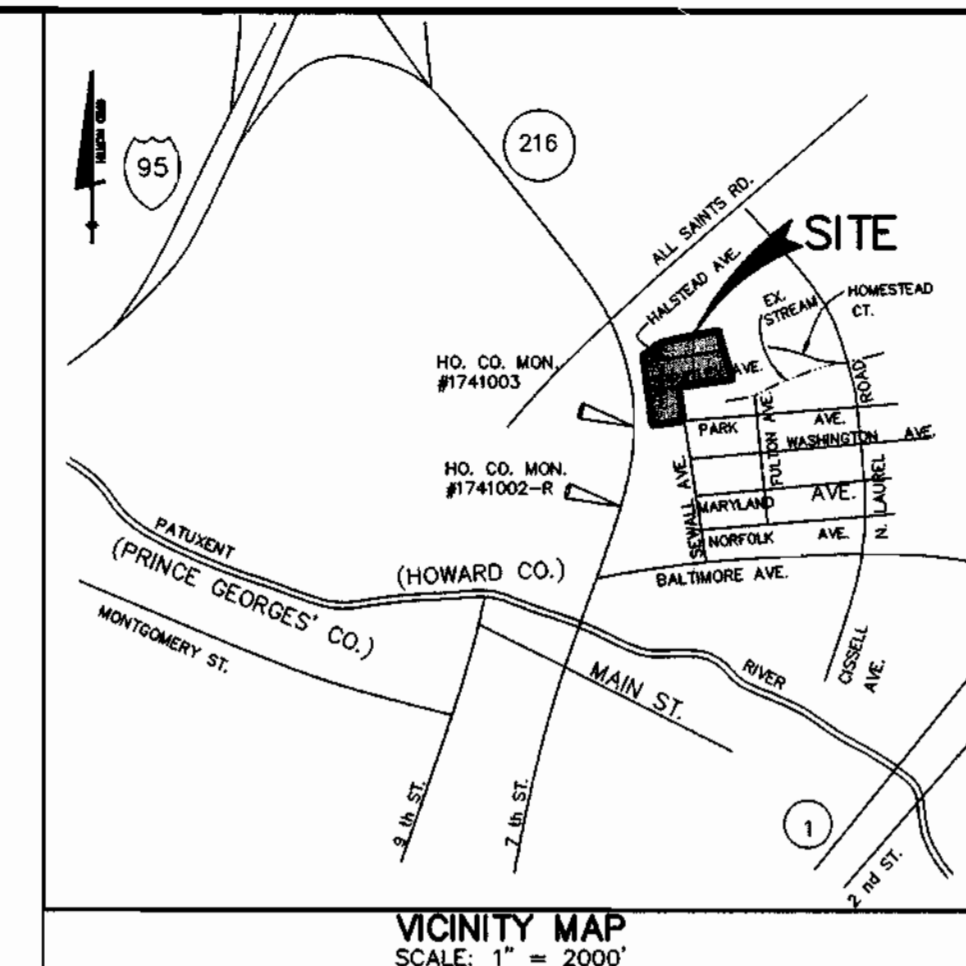


WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3704-D

NORTH LAUREL PARK PHASE II 6 th. ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCH MARK DATA

HOWARD COUNTY MON. # 1741003
CONC. MON. ON WEST SIDE OF
RTE. 216 AND 0.2' BELOW SURFACE.
ELEV. = 198.395

HOWARD COUNTY MON. # 1741002-R
CONC. MON. ON TOP OF BANK
EAST OF EAST EDGE MAC. OF
RTE. 216 FLUSH WITH SURFACE.
ELEV. = 197.368

GENERAL NOTES

PART 1 - GENERAL

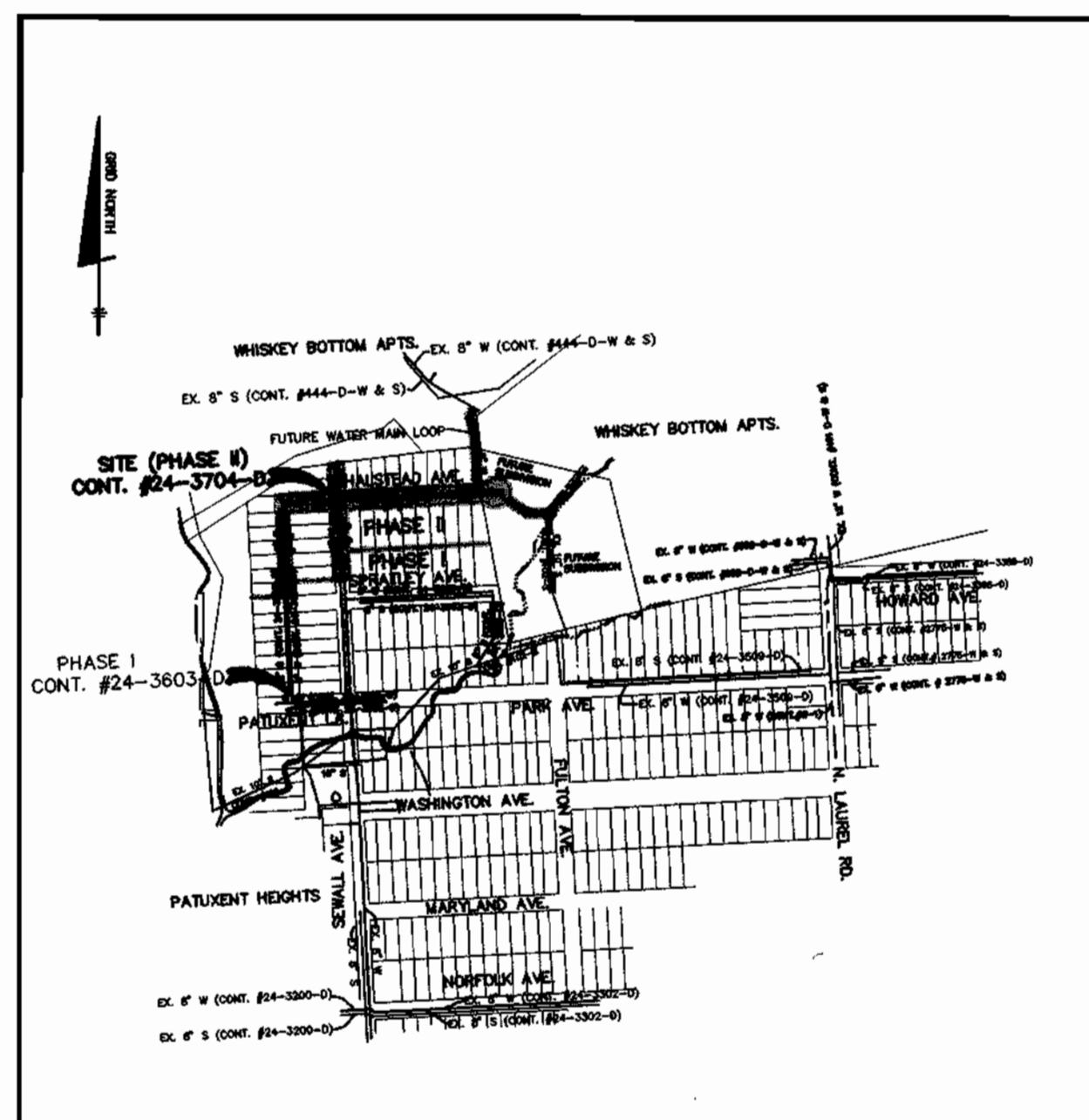
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES (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 THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY DUE TO 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. 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... 410-531-5533
 - BALTIMORE GAS & ELECTRIC CO. 410-850-4520
 - BALTIMORE GAS & ELECTRIC CO. 410-787-9068
 - MISS UTILITY 1-800-257-7777
 - COLONIAL PIPELINE CO. 410-795-1390
 - BUREAU OF UTILITIES.
 - HOWARD CO. DEPT. OF PUBLIC WORKS... 410-313-4900
- 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.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
- ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" TO 4' COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 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 MAINTENANCE 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 2 - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 80 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" TO 4' 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 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 SETTINGS UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.

PART 3 - SEWER

- ALL SEWER MAINS SHALL BE DIP. AND 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 M.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS. STANDARD DETAIL 85.52. WHERE WATER-TIGHT 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.



LOCATION MAP

SCALE: 1" = 600'

WATER AND SEWER COUNTY CODE

WATER CODE: C05
SEWER CODE: 7141500
TEST GRADIENT: 550

TYPE OF BUILDING: SINGLE FAMILY DETACHED
NUMBER OF LOTS: 39 (7 AS FUTURE LOTS)
NUMBER OF SHC'S: 37
NUMBER OF WHC'S: 35
DRAINAGE AREA: PATUXENT
TREATMENT PLANT: LITTLE PATUXENT

LEGEND

EXIST. WATER MAIN	
EXIST. SEWER MAIN	
EXIST. SEWER MANHOLE	
PROP. WATER MAIN	
PROP. SEWER MAIN	
PROP. STORM DRAIN (BY OTHERS)	
PROP. SEWER MANHOLE	
PROP. TERMINAL MANHOLE	
PROP. SEWER HOUSE CONNECTION	
PROP. WATER HOUSE CONNECTION (DOUBLE - 1 1/2" x 1")	
PROP. WATER HOUSE CONNECTION (SINGLE - 1")	
PROP. FIRE HYDRANT	
PROP. VALVE	
PROP. PLUG & BUTTRESS	

WATER AS-BUILT QUANTITIES				
ITEM	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	1589 L.F.	1589	DIP. 4152	A-I ATOMITE STATE
8" x 8" TEE	1 EA.	1 EA.	MULLER	TURNER PIPE
8" VALVES	2 EA.	2 EA.	CATE	MULLER
8" x 8" FIT	2 EA.	2 EA.	MULLER	MULLER
FIRE HYDRANTS	2 EA.	2 EA.		
1 1/2" DRAIN	1 EA.	1 EA.	K COPPER	FABRB-LES
1 1/2" WHC	2 EA.	2 EA.		
8" SEWER (PVC)	895 L.F.	895		
MANHOLES	6 EA.	6 EA.		
4" SHC	6 EA.	6 EA.		
4" DHC	2 EA.	2 EA.		
4" WATER	94 L.F.	94		
8" DIP CL. 2 SEWER	449 L.F.	449		

NAME OF UTILITY CONTRACTOR: *GAINE Co.*

SURVEY AND DRAFTING AS-BUILT DATE:

SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3 & 4	PROFILES

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

J. L. Robertson 11/14/99
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Dee Lynn Simmons 11/14/99
NATURAL RESOURCE CONSERVATION SERVICE DATE

OWNER/DEVELOPER

CORNERSTONE HOLDINGS, L.L.C.
9691 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

BENCHMARK
ENGINEERING, INC.

DES: YSL

DRN: YSL

CHK: CAM

DATE: 10/6/98

K.C.I. 2 AS-BUILT CONDITIONS ADDED TO PLAN 6/99
MCR 1 REVISIONS ADDED FROM CUL-DE-SAC 3-10-99
BY NO. REVISIONS DATE

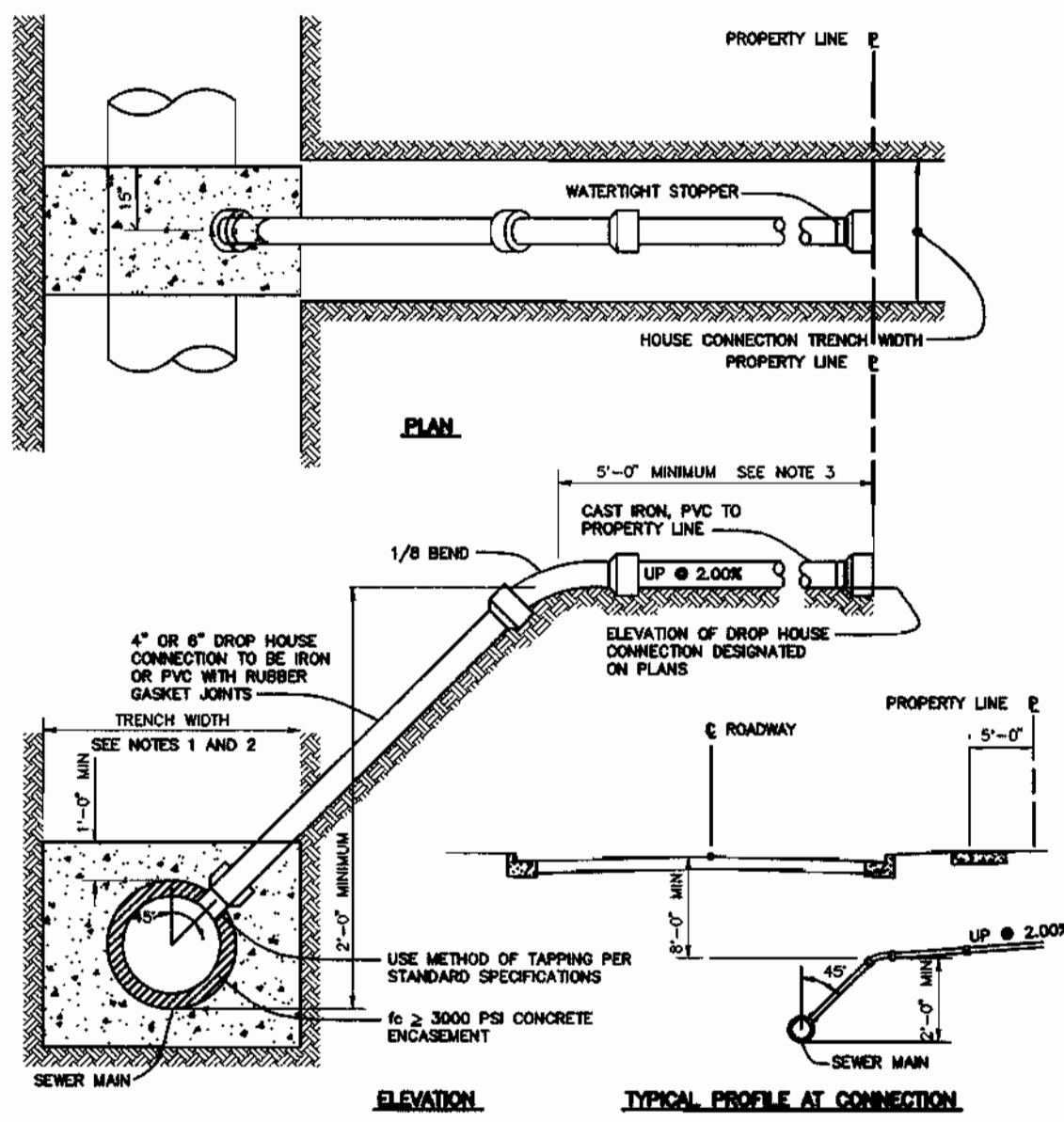
PHASE II
WATER & SEWER EXTENSION
AND SEWER RELOCATION
TITLE SHEET

NORTH LAUREL PARK
LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
AND FUTURE LOTS 1-6, PARCEL 374

HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3704-D

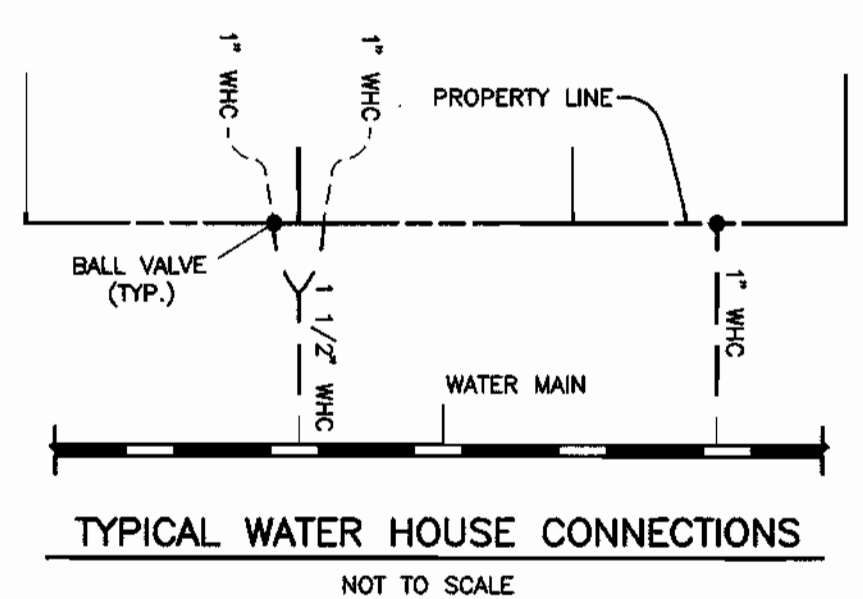
SCALE
AS
SHOWN

SHEET
1 OF 4



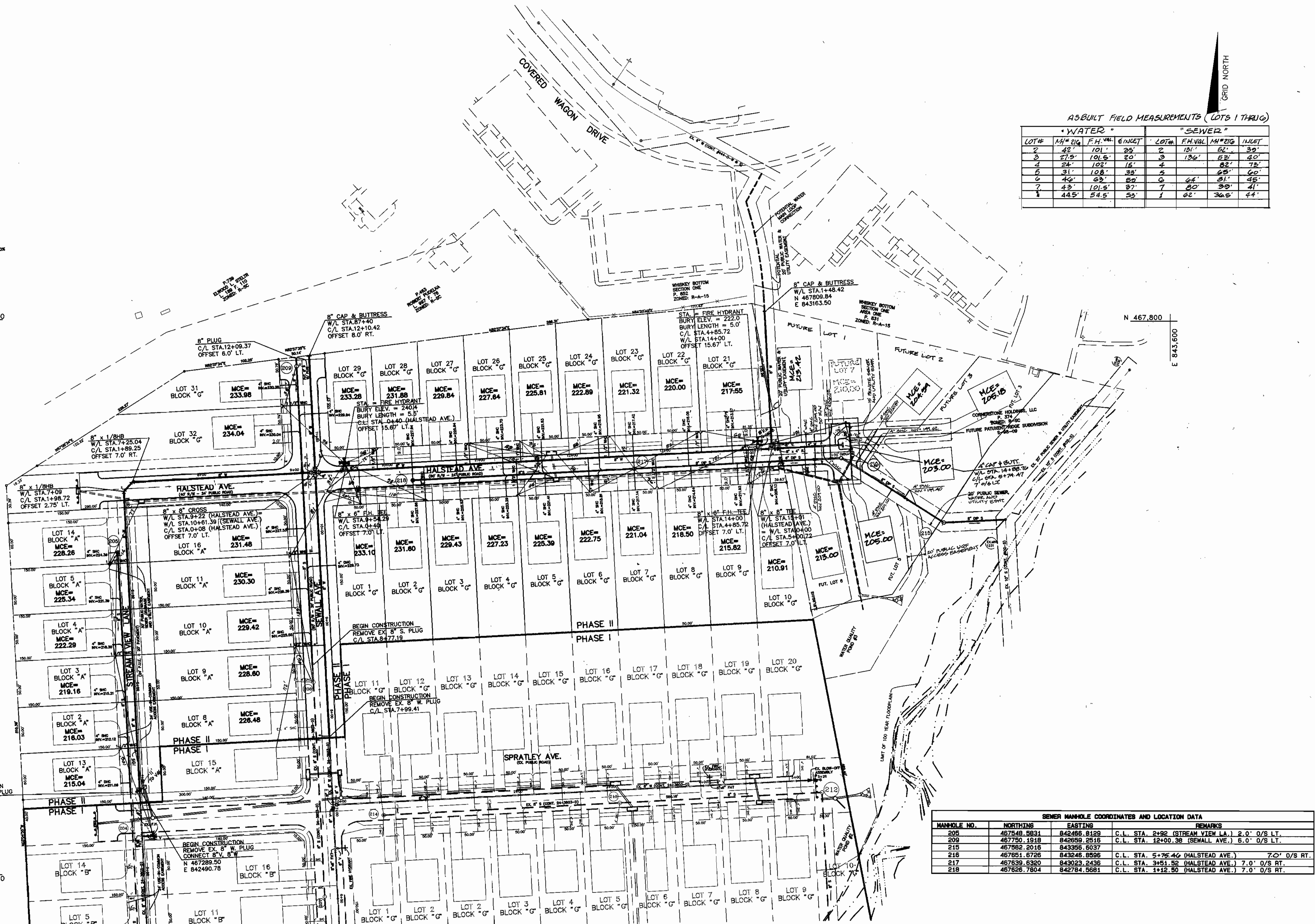
NOTES:
 1. S.S.C. TO 6" THRU 12" SEWER MAIN USE SADDLE.
 2. S.S.C. TO PROPOSED SEWER MAIN, USE TEES. SEE VOLUME IN STANDARD DETAIL S2.12.
 3. S.S.C. AT PROPERTY LINE SHALL TERMINATE WITH MINIMUM PIPE LENGTH OF 5'-0". DETAIL IS NOT APPLICABLE FOR A SHORTER LENGTH THAN 5'-0" AT THE PROPERTY LINE.

