

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, STANDARD SPECIFICATIONS AND SPECIFICATIONS APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION...

- 11. THERE ARE EXISTING UTILITIES ON SITE AS DETERMINED BY christopher consultants, inc. IN A REPORT DATED SEPTEMBER 2006 AND UPDATED IN FEBRUARY 2007.
12. THERE ARE SLOPES OF 2% OR GREATER OVER 10 VERTICAL FEET PRESENT ON THE SITE...

- 17. ALL EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED. UTILITIES CONTRACTOR SHALL VERIFY THE SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND FIELD TEST ALL UTILITIES INCLUDING PROPOSED TIE IN LOCATIONS...
23. THE SURETY FOR THE PUBLIC STREET TREES ALONG FREDERICK ROAD SHALL BE INCLUDED IN THE COST ESTIMATE GENERATED BY THE HOWARD COUNTY DEVELOPMENT ENGINEERING DIVISION...

- 25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.24 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 46 EVERGREEN TREES PROVIDED WITH LANDSCAPE PLANNING IN A ROBOTIC BASIS...
26. ASSOCIATED PLANS: PRELIMINARY DEVELOPMENT PLAN: ZB CASE 10641 (APPROVED MAY 11, 2006) AND F-10-00...

- 32. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES WHICH ARE TO REMAIN FREE FROM DAMAGE AND PLANT UNINTERRUPTED SERVICE TO ALL USERS...
35. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS AS NECESSARY TO GRADE THE SITE AND COMPLETE ANY REQUIRED UTILITIES...

- 41. ALL EXTERIOR LIGHT DEVICES SHALL BE ORIENTATED TO DIRECT LIGHT INWARDS AND DOWNWARDS ONSITE AWAY FROM ALL ADJACENT PUBLIC PROPERTIES...
47. PER DECISION AND ORDER 78 CASE 10641, HAS APPROVED ON MAY 17, 2006, AND SIGNED BY THE ZONING BOARD OF HOWARD COUNTY...

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.

SITE DEVELOPMENT PLAN
LUTHERAN VILLAGE AT MILLER'S GRANT
PLANNED SENIOR COMMUNITY
9531 FREDERICK ROAD ELLICOTT CITY, MD 21046
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

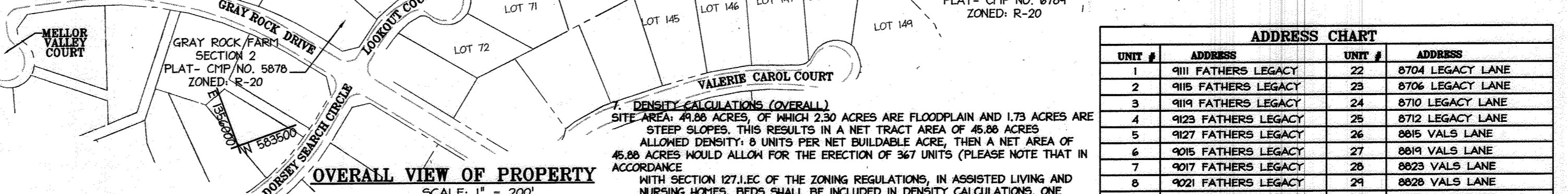
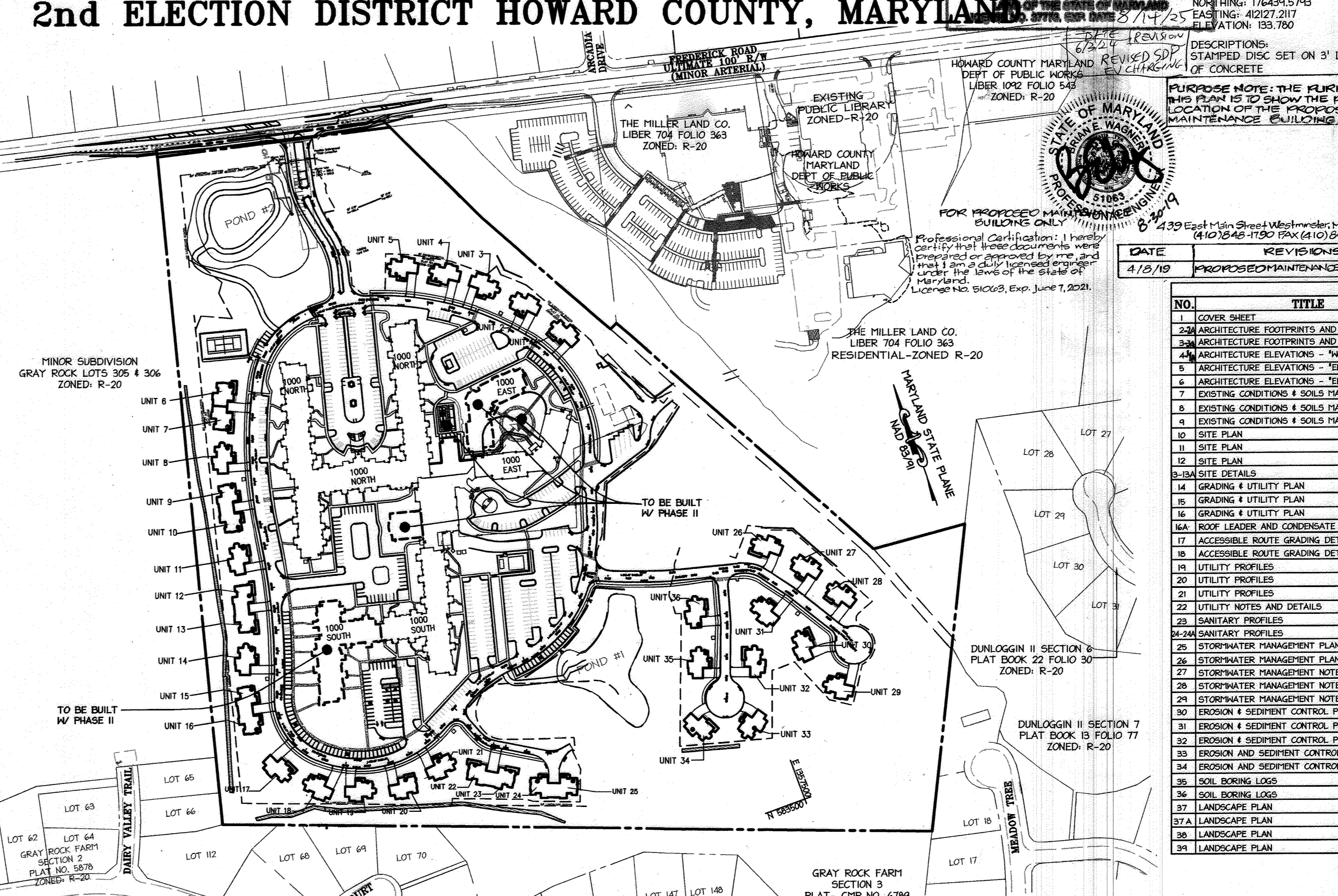
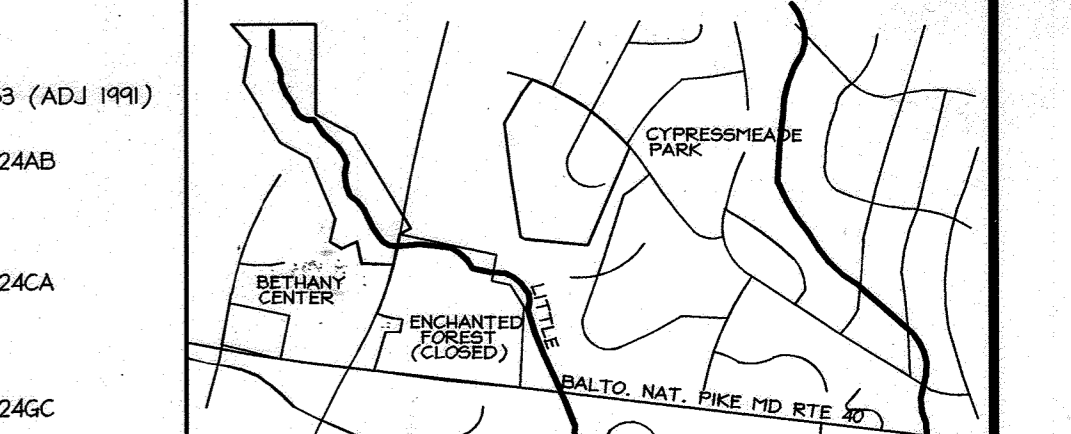


Table with columns: UNIT #, ADDRESS, UNIT #, ADDRESS. Lists units 1-24 and their corresponding addresses.

Table with columns: UNIT #, ADDRESS, UNIT #, ADDRESS. Lists units 25-39 and their corresponding addresses.

AS-BUILT CERTIFICATION
NOTE: THERE IS NO 'AS-BUILT' INFORMATION PROVIDED ON THIS SHEET
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.



SHEET INDEX table listing various sheets (NO., TITLE, SHEET INDEX) including cover sheet, architectural details, and engineering notes.

Table with columns: NO., TITLE, SHEET INDEX. Lists sheets 1-39 and their titles.

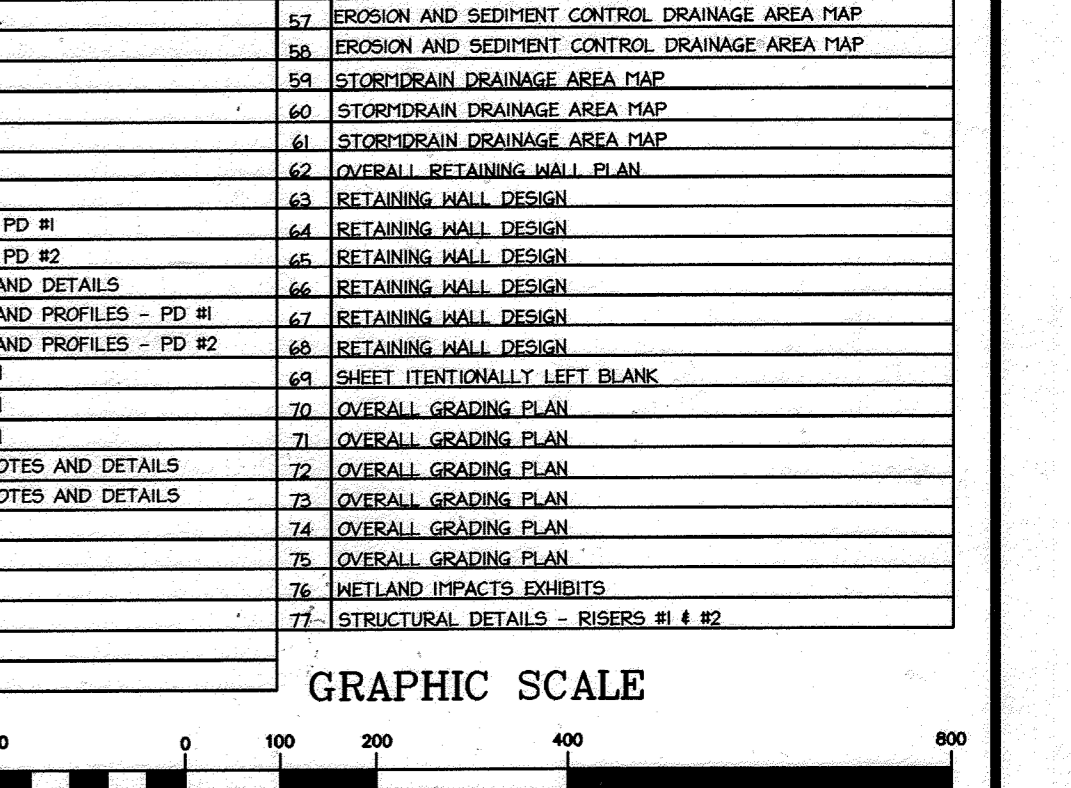
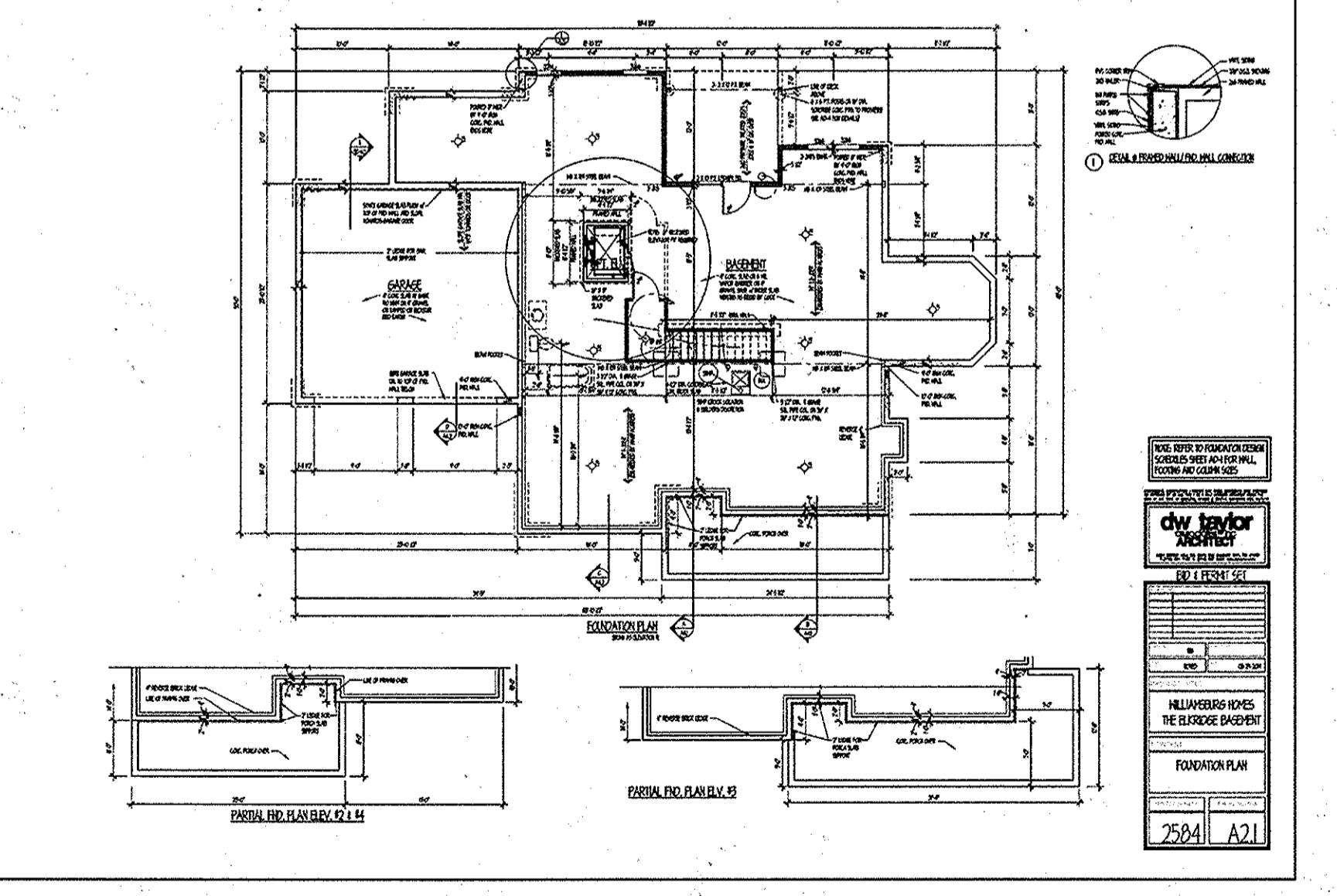
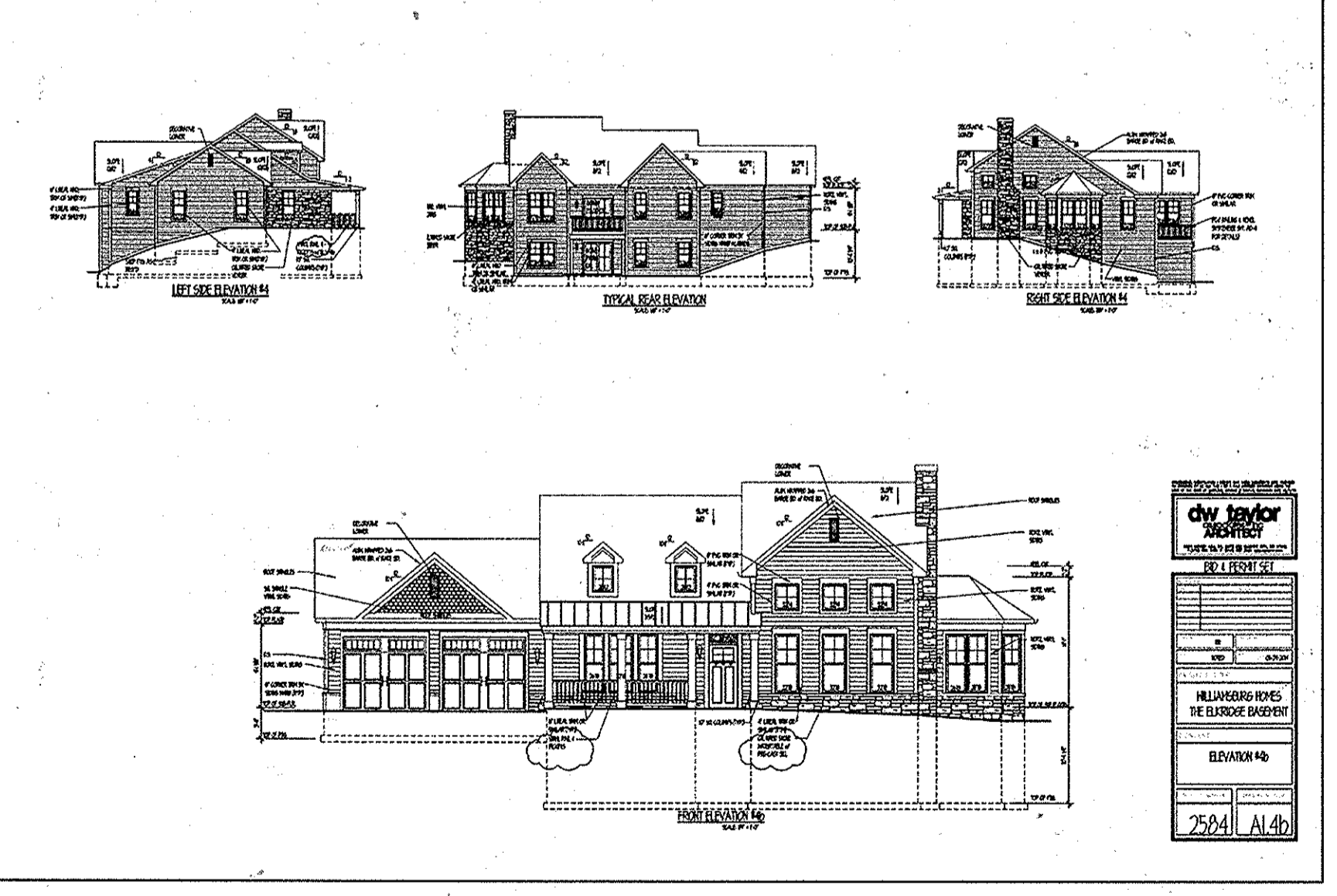
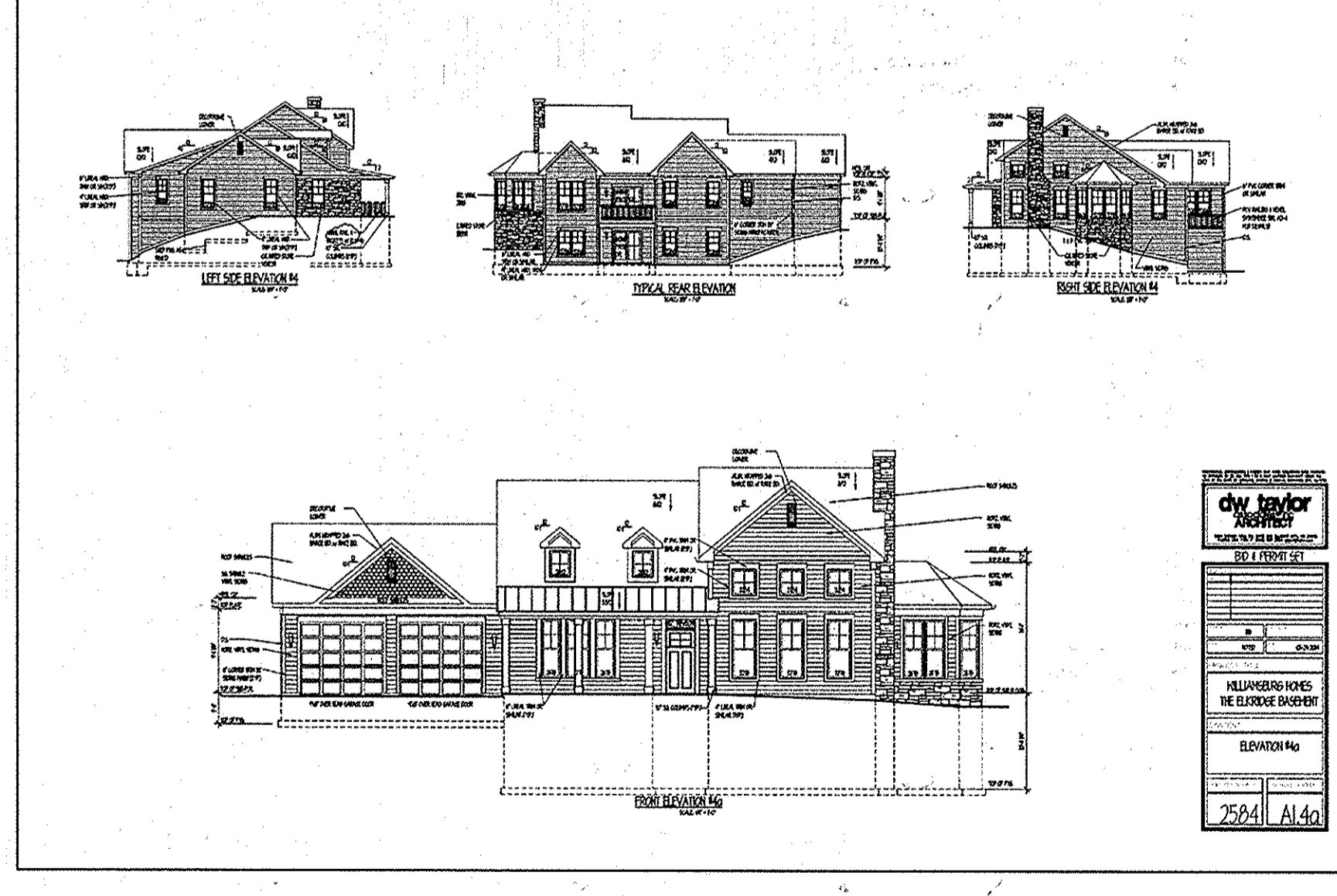
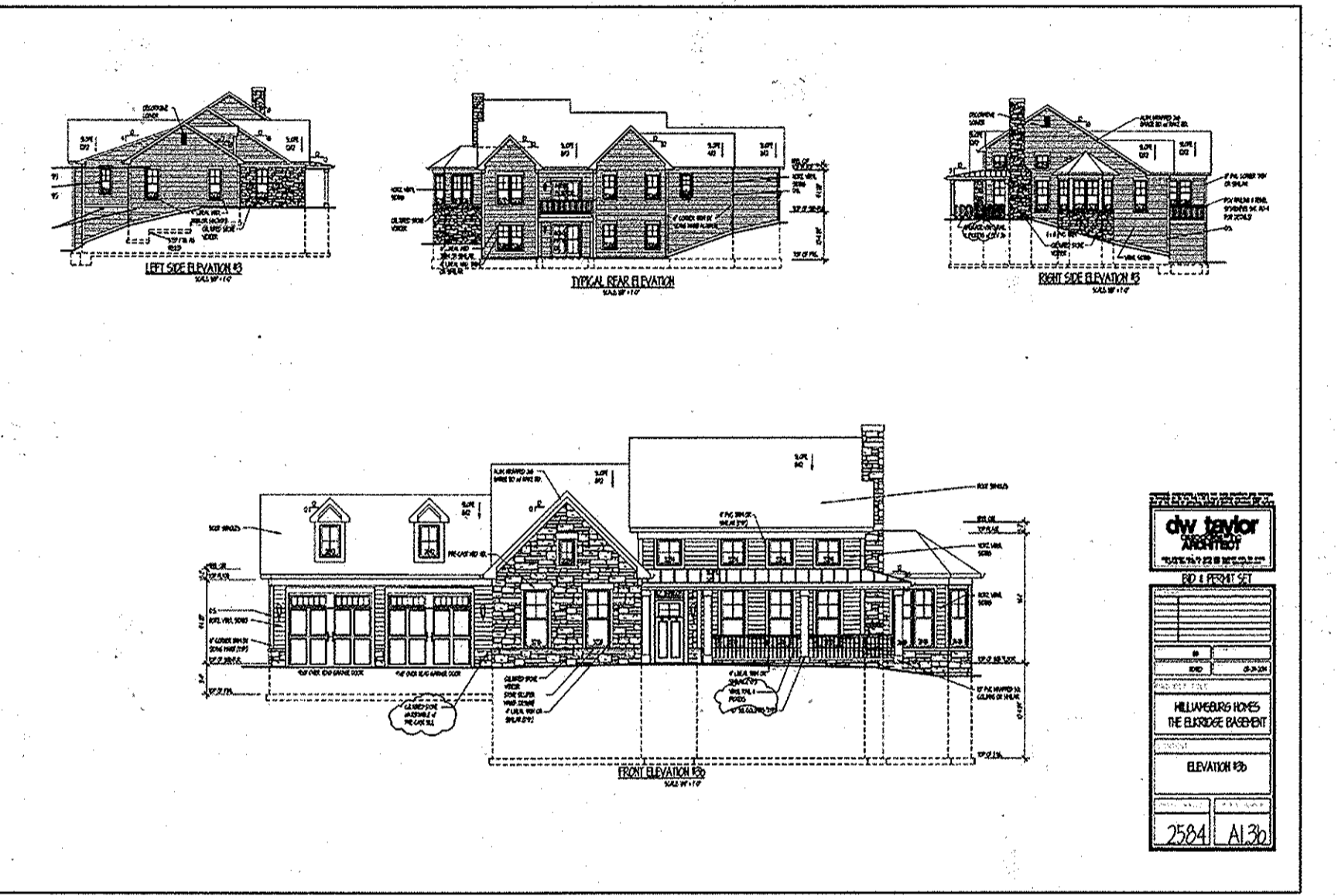
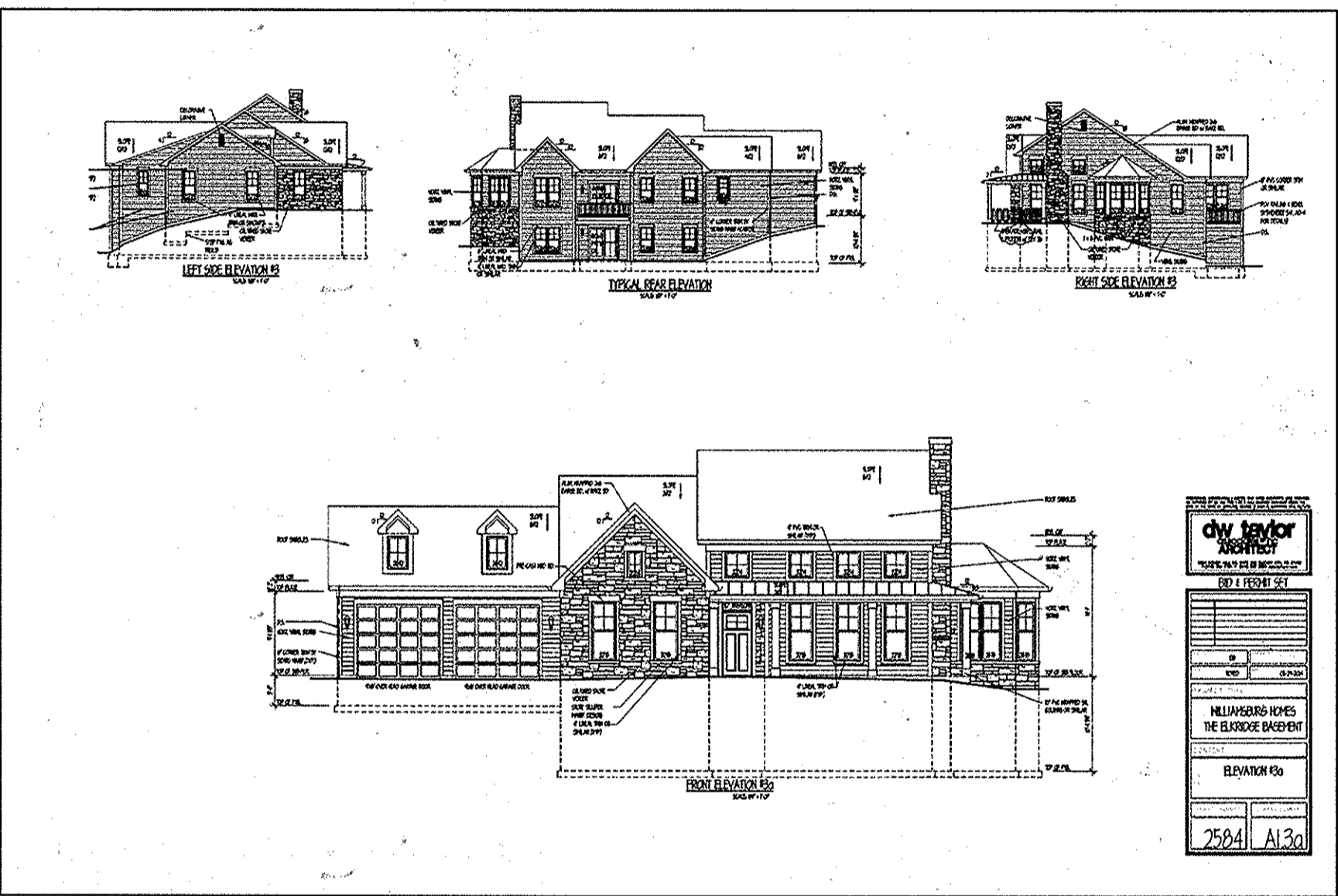
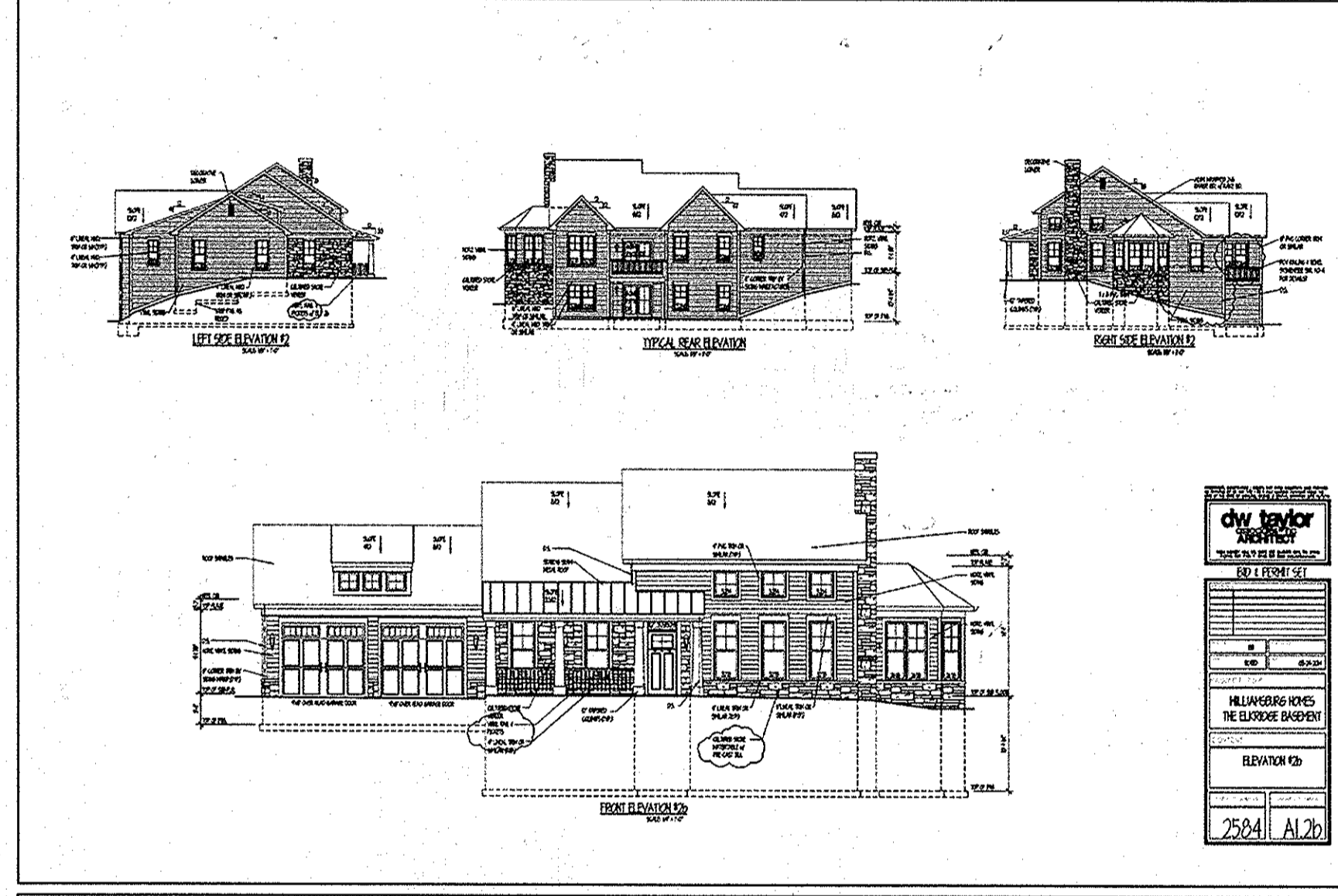
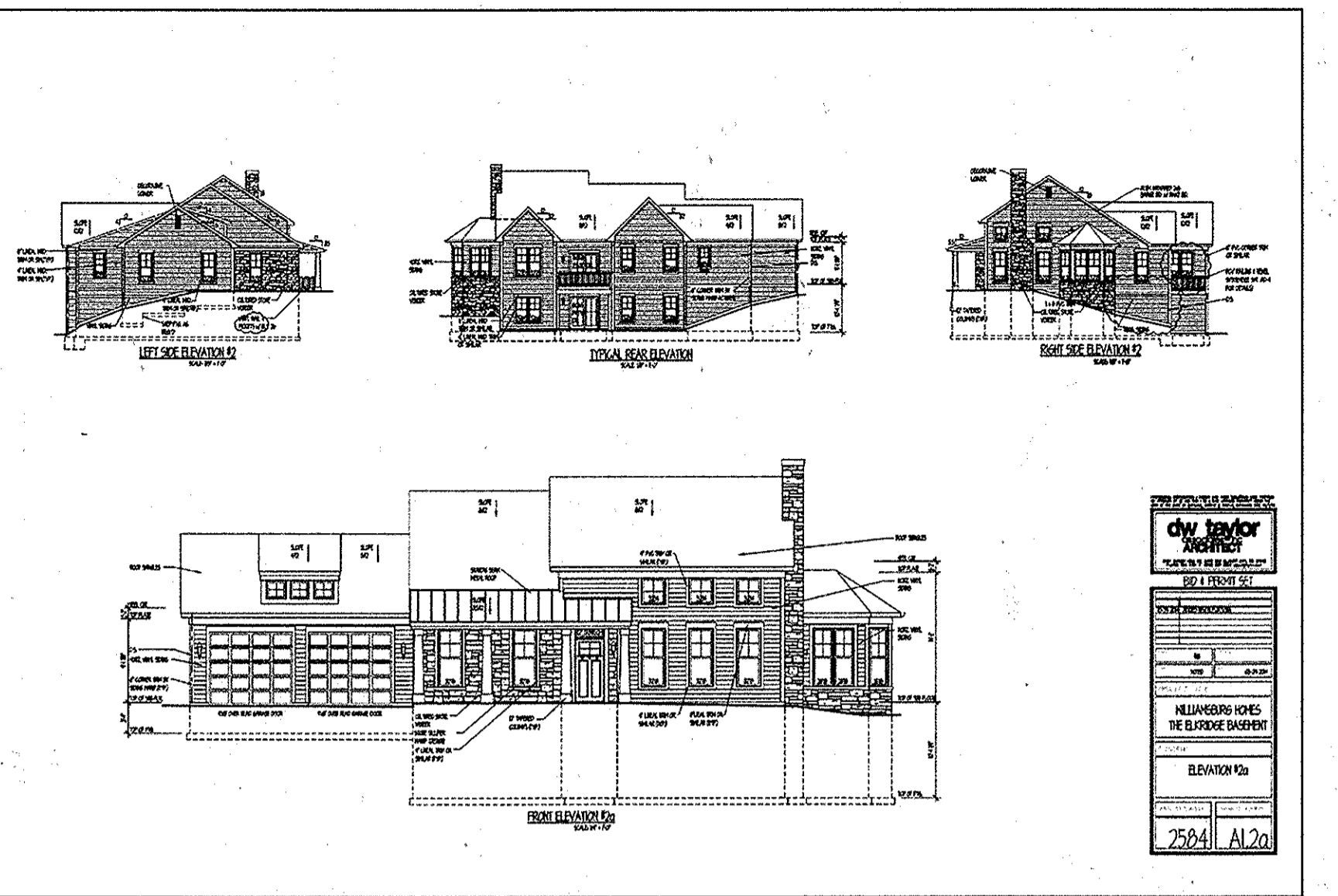
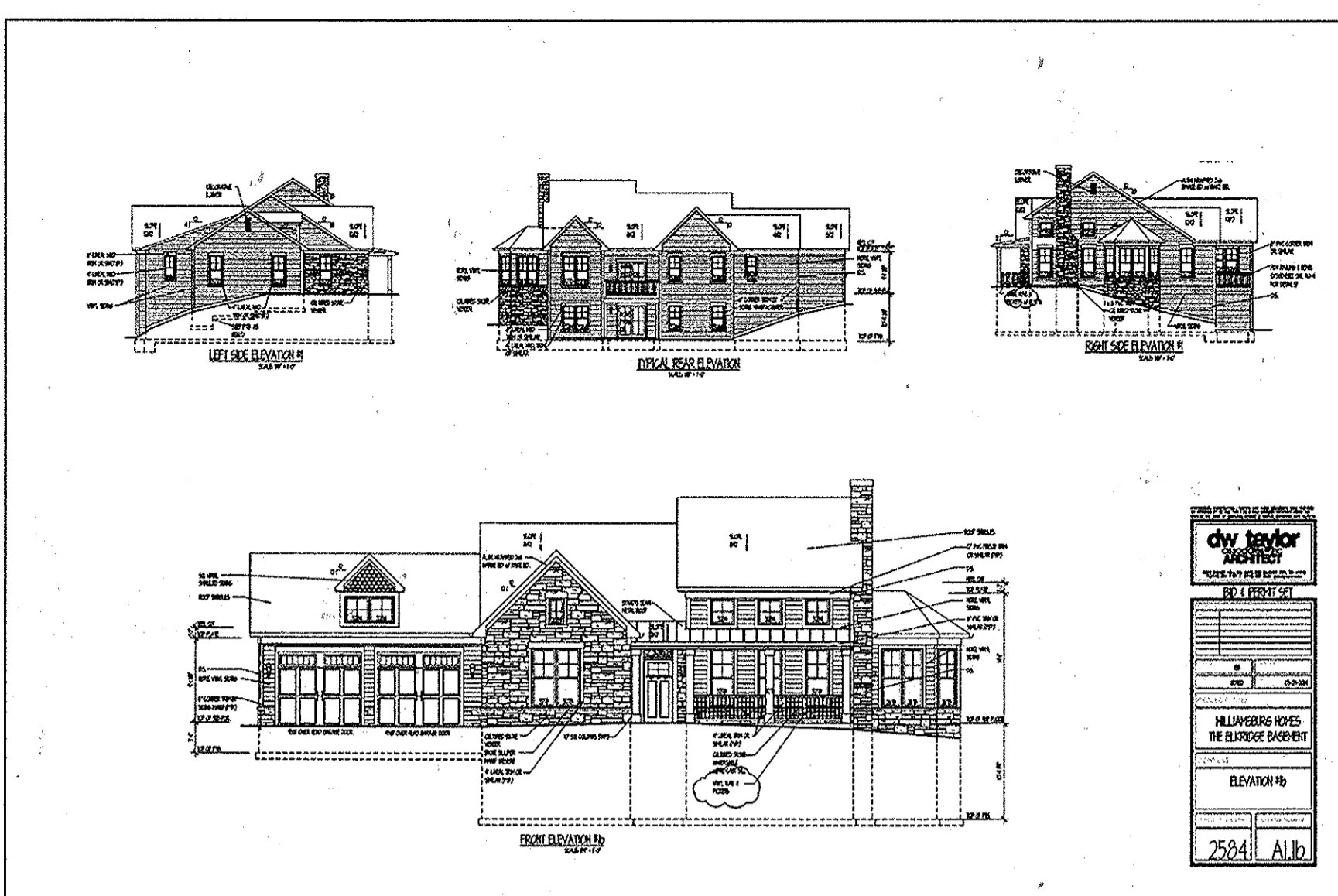
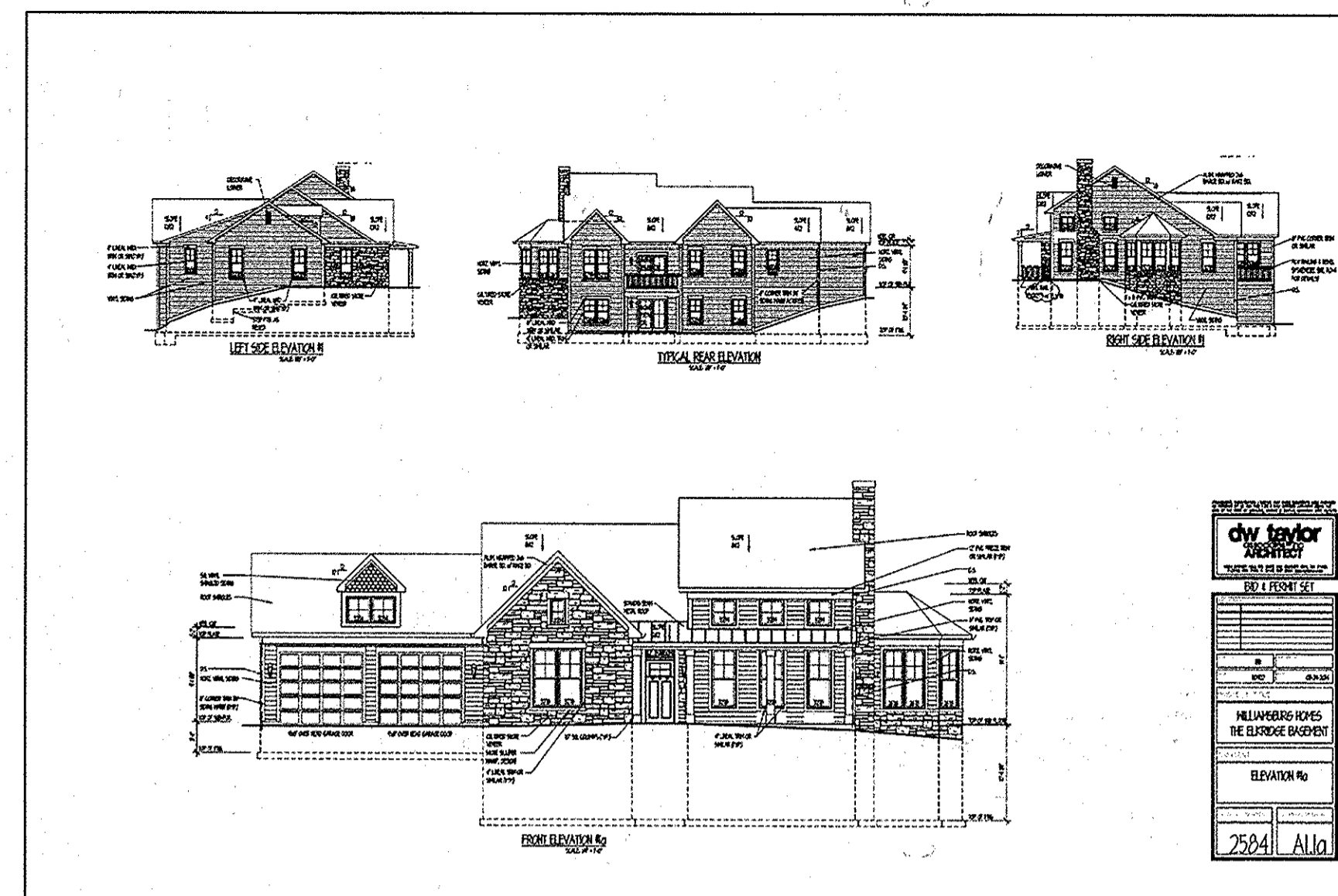


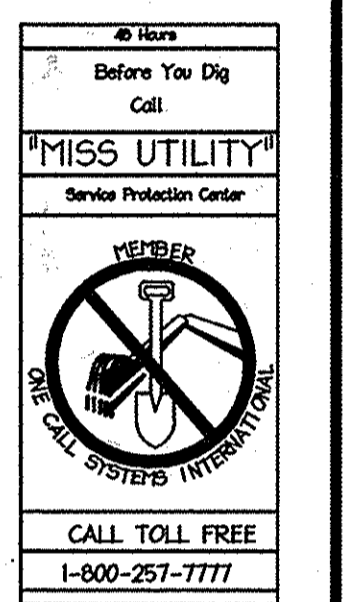
Table with columns: DATE, NO., REVISIONS. Lists revision history from 1/26/09 to 9/26/10.

LUTHERAN VILLAGE AT MILLER'S GRANT
PLANNED SENIOR COMMUNITY
OWNER/DEVELOPER
LUTHERAN VILLAGE AT MILLER'S GRANT
C/O CARROLL LUTHERAN VILLAGE
CONTACT: BOB ORLANDO, EX. VICE PRESIDENT
300 ST LUKE CIRCLE
WESTMINSTER MD 21158
(410) 946-0000

PERMIT INFORMATION CHART
PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT
LOT/PARCEL NO.: A
CENSUS TRACT: 602800
DEED REF: MILLERS GRANT
GRID NO: 10578 F. 424
ZONE: PSC
TAX MAP: 24
ELECTION DISTRICT: 02



NOTES:  
1.) HOUSE HEIGHT = 19'-10"

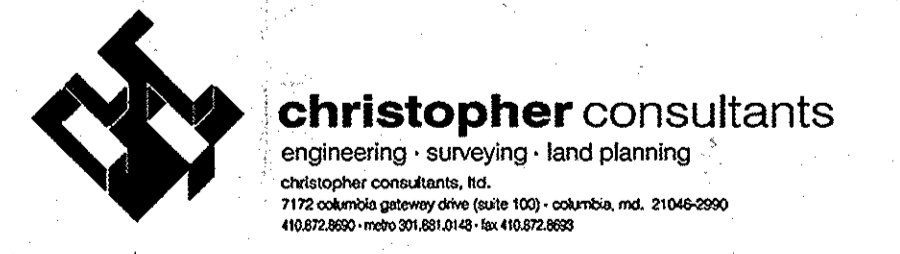


APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

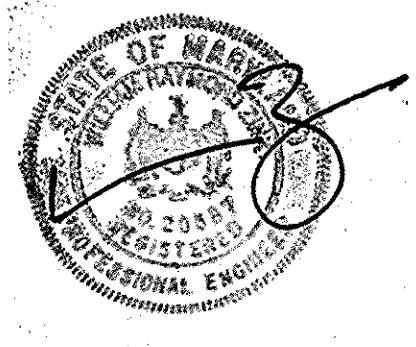
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division *[Signature]* Date 10-27-15  
 Chief, Division of Land Development *[Signature]* Date 10-30-15  
 Director *[Signature]* Date 10-30-15

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: BOY ORAVOOL, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 648-0090

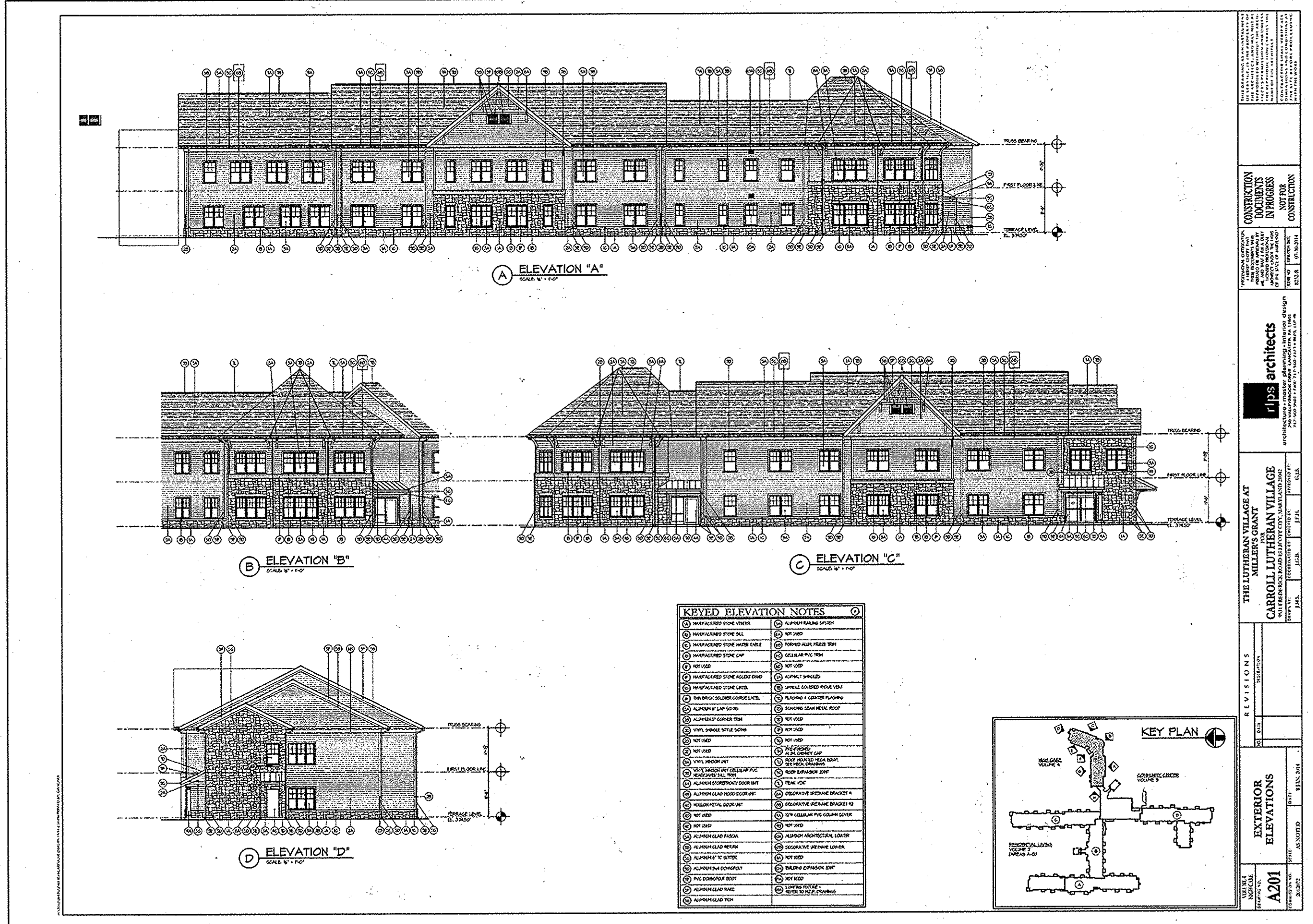
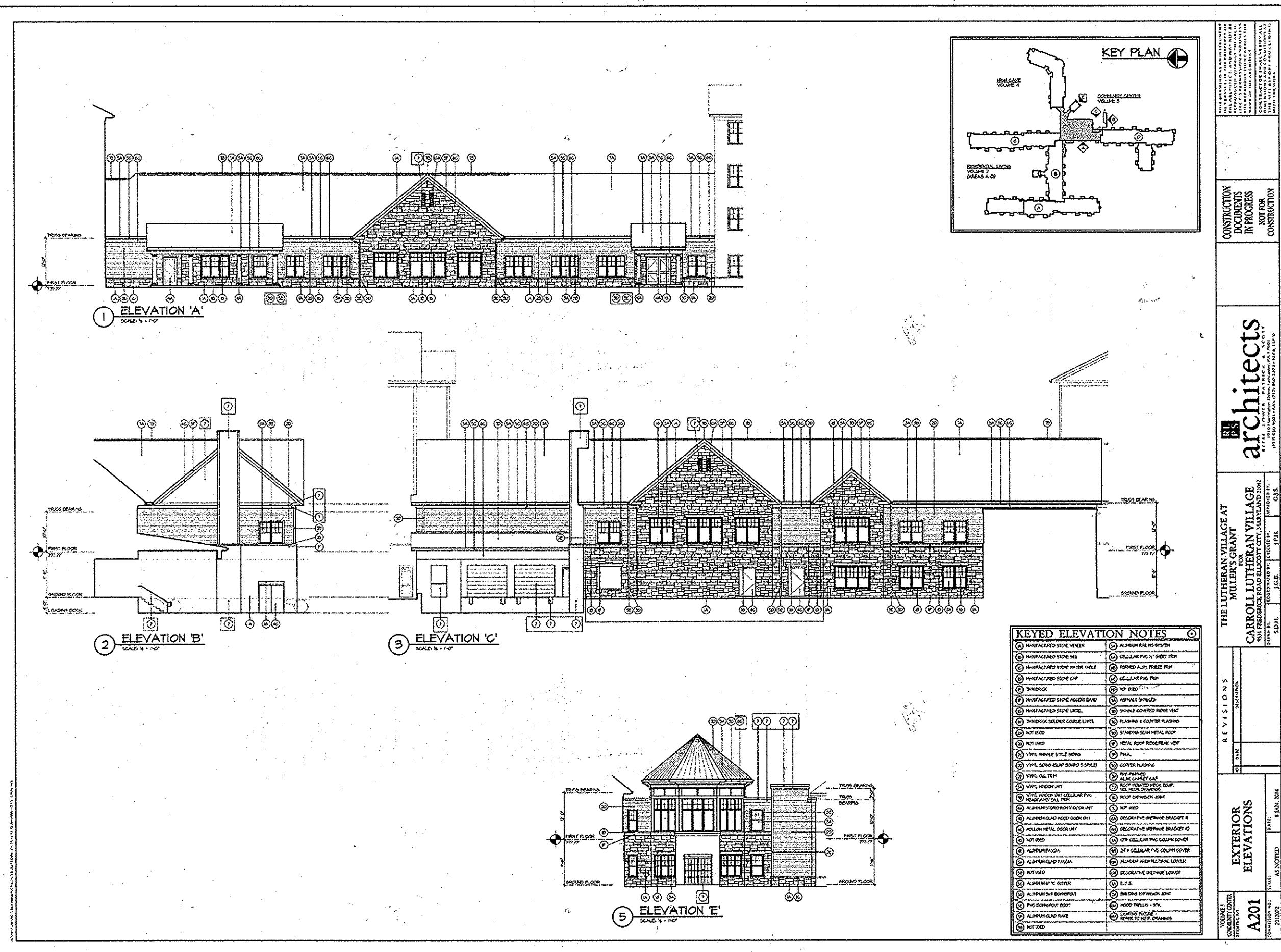
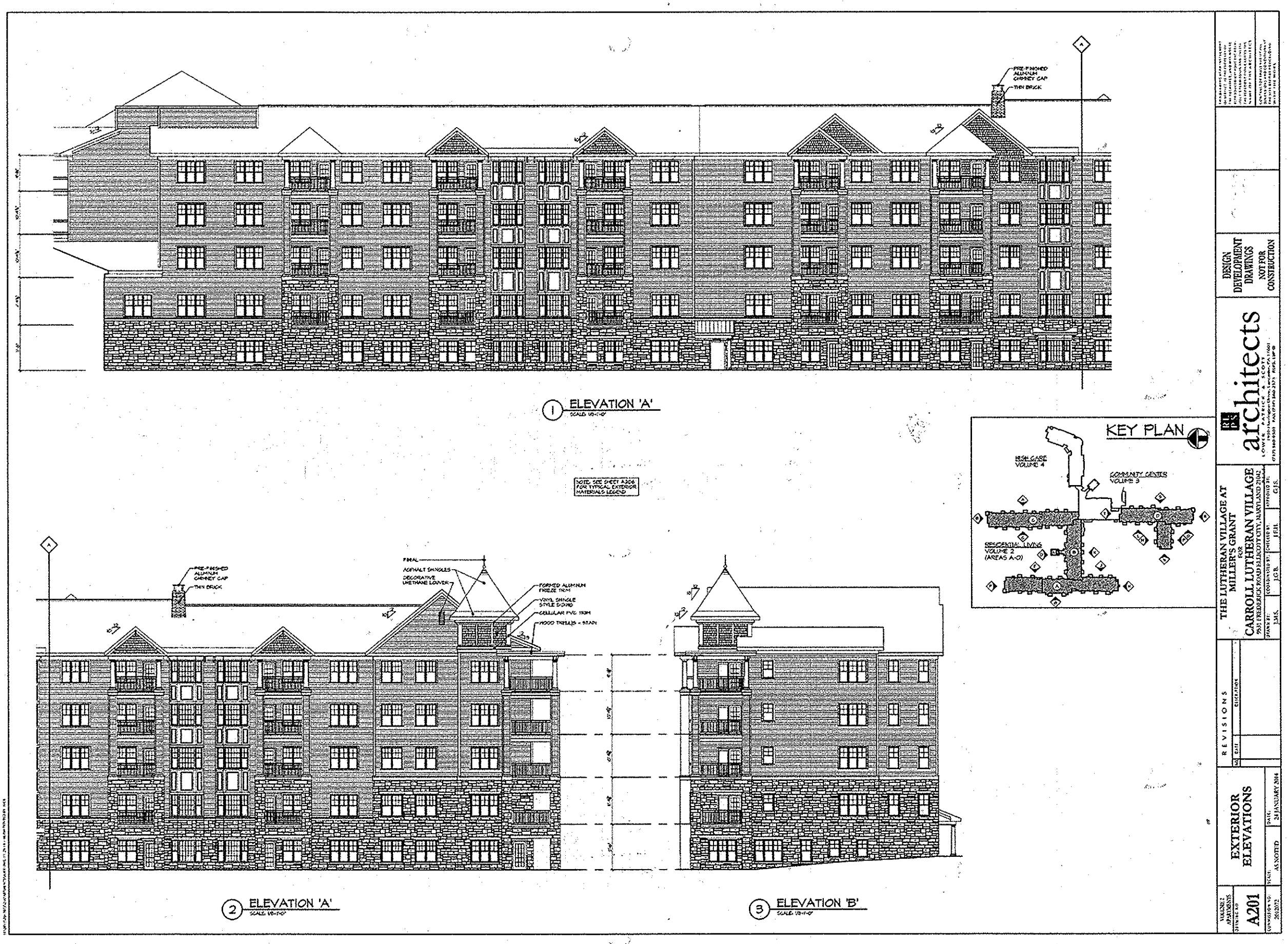


PROJECT NAME		LOT/PARCEL NO.	CENSUS TRACT
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DEED REF.	GRID NO.	ZONE	TAX MAP
L. 10578 F. 424	9	PSC	24
WATER CODE		SEWER CODE	
550 (TG 700)		F07	

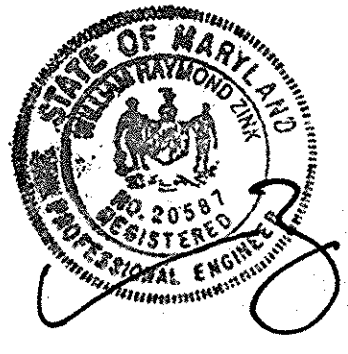
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TITLE:		
ARCHITECTURE ELEVATIONS & FOUNDATIONS "ELKCRIDGE"		
DESIGN:	SCALE:	PROJECT:
DAM	AS NOTED	0515.001.02
DRAWN:	DATE:	
DAM	APRIL 12, 2013	
CHECKED:	APPROVED:	
ENJ	WRZ	



**PROFESSIONAL CERTIFICATION**  
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APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE MARCH 7, 2013

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

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY ORLANDO, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 548-0050

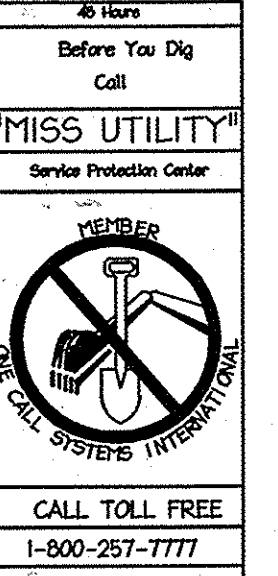
**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7172 columbia gateway drive suite 1001 - columbia, md. 21046-2960  
 410.872.8880 - fax: 301.581.0143 - tw: 410.872.8885

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SENER CODE F07	

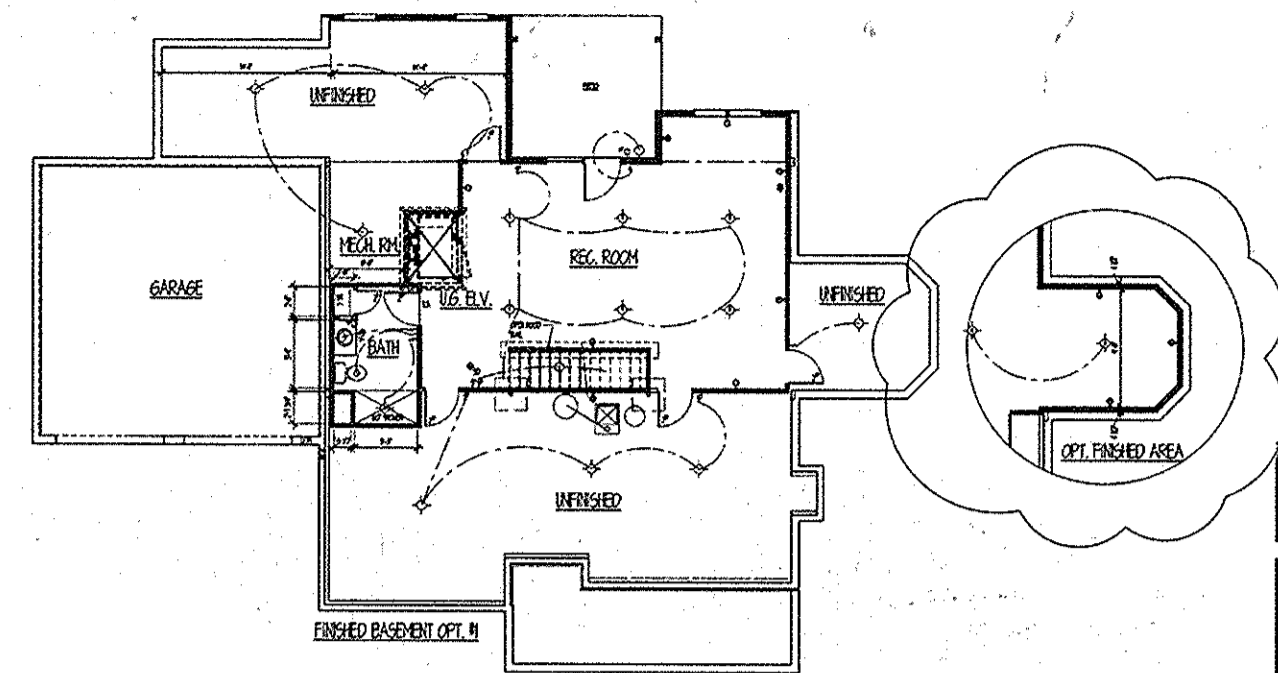
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DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>2A</b> of <b>77</b>

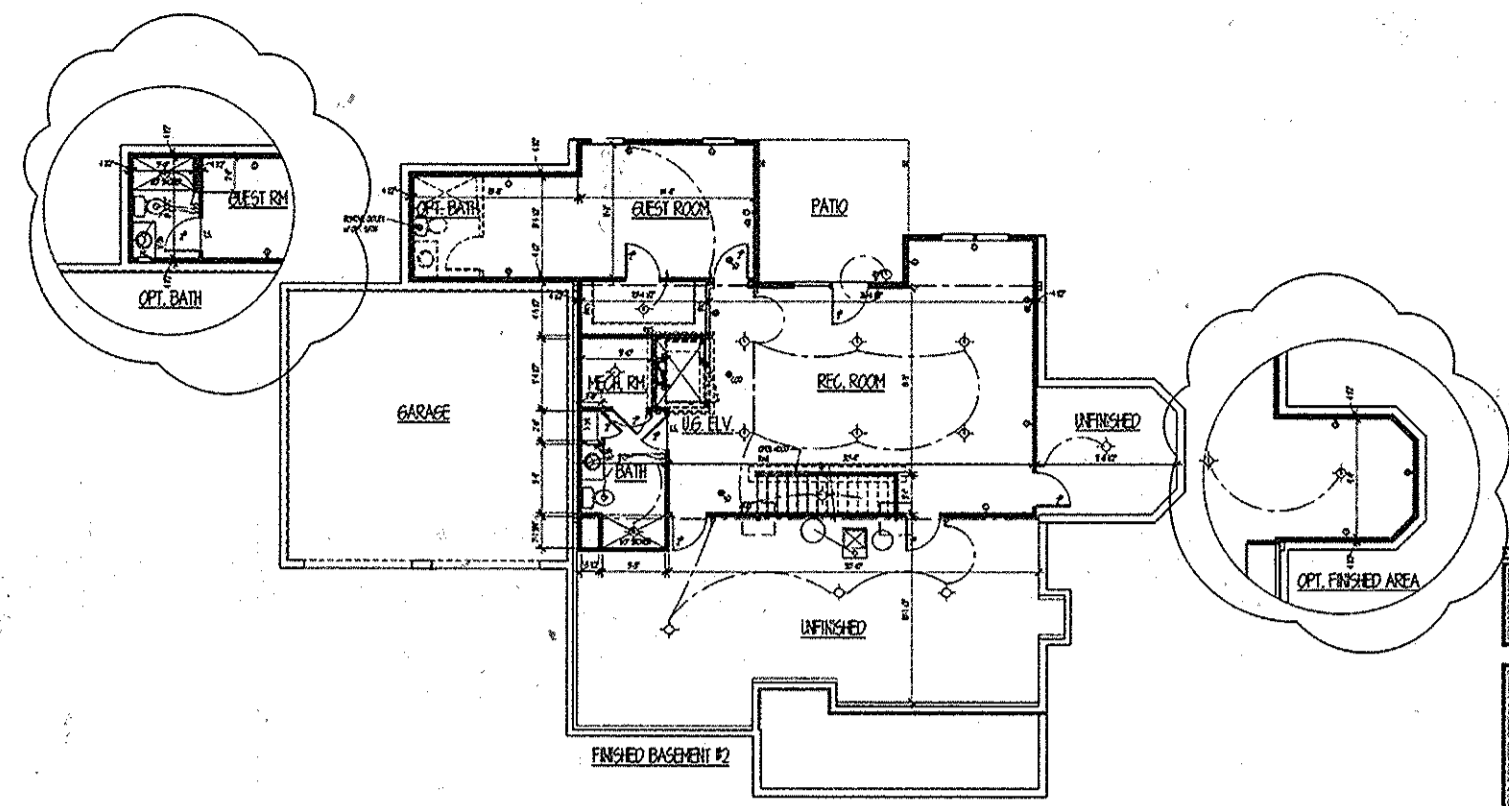


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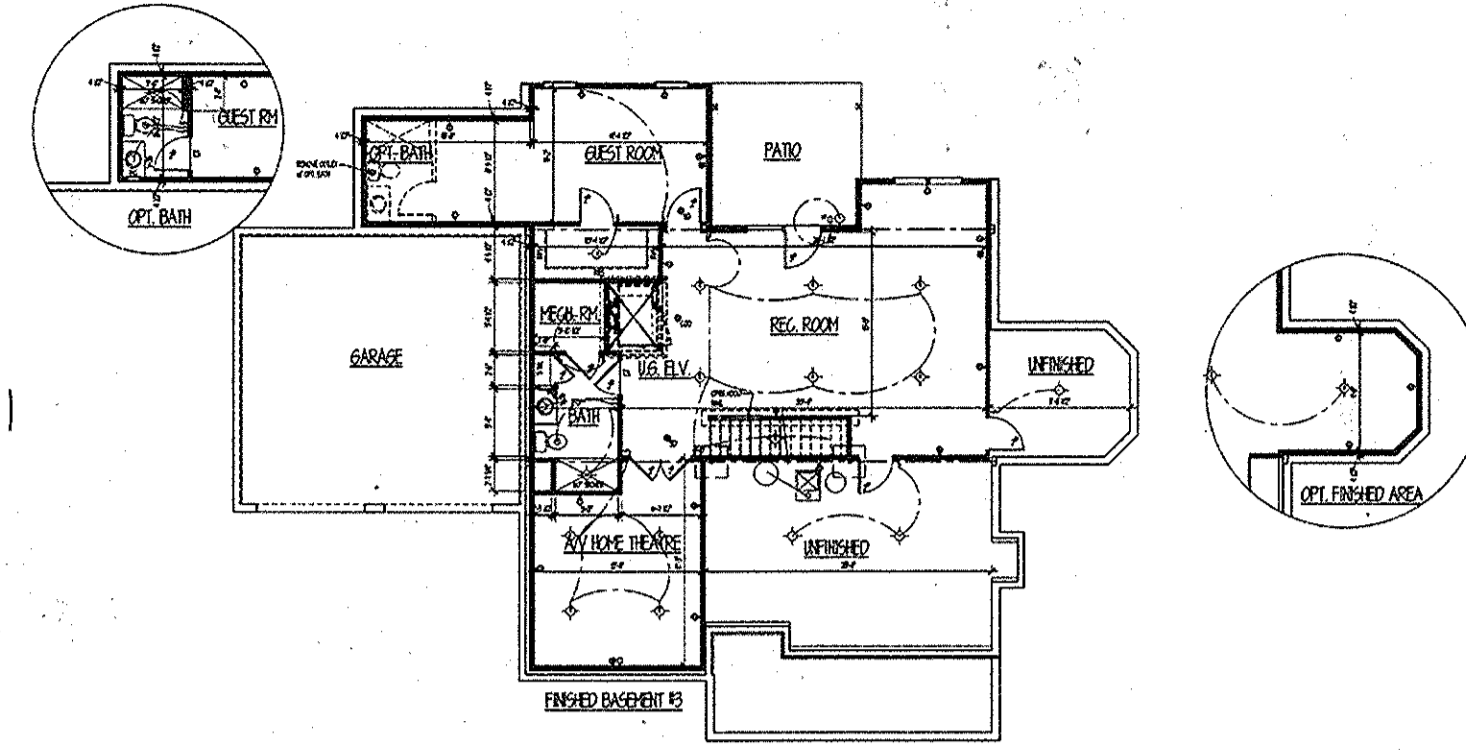
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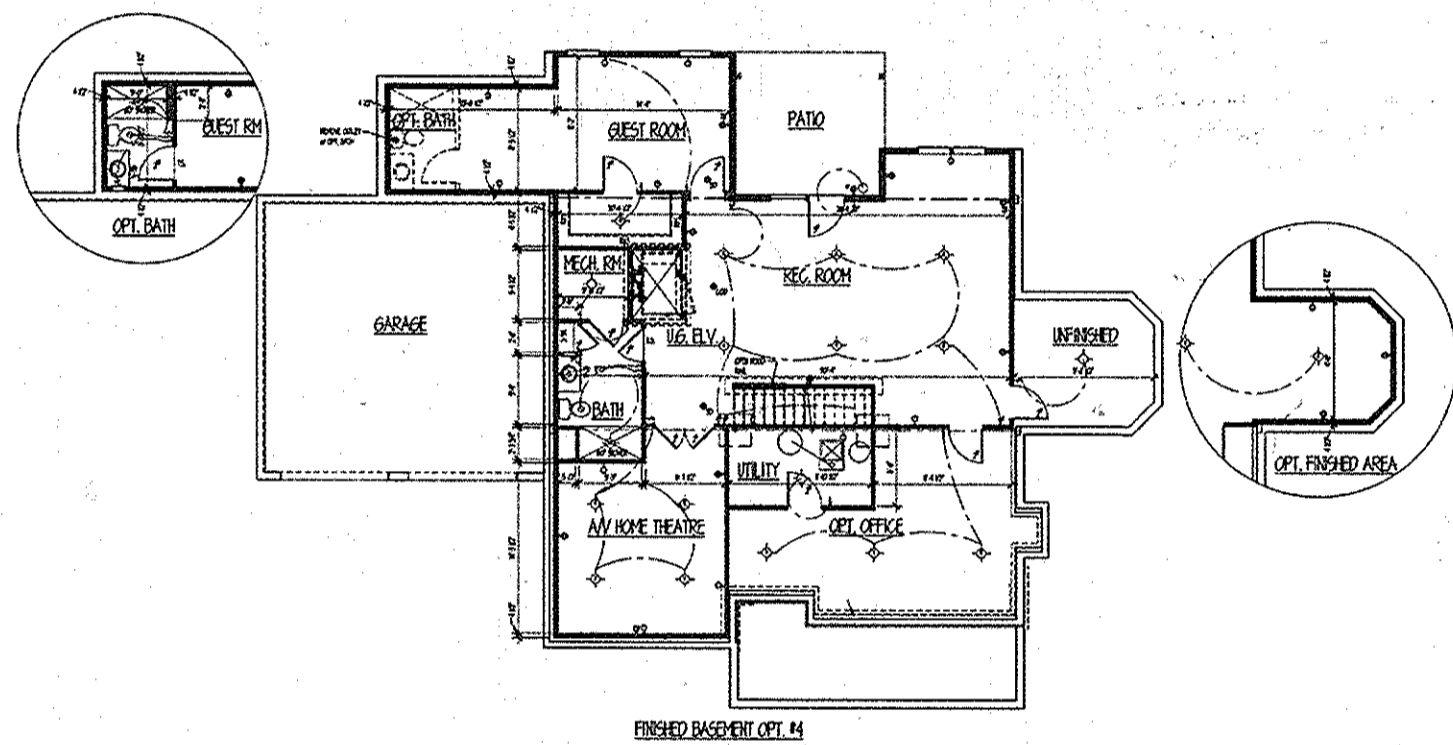
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BETHESDA, MD 20814  
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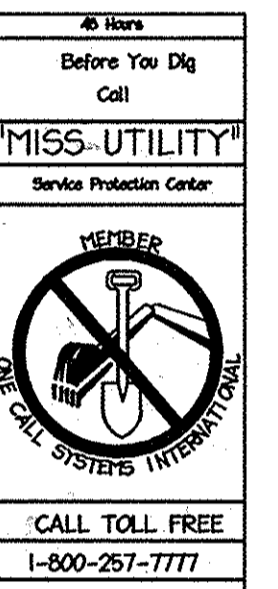
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BETHESDA, MD 20814  
FINISHED BASEMENT  
PLAN 2  
75041 A23



dw taylor  
ARCHITECT  
REGISTERED PROFESSIONAL ARCHITECT  
NO. 10100  
1111 WASHINGTON BLVD  
BETHESDA, MD 20814  
FINISHED BASEMENT  
PLAN 3  
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dw taylor  
ARCHITECT  
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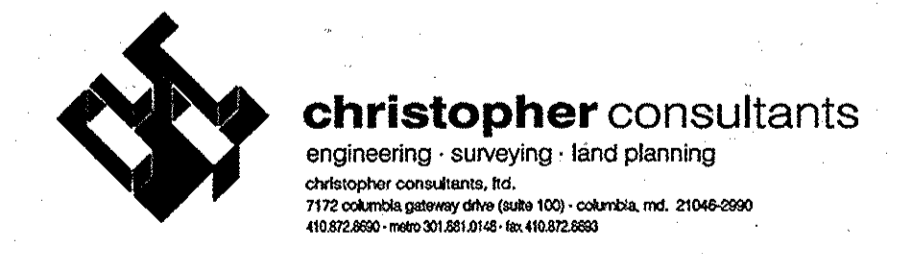


APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chad E. Smith* 10-27-15  
 Chief, Development Engineering Division NY Date  
*Robert A. D'Amico* 10-30-15  
 Chief, Division of Land Development Date  
*David M. Miller* 10-20-15  
 Director Date

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

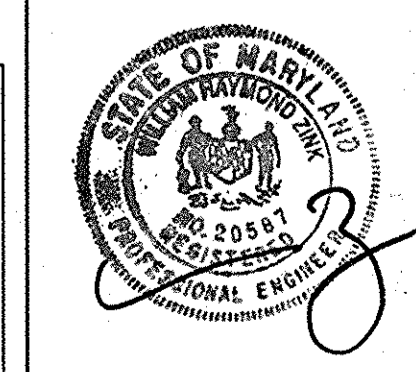
Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
**OWNER / DEVELOPER**  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY GRAMACCA, EX. VICE PRESIDENT  
 300 ST LUKE ORACLE  
 WESTMINSTER, MD 21158  
 (410) 645-0050



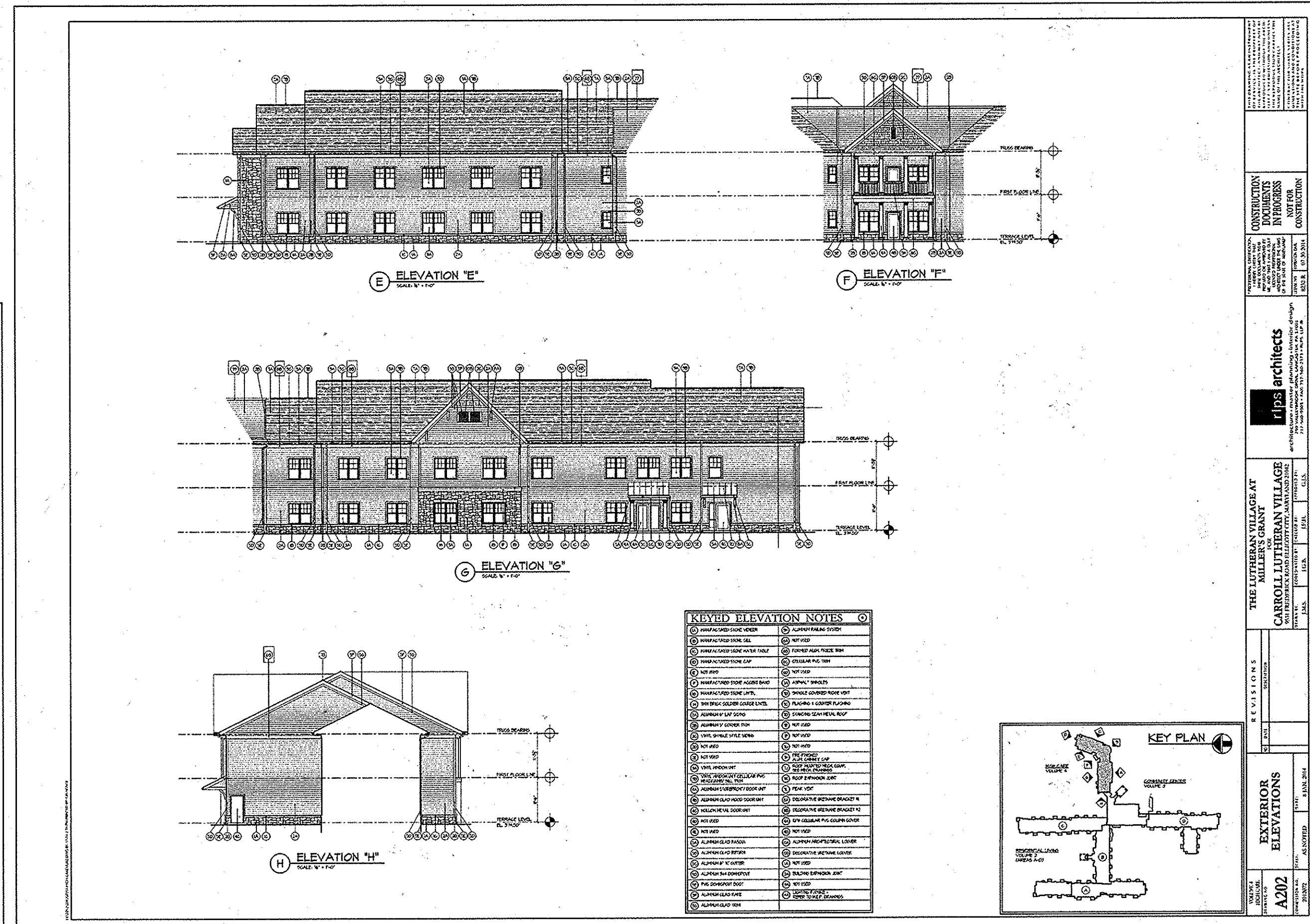
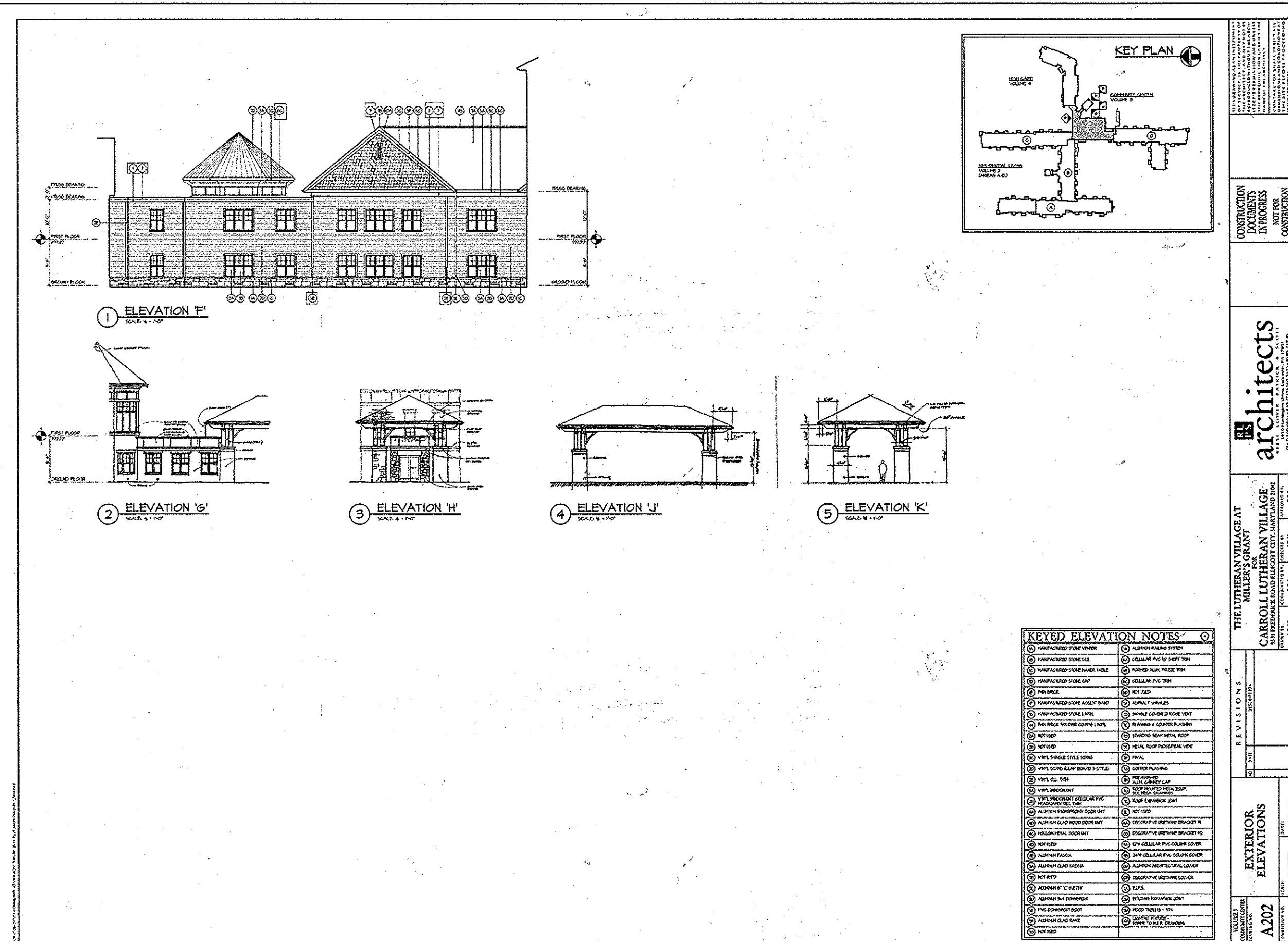
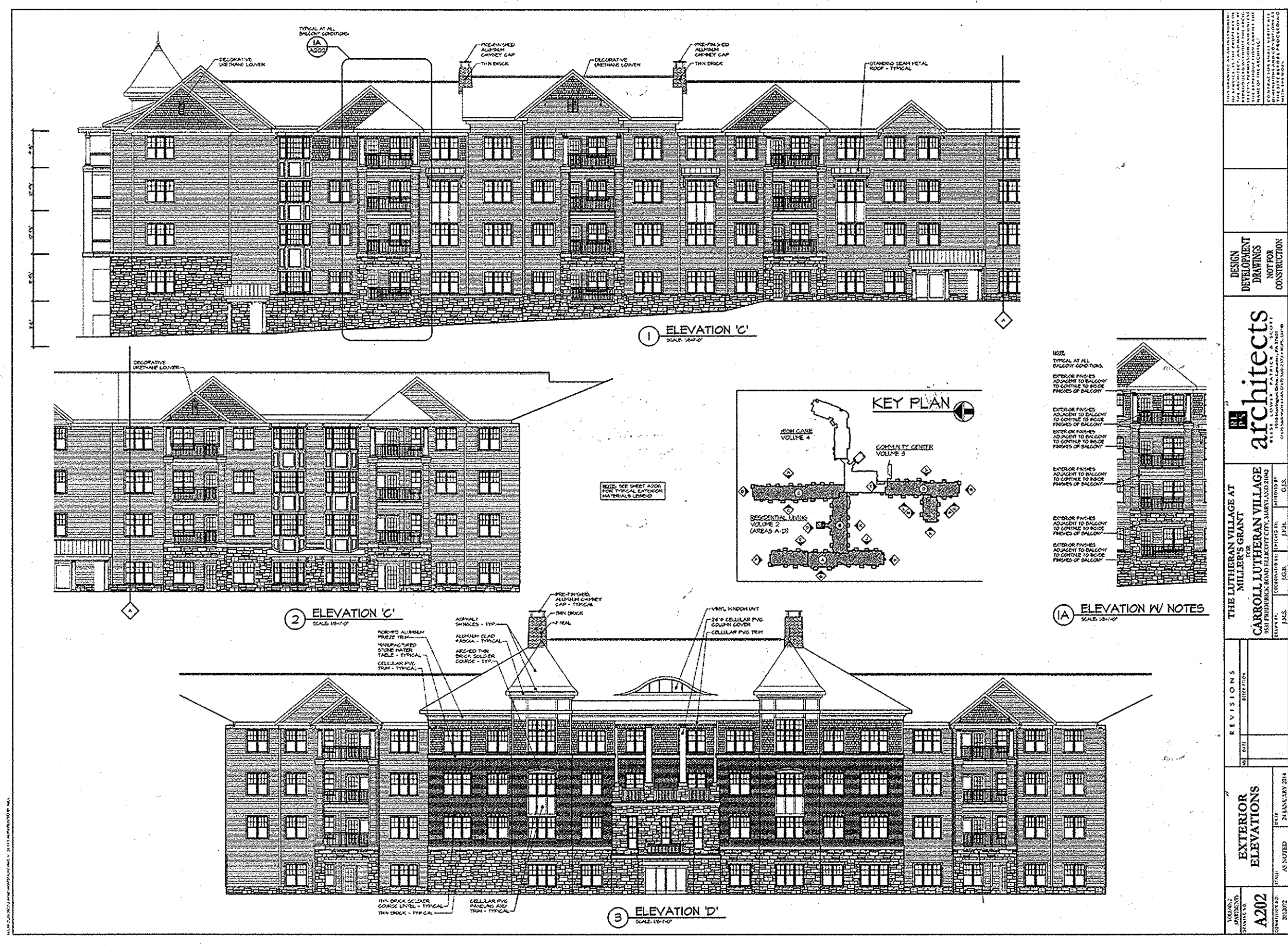
PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. ZONE 9 P5C	TAX MAP ELECTION DISTRICT 24 02
WATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>ARCHITECTURE ELEVATIONS &amp; FOUNDATIONS "ELKCRIDGE"</b>		
DESIGN: DAM	SCALE: AS NOTED	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>3 OF 77</b>

**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.



MDC-792 (SDP)



APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division  
Chief, Division of Land Development  
Director

10-27-15  
10-30-15  
10-30-15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

OWNER/DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
300 ST. LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 948-0090

**christopher consultants**  
engineering - surveying - land planning  
christopherconsultants.com  
7172 columbia gateway drive (suite 100) - columbia, md 21046-2990  
410.272.9200 - fax: 301.881.0148 - fax: 410.332.8907

**PERMIT INFORMATION CHART**

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800

DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02

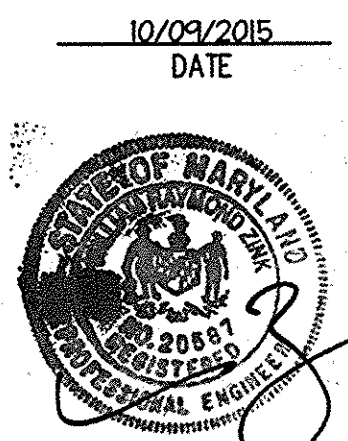
WATER CODE	SENER CODE
550 (TG 700)	F07

TITLE:  
**ARCHITECTURE ELEVATIONS -**

DESIGN: DAM	SCALE: AS NOTED	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	3A of 77
CHECKED: ENJ	APPROVED: MRZ	

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**NOTES:**

1.) HOUSE HEIGHT = 19'-10"

dw taylor  
ARCHITECT

MILLERS HOMES  
#10 ELKRIDGE

ELEVATION 10

2584 AL10

dw taylor  
ARCHITECT

MILLERS HOMES  
#11 ELKRIDGE

ELEVATION 11

2584 AL11

dw taylor  
ARCHITECT

MILLERS HOMES  
#12 ELKRIDGE

ELEVATION 12

2584 AL12

dw taylor  
ARCHITECT

MILLERS HOMES  
#13 ELKRIDGE

ELEVATION 13

2584 AL13

dw taylor  
ARCHITECT

MILLERS HOMES  
#14 ELKRIDGE

ELEVATION 14

2584 AL14

dw taylor  
ARCHITECT

MILLERS HOMES  
#15 ELKRIDGE

ELEVATION 15

2584 AL15

dw taylor  
ARCHITECT

MILLERS HOMES  
#16 ELKRIDGE

ELEVATION 16

2584 AL16

dw taylor  
ARCHITECT

MILLERS HOMES  
#17 ELKRIDGE

ELEVATION 17

2584 AL17

dw taylor  
ARCHITECT

MILLERS HOMES  
#18 ELKRIDGE

FOUNDATION PLAN

2584 AL18

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2018

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
04/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
		FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chad C. ...* Chief, Development Engineering Division  
*Neil ...* Chief, Division of Land Development  
*Walter ...* Director

Date: 10-27-15  
 Date: 10-30-15  
 Date: 10-30-15

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHIAVACCI, EX. VICE PRESIDENT  
 300 ST. LUKE ORLE  
 WESTMINSTER, MD 21158  
 (410) 848-0090



PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800		
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07			
TITLE: <b>ARCHITECTURE ELEVATIONS &amp; FOUNDATIONS "ELKRIDGE"</b>				
DESIGN: DAM	SCALE: AS NOTED	PROJECT: 05115.001.02		
DRAWN: DAM	DATE: APRIL 12, 2013			
CHECKED: ENJ	APPROVED: WRZ	<b>4 OF 77</b>		

**PROFESSIONAL  
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MDC-792 (SDP)

**1 ELEVATION E'**

**2 ELEVATION F'**

**3 ELEVATION G'**

**4 ELEVATION H'**

**KEY PLAN**

architects

THE LUTHERAN VILLAGE AT MILLER'S GRANT  
CARROLL LUTHERAN VILLAGE  
1000 MILLER'S GRANT  
WESTMINSTER, MD 21156

REVISIONS

EXTERIOR ELEVATIONS

ADJ3

**1 ELEVATION I'**

**2 ELEVATION J'**

**3 ELEVATION K'**

**4 ELEVATION L'**

**KEY PLAN**

architects

THE LUTHERAN VILLAGE AT MILLER'S GRANT  
CARROLL LUTHERAN VILLAGE  
1000 MILLER'S GRANT  
WESTMINSTER, MD 21156

REVISIONS

EXTERIOR ELEVATIONS

ADJ4

**1 ELEVATION M'**

**2 ELEVATION N'**

**3 ELEVATION O'**

**4 ELEVATION P'**

**5 ELEVATION Q'**

**KEY PLAN**

architects

THE LUTHERAN VILLAGE AT MILLER'S GRANT  
CARROLL LUTHERAN VILLAGE  
1000 MILLER'S GRANT  
WESTMINSTER, MD 21156

REVISIONS

EXTERIOR ELEVATIONS

ADJ5

**1 ELEVATION S'**

**2 TYPICAL EXTERIOR MATERIALS LEGEND**

**3 ELEVATION T'**

**4 ELEVATION U'**

**KEY PLAN**

architects

THE LUTHERAN VILLAGE AT MILLER'S GRANT  
CARROLL LUTHERAN VILLAGE  
1000 MILLER'S GRANT  
WESTMINSTER, MD 21156

REVISIONS

EXTERIOR ELEVATIONS

ADJ6

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 12-27-15  
Chief, Development Engineering Division Date

*[Signature]* 10-30-15  
Chief, Division of Land Development Date

*[Signature]* 10-30-15  
Director Date

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES

Date	No.	Revision Description
		LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY
OWNER/DEVELOPER		
LUTHERAN VILLAGE AT MILLER'S GRANT		
C/O CARROLL LUTHERAN VILLAGE		
CONTACT: ROY GRUNDEN, EX. VICE PRESIDENT		
300 ST LUKE CIRCLE		
WESTMINSTER, MD 21156		
(410) 948-3292		

**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.

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 coltsville gateway drive, suite 103, coltsville, md 21046-2390  
410.972.8899 · fax: 410.972.8898

PERMIT INFORMATION CHART				
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10678 F. 424	9	PBC	24	02
WATER CODE	SEWER CODE			
550 (TG 700)	F07			

10/09/2015  
DATE

STATE OF MARYLAND  
PLANNING BOARD OF HOWARD COUNTY

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2015

DESIGN:	SCALE:	PROJECT:
DAM	AS NOTED	05115.01.02
DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>4A</b> of <b>77</b>

**NOTES:**

1.) HOUSE HEIGHT = 19'-10"

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	9-26-16
Chief, Development Engineering Division	Date
<i>[Signature]</i>	10-5-16
Chief, Division of Land Development	Date
<i>[Signature]</i>	10-5-16
Director	Date

Date	No.	Revision Description
04/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
		FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
10/23/15	03	REVISED SITE DEVELOPMENT PLAN - REVISED
		GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
570 CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCA, EX. VICE PRESIDENT  
300 ST LINE CIRCLE  
WESTMINSTER MD 21156  
(410) 848-0080

**PROFESSIONAL CERTIFICATION**

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**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7777 coltsville greenway drive suite 100 · coltsville, md 21046-9900  
410.872.2892 · fax 410.872.2893

7/25/2016  
DATE

**PERMIT INFORMATION CHART**

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE:  
**ARCHITECTURE ELEVATIONS & FOUNDATIONS "WOODSTOCK"**

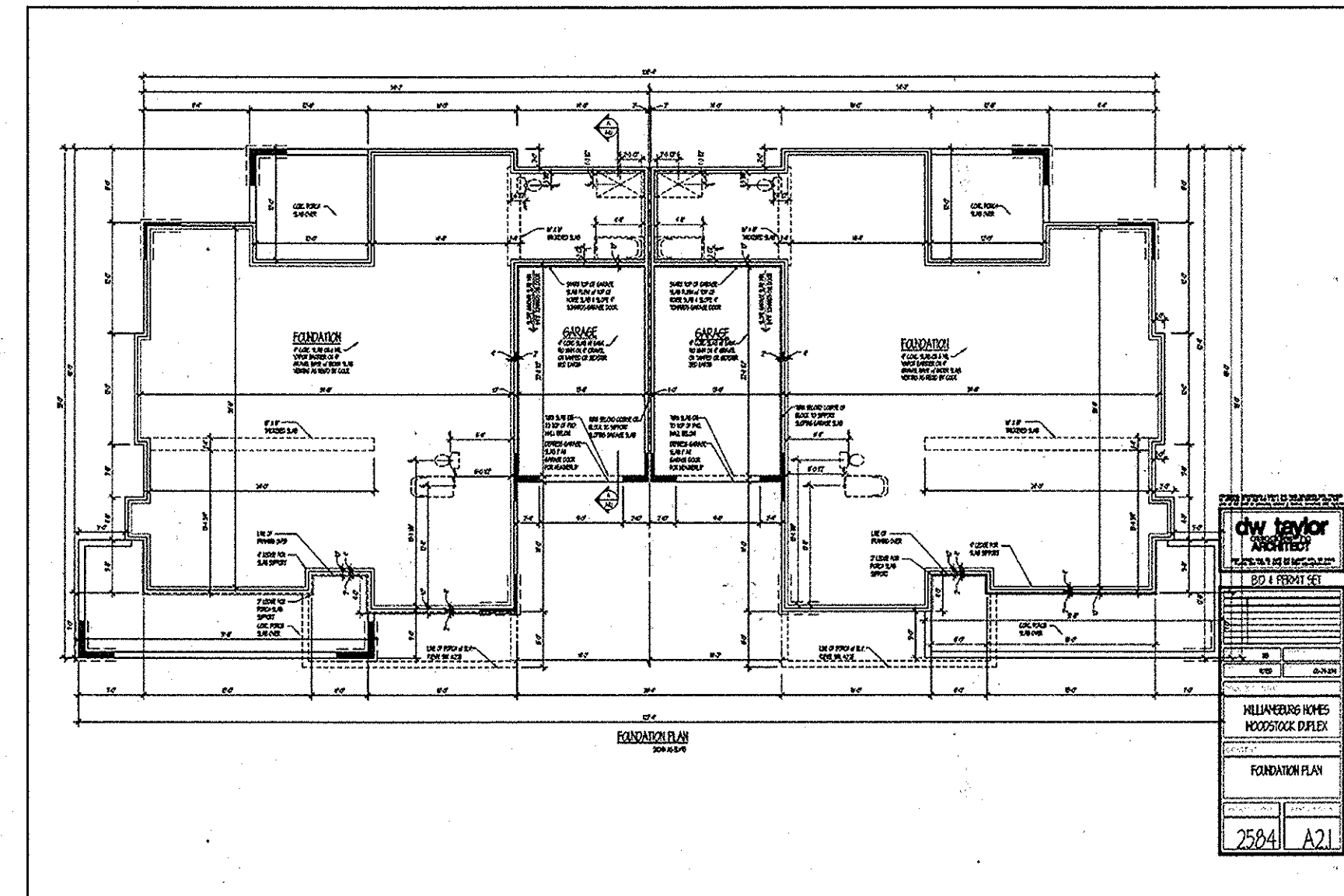
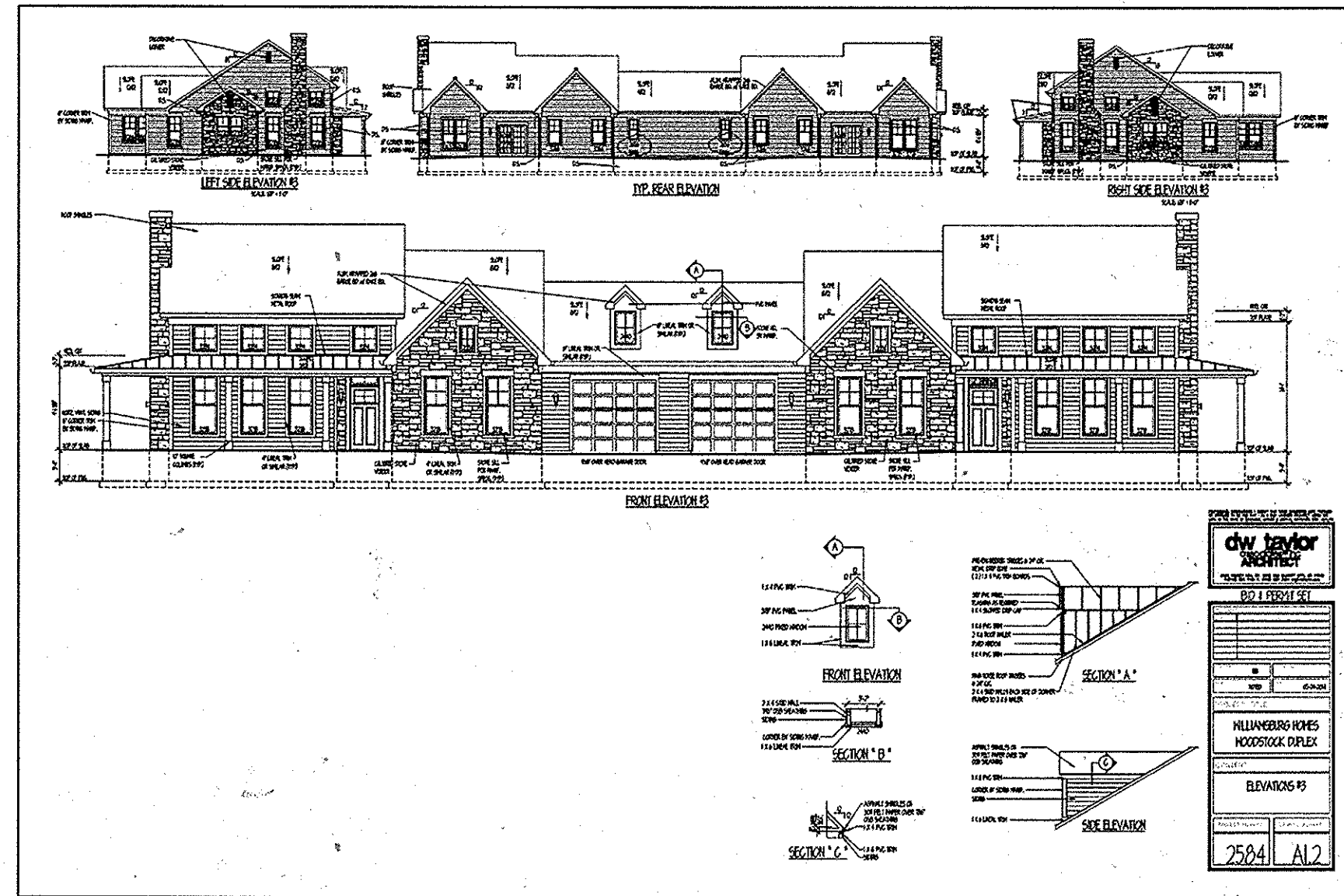
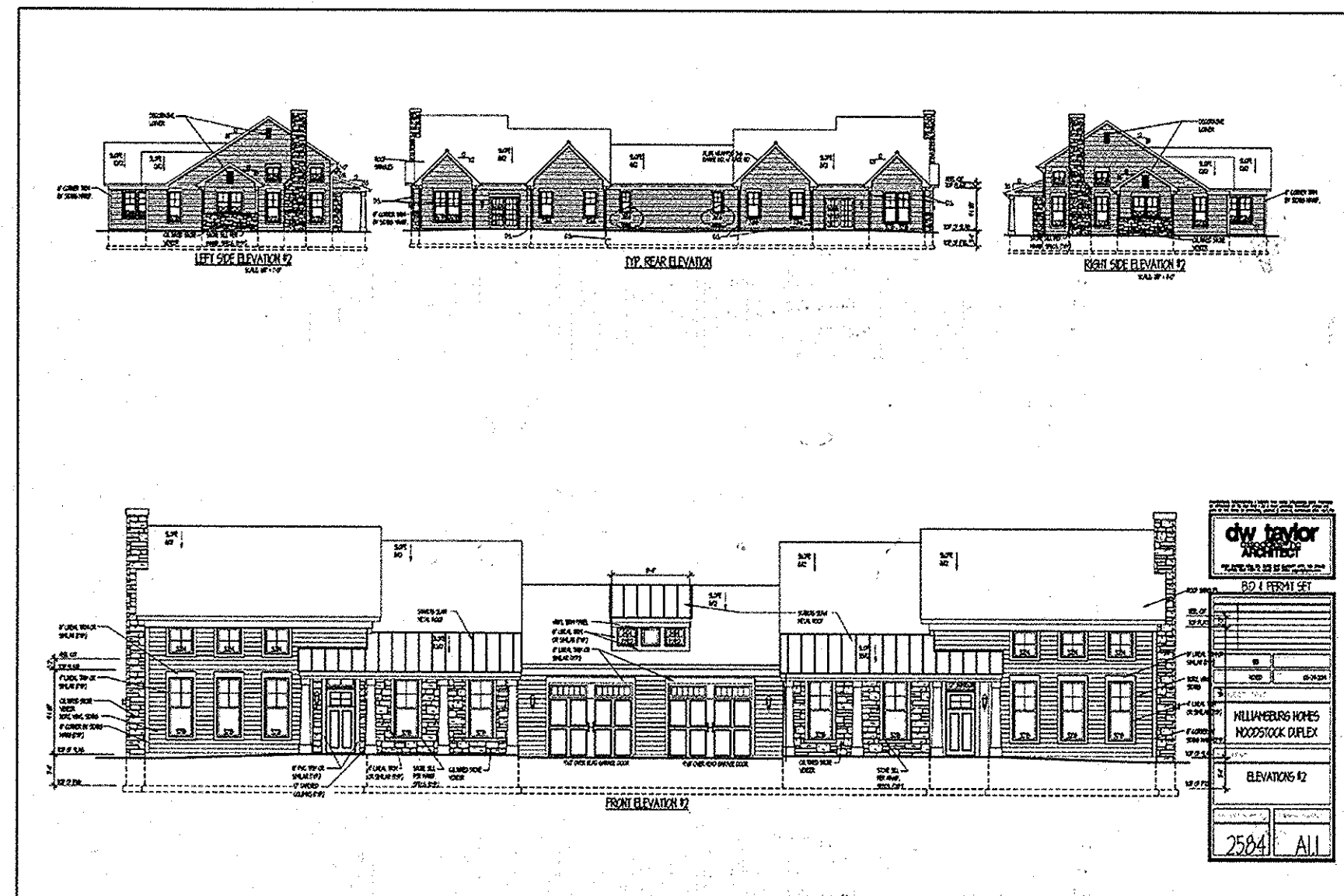
DESIGN: DAM	SCALE: AS NOTED	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>5 OF 77</b>

SDP-08-075

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013



NOTES:  
 1.) HOUSE HEIGHT = 19'-10"

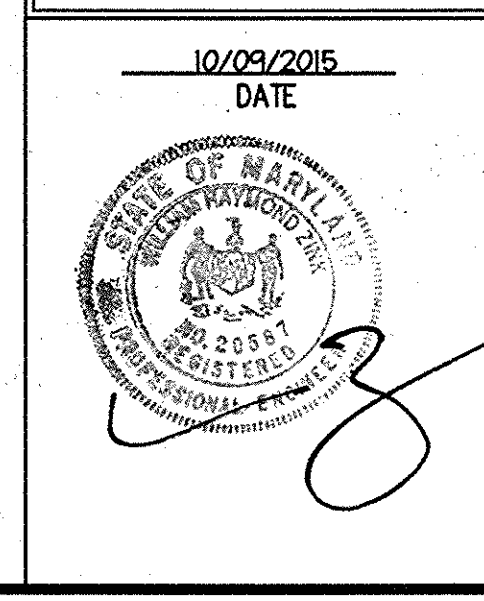


APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	10-27-15
Chief, Development Engineering Division	Date
<i>[Signature]</i>	10-30-15
Chief, Division of Land Development	Date
<i>[Signature]</i>	10-20-15
Director	Date
01/05/15	01 REVISED SITE DEVELOPMENT PLAN
09/01/15	02 REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
Date	No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
**OWNER / DEVELOPER**  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY OSWALDO, EX. VICE PRESIDENT  
 300 ST LUNE ORLE  
 WESTMINSTER, MD 21158  
 (410) 848-0090

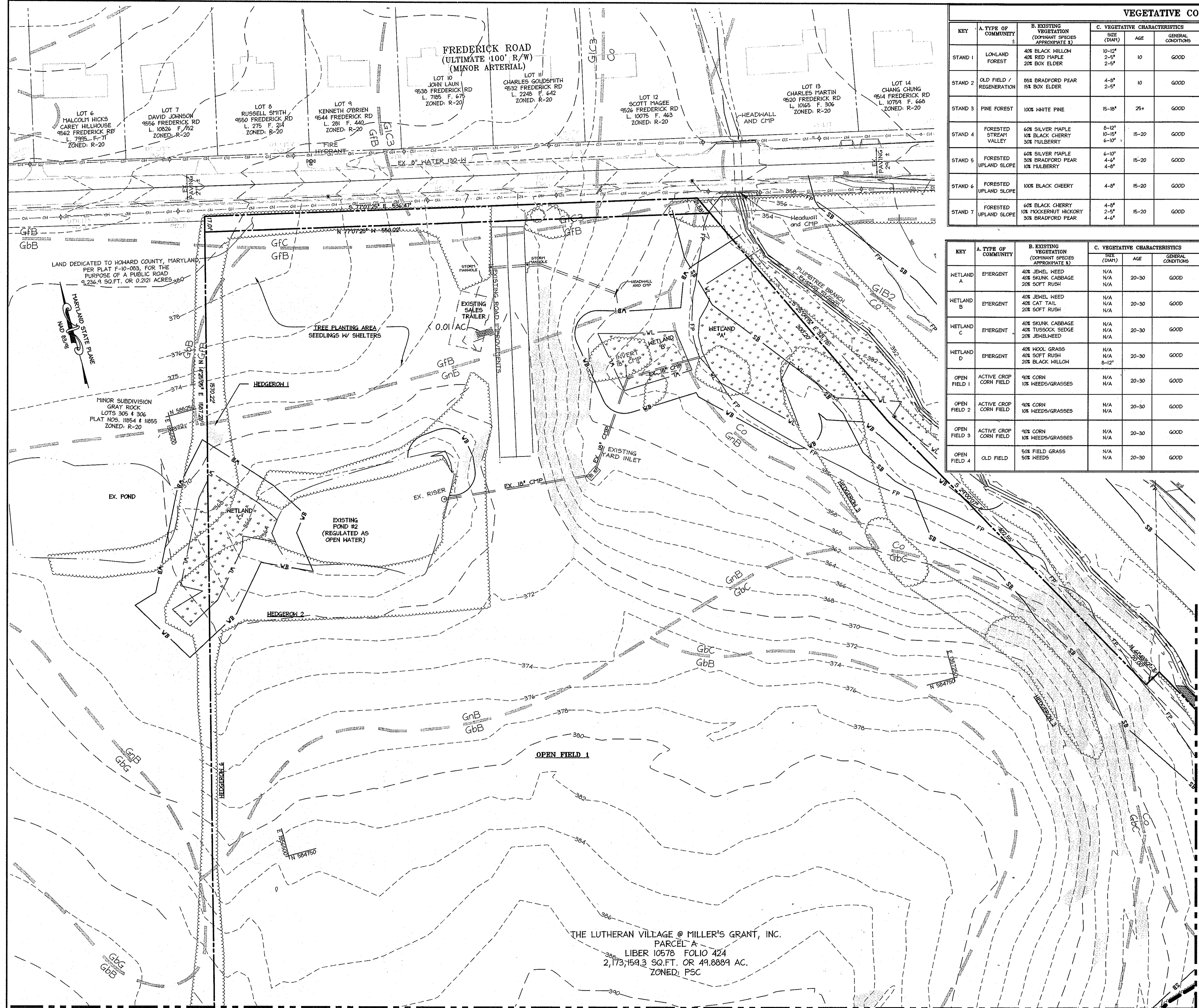
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT				LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)			SEWER CODE F07		
TITLE: <b>ARCHITECTURE ELEVATIONS &amp; FOUNDATIONS "WOODSTOCK"</b>					
DESIGN: DAM	SCALE: AS NOTED	PROJECT: 0515.001.02			
DRAWN: DAM	DATE: APRIL 12, 2013				
CHECKED: ENJ	APPROVED: MRZ	<b>6 of 77</b>			

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APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

MDC-792 (SDP)



KEY	A. TYPE OF COMMUNITY	B. EXISTING VEGETATION (DOMINANT SPECIES APPROXIMATE %)	C. VEGETATIVE CHARACTERISTICS			KEY	A. TYPE OF COMMUNITY	B. EXISTING VEGETATION (DOMINANT SPECIES APPROXIMATE %)	C. VEGETATIVE CHARACTERISTICS		
			SIZE (DIAM)	AGE	GENERAL CONDITIONS				SIZE (DIAM)	AGE	GENERAL CONDITIONS
STAND 1	LOWLAND FOREST	40% BLACK HILLON 40% RED MAPLE 20% BOX ELDER	10-12" 2-5" 2-5"	10	GOOD	HEDGEROW 1	HEDGEROW	50% SILVER MAPLE 50% BLACK CHERRY	8-12" 4-8"	15-20	GOOD
STAND 2	OLD FIELD / REGENERATION	85% BRADFORD PEAR 15% BOX ELDER	4-8" 2-5"	10	GOOD	HEDGEROW 2	HEDGEROW	85% SILVER MAPLE 15% BLACK HILLON	12-18" 12-15"	15-20	GOOD
STAND 3	PINE FOREST	100% WHITE PINE	15-18"	25+	GOOD	HEDGEROW 3	HEDGEROW	60% SILVER MAPLE 10% BLACK HILLON 30% MULBERRY	8-12" 6-10" 4-8"	15-20	GOOD
STAND 4	FORESTED STREAM VALLEY	60% SILVER MAPLE 10% BLACK CHERRY 30% MULBERRY	8-12" 10-15" 6-10"	15-20	GOOD	HEDGEROW 4	HEDGEROW	70% BLACK CHERRY 30% MULBERRY	6-10" 4-8"	15-20	GOOD
STAND 5	FORESTED UPLAND SLOPE	60% SILVER MAPLE 30% BRADFORD PEAR 10% MULBERRY	6-10" 4-6" 4-8"	15-20	GOOD	HEDGEROW 5	HEDGEROW	70% BLACK CHERRY 30% MULBERRY	6-10" 4-8"	15-20	GOOD
STAND 6	FORESTED UPLAND SLOPE	100% BLACK CHERRY	4-8"	15-20	GOOD	HEDGEROW 6	HEDGEROW	60% BLACK CHERRY 10% MULBERRY 30% BRADFORD PEAR	4-8" 2-5" 4-6"	15-20	GOOD
STAND 7	FORESTED UPLAND SLOPE	60% BLACK CHERRY 10% MOCKERNUT HICKORY 30% BRADFORD PEAR	4-8" 2-5" 4-6"	15-20	GOOD	HEDGEROW 7	HEDGEROW	50% RED OAK 30% RED MAPLE 10% BLACK CHERRY 10% BLACK CHERRY	8-12" 4-6" 8-12" 4-6"	15-20	GOOD

KEY	A. TYPE OF COMMUNITY	B. EXISTING VEGETATION (DOMINANT SPECIES APPROXIMATE %)	C. VEGETATIVE CHARACTERISTICS		
			SIZE (DIAM)	AGE	GENERAL CONDITIONS
WETLAND A	EMERGENT	40% JEWEL WEED 40% SKUNK CABBAGE 20% SOFT RUSH	N/A	20-30	GOOD
WETLAND B	EMERGENT	40% JEWEL WEED 40% TUSsock SEDGE 20% JEWELWEED	N/A	20-30	GOOD
WETLAND C	EMERGENT	40% SKUNK CABBAGE 40% TUSsock SEDGE 20% JEWELWEED	N/A	20-30	GOOD
WETLAND D	EMERGENT	40% WOOL GRASS 40% SOFT RUSH 20% BLACK WILLOW	N/A	20-30	GOOD
OPEN FIELD 1	ACTIVE CROP CORN FIELD	90% CORN 10% WEEDS/GRASSES	N/A	20-30	GOOD
OPEN FIELD 2	ACTIVE CROP CORN FIELD	90% CORN 10% WEEDS/GRASSES	N/A	20-30	GOOD
OPEN FIELD 3	ACTIVE CROP CORN FIELD	90% CORN 10% WEEDS/GRASSES	N/A	20-30	GOOD
OPEN FIELD 4	OLD FIELD	50% FIELD GRASS 50% WEEDS	N/A	20-30	GOOD

- LEGEND**
- 250 --- EXISTING INTER CONTOUR
  - 250 --- EXISTING INDEX CONTOUR
  - --- PROPERTY LINE
  - --- ADJACENT PROPERTY LINE
  - --- EXISTING WATER
  - --- EXISTING SANITARY SEWER
  - --- EXISTING STORMDRAIN
  - --- FENCE
  - --- STREAM CENTERLINE
  - --- EXISTING TREELINE
  - --- SOILS LINE
  - --- FLOODPLAIN
  - --- FOREST STAND BOUNDARY
  - --- STREAM BUFFER
  - --- WETLAND BUFFER
  - --- WETLANDS
  - --- STEEP SLOPES 25% AND GREATER
  - --- STEEP SLOPES 15% TO 25%

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE: MARCH 7, 2013

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

Signature: *William R. Zink*  
DATE: 4/12/13  
WILLIAM R. ZINK, P.E.  
MID LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *William R. Zink* Date: 4/26/13  
 Chief, Division of Land Development: *Mark P. Goggin* Date: 4/26/13  
 Director: *Mark P. Goggin* Date: 4/26/13

Date: No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVAZA, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
NEWMARKET, MD 21158  
(410) 946-0200

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, inc.  
7172 columbiana gateway drive suite 100 | columbia, md 21046-9999  
410.326.9600 | www.christopherconsultants.com

PERMIT INFORMATION CHART

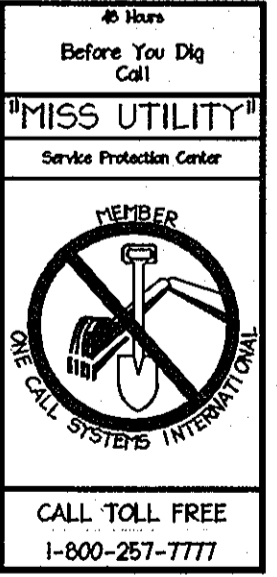
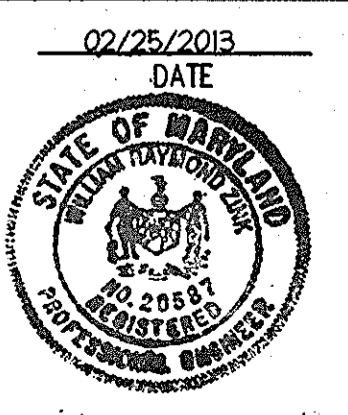
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. ZONE 9 PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07	ELECTION DISTRICT 02

TITLE: **EXISTING CONDITIONS & SOILS MAP PLAN**

DESIGN: DAM SCALE: 1" = 50'  
 DRAWN: DAM DATE: APRIL 12, 2013  
 CHECKED: ENJ APPROVED: WRZ

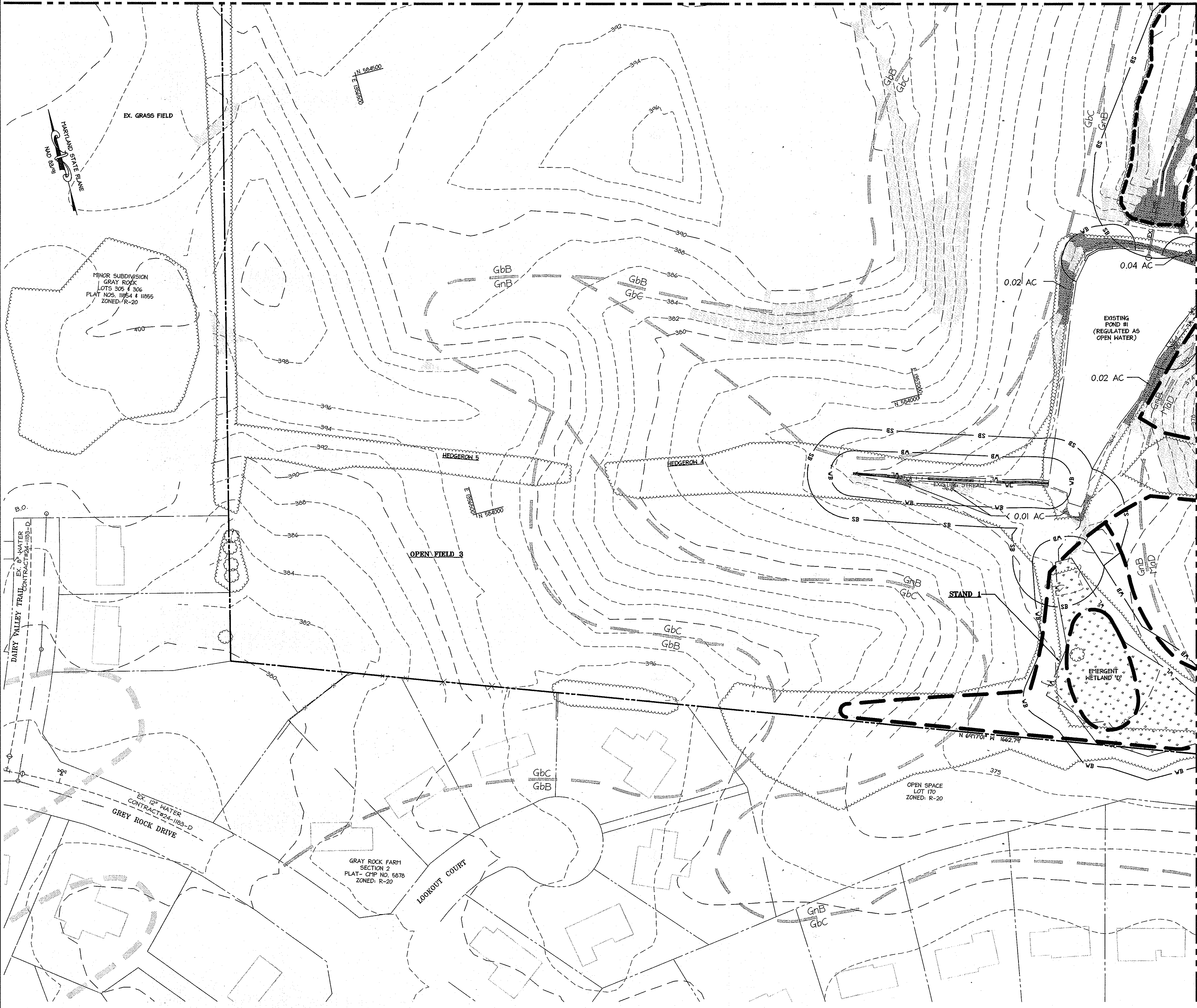
MATCHLINE - SEE SHEET 8 FOR CONTINUATION

MATCHLINE - SEE SHEET 9 FOR CONTINUATION



MDC-192 (SDP)

MATCHLINE - SEE SHEET 7 FOR CONTINUATION



**LEGEND**

- - - - - EXISTING INTER CONTOUR
- - - - - EXISTING INDEX CONTOUR
- — — — — PROPERTY LINE
- — — — — ADJACENT PROPERTY LINE
- — — — — EXISTING WATER
- — — — — EXISTING SANITARY SEWER
- — — — — EX. 24" RCP
- — — — — EXISTING STORMDRAIN
- — — — — FENCE
- — — — — STREAM CENTERLINE
- — — — — EXISTING TREELINE
- GIB2 Co SOILS LINE
- FP FLOODPLAIN
- — — — — FOREST STAND BOUNDARY
- SB STREAM BUFFER
- WB WETLAND BUFFER
- WETLANDS
- STEEP SLOPES 25% AND GREATER
- STEEP SLOPES 15% TO 25%

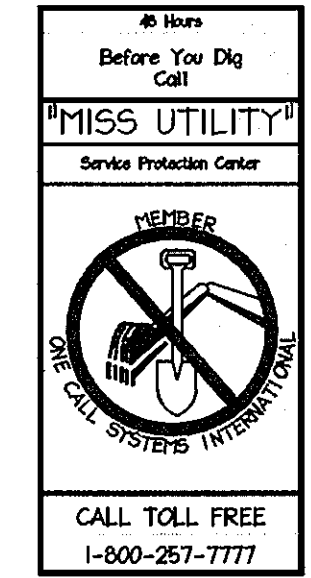
MATCHLINE - SEE SHEET 9 FOR CONTINUATION

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

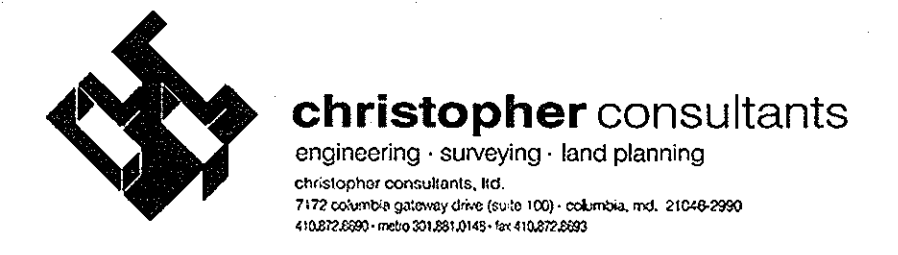
**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
SIGNATURE OF ENGINEER: *[Signature]* DATE: 4/12/13  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20687  
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i> Chief, Development Engineering Division	4/26/13 Date
<i>[Signature]</i> Chief, Division of Land Development	4/26/13 Date
<i>[Signature]</i> Director	4/26/13 Date

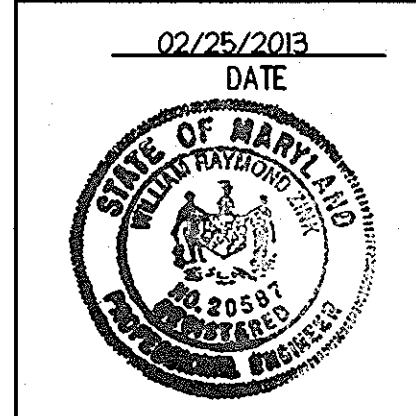


Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CRAMER, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 945-0260



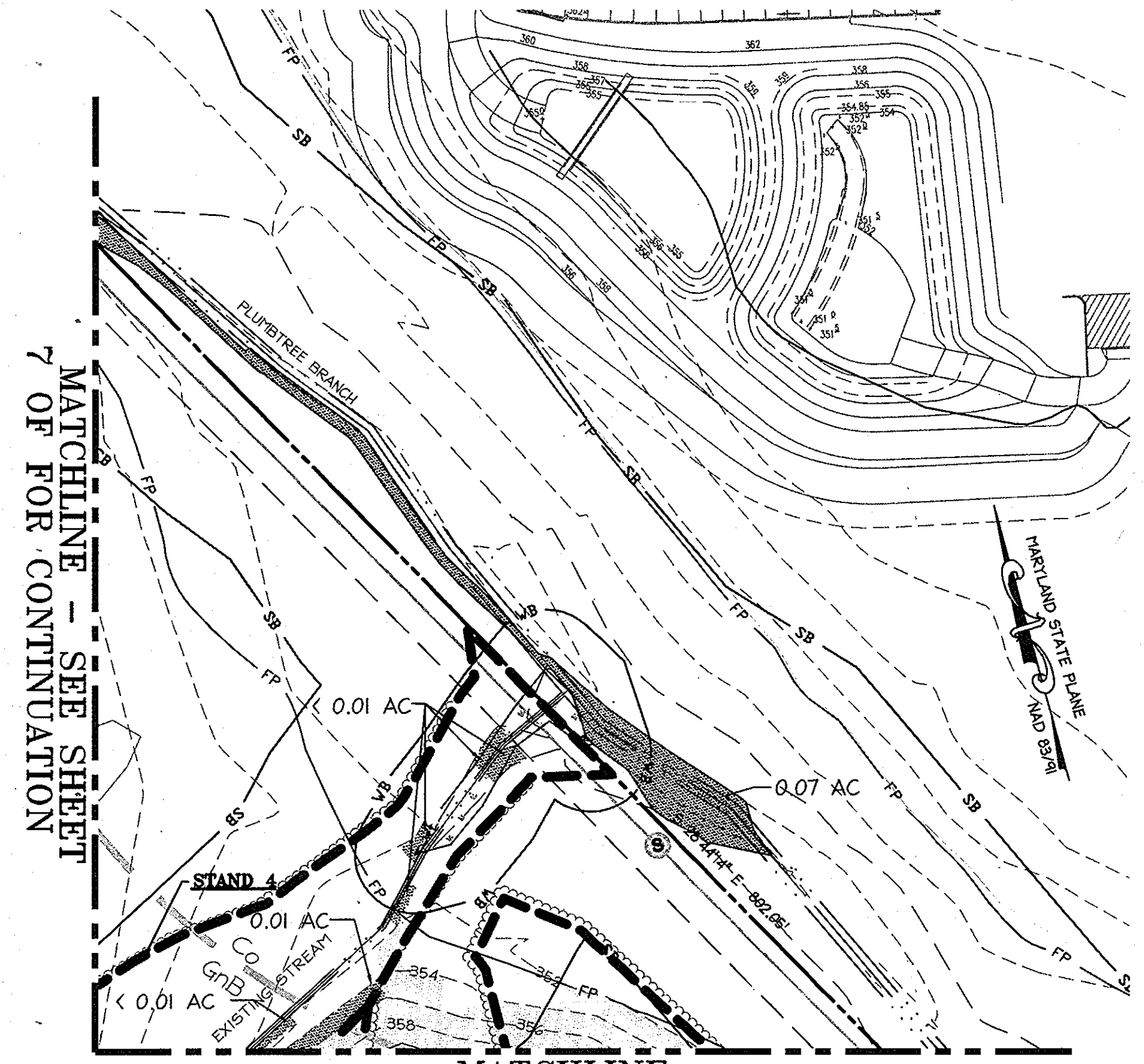
PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	SEWER CODE F07
TITLE: <b>EXISTING CONDITIONS &amp; SOILS MAP PLAN</b>		
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	8 of 77
CHECKED: ENJ	APPROVED: WRZ	



MDC-792 (SDP)

MATCHLINE - SEE THIS SHEET FOR CONTINUATION



MATCHLINE - SEE SHEET 7 OF FOR CONTINUATION

MATCHLINE  
SEE THIS SHEET FOR CONTINUATION

MATCHLINE - SEE SHEET 8 FOR CONTINUATION

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

**SOILS**

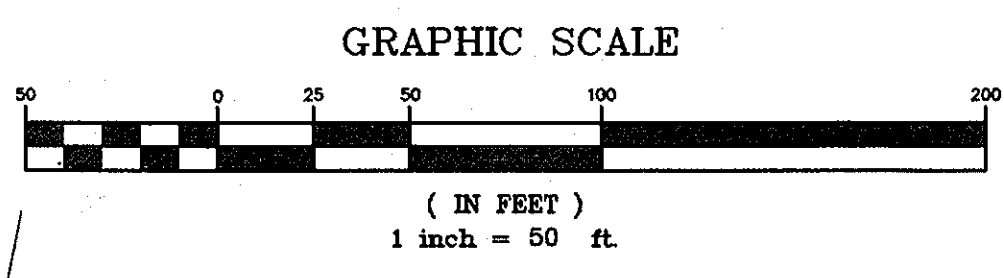
Map Unit Symbol	Revised Unit Symbol	Name	Slope	K-factor	Hydric
Co	Co	Cadonut Silt Loam	--	0.49	Yes
Cs	Cs	Comus Silt Loam	--	-	No
GIB2	(GgB)	Glenelq Loam	3-8%, Mod-Eroded	0.20	No
GIC2	(GgC)	Glenelq Loam	8-15%, Mod-Eroded	0.20	No
GIC3	(GgC)	Glenelq Loam	8-15%, Severely-Eroded	0.20	No
GrB2	(GrB)	Glenville Silt Loam	3-8%, Mod-Eroded	0.37	No
MIB2	(MaB)	Manor Loam	3-8%, Mod-Eroded	0.24	No
MIC2	(MaC)	Manor Loam	8-15%, Mod-Eroded	0.24	No
MIC3	(MaC)	Manor Loam	8-15%, Severely-Eroded	0.24	No
MID3	(MaD)	Manor Loam	15-25%, Severely-Eroded	0.24	No

**PROFESSIONAL CERTIFICATION**  
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Signature: *William R. Zink, P.E.* DATE: 4/24/13  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014

**LEGEND**

	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING STORMDRAIN
	FENCE
	STREAM CENTERLINE
	EXISTING TREELINE
	SOILS LINE
	FLOODPLAIN
	FOREST STAND BOUNDARY
	STREAM BUFFER
	WETLAND BUFFER
	WETLANDS
	STEEP SLOPES 25% AND GREATER
	STEEP SLOPES 15% TO 25%



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *NY* DATE: 4/24/13  
Chief, Division of Land Development: *NY* DATE: 4/24/13  
Director: *NY* DATE: 4/24/13

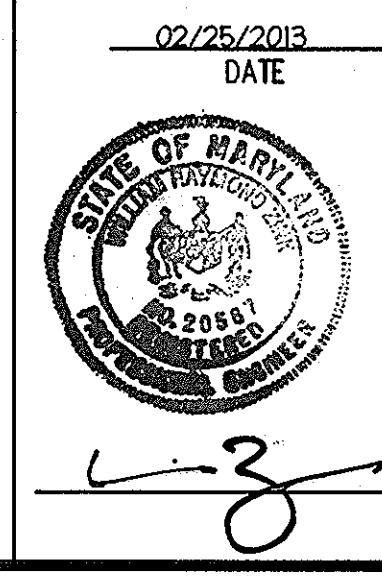
Date: No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCA, EX. VICE PRESIDENT  
300 ST. LINE DRIVE  
WESTMINSTER, MD 21158  
(410) 848-0090



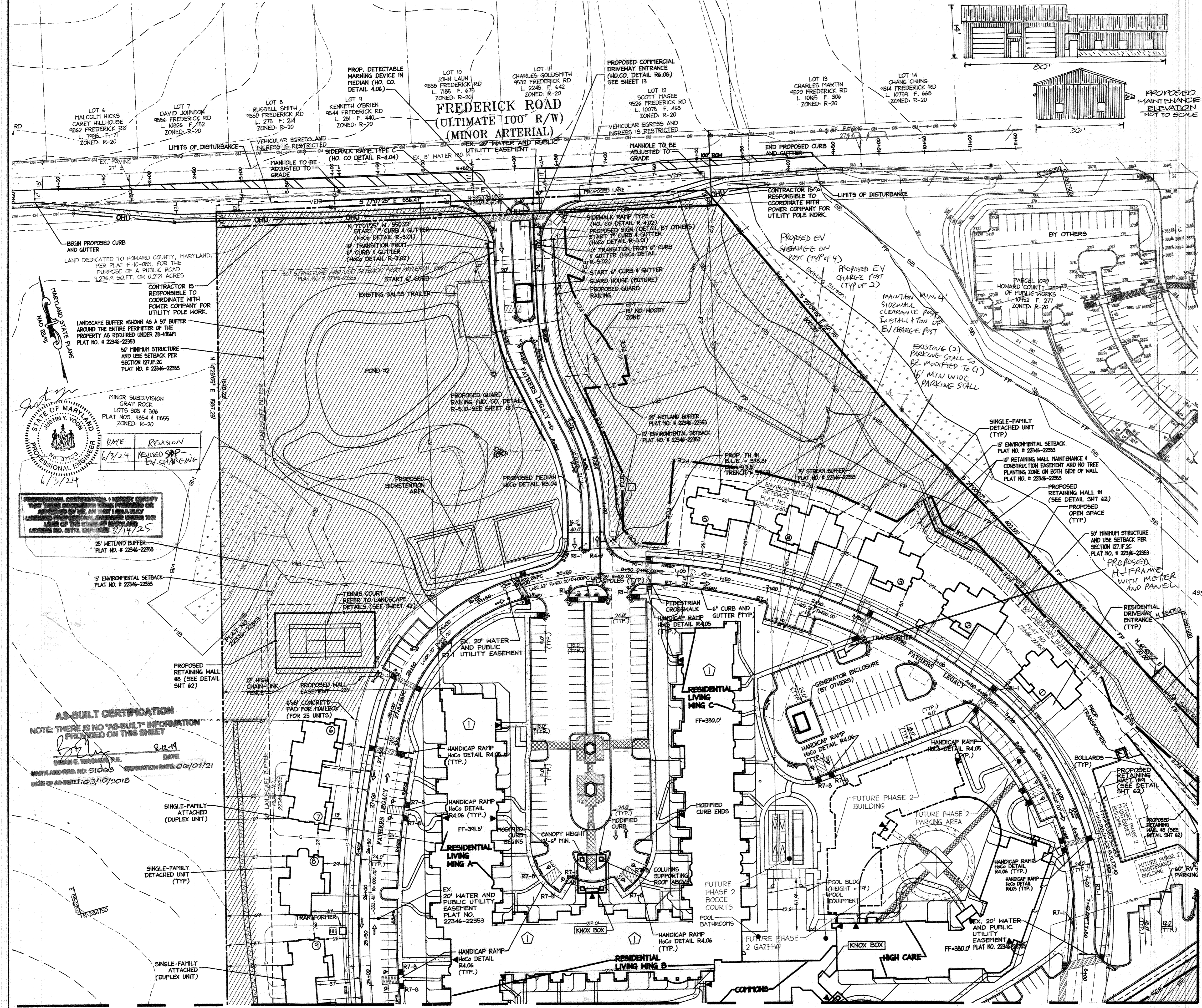
**PERMIT INFORMATION CHART**

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>EXISTING CONDITIONS &amp; SOILS MAP PLAN</b>		
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>9 of 77</b>



MDC-792 (SDP)

**PROFESSIONAL CERTIFICATION**  
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 SIGNATURE OF ENGINEER: *William R. Zink, P.E.* DATE: 8/6/16  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 01-26-2016



**LUMINAIRE SCHEDULE**

Symbol	Qty	Arrangement	Label	Description	Lumens	Height
□	9	BACK-TO-BACK	SB	CLM-AM-400-MH-MT-AS-FG	36000	30'
□	80	SINGLE	SA	CLM-AM-400-MH-MT-AS-FG	36000	30'
□	4	BACK-TO-BACK	SB	CLM-XX-400-MH-XX-3F-FG-XXX	36000	30'
□	8	SINGLE	SC	CLM-XX-400-MH-XX-4F-FG-XXX	36000	30'

LIGHTING INFORMATION PROVIDED BY COOPER LIGHTING CFC

**LEGEND**

EXISTING CONTOURS: 372-  
 EXISTING STORM DRAIN: EX. ST. DR.  
 EXISTING SANITARY SEWER: EX. S.S.  
 EXISTING WATER: EX. W. WATER  
 EXISTING FENCE: X  
 WETLANDS: M.  
 WETLANDS BUFFER: HB  
 EXISTING FLOODPLAIN: FP  
 STREAM: ST.  
 STREAM BUFFER: SB  
 EXISTING TREELINE: TL  
 EXISTING TREELINE: TL  
 PROPOSED RIGHT OF WAY LINE: RW  
 PROPOSED UTILITY EASEMENT: U.E.  
 PROPERTY LINE: PL  
 PROPOSED SETBACK LINES: S.L.  
 PROPOSED WATER EASEMENT: W.E.  
 PROPOSED STORM DRAIN MANHOLE: M.  
 PROPOSED STORM DRAIN INLET: I.  
 PROPOSED BENCH: B.  
 PARKING COUNT: P.C.  
 PROPOSED STREET LIGHT: S.L.  
 PROPOSED STREET LIGHT: S.L.  
 PROPOSED 5' CONCRETE SIDEWALK: S.W.  
 PROPOSED CROSSWALK: C.W.  
 PROPOSED STOP SIGN: S.S.  
 PROPOSED NO PARKING SIGN: N.P.  
 PROPOSED TOW AWAY ZONE SIGN: T.A.  
 PROPOSED KEEP RIGHT SIGN: K.R.  
 PROPOSED APARTMENTS: A.  
 PROPOSED COMMUNITY CENTER: C.C.  
 ASSISTED LIVING (40 BED CARE FACILITY): A.L.  
 PROPOSED OPEN SPACE: O.S.  
 PROPOSED GUARDRAIL: G.  
 PROPOSED BUILDING ENTRANCE: B.E.  
 HANDICAP RAMP: H.R.  
 PROPOSED NON-WOODY ZONE: N.W.Z.

**NOTES:**

- PRIVATE ROADS WILL BE P-2 PAVING UNLESS OTHERWISE INDICATED.
- ALL PROPOSED CURB ON-SITE TO BE 6" UNLESS OTHERWISE INDICATED.
- ALL PROPOSED DRIVEWAY APRONS TO BE CONCRETE.
- ALL PROPOSED HANDICAP RAMPS ARE HOWARD COUNTY STANDARD DETAIL R4.06, UNLESS OTHERWISE INDICATED.
- ALL PROPOSED CURB RADI ARE 5', UNLESS OTHERWISE INDICATED.
- KNOX BOX TO BE LOCATED AT THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4' - 5' TALL AND NO MORE THAN 6' FROM THE DOOR.
- THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY OWNER THAT IT IS BEING ACCESSSED (INTERRUPTED WITHIN ALARM SYSTEM).
- CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH POWER COMPANY FOR UTILITY POLE WORK.

**CROSSWALK NOTES:**

- WHEN CROSSWALK LINES ARE USED, THEY SHALL CONSIST OF SOLID WHITE LINES THAT SHALL BE NO LESS THAN 6" INCHES, NOR GREATER THAN 24" INCHES IN WIDTH.
- IF TRAVERSE LINES ARE USED TO MARK A CROSSWALK, THE GAP BETWEEN THE LINES SHOULD NOT BE LESS THAN 6". IF DIAGONAL OR LONGITUDINAL LINES ARE USED WITHOUT TRAVERSE LINES TO MARK THE CROSSWALK, THE CROSSWALK SHOULD NOT BE LESS THAN 6' WIDE.
- THE CROSSWALK SHALL BE MARKED WITH WHITE DIAGONAL LINES AT A 45 DEGREE ANGLE TO THE LINE OF THE CROSSWALK.
- ALL CROSSWALKS IN THE COMMUNITY SHALL BE INSTALLED USING THE HOWARD COUNTY STANDARD CROSSWALK - HOWARD COUNTY DESIGN MANUAL, VOLUME IV, DETAIL 7.03.

APPROVED PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2015

439 East Main Street Westminister, MD 21157-5939  
 (410) 546-1750 FAX (410) 546-1791

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
 DATE: 8-11-19  
 SIGNATURE: *William R. Zink, P.E.*  
 MARYLAND REG. NO: 51003 EXPIRATION DATE: 09/01/21  
 DATE OF AS-BUILT: 03/10/2018

**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.  
 DATE: 6/3/24  
 REASON: REVISED SPP - EV CHARGING  
 SIGNATURE: *William R. Zink, P.E.*  
 MARYLAND REG. NO: 51003 EXPIRATION DATE: 09/01/21

MATCHLINE - SEE SHEET 12 FOR CONTINUATION

MATCHLINE - SEE SHEET 11 FOR CONTINUATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Date	Revision Description
09/01/15	02 REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
10/23/15	03 REVISED SITE DEVELOPMENT PLAN - REVISED GRADES AROUND PHASE III
7/25/16	04 REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT 7/0 CARROLL LUTHERAN VILLAGE CONTACT: ROY CHAVACI, EX. VICE PRESIDENT 300 ST. LUKE CIRCLE WESTMINSTER, MD 21158 (410) 548-0090

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 christopher consultants, inc. 100 columbian, md. 21046-2000 7732 centerville gateway drive suite 100, coltsville, md. 21034-2000 410.272.8802 · fax 410.272.8803

**PERMIT INFORMATION CHART**

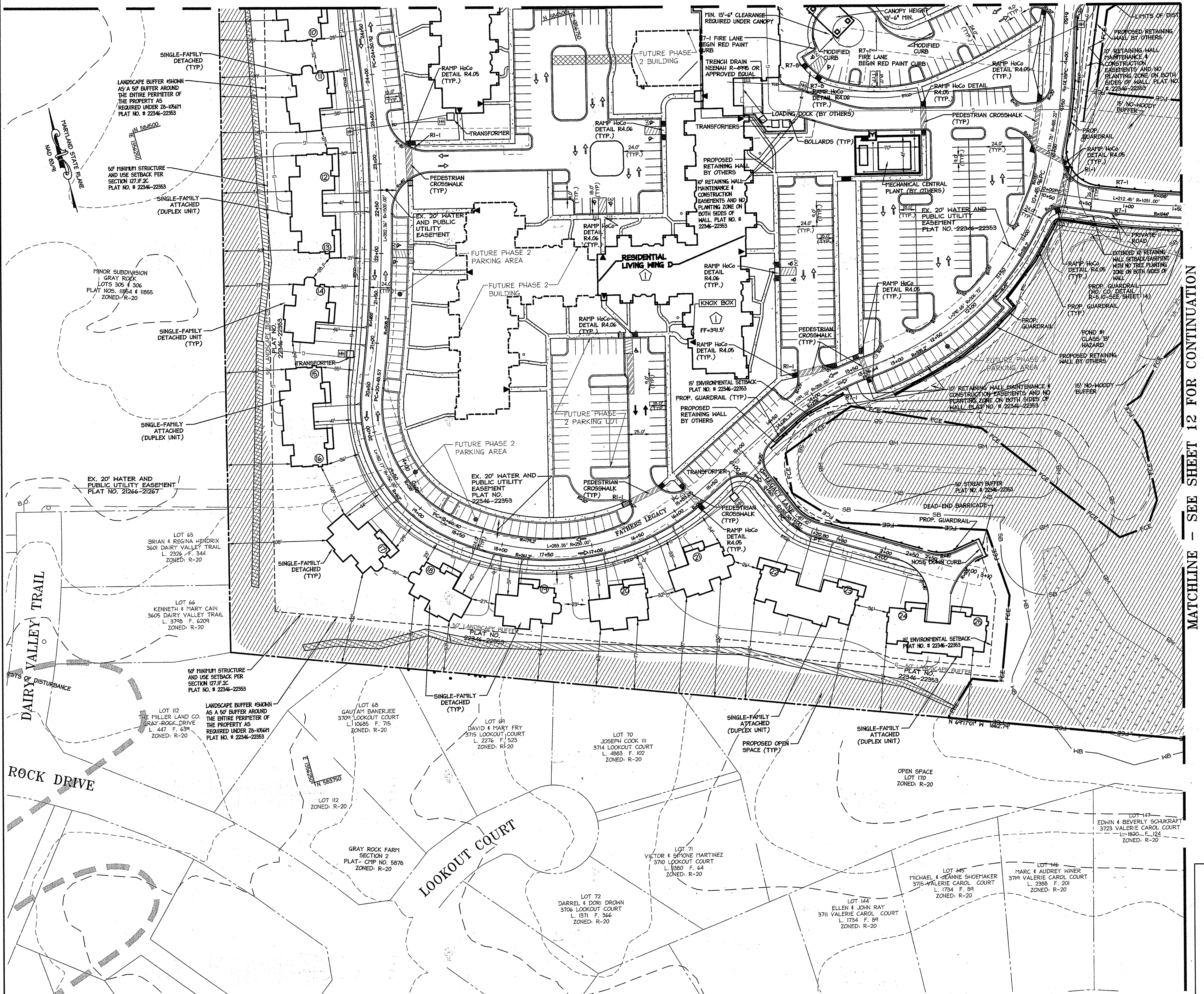
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800
DEED REF. L. 10578 F. 424	9 PSC	TAX MAP 24
WATER CODE 550 (TG 700)		ELECTION DISTRICT 02
TITLE: SITE PLAN		SEWER CODE F07

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>10 of 77</b>

SDP-08-075

MATCHLINE - SEE SHEET 10 FOR CONTINUATION

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *William R. Zink*  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016  
 DATE: 11/27/16



**CROSSWALK NOTES:**  
 1. WHEN CROSSWALK LINES ARE USED, THEY SHALL CONSIST OF SOLID WHITE LINES THAT SHALL BE NO LESS THAN 6 INCHES, NOR GREATER THAN 24 INCHES IN WIDTH.  
 2. IF TRVERSE LINES ARE USED TO MARK A CROSSWALK, THE GAP BETWEEN THE LINES SHOULD NOT BE LESS THAN 4FT. IF DIAGONAL OR LONGITUDINAL LINES ARE USED WITHOUT TRANSVERSE LINES TO MARK THE CROSSWALK, THE CROSSWALK SHOULD NOT BE LESS THAN 6' WIDE.  
 3. THE CROSSWALK SHALL BE MARKED WITH WHITE DIAGONAL LINES AT A 45 DEGREE ANGLE TO THE LINE OF THE CROSSWALK.

