

GENERAL NOTES

PART I - GENERAL

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED 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. [NORTH AMERICAN DATUM OF 1983 (NAD '83)].
- 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 THAT 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 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 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:

STATE HIGHWAY ADMINISTRATION	531-5553
BGE CO. CONTRACTOR SERVICES	850-4620
BGE CO. UNDER GROUND DAMAGE CONTROL	787-9068
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	795-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES	313-4900
- 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 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 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.

PART II - WATER

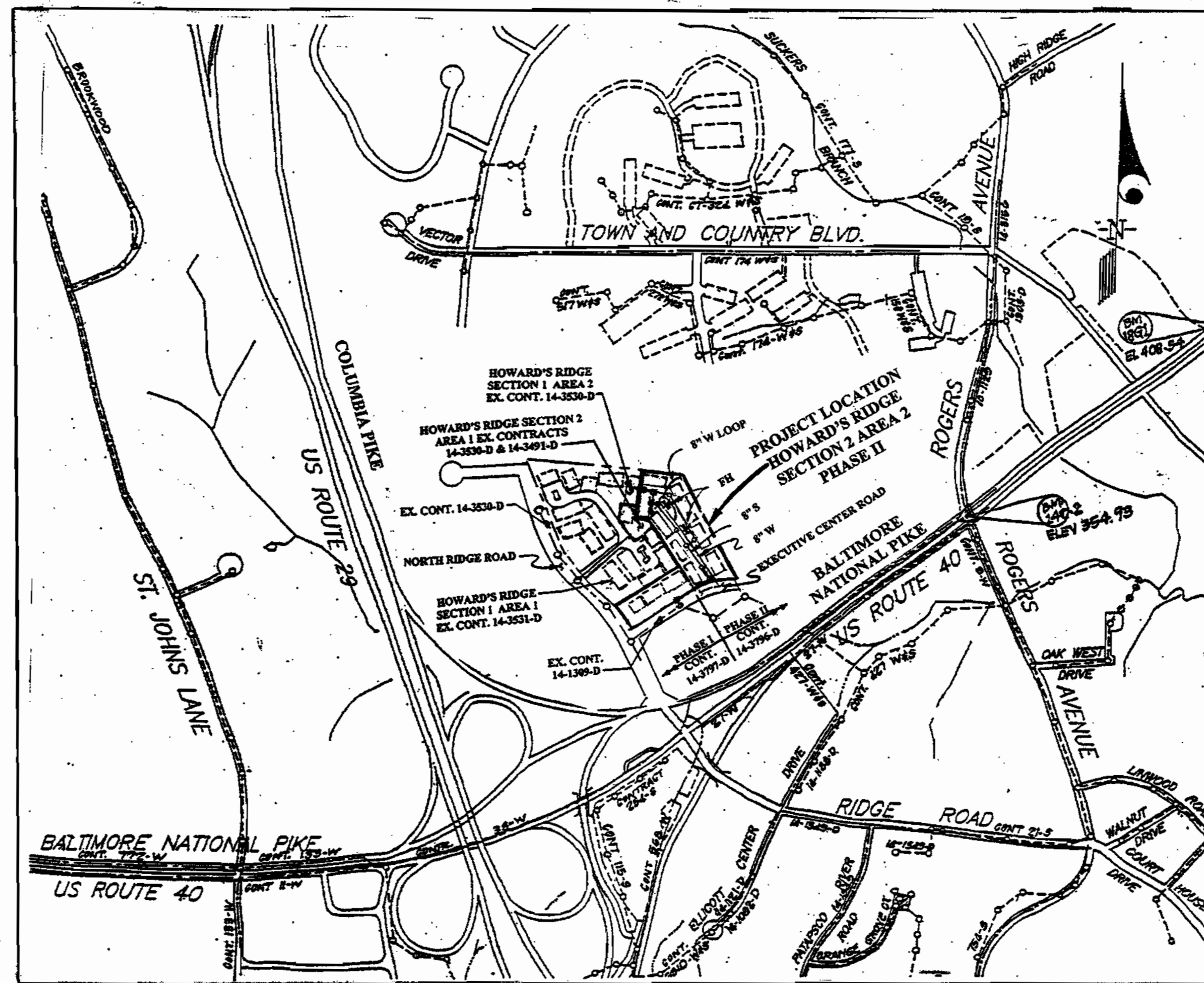
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTIONS 1006 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 TOWNHOUSES OR MULTI-FAMILY DWELLING UNITS SHALL HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.

PART III - SEWER

- ALL SEWER MAINS SHALL BE DIP OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOW WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL GS.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS 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.

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" W	1141 L.F.			
6" W	22 L.F.			
CAP & BUTTRESS	1 EA.			
1 1/2" WHC	1263 L.F.			
1" WHC	112 L.F.			
8" V	5 EA.			
6" V	2 EA.			
FIRE HYDRANT	2 EA.			
8" S	1453 L.F.			
4" SHC	1404 L.F.			
4'-0" MANHOLE	11 EA.			
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				

TYPE OF BUILDING	TOWNHOUSES
NO. OF NON-BUILDABLE LOTS	2
NO. OF BUILDABLE LOTS	69
NO. OF WATER HOUSE CONNECTIONS	69
NO. OF SEWER HOUSE CONNECTIONS	69
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO W.Q.M.C.



WATER AND SEWER CODE
 WATER CODE: F-03
 SEWER CODE: 1452800
 TEST GRADIENT: 700

VICINITY MAP
 SCALE: 1" = 600'

CONTRACT NO. 14-3796-D
 HOWARD'S RIDGE
 SECTION 2, AREA 2
 LOTS A-146 THRU A-216
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND ROAD CONSTRUCTION PLAN F-00-82.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 2-22-00
 SIGNATURE DATE

U. S. SOIL CONSERVATION SERVICE

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

APPROVED:
John B. Robertson 2-22-00
 HOWARD S. C. D. DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
John B. Robertson 2-17-00
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
Cheryl Simmons 2/20/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

KCE ENGINEERING, INC.
 EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD, SUITE 360
 ELLICOTT CITY, MARYLAND 21043
 PHONE (410) 203-9800 FAX (410) 203-9228

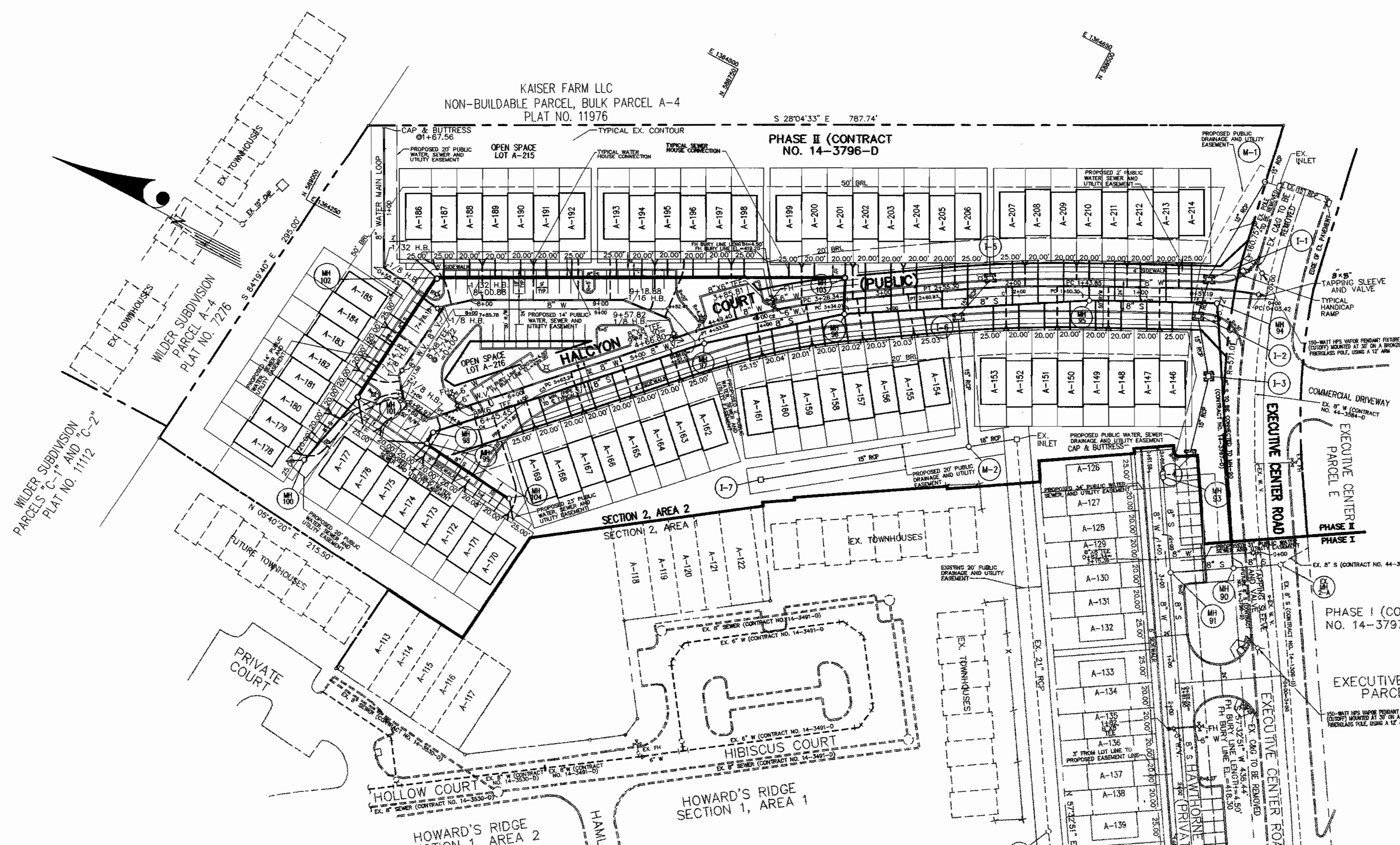


DESIGNED	BY	NO.	REVISION	DATE
DRAWN				
CHECKED				
DATE				

TITLE SHEET
 600 SCALE MAP NO. 24 BLOCK 6

HOWARD'S RIDGE
 SECTION 2, AREA 2
 LOTS A-146 THRU A-216 (PHASE II)
 CONTRACT NO. 14-3796-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 3



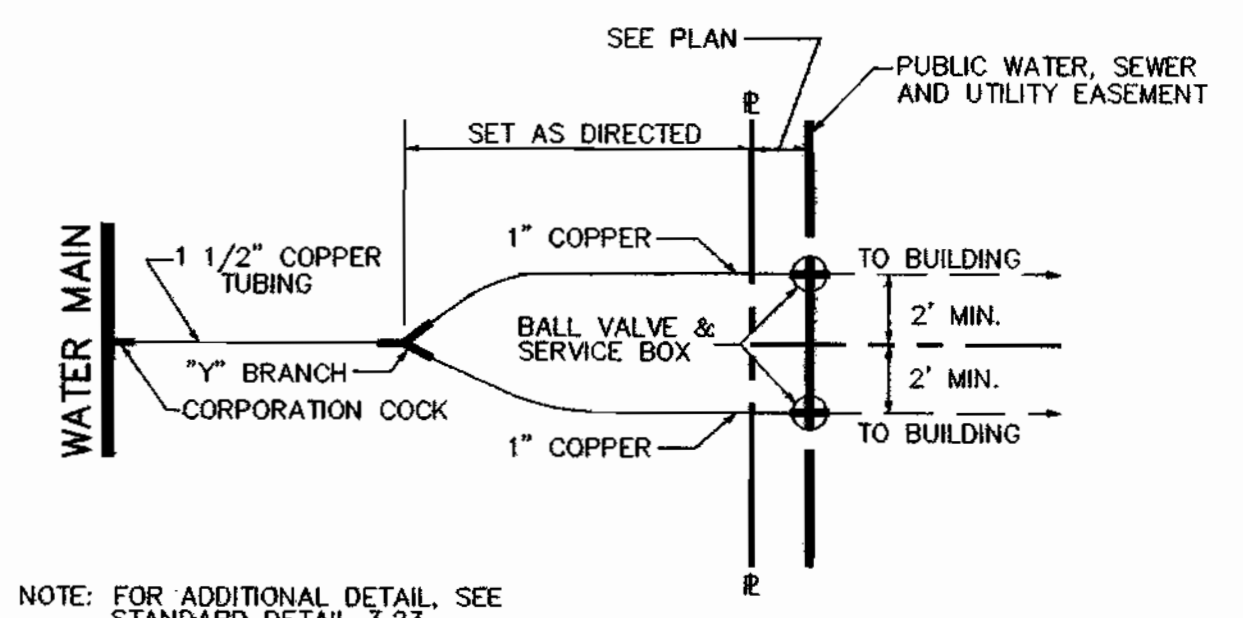
GENERAL NOTES

1. ALL SEWER HOUSE CONNECTIONS SHALL BE 4" PVC. ALL DUAL WATER HOUSE CONNECTIONS SHALL BE 1 1/2" COPPER TUBING FROM WATER MAIN. DUAL CONNECTIONS SHALL BE 1" COPPER TUBING. ALL SINGLE WATER HOUSE CONNECTIONS SHALL BE ONE-INCH.
2. SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH SPECIFICATION SECTION 219 AND HAWTHORNE COURT ROAD CONSTRUCTION PLANS F-00-02.

