

Site Development Plan

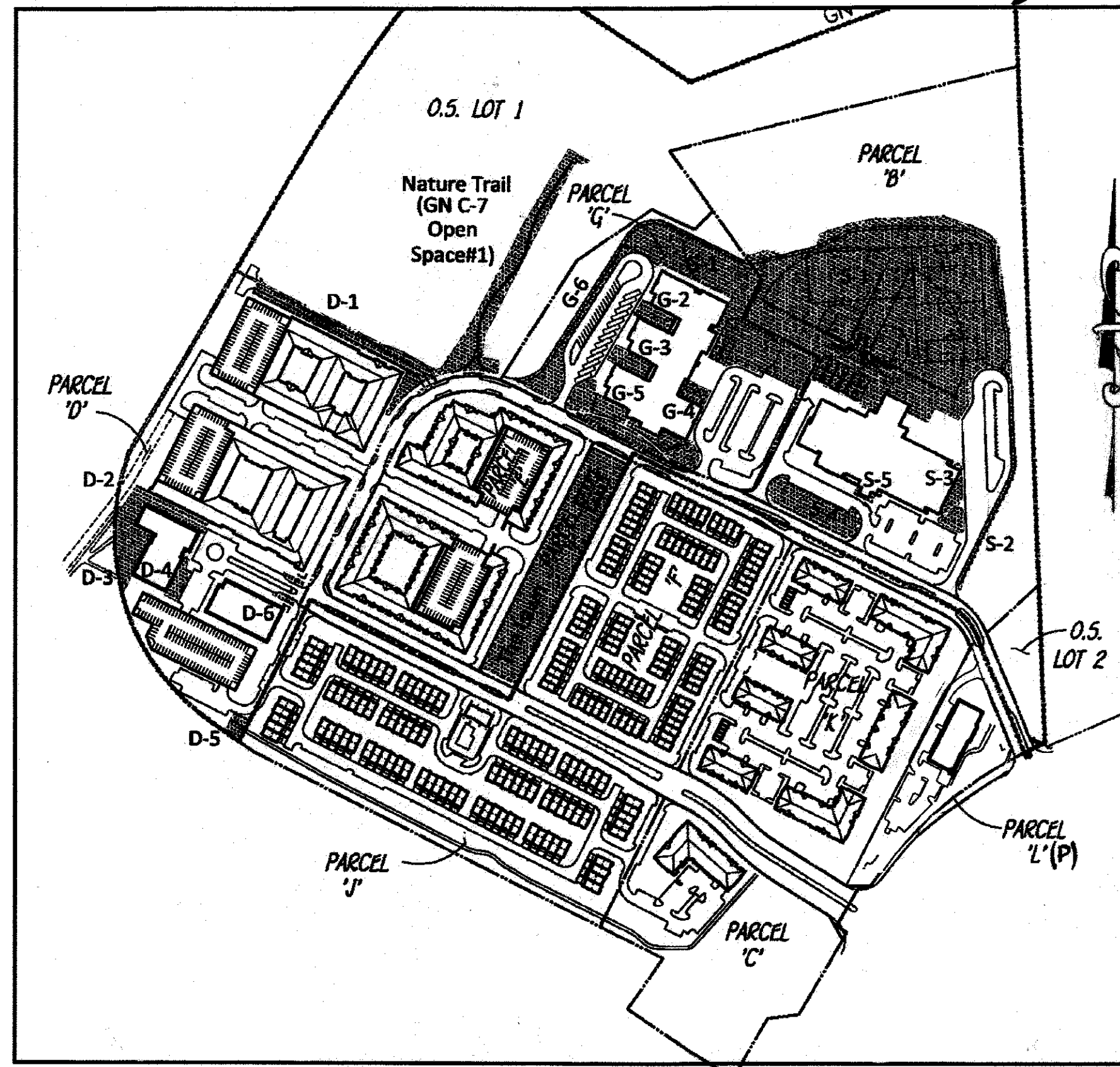
PARCEL 'P' - PRE-SCHOOL W/RETAIL BUILDING

OXFORD SQUARE

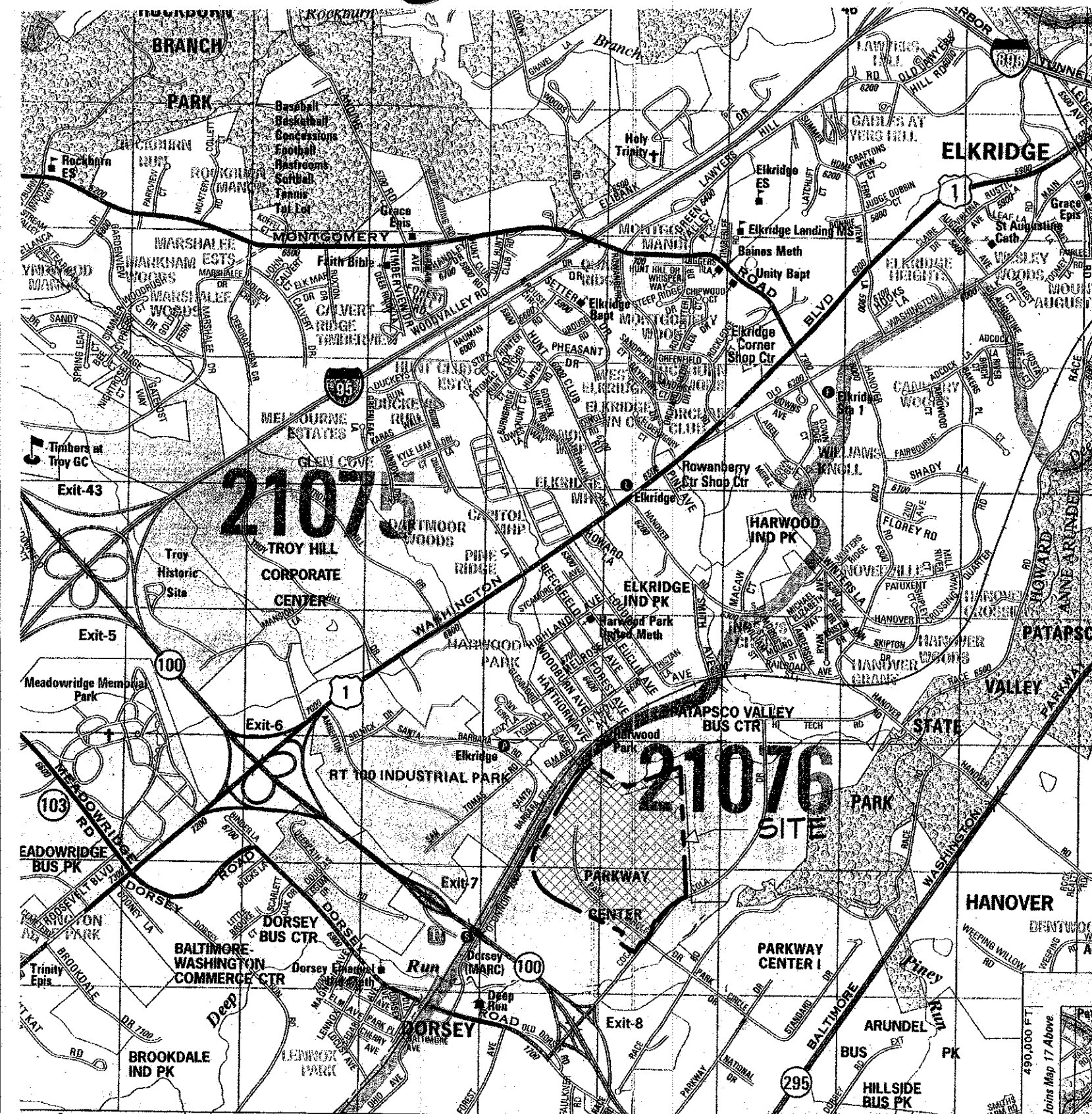
"A Howard County Green Neighborhood"

GENERAL NOTES

- Subject property Zoned T.O.D. per Zoning Board case number ZB-1086M dated September 13, 2010.
- Coordinates based on NAD 83 Maryland Coordinate System as projected by Howard County Geodetic Control Station numbers 38DA and 386A (adjustment: December 2007)
Station Number 38DA N 556,796.3221 E 1,390,221.4576 Elev: 126.06
Station Number 386A N 555,897.3373 E 1,390,132.0933 Elev: 80.78
- This plan is based on a field run monumented boundary survey dated October 9, 2009 by Fisher, Collins & Carter, Inc.
- No cemeteries exist on this site based on a site visit and on an examination of the Howard County Cemetery Inventory Map.
- No historic structures exist on the subject property.
- There are no existing structures or dwellings on this site.
- Previous Department of Planning and Zoning file numbers: S-87-066, P-87-070, F-88-055, SDF-89-275, SDF-90-041, F-89-085, F-90-125, F-91-069, SDF-90-055, F-93-023, ZB-1086M, WP-11-130, ECP-11-046, F-11-057, WP-12-051, WP-11-147, S-11-001, WP-12-109, S-14-001, F-12-026 and ZB-1102M.
- The forest stand delineation and wetland delineation for Oxford Square was prepared by Eco-Science Professionals, Inc. dated March 17, 2011 and approved under S-11-001.
- The property is located within the Metropolitan District.
- Open space requirement: Addressed by F-12-026.
- Existing water is public: Contract Number 14-11071-D
- Existing Sewer is public: Contract Number 14-11071-D
- Soils information taken from ESC Soil Survey dated November 2, 2009.
- Stormwater management will be provided in accordance with the 2007 MDE, chapter 5 regulations and the latest Howard County Design Manual, Vol. 1, chapter 5, adopted on or about May 4, 2010. Recharge volume will be provided through the use of a stone reservoirs. Water quality and channel protection volume will be provided by a surface sand filter. Stormwater management facilities will be privately owned and maintained by the Commercial Association. The street trees will be privately owned and maintained by Oxford Square Commercial Association.
- The Forest Conservation Act requirements for this project were addressed by F-12-026.
- Perimeter landscaping shall be addressed in accordance with Section 16.124 of the Howard County Code and the Landscape Manual as part of Site Development Plan stages. The financial surety for the required 42 trees (18-Shade x 300 + 11.5 shade substitutes/105 shrubs/10+2 ornamentals/2)x300+25 evergreens x 150) in the amount of \$12,600.00 will be posted with the Developers Agreement. The financial surety for the green neighborhood planting requirement shall be posted as part of the Developers Agreement in the amount of \$1,500 (23 shade trees x 300 + 4 ornamentals x 150). This plan was prepared in accordance with Section 16.124 of the Howard County Code and the Howard County Landscape Manual.
- Health department approval of this development plan does not ensure approval of building permit applications associated with this plan. Plans for certain facilities to be constructed within the limits described by this plan will require review and approval by the health department. Such facilities may include, but are not limited to, those which have swimming pools, or that sell prepared or packaged foods or that may have equipment that emits radiation.
- All sign and marking locations shall be approved by Howard County Traffic prior to any installations.
- 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 (1 1/2 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (1 1/2 gauge) - 3' long. The anchor shall not extend more than two holes above ground level. A galvanized steel pole cap shall be mounted on top of each post.
- Street light placement and the type of fixtures and poles shall be in accordance with the Howard County Design Manual, Volume II (2006), Section 5.5.A. A minimum of 20' shall be maintained between any street light and any tree.
- ESD practices shall be used to address the site PE and ESDV.
- A chapter 3 storm water management facility (sand filter) has been utilized due to site constraints.
- Per section 12.7.4.C.8 of the Howard County Zoning Code, Retail establishments, limited to convenience stores, food stores, drug and cosmetic stores, liquor stores and specialty stores.
- Relocated fire hydrant, water and sewer house connections will require an advanced deposit order. The ADO will be issued prior to building permit.
- The use of RC-6 for aggregate base material shall be approved by the geo-technical engineer.
- 26. FENCE GATES' OPERATION & MAINTENANCE TO BE THE RESPONSIBILITY OF THE COMMERCIAL ASSOCIATION.**



SITE MAP
SCALE: 1"=400'



VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

- COVER SHEET
- EXISTING CONDITIONS and DEMOLITION PLAN
- SITE DEVELOPMENT PLAN
- GRADING PLAN
- SITE DETAILS
- LAYOUT PLAN
- EROSION and SEDIMENT CONTROL PLAN
- EROSION and SEDIMENT CONTROL DETAILS & PROFILE
- EROSION and SEDIMENT CONTROL DETAILS
- EROSION and SEDIMENT CONTROL SPECIFICATIONS
- STORMWATER MANAGEMENT PLAN
- SYM EXISTING CONDITIONS DRAINAGE AREA MAP
- SYM PROPOSED CONDITIONS DRAINAGE AREA MAP
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT DETAILS
- UTILITY PROFILES
- LANDSCAPE PLAN
- LANDSCAPE PLAN
- LANDSCAPE DETAILS and NOTES
- LANDSCAPE DETAILS and NOTES and PHOTOMETRIC PLAN
- RETAINING WALL DETAILS
- GREEN NEIGHBORHOOD PLAN
- GREEN NEIGHBORHOOD PLAN
- PAVEMENT MARKING AND SIGN PLAN

SITE ANALYSIS

- | | |
|------------------------------------|--|
| 1. Subdivision Name: Oxford Square | 9. Site Data: |
| 2. Tax Map: 38 and 44 | a. Site In Acres: 2.43 AC. |
| 3. Parcel No.: 761 | b. Wetland Buffers: 0.00 AC. |
| 4. Zoning: T.O.D. | c. Floodplain and Buffers: 0.00 AC. |
| 5. Election District: First | d. Forests: 0.00 AC. |
| 6. Record Plat: 28174, 23175 | e. Steep Slopes 15% or Greater: 0.88 AC. |
| 7. Existing Use: Vacant | f. Erodeable Soils in Project Area: 0.00 AC. |
| 8. Proposed Use: Retail/Commercial | g. Limit of Disturbance: 2.73 AC. |
| | h. Green Open Area: 1.26 AC. |
| | i. Proposed Impervious Area: 1.17 AC. |

10. Proposed Building Area:
- | | |
|--------------------------|-----------|
| a. Preschool | 12,003 sf |
| b. Retail | 2,011 sf |
| c. Restaurant | 1,350 sf |
| TOTAL = 15,364 sf | |
11. Parking Required: 60
- | | |
|------------------------------------|----|
| a. Preschool (3 sp./1000 sf) | 36 |
| b. Retail (5 sp./1000 sf) | 10 |
| c. Carryout | |
| Restaurant (6 sp./1000 sf) | 8 |
| d. Outdoor Seating (7 sp./1000 sf) | 6 |
12. Parking Provided: 60
- | | |
|-------------------|----|
| a. Standard | 52 |
| b. Handicap | 4 |
| c. Fuel Efficient | 4 |

OWNER

KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

PROFESSIONAL CERTIFICATION

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

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-19

Approved For Public Water And Sewerage Systems
Howard County Health Department

Revised for Maria Rosman 9/10/2015
County Health Officer Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Clark 10-14-15
Chief, Development Engineering Division Date
Valerie D. Smith 10-21-15
Chief, Division of Land Development Date
William J. Miller 10-21-15
Director Date

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



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.2.2015
BY:	NO.
REVISION:	REVISE PARKING SPACES FROM 64 TO 60
DATE:	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT

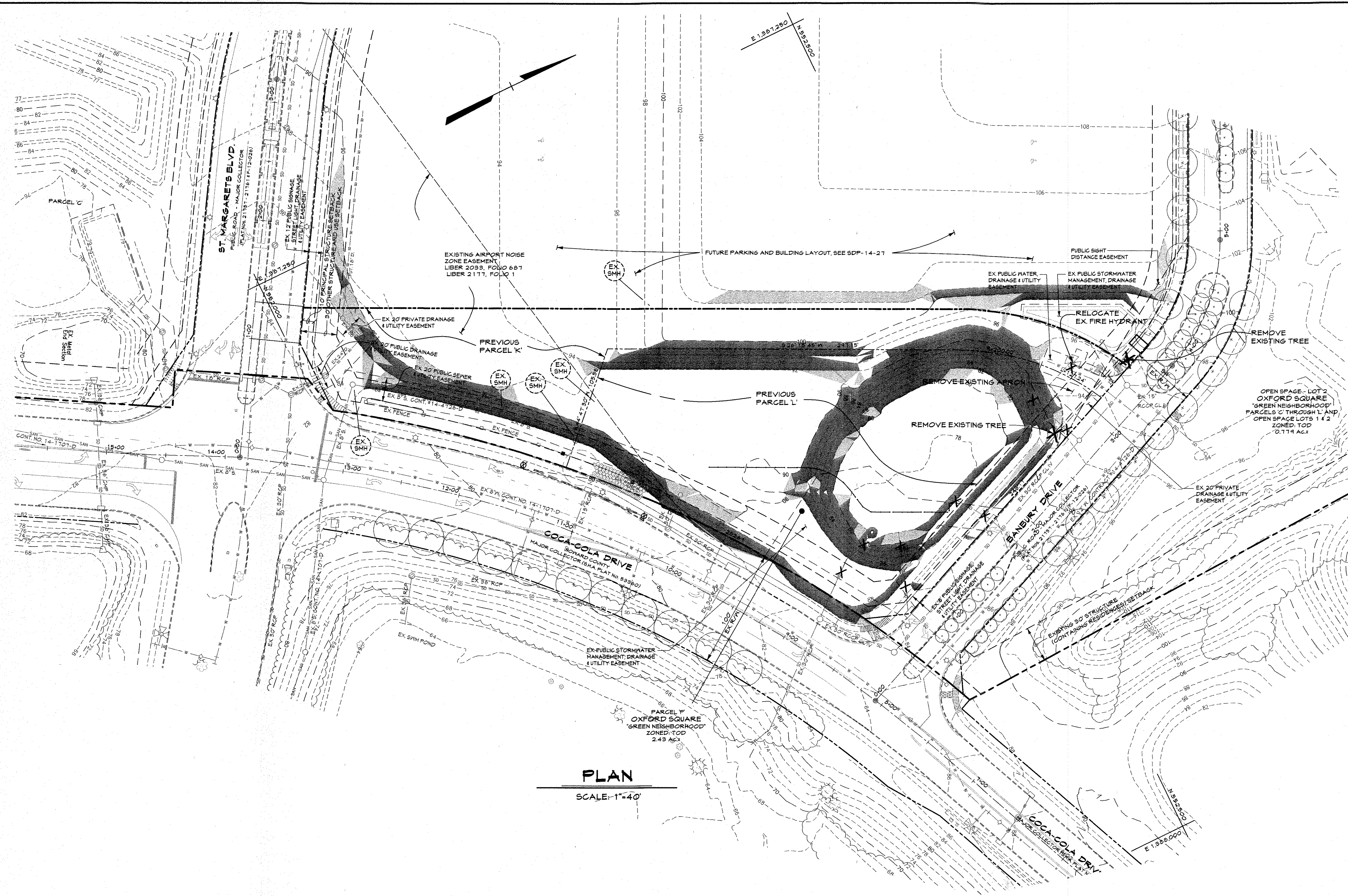
Cover Sheet

PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 1 OF 24

C.E.I. PROJECT NUMBER
131117.00

SCALE:
As Shown

S:\2013\Facilities\131117.00 Oxford Square\CADD\Drawings\SDP-PreSchool\131117 (SDP-02) Exist Conditions - Demolition Plan.dwg, Jul 23, 2015 9:12am kdarley



LEGEND

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- --- Existing Edge of Road
- --- Existing Stream
- --- Existing Trees/Tree Line
- --- Existing Curb & Gutter
- --- Existing Sidewalk
- --- Existing Storm Drains
- EX 15" D --- Existing Water Main
- EX 8" S --- Existing Sanitary Sewer
- --- Tract Boundary
- --- Existing Road Right-Of-Way
- --- Existing Road Centerline
- --- Existing Utility Easement
- --- Existing Building
- --- Existing Parcel Line
- --- Existing Structure and Use Setback
- --- Existing Principal Structure Setback
- --- Existing Airport Noise Zone Easement
- --- Existing Steep Slopes 15%-25%
- --- Existing Steep Slopes 25%-100%
- EX X --- Remove Existing Pipe

STEEP SLOPES ON-SITE:

Existing Steep Slopes 15%-25%	4,474 S.F. (0.10 AC)
Existing Steep Slopes 25%-100%	25,476 S.F. (0.58 AC)

Note: There are no contiguous steep slopes greater than 25% and greater than 20,000 in area.

PLAN

SCALE: 1"=40'

PROFESSIONAL CERTIFICATION

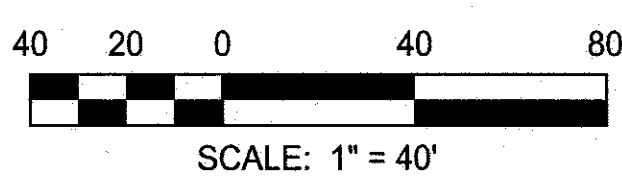
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-23-19

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

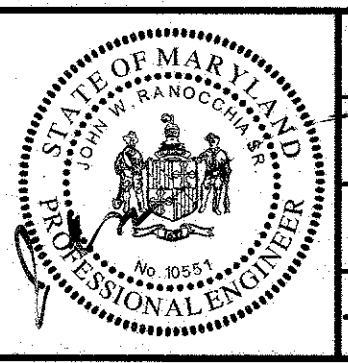


OWNER
KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad E. Smith 10-14-15
 Chief, Development Engineering Division
Kristen L. Smith 10-21-15
 Chief, Division of Land Development
Valeria J. Joffe 10-21-15
 Director

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



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY NO.	
REVISION	
DATE	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT

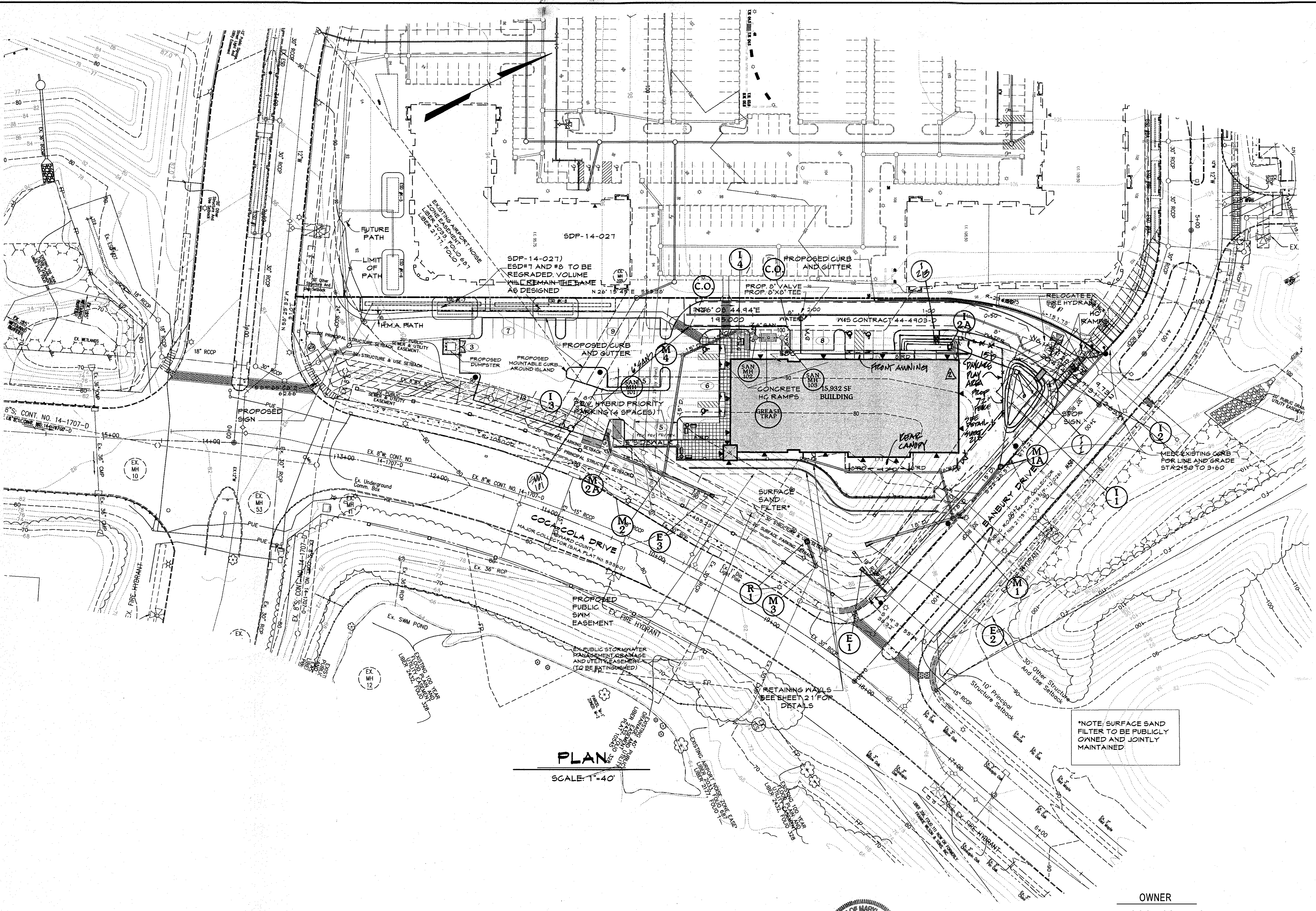
Existing Conditions / Demolition Plan
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1
 SHEET 2 OF 24

C.E.I. PROJECT NUMBER
 131117.00

SCALE:
 1"=40'

LEGEND

- 676 --- Existing Minor Contour
- 670 --- Existing Major Contour
- Existing Edge of Road
- Existing Stream
- Existing Trees/Tree Line
- Existing Curb & Gutter
- Existing Sidewalk
- Existing Storm Drains
- EX. 15" D. --- Existing Water Main
- EX. 8" S. --- Existing Sanitary Sewer
- Tract Boundary
- Utility Easement Line
- Existing Building
- 660 --- Proposed Grades
- 8" S. --- Proposed Sewer
- 8" W. --- Proposed Water and Fire Hydrant
- Proposed Storm Drain and Inlets
- Proposed Curb & Gutter
- Proposed Mountable Curb
- Proposed Sidewalk
- Proposed Building
- Proposed Concrete Sidewalk Scoring Pattern
- Proposed Retaining Wall
- 30' Structure and Use Setback
- 10' Principal Structure Setback
- Proposed Parking Lot Light
- ☆ Proposed Street Light
- ▼ Proposed Parking Sign
- NDC Nose Down Curb
- FDC Fire Department Connection
- HMA Hot Mix Asphalt
- FEV Fuel Efficient Vehicle
- Proposed Fence Column
- Existing Columns and Fence
- Proposed Bench
- Proposed Trash Receptacle
- ▲ Building Light



PLAN
SCALE: 1"=40'

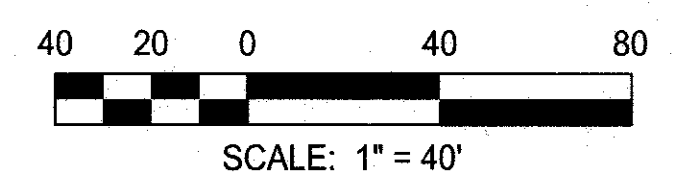
*NOTE: SURFACE SAND FILTER TO BE PUBLICLY OWNED AND JOINTLY MAINTAINED

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 10951 EXPIRATION DATE: 8-28-19

THERE IS NO 'AS BUILT' INFORMATION PROVIDED ON THIS SHEET.

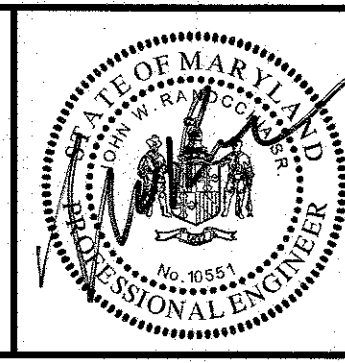


OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division: 10-14-15
Chief, Division of Land Development: 10-21-15
Director: 10-21-15

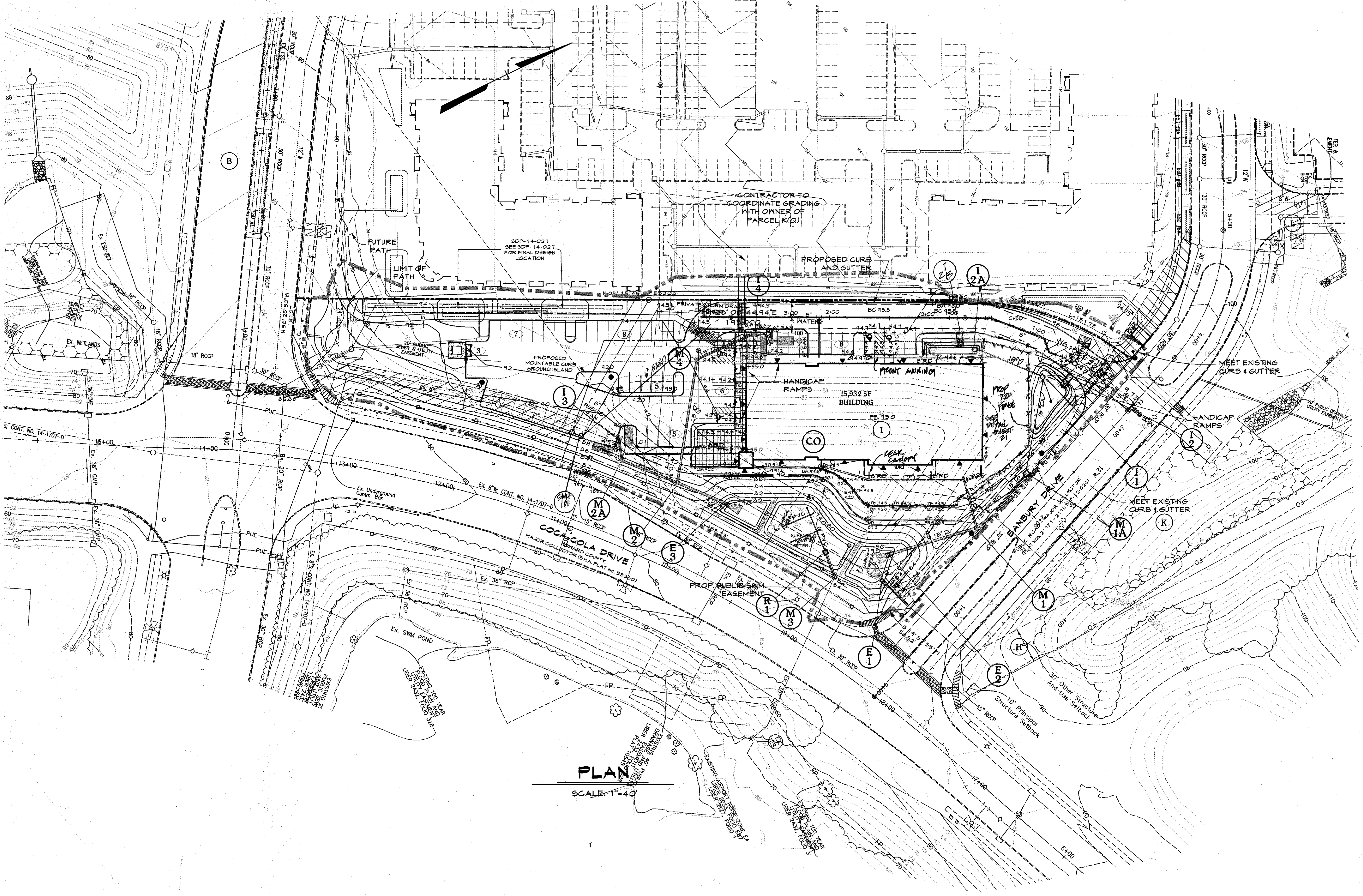
CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	C.B.S.
DATE:	7.2.2015
BY NO.	
REVISION	
DATE	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT
Site Development Plan
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 3 OF 24
C.E.I. PROJECT NUMBER: 131117.00
SCALE: 1"=40'



LEGEND

- - - 6.76 Existing Minor Contour
- - - 6.70 Existing Major Contour
- - - Existing Edge of Road
- - - Existing Stream
- - - Existing Trees/Tree Line
- - - Existing Curb & Gutter
- - - Existing Sidewalk
- - - EX. 15" D. Existing Storm Drains
- - - EX. 8" W. Existing Water Main
- - - EX. 8" S. Existing Sanitary Sewer
- - - Tract Boundary
- - - Existing Road Right-Of-Way
- - - Existing Road Centerline
- - - Existing Utility Easement
- - - Existing Building
- - - Existing Parcel Line
- - - Existing Structure and Use Setback
- - - Existing Principal Structure Setback
- - - Existing Airport Noise Zone Easement
- - - Limits of Disturbance
- ▼ Proposed Parking Sign

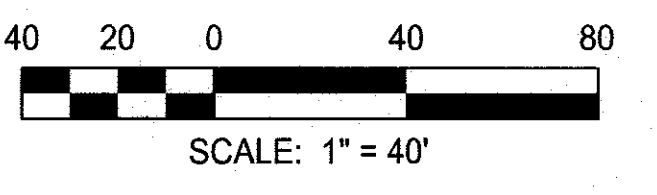
PLAN
SCALE: 1"=40'

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 10651 EXPIRATION DATE: 8-28-19

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

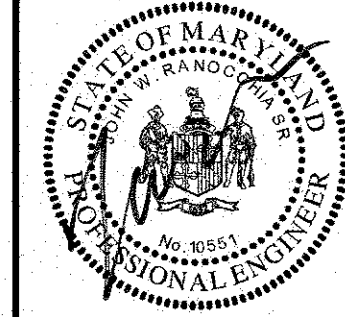


OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800



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

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

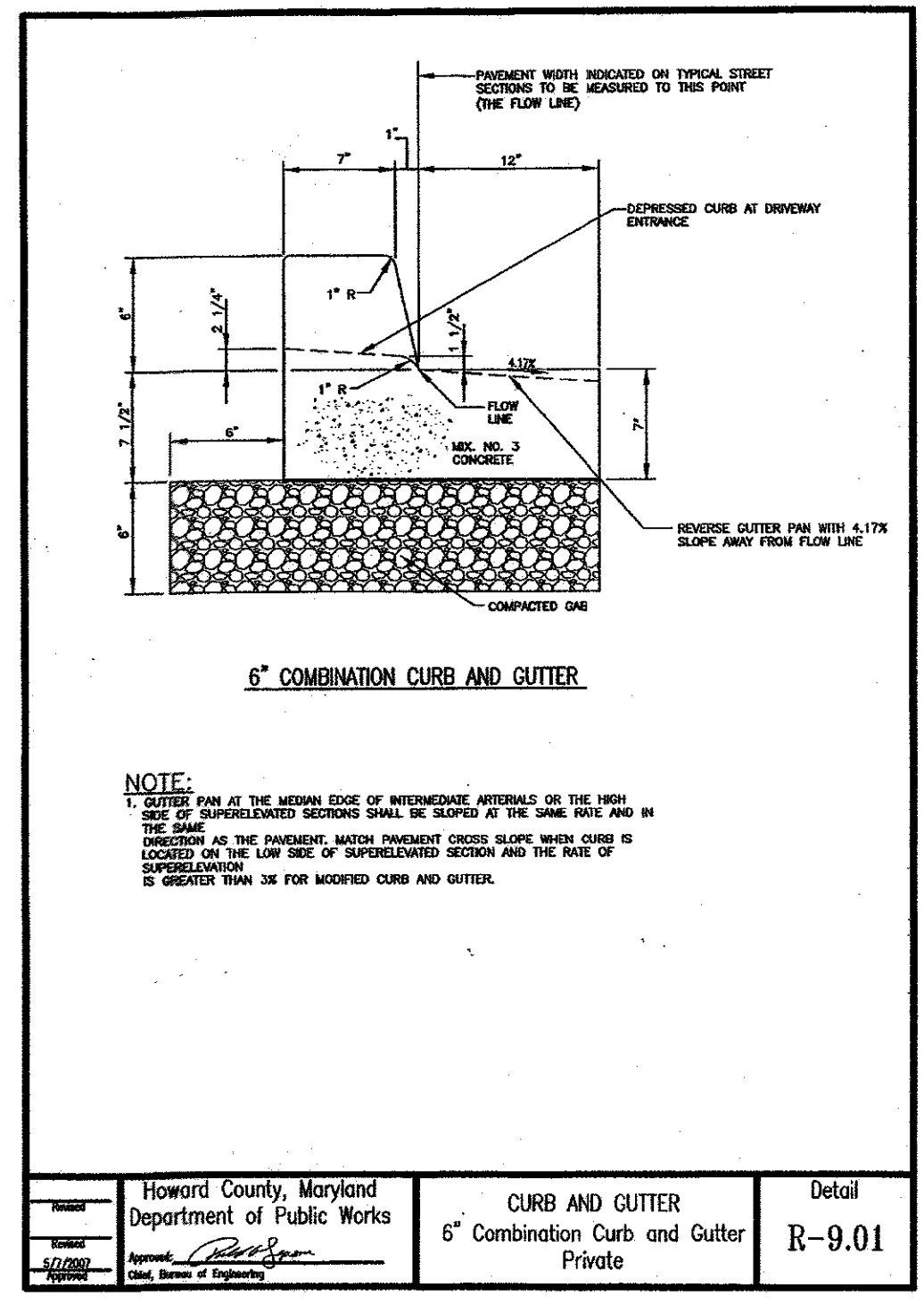
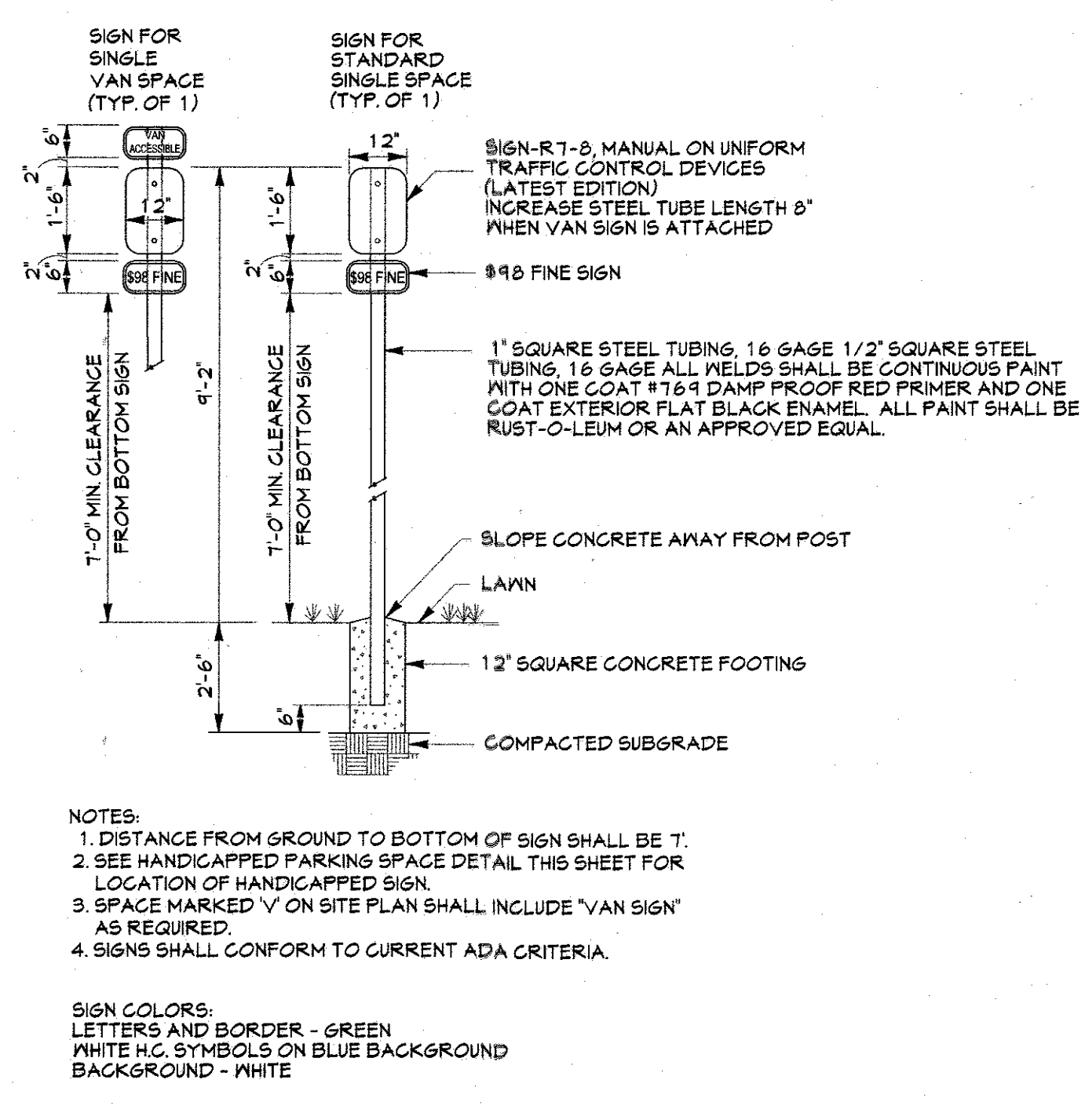
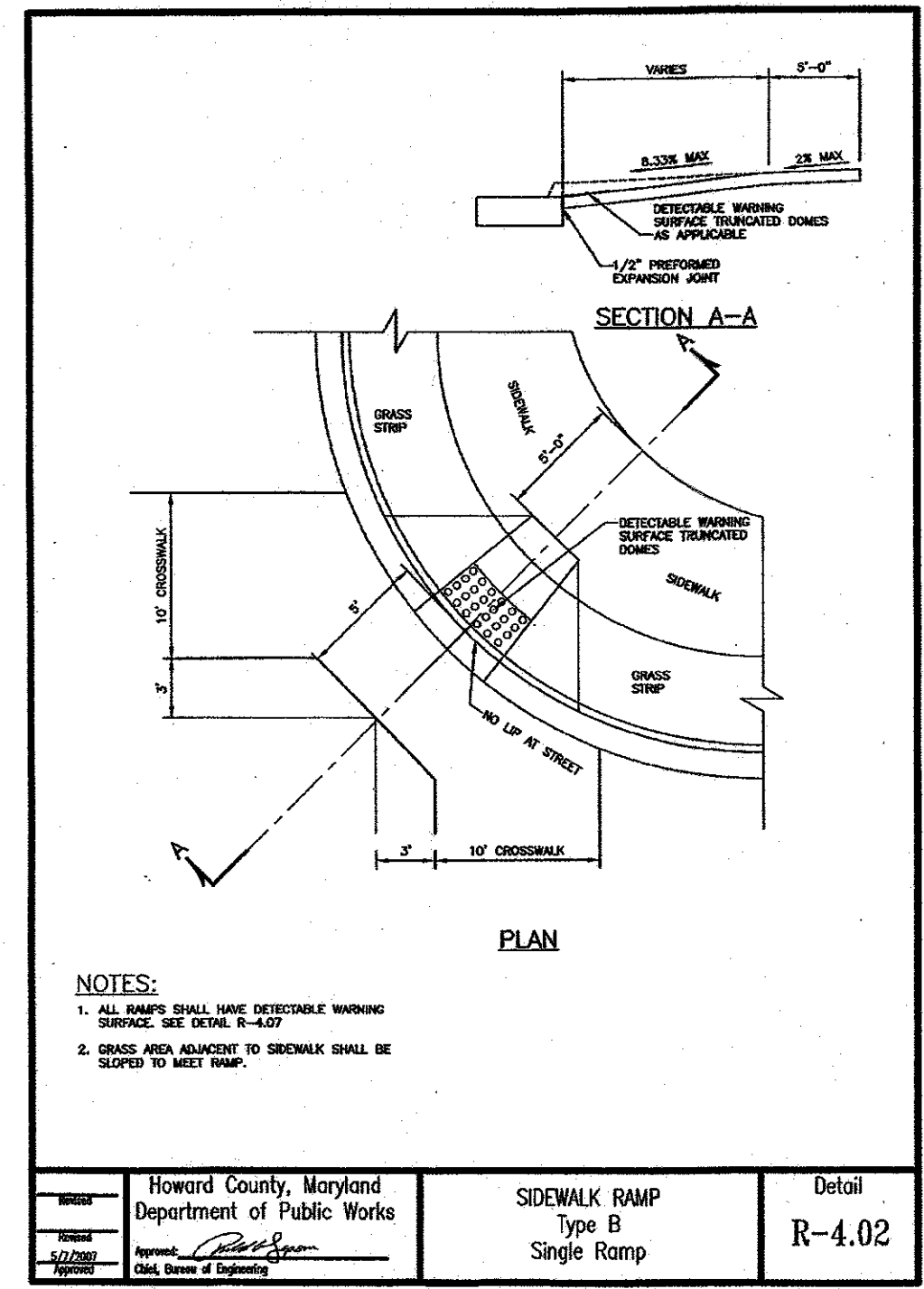
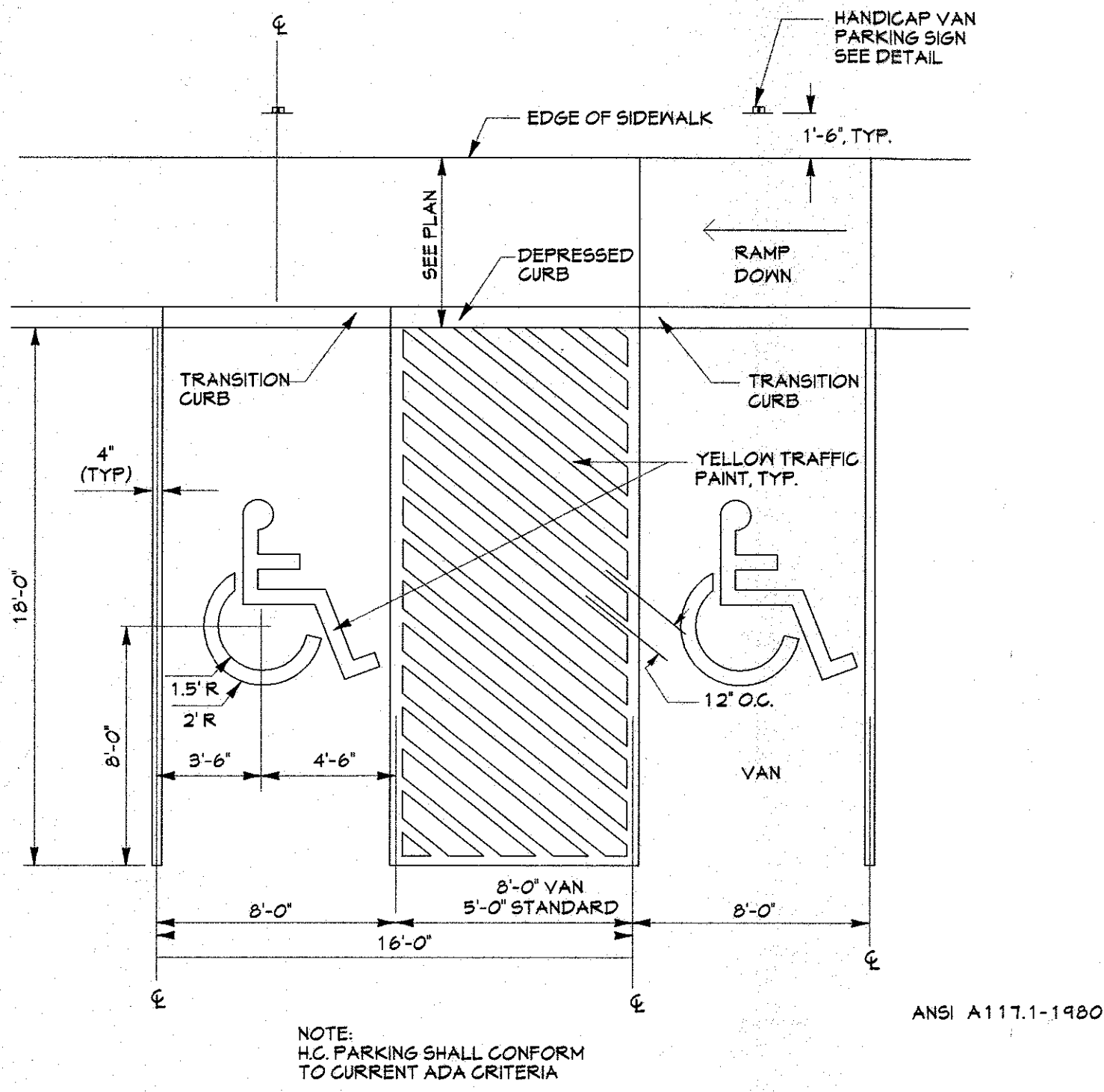


DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	NO.
REVISION:	RANGE SWIM, PLAY AREA, FENCE AND SANITARY
REVISION:	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT
Grading Plan
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 781 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 4 OF 24

