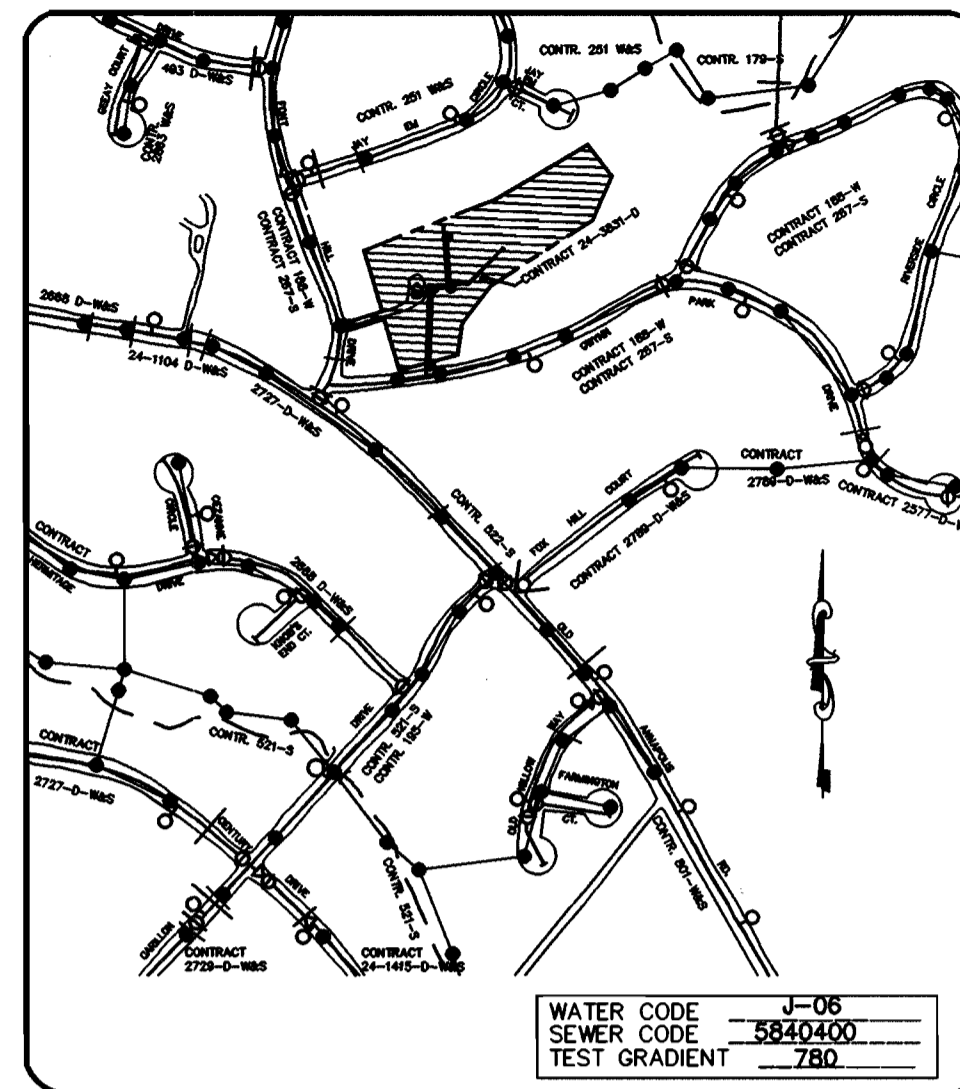


QUANTITY TABLE

| ITEMS | QUANTITIES ESTIMATED | QUANTITIES | TYPE | MANUFACTURER/SUPPLIER |
|--|----------------------|------------|------|-----------------------|
| STANDARD MH | 4 | | | |
| 8" SEWER MAIN | 426 L.F. | | | |
| 6" SEWER MAIN | 20 L.F. | | | |
| 4" SHC | 152 L.F. | | | |
| # SHC | 7 | | | |
| 8" WATER | 610 L.F. | | | |
| 6" WATER | 45 L.F. | | | |
| 4" WATER | 232 L.F. | | | |
| F.H. | 1 | | | |
| # WHC | 7 | | | |
| 1" WHC | 129 L.F. | | | |
| 8" X 6" T | 1 | | | |
| 8" X 8" T & CAP | 2 | | | |
| 8" X 4" T | 1 | | | |
| 4" V | 1 | | | |
| 6" V | 1 | | | |
| 8" V | 1 | | | |
| 1/8 HB | 1 | | | |
| 8" C & B | 2 | | | |
| 4" C & B | 1 | | | |
| 8" X 8" T, S & V | 1 | | | |
| 1-1/2" DRAIN | 1 | | | |
| SEWER CLEAN OUT(6"C.O) | 4 | | | |
| TWIN SHC | 2 | | | |
| NAME OF UTILITY CONTRACTOR: | | | | |
| SURVEY AND DRAFTING DIVISION AS-BUILT DATE | | | | |



VICINITY MAP

SCALE : 1" = 600'

| | |
|--------------------------------|---------------------------|
| TYPE OF BUILDING | SINGLE FAMILY-DETACHED |
| No. OF UNITS | 7 |
| No. OF WATER HOUSE CONNECTIONS | 7 |
| No. OF SEWER HOUSE CONNECTIONS | 7 |
| DRAINAGE AREA | ROUTE 108 PUMPING STATION |
| TREATMENT PLANT | PATAPSCO |

GENERAL NOTES

- 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.
- 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 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 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 MONEY 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 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 WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

| | |
|--|----------------|
| AT & T | (410) 865-3803 |
| CHEASAPEAKE & POTOMAC TELEPHONE CO. | (410) 597-8585 |
| STATE HIGHWAY ADMINISTRATION | (410) 531-5533 |
| BO & E CO. CONTRACTOR SERVICES | (410) 850-4620 |
| BO & E CO. UNDERGROUND DAMAGE CONTROL | (410) 787-9088 |
| MISS UTILITY | 1-800-257-7777 |
| COLONIAL PIPELINE CO. | (410) 795-1390 |
| HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES | (410) 313-4900 |
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE THE CONSTRUCTION STRIP ARE 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 HOWARD COUNTY CODE.
- 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 DRAWINGS.
- 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 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 1" CONNECTION WITH A 3/4" METER.
- ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES DESIGNATED W.T. 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' - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- SEDIMENT CONTROL TO BE PROVIDED BY F-00-104
- STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY, SEE ROAD PLANS FOR CONSTRUCTION DATA.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- ALL WATER HOUSE CONNECTIONS TO BE 1", AND ALL SEWER HOUSE CONNECTIONS TO BE 4". UNLESS OTHERWISE NOTED.

