

SHEET INDEX	
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1	TITLE SHEET
2	PLAN OF WATER AND SEWER MAINS
3	PROFILES OF SEWER MAINS
4	PROFILES OF WATER MAINS
5	DETAILS

# WATER AND SEWER EXTENSIONS

# PARKSIDE WAREHOUSE

# CONDOMINIUMS

## PARCELS G, H & PARCEL 287


### 1st ELECTION DISTRICT

### HOWARD COUNTY, MARYLAND

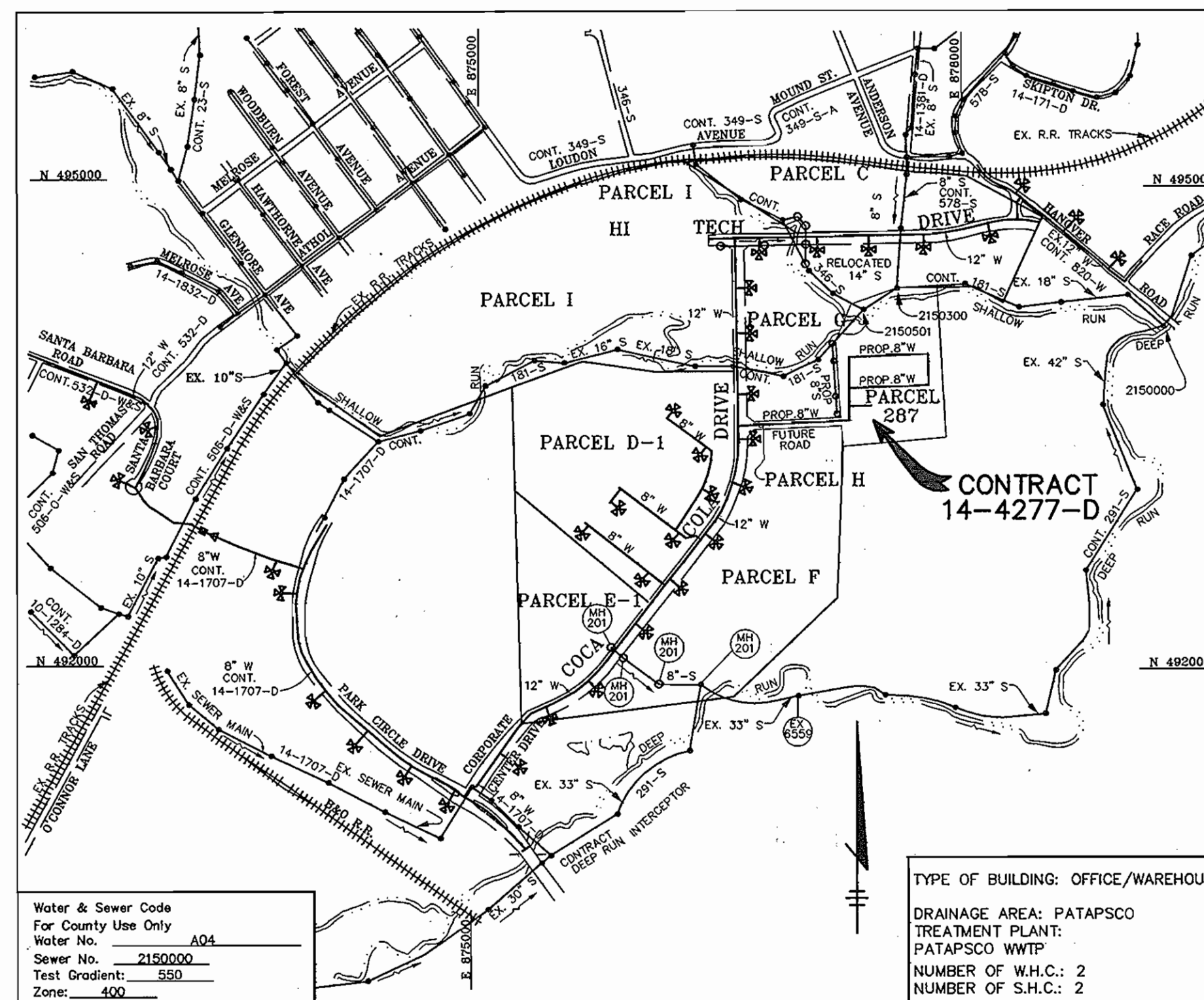
### CONTRACT NO. 14-4277-D

#### GENERAL NOTES

- Approximate locations 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.
- Topographic field surveys were performed on March 2005 by PHRA and from Mass Grading Plans (SDP-04-023) by Frederick Ward & Associates.
- Horizontal and Vertical Survey Controls:
 

The coordinates shown on the drawings are based on Maryland State Reference System NAD '83/'91 as projected by Howard County Geodetic Control Stations No. 3805 and No. 3808. All vertical controls on NAVD '88. Vertical Controls on the drawings are elevations 193.73 and 175.23.
- 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 monies owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
- For details not shown on the drawings, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on existing utilities, they are noted by the symbol  at the locations of the test pits. 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 (Construction Services)	410-850-4620
BGE (Emergency)	410-685-1400
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.



#### BENCH MARK

HOWARD COUNTY CONTROL  
STATION 3805  
N 422.613  
E 1,386.524  
ELEV. 193.73

HOWARD COUNTY CONTROL  
STATION 3806  
N 422.147  
E 1,384.992  
ELEV. 175.23

#### WATER NOTES

- All ductile iron pipes to be used on the public water system shall be class 54. Ductile iron fittings shall meet the requirements of the Howard County Design Manual Volume IV-Standard Specifications and Details for Construction and shall be epoxy coated in accordance with AWWA C116.
- All water house connections shall be copper meeting the requirements of and constructed in accordance with the Howard County Design Manual Volume IV-Standard Specifications and Details for Construction.
- All fire hydrant leads including tee shall be ductile iron class 54 meeting the requirements of and constructed in accordance with the Howard County Design Manual Volume IV-Standard Specifications and Details for Construction.
- All water mains constructed in fill areas shall be restrained iron pipe class 54 meeting the requirements of and constructed in accordance with the Howard County Design Manual Volume IV-Standard Specifications and Details for Construction.
- The following note is added to Howard County Standard Detail W2.22, Buttresses and Anchors for Vertical Bends, "When anchoring PVC pipe, the strapping in contact with the pipe surface shall be 1-inch wide by 1/4-inch thick steel. The remaining portion of the strap shall be bar sized in accordance with the pertinent chart as shown on the detail."
- Except as indicated on the Plans and noted above, all public water mains shall be polyvinylchloride (PVC) pipe meeting the requirements of AWWA C900 DR 18, pressure Class 150 and the Howard County Design Manual Volume IV-Standard Specifications and Details for Construction and all subsequent amendments thereto.
- 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 are 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.

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" PVC C900 DR-18	1430 LF		8" DR-18	J.M. MFG.
12" PVC C900 DR-18	950 LF		12" DR-18	J.M. MFG.
6" VALVES	5 EA.		6" F.H. GATE	MUELLER CO.
8" VALVES	5 EA.		8" GATE	MUELLER CO.
12" VALVES	1 EA.		12" GATE	MUELLER CO.
FIRE HYDRANTS	5 EA.		MUELLER F.H.	MUELLER CO.
12" COUPLING	4 EA.		H.J.	BIGHA
8" COUPLING	10 EA.		H.J.	BIGHA
8" DIP CL 52	91 LF			
8" SEWER	500 LF	8" PVC SDR	8" PVC SDR	J.M. MFG.
6" SEWER	21 LF	6" PVC SDR	6" PVC SDR	J.M. MFG.
4" DIA. MANHOLES	5 EA.	7 EA.	4" PRECAST	ATLANTIC CONCRETE PRODUCING.
4" DIA. MANHOLES	63 VF			

NAME OF UTILITY CONTRACTOR: COB INC.

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on SDP-05-083	CHECKBOX
	AS-BUILT DATE
	SURVEY AND DRAFTING DIVISION

Review for Howard Soil Conservation District and meets technical requirements.