C.E.I. PROJECT NUMBER
131117.00
SCALE:
1"=40'

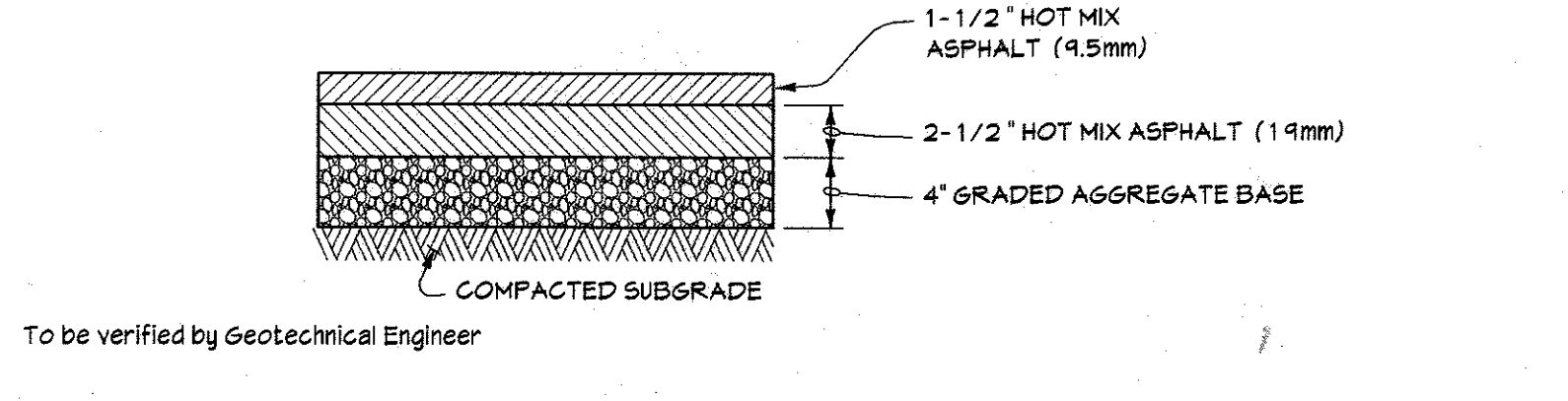
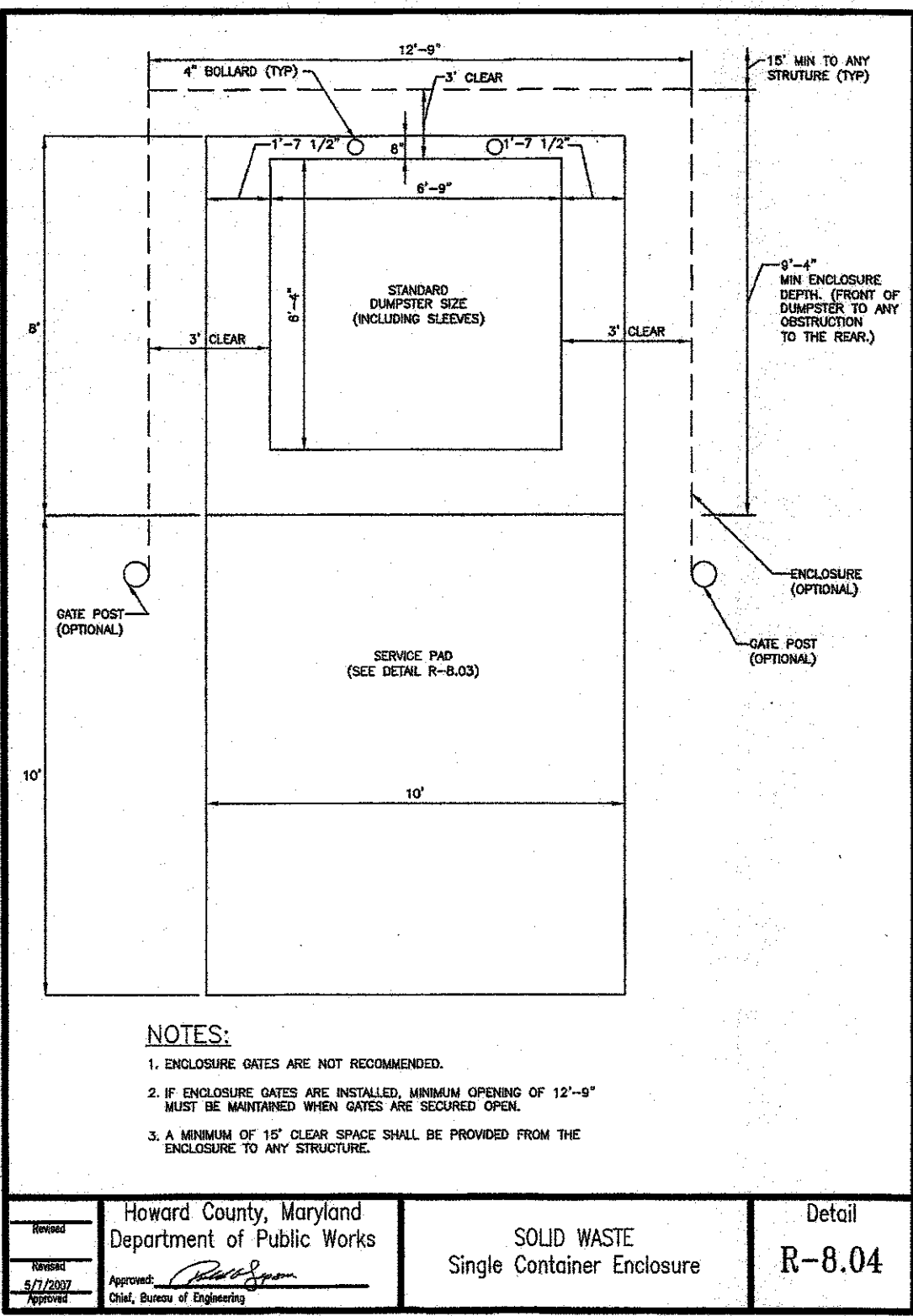


Handicap Parking: Van & Standard Not to Scale

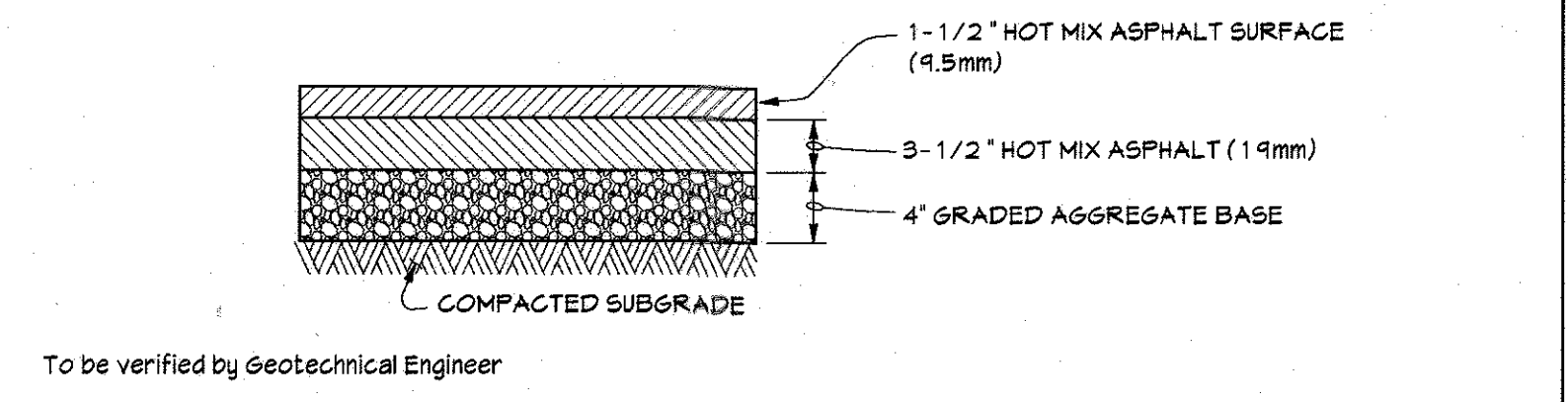
Handicap Ramp Not to Scale

Handicap Parking Signs Not to Scale

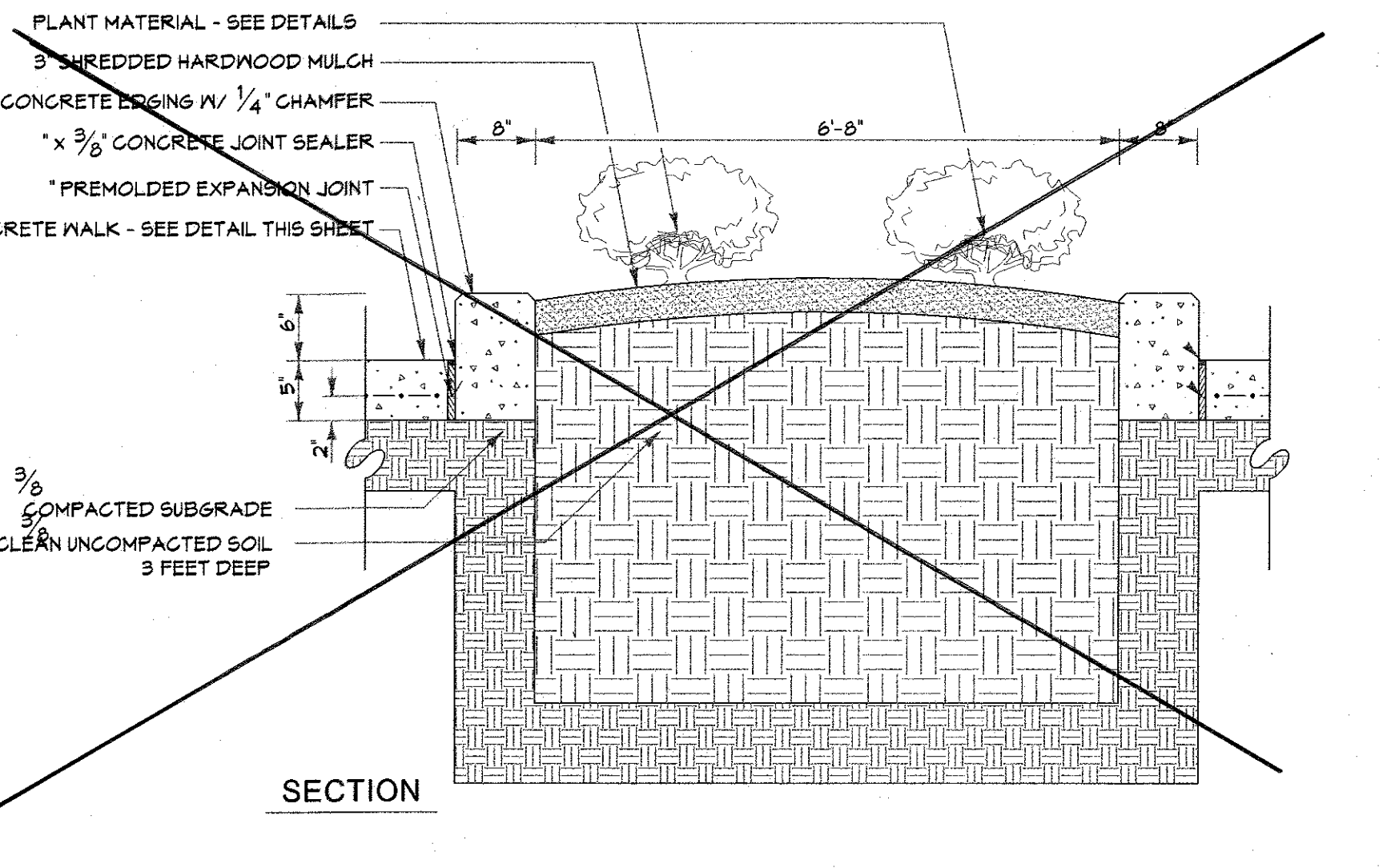
6 inch Curb and Gutter Not to Scale



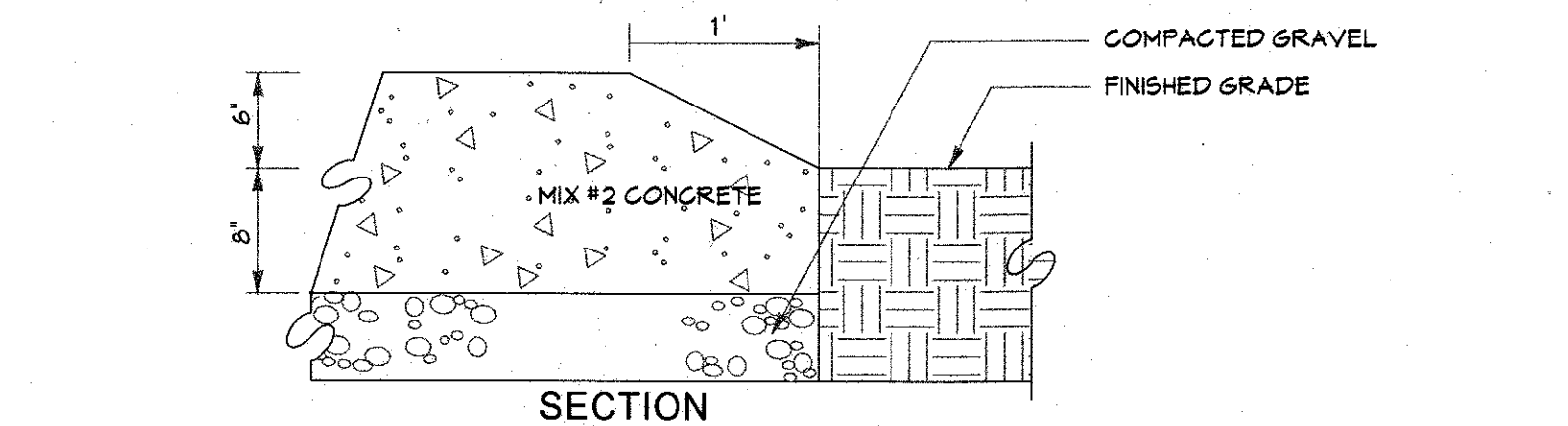
Light Duty Paving Not to Scale



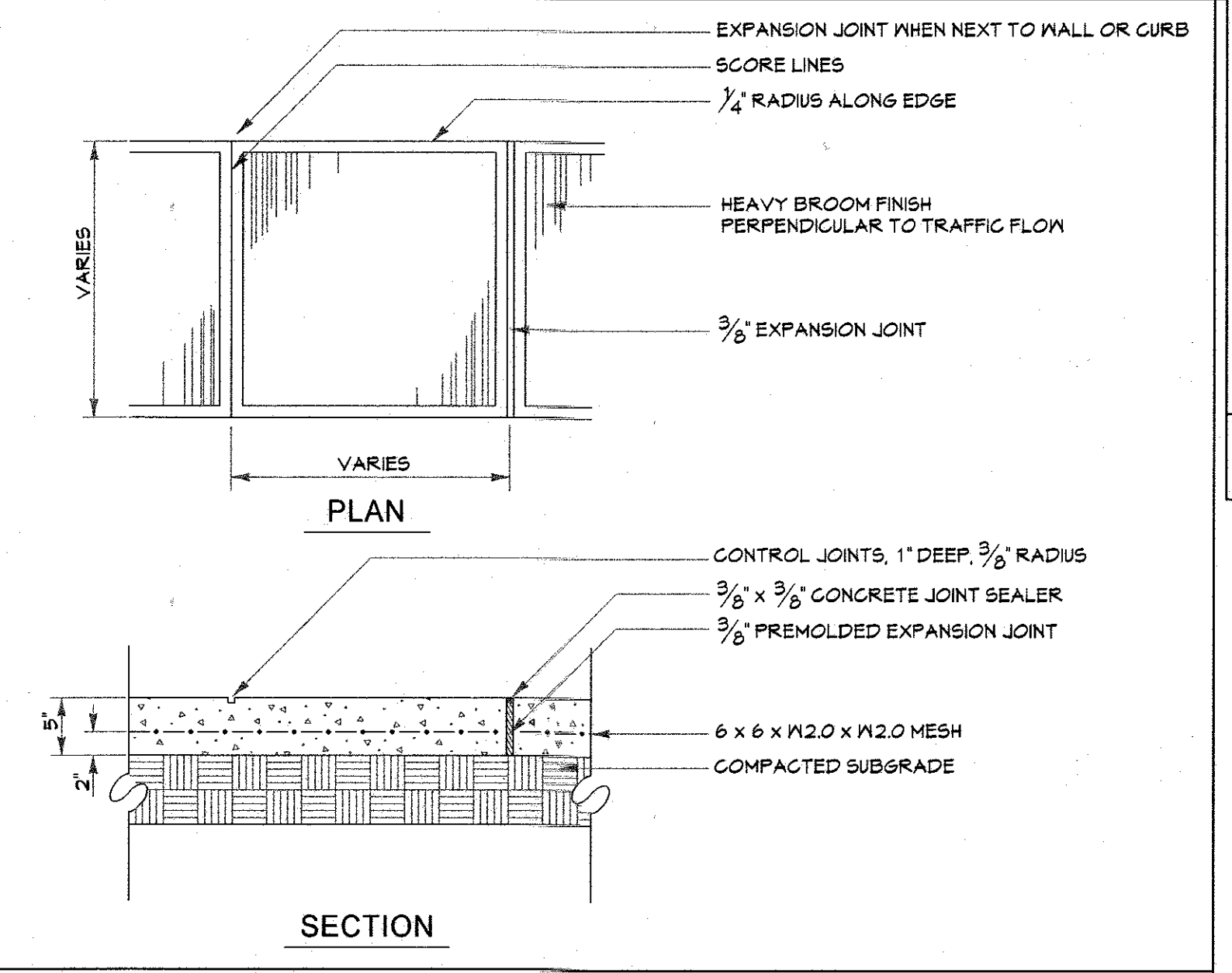
Heavy Duty Paving Not to Scale



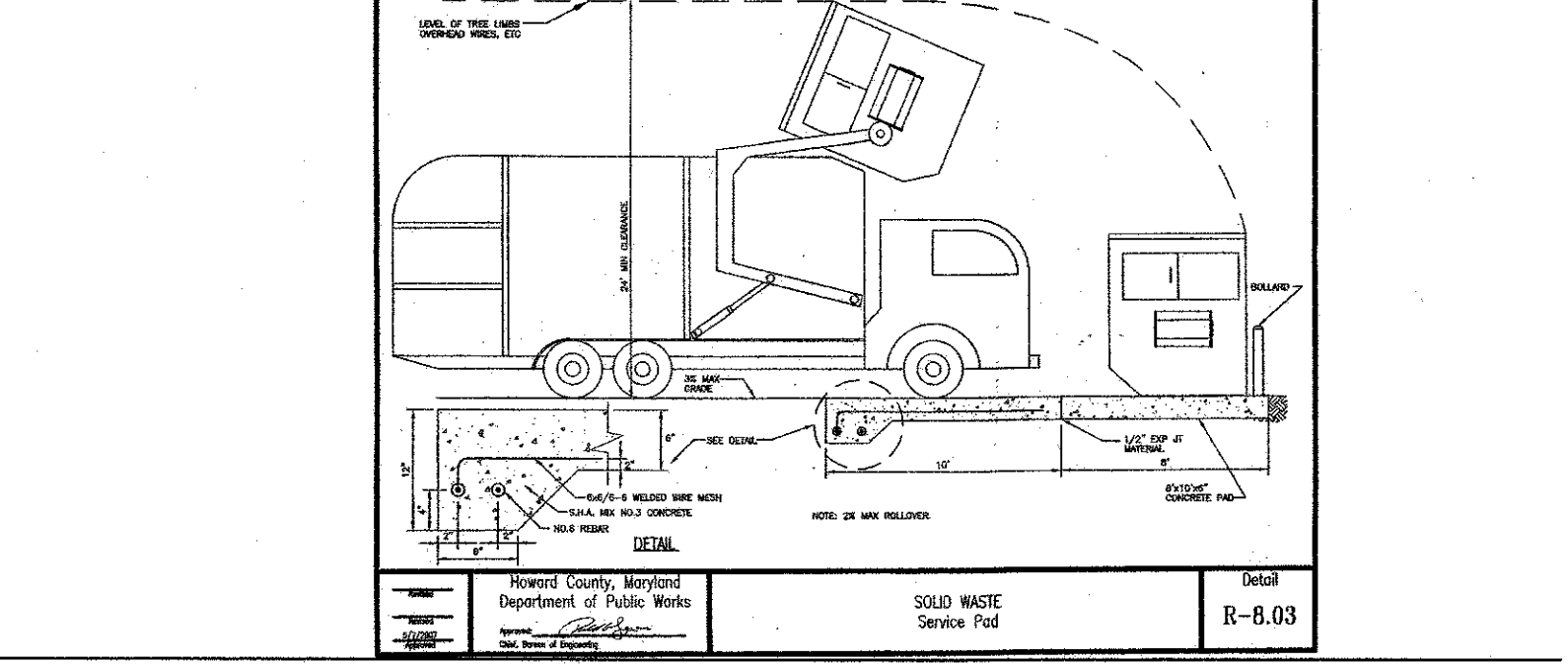
Plaza Planter Detail Not to Scale



Nose Down Curb Not to Scale



Concrete Walk Not to Scale



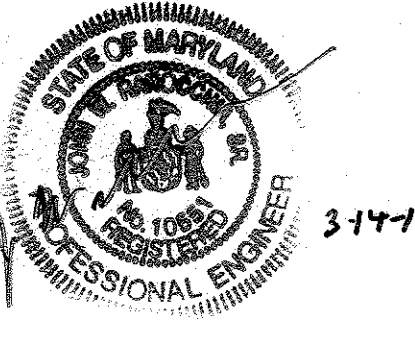
Dumpster Pad Not to Scale



FEV Sign Not to Scale

PROFESSIONAL CERTIFICATION
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LICENSE NUMBER: 14551 EXPIRATION DATE: 8-28-19

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.



OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

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

10-14-15
10-21-15
10-21-15

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

DESIGN BY: MJP/KAD
DRAWN BY: M.S.S.
CHECKED BY:
DATE: 7.27.2015

BY	NO.	REVISION	DATE

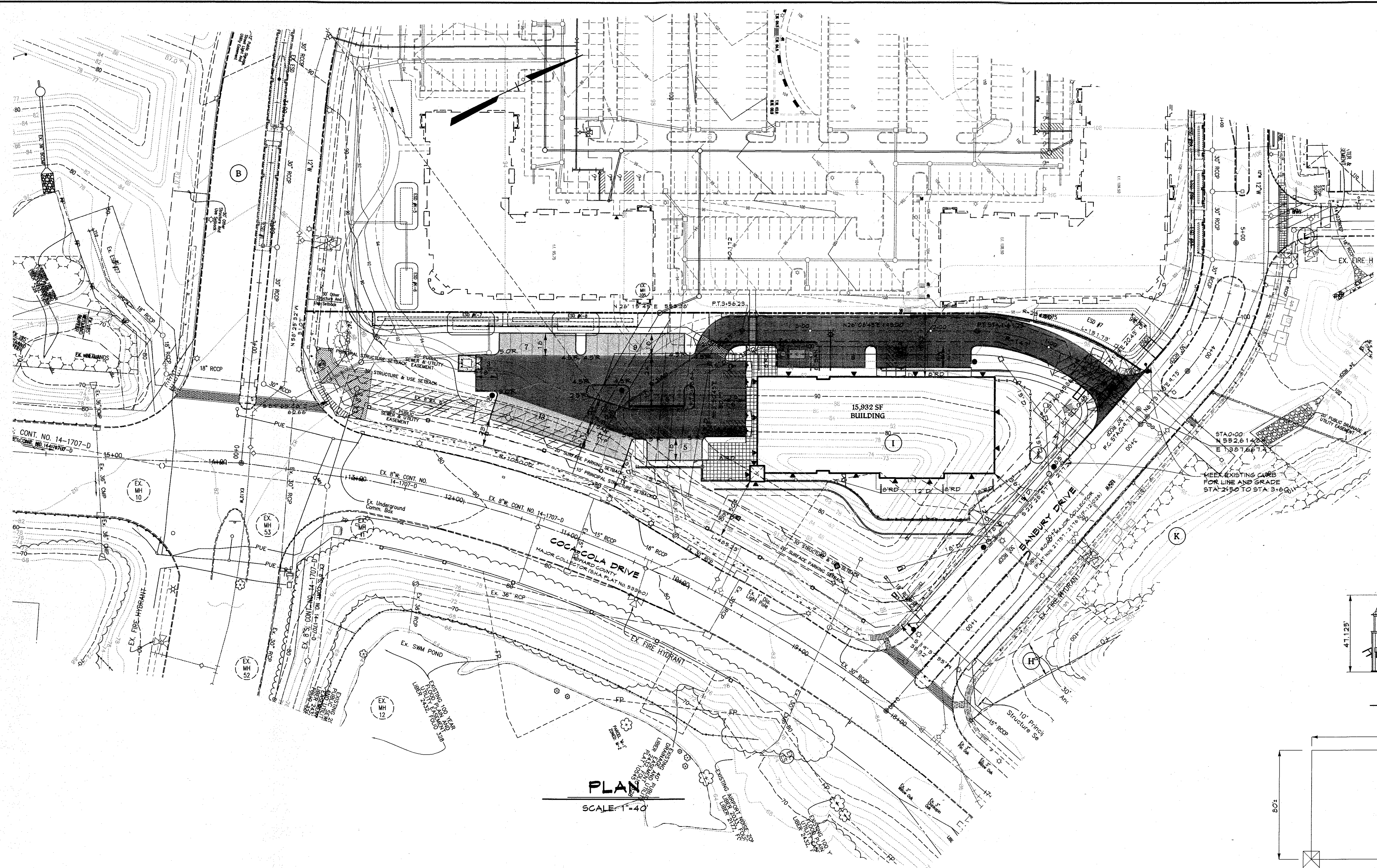
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AS BUILT
Site Details & Notes
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 5 OF 24

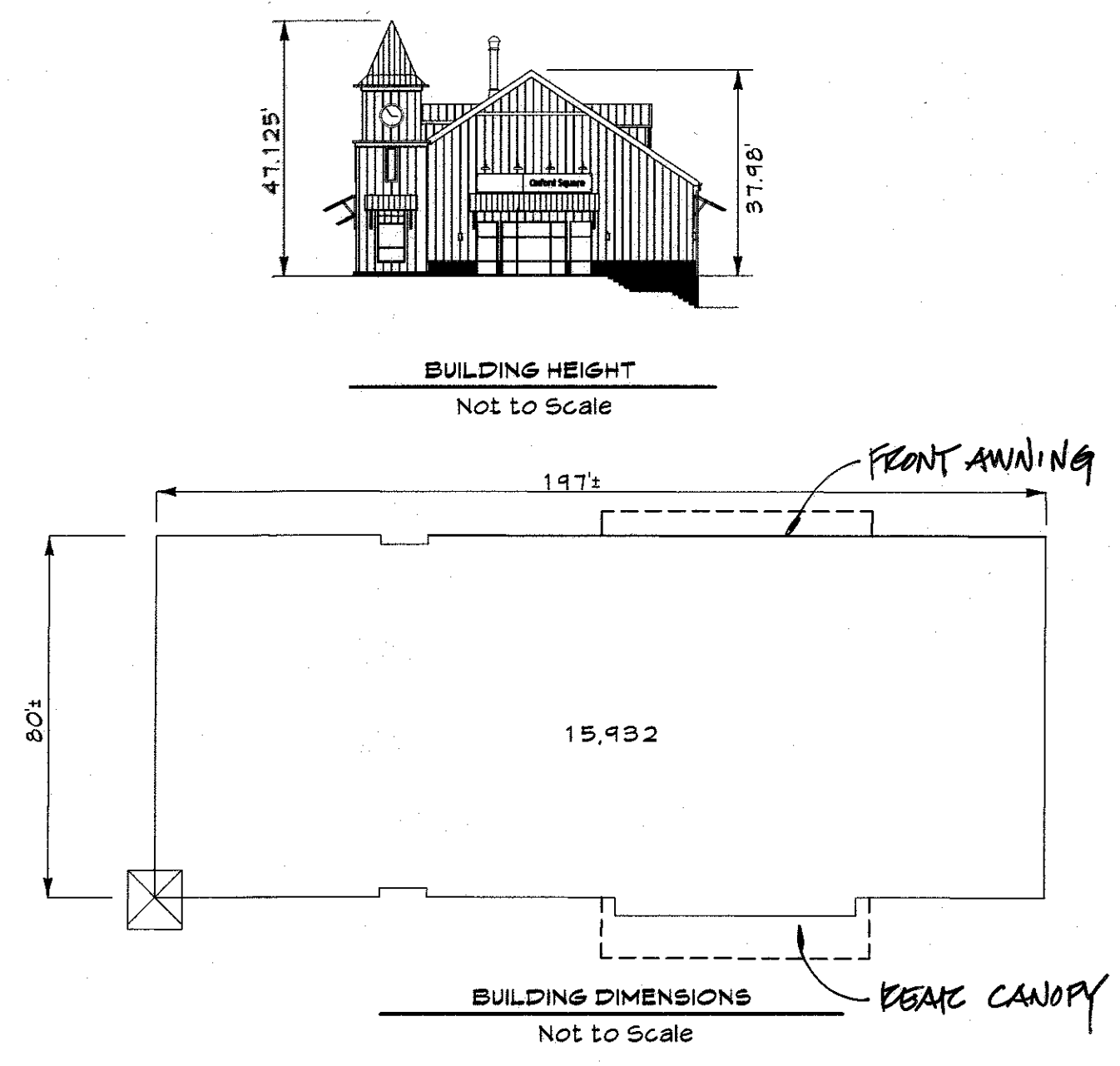
C.E.I. PROJECT NUMBER
131117.00
SCALE:
As Shown

LEGEND

- 676 Existing Minor Contour
- 670 Existing Major Contour
- Existing Edge of Road
- Existing Stream
- Existing Trees/Tree Line
- Existing Curb & Gutter
- Existing Sidewalk
- Existing Storm Drains
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- Existing Building
- Proposed Grades
- Proposed Sewer
- Proposed Water and Fire Hydrant
- Proposed Storm Drain and Inlets
- Proposed Curb & Gutter
- Proposed Sidewalk
- Proposed Building
- Proposed Retaining Wall
- 30' Structure and Use Setback
- 10' Principal Structure Setback
- Proposed Grades
- Proposed Sewer
- Proposed Water and Fire Hydrant
- Proposed Storm Drain and Inlets
- Proposed Curb & Gutter
- Proposed Tree Line
- Proposed Light Duty Paving
- Proposed Heavy Duty Paving



PLAN
SCALE: 1"=40'

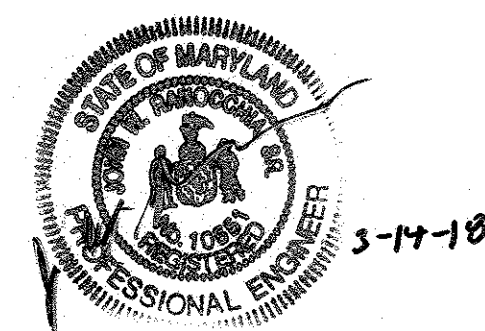


PROFESSIONAL CERTIFICATION

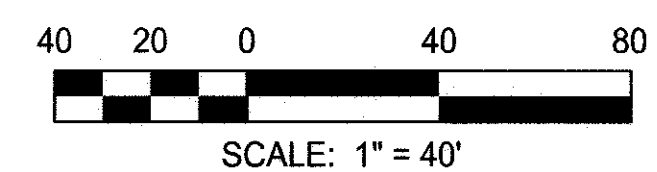
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 10591 EXPIRATION DATE: 8-20-19

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

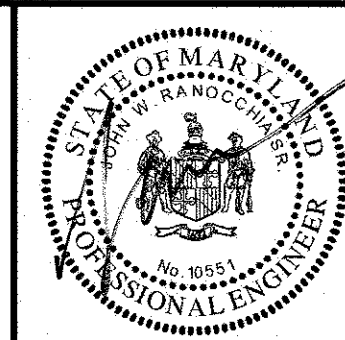


OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10-14-15
 Chief, Development Engineering Division
 [Signature] 10-21-15
 Chief, Division of Land Development
 [Signature] 10-21-15
 Director

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



DESIGN BY: MJP/KAD			
DRAWN BY: M.S.S.			
CHECKED BY:			
DATE: 7.27.2015	BY:	NO.	REVISION
			DATE

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT **Layout Plan**
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
 SHEET 6 OF 24

C.E.I. PROJECT NUMBER: 131117.00
SCALE: 1"=40'

SEQUENCE OF CONSTRUCTION *

1. Obtain grading permits (2 days)
2. Install erosion and sediment control measure SCE #1,2 and SSF to protect area during necessary grading to construct Temporary Riser and trap. (4 days)
3. With the permission of the sediment control inspector grade sediment trap, construct temporary riser and remove existing riser. Remove ex. flexible pipes and install new flexible pipes to trap. (10 days)
5. Contractor to begin rough grading operations. Areas north of trap to be temporarily stabilized as fill operations proceed and trap storage area is diminished. (14 days)
6. Repair as necessary any sediment controls at the end of each working day. (30 days)
7. Contractor to build (2) retaining walls below building. (30 days)
8. Begin building construction, install utilities and curbs, grade driveway, install sub base and base pave. (part of 30 days)
9. Install inlet protection at existing and proposed inlets. Install inlet protection at openings of Filterra Devices as each is installed. (part of 30 days)
10. Install "sump" silt fence at I-3. Delay outfall pipes @ M-1 and EX-I-9 where temporary pipes are in place. (part of 30 days)
11. Final pave driveway. (5 days)
11. With the approval of the sediment control inspector and once all areas north of trap are stabilized, begin trap conversion to sand filter. Only begin trap conversion in a 3 day dry weather forecast. Construct Pipes at M-1 and EX-I-9. (7 days)
12. Grade for sand filter and forebays. Install sand filter and construct R-1 and M-3. (7 days)
13. Install and/or repair SSF and SF at the end of each working day as necessary to complete sand filter. (1 day)
14. With the approval of the sediment control inspector, permanently stabilize any remaining areas and remove remaining sediment control devices. (1 day)

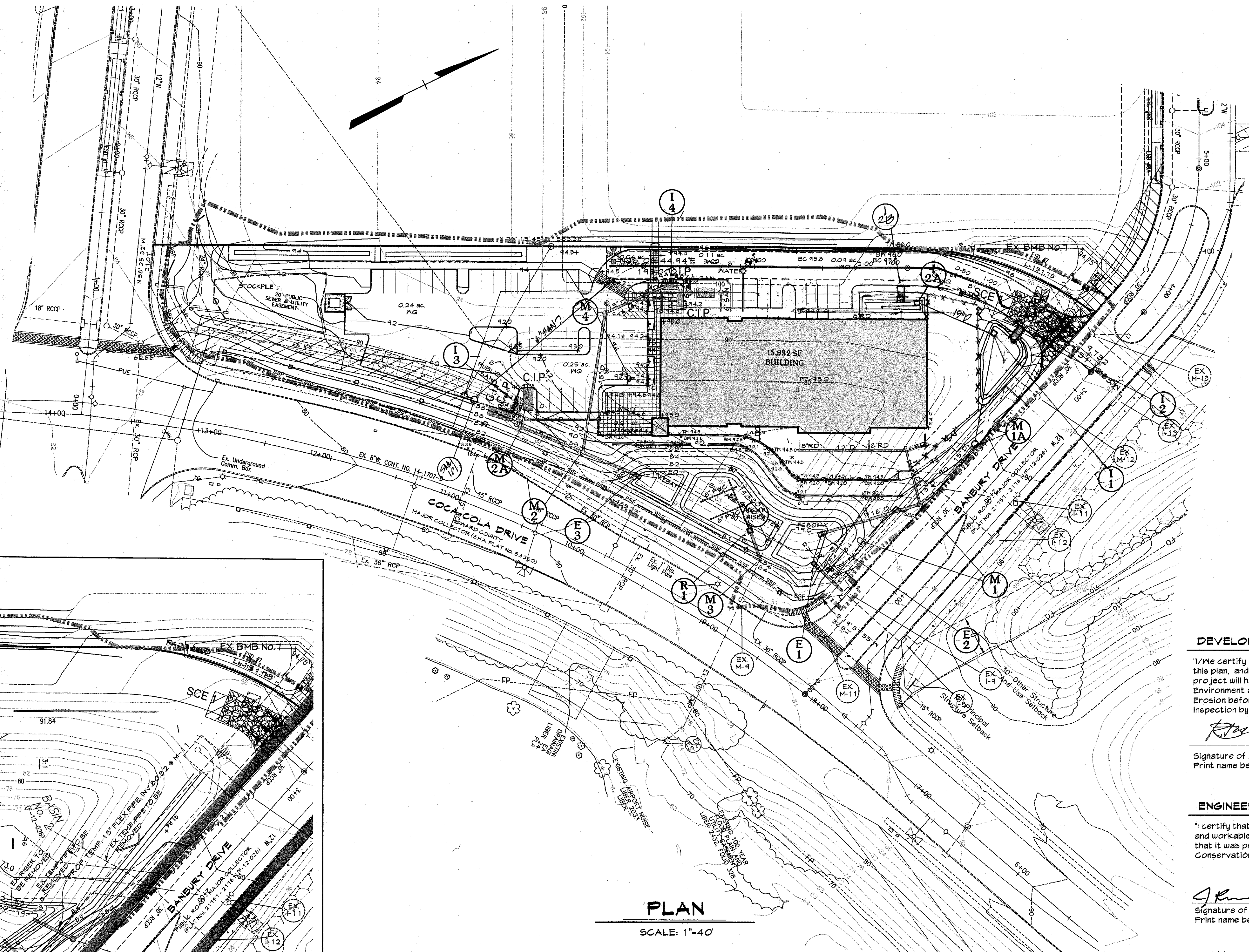
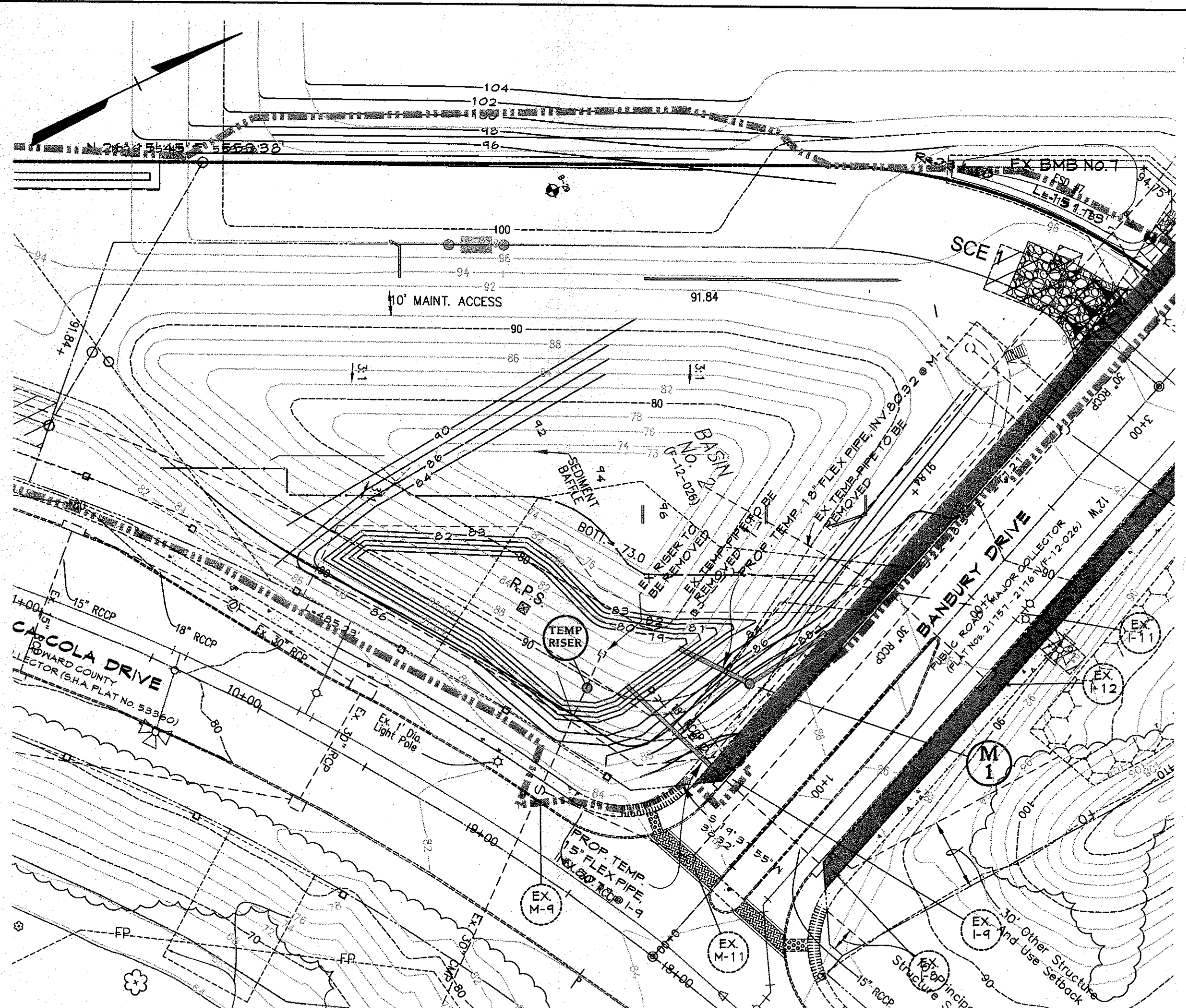
* All construction waste must be managed in accordance with the Construction Waste Management Plan.

LEGEND

- 6.76 Existing Minor Contour
- 6.70 Existing Major Contour
- Existing Edge of Road
- Existing Stream
- Existing Trees/Tree Line
- Existing Curb & Gutter
- Existing Sidewalk
- EX. 15" D. Existing Storm Drains
- EX. 8" M. Existing Water Main
- EX. 8" S. Existing Sanitary Sewer
- Tract Boundary
- Utility Easement Line
- Existing Building
- Proposed Grades
- Proposed Sewer
- Proposed Water and Fire Hydrant
- Proposed Storm Drain and Inlets
- Proposed Curb & Gutter
- Proposed Sidewalk
- Proposed Building
- Proposed Retaining Wall
- 30' Structure and Use Setback
- 10' Principal Structure Setback
- SF Silt Fence
- SSF Super Silt Fence
- CIP Curb Inlet Protection
- AGIP At Grade Inlet Protection
- MOUNTABLE BERM
- SCE Stabilized Construction Entrance
- Limit of Disturbance

TEMPORARY GRADING PLAN

SCALE: 1"=40'



PLAN

SCALE: 1"=40'

DEVELOPER'S CERTIFICATION

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

R.D. MacCuaie Aug 5, 2015
 Signature of Developer **R.D. MACCUAIE** Date
 Print name below signature

ENGINEER'S CERTIFICATION

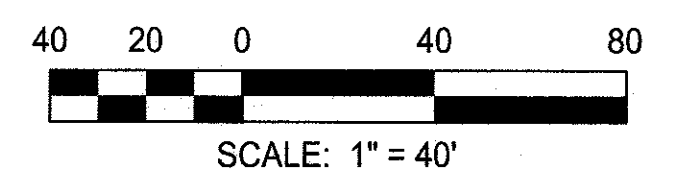
"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

John W. Randolchia Sr. 8-23-15
 Signature of Engineer **JOHN W. RANDOLCHIA SR.** Date
 Print name below signature

For the Howard Soil Conservation District

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. P... 8/21/15
 Signature of District Representative
 Date

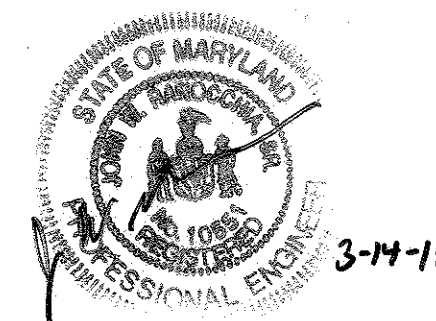


PROFESSIONAL CERTIFICATION

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.

