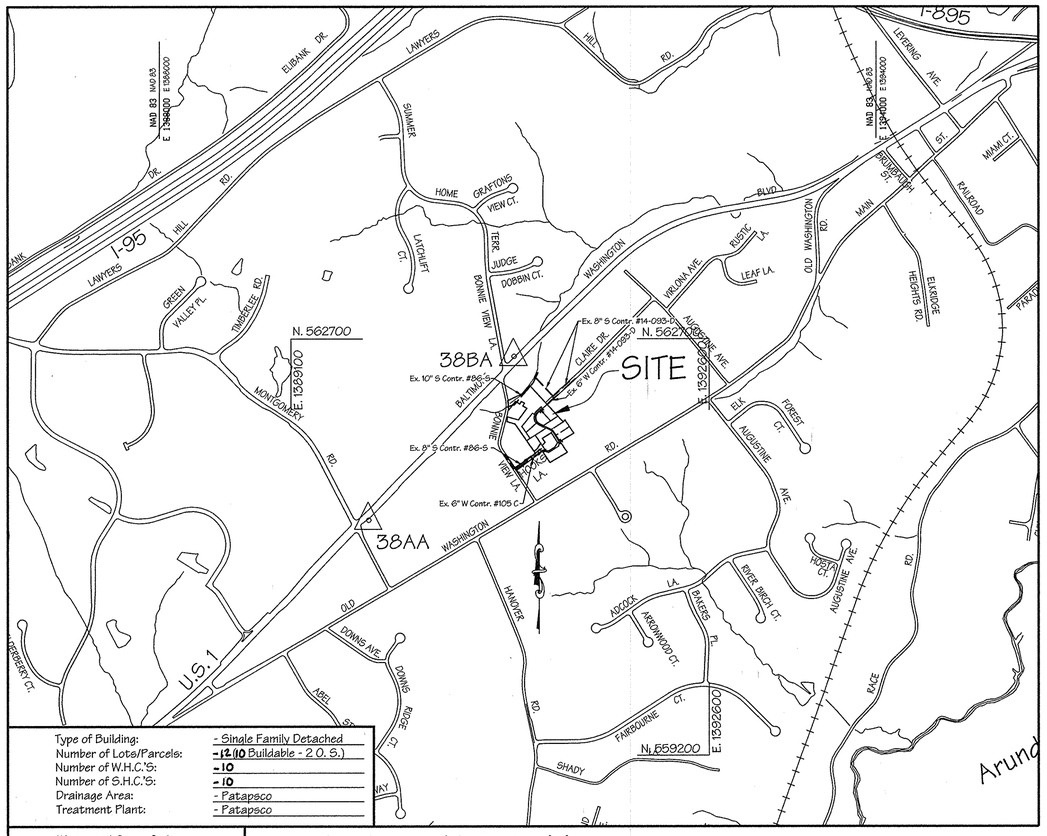
INDEX OF SHEETS	
SHEET NO.	TITLE
1	COVER SHEET
2	PLAN SHEET
3	PROFILE SHEET



Type of Building:	- Single Family Detached
Number of Lots/Parcels:	- 12 (10 Buildable - 2 O.S.)
Number of W.H.C.'S:	- 10
Number of S.H.C.'S:	- 10
Drainage Area:	- Patapsco
Treatment Plant:	- Patapsco

Water and Sewer Code
County Use

Water Code A-01
Water Test Gradient 550
Sewer Code 2022416

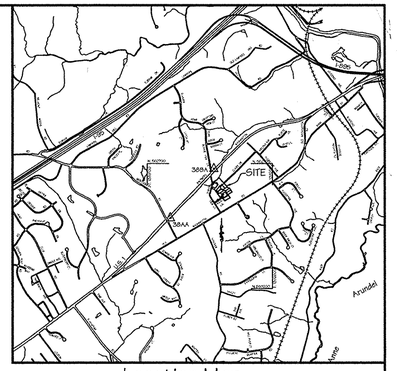
Vicinity Map

Scale 1"=600'

BENCHMARKS

HOWARD COUNTY GEODETIC CONTROL: 38AA
Elevation: 220.778
Station is a standard stamped disc set on top of concrete monument. Located 3.2' off the face of curb on North Bound Lane of Maryland Route 1 and 5.3' south of BG&E Pole # 334790

HOWARD COUNTY GEODETIC CONTROL: 38BA
Elevation: 166.944
Station is a standard stamped disc set on top of concrete monument. Located 9.5' off the face of South Bound Lane of Maryland Route 1 and 81.7' from fire hydrant at intersection of Maryland Route 1 and Bonnie View Lane.



