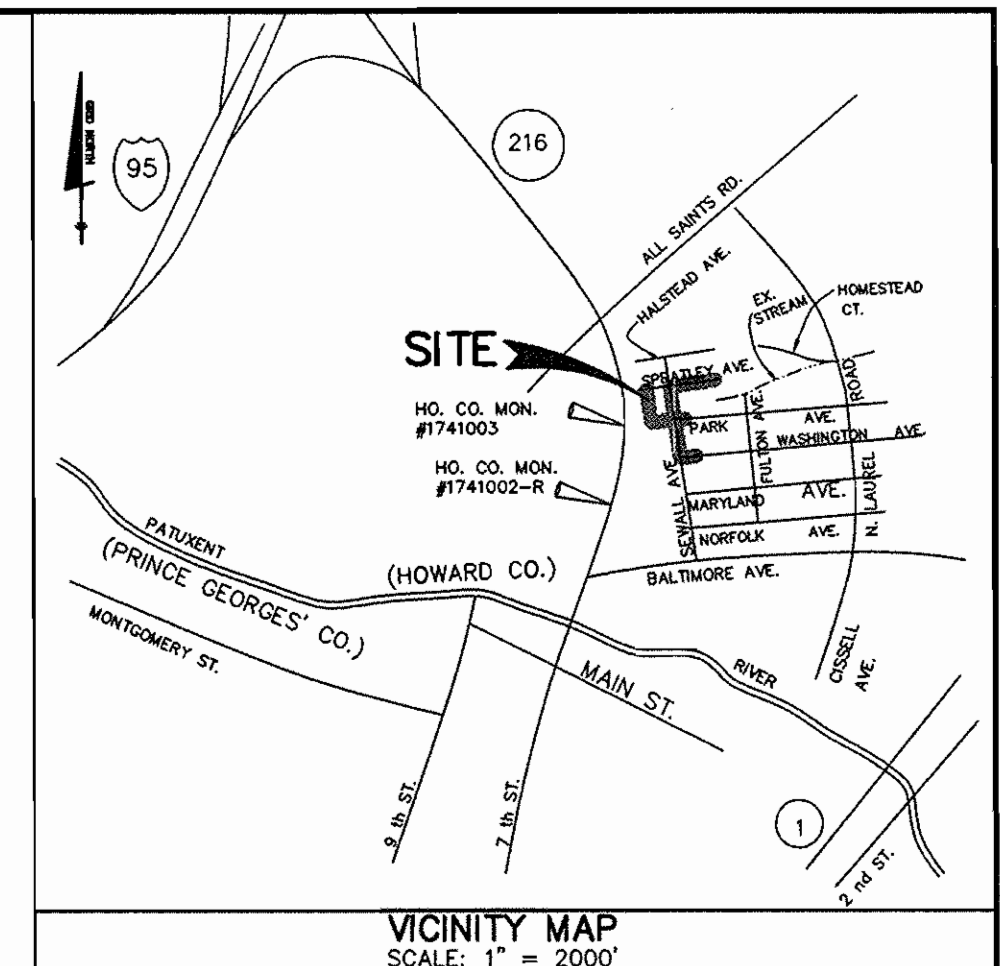


WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3603-D

NORTH LAUREL PARK PHASE I

6th. ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



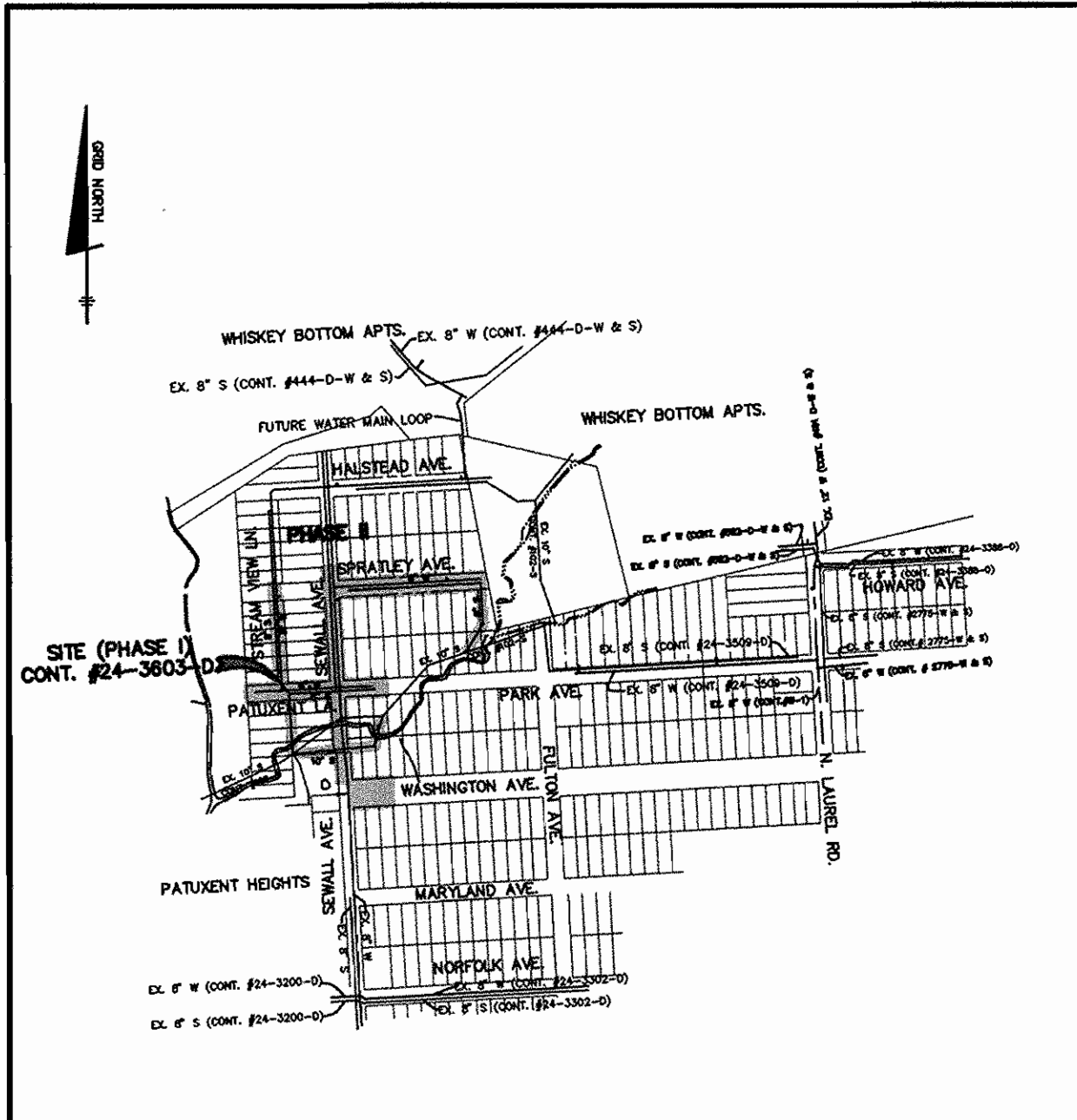
BENCH MARK DATA

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 (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 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.....531-5533
 - BALTIMORE GAS & ELECTRIC CO.....850-4620
 - BALTIMORE GAS & ELECTRIC CO.....787-9066
 - UNDERGROUND DAMAGE CONTROL.....1-800-257-7777
 - MISS UTILITY.....1-800-257-7777
 - COLONIAL PIPELINE CO.....795-1390
 - BUREAU OF UTILITIES.....313-4900
 - HOWARD CO. DEPT. OF PUBLIC WORKS.....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" 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 OPW REQUIREMENTS PER SECTION 18.114 (b) OF THE HOWARD COUNTY CODE.



LOCATION MAP

SCALE: 1" = 600'

WATER AND SEWER COUNTY CODE	TYPE OF BUILDING : SINGLE FAMILY DETACHED
WATER CODE: C05	NUMBER OF LOTS : 46*
SEWER CODE: 7141500	NUMBER OF SHCS : 46
TEST GRADIENT: 550	NUMBER OF WHCS : 46
	DRAINAGE AREA : PATUXENT
	TREATMENT PLANT: LITTLE PATUXENT
	* PHASE I: 64 LOTS, PHASE II: 2 LOTS (TOTAL=66)

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. SEWER HOUSE CONNECTION (SHC)	
PROP. SEWER DROP HOUSE CONNECTION (DHC)	
PROP. WATER HOUSE CONNECTION (WHC) (DOUBLE)	
PROP. WATER HOUSE CONNECTION (WHC) (SINGLE)	
PROP. FIRE HYDRANT	

- PART 2 - WATER**
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-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 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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL 65.52. 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			
ITEM	QUANTITIES ESTIMATED	AS-BUILT	
		QUANTITIES	TYPE MANUFACTURER/SUPPLIER
8" WATER	2,030 LF.		
4" WATER	180 LF.		
8"x8" TEE	2 EA.		
8"x8" CROSS	1 EA.		
8"x4" REDUCER	2 EA.		
8" VALVES	7 EA.		
8" x 6" FHT	5 EA.		
FIRE HYDRANTS	5 EA.		
3/4" MHC	222 L.F.		
4" MHC	588 L.F.		
12" SEWER (D.I.P.)	156 LF.		
10" SEWER (D.I.P.)	116 LF.		
8" SEWER (PVC)	2386 LF.		
8" SEWER (D.I.P.)	47 LF.		
MANHOLES	46 EA.		
4" SHC	792 LF.		
4" DHC	330 LF.		
STREAM CROSSING	130 LF.		
1 1/2" DRAIN	2 EA.		

NAME OF UTILITY CONTRACTOR: _____

SURVEY AND DRAFTING AS-BUILT DATE: _____

SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3-5	PROFILES

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

John R. Robertson 9/24/97
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

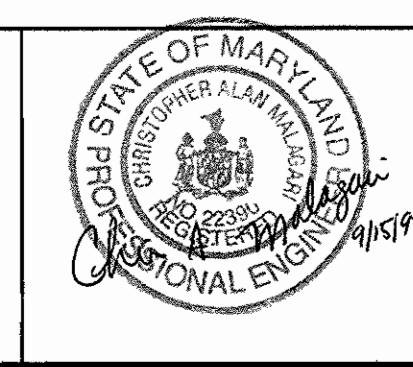
Shelby Simmons 9/24/97
NATURAL RESOURCES CONSERVATION SERVICE DATE

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
7405 BUCKS HAVEN LANE
HIGHLAND, MARYLAND 20777
(410) 988-9146

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert J. Berman 9-17-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Shelby Simmons 9/17/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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



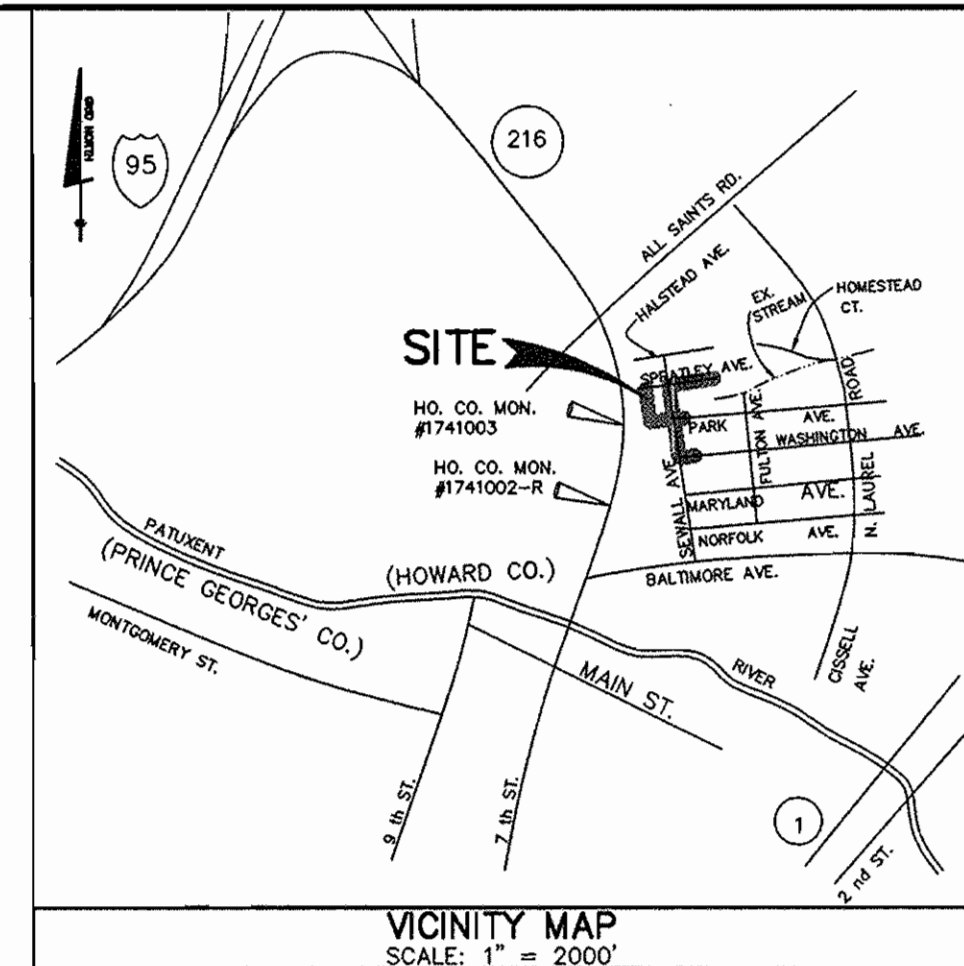
DES: YSL			
DRN: YSL			
CHK: CAM	JMC 3	REVISE PER NEW LAYOUT BLOCKS "I" & "J"	2/98
	YSL 2	REV. PER COUNTY COMMENTS OF AUG. 8, 1997	8/97
	YSL 1	REV. PER COUNTY COMMENTS OF MAY 8, 1997	5/97
DATE: 4/97	BY NO.	REVISIONS	DATE

PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
TITLE SHEET
600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
LOTS 13 THRU 14, BLOCK "C"; LOTS 11 THRU 20, BLOCK "G";
LOTS 1 THRU 10, AND LOTS 12 THRU 14, BLOCK "H";
LOTS 29 THRU 31, BLOCK "I"; AND LOTS 29 THRU 31, BLOCK "J"
HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D
SCALE AS SHOWN
SHEET 1 OF 5

WATER AND SEWER MAIN EXTENSIONS CONTRACT NO. 24-3603-D

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



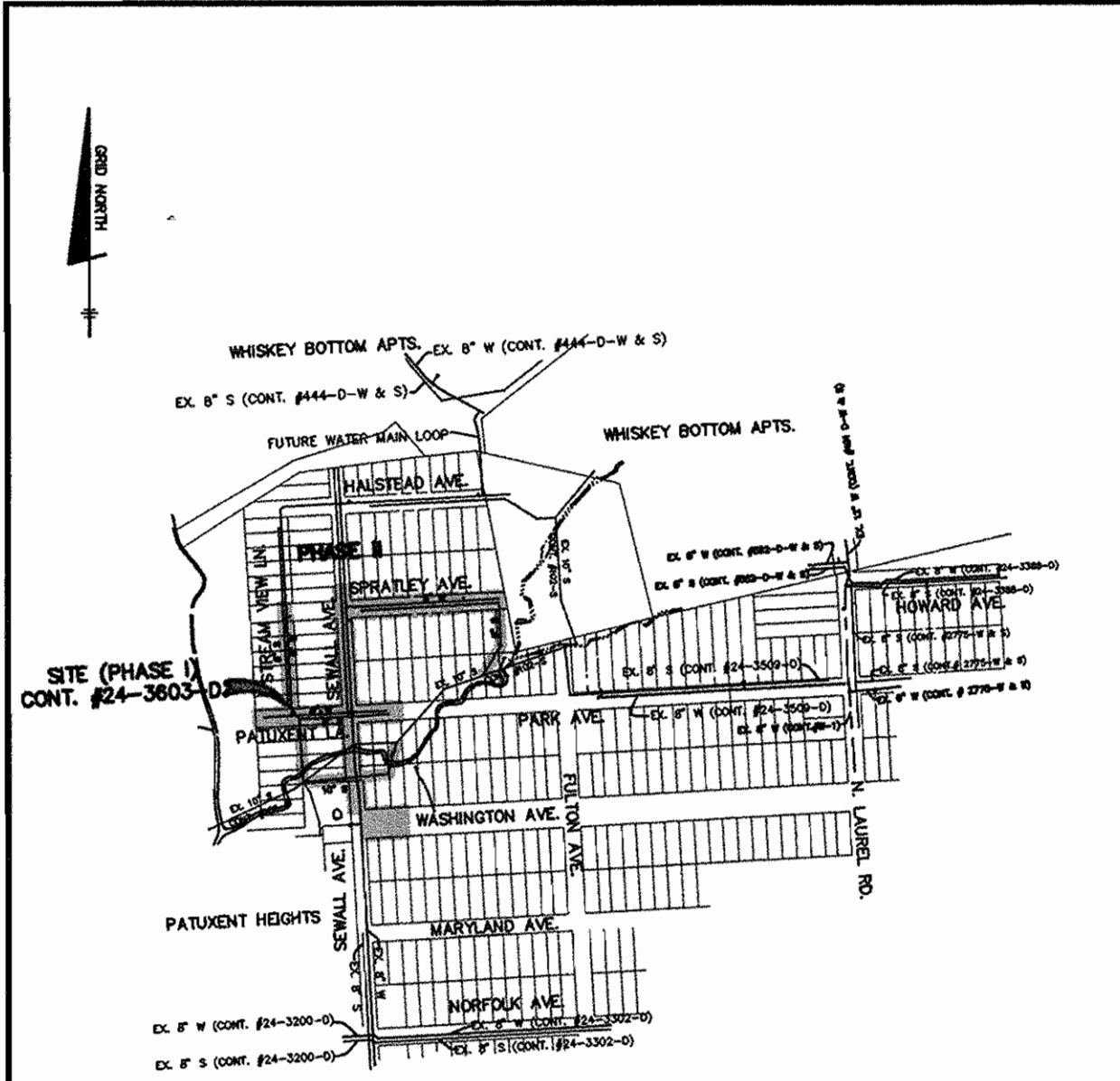
BENCH MARK DATA

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

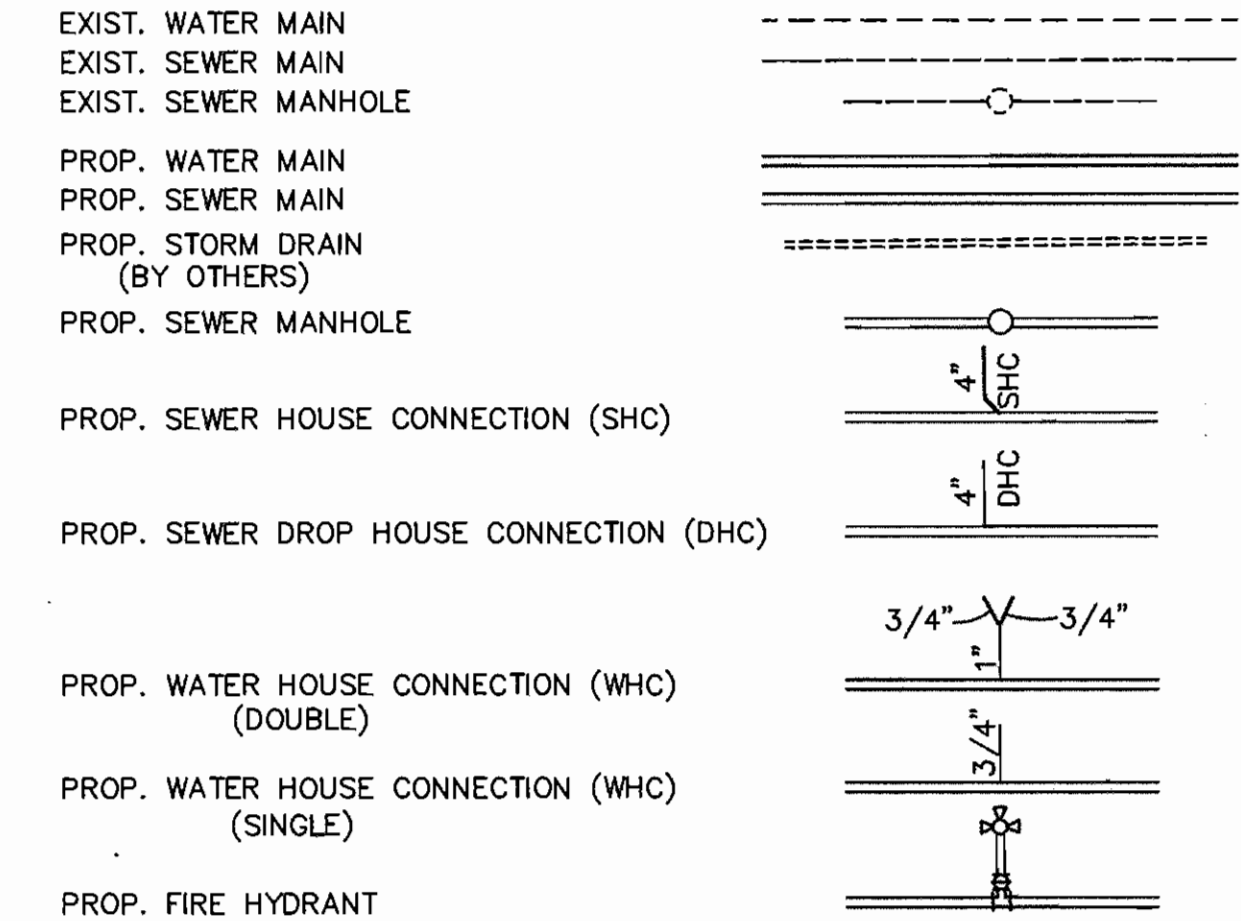
HOWARD COUNTY MON. # 1741002-R
CONC. MON. ON TOP OF BANK
EAST OF EAST EDGE MAG. OF
RTE. 216 FLUSH WITH SURFACE.
ELEV. = 197.368

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 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 531-5533
 - BALTIMORE GAS & ELECTRIC CO. 850-4620
 - BALTIMORE GAS & ELECTRIC CO. 787-9068
 - UNDERGROUND DAMAGE CONTROL 1-800-257-7777
 - MISS UTILITY 1-800-257-7777
 - COLONIAL PIPELINE CO. 795-1390
 - BUREAU OF UTILITIES, HOWARD CO. DEPT. OF PUBLIC WORKS 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" 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 OR ANY COUNTY ROAD DRAINING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH OPW REQUIREMENTS PER SECTION 18.114(b) OF THE HOWARD COUNTY CODE.



LEGEND



- 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" COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRESSES 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 SH-1 BE RESTRAINED AND BUTTRESSES 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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS. STANDARD DETAIL 05.52. WHERE WATER-TIGHT MANHOLE FRAME AND COVERS 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				
ITEM	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER	2,030 LF	2,035 LF		Atlantic States
4" WATER	180 LF	180 LF		"
8" x 8" TEE	2 EA	2 EA		Union Foundry
8" x 8" CROSS	1 EA	1 EA		"
8" x 4" REDUCER	2 EA	2 EA		"
8" VALVES	7 EA	7 EA		Nueller Co.
8" x 6" FHT	5 EA	5 EA		Union Foundry
FIRE HYDRANTS	5 EA	5 EA		Nueller Co.
3/4" MHC	222 LF	227 LF		Reading Tube
1/2" MHC	588 LF	593 LF		Atlantic States
12" SEWER (D.I.P.)	156 LF	156 LF		"
10" SEWER (D.I.P.)	116 LF	116 LF		"
8" SEWER (D.I.P.)	2,386 LF	2,391 LF		U.S. Filter
8" SEWER (D.I.P.)	277 LF	277 LF		Atlantic States
MANHOLES	78 EA	78 EA		Atlantic Concrete Products
4" SHC	792 LF	792 LF		U.S. Filter
4" DHC	350 LF	350 LF		U.S. Filter
STREAM CROSSING	130 LF	130 LF		"
1 1/2" DRAIN	2 EA	2 EA		U.S. Filter

LOCATION MAP	
SCALE: 1" = 600'	
WATER CODE: C05	TYPE OF BUILDING: SINGLE FAMILY DETACHED
SEWER CODE: 7141500	NUMBER OF LOTS: 44
TEST GRADIENT: 550	NUMBER OF SHC'S: 46
	NUMBER OF WHC'S: 46
	DRAINAGE AREA: PATUXENT
	TREATMENT PLANT: LITTLE PATUXENT
	*PHASE I: 64 LOTS, PHASE II: 2 LOTS (TOTAL: 66)

