

SHEET INDEX	
1	TITLE SHEET
2	PLAN VIEW OF WATER & SEWER MAINS
3	PROFILES OF WATER & SEWER MAINS

# WATER AND SEWER EXTENSIONS

# ST. LOUIS CHURCH

## 5th ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND


## CONTRACT NO. 34-4100-D

**BENCHMARKS**

CONTROL STATION: 34B2  
ELEVATION 560.032  
N 565,468.218  
E 1,321,931.520  
LOCATED ALONG RT. 32  
NORTH OF INTERSECTION  
AT CLARKSVILLE PIKE

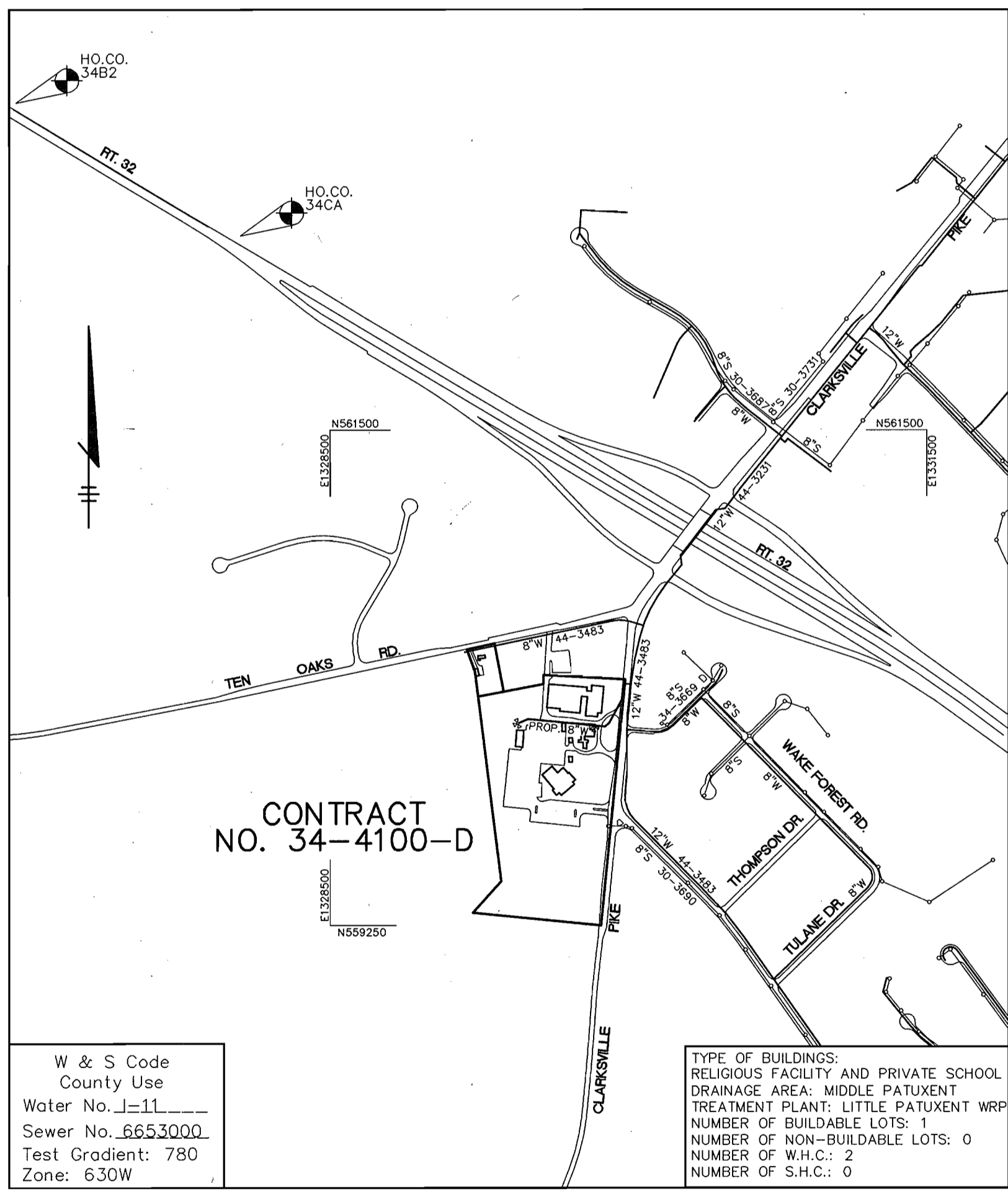
CONTROL STATION: 34CA  
ELEVATION -  
N 562,501.116  
E 1,326,884.894  
LOCATED ALONG RT. 32  
NORTH OF INTERSECTION  
AT CLARKSVILLE PIKE

**GENERAL NOTES**

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. 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 83/91 as projected by Howard County Horizontal and Vertical Geodetic Control Station Numbers 34B2 and 34CA.
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. 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 (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.
- The contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
 

AT&T	1-800-252-1133
BGE (Contractor Services)	410-850-4620
BGE (Underground Damage Control)	410-787-9068
Bureau of Utilities	410-313-4900
Colonial Pipeline Co.	410-795-1390
Miss Utility	1-800-257-7777
State Highway Administration	410-531-5533
Verizon	1-800-743-0033 / 410-224-9210
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The contractor shall notify the Bureau of Highways, Howard County, at 410-313-7450 at least five working days before open cutting or boring/jacking of any County road 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.
- This water and sewer drawing is based on a field run topographic survey performed by Greenhorn and O'Mara, Inc. dated September 1997 and supplemented by field survey performed by Riemer Muegge, a division of Patton Harris Rust and Associates, PC on or about January 2001.

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" SEWER	21 LF			
4' MANHOLES	2 EA.			
2" WATER	10 LF			
6" WATER	44 LF			
8" WATER	599 LF			
2" CORP. COCK	1 EA.			
2" CURB STOP VALVE	1 EA.			
FIRE HYDRANTS	2 EA.			
6"x6" TEE	1 EA.			
8"x6" T	1 EA.			
8"x6" C	1 EA.			
6" VALVES	5 EA.			
8"x6" R	1 EA.			
8" CAP	1 EA.			
6" CAP (WHC's)	1 EA.			
8" 1/16HB	3 EA.			
8" 1/8HB	1 EA.			



**WATER NOTES**

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. The 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.

**SEWER NOTES**

- All sewer mains shall 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 watertight frame and covers, Standard Detail G5.52. Where watertight manhole frames 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.

NAME OF UTILITY CONTRACTOR: \_\_\_\_\_


Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-064

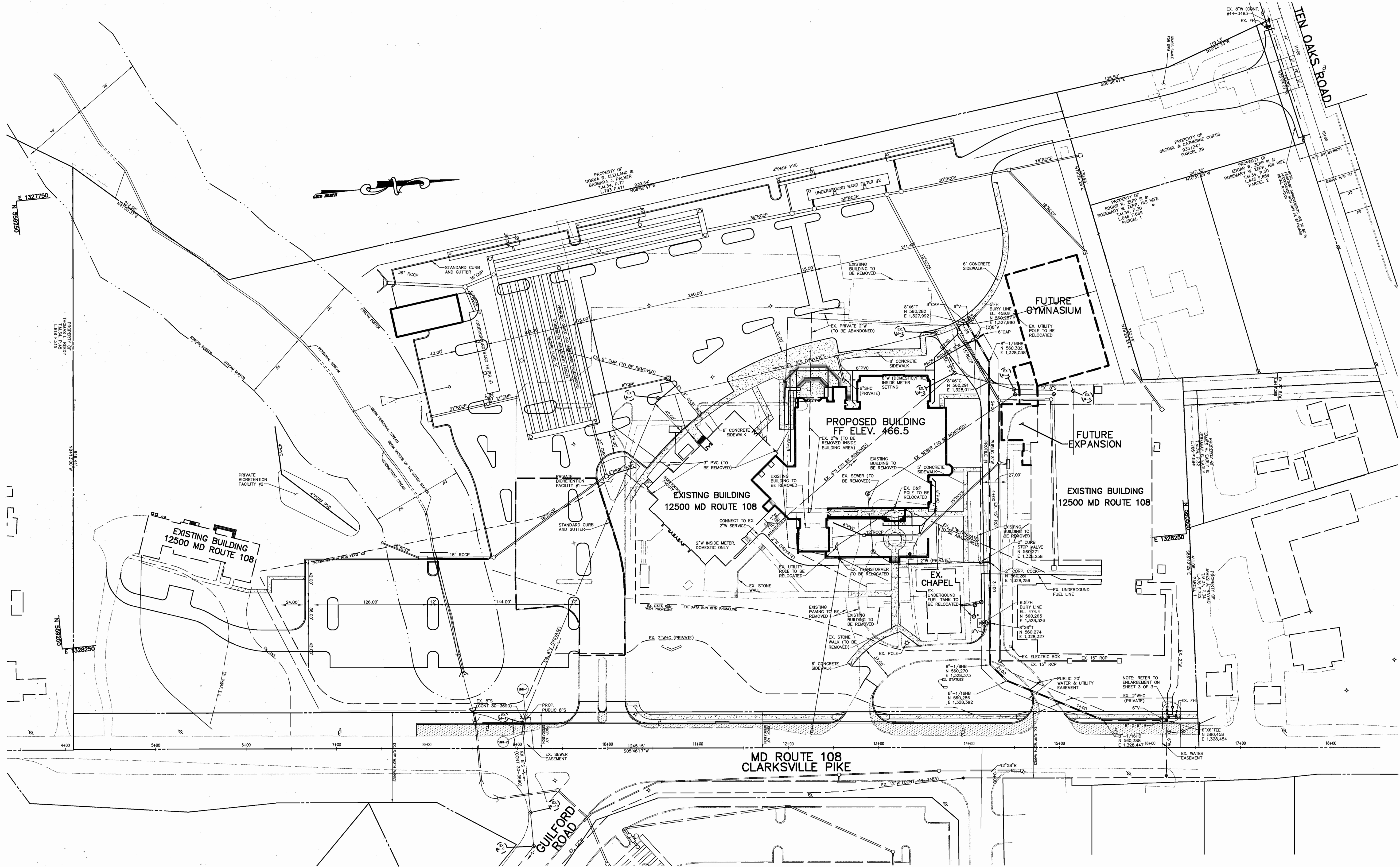
Review for Howard Soil Conservation District and meets technical requirements.