**LEGEND**

EXISTING CONTOURS	---
EXISTING STORM DRAIN	---
EXISTING SANITARY SEWER	---
EXISTING WATER	---
EXISTING FENCE	---
WETLANDS	---
WETLANDS BUFFER	---
EXISTING FLOODPLAIN	---
STREAM	---
STREAM BUFFER	---
EXISTING TREELINE	---
EXISTING TREELINE	---
PROPOSED RIGHT OF WAY LINE	---
PROPOSED UTILITY EASEMENT	---
PROPERTY LINE	---
PROPOSED SETBACK LINES	---
PROPOSED WATER EASEMENT	---
PROPOSED STORM DRAIN MANHOLE	---
PROPOSED STORM DRAIN INLET	---
PROPOSED BENCH	---
PARKING COUNT	---
PROPOSED STREET LIGHT	---
PROPOSED STREET LIGHT	---
PROPOSED 5' CONCRETE SIDEWALK	---
PROPOSED CROSSWALK	---
PROPOSED STOP SIGN	---
PROPOSED NO PARKING SIGN	---
PROPOSED TOW AWAY ZONE SIGN	---
PROPOSED KEEP RIGHT SIGN	---
PROPOSED APARTMENTS	---
PROPOSED COMMUNITY CENTER	---
ASSISTED LIVING (60 BED CARE FACILITY)	---
PROPOSED OPEN SPACE	---
PROPOSED GUARDRAIL	---
PROPOSED BUILDING ENTRANCE	---
HANDICAP RAMP	---
PROPOSED NON-WOODY ZONE	---

**NOTES:**  
 1. PRIVATE ROADS WILL BE P-2 PAVING UNLESS OTHERWISE INDICATED.  
 2. ALL PROPOSED CURB ON-SITE TO BE 6' UNLESS OTHERWISE INDICATED.  
 3. ALL PROPOSED DRIVEWAY APRONS TO BE CONCRETE.  
 4. ALL PROPOSED HANDICAP RAMPS ARE HOWARD COUNTY STANDARD DETAIL R4.05, UNLESS OTHERWISE INDICATED.  
 5. ALL PROPOSED CURB RADII ARE 5', UNLESS OTHERWISE INDICATED.

MATCHLINE - SEE SHEET 12 FOR CONTINUATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i> Chief, Development Engineering Division	4/4/16
<i>[Signature]</i> Chief, Division of Land Development	4-5-16
<i>[Signature]</i> Director	4-5-16

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
11/04/15	03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
		REVISED GRADING, STORM, SANITARY, RETAINING WALL

**LUTHERIAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER/DEVELOPER:  
 LUTHERIAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERIAN VILLAGE  
 CONTACT: ROY GRANICKS, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21156  
 (410) 248-2000

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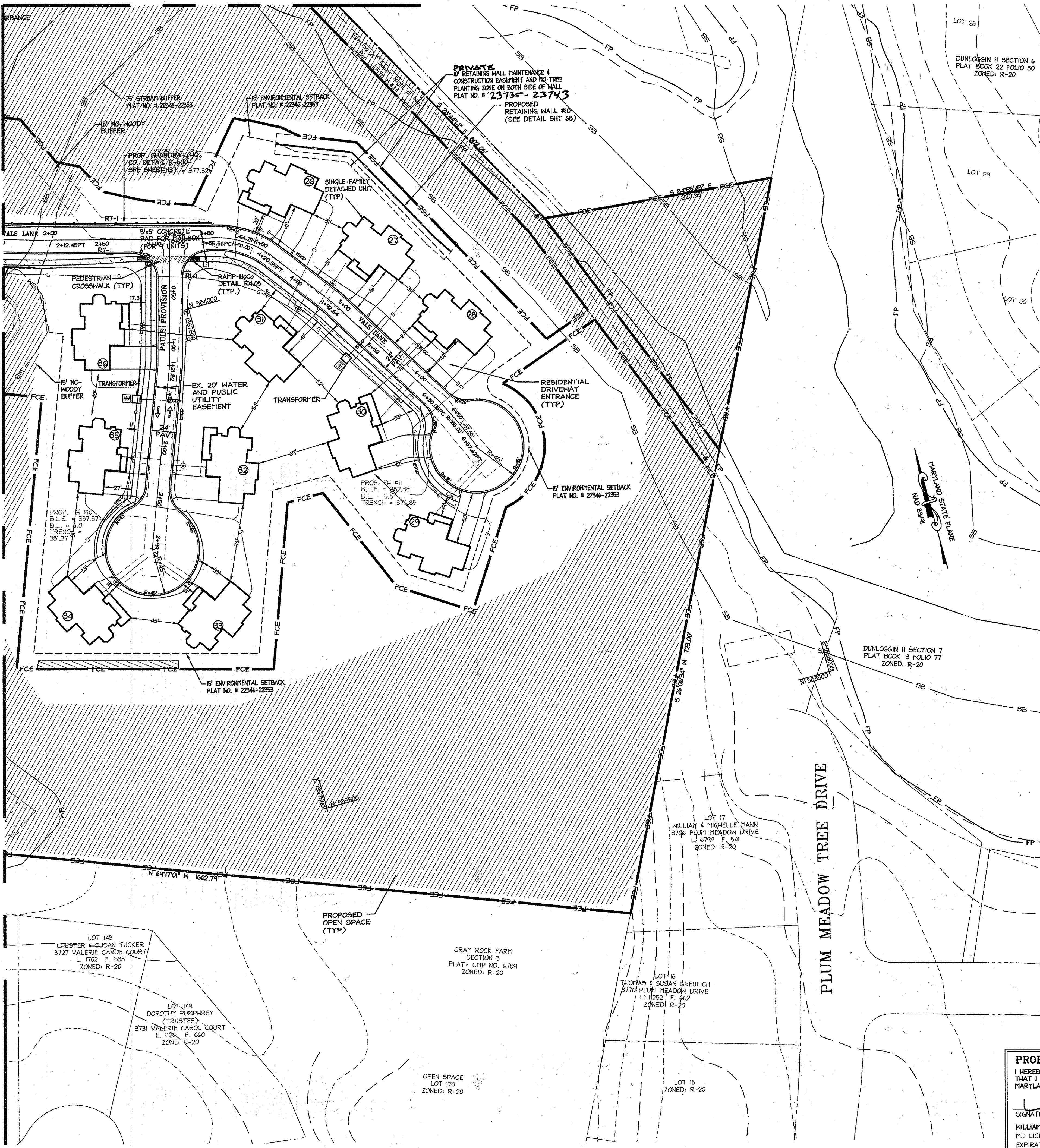
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERIAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF.	GRID NO.	TAX MAP
L. 10578 F. 424	9	24
WATER CODE	SEWER CODE	ELECTION DISTRICT
550 (TG 700)	F07	02

**TITLE: SITE PLAN**

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>11 of 77</b>

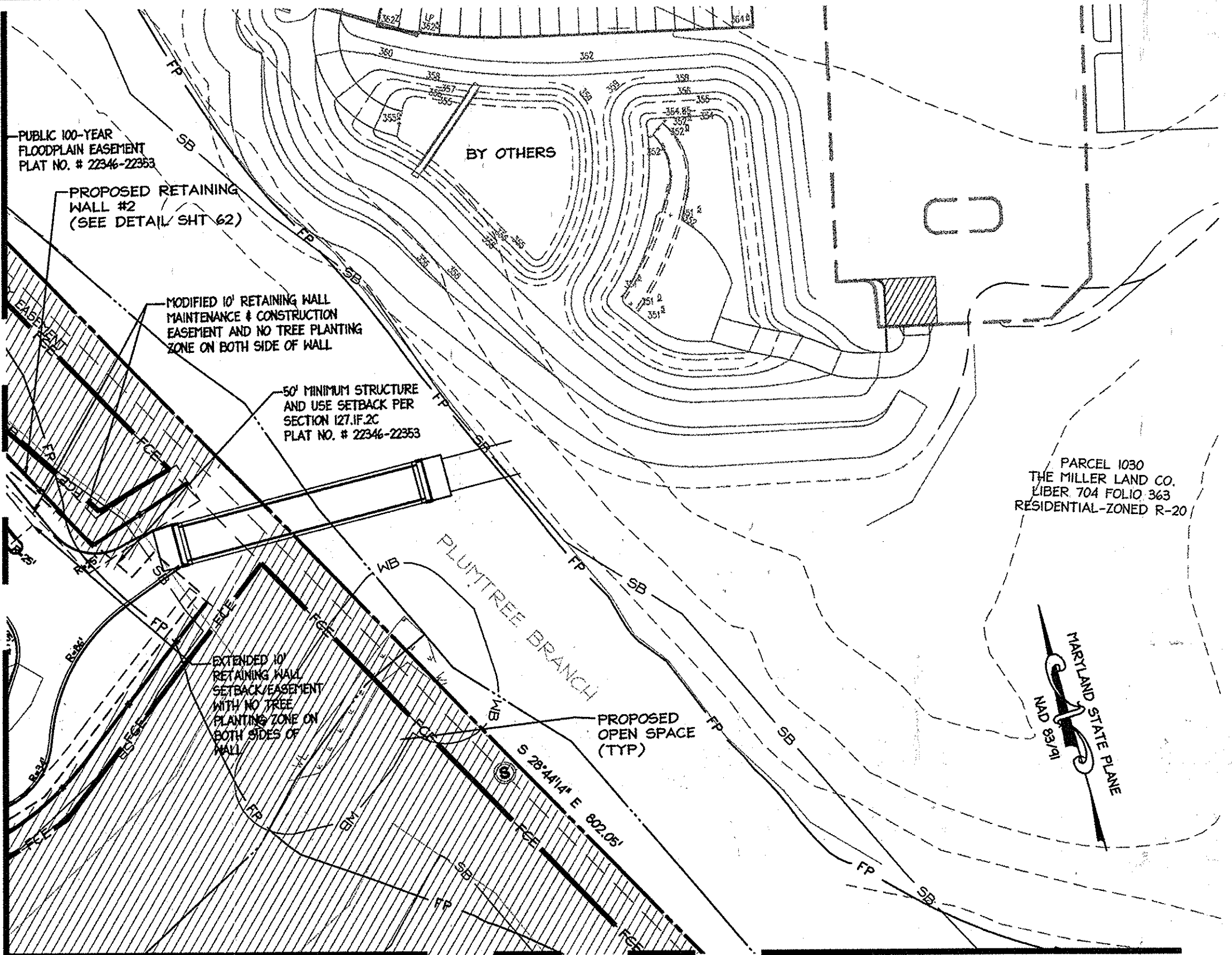


MATCHLINE - SEE THIS SHEET FOR CONTINUATION



MATCHLINE - SEE SHEET 11 FOR CONTINUATION

MATCHLINE - SEE SHEET 10 FOR CONTINUATION



MATCHLINE SEE THIS SHEET FOR CONTINUATION

LEGEND

- EXISTING CONTOURS - 372-
- EXISTING STORM DRAIN -
- EXISTING SANITARY SEWER -
- EXISTING WATER -
- EXISTING FENCE -
- WETLANDS -
- WETLANDS BUFFER -
- EXISTING FLOODPLAIN -
- STREAM -
- STREAM BUFFER -
- EXISTING TREELINE -
- PROPOSED RIGHT OF WAY LINE -
- PROPOSED UTILITY EASEMENT -
- PROPERTY LINE -
- PROPOSED SETBACK LINES -
- PROPOSED WATER EASEMENT -
- PROPOSED STORM DRAIN MANHOLE -
- PROPOSED STORM DRAIN INLET -
- PROPOSED BENCH -
- PARKING COUNT -
- PROPOSED STREET LIGHT -
- PROPOSED STREET LIGHT -
- PROPOSED 5' CONCRETE SIDEWALK -
- PROPOSED CROSSWALK -
- PROPOSED STOP SIGN - R1-1
- PROPOSED NO PARKING SIGN - R7-1
- PROPOSED TOW AWAY ZONE SIGN - R7-201
- PROPOSED KEEP RIGHT SIGN - R4-7
- PROPOSED APARTMENTS -
- PROPOSED COMMUNITY CENTER -
- ASSISTED LIVING (60 BED CARE FACILITY) -
- PROPOSED OPEN SPACE -
- PROPOSED GUARDRAIL -
- PROPOSED BUILDING ENTRANCE -
- HANDICAP RAMP -
- PROPOSED NON-WOODY ZONE -
- LIMITS OF DISTURBANCE -

NOTES:

1. PRIVATE ROADS WILL BE P-2 PAVING UNLESS OTHERWISE INDICATED.
2. ALL PROPOSED CURB ON-SITE TO BE 6" UNLESS OTHERWISE INDICATED.
3. ALL PROPOSED DRIVEWAY APRONS TO BE CONCRETE.
4. ALL PROPOSED HANDICAP RAMP ARE HOWARD COUNTY STANDARD DETAIL R4.05, UNLESS OTHERWISE INDICATED.
5. ALL PROPOSED CURB RADI ARE 5', UNLESS OTHERWISE INDICATED.

APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	Date 4-4-16
Chief, Division of Land Development	Date 4-5-16
Director	Date 4-5-16
01/05/15 01	REVISED SITE DEVELOPMENT PLAN
09/01/15 02	REVISED SITE DEVELOPMENT PLAN - REVISED
11/09/15 03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
	REVISED GRADING, STORM, SANITARY, RETAINING WALL

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY GRAMACK, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21156  
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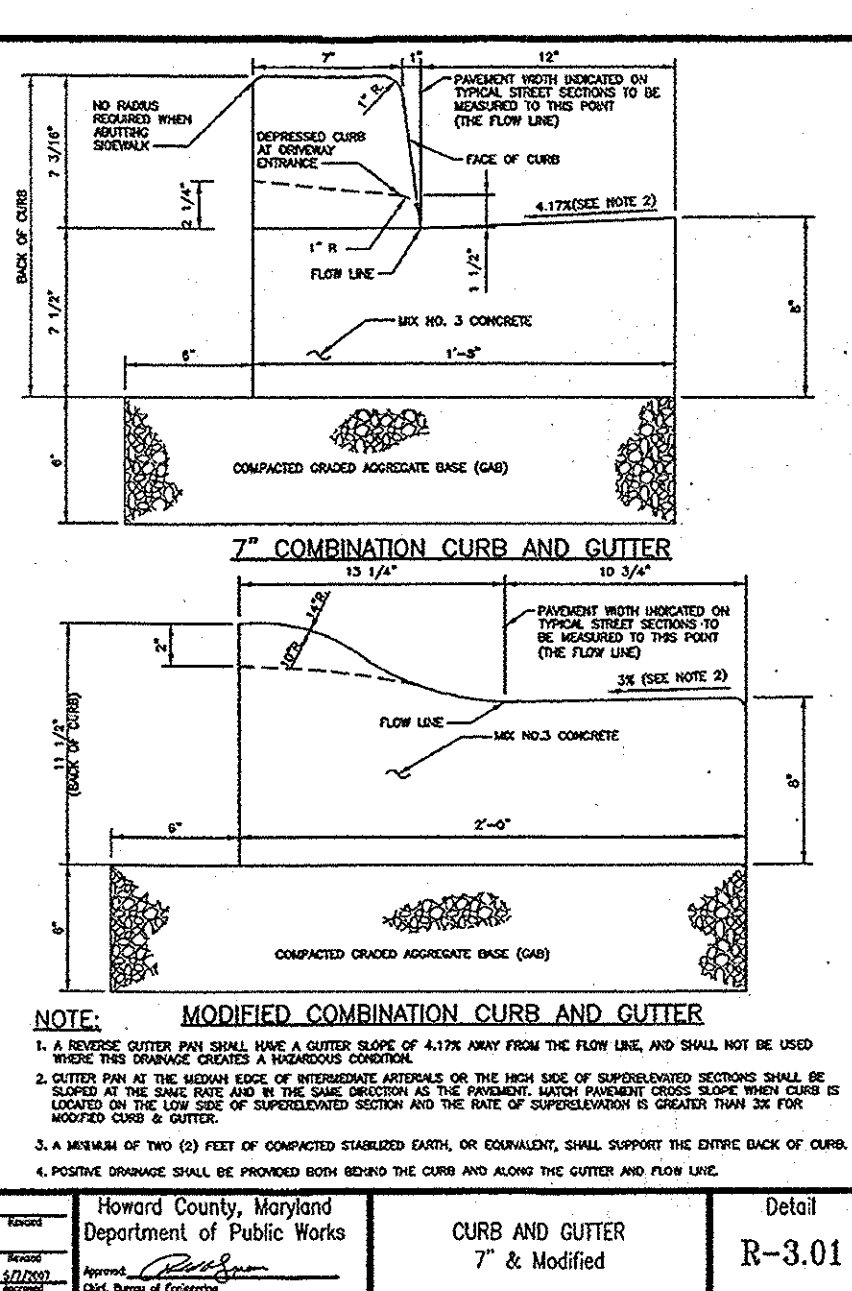
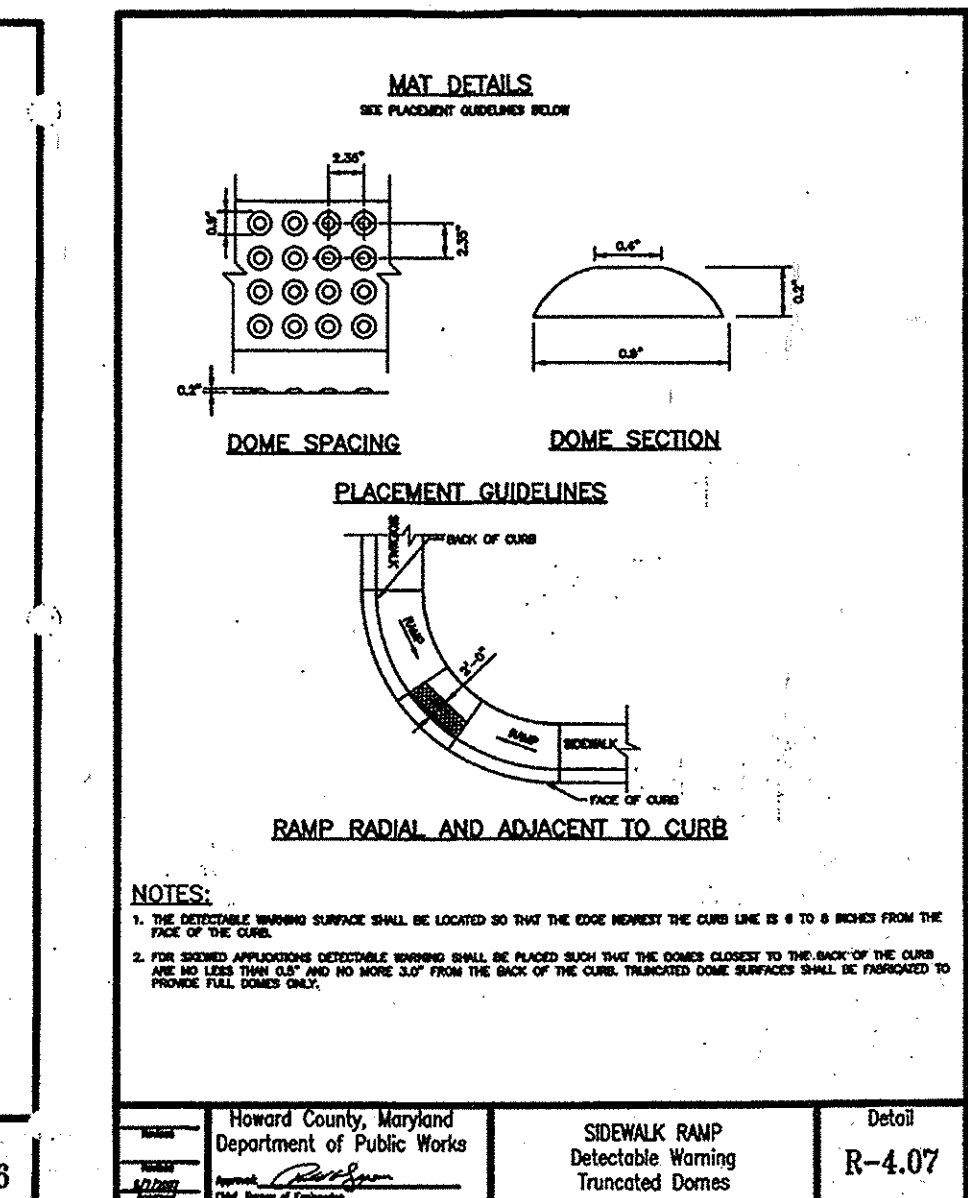
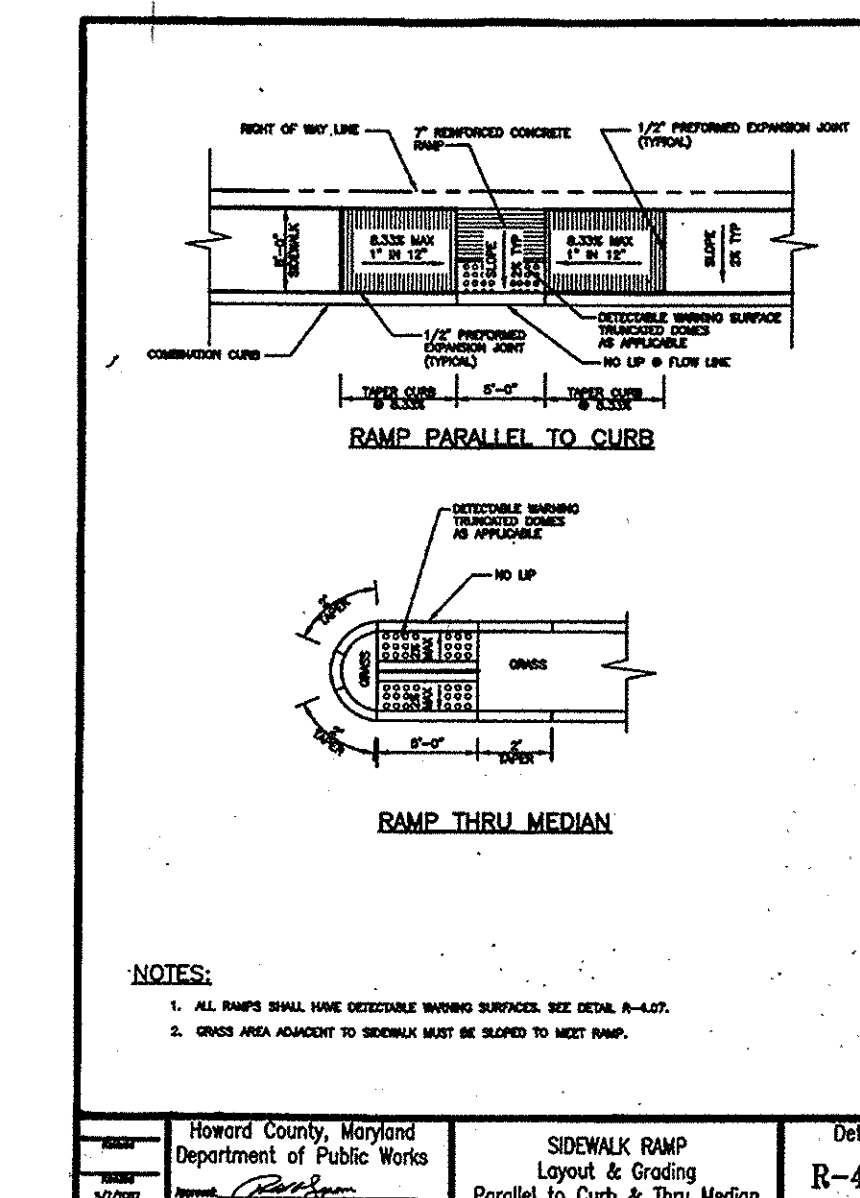
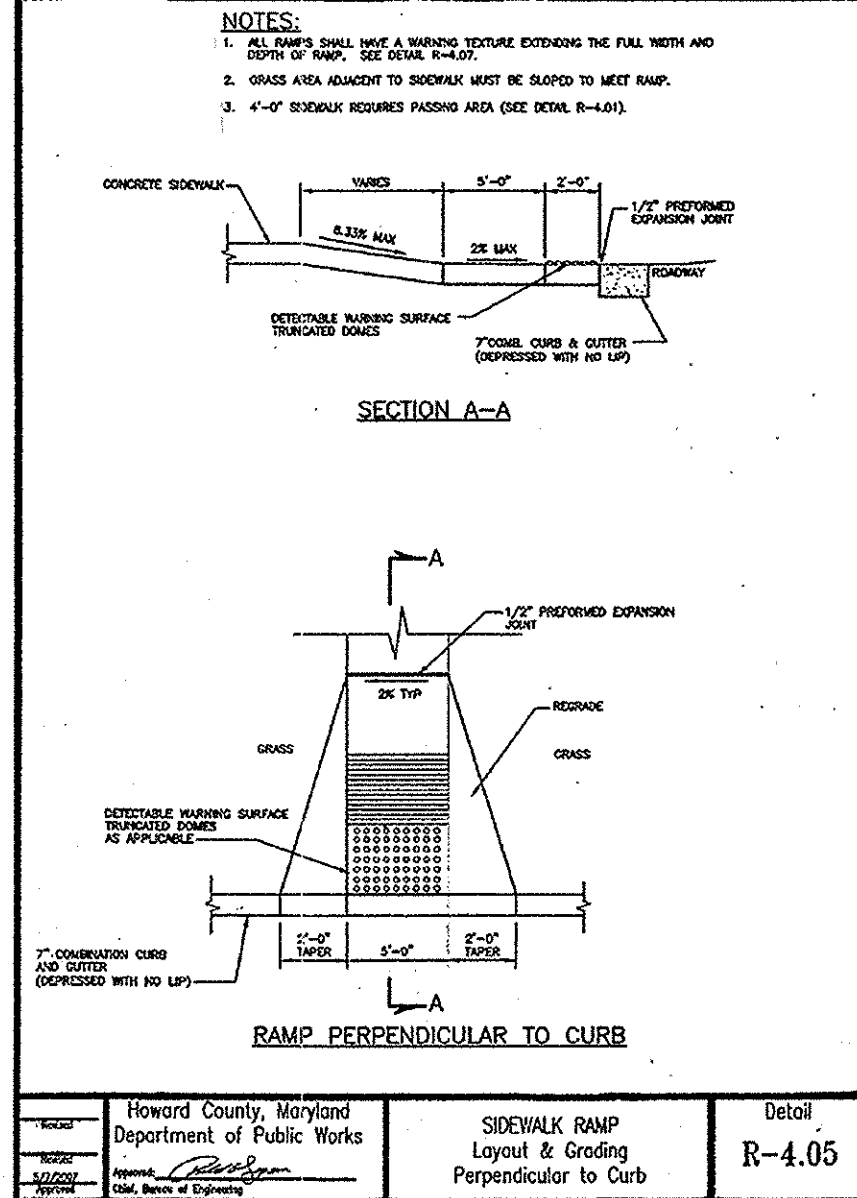
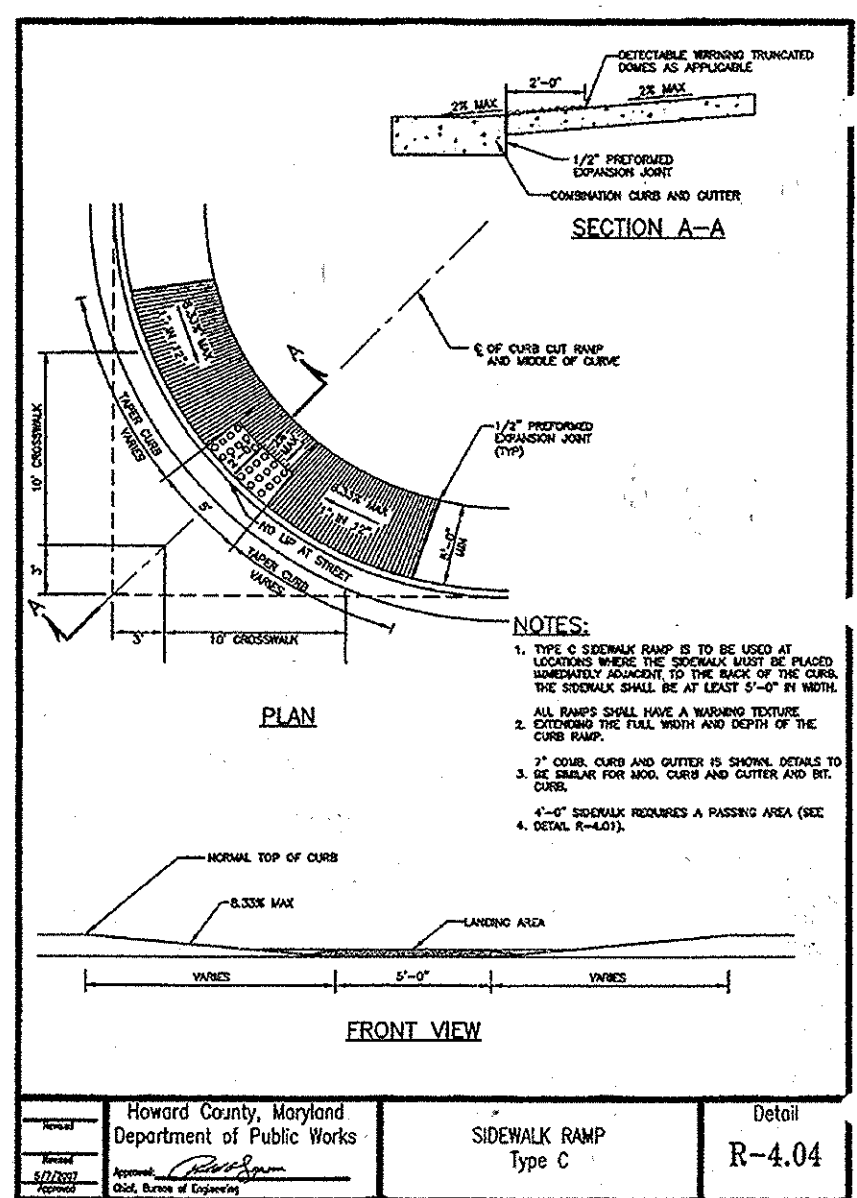
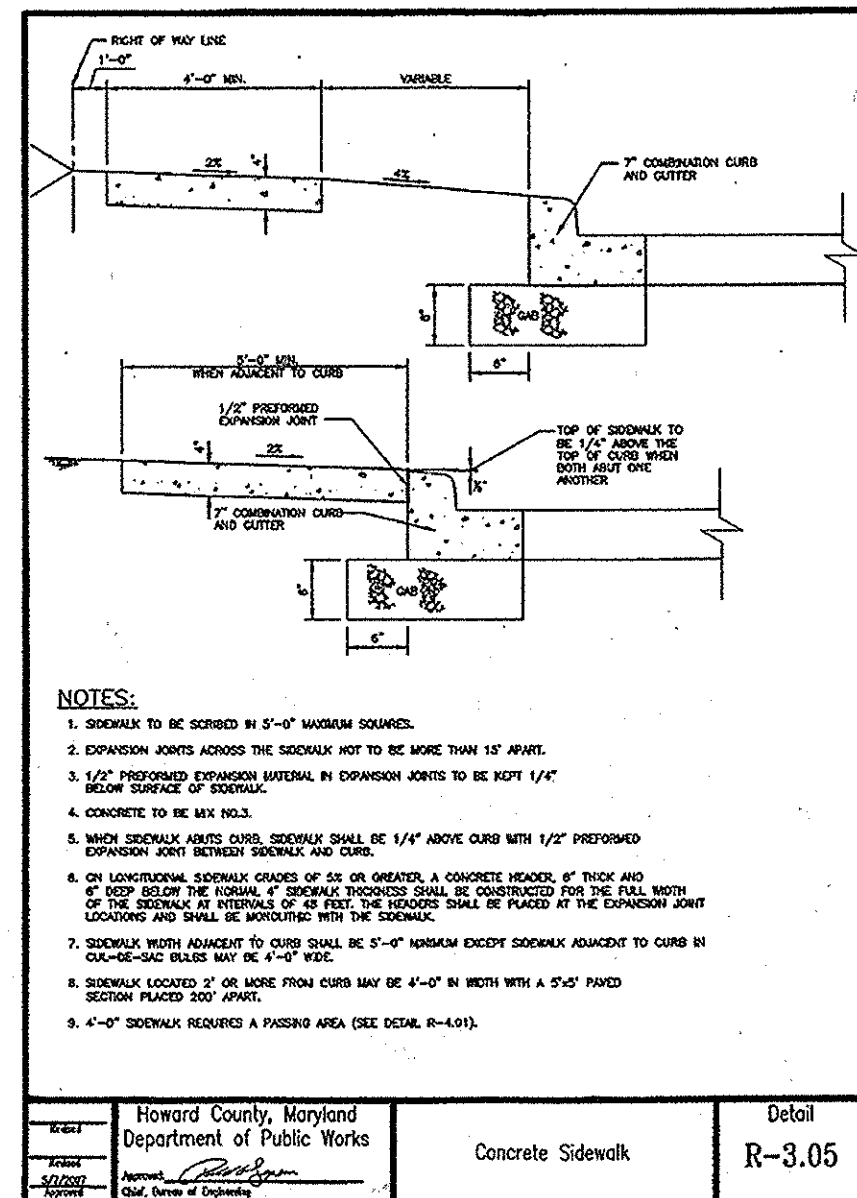
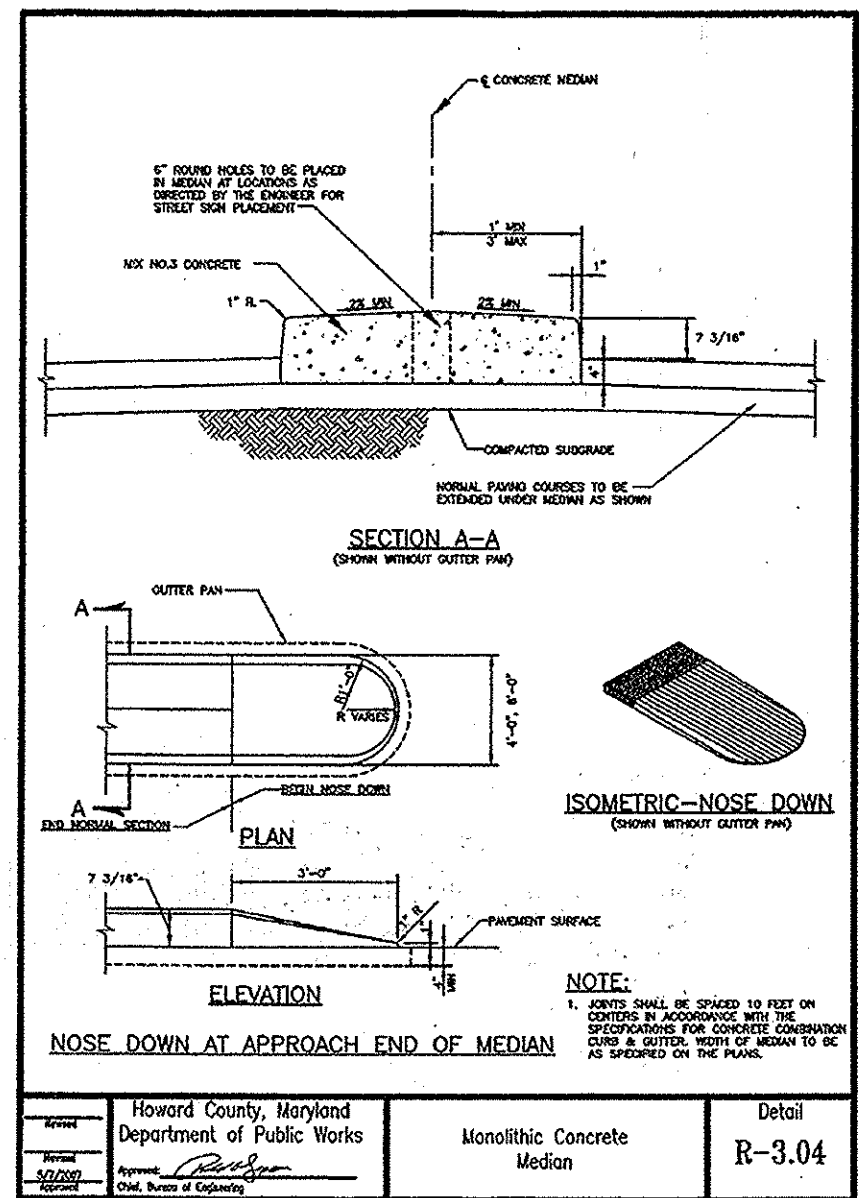
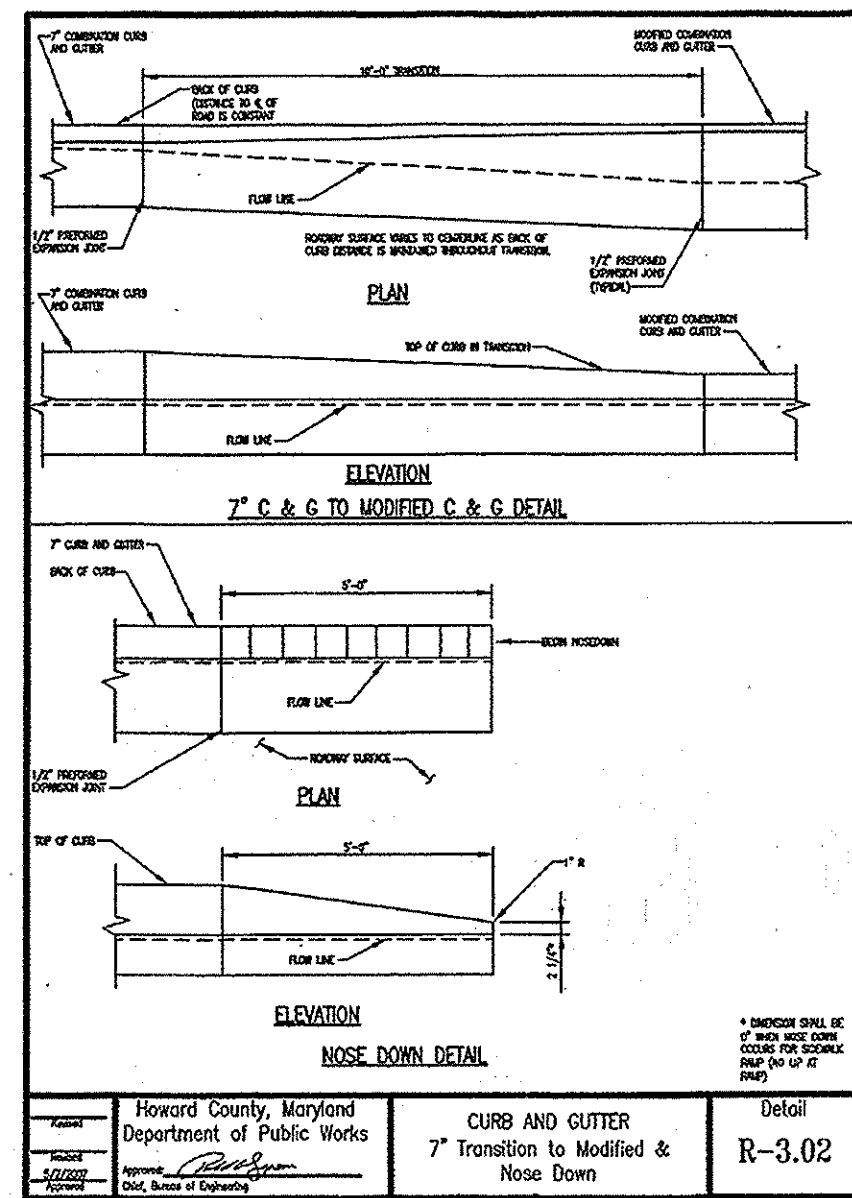
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016

DATE 4/27/16

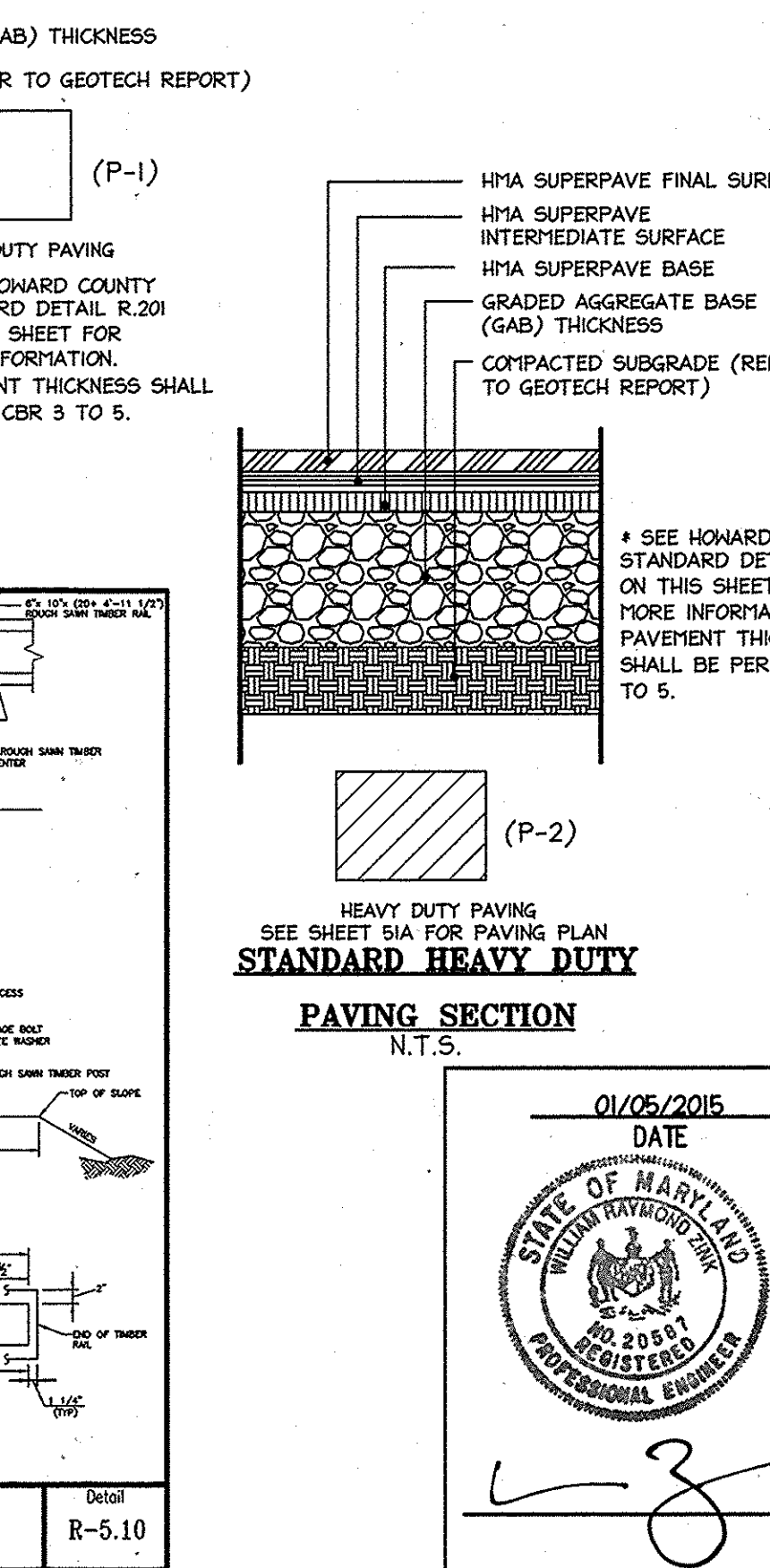
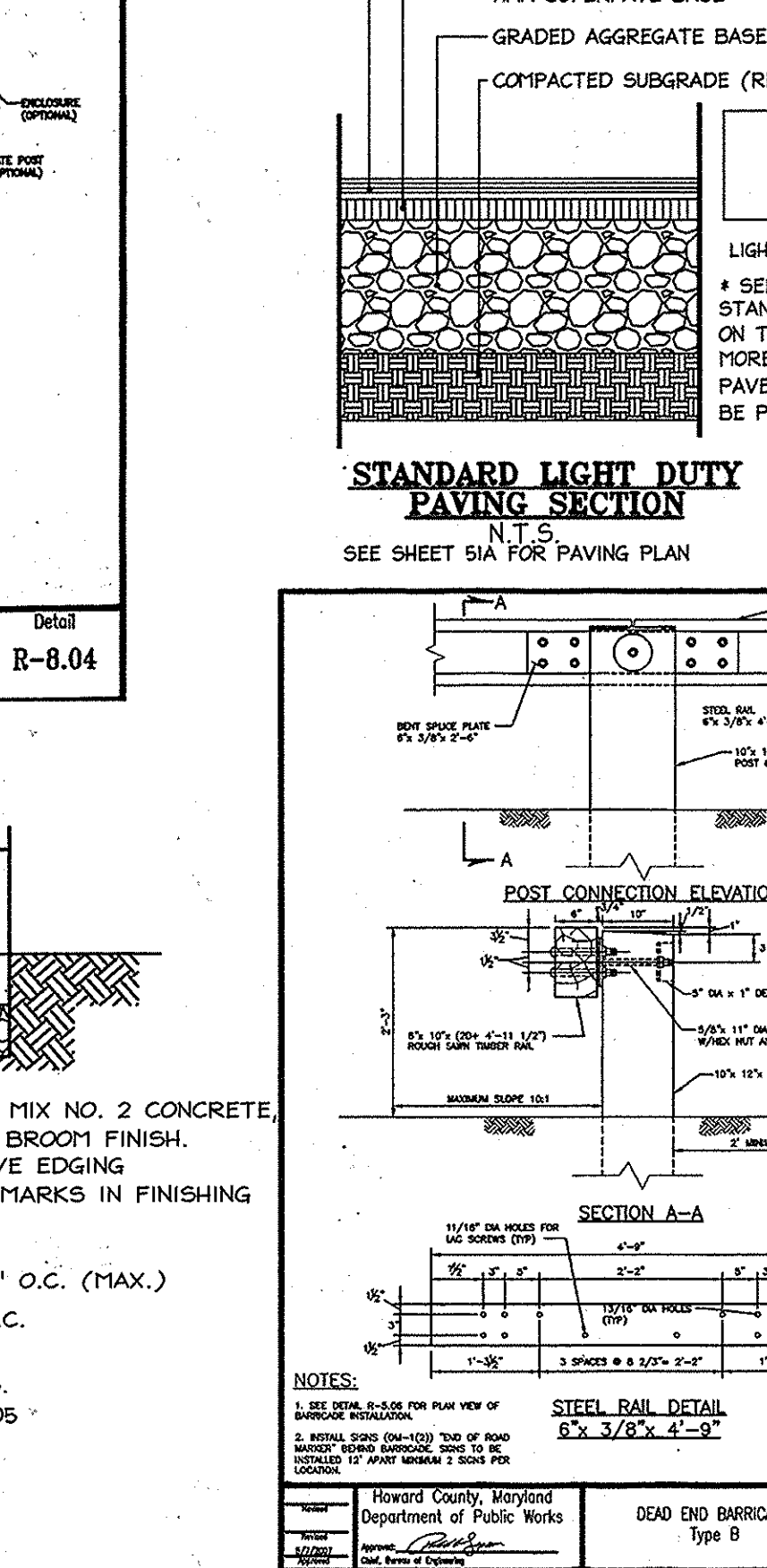
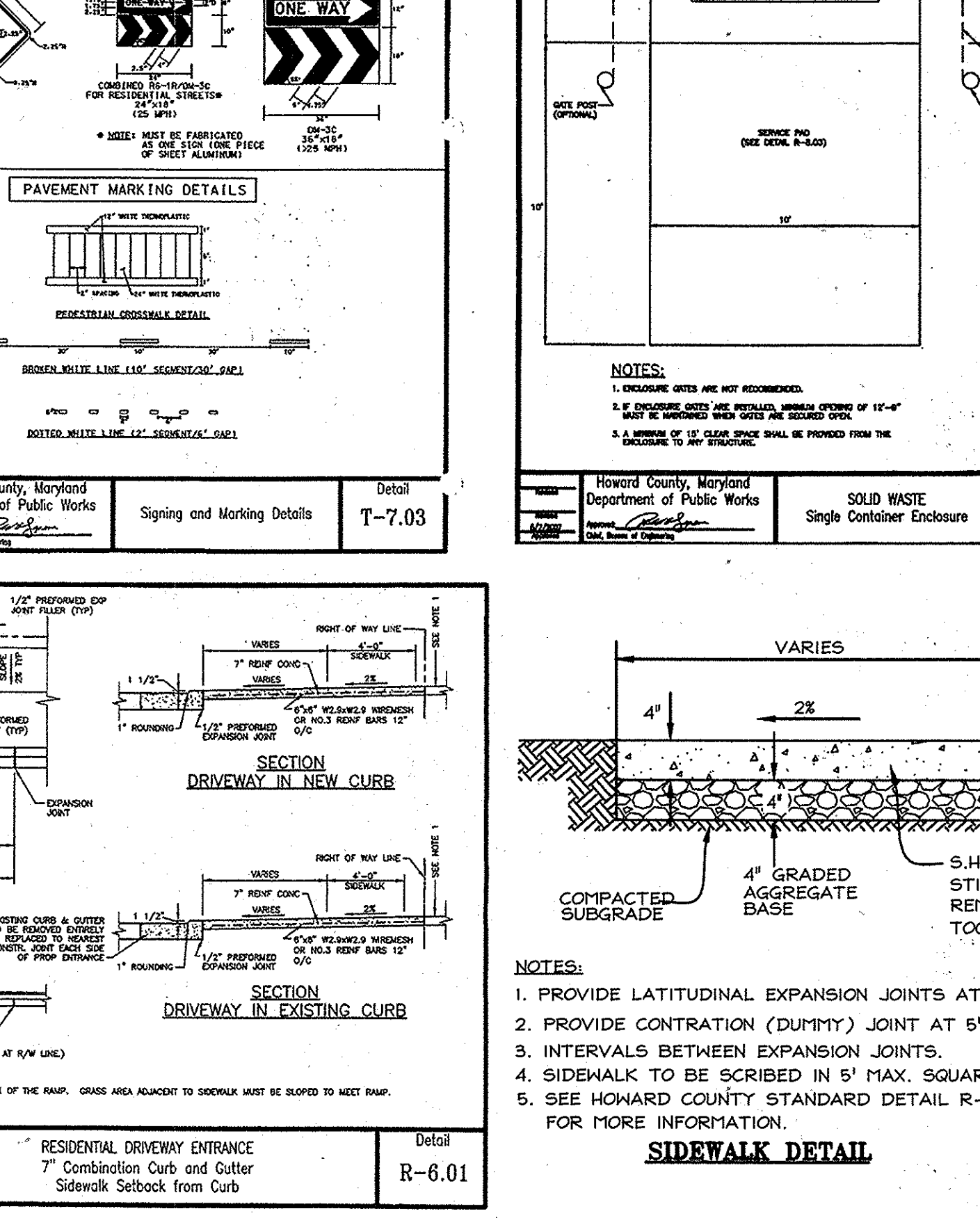
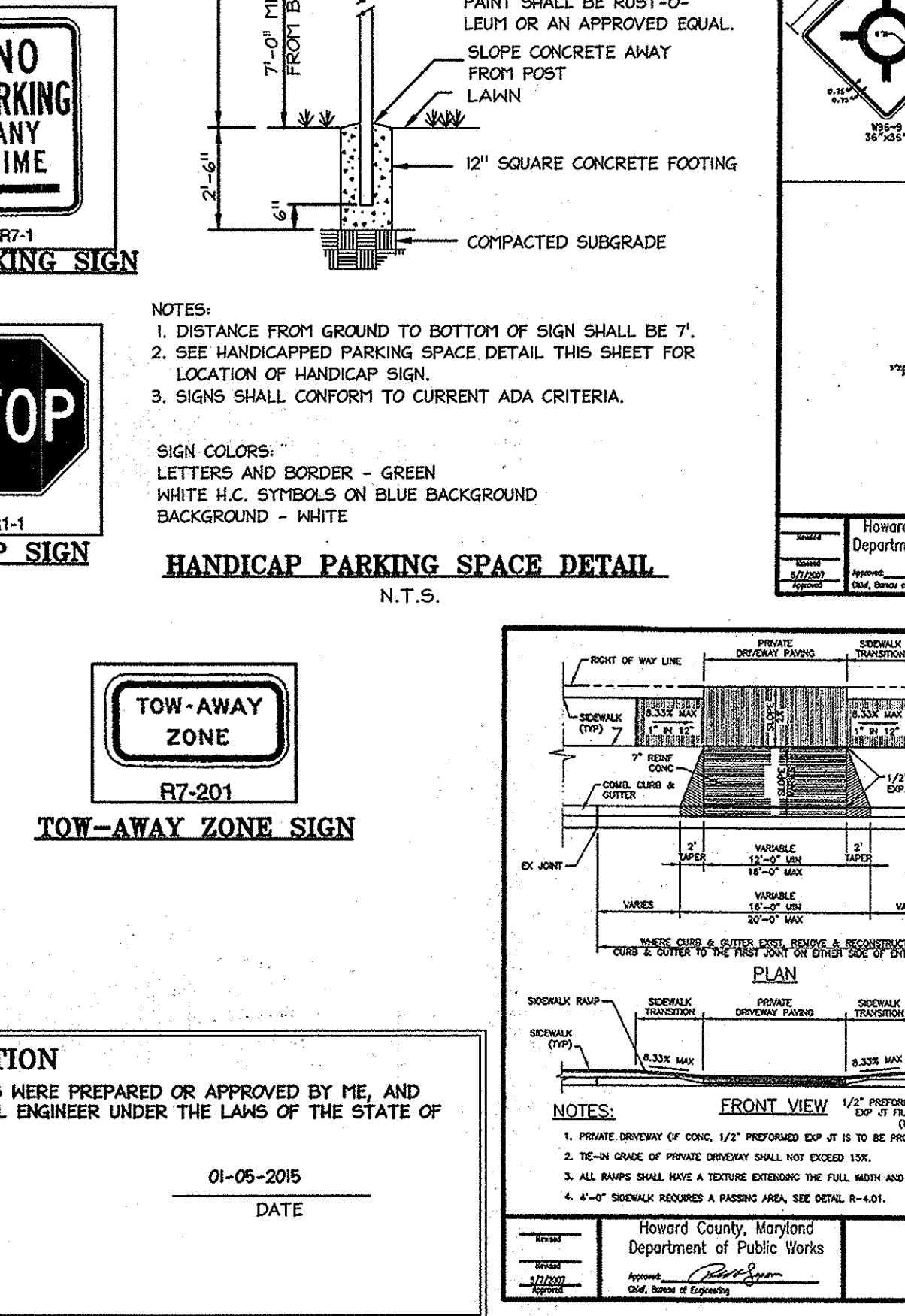
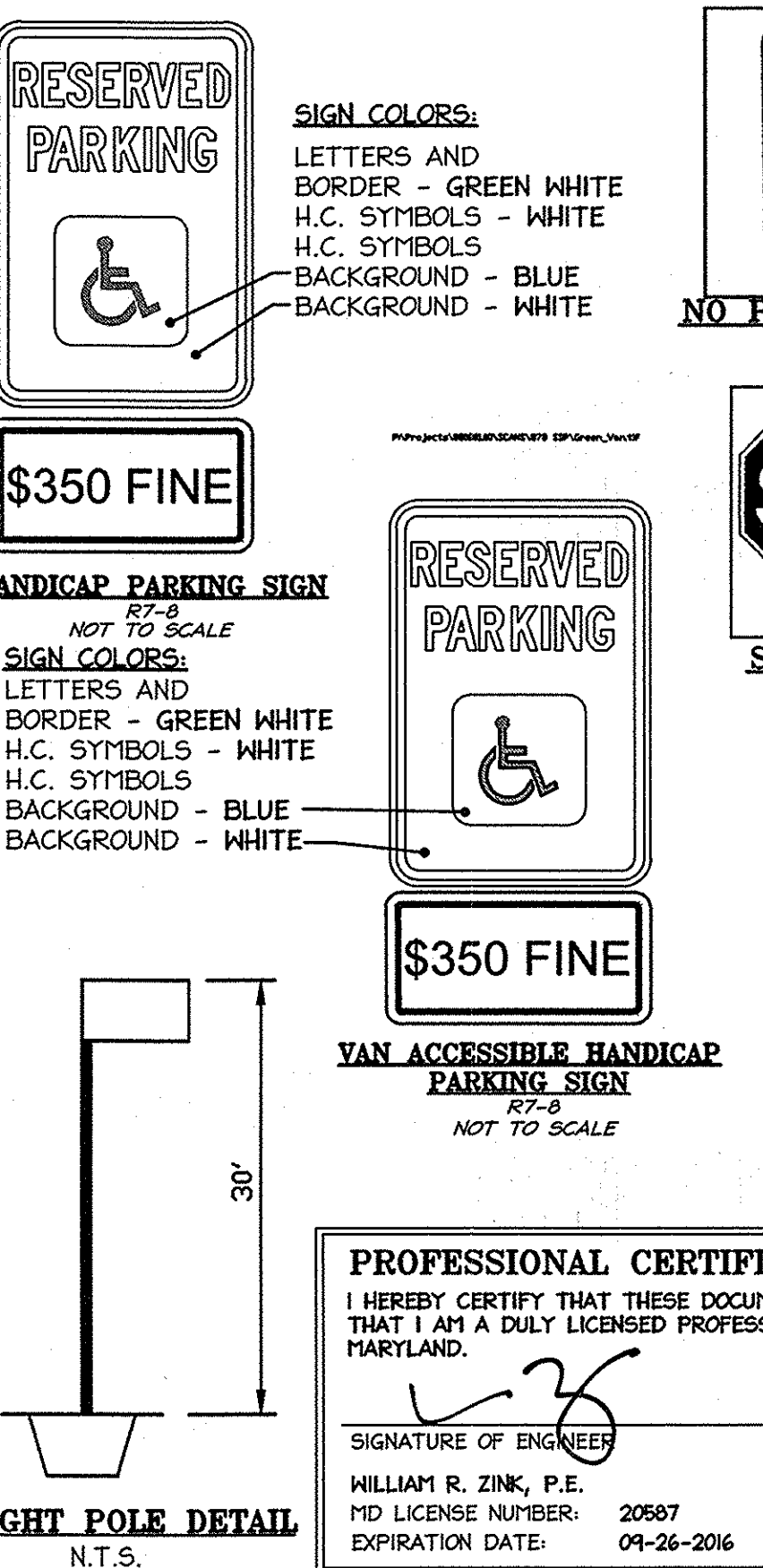
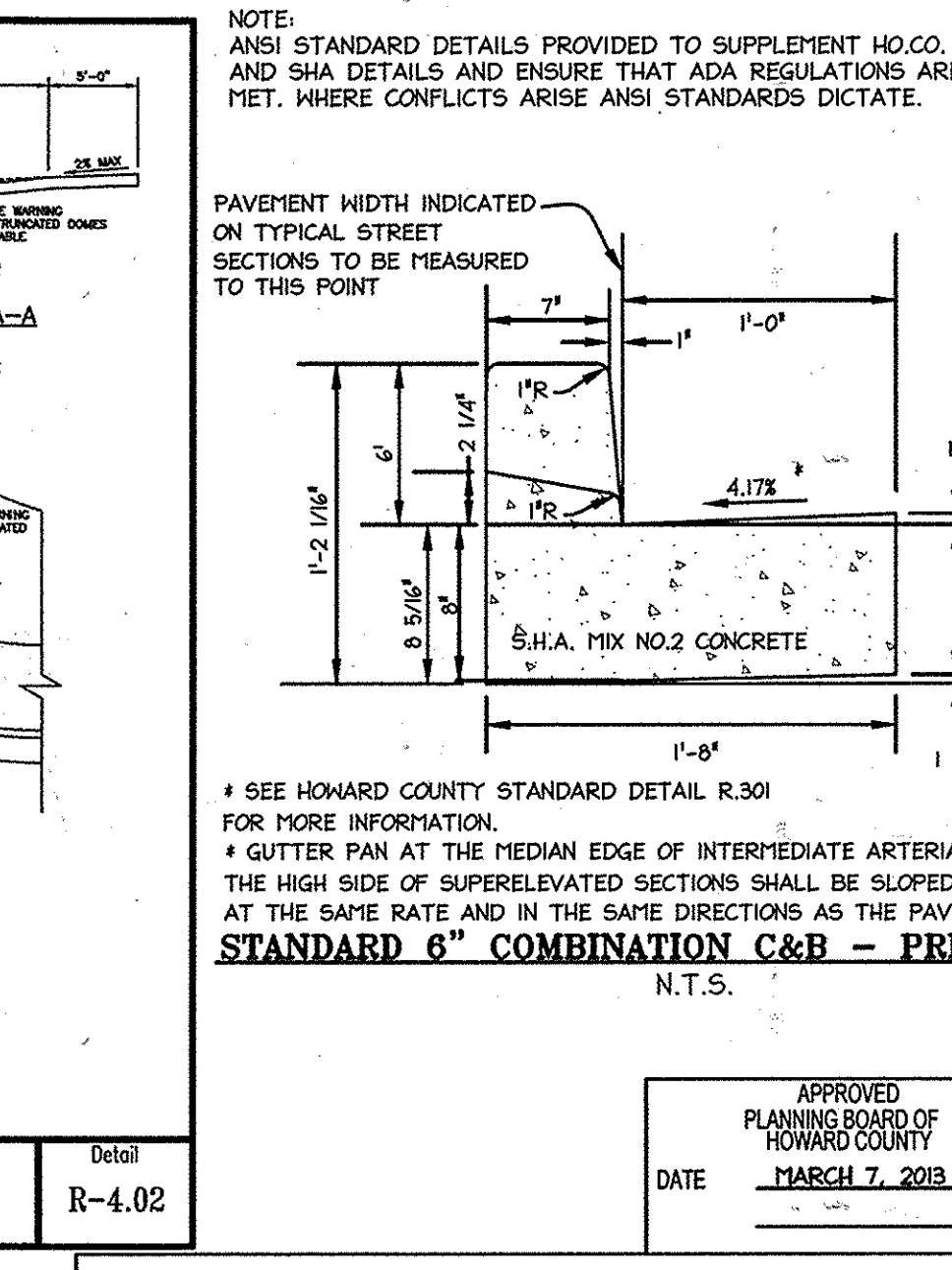
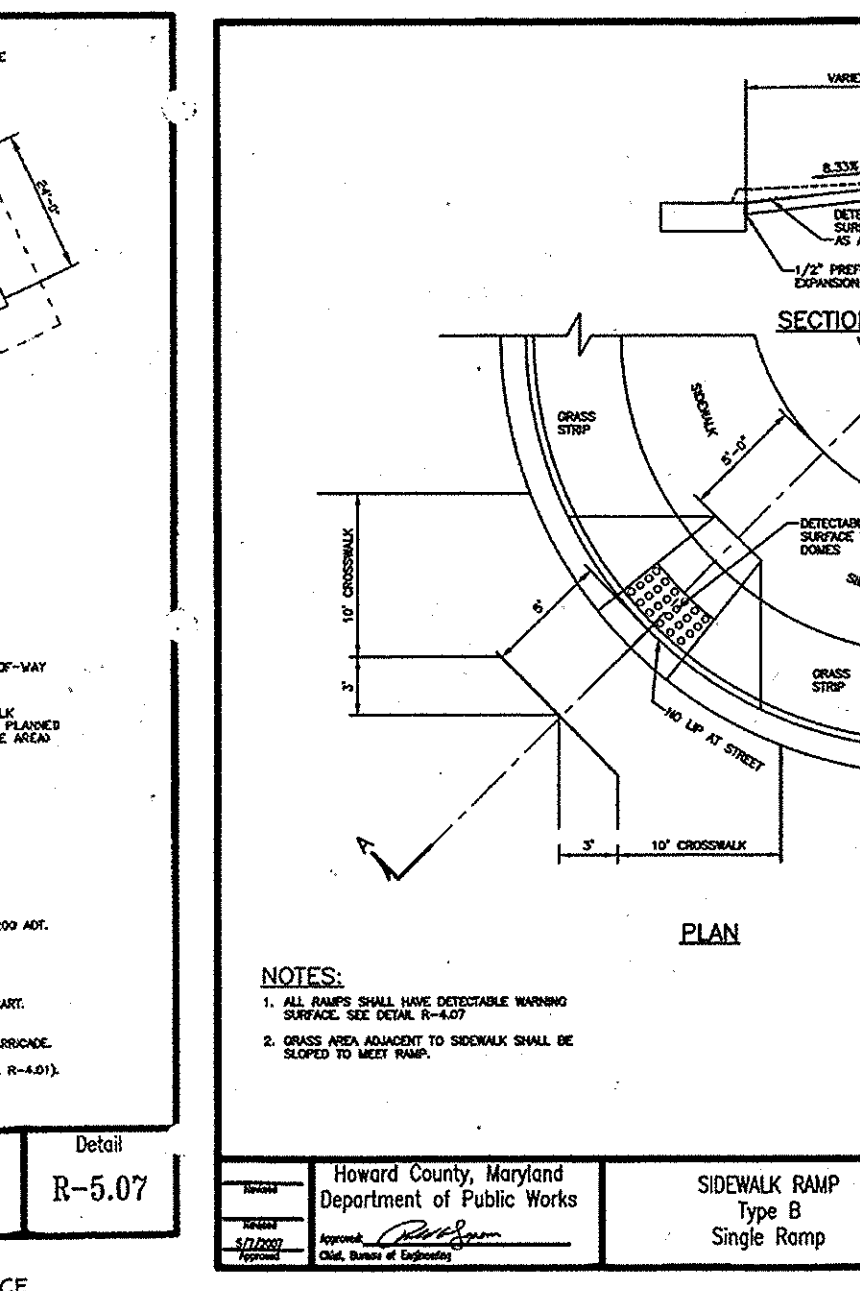
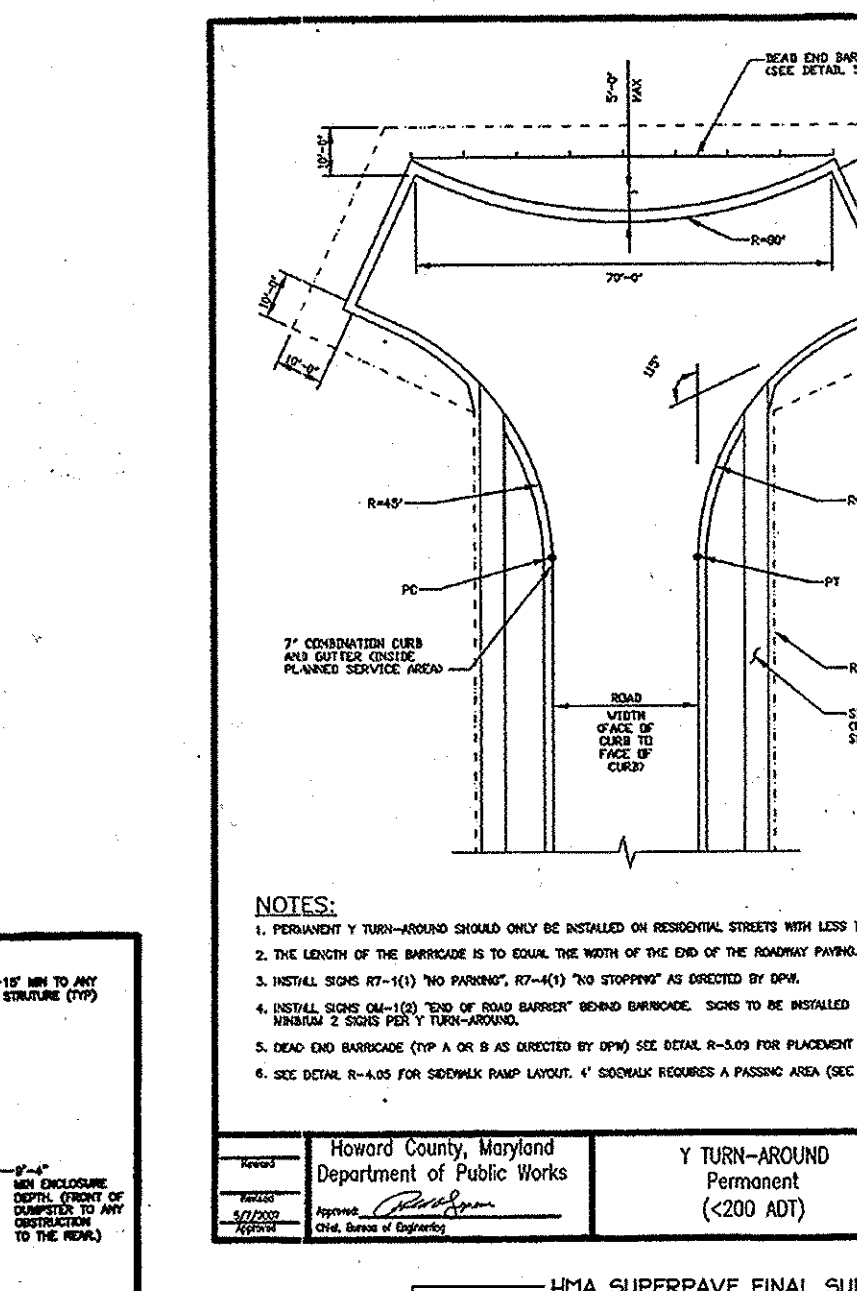
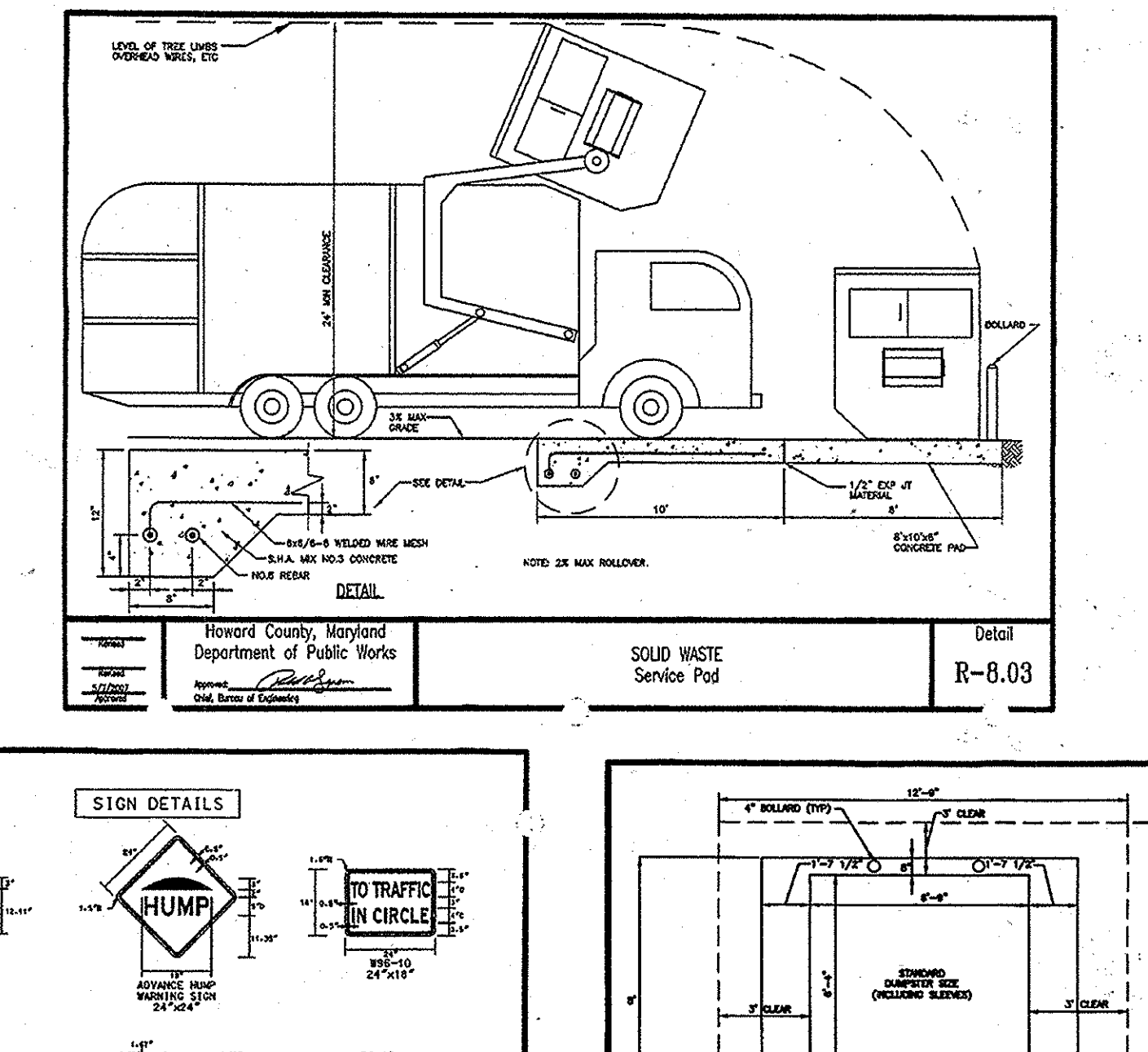


PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE	F07
TITLE: <b>SITE PLAN</b>		
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>12 OF 77</b>



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA ROADWAY RATED (CBR)	3 TO 4.5	4.5 TO 6	6 TO 8	8 TO 10	10 TO 15	15 TO 20	20 TO 30	30 TO 40	40 TO 50	50 TO 60	60 TO 70	70 TO 80	80 TO 90	90 TO 100
P-1	PAVEMENT TYPE: FAVORABLE SIDE WALKS, SIDEWALKS, AND SIDEWALKS WITH NO MORE THAN 2% GRADE (SEE NOTE 2)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-2	PAVEMENT TYPE: FAVORABLE SIDE WALKS, SIDEWALKS, AND SIDEWALKS WITH NO MORE THAN 2% GRADE (SEE NOTE 2)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-3	PAVEMENT TYPE: FAVORABLE SIDE WALKS, SIDEWALKS, AND SIDEWALKS WITH NO MORE THAN 2% GRADE (SEE NOTE 2)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
P-4	PAVEMENT TYPE: FAVORABLE SIDE WALKS, SIDEWALKS, AND SIDEWALKS WITH NO MORE THAN 2% GRADE (SEE NOTE 2)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division

Chief, Division of Land Development

Director

01/05/15

01

REVISED SITE DEVELOPMENT PLAN

Date

2-20-15

Date

2/6/15

Date

2/6/15

Date

Revision Description

LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY

OWNER / DEVELOPER

LUTHERAN VILLAGE AT MILLER'S GRANT

C/O CURRIEL LUTHERAN VILLAGE

CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT

300 ST. LUKE CIRCLE

WESTMINSTER, MD 21158

(410) 948-0090

christopher consultants

engineering - surveying - land planning

christopher consultants, Inc.

7172 GARDNER GARDEN DRIVE (SUITE 100) COLUMBIA, MD 21046-2000

(410) 251-1000 - FAX: (410) 251-1001 - SA: (410) 251-2800

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SENIOR CODE	
550 (TG 700)	F07	

TITLE:

SITE DETAILS

DESIGN: DAM	SCALE: NOT TO SCALE	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	

13 of 77

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.

01-05-2015

DATE

SIGNATURE OF ENGINEER

WILLIAM R. ZINK, P.E.

MD LICENSE NUMBER: 20587

EXPIRATION DATE: 01-26-2016



BOLLARD DETAIL NOT TO SCALE



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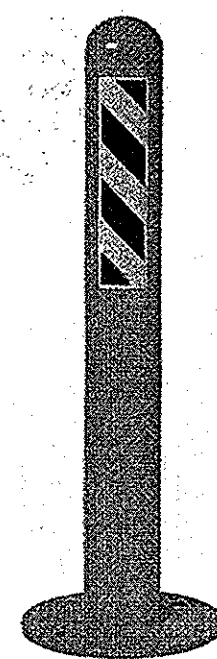
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Your Name\* Your Email Address\* Your Phone Number Company Enter Verification Code\*

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- Benefits Permanent fixed bollards made with USA steel. Easy installation. High visibility to drivers. Rust and corrosion resistant.

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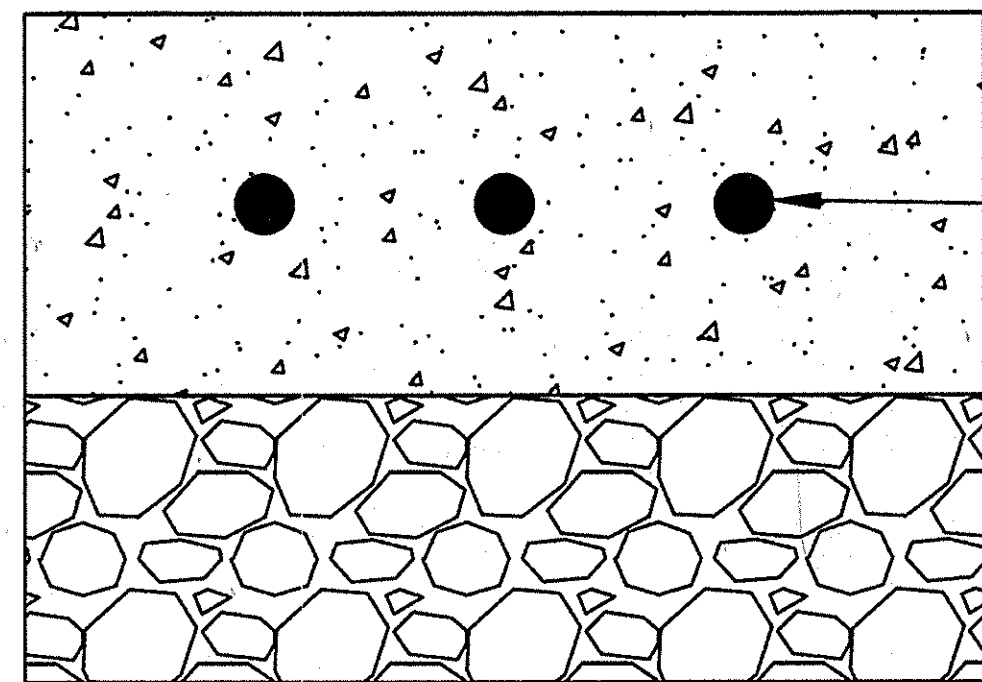


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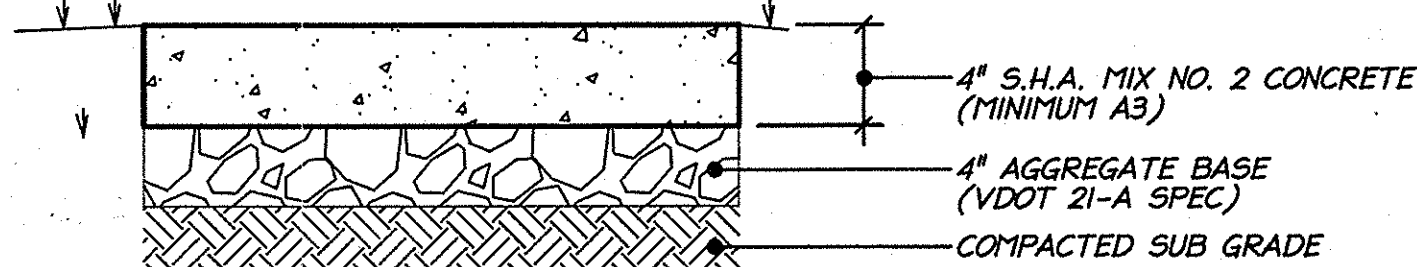
Item# 1570-138LK Regular Price \$1,280.00 Sale Price & Free Shipping: \$1,094.50

Click image above for an enlarged view. USPS Approved. ISO 9001 Certified. Above pedestal carries easy access to all mail slots.

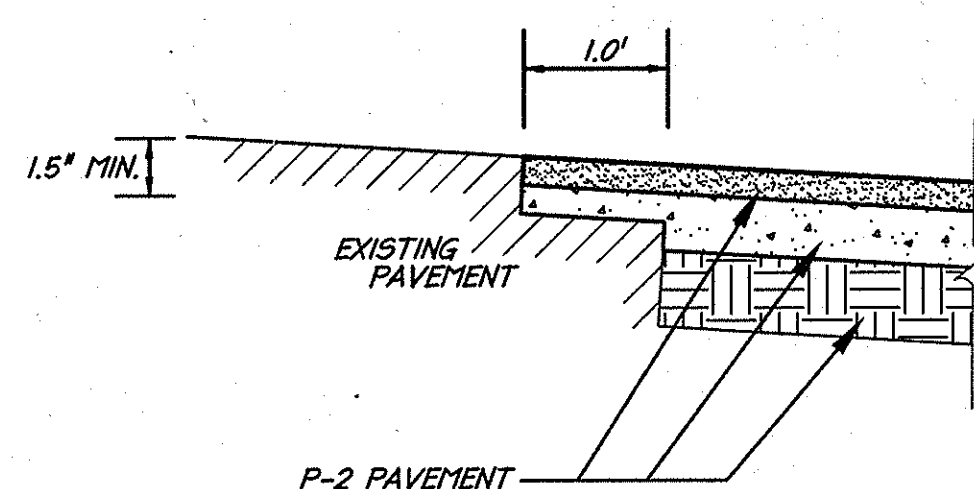
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LOADING DOCK CONCRETE SECTION (NTS)



CONCRETE PAD DETAIL - TRANSFORMER/MAILBOX NOT TO SCALE



BOTTOM AND ALL SIDES OF CUT TO BE PREPPED WITH ASPHALT PRIOR TO PLACING ASPHALT MIX. TYPICAL PAVEMENT WEDGING DETAIL (WP-2) (TO BE USED FOR PAVEMENT ADDITIONS) NOT TO SCALE

Technical drawing for R-499S - R-499E Type M Trench Frame with Solid or Grated Cover. Includes notes on installation, dimensions, and a table of specifications.

- Anchor holes for faster, easier installation. 36" tall fixed bollards each with an outer diameter of 4.5". Wall thickness of .237". 3M reflective tape. Zinc rich rust & corrosion resistant primer with 5,000 hour salt spray performance. TGIC yellow polyester finish. 4 anchor holes measuring 3/4". Specifications 36" tall fixed bollards each with an outer diameter of 4.5". Wall thickness of .237". 3M reflective tape. Zinc rich rust & corrosion resistant primer with 5,000 hour salt spray performance. TGIC yellow polyester finish. 4 7/8" anchor holes except 3/4" anchor bolts. Accessories

Table with 4 columns: Industry Applications, Products, News & Resources, and Get Connected. Lists various barrier types and contact information.



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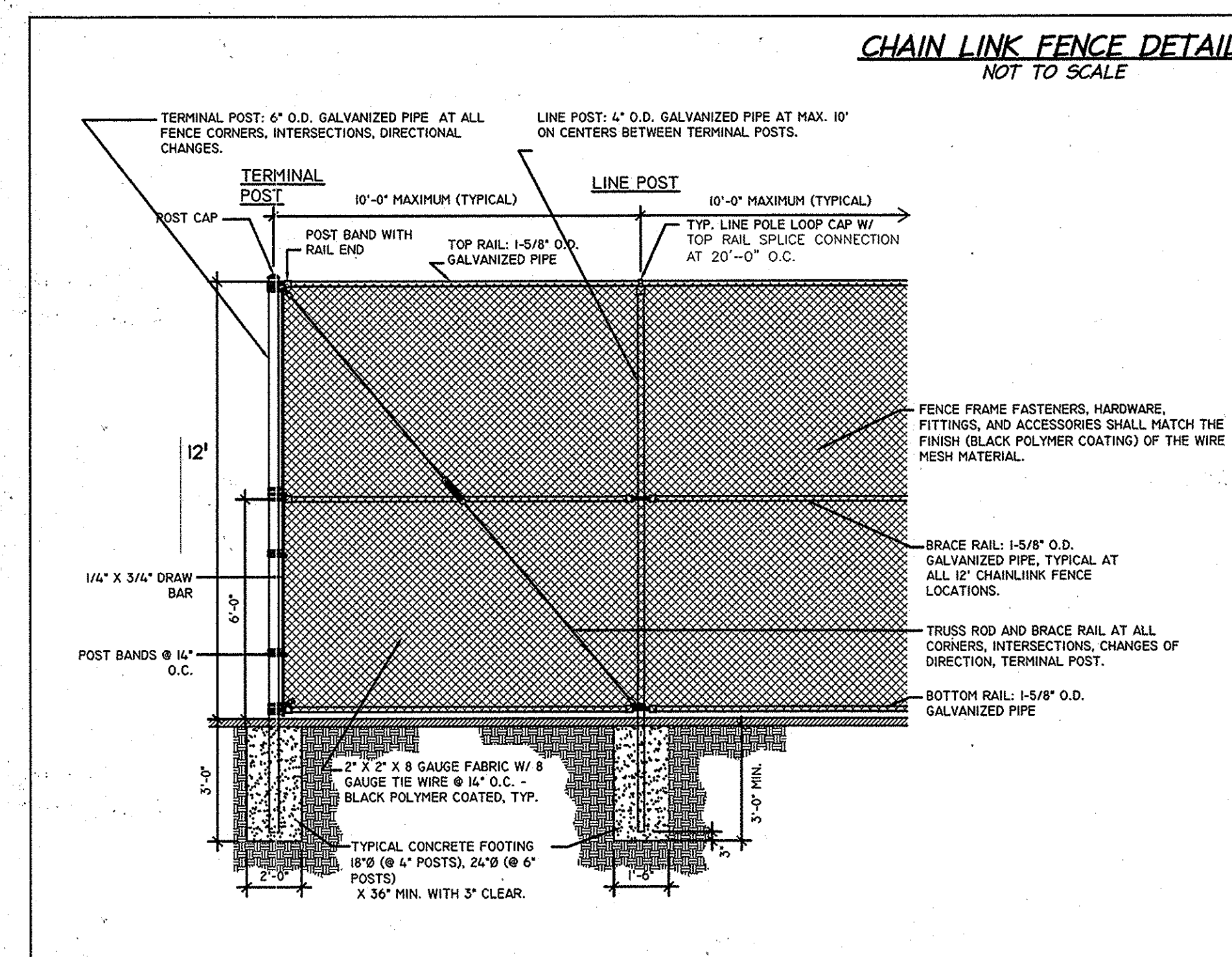


- Commercial - USPS Delivery Commercial - Private Delivery Residential Mailboxes Florence Cluster Box Units Salisbury Cluster Box Units Vertical Mailboxes 4B+ Horizontal Mailboxes 4C Mailboxes Large Locking Mailboxes High Security Cluster Boxes Mailbox Accessories Americana Mailboxes Brass Mailboxes Outdoor Parcel Lockers Single Post Mailboxes Mailbox Accessories Multi-Unit Post Mailboxes Multi-Unit Wall Mailboxes Column Mailboxes Florence Mailboxes

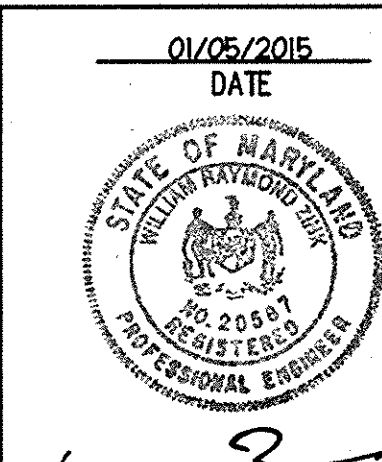
Item# 1570-128LK Regular Price \$1,235.00 Sale Price & Free Shipping: \$1,036.00

Click image above for an enlarged view. USPS Approved. ISO 9001 Certified. Above pedestal carries easy access to all mail slots.

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PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. SIGNATURE OF ENGINEER WILLIAM R. ZINK, P.E. DATE 01-05-2015



Approval stamps from the Planning Board of Howard County and the Department of Planning and Zoning. Includes project name: LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY.

PERMIT INFORMATION CHART table with columns: PROJECT NAME, LOT/PARCEL NO., CENSUS TRACT, DEED REF., GRID NO., ZONE, TAX MAP, ELECTION DISTRICT, WATER CODE, SENIOR CODE, TITLE, DESIGN: DAM, SCALE, PROJECT: 05115.001.02, DRAWN: DAM, DATE: APRIL 12, 2013, CHECKED: ENJ, APPROVED: WRZ, 13A OF 77.

**STORMWATER MANAGEMENT AS-BUILT CERTIFICATION**

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE FACILITY WAS CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEETS OR EXCEEDS THE REQUIREMENTS OF THE NATIONAL RESOURCES CONSERVATION SERVICE - MARYLAND CONSERVATION PRACTICE STANDARD FOR FIELDS (MD-378), IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, DETAILS AND SPECIFICATIONS ON THE APPROVED STORMWATER MANAGEMENT/POND PLANS.

**Brian E. Wagner, Professional Engineer**  
 MARYLAND LICENSE #510205, EXP. DATE: 04/7/2021  
 DATE OF AS-BUILT: MAR. 10, 2016

**STORMWATER MANAGEMENT AS-BUILT**

SURVEY PERFORMED BY Christopher Consultants, Ltd.  
 4001 FORBES BLVD, SUITE 140  
 LANHAM, MARYLAND 20706  
 240-290-1574  
 FIELD SURVEY DATE: MAR. 10, 2016

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 8/16/16  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 04-26-2016

- NOTES:**
- POND #1 IS CLASSIFICATION P-3 AND HAZARD CLASS 'B'. POND #2 IS CLASSIFICATION P-3 AND HAZARD CLASS 'A'.
  - TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
  - SWM FACILITY SHALL BE PRIVATELY OWNED BY THE PROPERTY OWNER. THE OWNER SHALL PERFORM MOWING/TRASH REMOVAL MAINTENANCE.
  - ACTUAL LENGTH AND DEPTH OF CUT-OFF TRENCH SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER IN THE FIELD. FILL MATERIAL FOR THE CUT-OFF TRENCH / CLAY CORE SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CL, CL, CH, OR SC. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT PROVIDED THAT THE CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.
  - SHCS SHALL BE 2" IN DIAMETER OR OTHERWISE INDICATED.
  - MHCs SHALL BE 1.5" LATERALS WITH 1" METER VAULTS.
  - REFER TO SHEET 62 FOR WALL DETAILS AND GRADES.
  - ALL BUILDING CONNECTIONS FOR WATER AND STORM TO BE 36" BELOW THE FINISHED FLOOR ELEVATION.

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

Signature: *[Signature]* DATE: 8/24/16  
 PRINT NAME BELOW SIGNATURE

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

Signature: *[Signature]* DATE: 8/16/16  
 PRINT NAME BELOW SIGNATURE

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

Signature: *[Signature]* DATE: 9/25/16  
 PRINT NAME BELOW SIGNATURE

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2013

FOR PROPOSED MAINTENANCE BUILDING ONLY  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AN AMERICAN SOCIETY OF PROFESSIONAL ENGINEERS UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 50779, EXPIRES 3/14/25

Signature: *[Signature]* DATE: 6/3/14  
 PRINT NAME BELOW SIGNATURE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
<i>[Signature]</i>	9-26-16
Chief, Division of Land Development	Date
<i>[Signature]</i>	10-5-16
Director	Date
<i>[Signature]</i>	10-5-16

09/01/15 02 REVISED SITE DEVELOPMENT PLAN - REVISED  
 FLOOR ELEVATIONS ON SINGLE FAMILY HOMES  
 10/23/15 03 REVISED SITE DEVELOPMENT PLAN - REVISED  
 GRADES AROUND PHASE III  
 7/25/16 04 REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 670 CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY ORAVACZ, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0090

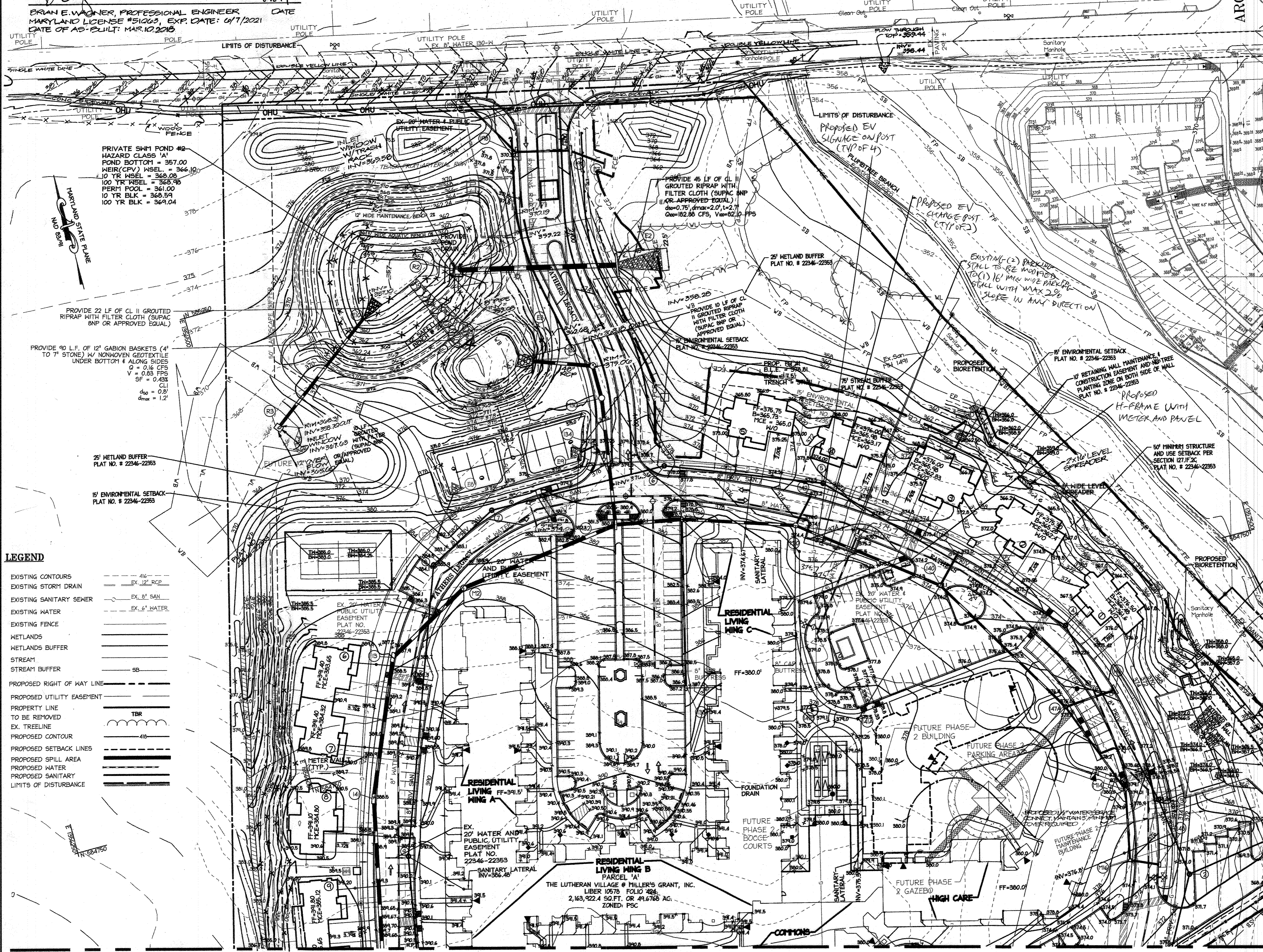
**christopher consultants**  
 engineering • surveying • land planning  
 christopher consultants, Inc.  
 7175 centerville gateway drive suite 100, column, md. 21046-9900  
 410.577.8800 • 410.391.8145 • fax 410.577.8803

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)	F07	

TITLE: **GRADING AND UTILITY PLAN**

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>14 OF 77</b>

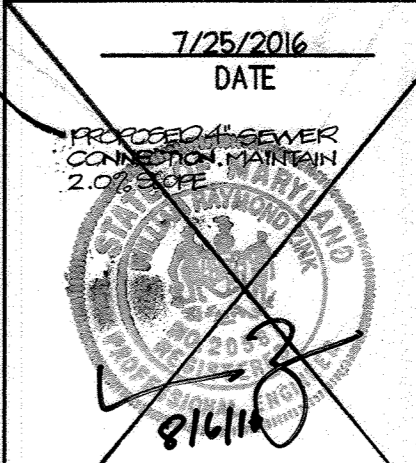
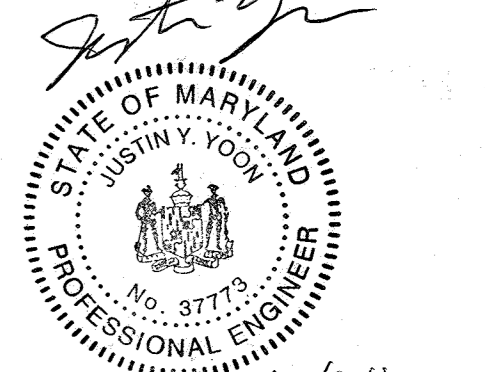


**LEGEND**

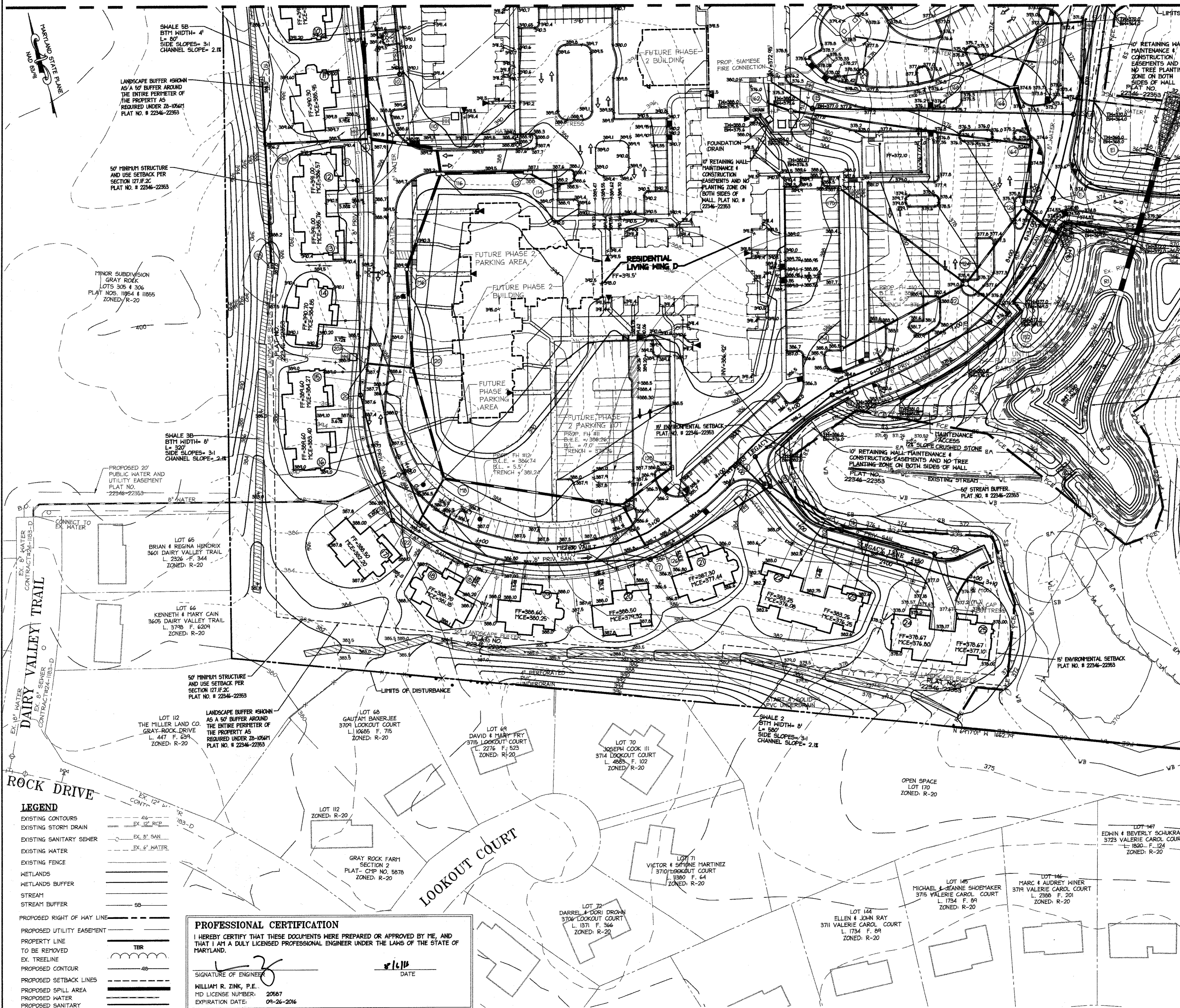
EXISTING CONTOURS	--- 4/6 ---
EXISTING STORM DRAIN	EX. 12" RCP
EXISTING SANITARY SEWER	EX. 8" SAN
EXISTING WATER	EX. 6" WATER
EXISTING FENCE	---
WETLANDS	---
WETLANDS BUFFER	---
STREAM	SB
STREAM BUFFER	---
PROPOSED RIGHT OF WAY LINE	---
PROPOSED UTILITY EASEMENT	---
PROPERTY LINE TO BE REMOVED	TBR
EX. TREELINE	---
PROPOSED CONTOUR	4/6
PROPOSED SETBACK LINES	---
PROPOSED SPILL AREA	---
PROPOSED WATER	---
PROPOSED SANITARY	---
LIMITS OF DISTURBANCE	---

MATCHLINE - SEE SHEET 15 FOR CONTINUATION

MATCHLINE - SEE SHEET 16 FOR CONTINUATION



MATCHLINE - SEE SHEET 14 FOR CONTINUATION



- NOTES:**
- POND #1 IS CLASSIFICATION P-3 AND HAZARD CLASS 'B' POND #2 IS CLASSIFICATION P-3 AND HAZARD CLASS 'A'
  - TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT
  - SM#1 FACILITY SHALL BE PRIVATELY OWNED BY THE PROPERTY OWNER. THE OWNER SHALL PERFORM MONITORING/TRASH REMOVAL MAINTENANCE.
  - ACTUAL LENGTH AND DEPTH OF CUT-OFF TRENCH SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER IN THE FIELD. FILL MATERIAL FOR THE CUT-OFF TRENCH / CLAY CORE SHALL CONFORM TO LIMITED SOIL CLASSIFICATION CL, CH, OR SC. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.
  - SM#S SHALL BE 2" IN DIAMETER OR OTHERWISE INDICATED.
  - M#S SHALL BE 1.5" LATERALS WITH 1' METER VAULTS.
  - REFER TO SHEET 62-64 FOR WALL DETAILS AND GRADES.
  - ALL BUILDING CONNECTIONS FOR WATER AND STORM TO BE 36" BELOW THE FINISHED FLOOR ELEVATION.

PROVIDE 69 LF OF CL II GROUTED RIPRAP WITH FILTER CLOTH (SUPAC 6NP OR APPROVED EQUAL) d50 = 0.30' dmax = 2.0' t = 2.7'

EXTENDED 10' RETAINING WALL SETBACK/EASEMENT WITH NO TREE PLANTING ZONE ON BOTH SIDES OF WALL

PROVIDE 10 LF OF CL II GROUTED RIPRAP WITH FILTER CLOTH (SUPAC 6NP OR APPROVED EQUAL)

PROVIDE 12 LF OF CL II GROUTED RIPRAP WITH FILTER CLOTH (SUPAC 6NP OR APPROVED EQUAL)

12' SAFETY BENCH @ 0% ELEV. 361.00

5' AQUATIC BENCH @ 0% ELEV. 359.00

PERMANENT POOL ELEV. 360.00

MOV ELEV. 360.00

PRIVATE SM#1 POND #1 PERMANENT POOL = 360.00 MOV HSEL = 360.00 WEIR (CPV) HSEL = 363.92 10 YR HSEL = 366.32 (BLOCKED) 100 YR HSEL = 368.95 (BLOCKED) TYPE 'B' HAZARD

CPV ELEV. 363.92

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

*[Signature]* 8/24/16  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

*[Signature]* 9/16/16  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE

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

*[Signature]* 9/29/16  
HOWARD SOIL CONSERVATION DISTRICT

MATCHLINE - SEE SHEET 16 FOR CONTINUATION

PLANS APPROVED BY  
*[Signature]*  
8/16/16

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE: MARCH 7, 2013

APPROVED  
MARYLAND DEPARTMENT OF ENVIRONMENT  
SMALL POND DAM SAFETY  
DATE: 10/5/16

Date	Revision Description
09/01/15	02 REVISED SITE DEVELOPMENT PLAN - REVISED
10/23/15	03 FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
	04 REVISED SITE DEVELOPMENT PLAN - REVISED GRADES AROUND PHASE III
7/25/16	04 REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVAZCO, EX. VICE PRESIDENT  
300 ST LIME CIRCLE  
NEWMARKET MD 21158  
(410) 948-0060

**christopher consultants**  
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christopherconsultants.com  
1772 clinton gateway drive suite 102, catonsville, md 21046-9992  
410.979.8880 • 410.979.8116 • fax 410.979.8881

PERMIT INFORMATION CHART			
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800	
DEED REF. L. 10578 F. 424	GRID NO. 700	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07		
TITLE: <b>GRADING AND UTILITY PLAN</b>			
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02	
DRAWN: DAM	DATE: APRIL 12, 2013		
CHECKED: ENJ	APPROVED: WRZ		

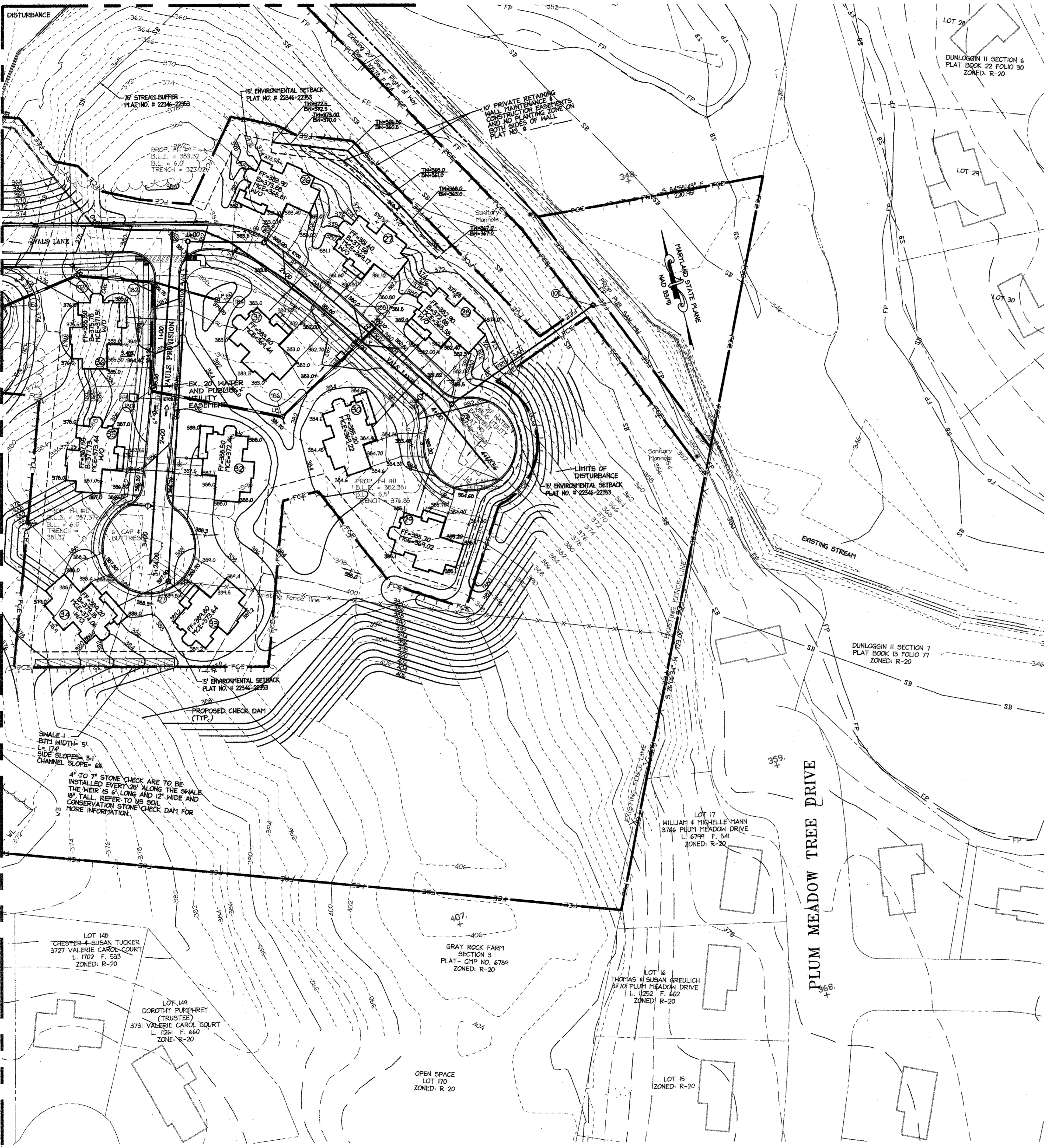
**PROFESSIONAL CERTIFICATION**

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

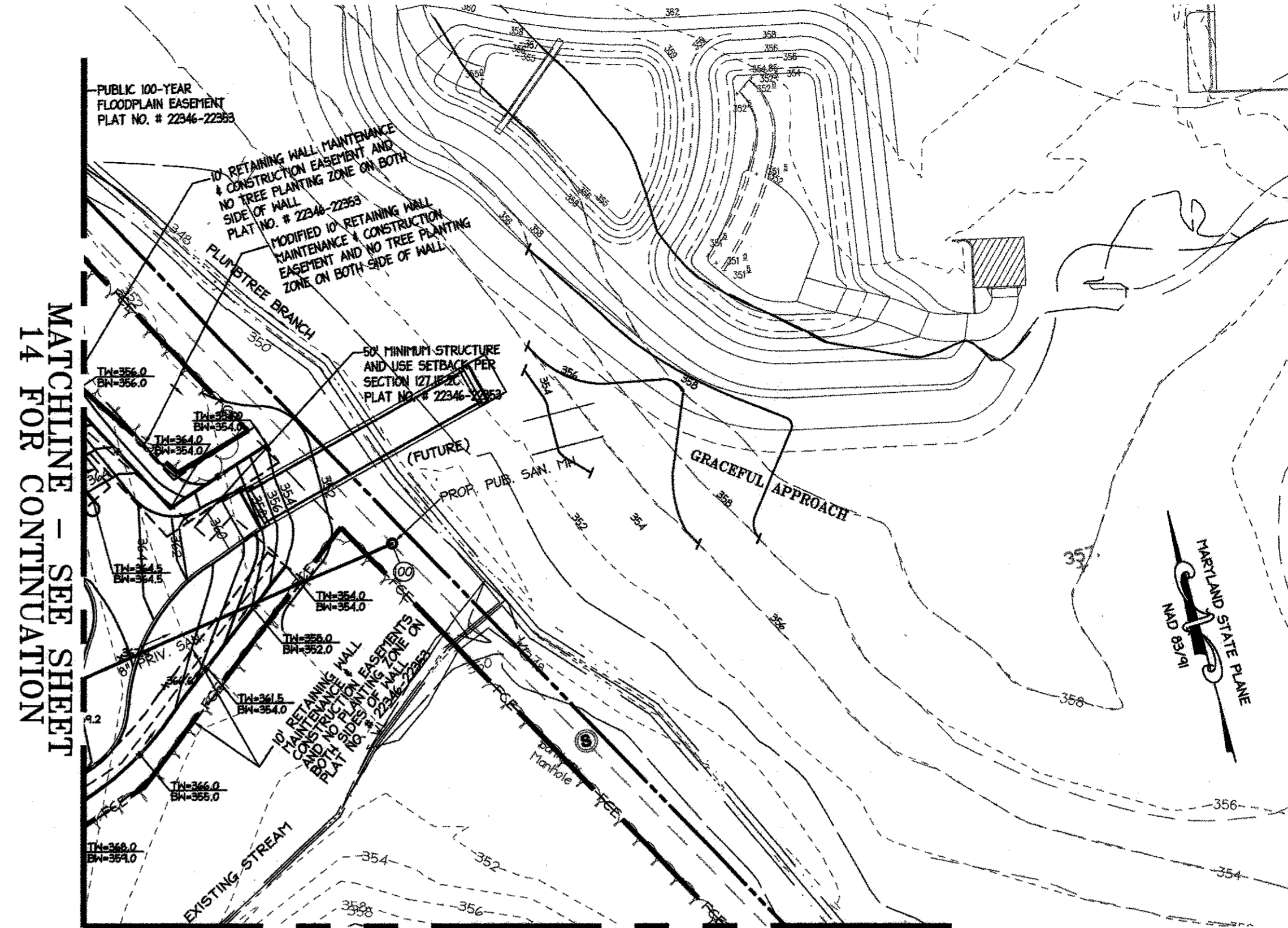
*[Signature]* 8/16/16  
SIGNATURE OF ENGINEER  
DATE

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016

MATCHLINE - SEE THIS SHEET FOR CONTINUATION



MATCHLINE - SEE SHEET 15 FOR CONTINUATION



MATCHLINE - SEE SHEET 14 FOR CONTINUATION

SEE THIS SHEET FOR CONTINUATION

**LEGEND**

EXISTING CONTOURS	---
EXISTING STORM DRAIN	---
EXISTING SANITARY SEWER	---
EXISTING WATER	---
EXISTING FENCE	---
WETLANDS	---
WETLANDS BUFFER	---
STREAM	---
STREAM BUFFER	---
PROPOSED RIGHT OF WAY LINE	---
PROPOSED UTILITY EASEMENT	---
PROPERTY LINE	---
TO BE REMOVED	---
EX. TREELINE	---
PROPOSED CONTOUR	---
PROPOSED SETBACK LINES	---
PROPOSED SPILL AREA	---
PROPOSED WATER	---
PROPOSED SANITARY	---
LIMITS OF DISTURBANCE	---

- NOTES:**
1. POND #1 IS CLASSIFICATION P-3 AND HAZARD CLASS 'B'. POND #2 IS CLASSIFICATION P-3 AND HAZARD CLASS 'A'.
  2. TREES, SHRUBS AND OTHER WOODY VEGETATION NOT ALLOWED WITHIN TWENTY-FIVE (25) FEET OF THE RISER STRUCTURE AND NOT ALLOWED WITHIN FIFTEEN (15) FEET OF ANY PORTION OF THE EMBANKMENT.
  3. S/W FACILITY SHALL BE PRIVATELY OWNED BY THE PROPERTY OWNER. THE OWNER SHALL PERFORM TROWING/TRASH REMOVAL MAINTENANCE.
  4. ACTUAL LENGTH AND DEPTH OF CUT-OFF TRENCH SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER IN THE FIELD. FILL MATERIAL FOR THE CUT-OFF TRENCH / CLAY CORE SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CL, CH, OR SC. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.
  5. S/C'S SHALL BE 2" IN DIAMETER OR OTHERWISE INDICATED.
  6. W/C'S SHALL BE 1.5" LATERALS WITH 1" METER VAULTS.
  7. REFER TO SHEET 62-69 FOR WALL DETAILS AND GRADES.
  8. ALL BUILDING CONNECTIONS FOR WATER AND STORM TO BE 36" BELOW THE FINISHED FLOOR ELEVATION.

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

Signature of Engineer: *William R. Zink, P.E.*  
 Date: 8/16/16

WILLIAM R. ZINK, P.E.  
 P.E. LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016



APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	9-26-16
Chief, Division of Land Development	10-5-16
Director	10-5-16

Date	No.	Revision Description
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
10/23/15	03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
		REVISED SITE DEVELOPMENT PLAN - REVISED
		GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAVAZO, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0080

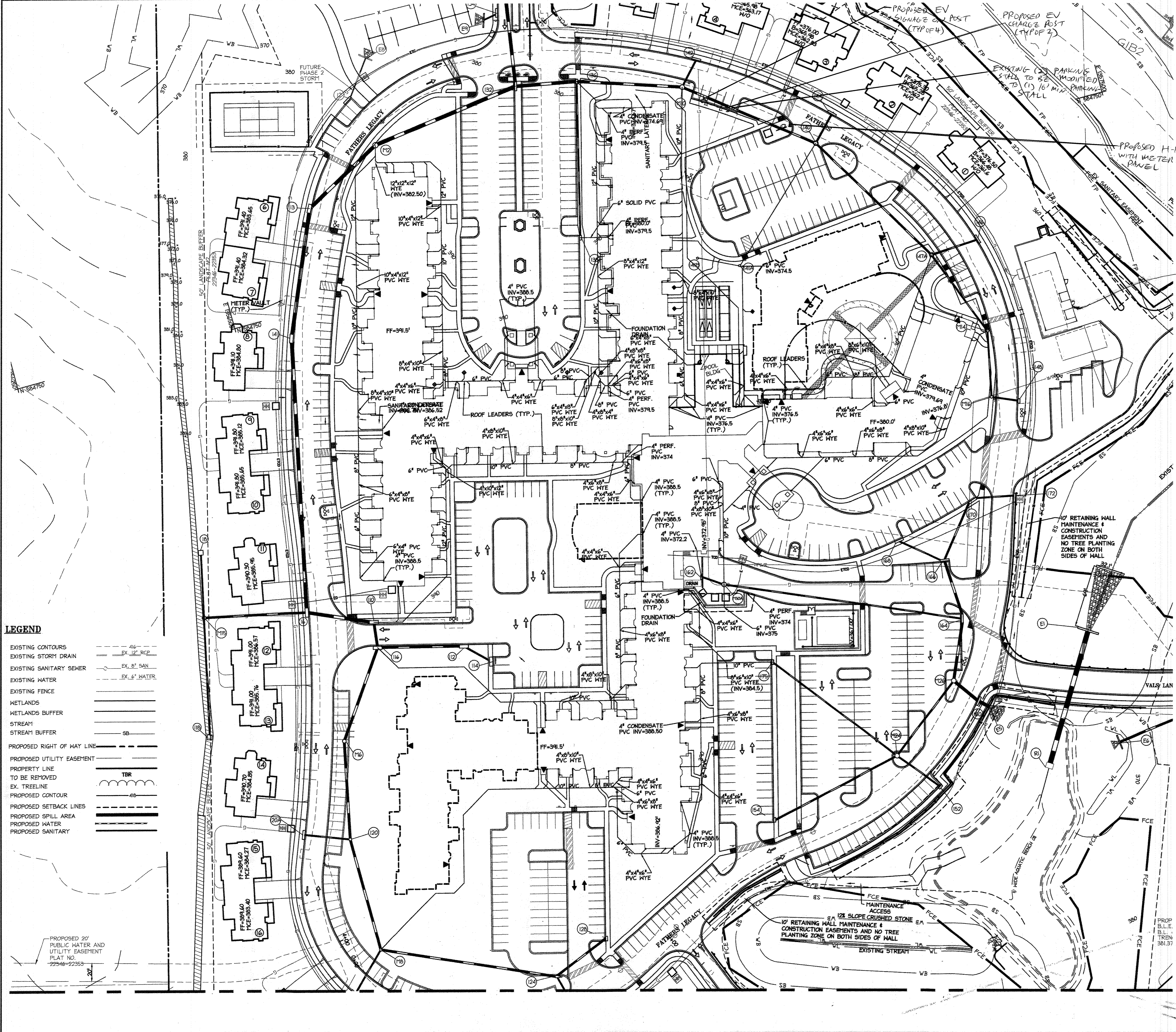


PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE:  
**GRADING AND UTILITY PLAN**

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRANN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>16 OF 77</b>



**LEGEND**

EXISTING CONTOURS	---
EXISTING STORM DRAIN	---
EXISTING SANITARY SEWER	---
EXISTING WATER	---
EXISTING FENCE	---
WETLANDS	---
WETLANDS BUFFER	---
STREAM	---
STREAM BUFFER	---
PROPOSED RIGHT OF WAY LINE	---
PROPOSED UTILITY EASEMENT	---
PROPERTY LINE TO BE REMOVED	---
EX. TREELINE	---
PROPOSED CONTOUR	---
PROPOSED SETBACK LINES	---
PROPOSED SPILL AREA	---
PROPOSED WATER	---
PROPOSED SANITARY	---

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *William R. Zink, P.E.*  
 DATE: 8/16/16  
 M.D. LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016

- NOTES:**
- ALL BUILDING CONNECTIONS FOR WATER AND STORM TO BE 36" BELOW THE FINISHED FLOOR ELEVATION.
  - ALL ROOF DRAINS TO BE 4" PVC UNLESS OTHERWISE NOTED.
  - ALL STORY HEADER PIPE INVERTS AT DISCHARGE POINTS SHOWN ON THE STORM UTILITY PROFILES. A CONSTANT SLOPE SHALL BE HELD BETWEEN THE FURTHEST UPSTREAM BUILDING CONNECTION AND THE INVERT WHERE IT ENTERS THE TERMINAL MANHOLE.

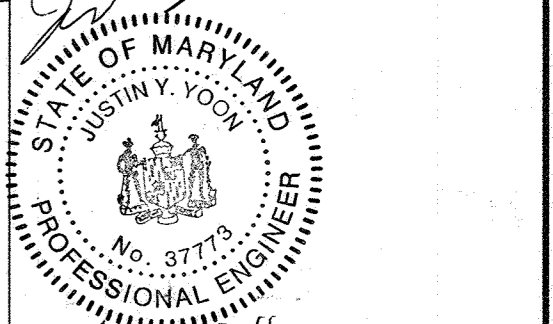
**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 SIGNATURE OF ENGINEER: *Brian E. Wagner, P.E.*  
 DATE: 8/12/19  
 MARYLAND REG. NO.: 51063  
 EXPIRATION DATE: 06/07/2021  
 DATE OF AS-BUILT: 03/10/2018



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

SIGNATURE OF ENGINEER: *John R. Volter*  
 DATE: 8/16/16

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

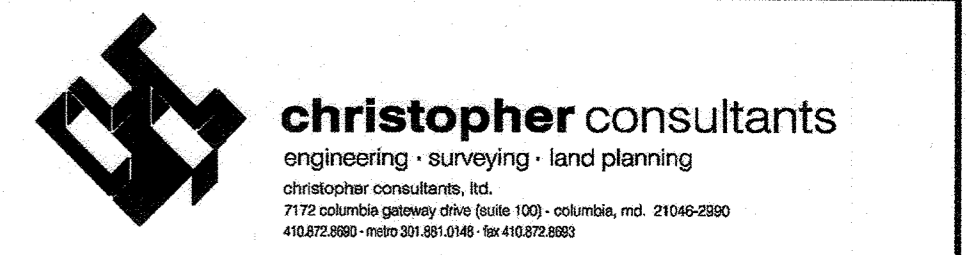


FOR THE HOWARD SOIL CONSERVATION DISTRICT:  
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF ENGINEER: *John R. Volter*  
 DATE: 9/24/16

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2013

Date	No.	Revision Description
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
10/23/15	03	REVISED SITE DEVELOPMENT PLAN - REVISED GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 700 CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAVACCO, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0080

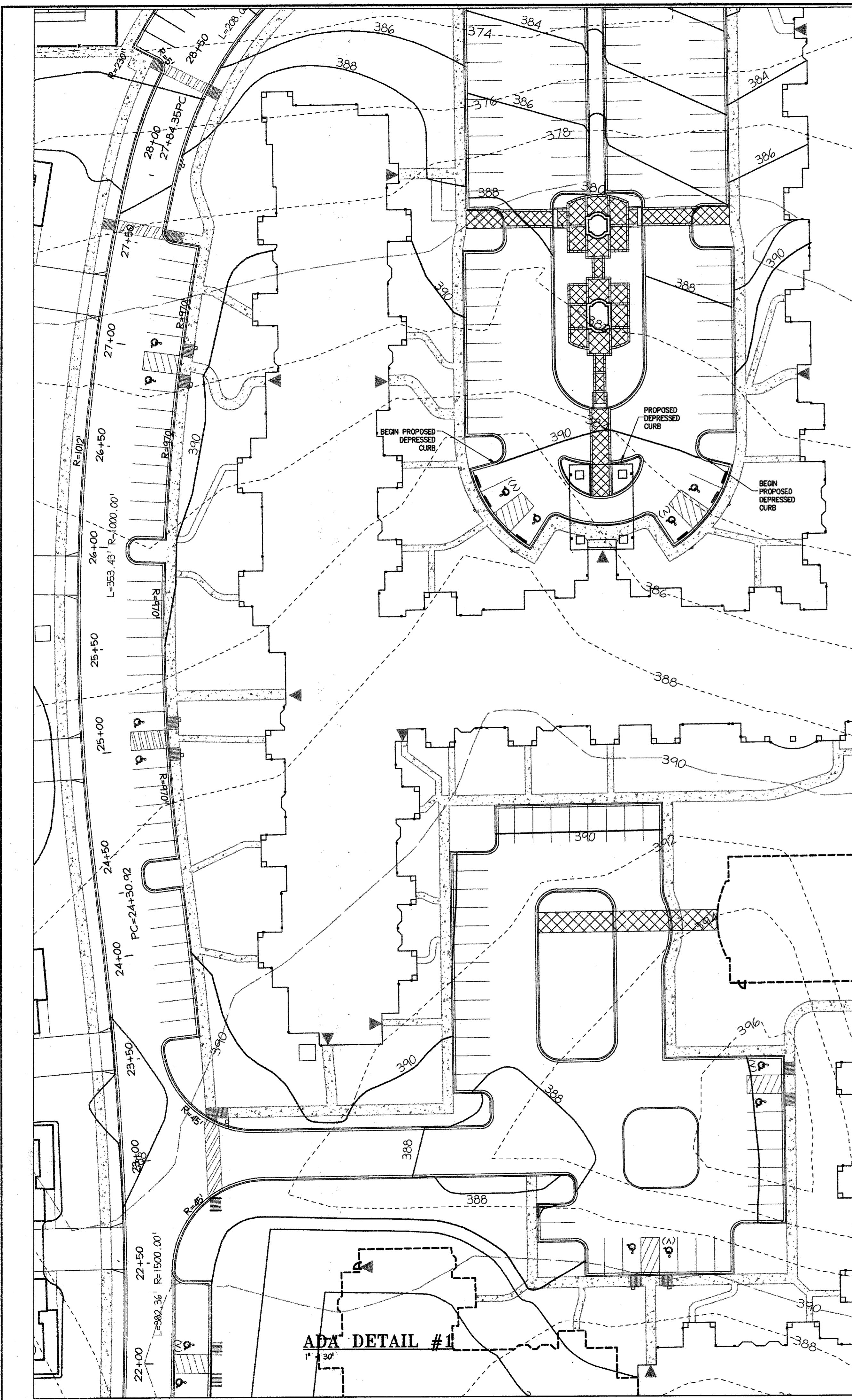


**PERMIT INFORMATION CHART**

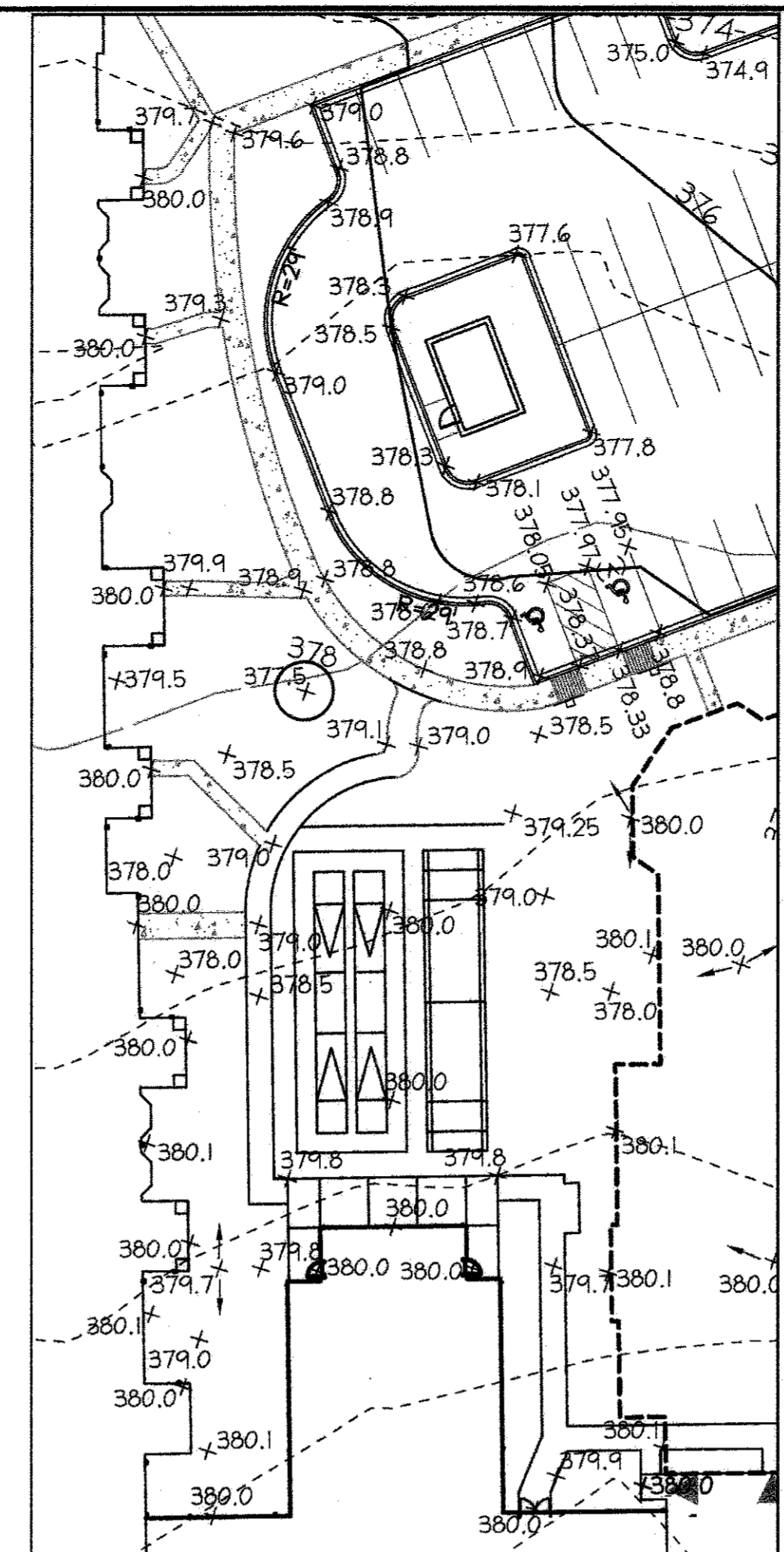
PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

**TITLE: ROOF LEADER AND CONDENSATE PLAN**

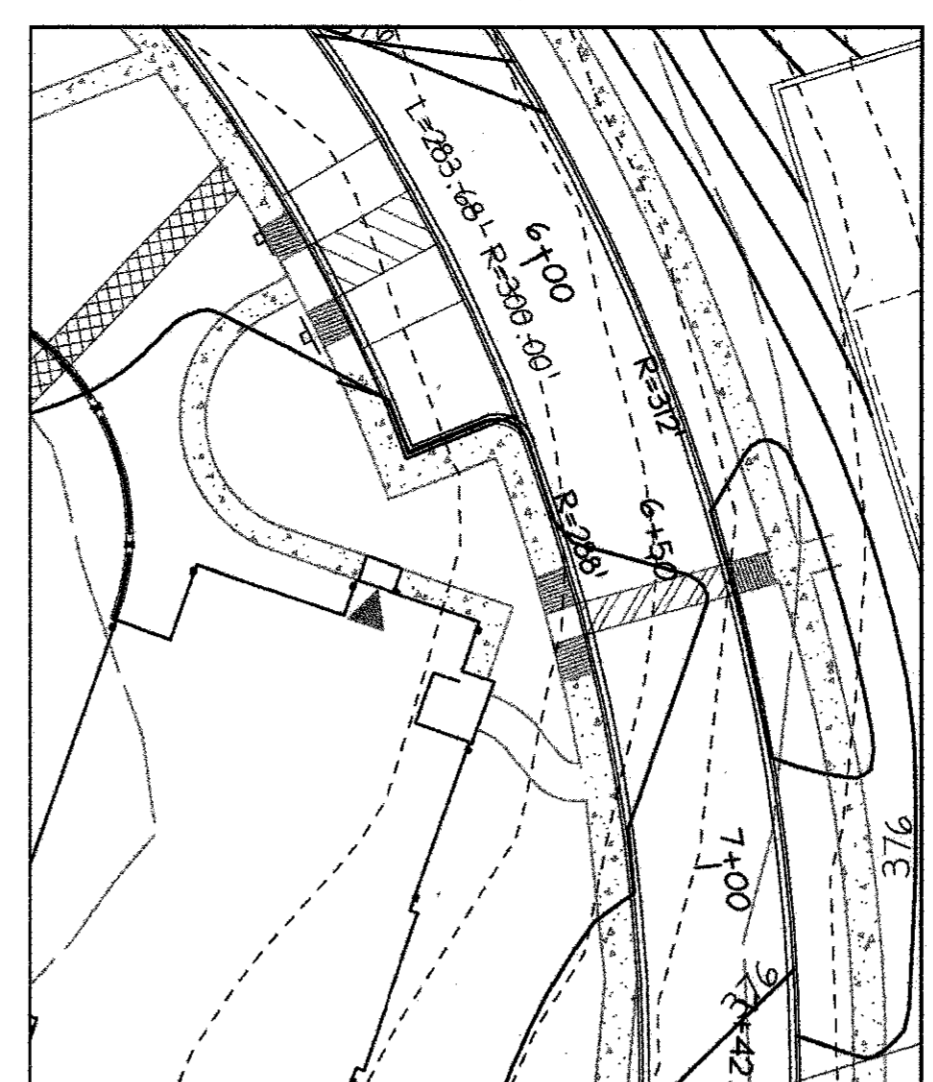
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DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	



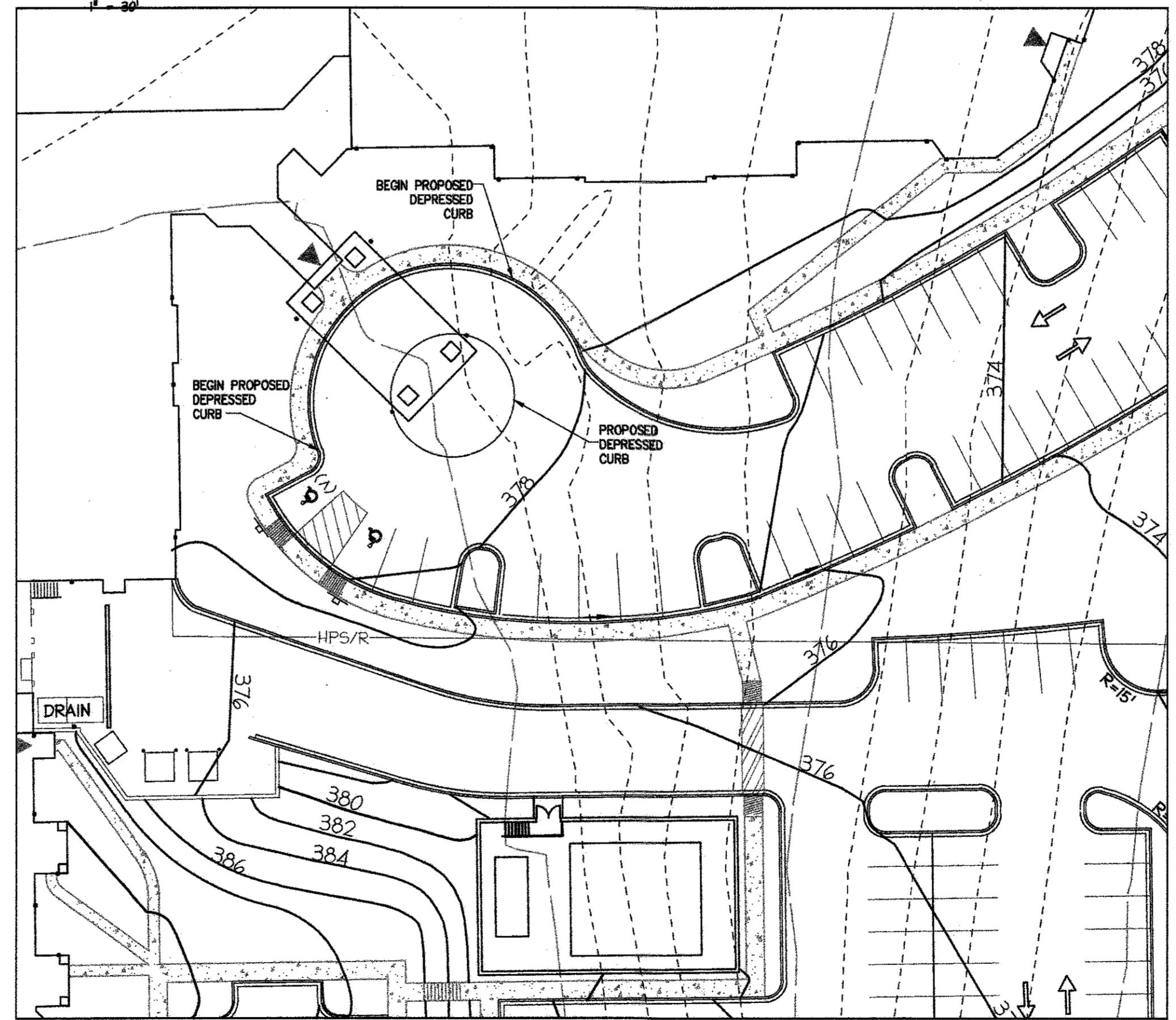
**ADA DETAIL #1**  
1" = 30'



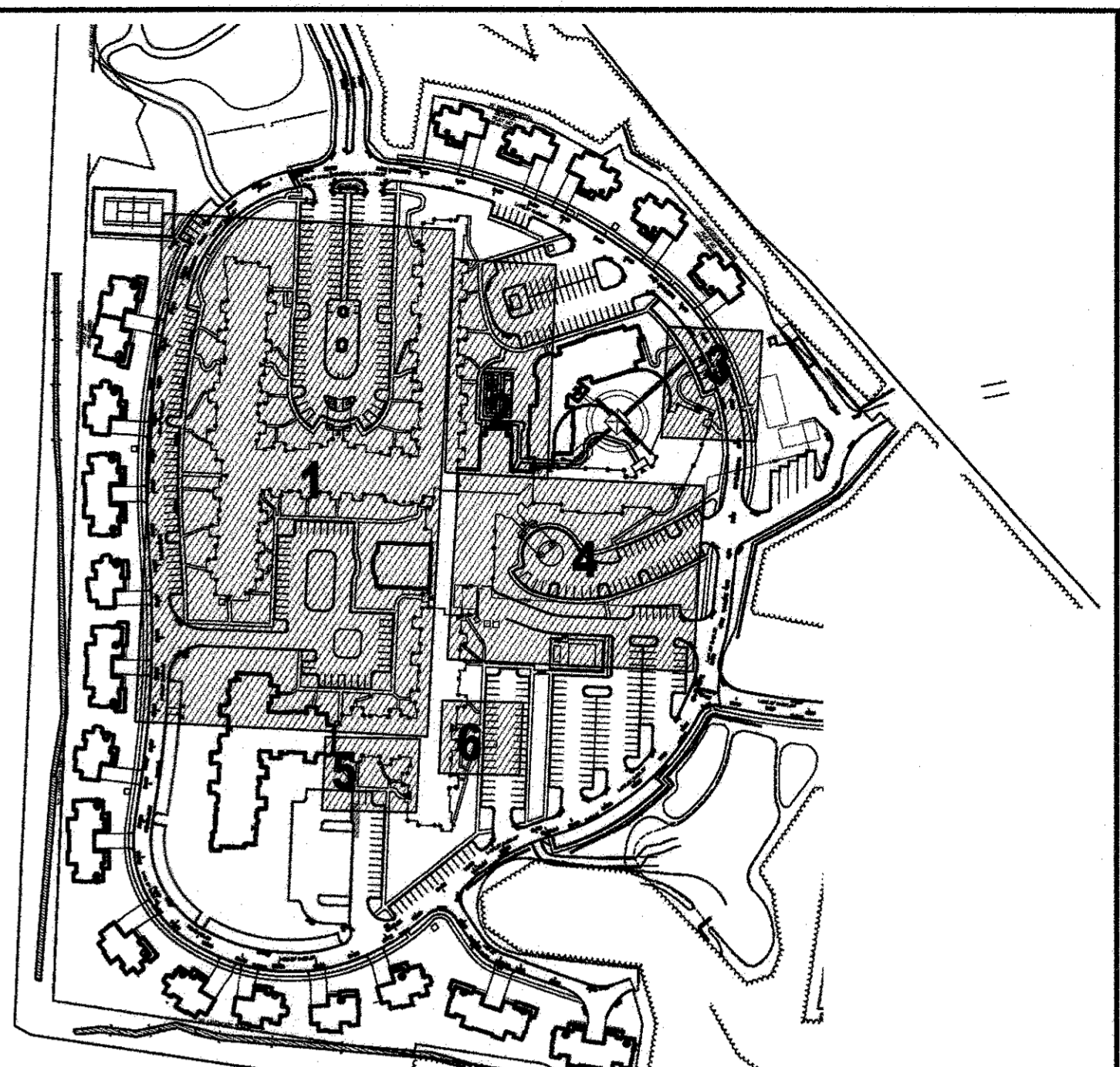
**ADA DETAIL #2**  
1" = 30'



**ADA DETAIL #3**  
1" = 30'



**ADA DETAIL #4**  
1" = 30'



**SHEET KEY**  
NOT TO SCALE

**LEGEND**

- PROPERTY LINE
- PROPOSED CONTOUR
- PROPOSED SPOT
- HANDICAP SPACE (VAN ACCESSIBLE)
- HANDICAP SPACE
- PROPOSED BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9-26-16  
Chief, Development Engineering Division **MR** Date

*[Signature]* 10-5-16  
Chief, Division of Land Development Date

*[Signature]* 10-5-16  
Director Date

09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
10/23/15	03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
		REVISED SITE DEVELOPMENT PLAN - REVISED
		GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
120 CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVAZO, EX. VICE PRESIDENT  
300 ST. LUNE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0000



