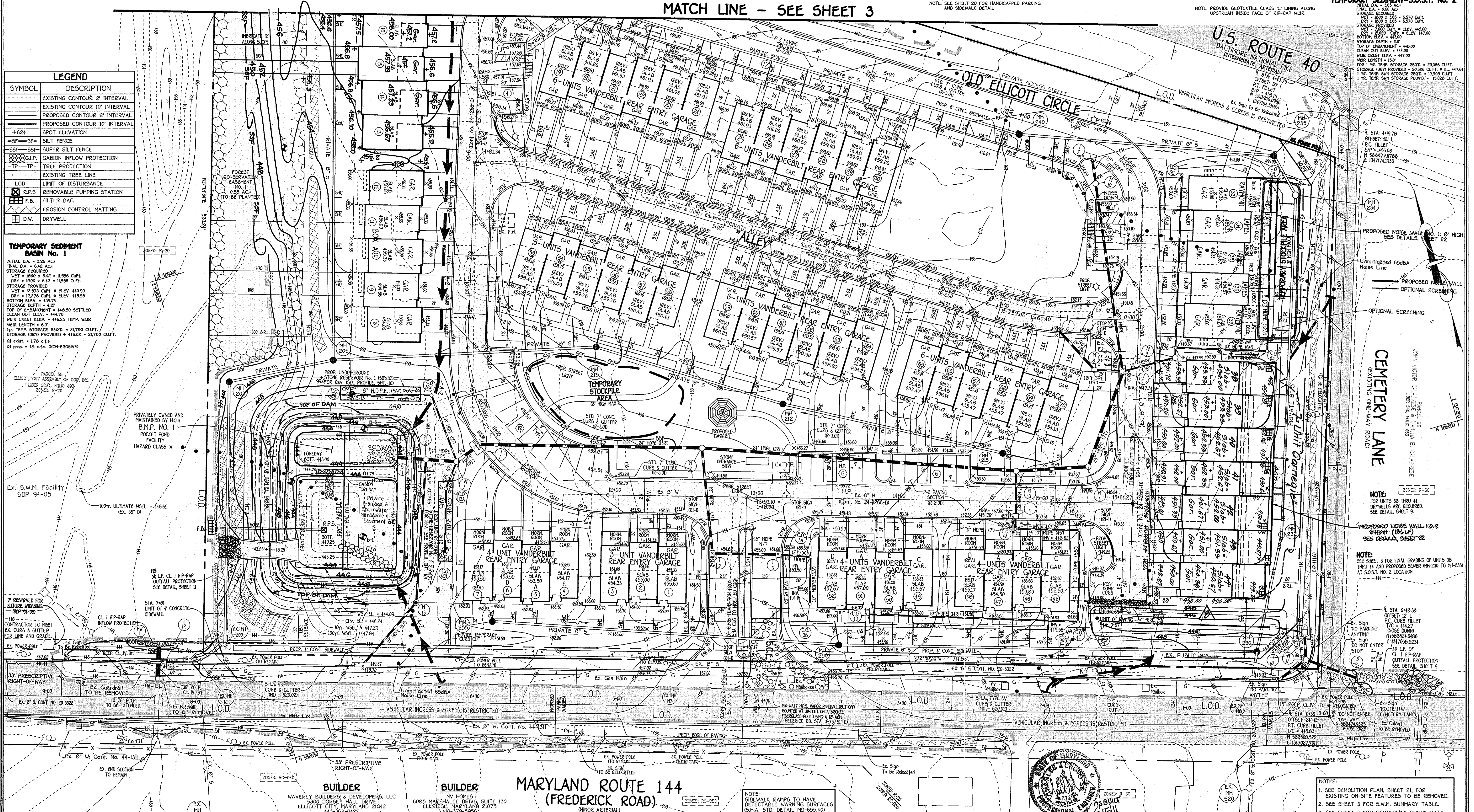
TEMPORARY SEDIMENT-S.O.S.T. No. 2

**LEGEND**

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+624	SPOT ELEVATION
5F-5F	SILT FENCE
55F-55F	SUPER SILT FENCE
G.I.P.	GABION INFLOW PROTECTION
TP-TP	TREE PROTECTION
---	EXISTING TREE LINE
---	LIMIT OF DISTURBANCE
R.P.S.	REMOVABLE PUMPING STATION
F.B.	FILTER BAG
---	EROSION CONTROL MATTING
D.W.	DRYWELL

**TEMPORARY SEDIMENT BASIN No. 1**

INITIAL D.A. = 3.26 AC.  
FINAL D.A. = 6.42 AC.  
STORAGE REQUIRED: MET = 1800 x 6.42 = 11,556 CU FT.  
STORAGE PROVIDED: MET = 12278 CU FT. \* ELEV. 443.90  
MET = 12278 CU FT. \* ELEV. 445.59  
BOTTOM ELEV. = 439.75  
STORAGE DEPTH = 4.87  
TOP OF ENHANCEMENT = 440.50 SETTLED  
CLEAN OUT ELEV. = 444.70  
WEIR CREST ELEV. = 446.25 TEMP. WEIR  
WEIR LENGTH = 6.0'  
NO. TEMP. STORAGE RECD. = 21,700 CU FT.  
STORAGE DEPTH PROVIDED = 446.09 = 21,700 CU FT.  
Q1 exist. = 170 c.f.s.  
Q1 prop. = 1.5 c.f.s. (NON-EROSIVE)



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10725 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
4100 461 - 2955

NO.	REVISION	DATE
10	Rev Units 38-44 to show 2', 4' and 6' Exh.	03/10/10
9	Rev Units 13-16 to show ex. conditions	11/13/09
8	Combined Units 38-44 into one (1) 7-unit Building	1/21/09
7	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09
6	SPLIT UNITS 38-44 INTO 2 SEPARATE BUILDINGS	12/17/08
5	REMOVE PH 6 & 7 AND RELATED ROOF TOP S.D., C.O. 4B-C, 10-A & 10-C, SPLIT UNIT 17 INTO 2 SEPARATE BLDGS. REVERSE GRD & REMOVE ROOF TOP S.D. & C.O. 1-A, 1-D, 2-A & 2-C	10/21/08
4	ADD BUILDERS' NAMES & ADDRESSES REV. UNITS 1-7, 45-48 & 49-50 TO ADD 10' OPT. EXTENSION	9/5/08
3	ADDED 10' MORN. ROOM EXTENSION TO UNITS 1-7, 45-48 & 50-52	7/3/08
2	REVISE UNITS 1-7, 42-50 AND ASSOCIATED UTILITIES	3/20/08
1	REVISE UNITS 33 THROUGH 44 AND ASSOCIATED UTILITIES	1/25/09

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC  
ELLICOTT CITY, MARYLAND 21042  
443-367-0422

**BUILDER**  
NV HOMES  
6095 MARSHALLE DRIVE, SUITE 130  
ELKBRIDGE, MARYLAND 21075  
410-379-5956

**MARYLAND ROUTE 144 (FREDERICK ROAD)**  
(MINOR ARTERIAL)

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

**DEVELOPER'S CERTIFICATE**  
I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Thomas J. Buttle*  
Director, Department of Planning and Zoning  
Date: 5/14/09

*Andy Hamel*  
Chief, Division of Planning and Development  
Date: 5/14/09

*David Cummings*  
Chief, Development Engineering Division  
Date: 5/14/09

**OWNERS**  
CHARLES J. & ELLEN H. NEPHOS  
7160 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
2500 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND 21042

SUBDIVISION: ELLICOTT SQUARE  
SECTION/AREA: N/A  
UNIT Nos.: 1-30 AND 33-70  
PLAT NO.: 10173-10174  
BLOCK NO.: 24  
ZONE: R-SA-B  
TAX/ZONE: 16  
ELEC. DIST.: 2nd  
CENSUS TR.: 6022.00  
WATER CODE: H 07  
SEWER CODE: 5083400

REVISED SITE DEVELOPMENT, GRADING & SEDIMENT CONTROL PLAN

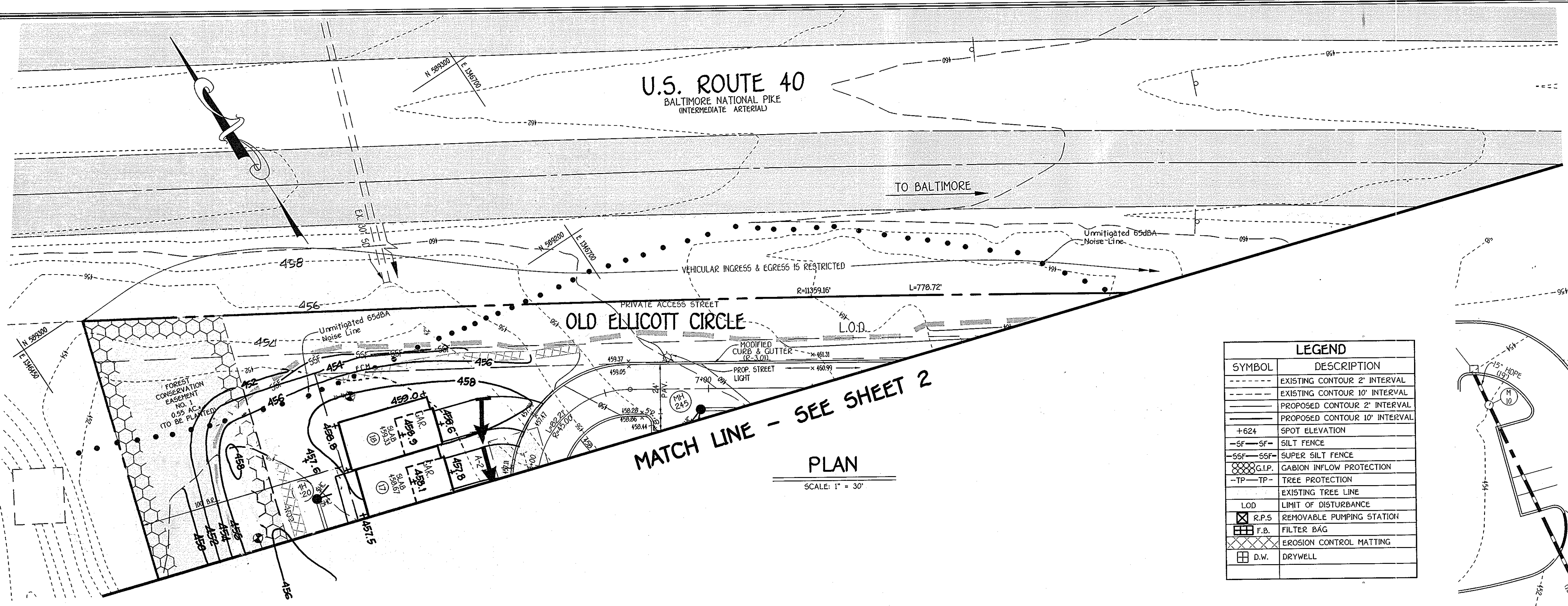
**ELLICOTT SQUARE**  
TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: MARCH, 2009

SHEET 2 OF 22 SDP 05-112

"As Built" 6-15-2011





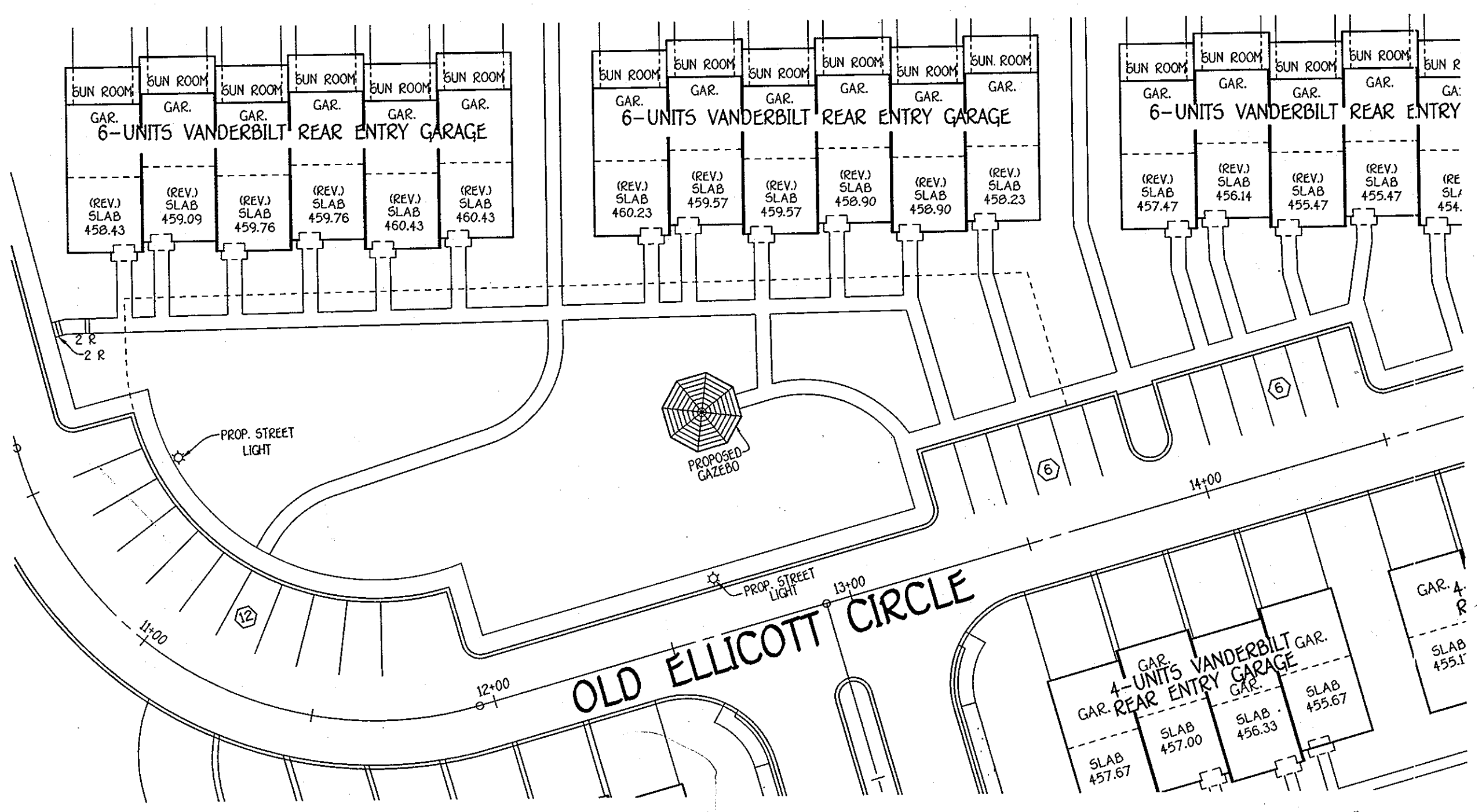
MATCH LINE - SEE SHEET 2

PLAN

SCALE: 1" = 30'

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+624	SPOT ELEVATION
-SF - SF	SILT FENCE
-SFF - SFF	SUPER SILT FENCE
---	CABON INFLOW PROTECTION
---	TREE PROTECTION
-TP - TP	EXISTING TREE LINE
---	LIMIT OF DISTURBANCE
R.P.S.	REMOVABLE PUMPING STATION
F.B.	FILTER BAG
---	EROSION CONTROL MATTING
D.W.	DRYWELL

CENTERLINE CURVE DATA				
ROAD NAME	STA. TO STA.	RADIUS	LENGTH	DELTA
OLD ELLICOTT CIRCLE	2+86.45 TO 3+45.41	45.00'R	58.96'	75°03'57"
OLD ELLICOTT CIRCLE	7+37.76 TO 8+19.97	45.00'R	82.21'	104°40'14"
OLD ELLICOTT CIRCLE	10+36.57 TO 11+95.75	100.00'R	102.12'	91°12'05"
"ALLEY"	0+42.49 TO 1+06.90	250.00'R	64.40'	14°45'37"
"ALLEY"	4+31.31 TO 4+69.26	150.00'R	37.95'	14°29'47"



SITTING AREA DETAIL

SCALE: 1" = 30'

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND 21042  
443-367-0422

**BUILDER**  
NV HOMES  
6085 MARSHALLEE DRIVE, SUITE 130  
ELLICOTT CITY, MARYLAND 21075  
410-379-5956

**ENGINEER'S CERTIFICATE**

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

Signature of Engineer: *[Signature]* Date: 5/5/09

**DEVELOPER'S CERTIFICATE**

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

Signature of Developer: *[Signature]* Date: 5/5/09

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
Signature: *[Signature]* Date: 5-5-09

**OWNERS**  
CHARLES J. & ELLEN H. NEMPHOS  
7100 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
JOSEPH W. & FRANCES L. GERMAN, ETAL.  
10210 FREDERICK ROAD  
ELLICOTT CITY, MARYLAND 21042



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *[Signature]* Date: 5/26/09  
Chief, Division of Land Development: *[Signature]* Date: 5/26/09  
Chief, Development Engineering Division: *[Signature]* Date: 5/26/09

SUBDIVISION	ELLICOTT SQUARE	SECTION/AREA	UNIT Nos. 1-30 AND 33-70
FLAT NO.	18173-18174	BLOCK NO. 24	ZONE R-SA-B
TAX/ZONE	16	ELEC. DIST.	2nd
CENSUS TR.	6022.00	SEWER CODE	5883400
WATER CODE	H 07		

REVISED SITE DEVELOPMENT, GRADING & SEDIMENT CONTROL PLAN

ELLICOTT SQUARE TOWNHOUSE CONDOMINIUMS

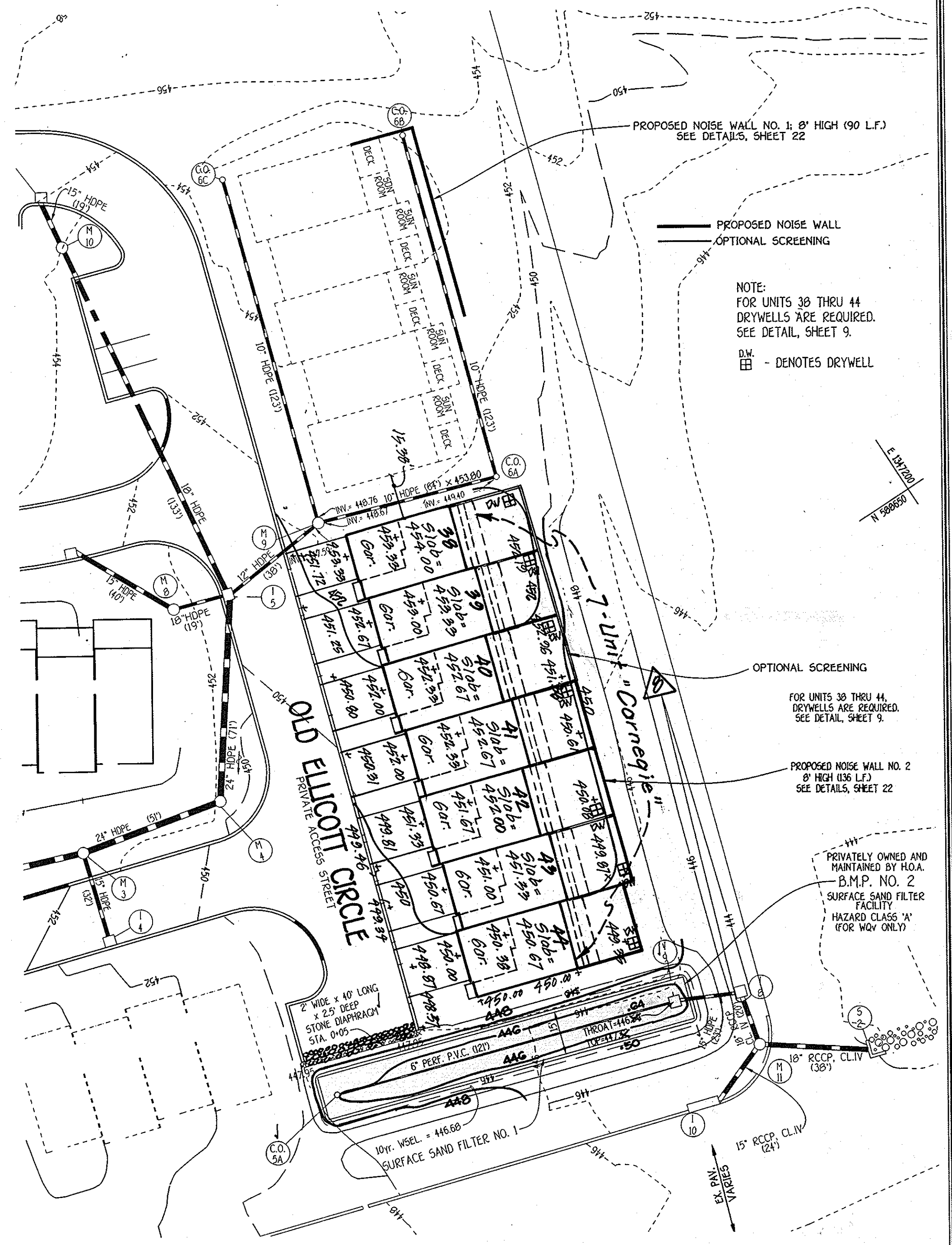
TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30' DATE: MARCH, 2009

SHEET 3 OF 22 SDP 05-112

"As Built" 6-15-2011

S.W.M. SUMMARY TABLE			
TYPE OF REQUIREMENT	VOLUME REQUIRED	VOLUME PROVIDED	
REV (RECHARGE VOL. FOR ENTIRE SITE)	146 ACRES OR 0.1185 ACRE-FEET (5,162 CU.FT.)	5,600 CUBIC-FEET	
WQV		2,841 CU.FT. • BMP #2 - SURFACE SAND FILTER	
STUDY POINT #1 (1.83 ACRES) - D.A. 'A'	4,217 CU.FT. AFTER CREDITS - 2,841 CU.FT.	2,841 CU.FT. • BMP #2 - SURFACE SAND FILTER	
STUDY POINT #2 (5.69 ACRES) - D.A. 'B-2'	13,116 CU.FT. AFTER CREDITS - 8,356 CU.FT.	3,356 CU.FT. • BMP #1 - POCKET POND P-5 w/MICRO-POOL	
CPV		N/A	
STUDY POINT #1 (1.83 ACRES) - D.A. 'A'	N/A 01'2" c.f.f. • 103 c.f.f.	N/A	
STUDY POINT #2 (5.69 ACRES) - D.A. 'B-2'	0.1840 ACRE-FEET	0.1840 ACRE-FEET - MICRO-POOL OF BMP #1	

NOTE: BOTH Q6 (OVERBANK FLOOD PROTECTION OR 10-YEAR STORM) AND OF (EXTREME FLOOD VOLUME OR 100-YEAR STORM) ARE NOT REQUIRED FOR THIS SITE SINCE WATERSHED AREA IS NOT CLASSIFIED AS ONE OF THE SENSITIVE WATERSHED AREAS FOR HOWARD COUNTY.



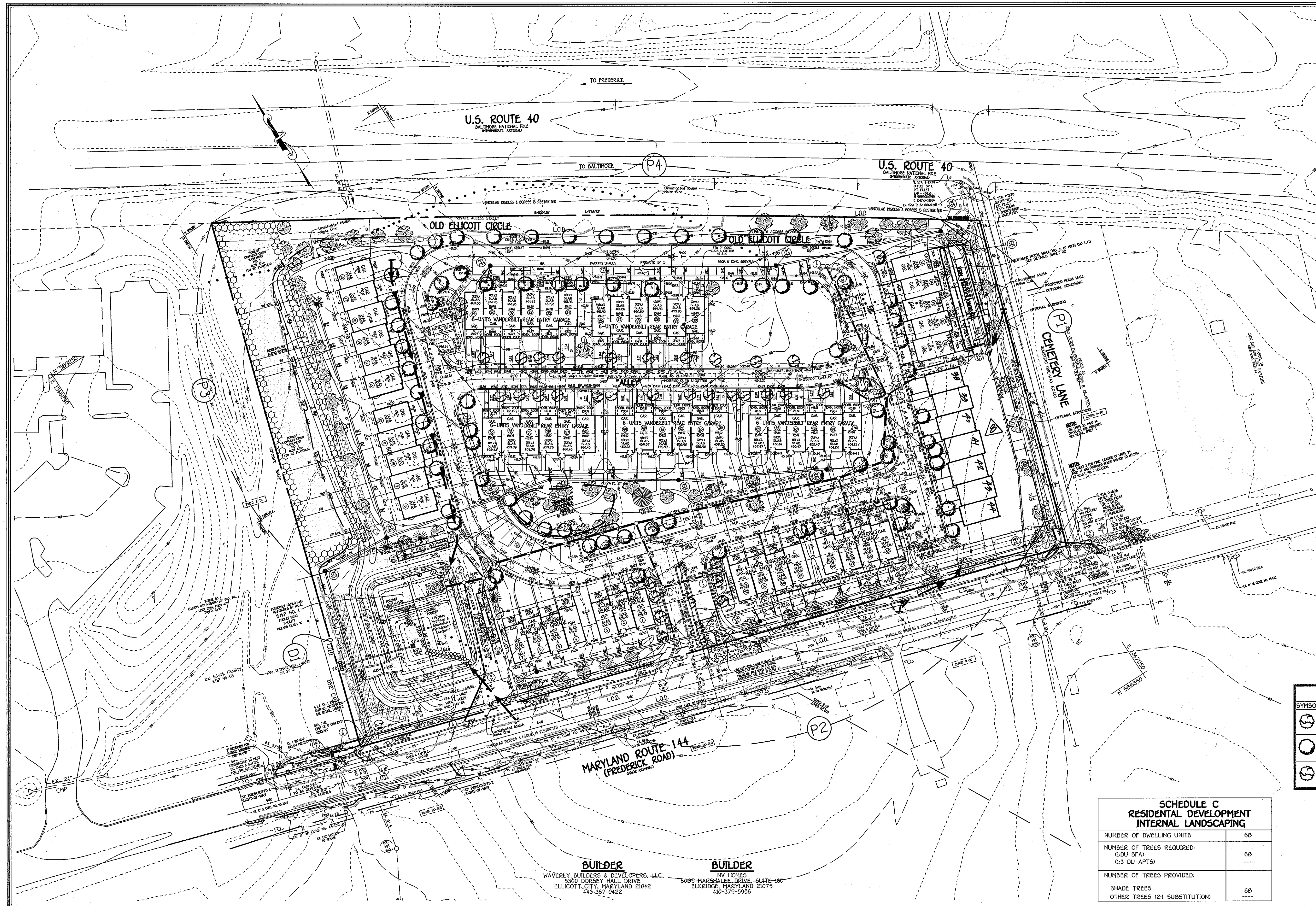
FINAL GRADING PLAN FOR UNITS 38 THRU 44

SCALE: 1" = 30'

K:\SDP\PROJ\30780\SDP\REPLACEMENT SHEETS\30780 REPLACEMENT SHEET 3 OF 22 UNITS 1-7 & 38-44.dwg, 4/21/2009 1:55:24 PM, bampd

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SERVICE OFFICE: 10722 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
410-461-2899





SCHEDULE A PERIMETER LANDSCAPE EDGE				
PERIMETER	P-1	P-2	P-3	P-4
CATEGORY	SFA FRONT TO ROAD	SFA FRONT TO ROAD	SFA FRONT TO NON-RES.	SFA FRONT TO ROAD
LANDSCAPE TYPE	N/A	N/A	A	N/A
LINEAR FEET OR ROADWAY FRONTAGE/PERIMETER	385.08'	566.97'	393.17'	776.99'
CREDIT FOR EXISTING VEGETATION (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	YES 100% EX. TREES	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED				
SHADE TREES	0	0	0	0
EVERGREEN TREES	0	0	0	0
SHRUBS	-	-	-	-
NUMBER OF PLANTS PROVIDED				
SHADE TREES	0	0	0	0
EVERGREEN TREES	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)				

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	DI: 692'
NUMBER OF TREES REQUIRED:	
SHADE TREES	14
EVERGREEN TREES	17
CREDIT FOR EXISTING VEGETATION (NO, YES AND X)	YES (102')
CREDIT FOR OTHER LANDSCAPING (NO, YES AND X)	NO
NUMBER OF TREES PROVIDED:	510' REMAINING
SHADE TREES	10
EVERGREEN TREES	13
OTHER TREES (2:1 SUBSTITUTION)	---

SCHEDULE B - RESIDENTIAL PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	50
NUMBER OF TREES REQUIRED (1:10)	5
NUMBER OF TREES PROVIDED:	
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	---

**NOTE:**  
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 96 REQUIRED LANDSCAPE TREES, AND THE REQUIRED 110 PRIVATE ROAD STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$59,850.00.

STREET TREE SCHEDULE (PRIVATE ROADS)				
SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	148 LF / 40 = 3.7 3.7 x 2 = 7.4 = 8	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ALONG OLD ELLICOTT CIRCLE (ENTRANCE ROAD)
	1564 LF / 40 = 39.1 39.1 x 2 = 78.2 = 78	ACER RUBRUM 'ARMSTRONG' ARMSTRONG COLUMNAR RED MAPLE	2 1/2"-3" CAL.	40' APART ALONG OLD ELLICOTT CIRCLE (LOOP ROAD)
	481 LF / 40 = 12.0 12.0 x 2 = 24.0 = 24	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ALONG "ALLEY"

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
NUMBER OF DWELLING UNITS	68
NUMBER OF TREES REQUIRED: (1:10 SFA) (1:3 DU APTS)	68 ---
NUMBER OF TREES PROVIDED:	
SHADE TREES	68
OTHER TREES (2:1 SUBSTITUTION)	---

LANDSCAPE LEGEND		
QUANTITY	SYMBOL	DESCRIPTION
42		PLATANUS X ACERIFOLIA, 'BLOODGOOD' BLOODGOOD LONDON PLANE 2-1/2"-3" CAL.
41		ACER RUBRUM, RED SUNSET, RED MAPLE 2-1/2"-3" CAL.
13		PINUS STROBUS/EASTERN WHITE PINE 6'-8' HEIGHT

**NOTE:** TREE AND SHRUB TYPES ARE ONLY AN RECOMMENDATION. THESE MAY BE REVISED TO A COUNTY APPROVED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL.

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC.  
5300 DORSEY HALL DRIVE SUITE 180  
ELLCOTT CITY, MARYLAND 21042  
410-367-0422

**BUILDER**  
NV HOMES  
6025 MARSHMERE DRIVE SUITE 180  
ELLCOTT CITY, MARYLAND 21075  
410-379-5956

**ENGINEER'S CERTIFICATE**

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

Signature of Engineer: *[Signature]* Date: 4/28/09

**DEVELOPER'S CERTIFICATE**

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

Signature of Developer: *[Signature]* Date: 4/28/09

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

Howard SCD Date: *[Signature]*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
Director - Department of Planning and Zoning

*[Signature]*  
Chief, Division of Land Development  
*[Signature]*  
Chief, Development Engineering Division

5/12/09  
5/12/09  
5/12/09

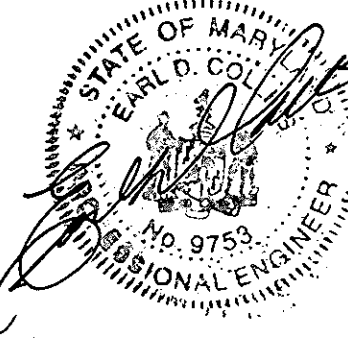
REVISED STREET TREE, LANDSCAPE PLAN & STORMWATER MANAGEMENT PLANTING

ELLCOTT SQUARE  
TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: MARCH, 2009

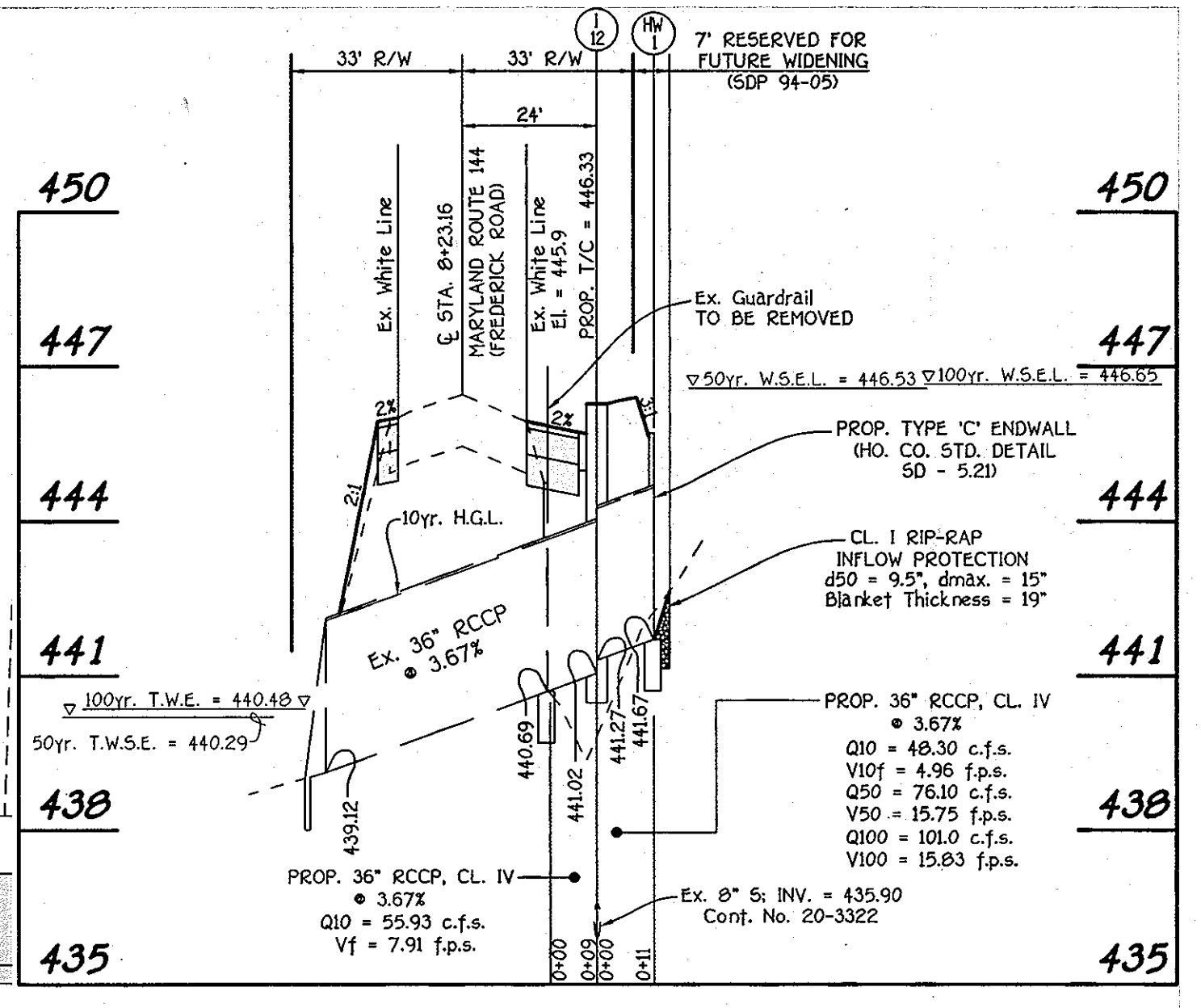
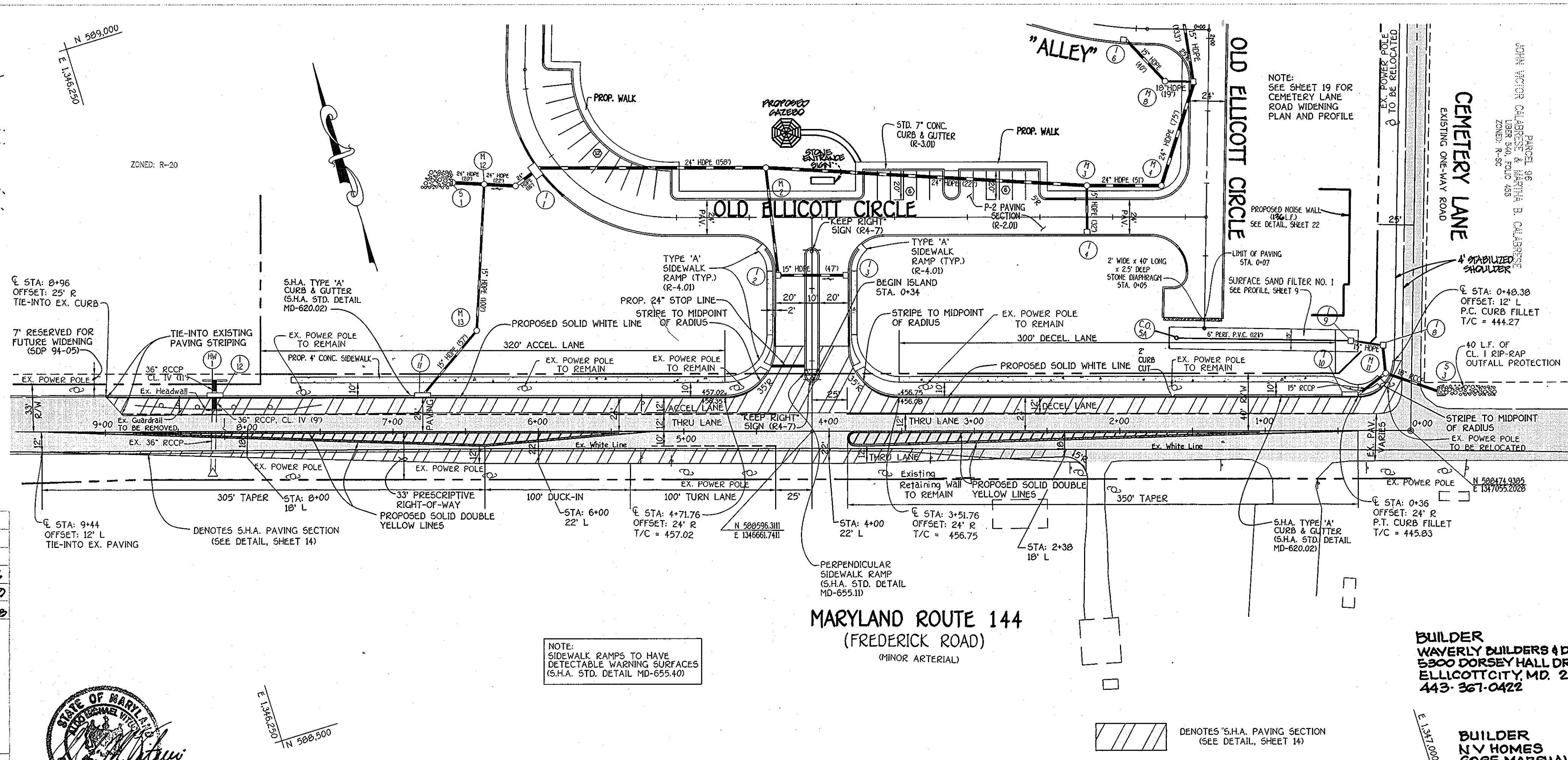
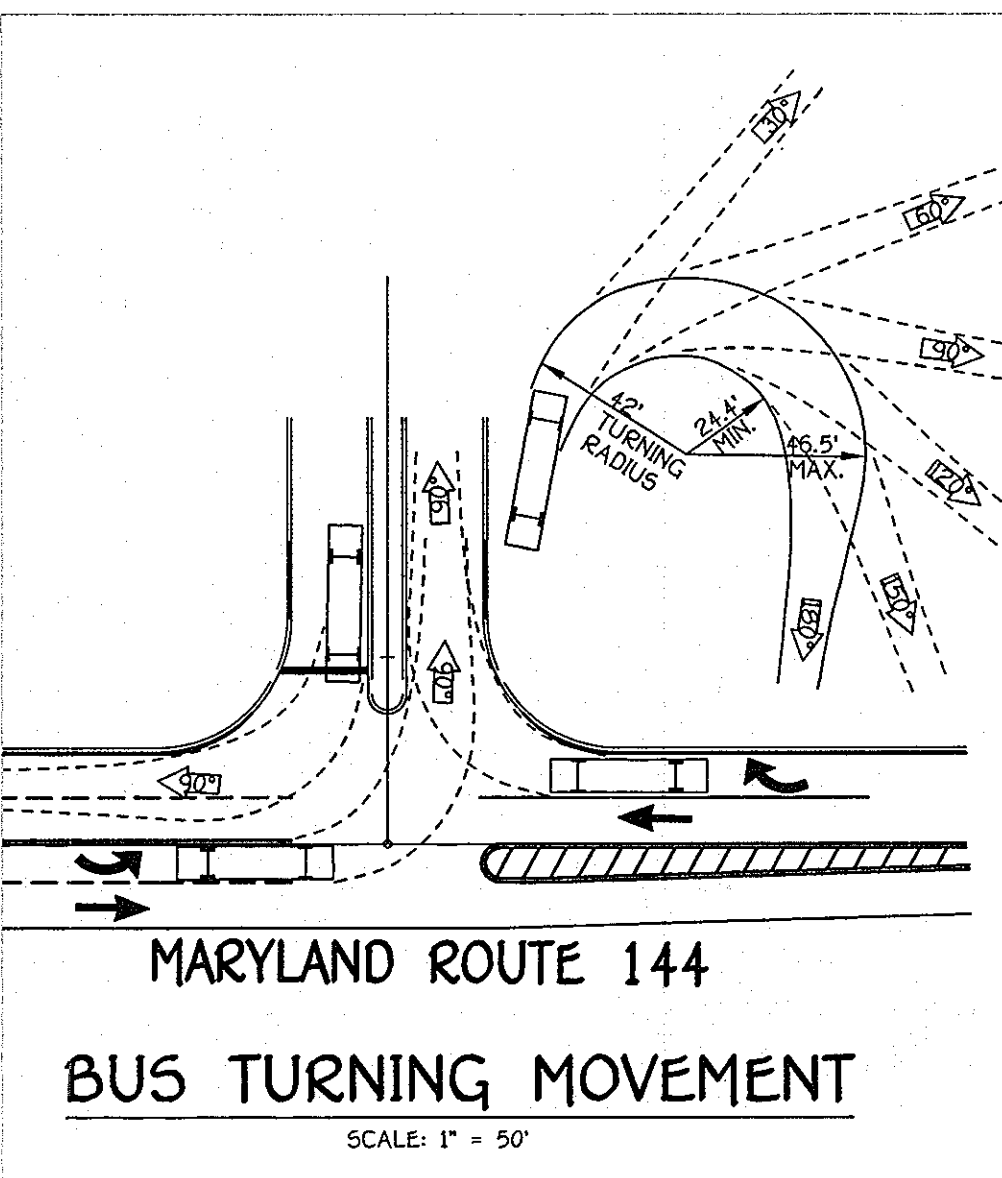
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50	REVISION	



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-2955

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NO.	REVISIONS DESCRIPTION	DATE
1	REMOVED CEMETERY LANE WIDENING SECTION	11/15/13
2	REVISE SOUND WALL, GAZEBO AND FILTER	4/21/09
3	ADD BUILDERS NAMES & ADDRESSES	9-9-08

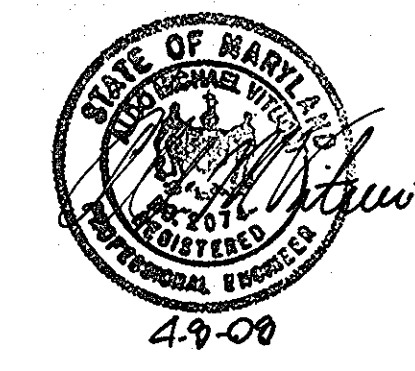
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Andy Hama* 4/24/08  
CHIEF, DIVISION OF LAND DEVELOPMENT

*John Deussen* 4/24/08  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Stephen Leffler* 4/22/08  
DIRECTOR



**MARYLAND ROUTE 144**  
(FREDERICK ROAD)  
(MINOR ARTERIAL)

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MD. 21042  
443-367-0422

**BUILDER**  
N.V. HOMES  
6085 MARSHALEE DRIVE  
SUITE 130  
ELKRIDGE, MD. 21075  
410-379-5956

**ELLCOTT SQUARE**  
TOWNHOUSE CONDOMINIUMS  
ZONED: R-5A-B  
TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

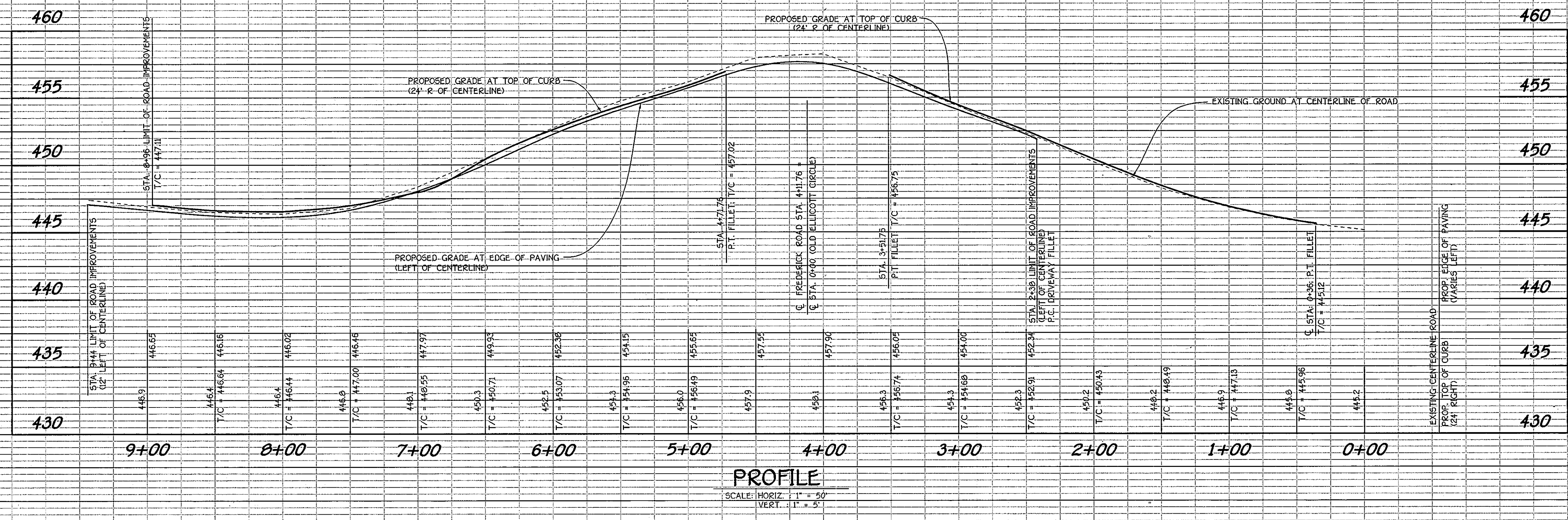
**MARYLAND ROUTE 144 (FREDERICK ROAD)**  
WIDENING

REVISED PLAN AND PROFILE

OWNERS		DEVELOPER	
CHARLES J. & ELLEN H. NEMPHOS 7860 COLUMBIA GATEWAY DRIVE COLUMBIA, MARYLAND 21046	JOSEPH V. & FRANCES L. GERHAN, ETAL. 10950 FREDERICK ROAD ELLCOTT CITY, MARYLAND 21042	LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLCOTT CITY, MARYLAND 21042	
SCALE: AS SHOWN	DATE: MARCH, 2009	DWG. NO. 5	OF 22
DES. R.A.I.	DEN. J.C.L.	CHK. A.M.V.	