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

LICENSE NUMBER: 14551 EXPIRATION DATE: 6-28-19



OWNER
KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

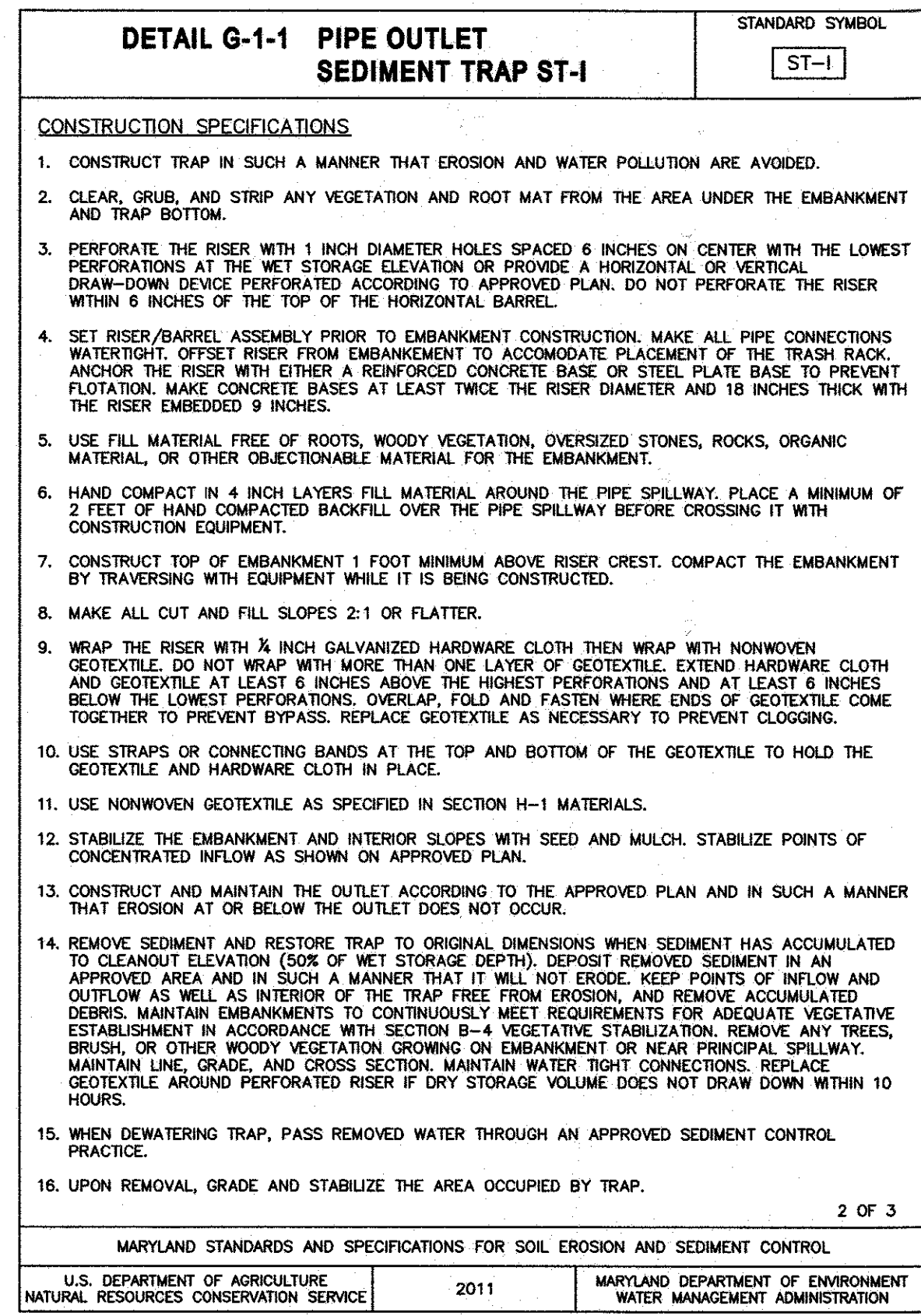
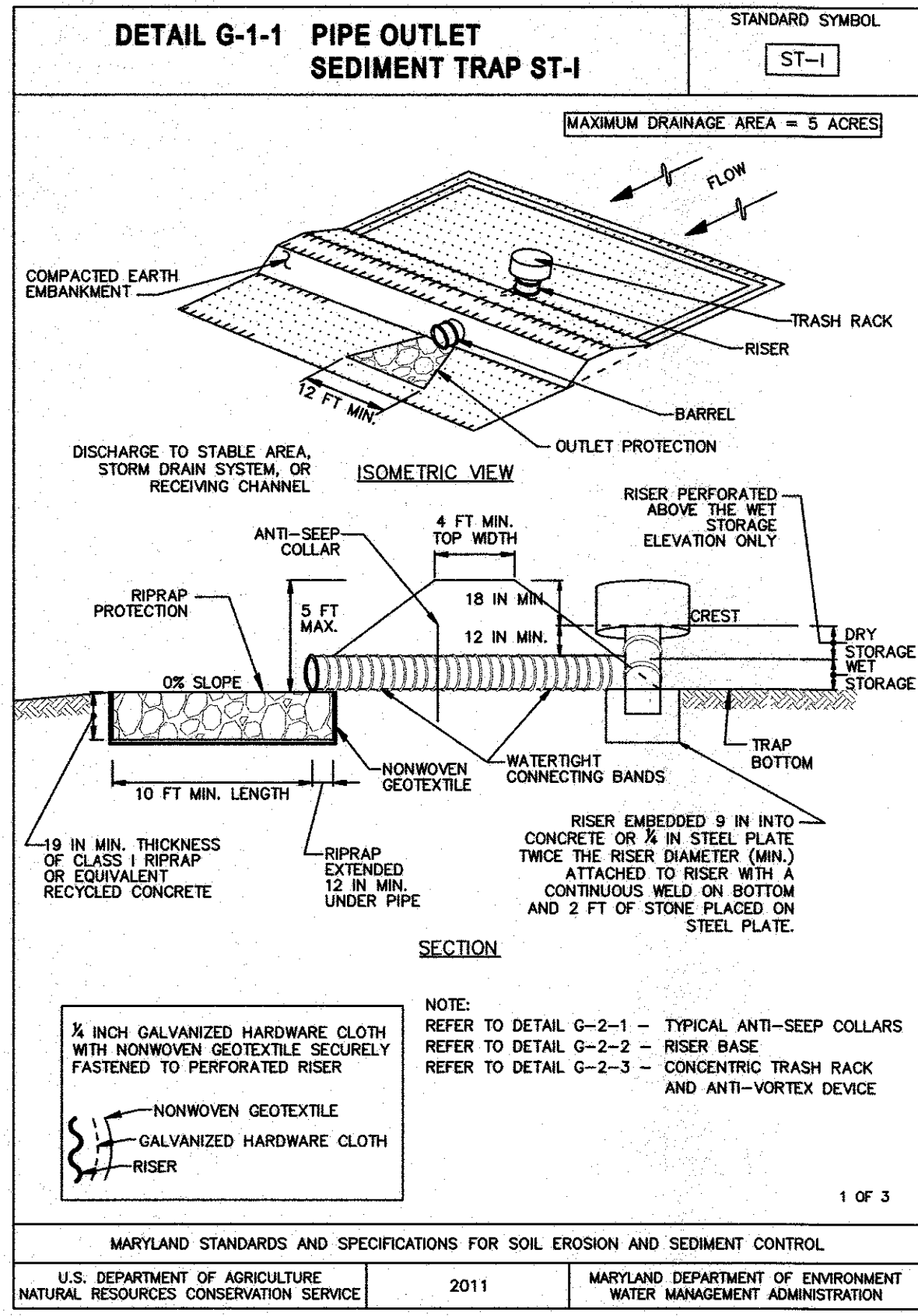
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad Clark 10-14-15
 Chief, Development Engineering Division
Ante Brown 10-21-15
 Chief, Division of Land Development
Valerie Goff 10-21-15
 Director

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



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	NO.
REVISION:	REMOVE SWIM, PLAY AREA, FENCE AND SANITARY
DATE:	

AS BUILT	Erosion & Sediment Control Plan	C.E.I. PROJECT NUMBER
	PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING	131117.00
	OXFORD SQUARE	SCALE:
	"A HOWARD COUNTY GREEN NEIGHBORHOOD"	1"=40'
	TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD	
	ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND	
	SHEET 7 OF 24	



DETAIL G-1-1 PIPE OUTLET SEDIMENT TRAP ST-1

STANDARD SYMBOL: ST-1

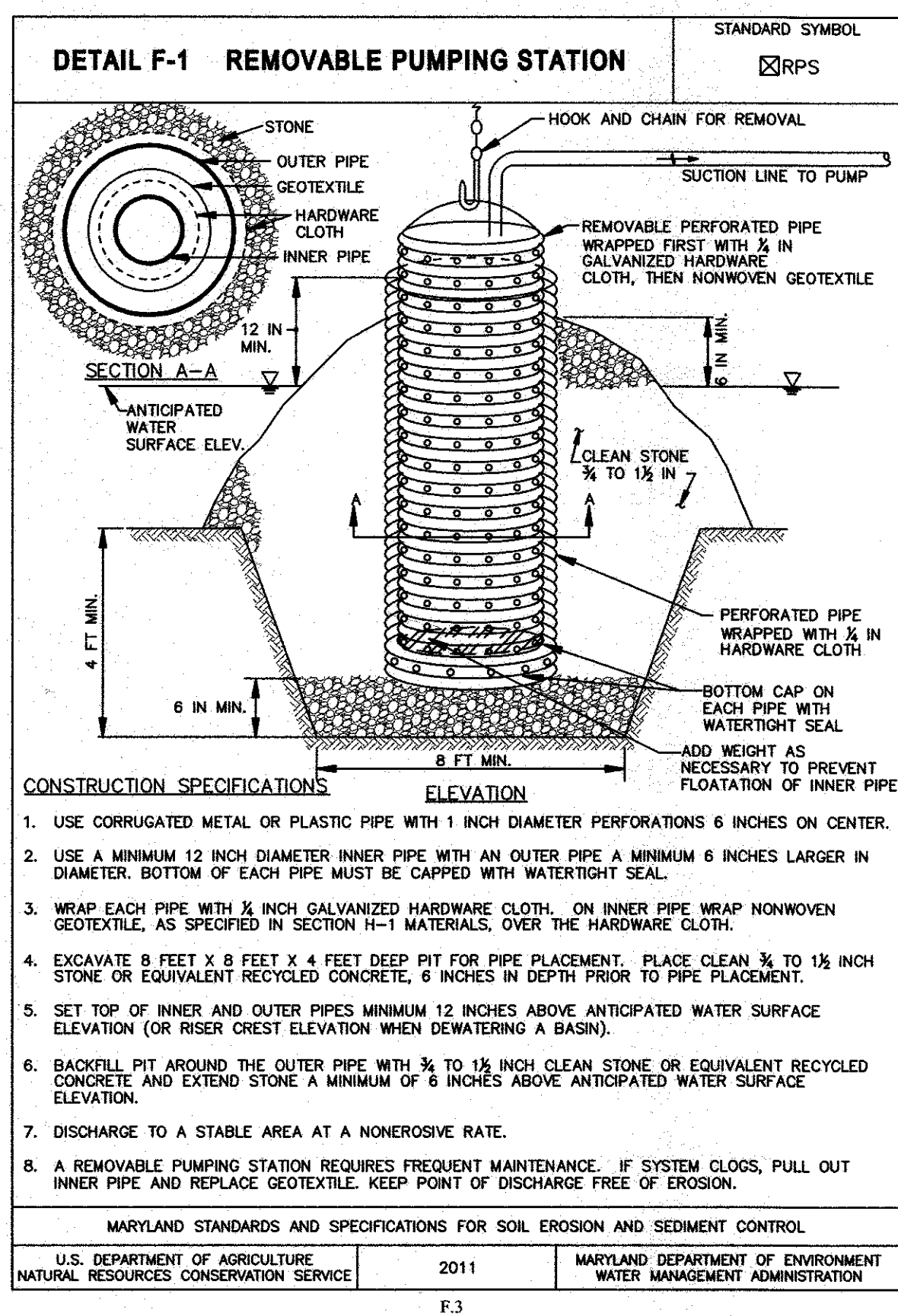
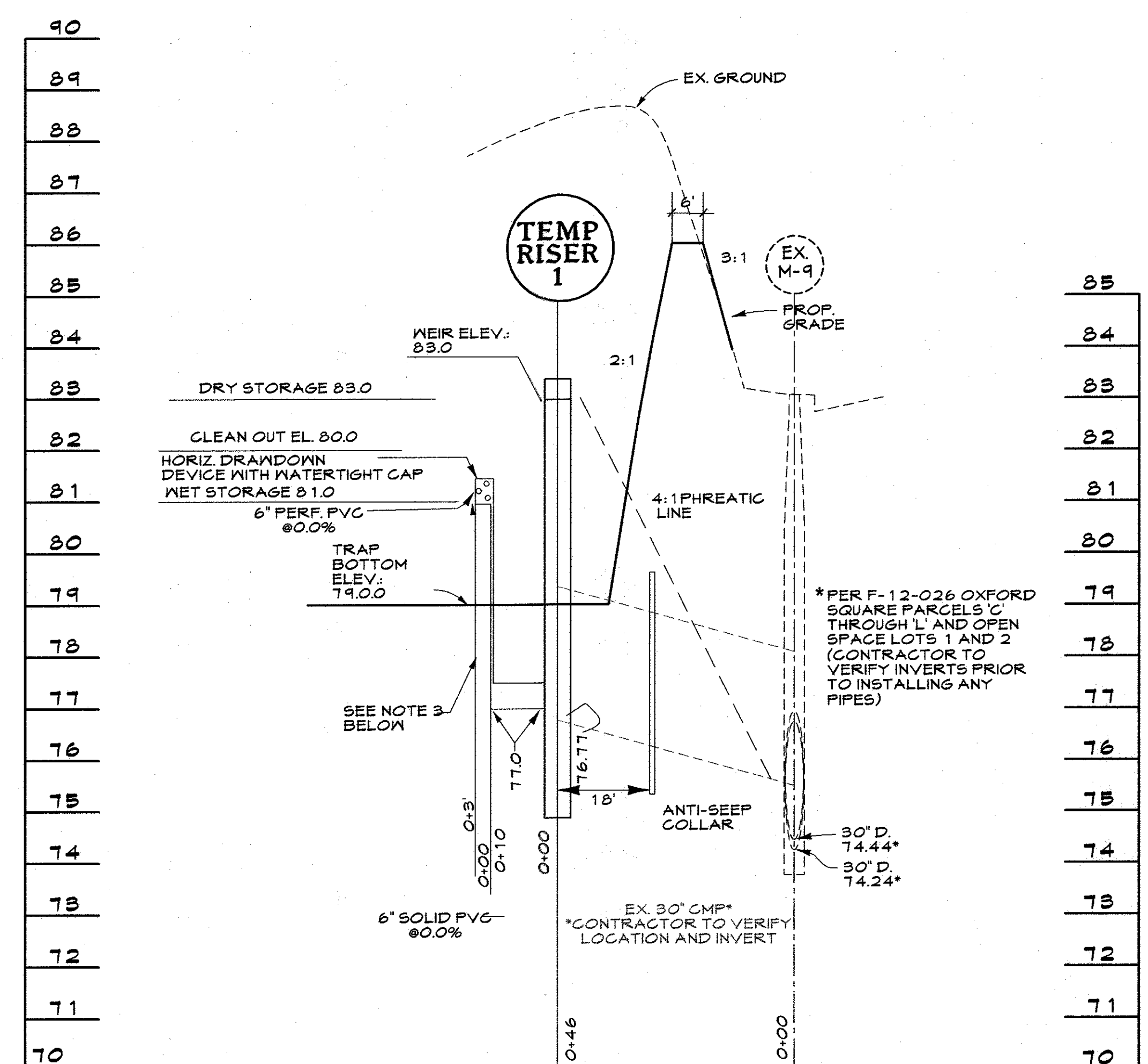
PIPE OUTLET SEDIMENT TRAP ST-1, TRAP NO. _____

PIPE OUTLET SEDIMENT TRAP ST-1, TRAP NO.		
DRAINAGE AREA - INITIAL	4.15*	ACRES
DRAINAGE AREA - INTERM	4.15*	ACRES
DRAINAGE AREA - FINAL	4.15*	ACRES
TOTAL STORAGE REQUIRED	14,940	CF
TOTAL STORAGE PROVIDED	19,681	CF
WET STORAGE REQUIRED	7,470	CF
WET STORAGE PROVIDED	8,376	CF
DRY STORAGE REQUIRED	7,470	CF
DRY STORAGE PROVIDED	11,305	CF
TRAP BOTTOM ELEVATION	79.0	FT
TRAP BOTTOM DIMENSIONS	100' x 30'	FT x FT
RISER CREST (DRY STORAGE) ELEVATION	83	FT
OUTLET (WET STORAGE) ELEVATION	81	FT
CLEANOUT ELEVATION	80	FT
TOP OF EMBANKMENT ELEVATION	86	FT
SIDE SLOPE	2:1	H:V RATIO
EMBANKMENT TOP WIDTH	6'	FT
PRINCIPAL SPILLWAY MATERIAL (BARREL, RISER, ANTI-SEEP COLLAR)	30" CMP	
RISER DIAMETER	42"	IN
BARREL DIAMETER	30"	IN
TRASH RACK DIAMETER	60"	IN
TRASH RACK HEIGHT	33"	IN
ANTI-SEEP COLLAR DIMENSIONS	1.0' x 1.0'	FT
OUTLET PROTECTION - LENGTH	NA	FT
OUTLET PROTECTION - WIDTH	NA	FT
OUTLET PROTECTION - DEPTH	NA	IN

3 OF 3

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
 G.8

* PROPOSED AND INTERIM DRAINAGE AREA WILL VARY BUT NOT EXCEED EXISTING DRAINAGE AREA.



DEVELOPER'S CERTIFICATION

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

R.D. McClung Aug. 5, 2015
 Signature of Developer R.D. McClung Date
 Print name below signature

ENGINEER'S CERTIFICATION

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

J.W. Panocchia 8-23-15
 Signature of Engineer JOHN W PANOCCHIA Date
 Print name below signature

For the Howard Soil Conservation District

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

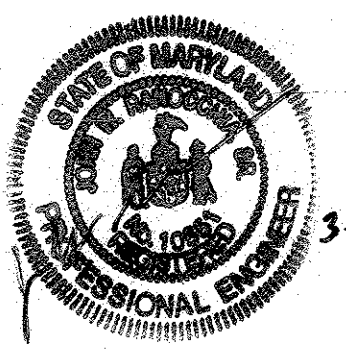
John R. Blanton 8/24/15
 Signature of District Director Date
 Print name below signature

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.

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-19

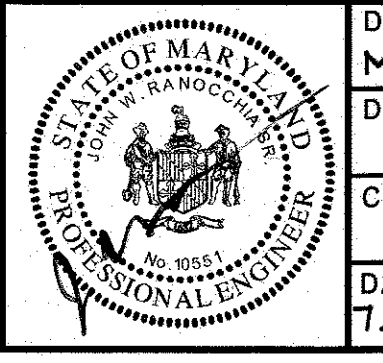


OWNER
 KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad Edwards 10-14-15
 Chief, Development Engineering Division Date
Kate Schuchman 10-21-15
 Chief, Division of Land Development Date
Walter Jaffe 10-21-15
 Director Date

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

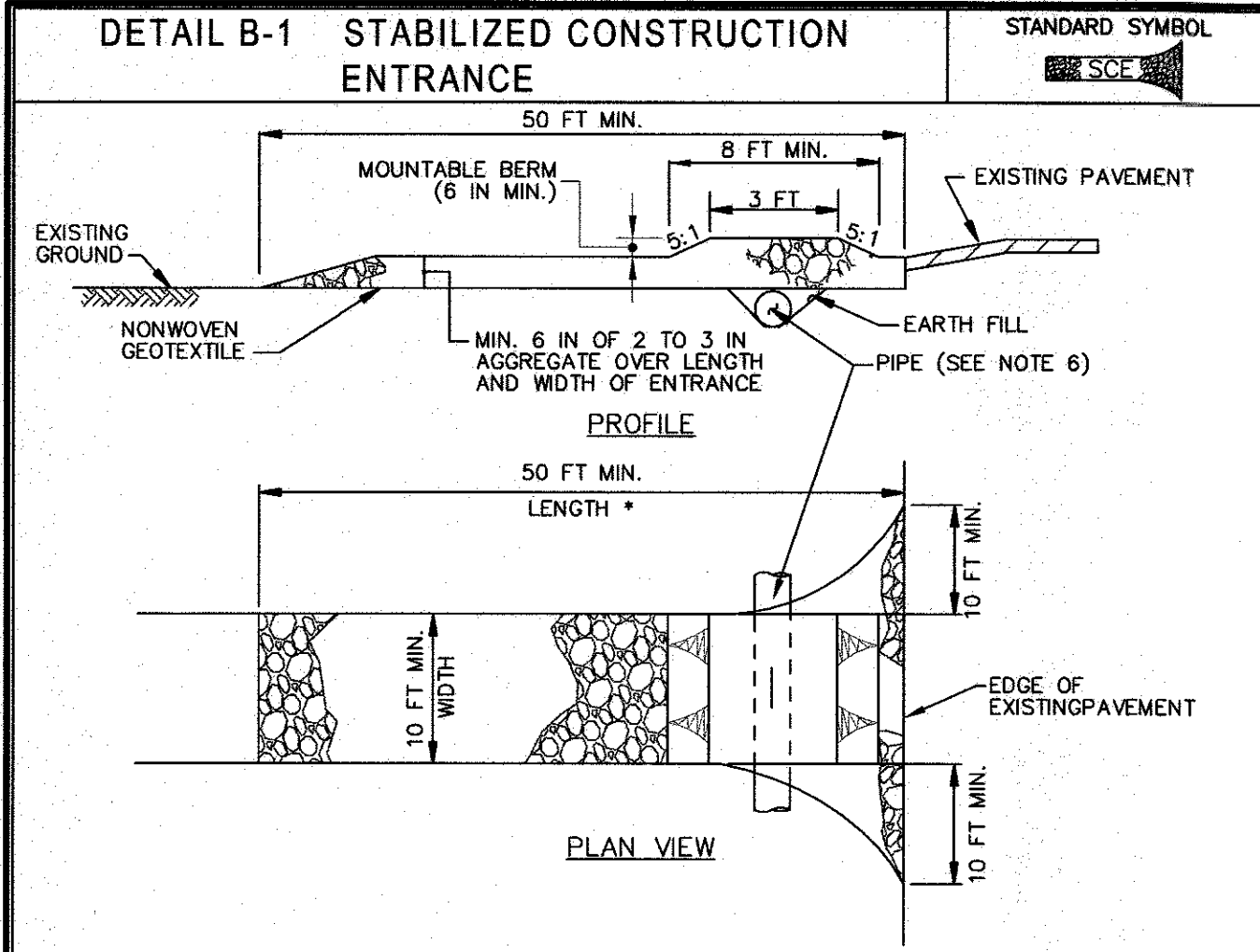


DESIGN BY:	DATE:	BY	NO.	REVISION	DATE
M.J.F./KAD	7.27.2015				
DRAWN BY:					
M.S.S.					
CHECKED BY:					

DEVELOPER
 PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

Erosion & Sediment Control Details & Profiles
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
 SHEET 8 OF 24

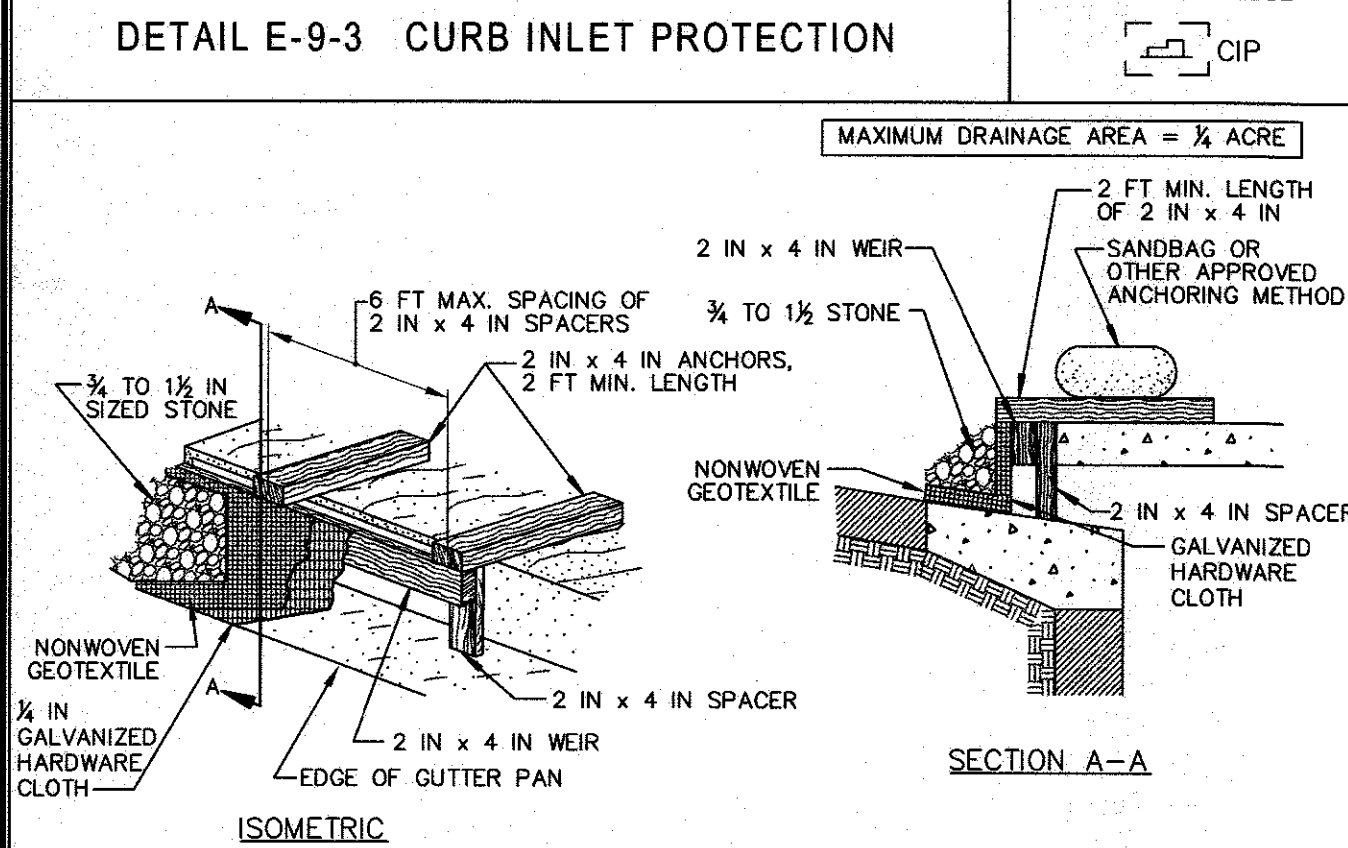
C.E.I. PROJECT NUMBER
 131117.00
 SCALE:
 As Shown



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 (150 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE. MAINTAINING 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 PIPE 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 DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

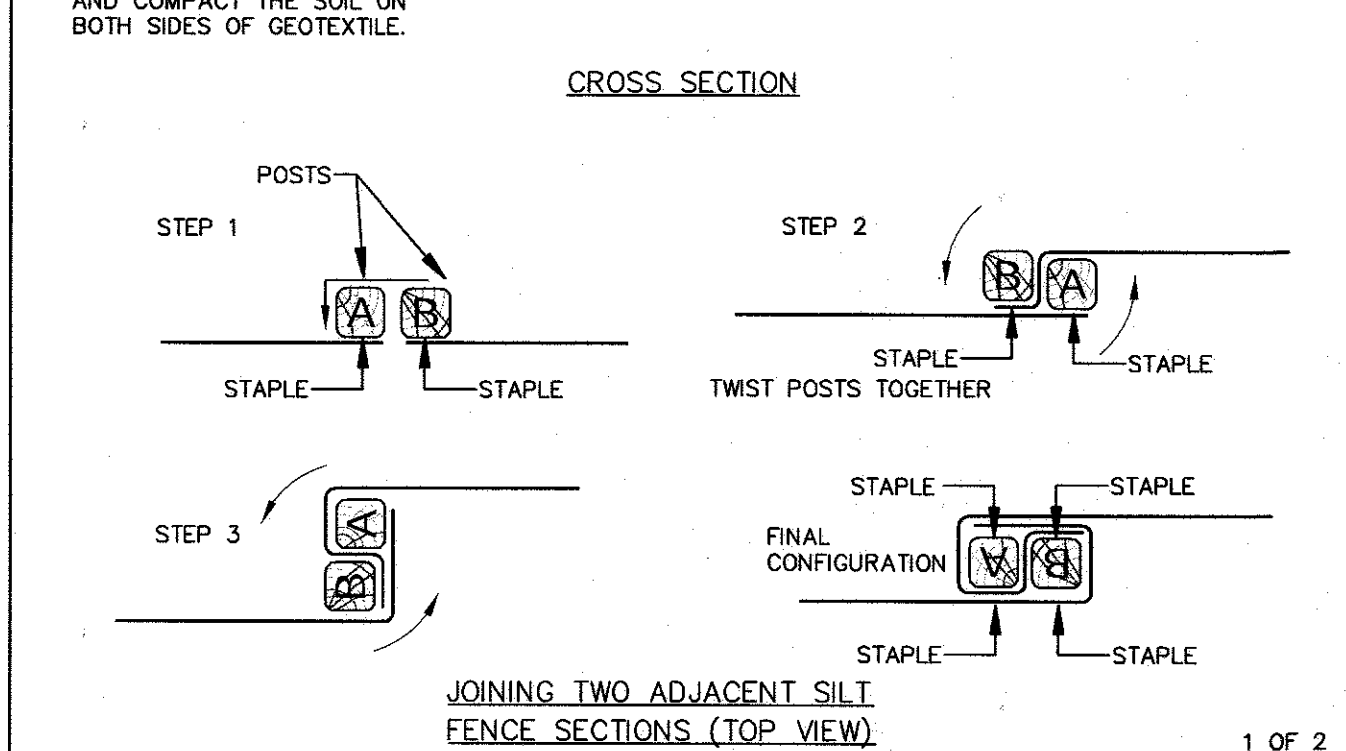
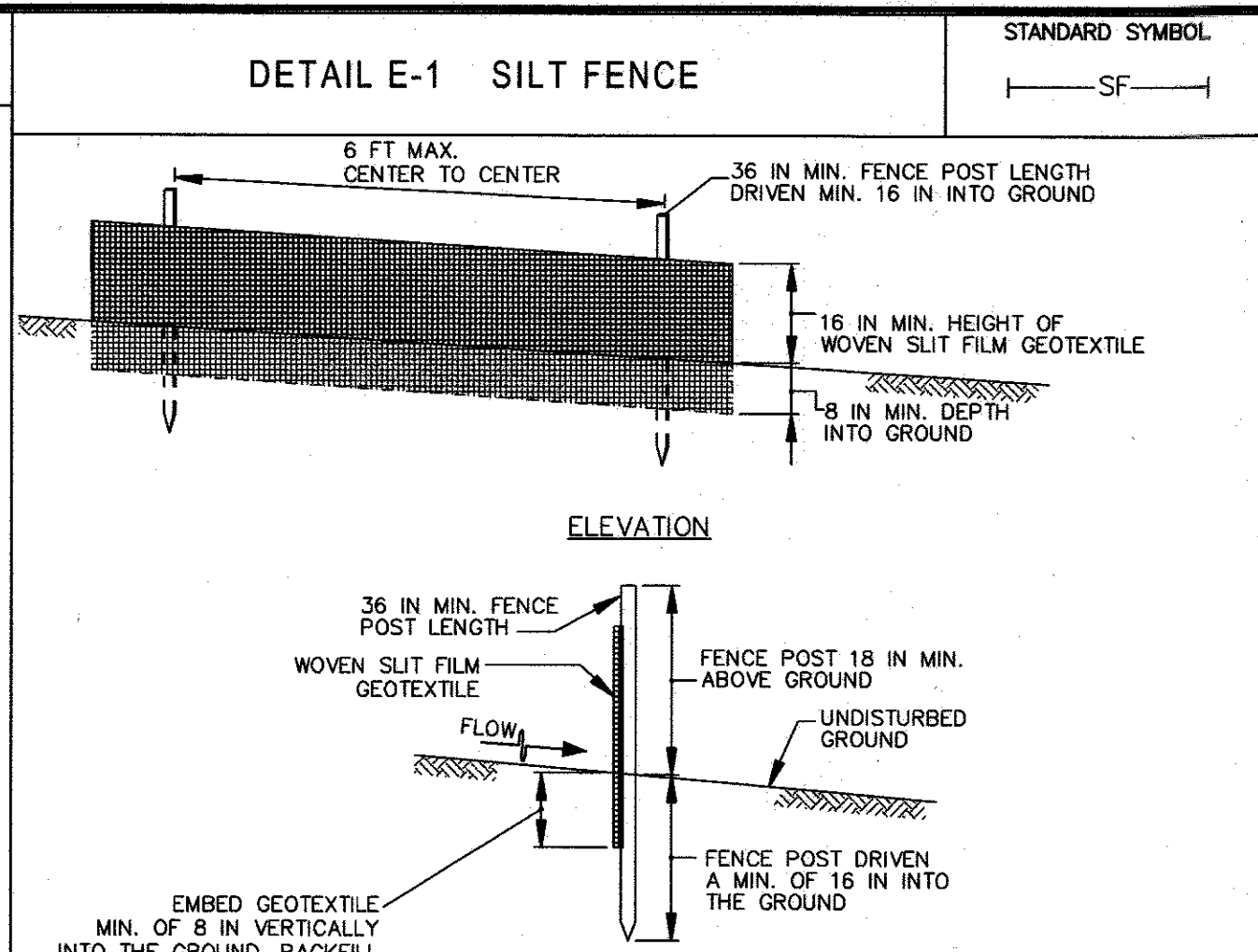
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL			
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION	STANDARD SYMBOL



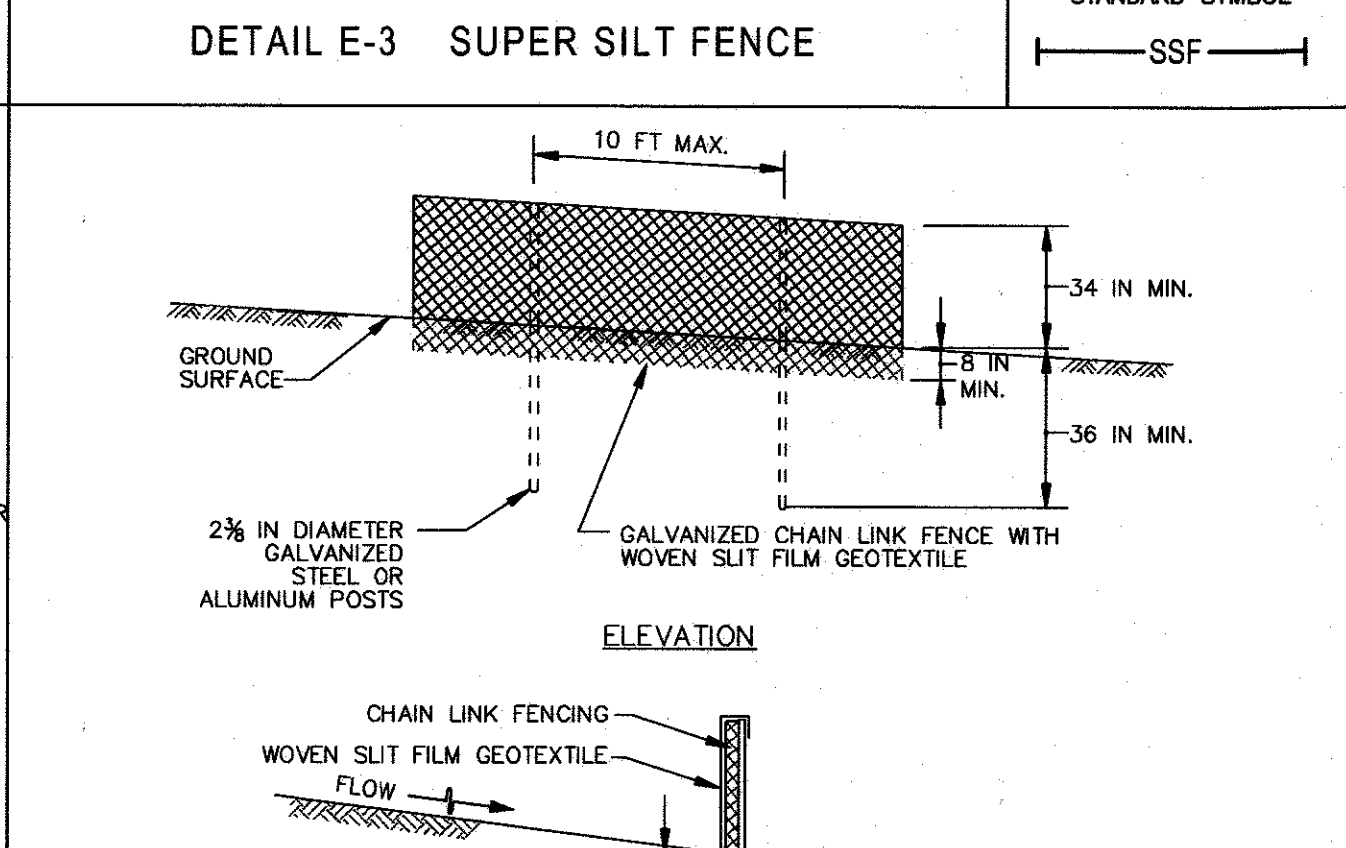
CONSTRUCTION SPECIFICATIONS

- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
- PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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



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

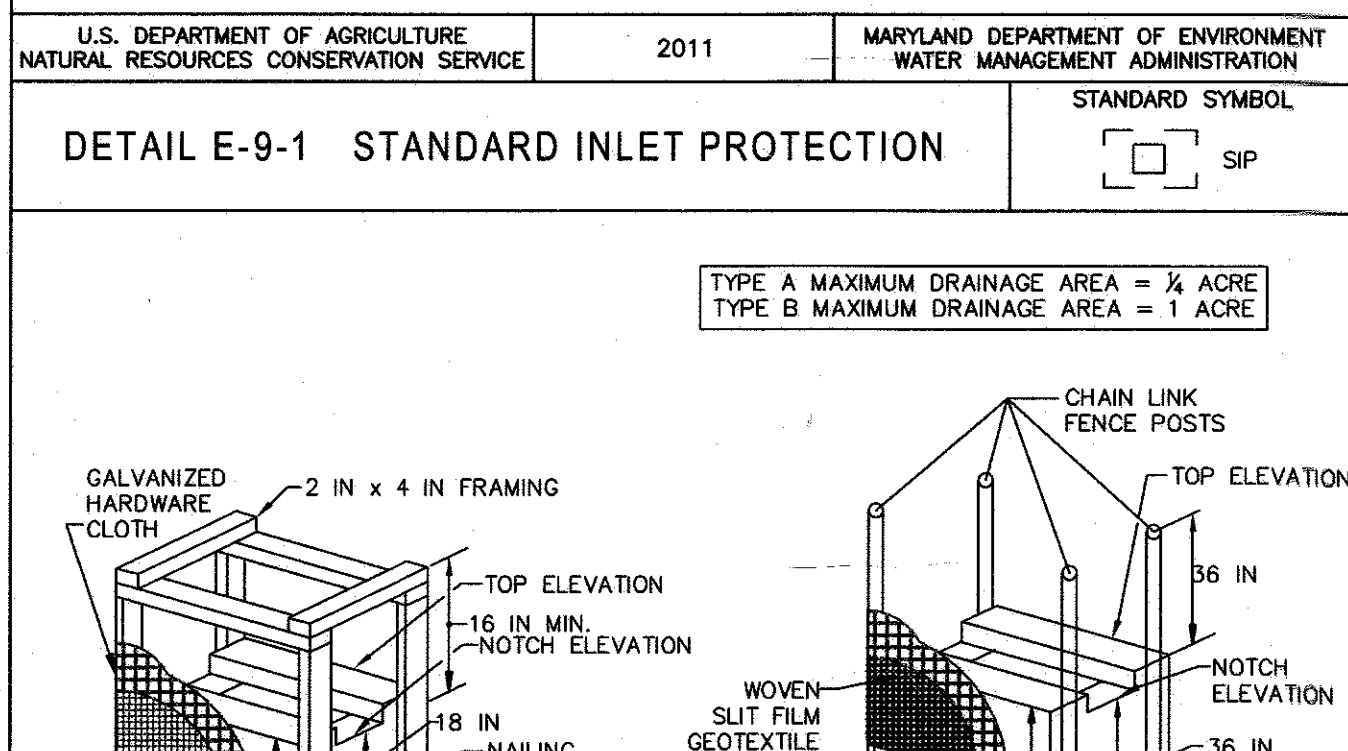
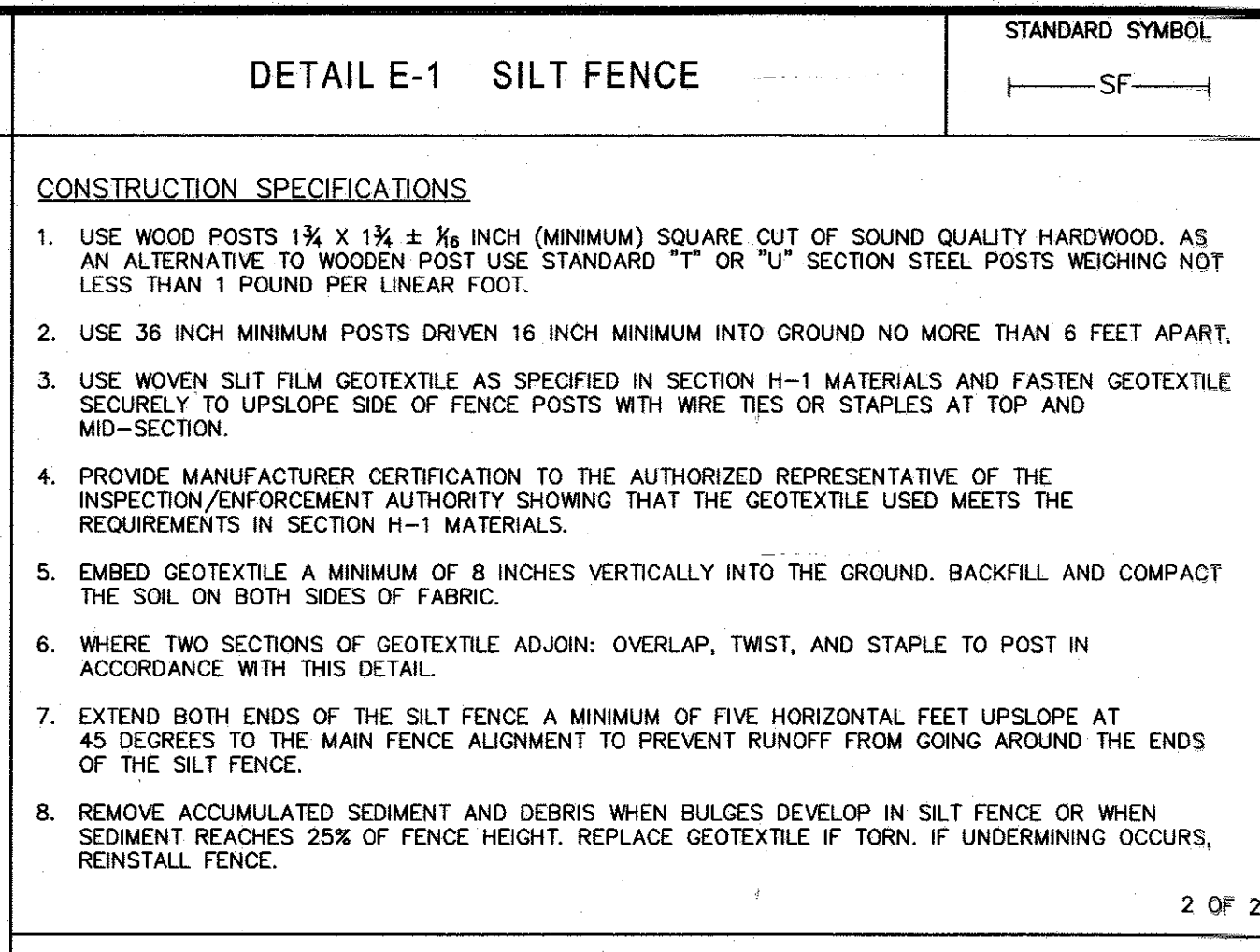


CONSTRUCTION SPECIFICATIONS

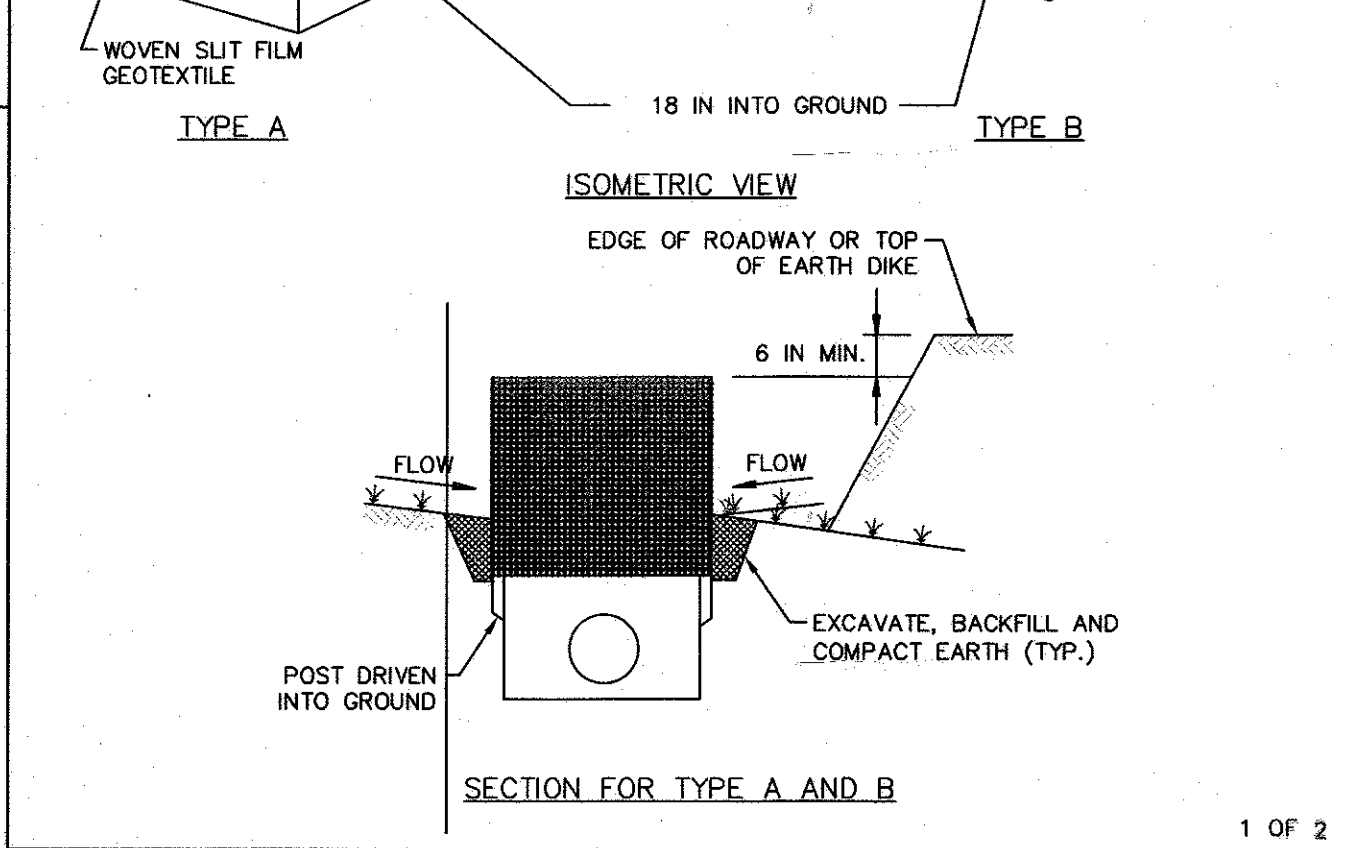
- INSTALL 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2 1/2 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT 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 TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
- WHERE 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, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

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

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



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



CONSTRUCTION SPECIFICATIONS

- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2x4 FRAME AS SHOWN. STRETCH 1/4 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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

PERMANENT SEEDING NOTES

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

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

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

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

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

Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.

Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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

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

TEMPORARY SEEDING NOTES

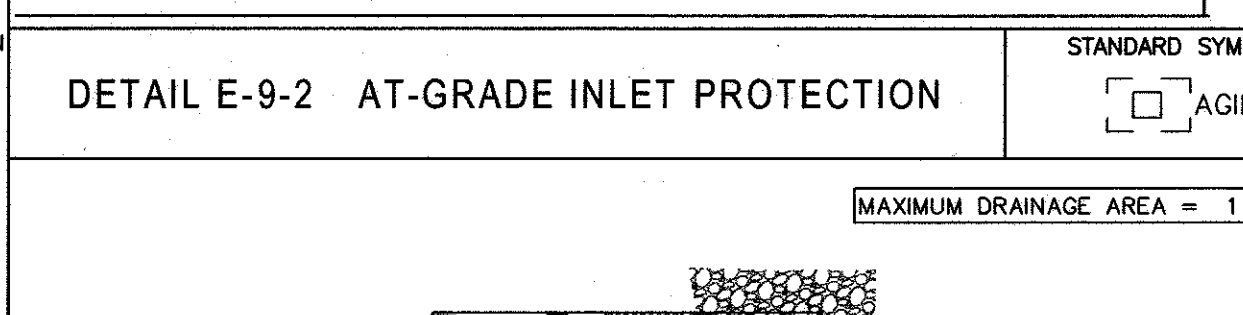
Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

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

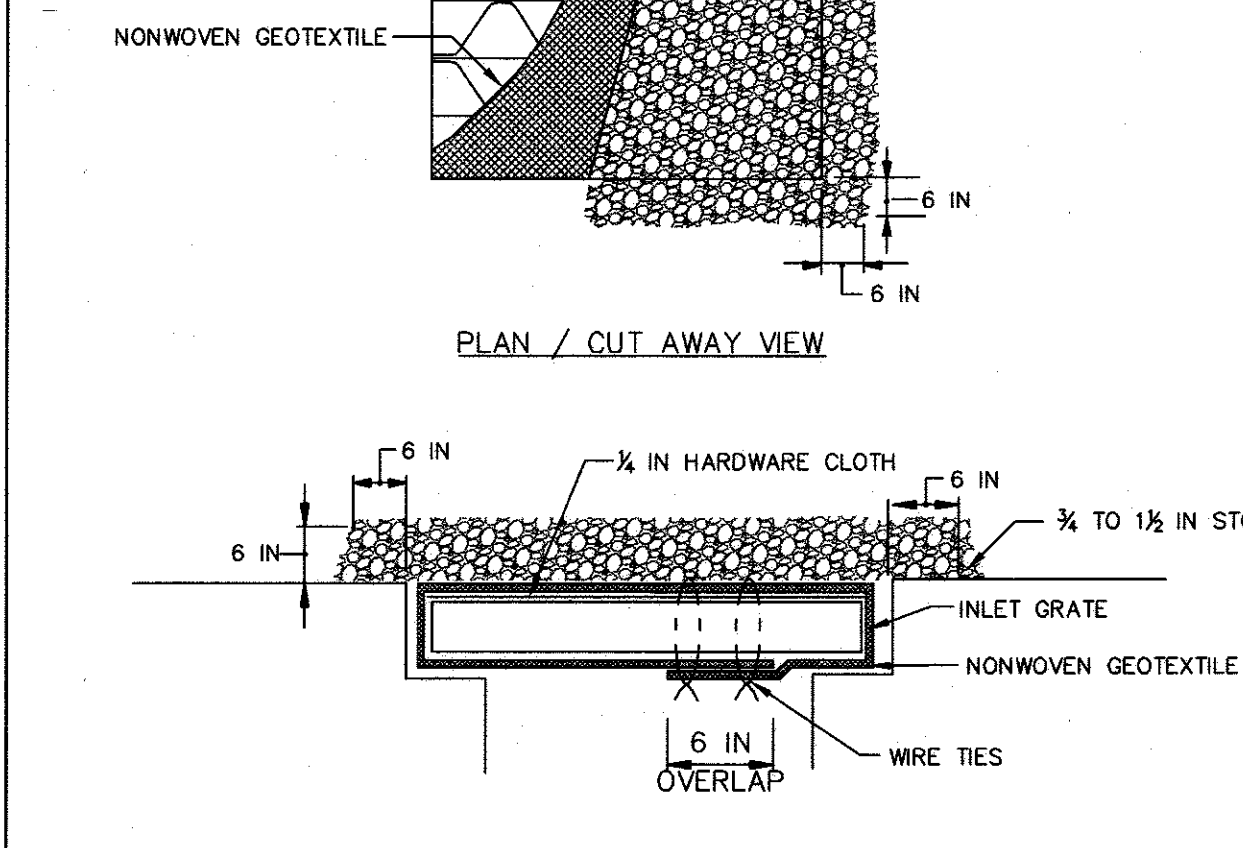
Soil Amendments - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

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

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



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



CONSTRUCTION SPECIFICATIONS

- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
- PLACE CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

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

HOWARD SOIL CONSERVATION DISTRICT

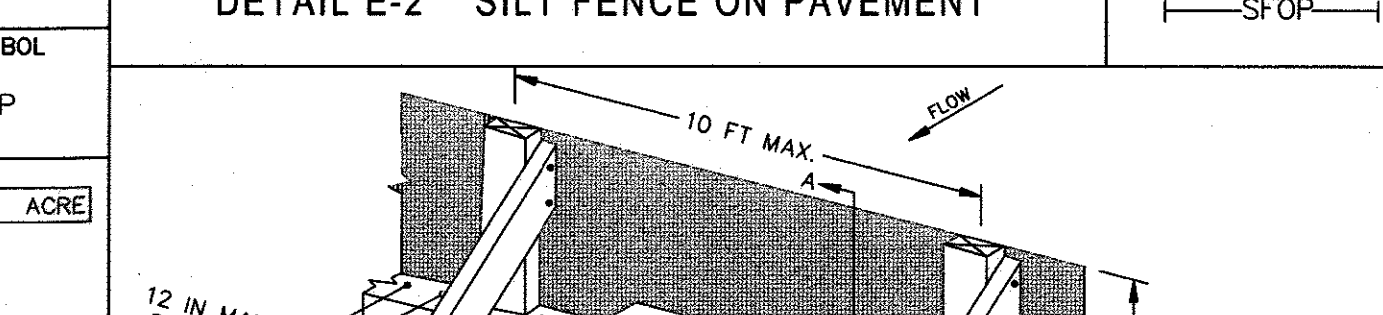
STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial disturbance or re-disturbance, permanent or temporary stabilization shall be completed within 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, 14 days for all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), and (Sec. 54), temporary seeding (Sec. 59) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

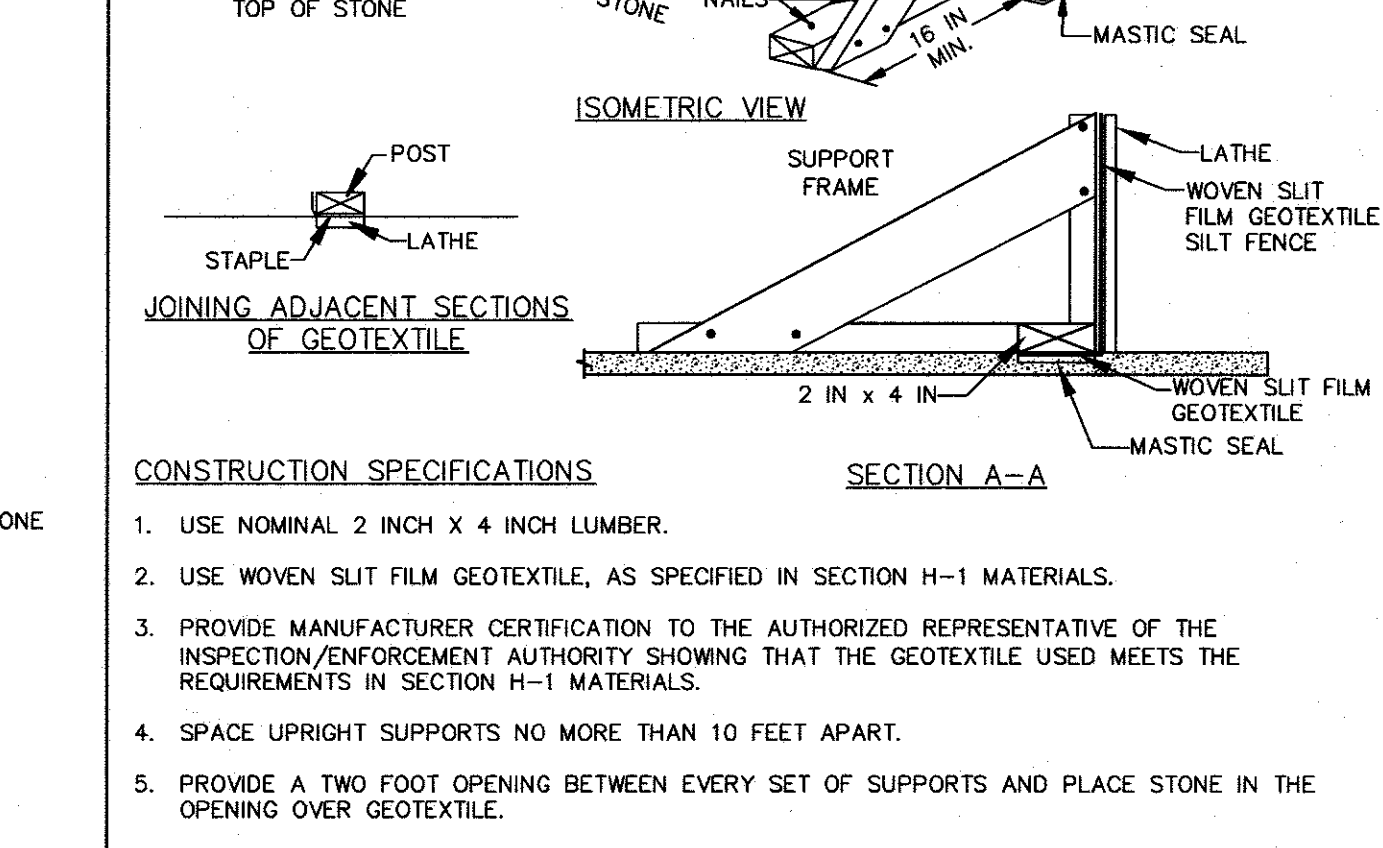
Total Area of Site	2.43 Acres (Plan submission 5.61 Ac.)
Area Disturbed	2.13 Acres
Area to be rooted or paved	1.17 Acres
Area to be vegetatively stabilized	1.96 Acres
Total Cut	23.612 Cu. Yds.
Total Fill	24.984 Cu. Yds.

 Off-site waste/borrow area location: *Gulf Mill Reflects overall Oxford Square development. Borrow Taken from open grading permit on-site.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other grading or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

Rev. 9/99



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



CONSTRUCTION SPECIFICATIONS

- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- USE WOVEN SILT FILM GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- SPACE UPRIGHT SUPPORTS NO MORE THAN 10 FEET APART.
- PROVIDE A TWO FOOT OPENING BETWEEN EVERY SET OF SUPPORTS AND PLACE STONE IN THE OPENING OVER GEOTEXTILE.
- KEEP SILT FENCE TAUT AND SECURELY STAPLE TO THE UPSLOPE SIDE OF UPRIGHT SUPPORTS. EXTEND GEOTEXTILE UNDER 2x4.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, FOLD, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL. ATTACH LATHE.
- PROVIDE A MASTIC SEAL BETWEEN PAVEMENT, GEOTEXTILE, AND 2x4 TO PREVENT SEDIMENT-LADEN WATER FROM ESCAPING BENEATH SILT FENCE INSTALLATION.
- SECURE BOARDS TO PAVEMENT WITH 400 5 INCH MINIMUM LENGTH NAILS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. MAINTAIN WATER TIGHT SEAL ALONG BOTTOM. REPLACE STONE IF DISPLACED.

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

DEVELOPER'S CERTIFICATION

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

Signature of Developer: *R.D. Maccubbin* Date: *Aug. 05, 15*
Print name below signature: **R.D. MACCUBBIN**

ENGINEER'S CERTIFICATION

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

Signature of Engineer: *John W. Pannicola* Date: *8-23-15*
Print name below signature: **John W. Pannicola**

For the Howard Soil Conservation District

OWNER

KELLOGG - CCP, LLC

c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

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: *Jim E. Hester* Date: *8/31/15*
License Number: **10551** Expiration Date: **8-23-15**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Elmer Date: *10-14-15*
Chief, Development Engineering Division

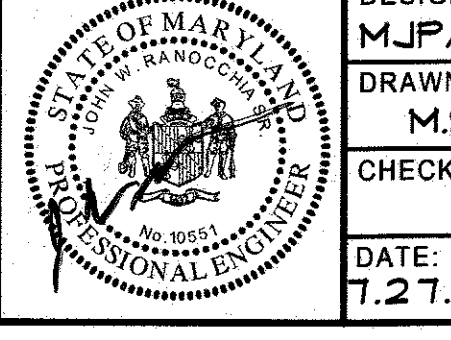
Walter Dineen Date: *10-21-15*
Chief, Division of Land Development

Valerio Joffe Date: *10-21-15*
Director

M CENTURY ENGINEERING

CONSULTING ENGINEERS - PLANNERS

10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY NO.	
REVISION	
DATE	

DEVELOPER

PRESTON - SCHEFFENACKER PROPERTIES

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT

Erosion & Sediment Control Details

PARCEL "P" - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"

TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND

SHEET 9 OF 24

C.E.I. PROJECT NUMBER: 131117.00
SCALE: As Shown

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
Using vegetation as cover to protect exposed soil from erosion.

PURPOSE
To promote the establishment of vegetation on exposed soil.

CONDITIONS WHERE PRACTICE APPLIES
On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization, soil preparation, soil amendments and topsoiling, seeding and mulching, temporary stabilization, and permanent stabilization.

EFFECTS ON WATER QUALITY AND QUANTITY
Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemical carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDING PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT
Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseeding within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

DEFINITION
Establishment of vegetative cover on cut and fill slopes.

PURPOSE
To provide timely vegetative cover on cut and fill slopes as work progresses.

CONDITIONS WHERE PRACTICE APPLIES
Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

CRITERIA

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
 - 2.1. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
 - 2.2. Perform Phase 1 excavation, prepare seedbed, and stabilize.
 - 2.3. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
 - 2.4. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

NOTE: ONCE EXCAVATION HAS BEGUN, THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

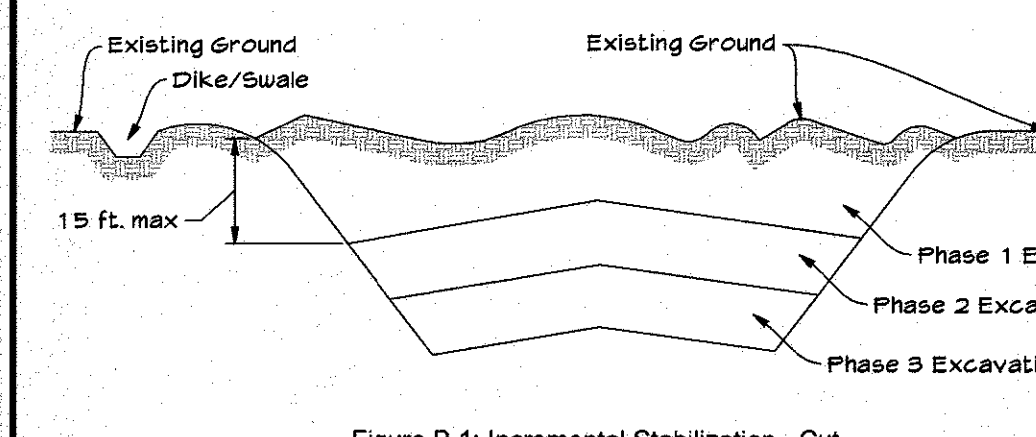
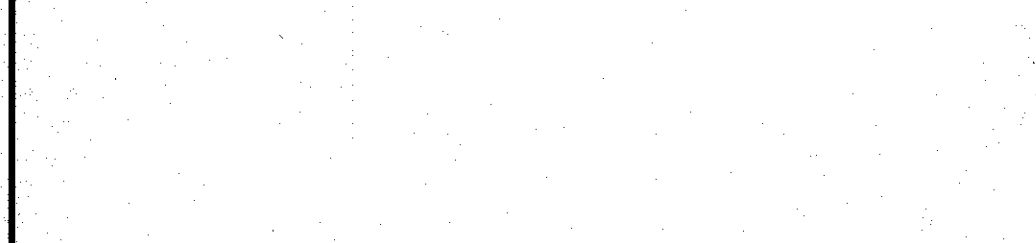


Figure B.1: Incremental Stabilization - Cut

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all fill slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a fill reaches 15 feet or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
 - 4.1. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
 - 4.2. At the end of the day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
 - 4.3. Place Phase 1 fill, prepare seedbed, and stabilize.
 - 4.4. Place Phase 2 fill, prepare seedbed, and stabilize.
 - 4.5. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN, THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.



THERE IS NO 'AS BUILT' INFORMATION PROVIDED ON THIS SHEET.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *10-14-15*
 Chief, Division of Land Development: *10-21-15*
 Director: *10-21-15*

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

DESIGN BY: MJP/KAD
 DRAWN BY: M.S.S.
 CHECKED BY:
 DATE: 7.27.2015

REVISION	DATE
BY NO.	DATE

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
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AS BUILT Erosion & Sediment Control Details
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
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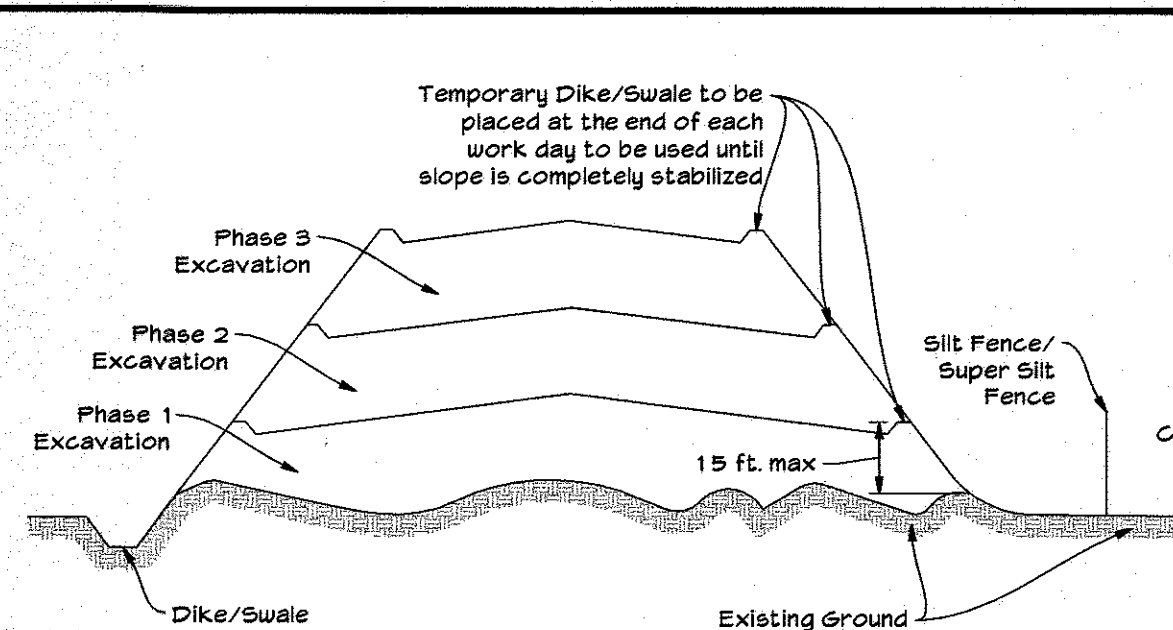


Figure B.2: Incremental Stabilization - Fill

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION
The process of preparing the soils to sustain adequate vegetative stabilization.

PURPOSE
To provide a suitable soil medium for vegetative growth.

CONDITIONS WHERE PRACTICE APPLIES
Where vegetative stabilization is to be established.

CRITERIA

1. Soil Preparation
 - 1.1. Temporary Stabilization
 - 1.1.a. Seed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After soil is loosened, it must not be rolled or dragged smooth but left in roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - 1.1.b. Apply fertilizer and lime as prescribed on the plans.
 - 1.1.c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - 1.2. Permanent Stabilization
 - 1.2.a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - a. Soil pH between 6.0 to 7.0.
 - b. Soluble salts less than 500 parts per million (ppm).
 - c. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if loessess will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - d. Soil contains 1.5 percent minimum organic matter by weight.
 - e. Soil contains sufficient pore space to permit adequate root penetration.
 - 1.2.b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - 1.2.c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - 1.2.d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - 1.2.e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seeded loosening may be unnecessary on newly disturbed areas.

2. Topsoiling
 - 2.1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
 - 2.2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in representative soil profile section in the Soil Survey published by USDA-NRCS.
 - 2.3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant material.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
 - 2.4. Areas having slopes steeper than 2:1 require special consideration and design.
 - 2.5. Topsoil specifications: Topsoil to be used as topsoil must meet the following criteria:
 - 2.5.1. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/2 inch in diameter.
 - 2.5.2. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
 - 2.5.3. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

3. Mulching
 - 3.1. Mulch Materials (in order of preference)
 - 3.1.1. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
 - 3.1.2. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
 - a. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 - a. WCFM, including dye, must contain no germination or growth inhibiting factors.
 - a. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogenous slurry. The mulch material must form a blotter-like ground cover, or application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - a. WCFM material must not contain elements or compounds at concentrations levels that are phytotoxic.
 - a. WCFM must conform to the following physical requirements: fiber length of approximately 1.0 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 40 percent minimum.

6. Topsoil Application
 - 6.a. Erosion and sediment control practices must be maintained when applying topsoil.
 - 6.b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - 6.c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

7. Soil Amendments (Fertilizer and Lime Specifications)
 - 7.1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - 7.2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 - 7.3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone to be used to such fineness that at least 50 percent will pass through a #100 mesh sieve and 48 to 100 percent will pass through a #20 mesh sieve.
 - 7.4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - 7.5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION
The application of seed and mulch to establish vegetative cover.

PURPOSE
To protect disturbed soils from erosion during and at the end of construction.

CONDITIONS WHERE PRACTICE APPLIES
To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

1. Seeding
 - 1.1. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
 - 1.2. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
 - 1.3. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package, use four times the recommended rate.

NOTE: It is very important to keep inoculants as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
 - 1.4. Sod and seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of phytotoxic materials.

2. Application
 - 2.a. Drilling: This includes use of conventional drop or broadcast spreaders.
 - 2.a.1. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
 - 2.a.2. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
 - 2.b. Drill or Outdragger Seeding: Mechanized seeders that apply and cover seed with soil.
 - 2.b.1. Outdragger seeders are required to bury the seed in such a fashion as to provide at least 1/2 inch of soil coverage. Seeded must be firm after planting.
 - 2.b.2. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
 - 2.c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
 - 2.c.1. If fertilizer is being applied at the time of seeding, the application rates should be as follows: nitrogen, 100 pounds per acre total soluble nitrogen; P₂O₅ (phosphorous), 200 pounds per acre; K₂O (potassium), 200 pounds per acre.
 - 2.c.2. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 - 2.c.3. Mix seed and fertilizer on site and seed immediately and without interruption.
 - 2.c.4. When hydroseeding, do not incorporate into the soil.

B-4-4 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION
To stabilize disturbed soils with permanent vegetation.

PURPOSE
To use long-lived perennial grasses and legumes to establish permanent cover on disturbed soils.

CONDITIONS WHERE PRACTICE APPLIES
Exposed soils where ground cover is needed for 6 months or more.

1. Seed Mixtures
 - 1.1. General
 - 1.1.a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - 1.1.b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office guide, Section 3-4.2 - Critical Area Planting.
 - 1.2. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
 - 1.2.1. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures
 - 2.1. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
 - 2.2. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - a. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of total mixture by weight.
 - a. Kentucky Bluegrass/Perennial Ryegrass: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Recommended Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
 - a. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought-prone areas and/or for areas receiving low to medium

2. Application
 - 2.1. Apply mulch to all seeded areas immediately after seeding.
 - 2.2. When straw mulch is used, spread it over seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
 - 2.3. Wood cellulose fiber used as mulch should be applied at a net dry weight of 100 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 80 pounds of wood cellulose fiber per 100 gallons of water.

3. Anchoring
 - 3.a. Perform much anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
 - a.1. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
 - a.2. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 150 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - a.3. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-10, Petrosol, Terra Tex, Terra Tack, AR, or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches much, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
 - a.4. Lightweight plastic netting may be applied over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION
To stabilize disturbed soils with vegetation for up to 6 months.

PURPOSE
To use fast growing vegetation that provides cover on disturbed soils.

CONDITIONS WHERE PRACTICE APPLIES
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

1. Seeding
 - 1.1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below under application rates, seeding dates and seeding depths. If the Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
 - 1.2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
 - 1.3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch along as prescribed in Section B-4-A.1.1b and maintain until the next seeding season.

Hardiness Zone: 6B		Seed Mixture: N/A		Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	
N/A	Annual Ryegrass (Lolium perenne spp. multiflorum)	40	May 15 to May 31 Aug 1 to Sep 15	0.5 in.	
N/A	Barley (Hordeum vulgare)	16	May 15 to May 31 Aug 1 to Sep 15	1.0 in.	
N/A	Foxtail Millet (Setaria italica)	30	Jun 1 to Jul 31	0.5 in.	4.5 lb/acre (1 lb/1000sq ft)
N/A	Pearl Millet (Pennisetum glaucum)	20	Jun 1 to Jul 31	0.5 in.	2 tons/acre (40 lb/1000 sq ft)

B-4-5 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

DEFINITION
A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

PURPOSE
To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

CONDITIONS WHERE PRACTICE APPLIES
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

1. Stockpile Areas
 - 1.1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
 - 1.2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
 - 1.3. Runoff from the stockpile area must drain to a suitable sediment control practice.
 - 1.4. Access the stockpile area from the upgrade side.
 - 1.5. Clear water runoff into the stockpile area must be minimized by use of a diversion fence such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
 - 1.6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
 - 1.7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization

2. Seeding
 - 2.1. Management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 45 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 3 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
 - 2.2. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf areas, mixture includes: Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

3. NOTES:
 - 3.1. SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY HANDBOOK #11, TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND.
 - 3.2. CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
 - 3.3. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:

Western Maryland:	March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
Central Maryland:	March 1 to May 15, August 15 to October 15 (Hardiness Zones: 6b)
Southern MD, Eastern Shore:	March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
 - 3.4. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1/2 inch in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
 - 3.5. If soil moisture is deficient, supply new seedlings with adequate water for plant growth (1/2 to 1 inch over 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedlings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

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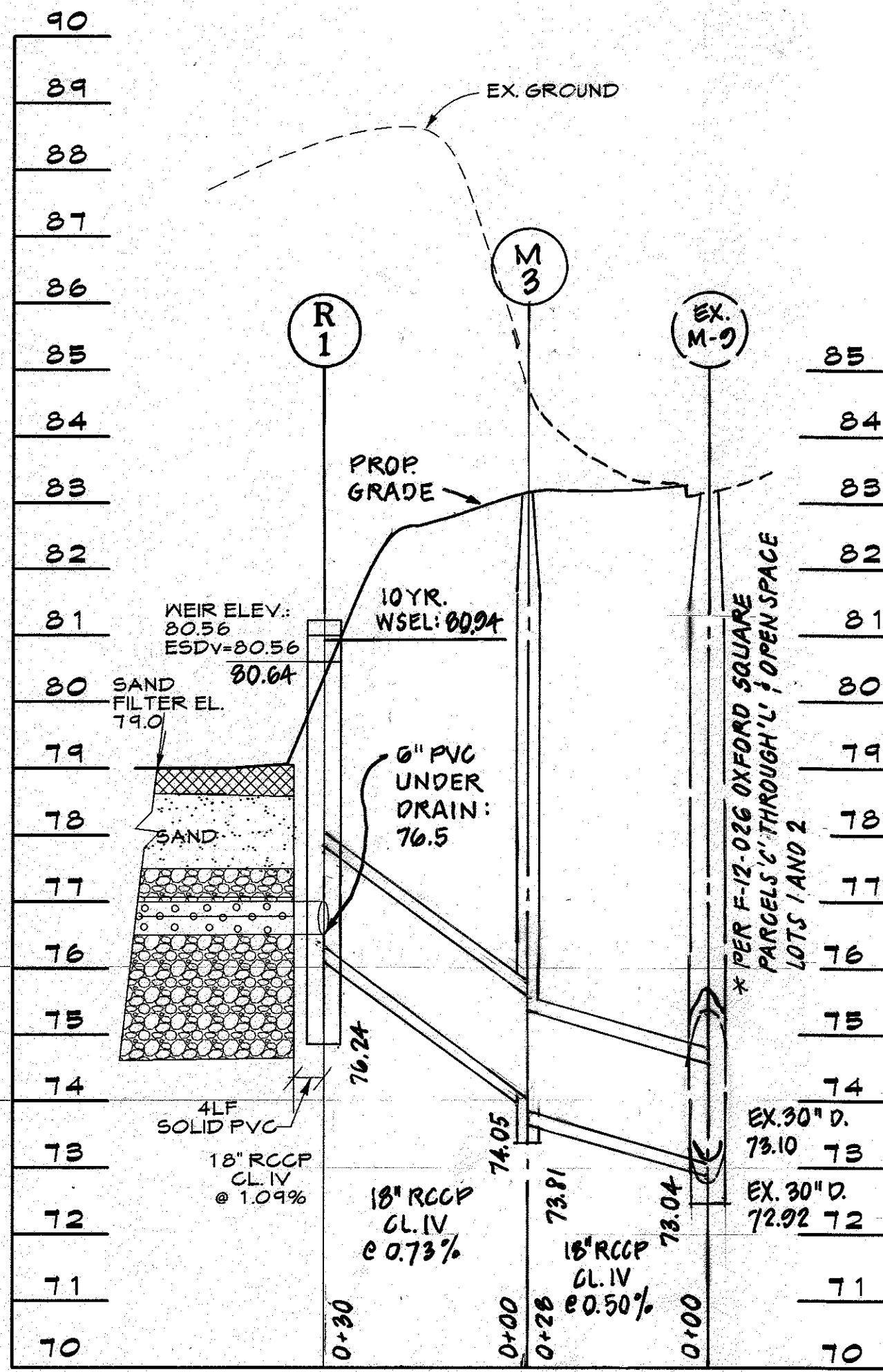
4. NOTES:
 - 4.1. SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY HANDBOOK #11, TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND.
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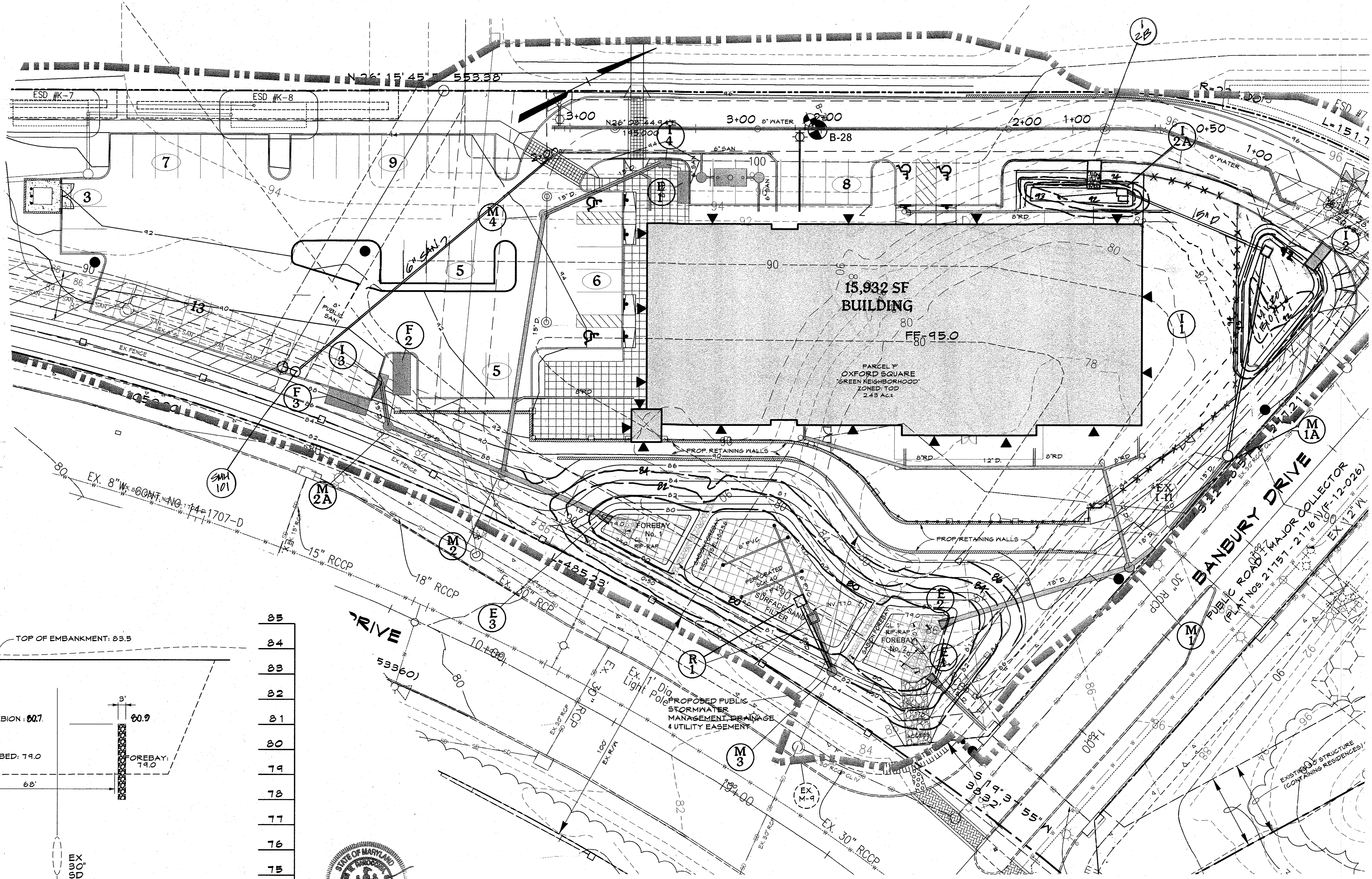
Permanent Seeding Summary

Hardiness Zone: 6B		Seed Mixture: Cool-Season Grass Mix		Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/acre)	Seeding Dates	Seeding Depth	
4	Tall Fescue (Lolium arundinaceum)	60	Mar 1 to May 15 Aug 1 to Oct 15	1/2 to 3/4 in.	45 lb/acre (1 lb/1000sq ft)
	Kentucky Bluegrass (Poa pratensis)	40		1/2 to 3/4 in.	40 lb/acre (2 lb/1000sq ft)
	Perennial Ryegrass (Lolium perenne)	20		1/2 to 3/4 in.	2 tons/acre (40 lb/1000 sq ft)

5. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).
 - 5.1. General Specifications
 - 5.1.1. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
 - 5.1.2. Sod must be machine cut at a uniform soil thickness of 3/4 inches, plus or minus 1/8 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
 - 5.1.3. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - 5.1.4. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - 5.2. Sod installation
 - 5.2.1. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
 - 5.2.2. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
 - 5.2.3. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 - 5.2.4. Whenever possible, lay sod with the long edge parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
 - 5.2.5. Under the side of immediately following rolling and tamping until the water of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operation of laying, tamping and irrigating for any piece of sod within eight hours.
 - 5.3. Sod Maintenance
 - 5.3.1. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the rest of the day to prevent wilting.
 - 5.3.2. After the first week, sod watering

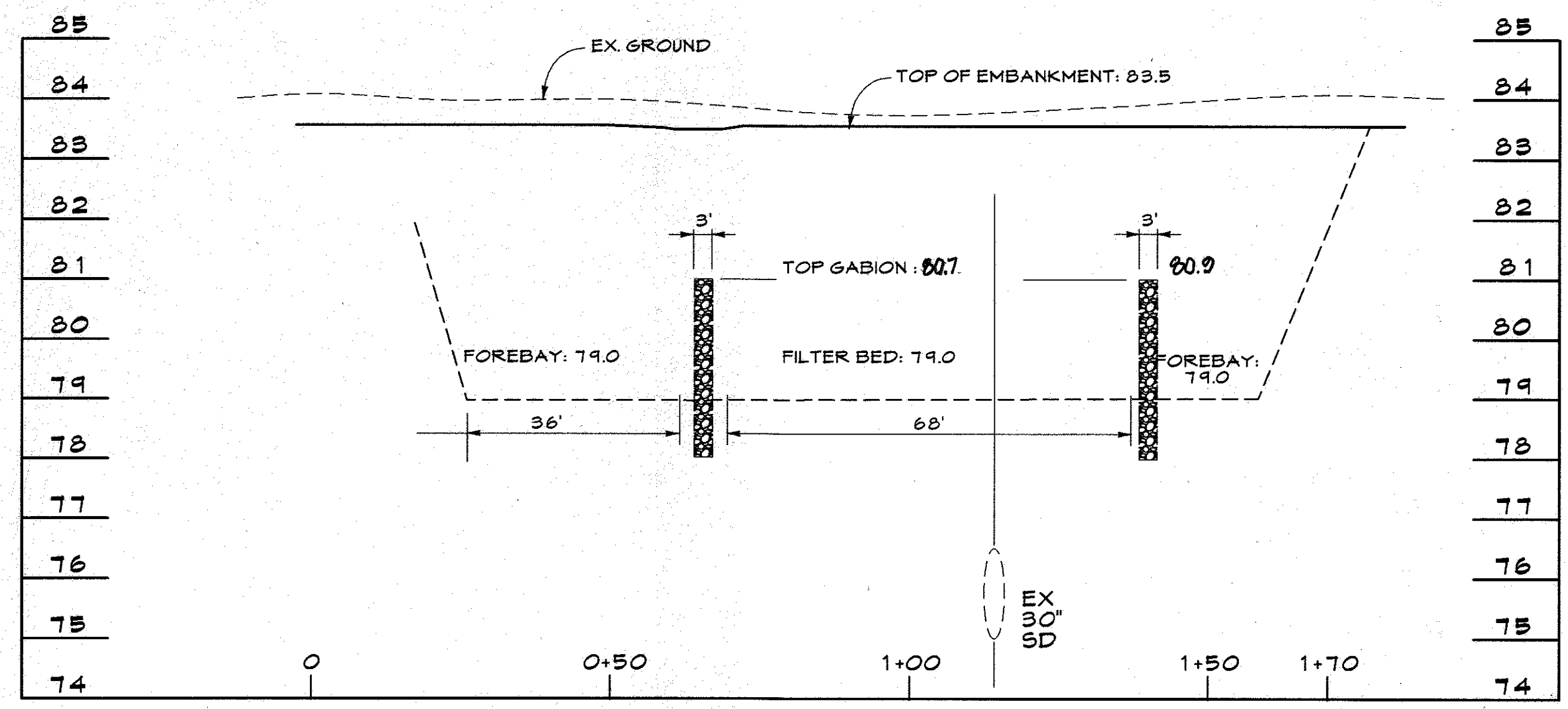


STORM DRAIN PROFILE
SCALE: HORIZ: 1"=20'
VERT: 1"=2'



PLAN
SCALE: 1"=20'

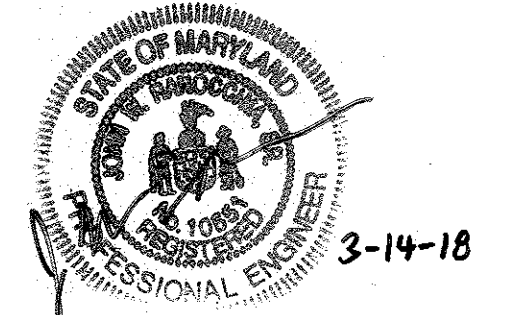
NOTE: FOR FILTERRA SIZING
SEE DETAIL AND SIZING CHART SHEET 15



CENTERLINE PROFILE ALONG TOP OF EMBANKMENT
SCALE: HORIZ: 1"=20'

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-19

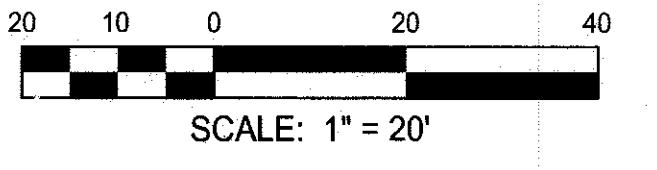
I HEREBY CERTIFY BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS 'AS BUILT' PLAN AND MEETS THE INTENT OF THE APPROVED PLANS AND SPECIFICATIONS.



STORMWATER MANAGEMENT MAINTENANCE NOTE

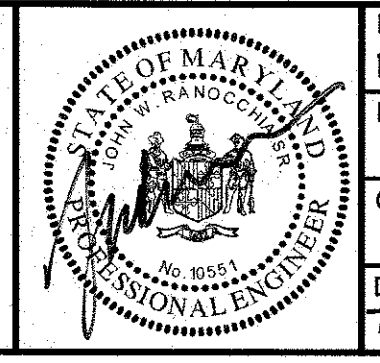
ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SNALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE PUBLIC UTILITY EASEMENT AS JACENT TO THE RIGHT-OF-WAY. THE SURFACE SAND FILTER.

OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 10-14-15
Chief, Division of Land Development
Date: 10-21-15
Director

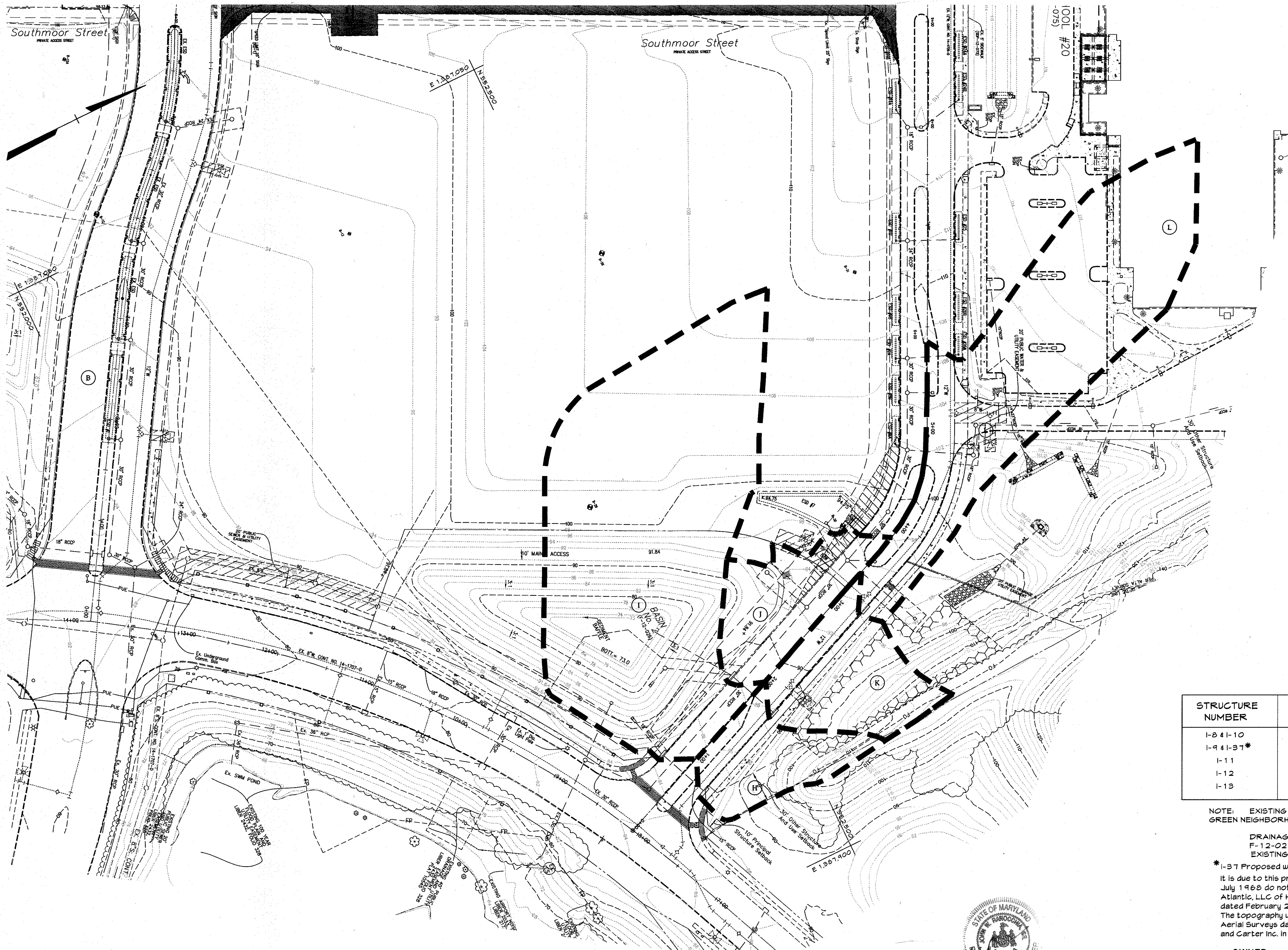
CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	CRF
NO.:	1
REVISION:	REMOVE SIGN, PLAY AREA, FENCE AND SANITARY
DATE:	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT
Stormwater Management Plan
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 11 OF 24
C.E.I. PROJECT NUMBER
131117.00
SCALE:
1"=20'



LEGEND

- - - - - Existing Minor Contour
- - - - - Existing Major Contour
- - - - - Existing Edge of Road
- - - - - Existing Stream
- Existing Trees/Tree Line
- - - - - Existing Curb & Gutter
- - - - - Existing Sidewalk
- EX. 18" D. Existing Storm Drains
- EX. 6" X. Existing Water Main
- EX. 6" S. Existing Sanitary Sewer
- - - - - Tract Boundary
- - - - - Utility Easement Line
- ▭ Existing Building

EXISTING DRAINAGE AREA DATA

STRUCTURE NUMBER	DRAINAGE AREA	AREA (ACRES)	AREA (SQ. FT.)	'C'	ZONED	% IMP.
I-B-1-10	H	0.26 AC.	11,199 Sq. Ft.	0.43	T.O.D.	25%
I-9-1-37*	I	0.74 AC.	32,317 Sq. Ft.	0.35	T.O.D.	14%
I-11	J	0.31 AC.	13,362 Sq. Ft.	0.67	T.O.D.	50%
I-12	K	0.35 AC.	15,363 Sq. Ft.	0.46	T.O.D.	31%
I-13	L	1.29 AC.	56,000 Sq. Ft.	0.32	T.O.D.	10%

NOTE: EXISTING DRAINAGE AREAS TAKEN FROM F-12-026, 'OXFORD SQUARE - A HOWARD COUNTY GREEN NEIGHBORHOOD' PARCELS 'C' THROUGH 'L' AND OPEN SPACE LOTS 1 AND 2.

DRAINAGE AREAS H, I, J, K, L, FOR BMP No.5 AT I-37 AS SHOWN ON F-12-026. EXISTING GRADING REFLECTS EXISTING SEDIMENT CONTROL BASIN

*I-37 Proposed with sand filter design previously approved F-12-026

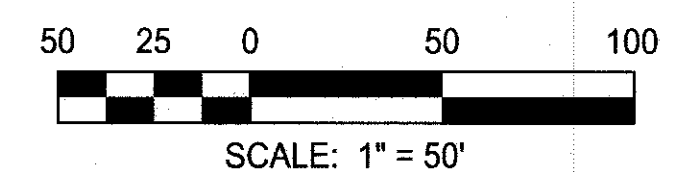
It is due to this previously mass graded condition that the normal Howard County Soil Survey maps dated July 1968 do not apply. As a result of this site condition, the Owner/Developer have contracted EGS-Mid Atlantic, LLC of Hanover, Maryland. The Soil Report is dated November 2009 with and Addendum dated February 2010 that summarized the Soils Groups required for this S/M Report. The topography utilized for this plan of subdivision is based on aerial topography prepared by Harford Aerial Surveys dated December 2010 supplemented with field run topography prepared by Fisher Collins and Carter Inc. in May of 2010.

OWNER

KELLOGG - CCP, LLC

c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800



PROFESSIONAL CERTIFICATION

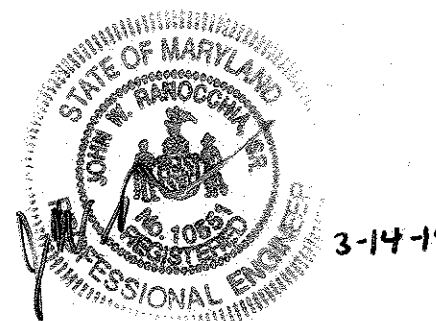
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 10691 EXPIRATION DATE: 8-26-10

PLAN

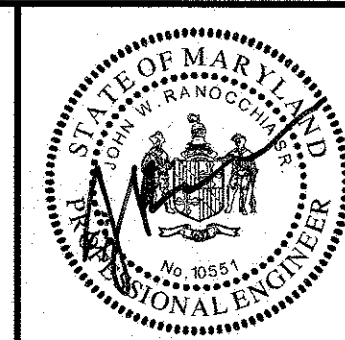
SCALE: 1"=50'

THERE IS NO 'AS BUILT' INFORMATION PROVIDED ON THIS SHEET.



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *[Signature]* 10-14-15
 Chief, Division of Land Development: *[Signature]* 10-21-15
 Director: *[Signature]* 10-21-15

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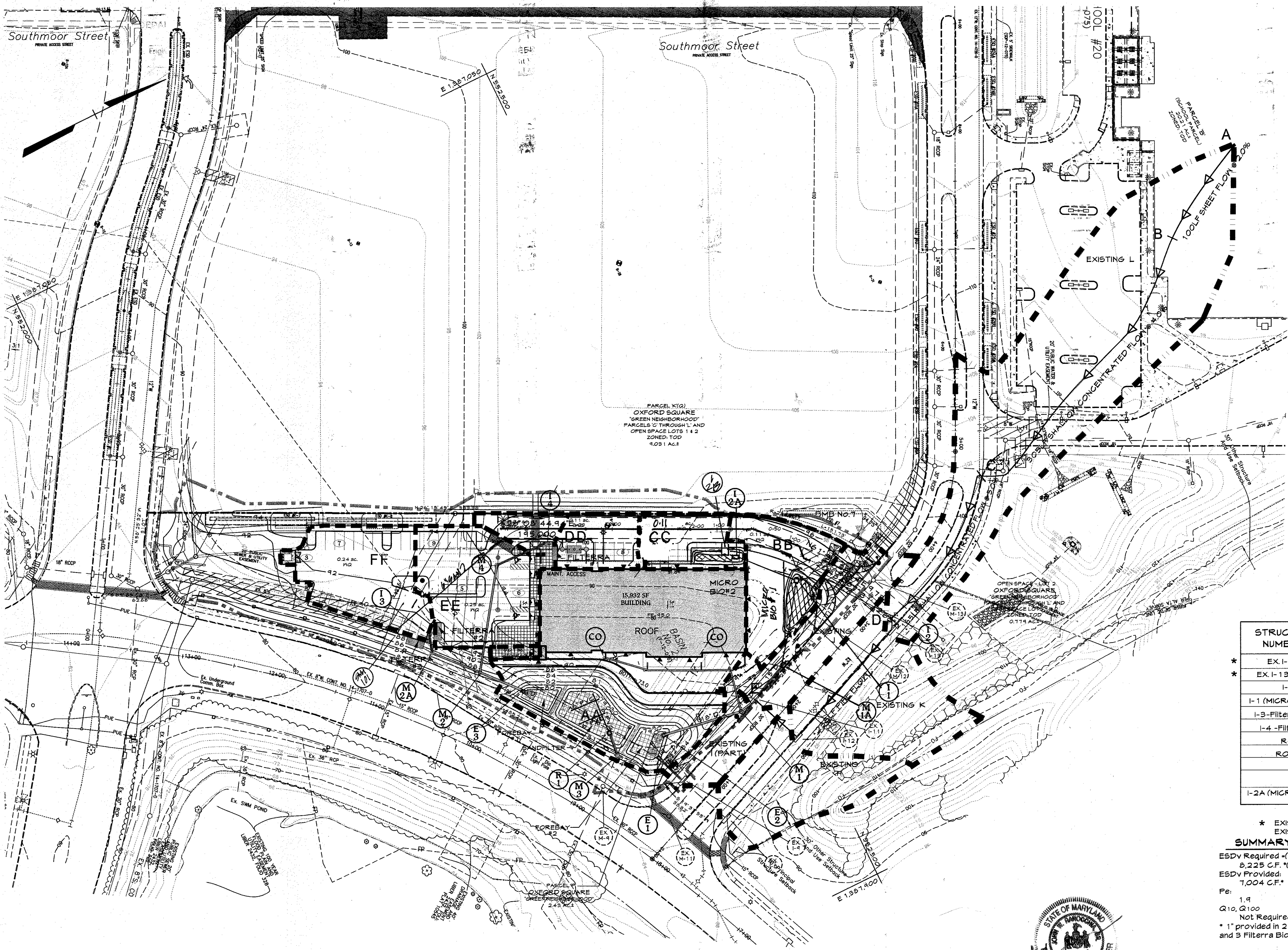


DESIGN BY: M.J.P./K.A.D.	DATE: 7.27.2015
DRAWN BY: M.S.S.	BY: NO.
CHECKED BY:	REVISION
	DATE

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
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AS BUILT
 Stormwater Management
 Existing Conditions Drainage Area Map
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
 SHEET 12 OF 24

C.E.I. PROJECT NUMBER: 131117.00
 SCALE: 1"=50'



LEGEND

- Existing Minor Contour
- Existing Major Contour
- Existing Edge of Road
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- Existing Sidewalk
- Existing Storm Drains
- Existing Water Main
- Existing Sanitary Sewer
- Tract Boundary
- Utility Easement Line
- Existing Building
- Proposed Grades
- Proposed Sewer
- Proposed Water and Fire Hydrant
- Proposed Storm Drain and Inlets
- Proposed Curb & Gutter
- Proposed Sidewalk
- Proposed Building
- Proposed Retaining Wall
- 30' Structure and Use Setback
- 10' Principal Structure Setback

DRAINAGE AREA DATA

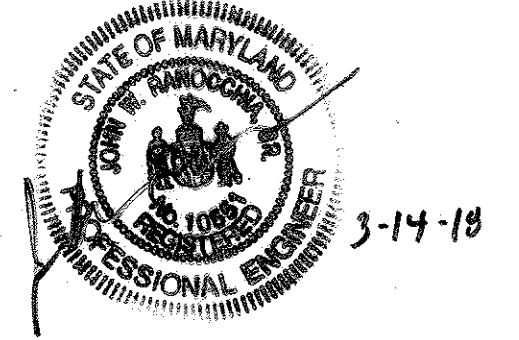
STRUCTURE NUMBER	DRAINAGE AREA	AREA (ACRES)	AREA (SQ. FT.)	'C'	ZONED	% IMP.
* EX-1-9, I-B	H	0.26 AC.	11,326 Sq. Ft.	---	---	---
* EX-1-13, 12, 11	I, J, K, L	1.64 AC.	71,438 Sq. Ft.	---	---	---
I-2	PART OF BB	0.11 AC.	4,792 Sq. Ft.	0.95	T.O.D.	95%
I-1 (MICRO BIO #1)	BB	0.25 AC.	10,890 Sq. Ft.	0.70	T.O.D.	50%
I-3-Filterra#2, #3	EE+FF	0.49 AC.	4,356 Sq. Ft.	0.95	T.O.D.	90%
I-4-Filterra#1	DD+HH	0.15 AC.	3,049 Sq. Ft.	0.95	T.O.D.	95%
R-1	TO FACILITY	2.43 AC.	105,850 Sq. Ft.	N/A	T.O.D.	N/A
ROOF	ROOF	0.37 AC.	16,117 Sq. Ft.	0.95	T.O.D.	95%
I-2A (MICRO BIO#2)	CC	0.11 AC.	4,792 Sq. Ft.	0.86		86%

* EXISTING DRAINAGE AREAS H, I, J, K, L TAKEN FROM F-12-026. EXISTING Y PART OF DRAINAGE AREA TO FACILITY.