Location Map
Scale 1"=2000'

GENERAL NOTES

PART I:

1. 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.
2. All horizontal controls are based on Maryland State Coordinates. [North American Datum of 1983 (NAD '83)].
3. All vertical controls are based on U.S.G.S. data.
4. All pipe elevations shown are invert elevations.
5. Clear all utilities by a minimum of 6". 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.
6. 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.
7. 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.
8. 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

9. 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.
10. 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.
11. General Notes (see attached)
12. 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

1. All water mains to be D.I.P. Class 52 unless otherwise noted.
2. Tops of all water mains to have a minimum of 3 1/2' cover unless otherwise noted.
3. Valves adjacent to the tees shall be strapped to the tees.
4. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
5. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be strapped 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.
6. The Contractor shall not operate any water main valves on the existing water system.
7. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.

PART III: SEWER

1. All sewer mains to be D.I.P.,and P.V.C. unless otherwise noted.
2. All manholes shall be 4'0" inside diameter unless otherwise noted.
3. Force mains shall be D.I.P. only.
4. Manholes shown with 12" and 16" walls are for brick manholes only.
5. 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 1'6" above finished grade unless otherwise noted on the drawings.
6. Houses with the symbol "C.N.S." indicates that cellar cannot be served.

QUANTITIES

ITEM	QUANTITIES ESTIMATED	AS BUILT QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
1" W.H.C.	169 L.F.	195 L.F.	K COPPER TUBING	CAMBRIDGE LEE / BELAIR RD. SUPPLY
4" S.H.C.	206 L.F.	186 L.F.	SDR-35 PVC	J.M. MFG. / " " "
Standard Manhole	4	4	PRECAST	ATLANTIC CONCRETE PROD. INC.
8" Water	654 L.F.	652 L.F.	CL-52 DIP	U.S. PIPE / BELAIR RD. SUPPLY
8" Sewer	532 L.F.	522 L.F.	SDR-35 PVC	J.M. MFG. / " " "
Fire Hydrants	2	2	MUELLER	MUELLER CO. / " " "
8" x 6" Reducer	2	2	M.J.	U.S. PIPE / " " "
8" Valve	2	2	R.S.O.R. GATE VALVE	MUELLER CO / " " "
1/8 8" Bend	5	5	M.J.	U.S. PIPE / " " "
1/16 8" Bend	3	3	"	" / " " "
1/32 8" Bend	1	1	"	" / " " "
8" x 6" F.H.T.	2	2	"	" / " " "

NAME OF UTILITY CONTRACTOR: WHEELER CONST.

CHECK BOX:
SURVEY & DRAFTING DIVISION
AS BUILT DATE:

WATER & SEWER CONSTRUCTION PLANS

BONNIE RIDGE

1st Election District - Howard County, Maryland

Lots 1, 3-12, 15 & 16

Contract No. 14-4008-D

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jim Myers 11/24/03
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 R. Robertson 11/24/03
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD AND DRAIN PLAN, F-03-109.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16

STATE OF MARYLAND DONALD ALAN MILLER No. 21443 PROFESSIONAL ENGINEER
8-10-15

FOR REVISIONS BY BENCHMARK ENGINEERING, INC. ONLY

DEPARTMENT OF PUBLIC WORKS
CHIEF-BUREAU OF UTILITIES DATE 11-17-03

DEPARTMENT OF PLANNING & ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE 12/1/03

LDE Inc.
Engineers, Surveyors, Planners
9230 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540

STATE OF MARYLAND SAMUEL W. CORDZ No. 15506 REGISTERED PROFESSIONAL ENGINEER
9/26/03

DESIGNED	S.W.C.
DRAWN	M.B.J. J.D.R.
CHECKED	S.W.C.
DATE	9/2003

BY	NO.	REVISION	DATE
BEI	2	REVISE LOT NOS PER RECORD PLAT	8-7-15
K.C.I	1	ASBUILT DATA	10/26/04

TITLE SHEET

600 SCALE MAP NO. 16 BLOCK 16 & 22

BONNIE RIDGE
LOTS 1, 3-12, 15 & 16
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4008-D

