


**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 SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- A FIELD RUN TOPOGRAPHIC SURVEYS WERE PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC., DATED MARCH 2006.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3044005R, NO. 3044004R
ALL VERTICAL CONTROLS ARE BASED ON NAVD' 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL #3044005R (ELEV.=374.389)
3/4" REBAR 0.8' BELOW SURFACE
N. 578233.92, E. 1373142.33
GEODETIC SURVEY CONTROL #3044004R (ELEV. 362.575)
3/4" REBAR 0.6' BELOW SURFACE
N. 578128.03, E. 1373460.71
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, 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.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:
AT & T 1-800-252-1133
BGE (CONTRACTOR SERVICE) 410-850-4620
BGE (EMERGENCY) 410-685-1400
BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE CO 410-795-1390
MISS UTILITY 1-800-257-7777
STATE HIGHWAY ADMINISTRATION 410-531-5533
VERIZON 1-800-743-0033/410-224-9210
TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY 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(o) 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'-6" 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 DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE 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.
- FOR TWIN DROP HOUSE CONNECTIONS, SEE HO. CO. DETAIL S2.12 AND S2.14.

PART III - SEWER

- ALL SEWER MAINS SHALL BE D.I.P. 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 W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH FINAL PLAN F-07-002.

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

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

John R. Blutes
SOIL CONSERVATION DISTRICT

6/26/07
DATE

Jim Meyer
S.S. SOIL CONSERVATION DISTRICT

6/26/07
DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

DES: RJ

DRN: RJ

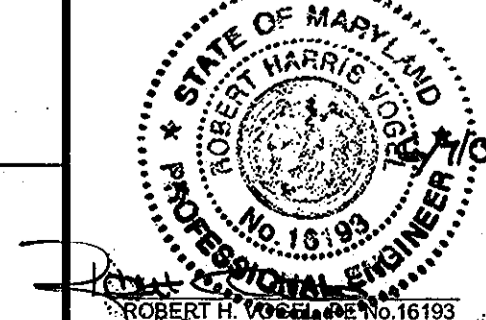
CHK: RHV

DATE: JANUARY 2007

BY	NO.	REVISION	DATE
KCI	2	AS-BUILT DATA ADDED	2-12-10
RHV	1	REVISE SERVICE FOR LOTS 100-123	4/13/09

PLAN & PROFILES

600' SCALE MAP NO. 25
BLOCK NO. 20
600' SCALE MAP NO. 31
BLOCK NO. 2



WORTHINGTON FIELDS
PHASE 6 LOTS 90 THRU 151
CONTRACT NO.14-4344-D

TAX MAP 25 BLOCK 20
TAX MAP 31 BLOCK 2
2ND ELECTION DISTRICT

PARCEL 98
HOWARD COUNTY, MARYLAND

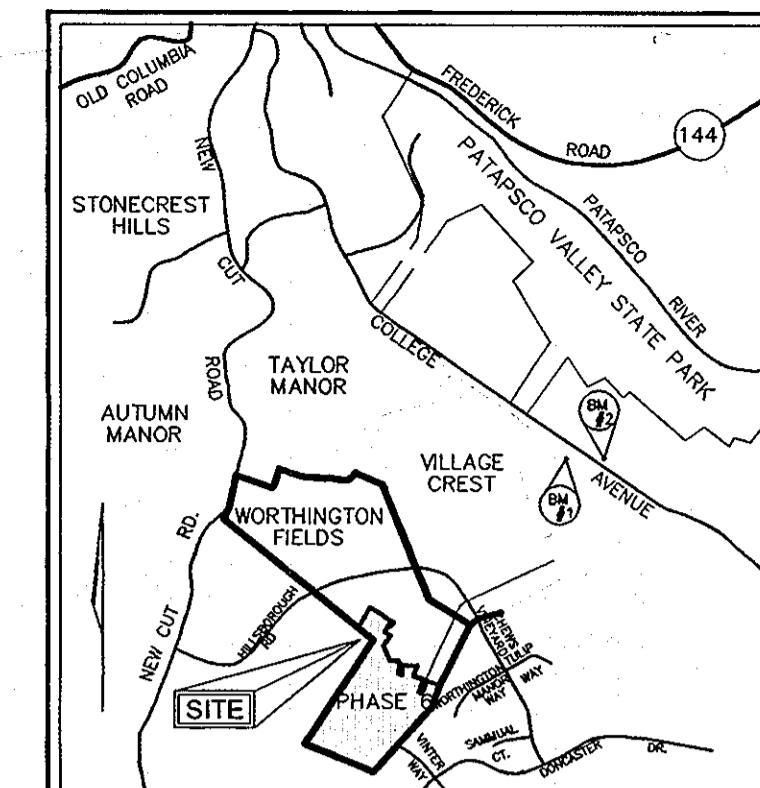
SCALE AS SHOWN
SHEET 1 OF 7

WORTHINGTON FIELDS

PHASE 6 LOTS 90 TO 151

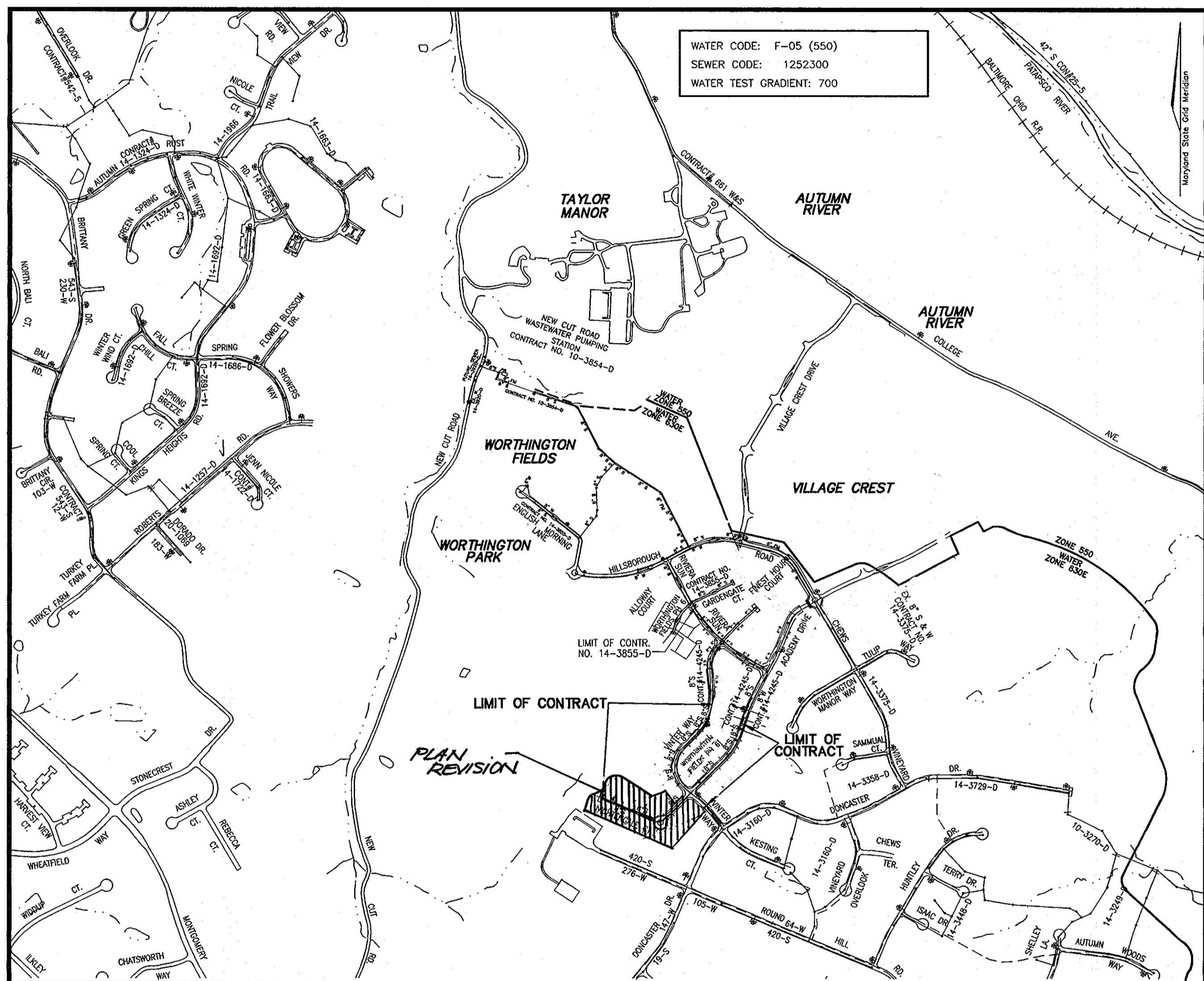
HOWARD COUNTY, MARYLAND

CONTRACT NO. 14 - 4344 - D



VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS
BENCHMARK NO. 1: COUNTY CONTROL #3044005R
3/4" REBAR 0.8' BELOW SURFACE
N. 578233.92, E. 1373142.33
ELEV. = 374.389
BENCHMARK NO. 2: COUNTY CONTROL #3044004R
3/4" REBAR 0.6' BELOW SURFACE
N. 578128.03, E. 1373460.71
ELEV. = 362.575



