

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 OCTOBER 2004.
- 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. 42E3, NO. 42E4.
ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 42E3 (ELEV. 306.522 FT.)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, 13.0' SOUTH OF RT32W, EAST OF GUILFORD ROAD.
GEODETIC SURVEY CONTROL 42E4 (ELEV. 337.610 FT.)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT, 20.1' SOUTH OF RT32W, EAST OF RAMP TO US95 OFF OF RT32E.
- 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 ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. 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(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'-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.

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.

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

John K. Roberts 5/14/06
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

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

Jim M. ... 5/14/06
S. SOIL CONSERVATION DISTRICT DATE

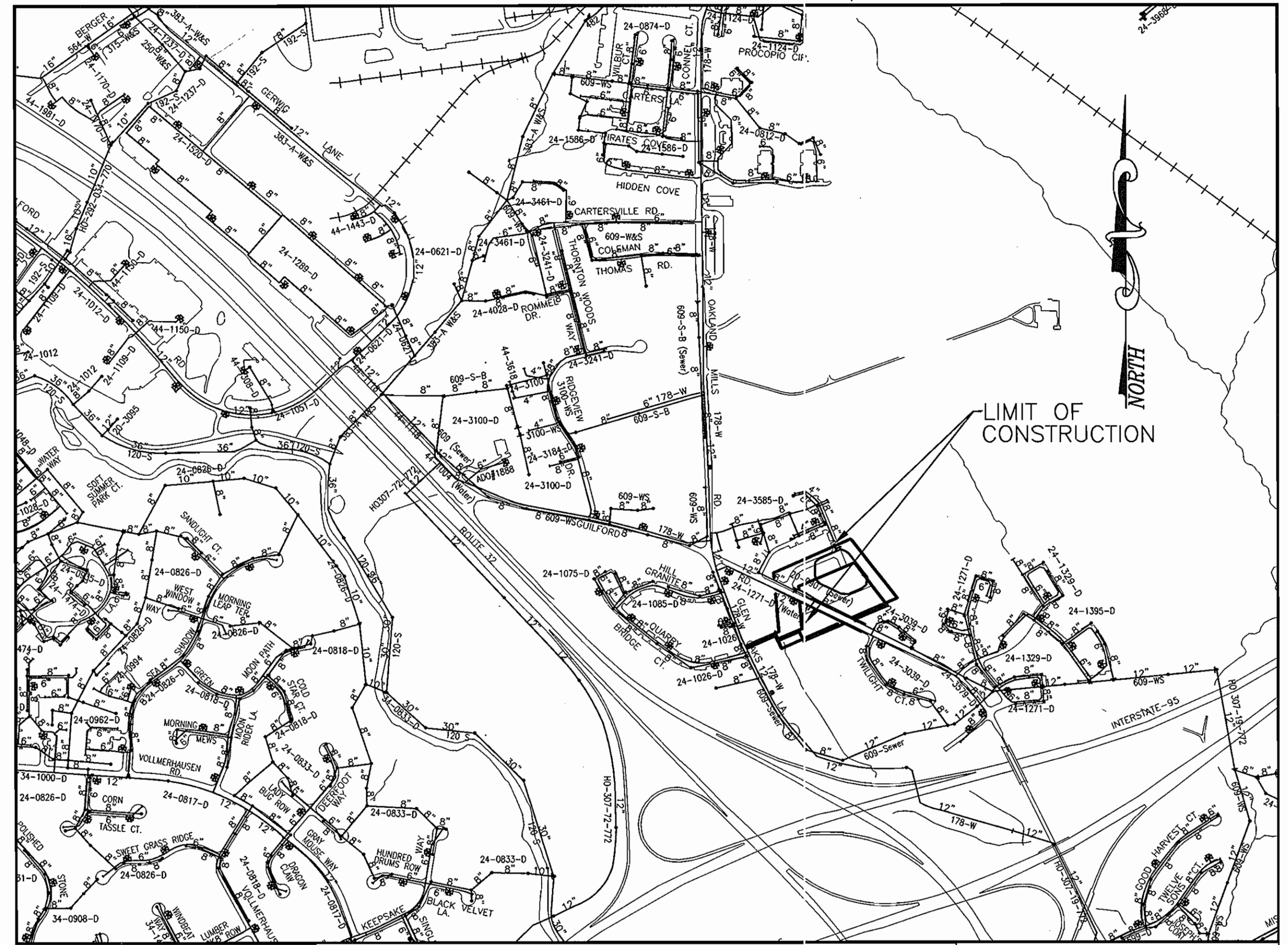
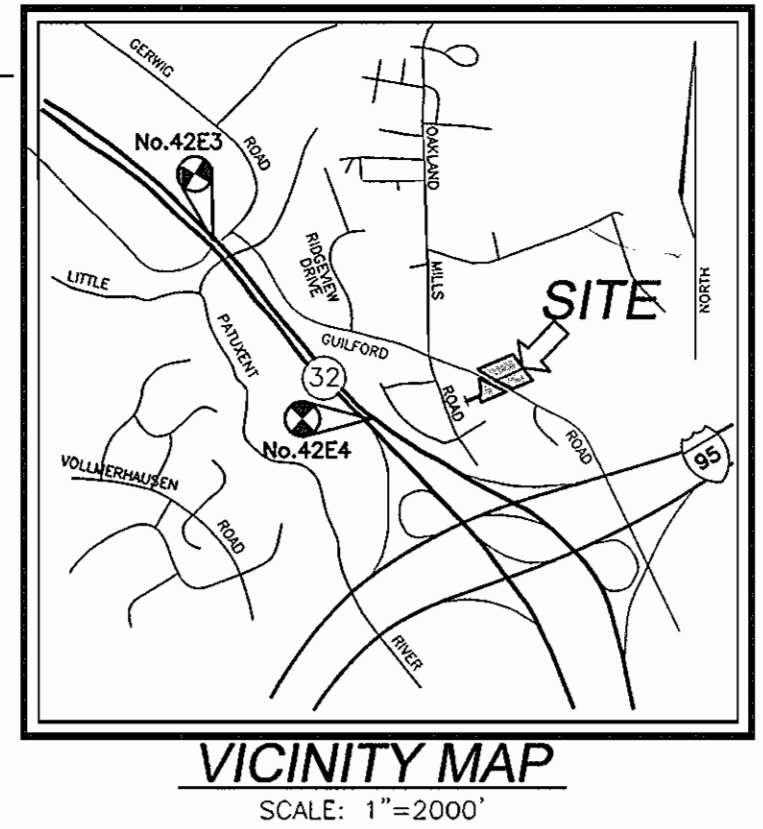
SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH FINAL PLAN SDP-05-151.