SHEET INDEX	
SHEET NO	TITLE
1	TITLE SHEET
2	PLAN
3-5	PROFILES

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

John R. Robertson 9/24/97
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

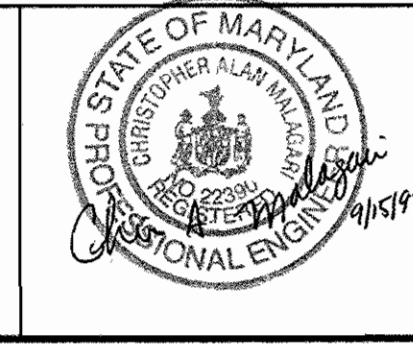
Sheef Simmons 9/24/97
NATURAL RESOURCES CONSERVATION SERVICE DATE

OWNER/DEVELOPER
CORNERSTONE HOLDINGS, L.L.C.
7405 BUCKS HAVEN LANE
HIGHLAND, MARYLAND 20777
(410) 988-9146

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert B. Bennett 9-17-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Sheef Simmons 9/17/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

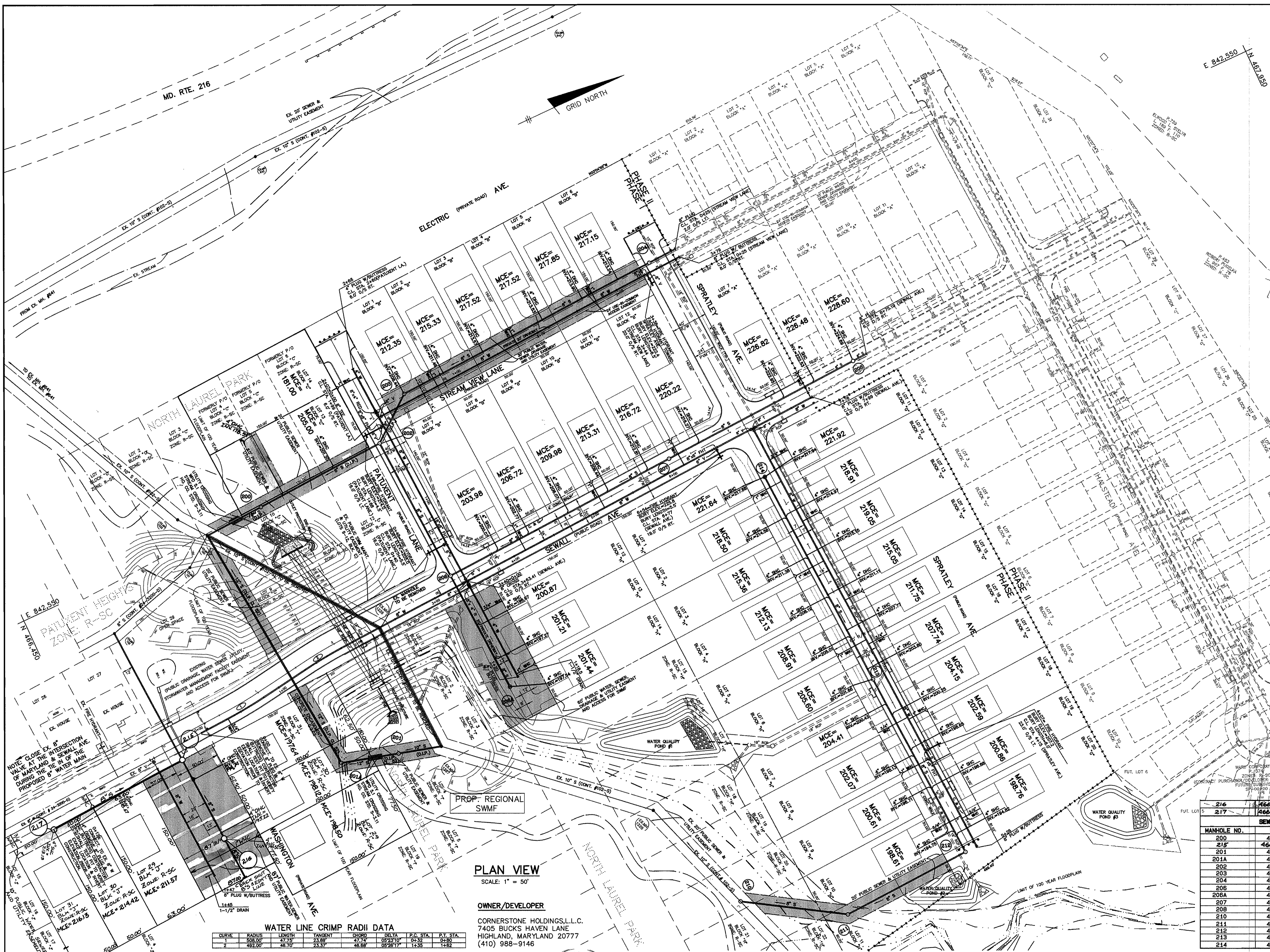


DES: YSL			
DRN: YSL			
CHK: CAM	JMC	3	REVISE PER NEW LAYOUT BLOCKS "I" - "J" 2/98
	YSL	2	REV. PER COUNTY COMMENTS OF AUG. 8, 1997 8/97
	YSL	1	REV. PER COUNTY COMMENTS OF MAY 8, 1997 5/97
DATE: 4/97	BY	NO.	REVISIONS

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

NORTH LAUREL PARK
LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
LOTS 13 THRU 14, BLOCK "C"; LOTS 11 THRU 20, BLOCK "G";
LOTS 1 THRU 10, AND LOTS 12 THRU 14, BLOCK "H";
LOTS 29 THRU 31, BLOCK "I"; AND LOTS 29 THRU 31, BLOCK "J"
HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

SCALE AS SHOWN
SHEET 1 OF 5



LEGEND

EX. 10" S TO BE REMOVED

PUBLIC WATER, SEWER, & UTILITY EASEMENT

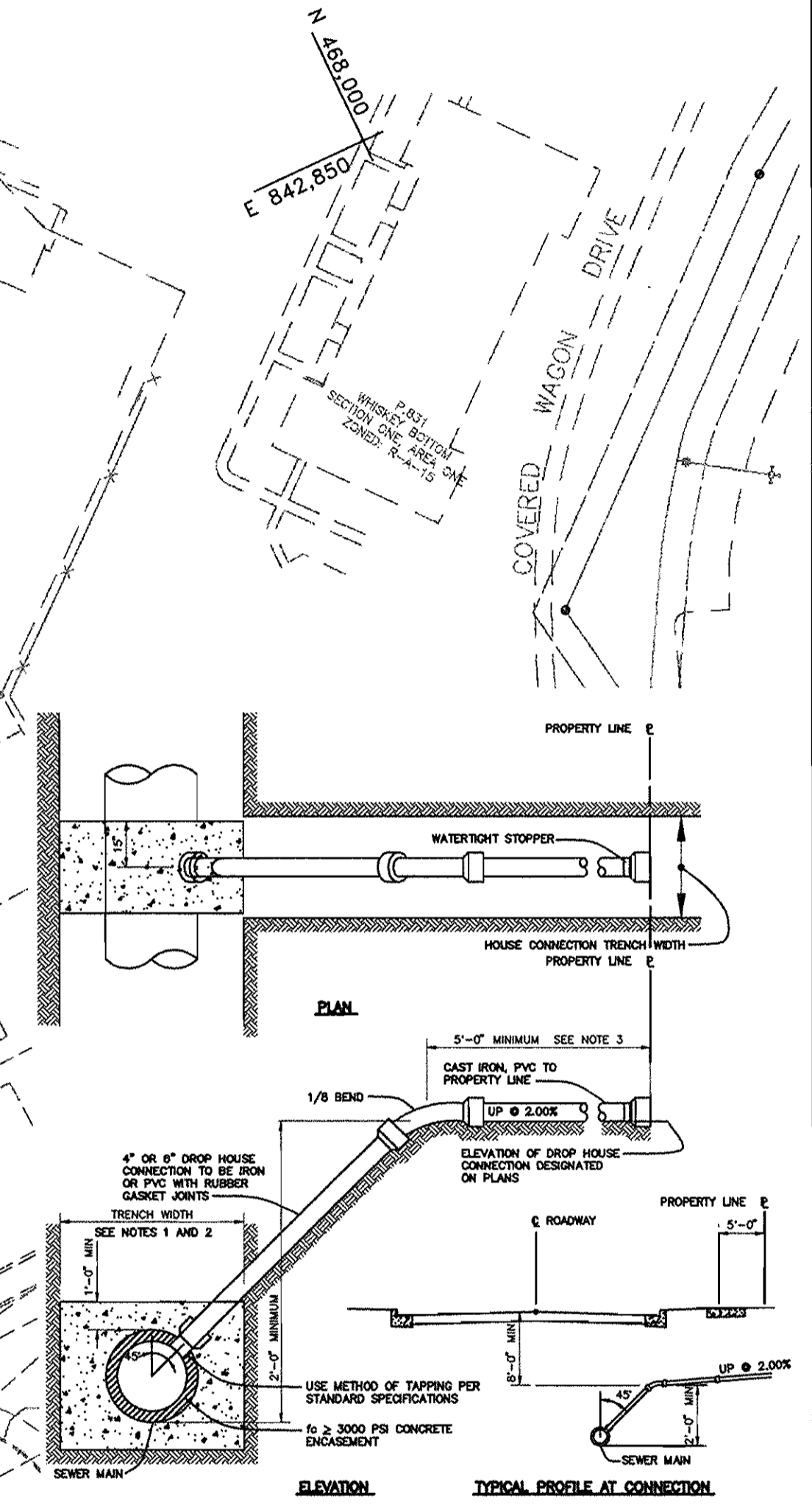
PHASE BOUNDARY LINE

PHASE II

PHASE I

NOTES:

- ENCASE 12" SEWER D.I.P., CLASS 52 PIPE BETWEEN MH 201A AND EX. MH 100 WITH CONCRETE PER HO. CO. STD. G.2.02.
- ALL SHC/DHC INVERT ELEVATIONS SHOWN ARE INVERT ELEVATIONS AT THE PROPERTY LINE OR AT EASEMENT/ RIGHT-OF-RIGHT LINE.



4" & 6" DROP HOUSE CONNECTION TO SEWER MAIN

NOT TO SCALE

HOWARD COUNTY DESIGN MANUAL - VOL. II WATER AND SEWER - APPENDIX 13

PLAN VIEW

SCALE: 1" = 50'

OWNER/DEVELOPER

CORNERSTONE HOLDINGS, L.L.C.
7405 BUCKS HAVEN LANE
HIGHLAND, MARYLAND 20777
(410) 988-9146

WATER LINE CRIMP RADI DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA	P.C. STA.	P.T. STA.
1	500.00	47.72	23.89	47.74	90.00	0+00.00	0+47.72
2	492.00	46.70	23.37	46.68	89.28	0+47.72	0+94.40

MANHOLE NO.	NORTHING	EASTING	REMARKS
200	466742.9758	842546.3795	
215	466544.1560	842765.0316	
201	466765.2306	842859.9117	
201A	466703.0679	842842.7249	
202	466692.4792	842539.3297	C.L. STA. 1+73 (PATUENT L.A.) 7.0' O/S LT.
203	466940.6138	842499.5482	C.L. STA. 0+43 (STREAM VIEW L.A.) 2.0' O/S LT.
204	467249.3465	842482.9249	C.L. STA. 3+52 (STREAM VIEW L.A.) 2.0' O/S LT.
206	466901.4507	842704.9509	C.L. STA. 3+50.41 (SEWALL AVE.) 6.0' O/S LT.
206A	466908.9780	842844.7484	
207	467176.5522	842690.1384	C.L. STA. 6+26 (SEWALL AVE.) 6.0' O/S LT.
208	467408.5012	842677.6494	C.L. STA. 8+88 (SEWALL AVE.) 6.0' O/S LT.
210	467039.8249	843170.0289	
211	467142.0265	843233.7811	
212	467290.0173	843225.8127	
213	467278.2927	843008.0602	C.L. STA. 3+17 (SPRATLEY AVE.) 7.0' O/S RT.
214	467264.5861	842753.4969	C.L. STA. 0+62 (SPRATLEY AVE.) 7.0' O/S RT.

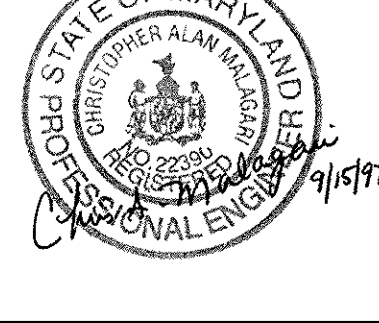
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert B... 9-17-97
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Charles... 11/1/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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



DESIGNER	DATE	REVISIONS	DATE
YSL			
YSL			
CAM			
YSL	4/97		
JMC	3	REVISE PER NEW LAYOUT FOR BLOCK "A" & "J"	2/98
YSL	2	REV. PER COUNTY COMMENTS OF AUG. 8, 1997	8/97
YSL	1	REV. PER COUNTY COMMENTS OF MAY 8, 1997	7/97
BY NO.			

**PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
PLAN**

600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
LOTS 13 THRU 14, BLOCK "C"; LOTS 11 THRU 20, BLOCK "G";
LOTS 1 THRU 10, AND 12 THRU 14, BLOCK "H";
LOTS 29-31, BLOCK "I"; AND LOTS 29 THRU 31, BLOCK "J"

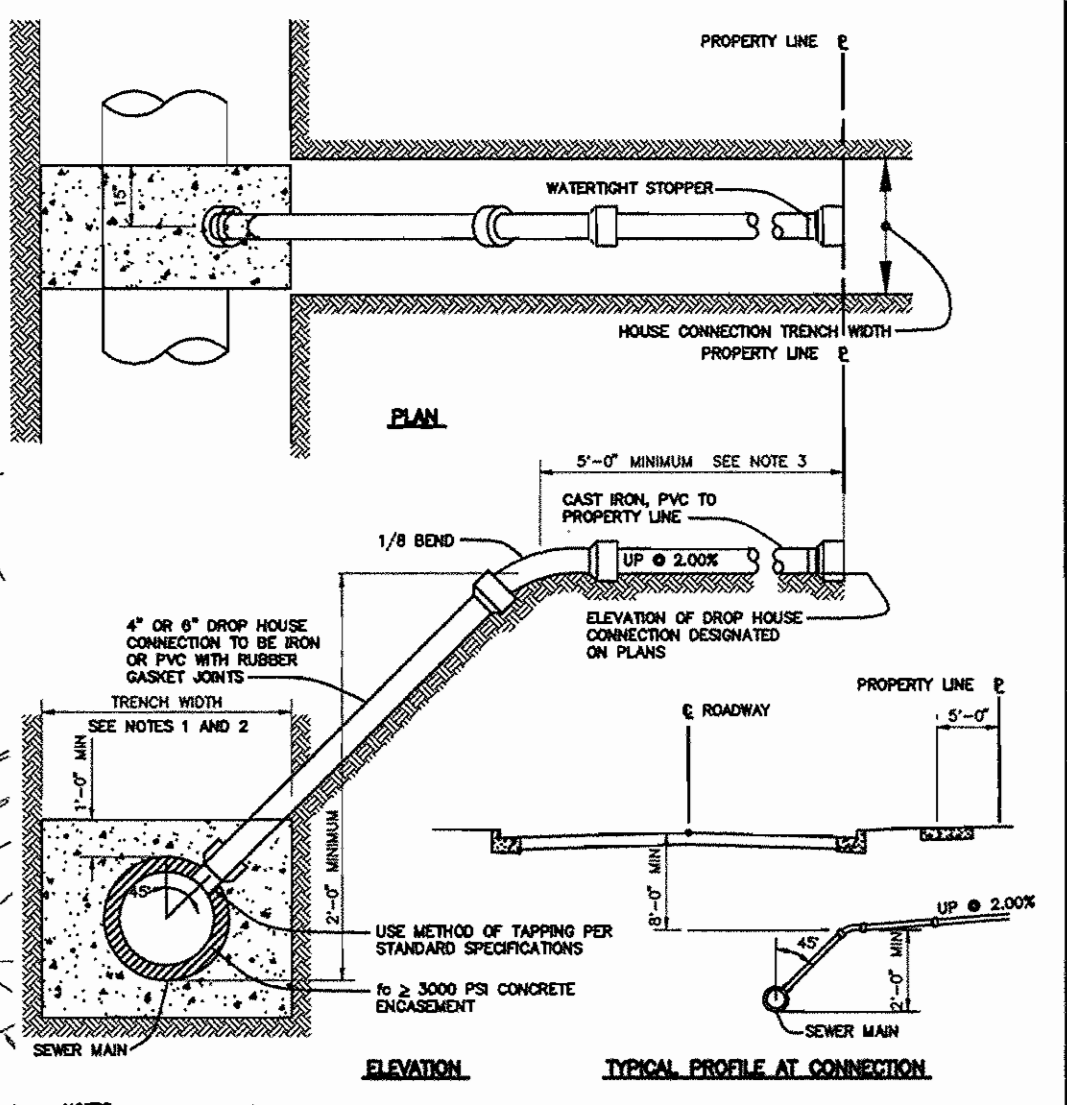
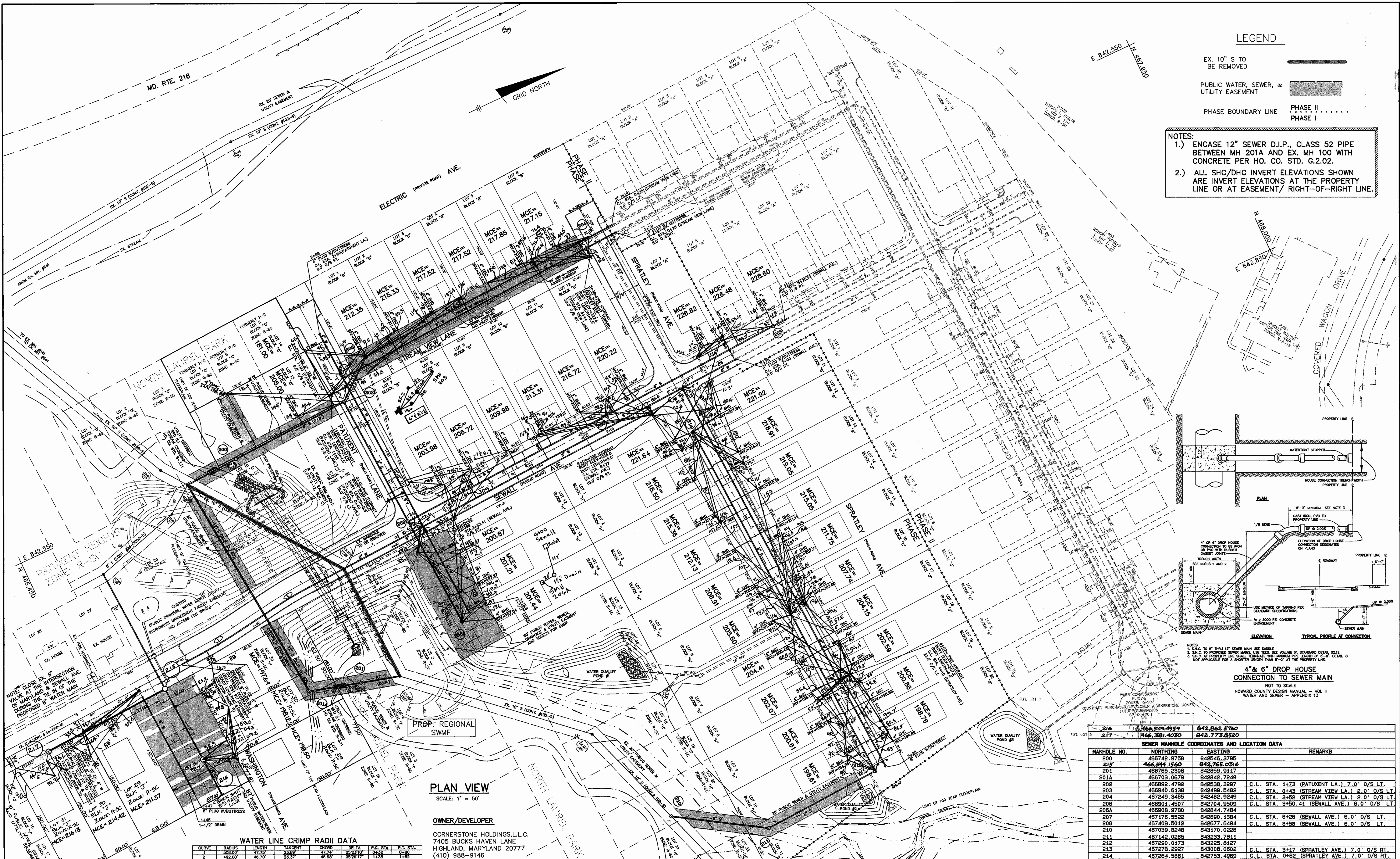
HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

SCALE: 1" = 50'
SHEET 2 OF 5

LEGEND

- EX. 10" S TO BE REMOVED
- PUBLIC WATER, SEWER, & UTILITY EASEMENT
- PHASE BOUNDARY LINE
- PHASE II
- PHASE I

NOTES:
 1.) ENCASE 12" SEWER D.I.P., CLASS 52 PIPE BETWEEN MH 201A AND EX. MH 100 WITH CONCRETE PER HO. CO. STD. G.2.02.
 2.) ALL SHC/DHC INVERT ELEVATIONS SHOWN ARE INVERT ELEVATIONS AT THE PROPERTY LINE OR AT EASEMENT/ RIGHT-OF-RIGHT LINE.



NOTES:
 1. S.H.C. TO 12\"/>

PLAN VIEW
 SCALE: 1" = 50'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 7405 BUCKS HAVEN LANE
 HIGHLAND, MARYLAND 20777
 (410) 988-9146

WATER LINE CRIMP RADI DATA

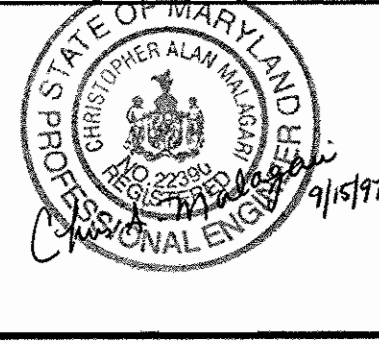
CURVE	RADIUS	LENGTH	TANGENT	CHORD	AREA	P.C. STA.	P.T. STA.
1	508.00	47.74	23.37	47.74	0.00	01+32.37	01+32.37
2	292.00	46.70	23.37	46.69	05+28.17	11+35	11+82

MANHOLE NO.	NORTHING	EASTING	REMARKS
200	466742.9759	842545.3795	
201	466594.1560	842768.0316	
201A	466705.2308	842690.5117	
202	466703.0679	842842.7249	
202A	466892.4792	842538.3297	C.L. STA. 1+73 (PATUXENT L.A.) 7.0' O/S LT.
203	466940.6138	842499.5482	C.L. STA. 0+43 (STREAM VIEW L.A.) 2.0' O/S LT.
204	467249.3465	842482.9249	C.L. STA. 3+52 (STREAM VIEW L.A.) 2.0' O/S LT.
206	466901.4507	842704.9509	C.L. STA. 3+50.41 (SEWALL AVE.) 6.0' O/S LT.
206A	466908.9780	842844.7484	
207	467178.5522	842690.1384	
208	467408.5012	842677.6494	C.L. STA. 6+26 (SEWALL AVE.) 6.0' O/S LT.
210	467039.8248	843170.0228	C.L. STA. 6+58 (SEWALL AVE.) 6.0' O/S LT.
211	467142.0265	843233.7811	
212	467290.0173	843225.8127	
213	467278.2927	843008.0602	C.L. STA. 3+17 (SPRATLEY AVE.) 7.0' O/S RT.
214	467264.5861	842753.4969	C.L. STA. 0+62 (SPRATLEY AVE.) 7.0' O/S RT.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division

TSA GROUP, INC.
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 Ellicott City, Maryland 21043