TYPE OF BUILDING:	RESIDENTIAL
NO. OF LOTS/PARCELS:	58 LOTS**
NO. OF WATER HOUSE CONNECTIONS:	52
NO. OF SEWER HOUSE CONNECTIONS:	52
DRAINAGE AREA:	PATAPSCO
TREATMENT PLANT:	NEW CUT ROAD WASTEWATER PUMPING STATION

WORTHINGTON FIELDS PH #6**
LOTS 90 TO 150 (LOT#S 44, 45 & 46 NOT USED)
LOTS 90 TO 96 UNDER CONT.#14-3855-D
LOTS 149, 150 & 151 - OPEN SPACE LOTS

DEVELOPER
NEW CUT ROAD DEVELOPMENT 2, INC.
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR STE 102
ELLICOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(443) 367-0422

QUANTITIES

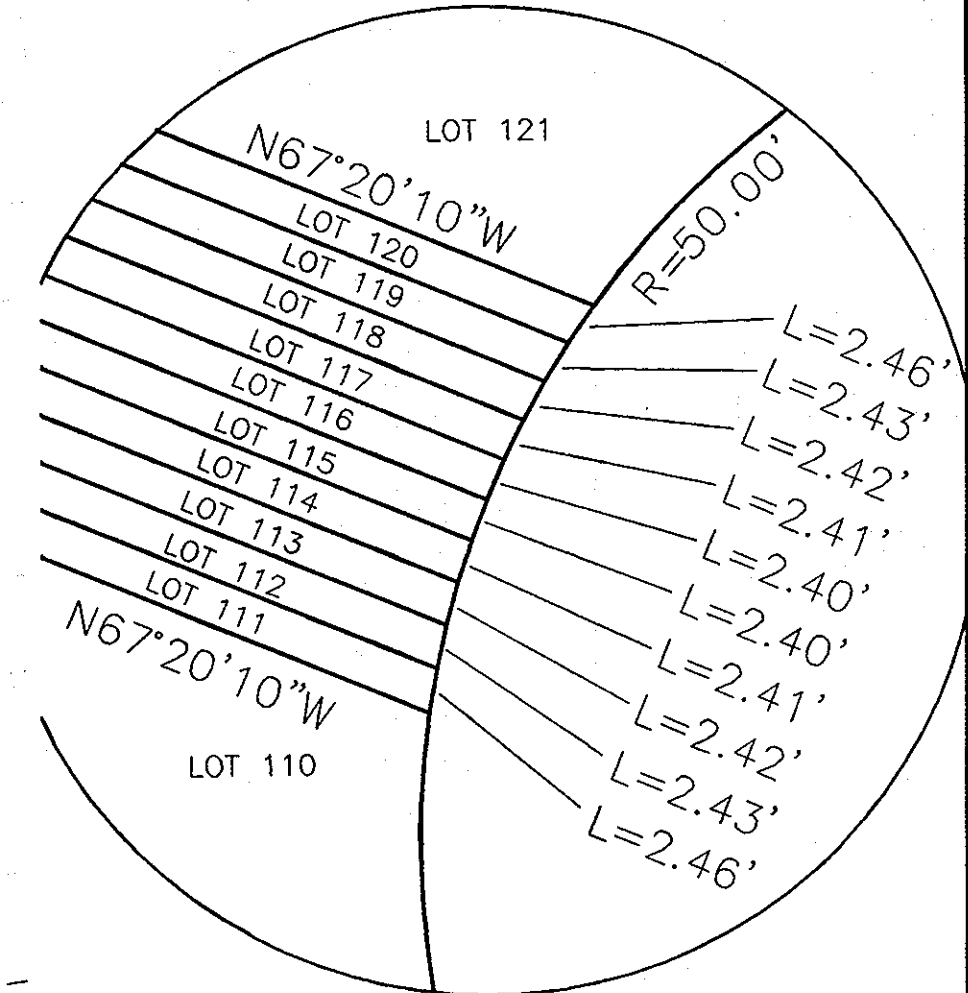
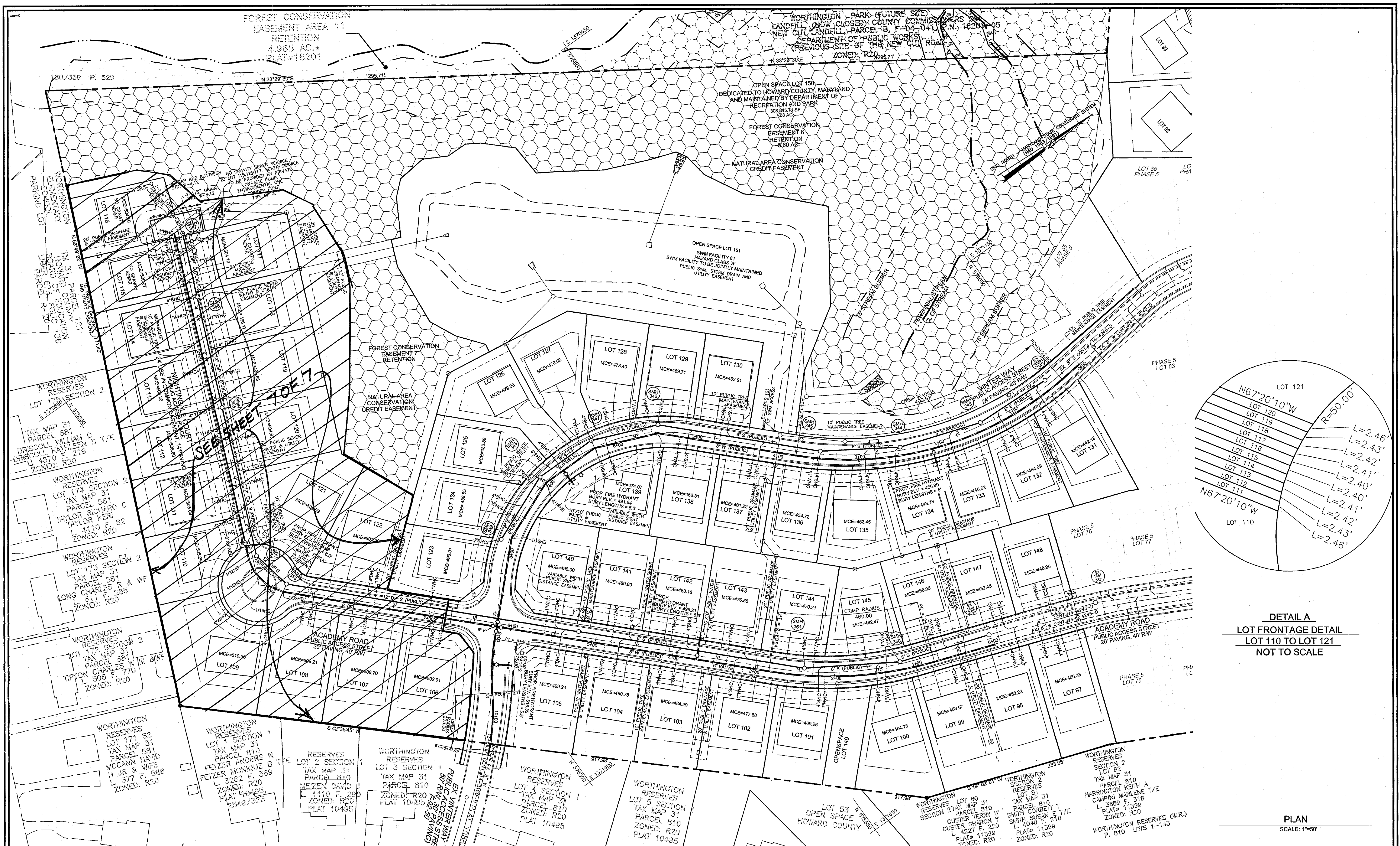
NAME OF UTILITY CONTRACTOR: _____
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: _____

