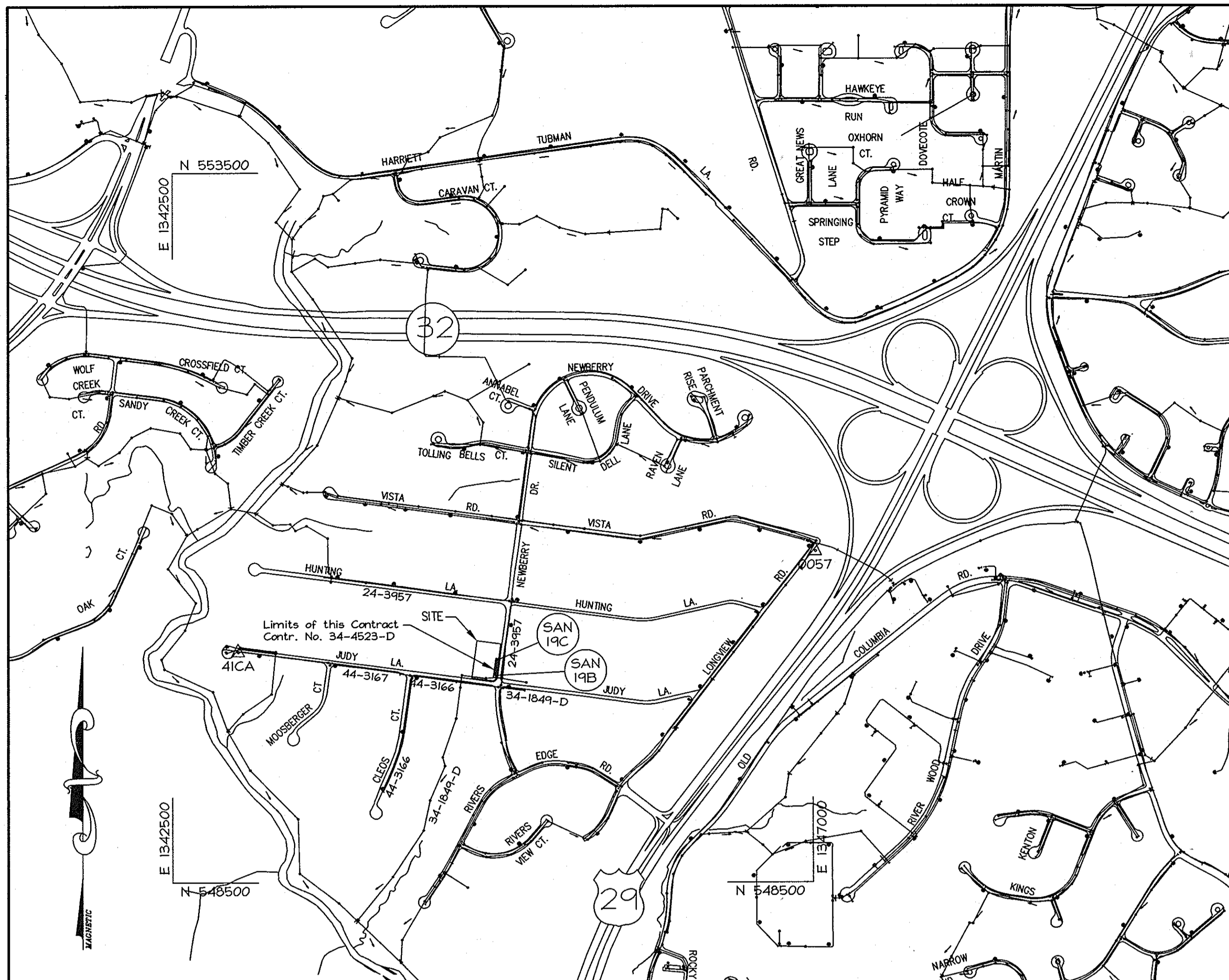


GENERAL NOTES

- PART I: GENERAL**
- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
 - Topographic field surveys were performed in May, 2007 by LDE, Inc.
 - The coordinates shown on the drawings are based on Maryland State Reference System, NAD 83/91 projected by Howard County Geodetic Control Stations No. 41CA # and No. 0057.
 - All vertical controls are based on NAVD 88. Horizontal controls provided on the drawings are NAD 83.
 - All pipe elevations shown are invert elevations unless otherwise noted on the plans.
 - Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The Contractor shall coordinate with the utility companies to have all existing utilities marked.
 - For details not shown on the drawing, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (latest edition). The Contractor shall have a copy of Volume IV on the job.
 - 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.
 - The contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - AT&T: (800) 252-1133
 - BGE (Contractor Services): (410) 850-4620
 - BGE (Emergency): (410)-685-1400
 - Howard County Department of Public Works Bureau of Utilities: (410) 313-4900
 - Colonial Pipeline Co.: (410) 795-1390
 - Miss Utility: 1-800-257-7777
 - State Highway Administration: (410) 531-5533