SEDIMENT CONTROL TO BE PROVIDED UNDER F-00-104

CONTRACT No. 24-3831-D
RED FOX ESTATE
 LOTS 3-12
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

INDEX OF DRAWINGS

| NO. | DESCRIPTION |
|-----|------------------------|
| 1 | TITLE SHEET |
| 2 | WATER & SEWER PLAN |
| 3 | WATER & SEWER PROFILES |

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/16/00
 DEVELOPER'S SIGNATURE DATE
R. JAMES HILLMANT, PRES.
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/16/00
 ENGINEER'S SIGNATURE DATE
R. JAMES HILLMANT
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 11/28/00
 J.A. Warkild
 NESA-NATURAL RESOURCE CONSERVATION SERVICE DATE

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

[Signature] 11/28/00
 John R. Robertson
 HOWARD SCD DATE

PLAN REFERENCE NUMBER
 F-00-104

These Revised water and Sewer Construction Plans Sheets 1,2 and 3 for Red Fox estate Contract # 24-3831-D SuperSedes the water and sewer construction sheets 1,2 and 3 Contract # 24-3831-D. Approved and Signed By chief, Development Engineering Division on 6/9/2000

OWNER/DEVELOPER

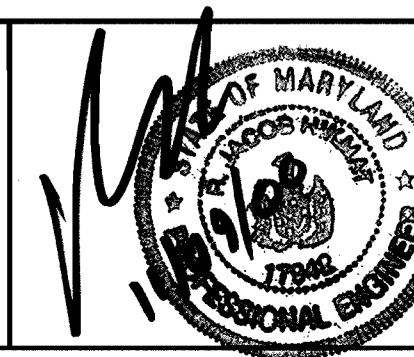
RAFAT, INC.
 C/O MILDENBERG, BOENDER AND ASSOC., INC.
 5072 DORSEY HALL DR. SUITE 202
 ELLICOTT CITY, MD 21042
 (410) 997-0296

F:\96044\DWG\W&S\FINAL\044-COVER.DWG

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
[Signature] 11/20/2000
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
[Signature] 11/29/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Balc. (301) 821-5221 Wash. (410) 997-0298 Fax.



| | | | | | |
|--------------|----------|----|-----|----------|------|
| engineering | SAA | | | | |
| illustration | SAA | | | | |
| approval | RJH | | | | |
| project | 96044 | | | | |
| date | MAY 2000 | BY | NO. | REVISION | DATE |

TITLE SHEET
 600' SCALE MAP NO. 24... BLOCK NO. 20

RED FOX ESTATE
 LOTS 3-12
 CONTRACT No. 24-3831-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

scale
 AS SHOWN
 1 OF 3

LATERAL SCHEDULE

| LOT # | SHC SLOPE | INV. EL. @ EASEMENT |
|---------|-----------|---------------------|
| 3 | 1% | 397.72 |
| 4 | 2% | 398.69 |
| 5 | 2% | 398.37 |
| 6 | 1% | 399.67 |
| 7 | 1% | 399.33 |
| 8 | 2% | 399.06 |
| 9 (F.M) | 2% | 398.50 |

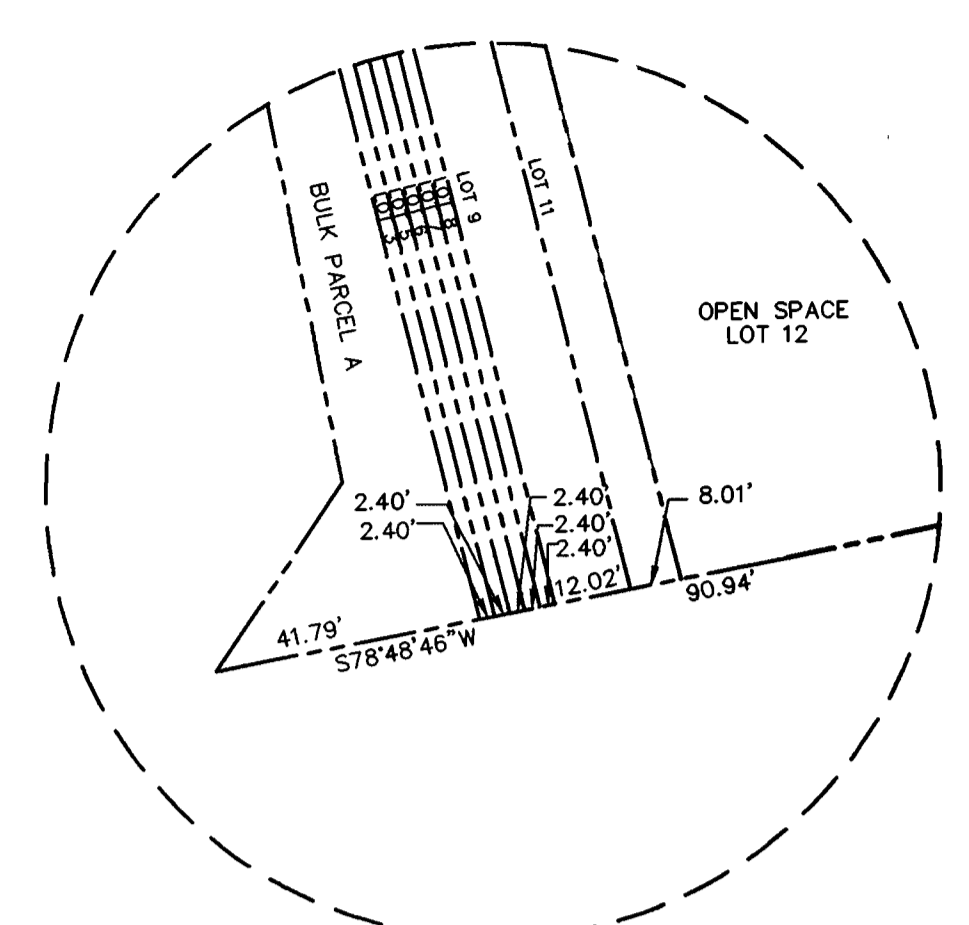
MANHOLE LOCATION CHART

| MH # | NORTHING & EASTING |
|------|------------------------------------|
| 1 | N 578,633.7972 E 1,353,602.8971 |
| 2 | N 578,867.0109 E 1,353,545.9913 |
| 3 | N 578,884.6083 E 1,353,598.3342 |
| 4 | N 579017.5907 E 1,353,554.2344 |

