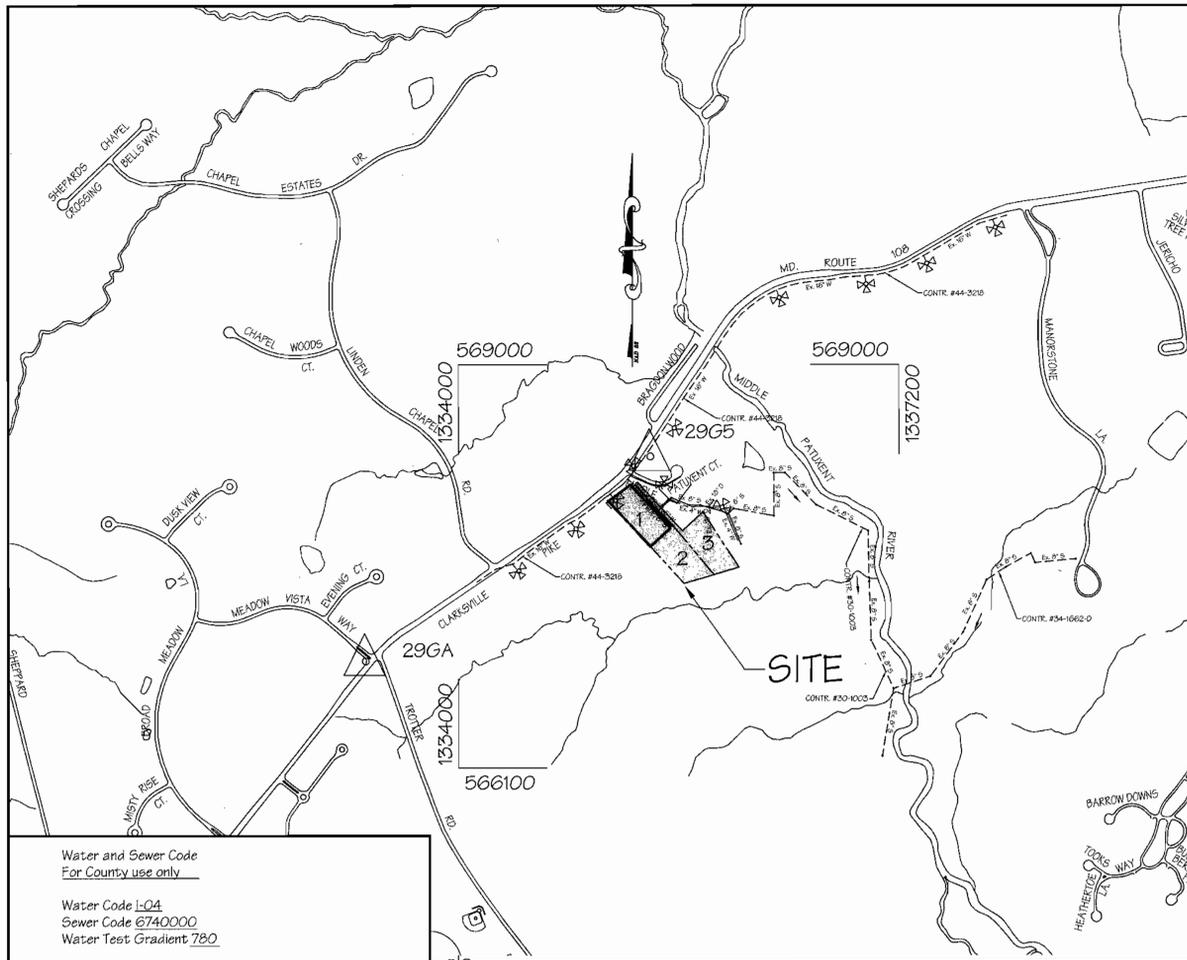


SHEET INDEX	
Sheet Number	Description
1	COVER SHEET
2	PLAN VIEW
3	WATER & SEWER PROFILES
4	SEDIMENT CONTROL PLAN, NOTES AND DETAILS

QUANTITIES					
AS BUILT					
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER	
STD Sewer Manholes	4 ea.	4 EACH	PRECAST CONC.	ATLANTIC CONCRETE PRODUCTS	
* 8" D.I.P. Sewer	392 L.F.	392 L.F.	8" PVC	BELAIR RD. SUPPLY/J.M. MANUFACT.	
4" PVC SHC	85 L.F.	85 L.F.	4" PVC	BELAIR RD. SUPPLY/J.M. MANUFACT.	
1" WHC	40 L.F.	03 L.F.	1" COPPER	BELAIR RD. SUPPLY/CAMBRIDGE LBB	
6" Water	473 L.F.	408 L.F.	6" D.I.P.	GRIFFIN PIPE PRODUCTS	
16" x 6" TS & V	1 ea.	1 EACH	S.S./D.I.P.	BELAIR RD. SUPPLY/J.C.M.	
Fire Hydrant	1 ea.	1 EACH	MUELLER	BELAIR RD. SUPPLY/MUELLER CO.	
6" Valve	1 ea.	1 EACH	D.I.P.	BELAIR RD. SUPPLY/MUELLER CO.	
6" Cap & Buttress	1 ea.	1 EACH	D.I.P.	BELAIR RD. SUPPLY/U.S. PIPE BOUNDARY	
Water Meter Vaults	2 ea.	2 EACH	CONCRETE	BELAIR RD. SUPPLY/HORNÉ CONCRETE	

NAME OF UTILITY CONTRACTOR: **CONSOLIDATED CONSTRUCTION SERVICES** CHECK BOX: SURVEY & DRAFTING DIVISION AS BUILT DATE: **11-21-03**

\* D.I.P. CHANGED BY REDLINE TO P.V.C. PIPE



Water and Sewer Code For County use only	
Water Code 1-04 Sewer Code 6740000 Water Test Gradient 780	
Type of Building:	Single Family Detached
Number of Lots/Parcels:	3 (3 Buildable)
Number of W.H.C.'S:	3
Number of S.H.C.'S:	4
Drainage Area:	Middle Patuxent
Treatment Plant:	Little Patuxent Water Reclamation Center

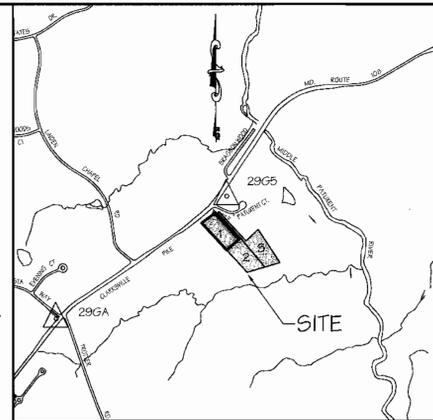
LOCATION MAP Scale: 1" = 600'

# Contract No. 34-4110-D VETICK PROPERTY Lots 1, 2 & 3 Water & Sewer Extension Howard County, Maryland

## BENCHMARKS

HOWARD COUNTY GEODETIC CONTROL: 29GA  
Elevation: 450.749  
Station is a standard stamped disc set on top of concrete monument. Located 2.5' from the edge of paving at the fillet, southwest of the Route 108 Meadow Vista Road Intersection.

HOWARD COUNTY GEODETIC CONTROL: 29G5  
Elevation: 388.133  
Station is a standard stamped disc set on top of concrete monument. Located 8.0' south of the Rt. 108 eastbound lane, approximately 142' from the east side of Middle Patuxent Court.



VICINITY MAP Scale: 1" = 1000'

## GENERAL NOTES

### PART I:

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All horizontal controls are based on Maryland State Coordinates. [North American Datum of 1983 (NAD '83)].
- All vertical controls are based on U.S.G.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 12". Clear all poles by 2'-0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractors work requires the bracing of additional poles, any cost incurred by the owner for bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of poles.
- For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
- Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:  
State Highway Administration 410-531-5533  
BGE Contractor Services 410-850-4620  
BGE Underground Damage Control 410-291-4607  
Miss Utility 1-800-257-7777  
Colonial Pipeline Co. 410-549-4120  
Howard County Department of Public Works Bureau of Utilities 410-313-4900  
Bell Atlantic 1-800-446-5266
- Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip area not to be removed or damaged by the contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114 (a) of the Howard County Code.

### PART II: WATER

- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3'-1/2" cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawing.
- Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained an buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 11 connection with a 3/4" meter.

