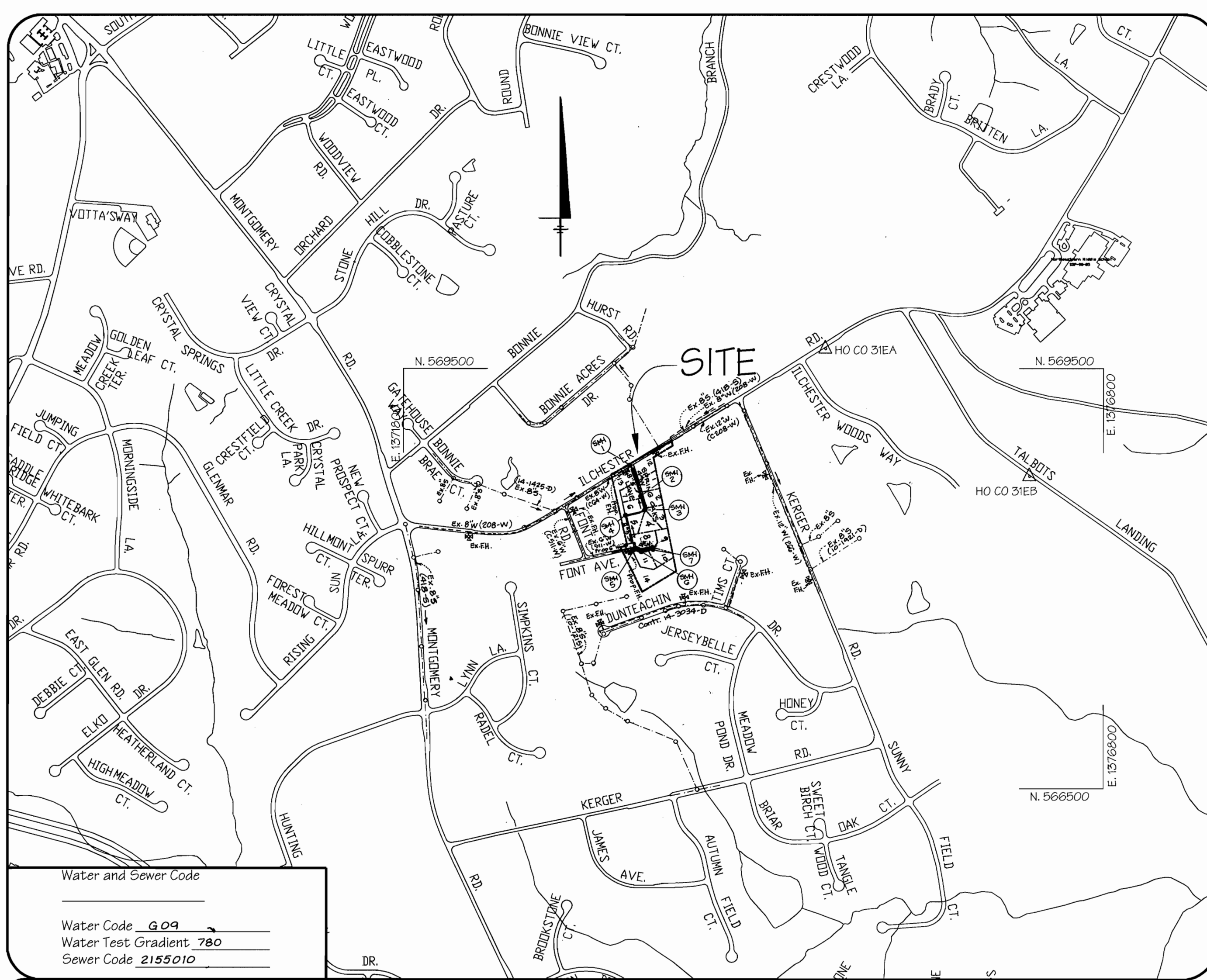


SHEET INDEX	
Sheet Number	Description
1	Cover Sheet
2	Plan View
3	Profiles

QUANTITIES				
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
1" W.H.C.	240 LF			
4" S.H.C.	184 LF			
Standard Manhole	7			
4" Water	520 LF			
6" Water	146 LF			
8" San.	909 LF			
8"x4" T&V	1			
8"x6" T&V	1			
Fire Hydrant	2			
6"x6" FHT	1			
6" Reducer	1			
6" Valve	1			
4" Cap & Buttress	2			

NAME OF UTILITY CONTRACTOR: _____ CHECK BOX: _____
 SURVEY & DRAFTING DIVISION AS BUILT DATE: _____



Water and Sewer Code
 Water Code 609
 Water Test Gradient 780
 Sewer Code 2155010

Type of Building: Single Family Detached
 Number of Lots/Parcels: 14 (11 Buildable - 3 O.S.)
 Number of W.H.C.'s: 11
 Number of S.H.C.'s: 11
 Drainage Area: Patapsco
 Treatment Plant: Patapsco

LOCATION MAP
 Scale: 1" = 600'

BENCHMARKS

Howard County Monument # 31 EA
 Elevation: 469.604
 Standard stamped brass or aluminum disc on Concrete Monument; 0.3' Below Surface
 Located S.E. corner of intersection of Ilchester Rd. and Ilchester Woods Way 2' from sidewalk.

Howard County Monument # 31 EB
 Elevation: 453.398
 Standard stamped brass or aluminum disc on Concrete Monument; 0.3' Below Surface
 Located 19' from C Talbot Landing Rd. 0.3 miles southeast of Ilchester Rd. 85' from BGE tower.