*Jim Meyer* 7/18/03  
NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

*John K. Roberts* 7/18/03  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>R. D. B...</i> 7-16-03 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND  <i>Christopher J. Reid</i> 8/4/03 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.8282   CHRISTOPHER J. REID #19849	DES: ACR DRN: DRH CHK: JWC DATE: 7/9/03 BY NO. REVISION DATE	TITLE SHEET  600' SCALE MAP NO. 34 BLOCK NO. 12	ST. LOUIS CHURCH PARCELS 196 & 29 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-4100-D  SCALE AS SHOWN SHEET 1 OF 3
---	---	--	--	---	--

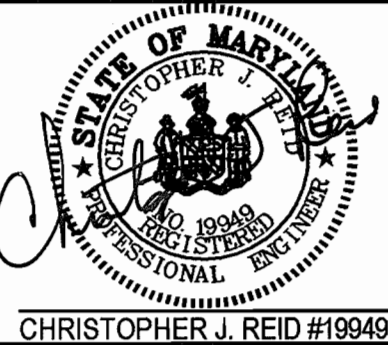


PLAN  
SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*R. L. B. B. B.*  
CHIEF, BUREAU OF UTILITIES  
7-16-03  
DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*Christopher J. Reid*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
8/4/03  
DATE

Patton Harris Rust & Associates, PC  
Engineers, Surveyors, Planners, Landscape Architects.  
**P.H.R.A.**  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282

