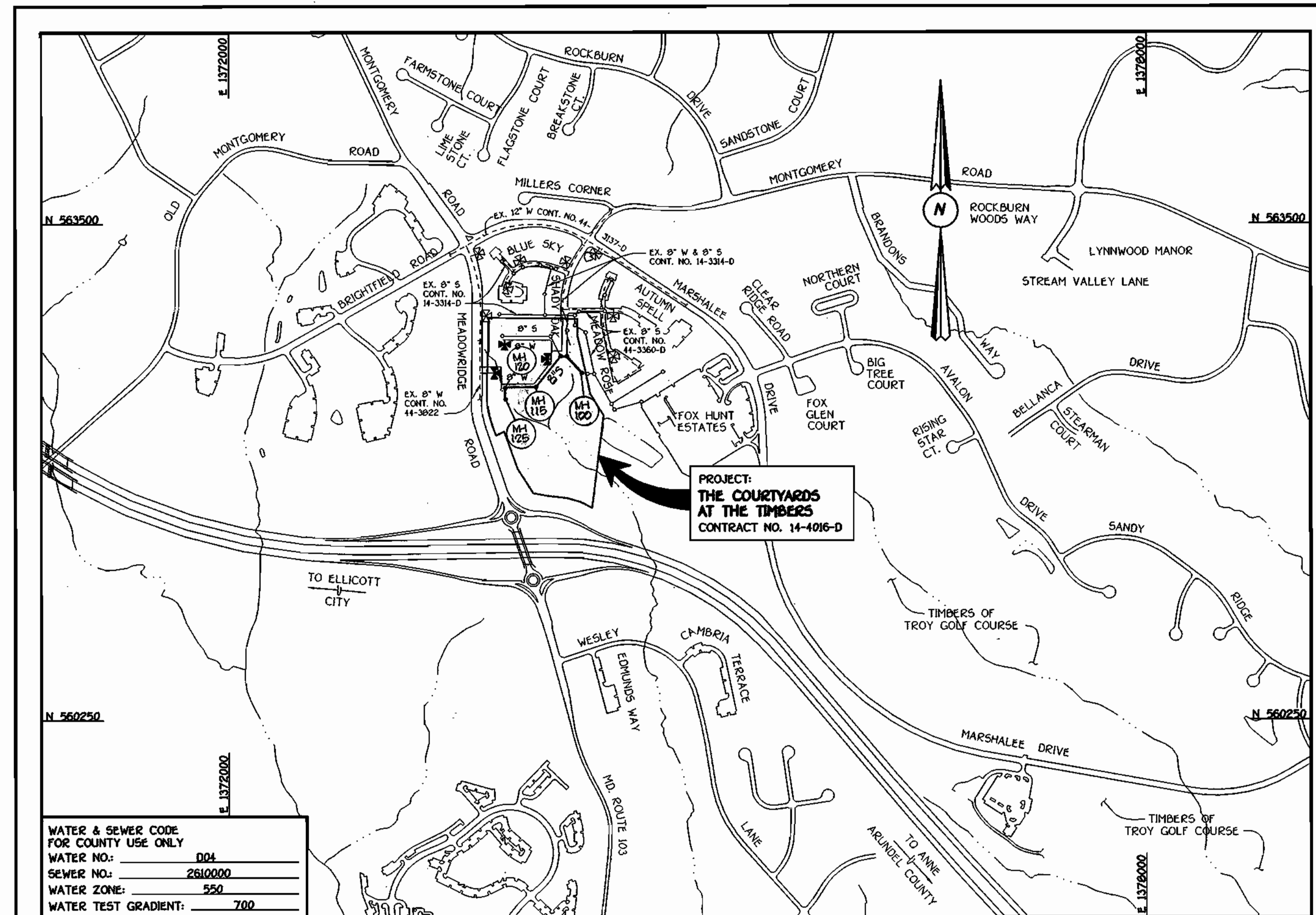


| QUANTITIES | | | | |
|----------------------------|-----------|------------|----------|----------|
| ITEM | ESTIMATED | QUANTITIES | AS-BUILT | SUPPLIER |
| 8" WATER | 1429 L.F. | | | |
| 6" WATER | 67 L.F. | | | |
| 4" WATER | 70 L.F. | | | |
| 1" WHC | 301 L.F. | | | |
| FIRE HYDRANTS | 2 EACH | | | |
| RELOCATED EX. FIRE HYDRANT | 1 EACH | | | |
| 8" X 8" TEE | 4 EACH | | | |
| 8" X 6" TEE | 2 EACH | | | |
| 8" X 4" TEE | 7 EACH | | | |
| 8" VALVES | 5 EACH | | | |
| 6" VALVES | 2 EACH | | | |
| 4" VALVES | 7 EACH | | | |
| 8"-1/8" H.B. | 3 EACH | | | |
| 8"-1/16" H.B. | 2 EACH | | | |
| 8"-1/32" H.B. | 2 EACH | | | |
| 4" PLUG & BUTTRESS | 7 EACH | | | |
| 8" PLUG & BUTTRESS | 4 EACH | | | |

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

| | | | |
|------------------|-------------|--|--|
| 8" SEWER | 178.00 L.F. | | |
| 6" SEWER, D.I.P. | 650.00 L.F. | | |
| 6" G.H.C. | 72 L.F. | | |
| MANHOLES | 0 EACH | | |



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, NAD 83.
- ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (99) AMENDMENTS. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO THE EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - AT&T 1-800-526-2000
 - BGE (CONTRACTOR SERVICES) 410-850-4620
 - BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9096
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 410-313-4900
 - BELL ATLANTIC MARYLAND, INC. 1-800-621-9900
 - COLONIAL PIPELINE CO. 410-795-1390
 - NESS UTILITY 1-800-297-7777
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 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.
- 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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL C5.52.
- WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS.
- HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL C5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL 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 ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W11 AND W213). 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 MAIN SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH THE AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (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.

WATER & SEWER CODE FOR COUNTY USE ONLY

WATER NO.: 001

SEWER NO.: 2610000

WATER ZONE: 550

WATER TEST GRADIENT: 700

VICINITY MAP
SCALE: 1"=600'

PLAN REFERENCE NUMBERS:
SDP 02-55

DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Michael D. Tumb
 FOR: RRSK, L.L.C. 6/14/02
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

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.

Paul W. Keidel 06-14-02
 SIGNATURE OF ENGINEER DATE

CONTRACT No. 14-4016-D

THE COURTYARDS AT THE TIMBERS

WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

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

Jim Myers 6/17/02
 U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Keister 6/17/02
 APPROVE HOWARD SOIL CONSERVATION DISTRICT DATE

SEDMIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND AS SHOWN ON SDP 02-55 AND ON THESE PLANS.

Michael D. Tumb
 FOR: RRSK, L.L.C. 6/14/02
 SIGNATURE OF DEVELOPER DATE

CONTRACT NO. 14-4016-D
 THE COURTYARDS AT THE TIMBERS
 WATER & SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert A. Berman 6-17-02
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Michael D. Tumb 6/14/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21114
 (410) 481-2055



DESIGNED BY: P.W.K.
 DRAWN BY: M.D.T.
 CHECKED BY: P.W.K.
 DATE: JUNE, 2002

REVISIONS:

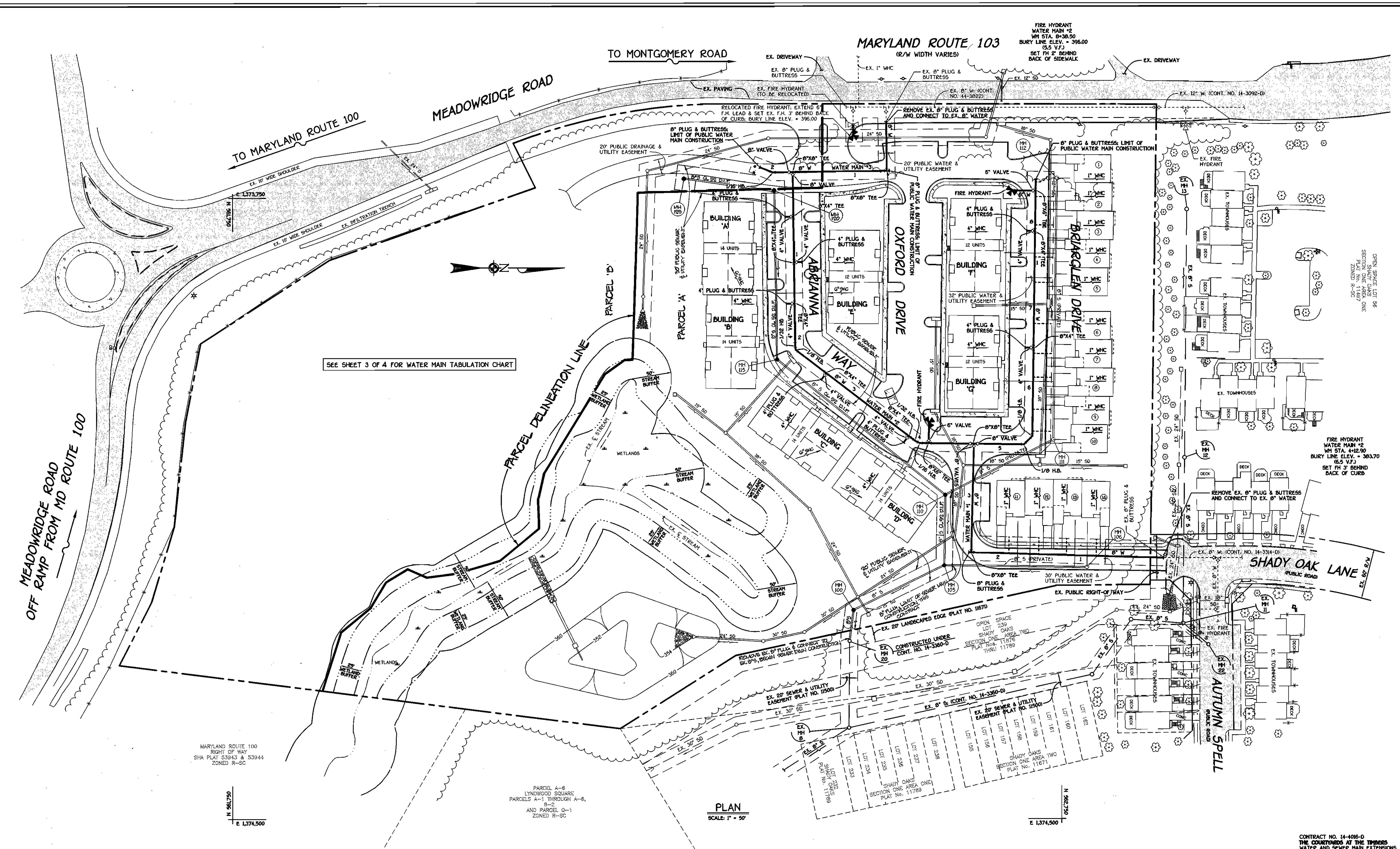
| NO. | REVISION | DATE |
|-----|--|---------|
| 1 | REVISED QUANTITIES CHART, TITLE BLOCK & VICINITY MAP | 4/15/02 |

WATER & SEWER MAINS
TITLE SHEET

600' SCALE MAP NO. 37 BLOCK NO. 3
 F.C.C. WORK ORDER NO. 30744
 FILE NAME: 30744 FINAL WATER AND SEWER TITLE SHEET

THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
 CONTRACT NO. 14-4016-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 of 4