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

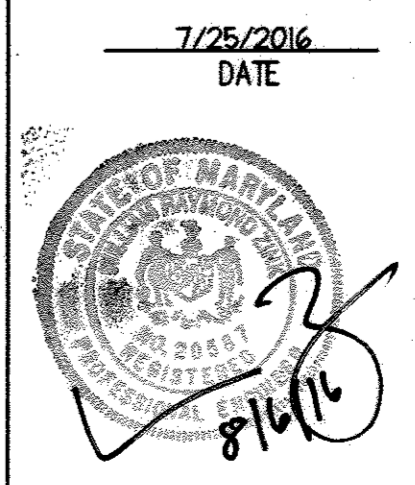
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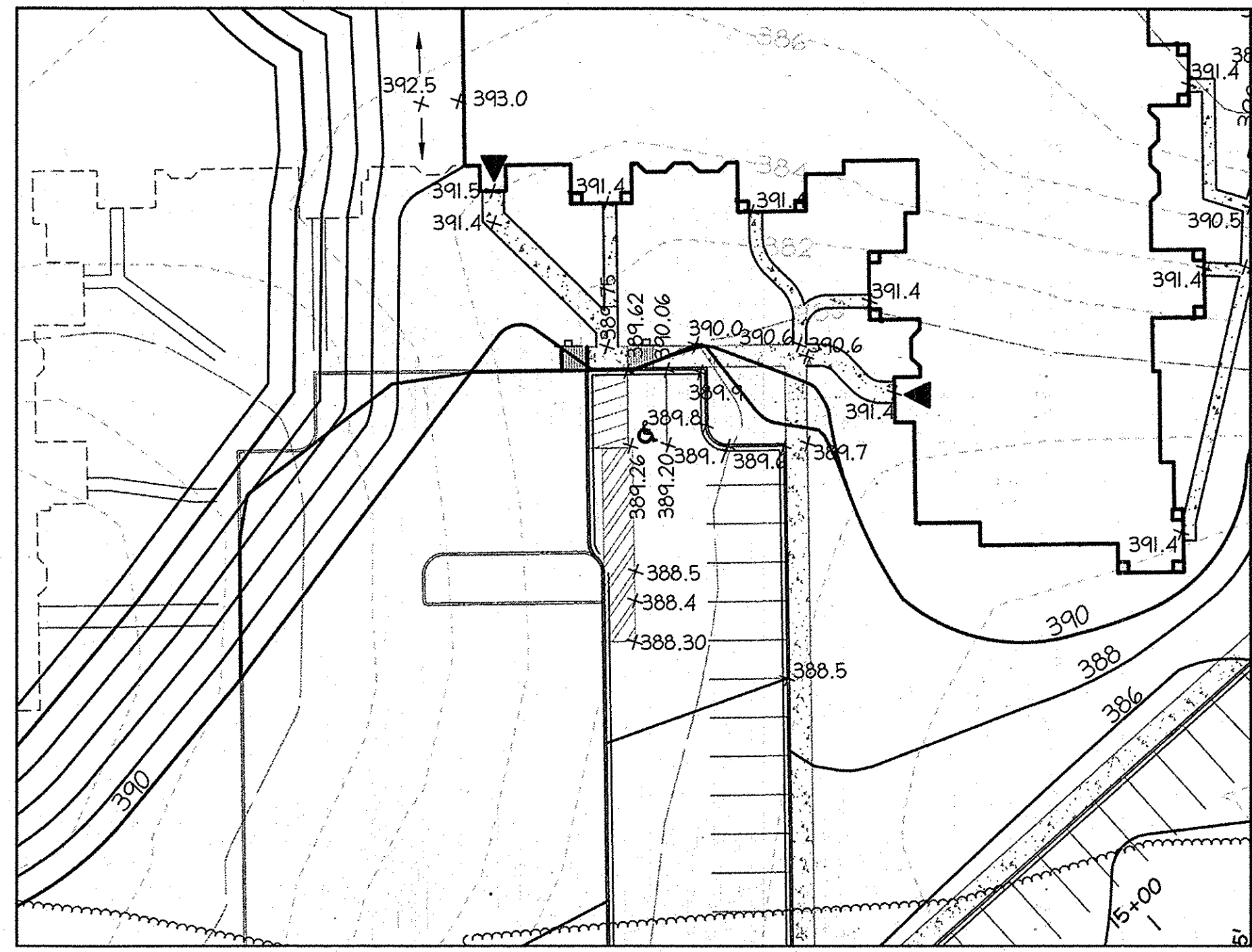
DESIGN: DAM	SCALE: 1" = 30'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>17 OF 77</b>

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

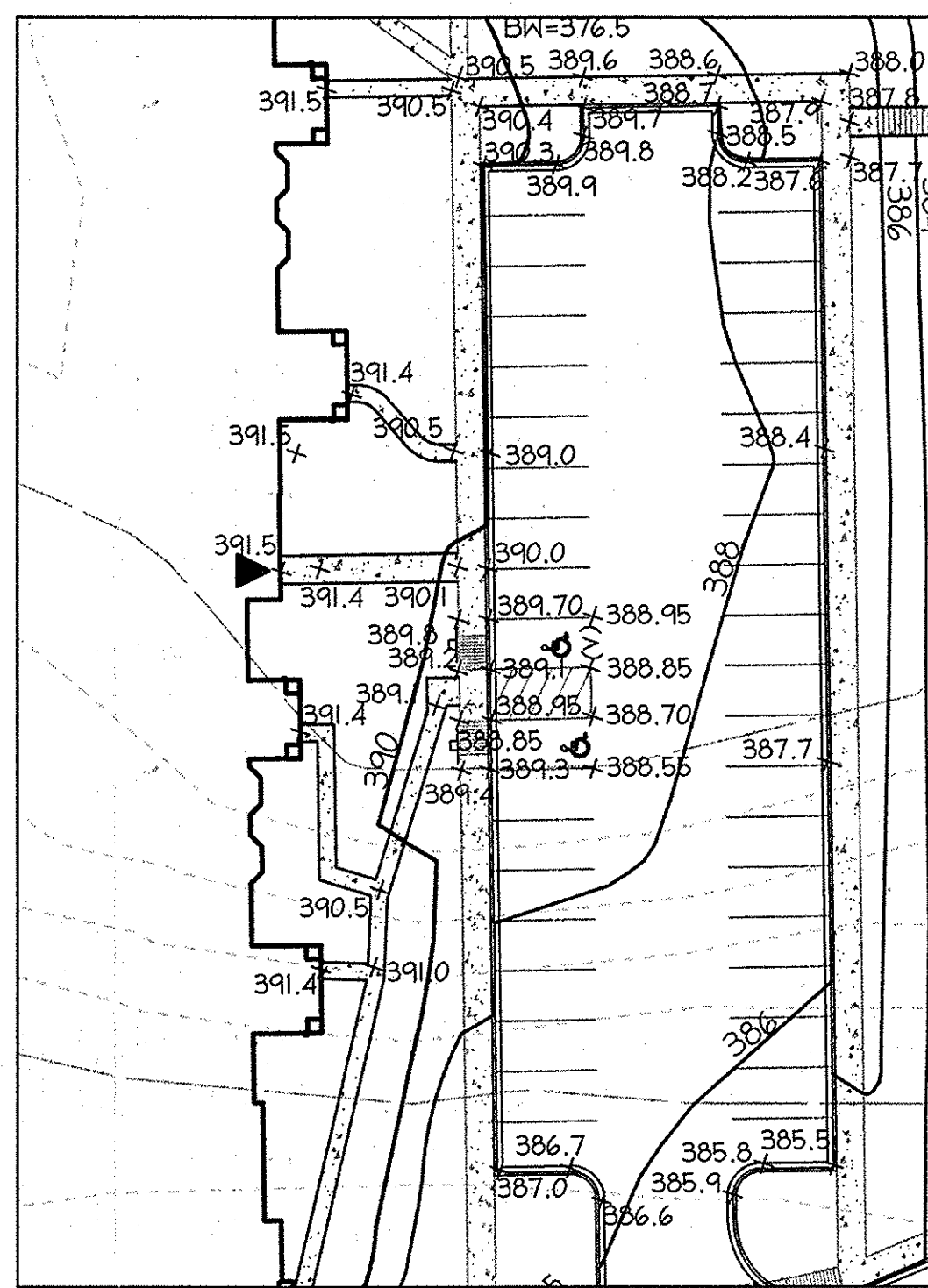
*[Signature]* 8/16/16  
DATE

SIGNATURE OF ENGINEER  
**WILLIAM R. ZINK, P.E.**  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016

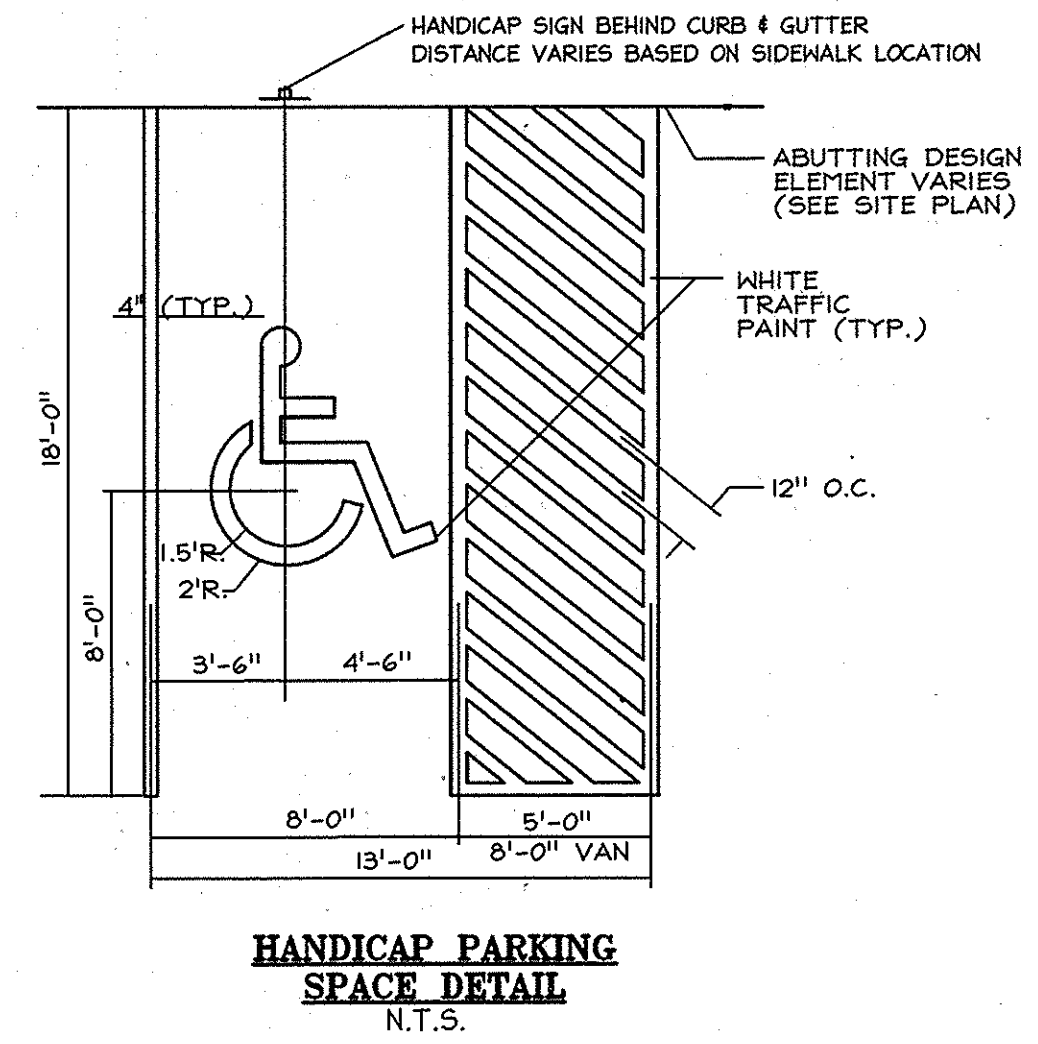




ADA DETAIL #5

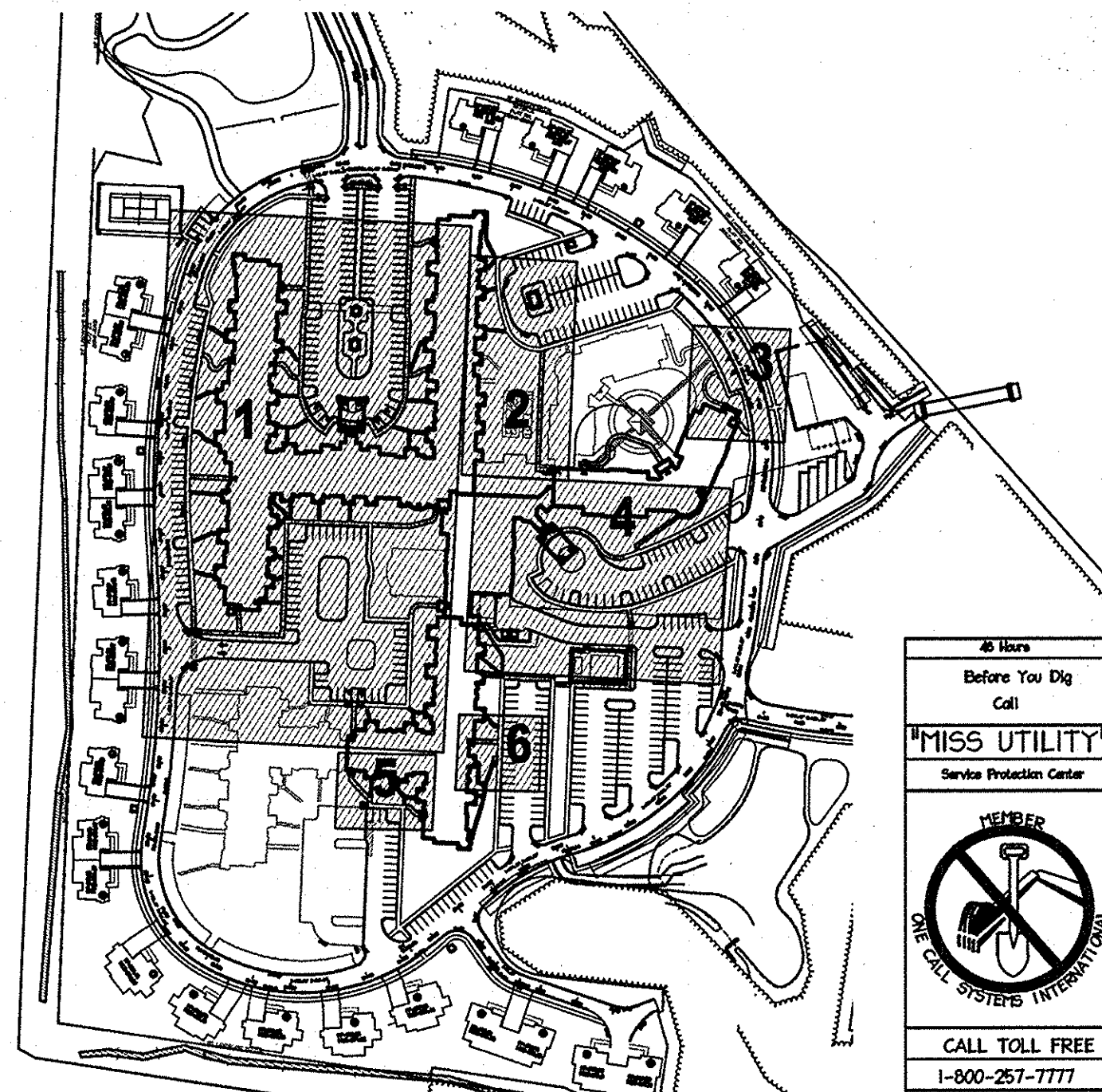


ADA DETAIL #6



**LEGEND**

- PROPERTY LINE
- PROPOSED CONTOUR
- PROPOSED SPOT
- HANDICAP SPACE (VAN ACCESSIBLE)
- HANDICAP SPACE
- PROPOSED BUILDING ENTRANCE ON AN ACCESSIBLE ROUTE



SHEET KEY  
NOT TO SCALE

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i> Chief, Development Engineering Division	2-20-15 Date
<i>[Signature]</i> Chief, Division of Land Development	2-26-15 Date
<i>[Signature]</i> Director	2/26/15 Date
01/05/15	01 REVISED SITE DEVELOPMENT PLAN
Date	No.
Revision Description	
LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY	
OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: ROY CHANVACK, EX. VICE PRESIDENT 300 ST LUKES CIRCLE WESTMINSTER MD 21158 (410) 848-0050	

**christopher consultants**  
engineering • surveying • land planning  
christopher consultants, Inc.  
7172 columbia gateway drive suite 100 • columbia, md. 21046-2900  
410.872.8800 • fax 410.872.8803

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT		LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)		SEWER CODE F07	

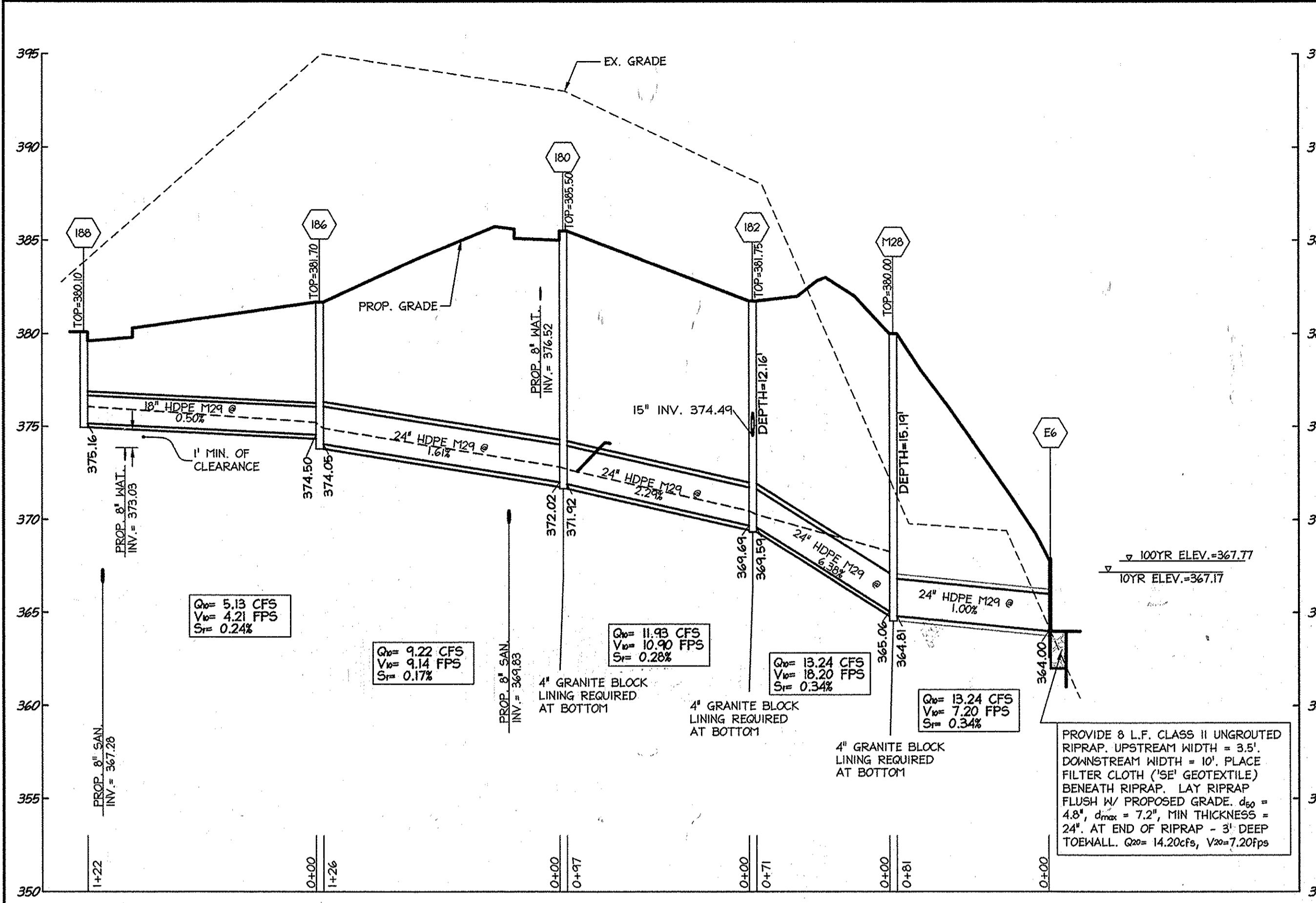
TITLE: ACCESSIBLE ROUTE GRADING DETAIL		
DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	18 of 77
CHECKED: ENJ	APPROVED: WRZ	

**PROFESSIONAL CERTIFICATION**  
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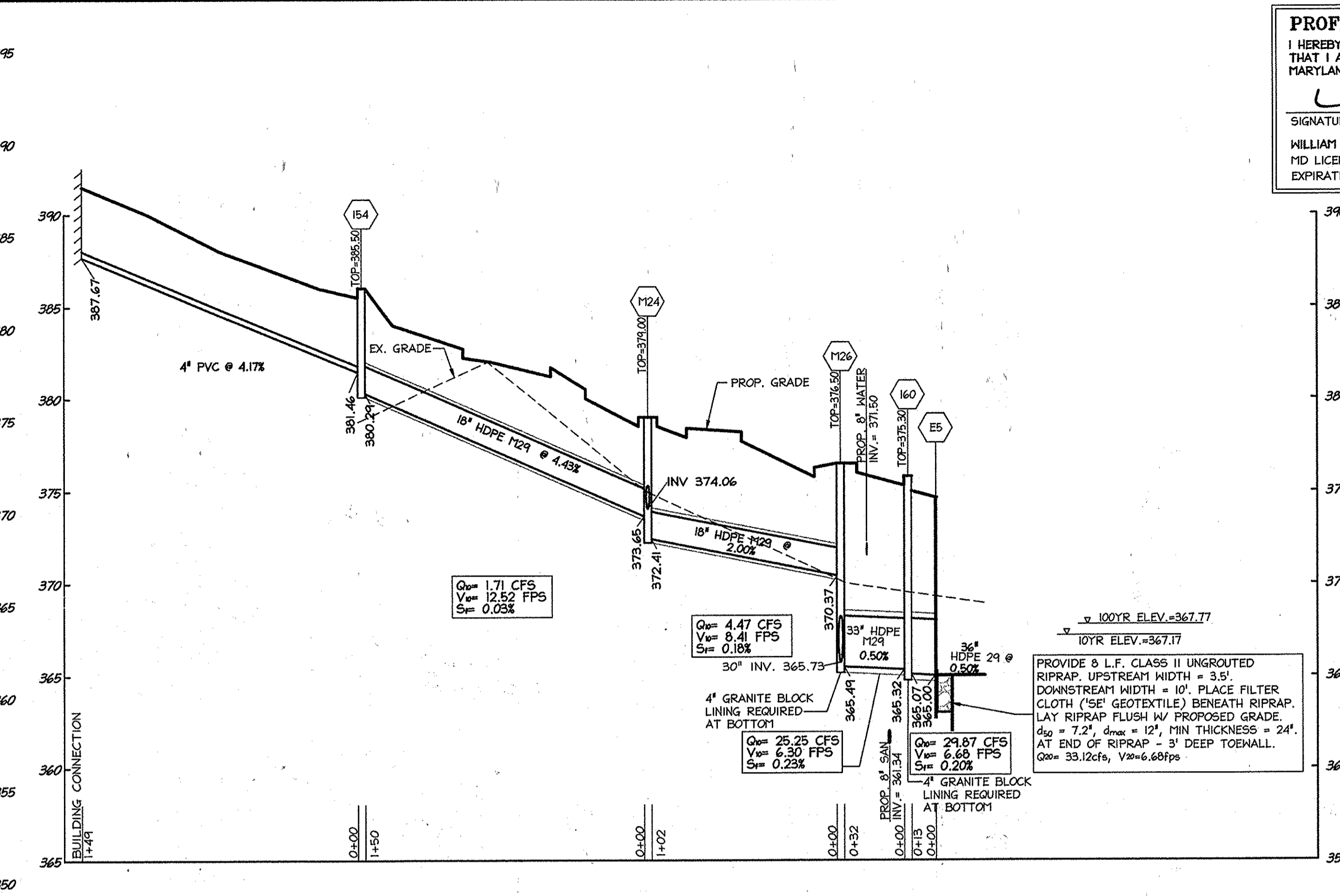
*[Signature]* 01-05-2015  
DATE

SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016





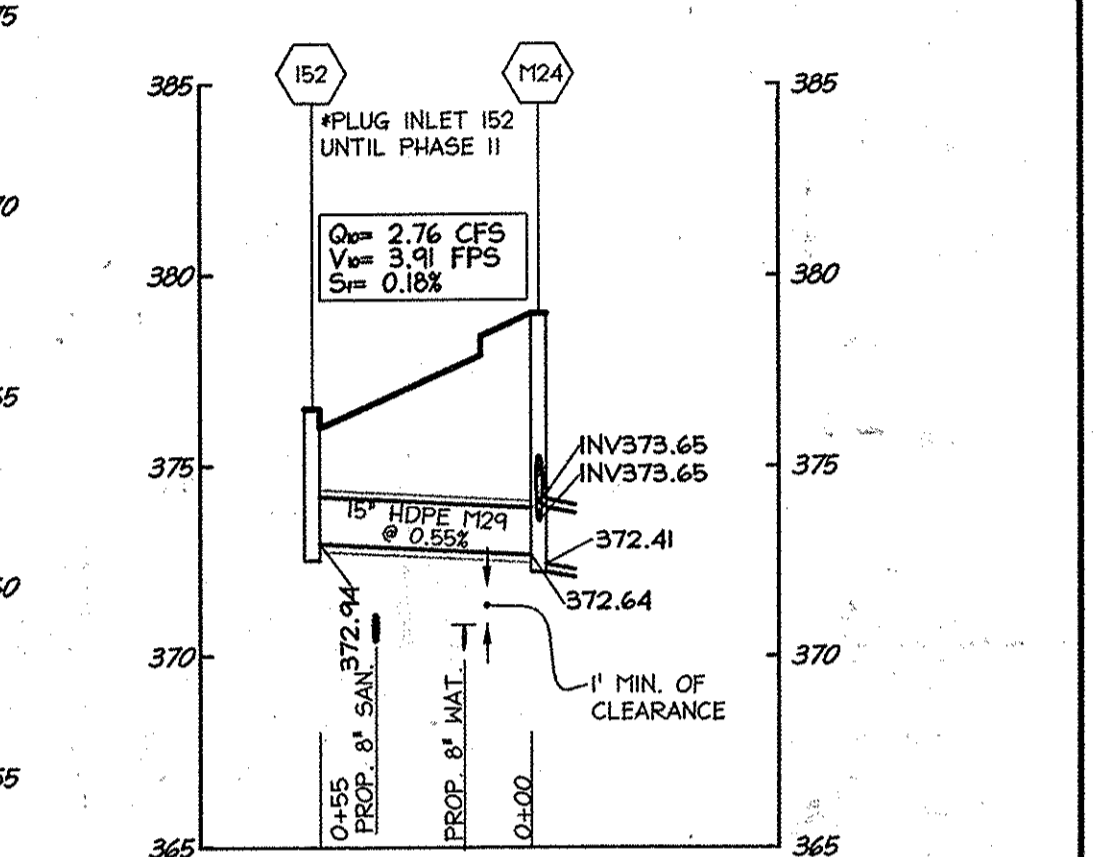
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 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



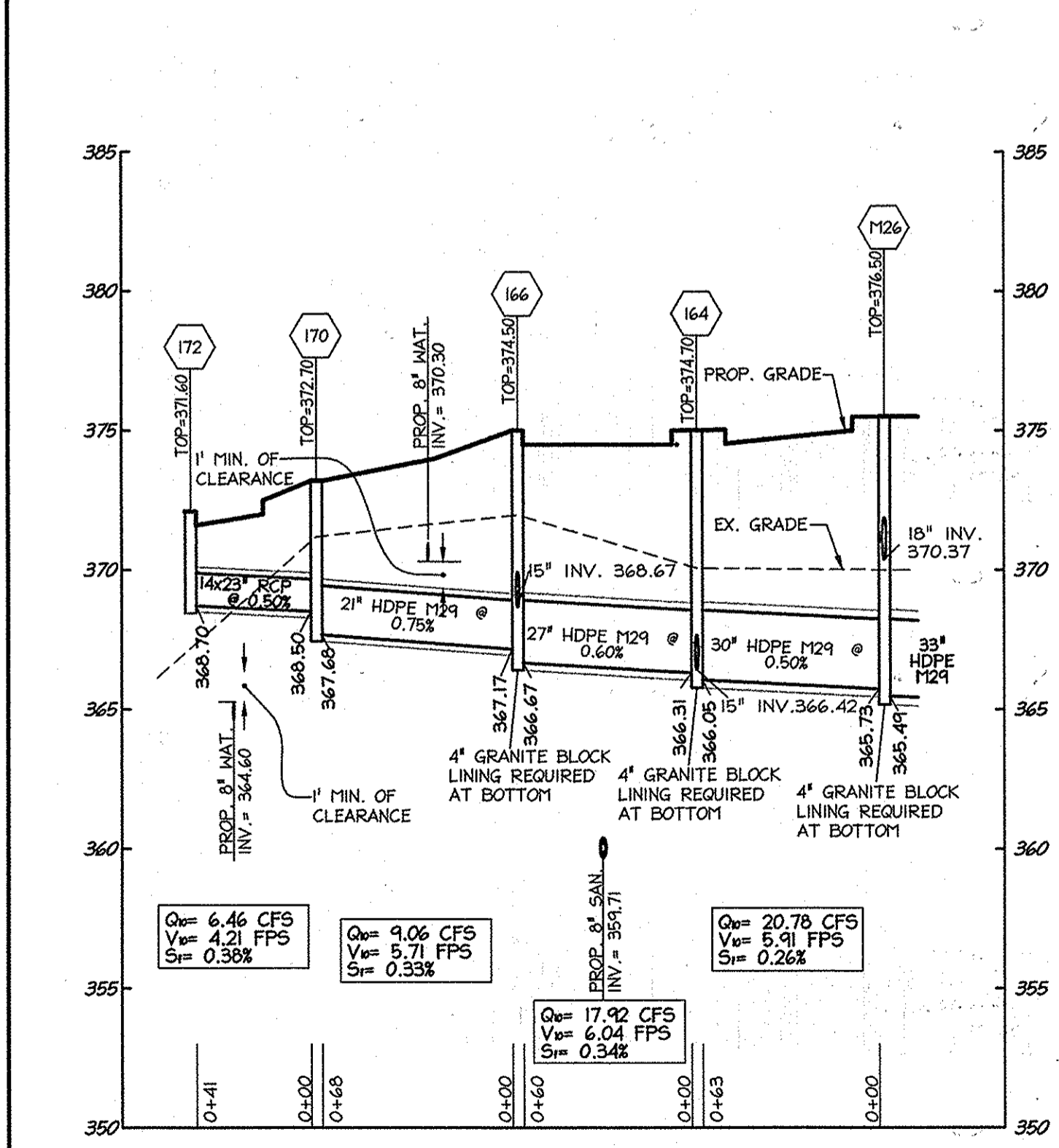
**STORM DRAIN PROFILE - BUILDING TO ENDWALL E-5**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'

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 SIGNATURE OF ENGINEER: *[Signature]*  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 04-26-2016  
 DATE: 1/27/16

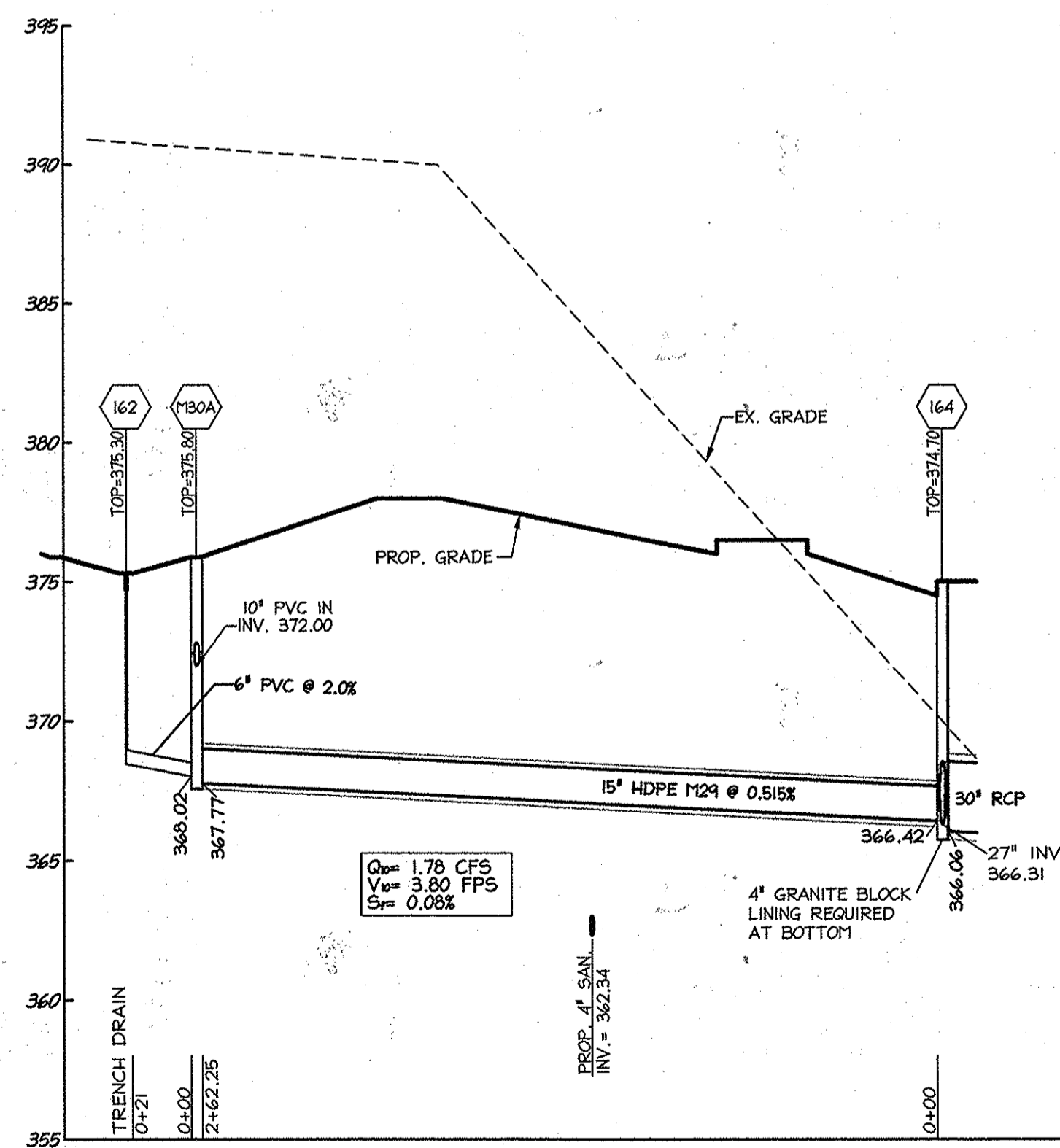
Before You Dig Call  
 MISS UTILITY  
 Service Protection Center  
  
 CALL TOLL FREE  
 1-800-251-7777



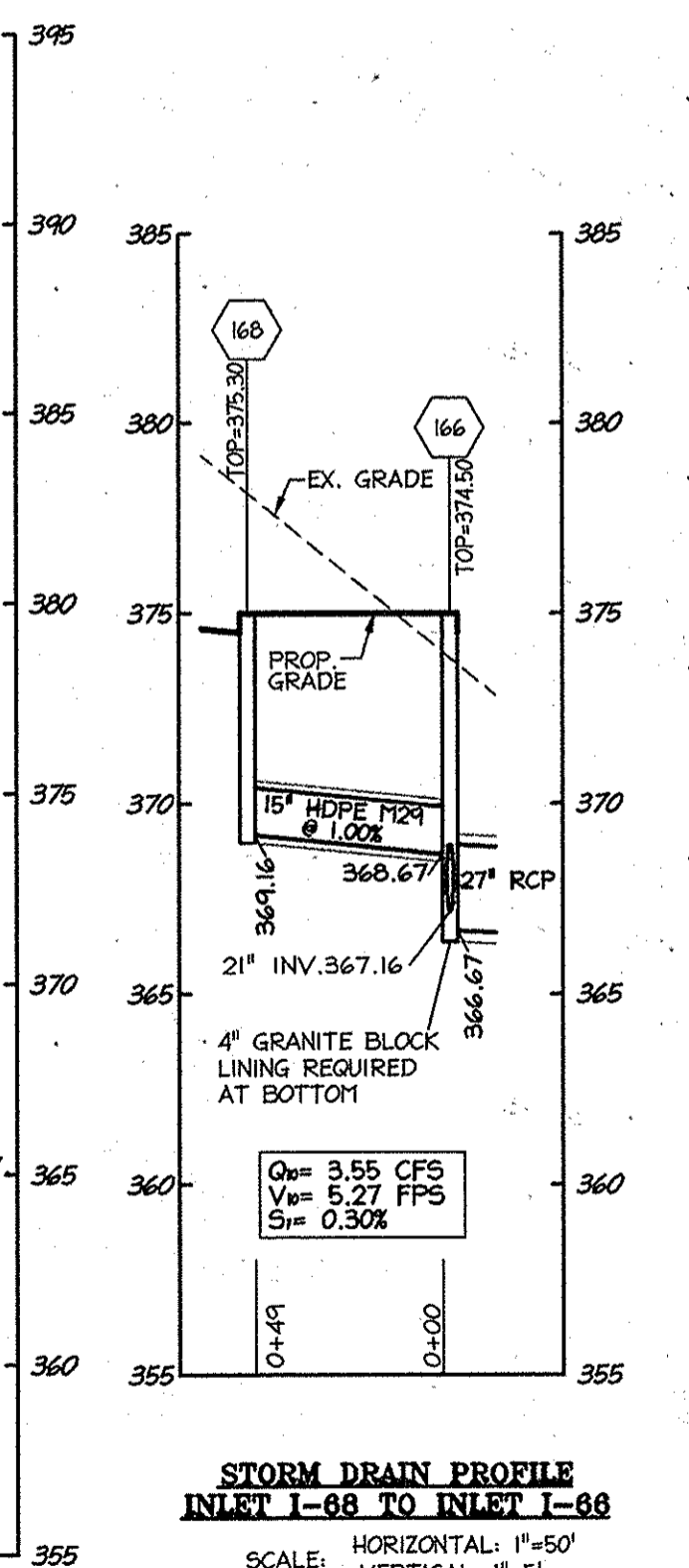
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 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



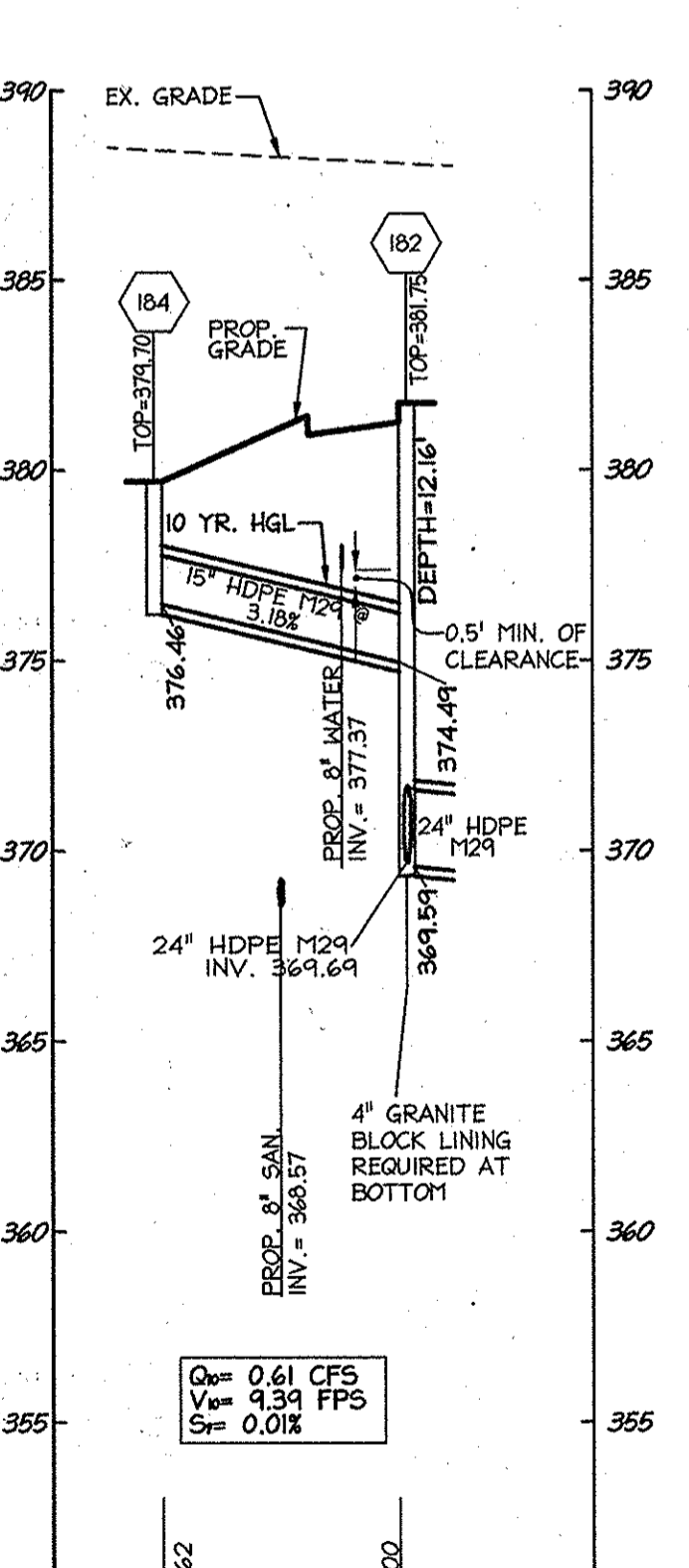
**STORM DRAIN PROFILE - INLET I-72 TO MANHOLE M-26**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



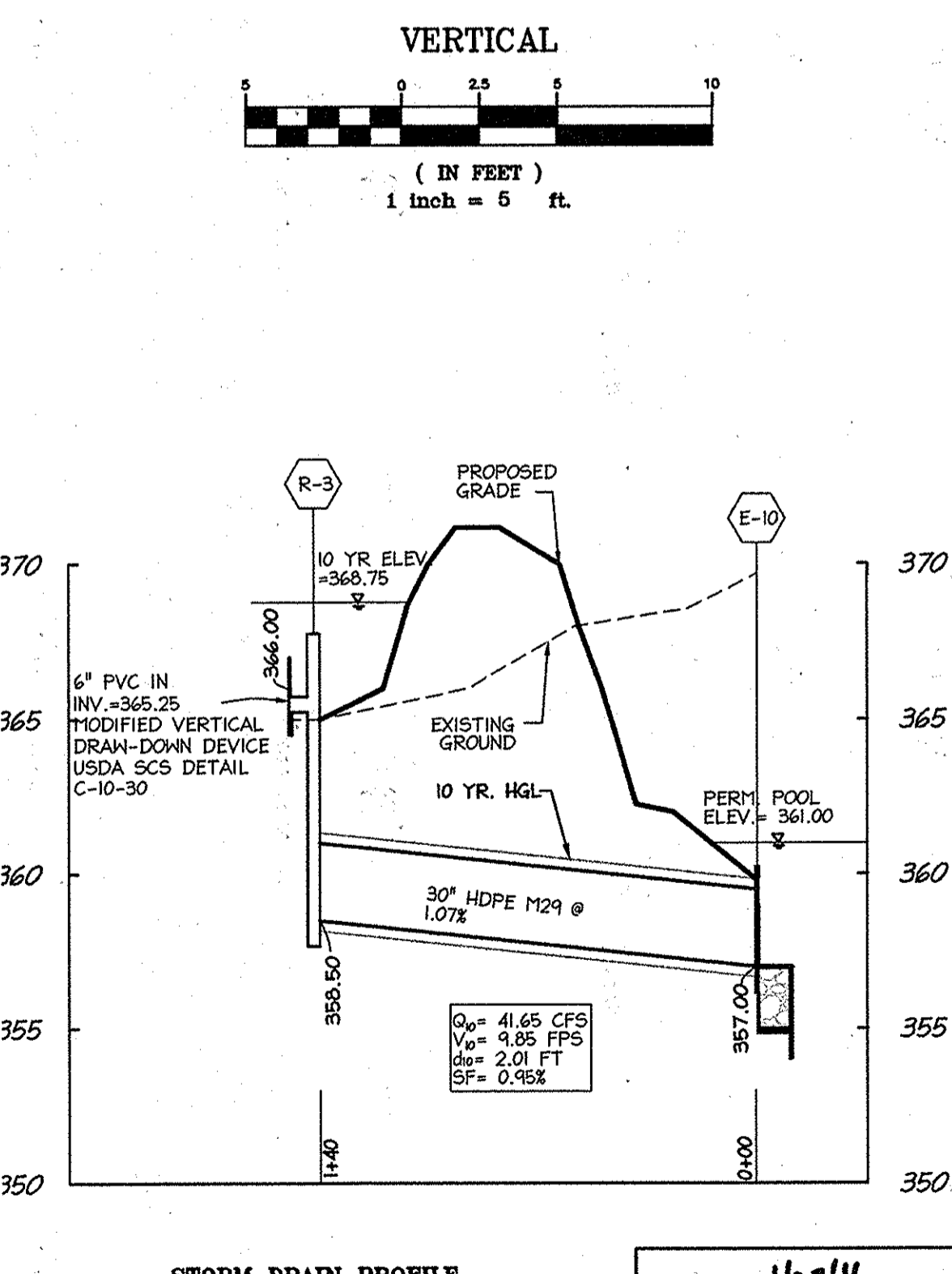
**STORM DRAIN PROFILE - INLET I-82 TO INLET I-84**  
 SCALE: HORIZONTAL: 1"=50'  
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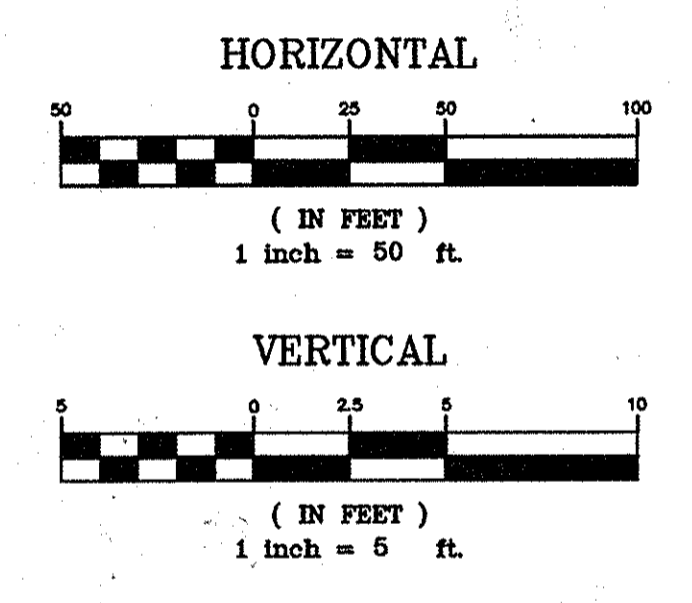
**STORM DRAIN PROFILE INLET I-88 TO INLET I-88**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



**STORM DRAIN PROFILE INLET I-84 TO INLET I-82**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



**STORM DRAIN PROFILE INLET R-3 TO INLET R-10**  
 SCALE: HORIZONTAL: 1"=50'  
 VERTICAL: 1"=5'



APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	<i>[Signature]</i>	Date	4-4-16
Chief, Division of Land Development	<i>[Signature]</i>	Date	4-5-16
Director	<i>[Signature]</i>	Date	4-5-16

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
11/09/15	03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
		REVISED GRADING, STORM, SANITARY, RETAINING WALL

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 846-0099

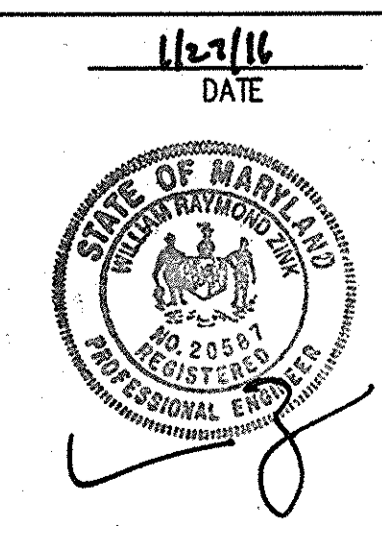
**christopher consultants**  
 engineering • surveying • land planning  
 christopherconsultants.com  
 7172 columbus gateway drive, suite 100 - columbia, md 21046-2900  
 (410) 260-8800 • fax: (410) 260-8801 • cell: (410) 260-8802

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)	F07	

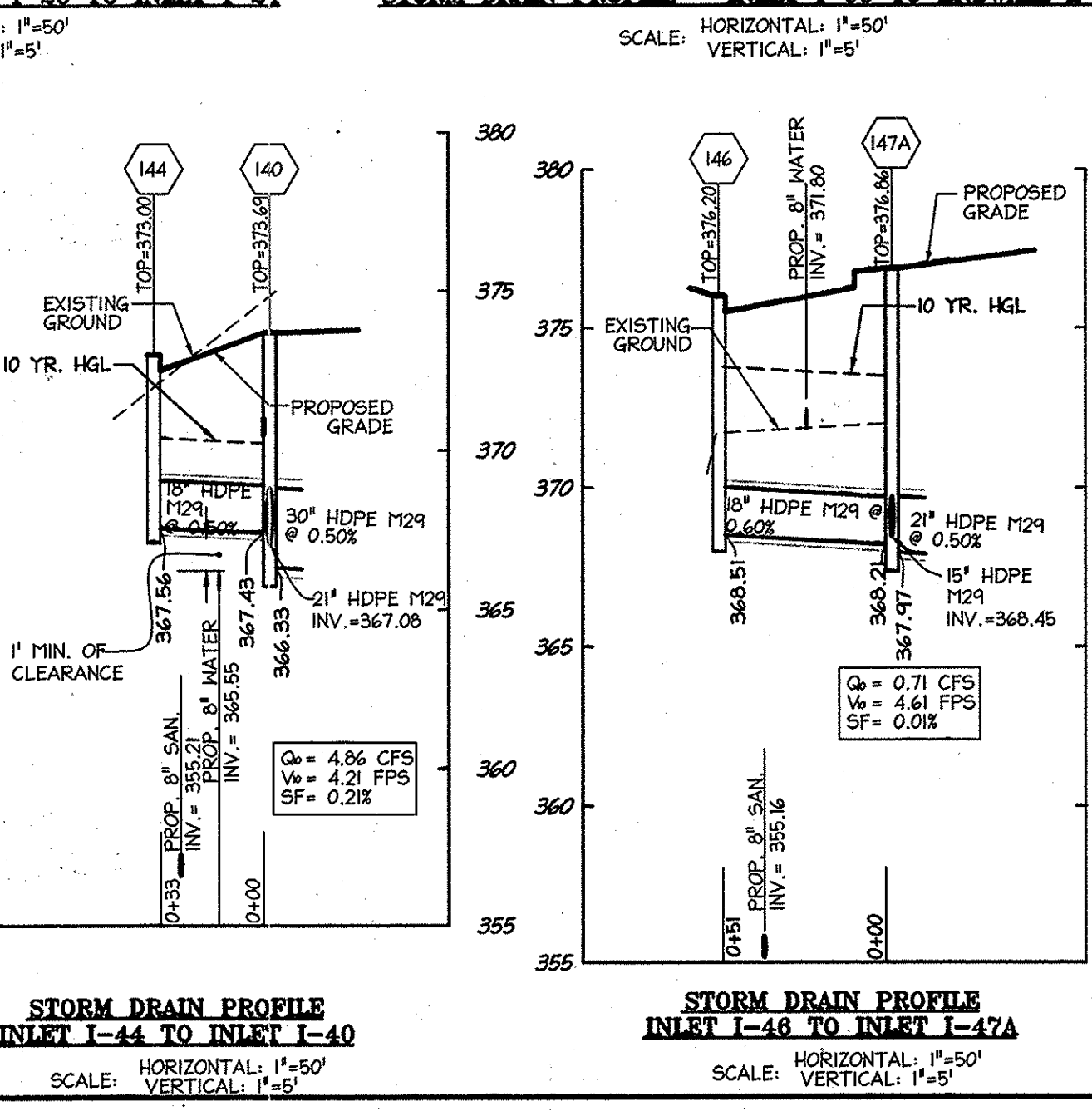
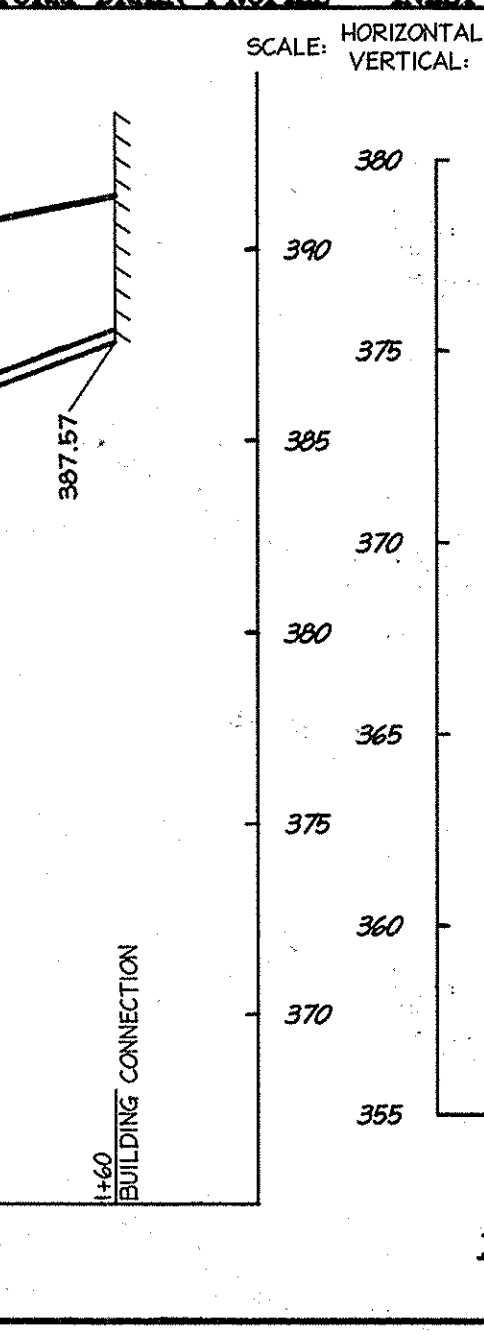
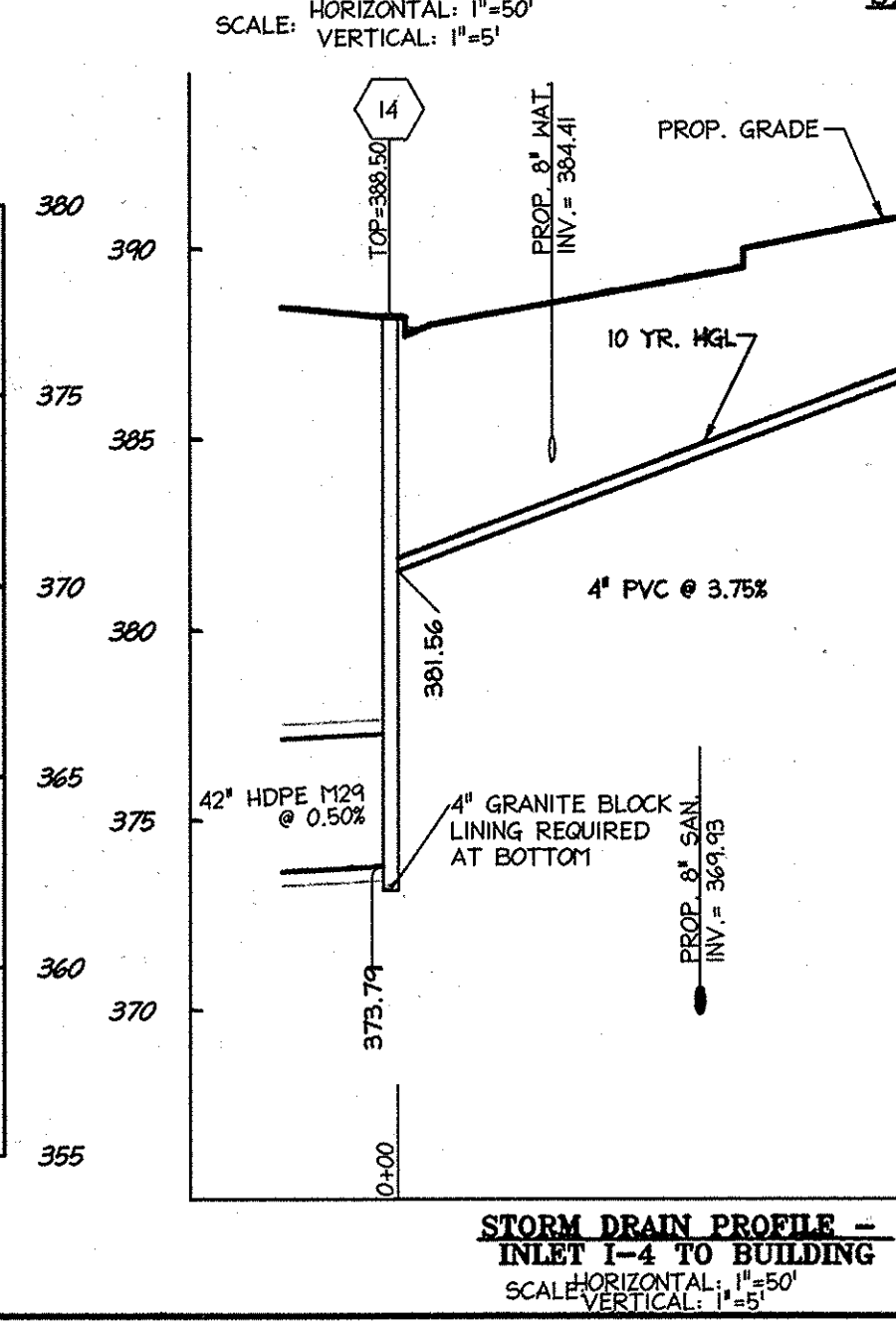
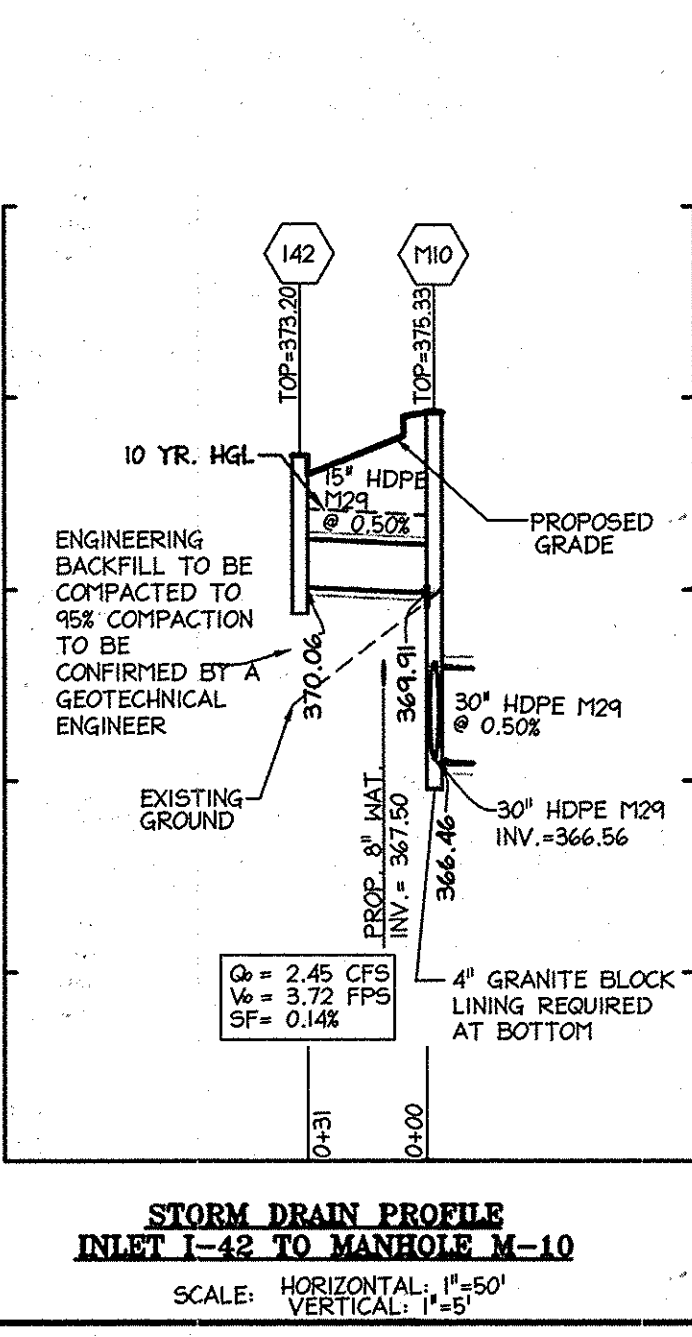
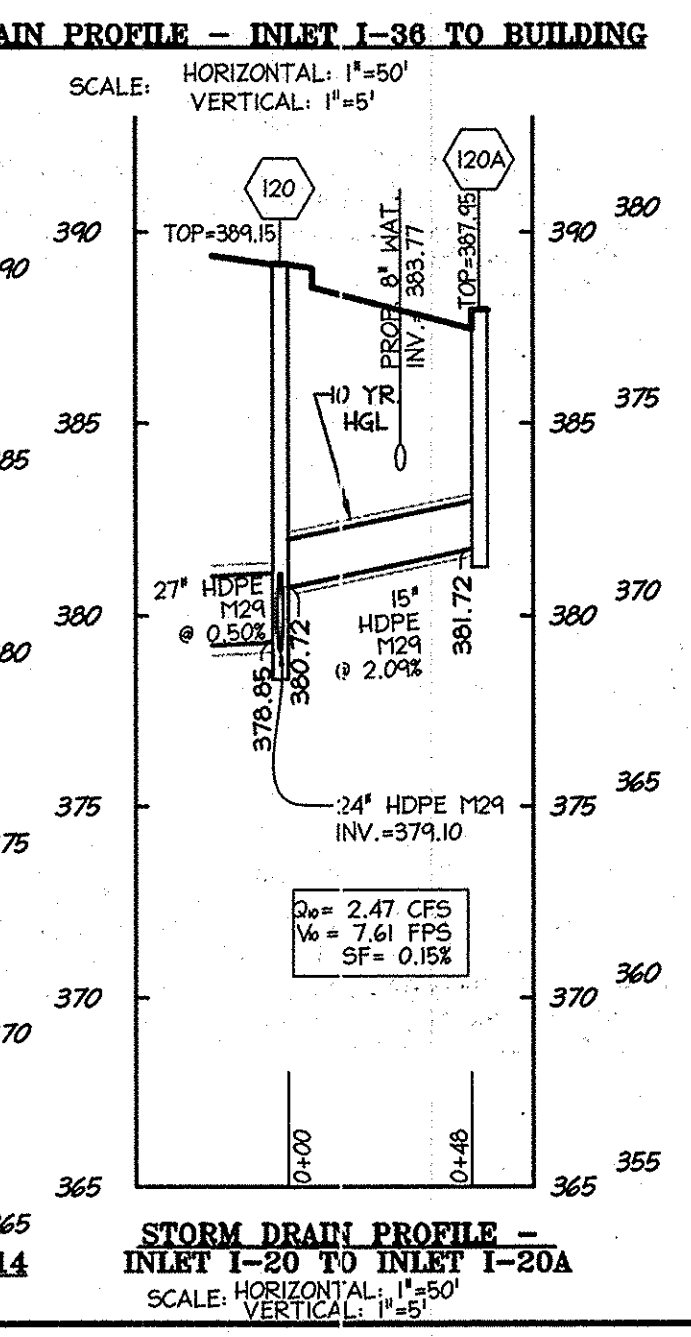
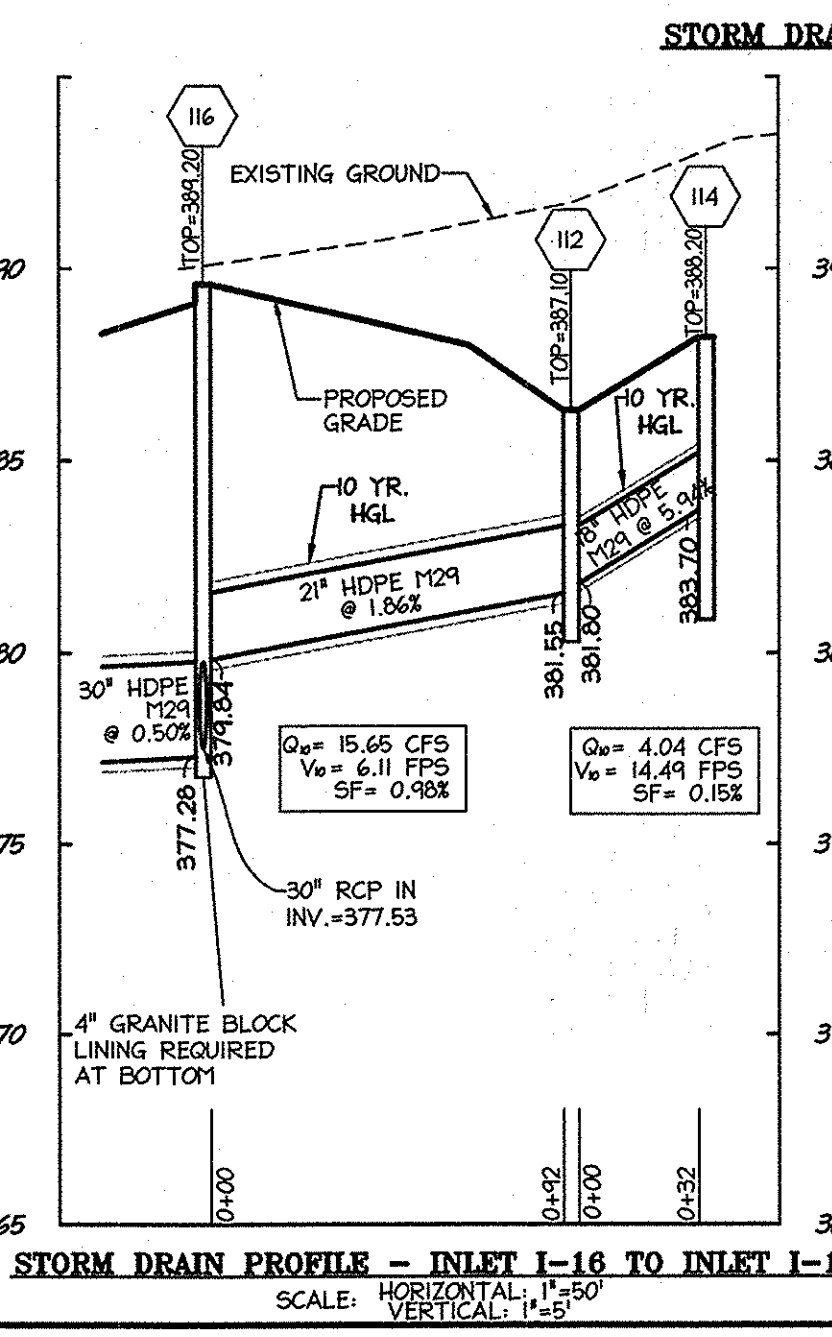
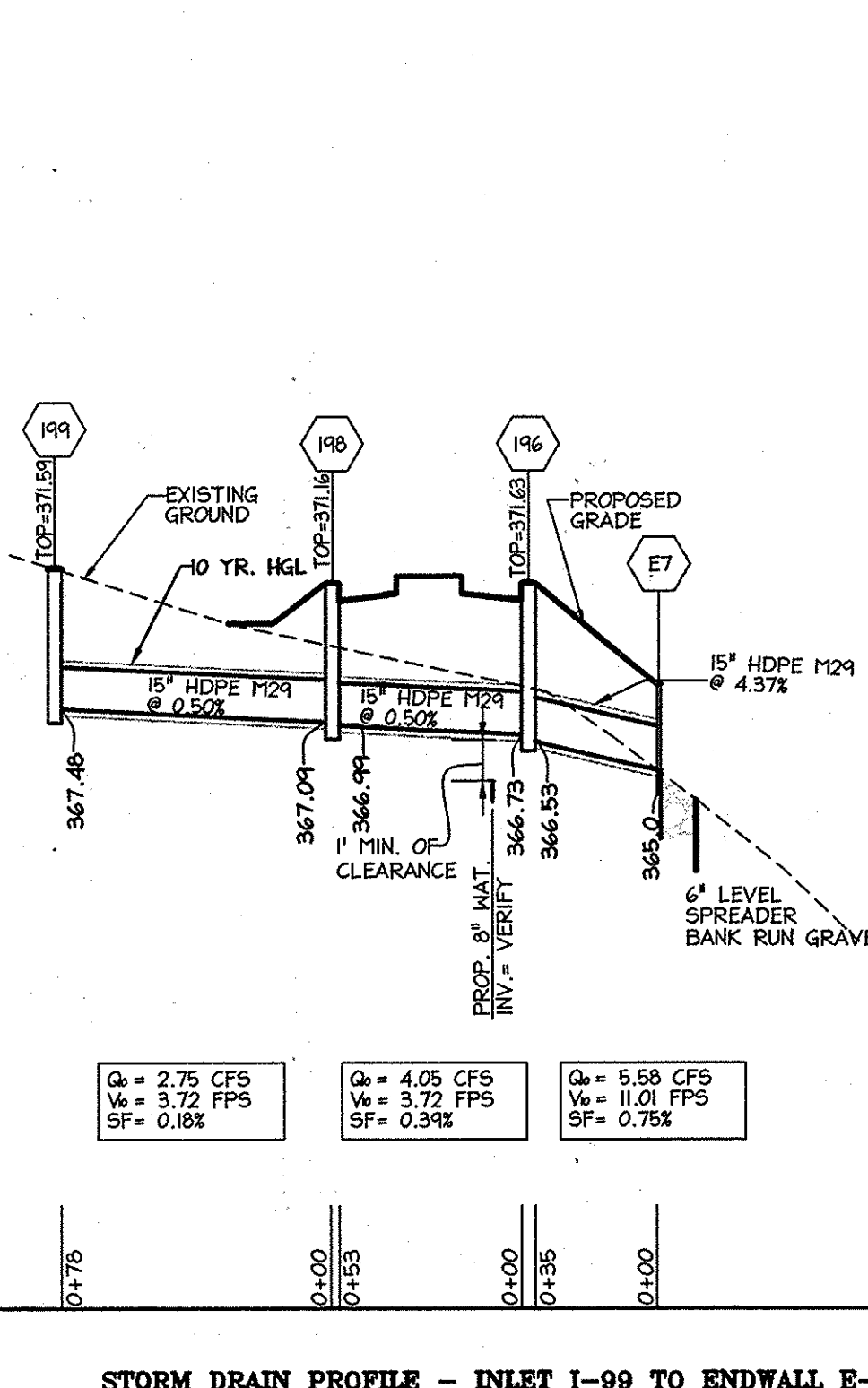
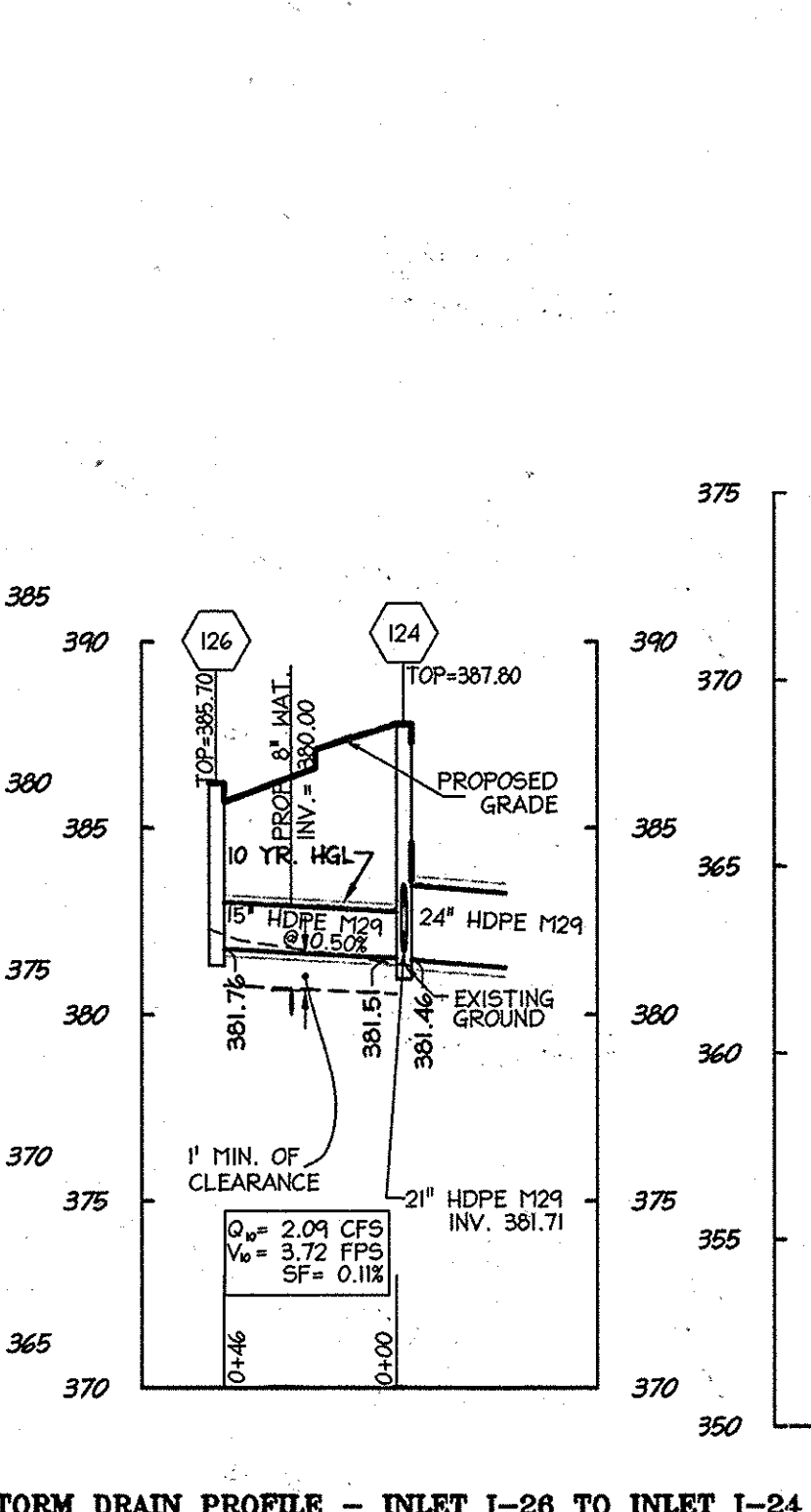
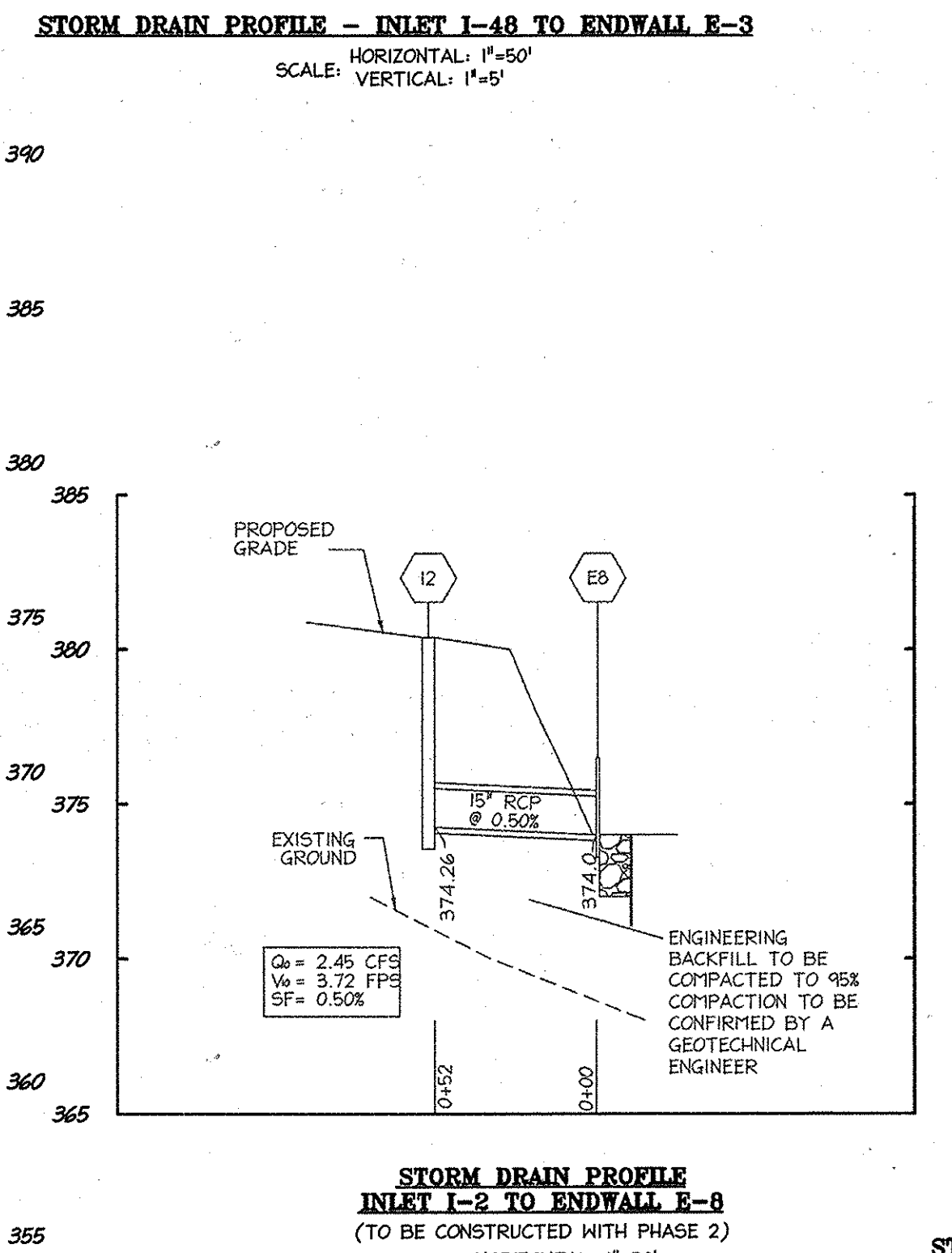
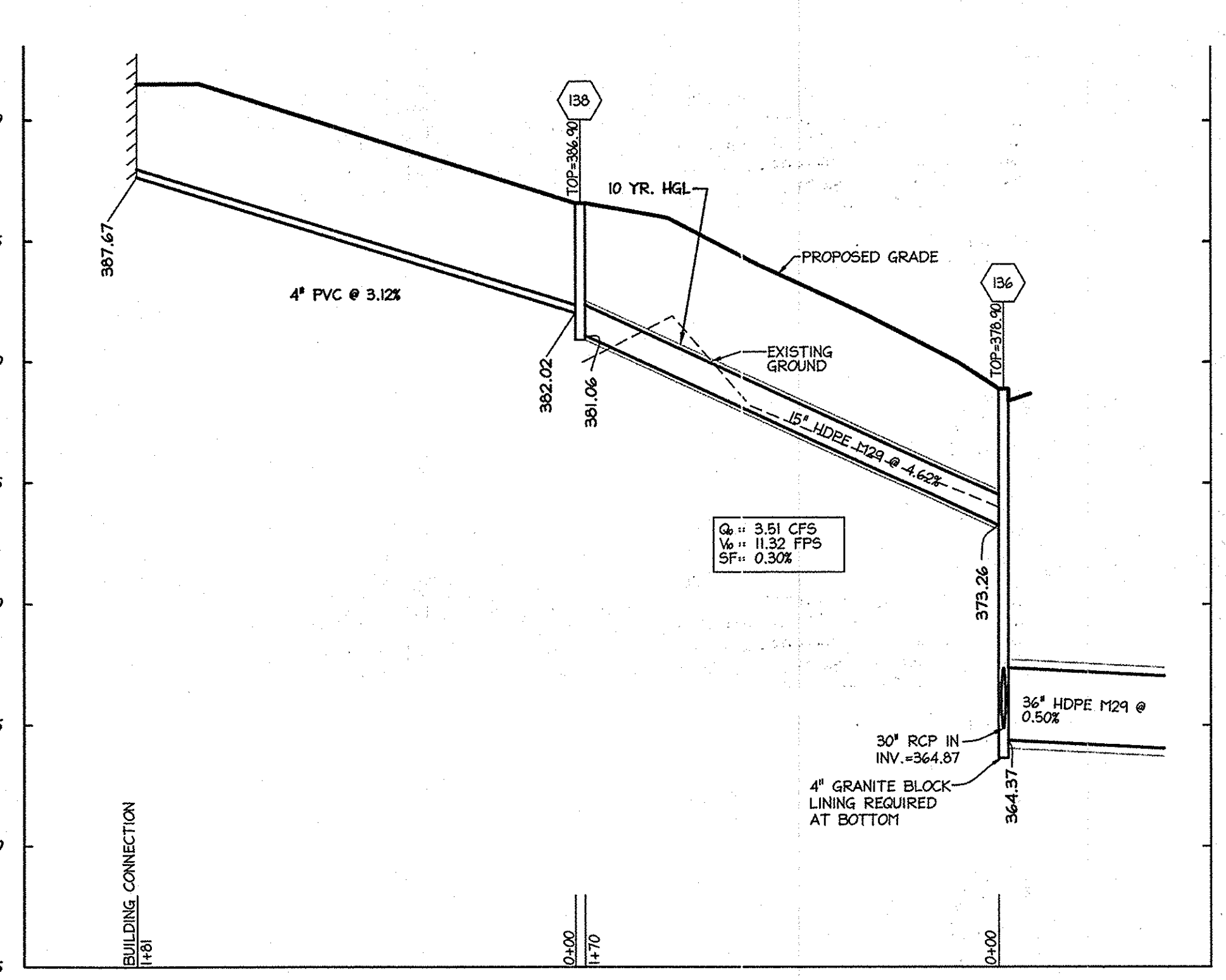
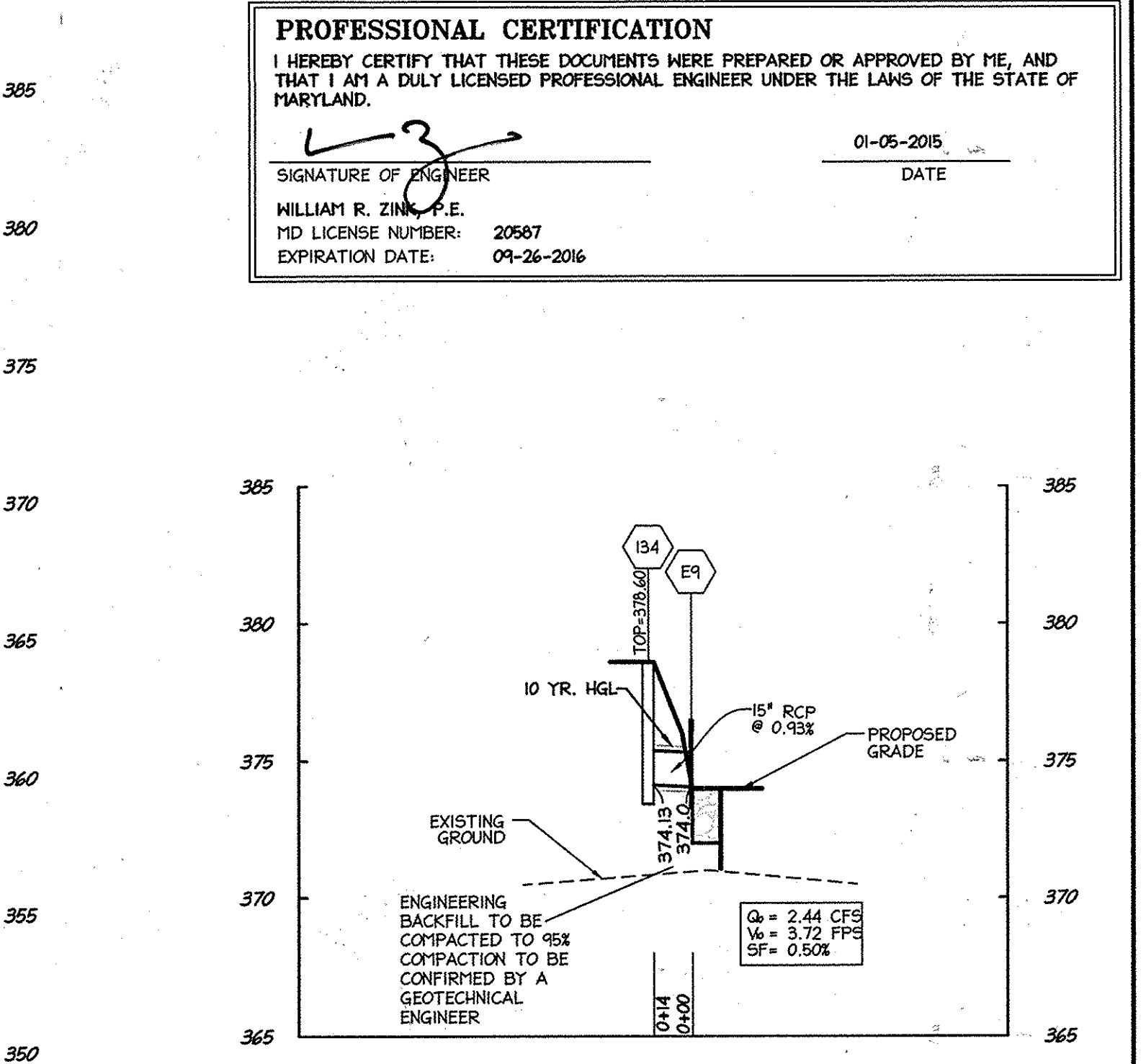
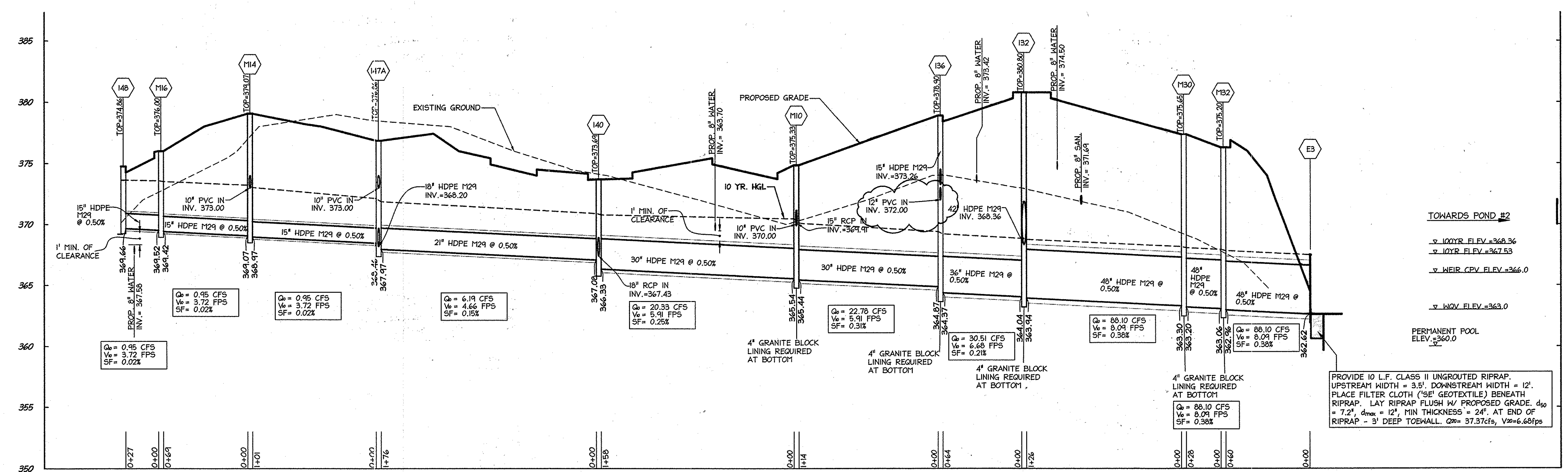
**UTILITY PROFILES**

DESIGN: DAM	SCALE: 1" = 50' V, 1" = 5' H	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>19 OF 77</b>



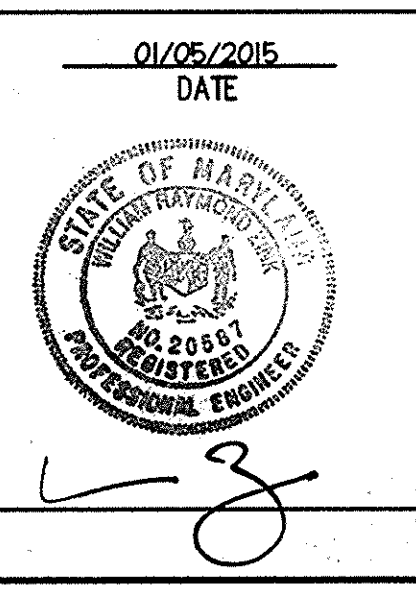


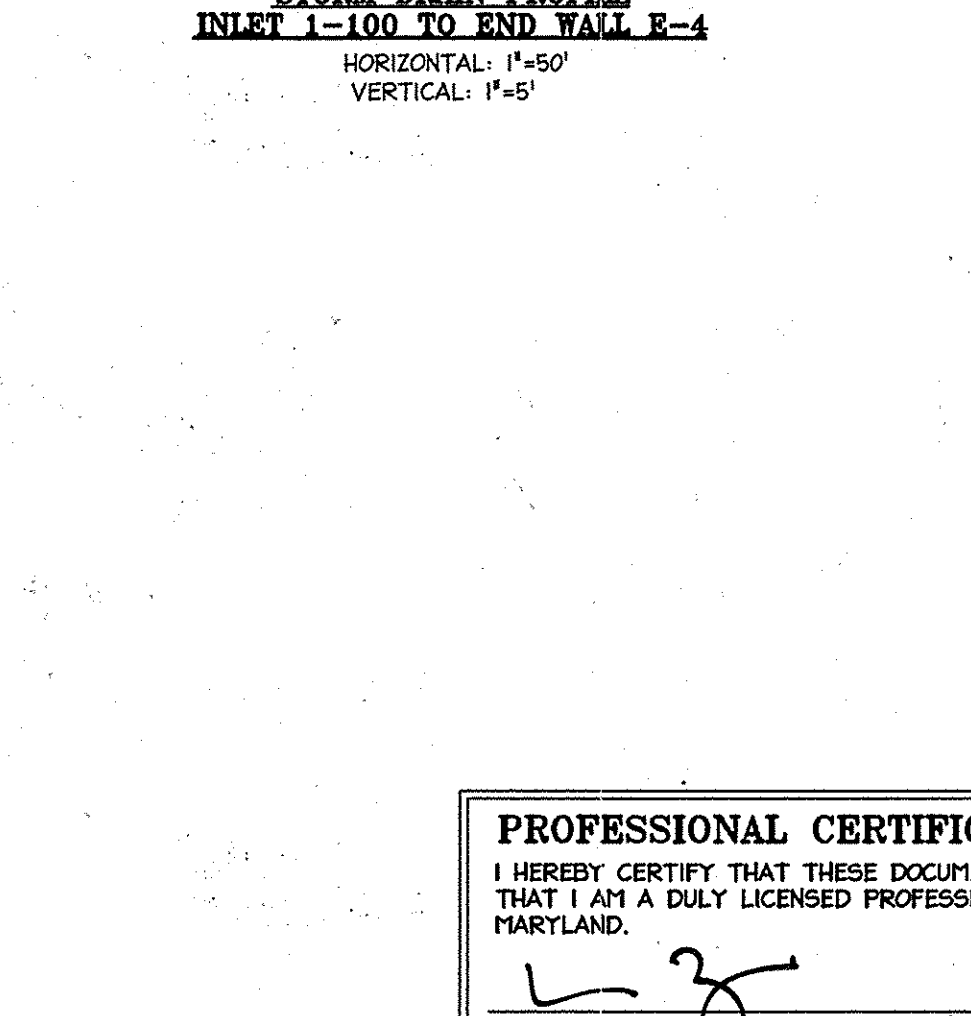
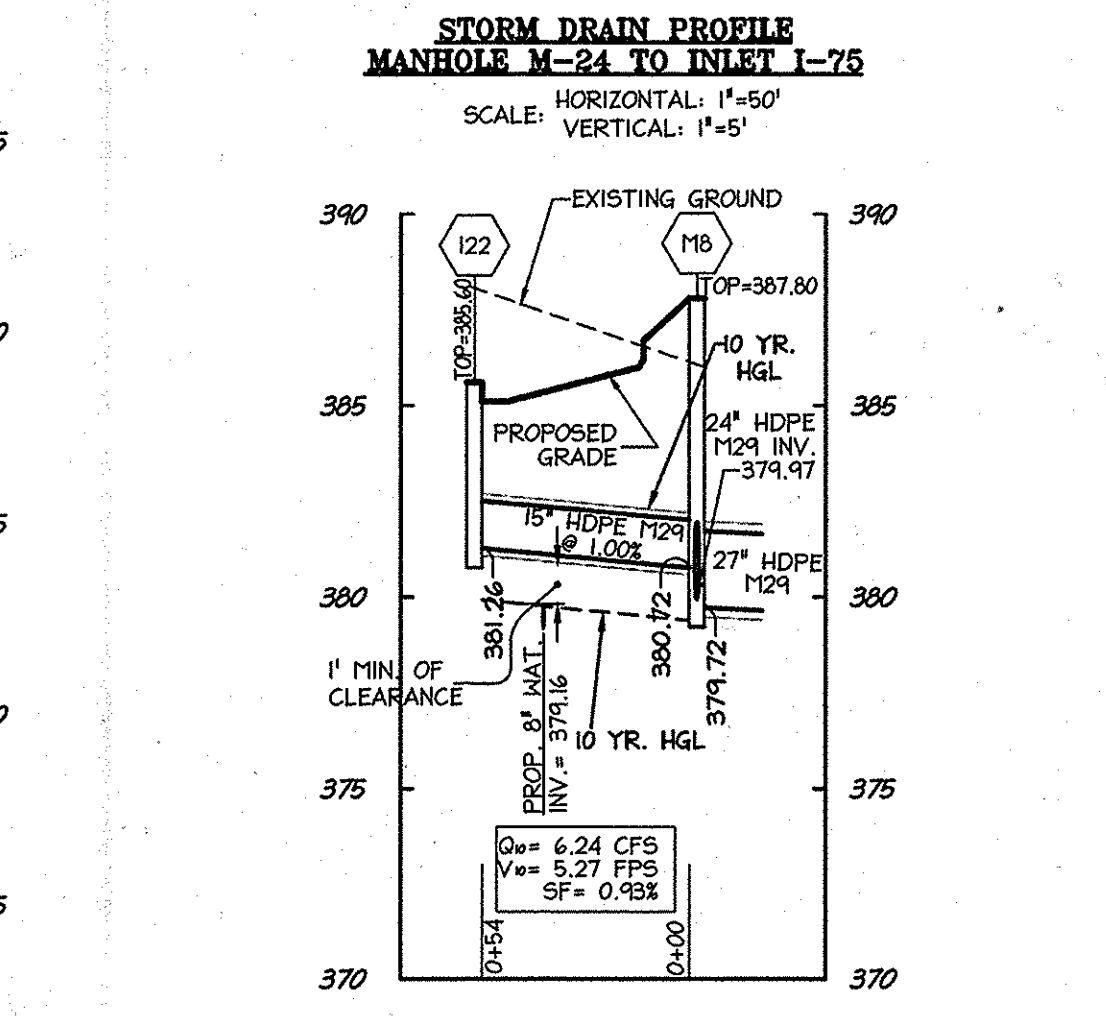
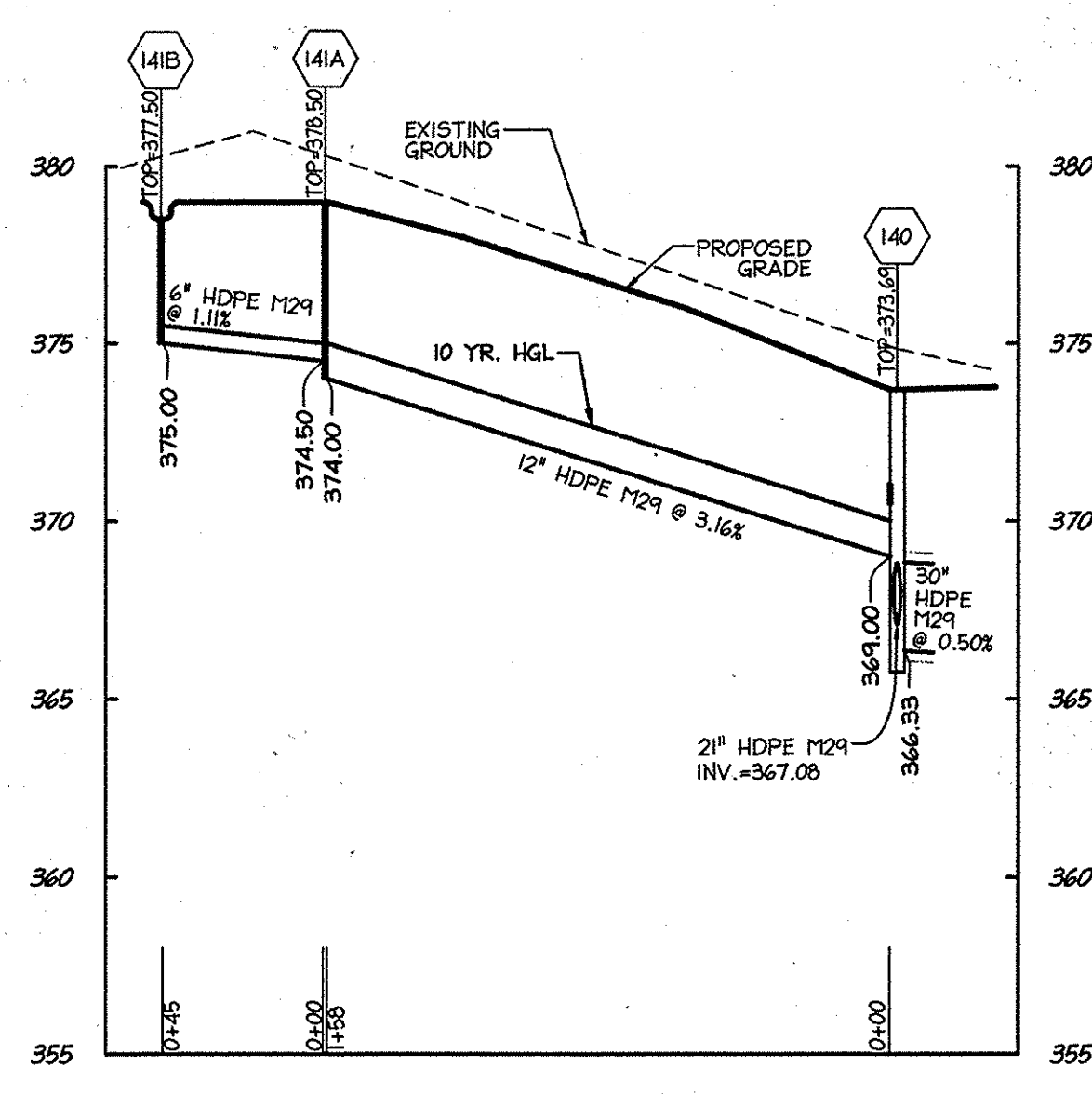
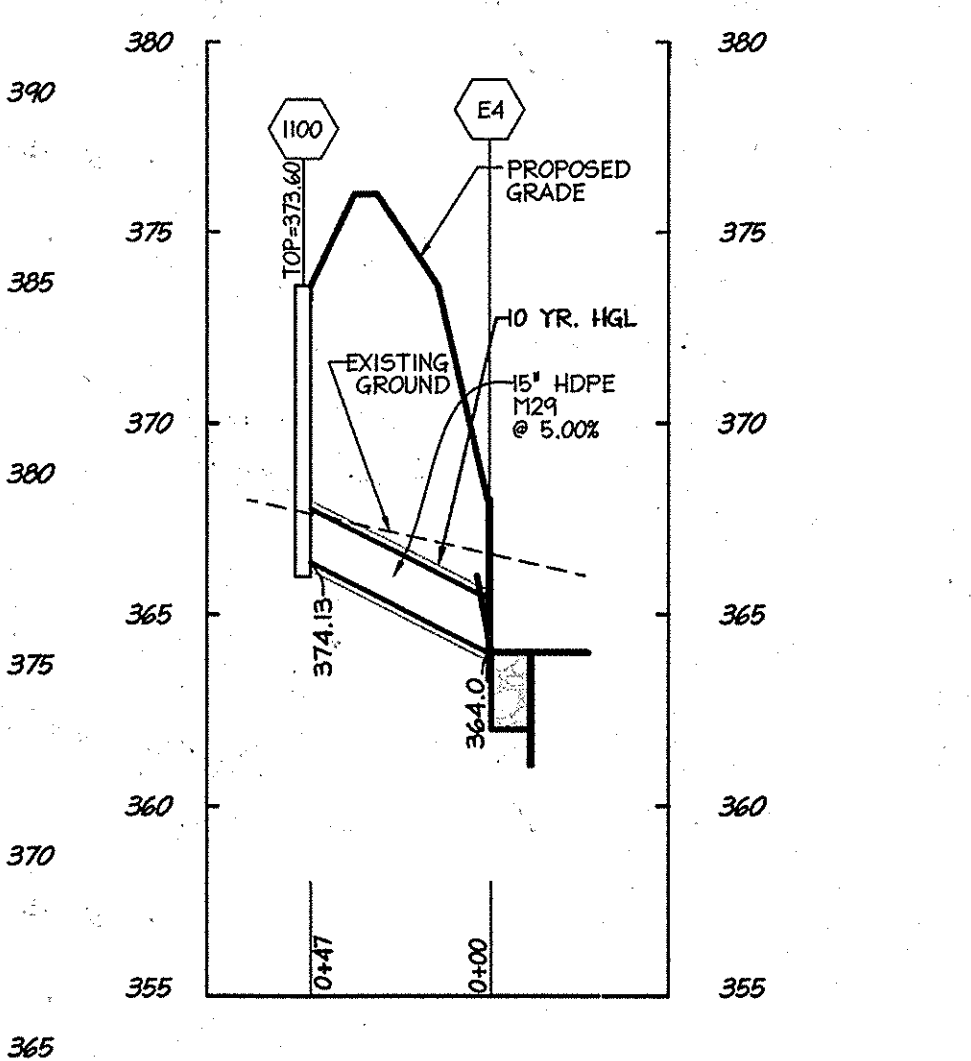
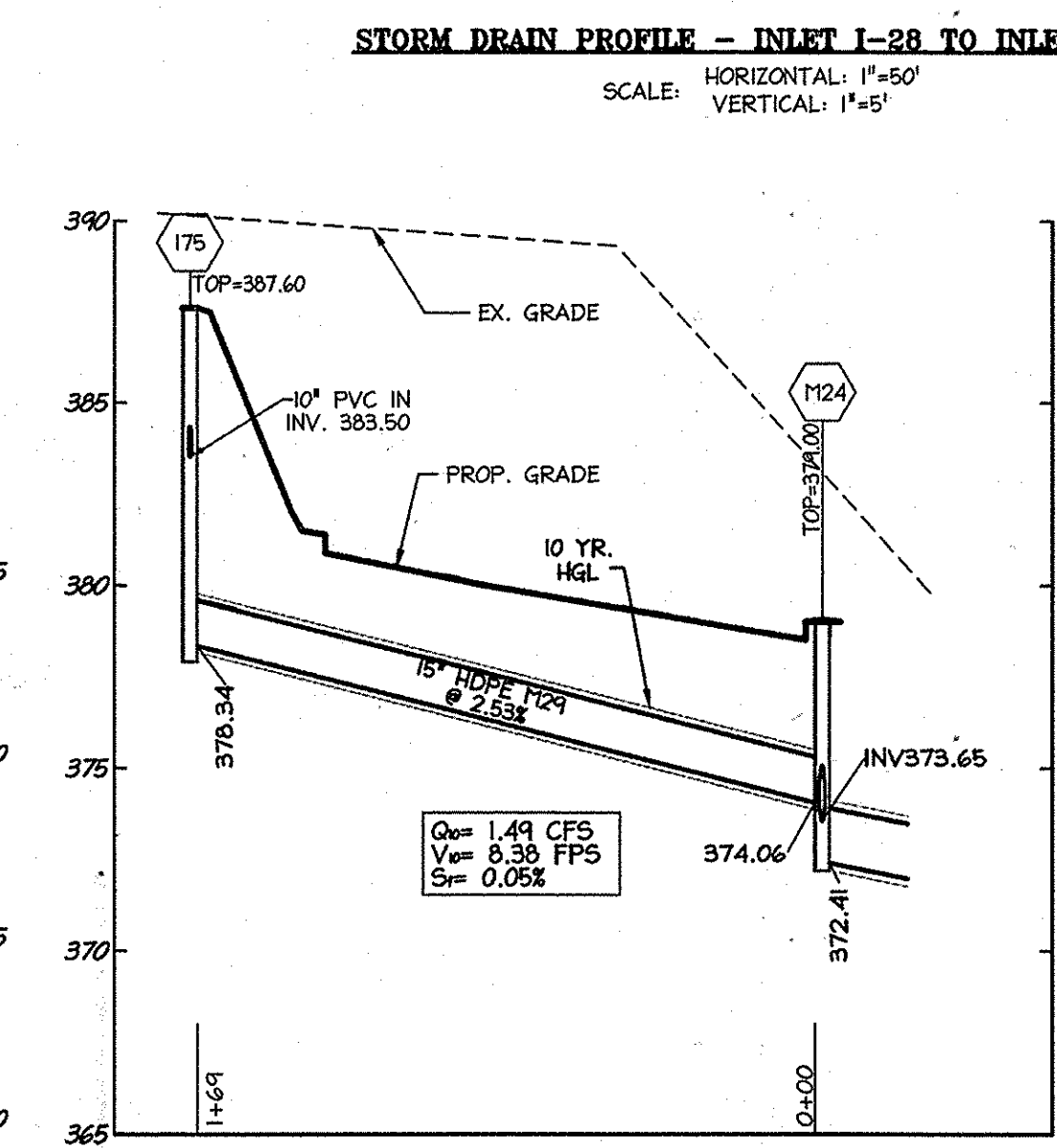
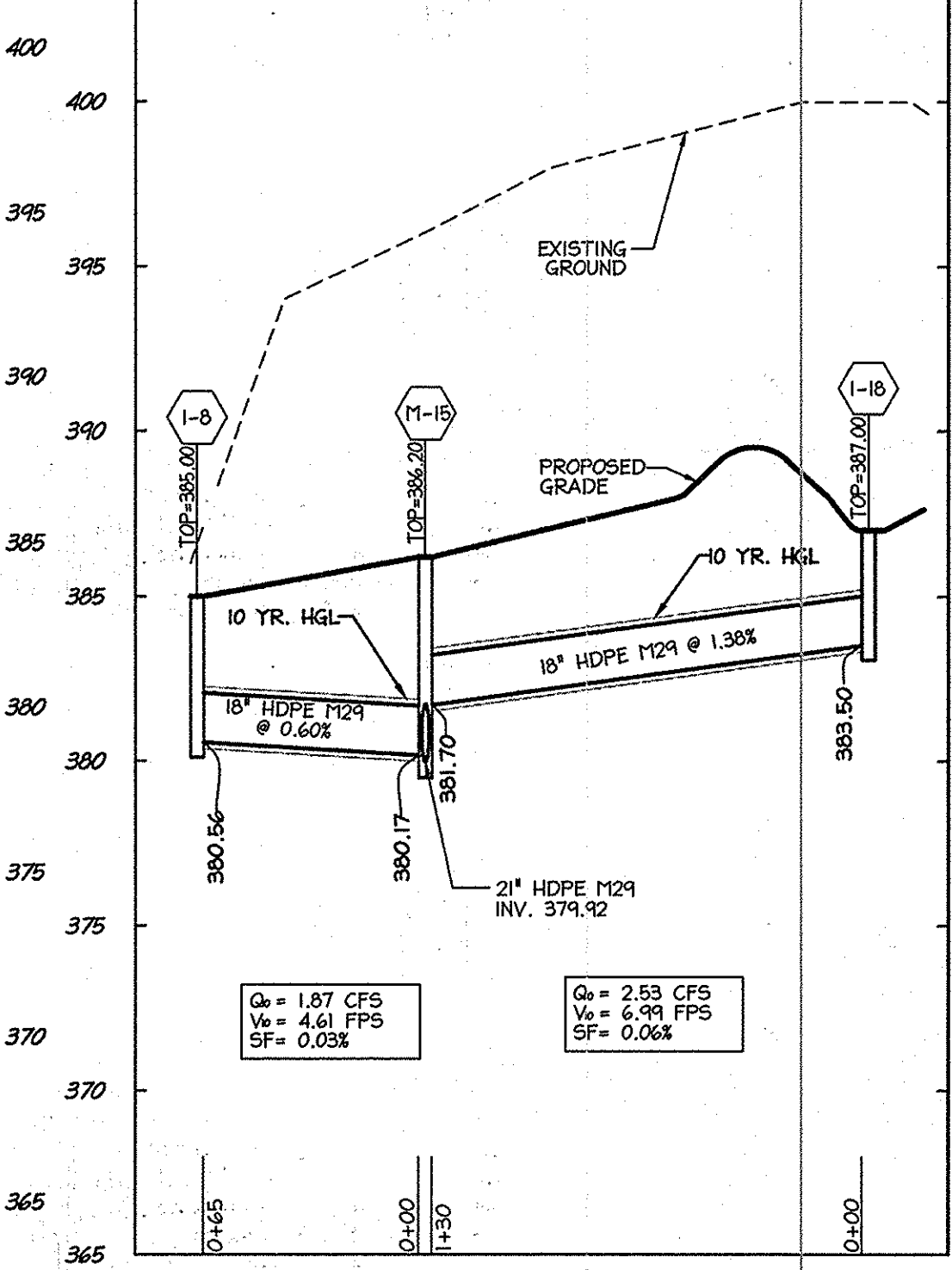
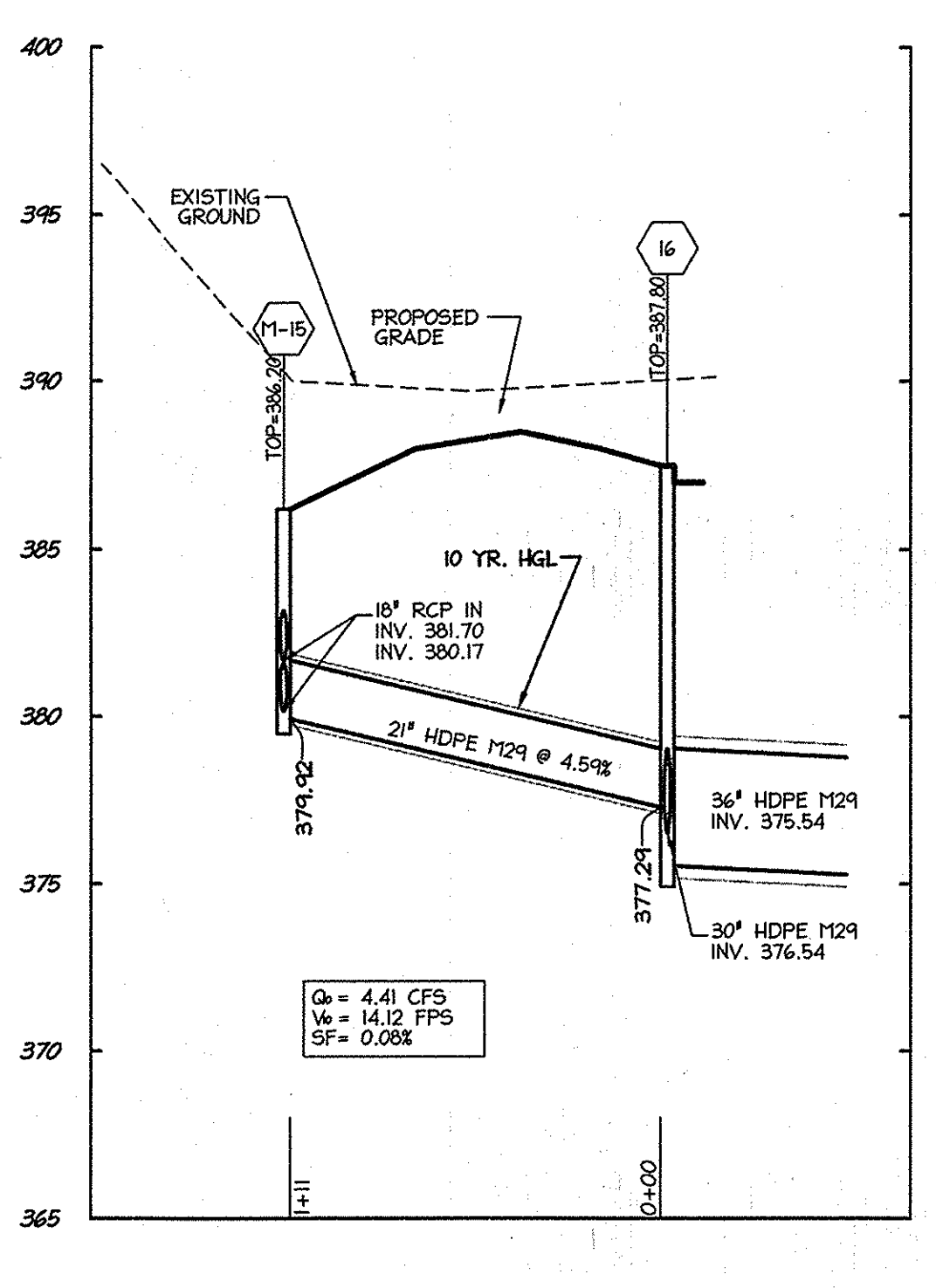
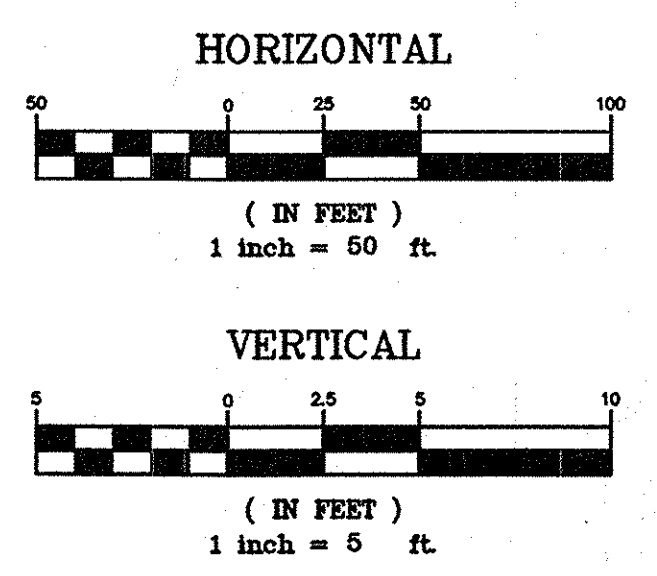
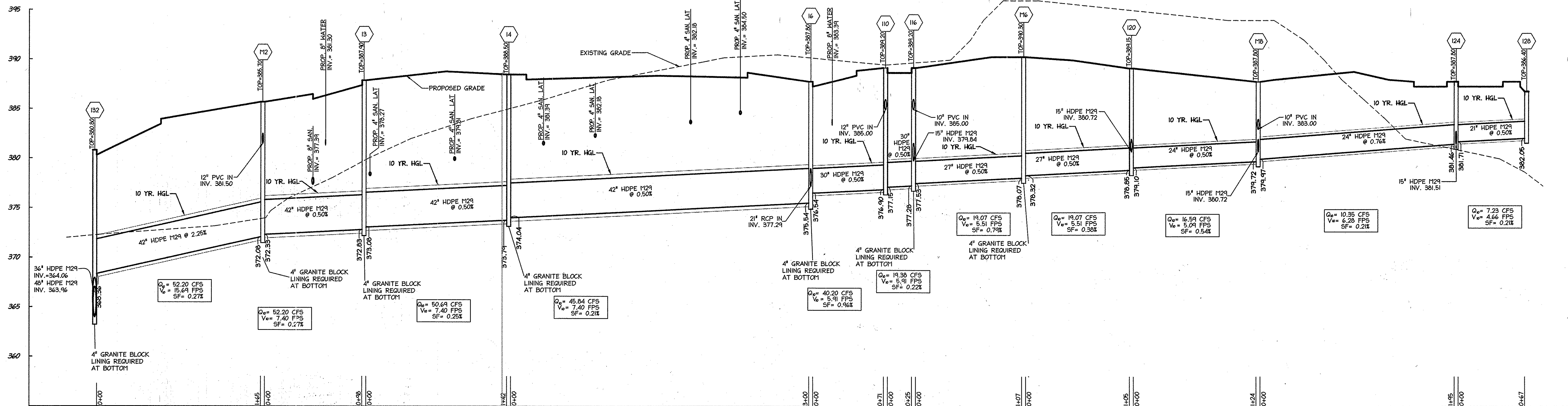
**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 01-05-2015  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016



**STORM DRAIN PROFILE INLET 1-34 TO ENDWALL E-9**  
 SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
 HORIZONTAL SCALE: 1 inch = 50 ft.  
 VERTICAL SCALE: 1 inch = 5 ft.  
 MISS UTILITY Service Protection Center  
 CALL TOLL FREE 1-800-257-7777  
 APPROVED PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: *[Signature]* Date: 2-20-15  
 Chief, Division of Land Development: *[Signature]* Date: 2/26/15  
 Director: *[Signature]* Date: 2/26/15  
 01/05/15 01 REVISED SITE DEVELOPMENT PLAN  
 Revision Description:  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER/DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT, C/O CARROLL LUTHERAN VILLAGE, CONTACT: ROY SHAWWEE, EXEC. VICE PRESIDENT, 300 ST LUKE CIRCLE, WESTMINSTER MD 21158, (410) 948-0090  
 christopher consultants  
 engineering - surveying - land planning  
 7172 coltsville primary drive (route 100), coltsville, md. 21048-2990  
 410.232.8800 - exts. 301,301,314-6 fax: 410.232.8805  
 PERMIT INFORMATION CHART  
 PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT LOT/PARCEL NO.: A CENSUS TRACT: 602800  
 DEED REF.: L. 10578 F. 424 GRID NO.: 9 ZONE: PSC TAX MAP: 24 ELECTION DISTRICT: 02  
 WATER CODE: 550 (TG 700) SEMER CODE: F07  
 TITLE: UTILITY PROFILES  
 DESIGN: DAM SCALE: 1" = 50' V DATE: APRIL 12, 2013 PROJECT: 0515.001.02  
 DRAWN: DAM SCALE: 1" = 5' H DATE: APRIL 12, 2013  
 CHECKED: ENJ APPROVED: WRZ  
 20 of 77





APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	Date: 2-20-15
Chief, Division of Land Development	Date: 2-26-15
Director	Date: 2/26/15
01/05/15	01 REVISED SITE DEVELOPMENT PLAN

Date	No.	Revision Description
		LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORNAN, ESQ., VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 948-0000

PERMIT INFORMATION CHART			
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT	
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800	
DEED REF.	GRID NO.	ZONE	TAX MAP
L 10578 F. 424	9	PSC	24
WATER CODE	SEWER CODE		ELECTION DISTRICT
550 (TG 700)	F07		02

TITLE: UTILITY PROFILES		
DESIGN: DAM	SCALE: 1" = 50' V	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: MRZ	21 OF 77

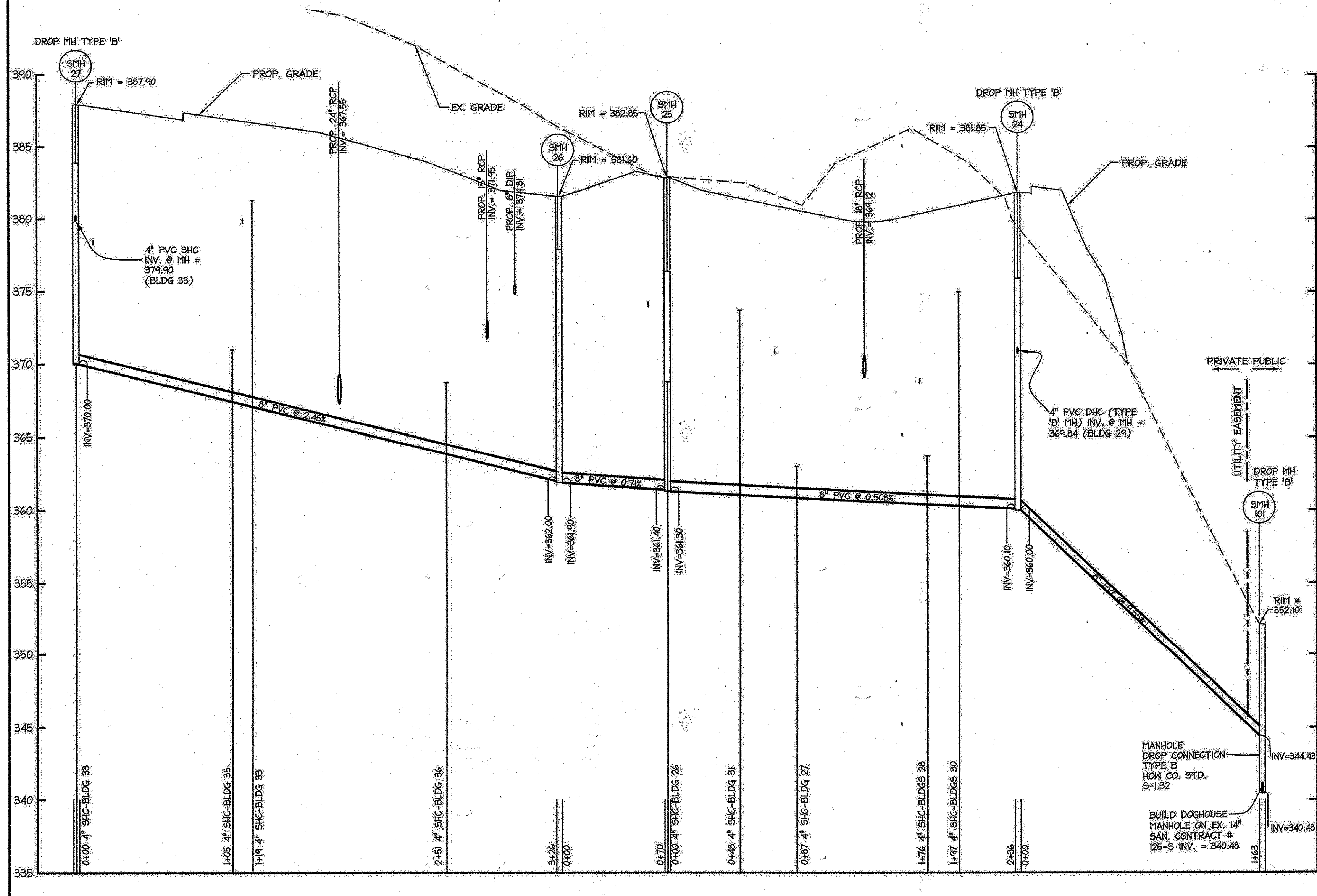
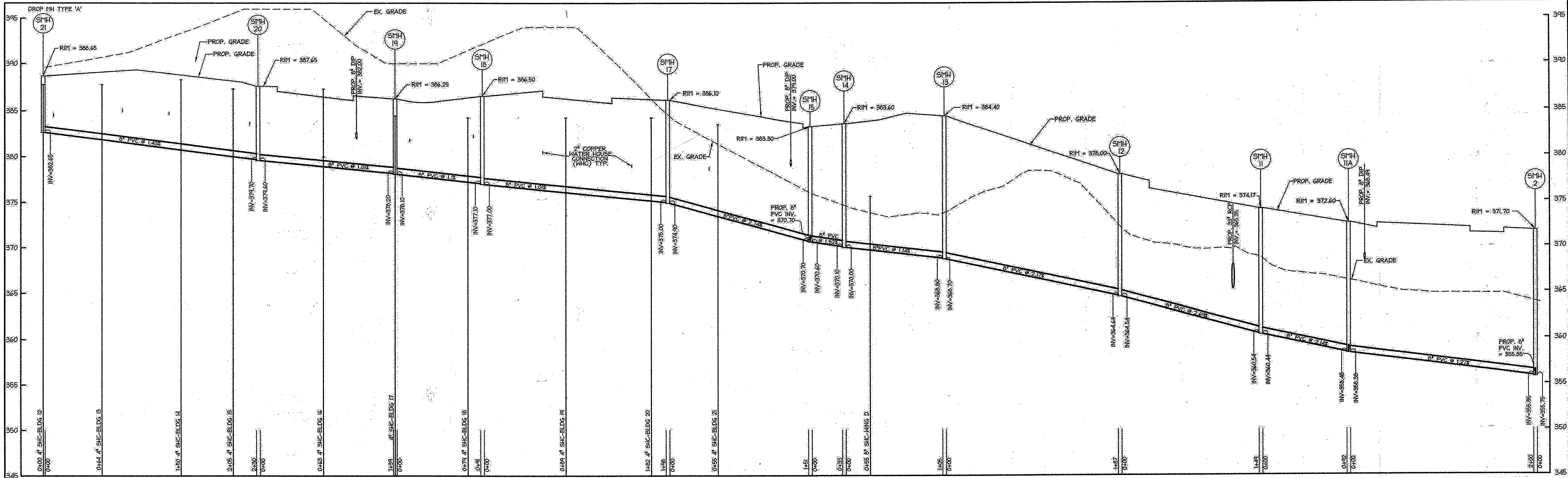
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01-05-2015  
DATE

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016







STRUCTURE	TYPE	NORTHING	EASTING	REMARKS
SMH 1	4'-0" DIA. MANHOLE	N 584461	E 1357587	HO. CO. STD. MANHOLE DETAIL NO. G-5.14 (DOGHOUSE)
SMH 2	4'-0" DIA. MANHOLE	N 584426	E 1357348	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 3	4'-0" DIA. MANHOLE	N 584508	E 1357337	HO. CO. STD. MANHOLE DETAIL NO. S-1.32 TYPE 'B'
SMH 4	4'-0" DIA. MANHOLE	N 584705	E 1357281	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 5	4'-0" DIA. MANHOLE	N 584911	E 1357089	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 6	4'-0" DIA. MANHOLE	N 584972	E 1356935	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 7	4'-0" DIA. MANHOLE	N 584976	E 1356753	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 8	4'-0" DIA. MANHOLE	N 584937	E 1356881	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 9	4'-0" DIA. MANHOLE	N 584656	E 1356577	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 10	4'-0" DIA. MANHOLE	N 584478	E 1356544	HO. CO. STD. MANHOLE DETAIL NO. S-1.32 TYPE 'A'
SMH 11	4'-0" DIA. MANHOLE	N 584163	E 1357205	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 11A	4'-0" DIA. MANHOLE	N 584247	E 1357250	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 11B	4'-0" DIA. MANHOLE	N 584328	E 1357974	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 12	4'-0" DIA. MANHOLE	N 584051	E 1357101	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 13	4'-0" DIA. MANHOLE	N 584019	E 1356913	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 14	4'-0" DIA. MANHOLE	N 583975	E 1356813	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 15	4'-0" DIA. MANHOLE	N 583939	E 1356820	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 16	4'-0" DIA. MANHOLE	N 583872	E 1356884	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 17	4'-0" DIA. MANHOLE	N 583897	E 1356672	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 18	4'-0" DIA. MANHOLE	N 583944	E 1356475	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 19	4'-0" DIA. MANHOLE	N 584014	E 1356410	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 20	4'-0" DIA. MANHOLE	N 584156	E 1356412	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 21	4'-0" DIA. MANHOLE	N 584388	E 1356471	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 22	4'-0" DIA. MANHOLE	N 583820	E 1356976	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 23	4'-0" DIA. MANHOLE	N 583897	E 1357881	HO. CO. STD. MANHOLE DETAIL NO. G-5.14 (DOGHOUSE)
SMH 24	4'-0" DIA. MANHOLE	N 583841	E 1357724	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 25	4'-0" DIA. MANHOLE	N 584041	E 1357590	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 26	4'-0" DIA. MANHOLE	N 584062	E 1357519	HO. CO. STD. MANHOLE DETAIL NO. G-5.12
SMH 27	4'-0" DIA. MANHOLE	N 583749	E 1357415	HO. CO. STD. MANHOLE DETAIL NO. G-5.12

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 04-05-2016  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 04-26-2016

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: *[Signature]* DATE: 4-4-16  
 Chief, Division of Land Development: *[Signature]* DATE: 4-5-16  
 Director: *[Signature]* DATE: 4-5-16

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
04/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
		FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
11/09/15	03	REVISED GRADING, STORM, SANITARY, RETAINING WALL

Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER/DEVELOPER:  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: BOY GRAMMS, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21156  
 (410) 586-0000

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, llc  
 7732 columbia gateway drive suite 100 | columbia, md 21046-2800  
 410.586.0000 | www.christopherconsultants.com

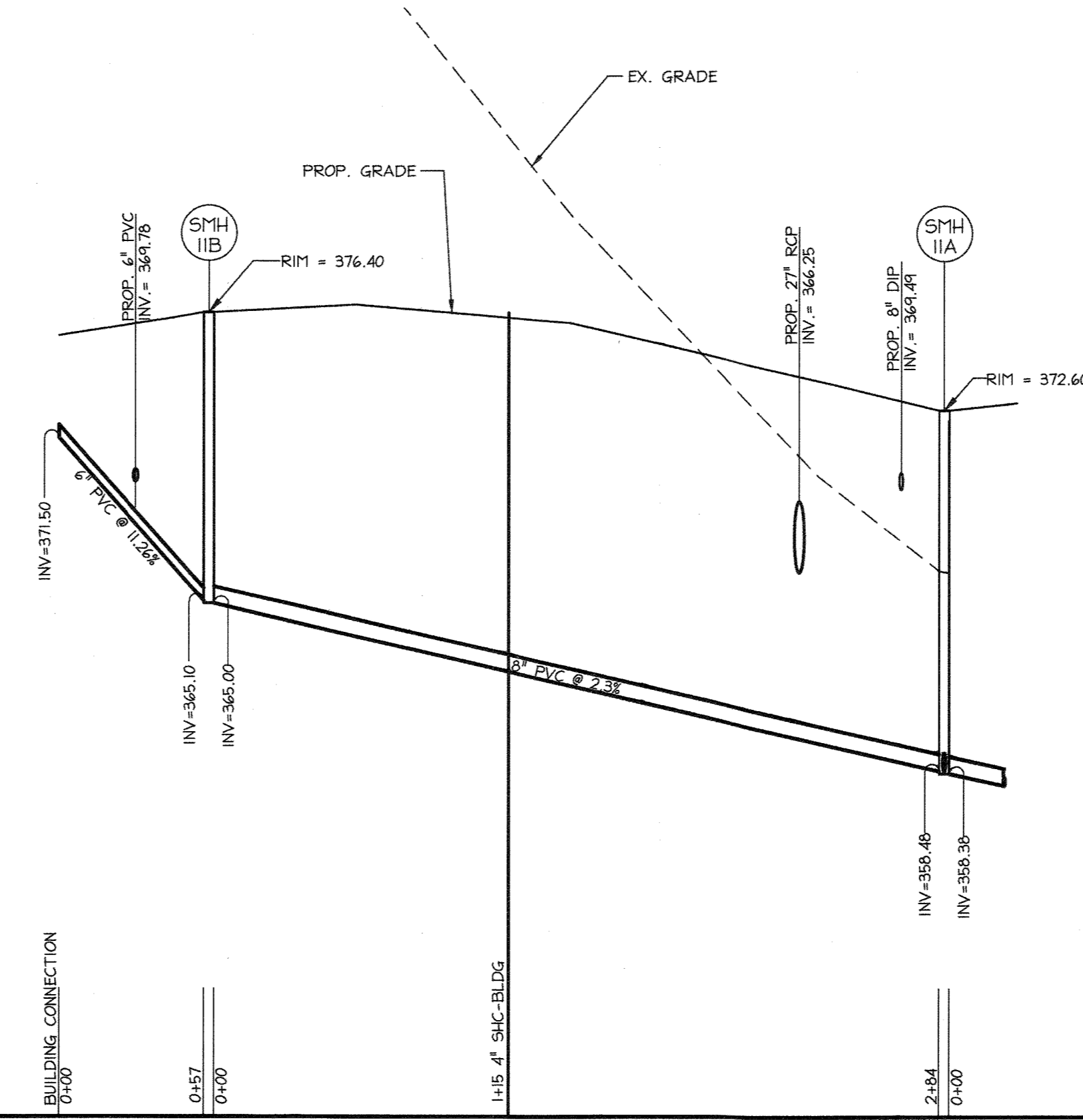
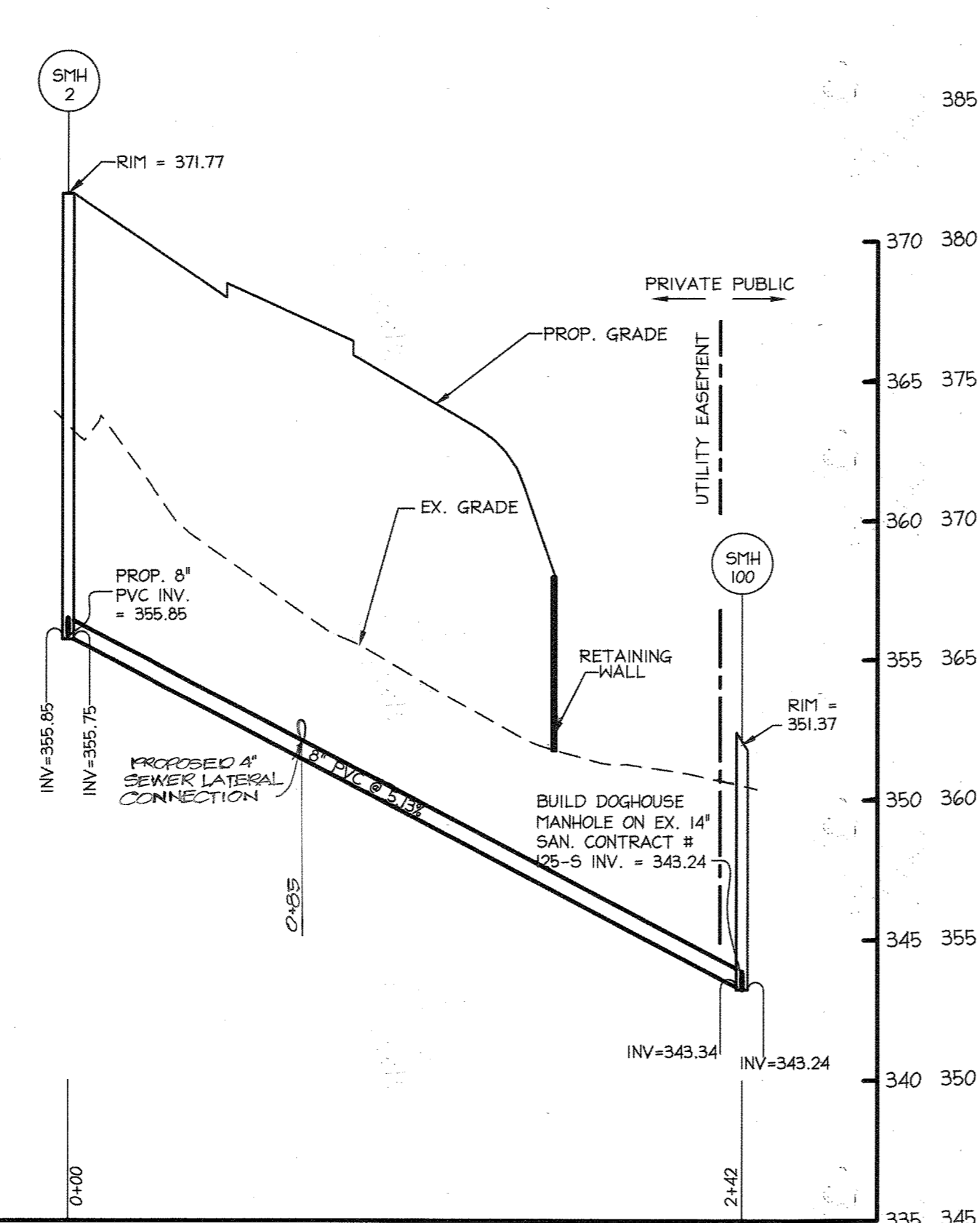
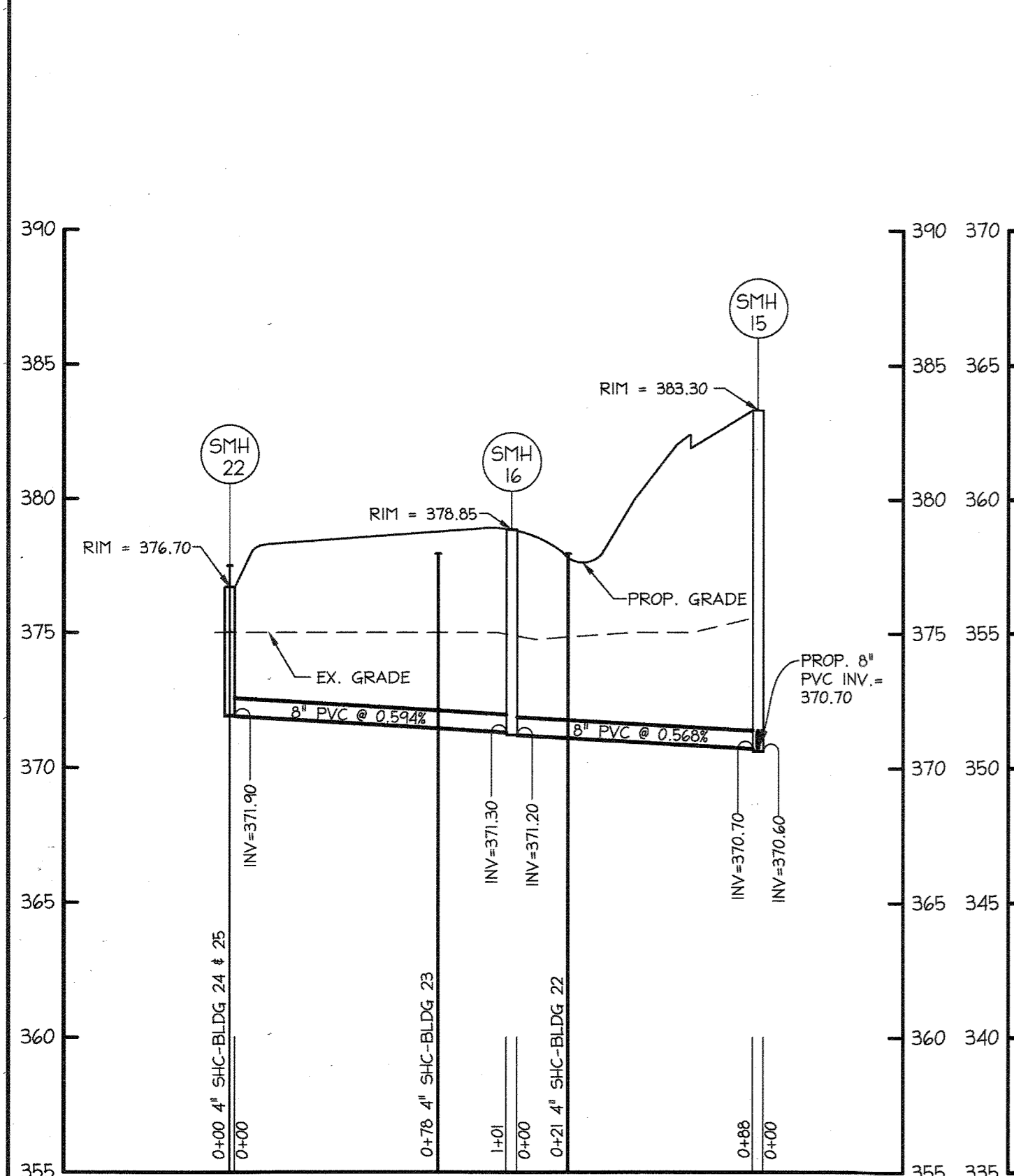
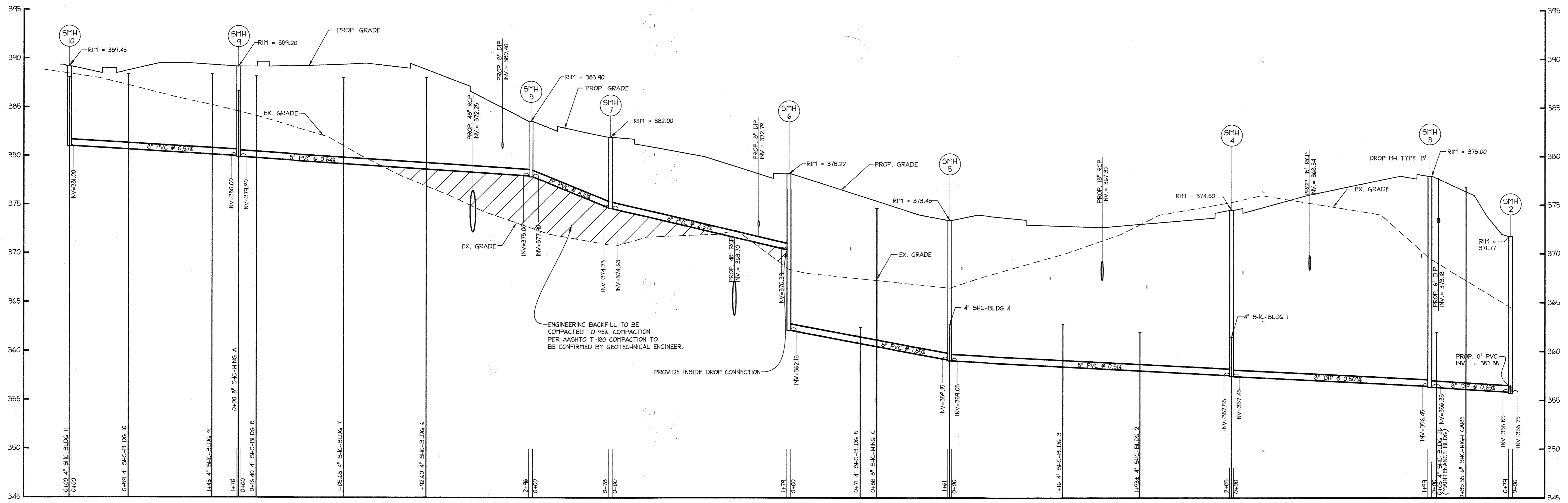
APPROVED: PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2016

3/16/16  
 DATE



PERMIT INFORMATION CHART

PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE: 550 (TG 700)	SEWER CODE F07	
TITLE: <b>SANITARY PROFILES</b>		
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0616.001.02
DRAWN: DAM	DATE: APRIL 12, 2016	
CHECKED: ENJ	APPROVED: MRZ	<b>23 OF 77</b>



APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division JYJ Date 2-20-15  
Chief, Division of Land Development Date 2-26-15  
Director Date 2/26/15

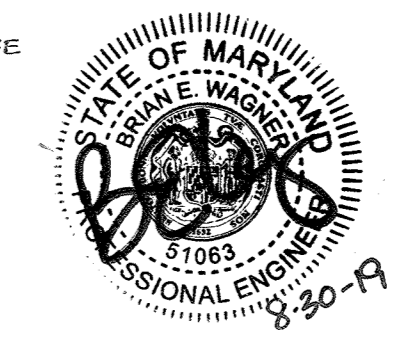
439 East Main Street, Westminster, MD 21157  
(410) 845-1750 FAX (410) 845-1751

FOR PROPOSED MAINTENANCE BUILDINGS ONLY

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. 51063, Exp. Jun 7, 2021

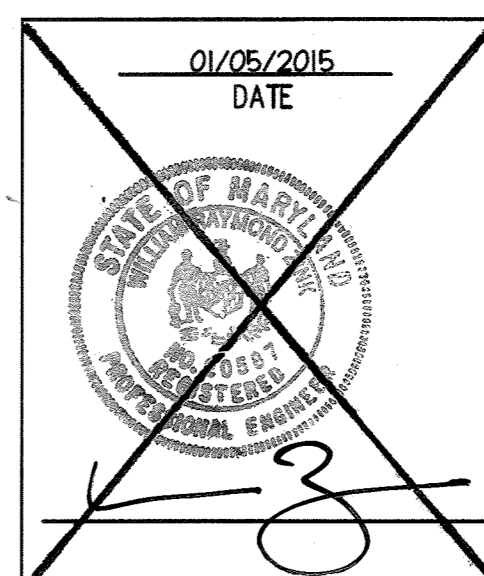
AS-BUILT CERTIFICATION  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

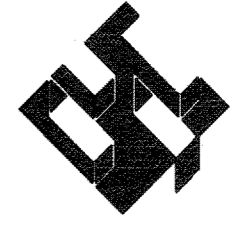
W. Zink, P.E. DATE 01-05-2015  
MARYLAND REG. NO. 51063 EXPIRATION DATE: 06/07/2021  
DATE OF AS-BUILT: 03/10/2018