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" W	2377 LF			
6" W	100 LF			
FIRE HYDRANT	5 EACH			
8"x6" TEE & VALVE	4 EACH			
8" CAP & BUTTRESS	1 EACH			
8" S	1988 LF			
MANHOLES	15 EACH			
12" S	808 LF			
4" SHC	1325 EACH			
1" WHC	1350 EACH			

QUANTITIES

NAME OF UTILITY CONTRACTOR: _____
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: _____

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	2,388 LF	2400 LF	CL52	GRIFFIN PIPE
8" VALVE	1 EACH	1 EA.		
1 1/2" HORIZONTAL BEND	2 EACH	2 EA.		GRIFFIN PIPE
1 1/2" HORIZONTAL BEND	2 EACH	2 EA.		GRIFFIN PIPE
8"x6" REDUCER	1 EACH	1 EA.		MUELLER
8"x6" TEE & VALVE	3 EACH	3 EA.		GRIFFIN PIPE
6" FIRE HYDRANT	5 EACH	5 EA.		MUELLER
6" VALVE	1 EACH	1 EA.		MUELLER
6" WATER	388 LF	385 LF		GRIFFIN PIPE
6" CAP & BUTTRESS	1 EACH	1 EA.		SIGMA CORP.
1" WHC	52 EACH	52 EA.		READING
SEWER MANHOLES	14 EACH	14 EA.		ATLANTIC
8" SEWER	1,888 LF	1900 LF		J.M. MFG.
12" SEWER	680 LF	680 LF		J.M. MFG
1 1/2" LOW PRESSURE SEWER	173 LF	173 LF		SIGMA
1 1/4" LOW PRESSURE SEWER	150 LF	150 LF		SIGMA
8" CAP & BUTTRESS	1 EACH	1 EA.		SIGMA
TRACER WIRE, CONDUCTING ROD & VAULT	1 EACH	1 EA.		READING
TERMINAL FLUSHING CONNECTION	1 EACH	1 EA.		READING
4" SHC	34 EACH	34 EA.		PLASTIC TRENDS
4" DHC	9 EACH	9 EA.		PLASTIC TRENDS
4" TWIN SHC	3 EACH	3 EA.		PLASTIC TRENDS



DETAIL A
LOT FRONTAGE DETAIL
LOT 110 TO LOT 121
NOT TO SCALE

PLAN
SCALE: 1"=50'

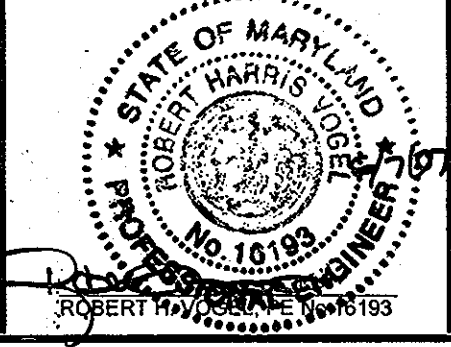
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIGOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

DES:	RJ
DRN:	RJ
CHK:	RHV
DATE:	JANUARY 2007
BY:	NO.
REVISION:	1 REVISE SERVICE FOR LOTS 104-123
DATE:	4/13/09

PLAN & PROFILES
600' SCALE MAP NO. 25
BLOCK NO. 20
600' SCALE MAP NO. 31
BLOCK NO. 2



WORTHINGTON FIELDS
PHASE 6 LOTS 90 THRU 151
CONTRACT NO. 14-4344-D

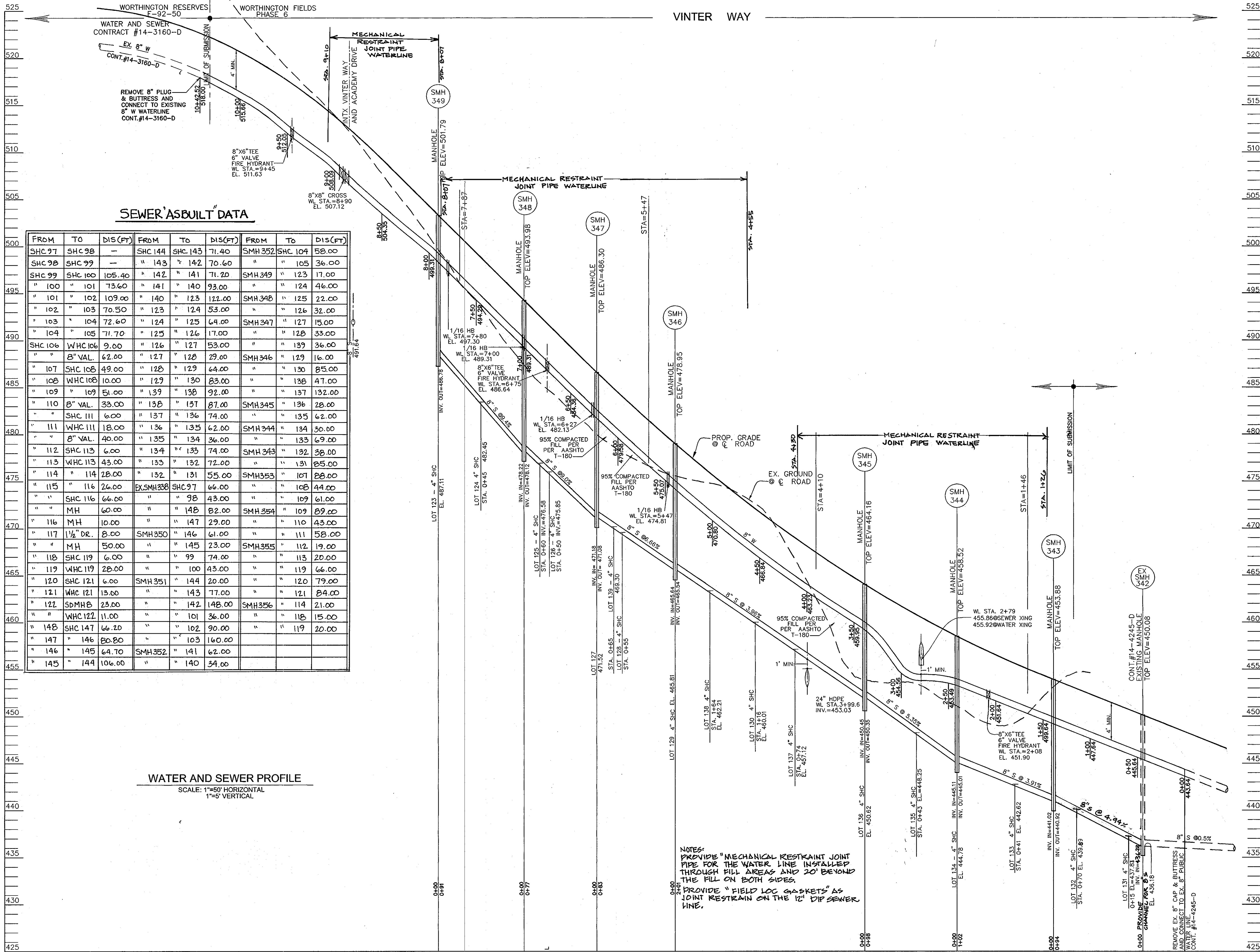
TAX MAP 25 BLOCK 20
TAX MAP 31 BLOCK 2
2ND ELECTION DISTRICT