4" DROP HOUSE CONNECTION TO SEWER MAIN
 NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL II
 WATER AND SEWER - APPENDIX 13



ASBUILT FIELD MEASUREMENTS (LOTS 1 THRU 6)

"WATER"				"SEWER"			
LOT#	M#	F.H. VAL	6 INLET	LOT#	F.H. VAL	M#	INLET
2	42'	101'	25'	2	131'	62'	30'
3	27.5'	101.5'	20'	3	136'	62'	40'
4	24'	102'	15'	4	82'	62'	72'
5	21'	102.5'	32'	5	64'	62'	60'
6	42'	62'	82'	6	81'	62'	45'
7	42'	101.5'	87'	7	80'	62'	41'
8	44.5'	54.5'	53'	8	62'	36.5'	44'



SEWER MANHOLE COORDINATES AND LOCATION DATA

MANHOLE NO.	NORTHING	EASTING	REMARKS
205	467548.5831	842466.8129	C.L. STA. 2+92 (STREAM VIEW L.A.) 2.0' O/S LT.
209	467750.1918	842659.2516	C.L. STA. 12+00.38 (SEWALL AVE.) 6.0' O/S LT.
215	467562.2016	843396.6037	C.L. STA. 5+75.46 (HALSTEAD AVE.) 7.0' O/S RT.
216	467651.6726	843246.9596	C.L. STA. 3+51.52 (HALSTEAD AVE.) 7.0' O/S RT.
217	467639.6320	843023.2436	C.L. STA. 1+12.50 (HALSTEAD AVE.) 7.0' O/S RT.
218	467626.7604	842784.5681	C.L. STA. 1+12.50 (HALSTEAD AVE.) 7.0' O/S RT.

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

PLAN VIEW
 SCALE: 1" = 60'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert Deinger
 CHIEF, BUREAU OF UTILITIES
 DATE: 10-27-98

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Mr. [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10/27/98

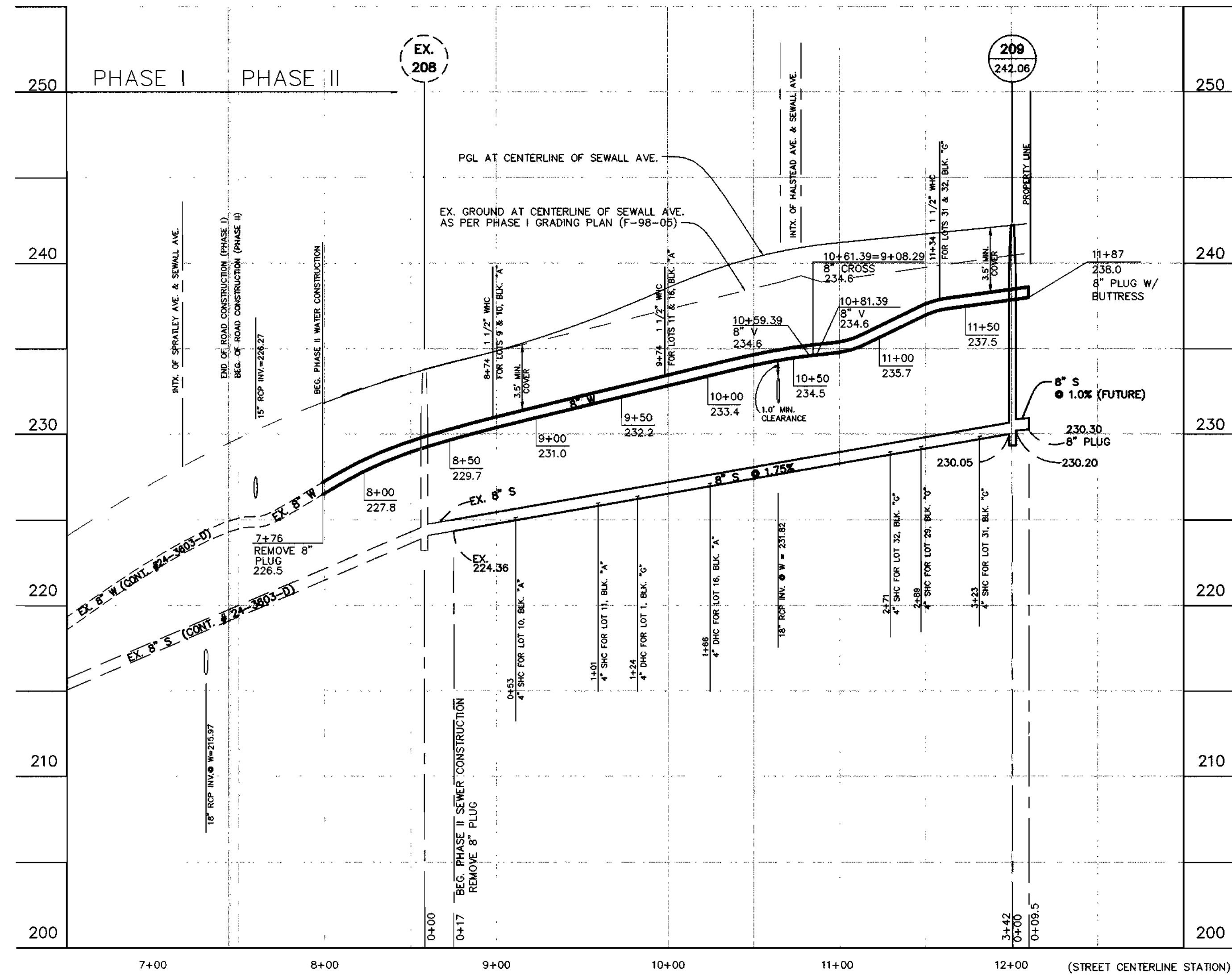
BENCHMARK
 ENGINEERING, INC.
 8480 BALDRO INTERNAL FIRE - SUITE 418 - BELLCOTT CITY, MARYLAND 21043
 PHONE: 410-465-0100 FAX: 410-465-0544

Donald Mean
 [Signature]

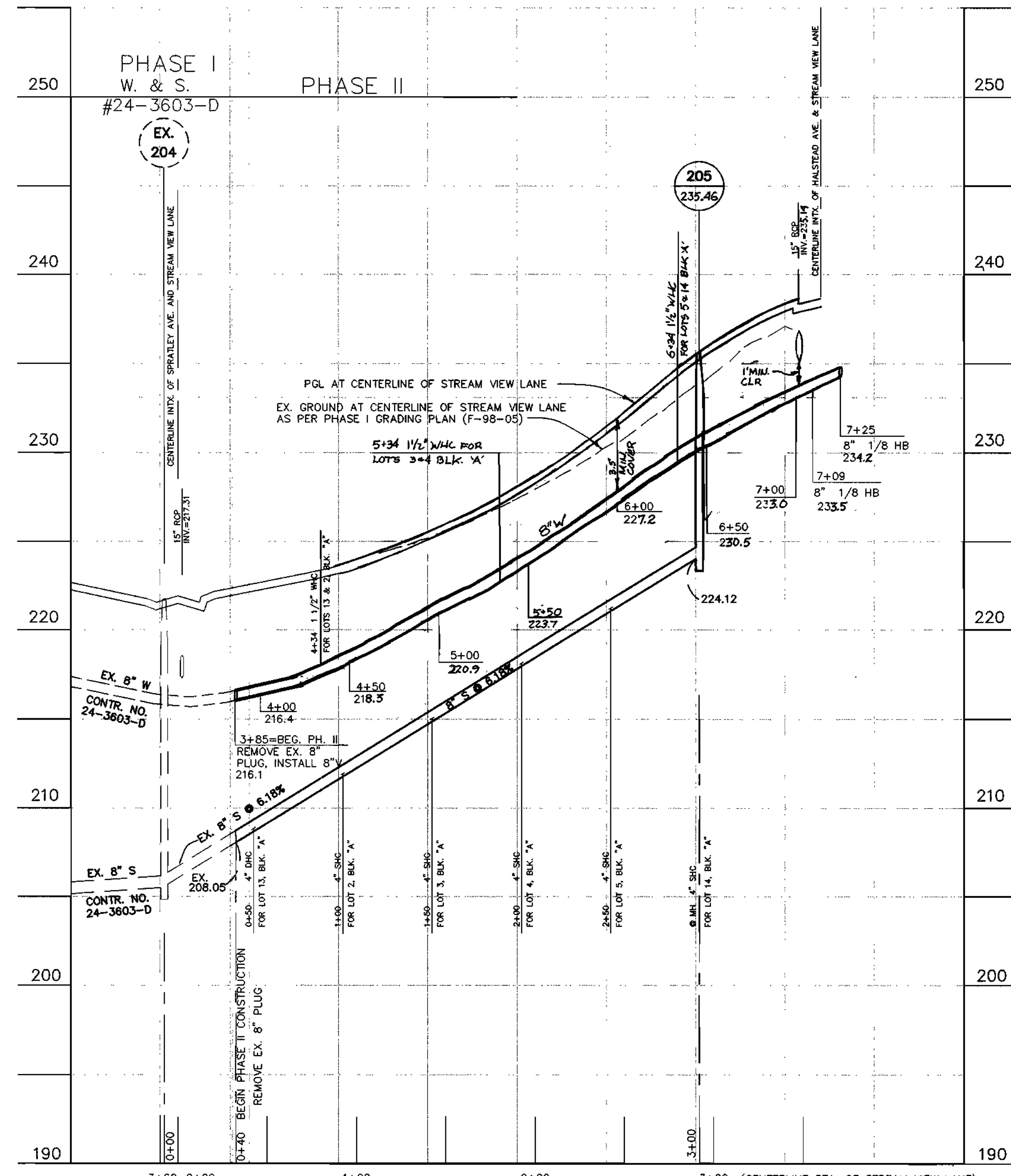
DES:	YSL				
DRN:	YSL				
CHK:	CAM	K21	2	ASBUILT CONDITIONS ADDED TO PLAN WATER ONLY	8/18/98
DATE:	10/6/98	MCR	1	REVISION: HALSTEAD AVE. FROM A CUL-DE-SAC TO A TEE-TURNAROUND	3-12-99
BY:	NO.			REVISIONS	DATE

PHASE II
 WATER & SEWER EXTENSION
 PLAN
 600 SCALE MAP NO. 50
 BLOCK "3"

NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D
 SCALE AS SHOWN
 SHEET 2 OF 4



WATER & SEWER PROFILE AT SEWALL AVENUE
SCALE: H: 1"=50'
V: 1"=5'

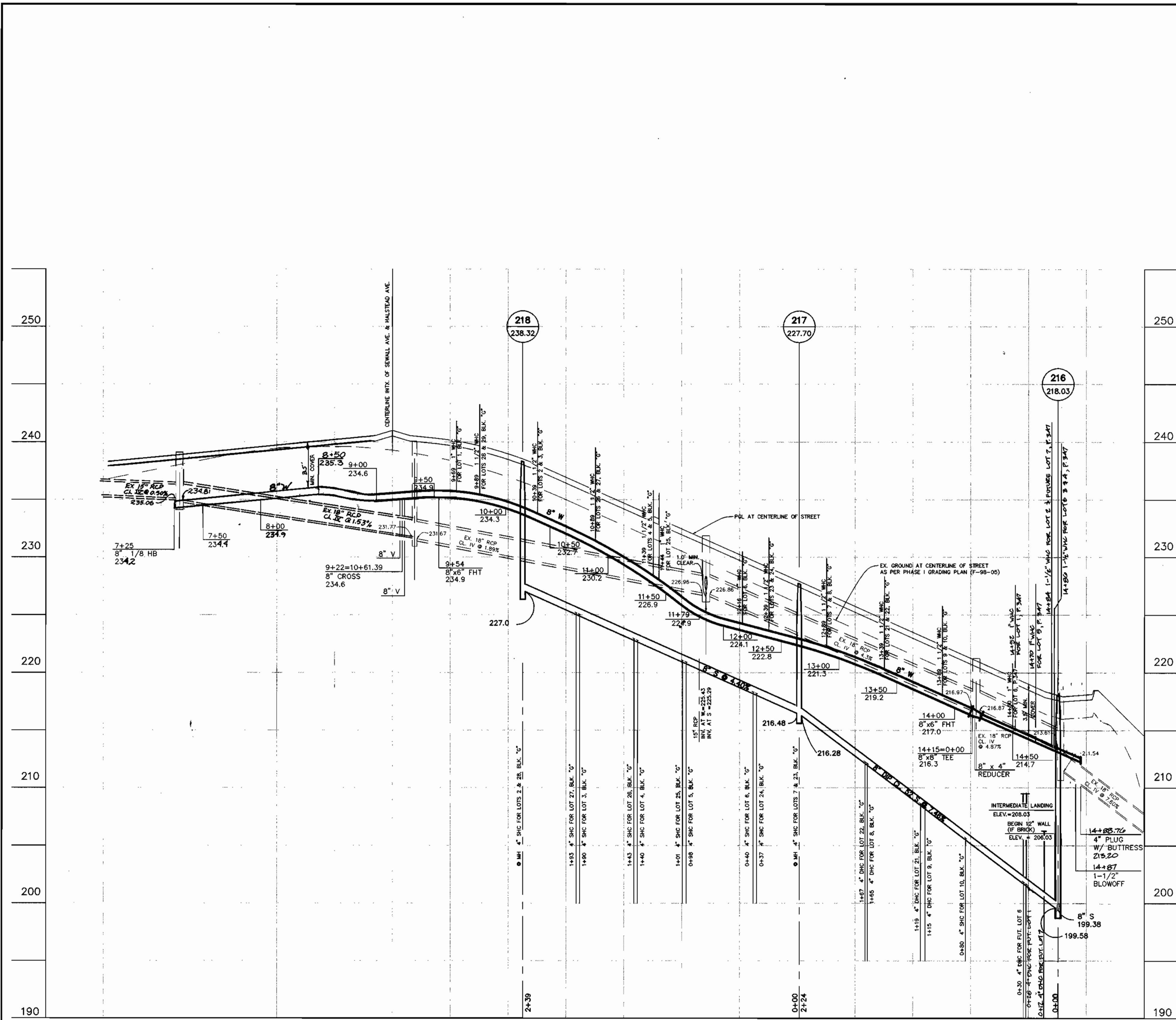


WATER & SEWER PROFILE AT STREAM VIEW LANE
SCALE: H: 1"=50'
V: 1"=5'

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
9691 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

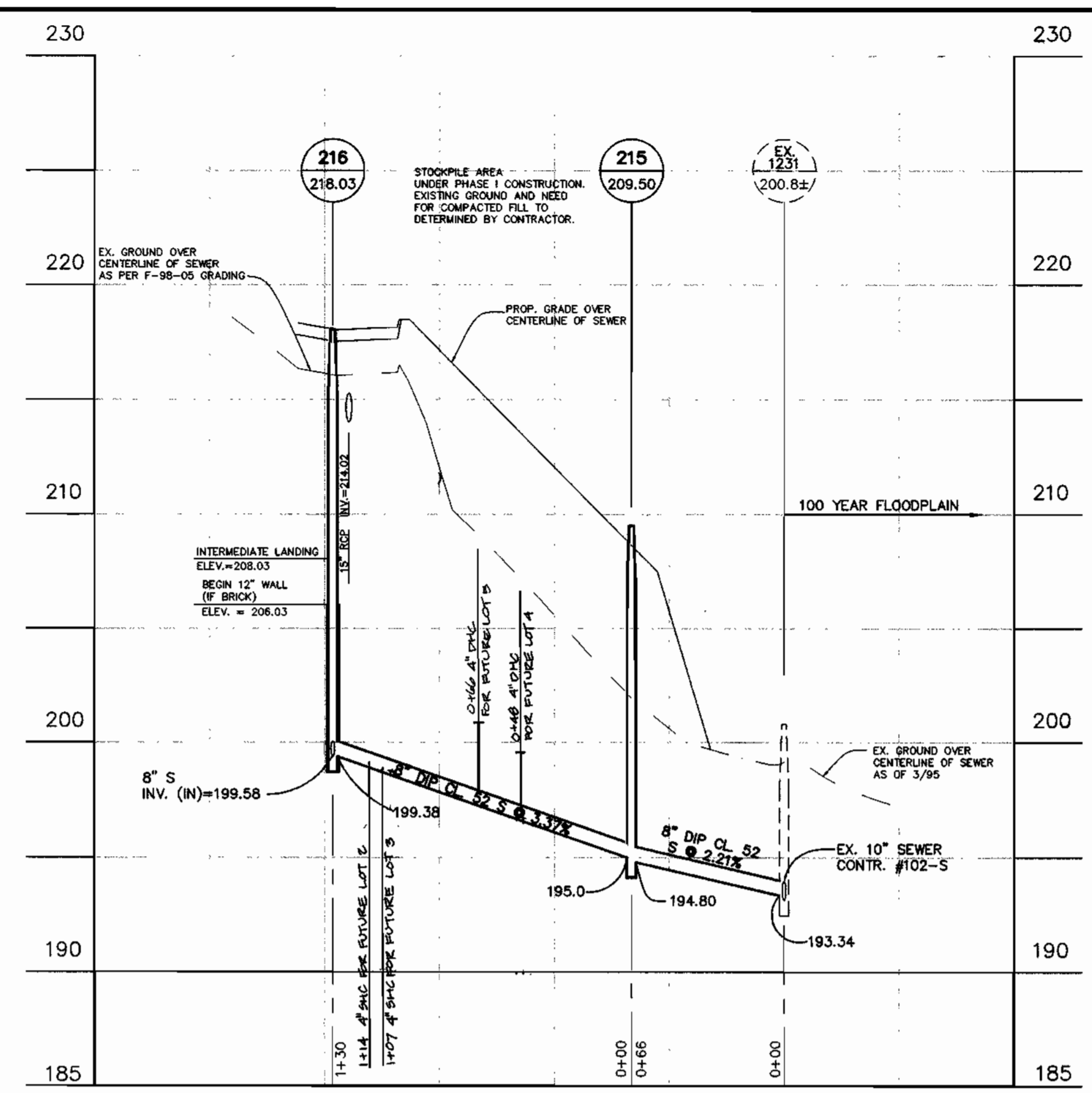
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert W. Reinger</i> 10-27-98 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Michael J. Williams</i> 11/5/98 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	BENCHMARK ENGINEERING, INC. 8400 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLSWORTH CITY, MARYLAND 21043 PHONE: 410-485-8105 FAX: 410-485-8444		DES: YSL DRN: YSL CHK: CAM DATE: 10/8/98 BY NO. REVISIONS DATE	PHASE II WATER & SEWER EXTENSION PROFILES 600 SCALE MAP NO. 50 BLOCK "3"	NORTH LAUREL PARK LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A"; LOTS 1-10, 21-29, 31 & 32 BLOCK "G"; AND FUTURE LOTS 1-6, PARCEL 374 HOWARD COUNTY ELECTION DISTRICT NO. 6 CONTRACT NO. 24-3704-D	SCALE AS SHOWN SHEET 3 OF 4
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Plotted: OCT. 5, 1998
Acad Dwg: \0946\60460233