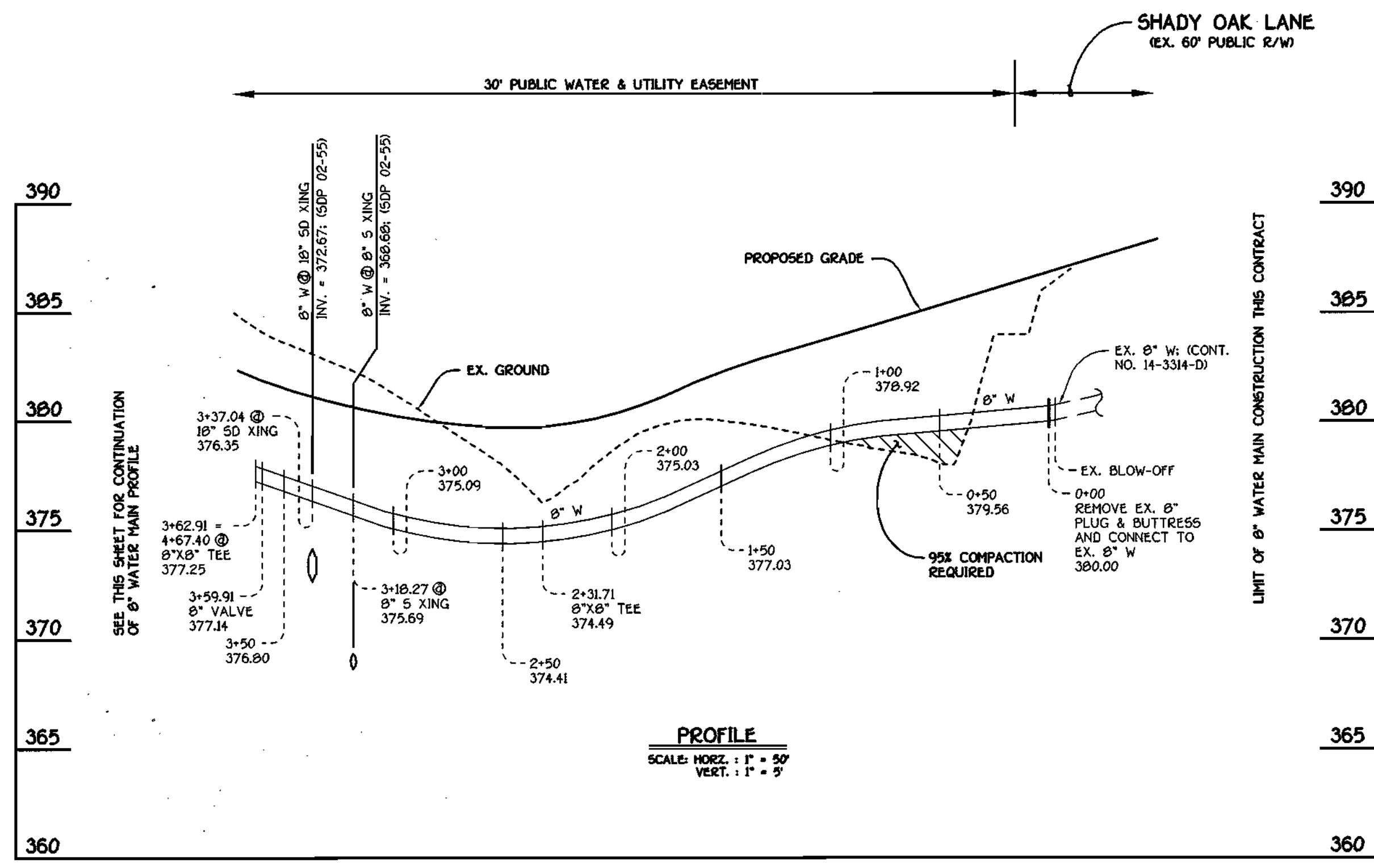


SEE SHEET 3 OF 4 FOR WATER MAIN TABULATION CHART

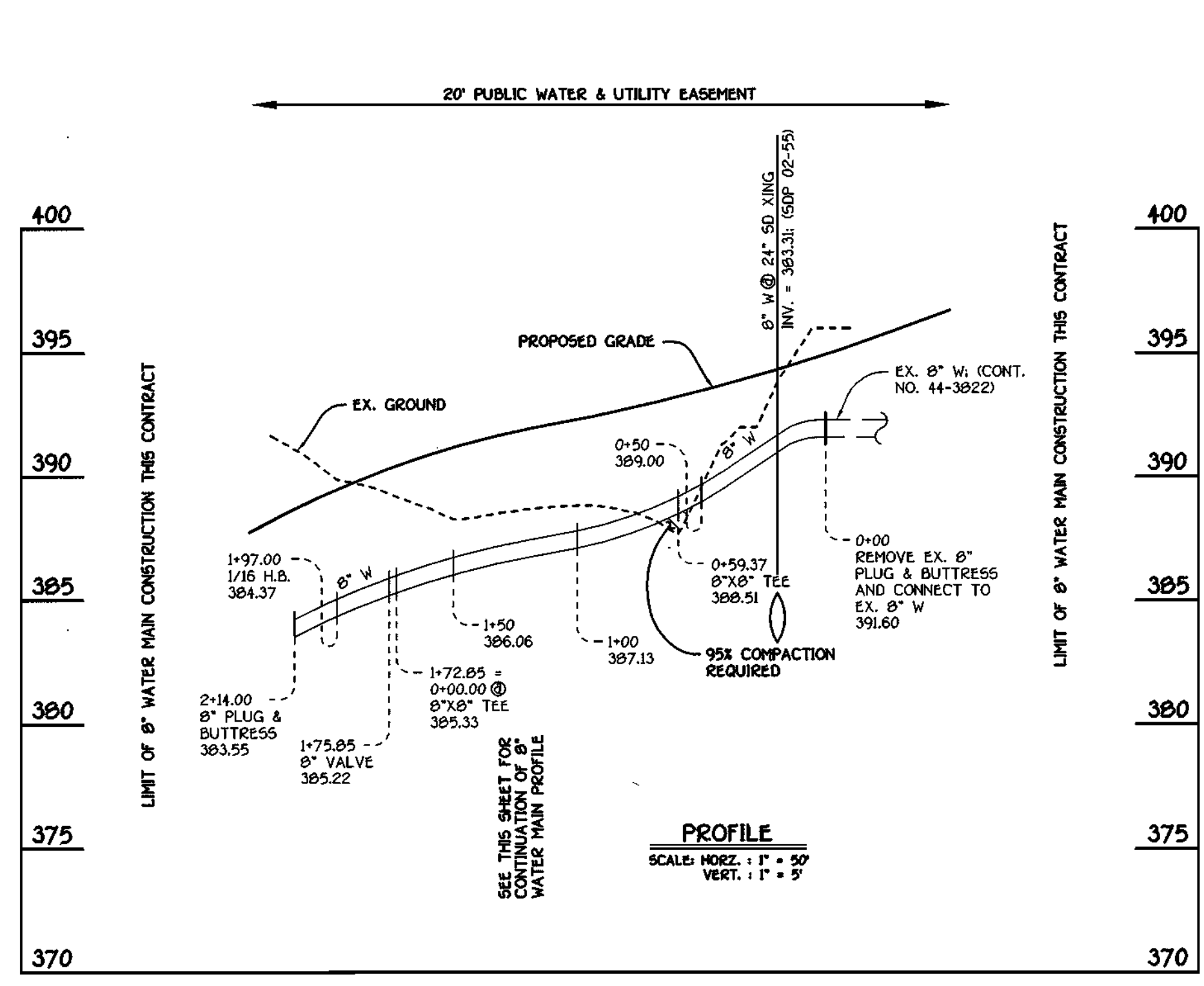
PLAN
SCALE: 1" = 50'

| | | | | | | | | | | | | | |
|--|--|--|--|---|--|---|--|---|--|--|--|--|--|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities 6-17-02 DATE | | DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division 6/19/02 DATE | | FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE ELICOTT CITY, MARYLAND 21042 410.461.2000 | | STATE OF MARYLAND TERRILL & FISHER PROFESSIONAL ENGINEER No. 8787 TERRILL A. FISHER | | DESIGNED BY: P.W.L. DRAWN BY: M.D.T. CHECKED BY: P.W.L. DATE: JUNE, 2002 BY NO. | | WATER & SEWER MAINS PLAN VIEW 600' SCALE MAP NO. 37 BLOCK NO. 3 F.C.C. WORK ORDER NO. 30744 FILE NAME: 30744.FINAL.WATER.MAIN.PLAN.SHT.2 | | THE COURTYARDS AT THE TIMBERS WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 14-4016-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE A5 SHOWN SHEET 2 of 4 | |
|--|--|--|--|---|--|---|--|---|--|--|--|--|--|

K:\Drawings\330744\K14\HW\Property\Water\30744.Final.Water.Plan.dwg, 06/14/02 09:01:09 AM