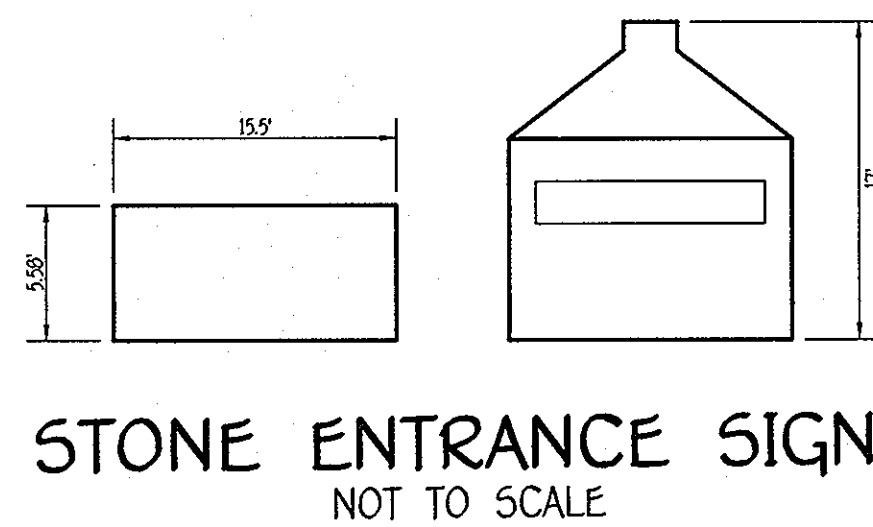
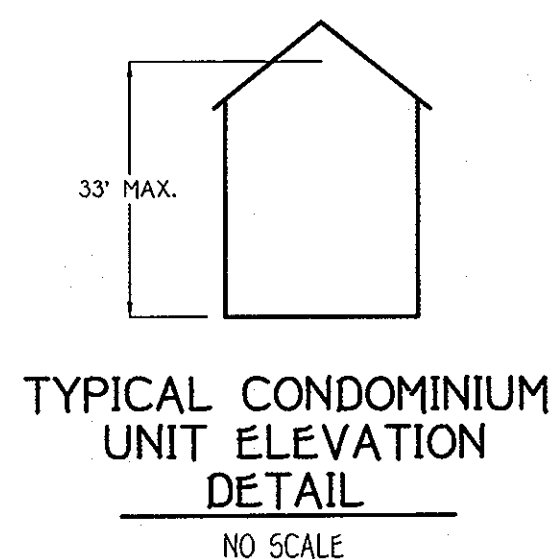
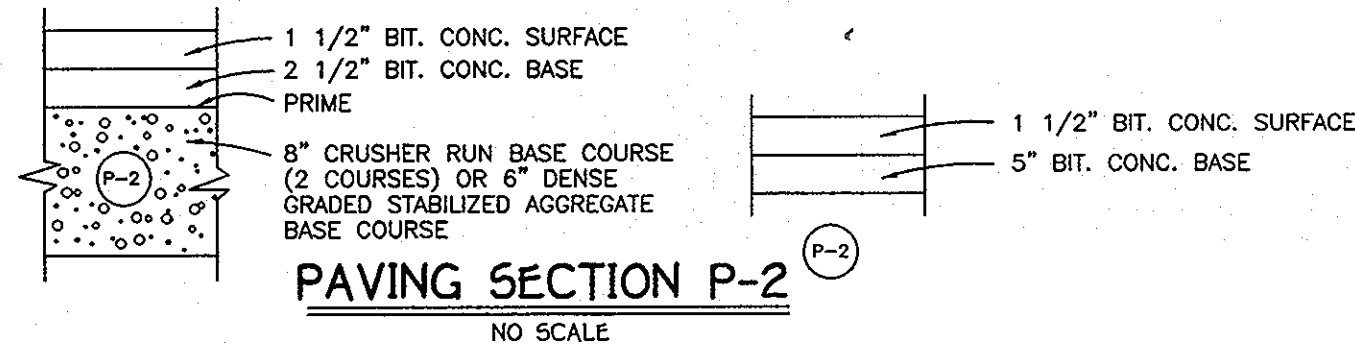
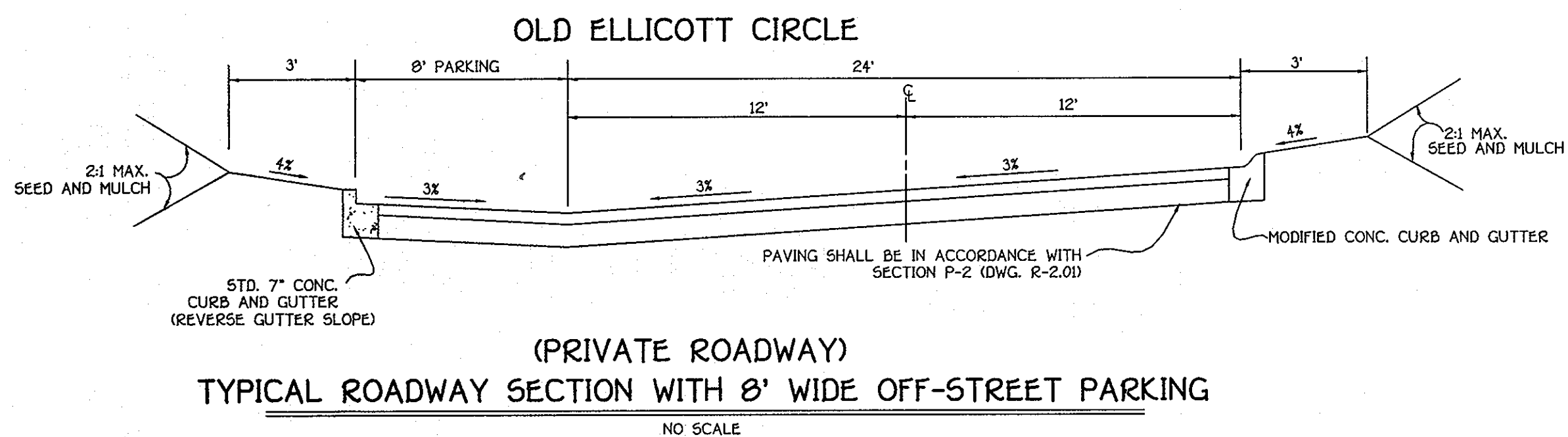
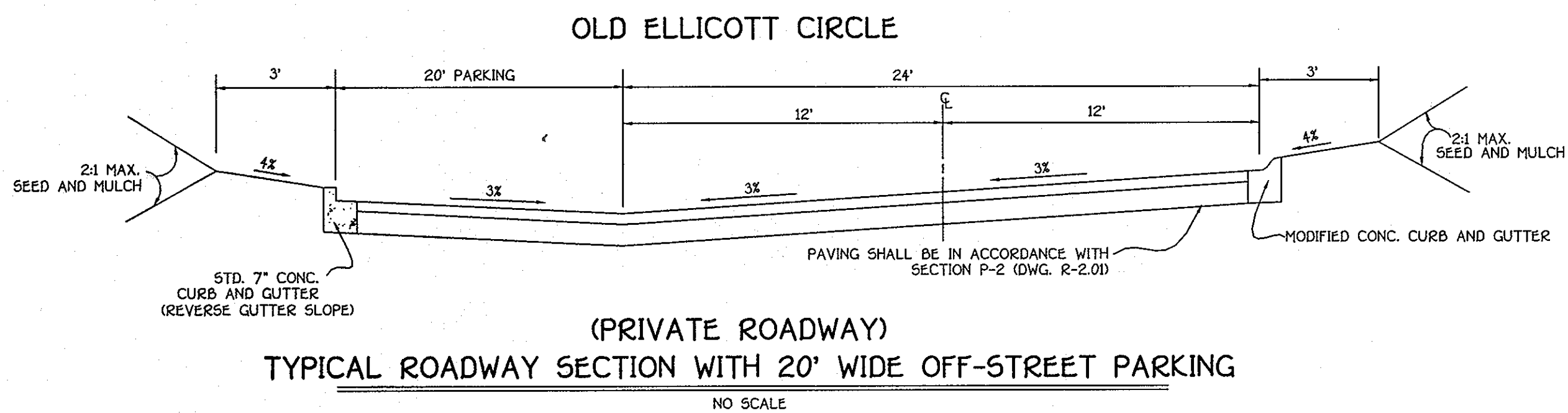
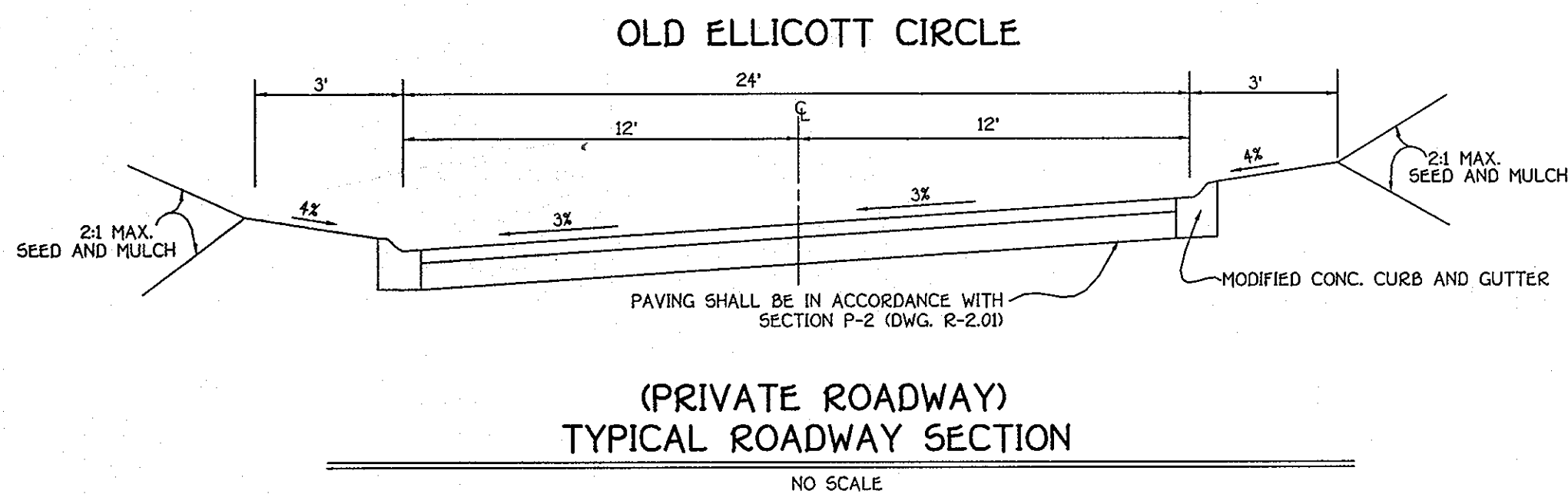
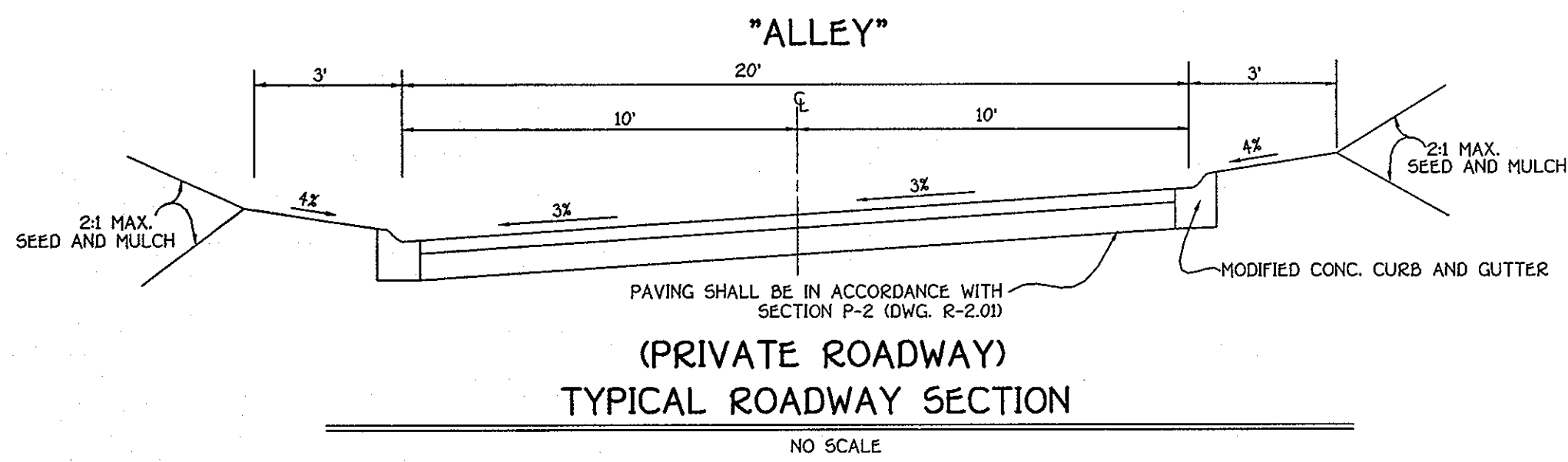
**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
200 NATIONAL SQUARE OFFICE PARK - 2272 BALTIMORE NATIONAL PKWY.  
ELLCOTT CITY, MARYLAND 21042  
(410) 481-8200

**MARYLAND ROUTE 144**  
(FREDERICK ROAD)



**PROFILE**  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'





**BUILDER**  
 WAVERLY BUILDERS & DEVELOPERS, LLC  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 410-387-9422

**BUILDER**  
 NV HOMES  
 6085 MARSHALEE DRIVE, SUITE 130  
 ELK RIDGE, MARYLAND 21075  
 410-379-5956

**ENGINEER'S CERTIFICATE**  
 I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer: [Signature] Date: 4/28/09

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 Signature of Developer: [Signature] Date: 4/28/09

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 This development plan is approved for sediment and erosion control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: [Signature] Date: [Blank]  
 Howard SCD  
 Date: [Blank]

**OWNERS**  
 CHARLES J. & ELLEN H. NICHOLS  
 7100 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046

**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042

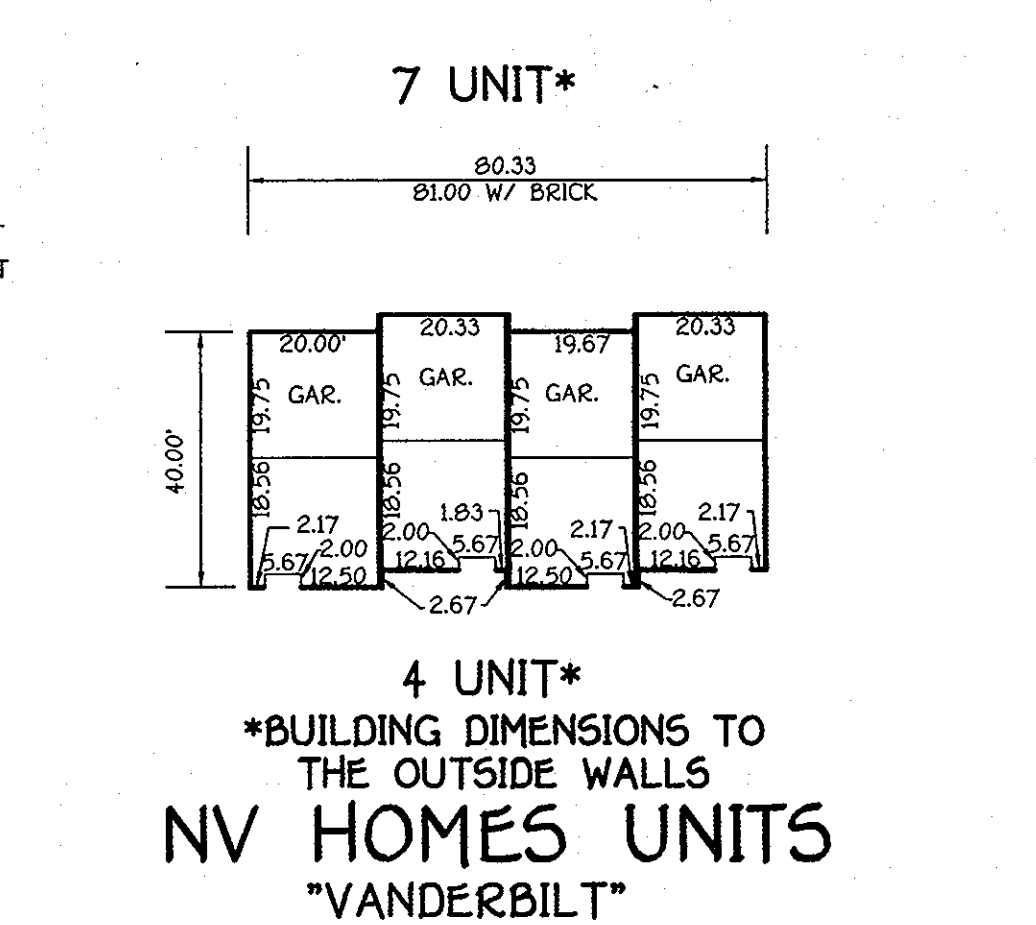
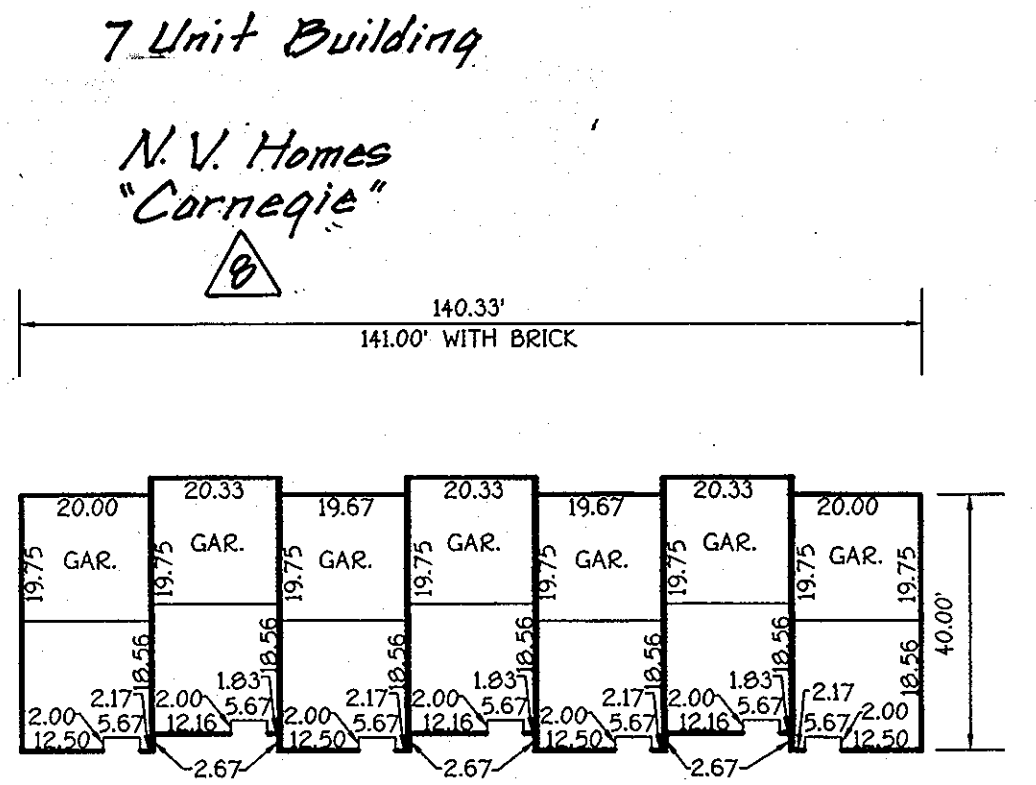
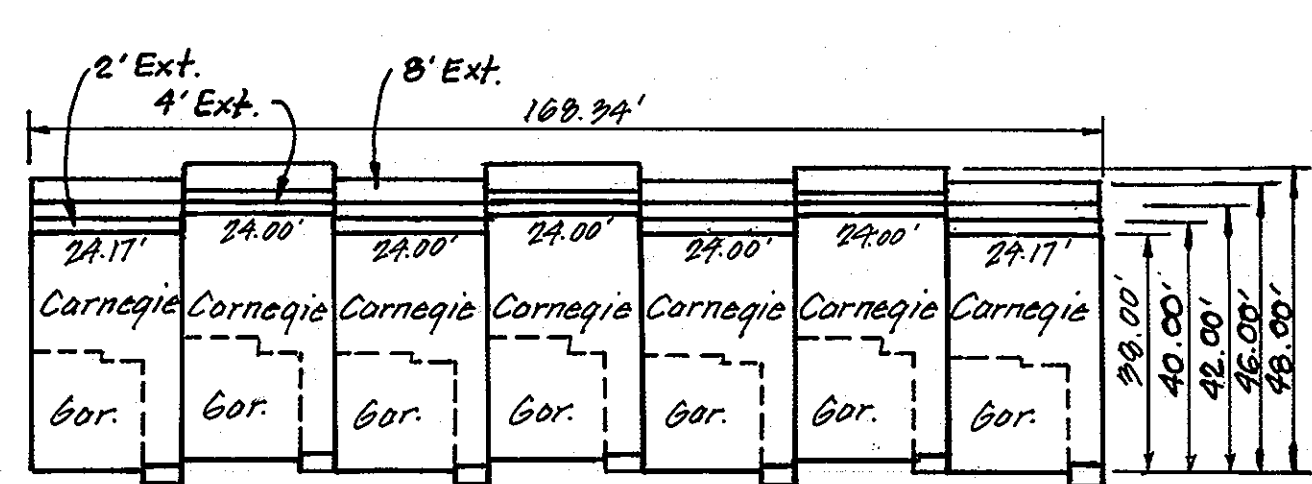
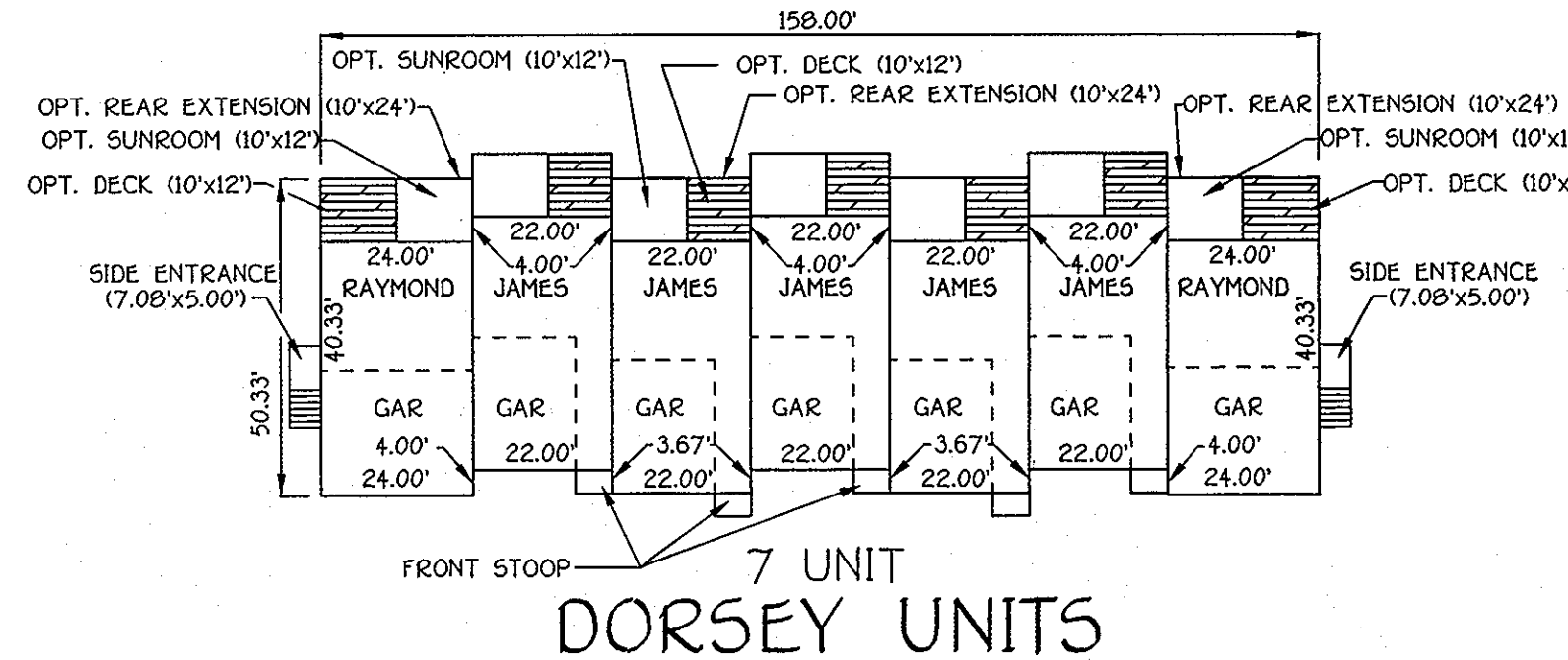
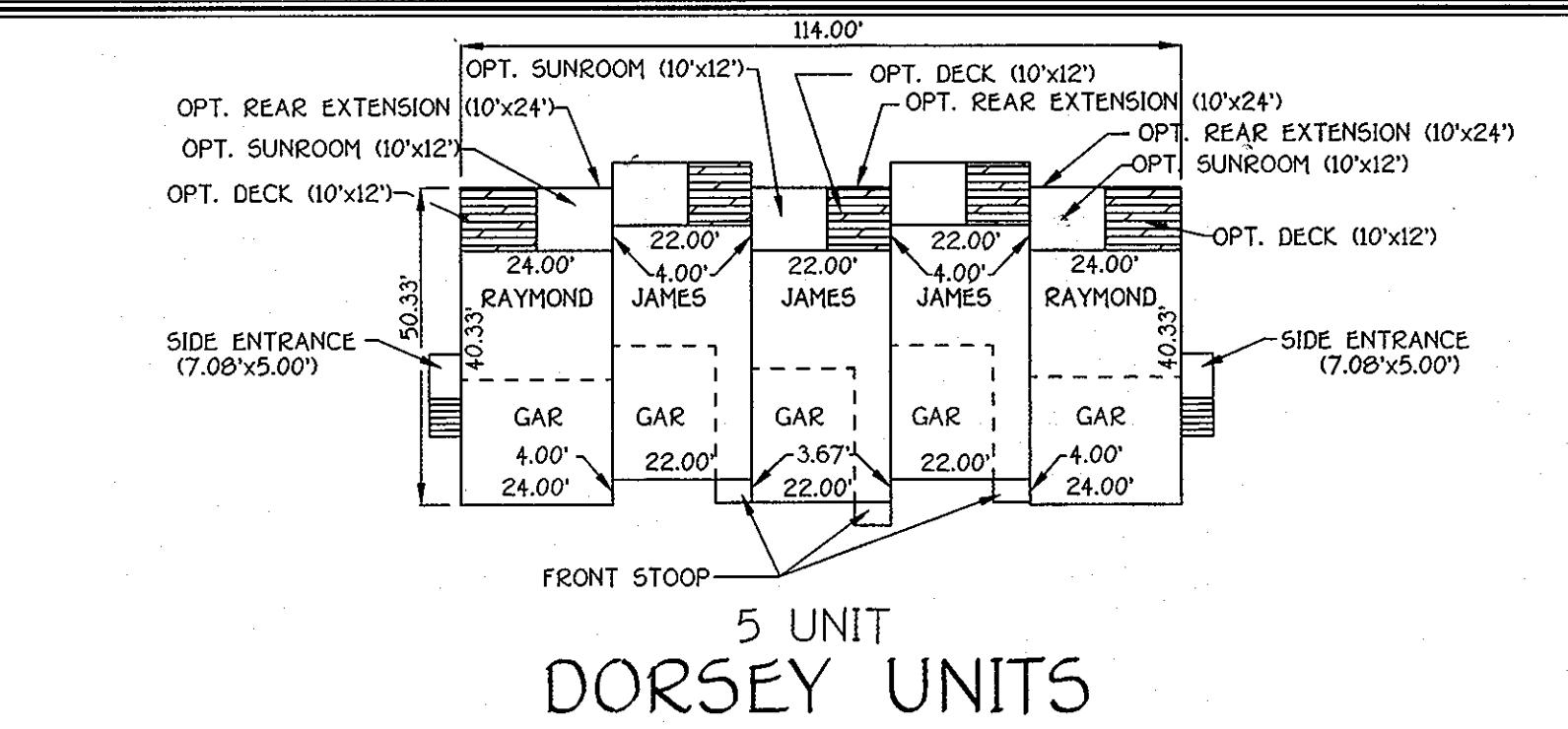
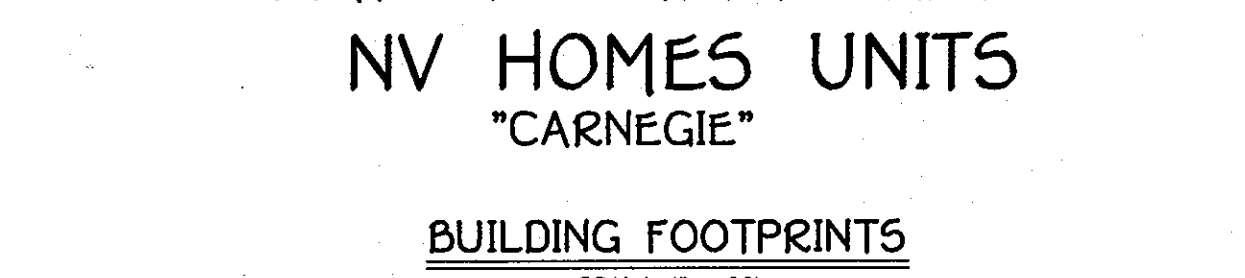
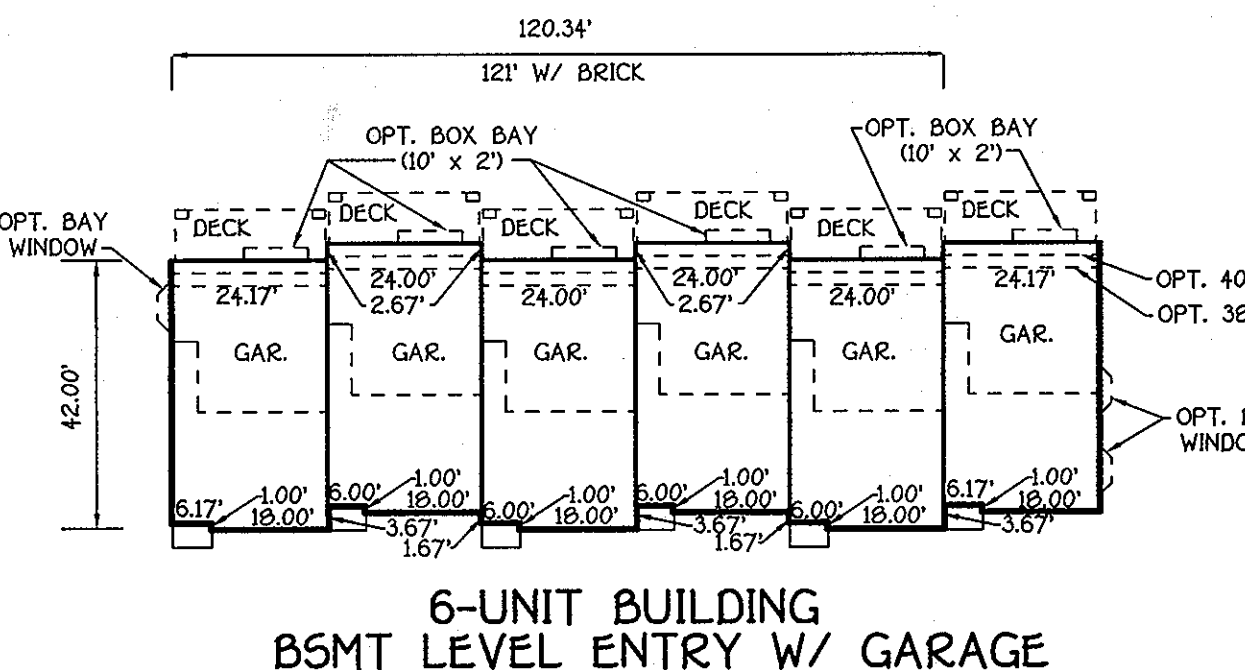
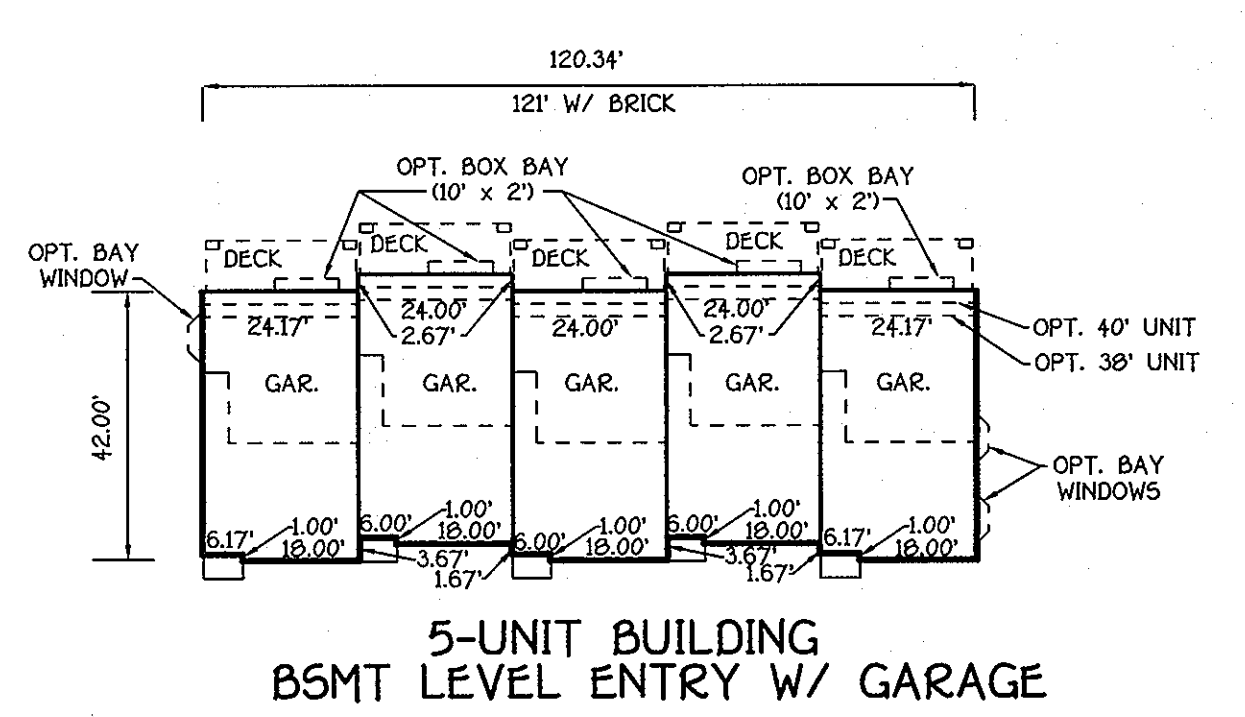
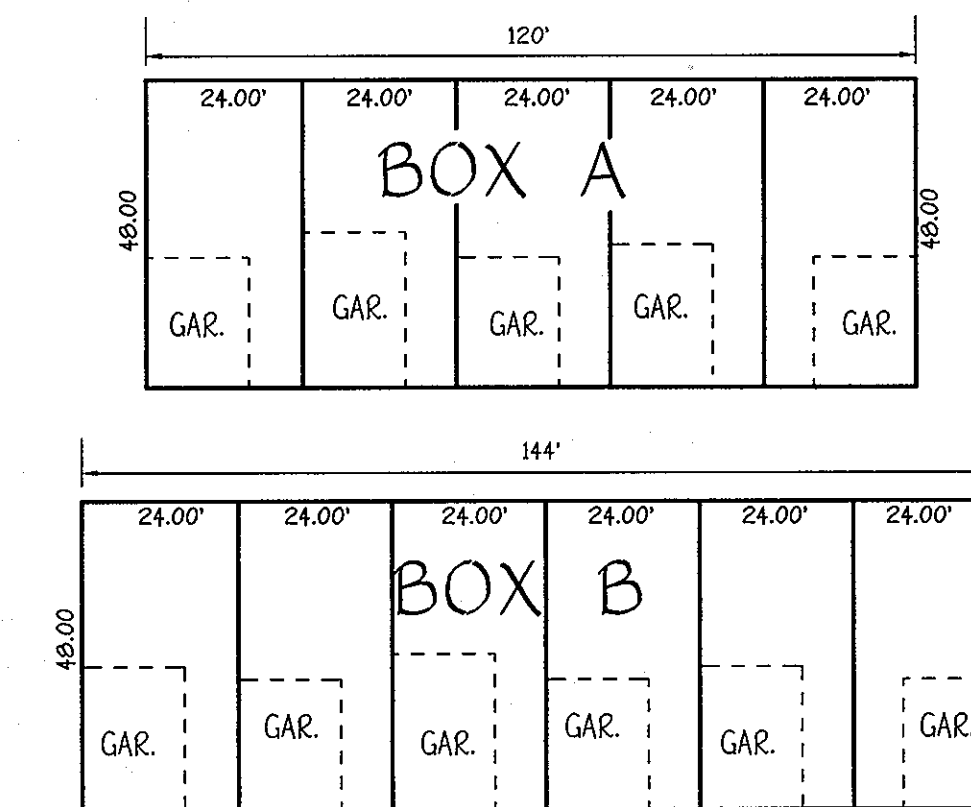
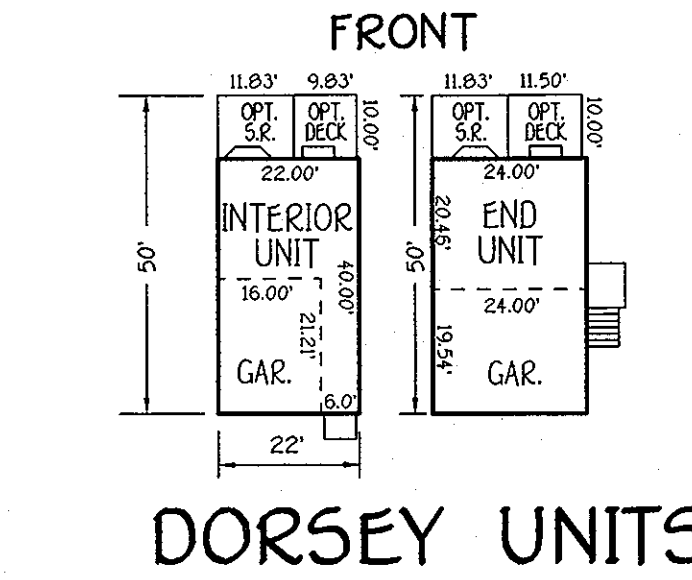
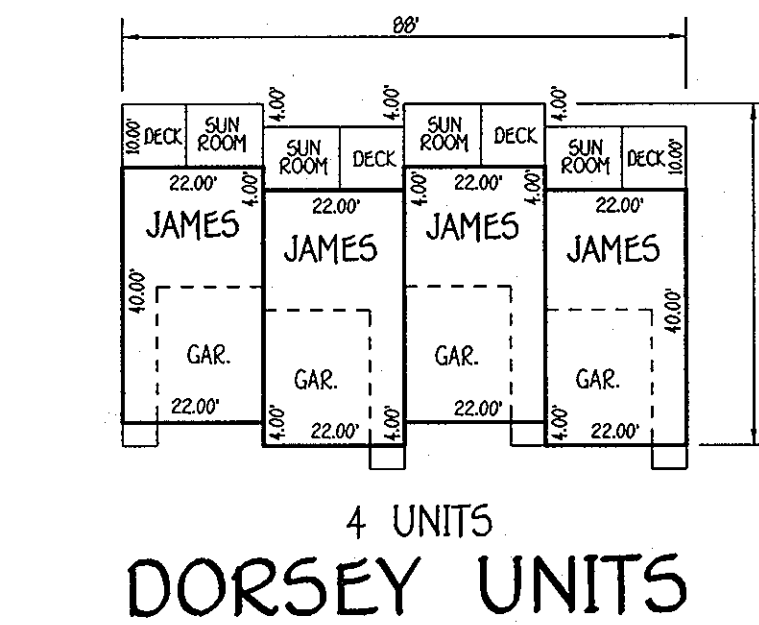
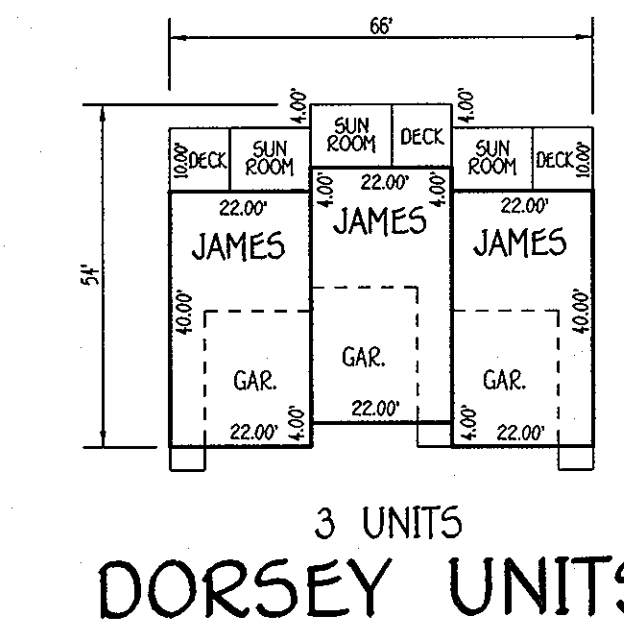
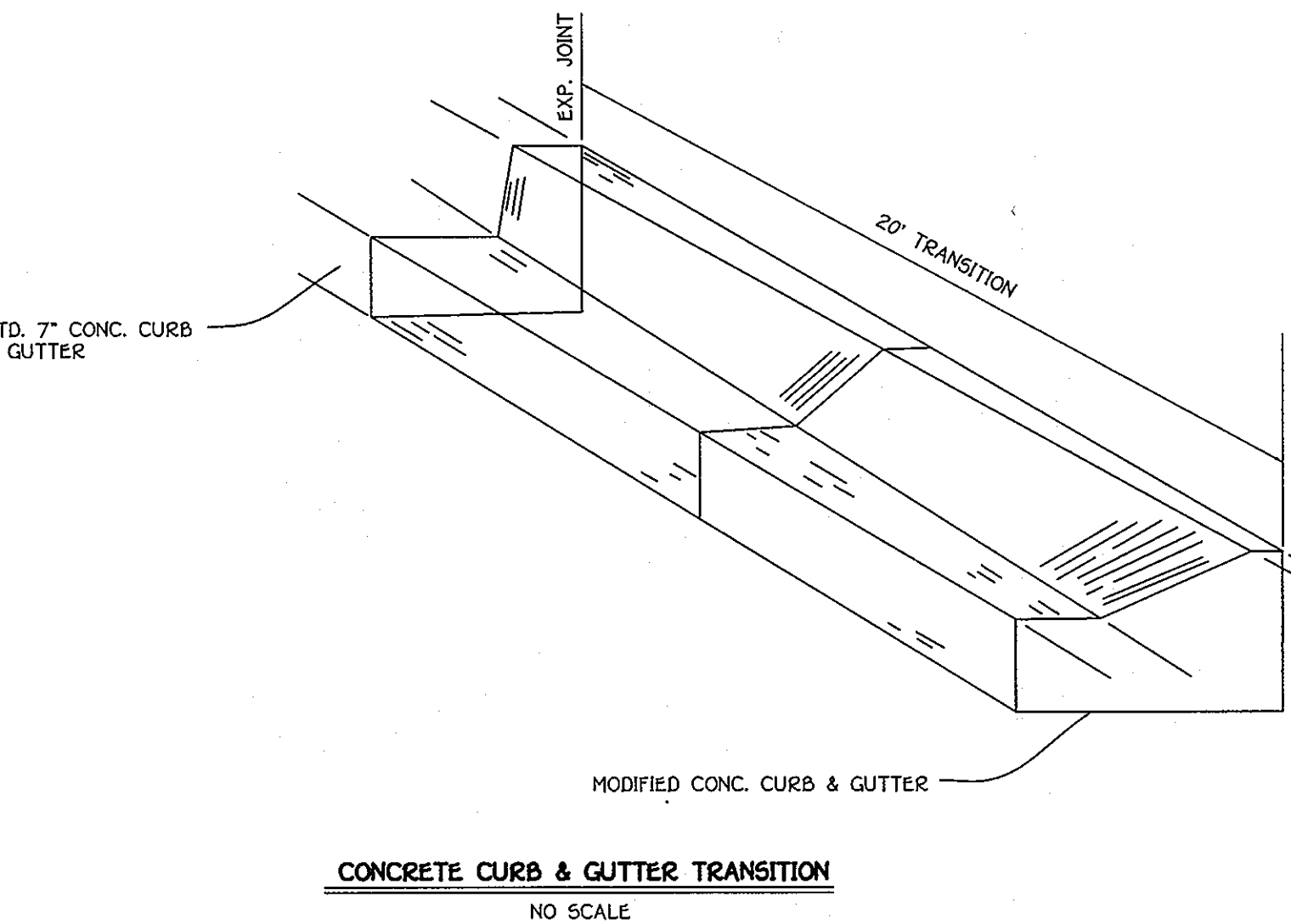
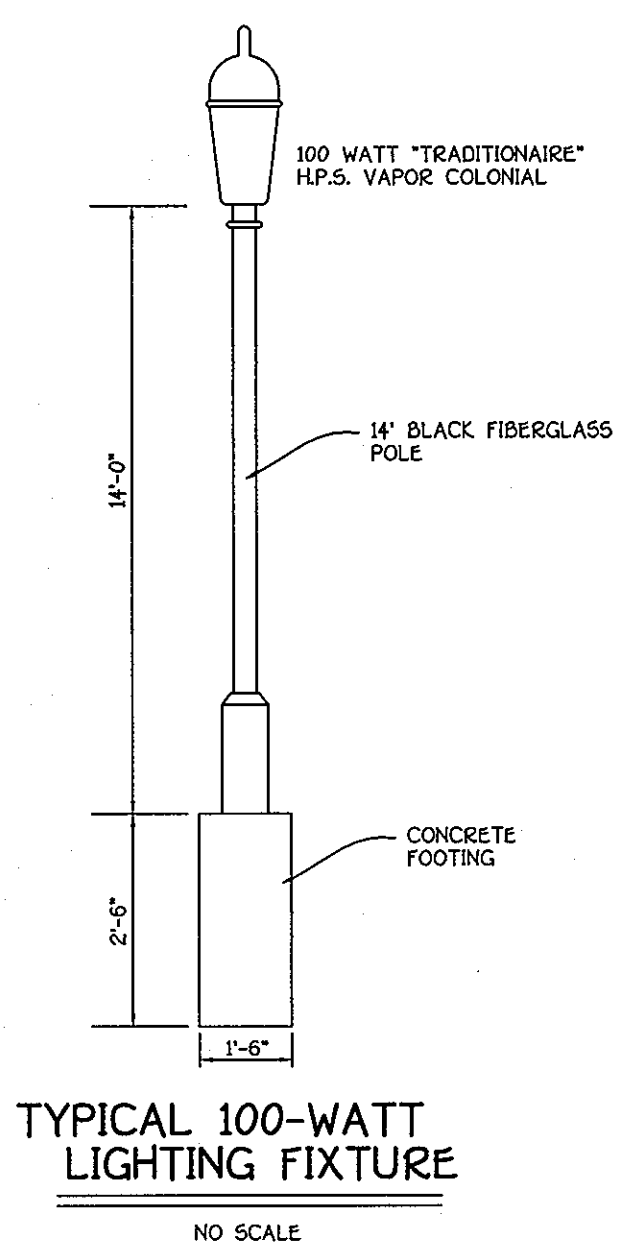
SUBDIVISION		SECTION/AREA		UNIT Nos.	
ELLICOTT SQUARE		N/A		1-30 AND 33-70	
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
18173-18174	24	R-SA-B	16	2nd	6022.00
WATER CODE		SEWER CODE			
H 07		5803400			

REVISED BUILDING FOOTPRINTS & ROADWAYS DETAILS

**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 6 OF 22 SDP 05-112



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**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10772 DALLHOPE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410-481-3999

NO.	REVISION	DATE
1	REVISE UNITS 33 THROUGH 44 AND ASSOCIATED UTILITIES	1/25/08
2	REVISE UNITS 1-7, 12-68 AND ASSOCIATED UTILITIES	3/20/08
3	ADD BUILDERS' NAMES & ADDRESSES, REV. VANDERBILT FOOTPRINTS TO ADD OPT. 10' EXTENSIONS	09/05/08
4	ADD 3 UNIT VANDERBILT REAR GARAGE FOOTPRINT	10/23/08
5	ADD 3 & 4 UNIT DORSEY FOOTPRINT & STONE ENTRANCE STRUCTURE	12/16/08
6	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09
7	ADD 3 & 4 UNIT DORSEY FOOTPRINT & STONE ENTRANCE STRUCTURE	12/16/08
8	Added footprint for 7 Unit Building N.V. Homes "Carnegie"	7-8-09
9	Rev. 7 Unit Carnegie Typical to show 2', 4' and 8' Ext. & Remove optional Deck	8-10-10



**20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

**DEFINITION**  
Using vegetation as cover for barren soil to protect it from forces that cause erosion.

**PURPOSE**  
Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

**CONDITIONS WHERE PRACTICE APPLIES**  
This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Example of Applicable Areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dunes, cut and fill slopes and other wide habitat and visual resources.