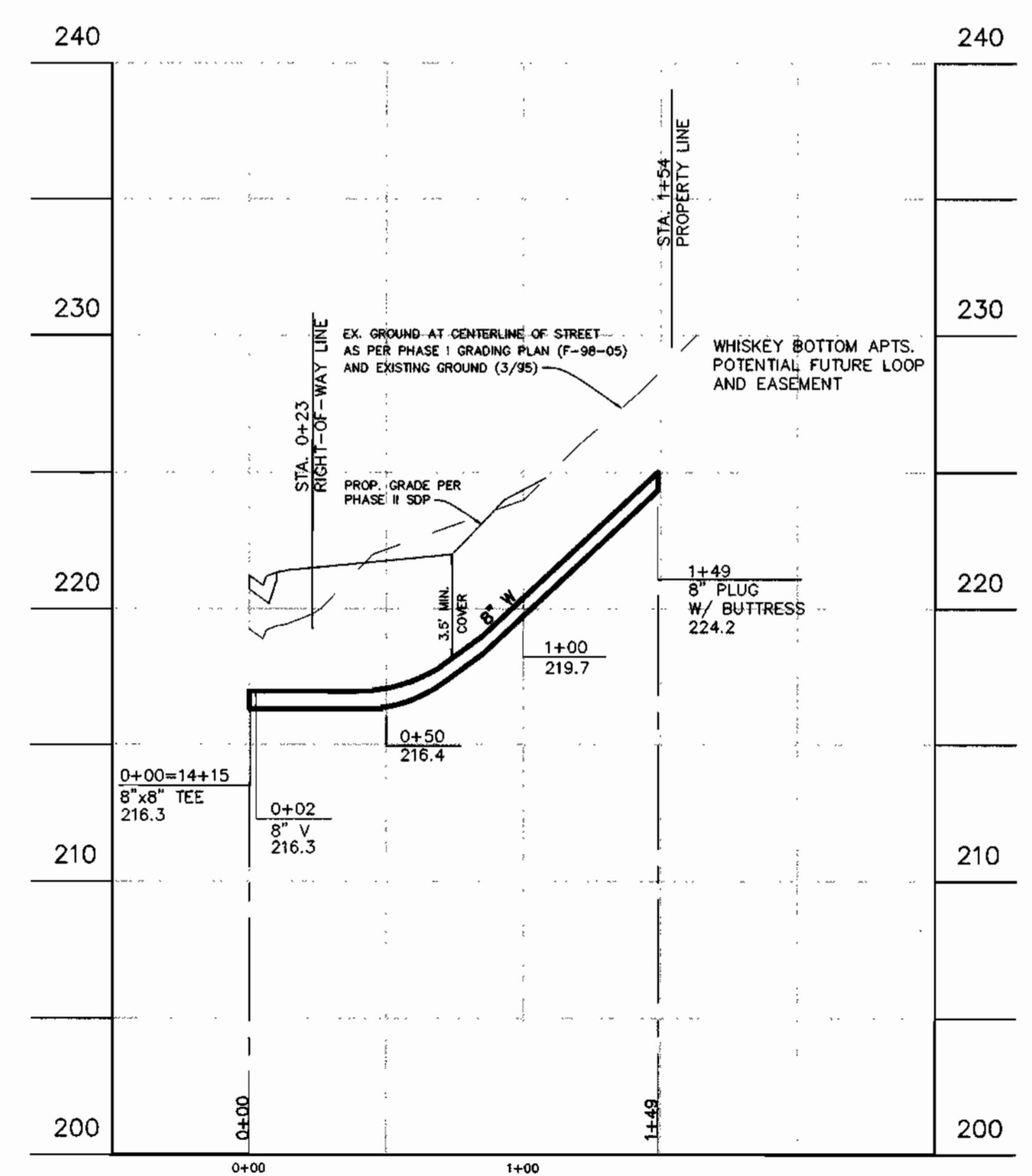


WATER AND SEWER PROFILE AT HALSTEAD AVENUE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565



OUTFALL SEWER PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'



WATER LINE PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Reinger 10-27-98
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 10/27/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
 ENGINEERS - LAND SURVEYORS - PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLSWORTH CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644

[Signature: Donald M. Moran]

DES:	YSL				
DRN:	YSL				
CHK:	CAM	MCR	Z	REVISE HALSTEAD AVE FROM A CUL-DE-SAC TO A TEE-TURN/ARROUND	3-10-99
DATE:	10/6/98	JC	I	RAISE 8" WATER, HALSTEAD AVE. (LT.)	12/20/98
BY:	NO.			REVISIONS	DATE

PHASE II
WATER & SEWER EXTENSION
 PROFILES
 600 SCALE MAP NO. 50 BLOCK "3"

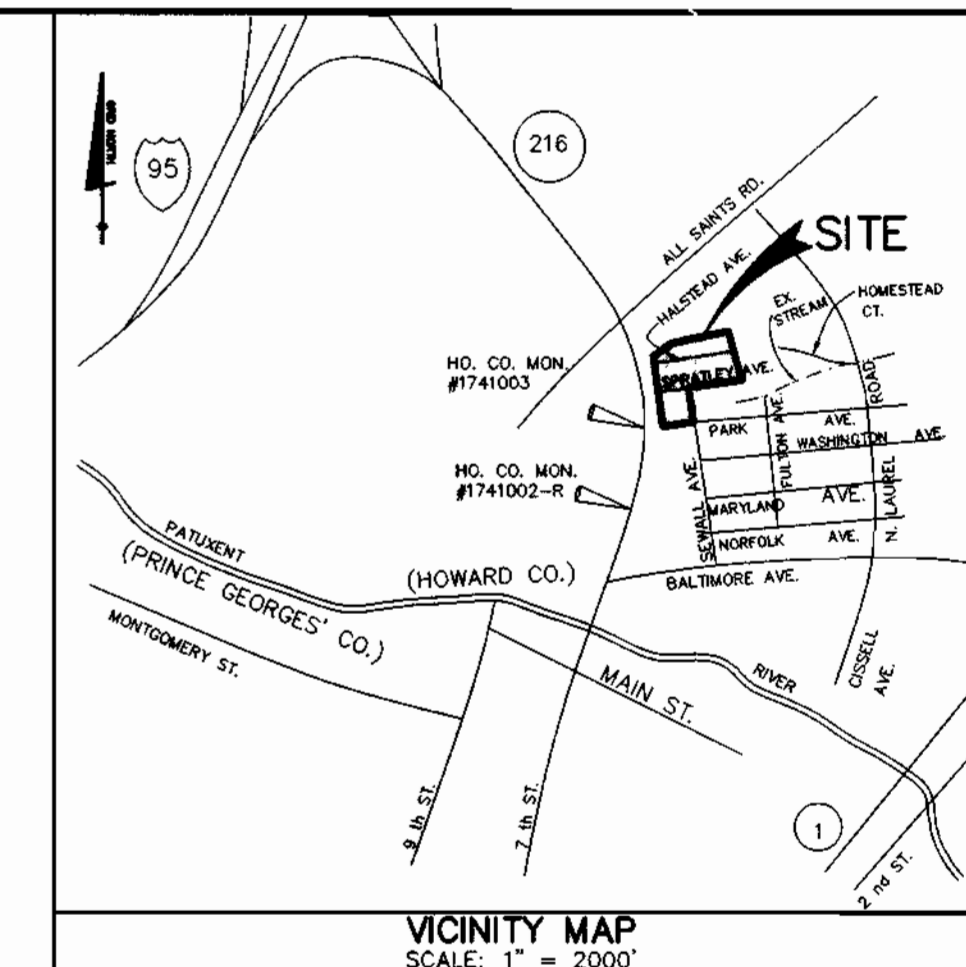
NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D

SCALE AS SHOWN
 SHEET 4 OF 4

Plotted: OCT. 5, 1998
 Acad Dwg: \0946\60460254

WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3704-D

NORTH LAUREL PARK PHASE II 6th. ELECTION DISTRICT HOWARD COUNTY, MARYLAND



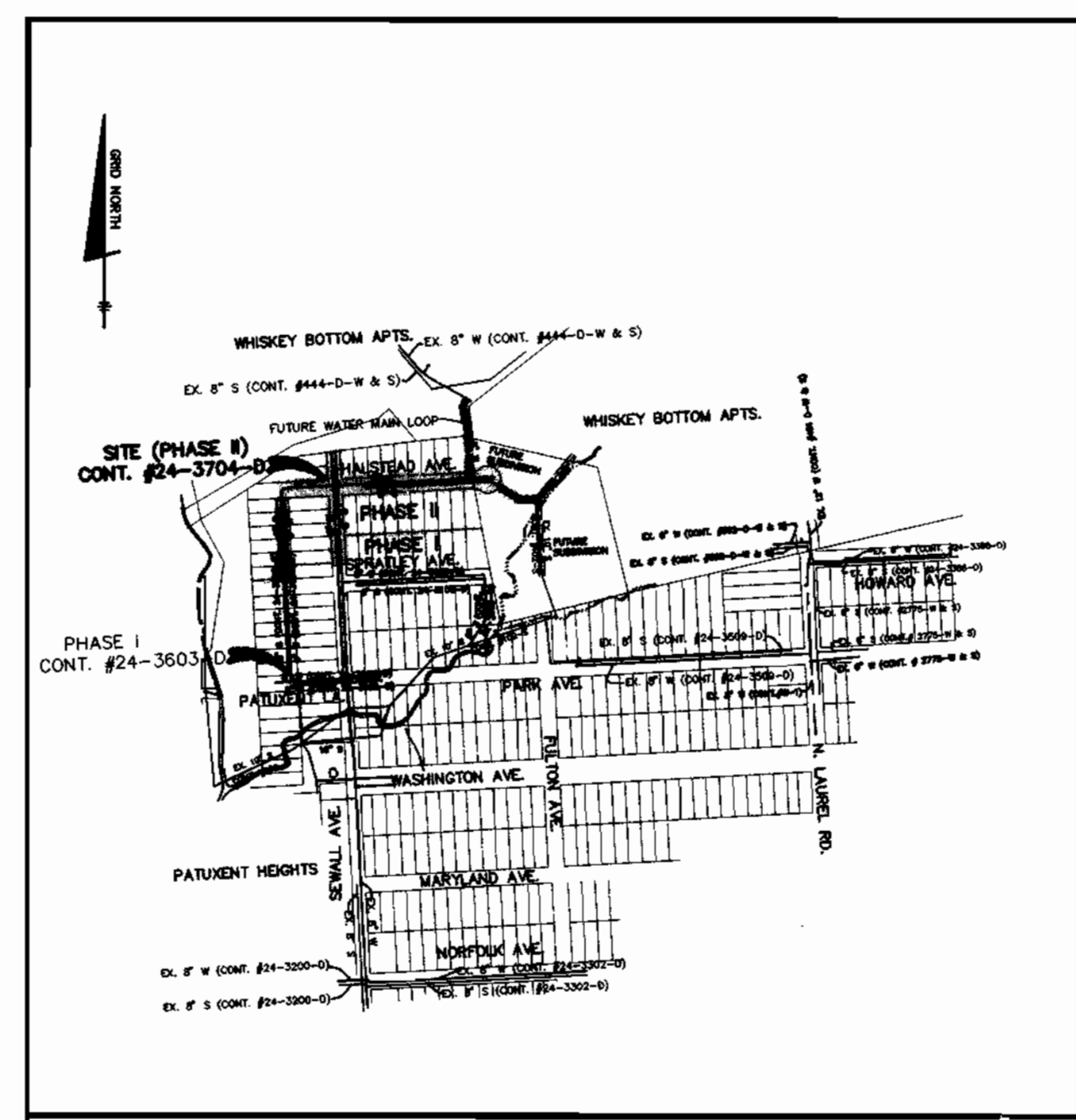
BENCH MARK DATA

HOWARD COUNTY MON. # 1741003
CONC. MON. ON WEST SIDE OF
RTE. 216 AND 0.2' BELOW SURFACE.
ELEV. = 198.395

HOWARD COUNTY MON. # 1741002-R
CONC. MON. ON TOP OF BANK
EAST OF EAST EDGE MAC. OF
RTE. 216 FLUSH WITH SURFACE.
ELEV. = 197.368

GENERAL NOTES

- PART 1 - 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 (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 THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE 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. 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 Φ 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 MADE 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 410-531-5533
 - BALTIMORE GAS & ELECTRIC CO. 410-850-4620
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL 410-787-8068
 - MISS UTILITY 1-800-257-7777
 - COLONIAL PIPELINE CO. 410-795-1950
 - BUREAU OF UTILITIES.
 - HOWARD CO. DEPT. OF PUBLIC WORKS. 410-313-4900
 - 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.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OR TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
 - ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 - TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" TO 4' COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - 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 DOW REQUIREMENTS PER SECTION 18.15(a) OF THE HOWARD COUNTY CODE.



LOCATION MAP
SCALE: 1" = 600'

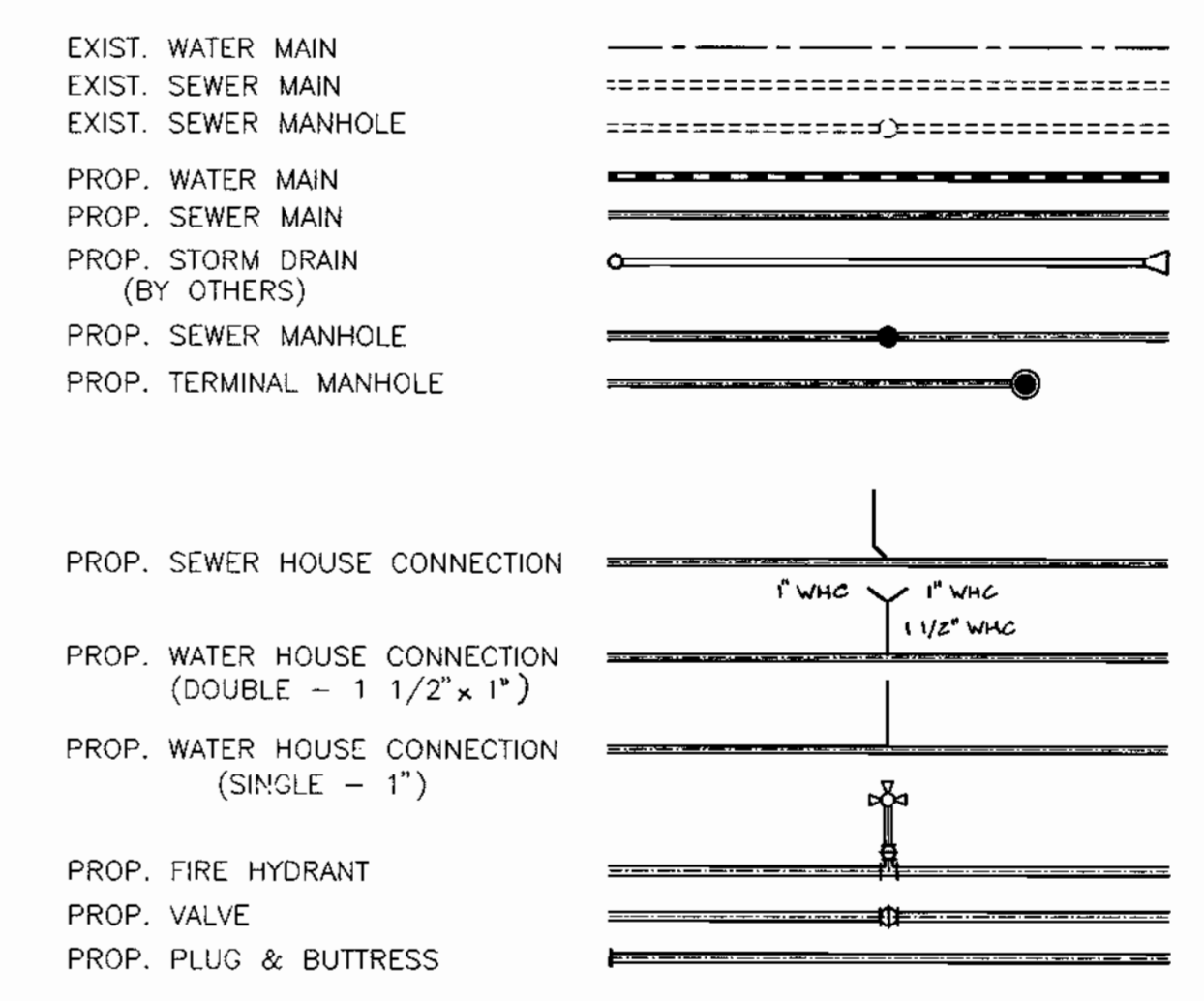
WATER AND SEWER COUNTY CODE		TYPE OF BUILDING :	
WATER CODE:	CO5	SINGLE FAMILY DETACHED	
SEWER CODE:	7141500	NUMBER OF LOTS :	39 (7 AS FUTURE LOTS)
TEST GRADIENT:	550	NUMBER OF SHC'S :	37
		NUMBER OF WHC'S :	35
		DRAINAGE AREA :	PATUXENT
		TREATMENT PLANT:	LITTLE PATUXENT

QUANTITIES				
ITEM	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	1589 L.F.	1589	DIP GLE	A.I. ATLANTIC STATES
8" x 8" TEE	1 EA.	1	MSGL	TELEK TYPE
8" VALVES	4 EA.	4	CAST	MUELER
8" x 6" FHT	2 EA.	2	MSGL	
FIRE HYDRANTS	2 EA.	2	CAST	
1 1/2" DRAIN	1 EA.	1	K COPPER	FRANK-LEE
1" WHC	324 L.F.	324		
1 1/2" WHC	441 L.F.	441		
8" SEWER (PVC)	835 L.F.	835	SOP 35 P.V.C.	J.M.
MANHOLES	5 EA.	5	FR. COPE	ATLANTIC COAG.
4" SHC	642 L.F.	642	S.D.R. 35 P.V.C.	J.M.
4" DHC	287 L.F.	287	"	J.M.
4" WATER	54 L.F.	54		
8" DIP CL 2 SEWER	419 L.F.	419	D.I.P. CL 2	ATLANTIC STATES

NAME OF UTILITY CONTRACTOR: *Game Co.*

SURVEY AND DRAFTING AS-BUILT DATE: _____

LEGEND



SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3 & 4	PROFILES

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

J. K. Blanton 11/14/98
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Dee Ann Simms 11/14/98
NATURAL RESOURCE CONSERVATION SERVICE DATE

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
9691 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B. Bowers 10-27-98
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Michael J. Dammann 11/14/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
ENGINEERING, INC.