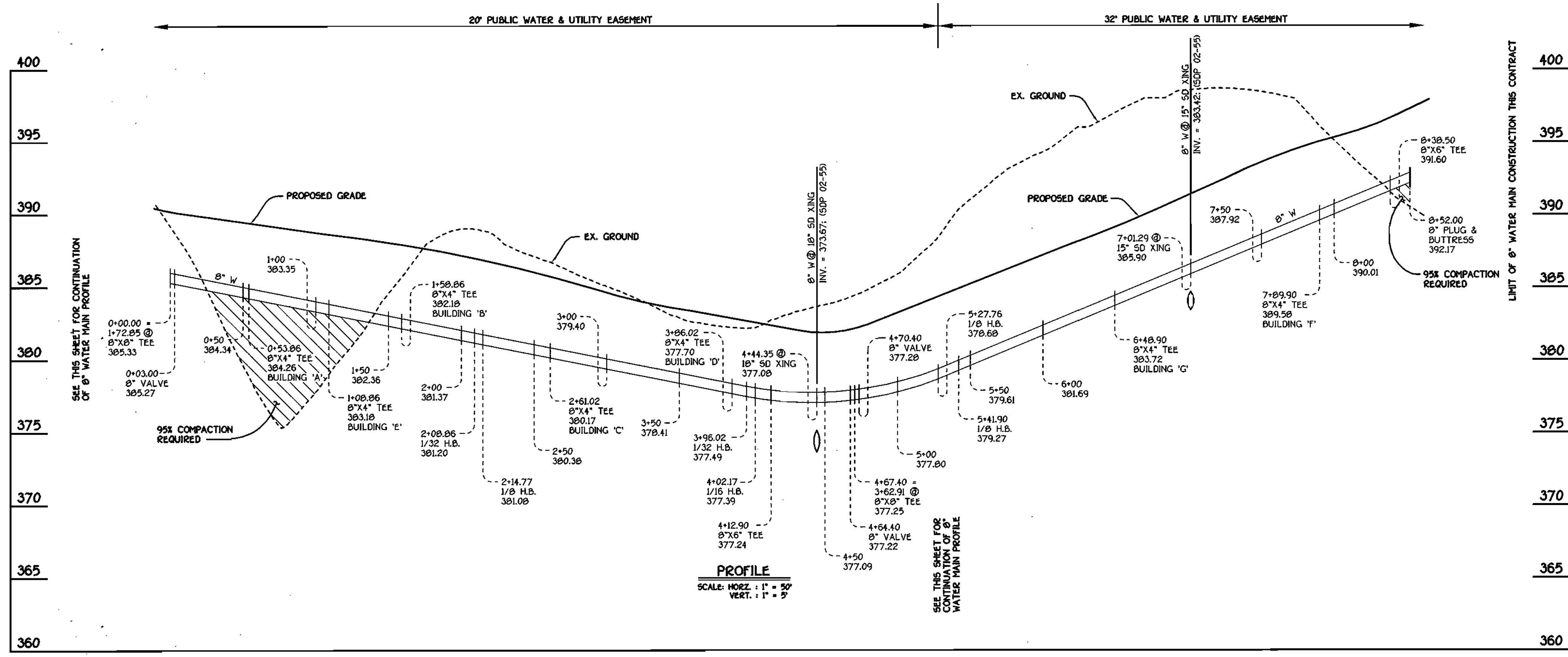
8" WATER MAIN # 1



8" WATER MAIN # 3

| WATER MAIN TABULATION CHART | | | |
|-----------------------------|---------------------|-----------|------------|
| W.M. STATION | APPURTENANCE | NORTHING | EASTING |
| 8" WATER MAIN #1 | | | |
| 0+00.00 | CONNECT TO EX. 8" W | 562872.43 | 1374185.04 |
| 2+31.71 | 8" X 8" TEE | 562840.82 | 1374178.38 |
| 3+59.91 | 8" VALVE | 562844.03 | 1374090.26 |
| 3+62.91 | 8" X 8" TEE | 562844.07 | 1374047.22 |
| 8" WATER MAIN #2 | | | |
| 0+00.00 | 8" X 8" TEE | 562425.64 | 1373719.00 |
| 0+03.00 | 8" VALVE | 562425.66 | 1373722.01 |
| 0+53.86 | 8" X 4" TEE | 562426.59 | 1373772.86 |
| 1+08.86 | 8" X 4" TEE | 562427.15 | 1373827.85 |
| 1+58.86 | 8" X 4" TEE | 562427.84 | 1373877.85 |
| 2+08.86 | 1/32 H.B. | 562428.53 | 1373927.84 |
| 2+14.77 | 1/8 H.B. | 562429.29 | 1373933.70 |
| 2+61.02 | 8" X 4" TEE | 562466.02 | 1373961.81 |
| 3+86.02 | 8" X 4" TEE | 562565.28 | 1374037.79 |
| 3+96.02 | 1/32 H.B. | 562573.22 | 1374043.86 |
| 4+02.17 | 1/16 H.B. | 562578.84 | 1374046.36 |
| 4+12.90 | 8" X 6" TEE | 562589.58 | 1374046.50 |
| 4+64.40 | 8" VALVE | 562641.07 | 1374047.18 |
| 4+67.40 | 8" X 8" TEE | 562644.07 | 1374047.22 |
| 4+70.40 | 8" VALVE | 562647.07 | 1374047.26 |
| 5+27.76 | 1/8 H.B. | 562704.42 | 1374048.02 |
| 5+41.90 | 1/8 H.B. | 562714.55 | 1374038.16 |
| 6+48.90 | 8" X 4" TEE | 562715.97 | 1373931.17 |
| 7+89.90 | 8" X 4" TEE | 562717.84 | 1373790.18 |
| 8+38.50 | 8" X 6" TEE | 562718.49 | 1373741.58 |
| 8+52.00 | 8" PLUG & BUTTRESS | 562718.66 | 1373728.08 |
| 8" WATER MAIN #3 | | | |
| 0+00.00 | CONNECT TO EX. 8" W | 562536.30 | 1373858.08 |
| 0+53.37 | 8" X 8" TEE | 562539.12 | 1373717.44 |
| 1+72.85 | 8" X 8" TEE | 562425.64 | 1373719.00 |
| 1+75.85 | 8" VALVE | 562422.64 | 1373719.02 |
| 1+97.00 | 1/16 H.B. | 562401.50 | 1373719.34 |
| 2+14.00 | 8" PLUG & BUTTRESS | 562385.70 | 1373713.05 |

SEE THIS SHEET FOR WATER MAIN TABULATION CHART



8" WATER MAIN # 2

CONTRACT NO. 14-4016-D
THE COURTYARDS AT THE TIMBERS
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
6-17-02
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
6/18/02
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
400 4th - 3000



DESIGNED BY: M.D.T.
DRAWN BY: M.D.T.
CHECKED BY: P.W.K.
DATE: JUNE, 2002

PK 1 REVISION TITLE BLOCK, REFER TO PUBLIC
DATE: 4/15/03
BY: NO. REVISION

WATER & SEWER MAINS
PROFILES
600' SCALE MAP NO. 37 BLOCK NO. 3
F.C.C. WORK ORDER NO. 30744
FILE NAME: 30744.FINAL.WATER.MAIN.PROFILES.SHT_3

THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4016-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4

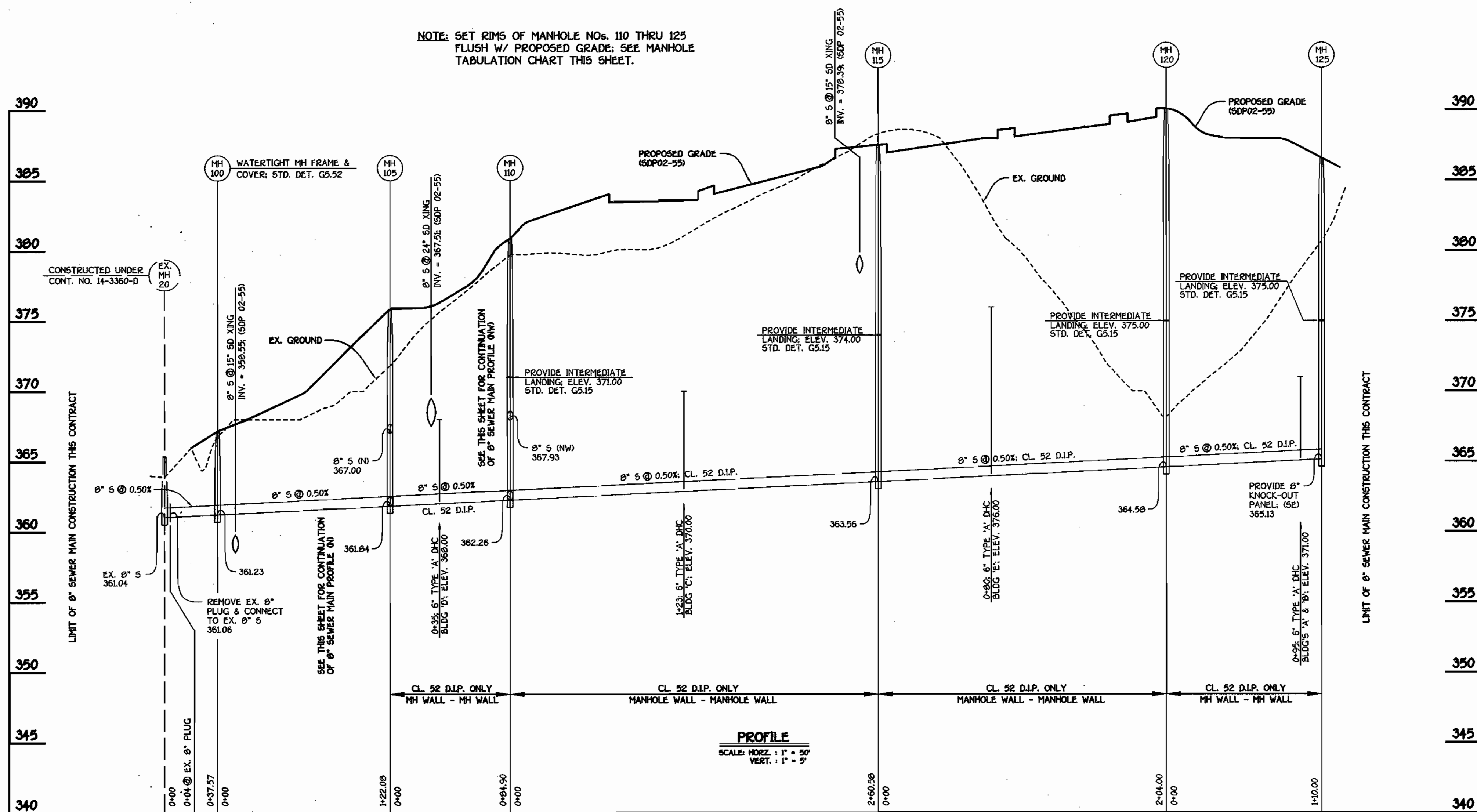
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| M.C.E. CHART | |
|--------------------|--------|
| UNIT | M.C.E. |
| BUILDING 'A' & 'D' | 378.60 |
| BUILDING 'C' | 376.20 |
| BUILDING 'D' | 373.80 |
| BUILDING 'E' | 362.34 |