*Jim Mays* 5/12/05 DATE

NATURAL RESOURCES CONSERVATION SERVICE

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

*John R. Robertson* 5/12/05 DATE

HOWARD SOIL CONSERVATION DISTRICT

OWNER: BLUE RUN I ENTERPRISES, LLC.  
c/o BILL KNOTT  
57 W. TIMONIUM ROAD, SUITE 106  
TIMONIUM, MARYLAND 21093  
443-271-5646

DEVELOPER: PATAPSCO VALLEY, LLC  
c/o SAM LANCELOTTA  
6339 TEN OAKS ROAD  
CLARKSVILLE, MARYLAND 21209  
443-535-0001

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
<i>[Signature]</i> 5/12-05 DATE	<i>[Signature]</i> 5/12/05 DATE

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

CHRISTOPHER J. REID #19949

DES: C.J.R.	
DRN: D.A.M.	
PHRA NO. 13282-1-0	
DATE: 5/10/05	
BY NO. <u>KCI 1</u>	REVISION <u>AS-BUILT DATA SHOWN</u>
DATE <u>5/16</u>	

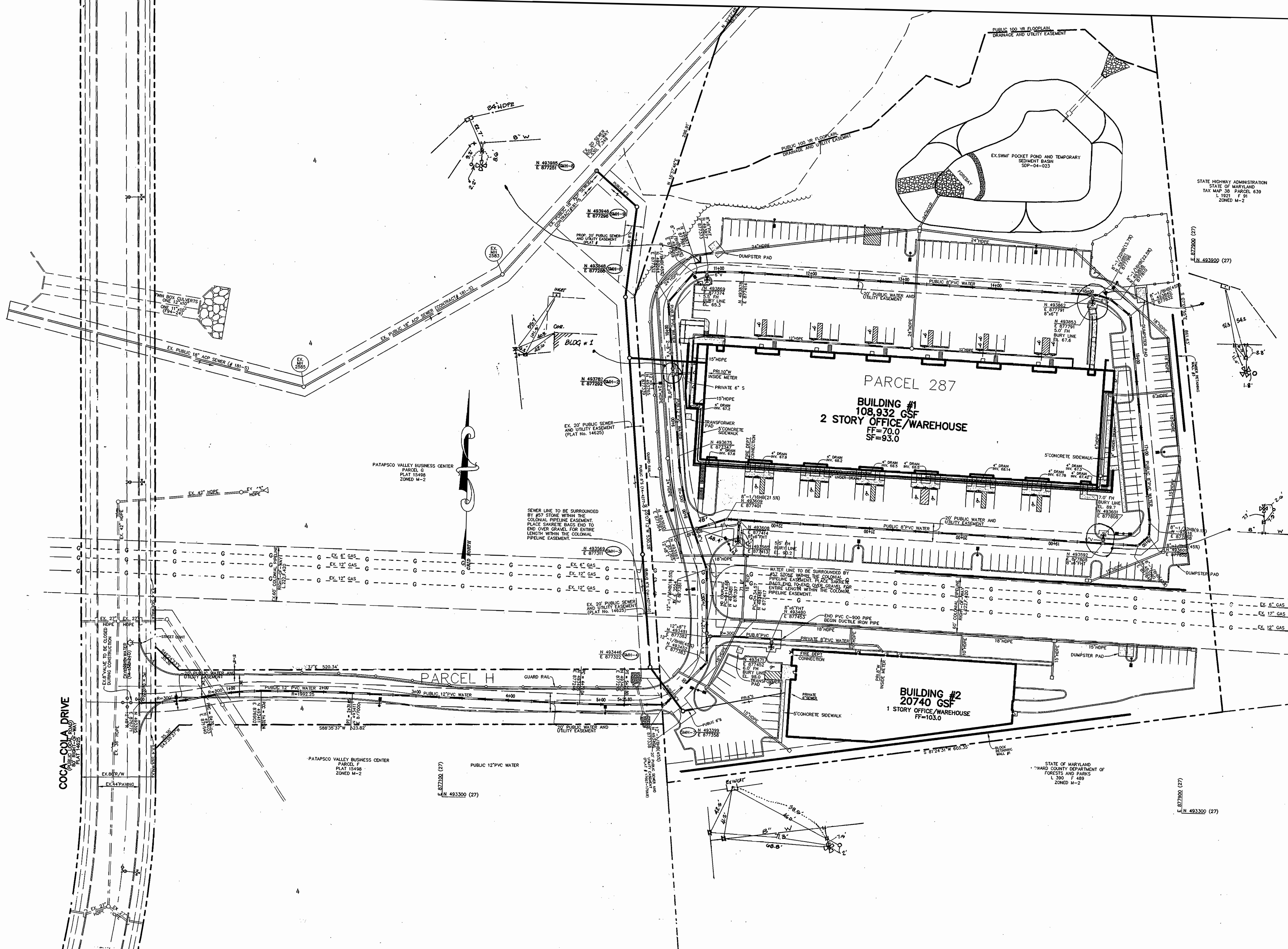
TITLE SHEET

600' SCALE MAP NO. 38 BLOCK NO. 20

PARKSIDE WAREHOUSE CONDOMINIUMS  
PATAPSCO VALLEY BUSINESS CENTER  
PARCELS G, H & PARCEL 287  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT 14-4277-D

SCALE AS SHOWN  
SHEET 1 OF 5





STATE HIGHWAY ADMINISTRATION  
STATE OF MARYLAND  
TAX MAP 38 PARCELS 439  
L 1922 F 91  
ZONED M-2

PATAPSCO VALLEY BUSINESS CENTER  
PARCEL G  
PLAT 15488  
ZONED M-2

PATAPSCO VALLEY BUSINESS CENTER  
PARCEL F  
PLAT 15488  
ZONED M-2

STATE OF MARYLAND  
HOWARD COUNTY DEPARTMENT OF  
FORESTS AND PARKS  
L 390 F 469  
ZONED M-2

NOTE: THIS SHEET SUPERCEDES PREVIOUS MYLARS SIGNED ON 5/17/2005

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*R.A.M.*  
CHIEF, BUREAU OF UTILITIES

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

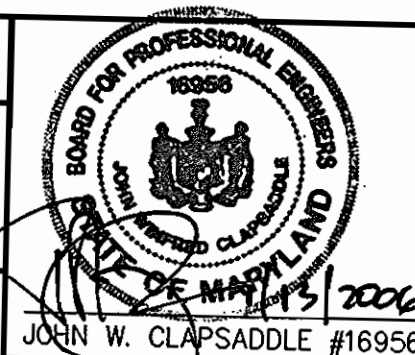
1-18-06  
DATE

1/25/06  
DATE

Patton Harris Rust & Associates, p.c.  
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:	C			
DRN:	D.M.			
CHK:	KGI	2	ASBUILT DATA SHOWN	3/22/06
DATE:	5/10/05	JC	1	WATER & SEWER ALIGNMENTS
BY:	NO.			REVISION
				DATE

PLAN OF WATER  
AND SEWER MAINS

600' SCALE MAP NO. \_\_\_\_\_

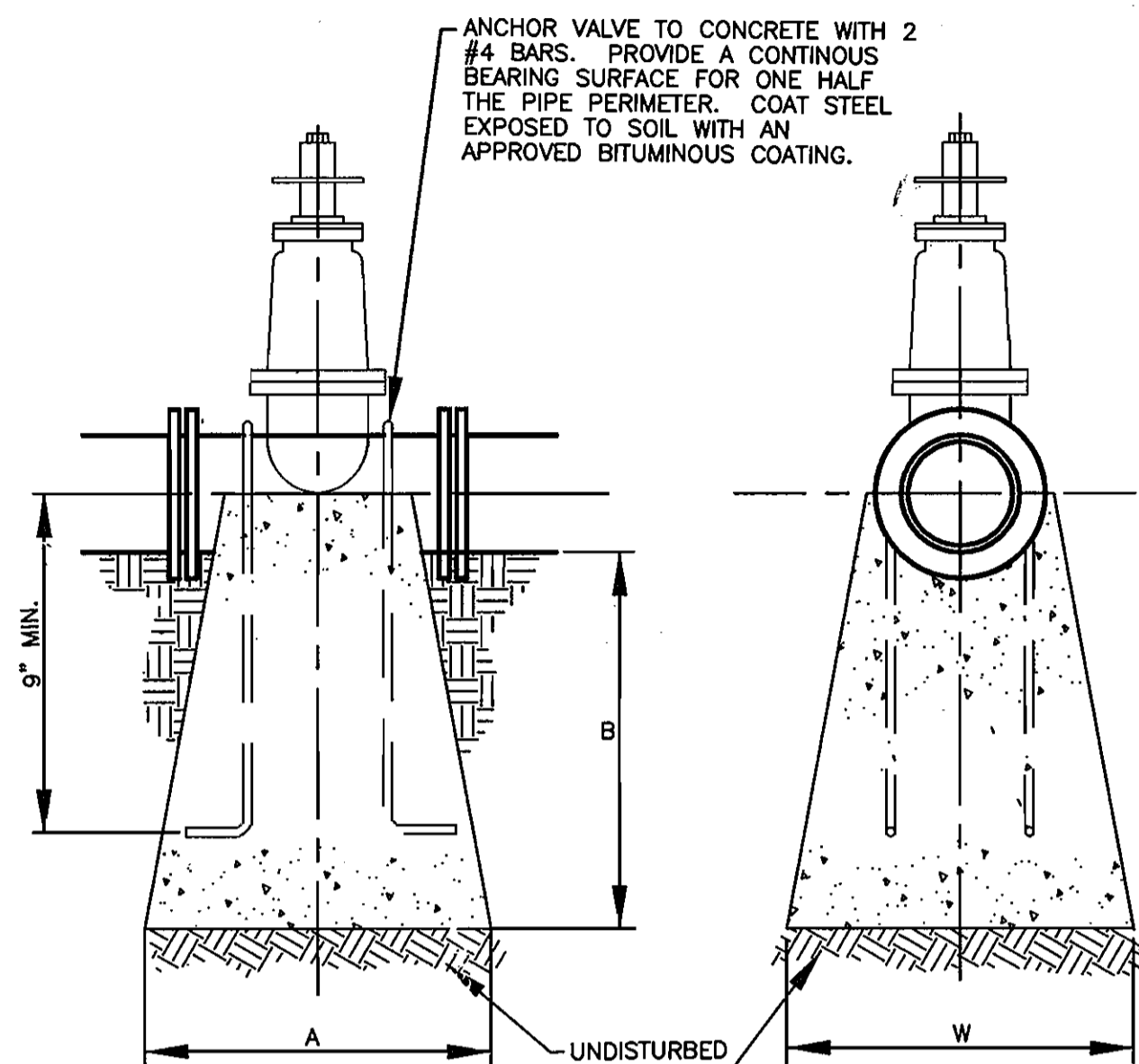
BLOCK NO. 20

PARKSIDE WAREHOUSE CONVERSIONS  
PATAPSCO VALLEY BUSINESS CENTER  
PARCELS G, F, & PARCEL 287  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT 14 4277-D