SEWER HOUSE CONNECTION TABLE					
LOT NO.	INVERT EL. @ PL.	MINIMUM CELLAR EL.	LOT NO.	INVERT EL. @ PL.	MINIMUM CELLAR EL.
A-146	403.0	406.7	A-170	416.4	420.0
A-147	403.8	407.3	A-171	416.3	419.9
A-148	404.3	408.0	A-172	416.2	419.8
A-149	404.9	408.6	A-173	416.0	419.6
A-150	405.6	409.3	A-174	416.0	419.6
A-151	406.3	410.0	A-175	415.9	419.5
A-152	407.0	410.7	A-176	415.9	419.5
A-153	407.7	411.4	A-177	415.5	420.1
A-154	408.4	413.1	A-178	417.2	420.7
A-155	410.1	413.8	A-179	417.1	420.6
A-156	410.8	414.5	A-180	416.9	420.4
A-157	411.8	415.5	A-181	416.7	420.2
A-158	412.3	416.0	A-182	416.4	419.9
A-159	412.8	416.5	A-183	416.2	419.7
A-160	413.3	417.0	A-184	416.0	419.5
A-161	413.8	417.5	A-185	415.8	419.3
A-162	414.5	418.2	A-186	415.3	419.0
A-163	414.6	418.3	A-187	415.3	419.0
A-164	414.8	418.5	A-188	415.1	418.8
A-165	414.9	418.6	A-189	414.9	418.6
A-166	415.0	418.7	A-190	414.7	418.4
A-167	415.2	418.9	A-191	414.5	418.2
A-168	415.3	419.0	A-192	414.3	418.0
A-169	415.4	419.1	A-193	413.9	417.6

COORDINATE LIST FOR WATER LINE		
ITEM	NORTHING	EASTING
TAPPING SLEEVE AND VALVE	588301.55	1364536.61
8" X 6" TEE TO FH @ STA 3+85.81	588635.09	1364345.18
8" X 8" TEE @ STA 4+56.80	588693.87	1364289.55
8" X 6" TEE TO FH @ STA 6+45.45	588817.86	1364160.94
1/8" H.B. @ STA 6+69.39	588834.48	1364143.70
1/8" H.B. @ STA 6+92.97	588857.94	1364146.03
1/8" H.B. @ STA 7+14.18	588871.39	1364162.44
8" X 8" TEE TO LOOP @ STA 7+74.22	588865.45	1364222.19
1/8" H.B. @ LOOP STA 0+55.23	588919.91	1364230.57
CAP & BUTTRESS @ LOOP STA 1+67.56	588973.30	1364329.34
1/8" H.B. @ STA 7+78.18	588865.06	1364226.13
1/32" H.B. @ STA 8+00.88	588847.88	1364240.97
1/16" H.B. @ STA 9+18.88	588743.77	1364296.51
1/8" H.B. @ STA 9+57.82	588705.01	1364300.29

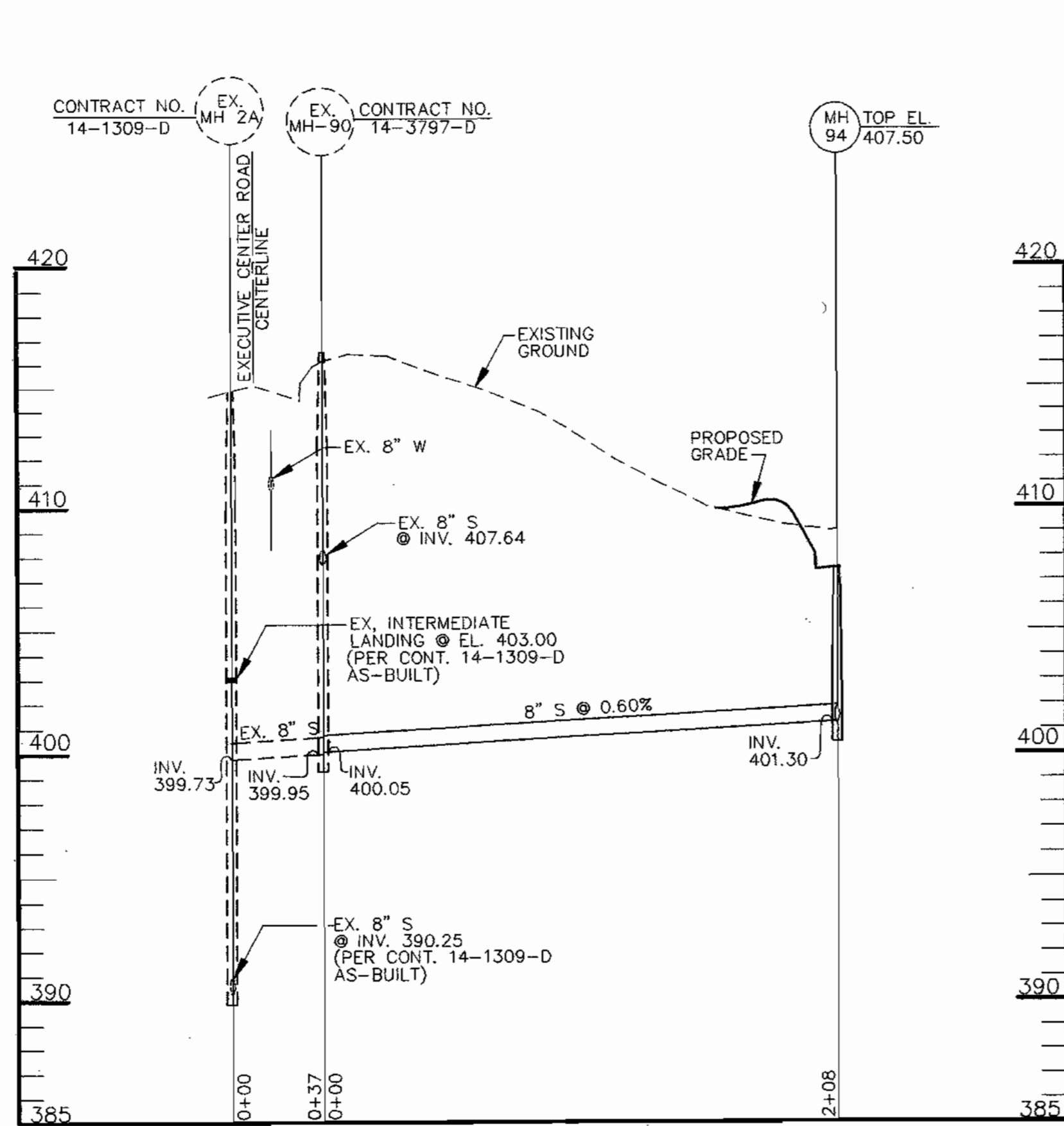
COORDINATE LIST FOR SEWER MANHOLES		
MH NO.	NORTHING	EASTING
MH-94	588332.49	1364513.40
MH-95	588421.63	1364468.07
MH-96	588585.61	1364368.20
MH-97	588671.75	1364296.62
MH-98	588826.70	1364135.92
MH-99	588827.20	1364125.90
MH-100	588905.70	1364069.89
MH-101	588891.47	1364132.28
MH-102	588880.48	1364242.85
MH-103	588598.14	1364393.45
MH-104	588749.99	1364118.23



NOTE: FOR ADDITIONAL DETAIL SEE STANDARD DETAIL 3.23
DUAL WATER HOUSE CONNECTION DETAIL
NOT TO SCALE

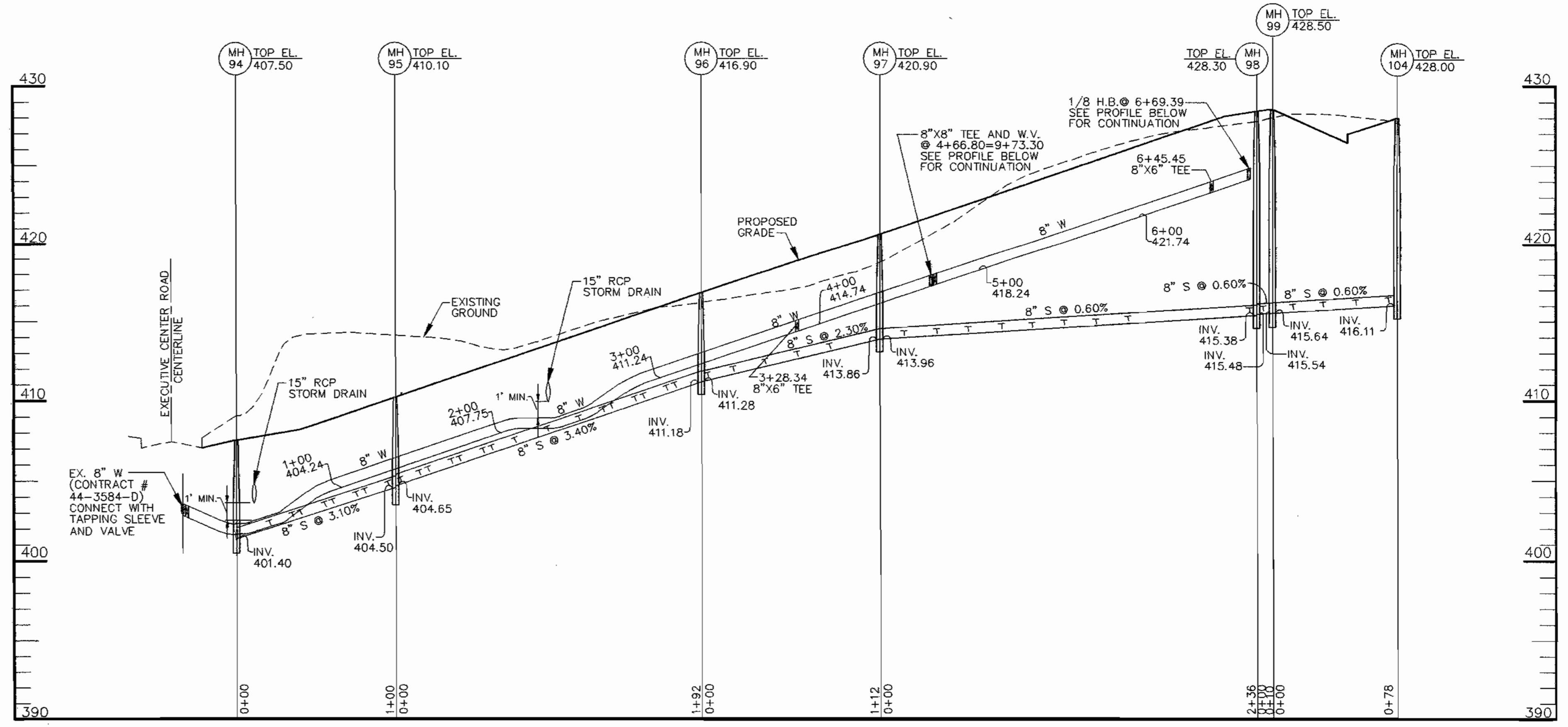
* BASED ON INFORMATION FROM AS-BUILT CONTRACT DRAWINGS

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities 2-17-00	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division 2/28/00	KCE ENGINEERING, INC. EXECUTIVE CENTER 3300 NORTH RIDGE ROAD, SUITE 360 ELLICOTT CITY, MARYLAND 21043 PHONE (410) 203-9600 FAX (410) 203-9228	DESIGNED DRAWN CHECKED DATE BY NO. REVISION DATE	600 SCALE MAP NO. 24 BLOCK 6	HOWARD'S RIDGE SECTION 2, AREA 2 LOTS A-146 THRU A-216 (PHASE II) CONTRACT NO. 14-3796-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 50' SHEET 2 OF 3
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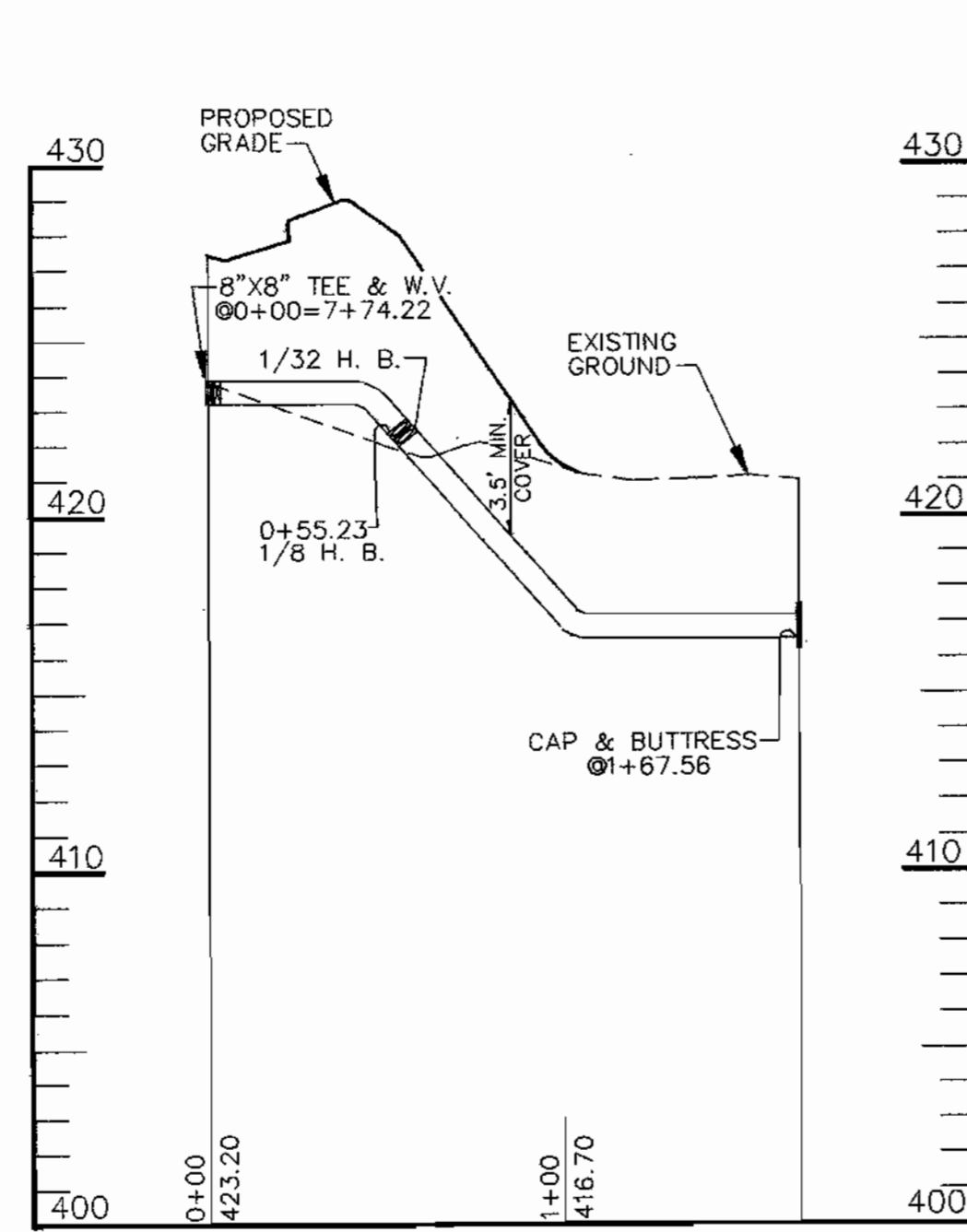
SEWER FROM MH-94 TO EX. MH-90