SUMMARY TABLE

ESDv Required (new development):
 8,225 CF (15% = 8,169 CF.)
 ESDv Provided:
 7,004 CF.
 Pe: 1.9
 Q10, Q100
 Not Required
 * 1" provided in 2 Bio-retention facility and 3 Filterra Bioretention Systems

It is due to this previously mass graded condition that the normal Howard County Soil Survey maps dated July 1968 do not apply. As a result of this site condition, the Owner/Developer have contracted ECS-Mid Atlantic, LLC of Hanover, Maryland. The Soil Report is dated November 2009 with an Addendum dated February 2010 that summarized the Soils Groups required for this SWM Report. The Topography utilized for this plan of subdivision is based on aerial topography prepared by Harford Aerial Surveys dated December 2010 supplemented with field run topography prepared by Fisher Collins and Carter Inc. in May of 2010.

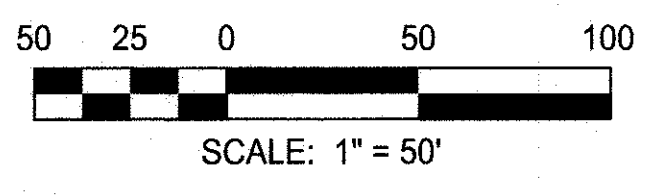


PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-19

PLAN
 SCALE: 1"=50'

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

OWNER
 KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10-14-15
 Chief, Development Engineering Division
 [Signature] 10-21-15
 Chief, Division of Land Development
 [Signature] 10-21-15
 Director

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

DESIGN BY: M.J.F./K.A.D.
 DRAWN BY: M.S.S.
 CHECKED BY:
 DATE: 7.27.2015
 BY NO. REVISION DATE

BY	NO.	REVISION	DATE
C.B.I.	1	REVISE SWM, PLAY AREA, FENCE AND SANITARY	

DEVELOPER
 PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT
 Stormwater Management / Storm Drain
 Proposed Conditions Drainage Area Map
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
 SHEET 13 OF 24

C.E.I. PROJECT NUMBER
 131117.00
 SCALE:
 1"=50'

TABLE B.3.1 MATERIALS SPECIFICATIONS FOR SAND FILTERS			
Material	Specifications/Test Method	Size	Notes
sand	clean AASHTO-6 of ASTM Concrete sand	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.
peat	ash content <15% pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc	n/a	The material must be reed-sedge hemic peat, shredded, uncompacted, uniform and clean.
leaf compost		n/a	
underdrain gravel	AASHTO-M-43	0.375" to 0.75"	
geotextile fabric (if required)	ASTM-D-4833 (puncture strength lb) ASTM-D-4632 (Tensile strength lb)	0.02" thick opening size of #90 sieve	Must maintain 1.25 gm per sq.ft. flow rate. Note: a 4" gravel layer may be substituted for geotextiles meant to "separate" sand filter layers
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb, elongation 200%) ASTM-D-624 (tear resistance 150 lb/in) ASTM-D-4711 (water absorption: +8 to -2% mass)	30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F 750, Type PS 20 or AASHTO-M-212	4" to 6" rigid Schedule 40 PVC or SDR35	1/2" perf. @ 6" on center, 4 holes per row; minimum 3" of gravel over pipes; not necessary underneath pipes
concrete (cast-in-place)	MSHA Standards and Specs. Section 902 Mix No. 3 Fc-3500 psi normal weight, air-entrained, reinforcing to meet ASTM-C-15-02	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or precast) not using previously approved State and local standards requires design sealed and approved by a professional structural engineer licensed in the State of Maryland
concrete (pre-cast)	per pre-cast manufacturer	n/a	SMM ABOVE NOTE
non-rebar steel	ASTM A-36	n/a	structural steel to be hot-dipped galvanized ASTM-A-123

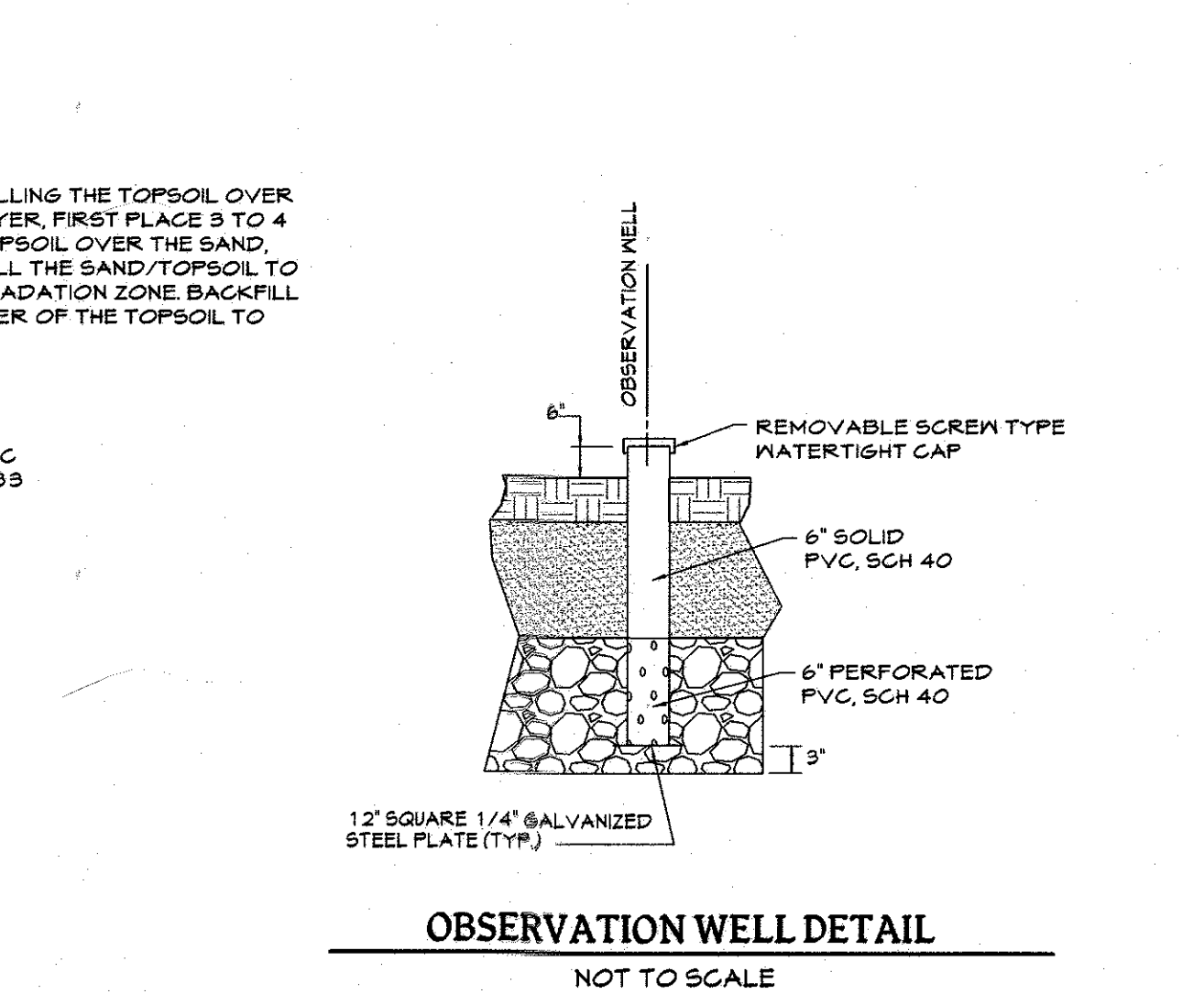
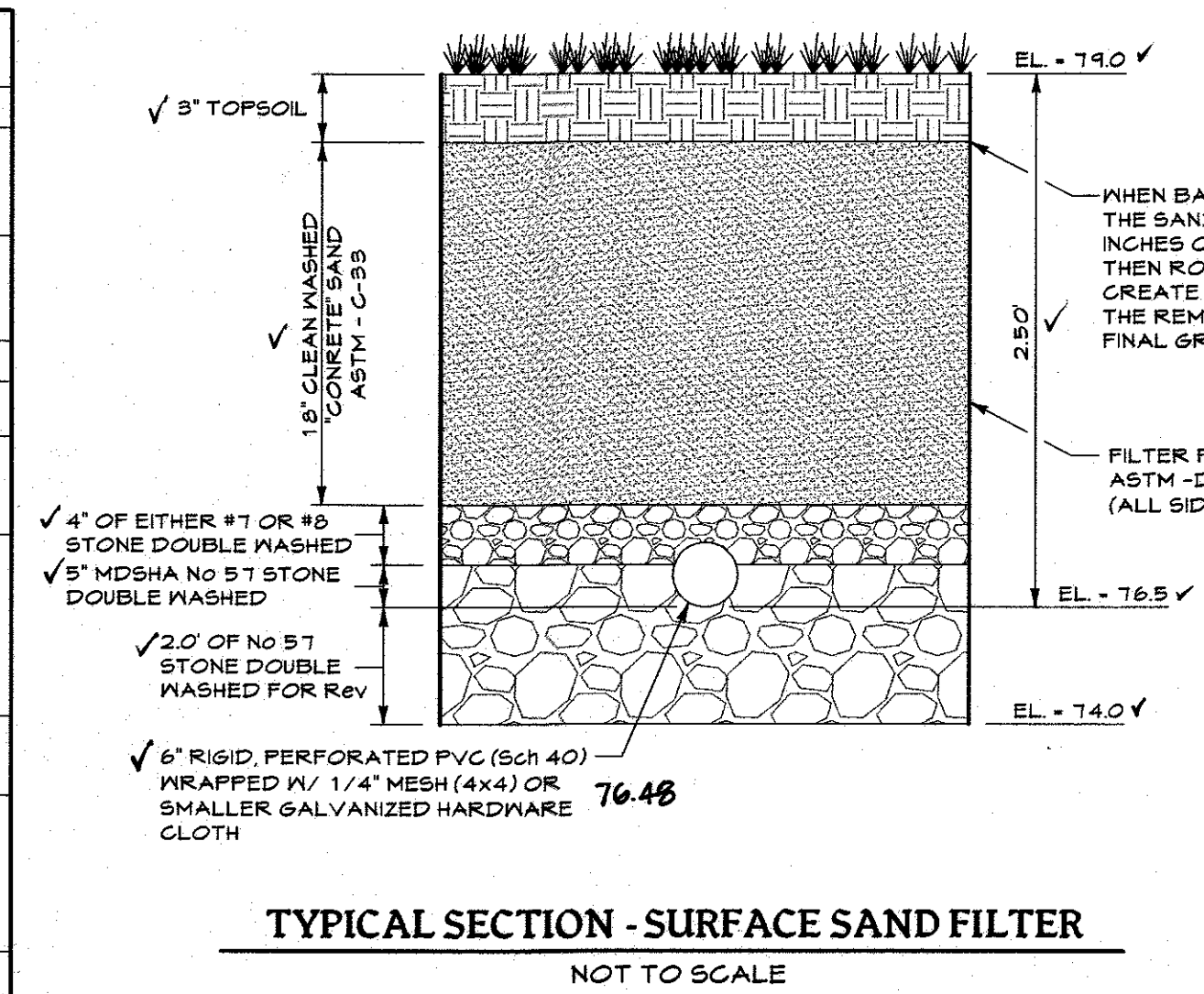
SAND FILTER SPECIFICATIONS

- MATERIAL SPECIFICATIONS FOR SAND FILTER
THE ALLOWABLE MATERIALS FOR SAND FILTER CONSTRUCTION ARE DETAILED IN TABLE B.3.1
- SAND FILTER TESTING SPECIFICATIONS
UNDERGROUND SAND FILTERS, FACILITIES WITHIN SENSITIVE GROUNDWATER AQUIFERS, AND FILTERS DESIGNED TO SERVE URBAN HOT SPOTS ARE TO BE TESTED FOR WATER TIGHTNESS PRIOR TO PLACEMENT ON FILTER MEDIA. ENTRANCES AND EXITS SHOULD BE PLUGGED AND THE SYSTEM COMPLETELY FILLED WITH WATER TO DEMONSTRATE WATER TIGHTNESS MEANS NO LEAKAGE FOR A PERIOD OF 8 HOURS. ALL OVERFLOW KEYS, MULTIPLE ORIFICES AND FLOW DISTRIBUTION SLOPS ARE TO BE FIELD-TESTED TO VERIFY ADEQUATE DISTRIBUTION OF FLOWS
- SAND FILTER CONSTRUCTION SPECIFICATIONS
PROVIDE SUFFICIENT MAINTENANCE ACCESS (i.e. 12-FOOT-WIDE ROAD WITH LEGALLY RECORDED EASEMENT). VEGETATED ACCESS SLOPES ARE TO BE A MAXIMUM OF 10%; GRAVEL SLOPES TO 15%; PAVED SLOPES TO BE 25%.
ABSOLUTELY NO RUNOFF IS TO ENTER THE FILTER UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
SURFACE OF FILTER BED IS TO BE LEVEL.
ALL UNDERGROUND SAND FILTER SHOULD BE CLEARLY DELINEATED WITH SIGNS SO THAT THEY MAY BE LOCATED WHEN MAINTENANCE IS DUE.
SURFACE SAND FILTERS MAY BE PLANTED WITH APPROPRIATE GRASSES; SEE MAA APPROVED SPECIES LIST.
"ROCKET" SAND FILTERS (AND RESIDENTIAL BIO-RETENTION FACILITIES TREATING AREAS LARGER THAN AN ACRE) SHALL BE SIZED WITH A STONE "WINDOW" THAT COVERS APPROXIMATELY 10% OF THE FILTER AREA. THIS "WINDOW" SHALL BE FILLED WITH PEA GRAVEL (3/4 INCH STONE).

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

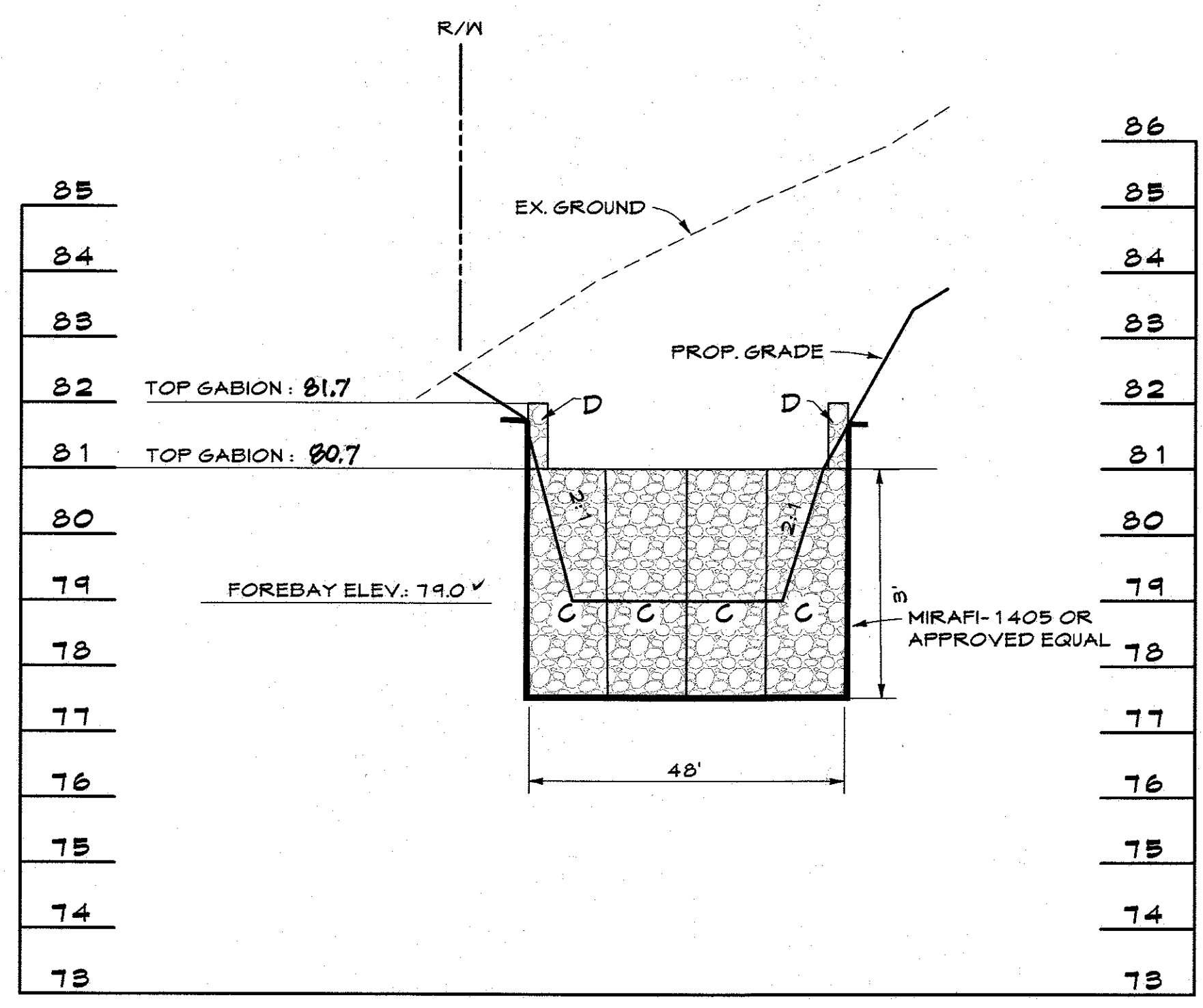
- THE STORMWATER FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
- FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
- FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 24 HOURS FOLLOWING A 1 OR 2 YEAR STORM EVENT OR MORE THAN 48 HOURS AFTER A 10 YEAR STORM EVENT.
- A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED AT AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

* ANNUAL PUBLIC MAINTENANCE OF CONTROL STRUCTURE AND BARRELL. PRIVATE MAINTENANCE OF ALL OTHER COMPONENTS

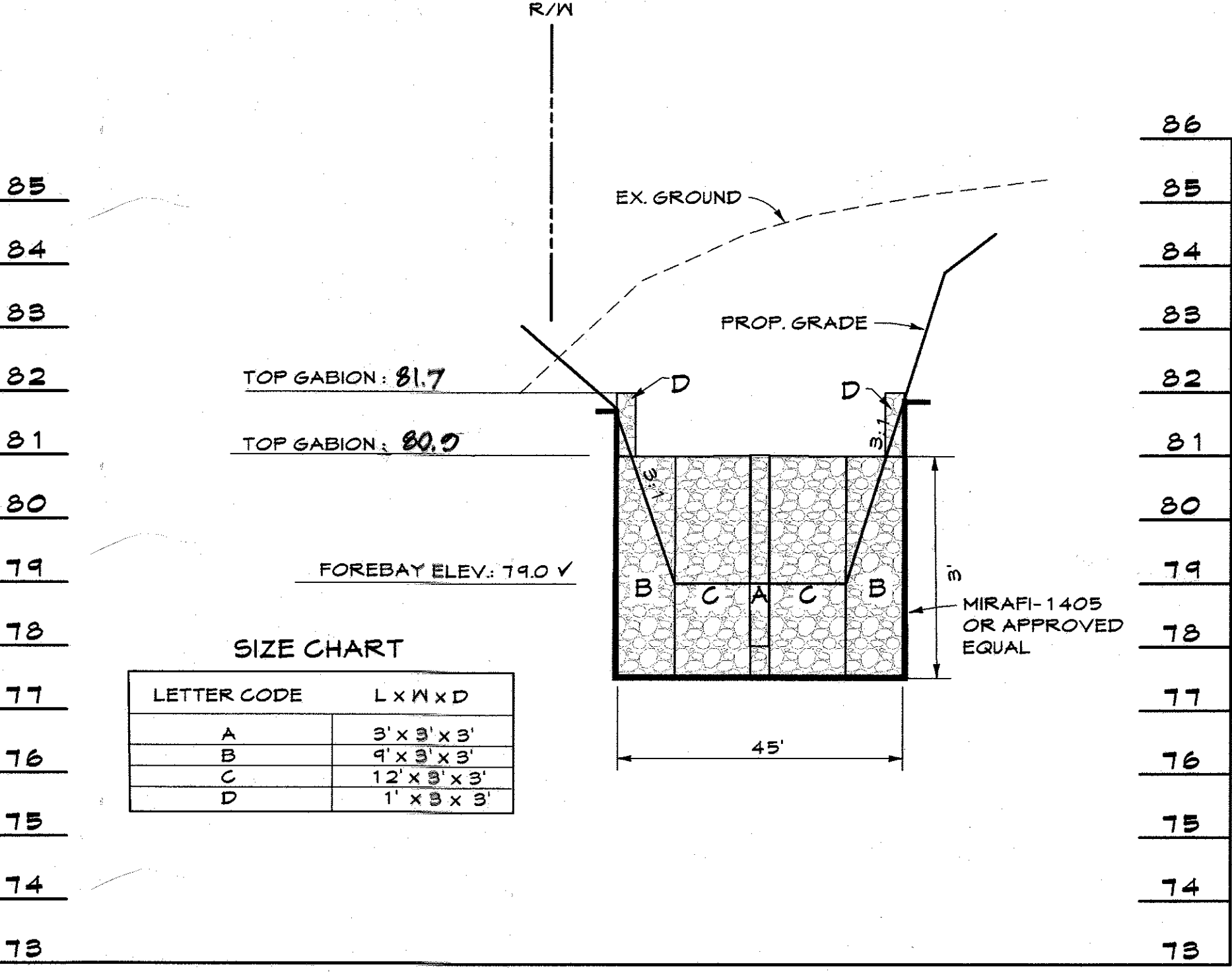


TYPICAL SECTION - SURFACE SAND FILTER
NOT TO SCALE

OBSERVATION WELL DETAIL
NOT TO SCALE



GABION FOREBAY No. 1
PROFILE
SCALE: HORIZ: 1"=20'
VERT: 1"=2'



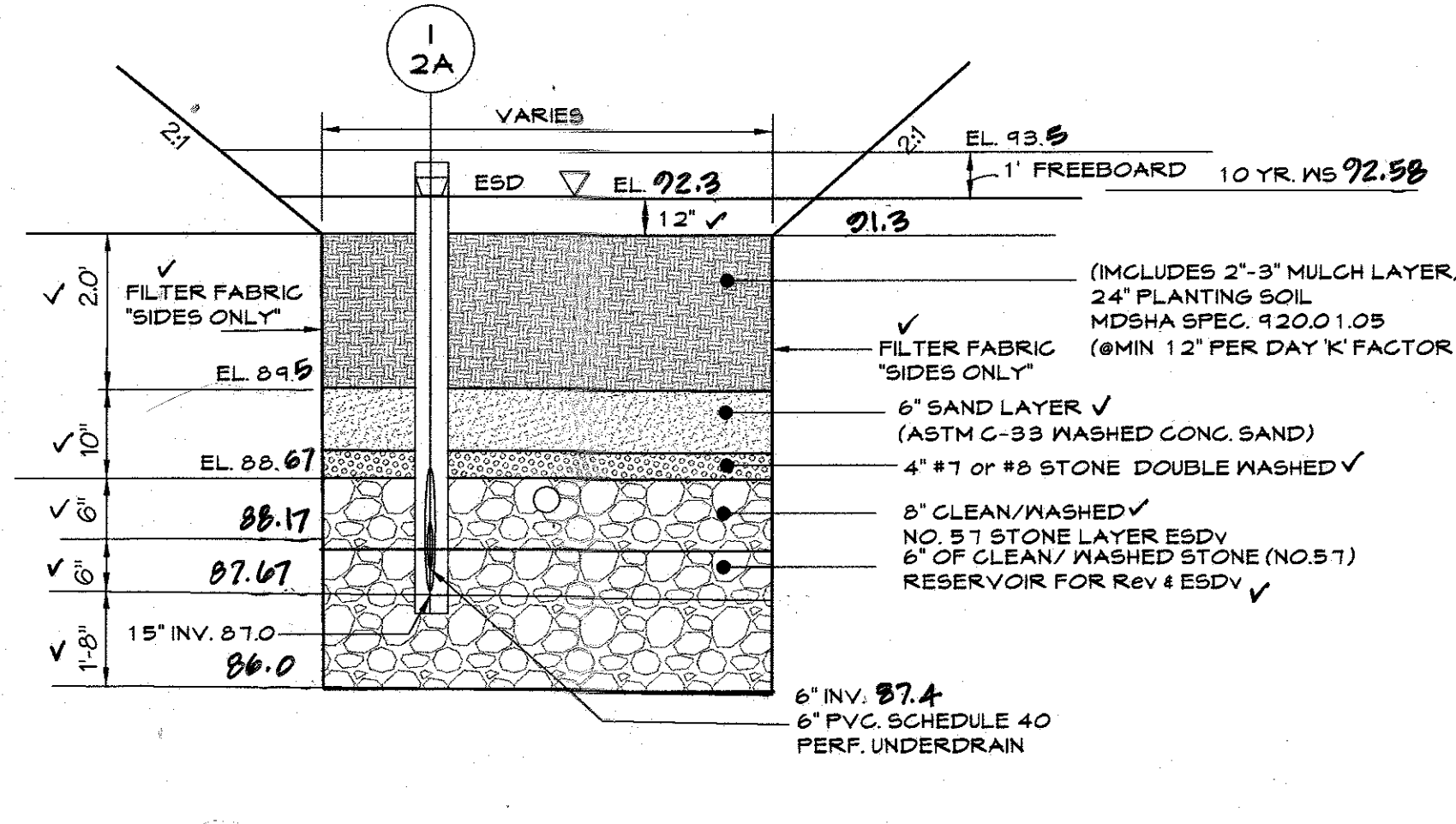
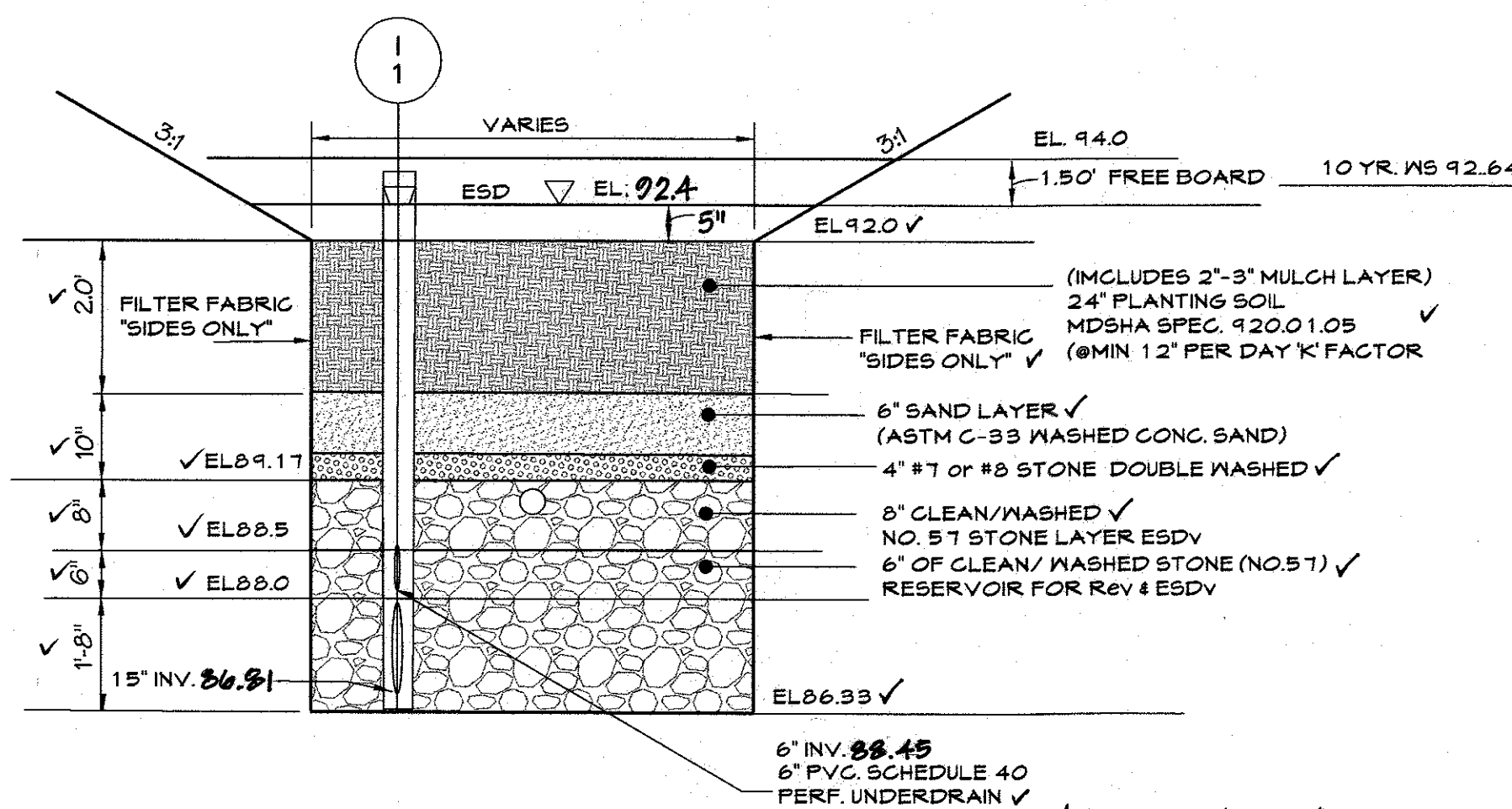
GABION FOREBAY No. 2
PROFILE
SCALE: HORIZ: 1"=20'
VERT: 1"=2'

CLIENT		JOB #	BORING #	SHEET
Preston Partners, LLC		5259	B-29	1 OF 1
PROJECT NAME		ARCHITECT-ENGINEER		
Coca Cola Site				
SITE LOCATION		Park Circle Drive and Coca Cola Drive		
Hanover, Maryland				
DESCRIPTION OF MATERIAL		ENGLISH UNITS		
SURFACE ELEVATION		92.55		
DEPTH (FT)		WATER LEVEL ELEVATION (FT)		
SAMPLE NO.		RECOVERY (IN)		
SAMPLE TYPE		RECOVERY (IN)		
RECOVERY (IN)		RECOVERY (IN)		
0		Topsoil Depth 1"		
1		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
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135		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
136		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
137		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
138		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
139		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
140		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
141		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
142		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
143		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
144		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
145		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
146		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		
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185		Silty SAND, Trace to Some Clay, Gray and Tan, Moist, Medium Dense, (SM)		

NOTE TO CONTRACTOR:
 THE CONTRACTOR SHALL SUPPLY A LETTER CERTIFICATION TO THE STORMWATER MANAGEMENT AS-BUILT CERTIFYING ENGINEER. THIS LETTER CERTIFICATION SHALL BE PREPARED BY A MARYLAND LICENSED GEOTECHNICAL ENGINEER WHICH CERTIFIES WITH REGARD TO THE MICRO BIORETENTION PLANTING SOIL THE FOLLOWING:

- MEETS THE MARYLAND DEPARTMENT OF THE ENVIRONMENT SPECIFICATION.
- HAS BEEN UNIFORMLY MIXED PRIOR TO PLACEMENT.
- HAS BEEN LAB TESTED TO ACHIEVE A PERMEABILITY OF NO LESS THAN 1/2 FOOT PER DAY AND NO MORE THAN 2 FEET PER DAY.
- THE PERMEABILITY TEST METHOD UTILIZED.
- THE PERMEABILITY TEST RESULTS.
- THE MIX GRADATION (T 88).
- RECOMMENDATIONS FOR COMPACTION DURING PLACEMENT TO ACHIEVE TARGET PERMEABILITY.

THE CONTRACTOR RESPONSIBLE FOR INSTALLING THE MICRO-BIORETENTION FACILITY MUST PROVIDE A LETTER TO THE STORMWATER MANAGEMENT AS-BUILT CERTIFYING ENGINEER WHICH CERTIFIES THAT THE PLANTING SOIL (PS) HAS BEEN KEPT FREE OF CONTAMINATION PRIOR TO ITS PERMANENT PLACEMENT IN THE FACILITY.



OPERATION AND MAINTENANCE SCHEDULE FOR COMMERCIAL ASSOCIATION OWNED & MAINTAINED BIO-RETENTION AREAS (M-6)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER & SOIL. ANNUAL MAINTENANCE OF MULCH AND SOIL IS LIMITED TO ONE (1) YEAR. MULCH SHALL BE REPLACED AS NEEDED. PLANT MATERIAL SHALL BE REPLACED AS NEEDED. PLANT MATERIAL SHALL BE REPLACED AS NEEDED. PLANT MATERIAL SHALL BE REPLACED AS NEEDED. PLANT MATERIAL SHALL BE REPLACED AS NEEDED.
- THE OWNER SHALL PERFORM A PLANTING IN THE SPRING AND IN THE FALL EACH YEAR. DURING THE WINTER THE OWNER SHALL REMOVE DEAD AND DROOPING BRANCHES. PLANTING SHALL BE PERFORMED AS NEEDED. PLANTING SHALL BE PERFORMED AS NEEDED. PLANTING SHALL BE PERFORMED AS NEEDED.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PERMANENT MULCH UNDER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CONDUCT SOIL RECOGNITION ON AN AS NEEDED BASIS, WITH A MAXIMUM OF ONE (1) YEAR. SOIL RECOGNITION SHALL BE PERFORMED AS NEEDED. SOIL RECOGNITION SHALL BE PERFORMED AS NEEDED.
- THE OWNER SHALL MAINTAIN AND OBSERVE ALL PERMANENT DRAINAGE AND PERFORATED UNDERDRAINS.
- FILTER MATERIAL MUST BE REPLACED WHEN WATER REMAINS ON THE SURFACE OF THE FILTER FOR MORE THAN 24 HOURS FOLLOWING A 1 INCH 2 HOUR RAIN EVENT OR MORE THAN 48 HOURS FOLLOWING A 1/2 INCH 2 HOUR RAIN EVENT.

No.	FTSC Size	Throat opening elev.	Top Elev.	Size/Inv. underdrain
F-1	12" X 4"	93.72	94.47	4' 00.84
F-2	16" X 6"	89.88	90.73	4' 07.04
F-3	16" X 6"	89.25	90.03	4' 06.32

* DEVICE ROTATED 90 DEGREES/SEE DETAIL/PLAN VIEW

Plantings	See Appendix A Table A.4	n/a	Plantings are site-specific
Planting Soil	Loamy Sand (60-65%) Compost (35-40%) or Sandy Loam (30%) coarse sand (30%) compost (40%)	n/a	USDA Soil types loamy sand and sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)	n/a	
Mulch	Shredded Hardwood	n/a	Aged 6 months, minimum; no pine or wood chips
Pea Gravel Diaphragm	Pea gravel: ASTM D-448	No. 5 or No. 9 (1/8" to 3/8")	
Curtain Drain	Ornamental stone: washed	stone: 2" to 5"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. 6 Aggregate (3/8" to 3/4")	
Underdrain piping	F 75B, Type PS 20 or AASHTO M-218	4" or 6" Rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf @ 6" on center; 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth. 1" x 6" slots @ 6" on center, 5 spaced radially around pipe.
Poured in place concrete (if required)	MSHA Mix No. 3; fc=3500 psi @ 28 days, normal weight air-entrained; reinforcing to meet ASTM-6 15-60	n/a	on-site testing of poured in place concrete required 28 day strength and slump test; all concrete design (cast-in-place or precast) not using previously approved state or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308R-09; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking.
Sand	AASHTO M-6 or ASTM C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO M-10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

S:\2013\Facilities\B111100 Oxford Square\SDP-PreSchool\B11111 (SDP-15) Stormwater Management Details.dwg Jul 23, 2013 11:08am kdarby

PLANTING SOIL

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretenion practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

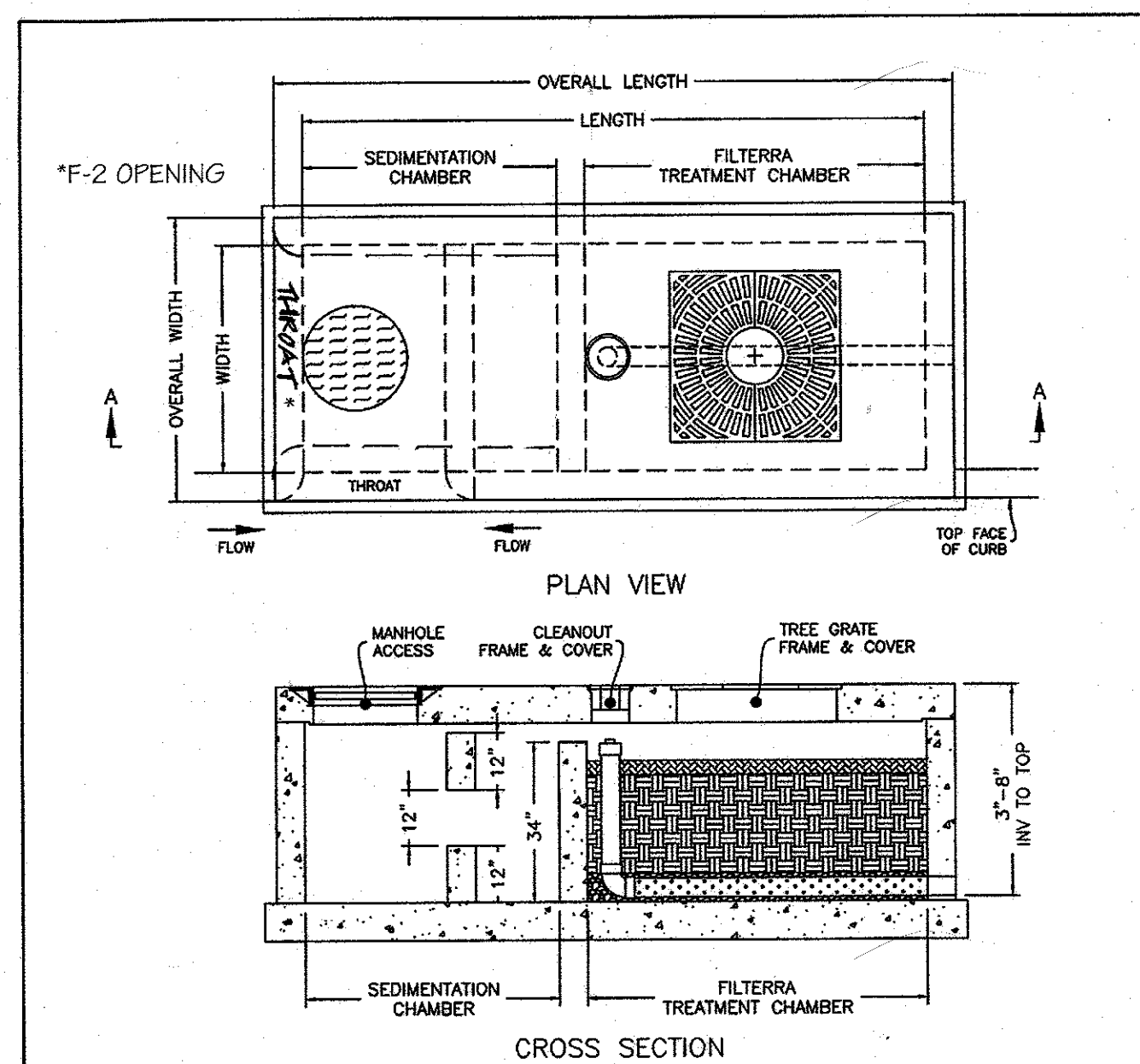
- Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
- Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
- Clay Content - Media shall have a clay content of less than 5%.
- pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled planting soil. If planting soil is imported, then a texture analysis shall be performed for each location where the planting soil was excavated.

PROFESSIONAL CERTIFICATION

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

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-19



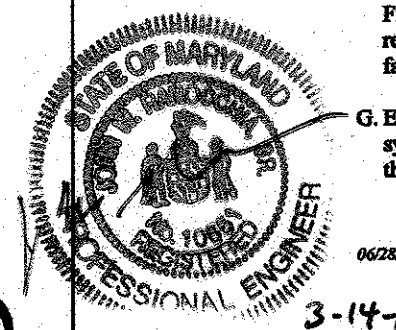
MODIFICATIONS OF DRAWINGS ARE ONLY PERMITTED BY WRITTEN AUTHORIZATION FROM CONTECH

UNIT DESIGNATION	OVERALL DIMENSIONS	FILTERRA TREATMENT AREA	LENGTH	WIDTH	OUTLET PIPE
FTSC 12" x 4"	13' x 5'	6' x 4'	12'-0"	4'-0"	4" PVC
FTSC 16" x 4"	17' x 5'	8' x 4'	16'-0"	4'-0"	4" PVC
FTSC 12" x 6"	13' x 7'	6' x 6'	12'-0"	6'-0"	4" PVC
FTSC 16" x 6"	17' x 7'	8' x 6'	16'-0"	6'-0"	4" PVC
FTSC 19" x 6"	20' x 7'	10' x 6'	19'-0"	6'-0"	6" PVC
FTSC 20" x 8"	21' x 9'	10' x 8'	20'-0"	8'-0"	6" PVC
FTSC 22" x 8"	23' x 9'	11' x 8'	22'-0"	8'-0"	6" PVC



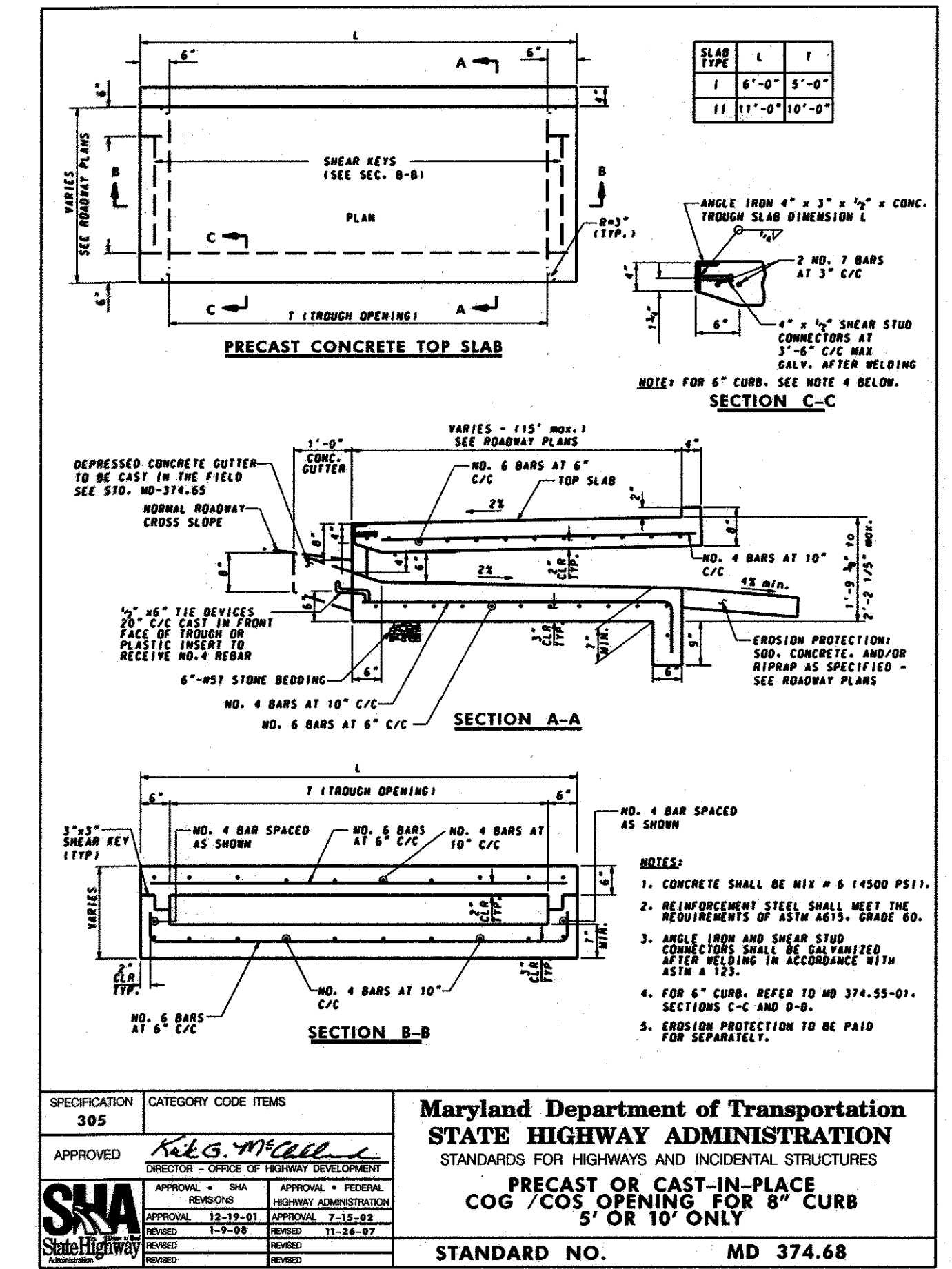
PRECAST FILTERRA® WITH SEDIMENTATION CHAMBER

8033 Centre Pointe Dr., Suite 400, West Chester, OH 45380
 800-338-1122 913-645-7000 913-645-7993 FAX
 www.contechES.com DATE: 10-06-14 SCALE: NONE PRODUCT No.: FTSC DRAWN BY: DD



I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS BUILT" PLAN AND MEETS THE INTENT OF APPROVED PLANS AND SPECIFICATIONS.