Donald Mason

8490 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-485-6105 FAX: 410-485-0644

DES:	YSL				
DRN:	YSL				
CHK:	CAM	K.C.I.	3	SEWER AS-BUILT CONDITIONS ADDED TO PLAN	10/11/99
		K.C.I.	2	AS-BUILT CONDITIONS ADDED TO PLAN	6/00
DATE:	10/6/98	MCR	1	REMOVED WALSTEAD AVE FROM COL-DR-SAC TREE BUILDING	3-10-99
		BY NO.		REVISIONS	DATE

**PHASE II
WATER & SEWER EXTENSION
AND SEWER RELOCATION
TITLE SHEET**

NORTH LAUREL PARK
LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
AND FUTURE LOTS 1-6, PARCEL 374

HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3704-D

SCALE AS SHOWN

SHEET 1 OF 4

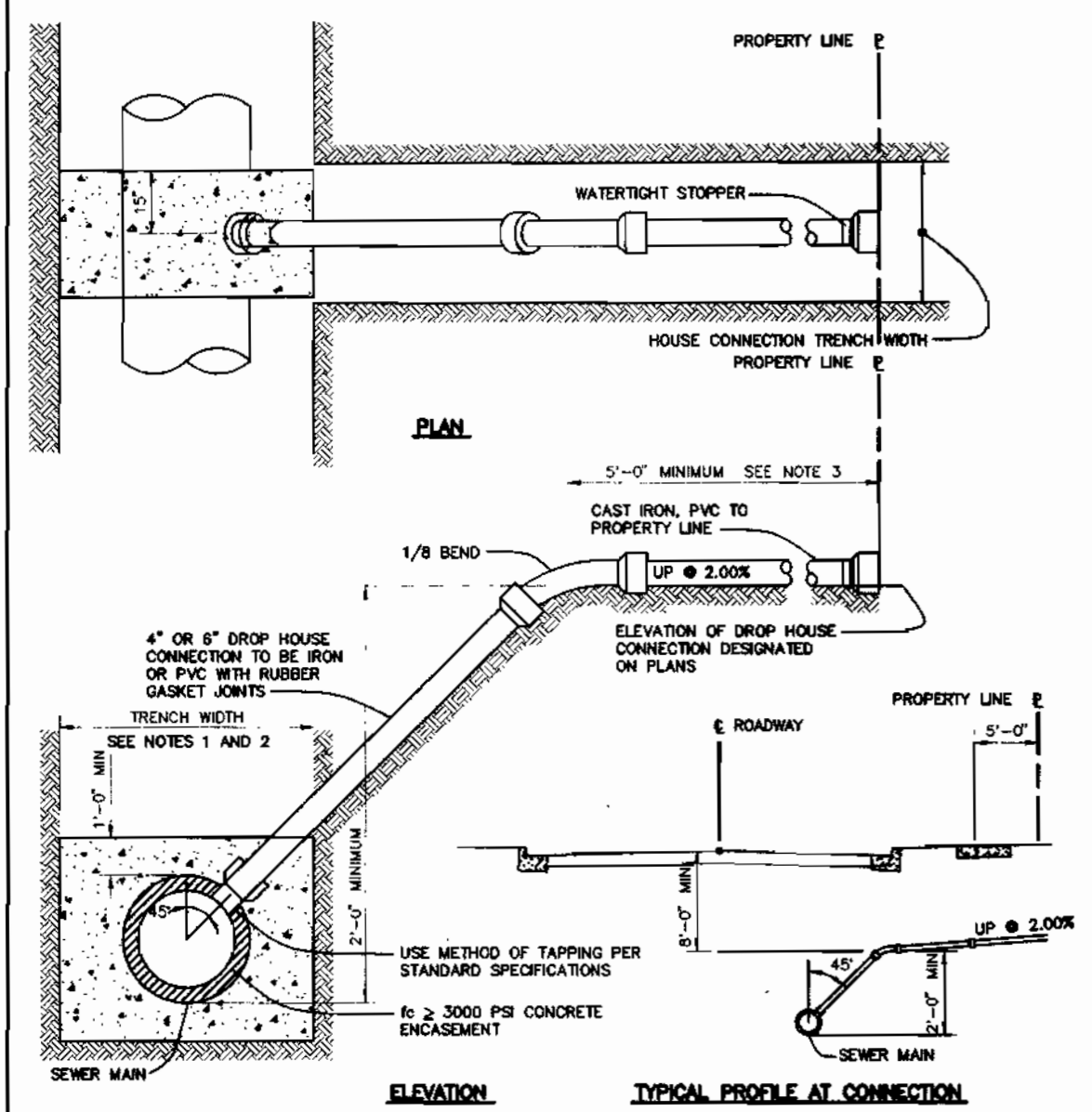
Plotter: CCI, 5/1998
Acad Dwg: \0946\60460251

ASBUILT FIELD MEASUREMENTS FOR SEWER ONLY

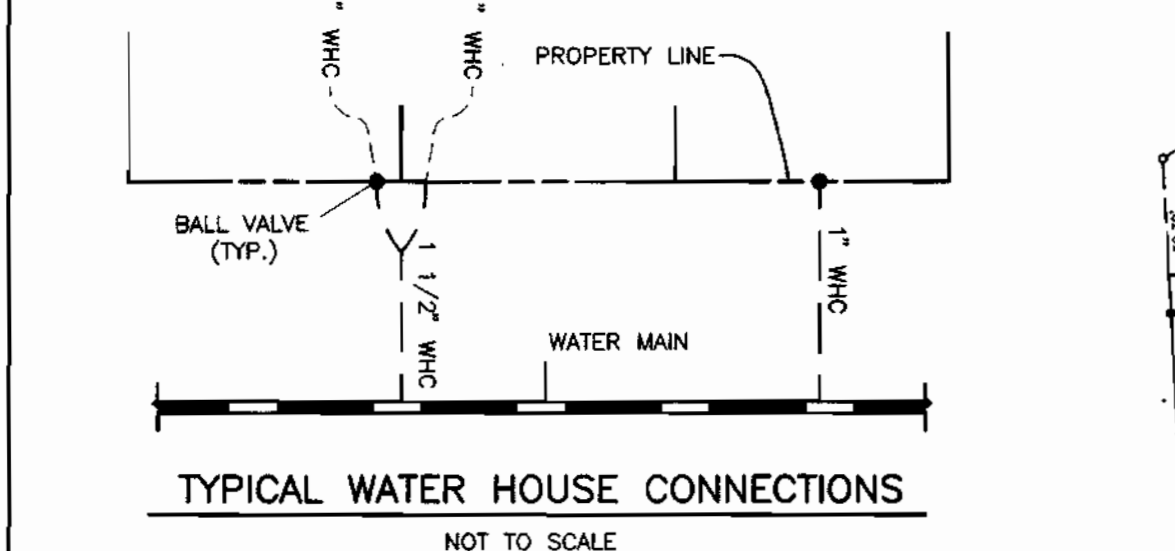
FROM	TO	DIST	FROM	TO	DIST	FROM	TO	DIST
INLET LOT 10	LOT 2A	100'	INLET LOT 10	LOT 10G	20'			
INLET LOT 10	LOT 3A	100'	INLET LOT 10	LOT 21G	40'			
INLET LOT 10	LOT 4A	100'	INLET LOT 10	LOT 22G	40'			
INLET LOT 10	LOT 5A	50'	INLET LOT 10	LOT 23G	40'			
INLET LOT 10	LOT 8A	50'	INLET LOT 10	LOT 24G	40'			
INLET LOT 10	LOT 9A	50'	INLET LOT 10	LOT 25G	40'			
INLET LOT 10	LOT 10A	50'	INLET LOT 10	LOT 26G	40'			
INLET LOT 10	LOT 11A	100'	INLET LOT 10	LOT 27G	40'			
INLET LOT 10	LOT 12A	50'	INLET LOT 10	LOT 28G	40'			
INLET LOT 10	LOT 13A	50'	INLET LOT 10	LOT 29G	40'			
INLET LOT 10	LOT 14A	50'	INLET LOT 10	LOT 30G	40'			
INLET LOT 10	LOT 16A	50'	INLET LOT 10	LOT 31G	40'			
INLET LOT 10	LOT 17A	50'	INLET LOT 10	LOT 32G	40'			
INLET LOT 10	LOT 18A	50'						
INLET LOT 10	LOT 19A	50'						
INLET LOT 10	LOT 20A	50'						
INLET LOT 10	LOT 21A	50'						
INLET LOT 10	LOT 22A	50'						
INLET LOT 10	LOT 23A	50'						
INLET LOT 10	LOT 24A	50'						
INLET LOT 10	LOT 25A	50'						
INLET LOT 10	LOT 26A	50'						
INLET LOT 10	LOT 27A	50'						
INLET LOT 10	LOT 28A	50'						
INLET LOT 10	LOT 29A	50'						
INLET LOT 10	LOT 30A	50'						
INLET LOT 10	LOT 31A	50'						
INLET LOT 10	LOT 32A	50'						

ASBUILT FIELD MEASUREMENTS (LOTS 1 THRU 6)

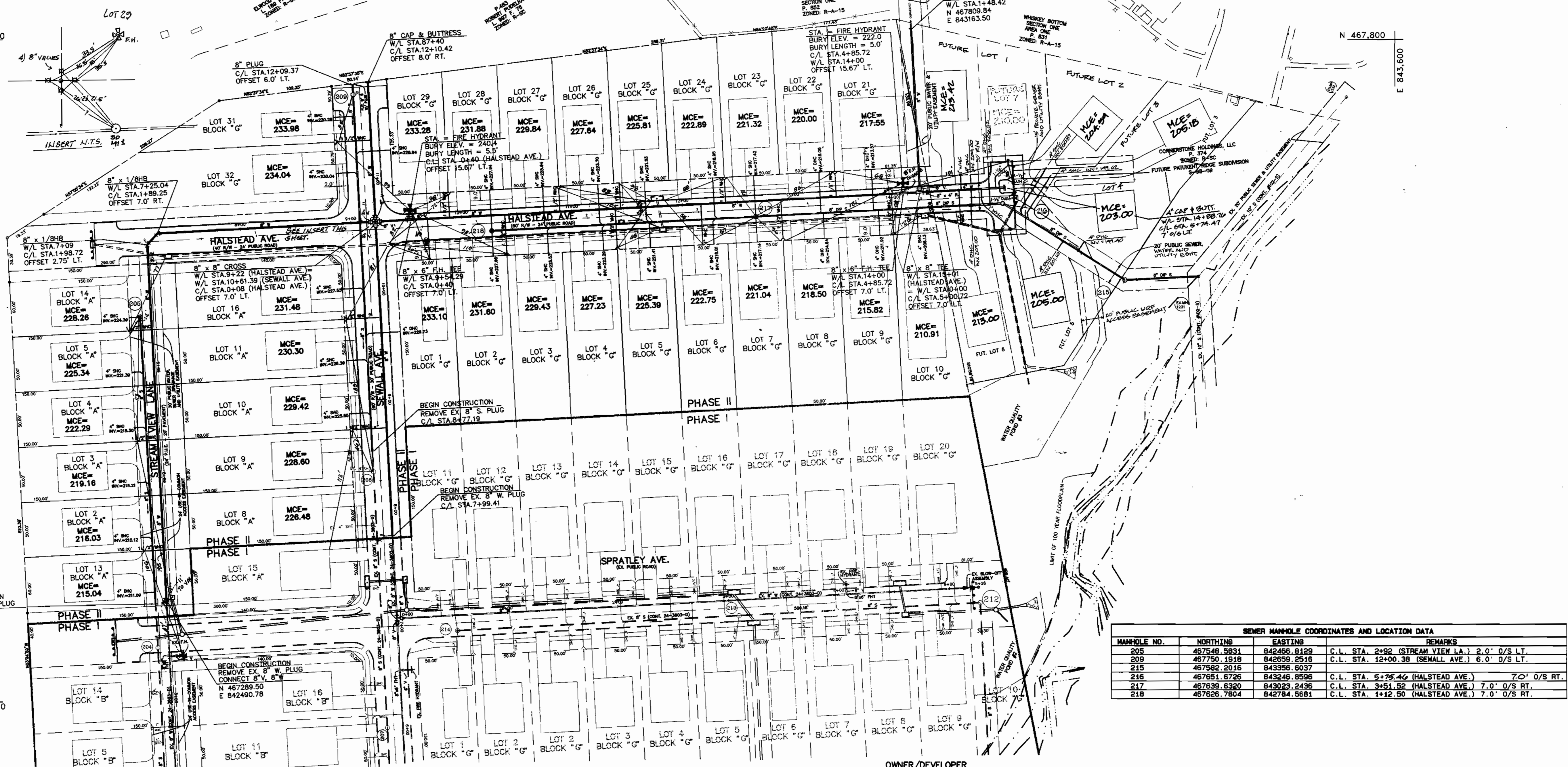
FUTURE "WATER"				FUTURE "SEWER"			
LOT#	M*W	F.H. VAL	ENSET	LOT#	F.H. VAL	M*W	INLET
2	42'	101'	35'	3	136'	82'	30'
4	24'	102'	15'	4	136'	82'	70'
5	31'	108'	35'	5	64'	81'	45'
6	42'	82'	50'	6	64'	81'	45'
7	43'	101.5'	37'	7	80'	30'	41'
1	44.5'	54.5'	55'	1	82'	36.5'	44'



4" DROP HOUSE CONNECTION TO SEWER MAIN
 NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL. II
 WATER AND SEWER - APPENDIX 13



TYPICAL WATER HOUSE CONNECTIONS
 NOT TO SCALE



SEWER MANHOLE COORDINATES AND LOCATION DATA

MANHOLE NO.	NORTHING	EASTING	REMARKS
205	467948.9831	842466.9129	C.L. STA. 2+92 (STREAM VIEW L.A.) 2.0' O/S LT.
209	467750.1919	842659.2516	C.L. STA. 12+00.38 (SEWALL AVE.) 6.0' O/S LT.
215	467582.2016	843956.6037	
216	467651.6726	843246.8596	C.L. STA. 5+75.46 (HALSTEAD AVE.) 7.0' O/S RT.
217	467639.6320	843023.2436	C.L. STA. 3+51.52 (HALSTEAD AVE.) 7.0' O/S RT.
218	467626.7804	842784.5681	C.L. STA. 1+12.50 (HALSTEAD AVE.) 7.0' O/S RT.

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

PLAN VIEW
 SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 Date: 10-27-98

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 Date: 11/10/98

BENCHMARK ENGINEERING, INC.
 8400 BALTIMORE NATIONAL PARK - SUITE 418 - BELLEFONTAINE, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644

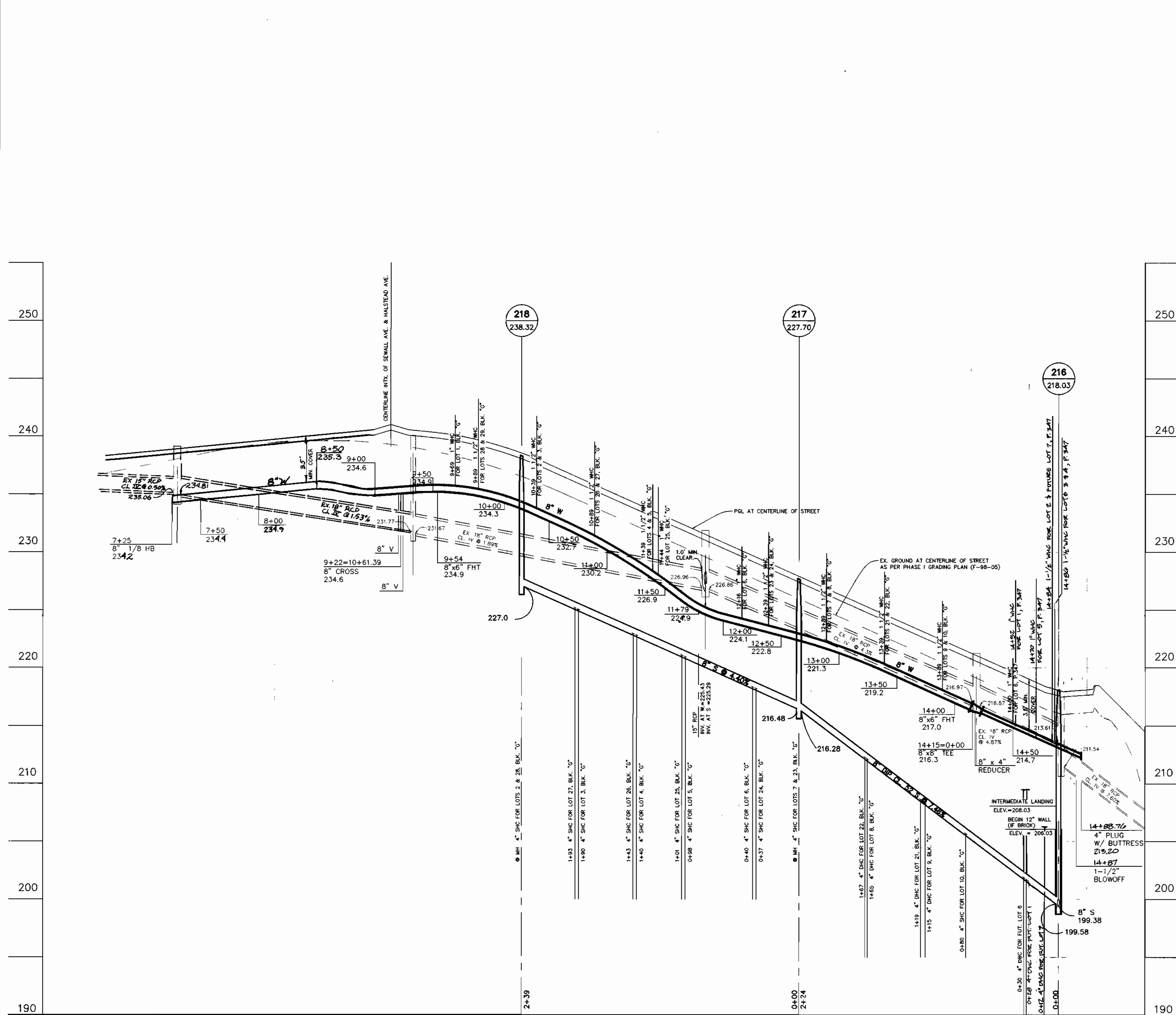
Donald Man

DES.	DRN.	CHK.	DATE:	BY NO.	REVISIONS	DATE
YSL	YSL	CAM	10/6/98			
				KRI 3	ASBUILT CONDITIONS SEWER ONLY ADDED TO PLAN	10/1/99
				KRI 2	ASBUILT CONDITIONS ADDED TO PLAN WATER ONLY	8/18/99
				MLR 1	REVISED HALSTEAD AVE. FROM A CUL-DE-SAC TO A TEE-TURNAROUND	3-10-99

PHASE II WATER & SEWER EXTENSION PLAN
 600 SCALE MAP NO. 50 BLOCK "3"