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



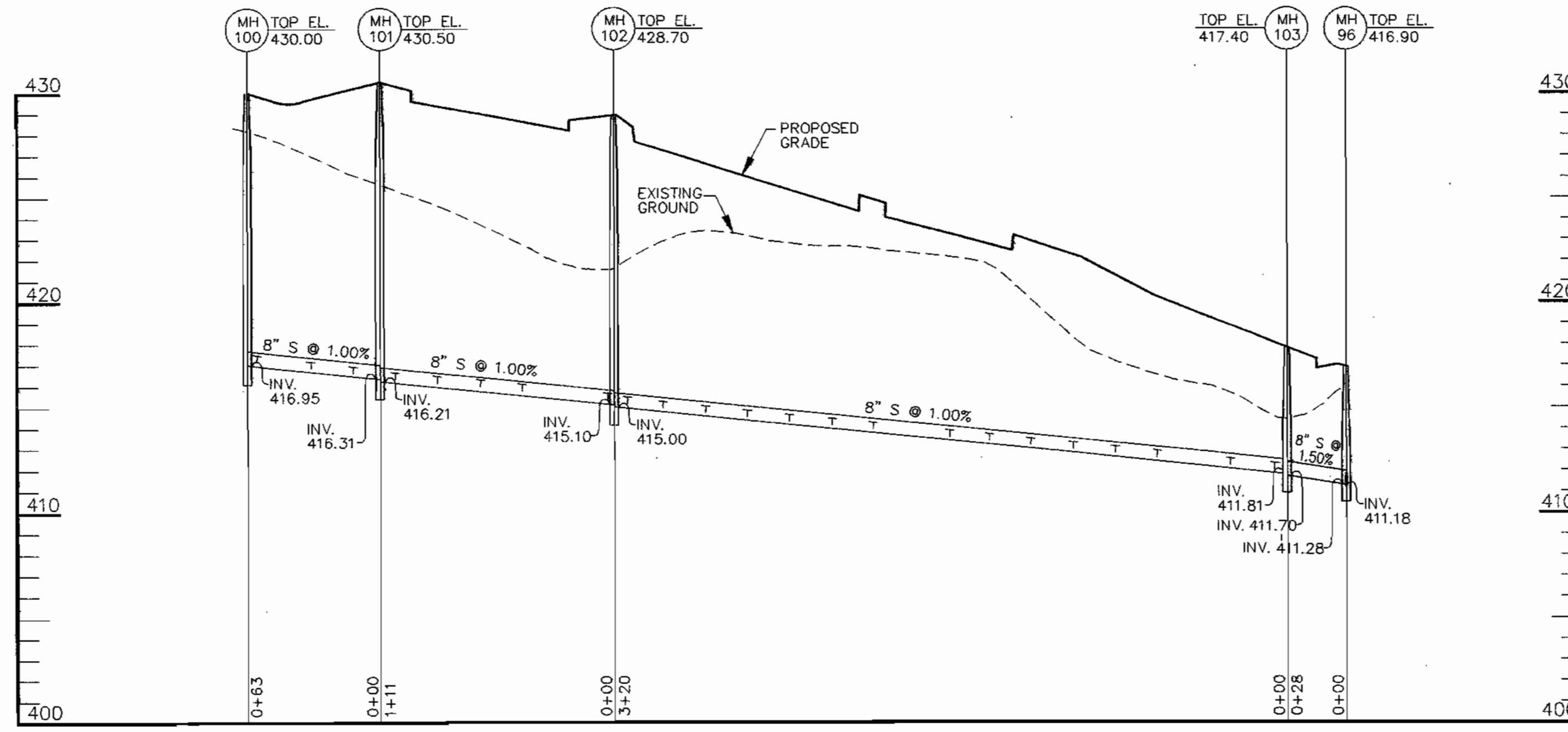
WATER FROM 0+00 TO 6+69.39
SEWER FROM MH-94 TO MH-99

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



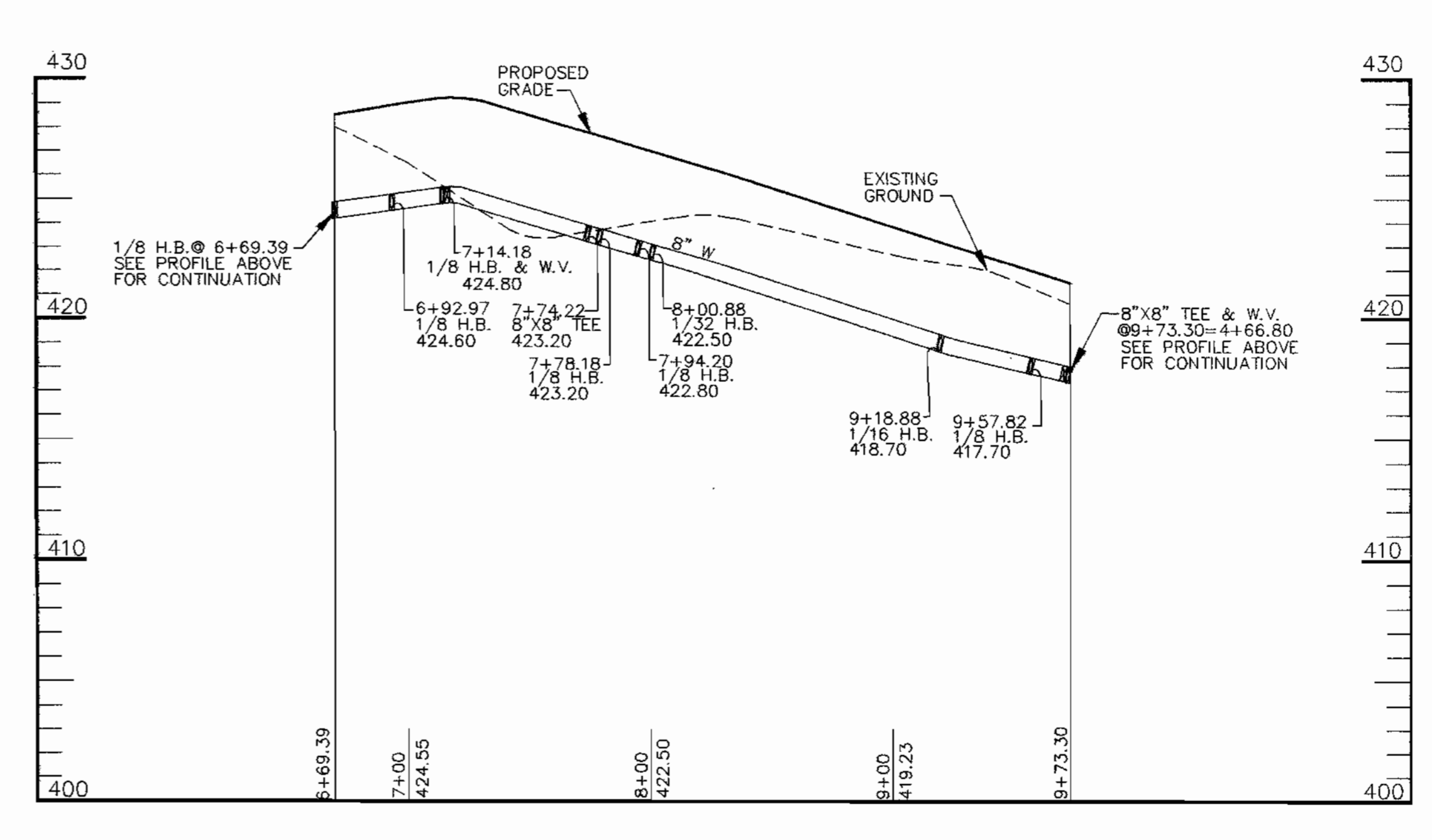
WATER FROM 0+00 TO 1+66.56

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



SEWER FROM MH-100 TO MH-96

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



WATER FROM 6+69.39 TO 9+73.30

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert J. Benner</i> CHIEF, BUREAU OF UTILITIES 2-17-00 DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Robert J. Benner</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/20/00 DATE	KCE ENGINEERING, INC. EXECUTIVE CENTER 3300 NORTH RIDGE ROAD, SUITE 360 ELLICOTT CITY, MARYLAND 21043 PHONE (410) 203-9800 FAX (410) 203-9228 <i>D. Walls</i>	DESIGNED DRAWN CHECKED DATE	BY NO. REVISION DATE	WATER AND SEWER PROFILES 600 SCALE MAP NO. 24 BLOCK 6	HOWARD'S RIDGE SECTION 2, AREA 2 LOTS A-146 THRU A-216 (PHASE II) CONTRACT NO. 14-3796-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
							SHEET 3 OF 3

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PART II - WATER

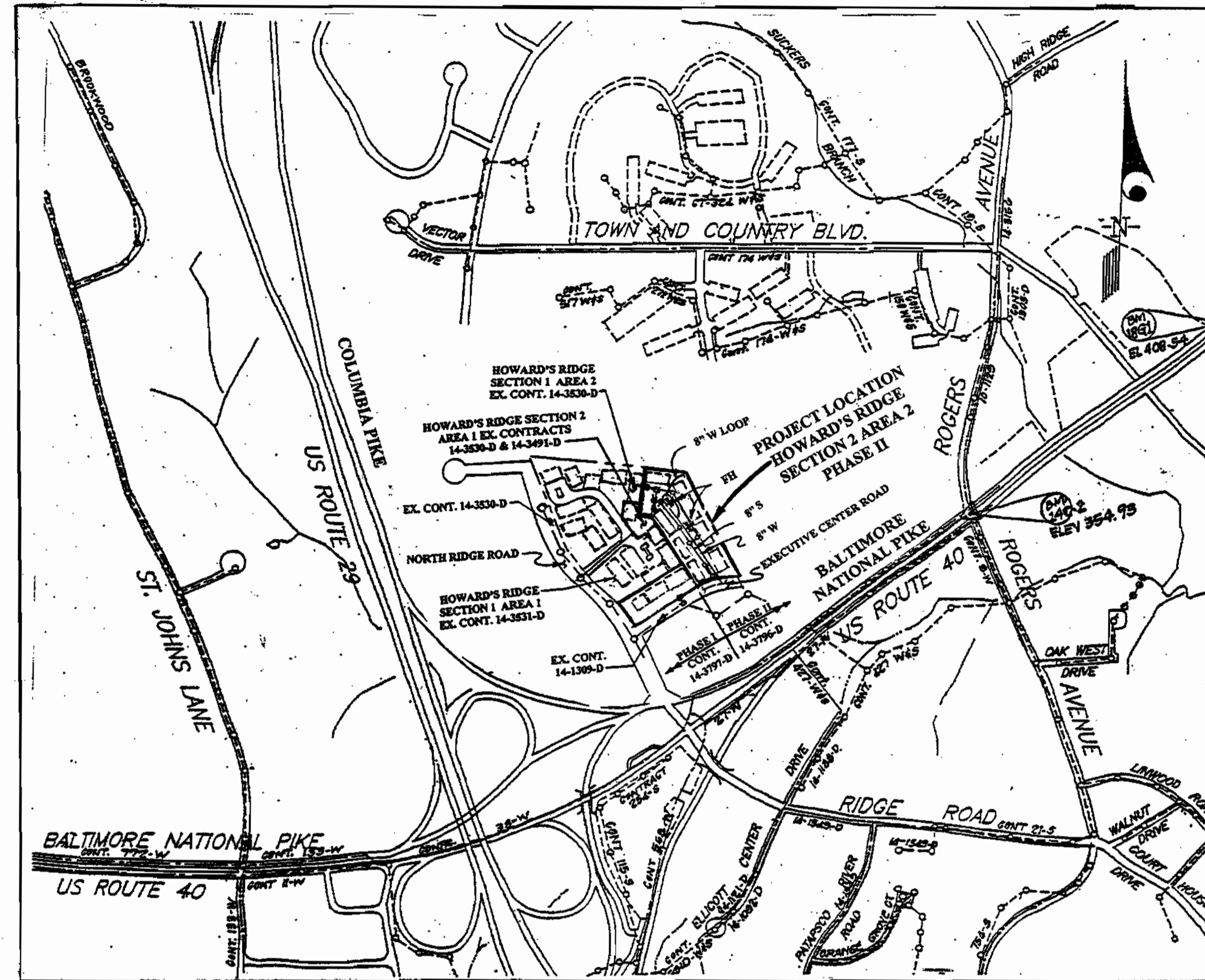
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- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
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- FOR SPRINKLER SYSTEM FOR ALL TOWNHOUSES OR MULTI-FAMILY DWELING UNITS SHALL HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.

PART III - SEWER

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QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
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6" W	22 L.F.			
CAP & BUTTRESS	1 EA.			
1" WHC	2695 L.F.			
8" V	5 EA.			
6" V	2 EA.			
FIRE HYDRANT	2 EA.			
8" S	1453 L.F.			
4" SHC	1404 L.F.			
4'-0" MANHOLE	11 EA.			
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				

TYPE OF BUILDING	TOWNHOUSES
NO. OF NON-BUILDABLE LOTS	2
NO. OF BUILDABLE LOTS	69
NO. OF WATER HOUSE CONNECTIONS	69
NO. OF SEWER HOUSE CONNECTIONS	69
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO W.Q.M.C.



WATER AND SEWER CODE
 WATER CODE: F-03
 SEWER CODE: 1452800
 TEST GRADIENT: 700

VICINITY MAP
 SCALE: 1" = 600'

CONTRACT NO. 14-3796-D
HOWARD'S RIDGE
SECTION 2, AREA 2
LOTS A-146 THRU A-216
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND ROAD CONSTRUCTION PLAN F-00-62.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 2-22-00
 SIGNATURE DATE
 U. S. SOIL CONSERVATION SERVICE

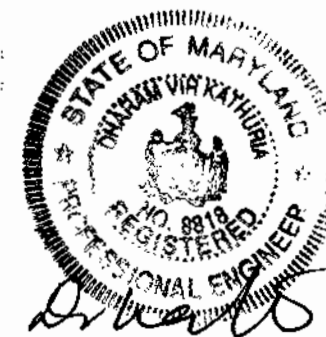
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APPROVED:
John B. Robertson 2-22-00
 HOWARD S. C. D. DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

KCE ENGINEERING, INC.
 EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD, SUITE 360
 ELLICOTT CITY, MARYLAND 21043
 PHONE (410) 203-9800 FAX (410) 203-9228