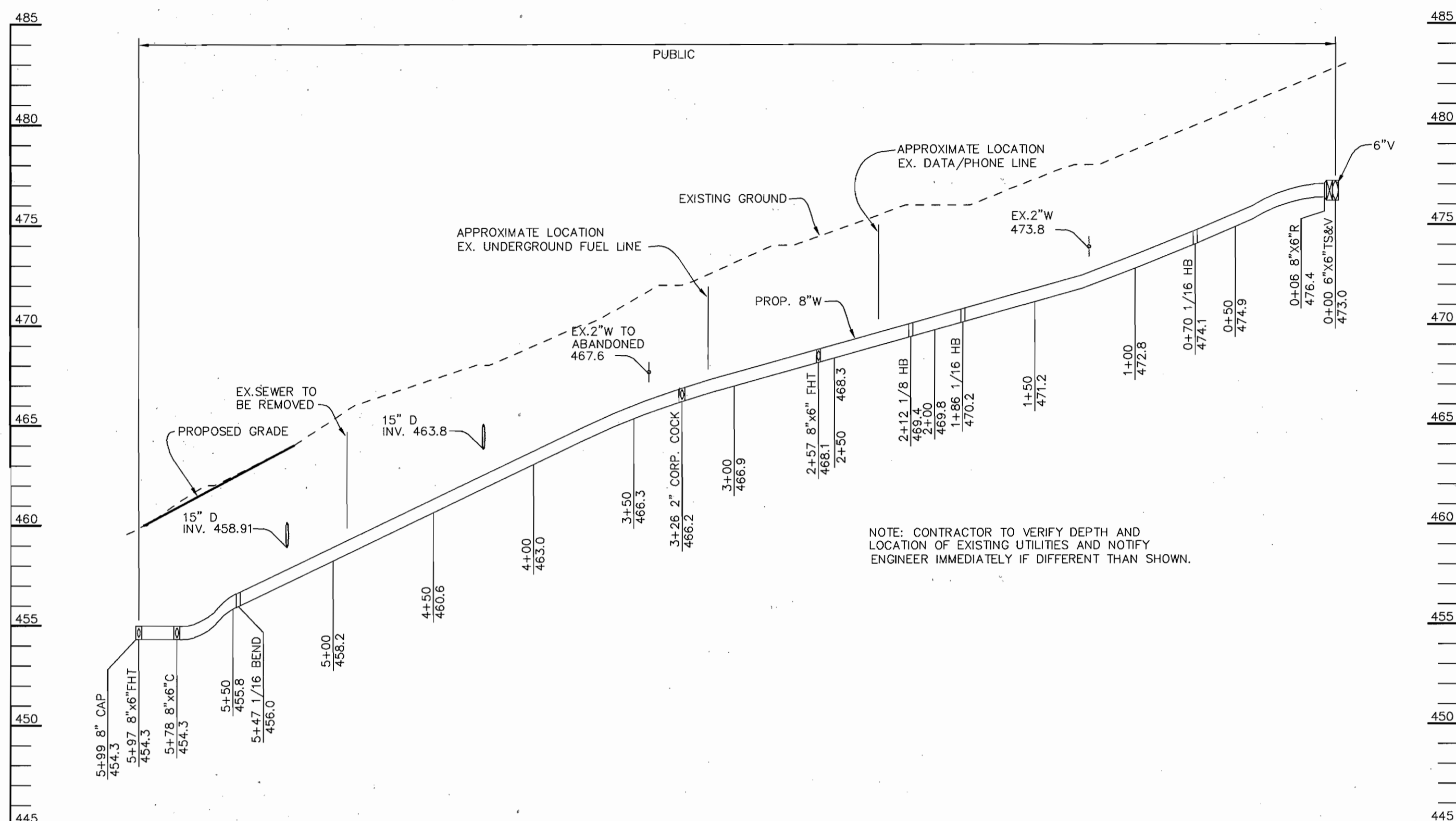


DES:	ACR				
DRN:	DRH				
CHK:	JWC				
DATE:	7/9/03				
BY	NO.	REVISION	DATE		

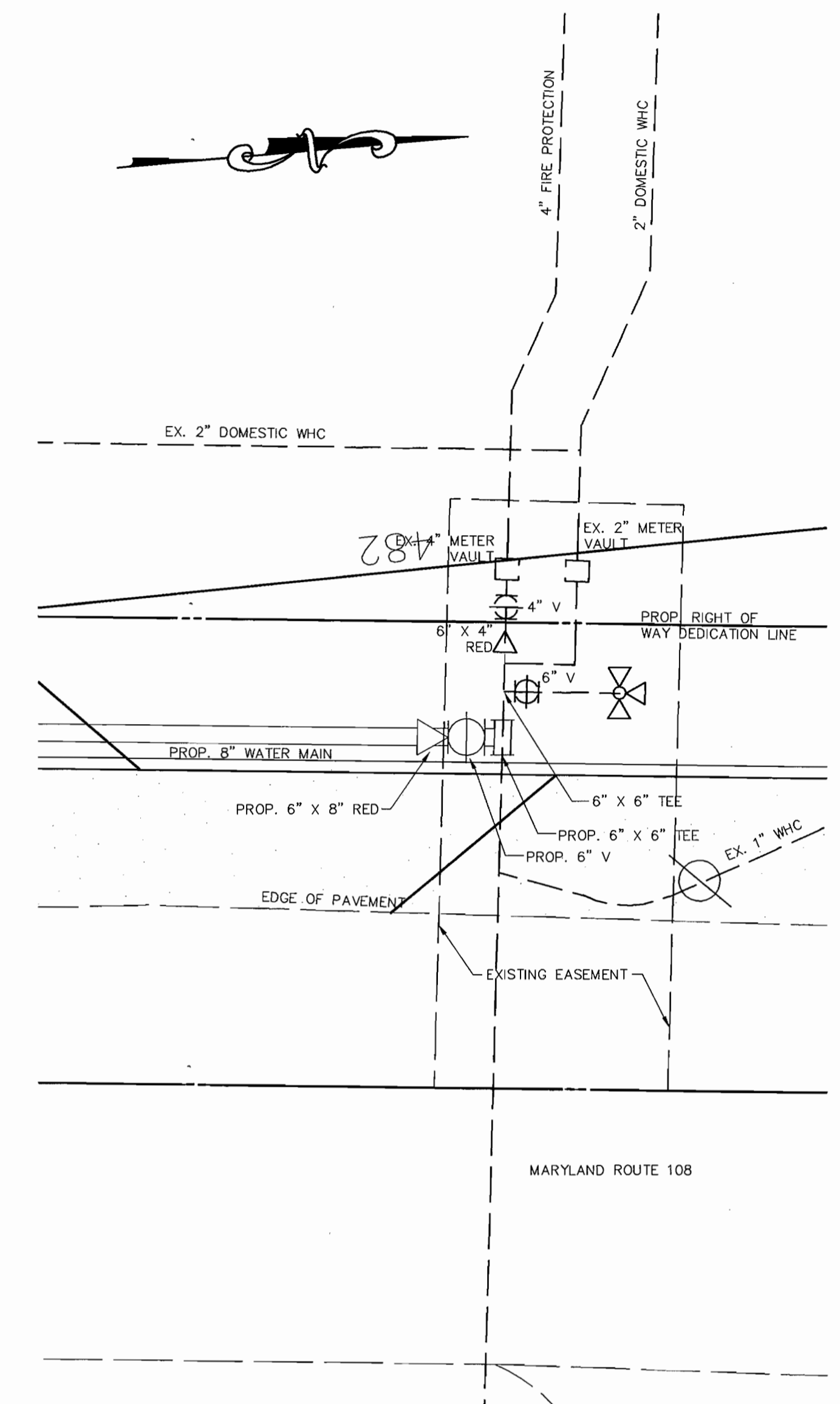
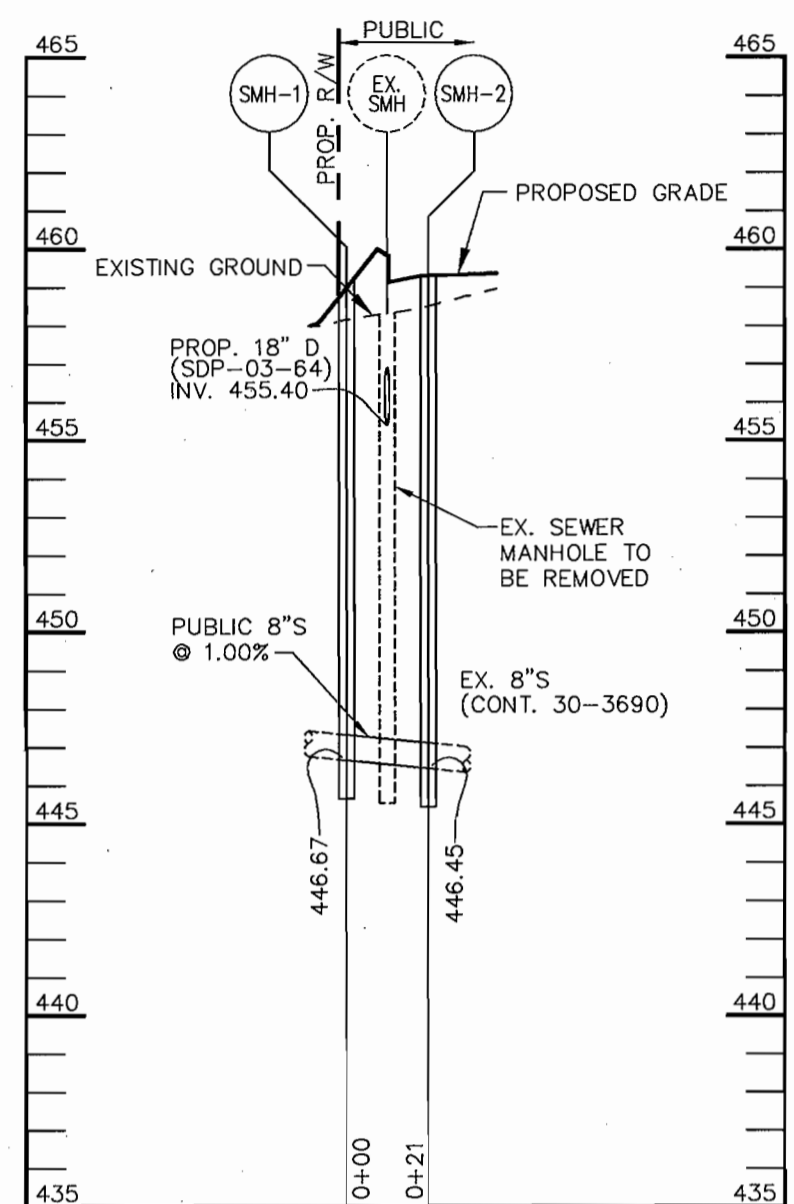
PLAN VIEW OF  
WATER AND SEWER MAINS  
600' SCALE MAP NO. 34 BLOCK NO. 12

ST. LOUIS CHURCH  
PARCELS 196 & 29  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 34-4100-D

SCALE  
AS  
SHOWN  
SHEET  
2 OF 3



NOTE: CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES AND NOTIFY ENGINEER IMMEDIATELY IF DIFFERENT THAN SHOWN.



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, p.c.  
Engineers, Surveyors, Planners, Landscape Architects.  
**PHRA**  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.9900  
F 410.997.9282



DES:	ACR				
DRN:	DRH				
CHK:	JWC				
DATE:	7/9/03	BY	NO.	REVISION	DATE

WATER AND SEWER PROFILES

600' SCALE MAP NO. 34 BLOCK NO. 12

ST. LOUIS CHURCH  
PARCELS 196 & 29  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 34-4100-D

SCALE AS SHOWN  
SHEET 3 OF 3

*Richard B...* 7-16-03  
CHIEF, BUREAU OF UTILITIES DATE

*Christopher J. Reid* 8/16/03  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SHEET INDEX	
1	TITLE SHEET
2	PLAN VIEW OF WATER & SEWER MAINS
3	PROFILES OF WATER & SEWER MAINS

# WATER AND SEWER EXTENSIONS

# ST. LOUIS CHURCH

## 5th ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND

## CONTRACT NO. 34-4100-D

### BENCHMARKS

CONTROL STATION: 34B2  
 ELEVATION 560.032  
 N 565,468.218  
 E 1,321,931.520  
 LOCATED ALONG RT. 32  
 NORTH OF INTERSECTION  
 AT CLARKSVILLE PIKE

CONTROL STATION: 34CA  
 ELEVATION -  
 N 562,501.116  
 E 1,326,884.894  
 LOCATED ALONG RT. 32  
 NORTH OF INTERSECTION  
 AT CLARKSVILLE PIKE

### QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" SEWER	21 LF			
4' MANHOLES	2 EA.			
2" WATER	10 LF			
6" WATER	55 LF			
8" WATER	599 LF			
2" CORP. COCK	1 EA.			
2" CURB STOP VALVE	1 EA.			
FIRE HYDRANTS	2 EA.			
6"x6" TEE	1 EA.			
8"x6" T	1 EA.			
8"x6" C	1 EA.			
6" VALVES	5 EA.			
8"x6" R	1 EA.			
8" CAP	1 EA.			
6" CAP (WHC's)	1 EA.			
8" 1/16HB	3 EA.			
8" 1/8HB	1 EA.			

