

QUANTITIES					
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	TYPE	SUPPLIER
8" C900 DR-18	308 LF	308 LF	PLASTIC	Diamond Plastic	
8" VALVE	1 EA.	1 EA.	DUCTILE	Mueller Company	
6" C900 DR-18	20 LF	21 LF	PLASTIC	Diamond Plastic	
6" VALVE	1 EA.	1 EA.	DUCTILE	Mueller Company	
1/8 HB.	2 EA.	2 EA.	DUCTILE	Mueller Company	
1/16 HB.	1 EA.	1 EA.	DUCTILE	Mueller Company	
8"x6" TEE	1 EA.	1 EA.	DUCTILE	Mueller Company	
8" PLUG	1 EA.	1 EA.	DUCTILE	Mueller Company	
6TH	1 EA.	1 EA.	DUCTILE	Mueller Company	
8"x8" TEE	1 EA.	1 EA.	DUCTILE	Mueller Company	
8" S PVC	39 LF	38 LF	SDR-35	PLASTIC RAINBOW	
San MH	1 EA.	1 EA.		Atlantic Precast	

DEVELOPER'S CERTIFICATION

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Michael Sheehy 6/30/15
Signature of Developer Date
Print name below signature

ENGINEER'S CERTIFICATION

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

John P. Poliet 7/1/15
Signature of Engineer Date
Print name below signature

Sediment Control measure for this contract will be implemented in accordance with section 308 of the Howard County design manual - volume IV. Standard specifications and details for construction and as shown on SDP-14-004.

Michael Sheehy 6/30/15
SIGNATURE OF DEVELOPER Date

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT APPROVED:

John P. Poliet 7/1/15
HOWARD SOIL CONSERVATION DISTRICT DATE

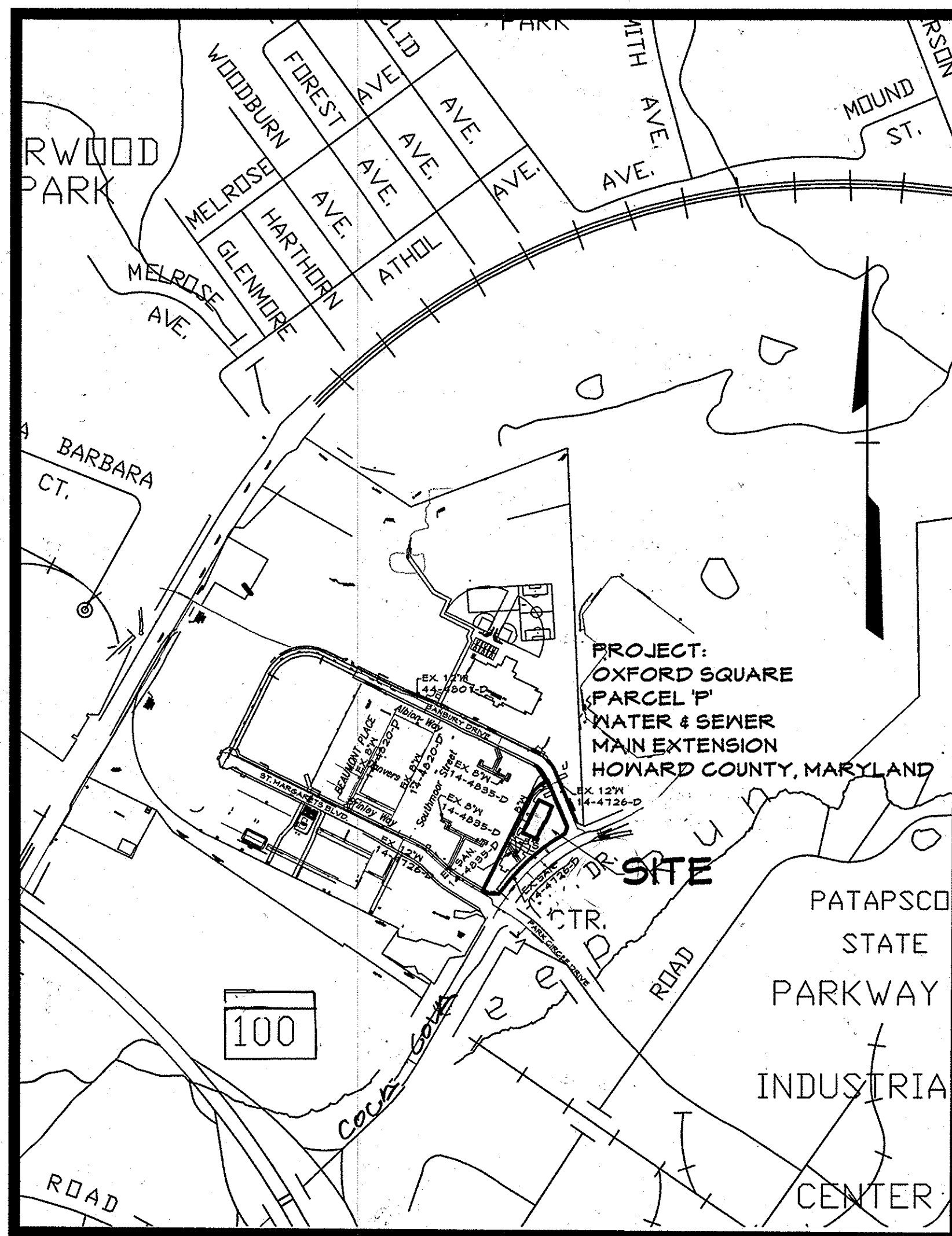
SIGNATURE OF DEVELOPER Date

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

Howard Soil Conservation District Date

OXFORD SQUARE-14-4903-D					
ITEM	LOCATION 1	MEASUREMENT	LOCATION 2	MEASUREMENT	ADDRESS
6" VALVE #2	INLET 4	46'	MH 4	35'	PARCEL P
8" VALVE #2	INLET 4	66'	MH 2	99'	PARCEL P
EX. 6" VALVE #1	AS BUILT COMPLETED ON CONTRACT # 14-4726-D				BANBURY DR.
EX. 8" VALVE #1	AS BUILT COMPLETED ON CONTRACT # 14-4726-D				BANBURY DR.