PARCEL 98
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 7

Robert H. Vogel 7-10-07
CHIEF, BUREAU OF UTILITIES

Robert H. Vogel 7/12/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION



SEWER ASBUILT DATA

FROM	TO	DIS(FEET)	FROM	TO	DIS(FEET)	FROM	TO	DIS(FEET)
SHC 97	SHC 98	-	SHC 144	SHC 143	71.40	SMH 352	SHC 104	58.00
SHC 98	SHC 99	-	" 143	" 142	70.60	"	" 105	36.00
SHC 99	SHC 100	105.40	" 142	" 141	71.20	SMH 349	" 123	17.00
" 100	" 101	73.60	" 141	" 140	93.00	"	" 124	46.00
" 101	" 102	109.00	" 140	" 123	122.00	SMH 348	" 125	22.00
" 102	" 103	70.50	" 123	" 124	53.00	"	" 126	32.00
" 103	" 104	72.60	" 124	" 125	64.00	SMH 347	" 127	15.00
" 104	" 105	71.70	" 125	" 126	17.00	"	" 128	33.00
SHC 106	WHC 106	9.00	" 126	" 127	53.00	"	" 139	36.00
"	" 8" VAL.	62.00	" 127	" 128	29.00	SMH 346	" 129	16.00
" 107	SHC 108	49.00	" 128	" 129	64.00	"	" 130	85.00
" 108	WHC 108	10.00	" 129	" 130	83.00	"	" 138	47.00
" 109	" 109	51.00	" 139	" 138	92.00	"	" 137	132.00
" 110	" 8" VAL.	33.00	" 138	" 137	87.00	SMH 345	" 136	28.00
"	SHC 111	6.00	" 137	" 136	74.00	"	" 135	62.00
" 111	WHC 111	18.00	" 136	" 135	62.00	SMH 344	" 134	30.00
"	" 8" VAL.	40.00	" 135	" 134	36.00	"	" 133	69.00
" 112	SHC 113	6.00	" 134	" 133	74.00	SMH 343	" 132	38.00
" 113	WHC 113	43.00	" 133	" 132	72.00	"	" 131	85.00
" 114	" 114	28.00	" 132	" 131	55.00	SMH 353	" 107	88.00
" 115	" 116	24.00	EX-SMH 338	SHC 97	66.00	"	" 108	44.00
"	SHC 116	66.00	"	" 98	43.00	"	" 109	61.00
"	MH	60.00	"	" 148	82.00	SMH 354	" 109	89.00
" 116	MH	10.00	"	" 147	29.00	"	" 110	43.00
" 117	1 1/2" DR.	8.00	SMH 350	" 146	61.00	"	" 111	58.00
"	MH	50.00	"	" 145	23.00	SMH 355	" 112	19.00
" 118	SHC 119	6.00	"	" 99	74.00	"	" 113	20.00
" 119	WHC 119	28.00	"	" 100	43.00	"	" 119	66.00
" 120	SHC 121	6.00	SMH 351	" 144	20.00	"	" 120	79.00
" 121	WHC 121	13.00	"	" 143	77.00	"	" 121	84.00
" 122	SDMH 8	23.00	"	" 142	148.00	SMH 356	" 114	21.00
"	WHC 122	11.00	"	" 101	36.00	"	" 118	15.00
" 148	SHC 147	66.20	"	" 102	90.00	"	" 119	20.00
" 147	" 146	80.80	"	" 103	160.00	"	"	
" 146	" 145	64.70	SMH 352	" 141	62.00	"	"	
" 145	" 144	106.00	"	" 140	34.00	"	"	

WATER AND SEWER PROFILE
SCALE: 1"=50' HORIZONTAL
1"=8' VERTICAL

WATER ASBUILT DATA

FROM	TO	DIS(FEET)	FROM	TO	DIS(FEET)
WHC 97	WHC 98	57.00	EX-SMH 338	WHC 97	83.00
" 98	" 99	74.00	"	" 98	35.00
" 99	" 100	86.00	"	" 148	22.00
" 100	" 101	75.00	"	" 147	22.00
" 101	" 102	103.00	SMH 350	" 99	64.00
" 102	" 103	98.00	"	" 100	34.00
" 103	" 104	72.00	"	" 146	52.00
" 104	" 105	66.00	"	" 145	25.00
" 105	" 106	-	SMH 351	" 144	22.00
WHC 106	" 8" VAL.	73.00	"	" 143	96.00
" 106	WHC 107	82.00	"	FH	132.00
" 107	WHC 122	46.00	"	WV@FH	130.00
"	SHC 107	18.00	"	WHC 101	42.00
" 108	" 8" VAL.	50.00	"	" 102	81.00
"	" 8" VAL.	18.00	SMH 352	" 142	114.00
"	SHC 110	19.00	"	" 141	45.00
" 111	" 8" VAL.	54.00	"	" 140	43.00
"	WHC 121	33.00	"	" 103	110.00
" 112	SHC 112	24.00	"	" 104	44.00
" 114	WHC 118	32.00	"	" 105	42.00
" 115	SHC 115	11.00	"	FH	95.00
"	WHC 117	32.00	"	WV@FH	107.00
" 116	SHC 116	46.00	SMH 349	WHC 123	40.00
"	MH	42.00	"	" 124	36.00
" 117	VAULT	33.00	SMH 348	" 125	20.00
" 118	SHC 118	36.00	"	FH	39.00
" 120	" 120	37.00	"	WV@FH	30.00
" 121	FH	75.00	SMH 347	WHC 126	43.00
"	" 6" FH VAL	77.00	"	" 127	18.00
" 122	SDMH 8	14.00	"	" 139	39.00
"	WHC 107	46.00	SMH 346	" 138	42.00
FH	" 6" FH VAL	23.00	"	" 128	32.00
"	" 8" VAL.	28.00	"	" 129	18.00
" 8" VAL.	" 6" FH VAL	8.00	"	" 130	76.00
VAULT	" 1" WHC 117	34.00	SMH 345	" 137	85.00
WHC 148	WHC 147	-	"	" 136	28.00
" 147	" 146	79.00	SMH 344	" 134	32.00
" 146	" 145	60.00	"	" 133	62.00
" 145	" 144	87.00	"	FH	48.00
" 144	" 143	105.00	"	WV@FH	42.00
" 143	" 142	70.00	SMH 343	WHC 132	30.00
" 142	" 141	72.00	"	" 131	75.00
" 141	" 140	82.00	SMH 353	" 108	37.00
" 123	" 124	75.00	"	" 109	83.00
" 124	" 125	46.00	SMH 354	" 112	31.00
" 125	" 126	54.00	"	" 110	36.00
" 126	" 127	31.00	"	" 111	74.00
" 127	" 128	69.00	SMH 355	" 112	31.00
" 128	" 129	18.00	"	" 113	52.00
" 129	" 130	92.00	"	" 119	40.00
" 139	" 138	73.00	"	" 120	42.00
" 138	" 137	92.00	SMH 356	" 113	41.00
" 137	" 136	73.00	"	" 114	39.00
" 136	" 135	66.00	"	" 118	27.00
" 135	" 134	36.00	"	" 119	45.00
" 134	" 133	74.00	"	VAULT	64.00
" 133	" 132	69.00	"	"	
" 132	" 131	59.00	"	"	

NOTES:
PROVIDE "MECHANICAL RESTRAINT JOINT PIPE FOR THE WATER LINE INSTALLED THROUGH FILL AREAS AND 20' BEYOND THE FILL ON BOTH SIDES."
PROVIDE "FIELD LOC GASKETS" AS JOINT RESTRAINT ON THE 12" DIP SEWER LINE.

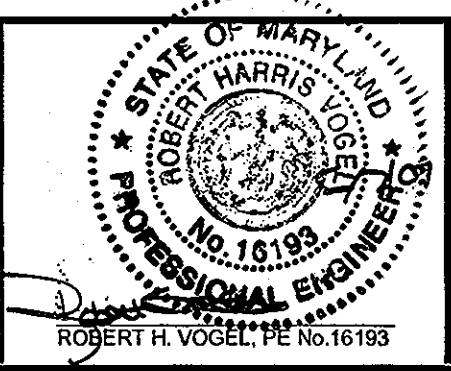
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
7-10-07
7/12/07