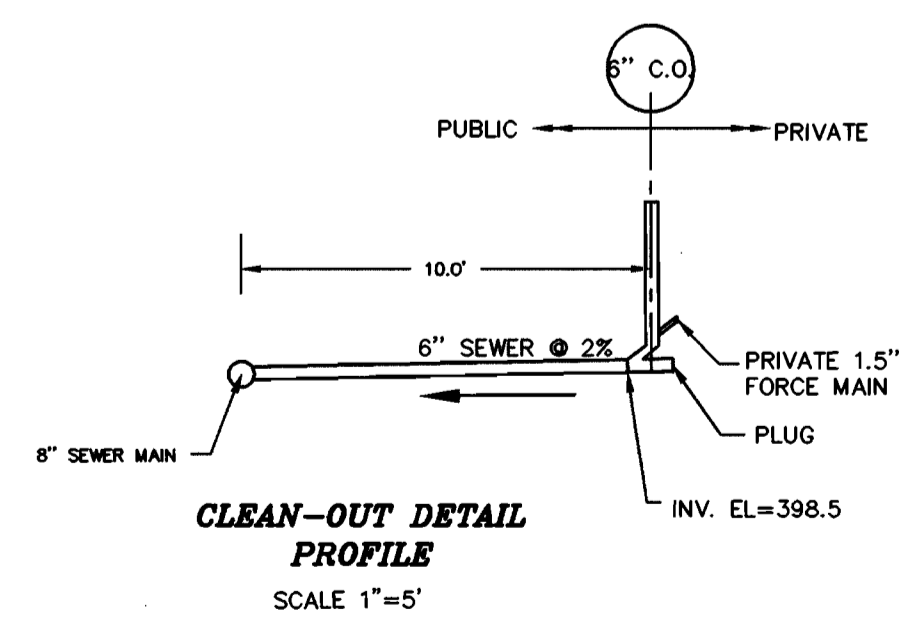
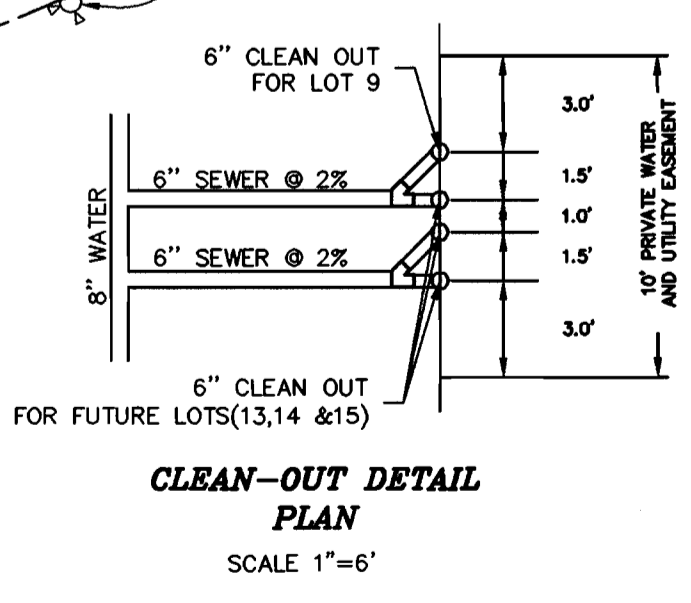
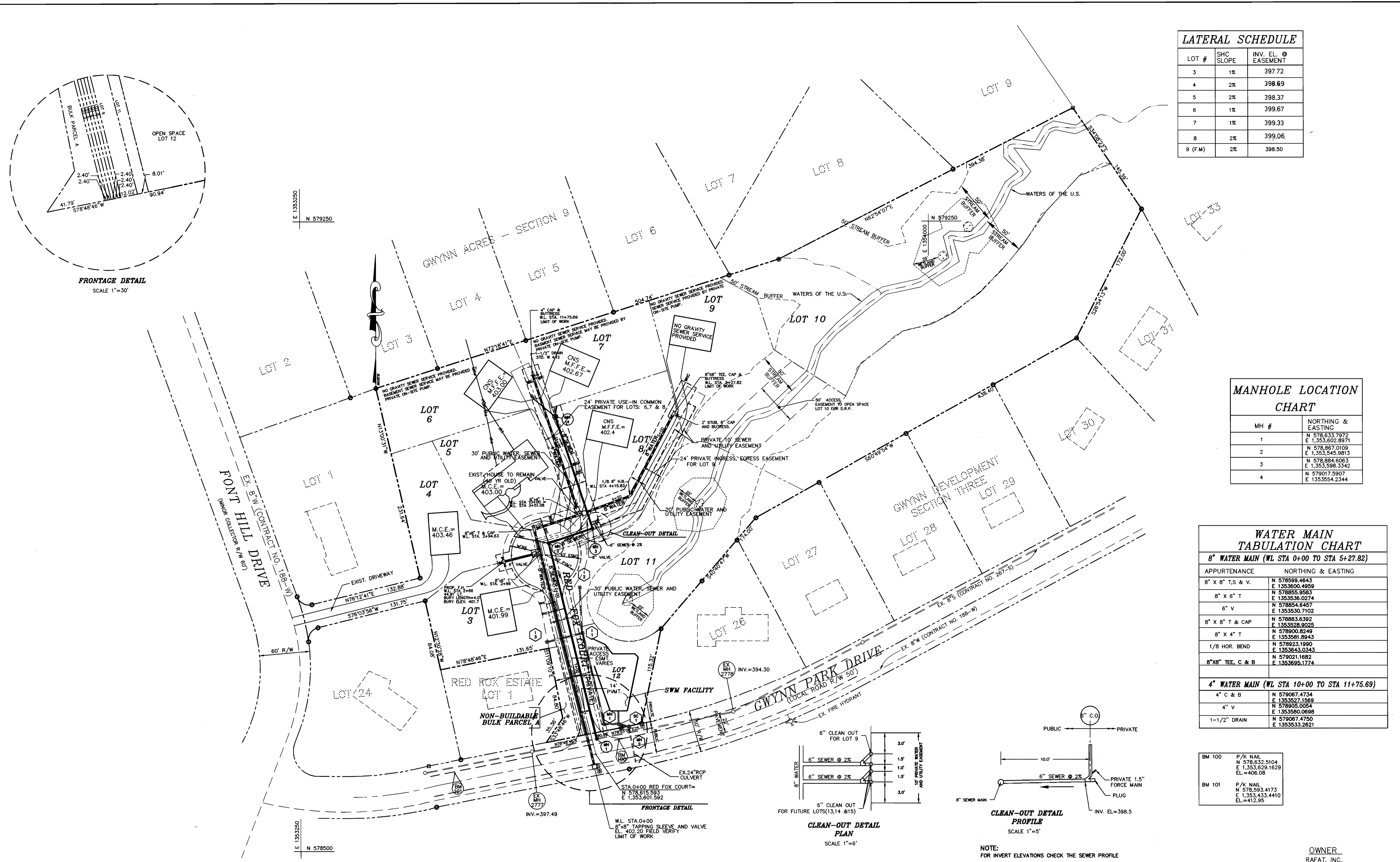
WATER MAIN TABULATION CHART

| 8" WATER MAIN (WL STA 0+00 TO STA 5+27.82) | |
|--|---------------------------------|
| APPURTENANCE | NORTHING & EASTING |
| 8" x 8" T.S & V. | N 578595.4643 E 1353600.4959 |
| 8" x 6" T | N 578855.9583 E 1353536.0274 |
| 6" V | N 578884.6457 E 1353530.7102 |
| 8" x 8" T & CAP | N 578883.6392 E 1353528.9225 |
| 8" x 4" T | N 578900.8249 E 1353581.8943 |
| 1/8 HOR. BEND | N 578923.1990 E 1353643.0343 |
| 8"x8" TEE, C & B | N 579021.1682 E 1353685.1774 |
| 4" WATER MAIN (WL STA 10+00 TO STA 11+75.69) | |
| 4" C & B | N 579067.4734 E 1353527.1569 |
| 4" V | N 578905.0054 E 1353580.0698 |
| 1-1/2" DRAIN | N 579067.4750 E 1353533.2621 |

| | |
|--------|--|
| BM 100 | P/K NAIL N 578,632.5104 E 1,353,629.1629 EL.=406.08 |
| BM 101 | P/K NAIL N 578,593.4173 E 1,353,433.4410 EL.=412.95 |



FRONTAGE DETAIL
SCALE 1"=30'