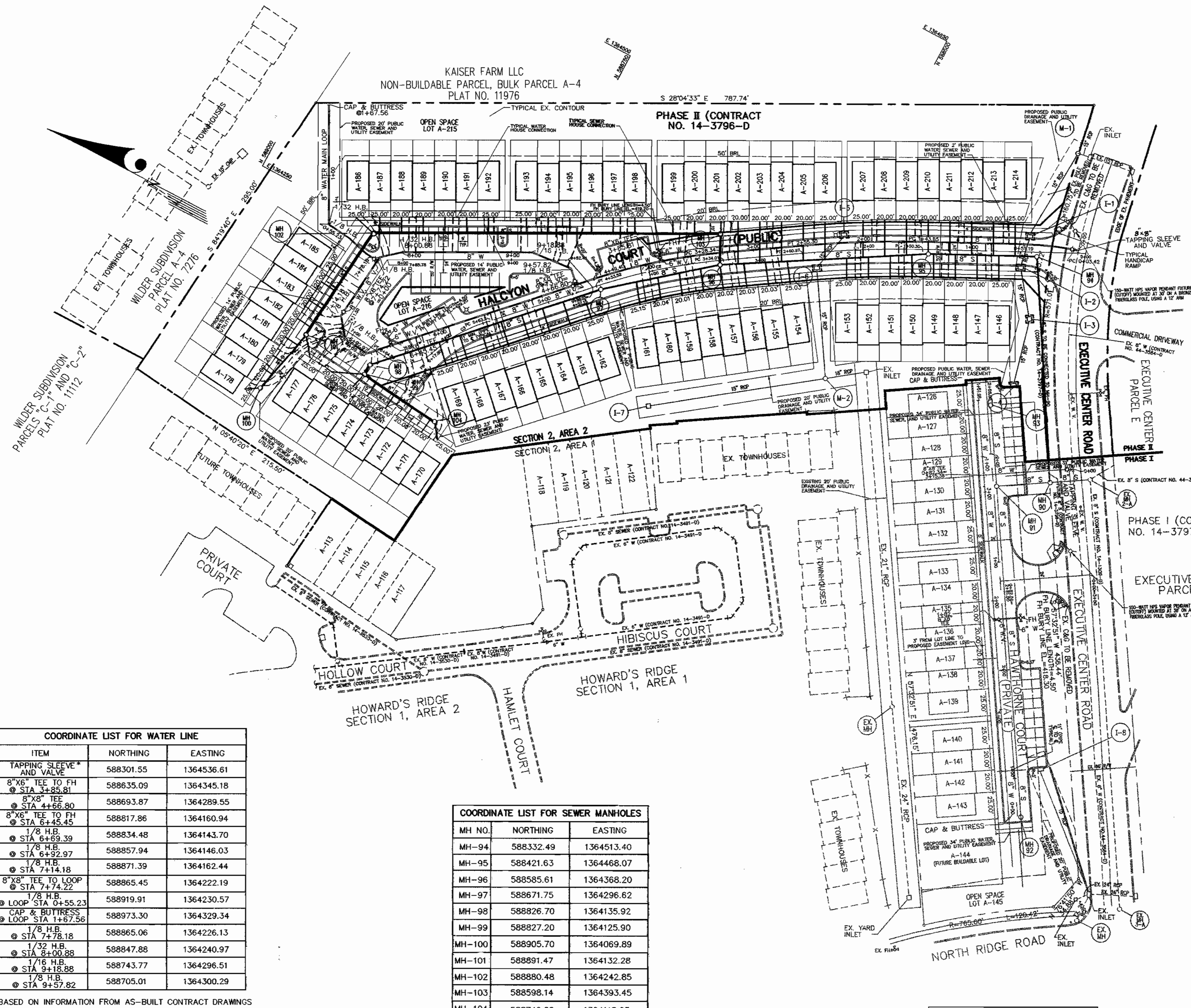


DESIGNED	DRAWN	CHECKED	DATE	BY	NO.	REVISION	DATE

TITLE SHEET

HOWARD'S RIDGE
 SECTION 2, AREA 2
 LOTS A-146 THRU A-216 (PHASE II)
 CONTRACT NO. 14-3796-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE
 AS SHOWN
 SHEET
 1 OF 3



GENERAL NOTES

1. ALL SEWER HOUSE CONNECTIONS SHALL BE 4" PVC. ALL DUAL WATER HOUSE CONNECTIONS SHALL BE 1 1/2" COPPER TUBING FROM WATER MAIN. DUAL CONNECTIONS SHALL BE 1" COPPER TUBING. ALL SINGLE WATER HOUSE CONNECTIONS SHALL BE ONE-INCH.
2. SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH SPECIFICATION SECTION 219 AND HAWTHORNE COURT ROAD CONSTRUCTION PLANS F-00-82.

SEWER HOUSE CONNECTION TABLE

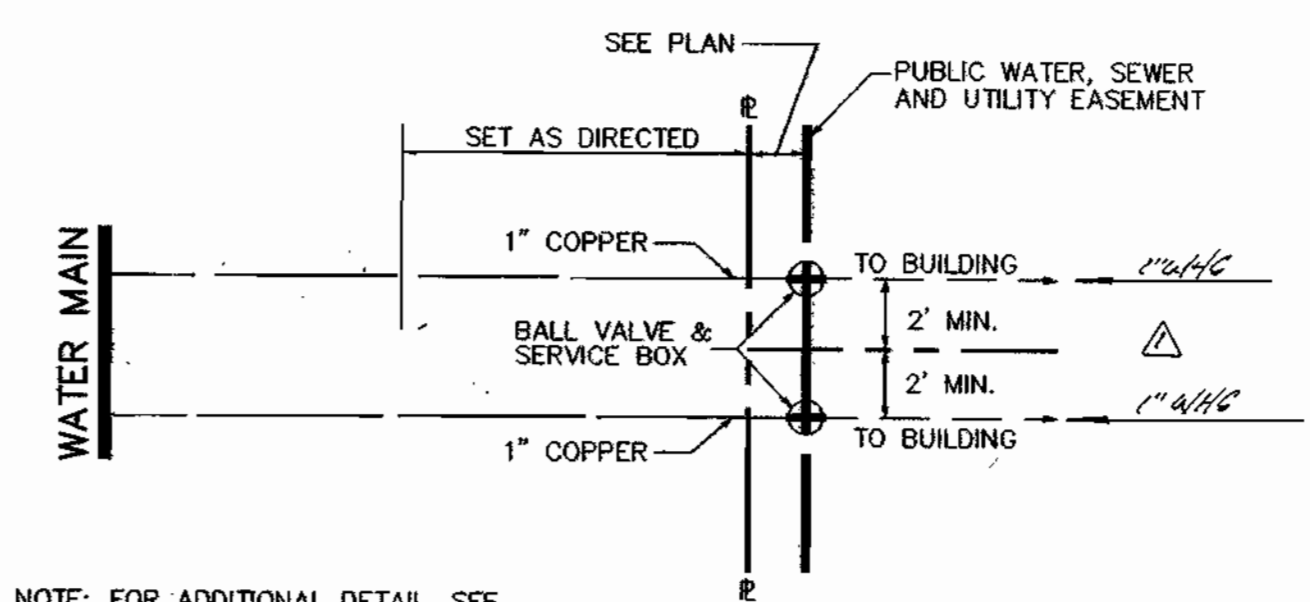
LOT NO.	INVERT EL. @ PL.	MINIMUM CELLAR EL.	LOT NO.	INVERT EL. @ PL.	MINIMUM CELLAR EL.	LOT NO.	INVERT EL. @ PL.	MINIMUM CELLAR EL.
A-146	403.0	406.7	A-170	416.4	420.0	A-194	413.7	417.4
A-147	403.6	407.3	A-171	416.3	419.9	A-195	413.5	417.2
A-148	404.3	408.0	A-172	416.2	419.8	A-196	413.3	417.0
A-149	404.9	408.6	A-173	416.0	419.6	A-197	413.1	416.8
A-150	405.6	409.3	A-174	416.0	419.6	A-198	412.9	416.6
A-151	406.3	410.0	A-175	415.9	419.5	A-199	412.6	416.3
A-152	407.0	410.7	A-176	415.9	419.5	A-200	412.4	416.1
A-153	407.7	411.4	A-177	416.5	420.1	A-201	412.2	415.9
A-154	408.4	413.1	A-178	417.2	420.7	A-202	411.3	415.0
A-155	410.1	413.8	A-179	417.1	420.6	A-203	410.6	414.3
A-156	410.8	414.5	A-180	416.9	420.4	A-204	409.9	413.6
A-157	411.8	415.5	A-181	416.7	420.2	A-205	409.2	412.9
A-158	412.3	416.0	A-182	416.4	419.9	A-206	408.5	412.2
A-159	412.8	416.5	A-183	416.2	419.7	A-207	407.3	411.0
A-160	413.3	417.0	A-184	416.0	419.5	A-208	406.6	410.3
A-161	413.8	417.5	A-185	415.8	419.3	A-209	406.0	409.7
A-162	414.5	418.2	A-186	415.3	419.0	A-210	405.3	409.0
A-163	414.6	418.3	A-187	415.3	419.0	A-211	404.5	408.2
A-164	414.8	418.5	A-188	415.1	418.8	A-212	403.9	407.6
A-165	414.9	418.6	A-189	414.9	418.6	A-213	403.2	406.9
A-166	415.0	418.7	A-190	414.7	418.4	A-214	402.6	406.3
A-167	415.2	418.9	A-191	414.5	418.2	A-215	N/A	N/A
A-168	415.3	419.0	A-192	414.3	418.0	A-216	N/A	N/A
A-169	415.4	419.1	A-193	413.9	417.6			

COORDINATE LIST FOR WATER LINE

ITEM	NORTHING	EASTING
TAPPING SLEEVE* AND VALVE	588301.55	1364536.61
8"X6" TEE TO FH @ STA 3+85.81	588635.09	1364345.18
8"X8" TEE @ STA 4+56.80	588693.87	1364289.55
8"X6" TEE TO FH @ STA 6+45.45	588817.86	1364160.94
1/8 H.B. @ STA 6+69.39	588834.48	1364143.70
1/8 H.B. @ STA 6+92.97	588857.94	1364146.03
1/8 H.B. @ STA 7+14.18	588871.39	1364162.44
8"X8" TEE TO LOOP @ STA 7+74.22	588865.45	1364222.19
1/8 H.B. @ LOOP STA 0+55.23	588919.91	1364230.57
CAP & BUTTRESS @ LOOP STA 1+67.56	588973.30	1364329.34
1/8 H.B. @ STA 7+78.18	588865.06	1364226.13
1/32 H.B. @ STA 8+00.88	588847.88	1364240.97
1/16 H.B. @ STA 9+18.88	588743.77	1364296.51
1/8 H.B. @ STA 9+57.82	588705.01	1364300.29

COORDINATE LIST FOR SEWER MANHOLES

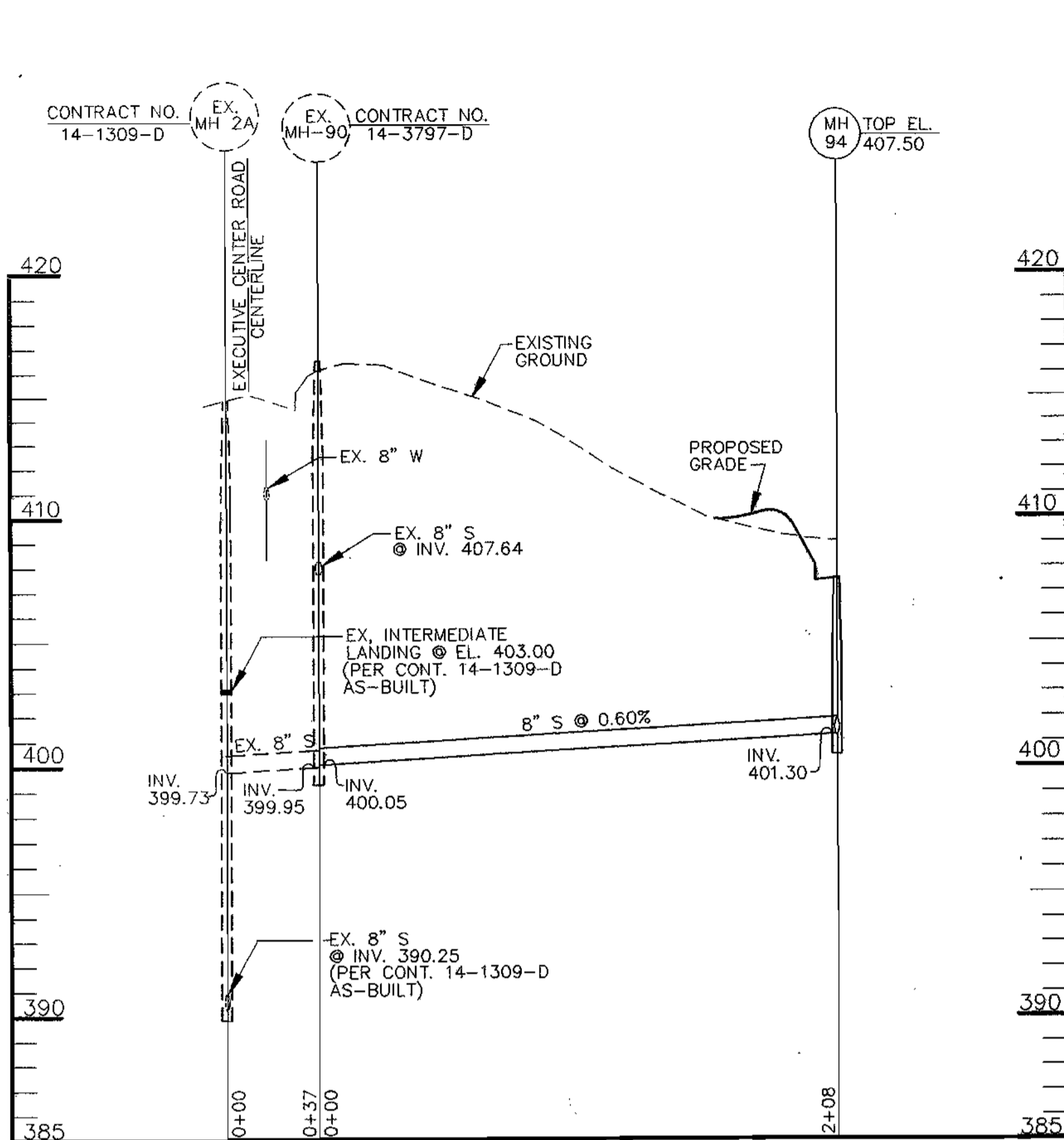
MH NO.	NORTHING	EASTING
MH-94	588332.49	1364513.40
MH-95	588421.63	1364468.07
MH-96	588585.61	1364368.20
MH-97	588671.75	1364296.62
MH-98	588826.70	1364135.92
MH-99	588827.20	1364125.90
MH-100	588905.70	1364069.89
MH-101	588891.47	1364132.28
MH-102	588880.48	1364242.85
MH-103	588598.14	1364393.45
MH-104	588749.99	1364118.23



NOTE: FOR ADDITIONAL DETAIL, SEE STANDARD DETAIL 3.23

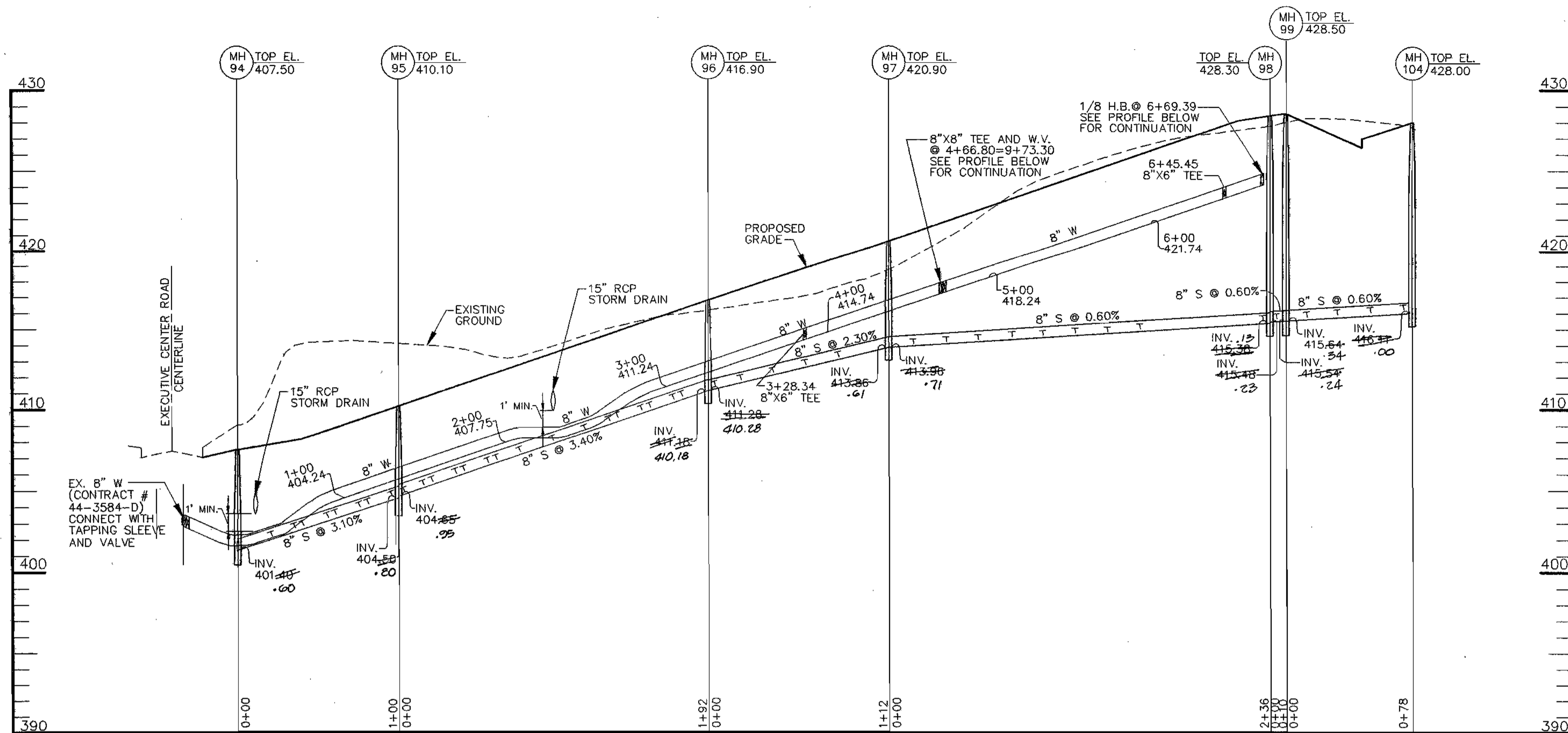
DUAL WATER HOUSE CONNECTION DETAIL
NOT TO SCALE

NOTE: THE INTENT OF THIS REVISION IS TO ELIMINATE ALL TURN WORK AND TO PROVIDE 1" SIMPLE WELDS IN THEIR PLACE.