NAME OF UTILITY CONTRACTOR :	CHECKBOX
Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-064	AS-BUILT DATE
	SURVEY AND DRAFTING DIVISION

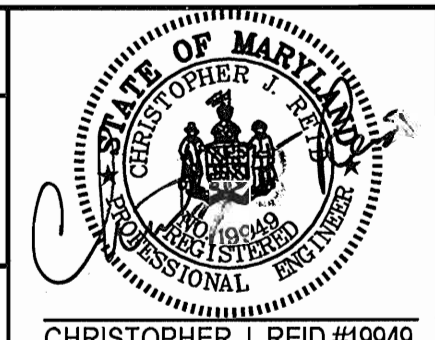
Review for Howard Soil Conservation District and meets technical requirements.  
*Jim M. Gutz* 7/18/03  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
*John R. Roberts* 7/18/03  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
*R. L. Berman* 7-16-03  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
*Chris Dorman* 8/4/03  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

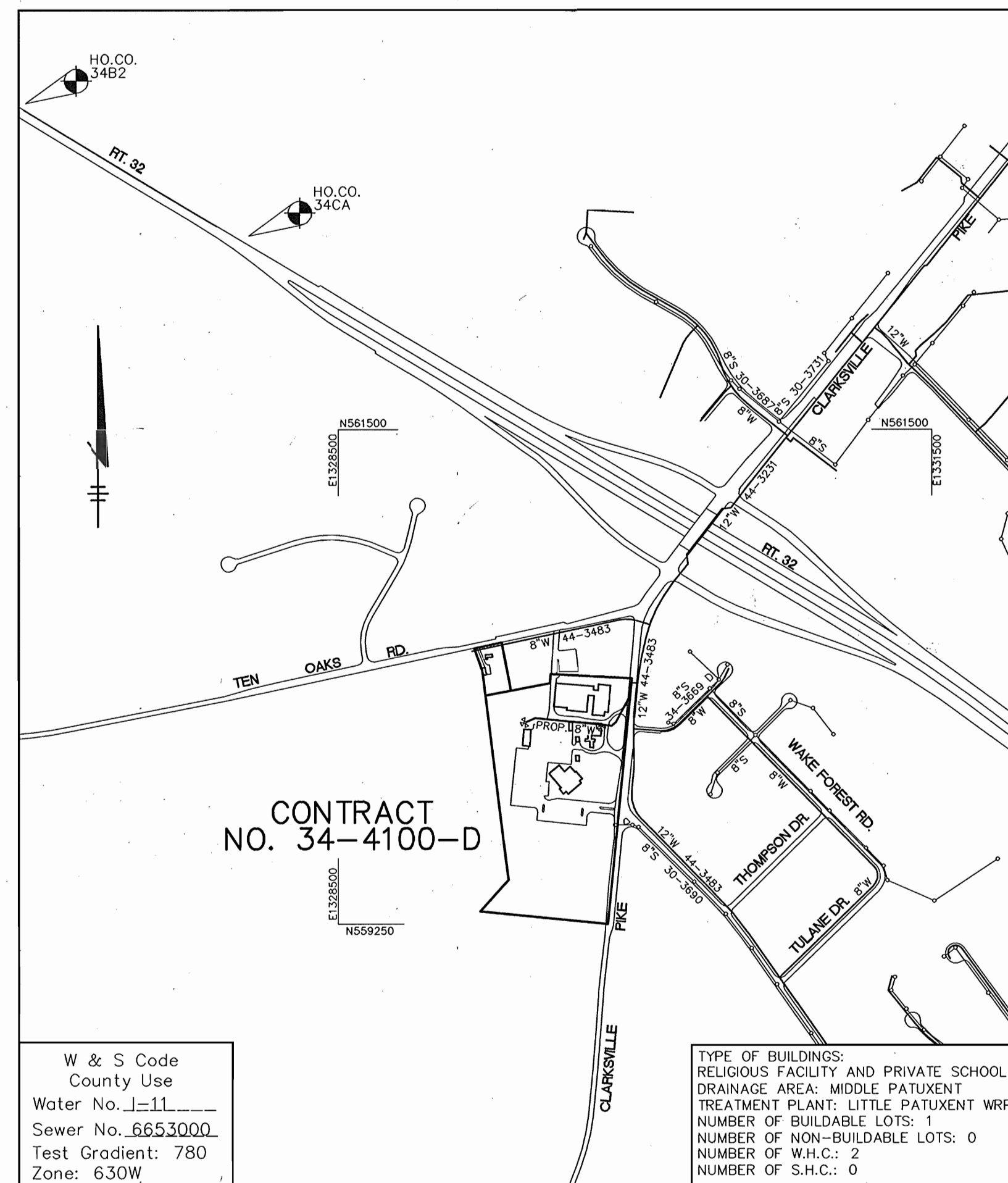
Patton Harris Rust & Associates, PC  
 Engineers, Surveyors, Planners, Landscape Architects.  
 8818 Centre Park Drive  
 Columbia, MD 21045  
 T 410.997.8900  
 F 410.997.9282



DES: ACR				
DRN: DRH				
CHK: JWC				
DATE: 7/9/03	CJR	1	MODIFIED 6" WATER QUANTITY	6-28-04
	BY	NO.	REVISION	DATE

TITLE SHEET  
 600' SCALE MAP NO. 34 BLOCK NO. 12

ST. LOUIS CHURCH  
 PARCELS 196 & 29  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CONTRACT NO. 34-4100-D  
 SCALE AS SHOWN  
 SHEET 1 OF 3



### GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. 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 83/91 as projected by Howard County Horizontal and Vertical Geodetic Control Station Numbers 34B2 and 34CA.
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. 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 (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.
- The contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
 

AT&T	1-800-252-1133
BGE (Contractor Services)	410-850-4820
BGE (Underground Damage Control)	410-787-9068
Bureau of Utilities	410-313-4900
Colonial Pipeline Co.	410-795-1390
Miss Utility	1-800-257-7777
State Highway Administration	410-531-5533
Verizon	1-800-743-0033 / 410-224-9210
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The contractor shall notify the Bureau of Highways, Howard County, at 410-313-7450 at least five working days before open cutting or boring/jacking of any County road 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.
- This water and sewer drawing is based on a field run topographic survey performed by Greenhorn and O'Mara, Inc. dated September 1997 and supplemented by field surveyor performed by Riener Muegge, a division of Patton Harris Rust and Associates, PC on or about January 2001.

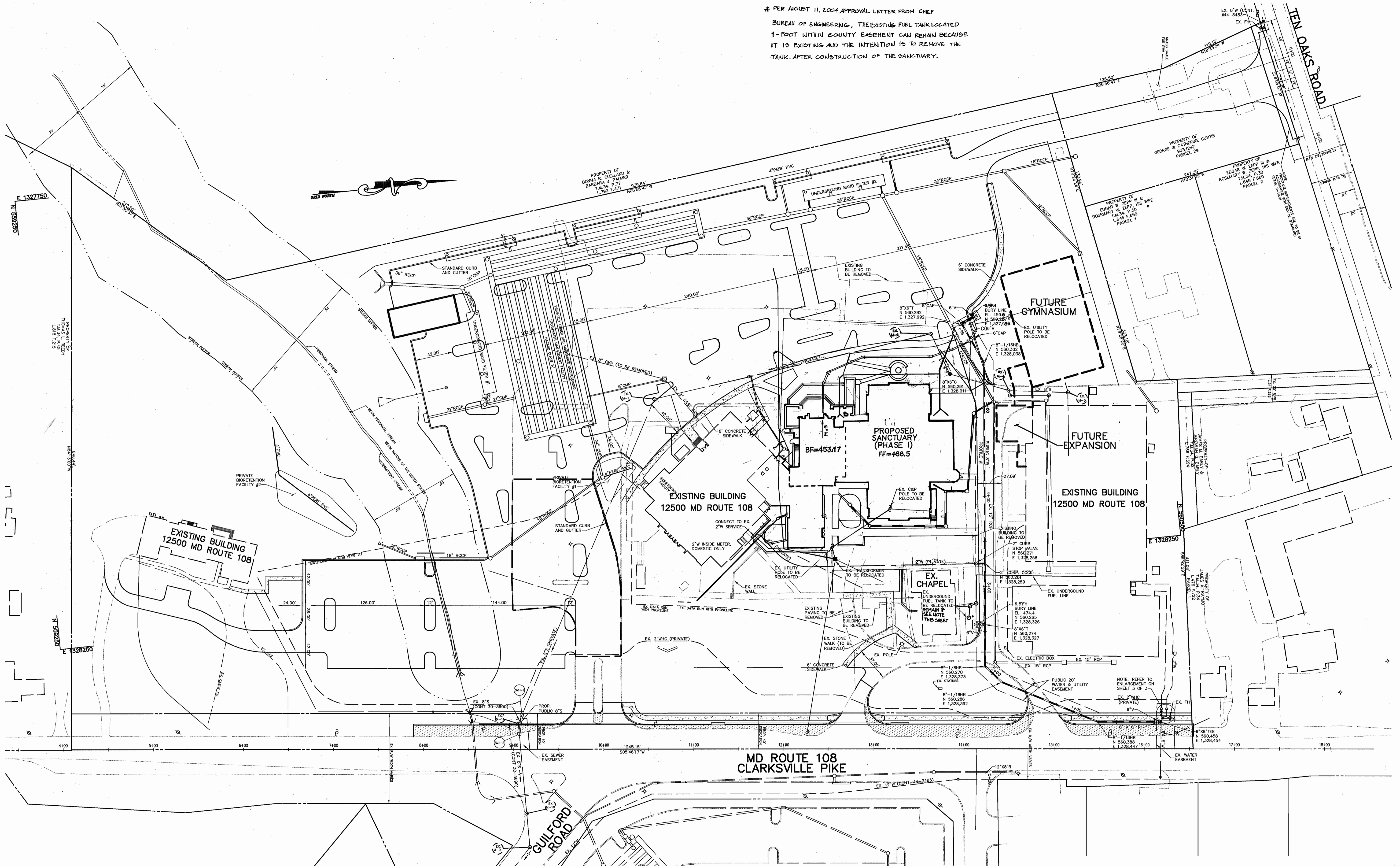
### WATER NOTES

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. The 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.