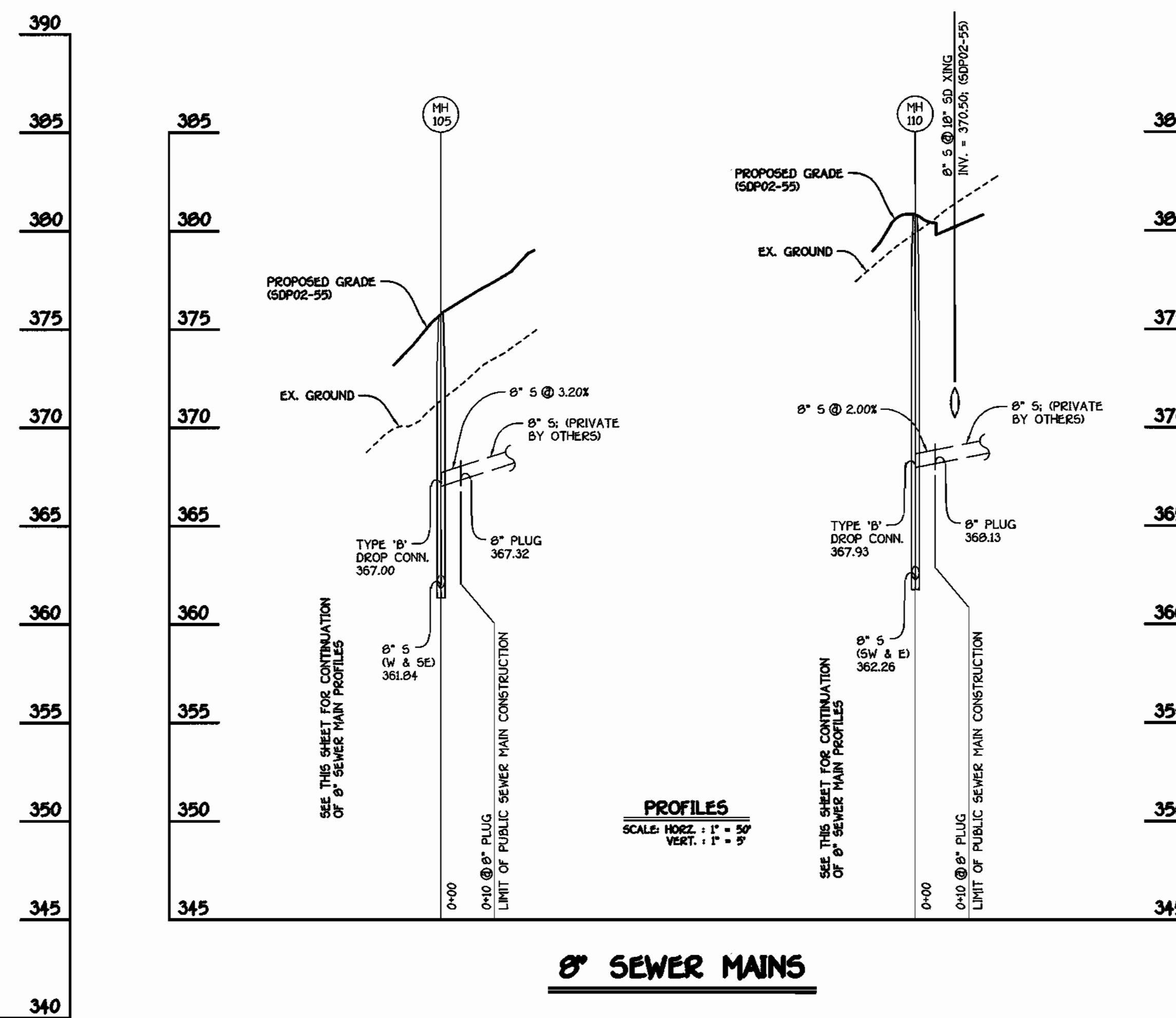
| MANHOLE TABULATION CHART | | | |
|--------------------------|-----------|------------|---------------|
| NO. | NORTHING | EASTING | RIM ELEVATION |
| 100* | 562496.90 | 1374247.95 | 367.17 |
| 105* | 562608.36 | 1374193.69 | 376.05 |
| 110* | 562609.46 | 1374106.99 | 369.60 |
| 115* | 562406.77 | 1373943.25 | 367.50 |
| 120* | 562403.95 | 1373741.27 | 369.50 |
| 125* | 562294.74 | 1373728.06 | 366.30 |

* SET MH RIMS FLUSH W/ PROPOSED FINISHED GRADE

| SHC INVERT @ PROPERTY LINE CHART | | |
|----------------------------------|---------------------------|-----------|
| STATION | UNIT | ELEVATION |
| | MH 105 TO MH 110 | |
| 0+35 LT. | BUILDING 'D' (DHC) | 368.20 |
| | MH 110 TO MH 115 | |
| 1+23 LT. | BUILDING 'C' (DHC) | 370.30 |
| | MH 115 TO MH 120 | |
| 0+80 RT. | BUILDING 'E' (DHC) | 376.64 |
| | MH 120 TO MH 125 | |
| 0+95 LT. | BUILDINGS 'A' & 'B' (DHC) | 371.30 |



8" SEWER MAIN: BUILDINGS 'A' THRU 'E'



8" SEWER MAINS

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
20100 SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
ELICOTT CITY, MARYLAND 21042
4101 401 - 2925



| | |
|--------------|-------------|
| DESIGNED BY: | M.D.T. |
| DRAWN BY: | M.D.T. |
| CHECKED BY: | P.M.K. |
| DATE: | APRIL, 2003 |
| BY NO. | |
| REVISION | |
| DATE | |

SEWER MAINS
PROFILES

600' SCALE MAP NO. 37 BLOCK NO. 3
F.C.C. WORK ORDER NO. 30744
FILE NAME: 30744 FINAL SEWER MAIN PROFILES SH4

THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4016-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN
SHEET
4 OF 4

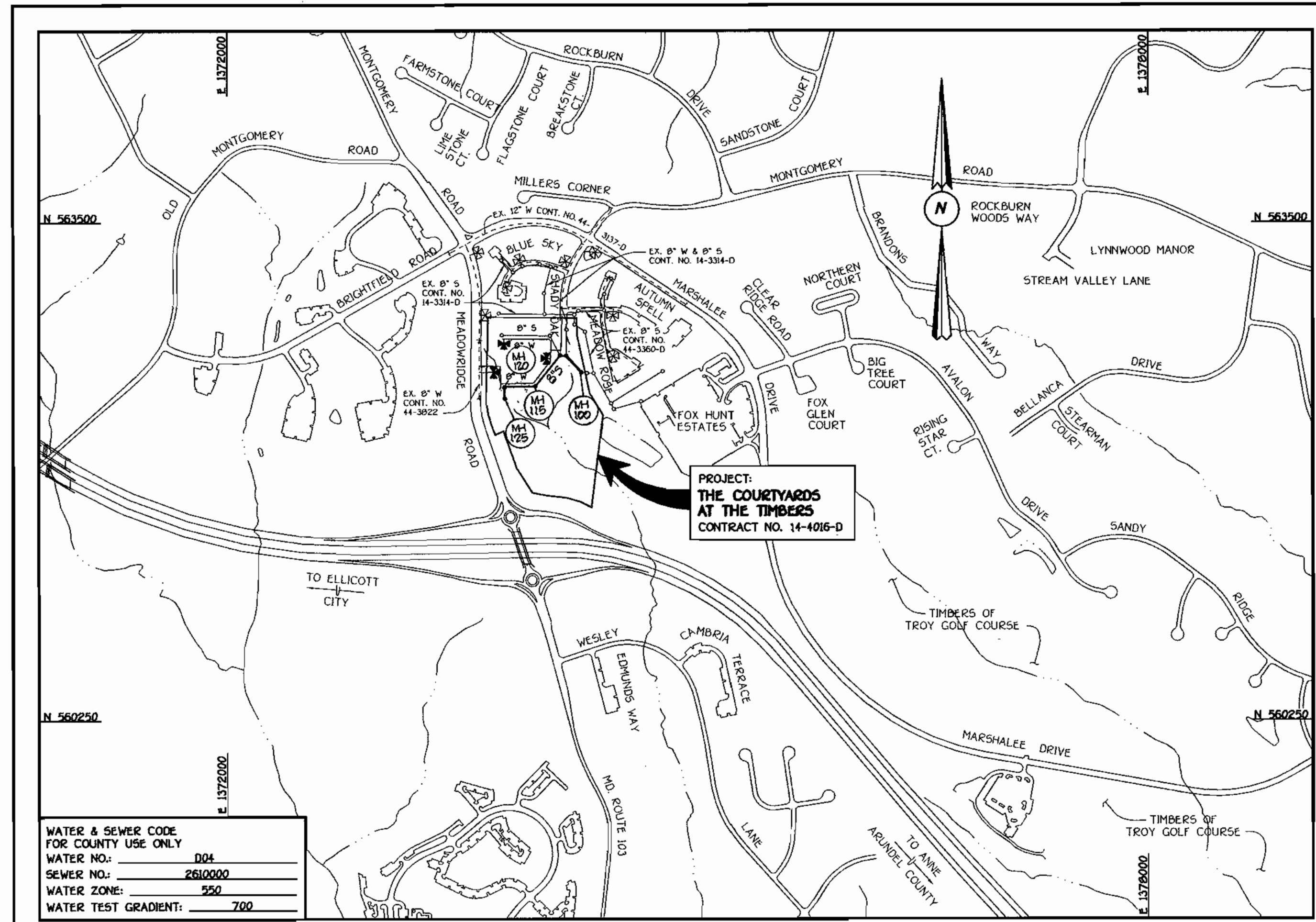
Rdth B... 4-21-03
CHIEF, BUREAU OF UTILITIES