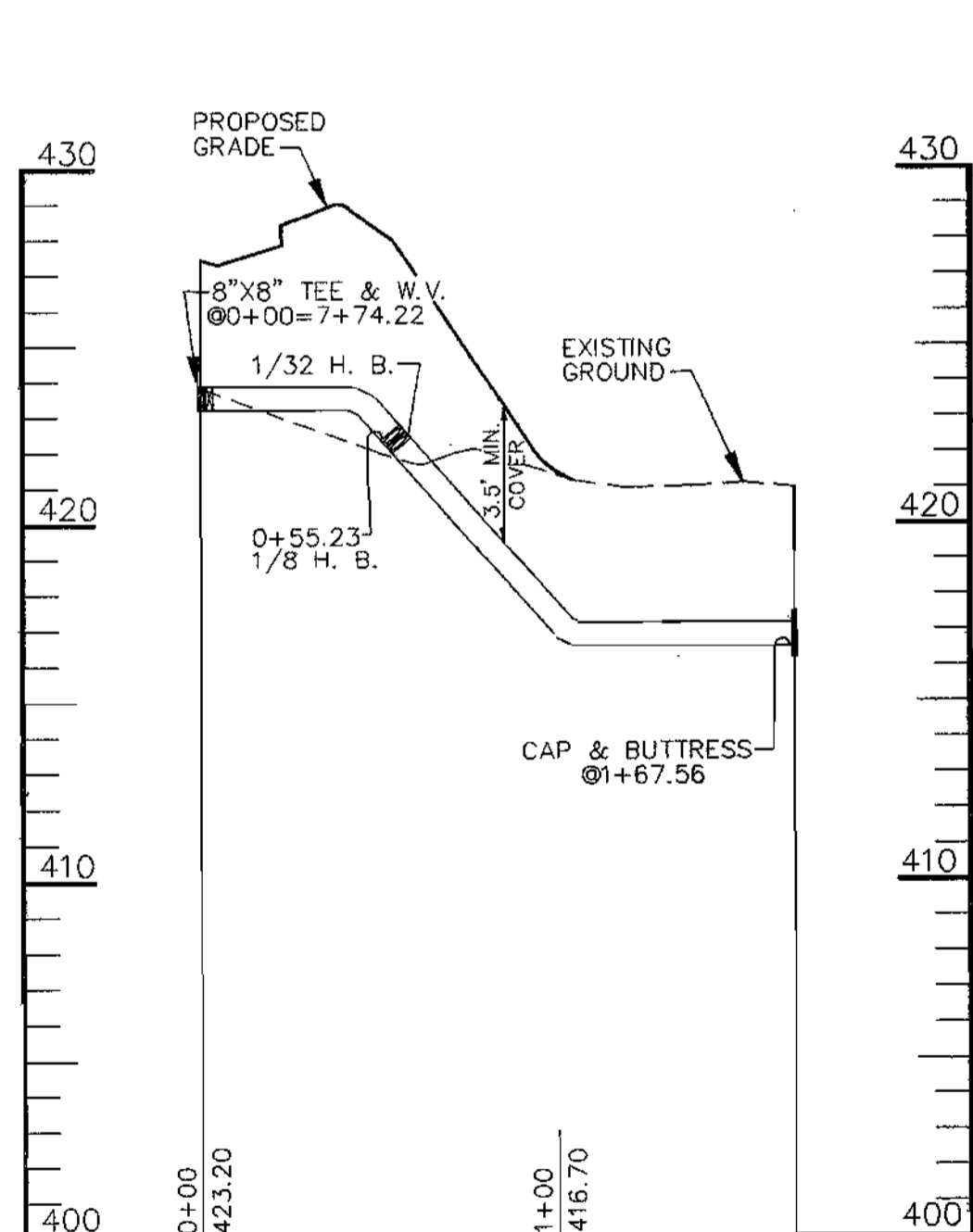
SEWER FROM MH-94 TO EX. MH-90

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



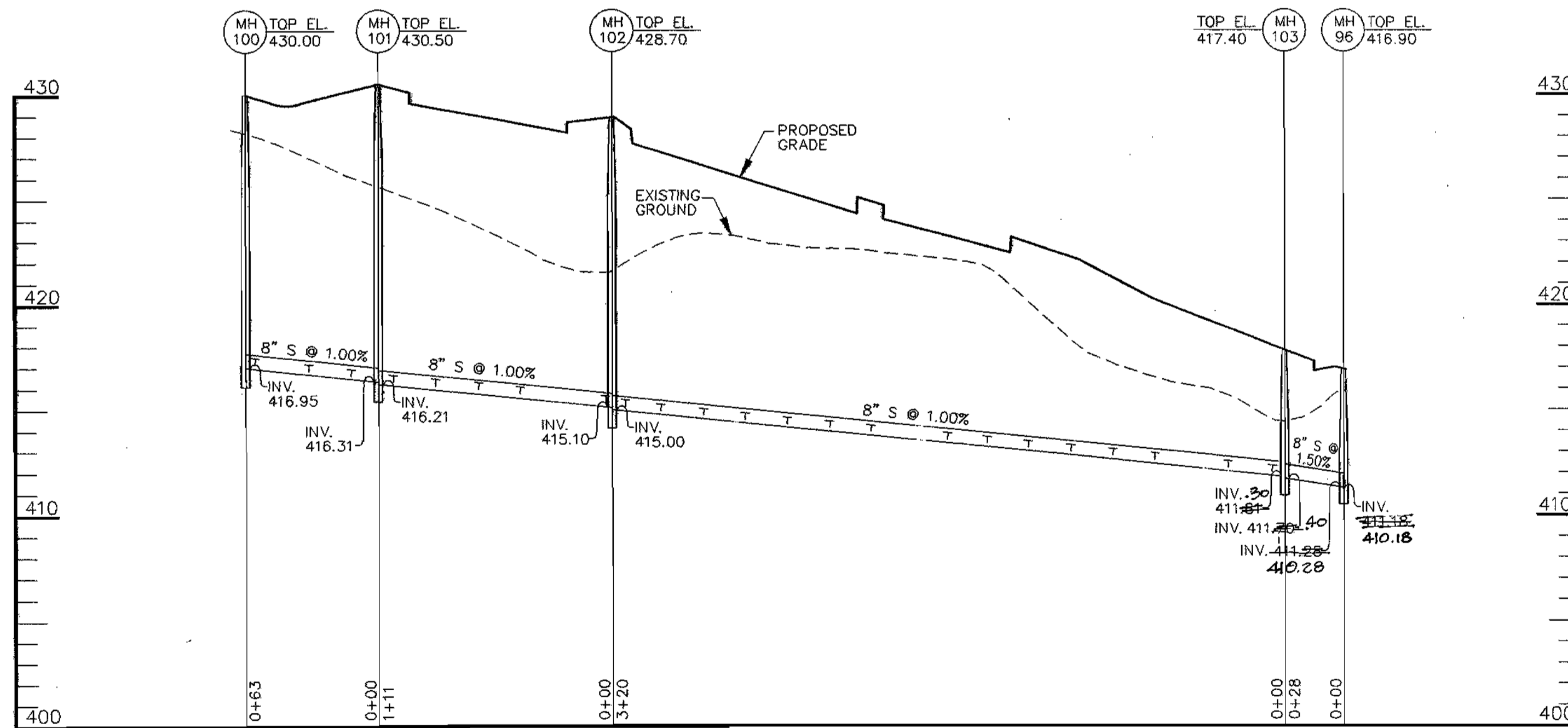
WATER FROM 0+00 TO 6+69.39
SEWER FROM MH-94 TO MH-99

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



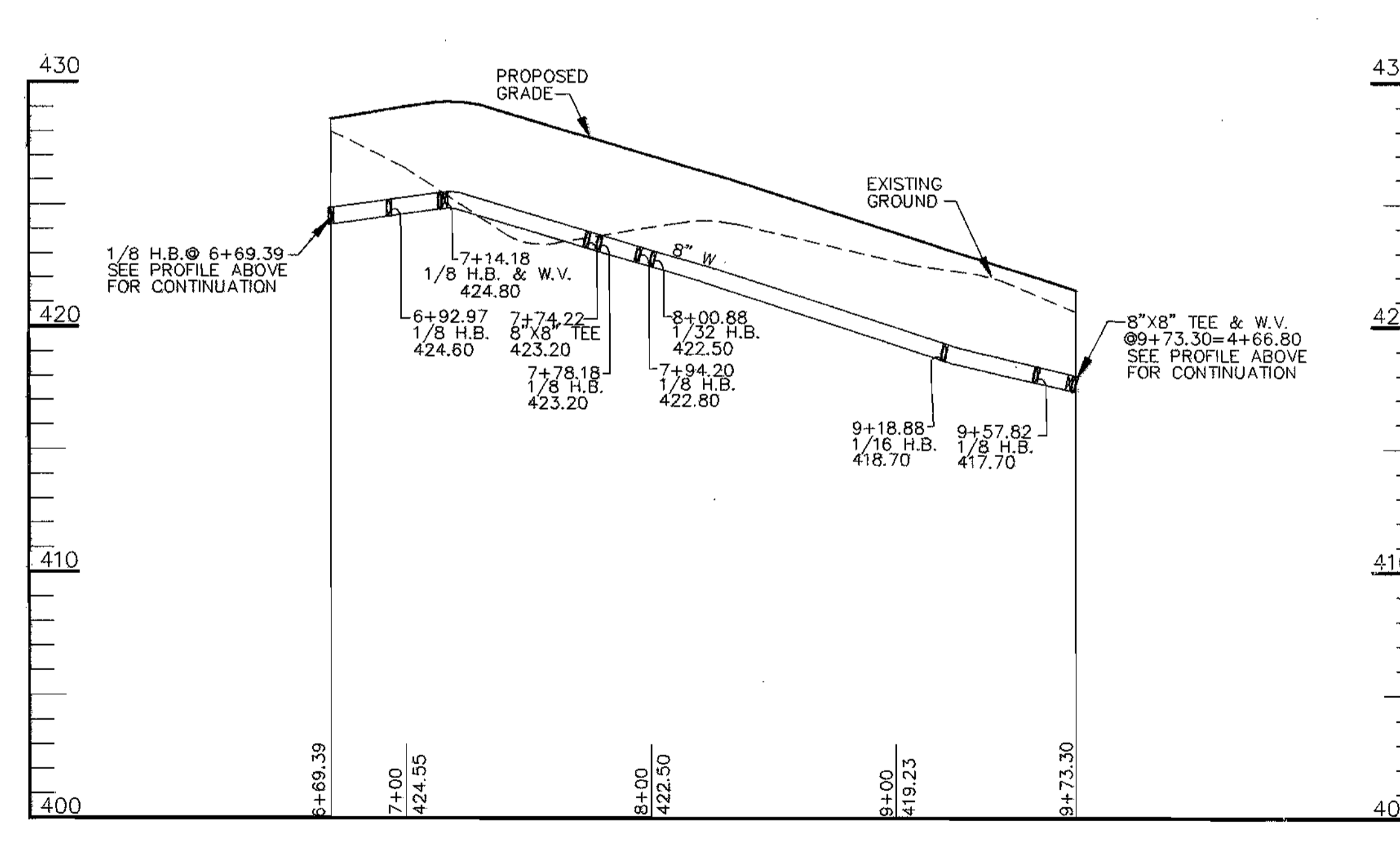
WATER FROM 0+00 TO 1+66.56

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



SEWER FROM MH-100 TO MH-96

SCALE: HORIZ. 1"=50'
VERT. 1"=5'



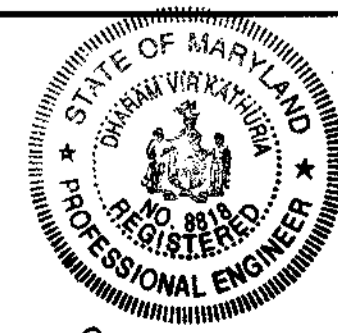
WATER FROM 6+69.39 TO 9+73.30

SCALE: HORIZ. 1"=50'
VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 360
ELLICOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228



DESIGNED	
DRAWN	
CHECKED	
DATE	01/20/01
BY	K/1
NO.	1
REVISION	AS-BUILT CONDITIONS ADDED TO PLAN

WATER AND SEWER PROFILES

600 SCALE MAP NO. 24 BLOCK 6

HOWARD'S RIDGE
SECTION 2, AREA 2
LOTS A-146 THRU A-216 (PHASE II)
CONTRACT NO. 14-3796-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