SCALE AS SHOWN

SHEET 1 OF 3

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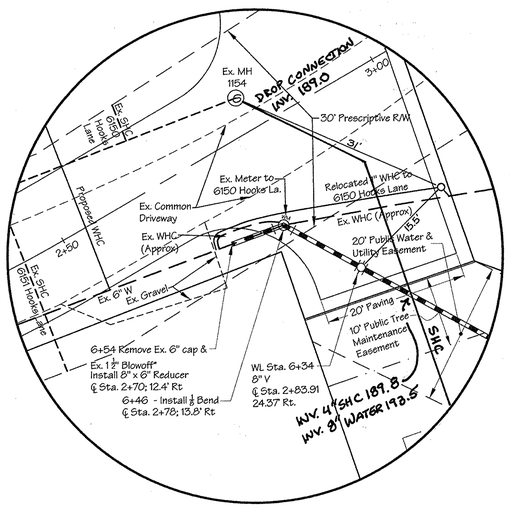
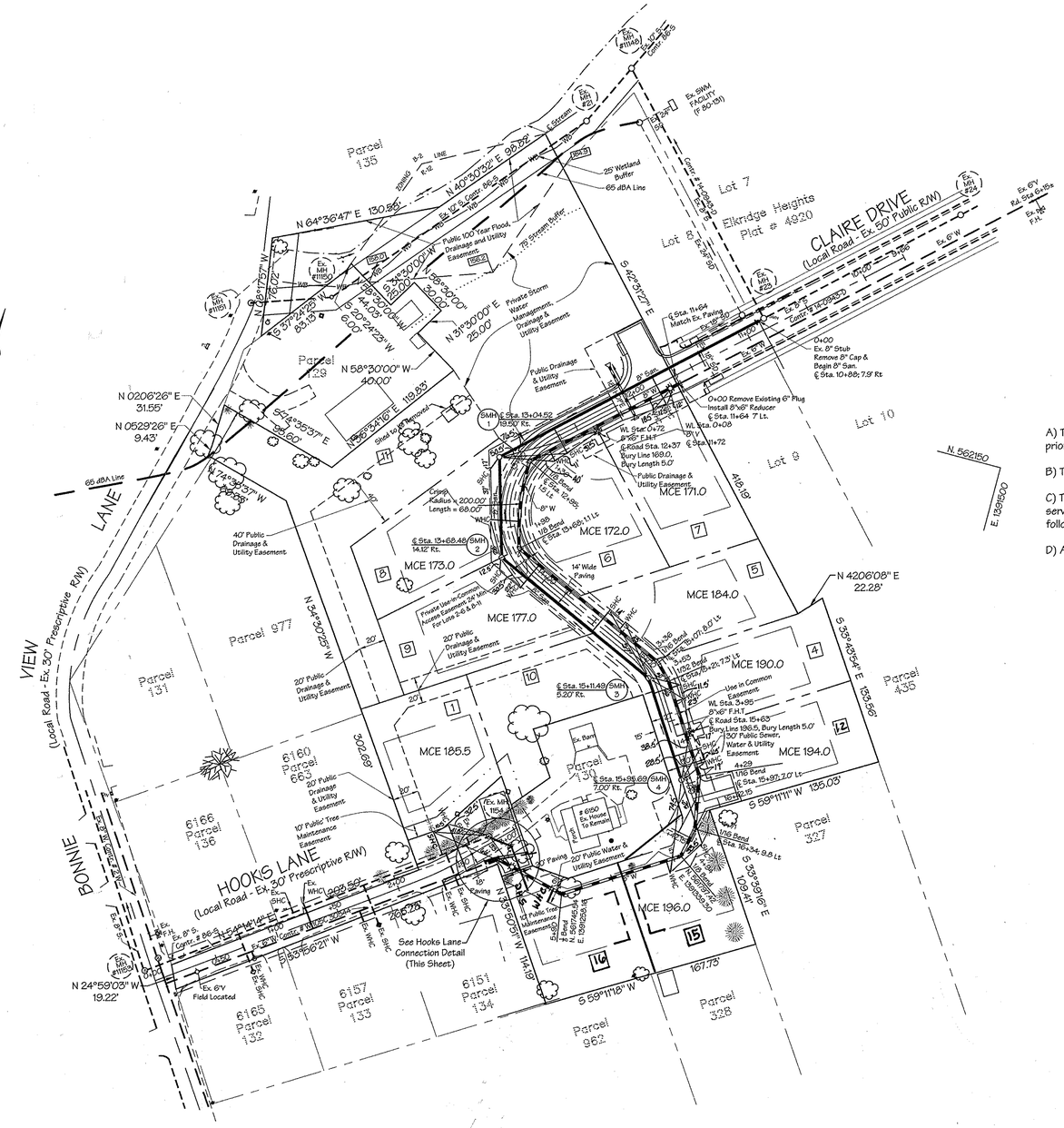