EQUALE  
1"=50'

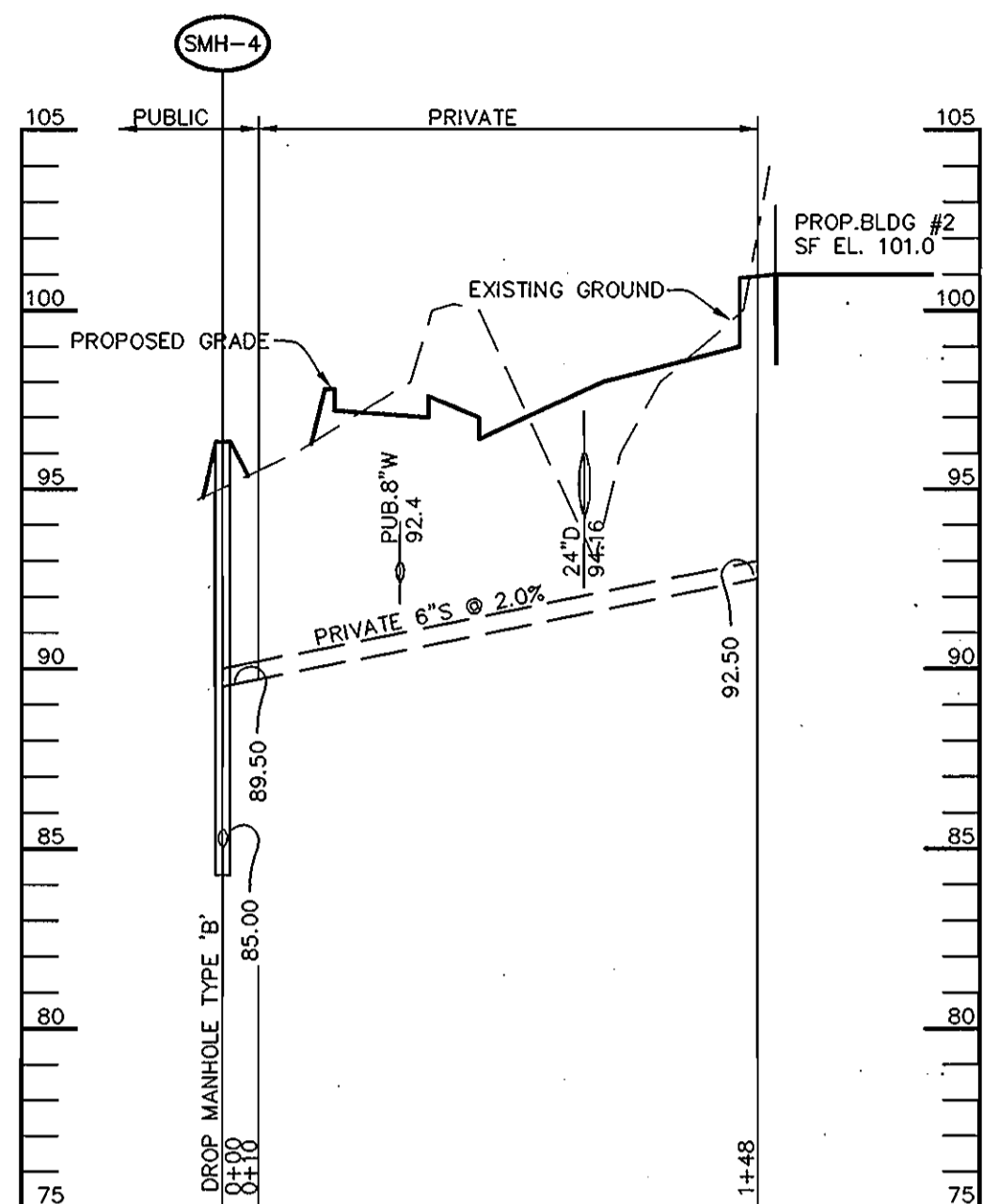
EEL  
2 OF 5

PIPE SIZE	A	B	W
4"	9"	1'-0"	1'-0"
6"	10"	1'-6"	1'-0"
8"	1'-0"	2'-0"	2'-0"
10"	1'-0"	2'-0"	3'-0"



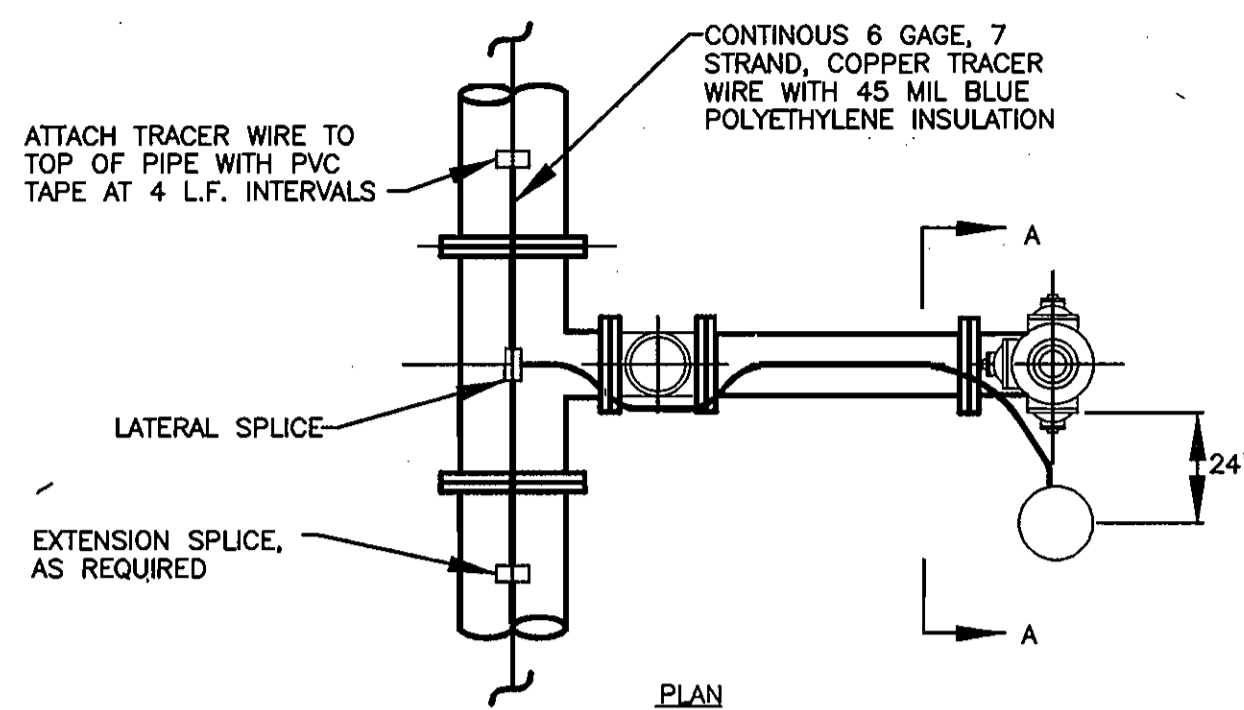
**ANCHORAGES FOR VALVES\*  
WITH PVC PIPES**

\*DO NOT ANCHOR VALVES THAT ARE ATTACHED TO TEES.