PLAN REFERENCE NUMBERS:
F-12-026
SDP-14-004



WATER ZONE: 400
WATER TEST GRADIENT: 550

TYPE OF BUILDING: COMMERCIAL
NUMBER OF PARCELS: 1
NO. OF WATER HOUSE CONNECTIONS: 0
NO. OF SEWER HOUSE CONNECTIONS: 0
SEWER SHED: PATAPSCO
TREATMENT PLANT: PATAPSCO WATER TREATMENT PLANT CITY OF BALTIMORE

PARCEL 'P'

CONTRACT NO. 14-4903-D

OXFORD SQUARE

WATER & SEWER MAIN EXTENSION

HOWARD COUNTY, MARYLAND

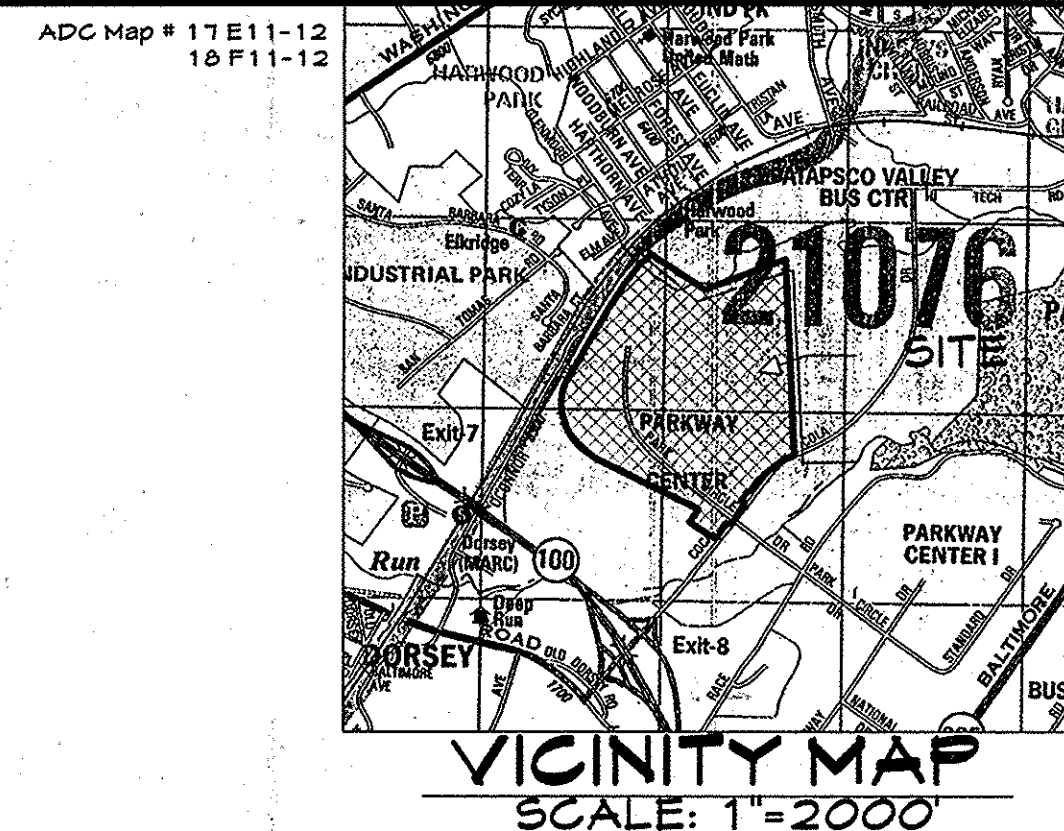
DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 140
LUTHERVILLE, MARYLAND 21093-4614
410-246-3800