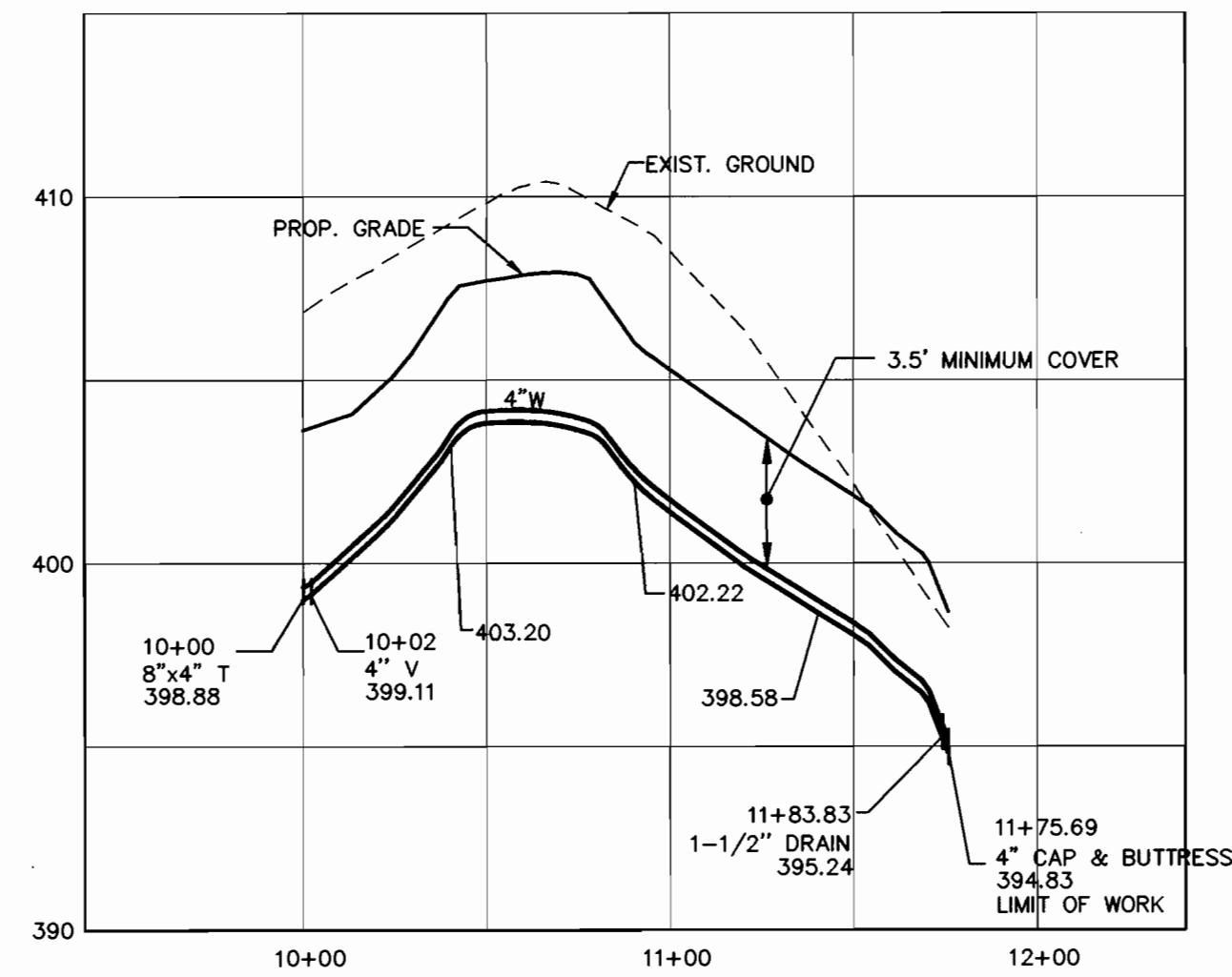


NOTE:
FOR INVERT ELEVATIONS CHECK THE SEWER PROFILE

OWNER
RAFAT, INC.
C/O MILDENBERG, BOENDER & ASSOC., INC.
5072 DORSEY HALL DR. SUITE 202
ELLCOTT CITY, MD 21042
(410) 997-0296

