

**NOTE:**  
THIS PLAY AREA IS NOT LOCATED ANYWHERE NEAR THE LIMITS OF THE 100 YEAR FLOOD PLAIN.

**SHEET INDEX**

SHT#	SHEET NAME
1	SITE PLAN
2	GRADING PLAN
3	GRADING PLAN
4	SITE DEVELOPMENT PLAN
5	EROSION SEDIMENT CONTROL PLAN
6	STORMWATER MANAGEMENT PLAN
7	SITE DETAILS
8	SWM/ESC DETAILS
9	STORMWATER MANAGEMENT PLAN
10	SWM PROFILES
11	SWM IMPERVIOUS AREAS

REVISION AND DISTRIBUTION RECORD			
NO.	DATE	PR.	DISTRIBUTION
1	8/21/68	RW	Pool Fence Relocated
2	3/29/69	RW	REVISED TELEPHONE BOOTH
3	6-1-73		TOT LOT EQUIPMENT ADDED TO S.D.P.
4	10-28-73		ADDITION OF PINE TREE SCREENING
5	9/6/73	CEI	ADD 531 SF OF BATHROOM ADDITION
6	12/5/73	CEI	ADDED SHEETS 9-11 TO SHEET INDEX, REPLACE EXISTING POOL DECK, ADD SWM FACILITIES.

**RE: SDP-71-29C**

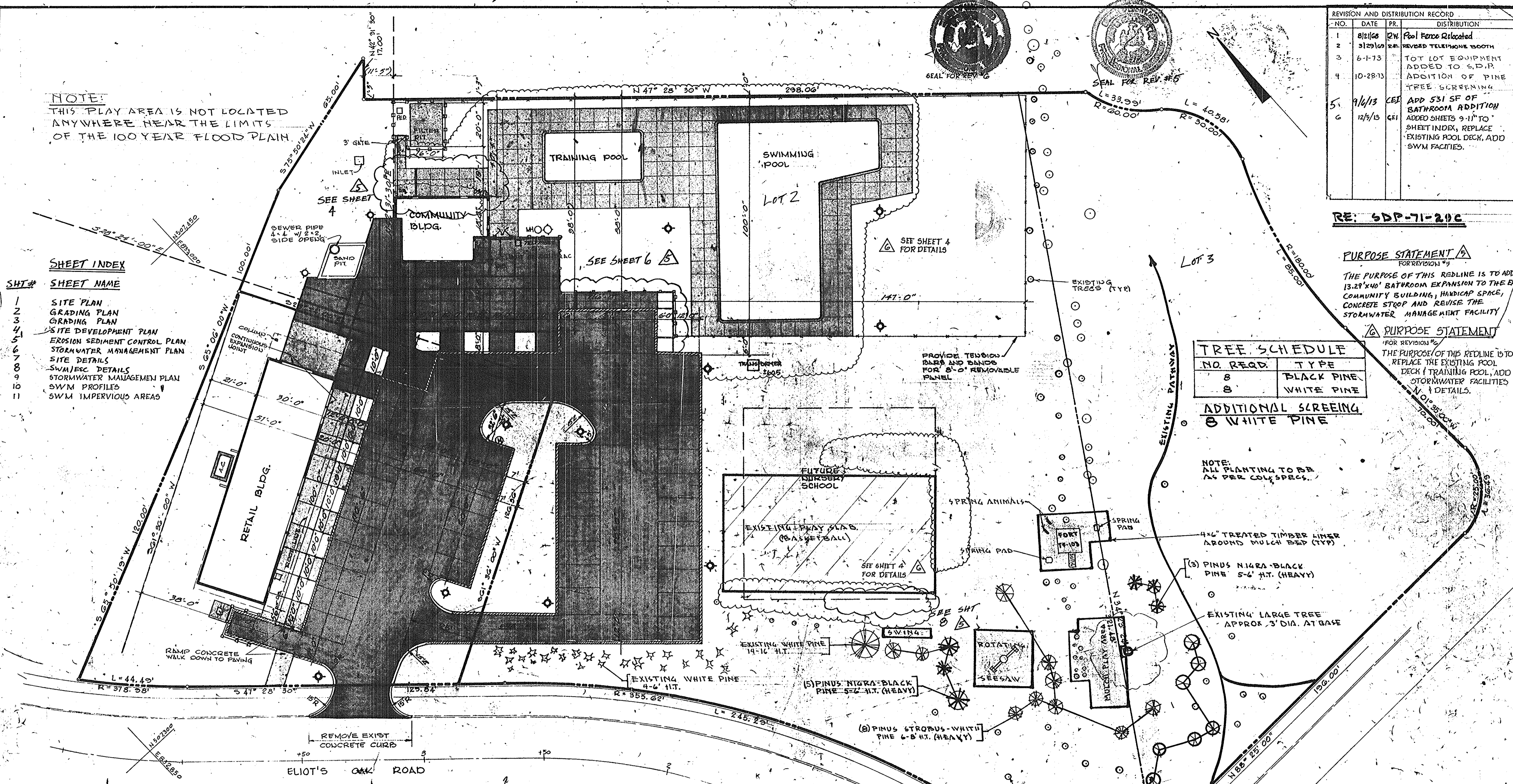
**PURPOSE STATEMENT**  
FOR REVISION #5  
THE PURPOSE OF THIS REDLINE IS TO ADD 13,29'x40' BATHROOM EXPANSION TO THE EX. COMMUNITY BUILDING, HANDICAP SPACE, CONCRETE STOOP AND REVISE THE STORMWATER MANAGEMENT FACILITY.

**PURPOSE STATEMENT**  
FOR REVISION #6  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK (TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS.

TREE SCHEDULE	
NO. REQD.	TYPE
8	BLACK PINE
8	WHITE PINE

**ADDITIONAL SCREENING**  
8 WHITE PINE

**NOTE:**  
ALL PLANTING TO BE AS PER COL. SPECS.



- GENERAL NOTES**
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONSULT WITH THE BALTIMORE GAS & ELECTRIC COMPANY, AND TO ASSURE THEMSELVES THAT THE SITE HAS BEEN STAKED FOR IDENTIFICATION OF ANY AND ALL UNDERGROUND CABLE BEFORE DIGGING.
  - CONCRETE PAVING TO HAVE DROOM FINISH W/ TOOLED JOINTS.
  - LAYOUT FOR WOOD PAVING PATTERNS, LOCATION OF FENCES AND LOCATION OF LIGHTING STANDARDS ARE TO BE CHECKED IN THE FIELD BY T.R.C. BEFORE BEGINNING CONSTRUCTION.
  - A BUILDING PERMIT FOR THE 531 SF BATHROOM ADDITION MUST BE GRANTED WITHIN 1 YEAR OF THE D.E.D. REDLINE APPROVAL. A GRADING PERMIT MUST BE ISSUED 1 YEAR FROM THE D.E.D. REDLINE APPROVAL.

**SYMBOLS**

[Pattern]	CONCRETE PAVING
[Pattern]	CONTINUOUS PAVING
[Pattern]	CONCRETE CURB
[Pattern]	RAIL TIES CURB
[Pattern]	WOOD FENCE
[Pattern]	CHAIN LINK FENCE
[Pattern]	CONTROL DIMENSIONS (0'-0")

**OWNER:** COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MD 21044  
ATTN: DIANA KELLY 410-381-2947

**AS-BUILT CERTIFICATION:**  
There is no "as built" information provided on this sheet.  
Robert Harvitz  
PE # 18808 4-21-16  
6.17.16

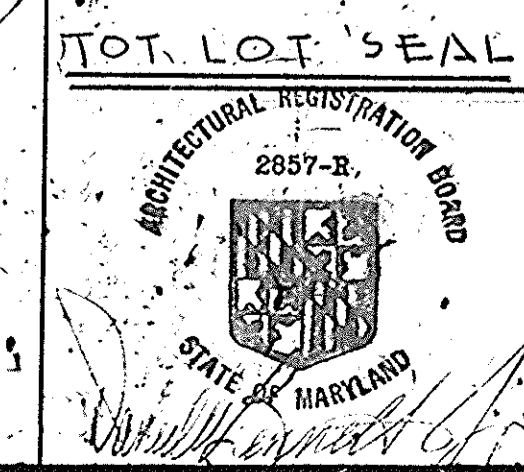
**PINE TREE SCREENING FOR PLAY EQUIPMENT**

**Professional Certification:** I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18968, Expiration Date 10-5-2016.

**APPROVED:** HO. CO. PLANNING  
[Signature] 12-11-73  
PLANNING DIRECTOR  
[Signature] 12/10/73  
CHIEF DIVISION OF LAND DEVELOPMENT, TRANS. PLANNING DATE

**APPROVED:** FOR PUBLIC WATER PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS  
[Signature] 1/2/72  
DIRECTOR  
[Signature] 8/22/73  
CHIEF BUREAU OF HIGHWAYS DATE

**APPROVED:** PLANNING BOARD OF HOWARD COUNTY  
[Signature] 10/21/70  
DATE



**COLUMBIA MARYLAND**

**THE ROUSE COMPANY**  
THE VILLAGE OF CROSS KEYS, BALTIMORE, MD. 21110

**PROJECT TITLE:** LOUGHELOW NEIGHBORHOOD CENTER 5TH ELECTION DISTRICT, HOWARD COUNTY  
SUBJECT: M 29 2731, LOT 1, 2, 3

**AS-BUILT SITE PLAN**

SCALE: 1" = 20'  
DATE: 9/27/68  
DES. BY: R.W.C.  
DWN. BY: R.W.C.  
CK. BY: [Signature]  
APP. BY: 1 of 3

SDP 71-29C

ELEMENTARY SCHOOL SITE



REVISION AND DISTRIBUTION RECORD			
NO.	DATE	PR.	DISTRIBUTION
1	4/2/68	R.W.	Add Pool Deck Int'l. Rev. Grades
2	4/5/68	MD	REV. COMMUNITY BLDG. FLD. FLOOR ELEV. TO 462.4
3	8/20/68	R.W.	Relocate Pool Fence, Adjust Grades
5	9/16/13	CEI	ADD 531 SF BATHROOM ADDITION
6	12/5/13	CEI	REPLACE EXISTING POOL DECK, ADD STORMWATER MANAGEMENT FACILITIES

APPROVED SITE PLAN	DATE
HOWARD COUNTY PLANNING COMMISSION	
PLANNING DIRECTOR	DATE
APPROVED: HOWARD CO. PLANNING COMMISSION	
SENIOR ENGINEER	DATE
APPROVED: HOWARD COUNTY, ROADS DEPT.	
ROADS ENGINEER	DATE
APPROVED: HOWARD CO. METROPOLITAN COMM.	
CHIEF ENGINEER	DATE
APPROVED: HOWARD CO. HEALTH DEPT. FOR PUBLIC WATER & SEWER	
COUNTY HEALTH OFFICER	DATE

LOCATION MAP 1"=800'

**PURPOSE STATEMENT**  
FOR REVISION #6  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL. ADD STORMWATER FACILITIES (DETAILS).

**PURPOSE STATEMENT**  
FOR REVISION #5  
THE PURPOSE OF THIS REDLINE IS TO ADD 15.24' x 40' BATHROOM EXPANSION TO THE EX. COMMUNITY BUILDING, HANDICAP SPACE, CONCRETE STOOP AND REVISE THE STORM WATER MANAGEMENT FACILITY.

- GENERAL NOTES**
1. CONTOURS INDICATED AS EXISTING GRADES ARE THOSE OF THE PREGRADDED SITE. VISIT SITE TO VIEW CONDITIONS, SPECIFICATIONS AND DRAWINGS FOR PREGRADING, AND ORIGINAL GRADERS BEFORE PREGRADING ARE AVAILABLE FROM THE OWNER'S REPRESENTATIVE.
  2. GRADES SHOWN ARE FINISH GRADES. CONSTRUCT SUBGRADES ALLOWING FOR THICKNESSES OF FINISH MATERIALS. SEE SHEET 1-1 FOR MATERIALS.
  3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONSULT WITH THE BALTIMORE GAS & ELECTRIC COMPANY AND TO ASSURE THEMSELVES THAT THE SITE HAS BEEN STAKED FOR IDENTIFICATION OF ANY AND ALL UNDERGROUND CABLE BEFORE DIGGING.

LIBER FOLIO  
VILLAGE OF HARPER'S CHOICE  
SEC. 1, AREA 5

COLUMBIA ASSOCIATION  
10221 WINGPIN CIR. SUITE 100  
COLUMBIA, MD 21049  
ATTN: DIANA KELLY 410-581-2100

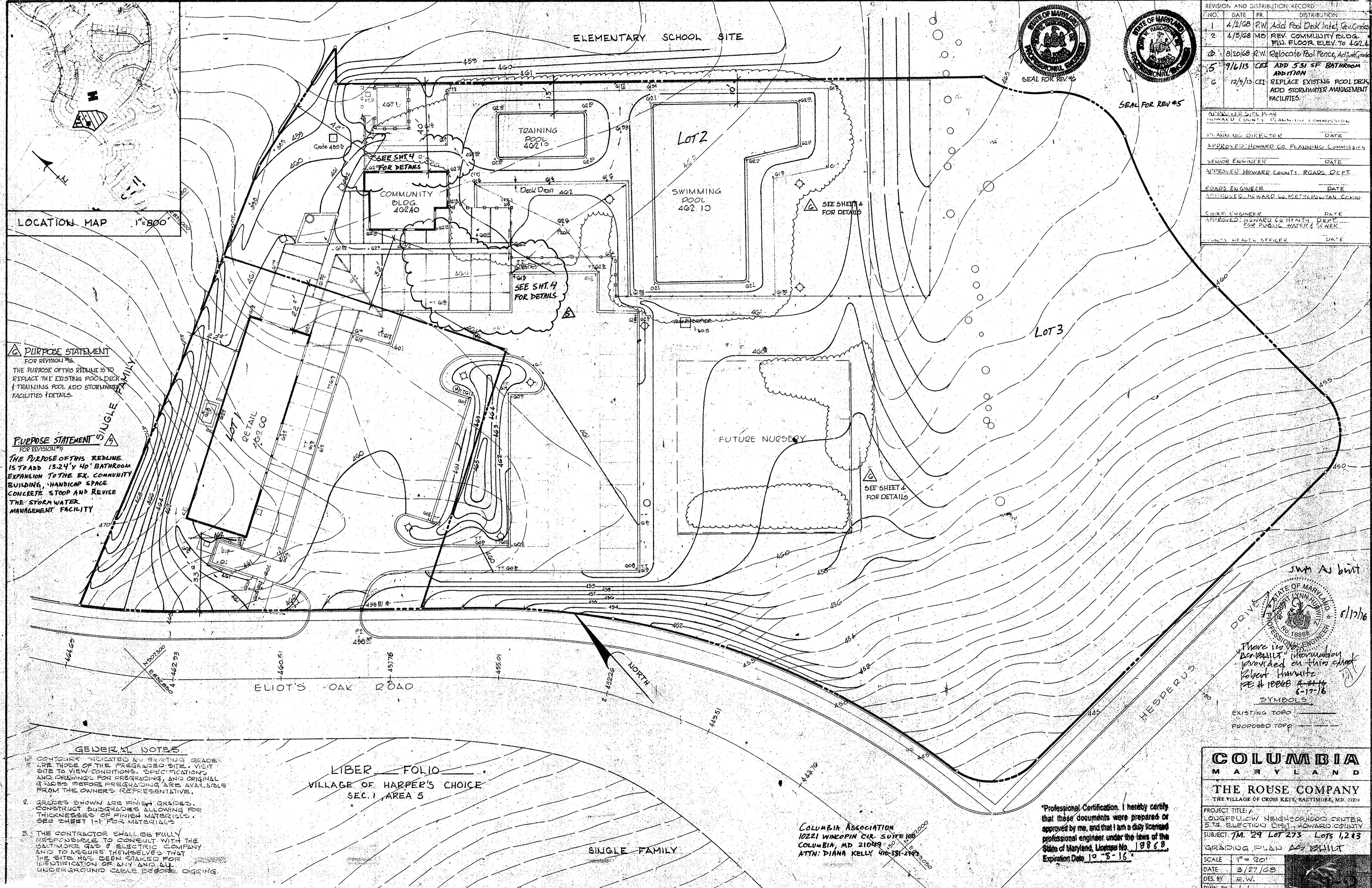
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18868, Expiration Date 12-31-16.

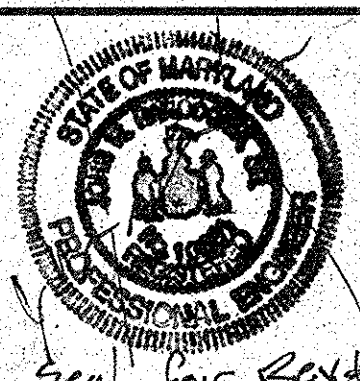
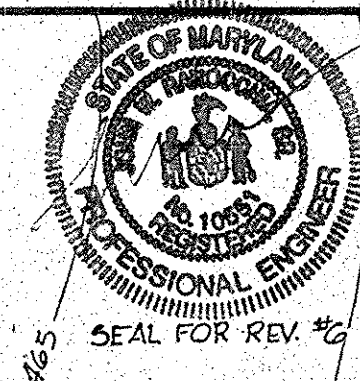
**COLUMBIA MARYLAND**  
THE ROUSE COMPANY  
THE VILLAGE OF CROSS KEYS, BALTIMORE, MD. 21210

PROJECT TITLE:  
LONGFELLOW NEIGHBORHOOD CENTER  
SITE ELECTION DIST. HOWARD COUNTY  
SUBJECT: TM 29 LOT 273 Lots 1, 2 & 3  
GRADING PLANS BY R.W.C.

SCALE: 1"=20'  
DATE: 3/27/68  
DES. BY: R.W.  
DWN. BY: W.J.  
CHK. BY: R.W.C.

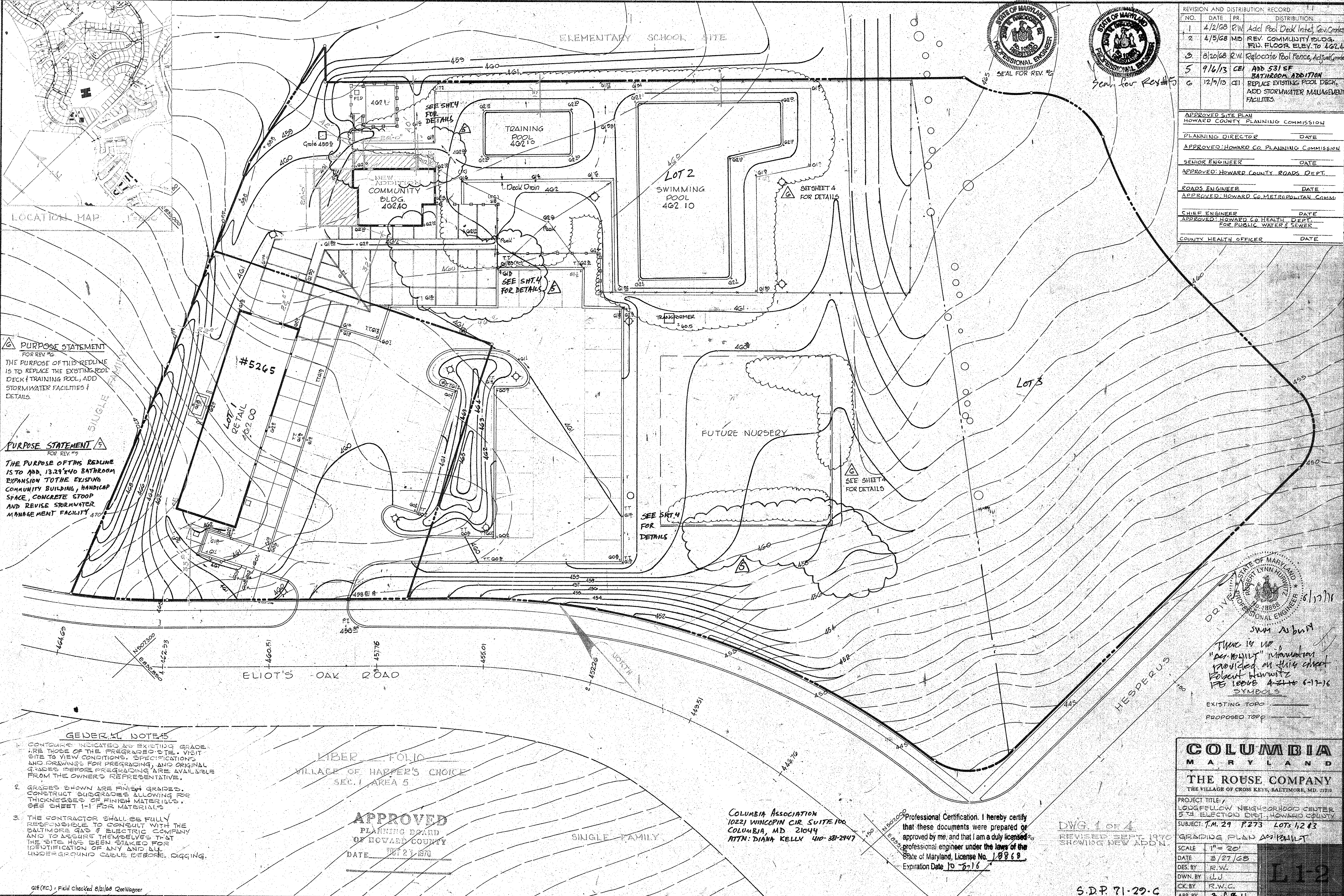
sum as built  
11/1/68  
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
No. 18868  
EXPIRES 12-31-16  
There is no "AS BUILT" information provided on this sheet.  
Robert Hurwitz  
PE # 18868 4-21-14  
8-17-16  
SYMBOLS  
EXISTING TOPO  
PROPOSED TOPO





REVISION AND DISTRIBUTION RECORD			
NO.	DATE	PR.	DISTRIBUTION
1	4/2/68	R.W.	Add Pool Deck Intst, Rev. Grades
2	4/5/68	M.D.	REV. COMMUNITY BLDG. FLD. FLOOR ELEV. TO 462.4
3	8/20/68	R.W.	Relocate Pool Fence, Adjust Grades
5	9/16/73	CEI	ADD 531 SF BATHROOM ADDITION
6	12/7/73	CEI	REPLACE EXISTING POOL DECK, ADD STORMWATER MANAGEMENT FACILITIES.