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
7/12/07

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
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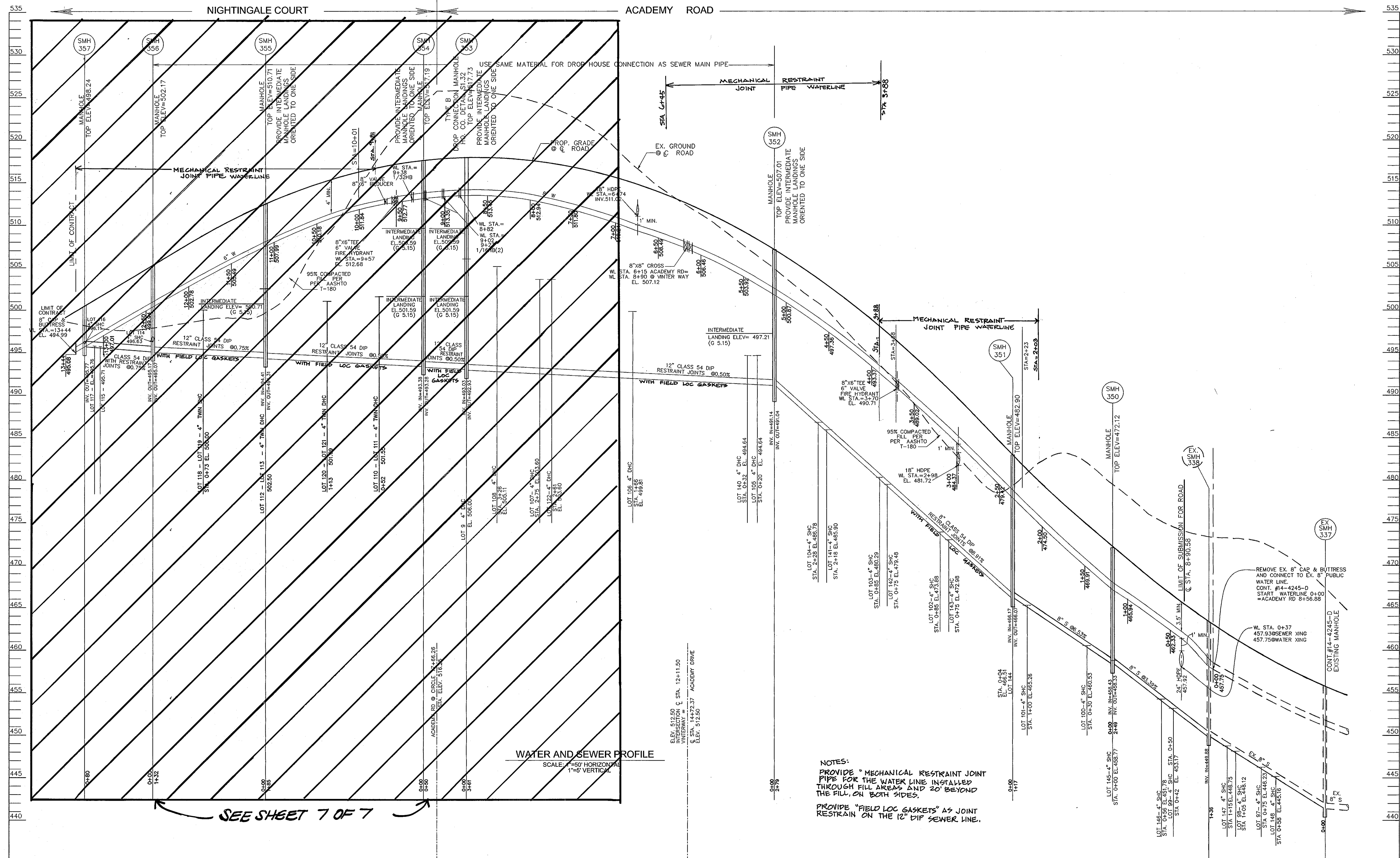
DES:	RJ
DRN:	RJ
CHK:	RHV
DATE:	JANUARY 2007
BY:	KC1 2
NO.:	ASBUILT DATA ADDED
REVISION:	
DATE:	2-15-10

PLAN & PROFILES
600' SCALE MAP NO. 25
BLOCK NO. 20
600' SCALE MAP NO. 31
BLOCK NO. 2



WORTHINGTON FIELDS
PHASE 6 LOTS 90 THRU 151
CONTRACT NO. 14-4344-D
TAX MAP 25 BLOCK 20
TAX MAP 31 BLOCK 2
2ND ELECTION DISTRICT
PARCEL 98
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 7



SEE SHET 7 OF 7

NOTES:
 PROVIDE "MECHANICAL RESTRAINT JOINT PIPE FOR THE WATER LINE INSTALLED THROUGH FILL AREAS AND 20' BEYOND THE FILL, ON BOTH SIDES.
 PROVIDE "FIELD LOC GASKETS" AS JOINT RESTRAIN ON THE 12" DIP SEWER LINE.

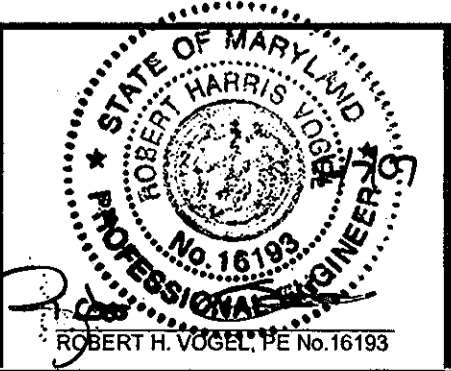
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. H. B. 7-10-07
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 7/26/07
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.8961

DES:	RJ		
DRN:	RJ		
CHK:	RHV		
DATE:	JANUARY 2007		
BY:	RHV	1	REVISE SERVICE FOR LOTS 100-123
NO.:			
REVISION:			
DATE:			11/13/09

PLAN & PROFILES
 600' SCALE MAP NO. 25
 BLOCK NO. 20
 600' SCALE MAP NO. 31
 BLOCK NO. 2



WORTHINGTON FIELDS
 PHASE 6 LOTS 90 THRU 151
 CONTRACT NO. 14-4344-D
 TAX MAP 25 BLOCK 20
 TAX MAP 31 BLOCK 2
 2ND ELECTION DISTRICT
 PARCEL '98
 HOWARD COUNTY, MARYLAND