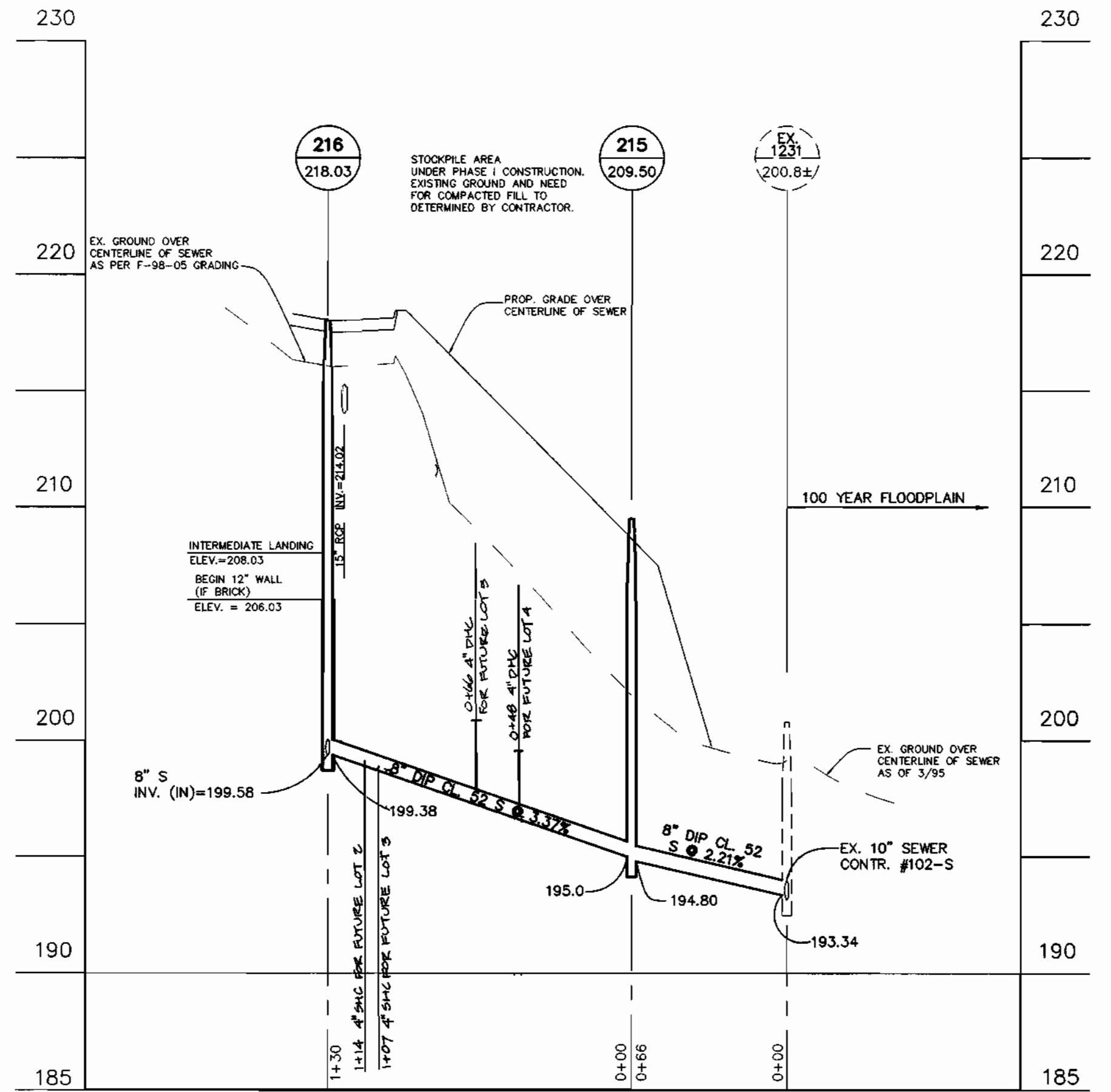
NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D

SCALE AS SHOWN
 SHEET 2 OF 4

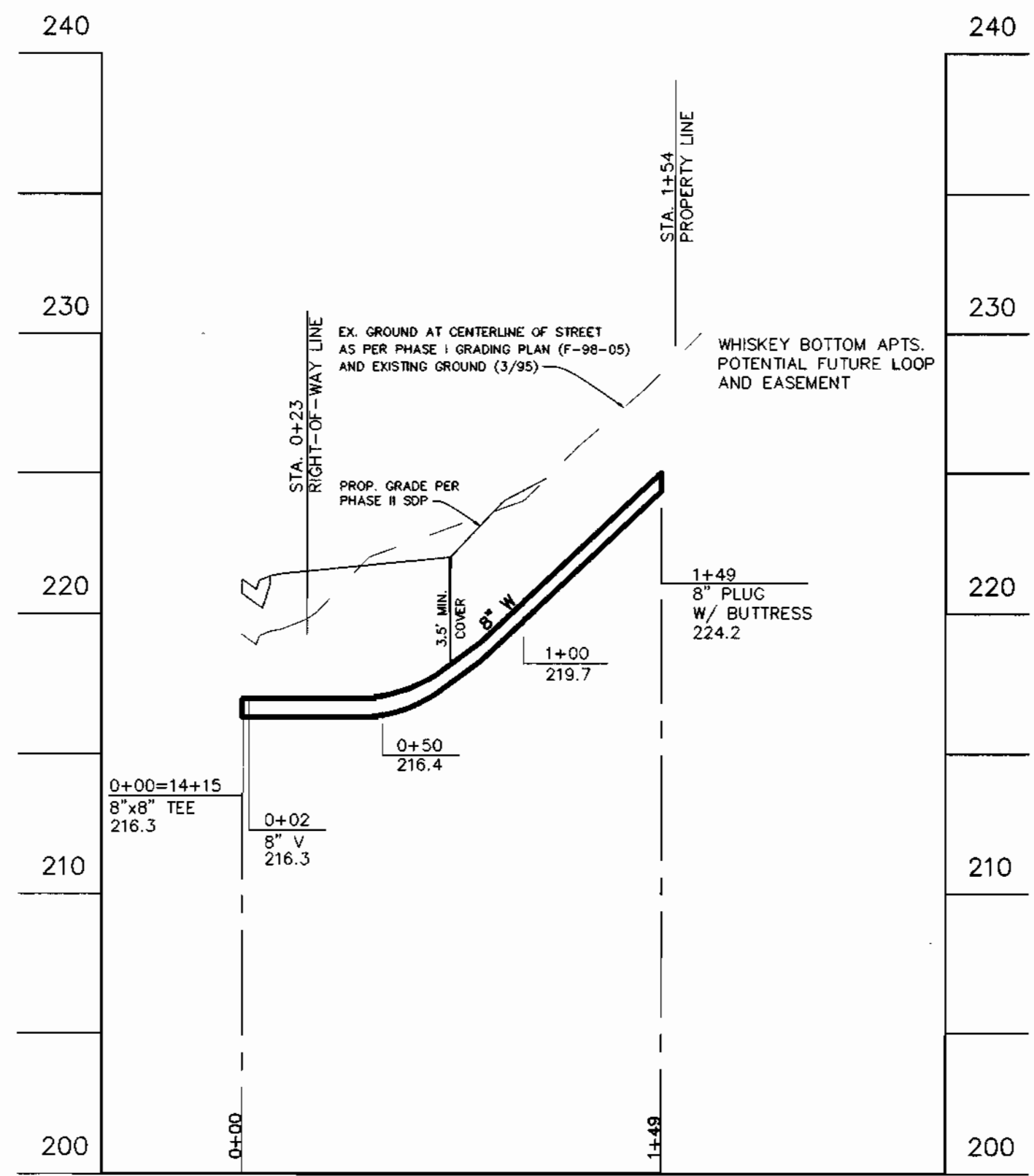


WATER AND SEWER PROFILE AT HALSTEAD AVENUE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565



OUTFALL SEWER PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'



WATER LINE PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Bainger
 CHIEF, BUREAU OF UTILITIES
 DATE: 10-27-98

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/30

BENCHMARK
 ENGINEERS - LAND SURVEYORS - PLANNERS
 ENGINEERING, INC.
 [Signature]
 8480 BALTHORE NATIONAL PIKE - SUITE 418 - ELICHTHILL CITY, MARYLAND 21043
 PHONE: 410-482-8100 FAX: 410-482-8844

DES: YSL
 DRN: YSL
 CHK: CAM
 DATE: 10/6/98

NO.	REVISIONS	DATE
1	REVISE HALSTEAD AVE FROM A CUL-DE-SAC TO A TEE - TURNAROUND	3-10-99
2	RAISE 8" WATER, HALSTEAD AVE. (LT.)	12/29/98

PHASE II
WATER & SEWER EXTENSION
 PROFILES
 600 SCALE MAP NO. 50
 BLOCK "3"

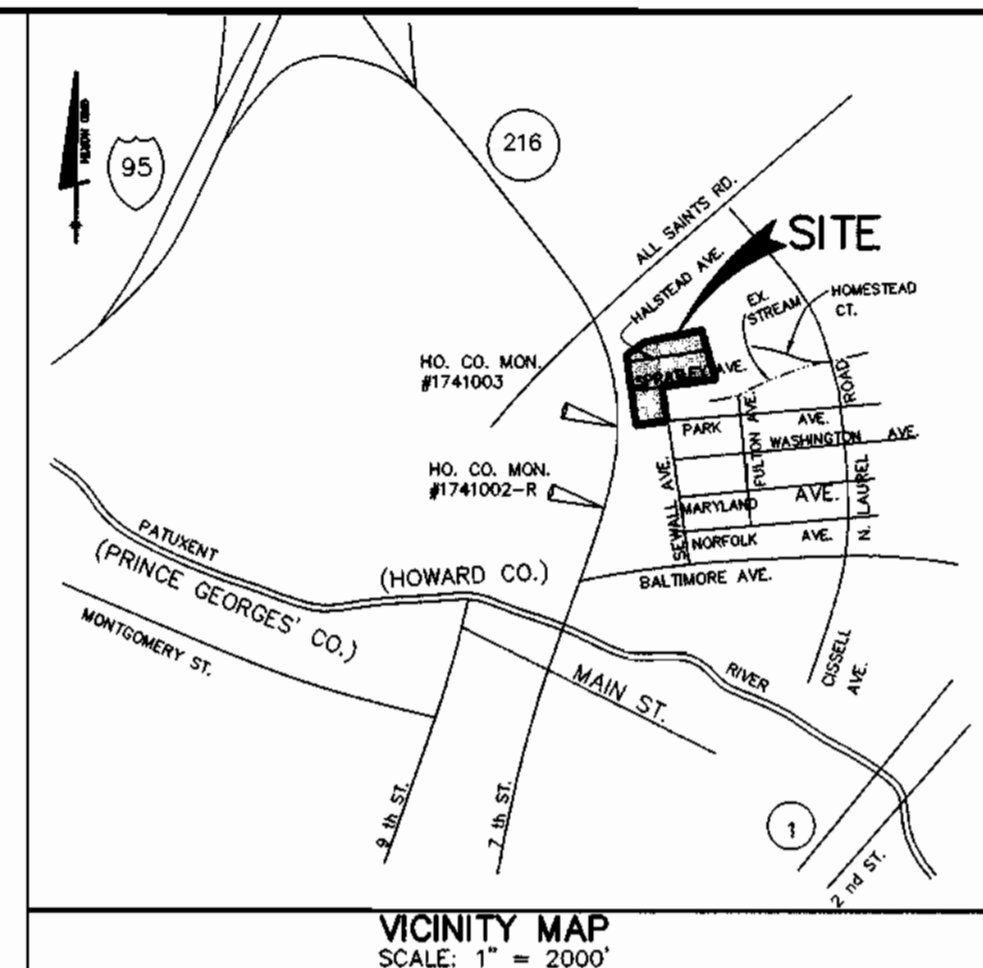
NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D

SCALE AS SHOWN
 SHEET 4 OF 4

Plotted: OCT 28, 1998
 Acad: Dwg: \0946\60462754

WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3704-D

NORTH LAUREL PARK PHASE II 6 th. ELECTION DISTRICT HOWARD COUNTY, MARYLAND



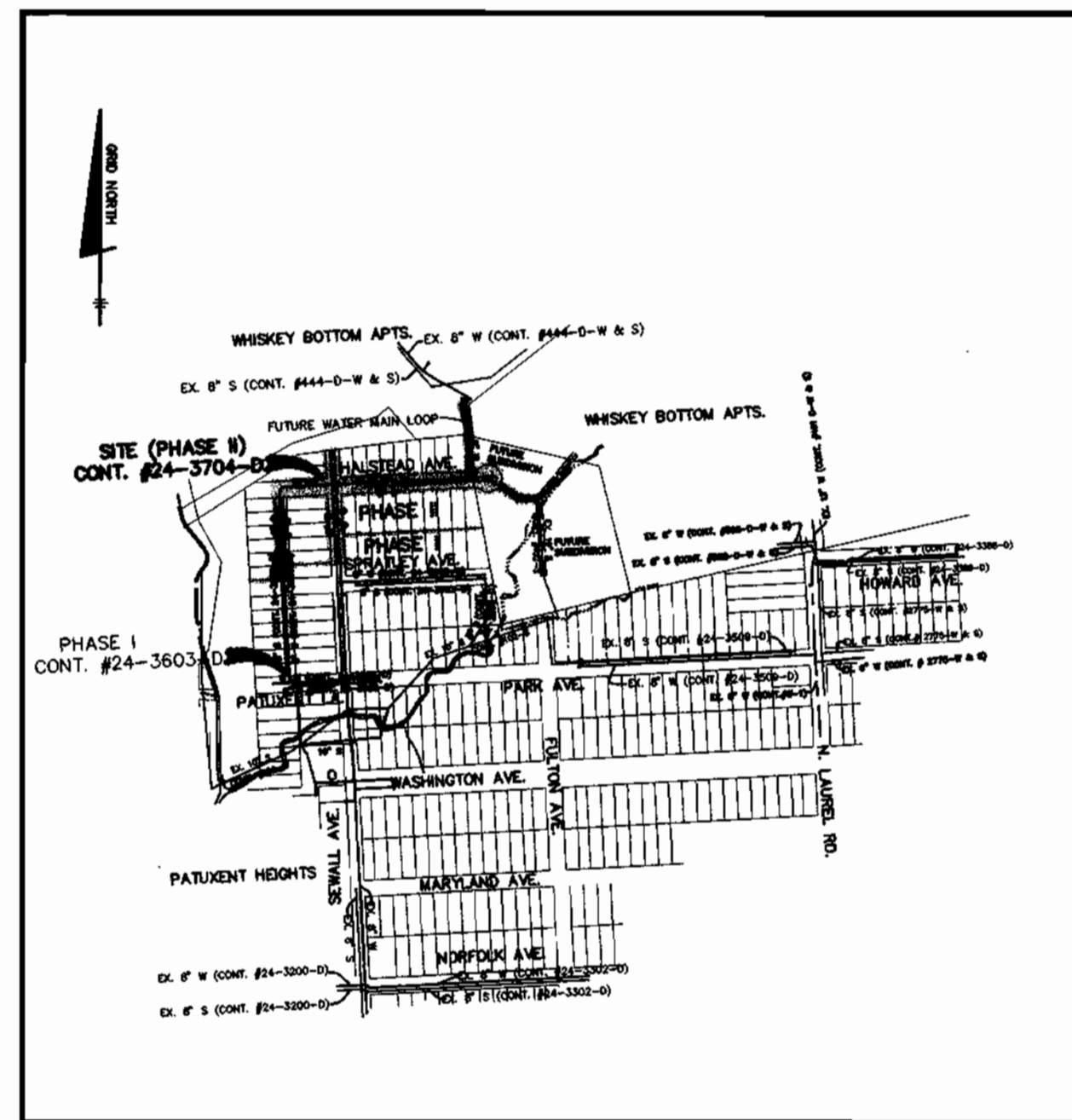
BENCH MARK DATA

HOWARD COUNTY MON. # 1741003
CONC. MON. ON WEST SIDE OF
RTE. 216 AND 0.2' BELOW SURFACE.
ELEV. = 198.395

HOWARD COUNTY MON. # 1741002-R
CONC. MON. ON TOP OF BANK
EAST OF EAST EDGE MAC. OF
RTE. 216 FLUSH WITH SURFACE.
ELEV. = 197.368

GENERAL NOTES

- PART 1 - 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 (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 THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE 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. 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 \oplus 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 MADE 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.....410-531-5533
 - BALTIMORE GAS & ELECTRIC CO.....410-850-4620
 - BALTIMORE GAS & ELECTRIC CO.....410-787-9068
 - MISS UTILITY.....1-800-257-7777
 - COLONIAL PIPELINE CO.....410-705-1390
 - BUREAU OF UTILITIES.....410-313-4900
 - HOWARD CO. DEPT. OF PUBLIC WORKS.....410-313-4900
 - 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.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
 - ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 - TOP OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" TO 4' COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - 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 DPM REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.



LOCATION MAP

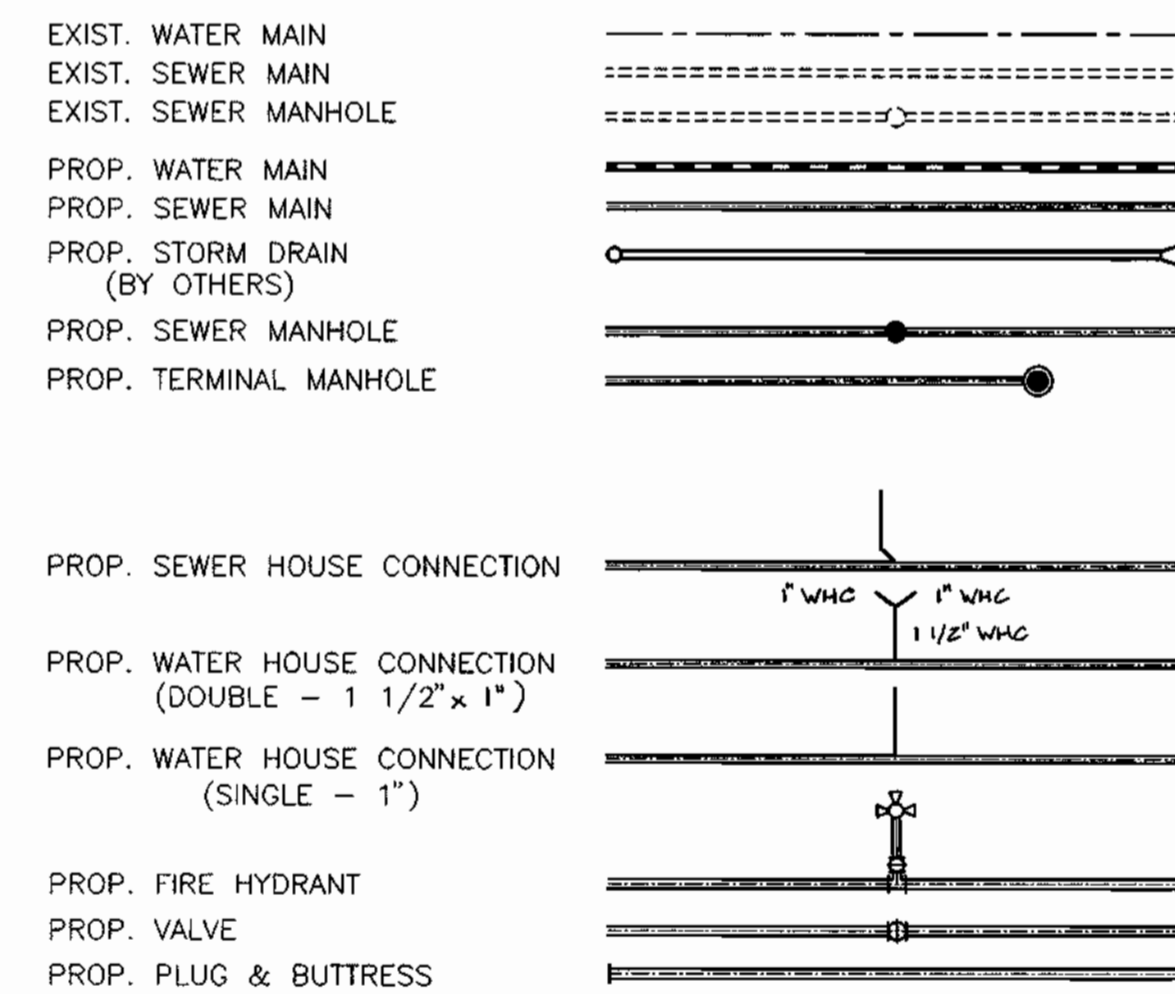
SCALE: 1" = 600'