APPROVED SITE PLAN HOWARD COUNTY PLANNING COMMISSION	
PLANNING DIRECTOR	DATE
APPROVED: HOWARD CO. PLANNING COMMISSION	
SENIOR ENGINEER	DATE
APPROVED: HOWARD COUNTY ROADS DEPT.	
ROADS ENGINEER	DATE
APPROVED: HOWARD CO. METROPOLITAN COMM.	
CHIEF ENGINEER	DATE
APPROVED: HOWARD CO. HEALTH DEPT. FOR PUBLIC WATER & SEWER	
COUNTY HEALTH OFFICER	DATE



**PURPOSE STATEMENT**  
FOR REV #6  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS.

**PURPOSE STATEMENT**  
FOR REV #9  
THE PURPOSE OF THIS REDLINE IS TO ADD 13.29'x40' BATHROOM EXPANSION TO THE EXISTING COMMUNITY BUILDING, HANDICAP SPACE, CONCRETE STOOP AND REVISE STORMWATER MANAGEMENT FACILITY.

- GENERAL NOTES**
- CONTOURS INDICATED AS EXISTING GRADES ARE THOSE OF THE PREGRADED SITE. VISIT SITE TO VIEW CONDITIONS, SPECIFICATIONS AND DRAWINGS FOR PREGRADING, AND ORIGINAL GRADES BEFORE PREGRADING ARE AVAILABLE FROM THE OWNER'S REPRESENTATIVE.
  - GRADES SHOWN ARE FINISH GRADES. CONSTRUCT SUBGRADES ALLOWING FOR THICKNESSES OF FINISH MATERIALS. SEE SHEET 1-4 FOR MATERIALS.
  - THE CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONSULT WITH THE BALTIMORE GAS & ELECTRIC COMPANY AND TO SECURE THEMSELVES THAT THE SITE HAS BEEN STAKED FOR IDENTIFICATION OF ANY AND ALL UNDERGROUND CABLE RECORD, DIGGING.

LIBER FOLIO  
VILLAGE OF HAPPER'S CHOICE  
SEC. 1 AREA 5

**APPROVED**  
PLANNING BOARD  
OF HOWARD COUNTY  
DATE: SEP 27 1970

COLUMBIA ASSOCIATION  
10221 WINCOPIN CIR SUITE 100  
COLUMBIA, MD 21044  
ATTN: DIANA KELLY 410-381-2947

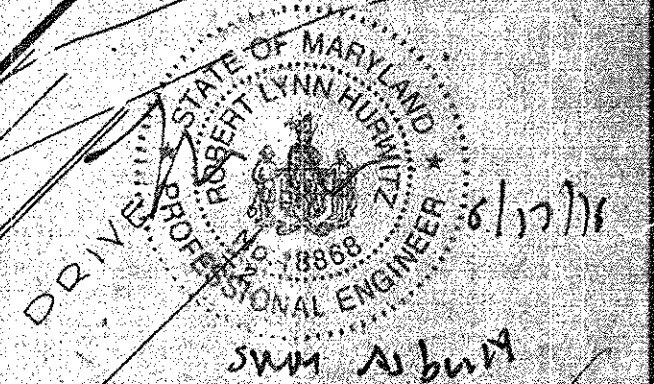
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10869.  
Expiration Date 10-7-76

DWG. 1 OF 4  
REVISED SEPT. 1970  
SHOWING NEW ADDN.

**COLUMBIA MARYLAND**  
THE ROUSE COMPANY  
THE VILLAGE OF CROSS KEYS, BALTIMORE, MD. 2120

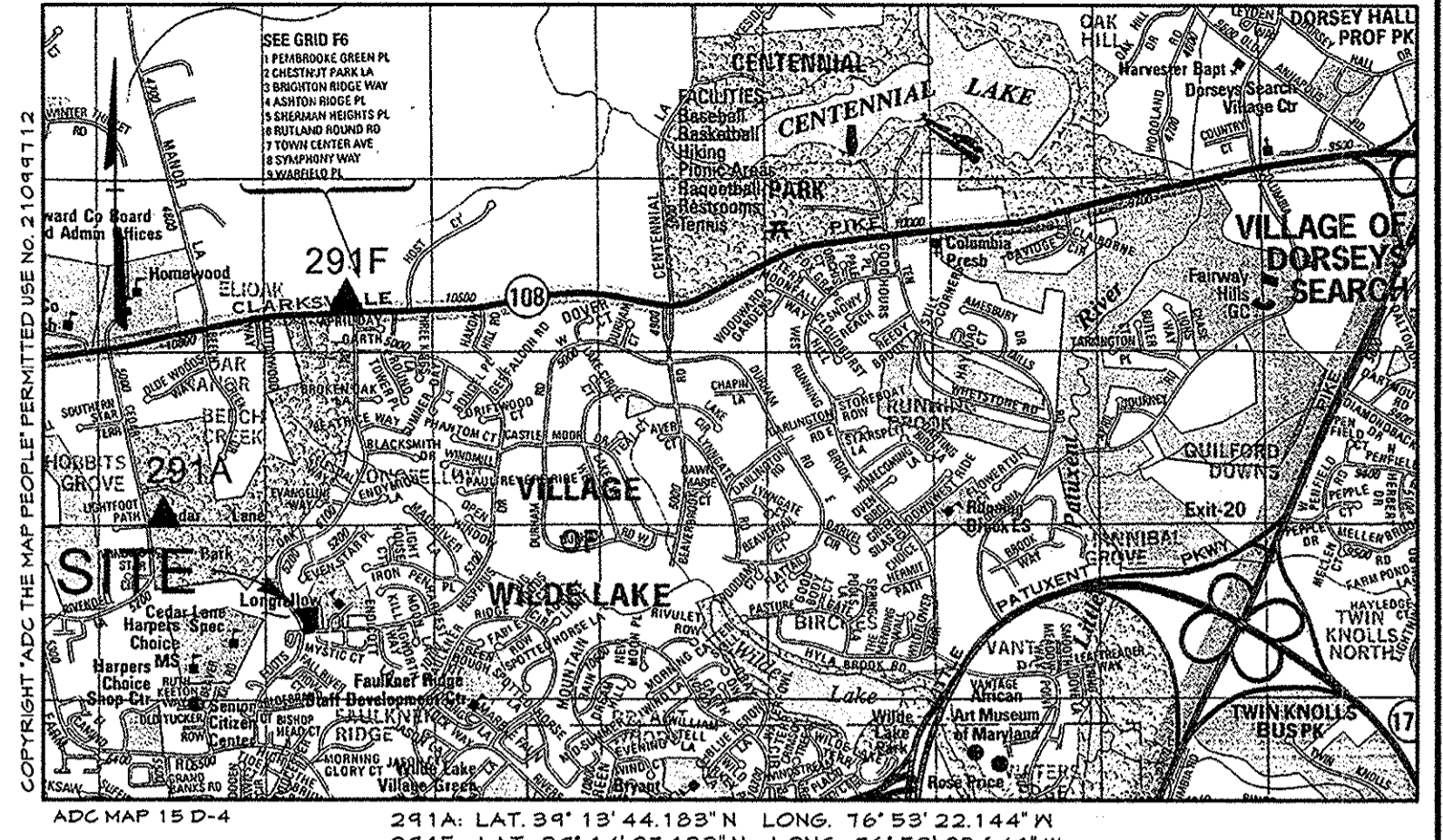
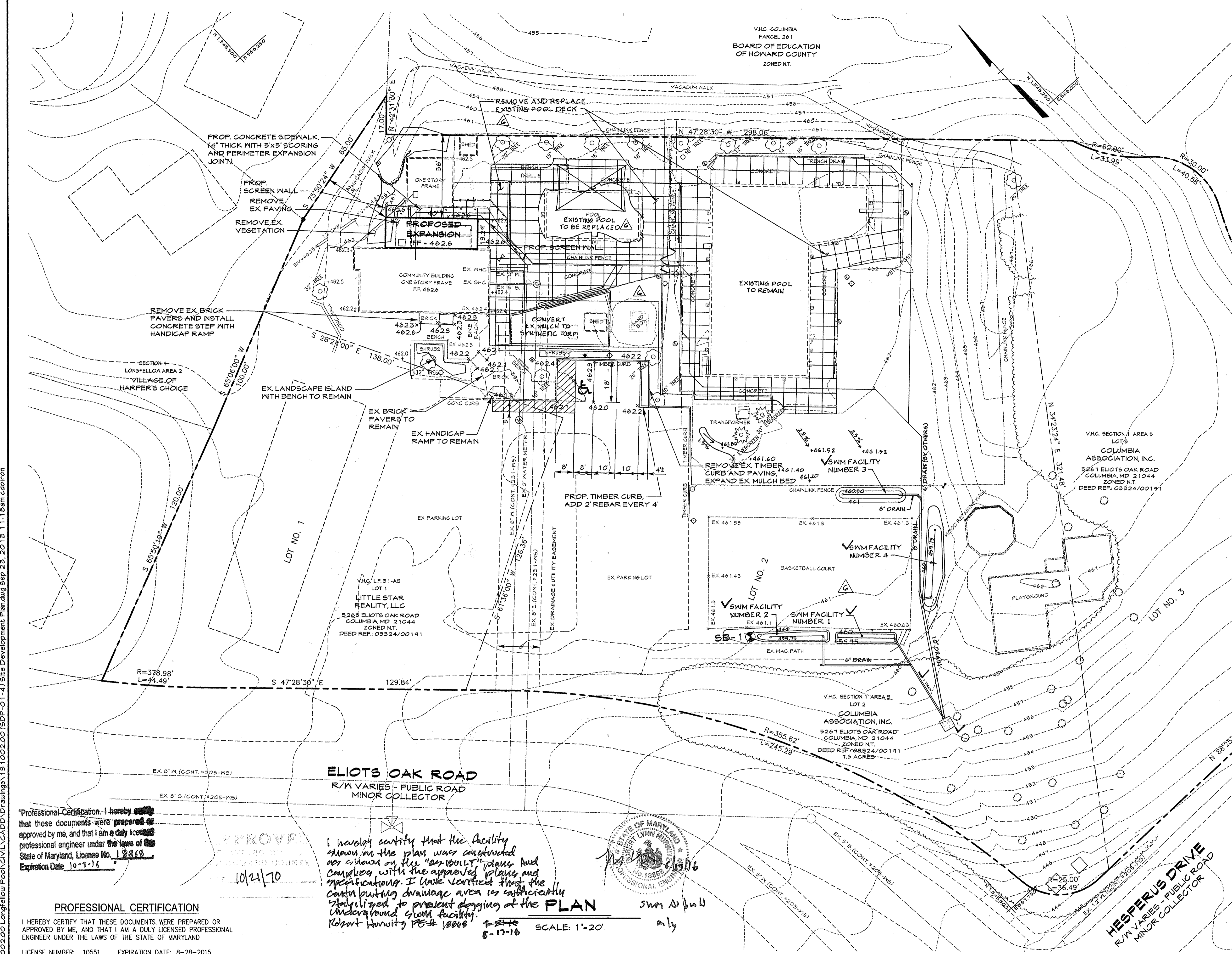
PROJECT TITLE: LOGG FELLOW NEIGHBORHOOD CENTER 5<sup>TH</sup> ELECTION DIST. HOWARD COUNTY  
SUBJECT: T.M. 29 P.273 LOTS 1,2 & 3  
GRADING PLAN APPROVAL

SCALE: 1" = 20'  
DATE: 8/27/68  
DES. BY: R.W.  
DWN. BY: L.J.  
CK. BY: R.W.C.  
APP. BY: 308B 11



DRIVEWAY  
SWM SUBMIT  
THAT IS THE "PER-BUILT" INFORMATION PROVIDED ON THIS SHEET  
ROBERT WINFIELD  
P.E. LICENSE 10869 6-17-76  
SYMBOLS

EXISTING TOPO  
PROPOSED TOPO



VICINITY MAP  
SCALE: 1"=200'

GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall contact "Miss Utility" at 1-800-257-7177 at least 48 hours prior to any excavation work being done.
- All plan dimensions are to face of curb unless otherwise noted.
- The existing topography is taken from field run survey with maximum two foot contour intervals prepared by Century Engineering, Inc. dated May, 2013.
- The coordinates shown hereon are based upon the Howard County Geodetic Control, which is based upon the Maryland State Plane Coordinate System, Howard County Nos. 291A and 291F were used for this project.
- Water is public - contract #231 MS
- Sewer is public - contract #231 MS
- Stormwater management for the proposed pool house expansion will be treated via a private micro-bio-retention facility.
- Existing utilities are based on county drawings.
- There is no floodplain on this site.
- There are no wetlands on this site.
- No traffic study is required for this project.

LEGEND

- 676 Existing Minor Contour
- 670 Existing Major Contour
- Av Existing Edge of Road
- Soil Line
- EX 15" D Existing Storm Drain and Inlet
- EX 12" W Existing Water and Fire Hydrant
- EX 8" S Existing Sewer
- Existing Curb and Gutter
- Existing Tree Line
- Existing Drive
- Tract Boundary
- Utility Easement Line
- Existing Building
- Proposed Building

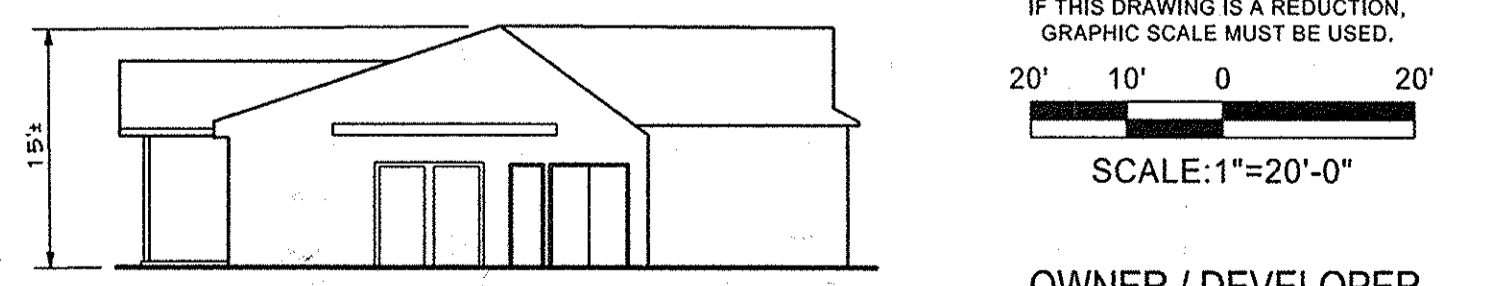
SITE DATA

- Site Area: 7.6 Acres
  - Zoning: N.T. (New Town)
  - Existing Use: Community Building
  - Proposed Use: Community Building Expansion
  - Existing Building Area: 1,710 Sq. Ft.
  - Proposed Expansion: 531 Sq. Ft.
  - Proposed Building Area: 2,241 Sq. Ft. \*2
  - Existing Parking Spaces: 38
  - Proposed Parking Spaces: 37 \*1 (36 standard, 1 Handicap)
- \*1 Parking spaces are shared for the uses on Lots 1, 2 and 3.  
\*2 Note: The proposed building expansion consists of bathroom expansion only. No net floor area is proposed.

PURPOSE STATEMENT

THE PURPOSE OF THIS REDLINE IS TO ADD 13.29' x 40' BATHROOM EXPANSION TO THE COMMUNITY BUILDING, CONCRETE STOOP, STORMWATER MANAGEMENT FACILITY, AND REVISE THE EXISTING HANDICAP PARKING SPACE.

△ PURPOSE STATEMENT FOR REVISION #6  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS.



BUILDING ELEVATION  
Not to Scale

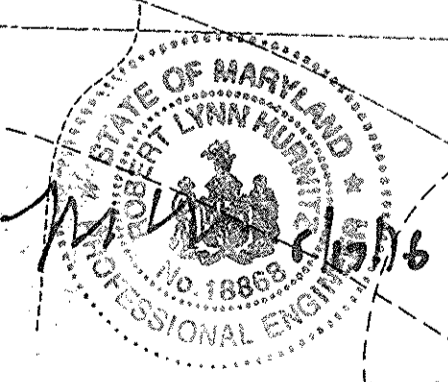
OWNER / DEVELOPER

THE COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MARYLAND 21044  
ATTN: DENNIS MATTEY 410.715.3000

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18868, Expiration Date 10-9-16.