### SEWER NOTES

- All sewer mains shall 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 watertight frame and covers, Standard Detail G5.52. Where watertight manhole frames 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.

\* PER AUGUST 11, 2004 APPROVAL LETTER FROM CHIEF  
 BUREAU OF ENGINEERING, THE EXISTING FUEL TANK LOCATED  
 1-FOOT WITHIN COUNTY EASEMENT CAN REMAIN BECAUSE  
 IT IS EXISTING AND THE INTENTION IS TO REMOVE THE  
 TANK AFTER CONSTRUCTION OF THE SANCTUARY.

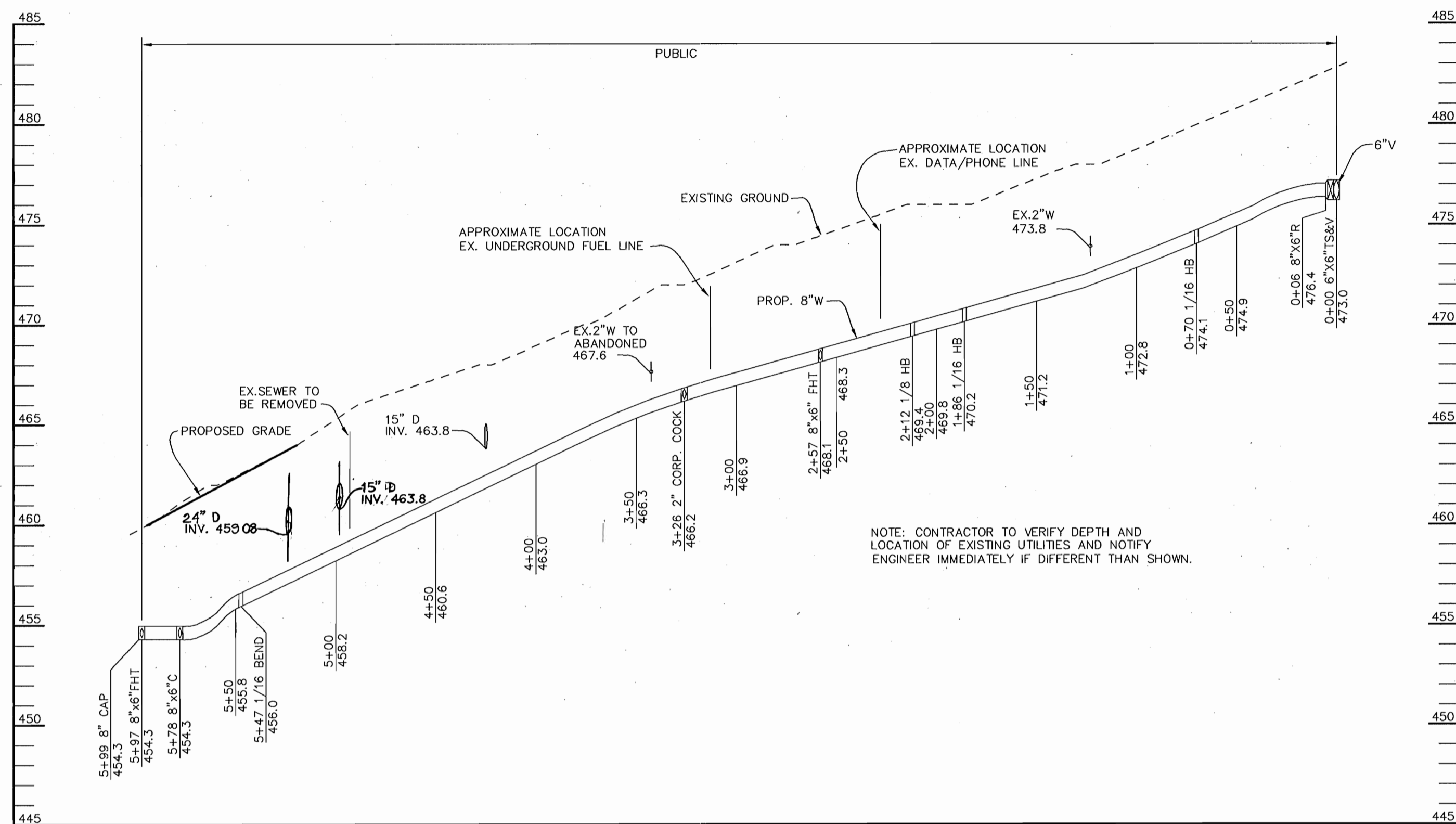


PLAN  
 SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND		Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. <b>P.H.R.A.</b> 8818 Centre Park Drive Columbia, MD 21045 T: 410.997.9900 F: 410.997.9282		 CHRISTOPHER J. REID #19949		DES: ACR DRN: DRH CHK: JWC DATE: 7/9/03		C.J.R. 1 NO. 1 MODIFY FH LOCATION, FUEL TANK DISPOSITION REVISION DATE: 6-28-04		PLAN VIEW OF WATER AND SEWER MAINS 600' SCALE MAP NO. 34 BLOCK NO. 12		ST. LOUIS CHURCH PARCELS 196 & 29 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-4100-D		SCALE AS SHOWN  SHEET 2 OF 3
---	--	--	--	---	--	---	--	--	--	---	--	---	--	--	--	---

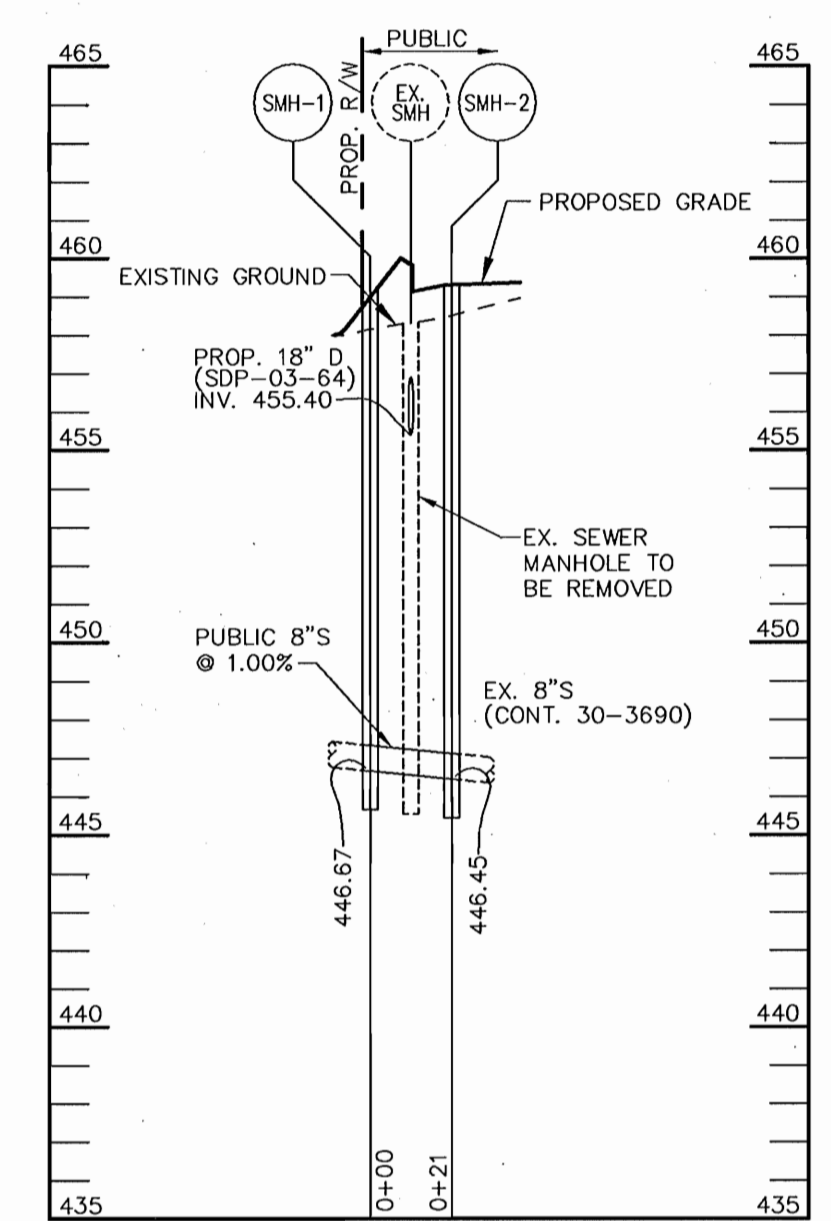
*R.H. Rust*  
 CHIEF, BUREAU OF UTILITIES  
 DATE: 7-16-03

*Christopher J. Reid*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 8/14/03