**SEWER PROFILE**

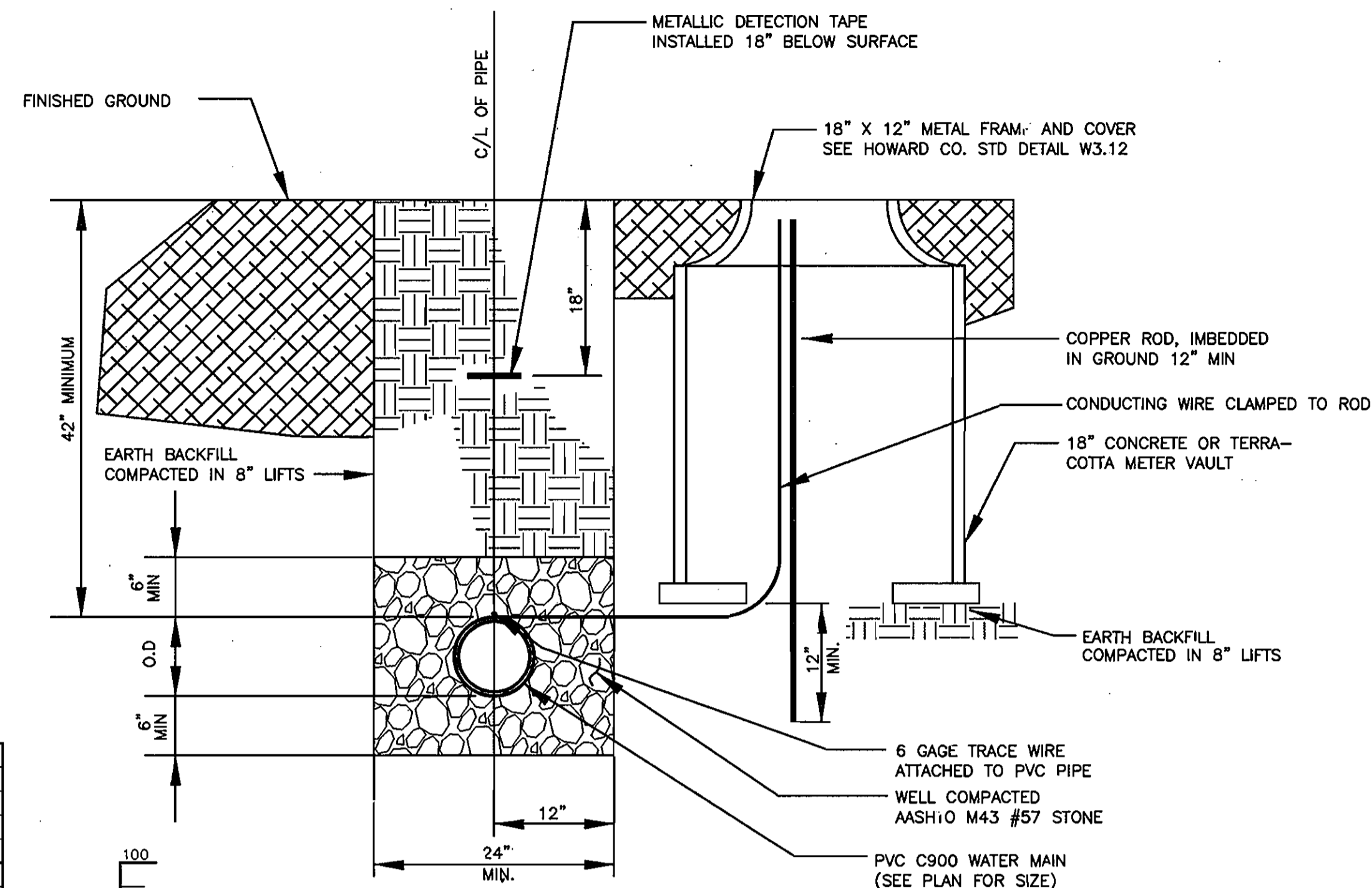
SCALE: HOR. - 1"=50'  
VERT. - 1"=5'



- NOTES:
- TEST STATION MUST BE PLACED TO THE RIGHT OR LEFT SIDE OF THE FIRE HYDRANT.
  - VALVE VAULT AND FRAME TO BE SET FLUSH WITH FINAL GRADE.
  - BUTTRESSES AND STRAPPING NOT SHOWN FOR CLARITY.

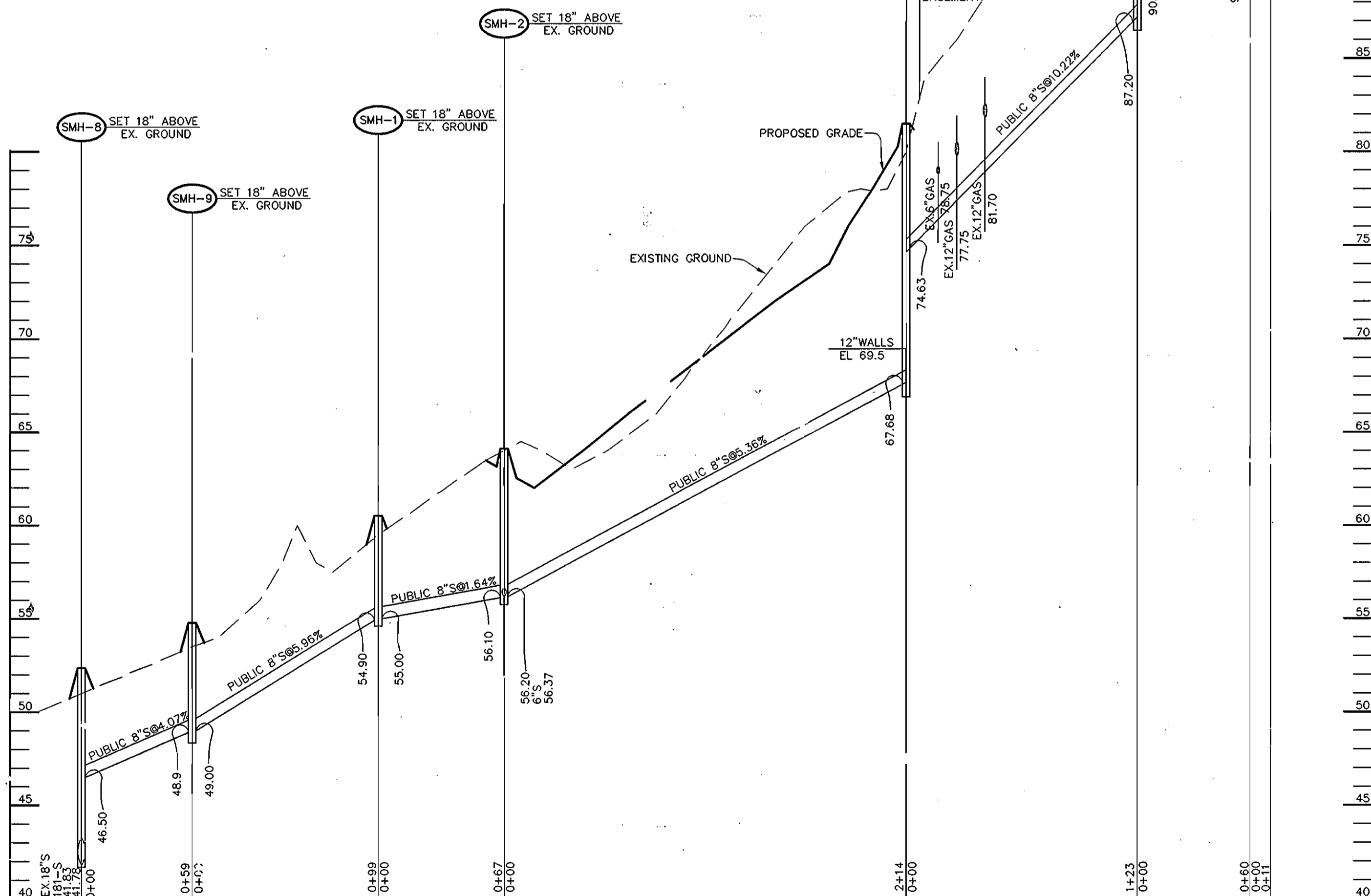
**CONTINUITY TEST STATION  
AT FIRE HYDRANT**