APPROVED  
10/21/17

I hereby certify that the facility shown on the plan was constructed as shown on the "AS BUILT" plans and complies with the approved plans and specifications. I have verified that the catchment drainage area is sufficiently analyzed to prevent flooding of the PLAN.  
Robert Horvitz PE # 18868  
8-17-16



PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF MARYLAND  
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: [Signature]  
Chief, Division of Land Development: [Signature]  
Chief, Development Engineering Division: [Signature]

**CENTURY ENGINEERING**  
CONSULTING ENGINEERS - PLANNERS  
10710 Gilroy Road, Hunt Valley, MD 21031  
Phone: 443.589.2400 Fax: 443.589.2401



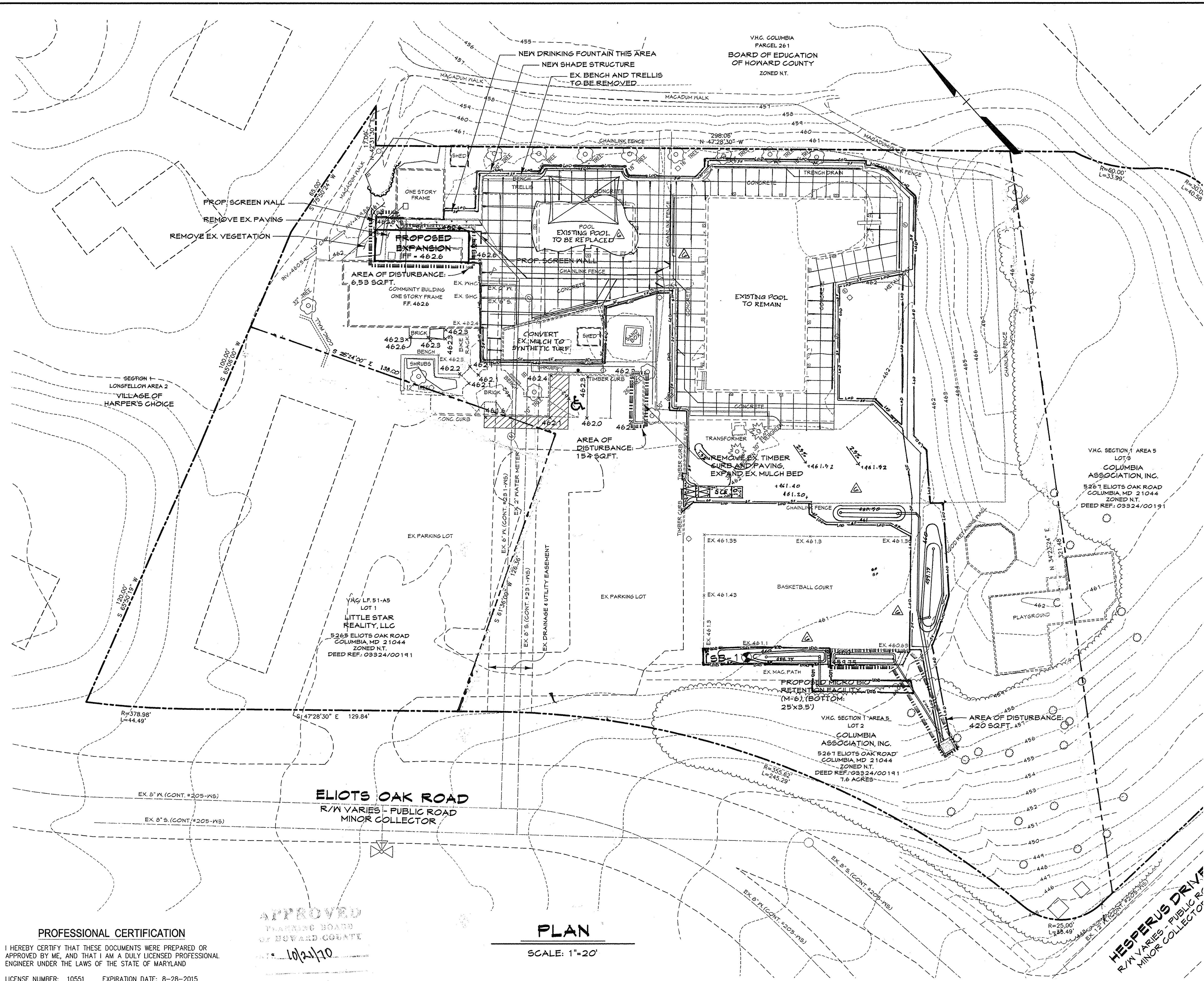
DESIGN BY:	M.J.P.		
DRAWN BY:	M.S.S.		
CHECKED BY:	J.W.R.		
DATE:	9/6/2013		
CEI	ADD SWM FAC. & REPLACEMENT OF POOL DECK	12.9.13	
CEI	See the Purpose note.	8.11.13	
BY NO.			
REVISION			

LONGFELLOW NEIGHBORHOOD CENTER  
VILLAGE OF HARPER'S CHOICE  
5267 ELIOTS OAK ROAD  
COLUMBIA, MD

SWM AS BUILT SUPPLEMENTAL SHEET  
REVISED SITE DEVELOPMENT PLAN  
LONGFELLOW NEIGHBORHOOD CENTER  
OPEN SPACE LOT 2, SECTION 1, AREA 5  
TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
HOWARD COUNTY, MARYLAND  
SHEET 4 OF 11

C.E.I. PROJECT NUMBER: 131002.00  
SCALE: AS SHOWN

S:\2013\Facilities\13100200 Longfellow Pool\CIVIL\CADD\Drawings\13100200 (SDP-01-5) Sediment & Erosion Control Plan.dwg, Jan 09, 2014, 2:10pm, mamibh



**LEGEND**

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- --- Existing Edge of Road
- Av --- Soil Line
- EX 12" D --- Existing Storm Drain and Inlet
- EX 12" W --- Existing Water and Fire Hydrant
- EX 8" S --- Existing Sewer
- --- Existing Curb and Gutter
- --- Existing Tree Line
- --- Existing Drive
- --- Tract Boundary
- --- Utility Easement Line
- --- Existing Building
- [Box] Proposed Building
- --- Limit of Disturbance
- SF --- Proposed Silt Fence

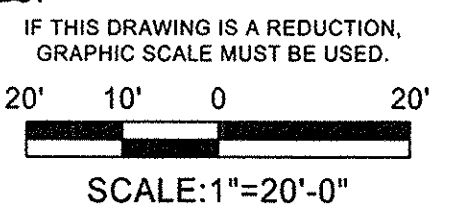


*There is no "as built" information provided on this sheet Robert Hummer 4-21-14 P.E. # 18868 6-17-16*

**PURPOSE STATEMENT**

THE PURPOSE OF THIS REDLINE IS TO ADD 13.24' x 40' BATHROOM EXPANSION TO THE COMMUNITY BUILDING, CONCRETE STOOP, STORMWATER MANAGEMENT FACILITY, AND REVISE THE EXISTING HANDICAP PARKING SPACE.

**PURPOSE STATEMENT FOR REVISION #6**  
 THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK WITH TRAINING POOL, ADD STORMWATER FACILITIES (DETAILS).



**Professional Certification.** I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18868, Expiration Date 10-5-16.

**OWNER / DEVELOPER**  
 THE COLUMBIA ASSOCIATION  
 10221 WINCOPIN CIRCLE, SUITE 100  
 COLUMBIA, MARYLAND 21044  
 ATTN: DENNIS MATTEY 410.715.3000

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND  
 LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

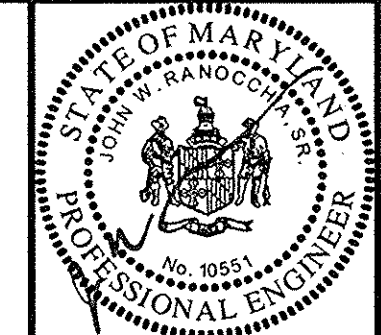
APPROVED  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 10/21/10

**PLAN**

SCALE: 1"=20'

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *[Signature]* Date: 1/16/14  
 Chief, Division of Land Development: *[Signature]* Date: 1-15-14  
 Chief, Development Engineering Division: *[Signature]* Date: 1-15-14

**CENTURY ENGINEERING**  
 CONSULTING ENGINEERS - PLANNERS  
 10710 Gilroy Road, Hunt Valley, MD 21031  
 Phone: 443.589.2400 Fax: 443.589.2401

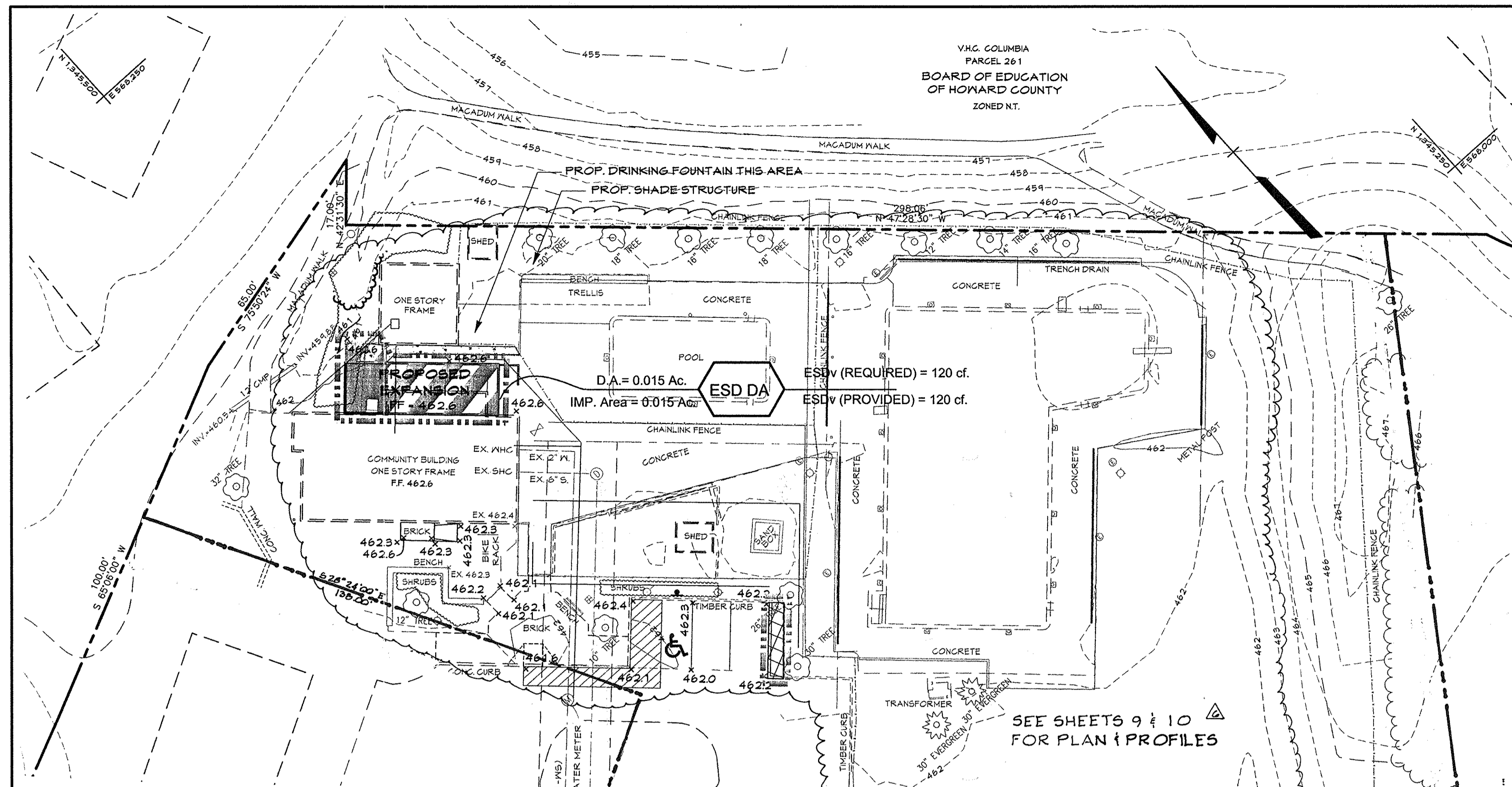


DESIGN BY:	M.J.P.		
DRAWN BY:	M.S.S.		
CHECKED BY:	J.W.R.	CEI	ADD SWM FAC. & REPLACEMENT OF POOL DECK 12.5.13
DATE:	9/6/2013	CEI	see the purpose note
		BY	NO.
			REVISION
			DATE

LONGFELLOW NEIGHBORHOOD CENTER  
 VILLAGE OF HARPER'S CHOICE  
 5267 ELIOTS OAK ROAD  
 COLUMBIA, MD

**SWM SUPPLEMENTAL SHEET**  
**REVISION EROSION & SEDIMENT CONTROL PLAN**  
 LONGFELLOW NEIGHBORHOOD CENTER  
 OPEN SPACE LOT 2, SECTION 1, AREA 5  
 TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
 HOWARD COUNTY, MARYLAND  
 SHEET 5 OF 11

C.E.I. PROJECT NUMBER: 131002.00  
 SCALE: AS SHOWN



**OVERALL SITE PLAN FOR STORMWATER MANAGEMENT AND DRAINAGE AREA MAP**  
SCALE: 1"=20'

The total site is within the GbB (Glenelg-Urban complex soil type) Hydrologic soils group 'B'

**LEGEND**

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- - - - - Existing Edge of Road
- AV --- Soil Line
- EX. 15" D. Existing Storm Drain and Inlet
- EX. 12" M. Existing Water and Fire Hydrant
- EX. 8" S. Existing Sewer
- Existing Curb and Gutter
- Existing Tree Line
- Existing Drive
- Tract Boundary
- Utility Easement Line
- Existing Building
- Proposed Building

**IMPERVIOUS AREA SUMMARY (WITHIN LOD)**

- [Cross-hatched] Existing Impervious
- [Diagonal lines] New Impervious over Existing Impervious
- [Solid black] New Impervious
- [Dashed line] Limit of Disturbance
- [Star symbol] ESD Facility Outfall
- [Circle with dot] Soil Boring location

**MICRO BIO-RETENTION (M-6) PLANT SCHEDULE**

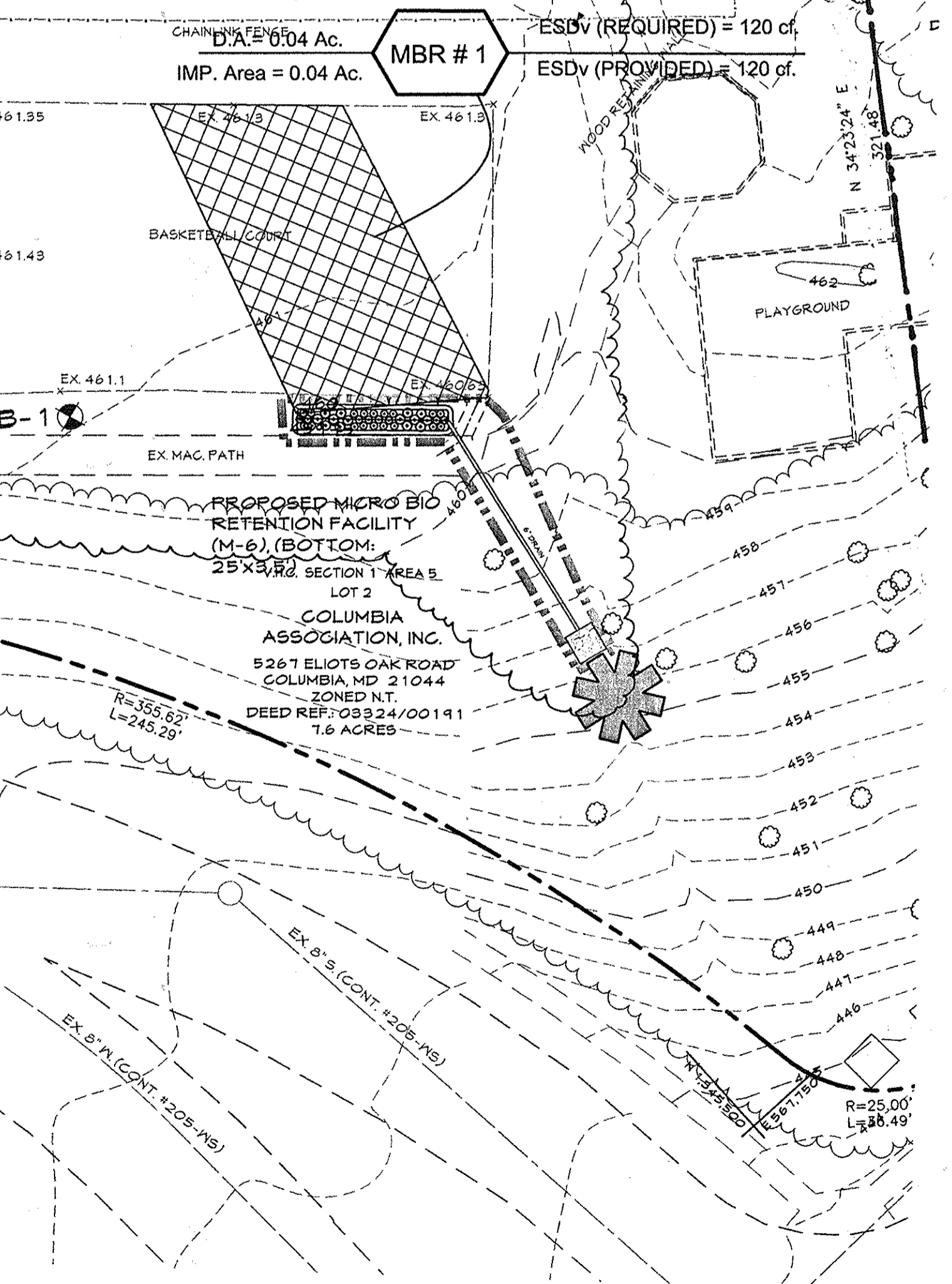
QTY.	KEY	BOTANICAL/Common NAME	SIZE	ROOT	COMMENTS
SHRUBS					
14	LS	Lilium superbum Turk's Head Lily	12"-18" HT.	Cont.	Heavy, full to ground
14	MD	Monarda didyma Bee Balm	12"-18" HT.	Cont.	Heavy, full to ground
12	SN	Sorghastrum nutans Indian Grass	12"-18" HT.	Cont.	Heavy, full to ground

**PROFESSIONAL CERTIFICATION**

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

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

DATE: 10/2/10



**MICRO-BIO-RETENTION (M-6) PLAN**  
SCALE: 1"=10'

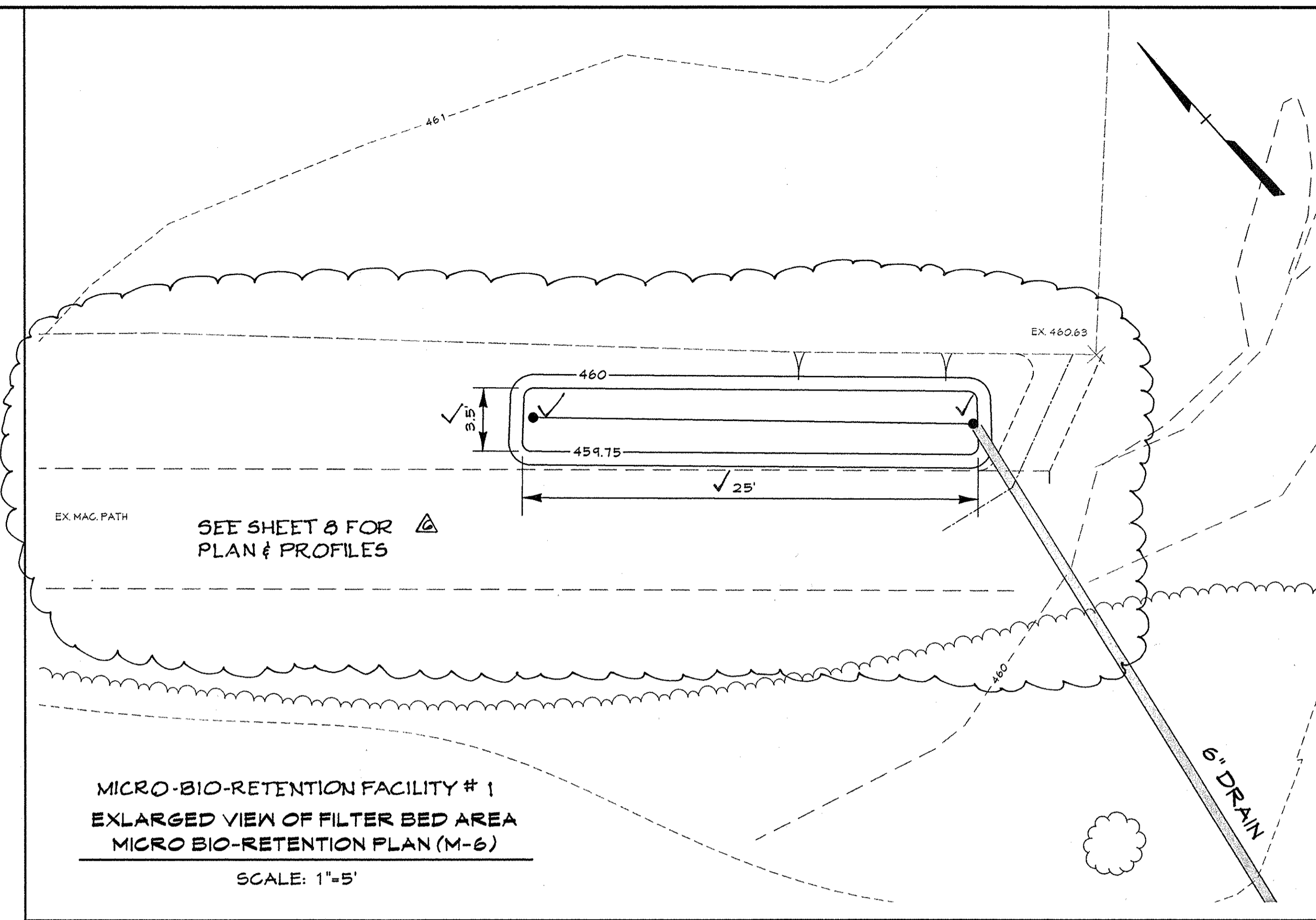
**PURPOSE STATEMENT FOR REVISION #6**  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL. ADD STORMWATER FACILITIES & DETAILS

**PURPOSE STATEMENT**

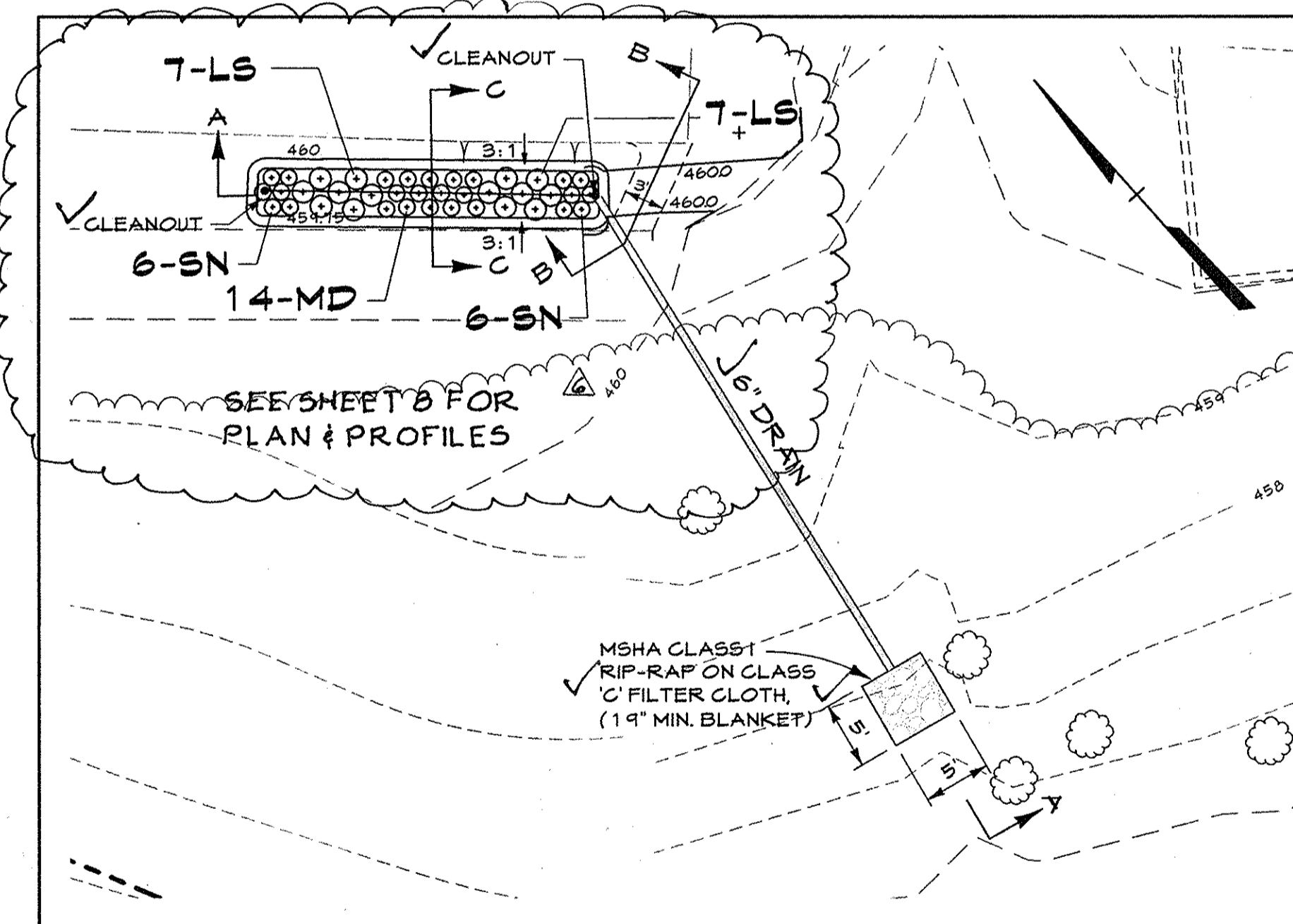
THE PURPOSE OF THIS REDLINE IS TO ADD 13.29' x 40' BATHROOM EXPANSION TO THE COMMUNITY BUILDING, CONCRETE STOOP, STORMWATER MANAGEMENT FACILITY, AND REVISE THE EXISTING HANDICAP PARKING SPACE.