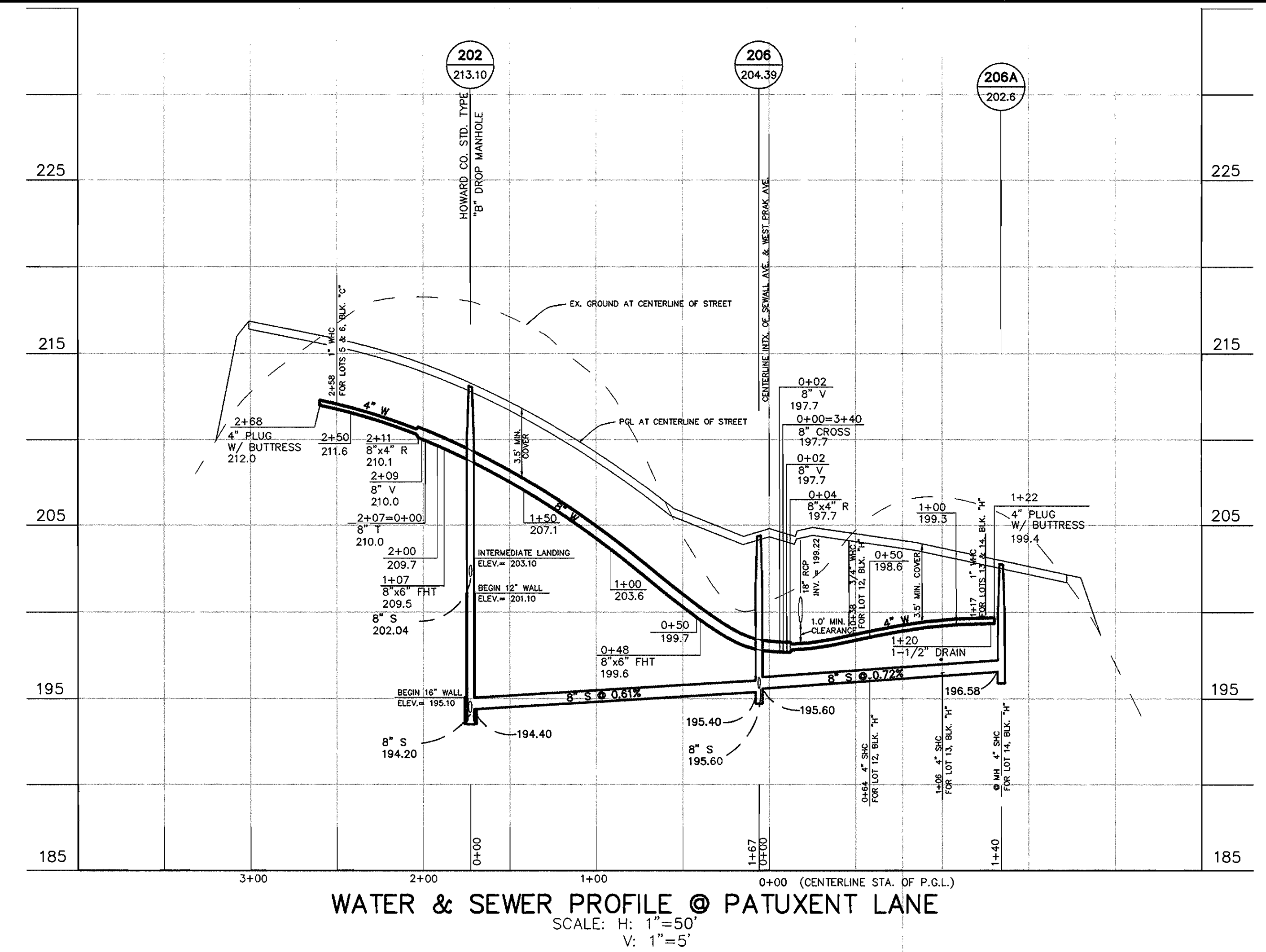


NO.	REVISIONS	DATE
JMC 3	REVISE PER NEW LAYOUT FOR BLOCK "J"	2/98
YSL 2	REV. PER COUNTY COMMENTS OF AUG. 8, 1997	8/97
YSL 1	REV. PER COUNTY COMMENTS OF MAY 8, 1997	7/97

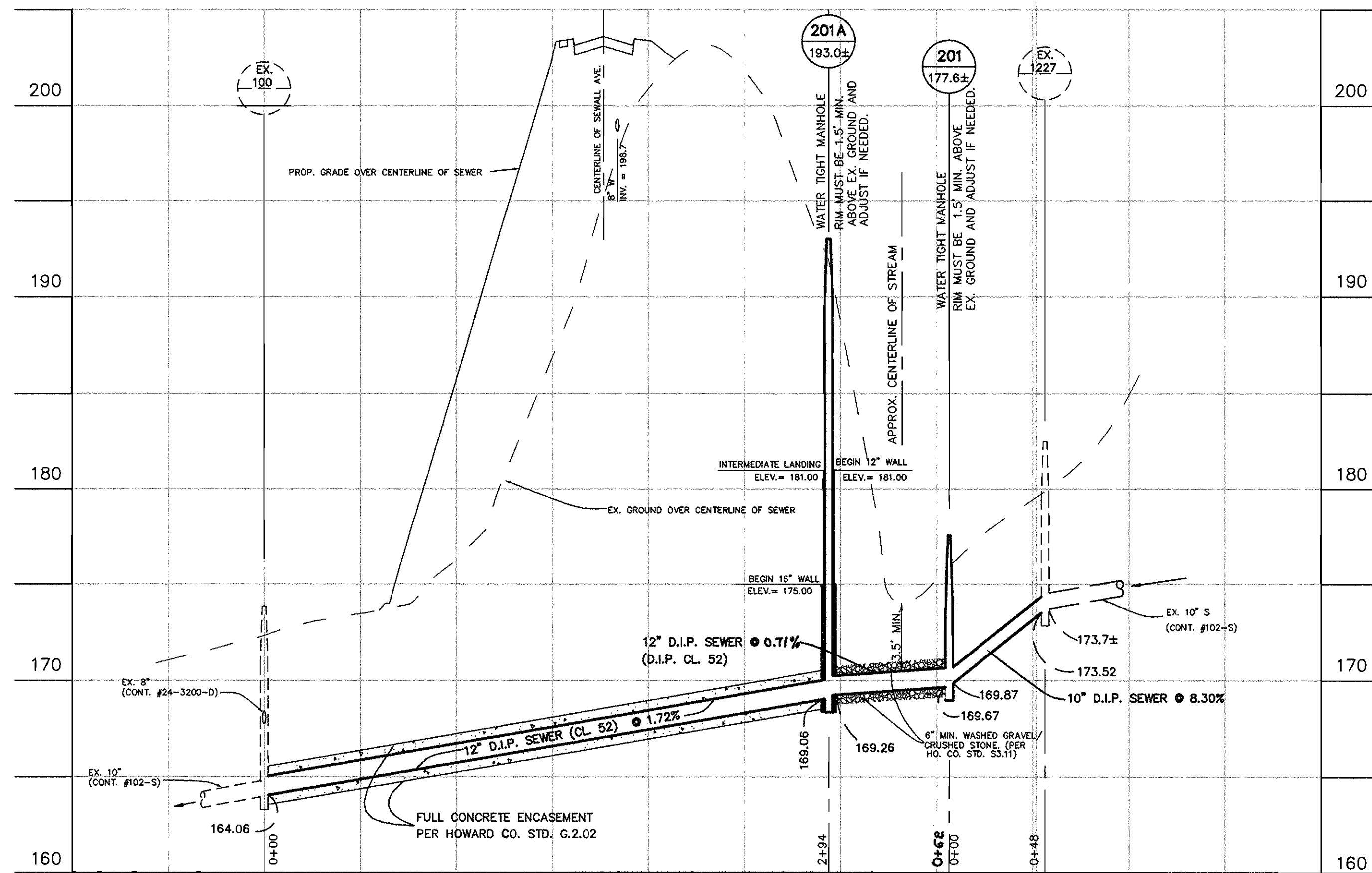
PHASE I
 WATER & SEWER EXTENSION
 AND SEWER RELOCATION
 PLAN
 600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
 LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
 LOTS 13 THRU 14, BLOCK "C"; LOTS 11 THRU 20, BLOCK "G";
 LOTS 1 THRU 10, AND 12 THRU 14, BLOCK "H";
 LOTS 29-31, BLOCK "I"; AND LOTS 29 THRU 31, BLOCK "J"
 HOWARD COUNTY ELECTION DISTRICT NO. 6
 CONTRACT NO. 24-3603-D

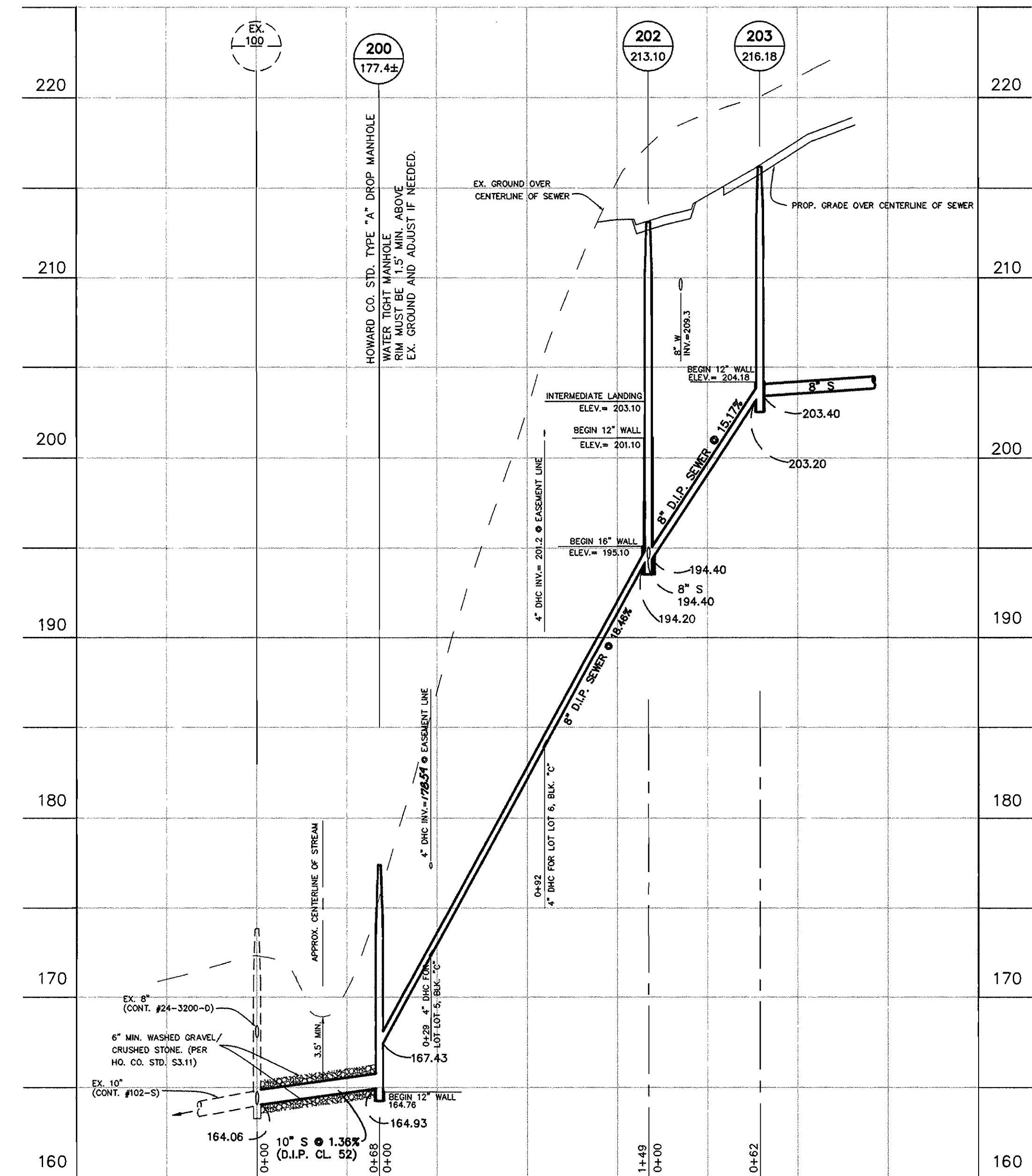
SCALE:
 1" = 50'
 SHEET
 2 OF 5



WATER & SEWER PROFILE @ PATUXENT LANE
 SCALE: H: 1"=50'
 V: 1"=5'



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



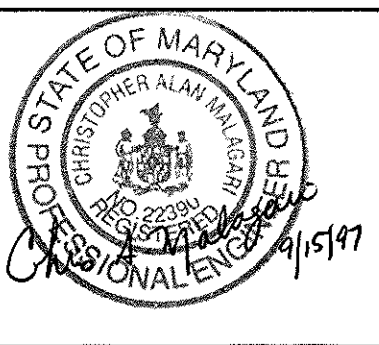
OUTFALL SEWER RELOCATION PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 7405 BUCKS HAVEN LANE
 HIGHLAND, MARYLAND 20777
 (410) 988-9146

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. J. Berman 94797
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 11/3/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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 Ellicott City, Maryland 21043