TRENT/LASTER PROPERTY PUBLIC WATER & SEWER CONSTRUCTION PLAN

HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4337-D

BENCHMARKS

| | | | |
|---|--------------|---------------|---------------|
| HOWARD COUNTY CONTROL TRAVERSE NO. 42E3 | N 546528.833 | E 1357894.405 | ELEV. 306.552 |
| HOWARD COUNTY CONTROL TRAVERSE NO. 42E4 | N 544850.922 | E 1359466.467 | ELEV. 337.610 |



LOCATION MAP
SCALE: 1"=600'

| | |
|----------------|---------|
| WATER CODE: | E14 |
| SEWER CODE: | 5200400 |
| TEST GRADIENT: | 700 |

| | |
|---------------------------------|-----------------------|
| TYPE OF BUILDING: | TOWNHOUSE UNITS |
| NO. OF UNITS: | 45 |
| NO. OF WATER HOUSE CONNECTIONS: | 45 |
| NO. OF SEWER HOUSE CONNECTIONS: | 2 |
| DRAINAGE AREA: | LITTLE PATUXENT RIVER |
| TREATMENT PLANT: | GUILFORD |

| QUANTITIES | | | | |
|--|----------------------|------------|------------|--------------------------|
| NAME OF UTILITY CONTRACTOR : C.C.S. INC. | | | | |
| SURVEY AND DRAFTING DIVISION AS-BUILT DATE : | | | | |
| ITEMS | QUANTITIES ESTIMATED | AS-BUILT | | |
| | | QUANTITIES | TYPE | MANUFACTURER/SUPPLIER |
| WATER | | | | |
| 8" WATER | 1120 LF. | 1120 | CL-52 | GRIFFIN / BELARRO SUPPLY |
| 8" VALVE | 4 EA. | 4 | CATE.V. | MUELLER / BRS. |
| 8"x8" TEE | 1 EA. | 1 | M.J. | SIGMA / BRS. |
| 8" 1/16 BEND | 7 EA. | 7 | M.J. | SIGMA / BRS. |
| 8" 1/8 BEND | 4 EA. | 4 | M.J. | SIGMA / BRS. |
| 8" 1/32 BEND | 3 EA. | 3 | M.J. | SIGMA / BRS. |
| 8" CAP AND BUTTRESS | 1 EA. | 1 | M.J. | SIGMA / BRS. |
| FIRE HYDRANT | 3 EA. | 3 | M.J. | MUELLER / BRS. |
| 8"x6" FIREHYDRANT TEE | 3 EA. | 3 | M.J. | SIGNAL / BRS. |
| 8" S | 81 LF. | 81 | SDR-35 | NATIONAL / BRS. |
| MANHOLE | 3 EA. | 3 | SANITARY | ATLANTIC / ATLANTIC ILC. |
| 8"x12" TAPPING SLEEVE & VALVE | 1 EA. | 1 | 35TAP | ROMAC / BRS. |
| 6" VALVE | 3 EA. | 3 | CATE | MUELLER / BRS. |
| 1 1/2" WNC | 874 LF. | 874 | "K" COPPER | READING TUBE / BRS. |

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

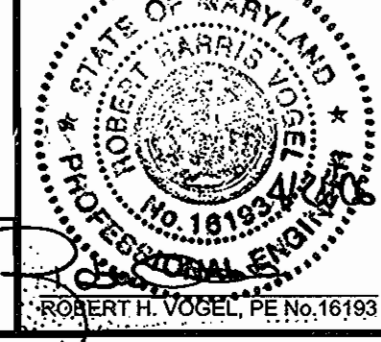
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

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

| | | | | |
|------------------|--------|---|--|---------|
| DES: R/JMY | | | | |
| DRN: R/JMY | KCI | 2 | AS-BUILT DATA | 6/10/07 |
| CHK: RHV | | 1 | REVISE WATER LINE PER REVISED ROAD ALIGNMENT | |
| DATE: MARCH 2006 | BY NO. | | SHOWN ON APPROVED SDP-05-151. | 3-7-07 |
| | | | REVISION | DATE |