WATER AND SEWER COUNTY CODE

WATER CODE: 005
SEWER CODE: 7141500
TEST GRADIENT: 550

TYPE OF BUILDING: SINGLE FAMILY DETACHED
NUMBER OF LOTS: 34 (7 AS FUTURE LOTS)
NUMBER OF SHC'S: 37
NUMBER OF WHC'S: 38
DRAINAGE AREA: PATUXENT
TREATMENT PLANT: LITTLE PATUXENT

LEGEND



WATER AS-BUILT QUANTITIES				
ITEM	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	1889 L.F.	1889	CHP. 3/4" S.C.	A-1 ATLANTIC STATE
8" x 8" CROSS	1 EA.	1 EA.	MESH/ST.	TYLER PIPE
8" VALVES	4 EA.	5 EA.	CAST	MUEHLER
8" x 6" FHT	2 EA.	2 EA.	MESH/ST.	"
FIRE HYDRANTS	2 EA.	2 EA.	"	"
1 1/2" DRAIN	1 EA.	1 EA.	K COPPER	HARRIS-LEE
1" WHC	304 L.F.	284	"	"
1 1/2" WHC	441 L.F.	441	"	"
8" SEWER (PVC)	835 L.F.	835	"	"
MANHOLES	6 EA.	6	"	"
4" SHC	642 L.F.	642	"	"
4" DHC	497 L.F.	497	"	"
4" WATER	54 L.F.	54	"	"
8" DIP CL. 2 SEWER	418 L.F.	418	"	"

NAME OF UTILITY CONTRACTOR: *GAINE Co.*

SURVEY AND DRAFTING AS-BUILT DATE: _____

SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3 & 4	PROFILES

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

John R. Blanton 11/1/98
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmer 11/4/98
NATURAL RESOURCE CONSERVATION SERVICE DATE

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
3691 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. Bessinger 10-27-98
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Mike Dammus 11/2/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK ENGINEERING, INC.
DESIGNERS • LAND SURVEYORS • PLANNERS

Donald Moran

2440 BALTIMORE NATIONAL PIKE • SUITE 410 • BLOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6844

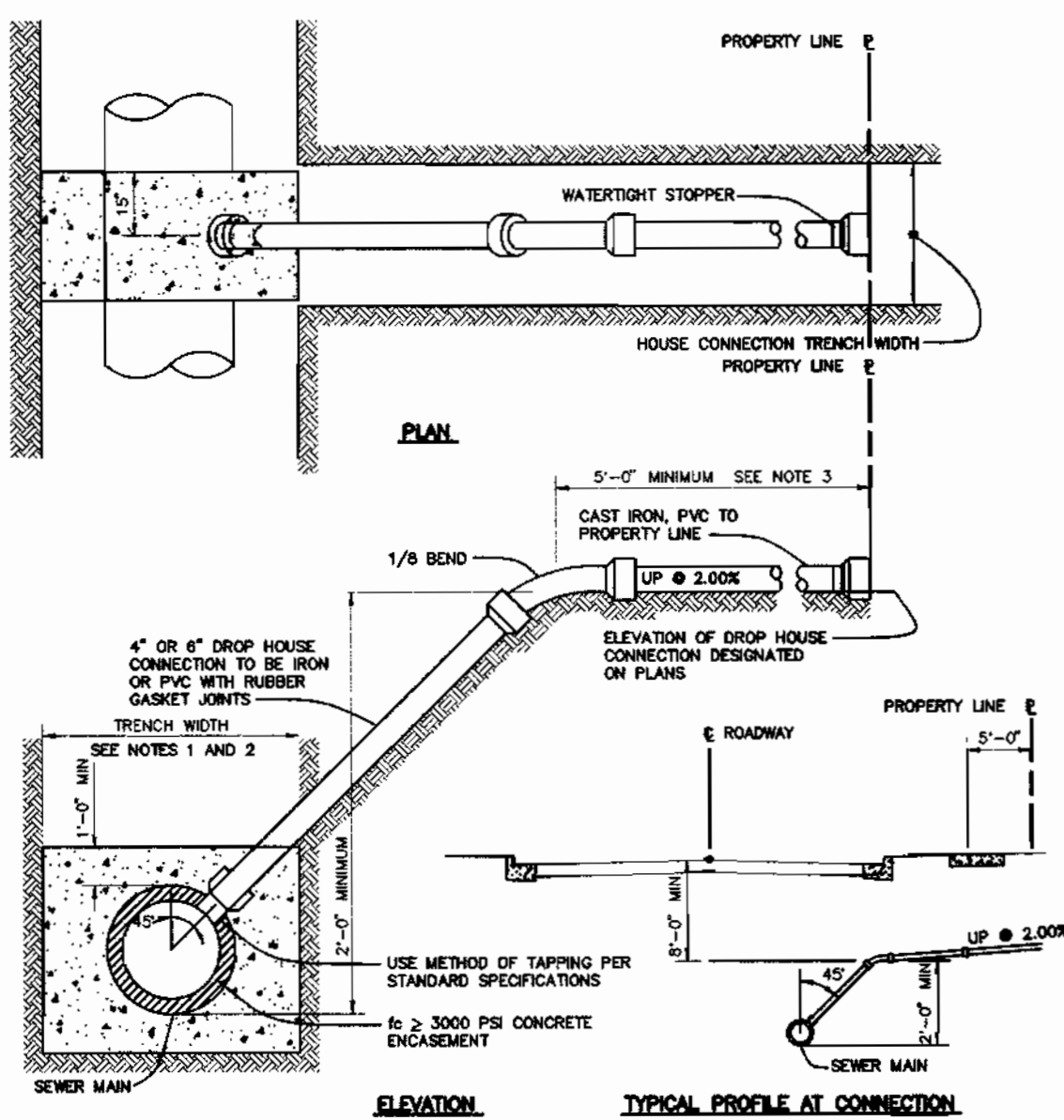
DES: YSL			
DRN: YSL			
CHK: CAM	K.C.I. 2	AS-BUILT CONDITIONS ADDED TO PLAN	6/00
	M.C.R. 1	REMOVED WALSTEAD AVE FROM CUL-DE-SAC	3-10-99
DATE: 10/6/98	BY NO.	REVISIONS	DATE

**PHASE II
WATER & SEWER EXTENSION
AND SEWER RELOCATION
TITLE SHEET**

NORTH LAUREL PARK
LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
AND FUTURE LOTS 1-6, PARCEL 374

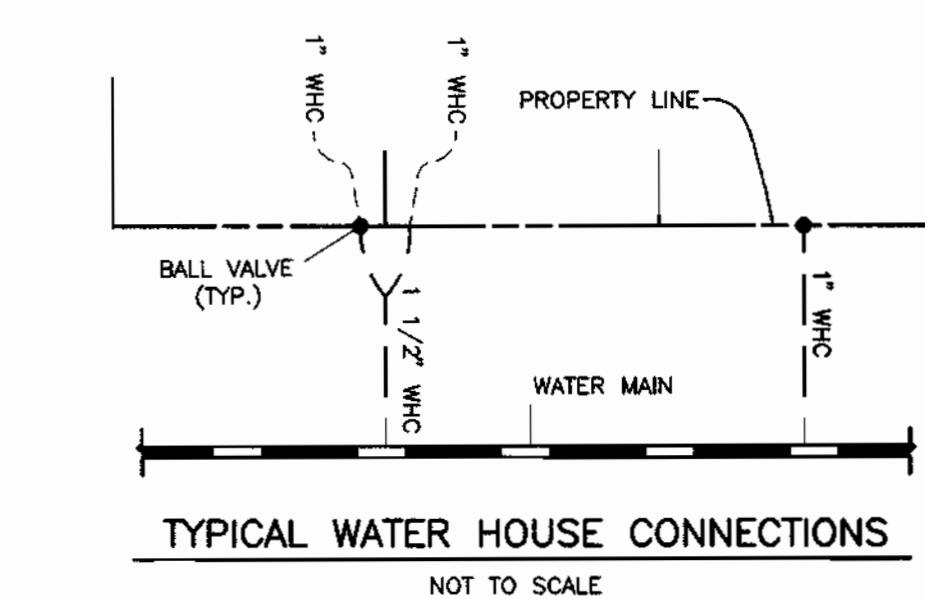
HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3704-D

SCALE AS SHOWN
SHEET 1 OF 4



NOTES:
 1. S.I.C. TO 8" THRU 12" SEWER MAIN USE SADDLE.
 2. S.I.C. TO PROPOSED SEWER MAINS, USE TESTS, SEE VOLUME IV, STANDARD DETAIL, S2.12.
 3. S.I.C. AT PROPERTY LINE SHALL TERMINATE WITH MINIMUM PIPE LENGTH OF 5'-0" AT THE PROPERTY LINE.
 NOT APPLICABLE FOR A SHORTER LENGTH THAN 5'-0" AT THE PROPERTY LINE.

4" DROP HOUSE CONNECTION TO SEWER MAIN
 NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL II
 WATER AND SEWER - APPENDIX 13



MANHOLE NO.	NORTHING	EASTING	REMARKS
205	467548.5831	842466.8129	C.L. STA. 2+92 (STREAM VIEW I.A.) 2.0' O/S LT.
209	467750.1918	842659.2516	C.L. STA. 12+00.38 (SEWALL AVE.) 6.0' O/S LT.
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216	467651.6726	843246.8596	C.L. STA. 5+75.46 (HALSTEAD AVE.) 7.0' O/S RT.
217	467639.6320	843023.2436	C.L. STA. 3+51.92 (HALSTEAD AVE.) 7.0' O/S RT.
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OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

PLAN VIEW
 SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 10-27-98

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 10-27-98

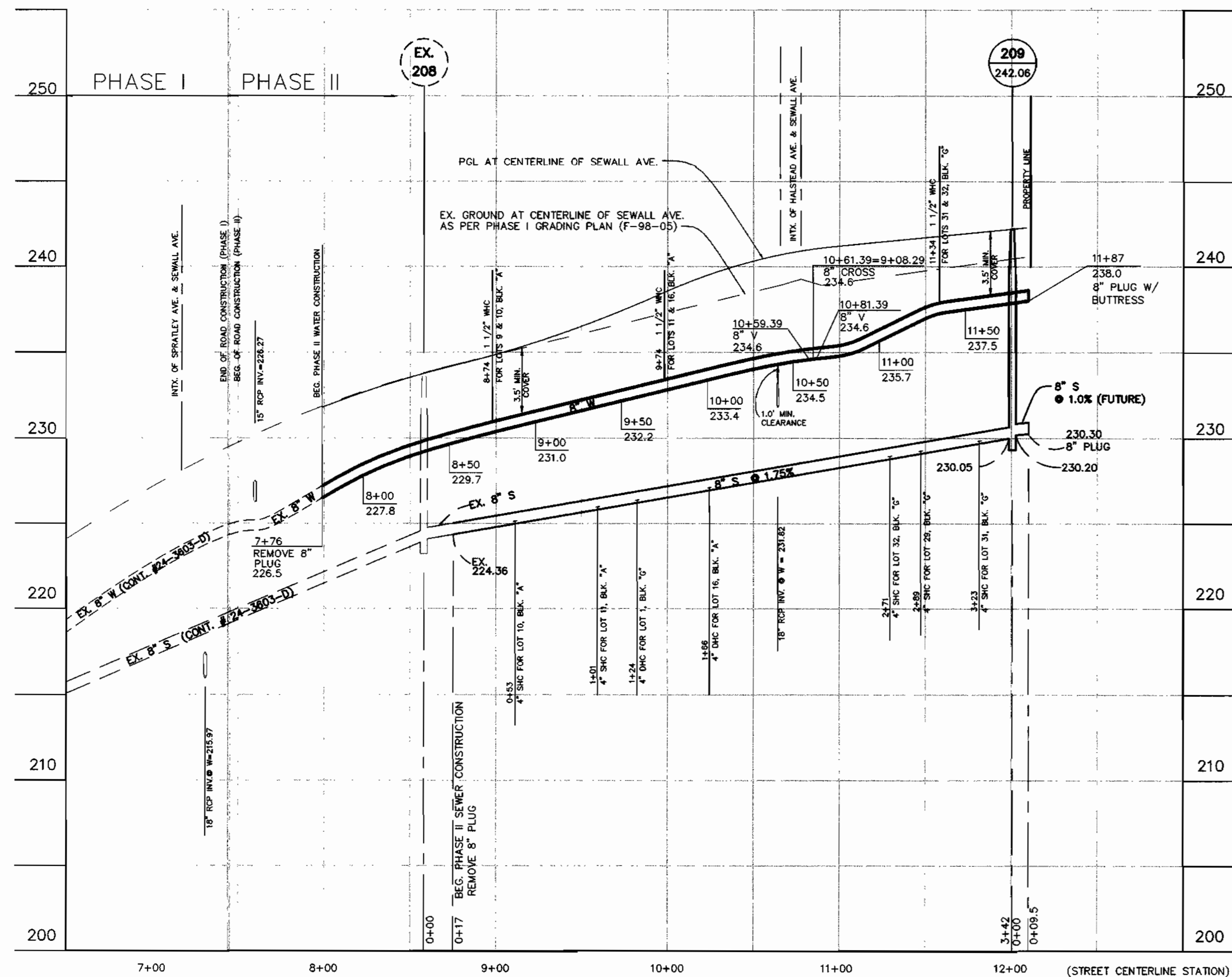
BENCHMARK ENGINEERING, INC.
 8400 BALTIMORE NATIONAL PARK - SUITE 418 - BELLOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644

DES: YSL					
DRN: YSL					
CHK: CAM	KRI	2	ASBUILT CONDITIONS ADDED TO PLAN WATER MAIN	5/21/00	
DATE: 10/6/98	MLR	1	REVISES HALSTEAD AVE. FROM A CUL-DE-SAC TO A TEE-TURNAROUND	3-12-99	
BY NO.			REVISIONS	DATE	

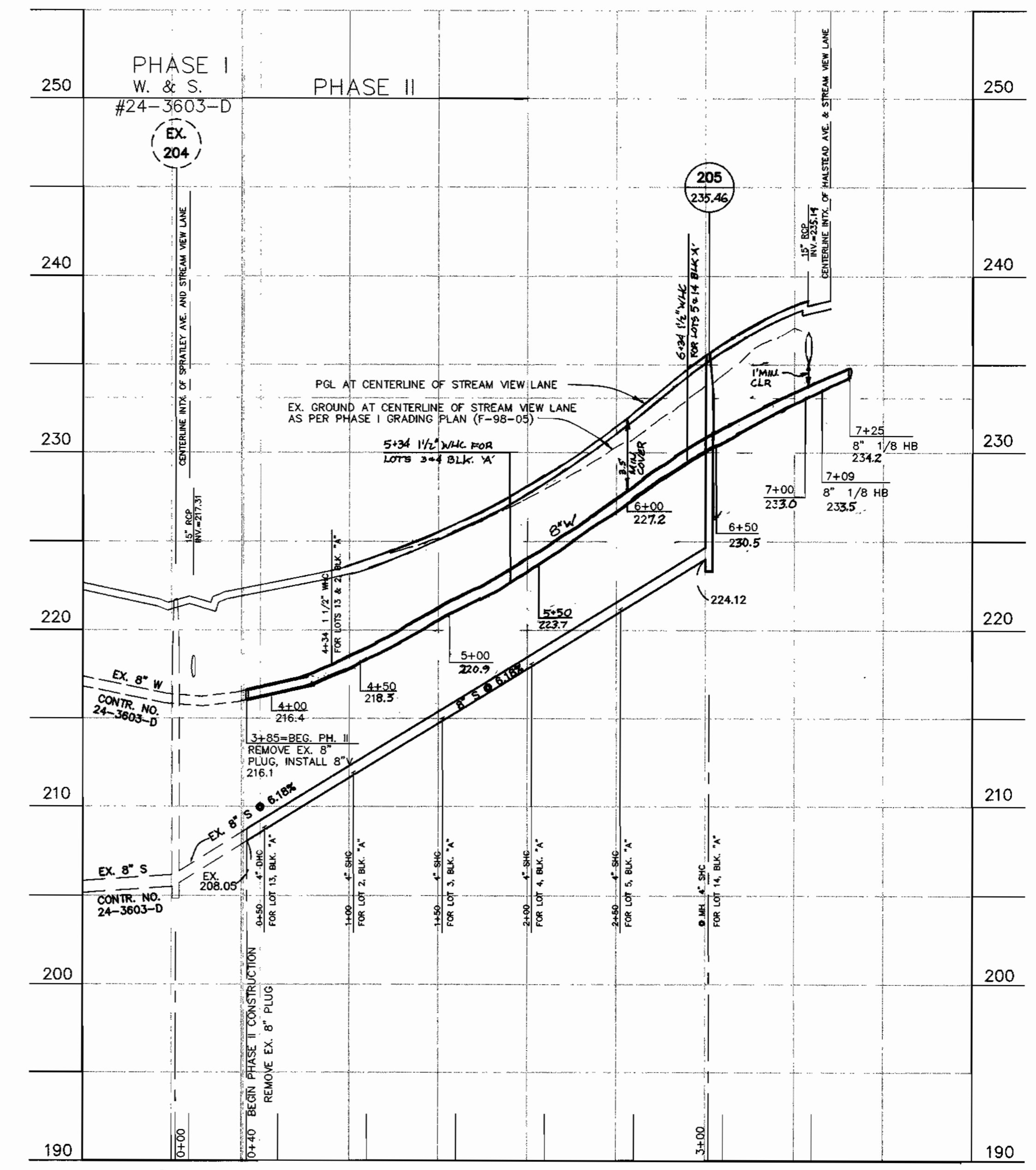
PHASE II WATER & SEWER EXTENSION PLAN
 600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D

SCALE AS SHOWN
 SHEET 2 OF 4



WATER & SEWER PROFILE AT SEWALL AVENUE
 SCALE: H: 1"=50'
 V: 1"=5'