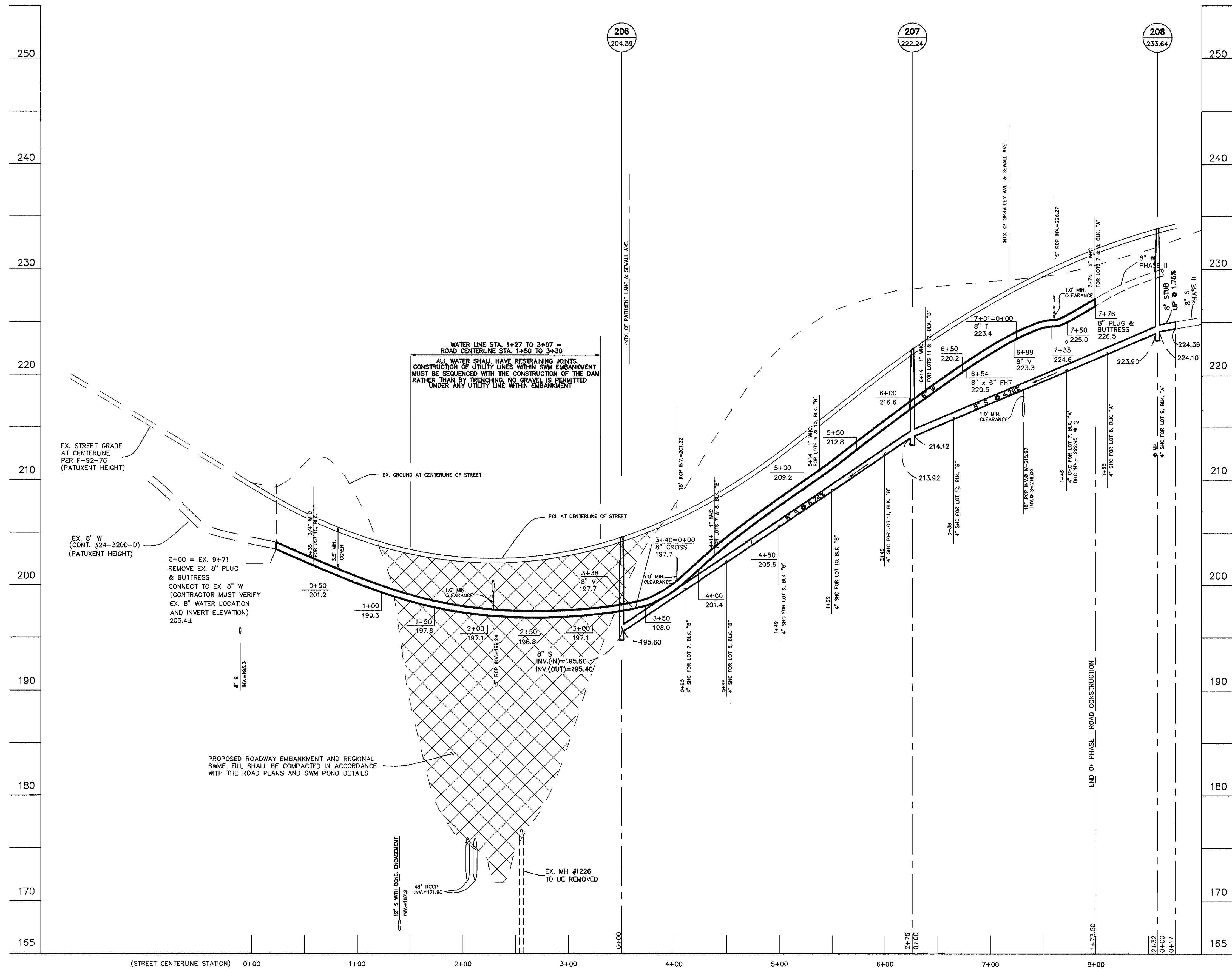


DES:	YSL			
DRN:	YSL			
CHK:	CAM	YSL 2	REV. PER COUNTY COMMENTS OF AUG. 8, 1997	8/97
DATE:	4/97	YSL 1	REV. PER COUNTY COMMENTS OF MAY 8, 1997	7/97
BY:	NO.	REVISIONS		DATE

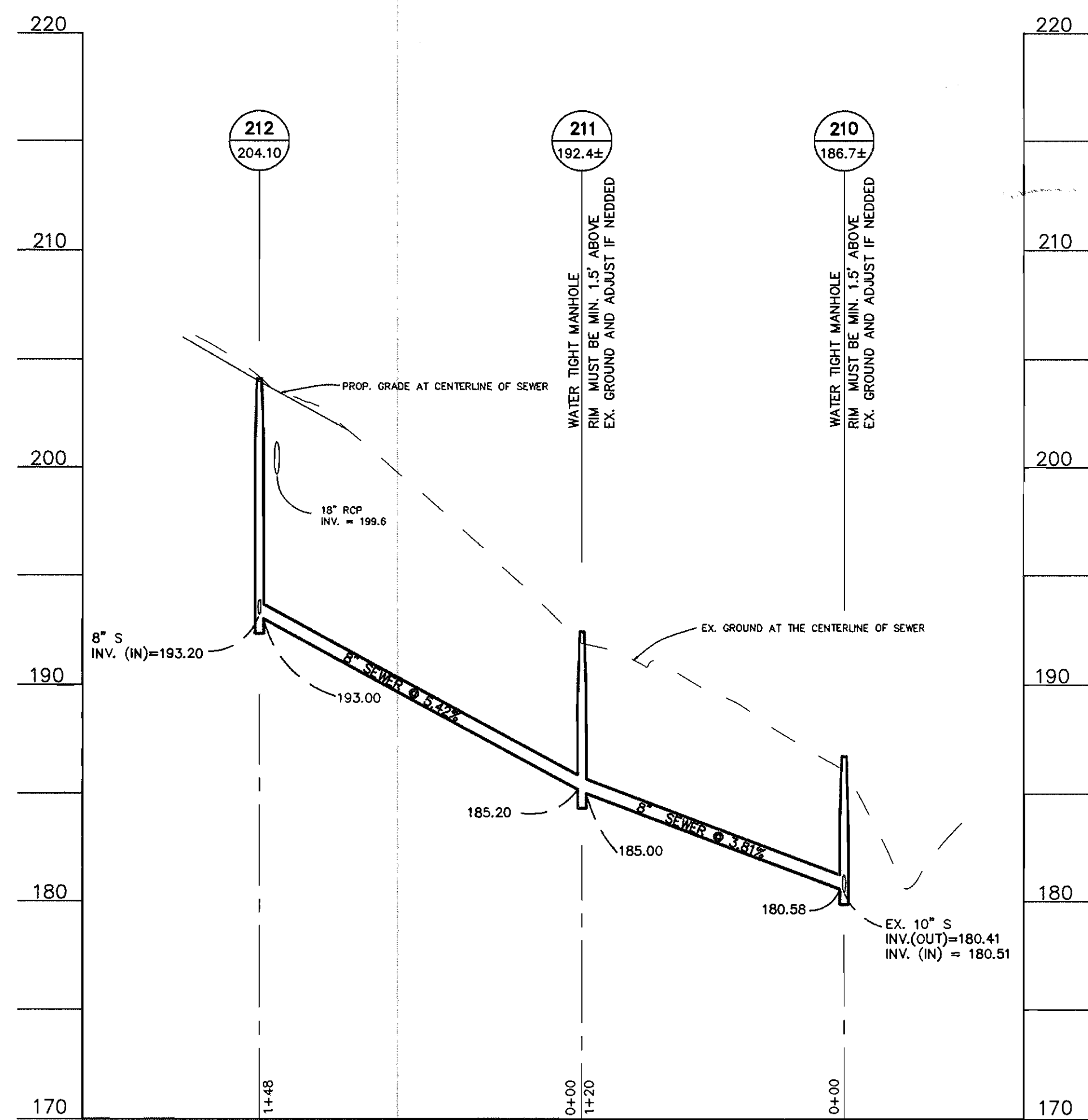
PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
PROFILES
 600 SCALE MAP NO. 50
 BLOCK "3"

NORTH LAUREL PARK
 LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
 LOTS 13 THRU 14, BLOCK "C"; LOTS 11 THRU 20, BLOCK "G";
 LOTS 1 THRU 10, AND 12 THRU 14, BLOCK "H";
 LOTS 15-17, BLOCK "I"; LOTS 1 THRU 3, BLOCK "J"
 HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

SCALE:
 HOR.: 1" = 50'
 VERT.: 1" = 5'
 SHEET
 3 OF 5



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



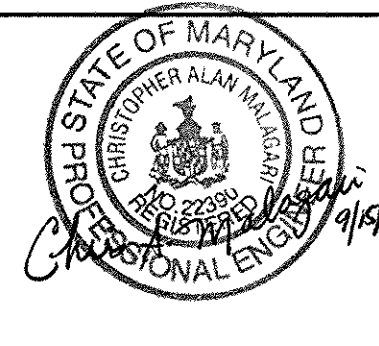
OUTFALL SEWER PROFILE
 SCALE: H: 1"=50'
 V: 1"=5'

OWNER/DEVELOPER
 CORNERSTONE HOLDINGS, L.L.C.
 7405 BUCKS HAVEN LANE
 HIGHLAND, MARYLAND 20777
 (410) 988-9146

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert B. ... 9/17/97
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 ... 11/7/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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 Ellicott City, Maryland 21043

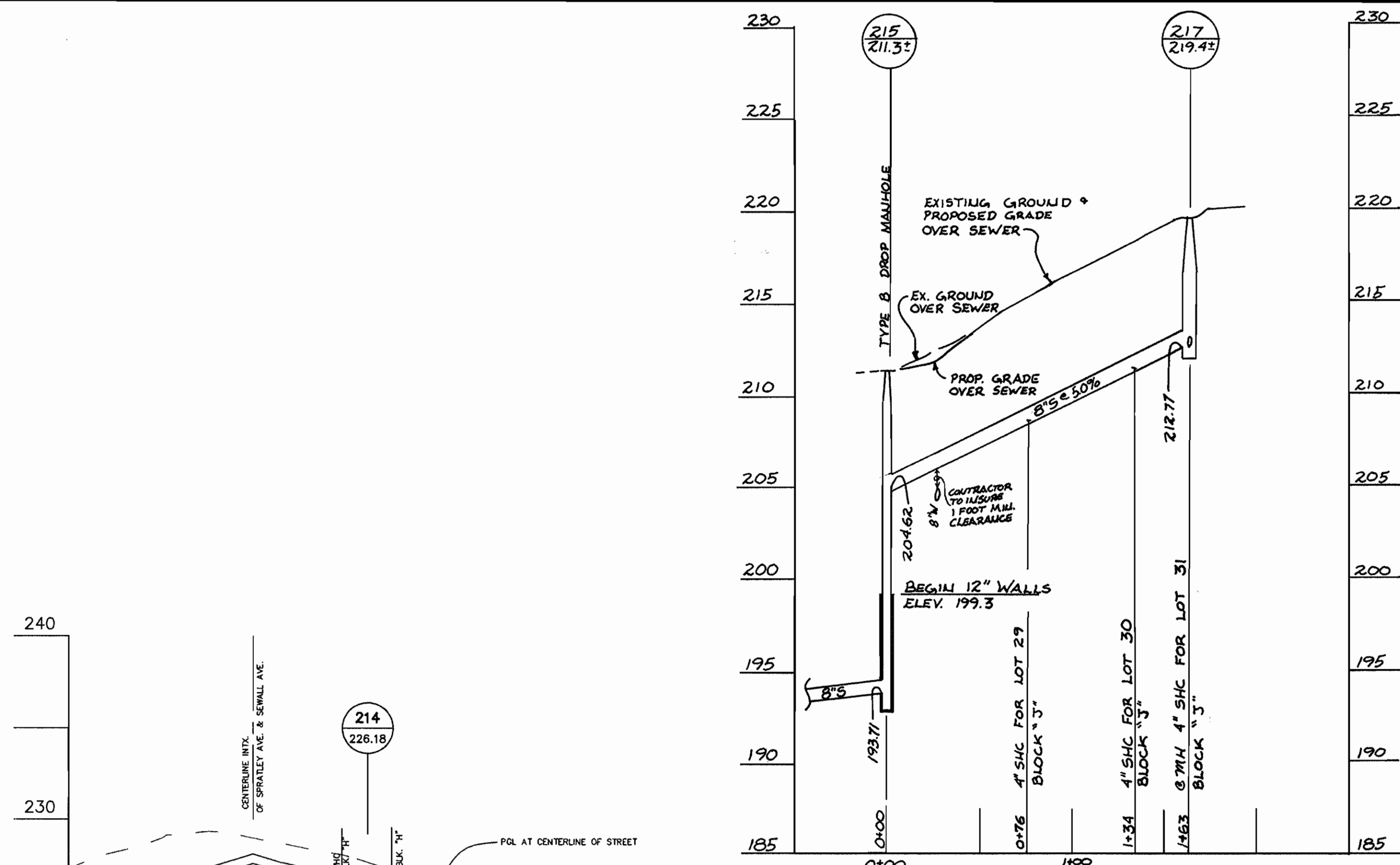


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DRN:	YSL		
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		YSL 2 REV. PER COUNTY COMMENTS OF AUG. 8, 1997	8/97
		YSL 1 REV. PER COUNTY COMMENTS OF MAY 8, 1997	7/97