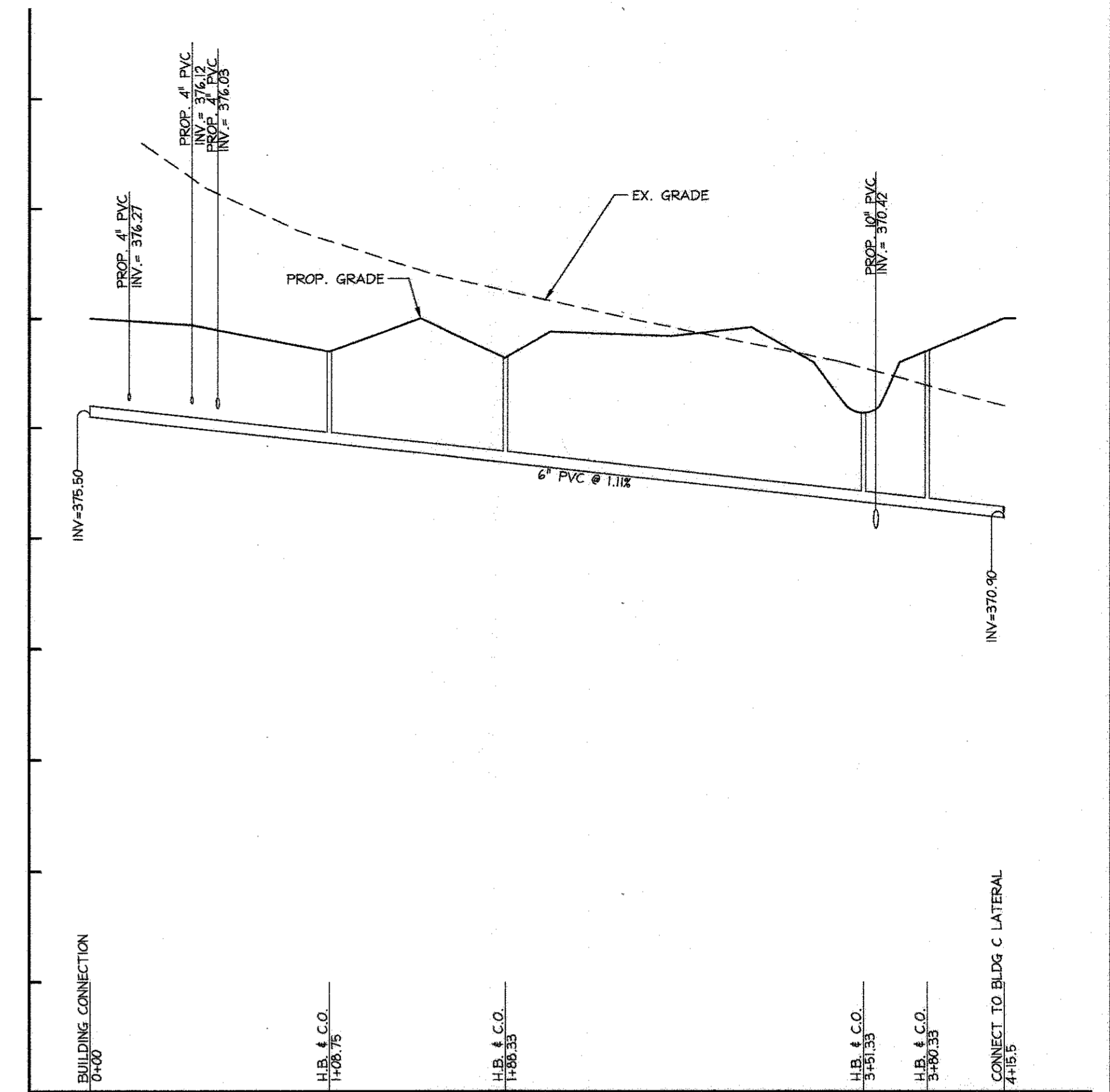


PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

W. Zink DATE 01-05-2015  
SIGNATURE OF ENGINEER DATE  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016



APPROVED: DEPARTMENT OF PLANNING AND ZONING				
Chief, Development Engineering Division		JYJ	Date 2-20-15	
Chief, Division of Land Development			Date 2-26-15	
Director			Date 2/26/15	
01/05/15	01	REVISED SITE DEVELOPMENT PLAN		
Date	No.	Revision Description		
<b>LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY</b>				
OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTRACT RPT OSBACH EX VICE PRESIDENT 300 ST LINE CIRCLE WESTMINSTER MD 21158 (410) 546-0000				
 <b>christopher consultants</b> engineering • surveying • land planning christopher consultants, Inc. 7172 Columbia Gateway Drive (Suite 100) • Columbia, MD 21046-2900 (410) 286-0000 • (410) 286-0001 • fax (410) 286-0001				
PERMIT INFORMATION CHART				
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE			
550 (TG 700)	F07			
TITLE: <b>SANITARY PROFILES</b>				
DESIGN: DAM	SCALE: 1" = 50' V 1" = 5' H	PROJECT: 0515.001.02		
DRAWN: DAM	DATE: APRIL 12, 2013			
CHECKED: ENJ	APPROVED: WRZ	<b>24 of 77</b>		



POOL BUILDING SANITARY CONNECTION

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 9-25-16  
Chief, Development Engineering Division Date

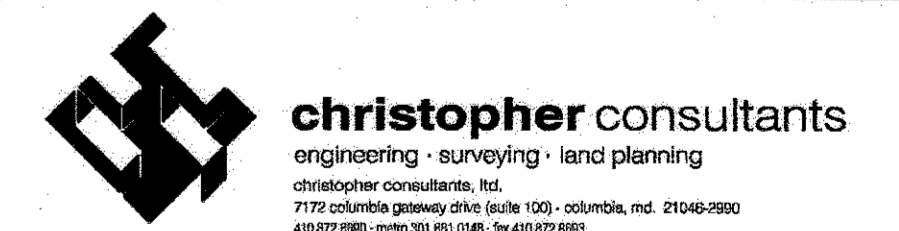
*[Signature]* 10-5-16  
Chief, Division of Land Development Date

*[Signature]* 10-5-16  
Director Date

Date	No.	Revision Description
04/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
		FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
10/23/15	03	REVISED SITE DEVELOPMENT PLAN - REVISED
		GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAWWAL, EXECUTIVE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 948-0200



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

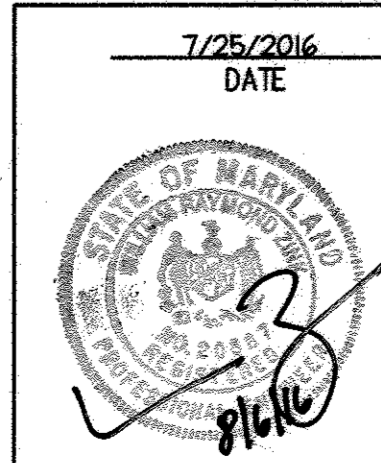
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**SANITARY PROFILES**

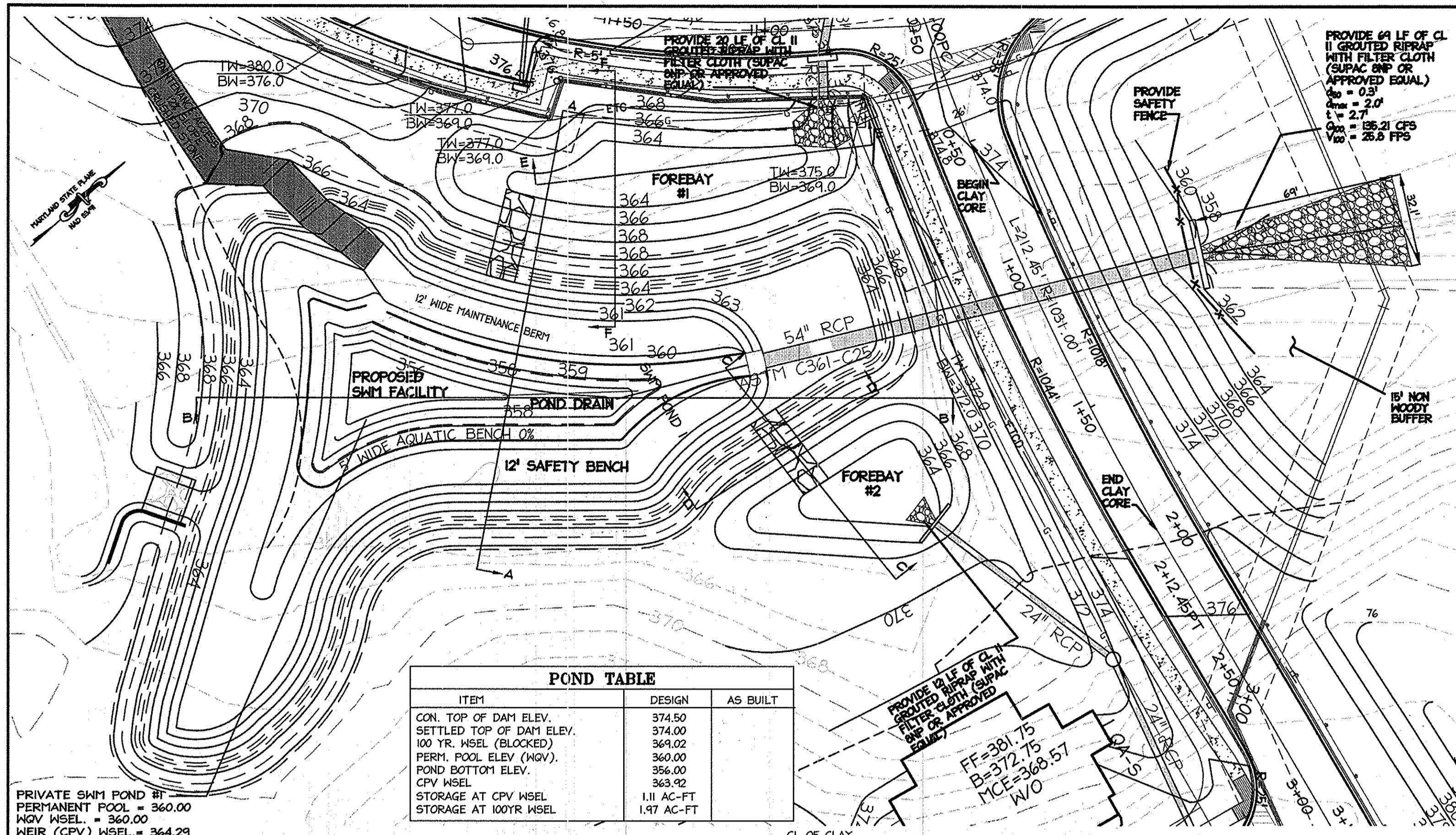
DESIGN: DAM	SCALE: 1" = 50' V, 1" = 5' H	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>24A of 77</b>

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

*[Signature]*  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016

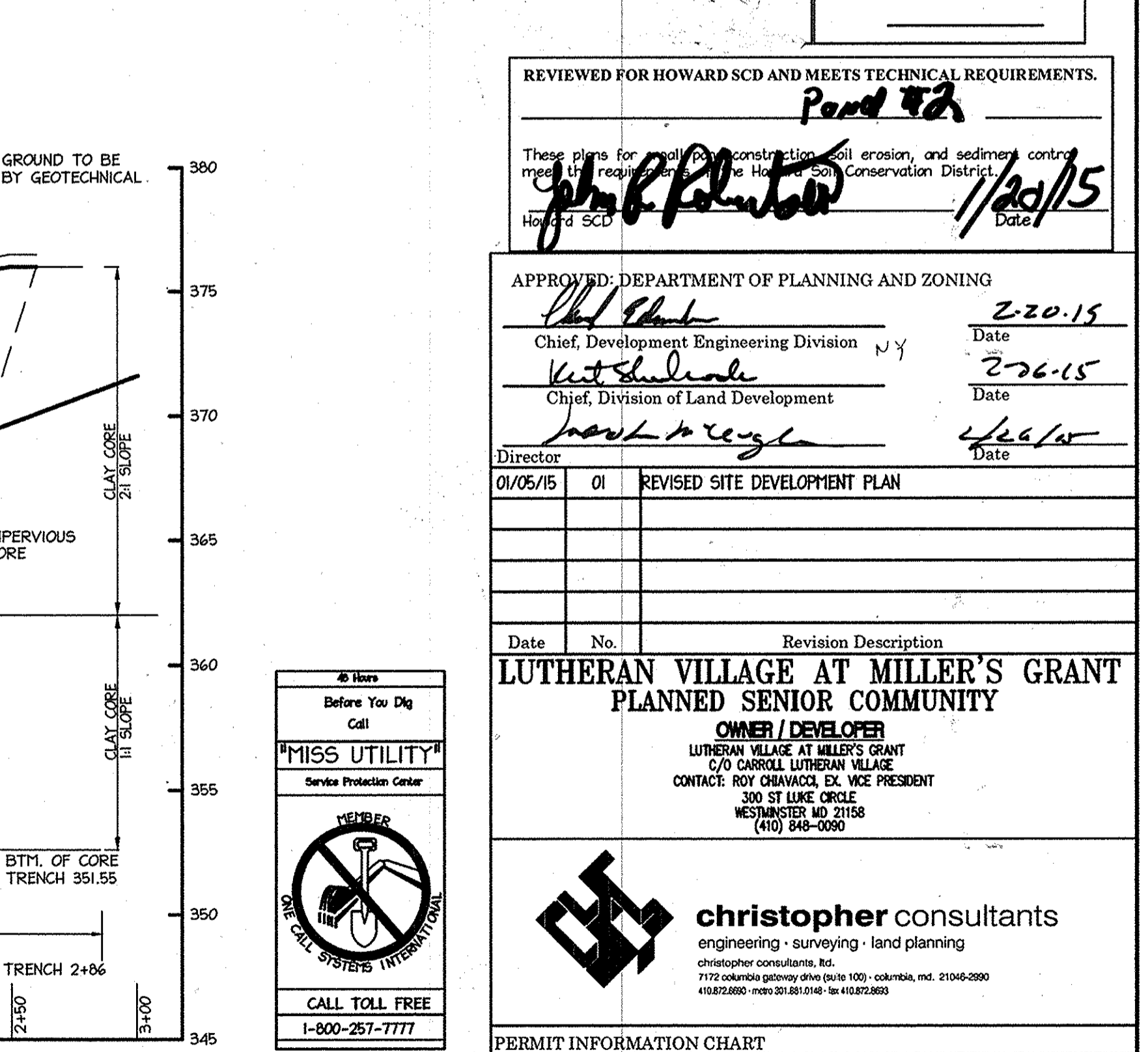
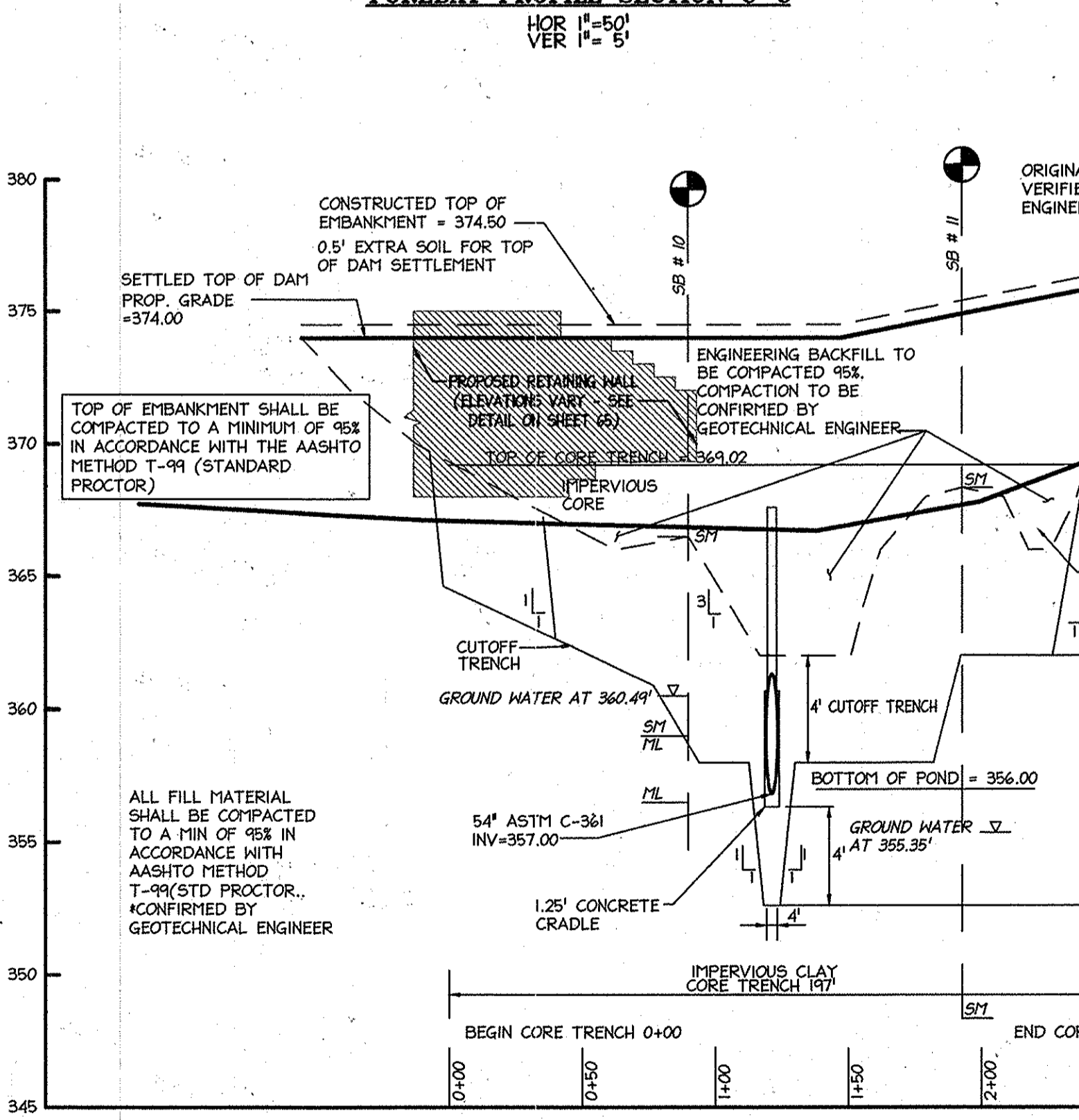
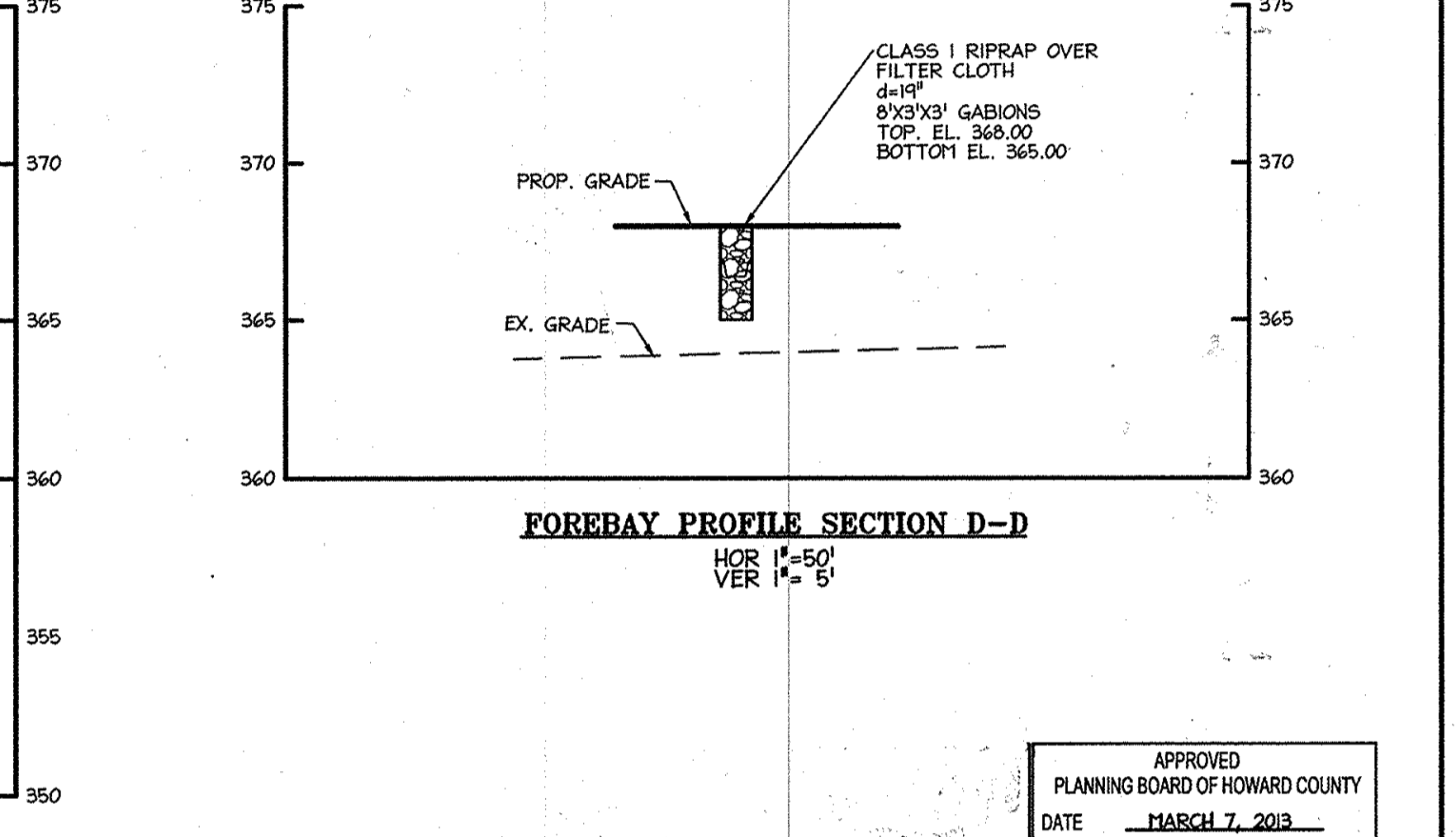
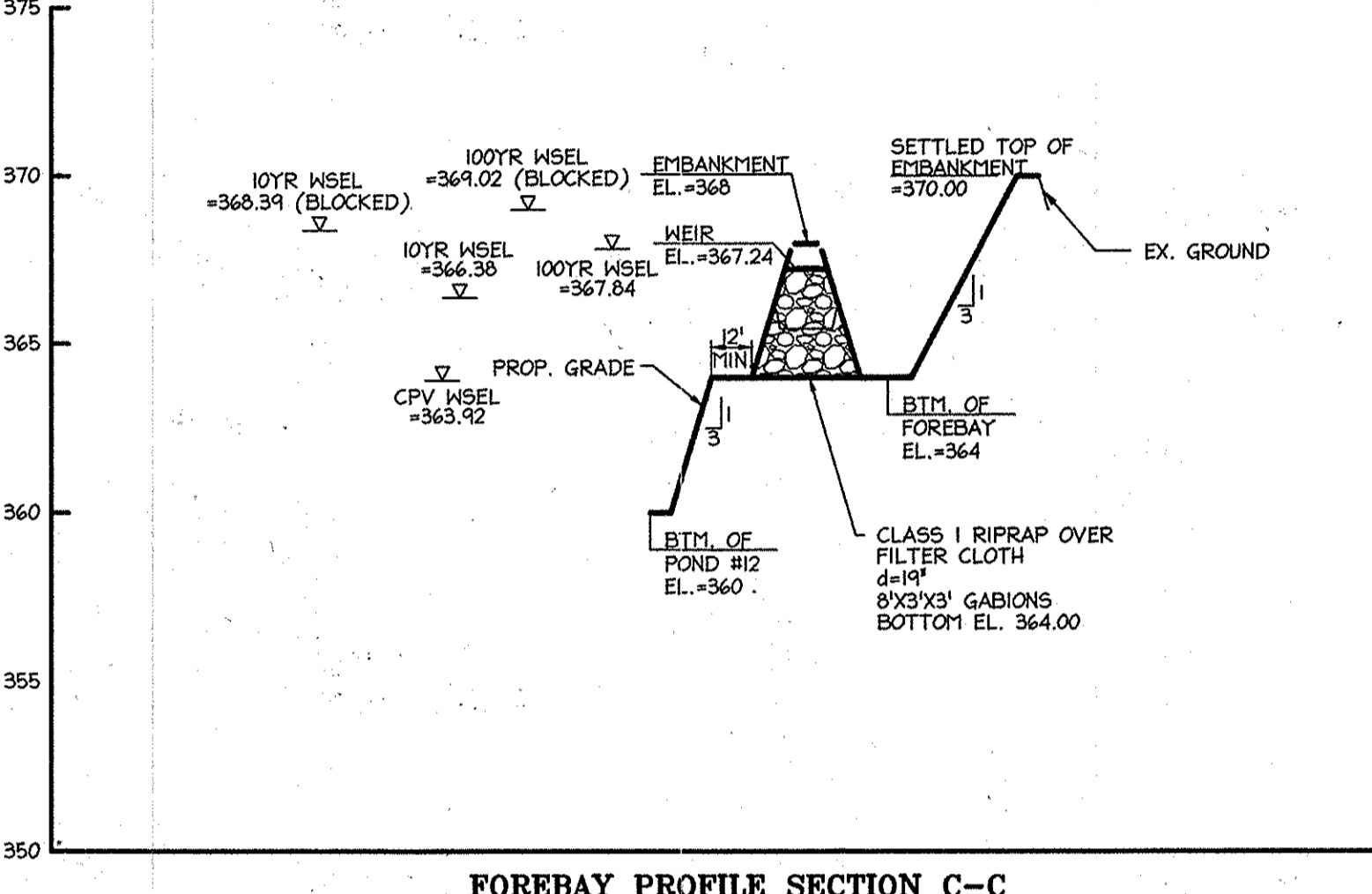
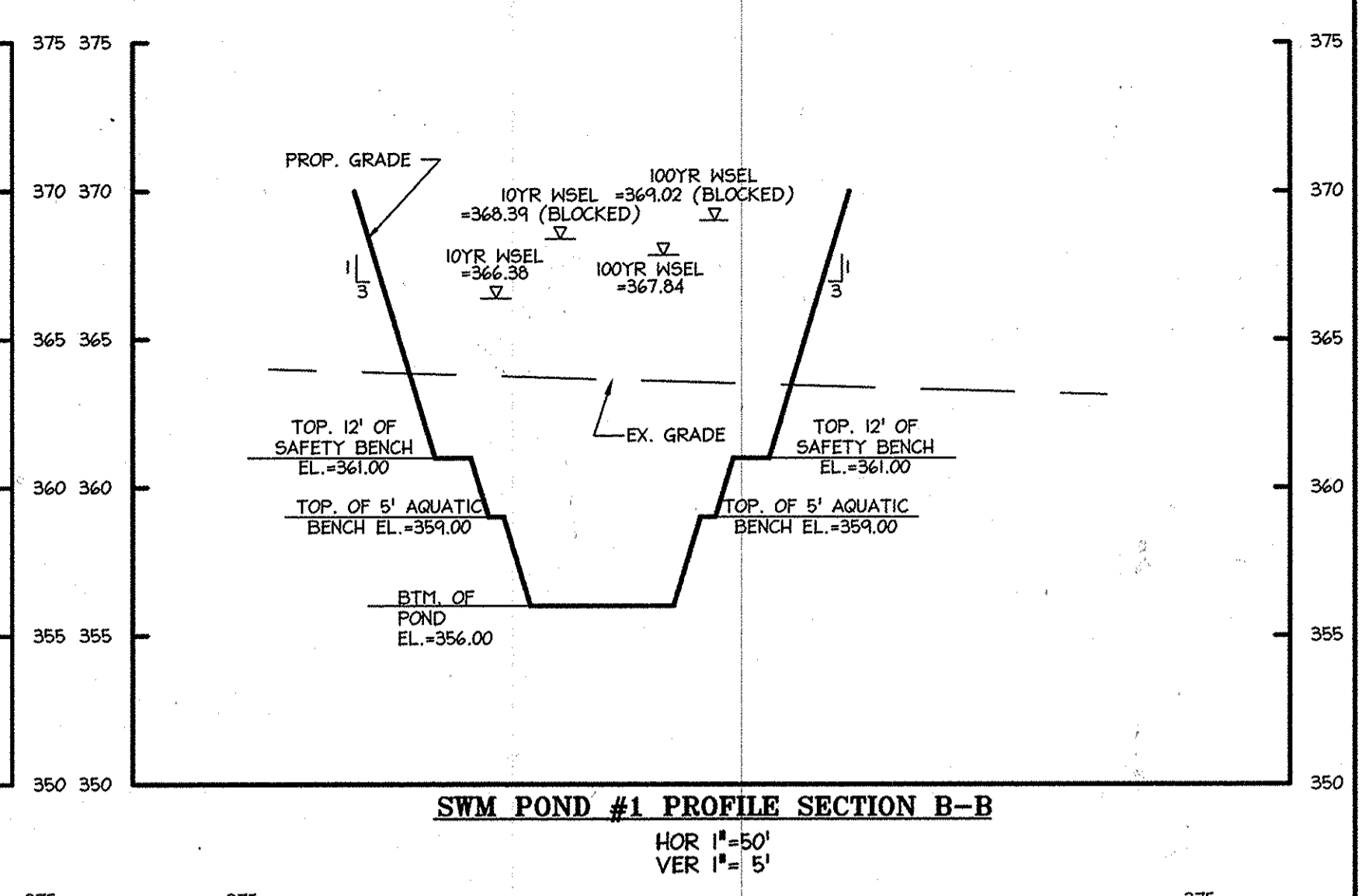
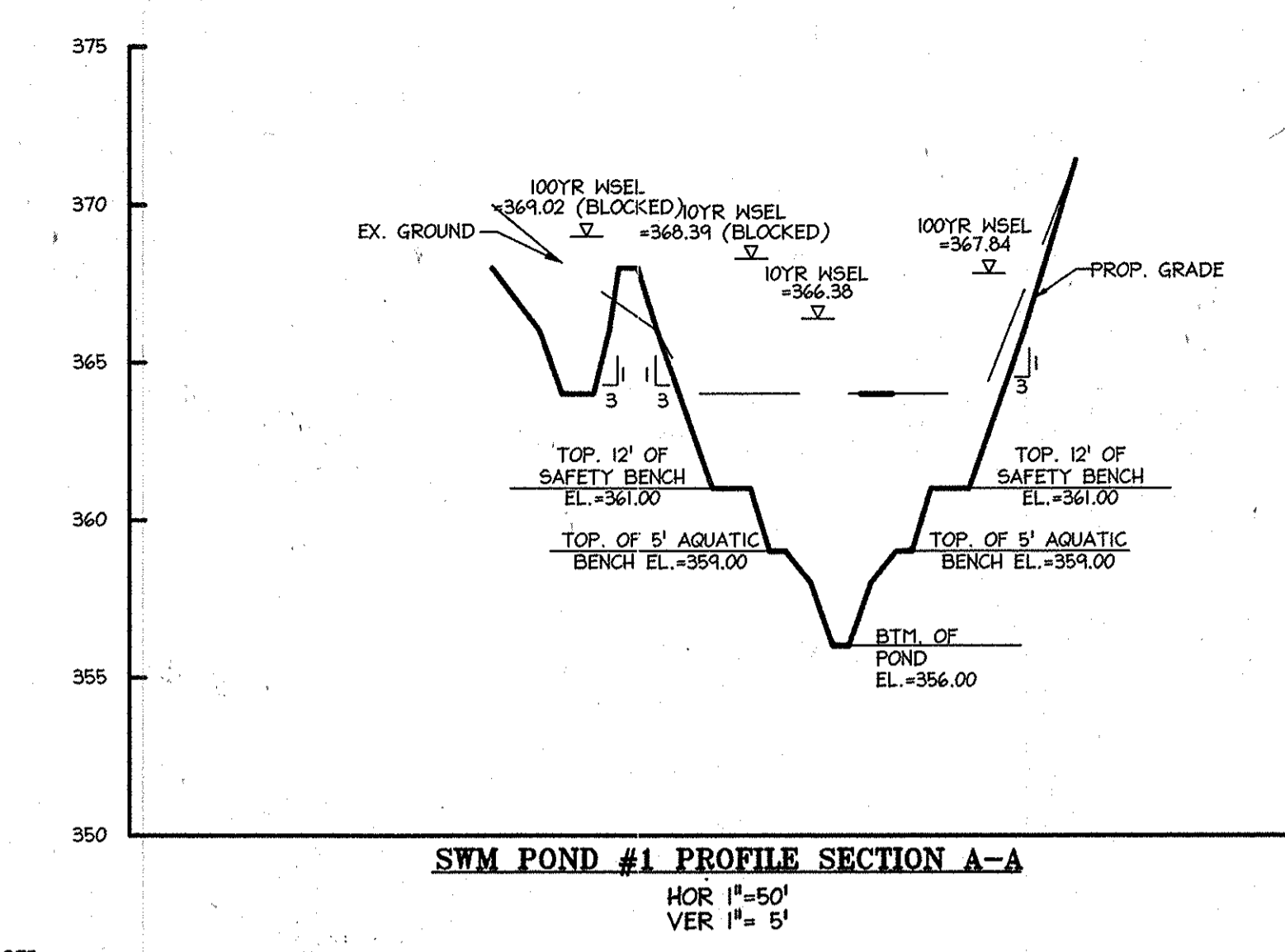
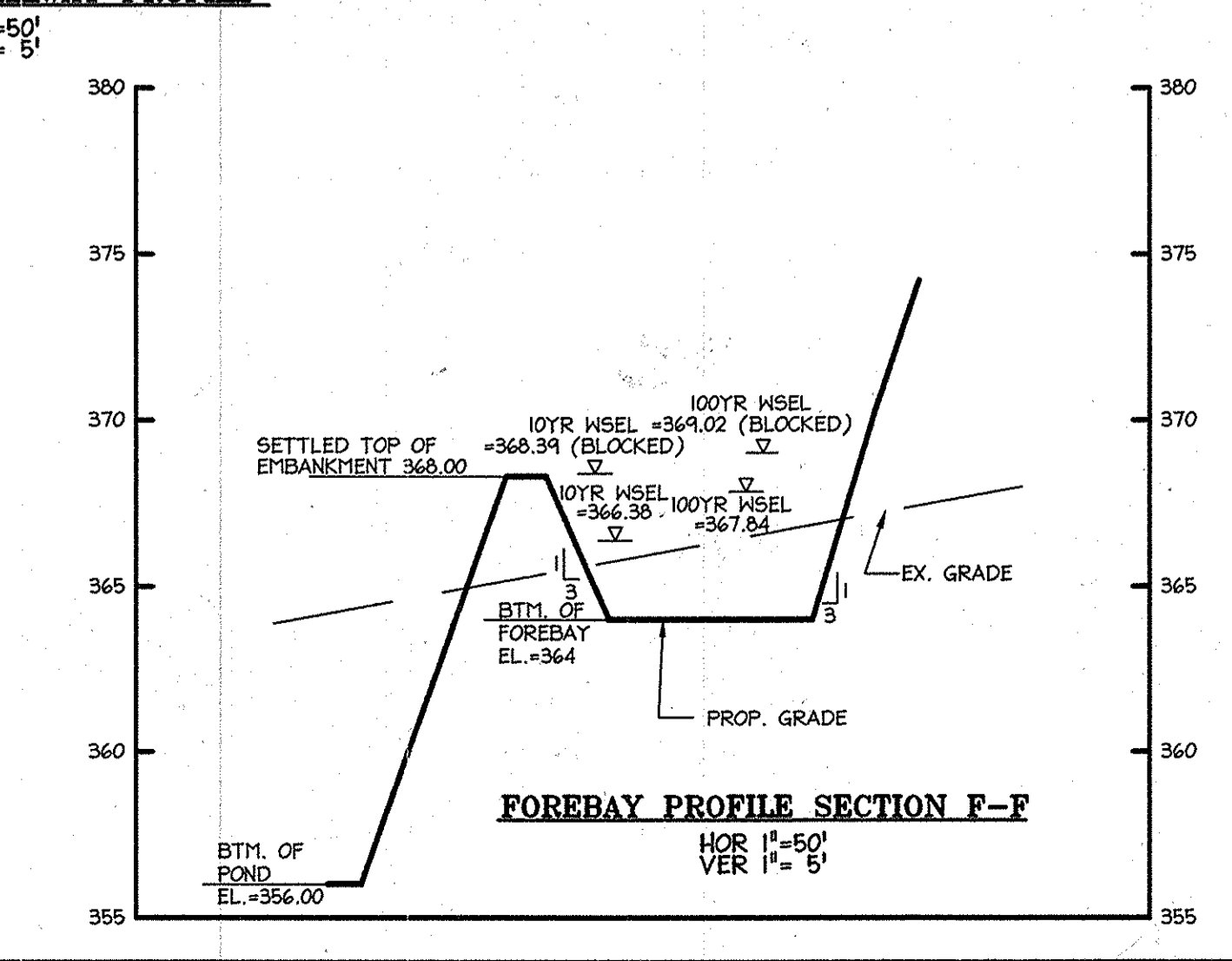
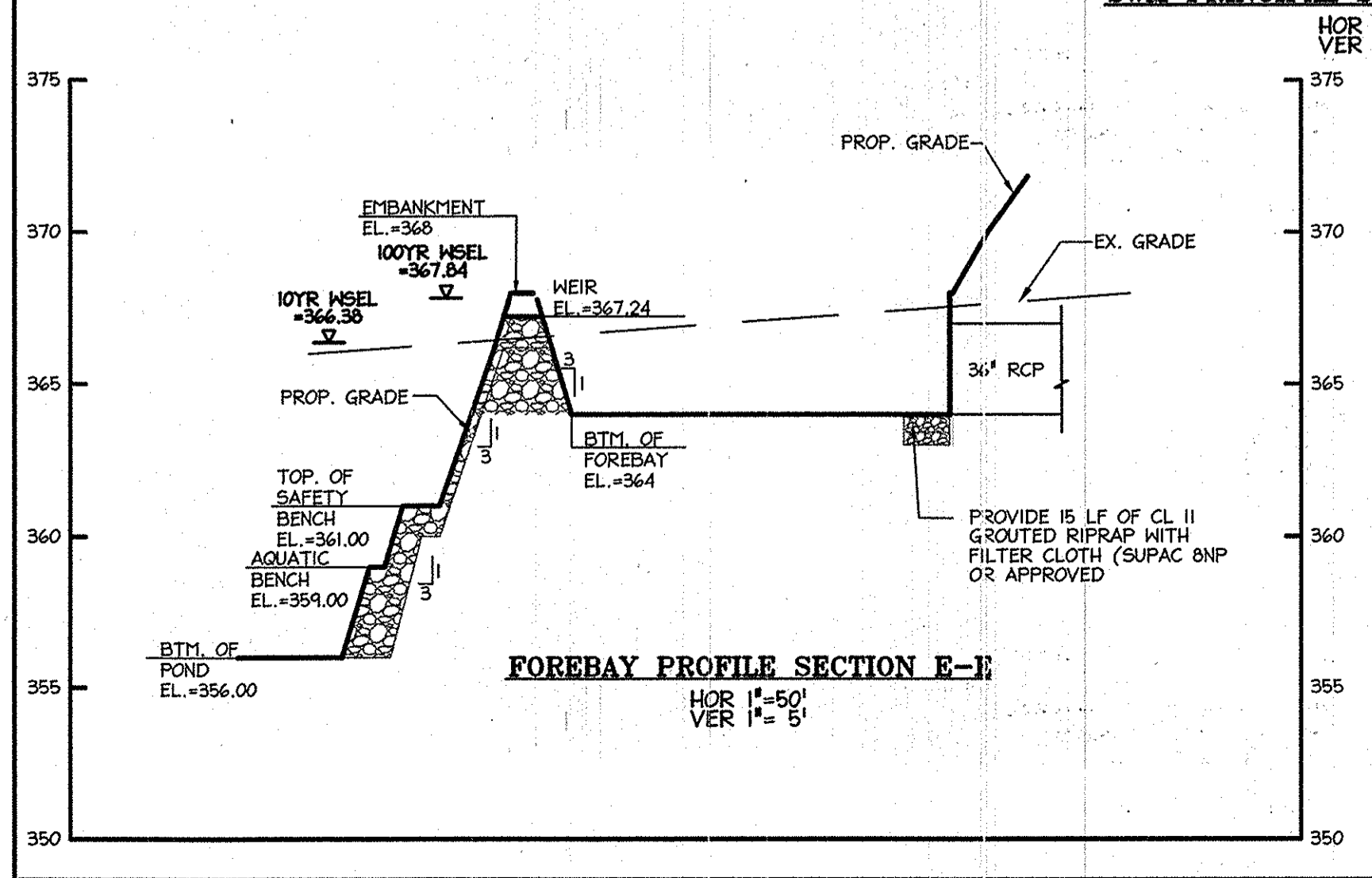
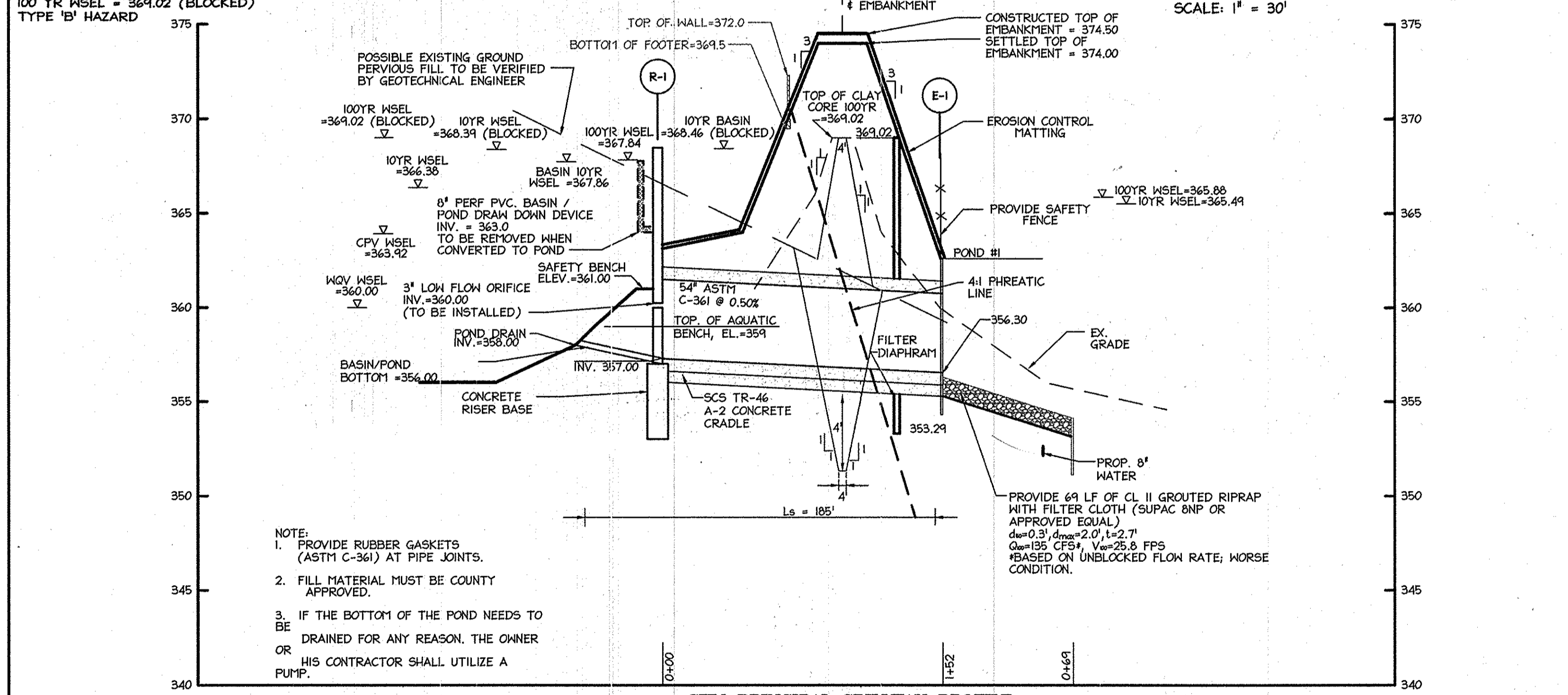
*[Signature]* 8/16/16  
DATE



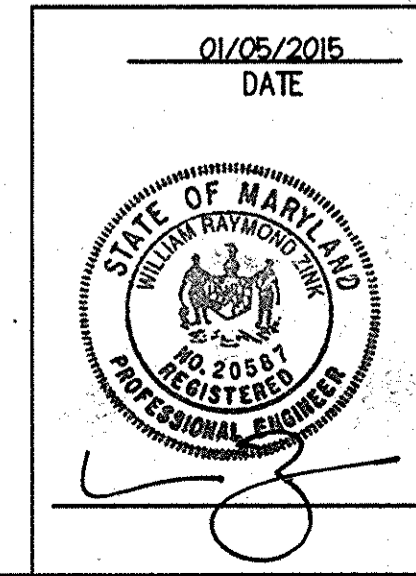


POND TABLE		
ITEM	DESIGN	AS BUILT
CON. TOP OF DAM ELEV.	374.50	
SETTLED TOP OF DAM ELEV.	374.00	
100 YR. WSEL (BLOCKED)	364.02	
PERM. POOL ELEV. (MOV.)	360.00	
POND BOTTOM ELEV.	356.00	
CPV WSEL	363.92	
STORAGE AT CPV WSEL	1.11 AC-FT	
STORAGE AT 100YR WSEL	1.97 AC-FT	

PRIVATE SWM POND #1  
 PERMANENT POOL = 360.00  
 MOVY WSEL = 360.00  
 WEIR (CPV) WSEL = 364.29  
 10 YR WSEL = 368.39 (BLOCKED)  
 100 YR WSEL = 364.02 (BLOCKED)  
 TYPE 'B' HAZARD



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
 M.D. LICENSE NUMBER: 20587  
 EXPIRATION DATE: 04-26-2016  
 DATE: 01-05-2015



APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2013

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
 These plans for all construction, erosion control, and sediment control meet the requirements of the Howard County Conservation District.  
 J.P. [Signature] 1/20/15  
 HOWARD SCD Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division Date: 2-20-15  
 Chief, Division of Land Development Date: 2-26-15  
 Director Date: 4/26/15

01/05/15 01 REVISED SITE DEVELOPMENT PLAN

Date	No.	Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 670 CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAVACA, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 948-0090

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, Inc.  
 7175 oakdale gateway drive (suite 100) - coltsville, md. 21046-2000  
 410.272.8800 - fax: 301.881.0148 - sa: 410.272.8803

PERMIT INFORMATION CHART

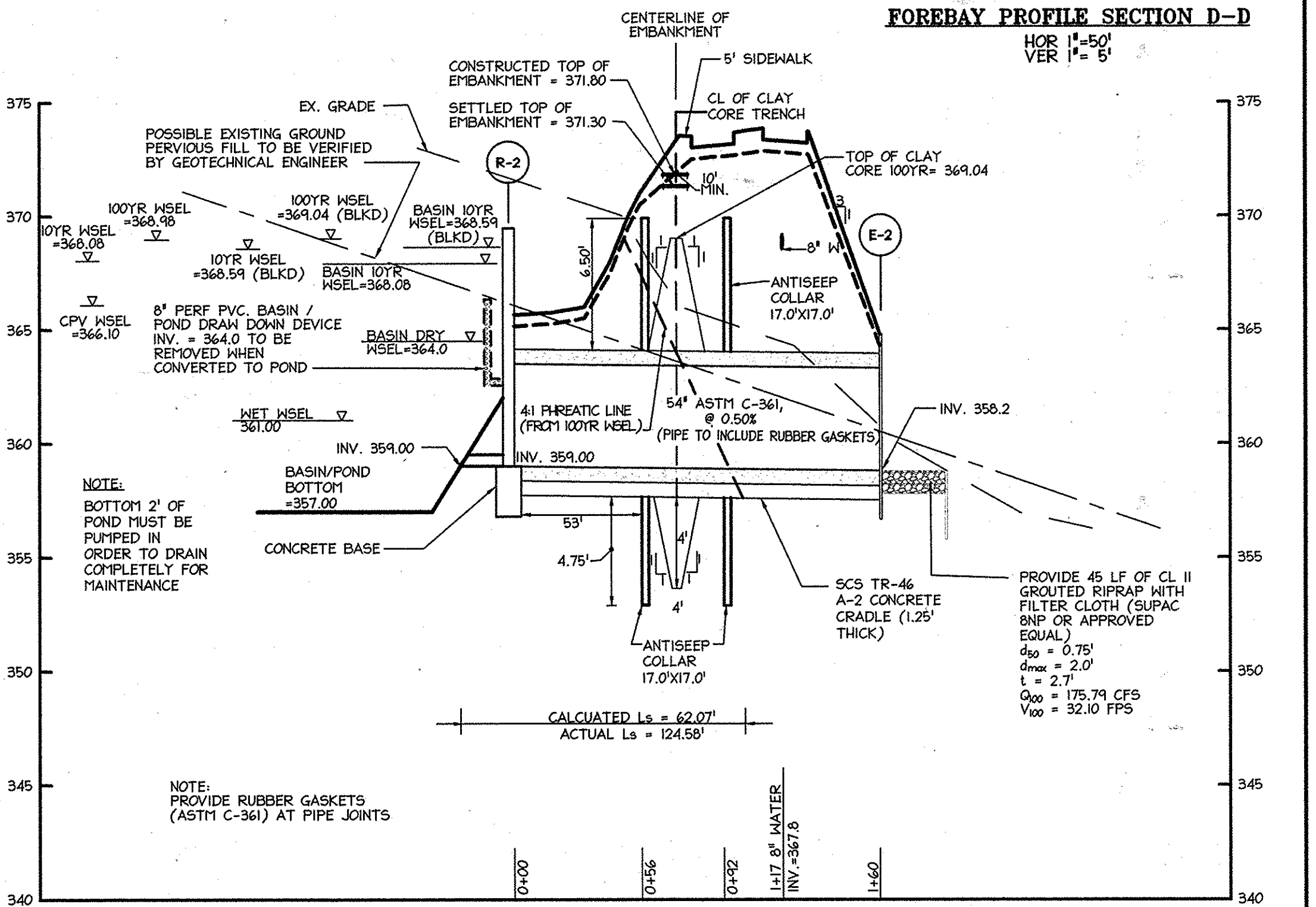
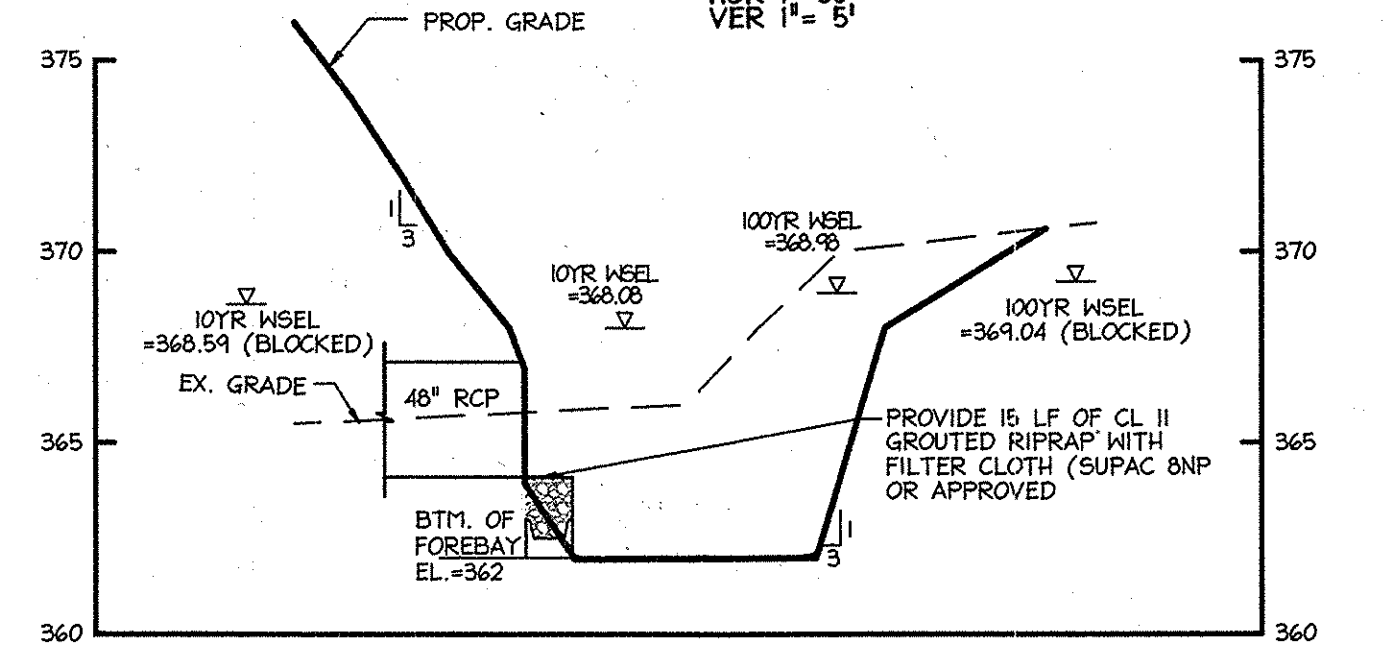
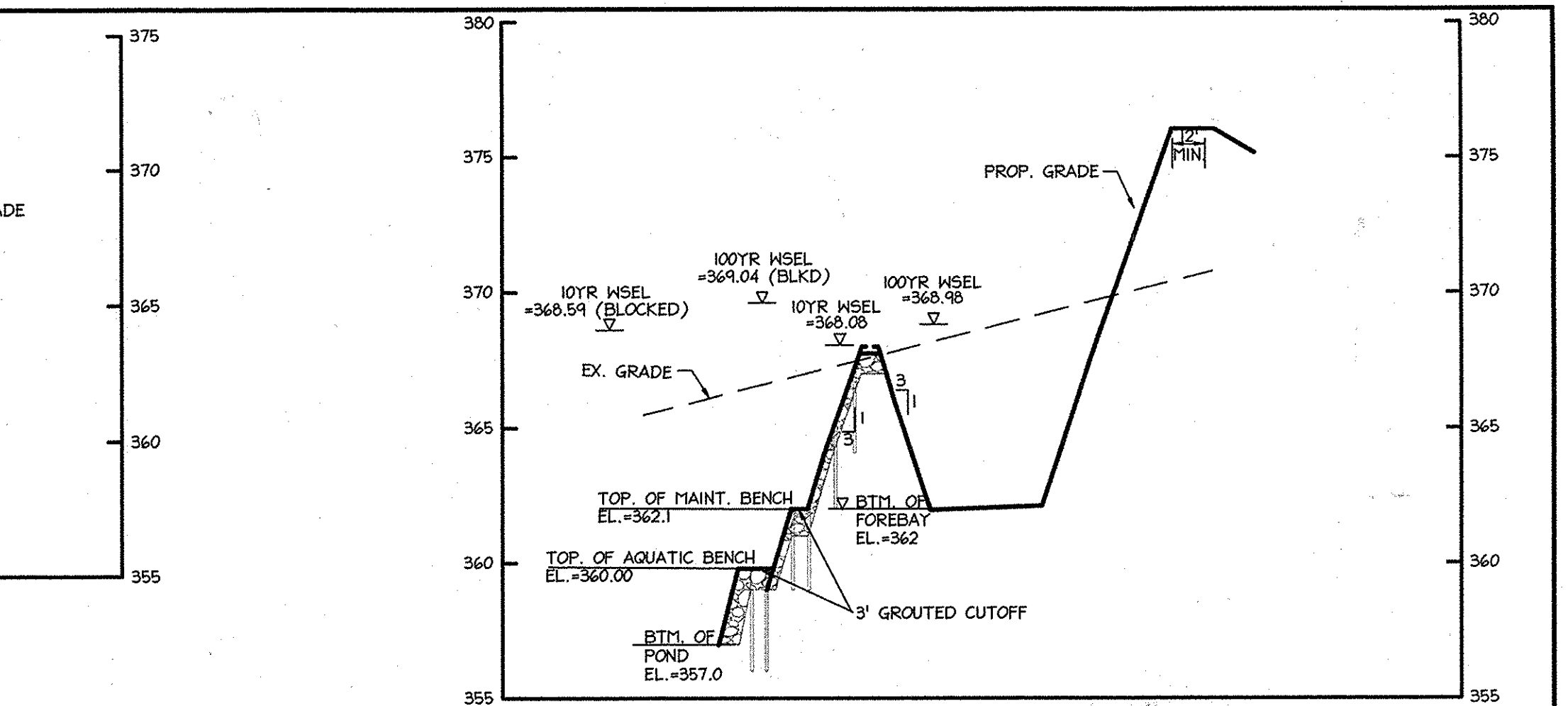
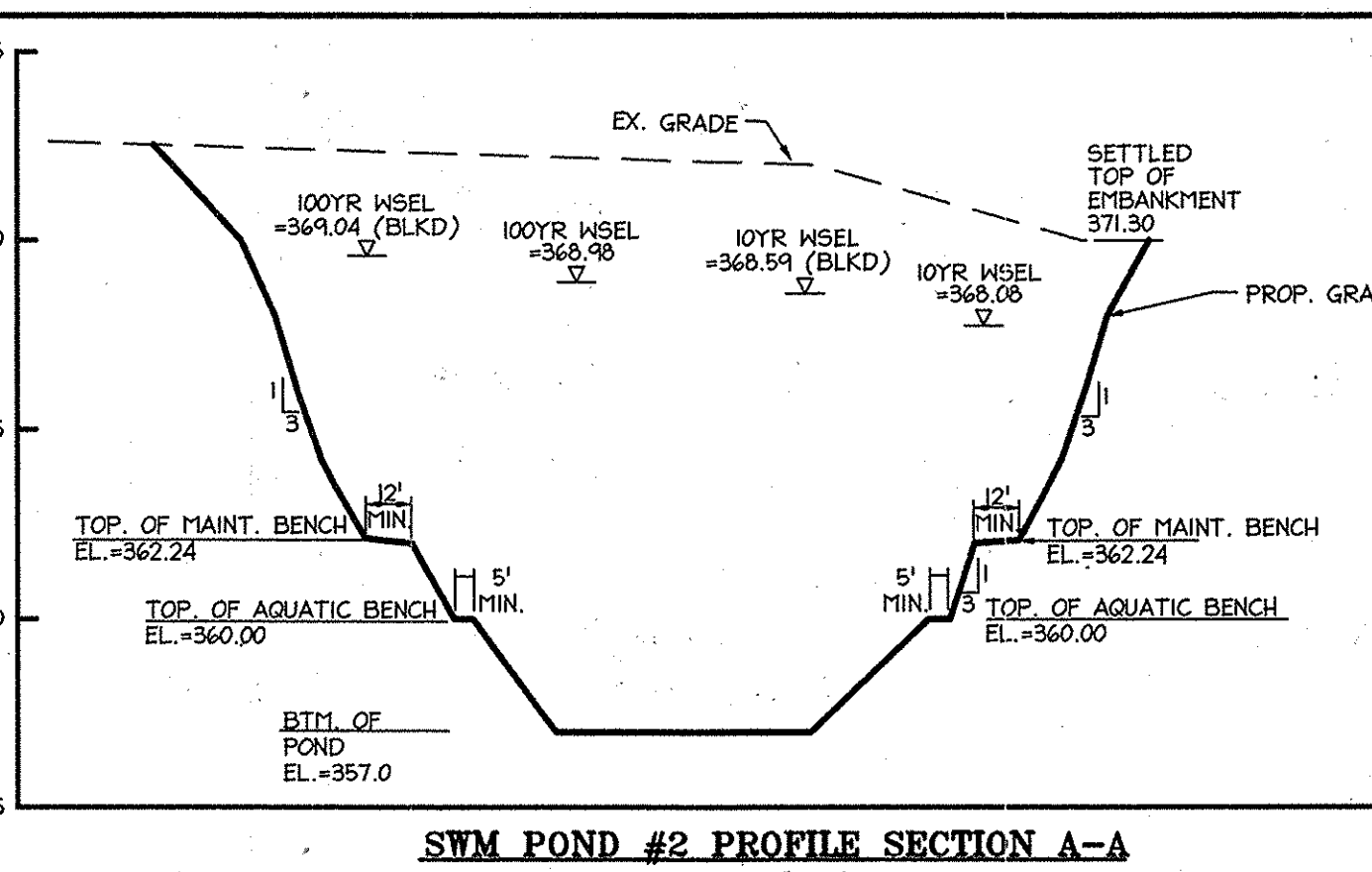
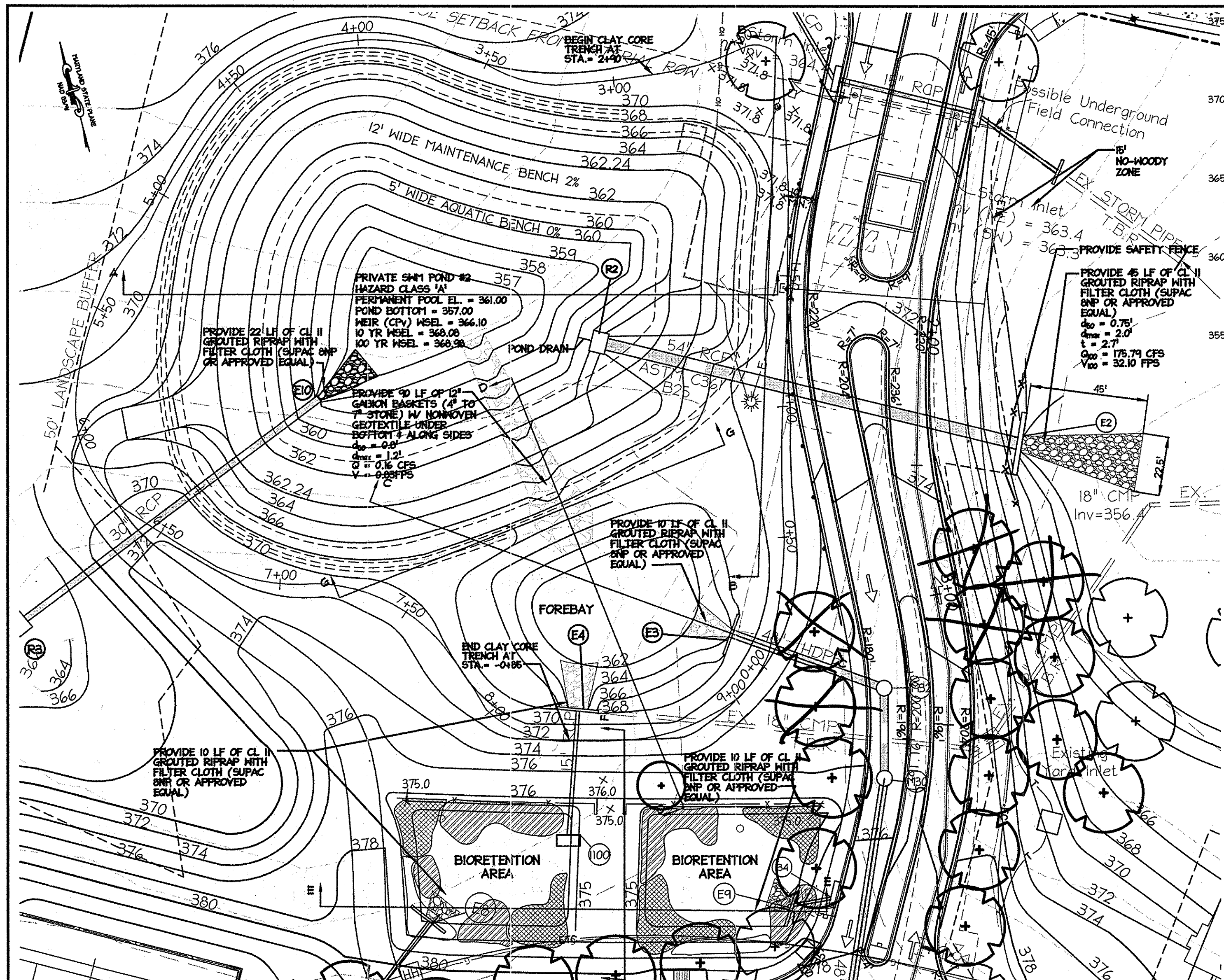
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800

DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02

WATER CODE	SEWER CODE
550 (TG 700)	F07

TITLE: **STORMWATER MANAGEMENT PLAN - PD1**

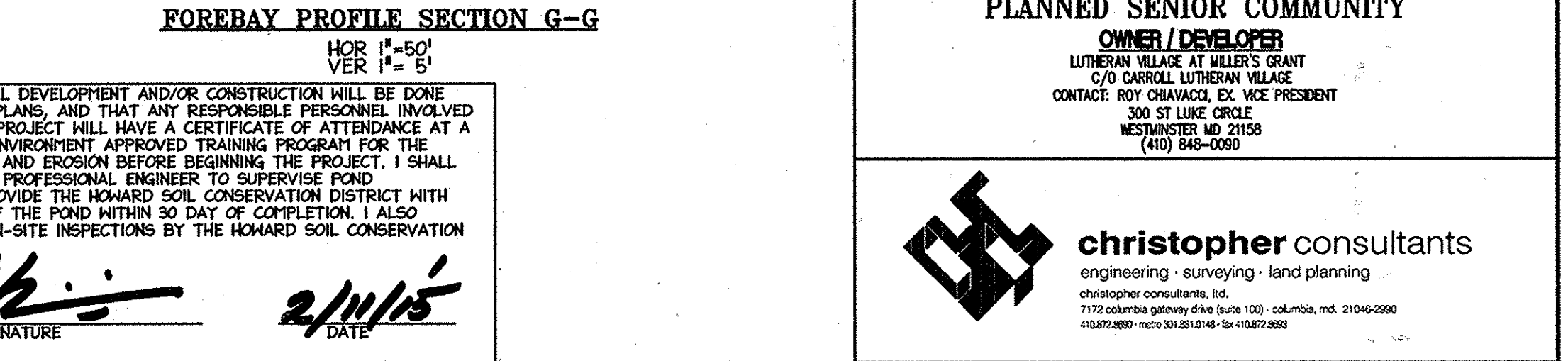
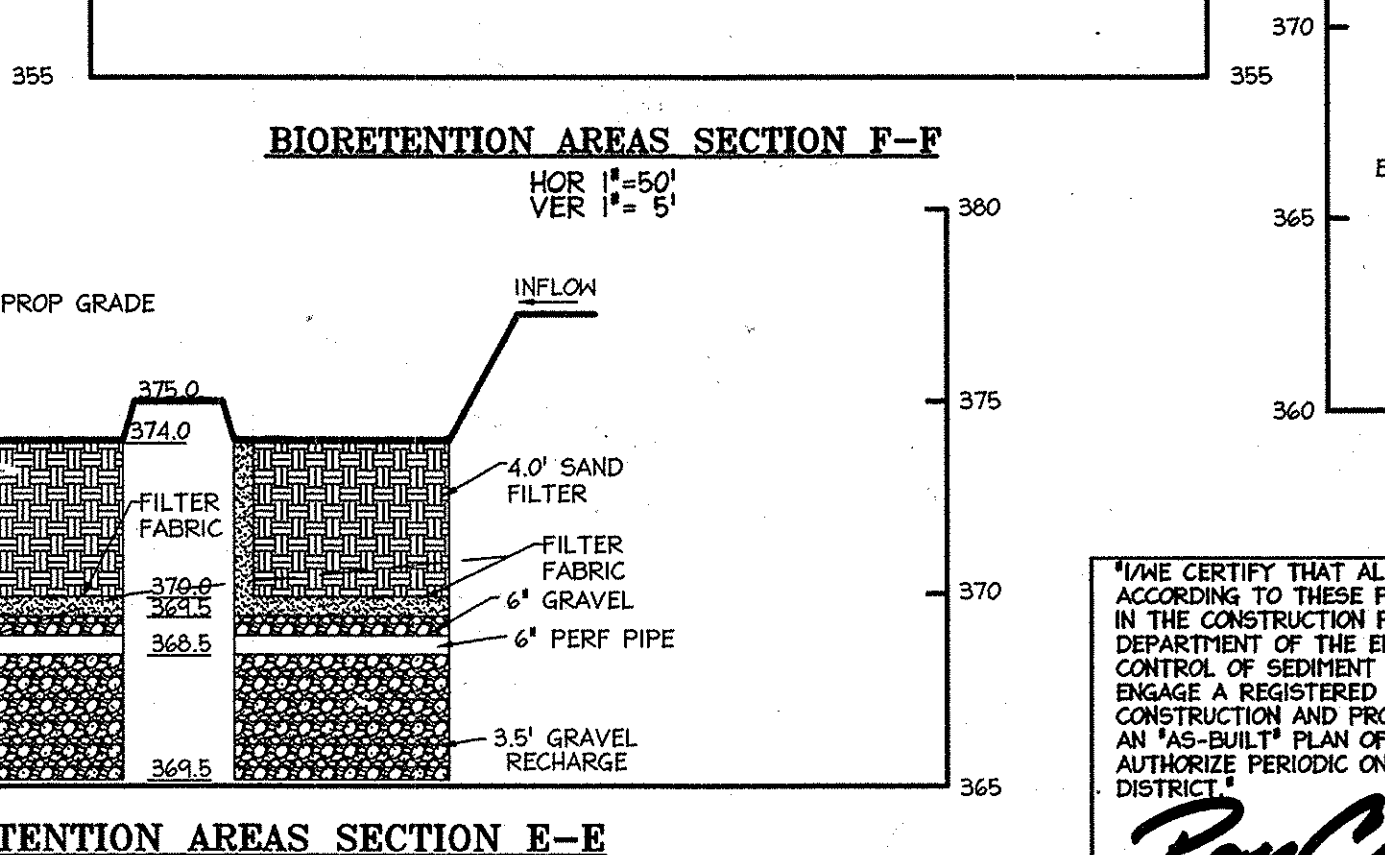
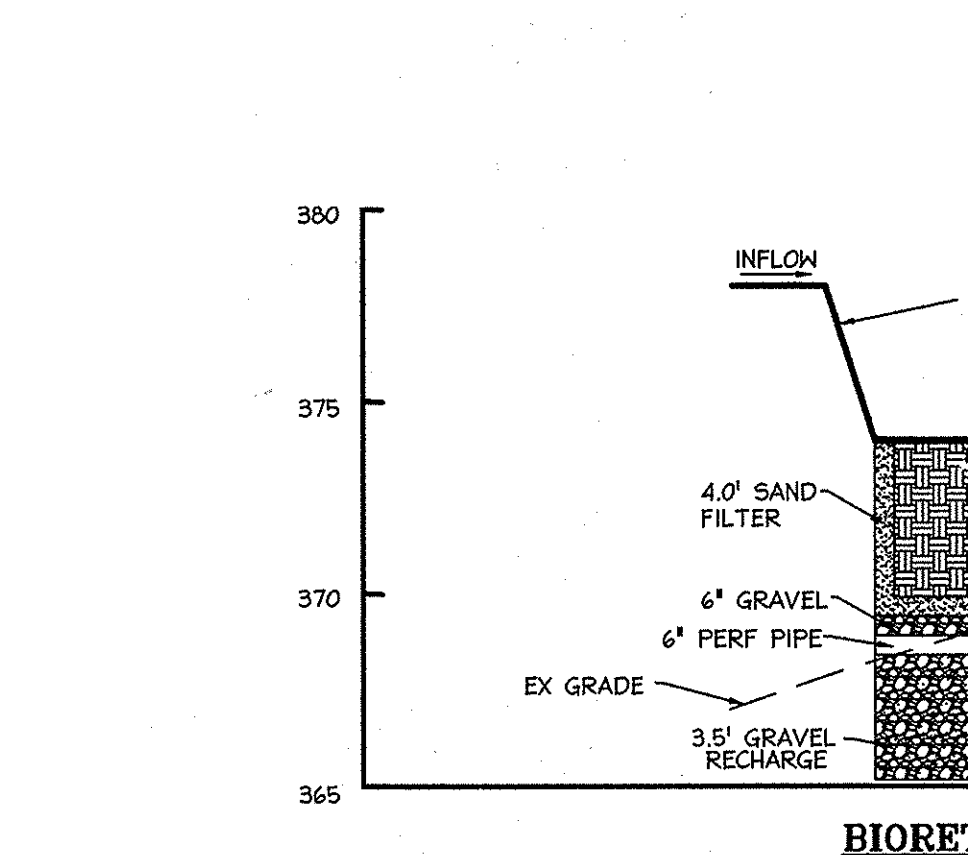
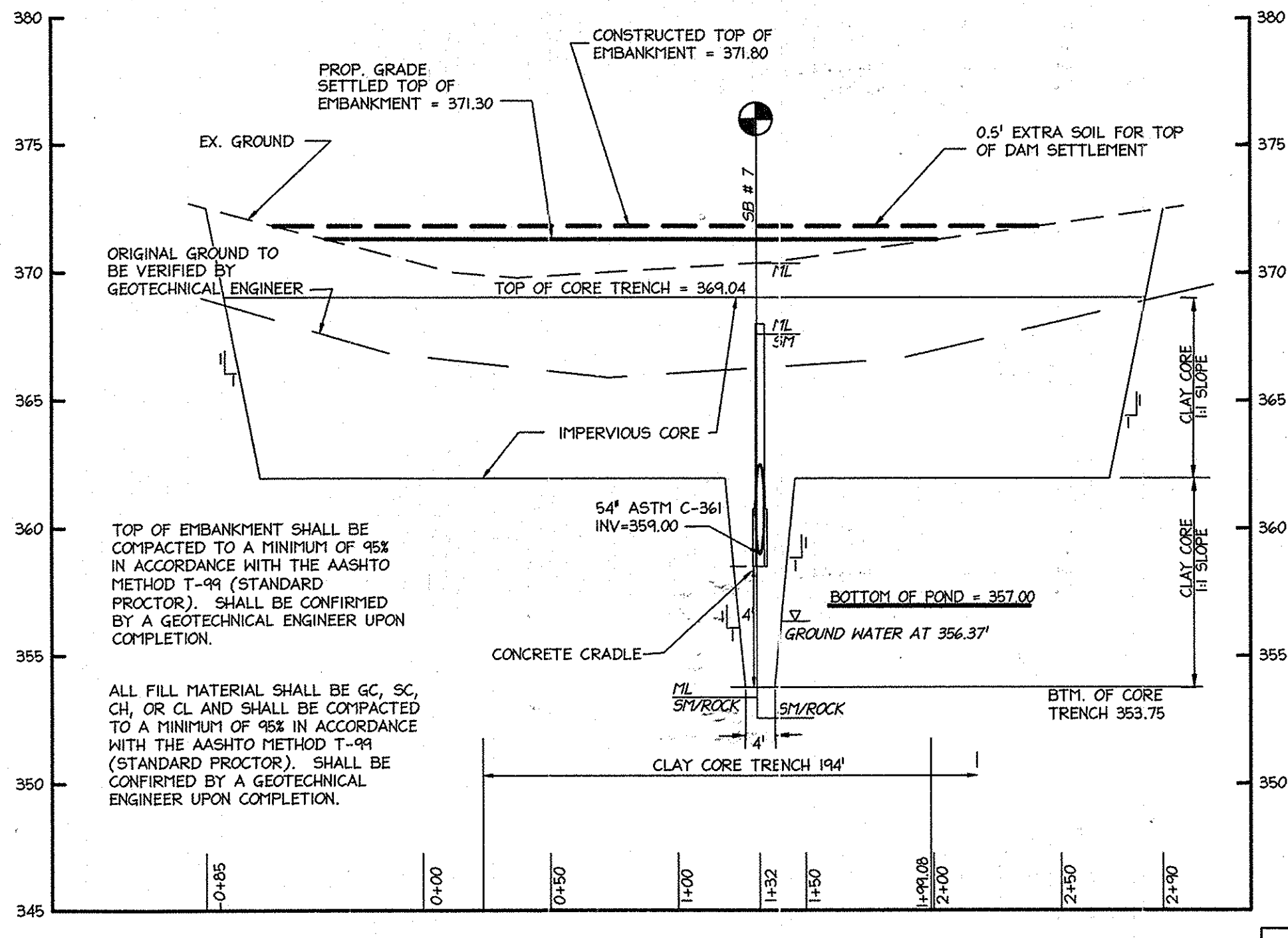
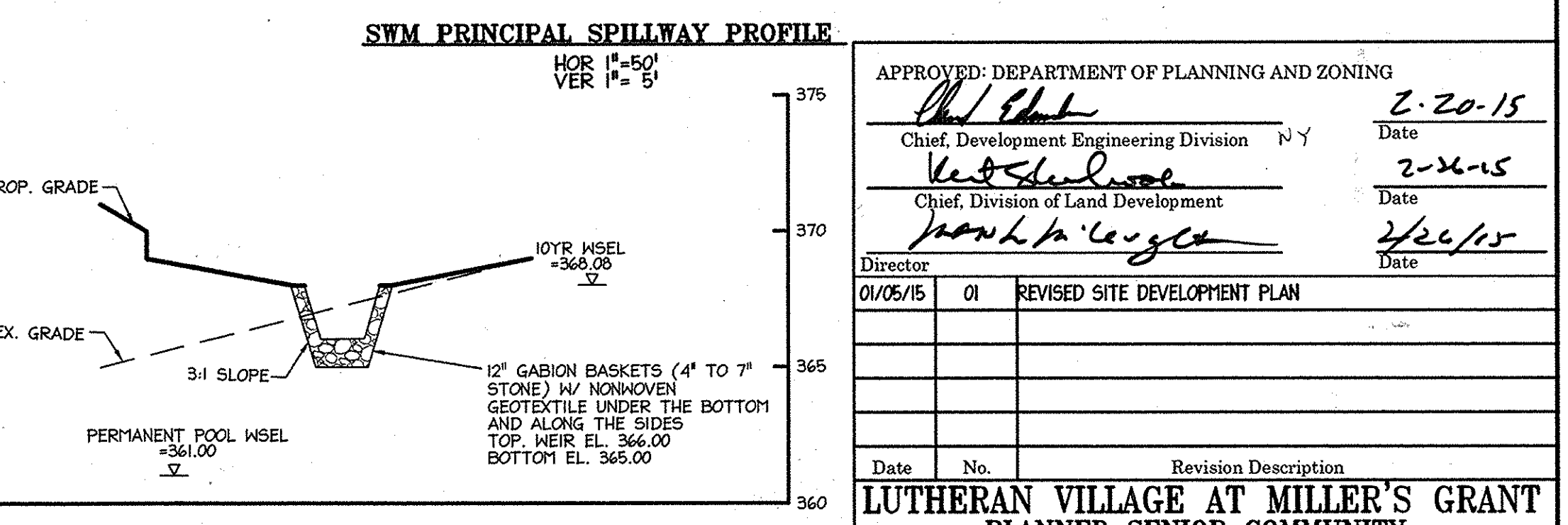
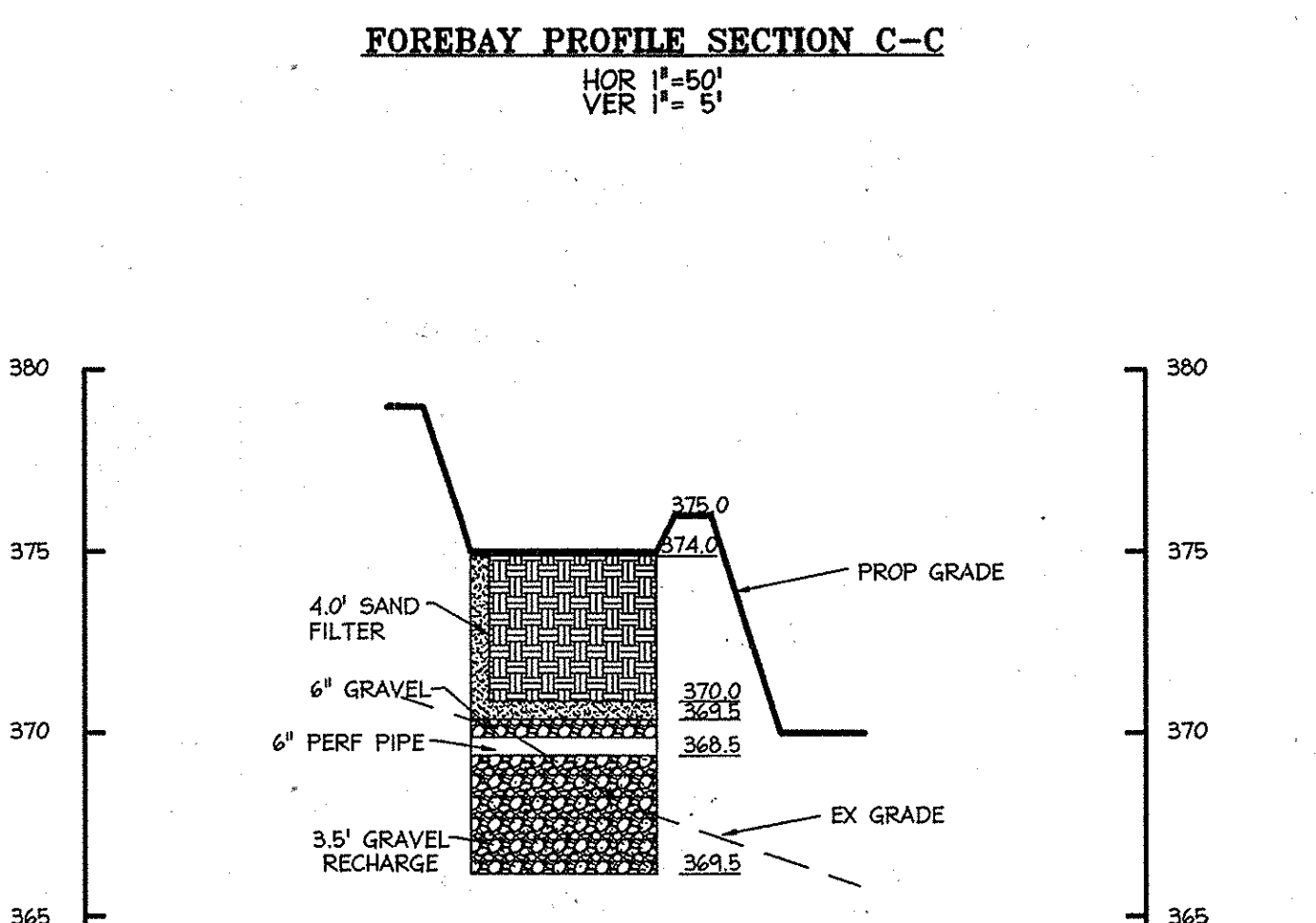
DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	25 of 77



ITEM	DESIGN	AS BUILT
CON. TOP OF DAM ELEV.	371.80	371.80
SETTLED TOP OF DAM ELEV.	371.30	371.30
10 YR. WEIR ELEV. (BLOCKED)	368.05	368.05
10 YR. WEIR ELEV. (BLOCKED)	368.54	368.54
100 YR. WEIR ELEV. (BLOCKED)	369.04	369.04
PERM. POOL ELEV. (MOV.)	361.00	361.00
POND BOTTOM ELEV.	357.00	357.00
CPV WEIR ELEV.	2.23 AC-FT	2.23 AC-FT
STORAGE AT 100YR WEIR	4.94 AC-FT	4.94 AC-FT

**PROPOSED STORMWATER MANAGEMENT POND #2**  
SCALE: 1" = 30'

REFER TO SHEET 42A FOR BIORETENTION SPECIFICATIONS



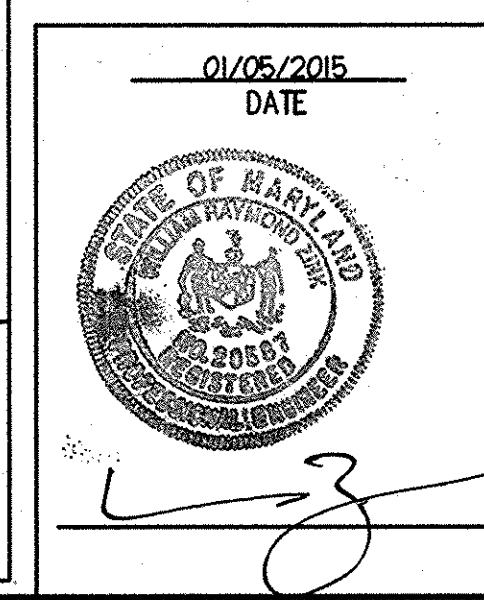
**EMBANKMENT PROFILE ALONG POND #2 SECTION B-B**  
HOR 1" = 50'  
VER 1" = 5'

PLANS APPROVED BY  
Charles H. Wallis  
FEB 04 2015  
Dam Safety Division  
Maryland Dept. of the Environment

APPROVED MARYLAND DEPARTMENT OF ENVIRONMENT SMALL POND DAM SAFETY	APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: _____	DATE: MARCH 7, 2015

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
MID LICENSE NUMBER: 20587  
EXPIRATION DATE: 04-26-2016  
DATE: 01-05-2015

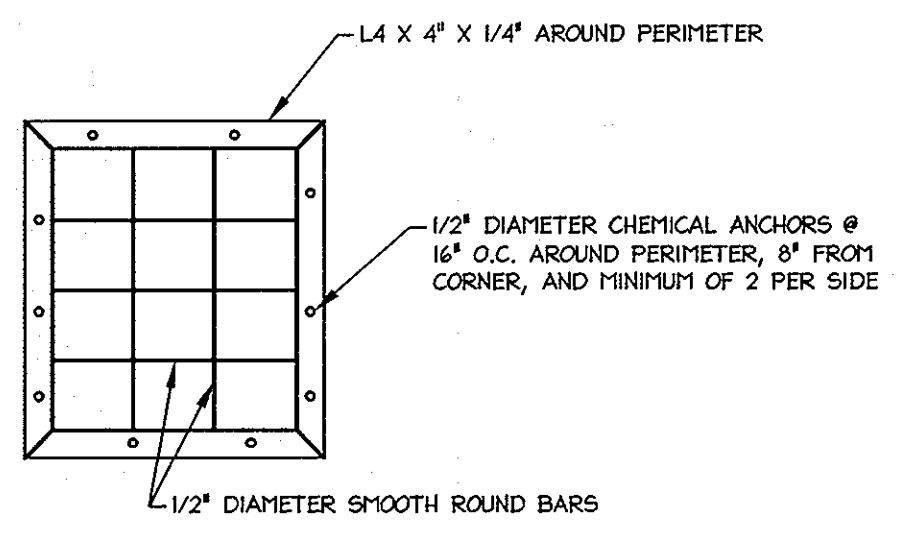
DATE: 2/11/15  
DATE: 1/15/15  
DATE: 1/20/15



APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>[Signature]</i>	Chief, Development Engineering Division	NY	Date: 2-20-15
<i>[Signature]</i>	Chief, Division of Land Development		Date: 2-26-15
<i>[Signature]</i>	Director		Date: 2/26/15
01/05/15	01	REVISED SITE DEVELOPMENT PLAN	
Date No. Revision Description			
<b>LUTHERAN VILLAGE AT MILLER'S GRANT</b>			
Planned Senior Community			
OWNER / DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT, C/O CARROLL LUTHERAN VILLAGE, CONTACT: ROY CHAVACCI, EX. VICE PRESIDENT, 300 ST. LUKE CIRCLE, WESTMINSTER, MD 21158, (410) 848-0090			
<b>christopher consultants</b> engineering - surveying - land planning christopherconsultants.com, 7175 GARDNER GARDENS DRIVE SUITE 100, COLLETSVILLE, MD 21046-9900, (410) 848-0090			
PERMIT INFORMATION CHART			
PROJECT NAME: LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800	
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)		SEWER CODE F07	
TITLE: <b>STORMWATER MANAGEMENT PLAN - PD 2</b>			
DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 0515.001.02	
DRAWN: DAM	DATE: APRIL 12, 2013		
CHECKED: ENJ	APPROVED: WRZ	26 OF 77	

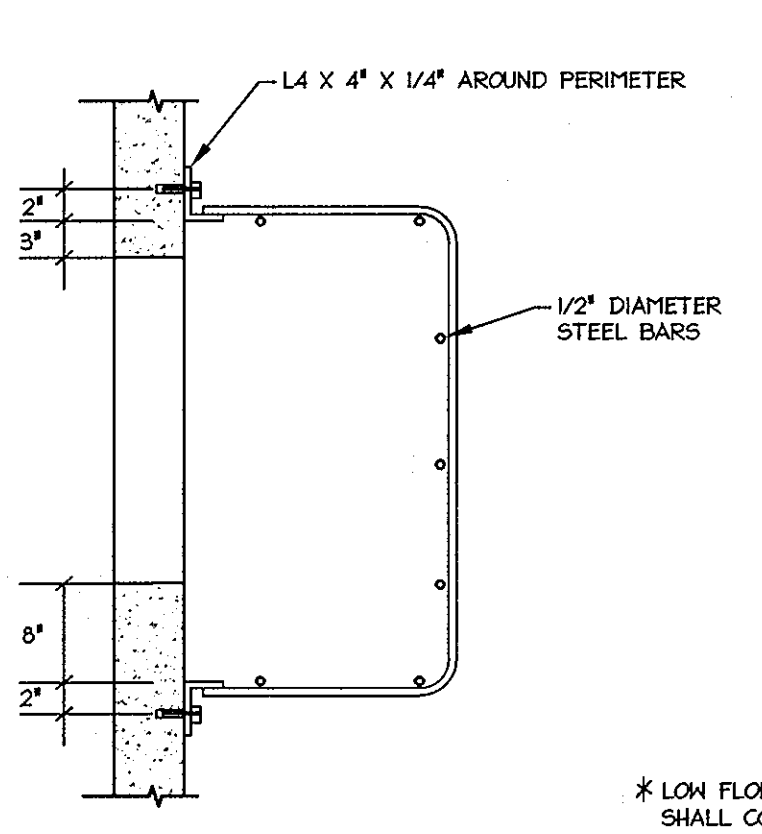






- ASSEMBLY SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
- STEEL ANGLES SHALL CONFORM TO ASTM A36.
- BARS TO CONFORM TO ASTM A108.
- CHEMICAL ANCHORS SHALL BE 1/2" DIAMETER GALVANIZED THREADED RODS WITH HILTI HY200 ADHESIVE SYSTEM (4:5 EMBEDMENT).

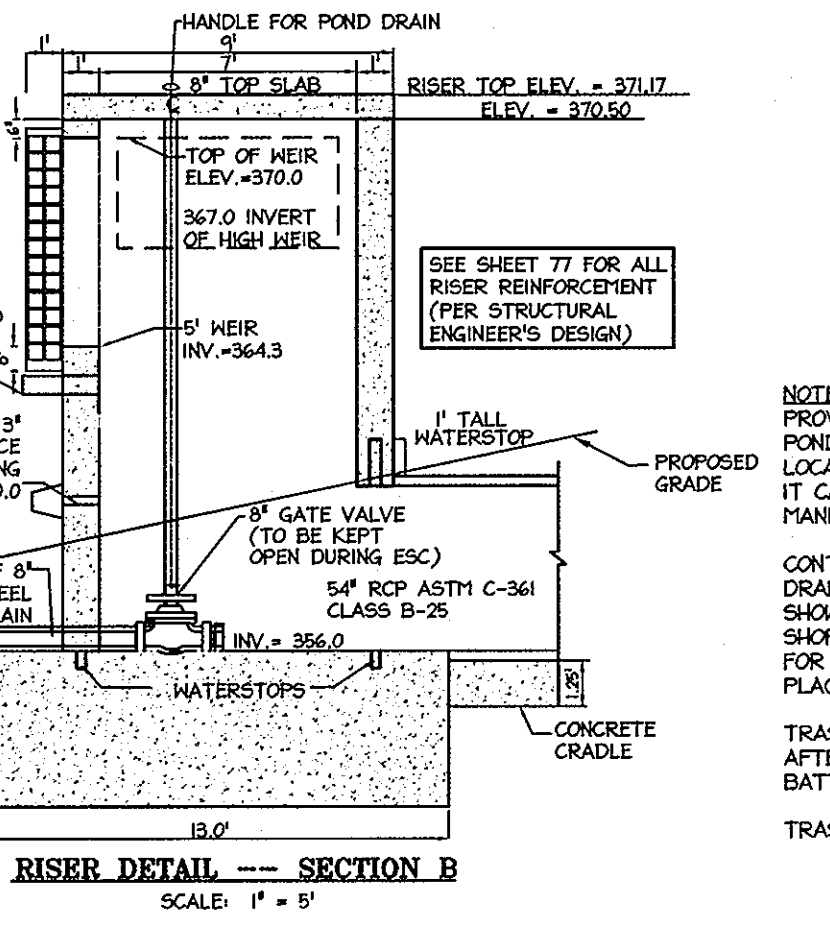
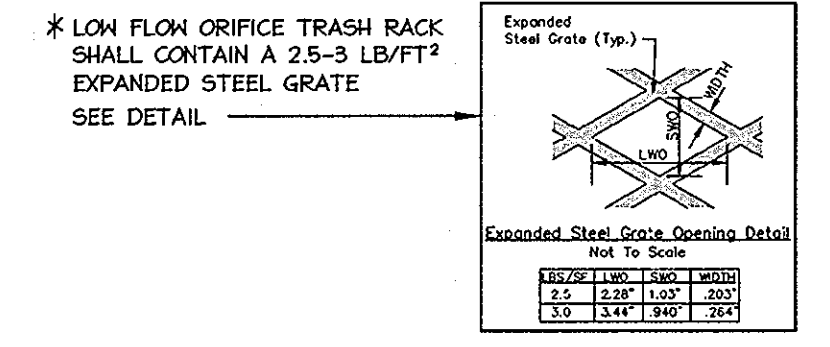
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N.T.S.



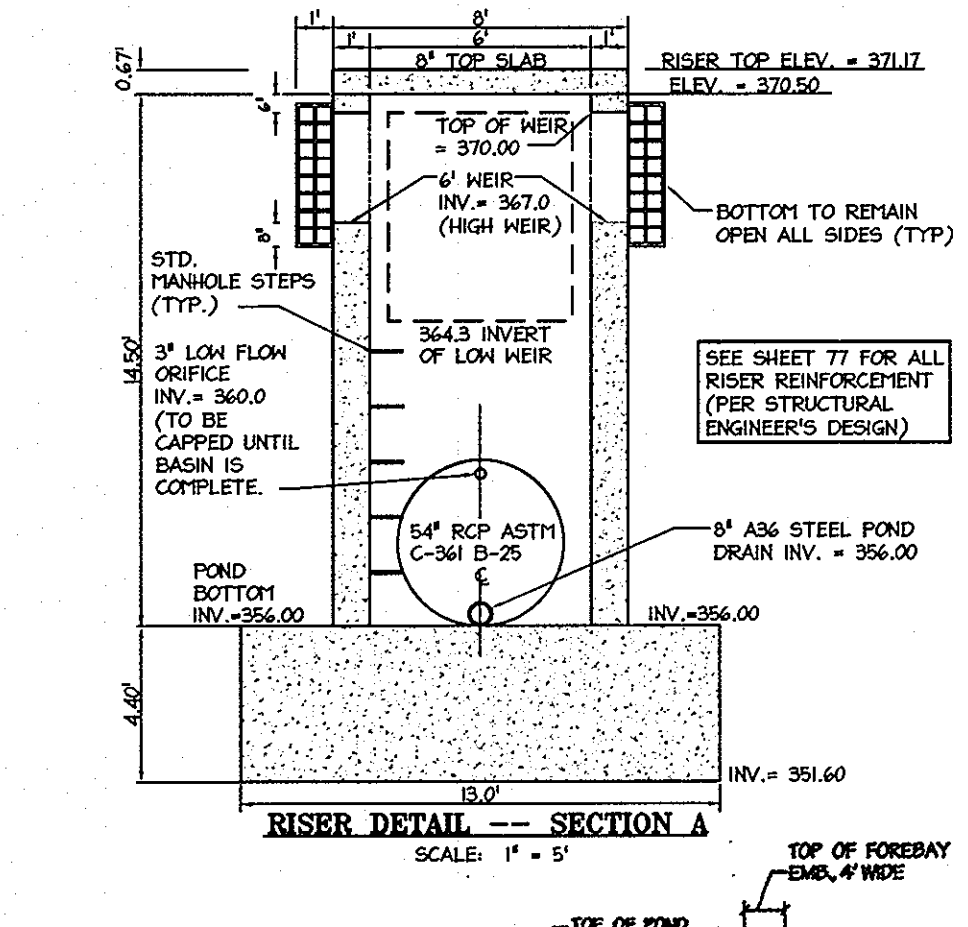
**TRASH RACK SECTION**  
N.T.S.

TRASH RACK DIMENSIONS

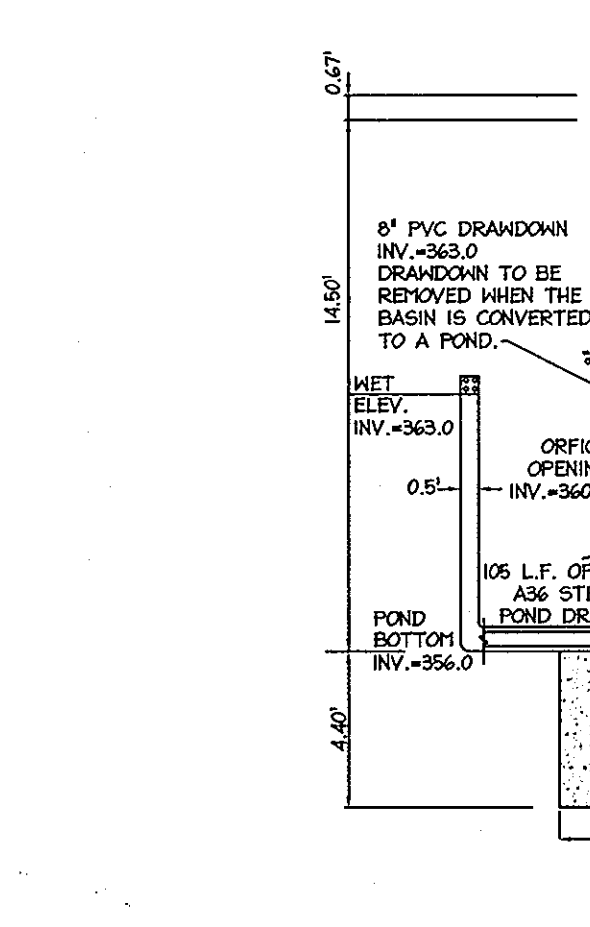
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LOW WEIR	1	6	6.62
HIGH WEIR	1	7	3.92
LOW FLOW ORIFICE	1	2	3



**RISER DETAIL -- SECTION B**  
SCALE: 1" = 5'



**RISER DETAIL -- SECTION A**  
SCALE: 1" = 5'



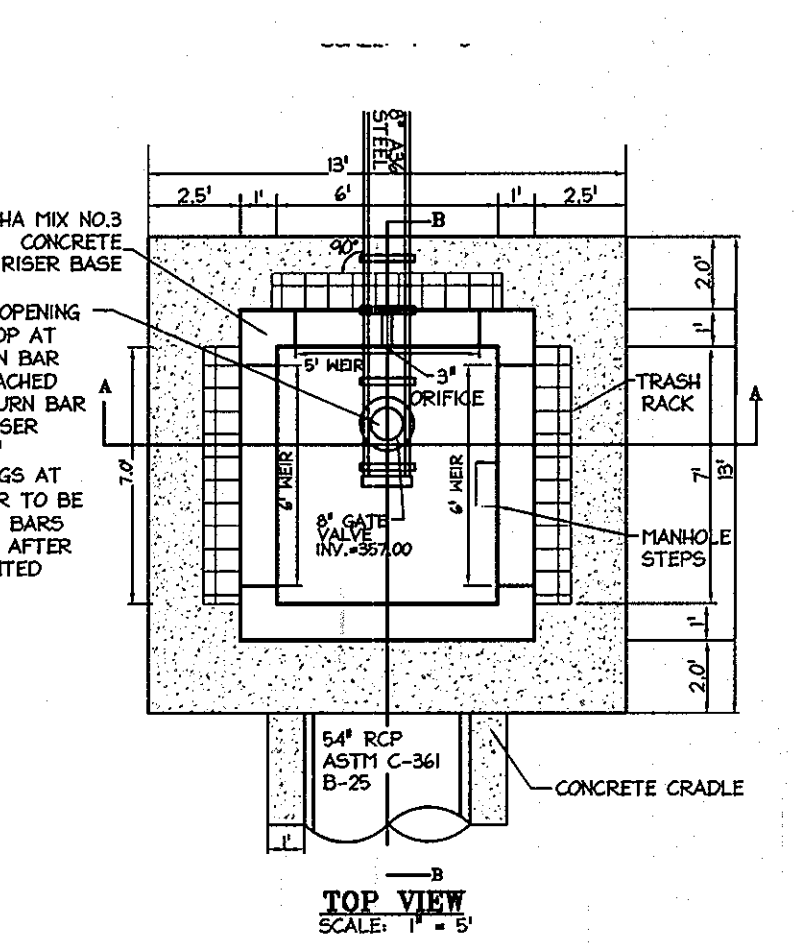
**RISER DETAIL -- SECTION B**  
SCALE: 1" = 5'

NOTE: PROVIDE RESEATING GATE VALVE ON POND DRAIN. VALVE SHALL BE LOCATED INSIDE RISER SUCH THAT IT CAN BE ACCESSED FROM MANHOLE.

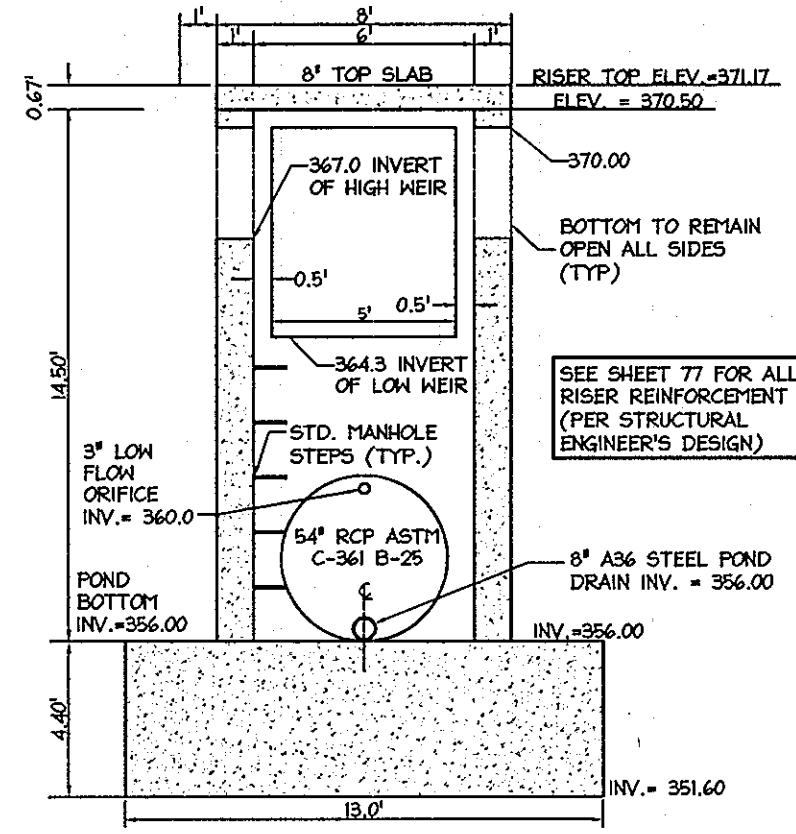
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEER'S APPROVAL SHOWING REBAR REINFORCEMENT. SHOP DRAWINGS TO BE PROVIDED FOR EITHER PRE-CAST OR CAST IN PLACE CONSTRUCTION.

TRASH RACK TO BE GALVANIZED AFTER FABRICATION AND PAINTED BATTLESHIP GRAY.

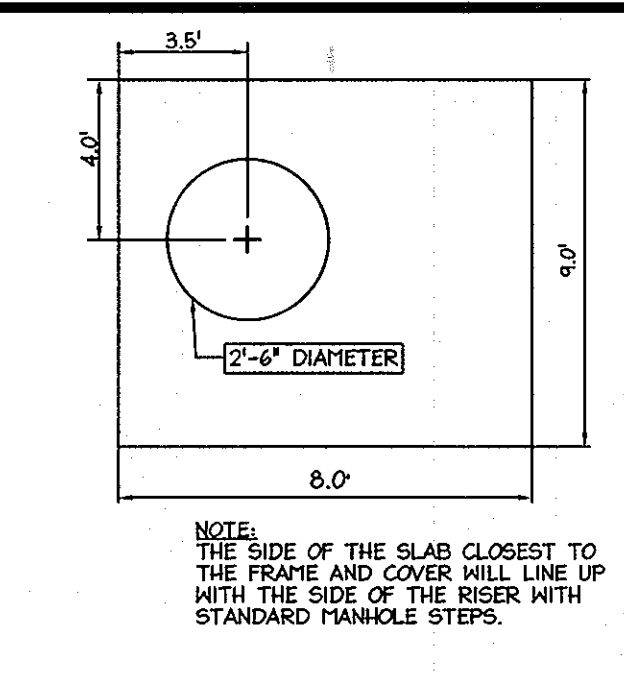
TRASH RACK TO BE REMOVABLE.



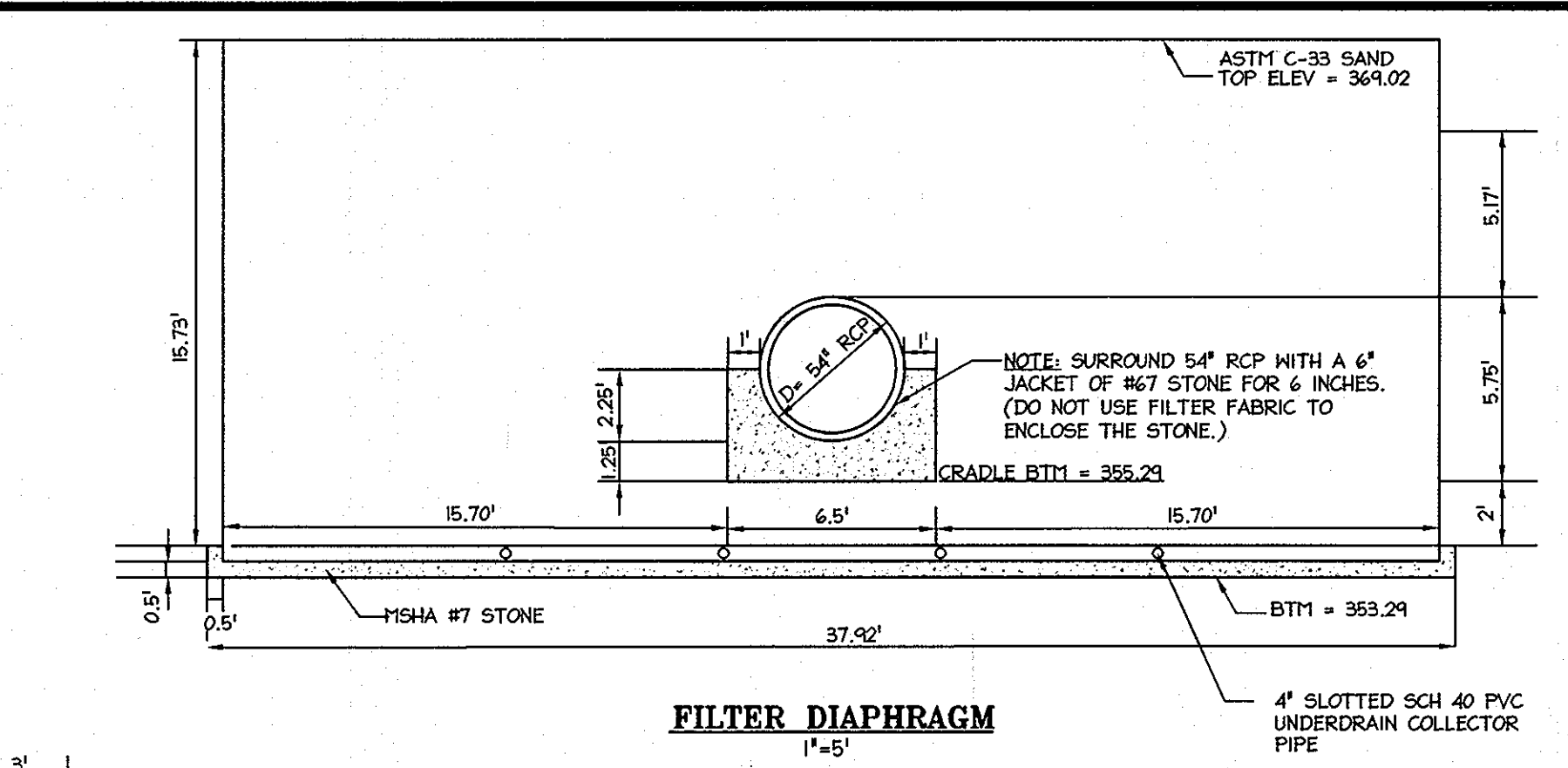
**TOP VIEW**  
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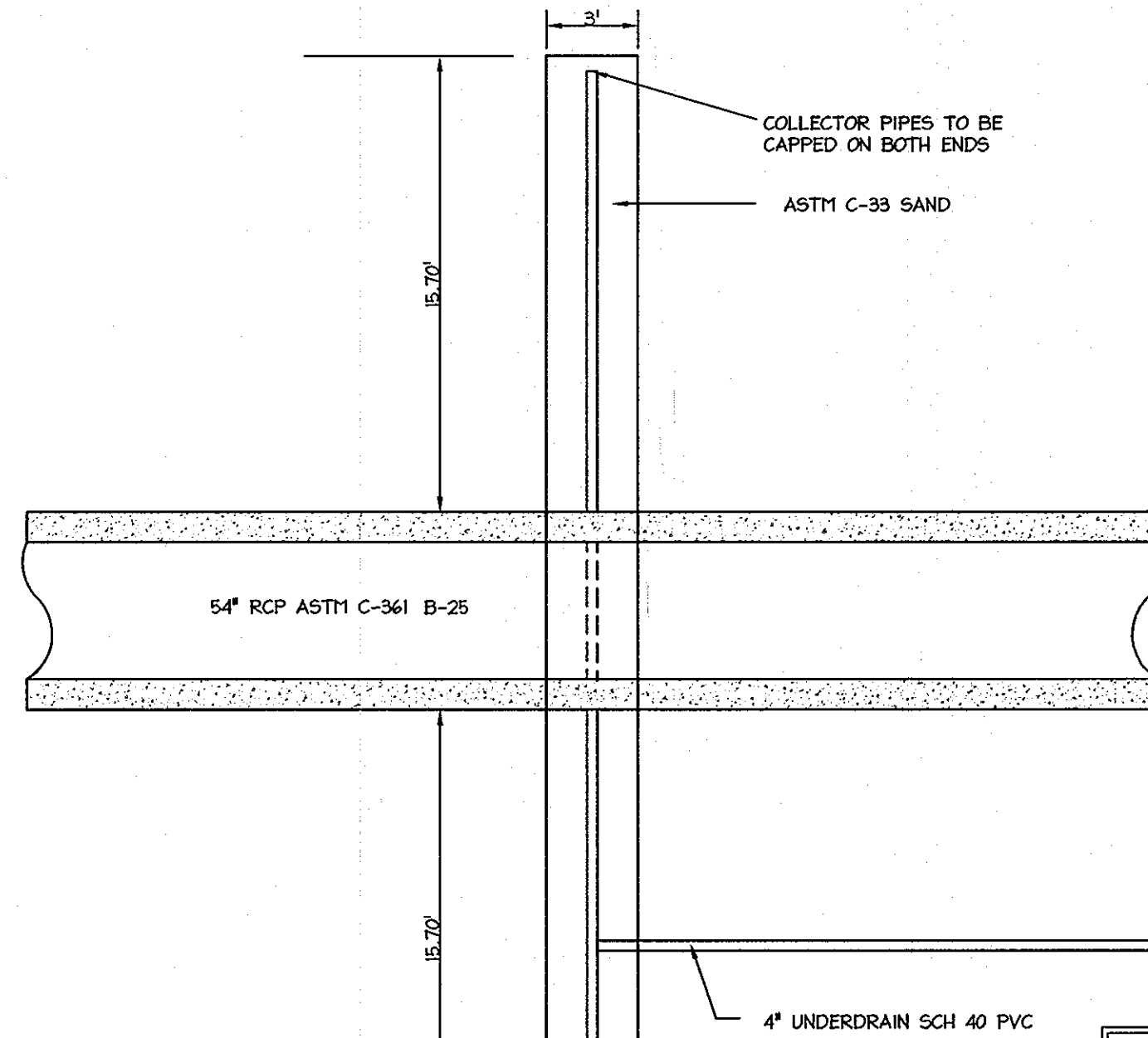
**WEIR DETAIL**  
SCALE: 1" = 5'



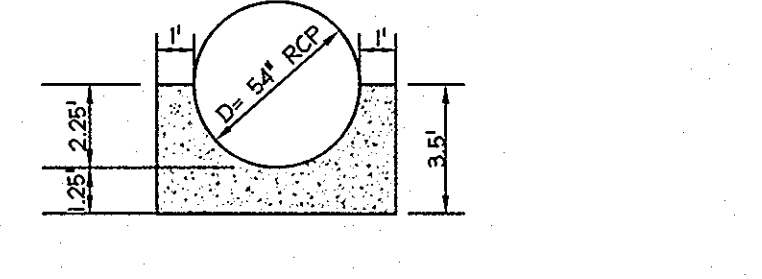
**TOP SLAB**  
CAST IN PLACE



**FILTER DIAPHRAGM**  
1" = 5'



**FILTER DIAPHRAGM--PLAN VIEW**  
(37.92" WIDE)  
1" = 5'



**CONCRETE CRADLE**  
1" = 5'

ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE=4,000PSI  
DESIGN STRENGTH OF CONCRETE=1,600PSI IF THIS PIPE IS LAID IN AN EXCAVATED TRENCH, THEN THE SIDE WALLS MAY CONFORM TO TRENCH SHAPE (I.E. THE TRENCH MAY BECOME THE CRADLE FORM).  
DESIGN TO SCS TR-46 A-2 CONCRETE CRADLE  
CONCRETE SHALL BE SH4 MIX #3

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

These plans for small pond construction, soil erosion, and sediment control meet the requirements of the Maryland Department of the Environment Conservation District.

*Howard SCD* 4/10/13

**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.

*William R. Zink* 4/10/13  
DATE

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

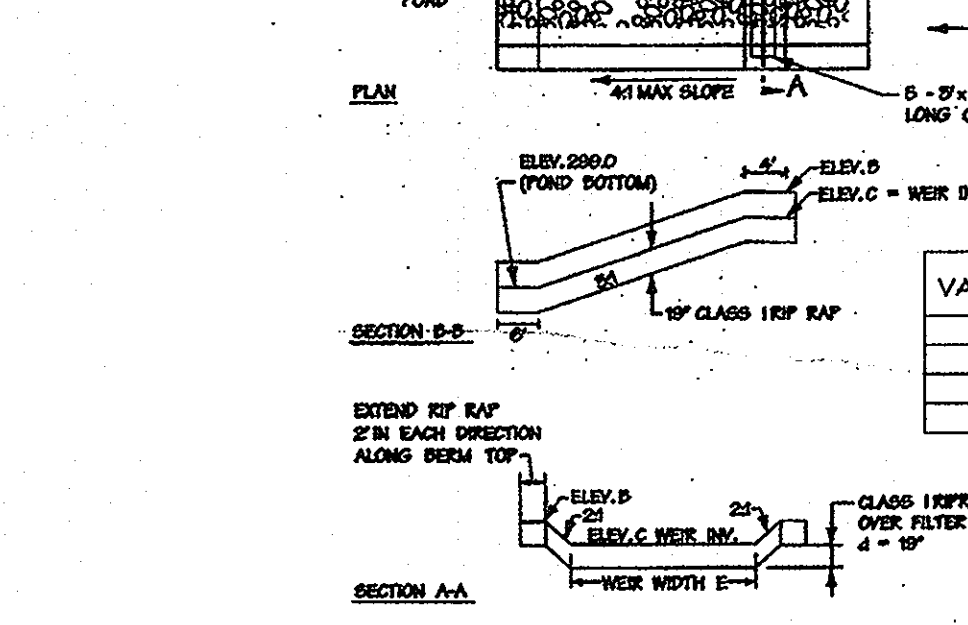
APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

APPROVED DEPARTMENT OF PLANNING AND ZONING

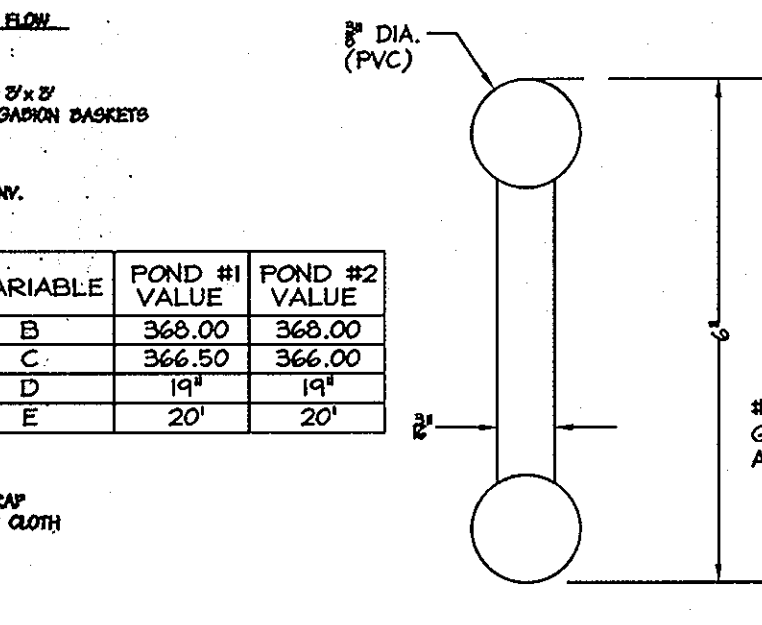
*Chief, Development Engineering Division* 4/26/13  
Date

*Chief, Division of Land Development* 4/26/13  
Date

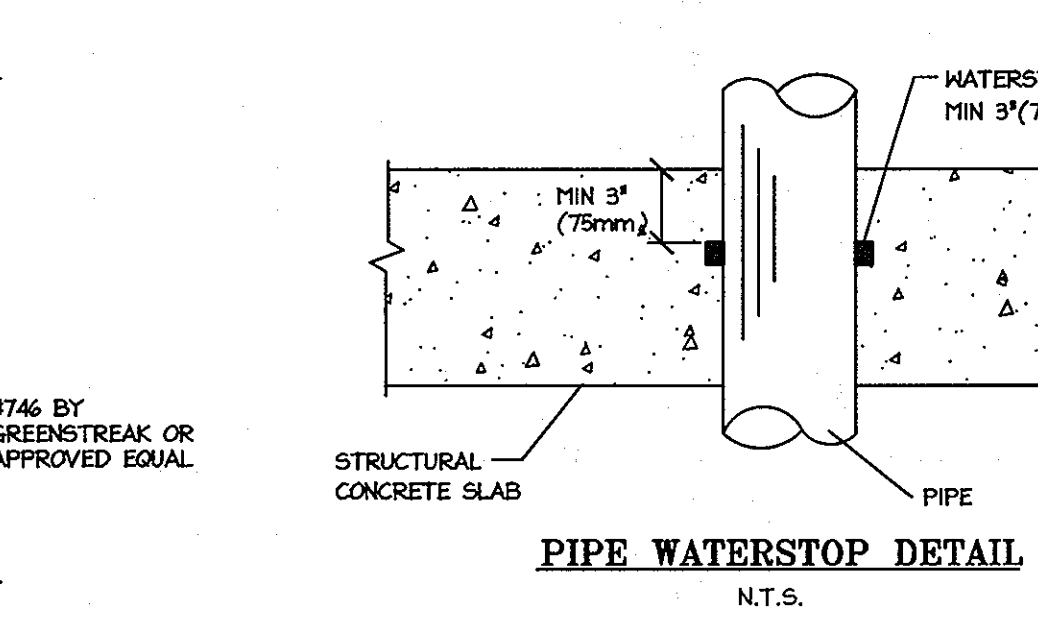
*Director* 4/26/13  
Date



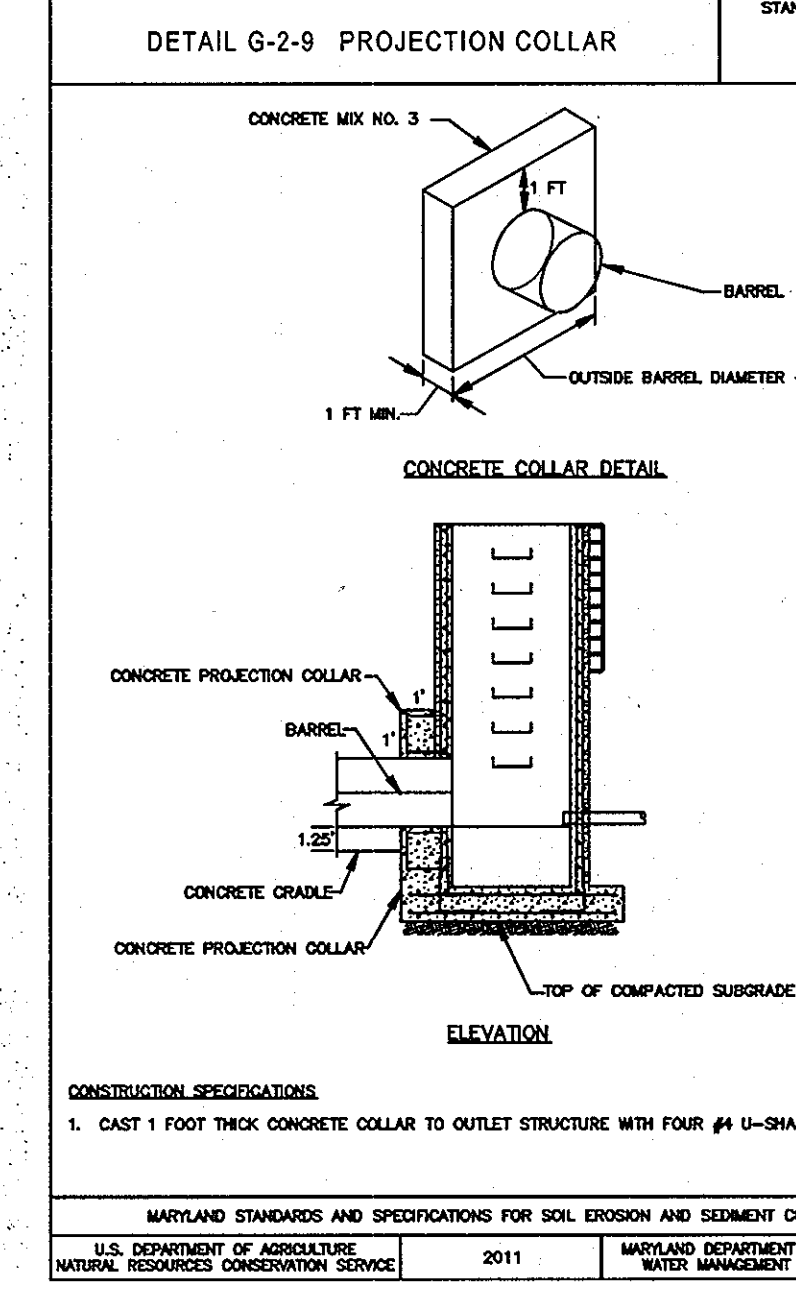
**SWM FOREBAY EMBANKMENT ARMORING DETAIL**  
N.T.S.



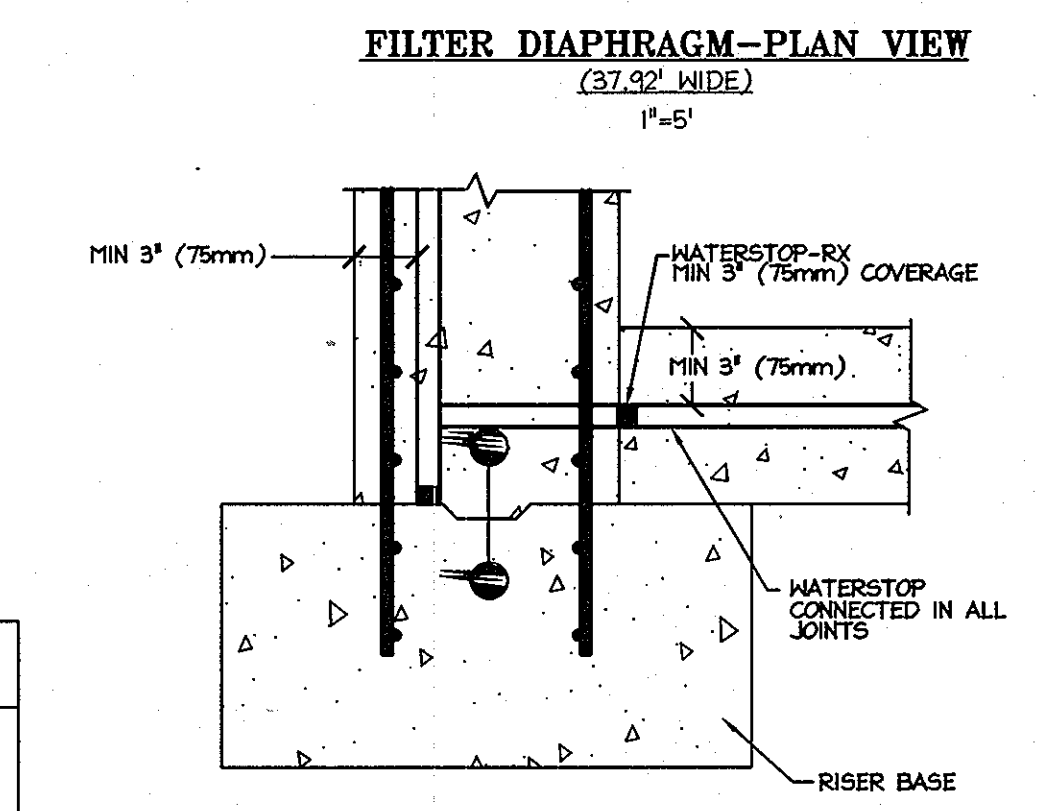
**6" WATERSTOP**  
N.T.S.



**PIPE WATERSTOP DETAIL**  
N.T.S.



**DETAIL G-2-9 PROJECTION COLLAR**  
N.T.S.



**WATER STOP DETAIL**  
N.T.S.

LUTHERAN VILLAGE AT MILLER'S GRANT SWM Page 5

**5.0 EVALUATIONS AND RECOMMENDATIONS**

The following evaluations have been developed on the basis of the previously described project characteristics and subsurface conditions. If there are any changes to the project characteristics or if different subsurface conditions are encountered during construction, HCEA should be consulted so that the recommendations of this report can be reviewed.

**5.1 Embankment Construction**

All fill materials must be placed and compacted in accordance with Code 378 specifications. The following procedures should be utilized to prepare the subgrade for embankment support and to construct the proposed embankments:

- All trees, topsoil, organic materials, frozen, wet, soft or loose soils and other deleterious materials should be removed from the areas of proposed new embankments and wasted prior to the placement of fill. These stripping operations should be performed in a manner consistent with good erosion and sediment control practices. It should be noted that greater depths of undercutting should be expected in order to establish subgrades suitable for the support of new embankment fill.
- Groundwater levels encountered in the borings during our field exploration indicated that groundwater and/or perched water may be encountered during construction, particularly in areas of deeper cuts.

Any water infiltration resulting from a shallow interception of the groundwater table, surface run-off, or perched water, if not too extensive, should be able to be controlled by means of sump pit and pump, or by gravity ditching procedures provided that the groundwater level must only be lowered by a depth of 12 ft to 24 ft. If the groundwater must be lowered by more than 12 ft to 24 ft, or if lesser amounts of water cannot be suitably lowered by pumping, then the use of a more extensive dewatering system such as deep wells or well points will be required. It would be desirable to establish a contingency fund to cover the costs associated with any required dewatering.

- Any soft or loose surficial soils encountered in the embankment subgrade areas should be undercut. Any materials containing significant amounts of organic or deleterious materials should also be undercut. Localized areas requiring additional undercutting should be anticipated. It should be anticipated that any areas requiring undercutting may be wet and soft or

LUTHERAN VILLAGE AT MILLER'S GRANT SWM Page 6

loose, therefore, construction operations should be planned such that the disturbance to the area is minimized during undercutting.

4. All fill materials should be compacted to a minimum of 95 percent of the Standard Proctor maximum dry density.

**5.2 Fill Material Suitability**

All materials to be used as fill in the embankments should be inspected, tested and approved by the Geotechnical Engineer. On-site soils that are free from organics and other deleterious materials can be used for construction of the embankments. Moisture conditioning (that is, wetting or drying) of the materials may be required in order to achieve proper compaction depending on the season of the year. The moisture contents of the soils should be properly controlled to avoid extensive construction delays. Additional laboratory tests should be performed on the borrow materials prior to their use in the compacted fill.

Imported fill materials should be of equal or greater quality than the on-site materials and should be approved for use by the Geotechnical Engineer.

**5.3 Construction Monitoring**

We recommend that a full-time Soils Inspector, under the direction of a registered Geotechnical Engineer, be present to monitor the placement and compaction of the embankment fill and other geotechnical aspects of the construction. Sufficient testing during fill placement should be performed to verify that adequate compaction is being achieved. If subsurface conditions which differ from those reported herein are encountered, this Office should be notified so that the analyses and recommendations can be reviewed.

**5.4 Core and Core Trench Considerations**

In accordance with NRCS-Maryland Code 378 (January, 2000), materials for the centers of the embankments and cut off trenches should consist of relatively impermeable GC, CH, or CL materials having at least 90 percent passing the #200 sieve. Cut-off and core materials may need to be imported to the site if they are not available elsewhere on-site. Additional laboratory testing should be performed prior to using these materials to determine their conformance with the required material types.

Excavation for the core trench may require dewatering. It may be necessary to provide a "mud mat" to plug the water flow into the excavation. An uncompacted bridge lift is not recommended since this will not provide sufficient foundation support for the embankment and would also provide a path of flow.

LUTHERAN VILLAGE AT MILLER'S GRANT SWM Page 7

**6.0 REMARKS**

This report has been prepared to aid in the evaluation of the site for the construction of the proposed SWM facilities. It is considered that adequate recommendations have been provided to serve as a basis for design and preparation of plans and specifications. Additional recommendations can be provided as needed.

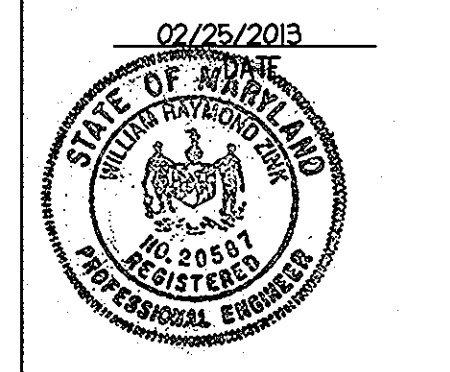
These analyses and recommendations are, of necessity, based on the information made available to us at the time of the actual writing of the report and the on-site conditions, surface and subsurface, that existed at the time the exploratory borings were drilled. Further assumption has had to be made that the limited exploratory borings, in relation both to the areal extent of the site and to depth, are representative of conditions across the site. Subsurface conditions may be encountered which differ from those reported herein. If this occurs, this Office should be notified immediately so that the analyses and recommendations can be reviewed and/or revised as necessary.

It is also recommended that:

- We be given the opportunity to review any plans and specifications in order to comment on the interaction of the soil conditions as described herein and the design requirements.
- A Geotechnical Engineer or experienced Soils Inspector be present at the site during the construction phase to verify installation according to the approved plans and specifications. This is particularly important during excavation, placement, and compaction of fill materials.

Please note that successful completion of the project is dependent on your compliance with all of the recommendations provided in this report. While represented separately, the recommendations represent work that is intertwined. The successful completion of the project is specifically conditioned on your complying with all recommendations.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted engineering principles and practices. This warranty is in lieu of all other warranties either implied or expressed. Hills-Carnes Engineering Associates, Inc. assumes no responsibility for interpretations made by others based on subsurface exploration work performed by HCEA.



Revision Description

Date	No.	Revision Description
4/26/13		
4/26/13		
4/26/13		

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

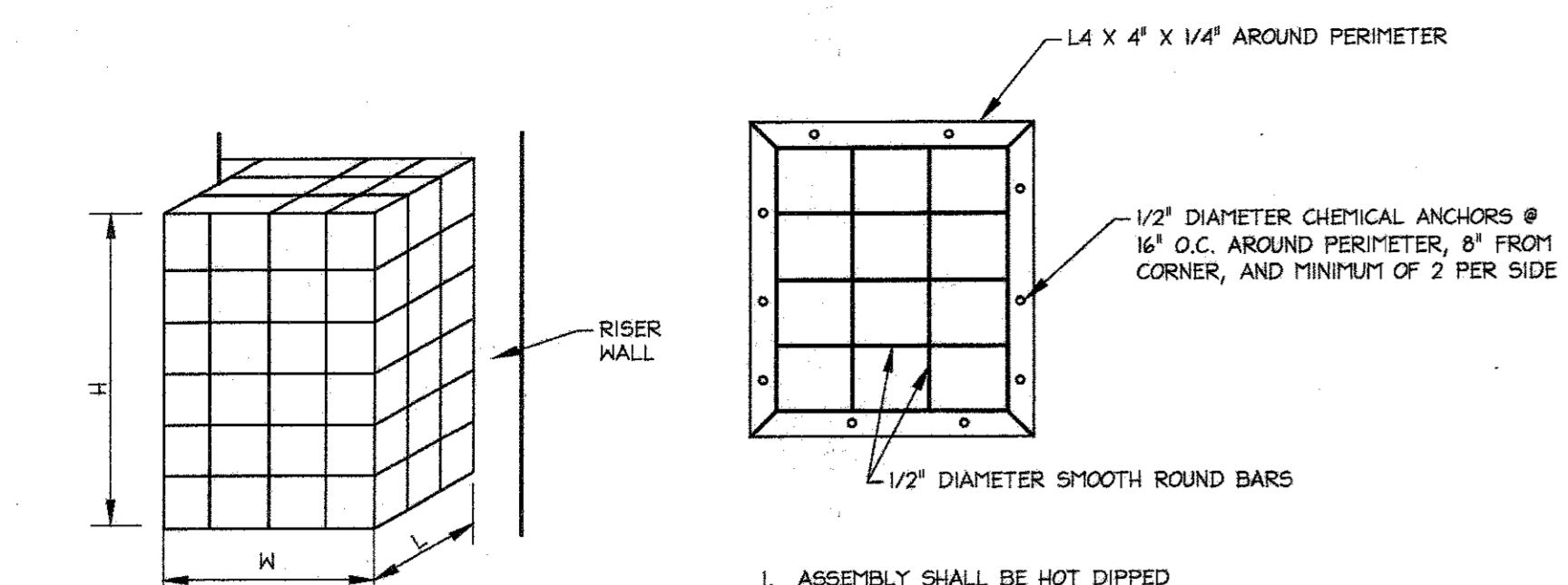
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY DRANOWSKI, EX. VICE PRESIDENT  
300 ST. LIME CIRCLE  
WESTMINSTER, MD 21158  
(410) 942-0020

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, inc.  
11720 GREENBRIAR DRIVE SUITE 100 - GREENBELT, MD 21060-2000  
410.228.0200 - FAX 301.281.2148 - BY 410.228.2803

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE			
550 (TG 700)	F07			
TITLE:	POND #1 STORMWATER MANAGEMENT NOTES AND DETAILS--RISER #1			
DESIGN: DAM1	SCALE: AS SHOWN	PROJECT: 0515.001.02		
DRAWN: DAM1	DATE: APRIL 12, 2013			
CHECKED: BJJ	APPROVED: MRZ	28 OF 77		

SDP-08-075

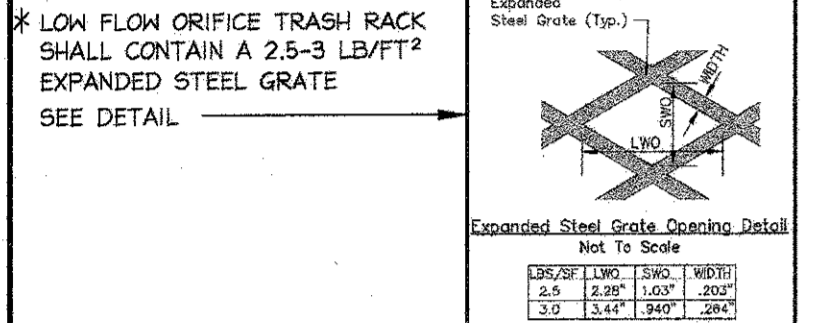


TRASH RACK DIMENSIONS

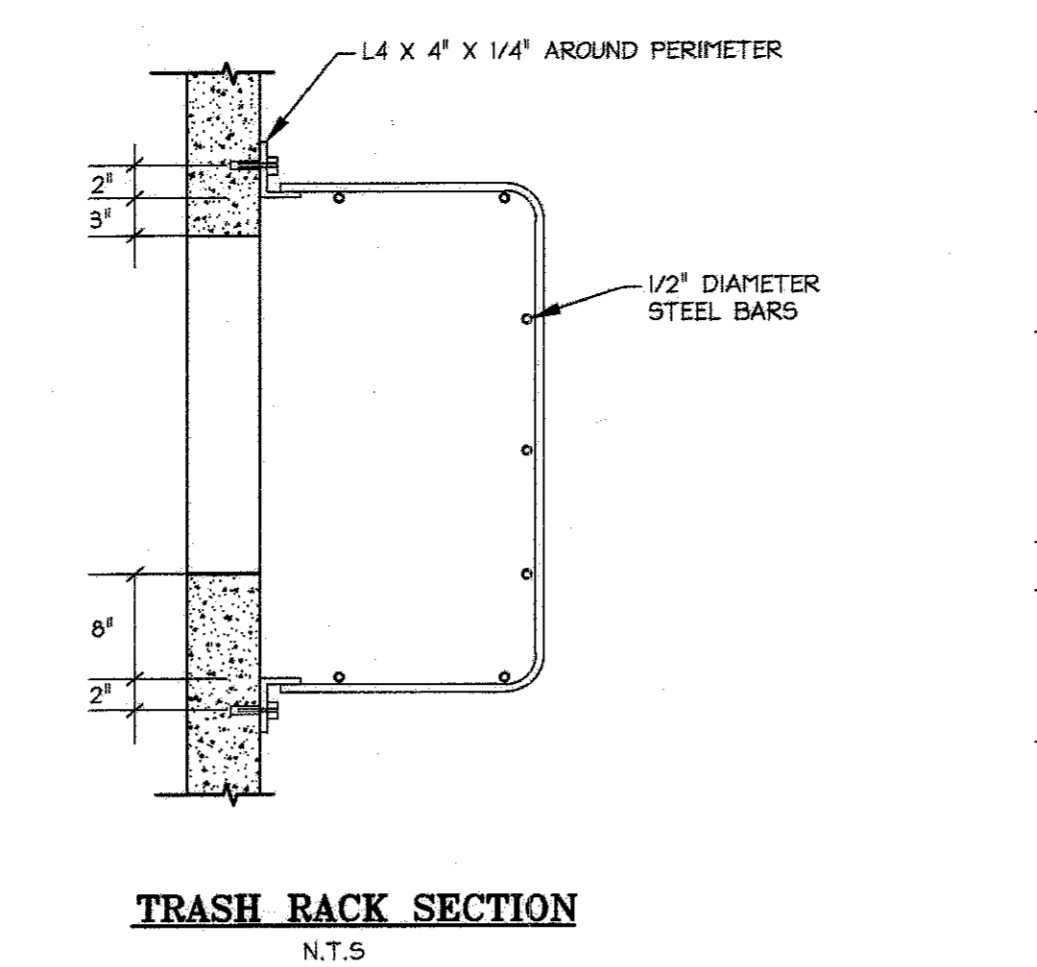
TYPE	L(FT)	W(FT)	H(FT)
LOW WEIR # HIGH WEIR	1	7.66	3.62
HIGH WEIR ONLY	1	6.67	2.72
LOW FLOW ORIFICE	1	2	3

- ASSEMBLY SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
- STEEL ANGLES SHALL CONFORM TO ASTM A36.
- BARS TO CONFORM TO ASTM A108.
- CHEMICAL ANCHORS SHALL BE 1/2" DIAMETER GALVANIZED THREADED RODS WITH MILT HY200 ADHESIVE SYSTEM (4.5" EMBEDMENT).

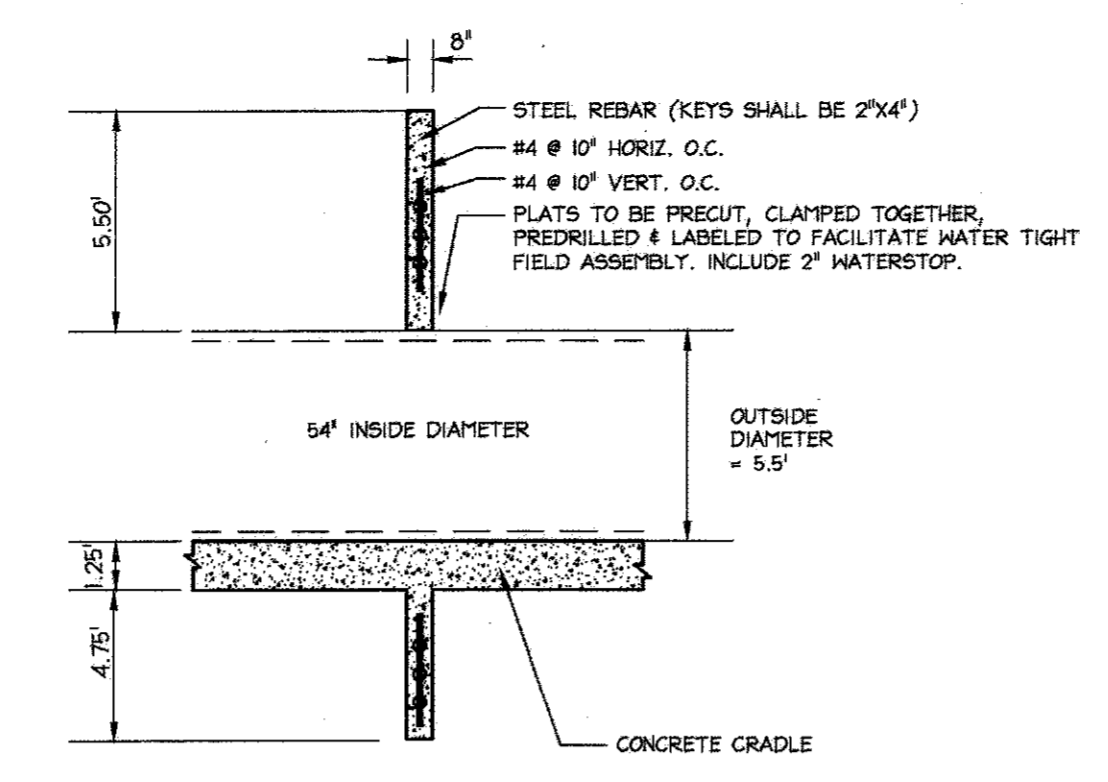
TRASH RACK DETAIL  
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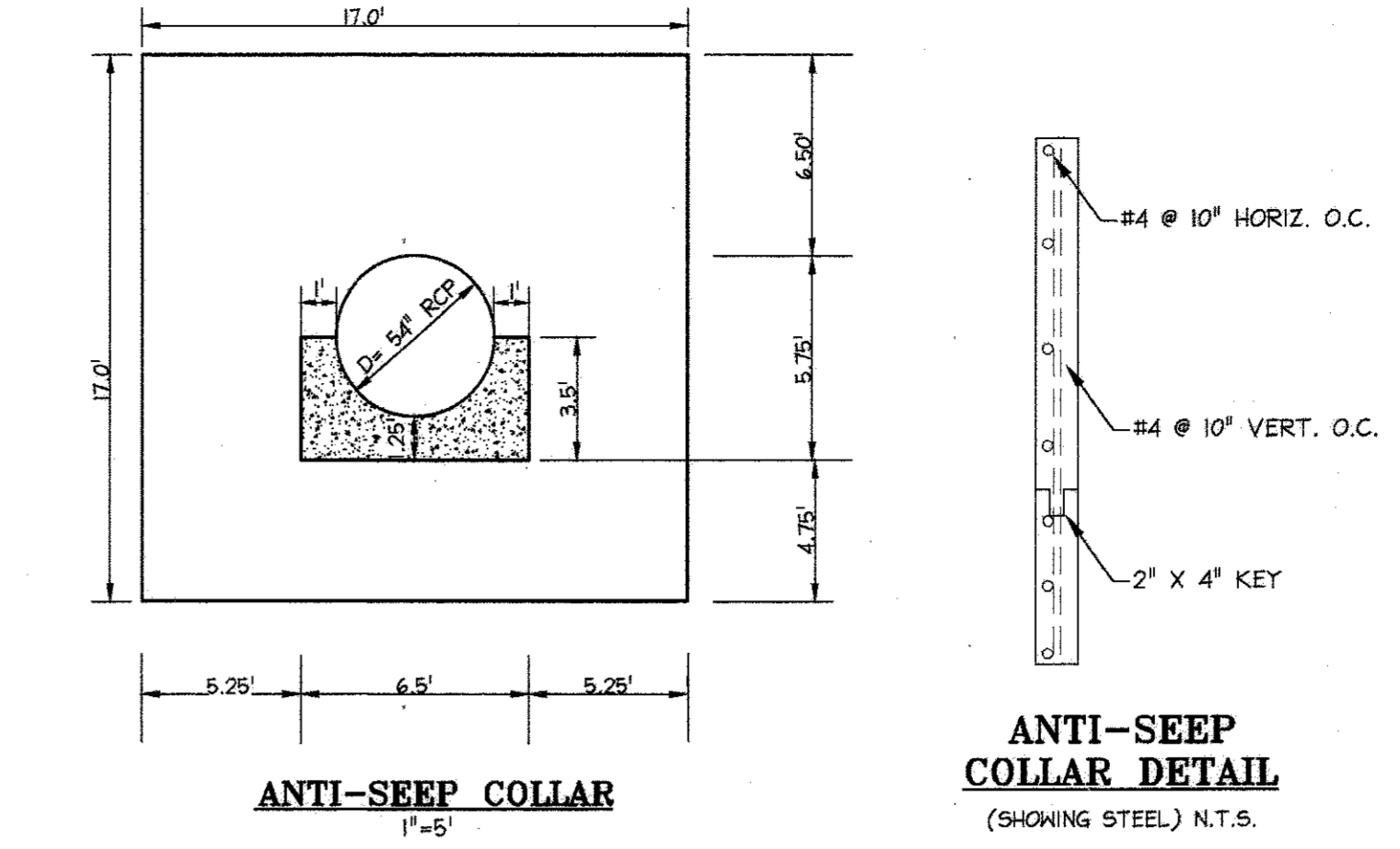
LOW FLOW ORIFICE TRASH RACK SHALL CONTAIN A 2.5-3 LB/FT<sup>2</sup> EXPANDED STEEL GRATE SEE DETAIL



TRASH RACK SECTION  
N.T.S.



ANTI-SEEP COLLAR SECTION  
1"=5"



ANTI-SEEP COLLAR DETAIL  
(SHOWING STEEL) N.T.S.