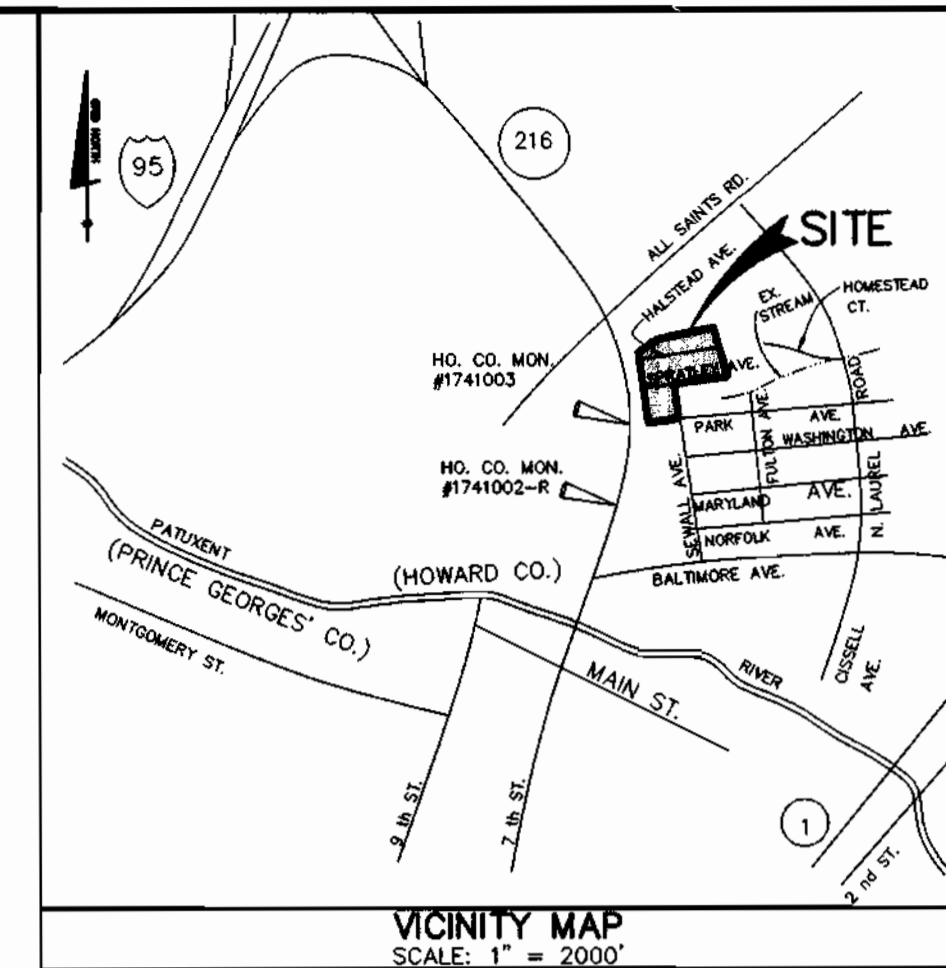
WATER & SEWER PROFILE AT STREAM VIEW LANE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities: <i>Robert W. Bennett</i> 10-27-98		DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division: <i>Michael J. Bennett</i> 10-27-98		BENCHMARK ENGINEERING, INC. 6400 BALTIMORE NATIONAL PIKE • SUITE 418 • ELICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6444		DES: YSL DRN: YSL CHK: CAM DATE: 10/6/98		PHASE II WATER & SEWER EXTENSION PROFILES 600 SCALE MAP NO. 50 BLOCK "3"		NORTH LAUREL PARK LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A"; LOTS 1-10, 21-29, 31 & 32 BLOCK "G" AND FUTURE LOTS 1-6, PARCEL 374 HOWARD COUNTY ELECTION DISTRICT NO. 6 CONTRACT NO. 24-3704-D SCALE AS SHOWN SHEET 3 OF 4	
Plotted: OCT. 5, 1998 Acad Dwg: \0946\60460253		DATE: 10/29/98 BY: J.C.		REVISIONS: RAISE 8"W, MH 205 RIM ELEV.; STREAM VIEW LU		DATE: 10/29/98		BLOCK "3"		SHEET 3 OF 4	

WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3704-D

NORTH LAUREL PARK PHASE II 6 th. ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCH MARK DATA

HOWARD COUNTY MON. # 1741003
CONC. MON. ON WEST SIDE OF
RTE. 216 AND 0.2' BELOW SURFACE.
ELEV. = 198.395

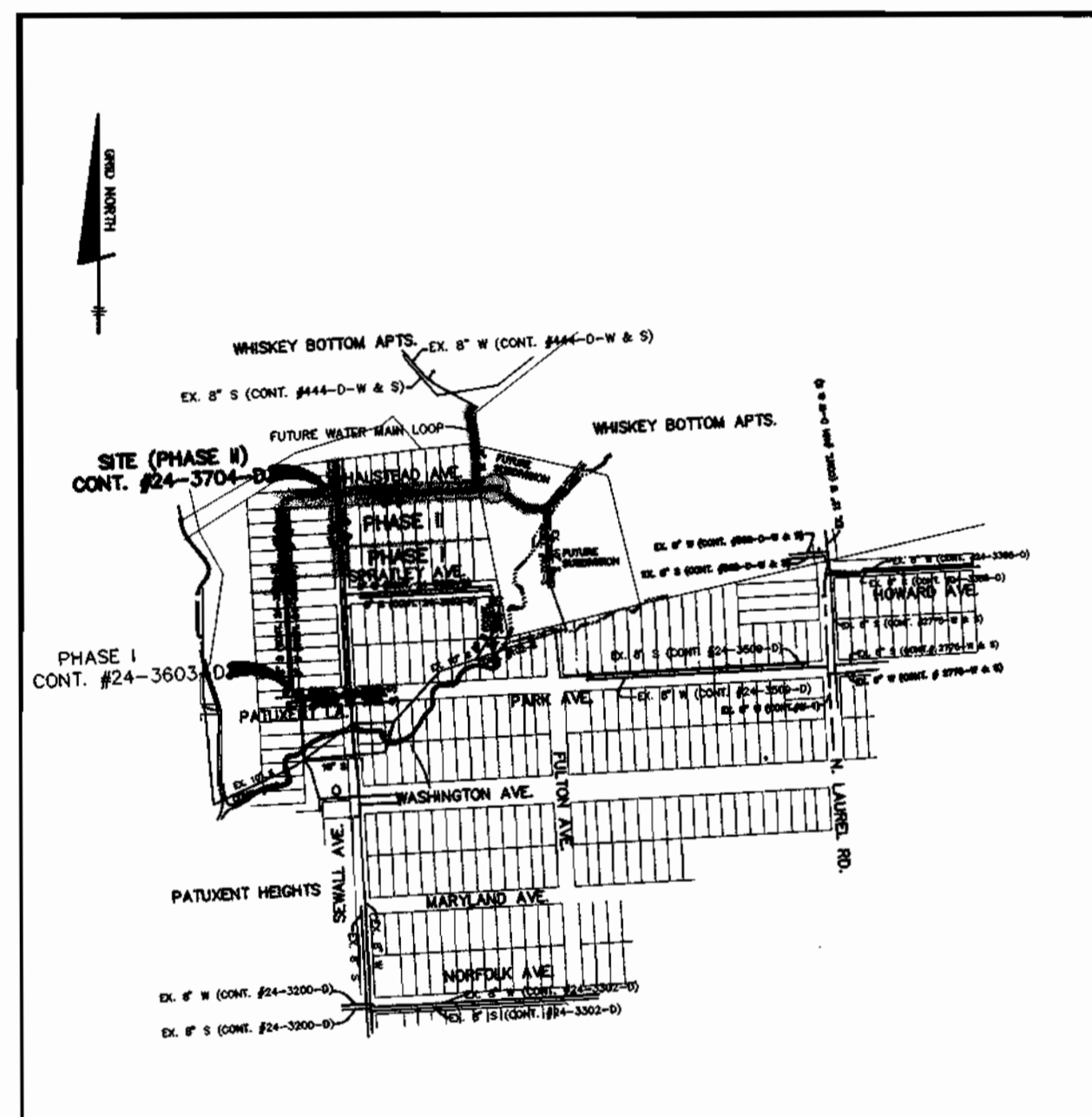
HOWARD COUNTY MON. # 1741002-R
CONC. MON. ON TOP OF BANK
EAST OF EAST EDGE MAC. OF
RTE. 216 FLUSH WITH SURFACE.
ELEV. = 197.368

GENERAL NOTES

- PART 1 - 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 (MAD-27).
 - 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 THE 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. 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 Φ 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..... 410-531-9533
 - BALTIMORE GAS & ELECTRIC CO..... 410-850-4620
 - CONTRACTOR SERVICES..... 410-787-9088
 - BALTIMORE GAS & ELECTRIC CO..... 410-787-9088
 - UNDERGROUND DAMAGE CONTROL..... 1-800-257-7777
 - MISS UTILITY..... 410-795-1390
 - COLONIAL PIPELINE CO..... 410-795-1390
 - BUREAU OF UTILITIES..... 410-313-4900
 - HOWARD CO. DEPT. OF PUBLIC WORKS..... 410-313-4900
 - 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.
 - PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY MAINTENANCE OPERATIONS.
 - ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 - TOP OF ALL WATER MAINS HAVE A MINIMUM OF 3'-6" TO 4' COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - 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 DPM REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

- PART 2 - WATER**
- ALL WATER MAINS TO BE D.I.P. CLASS 92 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' TO 4' 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 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.

- PART 3 - SEWER**
- ALL SEWER MAINS SHALL BE DIP. AND 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 18" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL 95.52 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.



LOCATION MAP

SCALE: 1" = 600'

WATER AND SEWER COUNTY CODE

WATER CODE: 005
SEWER CODE: 7141500
TEST GRADIENT: 550

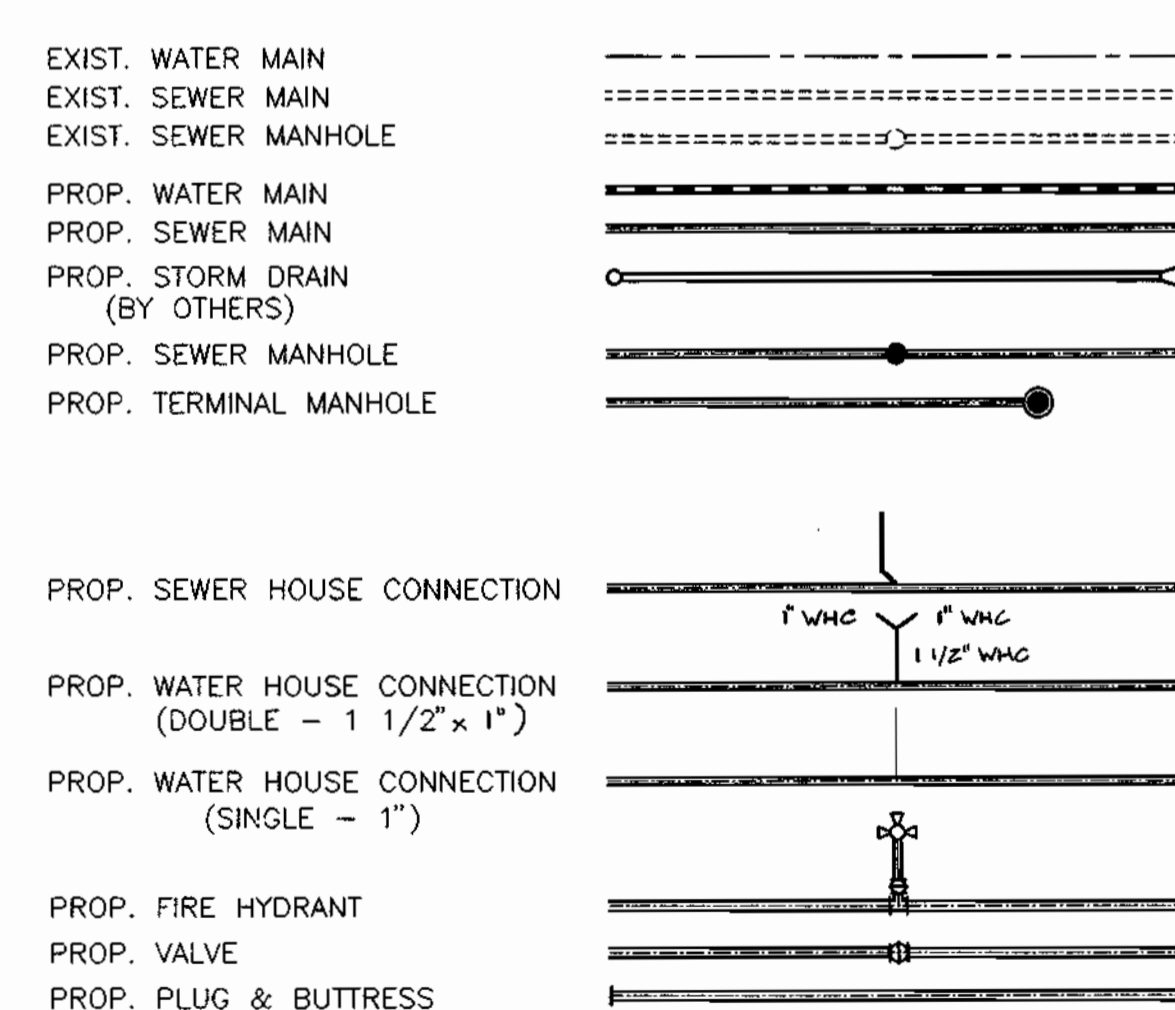
TYPE OF BUILDING: SINGLE FAMILY DETACHED
NUMBER OF LOTS: 34 (7 AS FUTURE LOTS)
NUMBER OF SHCS: 37
NUMBER OF WHCS: 35
DRAINAGE AREA: PATUXENT
TREATMENT PLANT: LITTLE PATUXENT

WATER AS-BUILT QUANTITIES				
ITEM	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	1889 L.F.	1889	DIP. 92	ALL ATLANTIC STATE
8" x 8" TEE	1 EA.	1 EA.	MESH. ST.	TIKES PIPE
8" x 8" CROSS	1 EA.	1 EA.	"	"
8" VALVES	4 EA.	5 EA.	GATE	MUELLER
8" x 8" FHT	2 EA.	2 EA.	CAST. IR.	"
FIRE HYDRANTS	2 EA.	2 EA.	"	"
1 1/2" DRAIN	1 EA.	1	K COPPER	BARB-LEE
1" NHC	304 L.F.	304	"	"
1 1/2" NHC	441 L.F.	441	"	"
8" SEWER (PVC)	839 L.F.	839	"	"
MANHOLES	6 EA.	6	"	"
4" SHC	642 L.F.	642	"	"
4" JHC	297 L.F.	297	"	"
4" WATER	54 L.F.	54	"	"
8" DIP CL. 2 SEWER	419 L.F.	419	"	"

NAME OF UTILITY CONTRACTOR: *Game Co.*

SURVEY AND DRAFTING AS-BUILT DATE: _____

LEGEND



SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3 & 4	PROFILES

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

John R. Robertson 11/14/98
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmon 11/14/98
NATURAL RESOURCE CONSERVATION SERVICE DATE

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
9691 NORFOLK AVENUE
LAUREL, MARYLAND 20723
410-792-2565

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. Bessinger 10-27-98
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Mike Dammus 11/5/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
ENGINEERING, INC.

Donald Moan

2400 BALTIMORE NATIONAL PIKE - SUITE 418 - BLOTTOWN CITY, MARYLAND 21043
PHONE: 410-455-6105 FAX: 410-455-6644

DES: YSL			
DRN: YSL			
CHK: CAM	K.C.I	2	AS-BUILT CONDITIONS ADDED TO PLAN
	MGR	1	REVISED WALSTEAD AVE FROM CUL-DE-SAC TO T-INTERCHANGE
DATE: 10/6/98	BY NO.		
			REVISIONS
			DATE

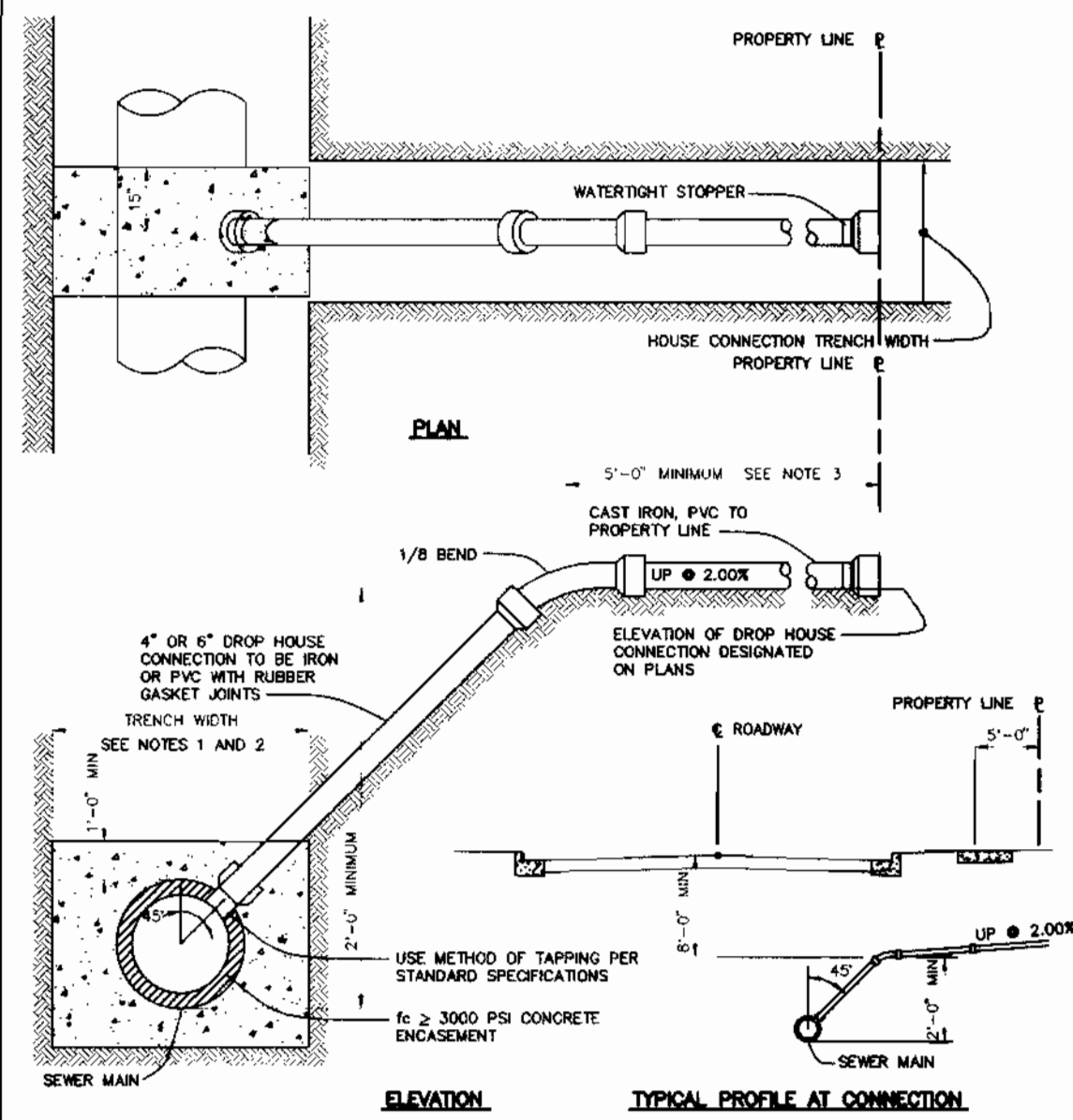
PHASE II
WATER & SEWER EXTENSION
AND SEWER RELOCATION
TITLE SHEET

600 SCALE MAP NO. 50

NORTH LAUREL PARK
LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
AND FUTURE LOTS 1-6, PARCEL 374

HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3704-D

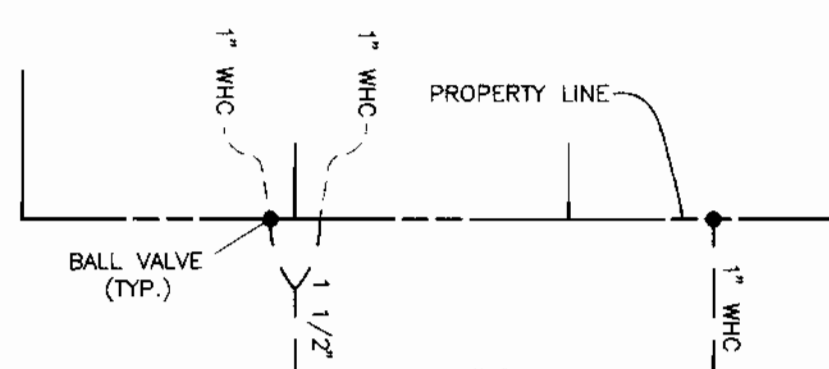
SCALE AS SHOWN
SHEET 1 OF 4



NOTES:
 1. S.I.C. TO 8" THRU 12" SEWER MAIN USE SADDLE.
 2. S.I.C. TO PROPOSED SEWER MAINS, USE TEES; SEE VOLUME IV, STANDARD DETAIL S2.12.
 3. S.I.C. AT PROPERTY LINE SHALL TERMINATE WITH MINIMUM PIPE LENGTH OF 5'-0" DETAIL IS NOT APPLICABLE FOR A SHORTER LENGTH THAN 5'-0" AT THE PROPERTY LINE.