OWNER
KELLOGG - COP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 140
LUTHERVILLE, MARYLAND 21093-4614
410-246-3800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
CONTRACT NO. 14-4903-D
PARCEL 'P'
WATER MAIN EXTENSION
HOWARD COUNTY, MARYLAND
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-15

BENCHMARK INFORMATION

- B.M.#1 HOWARD COUNTY CONTROL STATION #386A - HORIZONTAL - (NAD '83)
(LOCATION ALONG RAILROAD AVENUE, JUST SOUTH OF RYAN AVENUE APPROX. 22.6' NORTH FROM THE CENTER LINE OF RAILROAD AVENUE)
N 555,897.3373
E 1,390,132.0933
ELEVATION = 80.789 - VERTICAL - (NAVD '88)
- B.M.#2 HOWARD COUNTY CONTROL STATION #43CB - HORIZONTAL - (NAD '83)
(LOCATION ALONG THE SOUTHSIDE OF DORSEY ROAD, APPROX. 2.2' OFF THE EDGE OF PAVING APPROX. 46.7' EAST OF POWER POLE NO. 14)
N 552,084.2466
E 1,382,282.4190
ELEVATION = 144.391 - VERTICAL - (NAVD '88)



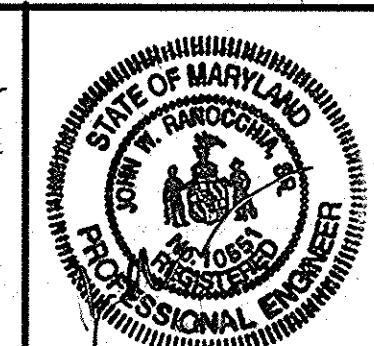
GENERAL NOTES

- Part A
- 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 or about May, 2010 by Fisher, Collins & Carter, Inc.
 - 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. 386A & No. 43CB.
All Vertical controls are based on NAVD '88 Vertical Controls provided on the drawings.
 - All pipe elevations shown are invert elevations unless otherwise noted on the plans.
 - Clear all utilities by a minimum 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 arrangement for bracing of additional poles, any cost incurred by the owner for the bracing of the additional poles or damages shall be deducted from monies owed the contractor. The contractor shall coordinate with the utility companies to schedule 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 site.
 - 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 (Contractor Services) 410-637-8713
BGE (Emergency) 410-685-0123
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.
 - 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 the 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 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 18.1149(a) of the Howard County Code.
- Part B: Water Main General Notes
- All Water mains shall be AWWA C900 PVC; DR-18
 - Tops of all water mains shall have a minimum of 3'-6" of cover unless otherwise noted.
 - Valves adjacent to trees shall be strapped to trees.
 - All fittings shall lie buttressed or anchored with concrete in accordance with 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 Section 1005 of the standard specifications.
 - The Contractor shall not operate any water main valves on the existing water system.
 - Tracer wire and continuity test stations shall be installed on all D.I.P. and PVC water mains in accordance with Howard County Design Manual.
 - For PVC Water Mains, all records for the quality control and qualification test requirements noted in section 5.1 of the AWWA standard C900 for PVC pressure pipe shall be submitted with the pipe material certifications or shop drawings prior to approval of the material for use. The test records shall be for the pipe to be installed under this contract. All PVC pipe shall contain markings to allow cross referencing of the pipe supplied to the test records received.
 - Unless otherwise noted on the plans or in the specifications, seventeen (17) pound sacrificial anodes shall be installed on all valves and metallic fittings used with PVC water mains in accordance with Volume IV, Standard Specifications and Details for construction. Magnesium anodes shall be installed on all valves and ductile iron fittings including restraints and harnesses. Zinc anodes shall be installed on all stainless steel fittings and saddles used with PVC mains. All "tees" used with PVC mains shall be ductile iron.
 - Proper assembly of gasketed PVC pipe joints: the manufacturer's insertion line of gasketed PVC pipe joints indicates the maximum depth of insertion of the spigot into the bell. After assembly of the joint, the insertion line shall remain visible. Dual insertion lines on gasketed PVC pipe indicate the maximum and minimum depth of insertion of the spigot into the bell the contractor shall not over insert or over home the spigot into the bell of PVC pipe
 - All changes in horizontal or vertical direction of PVC water pipe shall be made with standard bends, 5-degree sweeps or high deflection (HD) couplings. No bending of the pipe or deflecting of PVC pipe joints is permitted. Where high deflection couplings or 5-degree sweeps are permitted, the contractor shall provide on full pipe length (20 foot long) on either side of the high deflection coupling or 5-degree sweep, taking care not to use compaction equipment directly over the fitting.
- PVC high deflection couplings shall be limited to a total of 3-degree (1 1/2 Degree on either end of the coupling), shall be rated for a minimum 200 PSI Meeting the requirements of AWWA C900, shall have a minimum lay length of 9-inches and shall have center stops. PVC high deflection couplings shall be certified PVC High Deflection (HD) stop couplings or equal.
- Five degree sweeps shall be bell spigot, rated for a minimum 225 PSI, DR-18 meeting the requirements of AWWA C900 and shall be multi fittings (REX) blue brute DR-18 or equal.
- When PVC High deflection couplings or PVC 5-Degree sweeps are used to facilitate changes in horizontal or vertical alignments of AWWA C900 PVC Pipelines, the contractor shall insert devices for the prevention of over-insertion of the PVC pipe spigots or plain ends into the push on bell joint on both sides of the high deflection couplings and 5-degree sweeps. Bell stops shall be placed at the proper insertion line for the fitting. The bell stop shall be manufactured of ductile iron and incorporate an expansion retention spring to allow for pipe expansion and contraction. The bell stops shall be series 5000 mega-stop, as manufactured by EBAA Iron, Inc. or approval equal.
 - To accommodate a sprinkler system, all residential dwelling units shall have a 1- 1/2" connection with a 1" outside meter setting. STD. Det. W-3.28.
- Part C: Sewer Main General Notes
- All sewer mains shall be D.I.P. or PVC 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 cover, standard detail GS-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 cell cannot be served.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
7/2/15
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
7.7.15
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CENTURY ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 Fax: 443.589.2401