**OWNER / DEVELOPER**

THE COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MARYLAND 21044  
ATTN: DENNIS MATTEY 410.715.3000



**MICRO-BIO-RETENTION FACILITY #1  
ENLARGED VIEW OF FILTER BED AREA  
MICRO-BIO-RETENTION PLAN (M-6)**  
SCALE: 1"=5'



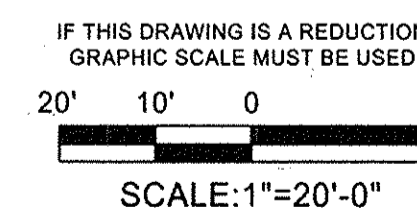
**SEE SHEET 8 FOR PLAN & PROFILES**

I hereby certify that the facility shown on the plan was constructed as shown on the 'as-built' plans and completed with the approved plans and specifications. I have verified that the contributing drainage area is sufficiently stabilized to prevent clogging of the underground storm facility.

Robert Hummity PE #10848 10-8-10 5-17-16



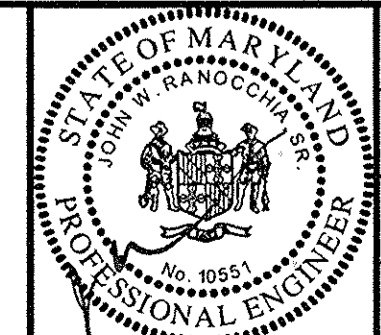
**Professional Certification.** I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10848. Expiration Date: 10-8-10



S:\2013\13 Longfellow Pool\CIVIL\CADD\Drawings\13100200 (SDP-03-6) SWM Planning Jan 09, 2014 2:10pm.msh

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: [Signature]  
Chief, Division of Land Development: [Signature]  
Chief, Development Engineering Division: [Signature]

**CENTURY ENGINEERING**  
CONSULTING ENGINEERS - PLANNERS  
10710 Gilroy Road, Hunt Valley, MD 21031  
Phone: 443.589.2400 Fax: 443.589.2401

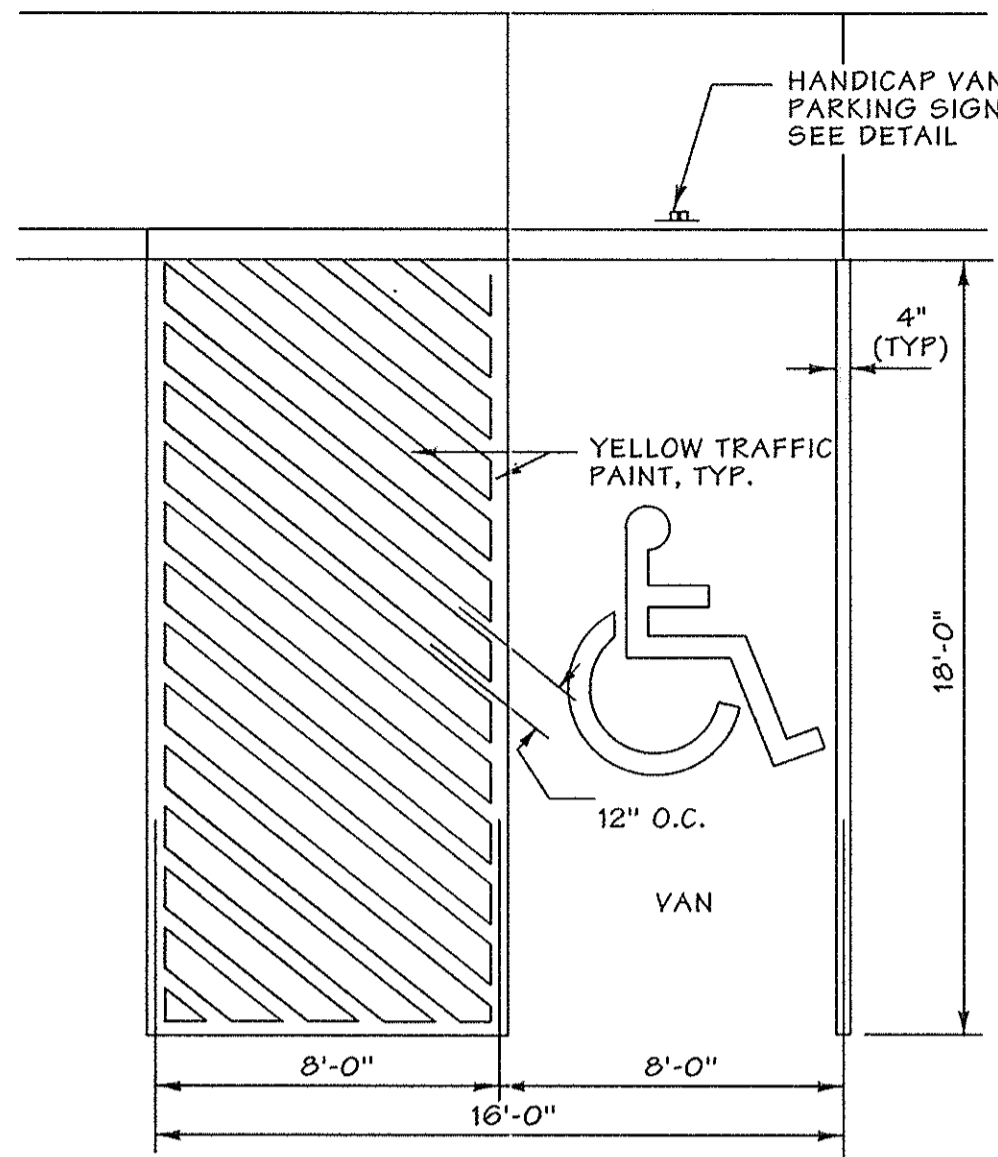


NO.	REVISION	DATE
CE1	ADD SWM FAC. & REPLACEMENT OF POOL DECK, CHG. SHEET #	12.5.13
CEI	See the purpose note.	
BY		

LONGFELLOW NEIGHBORHOOD CENTER  
VILLAGE OF HARPER'S CHOICE  
5267 ELIOTS OAK ROAD  
COLUMBIA, MD

SWM As Built SUPPLEMENTAL SHEET  
**REVISED STORMWATER MANAGEMENT PLAN**  
LONGFELLOW NEIGHBORHOOD CENTER  
OPEN SPACE LOT 2, SECTION 1, AREA 5  
TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
HOWARD COUNTY, MARYLAND  
SHEET 6 OF 11

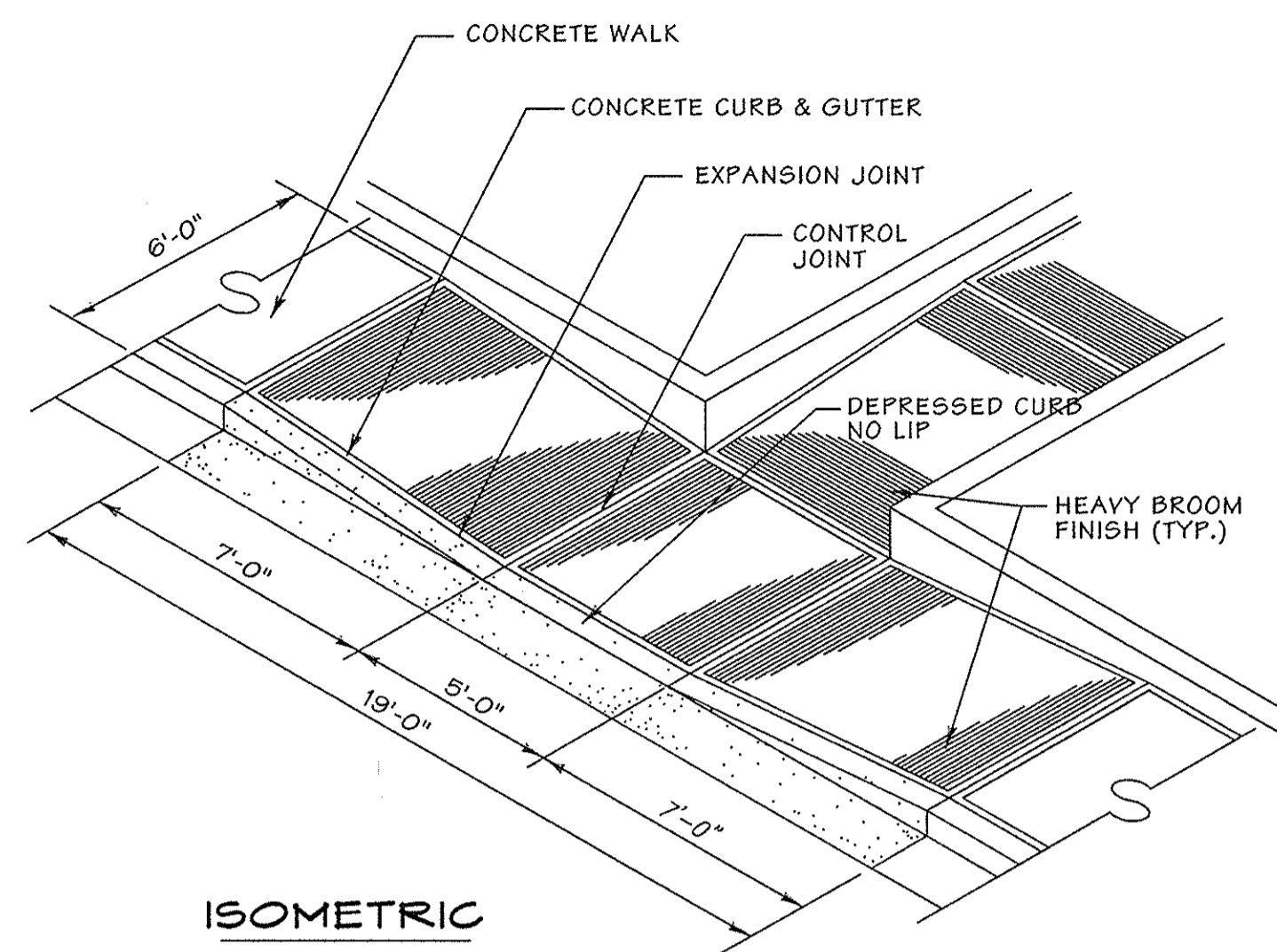
C.E.I. PROJECT NUMBER: 131002.00  
SCALE: AS SHOWN



NOTE: H.C. PARKING SHALL CONFORM TO CURRENT ADA CRITERIA  
ANSI A117.1-1980

Handicap Parking: Van & Standard

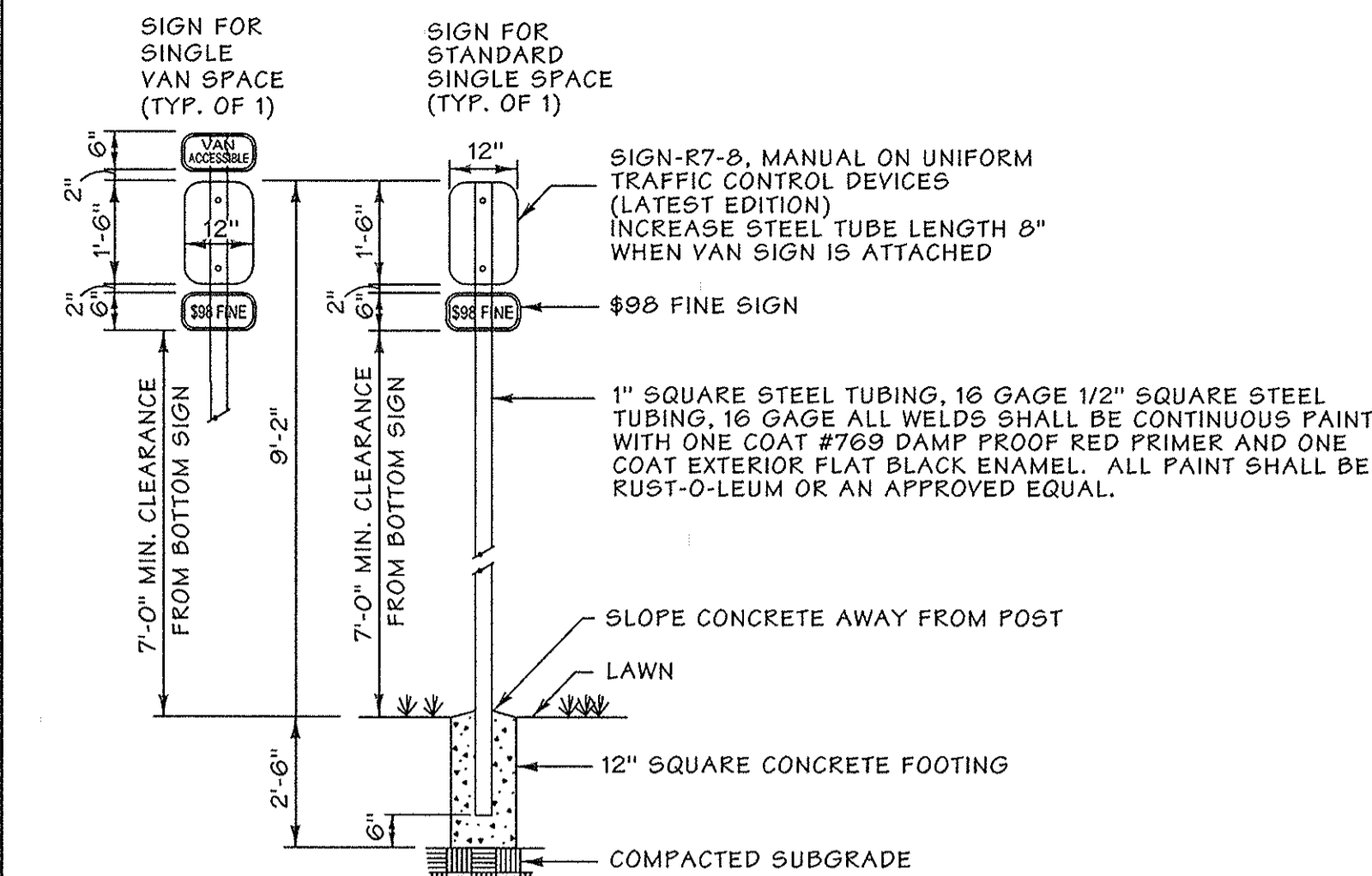
Not To Scale



ISOMETRIC

Handicap Ramp

Not To Scale



NOTES:  
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'.  
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAPPED SIGN.  
3. SPACE MARKED "V" ON SITE PLAN SHALL INCLUDE "VAN SIGN" AS REQUIRED.  
4. SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

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

Handicap Parking Signs

Not To Scale

SEQUENCE OF CONSTRUCTION

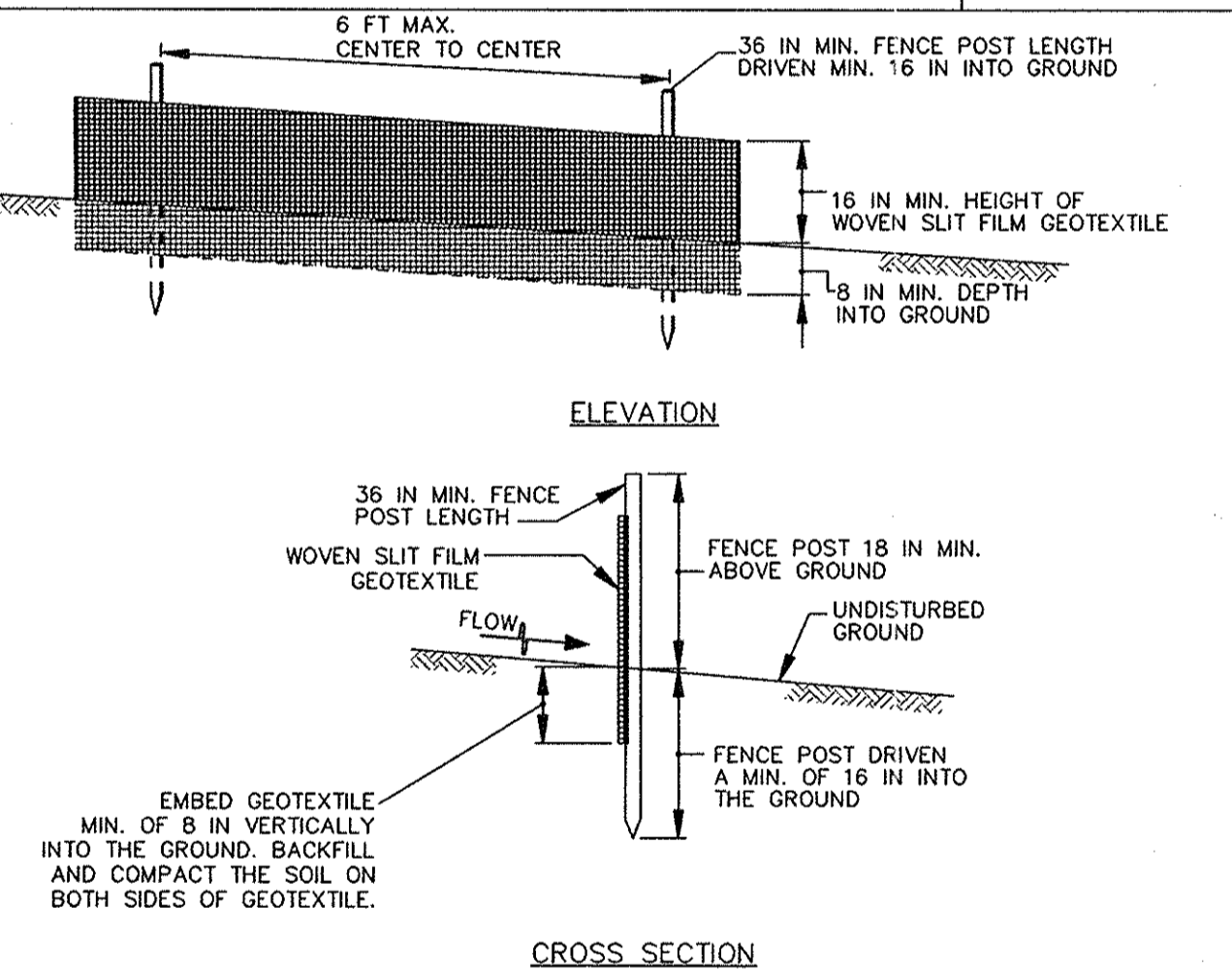
- BUILDING EXPANSION AND FACILITY # 1**
1. Obtain grading permits. (2 days)
  2. Install erosion and sediment control measures (silt fence). (2 days)
  3. Contractor to start removing existing paving and vegetation. (5 days)
  4. Contractor to build building expansion, concrete sidewalks, mulch bed and micro bio retention facility. (21 days)
  5. Contractor to install permanent stabilization to disturbed areas. (2 days)
  6. Upon completion of micro bio retention facility install silt fence as shown until the drainage area to these facilities are stabilized. (20 days)
  7. With approval from sediment control inspector contractor to remove remaining sediment control devices and permanently stabilize those areas disturbed by this process. (7 days)
- POOL DECK AND FACILITIES 2, 3 & 4**
1. Obtain grading permits. (2 days)
  2. Install erosion and sediment control measures (Silt Fence, Super Silt Fence, Stabilized Construction Entrance). (4 days)
  3. Contractor to start removing existing childrens pool, pool deck and vegetation. (14 days)
  4. Contractor to build new pool, pool deck, synthetic turf play area, and micro-bio-retention facilities (Numbers 2, 3 & 4). (60 days)
  5. Contractor to install permanent stabilization to disturbed areas. (2 days)
  6. Upon completion of micro-bio-retention facilities install silt fence as shown until the drainage areas to these facilities are stabilized (20 days)
  7. With approval from the sediment control inspector the contractor is to remove remaining sediment control devices and permanently stabilize those areas disturbed by this process. (7 days)