### PART III: SEWER

- All sewer mains to be D.I.P. and P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have water tight frame and covers; Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 16" above finished grade unless otherwise noted on the drawings.
- Houses with the symbol "C.N.S." indicates that cellar cannot be served.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Meyer* 7/28/03  
Signature: *Jim Meyer* Date: 7/28/03  
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John K. Roberts* 7/28/03  
Signature: *John K. Roberts* Date: 7/28/03  
HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.  
+ 6P03-70

**AS BUILT**  
DATE: Nov. 21, 2003

DEPARTMENT OF PUBLIC WORKS  
*Ruth Reinger* 7-10-03  
Signature: *Ruth Reinger* DATE: 7-10-03  
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
*Chris ...* 7/21/03  
Signature: *Chris ...* DATE: 7/21/03  
CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
Engineers, Surveyors, Planners  
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045  
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	S.D.H.				
DRAWN	D.J.M.				
CHECKED	B.D.B.				
DATE	07/20/03	BY	NO.	REVISION	DATE

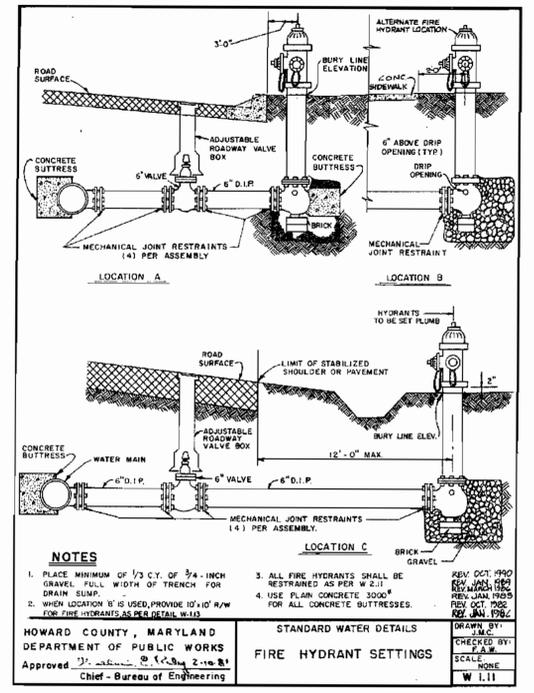
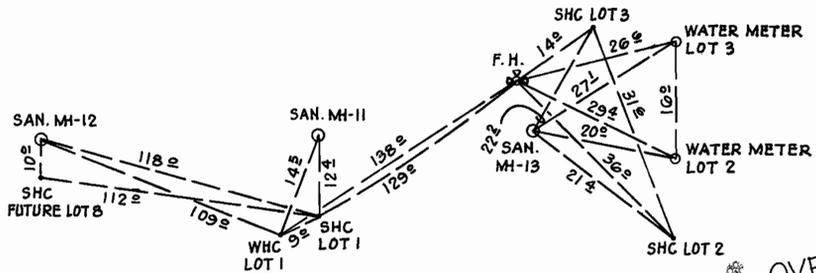
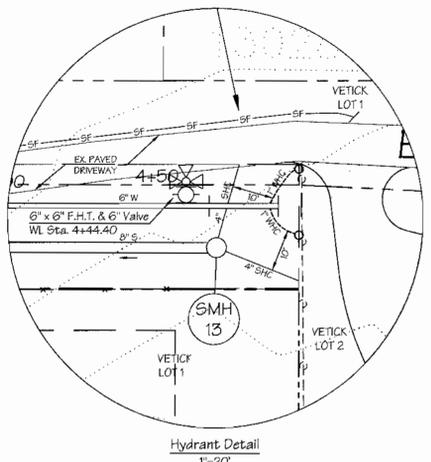
COVER SHEET  
600 SCALE MAP NO. 29  
BLOCK 14

**VETICK PROPERTY**  
Lots 1, 2 & 3  
Water & Sewer Extensions  
5th Election District - Howard County, Maryland  
Contract No: 34-4110-D

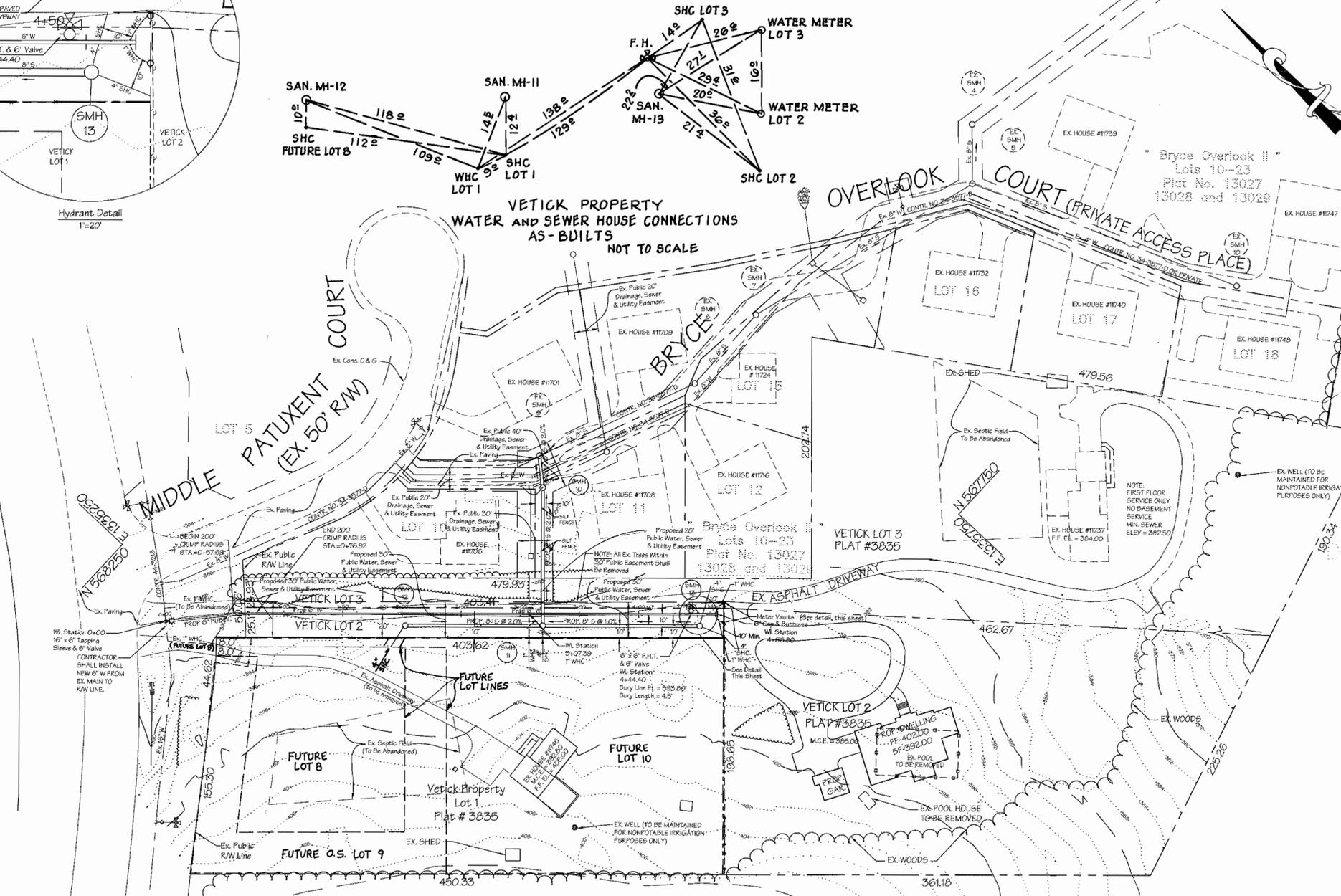
SCALE  
AS SHOWN  
SHEET  
1 OF 4

LOT NO.	INV. @ MAIN	INV. @ PL/EASMT	MIN. C.E.
1	387.50	387.70	399.00
2	379.33	379.53	385.00
3	379.33	379.53	382.50**
<b>FUTURE LOT 8</b>	<b>385.00</b>	<b>385.40</b>	<b>391.50</b>

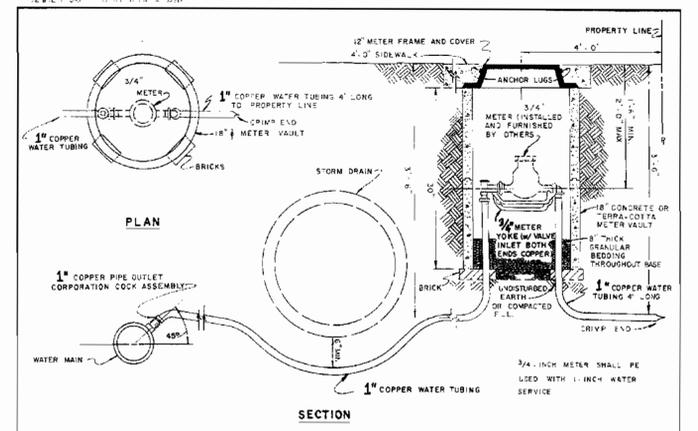
\* Slope between property line and farthest point from main in structure is assumed to be 1.0% minimum - 2.0% max.  
 \*\* No basement service.  
 \*\*\* Future Lot 10



MD. ROUTE 108  
(EX. R/W VARIES)



HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PARKS AND RECREATION  
 L. 740 / E. 708



HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS  
 Approved: [Signature] Chief - Bureau of Engineering

STANDARD WATER DETAILS  
 STANDARD INSTALLATION  
 3/4" METER SETTINGS

DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 SCALE: NONE  
 W 3. 31

**AS BUILT**  
 DATE: Nov. 21, 2003

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
 [Signature] 7/28/03

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 [Signature] 7/28/03

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.