... 4/20/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION

| QUANTITIES | | | | |
|----------------------------|------------|------------|----------|----------|
| ITEM | ESTIMATED | QUANTITIES | AS-BUILT | SUPPLIER |
| 8" WATER | 1,429 L.F. | | | |
| 6" WATER | 197 L.F. | | | |
| 2" W/C | 301 L.F. | | | |
| FIRE HYDRANTS | 2 EACH | | | |
| RELOCATED EX. FIRE HYDRANT | 1 EACH | | | |
| 8" X 8" TEE | 4 EACH | | | |
| 8" X 6" TEE | 9 EACH | | | |
| 8" VALVES | 5 EACH | | | |
| 6" VALVES | 9 EACH | | | |
| 8"-1/8" H.B. | 3 EACH | | | |
| 8"-1/16" H.B. | 2 EACH | | | |
| 8"-1/32" H.B. | 2 EACH | | | |
| 4" PLUG & BUTTRESS | 7 EACH | | | |
| 6" PLUG & BUTTRESS | 4 EACH | | | |

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

| | | | |
|------------------|-------------|--|--|
| 8" SEWER | 175.00 L.F. | | |
| 6" SEWER, D.I.P. | 650.40 L.F. | | |
| 6" S.H. | 72 L.F. | | |
| MANHOLES | 6 EACH | | |



| | |
|--|---------|
| WATER & SEWER CODE FOR COUNTY USE ONLY | |
| WATER NO.: | 004 |
| SEWER NO.: | 2610000 |
| WATER ZONE: | 550 |
| WATER TEST GRADIENT: | 700 |

| | |
|--|---|
| TYPE OF BUILDING: ATTACHED RESIDENTIAL | |
| NUMBER OF LOTS & PARCELS: | 1 BUILDABLE |
| NO. OF WATER HOUSE CONNECTIONS: | 21 |
| NO. OF SEWER HOUSE CONNECTIONS: | 0 |
| DRAINAGE AREA: | PATAPSCO |
| TREATMENT PLANT: | PATAPSCO WASTEWATER TREATMENT PLANT VIA CITY OF BALTIMORE |

PLAN REFERENCE NUMBERS: SOP 02-55

GENERAL NOTES

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- ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (99) (AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
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 - BGE (CONTRACTOR SERVICES) 410-850-4620
 - BGE (UNDERGROUND DAMAGE CONTROL) 410-787-9096
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 410-313-4900
 - BELL ATLANTIC MARYLAND, INC. 1-800-621-9900
 - COLONIAL PIPELINE CO. 410-795-1390
 - MISS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
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- 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.
- 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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL C5.52.
- WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL C6.52.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL 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 TREES SHALL BE STRAPPED TO TREES.
- 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 ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W111 AND W213). 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 MAIN SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH THE AWWA SPECIFICATIONS C-153, DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (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(D) OF THE HOWARD COUNTY CODE.

DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Mich D. Tumb
FOR: RRSK, L.L.C. 6/14/02
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

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.

Paul W. Koebel
6/14/02
SIGNATURE OF ENGINEER DATE

CONTRACT No. 14-4016-D

THE COURTYARDS AT THE TIMBERS

WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Jim Myers 6/17/02
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.
John R. Roberts 6/17/02
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND AS SHOWN ON SOP 02-55 AND ON THESE PLANS.
Mich D. Tumb
FOR: RRSK, L.L.C. 6/14/02
SIGNATURE OF DEVELOPER DATE

CONTRACT NO. 14-4016-D
THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Ruth Berman 6-17-02
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Michael J. ... 6/16/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS, CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE, OFFICE PARK 1, 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
410-441-2855



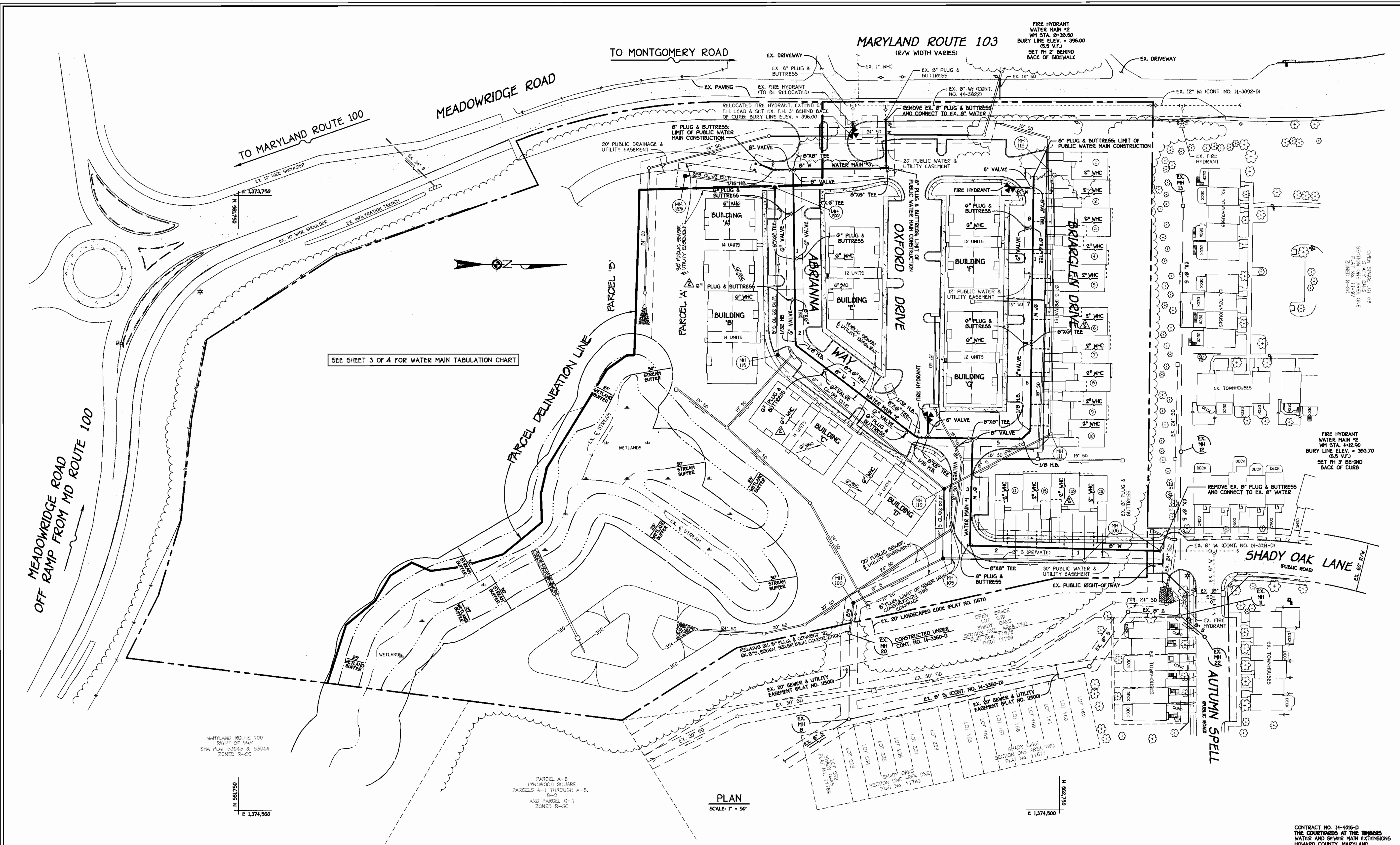
| | | |
|--------------|------------|---------|
| DESIGNED BY: | P.W.K. | |
| DRAWN BY: | M.D.T. | |
| CHECKED BY: | P.W.K. | 2/17/02 |
| DATE: | JUNE, 2002 | 4/23/02 |
| BY NO. | | |