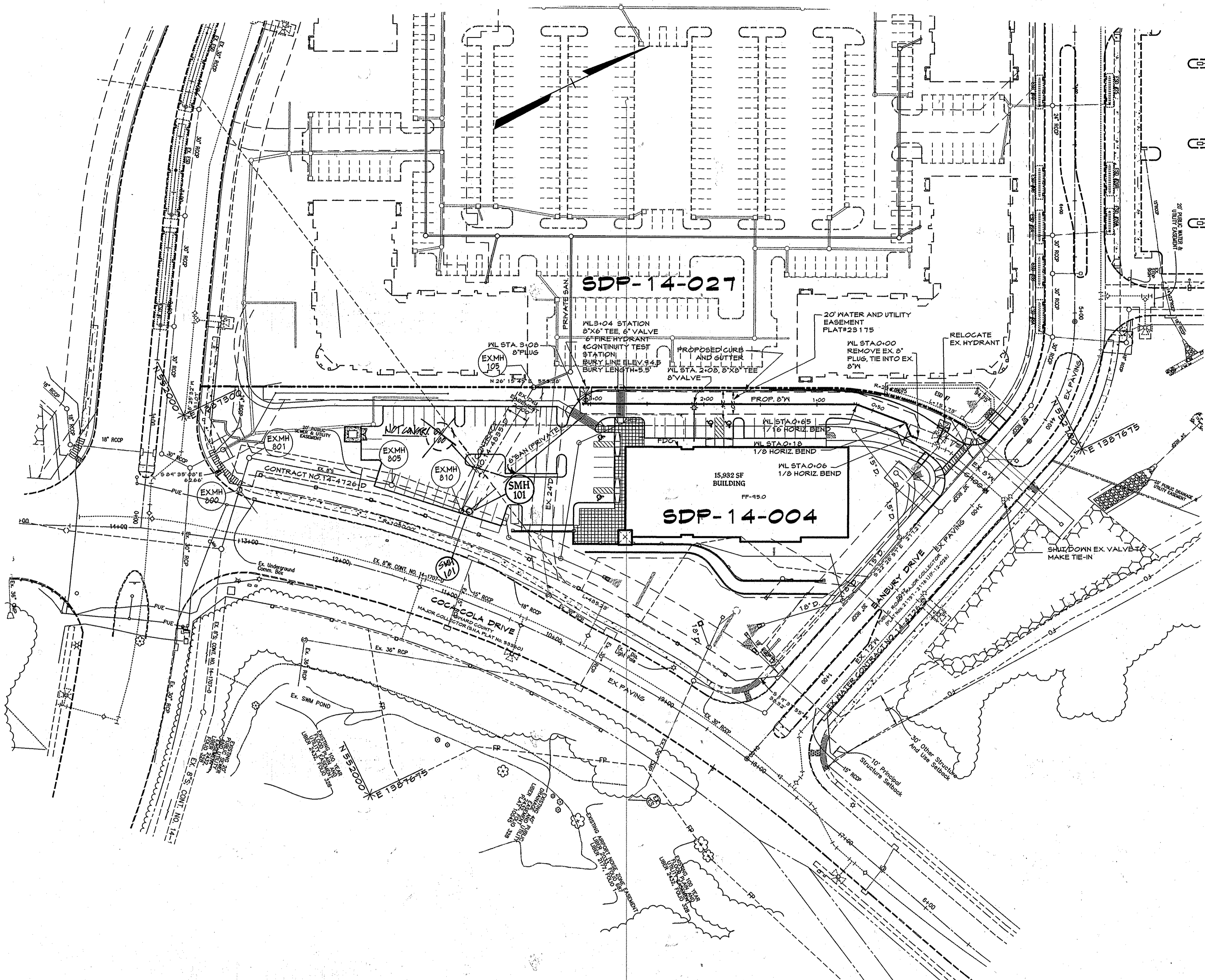


DESIGN BY:	MJP/KAD		
DRAWN BY:	KAD		
CHECKED BY:	EEL	AS BUILTS	3/16/16
DATE:	4-13-15	REVISE SEWER CONNECTION MID TO EX SAN. B10	
BY NO.		REVISION	DATE