NO SCALE



**TRENCH FOR PVC PIPE AND  
CONTINUITY TEST STATION DETAIL**

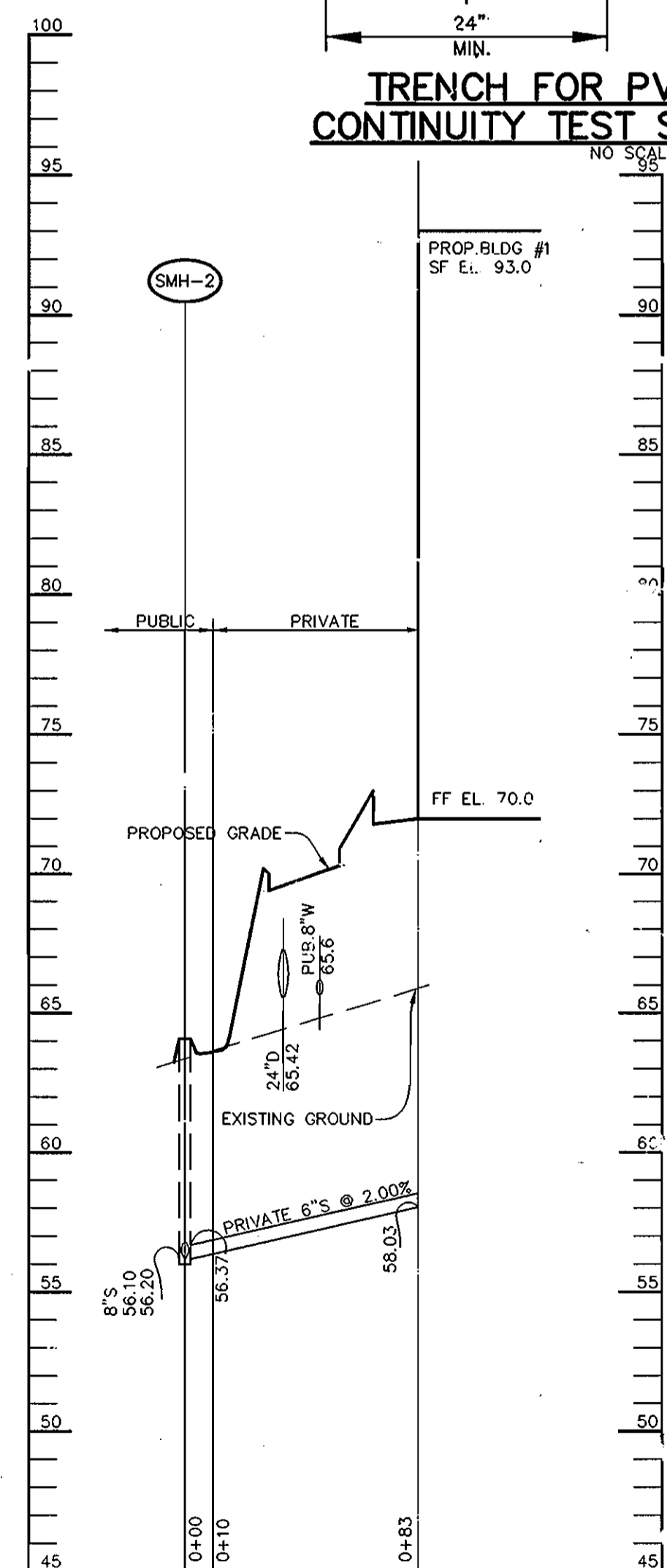
NO SCALE



**SEWER PROFILE**

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

\*CONTRACTOR TO BORE & JACK SEWER CASING UNDER STREAM PER DETAIL SHEET 5 PRIOR TO SETTING MANHOLES. IF ROCK IS ENCOUNTERED, CONTRACTOR TO OPEN CUT STREAM PER MDE DETAILS, SH1. 5



**SEWER PROFILE**

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

NOTE: THIS SHEET SUPERCEDES PREVIOUS MYLARS SIGNED ON 5/17/2005

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 410.997.9900  