DEPARTMENT OF PUBLIC WORKS  
 [Signature] 7-10-03  
 CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
 [Signature] 7/31/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
 Engineers, Surveyors, Planners  
 9250 Runsey Road, Suite 106 Columbia, Maryland - 21045  
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

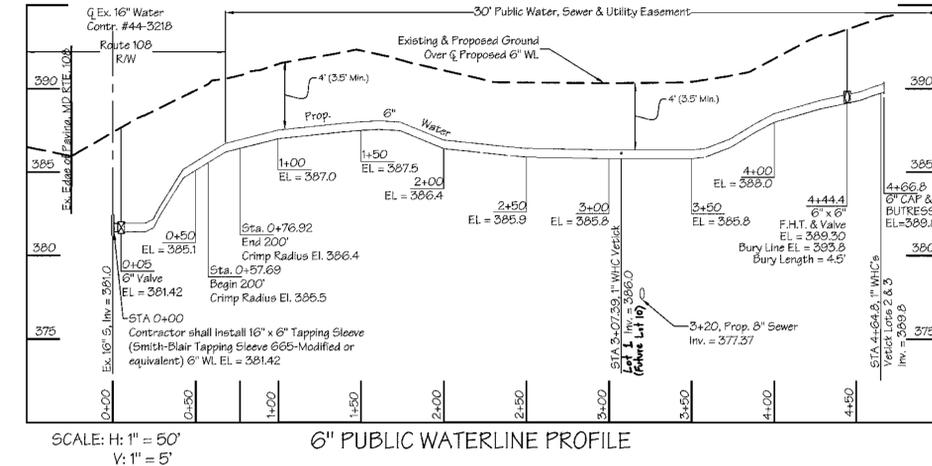
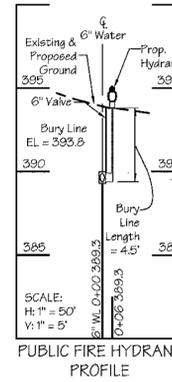


DESIGNED	DATE	BY	NO.	REVISION	DATE
S.D.H.	07/2003				
D.J.M.					
B.D.E.					

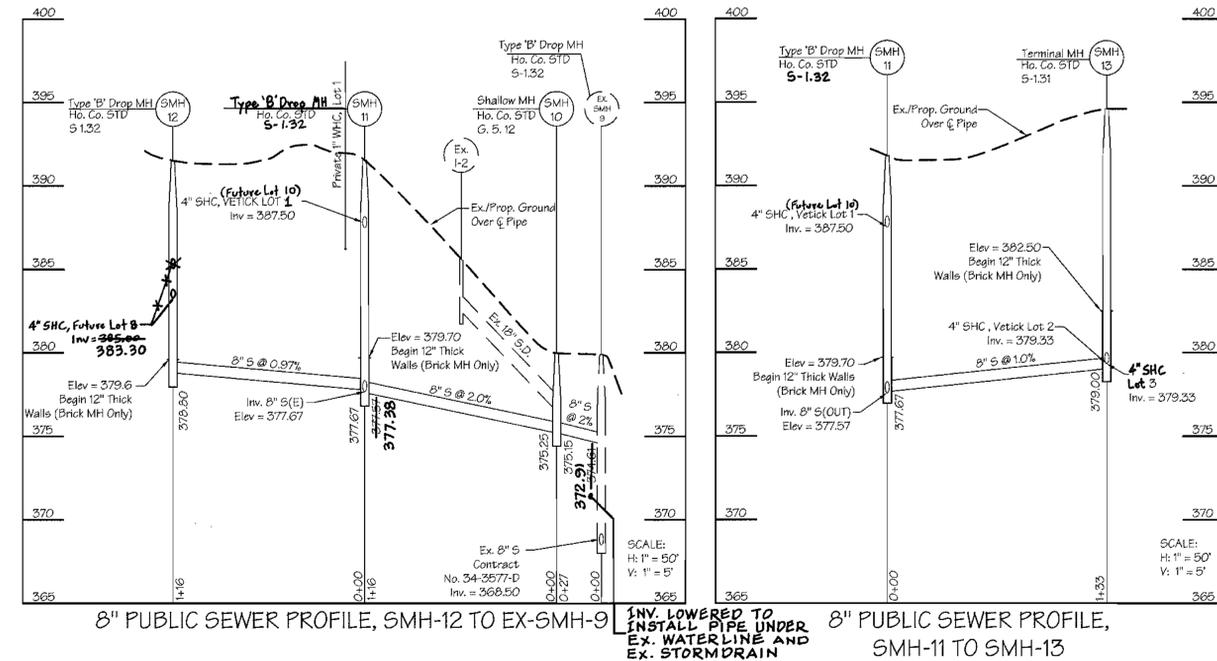
600 SCALE MAP NO. 29  
 BLOCK 14

PLAN VIEW  
 VETICK PROPERTY  
 Lots 1, 2 & 3  
 Water & Sewer Extensions  
 5th Election District - Howard County, Maryland  
 Contract No: 34-410-D

SCALE  
 1" = 50'  
 SHEET  
 2 OF 4



SEWER STRUCTURE SCHEDULE					
MANHOLE NO.	TOP RIM ELEV.	INV. IN	INV. OUT	LOCATION	REMARKS
EX-SMH-9	380.00	374.61	375.50	N 568042.48 E 1335544.12	Ex. SMH, Sect S-132
SMH-10	380.00	375.25	375.15	N 568022.47 E 1335526.95	See Ho. Co. Std. S-132
SMH-11	391.70	377.67	377.57	N 567943.24 E 1335441.84	See Ho. Co. Std. S-132
SMH-12	391.60	-	378.80	N 568028.16 E 1335563.13	See Ho. Co. Std. S-132
SMH-13	394.50	-	379.00	N 567845.83 E 1335532.33	See Ho. Co. Std. S-131



**AS BUILT**  
DATE: Nov. 21, 2003

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Meyer* 7/28/03  
Signature: *JMM* Date: 7/28/03  
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John R. Robertson* 7/28/03  
Signature: *JRR* Date: 7/28/03  
HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.