 - Columbia Gas Transmission Corporation: (301) 762-6306
 - Verizon: 1-800-745-0033 / 410-224-9210
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs within the construction area are not to be removed or damaged by the Contractor.
 - The 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 410-313-7450 at least five (5) working days before open cutting or boring/jacking of any County road 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**
- 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 single family dwelling units should have a minimum of 1" connection with a 3/4" meter.

- PART III: SEWER**
- All sewer mains to be DIP or 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 WT in plan and profile shall have watertight frame and covers; Standard Detail G5.52. Where watertight manhole frame and cover is used, set top of frame 1'-0" above finished grade unless otherwise noted on the drawings.
 - House(s) with the symbol "C.N.S." indicates that cellar cannot be serviced.
 - The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.



Type of Building:	SFD
Number of Lots/Parcels/Units:	2
Number of W.H.C.'s:	2
Number of S.H.C.'s:	2
Area of Lot/Parcel:	1.03 Ac.
Sewer Shed:	Middle Patuxent River
Pumping Station:	Little Patuxent Water Reclamation Plant

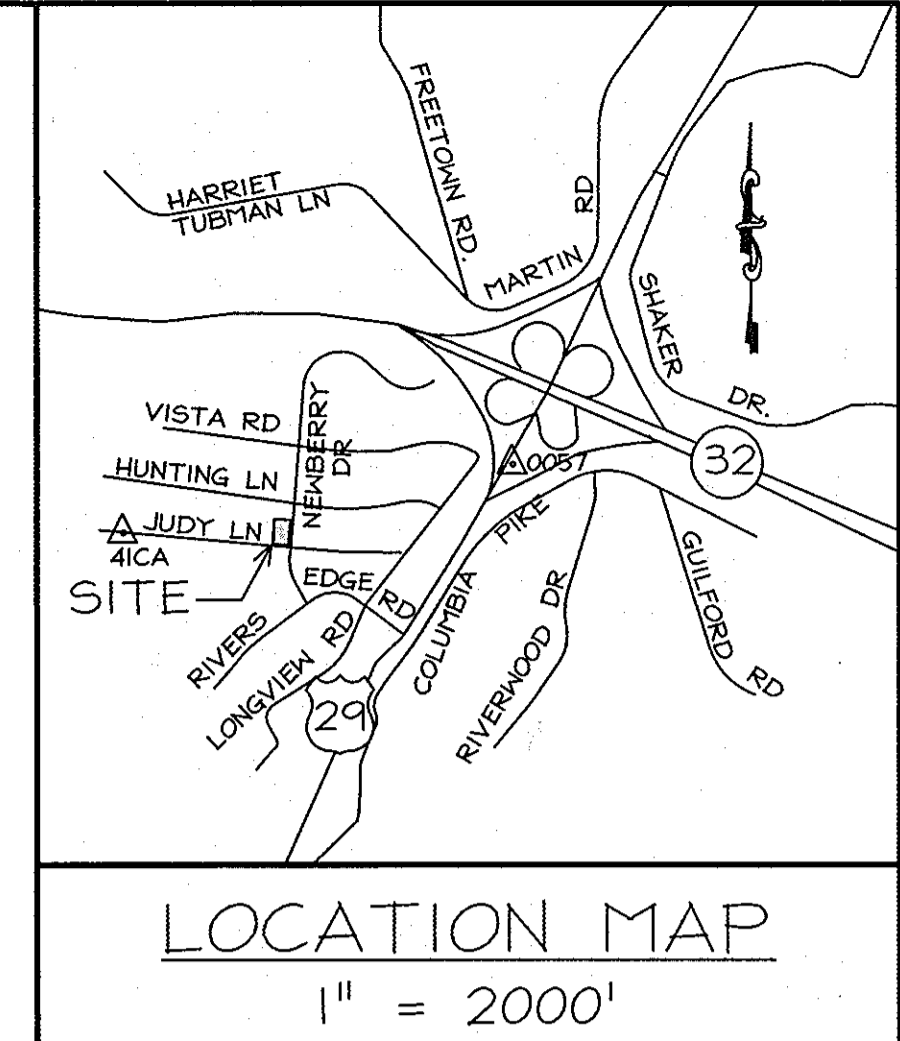
VICINITY MAP
SCALE: 1"=600'