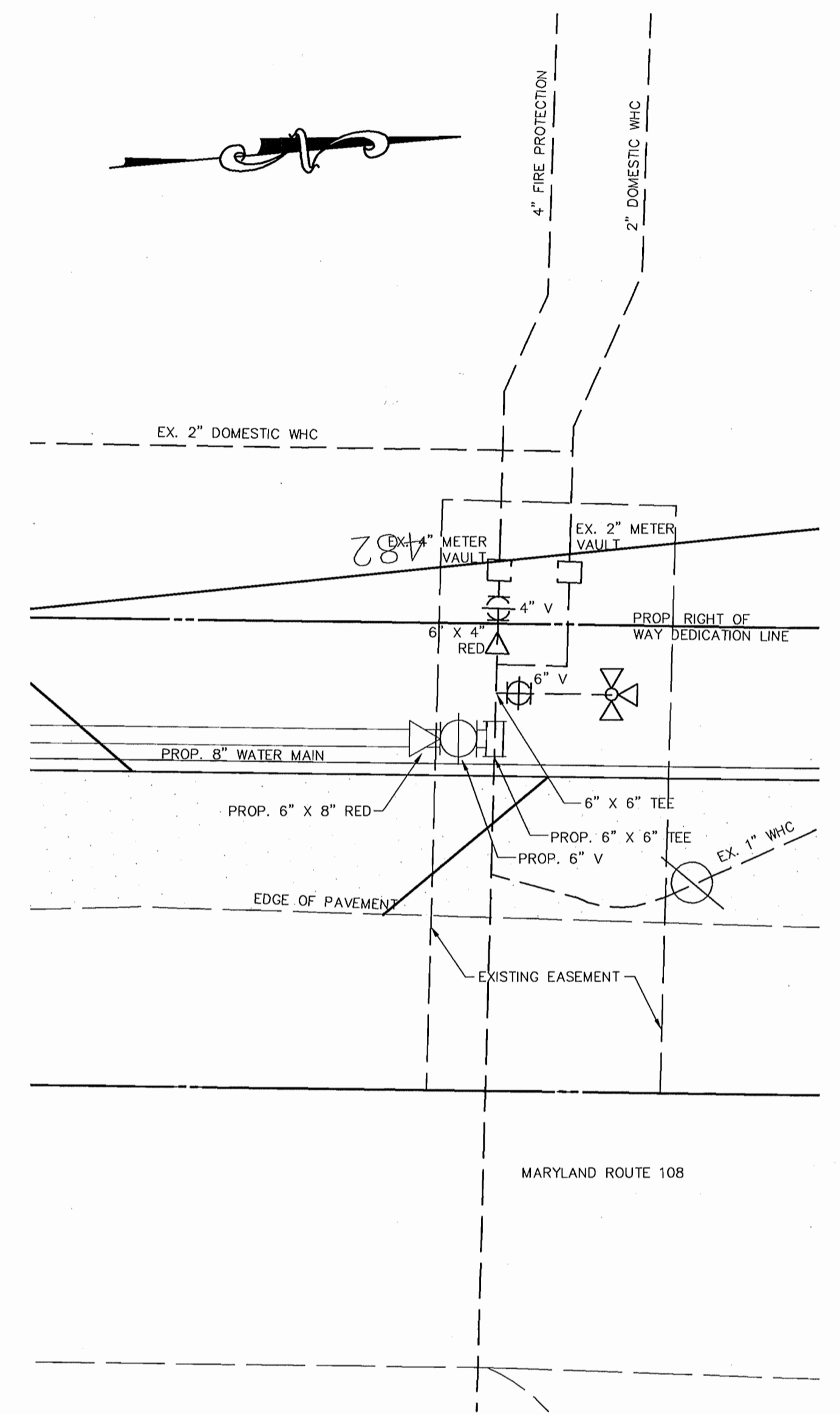
**WATER PROFILE**

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



**SEWER PROFILE**

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



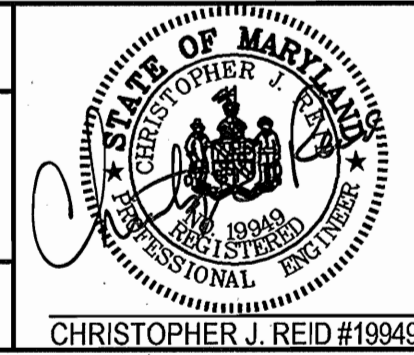
**ENLARGEMENT OF CONNECTION DETAIL**

1" = 10'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

Patton Harris Rust & Associates, pc  
Engineers, Surveyors, Planners, Landscape Architects.  
**PHRA**  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282



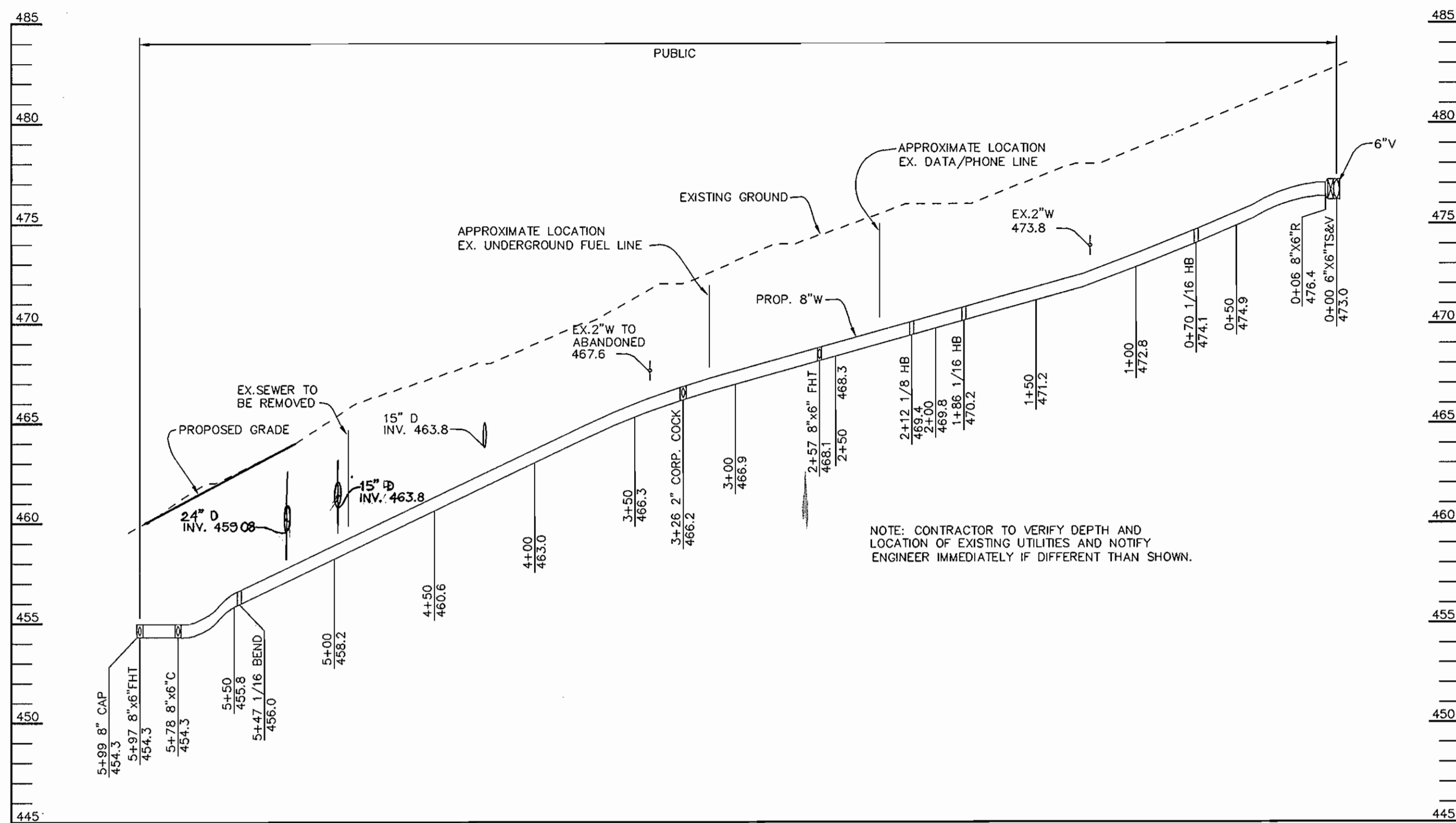
DES:	ACR			
DRN:	DRH			
CHK:	JWC			
DATE:	7/9/03			
BY:	GJR	1	ADDED CROSSINGS TO PROFILE	6-28-04
	NO.		REVISION	DATE