F 410.997.9282



DES:	C.J.R.		
DRN:	D.A.V.		
CHK:			
CAS	1	SEWER PROFILE	08/29/05
BY	NO.	REVISION	DATE

**PROFILES OF  
SEWER MAINS**

600' SCALE MAP NO. 38 BLOCK NO. 20

PARKSIDE WAREHOUSE CONDOMINIUMS  
PATAPSCO VALLEY BUSINESS CENTER  
PARCELS G, H & PARCEL 287  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT 14-4277-D

SCALE  
AS  
SHOWN

SHEET  
3 OF 5

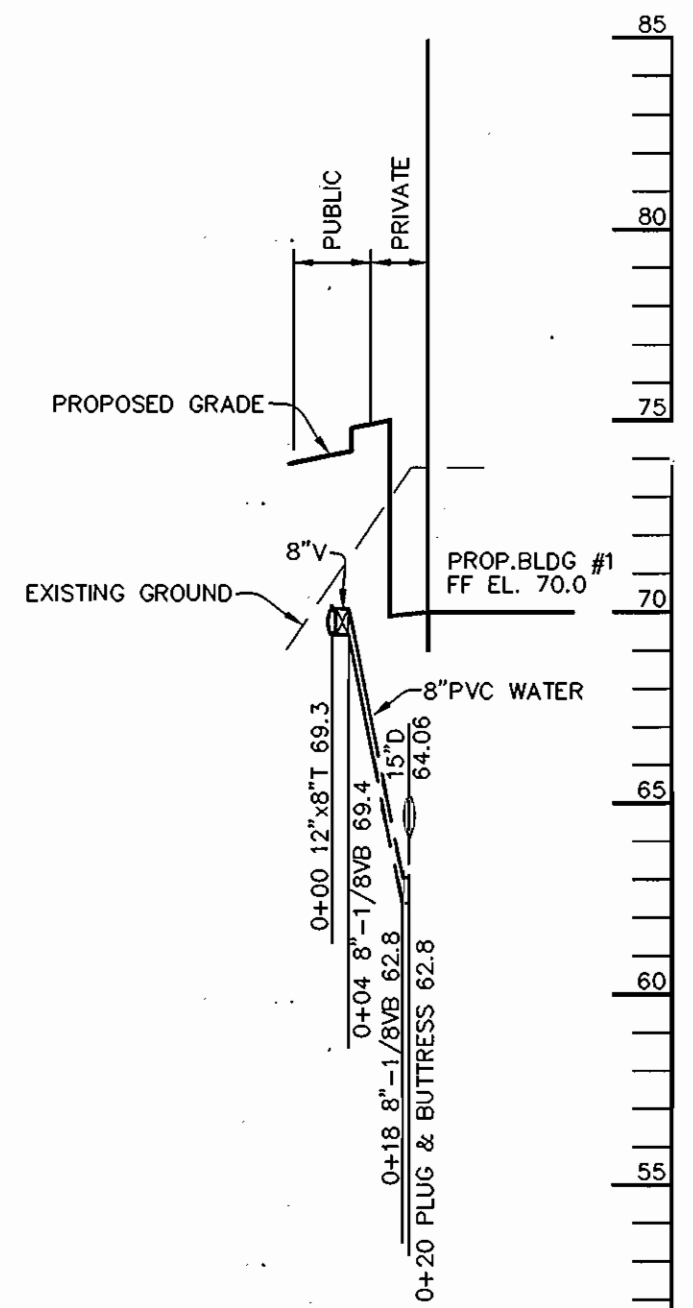
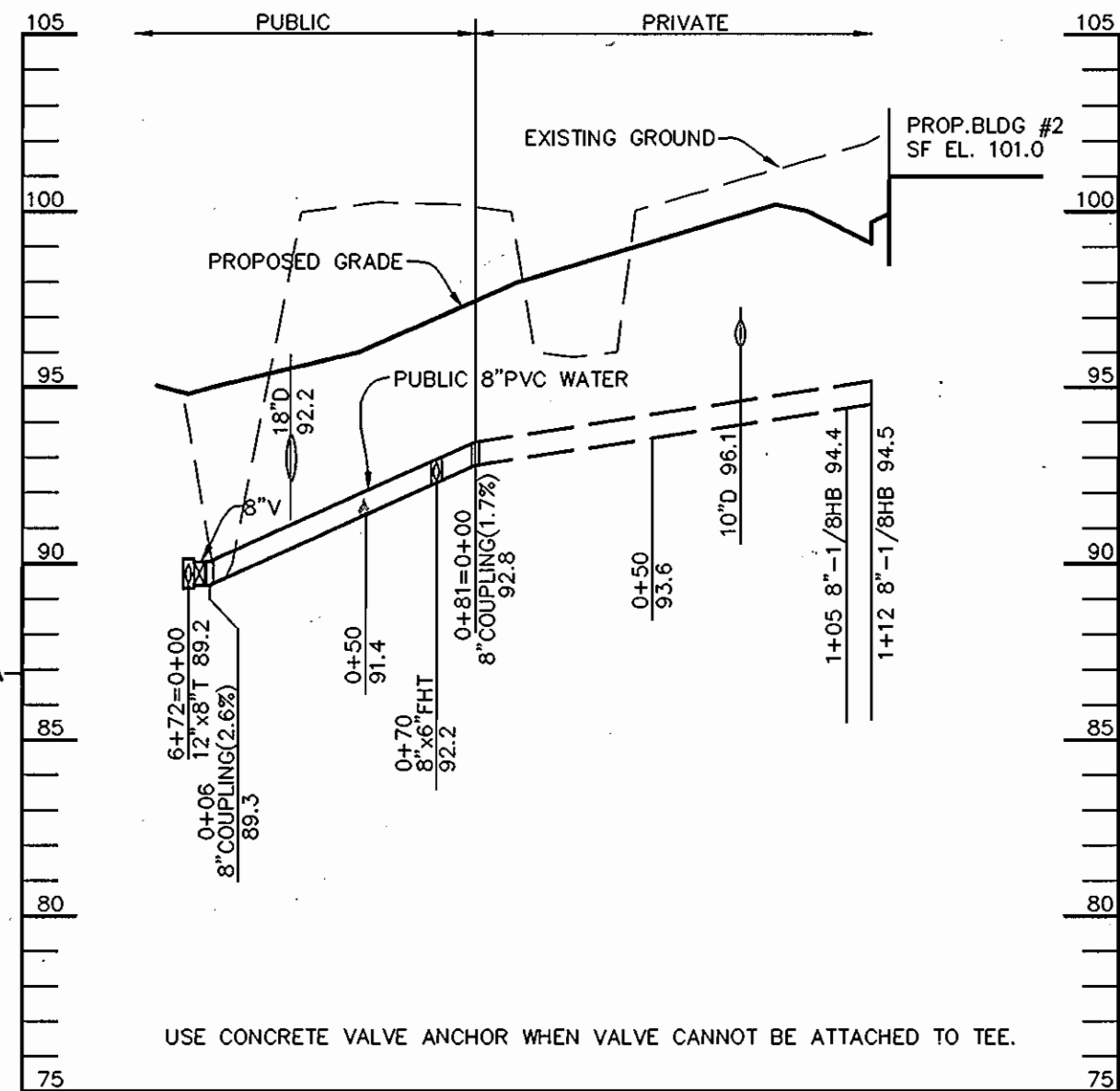
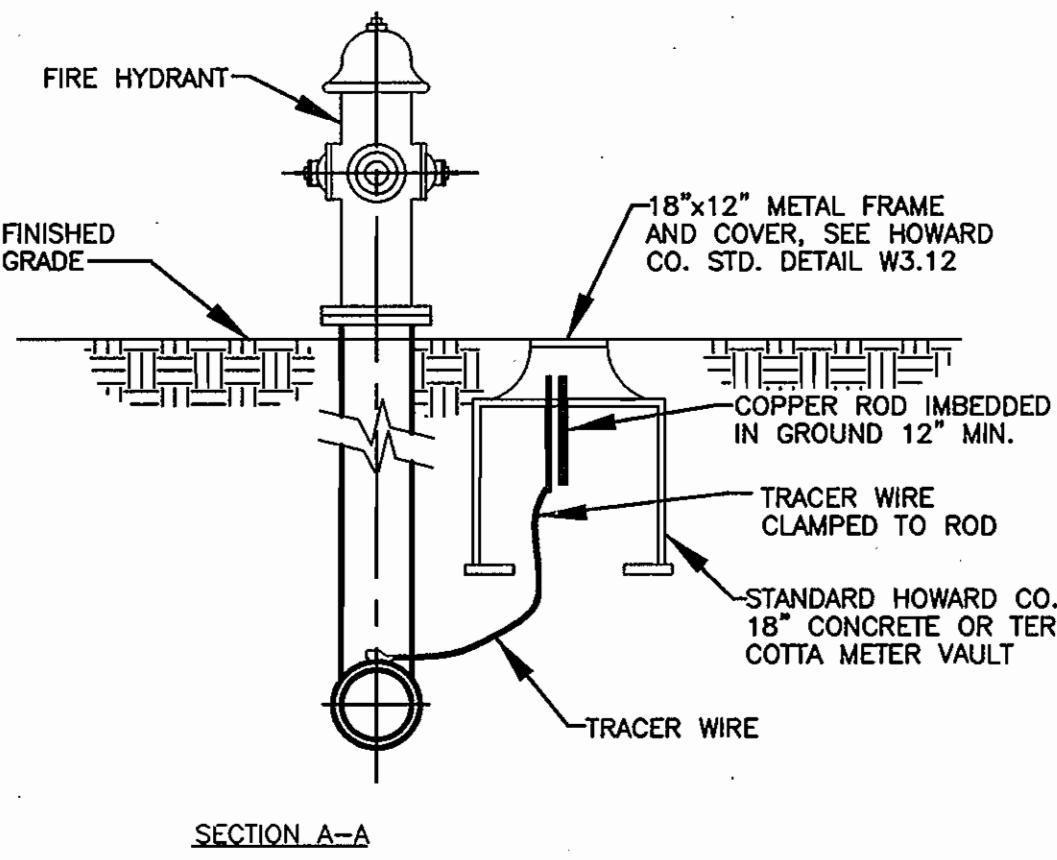
Robert W. Beaman 1-18-06  
CHIEF, BUREAU OF UTILITIES DATE