BENCH MARKS

- #41CA Disk set on top of concrete column
N 550124.854
E 1342960.933
EL= 295.985
- #0057 Disk set on top of concrete column
N 550835.217
E 1347017.693
EL= 399.610

INDEX OF SHEETS

No.	Description
1	Cover Sheet
2	Final Sewer - PLAN
3	Final Sewer - PROFILES



MASTER LEGEND:		WATER & SEWER LEGEND:	
———	PROPERTY LINE	— EX. 8" S —	EX SANITARY SEWER
—>—>	SEWER DRAINAGE FLOW	4" SHC	PROPOSED SEWER HOUSE CONNECTION
- - - -	UNDERGROUND TELEPHONE	(S)	EX SANITARY SEWER MANHOLE
⊗	GAS VALVE	— EX. 8" W —	EX WATER MAIN
⊠	PHONE PEDESTAL	- - - 1" WHC - - -	PROPOSED WATER HOUSE CONNECTION
*	LIGHT POLE	⊗	EX WATER VALVE
		———	PROPOSED SEWER LINE
		○	PROPOSED SEWER MANHOLE

FINAL SEWER PLAN
KEEHN ESTATES, LOTS 54 & 55
A RESUBDIVISION OF RIVERSIDE ESTATES, SECTION 4, BLOCK H, LOT 1

Tax Map No. 41 - Grid No. 11 - P/O PARCEL 420
1st Election District - Howard County, Maryland

Contract No. 34-4523-D

QUANTITIES AS BUILT

ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
SEWER MANHOLES	2 EA.	2 EA.	PRE-CAST	HANSON PIPE & PRECAST INC.
8" SEWER - PVC	129 L.F.	100 L.F.	SDR-35	JM EAGLE/BELAIR ROAD SUPPLY
1" WHC	120 L.F.	118 L.F.	COPPER	CAMBRIDGE LEE/BELAIR ROAD SUPPLY
4" SHC	20 L.F.	30 L.F.	SDR-35	JM EAGLE/BELAIR ROAD SUPPLY