**EFFECTS ON WATER QUALITY AND QUANTITY**  
Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, transpiration, precipitation, and groundwater recharge. Vegetation over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

**SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS**

- Site Preparation**
  - Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
  - Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
  - Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 2 acres.
- Soil Amendment (Fertilizer and Lime Specifications)**
  - Soil tests must be performed to determine the exact rates and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
  - Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizers may be substituted for fertilizers with prior approval from the appropriate approval authority. Fertilizers shall be labeled according to the applicable state fertilizer laws and shall bear the name, trade name, trademark or tradename and warranty of the producer.
  - Lime materials shall be ground limestone hydrated or burnt lime may be substituted which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground so fine that at least 50% will pass through a 20 mesh sieve and a 20 mesh sieve.
  - Apply lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
- Seeded Preparation**
  - Temporary Seeding**
    - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or ripper mounted on construction equipment. The soil shall be loosened to a depth of 3" to 5" and rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
    - Apply fertilizer and lime as prescribed on the plans.
    - Apply lime and fertilizer into the top 3-5" of soil by disk or other suitable means.
  - Permanent Seeding**
    - Soil shall be between 6:0 and 7:0.
    - Soil pH shall be between 6.0 and 7.0.
    - Soil shall contain less than 500 parts per million (ppm) of soluble salts.
    - Soil shall contain less than 40% clay, but enough fine grained material (200 sieve plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if the soil is a silty sand or silty loess and is to be planted then a sandy soil (30% silt plus clay) would be acceptable.
    - Soil shall contain 1.2% minimum organic matter by weight.
    - Soil must contain sufficient pore space to permit adequate root penetration.
    - If these factors cannot be met by soils on sites having disturbed areas or other equipment in accordance with Section 21 Standard and Specification for Topsoil.
    - Areas requiring graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3" to 5" and tracked with the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
    - Apply soil amendments as per soil test or as included on the plans.
    - Soil amendments into the top 3-5" of topsoil by disk or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application, where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

- Incremental Stabilization - Cut Slopes**
  - All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
  - Construction sequence refer to Figure 3 below.
    - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
    - Perform Phase 1 excavation, dress, and stabilize.
    - Perform Phase 2 excavation, dress and stabilize. Overseed previously seeded areas as necessary.
    - Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
- Incremental Stabilization of Embankments - Fill Slopes**
  - Embankments shall be constructed in lifts as prescribed on the plans.
  - Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15' or when the grading operation ceases as prescribed in the plans.
  - At the end of each lift, temporary berms and side slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trap.
  - Construction sequence: Refer to Figure 4 (below).
    - Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15' or when the grading operation ceases as prescribed in the plans.
    - Place Phase 1 embankment, dress and stabilize.
    - Place Phase 2 embankment, dress and stabilize.
    - Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

**SECTION 2 - TEMPORARY SEEDING**  
Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

**A. Seed mixtures - Temporary Seeding**

- Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardness Zone (from Figure 5) and enter them in the temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 25 must be put on the plans.
- For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

Seed Mixture (Hardness Zone -- 5B --) From Table 25				Fertilizer Rate (10-10-10)	Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth (in)		
1	EYE	140	3/15 - 5/31 6/1 - 10/31	1" - 2"	600 lb/ac (5 lb/1000sq ft)	2 tons/ac (600 lb/1000sq ft)
2	BARLEY OR RYE FLUX FOXTAIL, HELLOT	150	6/1 - 7/31	1"		

**SECTION 3 - PERMANENT SEEDING**  
Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

**A. Seed mixtures - Permanent Seeding**

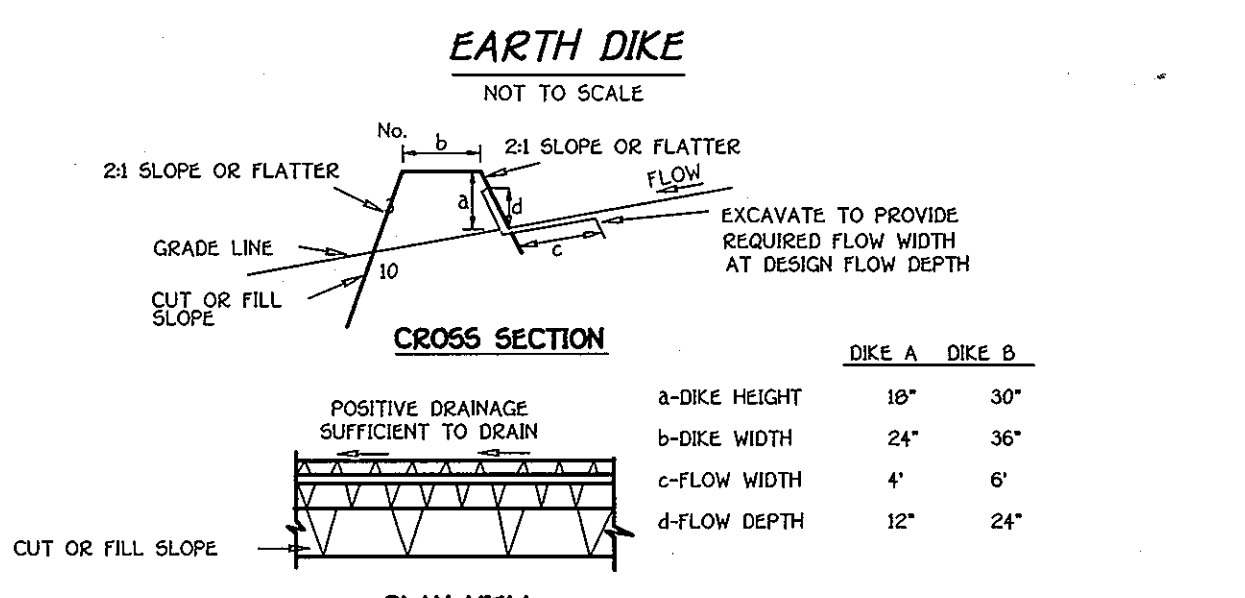
- Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be entered in the Permanent Seeding Summary below, along with application rates and seeding dates. If this summary is not put on the plans, additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be included in the Permanent Seeding Summary. Section 342 - Critical Area Planting for special lawn maintenance areas, see Section IV and V Turfgrass.
- For sites having disturbed areas over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
- For areas receiving low maintenance, apply urea-form fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardness Zone -- 5B --) From Table 25				Fertilizer Rate (10-20-20)	Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depth (in)		
1	TALL FESCUE (50%) KENTUCKY BLUEGRASS (50%) PERENNIAL RYEGRASS (10%)	125 15 15	3/15 - 6/1 8/1 - 10/1	1" - 2"	90 lb/ac (2.0 lb/1000sq ft)	2 tons/ac (600 lb/1000sq ft)
2	TALL FESCUE (50%) HARD FESCUE (50%)	120 30	3/15 - 6/1 8/1 - 10/1	1" - 2"	175 lb/ac (4 lb/1000sq ft)	2 tons/ac (600 lb/1000sq ft)

**SECTION 4 - EARTH DIKE**  
NOT TO SCALE

2:1 SLOPE OR FLATTER

EXCAVATE TO PROVIDE REQUIRED FLOW WIDTH AT DESIGN FLOW DEPTH



**CROSS SECTION**

POSITIVE DRAINAGE SUFFICIENT TO DRAIN

2:1 SLOPE OR FLATTER

EXCAVATE TO PROVIDE REQUIRED FLOW WIDTH AT DESIGN FLOW DEPTH

- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1:1.
- Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
- All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- The dike shall be constructed or adapted to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- Fill shall be compacted by earth moving equipment.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

**TOPSOIL SPECIFICATIONS**

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

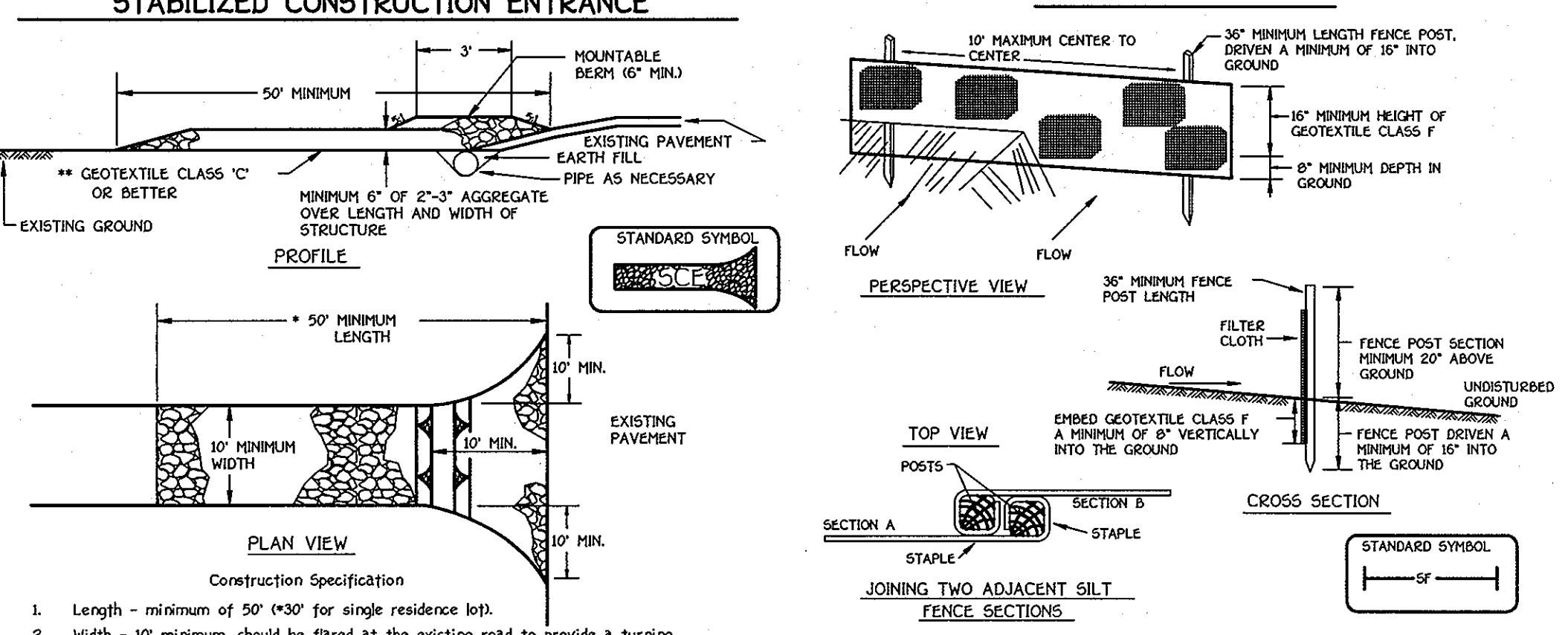
**Purpose**  
To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

**Conditions Where Practice Applies**  
This practice is limited to areas having 2:1 or flatter slopes where:  
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.  
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant growth.  
c. The original soil to be vegetated contains material toxic to plant growth.  
d. The soil is so acidic that treatment with limestone is not feasible.  
e. The soil is so alkaline that treatment with sulfur is not feasible.

**Construction and Material Specifications**

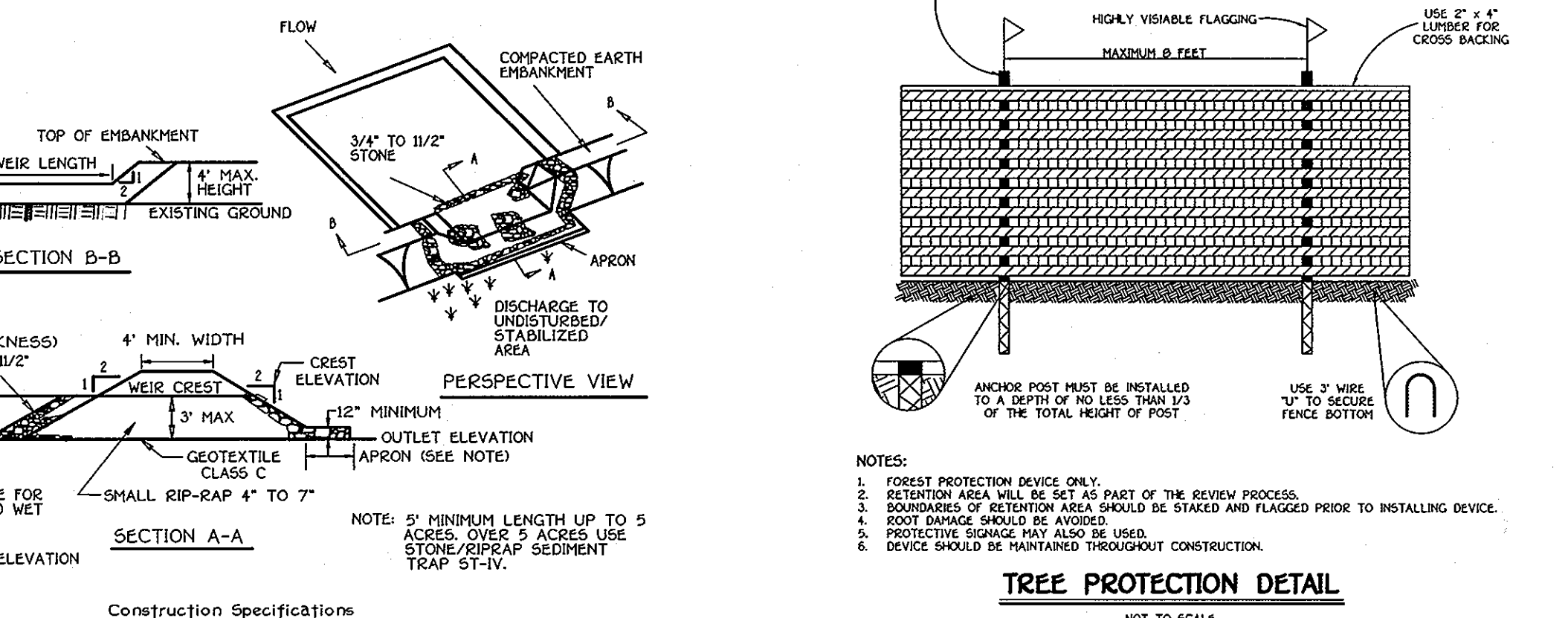
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Repeated topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
  - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or other species.
  - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at a rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over design areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
  - For sites having disturbed areas under 5 acres:
    - Place topsoil if required and apply soil amendments as specified in 10.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
    - For sites having disturbed areas over 5 acres:
      - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required by the soil in compliance with the following:
        - Where the subsoil is either highly acidic or composed of heavy clays, a pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
        - Organic content of topsoil shall be not less than 1.5 percent by weight.
      - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      - No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (45 days min) to permit dissipation of phytotoxic materials.
      - Note: 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.
      - Place topsoil if required and apply soil amendments as specified in 10.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
      - Topsoil Application
        - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
        - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 8" higher in elevation.
        - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
        - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition.
        - When the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.
        - Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below.
          - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
            - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
            - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
            - Composted sludge shall be applied at a rate of 1 ton/1000 square feet.
            - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1000 square feet, and 1/3 the normal lime application rate.

**STABILIZED CONSTRUCTION ENTRANCE**



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

**STONE OUTLET SEDIMENT TRAP - ST II**



- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected periodically and after each rain and repairs made as needed.
- Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been previously stabilized.
- Refer to Section D for specifications concerning trap dewatering.
- Minimum trap depth shall be measured from the weir elevation.
- The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
- Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
- Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

**SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION AND/OR GRADING.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, STRUCTURES, FOLLOWING INITIAL SOIL DISTURBANCE OR RE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. ALL SEDIMENT TRAP/SEDIMENT BASINS MUST BE INSTALLED AND SIGNAGE POSTED AROUND THEIR PERMETER IN ACCORDANCE WITH VOL. 1 CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING (SEC. 50, 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50, AND MULCHING (SEC. 52), 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 OPERATIVE CONDITION UNTIL PERMITS FOR THIS REMEDIAL WORK HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	8,657 ACRES
AREA DISTURBED	8,000 ACRES
AREA TO BE ROOFED OR PAVED	3,700 ACRES
AREA TO BE VEGETATED/STABILIZED	4,300 ACRES
TOTAL CUT	27,200 CUBIC YDS.
TOTAL FILL	19,700 CUBIC YDS.
NET SITE BORROW AREA LOCATION	AS SHOWN ON PLAN
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF CONSTRUCTION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR CONSTRUCTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- REQUIREMENTS FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OF THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

**BUILDER**  
MAVERICK BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MD 21042  
443-367-0422

**BUILDERS**  
NV HOMES  
6085 MARSHALE DRIVE  
SUITE 130  
ELK RIDGE, MD 21075  
443-579-5956

**ENGINEER'S CERTIFICATE**  
I certify that the development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic site inspection by the Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 9/20/07

**DEVELOPER'S CERTIFICATE**  
I certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic site inspection by the Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 9/20/07

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service  
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD  
Date: 9/20/07

**OWNERS**  
CHARLES J. & ELLEN H. NORRIS  
7160 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director, Department of Planning and Zoning: *[Signature]* Date: 9/20/07

Chief, Planning and Development: *[Signature]* Date: 9/20/07

Chief, Development Engineering Division: *[Signature]* Date: 9/20/07

**SEDIMENT CONTROL NOTES AND DETAILS**

**ELLCOTT SQUARE TOWNHOUSE CONDOMINIUMS**

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2009

SHEET 7 OF 22 SDP 05-112

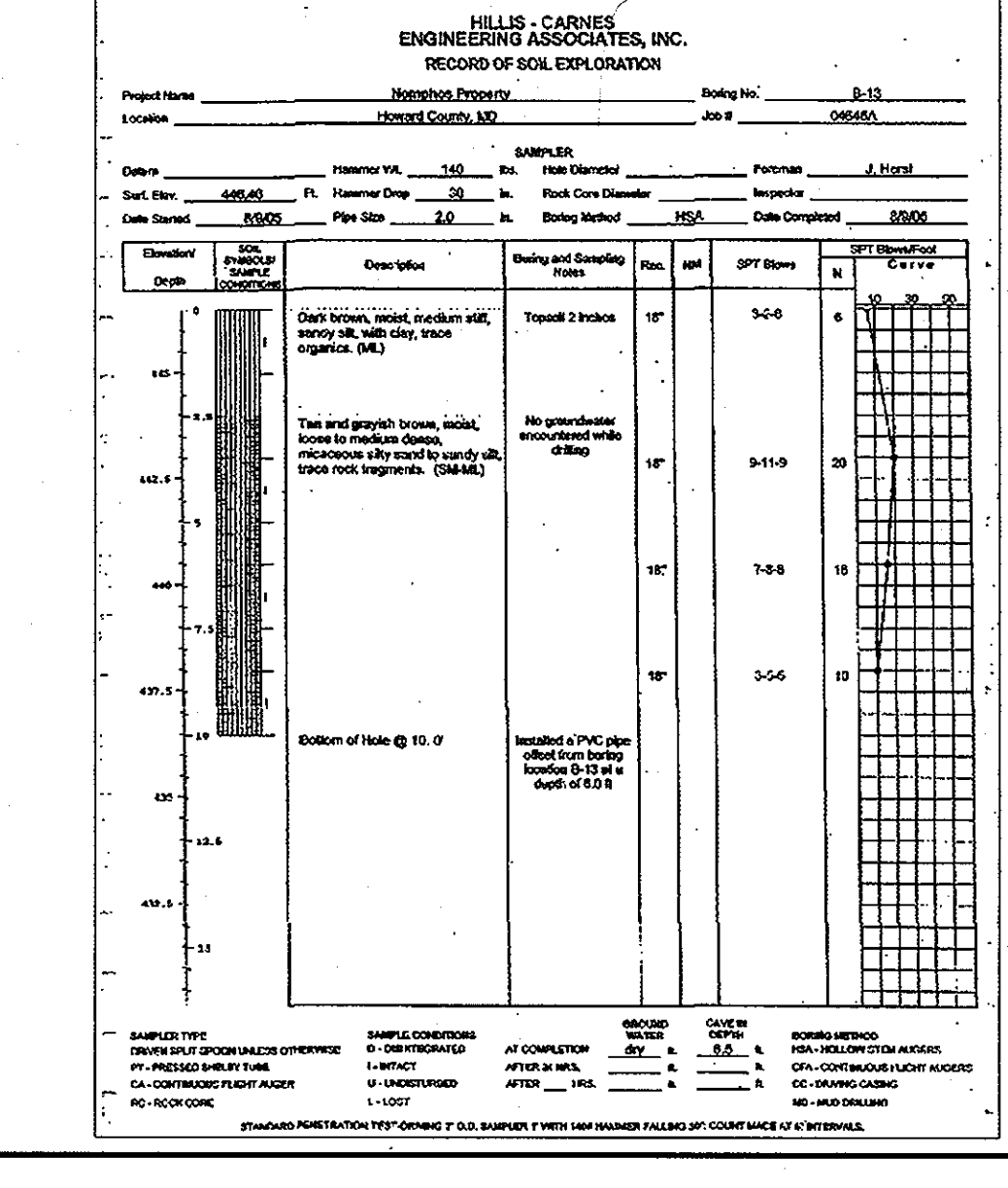
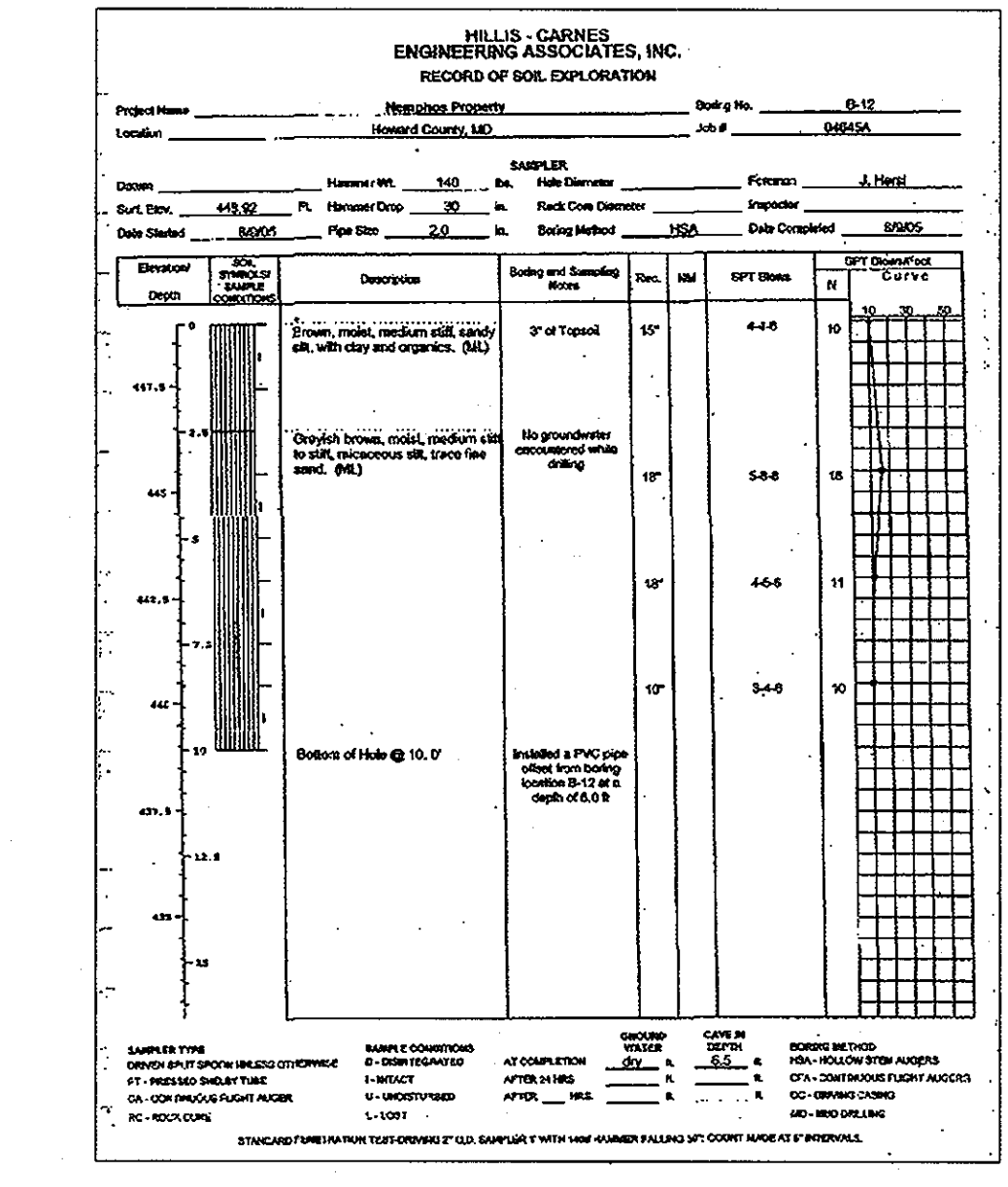
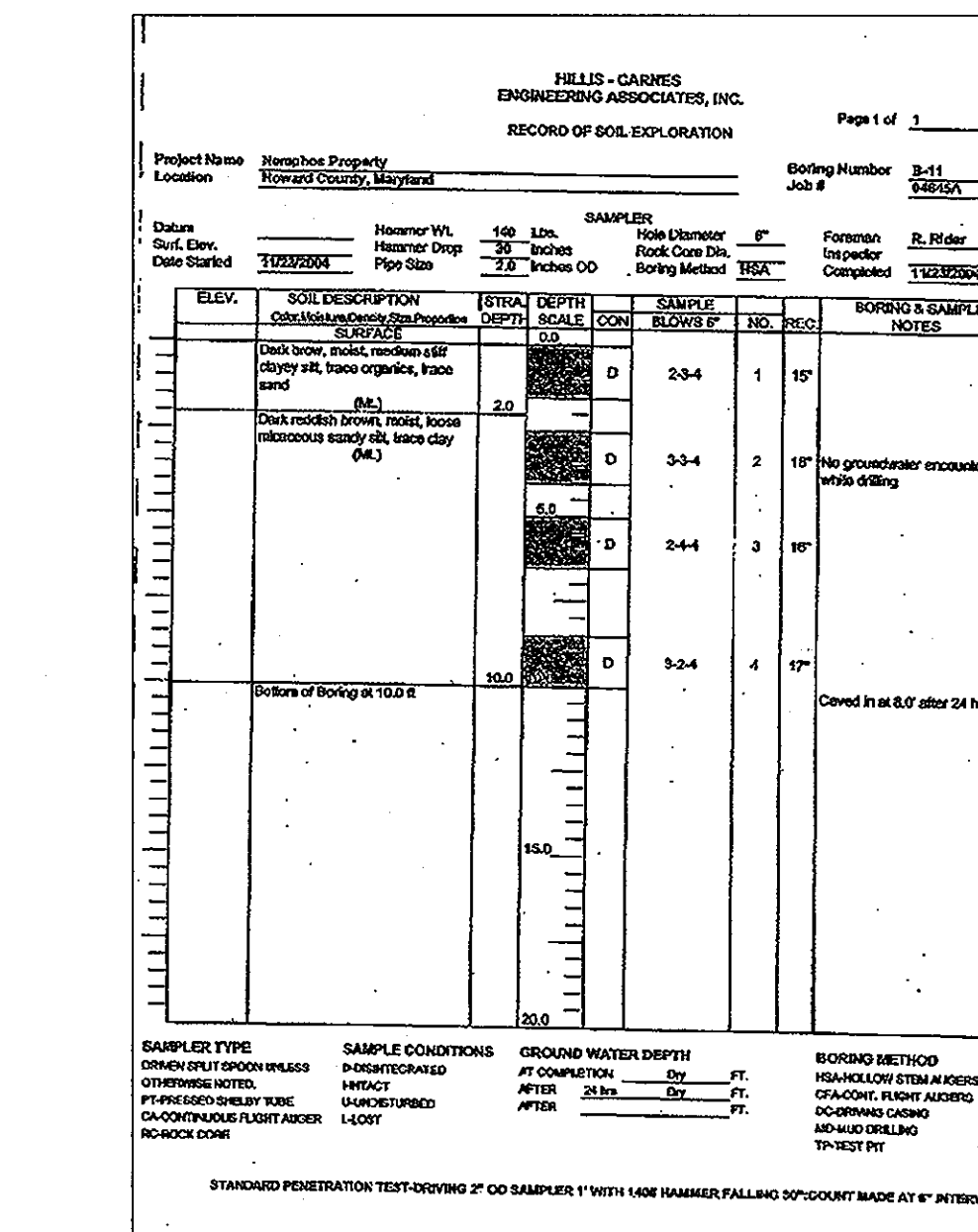
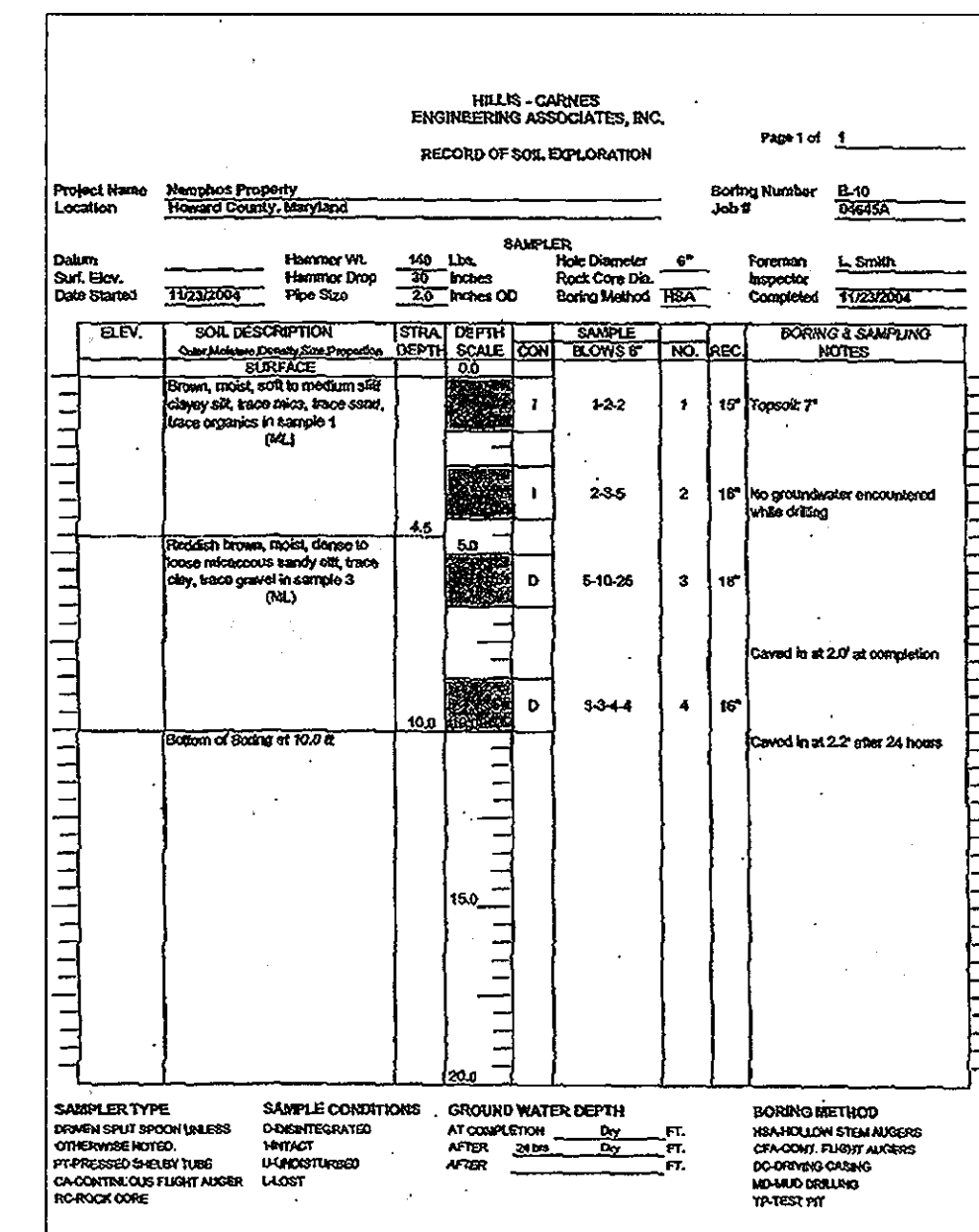
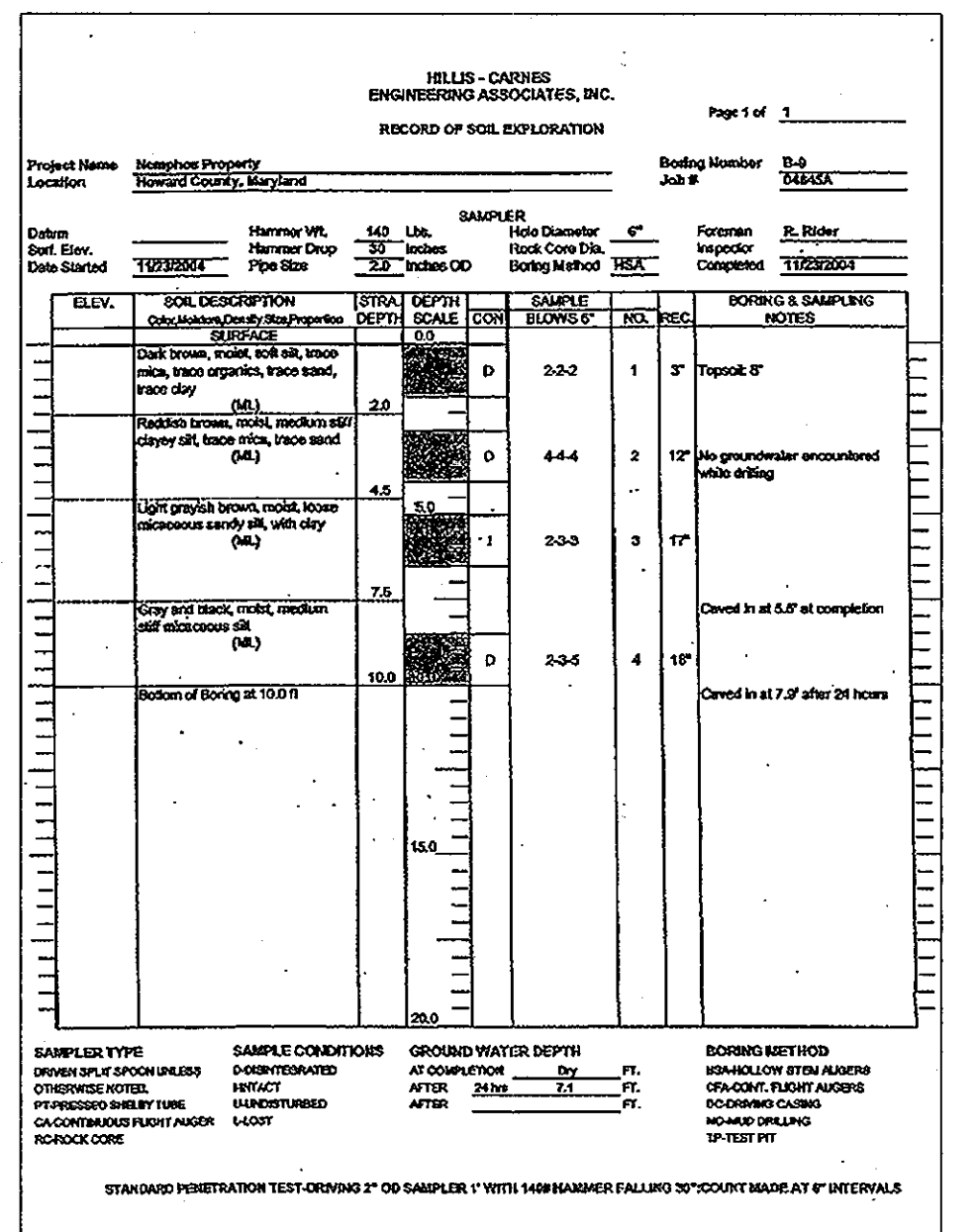
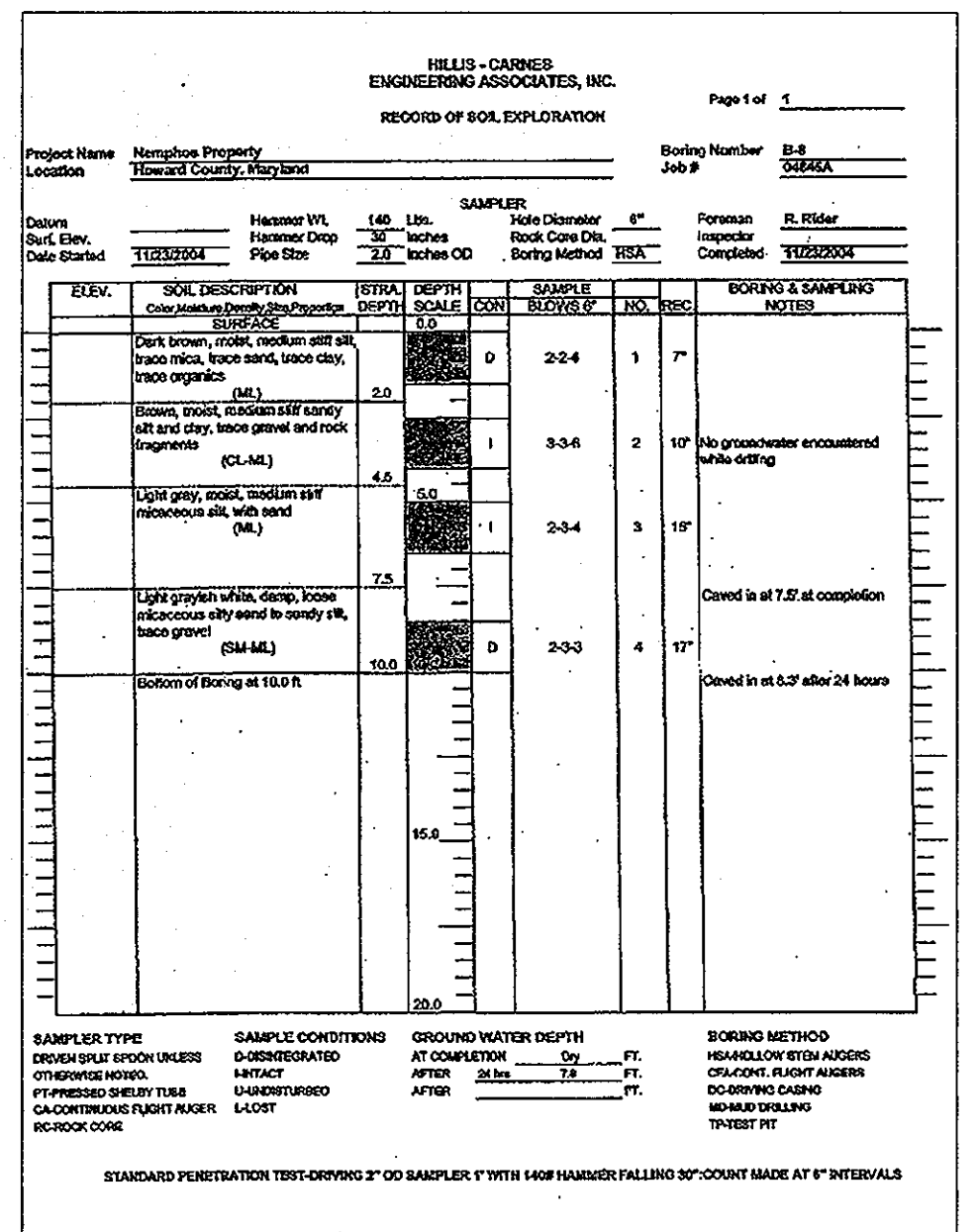
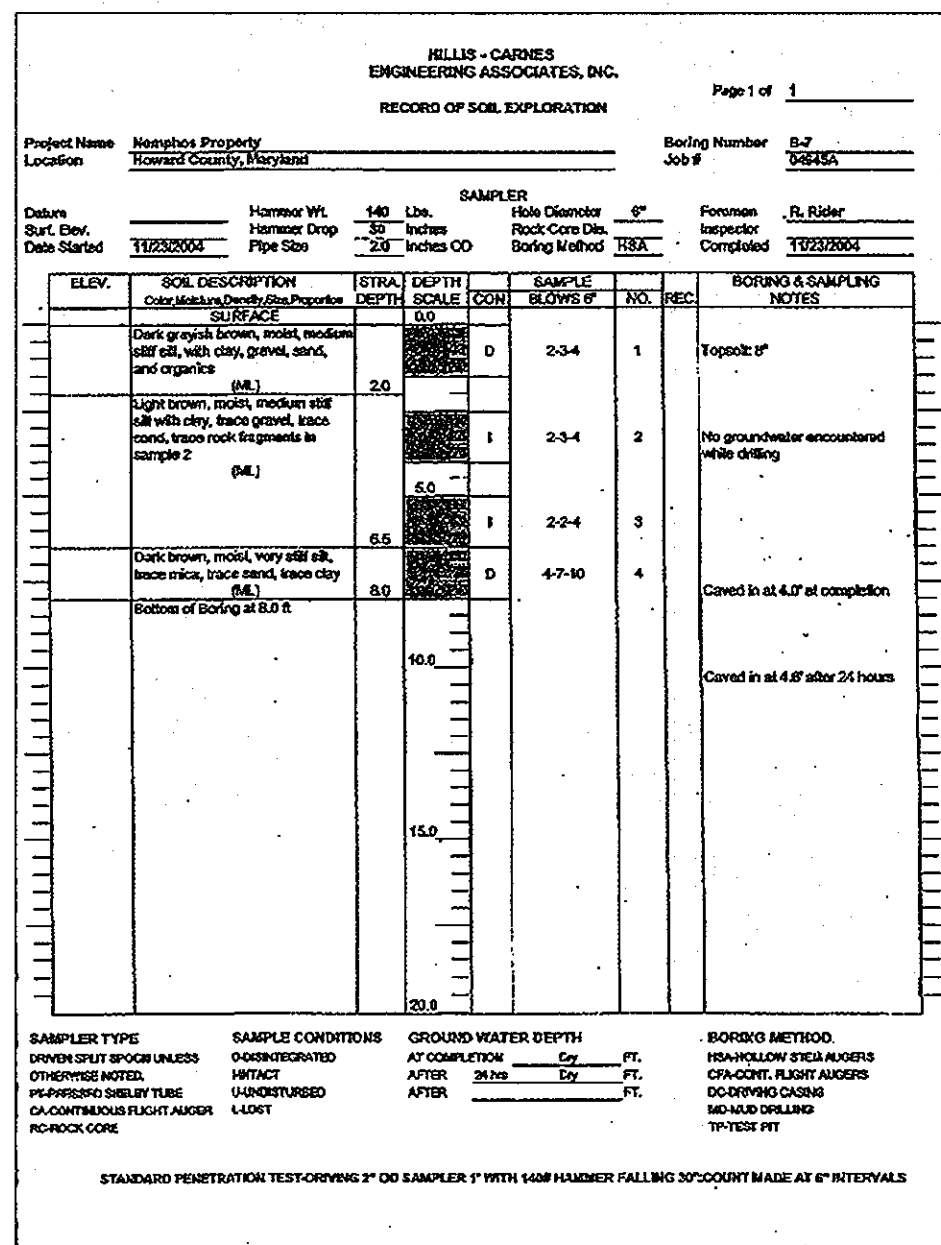
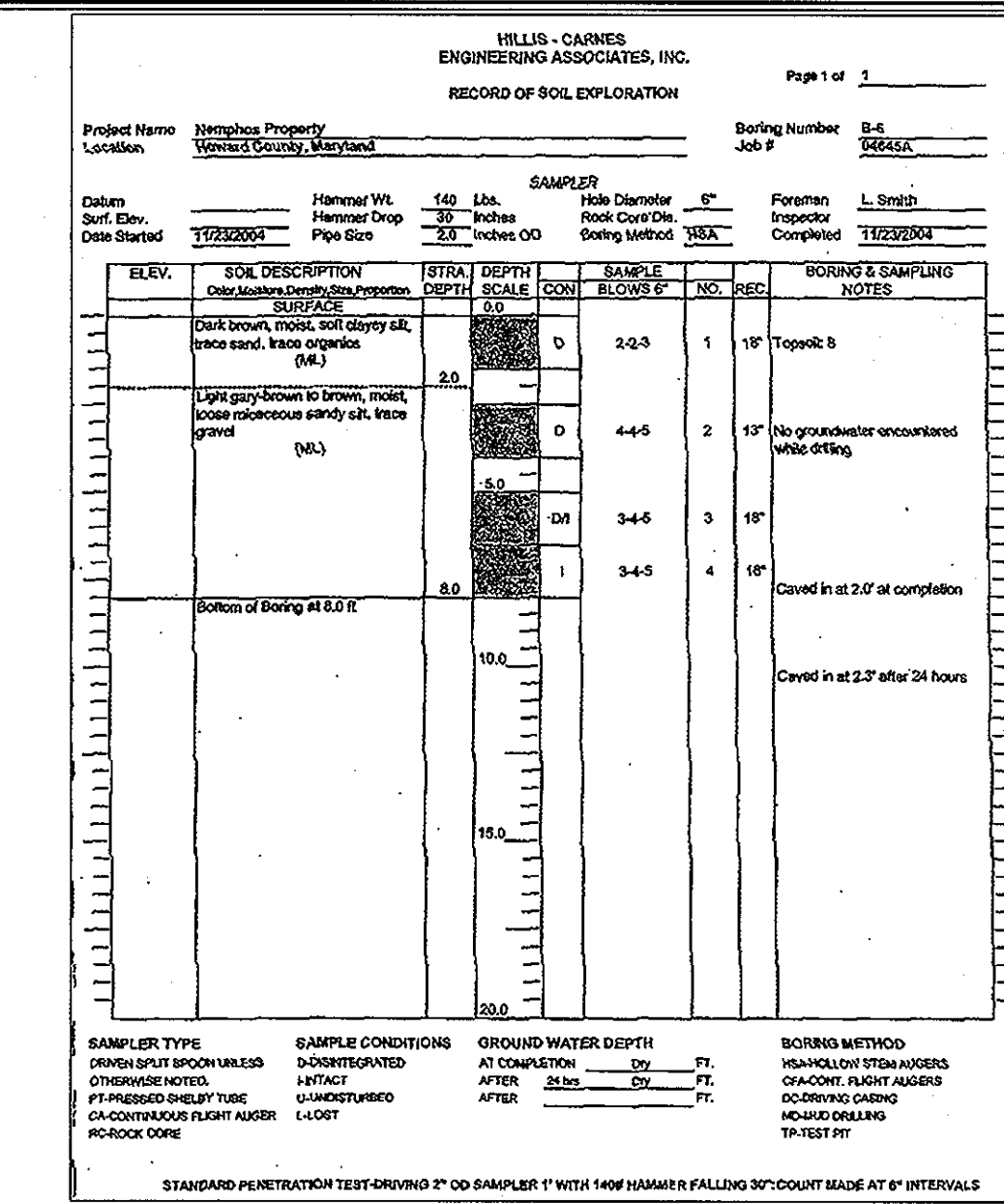
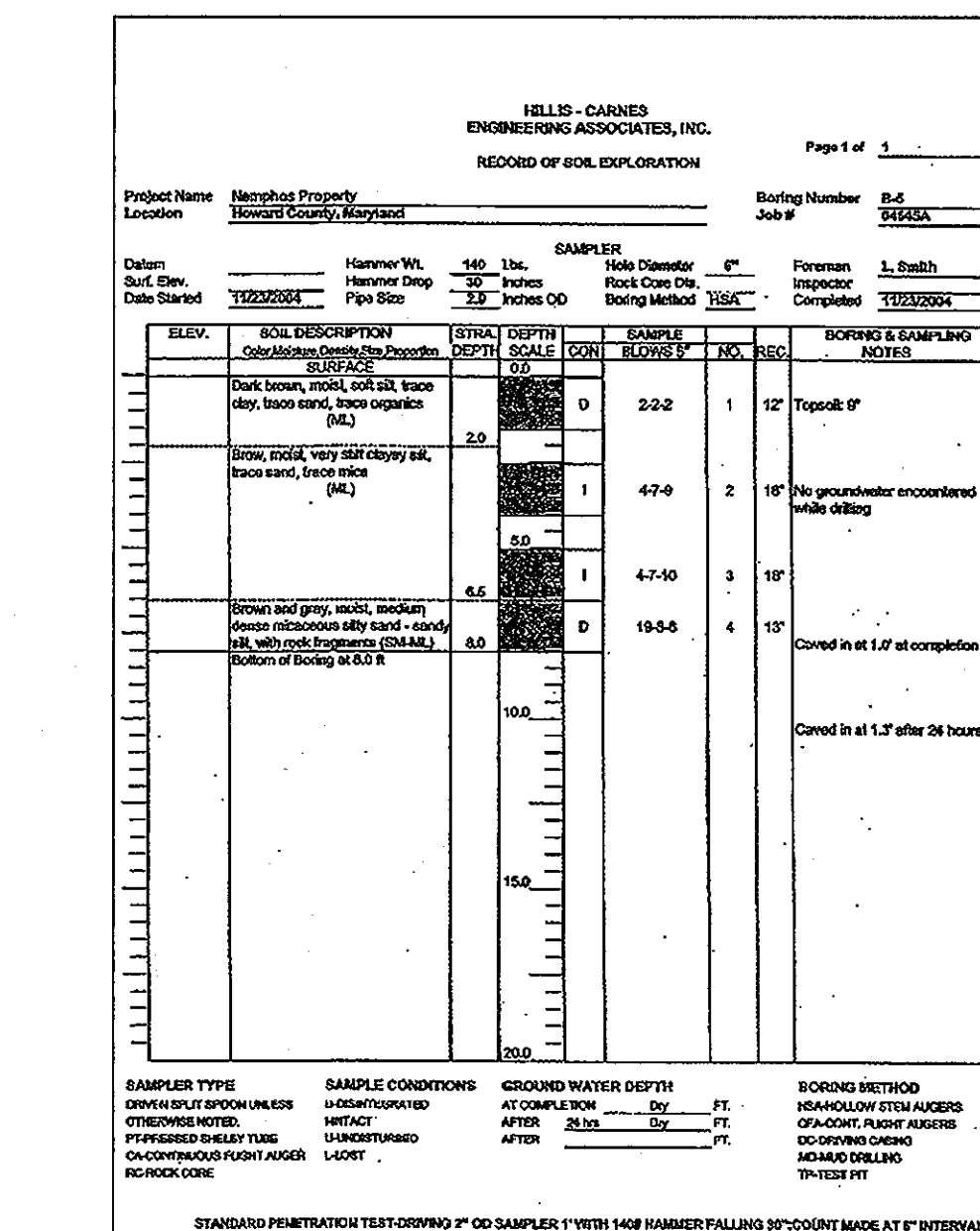
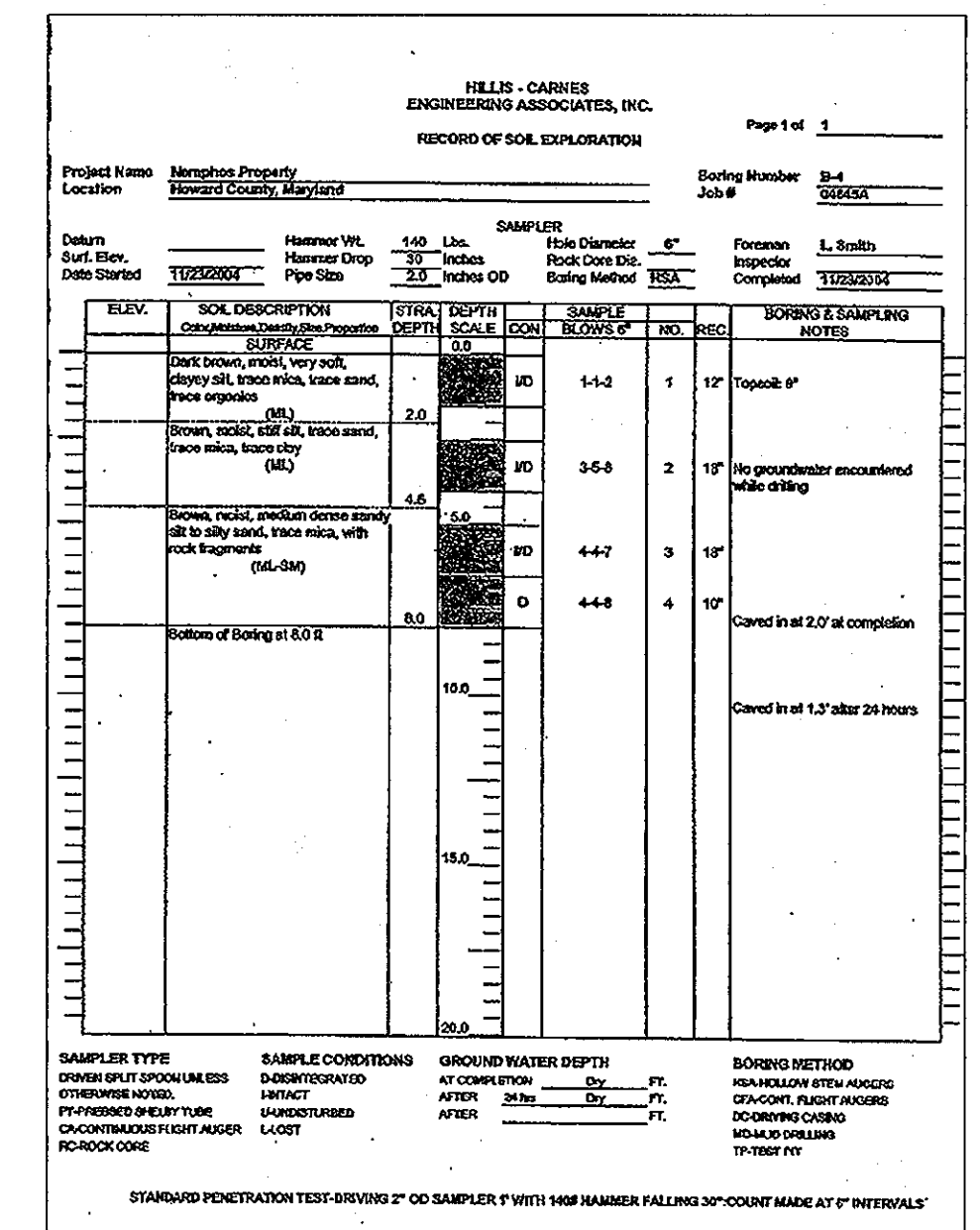
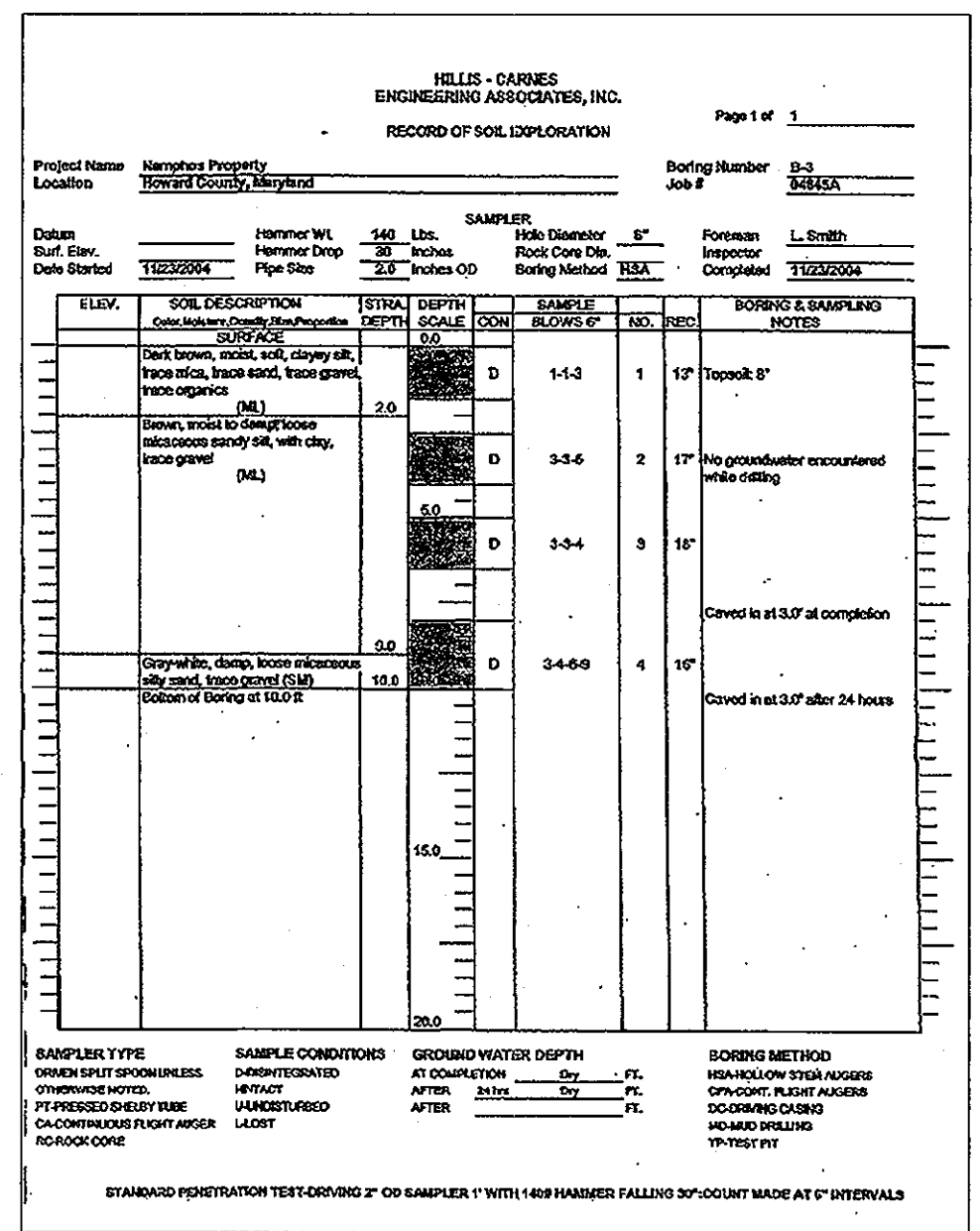
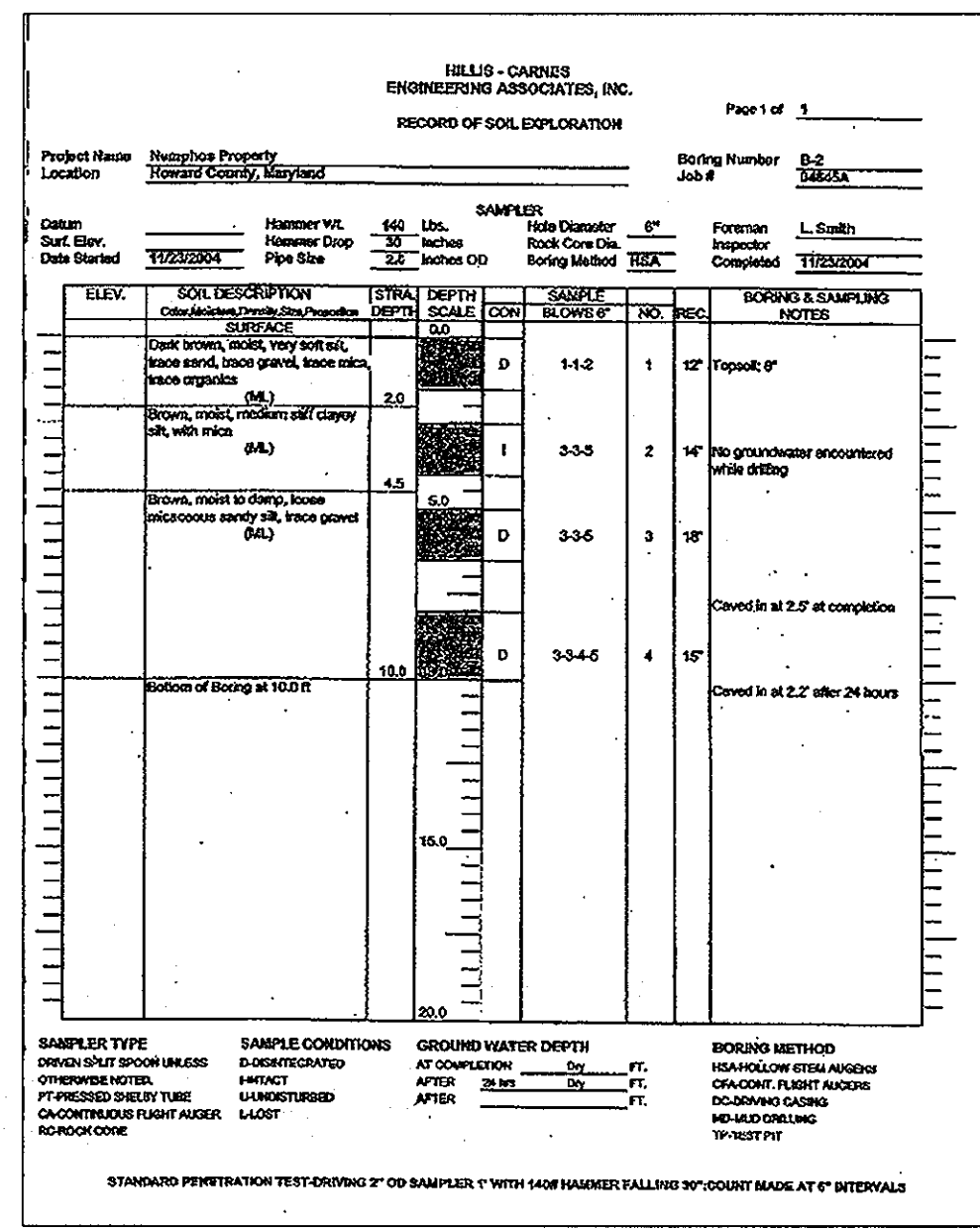
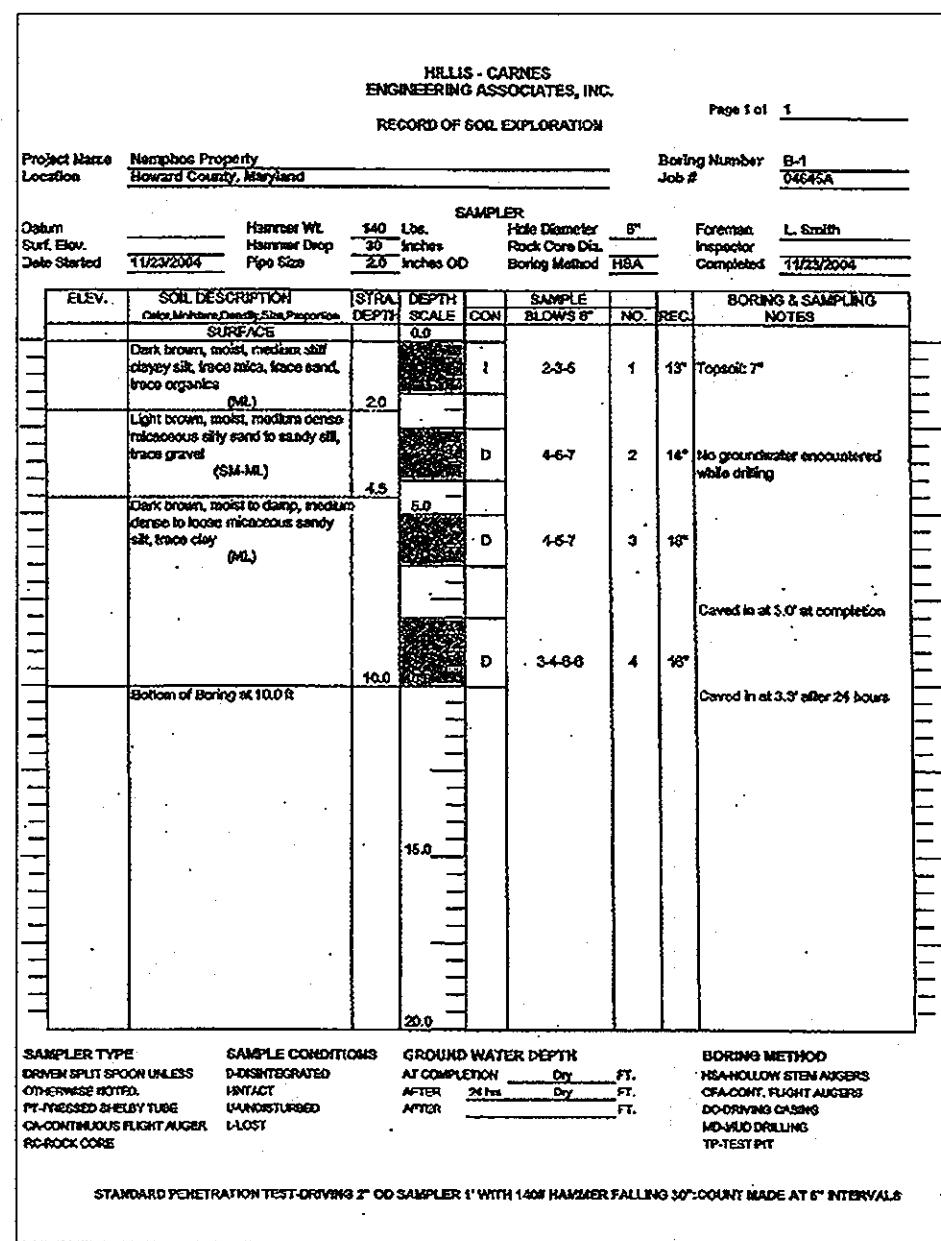
**FISHER, COLLINS & CARTER, INC.**  
ENGINEERING CONSULTANTS & LAND SURVEYORS