DETAIL E-1 SILT FENCE

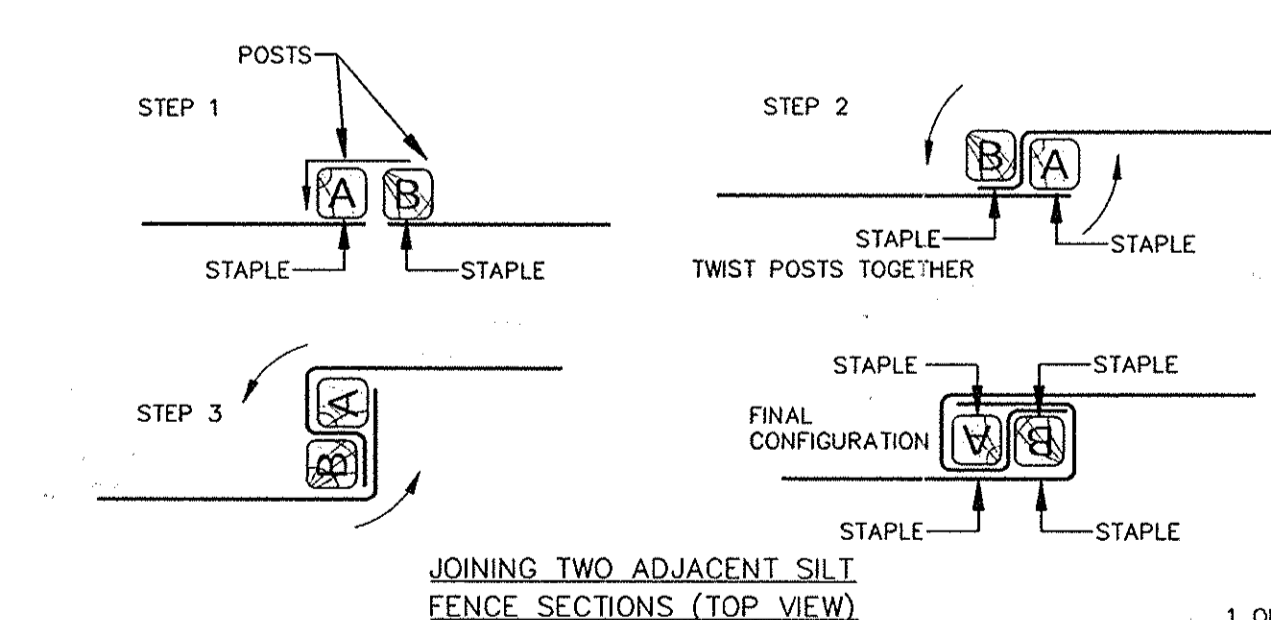
STANDARD SYMBOL  
SF

DETAIL E-1 SILT FENCE

STANDARD SYMBOL  
SF



- CONSTRUCTION SPECIFICATIONS**
1. USE WOOD POSTS 1 1/2 X 1 1/2 X 1/2 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
  2. USE 3/8 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
  3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
  4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
  5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
  6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
  7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
  8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.



1 OF 2 2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL	MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011	U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011
MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND  
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

**APPROVED**  
PLANNING BOARD OF HOWARD COUNTY  
DATE: 10/21/10

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *Parsha K. Coyle* 11/14/14  
Chief, Division of Land Development: *Victor Salomon* 11/14/14  
Chief, Development Engineering Division: *Chris Chamberlain* 1-15-14

**M CENTURY ENGINEERING**  
CONSULTING ENGINEERS - PLANNERS  
10710 Gilroy Road, Hunt Valley, MD 21031  
Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: M.J.P.  
DRAWN BY: M.S.S.  
CHECKED BY: J.W.R.  
DATE: 9/6/2013

CEI	ADD SWM FAC. & REPLACEMENT OF POOL DECK, CHG SHEET #	12.5.13
CEI	See the purpose note.	
BY	REVISION	DATE

LONGFELLOW NEIGHBORHOOD CENTER  
VILLAGE OF HARPER'S CHOICE  
5267 ELIOTS OAK ROAD  
COLUMBIA, MD

SWM As built SUPPLEMENTAL SHEET  
REVISED DETAILS  
LONGFELLOW NEIGHBORHOOD CENTER  
OPEN SPACE LOT 2, SECTION 11, AREA 5  
TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
HOWARD COUNTY, MARYLAND  
SHEET 7 OF 8 11

C.E.I. PROJECT NUMBER 131002.00  
SCALE: AS SHOWN

**PERMANENT SEEDING NOTES**

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

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

1. Preferred -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
2. Acceptable -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding -- For the periods March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000) sq. ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by:

Option 1 -- Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.  
Option 2 -- Use sod. Option 3 -- Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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

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

**TEMPORARY SEEDING NOTES.**

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

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

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

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

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

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

**HOWARD SOIL CONSERVATION DISTRICT**

**STANDARD SEDIMENT CONTROL NOTES**

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (213-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (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.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
 

Total Area of Site	2.43 Acres
Area Disturbed	0.08 Acres
Area to be roofed or paved	0.01 Acres
Area to be vegetatively stabilized	0.02 Acres
Total Cut	0 Cu. Yds.
Total Fill	0 Cu. Yds.
Offsite waste/borrow area location:	CA Property
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

Rev. 9/99



There is no "as built" information provided on this sheet  
Robert Hurwitz  
PE# 18868 8-17-16

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18868, Expiration Date 8-28-2015"

**PURPOSE STATEMENT FOR REVISION #6**  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS

**PURPOSE STATEMENT**  
THE PURPOSE OF THIS REDLINE IS TO ADD 13.29' x 40' BATHROOM EXPANSION TO THE COMMUNITY BUILDING, CONCRETE STOOP, STORMWATER MANAGEMENT FACILITY, AND REVISE THE EXISTING HANDICAP PARKING SPACE.

IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE MUST BE USED.  
SCALE: 1"=20'-0"

**OWNER / DEVELOPER**  
THE COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MARYLAND 21044  
ATTN: DENNIS MATTEY 410.715.3000

S:\2013\Facilities\131002.00 Longfellow Neighbohood Center\CADD Drawings\131002.00 (BDF-C2-7) Site Development Details.dwg Sep 28, 2013 11:25am ccdillon

**920.01.05 Bioretention Soil Mix (BSM).** A homogeneous mixture composed by loose volume of 5 parts Coarse Sand, 3 parts Base Soil, and 2 parts Fine Bark. BSM shall conform to the following:

(a) **Components.** Components of BSM shall be sampled, tested and approved before mixing as follows:

(1) **Coarse Sand.** MSMT 356. Coarse Sand shall be washed silica sand or crushed glass that conforms to ASTM Fine Aggregate C-33. Coarse Sand shall include less than 1% by weight of clay or silt size particles, and less than 5% by weight of any combination of diabase, gneiss, calcareous or dolomitic sand.

(2) **Base Soil.** Base Soil shall be tested and certified by the producer to conform to the following requirements:

920 LANDSCAPING

COMPOSITION - BASE SOIL				
TEST PROPERTY	TEST METHOD	TEST VALUE AND AMENDMENT		
Prohibited Weeds	—	Free of seed and viable plant parts of species in 920.06.02(a)(b)(c) when inspected.		
Debris	—	No observable content of cement, concrete, asphalt, crushed gravel or construction debris when inspected.		
Grading Analysis	T 87	Sieve Size	Passing by Weight Minimum %	
		2 in.	100	
		No. 4	90	
Textural Analysis	T 88	Particle Size	% Passing by Weight	
		mm	Minimum	Maximum
		Sand 2.0 - 0.050	55	85
Silt 0.050 - 0.002	—	20		
Clay less than 0.002	—	5	10	
Soil pH	D 4972	pH of 5.7 to 6.9		
Organic Matter	T 194	1.0 to 10.0% by weight		
Soluble Salts	EC1:2 (V:V)	500 ppm (1.25 mmhos/cm) or less		
Harmful Materials	—	920.01.01(a)		

(3) **Fine Bark.** Fine Bark shall be the bark of hardwood trees that is milled and screened to a uniform particle size of 2 in. or less. Fine Bark shall be composted and aged for 6 months or longer, and be free from sawdust and foreign materials.

A 1 to 2 lb sample of Fine Bark shall be submitted to the Landscape Operations Division for examination.

LANDSCAPING 920

(b) **Composition.** BSM shall be sampled and tested according to the requirements of MSMT 356 and conform to the following:

COMPOSITION - BIORETENTION SOIL MIX (BSM)						
TEST PROPERTY	TEST METHOD	TEST VALUE AND AMENDMENT				
Weeds	—	Free of seed and viable plant parts of species in 920.06.02(a)(b)(c) when inspected.				
Debris	—	920.01.05(a)(2)				
Textural Analysis	T 88	Particle Size	% Passing by Weight			
		mm	Minimum	Maximum		
		Sand 2.0 - 0.050	55	85		
Silt 0.050 - 0.002	—	20				
Clay less than 0.002	—	5	10			
Soil pH	D 4972	pH of 5.7 to 7.1				
Organic Matter	T 194	Minimum 1.5% by weight.				
Nutrient Analysis and Soluble Salts	Mohlich-3	Element	Concentration			
		ppm	Minimum	Maximum		
		Calcium (Ca)	32	25	no limit	no limit
		Magnesium (Mg)	15	25	no limit	no limit
Phosphorus (P)	18	25	92	100		
Potassium (K)	22	25	no limit	no limit		
Sulfur (SO <sub>4</sub> )	25	n/a	no limit	no limit		
EC1:2 (V:V)	Soluble Salts	40	n/a	500	n/a	
Harmful Materials	—	920.01.01(a).				

(c) **Amendment or Failure.** BSM that does not conform to composition requirements for pH or nutrient analysis shall be amended as specified by the NMP. BSM that exceeds maximum phosphorus concentration or fails other composition requirements will not be accepted, and shall not be delivered or used as BSM.

(d) **Storage.** 920.01.02(b). BSM shall be stored in a stockpile that is protected from weather under tarp or shed. BSM stored for 6 months or longer shall be resampled, retested, and reaproved before use.

(e) **Approval.** 920.01.02(c).

(f) **Certification and Delivery.** 920.01.02(d).

**MICRO BIORETENTION (M-6) MAINTENANCE SCHEDULE**

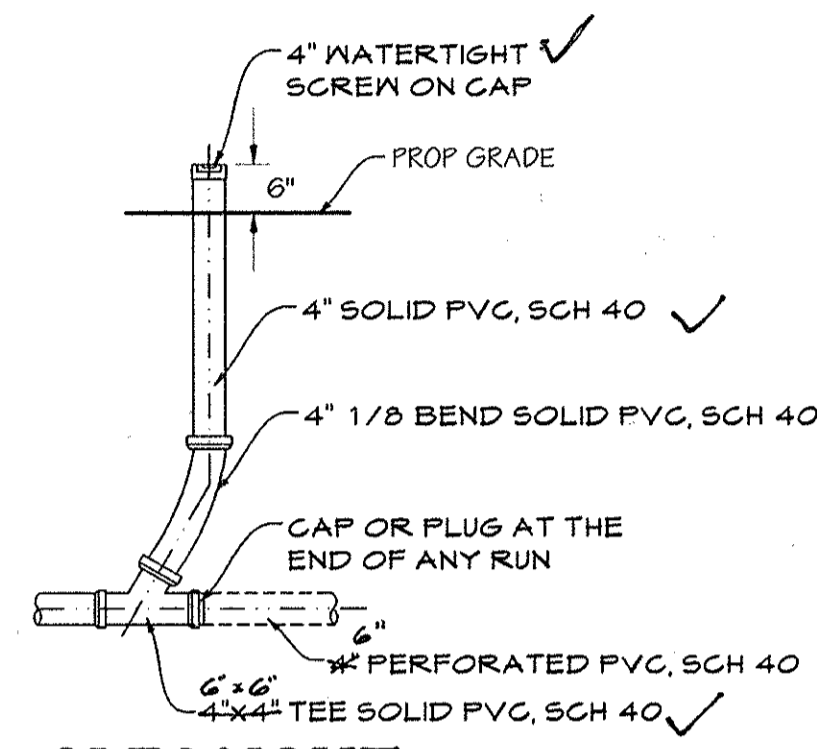
- FACILITY SHALL BE INSPECTED TWICE A YEAR ANNUALLY AND AFTER EVERY MAJOR STORM EVENT.
- THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
- WHERE PRACTICES ARE USED TO TREAT AREAS WITH HIGHER CONCENTRATIONS OF HEAVY METALS (E.G. PARKING LOTS, ROADS), MULCH SHOULD BE REPLACED ANNUALLY. OTHERWISE, THE TOP TWO TO THREE INCHES SHOULD BE REPLACED AS NECESSARY.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.

**NOTE TO CONTRACTOR:**

THE CONTRACTOR SHALL SUPPLY A LETTER PREPARED BY A MARYLAND LICENSED GEOTECHNICAL ENGINEER WHICH CERTIFIES THAT THE BIORETENTION SOIL MIX (BSM) TO BE PLACED AT THE SITE:

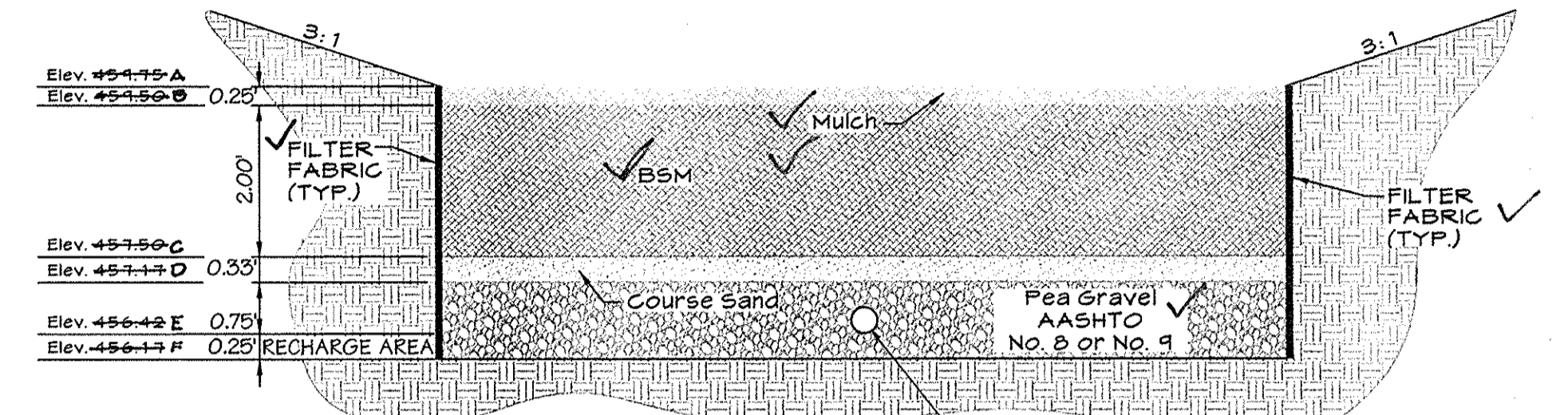
- MEETS THE MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATION FOR BSM
- HAS BEEN UNIFORMLY MIXED PRIOR TO PLACEMENT, AND
- HAS BEEN LAB TESTED TO ACHIEVE A PERMEABILITY OF NO LESS THAN 2 FEET PER DAY AND NO MORE THAN 6 FEET PER DAY.

THE STORMWATER MANAGEMENT AS-BUILT CERTIFYING ENGINEER MUST BE SUPPLIED THIS CERTIFICATION LETTER PRIOR TO THE BSM PLACEMENT INTO THE MICRO-BIORETENTION FACILITY. THE CERTIFICATION LETTER MUST INCLUDE PERMEABILITY TEST METHOD, PERMEABILITY TEST RESULTS, BSM MIX GRADATION (T 88), BSM MIX DRY DENSITY AND MOISTURE CONTENT AS TESTED. THE CONTRACTOR RESPONSIBLE FOR INSTALLING THE MICRO-BIORETENTION FACILITY MUST PROVIDE A LETTER TO THE STORMWATER MANAGEMENT AS-BUILT CERTIFYING ENGINEER WHICH CERTIFIES THAT THE BIORETENTION SOIL MIX (BSM) HAS BEEN KEPT FREE OF CONTAMINATION PRIOR TO ITS PERMANENT PLACEMENT IN THE FACILITY.