**8" WATER
8" SEWER**

600' SCALE MAP NO. 42
BLOCK NO. 17



TRENT/LASTER PROPERTY
TOWNHOUSE UNITS 1-45
CONTRACT NO. 24-4337-D

TAX MAP 42
6TH ELECTION DISTRICT
REF.: SDP-05-151

FUTURE PARCEL 'A'
EX. PARCEL 7'1" & 7'3"
HOWARD COUNTY, MARYLAND

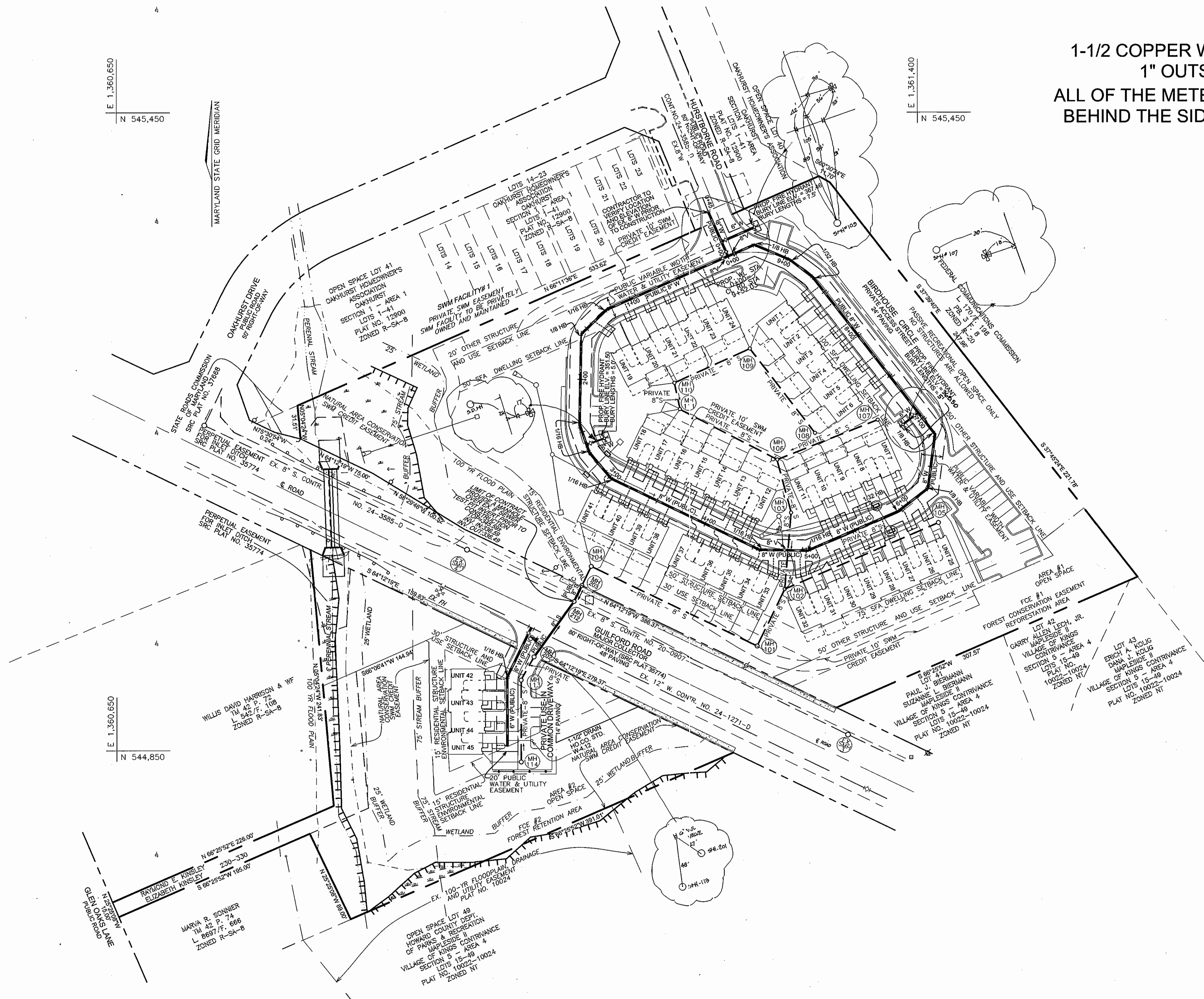
SCALE AS SHOWN

SHEET 1 OF 3

SEWER ASBUILT FIELD MEASUREMENTS

| LOT | FROM | TO | TO | FEET | |
|-----|------|---------|-----|---------|-----|
| 1 | SHC | SHH-109 | 7 | SHH-108 | 83 |
| 2 | SHC | | 25 | | 76 |
| 3 | SHC | | 41 | | 50 |
| 4 | SHC | | 03 | | 38 |
| 5 | SHC | | 85 | | 17 |
| 6 | SHC | | 101 | | 10 |
| 7 | SHC | SHH-106 | 101 | SHH-107 | 7 |
| 8 | SHC | | 80 | | 23 |
| 9 | SHC | | 60 | | 42 |
| 10 | SHC | | 40 | | 62 |
| 11 | SHC | | 10 | | 93 |
| 12 | SHC | SHH-110 | 109 | SHH-106 | 15 |
| 13 | SHC | | 89 | | 34 |
| 14 | SHC | | 70 | | 53 |
| 15 | SHC | | 51 | | 73 |
| 16 | SHC | | 34 | | 96 |