NAME OF UTILITY CONTRACTOR: _____

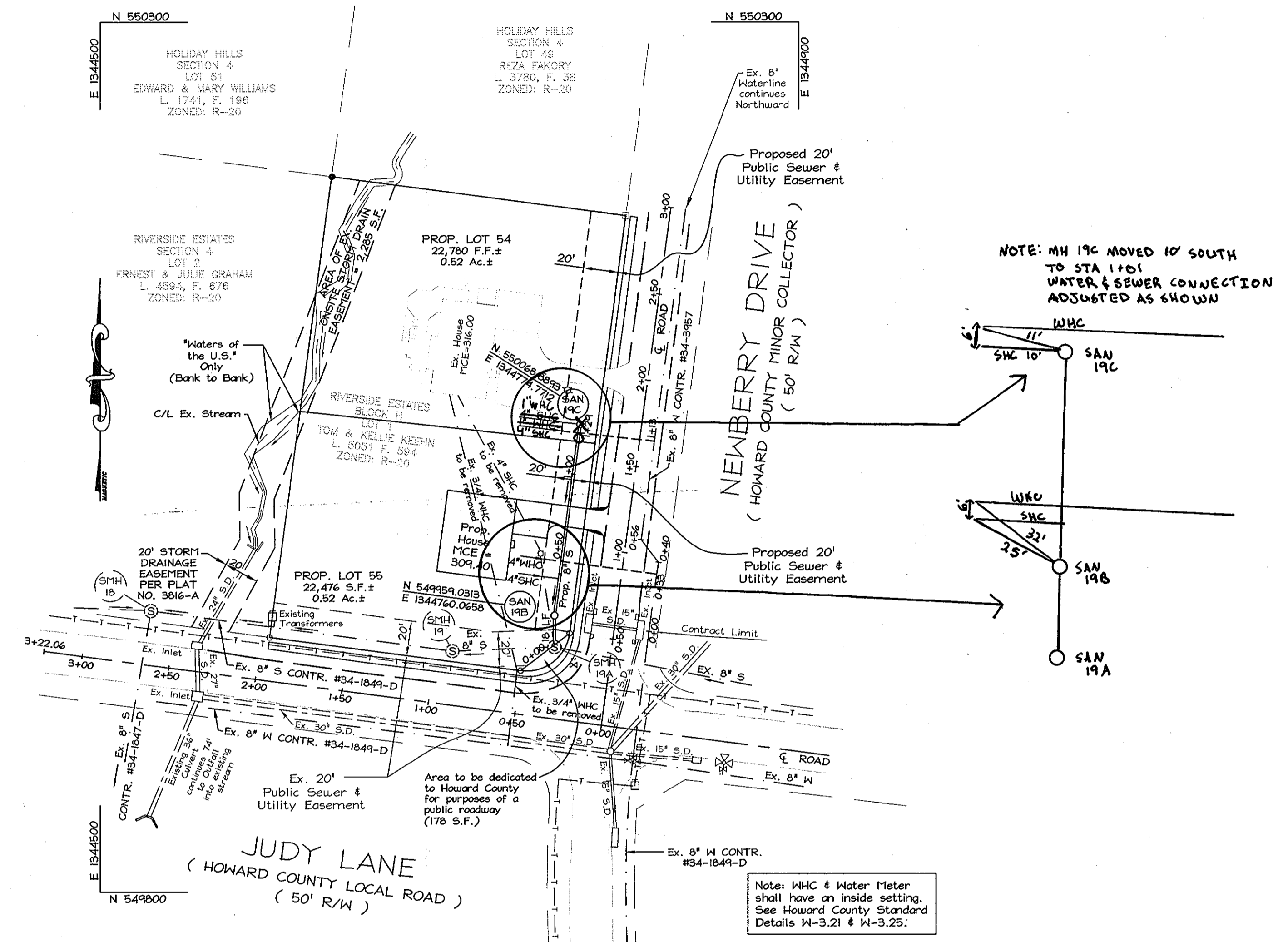
CHECK BOX:
SURVEY & DRAFTING DIVISION AS BUILT DATE: _____

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Signature: _____ Date: _____
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
Signature: _____ Date: 4/19/08
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND THE APPROVED SUPPLEMENTAL PLAN, FILED WITH F-07-171.