OWNER
 KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800



Maryland Department of Transportation
 STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
 PRECAST OR CAST-IN-PLACE
 COG /COS OPENING FOR 8" CURB
 5' OR 10' ONLY
 STANDARD NO. MD 374-68

Construction & Installation

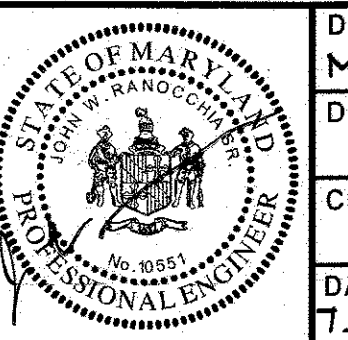
- Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and approved by the Engineer.
- The Filterra® is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery.
- The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1-2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.
- Outlet connections shall be aligned and sealed to meet the approved drawings with modifications necessary to meet site conditions and local regulations.
- Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box position before backfilling, using a non-shrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must NOT be removed. The Supplier (American or its authorized dealer) will remove these sections at the time of activation. Backfilling should be performed in a careful manner, utilizing the appropriate fill material up to 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of Filterra® unit shall conform to ASTM specification C891 "Standard Practice for Installation of Underground Precast Utility Structures", unless directed otherwise in contract documents.
- Curb and gutter construction (where present) shall ensure that the flow-line of the Filterra® units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure and/or damage to the Filterra® environmental device.
- Each Filterra® unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through gutter flow or through the tree grate.

Maintenance

- Each correctly installed Filterra® unit is to be maintained by the Supplier, or a Supplier approved contractor for a minimum period of 1 year. The cost of this service is to be included in the price of each Filterra® unit. Extended maintenance contracts are available at extra cost upon request.
- Annual maintenance consists of a maximum of (2) scheduled visits. The visits are scheduled seasonally; the spring visit aims to clean up after winter loads including salts and sands. The fall visit helps the system by removing excessive leaf litter.
- Each maintenance visit consists of the following tasks:
 - Filterra® unit inspection
 - Foreign debris, silt, mulch & trash removal
 - Filter media evaluation and recharge as necessary
 - Plant health evaluation and pruning or replacement as necessary
 - Replacement of mulch
 - Disposal of all maintenance refuse items
 - Maintenance records updated and stored (reports available upon request)
- The beginning and ending date of Supplier's obligation to maintain the installed system shall be determined by the Supplier at the time the system is activated. Owners must promptly notify the Supplier of any damage to the plant(s), which constitute(s) an integral part of the bio-retention technology.

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

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



DESIGN BY: M.J.P./KAD
 DRAWN BY: M.S.S.
 CHECKED BY:
 DATE: 7.27.2015
 BY: NO. REVISION DATE

DEVELOPER
 PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT Stormwater Management Details
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1
 SHEET 15 OF 24

C.E.I. PROJECT NUMBER
 131117.00
 SCALE:
 As Shown

2000 GALLON HEAVY DUTY GREASE INTERCEPTOR

ENVIRONMENTAL & WASTEWATER DIVISION

MODERN

Environmental & Wastewater Division

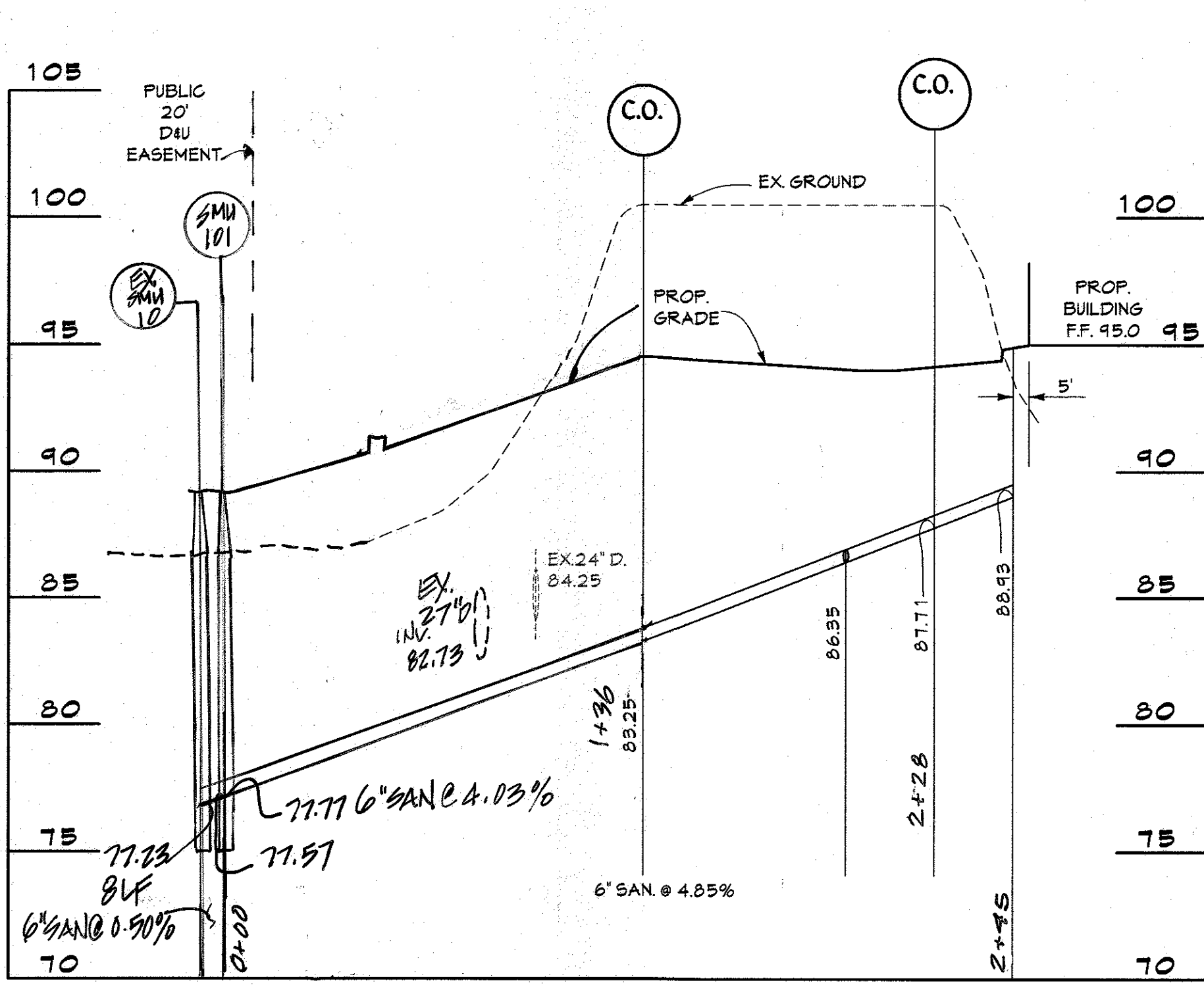
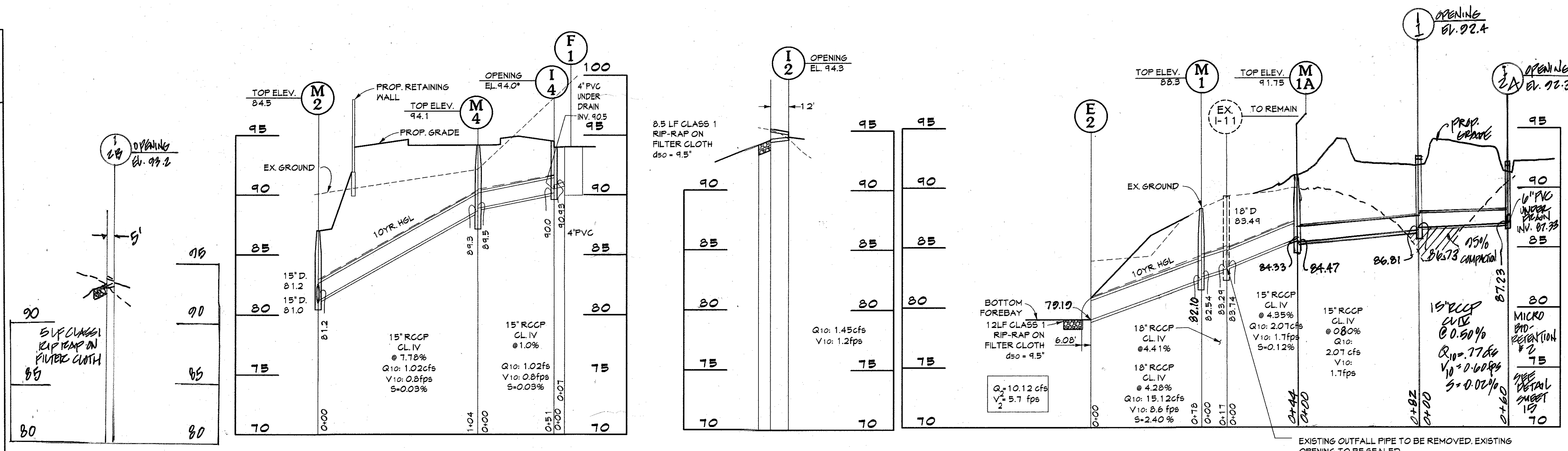
CONCRETE STRENGTH: 4000 PSI MIN. @ 28 DAYS
 REINFORCING CONFORMS TO ASTM #615 & #188
 DESIGN: MAXIMUM EARTH COVER IS 6'-0" HS-20 LOADING
 T-BUTYL RUBBER GASKET PROVIDED FOR JOINT
 APPROXIMATE WEIGHT: TANK - 10.53 TONS
 LD - 4.55 TONS

PLAN VIEW

SECTION VIEW

Modern ... Concrete Solutions

Modern Precast Concrete
 Corporate Headquarters | 210 Darham Road, PO Box 339 | Ottsville, PA 18942
 (610) 847-5112 | F (610) 847-1046 | www.modern.com



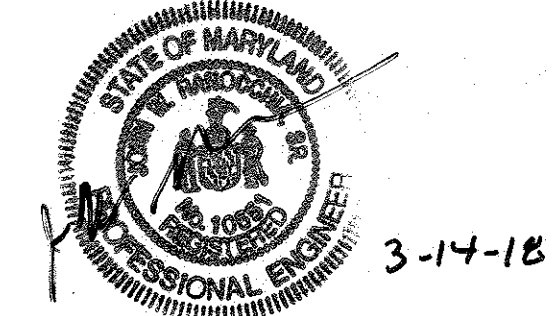
SANITARY SEWER PROFILE

SCALE: HORIZ: 1"=40'
 VERT: 1"=5'

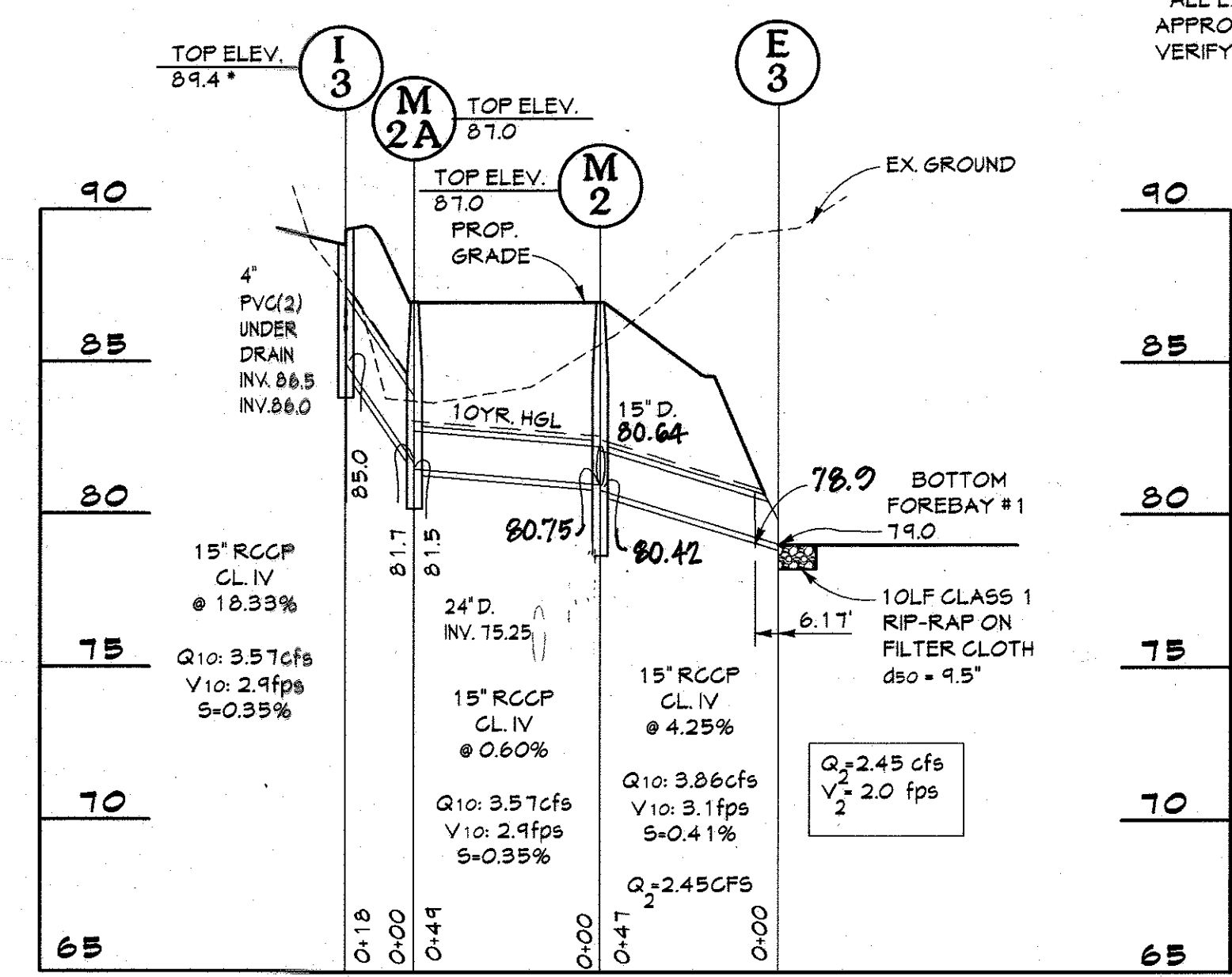
PROFESSIONAL CERTIFICATION

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

LICENSE NUMBER: 10551 EXPIRATION DATE: 8-23-2010



I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS BUILT" PLAN AND MEETS THE INTENT OF THE APPROVED PLANS AND SPECIFICATIONS.



STORM DRAIN PROFILES

SCALE: HORIZ: 1"=40'
 VERT: 1"=5'

OWNER
KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

STRUCTURE SCHEDULE			
NO.	TYPE	SIZE	DETAIL
1-1	TYPE 'D'		HO CO STD. DETAIL D.4.10
1-2	COS	5'	MD 314.6B
1-3	TYPE 'A-10'		HO CO STD. DETAIL D.4.03
1-4	TYPE 'A-5'		HO CO STD. DETAIL D.4.01
E-1	STANDARD CONCRETE END SECTION	15'	HO CO STD. DETAIL D.5.5.1
E-2	STANDARD CONCRETE END SECTION	15'	HO CO STD. DETAIL D.5.5.1
E-3	STANDARD CONCRETE END SECTION	15'	HO CO STD. DETAIL D.5.5.1
M-1	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
M-2	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
M-2A	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
R-1	TYPE 'D'		HO CO STD. DETAIL D.4.10
1-2A	TYPE 'D'		HO CO STD. DETAIL D.4.10
M-4	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
SMH 102	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
SMH 103	STANDARD PRE-CAST MANHOLE	4'-0"	HO CO STD. DETAIL G.5.1.2
1-2B	COS		MD 314.6B

PIPE SCHEDULE	
TYPE	LINER FEET
6" SAN	292
12" PVC-DRAIN	28.7
18" RCCP	45
15" RCCP	45.7
4" SAN	24
6" PVC-DRAIN	100

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
 Date: 10-14-15

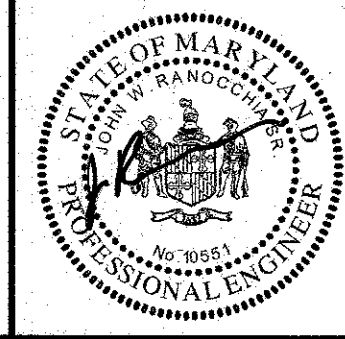
Chief, Division of Land Development
 Date: 10-21-15

Director
 Date: 10-21-15

CENTURY ENGINEERING

CONSULTING ENGINEERS - PLANNERS

10710 Gilroy Road, Hunt Valley, MD 21031
 Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY:	DRAWN BY:	CHECKED BY:	DATE:
MJP/KAD	M.S.S.		7.2.7.2015
REVISION	NO.	DATE	

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

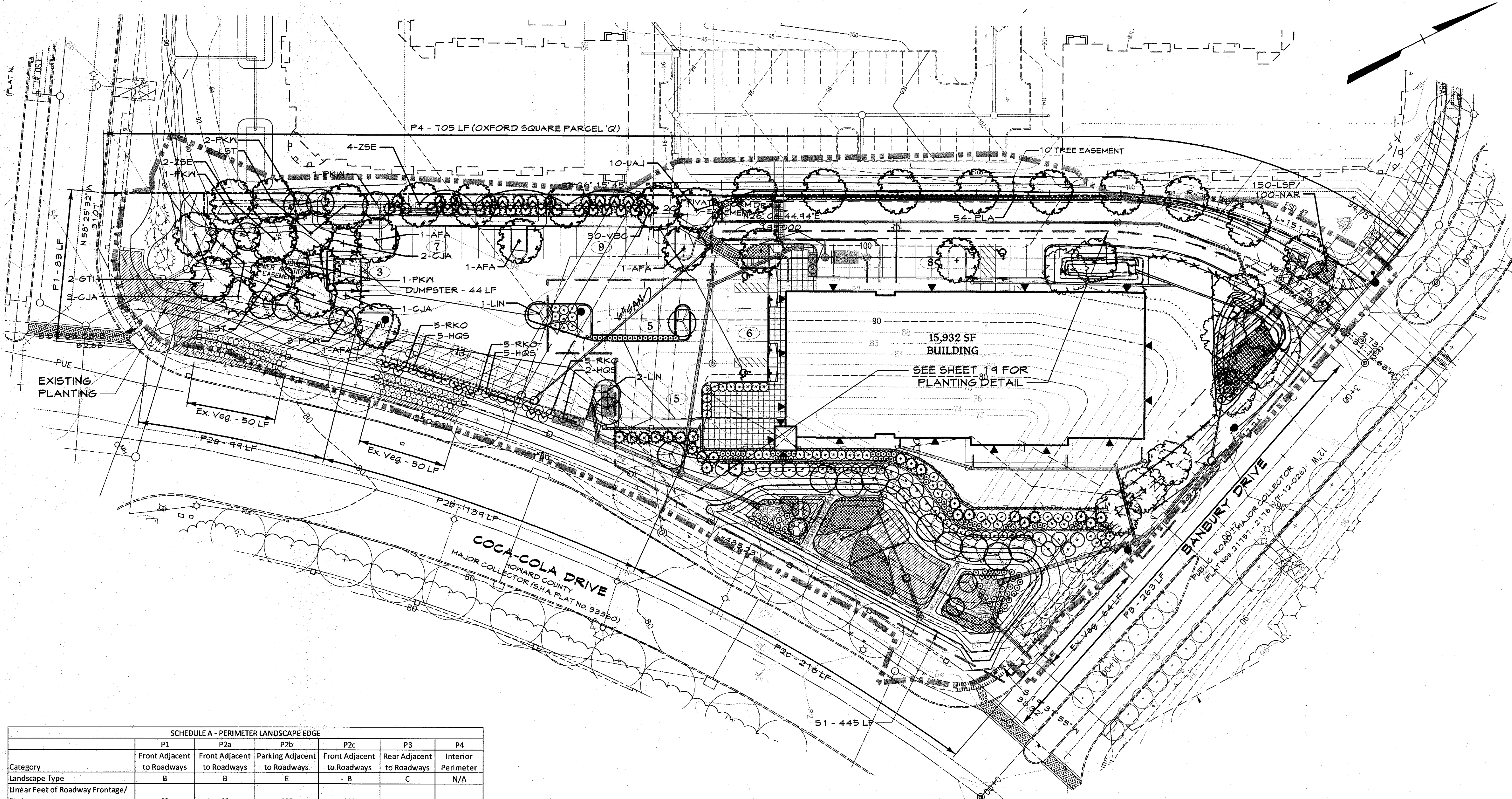
AS BUILT

Storm Drain Profiles

PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT: 1 HOWARD COUNTY, MARYLAND

SHEET 16 OF 24

C.E.I. PROJECT NUMBER: 131117.00
 SCALE: As Shown



- ### LEGEND
- 676 --- Existing Minor Contour
 - 670 --- Existing Major Contour
 - - - - - Existing Edge of Road
 - - - - - Existing Stream
 - - - - - Existing Trees/Tree Line
 - - - - - Existing Curb & Gutter
 - - - - - Existing Sidewalk
 - EX. 15" D --- Existing Storm Drains
 - EX. 8" M --- Existing Water Main
 - EX. 8" S --- Existing Sanitary Sewer
 - - - - - Tract Boundary
 - - - - - Existing Road Right-Of-Way
 - - - - - Existing Road Centerline
 - - - - - Existing Utility Easement
 - [] Existing Building
 - - - - - Existing Parcel Line
 - - - - - Existing Structure and Use Setback
 - - - - - Existing Principal Structure Setback
 - - - - - Existing Airport Noise Zone Easement
 - - - - - Limits of Disturbance
 - Proposed Parking Sign
 - Proposed Trees
 - Proposed Shrubs
 - Proposed Bench
 - Proposed Trash Receptacle

SCHEDULE A - PERIMETER LANDSCAPE EDGE						
Category	P1	P2a	P2b	P2c	P3	P4
Landscape Type	B	B	E	B	C	N/A
Linear Feet of Roadway Frontage/Perimeter	83	99	189	216	263	705
Credit for Existing Vegetation (Yes, No, Linear Feet)	YES/ 83 *	YES/ 50	YES/ 50	NO	YES/ 263 *	N/A **
(Describe below if needed)						
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	NO	NO	NO	NO	NO	N/A
(Describe below if needed)						
Number of Plants Required						
Shade Trees	0	1	3	4	0	N/A
Evergreen Trees	0	1		5	0	N/A
Shrubs			35			N/A
Number of Plants Provided						
Shade Trees	0	10	8	12	0	N/A
Evergreen Trees	0	6			0	N/A
Other Trees (2:1 substitution)	0	8	3	8	0	N/A
Shrubs (10:1 substitution)	0	0	105	193	0	N/A
(Describe plant substitution credits below if needed)						N/A

* P1 and P3 are internal to the overall Oxford Square property, and were previously submitted under F-12-26. Planting is not required for these perimeters.
 ** P4 is internal to the overall Oxford Square property.

PLAN
 SCALE: 1"=30'

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	60
Number of Trees Required	3
Number of Trees Provided	
Shade Trees	2
Other Trees (2:1 substitution)	2

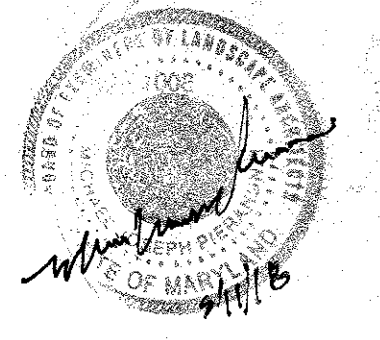
DUMPSTER SCREENING	
Linear Feet of Perimeter	44
Credit for Screen Enclosure	44 *

* Credit is provided by screen wall.

SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING			
	S1	S2	S3
Linear Feet of Perimeter	445	156	197
Number of Trees Required			
Shade Trees	9	3	3
Evergreen Trees	11	4	9
Credit for Existing Vegetation (No, Yes, and %)	NO	NO	NO
Credit for Other Landscaping (No, Yes, and %)	NO	NO	NO
Number of Trees Provided			
Shade Trees	0	5	2
Evergreen Trees	0	0	0
Other Trees (2:1 substitution)	4	0	0
Shrubs (10:1 substitution, planted within ESD Facilities)	57	37	25

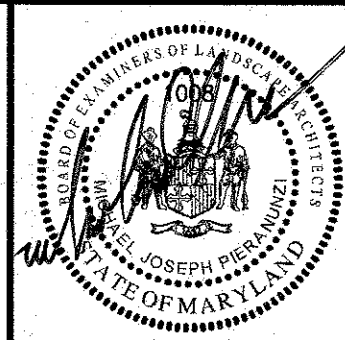
OWNER
KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

LANDSCAPE PLAN AS-BUILT APPROVED PER HOWARD COUNTY 12/4/2017 SPEED MEMO RELEASING THE \$6,400 LANDSCAPE SURETY.



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

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

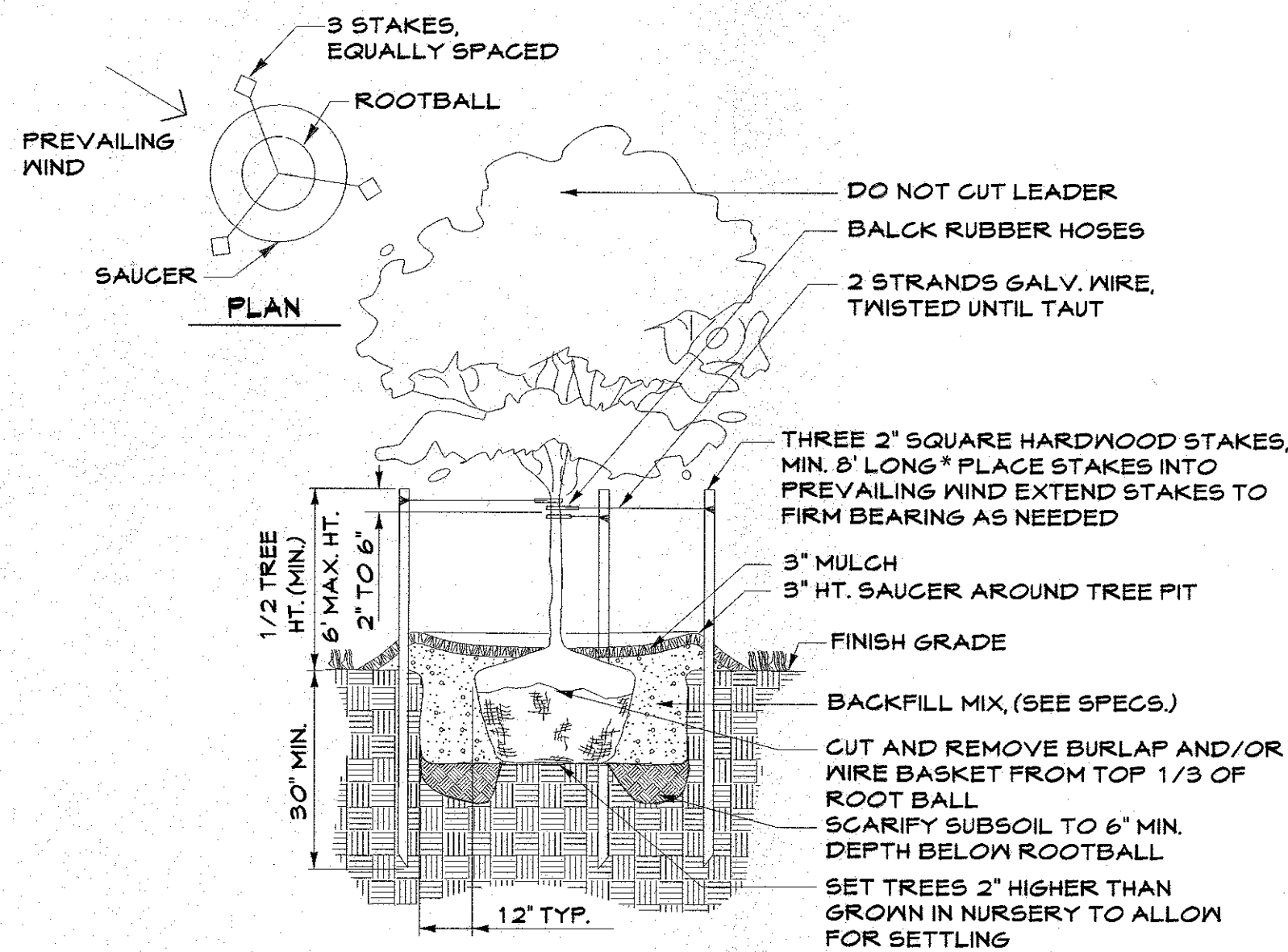


DESIGN BY:	MJP/KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	NO.
REVISION:	REVISE SWM, PLAY AREA, FENCE AND SANITARY
DATE:	

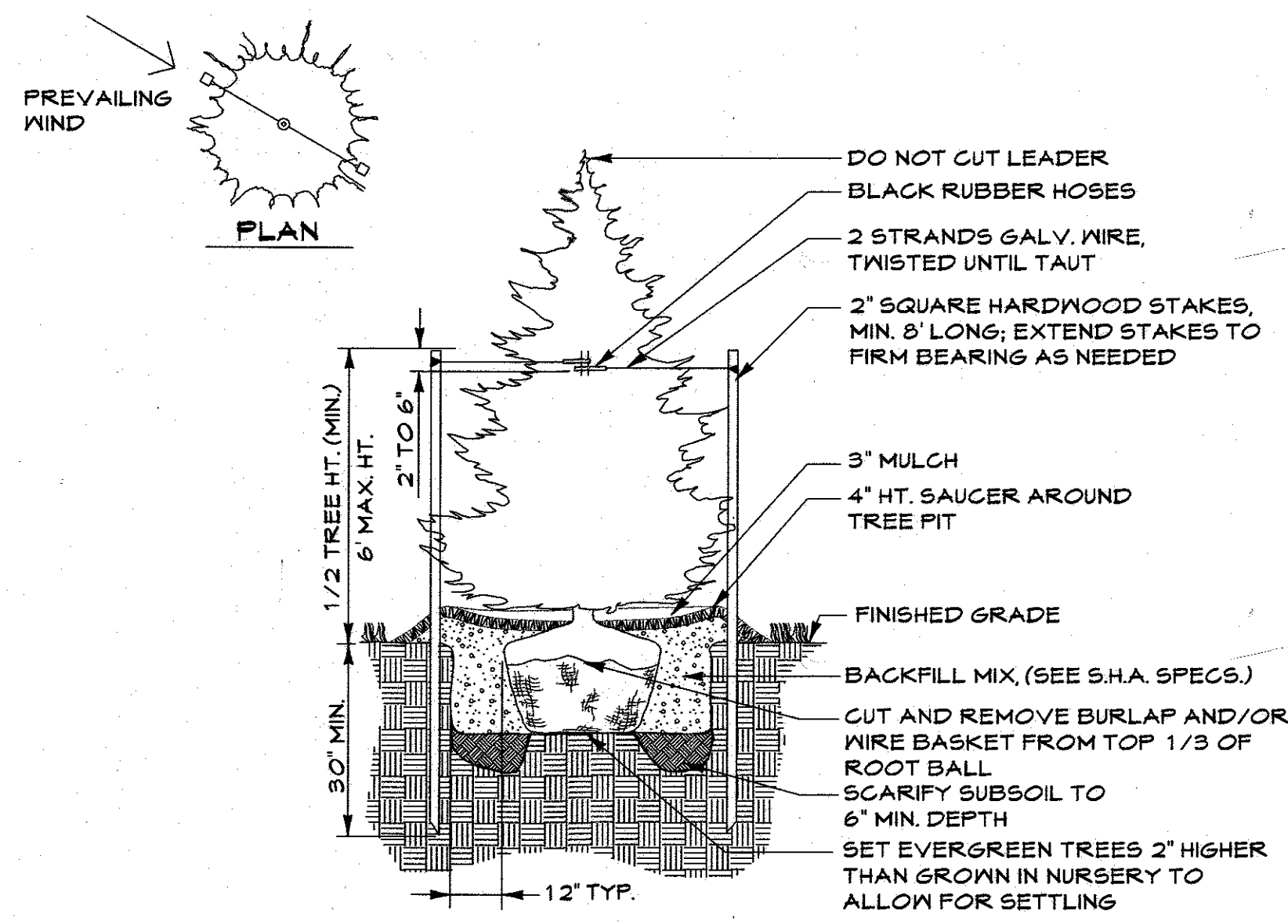
DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT
Landscape Plan
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
 SHEET 17 OF 24

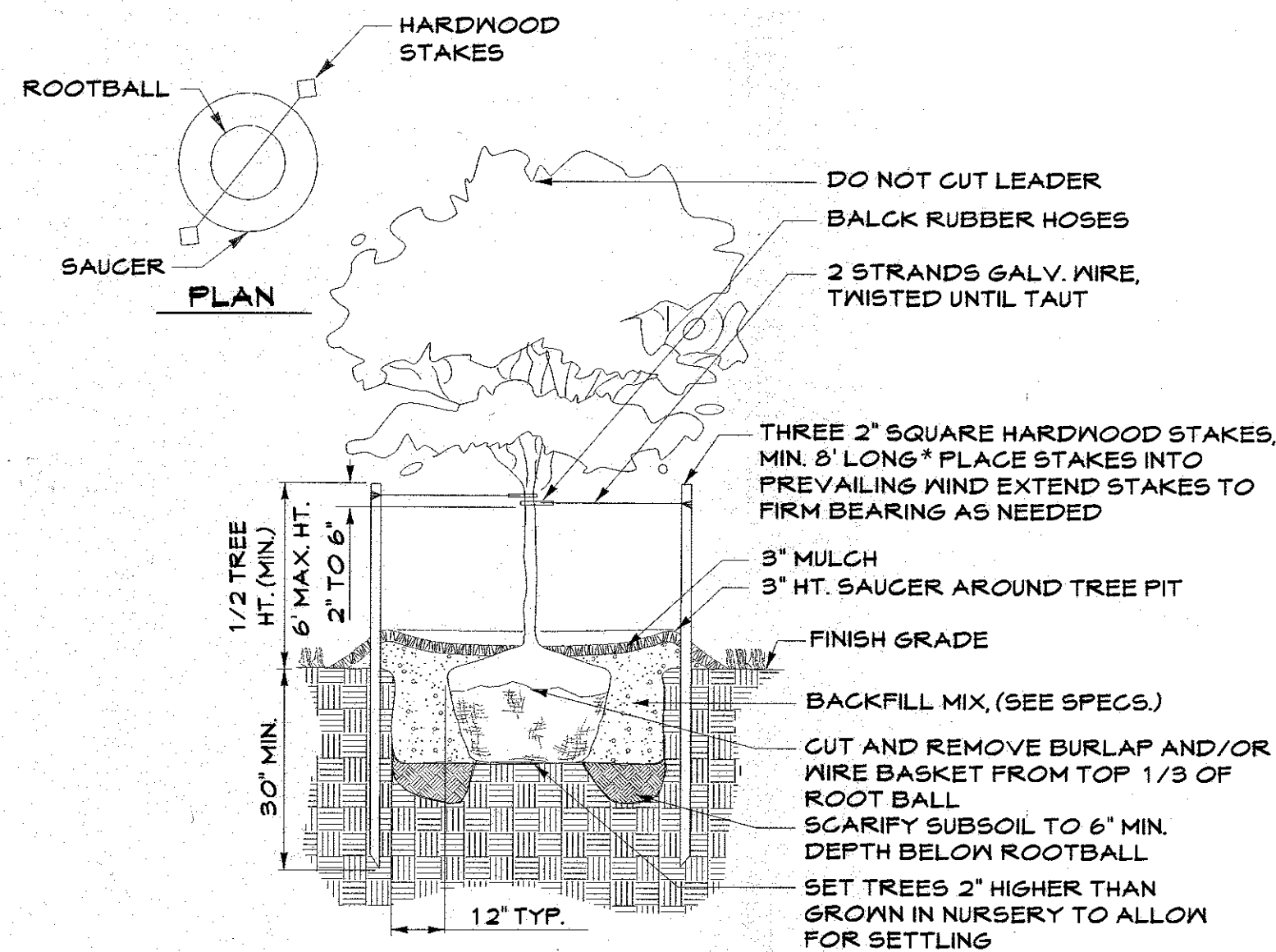
C.E.I. PROJECT NUMBER
 131117.00
 SCALE:



DECIDUOUS TREE PLANTING
GREATER THAN 3" CALIPER
Not To Scale



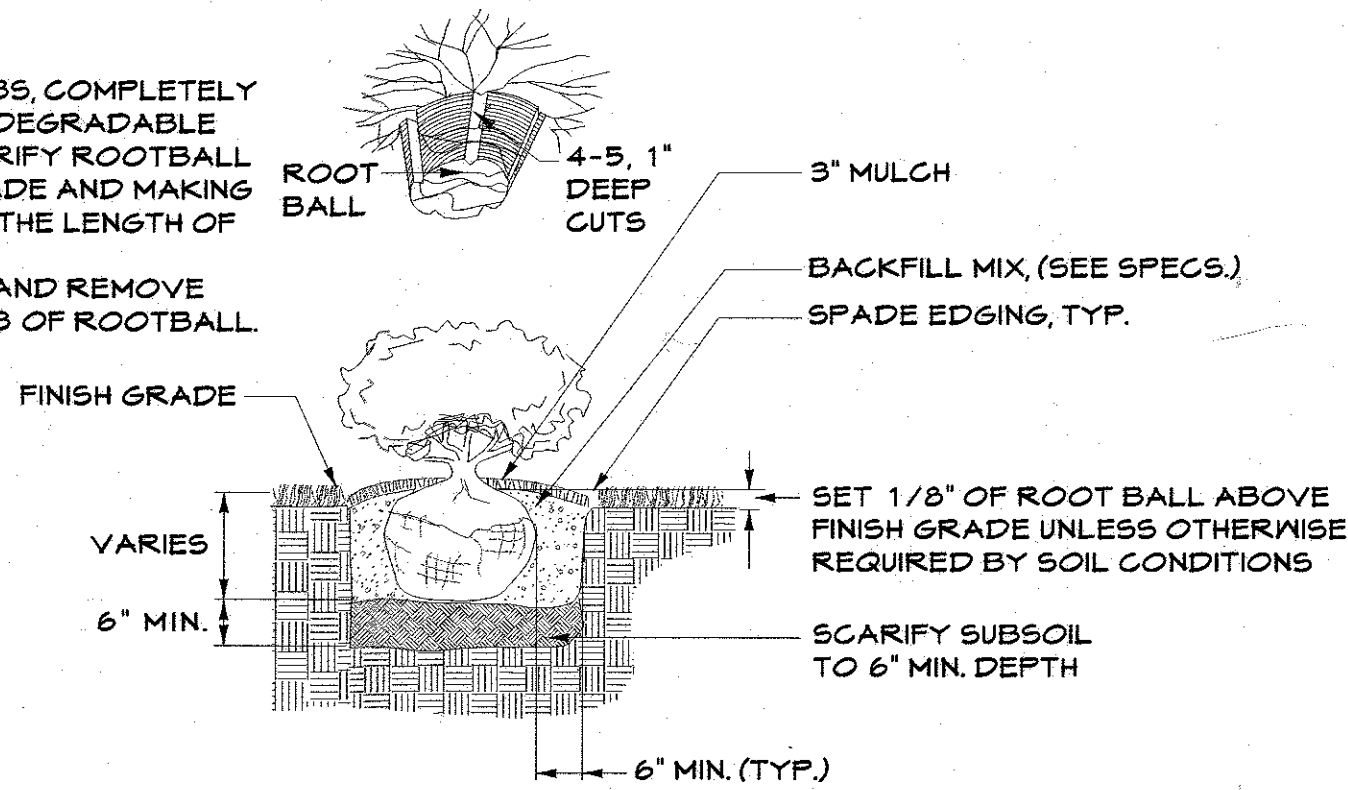
EVERGREEN TREE PLANTING
Not To Scale



DECIDUOUS TREE PLANTING
LESS THAN 3" CALIPER
Not To Scale

NOTES:

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



SHRUB PLANTING
Not To Scale

PLANTING CALCULATIONS

	REQUIRED	PROVIDED
SCHEDULE A (PERIMETER LANDSCAPE EDGE)	14.5	72.5
SCHEDULE B (PARKING LOT INTERNAL LANDSCAPING)	3	3
SCHEDULE D (STORMWATER MANAGEMENT AREA LANDSCAPING)	24	21
DUMPSTER	0	0
TOTALS:	41.5	96.5

* Results in an excess of 56 plants (133% more than required)

1. The financial surety for the required 42 trees will be posted as part of the developer's agreement in the amount of \$12,600.00 (18 shades x 300 + 1.5 shade substitutes (105 shrubs/10 + 2 ornamentals/2) x 300 + 25 evergreens x 150).

Tree Planting Summary

Type	Required	Provided
Shade Trees	26	30
Evergreen Trees	25	6
Ornamental Trees	0	25
Shrubs	35	103

2. The financial surety for the Green Neighborhood planting requirement shall be posted as part of the developer's agreement in the amount of \$7500.00 (25 shades x 300 + 4 ornamentals x 150).

LANDSCAPE PLAN AS-BUILT APPROVED PER HOWARD COUNTY 12/4/2017 SPEED MEMO RELEASING THE \$6,400 LANDSCAPE SURETY.

PLANTING NOTES

- Plant material substitutions will not be accepted without approval of the Landscape Architect.
- All shrubs and groundcover areas shall be planted in continuous prepared planting beds.
- All shrub beds shall be mulched with hardwood mulch as detailed and specified except where noted on plans.
- Maintain positive drainage out of planting beds at a minimum of two percent slope.
- Plant quantities are provided for the convenience of the contractor. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
- All areas within contract limits disturbed during or prior to construction not designated to receive plantings and mulch shall be fine graded and seeded in accordance with planting and construction.
- The contractor shall notify Miss Utility, (800-257-7777) a minimum of three working days prior to planting and construction.
- All plant material shall be nursery grown and shall conform to American Nurserymen Association Standards.
- All planting procedures shall conform to Landscape Contractors Association Specification Guidelines for Baltimore/Washington Metropolitan Area (latest edition) and Century Engineering, Inc. specifications.
- Contractor shall test pit prior to plant installation.

MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS

- Lawn areas shall be mowed to a height of 2 to 3 inches and not allowed to reach a height of 4 inches before mowing.
- All curbs and walks shall be edged as needed.
- All lawn areas adjacent to building faces or structures shall be trimmed.
- A slow release nitrogen balanced fertilizer with a 2-1-1 ratio shall be applied at a rate of 2 pounds of nitrogen per 1000 square feet in September, October, and February.
- Lime shall be applied at the rate determined by a soils report.
- It is recommended that lawn areas be treated in mid-March to early April with pre-emergent herbicide (Betasan) or equal applied at the manufacturer's rate.
- A post-emergent herbicide (Trimec) or equal is recommended to be sprayed on lawn areas in the late spring or early fall. Follow manufacturer's rates and recommendations.
- Insecticides and fungicides are recommended for insect and disease control.
- Reseed bare areas of lawn as necessary. Yearly aeration is recommended.
- All trash, litter, and debris shall be removed from lawn areas, parking lots, and shrub beds as needed.
- Mulch all shrub and groundcover beds yearly with 3 inches of shredded hardwood bark.
- Permit shrubs and trees to grow and enlarge to their design size. Consult project Landscape Architect for details.
- Prune trees in accordance with Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas.

PLANT LIST

KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
SHADE TREES					
AFA	6	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Red Maple	2 1/2" cal.	B & B, specimen, seedless
STI	5	Gleditsia triacanthos var. inermis 'Skyline'	Skyline Thornless Honeylocust	2 1/2" cal.	B & B, specimen
LST	5	Liquidambar styraciflua	American Sweetgum	2 1/2" cal.	B & B, specimen
UAJ	10	Ulmus americana 'Jefferson'	Jefferson American Elm	2 1/2" cal.	B & B, specimen
ZSE	6	Zelkova serrata 'Green Vase'	Green Vase Japanese Zelkova	2 1/2" cal.	B & B, specimen
Total	33				
EVERGREEN TREES					
CJA	6	Cryptomeria japonica	Japanese Cryptomeria	6'-8" ht.	B & B
Total	6				
ORNAMENTAL TREES					
LIN	5	Lagerstroemia x Biloxi'	Biloxi Crape Myrtle	6'-8" ht.	B & B, multistem, 3 cane min.
PKW	16	Prunus serrulata 'Kwanzan'	Kwanzan Cherry	6'-8" ht.	B & B, fruitless
Total	21				
SHRUBS, PERENNIALS, AND GROUNDCOVERS					
CLB	34	Garyopteris x clandonensis 'Longwood Blue'	Longwood Blue Blue Mist Shrub	2 gal.	Cont., 30" o.c.
COD	18	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Bearberry Cotoneaster	1 gal.	Cont., 30" o.c.
HQS	91	Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea	24"-30" ht.	Cont., 40" o.c.
LSP	770	Liriope spicata	Creeping Lilyturf	1 qt.	Cont., 12" o.c.
NAR	520	Narcissus spp.	Daffodils	Bulb	Place randomly amid lilyturf
		Narcissus 'Mount Hood'			
		Narcissus 'Tete-a-tete'			
		Narcissus 'King Alfred'			
		Narcissus 'Ice Follies'			
PLA	71	Prunus laurocerasus	Cherry Laurel	24"-30" ht.	B & B, 30" o.c.
RKO	70	Rosa x 'Radyod'	Blushing Pink Knockout Rose	24"-30" ht.	Cont., 36" o.c.
VBC	53	Viburnum x burkwoodii 'Conoy'	Conoy Burkwood Viburnum	30"-36" ht.	B & B, 42" o.c.
Total					

SWM PLANT LIST

KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
SHADE TREES					
TDI	7	Taxodium distichum	Baldcypress	6'-8" ht.	B & B
ORNAMENTAL TREES					
MVI	4	Magnolia virginiana	Sweetbay Magnolia	6'-8" ht.	B & B
SHRUBS, PERENNIALS, AND GROUNDCOVERS					
ALA	412	Aster novae-angliae	New York Aster	2 gal.	Cont., 18" o.c.
AVI	170	Andropogon virginicus	Broom Sedge	2 gal.	Cont., 18" o.c.
CHG	117	Chelone glabra	White Turtlehead	2 gal.	Cont., 24" o.c.
CLA	109	Clethra alnifolia 'Hummingbird'	Hummingbird Summersweet	18"-24" ht.	Cont., 36" o.c.
IVH	69	Itea virginica 'Little Henry'	Little Henry Sweetepire	24"-30" ht.	Cont., 36" o.c.
IVG	41	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetepire	24"-30" ht.	Cont., 36" o.c.
MPE	19	Myrica pennsylvanica	Northern Bayberry	24"-30" ht.	B & B, 40" o.c.
PVH	158	Panicum virgatum 'Heavy Metal'	Heavy Metal Switchgrass	2 gal.	Cont., 36" o.c.
RLA	106	Rudbeckia laciniata	Cutleaf Coneflower	2 gal.	Cont., 24" o.c.
VNO	60	Vernonia noveboracensis	New York Ironweed	2 gal.	Cont., 36" o.c.