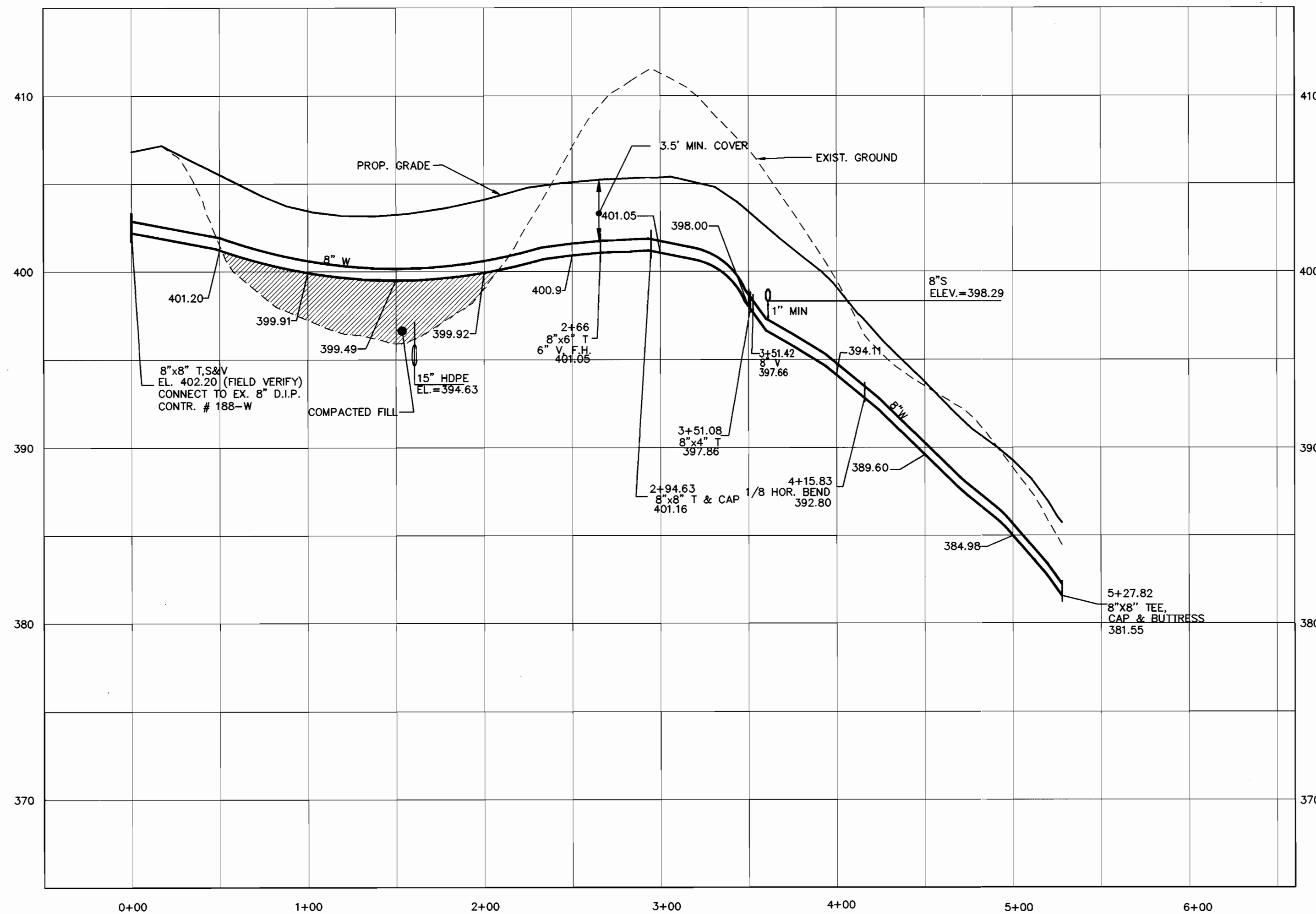
96044.DWG/M&S/FINAL/PLANDWG

| | | | | | | | | |
|---|--|---|--|---|--|---|--|--------------------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert M. Benner</i> Jan 20, 2000 CHIEF, BUREAU OF UTILITIES | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Michael J. Boender</i> 1/20/00 CHIEF, DEVELOPMENT ENGINEERING DIVISION | MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Fax (301) 621-5521 Week (410) 997-0296 Paz. | | engineering SAA illustration SAA approval RJH project 96044 date 5/2000 | BY NO. REVISION DATE 600' SCALE MAP NO. 24 BLOCK NO. 20 | <h2 style="margin:0;">WATER AND SEWER PLAN</h2> | <h2 style="margin:0;">RED FOX ESTATE</h2> LOTS 3-12 CONTRACT No. 24-3831-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND | scale 1"=50' 2 OF 3 |
|---|--|---|--|---|--|---|--|--------------------------------------|



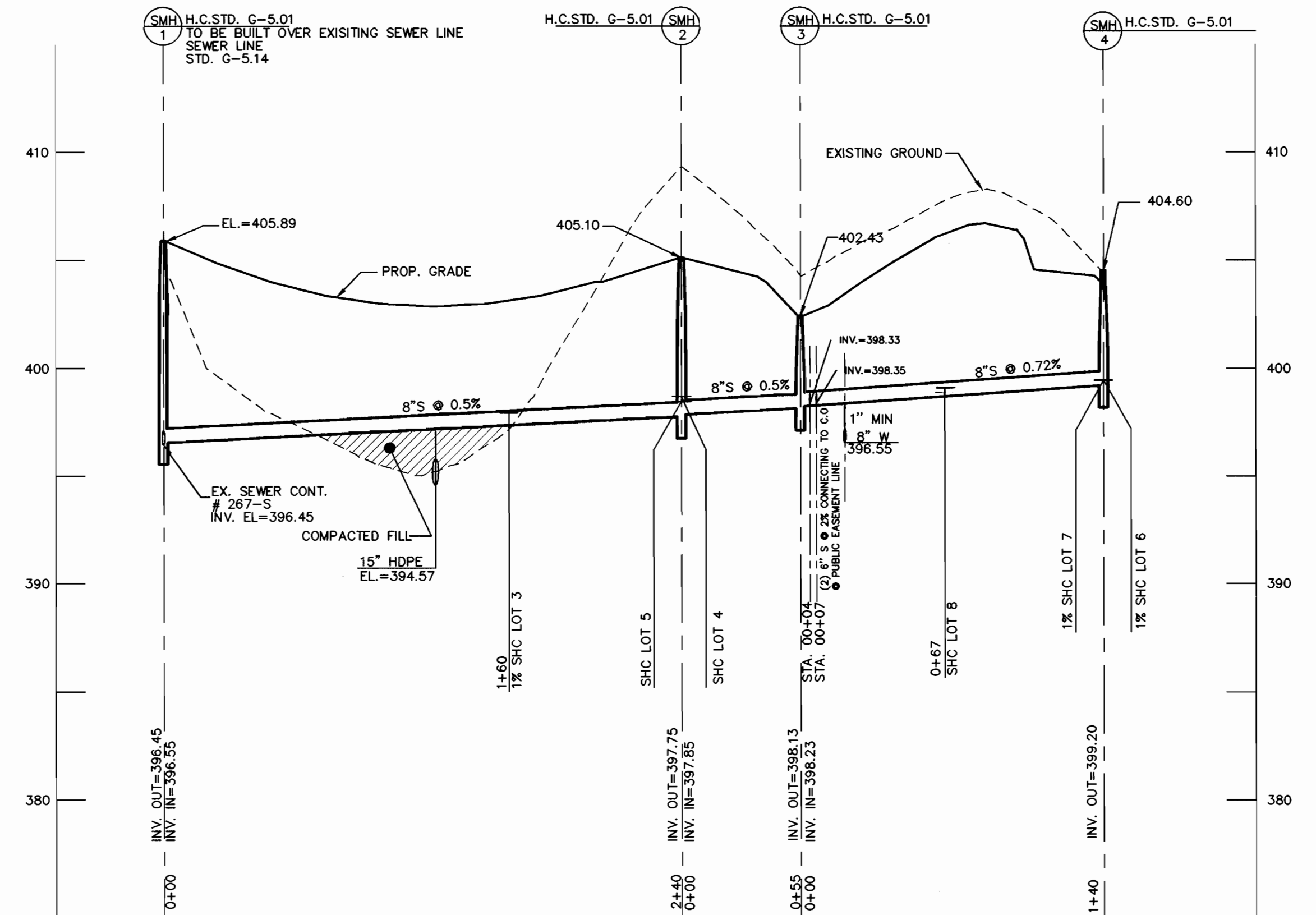
**4" WATER MAIN PROFILE
EASEMENT FOR LOTS 5,6,7 & 8**

SCALE: HOR. 1"=50'
VER. 1"=5'



**WATER MAIN PROFILE
RED FOX COURT & EASEMENT FOR LOT 9**

SCALE: HOR. 1"=50'
VER. 1"=5'



8" SEWER MAIN PROFILE

SCALE: HOR. 1"=50'
VER. 1"=5'

OWNER
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C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DR. SUITE 202
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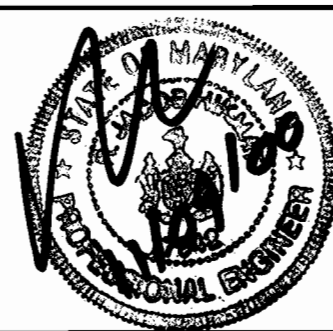
96044.DWG/REV. FINAL/PLANNING

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Planners Surveyors

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(410) 997-0296 Ball (301) 821-5521 Wash. (410) 997-0298 Fax



| | | | | | |
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| engineering | SAA | | | | |
| illustration | SAA | | | | |
| approval | RJH | | | | |
| project | 96044 | | | | |
| date | 5/2000 | BY | NO. | REVISION | DATE |