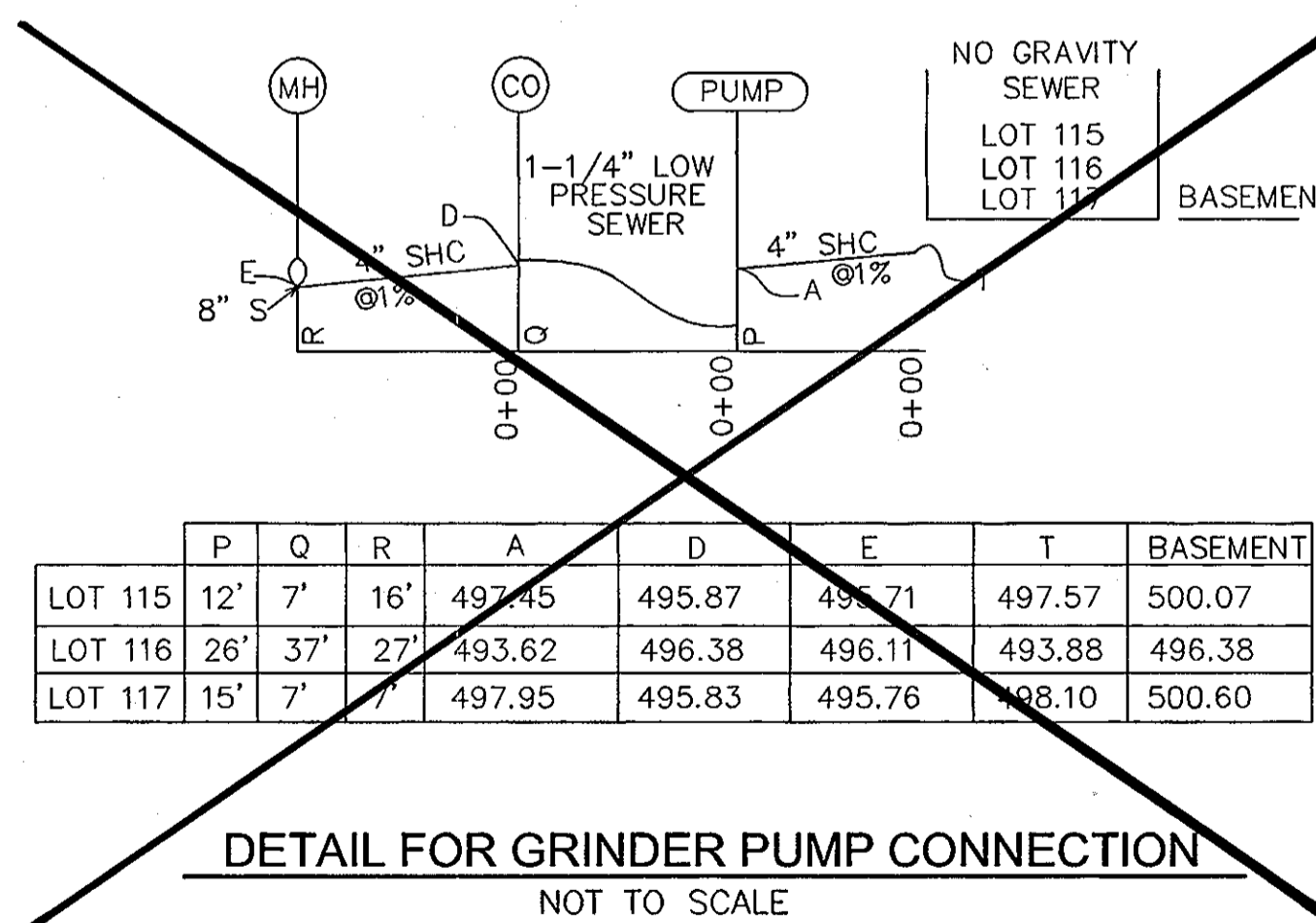
SCALE AS SHOWN
 SHEET 4 OF 7

SEWER MANHOLE SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
ACADEMY ROAD					
EX. SMH 337	STD. PRECAST MH HO. CO. STD. DET. G5.12	CONT.# 14-4245-D			
EX. SMH 338	STD. PRECAST MH HO. CO. STD. DET. G5.12	CONT.# 14-4245-D			
SMH 350	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 9+74.2, 2.4' RT.	472.12	458.43	458.33
SMH 351	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 10+92.46, 4' RT. ACADEMY ROAD	482.93	466.17	466.07
SMH 352	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 13+72.23, 6' RT. ACADEMY ROAD	507.01	491.14	491.04
SMH 353	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 17+33.5, 8' RT. ACADEMY ROAD	517.74	493.07	492.83
NIGHTINGALE COURT					
SMH 354	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 18+02, 5.0' RT. NIGHTINGALE COURT	517.21	493.38	493.28
SMH 355	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 19+88, 4.4' RT. NIGHTINGALE COURT	511.38	491.41	494.31
SMH 356	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 21+27, 4.88' RT. NIGHTINGALE COURT	503.44	495.17 (SHC) 496.65 (SHC)	495.07
SMH 357	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 22+7.21, 5.07' RT. VINTER WAY	498.63	493.11 (SHC)	495.71
VINTER WAY					
SMH 349	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 11+10, 9.49' RT. VINTER WAY	502.30	487.11 (SHC)	486.78
SMH 348	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 10+24, 8.99' RT. VINTER WAY	493.81	478.22	478.12
SMH 347	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 9+50, 9.21' RT. VINTER WAY	486.35	471.18	471.08
SMH 346	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 8+69.34, 8.94' RT. VINTER WAY	478.96	465.64	465.54
SMH 345	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 6+70, 3.52' RT. VINTER WAY	464.18	450.45	450.35
SMH 344	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 5+71, 3.8' RT. VINTER WAY	458.53	445.11	445.01
SMH 343	STD. PRECAST MH HO. CO. STD. DET. G5.12	CL STA. 4+67, 3.5' RT. VINTER WAY	453.86	441.02	440.92
SMH 342	STD. PRECAST MH HO. CO. STD. DET. G5.12	CONT. # 14-4245-D			

CRIMP TABLE					
CRIMP	LENGTH	RADIUS	PC STA.	PT STA.	LOCATION
CR1	204.18'	460.00	0+76.76	2+80.94	ACADEMY RD
CR2	139.32'	637.03'	9+03.20	10+42.52	VINTER WAY
CR3	48.43'	258.00'	9+03.20	8+54.77	VINTER WAY
CR4	395.00'	349.08'	0+27.60	3+76.28	VINTER WAY

WATER MAIN LOCATION CHART	
CL ROAD/WL STA.	APPURTENANCE
ACADEMY ROAD	
WL STA. 3+70	FIRE HYDRANT
WL STA. 6+15	8"X8" CROSS
WL STA. 8+90 @ ACADEMY RD	
WL STA. 8+82	1/32 HB
WL STA. 9+02	1/16 HB
NIGHTINGALE COURT	
WL STA. 9+23	1/16 HB
WL STA. 9+38	1/32 HB
WL STA. 9+57	FIRE HYDRANT
WL STA. 13+44	8" CAP & BUTTRESS
VINTER WAY	
WL STA. 2+08	FIRE HYDRANT
WL STA. 5+47	1/16 HB
WL STA. 6+27	1/16 HB
WL STA. 6+75	FIRE HYDRANT
WL STA. 7+00	1/16 HB
WL STA. 7+80	1/16 HB
WL STA. 8+90=	8"X8" CROSS
WL STA. 6+15 @ ACADEMY RD	
WL STA. 9+45	FIRE HYDRANT

SEE SHEET 7



SEWER CONNECTION TABULATION						
LOT NO	TYPE	ELEV.		ELEV. @ R/W OR EASEMENT		M.C.E.
		@ MAIN	@ UNIT	@ R/W OR EASEMENT	@ UNIT	
97	4" SHC @2%	446.23	446.83 (30')	447.83 (80')	450.33	
98	4" SHC @2%	448.12	448.68 (28')	449.72 (80')	452.22	
99	4" SHC @5%	453.17	454.67 (30')	457.17 (80')	459.67	
100	4" SHC @2%	460.53	461.13 (30')	462.23 (85')	464.73	
101	4" SHC @2%	465.26	465.88 (31')	466.76 (75')	469.26	
102	4" SHC @2%	473.88	474.48 (30')	475.38 (75')	477.88	
103	4" SHC @2%	480.29	480.89 (30')	481.79 (75')	484.29	
104	4" SHC @2%	486.78	487.38 (30')	488.28 (75')	490.78	
105	4" DHC @2%	494.64	495.04 (30')	496.74 (77')	499.24	
106	4" DHC @2%	498.81	499.33 (26')	500.41 (80')	502.91	
107	4" DHC @2%	503.60	504.00 (27')	504.70 (80')	506.70	
108	4" DHC @2%	505.71	505.62 (28')	506.71 (80')	509.21	
109	4" DHC @2%	508.00	508.06 (28')	508.06 (100')	510.50	
110	4" TDHC @2%	501.55	501.89 (20')	502.79 (70')	505.29	
111	4" TDHC @2%	501.55	501.89 (20')	502.59 (70')	505.09	
112	4" TDHC @2%	502.50	502.70 (20')	504.18 (70')	506.60	
113	4" TDHC @2%	502.55	502.70 (20')	503.70 (70')	506.20	
114	4" DHC @2%	498.63	497.03 (30')	497.57 (70')	500.07	
115	4" SHC @1%	495.71	496.41	497.57	500.07	
116	4" SHC @1%	496.11	501.20	501.60	504.10	
117	4" SHC @1%	495.76	501.20	501.60	504.10	
118	4" TDHC @2%	500.00	492.83 (10')	493.67 (70')	496.17	
119	4" TDHC @2%	500.00	492.83 (10')	494.17 (70')	496.63	
120	4" TDHC @2%	501.09	501.29 (10')	502.50 (70')	504.83	
121	4" TDHC @2%	501.09	501.29 (10')	502.59 (70')	505.09	
122	4" DHC @2%	503.60	505.88 (18')	505.00 (78')	507.58	
123	4" SHC @2%	487.11	487.45 (17')	488.41 (65')	490.91	
124	4" SHC @2%	482.45	482.85 (20')	484.05 (80')	486.55	
125	4" SHC @2%	476.58	476.86 (14')	478.38 (90')	480.88	
126	4" SHC @2%	474.78	475.14 (18')	476.58 (90')	479.08	
127	4" SHC @2%	471.52	471.82 (15')	473.52 (100')	476.02	
128	4" SHC @2%	469.30	469.66 (18')	470.90 (80')	473.40	
129	4" SHC @2%	465.81	466.11 (15')	467.21 (70')	469.71	
130	4" SHC @2%	460.01	460.39 (19')	461.41 (70')	463.91	
131	4" SHC @2%	437.81	438.52 (32')	439.68 (90')	442.18	
132	4" SHC @2%	439.89	440.59 (30')	441.59 (80')	444.09	
133	4" SHC @2%	442.62	443.24 (31')	444.12 (75')	446.62	
134	4" SHC @2%	444.78	445.36 (29')	446.28 (75')	448.78	
135	4" SHC @2%	448.25	448.87 (31')	449.95 (85')	452.45	
136	4" SHC @2%	450.62	451.18 (28')	452.22 (80')	454.72	
137	4" SHC @2%	457.12	457.70 (29')	458.72 (80')	461.22	
138	4" SHC @2%	462.21	462.77 (28')	463.81 (80')	466.31	
139	4" SHC @2%	469.97	470.59 (31')	471.57 (80')	474.07	
140	4" DHC @2%	494.64	495.00 (18')	495.80 (58')	498.30	
141	4" DHC @2%	485.90	486.26 (18')	487.10 (60')	489.60	
142	4" SHC @2%	479.48	479.84 (18')	480.68 (60')	483.18	
143	4" SHC @2%	472.98	473.34 (18')	474.18 (60')	476.58	
144	4" SHC @2%	466.51	466.91 (20')	467.71 (60')	470.21	
145	4" SHC @2%	458.77	459.23 (23')	459.97 (60')	462.47	
146	4" SHC @2%	451.78	452.18 (20')	453.08 (65')	458.05	
147	4" SHC @2%	448.75	449.13 (19')	449.95 (60')	452.45	
148	4" SHC @2%	445.16	445.52 (18')	446.46 (65')	448.96	

DROP CONNECTION BETWEEN MH 352 TO MH 356 ARE SAME MATERIAL AS SEWER PIPE.