| 17 | SHC | | 28 | | 100 |
| 18 | SHC | | 30 | SHH-111 | 34 |
| 19 | SHC | SHH-109 | 101 | SHH-110 | 24 |
| 20 | SHC | | 80 | | 7 |
| 21 | SHC | | 62 | | 20 |
| 22 | SHC | | 42 | | 39 |
| 23 | SHC | | 22 | | 60 |
| 24 | SHC | | 0 | | 79 |
| 25 | SHC | SHH-105 | 7 | SHH-102 | 152 |
| 26 | SHC | | 22 | | 132 |
| 27 | SHC | | 40 | | 114 |
| 28 | SHC | | 60 | | 93 |
| 29 | SHC | | 81 | | 71 |
| 30 | SHC | | 100 | | 52 |
| 31 | SHC | | 121 | | 31 |
| 32 | SHC | | 155 | | 12 |
| 33 | SHC | SHH-101 | 14 | SHH-104 | 102 |
| 34 | SHC | | 33 | | 142 |
| 35 | SHC | | 53 | | 122 |
| 36 | SHC | | 73 | | 102 |
| 37 | SHC | | 111 | | 65 |
| 38 | SHC | SHH-101 | 127 | SHH-104 | 48 |
| 39 | SHC | | 148 | | 27 |
| 40 | SHC | | 167 | | 12 |
| 41 | SHC | | 187 | | 20 |
| 42 | SHC | SHH-113 | 36 | SHH-114 | 73 |
| 43 | SHC | | 52 | | 51 |
| 44 | SHC | | 67 | | 35 |
| 45 | SHC | | 86 | | 23 |