REVISIONS:
1. REVISED QUANTITIES, 1" WMS TO 2" W/C & 4" W TO 6" W
2. REVISED QUANTITIES CHART, TITLE BLOCK & VICINITY MAP

| | |
|------------------------------------|---|
| WATER & SEWER MAINS TITLE SHEET | |
| 600' SCALE MAP NO. | 37 BLOCK NO. 3 |
| F.C.C. WORK ORDER NO. | 30744 |
| FILE NAME: | 30744 FINAL WATER AND SEWER TITLE SHEET |

THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4016-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 of 4



SEE SHEET 3 OF 4 FOR WATER MAIN TABULATION CHART

PLAN
SCALE: 1" = 50'

K:\Drawings\30774\KIAN\Property\Water\30774-Final Water Plan.dwg, 06/14/02 09:01:08 AM

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ruth Bauman
CHIEF, BUREAU OF UTILITIES
6-17-02 DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Michael Drummer
CHIEF, DEVELOPMENT ENGINEERING DIVISION
6/19/02 DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY
ELLSWORTH CITY, MARYLAND 21042
410.461.2992



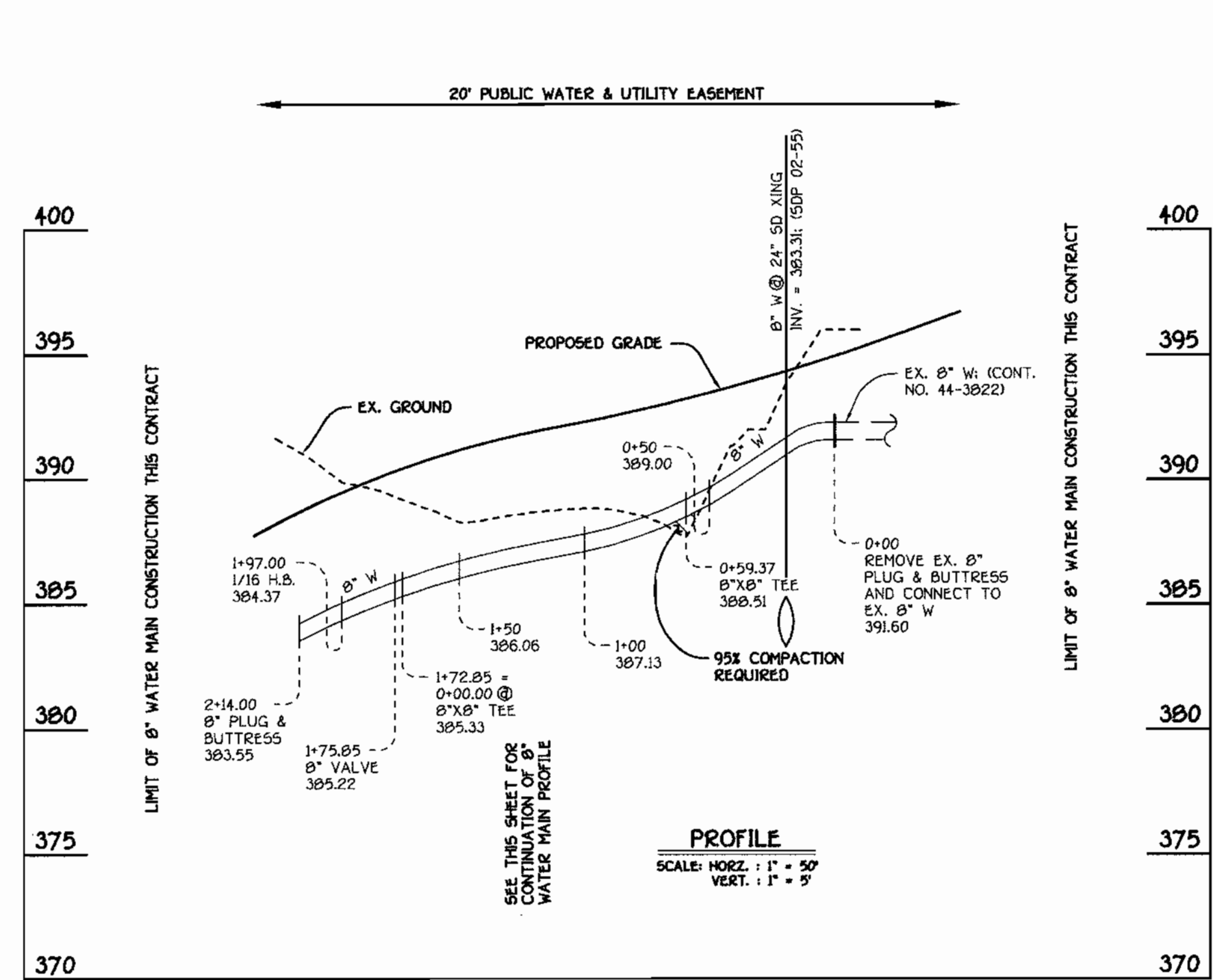
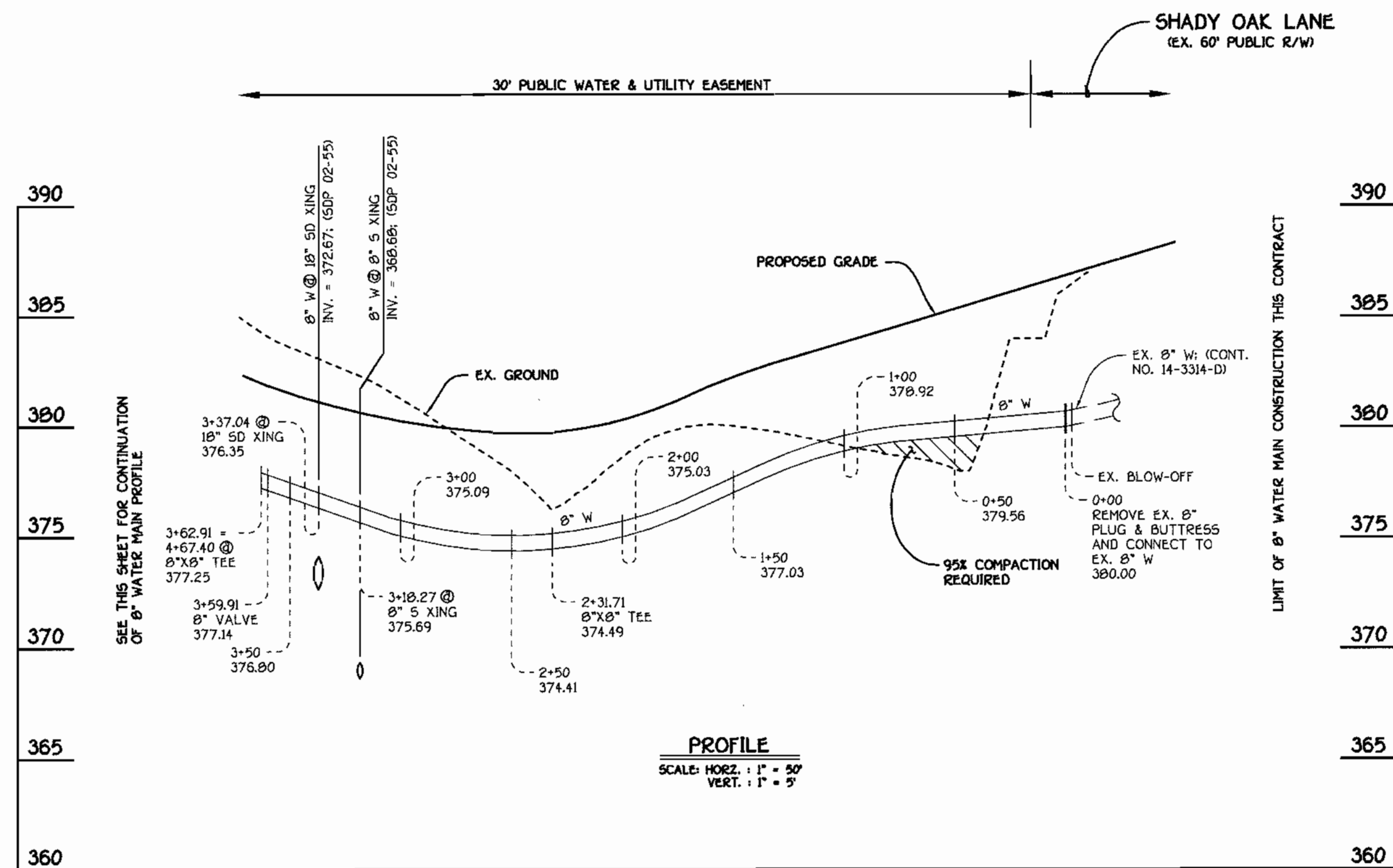
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|--------------|--|-------|------------|
| DESIGNED BY: | P.W.K. | DATE: | JUNE, 2002 |
| DRAWN BY: | M.D.T. | BY: | NO. |
| CHECKED BY: | P.W.K. | DATE: | 4/15/02 |
| REVISIONS: | 1. REVISE ALL 1" MHC TO 2" MHC & REVISE ALL 4" W TO 6" W REVISED SEWER ALIGNMENT, TITLE BLOCK & SEWER TO PUBLIC | DATE: | 2/17/04 |