VICINITY MAP
 Scale: 1" = 2000'

GENERAL NOTES

- PART I:
- 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 the contractors 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 poles.
 - For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
 - Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
 - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:

State Highway Administration	410-531-5533
BGE Contractor Services	410-850-4620
BGE Underground Damage Control	410-291-4607
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	410-549-4120
Howard County Department of Public Works Bureau of Utilities	410-313-4900
Bell Atlantic	1-800-446-5266
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip area 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.
 - General Notes (see attached)
 - The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114 (a) of the Howard County Code.
- PART II: 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 the tees shall be strapped to the tees.
 - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 - Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with the 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 III: SEWER
- All sewer mains to be D.I.P. 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 G5.52. Where watertight manhole frame and cover is used, set top of frame 16" above finished grade unless otherwise noted on the drawings.
 - Houses with the symbol "C.N.S." indicates that cellar cannot be served.

WATER AND SEWER CONSTRUCTION PLANS
SPRING OAKS
 1st Election District - Howard County, Maryland
 Lots 1-11
 Contract No. 14-3933-D

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 2/14/02
 SOIL CONSERVATION DISTRICT

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John R. Robertson 2/14/02
 HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD & DRAIN PLAN, F02-22.

DEPARTMENT OF PUBLIC WORKS
Robert Berman 2-11-02
 CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
John R. Robertson 2/15/02
 CHIEF-DEVELOPMENT ENGINEERING DIVISION

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	DATE	BY	NO.	REVISION	DATE
S.W.C.					
DRAWN					
J.D.R.					
CHECKED					
S.W.C.					
DATE					
9/2001					

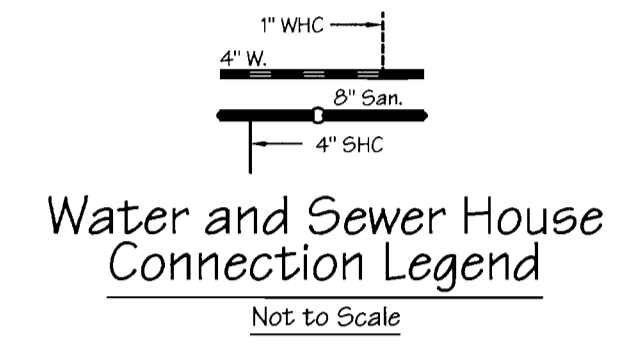
600 SCALE MAP NO. 31
 BLOCK 15

SPRING OAKS
 Lots 1-11
 1st Election District - Howard County, Maryland
 Contract No. 14-3933-D

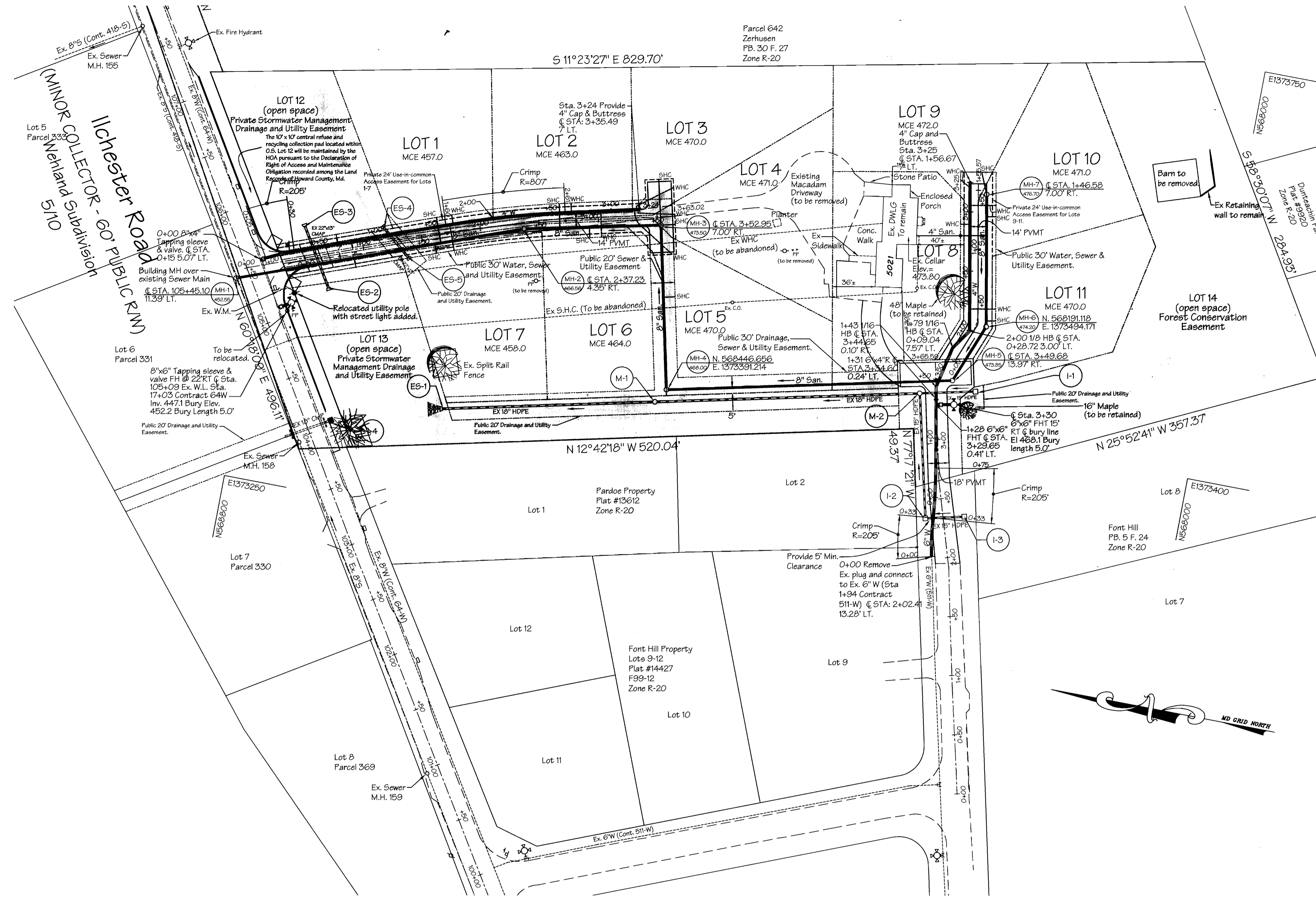
SCALE
 AS SHOWN
 SHEET
 1 OF 3

F:\Land Projects\2002\Spring Oaks\dwg\plans\plan2.dwg, SSW, Cover Sheet, 09/20/01, 03:34:41 PM