LOT 115, LOT 116 AND LOT 117 ARE UTILIZING ENVIRONMENTAL ONE GRINDER PUMP TO CLEANOUT. NO GRAVITY SEWER FOR THESE LOTS PROVIDED.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

DES: RJ

DRN: RJ

CHK: RHV

DATE: JANUARY 2007

BY	NO.	REVISION	DATE
RHV	1	REVISE SERVICE FOR LOTS 106-123	4/13/09

PLAN & PROFILES

600' SCALE MAP NO. 25
BLOCK NO. 20
600' SCALE MAP NO. 31
BLOCK NO. 2



WORTHINGTON FIELDS

PHASE 6 LOTS 90 THRU 151
CONTRACT NO. 14-4344-D

TAX MAP 25 BLOCK 20
TAX MAP 31 BLOCK 2
2ND ELECTION DISTRICT

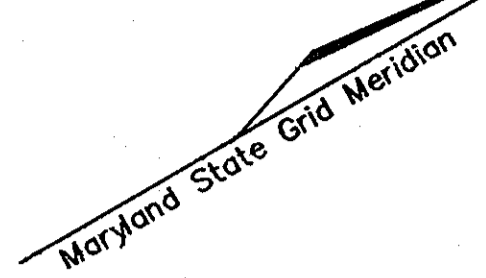
PARCEL 98
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
5 OF 7

RHV 7-10-07
CHIEF, BUREAU OF UTILITIES

RHV 7/12/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION



N 574500' E 1370600'

ROUNDHILL ROAD

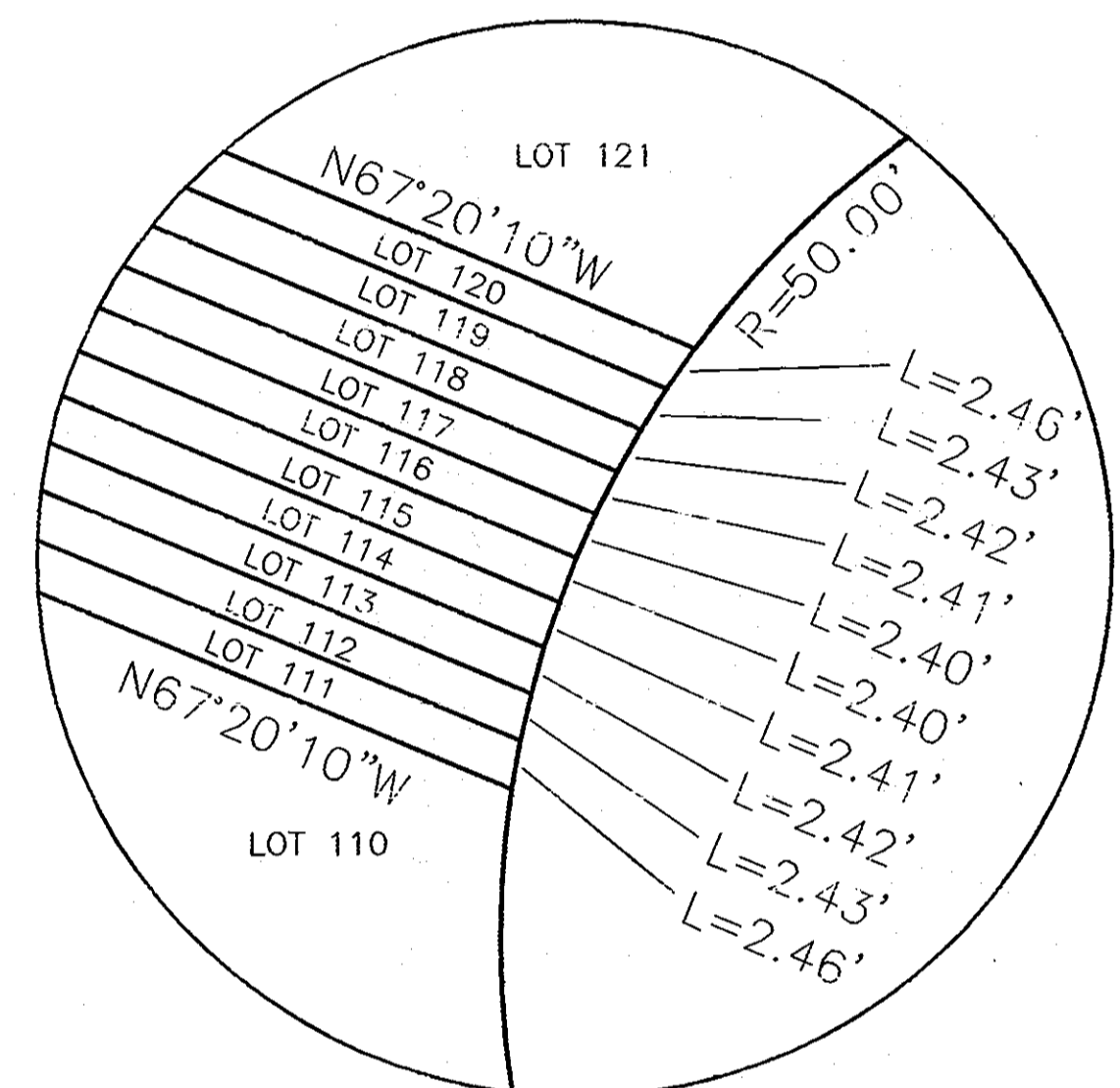
DONCASTER DRIVE

PLAN
SCALE: 1"=50'

OPEN SPACE LOT 150
DEDICATED TO HOWARD COUNTY, MARYLAND
AND MAINTAINED BY DEPARTMENT OF
RECREATION AND PARK
308,545.71 SF
7.08 AC.

FOREST CONSERVATION
EASEMENT 6
RETENTION
5.60 AC.

NATURAL AREA CONSERVATION
CREDIT EASEMENT



DETAIL A
LOT FRONTAGE DETAIL
LOT 110 TO LOT 121
NOT TO SCALE

K:\Projects\201907\1\ENGR\DWG\INAL_210-WS-6\02WS\PLAN.dwg - 7/30/2009 10:41:47 AM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

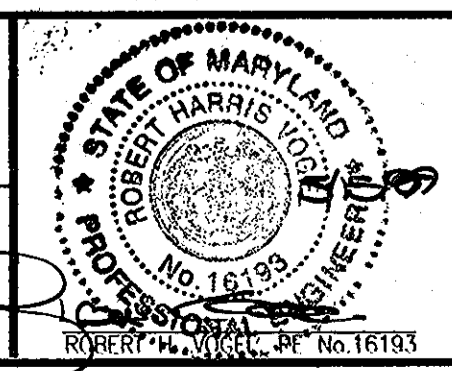
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8951