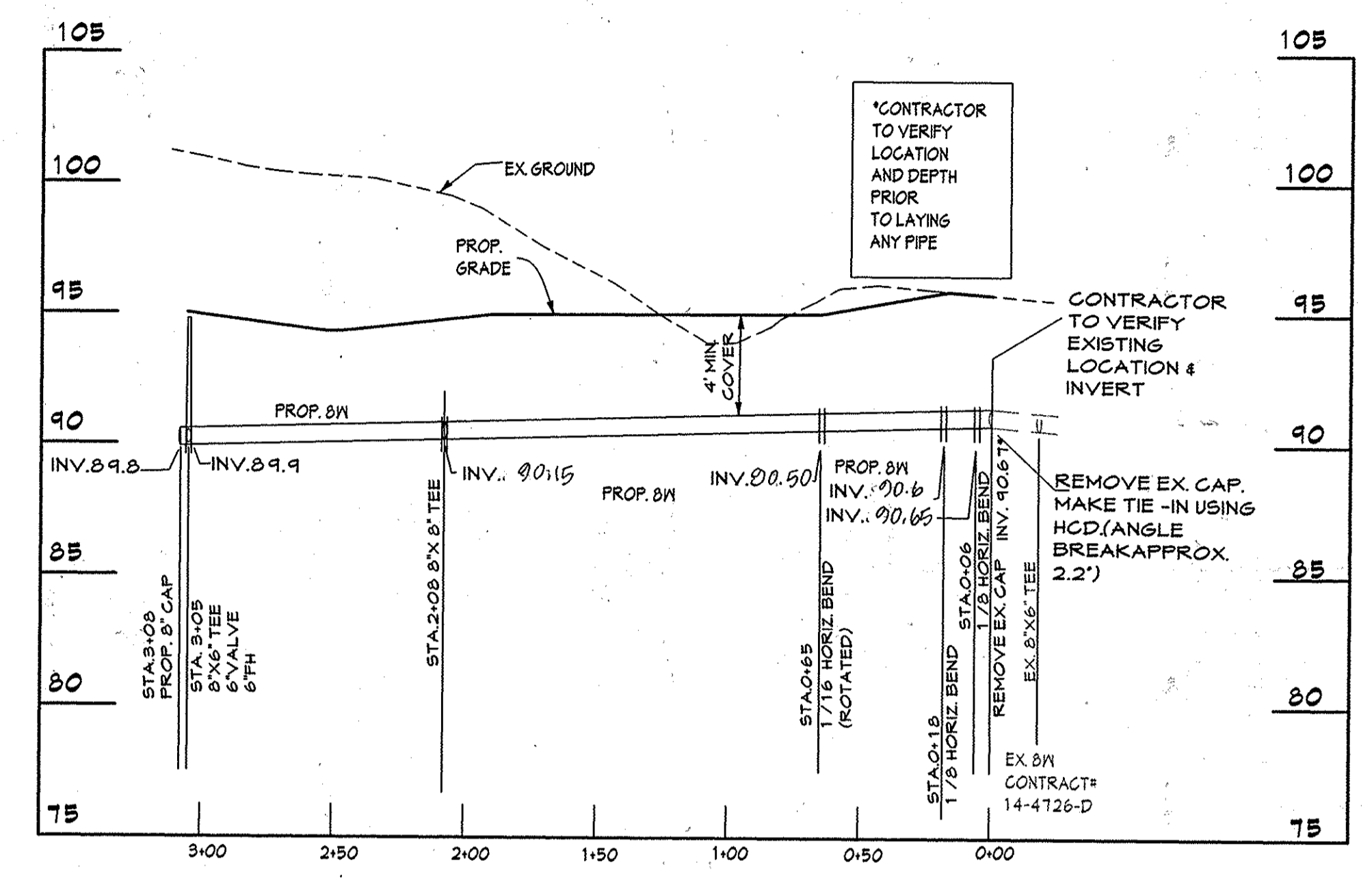
WATER & SEWER MAIN EXTENSION
TITLE SHEET
600' SCALE MAP NO. 36 BLOCK NO. 19 & 20
F.C.C. WORK ORDER NO
FILE NAME: WATER MAIN EXTENSION TITLE SHEET

OXFORD SQUARE
PARCEL 'P'
WATER MAIN AND SEWER MAIN
EXTENSION
CONTRACT 14-4903-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 1 OF 2