**CLEANOUT**  
NOT TO SCALE

Material	Specification	Size	Notes
Plantings	See Landscape Plan	n/a	Plantings are site-specific
Planting Soil	See SHA BSM Mix	N/A	N/A
Mulch (non BSM use)	Shredded Hardwood		Aged 6 months, minimum; no pine or wood chips <i>pine mulch</i>
Pea gravel Diaphragm	Pea gravel ASTM D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	Ornamental stone, washed cobble	stone: 2" to 5"	
Geotextile (sides of trench only)		n/a	PE TYPE 1 nonwoven
Gravel (underdrains)	AASHTO M-43	NO. 57 or No. 6 Aggregate (3/8" to 3/4")	
Underdrain piping	F 150, Type PS 20 or AASHTO M-218	4" or 6" Rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth. 1"x6" slots @ 6" on center, 5 spaced radial around pipe.
Poured in place concrete (if applicable)	MSHA MIX N 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-6 15-60	n/a	on-site testing of poured-in-place concrete required. 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved state or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland; design to include meeting ACI Code 308R/B-4; vertical loading (H-10 or H-20) allowing horizontal loading (based on soil pressures); and analysis of potential cracking
Course Sand (non BSM use)	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gneiss (AASHTO #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



**TYPICAL SECTION A-A**  
Scale: 1" = 2'

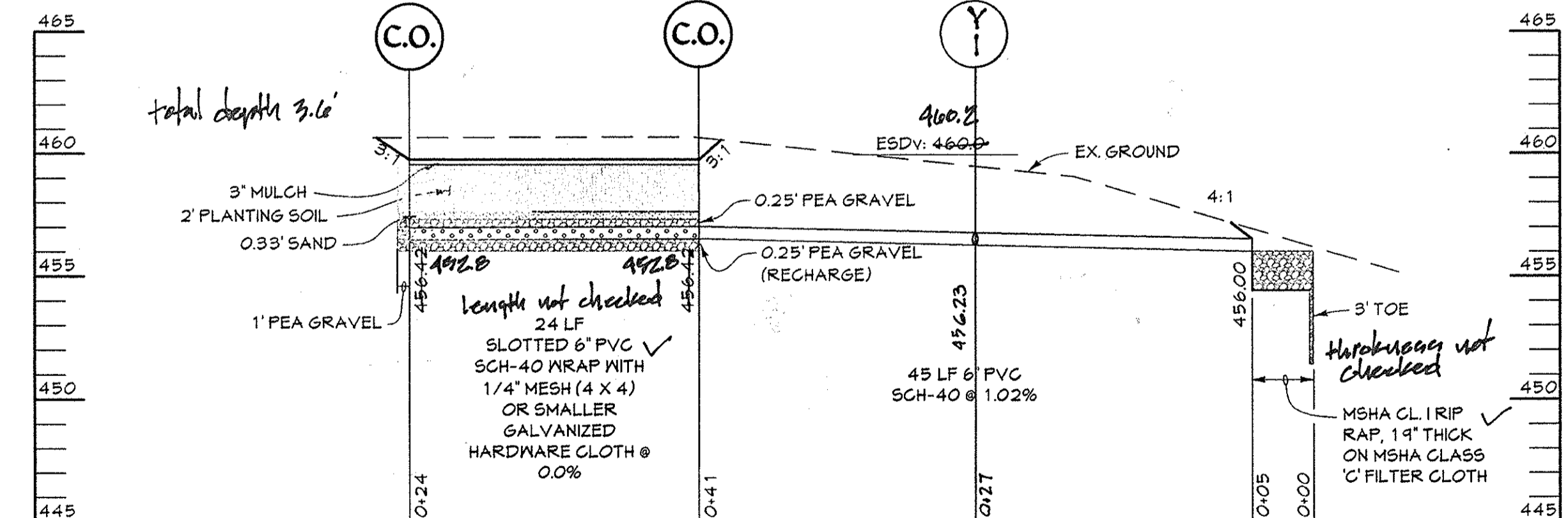
DEPTH (ft)	TIME	TEMPERATURE (°F)	WATER	DEPTH (ft)	TEMPERATURE (°F)	WATER	DEPTH (ft)	TEMPERATURE (°F)	WATER	DEPTH (ft)	TEMPERATURE (°F)	WATER
0.0				0.0			0.0			0.0		
0.5				0.5			0.5			0.5		
1.0				1.0			1.0			1.0		
1.5				1.5			1.5			1.5		
2.0				2.0			2.0			2.0		
2.5				2.5			2.5			2.5		
3.0				3.0			3.0			3.0		
3.5				3.5			3.5			3.5		
4.0				4.0			4.0			4.0		
4.5				4.5			4.5			4.5		
5.0				5.0			5.0			5.0		
5.5				5.5			5.5			5.5		
6.0				6.0			6.0			6.0		
6.5				6.5			6.5			6.5		
7.0				7.0			7.0			7.0		
7.5				7.5			7.5			7.5		
8.0				8.0			8.0			8.0		
8.5				8.5			8.5			8.5		
9.0				9.0			9.0			9.0		
9.5				9.5			9.5			9.5		
10.0				10.0			10.0			10.0		

Facility Number	A	B	C	Elevation	D	E	F
1	49.75	49.50	49.75	49.7.17	49.6.12	49.6.17	
2	49.75	49.50	49.75	49.7.17	49.6.12	49.6.17	
3	46.00	46.25	46.25	49.7.92	49.7.17	49.6.92	
4	49.75	49.50	49.75	49.7.17	49.6.12	49.6.17	

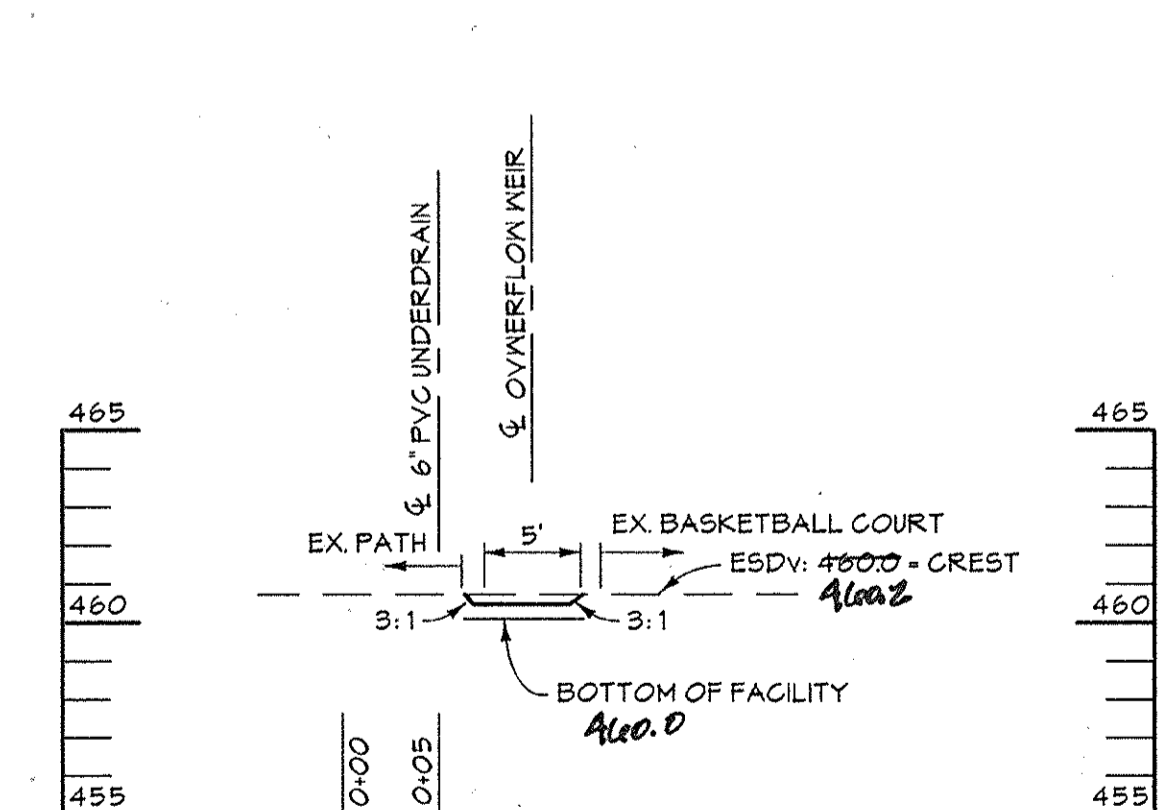
**PURPOSE STATEMENT FOR REVISION #6**  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES (DETAILS).

**PURPOSE STATEMENT**  
THE PURPOSE OF THIS REDLINE IS TO ADD 13.29' x 40' BATHROOM EXPANSION TO THE COMMUNITY BUILDING, CONCRETE STOOP, STORMWATER MANAGEMENT FACILITY, AND REVISE THE EXISTING HANDICAP PARKING SPACE.

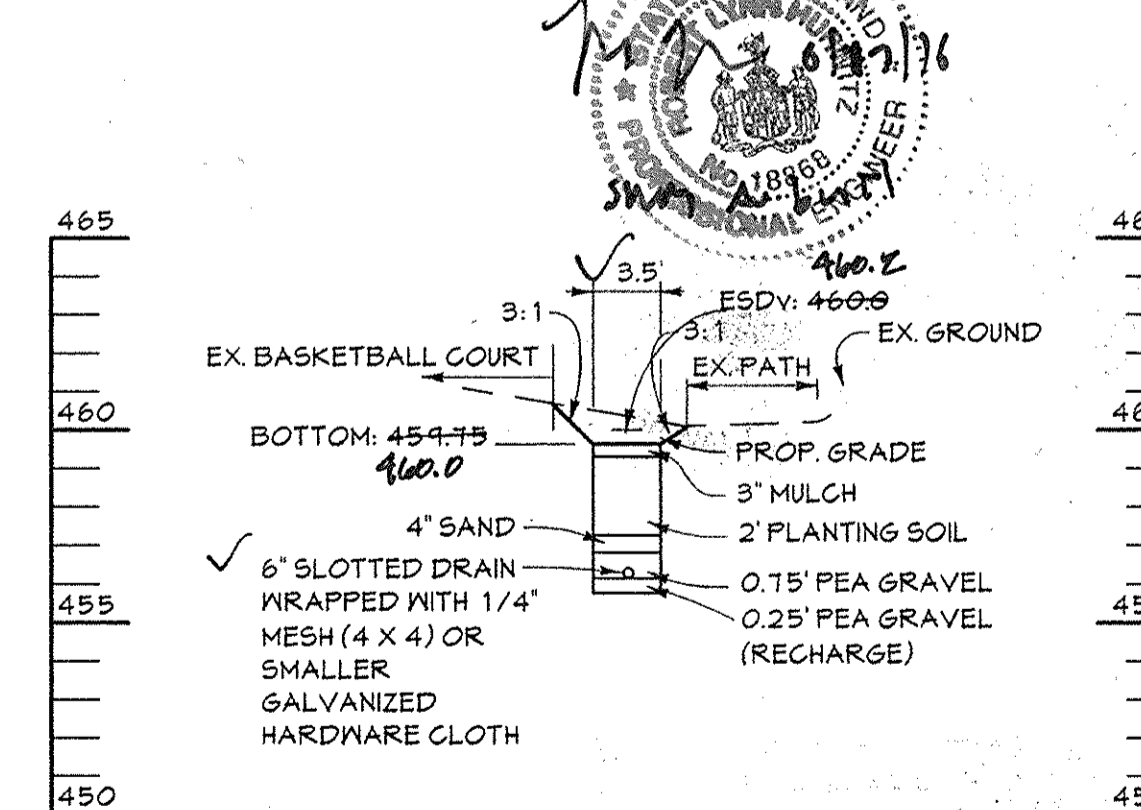
I hereby certify that the facility shown on the plan was constructed as shown on the approved plans & specifications. I have verified that the catchment drainage area is sufficiently stabilized to prevent erosion of the underground storm facility.  
Robert Harwitz PE #18868 4-21-16 6-17-16



**FACILITY NO. 1 SECTION A-A**  
MICRO-BIO-RETENTION FACILITY (M-6)  
SCALE: HORIZ: 1"=30' VERT: 1"=5'



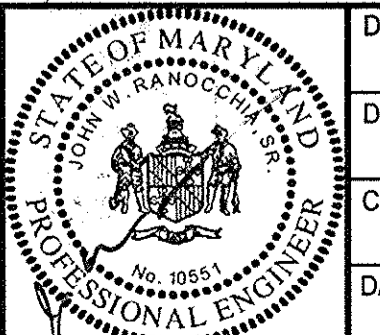
**FACILITY NO. 1 SECTION B-B**  
MICRO-BIO-RETENTION FACILITY (M-6)  
SCALE: HORIZ: 1"=10' VERT: 1"=5'



**FACILITY NO. 1 SECTION C-C**  
MICRO-BIO-RETENTION FACILITY (M-6)  
SCALE: HORIZ: 1"=10' VERT: 1"=5'

APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY  
10/21/20

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015



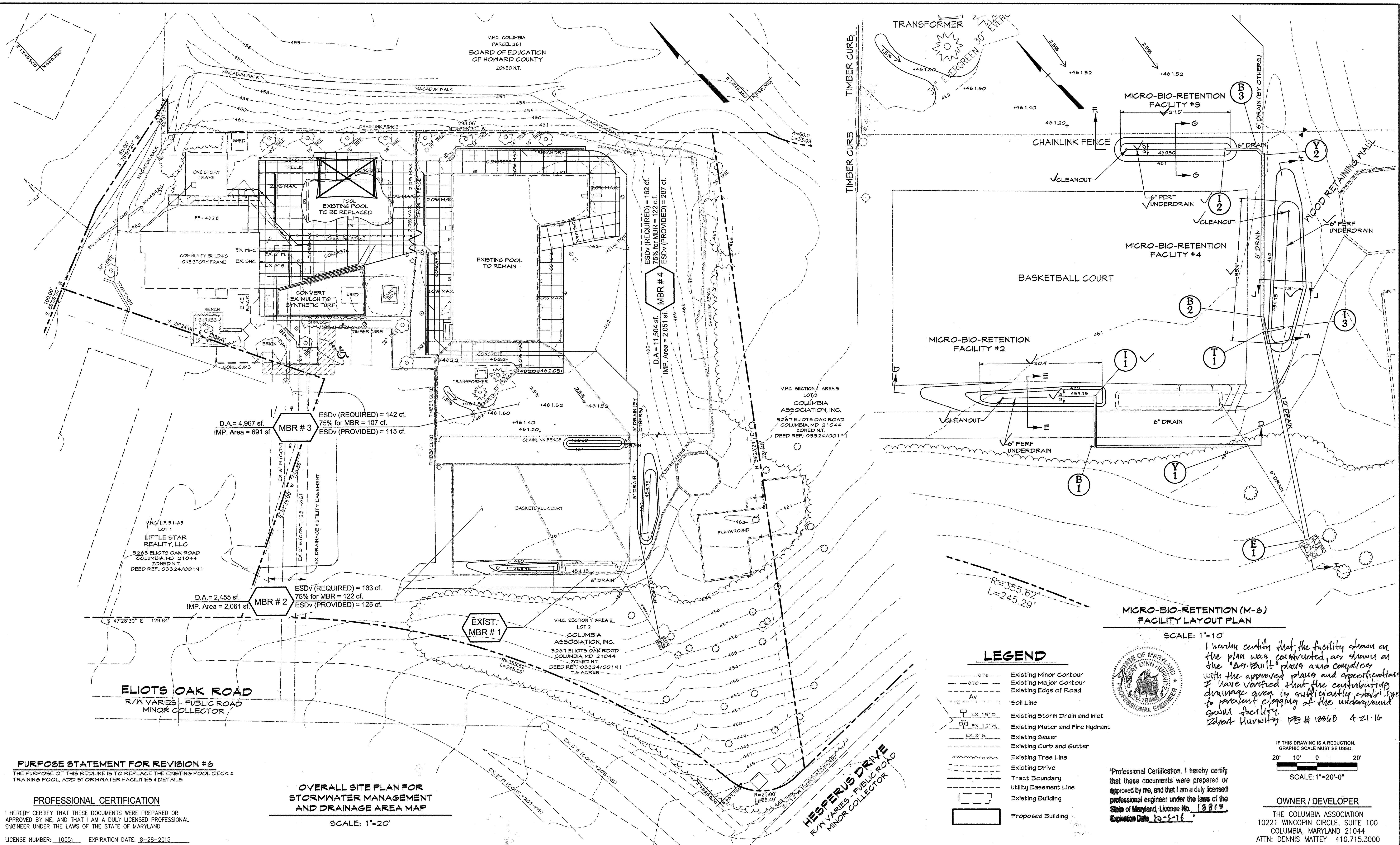
DESIGN BY:	M.J.P.		
DRAWN BY:	M.S.S.		
CHECKED BY:	J.W.R.		
DATE:	9/6/2013		
BY:	NO.	ADD SWM FAC. + REPLACEMENT OF POOL DECK, CHG SHEET #	12.5.13
		See the purpose note.	
		REVISION	DATE

LONGFELLOW NEIGHBORHOOD CENTER  
VILLAGE OF HARPER'S CHOICE  
5267 ELIOTS OAK ROAD  
COLUMBIA, MD

OWNER / DEVELOPER  
THE COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MARYLAND 21044  
ATTN: DENNIS MATTEY 410.715.3000

SWM AS-BUILT SUPPLEMENTAL SHEET  
REVISION DETAILS  
LONGFELLOW NEIGHBORHOOD CENTER  
OPEN SPACE LOT 2, SECTION 1, AREA 5  
TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
HOWARD COUNTY, MARYLAND  
SHEET 8 OF 11





**PURPOSE STATEMENT FOR REVISION #6**  
 THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL, DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND  
 LICENSE NUMBER: 10551    EXPIRATION DATE: 8-28-2015

**OVERALL SITE PLAN FOR STORMWATER MANAGEMENT AND DRAINAGE AREA MAP**  
 SCALE: 1"=20'

**LEGEND**

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- --- Existing Edge of Road
- Av --- Soil Line
- EX. 15" D. Existing Storm Drain and Inlet
- EX. 12" W. Existing Water and Fire Hydrant
- EX. 8" S. Existing Sewer
- --- Existing Curb and Gutter
- --- Existing Tree Line
- --- Existing Drive
- --- Tract Boundary
- --- Utility Easement Line
- --- Existing Building
- [ ] Proposed Building



I hereby certify that the facility shown on the plan was constructed, as shown on the "as-built" plans and complies with the approved plans and specifications. I have verified that the contributing drainage area is sufficiently stabilized to prevent clogging of the underground storm facility.  
 Robert Huvwitz    PE # 18818    4-21-16

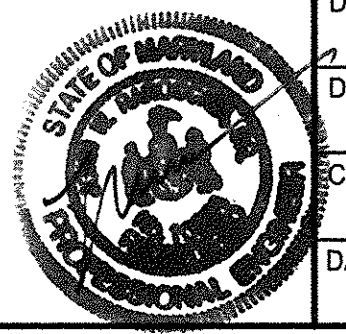
IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE MUST BE USED.  
 20' 10' 0 20'  
 SCALE: 1"=20'-0"

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18818, Expiration Date 10-1-16"

**OWNER / DEVELOPER**  
 THE COLUMBIA ASSOCIATION  
 10221 WINCOPIN CIRCLE, SUITE 100  
 COLUMBIA, MARYLAND 21044  
 ATTN: DENNIS MATTEY 410.715.3000

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: [Signature]    Date: 5/15/14  
 Chief, Division of Land Development: [Signature]    Date: 5-14-14  
 Chief, Development Engineering Division: [Signature]    Date: 5-13-14

**CENTURY ENGINEERING**  
 CONSULTING ENGINEERS - PLANNERS  
 10710 Gilroy Road, Hunt Valley, MD 21031  
 Phone: 443.589.2400 Fax: 443.589.2401

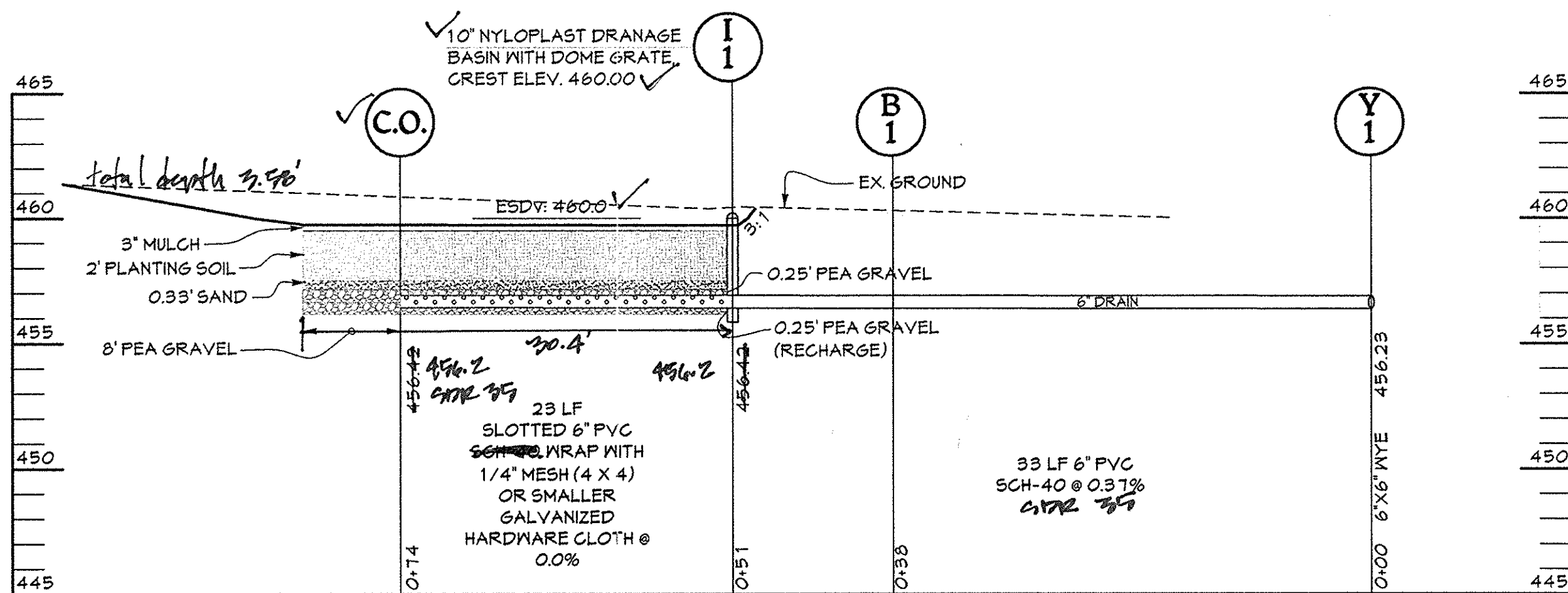


DESIGN BY: M.J.P.					
DRAWN BY: M.S.S.					
CHECKED BY: J.W.R.					
DATE: 10/22/2013					
CEI BY NO.		NEW SUPPLEMENTAL SHEET IN SET		1.24.14	
		REVISION		DATE	