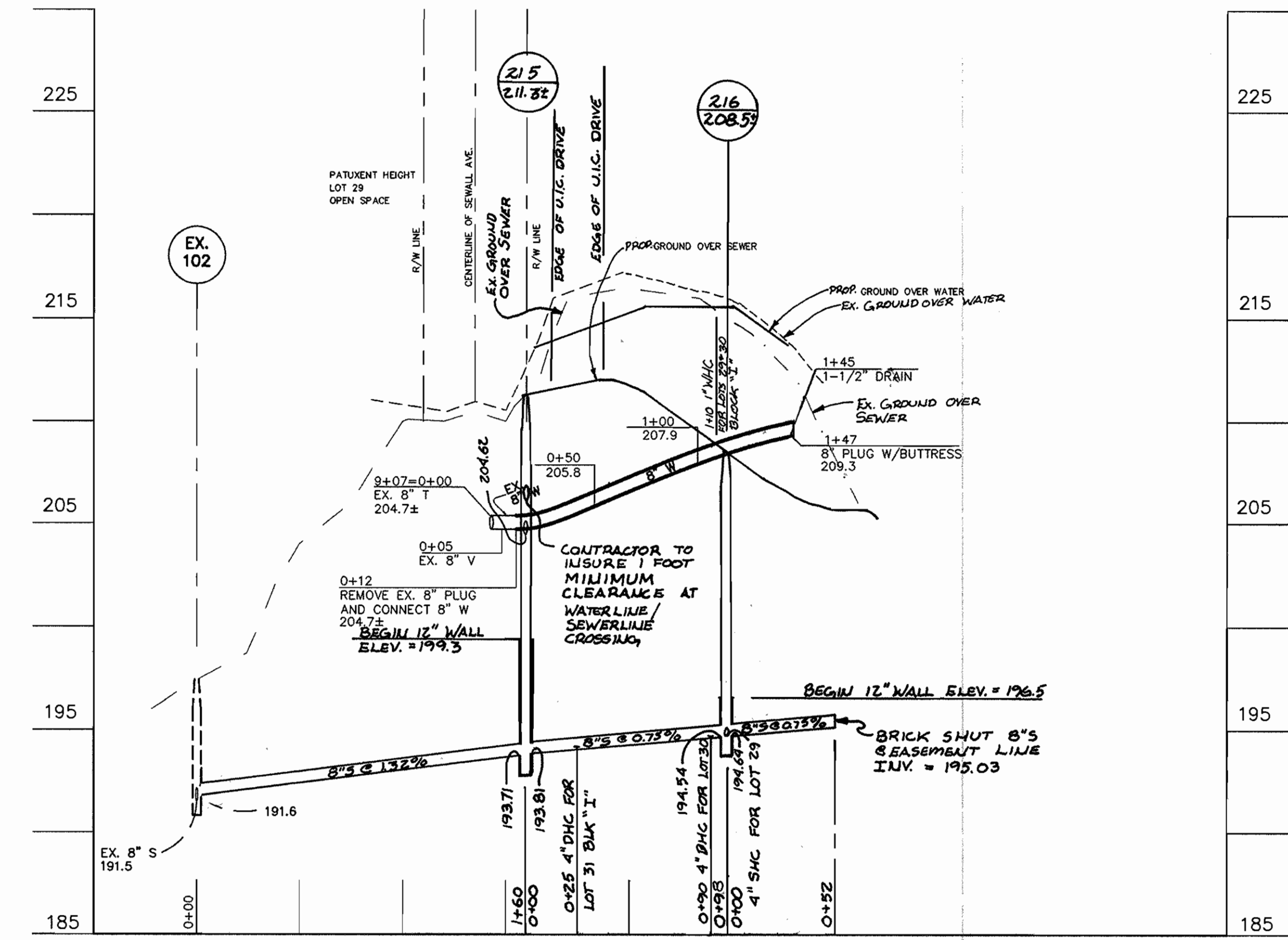
PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
PROFILES
 600 SCALE MAP NO. 50 BLOCK "3"

NORTH LAUREL PARK
 LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
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 HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

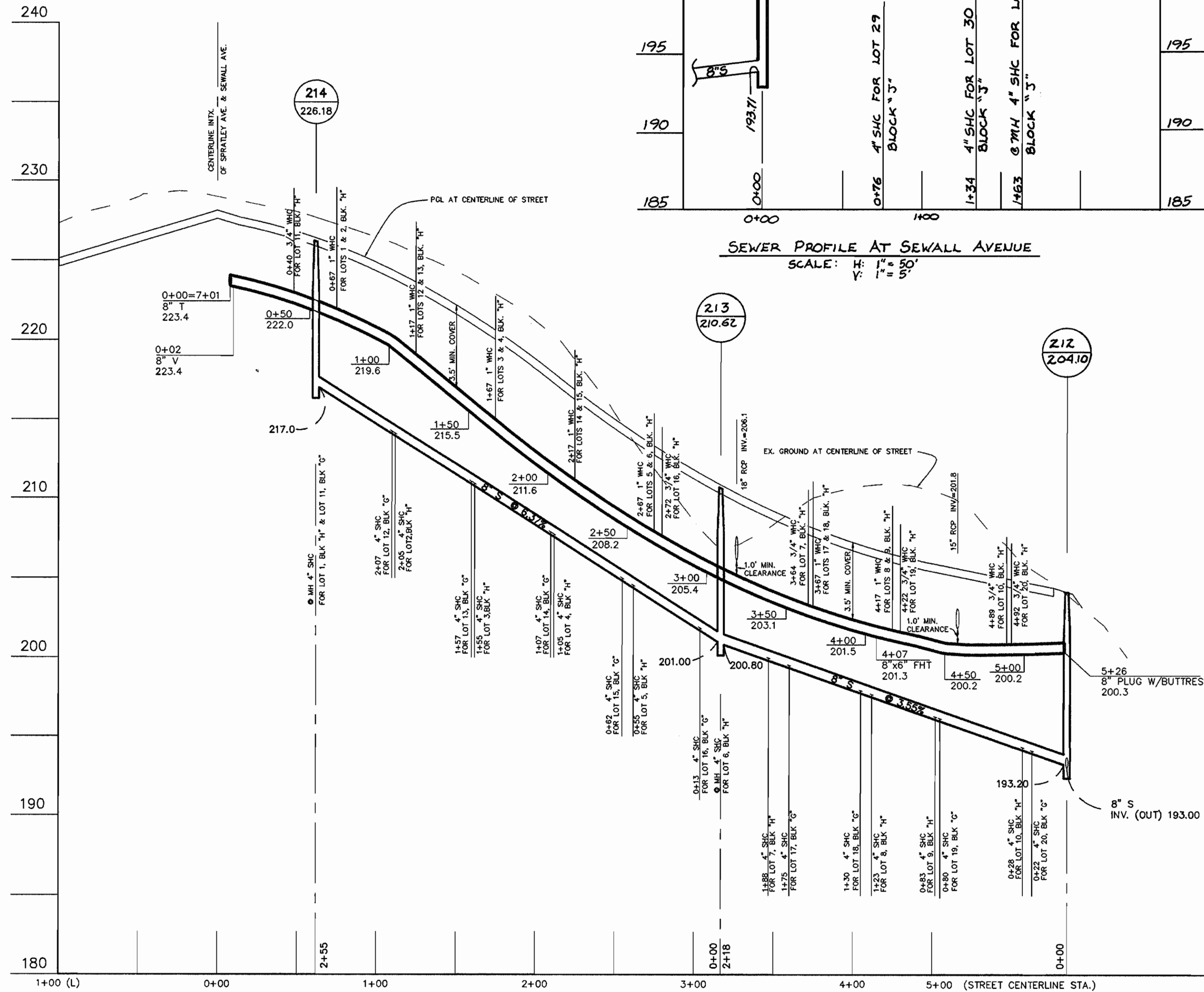
SCALE:
 HOR.: 1" = 50'
 VERT.: 1" = 5'
 SHEET
 4 OF 5



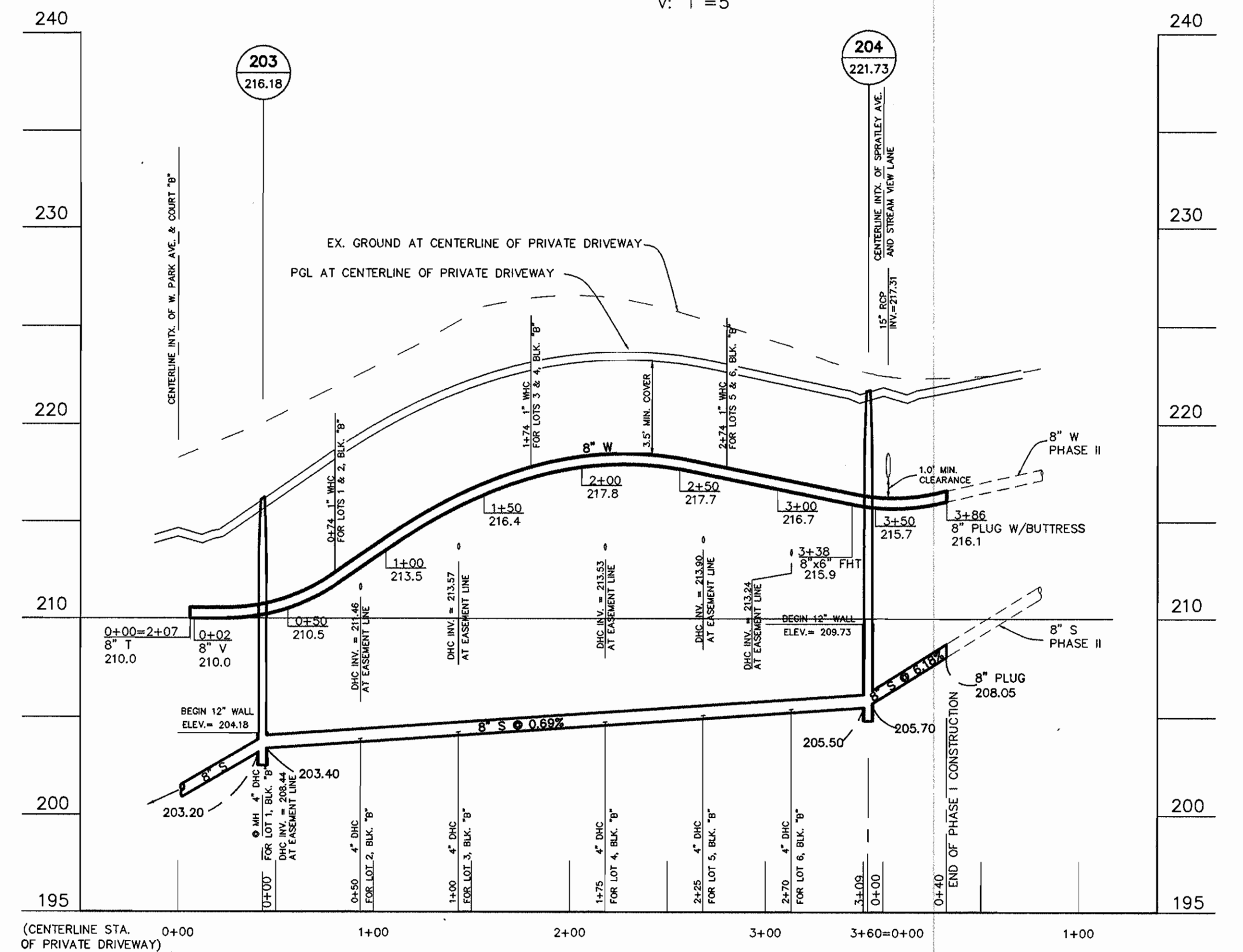
SEWER PROFILE AT SEWELL AVENUE
SCALE: H: 1"=50'
V: 1"=5'



WATER & SEWER PROFILE AT WASHINGTON AVE.
SCALE: H: 1"=50'
V: 1"=5'



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



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

OWNER/DEVELOPER
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7405 BUCKS HAVEN LANE
HIGHLAND, MARYLAND 20777
(410) 988-9146