DEPARTMENT OF PUBLIC WORKS  <i>Ruth Davis</i> 7-10-03 CHIEF-BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING  <i>John Damm</i> 7/10/03 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE	<b>LDE Inc.</b> Engineers, Surveyors, Planners 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045 (410)715-1070 - (301)596-3424 - FAX(410)715-9540		DESIGNED S.D.H. DRAWN D.J.M. CHECKED B.D.B. DATE 07/20/03	WATER & SEWER PROFILES 600 SCALE MAP NO. 29 BLOCK 14	VETICK PROPERTY Lots 1, 2 & 3 Water & Sewer Extensions 5th Election District - Howard County, Maryland Contract No: 34-410-D	SCALE AS SHOWN SHEET 3 OF 4
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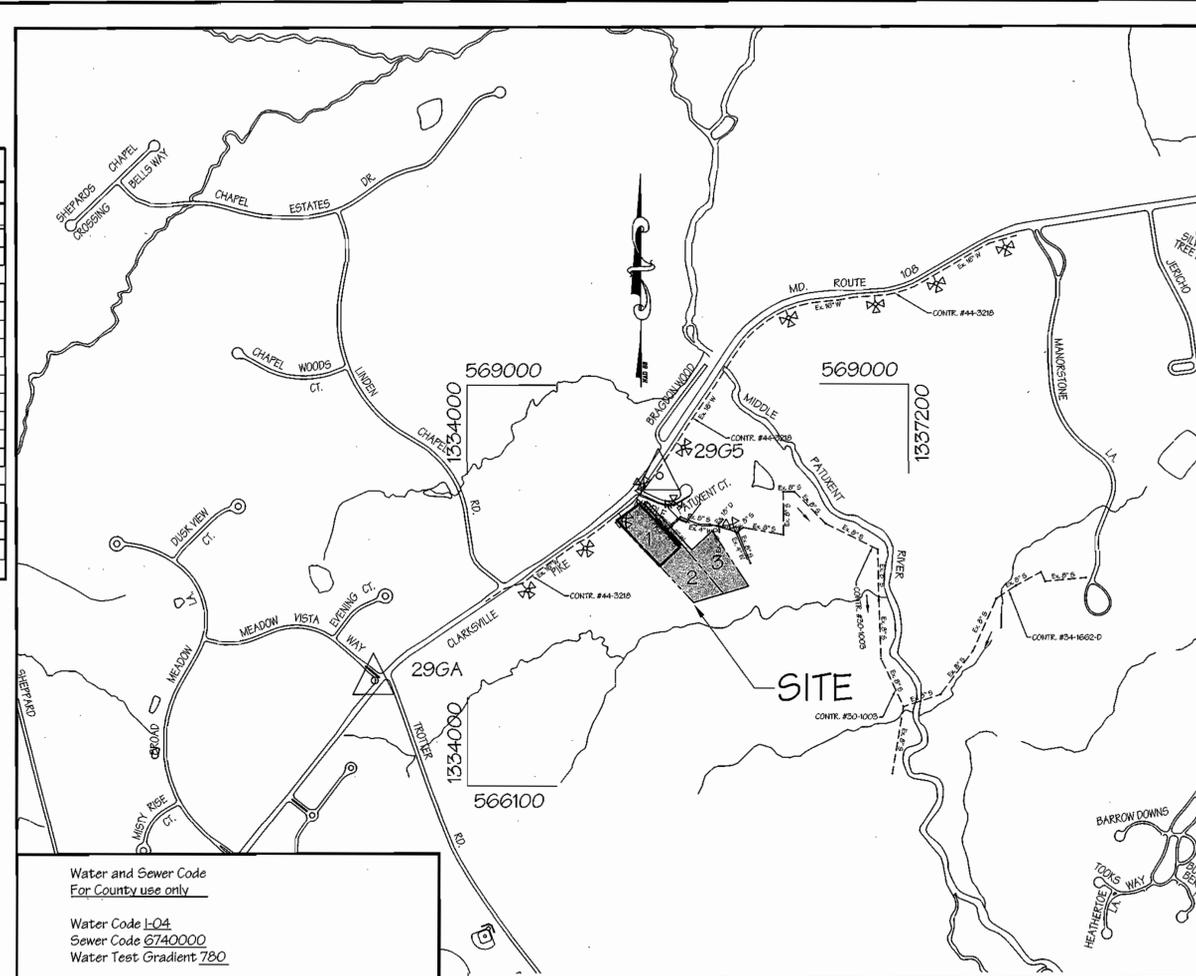
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SHEET INDEX	
Sheet Number	Description
1	COVER SHEET
2	PLAN VIEW
3	WATER & SEWER PROFILES
4	SEDIMENT CONTROL PLAN, NOTES AND DETAILS

QUANTITIES				
AS BUILT				
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
6TD Sewer Manholes	4 ea.			
8" D.I.P. Sewer	392 L.F.			
4" PVC SHC	85 L.F.			
1" WHC	40 L.F.			
6" Water	473 L.F.			
16" x 6" TS & V	1 ea.			
Fire Hydrant	1 ea.			
6" Valve	1 ea.			
6" Cap & Buttress	1 ea.			
Water Meter Vaults	2 ea.			

NAME OF UTILITY CONTRACTOR: \_\_\_\_\_ CHECK BOX: SURVEY & DRAFTING DIVISION AS BUILT DATE: \_\_\_\_\_



Water and Sewer Code For County use only	
Water Code	1-04
Sewer Code	6740000
Water Test Gradient	780
Type of Building:	Single Family Detached
Number of Lots/Parcels:	3 (3 Buildings)
Number of W.H.C.'s:	3
Number of S.H.C.'s:	4
Drainage Area:	Middle Patuxent
Treatment Plant:	Little Patuxent Water Reclamation Center

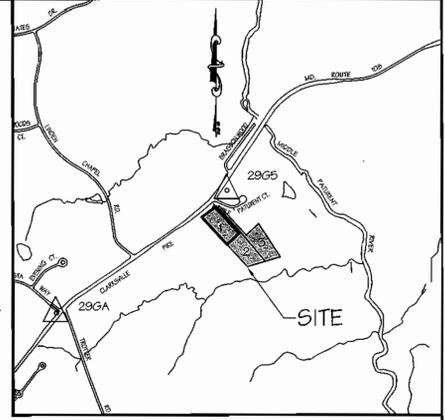
LOCATION MAP Scale: 1" = 600'

# Contract No. 34-4110-D VETICK PROPERTY Lots 1, 2 & 3 Water & Sewer Extension Howard County, Maryland

## BENCHMARKS

HOWARD COUNTY GEODETIC CONTROL: 29GA  
Elevation: 450.749  
Station is a standard stamped disc set on top of concrete monument. Located 2.5' from the edge of paving at the fillet, southwest of the Route 108 Meadow Vista Road Intersection.

HOWARD COUNTY GEODETIC CONTROL: 29G5  
Elevation: 388.133  
Station is a standard stamped disc set on top of concrete monument. Located 8.0' south of the Rt. 108 eastbound lane, approximately 142' from the east side of Middle Patuxent Court.



VICINITY MAP Scale: 1" = 1000'

## GENERAL NOTES

- PART I:**
- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
  - All horizontal controls are based on Maryland State Coordinates. [North American Datum of 1983 (NAD '83)].
  - All vertical controls are based on U.S.G.S. data.
  - All pipe elevations shown are invert elevations.
  - Clear all utilities by a minimum of 12". Clear all poles by 2'-0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractors work requires the bracing of additional poles, any cost incurred by the owner for bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of poles.
  - For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
  - Where test pits have been made on existing utilities, they are noted by the symbol [ ] at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
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    - State Highway Administration 410-531-5533
    - BGE Contractor Services 410-850-4620
    - BGE Underground Damage Control 410-291-4607
    - Miss Utility 1-800-257-7777
    - Colonial Pipeline Co. 410-549-4120
    - Howard County Department of Public Works Bureau of Utilities 410-313-4800
    - Bell Atlantic 1-800-446-5266
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  - Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
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- PART II: WATER**
- All water mains to be D.I.P., and P.V.C. unless otherwise noted.
  - Tops of all water mains to have a minimum of 3'-1/2" cover unless otherwise noted.
  - Valves adjacent to tees shall be strapped to tees.
  - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawing.
  - Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
  - The contractor shall not operate any water main valves on the existing water system.
  - All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
  - For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 11 connection with a 3/4" meter.
- PART III: SEWER**
- All sewer mains to be D.I.P., and P.V.C. unless otherwise noted.
  - All manholes shall be 4'-0" inside diameter unless otherwise noted.
  - Force mains shall be D.I.P. only.
  - Manholes shown with 12" and 16" walls are for brick manholes only.
  - Manholes designated W.T. in plan and profile shall have water tight frame and covers; Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 16" above finished grade unless otherwise noted on the drawings.
  - Houses with the symbol "C.N.S." indicates that cellar cannot be served.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Meyer* 7/28/03  
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John R. Roberts* 7/28/03  
HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.  
# 6P03-70

DEPARTMENT OF PUBLIC WORKS  
*Ruth Benner* 7-10-03  
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
*Chris [Signature]* 7/31/03  
CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
Engineers, Surveyors, Planners  
9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045  
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	S.D.H.				
DRAWN	D.J.M.				
CHECKED	B.D.B.				
DATE	07/20/03	BY	NO.	REVISION	DATE

COVER SHEET  
600 SCALE MAP NO. 29 BLOCK 14

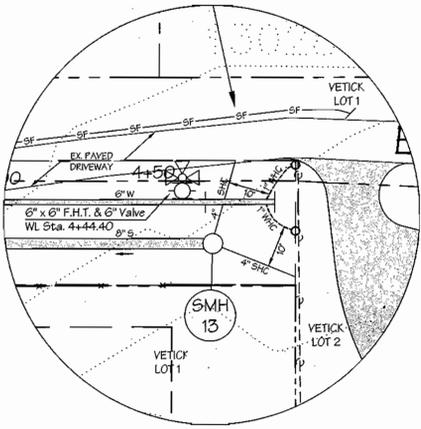
**VETICK PROPERTY**  
Lots 1, 2 & 3  
Water & Sewer Extensions  
5th Election District - Howard County, Maryland  
Contract No: 34-4110-D