Hooks Lane Connection Detail
1"=10'

*NOTE: 1. Contractor must install new WHC to 6150 Hooks Lane and relocate meter as shown, prior to construction of 8" Water main
2. Care must also be taken to avoid the existing SHC to parcel 130 (6150 Hooks Lane). Damage to the existing SHC must be repaired immediately.



Water Main Tie-In Notification Sequence

A) The Contractor shall notify the Bureau of Utilities of Howard County (313-4900) prior to making any tie to the existing system.

B) The Contractor shall not operate any water main valve on the existing system.

C) The Contractor shall notify all water customers of the County who will be without service a minimum of 48 hours in advance of the scheduled shutdown including the following addresses on Hooks Lane; 6150, 6151, 6157, 6160, and 6165.

D) A typical notification letter is shown below.

DEAR CUSTOMER

This is to notify you that your water will be shut-off on _____ at or about _____ for approximately _____ hours.

Guard against the collapse of tanks, boilers, or other fixtures and look out for your fires and boiler as the county assumes no responsiblity for what may happen on the premises as a result of the water being shut off.

Your best protection against damage is to shut-off the valve on your service pipe where it enters the house. This valve may be located in the utility room, crawl space, basement, etc.

Draw water sufficient for your needs before shut-off. In the event of bad weather shut-off will be the following day.

Contractor Name:_____
Phone Number: _____

Scale: 1" = 50'

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature 11/24/03 Date
NATURAL RESOURCES CONSERVATION SERVICE

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

HOWARD SOIL CONSERVATION DISTRICT 11/24/03 DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD AND DRAIN PLAN, F-03-109.

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16

STATE OF MARYLAND — DONALD ALAN MARSH — No. 21443 — PROFESSIONAL ENGINEER
8-10-15

FOR REVISIONS BY BENCHMARK ENGINEERING, INC ONLY

DEPARTMENT OF PUBLIC WORKS
CHIEF-BUREAU OF UTILITIES 11-17-03 DATE

DEPARTMENT OF PLANNING & ZONING
CHIEF-DEVELOPMENT ENGINEERING DIVISION 12/1/03 DATE

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

STATE OF MARYLAND — SAMUEL W. CORRIGAN — No. 22355 — PROFESSIONAL ENGINEER
11/5/03

DESIGNED S.W.C.				
DRAWN M.B.J. J.D.R.				
CHECKED S.W.C.	GEI	2	REVISE LOT LAYOUT TO MATCH RECORD PLAT NO. 22355 AND ADD WHC/SHC TO LOT 16	8-7-15
	K.C.I	1	ASBUILT DATA	10/26/04
DATE 9/2003	BY	NO.	REVISION	DATE

PLAN VIEW

600 SCALE MAP NO. 16 BLOCK 16 & 22

BONNIE RIDGE

LOTS 1, 3-12, 15 & 16
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4008-D