SEWER HOUSE CONNECTION TABLE			
Lot	Inv. @ Main	Inv. @ R	Min. Cellar Elevations
1	452.92	453.36	457.00
2	459.08	459.52	463.00
3	462.17	462.95	470.00
4	462.17	462.41	471.00
5	462.43	462.63	470.00
6	459.90	460.04	464.00
7	452.64	452.78	458.00
8	466.22	466.68	473.80 (Actual)
9	466.75	467.15	472.00
10	466.37	466.51	471.00
11	465.52	465.66	470.00



- Notes:
- Existing Water Service - Remove corporation, plug main, remove meter box, and return meter to the Bureau of Utilities.
 - Existing Sewer house Connection - Disconnect existing connection from main on Ilchester Road and plug the sewer.



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 2/14/02
 DISTRICT CHIEF, NATURAL RESOURCES CONSERVATION

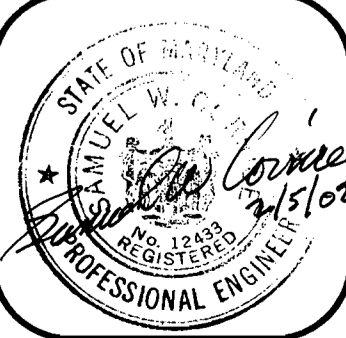
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John R. Roberts 2/14/02
 DISTRICT CHIEF, HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD & DRAIN PLAN, FO2-22.

DEPARTMENT OF PUBLIC WORKS
Robert Seaman 2-11-02
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
Michael... 2/15/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

LDE Inc.
 Engineers, Surveyors, Planners
 9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045
 (410)715-1070 - (301)596-3424 - FAX(410)715-9540