DEPARTMENT OF PUBLIC WORKS Chief: Steve C. _____ Date: 4/15/08 CHIEF - BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING LDE Inc. Engineers, Surveyors, Planners 9250 Rumsig Road, Suite 106 Columbia, Maryland - 21045 (410) 715-1070 - (301) 596-3424 - FAX (410) 715-9540	DESIGNED SDH DRAWN GDW CHECKED SWC DATE 3/20/08	STATE OF MARYLAND JAMES W. COOPER PROFESSIONAL ENGINEER 3/20/08	COVER SHEET 600 SCALE MAP NO. _____ BLOCK _____		KEEHN ESTATES, LOTS 54 & 55 A RESUBDIVISION OF RIVERSIDE ESTATES, SECTION 4, BLOCK H, LOT 1 Tax Map No. 41 - Grid No. 11 - P/O Parcel 420 5th Election District - Howard County, Maryland CONTRACT NO. 34-4523-D	SCALE As Shown SHEET 1 of 3



NOTE: MH 196 MOVED 10' SOUTH TO STA 1101 WATER & SEWER CONNECTION ADJUSTED AS SHOWN

Note: WHC & Water Meter shall have an inside setting. See Howard County Standard Details W-3.21 & W-3.25.

SEWER HOUSE CONNECTION TABLE			
LOT NO.	INV. @ MAIN	INV. @ PL / EASMT	MIN. CELLAR ELEV.
54	318.7	318.9	316
55	311.7	311.9	309.4

APPROVED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: _____ Date: _____
 NATURAL RESOURCES CONSERVATION SERVICE

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

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND THE APPROVED SUPPLEMENTAL PLAN, FILED WITH F-07-171.

HOWARD SOIL CONSERVATION DISTRICT DATE: _____

DEPARTMENT OF PUBLIC WORKS

Signature: *Steve Clow* 4/13/08
 CHIEF-BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING

Signature: *John P. ...* 4/14/08
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