**WATER AND SEWER PROFILES**

600' SCALE MAP NO. 34 BLOCK NO. 12

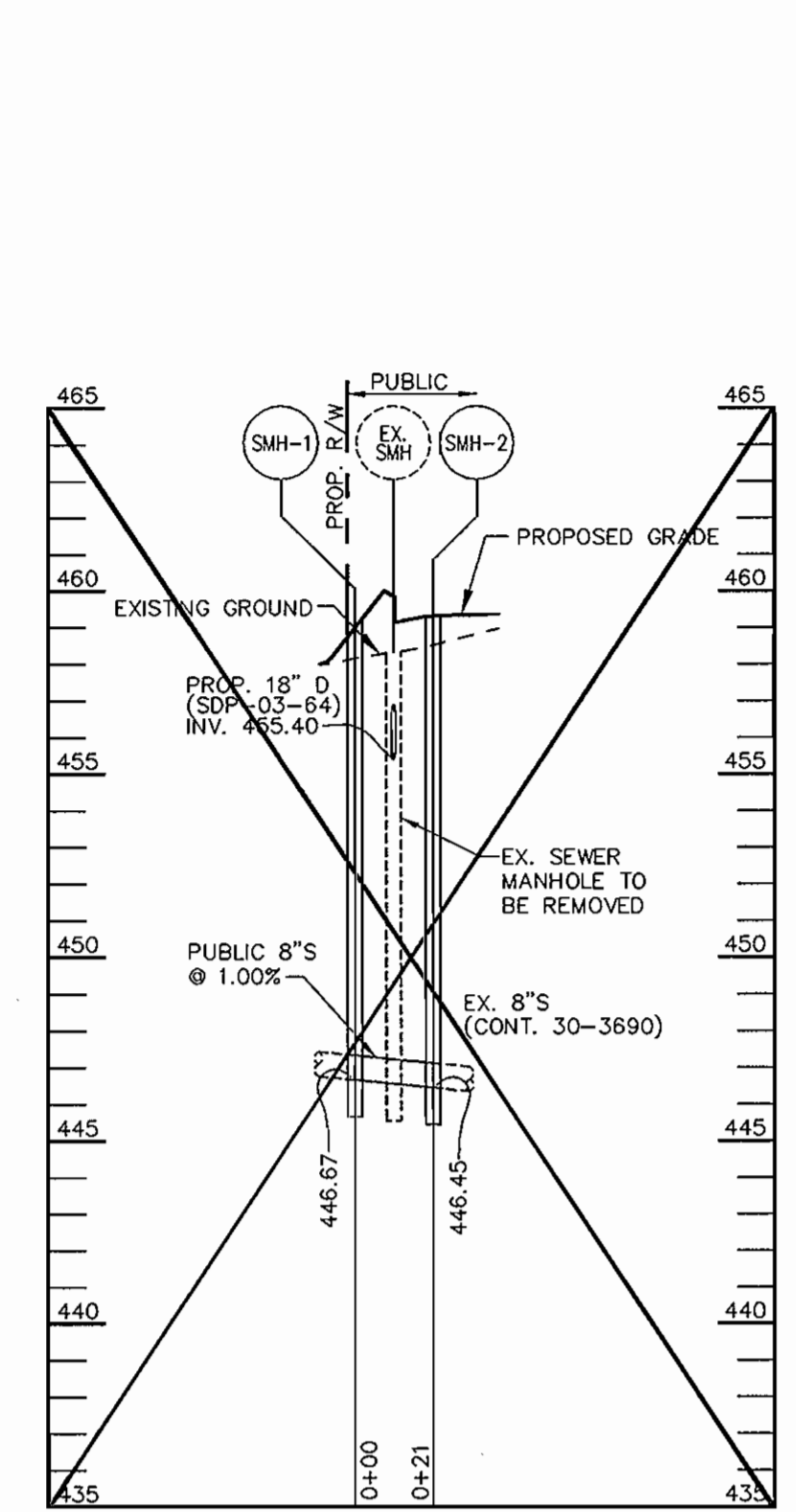
**ST. LOUIS CHURCH  
PARCELS 196 & 29  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 34-4100-D**

SCALE AS SHOWN  
SHEET 3 OF 3



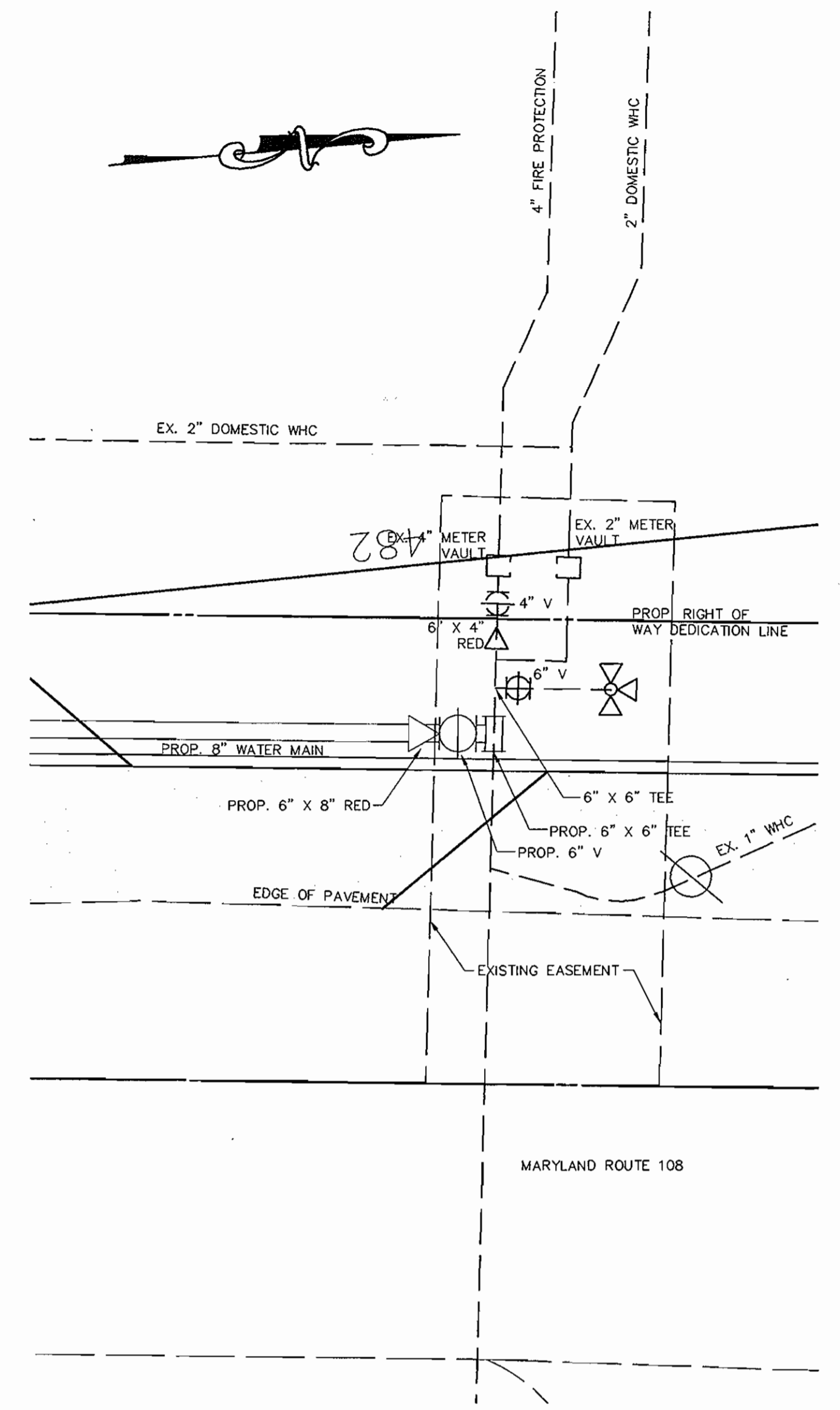
**WATER PROFILE**

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



**SEWER PROFILE**

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



**ENLARGEMENT OF CONNECTION DETAIL**

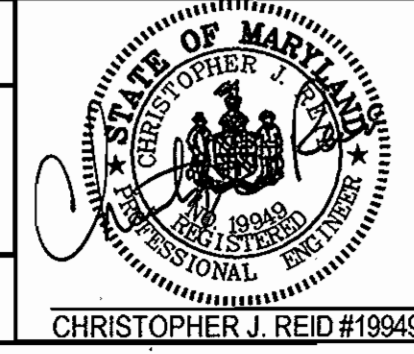
1" = 10'

**AS BUILT**  
DATE: MAY 2007

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Rltu3*  
CHIEF, BUREAU OF UTILITIES  
DATE: 7/16/03

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*Christopher J. Reid*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 7/16/03

Patton Harris Rust & Associates, pc  
Engineers, Surveyors, Planners, Landscape Architects.  
**PHRA**  
8818 Centre Park Drive  
Columbia, MD 21045  
T 410.997.8900  
F 410.997.9282