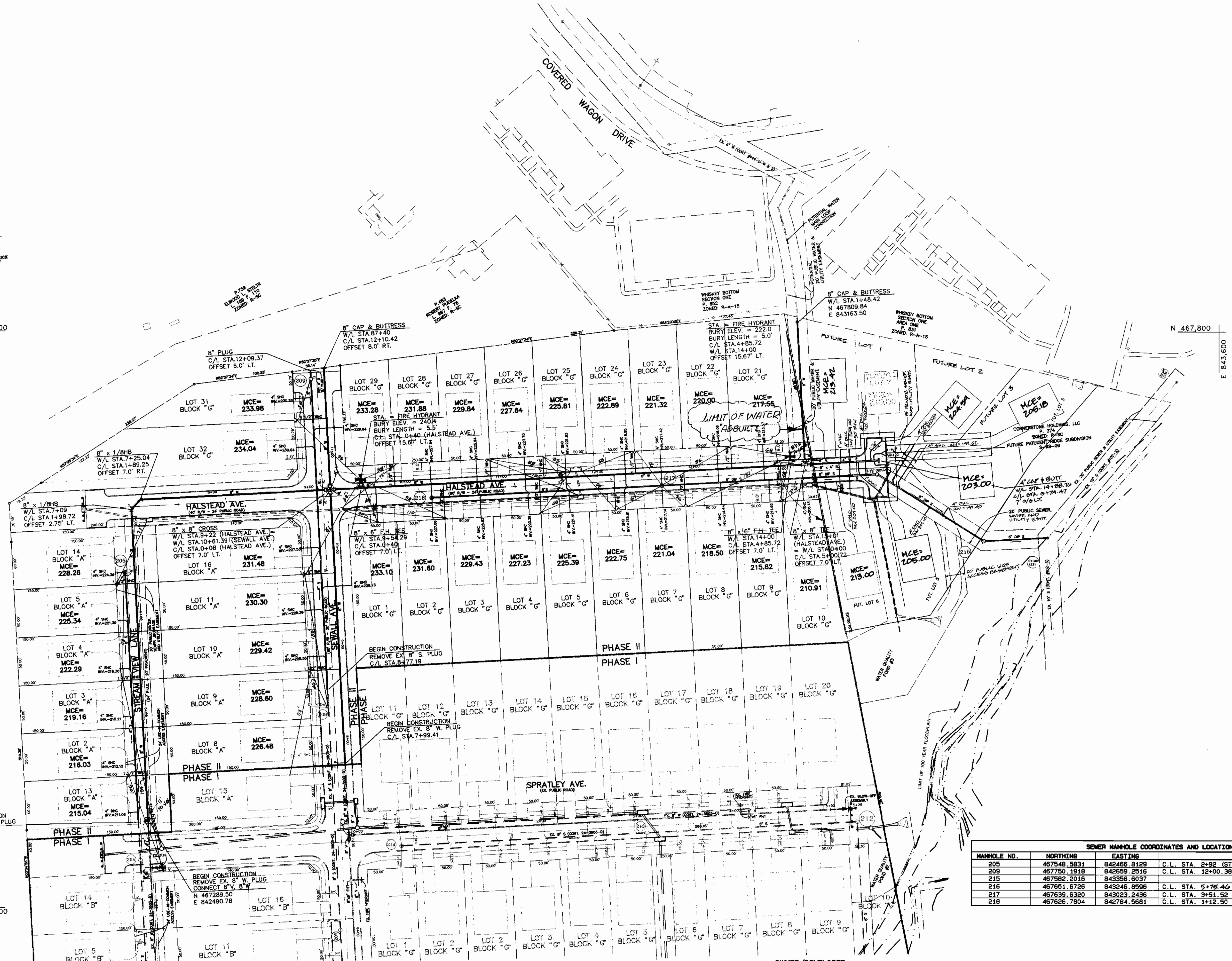
4" DROP HOUSE CONNECTION TO SEWER MAIN

NOT TO SCALE
 HOWARD COUNTY DESIGN MANUAL - VOL II
 WATER AND SEWER - APPENDIX 1.3



TYPICAL WATER HOUSE CONNECTIONS

NOT TO SCALE

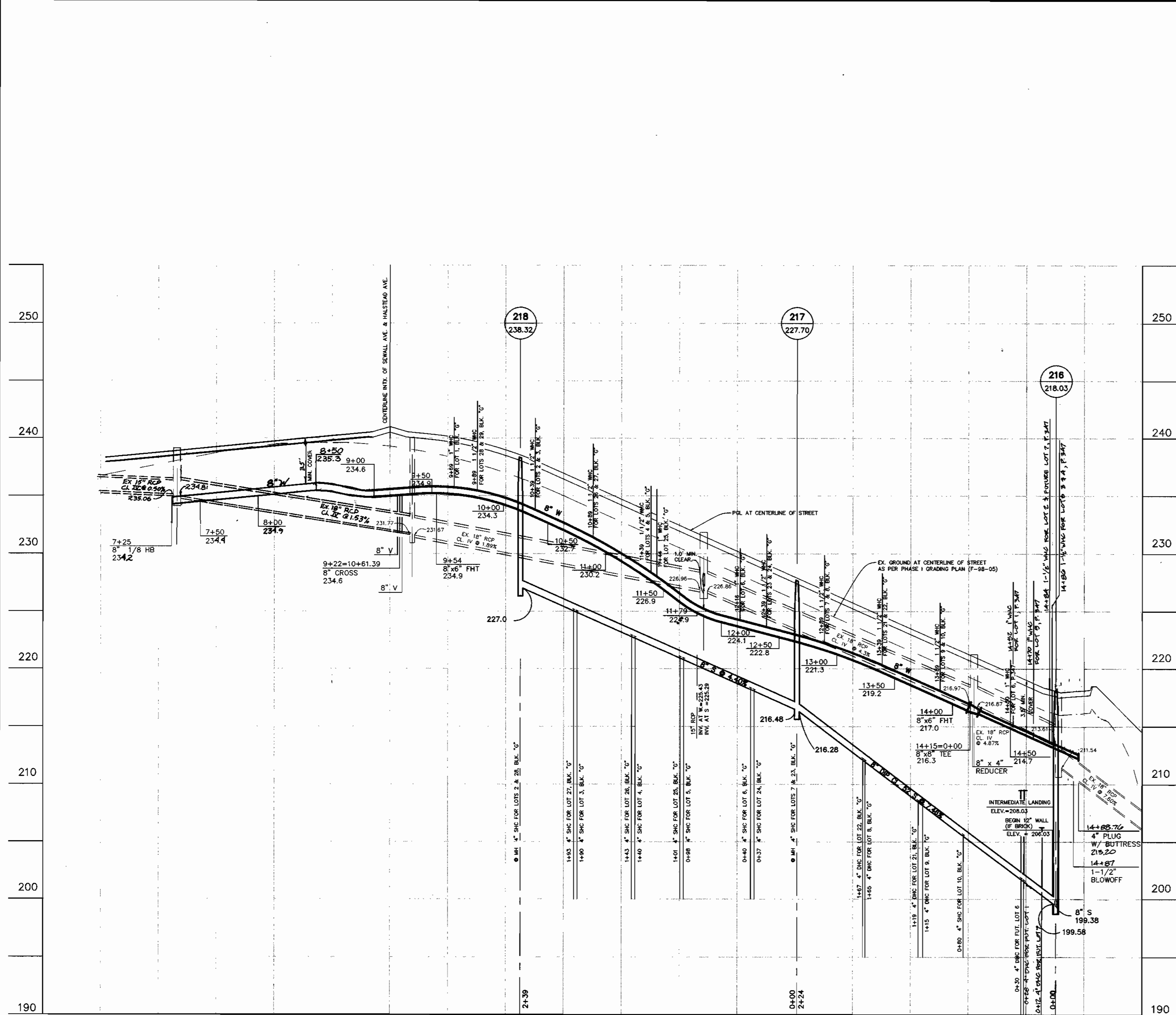


PLAN VIEW
 SCALE: 1" = 50'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565

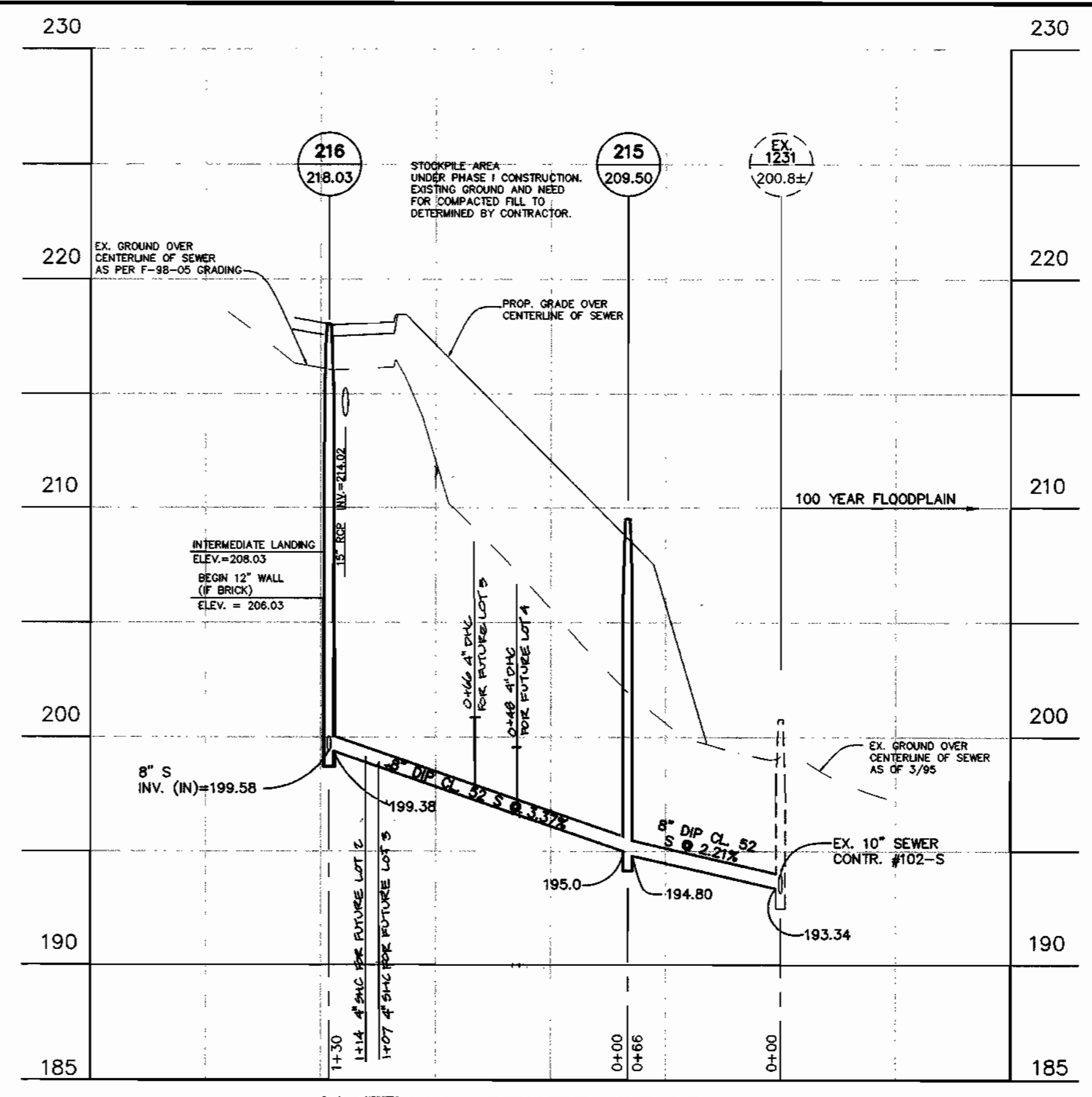
SEWER MANHOLE COORDINATES AND LOCATION DATA				
MANHOLE NO.	NORTHING	EASTING	C.L. STA.	REMARKS
205	467548.5831	842486.8129	C.L. STA. 2+92 (STREAM VIEW L.A.)	2.0' O/S LT.
209	467750.1918	843659.2516	C.L. STA. 12+00.38 (SEWALL AVE.)	6.0' O/S LT.
215	467582.2016	843365.6037		
216	467651.6726	843246.8596	C.L. STA. 5+75.46 (HALSTEAD AVE.)	7.0' O/S RT.
217	467639.6320	843023.2436	C.L. STA. 3+51.52 (HALSTEAD AVE.)	7.0' O/S RT.
218	467626.7804	842784.5681	C.L. STA. 1+12.50 (HALSTEAD AVE.)	7.0' O/S RT.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities 10-27-98	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division 11/2/98	BENCHMARK ENGINEERING, INC. 9400 BALTIMORE NATIONAL PIKE - SUITE 418 - BLOOMINGTON CITY, MARYLAND 21043 PHONE: 410-485-8105 FAX: 410-485-6644	DES: YSL DRN: YSL CHK: CAM DATE: 10/6/98	REVISIONS 1. REVISE HALSTEAD AVE. FROM A CUL-DE-SAC TO A TEE-TURNAROUND 2. ASBUILT CONDITIONS ADDED TO PLAN WATER ONLY DATE: 5/21/00 DATE: 3-12-99	PHASE II WATER & SEWER EXTENSION PLAN 600 SCALE MAP NO. 50 BLOCK "3"	NORTH LAUREL PARK LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A"; LOTS 1-10, 21-29, 31 & 32 BLOCK "G" AND FUTURE LOTS 1-6, PARCEL 374 HOWARD COUNTY ELECTION DISTRICT NO. 6 CONTRACT NO. 24-3704-D	SCALE AS SHOWN SHEET 2 OF 4
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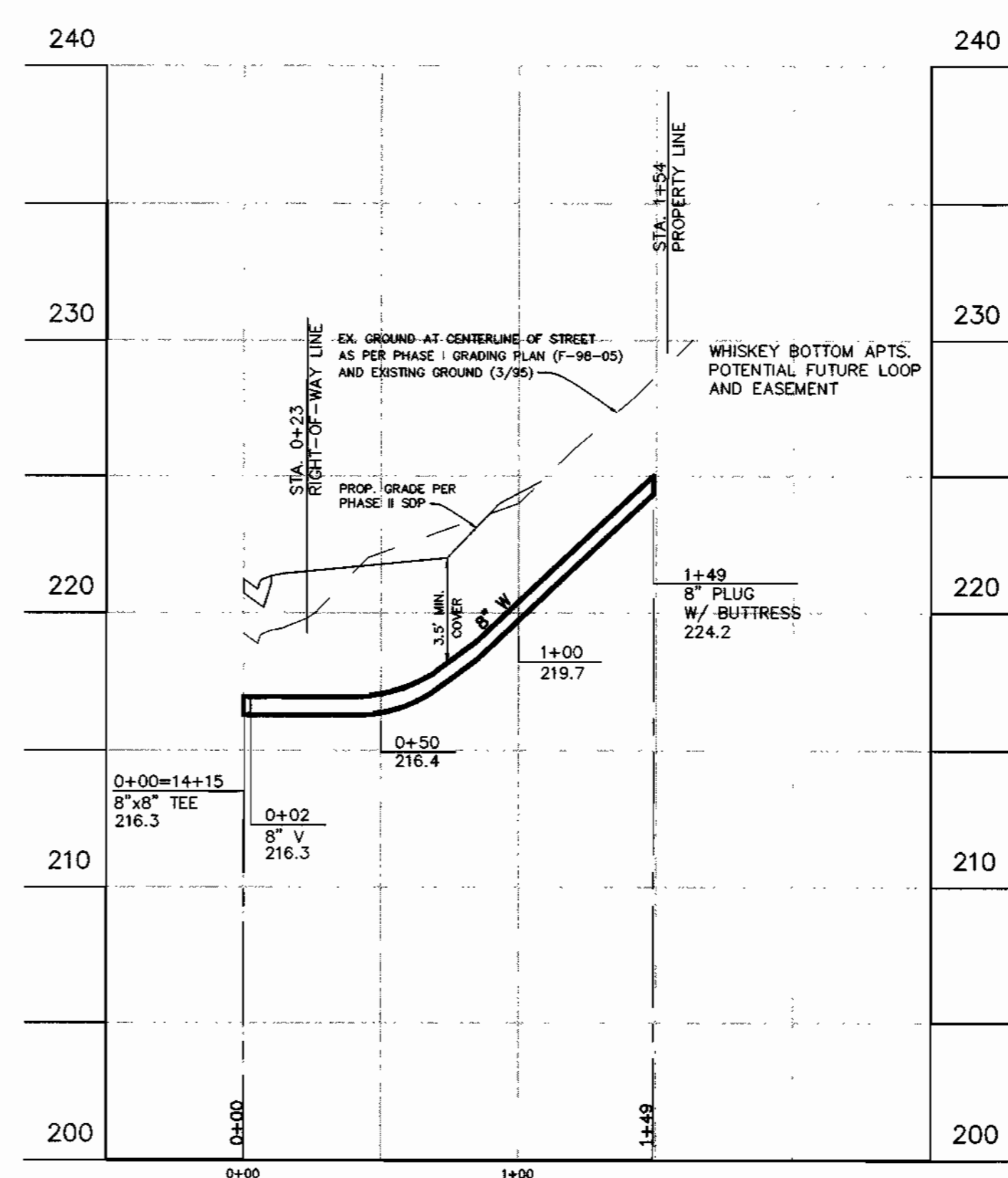


WATER AND SEWER PROFILE AT HALSTEAD AVENUE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 9691 NORFOLK AVENUE
 LAUREL, MARYLAND 20723
 410-792-2565



OUTFALL SEWER PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'



WATER LINE PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Bennett 10-27-98
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 11/3/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
 ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE - SUITE 415 - ELLSWORTH CITY, MARYLAND 21043
 PHONE: 410-465-8100 FAX: 410-465-9844

[Signature: Donald Mean]

DES: YSL					
DRN: YSL					
CHK: CAM	MCK	Z	REVISE HALSTEAD AVE FROM A CUL-DE-SAC TO A TEE-TURNAROUND	3-10-99	
DATE: 10/8/98	JC	I	RAISE 8" WATER, HALSTEAD AVE. (LT.)	12/29/98	
BY NO.			REVISIONS	DATE	

PHASE II
WATER & SEWER EXTENSION
 PROFILES
 600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
 LOTS 2-5, 8-11, 13, 14 & 16 BLOCK "A";
 LOTS 1-10, 21-29, 31 & 32 BLOCK "G"
 AND FUTURE LOTS 1-6, PARCEL 374
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3704-D

SCALE AS SHOWN
 SHEET 4 OF 4

Plotted: OCT. 5, 1998
 Acad Dwg: \0946\60460254