1-1/2 COPPER WATER LATERALS FROM MAIN
1" OUTSIDE METER SETTING.
ALL OF THE METER BOXES ARE TO BE LOCATED
BEHIND THE SIDEWALK IN THE GRASSY AREA.



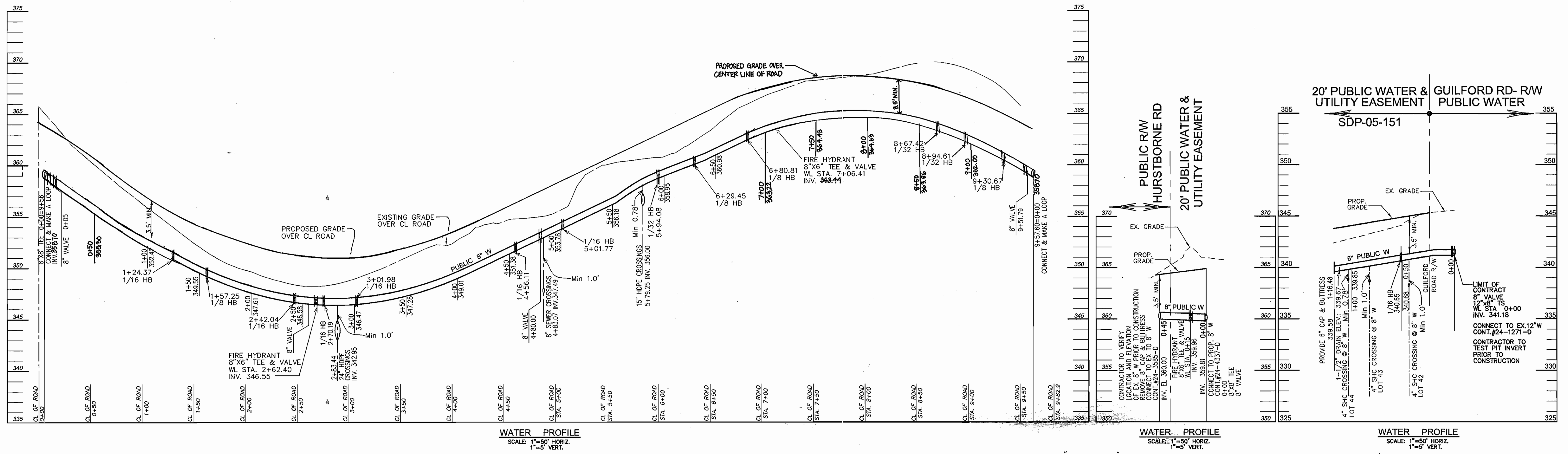
PLAN
SCALE: 1"=50'

DEVELOPER
LAND DESIGN AND DEVELOPMENT
5300 DORSEY HALL DR. STE 102
ELLCOTT CITY MD 21042-7819
ATTN: MR. DONALD R. REUWER
(410) 480-9105