OWNER

KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

DEVELOPER

PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT

Landscape Details

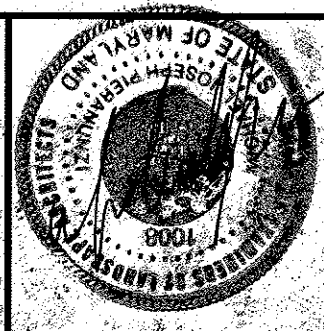
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1
SHEET 19 OF 24

C.E.I. PROJECT NUMBER
131117.00
SCALE:
As Shown

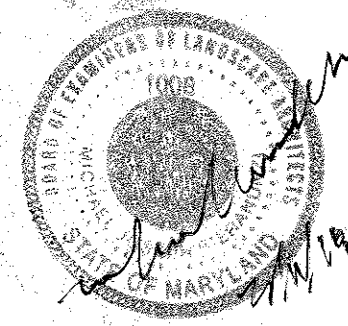
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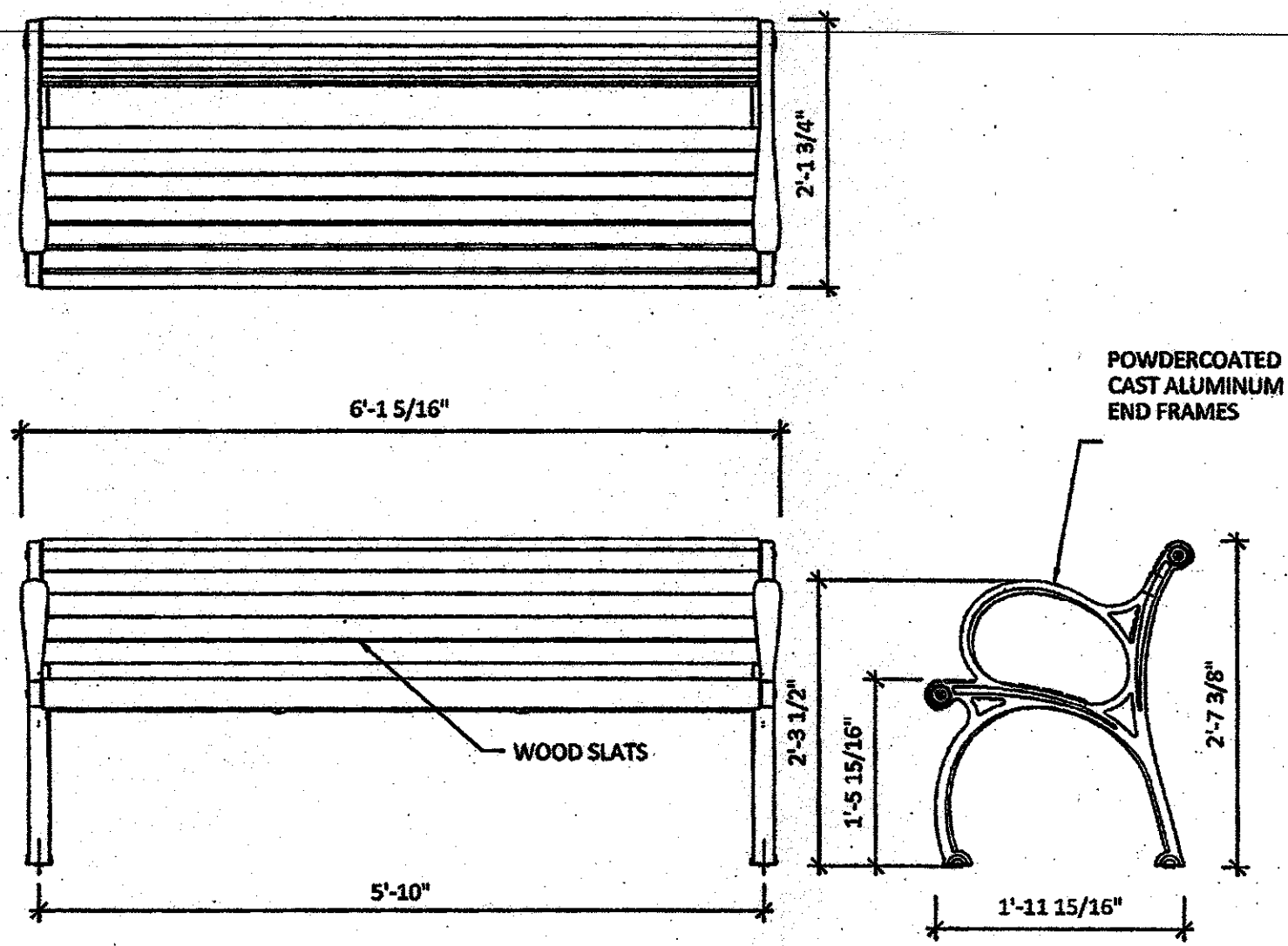
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 10-14-15
Date: 10-21-15
Date: 10-21-15

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

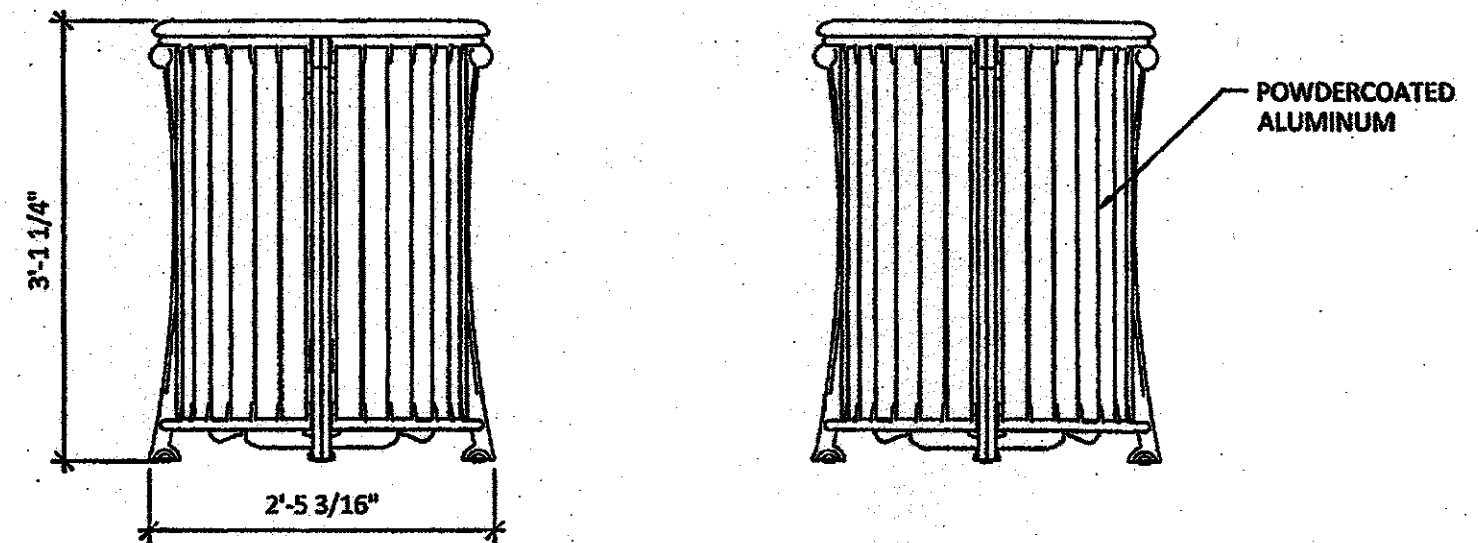
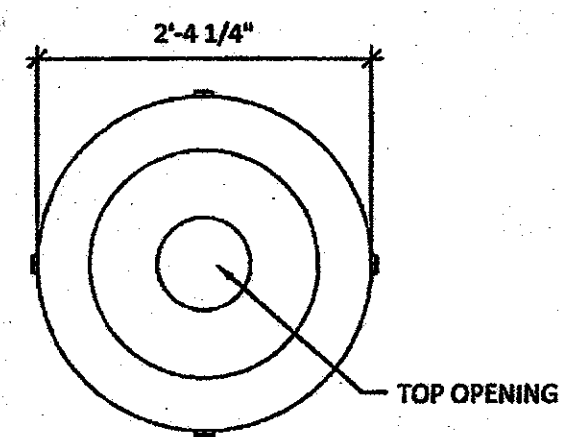


DESIGN BY:	M.J.P./KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	NO.
REVISION:	REVISE SWM, PLAY AREA, FENCE AND SANITARY

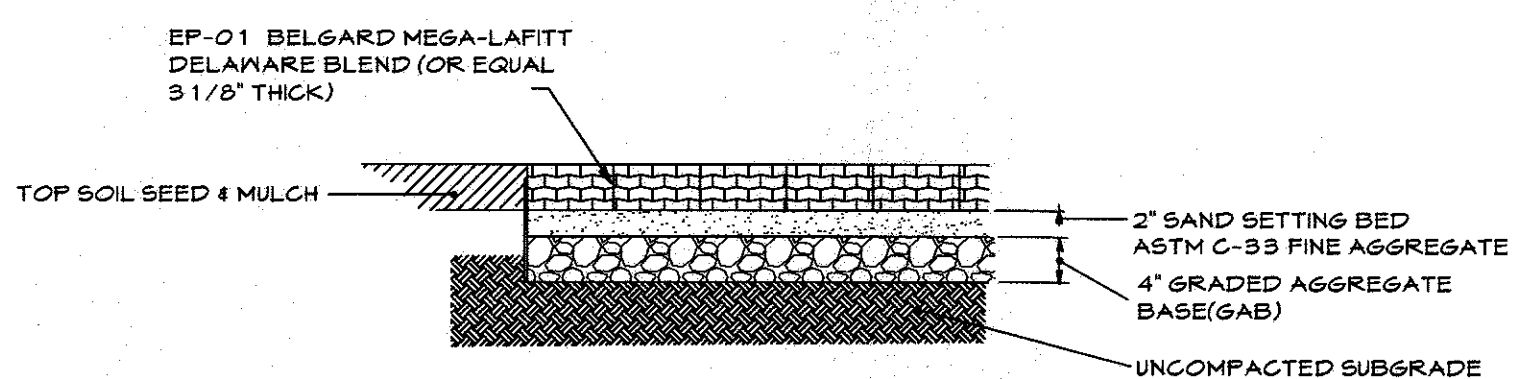




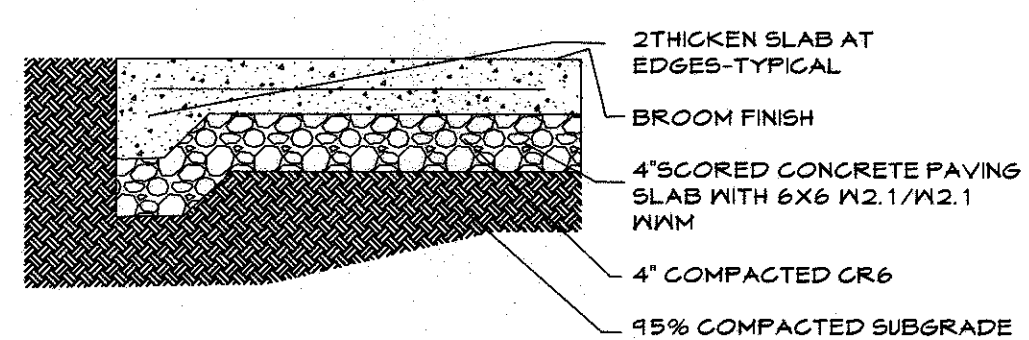
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3/4" = 1'-0"



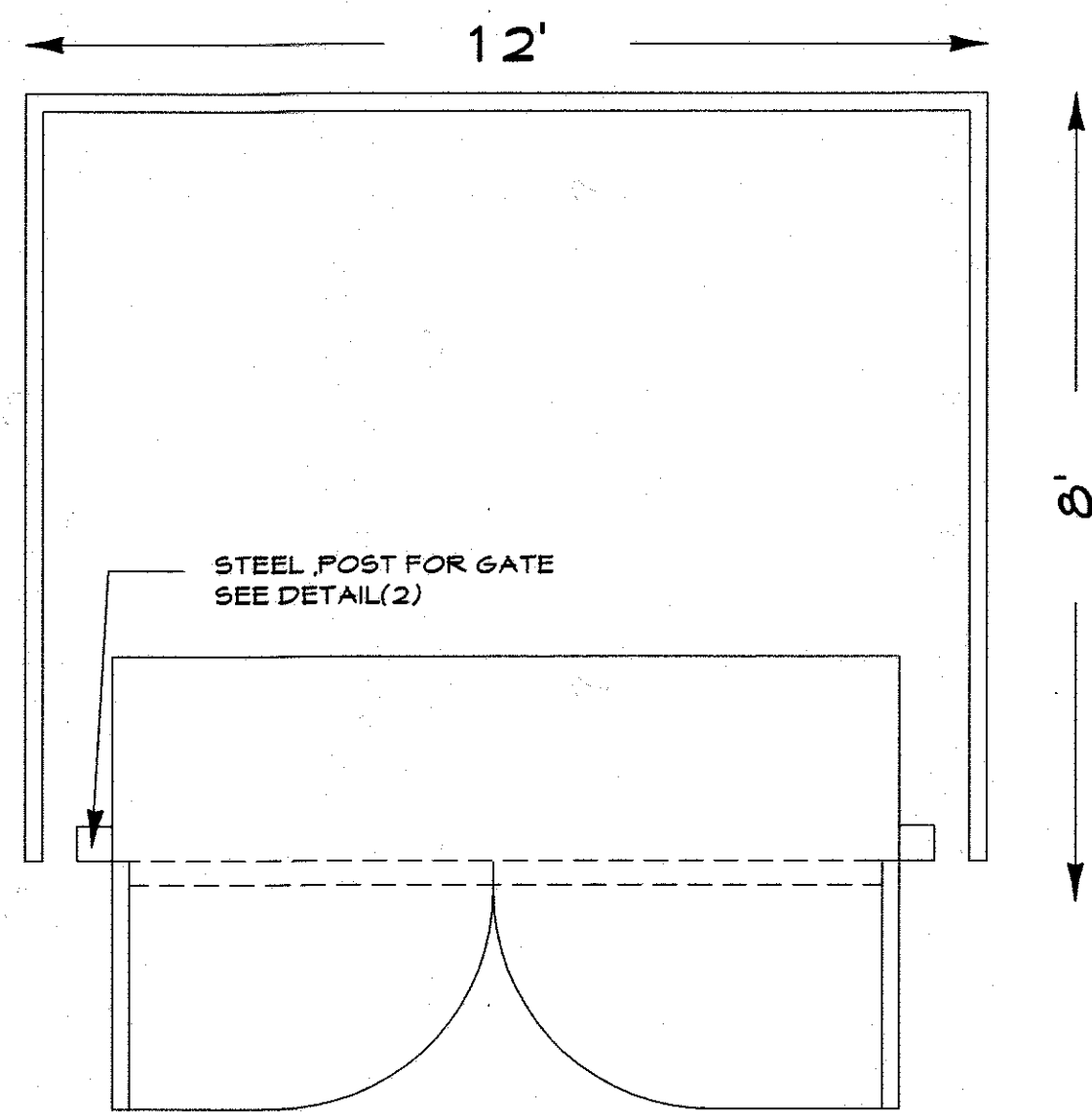
2 TYPICAL TRASH RECEPTACLE DETAIL
3/4" = 1'-0"



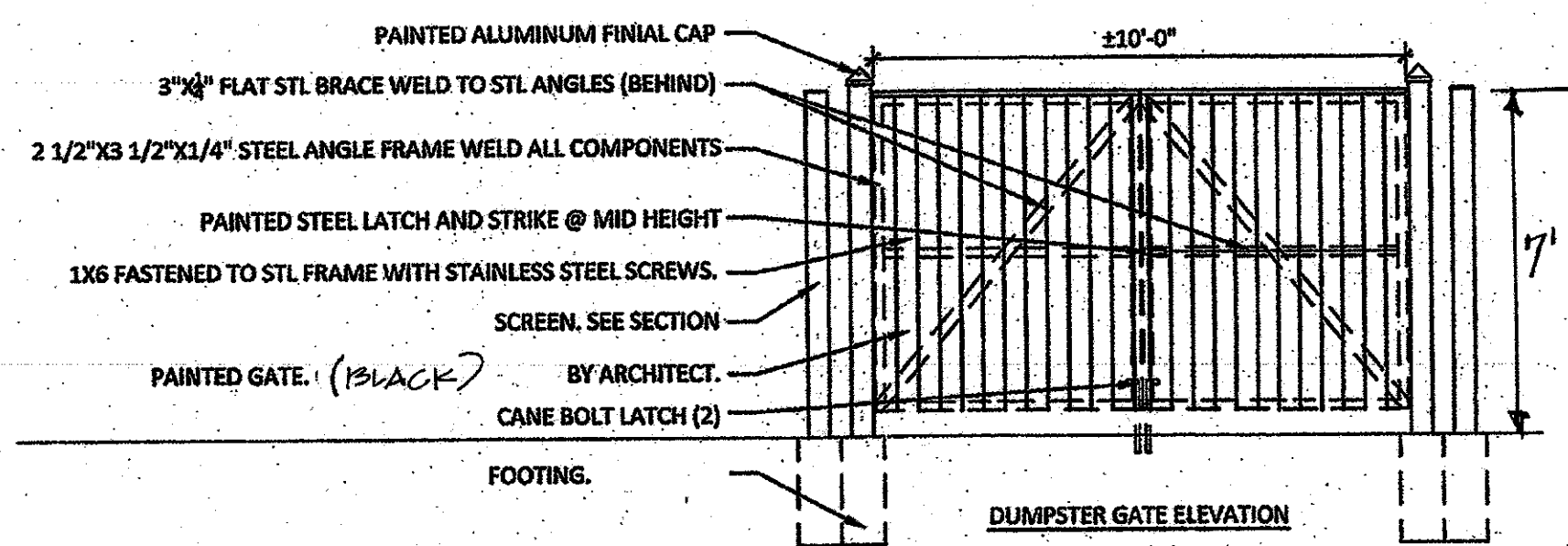
PROPOSED PAVER DETAIL
N.T.S.



CONCRETE EDGE DETAIL
N.T.S.



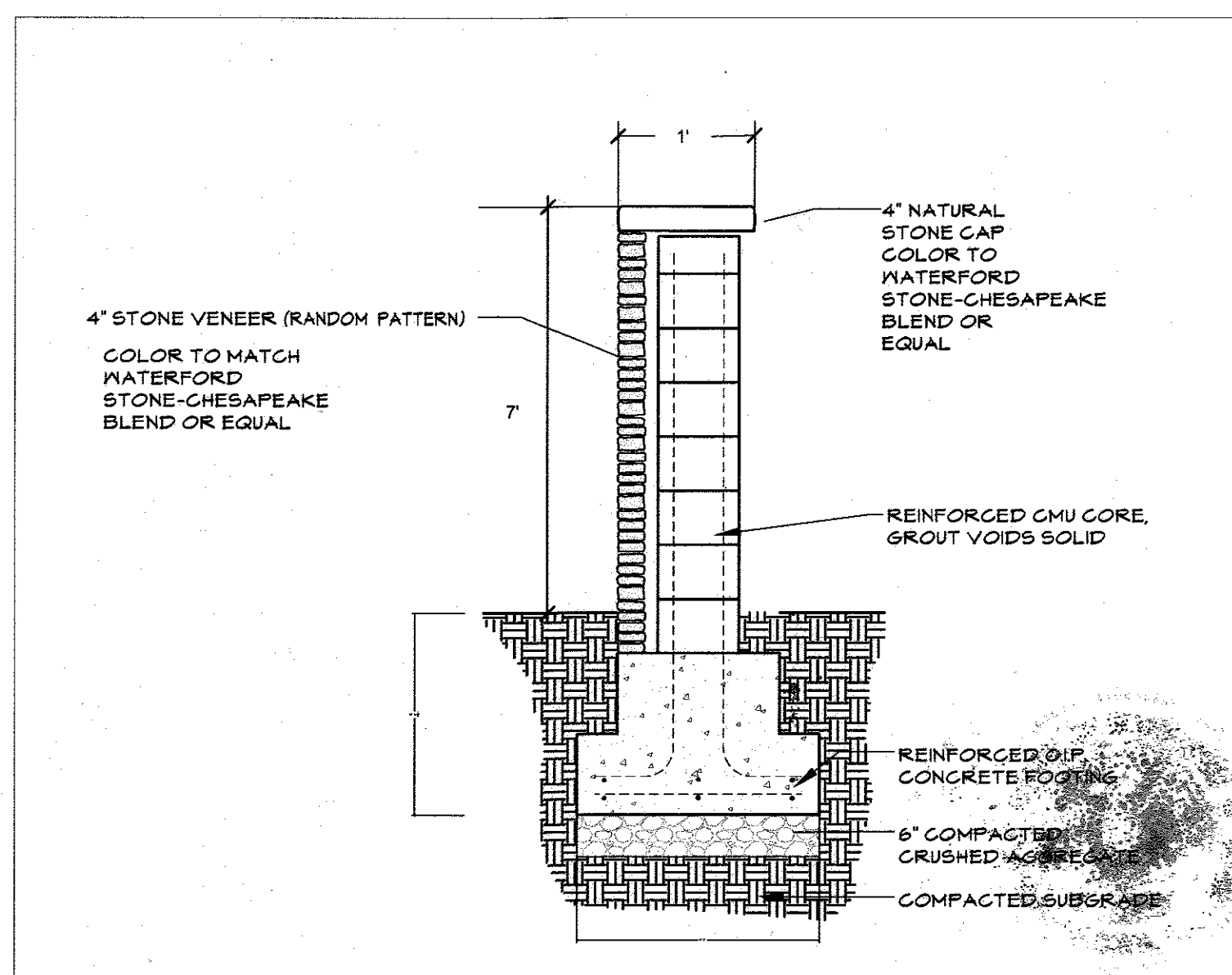
PLAN



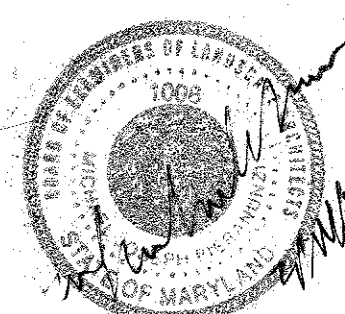
NOTES:

- 1. ALL STEEL POSTS AND ALUMINUM CAPS SHALL BE PAINTED, BLACK
- 2. ALL HARDWARE TO BE STAINLESS STEEL

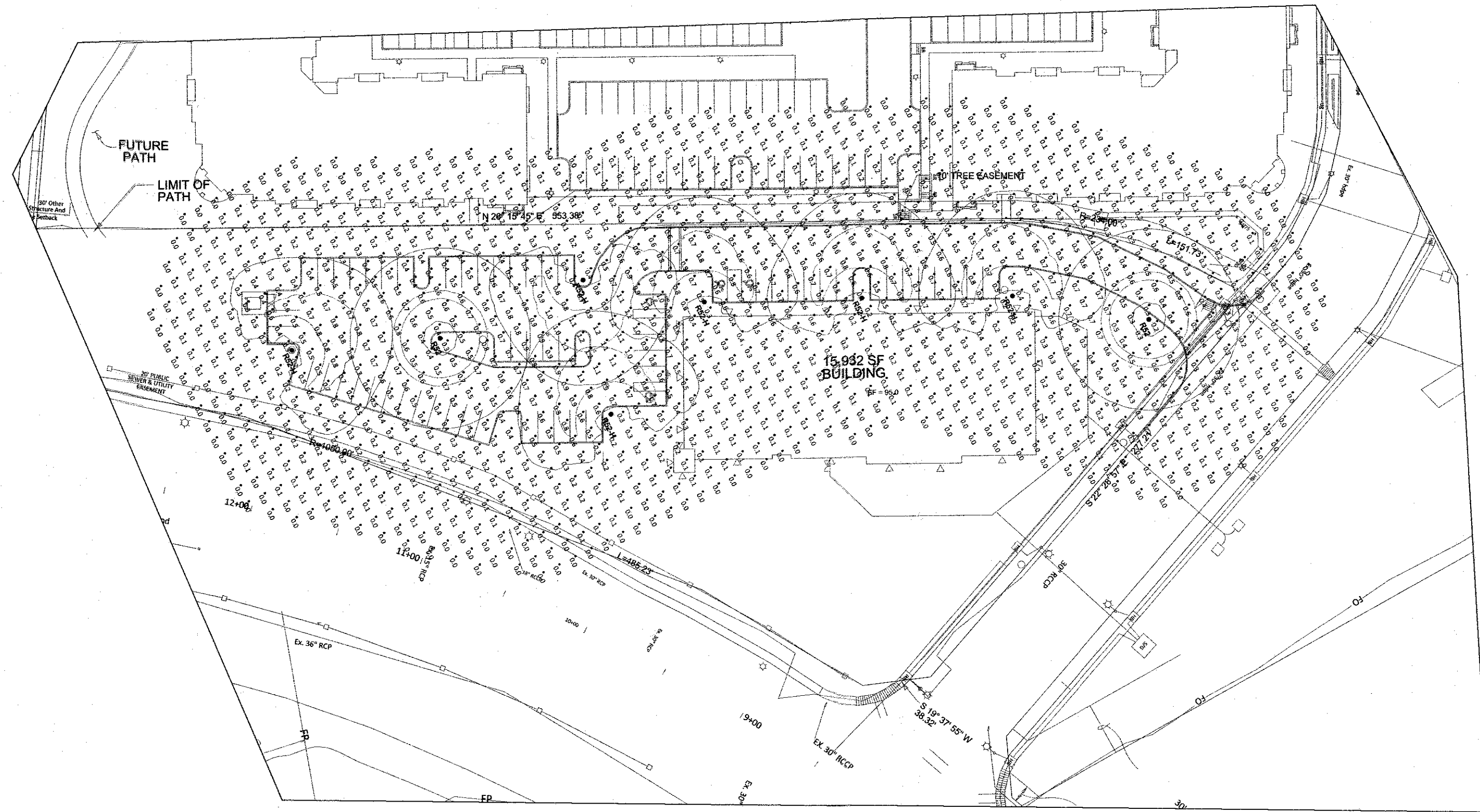
4 DUMPSTER ENCLOSURE DETAIL
N.T.S.



DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



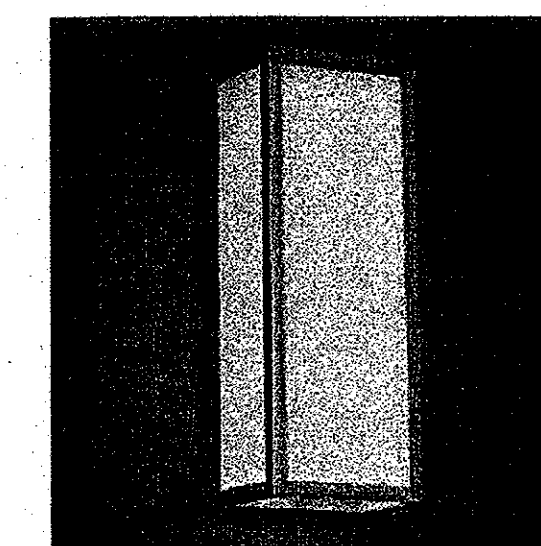
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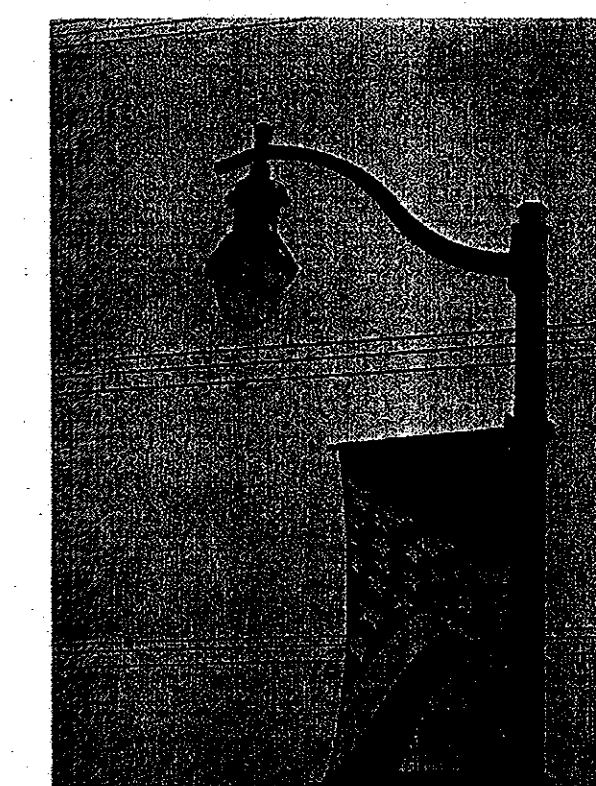
PHOTOMETRIC PLAN
N.T.S.



PARKING LOT/AREA LIGHT
HAVRE DE GRACE POLE TOP
FIGURE BY HADCO (100W MH)
MOUNTING HEIGHT: 14'



BUILDING MOUNTED SCONCE
672-WP SERIES BY SHAPER
LIGHTING W/ (2) 27W HIGH
LUMEN CFLs



STREET INTERSECTION LIGHT
TEARDROP FIGURE BY HADCO
(150W MH)
MOUNTING HEIGHT: 23' WITH
4' EXTENSION ARM

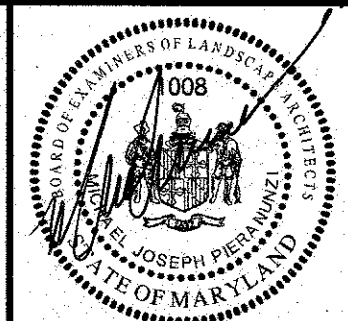
5 TYPICAL LIGHT DETAILS
N.T.S.

KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER

2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 10-14-15
Date: 10-21-15
Date: 10-21-15

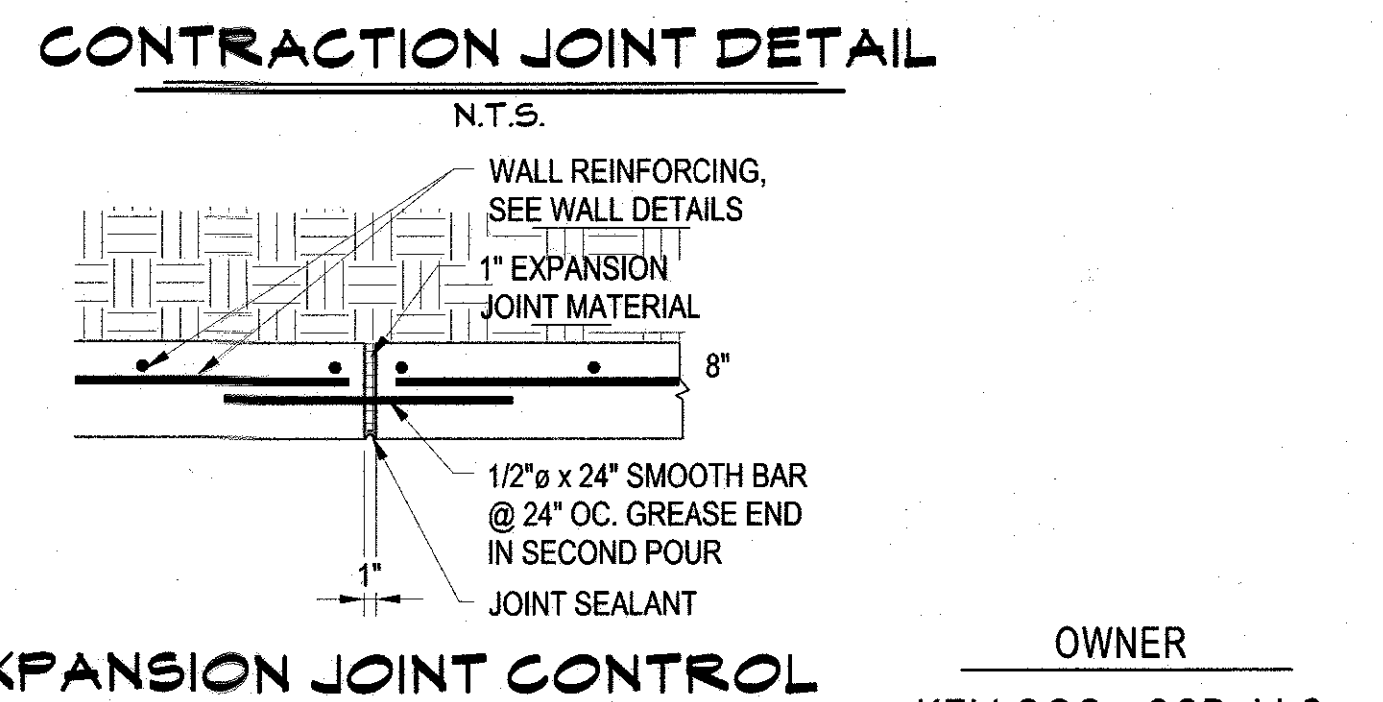
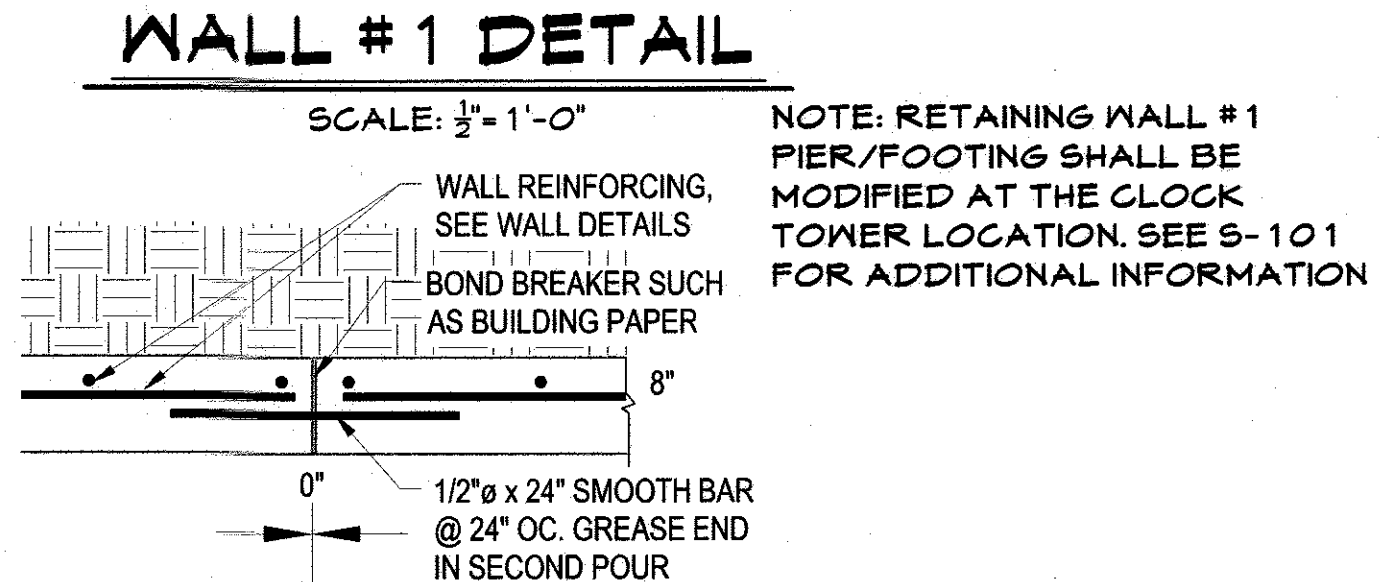
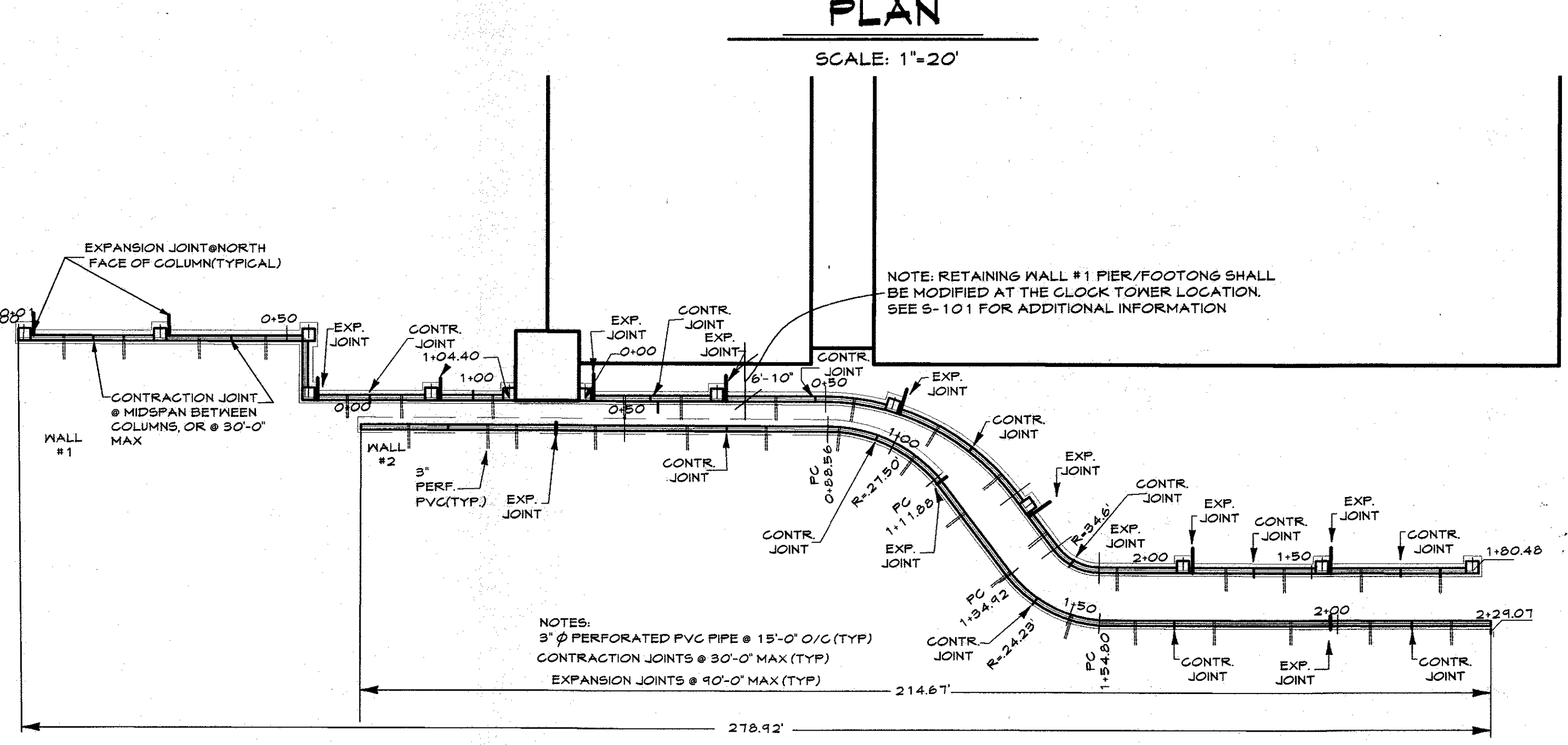
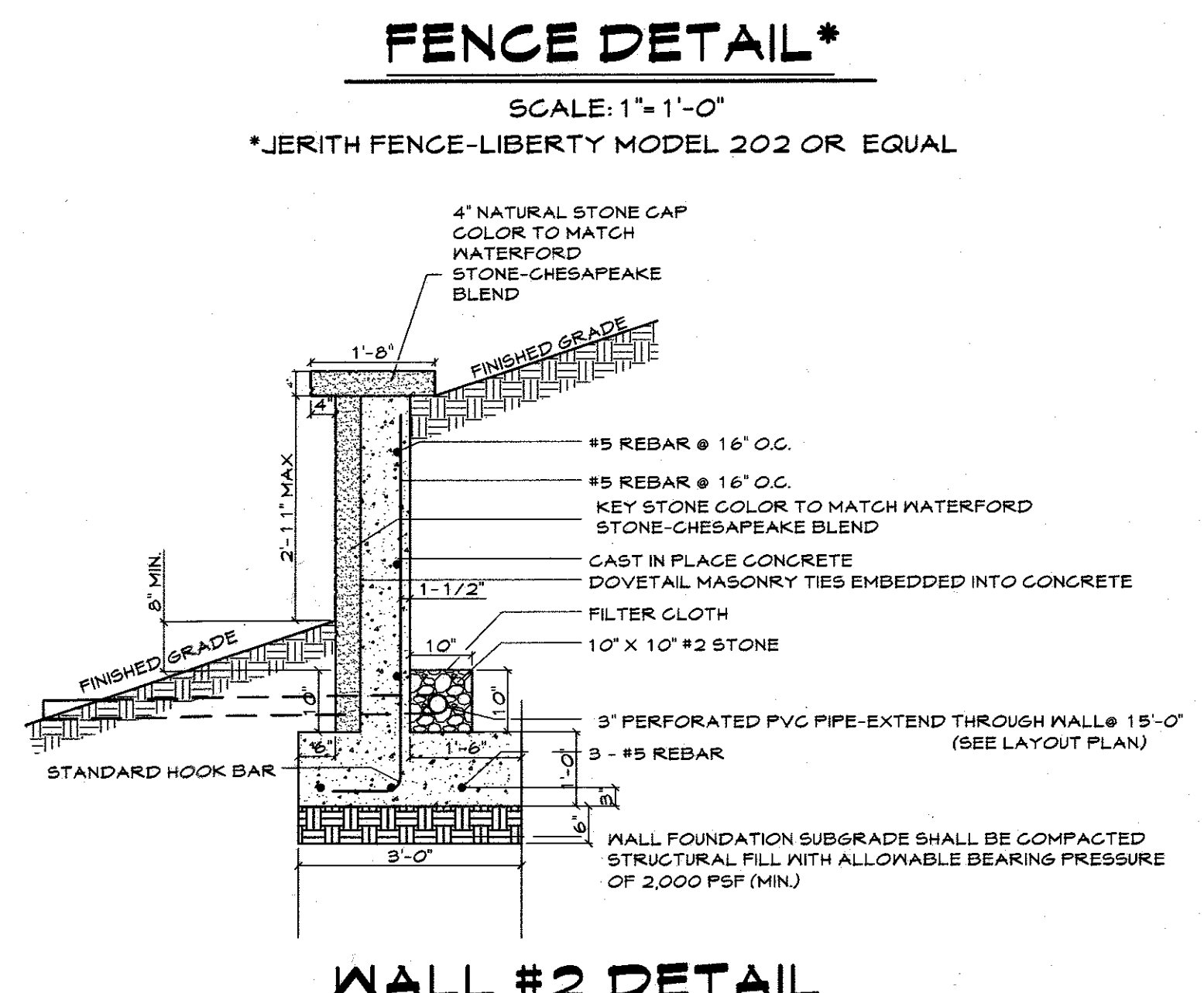
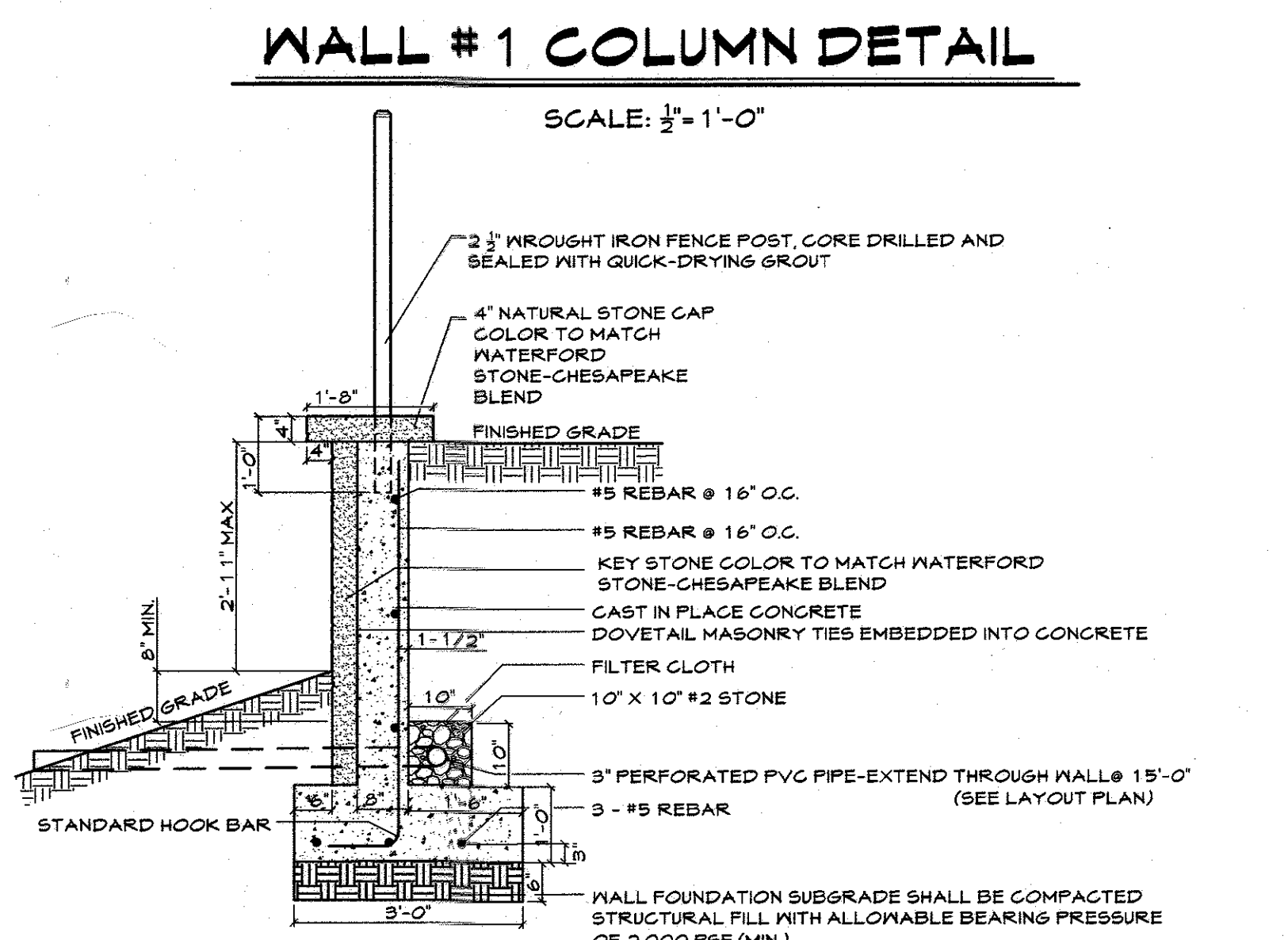
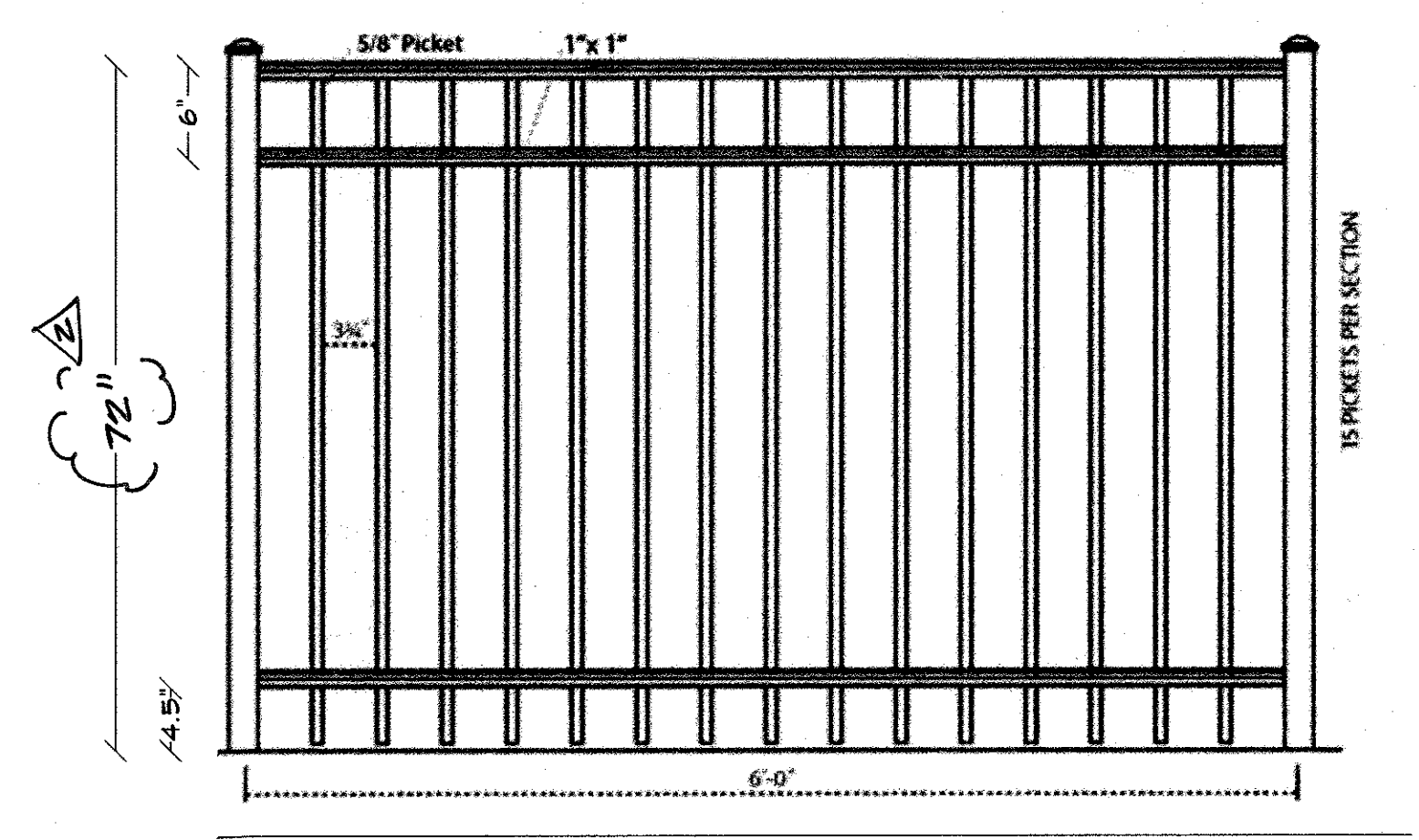
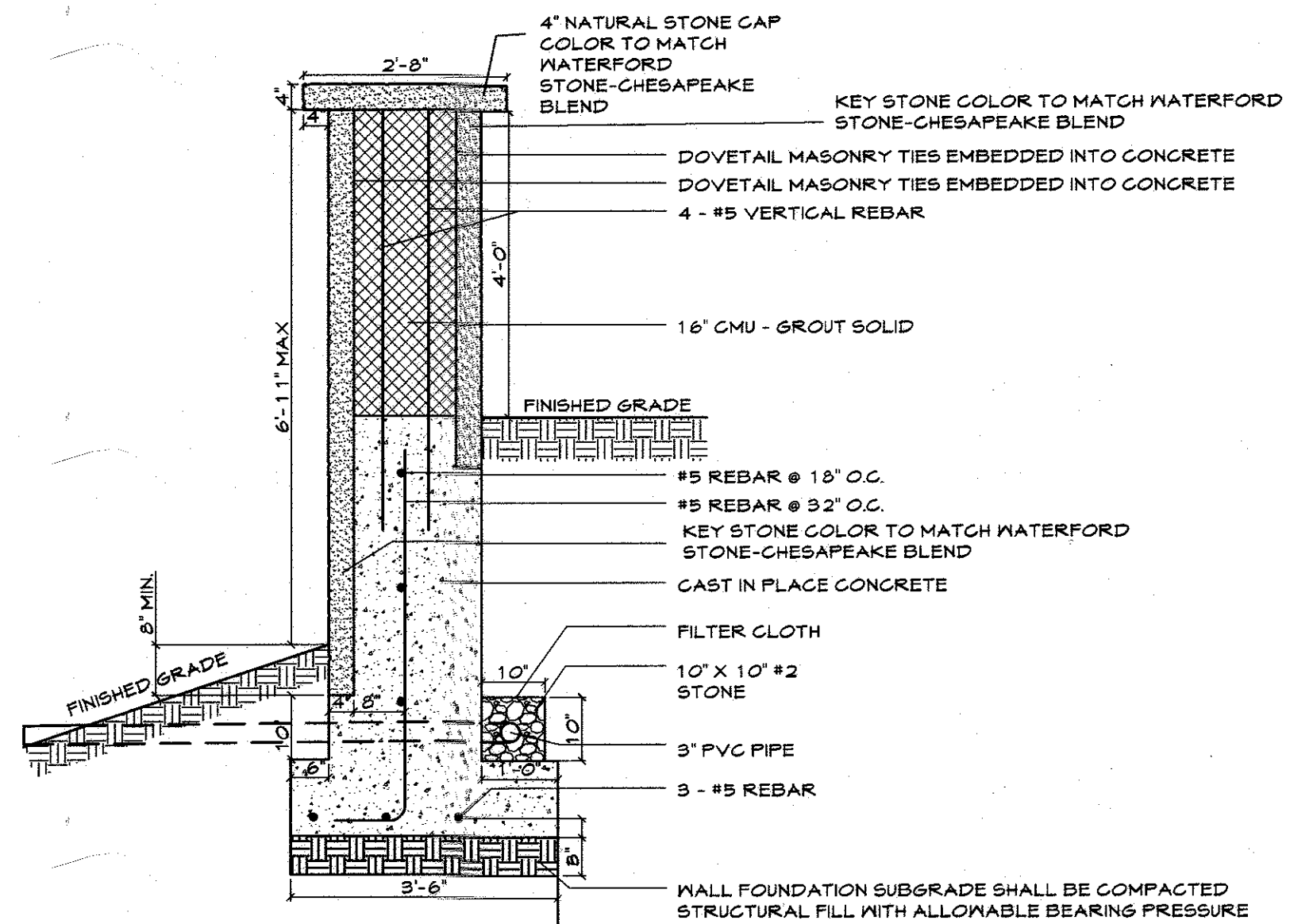
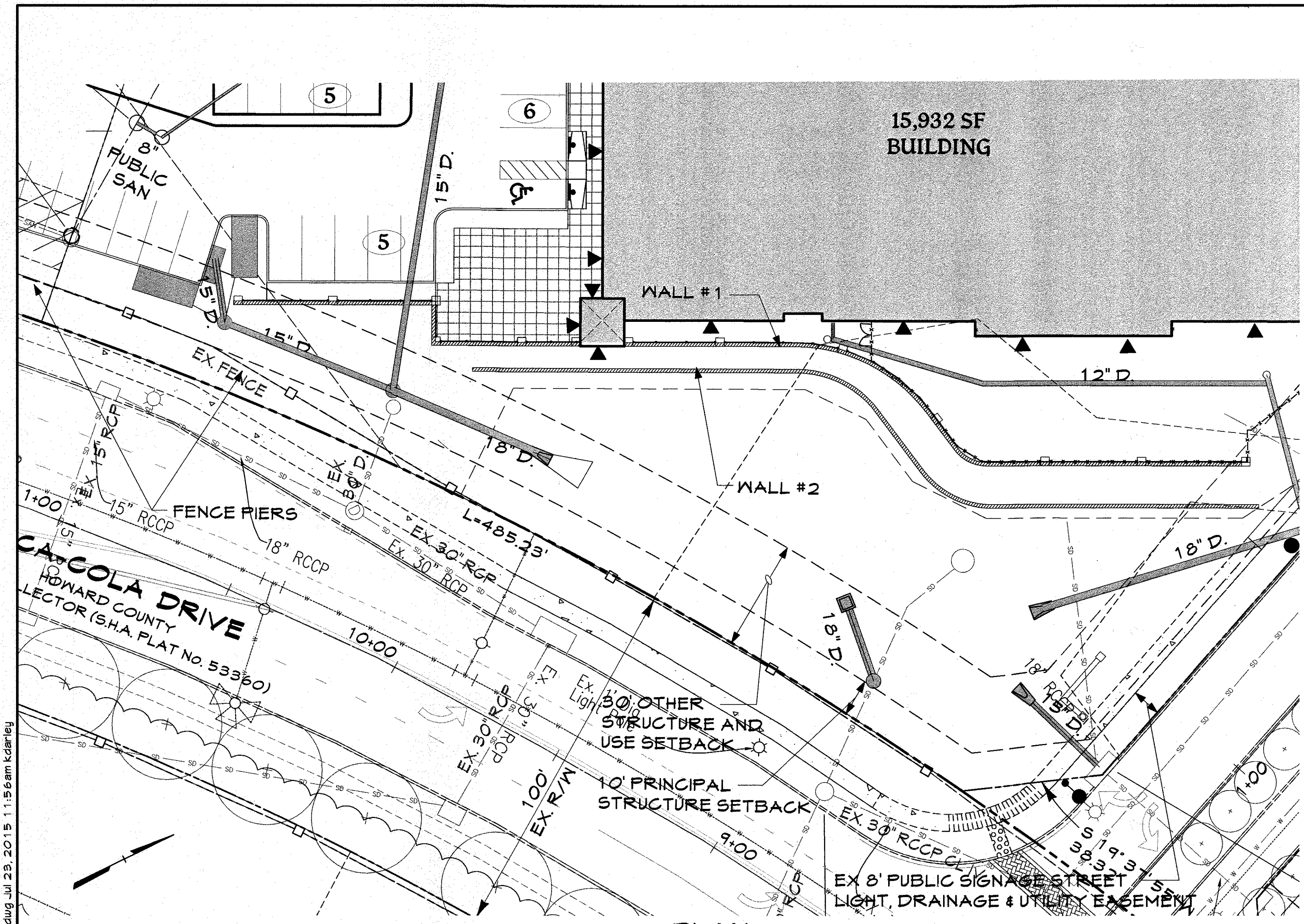
CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401