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

Signature: *Michael W. ...*
 PROFESSIONAL ENGINEER

DESIGNED SDH				
DRAWN GDW				
CHECKED SWC				
DATE 3/20/08	KCF	AS-BUILT	3/20/08	
BY NO.		REVISION	DATE	

PLAN VIEW

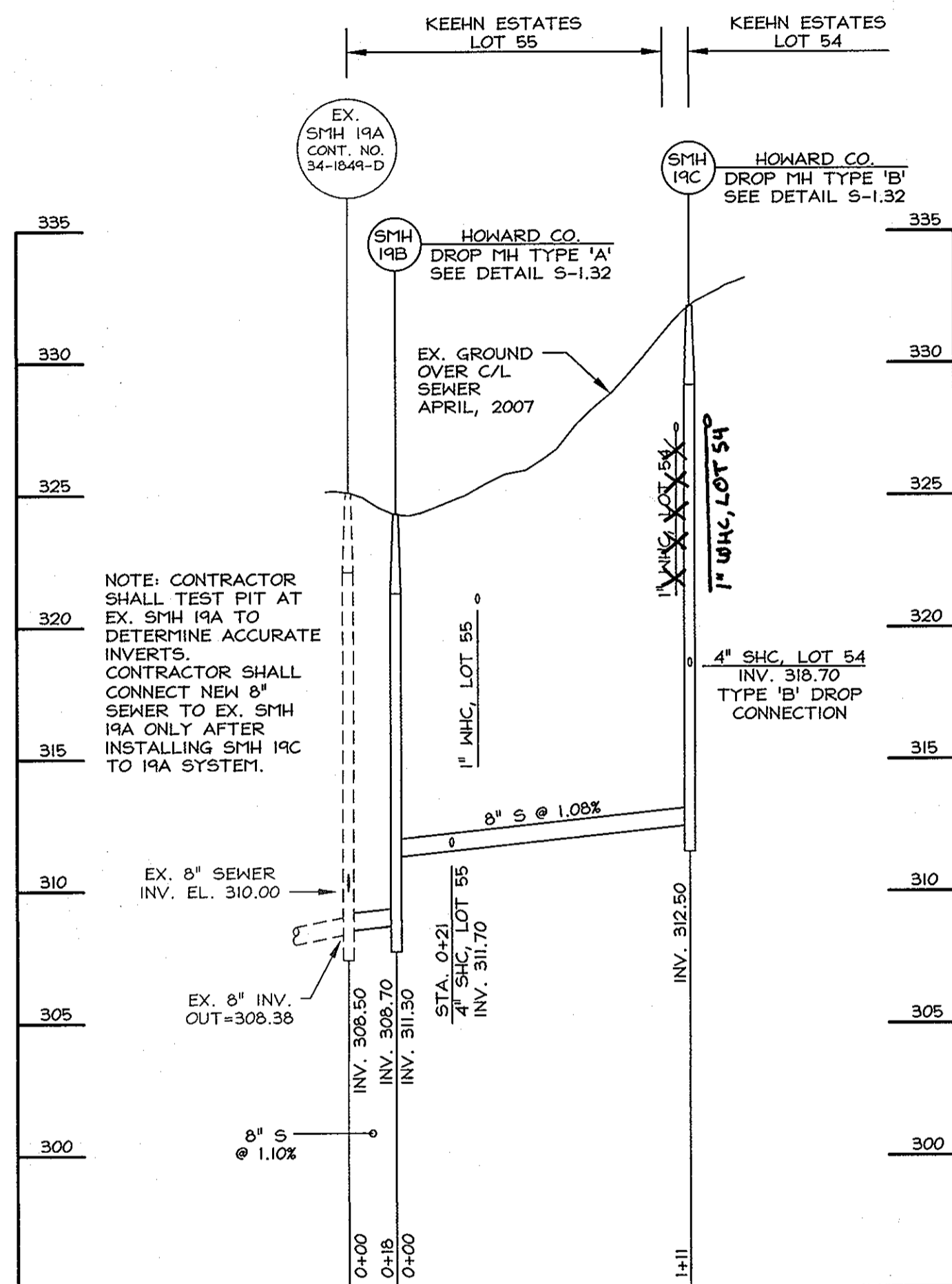
600 SCALE MAP NO. BLOCK

KEEHN ESTATES, LOTS 54 & 55

A RESUBDIVISION OF RIVERSIDE ESTATES, SECTION 4, BLOCK H, LOT 1
 Tax Map No. 41 - Grid No. 11 - P/O Parcel 420
 5th Election District - Howard County, Maryland
 CONTRACT NO. 34-4523-D

SCALE 1" = 50'

SHEET 2 of 3



8" PUBLIC SEWER EXTENSION PROFILE
 SCALE: HOR. 1"=50'
 VER. 1"=5'

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: _____ Date: _____
 NATURAL RESOURCES CONSERVATION SERVICE

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

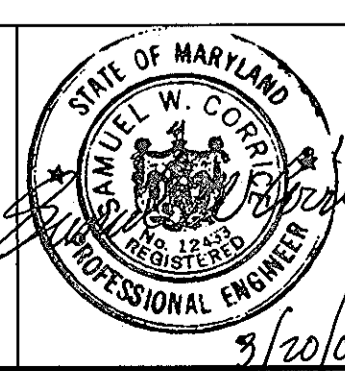
Signature: _____ Date: _____
 HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND THE APPROVED SUPPLEMENTAL PLAN, FILED WITH F-07-171.

DEPARTMENT OF PUBLIC WORKS
 Signature: *Shirley C. Chen* 4/3/08
 CHIEF-BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 Signature: *John Danner* 4/14/08
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

LDE Inc.
 Engineers, Surveyors, Planners
 9230 Rumsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9340



DESIGNED SDH			
DRAWN GDW			
CHECKED SWC			
DATE 3/2008	KCI	AS-BUILT	3/20/08
BY NO.		REVISION	DATE

PROFILE SHEET

600 SCALE MAP NO. BLOCK

KEEHN ESTATES, LOTS 54 & 55
 A RESUBDIVISION OF RIVERSIDE ESTATES, SECTION 4, BLOCK H, LOT 1
 Tax Map No. 41 - Grid No. 11 - P/O Parcel 420
 5th Election District - Howard County, Maryland
 CONTRACT NO. 34-4523-D

SCALE As Shown
 SHEET 3 of 3