LONGFELLOW NEIGHBORHOOD CENTER  
 VILLAGE OF HARPER'S CHOICE  
 5267 ELIOTS OAK ROAD  
 COLUMBIA, MD

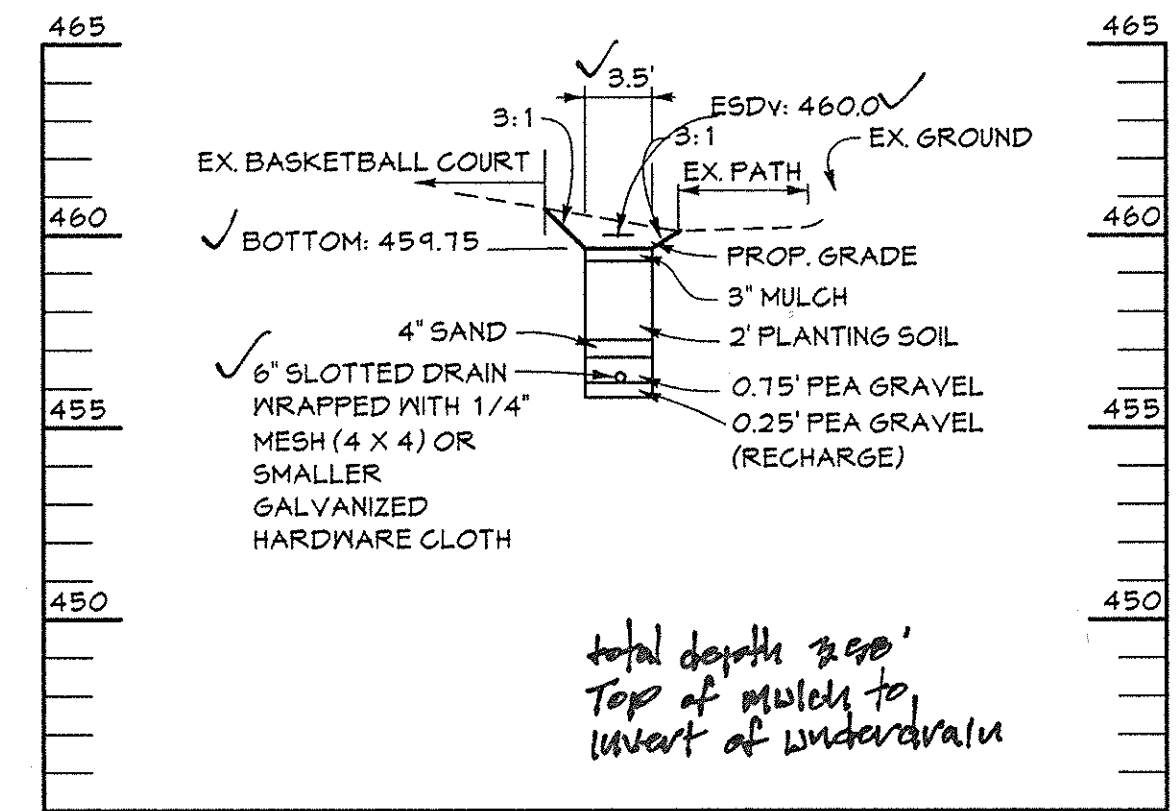
SWM 200 BUILT SUPPLEMENTAL SHEET  
**STORMWATER MANAGEMENT PLAN**  
 LONGFELLOW NEIGHBORHOOD CENTER  
 OPEN SPACE LOT 2, SECTION 1, AREA 5  
 TAX MAP: 29    PARCEL: 273    15th ELECTION DISTRICT    ZONE: N.T.  
 HOWARD COUNTY, MARYLAND  
 SHEET 9 OF 11

C.E.I. PROJECT NUMBER 131002.01  
 SCALE: AS SHOWN



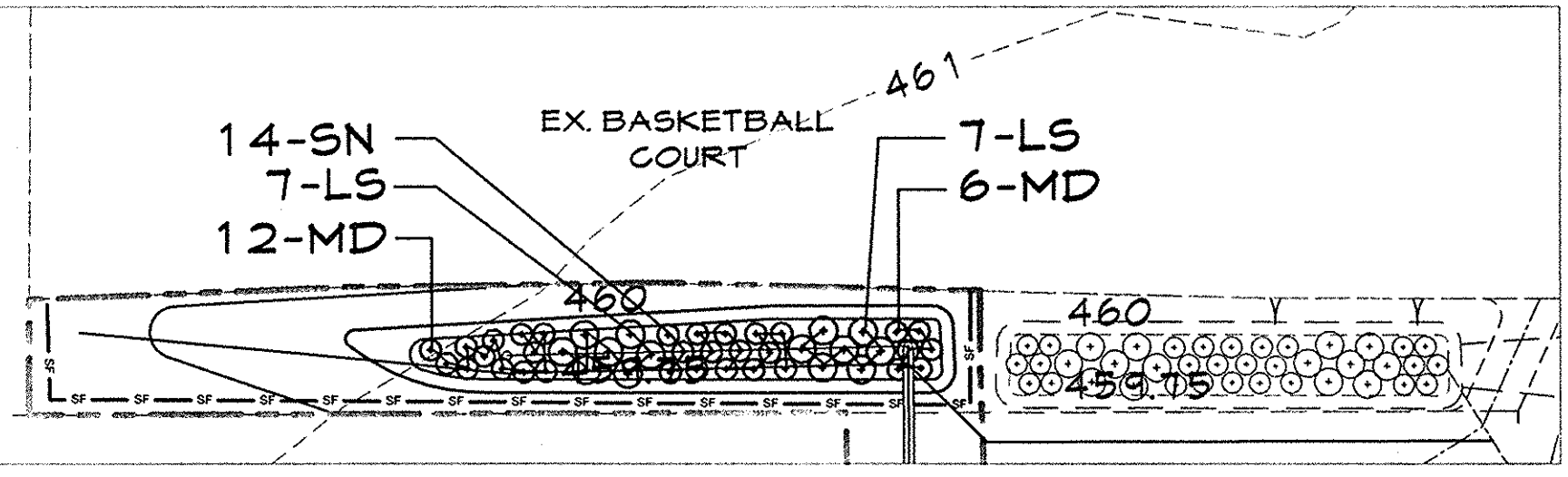
**FACILITY NO. 2 SECTION 'D-D'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'



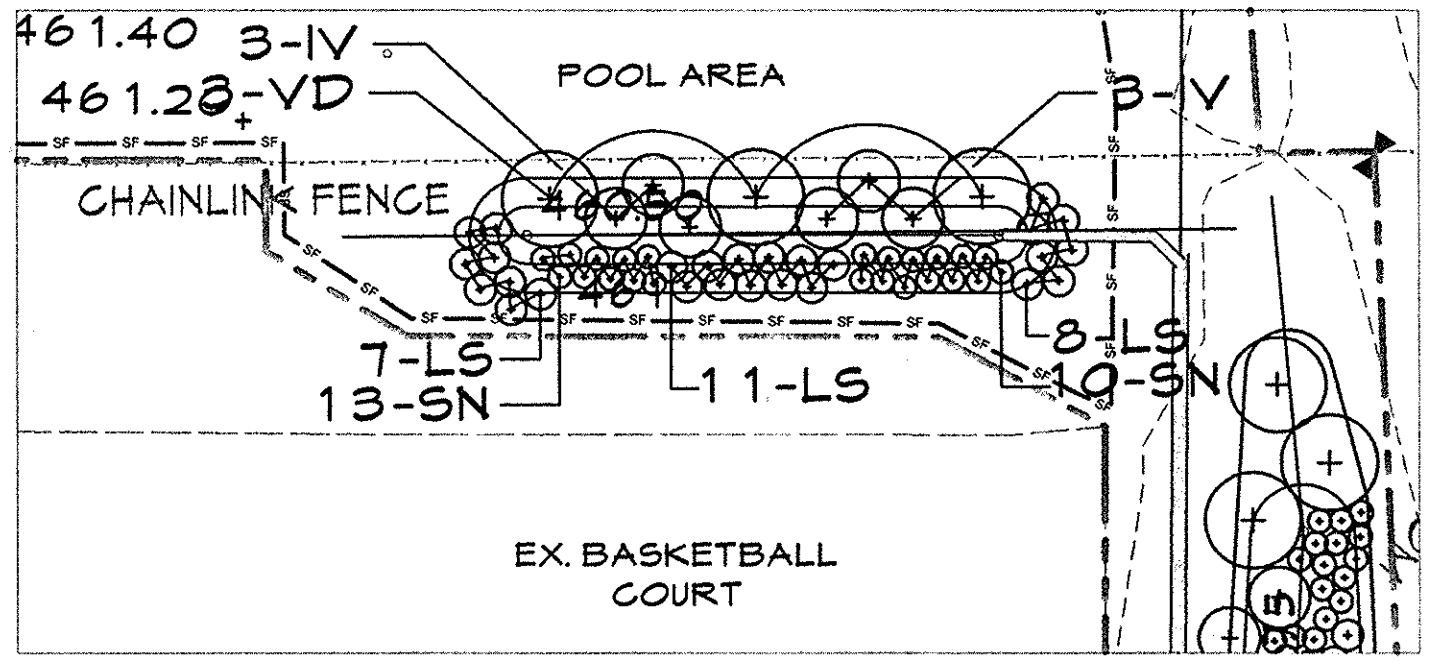
**FACILITY NO. 2 SECTION 'E-E'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'



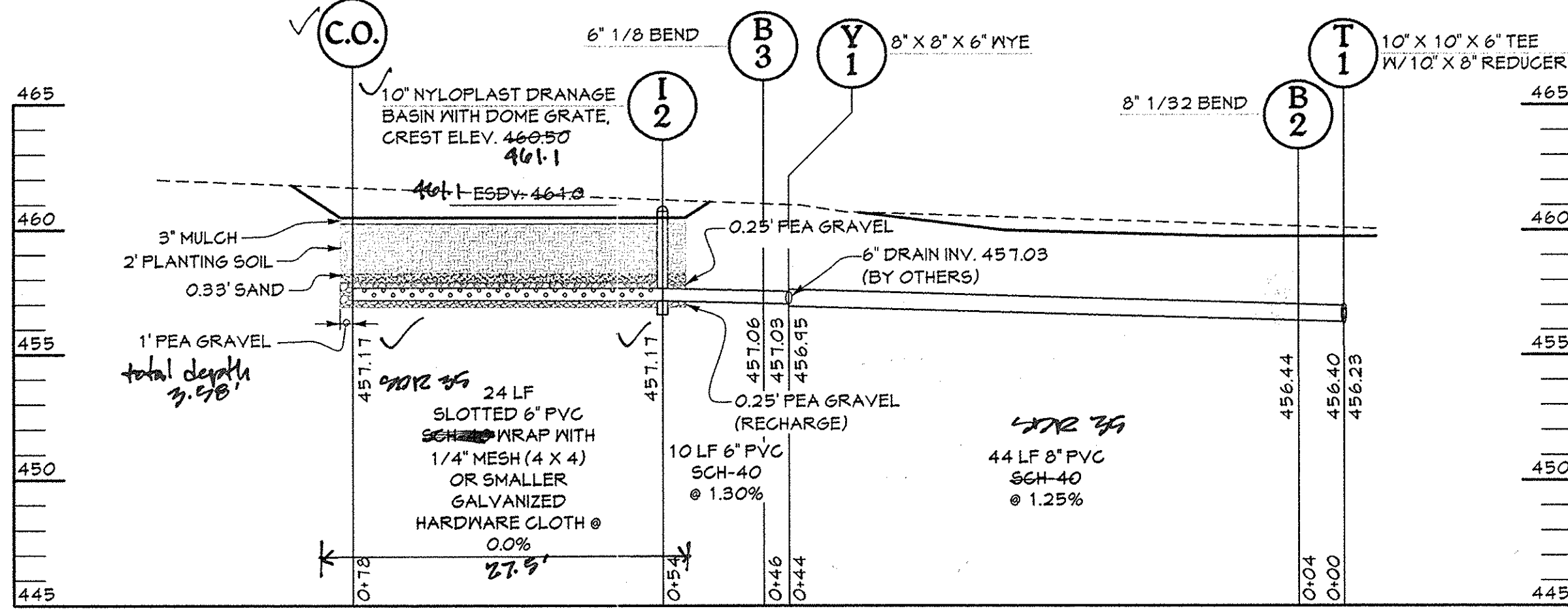
**MICRO-BIO-RETENTION #2 PLAN**

SCALE: 1"=10'



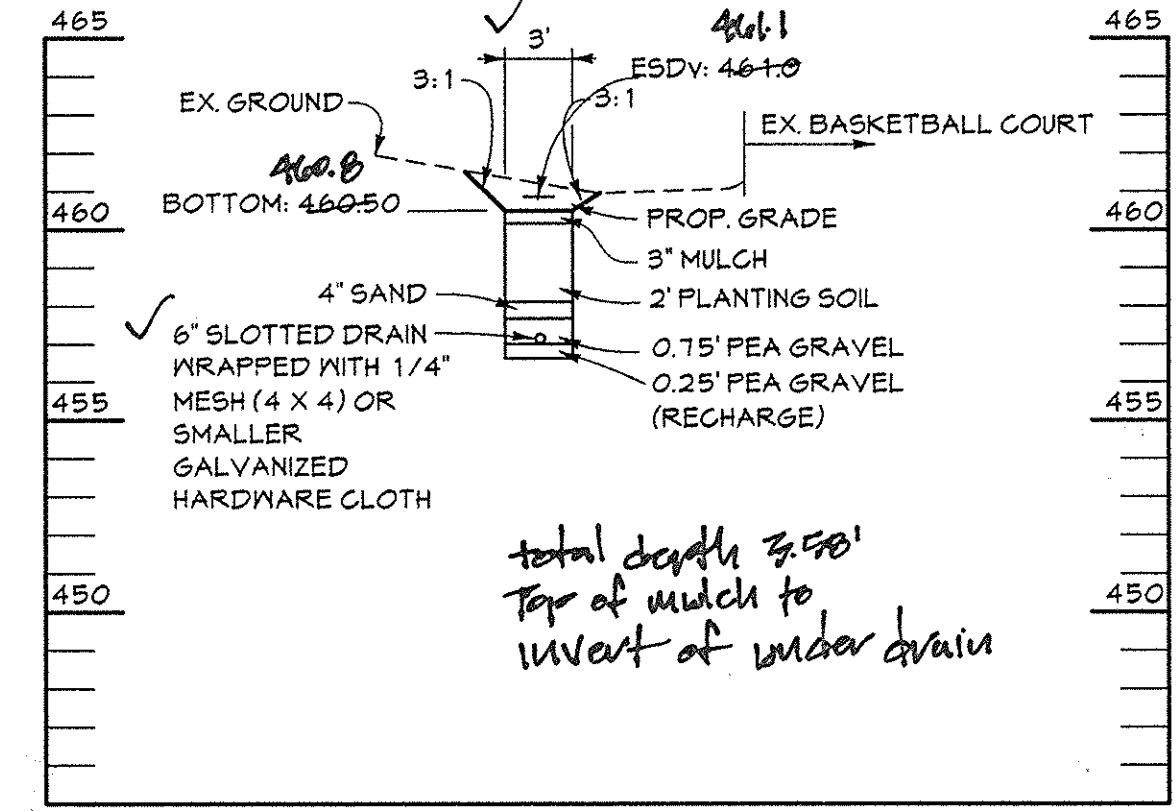
**MICRO-BIO-RETENTION #3 PLAN**

SCALE: 1"=10'



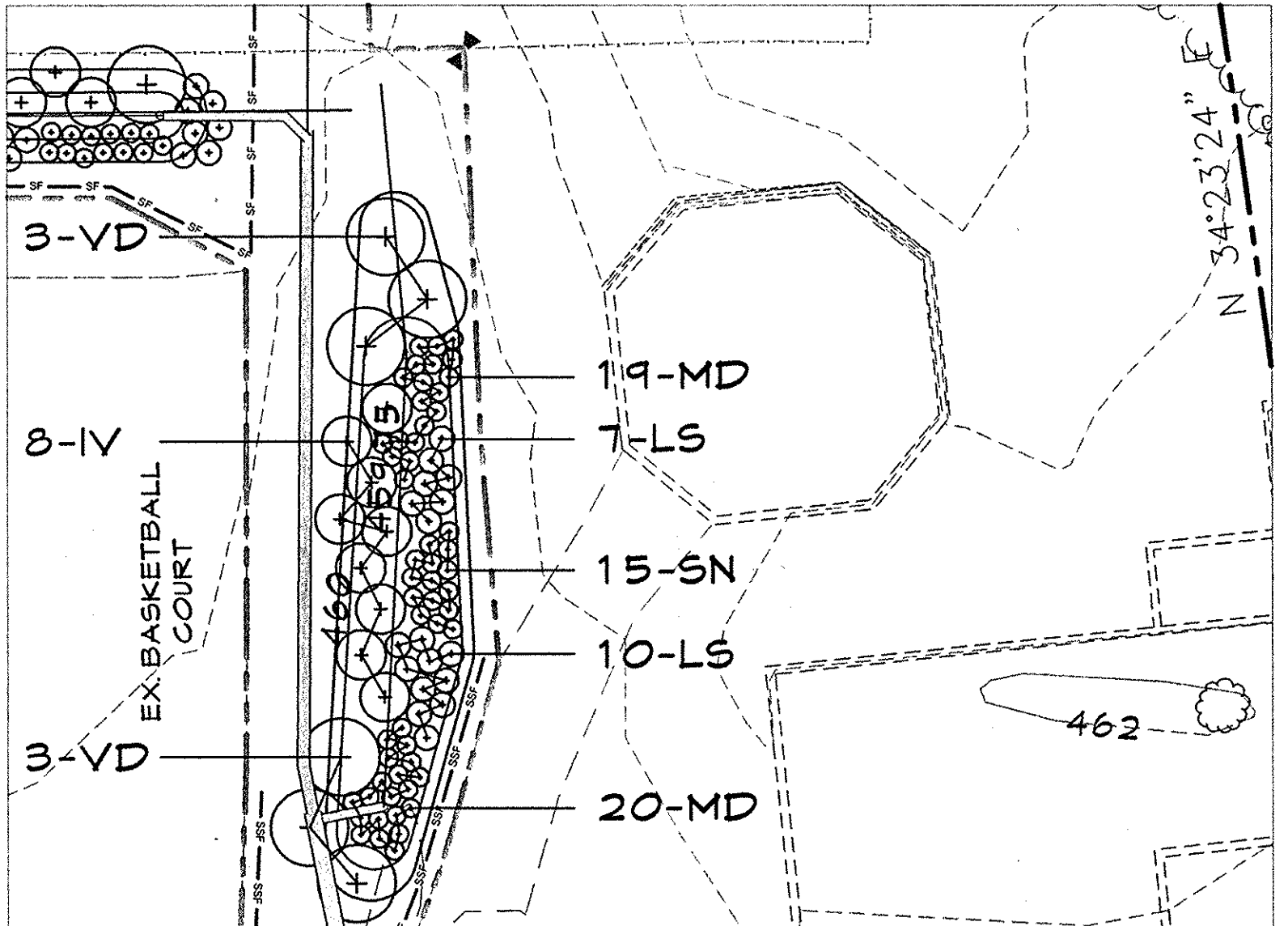
**FACILITY NO. 3 SECTION 'F-F'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'



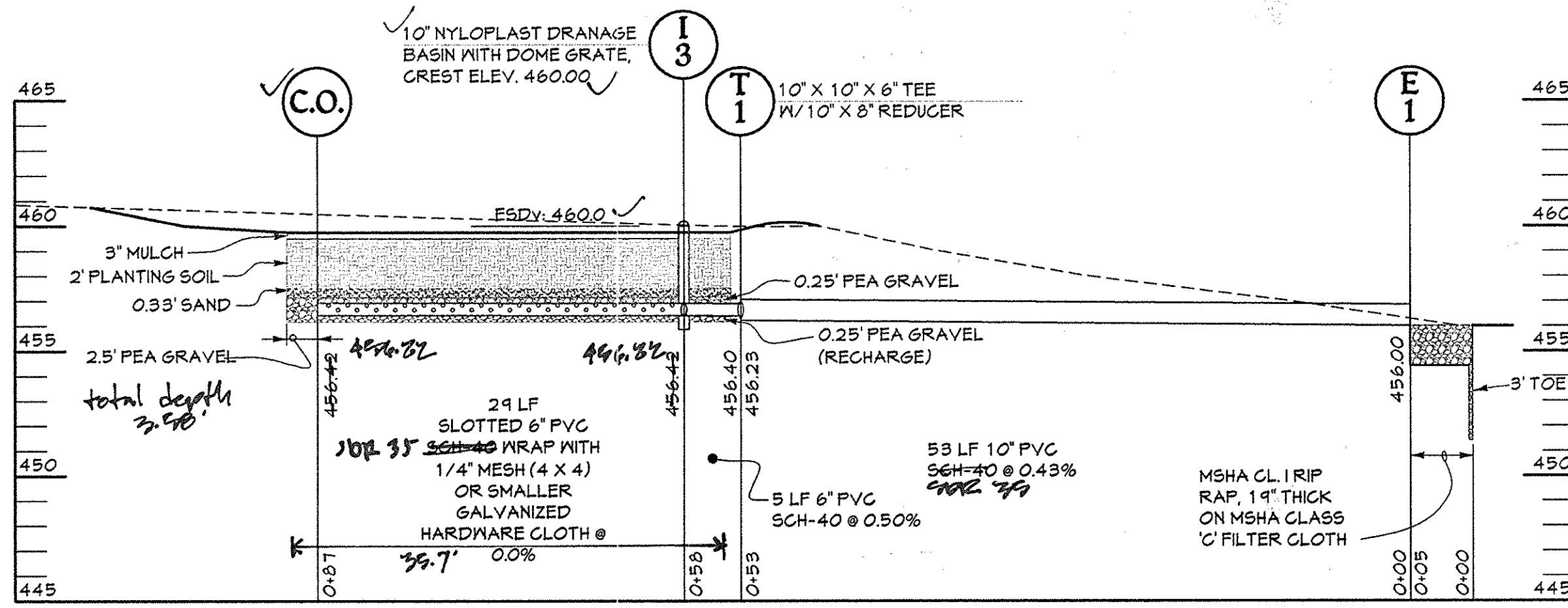
**FACILITY NO. 3 SECTION 'G-G'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'