SCALE AS SHOWN  
SHEET 1 OF 4

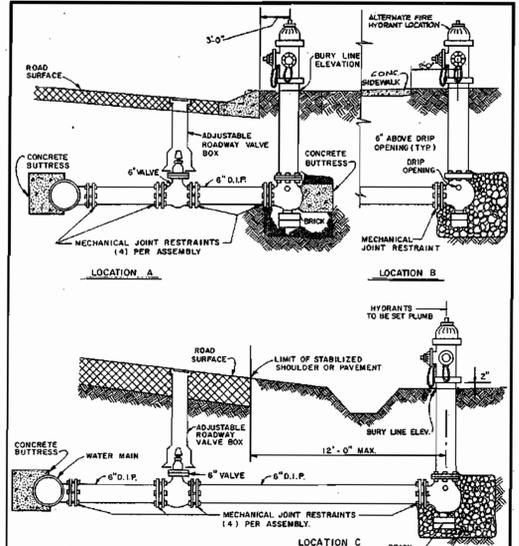
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SEWER HOUSE CONNECTION TABLE			
LOT NO.	INV. @ MAIN	INV. @ PL/EASMT	MIN. C.E.
#1	387.50	387.70	389.00
2	379.33	379.53	385.00
3	379.33	379.53	382.50**
<b>FUTURE</b>	<b>385.00</b>	<b>385.40</b>	<b>391.50</b>

\* Slope between property line and farthest point from main in structure is assumed to be 1.0% minimum - 2.0% max.  
 \*\* No basement service.  
 \*\*\* Future Lot 10



Hydrant Detail  
1"=20'



**NOTES**  
 1. PLACE MINIMUM OF 1/3 C.Y. OF 3/4" INCH GRAVEL FULL WIDTH OF TRENCH FOR DRAIN SUMP.  
 2. WHEN LOCATION 'B' IS USED, PROVIDE 10" O.D. R/W FOR FIRE HYDRANTS AS PER DETAIL W-113.  
 3. ALL FIRE HYDRANTS SHALL BE RESTRAINED AS PER W-211.  
 4. USE PLAIN CONCRETE 3000\* FOR ALL CONCRETE BUTTRESSES.  
 5. ALL FIRE HYDRANTS SHALL BE RESTRAINED AS PER W-211.  
 6. USE PLAIN CONCRETE 3000\* FOR ALL CONCRETE BUTTRESSES.

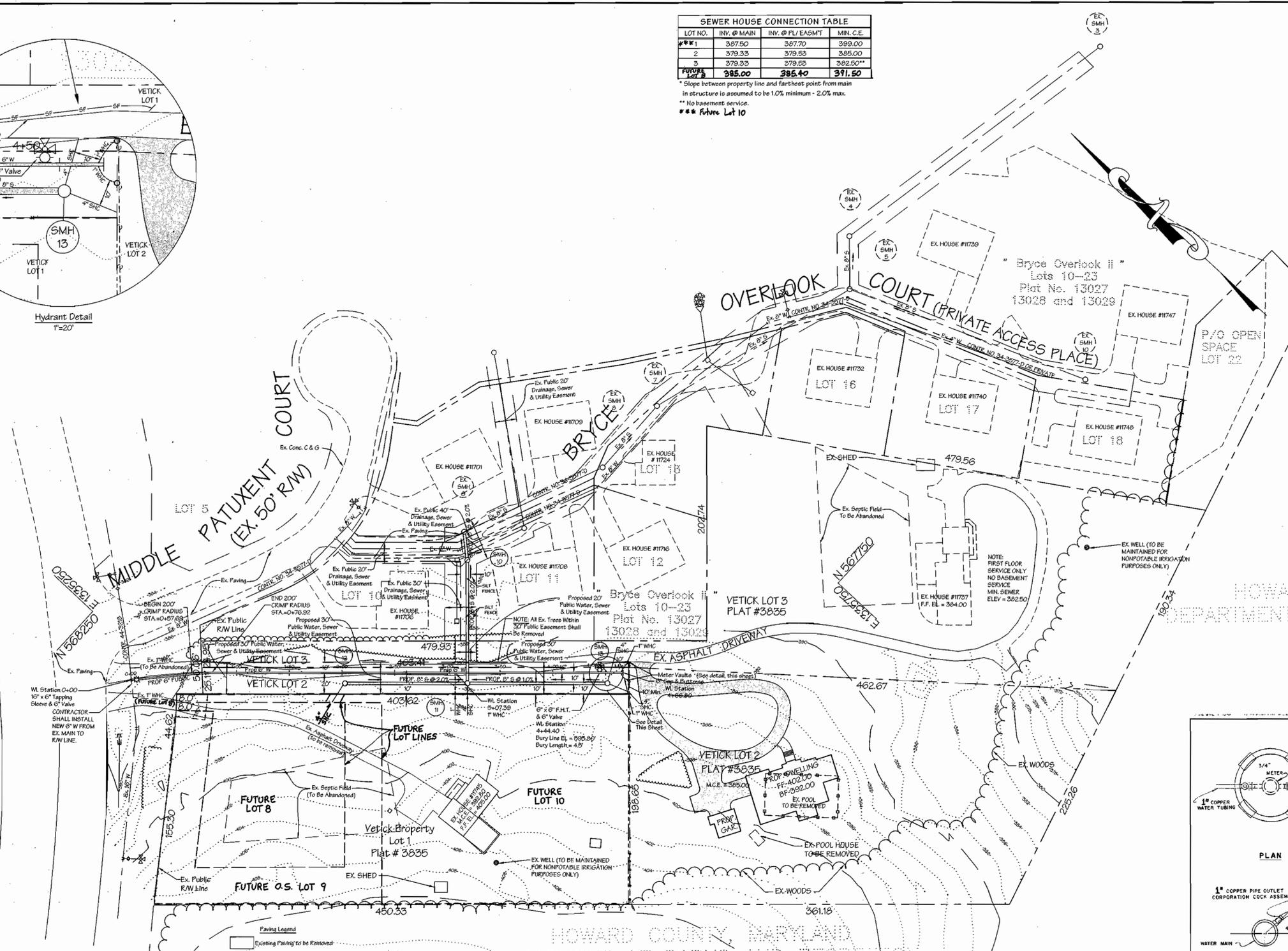
**HOWARD COUNTY, MARYLAND**  
 DEPARTMENT OF PUBLIC WORKS  
 Approved: [Signature] Chief - Bureau of Engineering

**STANDARD WATER DETAILS**  
 FIRE HYDRANT SETTINGS

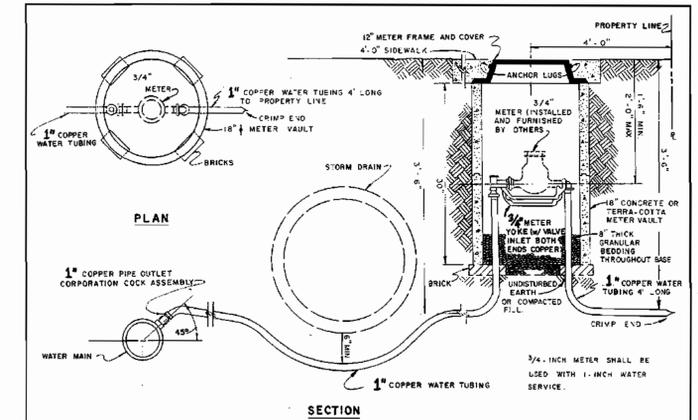
REV. OCT. 1990  
 REV. JAN. 1992  
 REV. JAN. 1995  
 REV. OCT. 2005  
 REV. JAN. 1992

DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 SCALE: NONE  
 W 1.11

MD. ROUTE 108  
(EX. RW VARIES)



HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PARKS AND RECREATION  
 L. 740 / F. 709



**HOWARD COUNTY, MARYLAND**  
 DEPARTMENT OF PUBLIC WORKS  
 Approved: [Signature] Chief - Bureau of Engineering

**STANDARD WATER DETAILS**  
 STANDARD INSTALLATION  
 3/4" METER SETTINGS

REV. OCT. 1990  
 REV. JAN. 1992  
 REV. JAN. 1995  
 REV. OCT. 2005  
 REV. JAN. 1992

DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 SCALE: NONE  
 W 3.31

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
 [Signature] 7/28/03  
 NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
 [Signature] 7/28/03  
 HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.