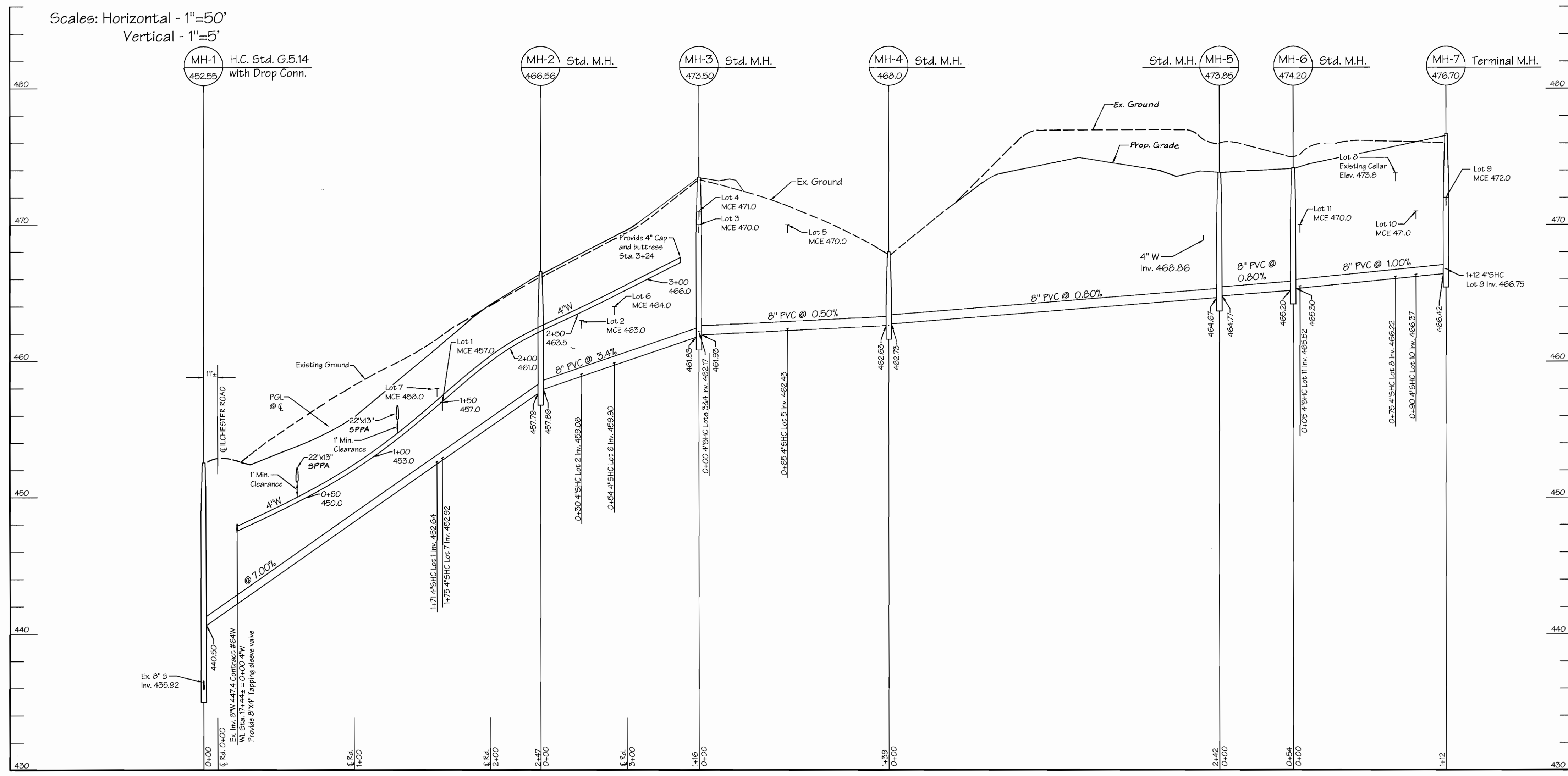


DESIGNED	DRAWN	CHECKED	DATE	BY	NO.	REVISION	DATE
S.W.C.	J.D.R.	S.W.C.	9/20/01				

PLAN VIEW
 600 SCALE MAP NO. 31
 BLOCK 15

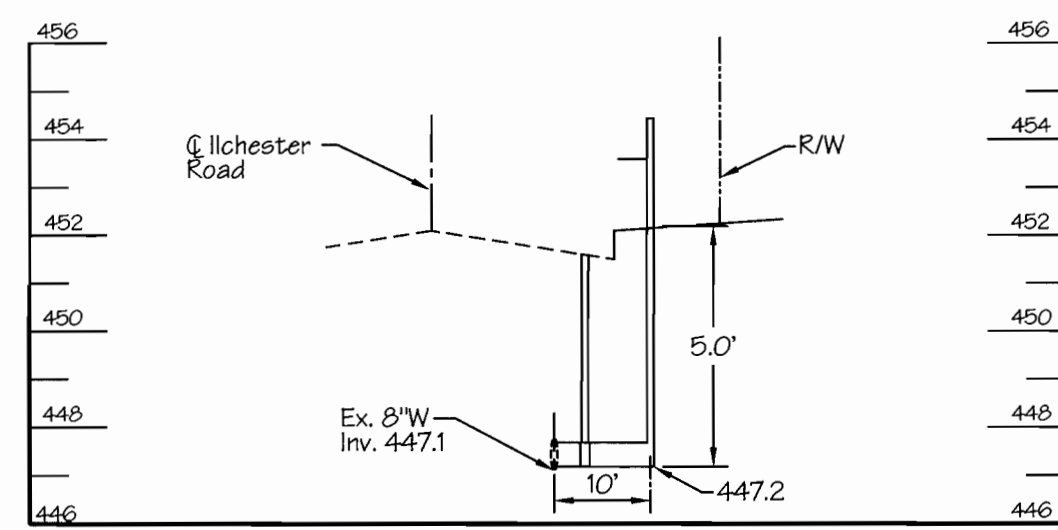
SPRING OAKS
 Lots 1-11
 1st Election District - Howard County, Maryland
 Contract No. 14-3933-D

SCALE: 1"=50'
 SHEET: 2 OF 3

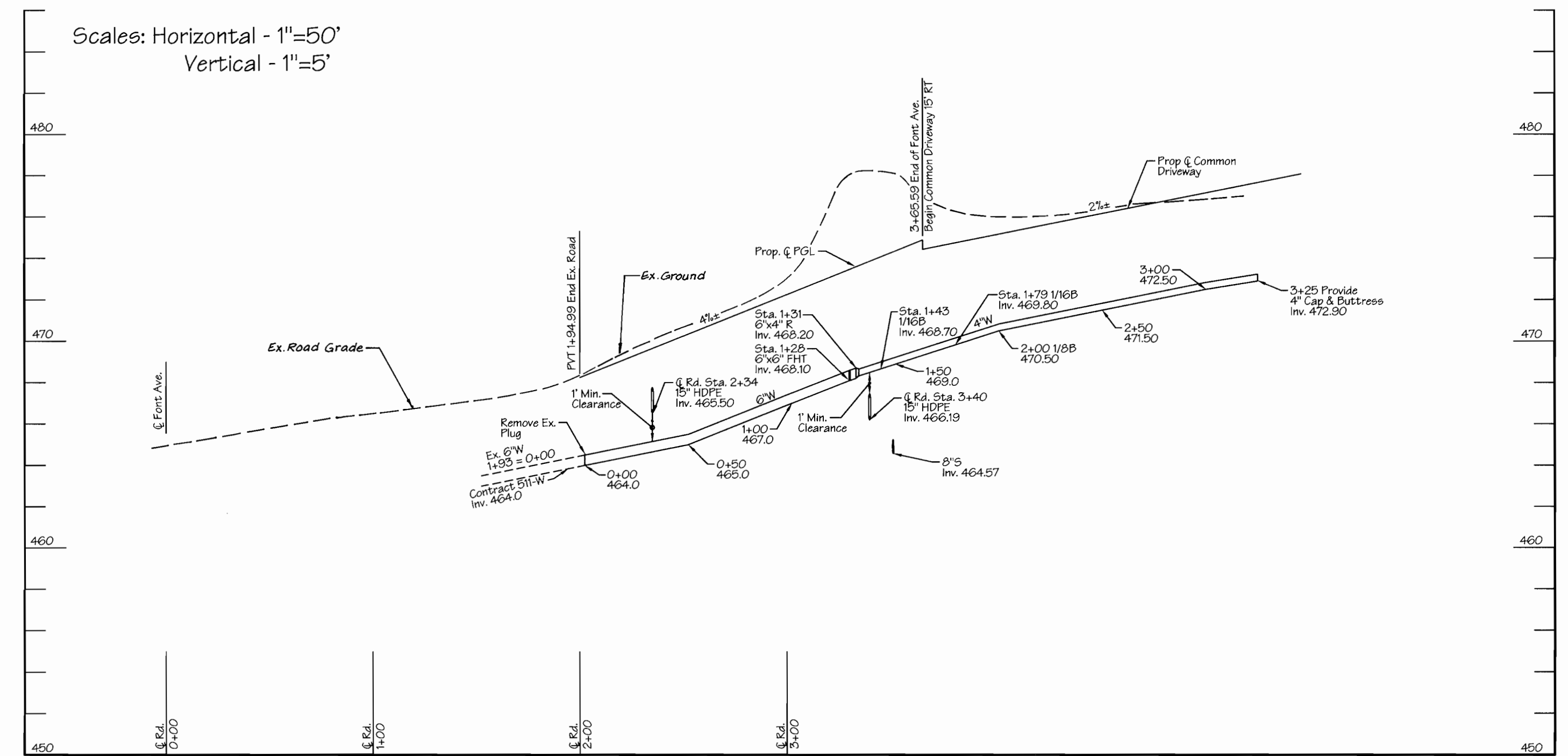


Spring Oaks Lane Water & Sewer

Font Avenue Sewer



Fire Hydrant @ Spring Oak Lane & Ilchester Rd.
Scales: Horizontal - 1"=20'
Vertical - 1"=2'



Font Avenue Water Main

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Jim Meyer 2/14/02
NATURAL RESOURCES CONSERVATION DISTRICT

THIS DEVELOPMENT PLAN IS SUBJECT TO SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John R. Roberts 2/14/02
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD & DRAIN PLAN, F02-22.

DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PLANNING & ZONING

Robert Berman 2-11-02
CHIEF-BUREAU OF UTILITIES DATE

John R. Roberts 2/15/02
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

LDE Inc.
Engineers, Surveyors, Planners
9250 Rumsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED S.W.C.					
DRAWN J.D.R.					
CHECKED S.W.C.					
DATE 9/20/01	BY	NO.	REVISION	DATE	

PROFILE

600 SCALE MAP NO. 31

BLOCK 15

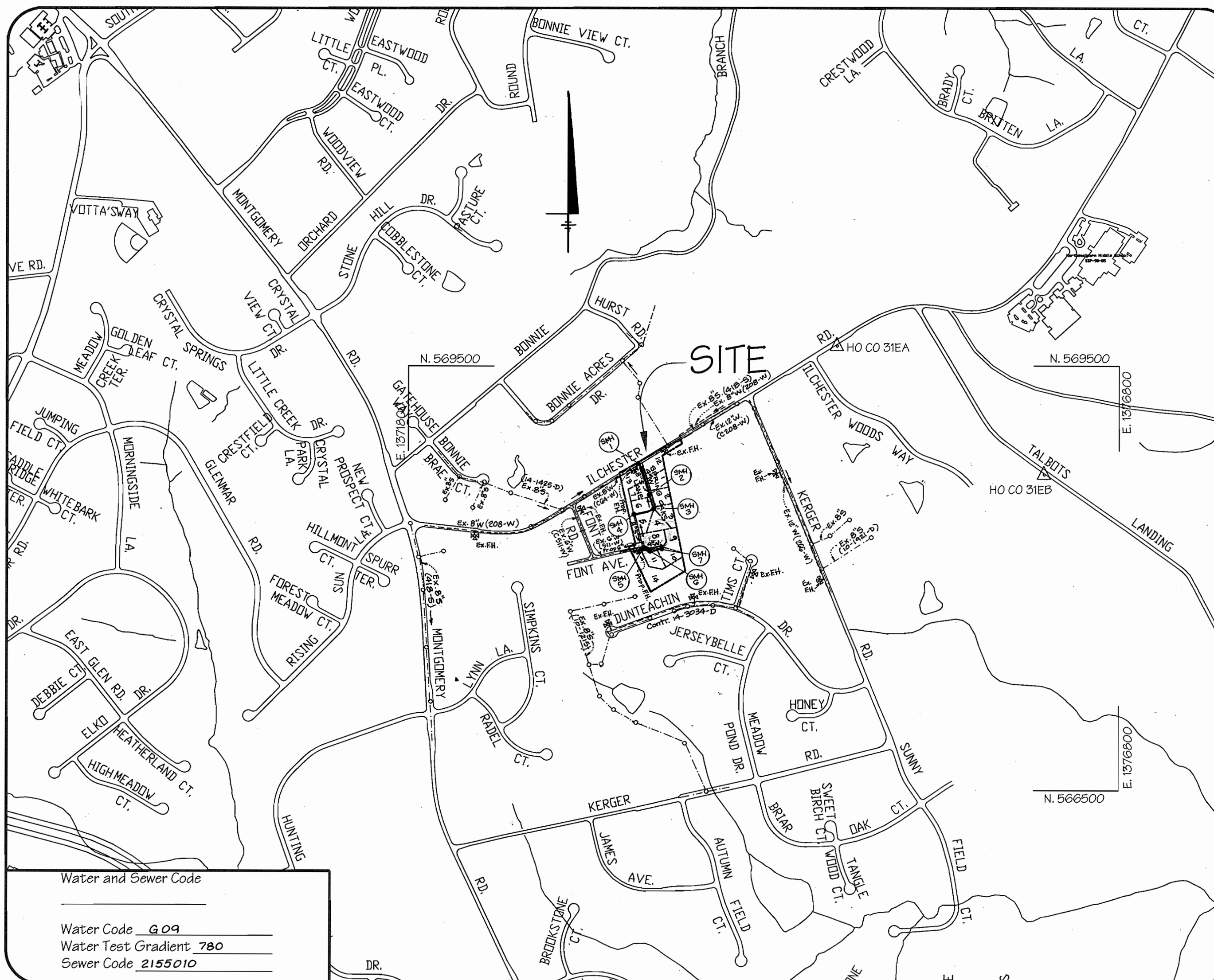
SPRING OAKS

Lots 1-11
1st Election District - Howard County, Maryland
Contract No. 14-3933-D

SCALE
AS SHOWN
SHEET
3 OF 3

SHEET INDEX	
Sheet Number	Description
1	Cover Sheet
2	Plan View
3	Profiles

QUANTITIES					
AS BUILT					
ITEM	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER	
1" W.H.C.	240 LF	240 L.F.	'K' COPPER	READING TUBE	
4" S.H.C.	184 LF	184 L.F.	S.D.R. 35 PVC	J.M. MANUFACTURING	
Standard Manhole	7	7	STANDARD	ATLANTIC CONC. PRODUCTS	
4" Water	520 LF	520 L.F.	TYTON JOINT-D.I.P./GRIFFIN PIPE PRODUCTS		
6" Water	146 LF	146 L.F.	TYTON JOINT-D.I.P./GRIFFIN PIPE PRODUCTS		
8" San.	909 LF	909 L.F.	S.D.R. 35	J.M. MANUFACTURING	
8"x4" TS&V	1	1	RES. WEDGE GATE	MUELLER COMPANY	
8"x6" TS&V	1	1	RES. WEDGE GATE	MUELLER COMPANY	
Fire Hydrants	2	2	A423 CENTURION	MUELLER COMPANY	
6"x6" FHT	1	1	M.J. TEE	UNION FOUNDRY	
6"x4" Reducer	1	1	M.J. REDUCER	UNION FOUNDRY	
6" Valve	1	1	RES. WEDGE GATE	MUELLER COMPANY	
4" Cap & Buttriss	2	2	M.J. CAP	UNION FOUNDRY	
NAME OF UTILITY CONTRACTOR: GAINS CONSTRUCTION					
CHECK BOX: SURVEY & DRAFTING DIVISION AS BUILT DATE: _____					



Water and Sewer Code	
Water Code	609
Water Test Gradient	780
Sewer Code	2155010
Type of Building:	Single Family Detached
Number of Lots/Parcels:	14 (11 Buildable - 3 O.S.)
Number of W.H.C.'s:	11
Number of S.H.C.'s:	11
Drainage Area:	Fatapasco
Treatment Plant:	Fatapasco

LOCATION MAP
Scale: 1" = 600'

BENCHMARKS

Howard County Monument # 31 EA
Elevation: 469.604
Standard stamped brass or aluminum disc on Concrete Monument; 0.3' Below Surface
Located S.E. corner of intersection of Ilchester Rd. and Ilchester Woods Way 2' from sidewalk.

Howard County Monument # 31 EB
Elevation: 453.398
Standard stamped brass or aluminum disc on Concrete Monument; 0.3' Below Surface
Located 19' from C Talbot Landing Rd. 0.3 miles southeast of Ilchester Rd. 85' from BGE tower.



VICINITY MAP
Scale: 1" = 2000'

GENERAL NOTES

- PART I:
- 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 the contractors 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 poles.
 - For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
 - Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
 - Contractor shall notify the following utility companies or agencies at least five (5) working days before starting work shown on these plans:
 - State Highway Administration 410-531-5533
 - BGE Contractor Services 410-850-4620
 - BGE Underground Damage Control 410-291-4607
 - Miss Utility 1-800-257-7777
 - Colonial Pipeline Co. 410-549-4120
 - Howard County Department of Public Works Bureau of Utilities 410-313-4900
 - Bell Atlantic 1-800-446-5266
 - Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip area 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.
 - General Notes (see attached)
 - The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114 (a) of the Howard County Code.
- PART II: 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 the tees shall be strapped to the tees.
 - All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
 - Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with the 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 III: SEWER
- All sewer mains to be D.I.P. 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 G5.52. Where watertight manhole frame and cover is used, set top of frame 1'6" above finished grade unless otherwise noted on the drawings.
 - Houses with the symbol "C.N.S." indicates that cellar cannot be served.

WATER AND SEWER CONSTRUCTION PLANS

SPRING OAKS

1st Election District - Howard County, Maryland
Lots 1-11

Contract No. 14-3933-D

AS BUILT
DATE: Dec. 2002

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 2/14/02
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John R. Robertson 2/14/02
HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD & DRAIN PLAN, F02-22.

DEPARTMENT OF PUBLIC WORKS
Robert Berman 2-11-02
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
Chris Daneman 2/15/02
CHIEF-DEVELOPMENT ENGINEERING DIVISION

LDE Inc.
Engineers, Surveyors, Planners
9250 Ramsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	DRAWN	CHECKED	DATE	BY	NO.	REVISION	DATE
S.W.C.	J.D.R.	S.W.C.	9/2001				