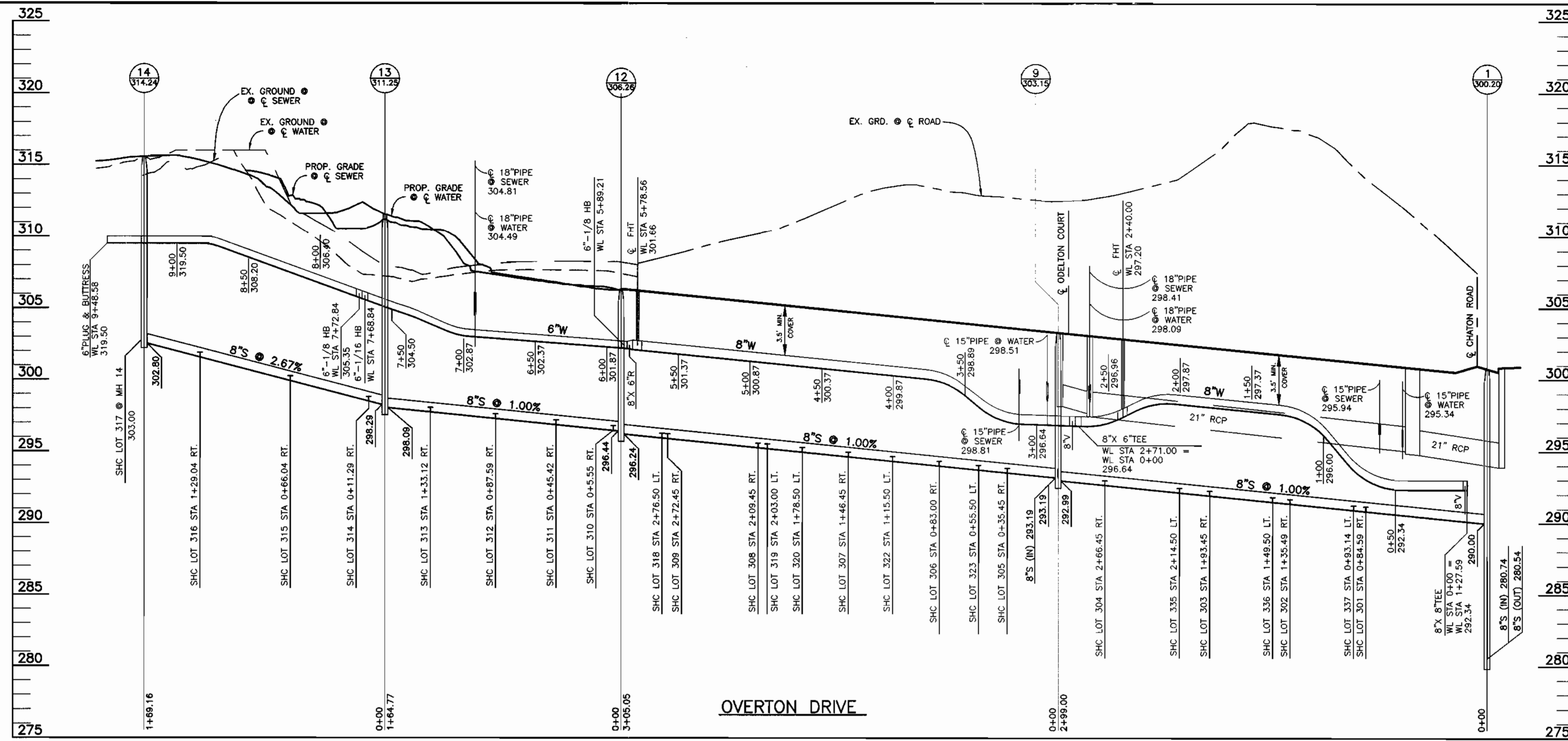
SCALE
AS
SHOWN
SHEET
3 OF 3

Robert D. Bennett
CHIEF, BUREAU OF UTILITIES
2-17-00
DATE

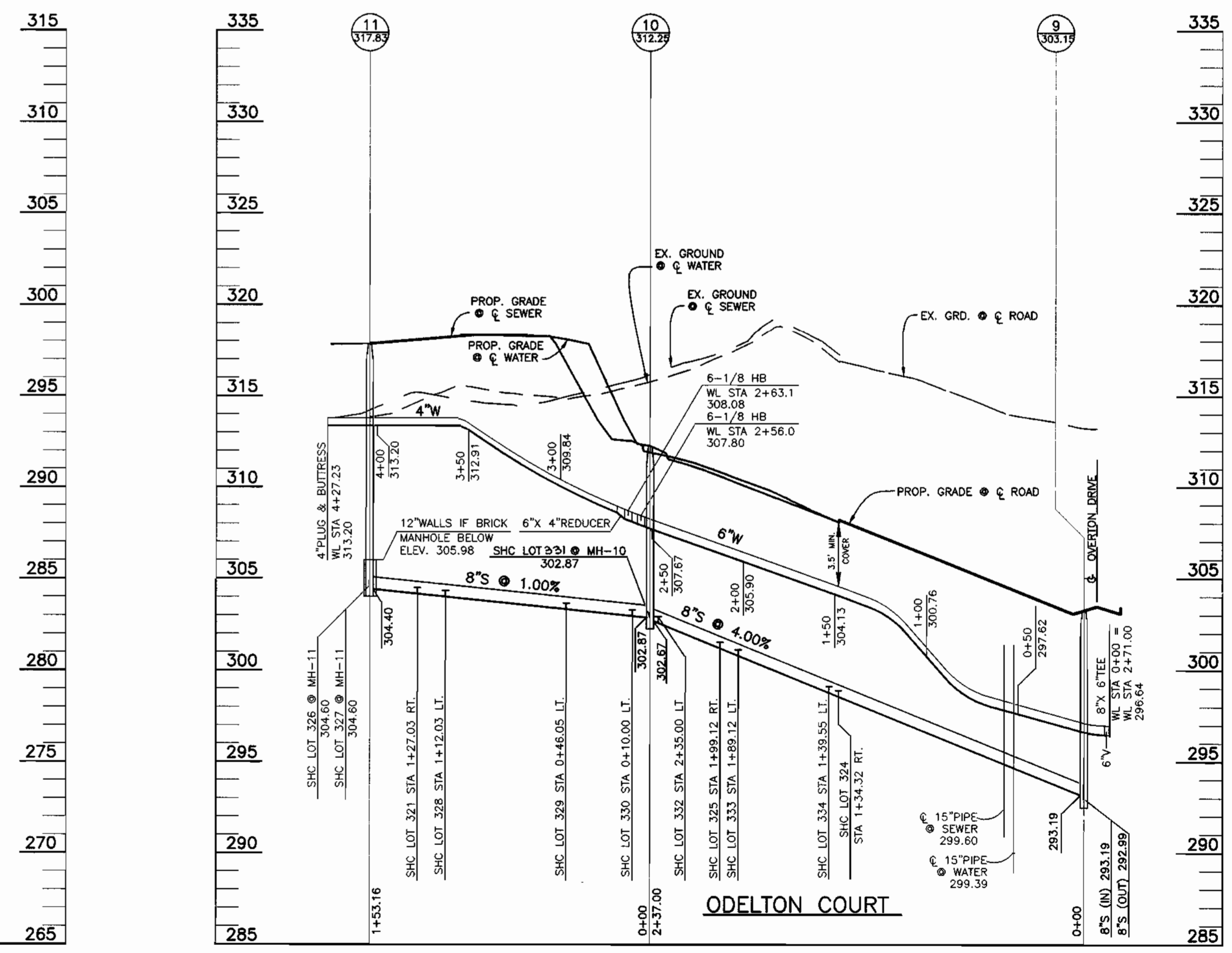
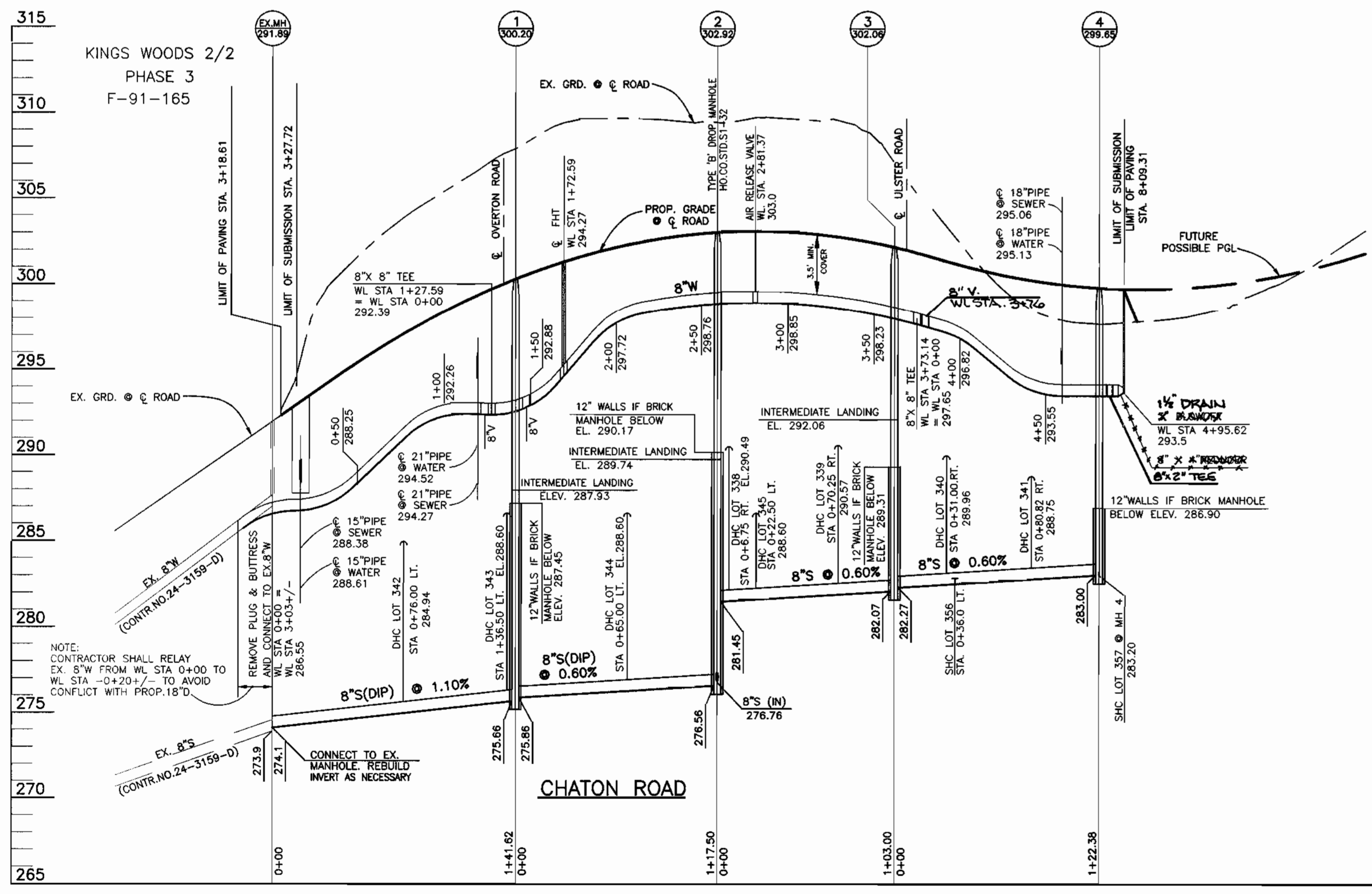
Michael J. DeMauro
CHIEF, DEVELOPMENT ENGINEERING DIVISION
2/20/00
DATE

WATER & SEWER PROFILES (CONTINUED)

FROM:	TO:	DIST.:	FROM:	TO:	DIST.:
SD1-5	LOT 301	45'	PH STA 5119	LOT 318	45'
SD1-5	LOT 302	52'	PH STA 5119	LOT 319	53'
PH STA 2+40	LOT 303	54'	PH STA 5119	LOT 320	122'
PH STA 2+40	LOT 304	52'	PH STA 5119	LOT 321	129'
MH-9	LOT 304	69'	MH-12	LOT 321	142'
MH-9	LOT 303	74'	MH-12	LOT 320	135'
MH-9	LOT 305	61'	MH-12	LOT 319	61'
MH-9	LOT 306	73'	MH-12	LOT 318	60'
SD1-7	LOT 305	41'	MH-9	LOT 323	92'
SD1-7	LOT 306	51'	MH-9	LOT 322	98'
PH STA 5119	LOT 307	119'	SD1-7	LOT 323	96'
PH STA 5119	LOT 308	115'	SD1-7	LOT 322	92'
MH-12	LOT 308	116'	SD1-9	LOT 324	122'
MH-12	LOT 307	124'	SD1-9	LOT 325	130'
MH-12	LOT 309	35'	MH-10	LOT 325	62'
MH-12	LOT 310	35'	MH-10	LOT 324	70'
PH STA 5119	LOT 310	36'	MH-10	LOT 320	30'
PH STA 5119	LOT 309	54'	MH-10	LOT 323	35'
MH-12	LOT 311	94'	MH-10	LOT 328	150'
MH-12	LOT 312	106'	MH-10	LOT 327	151'
SDMH-7	LOT 312	35'	MH-10	LOT 326	164'
SDMH-7	LOT 311	26'	MH-11	LOT 326	12'
SDMH-7	LOT 313	47'	MH-11	LOT 327	23'
SDMH-7	LOT 314	121'	MH-11	LOT 328	25'
SDMH-7	LOT 315	126'	MH-11	LOT 329	121'
MH-13	LOT 313	30'	MH-11	LOT 330	134'
MH-13	LOT 314	45'	MH-10	LOT 331	62'
MH-13	LOT 315	50'	MH-10	LOT 332	79'
MH-13	LOT 316	168'	MH-10	LOT 333	80'
MH-13	LOT 317	174'	LOT 331	LOT 332	26'
MH-14	LOT 316	20'	LOT 331	LOT 333	32'
MH-14	LOT 317	21'	LOT 332	LOT 333	7'



FROM:	TO:	DIST.:
SD1-9	LOT 335	73'
SD1-9	LOT 334	79'
SD1-8	LOT 336	79'
SD1-6	LOT 334	82'
SD1-4	LOT 337	81'
SD1-4	LOT 336	81'
SD1-5	LOT 337	45'
SD1-5	LOT 336	52'
PH STA 2+40	G° FHV	30'
PH STA 2+40	G° V. STA 0+02	42'
PH STA 2+40	G° V. STA 2+15	44'
MH-9	G° FHV. STA 2+40	46'
MH-9	G° V. STA 0+02	18'
MH-9	G° V. STA 2+15	17'
PH STA 5119	G° FHV	30'
MH-12	G° FHV. STA 5119	16'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert D. Smith
7-9-96
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Michael J. ...
7-9-96
DATE

TSA GROUP, INC.
planning • engineering • surveying
8480 Baltimore National Pike Suite 418
Ellicott City, Maryland 21043



DES:	JH
DRN:	JH
CHK:	JME
DATE:	4-10-96
	7-1-96
BY:	NO.
REVISIONS:	