DEPARTMENT OF PUBLIC WORKS  
 [Signature] 7-10-03  
 CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
 [Signature] 7/10/03  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
 Engineers, Surveyors, Planners  
 9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045  
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

[Professional Engineer Seal]

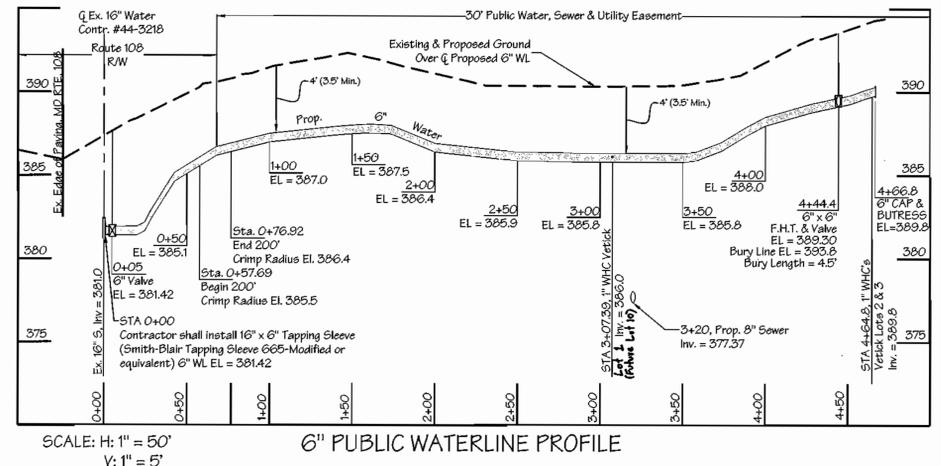
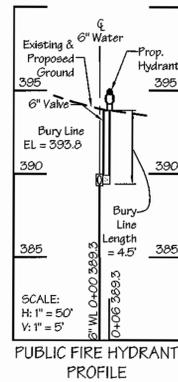
DESIGNED	S.D.H.				
DRAWN	D.J.M.				
CHECKED	B.D.B.				
DATE	07/21/2003	BY	NO.	REVISION	DATE

PLAN VIEW  
 600 SCALE MAP NO. 29  
 BLOCK 14

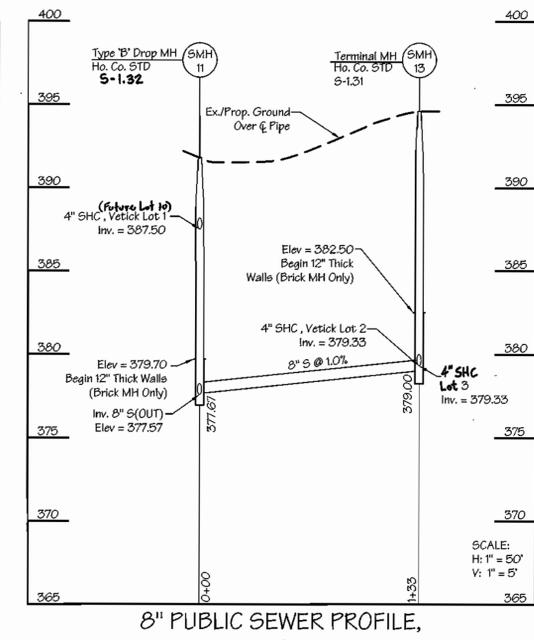
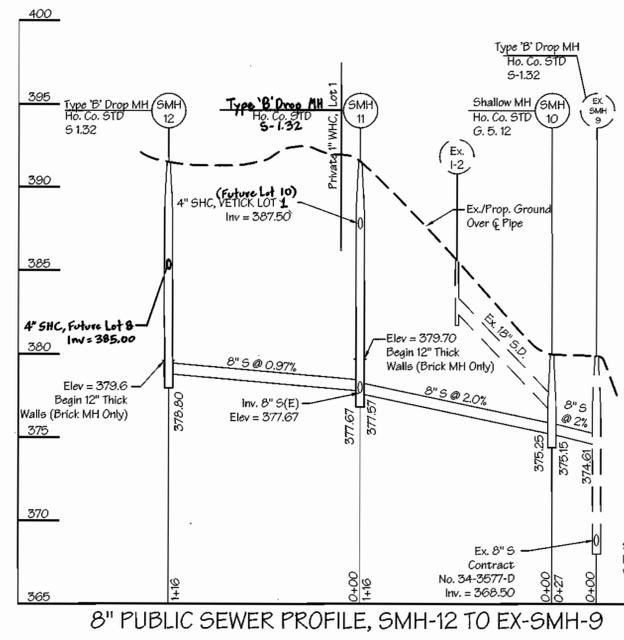
**VETICK PROPERTY**  
 Lots 1, 2 & 3  
 Water & Sewer Extensions  
 5th Election District - Howard County, Maryland  
 Contract No. 34-410-D

SCALE  
 1" = 50'  
 SHEET  
 2 OF 4

File Path: Projects\2003-07-10\101\101.dwg, 5 & 10M PLAN, 7/20/2003 10:56:56 AM



SEWER STRUCTURE SCHEDULE					
MANHOLE NO.	TOP RIM ELEV.	INV. IN	INV. OUT	LOCATION	REMARKS
EX. SMH-9	380.00	374.61	EX. 368.50	N 568042.48 E 1335544.12	Ex. SMH, Std. S-1.32
SMH-10	380.00	375.25	375.15	N 568022.47 E 1335526.95	See Ho. Co. Std. G-5.12
SMH-11	391.70	377.67	378.80	N 567948.24 E 1335441.24	See Ho. Co. Std. S-1.32
SMH-12	391.60	-	378.60	N 568028.16 E 1335563.13	See Ho. Co. Std. S-1.32
SMH-13	394.50	-	379.00	N 567845.83 E 1335532.33	See Ho. Co. Std. S-1.31



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Meyer* 7/28/03  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
NATURAL RESOURCES CONSERVATION SERVICE

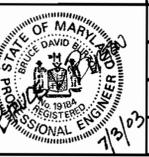
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John K. Robertson* 7/28/03  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
HOWARD COUNTY SOIL CONSERVATION DISTRICT

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DEPARTMENT OF PUBLIC WORKS  
*R. L. ...* 7-10-03  
Signature: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
*...* 7/19/03  
Signature: \_\_\_\_\_ DATE: \_\_\_\_\_  
CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
Engineers, Surveyors, Planners  
9250 Rumsay Road, Suite 106 Columbia, Maryland - 21045  
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	S.D.H.				
DRAWN	D.J.M.				
CHECKED	B.D.B.				
DATE	07/20/03	BY	NO.	REVISION	DATE

**WATER & SEWER PROFILES**  
600 SCALE MAP NO. 29 BLOCK 14

**VETICK PROPERTY**  
Lots 1, 2 & 3  
Water & Sewer Extensions  
5th Election District - Howard County, Maryland  
Contract No: 34-4110-D

SCALE AS SHOWN  
SHEET 3 OF 4

**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. (310-1800).
- 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 soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 2:1 to 14 days as to 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 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding rates 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	4.05	Acres (VETICK LOTS 2 & 3)
Area Disturbed	0.37	Acres
Area to be roofed or paved	0.00	Acres
Area to be vegetatively stabilized	0.37	Acres
Total Cut	290	Cu. Yds.
Total Fill	290	Cu. Yds.
Office waste/borrow area location	0	

- 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 building 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 can be back filled and stabilized within one working day, whichever is shorter.

**HOWARD SOIL CONSERVATION DISTRICT  
PERMANENT SEEDING NOTES**

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

**SEEDING 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 per acre dolomitic limestone (92 lbs/1000sq. ft.) and 500 lbs per 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 per acre 20-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
  - ACCEPTABLE:** Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. ft.) and 1000 lbs per 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 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (14 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 50 lbs per acre (14 lbs/1000sq. ft.) of Kentucky 21 Tall Fescue and 2 lbs. per acre (.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) - 2 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. per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gallons per acre (9 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 0 feet or higher, use 340 gallons per acre (8 gal/1000sq. ft.) for anchoring.