SCALE As Shown

SHEET 2 of 3

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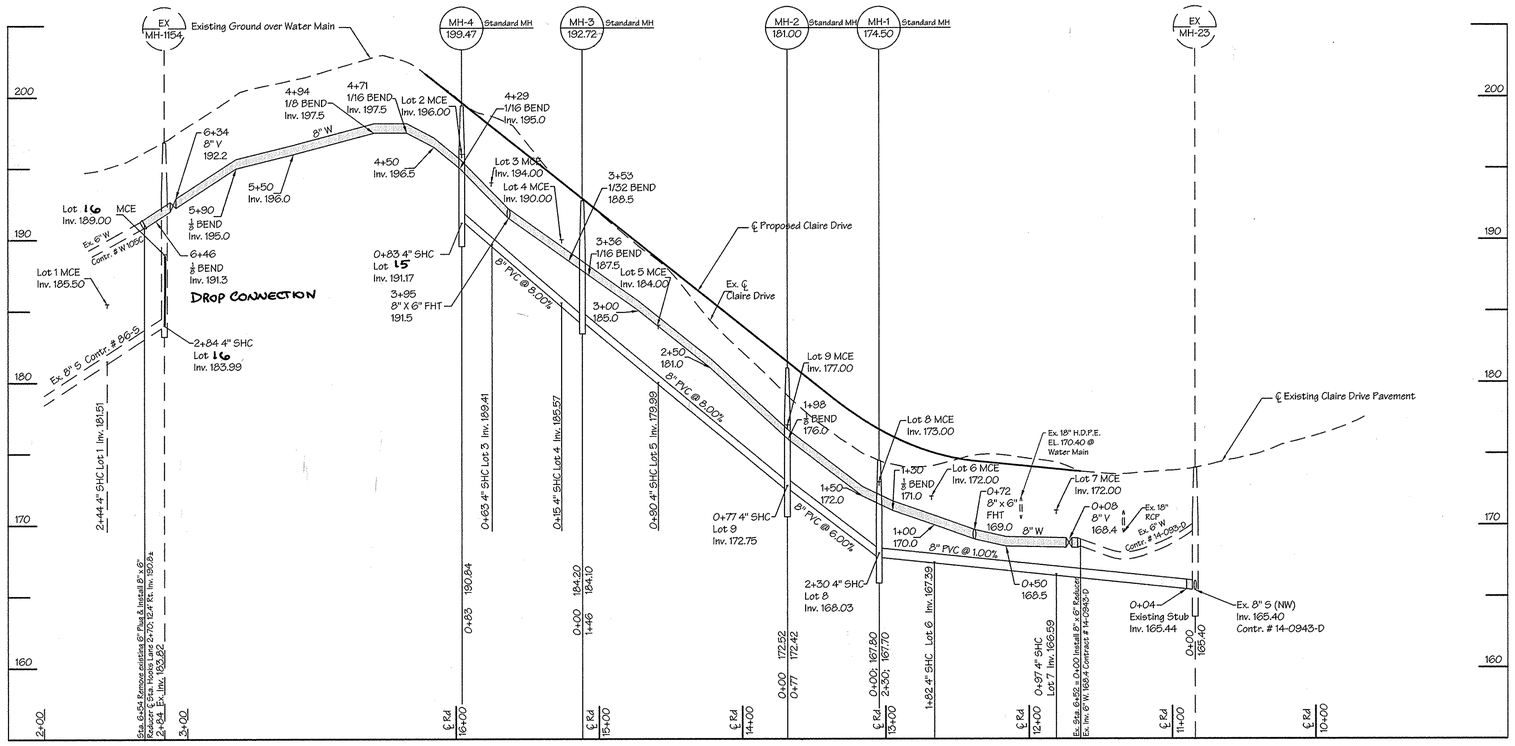

HOOKS LANE

WATER & SEWER - CLAIRE DRIVE

SCALES: H. 1" = 50'
V. 1" = 5'

Sewer House Connection Table			
Lot	Inv. @ Main	Inv. @ PL	Min. Cellar Elevation
1	181.63	182.01	185.50
15	191.17	192.17	196.00
3	189.41	189.85	194.00
4	185.57	186.01	190.00
5	179.99	180.43	184.00
6	167.39	167.82	172.00
7	166.59	167.09	171.00
8	168.03	168.29	173.00
9	172.75	172.91	177.00
Note: Lot 1 comes off existing main in Hooks Lane			
16	189.00	190.1	194.2

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jim Myers 11/24/03
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 R Robertson 11/24/03
HOWARD SOIL CONSERVATION DISTRICT DATE

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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443, Expiration Date: 12-31-16

STATE OF MARYLAND DONALD ALAN BIRCH No. 21443 PROFESSIONAL ENGINEER
8-10-15

FOR REVISION BY BENCHMARK ENGINEERING, INC. ONLY

DEPARTMENT OF PUBLIC WORKS
11-17-03
CHIEF-BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
12/1/03
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

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

STATE OF MARYLAND SAMUEL W. COX, JR. REG. No. 9788 PROFESSIONAL ENGINEER
9/24/03

DESIGNED				
S.W.C.				
DRAWN M.B.J. J.D.R.				
CHECKED S.W.C.				
DATE 9/2003	BBT	1	REVISE PROFILE & CONNECTION CHART	8-7-15
	BY	NO.	REVISION	DATE

PROFILE VIEW

600 SCALE MAP NO. 16 BLOCK 16 & 22

BONNIE RIDGE

LOTS 1, 3-12, 15 & 16
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4008-D

SCALE As Shown

SHEET 3 of 3

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