**WATER AND SEWER
PROFILES**

600' SCALE MAP NO. 24 BLOCK NO. 20

RED FOX ESTATE

LOTS 3-12

CONTRACT No. 24-3831-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale

AS SHWN

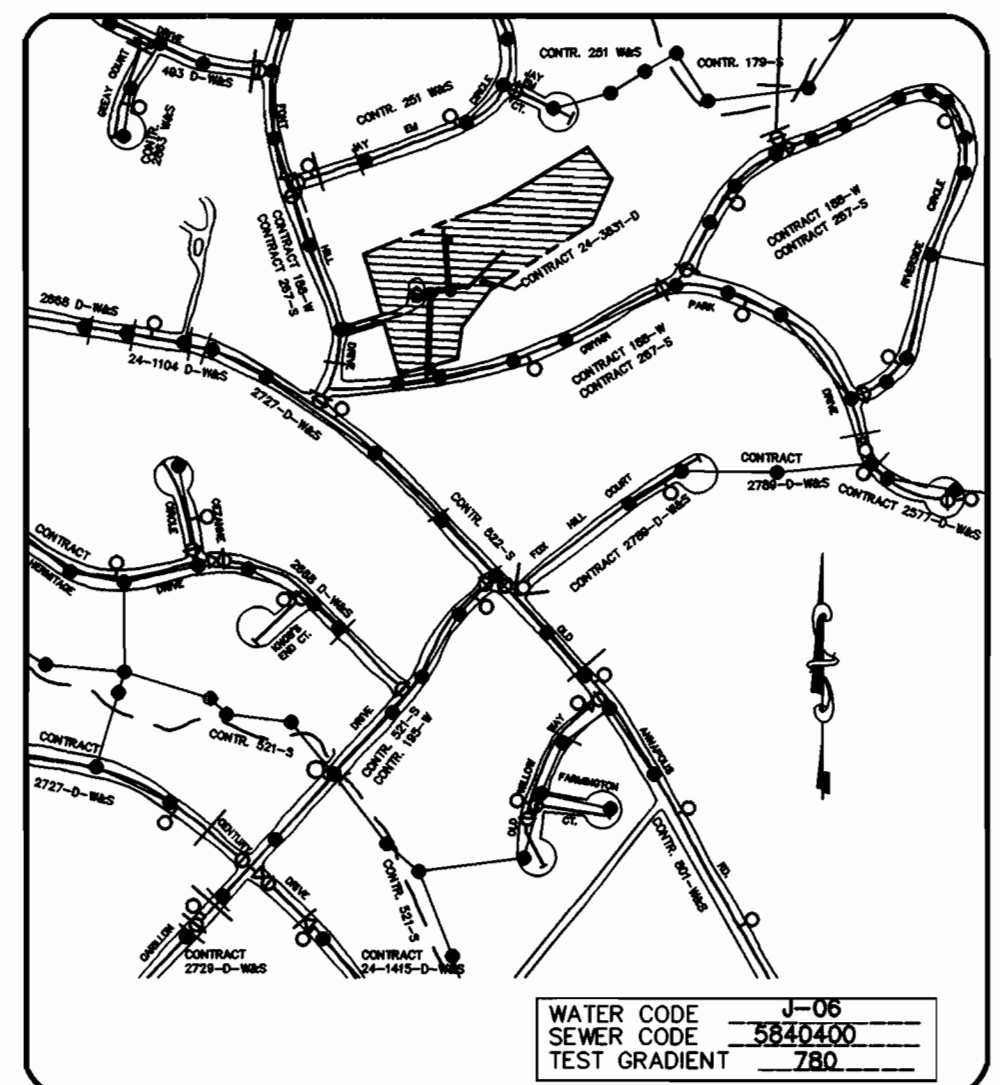
3 OF 3

Robert M. Boender Nov 29, 2000
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Boender 11/29/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

QUANTITY TABLE

| ITEMS | QUANTITIES ESTIMATED | QUANTITIES | TYPE | MANUFACTURER/SUPPLIER |
|---|----------------------|------------|-----------------------------|-----------------------|
| STANDARD MH | 4 | 4 | | |
| 8" SEWER MAIN | 426 L.F. | 434 | SDR 35 | J.M. MANUFACTURING |
| 6" SEWER MAIN | 20 L.F. 10 L.F. | 12 | SDR 35 | " |
| | | 160 | ADVERTISED ADV DRAINAGE SYS | |
| 4" SHC | 152 L.F. | 162 | SDR 35 | J.M. MANUFACTURING |
| # SHC | 7 | 7 | | |
| 8" WATER | 610 L.F. 510 L.F. | 525 | CL 52 | U.S. PIPE & FOUNDRY |
| 6" WATER | 45 L.F. | 50 | CL 52 | " |
| 4" WATER | 232 L.F. 436 L.F. | 185 | CL 52 | " |
| F.H. | 1 | 1 | 4" SC | MUELLER CO. |
| # WHC | 7 | 7 | CL 52 | " |
| 1" WHC | 129 L.F. | 162 | SOFTK | READING TUBE |
| 8" X 6" T | 1 | 1 | M.J. | U.S. PIPE & FOUNDRY |
| 8" X 8" T & CAP | 2 | 1 | M.J. | " |
| 8" X 4" T | 1 | 1 | M.J. | " |
| 4" V | 1 | 1 | RS/OR | MUELLER CO. |
| 6" V | 1 | 1 | RS/OR | " |
| 8" V | 1 | 1 | RS/OR | " |
| 1/8 HB | 1 | 1 | M.J. | U.S. PIPE & FOUNDRY |
| 8" C & B | 2 | 1 | M.J. | " |
| 4" C & B | 1 | 1 | M.J. | " |
| 8" X 8" T, V & V | 1 | 1 | RS/OR | MUELLER CO. |
| 1-1/2" DRAIN | 2 | 1 | CL 52 | " |
| SEWER CLEAN OUT (6" CD) | 1 | 4 | P.C. | DAVIS CONCRETE |
| TWIN SHC SEWER CLEAN OUT | 1 | 1 | LESS STAIN | POWER SEAL |
| | | 6 | P.C. | DAVIS CONCRETE |
| | | 7 | PLASTIC | AMETEX PLYMOUTH |
| NAME OF UTILITY CONTRACTOR: CONSOLIDATED CONSTRUCTION | | | | |
| SURVEY AND DRAFTING DIVISION AS-BUILT DATE | | | | |



VICINITY MAP

SCALE : 1" = 600'

| TYPE OF BUILDING SINGLE FAMILY-DETACHED | |
|---|----------|
| No. OF UNITS | 7 |
| No. OF WATER HOUSE CONNECTIONS | 7 |
| No. OF SEWER HOUSE CONNECTIONS | 7 |
| DRAINAGE AREA ROUTE 108 PUMPING STATION | |
| TREATMENT PLANT | PATAPSCO |

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| | |
|--|----------------|
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| CHEESAPEAKE & POTOMAC TELEPHONE CO. | (410) 597-8585 |
| STATE HIGHWAY ADMINISTRATION | (410) 531-5533 |
| BG & E CO. CONTRACTOR SERVICES | (410) 850-4620 |
| BG & E CO. UNDERGROUND DAMAGE CONTROL | (410) 787-9068 |
| MIS UTILITY | 1-800-257-7777 |
| COLONIAL PIPELINE CO. | (410) 795-1390 |
| HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS | |
| BUREAU OF UTILITIES | (410) 313-4900 |
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- 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 HOWARD COUNTY CODE.
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- 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 DRAWINGS.
- 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 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 1" CONNECTION WITH A 3/4" METER.
- ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES DESIGNATED W.T. 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' - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- SEDIMENT CONTROL TO BE PROVIDED BY F-00-104
- STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY. SEE ROAD PLANS FOR CONSTRUCTION DATA.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- ALL WATER HOUSE CONNECTIONS TO BE 1", AND ALL SEWER HOUSE CONNECTIONS TO BE 4" UNLESS OTHERWISE NOTED.