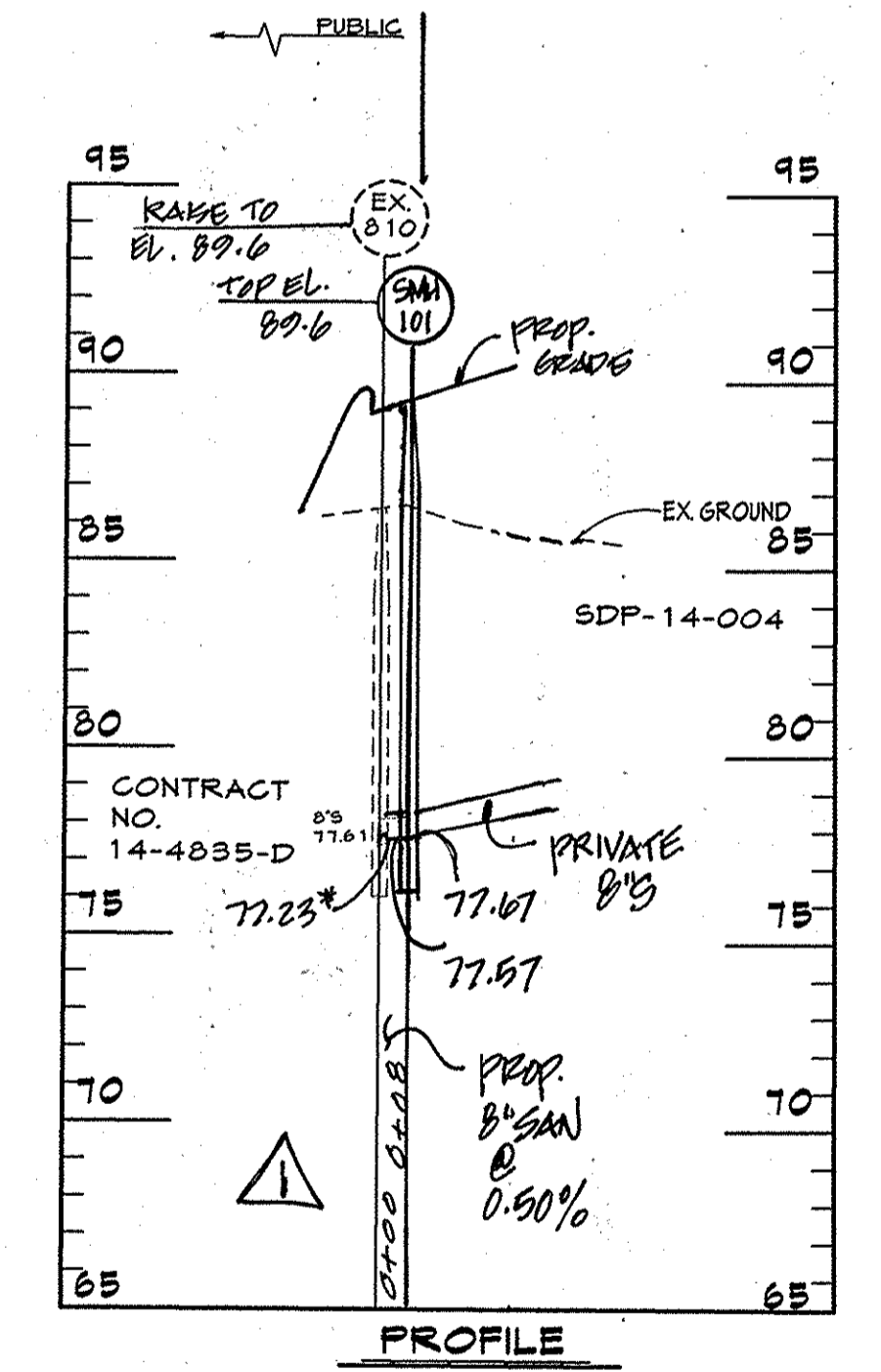
S:\2013 Facilities\131111 Oxford Square\CADD\Drawings\SDP-Freshhook\131111(BDP-O1) Cover Sheet\water.dwg Jun 04, 2015 12:07 pm kdarby



PLAN
SCALE: 1"=50'



WATER SERVICE PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

OWNER
KELLOGG - COP, LLC
c/o DAVID P. SCHEFFENACKER, JR.
MANAGING MEMBER
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-9800

DEVELOPER
PRESTON - SCHEFFENACKER PROPERTIES
2330 WEST JOPPA ROAD, SUITE 190
LUTHERVILLE, MARYLAND 21093-4614
410-296-3800

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 10551 EXPIRATION DATE: 8-28-15

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Steve Coen</i> 7/2/15 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>Phil Anderson</i> 7-7-15 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	CENTURY ENGINEERING CONSULTING ENGINEERS - PLANNERS 10710 Gilroy Road, Hunt Valley, MD 21081 Phone: 443.589.2400 Fax: 443.589.2401	DESIGN BY: MJP/KAD DRAWN BY: KAD CHECKED BY: DATE: 4-13-15 BY NO. REVISION DATE 0.61 RELOCATE SMH101 AND CONNECT PRIVATE SAN.	WATER & SEWER MAIN EXTENSION PLAN & PROFILE 600' SCALE MAP NO. 36 BLOCK NO. 19 & 20 F.C.C. WORK ORDER NO. _____ FILE NAME: WATER MAIN EXTENSION TITLE SHEET	OXFORD SQUARE PARCEL 'P' WATER MAIN AND SEWER MAIN EXTENSION CONTRACT 14-4903-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 2 OF 2
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