2 REVISE DATE AND UNIT NUMBERS  
Add builders names & addresses

NO. DATE REVISION

1 9/20/07  
2 9/20/07





**BUILDER**  
**WAVERLY BUILDERS & DEVELOPERS, LLC**  
 5900 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD. 21042  
 443-367-0422

**BUILDER**  
**NV HOMES**  
 6085 MARSHALEE DRIVE  
 SUITE 130  
 ELK RIDGE, MD. 21075  
 410-319-5956

**ENGINEER'S CERTIFICATE**  
 I certify that the sediment and erosion control plan represents a practical and workable plan for the control of sediment and erosion control on the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Date: 9/20/07

**DEVELOPER'S CERTIFICATE**  
 I certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will attend a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Date: 9/20/07

Reviewed for HOWARD SCD and meets Technical Requirements.  
 U.S.D.A.-Natural Resources Conservation Service  
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Owners: CHARLES J & ELLEN H. NEWMAN, JOSEPH W. & FRANCES L. GERMAN, ETAL.  
 Developer: LAND DESIGN AND DEVELOPMENT, INC.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director, Department of Planning and Zoning  
 Chief, Division of Land Development  
 Chief, Development Engineering Division  
 SUBDIVISION: ELLICOTT SQUARE  
 SECTION/AREA: N/A  
 UNIT Nos.: 1-30 AND 33-70  
 PLAT NO.: 18173-18174  
 BLOCK NO.: 24  
 ZONE: R-5A-B  
 TAX/ZONE: 16  
 ELEC. DIST.: 2nd  
 CENSUS TR.: 6022.00  
 WATER CODE: H 07  
 SEWER CODE: 5083400

**BORING LOGS**  
**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS  
 TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 8 OF 22 SDP 05-112

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 1972 BALTIMORE NATIONAL FEE  
 ELLICOTT CITY, MARYLAND 21042  
 410 461-2955

2. REVISE DATE AND UNIT NUMBERS  
 1. Add builders names & addresses  
 DATE: 4/21/09  
 REVISION: 9-5-08



STRUCTURE SCHEDULE										
STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS		
I-1	450.76	446.00, 443.98, 444.50	443.91	OLD ELLICOTT CIRCLE	11+02	12.43' R	A-10	S.D. - 4.02		
I-2	454.42	448.22, 448.47	447.97	OLD ELLICOTT CIRCLE (ENTRANCE ROAD)	1+08	25' L	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-3	454.60	451.00	450.50	OLD ELLICOTT CIRCLE (ENTRANCE ROAD)	1+08	25' R	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-4	451.00	447.00	446.90	OLD ELLICOTT CIRCLE	14+82	12' R	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-5	450.60	(3) 447.34	446.84	OLD ELLICOTT CIRCLE	1+70	12' L	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-6	452.19	449.02	448.60	ALLEY	0+58	10' L	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-7	454.00	---	449.80	OLD ELLICOTT CIRCLE	3+45	12' L	SINGLE WR INLET	S.D. - 4.37 & R - 3.01		
I-8	*** 443.50	440.75	440.85	CEMETERY LANE	0+59	20' L	6" DIA. TYPE 'E' INLET	MD - 379.63		
I-9	*** 446.99, 444	(2) 442.24	441.41, 443	N 508546.71 E 1347034.29	---	---	10" INLET	S.D. - 4.39		
I-10	445.83	---	441.65	FREDERICK ROAD	0+42	24' R	COG-10	MD - 374.62		
I-11	449.37	---	444.63	FREDERICK ROAD	6+70	24' R	COG-10	MD - 374.62		
I-12	446.33	441.27	441.02	FREDERICK ROAD	8+23.16	24' R	COG-10	MD - 374.62		
M-1	449.25	443.62	(2) 442.79, 443.52	OLD ELLICOTT CIRCLE	11+02	32' R	STD. MANHOLE	G - 5.12		
M-2	454.60	444.95, 444.85	444.77	OLD ELLICOTT CIRCLE	12+61	34' L	STD. MANHOLE	G - 5.12		
M-3	452.60	447.33, 446.16, 446.74	446.06	OLD ELLICOTT CIRCLE	14+82	21.6' L	STD. MANHOLE	G - 5.12		
M-4	451.87	446.51	446.41	OLD ELLICOTT CIRCLE	15+33	25.3' L	STD. MANHOLE	G - 5.12		
M-5	453.20	448.17, 448.00	447.50	OLD ELLICOTT CIRCLE	10+14	24.3' R	STD. MANHOLE	G - 5.12		
M-6	456.90	451.97, 451.80	450.16	ALLEY	4+36	24.5' L	STD. MANHOLE	G - 5.12		
M-7	458.30	455.50, 455.21	452.50	ALLEY	4+46	30.2' R	STD. MANHOLE	G - 5.12		
M-8	453.45	448.34, 447.92	447.67	OLD ELLICOTT CIRCLE	1+70	29.6' L	STD. MANHOLE	G - 5.12		
M-9	452.10	447.94	447.59	OLD ELLICOTT CIRCLE	1+81	26.2' R	STD. MANHOLE	G - 5.12		
M-10	454.00	449.94, 449.52	449.27	OLD ELLICOTT CIRCLE	3+27	26.1' R	STD. MANHOLE	G - 5.12		
M-11	445.39	440.50, 440.75	440.40	FREDERICK ROAD	0+17	36.5' R	STD. MANHOLE	G - 5.12		
M-12	448.50	443.32, 443.66	443.22	OLD ELLICOTT CIRCLE	11+07	49' R	STD. MANHOLE	G - 5.12		
M-13	448.50	444.41	444.16	N 508731.2244 E 1346462.0810	---	---	STD. MANHOLE	G - 5.12		
S-1	445.04	443.04	---	N 508833.4208 E 1346477.2281	---	---	HOPE FLARED END SECTION	A.D.S. **		
S-2	442.37	440.12	---	N 508496.5429 E 1347077.8119	---	---	TYPE 'E' ENDWALL	S.D. - 5.31		
HW-1	445.67	441.67	---	FREDERICK ROAD	8+23.16	36' R	TYPE 'C' ENDWALL	S.D. - 5.21		

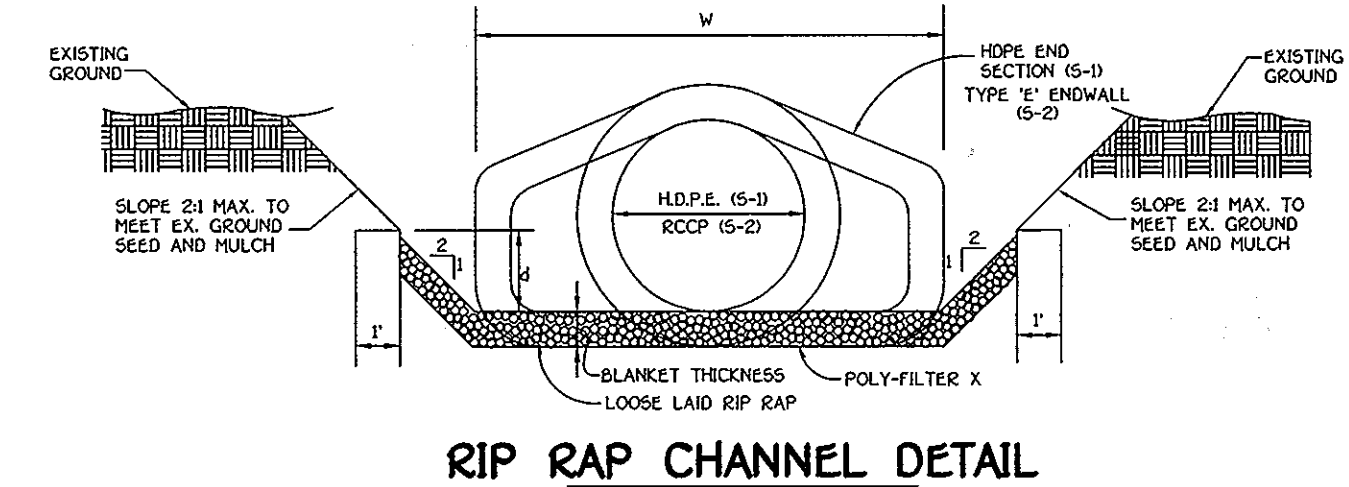
\* SEE MODIFIED PRECAST SINGLE WR INLET DETAIL, THIS SHEET  
 \*\* A.D.S. - ADVANCED DRAINAGE SYSTEMS, INC.  
 \*\*\* - DENOTES THROAT OPENING ELEVATION  
 (2) - DENOTES NUMBER OF PIPES WITH THAT ELEVATION  
 # - DENOTES TOP OF GRATE

SIZE	CLASS	LENGTH
6"	P.V.C. SCH. 40	124 L.F.
8"	HOPE	172 L.F.
10"	HOPE	3,025 L.F.
12"	HOPE	422 L.F.
15"	HOPE	291 L.F.
18"	HOPE	324 L.F.
24"	HOPE	554 L.F.
15"	RCCP, CL. IV	24 L.F.
18"	RCCP, CL. IV	58 L.F.
36"	RCCP, CL. IV	20 L.F.

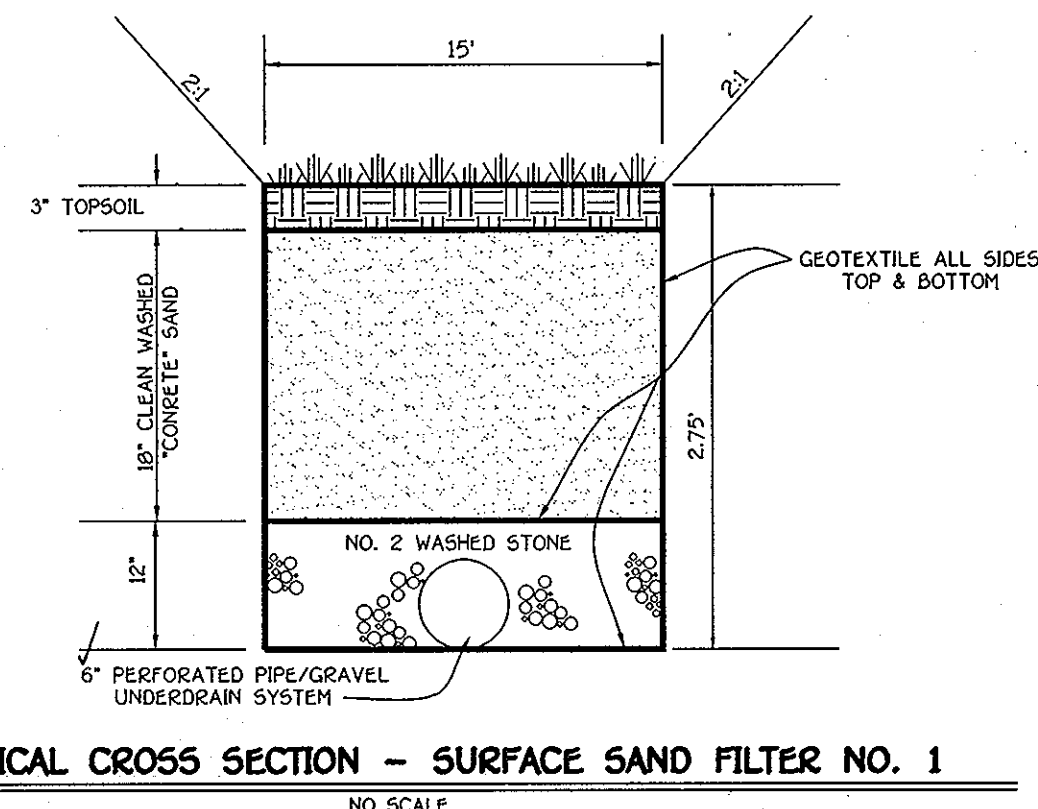
CLEAN-OUT SCHEDULE						
STRUCTURE NO.	TOP ELEVATION	INVERT	LOCATION		TYPE	REMARKS
			NORTH	EAST		
C.O-3A	456.40	453.50	N 508684.61	E 1346737.04	SEE DETAIL THIS SHEET	
C.O-3B	457.00	454.60	N 508653.05	E 1346727.22	SEE DETAIL THIS SHEET	
C.O-4A	452.00	447.26	N 508663.43	E 1346880.59		
C.O-4B	451.25	448.00	N 508643.26	E 1346904.49		
C.O-4C	450.30	448.50	N 508694.08	E 1346807.89		
C.O-4D	456.10	452.80	N 508634.65	E 1346764.27		
C.O-6A	452.20	449.00	N 508736.02	E 1347072.47		
C.O-6B	455.10	451.50	N 508652.52	E 1347111.03		
C.O-6C	455.45	451.00	N 508670.39	E 1347061.84		
					LOCATED IN SAND FILTER NO. 1	SEE DETAIL THIS SHEET

**BUILDER**  
 FISHER, COLLINS & CARTER, INC.  
 6000 HANOVER RD., SUITE 100  
 ELICOTT CITY, MARYLAND 21042  
 TEL: 301-271-1100

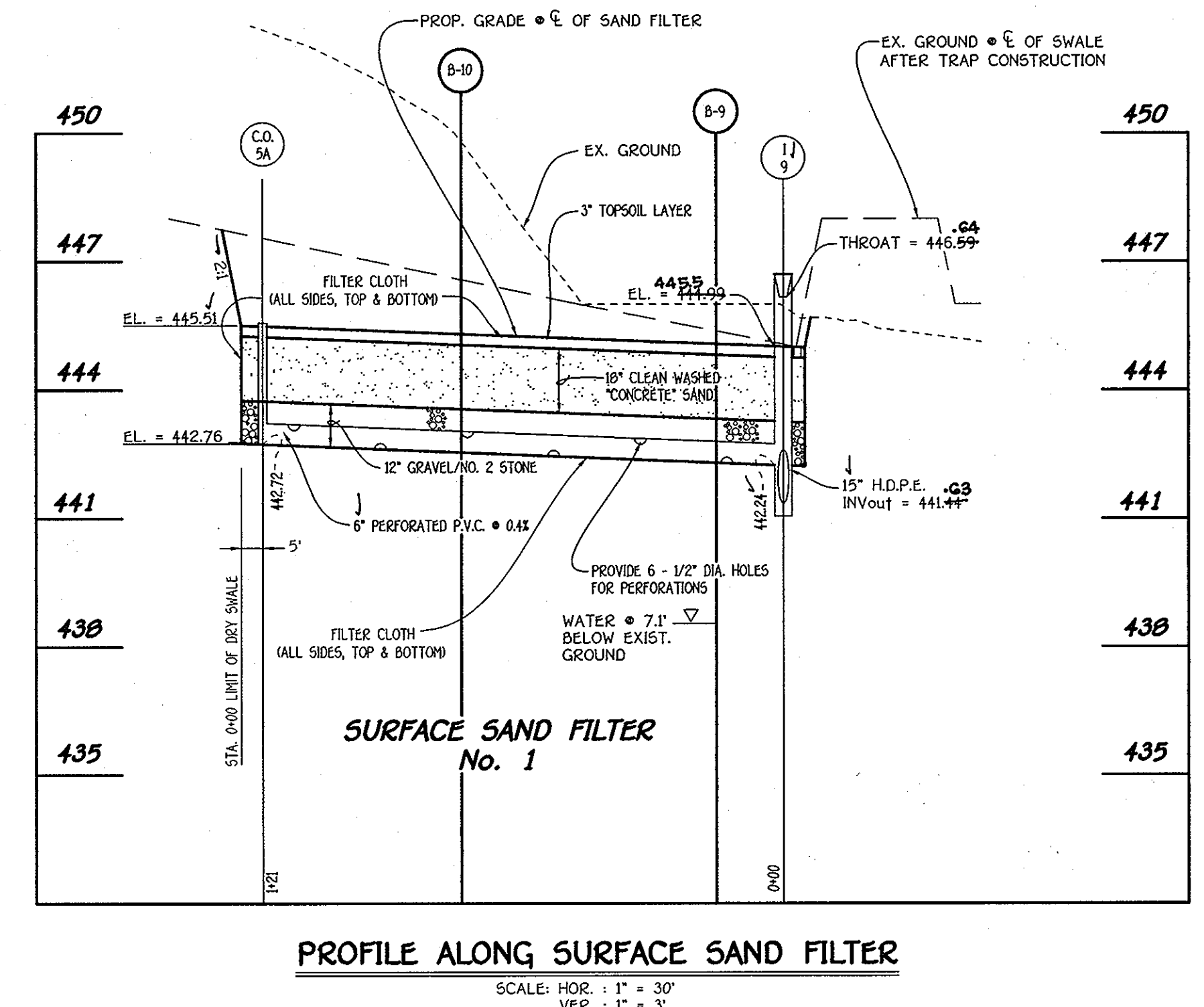
**BUILDER**  
 WARELY BROTHERS & SONS, INC.  
 1200 DORSEY HALL DRIVE  
 ELICOTT CITY, MARYLAND 21042  
 TEL: 301-271-1100



RIP-RAP CHANNEL DESIGN DATA											
STRUCTURE	AREA	WETTED PERIMETER	R	R <sup>2/3</sup>	S	S <sup>1/2</sup>	W	d	N	V (ft. <sup>3</sup> /s)	Q (c.f.s.)
S-1	8.95	9.99	0.8959	0.9250	0.005	0.0707	4.0'	1.34'	0.04	2.44	21.50
S-2	4.34	7.49	0.5794	0.6937	0.005	0.0707	4.0'	0.78'	0.04	1.83	7.83



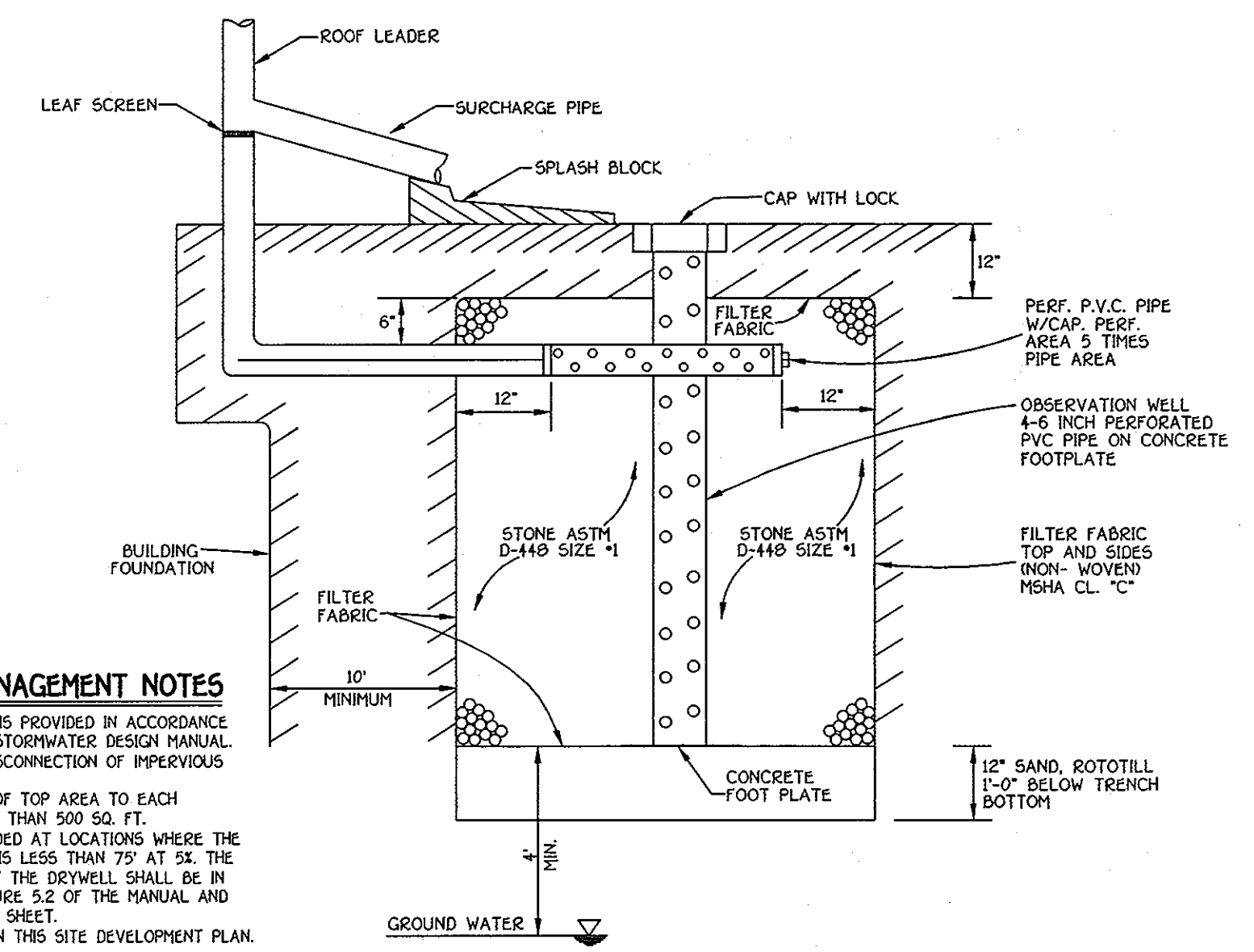
TYPICAL CROSS SECTION - SURFACE SAND FILTER NO. 1  
 NO SCALE



PROFILE ALONG SURFACE SAND FILTER  
 SCALE: HOR. 1" = 30'  
 VER. 1" = 3'

**CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS**

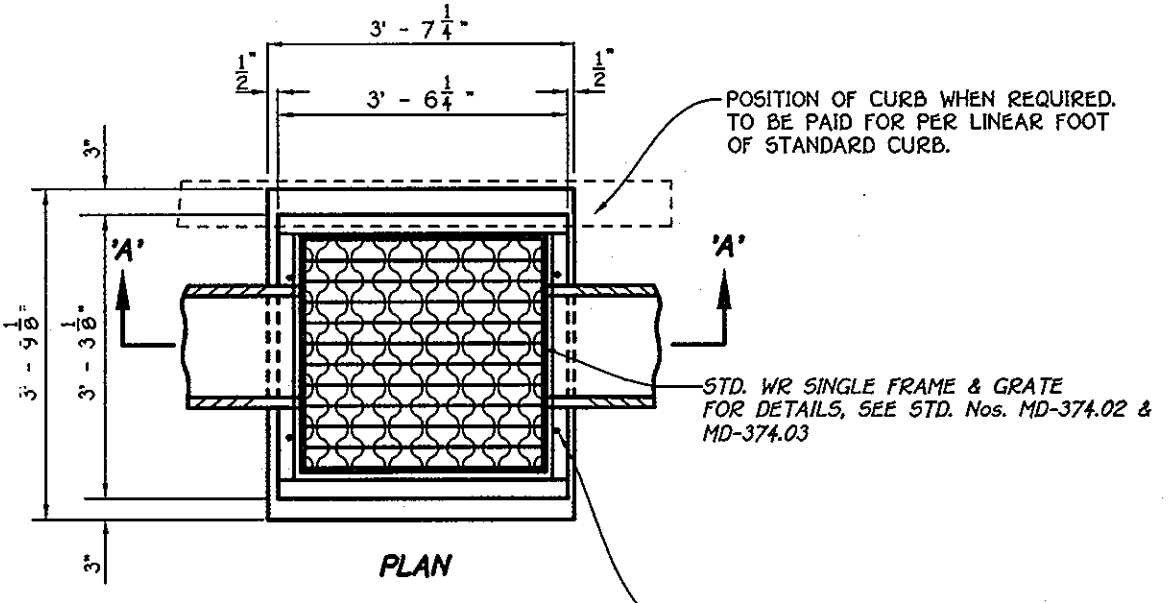
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from puncturing, cutting or tearing. Any damage other than an occasional hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment, both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.



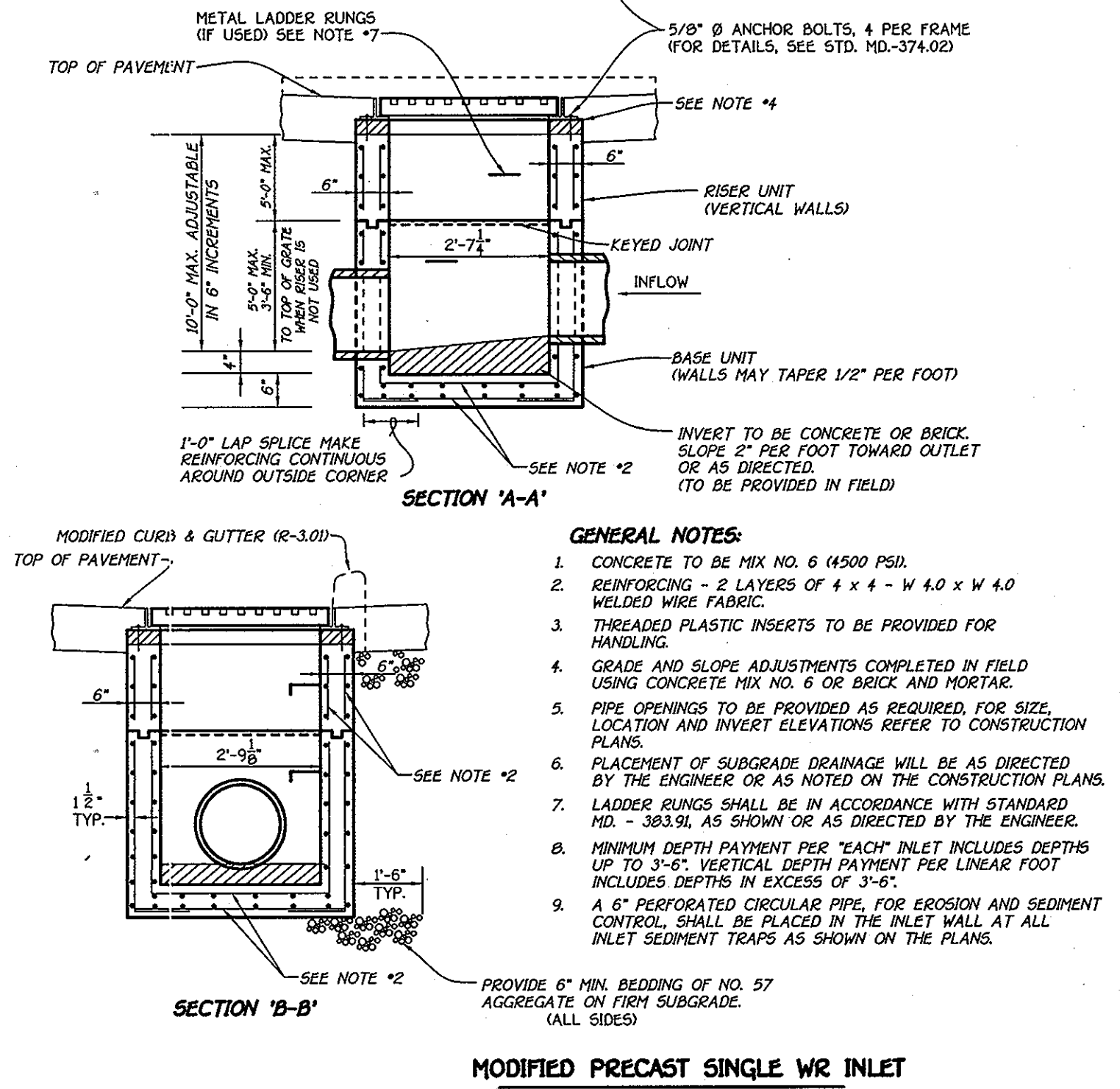
**STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL.
- CREDITS ARE GIVEN FOR DISCONNECTION OF IMPERVIOUS COVERS.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE LESS THAN 500 SQ. FT.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE FIGURES 52 OF THE MANUAL AND THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

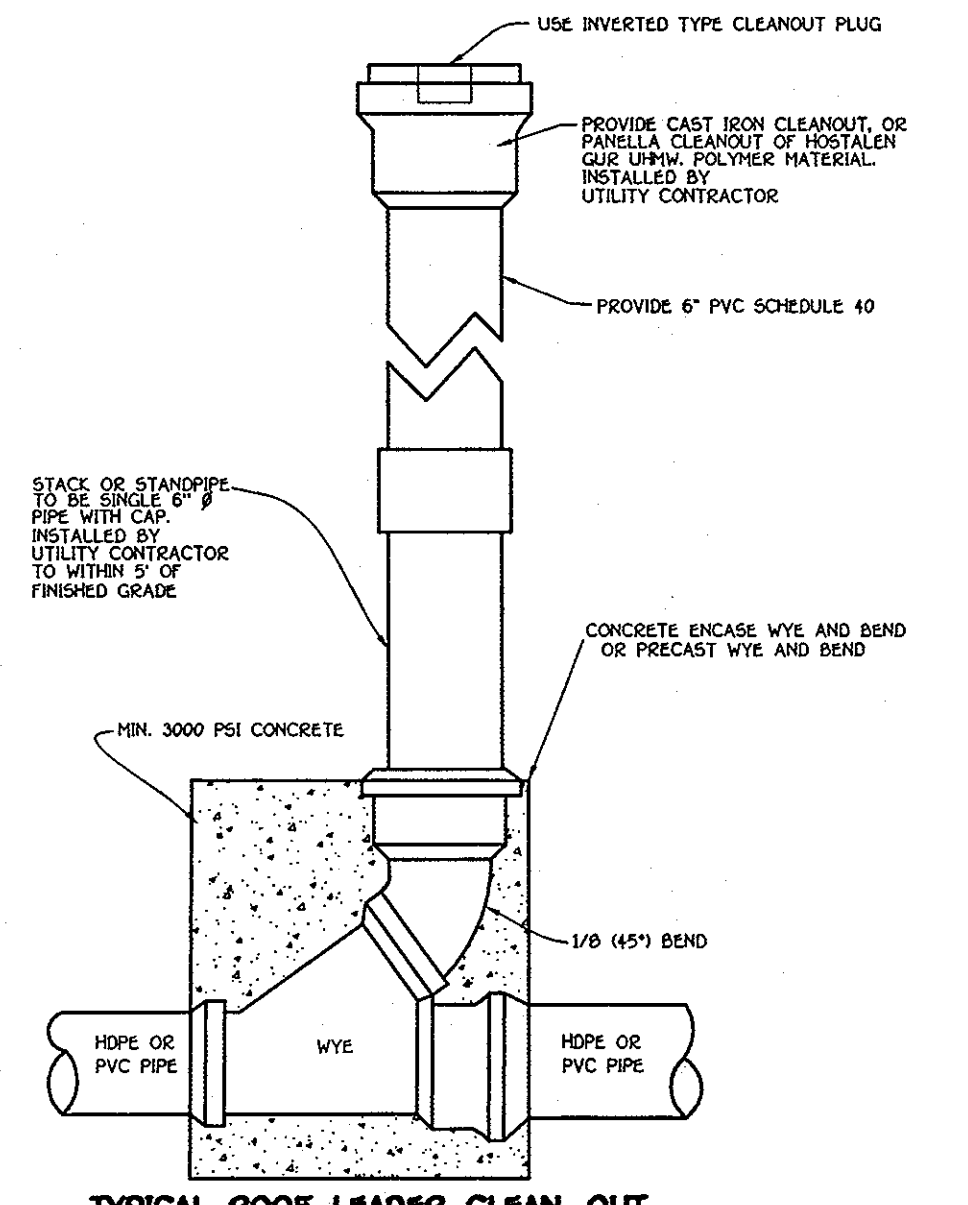
DRY WELL CHART											
UNIT NO.	DISCONNECTION LENGTHS W/ BY DISCONNECTION			W/ BY TREATED BY STORAGE			REQD. STORAGE VOLUME	SIZE OF DRYWELL		VOLUME PROVIDED	
	REAR	FRONT	REAR	FRONT	REAR	FRONT		REAR	FRONT	REAR	FRONT
38	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
39	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
40	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
41	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
42	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
43	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.
44	25'	41'	20'	40'	80'	60'	32 C.F.	24 C.F.	3.2'x3.2'x2'	2.9'x2.9'x2'	32.77 C.F.