SEDIMENT CONTROL TO BE PROVIDED UNDER F-00-104

CONTRACT No. 24-3831-D
RED FOX ESTATE
LOTS 3-12
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

INDEX OF DRAWINGS

| NO. | DESCRIPTION |
|-----|------------------------|
| 1 | TITLE SHEET |
| 2 | WATER & SEWER PLAN |
| 3 | WATER & SEWER PROFILES |

OWNER/DEVELOPER

RAFAT, INC.
C/O MILDENBERG, BOENDER AND ASSOC., INC.
5072 DORSEY HALL DR. SUITE 202
ELLCOTT CITY, MD 21042
(410) 997-0296

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/11/00
DEVELOPER'S SIGNATURE DATE
R. JACOB HILKMAT, P.E.C.S.
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 11/11/00
ENGINEER'S SIGNATURE DATE
R. JACOB HILKMAT
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 11/25/00
DATE
J.A. Washfield
NATURAL RESOURCES CONSERVATION SERVICE

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

[Signature] 11/25/00
DATE
John R. Kinton
HOWARD SCD

PLAN REFERENCE NUMBER
F-00-104

These Revised water and Sewer Construction Plans Sheets 1, 2 and 3 for Red Fox estate Contract # 24-3831-D Super-Sedes the water and sewer construction sheets 1, 2 and 3 Contract # 24-3831-D. Approved and Signed By chief, Development Engineering Division on 6/9/2000

F: 1986044 DMC/1985 (FINAL) 1044-COVER.DWG

| | | | | | | | |
|---|---|---|---|--|---|---|--------------------------|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities Date: 11/20/2000 | DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division Date: 11/20/00 | MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Fax. (301) 821-5521 Wash. (410) 997-0298 Fax. | engineering SAA illustration SAA approval RJH project 98044 date MAY 2000 | BY NO. 1 REVISION ASBUILT CONDITIONS ADDED TO PLAN DATE 01/20/01 | TITLE SHEET 600' SCALE MAP NO. 24 BLOCK NO. 29 | RED FOX ESTATE LOTS 3-12 CONTRACT No. 24-3831-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND | scale AS SHOWN 1 OF 3 |
|---|---|---|---|--|---|---|--------------------------|

LATERAL SCHEDULE

| LOT # | SHC SLOPE | INV. EL. @ EASEMENT |
|---------|-----------|---------------------|
| 3 | 1% | 397.72 |
| 4 | 2% | 398.69 |
| 5 | 2% | 398.37 |
| 6 | 1% | 399.67 |
| 7 | 1% | 399.33 |
| 8 | 2% | 399.06 |
| 9 (F.M) | 2% | 398.50 |

MANHOLE LOCATION CHART

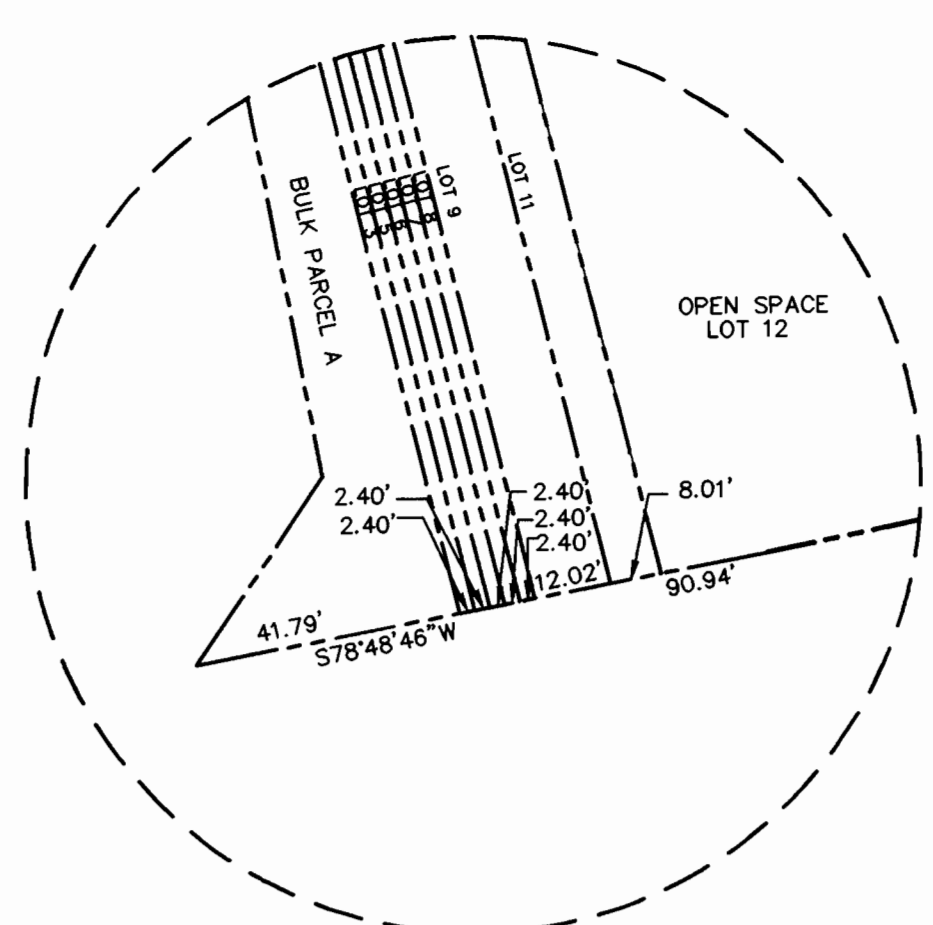
| MH # | NORTHING & EASTING |
|------|------------------------------------|
| 1 | N 578,633.7972 E 1,353,602.8971 |
| 2 | N 578,867.0109 E 1,353,545.9813 |
| 3 | N 578,884.6063 E 1,353,598.3342 |
| 4 | N 579,017.5907 E 1,353,554.2344 |

WATER MAIN TABULATION CHART

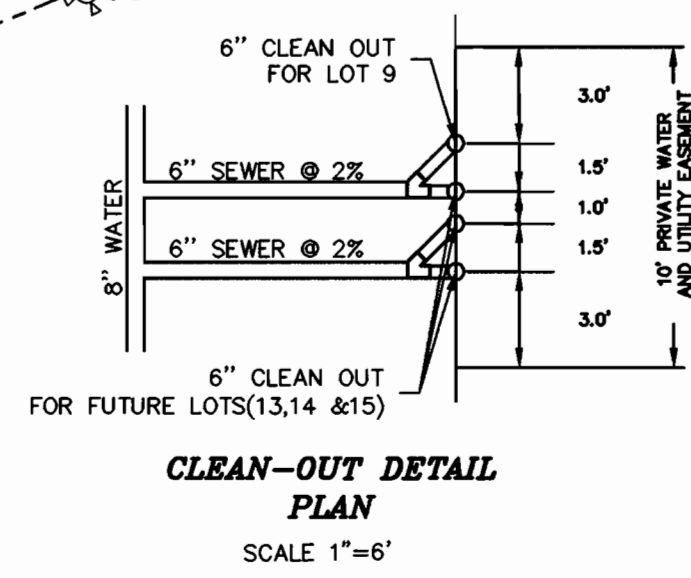
| 8" WATER MAIN (WL STA 0+00 TO STA 5+27.82) | |
|--|---------------------------------|
| APPURTENANCE | NORTHING & EASTING |
| 8" x 8" T.S. & V. | N 578599.4643 E 1353600.4959 |
| 8" x 6" T | N 578855.9583 E 1353536.0274 |
| 6" V | N 578854.6457 E 1353530.7102 |
| 8" x 8" T & CAP | N 578883.6392 E 1353528.9025 |
| 8" x 4" T | N 578900.8249 E 1353581.8943 |
| 1/8 HOR. BEND | N 578923.1990 E 1353643.0343 |
| 8"x8" TEE, C & B | N 579021.1682 E 1353695.1774 |
| 4" WATER MAIN (WL STA 10+00 TO STA 11+75.69) | |
| 4" C & B | N 579067.4734 E 1353527.1569 |
| 4" V | N 578905.0054 E 1353580.0696 |
| 1-1/2" DRAIN | N 579067.4750 E 1353533.2621 |

| | |
|--------|--|
| BM 100 | P/K NAIL N 578,632.5104 E 1,353,629.1629 EL. = 406.08 |
| BM 101 | P/K NAIL N 578,593.4173 E 1,353,433.4410 EL. = 412.95 |