**MAINTENANCE:** Inspect all seeding areas and make needed repairs, replacements and reseedings.

**SEQUENCE OF CONSTRUCTION**

- Obtain Grading Permit 1 day
- Notify the Howard County Department of Public Works/ Bureau of Engineering/ Construction Inspection Division at 410-313-1880 at least 5 working days prior to the start of work. 1 day
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation being done. 1 day
- Install SCE and silt fence. 1 day
- Remove existing vegetation as necessary to install new 8" sewer and new 6" water. 2 days
- Note: Spoil from the trenching operations shall be placed on the uphill side of the trench.
- Install new 6" water and new WHC's. 1 day
- Install 8" sewermain and manholes in accordance with the approved sewer plan and profiles. Open cut across existing Bryce Overlook Court to connect 8" sewer to existing sewer manhole #9. Contractor shall restore Bryce Overlook Court paving to its pre-construction condition. 1/2 day
- Install SHC's and WHC's in accordance with the approved plan and profiles. 3 days
- Immediately stabilize all disturbed areas associated with the utility installation in accordance with the permanent seeding notes. Replace trees and shrubs on existing lots as specified. 1 day
- With the permission of the Sediment Control Inspector, remove all remaining sediment control devices and stabilize any remaining undisturbed areas. 1 day

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim M. [Signature]* 7/28/03  
NATURAL RESOURCES CONSERVATION

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John P. [Signature]* 7/28/03  
HOWARD SOIL CONSERVATION DISTRICT

**HOWARD SOIL CONSERVATION DISTRICT  
TEMPORARY SEEDING NOTES**

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

**SEEDING 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 per acre 10-10-10 fertilizer (14 lbs/1000sq. ft.).

**SEEDING:** For the periods March 1 thru April 30, and August 15 thru October 15 seed with 2-1/2 bushels per acre of annual ryegrass (32 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

**MULCHING:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gallons per acre (9 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 0 feet or higher, use 340 gallons per acre (8 gal/1000sq. ft.) for anchoring.

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

**21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL**

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

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

**Conditions Where Practice Applies:**

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**Construction and Material Specifications:**

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of clumps, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
  - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsrass, nutgrass, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

**III. For sites having disturbed areas under 5 acres:**

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
  - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
    - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
    - Organic content of topsoil shall be not less than 1.5 percent by weight.
    - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
    - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

**V. Topsoil Application:**

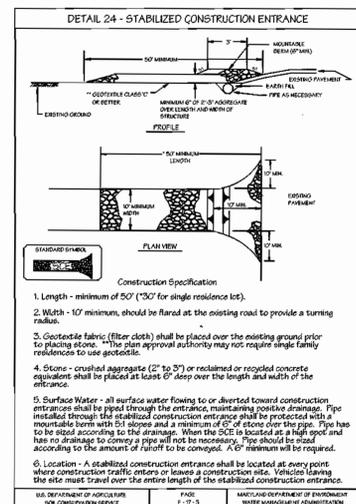
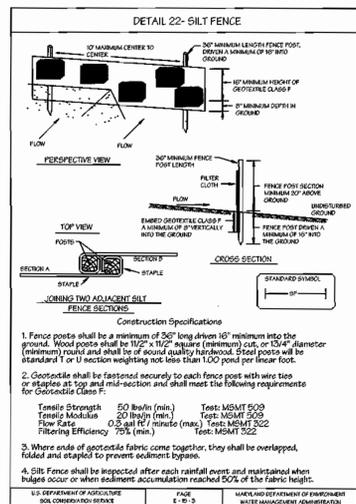
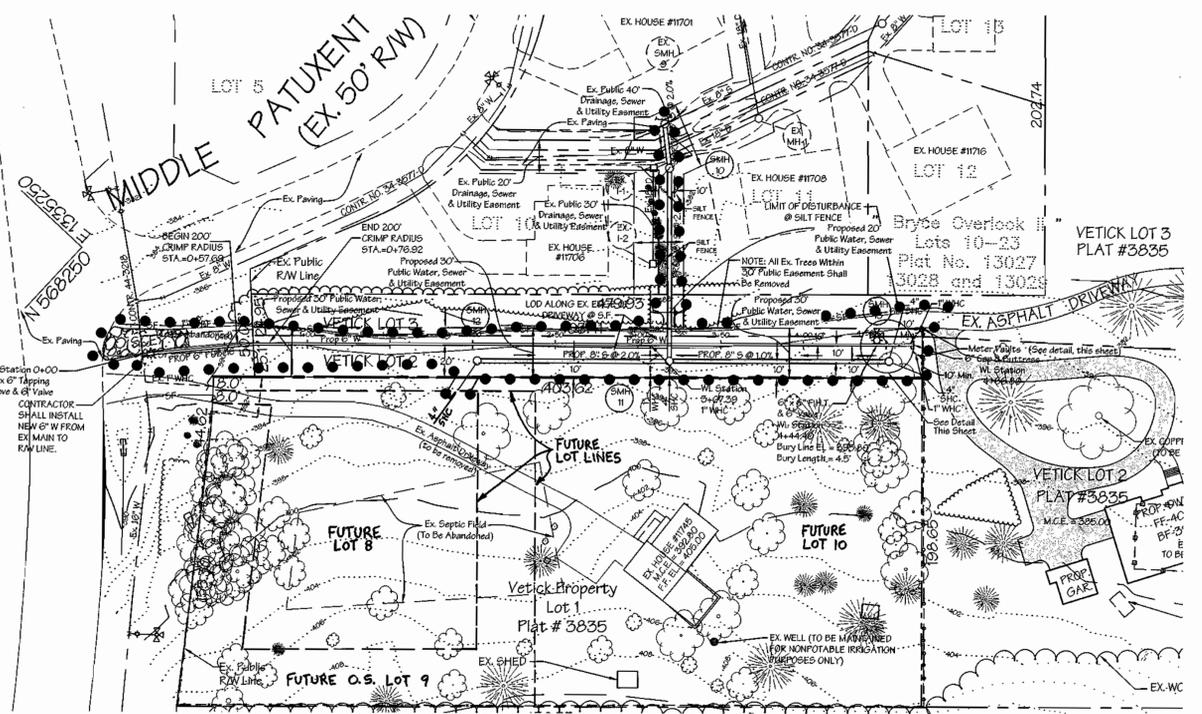
- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 6" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

**VI. Alternative for Permanent Seeding:** Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
  - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
  - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
  - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lbs/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding. MD-VA, Pub.#1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

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**LEGEND**

EX. TREE	(Symbol)
EX. MAJOR CONTOUR	(Symbol)
EX. MINOR CONTOUR	(Symbol)
LIMIT OF DISTURBANCE	(Symbol)
EX. WATER	(Symbol)
EX. SEWER	(Symbol)
SILT FENCE	(Symbol)
STABILIZED CONSTRUCTION ENTRANCE	(Symbol)
EX. DRIVEWAY	(Symbol)
EX. TREELINE	(Symbol)

DEPARTMENT OF PUBLIC WORKS  
*John P. [Signature]* 7-10-03  
CHIEF BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
*John P. [Signature]* 7/10/03  
CHIEF DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
Engineers, Surveyors, Planners  
9250 Rumsley Road, Suite 106 Columbia, Maryland - 21045  
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	S.D.H.		
DRAWN	D.J.M.		
CHECKED	D.B.B.		
DATE	07/28/03		
BY	NO.	REVISION	DATE

SEDIMENT CONTROL PLAN,  
NOTES AND DETAILS  
600 SCALE MAP NO. 29 BLOCK 14

**VETICK PROPERTY**  
Lots 1, 2 & 3  
Water & Sewer Extensions  
5th Election District - Howard County, Maryland  
Contract No: 34-410-D