DRY WELL DETAIL  
 NOT TO SCALE



MODIFIED PRECAST SINGLE WR INLET  
 NOT TO SCALE



TYPICAL ROOF LEADER CLEAN-OUT  
 NOT TO SCALE

NO.	REVISION	DATE
5	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	3/15/09
4	REMOVE MH 6 & 7 FROM STR. SCHEDULE, CO 1A-2C, @ C & 10A-10D FROM CO SCHEDULE AND REV. PIPE SCHEDULE	10/23/08
3	ADD BUILDERS' NAMES & ADDRESSES, REV. UNITS 1-7, 45-48 & 49-52 CLEAN OUT SCHEDULE	09/05/08
2	REV. UNITS 1-7, 42-68 & ASSOCIATED UTILITIES	04/07/08
1	REV. CLEANOUT AND PIPE SCHEDULES	02/08/04

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PLACE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2855

**ENGINEER'S CERTIFICATE**  
 "I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
 Signature of Engineer: \_\_\_\_\_ Date: \_\_\_\_\_

**DEVELOPER'S CERTIFICATE**  
 "I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic site inspection by the Howard Soil Conservation District."  
 Signature of Developer: \_\_\_\_\_ Date: \_\_\_\_\_

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: Department of Planning and Zoning  
 Chief, Division of Land Development  
 Chief, Development Engineering Division

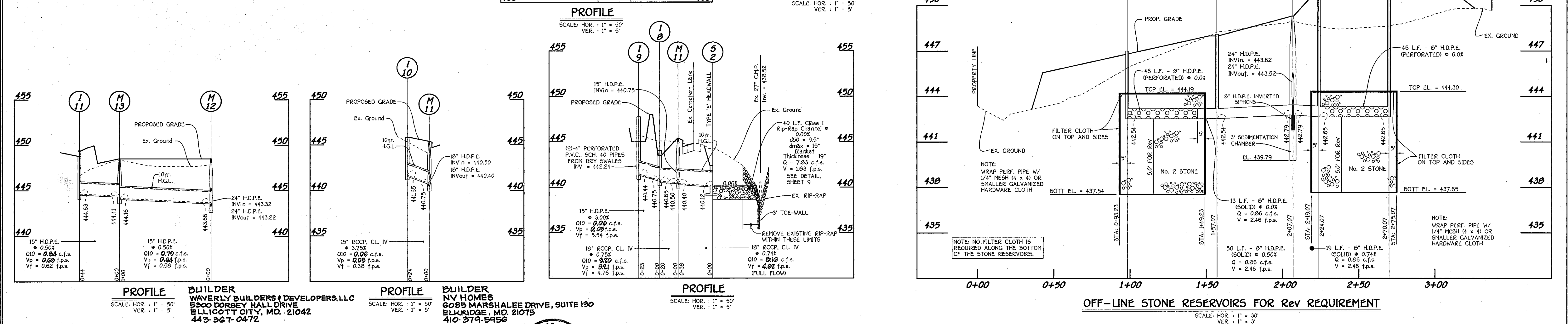
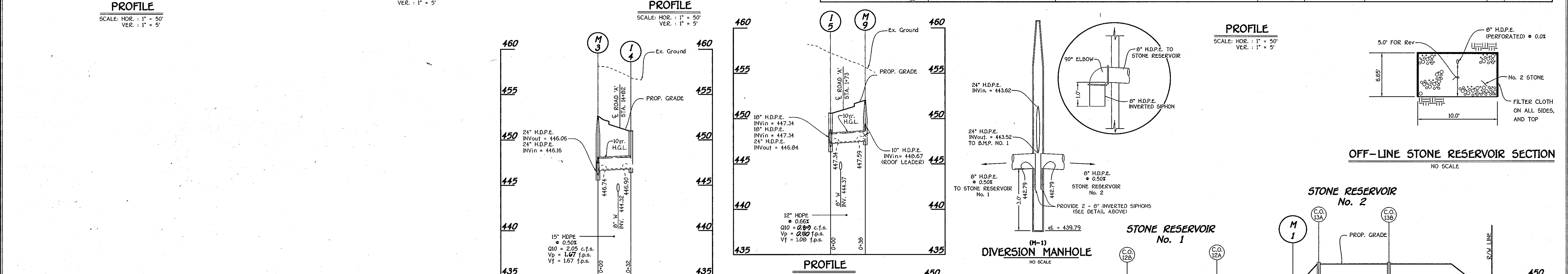
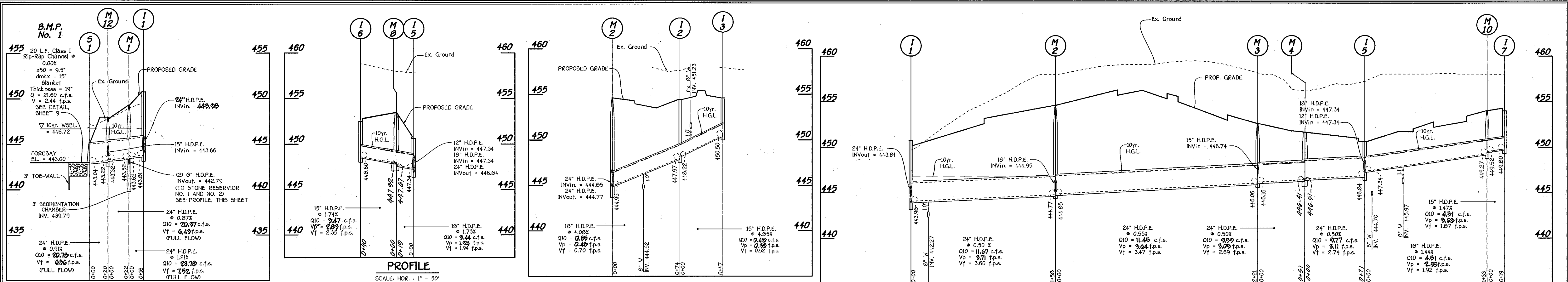
OWNERS: CHARLES J. & ELLEN H. NEHRPINS, 7160 COLUMBIA GATEWAY DRIVE, COLUMBIA, MARYLAND 21046  
 JOSEPH W. & FRANCES L. GERMAN, ETAL, 10280 FREDERICK ROAD, ELICOTT CITY, MARYLAND 21042  
 DEVELOPER: LAND DESIGN AND DEVELOPMENT, INC., 5300 DORSEY HALL DRIVE, ELICOTT CITY, MARYLAND 21042

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
18173-18174	24	R-SA-B	16	2nd	6022.00

REVISED STORM DRAIN SCHEDULES & DETAILS  
**ELICOTT SQUARE TOWNHOUSE CONDOMINIUMS**  
 TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 9 OF 22 SDP 05-112  
 "As Built" 6-15-2011

K:\SDP\03\030780\SDP REPLACEMENT SHEETS\SDP REPLACEMENT SHEET 9A.DWG SDP PROFILES.dwg, 4/21/2009 2:00:20 PM, banyan, 1:50





NO.	REVISION	DATE
5	REVISED STORM DRAIN PROFILES	4/21/09
4	Remove Storm Drain Profile from M12 to M11	10-23-08
3	Q to M11 including M11C & M117	
2	Add builder names & addresses	5-9-08
1	Revise Units 1-7, 40-08 & 08500 UTILITIES	4-7-08
1	Revise Units 28 thru 44 & 08500 UTILITIES	1-22-08

**ENGINEER'S CERTIFICATE**  
 I certify that the plan, specification and erosion control represents a practical and workable plan based on the knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature: *[Signature]* Date: 9/28/07

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic inspection by the Howard Soil Conservation District.  
 Signature of Developer: *[Signature]* Date: 9/28/07

Reviewed for HOWARD SCD and meets Technical Requirements.  
 Date: 9/28/07  
 U.S.D.A.-Natural Resources Conservation Service  
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Date: 9/28/07

**OWNERS**  
 CHARLES J. & ELLEN H. NEMPHOS  
 7160 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046

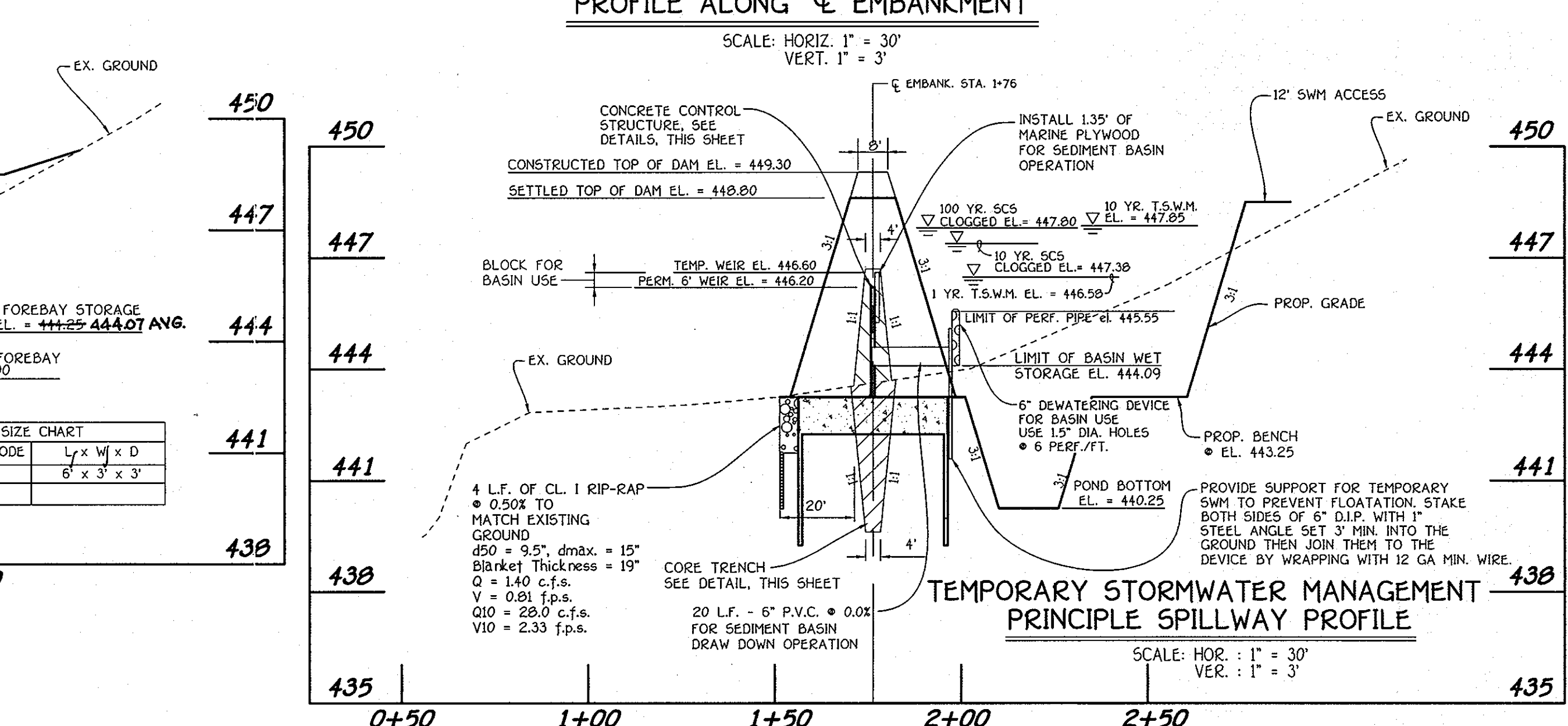
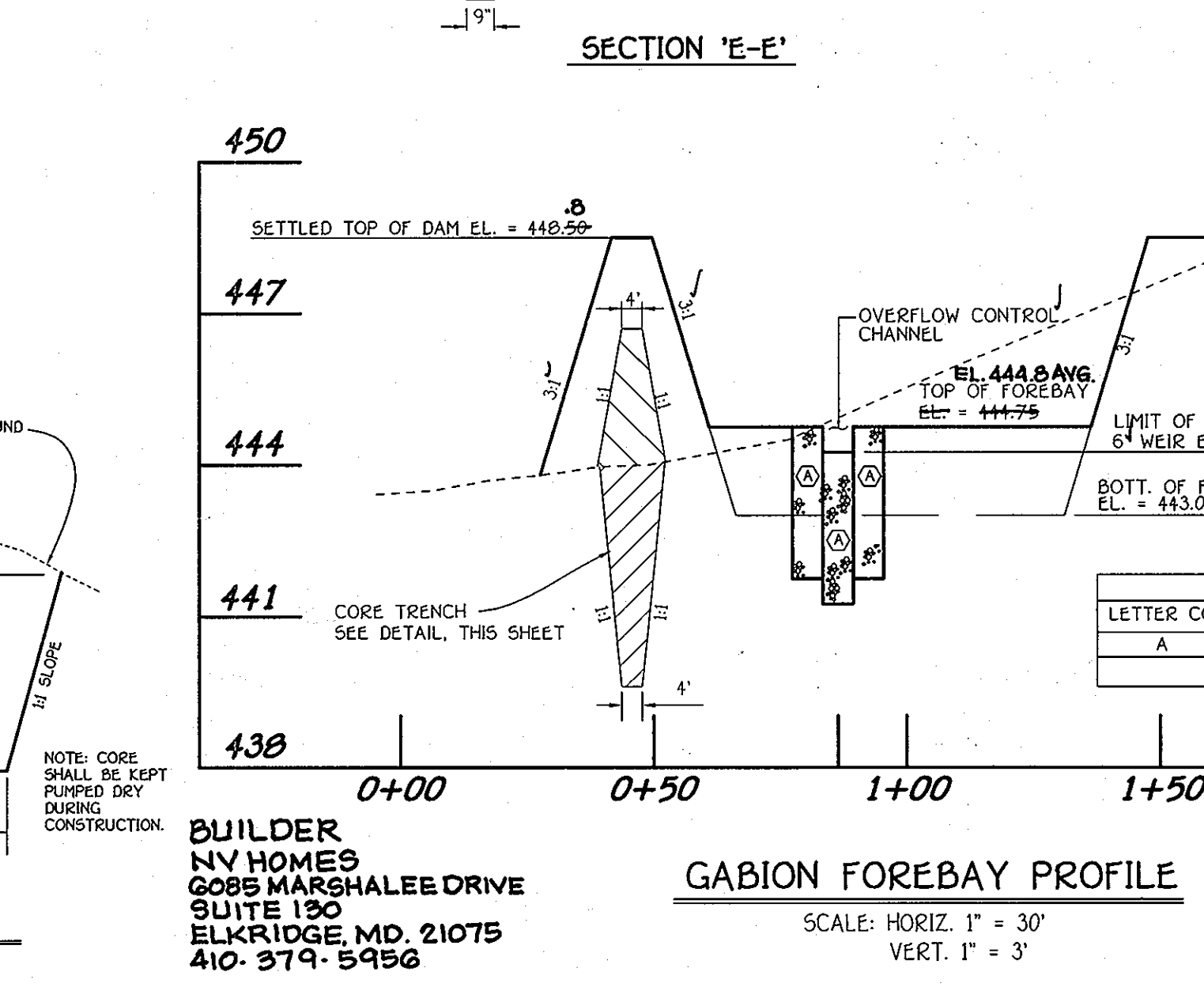
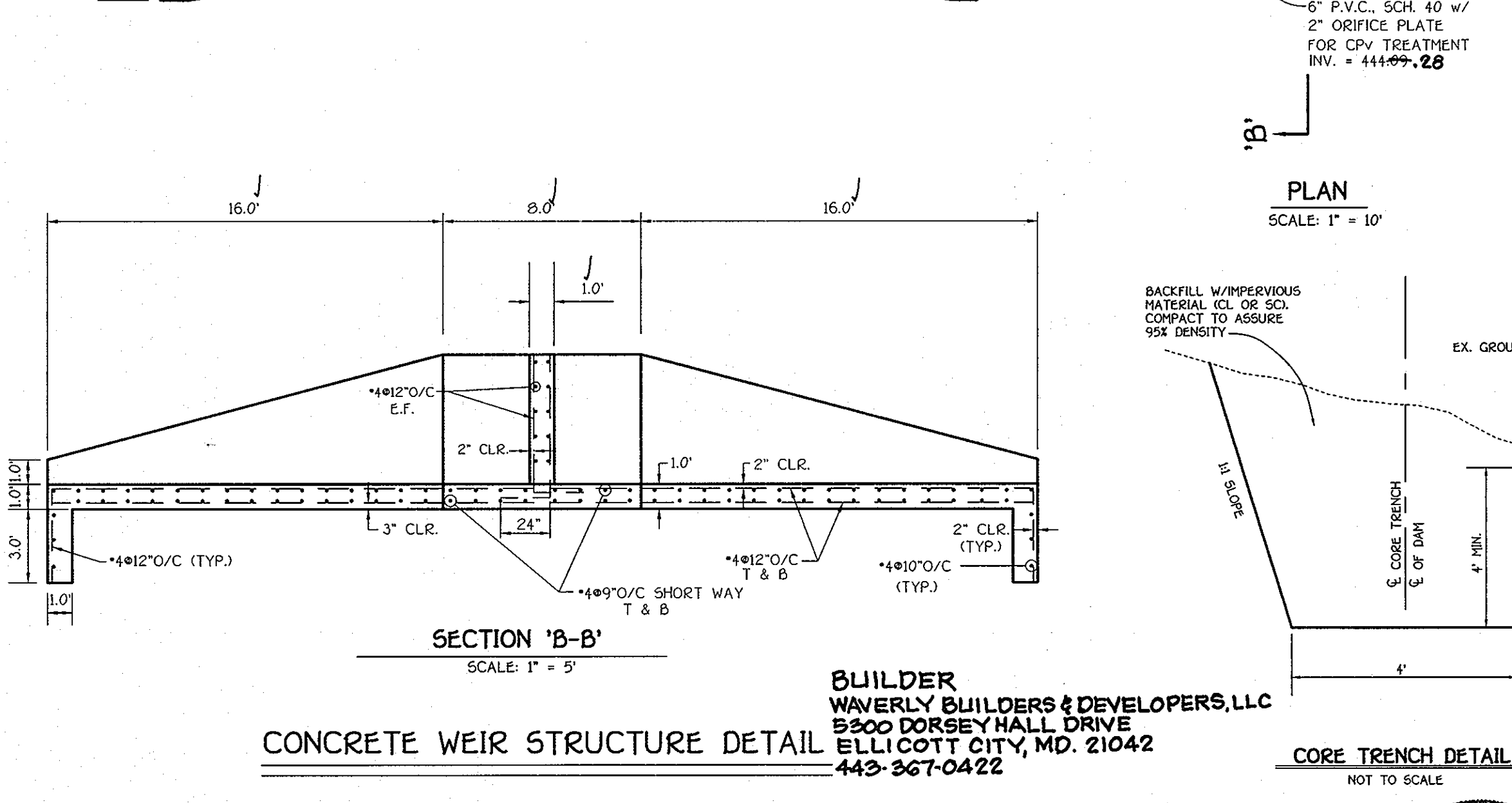
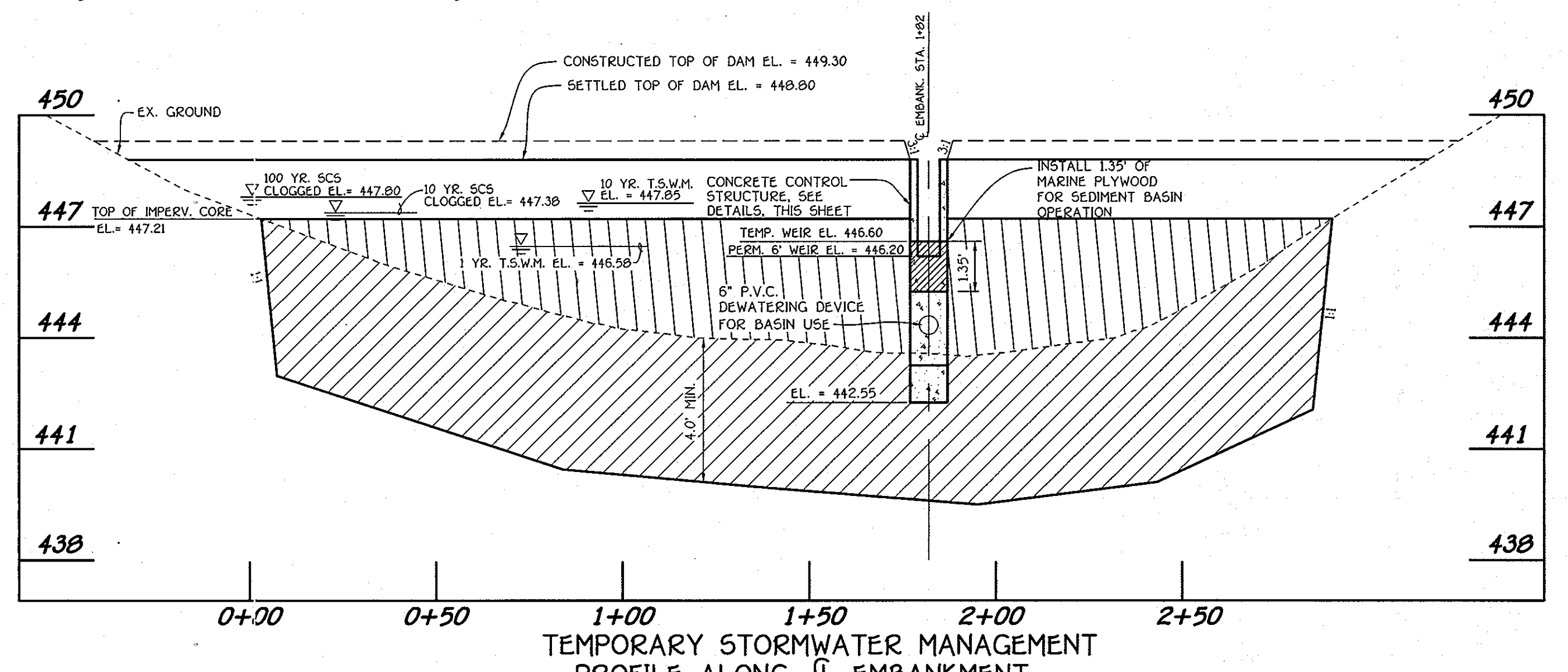
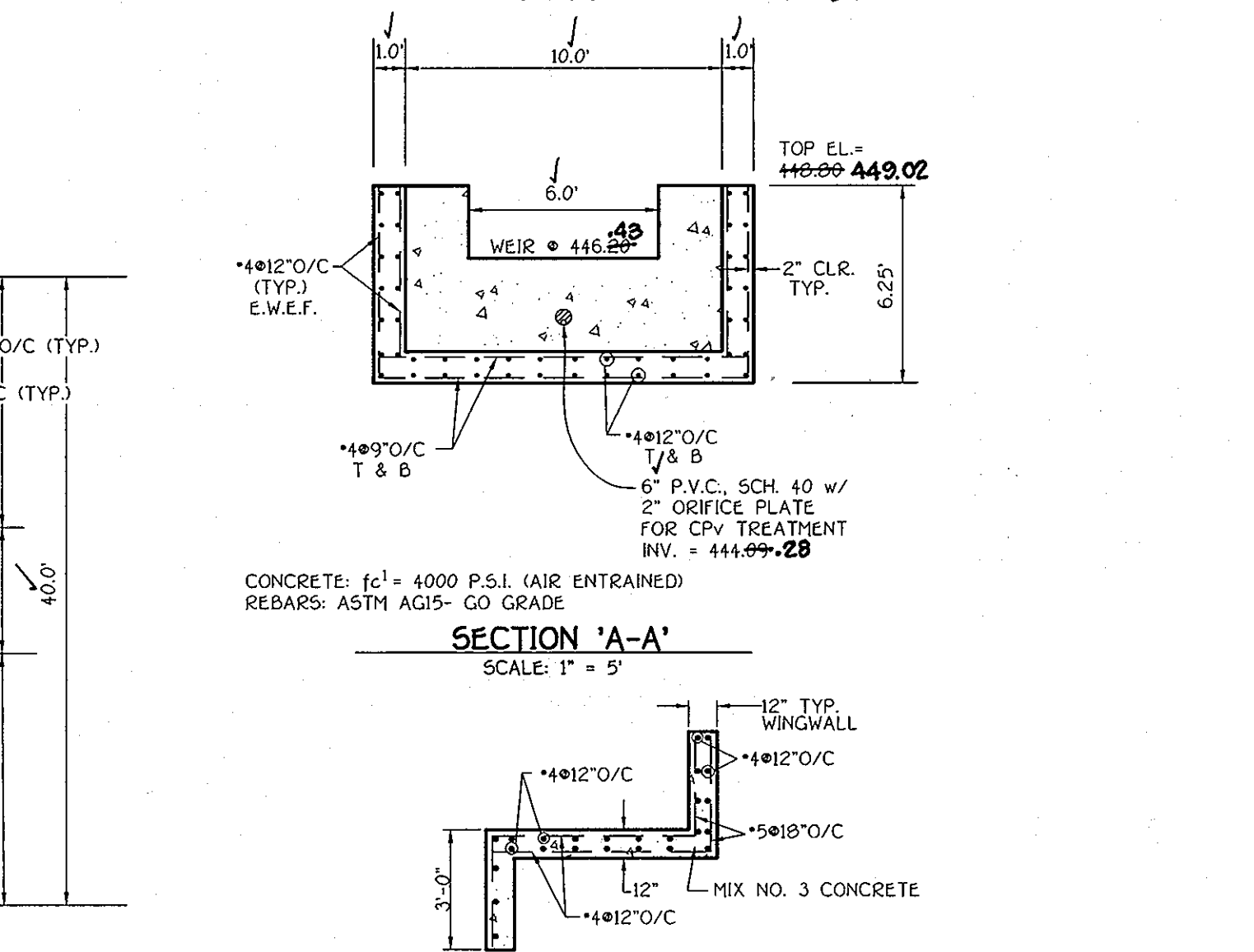
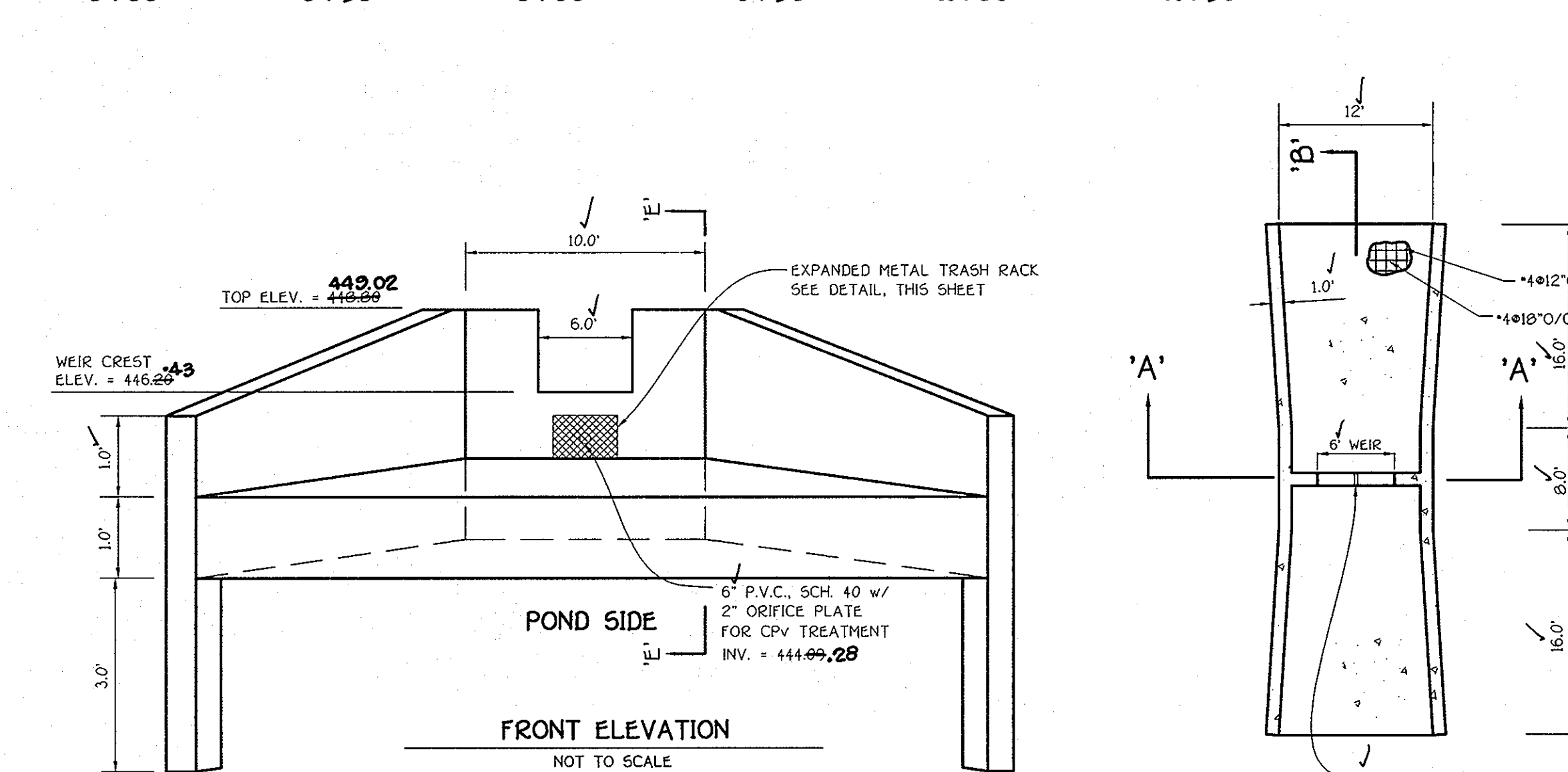
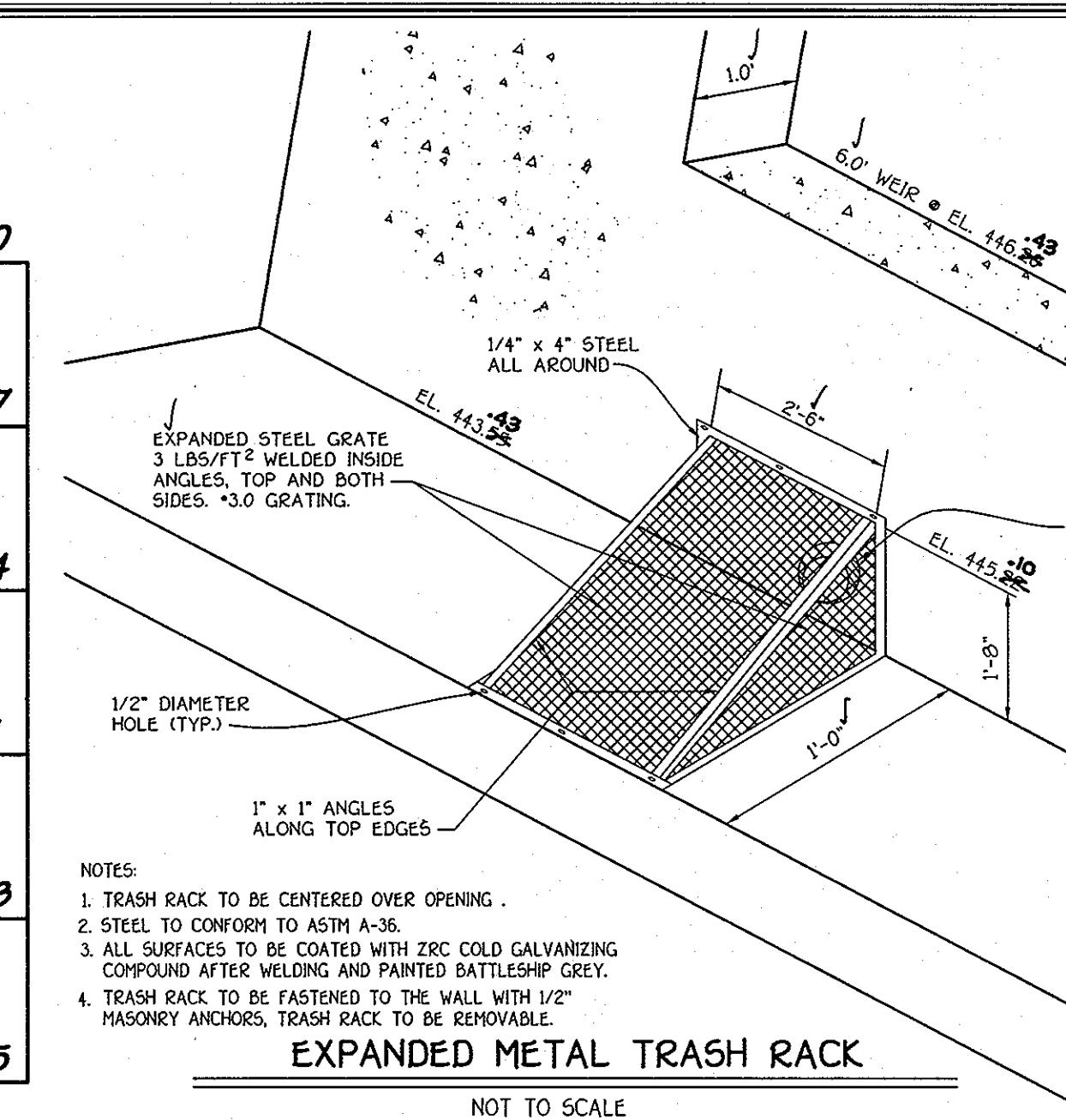
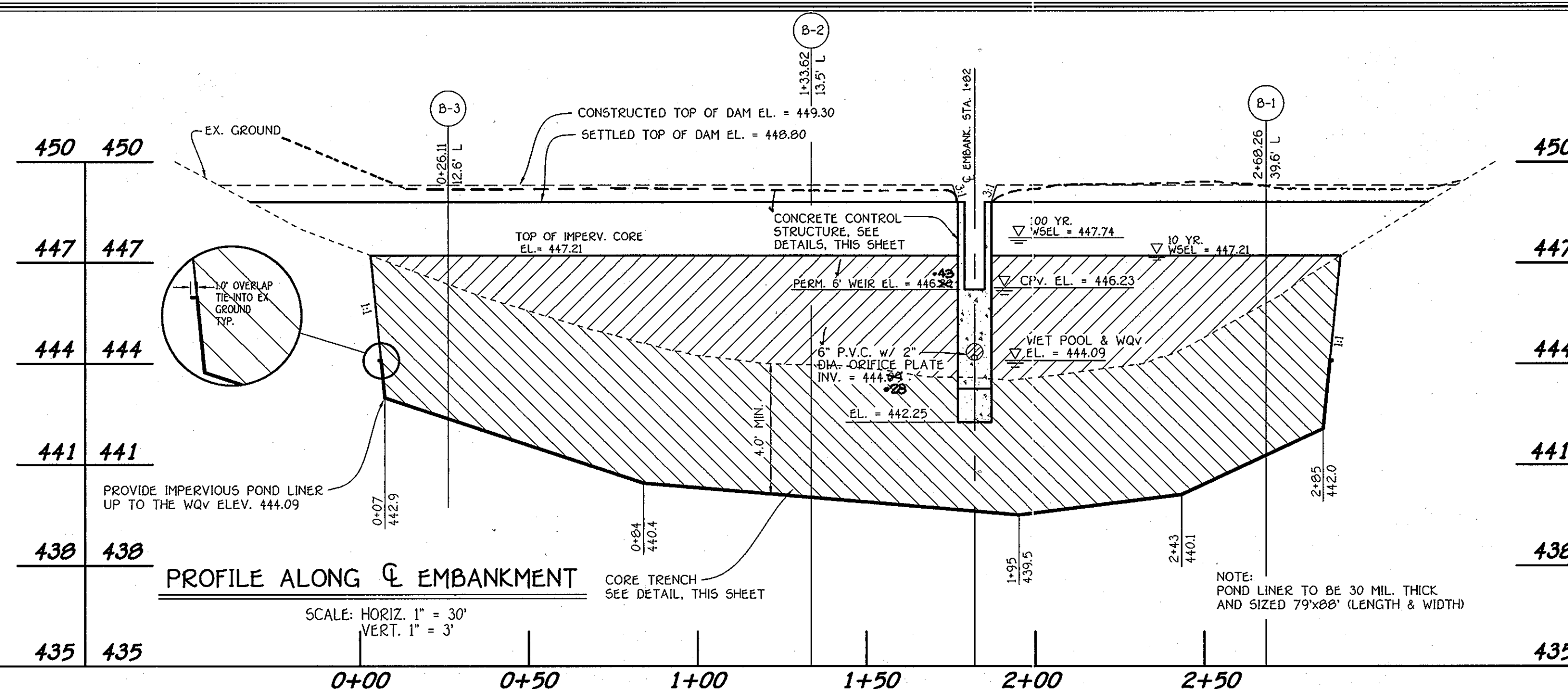
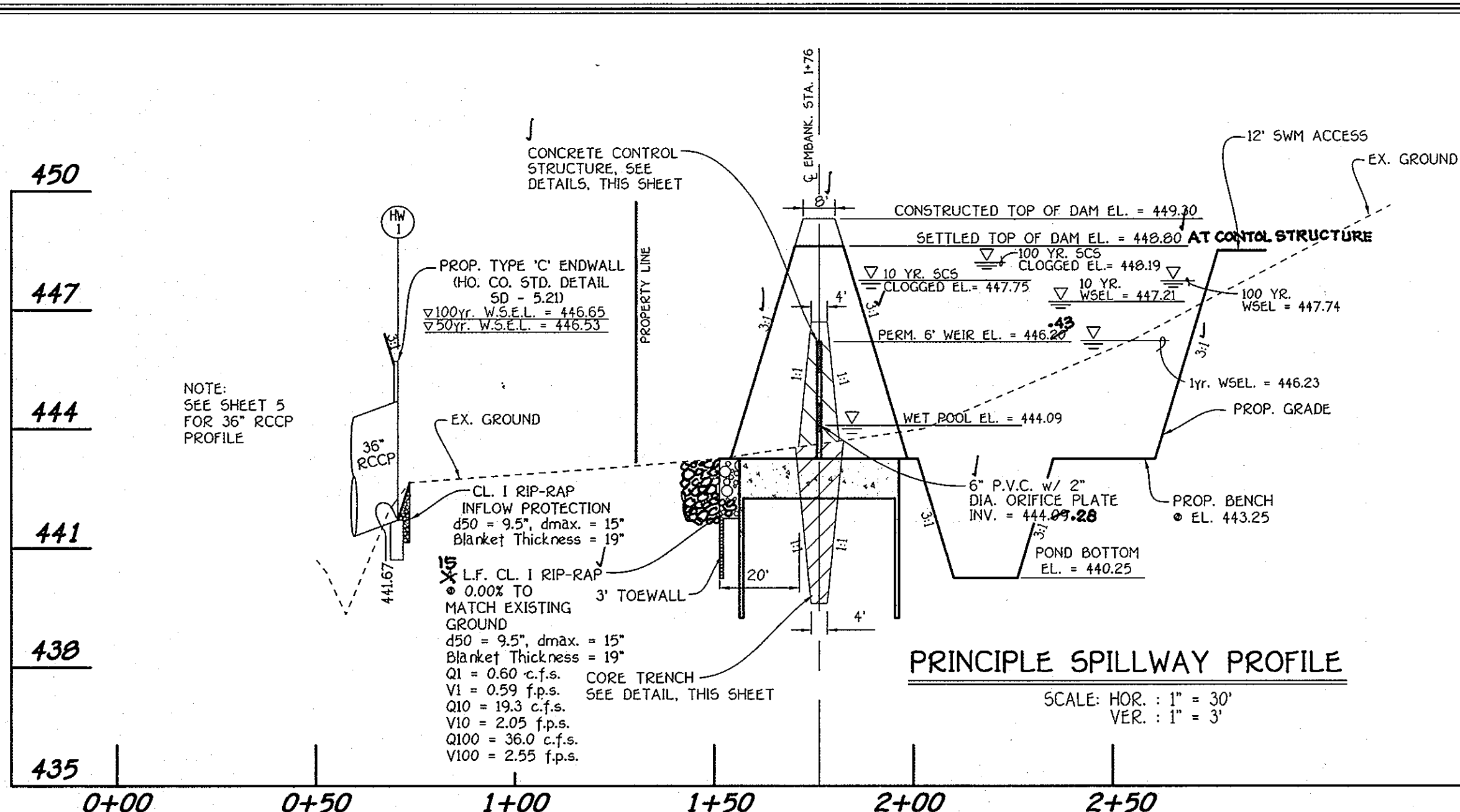
**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director - Department of Planning and Zoning  
 Chief, Division of Land Development  
 Chief, Development Engineering Division

SUBDIVISION	ELLICOTT SQUARE	SECTION/AREA	N/A	UNIT Nos.	1-30 AND 33-70
FLAT NO.	18173-18174	BLOCK NO.	24	TAX/ZONE	R-SA-B 16
WATER CODE	H 07	SEWER CODE		ELEC. DIST.	2nd.
				CENSUS TR.	6022.00

STORM DRAIN PROFILES  
**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS  
 TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 10 OF 22 SDP 05-112





**BUILDER**  
**WAVELY BUILDERS & DEVELOPERS, LLC**  
 8300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD. 21042  
 443-267-0422

**ENGINEER'S CERTIFICATE**  
 I certify that the design and construction of the stormwater management system is in accordance with the approved plans and specifications. I also certify that the design and construction of the stormwater management system is in accordance with the approved plans and specifications.

**DEVELOPER'S CERTIFICATE**  
 I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 1800 481 - 2895

**STATE OF MARYLAND**  
 DEPARTMENT OF THE ENVIRONMENT  
 HOWARD SOIL CONSERVATION DISTRICT

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**OWNERS**  
 CHARLES J. & ELLEN H. NEMPHOS  
 1760 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046

**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042

**REVIEWED BY:** HOWARD SCD and meets Technical Requirements.  
 U.S.D.A. - Natural Resources Conservation Service  
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Howard SCD

**APPROVED - DEPARTMENT OF PLANNING AND ZONING**

**Director - Department of Planning and Zoning**  
**Chief, Planning and Development**  
**Chief, Development Engineering Division**

**SUBDIVISION**  
 ELLICOTT SQUARE

**SECTION/AREA**  
 N/A

**LOT Nos.**  
 1-90 AND 93-70

**PLAT NO.**  
 18173-18174

**BLOCK NO.**  
 24

**ZONE**  
 R-SA-B

**TAX/ZONE**  
 16

**ELEC. DIST.**  
 2nd

**CENSUS TR.**  
 5022.00

**WATER CODE**  
 H 07

**SEWER CODE**  
 5083400

**STORMWATER MANAGEMENT PROFILES AND DETAILS**  
 B.M.P. FACILITY NO. 1

**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS

**TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63**

**SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND**

**SCALE: AS SHOWN DATE: MARCH, 2009**

**SHEET 11 OF 22 SDP 05-112**



# STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. 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 objectionable 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 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

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, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the 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. 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 track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired 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 formed into a ball it will not crumble, yet not be 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).

**Cut Off Trench** - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

**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 the structure or 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 psi, 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 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 conduits. Average slump of the fill shall be 7" 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 the specified for the core of the embankment or other embankment materials.

## Pipe Conduits

All pipes shall be circular in cross section.

**Corrugated Metal Pipe** - All of the following criteria shall apply for corrugated metal pipe:

1. **Materials** - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight 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 watertight 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-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

**Materials** - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate 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.

2. **Coupling bands, anti-seep collars, end sections, etc.** must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. **Connections**- All connections with pipes must be completely watertight. 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 watertight. Dimple bands are not considered to be watertight.

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 neoprene gasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lay-type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide lugger type band with oring gaskets having a minimum diameter of 1/2-inch greater than the corrugation depth. Pipes 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 lugs, 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 caulking or a neoprene bead.

4. **Bedding** - 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.

**Reinforced Concrete Pipe** - All of the following criteria shall apply for reinforced concrete pipe:

1. **Materials** - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. **Bedding** - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted.

3. **Laying pipe** - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. **Backfilling** shall conform to "Structure Backfill".

5. Other details (Anti-seep collars, valves, etc.) shall be as shown on the drawings.

## Plastic Pipe

The following criteria shall apply for plastic pipe:

1. **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 requirement of AASHTO M252 Type 5, and 12" through 24" inch shall meet the requirement of AASHTO M294 Type 5.

2. **Joints and connections** to anti-seep collars shall be completely watertight.

3. **Bedding** - 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.

4. **Backfilling** shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

## Drainage Diaphragms

When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

## Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, 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 921.09, 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 dikes, 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 way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full 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 excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being so refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

## Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, soil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

## 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 below 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 Permit 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.

## OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITIES

### ROUTINE MAINTENANCE

1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
3. Debris and litter shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

### NON-ROUTINE MAINTENANCE

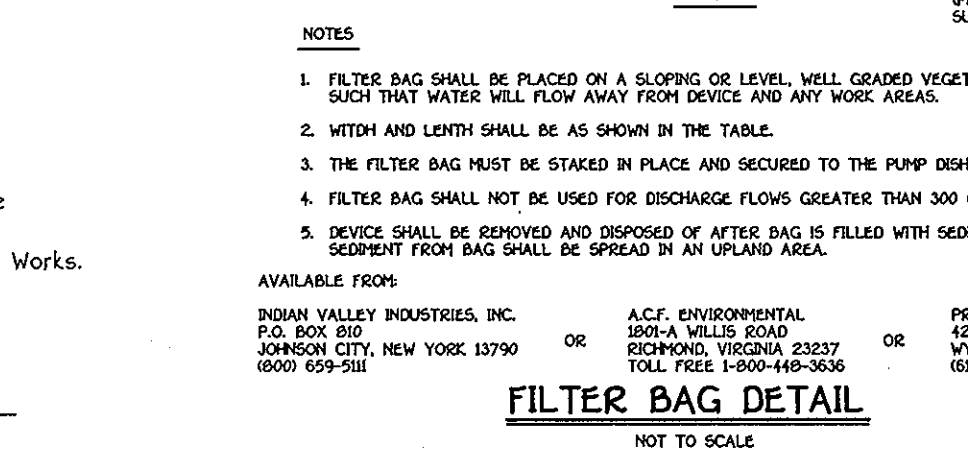
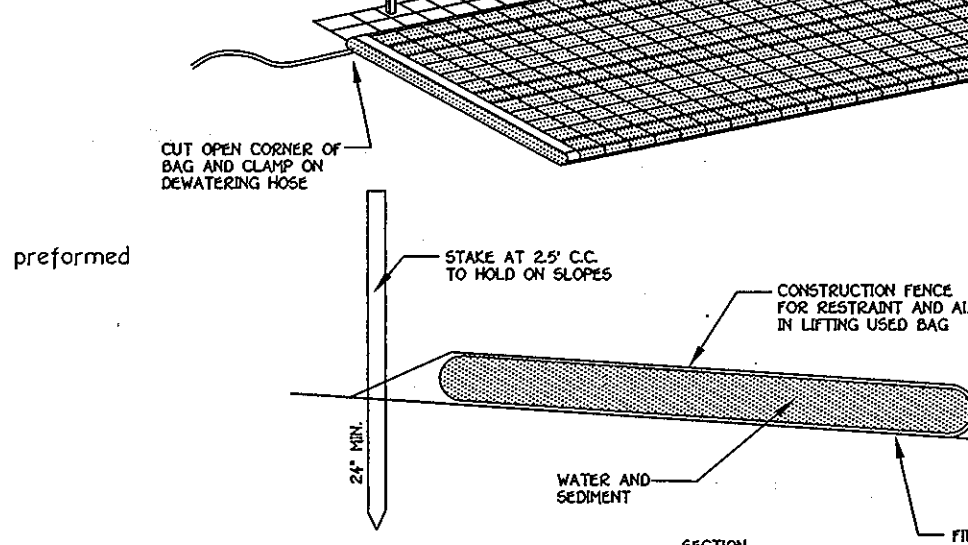
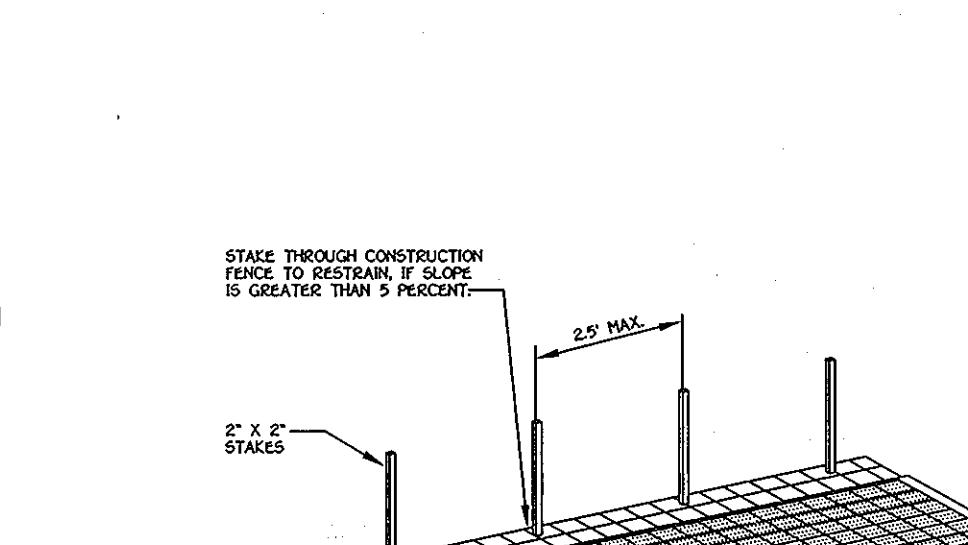
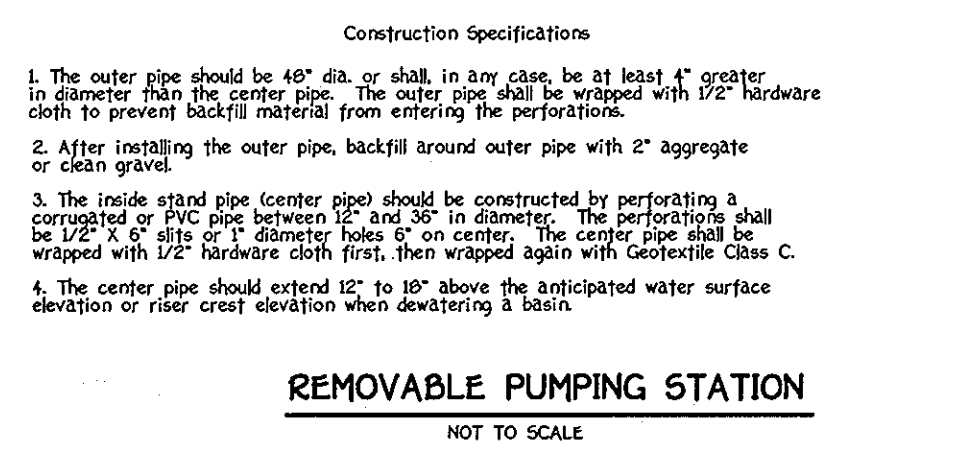
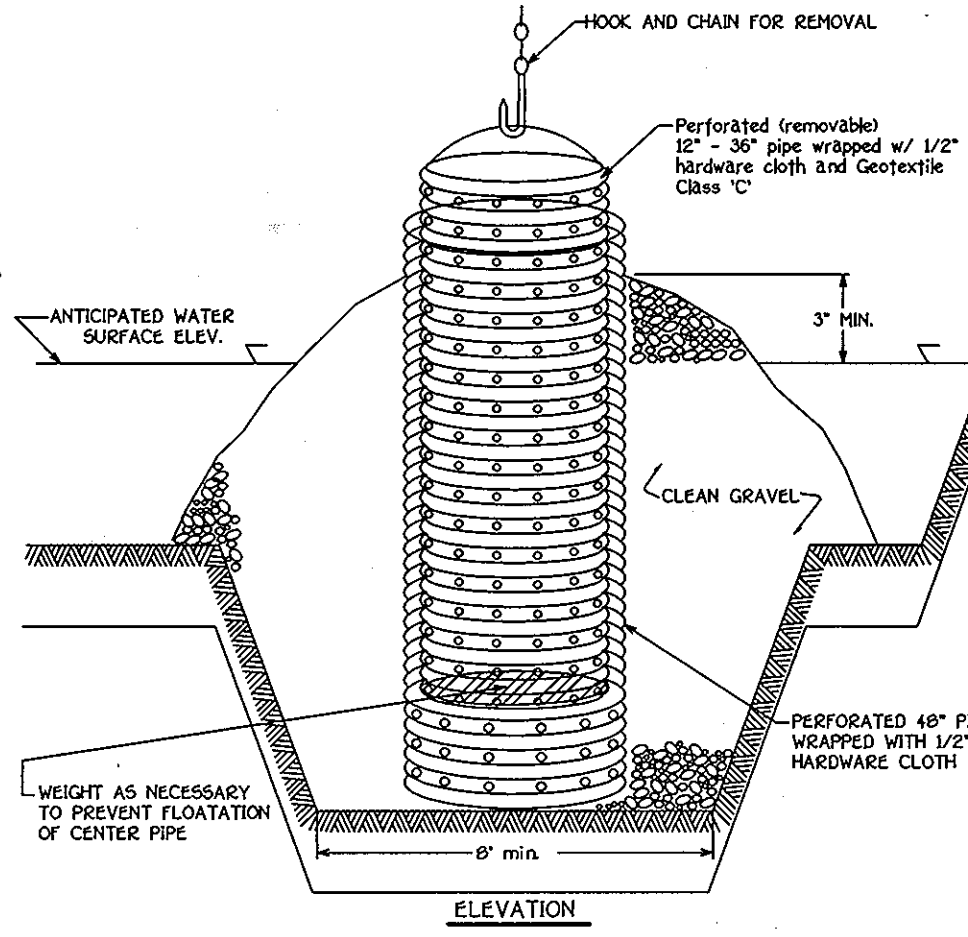
1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
2. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

## Embankment and Cut-off Trench Construction

THE AREA OF THE PROPOSED SWM POND SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING 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 MARYLAND SOIL CONSERVATION SPECIFICATION 37B SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION SC, CH, OR CL.