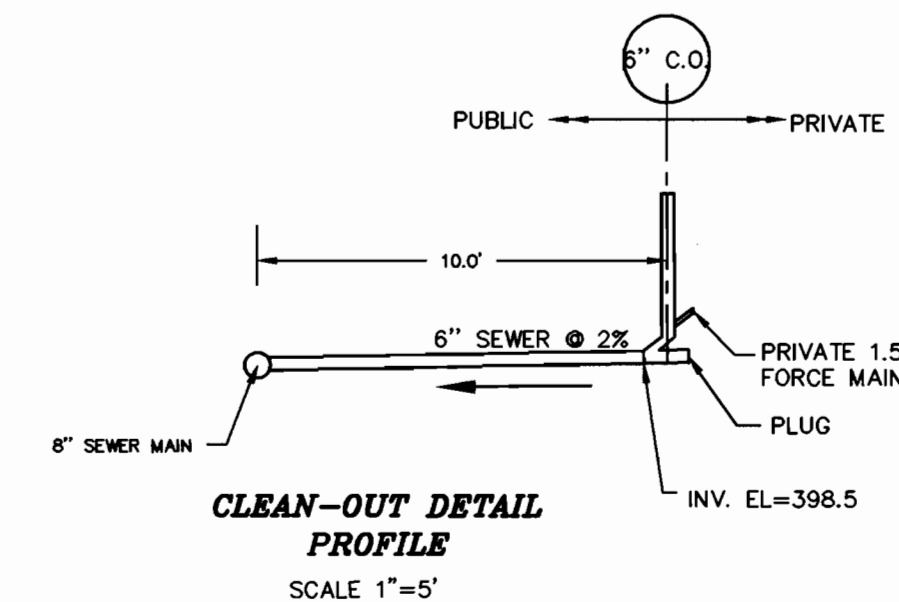
OWNER
RAFAT, INC.
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FRONTAGE DETAIL
SCALE 1"=30'

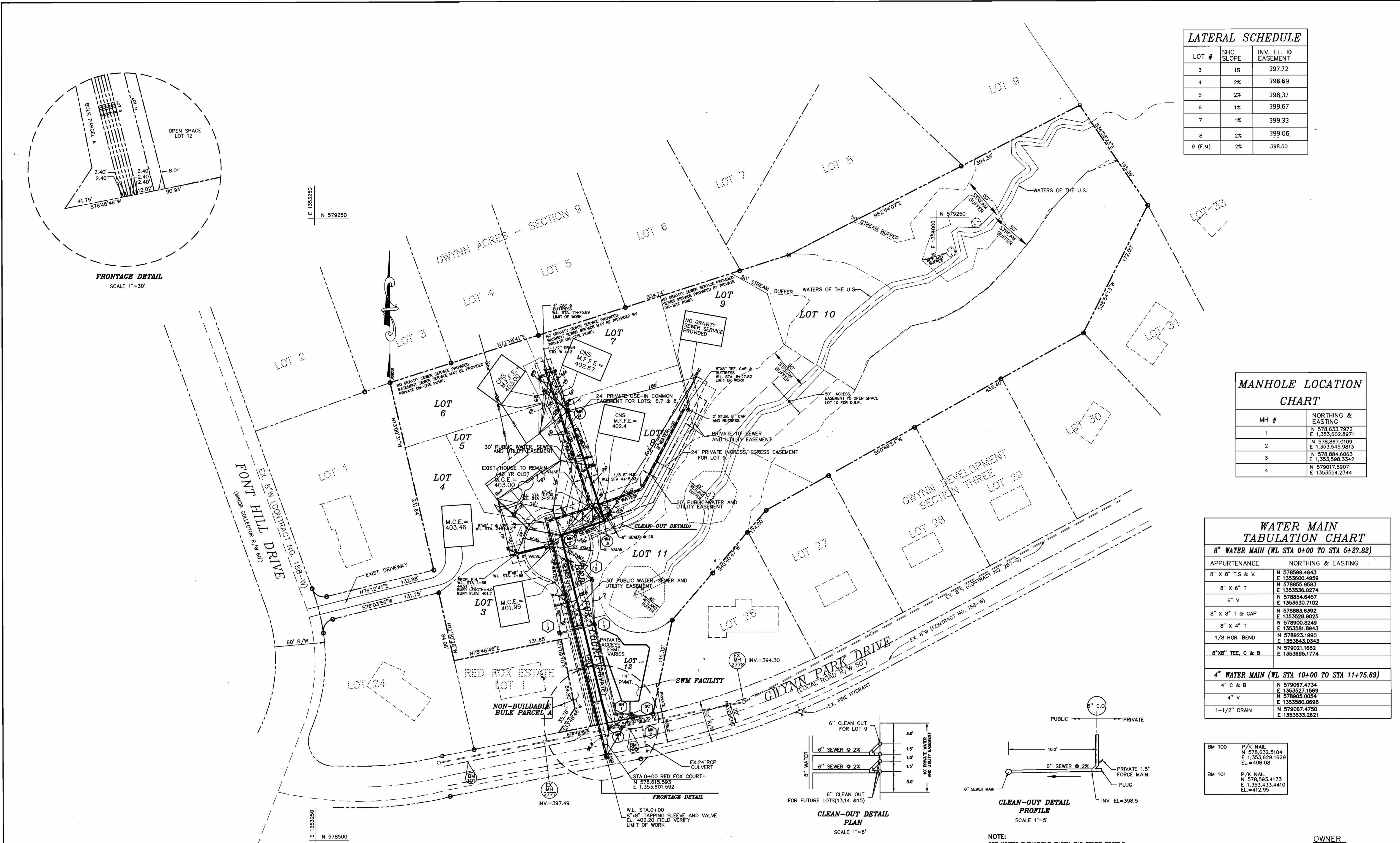


CLEAN-OUT DETAIL PLAN
SCALE 1"=6'



CLEAN-OUT DETAIL PROFILE
SCALE 1"=5'

NOTE:
FOR INVERT ELEVATIONS CHECK THE SEWER PROFILE



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

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Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax



| | | | | | |
|--------------|--------|--------|-----|-----------------------------------|---------|
| engineering | SAA | | | | |
| illustration | SAA | | | | |
| approval | RJH | | | | |
| project | 98044 | K.C.T. | 1 | AS-BUILT CONDITIONS ADDED TO PLAN | 2/24/00 |
| date | 5/2000 | BY | NO. | REVISION | DATE |

WATER AND SEWER PLAN

RED FOX ESTATE
LOTS 3-12
CONTRACT No. 24-3831-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale
1"=50'
2 OF 3