WATER AND SEWER PROFILES

600 SCALE MAP NO. 47

BLOCK 15,16,21 & 22

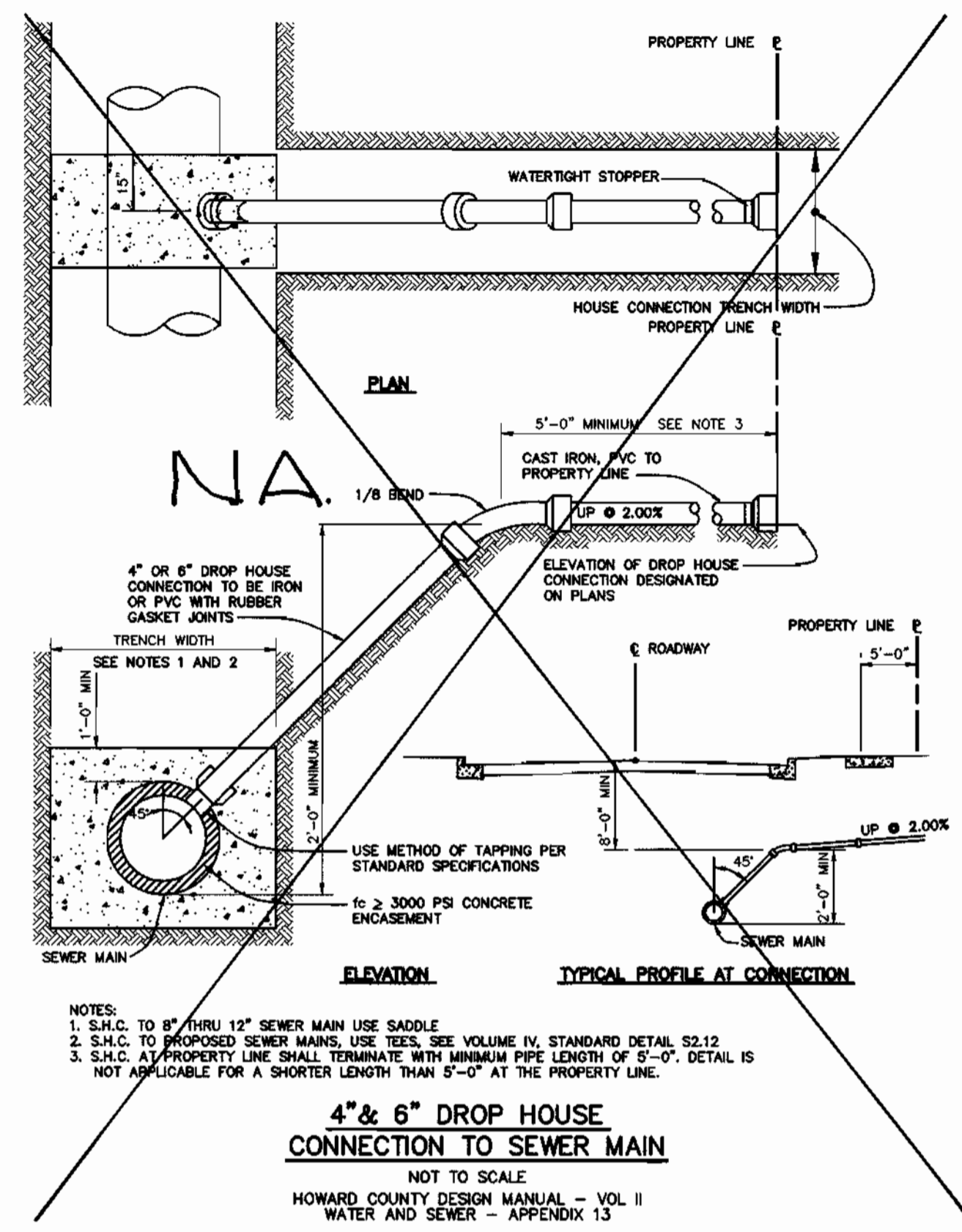
KINGS WOODS
SECTION 4 LOTS 301-361
(KING PROPERTY)
ELECTION DISTRICT NO. 6

CONTRACT NO. 24-3496-D

SCALE:
1" = 50'

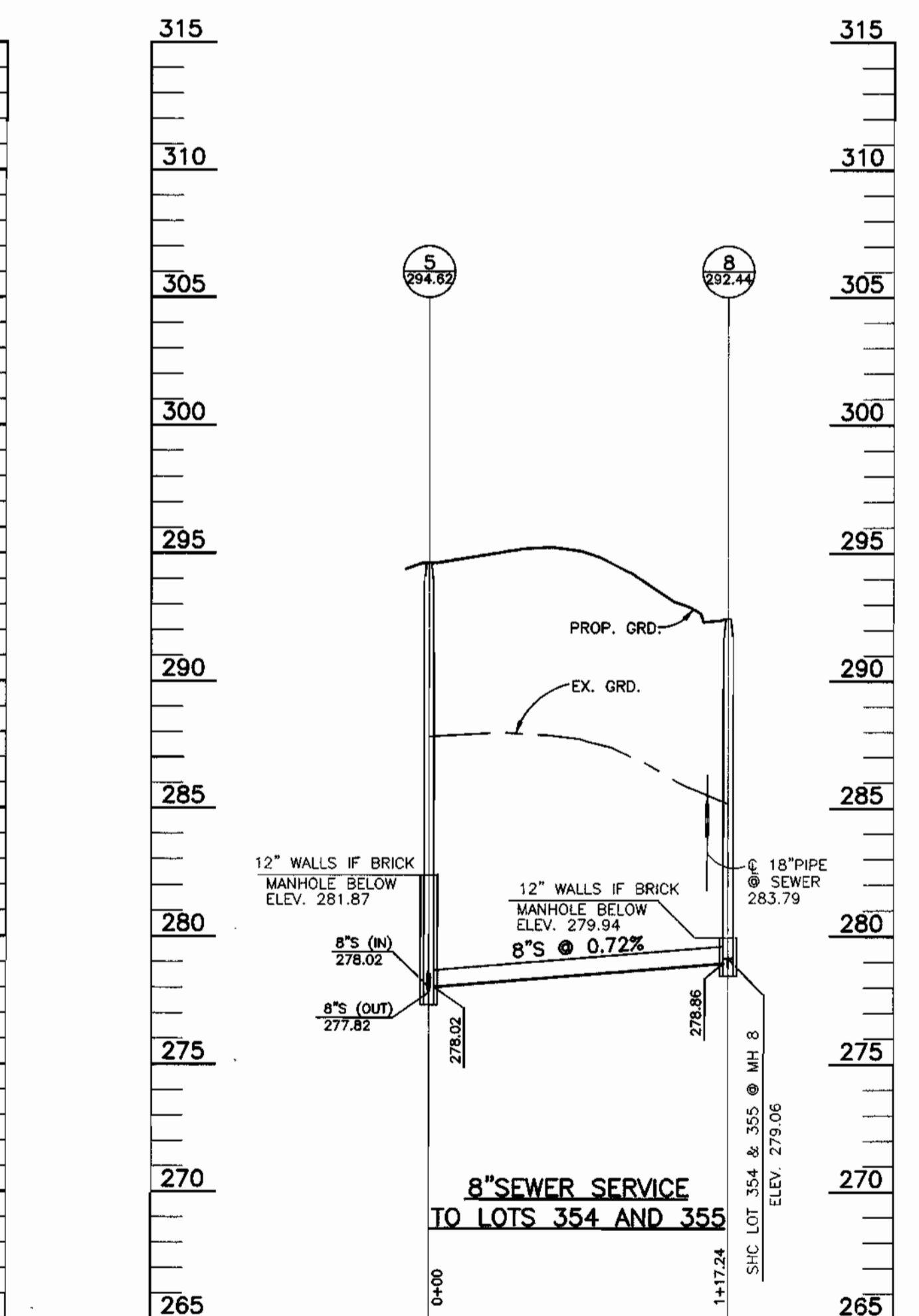
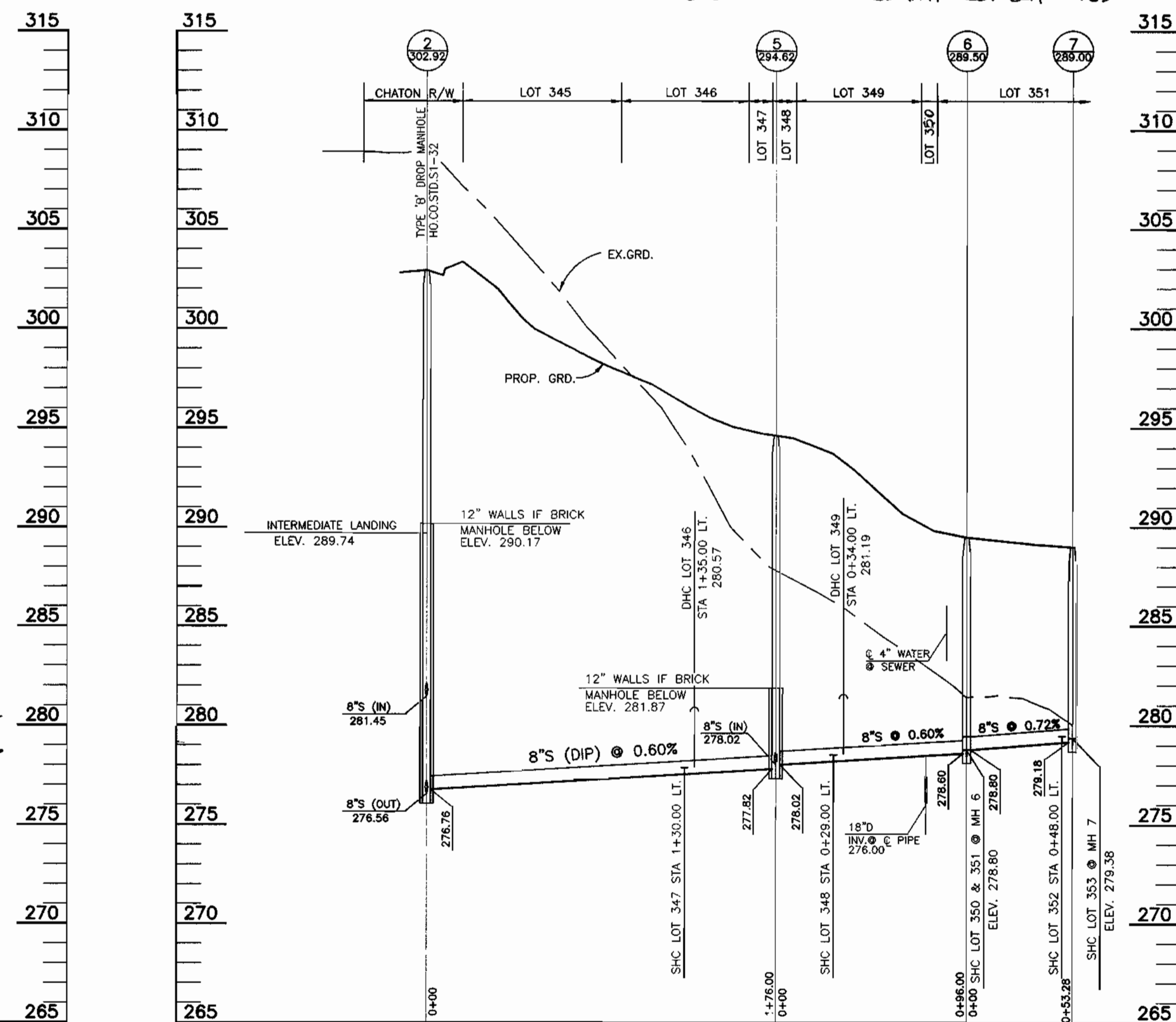
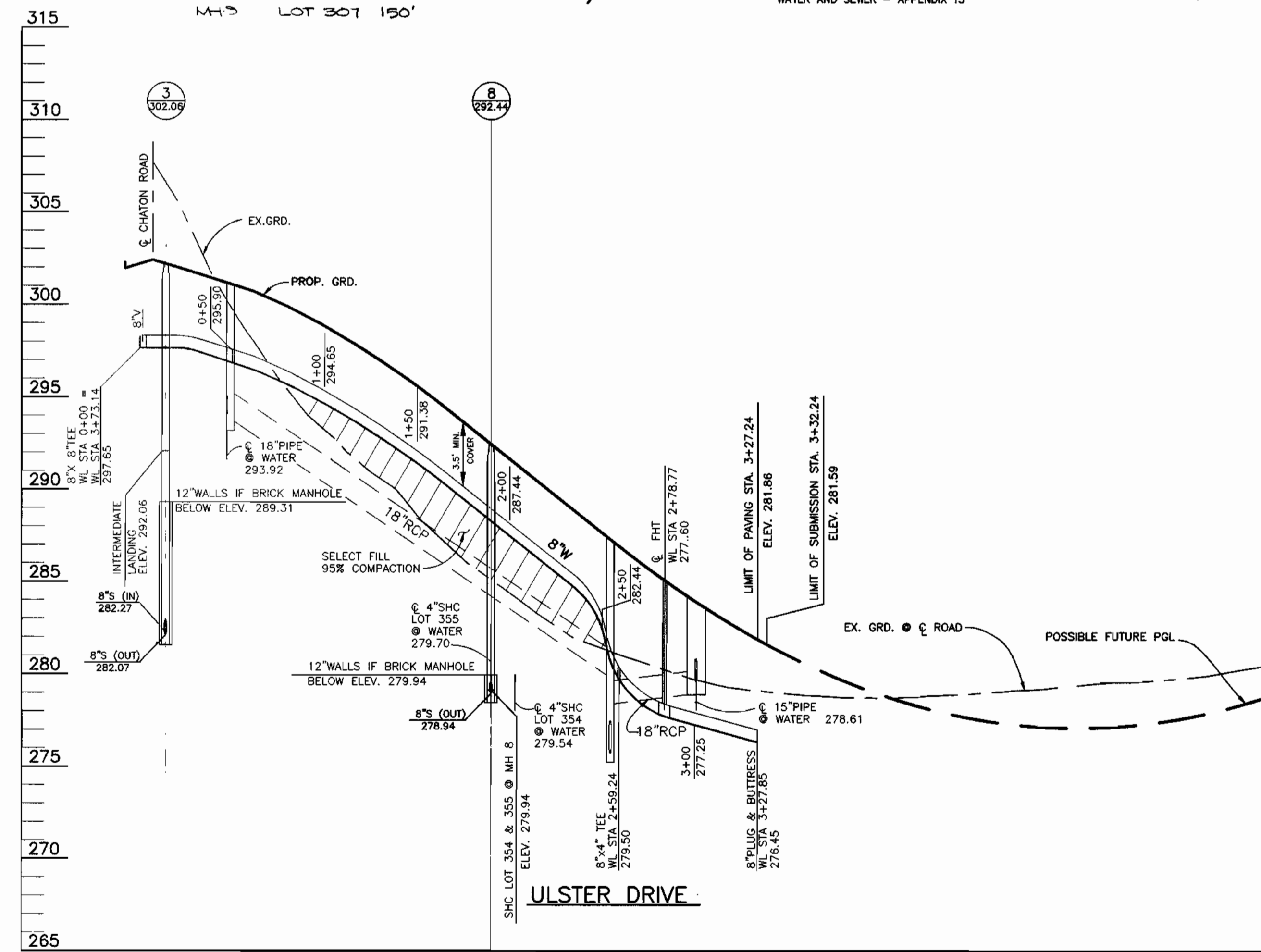
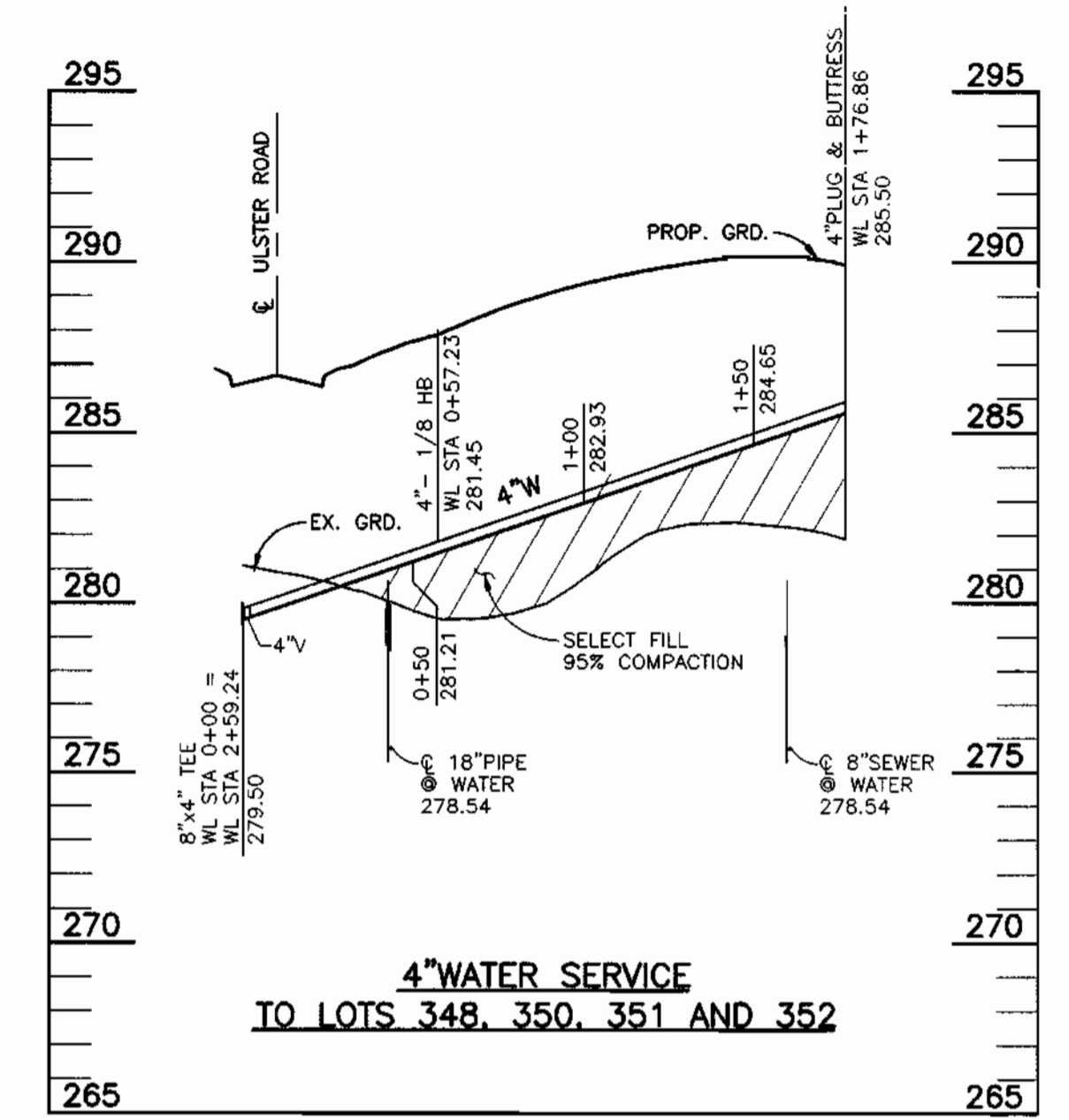
SHEET NO.
2 OF 3