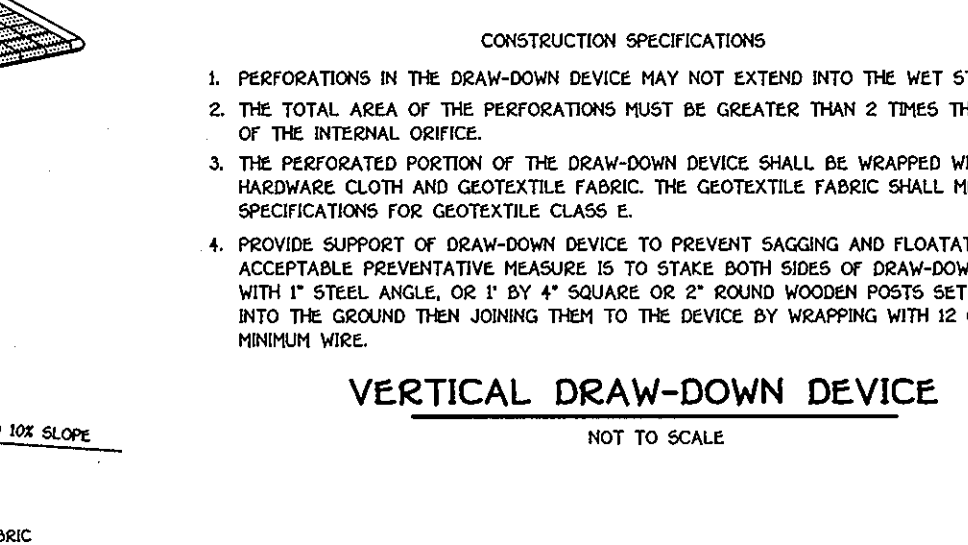
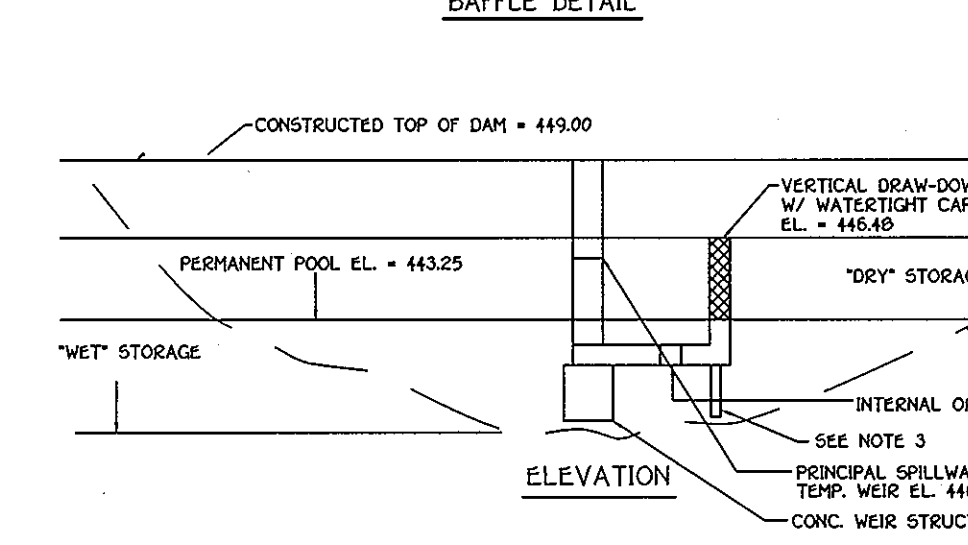
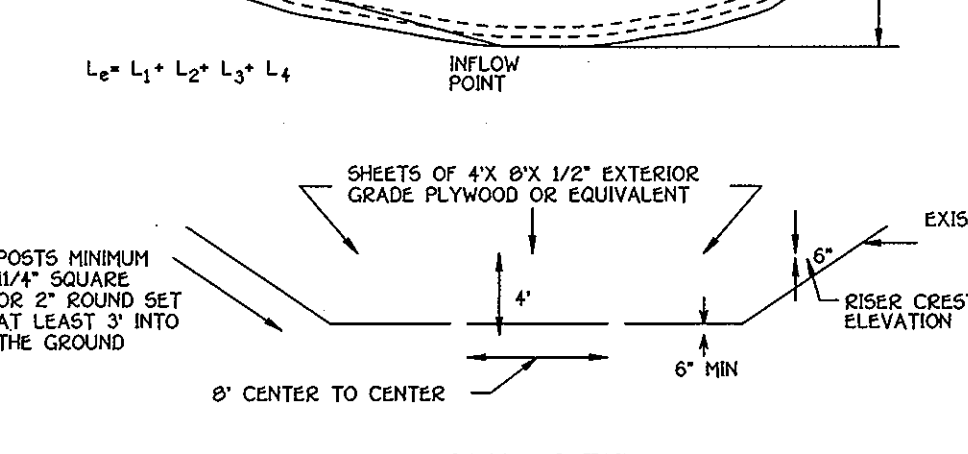
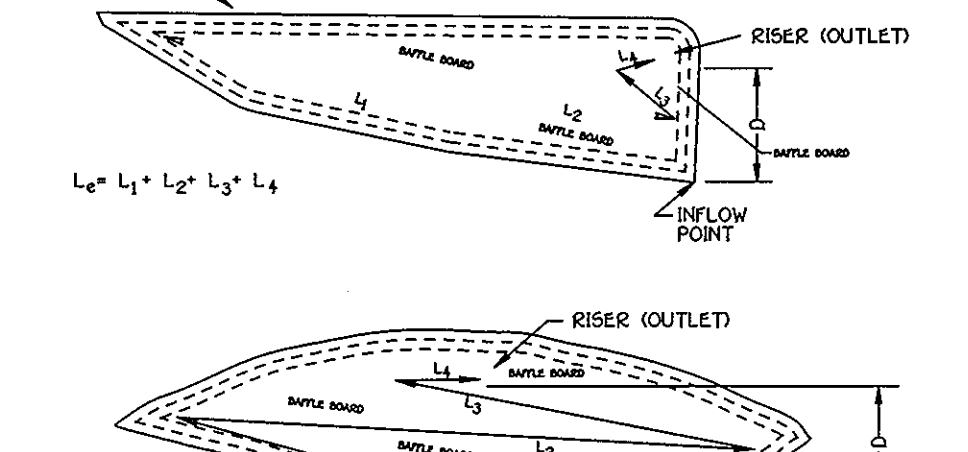
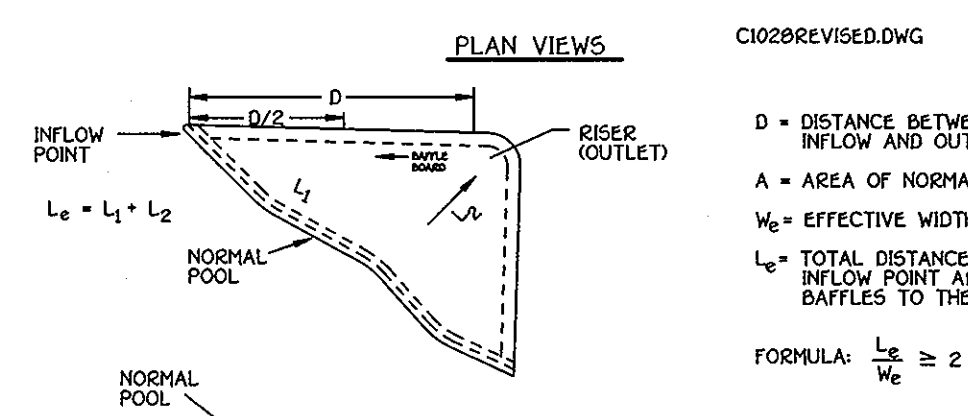
IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD SC5 37B SPECIFICATIONS.



## OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS

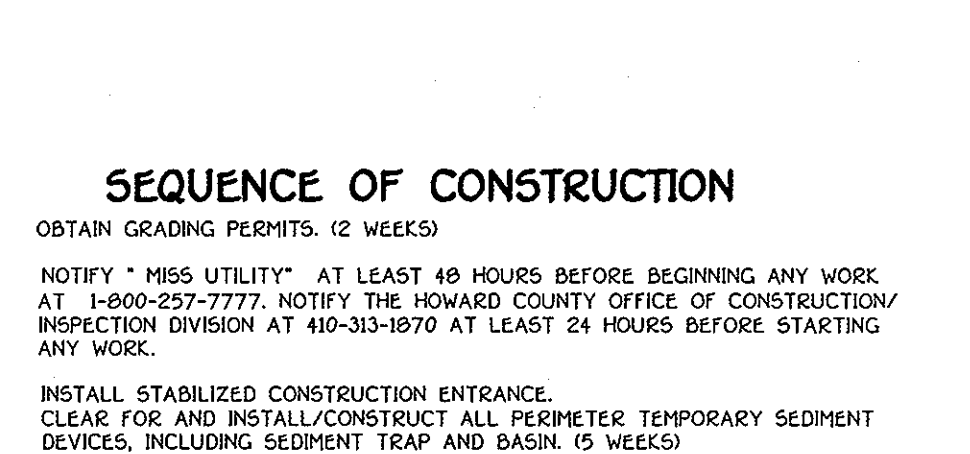
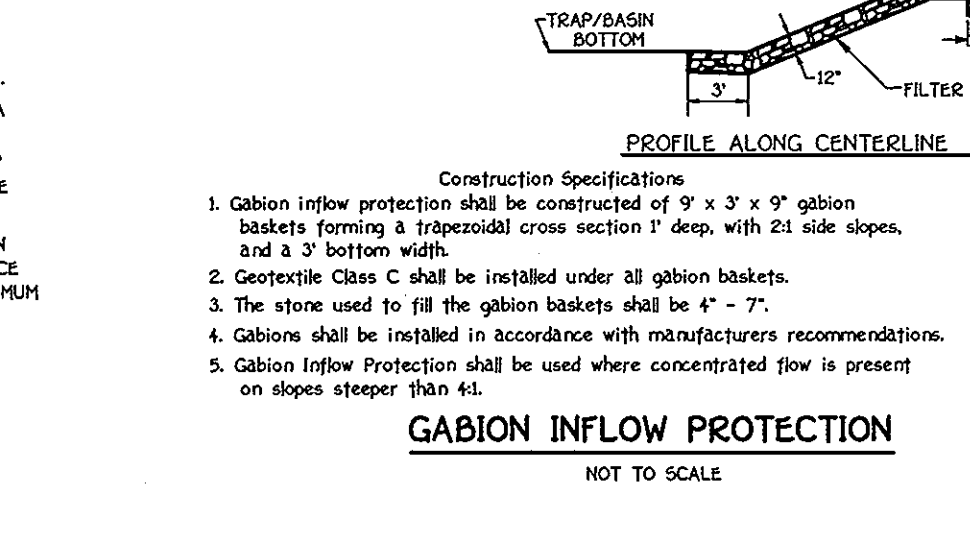
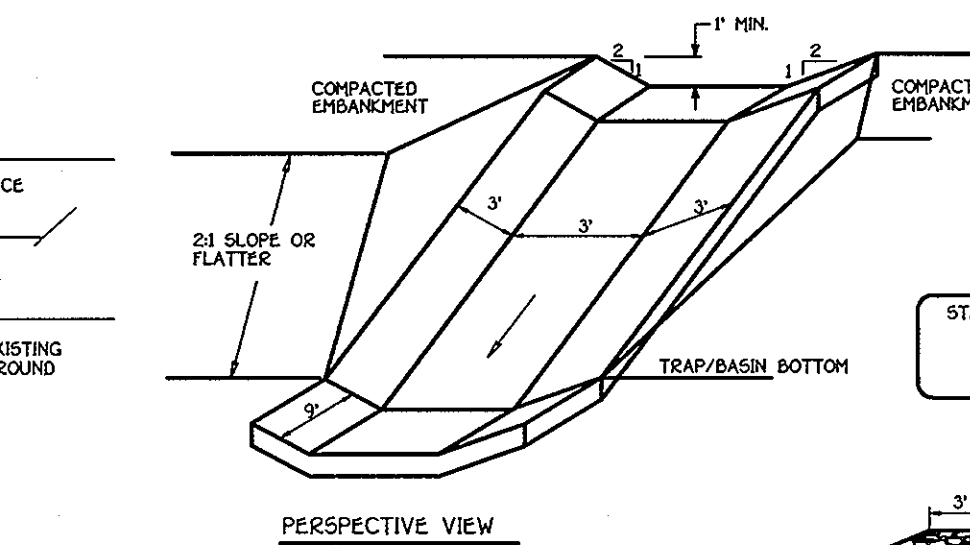
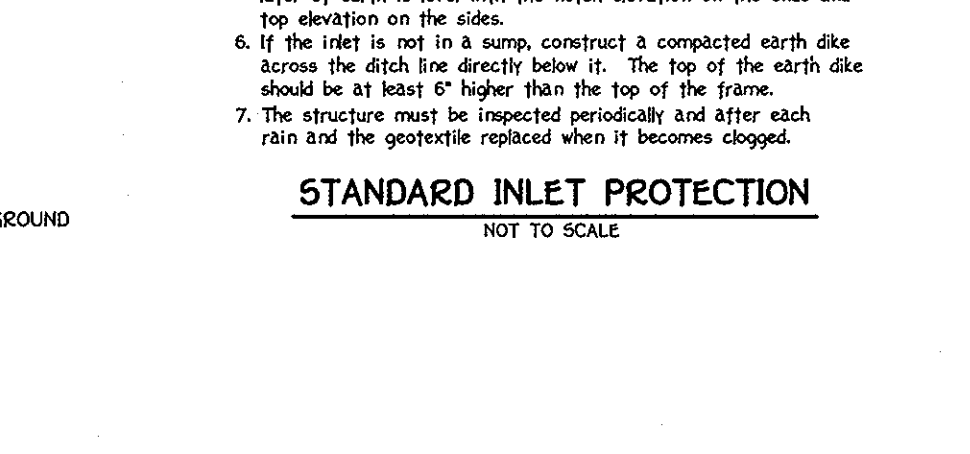
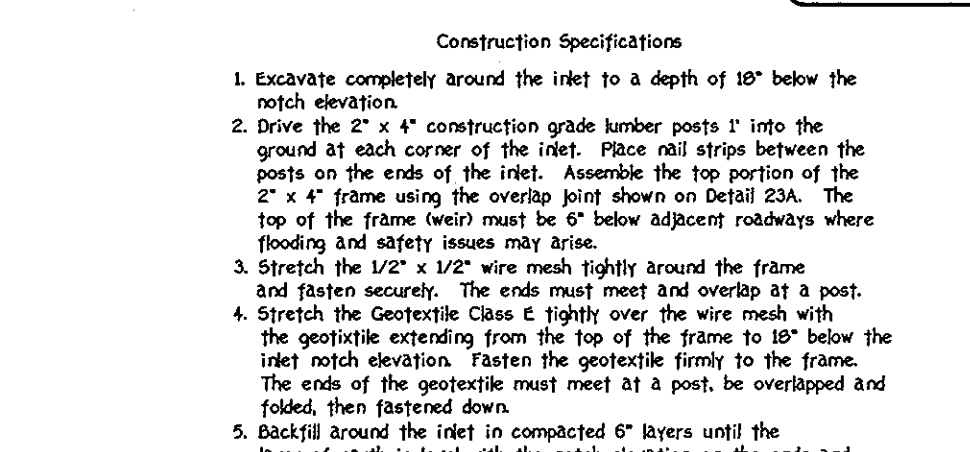
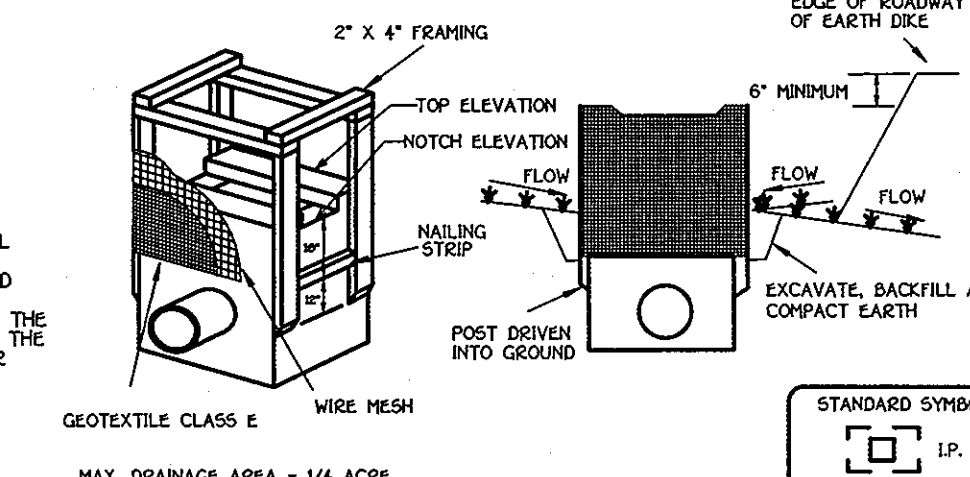
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2. THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 10\"/>

## SEDIMENT BASIN BAFFLES



## OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS

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**BUILDER**  
WAVELY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD. 21042  
443-367-0422

**BUILDER**  
NV HOMES  
6085 MARSHALEE DRIVE  
SUITE 120  
ELK RIDGE, MD 21075  
410-379-5956

NO.	REVISION	DATE
1	REVISE DATE AND UNIT NUMBERS	4/21/07
2	Add builders names & addresses	4-5-08

**ENGINEER'S CERTIFICATE**  
I certify that the design and construction represents a practical and workable plan for sediment and erosion control and that it was prepared in accordance with the knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

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

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service

Approved: *[Signature]* 9/26/07 DATE

Howard SCD

**OWNERS**  
CHARLES J. & ELLEN H. NEPHOS  
780 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
JOSEPH W. & FRANCES L. GERMAN, ETAL.  
10900 FREDERICK ROAD  
ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director, Department of Planning and Zoning: *[Signature]* 12/14/07 DATE

Chief, Division of Development: *[Signature]* 12/13/07 DATE

Chief, Development Engineering Division: *[Signature]* 4/21/07 DATE

**OWNERS**  
ELLICOTT SQUARE  
18173-18174

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
2300 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND 21042

STORMWATER MANAGEMENT & SEDIMENT CONTROL NOTES AND DETAILS

**ELLICOTT SQUARE TOWNHOUSE CONDOMINIUMS**

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2009

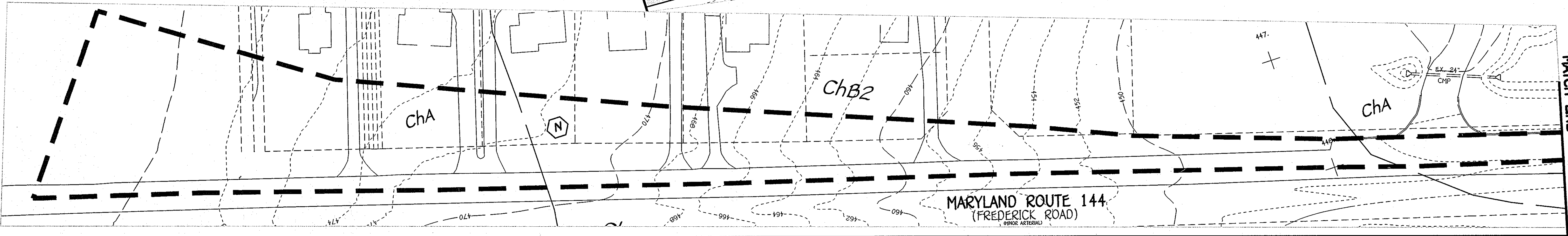
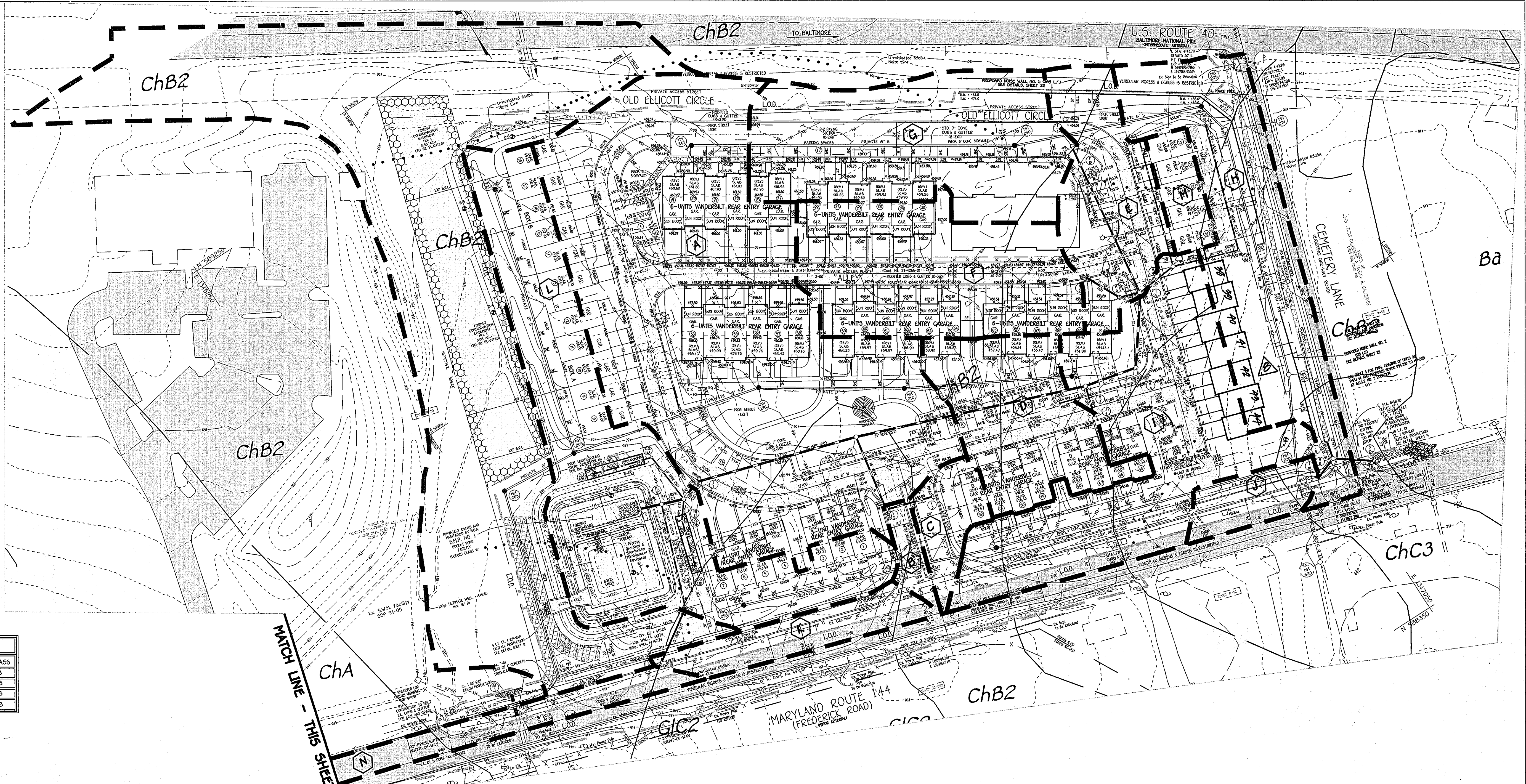
SHEET 12 OF 22 SDP 05-112



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	2.32 AC.	0.64	R-5A-B	55%
I-2	B	0.06 AC.	0.92	R-5A-B	95%
I-3	C	0.14 AC.	0.92	R-5A-B	95%
I-4	D	0.47 AC.	0.76	R-5A-B	72%
I-5	E	0.50 AC.	0.56	R-5A-B	44%
I-6	F	0.71 AC.	0.74	R-5A-B	70%
I-7	G	0.81 AC.	0.74	R-5A-B	70%
I-8	H	0.73 AC.	0.59	R-5A-B	49%
I-9	I	1.02 AC.	0.76	R-5A-B	72%
I-10	J	0.02 AC.	0.44	R-5A-B	27%
I-11	K	0.20 AC.	0.49	R-5A-B	35%
M-5	L	3.86 AC.	0.29	R-5A-B	6%
M-9	M	0.11 AC.	0.95	R-5A-B	100%
I-12	N	2.38 AC.	0.49	R-5A-B	34%

SOILS LEGEND		
SOIL	NAME	CLASS
ChA	Chester silt loam, 0 to 3 percent slopes	B
ChB2	Chester silt loam, 3 to 8 percent slopes, moderately eroded	B
ChC3	Chester silt loam, 8 to 15 percent slopes, severely eroded	B
Gc2	Glenelg loam, 8 to 15 percent slopes, moderately eroded	B

NOTES:  
 \* Hydric soils and/or contains hydric inclusions  
 \*\* May contain hydric inclusions  
 † Generally only within 100-year floodplain areas

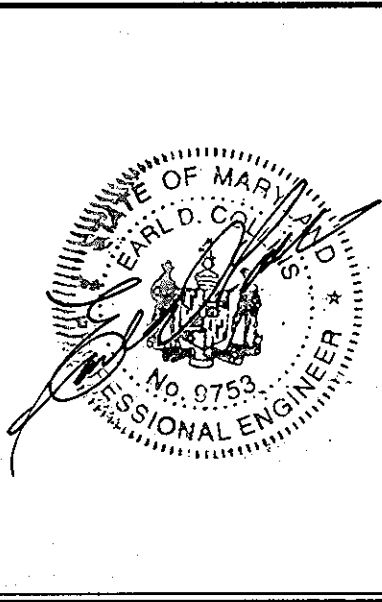


**BUILDER**  
 WAVERLY BUILDERS & DEVELOPERS, LLC  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 443-367-0422

**BUILDER**  
 INV HOMES  
 6085 MARSHALEE DRIVE, SUITE 130  
 ELK RIDGE, MARYLAND 21075  
 410-379-5956

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 10772 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410-461-2555

NO.	REVISION	DATE
1	REVISE UNITS 33 THROUGH 44 AND ASSOCIATED UTILITIES	1/25/08
2	REVISE UNITS 1-7, 42-68 AND ASSOCIATED UTILITIES	3/20/08
3	ADD BUILDERS' NAMES & ADDRESSES, REV. UNITS 1-7, 45-48 & 49-52 TO ADD 10' OPT. EXTENSION	09/05/08
4	REMOVE ROOFTOP S.D. LOTS 1-7, 19-25 & 53-57, MH NUMBERS 6 & 7, SPLIT UNIT 1-7 INTO 2 SEPARATE BLDGS. & ALL RELATED CLEAN-OUTS	10/23/08
5	SPLIT UNITS 38-44 INTO 2 SEPARATE BUILDINGS	12/17/08
6	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09
7	Combined Units 29-44 into one (01) Unit Bldg. 1-24-09 Revised P.A. to include Unit 44	4/28/09



**ENGINEER'S CERTIFICATE**  
 I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer: *Charles J. Nehros* Date: 4/28/09

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic site inspection by the Howard Soil Conservation District.  
 Signature of Developer: *John K. Conway* Date: 4/28/09

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Dianne S. Butler* 5/12/09  
 Director - Department of Planning and Zoning  
*Candy Hanna* 5/12/09  
 Chief, Division of Land Development  
*Mike Deane* 5/12/09  
 Chief, Development Engineering Division

**OWNERS**  
 CHARLES J. & ELLEN H. NEHROS  
 7160 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 20846

**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING					
SUBDIVISION	ELLICOTT SQUARE	SECTION/AREA	N/A	UNIT Nos.	1-30 AND 33-70
PLAT NO.	18173-18174	ZONE	R-5A-B	ELEC. DIST.	2nd
WATER CODE	H 07	SEWER CODE	5883400	CENSUS TR.	6022.00

REVISED STORM DRAIN DRAINAGE AREA MAP & SOILS MAP

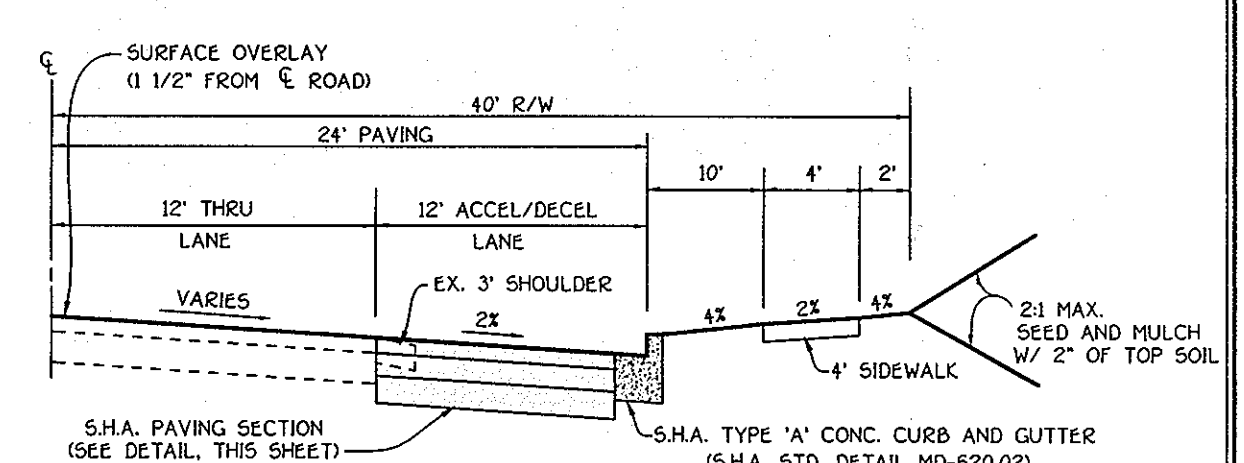
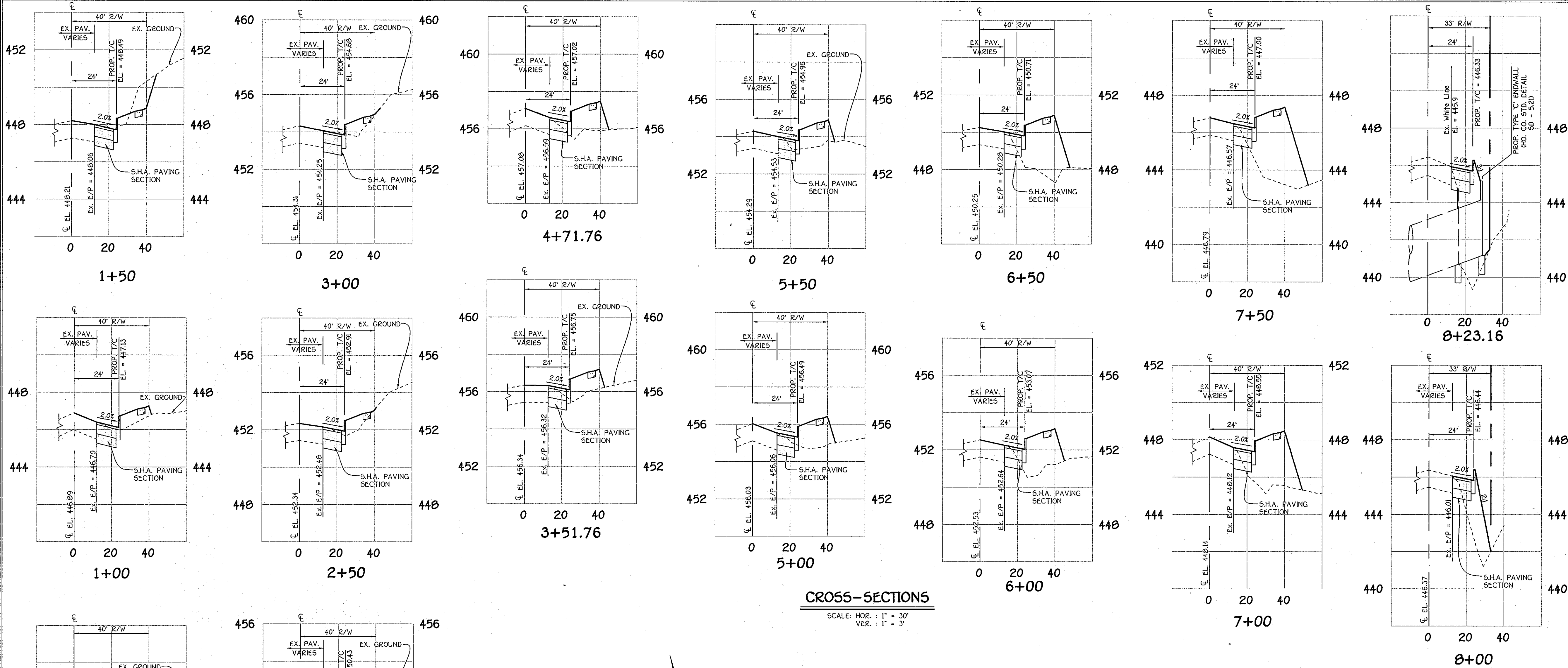
**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

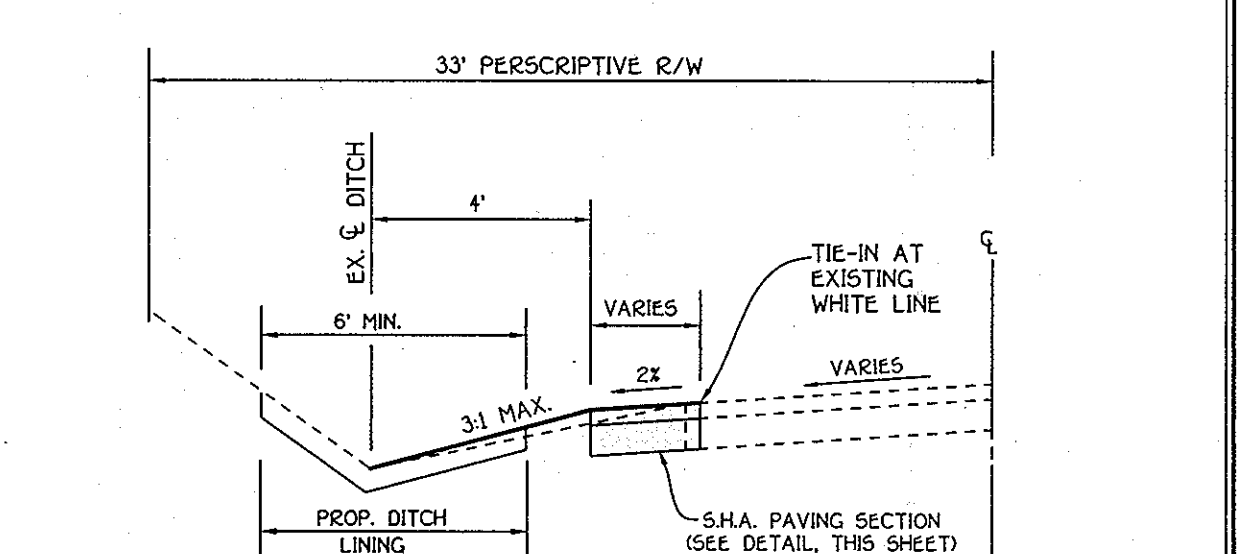
SCALE: 1" = 50' DATE: MARCH, 2009

SHEET 13 OF 22 SDP 05-112

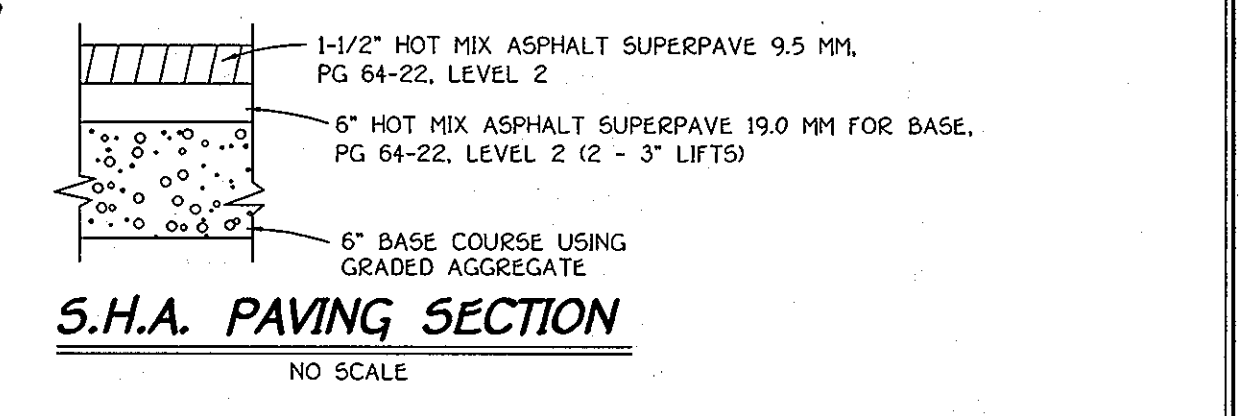




TYPICAL WIDENING W/ CURB (24' RIGHT)  
MARYLAND ROUTE 144 (FREDERICK ROAD)  
NO SCALE

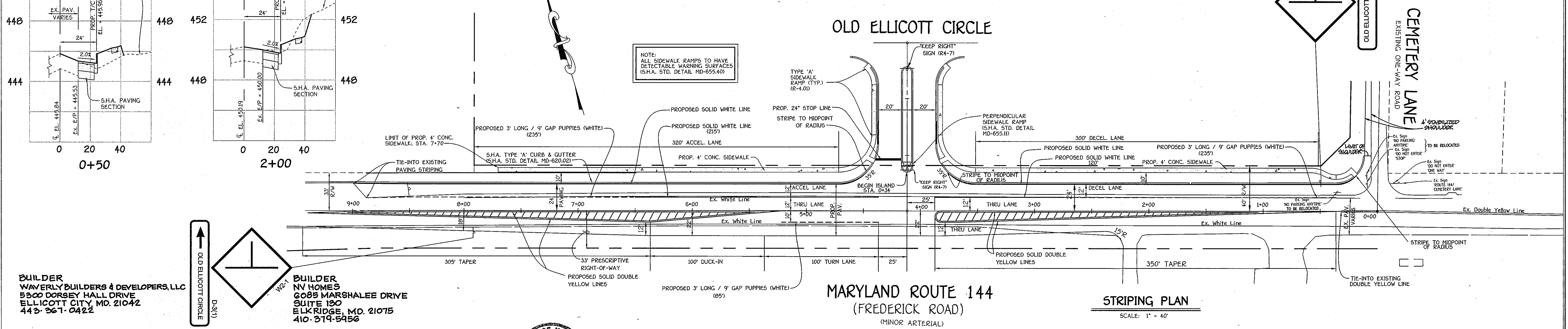


TYPICAL WIDENING (LEFT)  
MARYLAND ROUTE 144 (FREDERICK ROAD)  
NO SCALE



S.H.A. PAVING SECTION  
NO SCALE

CROSS-SECTIONS  
SCALE: HOR. : 1" = 30'  
VER. : 1" = 3'



MARYLAND ROUTE 144  
(FREDERICK ROAD)  
(MINOR ARTERIAL)  
STRIPING PLAN  
SCALE: 1" = 40'

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD. 21042  
443-261-0422

**BUILDER**  
NN HOMES  
3085 MARSHALEE DRIVE  
SUITE 130  
ELK RIDGE, MD. 21075  
410-319-5456

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL Pk.  
ELLICOTT CITY, MARYLAND 21042  
410-461-2055

NO.	REVISION	DATE
1	REVISED CEMENTARY LANE WIDENING SECTION	11/5/10
2	REVISED DATE AND UNIT NUMBERS	4/21/09
3	ADD BUILDERS NAMES & ADDRESSES	3-5-08

**ENGINEER'S CERTIFICATE**  
I certify that the plan and erosion control represents a practical and workable plan based on the knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature: [Signature] Date: 9-20-07

**DEVELOPER'S CERTIFICATE**  
I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic or other inspection by the Howard Soil Conservation District.  
Signature of Developer: [Signature] Date: 9-20-07

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: [Signature] Date: 12/10/07  
Chief, Division of Land Development: [Signature] Date: 9/20/07  
Chief, Development Engineering Division: [Signature] Date: 9/20/07

**OWNERS**  
CHARLES J. & ELLEN H. NEMPHOS  
7160 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND 21042

SUBDIVISION	ELLICOTT SQUARE	SECTION/AREA	N/A	UNIT Nos.	1-90 AND 93-70
PLAT NO.	18173-18174	BLOCK NO.	24	TAX/ZONE	R-5A-B
WATER CODE	H 07	SEWER CODE		ELEC. DIST.	2nd
				CENSUS TR.	6022.00

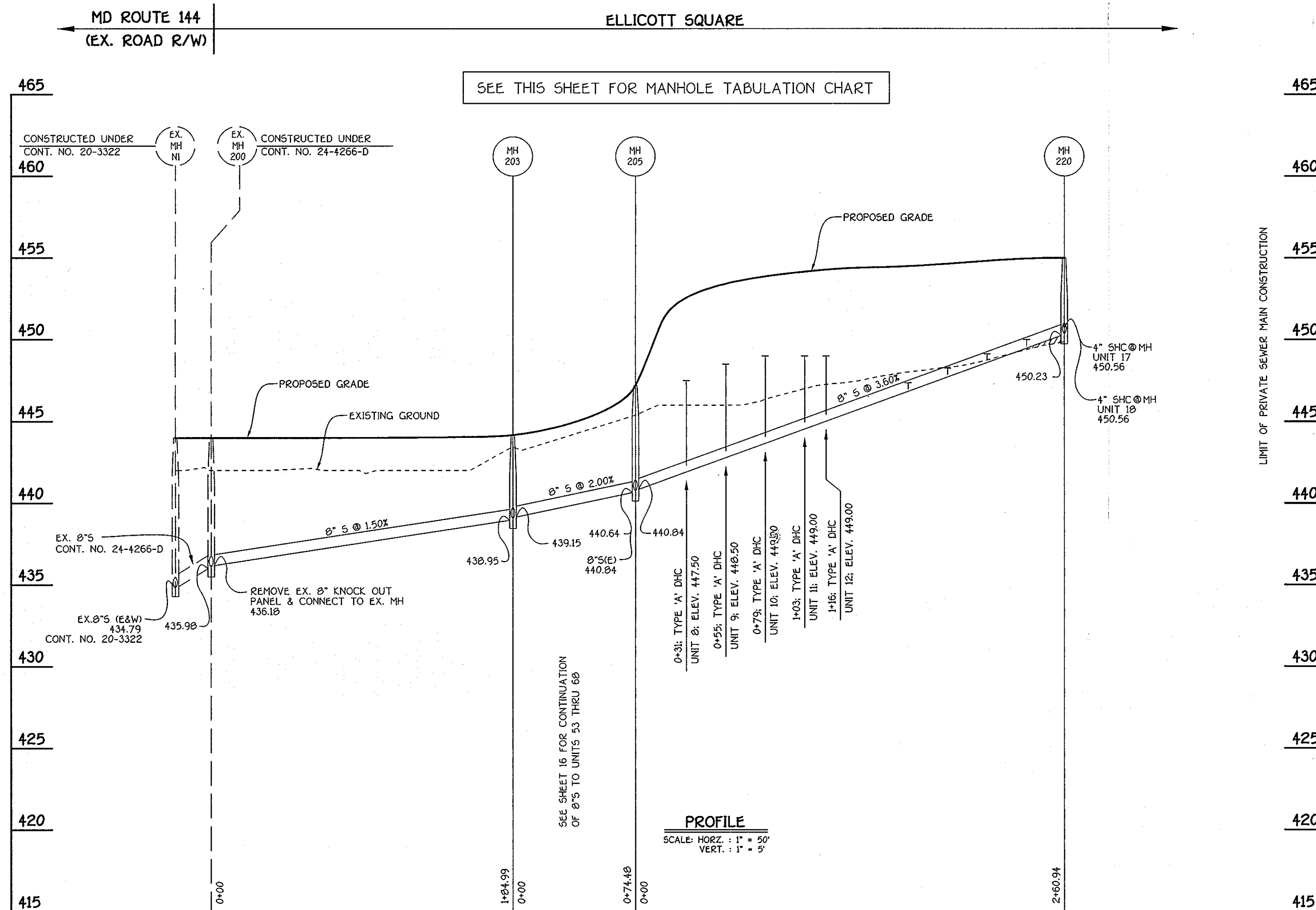
FREDERICK ROAD (MARYLAND ROUTE 144)  
CROSS-SECTIONS & STRIPING PLAN

**ELLICOTT SQUARE**  
TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MARCH, 2009  
SHEET 14 OF 22 SDP 05-112

SDP 05-112 (12/10/07) revised 2nd submission SDP Submission 03/08 SHEET 14 ROUTE 144 CROSS SECTIONS WITH NEW SIDEWALK CAMP 130





MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
203	500917.20	1346379.56	444.17
205	500911.50	1346453.03	447.18
210	500060.07	1346633.72	456.00
212	500793.62	1346748.32	456.00
215	500717.22	1346806.95	453.65
220	509161.00	1346527.60	455.00
230	500533.09	1347019.05	448.00
235	500065.42	1347128.07	456.00
240	500929.73	1346960.79	456.00
245	509095.74	1346705.43	460.00
250	500619.67	1346736.63	455.51
255	500703.58	1346509.57	452.00

NOTE: SET ALL MH RIMS FLUSH W/ PROPOSED FINISHED GRADE OR EXISTING GROUND, AS APPLICABLE. SEE PRIVATE SEWER MAIN PROFILES, SHEETS 15 THRU 17

232	500607.55	1347050.83	448.50
234	500634.60	1347135.00	455.00

M.C.E. CHART							
UNIT	M.C.E.	UNIT	M.C.E.	UNIT	M.C.E.	UNIT	M.C.E.
1	453.96	19	450.07	37	448.04	55	454.02
2	452.96	20	450.07	38	446.01	56	451.10
3	449.46	21	457.09	39	446.27	57	455.08
4	449.65	22	457.92	40	445.80	58	455.04
5	449.73	23	457.07	41	445.18	59	451.91
6	449.00	24	456.04	42	444.72	60	452.10
7	450.17	25	456.42	43	443.72	61	452.00
8	451.58	26	456.15	44	443.21	62	452.75
9	452.50	27	456.07	45	442.03	63	452.77
10	453.08	28	459.43	46	440.97	64	453.04
11	453.09	29	459.23	47	450.11	65	452.00
12	453.05	30	454.82	48	450.61	66	453.01
13	451.05	31	454.41	49	452.02	67	453.97
14	451.95	32	454.29	50	452.64	68	453.03
15	452.74	33	450.27	51	453.14	69	453.07
16	453.70	34	449.62	52	448.35	70	453.40
17	454.59	35	449.15	53	452.58	71	453.16
18	454.72	36	448.53	54	454.20	72	453.71
						73	453.08
						74	454.29

**ELLCOTT SQUARE: 8" SEWER MAIN: UNITS 8 THRU 18**

SHC INVERT @ 10' FROM BUILDING		
STATION	UNIT	ELEVATION
MH 205 TO MH 220		
0+31 RT.	8	447.64
0+55 RT.	9	448.56
0+79 RT.	10	449.14
1+03 RT.	11	449.11
1+16 RT.	12	449.11
1+66 RT.	13	447.11
1+90 RT.	14	448.01
2+14 RT.	15	448.80
2+38 RT.	16	449.75
@ MH 220 RT.	17	450.67
@ MH 220 RT.	18	450.72

**BUILDER**  
**WAVERLY BUILDERS & DEVELOPERS, LLC**  
 5300 DORSEY HALL DRIVE  
 ELLCOTT CITY, MD. 21042  
 443-367-0422

**BUILDER**  
**NV HOMES**  
 6085 MARSHALEE DRIVE, SUITE 130  
 ELKRIEGE, MD. 21075  
 410-319-5956

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 10772 BALTIMORE NATIONAL PIKE  
 ELLCOTT CITY, MARYLAND 21042  
 410-461-2895