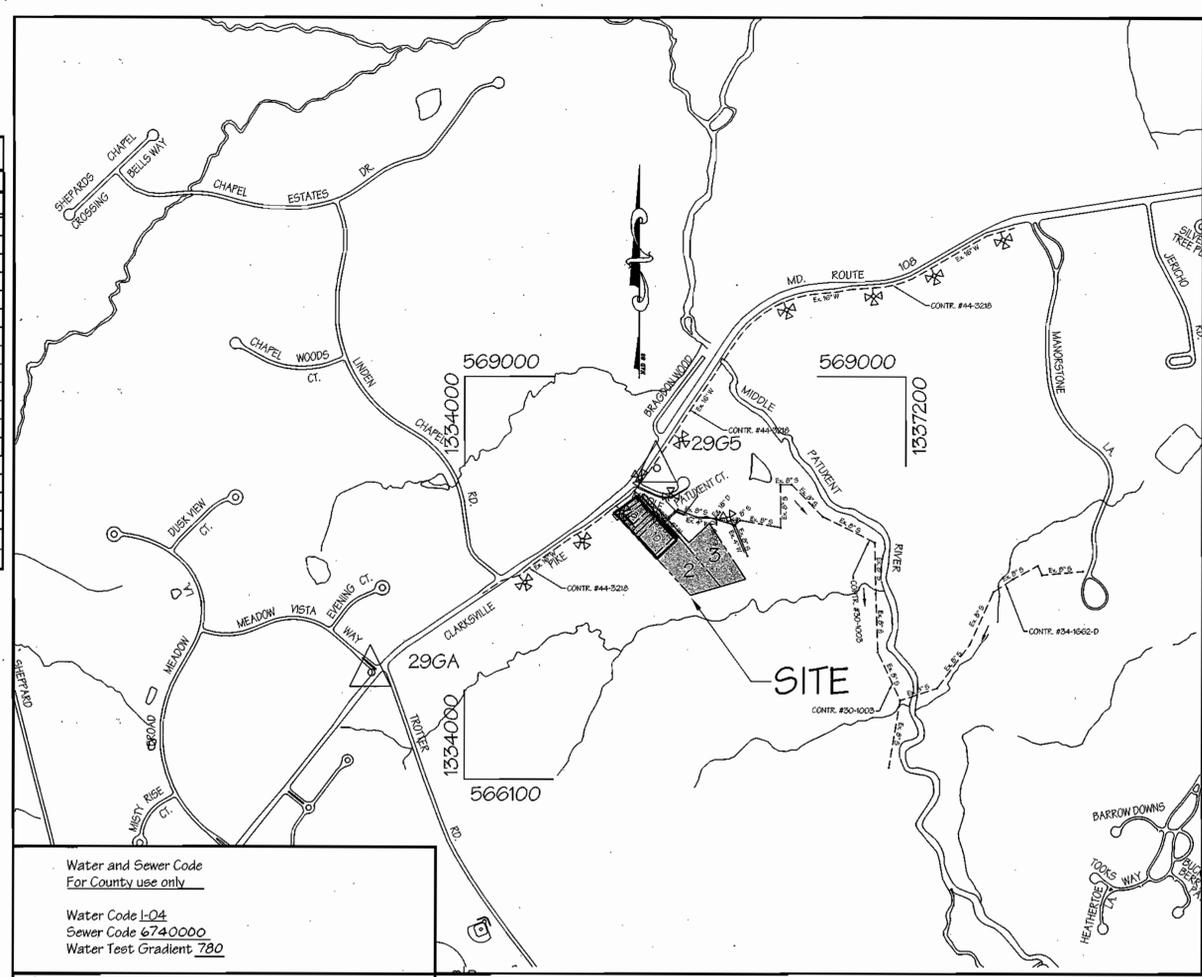
SCALE AS SHOWN  
SHEET 4 OF 4

SHEET INDEX	
Sheet Number	Description
1	COVER SHEET
2	PLAN VIEW
3	WATER & SEWER PROFILES
4	SEDIMENT CONTROL PLAN, NOTES AND DETAILS

QUANTITIES				
AS BUILT				
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STD Sewer Manholes	4 ea.			
8" PVC Sewer	392 L.F.			
4" PVC SHC	75 L.F.			
1" WHC	40 L.F.			
6" Water	473 L.F.			
16" x 6" TS & V	1 ea.			
Fire Hydrant	1 ea.			
6" Valve	1 ea.			
6" Cap & Buttrise	1 ea.			
Water Meter Vaults	2 ea.			

NAME OF UTILITY CONTRACTOR: \_\_\_\_\_

CHECK BOX:  
 SURVEY & DRAFTING DIVISION  
 AS BUILT DATE: \_\_\_\_\_



Water and Sewer Code For County use only	
Water Code	L-04
Sewer Code	674-0000
Water Test Gradient	780
Type of Building:	Single Family Detached
Number of Lots/Parcels:	5 (4 Buildable, 1 Open Space)
Number of W.H.C.'S:	4 (3 Prop., 1 Ex.)
Number of S.H.C.'S:	4
Drainage Area:	Middle Patuxent
Treatment Plant:	Little Patuxent Water Reclamation Center

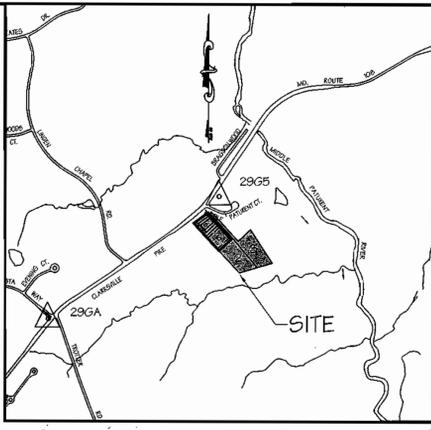
LOCATION MAP  
Scale: 1" = 600'

# Contract No. 34-4110-D VETICK PROPERTY Lots 2, 3, 8 thru 10 Water & Sewer Extension Howard County, Maryland

### BENCHMARKS

HOWARD COUNTY GEODETIC CONTROL: 29GA  
Elevation: 450.749  
Station is a standard stamped disc set on top of concrete monument. Located 2.5' from the edge of paving at the fillet, southwest of the Route 108 Meadow Vista Road Intersection.

HOWARD COUNTY GEODETIC CONTROL: 29G5  
Elevation: 388.133  
Station is a standard stamped disc set on top of concrete monument. Located 8.0' south of the Rt. 108 eastbound lane, approximately 142' from the east side of Middle Patuxent Court.



VICINITY MAP  
Scale: 1" = 1000'

### GENERAL NOTES

- PART I:
- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
  - All horizontal controls are based on Maryland State Coordinates. [North American Datum of 1983 (NAD '83)].
  - All vertical controls are based on U.S.G.S. data.
  - All pipe elevations shown are invert elevations.
  - Clear all utilities by a minimum of 12". Clear all poles by 2'-0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractors work requires the bracing of additional poles, any cost incurred by the owner for bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of poles.
  - For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
  - Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
  - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 

State Highway Administration	410-531-5533
BGE Contractor Services	410-850-4620
BGE Underground Damage Control	410-291-4607
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	410-549-4120
Howard County Department of Public Works Bureau of Utilities	410-313-4900
Bell Atlantic	1-800-446-5266
  - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip area not to be removed or damaged by the contractor.
  - Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
  - The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DFW requirements per Section 18.114 (a) of the Howard County Code.
- PART II: WATER
- All water mains to be D.I.P. Class 52 unless otherwise noted.
  - Tops of all water mains- to have a minimum of 3'-1/2" cover unless otherwise noted.
  - Valves adjacent to trees shall be strapped to trees.
  - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawing.
  - Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained an buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
  - The contractor shall not operate any water main valves on the existing water system.
  - All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
  - For a sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 11 connection with a 3/4" meter.
- PART III: SEWER
- All sewer mains to be D.I.P. and P.V.C. unless otherwise noted.
  - All manholes shall be 4'0" inside diameter unless otherwise noted.
  - Force mains shall be D.I.P. only.
  - Manholes shown with 12" and 16" walls are for brick manholes only.
  - Manholes designated W.T. in plan and profile shall have water tight frame and covers; Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 16" above finished grade unless otherwise noted on the drawings.
  - Houses with the symbol "C.N.S." indicates that cellar cannot be served.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Jim Myers* 4/9/03  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 NATURAL RESOURCES CONSERVATION SERVICE

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

*Justin Sh...* 4/9/03  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE SEDIMENT CONTROL PLAN INCLUDED IN THIS CONTRACT SET AS SHEET 4.

DEPARTMENT OF PUBLIC WORKS

*Ruth Br...* 6-3-03  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING

*...* 4/5/03  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 CHIEF-DEVELOPMENT ENGINEERING DIVISION

**LDE Inc.**  
 Engineers, Surveyors, Planners  
 9250 Runsey Road, Suite 106 Columbia, Maryland - 21045  
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	S.D.H.		
DRAWN	D.J.M.		
CHECKED	B.D.B.		
DATE	03/2003		
BY	LDE	NO.	1
REVISION	Changed 8" sewer pipe from D.I.P. to PVC		
DATE	12/19/03		

COVER SHEET

600 SCALE MAP NO. 29 BLOCK 14

**VETICK PROPERTY**  
 Lots 2, 3, 8 thru 10  
 Water & Sewer Extensions  
 5th Election District - Howard County, Maryland  
 Contract No: 34-4110-D

SCALE AS SHOWN

SHEET 1 OF 4