William Dammann 12/5/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

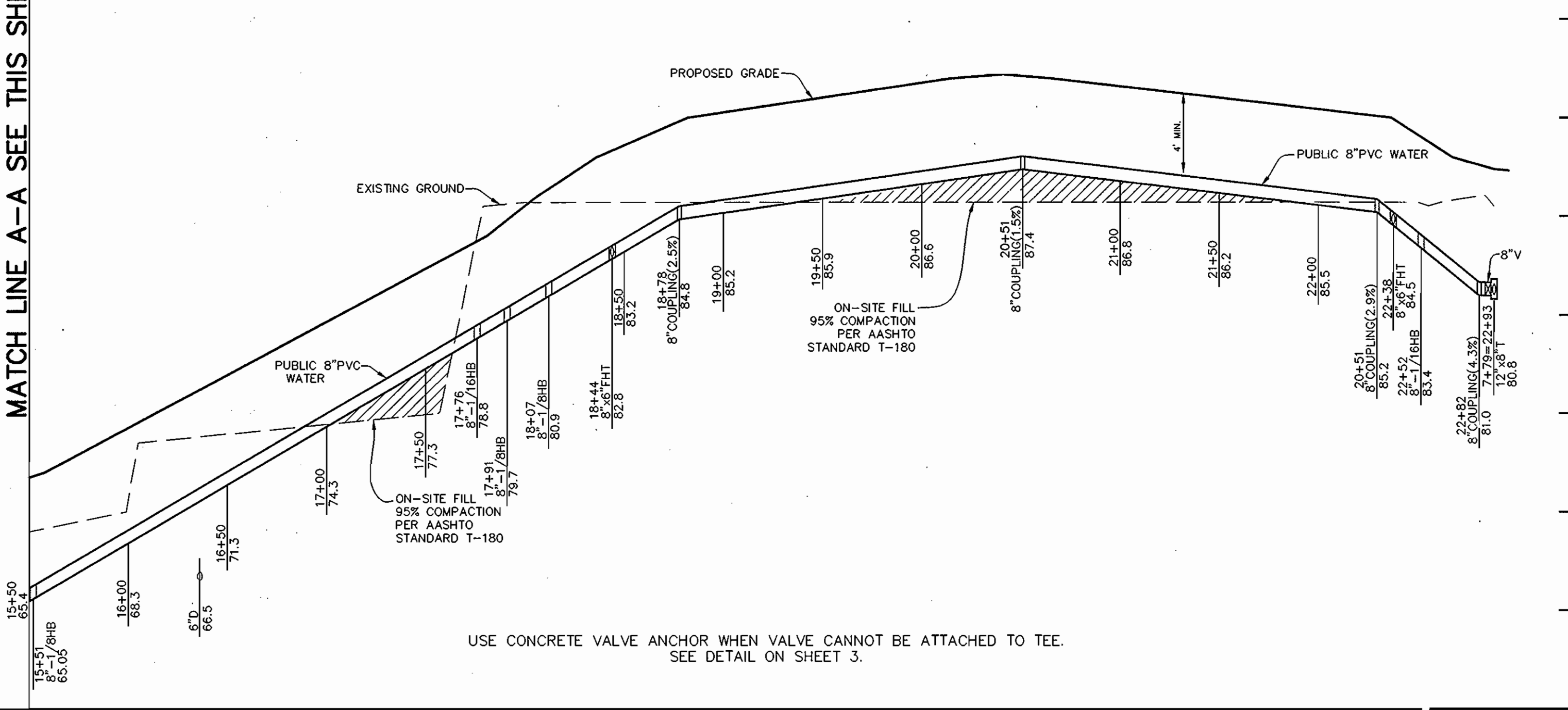
JOHN W. CLAPSADDE #16956

DATE: 5/1/05





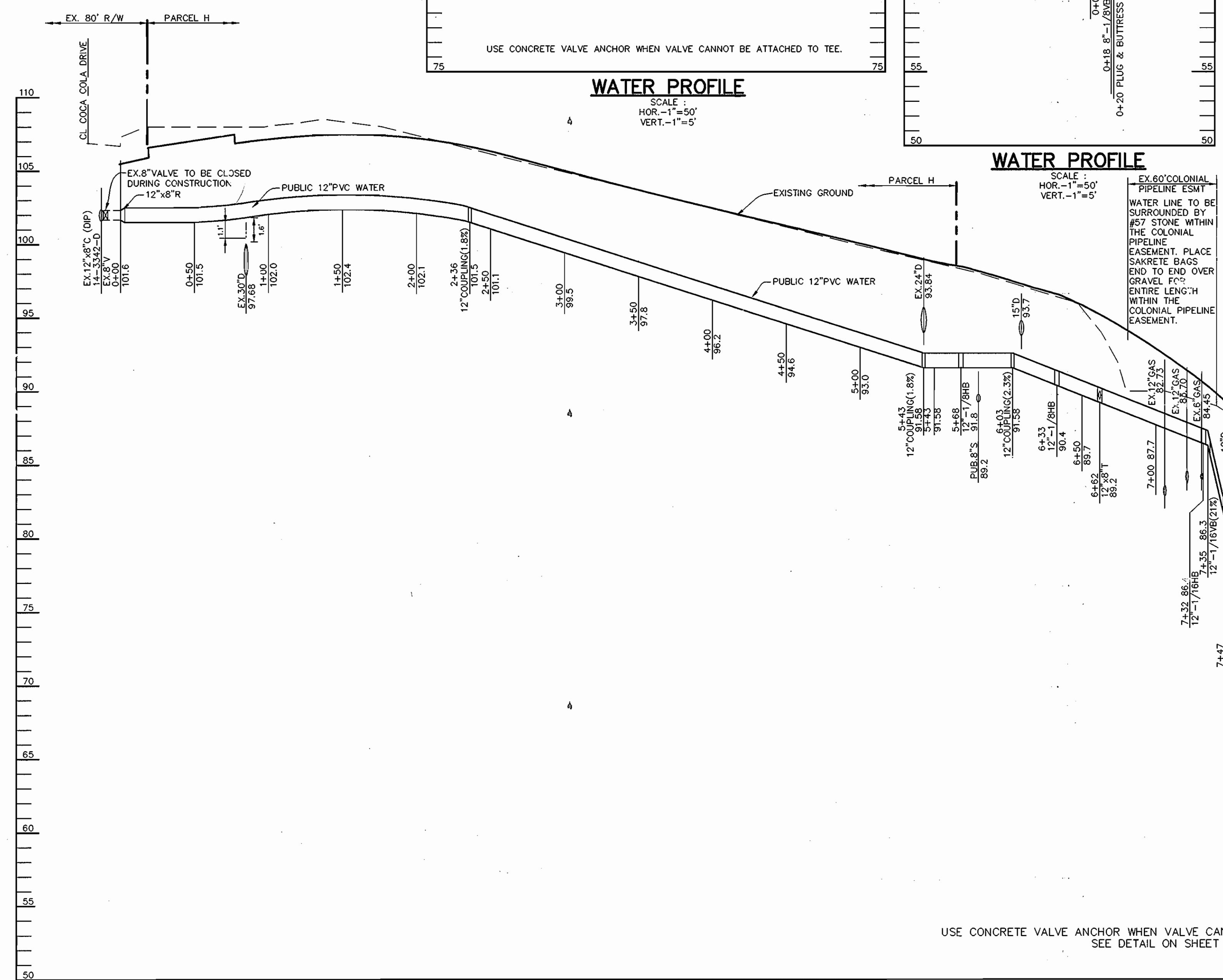
MATCH LINE A-A SEE THIS SHEET



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

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

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



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

MATCH LINE A-A SEE THIS SHEET

NOTE: THIS SHEET SUPERCEDES PREVIOUS MYLARS SIGNED ON 5/17/2005

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>Robert Berman</i> 1-18-06 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND  <i>John W. Clapsaddle</i> 1/25/06 CHIEF, DEVELOPMENT ENGINEERING DIVISION 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  
 JOHN W. CLAPSADDLE #16956

DES:	C.J.R.
DRN:	D.A.M.
CHK:	
CAS:	WATER PROFILE
BY:	NC.
DATE:	5/10/05
REVISION:	08/29/05

<b>PROFILES OF WATER MAINS</b>	
600' SCALE MAP NO.	38
BLOCK NO.	20

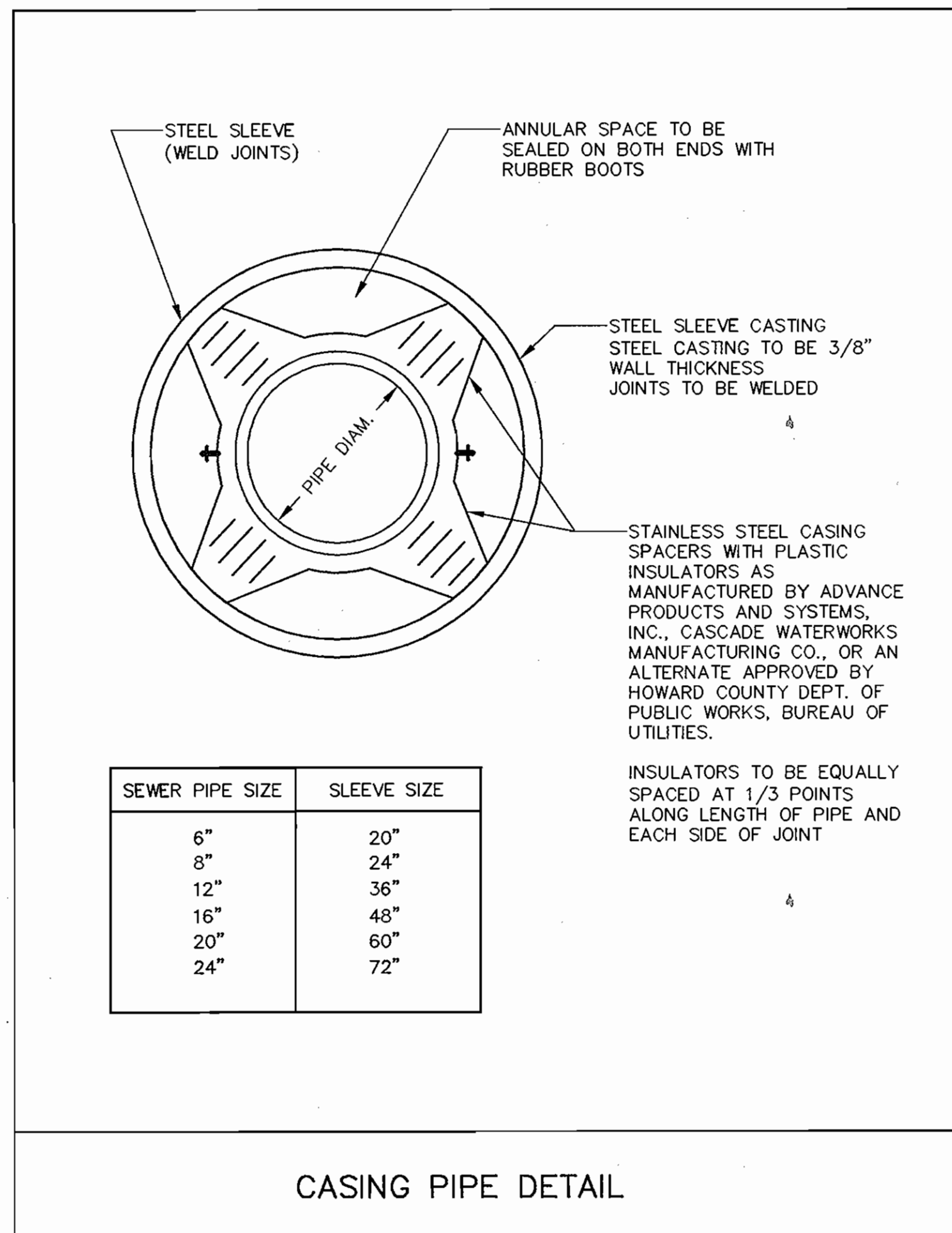
PARKSIDE WAREHOUSE CONDOMINIUMS  
 PATAPSCO VALLEY BUSINESS CENTER  
 PARCELS G, H & PARCEL 287  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CONTRACT 14-77-D  
 SHEET 4 OF 5