NO.	REVISION	DATE
4	REVISE MCE CHART BASED ON UNIT CHANGES	4/21/02
3	ADD BUILDERS NAMES & ADDRESSES	9-5-00
2	REVISE UNITS 1-7, 42-08 & 05200 UTILIZE	4-7-00
1	REV. MH TABULATION AND MCE CHARTS PER NEW SEWER MAIN ALIGNMENT	2-8-00

**ENGINEER'S CERTIFICATE**  
 I certify that the plan and erosion control represents a practical and workable plan and that I have the knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature: *[Signature]* Date: 9-2-02

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer: *[Signature]* Date: 9-2-02

Reviewed for HOWARD SCD and meets Technical Requirements.  
 U.S.D.A.-Natural Resources Conservation Service  
 This development plan is approved for soil-erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *[Signature]* Date: 9/2/02

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Signature: *[Signature]* Date: 12/14/01  
 Director, Department of Planning and Zoning  
 Signature: *[Signature]* Date: 12/12/02  
 Chief, Division of Land Development  
 Signature: *[Signature]* Date: 9/2/02  
 Chief, Development Engineering Division

**OWNERS**  
 CHARLES J. & ELLEN H. NEWMAN  
 7160 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046

**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLCOTT CITY, MARYLAND 21042

SUBDIVISION	ELLCOTT SQUARE	SECTION/AREA	N/A	UNIT Nos.	1-90 AND 93-70
PLAT NO.	18173-18174	BLOCK NO.	24	ZONE	R-5A-B
TAX/ZONE	16	ELEC. DIST.	2nd	CENSUS TR.	6022.00
WATER CODE	H 07	SEWER CODE	5083400		

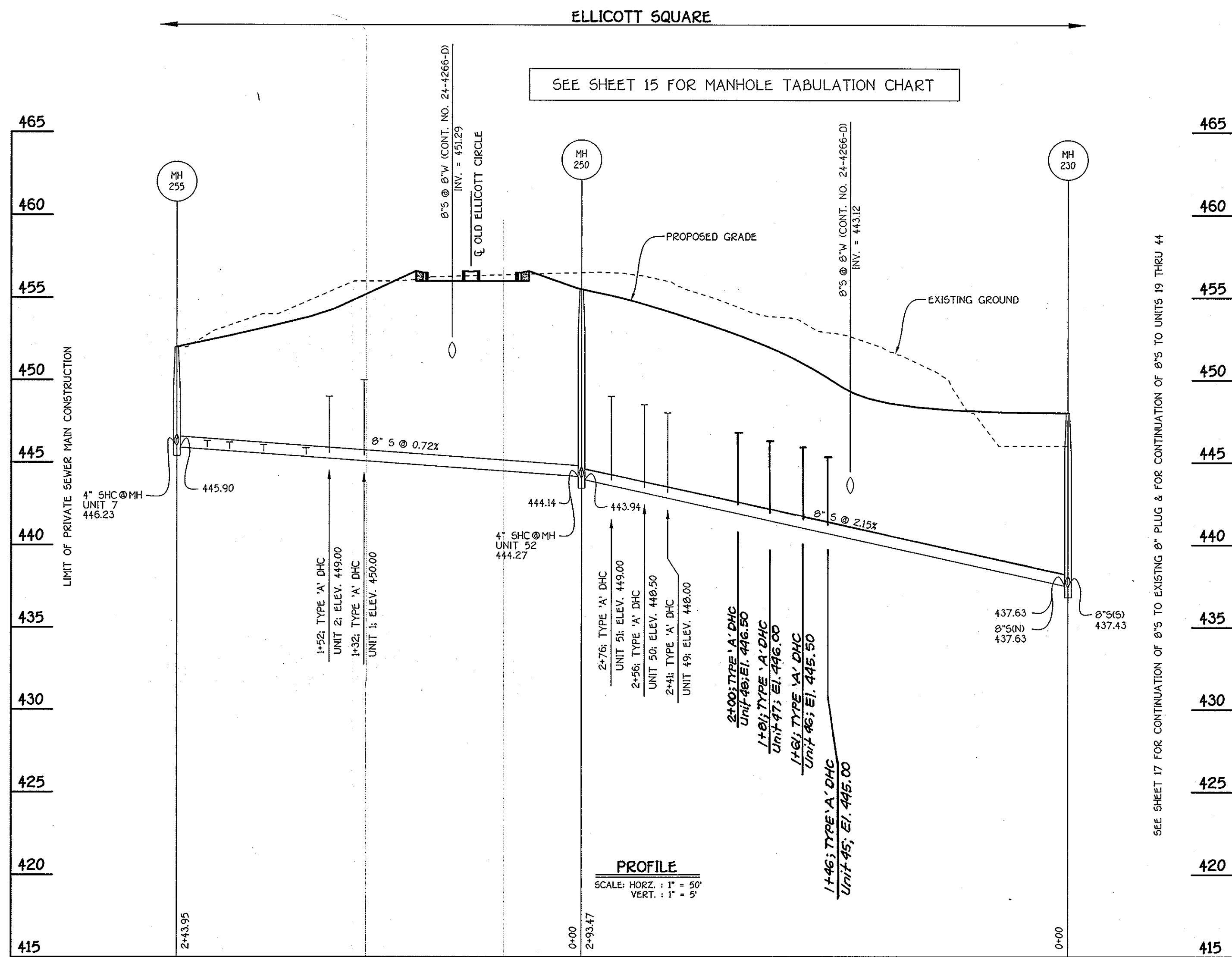
PRIVATE SEWER MAIN PROFILES

**ELLCOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS

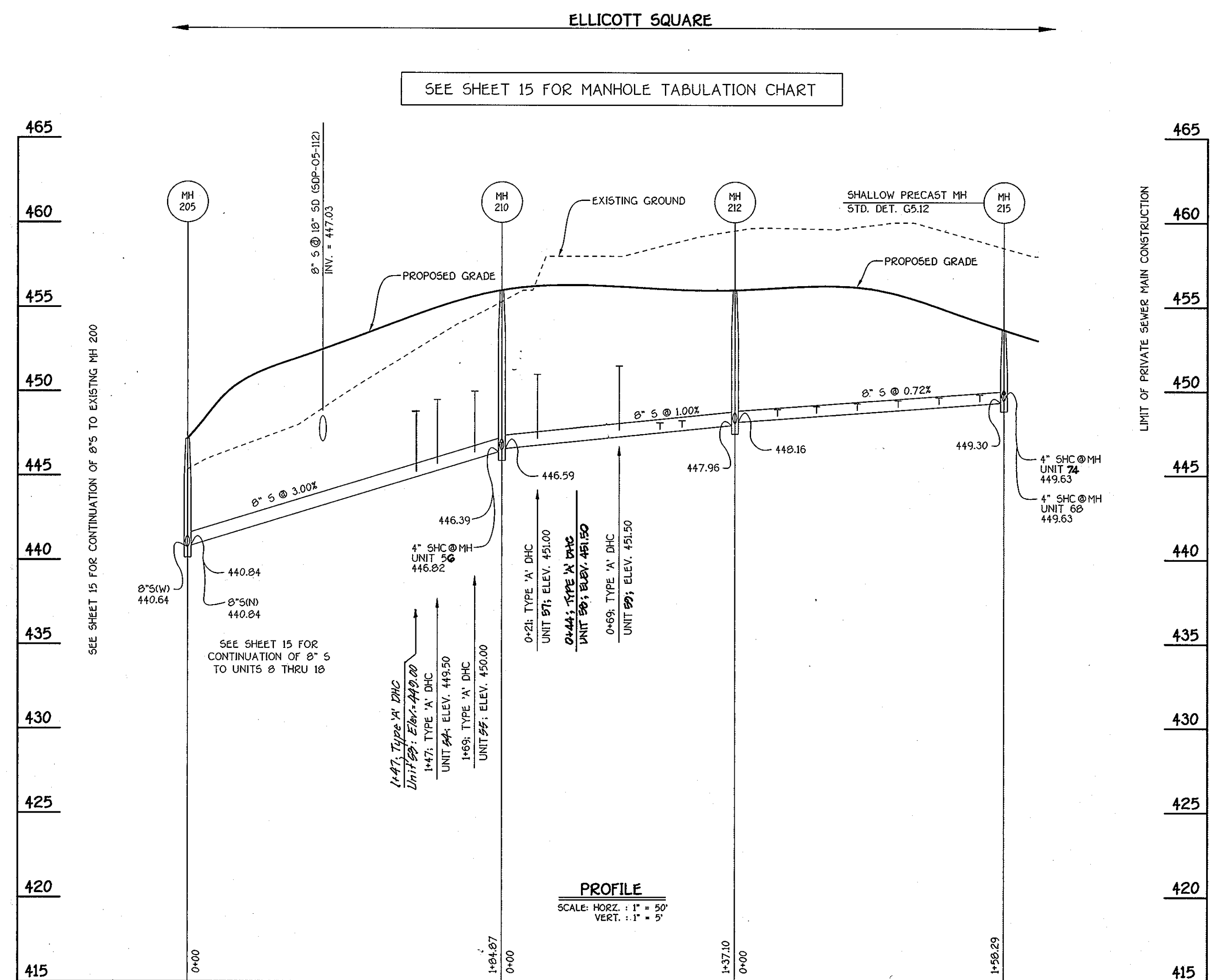
TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 15 OF 22 SDP 05-112

301/0790/09/01/02/03/04/05/06/07/08/09/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100





ELLICOTT SQUARE: 8" SEWER MAIN: UNITS 1 THRU 7 & 45 THRU 52



ELLICOTT SQUARE: 8" SEWER MAIN: UNITS 53 THRU 68

SHC INVERT @ 10' FROM BUILDING		
STATION	UNIT	ELEVATION
MH 230 TO MH 250		
1+46 LT.	45	445.26
1+61 LT.	46	445.85
1+81 LT.	47	446.35
2+00 LT.	48	446.81
2+41 RT.	49	448.35
2+56 RT.	50	448.86
2+76 RT.	51	449.36
@ MH 250 RT.	52	444.57
MH 250 TO MH 255		
1+32 RT.	1	450.20
1+52 RT.	2	449.20
1+66 RT.	3	445.70
1+92 RT.	4	445.85
2+12 RT.	5	445.97
2+26 RT.	6	446.10
@ MH 255 RT.	7	446.39

SHC INVERT @ 10' FROM BUILDING		
STATION	UNIT	ELEVATION
MH 205 TO MH 210		
1+47 LT.	54	450.18
1+69 LT.	56	450.50
MH 210 TO MH 212		
@ MH 210 LT.	56	447.08
0+21 LT.	57	451.02
0+44 LT.	58	451.96
0+69 LT.	59	447.71
0+93 LT.	60	447.96
1+16 LT.	61	448.18
MH 212 TO MH 215		
0+25 LT.	63	448.88
0+48 LT.	73	448.72
0+88 LT.	64	449.50
0+96 LT.	65	449.00
1+20 LT.	66	449.21
1+44 LT.	67	449.39
@ MH 215 LT.	68	449.67
@ MH 215 LT.	74	450.15

**BUILDER**  
**WAVERLY BUILDERS & DEVELOPERS, LLC**  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD. 21042  
 443-367-0422

**BUILDER**  
**NV HOMES**  
 6085 MARSHALEE DRIVE, SUITE 130  
 ELK RIDGE, MD. 21075  
 410-519-5956

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 18722 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-2555

NO.	REVISION	DATE
4	REVISE SEWER HOUSE CONNECTIONS BASED ON UNIT CHANGES	4/21/09
3	Add builders names & addresses	9-5-08
2	Revised Units 1-7, 42-68 & 69-90 Utilities	4-7-08
1	Rev. Sewer Profile and SHC Invert Chart per New Sewer Main Approval	2-8-08

**ENGINEER'S CERTIFICATE**  
 I certify that the plan and erosion control represents a practical and workable plan based on a study of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature: *[Signature]* Date: 9/20/07

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer: *[Signature]* Date: 9/20/07

APPROVED FOR HOWARD SCD and meets Technical Requirements.  
 U.S.D.A. Natural Resources Conservation Service  
 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Howard SCD Date: *[Signature]*

**OWNERS**  
 CHARLES J. & ELLEN H. NEHRROS  
 7160 COLUMBIA GATEWAY DRIVE  
 COLUMBIA, MARYLAND 21046

**DEVELOPER**  
 LAND DESIGN AND DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *[Signature]* Date: 12/14/07  
 Chief, Department of Planning and Zoning  
 Chief, Department of Land Development  
 Chief, Development Engineering Division

SUBDIVISION: ELLICOTT SQUARE SECTION/AREA: N/A UNIT Nos.: 1-20 AND 23-70  
 PLAT NO.: 18173-18174 BLOCK NO.: 24 ZONE: R-5A-B TAX/ZONE: 16 ELEC. DIST.: 2nd CENSUS TR.: 6022.00  
 WATER CODE: H 07 SEWER CODE: 5803400

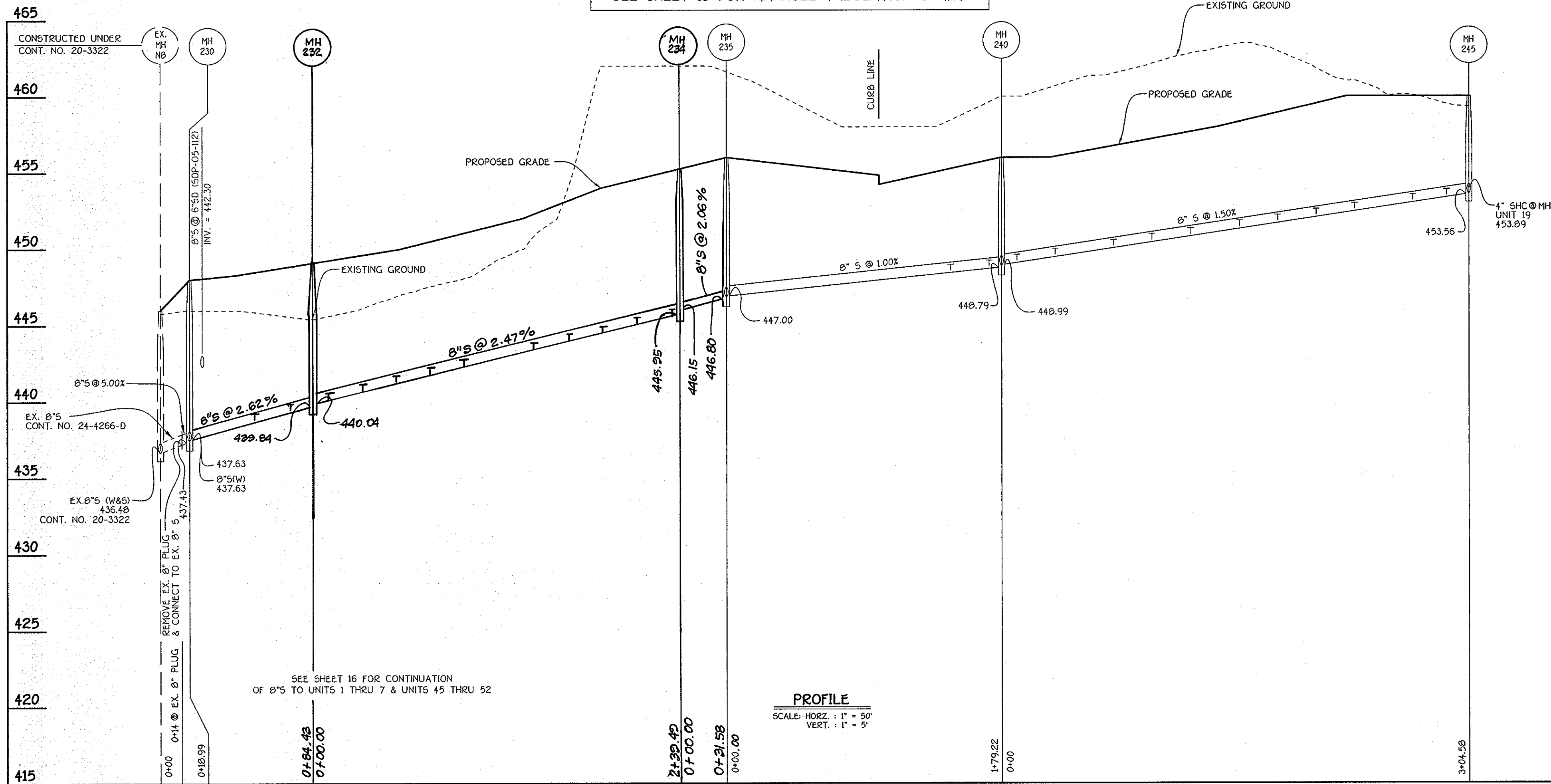
PRIVATE SEWER MAIN PROFILES  
**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS  
 TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 16 OF 22 SDP 05-112



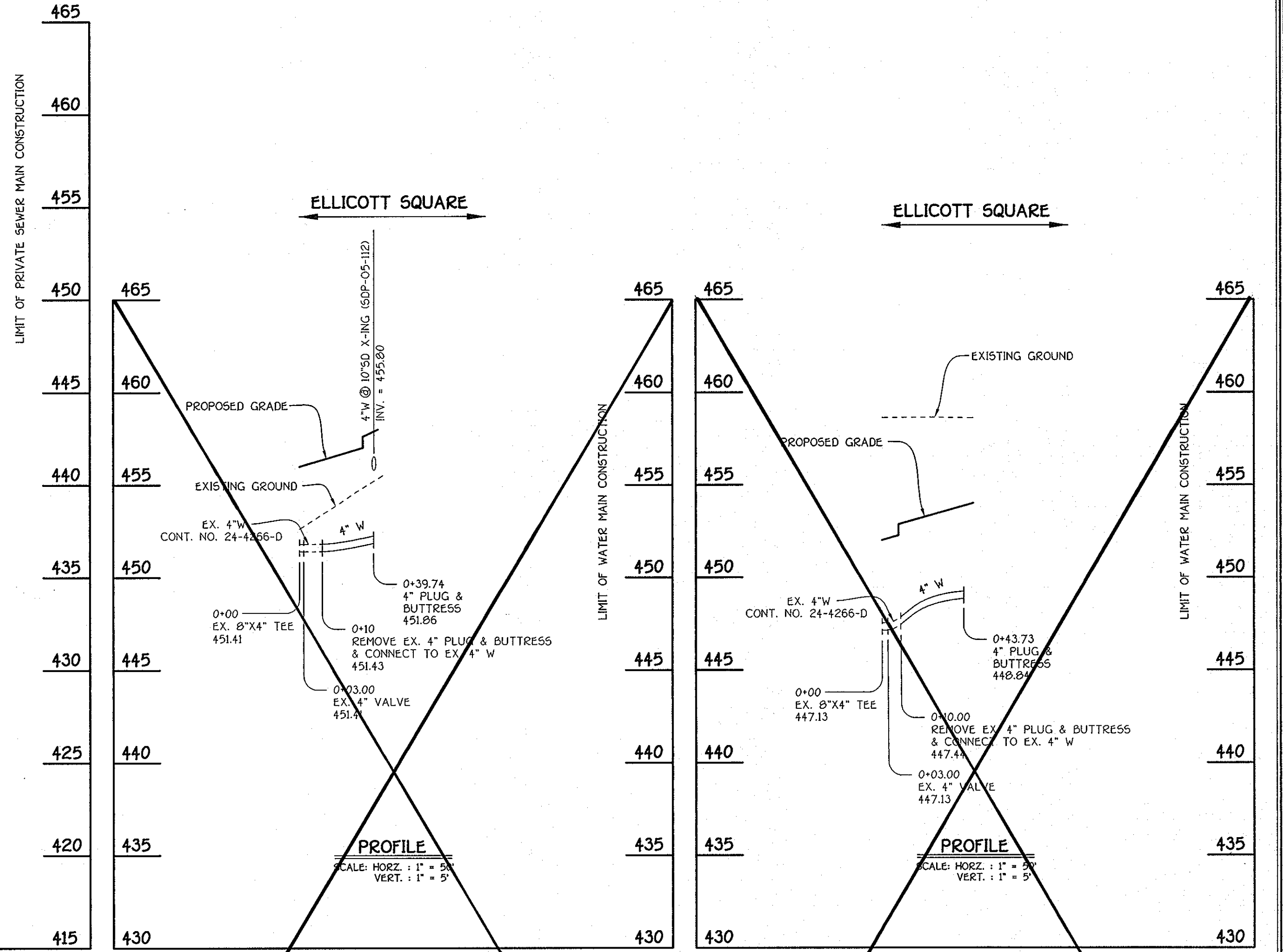
MD ROUTE 144  
(EX. ROAD R/W)

ELLICOTT SQUARE

SEE SHEET 15 FOR MANHOLE TABULATION CHART



PROFILE  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'



ELLICOTT SQUARE

ELLICOTT SQUARE

PROFILE  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

PROFILE  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

ELLICOTT SQUARE: 8" SEWER MAIN: UNITS 19 THRU 44

ELLICOTT SQUARE: 4" PRIVATE WATER MAIN TO UNITS 19 THRU 25

ELLICOTT SQUARE: 4" PRIVATE WATER MAIN TO UNITS 26 THRU 32

SHC INVERT @ 10' FROM BUILDING		
STATION	UNIT	ELEVATION
MH 232 TO MH 234		
0+10 LT.	42	440.62
0+32 LT.	41	441.16
0+54 LT.	40	441.70
0+76 LT.	39	442.25
0+98 LT.	38	442.81
1+19 LT.	37	443.24
1+66 LT.	36	444.51
1+88 LT.	35	445.05
2+10 LT.	34	445.60
2+33 LT.	33	446.17
MH 230 TO MH 232		
0+46 LT.	44	439.05
0+68 LT.	43	439.70

SHC INVERT @ 10' FROM BUILDING		
STATION	UNIT	ELEVATION
MH 235 TO MH 240		
1+46 LT.	32	449.09
1+71 LT.	31	449.24
MH 240 TO MH 245		
0+10 LT.	30	449.62
0+35 LT.	29	450.00
0+73 LT.	28	450.57
0+98 LT.	27	450.94
1+23 LT.	26	451.32
1+55 LT.	25	451.80
1+80 LT.	24	452.17
2+05 LT.	23	452.55
2+30 LT.	22	452.92
2+68 LT.	21	453.49
2+90 LT.	20	453.82
@ MH 245 LT.	19	454.20

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
ELLICOTT SQUARE: 4" W TO UNITS 19 THRU 25			
0+10.00	EX. 4" PLUG & BUTTRESS	589074.47	1346617.37
0+39.74	4" PLUG & BUTTRESS	589066.73	1346645.85

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
ELLICOTT SQUARE: 4" W TO UNITS 26 THRU 32			
0+10.00	EX. 4" PLUG & BUTTRESS	588809.85	1346961.99
0+43.73	4" PLUG & BUTTRESS	588840.11	1346970.66

**BUILDER**  
WAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD. 21042  
443-367-0422

**BUILDER**  
LIVHOMES  
6085 MARSHALEE DRIVE  
SUITE 130  
ELK RIDGE, MD. 21075  
410-379-5956

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
410-461-2055

NO.	REVISION	DATE
3	Add builders names & addresses	9-5-08
2	Revise Lots 1-7, 42-68 & 05800 Utilities	7-7-08
1	Rev. Sewer Profile and SHC Invert Chart per New Sewer Alignment	2-8-08

**ENGINEER'S CERTIFICATE**  
I certify that the sediment and erosion control represents a practical and workable plan based on my knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
Signature: *[Signature]* Date: 9-20-07

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
Signature of Developer: *[Signature]* Date: 9-20-07

Reviewed for HOWARD SCD and meets Technical Requirements.  
U.S.D.A.-Natural Resources Conservation Service  
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *[Signature]* Date: 9-20-07

**OWNERS**  
CHARLES J. & ELLEN H. NEMPHOS  
7180 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MARYLAND 21042

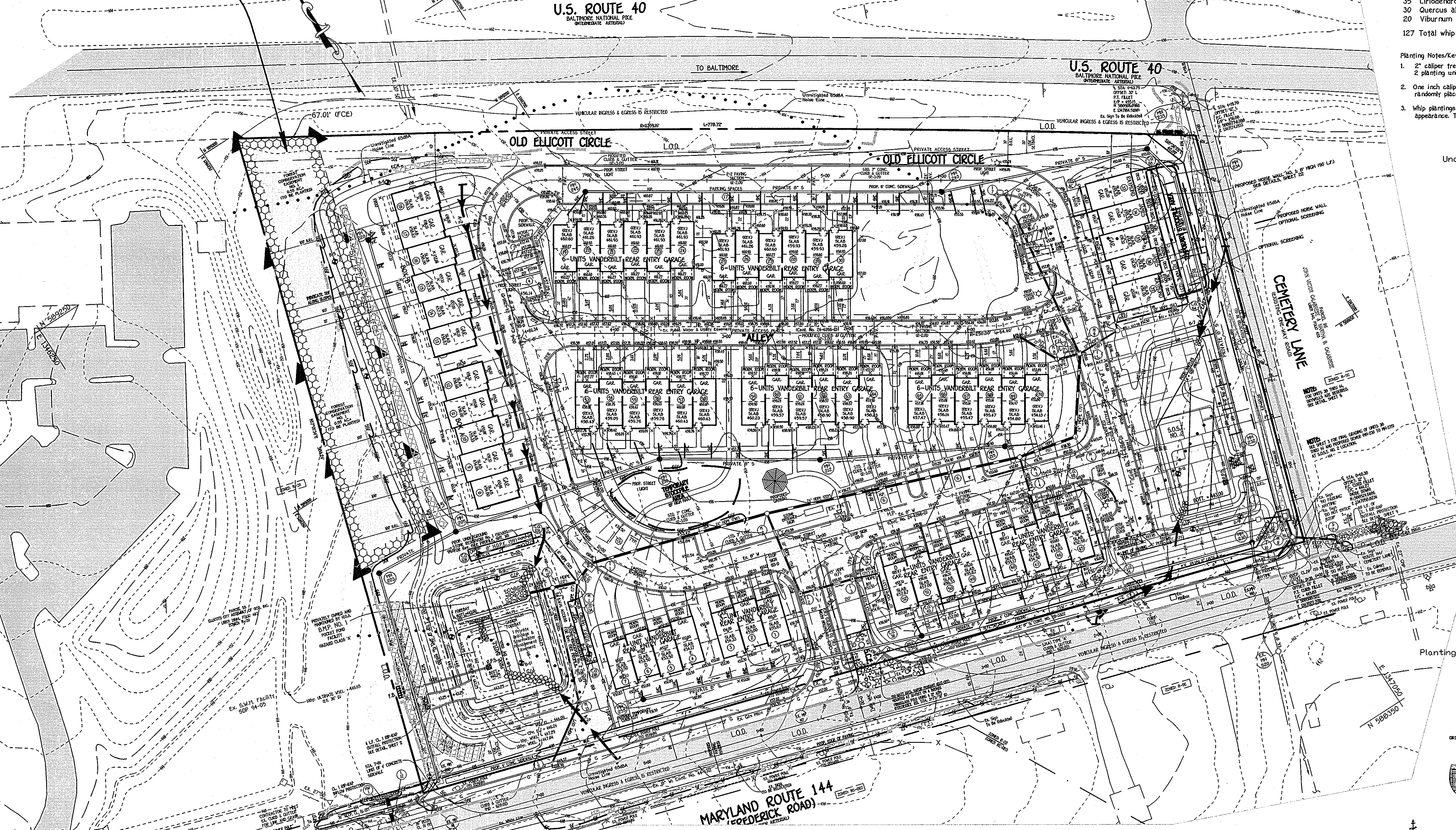
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Signature: *[Signature]* Date: 9/20/07  
Director - Department of Planning and Zoning  
Signature: *[Signature]* Date: 9/20/07  
Chief, Planning and Development  
Signature: *[Signature]* Date: 9/20/07  
Chief, Development Engineering Division

SUBDIVISION: ELLICOTT SQUARE SECTION/AREA: N/A UNIT Nos.: 1 thru 68  
PLAT NO.: 18173-18174 BLOCK NO.: 24 ZONE: R-5A-B TAX/ZONE: 16 ELEC. DIST.: 2nd CENSUS TR.: 6022.00  
WATER CODE: H 07 SEWER CODE: 5883400

PRIVATE WATER & SEWER MAIN PROFILES  
**ELLICOTT SQUARE**  
TOWNHOUSE CONDOMINIUMS  
TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: SEPTEMBER, 2007  
SHEET 17 OF 22 SDP 05-112



**FOREST CONSERVATION EASEMENT NO. 1**  
0.55 AC.  
TO BE PLANTED



**TCF NOTES**

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land coverages.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- The forest conservation easement has been established to fulfill the requirements of Section 16.12000 of the Howard County Code and the Forest Conservation Manual. No clearing, grading, or construction in the forest conservation easement, however, forest management practices as defined in the Deed of Forest Conservation Easement area allowed.
- No stockpiles, parking areas, equipment clearing areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary encircling shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits.
- Permanent signage will be posted at 50-100 foot intervals along all FCE limits.
- The Forest Conservation Act requirements, 1.3 acres of afforestation will be met through the onsite planting of 0.55 acres of forest with the balance of the obligation, 0.75 acres to be met through payment of a fee-in-lieu. The fee-in-lieu cost for this obligation will be \$16,335.00.

**BUILDER**  
N.V. HOPES  
5085 MARSHALLS DR. #30  
ELKIDGE, MARYLAND 21075  
4100 370-0568

**BUILDER**  
MAVERLY BUILDERS & DEVELOPERS, LLC  
5300 DORSEY HALL DR.  
ELLCOTT CITY, MARYLAND 21042  
(410) 367-0422

MD DNR Qualified Professional  
USACOE Wetland Designer  
Certification # WDCPS3MD051004H

JOHN P. CANOLES

NO.	REVISION	DATE
2	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09
1	ADD BUILDERS' NAMES & ADDRESSES	09/02/08
	REVISION	DATE



**ENGINEER'S CERTIFICATE**

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

Signature of Engineer: *[Signature]* Date: 4/28/09

**DEVELOPER'S CERTIFICATE**

I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a certificate of attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic inspection by the Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 4/28/09

**OWNERS**  
CHARLES J. & ELLEN H. NEPHROS  
7860 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *[Signature]* Date: 5/12/09  
Chief, Division of Land Development: *[Signature]* Date: 5/12/09  
Chief, Development Engineering Division: *[Signature]* Date: 5/12/09

Subdivision: ELLCOTT SQUARE SECTION/AREA: N/A UNIT Nos.: 1-30 AND 33-70  
PLAT NO.: 18173-10174 BLOCK NO.: 24 ZONE: R-3A-B TAX/ZONE: 16 ELEC. DIST.: 2nd. CENSUS TR.: 6022.00  
WATER CODE: H 07 SEWER CODE: 5883400

**SEEDING AND WHIP PLANTING SPECIFICATION**

Seeding and Whip Planting Specification

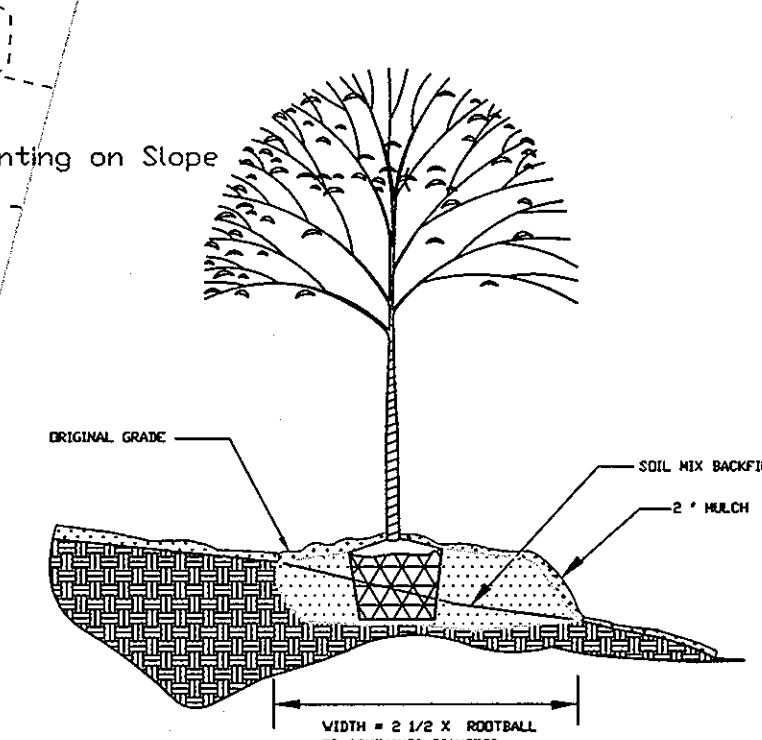
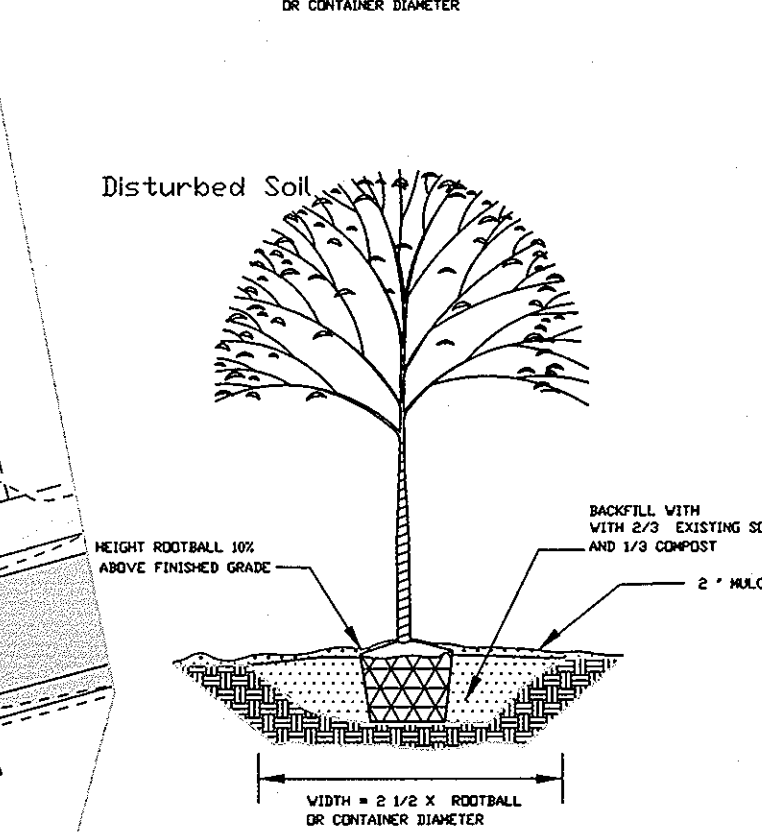
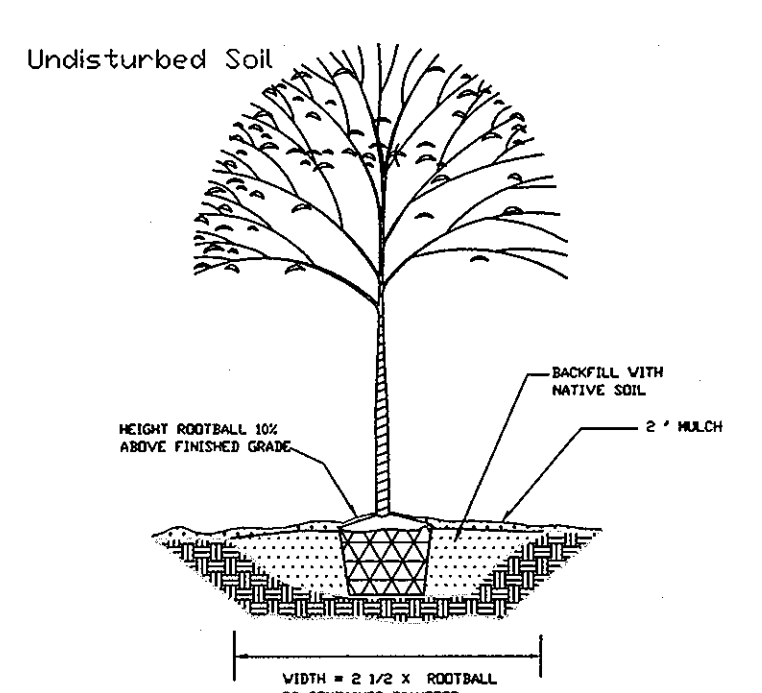
**Planting Schedule**

**Forest Conservation Easement #1 - 0.5 acres**

Qty	Species	Size Spacing	Total Units
8	Liriodendron tulipifera - Tulip poplar	1" cal.	15' o.c.
10	Quercus alba - White oak	1" cal.	15' o.c.
10	Quercus rubra - Red oak	1" cal.	15' o.c.
28	Total 1" caliper trees (3.5 planting units per tree) FCA unit credit = 98		
20	Acer rubrum - Red maple	2-3' whip	11 o.c.
22	Cornus florida - Flowering dogwood	2-3' whip	11 o.c.
35	Liriodendron tulipifera - Tulip poplar	2-3' whip	11 o.c.
30	Quercus alba - White oak	2-3' whip	11 o.c.
20	Viburnum prunifolium - Blackhaw	2-3' whip	11 o.c.
127	Total whip plantings (2 planting units per tree) FCA unit credit = 254		
			Total Unit Credit 352

**Planting Notes/Key:**

- 2" caliper trees = 7 planting units, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units and seedlings = 1 planting unit
- One inch caliper trees shall be planted along the outer edge of the FCE along the species may be randomly placed.
- Whip plantings should be installed in a curvilinear pattern to facilitate maintenance but avoid a grid appearance. Tree shelters should be installed on all whip plantings.



**ON-SITE SIGNAGE**

**FOREST CONSERVATION EASEMENT**

UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991.

**TREES FOR YOUR FUTURE**

15" MINIMUM

11" MINIMUM

**FOREST CONSERVATION WORKSHEET VERSION 1.0**

NET TRACT AREA:		0.50
A. TOTAL TRACT AREA		0.50
B. AREA WITHIN 100 YEAR FLOODPLAIN		0.00
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION		0.00
D. NET TRACT AREA		0.50
LAND USE CATEGORY:	HDR	
E. AFFORESTATION THRESHOLD	15% x D =	1.29
F. FOREST CONSERVATION THRESHOLD	20% x D =	1.72
EXISTING FOREST COVER:		
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)		0.00
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD		0.00
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD		0.00
BREAK EVEN POINT:		
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION		0.00
K. CLEARING PERMITTED WITHOUT MITIGATION		0.00
PROPOSED FOREST CLEARING:		
L. TOTAL AREA OF FOREST TO BE CLEARED		0.00
M. TOTAL AREA OF FOREST TO BE RETAINED		0.50
PLANTING REQUIREMENTS:		
N. REAFFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD		0.00
P. REAFFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD		0.00
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD		0.00
R. TOTAL REAFFORESTATION REQUIRED		1.29
S. TOTAL AFFORESTATION REQUIRED		1.72
T. TOTAL REAFFORESTATION AND AFFORESTATION REQUIRED		1.29

**REVISED FOREST CONSERVATION PLAN**

**ELLCOTT SQUARE**

TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1" = 50' DATE: MARCH, 2009

SHEET 18 OF 22 SDP 05-112

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTRAL SQUARE OFFICE PARK - 18725 BALTIMORE NATIONAL PkE  
ELLCOTT CITY, MARYLAND 21042  
410 481-2855



REVISIONS		
NO.	DESCRIPTION	DATE
3	REVISED CEMETERY LANE WIDENING SECTION	11/5/10
2	REVISED SOUND WALL AND SAND FILTER	4/21/09
1	ADD BUILDERS NAMES & ADDRESSES	9-5-08

APPROVED: DEPARTMENT OF PLANNING AND ZONING

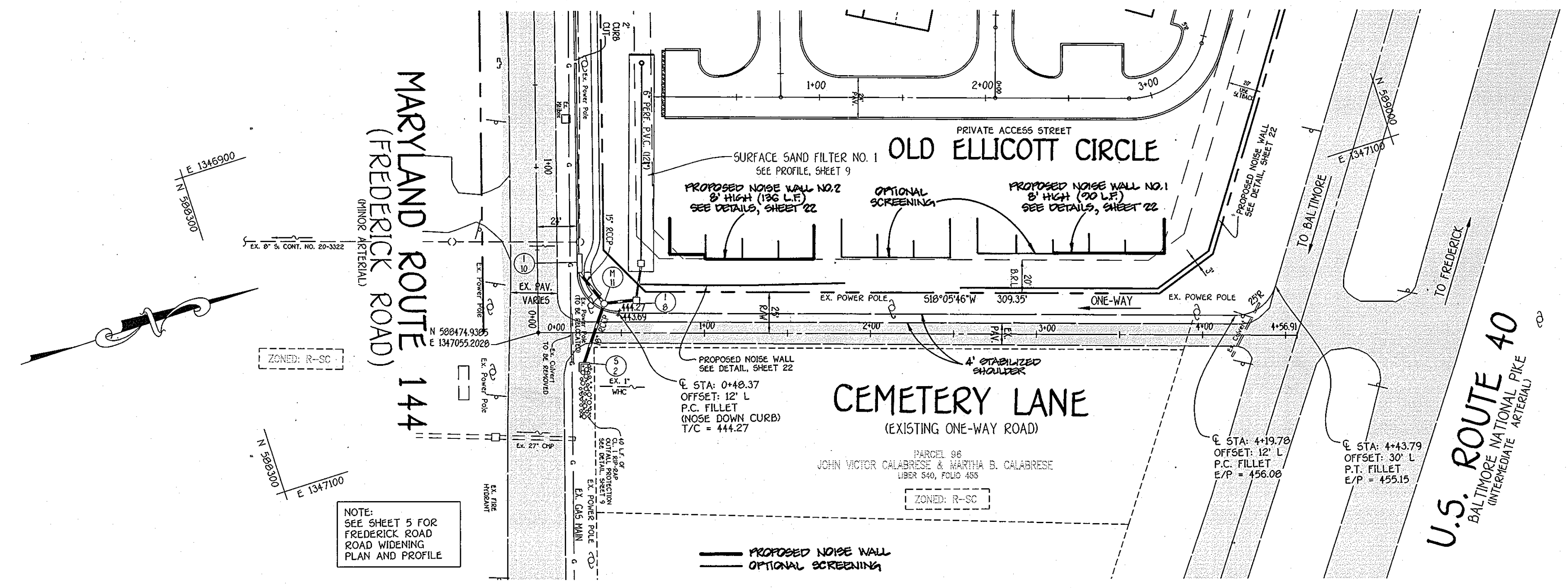
*Cindy Harris* 12/12/07  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John J. ...* 4/22/07  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Frank ...* 1/24/11  
 DIRECTOR, DEPT. OF PLANNING AND ZONING

**BUILDER**  
 WAVERLY BUILDERS & DEVELOPERS, LLC  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MD. 21042  
 443-367-0422

**BUILDER**  
 NV HOMES  
 6085 MARSHALEE DRIVE, SUITE 130  
 ELK RIDGE, MD 21075  
 410-379-5956



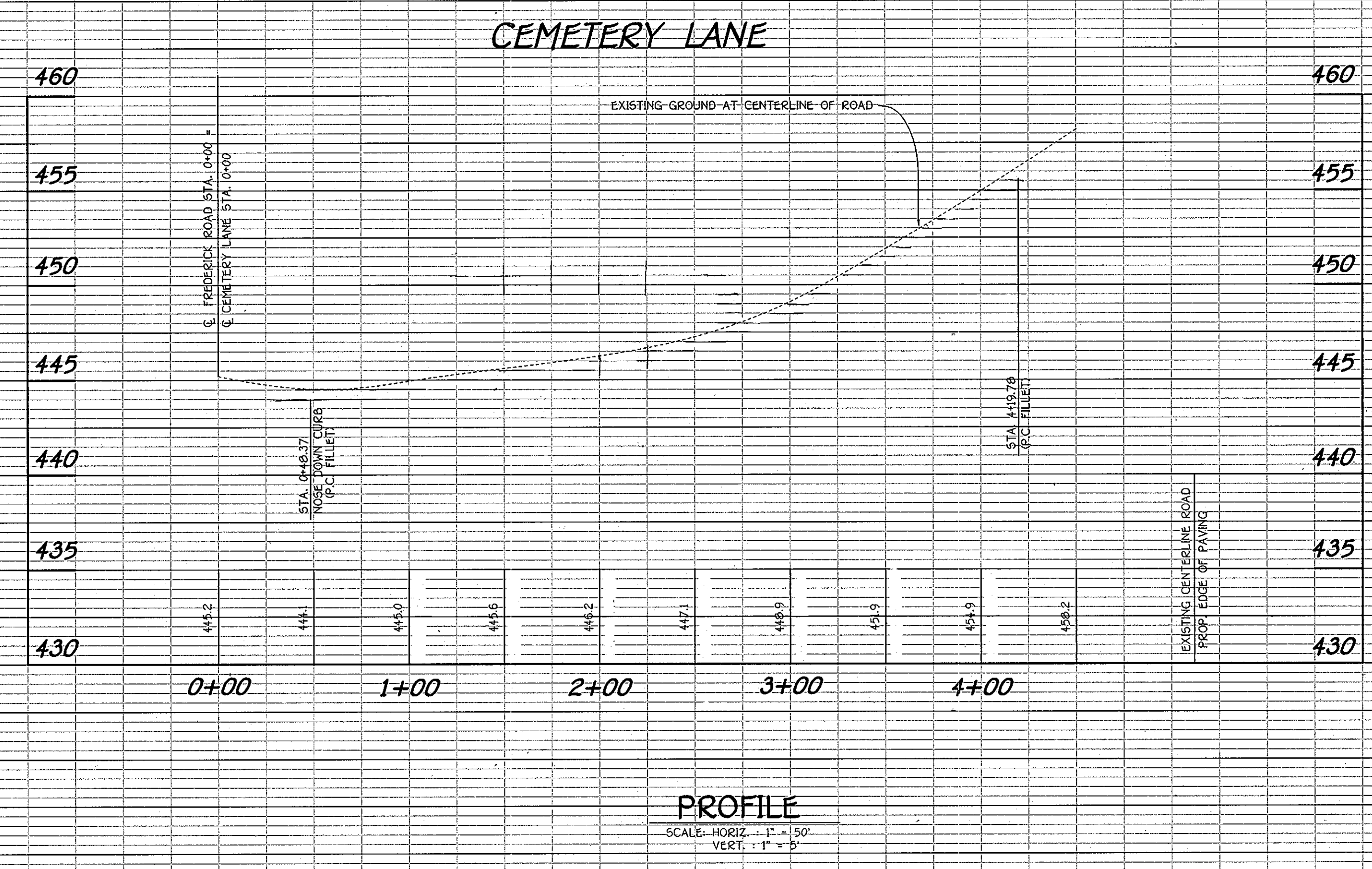
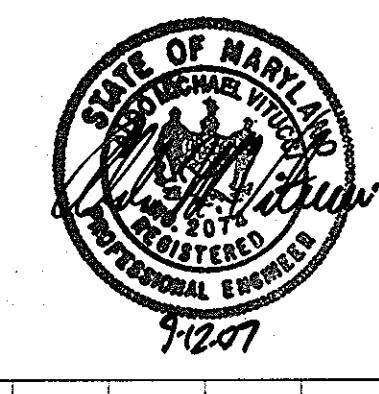
**ELlicOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS  
 ZONED: R-5A-B  
 TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**CEMETERY LANE WIDENING**  
 PLAN AND PROFILE