DES:	JR/DZ			
DRN:	HD			
CHK:	RHV			
DATE:	JULY 2008	BY NO.		REVISION
			1	REVISE W&S SERVICE FOR LOTS 106-123

PLAN & PROFILES

600' SCALE MAP NO. 25
BLOCK NO. 20
600' SCALE MAP NO. 31
BLOCK NO. 2



WORTHINGTON FIELDS

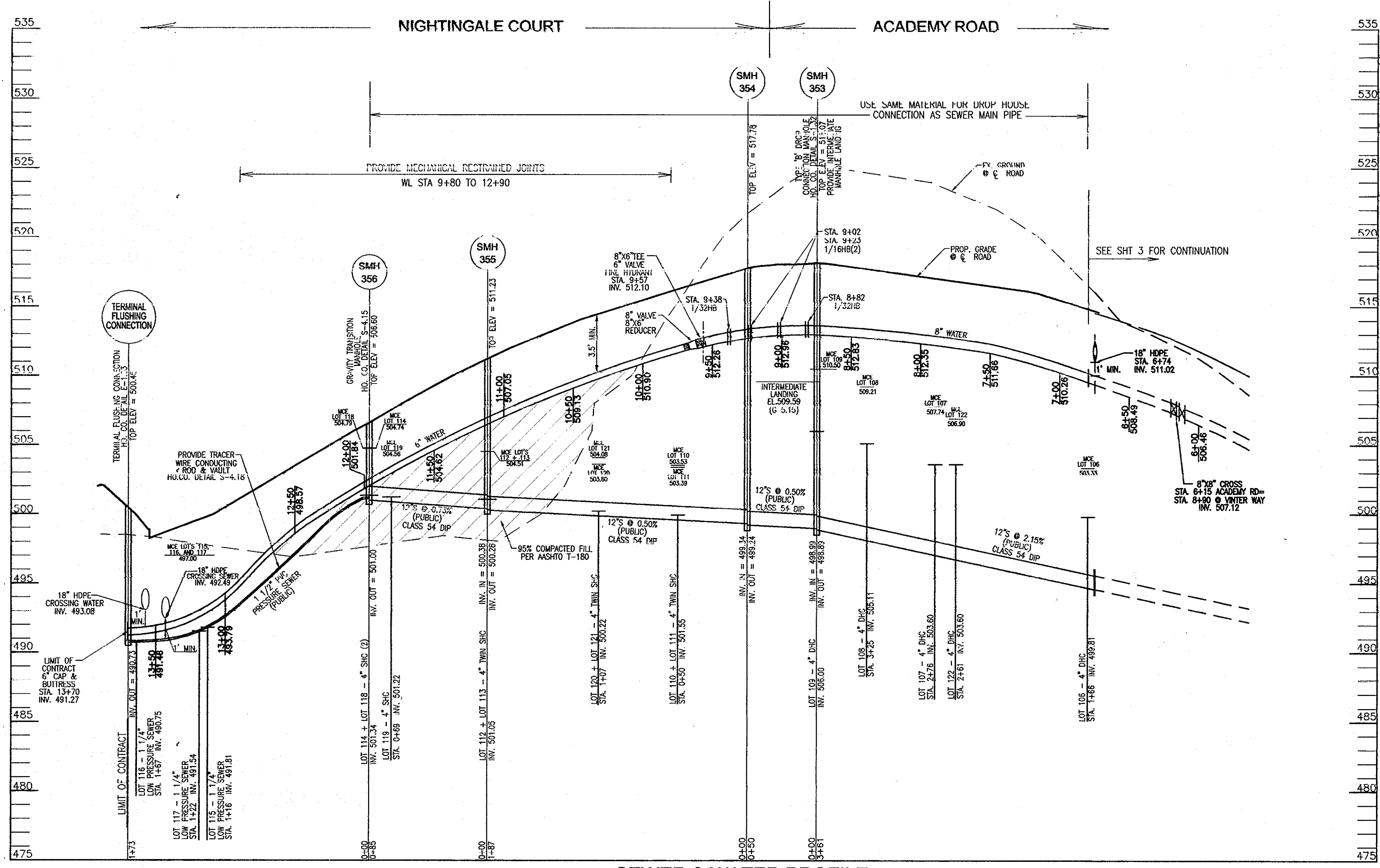
PHASE 6 - LOTS 90 THRU 151
CONTRACT NO. 14-4344-D

TAX MAP 25 BLOCK 20
TAX MAP 31 BLOCK 2
2ND ELECTION DISTRICT

PARCEL 98
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 6 OF 7

CHIEF, BUREAU OF UTILITIES
DATE: 6/20/09
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: M.G.



SEWER & WATER PROFILE
 SCALE: 1"=50' HORIZ.
 1"=5' VERT.

WATER MAIN LOCATION CHART	
CL. ROAD/WL STA.	APPURTENANCE
NIGHTINGALE COURT	
WL STA. 8+82	1/32 HB
WL STA. 9+02	1/16 HB
WL STA. 9+23	1/16 HB
WL STA. 9+38	1/32 HR
WL STA. 9+57	FIRE HYDRANT
WL STA. 9+64	8"X6" REDUCER
WL STA. 13+70	6" CAP & BUTTRESS

SEWER CONNECTION TABULATION					
LOT NO	TYPE	ELEV. @ MAIN	ELEV. @ R/W OR EASEMENT	ELEV. @ UNIT	M.C.E.
106	4" DHC @2%	499.81	500.13	500.83	503.33
107	4" DHC @2%	503.60	504.14	505.24	507.74
108	4" DHC @2%	505.11	505.63	506.71	509.21
109	4" DHC @2%	506.00	507.06	508.00	510.50
110	4" TSHC @2%	499.93	500.33	501.03	503.53
111	4" TSHC @2%	499.93	500.33	500.89	503.39
112	4" TSHC @2%	501.05	501.45	502.01	504.51
113	4" TSHC @2%	501.05	501.45	502.01	504.51
114	4" SHC @2%	501.34	501.84	502.24	504.74
115	1 1/4" LOW PRESSURE SEWER SHC	491.81	-	-	497.00
116	1 1/4" LOW PRESSURE SEWER SHC	490.75	-	-	497.00
117	1 1/4" LOW PRESSURE SEWER SHC	491.54	-	-	497.00
118	4" SHC @2%	501.34	501.59	502.29	504.79
119	4" SHC @2%	501.22	501.42	502.06	504.56
120	4" TSHC @2%	500.22	500.42	501.10	503.60
121	4" TSHC @2%	500.22	500.42	501.58	504.08
122	4" DHC @2%	503.60	504.00	504.40	506.90

DROP CONNECTIONS BETWEEN MH 352 TO MH 356 ARE SAME MATERIAL AS SEWER PIPE.

LOTS 115, 116, AND 117 ARE UTILIZING ENVIRONMENTAL ONE GRINDER PUMP. NO GRAVITY SEWER FOR THESE LOTS PROVIDED.

LOTS 114 AND 118 PROVIDE GRAVITY SERVICE TO FIRST FLOOR ONLY.

SEWER MANHOLE SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.
ACADEMY ROAD					
SMH 353	STD. PRECAST MH HO. CO. STD. DET. G-5-12	CL STA. 17+33, 6.0' RT. ACADEMY ROAD	518.16	506.00 (SHC) 498.99	498.89
NIGHTINGALE COURT					
SMH 354	STD. PRECAST MH HO. CO. STD. DET. G-5-12	CL STA. 18+02, 5.0' RT. NIGHTINGALE COURT	517.79	499.34	499.24
SMH 355	STD. PRECAST MH HO. CO. STD. DET. G-5-12	CL STA. 19+88, 4.4' RT. NIGHTINGALE COURT	511.23	501.05 (SHC'S) 500.38	500.28
SMH 356	STD. PRECAST MH HO. CO. STD. DET. G-5-12	CL STA. 20+73, 4.7' RT. NIGHTINGALE COURT	506.60	501.34 (SHC'S)	501.00
TERMINAL FLUSHING CONN.	HO. CO. STANDARD DETAIL E-1.03	N 575301.60 E 1370528.34	500.45	-	490.73

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-09-022.

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

John K. Rolinson 6/25/09
 SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Sheri C. Green
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

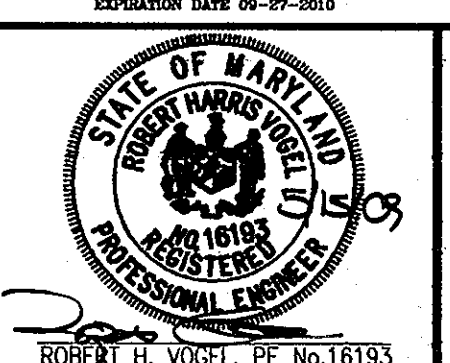
John P. ... 6/30/09
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DES:	JR/DZ		
DRN:	HD		
CHK:	RHV		
DATE:	JULY 2008		
BY:	NO.	REVISION	DATE
		1 REVISE W&S SERVICE FOR LOTS 106-123	

PLAN & PROFILES

600' SCALE MAP NO. 25
 BLOCK NO. 20
 600' SCALE MAP NO. 31
 BLOCK NO. 2



WORTHINGTON FIELDS
 PHASE 6 - LOTS 90 THRU 151
 CONTRACT NO. 14-4344-D

TAX MAP 25 BLOCK 20
 TAX MAP 31 BLOCK 2
 2ND ELECTION DISTRICT

PARCEL 98
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 7 OF 7