<p><b>I. Description</b> The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-water pumped from a construction site to allow the water to re-enter the waterway.</p> <p><b>II. Material Specifications</b></p> <ol style="list-style-type: none"> <li>Riprap: Riprap shall consist of 4-8 inch washed stone or gravel.</li> <li>Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polypropylene. The fabric shall be tested to commonly encountered chemicals, hydrocarbons, acids, and salt resistant. No. 10 stone (ASTM D 53) may be used on the inner-face for filtering instead of fabric.</li> <li>Strap: Straps shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.</li> </ol> <p><b>III. Construction Requirements</b></p> <ol style="list-style-type: none"> <li>The contractor shall install all sediment and erosion control devices on the first order of business.</li> <li>Excavated material shall be stored such that sediments are prevented from entering the waterway, i.e., sediment perimeter controls may be necessary.</li> <li>Excavated material and topsoil shall be kept separate and replaced in their natural order.</li> <li>Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.</li> <li>The dewatering basin shall be excavated to a minimum depth of 3 feet.</li> <li>Once the dewatering basin becomes filled to 1/3 of the excavated depth, accumulated sediment shall be removed and disposed of in a SOD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MPA.</li> <li>Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.</li> </ol>	<p><b>PLAN VIEW</b></p> <p><b>SECTION A-A</b></p> <p><b>SECTION B-B</b></p>	<p><b>I. Description</b> The work shall consist of installing a flow diversion structure in conjunction with a temporary culvert crossing during in-stream construction such as utility crossings.</p> <p><b>II. Construction Requirements</b></p> <ol style="list-style-type: none"> <li>All erosion and sediment control devices shall be installed as the first order of business.</li> <li>Pipes must be sized to accommodate normal stream flow.</li> <li>The flow barrier shall be constructed of sandbags, washed riprap, or other approved material as per MPA 2.3. The materials shall be sized to withstand normal stream flow velocities.</li> <li>All dewatering of the construction area shall be pumped to a dewatering basin (WPD 1.1) prior to re-entering the stream.</li> <li>The temporary culvert crossing shall be constructed in accordance with Standard Detail (DC-1), 1993 Maryland Standards and Specifications for Sediment and Erosion Control.</li> <li>Sediment control devices shall remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.</li> </ol>	<p><b>PLAN &amp; PROFILE</b></p> <p><b>SECTION A-A</b></p>	<p><b>I. Description</b> The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.</p> <p><b>II. Material Specifications</b></p> <ol style="list-style-type: none"> <li>Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).</li> <li>Stone: Stone shall be washed and have a minimum diameter of 6 inches.</li> <li>Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.</li> </ol> <p><b>III. Construction Requirements</b></p> <ol style="list-style-type: none"> <li>All erosion and sediment control devices shall be installed as the first order of business.</li> <li>The diversion structure shall be installed from upstream to downstream.</li> <li>The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross section view.</li> <li>All excavated materials shall be disposed of in an SOD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MPA.</li> <li>All dewatering of the construction area shall be pumped to a dewatering basin prior to re-entering the stream.</li> <li>Sheeting shall be developed such that the upstream portion covers the downstream portion with at least an 18-inch overlap.</li> <li>Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.</li> </ol>	<p><b>PLAN VIEW</b></p> <p><b>SECTION A-A</b></p>	<p><b>I. Description</b> This work shall consist of installing erosion control devices in and adjacent to temporary stream construction such as utility crossings.</p> <p><b>II. Material Specifications</b></p> <p>A. Base riprap shall meet the following requirements:</p> <table border="1"> <thead> <tr> <th>U.S. Standard</th> <th>Min. Size</th> <th>Max. Size</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>1 1/2 in.</td> <td>2 1/2 in.</td> </tr> <tr> <td>200</td> <td>2 in.</td> <td>3 in.</td> </tr> <tr> <td>40-100</td> <td>3/4 in.</td> <td>1 1/2 in.</td> </tr> <tr> <td>20-40</td> <td>3/8 in.</td> <td>1 in.</td> </tr> <tr> <td>10-20</td> <td>3/16 in.</td> <td>3/4 in.</td> </tr> <tr> <td>5-10</td> <td>3/32 in.</td> <td>3/8 in.</td> </tr> <tr> <td>2-5</td> <td>1/16 in.</td> <td>3/16 in.</td> </tr> </tbody> </table> <p>B. Geotextile filter fabric shall meet the following requirements:</p> <table border="1"> <thead> <tr> <th>Property</th> <th>Requirement</th> </tr> </thead> <tbody> <tr> <td>Tensile Strength</td> <td>200 lb.</td> </tr> <tr> <td>Bar Strength</td> <td>70 lb.</td> </tr> <tr> <td>Puncture Strength</td> <td>70 lb.</td> </tr> <tr> <td>Permeability</td> <td>0.7 cm/sec</td> </tr> <tr> <td>Dimensional Change</td> <td>3% max.</td> </tr> <tr> <td>Minimum Lap Length</td> <td>24 in.</td> </tr> </tbody> </table> <p>C. Riprap</p> <ol style="list-style-type: none"> <li>The maximum weight of stones shall be based upon the bearing capacity of the stream bed.</li> <li>The gradation of the stones shall be as indicated.</li> </ol> <p><b>III. Construction Requirements</b></p> <ol style="list-style-type: none"> <li>The contractor shall install all sediment and erosion control devices as a first order of business.</li> <li>Provision must be made to ensure the integrity of the stream bed so as to provide protection against undermining. This concern is accentuated by installing the flow barrier as indicated in Cross Section, on alternate method of protection must be received prior written approval of the Administration.</li> <li>Excavated riprap shall be made to reasonably close conformity with the existing stream slope and bed.</li> <li>A flow barrier or riprap shall be placed in the stream bed to provide a check dam to reduce the velocity of the stream. The riprap shall be placed with suitable spacing at each corner or in a grid or rectangular pattern of stones with two step height. The placing of stones that cause erosion migration is not allowed.</li> <li>Any excavation made within the edge of the riprap shall be backfilled with suitable material to prevent erosion.</li> <li>All disturbed areas shall be permanently stabilized in accordance with an approved sediment and erosion control plan.</li> </ol>	U.S. Standard	Min. Size	Max. Size	100	1 1/2 in.	2 1/2 in.	200	2 in.	3 in.	40-100	3/4 in.	1 1/2 in.	20-40	3/8 in.	1 in.	10-20	3/16 in.	3/4 in.	5-10	3/32 in.	3/8 in.	2-5	1/16 in.	3/16 in.	Property	Requirement	Tensile Strength	200 lb.	Bar Strength	70 lb.	Puncture Strength	70 lb.	Permeability	0.7 cm/sec	Dimensional Change	3% max.	Minimum Lap Length	24 in.
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<p>WATER MANAGEMENT ADMINISTRATION</p> <p>Dewatering Basins</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 1.1</p>	<p>WATER MANAGEMENT ADMINISTRATION</p> <p>Culvert Pipe with Access</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 2.1</p>	<p>WATER MANAGEMENT ADMINISTRATION</p> <p>Sandbag/Stone Diversion</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 2.3</p>	<p>WATER RESOURCES ADMINISTRATION</p> <p>RIPRAP</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 3.1</p>	<p>WATER MANAGEMENT ADMINISTRATION</p> <p>Utility Crossing</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 5.1</p>	<p>WATER RESOURCES ADMINISTRATION</p> <p>FORD CROSSING</p> <p>APPROVED ON <i>5/12/05</i></p> <p>WPD 5.2</p>	<p>U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE</p> <p>PAGE E-15-3</p> <p>MARYLAND DEPARTMENT OF ENVIRONMENT &amp; WATER MANAGEMENT ADMINISTRATION</p>																																						

NOTE: THE SEWER STREAM CROSSING WILL BE PERFORMED USING BORING AND JACKING OF A STEEL CASING PIPE. ONLY IF ROCK IS ENCOUNTERED WILL THE MDE DETAILS ABOVE BE REQUIRED.

"CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS AND BUFFERS"

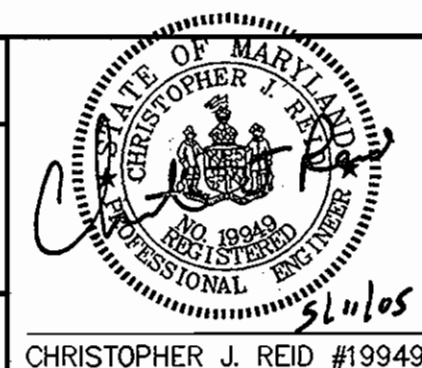
- REMOVE EXCAVATED MATERIAL, CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA OUTSIDE OF ANY WATERWAY, FLOODPLAIN, NONTIDAL WETLAND, OR BUFFER;
- IF BACKFILL IS OBTAINED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
- PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND;
- MAINTAIN THE HYDROLOGIC REGIME OF NONTIDAL WETLANDS OUTSIDE THE LIMITS OF DISTURBANCE.
- RECTIFY ANY NONTIDAL WETLANDS AND BUFFERS TEMPORARILY IMPACTED BY THE PERMITTED ACTIVITY. ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), OATS (UNIOA SP.), AND/OR RYE (SECALE CEREALE). OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION, KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER. ALL TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY ON OR BEFORE THE COMPLETION OF CONSTRUCTION;
- TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:  
USE 1 WATERS. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 - JUNE 15 INCLUSIVE, DURING ANY YEAR.
- NO REMOVAL OF VEGETATION, GRADING, FILLING, DRAINING OR OTHER ALTERATION OF THE NONTIDAL WETLANDS OR BUFFER OUTSIDE THE LIMITS OF DISTURBANCE SHALL OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE WATER MANAGEMENT ADMINISTRATION.



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

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8818 Centre Park Drive  
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T 410.997.8900  
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DES: C.J.R.

DRN: D.A.M.

CHK: C. J. R.

DATE: 5/10/05

BY NO. REVISION DATE

DETAILS

600' SCALE MAP NO. 38 BLOCK NO. 20

PARKSIDE WAREHOUSE CONDOMINIUMS  
PATAPSCO VALLEY BUSINESS CENTER  
PARCELS G, H & PARCEL 287  
1st ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT 14-4277-D

SCALE AS SHOWN

SHEET 5 OF 5