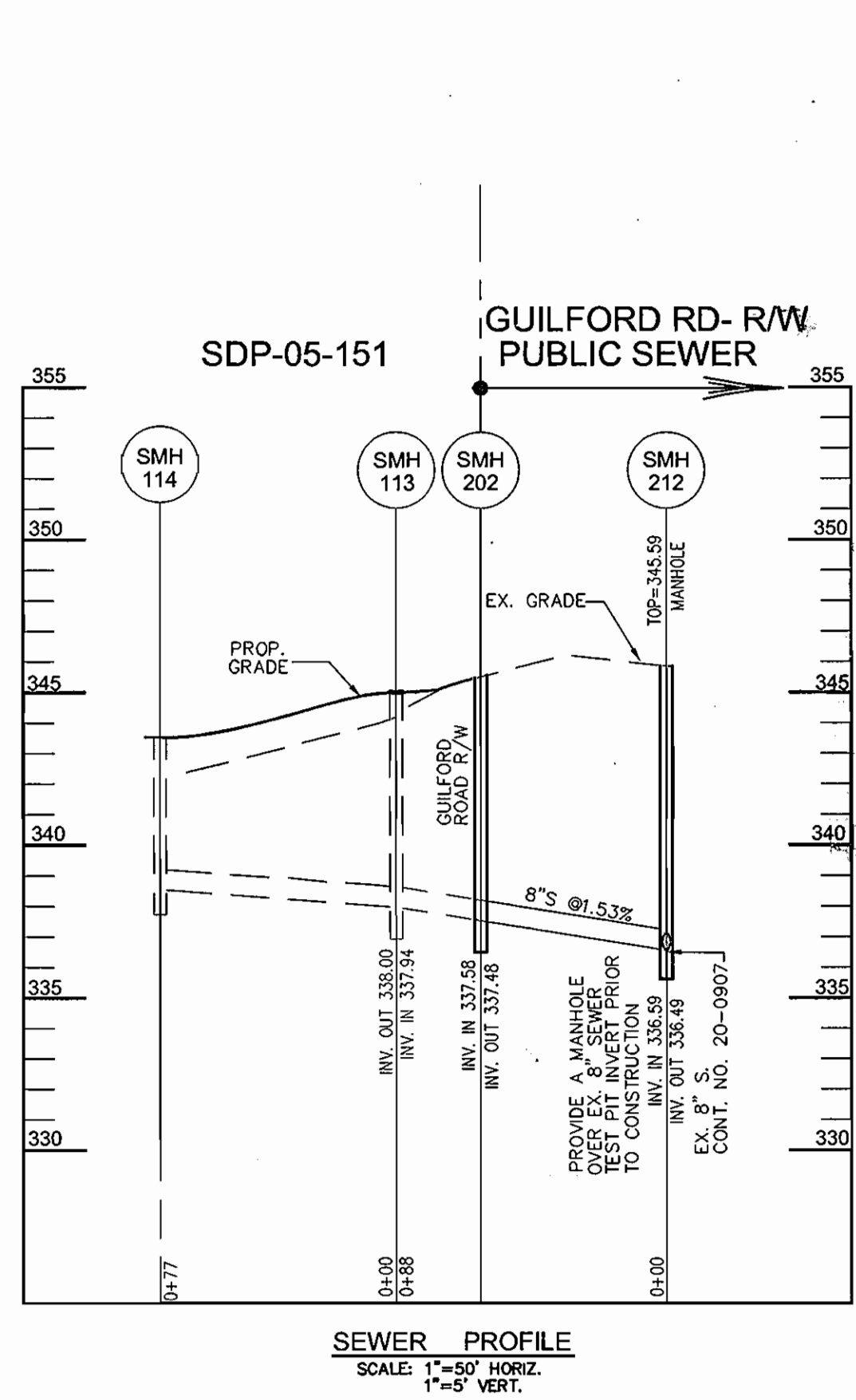
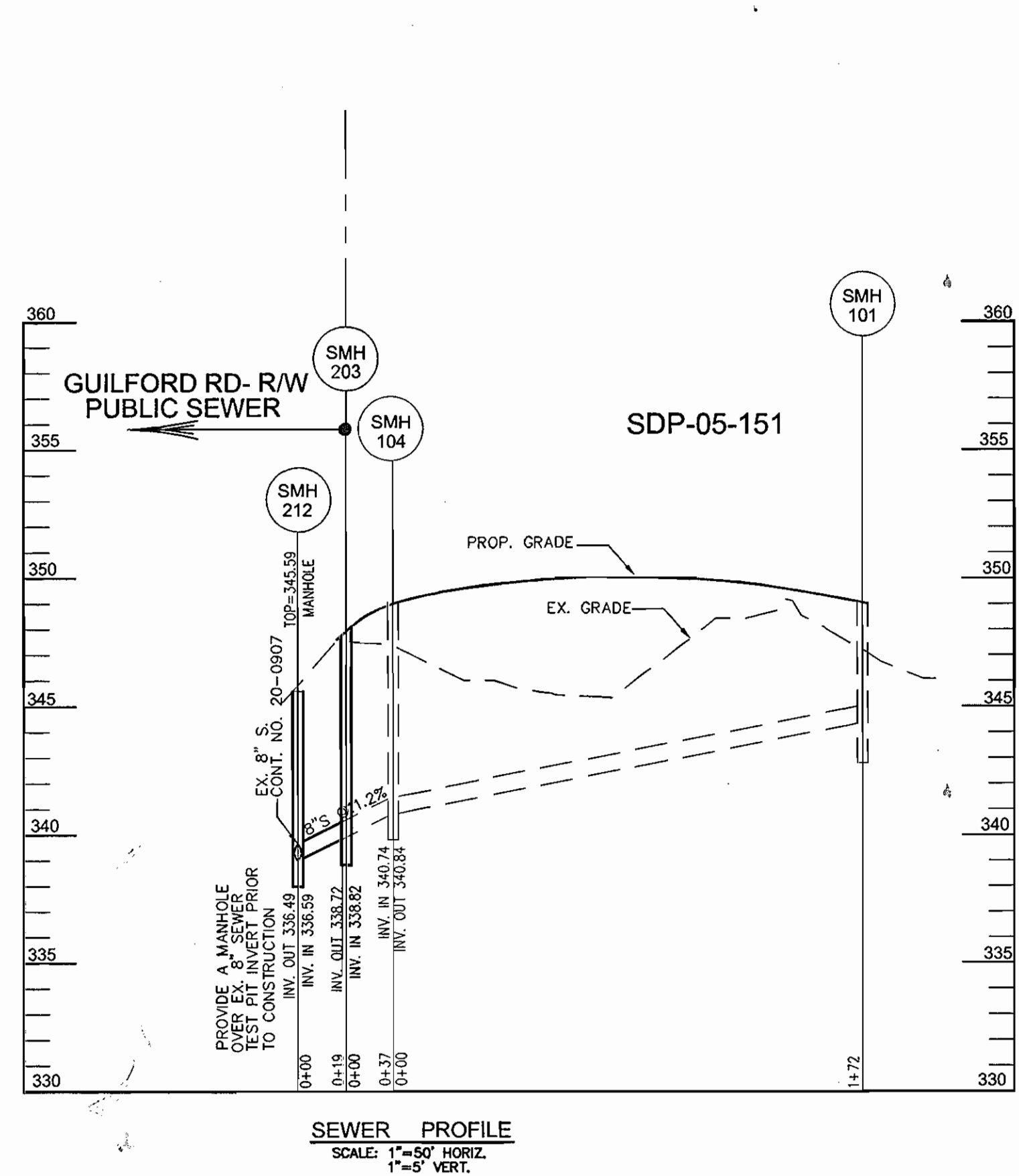
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|--|--|--|--|---|------------------|---|--|--|------------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert H. Vogel</i> CHIEF, BUREAU OF UTILITIES DATE: 4-26-07 | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Stacy</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: | ROBERT H. VOGEL ENGINEERING, INC. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET ELLCOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961 | DES: RJMY DRN: RJMY CHK: RHV DATE: MARCH 2006 | KCI 2 1 ASBUILT DATA REVISE WATER LINE PER REVISED ROAD ALIGNMENT SHOWN ON APPROVED SDP-05-5L | 0/0/07 3-7-07 | 8" WATER 8" SEWER 600' SCALE MAP NO. 42 BLOCK NO. 17 | | TRENT/LASTER PROPERTY TOWNHOUSE UNITS 1-45 CONTRACT NO. 24-4337-D | SCALE AS SHOWN SHEET 2 OF 3 |
|--|--|--|--|---|------------------|---|--|--|------------------------------------|