CONCRETE CRADLE

ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE=4,000PSI  
DESIGN STRENGTH OF CONCRETE=1,600PSI IF THIS PIPE IS LAID IN AN EXCAVATED TRENCH, THEN THE SIDE WALLS MAY CONFORM TO TRENCH SHAPE (I.E. THE TRENCH MAY BECOME THE CRADLE FORM).  
DESIGN TO SCS TR-46 A-2 CONCRETE CRADLE  
CONCRETE SHALL BE SH4 MIX #3

NOTE:  
PROVIDE RESEATING GATE VALVE ON POND DRAIN. VALVE SHALL BE LOCATED INSIDE RISER SUCH THAT IT CAN BE ACCESSED FROM MANHOLE.  
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEERS APPROVAL SHOWING REBAR REINFORCEMENT. SHOP DRAWINGS TO BE PROVIDED FOR EITHER PRE-CAST OR CAST IN PLACE CONSTRUCTION.  
TRASH RACK TO BE GALVANIZED AFTER FABRICATION AND PAINTED BATTLESHIP GRAY.  
TRASH RACK TO BE REMOVABLE

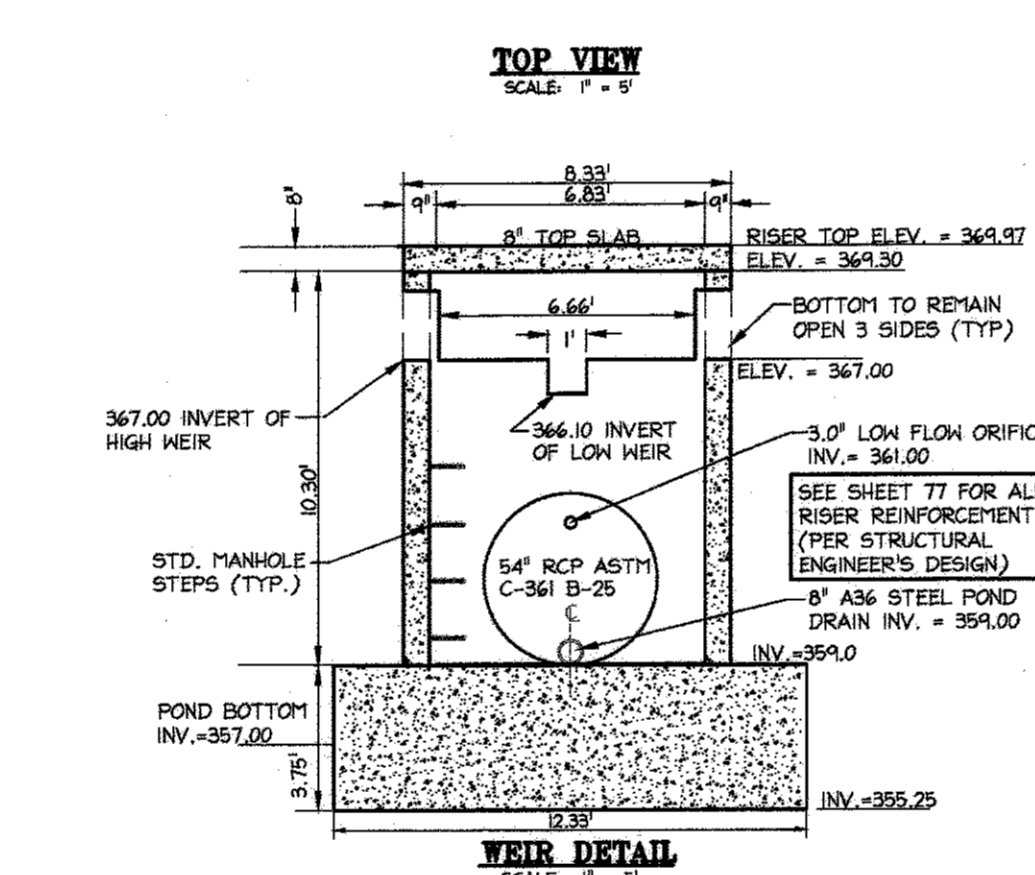
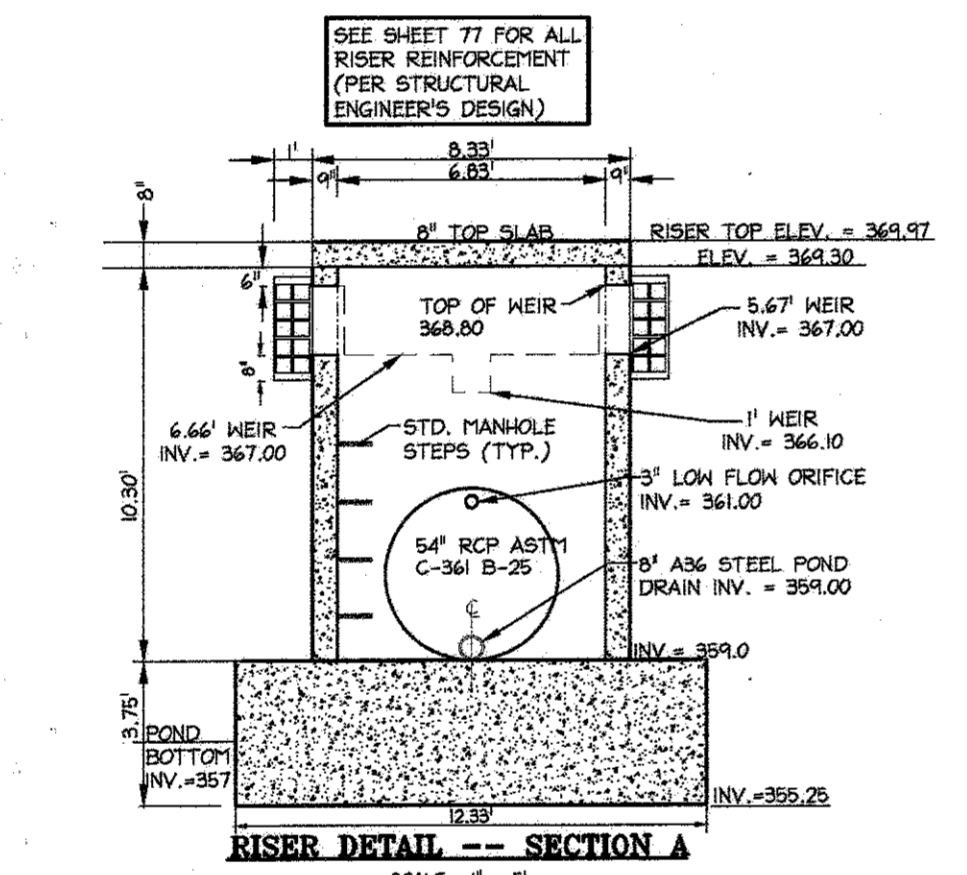
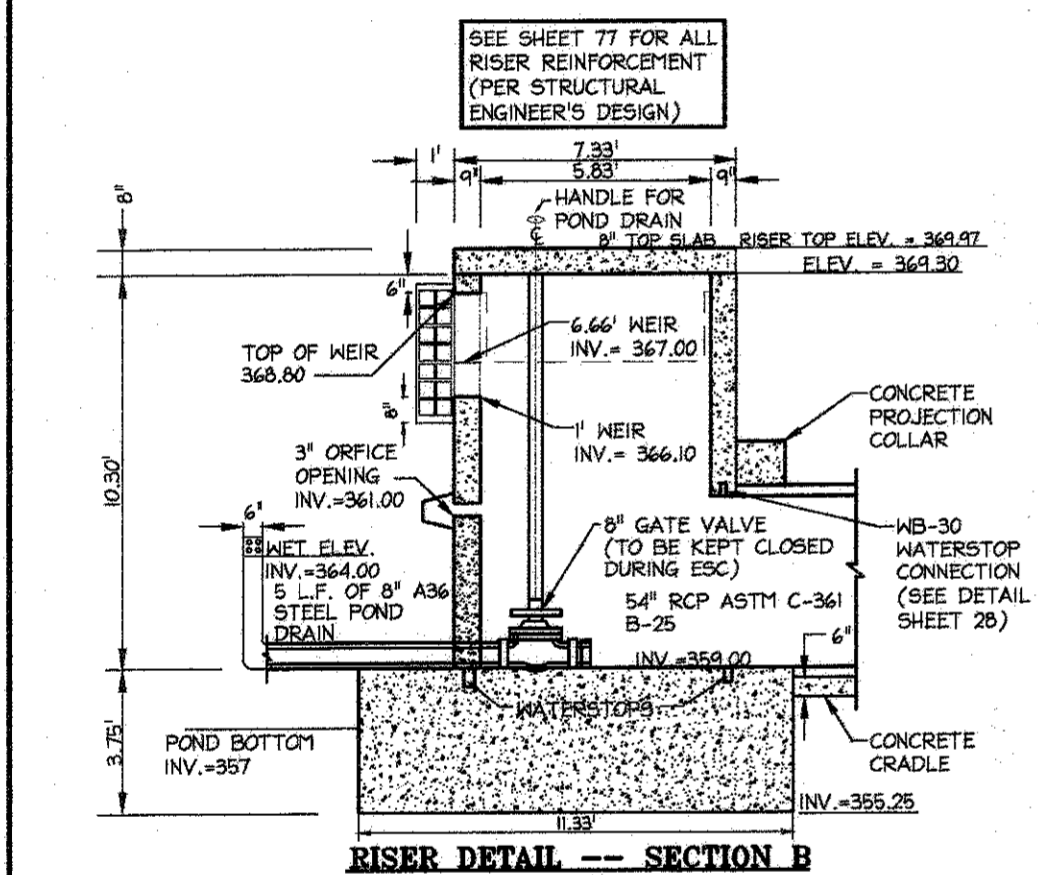


Table A.7 Common Grass Species for Open Channels

Common Name	Scientific Name	Notes
Big Bluestem	<i>Andropogon gerardii</i>	Warm, not for Wet Swale
Creeping Bentgrass	<i>Agrostis palustris</i>	Cool
Red Fescue	<i>Festuca rubra</i>	Cool, not for Wet Swale
Reed Canary grass	<i>Phalaris arundinacea</i>	Cool, Wet Swale
Redtop	<i>Agrostis alba</i>	Cool
Smooth Brome	<i>Bromus inermis</i>	Cool, not for Wet Swale
Switch grass	<i>Panicum virgatum</i>	Warm

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

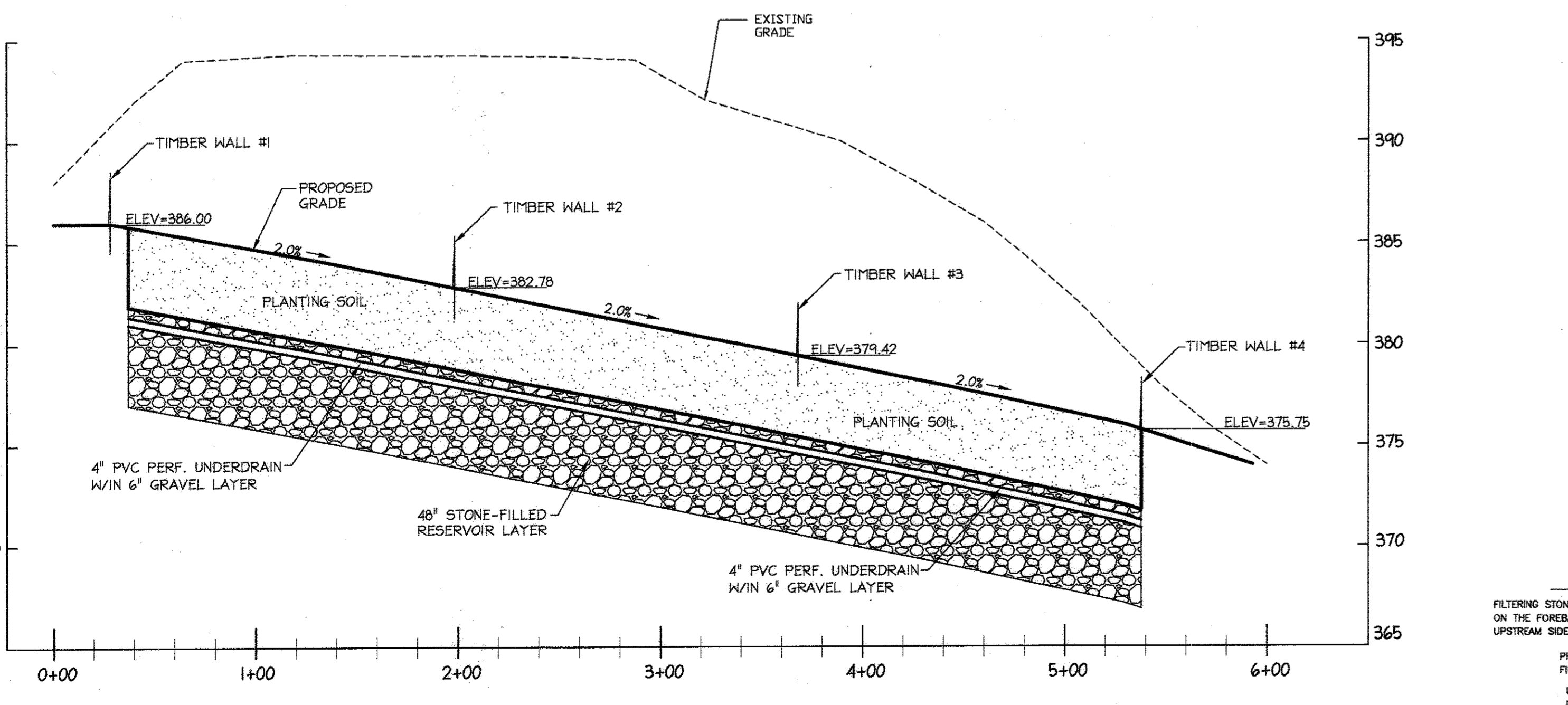
Note 2: Where possible, one or more of these grasses should be in the seed mixes. For a more thorough listing of seed mixes, consult the 1994 Maryland Standard and Specifications for Soil Erosion and Sediment Control (MDE, 1994) or the MD NRCS Code 391 Riparian Forest Buffer Standard, Table 2 (Zone 3).

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

- Material Specifications**  
The recommended construction materials for open channels and filter strips are detailed in Table B.3.3.
- Dry Swales**  
Permeable soil mixture (20" to 30" deep) should meet the bioretention specifications.  
Check dams, if required, shall be placed as specified.  
System to have 6" of freeboard, minimum above 2 year water surface elevation.  
Side slopes to be 3:1 maximum; (4:1 or flatter is preferred).  
No gravel or perforated pipe is to be placed under driveways.  
Bottom of facility to be above the seasonally high water table per Table 2 of Appendix D.1.  
Seed with flood/drought resistant grasses; see Appendix A, Section 2.4.  
Longitudinal slope to be 4%, maximum.  
Bottom width to be 8" maximum to avoid braiding; larger widths may be used if proper berming is supplied. Width to be 2" minimum.

- Wet Swales**  
Follow above information for dry swales, with the following exceptions: the seasonally high water table may inundate the swale; but not above the design bottom of the channel [NOTE: if the water table is stable within the channel, the WQ storage may start at this point - see Figure 3.19].  
Excavate into undisturbed soils; do not use an underdrain system.

- Filter Strips**  
Construct pea gravel diaphragms 12" wide, minimum, and 24" deep minimum.  
Pervious berms to be a sand/gravel mix (sand (35-60%), silt (30-55%), and gravel (10-25%)). Berms to have overflow weirs with 6 inch minimum head.  
Slope range to be 2% minimum to 8% maximum.
- Plant Selection**  
Recommended grass species for use in establishing permanent ground cover are provided in Section 2.4 of Appendix A.

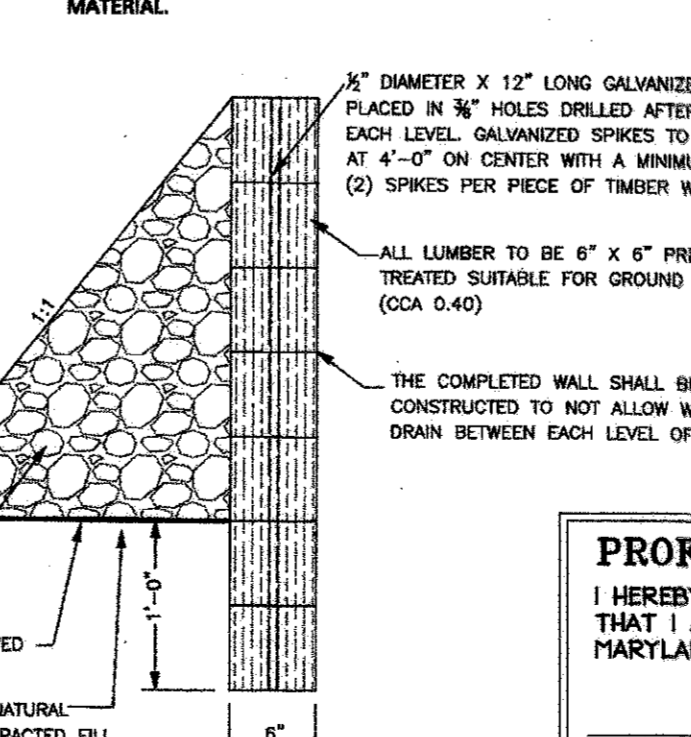


GRASS CHANNEL PROFILE-ONLY FOR THE PORTION SWALE 2 THAT DRAINS TO THE EAST (BEHIND LOTS 18-25)  
SCALE: HOR. 1"=50'  
VERT. 1"=5'

SPECIFICATION FOR TYPICAL DRY SWALE TIMBER WALL

TIMBER SHALL BE 6" X 6" PRESSURE TREATED, SUITABLE FOR GROUND CONTACT, FREE OF ROT, DECAY, SPLITS, CHECKS, INDENTATIONS OR OTHER NATURAL OR MAN MADE CONDITION WHICH WOULD IMPAIR THE STRENGTH OF THE MEMBER. THE STANDARD OF ACCEPTANCE SHALL BE VISUAL INSPECTION.

- WORKMANSHIP:
- FIRST STRETCHER FOR ANCHORED WALLS AND ALL LOWEST LEVEL TIMBERS FOR CAB WALL SHALL BEAR ON NATURAL GROUND.
  - CUT OR TRIMMED TIMBERS SHALL BE BRUSH COATED WITH PRESERVATIVES.
  - ALL FILL OR BACKFILL SHALL BE COMPACTED TO REDUCE SETTLEMENT TO A MINIMUM. COMPACTION WITHIN THE LIMITS OF A 45 DEGREE LINE UP FROM THE BASE STRETCHER SHALL BE BY USE OF MECHANICAL HAND TAMPERS. MINIMUM COMPACTION SHALL BE IN ACCORDANCE WITH ASTM-D1557.
  - FILL OR BACKFILL SHALL BE CLEAN SANDY GRAVEL MATERIAL HAVING A MINIMUM OF CLAY, FREE OF DEBRIS AND DELETERIOUS MATERIAL.



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

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

PROFESSIONAL CERTIFICATION

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

SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2014  
DATE: 09-16-2014

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

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

SIGNATURE OF ENGINEER: ROY CHAVACCI  
DATE: 8/16/16

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

SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
DATE: 9/16/16

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

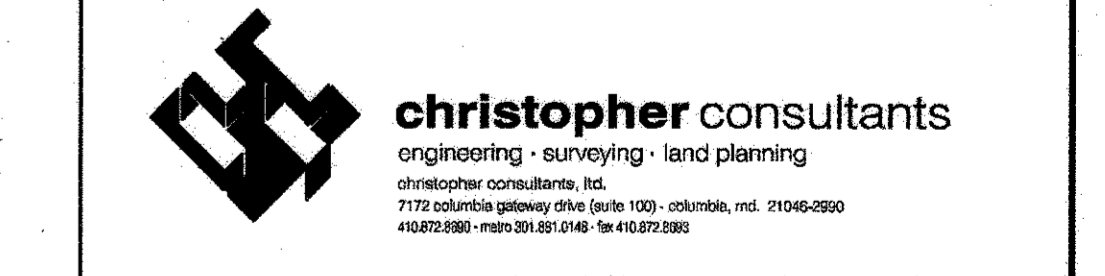
SIGNATURE OF ENGINEER: JOHN R. ROBERTSON  
DATE: 9/20/16  
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	9-26-16
Chief, Division of Land Development	10-5-16
Director	10-5-16

Date	No.	Revision Description
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
		FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
10/23/15	03	REVISED SITE DEVELOPMENT PLAN - REVISED
		GRADES AROUND PHASE III
7/25/16	04	REVISED SITE DEVELOPMENT PLAN - POOL REV.

LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCI, DL, VICE PRESIDENT  
30 ST. LINE DRIVE  
WESTMINSTER, MD 21156  
(410) 948-0280



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07	ELECTION DISTRICT 02

TITLE:  
STORMWATER MANAGEMENT  
NOTES AND PROFILES-PD #2

DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	

29 of 77  
SDP-08-075

**PROFESSIONAL CERTIFICATION**

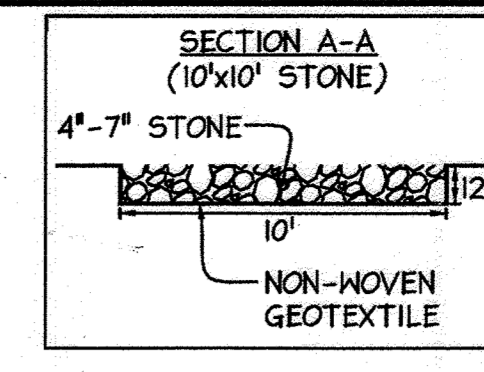
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 04-26-2016

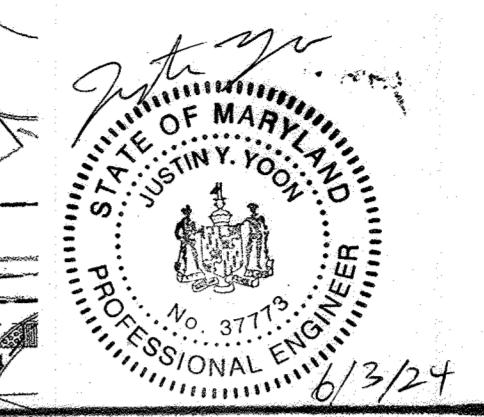
LOT 6 MALCOLM HICKS CAREY HILLHOUSE 9562 FREDERICK RD 7095 S.F. 71 ZONED: R-20  
 LOT 7 DAVID JOHNSON 9556 FREDERICK RD L. 10826 F. 514 ZONED: R-20  
 LOT 8 RUSSELL SMITH 9550 FREDERICK RD L. 279 F. 34 ZONED: R-20  
 LOT 9 KENNETH O'BRIEN 9544 FREDERICK RD L. 291 F. 440 ZONED: R-20  
 LOT 10 JOHN LAUN 9538 FREDERICK RD L. 2249 F. 642 ZONED: R-20  
 LOT 11 CHARLES GOLDSMITH 9532 FREDERICK RD L. 10075 F. 463 ZONED: R-20  
 LOT 12 SCOTT HAGEE 9526 FREDERICK RD L. 10075 F. 463 ZONED: R-20  
 LOT 13 CHARLES MARTIN 9520 FREDERICK RD L. 10165 F. 306 ZONED: R-20  
 LOT 14 CHANG CHUNG 9514 FREDERICK RD L. 10759 F. 669 ZONED: R-20  
 LOT 15 JOHN MITCHELL 9508 FREDERICK RD L. 3632 F. 510 ZONED: R-20

**FREDERICK ROAD (ULTIMATE 100' R/W) (MINOR ARTERIAL)**

ARCADIA DRIVE

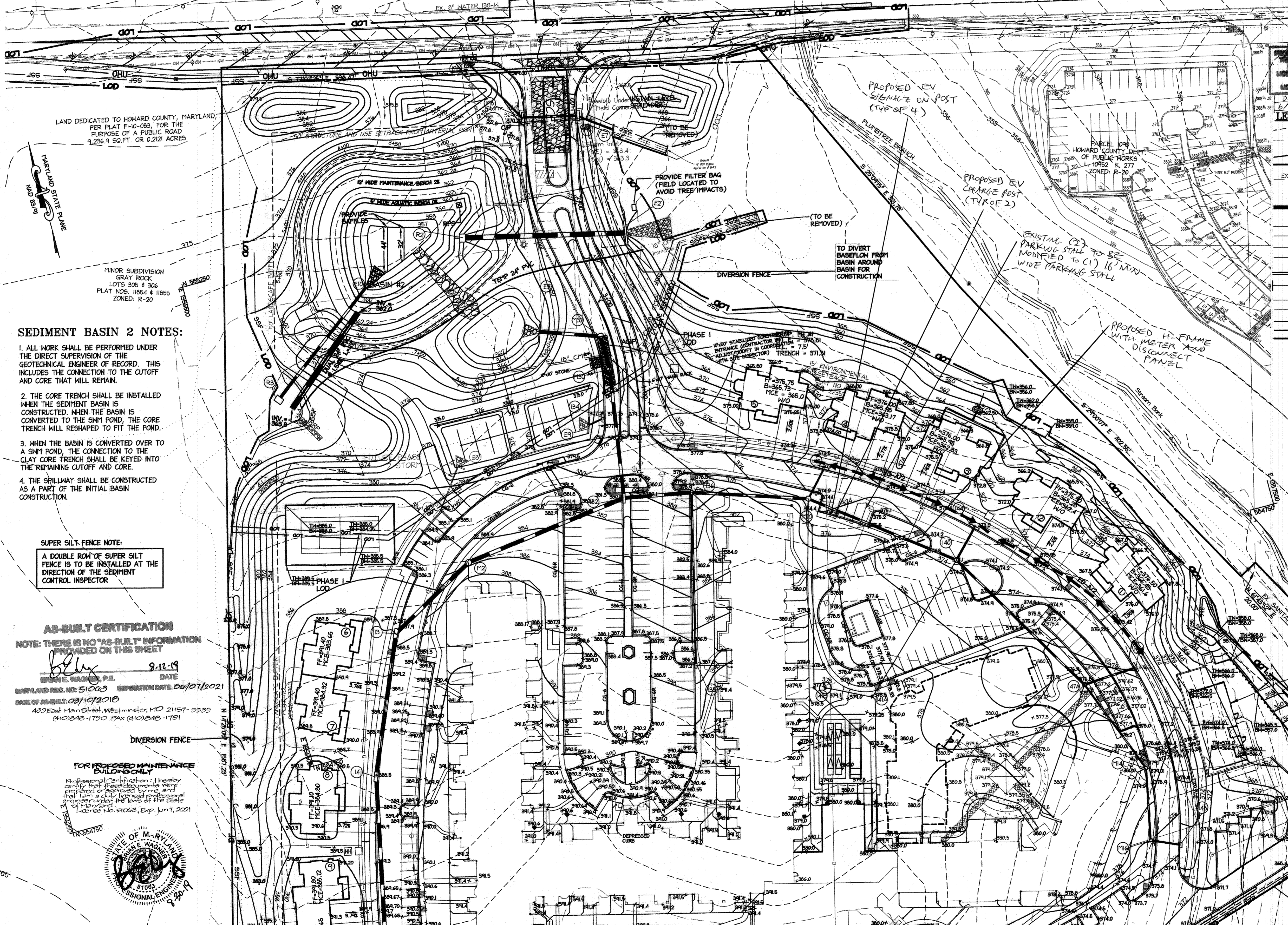


SECTION A-A (10'x10' STONE)  
 4'-7" STONE  
 10' NON-WOVEN GEOTEXTILE



DATE: 8/2/16  
 SIGNATURE OF DEVELOPER: [Signature]  
 DATE: 8/1/16  
 SIGNATURE OF ENGINEER: WILLIAM R. ZINK, P.E.  
 DATE: 8/1/16

THESE PLANS FOR SHALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 SIGNATURE OF ENGINEER: [Signature]  
 DATE: 9/2/16  
 HOWARD SOIL CONSERVATION DISTRICT



**LEGEND**

DATE	REVISION
6/3/24	REV. SDP - EV CHARGING

EXISTING INTER CONTOUR	---	EARTH DIKE	---
EXISTING INDEX CONTOUR	---	PHASE I LOD BOUNDARY	---
PROPOSED INTER CONTOUR	---	TEMPORARY DIVERSION PIPE	---
PROPERTY LINE	---	DIVERSION FENCE	---
EXISTING STORMDRAIN	---		
EXISTING TREELINE	---		
SOILS LINE	---		
FLOORPLAN BUFFER	---		
NETLAND BUFFER	---		
100 YEAR FLOODPLAIN	---		
NETLANDS	---		
PROPOSED STORY DRAIN	---		
PROPOSED WATERLINE	---		
PROPOSED SANITARY LINE	---		
PROPOSED SILT FENCE	---		
SUPER SILT FENCE	---		
TREE PROTECTION FENCE	---		
LIMITS OF DISTURBANCE	---		
STABILIZED CONSTRUCTION ENTRANCE	---		
15 TO 25% STEEP SLOPES	---		
25% AND GREATER STEEP SLOPES	---		
EROSION CONTROL MATTING	---		

BASIN #2	
Existing Drainage Area	22,285.5
FLOORPLAN BUFFER	22,285.5
NETLAND BUFFER	22,285.5
100 YEAR FLOODPLAIN	22,285.5
NETLANDS	22,285.5
PROPOSED STORY DRAIN	22,285.5
PROPOSED WATERLINE	22,285.5
PROPOSED SANITARY LINE	22,285.5
PROPOSED SILT FENCE	22,285.5
SUPER SILT FENCE	22,285.5
TREE PROTECTION FENCE	22,285.5
LIMITS OF DISTURBANCE	22,285.5
STABILIZED CONSTRUCTION ENTRANCE	22,285.5
15 TO 25% STEEP SLOPES	22,285.5
25% AND GREATER STEEP SLOPES	22,285.5
EROSION CONTROL MATTING	22,285.5

**SEDIMENT BASIN 2 NOTES:**

1. ALL WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER OF RECORD. THIS INCLUDES THE CONNECTION TO THE CUTOFF AND CORE THAT WILL REMAIN.
2. THE CORE TRENCH SHALL BE INSTALLED WHEN THE SEDIMENT BASIN IS CONSTRUCTED. WHEN THE BASIN IS CONVERTED TO THE SHM POND, THE CORE TRENCH WILL RESHAPED TO FIT THE POND.
3. WHEN THE BASIN IS CONVERTED OVER TO A SHM POND, THE CONNECTION TO THE CLAY CORE TRENCH SHALL BE KEPT INTO THE REMAINING CUTOFF AND CORE.
4. THE SPILLWAY SHALL BE CONSTRUCTED AS A PART OF THE INITIAL BASIN CONSTRUCTION.

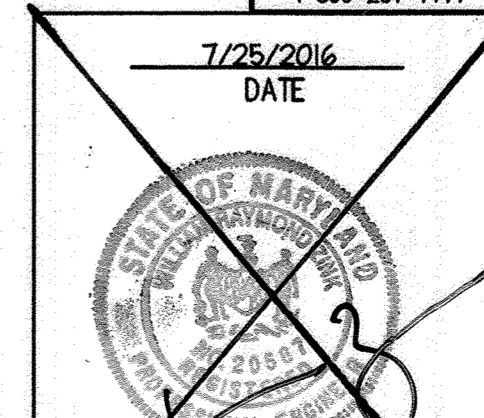
**SUPER SILT FENCE NOTE:**  
 A DOUBLE ROW OF SUPER SILT FENCE IS TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

DATE: 9-12-19  
 SIGNATURE: [Signature]  
 MARYLAND REG. NO. 51003 EXPIRATION DATE: 09/10/2021  
 DATE OF AS-BUILT: 09/10/2018  
 439 East Main Street, Westminster, MD 21157-5599  
 (410) 648-1750 FAX (410) 648-1191

**FOR PROPOSED MAINTENANCE BUILDING ONLY**  
 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. 51003, Exp. 9/10/2021

MATCHLINE - SEE SHEET 32 FOR CONTINUATION



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: MARCH 7, 2013

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

09/01/15 02 REVISED SITE DEVELOPMENT PLAN - REVISED  
 FLOOR ELEVATIONS ON SINGLE FAMILY HOMES  
 10/23/15 03 REVISED SITE DEVELOPMENT PLAN - REVISED  
 GRADES AROUND PHASE III  
 7/25/16 04 REVISED SITE DEVELOPMENT PLAN - POOL REV.

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER/DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT 300 ST. LOUIS CIRCLE WESTMINSTER, MD 21158 (410) 948-0090

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7172 columbia gateway, suite 101, coltsville, md 21046-2800  
 (410) 280-2800 - fax: (410) 280-2801

**PERMIT INFORMATION CHART**

PROJECT NAME: LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT: 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE	F07

TITLE: **EROSION & SEDIMENT CONTROL PLAN**

DESIGN: DAM SCALE: 1" = 50'  
 DRANN: DAM DATE: APRIL 12, 2013  
 CHECKED: ENJ APPROVED: WRZ

PROJECT: 05115.001.02  
**30 OF 77**  
 SDP - 08-075

MATCHLINE - SEE SHEET 30 FOR CONTINUATION

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

*Roy Chivacci*  
 SIGNATURE OF DEVELOPER  
 ROY CHIVACCI  
 DATE 1/26/16

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

*William R. Zink, P.E.*  
 SIGNATURE OF ENGINEER  
 WILLIAM R. ZINK, P.E.  
 DATE 1/27/16

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*John P. Rosta*  
 HOWARD SOIL CONSERVATION DISTRICT  
 DATE 2/4/16

**LEGEND**

DISTING INTER CONTOUR	---	EARTH DIKE	---
DISTING INTER CONTOUR	---	PHASE I LOD BOUNDARY	---
PROPOSED INTER CONTOUR	---	DIVERSION FENCE	---
PROPERTY LINE	---	BASIN #1	---
EXISTING STORM DRAIN	---	Storage Required (cubic feet)	Cleanout 49,500
EXISTING TRENCH	---	Wet 26,795	Total 76,295
SOILS LINE	---	Cleanout 28,700	Total 49,500
FLOODPLAIN BUFFER	---	Storage Provided (cubic feet)	Wet 296,103.54
100 YEAR FLOODPLAIN	---	Cleanout 863	Total 296,966.54
NETLANDS	---	Wet 801.4	Total 802.8
NETLANDS	---	Cleanout 863	Total 865.3
PROPOSED STORM DRAIN	---	Ex Ground Elevation	363
PROPOSED WATERLINE	---	Top of Embankment Elevation	370
PROPOSED SANITARY LINE	---	Riser Crest Elevation	365.3
SILT FENCE	---	Cleanout Elevation	361.4
SUPER SILT FENCE	---	Bottom Elevation	359
TREE PROTECTION FENCE	---	High-water	368.46
LIMITS OF DISTURBANCE	---	Freestream	1.54
		Provided	54
		Barrel Diameter	54
		Riser	1343.1
		Bottom Dim	1304.59
		10 Year	307.84
		10 Year Blocked	368.46
		C10 Blocked Proposed	73.42

STABILIZED CONSTRUCTION ENTRANCE  
 15 TO 25% STEEP SLOPES  
 25% AND GREATER STEEP SLOPES  
 EROSION CONTROL MATTING

NOTES:  
 1. THE PHASE I LIMIT OF DISTURBANCE IS FOR THE CONSTRUCTION OF THE BASIN ONLY.  
 2. RISER IS TO BE TEMPORARILY BRICKED UP TO THE WEIR ELEVATION REQUIRED FOR ESC PURPOSES.

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE MARCH 7, 2015

MATCHLINE - SEE SHEET 32 FOR CONTINUATION

**MISS UTILITY!**  
 Service Protection Center  
 CALL TOLL FREE  
 1-800-257-7777

DATE 1/27/16

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date 4-1-16
Chief, Division of Land Development	Date 4-5-16

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
09/01/15	02	REVISED SITE DEVELOPMENT PLAN - REVISED
11/09/15	03	FLOOR ELEVATIONS ON SINGLE FAMILY HOMES
		REVISED GRADING, STORM, SANITARY, RETAINING WALL

**LUTHERAN VILLAGE AT MILLER'S GRANT**  
 PLANNED SENIOR COMMUNITY  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHIVACCI, EX. VICE PRESIDENT  
 300 ST. LUKE DRIVE  
 WESTMINSTER MD 21156  
 (410) 946-3099

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7172 coltona gateway drive (suite 100) - coltona, md 21046-2900  
 (410) 839-1999 - fax: (410) 839-2299

**PERMIT INFORMATION CHART**

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 950 (TG 700)	SEWER CODE F07	

TITLE:  
**EROSION & SEDIMENT CONTROL PLAN**

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>31 of 77</b>

50P-09-015

**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.  
*William R. Zink, P.E.*  
 SIGNATURE OF ENGINEER  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016  
 DATE 1/27/16

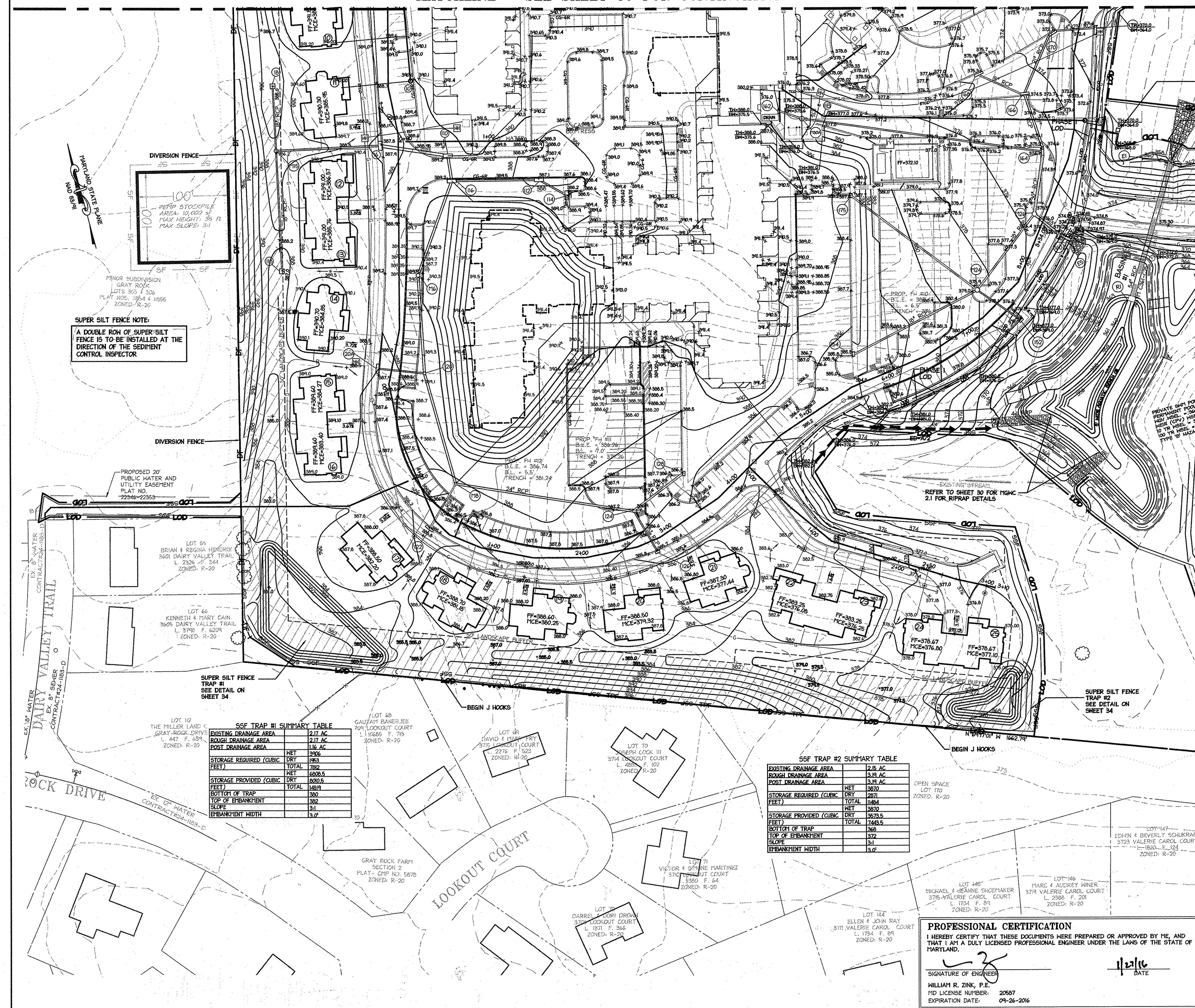
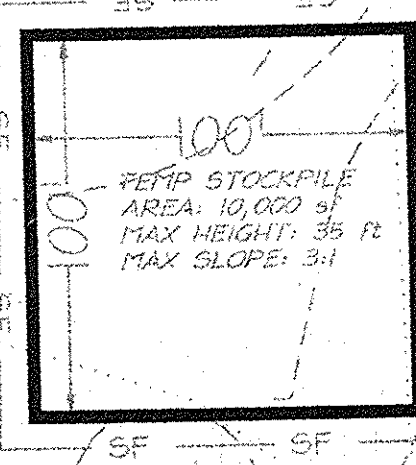
**SSF TRAP #2 SUMMARY TABLE**

EXISTING DRAINAGE AREA	2.15 AC
ROUGH DRAINAGE AREA	3.19 AC
POST DRAINAGE AREA	3.19 AC
STORAGE REQUIRED (CUBK FEET)	NET 2870
	TOTAL 1484
STORAGE PROVIDED (CUBK FEET)	NET 3870
	TOTAL 3273.5
BOTTOM OF TRAP	368
TOP OF EMBANKMENT	372
SLOPE	3:1
EMBANKMENT WIDTH	3.0'

**SSF TRAP #1 SUMMARY TABLE**

EXISTING DRAINAGE AREA	2.17 AC
ROUGH DRAINAGE AREA	2.17 AC
POST DRAINAGE AREA	1.16 AC
STORAGE REQUIRED (CUBK FEET)	NET 3906
	TOTAL 1282
STORAGE PROVIDED (CUBK FEET)	NET 6909.5
	TOTAL 1493
BOTTOM OF TRAP	360
TOP OF EMBANKMENT	368
SLOPE	3:1
EMBANKMENT WIDTH	3.0'

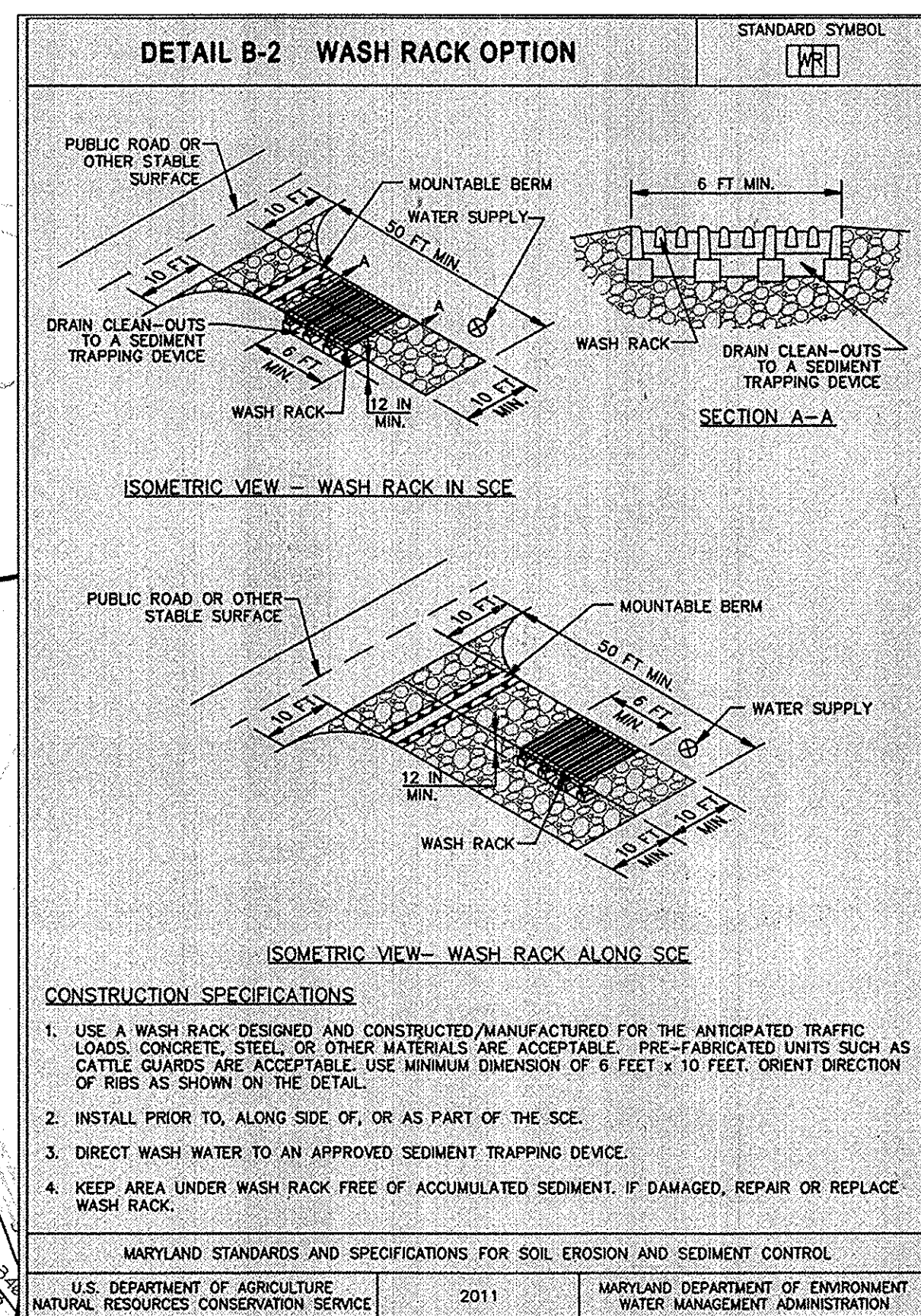
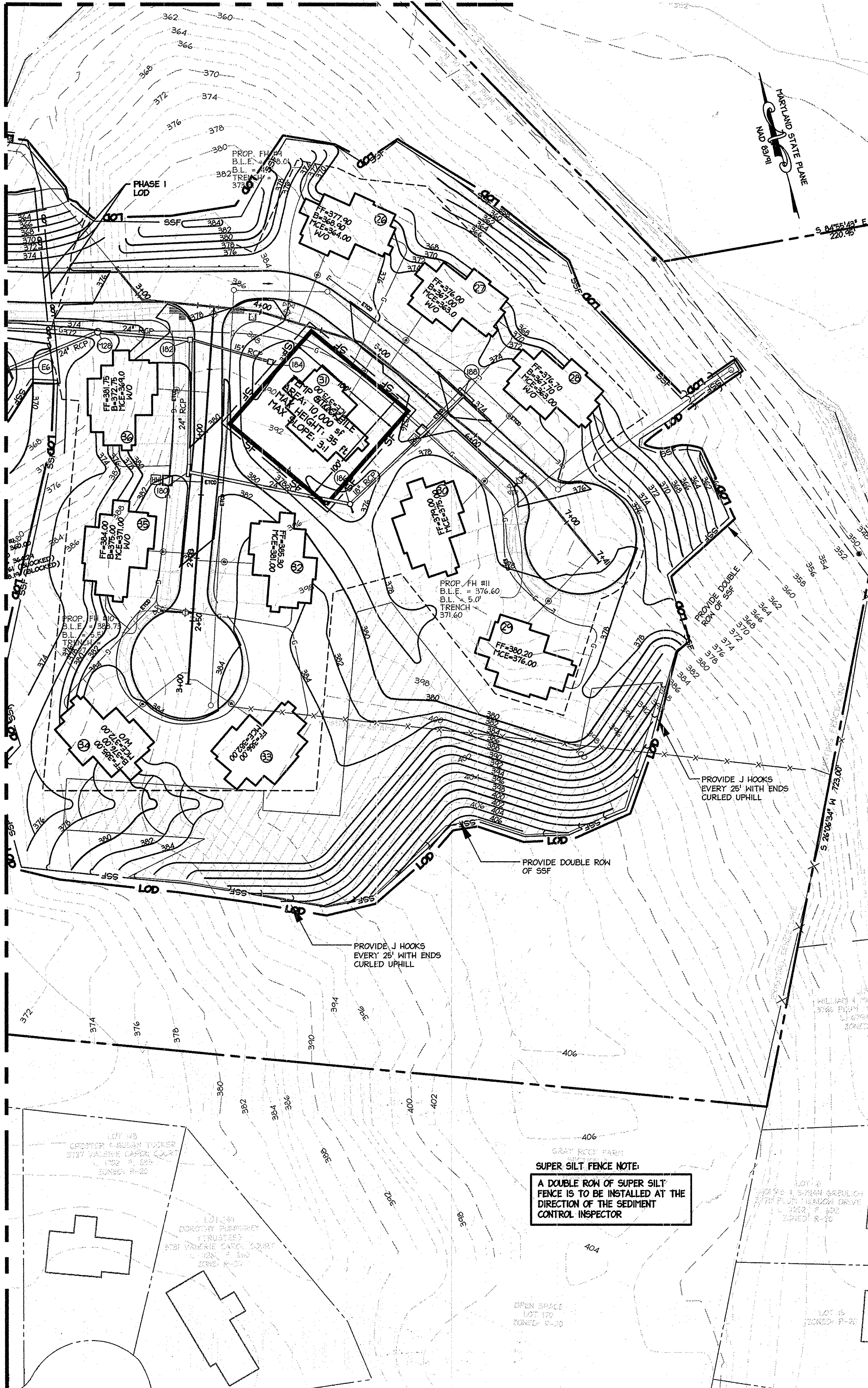
**SUPER SILT FENCE NOTE:**  
 A DOUBLE ROW OF SUPER SILT FENCE IS TO BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.



P:\projects\05115\01-MDC-799-SDP\2014-01-02\_Bld\_SDP\2015-11-10\_Phase III Rollins Submission\Chen ar30-32\_BSC\_PLAN.dwg, 1/21/2016 10:39:05 AM, johndahana, l1\_christopher consultants, inc.

MATCHLINE - SEE THIS SHEET FOR CONTINUATION

MATCHLINE - SEE SHEET 31 FOR CONTINUATION



**LEGEND**

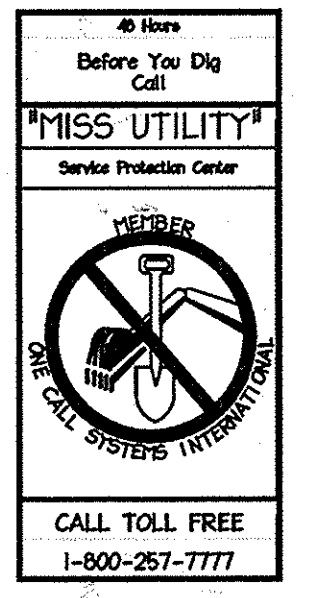
---	EXISTING INTER CONTOUR
---	EXISTING INDEX CONTOUR
---	PROPOSED INTER CONTOUR
---	PROPERTY LINE
---	EXISTING STORY/DRAIN
---	EXISTING TREETLINE
---	SOILS LINE
---	FLOODPLAIN BUFFER
---	WETLAND BUFFER
---	100 YEAR FLOODPLAIN
---	WETLANDS
---	PROPOSED STORY DRAIN
---	PROPOSED WATERLINE
---	PROPOSED SANITARY LINE
---	SILT FENCE
---	SUPER SILT FENCE
---	TREE PROTECTION FENCE
---	LIMITS OF DISTURBANCE
---	PHASE I LOD BOUNDARY
---	STABILIZED CONSTRUCTION ENTRANCE
---	15 TO 25% STEEP SLOPES
---	25% AND GREATER STEEP SLOPES
---	EROSION CONTROL HATTING

MATCHLINE - SEE SHEET 30 FOR CONTINUATION



MATCHLINE - SEE THIS SHEET FOR CONTINUATION

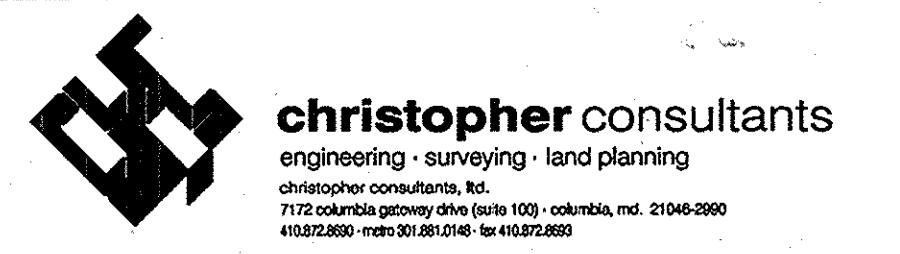
APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2013



APPROVED: DEPARTMENT OF PLANNING AND ZONING		Date
<i>[Signature]</i>	Chief, Development Engineering Division	2-20-13
<i>[Signature]</i>	Chief, Division of Land Development	2-20-13
<i>[Signature]</i>	Director	2/24/13

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
----------	----	-------------------------------

Date	No.	Revision Description
LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY		
OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT 670 CARROLL LUTHERAN VILLAGE CONTACT: ROY CHIAVACCI, EX. VICE PRESIDENT 300 ST LIME CIRCLE WESTMINSTER MD 21158 (410) 948-0090		



PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT		LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10678 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07		

TITLE EROSION & SEDIMENT CONTROL PLAN		
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	32 of 77

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

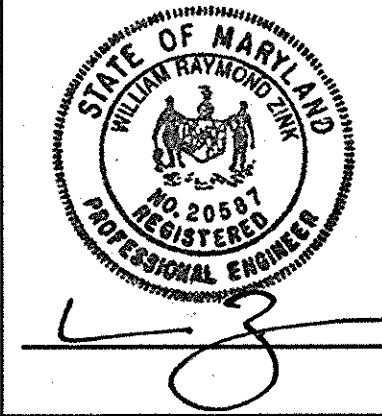
*[Signature]* 1/2/15  
SIGNATURE OF DEVELOPER  
ROY CHIAVACCI

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

*[Signature]* 11/5/15  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*[Signature]* 1/20/15  
HOWARD SOIL CONSERVATION DISTRICT

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
*[Signature]* 01-05-2015  
DATE  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016





**DETAIL C-1 EARTH DIKE**

**DIKE TYPE**

	A	B
a - DIKE HEIGHT	10 IN MIN.	30 IN MIN.
b - DIKE WIDTH	24 IN MIN.	36 IN MIN.
c - FLOW WIDTH	4 FT MIN.	6 FT MIN.
d - FLOW DEPTH	12 IN MIN.	24 IN MIN.

**CONSTRUCTION SPECIFICATIONS**

- REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
- EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
- COMPACT FILL.
- CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
- PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
- STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
- UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND, WITHIN 24 HOURS OF REMOVAL. STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL D-3-1 RIPRAP INFLOW PROTECTION**

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 10 INCHES (2' D<sub>50</sub>) AND 1 FOOT DEEP FLOW CHANNEL BELOW RIPRAP PROTECTION CHANNEL. MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLEND RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL F-1 REMOVABLE PUMPING STATION**

**CONSTRUCTION SPECIFICATIONS**

- USE CORRUGATED METAL OR PLASTIC PIPE WITH 1/2 INCH DIAMETER PERFORATIONS 6 INCHES ON CENTER.
- USE A MINIMUM 12 INCH DIAMETER INNER PIPE WITH AN OUTER PIPE A MINIMUM 6 INCHES LARGER IN DIAMETER. BOTTOM OF EACH PIPE MUST BE CAPPED WITH WATER TIGHT SEAL.
- WRAP EACH PIPE WITH 3/8 INCH GALVANIZED HARDWARE CLOTH. ON INNER PIPE WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
- EXCAVATE 8 FEET X 8 FEET X 4 FEET DEEP PIT FOR PIPE PLACEMENT. PLACE CLEAN 3/4 TO 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
- SET TOP OF INNER AND OUTER PIPES MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION (OR RISER CREST ELEVATION WHEN DRAINING A BASIN).
- BACKFILL PIT AROUND THE OUTER PIPE WITH 3/4 TO 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
- DISCHARGE TO A STABLE AREA AT A NONEROSE RATE.
- A REMOVABLE PUMPING STATION REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, PULL OUT INNER PIPE AND REPLACE GEOTEXTILE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL E-1 SILT FENCE**

**CONSTRUCTION SPECIFICATIONS**

- USE WOVEN SILT 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.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- 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.
- 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, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL E-1 SILT FENCE**

**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 X 1 1/2 X 1/4 INCH (MINIMUM SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEARING NOT LESS THAN 1 FOOT FEET LINEAR FOOT).
- USE 36 INCH MINIMUM POSTS DRIVEN 18 INCH MINIMUM INTO GROUND MORE THAN 6 FEET APART.
- USE WOVEN SILT 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.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- 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.
- 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, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL C-9 DIVERSION FENCE**

**CONSTRUCTION SPECIFICATIONS**

- USE 42 INCH HIGH 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING).
- USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
- FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
- SECURE 10 MIL OR THICKER UV RESISTANT IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
- EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
- WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNWARD.
- KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE**

**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE TO FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADII.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAIN POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE OR EQUIVALENT RECYCLED CONCRETE WITHOUT REBAR AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE).
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM AND SPECIFIED ENDINGS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE SOIL TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL B-4-6-C PERMANENT SOIL STABILIZATION MATTING CHANNEL APPLICATION**

**CONSTRUCTION SPECIFICATIONS**

- USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
- USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEREGULABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LACHRIMATING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-ALLERGENIC TO THE SKIN. IF FREESTITCH NETTING MUST BE EXTENDED PLASTIC WITH A MINIMUM MESH OPENING OF 2 1/2 INCHES AND SUFFICIENTLY BOUNDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
- SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEELS HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 6 INCH MAIN LEG, A MINIMUM 4 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1 1/2 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
- PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDING PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS. LINES END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FINALLY UPON THE SEEDER SURFACE. AVOID STRETCHING THE MATTING.
- OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
- KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DOING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
- STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT MAXIMUM CENTERS THROUGHOUT AND 2 FOOT MAXIMUM CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
- IF SPECIFIED BY THE MANUFACTURER OR MANUFACTURING AND PERFORMING ON THE TYPE OF MAT USED, INSTALL, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
- ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL E-3 SUPER SILT FENCE**

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE BOTH ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**Maryland's Guidelines To Waterway Construction**

**DETAIL 4.2(a): UTILITY CROSSING**

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE BOTH ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**Maryland's Guidelines To Waterway Construction**

**DETAIL 4.2(b): UTILITY CROSSING**

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE BOTH ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**EROSION CONTROL MATTING NOTE:**

SHALES ARE TO BE PROTECTED WITH EROSION CONTROL MATTING AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR

**SSF-TRAP #1 DETAIL**

**SSF-TRAP #2 DETAIL**

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**DETAIL F-4 FILTER BAG**

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE BOTH ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

**Maryland's Guidelines To Waterway Construction**

**DETAIL 2.1: RIPRAP**

**CONSTRUCTION SPECIFICATIONS**

- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.085 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
- FASTEN WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TEST SPACES EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE BOTH ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
- PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTATE FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT NATURAL RESOURCES CONSERVATION SERVICE 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.

Signature: [Signature]  
Date: 01-05-2015

WILLIAM R. ZIMM, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2015

STATE OF MARYLAND  
Professional Engineer

**APPROVED**

PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2015

STATE OF MARYLAND  
Professional Engineer

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

Signature of Developer: Roy Chavacci  
Date: 1/7/15

Signature of Engineer: William R. Zimm, P.E.  
Date: 1/15/15

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

Signature: [Signature]  
Date: 1/20/15

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Date: 2-20-15  
Date: 2-20-15  
Date: 2/16/15

01/05/15 01 REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER/DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCI, EX. VICE PRESIDENT  
301 ST. LUKES DRIVE  
WESTMINSTER MD 21158  
(410) 948-0090

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1773 collinsdale rd. (route 100) catonsville, md. 21048-9000  
410.832.8920 - fax: 301.881.0418 - fax 410.832.8920

PERMIT INFORMATION CHART

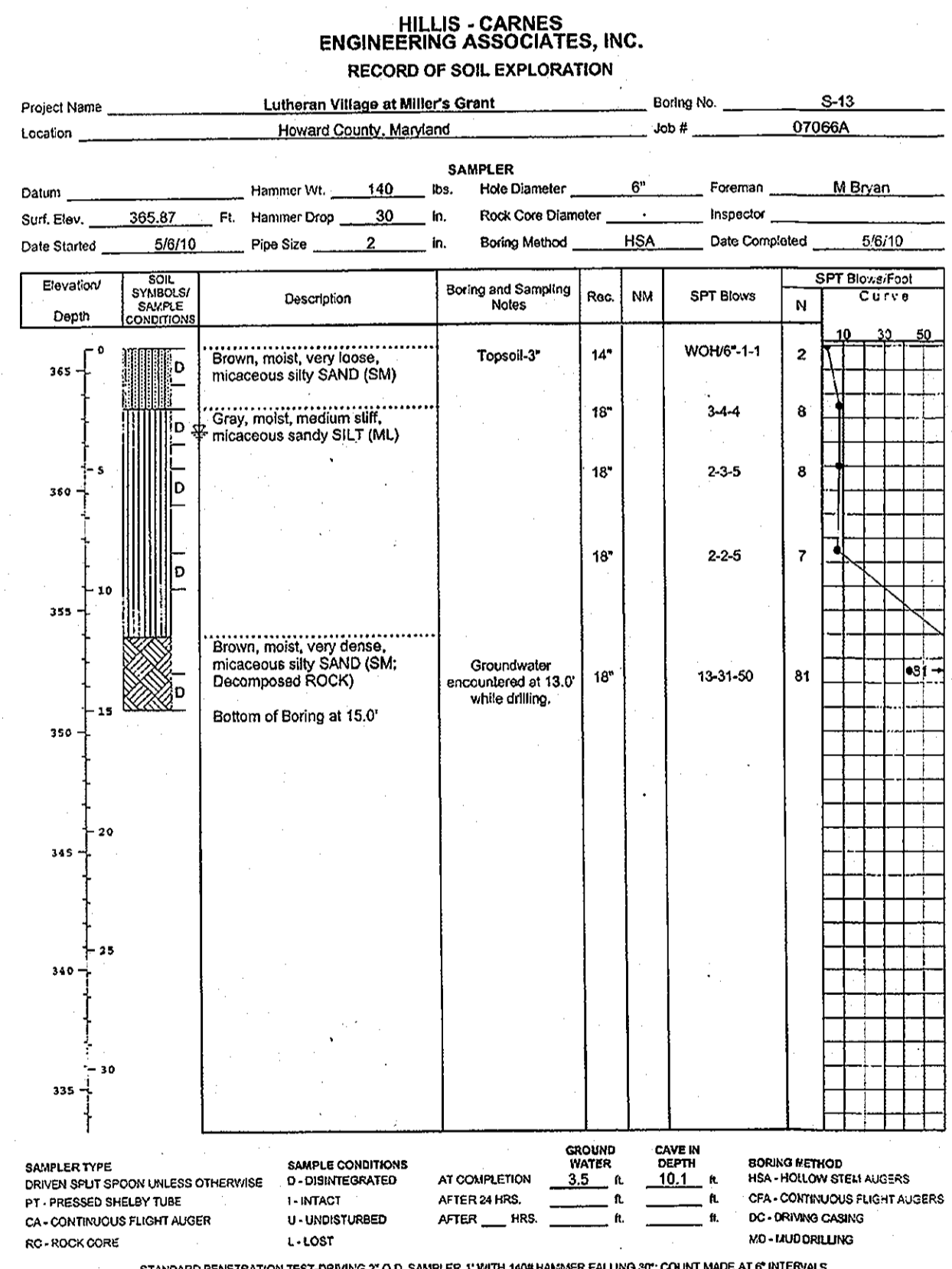
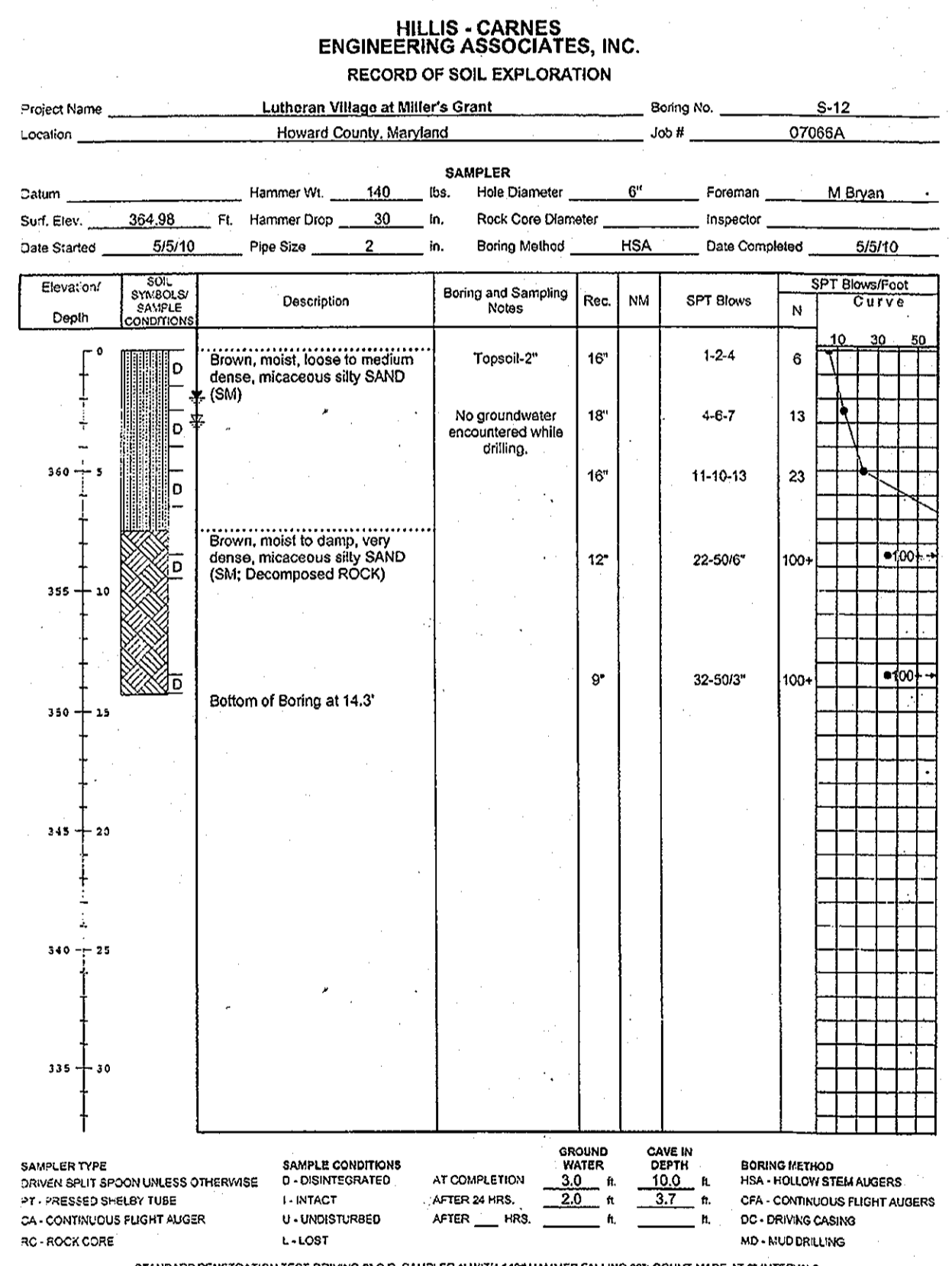
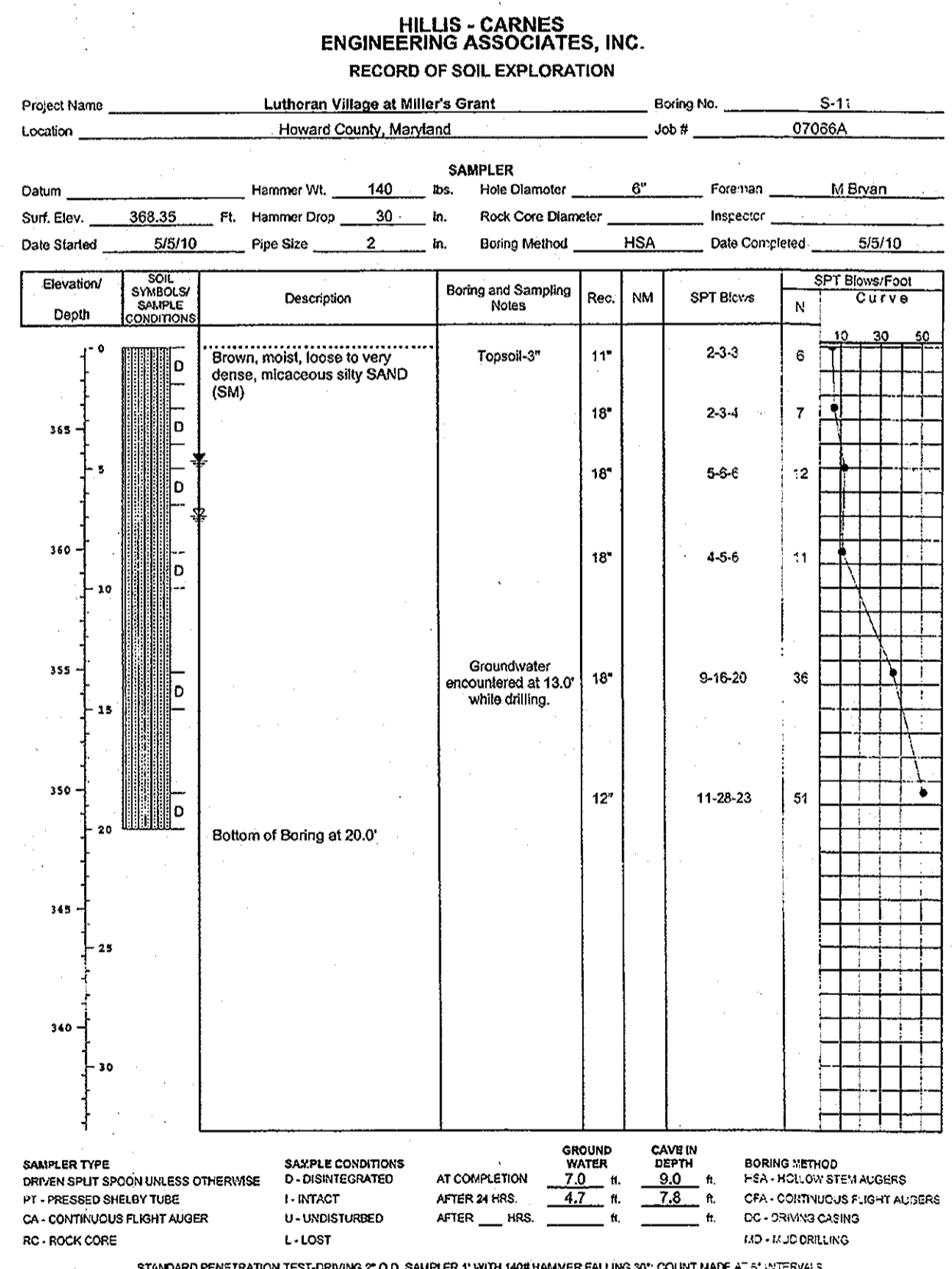
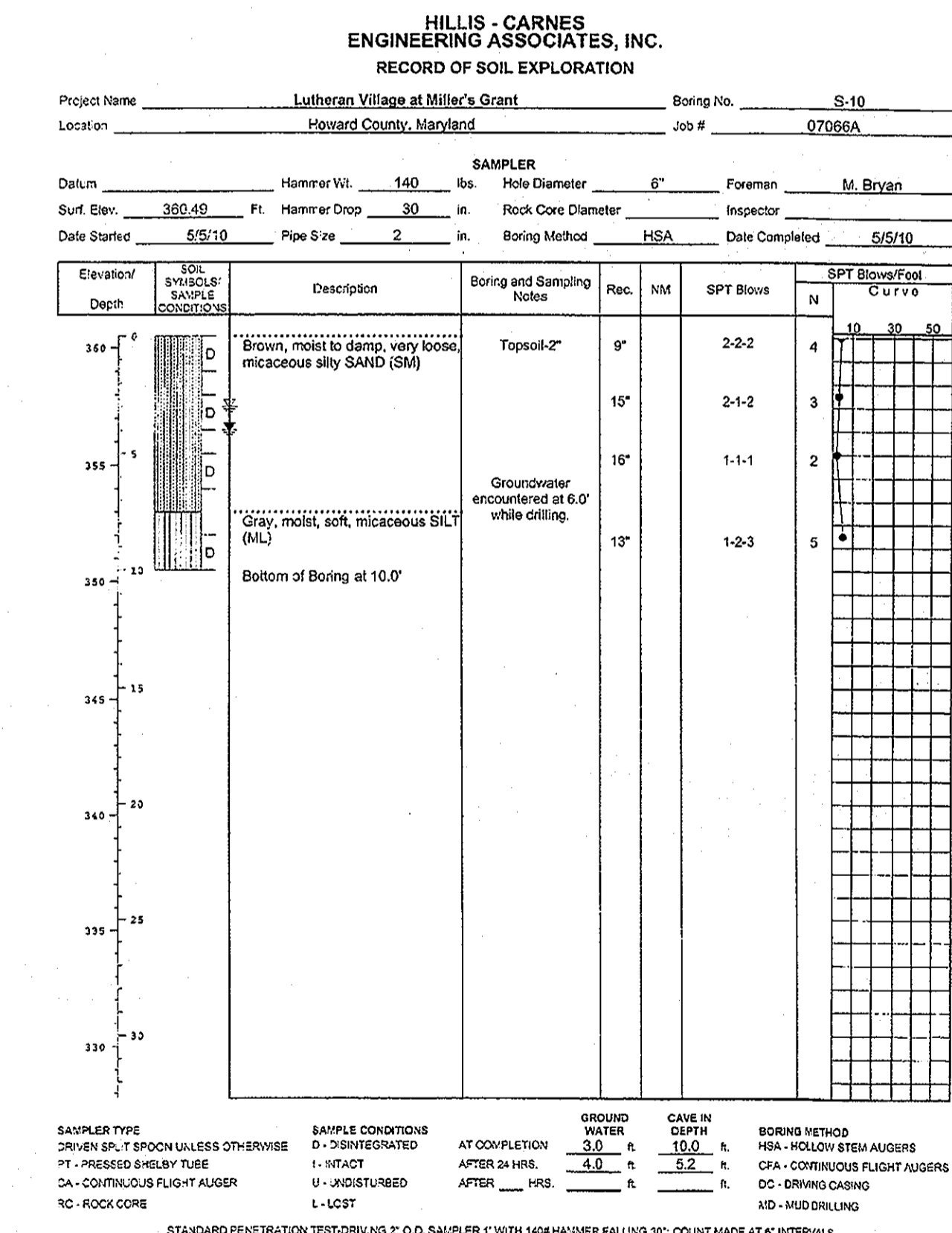
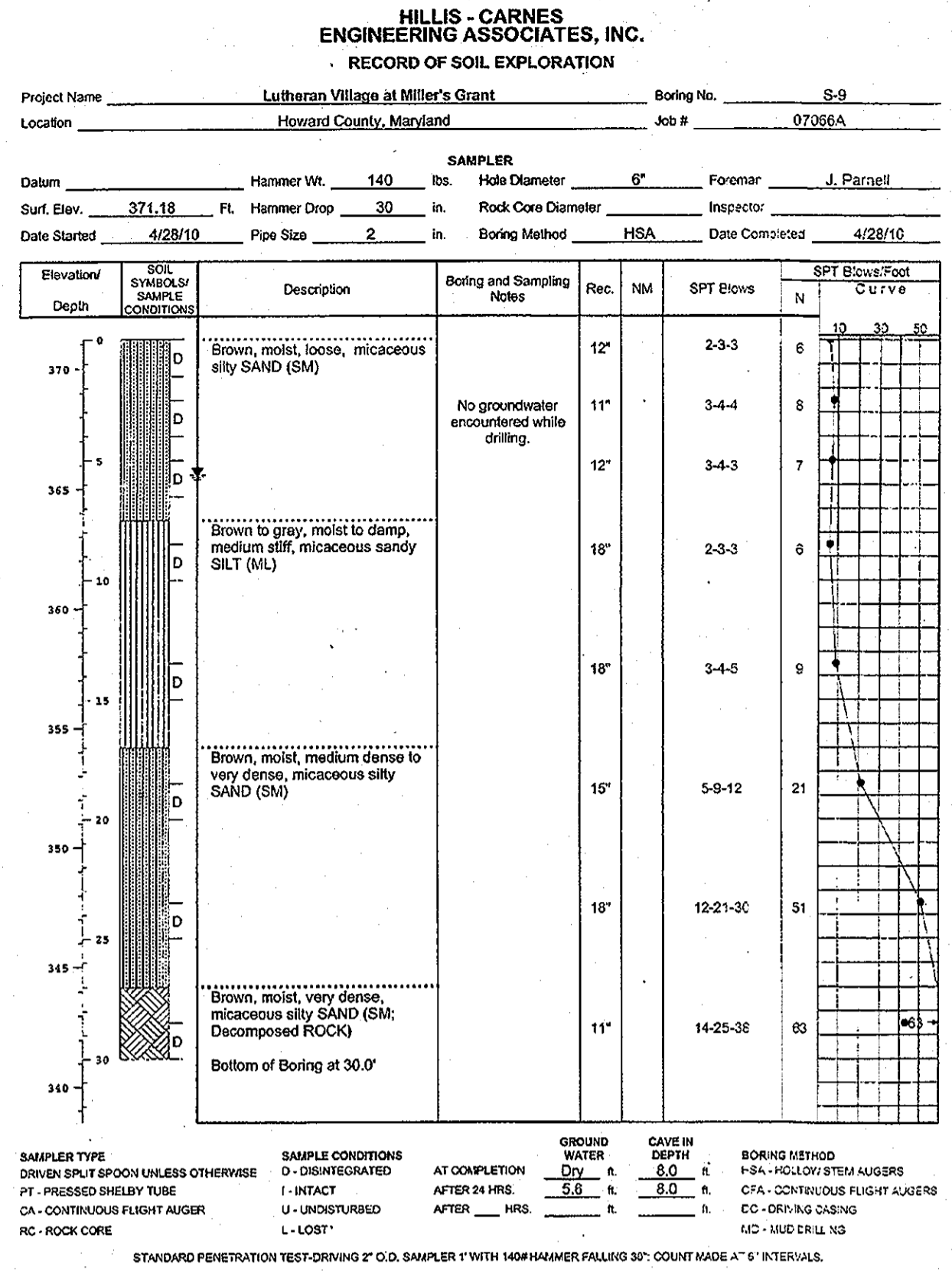
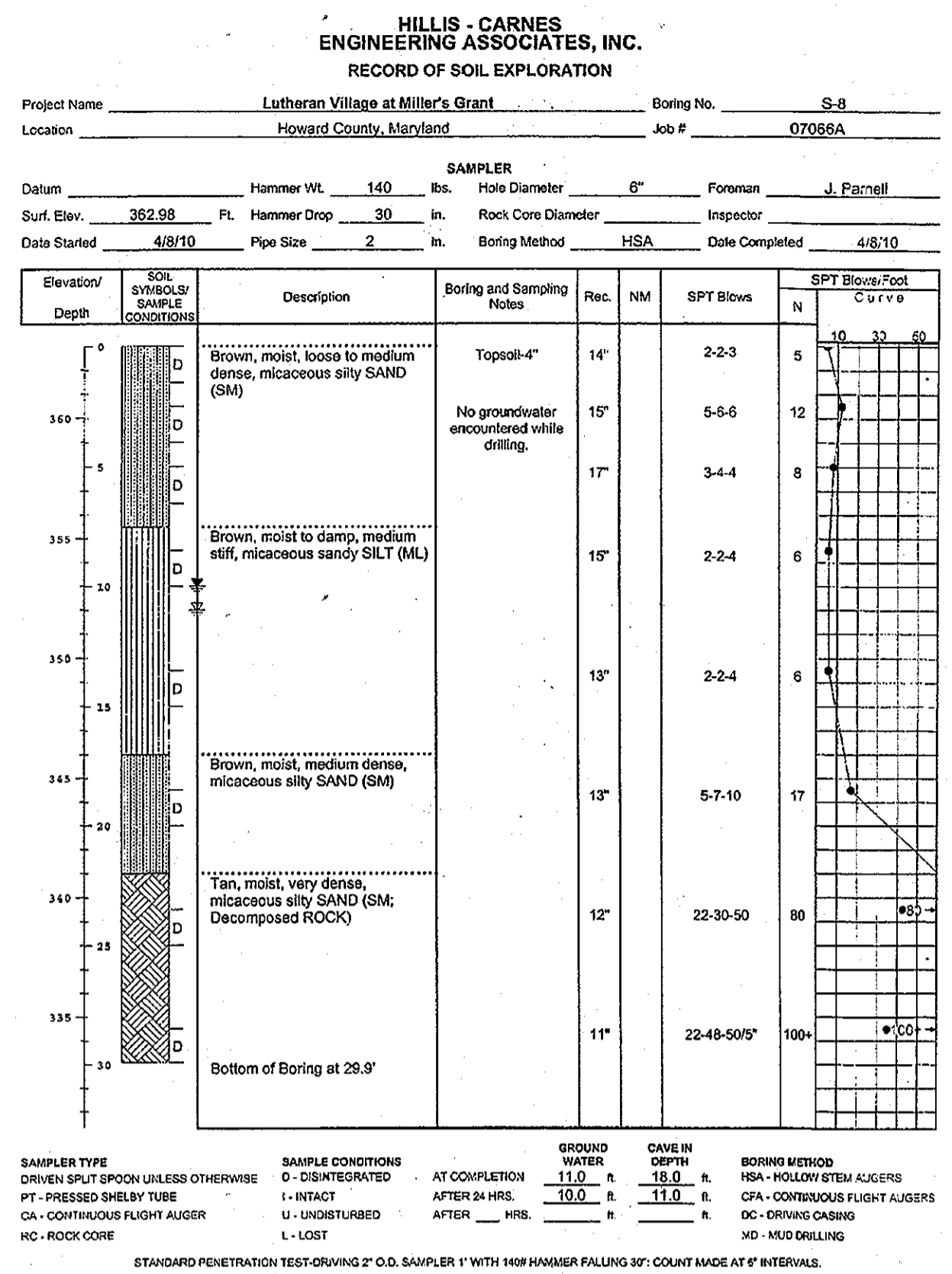
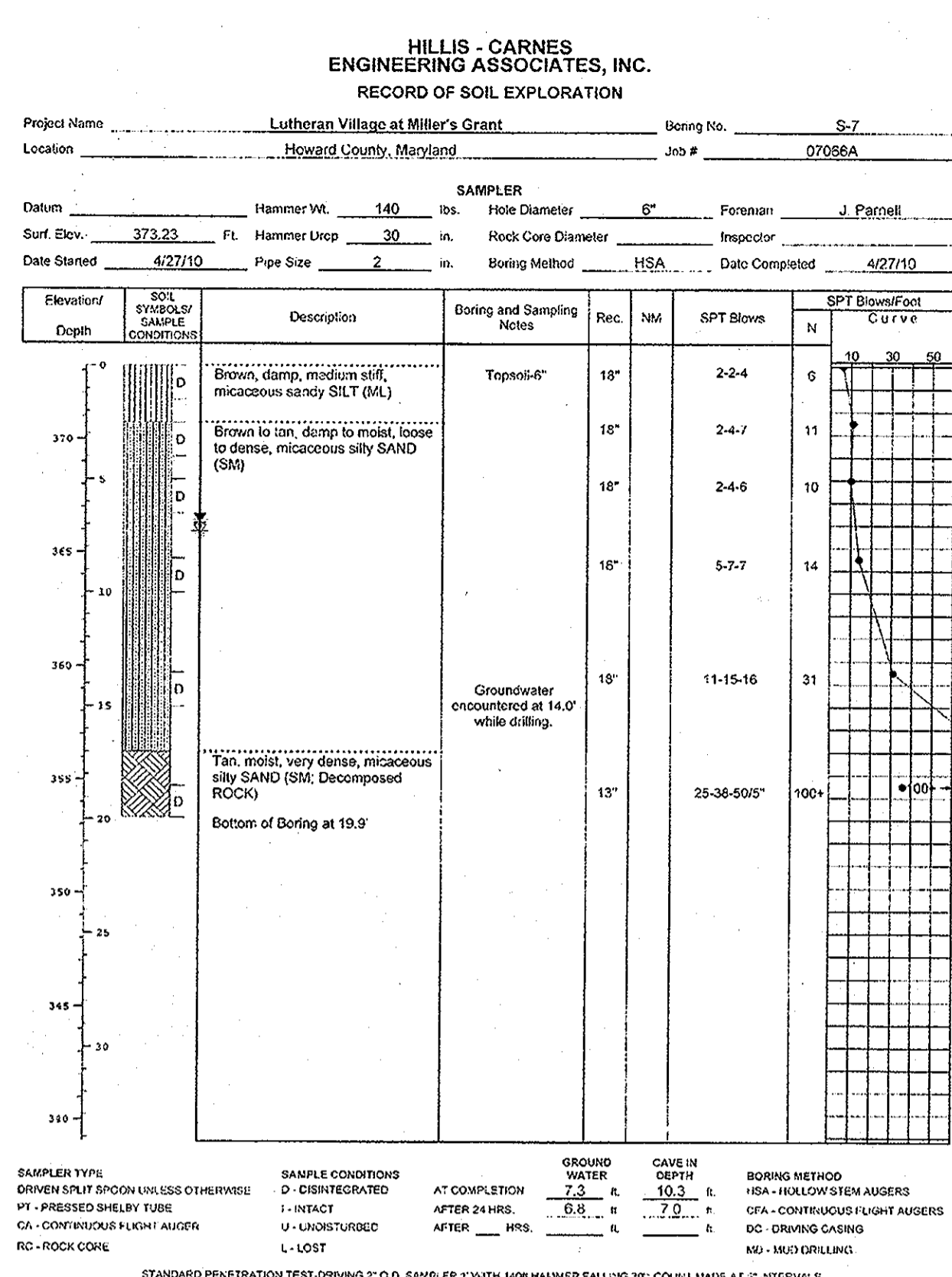
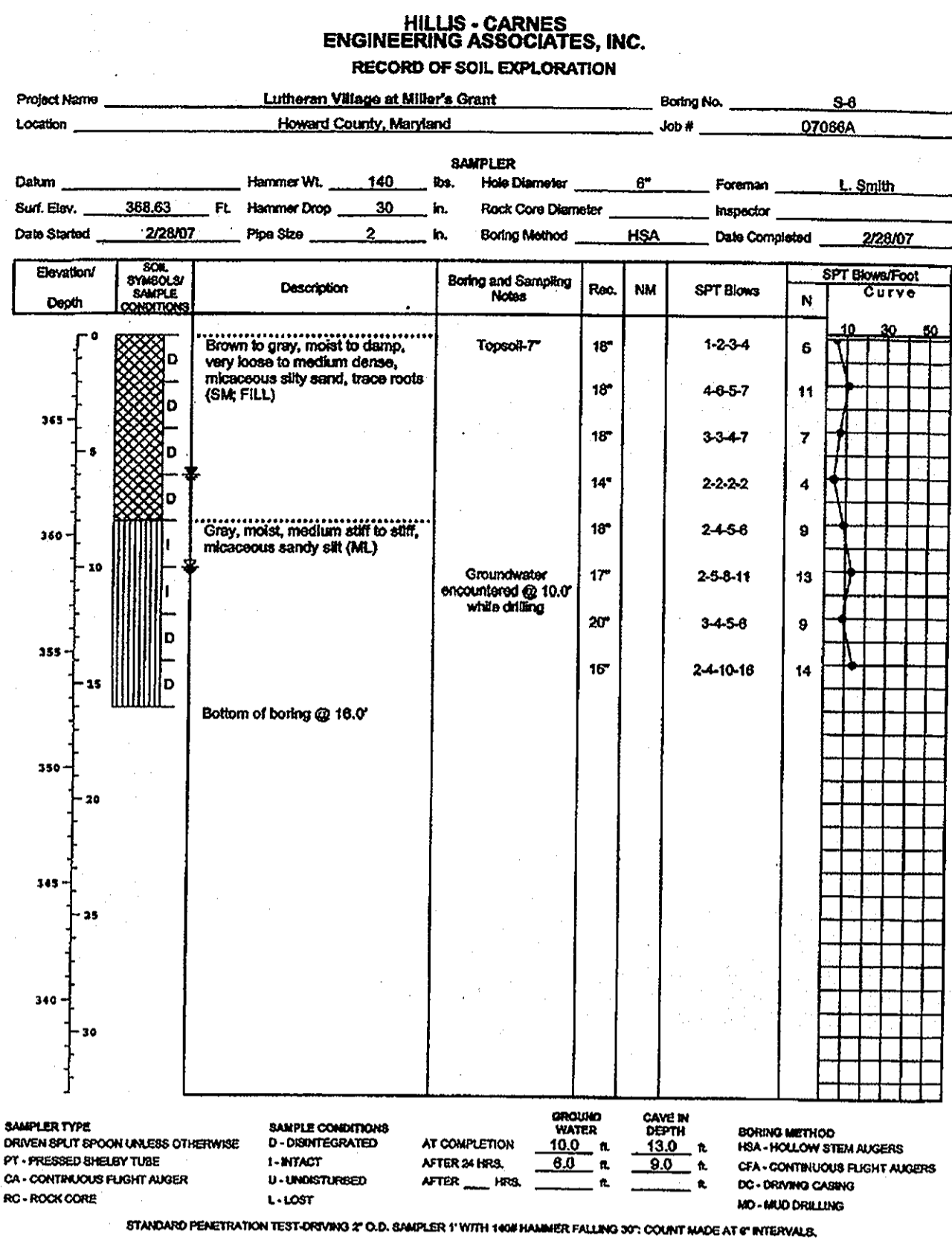
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)		

TITLE: **EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>34 OF 77</b>



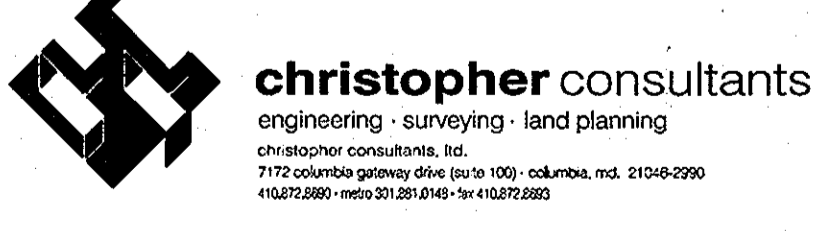




APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

APPROVED DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division  
Chief, Division of Land Development  
Director

REVISION DESCRIPTION  
LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
CONTACT: ROY CREAVACCO, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
NEWMARKET, MD 21158  
(410) 846-0090



PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07	ELECTION DISTRICT 02

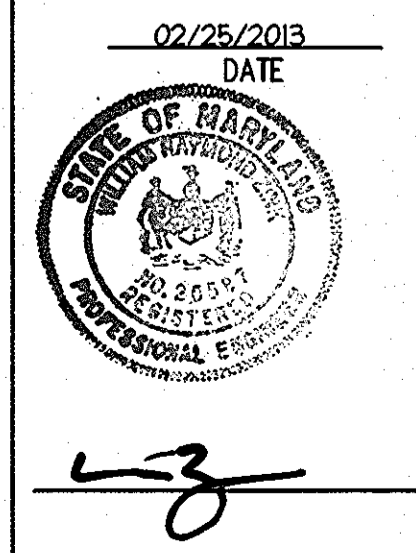
TITLE:  
SOIL BORING LOGS

DESIGN: DAM  
SCALE: 1" = 50'  
PROJECT: 0515.001.02

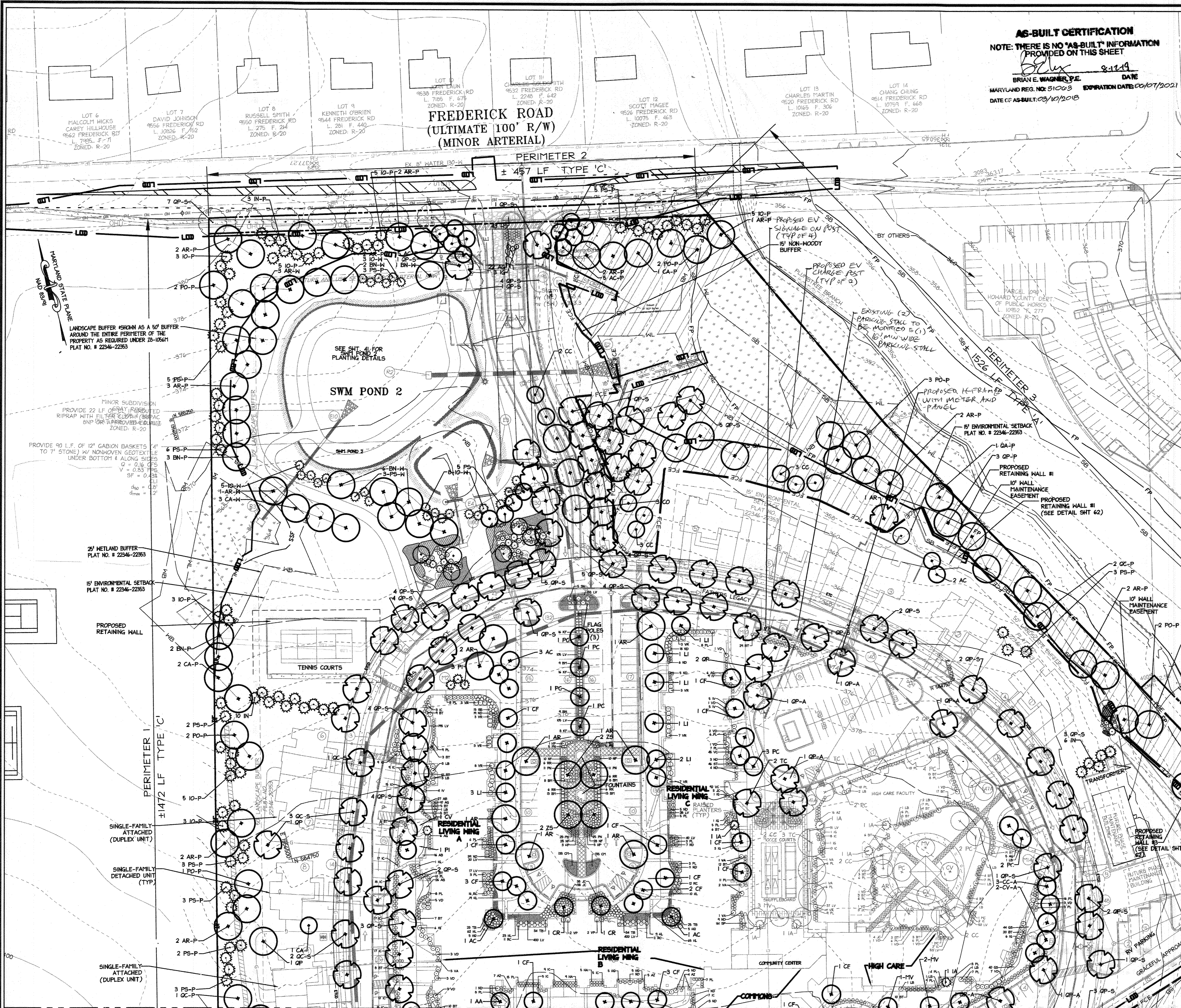
DRAWN: DAM  
DATE: APRIL 12, 2013

CHECKED: ENJ  
APPROVED: WRZ

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
SIGNATURE OF ENGINEER: [Signature]  
WILLIAM R. ZINS, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2014  
DATE: [Signature]



MDC-792 (SDP)



**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
 BRIAN E. WAGNER, P.E. DATE 8-11-14  
 MARYLAND REG. NO. 51005 EXPIRATION DATE 03/07/2021  
 DATE OF AS-BUILT: 03/10/2018

**LEGEND**

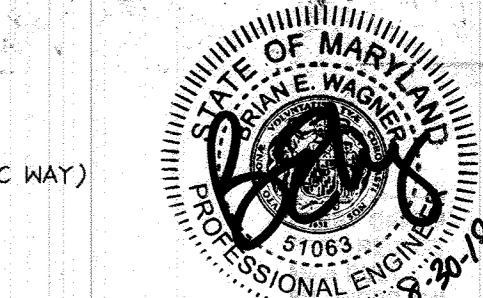
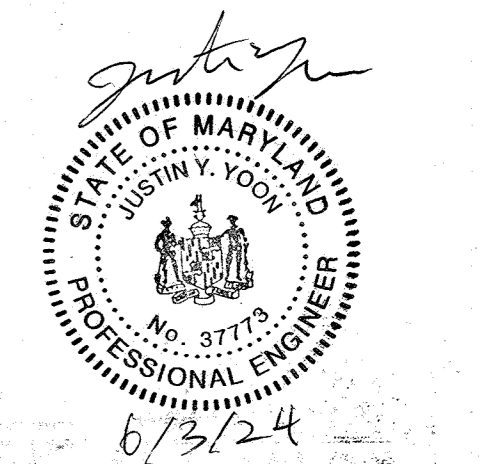
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- EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- STREAM CENTERLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- FLOODPLAIN
- FLOODPLAIN BUFFER
- STREAM BUFFER
- WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- LIMITS OF DISTURBANCE (LOD)
- RETENTION FOREST CONSERVATION EASEMENT
- REFORESTATION AREA
- NO-WOODY BUFFER
- WETLANDS
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED LARGE STREET TREE
- FREDERICK ROAD (11 WILLOW OAK)
- APARTMENTS
- COMMUNITY CENTER
- ASSISTED LIVING (60 BED CARE FACILITY)
- PROPOSED ENTRANCE/EXIT (ACCESSIBLE ROUTE TO PUBLIC WAY)
- PROPOSED STREET LIGHT
- PROPOSED PHASE II PLANTINGS

**NOTES:**

- ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II.
- SEE SHEET 41 FOR A COMPLETE LIST OF PHASE II PLANTINGS

**PROFESSIONAL CERTIFICATION:** I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AS THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 37775, EXP. DATE 8/14/25

**APPROVED:** PLANNING BOARD OF HOWARD COUNTY DATE MARCH 7, 2015



FOR PROPOSED MAINTENANCE BUILDING ONLY  
 Professional Certification: I hereby certify that these documents were prepared or approved by me, and I am a duly licensed professional engineer under the laws of the State of Maryland License No. 51005, Exp. Jun 7, 2021

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division Date 2-20-15  
 Chief, Division of Land Development Date 2-26-15  
 Director Date 2/26/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
6/3/24	05	REV. SDP - EV CHARGING

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0200

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, ltd.  
 7172 columbus gateway drive suite 100 - columbia, md. 21046-2800  
 410.329.9800 - fax 410.329.9801

**PERMIT INFORMATION CHART**

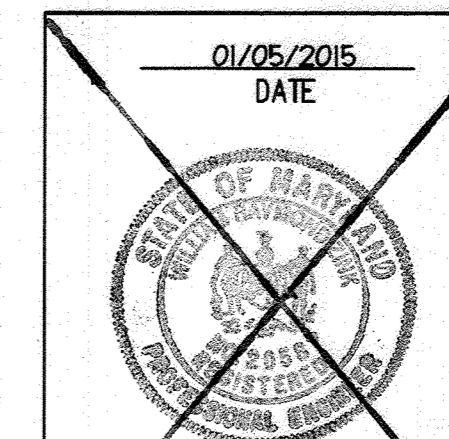
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE	TITLE:		
550 (TG 700)	F07	LANDSCAPE PLAN		

DESIGN: DQRH	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DQRH	DATE: APRIL 12, 2013	37 of 77
CHECKED: BING	APPROVED: HURIG	

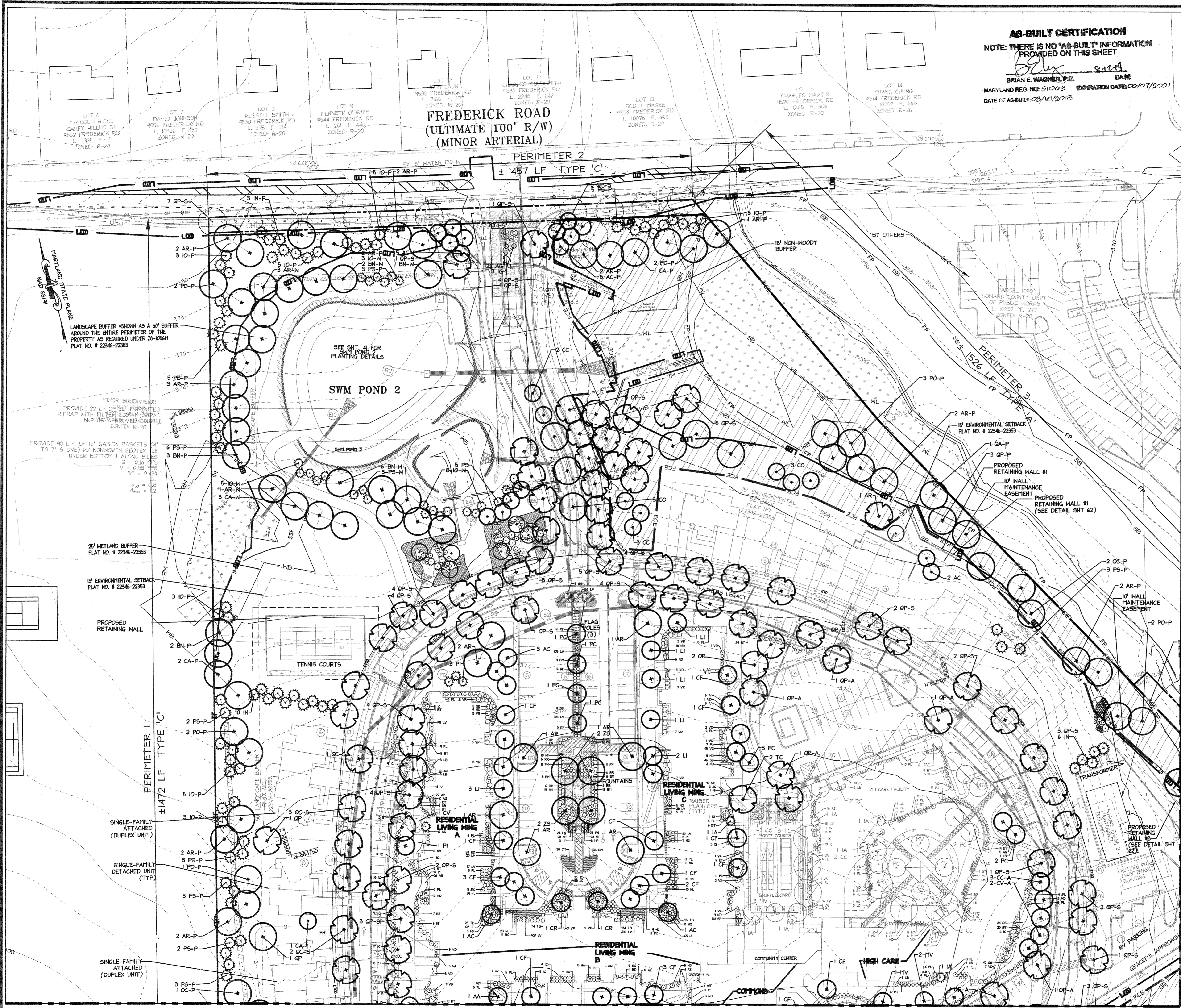
NOTE: SEE SHEET 37A FOR EXPANDED VIEW OF INTERIOR COURTYARD LANDSCAPE

MATCHLINE - SEE SHEET 38 FOR CONTINUATION

MATCHLINE - SEE SHEET 39 FOR CONTINUATION



SDP-08-075



**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
 Brian E. Wagner, P.E. 8-11-14 DATE  
 MARYLAND REG. NO. 51003 EXPIRATION DATE: 06/07/2021  
 DATE OF AS-BUILT: 03/10/2015

**LEGEND**

- - - - - EXISTING INTER CONTOUR
- - - - - EXISTING INDEX CONTOUR
- — — — — PROPERTY LINE
- - - - - ADJACENT PROPERTY LINE
- - - - - STREAM CENTERLINE
- - - - - EXISTING TREELINE
- - - - - PROPOSED TREELINE
- FP FLOODPLAIN
- FB FLOODPLAIN BUFFER
- SB STREAM BUFFER
- WB WETLAND BUFFER
- FC FOREST CONSERVATION EASEMENT
- LOD LIMITS OF DISTURBANCE (LOD)
- RF RETENTION FOREST CONSERVATION EASEMENT
- RA REFORESTATION AREA
- NWB NO-WOODY BUFFER
- WL WETLANDS
- PT PROPOSED SHADE TREE
- OT PROPOSED ORNAMENTAL TREE
- ET PROPOSED EVERGREEN TREE
- SLT PROPOSED LARGE STREET TREE FREDERICK ROAD (11 WILLOW OAK)
- A APARTMENTS
- CC COMMUNITY CENTER
- AL ASSISTED LIVING (60 BED CARE FACILITY)
- PE PROPOSED ENTRANCE/EXIT (ACCESSIBLE ROUTE TO PUBLIC WAY)
- SL PROPOSED STREET LIGHT
- XX XX

SA SC SB SD SE SF SG SH SJ SK SL SM SN SO SP ST SV SW SY SZ

PROPOSED MAINTENANCE BUILDING

PROPOSED PHASE II PLANTINGS

NOTES:  
 1. ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II.  
 2. SEE SHEET 41 FOR A COMPLETE LIST OF PHASE II PLANTINGS.  
 439 East Main Street, Westminster, MD 21157-5239  
 (410) 646-1790 FAX (410) 646-1791

APPROVED PLANNING BOARD OF HOWARD COUNTY  
 DATE MARCH 7, 2015



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Development Engineering Division Date 2-20-15  
 Chief, Division of Land Development Date 2-20-15  
 Director Date 2/26/15

01/05/15 01 REVISED SITE DEVELOPMENT PLAN

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 546-0226

**christopher consultants**  
 engineering • surveying • land planning  
 christopher consultants, ltd.  
 7112 columbia gateway drive suite 100 • columbia, md • 21046-2800  
 410.880.9900 • www.christopherconsultants.com

PERMIT INFORMATION TABLE

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE F5C
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE: **LANDSCAPE PLAN**

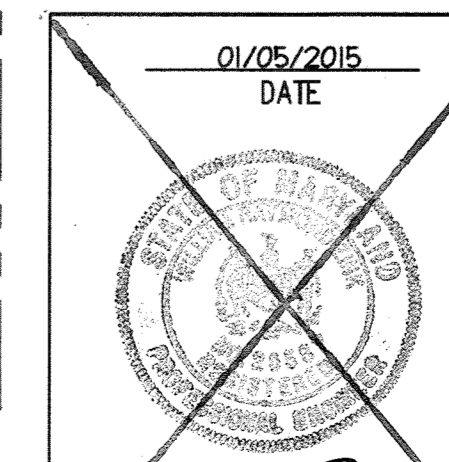
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 DRAWN: DARRH DATE: APRIL 12, 2013 PROJECT: 0515.001.02  
 CHECKED: BING APPROVED: HURIG

DATE: 01/05/2015

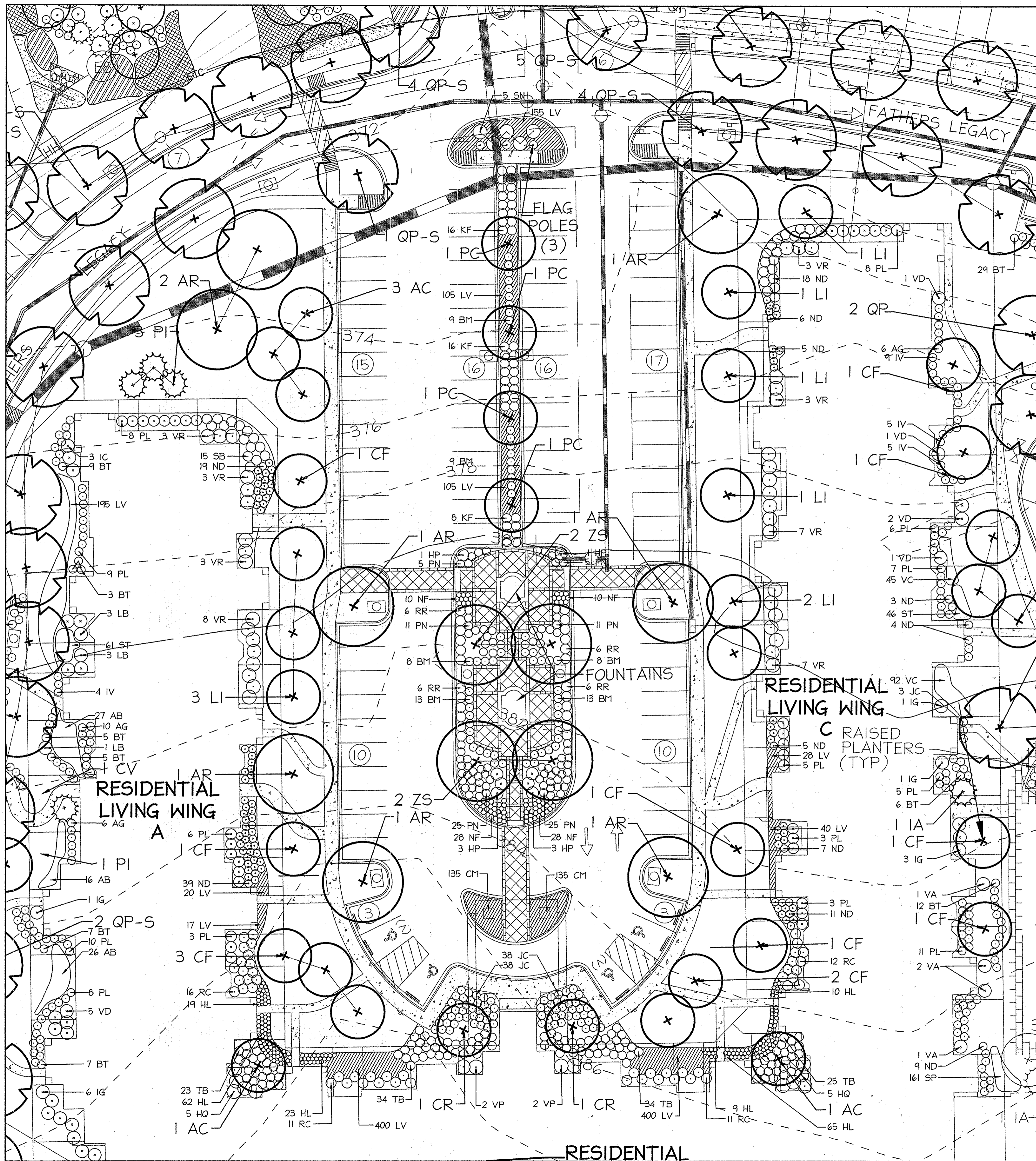
37 of 77  
 SDP-08-075

NOTE: SEE SHEET 37A FOR EXPANDED VIEW OF INTERIOR COURTYARD LANDSCAPE  
 MATCHLINE - SEE SHEET 38 FOR CONTINUATION

MATCHLINE - SEE SHEET 39 FOR CONTINUATION



MDC-792 (SDP)



**LEGEND**

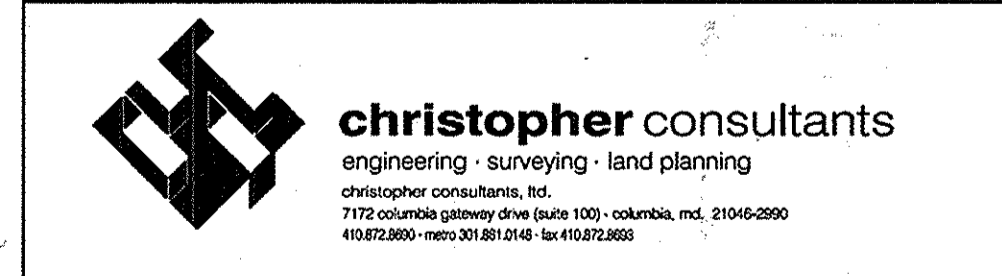
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- EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- STREAM CENTERLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- FP FLOODPLAIN
- FB FLOODPLAIN BUFFER
- SB STREAM BUFFER
- WB WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- LIMITS OF DISTURBANCE (LOD)
- RETENTION FOREST CONSERVATION EASEMENT
- REFORESTATION AREA
- NO-WOODY BUFFER
- WETLANDS
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED LARGE STREET TREE  
FREDERICK ROAD  
(11 MILLON OAK)
- APARTMENTS
- COMMUNITY CENTER
- ASSISTED LIVING  
(60 BED CARE FACILITY)
- PROPOSED ENTRANCE/EXIT  
(ACCESSIBLE ROUTE TO PUBLIC WAY)
- PROPOSED STREET LIGHT
- PROPOSED PHASE II PLANTINGS

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

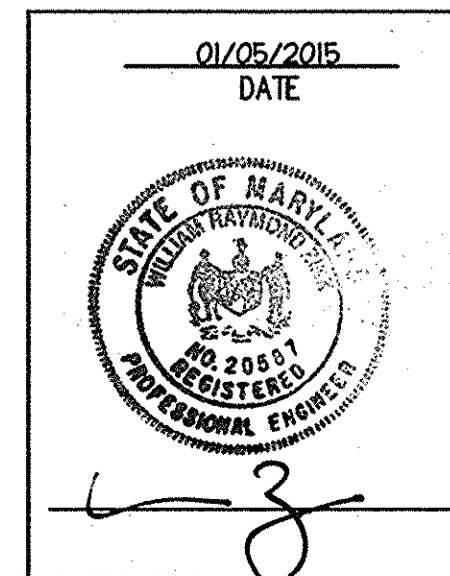
APPROVED: DEPARTMENT OF PLANNING AND ZONING	
Chief, Development Engineering Division	Date 2-20-15
Chief, Division of Land Development	Date 2-26-15
Director	Date 3/26/15
01/05/15	01 REVISED SITE DEVELOPMENT PLAN



Date	No.	Revision Description
		LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY
OWNER / DEVELOPER		
LUTHERAN VILLAGE AT MILLER'S GRANT 670 CARROLL LUTHERAN VILLAGE CONTACT: ROY CHAVAZO, EX. VICE PRESIDENT 300 ST LUKE CIRCLE WESTMINSTER, MD 21156 (410) 946-4050		

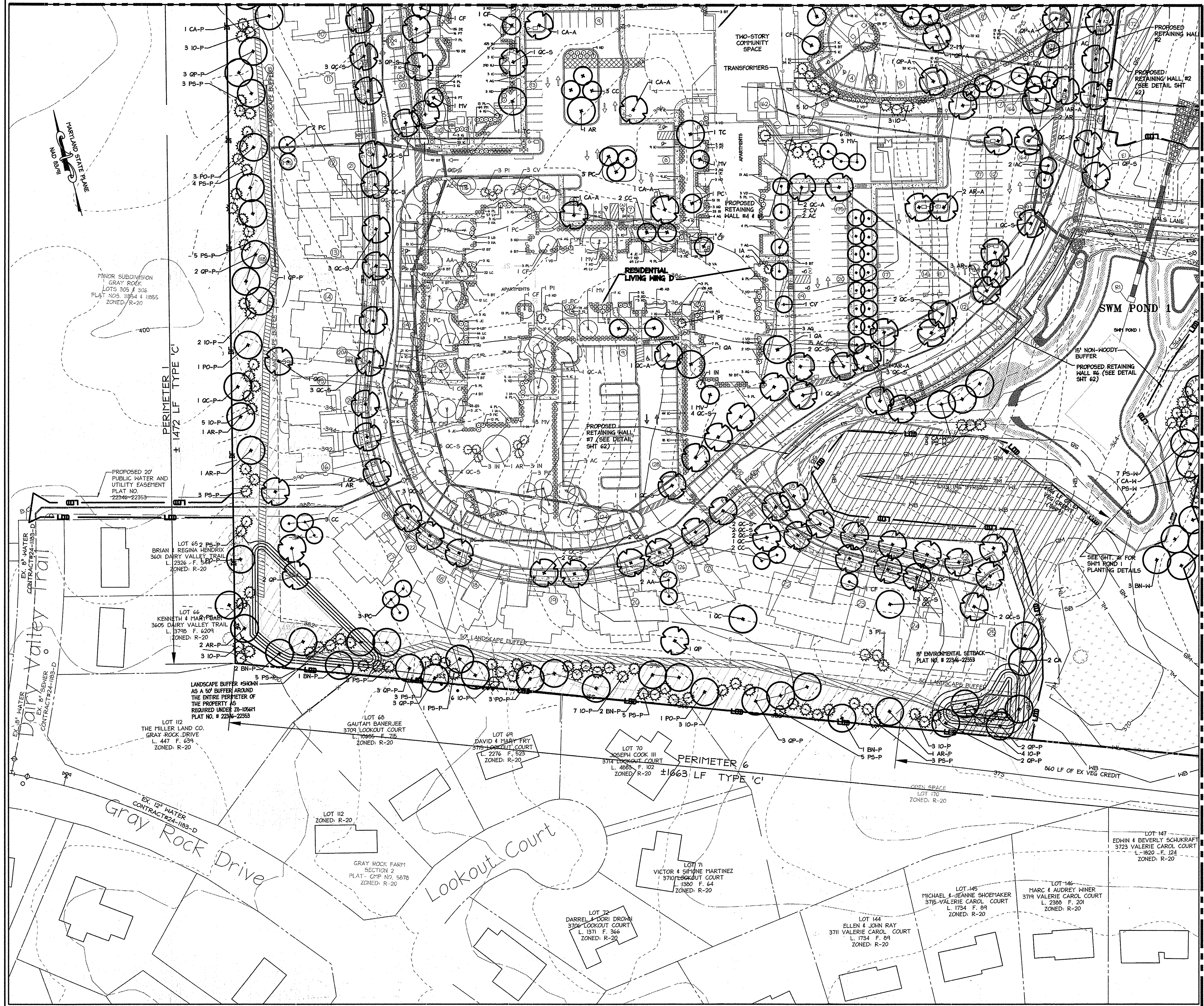


PERMIT INFORMATION CHART		
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF	GRID NO.	ZONE
L 10678 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)	F07	



TITLE:		
LANDSCAPE PLAN		
DESIGN: CRH	SCALE: 1" = 20'	PROJECT: 0515.001.02
DRAWN: CRH	DATE: APRIL 12, 2015	
CHECKED: LNG	APPROVED: LNG	37A of 77

MATCHLINE - SEE SHEET 37 FOR CONTINUATION



**LEGEND**

- - - 250 - EXISTING INTER CONTOUR
- - - - - EXISTING INDEX CONTOUR
- — — — — PROPERTY LINE
- - - - - ADJACENT PROPERTY LINE
- - - - - STREAM CENTERLINE
- - - - - EXISTING TREELINE
- - - - - PROPOSED TREELINE
- FP - FLOODPLAIN
- FB - FLOODPLAIN BUFFER
- SB - STREAM BUFFER
- WB - WETLAND BUFFER
- — — — — FOREST CONSERVATION EASEMENT
- LOD - LIMITS OF DISTURBANCE (LOD)
- Retention Forest Conservation Easement
- REFORESTATION AREA
- NO-WOODY BUFFER
- WETLANDS
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED LARGE STREET TREE (FREDERICK ROAD (11 WILLOW OAK))
- 1 - APARTMENTS
- 2 - COMMUNITY CENTER
- 3 - ASSISTED LIVING (60 BED CARE FACILITY)
- ▲ - PROPOSED ENTRANCE/EXIT (ACCESSIBLE ROUTE TO PUBLIC WAY)
- SA □ SC □ - PROPOSED STREET LIGHT
- SB □ SD □ - PROPOSED PHASE II PLANTINGS

MATCHLINE - SEE SHEET 39 FOR CONTINUATION

**NOTES:**

- ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II.
- SEE SHEET 41 FOR A COMPLETE LIST OF PHASE II PLANTINGS.

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	2-20-15
Chief, Development Engineering Division	Date
<i>[Signature]</i>	2-26-15
Chief, Division of Land Development	Date
<i>[Signature]</i>	2/26/15
Director	Date

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

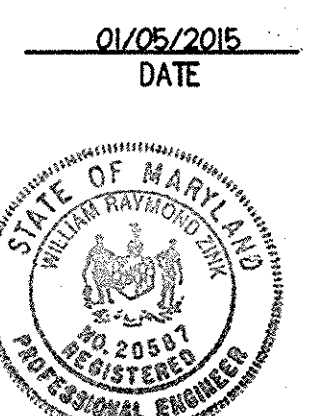
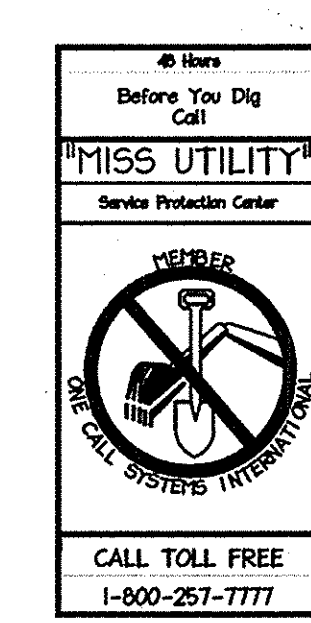
**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORNABACH, EX. VICE PRESIDENT  
300 ST. LIME CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, Inc.  
7172 rockledge gateway drive (suite 100) - catonsville, md. 21046-2000  
410.872.2800 - fax: 301.881.5148 - tel: 410.872.2803

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

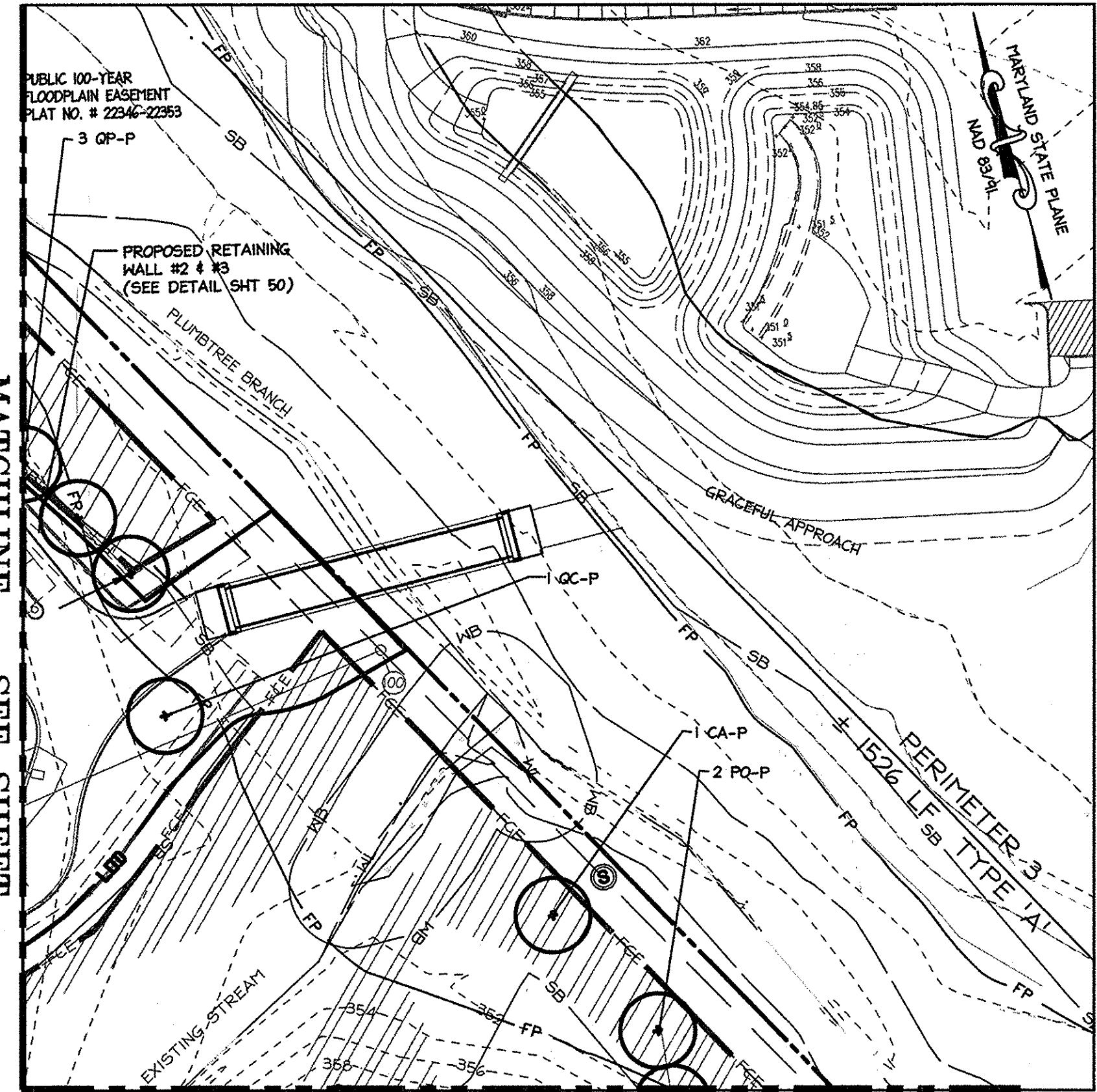
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DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: LNG	APPROVED: FLNG	<b>38</b> OF <b>77</b>



MATCHLINE - SEE THIS SHEET FOR CONTINUATION



MATCHLINE - SEE SHEET 38 FOR CONTINUATION

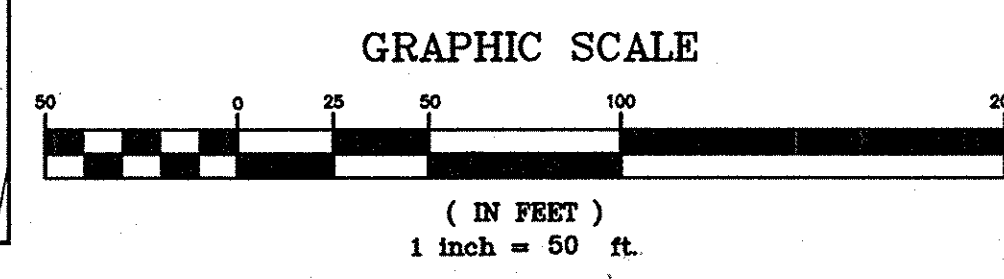


MATCHLINE - SEE SHEET 37 FOR CONTINUATION

MATCHLINE  
SEE THIS SHEET FOR CONTINUATION

LEGEND

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- STREAM CENTERLINE
- EXISTING TREELINE
- PROPOSED TREELINE
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- COMMUNITY CENTER
- ASSISTED LIVING (60 BED CARE FACILITY)
- PROPOSED ENTRANCE/EXIT (ACCESSIBLE ROUTE TO PUBLIC WAY)
- PROPOSED STREET LIGHT



APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING.	
<i>Phil Shank</i> Chief, Development Engineering Division	2-20-15 Date
<i>Vest Snelgrove</i> Chief, Division of Land Development	2-26-15 Date
<i>Mark P. Coyle</i> Director	2/24/15 Date
01/05/15	01 REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description

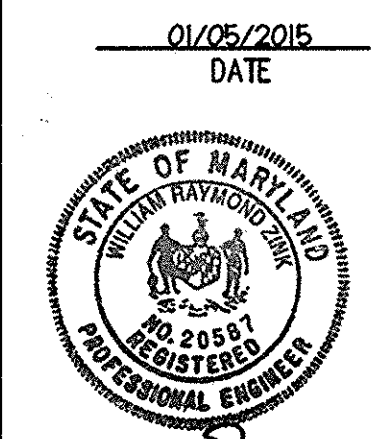
**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORAVACH, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 848-0090



PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800		
DEED REF. L. 10576 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07			

TITLE: <b>LANDSCAPE PLAN</b>		
DESIGN: CRH	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: LNG	APPROVED: I LNG	<b>39 OF 77</b>



**GENERAL PLANTING NOTES**

- ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
- LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LCAMM.
- NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
- IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
- ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
- LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
- LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL. AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
- LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC, WATER, DRAINAGE, AND FOUNTAIN UTILITIES AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDAUNTED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
- CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

- TOPSOIL MIX
  - PLANTING MIX SHALL BE PREPARED AT APPROVED ON-SITE STAGING AREA USING APPROVED ON-SITE EXISTING SOIL. MIX MINIMUM QUANTITIES OF 20 CUBIC YARDS OR SUFFICIENT MIX FOR ENTIRE JOB IF LESS THAN 20 CUBIC YARDS IS REQUIRED.
  - THOROUGHLY MIXED IN THE FOLLOWING PROPORTIONS FOR TREE AND SHRUB PLANTING MIX: 5 CY EXISTING SOIL, 2 CY SHARP SAND, 3 CY WOOD RESIDUALS, 4.5 LBS TREBLE SUPERPHOSPHATE, 5 LBS DOLMONTITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
  - FOR BED PLANTING, SHRUBS AND GROUNDCOVER SPACES 24 INCHES OR CLOSER, INCORPORATE THE FOLLOWING INGREDIENTS PER 20 SF AND INCORPORATE INTO TOP 8 INCHES OF EXISTING SOILS BY ROTOTILLING OR SIMILAR METHOD OF INCORPORATION: 2 CY SHARP SAND, 3 CY ORGANIC MATERIAL, 4.5 LBS TREBLE SUPERPHOSPHATE, 5 LBS DOLMONTITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 44 SHADE TREES AND 183 EVERGREEN TREES PROVIDED LANDSCAPE SURETY IN THE AMOUNT OF \$159,750.00 WITH THE DPW DEVELOPER'S AGREEMENT. LANDSCAPE SURETY IS BASED ON THE NUMBER OF REQUIRED PLANTS PER THE LANDSCAPE MANUAL (44 SHADE TREES x \$300.00 EA. AND 183 EVERGREEN TREES x \$150.00 EA.)
- THE SURETY FOR THE PUBLIC STREET TREES ALONG FREDERICK ROAD SHALL BE INCLUDED IN THE COST ESTIMATE GENERATED BY THE HOWARD COUNTY DEVELOPMENT ENGINEERING DIVISION, AND NOT TO BE INCLUDED IN THE GENERAL LANDSCAPE SURETY, WITH 12 REQUIRED SHADE TREES. THE SURETY ASSOCIATED WITH THE PUBLIC STREET TREES IS \$3,600.00 (12 SHADE TREES x \$300.00). BECAUSE OF SPACE CONSTRAINTS, ONLY 11 OF THE REQUIRED SHADE TREES WERE PLANTED ALONG FREDERICK RD, 1 SHADE TREE WAS RELOCATED TO 12 PERIMETER PLANTING.
- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3" IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON TREES COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Deany Middle*  
 NAME: Deany Middle DATE: 2-26-15  
 President/CEO

**PRIVATE STREET TREE SCHEDULE**

ROAD NAME	LENGTH OF ROAD (BOTH SIDES)	PHASE I (IF APPLICABLE)		NO. OF TREES PROVIDED
		REQ. NO. OF TREES (1 TREE/40 L.F.)	NO. OF TREES PROVIDED	
FATHERS LEGACY	850 L.F.	22		22
FATHERS LEGACY	4380 L.F.	110	88	22
VALS LANE	840 L.F.	21	21	
PAULS PROVISION	600 L.F.	15		15
LEGACY LANE	556 L.F.	14		14

- \*STREET TREES ARE LABELED #-SYMBOL-S (OR 2-AR-S FOR EXAMPLE)
- \*\*PUBLIC STREET TREES NOT INCLUDED IN LANDSCAPE SURETY--SEE NOTE #13 (THIS SHEET)
- \*\*\*THREE TREES ALONG FATHERS LEGACY HAVE BEEN RELOCATED, DUE TO BEING REMOVED FROM POND EMBANKMENT
- \*\*\*\*ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II

**PUBLIC STREET TREE SCHEDULE**

ROAD NAME	LENGTH OF ROAD (BOTH SIDES)	REQ. NO. OF TREES (1 TREE/40 L.F.)	NO. OF TREES PROVIDED
#FREDERICK ROAD (ONE SIDE)	477 L.F.	12	12

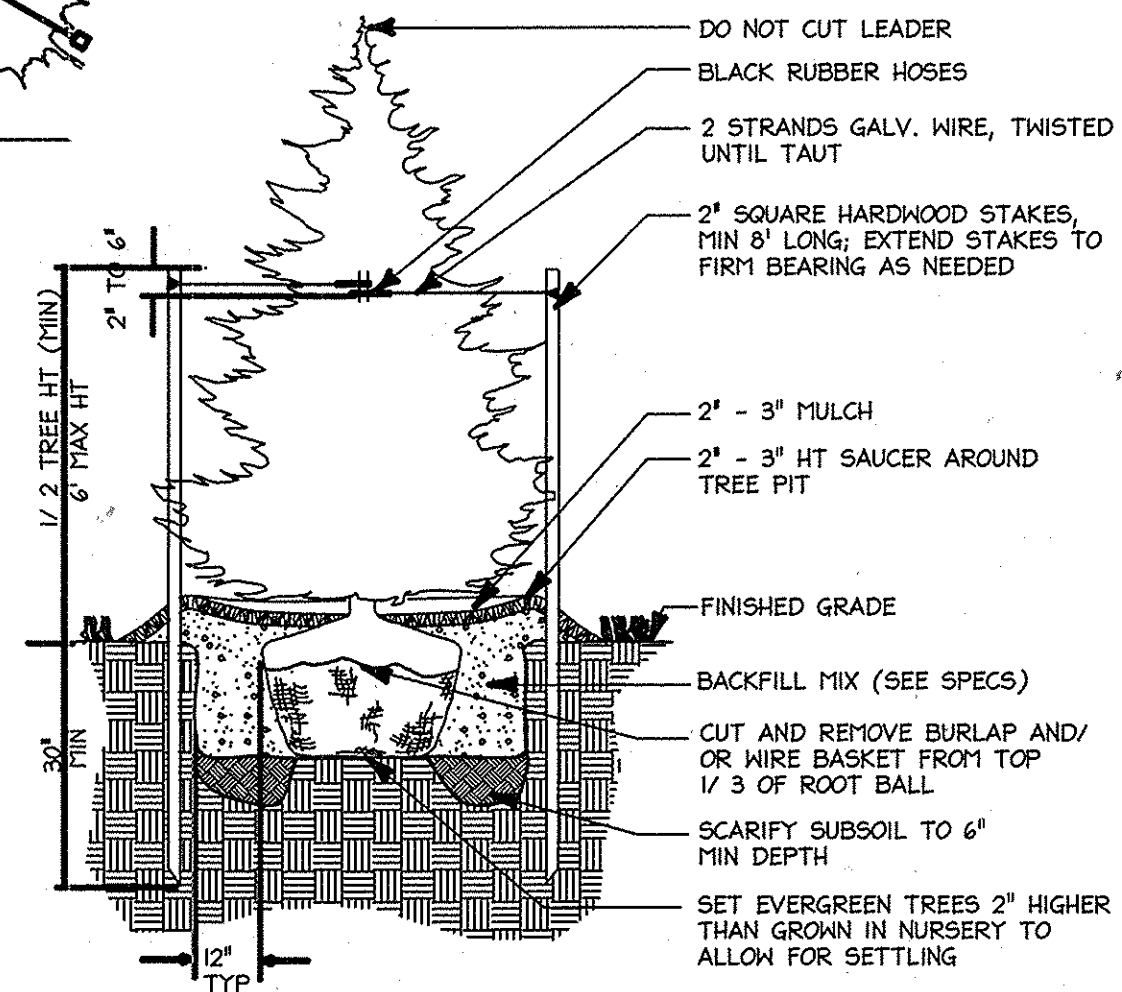
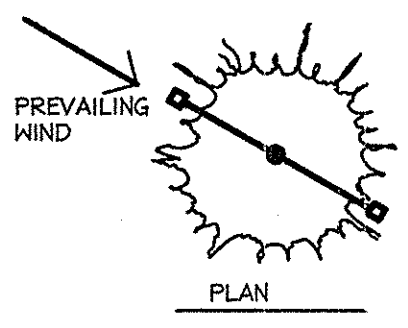
\*\*\*THE SURETY FOR THE PUBLIC STREET TREES ALONG FREDERICK ROAD SHALL BE INCLUDED IN THE COST ESTIMATE GENERATED BY THE HOWARD COUNTY DEVELOPMENT ENGINEERING DIVISION, AND NOT TO BE INCLUDED IN THE GENERAL LANDSCAPE SURETY.