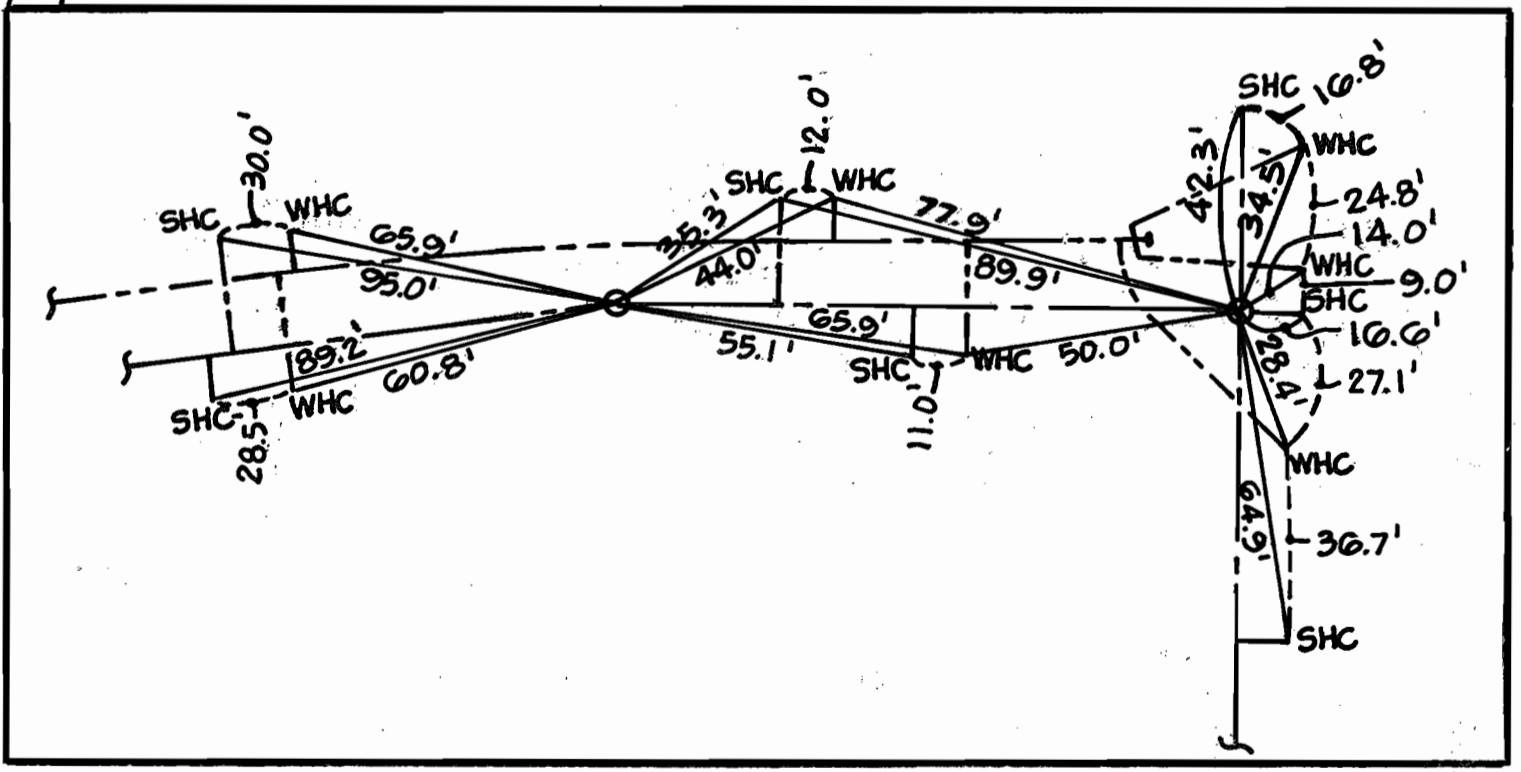
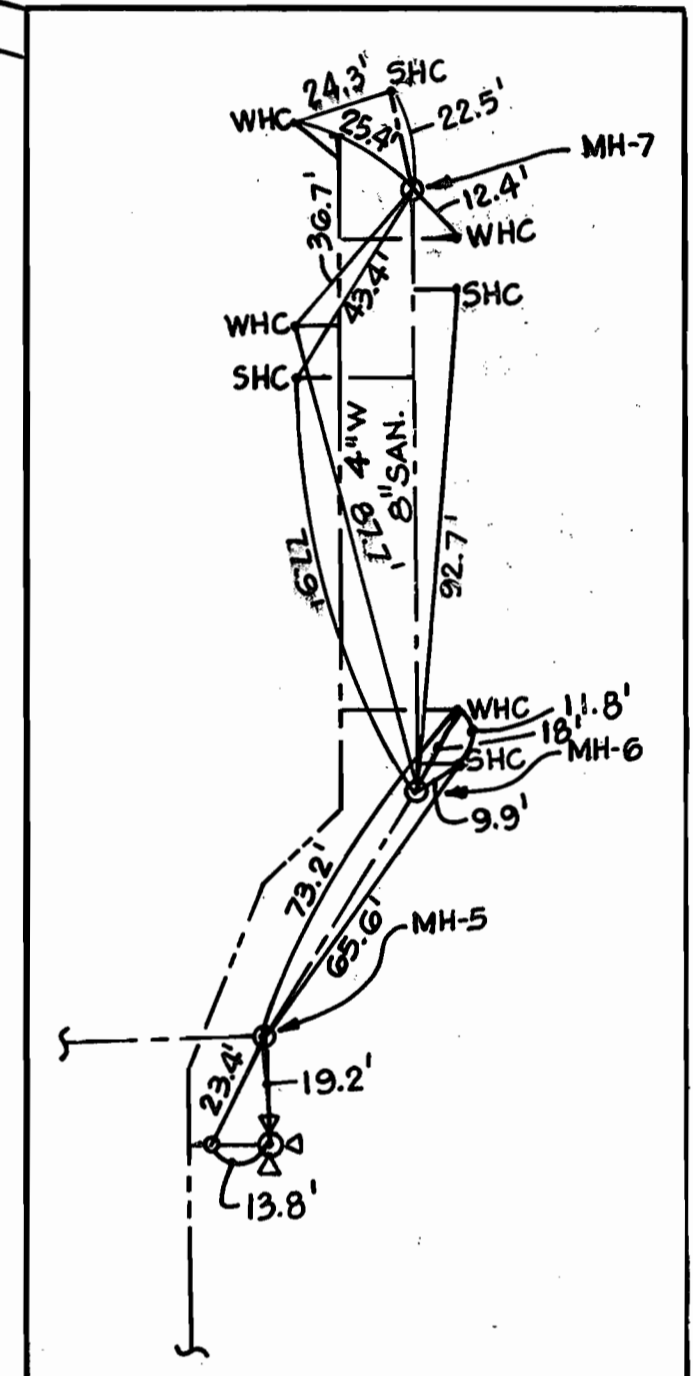
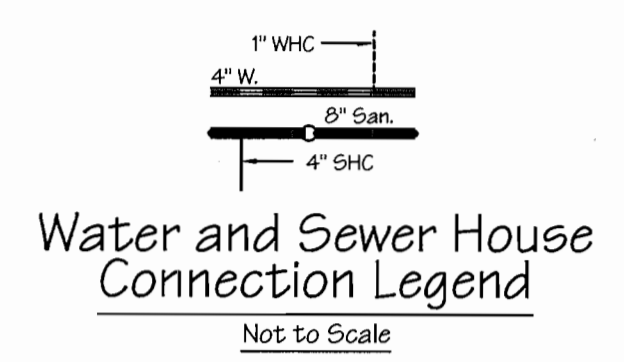
600 SCALE MAP NO. 31
BLOCK 15

SPRING OAKS
Lots 1-11
1st Election District - Howard County, Maryland
Contract No. 14-3933-D