DES:	ACR				
DRN:	DRH				
CHK:	JWC				
DATE:	7/9/03				
BY:	CJR	1	ADDED CROSSINGS TO PROFILE	6-28-01	
	NO.		REVISION	DATE	

WATER AND SEWER PROFILES  
600' SCALE MAP NO. 34 BLOCK NO. 12

ST. LOUIS CHURCH  
PARCELS 196 & 29  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 34-4100-D

SCALE AS SHOWN  
SHEET 3 OF 3





SHEET INDEX	
1	TITLE SHEET
2	PLAN VIEW OF WATER & SEWER MAINS
3	PROFILES OF WATER & SEWER MAINS

# WATER AND SEWER EXTENSIONS


# ST. LOUIS CHURCH

## 5th ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND

## CONTRACT NO. 34-4100-D

### GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. 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 83/91 as projected by Howard County Horizontal and Vertical Geodetic Control Station Numbers 34B2 and 34CA.
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for brocing of poles as shown on the drawings. In the event the contractor's work requires the brocing of additional poles, any cost incurred by the owner for the brocing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the brocing 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 (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.
- The contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

AT&T	1-800-252-1133
BGE (Contractor Services)	410-850-4620
BGE (Underground Damage Control)	410-787-9068
Bureau of Utilities	410-313-4900
Colonial Pipeline Co.	410-795-1390
Miss Utility	1-800-257-7777
State Highway Administration	410-531-5533
Verizon	1-800-743-0033 / 410-224-9210
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The contractor shall notify the Bureau of Highways, Howard County, of 410-313-7450 at least five working days before open cutting or boring/packing of any County road for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(o) of the Howard County Code.
- This water and sewer drawing is based on a field run topographic survey performed by Greenhorn and O'Mara, Inc. dated September 1997 and supplemented by field surveyor performed by Riemer Muegge, a division of Patton Harris Rust and Associates, PC on or about January 2001.

### BENCHMARKS

CONTROL STATION: 34B2  
ELEVATION 560.032  
N 565,468.218  
E 1,321,931.520  
LOCATED ALONG RT. 32  
NORTH OF INTERSECTION  
AT CLARKSVILLE PIKE

CONTROL STATION: 34CA  
ELEVATION -  
N 562,501.116  
E 1,326,884.894  
LOCATED ALONG RT. 32  
NORTH OF INTERSECTION  
AT CLARKSVILLE PIKE

### QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" SEWER	21 LF	—	—	—
4' MANHOLES	2 EA.	—	—	—
2" WATER	10 LF	10 L.F.	COPPER	HUGHES SUPPLY
6" WATER	55 LF	—	—	—
8" WATER	599 LF	599 L.F.	D. I. P.	U.S. PIPE & FOUNDRY
2" CORP. COCK	1 EA.	1 EA.	BRASS	HUGHES SUPPLY
2" CURB STOP VALVE	1 EA.	1 EA.	BRASS	HUGHES SUPPLY
FIRE HYDRANTS	2 EA.	2 EA.	MUELLER	BELAIR ROAD SUPPLY
6"x6" TEE	1 EA.	1 EA.	D. I. P.	HUGHES SUPPLY
8"x6" T	1 EA.	1 EA.	D. I. P.	HUGHES SUPPLY
8"x6" C	1 EA.	—	—	—
6" VALVES	5 EA.	5 EA.	GATE	HUGHES SUPPLY
8"x6" R	1 EA.	—	—	—
8" CAP	1 EA.	—	—	—
6" CAP (WHC's)	1 EA.	1 EA.	D. I. P.	HUGHES SUPPLY
8" 1/16HB	3 EA.	3 EA.	D. I. P.	HUGHES SUPPLY
8" 1/8HB	1 EA.	1 EA.	D. I. P.	HUGHES SUPPLY

NAME OF UTILITY CONTRACTOR : **HTI CONTRACTORS**

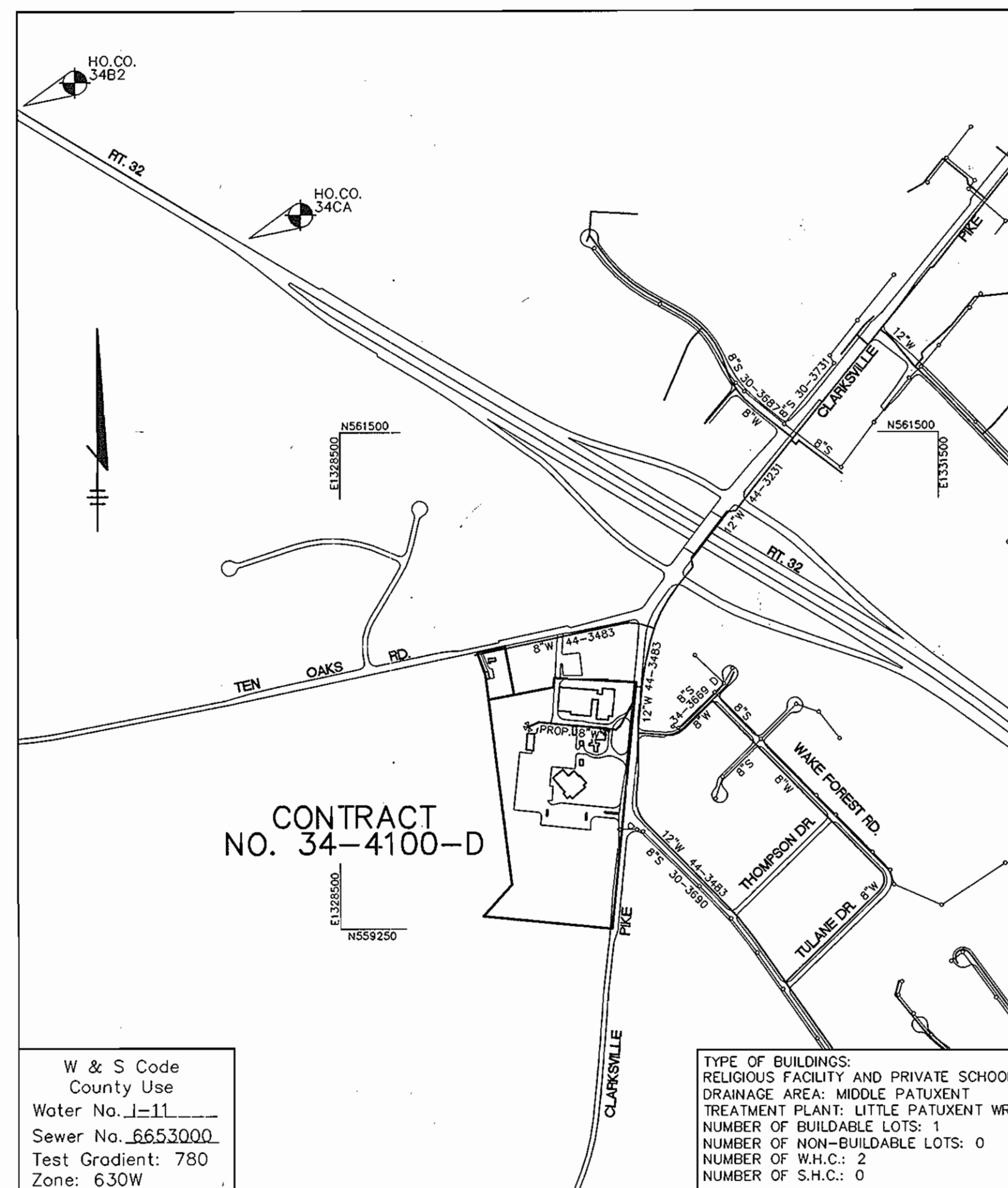
Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-03-064

CHECKBOX	
AS-BUILT DATE	MAY 2007
SURVEY AND DRAFTING DIVISION	

Review for Howard Soil Conservation District and meets technical requirements.

*Jim Meyer* 7/18/03  
NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.  
*John K. Roberts* 7/18/03  
HOWARD SOIL CONSERVATION DISTRICT DATE



WATER VICINITY MAP

SCALE : 1"=600'


### WATER NOTES

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Taps of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. The 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.

### SEWER NOTES

- All sewer mains shall 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 watertight frame and covers, Standard Detail G5.52. Where watertight manhole frames 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.

**AS BUILT**  
DATE: MAY 2007

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>R. L. B. Bunn</i> 7-16-03 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND  <i>John J. Dennis</i> 8/16/03 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. <b>PHRA</b> 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	 CHRISTOPHER J. REID #19949	DES: ACR DRN: DRH CHK: JWC DATE: 7/9/03 CJR 1 BY NO. MODIFIED 6" WATER QUANTITY 6-28-04 REVISION DATE	TITLE SHEET  600' SCALE MAP NO. 34 BLOCK NO. 12	ST. LOUIS CHURCH PARCELS 196 & 29 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 34-4100-D  SCALE AS SHOWN  SHEET 1 OF 3
--	---	---	---	---	---	--