**WATER & SEWER MAINS
PLAN VIEW**

600' SCALE MAP NO. 37 BLOCK NO. 3
F.C.C. WORK ORDER NO. 30744
FILE NAME: 30744 FINAL WATER MAIN PLAN SHT 2

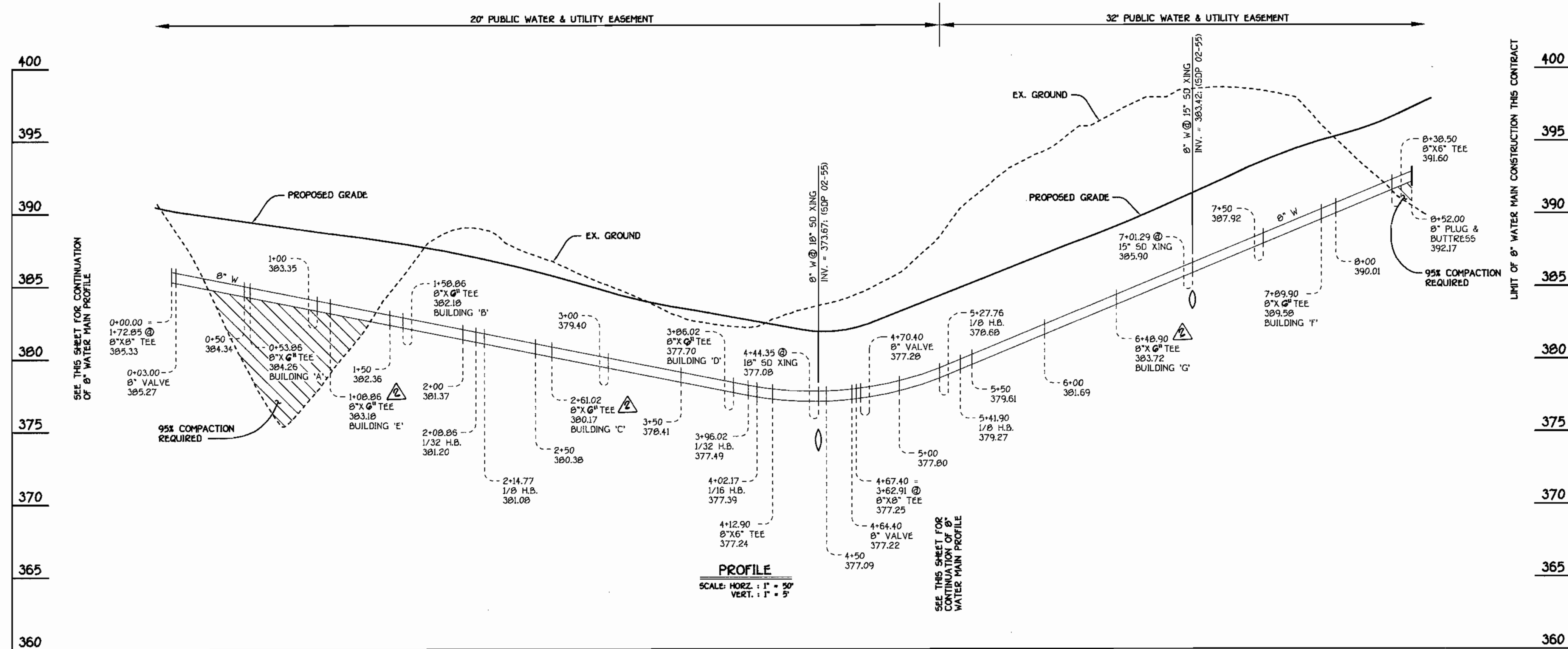
THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4016-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 4



| WATER MAIN TABULATION CHART | | | |
|-----------------------------|---------------------|-----------|------------|
| W.M. STATION | APPURTENANCE | NORTHING | EASTING |
| 8" WATER MAIN #1 | | | |
| 0+00.00 | CONNECT TO EX. 8" W | 562872.43 | 1374185.04 |
| 2+31.71 | 8" X 8" TEE | 562640.82 | 1374178.38 |
| 3+59.91 | 8" VALVE | 562644.03 | 1374050.26 |
| 3+62.91 | 8" X 8" TEE | 562644.07 | 1374047.22 |
| 8" WATER MAIN #2 | | | |
| 0+00.00 | 8" X 8" TEE | 562425.64 | 1373719.00 |
| 0+03.00 | 8" VALVE | 562425.68 | 1373722.01 |
| 0+53.86 | 8" X 8" TEE | 562426.39 | 1373772.86 |
| 1+08.86 | 8" X 8" TEE | 562427.15 | 1373827.85 |
| 1+58.86 | 8" X 8" TEE | 562427.84 | 1373877.84 |
| 2+08.86 | 1/32 H.B. | 562428.53 | 1373927.84 |
| 2+14.77 | 1/8 H.B. | 562429.29 | 1373933.70 |
| 2+61.02 | 8" X 8" TEE | 562466.02 | 1373961.81 |
| 3+86.02 | 8" X 8" TEE | 562565.28 | 1374037.79 |
| 3+96.02 | 1/32 H.B. | 562573.22 | 1374043.86 |
| 4+02.17 | 1/16 H.B. | 562578.84 | 1374046.36 |
| 4+12.90 | 8" X 8" TEE | 562589.58 | 1374046.50 |
| 4+64.40 | 8" VALVE | 562644.07 | 1374047.18 |
| 4+67.40 | 8" X 8" TEE | 562644.07 | 1374047.22 |
| 4+70.40 | 8" VALVE | 562647.02 | 1374047.26 |
| 5+27.76 | 1/8 H.B. | 562704.42 | 1374048.02 |
| 5+41.90 | 1/8 H.B. | 562714.55 | 1374038.16 |
| 6+48.90 | 8" X 8" TEE | 562715.97 | 1373931.17 |
| 7+89.90 | 8" X 8" TEE | 562717.84 | 1373790.18 |
| 8+38.50 | 8" X 8" TEE | 562718.49 | 1373741.58 |
| 8+52.00 | 8" PLUG & BUTTRESS | 562718.66 | 1373728.08 |
| 8" WATER MAIN #3 | | | |
| 0+00.00 | CONNECT TO EX. 8" W | 562538.30 | 1373858.08 |
| 0+59.37 | 8" X 8" TEE | 562539.12 | 1373717.44 |
| 1+72.85 | 8" X 8" TEE | 562425.64 | 1373719.00 |
| 1+75.85 | 8" VALVE | 562422.64 | 1373719.02 |
| 1+97.00 | 1/16 H.B. | 562401.50 | 1373719.34 |
| 2+14.00 | 8" PLUG & BUTTRESS | 562385.70 | 1373713.05 |

SEE THIS SHEET FOR WATER MAIN TABULATION CHART



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Berman
6-17-02
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Mark Dammann
6/18/02
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELKLOTT CITY, MARYLAND 2092
410.461.9999



DESIGNED BY: M.D.T.
DRAWN BY: M.D.T.
CHECKED BY: P.W.K.
DATE: JUNE, 2002

BY: P.W.K. 1
NO. 1

REVISION: REVISION 4/18/08
REVISION: REVISION 4/18/08

WATER & SEWER MAINS
PROFILES

600' SCALE MAP NO. 37 BLOCK NO. 3
F.C.C. WORK ORDER NO. 30744
FILE NAME: 30744 FINAL WATER MAIN PROFILES SHIT 3

THE COURTYARDS AT THE TIMBERS
WATER & SEWER MAIN EXTENSIONS
CONTRACT NO. 14-4016-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4

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