DESIGN BY:	MJP/KAD				
DRAWN BY:	M.S.S.				
CHECKED BY:					
DATE:	7.27.2015	BY:	NO.	REVISION	DATE

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT Landscape Details
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 20 OF 24
C.E.I. PROJECT NUMBER: 131117.00
SCALE: As Shown



NOTE: RETAINING WALL #1 PIER/FOOTING SHALL BE MODIFIED AT THE CLOCK TOWER LOCATION. SEE 5-101 FOR ADDITIONAL INFORMATION

- NOTES:
1. RETAINING WALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS PROVIDED ON STRUCTURAL DRAWING SO. 1 "GENERAL NOTES AND SCHEDULES", FOR OXFORD SQUARE RETAIL BUILDING. IN ADDITION TO THESE NOTES.
 2. RETAINING WALL FOUNDATIONS SHALL BEAR ON CONTROLLED STRUCTURAL FILL CONSISTING OF UNIFIED SOIL CLASSIFICATION TYPE SM OR BETTER PLACED AND COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D 1557).
 3. AN APPROVED INDEPENDENT SOILS TESTING AND INSPECTION AGENCY SHALL MONITOR SITE PREPARATION AND CONTROLLED STRUCTURAL FILL PLACEMENT, PERFORM IN-PLACE DENSITY TESTING AND PROVIDE REPORTS FOR DOCUMENTATION. SOILS TESTING AND INSPECTION SHALL BE PERFORMED AS DIRECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER, REGISTERED IN THE STATE OF MARYLAND.
 4. THE GEOTECHNICAL ENGINEER SHALL PROVIDE WRITTEN VERIFICATION OF PROPER SITE PREPARATION AND APPROVAL OF THE COMPACTED STRUCTURAL FILL FOR RETAINING WALL CONSTRUCTION BEFORE CONSTRUCTION BEGINS.
 5. WALL DRAINAGE PIPE SHALL BE PERFORMED OR SLOTTED PVC PIPE OR CORRUGATED HDPE PIPE (ASTM 3084 OR ASTM 1248). PROVIDE WALL DRAIN OUTLETS AT 20 FEET ON CENTER MAXIMUM. PROVIDE SOLID WALL DRAIN OUTLET PIPE.
 6. PROVIDE A FENCE OR RAILING AT TOP OF WALL PER IBC CODE REQUIREMENTS. PLACE VERTICAL PIPE SLEEVES AS REQUIRED AT TOP OF WALL FOR PROPER FENCE OR RAILING POST ANCHORAGE. PLACE POSTS AND SLEEVES AT 6 FEET ON CENTER MAXIMUM.
 7. RETAINING WALL CONSTRUCTION SHALL BE MONITORED BY A TESTING AND INSPECTION AGENCY UNDER SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER AND DOCUMENTATION SHALL BE PROVIDED TO VERIFY COMPLIANCE WITH THE DRAWING, NOTES AND SPECIFICATIONS.

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NUMBER: 22443 EXPIRATION DATE: 8/23/19

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.

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

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

DESIGN BY:	M.J.F./K.A.D.
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	12.27.2015
BY:	NO.
REVISION:	REVISED FENCE HEIGHT

OWNER
 KELLOGG - CCP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 2330 WEST JOPPA ROAD, SUITE 190
 LUTHERVILLE, MARYLAND 21093-4614
 410-296-3800

AS BUILT
Retaining Wall Details
 PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
 ELECTION DISTRICT 1
 SHEET 21 OF 24

S:\2015\Facilities\191117.00 Oxford Square\CIVIL\CADD\Drawings\SDP-PreSchool\191117 (SDP-2.1) Retaining Wall Details.dwg Jul 23, 2015 11:56am kdarley

GREEN NEIGHBORHOOD COMPLIANCE CHECKLIST

Beth Buege
CHIEF, RESOURCE CONSERVATION DIVISION
9/17/15
DATE

LEED ACCREDITED PROFESSIONAL CERTIFICATE
GREEN NEIGHBORHOOD PLAN FOR SITES
I hereby certify that this plan represents a practical and workable plan for achieving the targeted credits and point total shown on the Green Neighborhood Plan for Sites Compliance Checklist.

Matthew J. Fitzsimmons
MATTHEW J. FITZSIMMONS, LEED AP
10007912
6-16-15
LEED ACCREDITATION NUMBER DATE

Credit No.	Credit	Champion (Name, Role)	Requirement	Site Development Plan Parcel ID / GI Strategies	Documentation Location	M #	P #	Required Points
A-1	Innovative/Integrated Design Phases	HCM/Planners	Show a how plans meet and energy analysis	Provide documentation	GI Plan GI Report			4
A-2	Interdisciplinary Project Team	HCM/Planners	The design team includes a LEED AP professional, an ecologist, a civil engineer, an architect and landscape architect	GI Plan SDP (SDP-14-004) Sheet 23				RECD
A-3	Third Party Certification	HCM/Planners	Certification of credits by independent LEED accredited professional	Skanska Design Studio	GI Plan SDP (SDP-14-004) Sheet 22			RECD
A-4a	Innovative Design A	HCM/Planners	Green Streets	Green Streets	GI Report SDP (SDP-14-004) Sheet 3, 6	1	1	1
A-4b	Innovative Design B	HCM/Planners	Priority Parking for Fuel Efficient Cars	Reserve 6% for Priority Parking for Fuel Efficient Cars	GI Plan GI Report SDP (SDP-14-004) Sheet 3, 6	1	1	1
A-4c	Innovative Design C	HCM/Planners	Compact Development	Residential Development will exceed 20 DU/A	GI Plan Reference: Sketch Plan (S-14-001)	1	1	1
A-4d	Innovative Design D	HCM/Planners	Walkable Streets	More than 80% building frontage oriented towards public space. Less than 20% service and garage openings to public space.	GI Plan GI Report SDP (SDP-14-004) Sheet 3, 6 Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	1	1	1
B - Location, Linkages & Community Context								
B-1a	Redevelopment Site	HCM/Planners FOCUS	More than 25% area previously developed (former land and gravel operation)	GI Plan Reference: Sketch Plan (S-14-001)		2	2	2
B-1b	Redevelopment Site	N/A	Green building cleanup of underutilized site	N/A		0	0	0
B-2	Service Buildings	N/A	Reserve, maintain or rehabilitate historic properties	N/A		4	0	0
B-3a	Transit Access & Amenities for Reduced Auto Dependence (RtP)	HCM/Planners	Site is served by transit stop within 1/2 mile (1/4 mile if walk from property)	GI Plan Reference: Sketch Plan (S-14-001)		2	2	2
B-3b	Transit Access & Amenities for Reduced Auto Dependence (Street)	HCM/Planners	Provide county specified transit shelter with benches and lighting at transit stop within 1/2 mile of property and provide pedestrian link to stop if none currently exists	GI Plan Future Residential SDP Reference: Sketch Plan (S-14-001)		4	4	4
B-4	Proximity to Community Resources	N/A	2/3rd for 1/2 mile proximity to existing or proposed community resources such as schools, parks, library, post office, etc.	N/A		5	0	0
C - Compact, Complete & Connected Development								
C-1	Diversity of Uses	HCM/Planners	11 points per different land use, minimum 100 sq ft for each non-residential per DU. Minimum of 140,000 SF each of office, institutional and civic use, per 1,000 DU	GI Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)		3	3	3
C-2	Planned Service Area	HCM/Planners	Locate the project within the Planned Service Area	GI Plan Reference: Sketch Plan (S-14-001)		5	5	5
C-3a	Bike/Walk System (Path)	HCM/Planners	Provide an off-site path system with 2 connections to arterial or regional streets, with minimal environmental impacts, long term maintenance	GI Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075) SDP (SDP-13-068)		2	2	2
C-3b	Pedestrian System (Connections)	N/A	Provide an off-site path system of connections	N/A		2	0	0
C-3c	Pedestrian System (Amenities)	HCM/Planners	Provide at least five different pedestrian experience features	GI Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)		2	2	2
C-4	Connected On-site Street Network	HCM/Planners	Provide a grid-like street network	GI Plan Reference: Sketch Plan (S-14-001)		2	2	2
C-5	Parking lots not exceed Required Minimum	HCM/Planners	Surface parking lots do not exceed required parking ratios (1 point); plan takes advantage of shared parking provisions parking structure provided in deck or beneath building; does not include garages within individual units (4 points)	GI Plan Reference: Sketch Plan (S-14-001)		4	4	4
C-6	Exceed Minimum Open Space Requirements	HCM/Planners	1 point for every 3% above required minimum open space for the TOD zone, 1 point for every 10% of non-parkable open space above 50% of the site (up to 3 points).	GI Report GI Plan SDP (SDP-14-004) Sheet 23 Reference: Sketch Plan (S-14-001)		5	5	5
C-7	Open Spaces and Amenity Areas	HCM/Planners	Open space along public/private roads available for public use	Publicly accessible open space will be provided at the nature trail and clubhouse and pool.	GI Plan Reference: Sketch Plan (S-14-001)	2	2	2

Credit No.	Credit	Champion (Name, Role)	Requirement	Site Development Plan Parcel ID / GI Strategies	Documentation Location	M #	P #	Required Points
D-1	Stream Restoration or Wetland Creation or Restoration	Ecoscience	Restoration of degraded or lost stream channel, or restoration of degraded wetlands (padding scale based on % of length of stream restored and % of acres of wetland created or restored)	Provide wetland restoration for 97,000 SF and stream restoration for stream segment 01-2 (100-120 FT of channel).	Reference: Sketch Plan (S-14-001)	10	10	10
D-2	Habitat Management Plan	Ecoscience	Prepare and implement plan that identifies, conserves and enhances natural resources and ecological communities (may include clean up of debris, removal of invasives, etc.)	Provide Habitat Management Plan	Reference: Sketch Plan (S-14-001)	4	4	4
D-3	25% Slope Preservation	N/A	Protect all existing steep slopes as defined by County regulations; provide 20' minimum buffer at top of 25% slope (2 points)	N/A		2	0	0
D-4	10% Slope Preservation	FOCUS HCM/Planners	Protect existing 10% slopes (protect minimum 1/2 acre, with 5' buffer scale based on area % protected)	Preserve between 51-75% of 10%-24% slopes	GI Plan Reference: Sketch Plan (S-14-001)	4	3	3
D-5	Minimize Grading and Site Disturbance	FOCUS HCM/Planners	Minimize total of disturbance: 1 point for every 20% of site undisturbed (1 point), 30% (2 points), 40% (3 points), balanced and fill on site (2 points), retaining walls 3-5 ft (deduct 1 point), 6-8 ft (deduct 2 points), 9-12 ft (deduct 3 points), no new created steep slopes over 20% (1 point), minimal soil retained in lot and planting areas (1 point)	Balance Cut and Fill on entire site - 2 points Disturbance: retaining walls - 0 points No new > 25% steep slopes - 1 point Leave more than 30% of site undisturbed - 2 points	GI Plan GI Report SDP (SDP-14-004) Sheet 4, 21 Reference: Sketch Plan (S-14-001)	5	0	0
D-6	Exceed Minimum Forest Conservation Requirements	Ecoscience FOCUS HCM/Planners	1 point for every 10% of existing forest retained above break even point, 1 point for every 10% of on-site forest planted in excess of reforestation obligation	Provide 5.0 acres of planting area (30% over reforestation obligation)	Reference: Sketch Plan (S-14-001) Final Plan (F-12-028)	0	0	0
D-7	Save Trees Above 10' Minimum Canopy	N/A	1 point for protecting each 25% of all specimens trees in 100' Forest Conservation Area or in trees that are being saved	N/A		4	0	0
D-8a	Exceed Minimum Stream Buffer Requirements	FOCUS	75' buffer required for perennial and intermittent streams inside PSA, 100' buffer required for perennial and intermittent streams outside PSA	75' buffer required for perennial and intermittent streams inside PSA	Reference: Sketch Plan (S-14-001) Final Plan (F-12-028)	RECD		
D-8b	Exceed Minimum Stream Buffer Requirements	Ecoscience FOCUS HCM/Planners	2 points for each additional 20' of buffer provided in excess of requirements in D-8a outside of adjacent buffer or floodplain	Provide 100' FT Stream Buffer (75' FT enhanced buffer) - 6 points	Reference: Sketch Plan (S-14-001) Final Plan (F-12-028)	6	6	6
D-9	Exceed Minimum Wetland Buffer Requirements	Ecoscience FOCUS HCM/Planners	2 points for each additional 20' of buffer provided in excess of requirements in D-8a outside of adjacent buffer or floodplain	N/A		4	0	0
D-10	Floodplain Buffer	N/A	1 point for each 25' of buffer to floodplain outside required or provided wetland or stream buffer	N/A		2	0	0
E - Site Landscape Improvements								
E-1	Landscape	N/A	1 point for each 10% increase in number of plants (must be native plants) provided above minimum required in Landscape Manual; retain or plant trees on south and west sides of buildings; increase trees in the parking areas and along sidewalk and paths	Provide 20% increase in Landscape Requirements	GI Plan SDP (SDP-14-004) Sheet 17-20 Reference: Sketch Plan (S-14-001)	0	2	2
E-2	Native Plants	N/A	1 point for 80%, 2 points for 90%, 3 points for 100% of all plants native to within 200 miles of site	N/A		0	0	0
E-3	No Invasive Plants	HCM/Planners	No plants that are on the USDA or Cooperative Extension Service lists of invasive plants	Will not plant invasive plants	GI Plan SDP (SDP-14-004) Sheet 17-20 Reference: Sketch Plan (S-14-001)	RECD		
E-4	Limit Turf	HCM/Planners	Turf does not exceed 50% of landscaped area (1 point); no turf on new created steep slopes 25%+ or in already landscaped areas (1 point); reseed areas must be planted in native vegetation	Will not plant conventional turf in densely shaded areas and on newly created steep slopes	GI Report Reference: Sketch Plan (S-14-001)	2	1	1

Credit No.	Credit	Champion (Name, Role)	Requirement	Site Development Plan Parcel ID / GI Strategies	Documentation Location	M #	P #	Required Points
F-1	Native Wet Harvesting System	Straighten	Collect and make use of water runoff from minimum 50% of roof area; provide storage system and maintenance/management program	Provide rainwater harvesting for school and recreational uses	GI Plan Reference: Sketch (S-14-001) SDP (SDP-12-075)	0	5	5
F-2	Water-Resistant Walkways	N/A	Use water permeable materials in 10% or more of walkways; provide maintenance program	N/A		4	0	0
F-3a	Low Impact Development (LED) Stormwater Treatment	FOCUS	Meets minimum Design Requirements, including use of bioretention (imp. for parking lots), rain gardens, rain barrels, stormwater cisterns, green roof, etc.	No dry ponds	GI Plan SDP Plan (SDP-14-004) Sheets 11-15 Reference: Sketch Plan (S-14-001)	RECD		
F-3b	Low Impact Development (LED) Stormwater Treatment	FOCUS	Meets Design Manual requirements, including use of bioretention (imp. for parking lots), rain gardens, rain barrels, stormwater cisterns, green roof, etc.	Will provide more than 9% water quality volume stored and infiltrated on-site	GI Plan GI Report SDP Plan (SDP-14-004) Sheets 11-15 Reference: Sketch Plan (S-14-001)	0	6	6
G - Energy Efficiency								
G-1	Light Fixtures	FOCUS HCM/Planners	Select all site lighting fixtures to meet light and glare requirements; include controls or timers on all exterior site lighting fixtures	N/A		4	0	0
G-2	Solar Orientation	N/A	Orient 100% (1 point) or 75% (2 points) of buildings to make available for solar strategies	N/A		3	0	0
G-3	High-Efficiency Energy Efficiency	N/A	Select high efficiency fixtures for parking lot and other site lighting fixtures	N/A		0	0	0
H - Materials Beneficial to the Environment / Waste Management								
H-1	Environmentally Preferable Site Products	Straighten FOCUS HCM/Planners	Select products from a list including recycled materials (concrete, asphalt, bricks, etc.), materials with recycled content, salvaged or engineered materials	Use 20%-25% environmentally preferable materials	GI Plan GI Report	0	0	0
H-2	Reduce Heat Island Effect of Paving	N/A	Use light-colored or high albedo materials and/or porous paving with a minimum solar reflective index of 0.6 or over for at least 50% of the site hardscape	N/A		2	0	0
H-3	Site Construction Waste Management	Straighten	Develop and implement a construction waste management plan to divert, reuse, recycle or reduce the amount of site material sent to the landfill by 25% (2 points) or 50% (4 points)	Divert 75% or more site construction waste	GI Report	4	4	4
H-4	Regionally Produced Materials	Straighten FOCUS HCM/Planners	20% of common and public infrastructure materials from within 200 miles	Use regionally produced materials for 20% of site materials	GI Report	3	3	3
I - Operations and Maintenance Situations								
I-1	HCA Documents	Straighten	Include information about green site features and maintenance requirements in HCA documents	Comply with HCA document	Reference: SDP-13-068	RECD		
I-2	Maintenance Manual for Owner / HCA / Manager	Straighten	Provide a manual that includes information on how to maintain the green features of the site, including paving materials, landscaping and stormwater management; LID and encourages additional green activities such as recycling, gardening, etc.	Comply with Maintenance Manual	Reference: SDP-13-068	RECD		
I-3	Public Air Announcements of Sustainable Community	Straighten, HCM	Develop a program to advertise the environmental benefits of the community	Comply with public awareness strategy	Reference: SDP-13-068			
TOTAL GREEN NEIGHBORHOOD SITE POINTS						167	87	
Number of points required to obtain Green Neighborhood Allocation						90		
Third Party Certification								
By affixing my signature below, the undersigned does hereby declare and affirm to Howard County that the targeted Green Neighborhood Site Credits and point total specified in the Green Neighborhood Site Compliance Checklist are reasonable and achievable.								
Signature: <i>Charles A. Koppell</i>			Title: PRESTON			Date: 6-19-15		
Signature: <i>Alexander Kelly Stino</i>			Title: ALEXANDER KELLY STINO			Date:		
Submission (mark "X" where applicable):			Site Development Plan (SDP-14-004)					

THERE IS NO 'AS BUILT' INFORMATION PROVIDED ON THIS SHEET.

OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT GREEN NEIGHBORHOOD PLAN
PARCEL 'P' - PRESCHOOL W/ RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 22 OF 24

HCM. PROJECT NUMBER
213032.30
SCALE:
As Shown

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad E. Ehrlich
Chief, Development Engineering Division
Rest S. Smith
Chief, Division of Land Development
Nalini J. Jha
Director

Date: **10-14-15**
Date: **10-21-15**
Date: **10-21-15**

hord | coplan | macht
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LANDSCAPE ARCHITECTURE
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410 837 4530 fax
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DESIGN BY:	DATE:	BY:	NO.	REVISION	DATE
MF	12.19.2014				
MF					
MF					

GREEN NEIGHBORHOOD NOTES:

- A-2 THE DESIGN AND DEVELOPMENT TEAM INCLUDES A LEED AP (MATTHEW FITZSIMMONS- HORD COPLAN MACTH), ENVIRONMENTAL PROFESSIONAL (JOHN CAWLES- ECO-SCIENCE PROFESSIONALS, INC.), LANDSCAPE ARCHITECT (JOSH KILRAIN- HORD COPLAN MACTH) AND AN ENGINEER (JOHN RACONOCCHIA PE- CENTURY ENGINEERING, INC)
- A-3 THE THIRD PARTY CERTIFICATION IS PROVIDED BY CHARLES ALEXANDER, LEED-AP OF ALEXANDER DESIGN STUDIOS.
- B-1a THE 111.1 ACRE DEVELOPMENT CONSISTS OF 28.4 ACRES OF PREVIOUSLY DEVELOPED LAND (25.6% OF THE OXFORD SQUARE DEVELOPMENT).
- B-3a OXFORD SQUARE WILL PROVIDE TWO TRANSIT STOPS FOR THE PROPOSED PRIVATE SHUTTLE SERVICE CONNECTING OXFORD SQUARE TO THE DORSEY MARC COMMUTER RAIL STATION. THE STOPS WILL BE WITHIN 1/4 WALKING DISTANCE TO ALL DWELLING UNITS.
- B-3b OXFORD SQUARE WILL PROVIDE ONE SHELTER AT ONE OF THE PRIVATE SHUTTLE STOPS. THE SHELTER WILL COMPLY WITH COUNTY APPROVED CRITERIA INCLUDING BENCHES AND LIGHTING.
- C-1 OXFORD SQUARE WILL PROVIDE THREE DIVERSE USES OTHER THAN RESIDENTIAL: INSTITUTIONAL (MIDDLE SCHOOL BUILDING AND OUTDOOR CLASSROOM SPACE, ELEMENTARY SCHOOL), CIVIC (SCHOOL'S RECREATIONAL PLAYING FIELDS AND SHARED-USE PATH) AND OFFICE.
- C-2 OXFORD SQUARE IS LOCATED WITHIN THE EXISTING PLANNED WATER AND SEWER SERVICE AREA.
- C-3c OXFORD SQUARE WILL PROVIDE A MINIMUM OF TWO PEDESTRIAN SYSTEM AMENITY EXPERIENCES: 1) SHARED USE PATH AND NATURE TRAIL (TRAIL SIGNS AND MARKERS, BENCHES, LITTER RECEPTACLES, INFORMATIONAL SIGNS, BIKE RACKS), 2) THE LAWN (BENCHES, EXTERIOR LIGHTING, SHADE TREES, INFORMATIONAL SIGNS), 3) RESIDENTIAL COURTYARDS AND MEWS (BENCHES), AND 4) SCHOOL SITES (PLAYING FIELDS, BENCHES, BIKE RACKS)
- D-8b OXFORD SQUARE WILL PROVIDE A MINIMUM 75 FT ENHANCED STREAM BUFFER.
- E-3 OXFORD SQUARE WILL NOT PLANT INVASIVE PLANTS.
- E-4 OXFORD SQUARE WILL NOT PLANT TURF IN DENSELY SHADED AREAS.
- F-3b OXFORD SQUARE WILL PROVIDE AT LEAST 51% WATER QUALITY VOLUME STORED AND INFILTRATED/RE-USED ON-SITE.

B-3a & B-3b VICINITY MAP (Scale: 1"= 600')



GREEN NEIGHBORHOOD CALCULATIONS & TABLES:

A-4b Priority Parking for Low-Emitting and Fuel Efficient Vehicles

	Complete Build-Out	SDP
Total Number of Off-Street Parking Spaces:	3,483 Spaces	64 Spaces
Total Number of Proposed Preferred Parking Spaces:	175 Spaces	4 Spaces
Percent of Preferred Parking Spaces:	5.0%	6.3%

Note: 1. This SDP submission provides twenty-four additional surface parking spaces over the parking proposed on Sketch Plan (S-14-001)

A-4c Compact Development

Total Dwelling Units:	1,492 DU
Residential Land Area:	41.0 AC
Residential Density:	36.4 DU/AC

A-4d Walkable Streets

	Complete Build-Out	SDP
Length of Buildings Frontage Oriented Towards the Public Space:	10,422 FT	287 FT
Total Length of Building Frontage:	11,877 FT	554 FT
% of Building Frontage Oriented Towards the Public Spaces:	87.7%	51.8%
Length of Building Frontage with Service or Garage Openings:	754 FT	0
Total Length of Building Frontage (Oriented Towards Public Spaces):	11,176 FT	287
% of Building Frontage with Service or Garage Openings:	6.7%	0.0%

Note: 1. Complete Build-Out Includes Sketch Plan (S-14-001), Approved Final Plan (F-12-026), Approved Middle School SDP (SDP-12-075) and modifications made with this SDP submission.

B-1a Redevelopment Site

Gross Site Area:	111.1 Acres
Area of Existing Development (Impervious Area):	28.4 Acres
Percent of Previously Developed:	25.6%

B-3a Transit Access & Amenities for Reduced Auto Dependence (Stop)

Residential Buildings within 1/4 Mile	Total Number of Qualifying Units	Percent of All Units
All Buildings	1,492 DU	100%

C-1 Diversity of Uses

Residential Uses	Number of Units	Percent of Total Units
Townhouses and Apartments	1,492 DU	100%

Nonresidential Uses	Area	SF per Dwelling Unit
Office:	154,000 SF	103 SF/DU
Institutional: Middle School ¹	95,747 SF	
Middle School Outdoor Classroom Space ¹	2,500 SF	
Elementary School	101,014 SF	
Institutional Subtotal:	199,261 SF	134 SF/DU
Civic: Recreational Playing Fields (School Site) ¹	236,139 SF	
Northern Loop Shared-Use Path (8 FT wide) ² and Trail heads ²	19,504 SF	
Southern Loop Shared-Use Path (8 FT wide) and Trail heads	9,240 SF	
Civic Subtotal:	264,883 SF	178 SF/DU

Notes: ¹ Revised per the approved Middle School SDP (SDP-12-075)
² 12,801 SF of Shared-Use Path will be constructed on Middle School site (SDP-12-075)

C-3a Pedestrian System (Paths and Trails)

Northern Shared Use Path:	Width of Path: 8 FT Length: 2,438 FT (0.46 Miles)
Southern Shared Use Path:	Width of Path: 8 FT Length: 1,155 FT (0.22 Miles)
Mulch Nature Trail	Width of Path: 5 FT Length: 595 FT

C-4 Street Connections

Street Name / ID (per Sketch Plan)	Street Length	Qualifying Street
Saint Margaret's Boulevard	1,684 FT	Yes
Banbury Drive	2,589 FT	Yes
Road A	220 FT	No
Road B	514 FT	No
Road C	228 FT	No
Road D	740 FT	Yes
Road E (North and South)	1,450 FT	Yes
Road F	1,016 FT	Partial
Road G	120 FT	No
Road H	120 FT	No
Road J	465 FT	Yes
Road I	245 FT	No
Summary		
Total Street Length:	9,391 FT	
Total Connected Street Length:	7,393 FT	
Percent Connected Streets:	78.7%	

Note: 1. Final Plan (F-13-095) contributes +/- 592 linear feet of Saint Margaret's Boulevard and +/- 362 linear feet of Banbury Drive to the complete build out (per Sketch Plan (S-14-001))

C-6 Exceed Minimum Open Space

	Complete Build-Out
Net Acreage:	101.6 AC
Required Amenity Space (10% of Net Acreage):	10.2 AC
Provided Amenity Space:	15.7 AC
Percent Increase above the Minimum Required:	53.9%

Notes: 1. Complete Build-Out includes Sketch Plan (S-14-001), Approved Final Plan (F-12-026), Approved Middle School SDP (SDP-12-075) and modifications made with this SDP submission.
2. This SDP submission contributes 0.42 Acres of Amenity Space to the Complete Build-Out goal.

C-7 Green Spaces and Amenity Areas

Parcel	Road Frontage	Amenity Type	Amenity Area
Open Space 1: The Nature Trail	160 FT	Nature Trail, Benches, Trail Signage, Educational Signage	31,265 SF (0.72 AC)
Open Space 2: Pool House and Pool	+/- 138 FT (length along Private Road 'J')	Pool house, Pool, Fitness Room, and Warming Kitchen	11,282 SF (0.26 AC)

D-4 15% Slope Preservation

	Complete Build-Out
Total Area of Slopes 15-24.9%:	504,072 SF
Area of Undisturbed Slopes 15-24.9%:	289,178 SF
Percent of Undisturbed Slopes:	57.4%

Notes: 1. The area of undisturbed slopes is the summation of slopes impacted by the greatest extent of LODs accumulated from the entire development.
2. Complete Build-Out includes Sketch Plan (S-14-001), Approved Final Plan (F-12-026), Approved Middle School SDP (SDP-12-075) and future environmental restoration work.
3. SDP submission land area is located within the Complete Build-Out LOD, therefore there are no impacts to undisturbed areas.

D-5 Minimize Grading and Site Disturbance

	Complete Build-Out
Gross Area of Site (GN Boundary):	111.1 AC
Existing Impervious Cover:	28.4 AC
Area of Site:	82.7 AC
Area of Site to Remain Undisturbed:	28.4 AC
Percent of Site to Remain Undisturbed:	34.3%
Ratio of Cut to Fill:	1:1.3 Ratio
Retaining Wall:	< 3 FT

Notes: 1. Complete Build-Out Calculations are based on the aggregate greatest extent of LODs from the submitted Sketch Plan (S-14-001), Approved Final Plan (F-12-026) and Approved Middle School SDP (SDP-12-075).
2. This SDP submission land area is located within the Complete Build-Out LOD therefore, there are no impacts to undisturbed areas.
3. This SDP submission will not import or export soil from Oxford Square.

D-6 Exceed Minimum Forest Conservation Requirements

Afforestation Obligation:	8.50 AC
Afforestation Provided in Excess of Obligation:	1.75 AC
Percentage of Provided in Excess of Obligation:	50.00%

D-8b Exceed Minimum Stream Buffer Requirements

Total Stream Buffer Width:	150 FT
Width of Buffer Exceeding Requirements:	75 FT
Total Length of Stream Buffer:	1,984.2 FT
Length of Stream Buffer Outside Other Buffers:	1,312.3 FT
Percent of Stream Buffer Outside Other Buffers:	66.2%

E-1 Landscaping

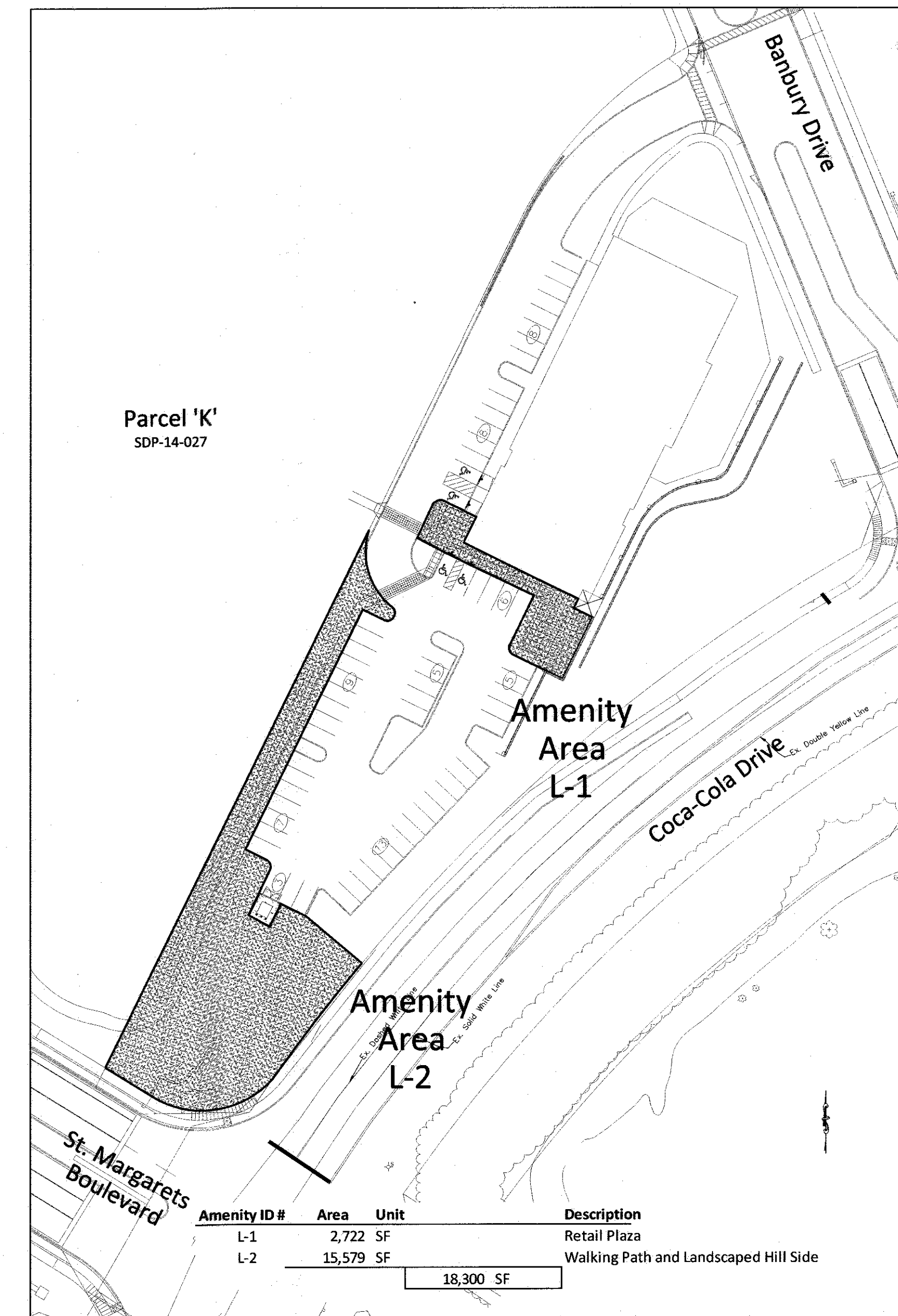
Plants Required	Shade Trees	Evergreen	Shrubs	Total	Percent
Number of Plants Required by Landscape Manual	26	25	35	86	
Number Excess Plants Required for 6M Credits	6	5	7	18	20.9
Landscape Manual and 6M Requirements	32	30	42	104	

Plants Provided

	Shade Trees (Substitute)	Evergreen (Substitute)	Other Trees (Substitute)	Shrubs (Substitute)	Total
Number of Plants Provided to Meet Landscape Manual Requirements	18	6	19	35	86
Number of Plants Provided to Meet 6M Credits	21	0	5	0	33
Total Number of Plants Provided	39	6	24	35	119

Notes: 1. Shade Tree Substitute (70 Shrubs/10= 7 Required Shade Trees)
2. Shade Tree Substitute (2 Ornamentals= 1 Required Shade Trees)
3. Evergreen Substitute (19 Ornamentals= 19 Evergreen)
4. Excess Native Evergreen Substitute (4 Native Ornamentals= 4 Excess Evergreen)
5. Excess Native Evergreen Substitute (0.5 Native Shade Tree x 2= 1 Excess Evergreen)
6. Excess Native Shrub Substitute (1.5 Native Shade Tree x 10= 15 Excess Native Shrubs)
7. Native Shade Trees (5 LST, 10 UAL, 8 TDI)= 23
8. Native Ornamental (6 MVI)
9. This SDP provides 15 additional Native Shade Trees above the goal of 20% additional native shade trees.

AMENITY SPACE (Scale: 1"= 60')



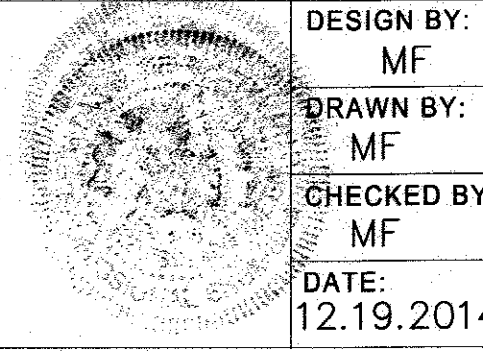
THERE IS NO 'AS BUILT' INFORMATION PROVIDED ON THIS SHEET.

OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 10-14-15
Date: 10-21-15
Date: 10-21-15

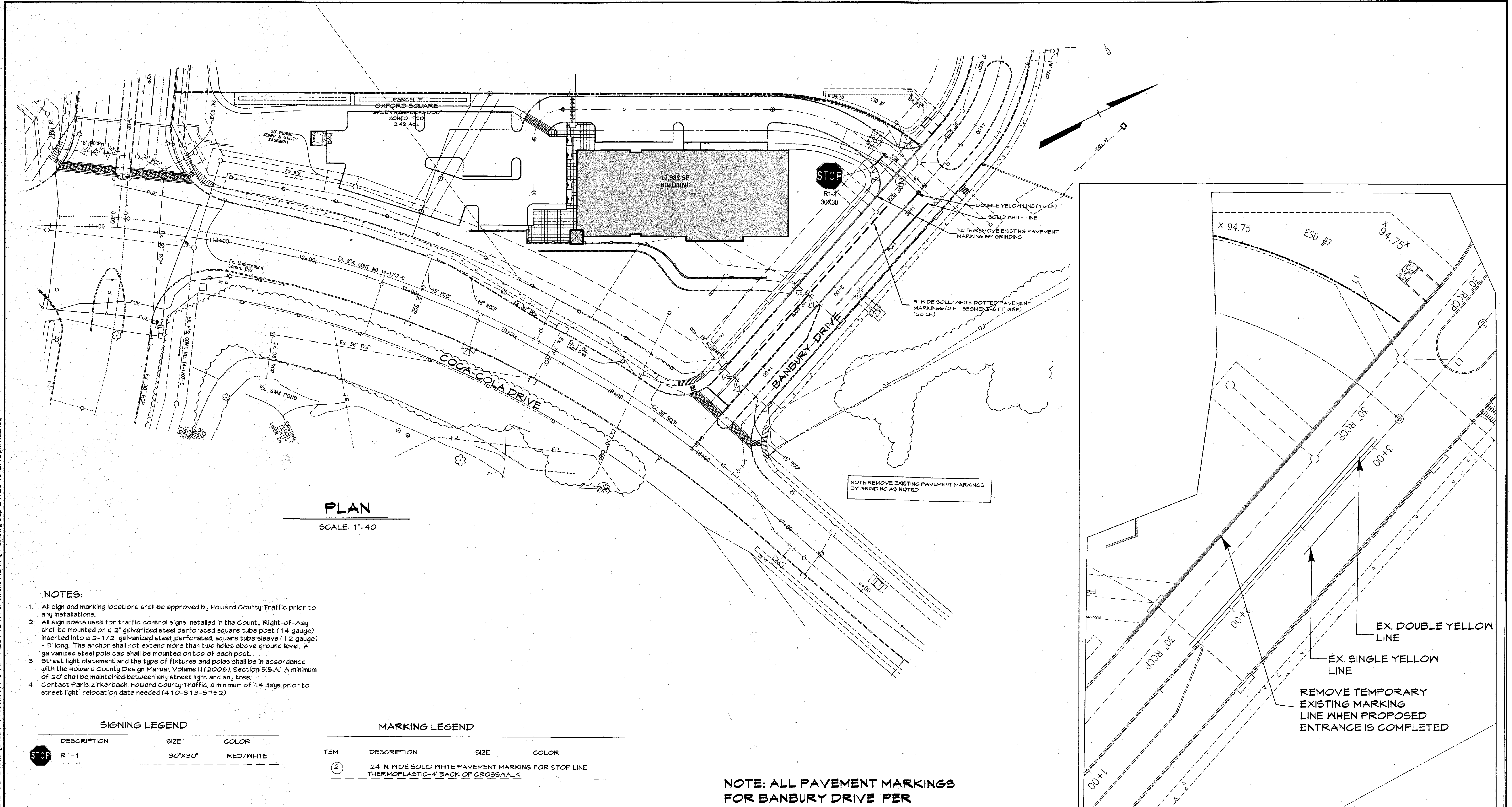
hord | coplan | macht
HORD COPLAN MACTH, INC.
ARCHITECTURE
LANDSCAPE ARCHITECTURE
PLANNING
INTERIOR DESIGN
750 E. Pratt Street, Suite 1100
Baltimore, MD 21202
410 837 7311
410 837 6530 fax
www.hcm2.com



DESIGN BY:	DATE:	BY:	NO.:	REVISION:	DATE:
MF	12.19.2014				
MF					
MF					

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

AS BUILT GREEN NEIGHBORHOOD PLAN
PARCEL 'P' - PRESCHOOL W/ RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1
SHEET 23 OF 24
SDP-14-004



PLAN
SCALE: 1"=40'

- NOTES:**
- All sign and marking locations shall be approved by Howard County Traffic prior to any installations.
 - 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. The anchor shall not extend more than two holes above ground level. A galvanized steel pole cap shall be mounted on top of each post.
 - Street light placement and the type of fixtures and poles shall be in accordance with the Howard County Design Manual, Volume III (2006), Section 5.5.A. A minimum of 20' shall be maintained between any street light and any tree.
 - Contact Paris Zirkebach, Howard County Traffic, a minimum of 14 days prior to street light relocation date needed (410-313-5752)

SIGNING LEGEND

DESCRIPTION	SIZE	COLOR
R-1-1	30"X30"	RED/WHITE

MARKING LEGEND

ITEM	DESCRIPTION	SIZE	COLOR
②	2.4 IN. WIDE SOLID WHITE PAVEMENT MARKING FOR STOP LINE THERMOPLASTIC-4' BACK OF CROSSWALK		

NOTE: ALL PAVEMENT MARKINGS FOR BANBURY DRIVE PER F-12-026

THERE IS NO "AS BUILT" INFORMATION PROVIDED ON THIS SHEET.



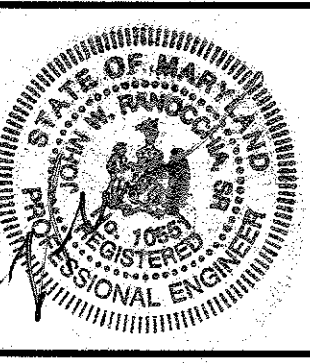
OWNER
KELLOGG - CCP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

EX. MARKING ALONG BANBURY DRIVE
SCALE: 1"=20'
40 20 0 40 80
SCALE: 1"=40'

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

10-14-15
10-21-15
10-21-15

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



DESIGN BY:	M.J.P./KAD
DRAWN BY:	M.S.S.
CHECKED BY:	
DATE:	7.27.2015
BY:	NO.
REVISION	DATE

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

PAVEMENT MARKING AND SIGN PLAN
A5 BUILT
PARCEL 'P' - PRESCHOOL W/RETAIL BUILDING
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
TAX MAP: 38 PARCEL: 761 GRID: 20 ZONED: TOD
ELECTION DISTRICT 1 HOWARD COUNTY, MARYLAND
SHEET 24 OF 24

C.E.I. PROJECT NUMBER
131117.00
SCALE:
1"=40'