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

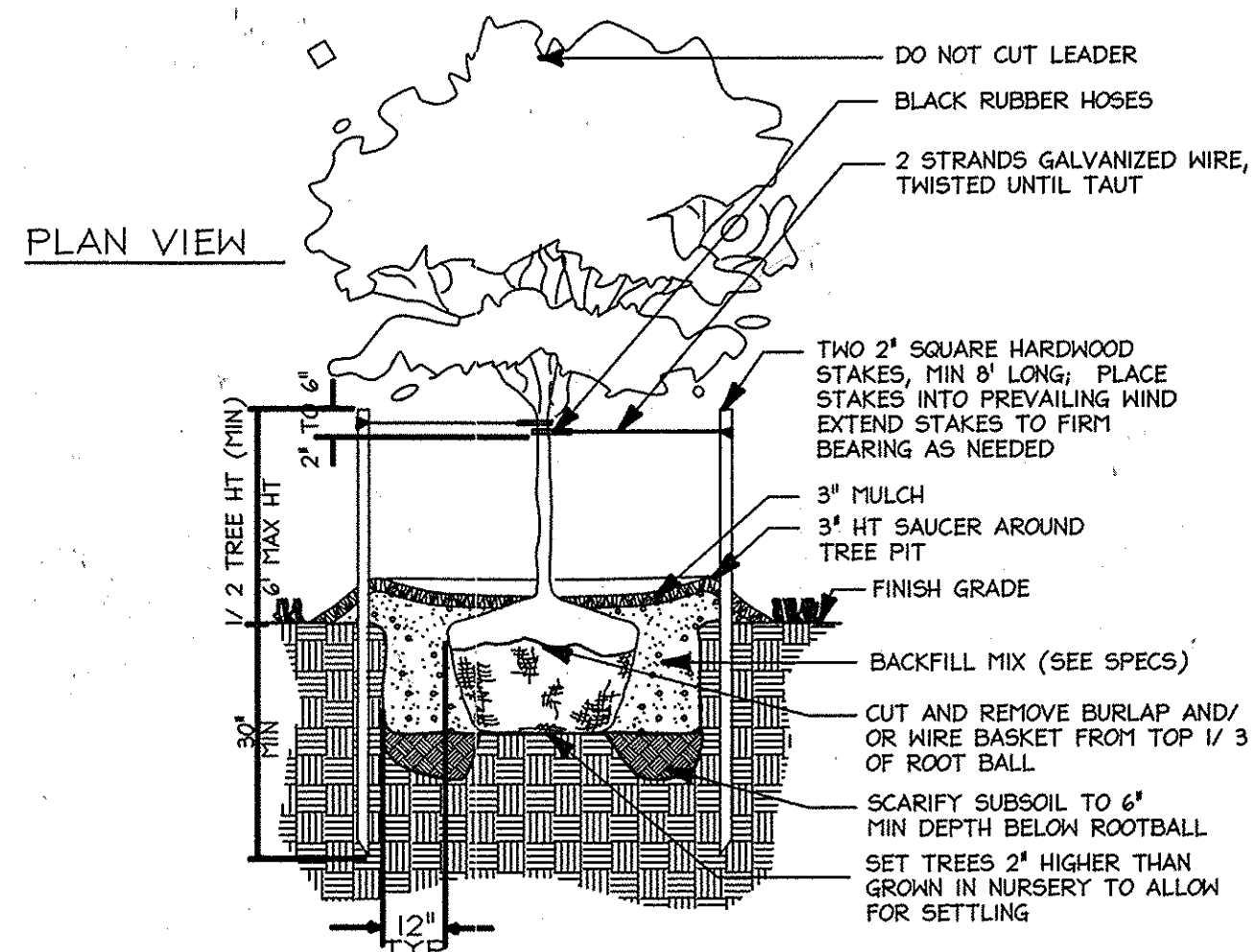
A 50-FOOT LANDSCAPE BUFFER IS TO BE ESTABLISHED AROUND THE PERIMETER OF THE PROPERTY AS REQUIRED UNDER ZB-1056M

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES				NO. OF PLANTS PROV.
	2	1	3	4	5	6	
LANDSCAPE TYPE #A 1 SHADE TREE PER 60 L.F.			±1546 LF	±221 LF	±726 LF		
LANDSCAPE TYPE #B 1 SHADE TREE PER 60 L.F. & 1 EVERGREEN TREE PER 40 L.F.							
LANDSCAPE TYPE #C 1 SHADE TREE PER 40 L.F. AND 1 EVERGREEN TREE PER 20 L.F.	±457 LF		±1472 LF			±1663 LF	
CREDIT FOR EX. VEG.	NO	NO	NO	YES ±85 LF	YES ±726 LF	YES ±720 LF	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	Plant Totals
NO. OF PLANTS REQ.							
SHADE TREES	12	37	26	4	0	24	103 SHADE TREES
EVG. TREES	23	74	0	0	0	48	145 EVG. TREES
SHRUBS	0	0	0	0	0	0	10 OTHER TREES
NO. OF PLANTS PROV.							
SHADE TREES	12	37	27	4	0	24	104 SHADE TREES
EVG. TREES	23	74	0	0	0	48	146 EVG. TREES
OTHER TREES	0	0	0	0	0	0	10 OTHER TREES
SHRUBS	0	0	0	0	0	0	0 SHRUBS

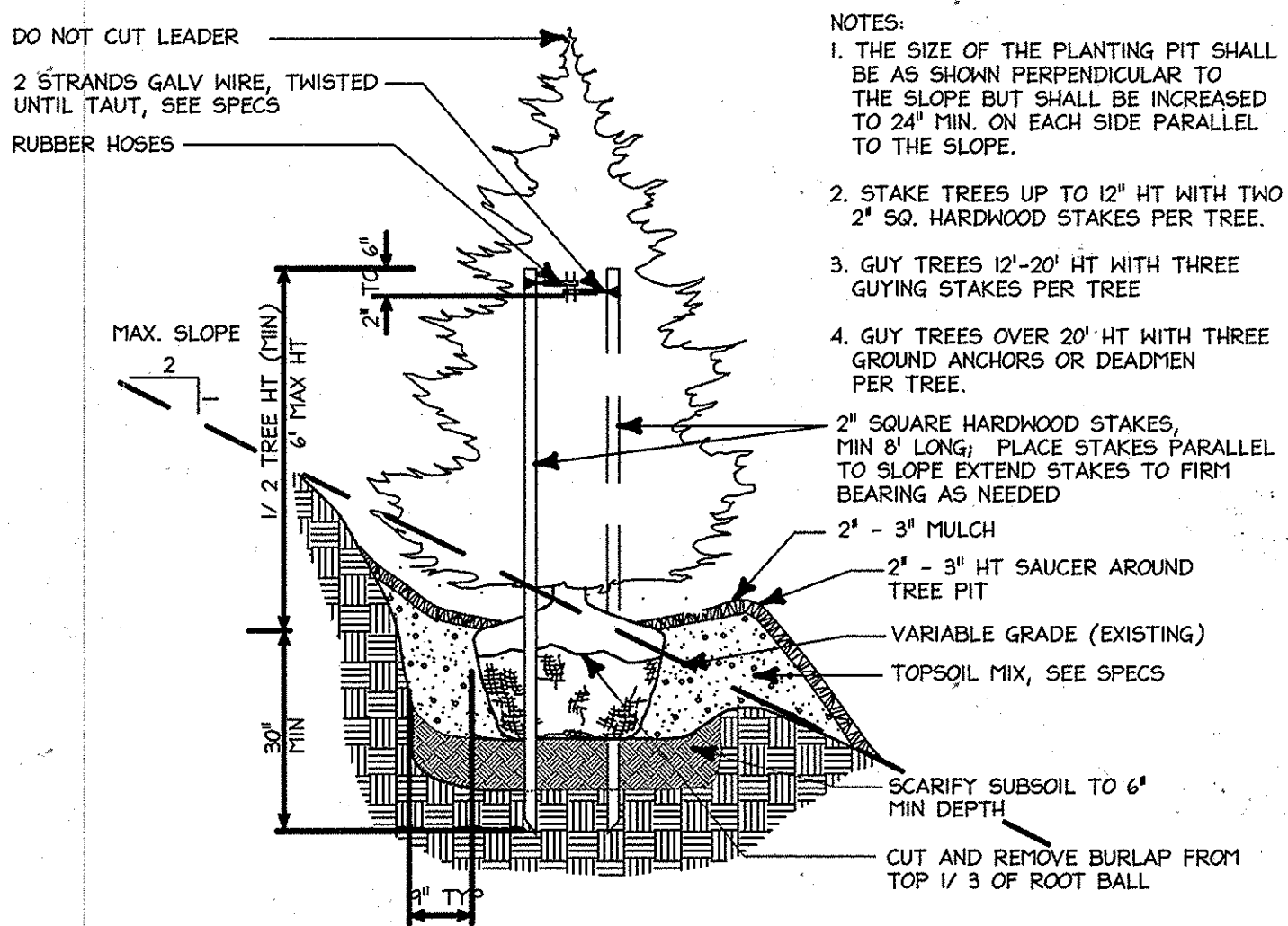
\*\*PERIMETER TREES ARE LABELED #-SYMBOL-P (OR 2-AR-P FOR EXAMPLE)



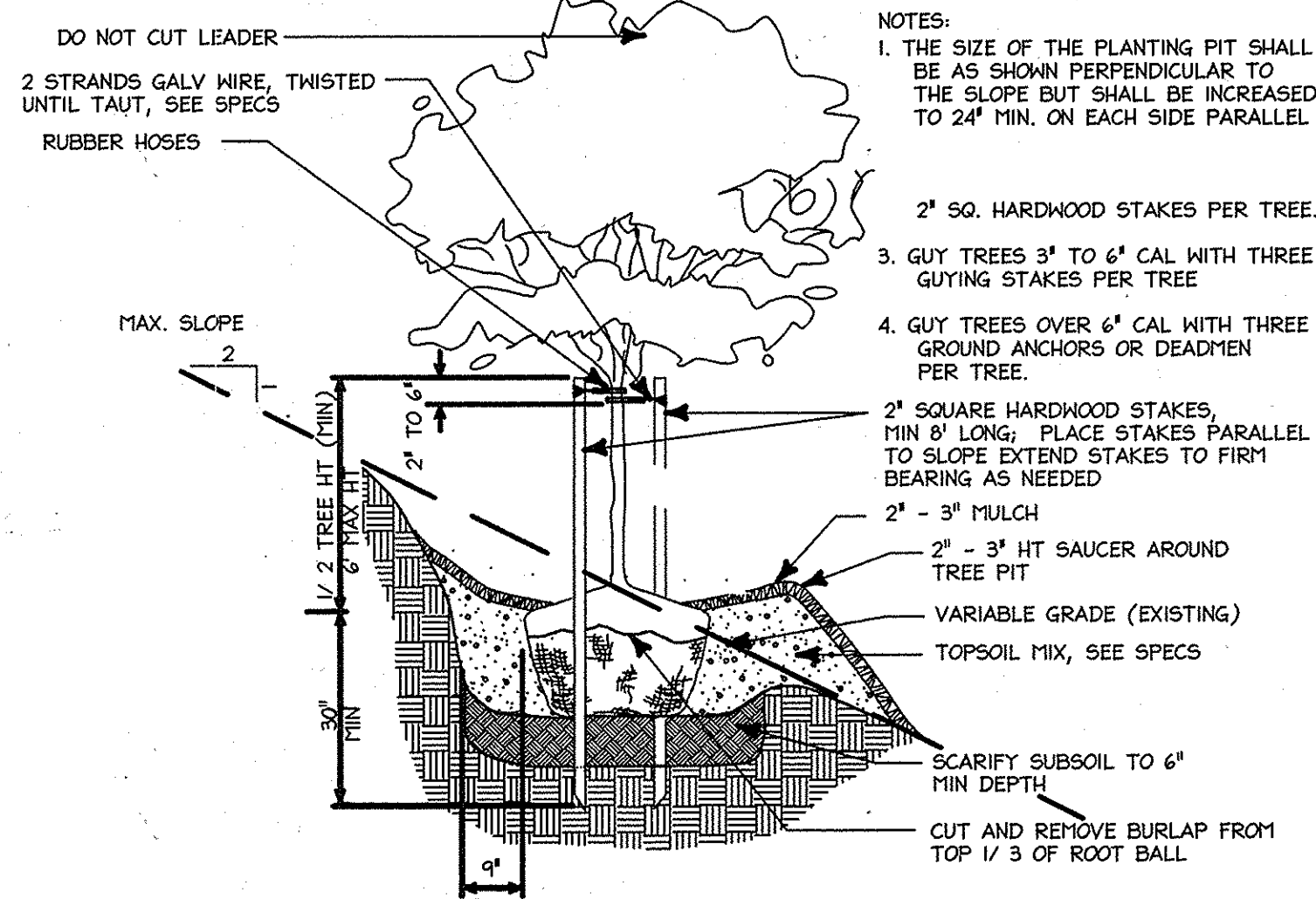
**(A) Evergreen Tree Planting Detail**  
Not To Scale



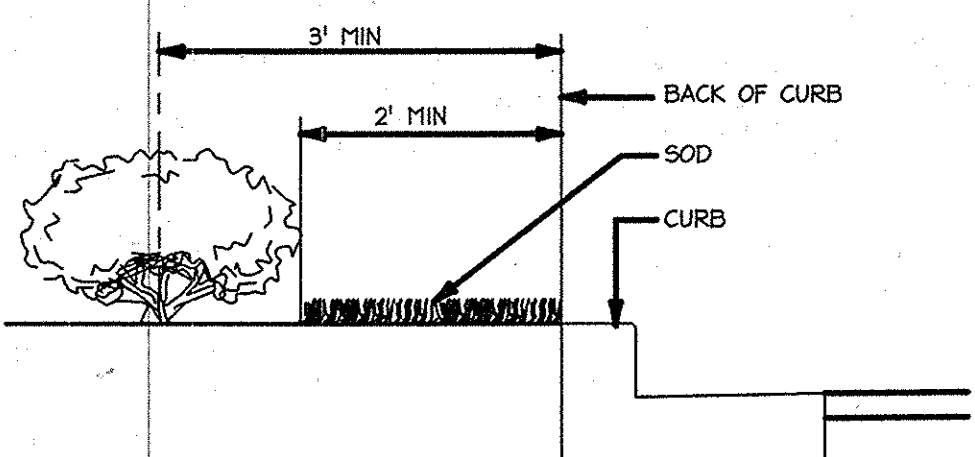
**(B) Tree Planting Detail**  
Not To Scale



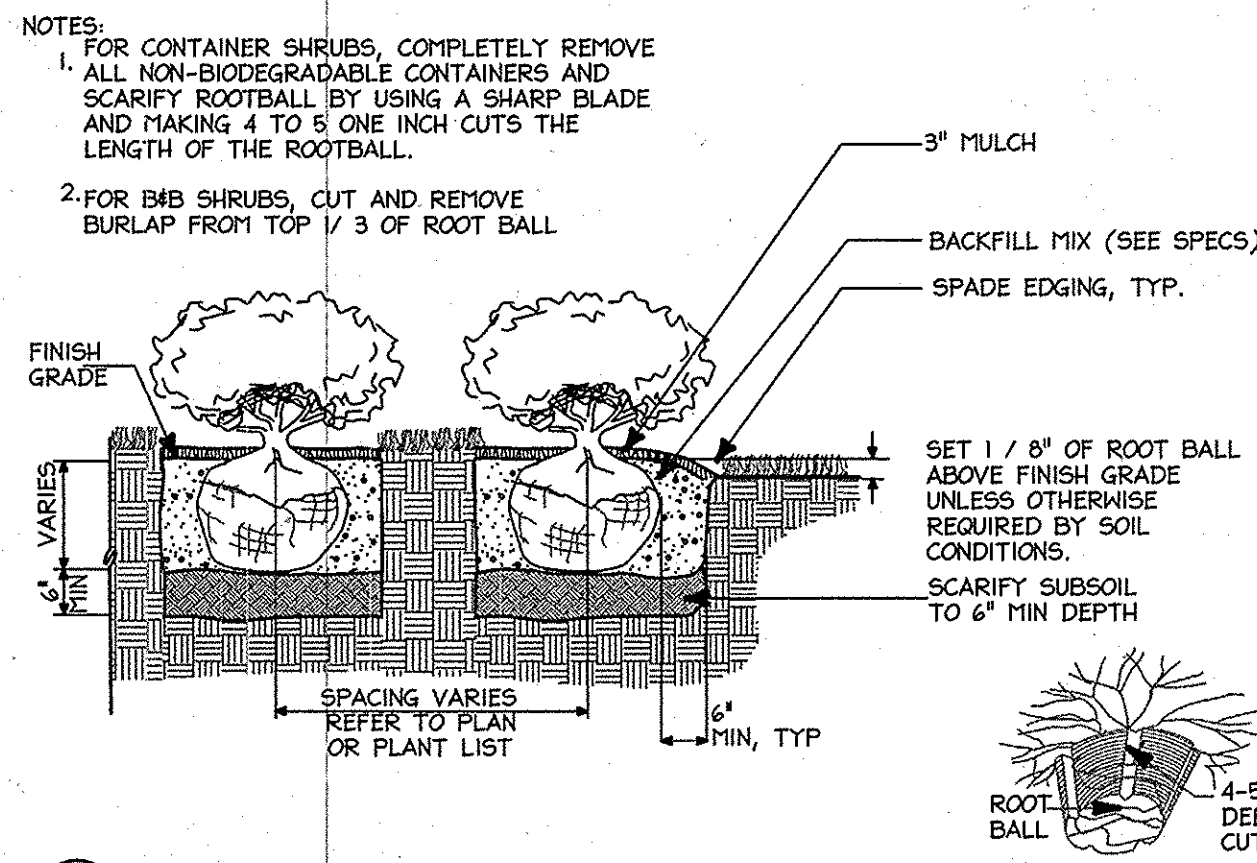
**(C) Evergreen Tree Planting on Slope**  
Not To Scale



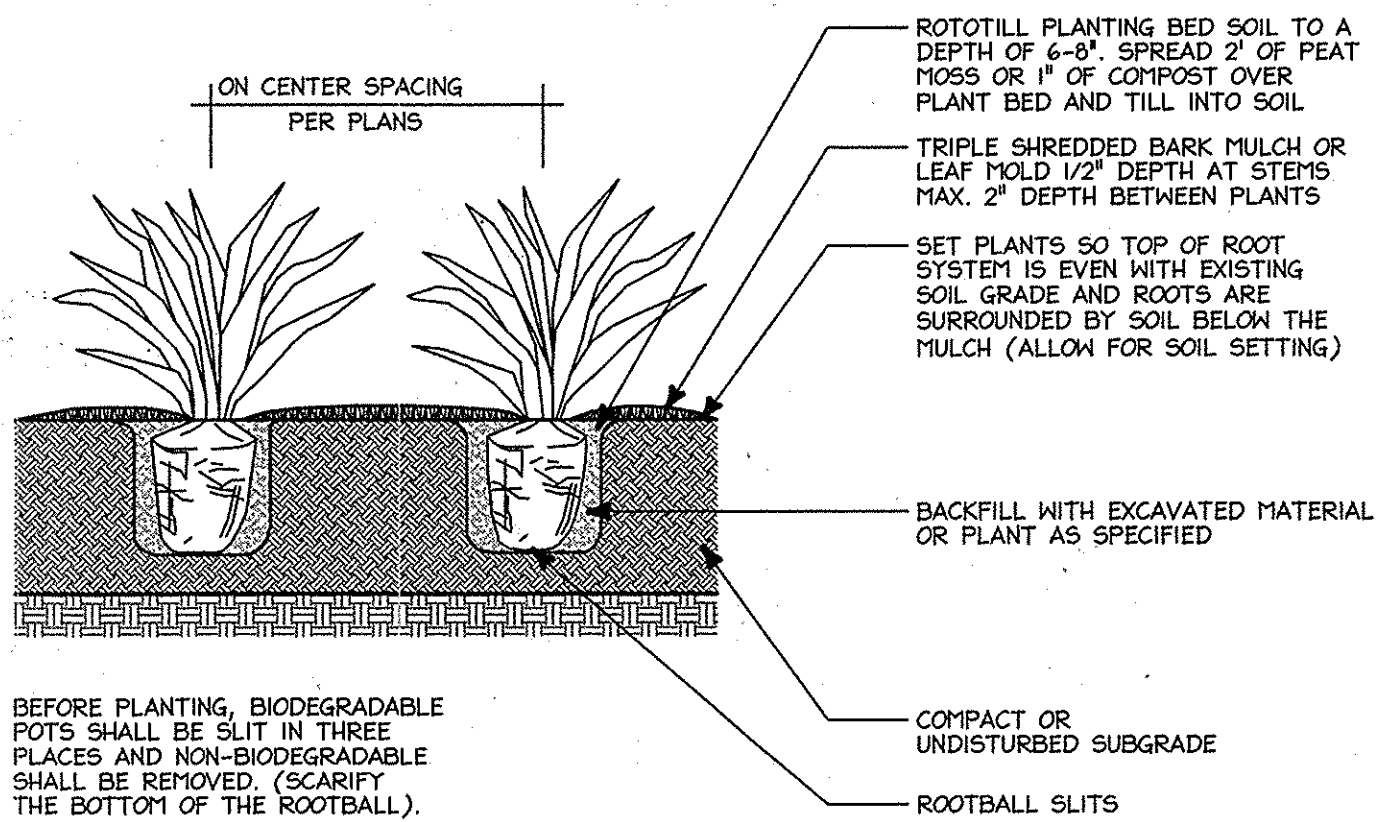
**(D) Tree Planting on Slope**  
Not To Scale



**(E) Typ. Shrub Spacing Along Curb**  
Not To Scale



**(F) Shrub Bed Planting**  
Not To Scale



**(G) PERENNIAL PLANTING**  
Not To Scale

**SCHEDULE B PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PROPOSED PARKING SPACES	PHASE I		PHASE II (CUMULATIVE)
	402 PARKING SPACES	505 PARKING SPACES	505 PARKING SPACES
NUMBER OF TREES REQUIRED (1 SHADE TREE PER 20 PARKING SPACES)	21 SHADE TREES		30 SHADE TREES
TOTAL NUMBER OF TREES PROVIDED	30 SHADE TREES		31 SHADE TREES
SHADE TREES (21 SUBSTITUTION)	0		0
OTHER TREES (9 SUBSTITUTION)	30 SHADE TREES		31 SHADE TREES

\*PARKING LOT TREES ARE LABELED #-SYMBOL-A (OR 2-AR-A FOR EXAMPLE)  
 \*\*ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II

**SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING**

TOTAL NUMBER OF DWELLING UNITS*	PHASE I		PHASE II (CUMULATIVE)
	249 TOTAL UNITS	249 TOTAL UNITS	249 TOTAL UNITS
SINGLE FAMILY ATTACHED DUPLEX UNITS	12 DUPLEX UNITS		12 DUPLEX UNITS
SINGLE FAMILY DETACHED UNITS	24 SFD UNITS		24 SFD UNITS
APARTMENT UNITS	205 APT. UNITS		248 APT. UNITS
HIGH CARE UNITS	32 BEDS (8 UNITS)		60 BEDS (15 UNITS)
NUMBER OF TREES REQUIRED	12 TREES FOR SFA	12 TREES FOR APTS	12 TREES FOR SFA
1:DU SFA	68 TREES FOR APTS		83 TREES FOR APTS
1:3 DU APTS			
TOTAL NUMBER OF TREES PROVIDED	34 SHADE TREES		47 SHADE TREES
SHADE TREES (21 SUBSTITUTION)	0		0
OTHER TREES (21 SUBSTITUTION)	34 SHADE TREES		47 SHADE TREES

HIGH CARE UNITS/BEDS DO NOT REQUIRE UNIT TREES  
 \*\*HUNT (RESIDENTIAL) TREES ARE LABELED #-SYMBOL (OR 2 AR FOR EXAMPLE)  
 \*\*\*ALL PHASE II LANDSCAPING SHALL BE INSTALLED IN PHASE II

**SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	POND 1	POND 2
	±805 L.F.	±818 L.F.
LANDSCAPE TYPE #B		
1 SHADE TREE PER 50 L.F.	17	17
1 EVERGREEN TREE PER 40 L.F.	21	21
CREDIT FOR EXISTING VEGETATION (NO, YES AND #)	YES, ±144 LF (16#)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND #)	NO	NO
NUMBER OF TREES REQUIRED:		
SHADE TREES	14	17
EVERGREEN TREES	17	21
OTHER TREES (21 SUBSTITUTION)	0	0
NUMBER OF TREES PROVIDED:		
SHADE TREES	14	17
EVERGREEN TREES	21	22
OTHER TREES (21 SUBSTITUTION)	0	0

\*STORMWATER MANAGEMENT AREA TREES ARE LABELED #-SYMBOL-W (OR 2-AR-W FOR EXAMPLE)

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Paul Shubert* 2-20-15  
 Chief, Development Engineering Division Date

*Walt Shubert* 2-26-15  
 Chief, Division of Land Development Date

*Mark W. Mygale* 2/26/15  
 Director Date

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER/DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAMBERS, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 948-0090

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, Inc.  
 7175 colombo gateway drive suite 100 · colombo, md 21046-2990  
 410.872.8800 · fax 410.872.8800

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800

DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02

WATER CODE	SEWER CODE
550 (TG 700)	F07

TITLE: **LANDSCAPE DETAILS**

DESIGN:	SCALE:	PROJECT:
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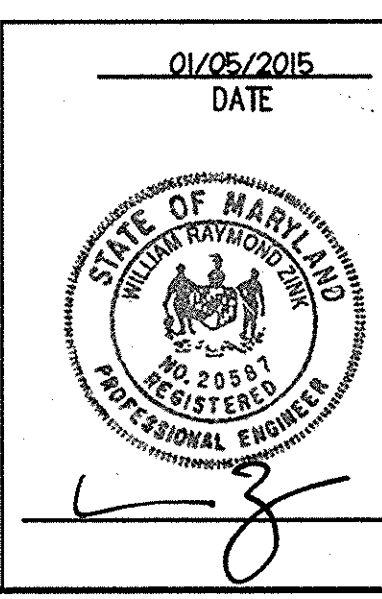
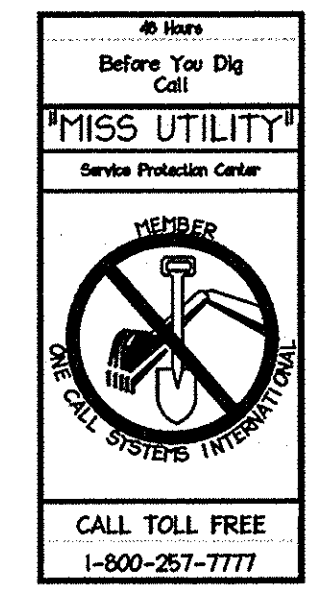
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CRH	APRIL 12, 2013

CHECKED:	APPROVED:
LNG	LNG

DATE: 01/05/2015

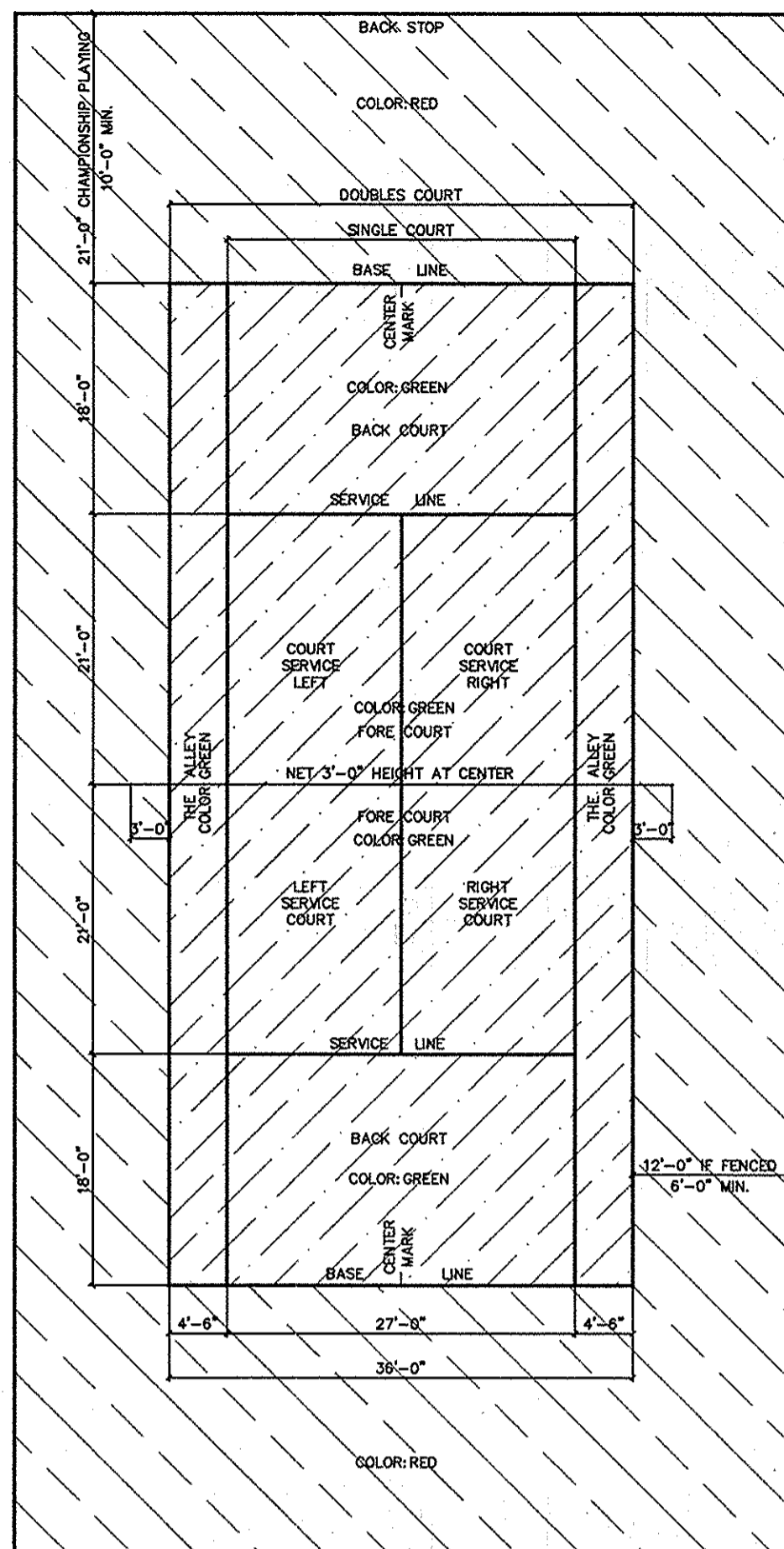
STATE OF MARYLAND  
 ENGINEERING BOARD  
 No. 20581  
 REGISTERED PROFESSIONAL ENGINEER

**40 of 77**









**Surface:**  
 Hot Mix Asphalt constructed in accordance with A.S.B.A. Guidelines for Tennis Court Construction - Section 2.1

**Colors:**  
 Inner Court = Light Green  
 Outer Court = Red  
 Lines = White  
 Acrylic Resurfacer = Neutral

**A Tennis Court Layout**  
 Not To Scale

**SportMaster Ready-Mix Color**  
 CMT - 37 Revised: 7/09

**1. PRODUCT NAME:**  
 Ready-Mix Color

**2. MANUFACTURER:**  
 ThorWorks Industries, Inc.  
 2520 S. Campbell St.  
 Sandusky, OH 44870  
 Phone: 800-326-1994  
 Fax: 419-626-5477  
 www.thorworks.com

**Additional Plant Locations:**  
 SealMaster has a nationwide network of manufacturing and distribution facilities.

Phone 1-800-395-7325 or visit www.sealmaster.net to find the location near you.

**3. PRODUCT DESCRIPTION & BENEFITS:**  
 SportMaster Ready-Mix Color is a 100% acrylic emulsion coating designed for tennis courts and other sport and recreational pavement surfaces.

**Color:** Available in Forest Green, \*Light Green, Dark Green, Beige, Brown, \*Red, Maroon, Gray, and Blue.

**LEED: SS Credit 7.1:**  
 Heat Island Effect: Non-Roof  
 \*Specific colors may contribute toward LEED credits.

**Uses:** Tennis courts, basketball courts, and other asphalt or concrete multi-purpose surfaces.

**4. SURFACE PREPARATION:**  
 Pavement surface must be cleaned entirely of dust, dirt, debris and all loose materials. Repair of pavement surface defects, depressions and cracks must be completed prior to application. All repairs must be flush and smooth to adjoining surfaces.

**New asphalt surfaces** must cure 14 to 28 days prior to application. It is recommended that any uncoated asphalt surface receive one or more coats of Acrylic Resurfacer (Technical Bulletin CMT-3) as required by surface roughness and porosity to provide a smooth, dense underlayment for

application of color texture and finish coats.

**New concrete surfaces** must cure 28 days prior to application. Concrete surfaces should have a medium broom finish or similar roughened texture. They must never be steel troweled. Etch surface with Muriatic or Phosphoric Acid and apply SportMaster Acrylic SportMaster Adhesion Promoter prior to color coating.

**5. MIXING PROCEDURES:**  
 Ready-Mix Color is ready to use. Do not add water. Stir thoroughly prior to application.

**6. APPLICATION:**  
 Apply Ready-Mix Color with a soft rubber squeegee. Allow each coat to thoroughly dry before applying the next coat. Two coats are recommended.

**7. IMPORTANT:**  
 Stir material thoroughly before using. Temperature must be a minimum of 50° F. and rising before application. Do not apply when raining is imminent or forecast. Keep from freezing. Close container when not in use.

**8. COVERAGE:**  
 Approximately .12 to .15 gallon per square yard per coat.

**9. DRYING TIME:**  
 Ready-Mix Color dries in 30 to 60 minutes under optimum drying conditions. Allow 48 hours before allowing foot traffic or play.

**10. CAUTIONS:**  
 KEEP OUT OF REACH OF CHILDREN. Do not take internally. If swallowed, call a physician immediately. In case of contact with eyes, flush immediately with water for 15 minutes and call a physician. When not in use, keep containers tightly closed and upright to prevent leakage.

**11. WARRANTY:**  
 The statements made on this technical bulletin are believed to be true and accurate, and are intended to provide a guide for approved construction practices. Manufacturer does not make, nor does it authorize any agent or representative to make any warranty, express or implied, concerning this material as workmanship, weather, construction, equipment utilized and other variables affecting results are all beyond our control. Manufacturer warrants only that the material conforms to product specifications and any liability to the buyer or user of this product is limited to the replacement value of the product only. In no event shall Manufacturer be liable for any injury, loss or damage, either direct or incidental, special or consequential, however arising in connection with material or equipment furnished or work performed. Manufacturer shall not, in any manner, be liable for any defects, variations or change in condition in the substructure over which its products are installed.

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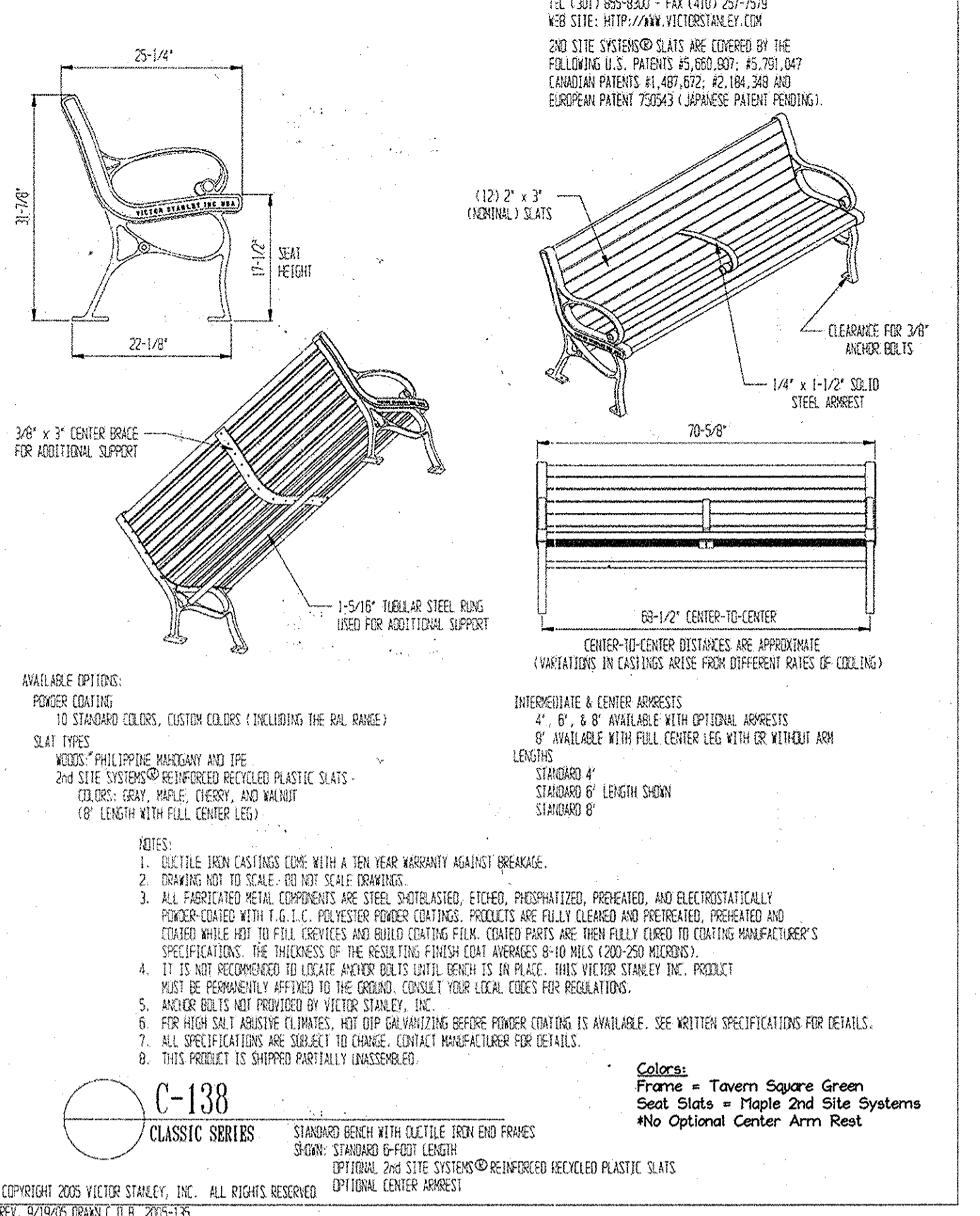
ThorWorks Industries, Inc.  
 P.O. Box 2277  
 Sandusky, OH 44870  
 Phone: 1-800-326-1994  
 Fax: 1-419-626-5477  
 www.sportmaster.net

**Product Data:**

Type	Acrylic
Color	Slight Ammonia
Flammability	Non Flammable
Flash Point	None
Colors	Several Available

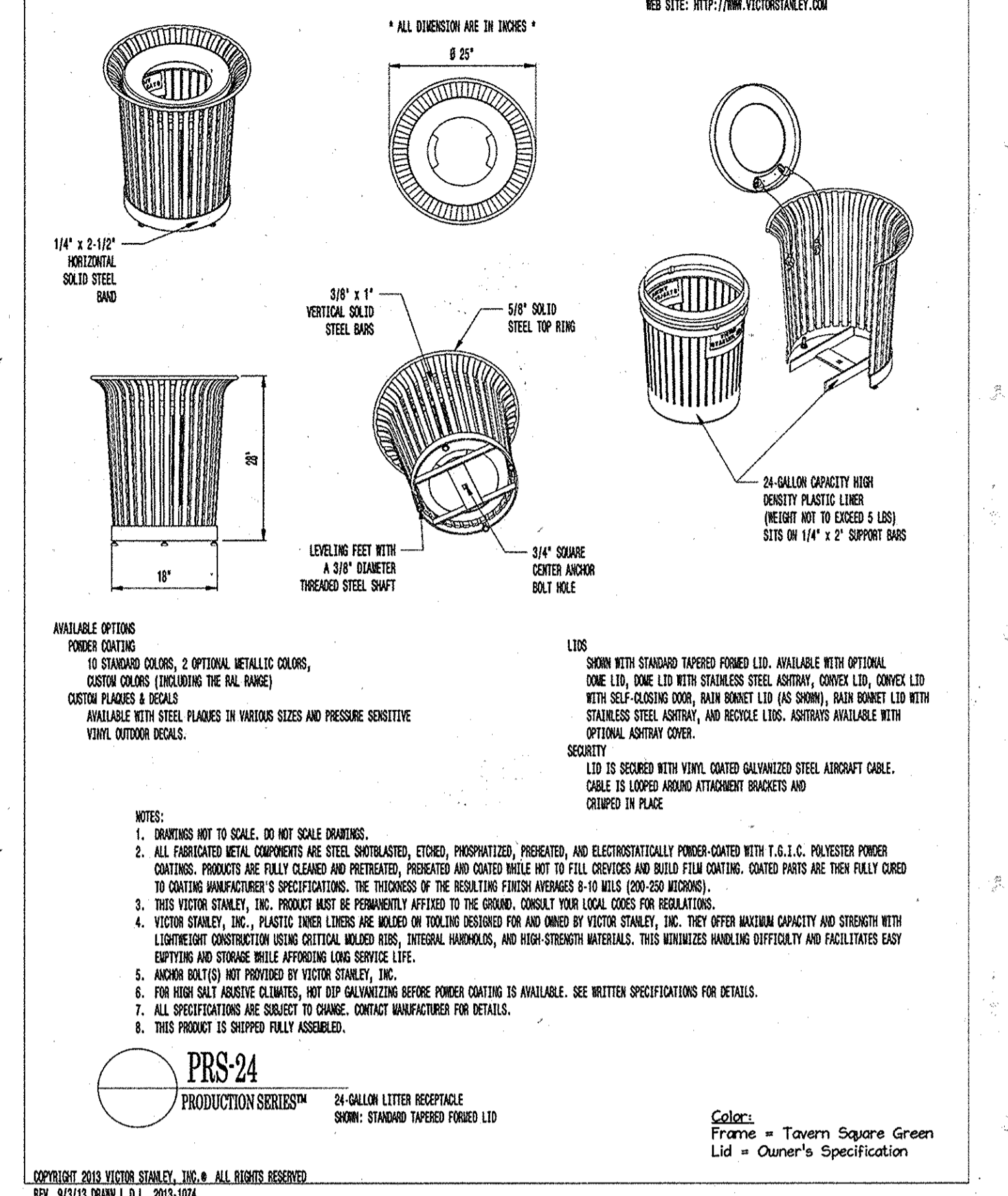
**B Tennis Court Surfacing**  
 Not To Scale

**VICTOR STANLEY, INC.**  
 Manufacturers of Quality Site Furnishings since 1962.

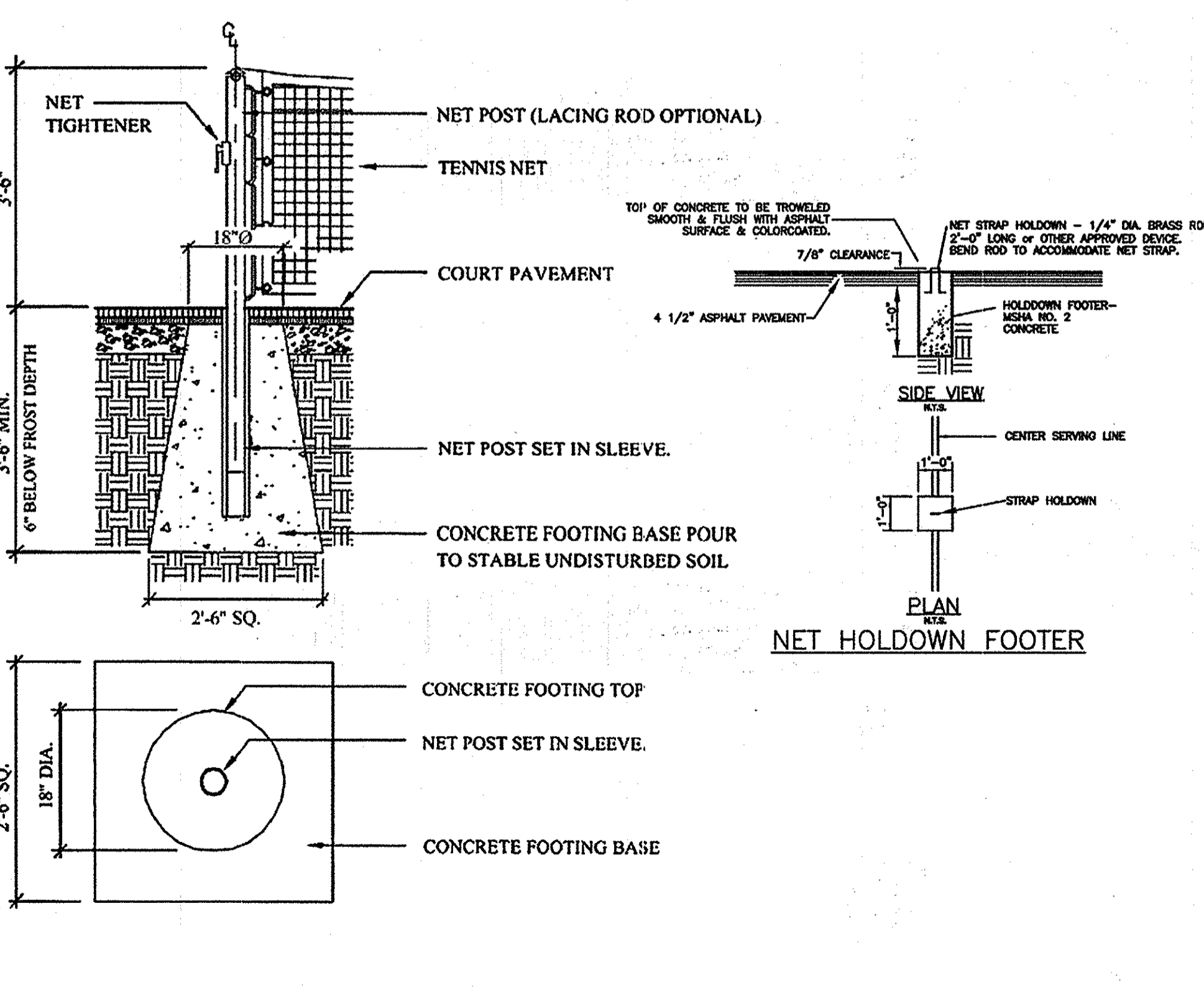


**C Bench Specification (Typ.)**  
 Not To Scale

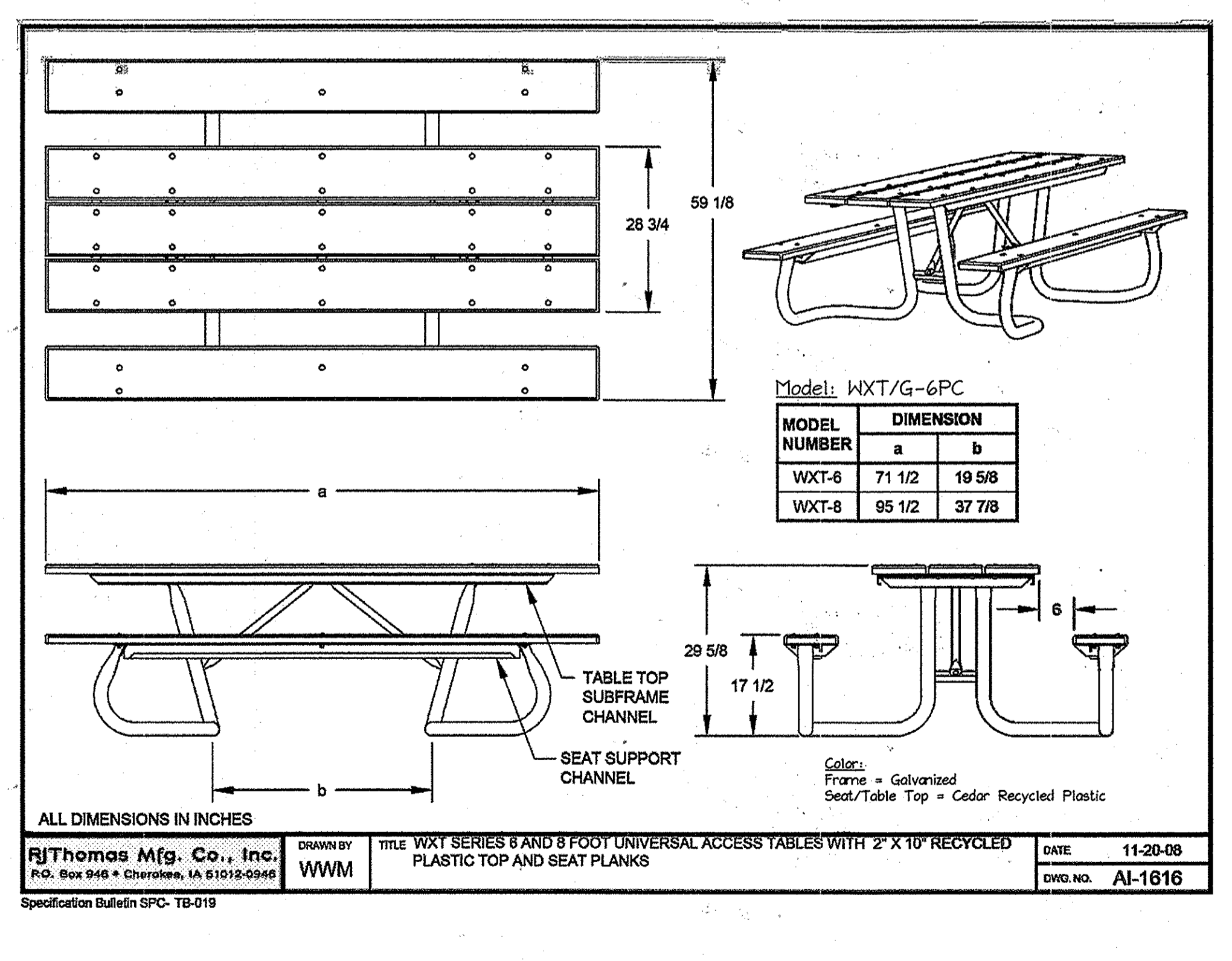
**VICTOR STANLEY, INC.**  
 Manufacturers of Quality Site Furnishings since 1962.



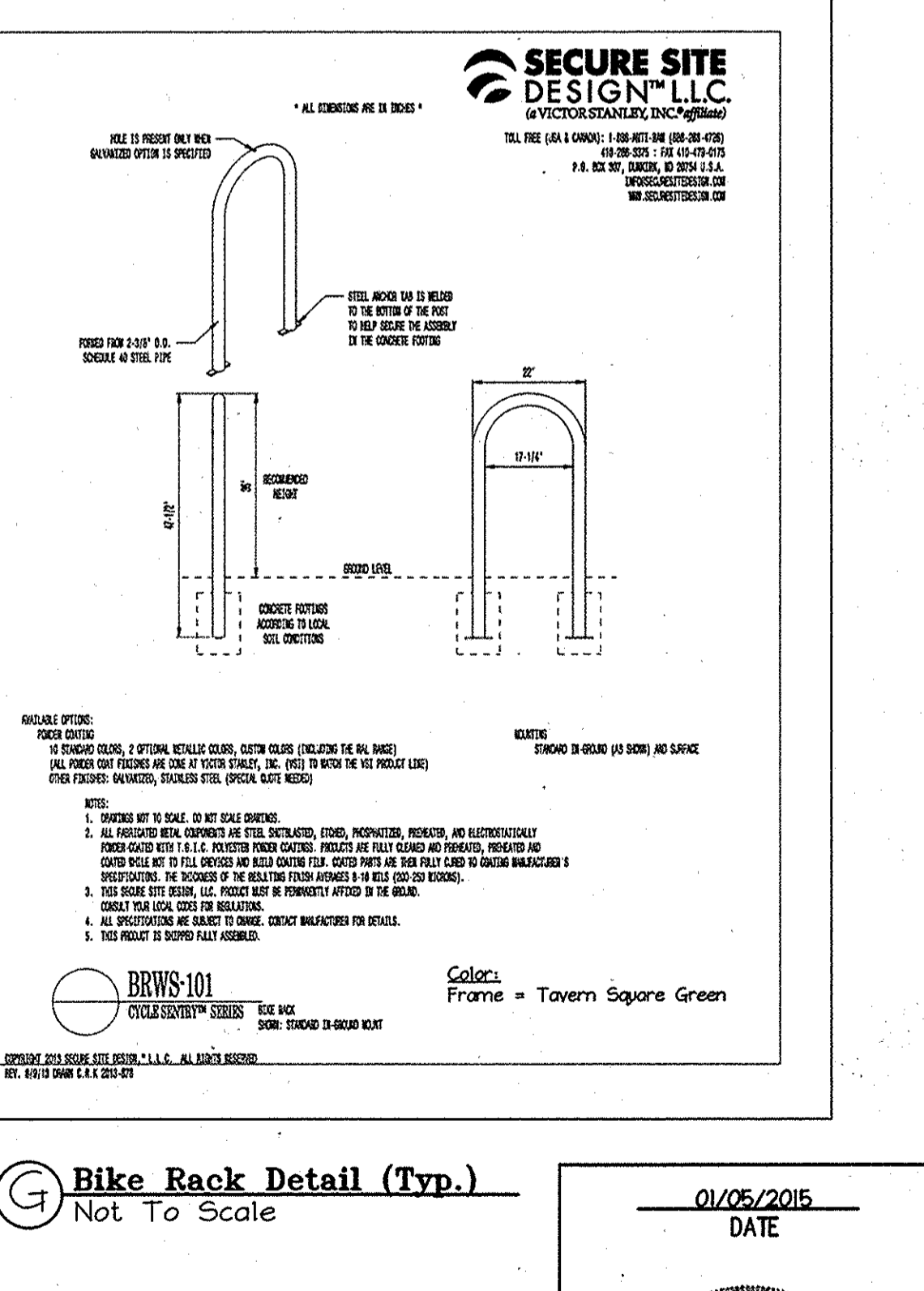
**D Waste Receptacle Specification (Typ.)**  
 Not To Scale



**E Net Post Details**  
 Not To Scale



**F ADA Picnic Table**  
 Not To Scale



**G Bike Rack Detail (Typ.)**  
 Not To Scale

APPROVED PLANNING BOARD OF HOWARD COUNTY  
 DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division  
 Director

Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 948-0090

**christopher consultants**  
 engineering • surveying • land planning  
 christopher consultants, Inc.  
 7175 Rockwood Parkway, Suite 1000, Columbia, MD 21046-0900  
 410.392.8800 • fax 410.392.8800

PERMIT INFORMATION CHART

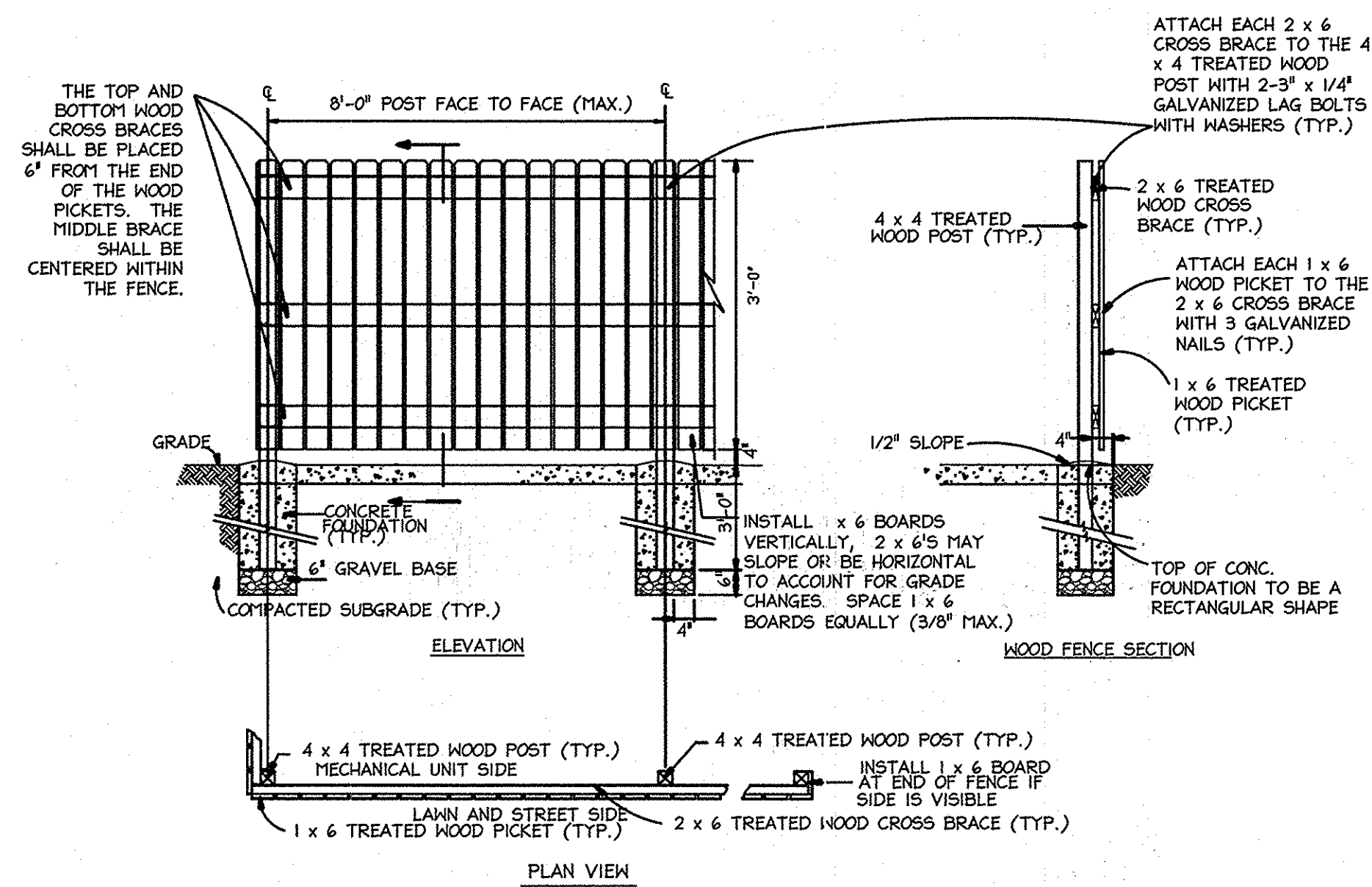
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LUTHERAN VILLAGE AT MILLERS GRANT	A	602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
MATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE: **LANDSCAPE DETAILS**

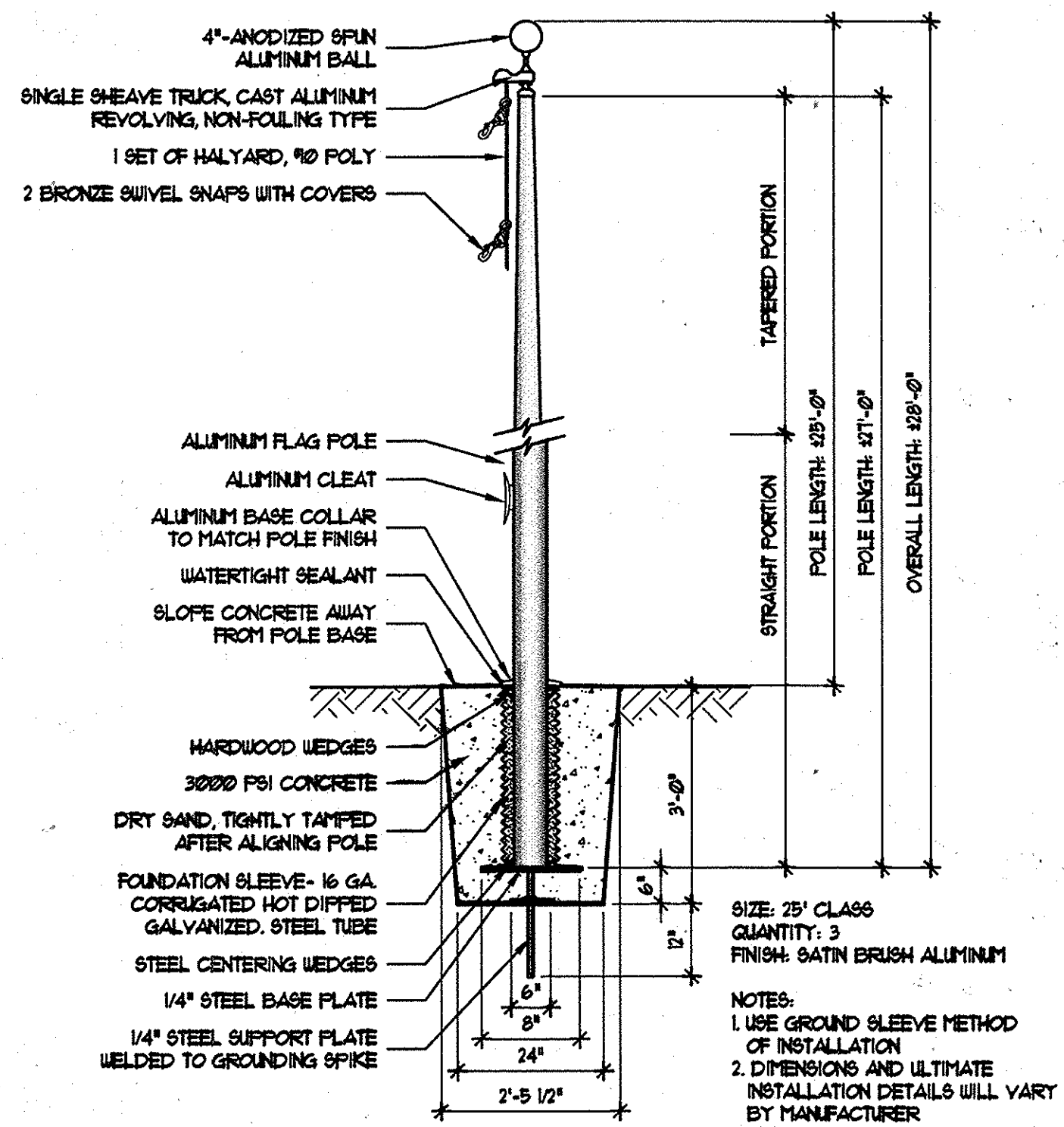
DATE: 01/05/2015

DESK CRH SCALE: AS SHOWN PROJECT: 05115.001.02  
 DRAWN: DAM DATE: APRIL 12, 2013  
 CHECK: LNJ APPROVED: RZ

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**A Wood Fence Detail**  
Not To Scale

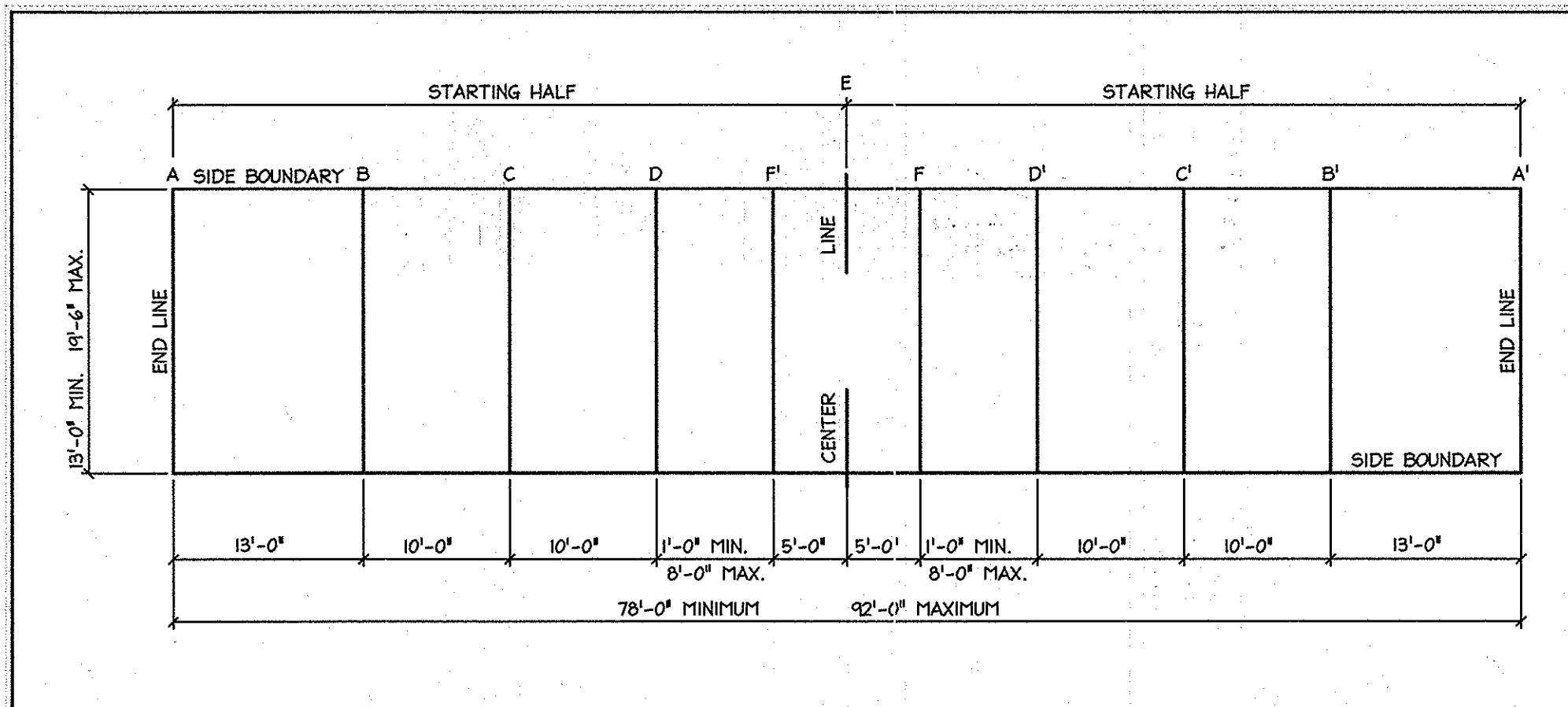


**B Flag Pole Detail**  
Not To Scale

**Table B.3.2 Materials Specifications for Bioretention**

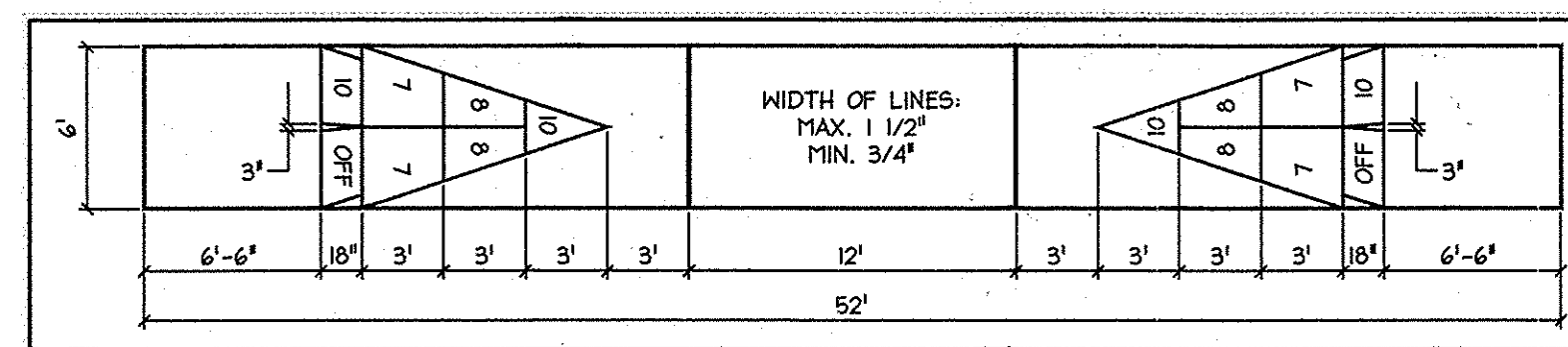
Material	Specification	Size	Notes
planting soil [2.5' to 4' deep]	see Appendix A, Table A.4	n/a	plantings are site-specific
mulch	shredded hardwood	n/a	aged 6 months, minimum
pea gravel diaphragm and curtain drain	pea gravel: ASTM-D-448 ornamental stone: washed cobbles	pea gravel: No. 6 stone: 2" to 5"	
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4632), puncture resistance (ASTM-D-4833)	n/a	for use as necessary beneath underdrains only
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
poured in place concrete (if required)	MSHA Mix No. 3; F <sub>c</sub> = 3000 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	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 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
sand [1' deep]	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

Appendix B.3 - Construction Specifications for Sand Filters, Bioretention and Open Channels



**C Bocce Court Detail**  
Not To Scale

\*TO BE INSTALLED IN PHASE II



**D Shuffle Board Court Detail**  
Not To Scale

\*TO BE INSTALLED IN PHASE II

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Phil Clark* Chief, Development Engineering Division NY Date 2-20-15

*Ken Salomon* Chief, Division of Land Development NY Date 2-26-15

*Thomas M. Long* Director NY Date 2/26/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORAVACA, EX. VICE PRESIDENT  
300 ST. LIKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

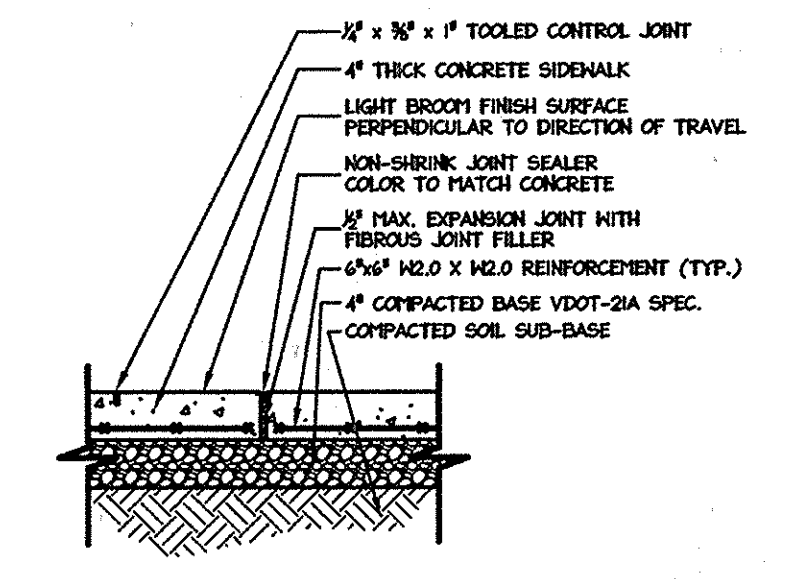
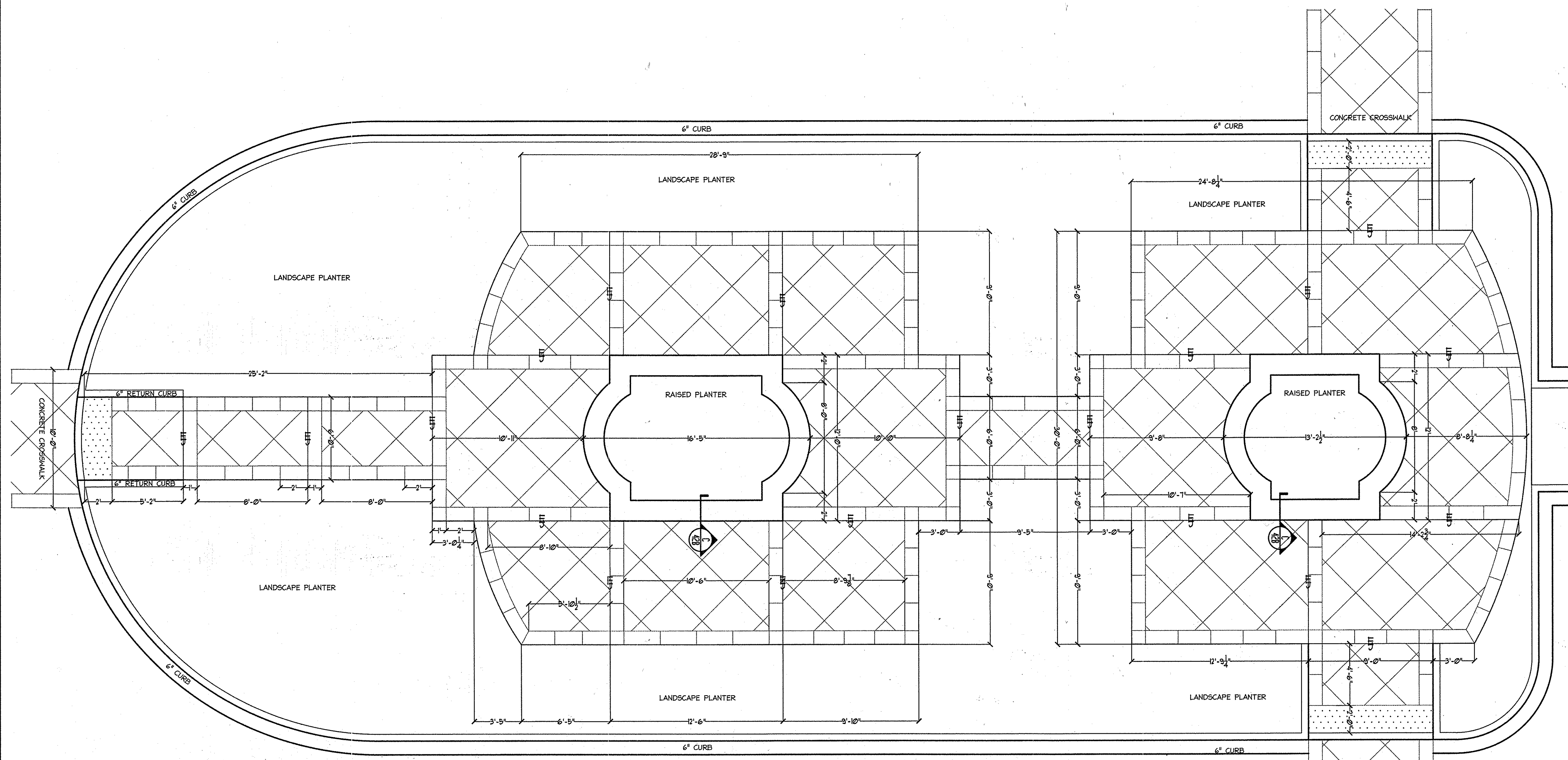
**christopher consultants**  
engineering • surveying • land planning  
christopherconsultants.net  
7172 columbia gateway office (suite 103) • columbia, md. 21046-2990  
410.872.8800 • fax: 410.872.8800

01/05/2015  
DATE

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
NO. 20581

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE			
550 (TG 700)	F07			
TITLE:	LANDSCAPE DETAILS			
DESIC CRH	SCALE(S) SHOWN	PROJECT: 05115.001.02		
DRAWN: DAM	DATE: APRIL 12, 2015			
CHECK: LNQU	APPROV: LNKRZ	42A OF 77		



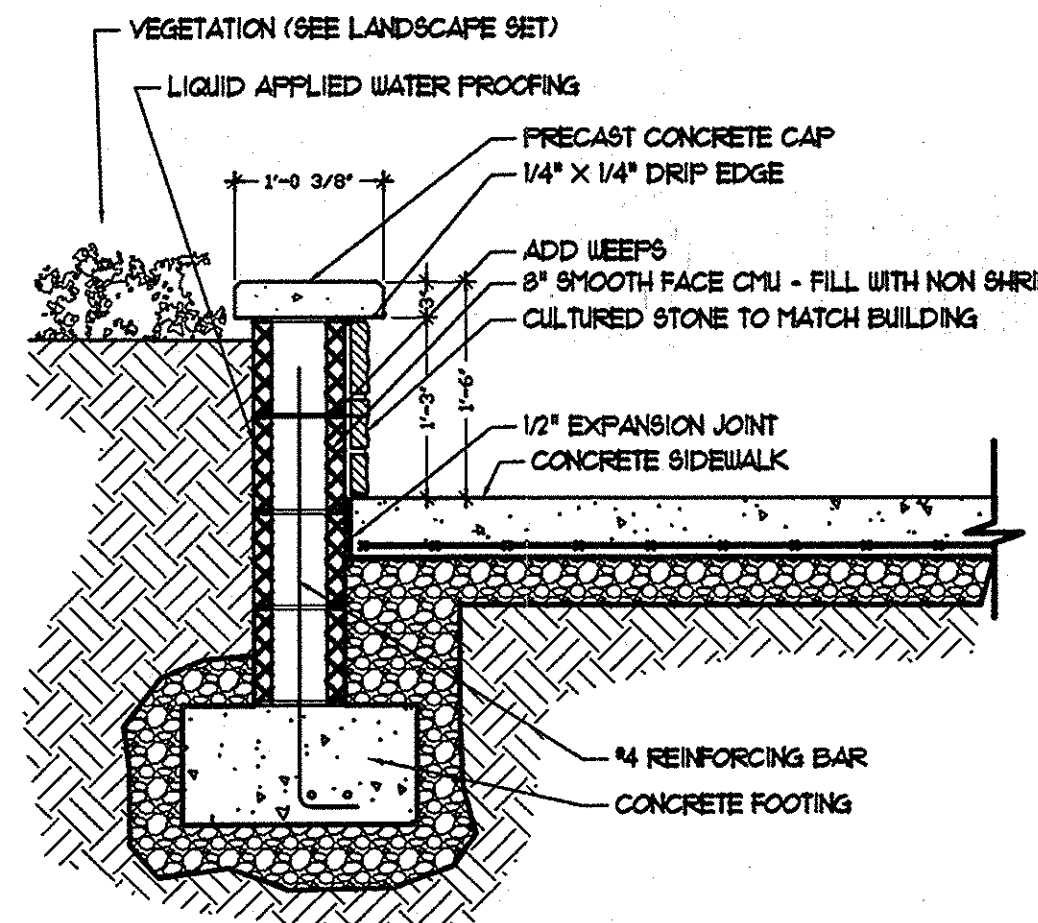
**(B) CONCRETE SIDEWALK JOINTS (TYP.)**  
3/4" = 1'

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

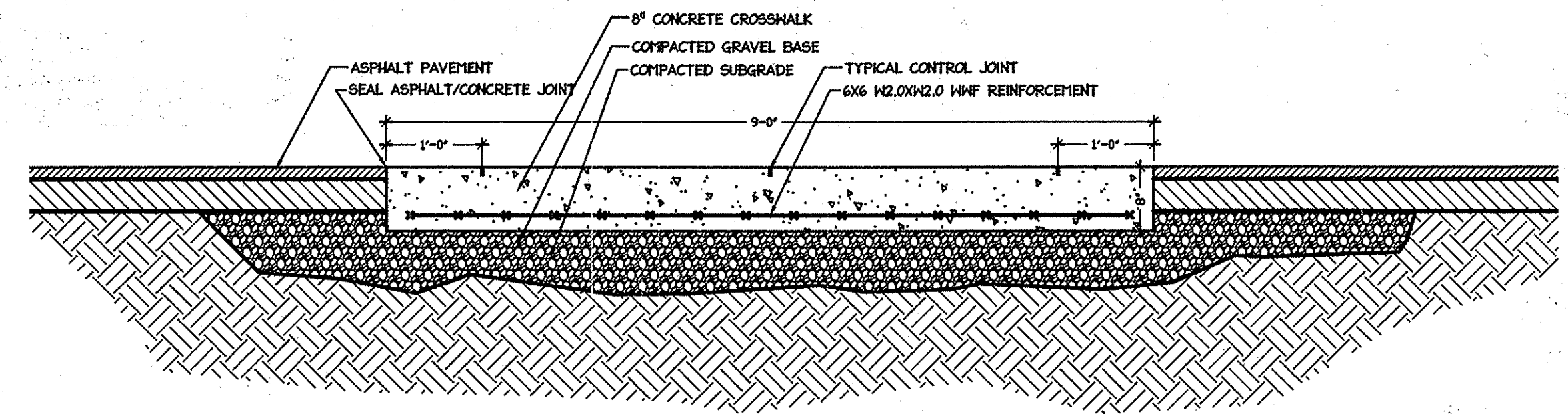
APPROVED: DEPARTMENT OF PLANNING AND ZONING		Date	2-20-15
Chief, Development Engineering Division		Date	2-20-15
Chief, Division of Land Development		Date	2/20/15
Director		Date	
01/05/15	01	REVISED SITE DEVELOPMENT PLAN	
Date No. Revision Description			
<b>LUTHERAN VILLAGE AT MILLER'S GRANT</b>			
<b>PLANNED SENIOR COMMUNITY</b>			
OWNER / DEVELOPER			
LUTHERAN VILLAGE AT MILLER'S GRANT			
C/O CARROLL LUTHERAN VILLAGE			
CONTACT: ROY OSWALD, EX. VICE PRESIDENT			
300 ST LAKE DRIVE			
WESTMINSTER, MD 21158			
(410) 848-0090			

**(A) INTERIOR COURTYARD --- PAVING PATTERN DIMENSIONS**  
1/4" = 1'

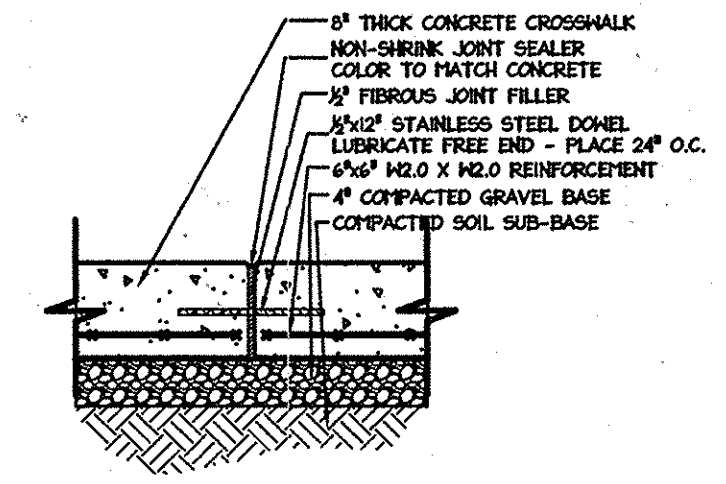
NOTES:  
1. BORDER PATTERN IS 1" WIDE AT ALL POINTS, BUT LENGTH OF SCORED BORDER PATTERN VARIES FROM 2'-3" (LENGTHS ARE TO BE EQUAL BASED ON SIZE OF LARGER ADJACENT PANELS).  
2. 45 DEGREE DIAGONAL PATTERN PANELS ARE 3' X 3'.  
3. INSTALL EXPANSION JOINT AT ALL LOCATIONS WHERE CONCRETE MEETS CONCRETE OR ARCHITECTURAL PLANTER.



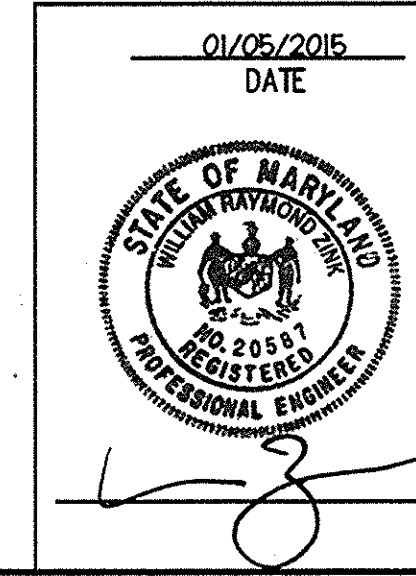
**(C) RAISED PLANTER WALL SECTION DETAIL**  
3/4" = 1'



**(D) CONCRETE CROSSWALK SECTION**  
3/4" = 1'



**(E) CROSSWALK EXPANSION JOINT --- SECTION**  
3/4" = 1'



PERMIT INFORMATION CHART				
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLERS GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10678 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE		F07	
550 (TG 700)				
TITLE:				
<b>LANDSCAPE DETAILS</b>				
DESIGN: CRH	SCALE: AS SHOWN	PROJECT: 0515.001.02		
DRAWN: DAM	DATE: APRIL 12, 2013			
CHECKED: L'NG	APPROVED: L'NG	<b>42B OF 77</b>		

SHEET 44

FREDERICK ROAD  
(ULTIMATE 100' R/W)  
(MINOR ARTERIAL)

FOREST CONSERVATION  
BASEMENT #1 - 2.38 ACRES  
EMERGENT WETLANDS - 0.46 ACRES  
REFORESTATION - 1.83 ACRES

SHEET 46

FOREST CONSERVATION  
BASEMENT #2 - 2.41 ACRES  
RETENTION - .90 ACRES  
REFORESTATION - 1.51 ACRES FORESTED  
FORESTED FLOODPLAIN - 0.12 ACRES

FOREST CONSERVATION  
BASEMENT #3 - 0.63 ACRES  
REFORESTATION - 0.63 ACRES

CLEARING #1  
0.04 ACRES

CLEARING #2  
0.82 ACRES

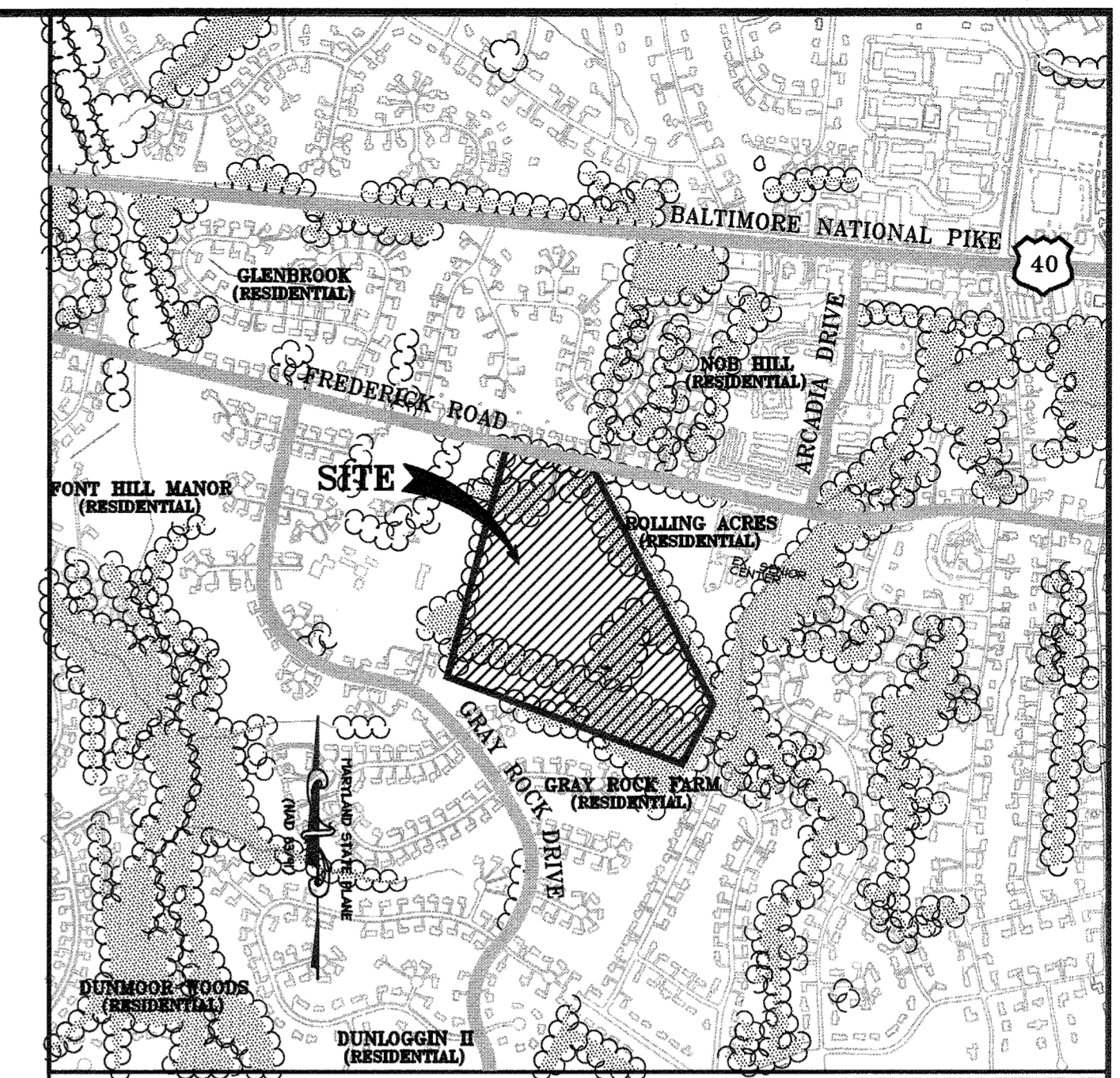
CLEARING #3  
0.89 ACRES

CLEARING #4  
1.53 ACRES

CLEARING #5  
0.28 ACRES

SHEET 45

SHEET 46



SITE VICINITY MAP

SCALE 1" = 100'

LEGEND

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- STREAM BANK
- STREAM CENTERLINE
- STREAM BANK
- EXISTING TREELINE
- PROPOSED TREELINE
- FLOODPLAIN EASEMENT
- SUPER SILT FENCE
- STREAM BUFFER
- WETLAND BUFFER
- WETLANDS
- PROPOSED FOREST CONSERVATION EASEMENT
- MATCHLINE
- RETENTION FOREST CONSERVATION EASEMENT
- FOREST CLEARING AREA (NONE ON THIS SHEET)
- REFORESTATION AREA
- PROPOSED VARIABLE WIDTH PUBLIC ACCESS, FIRE ACCESS AND UTILITY EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- TEMPORARY TREE PROTECTION SIGNAGE
- SUPER SILT FENCE ALSO DOUBLES AS TREE PROTECTION FENCE ALONG RETENTION AREAS

AS-BUILT CERTIFICATION  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

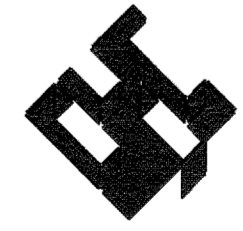
Brian E. Wagner, P.E.  
DATE: 8-12-19  
SEPARATION DATE: 6/7/21  
DATE OF AS-BUILT: 03/10/2018  
439 East Main Street, Washington, MD 21157-5599  
(410) 848-1700 FAX (410) 848-1701



APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

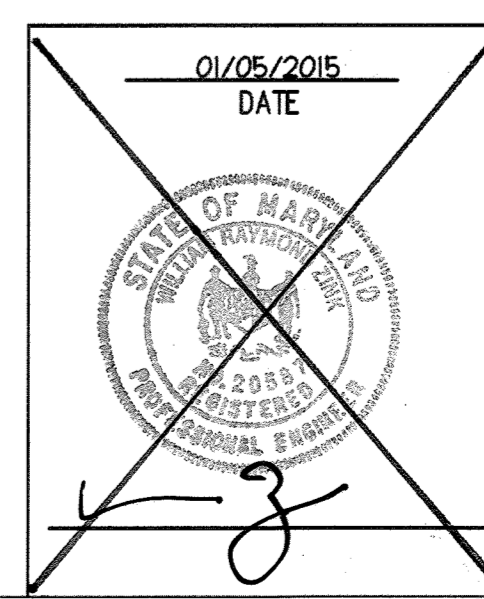
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Date: 2.20.15  
Chief, Development Engineering Division  
Date: 2-26-15  
Chief, Division of Land Development  
Date: 2/26/15  
Director

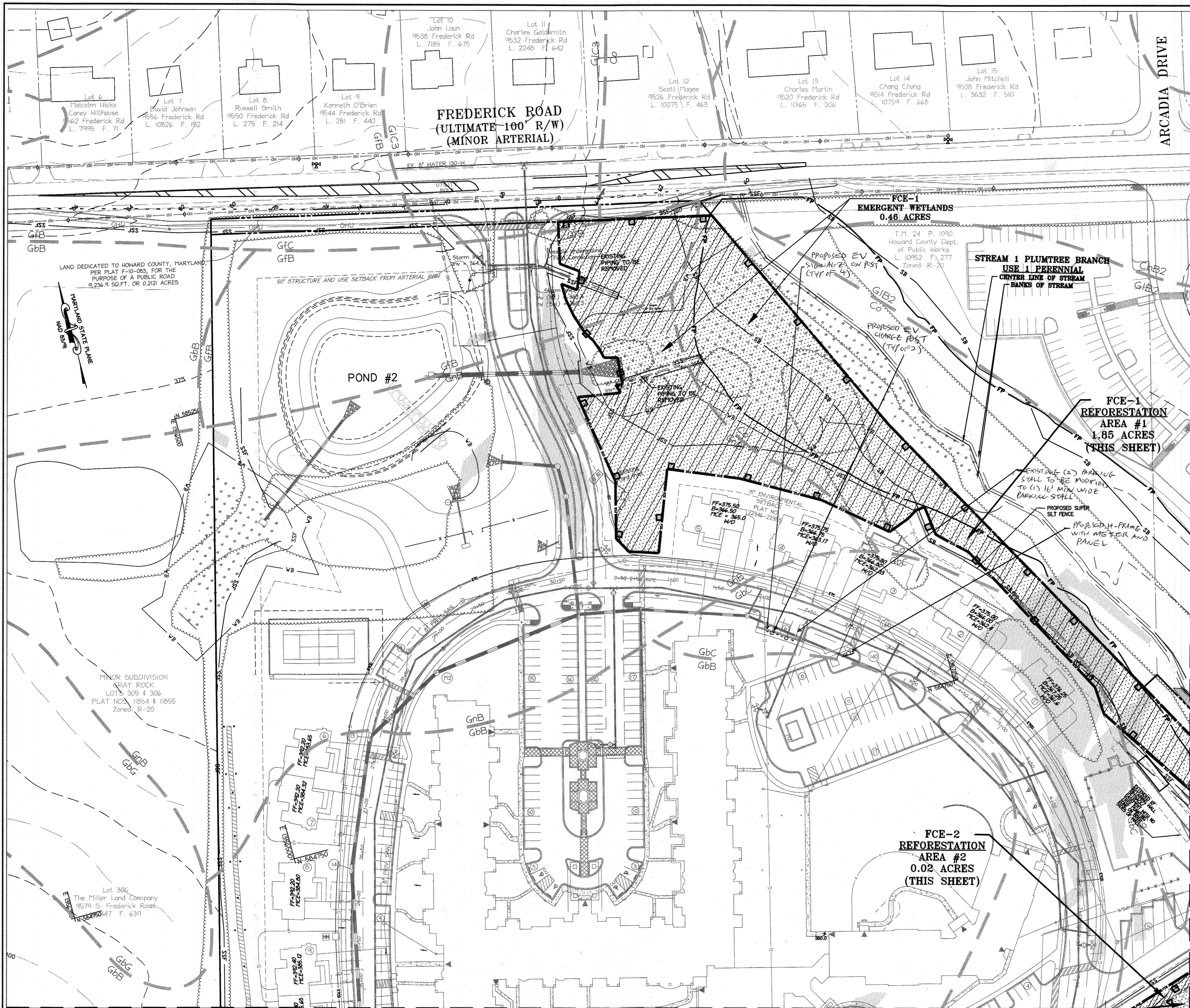
Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
<p>Date No. Revision Description</p> <p><b>LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY</b></p> <p>OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: ROY CHIVACCA, EX. VICE PRESIDENT 300 ST. LUKE CIRCLE WESTMINSTER, MD 21158 (410) 848-0080</p>		



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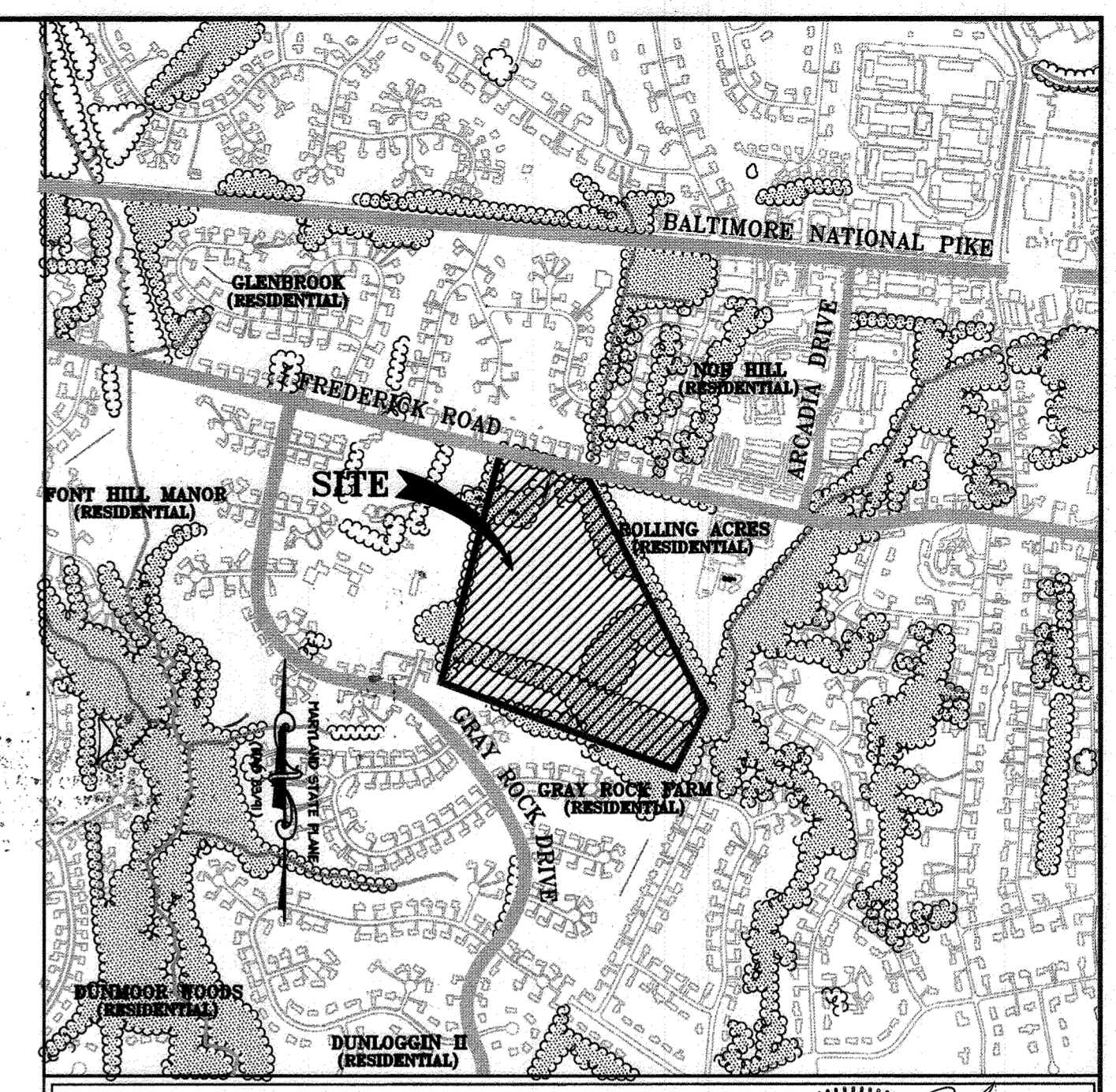
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PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602600	
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07		ELECTION DISTRICT 02
TITLE: <b>OVERALL FOREST CONSERVATION PLAN</b>			
DESIGN: DAM1	SCALE: 1" = 100'	PROJECT: 0515.001.02	
DRAWN: DAM1	DATE: APRIL 12, 2013	43 OF 77	
CHECKED: ENJ	APPROVED: MRZ		





MATCHLINE - SEE SHEET 45 OF 75 FOR CONTINUATION

FCE-2  
RETENTION AREA #1  
0.01 ACRES (THIS SHEET)



SITE VICINITY MAP  
SCALE 1"=1000'

LEGEND

- 250 --- EXISTING INTER CONTOUR
- 200 --- EXISTING INDEX CONTOUR
- --- PROPERTY LINE
- --- STREAM BANK
- --- STREAM CENTERLINE
- --- STREAM BANK
- --- EXISTING TREELINE
- --- PROPOSED TREELINE
- GIB2 SOILS LINE
- Co FLOODPLAIN
- FP EASEMENT
- SSF SUPER SILT FENCE
- SB STREAM BUFFER
- VB WETLAND BUFFER
- VL WETLANDS
- FCX PROPOSED FOREST CONSERVATION EASEMENT
- LOD LIMITS OF DISTURBANCE

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DRAWINGS WERE PREPARED OR APPROVED BY ME, AN ENGINEER, UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 37775, EXP. DATE 8/14/25

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
DATE: 8-12-19  
BRIAN E. WAGNER, P.E.  
DATE OF AS-BUILT: 03/10/2018

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	2-20-15
Chief, Development Engineering Division	Date
16-2-20-15	2-26-15
Chief, Division of Land Development	Date
16-2-20-15	2-26-15
Director	Date

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
6/3/24	05	REV SIDP - EV CHANGING

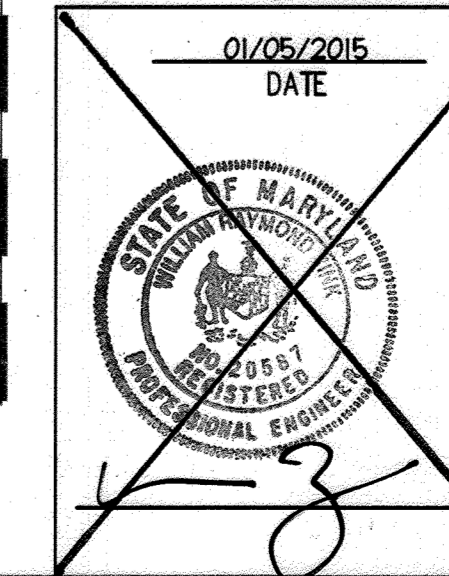
Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCA, EX. VICE PRESIDENT  
300 ST LINE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

**christopher consultants**  
engineering • surveying • land planning  
christopher consultants, inc.  
1172 colchester greenway drive, suite 100, colchester, md 21046-2800  
410.832.8800 • fax: 410.832.8800 • www.christopherconsultants.com

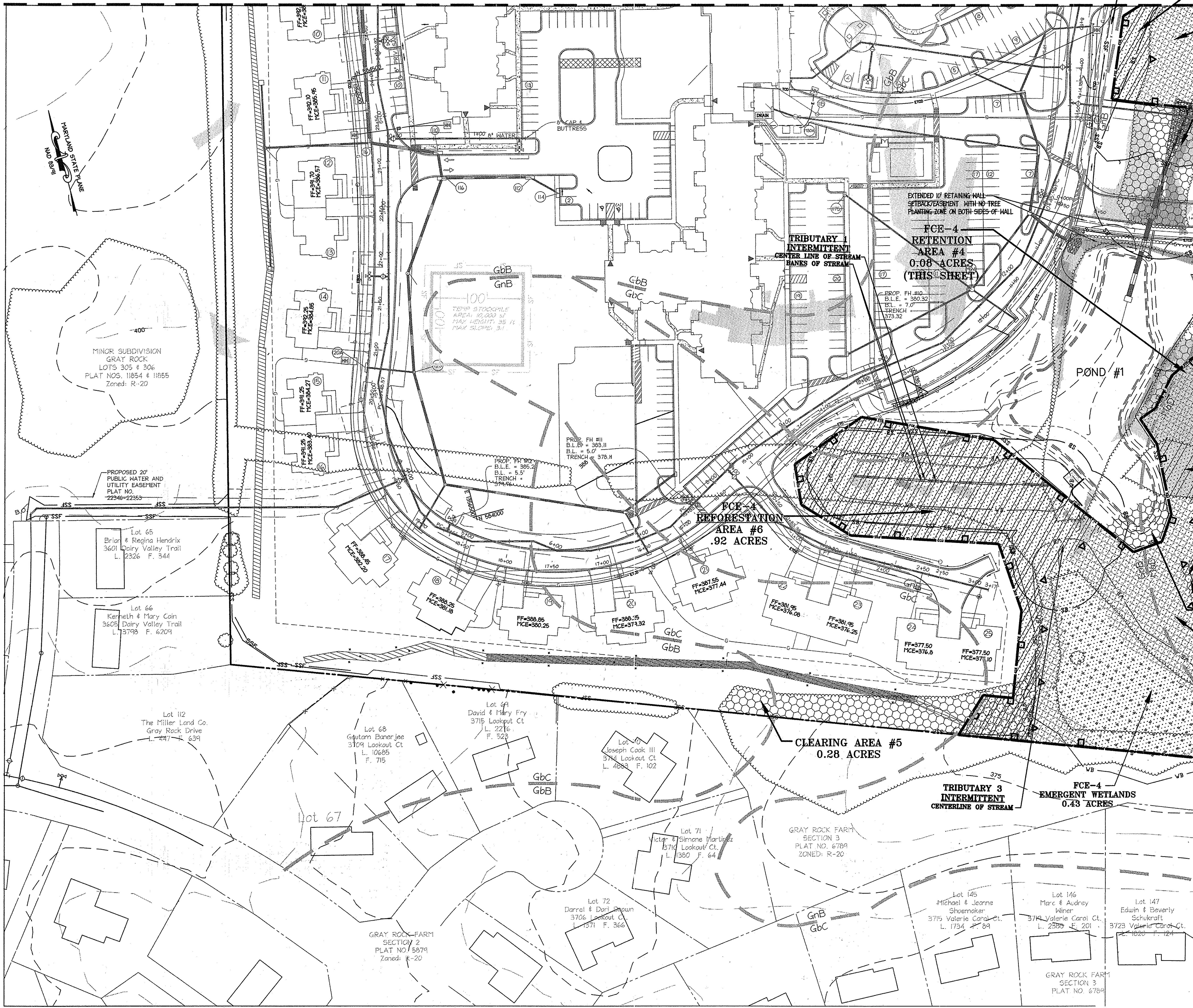
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	SEWER CODE F07
WATER CODE 550 (TG 700)	TITLE: <b>FOREST CONSERVATION PLAN</b>	

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>44 of 77</b>

MATCHLINE - SEE SHEET 46 OF 75 FOR CONTINUATION



MATCHLINE - SEE SHEET 44 OF 75 FOR CONTINUATION



**FCE-2 REFORESTATION AREA #2**  
0.08 ACRES (THIS SHEET)

**FCE-2 RETENTION AREA #1**  
0.13 ACRES (THIS SHEET)

**CLEARING AREA #2** 0.22 ACRES (THIS SHEET)

**FCE-4 RETENTION AREA #4**  
0.08 ACRES (THIS SHEET)

**FCE-4 REFORESTATION AREA #5**  
0.07 ACRES (THIS SHEET)

**FCE-4 REFORESTATION AREA #6**  
.92 ACRES

**CLEARING AREA #4**  
0.06 ACRES (THIS SHEET)

**FCE-4 RETENTION AREA #3**  
0.48 ACRES (THIS SHEET)

**CLEARING AREA #5**  
0.28 ACRES

**FCE-4 EMERGENT WETLANDS**  
0.43 ACRES

**LEGEND**

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- STREAM BANK
- STREAM CENTERLINE
- STREAM BANK
- EXISTING TREELINE
- PROPOSED TREELINE
- GIB2
- Co
- FP
- SB
- VB
- VL
- LD
- RETENTION FOREST CONSERVATION EASEMENT
- FOREST CLEARING AREA
- REFORESTATION AREA
- 15 TO 25% STEEP SLOPES
- 25% AND GREATER STEEP SLOPES
- PROPOSED VARIABLE WIDTH PUBLIC ACCESS, FIRE ACCESS AND UTILITY EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- TEMPORARY TREE PROTECTION SIGNAGE
- \*SUPER SILT FENCE ALSO DOUBLES AS TREE PROTECTION FENCE ALONG RETENTION AREAS

MATCHLINE - SEE SHEET 46 OF 75 FOR CONTINUATION

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	2-20-15
Chief, Development Engineering Division	Date
<i>[Signature]</i>	2-26-15
Chief, Division of Land Development	Date
<i>[Signature]</i>	2/26/15
Director	Date

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT**  
PLANNED SENIOR COMMUNITY

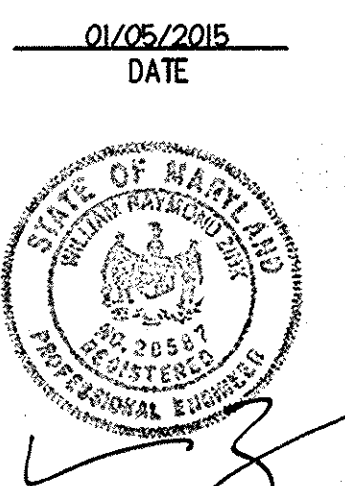
**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAMWAL, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 648-0680



**PERMIT INFORMATION CHART**

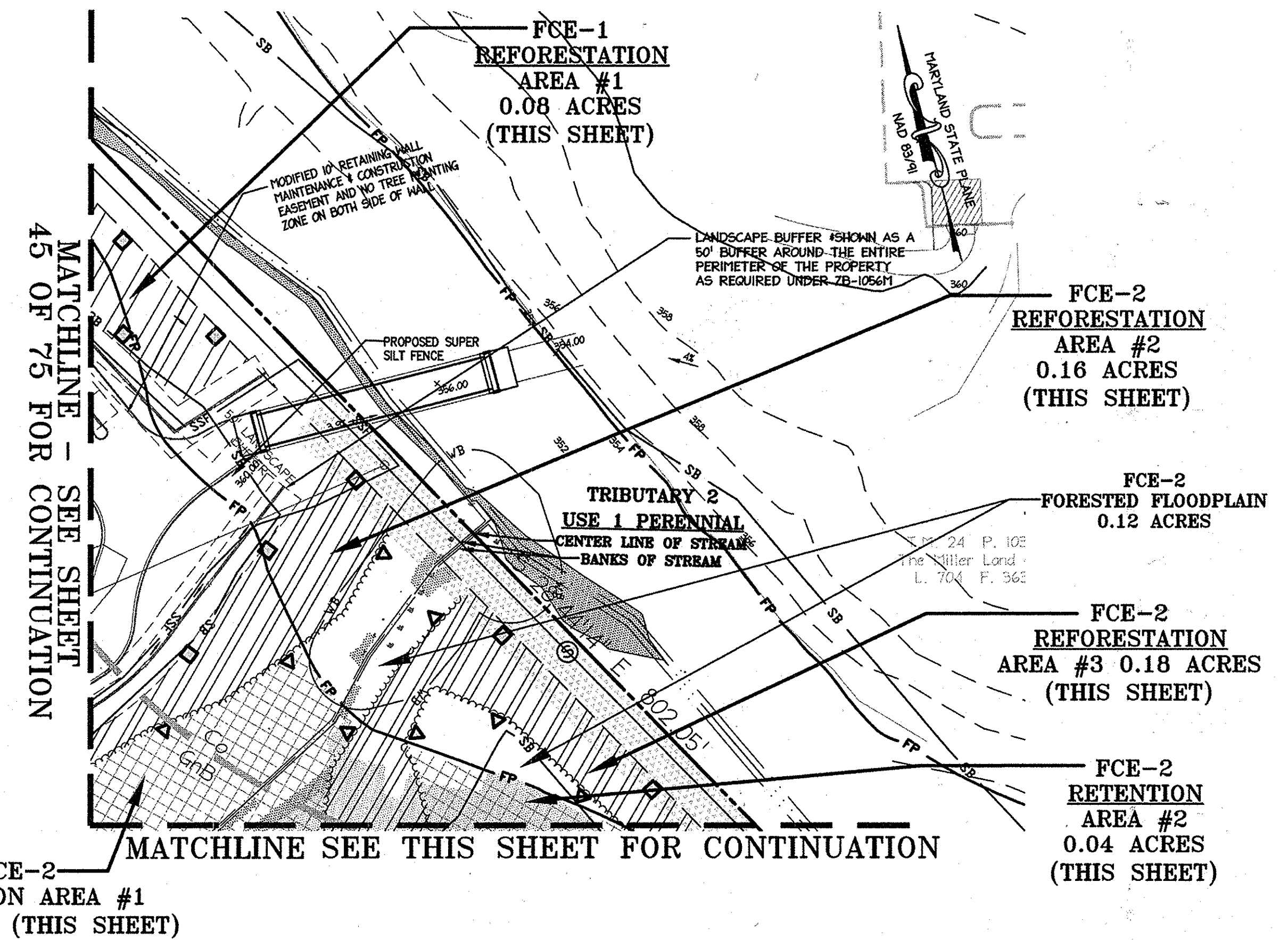
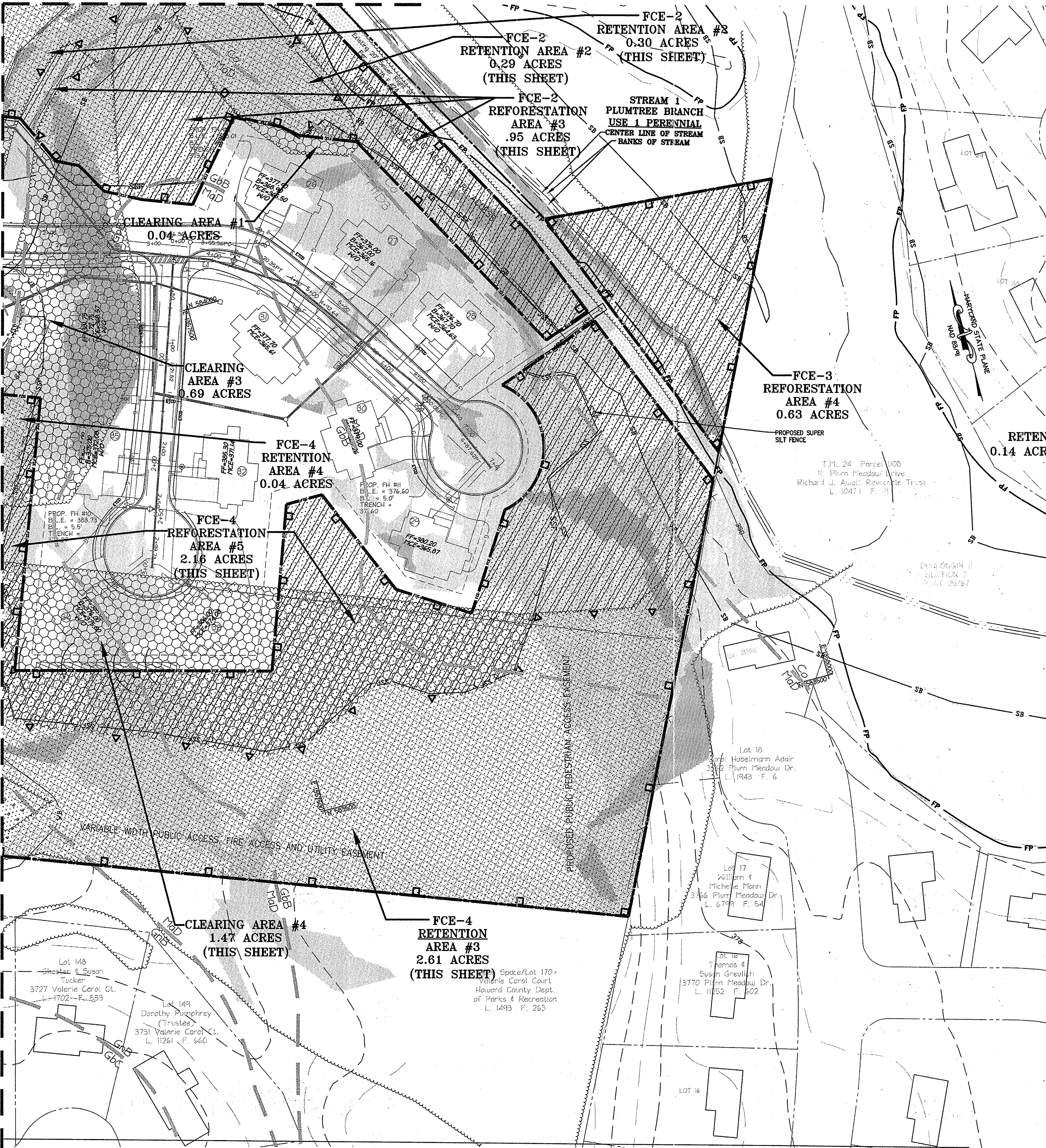
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	TAX MAP 24
WATER CODE 550 (TG 700)	SENER CODE F07	ELECTION DISTRICT 02
TITLE: <b>FOREST CONSERVATION PLAN</b>		

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	



MDC-792 (SDP)

MATCHLINE - SEE THIS SHEET FOR CONTINUATION

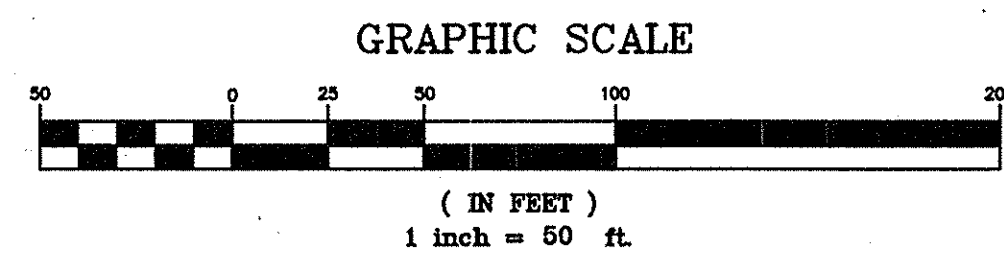


MATCHLINE - SEE SHEET 45 OF 75 FOR CONTINUATION

MATCHLINE - SEE SHEET 45 OF 75 FOR CONTINUATION

**LEGEND**

- 250 --- EXISTING INTER CONTOUR
- 250 --- EXISTING INDEX CONTOUR
- --- PROPERTY LINE
- --- STREAM BANK
- --- STREAM CENTERLINE
- --- STREAM BANK
- --- EXISTING TREELINE
- --- PROPOSED TREELINE
- --- SOILS LINE
- --- FLOODPLAIN EASEMENT
- --- SUPER SILT FENCE
- --- STREAM BUFFER
- --- WETLAND BUFFER
- --- WETLANDS
- --- PROPOSED FOREST CONSERVATION EASEMENT
- --- LIMITS OF DISTURBANCE
- [Pattern] RETENTION FOREST CONSERVATION EASEMENT
- [Pattern] FOREST CLEARING AREA
- [Pattern] REFORESTATION AREA
- [Pattern] 15 TO 25% STEEP SLOPES
- [Pattern] 25% AND GREATER STEEP SLOPES
- [Pattern] PROPOSED VARIABLE WIDTH PUBLIC ACCESS, FIRE ACCESS AND UTILITY EASEMENT
- [Symbol] PERMANENT TREE PROTECTION SIGNAGE
- [Symbol] TEMPORARY TREE PROTECTION SIGNAGE
- [Symbol] SUPER SILT FENCE ALSO DOUBLES AS TREE PROTECTION FENCE ALONG RETENTION AREAS



APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2015

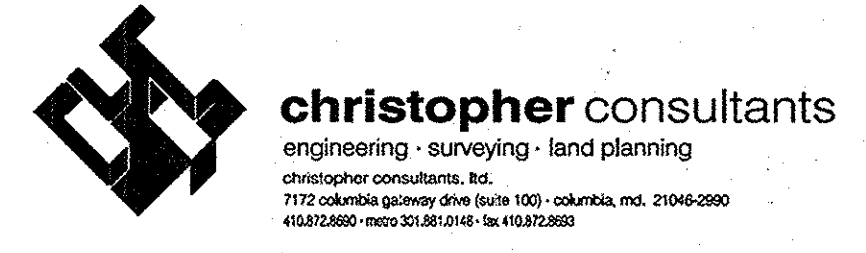
MISS UTILITY  
Service Protection Center  
CALL TOLL FREE  
1-800-267-7777

APPROVED, DEPARTMENT OF PLANNING AND ZONING		Date	2.20.15
Chief, Development Engineering Division		Date	2-26-15
Chief, Division of Land Development		Date	2/26/15
Director		Date	
01/06/15	01	REVISED SITE DEVELOPMENT PLAN	

Date No. Revision Description

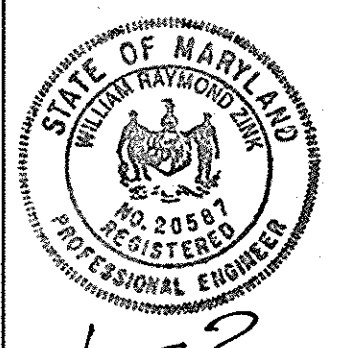
**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

OWNER/DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY OSWICK, EXECUTIVE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 948-0080



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	



TITLE: **FOREST CONSERVATION PLAN**

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: WRZ	

MDC-792 (SDP)





FOREST STAND NARRATIVE

STAND 1

THIS STAND LIES ALMOST ENTIRELY WITHIN WETLAND D AND CONSISTS OF 6-12" DIAMETER BLACK HILLWAX AND 5-8" RED MAPLE TREES WITH BOX ELDER AND SCATTERED BRADFORD PEAR TREES ALONG ITS OUTER EDGES.

STAND 2

THIS MOODED AREA IS IN THE SOUTHEASTERN PORTION OF THE SITE IN AN OLD FIELD REGENERATION AREA. THE REGENERATION CONSISTS OF 6-10" DIAMETER BRADFORD PEAR TREES WITH SOME SCATTERED BOX ELDER TREES.

STAND 3

THIS STAND IS LOCATED IN THE EXTREME SOUTHEAST CORNER OF THE PROPERTY AND EXTENDS OFF THE SITE TO THE SOUTH. THE PRIMARY VEGETATION IS WHITE PINE (15-18" DIAMETER AND 50-60 FEET TALL).

STAND 4

THIS STAND IS LOCATED ALONG THE EXISTING STREAM THAT RUNS THROUGH THE CENTRAL PORTION OF THE SITE AND CONSISTS OF 8-12" SILVER MAPLE, 6-10" RED MULBERRY AND 10-15" BLACK CHERRY TREES.

STAND 5

STAND 5 IS LOCATED BETWEEN STAND 4 AND PLUM TREE BRANCH AND ACTS AS A BUFFER BETWEEN FIELDS ON A NORTHEAST FACING SLOPE (15-25%). THE DOMINANT TREE SPECIES ARE 6-10" SILVER MAPLE, 4-6" BRADFORD PEAR AND 4-8" RED MULBERRY TREES.

STAND 6

STAND 6 IS LOCATED ON A STEEPLY SLOPED AREA THAT LIES BETWEEN STAND 4 AND THE EXISTING CORN FIELD IN THE CENTRAL AREA OF THE SITE. THE STAND IS ESSENTIALLY A MONO-CULTURE IN THE CANOPY LAYER WITH 4-8" BLACK CHERRY TREES PRESENT.

STAND 7

STAND 7 IS LOCATED ADJACENT TO STAND 6 AND LIES BETWEEN THE EXISTING POND (#3) AND THE CORN FIELD ON MODERATE TO STEEPLY SLOPED AREAS.

NOTES FROM FOREST STAND DELINEATION

- 1. GROSS TRACT AREA: 49.88 ACRES
2. 100 YEAR FLOODPLAIN AREA: 2.30 ACRES
3. FORESTED FLOODPLAIN AREA: 0.12 ACRES
4. EXISTING FORESTED AREA (NON-FLOODPLAIN): 6.87 ACRES
5. THERE ARE NO AREAS OF 25% OR GREATER SLOPES MORE THAN 20,000 S.F. EXTENDING ON THE SITE.

SOILS

Table with 7 columns: Map Unit, Revised Unit Symbol, Name, Slope, K-factor, Hydroic. Lists soil types like Co, Cs, GIB2, GIC2, GIC3, GmB2, MIB2, MIC2, MIC3, MID3.

HEDGEROW 1

THIS HEDGEROW BUFFERS THE NORTHEAST EDGE OF THE PROPERTY FROM THE ADJACENT FARM TO THE EAST. IT CONSISTS MAINLY OF SILVER MAPLE AND BLACK CHERRY WITH AN UNDERSTORY OF HONEYSUCKLE.

HEDGEROW 2

THIS HEDGEROW SURROUNDS THE EXISTING FARM POND IN THE NORTHEAST CORNER OF THE PROPERTY. PRIMARY VEGETATION IS SILVER MAPLE (12-18") AND BLACK HILLWAX (12-15").

HEDGEROW 3

THIS HEDGEROW RUNS ALONG PLUMTREE BRANCH ON THE WEST SIDE OF THE PROPERTY AND ALSO SERVES AS A BUFFER TO ADJACENT PROPERTY. IT IS SEPARATED FROM THE STREAM BY A CLEARED SENIOR RIGHT OF WAY.

HEDGEROW 4

THIS HEDGEROW IS LOCATED ALONG THE TRIBUTARY OF THE FARM POND AND EXTENDS AROUND THE POND TO STAND 4. PRIMARY VEGETATION IS BLACK CHERRY (6-10") AND MULBERRY WITH AN UNDERSTORY OF MULTIFLORA ROSE.

HEDGEROW 5

THIS HEDGEROW IS LOCATED PERPENDICULAR TO HEDGEROW 6, AND BETWEEN HEDGEROWS 4 & 6. PRIMARY VEGETATION IS BLACK CHERRY (6-10") AND MULBERRY WITH AN UNDERSTORY OF MULTIFLORA ROSE.

HEDGEROW 6

THIS HEDGEROW IS SITUATED ALONG THE WESTERN PROPERTY BOUNDARY AND COULD SERVE AS A BUFFER BETWEEN THE PROPOSED DEVELOPMENT AND THE ADJACENT PROPERTY. PRIMARY VEGETATION IS BLACK CHERRY, COMMON PEAR, AND MULBERRY.

HEDGEROW 7

THIS HEDGEROW IS SITUATED ALONG THE EASTERN PROPERTY BOUNDARY AND COULD SERVE AS A BUFFER BETWEEN THE PROPOSED DEVELOPMENT AND THE ADJACENT PROPERTY. PRIMARY VEGETATION IS RED OAK, RED MAPLE, BLACK GUM, AND BLACK CHERRY.

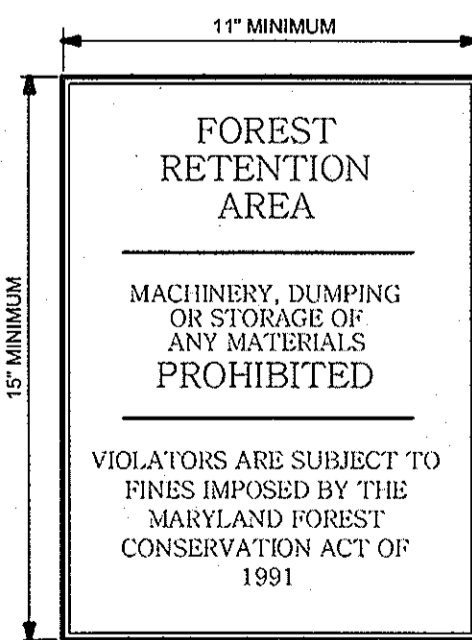
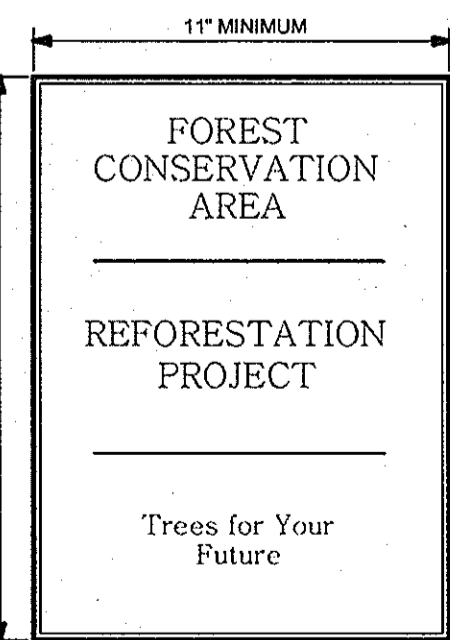
PLANTED TREE AREA

THIS AREA WAS PLANTED IN 2005 BY MR. MILLER AND IS NOT PART OF ANY FOREST CONSERVATION PLAN OR PROJECT. IT CONSISTS OF WHITE OAK, PIN OAK, AND CHESTNUT OAK SEEDLINGS PROTECTED BY PLASTIC TREE SHEETING.

FOREST CONSERVATION CALCULATIONS

Table with 2 columns: BASIC SITE DATA, ACRES. Lists items like GROSS SITE AREA (49.88), AREA WITHIN 100 YEAR FLOODPLAIN (2.30), LAND USE CATEGORY (HDR), AFFORESTATION THRESHOLD (15% X A) (7.14).

NOTE: LIMIT OF DISTURBANCE SHOWN GRAPHICALLY FOR CLARITY. ACTUAL LIMIT OF DISTURBANCE SHALL BE JUST OUTSIDE OF SEDIMENT CONTROLS AND SHALL BE LOCATED ON THE PROPERTY IN QUESTION.



Permanent Signage
Not To Scale
PLAN SYMBOL = ■
(TO REMAIN IN PERPETUITY)

Temporary Signage
Not To Scale
PLAN SYMBOL = ▼
TEMPORARY SIGNAGE IS USED IN AREAS WHERE CONSTRUCTION AND GRADING WILL OCCUR PRIOR TO REFORESTATION.

WOODLAND CLEARING AREAS table with columns: AREA# (CA-1 to CA-5), AREA# (CA), TOTAL AREA.

FOREST CONSERVATION EASEMENT RETENTION AREAS table with columns: RFCE #, RTA-1 to RTA-4, TOTAL AREA.

REFORESTATION AREAS table with columns: AREA# (RFA-1 to RFA-6), TOTAL AREA, REASON FOR PRIORITY.

STREAM BUFFERS IN FOREST CONSERVATION table with columns: AREA# (CA), TOTAL STREAM BUFFER AREA, WIDTH OF BUFFER.

FOREST CONSERVATION EASEMENT 1 table with columns: SHEET, TOTAL AREA, REFORESTATION AREA 1, WETLAND AREA\*, FCE-1 SITE TOTAL.

FOREST CONSERVATION EASEMENT 3 table with columns: SHEET, TOTAL AREA, REFORESTATION AREA 4, FCE-3 SITE TOTAL.

FOREST CONSERVATION EASEMENT 4 table with columns: SHEET, TOTAL AREA, REFORESTATION AREA 5, REFORESTATION AREA 6, RETENTION AREA 3, RETENTION AREA 4, WETLAND AREA\*, FCE-4 SITE TOTAL.

FOREST CONSERVATION EASEMENT 2 table with columns: SHEET, TOTAL AREA, REFORESTATION AREAS FOR FCE-2, RETENTION AREAS FOR FCE-2, REFORESTATION AREA 3, TOTAL REFORESTATION FOR FCE-2, TOTAL RETENTION FOR FCE-2.

FORESTED FLOODPLAIN AREA\*

Table with 3 columns: TYPES, 5334 SQ.FT., 0.12 AC. FCE-2 SITE TOTAL 105,142 SQ.FT., 2.41 AC.

\* FORESTED FLOOD PLAIN AREA IS INCLUDED IN THE FOREST CONSERVATION EASEMENT HOWEVER IT DOES NOT COUNT TOWARD RETENTION CALCULATIONS. THESE AREAS WERE ADDED PURELY FOR CLARITY AND SIMPLIFICATION OF THE FOREST CONSERVATION EASEMENT LINE.

FOREST STAND ANALYSIS TABLE with columns: KEY, A. TYPE OF COMMUNITY, B. AREA, C. SOIL INFORMATION, D. EXISTING VEGETATION, E. STAND CHARACTERISTICS, F. FOREST AREA IN SENSITIVE ENVIRONMENTS, G. HABITAT VALUE.

GENERAL NOTES:

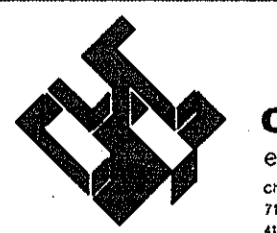
- 1. NO RARE, THREATENED OR ENDANGERED SPECIES OR HABITATS WERE OBSERVED DURING ANY SITE VISIT.
2. NO SPECIMEN TREES WERE OBSERVED ON SITE.
3. THE TOPOGRAPHY AND SITE BOUNDARY WERE PREPARED BY christopher consultants, ON APPROXIMATELY MAY, 2007.

APPROVED PLANNING BOARD OF HOWARD COUNTY DATE MARCH 7, 2013

APPROVED DEPARTMENT OF PLANNING AND ZONING Chief, Development Engineering Division NJ Date 4/26/13

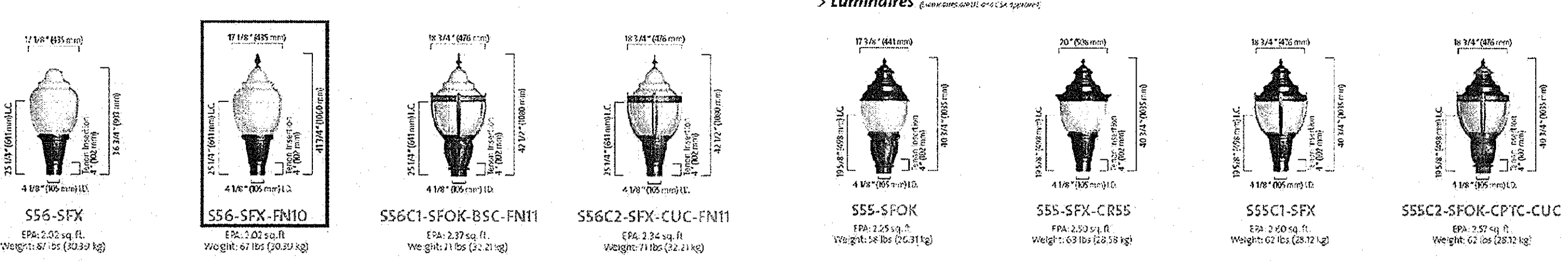
Chief, Division of Land Development Date 4/26/13 Director

REVISIONS table with columns: Date, No., Revision Description. LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY



christopher consultants engineering - surveying - land planning

PERMIT INFORMATION CHART with fields for PROJECT NAME, LOT/PARCEL NO., CENSUS TRACT, DEED REF., GRID NO., ZONE, TAX MAP, ELECTION DISTRICT, WATER CODE, SEMER CODE, TITLE: FOREST CONSERVATION PLAN DETAILS, DESIGN: DAM, SCALE: AS SHOWN, PROJECT: 0515.001.02, DRAWN: DAM, DATE: APRIL 12, 2013, CHECKED: ENJ, APPROVED: WRZ, 48 of 77



- Luminaire options**
- IS - Insect shield
  - BC - Block connector
  - TN3 - Adaptor to fit over a 3/4" (19 mm) O.D. by 4" (102 mm) King beam
  - TN3.5 - Adaptor to fit over a 1 1/2" (38 mm) O.D. by 4" (102 mm) King beam
  - TN5 - Copper colored painted metal
  - IS - Flaring (conical) factory
  - PH - Photoelectric cell
  - S55C1/S55C2/S56C1/S56C2
  - BSC - Brass decorative band, protected by a polyester clear coat
  - CU - Copper decorative bands, located on the ring band
  - CLC - Copper decorative band, protected by a polyester clear coat
- Poles and Pole options**
- CSA - Cast Aluminum
  - CLC - Cast Aluminum
  - CFD - Cast Aluminum
  - CFE - Cast Aluminum
  - CFB - Cast Aluminum
- Mountings**
- CSA - Cast Aluminum
  - CLC - Cast Aluminum
  - CFD - Cast Aluminum
  - CFE - Cast Aluminum
  - CFB - Cast Aluminum
- Configurations**
- 1A, 2A, 3A, 3B, 4A, 5A
- Finishes**
- Specialty formulated Luminal powder coat finish is available in a range of many standard colors.

**HID Lamps**

WATTAGE	DSX	DSX	DSX	DSX	DSX	DSX	DSX
300W	✓	✓	✓	✓	✓	✓	✓
400W	✓	✓	✓	✓	✓	✓	✓
500W	✓	✓	✓	✓	✓	✓	✓
700W	✓	✓	✓	✓	✓	✓	✓
1000W	✓	✓	✓	✓	✓	✓	✓
1500W	✓	✓	✓	✓	✓	✓	✓
2000W	✓	✓	✓	✓	✓	✓	✓

**QL Lamps**

WATTAGE	DSX	DSX
500W	✓	✓
700W	✓	✓
1000W	✓	✓
1500W	✓	✓
2000W	✓	✓

**Voltagess**

VOL	DSX	DSX
120V	✓	✓
277V	✓	✓
347V	✓	✓

### FORM 10 SQUARE EH/H/HT ARM MOUNT

**GENERAL DESCRIPTION:** The Square form mounted Square form luminaire products are ideal luminaires for high intensity discharge lamps up to 1000 watts. The EH series is manufactured from ribbed extruded aluminum and finished in an architectural Class 1 coating. The H and HT style luminaires are fabricated from aluminum with a thermoplastic finish. Both products can accept one or two (2) interchangeable and rotatable provisions for optimal optical systems.

**CUTOFF PERFORMANCE:** Flat glass lens luminaires provide full cutoff performance. Square Lens luminaires provide cutoff performance.

**ORDERING**

Prefix MOUNTING DISTRIBUTION WATTAGE VOLTAGE FINISH OPTIONS

Enter the order code into the appropriate box above. Note: Check the right to indicate a correct box. Not all combinations and combinations are available. Refer to notes below for the measures and limitations. For questions or comments, please contact the factory.

**PREFIX**

EH14	14" Square Extruded Luminaire
EH18	18" Square Extruded Luminaire
EH24	24" Square Extruded Luminaire
EH30	30" Square Extruded Luminaire
EH36	36" Square Extruded Luminaire

**MOUNTING**

1	Single Assembly
2	Two Assembly
3	Three Assembly
4	Four Assembly

**DISTRIBUTION**

1	1/2" Type I
2	1/2" Type II
3	1/2" Type III
4	1/2" Type IV
5	1/2" Type V
6	1/2" Type VI
7	1/2" Type VII
8	1/2" Type VIII
9	1/2" Type IX
10	1/2" Type X

**WATTAGE**

300W	350W	400W	500W	700W	1000W	1500W	2000W
------	------	------	------	------	-------	-------	-------

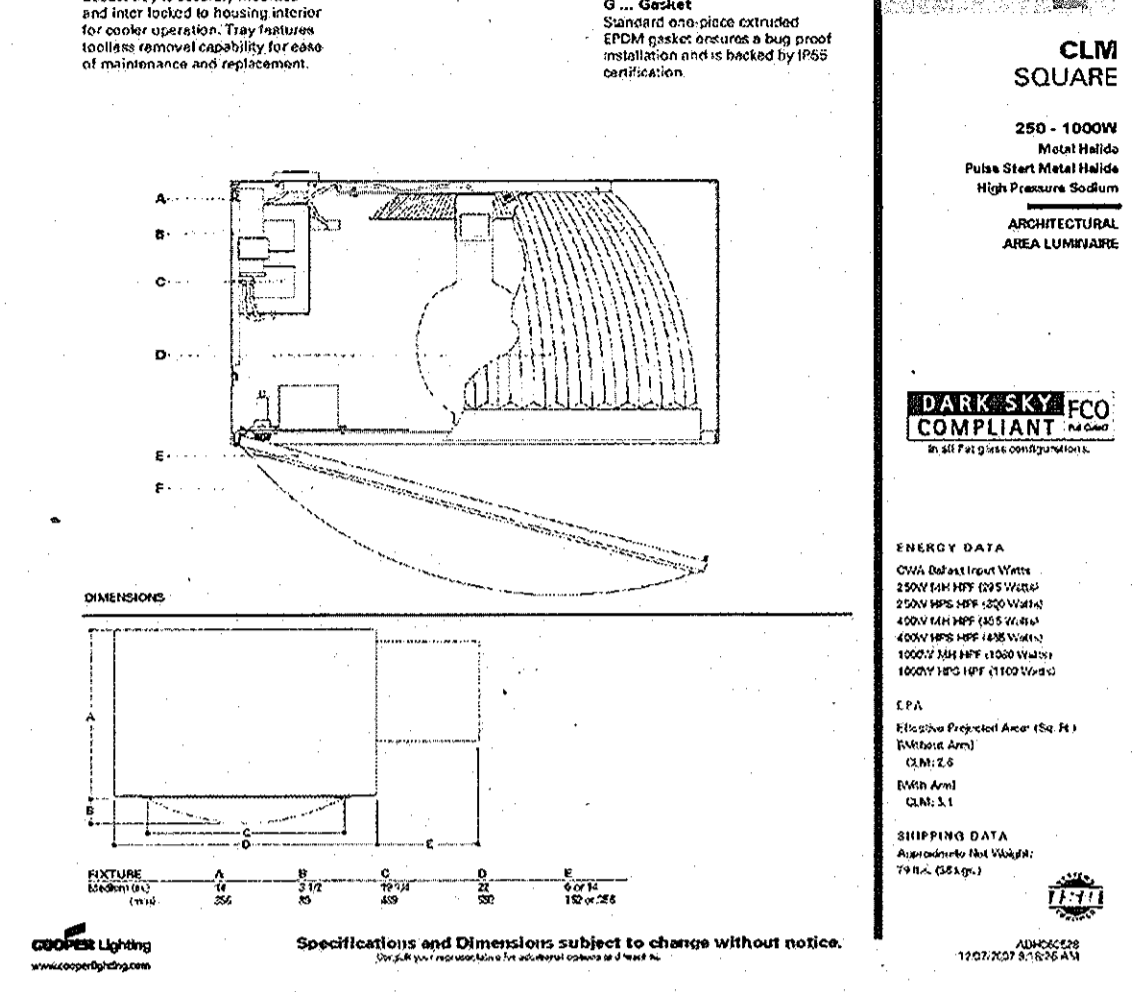
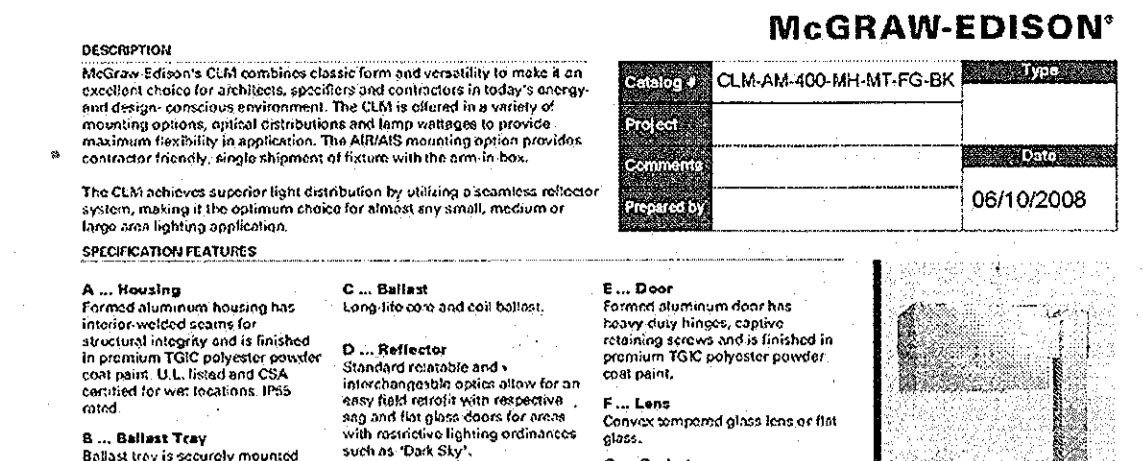
**VOLTAGE**

120	277	347	480	500-277
-----	-----	-----	-----	---------

**FINISH**

ALUMINUM AND STEEL

- AL - Anodized
- BR - Bronze Anodized
- BR - Bronze Anodized
- OC - Optional Color Paint
- SC - Special Color Paint



**McGRAW-EDISON**

Product: CLM-AM-400-MH-MT-FG-BK

Date: 06/10/2008

Project: [Blank]

Prepared by: [Blank]

**CLM SQUARE**

250 - 1000W

High Intensity Discharge

High Pressure Sodium

Architectural

Area Luminaires

**ENERGY DATA**

250W: 1000lm, 4.0lm/W, 100lm/ft²

400W: 1600lm, 4.0lm/W, 160lm/ft²

500W: 2000lm, 4.0lm/W, 200lm/ft²

700W: 2800lm, 4.0lm/W, 280lm/ft²

1000W: 3600lm, 3.6lm/W, 360lm/ft²

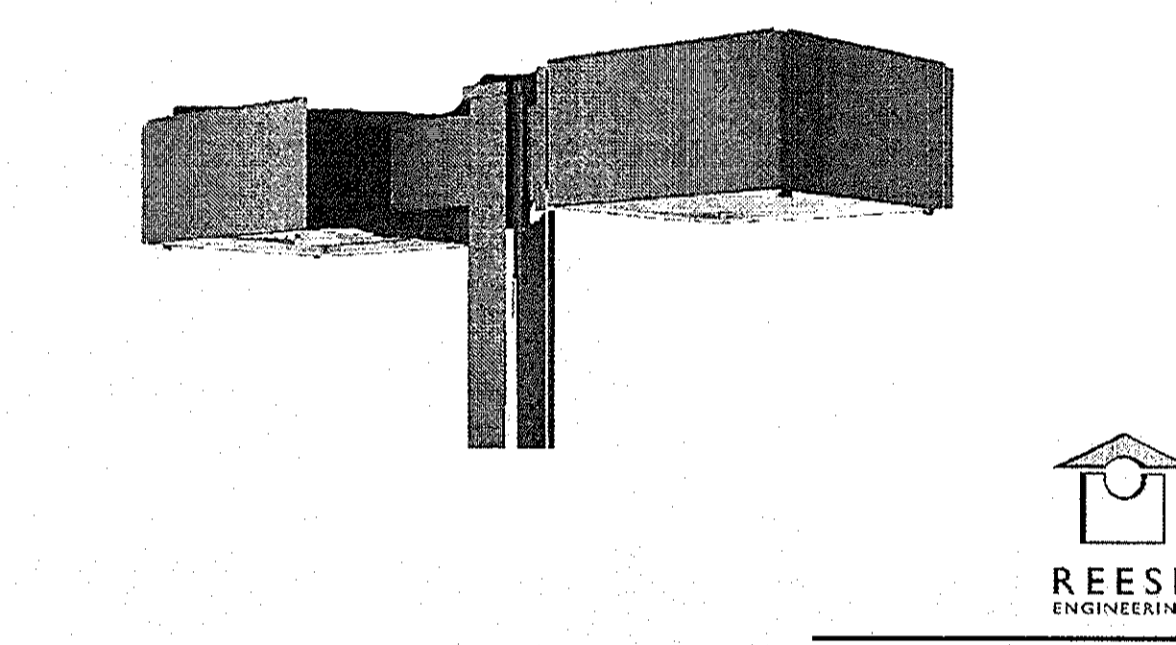
**REESE ENGINEERING**

Type: SD  
Manufacturer: GARCOO  
Catalog No. #EH14-2-3-150-XX

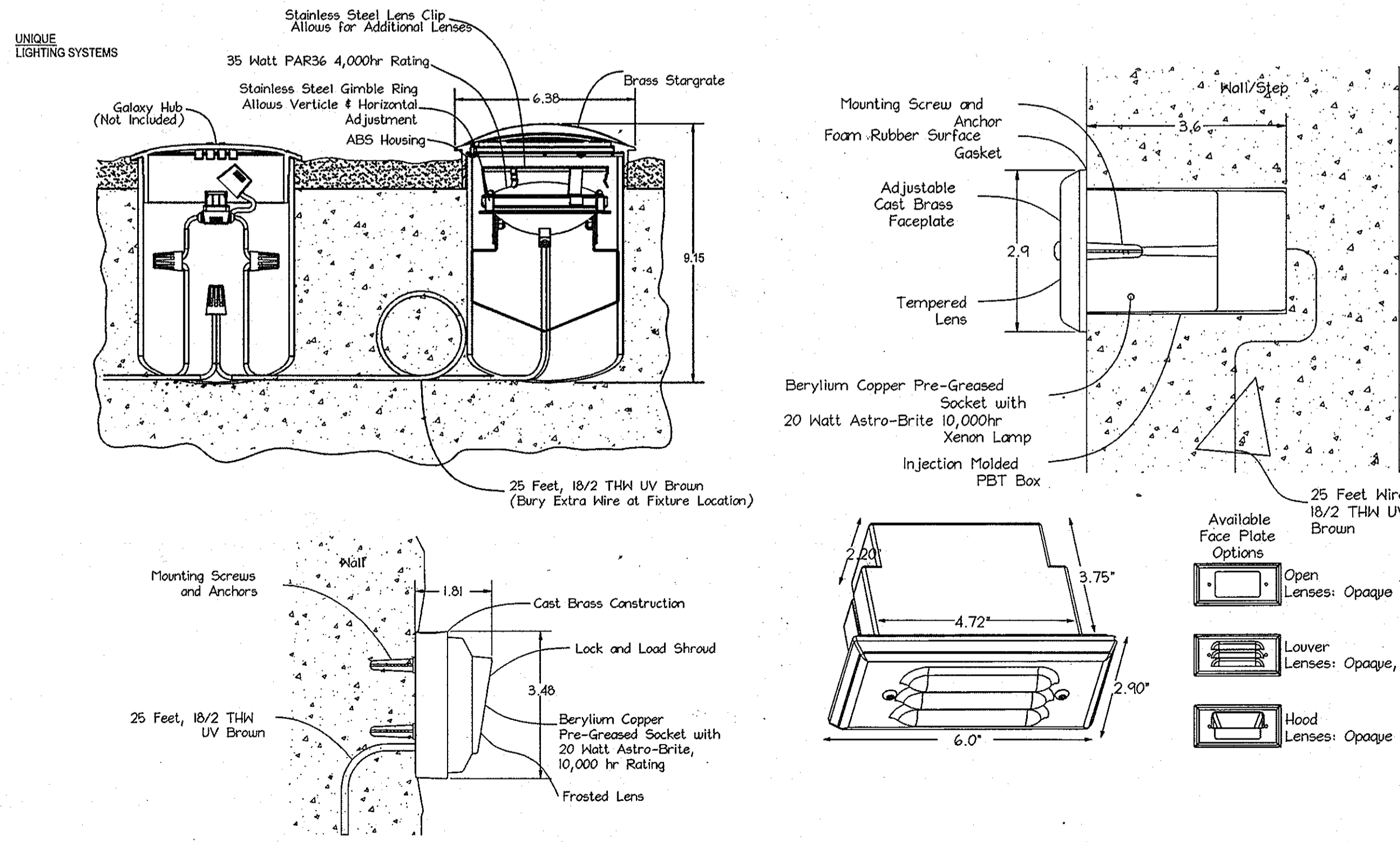
Jardco is a Philips group brand

Type: SB  
Manufacturer: LUMEC  
Catalog No. #S56-FH10-DSX3-HS2  
SINGLE HEAD

Type: SE  
Manufacturer: BRONZELIGHT  
Catalog No. #FL-100HPS



Type: SA  
Manufacturer: LUMEC  
Catalog No. #S56-FH10-DSX3-HS  
SINGLE HEAD



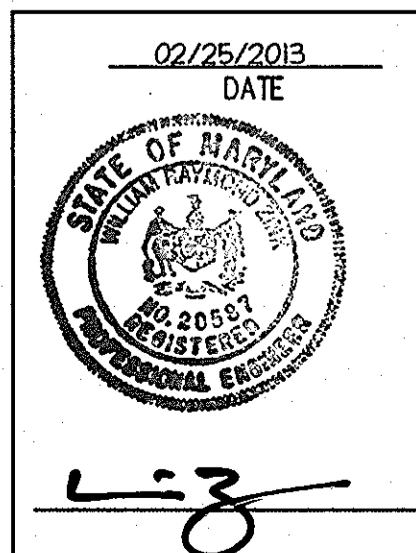
Lighting Details (or Equivalent)  
Not To Scale

**PROFESSIONAL CERTIFICATION**

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

Signature: [Signature]  
Date: 4/10/13

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



APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

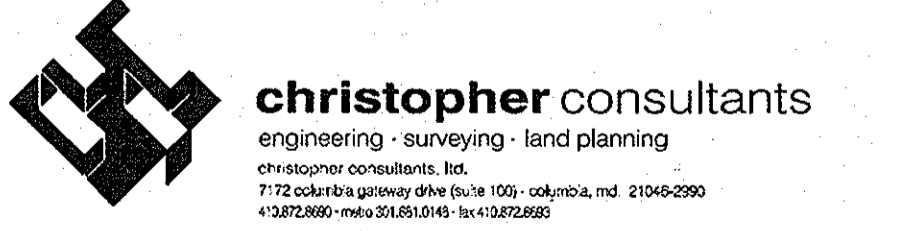
Chief, Development Engineering Division: [Signature] 4/26/13

Chief, Division of Land Development: [Signature] 4/26/13

Director: [Signature] 4/26/13

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAWWAL, EX. VICE PRESIDENT  
300 ST LUCE CIRCLE  
WESTMINSTER, MD 21158  
(410) 548-0090



**PERMIT INFORMATION CHART**

PROJECT NAME: LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT: 602800
DEED REF. L: 10578 F: 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

**LIGHTING DETAILS**

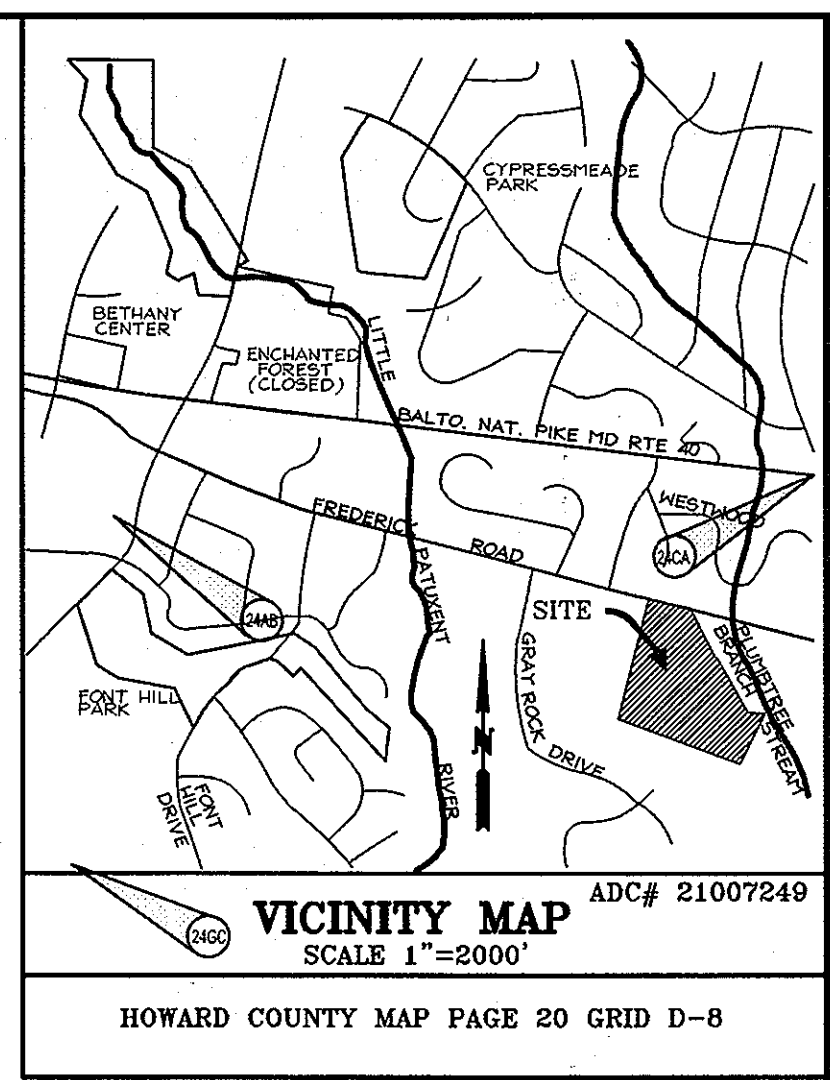
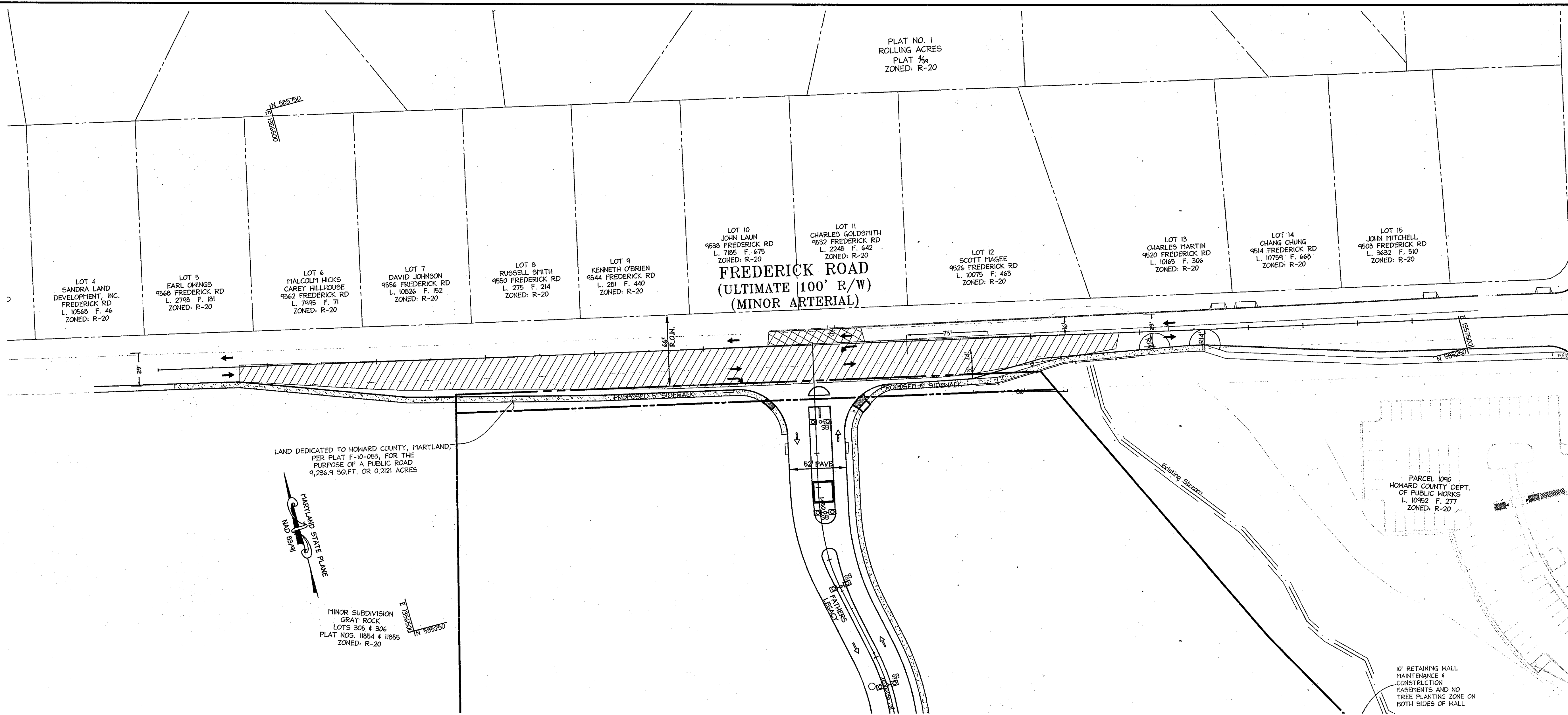
DESIGN: CRH	SCALE: AS SHOWN	PROJECT: 0615.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: LNG	APPROVED: LNG	49 of 77

**LIGHT FIXTURE SCHEDULE**

NO.	DESCRIPTION	LAMPS	WATTS	MANUFACTURER & DETAIL NO.	VOLTAGE	KEY NOTES	MOUNTING	REMARKS
0A	SINGLE HEAD DECORATIVE POST TOP LUMINAIRE WITH 18" HO" MOUNTING HEIGHT	(1) - 100W HIGH PRESSURE SODIUM	100	LUMEC 1000-FH10-DSX3-HS2 SINGLE HEAD	XX	1	CONCRETE BASE	NOTE B
0B	THIN HEAD DECORATIVE POST TOP LUMINAIRE WITH 18" HO" MOUNTING HEIGHT	(2) - 100W HIGH PRESSURE SODIUM	200	LUMEC 1000-FH10-DSX3-HS2 THIN HEAD	XX	2	CONCRETE BASE	NOTE B
0C	SINGLE HEAD, SHOE BOX STYLE OUT-OF-AREA LUMINAIRE ON 30'-0" POLE	(1) - 100W HIGH PRESSURE SODIUM	100	GARCOO 100-FH10-DSX3-HS	XX		CONCRETE BASE	NOTE B
0D	THIN HEAD, SHOE BOX STYLE OUT-OF-AREA LUMINAIRE ON 30'-0" POLE	(2) - 100W HIGH PRESSURE SODIUM	200	GARCOO 100-FH10-DSX3-HS	XX		CONCRETE BASE	NOTE B
0E	ADJUSTABLE LANSPEC UP LIGHT	(1) - 100W HIGH PRESSURE SODIUM	100	BRONZELIGHT FL-1000 HPS	XX		GRADE	N/A
0F	LOW LEVEL, LANSPEC UP LIGHT	(1) - 100W HPS	100	ALLEN BRADLEY (PATRIAL, 6057)	XX		GRADE	N/A

Lighting Details (or Equivalent)  
Not To Scale

MDC-792 (SDP)



ADG# 21007249  
SCALE 1"=2000'

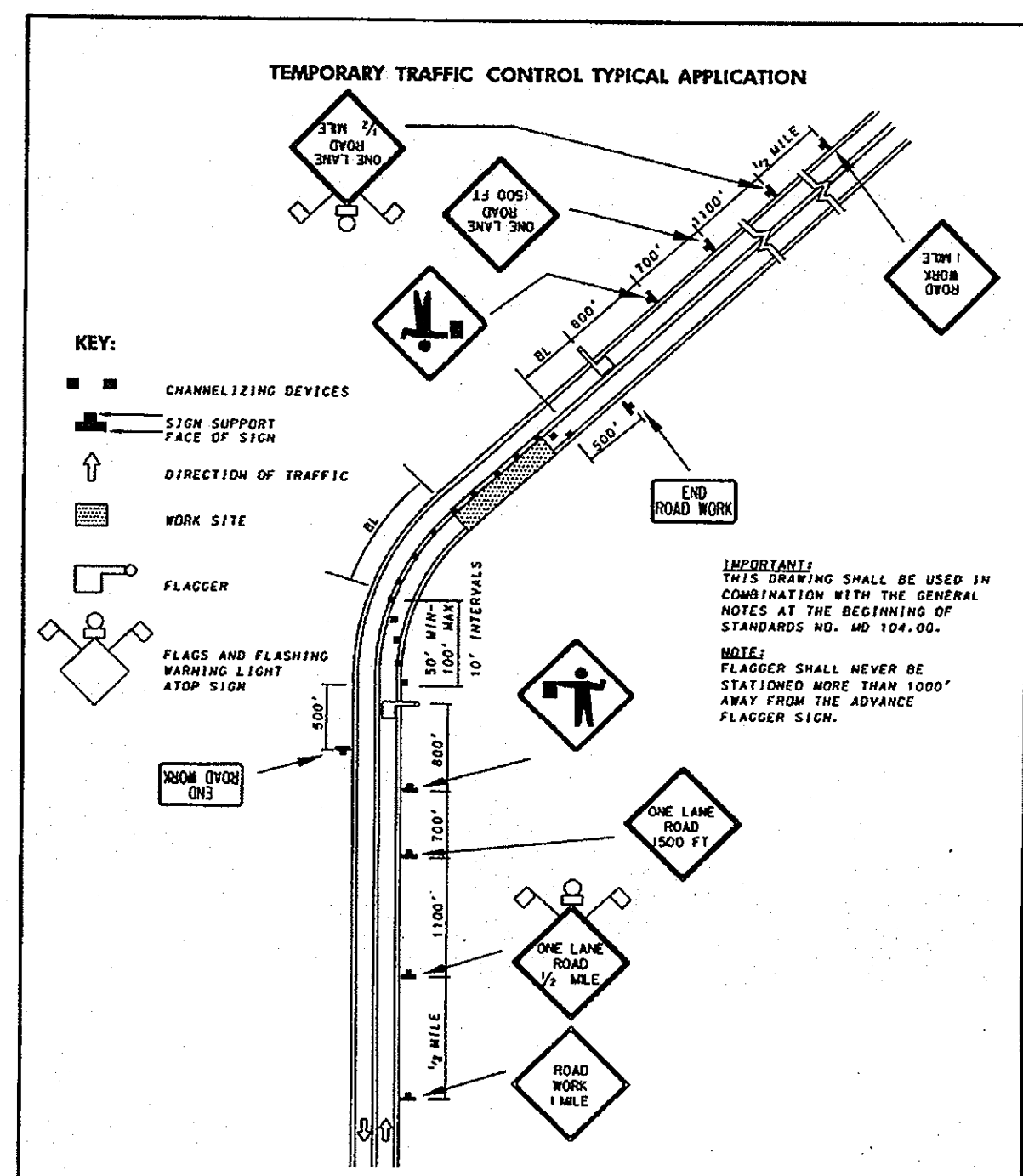
HOWARD COUNTY MAP PAGE 20 GRID D-8

LAND DEDICATED TO HOWARD COUNTY, MARYLAND, PER PLAT F-10-083, FOR THE PURPOSE OF A PUBLIC ROAD 9,236.9 SQ.FT. OR 0.2121 ACRES

MINOR SUBDIVISION GRAY ROCK LOTS 305 & 306 PLAT NOS. 11854 & 11855 ZONED: R-20

10' RETAINING WALL MAINTENANCE & CONSTRUCTION EASEMENTS AND NO TREE PLANTING ZONE ON BOTH SIDES OF WALL

APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2013

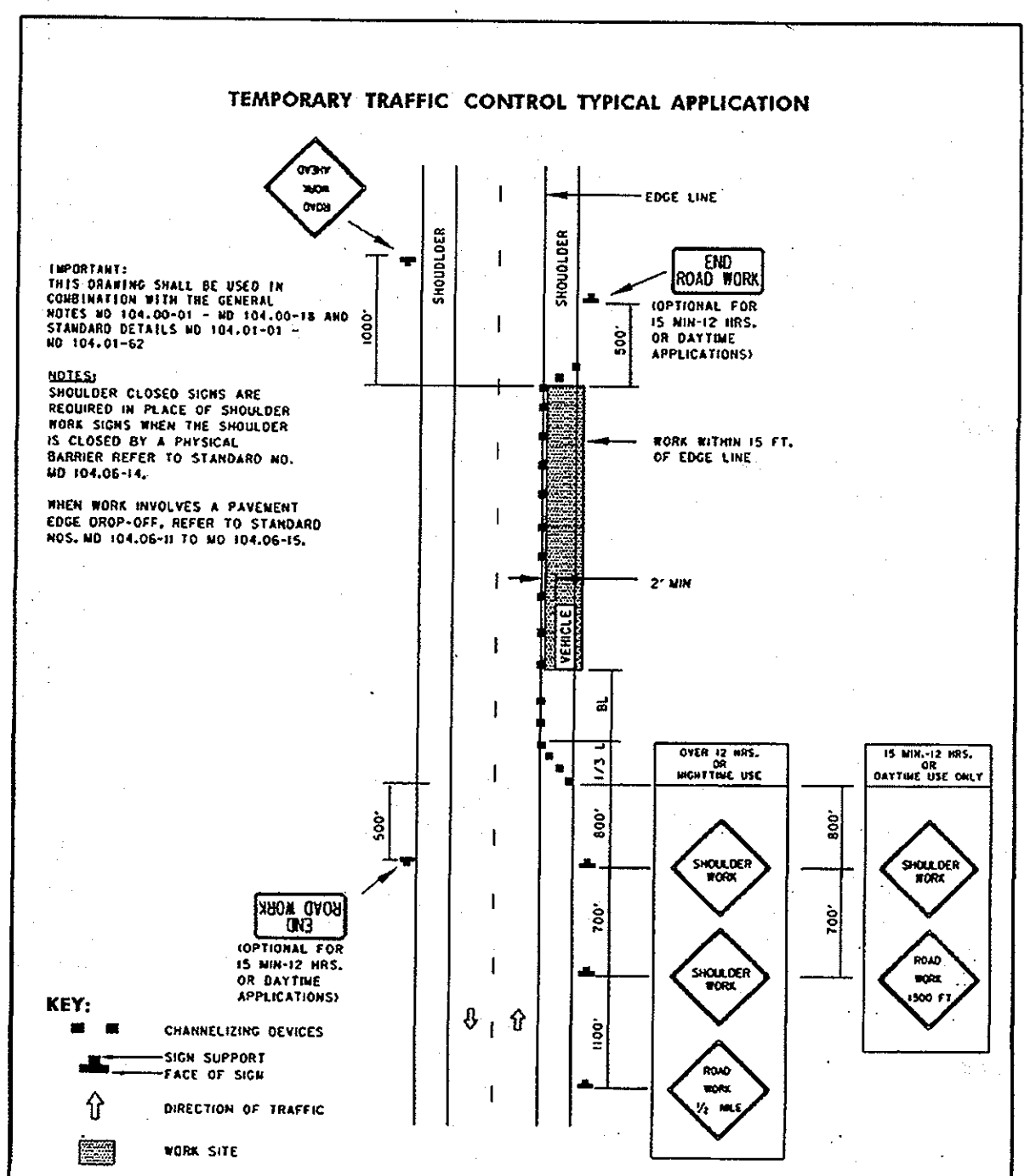


KEY:  
CHANNELIZING DEVICES  
SIGN SUPPORT  
FACE OF SIGN  
DIRECTION OF TRAFFIC  
WORK SITE  
FLAGGER  
FLASGS AND FLASHING WARNING LIGHT STOP SIGN  
ROAD WORK 1/2 MILE  
ROAD WORK 1 MILE

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARDS NO. MD 104.02-01.