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert S. ...
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chris ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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DES:	YSL			
DRN:	YSL			
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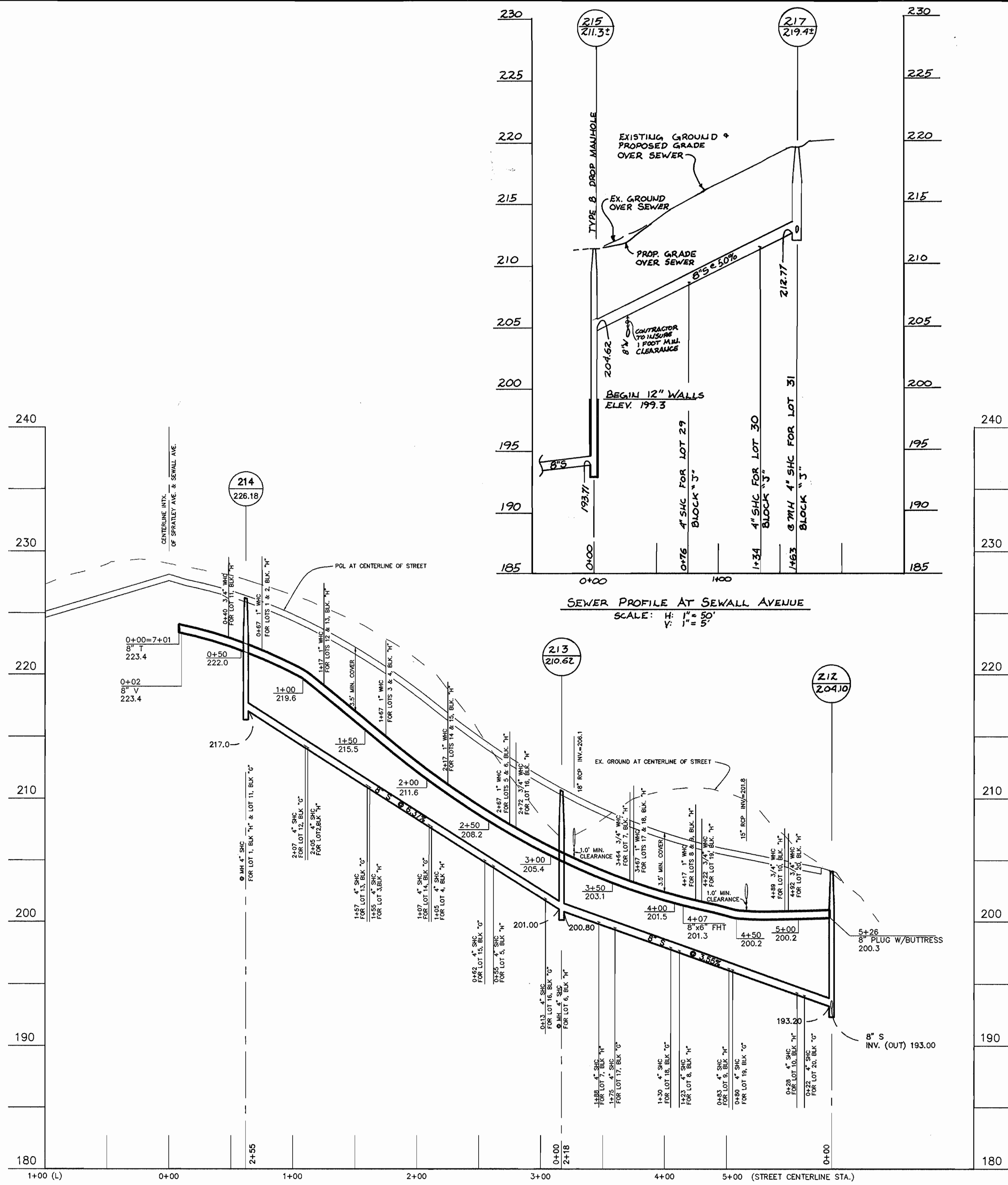
JMC	3	REVISE PER NEW LAYOUT	2/98
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YSL	1	REV. PER COUNTY COMMENTS OF MAY 8, 1997	7/97
DATE:			

PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
PROFILES

NORTH LAUREL PARK
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HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

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

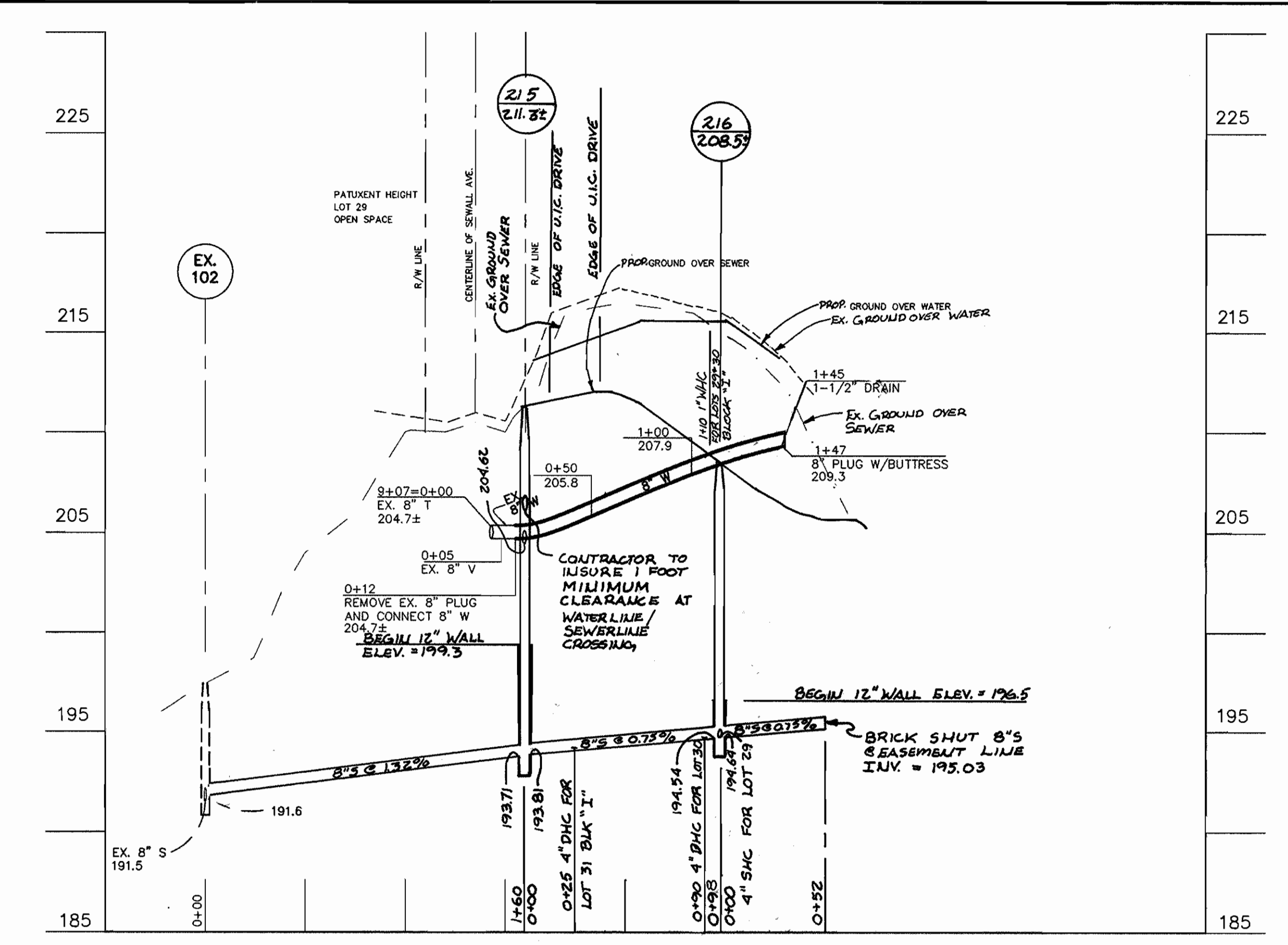
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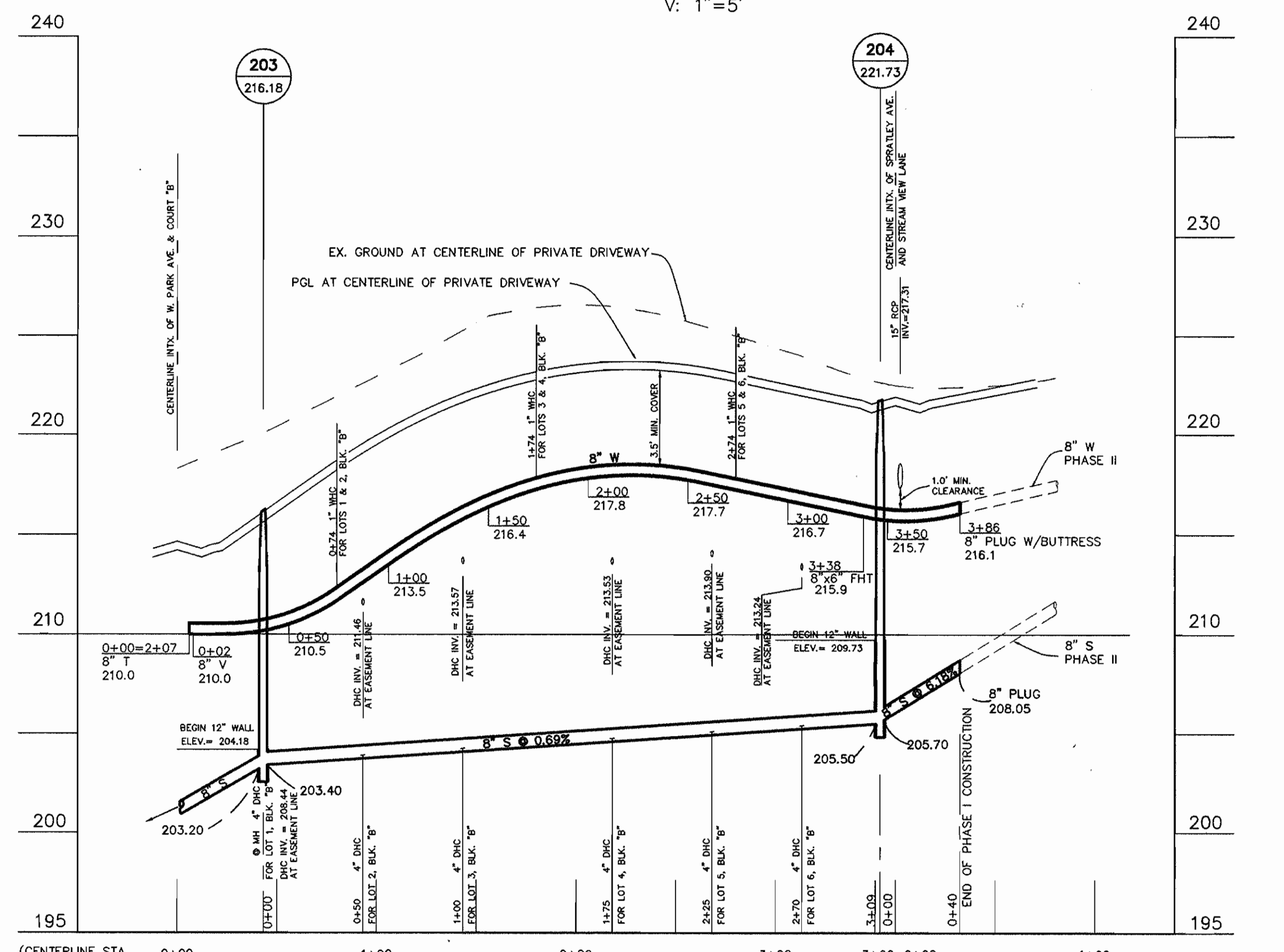
SEWER PROFILE AT SEWALL AVENUE
SCALE: H: 1"=50'
V: 1"=5'

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

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7405 BUCKS HAVEN LANE
HIGHLAND, MARYLAND 20777
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WATER & SEWER PROFILE AT WASHINGTON AVE.
SCALE: H: 1"=50'
V: 1"=5'



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

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		BY NO.	REVISIONS

PHASE I
WATER & SEWER EXTENSION
AND SEWER RELOCATION
PROFILES
600 SCALE MAP NO. 50

NORTH LAUREL PARK
LOT 7, BLOCK "A"; LOTS 1 THRU 12, BLOCK "B";
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LOTS 29-31, BLOCK "I"; LOTS 29 THRU 31 BLOCK "J"
HOWARD COUNTY ELECTION DISTRICT NO. 6
CONTRACT NO. 24-3603-D

SCALE:
HOR.: 1" = 50'
VERT.: 1" = 5'
SHEET
5 OF 5