FROM:	TO:	DIST.:	FROM:	TO:	DIST.:
EX-MH	LOT 342	77'	MH-6	LOT 352	50'
EX-MH	LOT 343	136'	MH-6	LOT 353	66'
MH-1	LOT 343	21'	MH-7	LOT 353	16'
MH-1	LOT 342	69'	MH-7	LOT 352	12'
MH-1	LOT 344	66'	MH-7	LOT 351	35'
MH-2	LOT 344	58'	MH-7	LOT 350	82'
MH-2	LOT 338	31'	MH-7	LOT 354	127'
MH-2	LOT 339	76'	MH-7	LOT 355	137'
MH-2	LOT 345	30'	MH-8	LOT 355	28'
MH-3	LOT 345	82'	MH-8	LOT 354	40'
MH-3	LOT 339	48'	MH-1	LOT 337	94'
MH-3	LOT 338	100'	MH-1	LOT 301	92'
MH-3	LOT 340	45'	SDI-4	LOT 301	34'
MH-3	LOT 356	53'	SDI-5	LOT 337	18'
MH-3	LOT 341	85'	SDI-4	LOT 302	83'
MH-3	LOT 357	128'	SDI-4	LOT 303	141'
MH-4	LOT 357	17'	SDI-9	LOT 302	69'
MH-4	LOT 341	53'	SDI-9	LOT 303	121'
MH-4	LOT 340	92'	SDMH-3	LOT 304	12'
MH-4	LOT 356	28'	SDI-6	LOT 304	36'
MH-2	LOT 347	135'	MH-9	LOT 305	47'
MH-2	LOT 346	138'	MH-9	LOT 306	90'
MH-5	LOT 346	44'	SDI-7	LOT 305	41'
MH-5	LOT 347	46'	SDI-7	LOT 306	64'
MH-8	LOT 348	31'	SDI-7	LOT 307	119'
MH-5	LOT 349	35'	MH-12	LOT 310	48'
MH-6	LOT 349	66'	MH-12	LOT 303	45'
MH-6	LOT 348	69'	MH-12	LOT 308	100'
MH-6	LOT 350	27'	FH	LOT 308	87'
MH-6	LOT 351	8'	FH	LOT 309	53'
			MH-3	LOT 301	150'



FROM:	TO:	DIST.:	FROM:	TO:	DIST.:
FH	LOT 310	68'	MH-10	LOT 326	163'
FH	LOT 311	103'	MH-10	LOT 327	166'
FH	LOT 312	122'	MH-10	LOT 328	114'
MH-12	LOT 311	86'	MH-10	LOT 329	91'
MH-12	LOT 312	110'	MH-10	LOT 330	23'
MH-12	LOT 313	134'	MH-11	LOT 321	21'
MH-13	LOT 313	39'	MH-11	LOT 326	14'
MH-13	LOT 314	24'	MH-11	LOT 327	30'
MH-13	LOT 315	70'	MH-11	LOT 328	46'
MH-13	LOT 316	131'	MH-11	LOT 329	108'
MH-13	LOT 317	184'	MH-11	LOT 330	144'
MH-14	LOT 317	26'	MH-10	LOT 331	92'
MH-14	LOT 316	41'	MH-10	LOT 332	75'
MH-14	LOT 315	101'	MH-10	LOT 333	96'
MH-14	LOT 314	156'	LOT 330	LOT 331	61'
FH	LOT 318	17'	LOT 331	LOT 332	31'
FH	LOT 319	90'	LOT 332	LOT 333	46'
FH	LOT 320	115'	LOT 333	LOT 334	11'
MH-12	LOT 318	24'	MH-8	LOT 334	101'
MH-12	LOT 319	104'	MH-8	LOT 334	140'
MH-12	LOT 320	128'	MH-8	LOT 335	87'
MH-9	LOT 323	59'	MH-8	LOT 336	150'
MH-9	LOT 322	116'	FH	LOT 335	40'
SDI-7	LOT 323	22'	FH	LOT 336	104'
SDI-7	LOT 322	81'			
SDI-9	LOT 324	92'			
SDI-9	LOT 325	151'			
MH-10	LOT 325	44'			
MH-10	LOT 324	100'			
MH-10	LOT 321	127'			

FROM:	TO:	DIST.:	FROM:	TO:	DIST.:
MH-1	8\"/>				



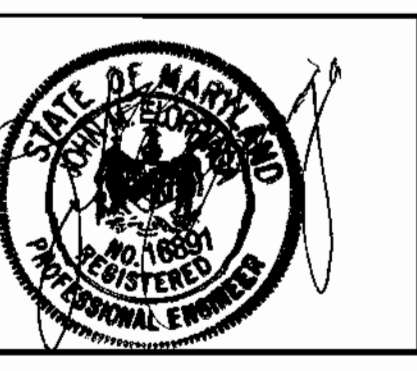
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert D. ...
7-9-96
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

...
DATE

TSA GROUP, INC.
planning • engineering • surveying
8480 Baltimore National Pike Suite 418
Ellicott City, Maryland 21043



DES:	JH
DRN:	JH
CHK:	JME
DATE:	4-10-96
DATE:	7-1-96
BY:	NO.

WATER AND SEWER
PROFILES AND DETAILS

600 SCALE MAP NO. 47
BLOCK 15,16,21 & 22

KINGS WOODS
SECTION 4 LOTS 301-361
(KING PROPERTY)
ELECTION DISTRICT NO. 6

CONTRACT NO. 24-3496-D

SCALE:
1" = 50'

SHEET NO.
3 OF 3

GENERAL NOTES

PART I - GENERAL

- 1. 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.

PART II - WATER

- 1. ALL WATER MAINS SHALL BE D.I.P. CLASS S2 UNLESS OTHERWISE NOTED.
- 2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.

PART III - SEWER

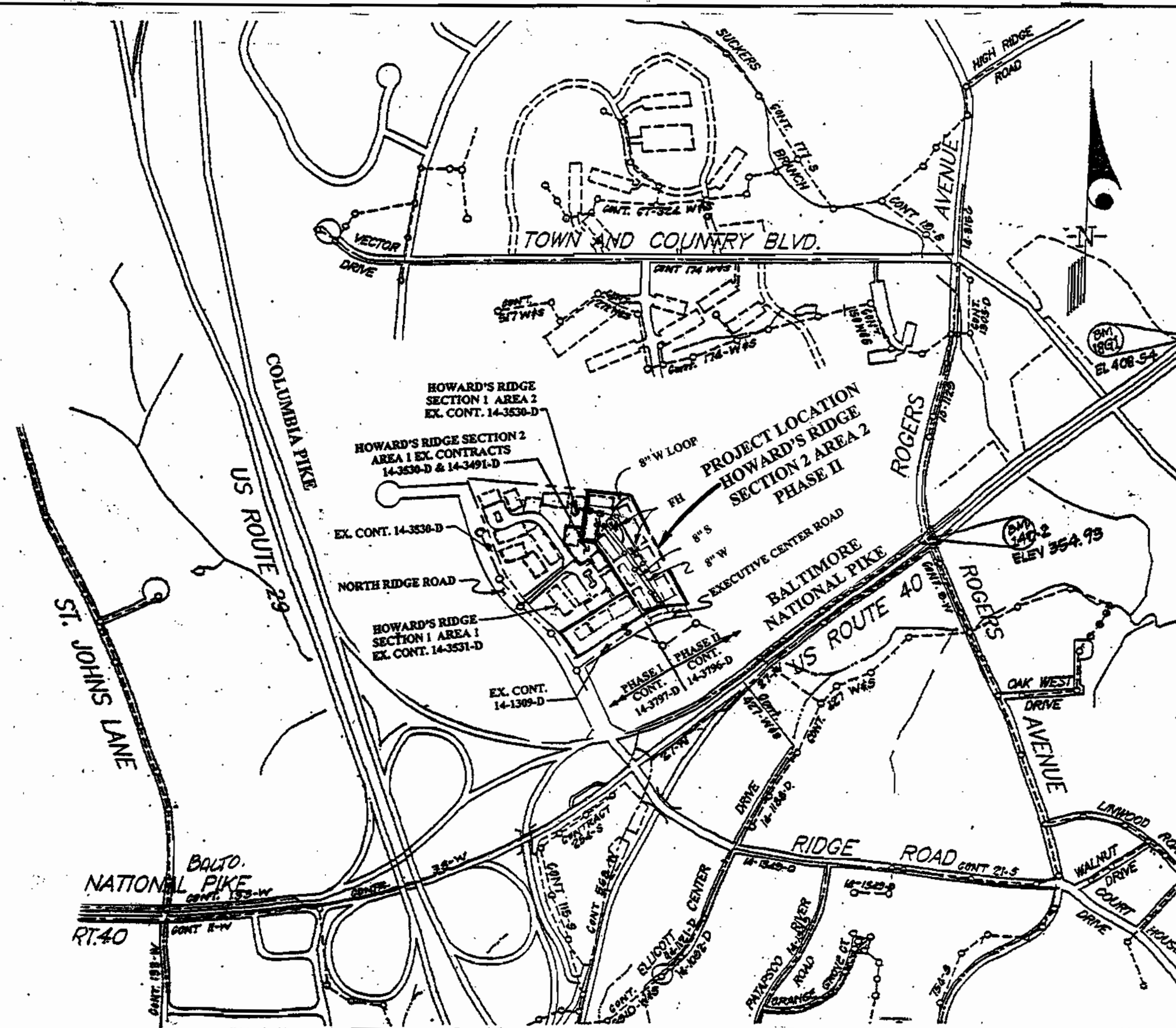
- 1. ALL SEWER MAINS SHALL BE DIP OR P.V.C UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.

QUANTITIES AS-BUILT table with columns for ITEMS, QUANTITIES ESTIMATED, QUANTITIES, TYPE, MANUFACTURER/SUPPLIER. Includes rows for 8" W, 6" W, 1" WHC, 8" V, 6" V, FIRE HYDRANT, 8" S, 4" SHC, 4'-0" MANHOLE.

SEWER table listing lots from 172 to 178 with columns for FROM, TO, DISTANCE, and OTHER INFO.

WATER AND SEWER AS-BUILT FIELD MEASUREMENTS

Large table for WATER AND SEWER AS-BUILT FIELD MEASUREMENTS with columns for LOT #, FROM, TO, DISTANCE, and notes. Includes sections for WATER and SEWER.



VICINITY MAP SCALE: 1" = 600'

CONTRACT NO. 14-3796-D HOWARD'S RIDGE SECTION 2, AREA 2 LOTS A-146 THRU A-216 HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 2-22-00 DATE

U. S. SOIL CONSERVATION SERVICE

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

APPROVED: John R. Robertson 2-22-00 DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

KCE ENGINEERING, INC. EXECUTIVE CENTER 3500 NORTH RIDGE ROAD, SUITE 360 ELLCOTT CITY, MARYLAND 21043



DESIGNED, DRAWN, CHECKED, DATE table with fields for AS-BUILT CONDITIONS ADDED TO PLAN and REVISE W.H.C.s

TITLE SHEET

HOWARD'S RIDGE SECTION 2, AREA 2 LOTS A-146 THRU A-216 (PHASE II) CONTRACT NO. 14-3796-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 1 OF 3