NOTE: FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLASGER SIGN.

APPROVED: [Signature]  
DIRECTOR - OFFICE OF TRAFFIC AND SAFETY  
MARYLAND DEPARTMENT OF TRANSPORTATION  
STANDARD NO. MD 104.02-01



KEY:  
CHANNELIZING DEVICES  
SIGN SUPPORT  
FACE OF SIGN  
DIRECTION OF TRAFFIC  
WORK SITE

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARDS NO. MD 104.02-01.

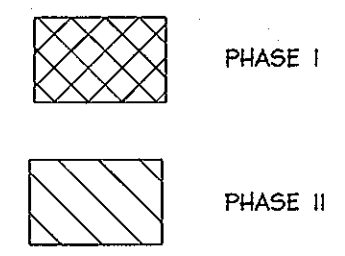
NOTE: WHEN WORK INVOLVES A PARALLEL EDGE DROP-OFF, REFER TO STANDARD NOS. MD 104.06-10 TO MD 104.06-15.

APPROVED: [Signature]  
DIRECTOR - OFFICE OF TRAFFIC AND SAFETY  
MARYLAND DEPARTMENT OF TRANSPORTATION  
STANDARD NO. MD 104.02-01

**GENERAL NOTES:**

- 1) ALL PHASING ON THIS PLAN IS SUGGESTED AND SHALL BE CONFIRMED WITH HOWARD COUNTY DPW-TRAFFIC DIVISION.
- 2) ALL TEMPORARY TRAFFIC CONTROL DEVICES AND METHODS SHALL BE IN ACCORDANCE WITH THE 2003 MUTCD STANDARDS, MD. S.H.A. STANDARDS, AND HOWARD COUNTY DPW STANDARDS.
- 3) IF STEEL PLATES ARE UTILIZED TO TEMPORARILY RESTORE THE ROAD, THEN STEEL PLATE WARNING SIGNS SHALL BE INSTALLED ON ALL APPROACHES.
- 4) FLAGGING OPERATION CAN ONLY BE DONE DURING OFF-PEAK HOURS OF 9 AM TO 3 PM. ROADWAY SHALL BE FULLY RESTORED AT THE END OF EACH WORK DAY.

**LEGEND**



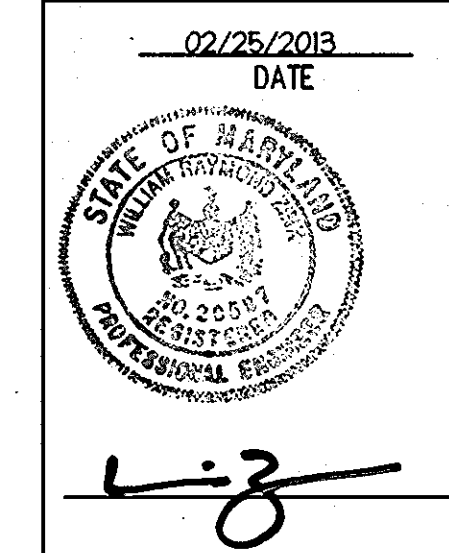
**PHASE I- LANE CLOSURE WORK**

- WESTBOUND FREDERICK ROAD CONNECT PROPOSED 8" WATER TO MAINLINE
- EXTENSION TO CENTERLINE OF FREDERICK ROAD

**PHASE II- LANE CLOSURE WORK**

- EASTBOUND FREDERICK ROAD-EXTEND PROPOSED 8" WATER PAST RIGHT OF WAY.
- FRONTAGE IMPROVEMENTS

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
[Signature]  
WILLIAM R. ZINK, P.E.  
MID LICENSE NUMBER: 20567  
EXPIRATION DATE: 01-26-2014



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

PERMIT INFORMATION CHART  
PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT  
LOT/PARCEL NO.: A  
CENSUS TRACT: 602800  
DEED REF.: L. 10578 F. 424  
GRID NO.: 9  
ZONE: PSC  
TAX MAP: 24  
ELECTION DISTRICT: 02  
WATER CODE: 550 (TG 700)  
SEWER CODE: F07

OWNER / DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAWKHA, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0200

christopher consultants  
engineering - surveying - land planning  
772 Columbia Gateway Blvd. Suite 100 - Columbia, MD 21046-2990  
410-271-9900  
www.christopherconsultants.com

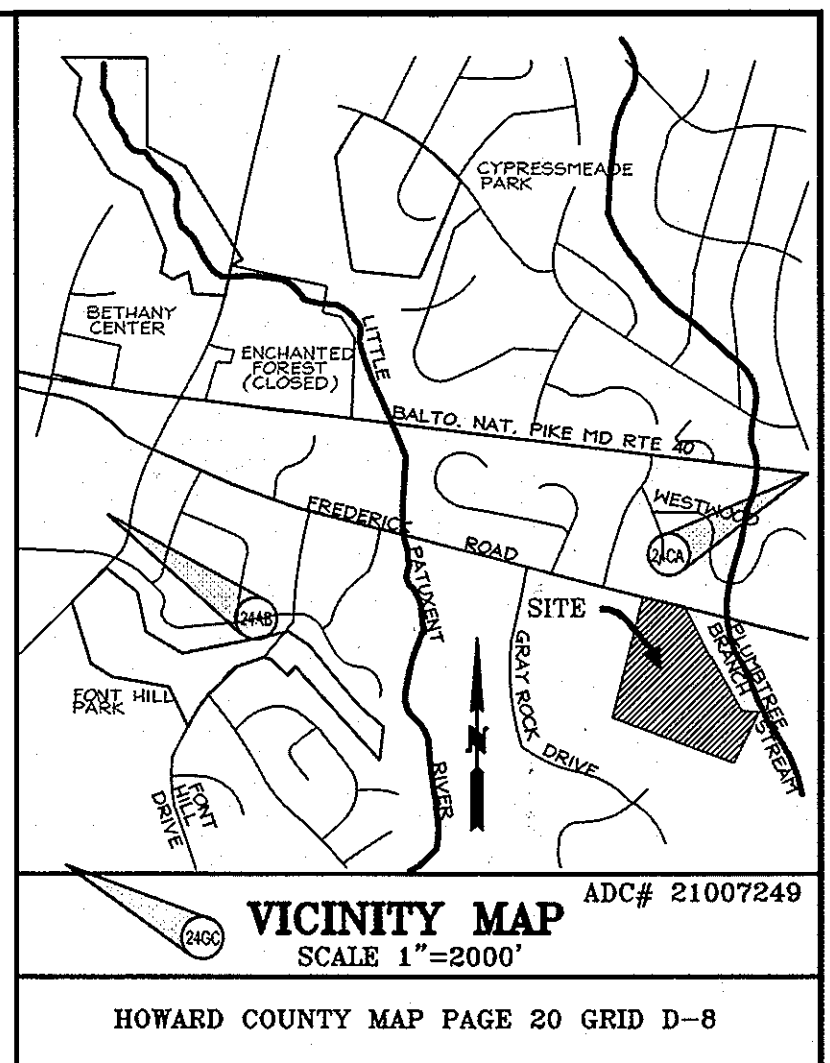
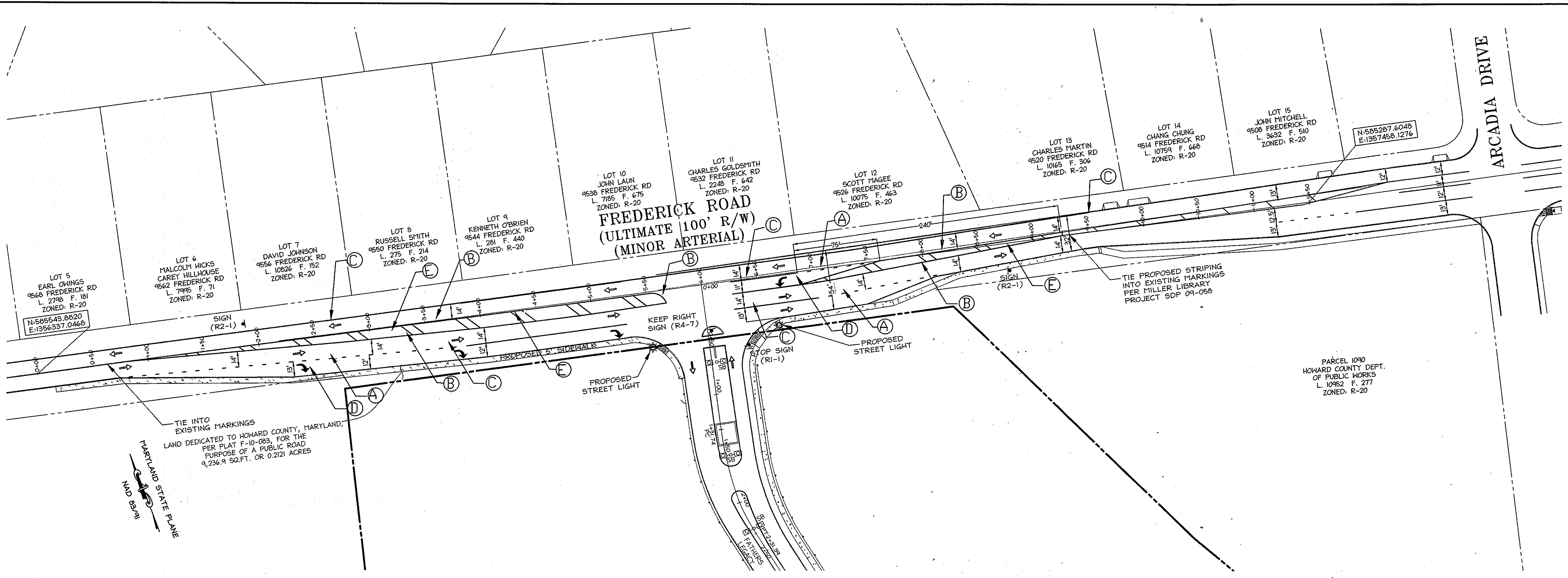
PERMIT INFORMATION CHART  
PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT  
LOT/PARCEL NO.: A  
CENSUS TRACT: 602800  
DEED REF.: L. 10578 F. 424  
GRID NO.: 9  
ZONE: PSC  
TAX MAP: 24  
ELECTION DISTRICT: 02  
WATER CODE: 550 (TG 700)  
SEWER CODE: F07

TITLE: MAINTENANCE OF TRAFFIC PLAN

DESIGN: DAM  
SCALE: 1" = 50'  
PROJECT: 05115.001.02  
DRAWN: DAM  
DATE: APRIL 12, 2013  
CHECKED: ENJ  
APPROVED: WRZ

50 of 77

MDC-192 (SDP)



**SIGNING NOTES:**  
 1. 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 (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.  
 2. ALL SIGN LOCATIONS AND PAVEMENT MARKINGS WITHIN THE PUBLIC RIGHT OF WAY SHALL BE APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION PRIOR TO ANY INSTALLATIONS. (410-313-5752)

**PAVEMENT MARKING NOTE**  
 ANY EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE NEW PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING ONLY. HOWARD COUNTY TRAFFIC WILL DETERMINE IF ANY GRINDING IS NECESSARY (410-313-5752).

WE HAVE ACHIEVED A TAPER LENGTH FOR THE EASTBOUND LANE OF 260'. BOTH THE EAST AND WEST BOUND THROUGH LANES WILL BE 14' WIDE ACROSS THE FRONT OF THE LUTHERAN VILLAGE PROPERTY, ALLOWING ROOM FOR BIKERS. THE 13' ACCELERATION LANE FOR THE LUTHERAN VILLAGE SITE IS 75' LONG WITH AN 86' TAPER AFTER. THE NEW HAND TURN LANE IS 60' LONG WITH A 75' TAPER. A NEW SIDEWALK HAS BEEN LAID OUT THAT PARALLELS THE STREET, AND AVOIDS CONTACT WITH THE EXISTING RETAINING WALL BY 2'. THIS REQUIRED SOME NEW GRADING, BUT NONE OF THE WORK WILL IMPACT THE EXISTING WETLANDS OR FLOODPLAIN OF THE PLUMTREE BRANCH. PEDESTRIANS WILL BE PROTECTED FROM FALLING OVER THE RETAINING WALL BY A PROPOSED FENCE THAT WILL RUN THE LENGTH OF THE SIDEWALK WHERE GRADES ARE GREATER THAN 3:1. AN EXISTING UTILITY POLE WILL HAVE TO BE RELOCATED TO ALLOW FOR THE SIDEWALK TO BE LAID, A GRASS STRIP BETWEEN THE SIDEWALK AND THE CURB HAS BEEN PROVIDED FOR ITS NEW LOCATION.

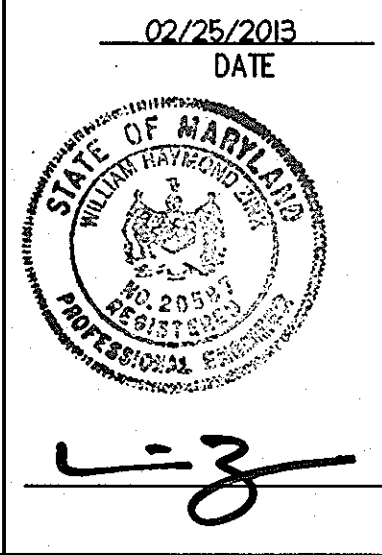
**LEGEND**

- PROPOSED STREET SIGN
- PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- 150 WATT HPS VAPOR MAPLE LAMN ACORN FIXTURES ON A 14' BLACK FIBERGLASS POLE.

**STRIPING LEGEND**

- (A) PAVEMENT LINES 5' BROKEN WHITE LINE
- (B) PAVEMENT LINES 5' DOUBLE YELLOW SOLID
- (C) WHITE SOLID LINE
- (D) TURN LANE USE ARROWS
- (E) 10° YELLOW HATCHED LINES AT 45° ANGLE AND SPACED 40' APART

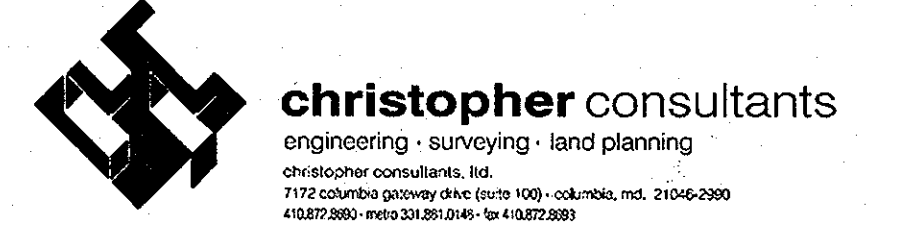
**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER:   
 DATE: 4/12/13  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2014



APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

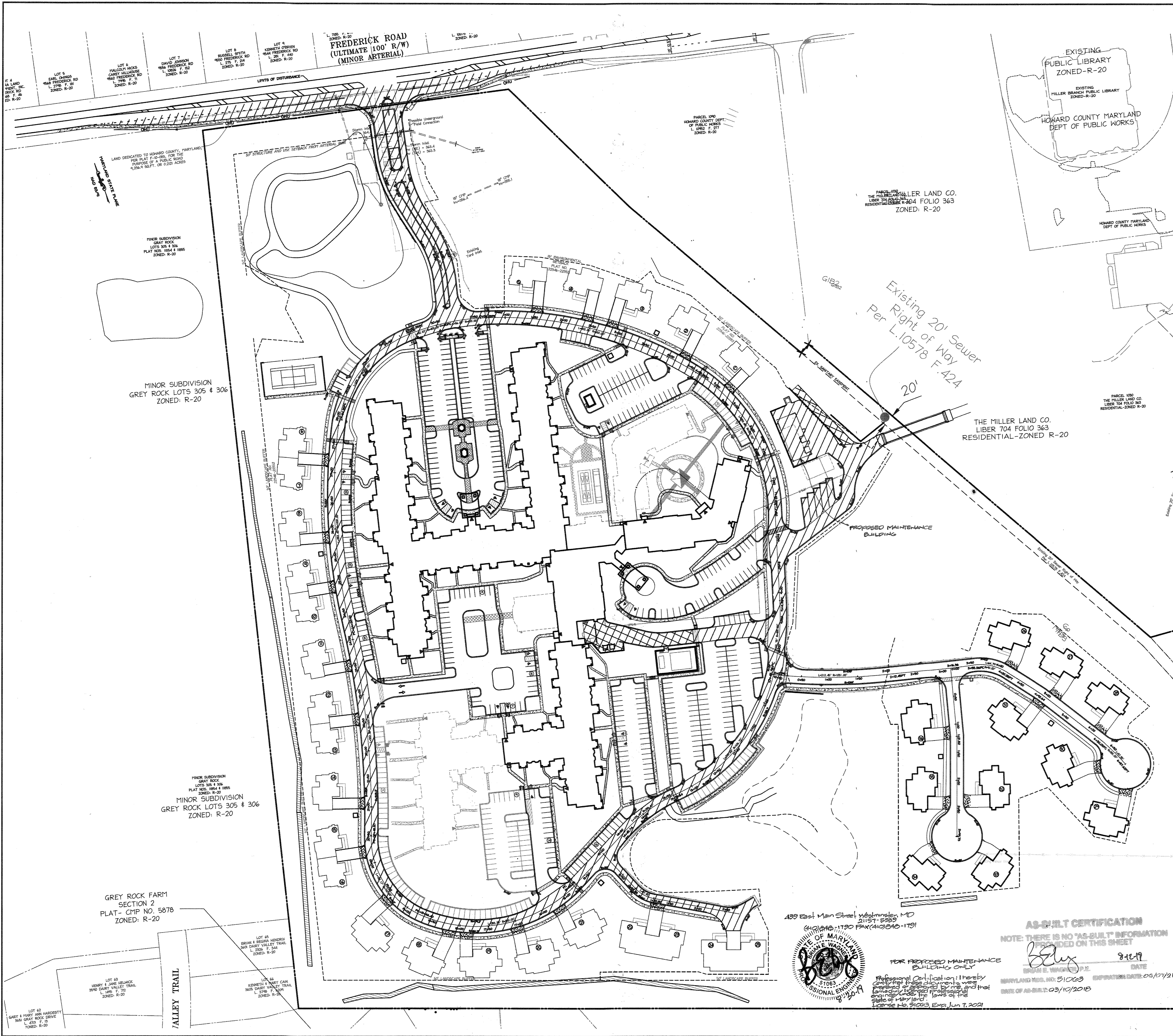
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Date: 4/26/13  
 Chief, Development Engineering Division  
 Date: 4/26/13  
 Chief, Division of Land Development  
 Date: 4/26/13  
 Director

Date: No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: BOB OSWALD, EXECUTIVE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 946-0000

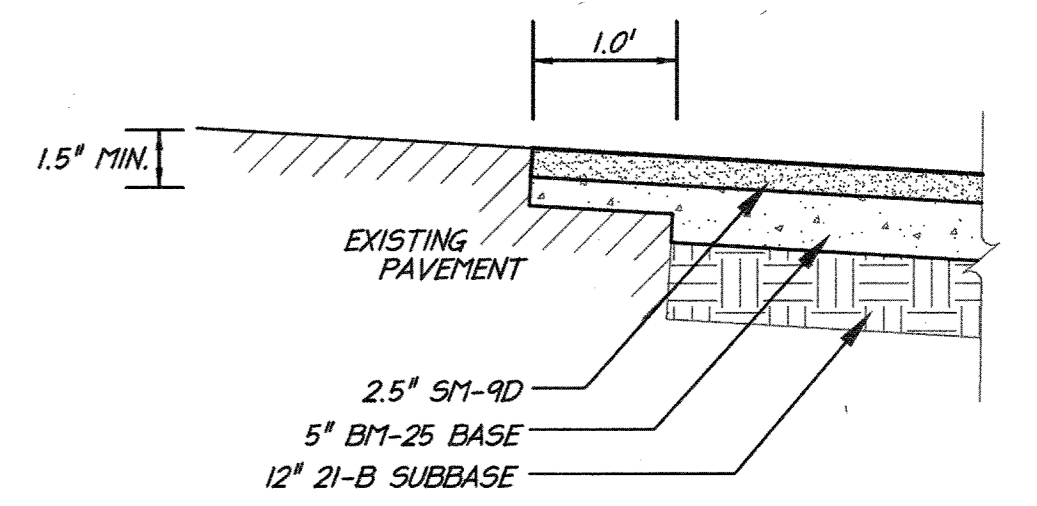
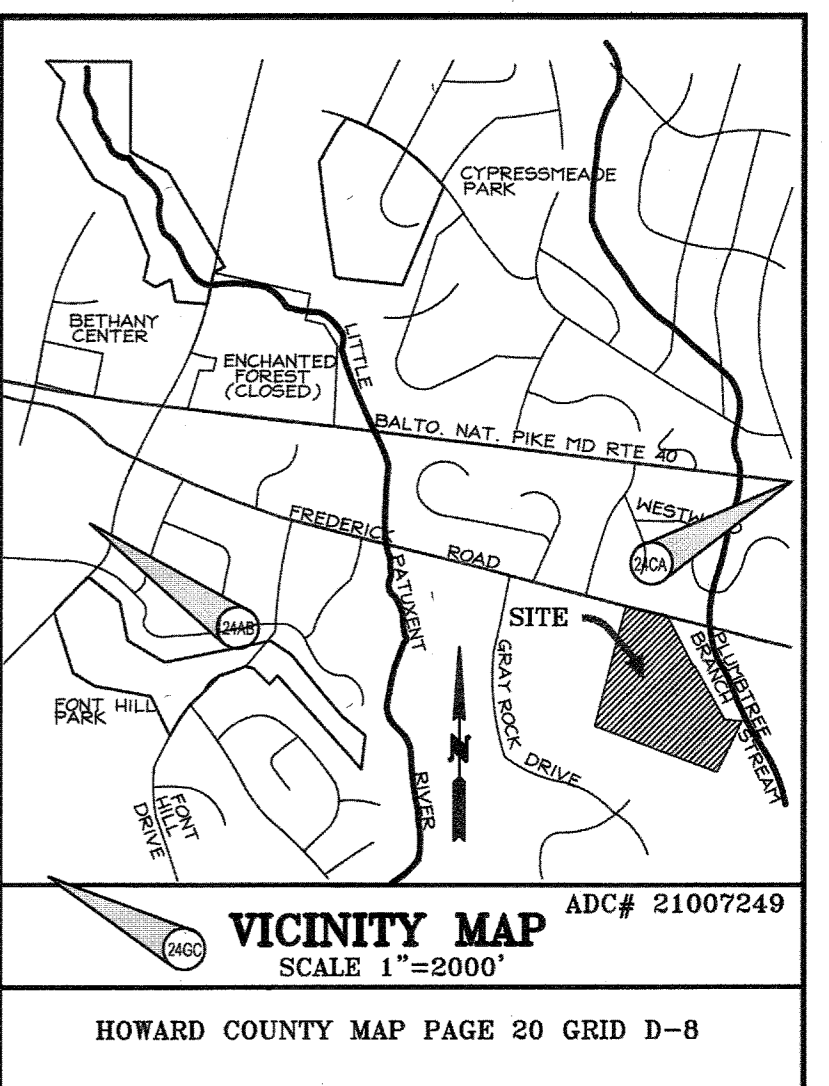
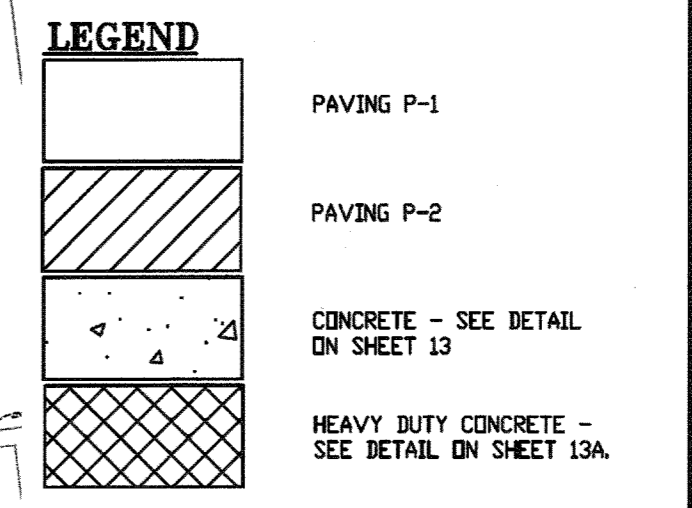


PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE:  
**SIGNING, PAVEMENT MARKINGS AND STREET LIGHTING PLAN**  
 DESIGN: DAM SCALE: 1"=50'  
 DRAWN: DAM DATE: APRIL 12, 2013 PROJECT: 05115.001.02  
 CHECKED: ENJ APPROVED: WRZ  
**51 OF 77**



- NOTES:
1. PRIVATE ROADS WILL BE P-2 PAVING UNLESS OTHERWISE INDICATED.
  2. ALL PROPOSED SIDEWALKS AND DRIVEWAY APRONS TO BE CONCRETE.
  3. PAVING BETWEEN DRIVEWAY APRON AND HOUSE TO BE P-1.
  4. PAVING SECTION BASED ON A CBR OF 3 PER GEOTECHNICAL REPORT. THE CONTRACTOR WILL REVISE THE PAVEMENT DESIGN BASED ON THE FIELD DETERMINED CBR.
  5. SEE SHEET 13 FOR PAVEMENT THICKNESS 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.  
 SIGNATURE OF ENGINEER: [Signature]  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016  
 DATE: 01-05-2015

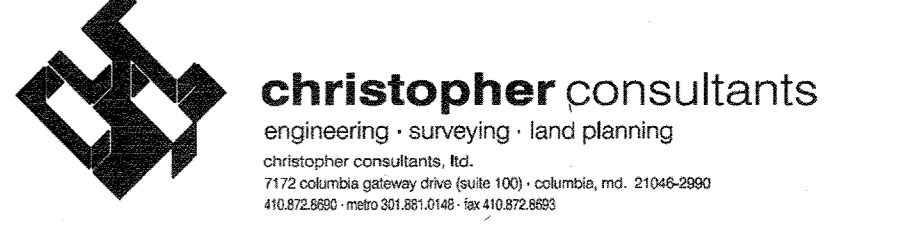
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
Chief, Division of Land Development	Date
Director	Date

APPROVED PLANNING BOARD OF HOWARD COUNTY DATE MARCH 7, 2015

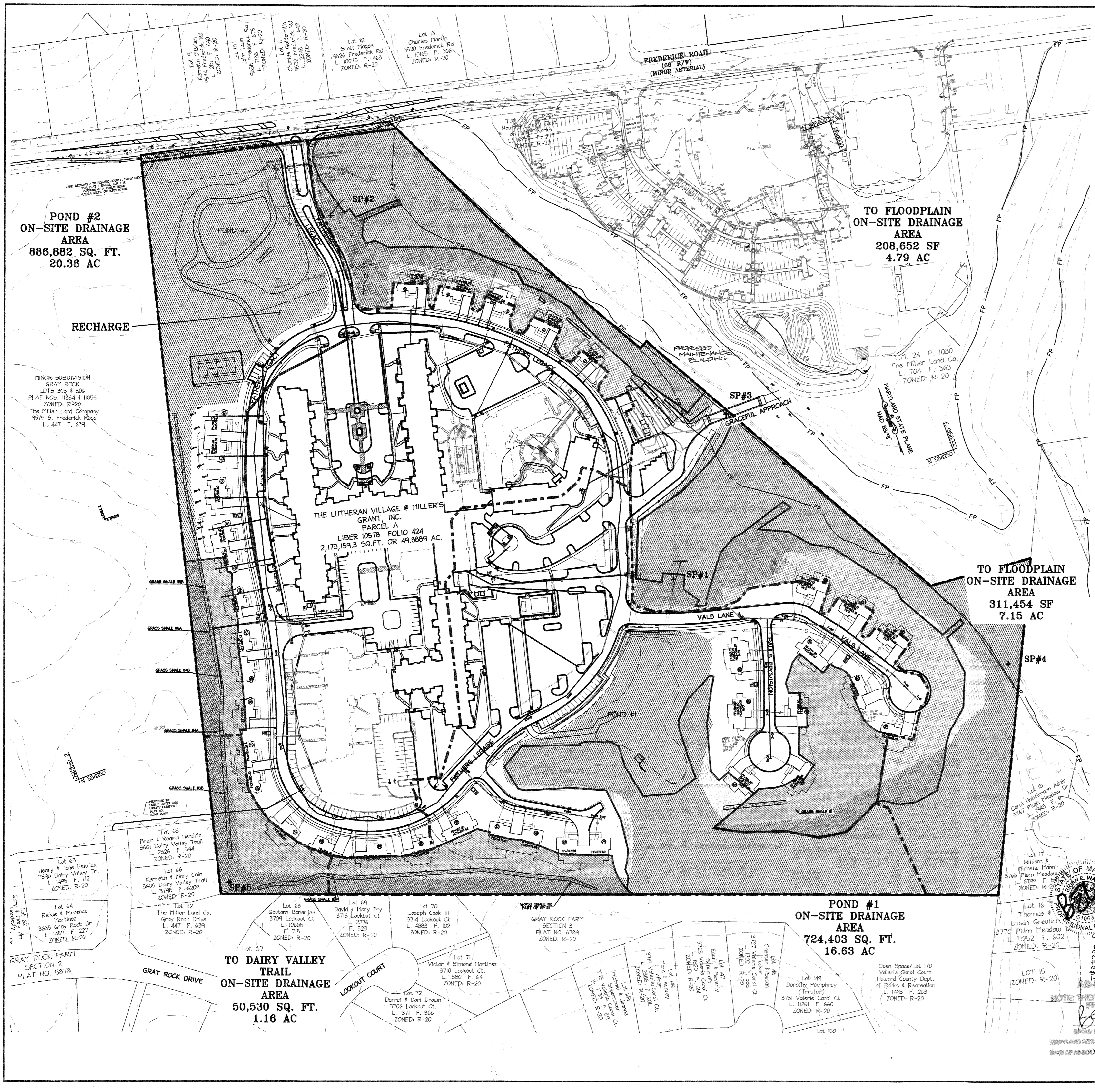
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
----------	----	-------------------------------

Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHIAVACCI, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0060

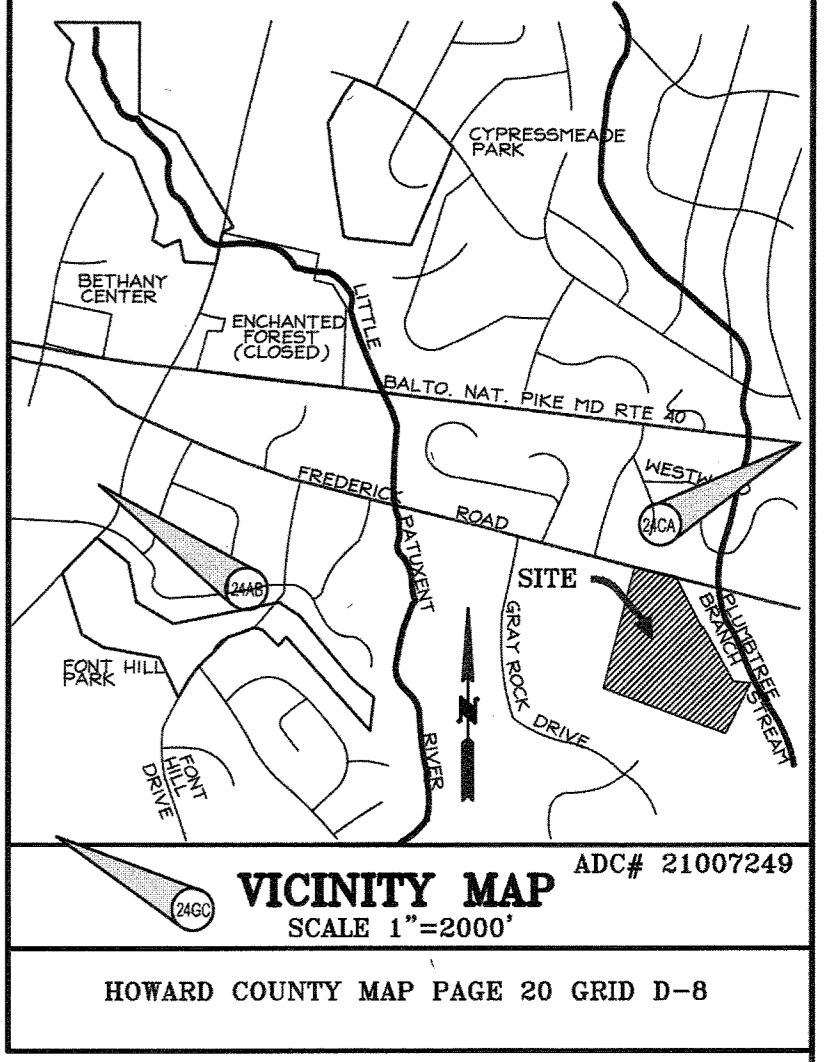


PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)	F07	
TITLE:	<b>PAVEMENT PLAN</b>	
DESIGN: DAM	SCALE: 1"=50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: MRZ	<b>51A OF 77</b>



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: [Signature]  
 WILLIAM R. ZINN, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016  
 DATE: 01-05-2015



Study Point 1	Pond #1
Area (acres)	16.63
Impervious Cover	7.95
RCN	78
Time of Conc.	0.12
Credited Area	1.36
RCN after Credits	76
WQv (act)	0.49
Rev (act)	0.14
Cpv (act)	1.11
Credits:	Conservation Area, Grass Swale
Device:	Pond #1 will provide Cpv and remainder of WQv
As stone reservoir has been provided under the grass swale for Rev	

Study Point 2	Pond #2
Area (acres)	20.36
Impervious Cover	12.30
RCN	81
Time of Conc.	0.10
Credited Area	1.52
RCN after Credits	81
WQv (act)	1.01
Rev (act)	0.23
Cpv (act)	1.79
Credits:	Rooftop Disconnect, Grass Swales
Device:	Pond #2 will provide Cpv and WQv
A Bioretention area will provide the Rev	

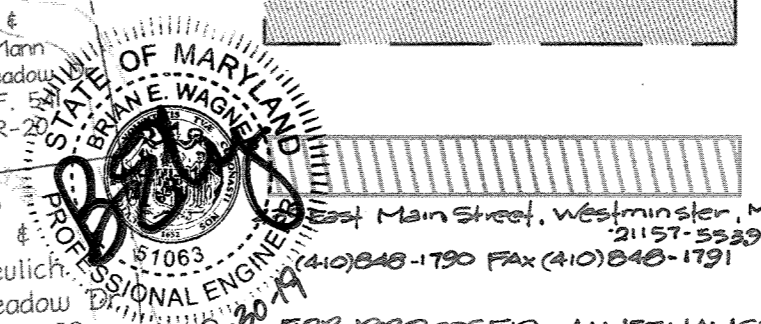
Study Point 3	Eastern Side of the site
Area (acres)	4.79
Impervious Cover	1.88
RCN	80
Time of Conc.	0.10
Credited Area	4.54
RCN after Credits	85
WQv (act) pre Credits	0.15
Rev (act)	0.03
Cpv (cfs)	2.0
Credits:	Conservation Area, Sheetflow to Buffer
95% of the drainage area is treated by Credits	
*No Cpv provided because 1 Yr Cpv < 2.0 cfs	

Study Point 4	South Eastern Side of Site
Area (acres)	7.15
Impervious Cover	2.50
RCN	79
Time of Conc.	0.12
Credited Area	7.15
RCN after Credits	83
WQv (act) pre Credits	0.22
Rev (act)	0.04
Cpv (cfs)	1.9
Credits:	Conservation Area, Sheetflow to Buffer
100% of the drainage area is treated by Credits	
*No Cpv provided because 1 Yr Cpv < 2.0 cfs	

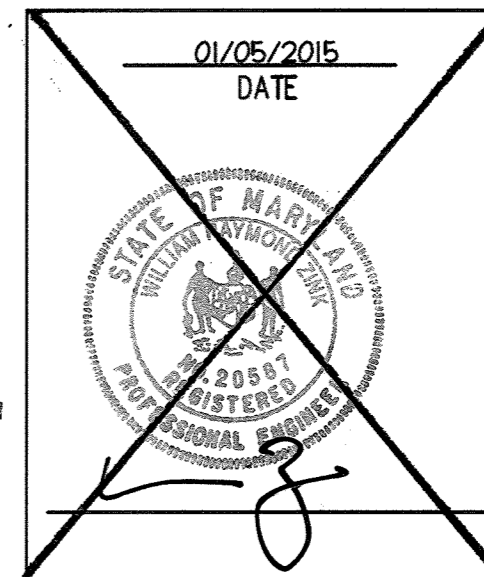
Study Point 5	South Western Corner of Site
Area (acres)	1.16
Impervious Cover	0.41
RCN	75
Time of Conc.	0.10
Credited Area	1.16
RCN after Credits	75
WQv (act) pre Credits	0.04
Rev (act)	0.01
Cpv (cfs)	1.3
Credits:	Grass Channels
100% of the drainage area is treated by Credits	
*No Cpv provided because 1 Yr Cpv < 2.0 cfs	

**NOTE**  
 RECHARGE FOR SP #1 IS PROVIDED UNDER GRASS SWALES. RECHARGE FOR SP #2 IS THE INFILTRATION TRENCH AREA NEXT TO POND #2  
 WATER QUALITY PROVIDED VIA STORMWATER MANAGEMENT CREDITS, FOREBAYS, AND PONDS.  
 GRASS CHANNELS MUST BE 15' AWAY FROM STRUCTURE AND SLOPE IS < 4%  
 REFER TO F-10-083 FOR PRIVATE SWM CREDIT EASEMENTS

- LEGEND**
- ON-SITE DRAINAGE DIVIDE
  - [Hatched Box] CONSERVATION CREDITS
  - [Dotted Box] SHEETFLOW TO BUFFER CREDIT
  - [Horizontal Lines Box] GRASS CHANNEL CREDIT
  - [Vertical Lines Box] CISTERN



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.  
 DATE: 01/05/2015  
 SIGNATURE: [Signature]  
 WILLIAM R. ZINN, P.E.  
 MD LICENSE NO. 20587  
 EXPIRATION DATE: 09/26/2016  
 DATE OF AS-BUILT: 03/11/2016



APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: [Signature] Date: 2-20-15  
 Chief, Division of Land Development: [Signature] Date: 2-26-15  
 Director: [Signature] Date: 2/26/15

01/05/15 01 REVISED SITE DEVELOPMENT PLAN

Date	No.	Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT, C/O DARRELL LUTHERAN VILLAGE, CONTACT: ROY QWAMBA, EX. VICE PRESIDENT, 300 ST. LUKE ORACLE, WESTMINSTER, MD 21158, (410) 948-0080

**christopher consultants**  
 engineering • surveying • land planning  
 christopher consultants, Inc., 1172 Lakeside Gateway Drive, Suite 1031, Columbia, MD 21046-2800, 410.822.8800, mobile 301.581.6141, fax 410.822.8893

PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800

DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02

WATER CODE	SEWER CODE
550 (TG 700)	F07

TITLE: **ONSITE ONLY WQV/REV AREA MAP**

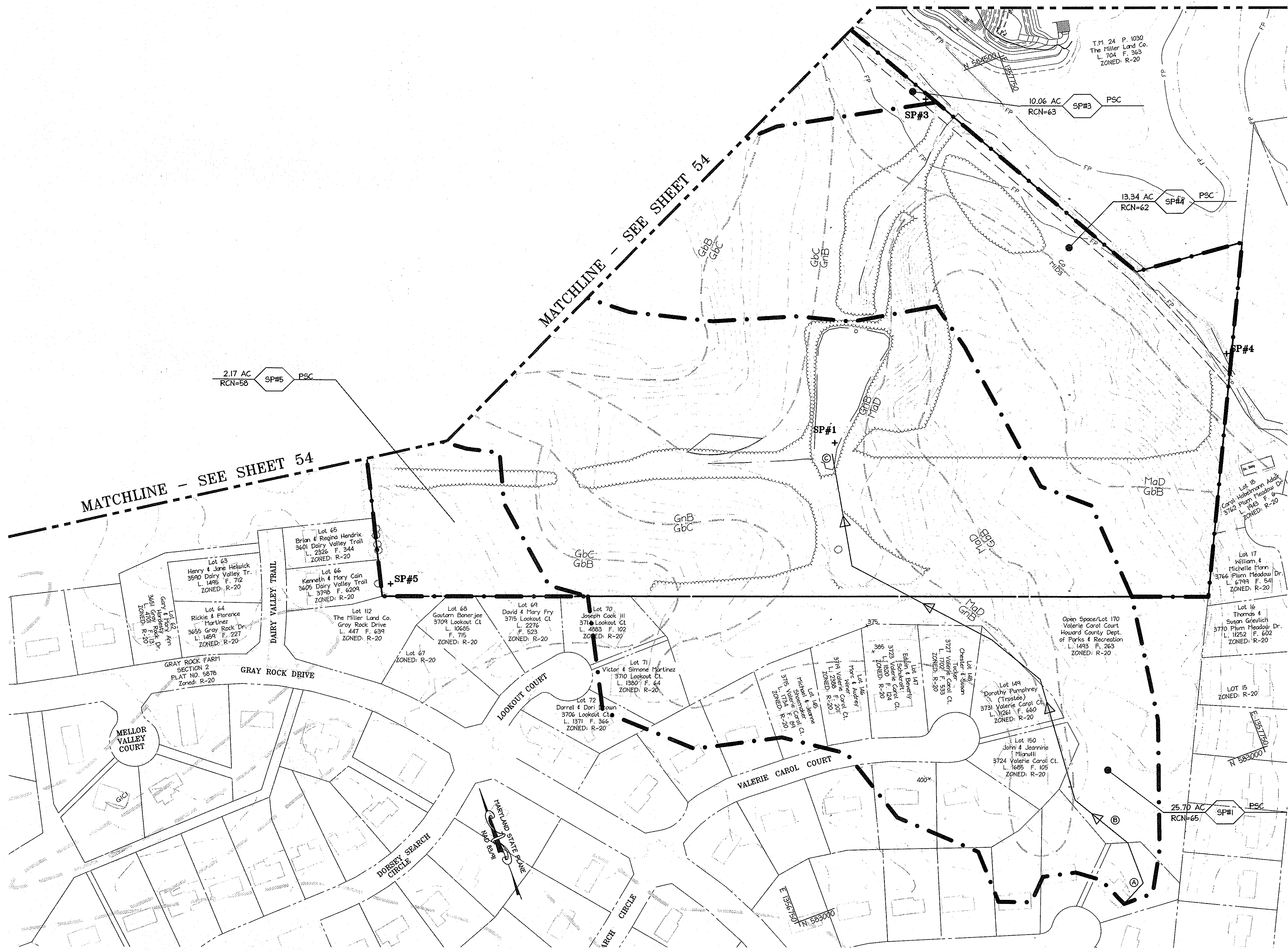
DESIGN:	SCALE:	PROJECT:
DA1	1"=100'	0515.001.02

DRAWN:	DATE:	APPROVED:
DA1	APRIL 12, 2013	MRZ

CHECKED: ENJ APPROVED: MRZ

52 of 77

POND #1		
EXISTING DRAINAGE AREA=27.55		
EXISTING To		
A TO B	SHEET FLOW	L=50' S=3%
B TO C	SHALLOW CONCENTRATION	L=1020' S=4%



**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *W.R. Zink* DATE: 4/12/13  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014

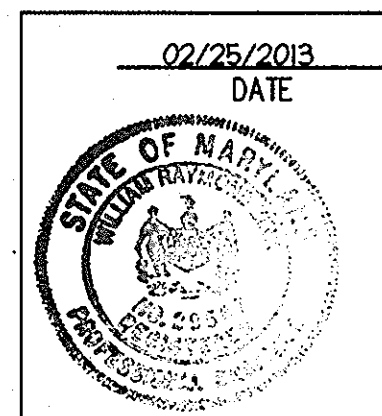
**LEGEND**  
 - - - - - EXISTING DRAINAGE AREA  
 - - - - - EXISTING To PATH

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division NY Date: 4/26/13  
 Chief, Division of Land Development Date: 4/26/13  
 Director Date: 4/26/13

Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY OHAWOZA, EX. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-1000

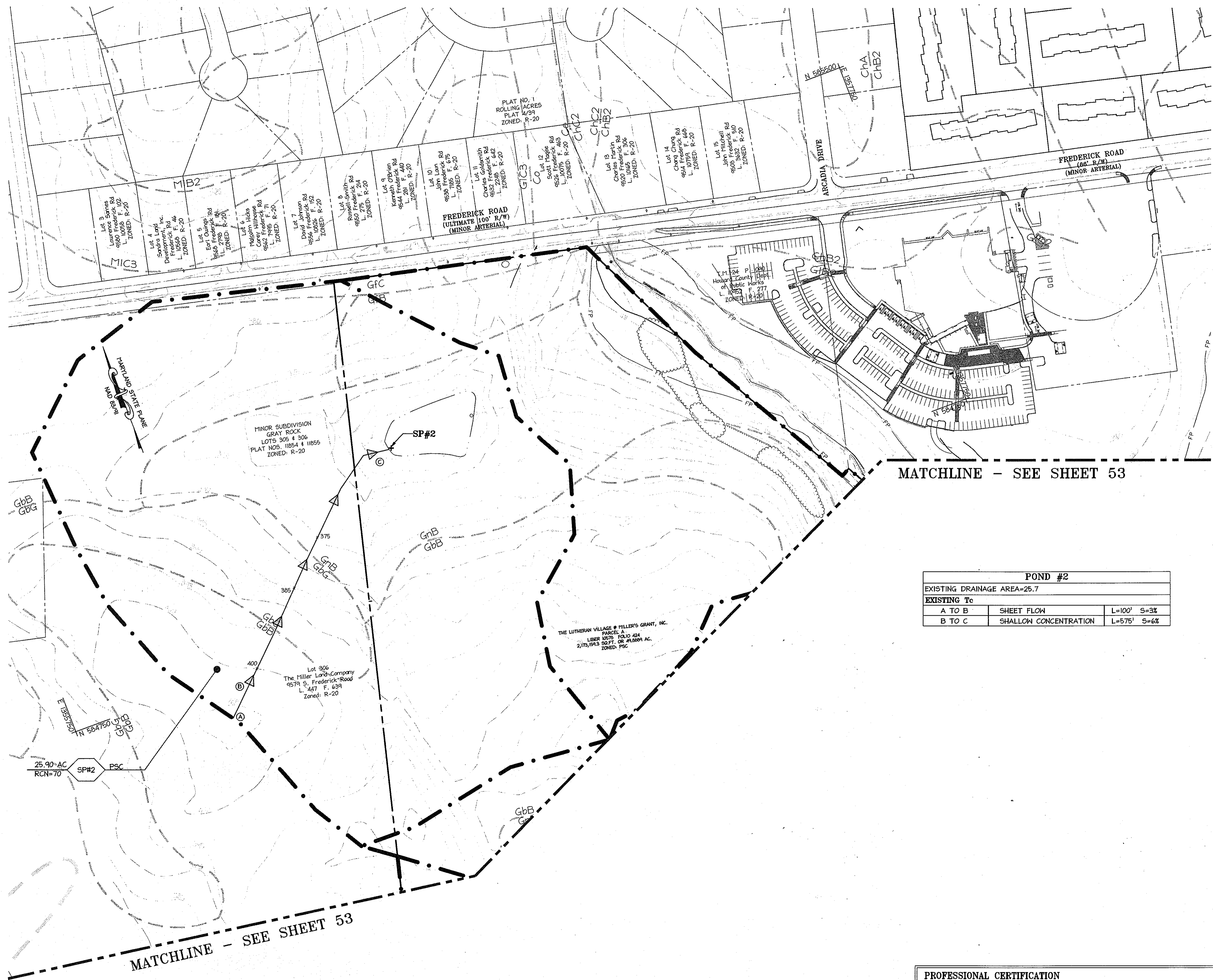
**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7172 oakridge primary drive suite 100 - oakridge, md. 21046-2990  
 410.872.8600 - fax 410.872.8600



PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800		
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07			
TITLE: <b>EXISTING SWM DRAINAGE AREA MAP</b>				
DESIGN: DAF1	SCALE: 1" = 100'	PROJECT: 05115.001.02		
DRAWN: DAF1	DATE: APRIL 12, 2013			
CHECKED: ENJ	APPROVED: NRZ	<b>53 of 77</b>		

MDC-792 (SDP)





**LEGEND**  
 - - - - - EXISTING DRAINAGE AREA  
 ———— EXISTING Tc PATH

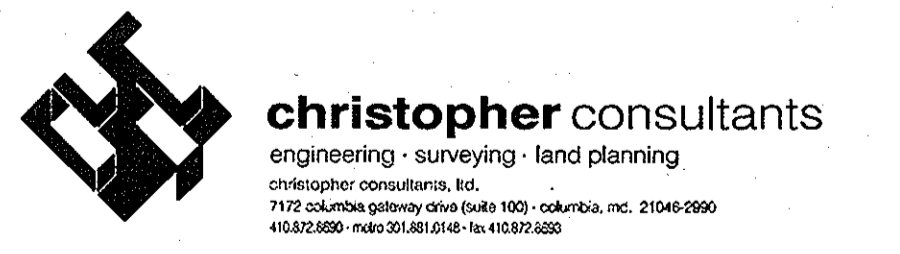
MATCHLINE - SEE SHEET 53

POND #2		
EXISTING DRAINAGE AREA=25.7		
EXISTING Tc		
A TO B	SHEET FLOW	L=100' S=3%
B TO C	SHALLOW CONCENTRATION	L=575' S=6%

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE MARCH 7, 2013

APPROVED DEPARTMENT OF PLANNING AND ZONING  
 Chief Development Engineering Division NY Date 4/26/13  
 Chief, Division of Land Development Date 4/26/13  
 Director Date 4/26/13

Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY GRAWACZ, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0090



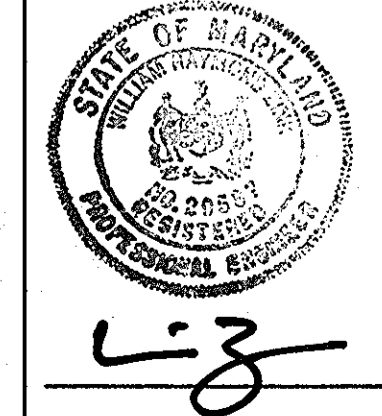
48 Hours  
 Before You Dig  
 Call  
**MISS UTILITY**  
 Service Protection Center  
 1-800-251-7777

MISS UTILITY  
 Service Protection Center  
 1-800-251-7777

PERMIT INFORMATION CHART

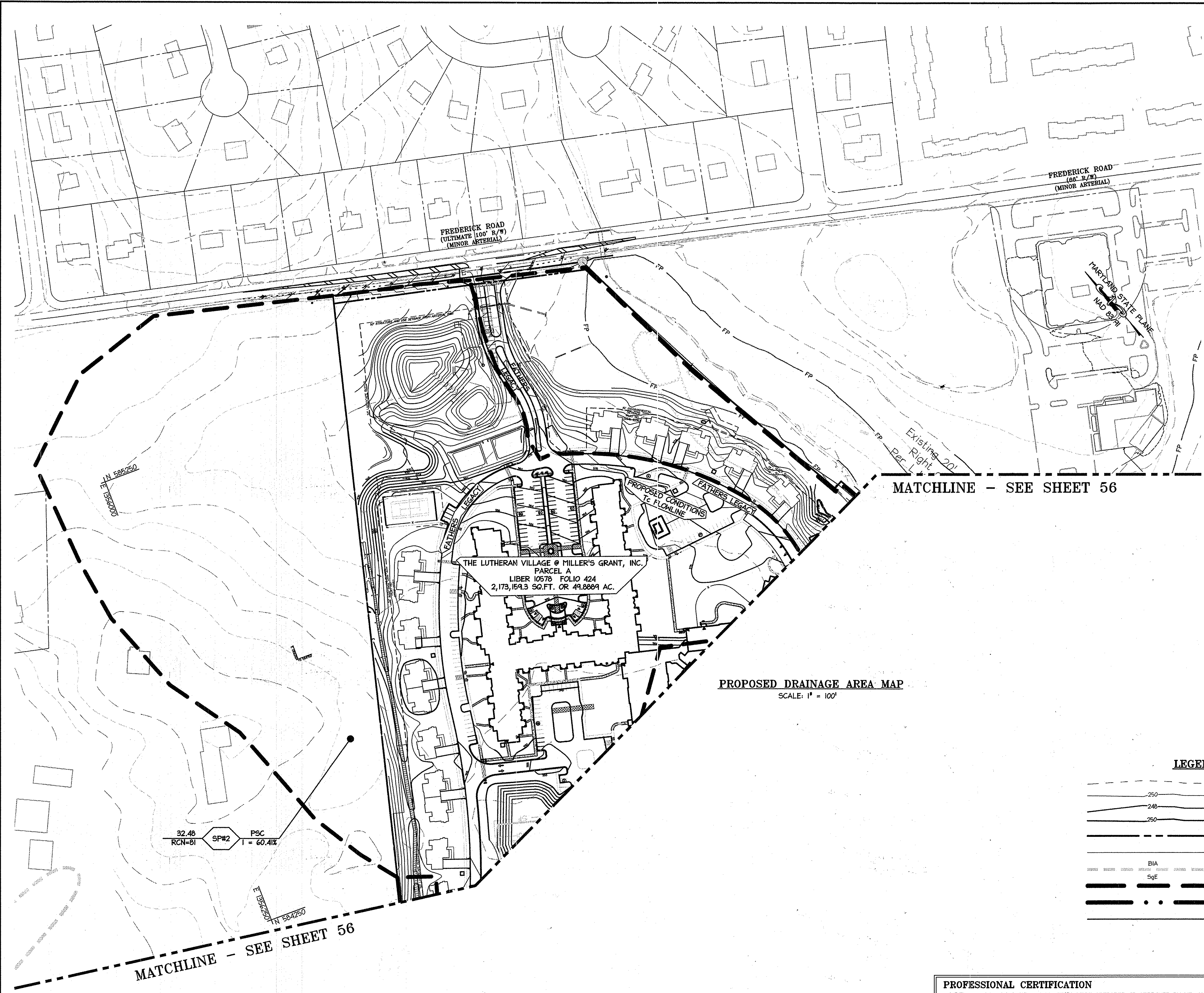
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>EXISTING SWM DRAINAGE AREA MAP FOR CPV</b>		
DESIGN: DAM	SCALE: 1" = 100'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>54</b> OF <b>77</b>

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: [Signature]  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014  
 DATE: 4/24/13



MATCHLINE - SEE SHEET 53

MDC-792 (SDP)



SWM SUMMARY						
STRUCTURE	DRAINAGE AREA	ON-SITE DA	OFF-SITE DA	Tc	RCN	RCN W/ CREDITS
SP#1	27.55	16.63	10.92	0.12	78	76
SP#2	32.48	20.36	12.12	0.1	81	81
SP#3	4.74	4.74	Q <= 2 CFS		80	65
SP#4	7.15	7.15	Q <= 2 CFS		79	63
SP#5	1.16	1.16	Q <= 2 CFS		75	75

MATCHLINE - SEE SHEET 56

**PROPOSED DRAINAGE AREA MAP**  
SCALE: 1" = 100'

**LEGEND**

	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	PROPOSED INTER CONTOUR
	PROPOSED INDEX CONTOUR
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	BIA
	SgE
	PROPOSED DRAINAGE DIVIDE
	EXISTING DRAINAGE DIVIDE
	EXISTING Tc PATH

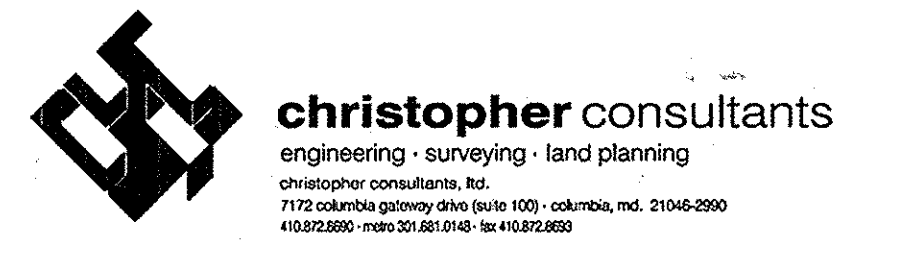
MATCHLINE - SEE SHEET 56

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Date: 2-20-15  
Chief, Development Engineering Division  
Date: 2-26-15  
Chief, Division of Land Development  
Date: 2/24/15  
Director

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CURRIE LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCA, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10678 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	SEWER CODE F07
WATER CODE 550 (TG 700)		

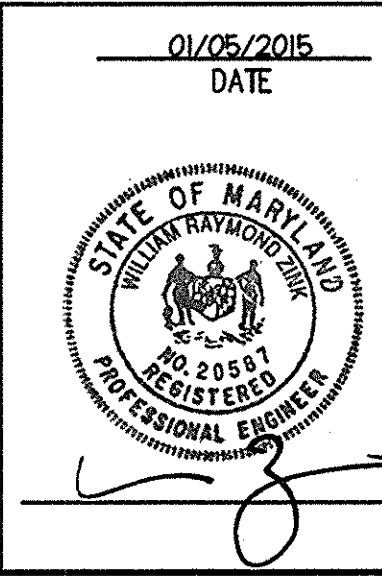
TITLE: **PROPOSED SWM DRAINAGE AREA MAP FOR CPv**

DESIGN: DAM	SCALE: AS SHOWN	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: WRZ	<b>55 OF 77</b>

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

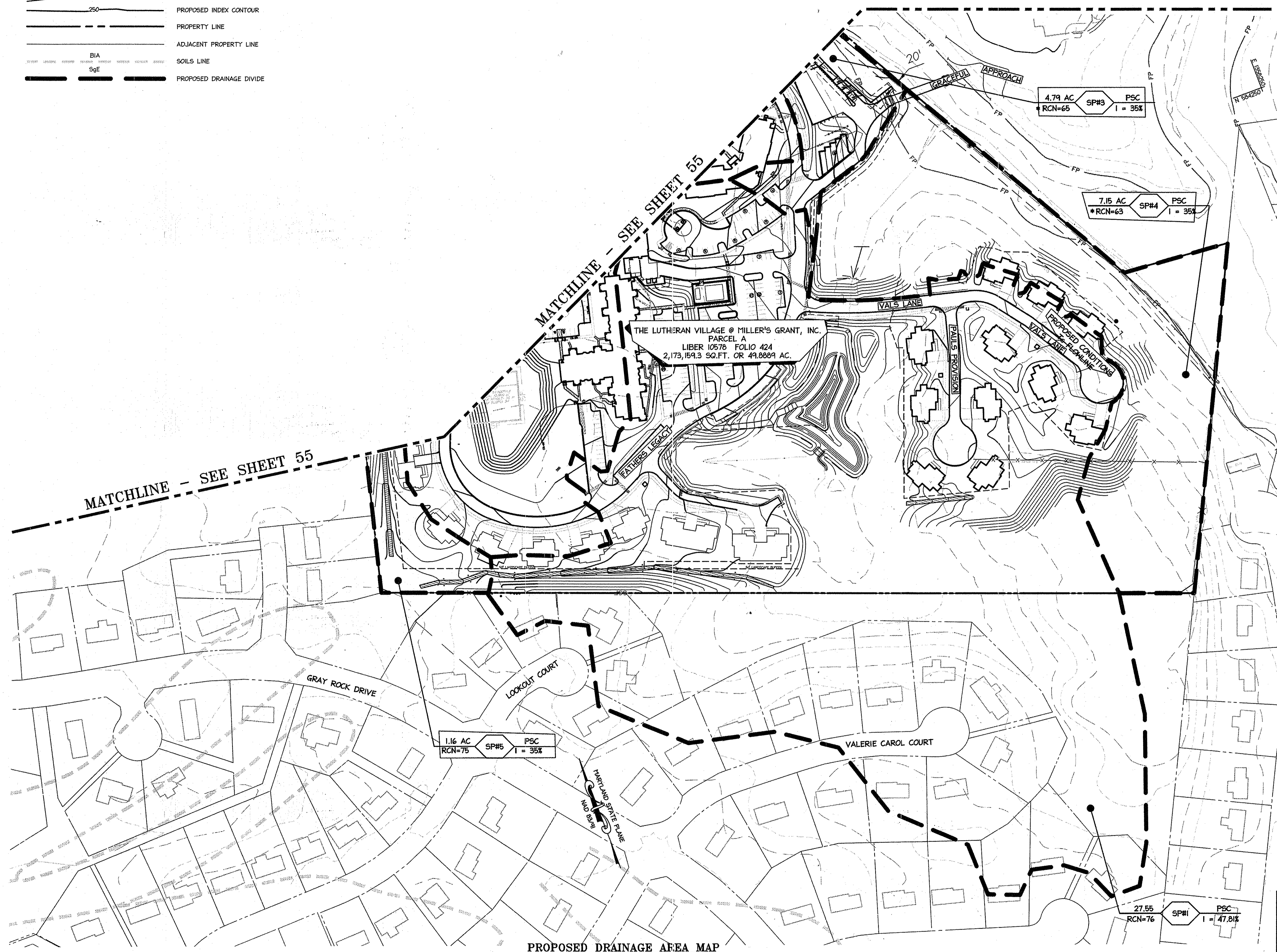
SIGNATURE OF ENGINEER:   
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016

DATE: 01-05-2015



**LEGEND**

- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED INTER CONTOUR
- PROPOSED INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- BIA
- SoE
- SOILS LINE
- PROPOSED DRAINAGE DIVIDE



**PROPOSED DRAINAGE AREA MAP**  
SCALE: 1" = 100'

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2016  
DATE: 01-05-2015

**SWM SUMMARY**

STRUCTURE	DRAINAGE AREA	ON-SITE DA	OFF-SITE DA	Tc	RCN	RCN W/ CREDITS
SP#1	27.55	16.63	10.92	0.12	76	76
SP#2	32.48	20.36	12.12	0.1	81	81
SP#3	4.79	4.79	Q <= 2 CFS		80	65
SP#4	7.15	7.15	Q <= 2 CFS		79	63
SP#5	1.16	1.16	Q <= 2 CFS		75	75

\* RCN IS THE RUNOFF CURVE NUMBER THAT HAS BEEN ADJUSTED

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
  
Chief, Development Engineering Division NY Date: 2-20-15  
  
Chief, Division of Land Development Date: 2-20-15  
Director  
  
Date: 01/05/15 No. 01 REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**  
OWNER/DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACAS, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, inc.  
7172 columbia gateway drive (suite 100) - columbia, md. 21046-2900  
410.272.8800 - fax 410.272.8803

**PERMIT INFORMATION CHART**

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>PROPOSED SWM DRAINAGE AREA MAP FOR CPV</b>		
DESIGN: DAM	SCALE:	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>56 of 77</b>

01/05/2015  
DATE  
  
W. R. Zink

BASIN #1			
EXISTING DRAINAGE AREA=25.75			
PROPOSED DRAINAGE AREA=27.55			
EXISTING Tc			
A TO B	SHEET FLOW	L=50'	S=4%
B TO C	SHALLOW CONCENTRATION	L=1163'	S=2.7%
PROPOSED Tc			
A TO B	SHEET FLOW	L=100'	S=3%
B TO C	SHALLOW CONCENTRATION	L=145'	S=3.1%
C TO D	CHANNEL FLOW	L=517'	V=5 F/S

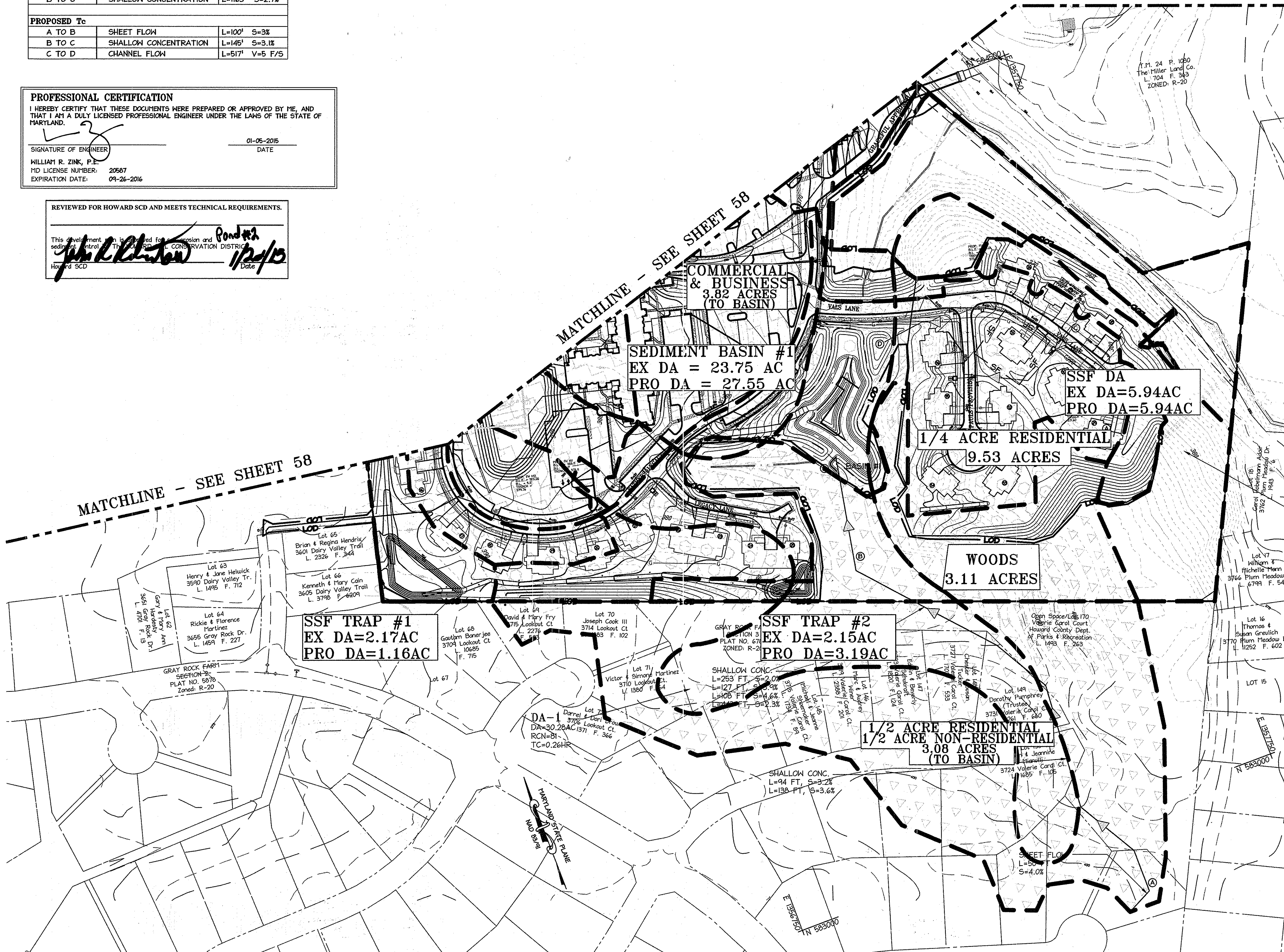
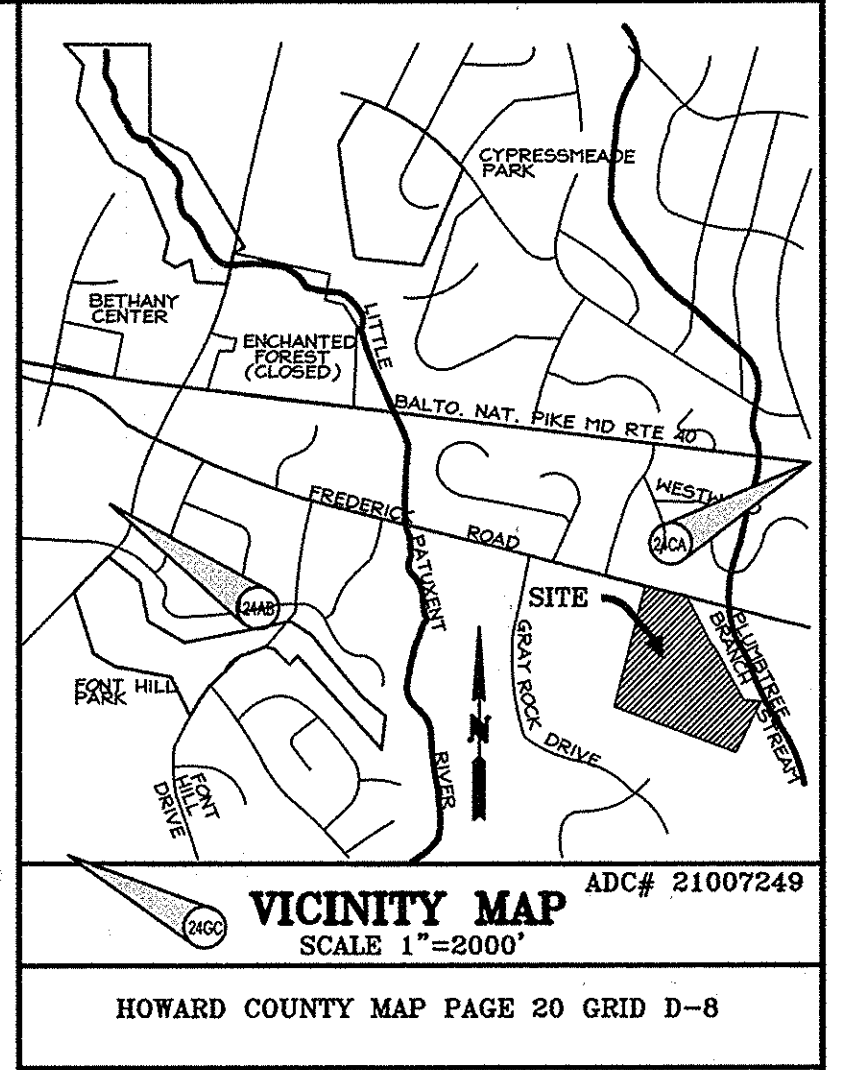
**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

\_\_\_\_\_  
 SIGNATURE OF ENGINEER  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2016

\_\_\_\_\_  
 DATE  
 01-05-2015

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development is intended for erosion and sediment control. The project is located in the Conservation District of Howard SCD.  
 \_\_\_\_\_  
 Date: 1/24/15



**LEGEND**

- EXISTING DRAINAGE AREA
- - - PROPOSED DRAINAGE AREA
- - - LOD
- EXISTING Tc PATH
- - - PROPOSED Tc PATH
- [Hatched Box] 1/2 ACRE RESIDENTIAL LAND USE AREA
- [Dotted Box] 1/4 ACRE RESIDENTIAL LAND USE AREA
- [Cross-hatched Box] COMMERCIAL & BUSINESS LAND USE AREA
- [Stippled Box] WOODS LAND USE AREA

**NOTE:**  
 BASIN #1  
 WOODS = 3.11 AC  
 OFFSITE RESIDENTIAL = 3.08 AC  
 NEARLY GRADED INCLUDES  
 COMMERCIAL  
 1/2 AND 1/4 ONSITE = 21.36 AC.  
 TOTAL = 27.55 AC.

APPROVED  
 PLANNING BOARD OF HOWARD COUNTY  
 DATE MARCH 7, 2015

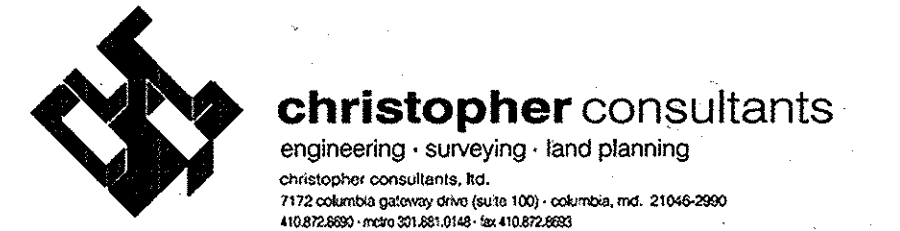
APPROVED DEPARTMENT OF PLANNING AND ZONING	
_____ Chief, Development Engineering Division	Date 2-20-15
_____ Chief, Division of Land Development	Date 7-24-15
_____ Director	Date 2/24/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**

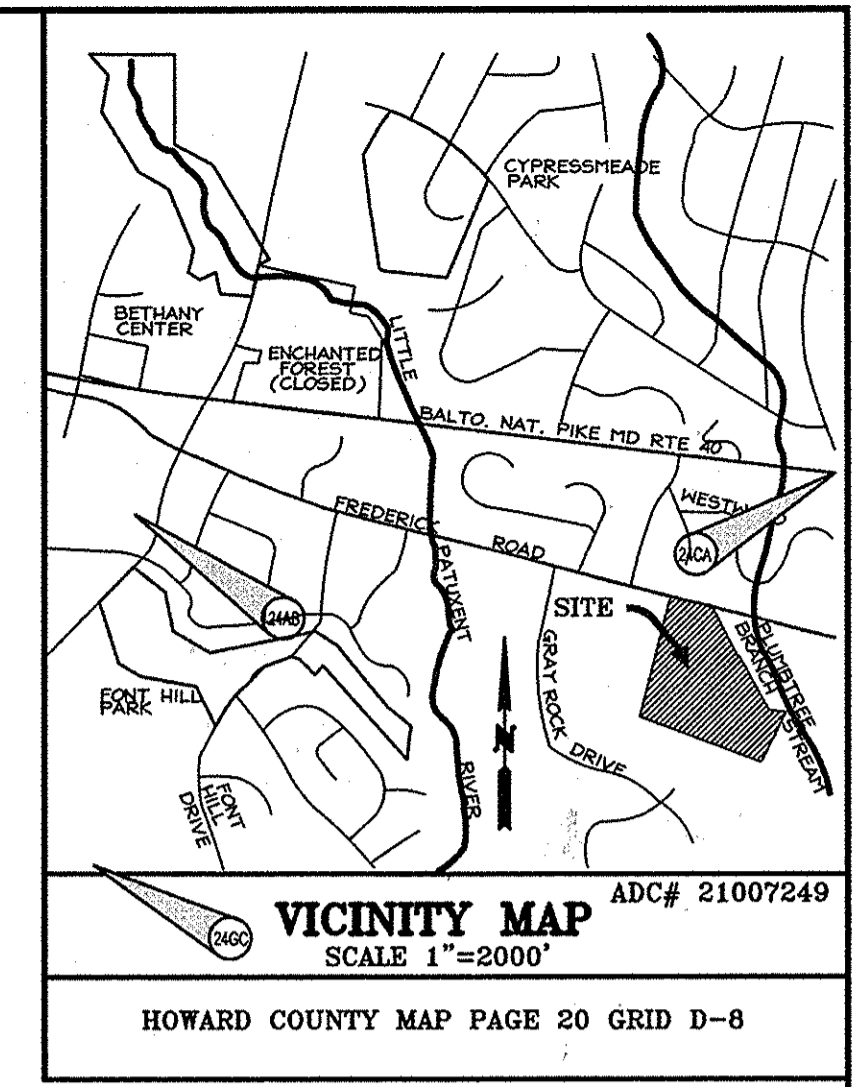
OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: BOB SHAWKES, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER MD 21158  
 (410) 946-0090



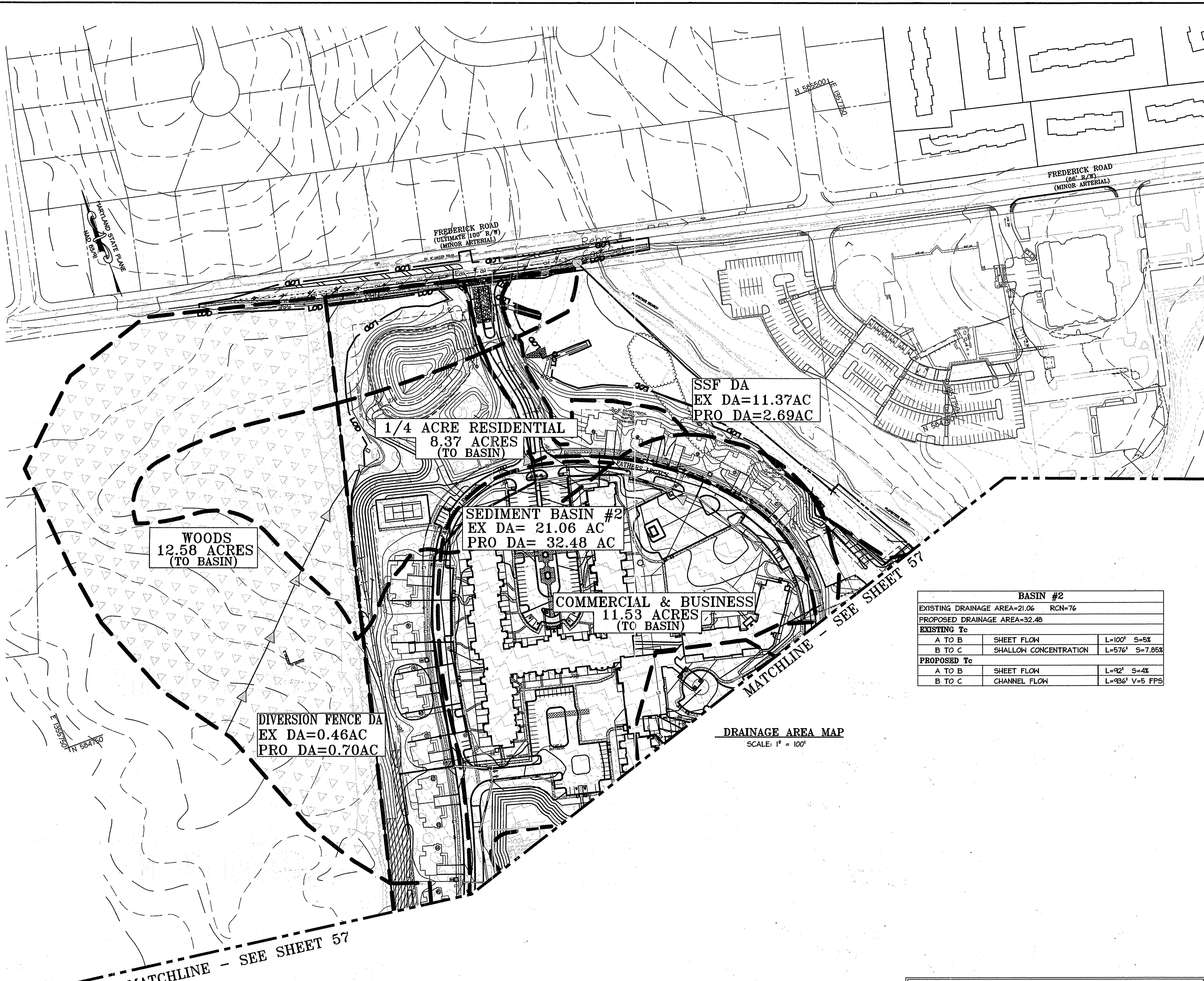
PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800		
DEED REF. L 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07			
TITLE: EXISTING AND PROPOSED DRAINAGE AREA MAP FOR SEDIMENT CONTROL				
DESIGN: DAM	SCALE: 1" = 100'	PROJECT: 0515.001.02		
DRAWN: DAM	DATE: APRIL 12, 2015			
CHECKED: ENJ	APPROVED: MRZ	57 of 77		



**DRAINAGE AREA MAP**  
 SCALE: 1" = 100'



- LEGEND**
- EXISTING DRAINAGE AREA
  - PROPOSED DRAINAGE AREA
  - EXISTING / PROPOSED Tc PATH
  - PROPOSED Tc PATH
  - 1/2 ACRE RESIDENTIAL LAND USE AREA
  - 1/4 ACRE RESIDENTIAL LAND USE AREA
  - COMMERCIAL & BUSINESS LAND USE AREA
  - WOODS LAND USE AREA



BASIN #2			
EXISTING DRAINAGE AREA=21.06 RCN=76			
PROPOSED DRAINAGE AREA=32.48			
EXISTING Tc			
A TO B	SHEET FLOW	L=100'	S=5%
B TO C	SHALLOW CONCENTRATION	L=576'	S=7.85%
PROPOSED Tc			
A TO B	SHEET FLOW	L=92'	S=4%
B TO C	CHANNEL FLOW	L=936'	V=5 FPS

**DRAINAGE AREA MAP**  
SCALE: 1" = 100'

APPROVED  
PLANNING BOARD OF HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* Chief, Development Engineering Division Date 2/20/15

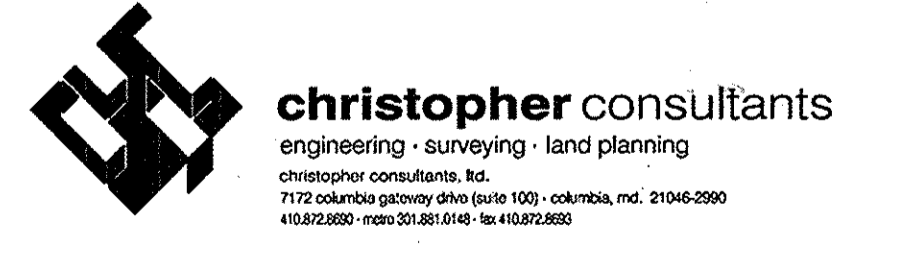
*[Signature]* Chief, Division of Land Development Date 2/24/15

*[Signature]* Director Date 2/24/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORNABACH, EX. VICE PRESIDENT  
300 ST LUKA CIRCLE  
WESTMINSTER MD 21158  
(410) 848-0090



PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF. L. 10578 F. 424	GRID NO. 9 ZONE PSC	TAX MAP 24 ELECTION DISTRICT 02
WATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>EXISTING AND PROPOSED DRAINAGE AREA MAP FOR SEDIMENT CONTROL</b>		
DESIGN: DAM	SCALE: 1" = 100'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>58</b> OF <b>77</b>

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is intended to be used for sediment control by the HOWARD COUNTY SUPERVISION DISTRICT.

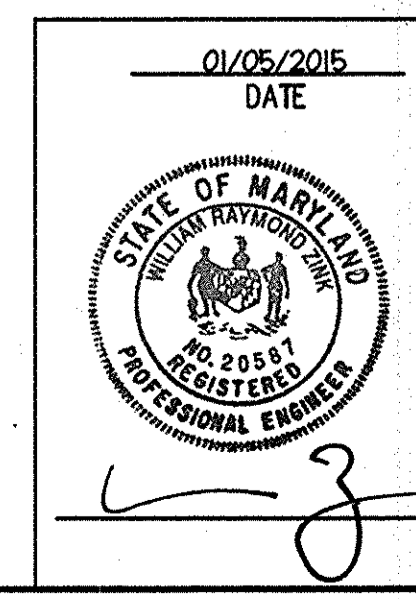
*[Signature]* 1/20/15  
Howards SCD

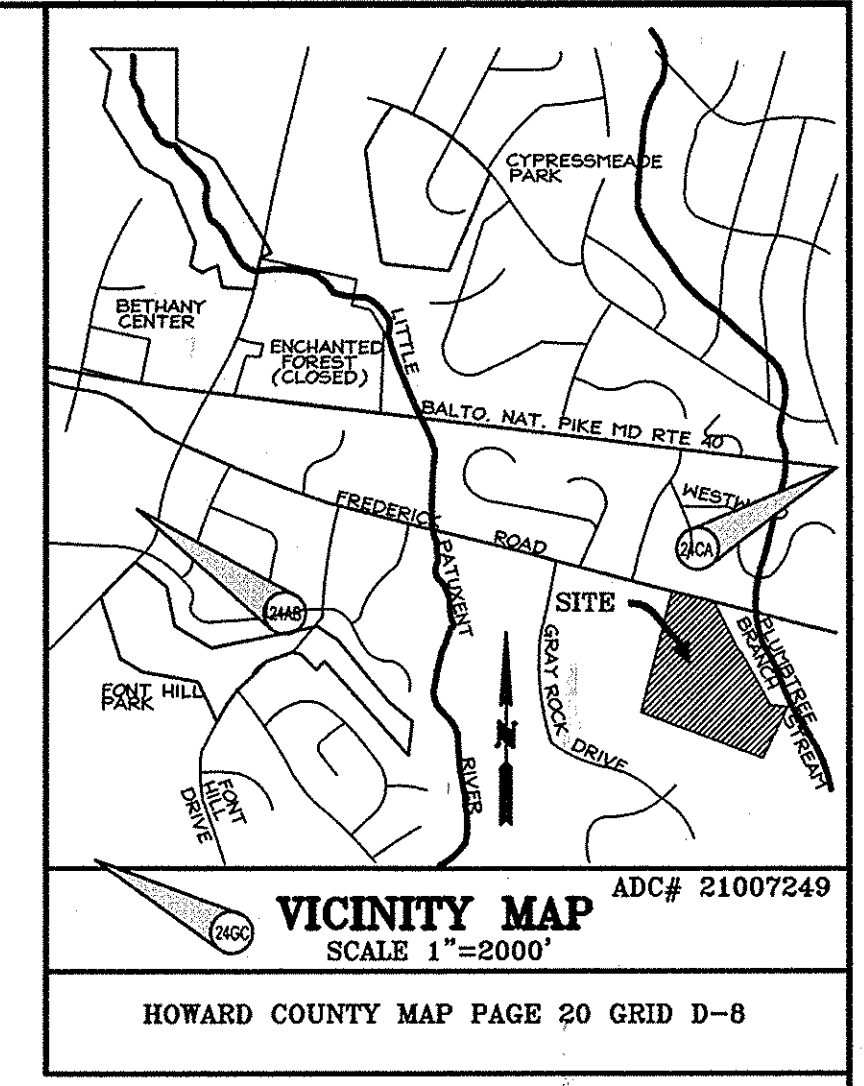
**PROFESSIONAL CERTIFICATION**

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

*[Signature]* 01-05-2015  
SIGNATURE OF ENGINEER DATE

WILLIAM R. ZINN, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016





Miss Utility  
Service Protection Center  
CALL TOLL FREE  
1-800-257-7777

**LEGEND**

	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	PROPOSED INTER CONTOUR
	PROPOSED INDEX CONTOUR
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING STORMDRAIN
	EXISTING CURBLINE
	EXISTING TREELINE
	PROPOSED STORM DRAIN
	PROPOSED WATERLINE
	PROPOSED SANITARY LINE
	PROPOSED DRAINAGE DIVIDE
	DRAINAGE AREA DESIGNATION

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	Chief, Development Engineering Division	Date	2-20-15
<i>[Signature]</i>	Chief, Division of Land Development	Date	2-26-15
<i>[Signature]</i>	Director	Date	2/26/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: BOY ORAVACCI, EX. VICE PRESIDENT  
300 ST LIME CIRCLE  
WESTMINSTER MD 21158  
(410) 848-0090

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, Inc.  
1772 columbian gateway drive suite 1001 - coltsville, md. 21046-2900  
410.872.8800 - fax 410.872.8803

PERMIT INFORMATION CHART

PROJECT NAME	LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO.	A	CENSUS TRACT	602800
DEED REF.	L. 10578 F. 424	GRID NO.	9	TAX MAP	24
WATER CODE	550 (TG 700)	ZONE	PSC	ELECTION DISTRICT	02
TITLE:			SEWER CODE F07		

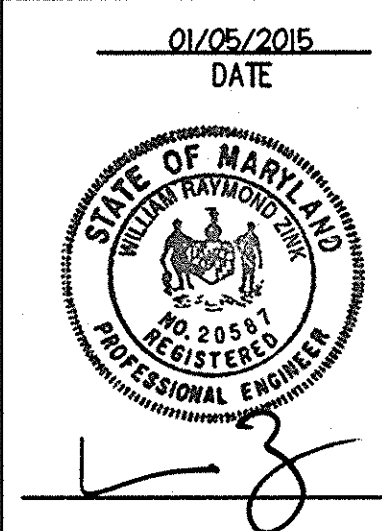
DESIGN: DAM	SCALE: 1"=50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	59 of 77

**PROFESSIONAL CERTIFICATION**  
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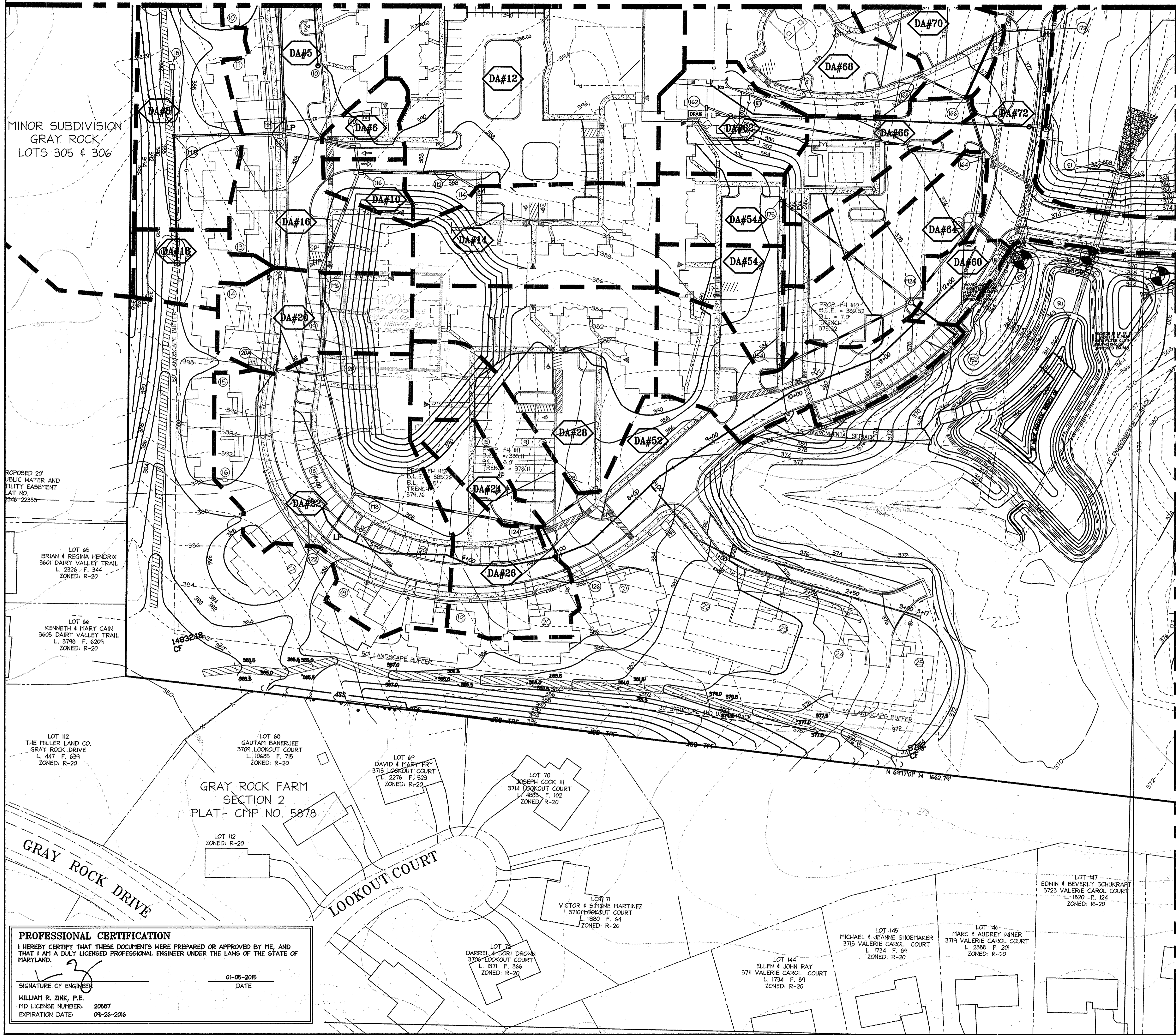
*[Signature]*  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 04-26-2016

01-05-2015  
DATE

MATCHLINE - SEE SHEET 60 FOR CONTINUATION



MATCHLINE - SEE SHEET 59 FOR CONTINUATION



**LEGEND**

- - - - - EXISTING INTER CONTOUR
- - - - - EXISTING INDEX CONTOUR
- - - - - PROPOSED INTER CONTOUR
- - - - - PROPOSED INDEX CONTOUR
- — — — — PROPERTY LINE
- — — — — ADJACENT PROPERTY LINE
- - - - - EXISTING STORMDRAIN
- - - - - EXISTING CURBLINE
- - - - - EXISTING TREELINE
- - - - - PROPOSED STORM DRAIN
- - - - - PROPOSED WATERLINE
- - - - - PROPOSED SANITARY LINE
- - - - - PROPOSED DRAINAGE DIVIDE
- DA#64
- - - - - DRAINAGE AREA DESIGNATION

**VICINITY MAP**  
 ADC# 21007249  
 SCALE 1"=2000'  
 HOWARD COUNTY MAP PAGE 20 GRID D-8

MINOR SUBDIVISION  
 GRAY ROCK  
 LOTS 305 & 306

PROPOSED 20'  
 PUBLIC WATER AND  
 UTILITY EASEMENT  
 AT NO.  
 2946-22353

LOT 65  
 BRIAN & REGINA HENDRIX  
 3601 DAIRY VALLEY TRAIL  
 L. 2326 F. 344  
 ZONED: R-20

LOT 66  
 KENNETH & MARY CAIN  
 3605 DAIRY VALLEY TRAIL  
 L. 3718 F. 6204  
 ZONED: R-20

LOT 112  
 THE MILLER LAND CO.  
 GRAY ROCK DRIVE  
 L. 447 F. 634  
 ZONED: R-20

GRAY ROCK FARM  
 SECTION 2  
 PLAT- CMP NO. 5878

LOT 112  
 ZONED: R-20

LOT 69  
 GAUTAM BANERJEE  
 3709 LOOKOUT COURT  
 L. 1625 F. 716  
 ZONED: R-20

LOT 69  
 DAVID & MARY FRY  
 3715 LOOKOUT COURT  
 L. 2276 F. 523  
 ZONED: R-20

LOT 70  
 JOSEPH COOK III  
 3714 LOOKOUT COURT  
 L. 4828 F. 102  
 ZONED: R-20

LOT 71  
 VICTOR & SIMONE MARTINEZ  
 3710 LOOKOUT COURT  
 L. 1890 F. 64  
 ZONED: R-20

LOT 72  
 DARREL & DORI DROWN  
 3706 LOOKOUT COURT  
 L. 1871 F. 366  
 ZONED: R-20

LOT 144  
 ELLEN & JOHN RAY  
 3711 VALERIE CAROL COURT  
 L. 1734 F. 84  
 ZONED: R-20

LOT 145  
 MICHAEL & JEANNE SHOEMAKER  
 3715 VALERIE CAROL COURT  
 L. 1734 F. 84  
 ZONED: R-20

LOT 146  
 MARC & AUDREY MINER  
 3719 VALERIE CAROL COURT  
 L. 2388 F. 201  
 ZONED: R-20

LOT 147  
 EDWIN & BEVERLY SCHUKRAFT  
 3723 VALERIE CAROL COURT  
 L. 1820 F. 124  
 ZONED: R-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.

01-05-2015  
 DATE

SIGNATURE OF ENGINEER  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2016

MATCHLINE - SEE SHEET 61 FOR CONTINUATION

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING		Date	2-20-15
Chief, Development Engineering Division	NY	Date	2-26-15
Chief, Division of Land Development		Date	3/26/15
Director		Date	

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
----------	----	-------------------------------

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 670 CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHANVOLA, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER MD 21158  
 (410) 948-0090

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, Inc.  
 7175 oakdale gateway drive suite 100 | oakdale, md 21046-0990  
 410.222.8800 • fax: 501.881.5148 • cell: 410.222.8803

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
MATER CODE 550 (TG 700)	SEWER CODE F07	
TITLE: <b>DRAINAGE AREA MAP FOR STORMDRAIN</b>		
DESIGN: DAM	SCALE: 1"=50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>60 of 77</b>

MISS UTILITY  
 Service Protection Center

CALL TOLL FREE  
 1-800-251-7777

01/05/2015  
 DATE

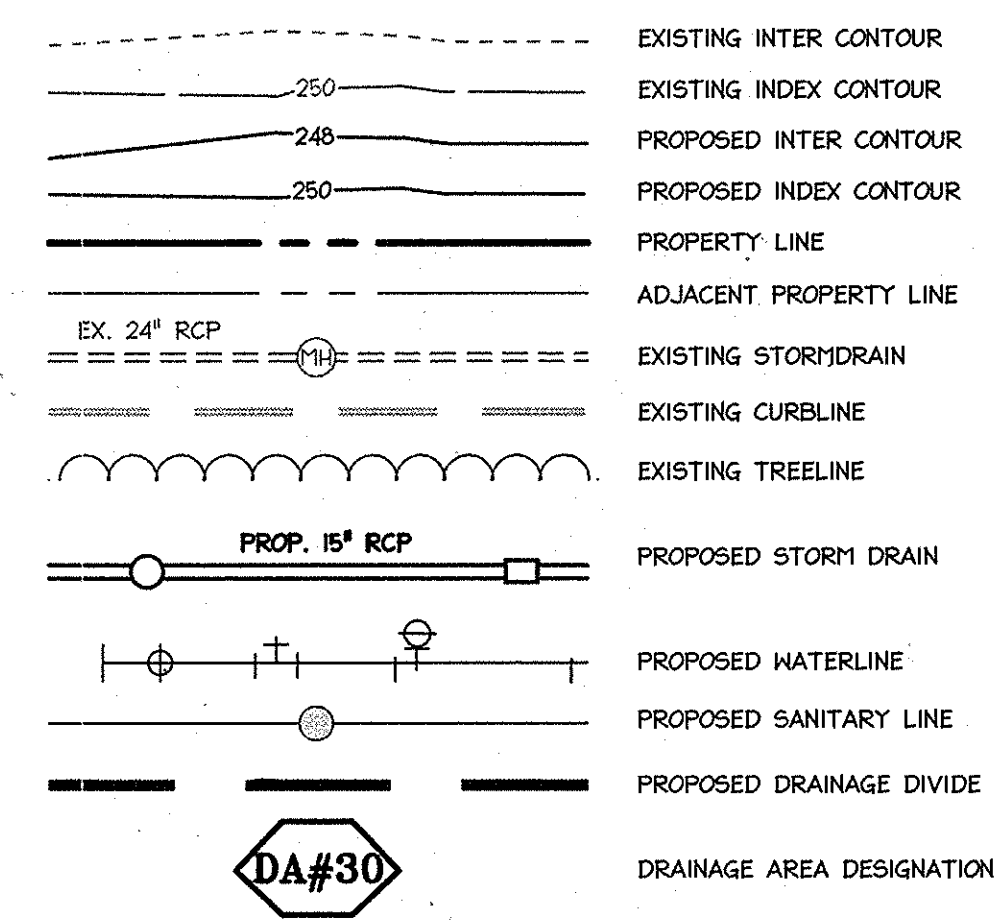
STATE OF MARYLAND  
 REGISTERED PROFESSIONAL ENGINEER



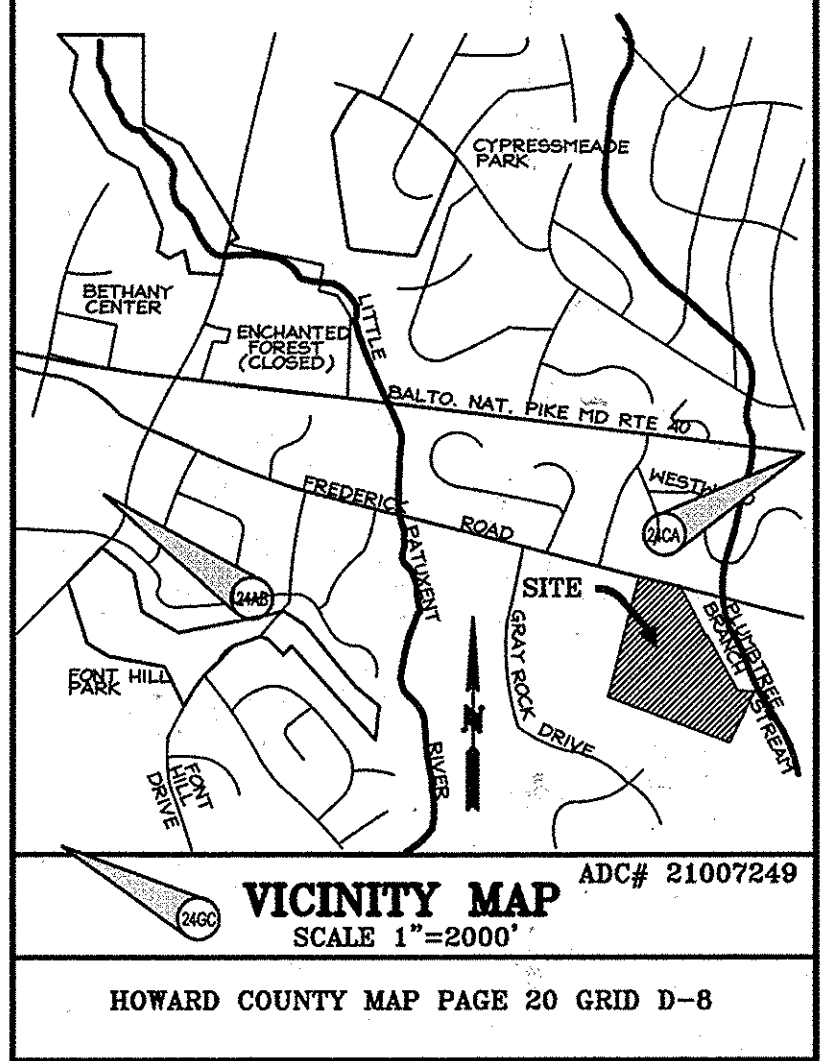
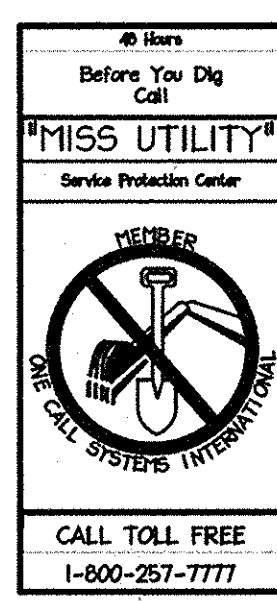
MATCHLINE - SEE SHEET 60 FOR CONTINUATION

MEADOW TREE

**LEGEND**



DRAINAGE AREA SCHEDULE						
Label	INLET	SF	Acres	Impv Area	% Imp.	Composite "C"
DA-2	I-34	35015.35	0.80	12251.13	42.12	0.52
DA-3	I-3	11107.80	0.26	7609.20	68.50	0.70
DA-4	I-4	40597.00	0.93	22658.36	55.81	0.61
DA-5	I-6	44431.20	1.02	27513.23	61.92	0.65
DA-6	I-10	5270.76	0.12	3983.65	75.58	0.74
DA-8	I-8	25961.76	0.60	4669.68	17.99	0.37
DA-10	I-16	4399.56	0.10	821.54	18.67	0.37
DA-12	I-12	75794.40	1.74	62469.23	82.29	0.78
DA-14	I-14	25264.80	0.58	22263.47	88.12	0.82
DA-18	I-18	8407.08	0.19	1976.71	23.51	0.40
DA-20	I-20A	17859.60	0.41	11234.20	70.00	0.71
DA-22	I-22	50790.96	1.17	29686.12	58.45	0.63
DA-24	I-24	6319.00	0.15	5371.15	85.00	0.80
DA-26	I-26	33028.00	0.76	19813.71	59.99	0.64
DA-28	I-28	46133.00	1.06	39213.05	85.00	0.80
DA-32	I-32	34412.40	0.79	29250.54	85.00	0.80
DA-34	I-34	16261.00	0.37	13008.80	80.00	0.77
DA-36	I-36	26963.64	0.62	22919.09	85.00	0.80
DA-38	I-38	22433.40	0.52	19068.39	85.00	0.80
DA-40	I-40	60785.00	1.40	51667.25	85.00	0.80
DA-42	I-42	19707.00	0.45	11824.20	60.00	0.64
DA-44	I-44	37026.00	0.85	24066.90	65.00	0.67
DA-46	I-46	4530.24	0.10	3869.23	85.41	0.81
DA-48	I-48	7065.00	0.16	4945.50	70.00	0.71
DA-52	I-52	21502.00	0.49	13615.96	63.32	0.66
DA-54	I-54	10933.56	0.25	9293.52	85.00	0.80
DA-54A	I-75	9801.00	0.23	8436.21	82.00	0.78
DA-60	I-60	29847.00	0.69	24668.63	82.65	0.79
DA-62	I-62	11325.60	0.26	9626.76	85.00	0.80
DA-64	I-64	8409.00	0.19	5465.85	65.00	0.67
DA-66	I-66	33938.00	0.78	28847.30	85.00	0.80
DA-68	I-68	22589.00	0.52	19200.65	85.00	0.80
DA-70	I-70	16539.00	0.38	14058.15	85.00	0.80
DA-72	I-72	43103.00	0.99	34357.49	79.71	0.77
DA-80	I-80	29171.00	0.67	10209.85	35.00	0.48
DA-82	I-82	7438.00	0.17	2603.30	35.00	0.48
DA-84	I-84	6551.00	0.15	2292.85	35.00	0.48
DA-86	I-86	51002.00	1.17	17850.70	35.00	0.48
DA-88	I-88	47940.00	1.10	16779.00	35.00	0.48
DA-96	I-96	8692.00	0.20	8692.00	100.00	0.90
DA-98	I-98	7507.00	0.17	7507.00	100.00	0.90
DA-99	I-99	15805.00	0.36	15805.00	100.00	0.90



VICINITY MAP  
SCALE 1"=2000'  
HOWARD COUNTY MAP PAGE 20 GRID D-8

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* Date 2-20-15  
Chief, Development Engineering Division

*[Signature]* Date 2-26-15  
Chief, Division of Land Development

*[Signature]* Date 2/26/15  
Director

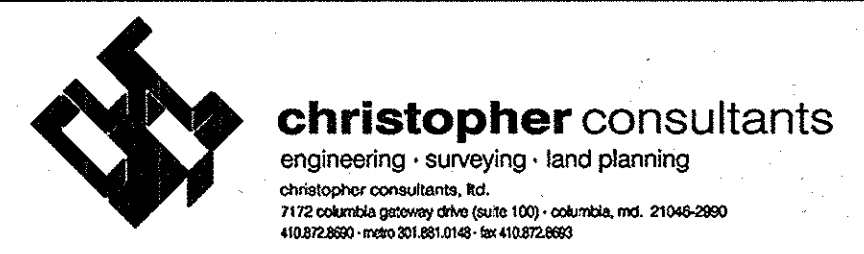
01/05/15 01 REVISED SITE DEVELOPMENT PLAN

---

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACI, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 848-0090



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. ZONE 9 PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07	ELECTION DISTRICT 02

TITLE: **DRAINAGE AREA MAP FOR STORMDRAIN**

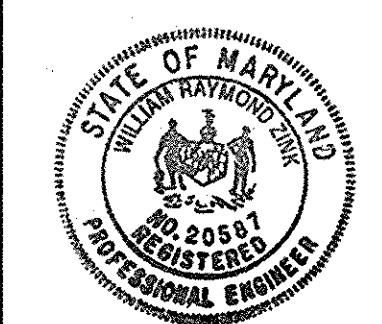
DESIGN: DAM	SCALE: 1"=50'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: MRZ	<b>61 of 77</b>

**PROFESSIONAL CERTIFICATION**

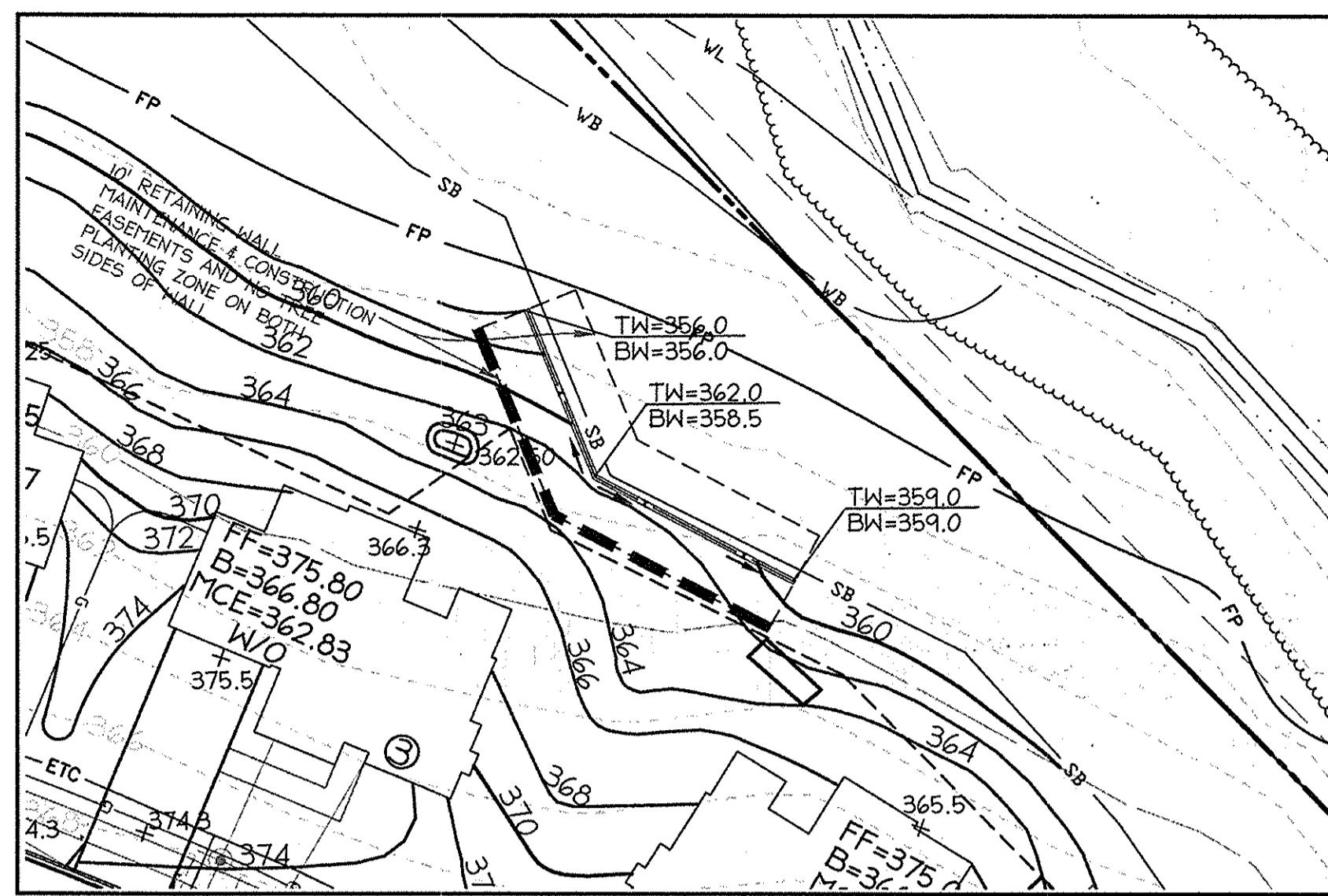
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*[Signature]* DATE 01-05-2015

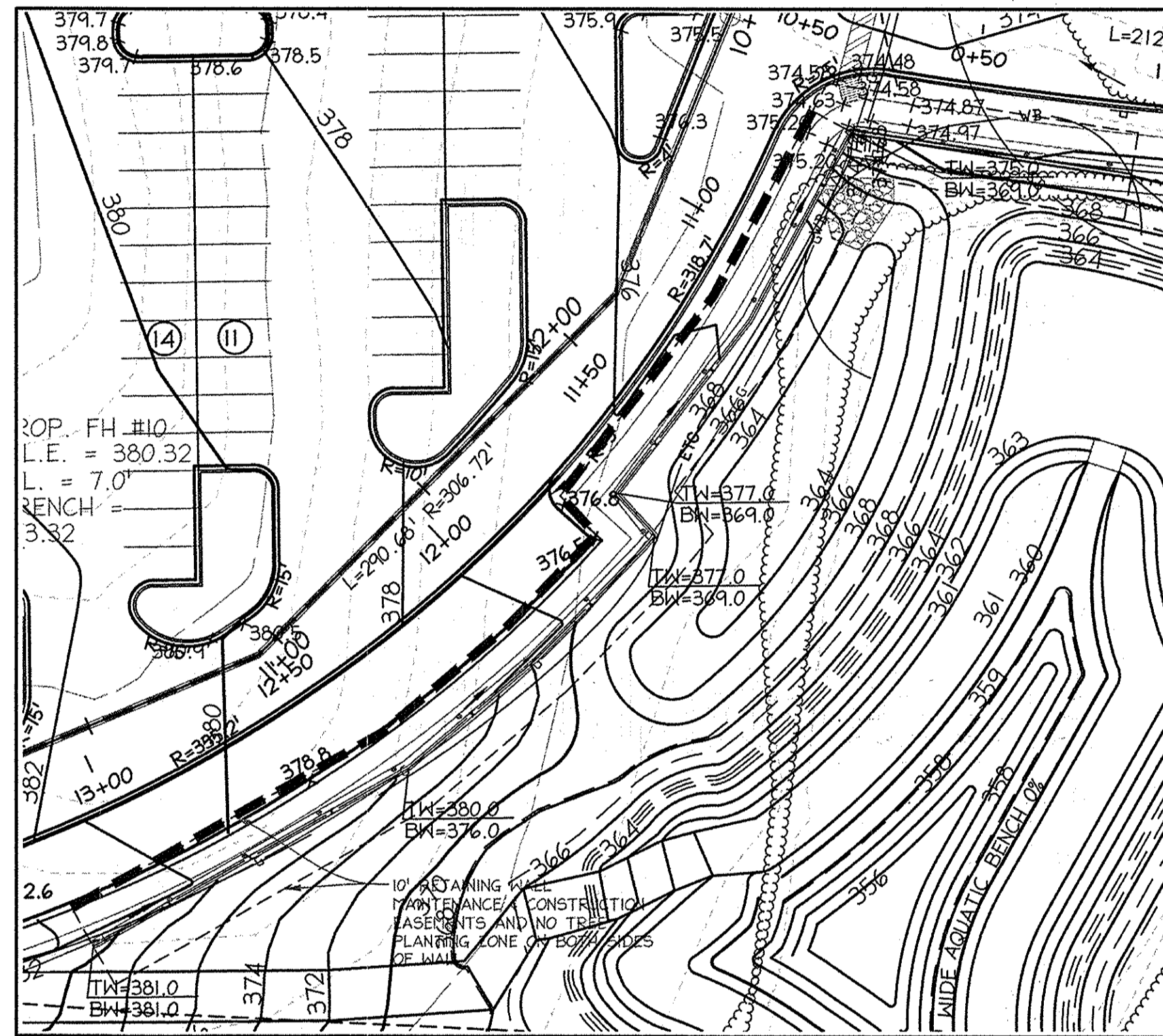
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016



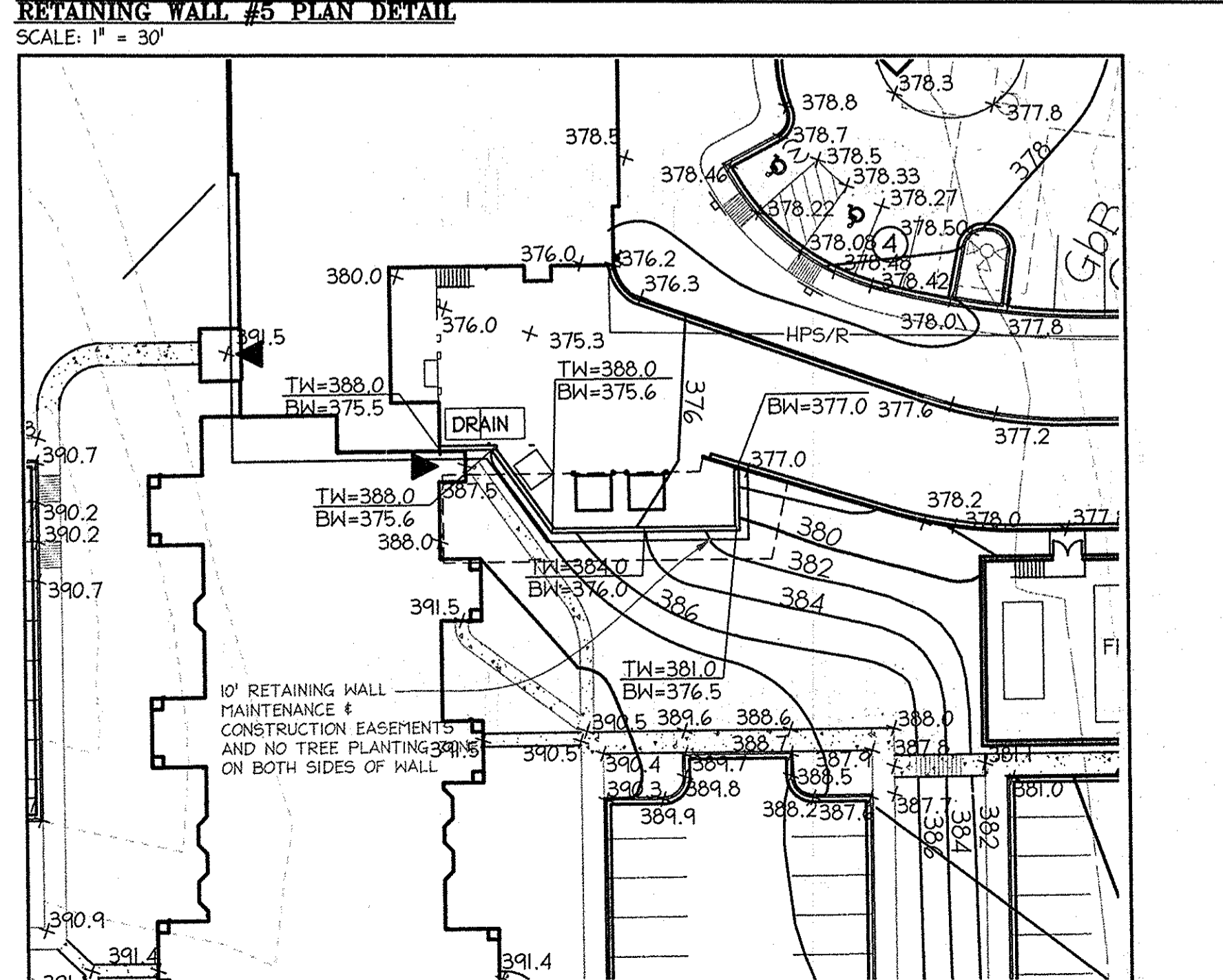




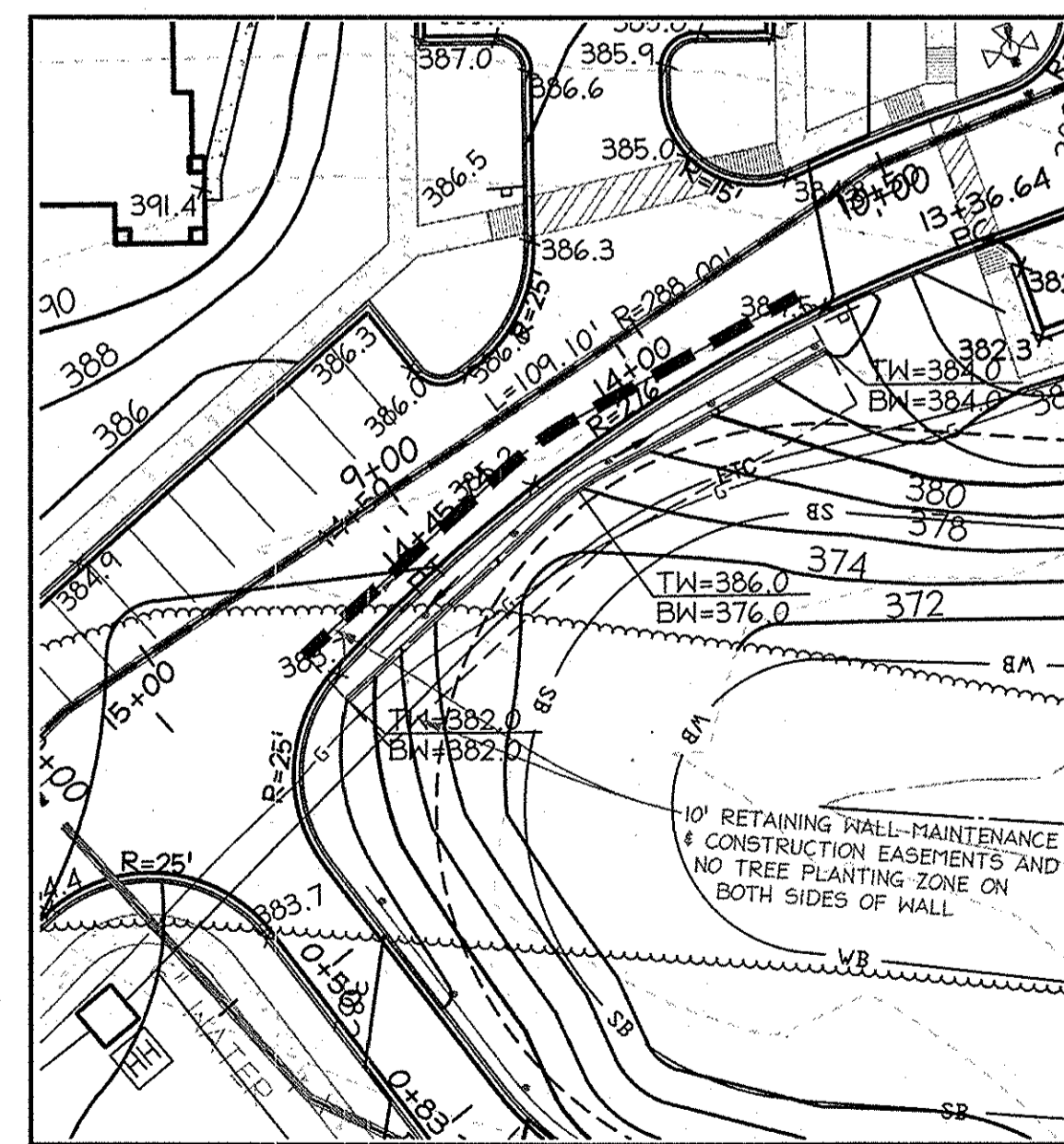
**RETAINING WALL #1 PLAN DETAIL**  
SCALE: 1" = 30'



**RETAINING WALL #2, #3 PLAN DETAIL**  
SCALE: 1" = 30'

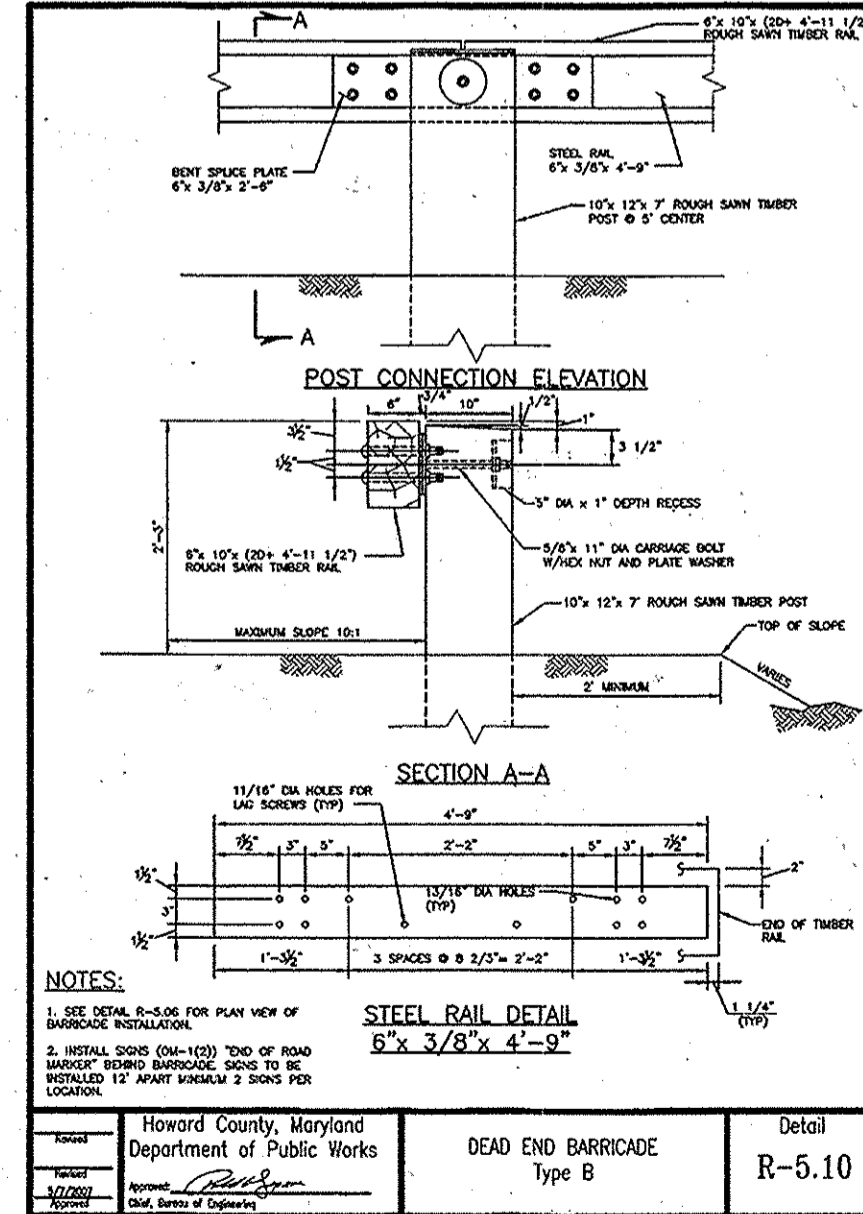


**RETAINING WALL #4 PLAN DETAIL**  
SCALE: 1" = 30'



**RETAINING WALL #5 PLAN DETAIL**  
SCALE: 1" = 30'

**RETAINING WALL #6 PLAN DETAIL**  
SCALE: 1" = 30'



**LEGEND**

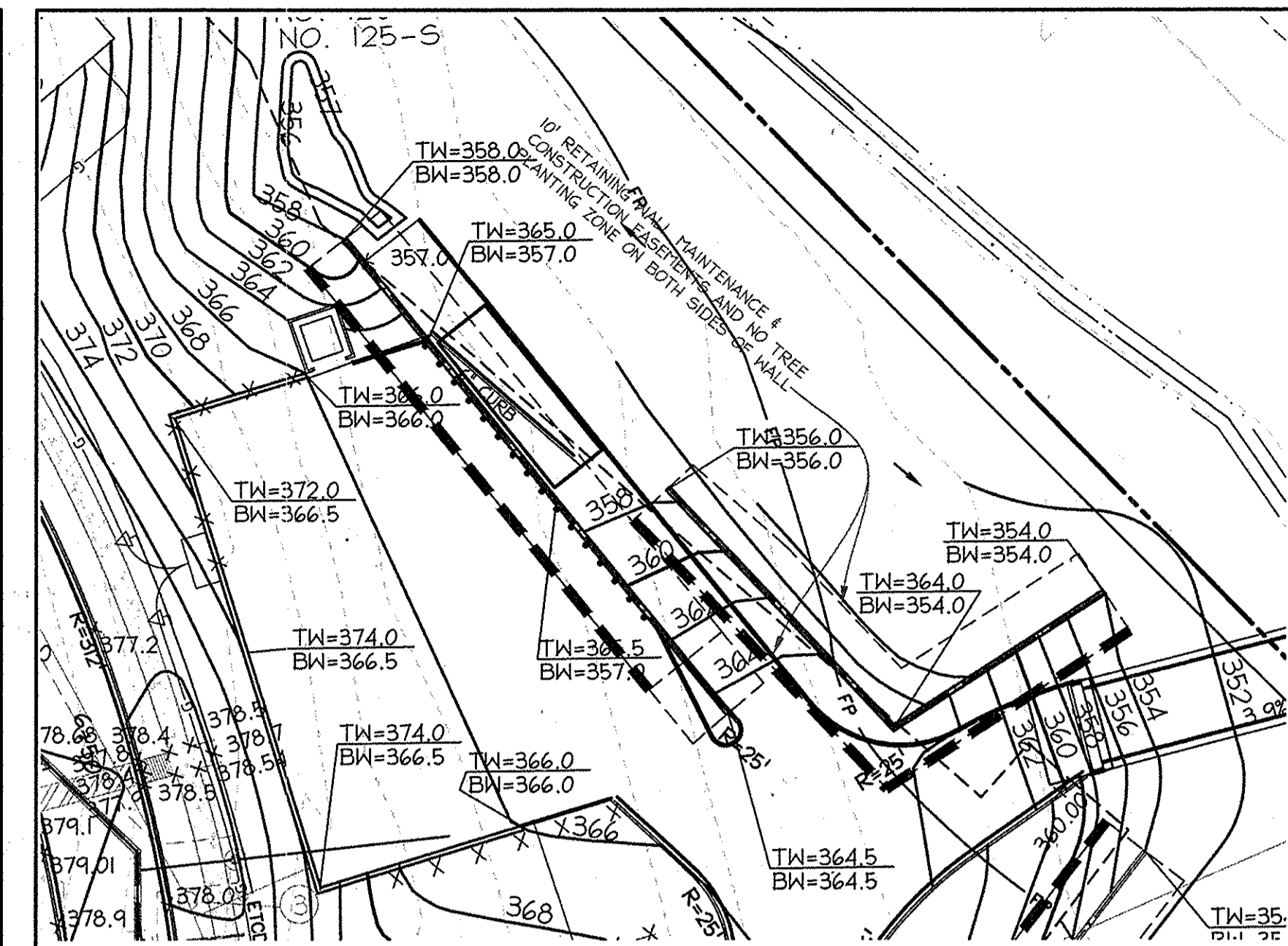
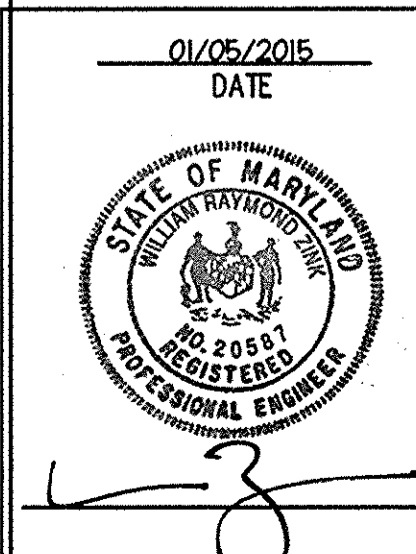
- PROPERTY LINE
- PROPOSED CONTOUR
- PROPOSED SPOT
- PROPOSED RETAINING WALL
- PROPOSED RETAINING WALL BUILDING SETBACK LINE

**PROFESSIONAL CERTIFICATION**

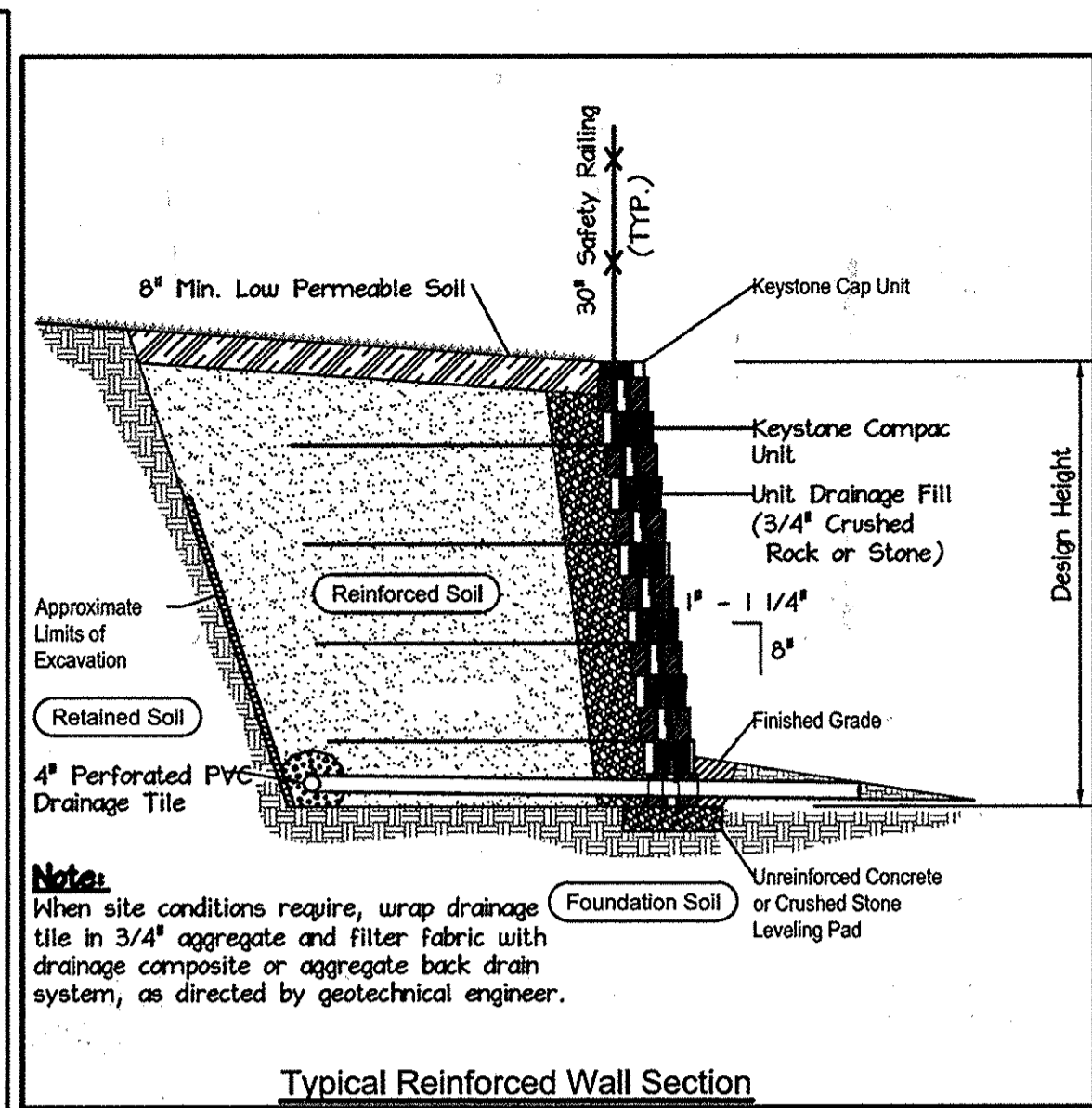
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SIGNATURE OF ENGINEER: *William R. Zink* DATE: 01-05-2015

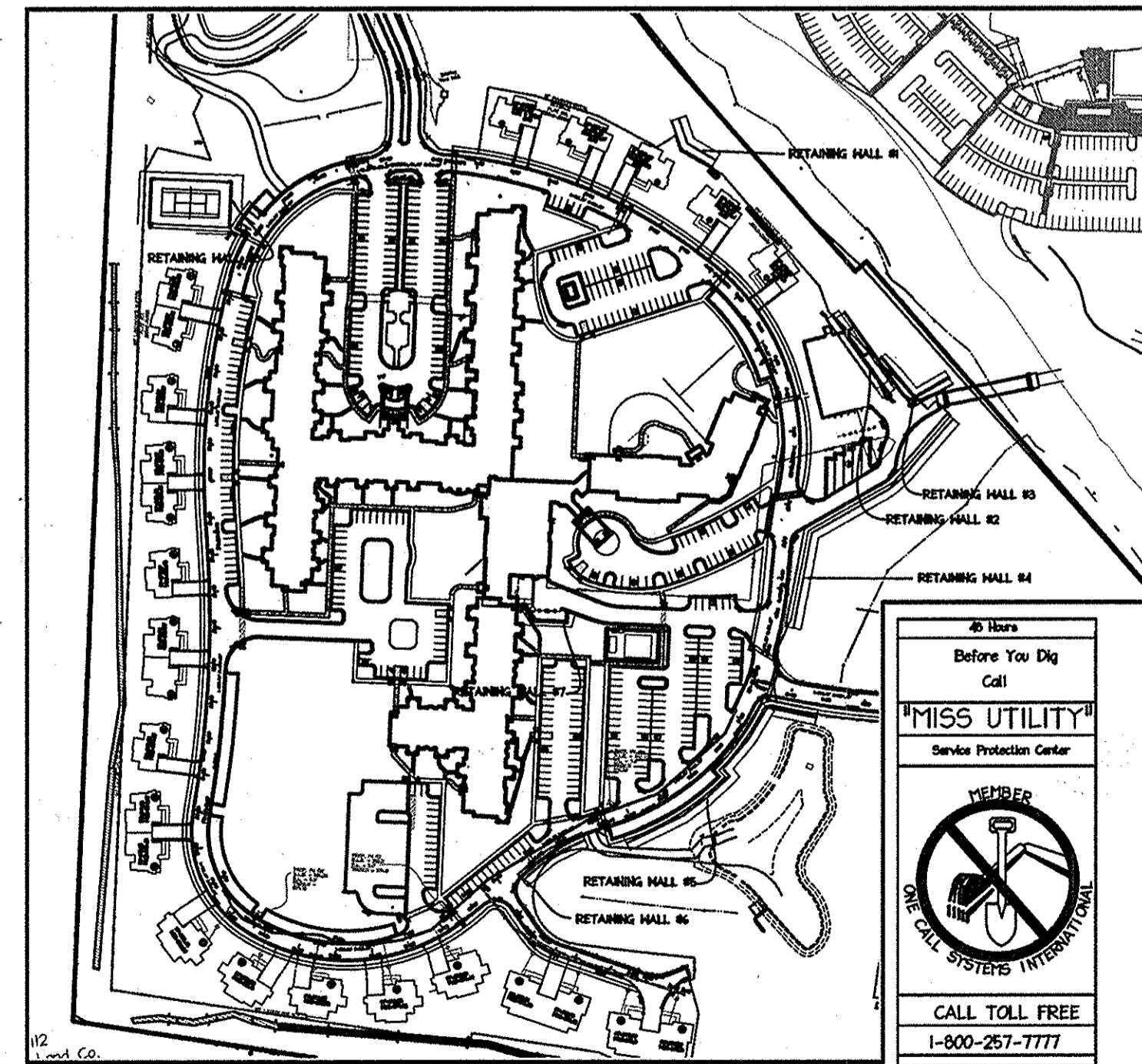
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2016



**RETAINING WALL #8 PLAN DETAIL**  
SCALE: 1" = 30'



- RETAINING WALL NOTES**
- RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.
  - THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
  - THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (8) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTER DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
  - FOR "CRITICAL" WALLS, ONE SOIL BORING SHALL BE REQUIRED EVERY 100' ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
  - IF NO SURCHARGE LOADS ARE CONSIDERED ADD A NOTE TO THE CROSS SECTION DETAILS STATING, "THIS WALL NOT DESIGNED FOR SURCHARGE LOADS."



APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Date: 2-20-15  
Chief, Development Engineering Division  
Date: 2-26-15  
Chief, Division of Land Development  
Date: 2-26-15  
Director

01/05/15	01	REVISED SITE DEVELOPMENT PLAN
----------	----	-------------------------------

Date: No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER: LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: BOY CHAMACK, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, inc.  
7172 cobblestone gateway drive suite 1000, columbia, md 21046-2900  
410.732.8800 - fax: 410.315.0148 - cell: 410.875.8800

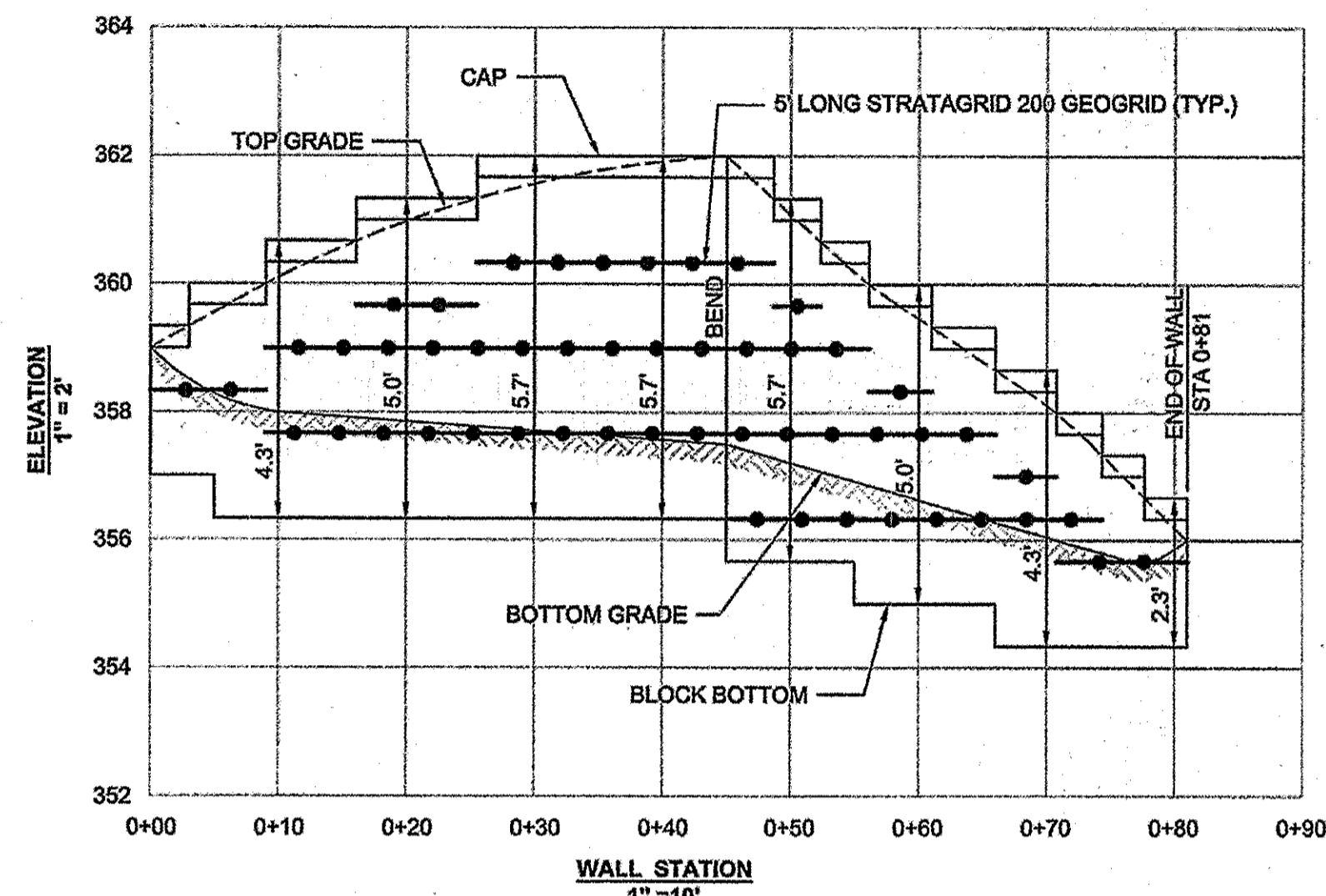
PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800
DEED REF.	GRID NO.	ZONE
L. 10578 F. 424	9	PSC
TAX MAP	ELECTION DISTRICT	
24	02	
WATER CODE	SEWER CODE	
550 (TG 700)	F07	

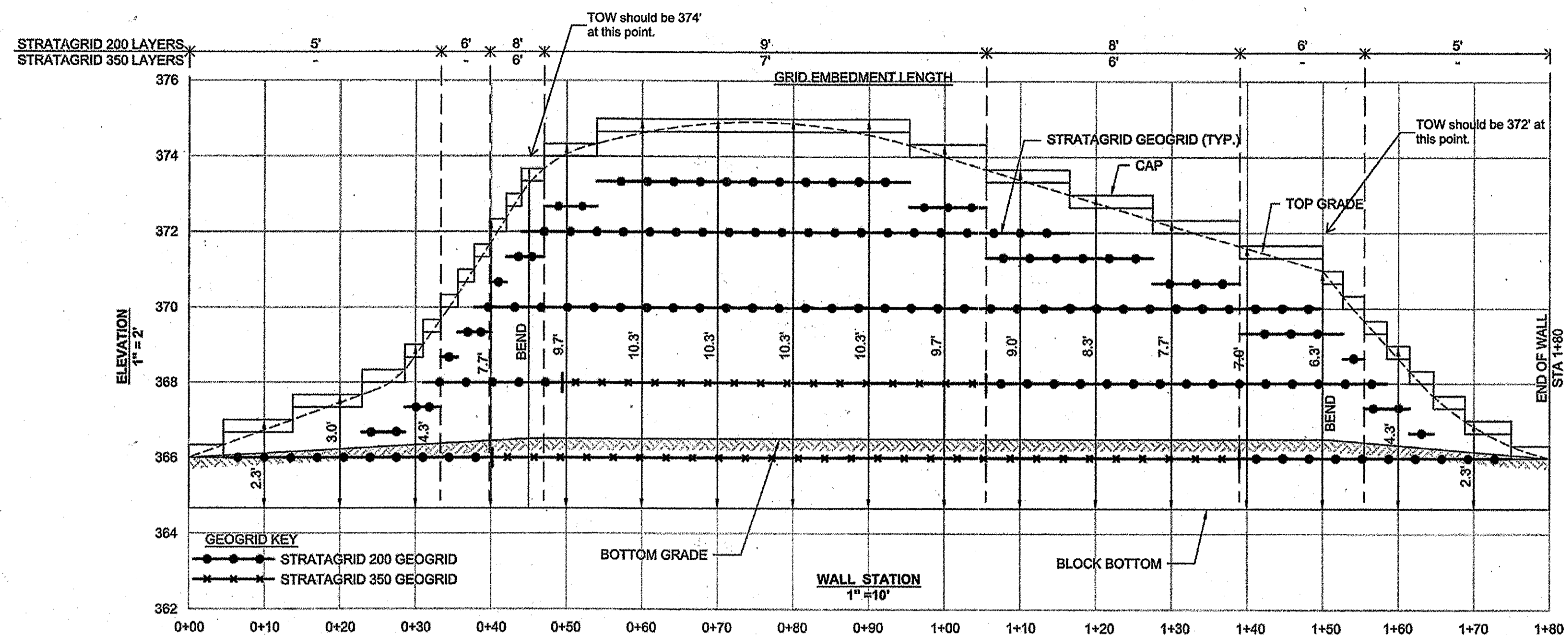
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DESIGN: DAM	SCALE: 1" = 30'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: MRZ	

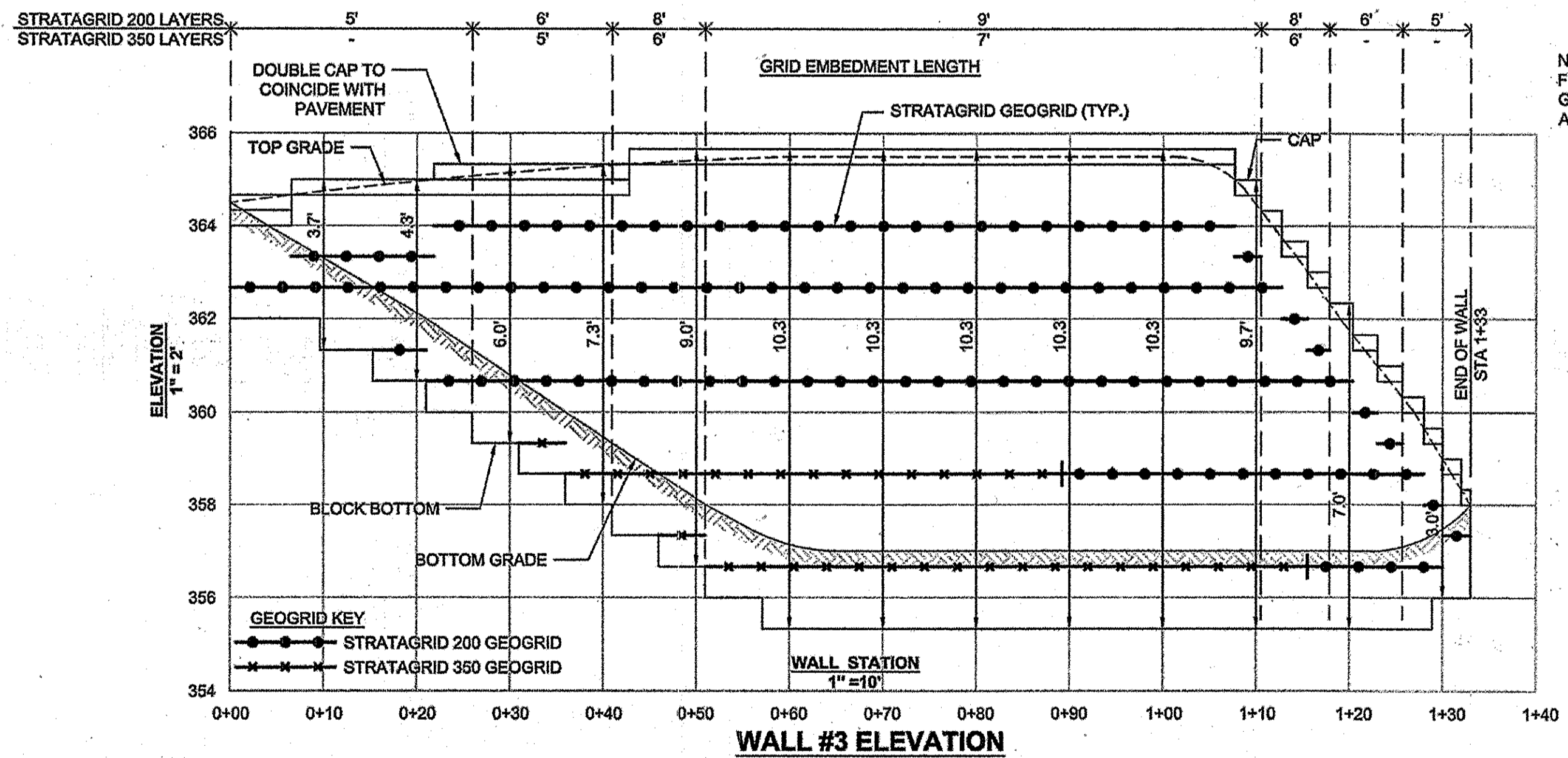
62 OF 77



WALL #1 ELEVATION



WALL #2 ELEVATION

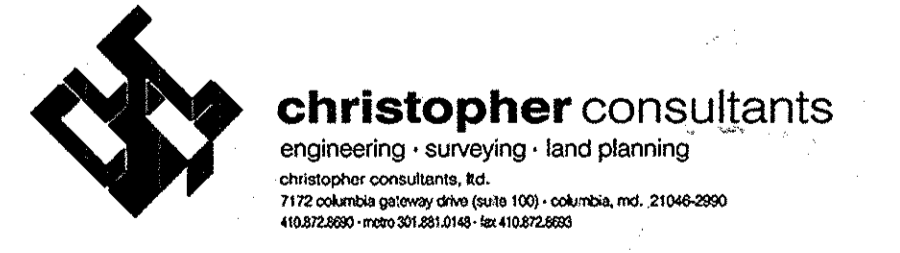


WALL #3 ELEVATION

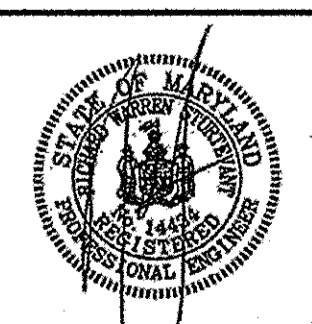
NOTE:  
FIELD CONFIRM REQUIRED TW/BW FINAL GRADES AND ADJUST BLOCK LOCATION AND ELEVATION ACCORDINGLY.

APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	2-20-15
Chief, Development Engineering Division	Date
<i>[Signature]</i>	2-26-15
Chief, Division of Land Development	Date
<i>[Signature]</i>	2-26-15
Director	Date
01/05/15	01 REVISED SITE DEVELOPMENT PLAN
Date	No. Revision Description
LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY	
OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: BOY CHAVACA, EX. VICE PRESIDENT 300 ST. LUKE CHURCH WESTMINSTER, MD 21158 (410) 848-0090	



PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 24834, EXPIRATION DATE 09/30/15.



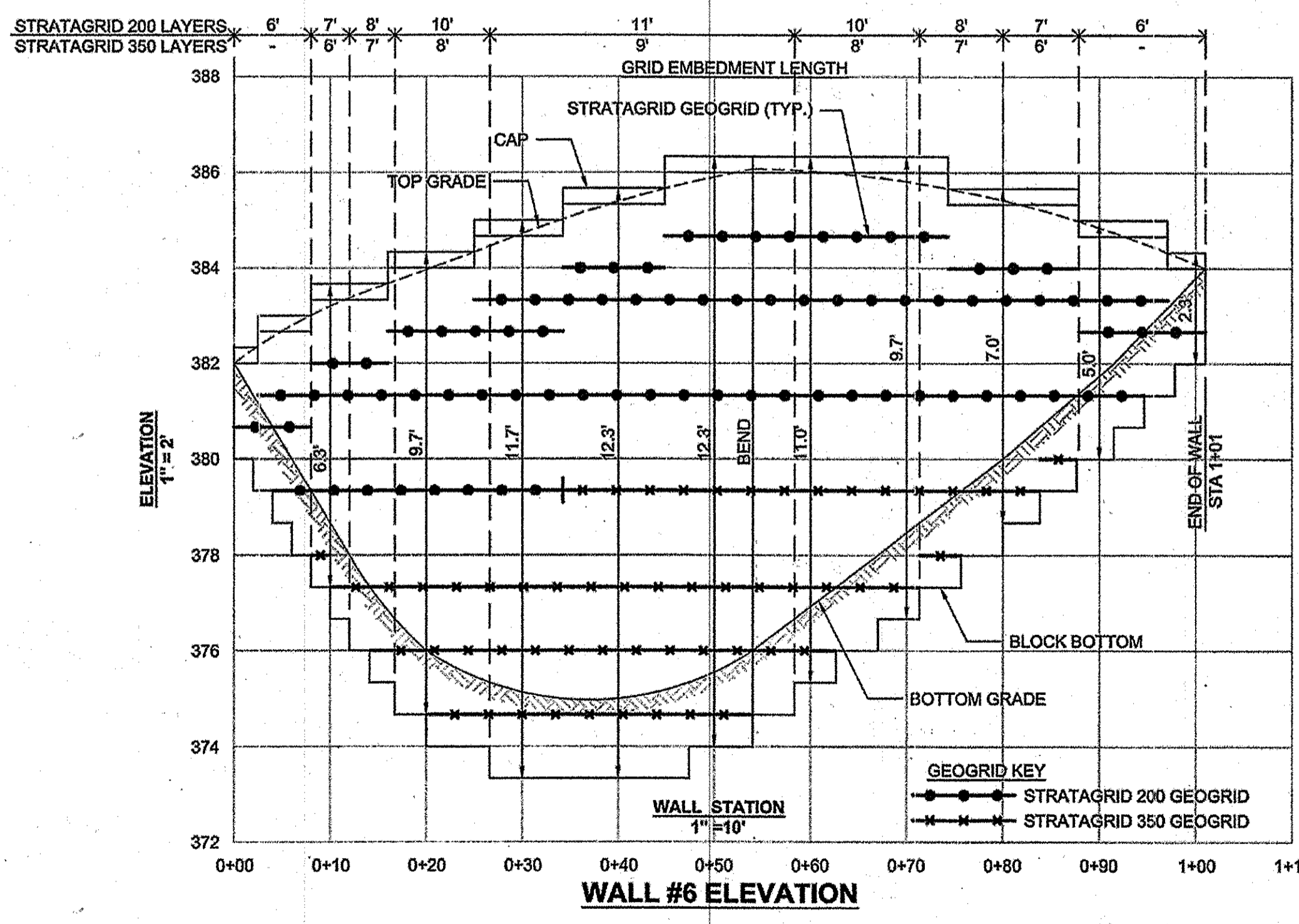
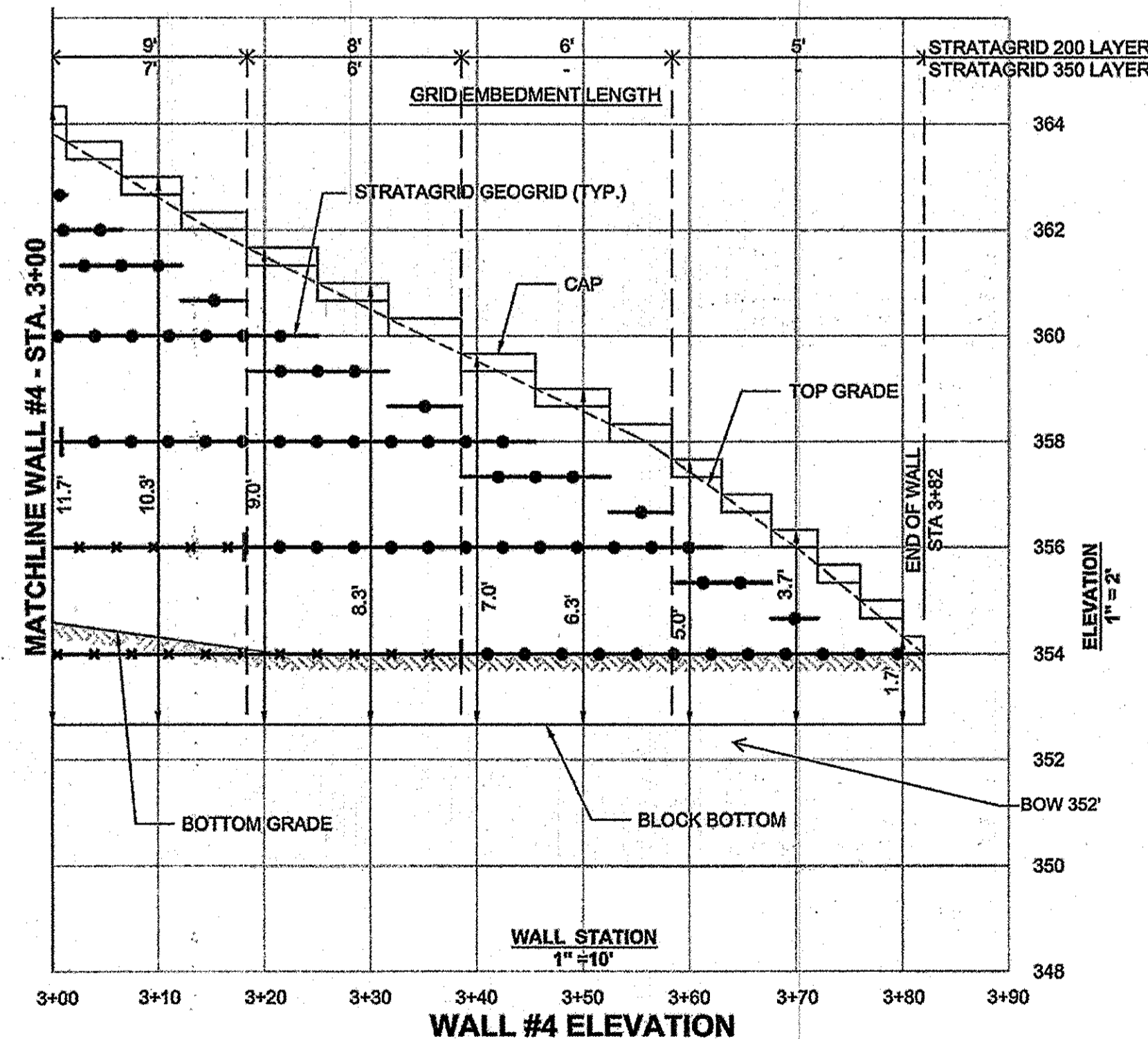
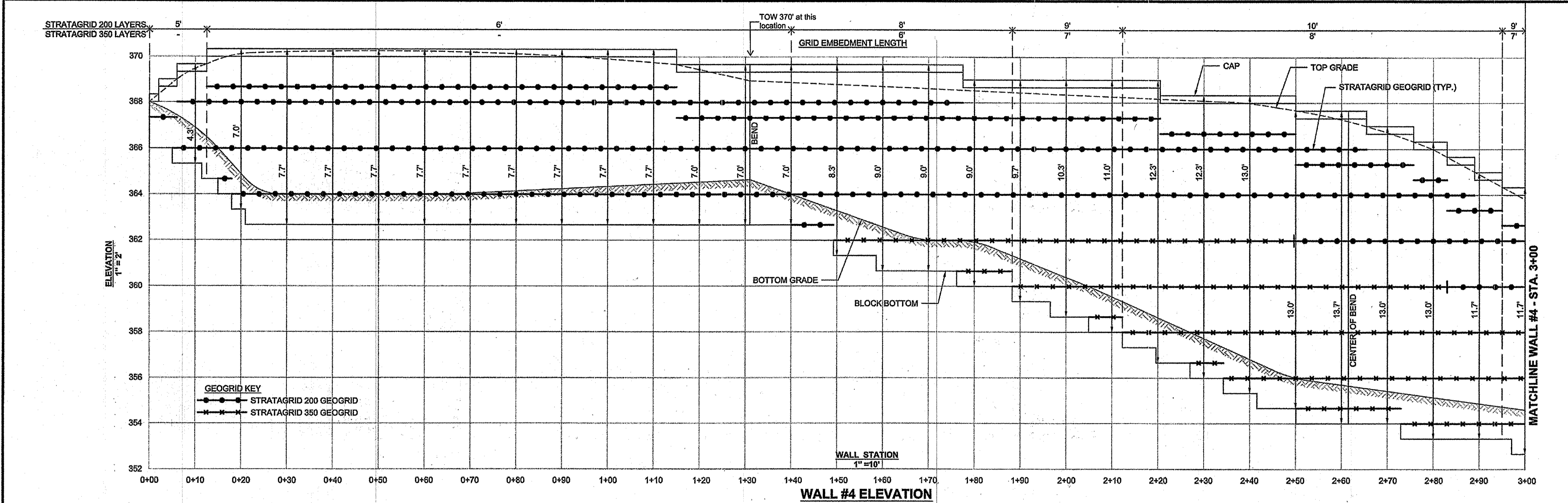
**HILLIS-CARNES**  
ENGINEERING ASSOCIATES  
10975 Guilford Road, Suite A  
Annapolis Junction, Maryland  
(410) 840-4788 WWW.HCEA.COM Fax: (410) 840-4098

RETAINING WALL #1, #2, & #3 ELEVATIONS  
LUTHERAN VILLAGE AT MILLER'S GRANT  
HOWARD COUNTY, MARYLAND

REVISION NO.	DESCRIPTION	DATE	JOB NUMBER: 14013-Z	DESIGNED BY: HM
			SCALE: AS SHOWN	DRAWN BY: HM
			DATE: 9/30/14	APPROVED BY: RWS

PROJECT NAME: LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	SEWER CODE F07
WATER CODE 550 (TG 700)		

TITLE: RETAINING WALL DESIGN		
DESIGN: DAM	SCALE: N/A	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	63 OF 77



NOTE:  
COORDINATE INSTALLATION  
OF SEWER LINE WITH WALL  
CONSTRUCTION.

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS  
WERE PREPARED OR APPROVED BY ME,  
AND THAT I AM A DULY LICENSED  
PROFESSIONAL ENGINEER UNDER THE  
LAWS OF THE STATE OF MARYLAND,  
LICENSE NO. 14453,  
EXPIRATION DATE: 02/28/16.



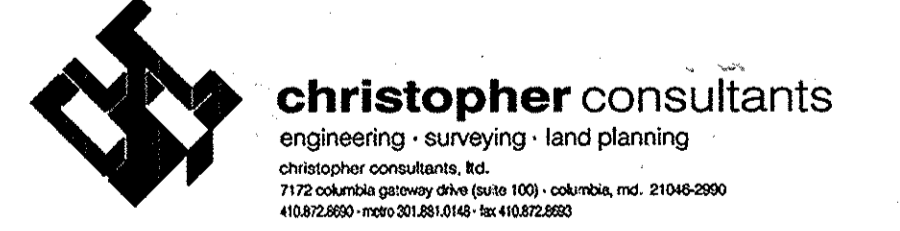
APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	Date 2-20-15
Chief, Development Engineering Division	Date 2-26-15
<i>[Signature]</i>	Date 2/24/15
Chief, Division of Land Development	Date
<i>[Signature]</i>	Date
Director	Date
01/05/15	01 REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: BOY CHAVACIA, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER MD 21158  
(410) 848-0090



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

**RETAINING WALL DESIGN**

DESIGN: DAM	SCALE: N/A	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	64 of 77
CHECKED: EJU	APPROVED: WRZ	

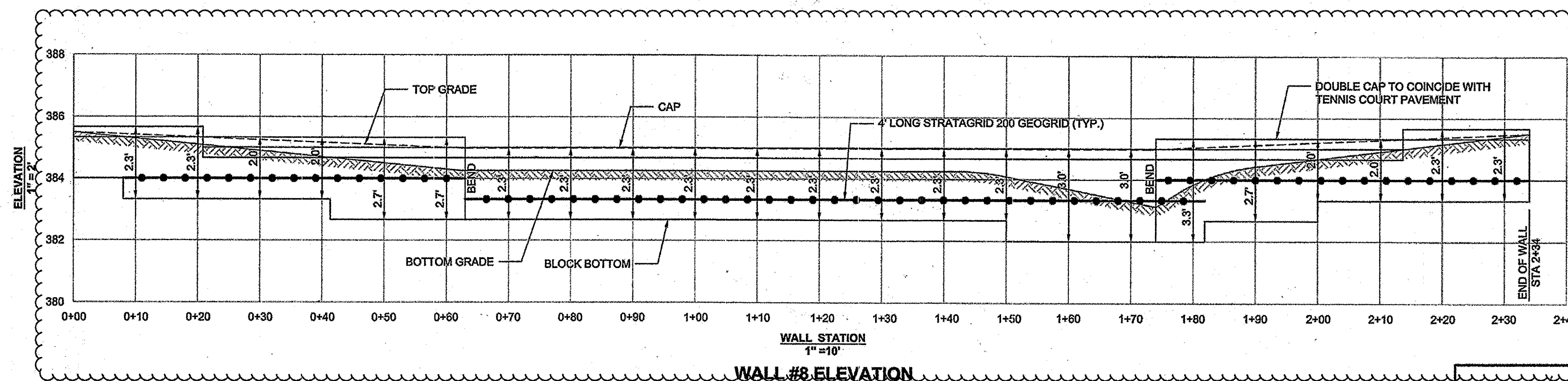
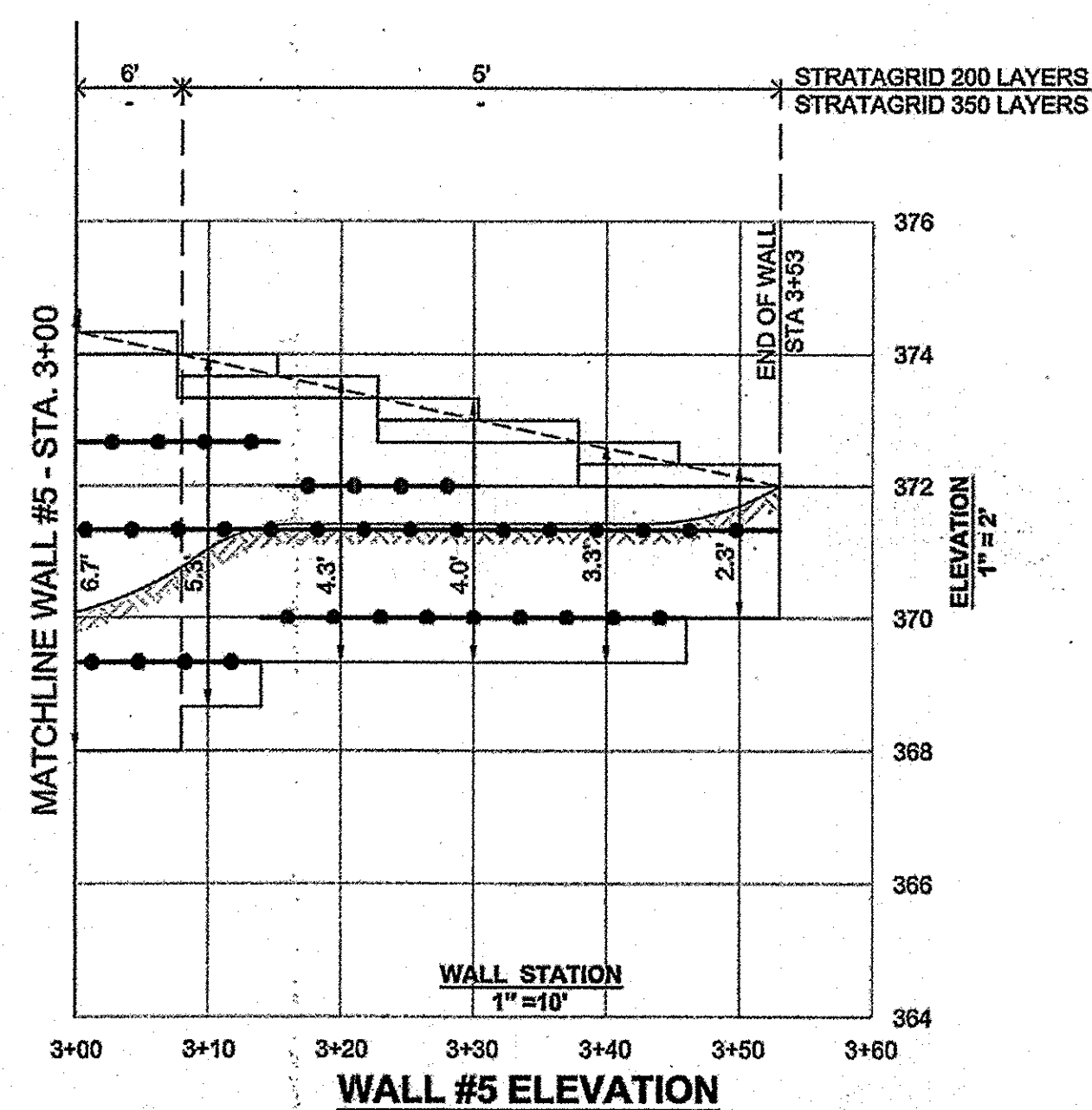
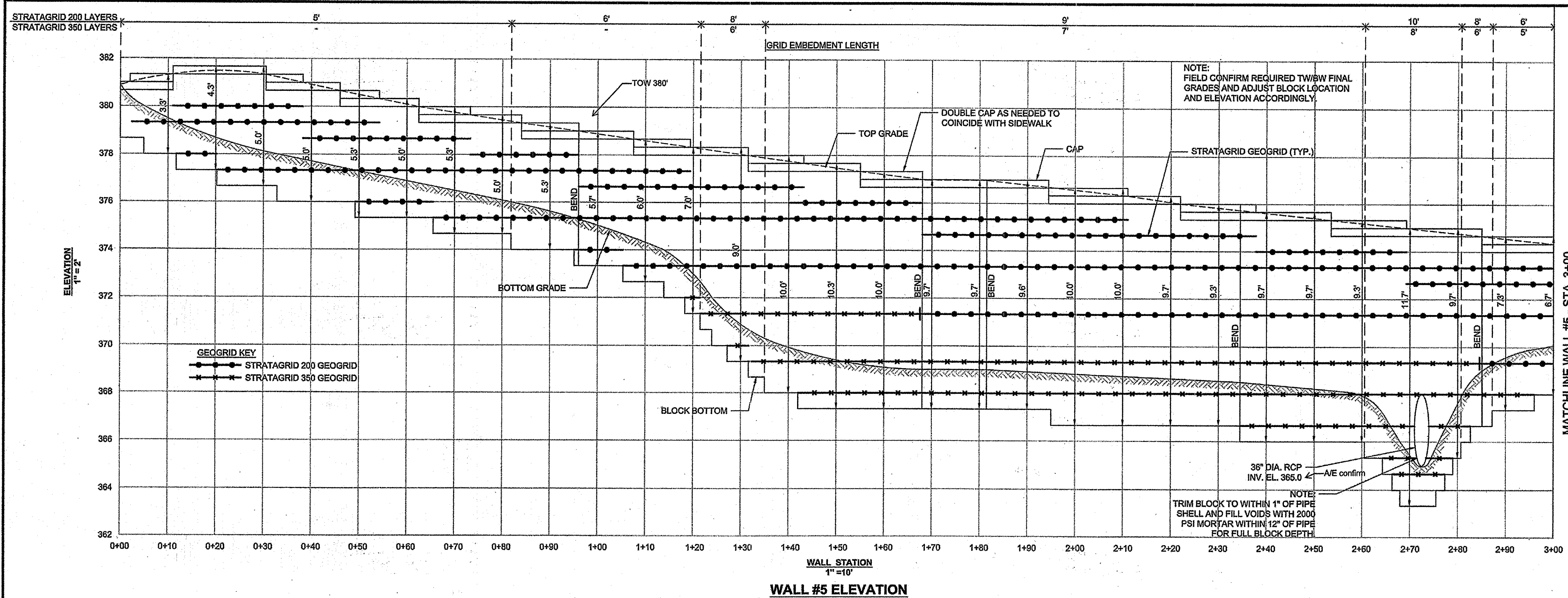
**HILLIS-CARNES  
ENGINEERING ASSOCIATES**  
10075 Guilford Road, Suite A Annapolis Junction, Maryland  
(410) 880-4780 WWW.HCAE.COM Fax: (410) 880-4258

**RETAINING WALL #4 & #6 ELEVATION  
LUTHERAN VILLAGE AT MILLER'S GRANT  
HOWARD COUNTY, MARYLAND**

REVISION NO.	DESCRIPTION	DATE

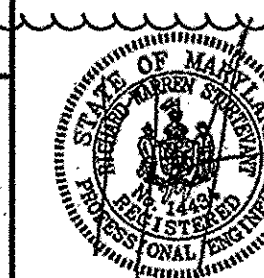
JOB NUMBER: 14013-Z	DESIGNED BY: HM
SCALE: AS SHOWN	DRAWN BY: HM
DATE: 9/30/14	APPROVED BY: RWS

3 OF 5 SHEET



Wall #8 has been changed to concrete

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 14453 EXPIRATION DATE 09/30/15.



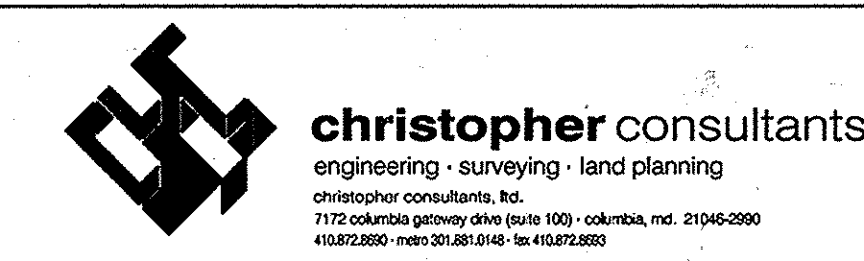
APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING		2-20-15
<i>[Signature]</i>	Chief, Development Engineering Division	Date
<i>[Signature]</i>	Chief, Division of Land Development	2-26-15
<i>[Signature]</i>	Director	2/26/15
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

Date No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: BOY CHAVACCA, EX. VICE PRESIDENT  
300 ST LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 648-0090



PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT		LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07		

**RETAINING WALL DESIGN**

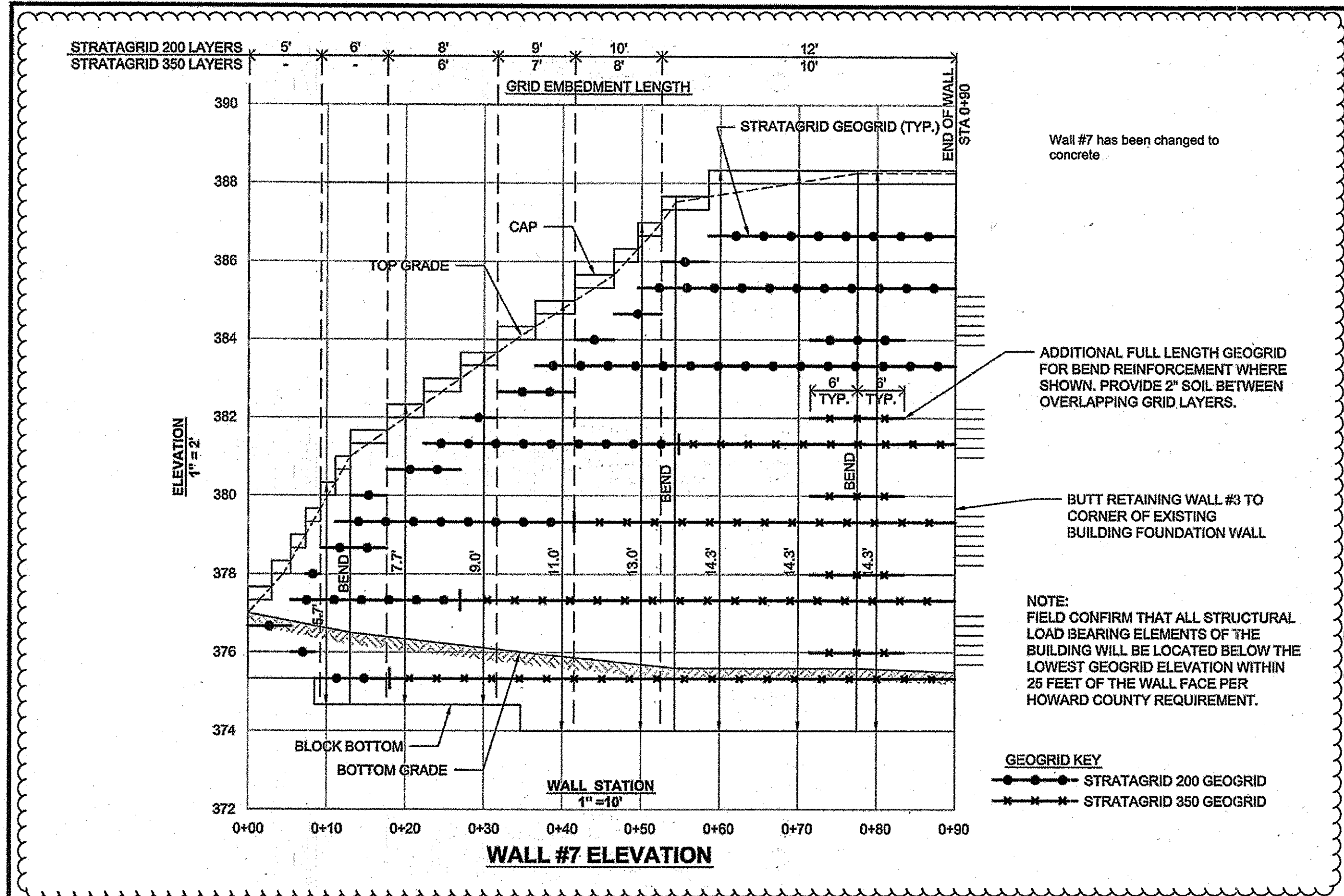
DESIGN: DAM	SCALE: N/A	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	65 of 77
CHECKED: ENJ	APPROVED: NRZ	

**HILLIS-CARNES  
ENGINEERING ASSOCIATES**  
10975 Guilford Road, Suite A Annapolis Junction, Maryland  
(410) 660-4788 WWW.HILLIS-CARNES.COM Fax: (410) 660-4009

**RETAINING WALL #5 & #8 ELEVATIONS  
LUTHERAN VILLAGE AT MILLER'S GRANT  
HOWARD COUNTY, MARYLAND**

REVISION NO.	DESCRIPTION	DATE	JOB NUMBER: 14013-Z	DESIGNED BY: HM
			SCALE: AS SHOWN	DRAWN BY: HM
			DATE: 9/30/14	APPROVED BY: RWS

4 OF 5 SHEET

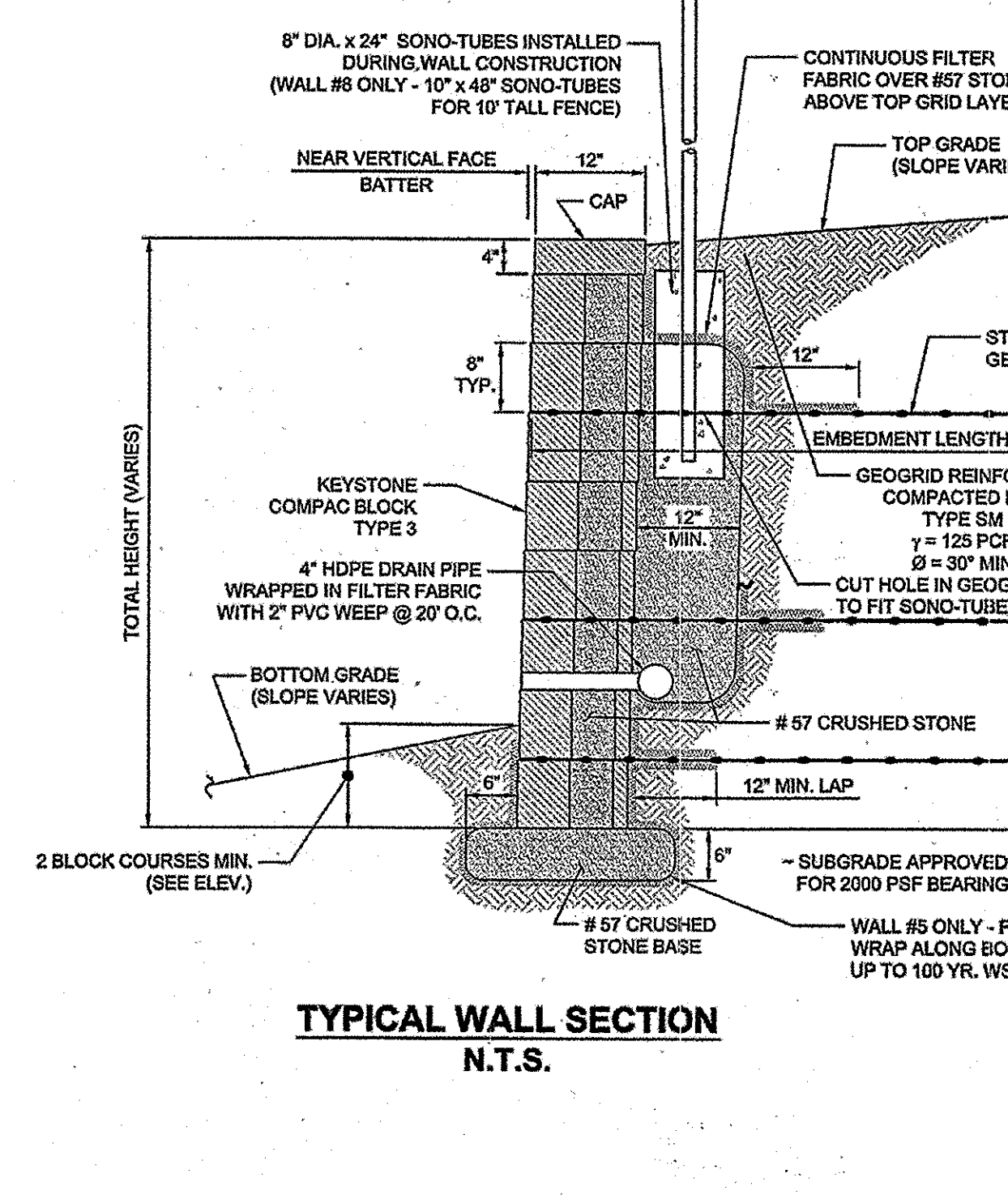
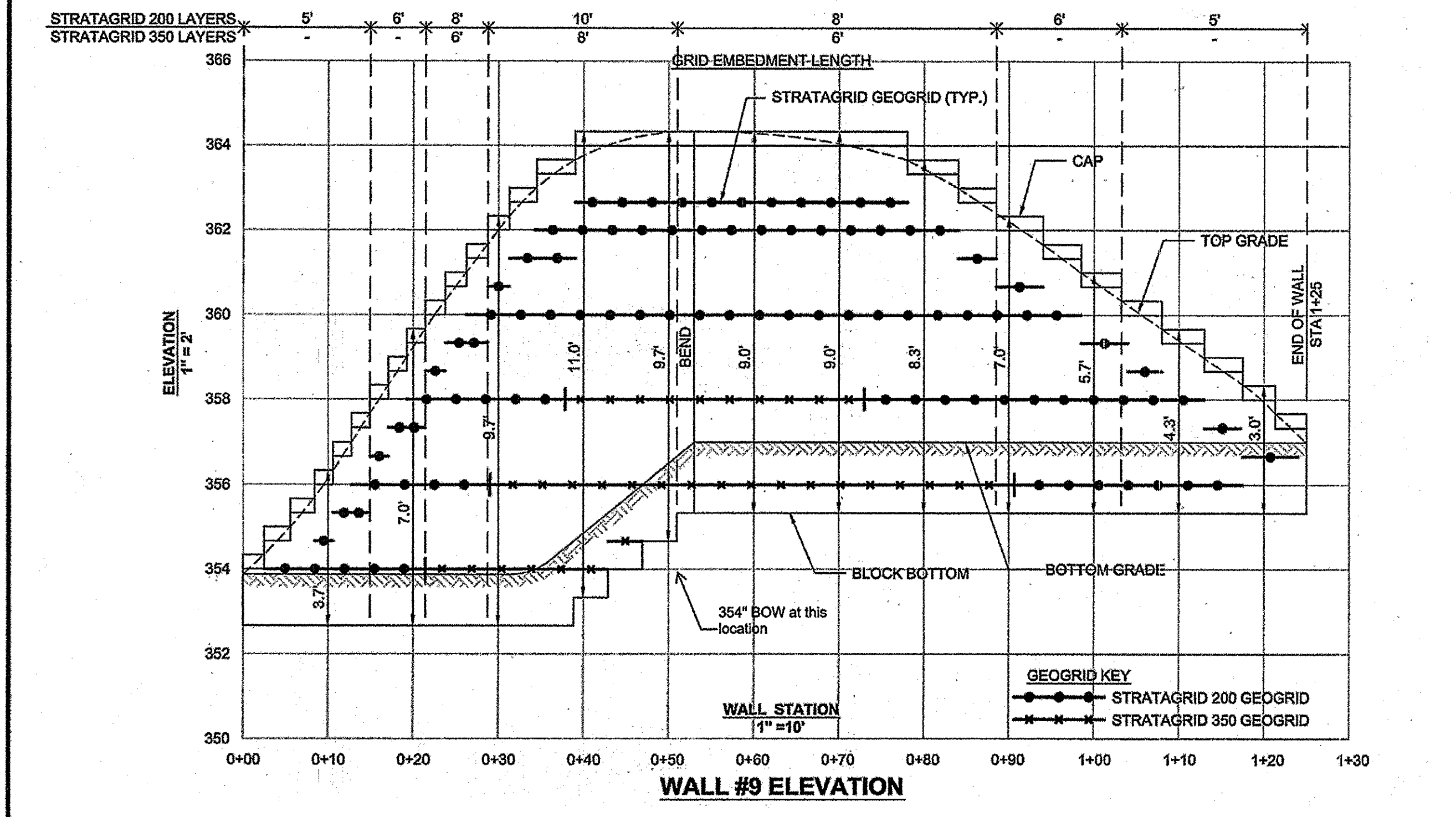


**SPECIFICATIONS**  
**MODULAR CONCRETE BLOCK RETAINING WALL**

**PART 1: GENERAL**  
**1.01 DESCRIPTION**  
 A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.  
 B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVEL UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.  
 C. WORK INCLUDES FURNISHING AND INSTALLING GEOGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.  
**1.02 DELIVERY, STORAGE AND HANDLING**  
 A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.  
 B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.  
**PART 2: PRODUCTS**  
**2.01 MODULAR CONCRETE RETAINING WALL UNITS**  
 A. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:  
 FACE COLOR - COLOR MAY BE SPECIFIED BY THE OWNER.  
 FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR TRI-PLANNER OR FLAT CONFIGURATION, OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.  
 BOND CONFIGURATION - RUNNING WITH BONDS NORMALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS.  
 EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER DIFFUSED LIGHTING.  
 B. MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.  
 C. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCES:  
 COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 9% MAXIMUM (9% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;  
 DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS (NOT INCLUDING RIGHT FACE, ±1/16" UNIT HEIGHT - TOP AND BOTTOM PLANES; UNIT SIZE - 8" (H) X 16" (W) X 12" (D) MINIMUM;  
**2.02 SHEAR CONNECTORS (IF APPLICABLE)**  
 A. SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER THERMOSET ISOPHTHALIC POLYESTER RESIN-PROVIDED FIBERGLASS REINFORCEMENT RODS OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN VERTICALLY AND HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO + 100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEOGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.  
**2.03 BASE LEVELING PAD MATERIAL**  
 A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE AS SHOWN ON THE CONSTRUCTION DRAWINGS.  
**2.04 UNIT DRAINAGE FILL**  
 A. UNIT DRAINAGE FILL SHALL CONSIST OF #57 CRUSHED STONE  
**2.05 REINFORCED BACKFILL**  
 A. REINFORCED BACKFILL SHALL BE FREE OF DEBRIS AND MEET THE FOLLOWING REQUIREMENTS IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN:  

SIEVE SIZE	PERCENT PASSING
2 INCH	100-75
3/4 INCH	100-75
NO. 40	0-60
NO. 200	0-35

 B. PLASTICITY INDEX (PI) < 10 AND LIQUID LIMIT < 35 PER ASTM D-4318.  
 B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.  
**2.06 GEOGRID SOIL REINFORCEMENT**  
 A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEOGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE MANUFACTURED FROM HIGH TENACITY POLYESTER YARN.  
**2.07 DRAINAGE PIPE**  
 A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HOPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-3099.  
**PART 3: EXECUTION**  
**3.01 EXCAVATION**  
 A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNERS REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.  
**3.02 BASE LEVELING PAD**  
 A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 8 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.  
 B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.  
**3.03 MODULAR UNIT INSTALLATION**  
 A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY GEATED.  
 B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAY OUT CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.  
 C. INSTALL SHEAR-CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.  
 D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL. FOLLOW WALL SECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.  
 E. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED THREE COURSES.  
**3.04 STRUCTURAL GEOGRID INSTALLATION**  
 A. GEOGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.  
 B. GEOGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.  
 C. THE GEOGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEOGRID. THE GEOGRID SHALL BE FILLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEOGRID.  
**3.05 REINFORCED BACKFILL PLACEMENT**  
 A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEOGRID AND INSTALLATION DAMAGE.  
 B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 8 INCHES WHERE HAND COMPACTION IS USED, OR 8-10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.  
 C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO - 5% OF OPTIMUM.  
 D. ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.  
 E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEOGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.  
 F. RUBBER TRED EQUIPMENT MAY PASS OVER GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.  
 G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF DRAINAGE FILL TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID.  
**3.06 CAP INSTALLATION**  
 A. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.  
**3.07 FIELD QUALITY CONTROL**  
 A. THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES, TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.  
 B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL CONFORMANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.



**NOTES:**

- NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL.
- RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIV.) CERTIFIED SOILS TECHNICIAN.
- ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
- THE REQUIRED BEARING PRESSURE BENEATH THE WALL SYSTEM SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO START OF CONSTRUCTION. THE REQUIRED BEARING TEST SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
- THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH 8' LIFT MUST BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
- WALLS SHALL NOT BE CONSTRUCTED ON UNCERTIFIED FILL MATERIALS.
- WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD CO. RIGHT-OF-WAY OR EASEMENT.

**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14433, EXPIRATION DATE 03/31/15.

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

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

2-20-15  
 2-26-15  
 2/26/15

01/05/15 01 REVISED SITE DEVELOPMENT PLAN

Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: BOY CHAVAZA, EX. VICE PRESIDENT  
 300 ST. LAKE CRUISE  
 WESTMINSTER, MD 21158  
 (410) 648-0090

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, Inc.  
 7175 colchester gateway, #100 - colmdel, md. 21046-9900  
 410.322.8800 - fax: 301.381.0148 - in: 410.322.8800

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE:  
**RETAINING WALL DESIGN**

DESIGN: DAM	SCALE: N/A	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>66</b> OF <b>77</b>

**HILLIS-CARNES  
 ENGINEERING ASSOCIATES**  
 10975 Guilford Road, Suite A Annapolis Junction, Maryland  
 (410) 680-4778 WWW.HCEA.COM Fax: (410) 680-4068

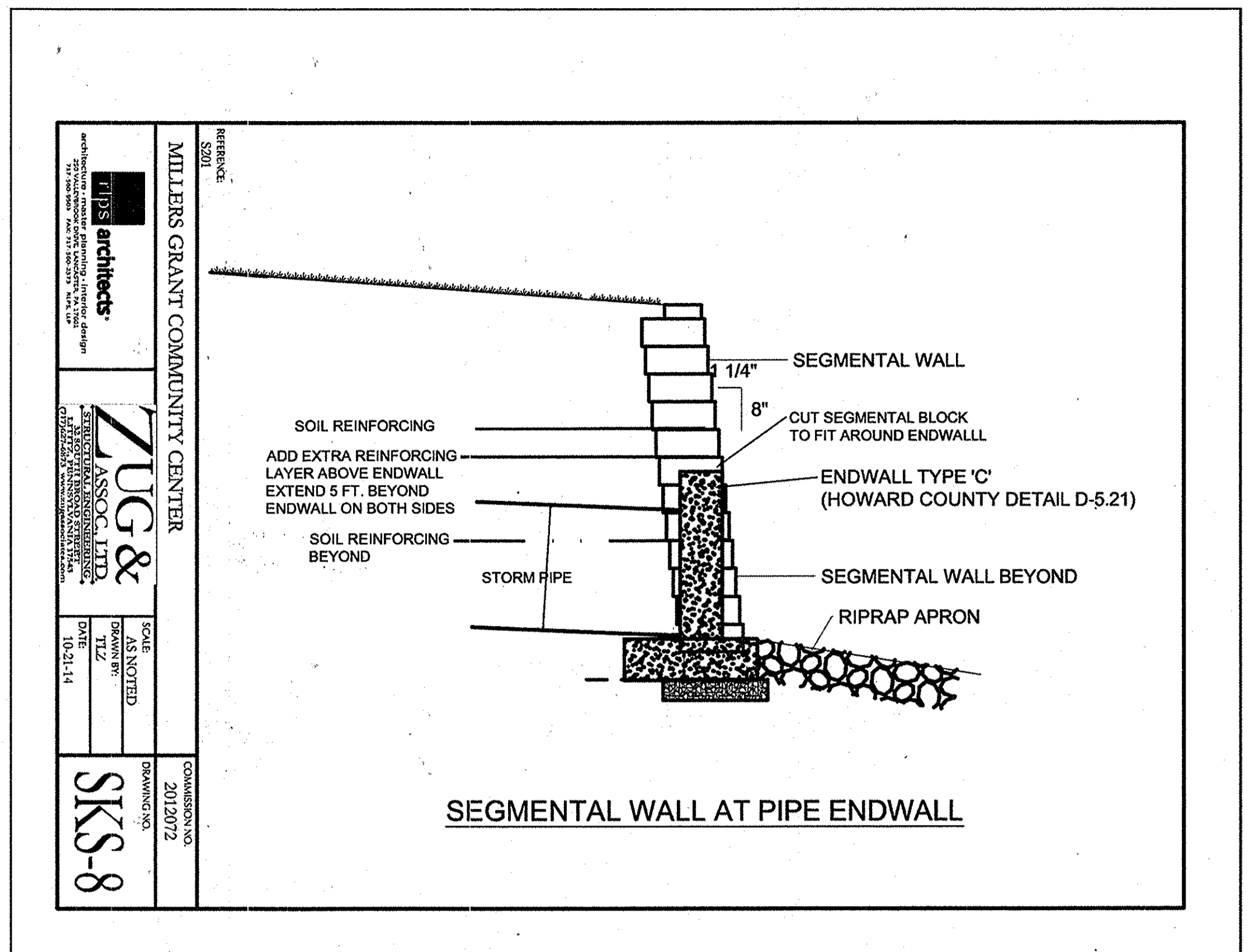
**RETAINING WALL #7, #8 ELEVATIONS AND CONSTRUCTION DETAILS  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 HOWARD COUNTY, MARYLAND**

REVISION NO.	DESCRIPTION	DATE

JOB NUMBER: 14013-Z	DESIGNED BY: HM
SCALE: AS SHOWN	DRAWN BY: HM
DATE: 9/30/14	APPROVED BY: RWS

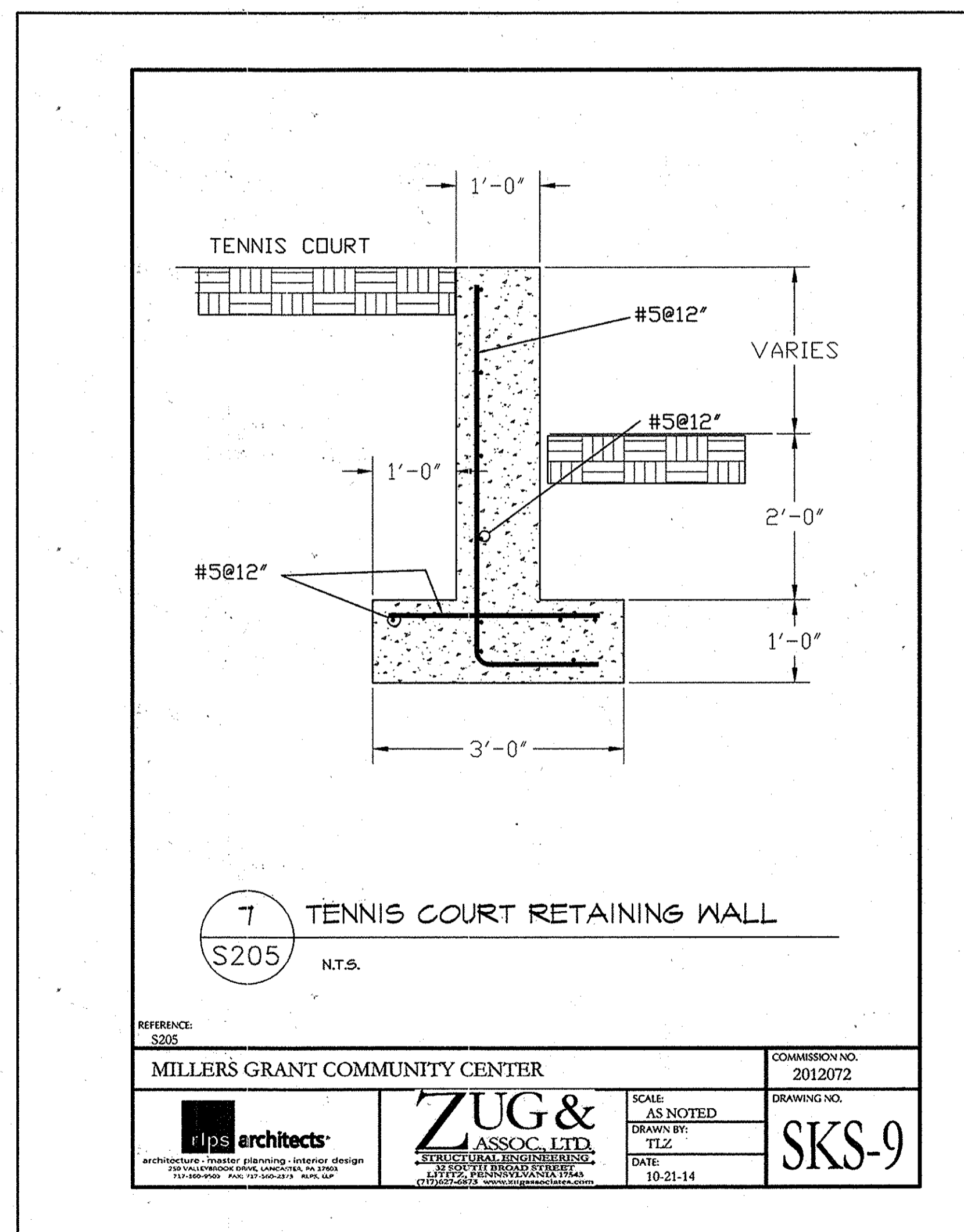
5 OF 5 SHEET

P:\Projects\051011-MDC-XXX-34DC-792 EDP\2014-01-22 Bid Set\2014-09-09 Hillis-Carnes-09 REVISIONS.dwg, 12/29/2014 4:21:16 PM, dghibman, 11, c:\temp\p\consultants, Ltd.



**TPS architects**  
**ZUG & ASSOC. LTD.**  
 ARCHITECTS  
 10-21-14  
**SKS-8**

SEGMENTAL WALL AT PIPE ENDWALL



7 TENNIS COURT RETAINING WALL  
N.T.S.

REFERENCE: S205  
**MILLERS GRANT COMMUNITY CENTER**  
 COMMISSION NO. 2012072  
**TPS architects**  
**ZUG & ASSOC. LTD.**  
 ARCHITECTS  
 SCALE: AS NOTED  
 DRAWN BY: TLZ  
 DATE: 10-21-14  
**SKS-9**

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division Date: 2-20-15  
 Chief, Division of Land Development Date: 2-24-15  
 Director Date: 2/26/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN
<b>LUTHERAN VILLAGE AT MILLER'S GRANT            PLANNED SENIOR COMMUNITY</b> <b>OWNER / DEVELOPER</b> LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: ROY GRIVACIS, EX. VICE PRESIDENT 300 ST. LIME CIRCLE WESTMINSTER, MD 21158 (410) 848-0090		

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, Inc.  
 7172 OAKBROOK GARDENS DRIVE SUITE 100 - COLLEGE PARK, MD 20746-2090  
 410.872.8800 - FAX: 410.872.8148 - TEL: 410.872.8800

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	SEWER CODE F07
WATER CODE 550 (TG 700)		

TITLE:  
**RETAINING WALL DESIGN**  
 DESIGN: DAM SCALE: N/A PROJECT: 05115.001.02  
 DRAWN: DAM DATE: APRIL 12, 2013  
 CHECKED: ENJ APPROVED: WRZ **67 of 77**



THIS SHEET INTENTIONALLY LEFT BLANK

APPROVED:  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 2-20-15  
Chief, Development Engineering Division Date  
*[Signature]* 2-26-15  
Chief, Division of Land Development Date  
*[Signature]* 2/26/15  
Director Date

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**  
**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CASSILL LUTHERAN VILLAGE  
CONTACT: ROY ORAVACCI, EX. VICE PRESIDENT  
300 ST LUKE DRIVE  
WESTMINSTER, MD 21158  
(410) 648-0090



PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10678 F. 424	GRID NO. ZONE 9 PSC	TAX MAP 24
WATER CODE 550 (TG 700)	ELECTION DISTRICT 02	SEWER CODE F07


TITLE:  
N/A

DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	<b>68</b> OF <b>77</b>
CHECKED: ENJ	APPROVED: NRZ	

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APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
		Date <u>2-20-15</u>	
Chief, Development Engineering Division		Date	
		Date <u>2-26-15</u>	
Chief, Division of Land Development		Date	
		Date <u>2/26/15</u>	
Director		Date	
01/05/15	01	REVISED SITE DEVELOPMENT PLAN	
Revision Description			
Date	No.	Revision Description	
LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY			
OWNER / DEVELOPER LUTHERAN VILLAGE AT MILLER'S GRANT C/O CARROLL LUTHERAN VILLAGE CONTACT: ROY ORAVACCI, EX. VICE PRESIDENT 300 ST LUKE CIRCLE WESTMINSTER, MD 21158 (410) 848-0090			
 <b>christopher consultants</b> engineering - surveying - land planning <small>christopher consultants, Inc.          7175 Rockledge Parkway, Suite 100, Columbia, MD 21046-2690          410.312.2800 - fax 410.312.0148 - cell 410.312.2800</small>			
PERMIT INFORMATION CHART			
PROJECT NAME LUTHERAN VILLAGE AT MILLERS GRANT		LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24
WATER CODE 550 (TG 700)		ELECTION DISTRICT 02	
TITLE: N/A		SEWER CODE F07	
DESIGN: DAM	SCALE: 1" = 50'	PROJECT: 05115.001.02	
DRAWN: DAM	DATE: APRIL 12, 2013	69 OF 77	
CHECKED: ENJ	APPROVED: WRZ		



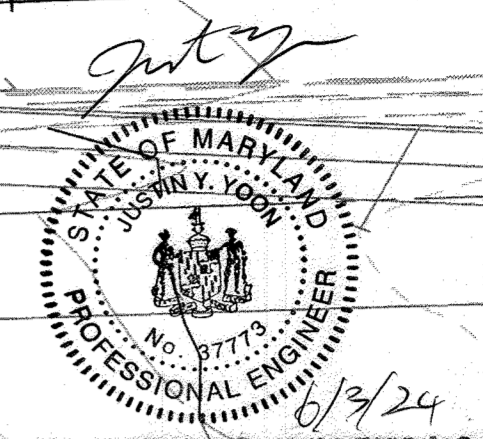
FREDERICK ROAD - MD. STATE ROUTE 144  
 ULTIMATE 100' R/W  
 (MINOR ARTERIAL)

FREDERICK ROAD  
 CENTER LINE

VEHICULAR EGRESS AND  
 INGRESS IS RESTRICTED

MANHOLE TO BE  
 ADJUSTED TO  
 GRADE

END PROPOSED CURB  
 AND GUTTER



**AS-BUILT CERTIFICATION**

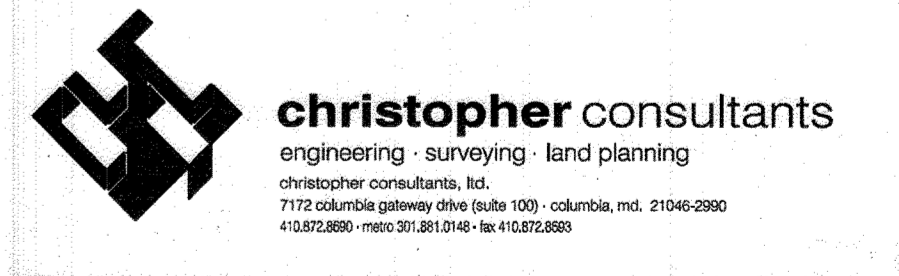
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

*Brian E. Wagner* 8/12/19 DATE  
 BRIAN E. WAGNER, P.E. DATE  
 MARYLAND REG. NO. 07795 EXPIRATION DATE: 08/14/25  
 DATE OF AS-BUILT: 09/10/2018

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING		Date	2-20-15
Chief, Development Engineering Division		Date	2-26-15
Chief, Division of Land Development		Date	3/26/15
Director		Date	
01/05/15	01	REVISED SITE DEVELOPMENT PLAN	
6/3/24	05	REV SDP - EV CHARGING	

Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY ORAVACK, EX. VICE PRESIDENT  
 300 ST. LUKE CHURCH  
 WESTMINSTER, MD 21158  
 (410) 848-0090



PERMIT INFORMATION CHART			
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT	
LUTHERAN VILLAGE AT MILLERS GRANT	1001	602800	
DEED REF.	GRID NO.	ZONE	TAX MAP
L. 10578 F. 424	9	PSC	24
WATER CODE	SEWER CODE		ELECTION DISTRICT
550 (TG 700)	F07		02

TITLE: <b>OVERALL GRADING PLAN</b>		
DESIGN: NM1	SCALE: 1"=30'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>70 of 77</b>

MATCHLINE - SEE SHEET 72 FOR CONTINUATION

MATCHLINE - SEE SHEET 71 FOR CONTINUATION

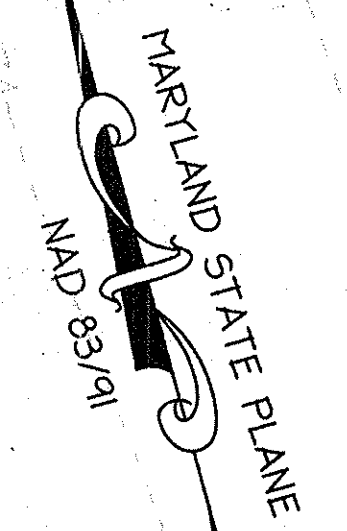
MDC-792 (SDP)

SDP-08-075

MATCHLINE - SEE SHEET 70 FOR CONTINUATION

MATCHLINE - SEE SHEET 73 FOR CONTINUATION

ARCA



F.F.E. = 369.0

PLAT NO. # 22346-22353  
 10' RETAINING WALL MAINTENANCE & CONSTRUCTION EASEMENT AND TREE PLANTING ZONE ON BOTH SIDE OF WALL  
 PLAT NO. # 22346-22353

50' MINIMUM STRUCTURE AND USE SETBACK PER SECTION 127.1F.2C  
 PLAT NO. # 22346-22353

5' WIDE LEVEL SPREADER

PUBLIC 100-YEAR FLOODPLAIN EASEMENT  
 PLAT NO. # 22346-22353

APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE MARCH 17, 2015

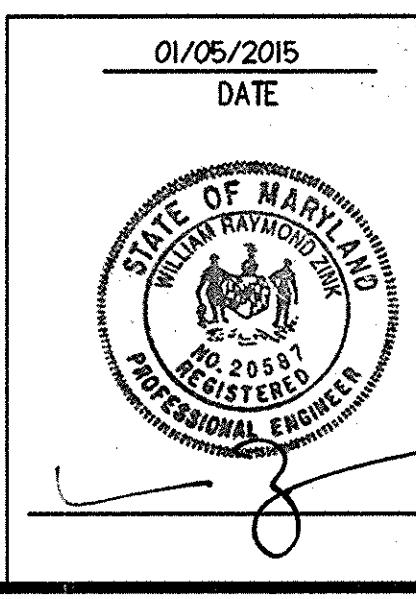
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division 2-20-15  
 Chief, Division of Land Development 2-26-15  
 Director 2-26-15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAVAZ, EX. VICE PRESIDENT  
 300 ST. LIME DRIVE  
 WESTMINSTER, MD 21158  
 (410) 848-0690



PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. 1001	CENSUS TRACT 602800		
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)		SEWER CODE F07		
TITLE: <b>OVERALL GRADING PLAN</b>				
DESIGN: NM	SCALE: 1"=30'	PROJECT: 05115.001.02		
DRAWN: DAM	DATE: APRIL 12, 2015			
CHECKED: BUJ	APPROVED: WRZ	<b>71 of 77</b>		

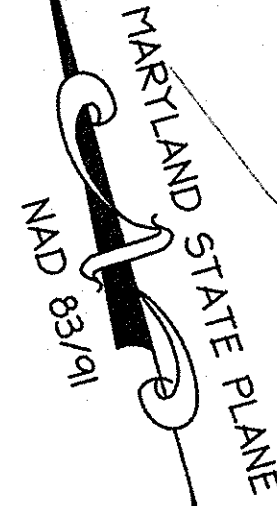
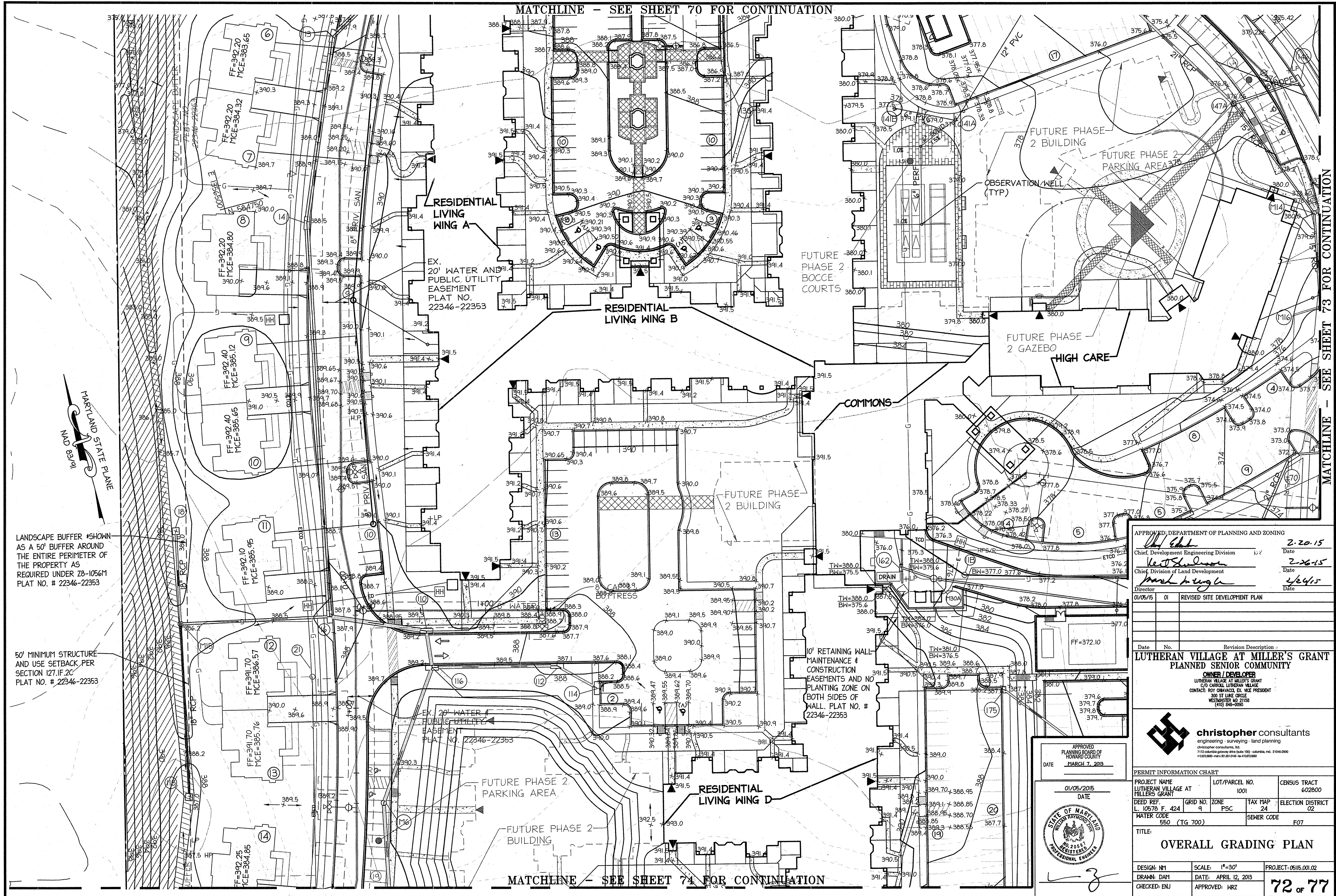


MATCHLINE - SEE SHEET 73 FOR CONTINUATION

MATCHLINE - SEE SHEET 70 FOR CONTINUATION

MATCHLINE - SEE SHEET 73 FOR CONTINUATION

MATCHLINE - SEE SHEET 74 FOR CONTINUATION



LANDSCAPE BUFFER \*SHOWN AS A 50' BUFFER AROUND THE ENTIRE PERIMETER OF THE PROPERTY AS REQUIRED UNDER ZB-105.61 PLAT NO. # 22346-22353

50' MINIMUM STRUCTURE AND USE SETBACK PER SECTION 127.1F.2C PLAT NO. # 22346-22353

RESIDENTIAL LIVING WING A

RESIDENTIAL LIVING WING B

FUTURE PHASE 2 BUILDING

COMMONS

RESIDENTIAL LIVING WING D

FUTURE PHASE 2 BUILDING

FUTURE PHASE 2 PARKING AREA

OBSERVATION WELL (TYP)

FUTURE PHASE 2 GAZEBO

HIGH CARE

EX. 20' WATER AND PUBLIC UTILITY EASEMENT PLAT NO. 22346-22353

FUTURE PHASE 2 BOCCO COURTS

10' RETAINING WALL MAINTENANCE & CONSTRUCTION EASEMENTS AND NO PLANTING ZONE ON BOTH SIDES OF WALL. PLAT NO. # 22346-22353

EX. 20' WATER & PUBLIC UTILITY BASEMENT PLAT NO. 22346-22353

FUTURE PHASE 2 PARKING AREA

FUTURE PHASE 2 BUILDING

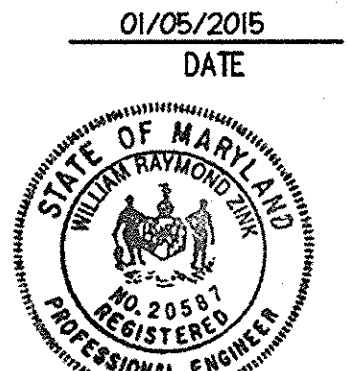
APPROVED: DEPARTMENT OF PLANNING AND ZONING		Date	2-20-15
Chief, Development Engineering Division		Date	2-26-15
Chief, Division of Land Development		Date	2/24/15
Director		Date	
01/05/15	01	REVISED SITE DEVELOPMENT PLAN	

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
210 CARROLL LUTHERAN VILLAGE  
CONTACT: ROY CHAVACCI, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
RESISTANCE MD 21158  
(410) 648-0090

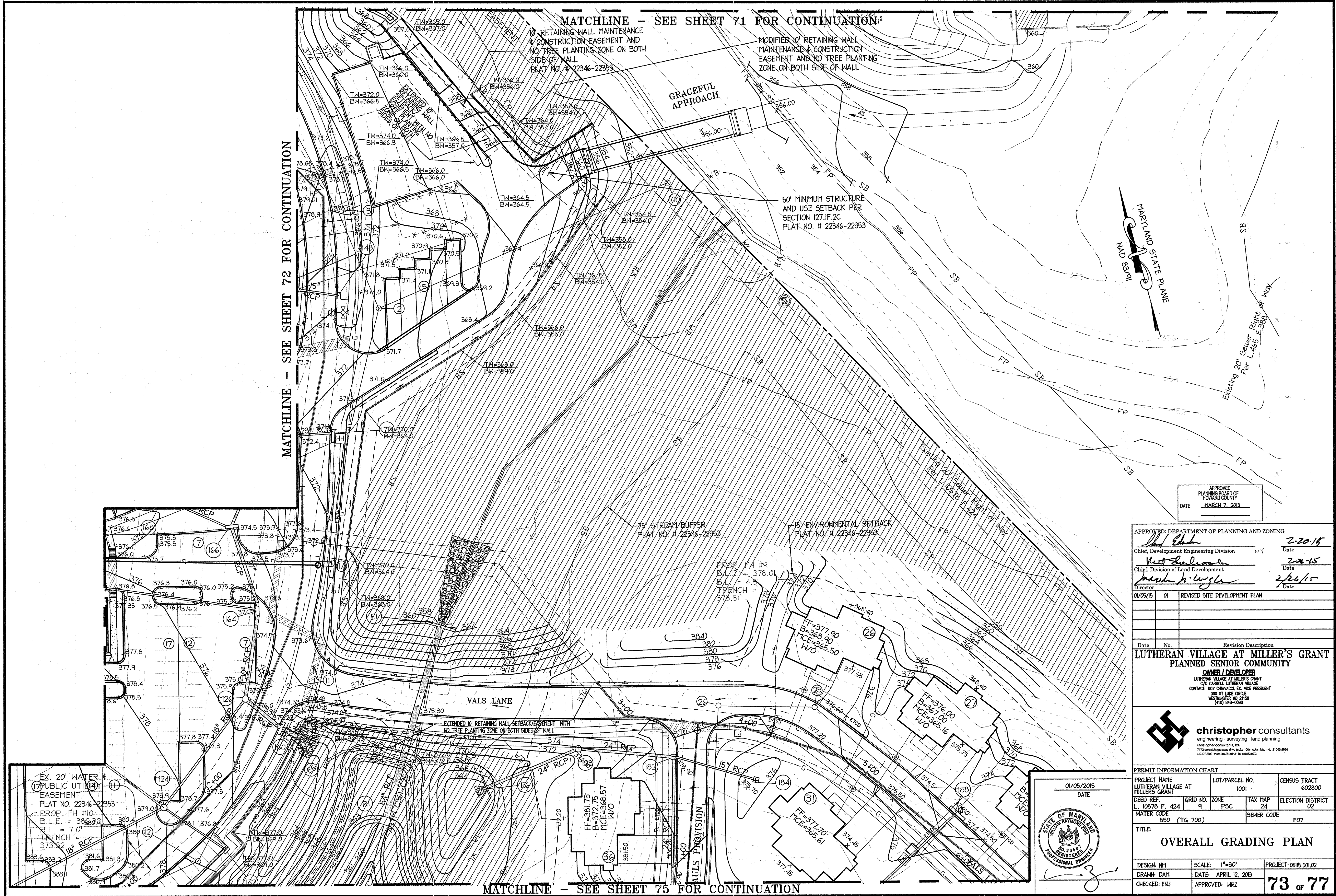


APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE  
MARCH 7, 2015



PERMIT INFORMATION CHART			
PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT	
LUTHERAN VILLAGE AT MILLER'S GRANT	1001	602800	
DEED REF.	GRID NO.	ZONE	TAX MAP
L. 10578 F. 424	9	PSC	24
WATER CODE	SEWER CODE		ELECTION DISTRICT
550 (TG 700)			02
TITLE:			
OVERALL GRADING PLAN			

DESIGN: NM	SCALE: 1"=30'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: ENJ	APPROVED: WRZ	



MATCHLINE - SEE SHEET 71 FOR CONTINUATION

MATCHLINE - SEE SHEET 72 FOR CONTINUATION

MATCHLINE - SEE SHEET 75 FOR CONTINUATION

RETAINING WALL MAINTENANCE & CONSTRUCTION EASEMENT AND NO TREE PLANTING ZONE ON BOTH SIDES OF WALL  
PLAT NO. # 22346-22353

MODIFIED 10' RETAINING WALL MAINTENANCE & CONSTRUCTION EASEMENT AND NO TREE PLANTING ZONE ON BOTH SIDES OF WALL

50' MINIMUM STRUCTURE AND USE SETBACK PER SECTION 127.1F.2C  
PLAT NO. # 22346-22353

75' STREAM BUFFER  
PLAT NO. # 22346-22353

15' ENVIRONMENTAL SETBACK  
PLAT NO. # 22346-22353

PROP. FH #9  
B.L.E. = 378.0  
B.L. = 4.5  
TRENCH = 378.51

EX. 20' WATER EASEMENT  
PLAT NO. 22346-22353  
PROP. FH #10  
B.L.E. = 383.0  
B.L. = 7.0'  
TRENCH = 373.32

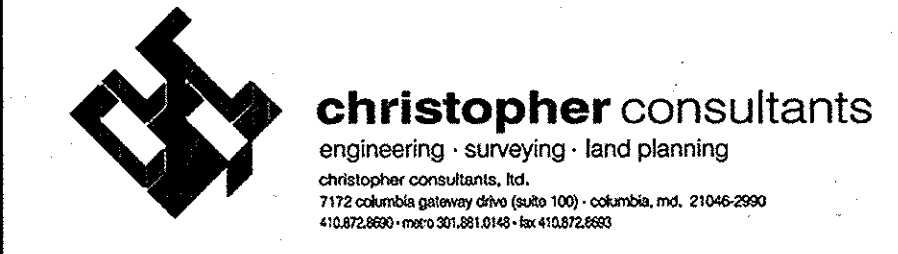
EXTENDED 10' RETAINING WALL SETBACK/EASEMENT WITH NO TREE PLANTING ZONE ON BOTH SIDES OF WALL



APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2013

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i>	Date 2-20-15
Chief, Development Engineering Division	
<i>[Signature]</i>	Date 2-26-15
Chief, Division of Land Development	
<i>[Signature]</i>	Date 2/26/15
Director	
01/05/15	01 REVISED SITE DEVELOPMENT PLAN

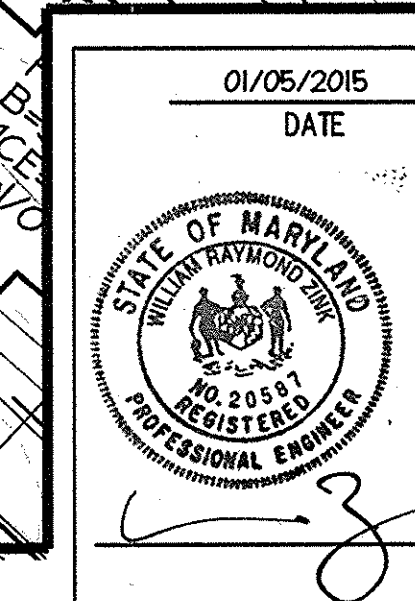
Date No. Revision Description  
**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**  
OWNER / DEVELOPER  
LUTHERAN VILLAGE AT MILLER'S GRANT  
670 CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORAVACCI, EX. VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21158  
(410) 848-0090

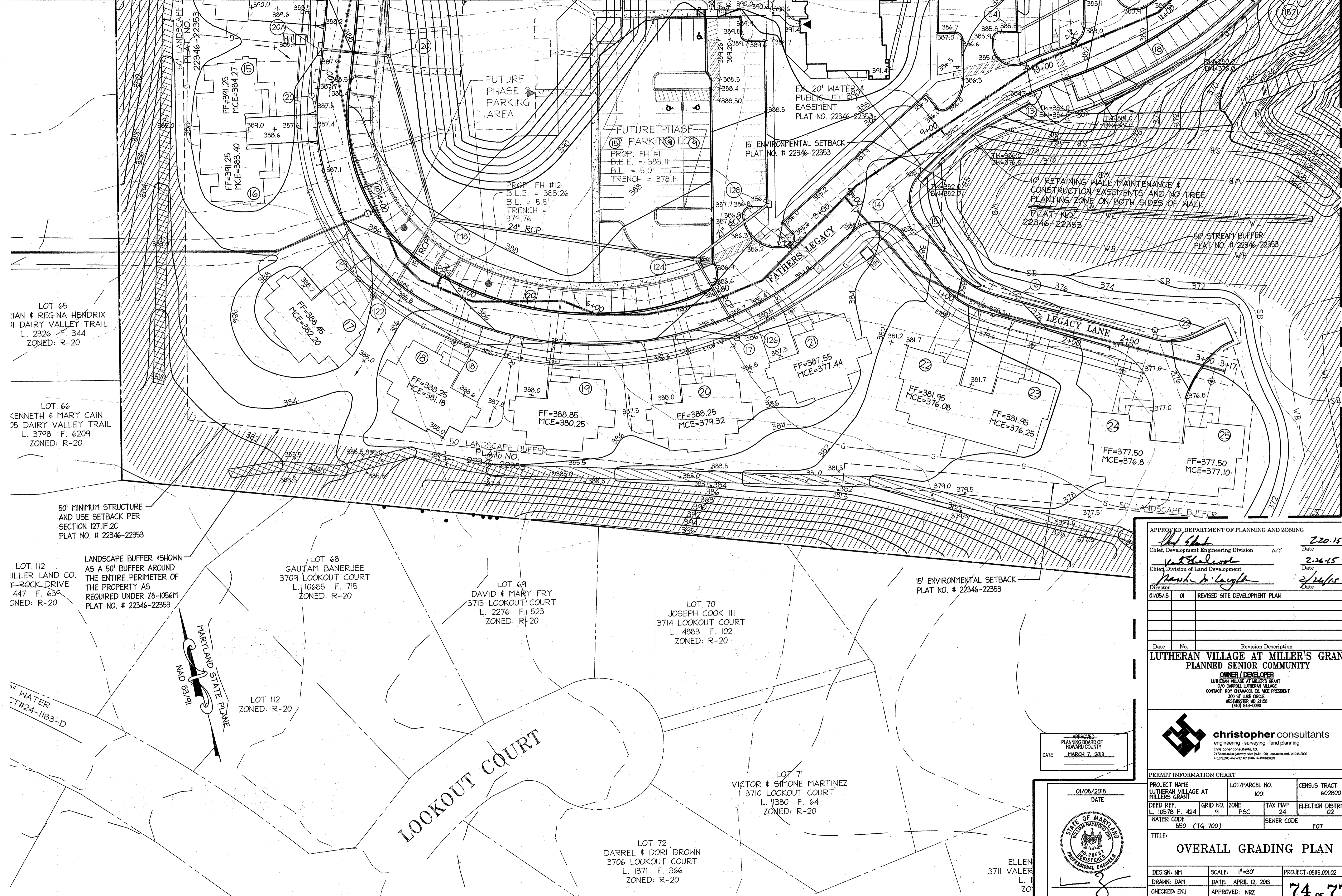


PERMIT INFORMATION CHART			
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. 1001	CENSUS TRACT 602800	
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE P5C	TAX MAP 24
ELECTION DISTRICT 02		SEWER CODE F07	
WATER CODE 550 (TG 700)		SEWER CODE F07	

**OVERALL GRADING PLAN**

DESIGN: N1	SCALE: 1"=30'	PROJECT: 05115.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>73 OF 77</b>





LOT 65  
IAN & REGINA HENDRIX  
71 DAIRY VALLEY TRAIL  
L. 2326 F. 344  
ZONED: R-20

LOT 66  
KENNETH & MARY CAIN  
75 DAIRY VALLEY TRAIL  
L. 3798 F. 6209  
ZONED: R-20

50' MINIMUM STRUCTURE  
AND USE SETBACK PER  
SECTION 127.1F.2C  
PLAT NO. # 22346-22353

LOT 112  
MILLER LAND CO.  
Y-ROCK DRIVE  
447 F. 639  
ZONED: R-20

LANDSCAPE BUFFER #SHOWN  
AS A 50' BUFFER AROUND  
THE ENTIRE PERIMETER OF  
THE PROPERTY AS  
REQUIRED UNDER ZB-1056M  
PLAT NO. # 22346-22353

LOT 68  
GAUTAM BANERJEE  
3709 LOOKOUT COURT  
L. 10685 F. 715  
ZONED: R-20

LOT 69  
DAVID & MARY FRY  
3715 LOOKOUT COURT  
L. 2276 F. 523  
ZONED: R-20

LOT 70  
JOSEPH COOK III  
3714 LOOKOUT COURT  
L. 4883 F. 102  
ZONED: R-20

15' ENVIRONMENTAL SETBACK  
PLAT NO. # 22346-22353

LOT 112  
ZONED: R-20

LOT 71  
VICTOR & SIMONE MARTINEZ  
3710 LOOKOUT COURT  
L. 11380 F. 64  
ZONED: R-20

LOT 72  
DARREL & DORI DROWN  
3706 LOOKOUT COURT  
L. 1371 F. 366  
ZONED: R-20

ELLEN  
3711 VALER  
ZONED: R-20

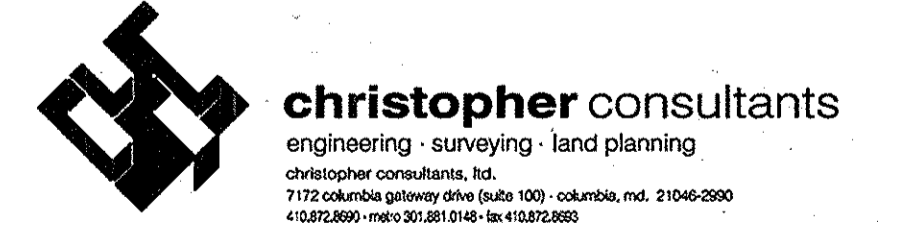
APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	Chief, Development Engineering Division	2-20-15	Date
<i>[Signature]</i>	Chief, Division of Land Development	2-26-15	Date
<i>[Signature]</i>	Director	2/26/15	Date

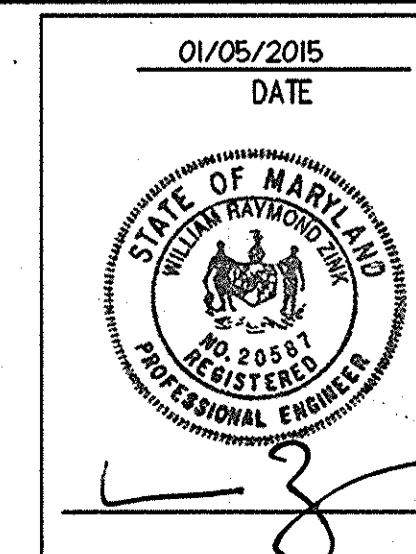
Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**

**OWNER / DEVELOPER**  
LUTHERAN VILLAGE AT MILLER'S GRANT  
C/O CARROLL LUTHERAN VILLAGE  
CONTACT: ROY ORMAVACI, ESQ., VICE PRESIDENT  
300 ST. LUKE CIRCLE  
WESTMINSTER, MD 21159  
(410) 848-0090



APPROVED:  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE: MARCH 7, 2015



PERMIT INFORMATION CHART

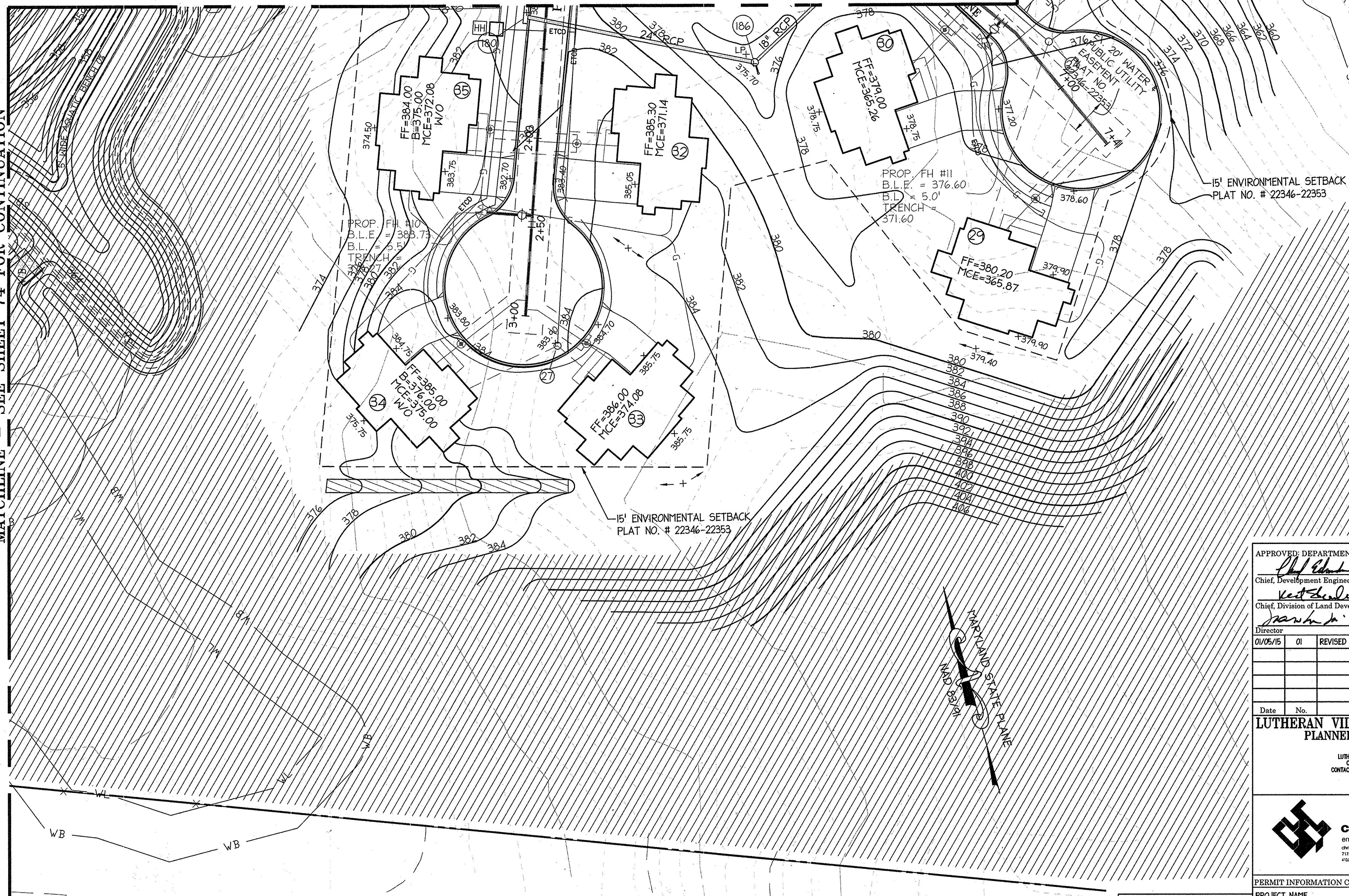
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. 1001	CENSUS TRACT 602800
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC
TAX MAP 24	ELECTION DISTRICT 02	
WATER CODE 550 (TG 700)	SEWER CODE F07	

TITLE:  
**OVERALL GRADING PLAN**

DESIGN: NM	SCALE: 1"=30'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2015	
CHECKED: EUJ	APPROVED: WRZ	<b>74 of 77</b>

MATCHLINE - SEE SHEET 73 FOR CONTINUATION

MATCHLINE - SEE SHEET 74 FOR CONTINUATION



APPROVED  
PLANNING BOARD OF  
HOWARD COUNTY  
DATE MARCH 7, 2015

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division *[Signature]* Date 2-20-15  
 Chief, Division of Land Development *[Signature]* Date 2-26-15  
 Director *[Signature]* Date 2/26/15

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT  
PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY OMAVACKI, ESQ., VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0050

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, inc.  
 1172 columbia gateway drive (suite 100) · columbia, md. 21046-2990  
 410.872.8800 · fax 410.872.8803

PERMIT INFORMATION CHART				
PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. 1001	CENSUS TRACT 602800		
DEED REF. L. 10578 F. 424	GRID NO. 9	ZONE PSC	TAX MAP 24	ELECTION DISTRICT 02
WATER CODE 550 (TG 700)		SEWER CODE F07		
TITLE: <b>OVERALL GRADING PLAN</b>				
DESIGN: NM	SCALE: 1"=30'	PROJECT: 05115.001.02		
DRAWN: DAM	DATE: APRIL 12, 2015	75 OF 77		
CHECKED: EUJ	APPROVED: WRZ			

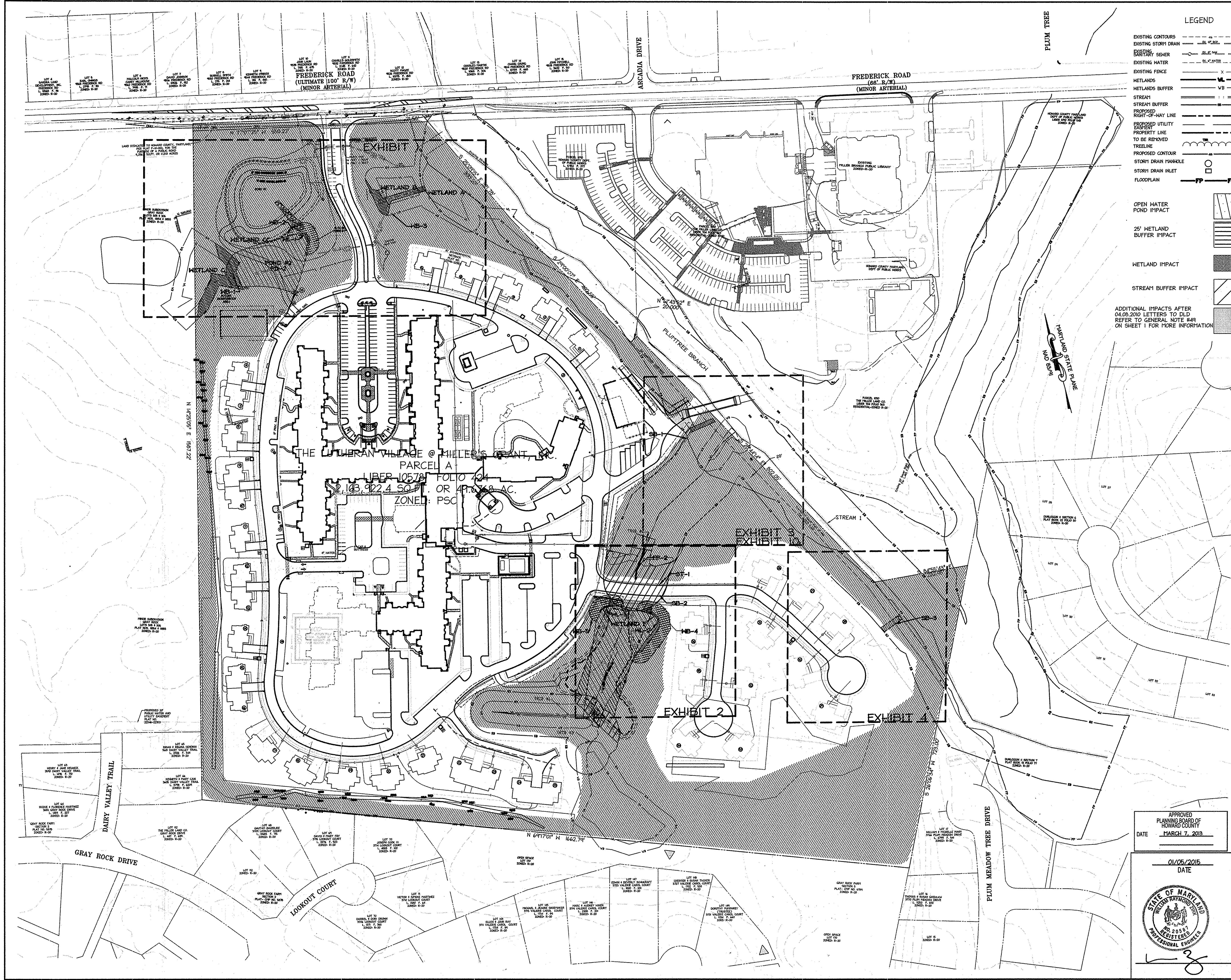
01/05/2015  
DATE

GRAY ROCK  
SECTION  
PLAT - CMP N  
ZONED: R

LOT 147  
EDWIN & BEVERLY SCHUKRAFT  
3723 VALERIE CAROL COURT  
L. 1820 F. 124  
ZONED: R-20

LOT 148  
CHESTER & SUSAN TUCKER  
3727 VALERIE CAROL COURT  
L. 1702 F. 533  
ZONED: R-20

MDC-792 (SDP)

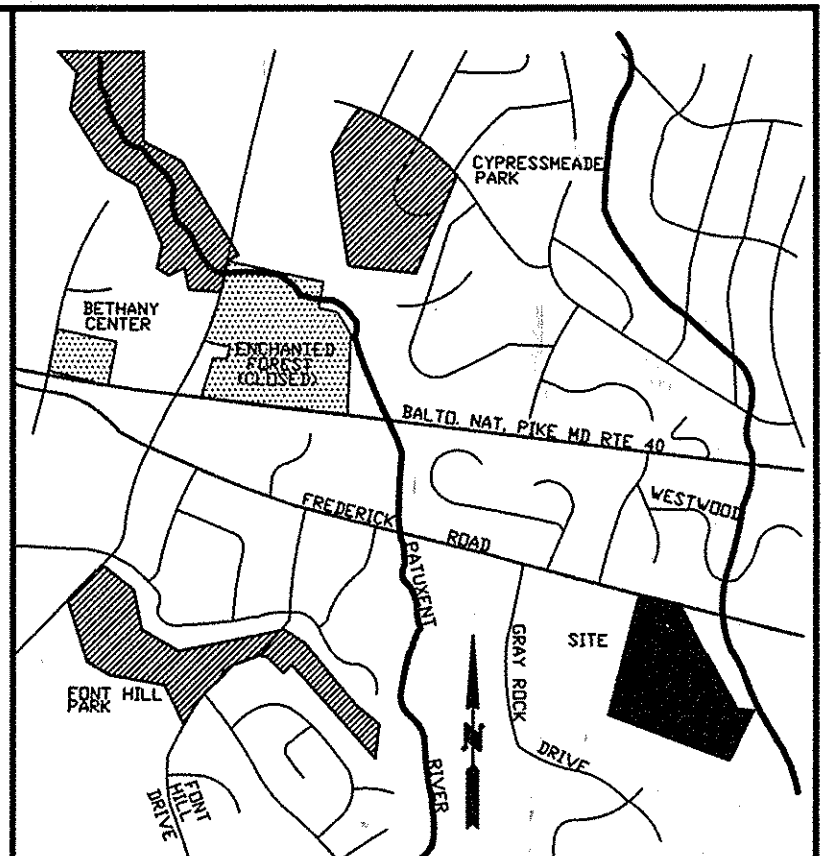


**LEGEND**

- EXISTING CONTOURS
- EXISTING STORY DRAIN
- EXISTING SANITARY SEWER
- EXISTING WATER
- EXISTING FENCE
- METLANDS
- METLANDS BUFFER
- STREAM
- STREAM BUFFER
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED UTILITY EASEMENT
- PROPERTY LINE TO BE REVOKED
- TREELINE
- PROPOSED CONTOUR
- STORM DRAIN MANHOLE
- STORM DRAIN INLET
- FLOODPLAIN

- OPEN WATER POND IMPACT
- 25' WETLAND BUFFER IMPACT
- WETLAND IMPACT
- STREAM BUFFER IMPACT

ADDITIONAL IMPACTS AFTER 04.08.2010 LETTERS TO DLD REFER TO GENERAL NOTE #49 ON SHEET 1 FOR MORE INFORMATION



**VICINITY MAP** ADC# 21007249  
SCALE 1"=2000'  
HOWARD COUNTY MAP 20 GRID D-8

OPEN WATER			
POND 2	PD-1	24,809 SQ.FT.	
POND 1	PD-2	18,861 SQ.FT.	
TOTAL		43,670 SQ.FT.	
WETLAND IMPACTS			
WETLAND CC 1	WL-1	108 SQ.FT.	
WETLAND F 2	WL-2	739 SQ.FT.	
WETLAND F 2	WL-3	71 SQ.FT.	
WETLAND B#1	WL-4	988.85 SQ.FT.	
TOTAL		1,867 SQ.FT.	
WETLAND BUFFER IMPACTS			
WETLAND C 1	WB-1	5,546.43 SQ.FT.	
WETLAND CC 1	WB-2	2,463 SQ.FT.	
WETLAND B 1	WB-3	1,526.33 SQ.FT.	
WETLAND F 2	WB-4	5,043 SQ.FT.	
WETLAND F 2	WB-5	2,334 SQ.FT.	
WETLAND A 1	WB-6	203 SQ.FT.	
TOTAL		17,167.76 SQ.FT.	
FLOODPLAIN IMPACTS			
	FP-1	756 SQ.FT.	
TOTAL		756 SQ.FT.	
STREAM IMPACTS			
TRIBUTARY 2	ST-1	148 SQ.FT.	
STREAM BUFFER IMPACTS			
TRIBUTARY 3	SB-1	724.59 SQ.FT.	
TRIBUTARY 2	SB-2	22,915 SQ.FT.	
STREAM 2	SB-3	590 SQ.FT.	
TRIBUTARY 2	SB-4	7,787 SQ.FT.	
TRIBUTARY 1	SB-5	3,601.24 SQ.FT.	
TOTAL		35,617.83 SQ.FT.	

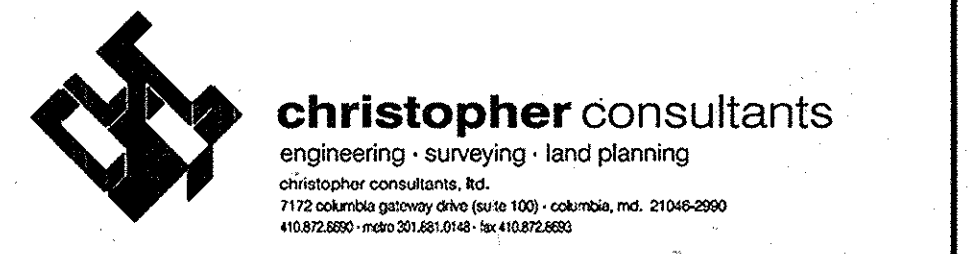
\* TEMPORARY WETLAND IMPACT (941 SQ.FT.)

TYPE OF IMPACT	SQ.FT.	ACRES	L.F.
OPEN WATER	43,670	1.00	-
WETLAND IMPACTS	1,859	0.04	-
WETLAND BUFFER IMPACTS	17,090	0.39	-
FLOODPLAIN IMPACTS	756	0.02	-
STREAM IMPACTS	112	LESS THAN 0.01	74
STREAM BUFFER IMPACTS	23,285	0.53	-

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* Date: 2-20-15  
 Chief, Development Engineering Division  
*[Signature]* Date: 2-26-15  
 Chief, Division of Land Development  
*[Signature]* Date: 2/24/15  
 Director

Date	No.	Revision Description
01/05/15	01	REVISED SITE DEVELOPMENT PLAN

**LUTHERAN VILLAGE AT MILLER'S GRANT PLANNED SENIOR COMMUNITY**  
 OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY CHAVACCA, EX. VICE PRESIDENT  
 300 ST LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 848-0090



APPROVED  
 PLANNING BOARD OF  
 HOWARD COUNTY  
 DATE: MARCH 7, 2013

01/05/2015  
 DATE



PERMIT INFORMATION CHART

PROJECT NAME	LOT/PARCEL NO.	CENSUS TRACT		
LUTHERAN VILLAGE AT MILLER'S GRANT	A	602800		
DEED REF.	GRID NO.	ZONE	TAX MAP	ELECTION DISTRICT
L. 10578 F. 424	9	PSC	24	02
WATER CODE	SEWER CODE			
550 (TG 700)	F07			

TITLE: **Wetland Impact Map Index**

DESIGN: DAM	SCALE: 1"=100'	PROJECT: 0515.001.02
DRAWN: DAM	DATE: APRIL 12, 2013	
CHECKED: ENJ	APPROVED: WRZ	<b>76 OF 77</b>

**DESIGN CRITERIA**

**BUILDING CODE**

INTERNATIONAL BUILDING CODE (IBC) 2009  
 VIRGINIA CONSTRUCTION CODE (VCC) 2009 \*\*  
 LOCAL CODE AMENDMENTS: FAIRFAX COUNTY, VA

**LIVE LOADS**

ACI 350  
 SECTION 1607 IBC  
 CHAPTER 4 ASCE 7

**GENERAL**

1. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO, THE ADDITION OF SHEETING, SHORING, TEMPORARY BRACING, GUYS, AND TIEDOWNS. THE CONTRACTOR SHALL PROVIDE SHORING AND BRACING NECESSARY TO PROTECT EXISTING AND ADJACENT STRUCTURES.
2. STRUCTURAL DOCUMENTS SHALL BE USED WITH OTHER CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, M/E/P, AND SITE DOCUMENTS, COORDINATE WITH THESE DOCUMENTS, ALL FLOOR AND ROOF OPENINGS, DEPRESSIONS, DIMENSIONS, AND SLOPES, ETC. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING CONSTRUCTION LOADS SUCH THAT THESE LOADS DO NOT EXCEED THE DESIGN LIVE LOADS NOTED ABOVE. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AS REQUIRED DURING CONSTRUCTION TO SUPPORT CONSTRUCTION LOADS UNTIL SUCH TIME THAT THE STRUCTURE IS ABLE TO SUPPORT THE DESIGN LIVE LOADS NOTED.
4. SECTIONS AND DETAILS SHOWN ON THE STRUCTURAL DOCUMENTS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS THAT DO NOT HAVE A SPECIFIC SECTION INDICATED.
5. TYPICAL DETAILS APPLY AT ALL APPROPRIATE LOCATIONS AND ARE NOT GENERALLY CUT ON PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL TYPICAL DETAIL APPLICATIONS.
6. FOR INCONSISTENCIES BETWEEN GENERAL NOTES, SPECIFICATIONS AND CONSTRUCTION DOCUMENTS, THE STRICTER REQUIREMENT SHALL APPLY, AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
7. PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND MISCELLANEOUS ITEMS INCLUDING BUT NOT LIMITED TO CLIPS, INSERTS, TIES, ANCHOR STRAPS, HANGERS, BOLTS, AND OTHER FASTENERS REQUIRED TO COMPLETE THE WORK.

**EXISTING CONDITIONS**

1. THE DRAWINGS MAY REFLECT INFORMATION PROVIDED BY OTHERS AND/OR EXISTING CONDITIONS THAT HAVE BEEN SURVEYED AND/OR DOCUMENTED TO THE GREATEST POSSIBLE EXTENT BUT NOT VERIFIED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FULLY COORDINATE THE WORK, INCLUDING, BUT NOT NECESSARILY LIMITED TO, THE VERIFICATION OF ALL EXISTING CONDITIONS SHOWN IN THE DRAWINGS, COORDINATION OF ALL NECESSARY BUILDING TRADES, ETC. ANY AND ALL CONDITIONS THAT ARE MIS-REPRESENTED IN THESE DOCUMENTS, OR ANY CONDITIONS THAT ARE NOT SHOWN BUT WARRANT THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER, SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER.
2. MEANS AND METHODS OF CONSTRUCTION AND TEMPORARY SHORING AND BRACING OF THE EXISTING STRUCTURE(S) ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER MAY INCLUDE PHASING, SEQUENCING, SHORING REQUIREMENTS, ETC. IN THE CONSTRUCTION TO ALERT, ASSIST, OR OTHERWISE DICTATE PROCEDURAL REQUIREMENTS THAT MAY BE NECESSARY TO PROPERLY IMPLEMENT THE STRUCTURAL PORTION OF THE WORK OR THAT MAY BE REQUIRED TO ENSURE BUILDING STABILITY; HOWEVER, THE CONTRACTOR SHALL PROPERLY COORDINATE THESE REQUIREMENTS AND SHALL REMAIN COMPLETELY AND SOLELY RESPONSIBLE FOR ERECTING THE BUILDING STRUCTURE IN A SAFE AND TIMELY MANNER.
3. UNLESS OTHERWISE INDICATED, IT HAS BEEN ASSUMED THAT THE EXISTING STRUCTURE(S) ARE IN SERVICEABLE CONDITION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY AND ALL AREAS OF STRUCTURAL DISTRESS (INCLUDING, BUT NOT LIMITED TO, CRACKS, SPALLING, ETC.) NOT INDICATED IN THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL NOT PROCEED WITH WORK IN SUCH AREAS WITHOUT DIRECTION FROM THE ENGINEER.

**CONCRETE**

1. ALL CONCRETE CONSTRUCTION INCLUDING DETAILING, FABRICATION, PLACEMENT OF REINFORCING, MIXING, HANDLING, PLACING, FINISHING, AND CURING SHALL CONFORM TO ACI "STRUCTURAL CONCRETE FOR BUILDINGS" (30), ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI-315), AND "ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI-318).
2. ALL CONCRETE SHALL CONFORM TO ASTM C94. MINIMUM COMPRESSIVE STRENGTH AND MAXIMUM WATER/CEMENT RATIO SHALL BE AS FOLLOWS:

**CONCRETE PROPERTIES**

STRUCTURE TYPE	F <sub>c</sub> 28 DAY MINIMUM COMPRESSIVE STRENGTH, PSI	WATER/CEMENT RATIO (AIR ENTRAINED)	AIR CONTENT (PERCENT)	WATER/CEMENT RATIO (NON-AIR ENTRAINED)
FOUNDATIONS	3,000	0.59	6% ± 1%	-
WALLS & SLABS	4,500	0.40	6% ± 1%	0.48

**NOTES:**

1. CONCRETE TO RECEIVE A SMOOTH, DENSE, HARD-TROWEL FINISH SHALL NOT BE AIR ENTRAINED.

3. CONTRACTOR SHALL PROVIDE CONCRETE MIX DESIGN DATA CONFORMING TO CHAPTER 5 OF ACI 318 FOR EACH TYPE AND STRENGTH OF CONCRETE SPECIFIED. MIX DESIGN DATA SHALL INCLUDE CONCRETE STRENGTH, SLUMP, AIR ENTRAINMENT, PROPOSED AGGREGATES, ADMIXTURES, POZZOLANS AND LABORATORY TEST DATA.
4. MATERIALS USED IN CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING STANDARDS:
  - PORTLAND CEMENT CONFORMING TO ASTM C150
  - FLY ASH CLASS C & F CONFORMING TO ASTM C618. FLY ASH SHALL BE LIMITED TO A MAXIMUM OF 20% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT AND SHALL NOT BE USED IN COLD WEATHER AND EXTERIOR APPLICATIONS.
  - GROUND GRANULATED BLAST-FURNACE SLAG GRADE 100 & 120 CONFORMING TO ASTM C989. SLAG SHALL BE LIMITED TO A MAXIMUM OF 50% OF TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IN TYPICAL APPLICATIONS AND 25% IN COLD WEATHER AND EXTERIOR APPLICATIONS.
  - AIR-ENTRAINED ADMIXTURES CONFORMING TO ASTM C260
  - ADDITIONAL ADMIXTURES SHALL CONFORM TO ASTM C494 AND ASTM C1017
5. CONCRETE AGGREGATES SHALL CONFORM TO THE FOLLOWING:
  - AGGREGATES SHALL CONFORM TO ASTM C33
  - AGGREGATES USED IN LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C330
  - MAXIMUM AGGREGATE SIZE FOR CONCRETE 1 IN.
  - MAXIMUM AGGREGATE SIZE FOR PEA-GRAVEL CONCRETE ¾ IN.
6. PROPORTION AND DESIGN MIXES TO RESULT IN CONCRETE SLUMP OF 3 ½ IN. ± 1 IN. AT THE POINT OF PLACEMENT. CONCRETE CONTAINING HIGH-RANGE WATER REDUCERS (HRWR) SHALL HAVE A SLUMP OF 4 IN. TO 8 IN.

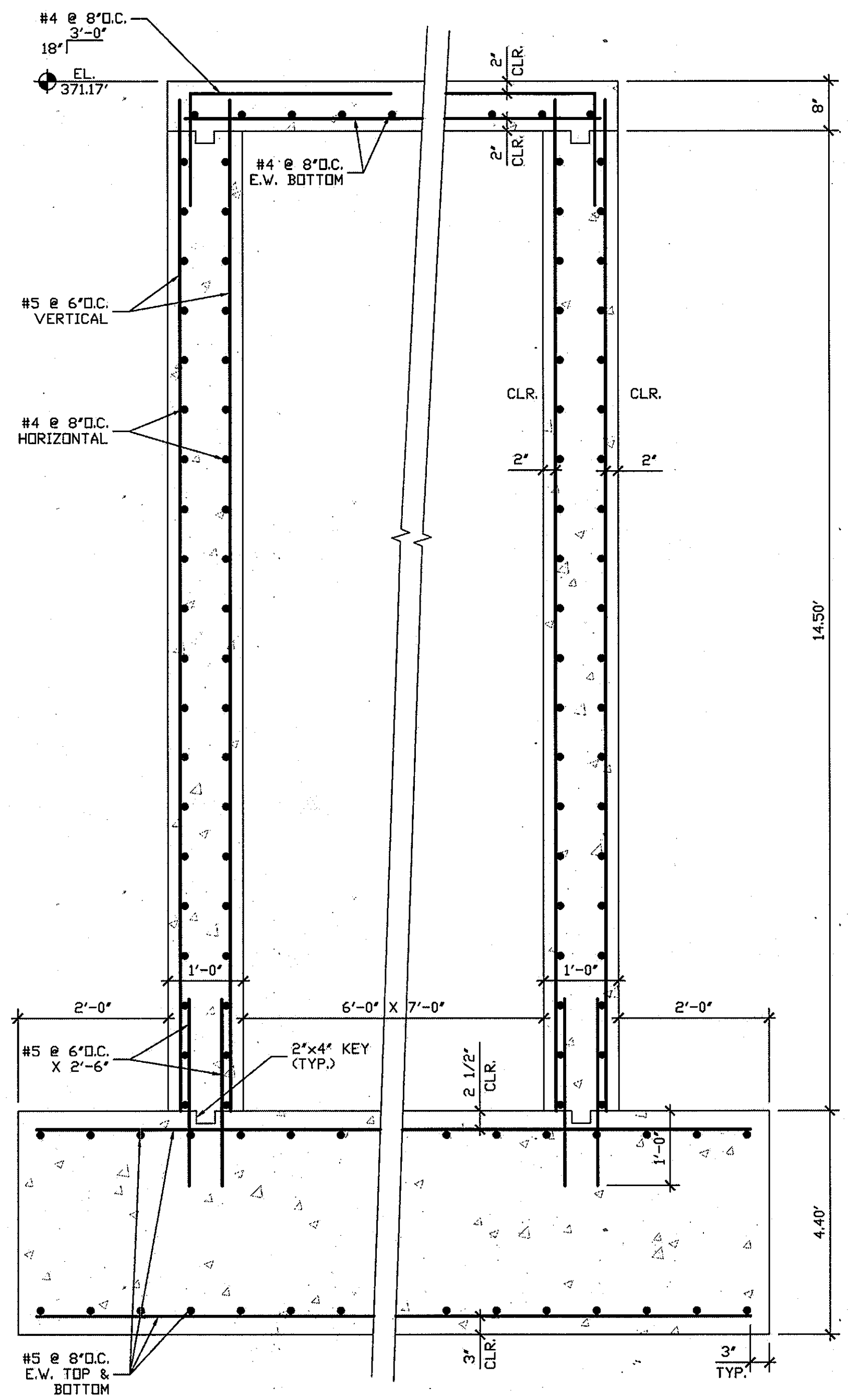
7. OWNER SHALL RETAIN THE SERVICES OF A QUALIFIED TESTING AGENCY TO PROVIDE TESTING OF CONCRETE TO INCLUDE COMPRESSIVE STRENGTH, TEMPERATURE, SLUMP AND AIR ENTRAINMENT. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQ. FT. OF SURFACE AREA OF SLABS OR WALLS. EACH SAMPLE SHALL INCLUDE THE FOLLOWING:
  - (2) 7 DAY LAB CURED CYLINDER BREAKS
  - (2) 28 DAY LAB CURED CYLINDER BREAKS
  - (2) 28 DAY FIELD CURED CYLINDER BREAKS
  - (1) 56 DAY LAB CURED CYLINDER BREAK (HELD IN RESERVE)
  - CONTRACTOR SHALL OBTAIN ADDITIONAL FIELD CURED CYLINDERS AS NECESSARY TO MEET FORMWORK AND SHORING REMOVAL REQUIREMENTS.
9. ALL STRUCTURAL MEMBERS SHALL BE POURED TO THEIR FULL DEPTHS IN ONE OPERATION. CONTRACTOR SHALL PROVIDE LOCATIONS OF CONSTRUCTION JOINT LOCATIONS FOR REVIEW.

**REINFORCEMENT STEEL**

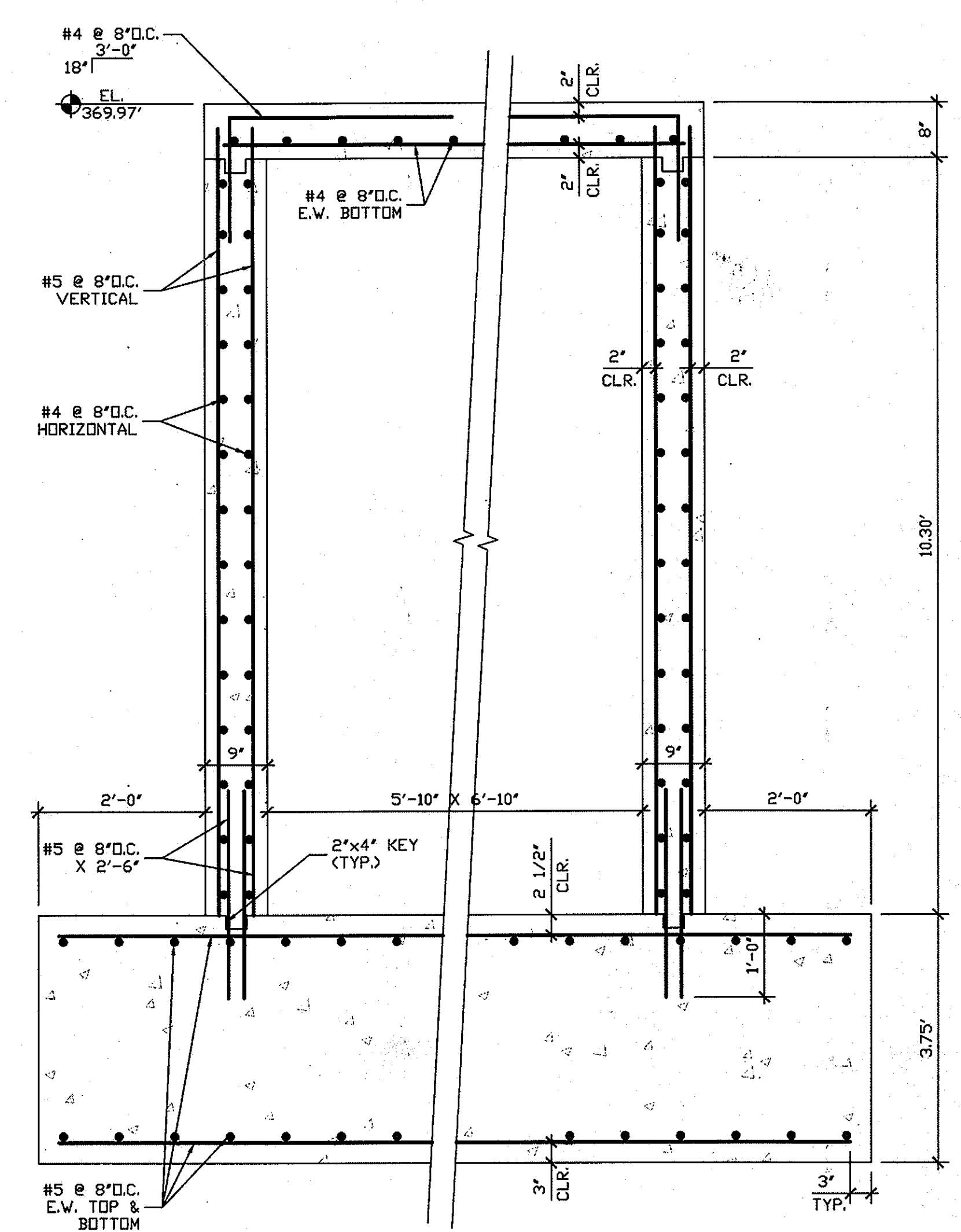
1. CONCRETE REINFORCING SHALL CONFORM TO THE FOLLOWING DESIGNATIONS:
  - DEFORMED BARS ASTM A615, GRADE 60
  - DEFORMED BARS (WELDABLE) ASTM A706
  - DEFORMED BARS (EPOXY-COATED) ASTM A775 & A615, GR. 60
  - WELDED WIRE MESH ASTM A185
2. FABRICATE AND PROVIDE STANDARD SUPPORTING ACCESSORIES IN ACCORDANCE WITH THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315.
3. UNLESS NOTED OTHERWISE, REINFORCING SHALL BE CONTINUOUS WITH CLASS B LAP SPLICES. HOOKS SHALL BE STANDARD HOOKS, AND WALL INTERSECTIONS SHALL HAVE CORNER/L-BARS. LAP WELD WIRE MESH SUCH THAT THE OVERLAP OF THE OUTERMOST CROSS-WIRES OF EACH ADJOINING SHEET IS NOT LESS THAN THE SPACING OF THE CROSS-WIRES PLUS 2 IN. UNL. REFER TO TYPICAL DETAILS FOR ADDITIONAL DETAILING REQUIREMENTS.
4. ALL TOP REINFORCING STEEL AND BEAM STIRRUPS IN BALCONIES, PARKING SLABS AND WEATHER-EXPOSED LOCATIONS SHALL BE EPOXY COATED. ALL REINFORCEMENT IN BELOW GRADE TANKS AND STRUCTURES SHALL BE EPOXY COATED.
5. CONCRETE PROTECTION FOR REINFORCEMENT:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3 IN.
  - CONCRETE EXPOSED TO EARTH OR WEATHER
    - NO. 6 AND LARGER 2 IN.
    - NO. 5 AND SMALLER 1 ½ IN.
  - FRAMED SLABS, PARKING SLAB TOP BARS W/ EPOXY COATING, AND JOISTS ¾ IN.
  - INTERIOR FACES OF WALLS 1 IN.

**POST INSTALLED MECHANICAL AND CHEMICAL ANCHORS**

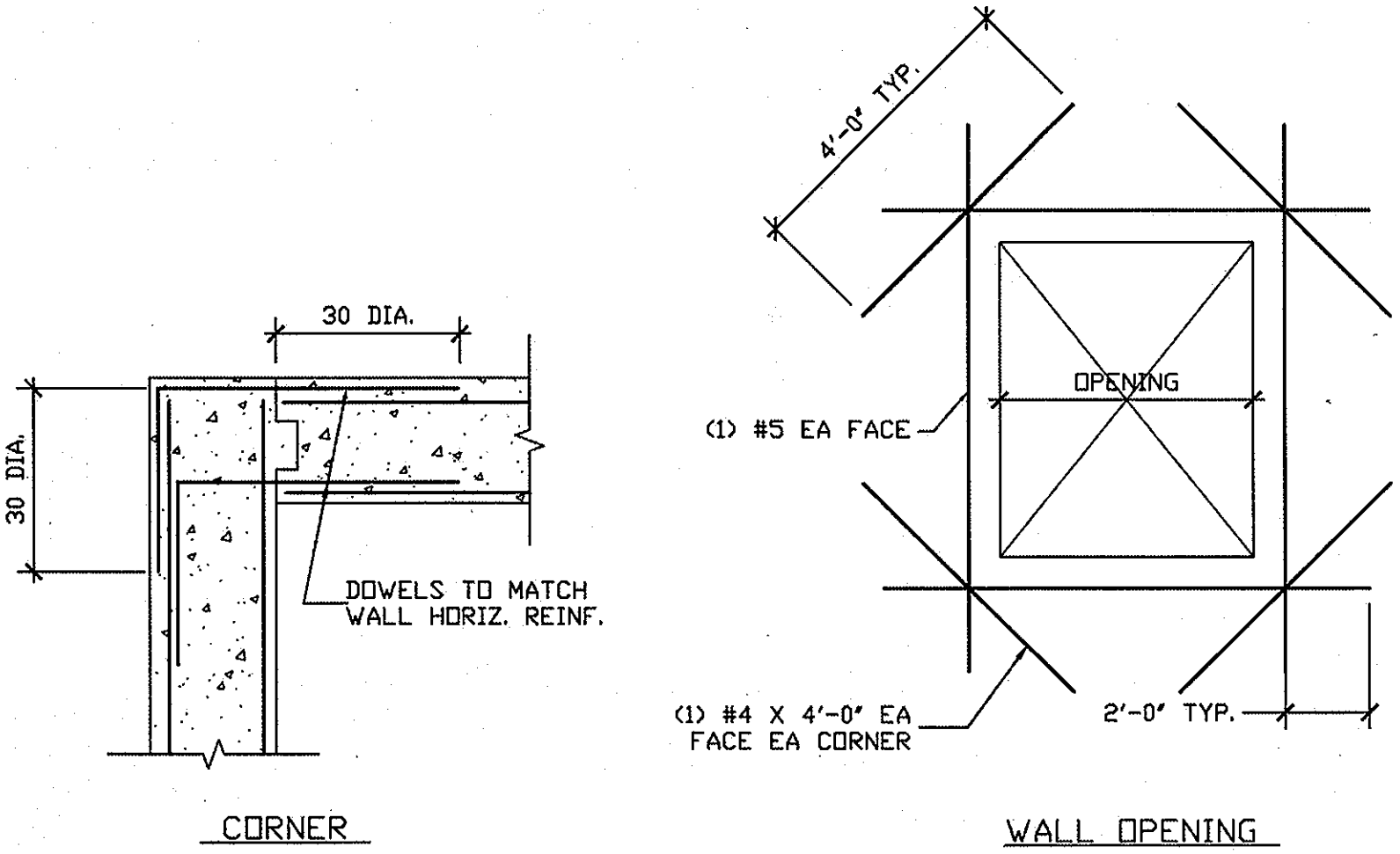
1. ALL MECHANICAL AND CHEMICAL ANCHORS INDICATED WITHIN THESE DOCUMENTS SHALL BE PROVIDED BY HILTI, POWERS, OR AN STRUCTURA-APPROVED EQUIVALENT. ALTERNATE ANCHORS SHALL BE SUBMITTED TO STRUCTURA FOR APPROVAL-SUBMITTAL MUST INCLUDE ALL RELEVANT TECHNICAL INFORMATION INCLUDING ALLOWABLE LOAD VALUES. THE FOLLOWING ANCHORS WERE ASSUMED DURING DESIGN UNLESS SPECIFICALLY NOTED OTHERWISE:
  - A. CHEMICAL ANCHORS: HILTI HAS-E RODS (STANDARD) W/ HILTI HY150 ADHESIVE SYSTEM.
    - 6 ½ INCH MINIMUM EMBEDMENT
    - 6 INCH MINIMUM EDGE DISTANCE (IN DIRECTION OF LOAD)
  - B. EXPANSION ANCHORS: HILTI KWIK BOLT III
    - 6 INCH MINIMUM EMBEDMENT
    - 6 INCH MINIMUM EDGE DISTANCE (IN DIRECTION OF LOAD)
2. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE ANCHOR MANUFACTURER'S SPECIFICATIONS.
3. UNL. ALL ANCHORS SHALL HAVE STANDARD EMBEDMENT DEPTH AS DEFINED BY THE ANCHOR MANUFACTURER.



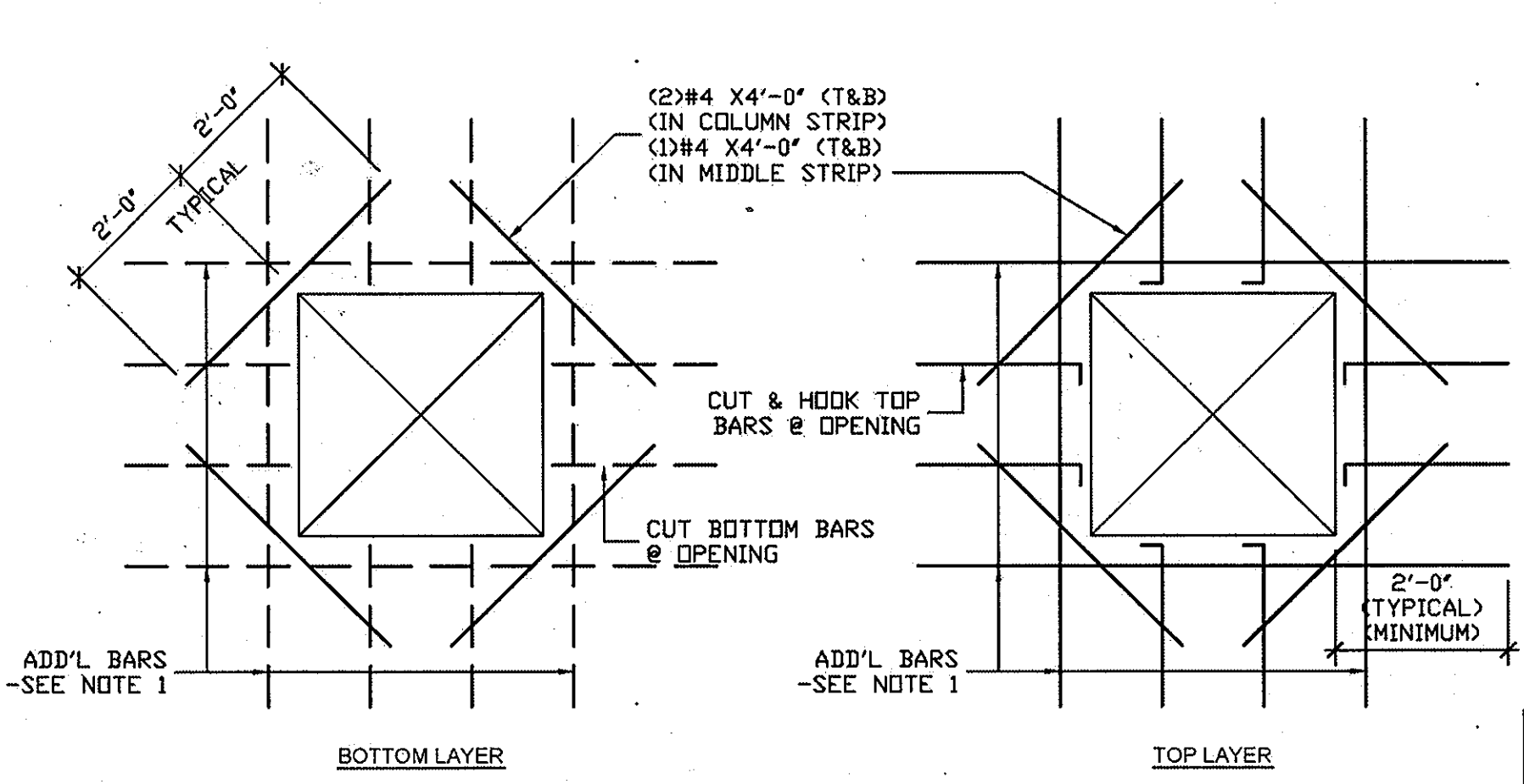
1 SECTION - RISER #1  
 Scale: 3/4" = 1'-0"



2 SECTION - RISER #2  
 Scale: 3/4" = 1'-0"



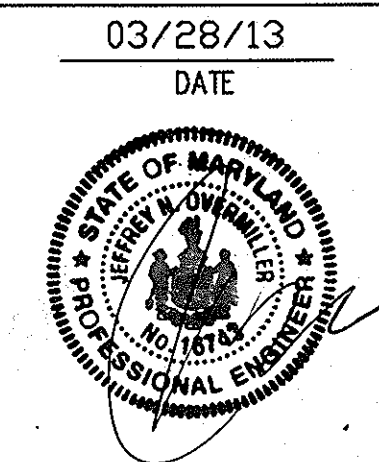
3 TYPICAL CONCRETE WALL DETAILS  
 Scale: N.T.S



4 TYPICAL SLAB OPENING  
 Scale: N.T.S

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 15743, Expiration Date: 12/18/2013

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 Telephone: 410-527-8176 Fax: 410-527-8001  
 www.structura.com



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 4/26/13  
 Chief, Division of Land Development: *[Signature]* 4/26/13  
 Director: *[Signature]* 4/26/13

Date: No. Revision Description

**LUTHERAN VILLAGE AT MILLER'S GRANT  
 PLANNED SENIOR COMMUNITY**

OWNER / DEVELOPER  
 LUTHERAN VILLAGE AT MILLER'S GRANT  
 C/O CARROLL LUTHERAN VILLAGE  
 CONTACT: ROY QUARLES, ESQ. VICE PRESIDENT  
 300 ST. LUKE CIRCLE  
 WESTMINSTER, MD 21158  
 (410) 548-0250

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 christopherconsultants.com  
 7177 coltsville gateway drive (route 100) coltsville, md 21046-2990  
 410-277-0000 - fax: 410-277-0144 - toll free: 800-298-8888

PERMIT INFORMATION CHART

PROJECT NAME LUTHERAN VILLAGE AT MILLER'S GRANT	LOT/PARCEL NO. A	CENSUS TRACT 602800
DEED REF # L 10578 F 424	GRID NO. ZONE 9 PSC	TAX MAP 24
WATER CODE 550 (TG 700)	SEWER CODE F07	ELECTION DISTRICT 02

TITLE:  
**STRUCTURAL DETAILS  
 RISERS #1 & #2**

DESIGN: ENJ SCALE: PROJECT: 05115.001.02  
 DRAWN: DAM DATE: --  
 CHECKED: ENJ APPROVED: --

77 OF 77

MDC-792 (SDP)