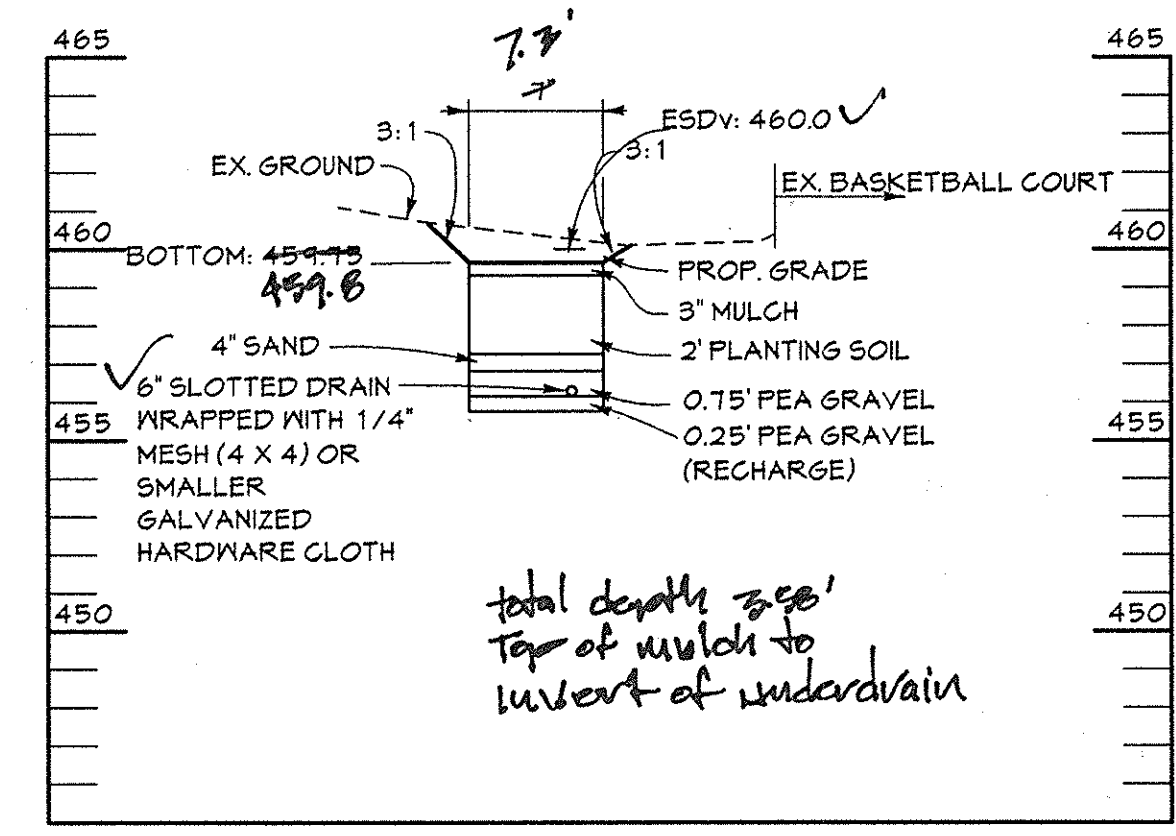
**MICRO-BIO-RETENTION #4 PLAN**

SCALE: 1"=10'



**FACILITY NO. 4 SECTION 'H-H'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'

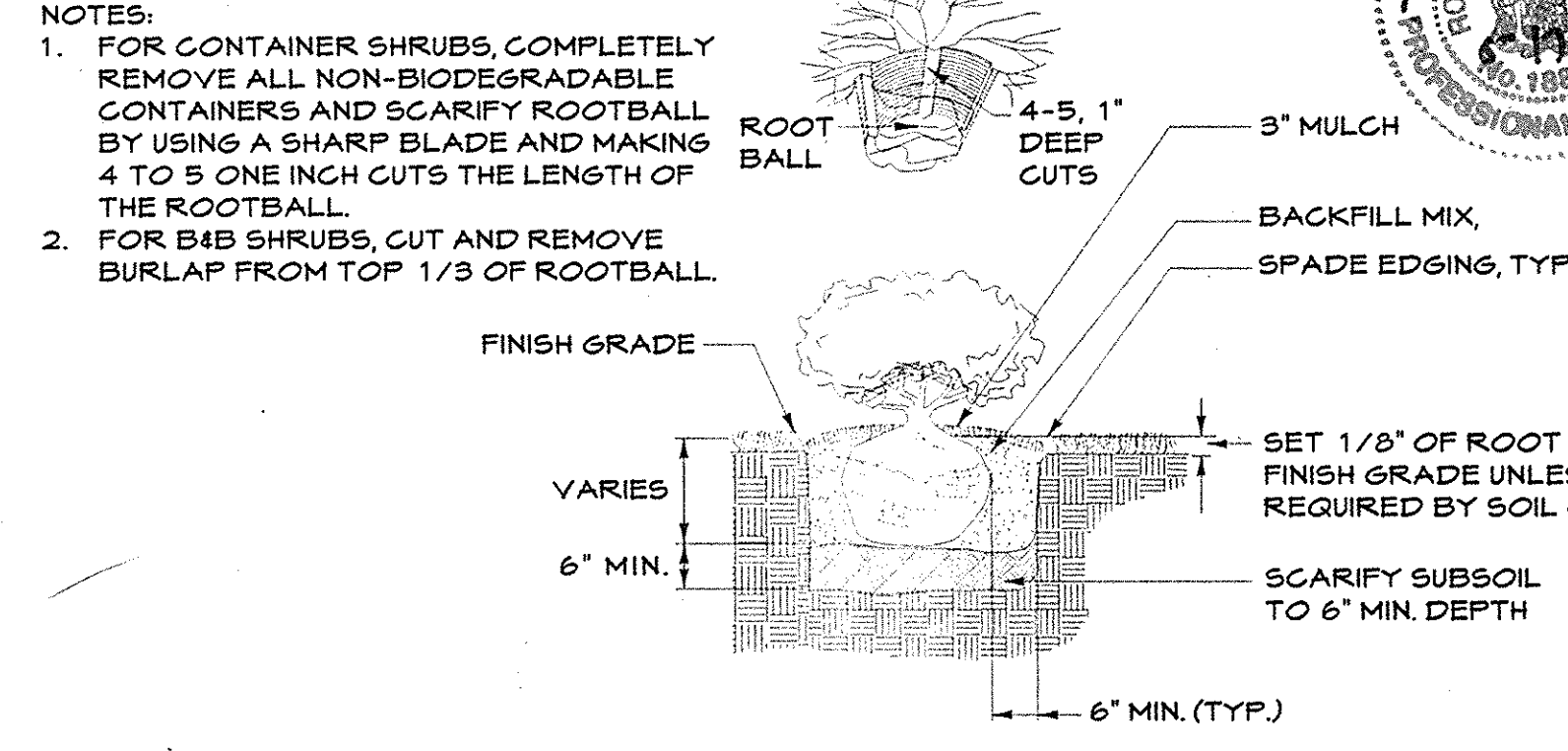


**FACILITY NO. 4 SECTION 'J-J'**  
**MICRO-BIO-RETENTION FACILITY (M-6)**

SCALE: HORIZ: 1"=10'  
VERT: 1"=5'

**MICRO-BIO-RETENTION #2, #3, #4 PLANT SCHEDULE**

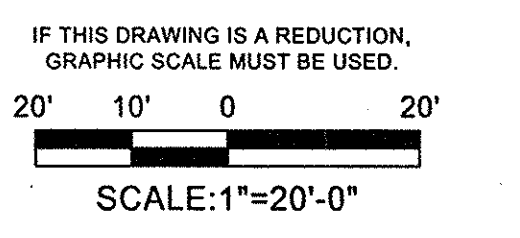
QTY.	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT	COMMENTS
14	IV	Ilex verticillata Winterberry	24"-36" HT.	Cont.	Heavy, full to ground
57	LS	Lilium superbum Turk's Head Lily	12"-18" HT.	Cont.	Heavy, full to ground
57	MD	Monarda didyma Bee Balm	12"-18" HT.	Cont.	Heavy, full to ground
52	SN	Sorghastrum nutans Indian Grass	12"-18" HT.	Cont.	Heavy, full to ground
9	VD	Viburnum dentatum Arrowwood	30"-42" HT.	Cont.	Heavy, full to ground



**SHRUB PLANTING**  
Not To Scale

**PURPOSE STATEMENT FOR REVISION #6**  
THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS

I hereby certify that the facility shown on the plan was constructed as shown on the "as-built" plans and complies with the approved plans & specifications. I have verified that the construction drainage area is sufficient in capacity to prevent flooding of the underground Robert Hurwitz PE-18810 4/14/16  
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18810, Expiration Date 10-1-16 6-11-16



**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND  
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Director: *Frank P. Long* 5/15/14  
Date: 5-14-14  
Chief, Division of Land Development: *Chad Edwards* 5-13-14  
Date: 5-13-14  
Chief, Development Engineering Division: *Chad Edwards*

**CENTURY ENGINEERING**  
CONSULTING ENGINEERS - PLANNERS  
10710 Gilroy Road, Hunt Valley, MD 21031  
Phone: 443.589.2400 Fax: 443.589.2401



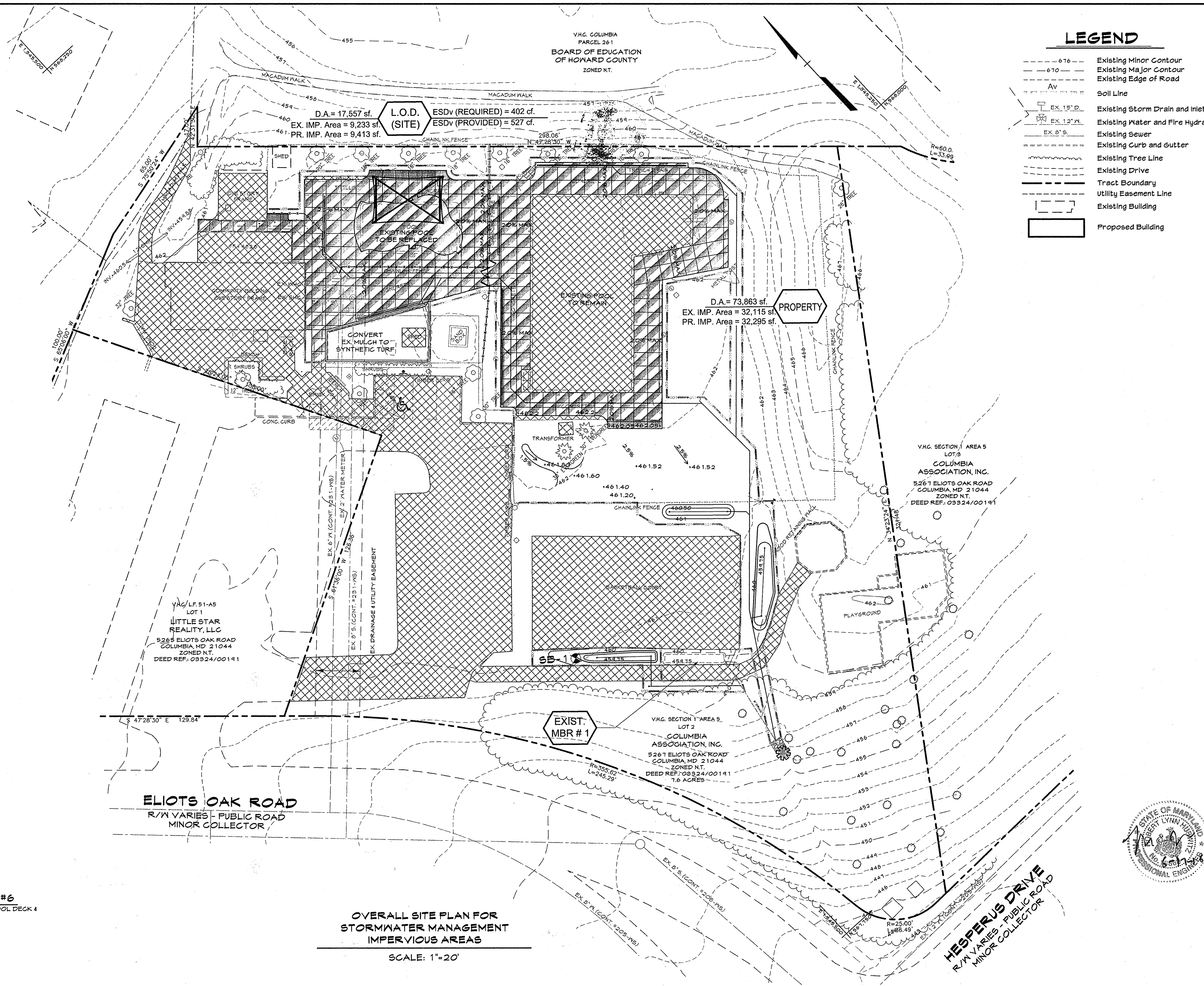
DESIGN BY: M.J.P.			
DRAWN BY: M.S.S.			
CHECKED BY: J.W.R.			
DATE: 10/22/2013	CEI	NEW SUPPLEMENTAL SHEET IN SET	1.24.14
BY NO.		REVISION	DATE

LONGFELLOW NEIGHBORHOOD CENTER  
VILLAGE OF HARPER'S CHOICE  
5267 ELIOTS OAK ROAD  
COLUMBIA, MD

OWNER / DEVELOPER  
THE COLUMBIA ASSOCIATION  
10221 WINCOPIN CIRCLE, SUITE 100  
COLUMBIA, MARYLAND 21044  
ATTN: DENNIS MATTHEY 410.715.3000

SWM As built SUPPLEMENTAL SHEET  
**STORMWATER MANAGEMENT PROFILES**  
LONGFELLOW NEIGHBORHOOD CENTER  
OPEN SPACE LOT 2, SECTION 1, AREA 5  
TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
HOWARD COUNTY, MARYLAND  
SHEET 10 OF 11

C.E.I. PROJECT NUMBER 131002.01  
SCALE: AS SHOWN



**LEGEND**

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- Existing Edge of Road
- AV Soil Line
- EX 15" D Existing Storm Drain and Inlet
- EX 12" W Existing Water and Fire Hydrant
- EX 8" S Existing Sewer
- Existing Curb and Gutter
- Existing Tree Line
- Existing Drive
- Tract Boundary
- Utility Easement Line
- Existing Building
- Proposed Building

**IMPERVIOUS AREA SUMMARY**

- Existing Impervious
- New Impervious over Existing Impervious
- New Impervious
- Limit of Disturbance
- ESD Facility Outfall
- Soil Boring location

D.A. = 17,557 sf.  
 EX. IMP. Area = 9,233 sf.  
 PR. IMP. Area = 9,413 sf.

L.O.D. (SITE)  
 ESDv (REQUIRED) = 402 cf.  
 ESDv (PROVIDED) = 527 cf.

D.A. = 73,863 sf.  
 EX. IMP. Area = 32,115 sf.  
 PR. IMP. Area = 32,295 sf.

V.H.G. SECTION 1 AREA 5  
 LOT 3  
 COLUMBIA ASSOCIATION, INC.  
 5267 ELIOTS OAK ROAD  
 COLUMBIA, MD 21044  
 ZONED N.T.  
 DEED REF. 08924/00191

V.H.G. L.F. 51-A5  
 LOT 1  
 LITTLE STAR REALTY, LLC  
 5265 ELIOTS OAK ROAD  
 COLUMBIA, MD 21044  
 ZONED N.T.  
 DEED REF. 08924/00191

V.H.G. SECTION 1 AREA 5  
 LOT 2  
 COLUMBIA ASSOCIATION, INC.  
 5267 ELIOTS OAK ROAD  
 COLUMBIA, MD 21044  
 ZONED N.T.  
 DEED REF. 08924/00191  
 7.6 ACRES

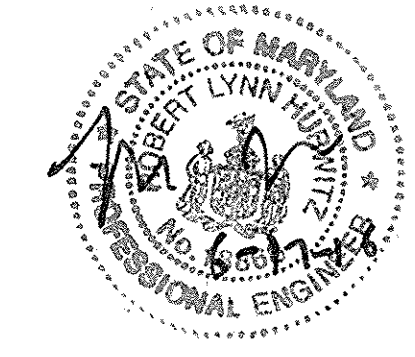
**ELIOTS OAK ROAD**  
 R/W VARIES - PUBLIC ROAD  
 MINOR COLLECTOR

**HESPERUS DRIVE**  
 R/W VARIES - PUBLIC ROAD  
 MINOR COLLECTOR

**OVERALL SITE PLAN FOR  
 STORMWATER MANAGEMENT  
 IMPERVIOUS AREAS**

SCALE: 1"=20'

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18868, Expiration Date 10-5-16"



There is no "as-built" information provided on this sheet.  
 Robert Hummel  
 PE # 18868 4-21-16  
 6-17-16

IF THIS DRAWING IS A REDUCTION, GRAPHIC SCALE MUST BE USED.  
 20' 10' 0 20'  
 SCALE: 1"=20'-0"

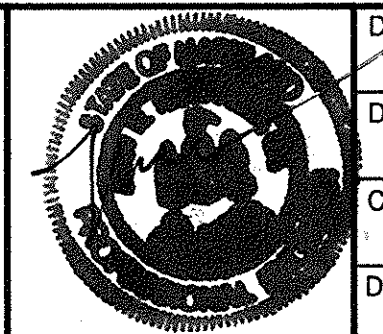
**OWNER / DEVELOPER**  
 THE COLUMBIA ASSOCIATION  
 10221 WINCOPIN CIRCLE, SUITE 100  
 COLUMBIA, MARYLAND 21044  
 ATTN: DENNIS MATTEY 410.715.3000

**PURPOSE STATEMENT FOR REVISION #6**  
 THE PURPOSE OF THIS REDLINE IS TO REPLACE THE EXISTING POOL DECK & TRAINING POOL, ADD STORMWATER FACILITIES & DETAILS

**PROFESSIONAL CERTIFICATION**  
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 LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Director: *Mark M. Grogan* 5/15/14  
 Chief, Division of Land Development: *K. S. S. S.* 5-14-14  
 Chief, Development Engineering Division: *...* 5-13-14

**CENTURY ENGINEERING**  
 CONSULTING ENGINEERS - PLANNERS  
 10710 Gilroy Road, Hunt Valley, MD 21031  
 Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY: M.J.P.					
DRAWN BY: M.S.S.					
CHECKED BY: J.W.R.					
DATE: 10/22/2013	CEI	NO.	NEW SUPPLEMENTAL SHEET IN SET	1.24.14	DATE

LONGFELLOW NEIGHBORHOOD CENTER  
 VILLAGE OF HARPER'S CHOICE  
 5267 ELIOTS OAK ROAD  
 COLUMBIA, MD

SUPPLEMENTAL SHEET  
**STORMWATER MANAGEMENT IMPERVIOUS AREAS**  
 LONGFELLOW NEIGHBORHOOD CENTER  
 OPEN SPACE LOT 2, SECTION 1, AREA 5  
 TAX MAP: 29 PARCEL: 273 15th ELECTION DISTRICT ZONE: N.T.  
 HOWARD COUNTY, MARYLAND  
 SHEET 11 OF 11

C.E.I. PROJECT NUMBER  
 131002.01  
 SCALE:  
 AS SHOWN