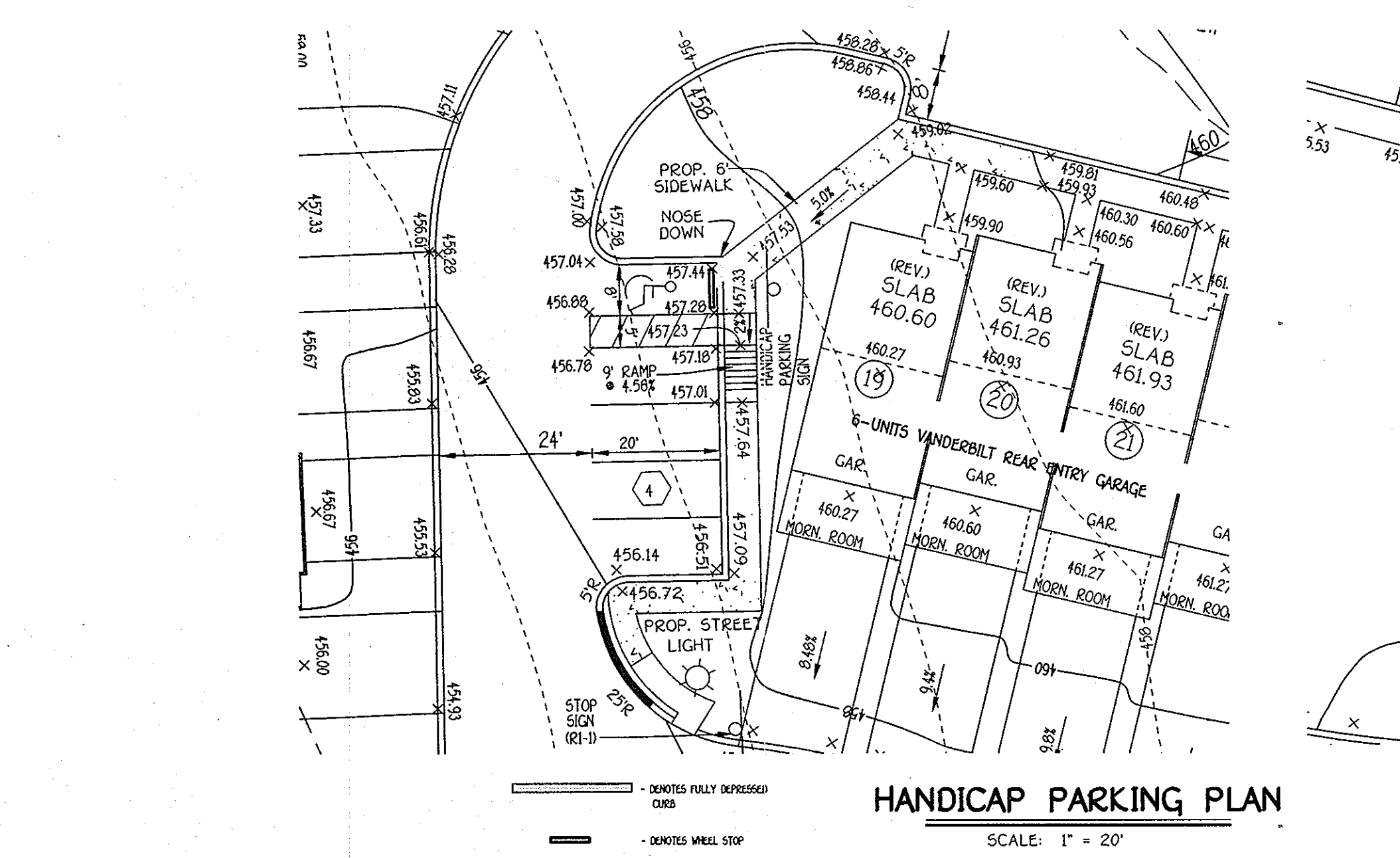
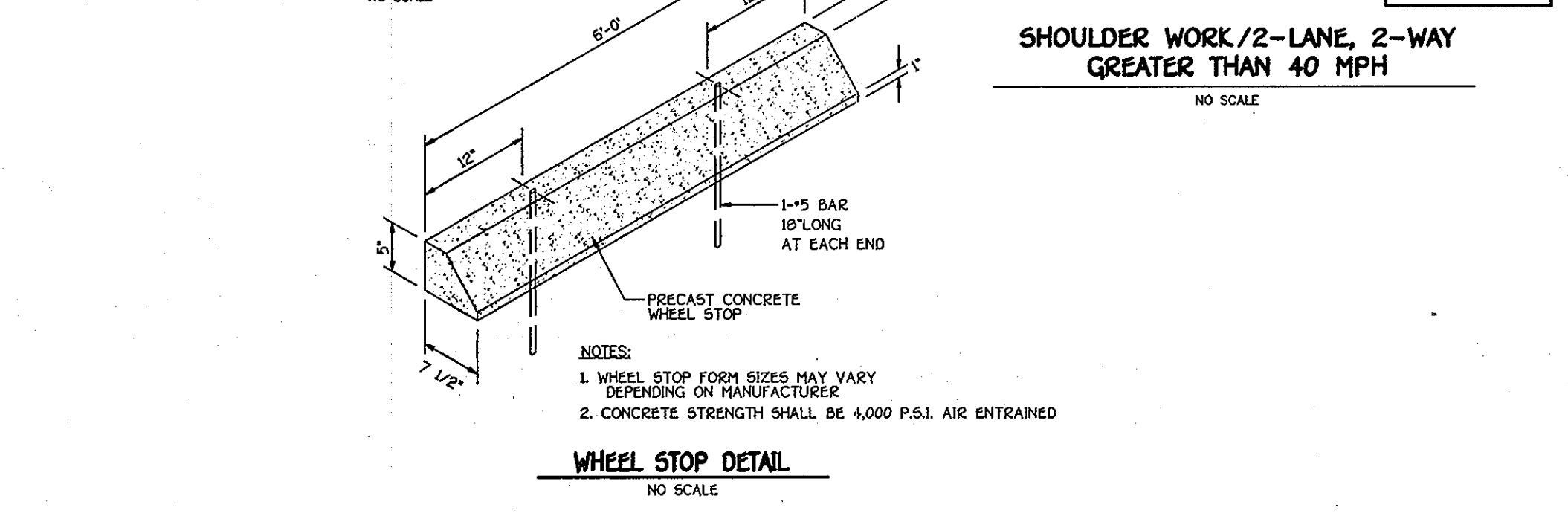
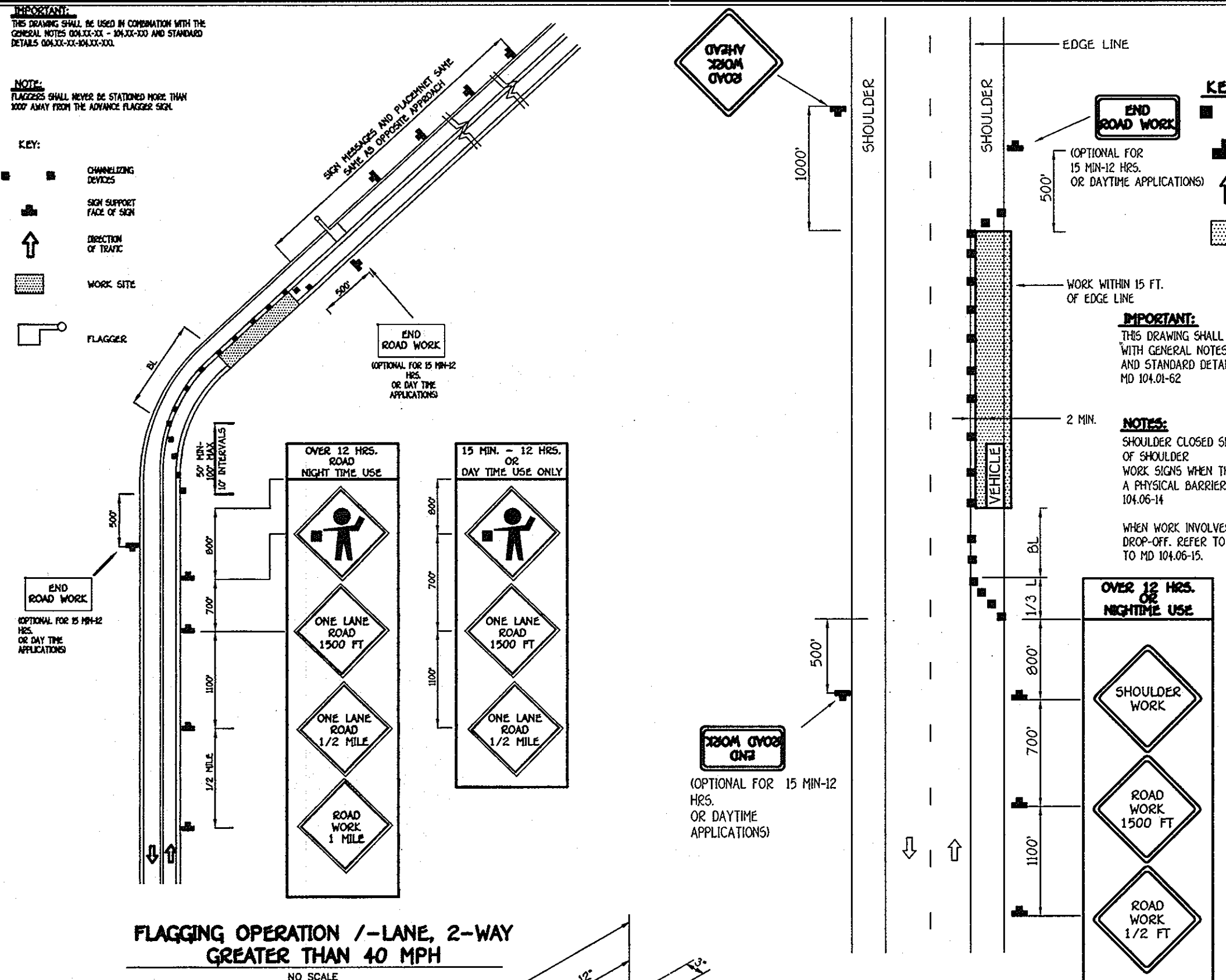
OWNERS		DEVELOPER
CHARLES J. & ELLEN H. NEPHOS 7160 COLUMBIA GATEWAY DRIVE COLUMBIA, MARYLAND 21046	JOSEPH W. & FRANCES L. GERMAN ET AL. 10510 FREDERICK ROAD ELLICOTT CITY, MARYLAND 21042	LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: MARCH, 2009 DWG. NO. 19 OF 22  
 DES. R.A.L. DRN. J.C.L. CHK. AM.V.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 1000 481 - 3029



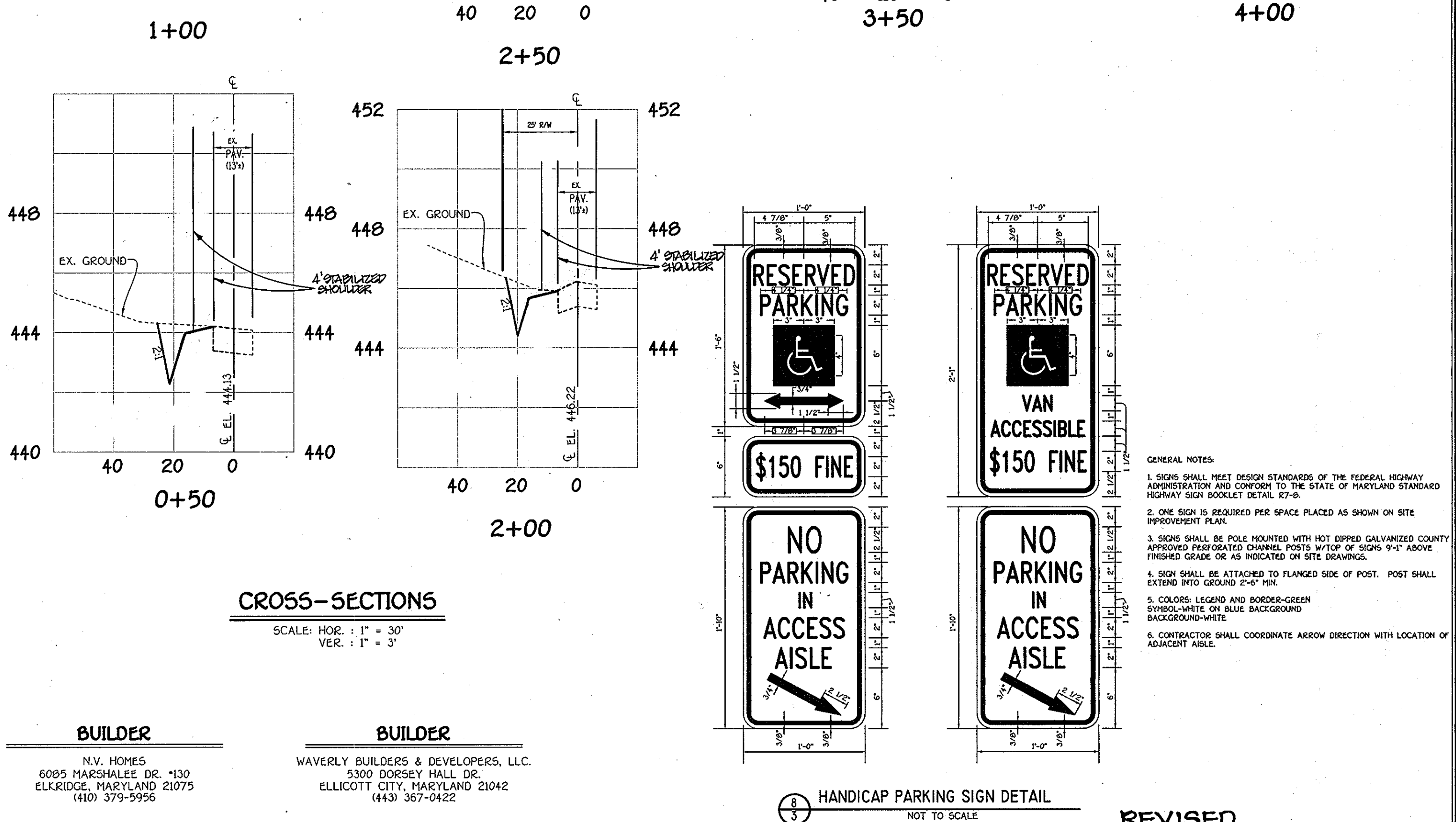
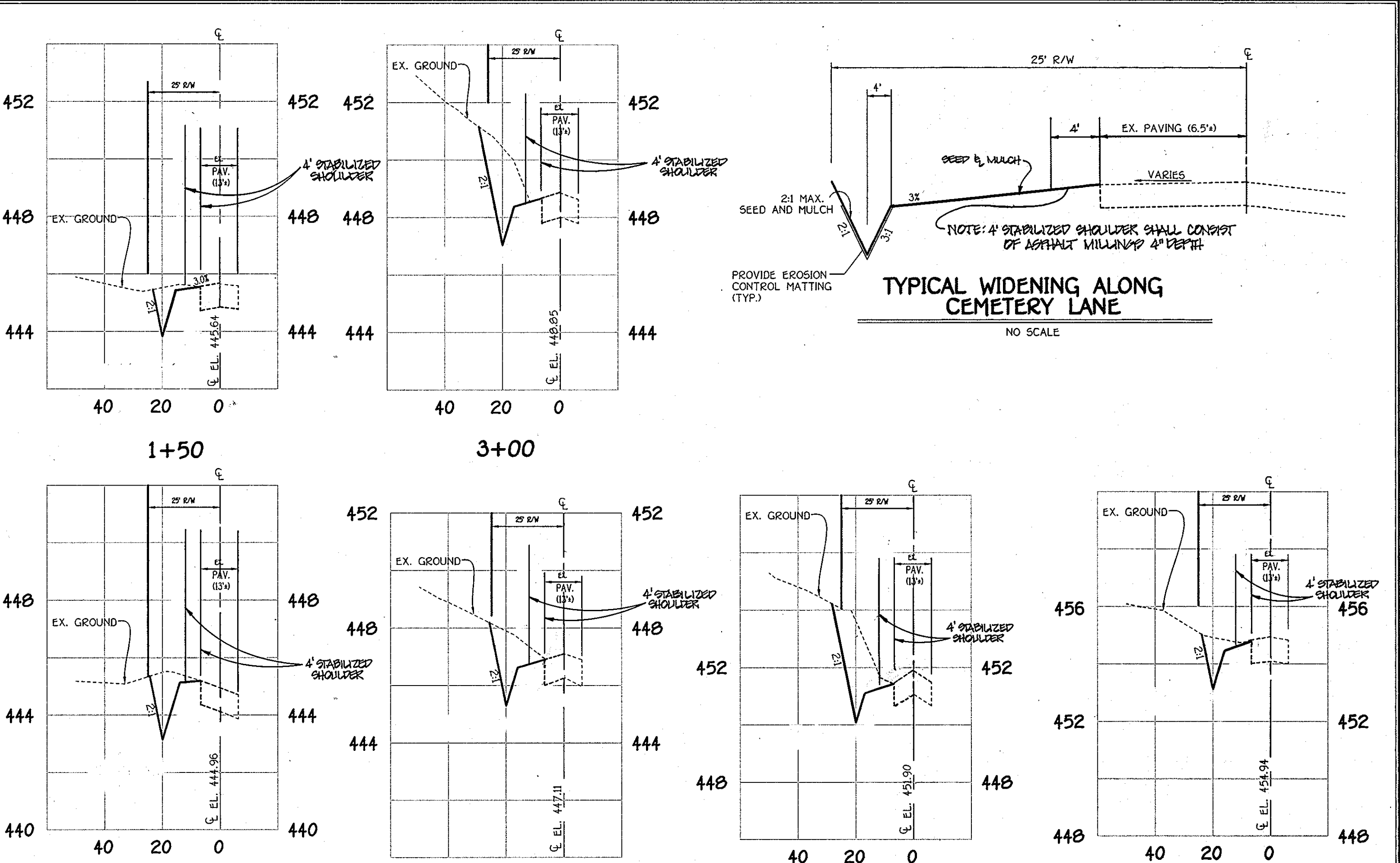
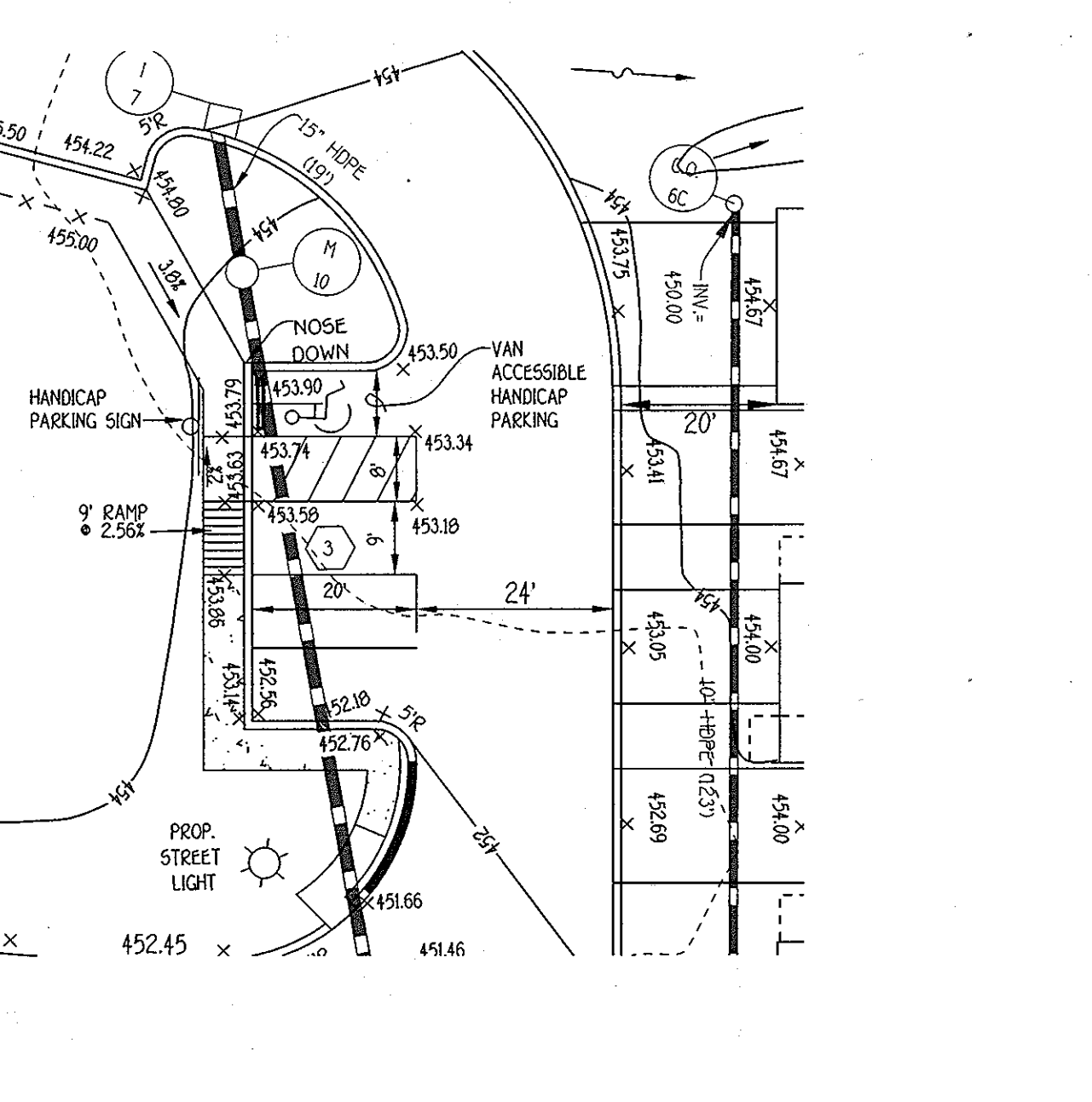
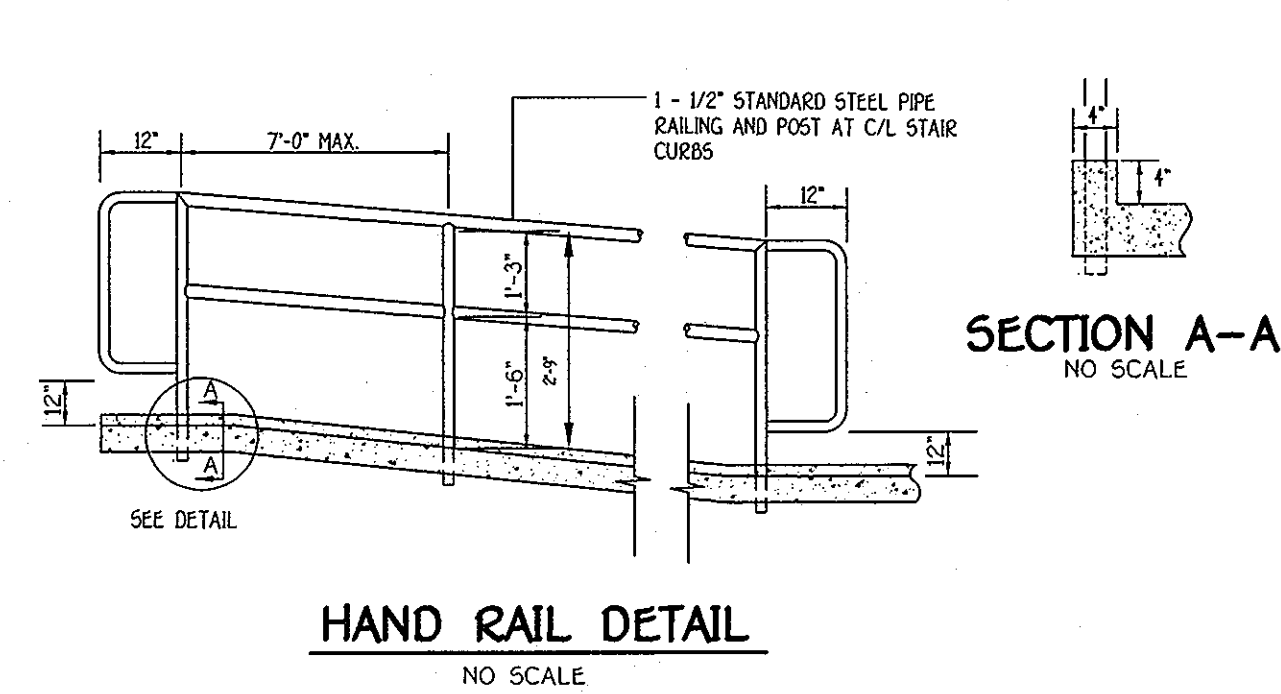




**MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS**

**GENERAL**

- THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FORTH THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE OF TRAFFIC THROUGH WORK AREAS AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
- PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPERTY APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
- THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TOP SHALL BE APPLIED TO INCLUDE ANY COMBINATION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
- THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1988 EDITION, ESPECIALLY PART VI, AND TO SECTION 04 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1992), INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
- THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TOP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TOP OR THE SPECIAL PROVISIONS WITH REGARD TO TRAFFIC CONTROL ITEMS SHALL BE MADE BY NOTING TO THE ENGINEER A MINIMUM OF THIRTEEN WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
- NO WORK SHALL BEAR ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TOP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
- GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
- THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WHEELCHAIR USERS.
- ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TOP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE MUTCD, AND/OR SECTION 04 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTIVE CAPABILITY OF AT LEAST ONE OF THE SPECIFIED MINIMUM VALUES OVER AT LEAST ONE OF THE VISIBLE REFLECTIVE SURFACES.
- ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
- THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TOP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATIVE AGENCIES. THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TOPS MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TOPS JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
- THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
- TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TOP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



NO.	REVISION	DATE
1	REVISED CEMETERY LANE WIDENING SECTION	11/9/10
2	REVISED UNIT LOCATIONS, UNIT NUMBERS, GRADING & UTILITIES	03/13/09
3	ADD BUILDERS' NAMES & ADDRESSES	09/02/08

**ENGINEER'S CERTIFICATE**  
 I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Signature of Engineer: [Signature] Date: [Date]

**DEVELOPER'S CERTIFICATE**  
 I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.  
 Signature of Developer: [Signature] Date: [Date]

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: [Signature] Date: 5/14/09  
 Chief, Planning and Development: [Signature] Date: 5/12/09  
 Chief, Development Engineering Division: [Signature] Date: 5/12/09

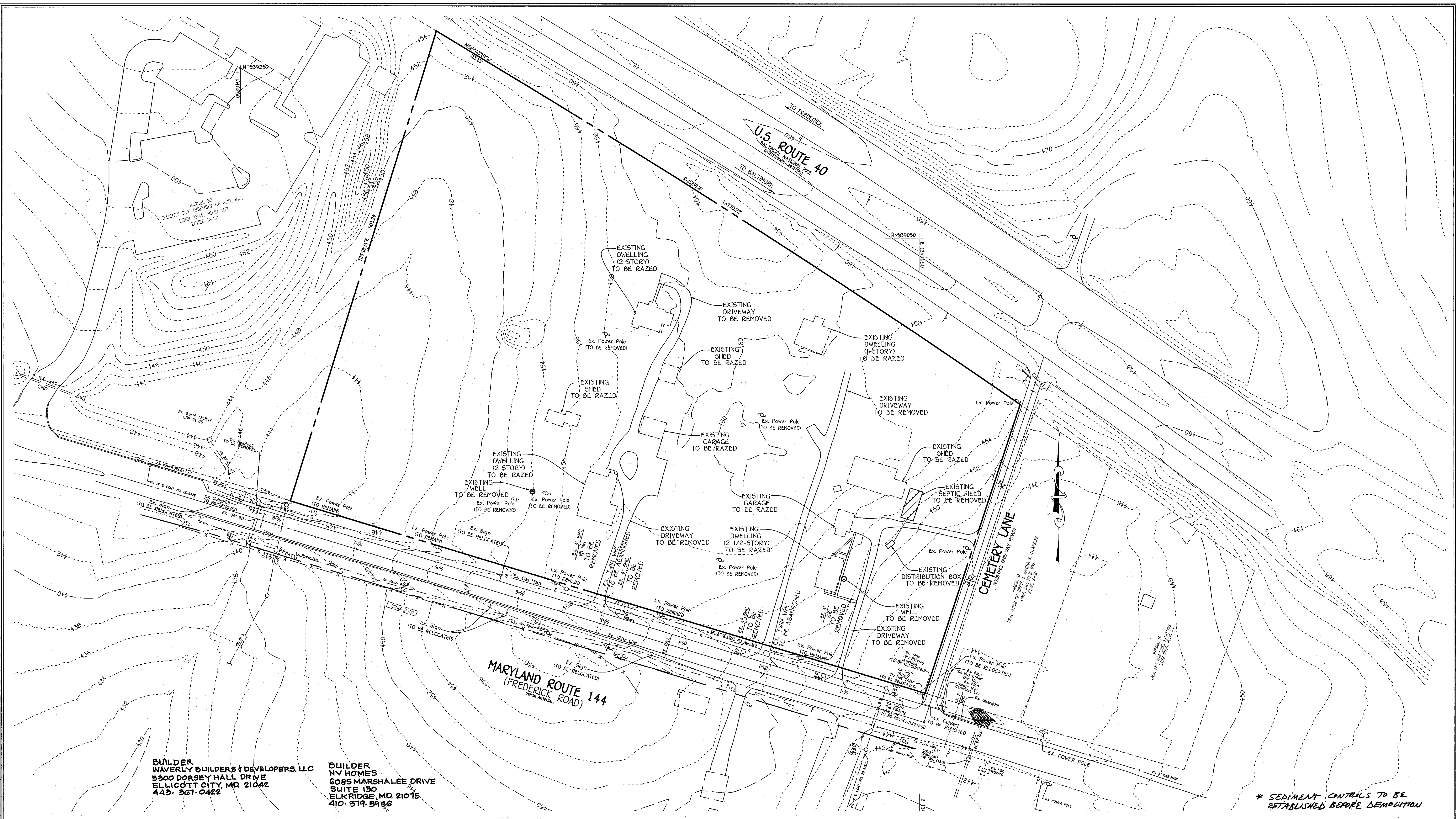
OWNERS: CHARLES J. & ELLEN H. NEPHOS, JOSEPH W. & FRANCES L. GERMAN, ETAL.  
 DEVELOPER: LAND DESIGN AND DEVELOPMENT, INC.

SUBDIVISION	ELLICOTT SQUARE	SECTION/AREA	N/A	UNIT Nos.	1-30 AND 33-70
PLAT NO.	18173-18174	BLOCK NO.	24	TAX/ZONE	R-SA-0B
WATER CODE	H 07	SEWER CODE		ELEC. DIST.	2nd
				CENSUS TR.	6022.00

**CEMETERY LANE CROSS-SECTIONS AND HANDICAP PARKING PLAN**  
**ELLICOTT SQUARE**  
 TOWNHOUSE CONDOMINIUMS

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN DATE: MARCH, 2009  
 SHEET 20 OF 22 SDP 05-112





**BUILDER  
WAVERLY BUILDERS & DEVELOPERS, LLC**  
5300 DORSEY HALL DRIVE  
ELLICOTT CITY, MD 21042  
443-367-0422

**BUILDER  
NY HOMES**  
6085 MARSHALEE DRIVE  
SUITE 130  
ELK RIDGE, MD 21015  
410-314-5956

\* SEDIMENT CONTROLS TO BE ESTABLISHED BEFORE DEMOLITION

**FISHER, COLLINS & CARTER, INC.**  
ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE: PASE - 10772 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
410-461-2955

NO.	REVISION	DATE
2	REVISE DATE AND UNIT NUMBERS	4/21/09
1	Add builders names & addresses	9-5-08

**ENGINEER'S CERTIFICATE**  
"I certify that the erosion and sediment control plan represents a practical and workable plan based on the knowledge of the site conditions and that it was prepared in accordance with the standards of the Howard Soil Conservation District."  
Signature: *[Signature]* Date: 9/22/07

**DEVELOPER'S CERTIFICATE**  
"I/we certify that all development and construction will be done according to this plan for sediment and erosion control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."  
Signature: *[Signature]* Date: 9/22/07

Reviewed for HOWARD SCD and meets Technical Requirements.  
U.S.D.A.-Natural Resources Conservation Service  
This development plan is approved for erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Howard SCD

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *[Signature]* Date: 12/14/07  
Chief, Division of Land Development: *[Signature]* Date: 12/13/07  
Chief, Development Engineering Division: *[Signature]* Date: 9/27/07

OWNERS	DEVELOPER
CHARLES J. & ELLEN H. MEMPHOS 7160 COLUMBIA GATEWAY DRIVE COLUMBIA, MARYLAND 21046	LAND DESIGN AND DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE ELLICOTT CITY, MARYLAND 21042

SUBDIVISION	SECTION/AREA	UNIT Nos.
ELLICOTT SQUARE	N/A	1-30 AND 33-70

PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
18173-18174	24	R-SA-B	16	2nd.	6022.00

WATER CODE	SEWER CODE
H 07	5083400

DEMOLITION PLAN #

**ELLICOTT SQUARE**  
TOWNHOUSE CONDOMINIUMS

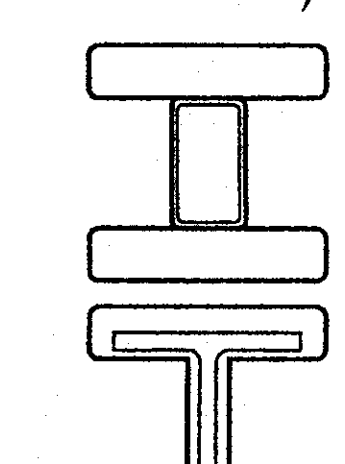
TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: 1" = 50' DATE: MARCH, 2009

SHEET 21 OF 22 SDP 05-112

2013/07/09 10:47:12 AM SDP Submission 037890 SHEET 21 DEMO PLAN.dwg, 1:1



# TUFO BARRIER TUFO BARRIER

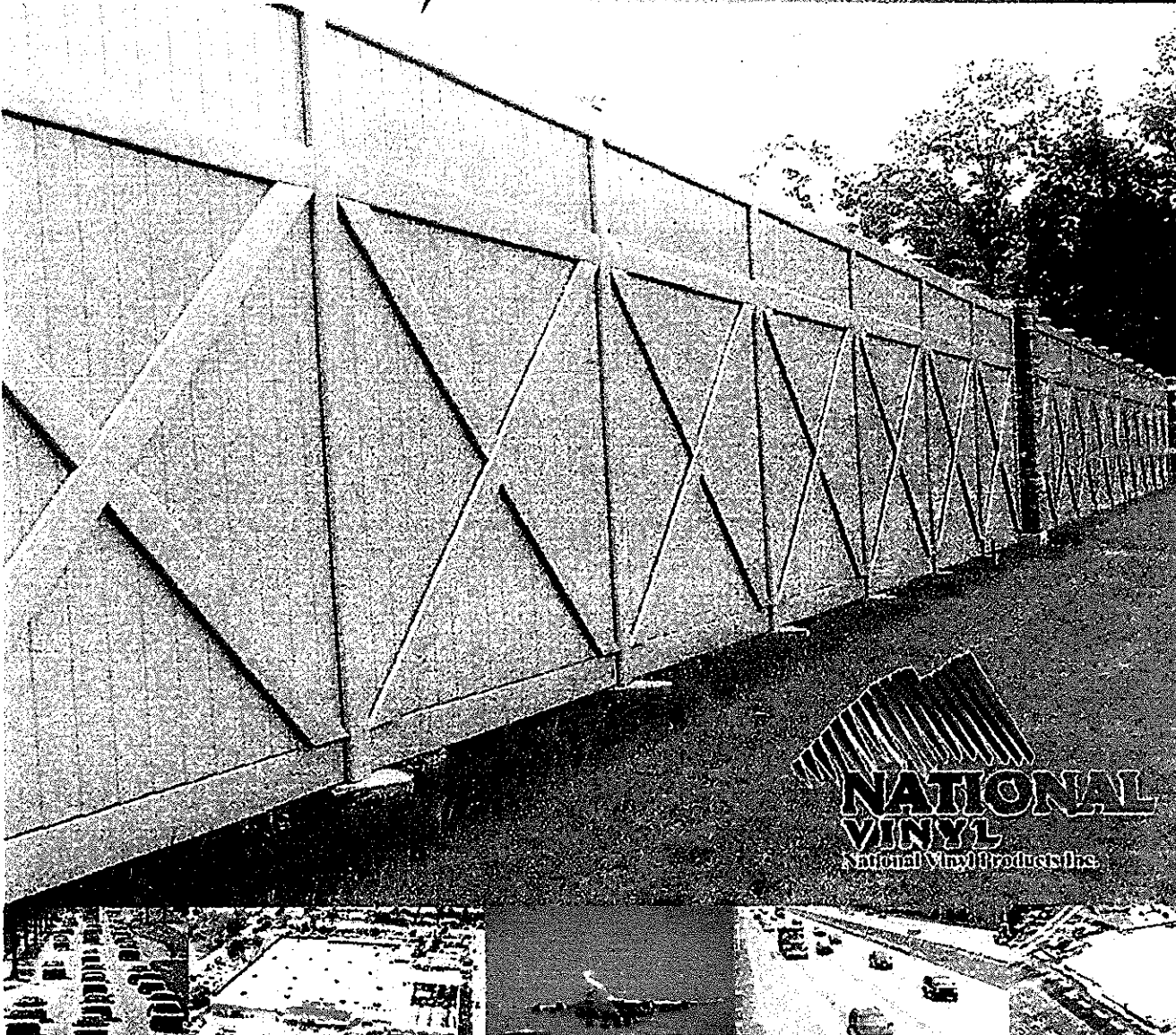


The TUF BARRIER, when built at heights under 10', utilizes a 125" thick steel tube for the core stiffener. The 1.5" x 2.5" tube is set in the concrete footing at desired centers and the post "sleeve" is slipped over the tube once concrete has set.

The TUF BARRIER, when built at heights exceeding 10', utilizes a 4" x 4" steel I-beam for the post stiffener. Again, once the concrete has set the vinyl post sleeve is slipped over and down the I-beam.

Because all heights utilize steel stiffeners that are "sleeved" it provides the strength of a steel core and the flexibility of building at multiple heights, with a uniform post appearance. In addition, all posts are capped with a color matched vinyl pyramidal cap. *Note: On taller walls, footing sizes and depth depend greatly on soil conditions and need to be determined by the project site engineer.*

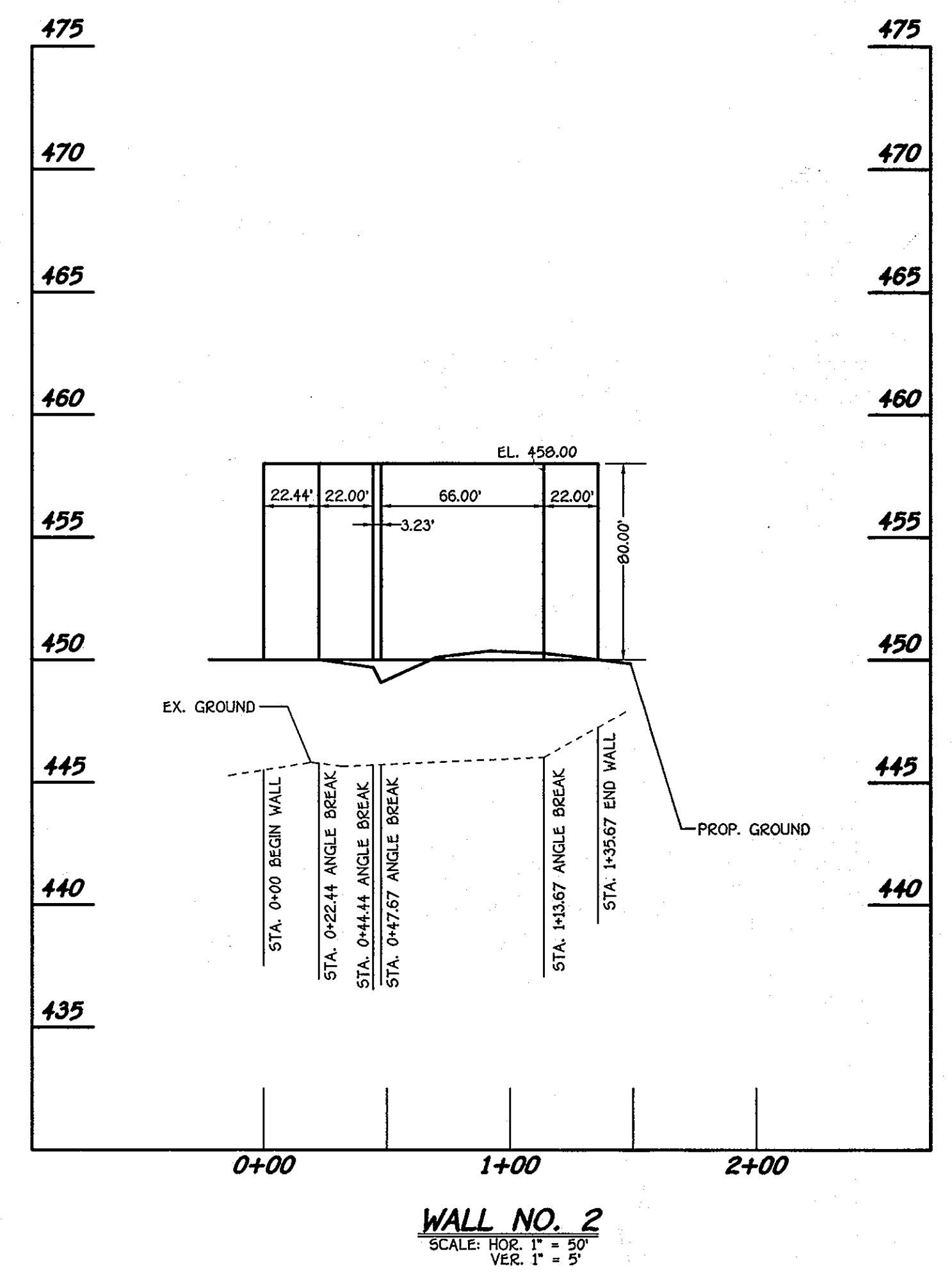
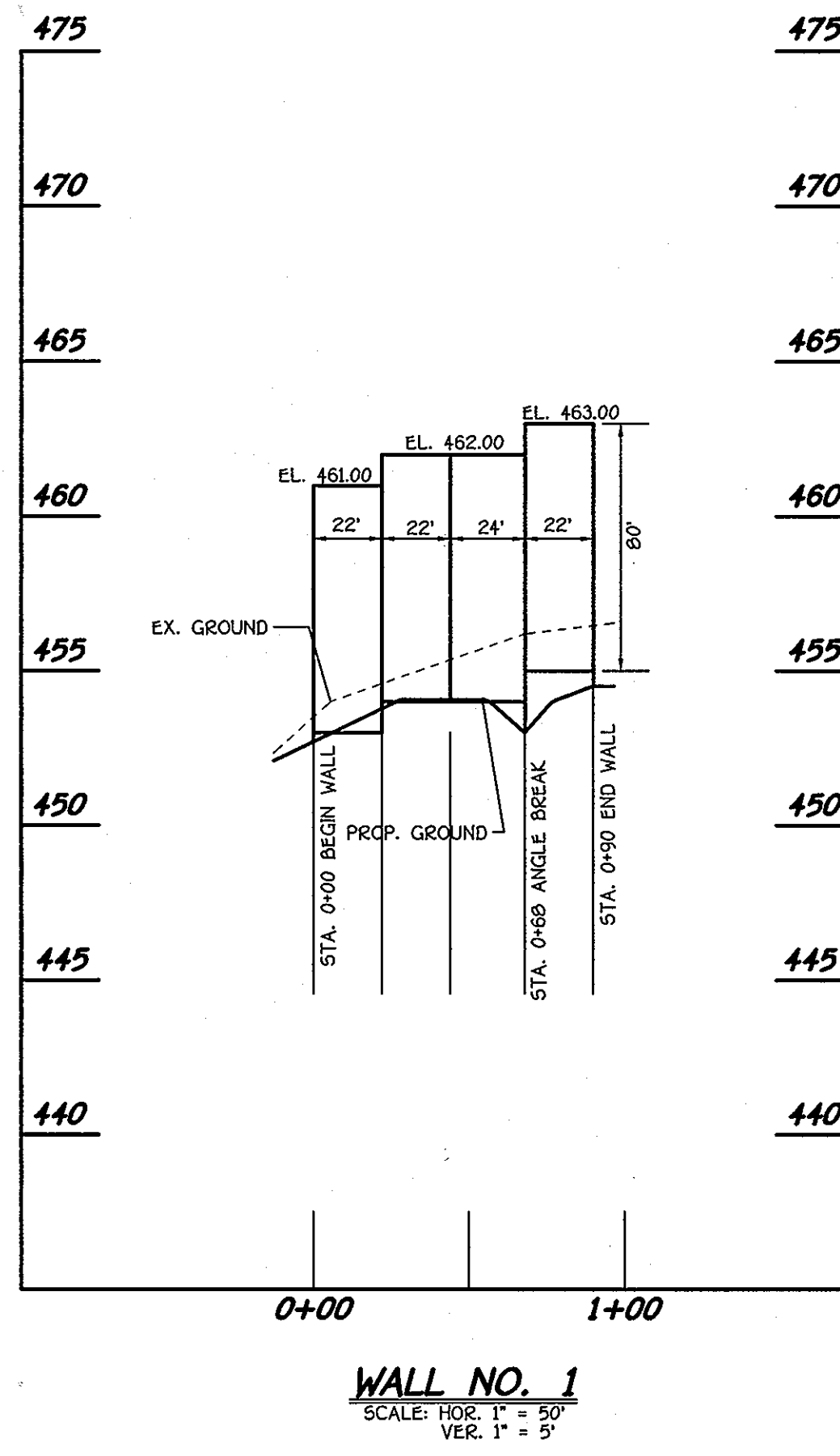
Both the STC 25 and the STC 32 Tuf Barrier is available with or without the polystyrene insulator when the STC rating is flexible or not needed. Due to the strength and low maintenance of the TUF rails there are many other uses for the TUF BARRIER such as sight barriers.




**NATIONAL VINYL**  
National Vinyl Products Inc.

**NATIONAL VINYL PRODUCTS INC.**  
www.nationalvinyl.net 1.866.231.7867 sales@nationalvinyl.net

**NORTH AMERICA'S MAINTENANCE FREE CHOICE FOR SIGHT AND SOUND BARRIERS**



# TUFO BARRIER



National Vinyl manufactures two types of its TUF Barrier sight and sound barrier wall system.

The "25STC-Heavy Wall" system meets or exceeds AASHTO guidelines in the key mass requirements, wind load sustaining (most heights and velocities) and decibel reduction criteria.

The more economical "25STC-Medium Wall" system, while lighter, still provides exceptional sound reduction performance.

Both systems are aesthetically pleasing, easy to install, remarkably rugged and virtually maintenance free.

**TECHNICAL INFORMATION**

STC rating (sound transmission loss) of 32 - bettered only by much more onerous and costly concrete wall systems in known (previously tested) materials. STC20 is the minimum requirement for a true sound barrier designation.

\*Five wind load\* panel performance of 45 psf on 10' post centers. Exceeds requirements for 100 mph at 14' heights in most open terrain (Exposure C).

Surface density of 4.12 lb/ft<sup>2</sup> - exceeding the 4.00 lb/ft<sup>2</sup> criteria - without any significant surplus mass (cost).

Typical applications: key arterial roads and highways, commercial developments, industrial sites.

STC25 rating - still exceeding mandated minimum but at reduced cost.

Surface density of 2.76 lb/ft<sup>2</sup>.

Typical applications: some roadways, housing development perimeter fencing, schoolyards, business yard enclosures.

Highly durable. Will not corrode, erode, rust or rot. Material lifespan measured in multiple decades as opposed to years.

Near zero-maintenance. No aftercare (painting/staining) required. Rain will wash most accumulated (environmental) residue away. Excessive dirt can be power-washed away if desired. Graffiti can be removed with detergents or solvents.

Easy installs - no heavy equipment required with pad (rail) placement. Walls can also be easily configured to house "doorways" or portals for access to city services like hydrants.

Various colors and "patterns" are available for contrast or for a more aesthetically pleasing finished structure.

**NATIONAL VINYL**  
National Vinyl Products Inc.

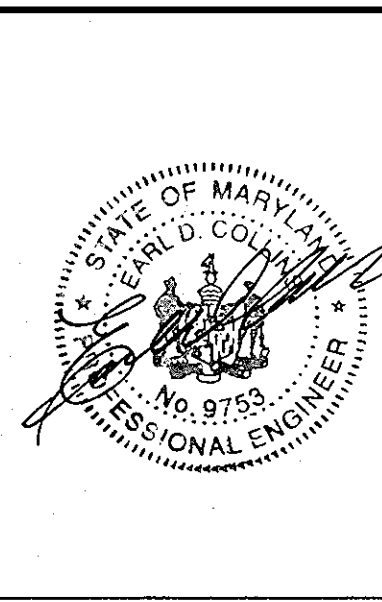
**NORTH AMERICA'S MAINTENANCE FREE CHOICE FOR SIGHT AND SOUND BARRIERS**

**BUILDER**  
N.V. HOPES  
6095 MARSHALLE DR. #10  
ELICOTT, MARYLAND 21075  
410 379-9996

**BUILDER**  
MAVERLY BUILDERS & DEVELOPERS, LLC  
2300 ROSSETT HALL DR.  
ELICOTT CITY, MARYLAND 21042  
410 307-9422

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
410 461 - 2095

NO.	REVISION	DATE
1	Add Sound Barrier Wall & Detail	5/12/09
2	Add builders name & addresses	09/02/08



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

Signature of Engineer: *[Signature]* Date: 4/28/09

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

Signature of Developer: *[Signature]* Date: 4/28/09

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

Howard SCD Date: \_\_\_\_\_

**OWNERS**  
CHARLES J. & ELLEN H. MEMPHOS  
7160 COLUMBIA GATEWAY DRIVE  
COLUMBIA, MARYLAND 21046

**DEVELOPER**  
LAND DESIGN AND DEVELOPMENT, INC.  
5300 ROSSETT HALL DRIVE  
ELICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 5/12/09  
Director - Department of Planning and Zoning Date

*[Signature]* 5/12/09  
Chief, Division of Land Development Date

*[Signature]* 5/12/09  
Chief, Development Engineering Division Date

SUBDIVISION: ELLICOTT SQUARE SECTION/AREA: N/A UNIT Nos.: 1-30 AND 33-70

PLAT NO.: 18173-10174 BLOCK NO.: 24 ZONE: R-SA-B TAX/ZONE: 16 ELEC. DIST.: 2nd CENSUS TR.: 6022.00

WATER CODE: H 07 SEWER CODE: 5063400

**REVISED NOISE BARRIER DETAIL SHEET**

**ELLICOTT SQUARE TOWNHOUSE CONDOMINIUMS**

TAX MAP No. 16 GRID No. 24 PARCEL Nos. 59, 60 & 63  
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MARCH, 2009  
SHEET 22 OF 22 S0P 05-112

K:\SOP\030780\04\50P REPLACEMENT SHEETS\30780 REPLACEMENT SHEET 22 NOISE WALL DETAILS.dwg - 4/21/2009 2:16:18 PM, bamp.