TAX MAP 42
6TH ELECTION DISTRICT
REF.: SDP-05-151

 FUTURE PARCEL 'A'
EX. PARCEL '71' & '73'
HOWARD COUNTY, MARYLAND



WATER ABSOLUTE FIELD MEASUREMENTS



| LOT | FROM | TO | FEET | TO | FEET |
|-----|------|-------------------|------|--------------------|------|
| 1 | WHC | INLET 1/8" RT. | 0 | FH. VALVE 7" OULT. | 151 |
| 2 | WHC | | 21 | | 131 |
| 3 | WHC | | 43 | | 108 |
| 4 | WHC | | 59 | | 93 |
| 5 | WHC | | 84 | | 69 |
| 6 | WHC | | 104 | | 49 |
| 7 | WHC | INLET 5" OULT. | 57 | INLET 5" OULT. | 51 |
| 8 | WHC | | 23 | | 28 |
| 9 | WHC | | 15 | | 28 |
| 10 | WHC | | 11 | | 34 |
| 11 | WHC | | 23 | | 44 |
| 12 | WHC | S.D. 44" 4+75 LT. | 17 | INLET 21" OULT. | 150 |
| 13 | WHC | | 25 | | 121 |
| 14 | WHC | | 58 | | 107 |
| 15 | WHC | | 78 | | 87 |
| 16 | WHC | | 98 | | 68 |
| 17 | WHC | | 119 | | 46 |
| 18 | WHC | | 138 | | 27 |

| LOT | FROM | TO | FEET | TO | FEET |
|-----|------|------------------------------|------|------------------|------|
| 19 | WHC | METER VALVE FROM LOT 19 DEP. | 0 | 8" W. VALVE 0409 | 128 |
| 20 | WHC | | 25 | | 104 |
| 21 | WHC | | 45 | | 84 |
| 22 | WHC | | 68 | | 64 |
| 23 | WHC | | 88 | | 45 |
| 24 | WHC | | 105 | | 28 |
| 25 | WHC | INLET 5" OULT. | 50 | INLET 5" OULT. | 67 |
| 26 | WHC | | 30 | | 56 |
| 27 | WHC | | 19 | | 40 |
| 28 | WHC | | 13 | | 31 |
| 29 | WHC | | 29 | | 30 |
| 30 | WHC | | 44 | | 40 |
| 31 | WHC | | 63 | | 58 |
| 32 | WHC | | 76 | | 75 |
| 33 | WHC | S.D. 44" 4+75 LT. | 30 | 8" W. VALVE 4100 | 80 |
| 34 | WHC | | 28 | | 35 |
| 35 | WHC | | 31 | | 48 |
| 36 | WHC | | 44 | | 66 |
| 37 | WHC | | 69 | | 88 |

| LOT | FROM | TO | FEET | TO | FEET |
|-----|------|-----------------|------|-----------------|------|
| 38 | WHC | INLET 21" OULT. | 84 | INLET 21" OULT. | 80 |
| 39 | WHC | | 64 | | 62 |
| 40 | WHC | | 44 | | 47 |
| 41 | WHC | | 23 | | 34 |
| 42 | WHC | S.M. 202 | 32 | S.M. 114 | 69 |
| 43 | WHC | | 59 | | 47 |
| 44 | WHC | | 76 | | 35 |
| 45 | WHC | | 26 | | 26 |

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

R.H. Vogel
CHIEF, BUREAU OF UTILITIES

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 5/2/06

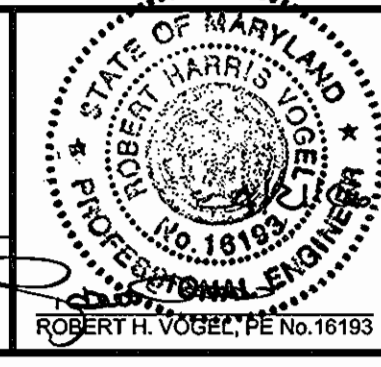
ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
ELICOTT CITY, MD 21043 TEL: 410.481.7666 FAX: 410.481.8961

| | | | |
|-------|------------|--|---------|
| DES: | RJMY | | |
| DRN: | RJMY | | |
| CHK: | RHV | 2 ASBUILT DATA | 6/02/07 |
| DATE: | MARCH 2006 | 1 REVISE WATER LINE PER REVISED ROAD ALIGNMENT SHOWN ON APPROVED SDF-05-151. | 3-7-07 |
| BY: | NO. | REVISION | DATE |

**8" WATER
8" SEWER**

600' SCALE MAP NO. 42
BLOCK NO. 17



TRENT/LASTER PROPERTY
TOWNHOUSE UNITS 1-45
CONTRACT NO. 24-4337-D

TAX MAP 42
8TH ELECTION DISTRICT
REF.: SDP-05-151

DEVELOPER
LAND DESIGN AND DEVELOPMENT
5300 CORSEY HALL DR. STE 102
ELICOTT CITY MD 21042-7818
ATTN: MR. DONALD R. REUWER
(410) 480-9105

FUTURE PARCEL 'A'
EX. PARCEL 711 & 713
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 3