SCALE: AS SHOWN
SHEET: 1 OF 3

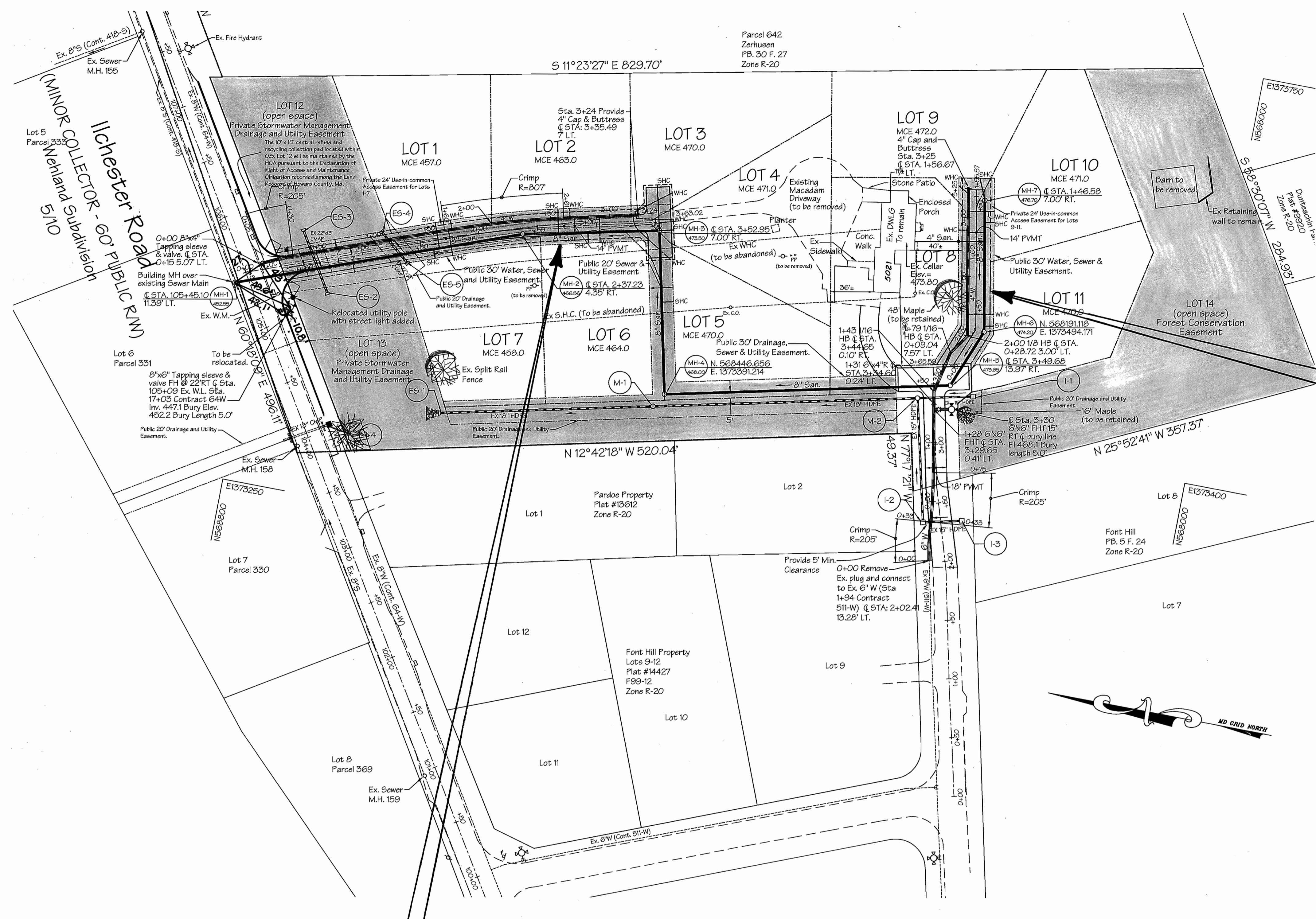
F:\Land Projects\F02\Spring Oaks\view\plan\plan2.dwg, SSW Cover Sheet, 09/24/01 09:36:41 PM

SEWER HOUSE CONNECTION TABLE			
Lot	Inv. @ Main	Inv. @ R	Min. Cellar Elevations
1	452.92	453.36	457.00
2	459.08	459.52	463.00
3	462.17	462.95	470.00
4	462.17	462.41	471.00
5	462.43	462.63	470.00
6	459.90	460.04	464.00
7	452.64	452.78	458.00
8	466.22	466.68	473.80 (Actual)
9	466.75	467.15	472.00
10	466.37	466.51	471.00
11	465.52	465.66	470.00



AS BUILT
DATE: DEC. 2002

- Notes:
- Existing Water Service - Remove corporation, plug main, remove meter box, and return meter to the Bureau of Utilities.
 - Existing Sewer house Connection - Disconnect existing connection from main on Ichester Road and plug the sewer.



REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 2/14/02
NATURAL RESOURCES CONSERVATION

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
John R. Roberts 2/14/02
HOWARD COUNTY SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
Robert B. ... 2-11-02
CHIEF-BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
... 2/15/02
CHIEF-DEVELOPMENT ENGINEERING DIVISION

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION AND THE APPROVED ROAD & DRAIN PLAN, F02-22.

LDE Inc.
Engineers, Surveyors, Planners
9250 Runsey Road, Suite 106 Columbia, Maryland - 21045
(410)715-1070 - (301)596-3424 - FAX(410)715-9540



DESIGNED	DRAWN	CHECKED	DATE	BY	NO.	REVISION	DATE
S.W.C.	J.D.R.	S.W.C.	9/2001				

PLAN VIEW
600 SCALE MAP NO. 31
BLOCK 15

SPRING OAKS
Lots 1-11
1st Election District - Howard County, Maryland
Contract No. 14-3933-D

SCALE
1"=50'
SHEET
2 OF 3

File: d:\projects\2\spring oak\spring oak\plans\plan2.dwg, S:\W\Plans_01\221\02\09-48-05.dwg
 01/22/02 09:48:05 AM