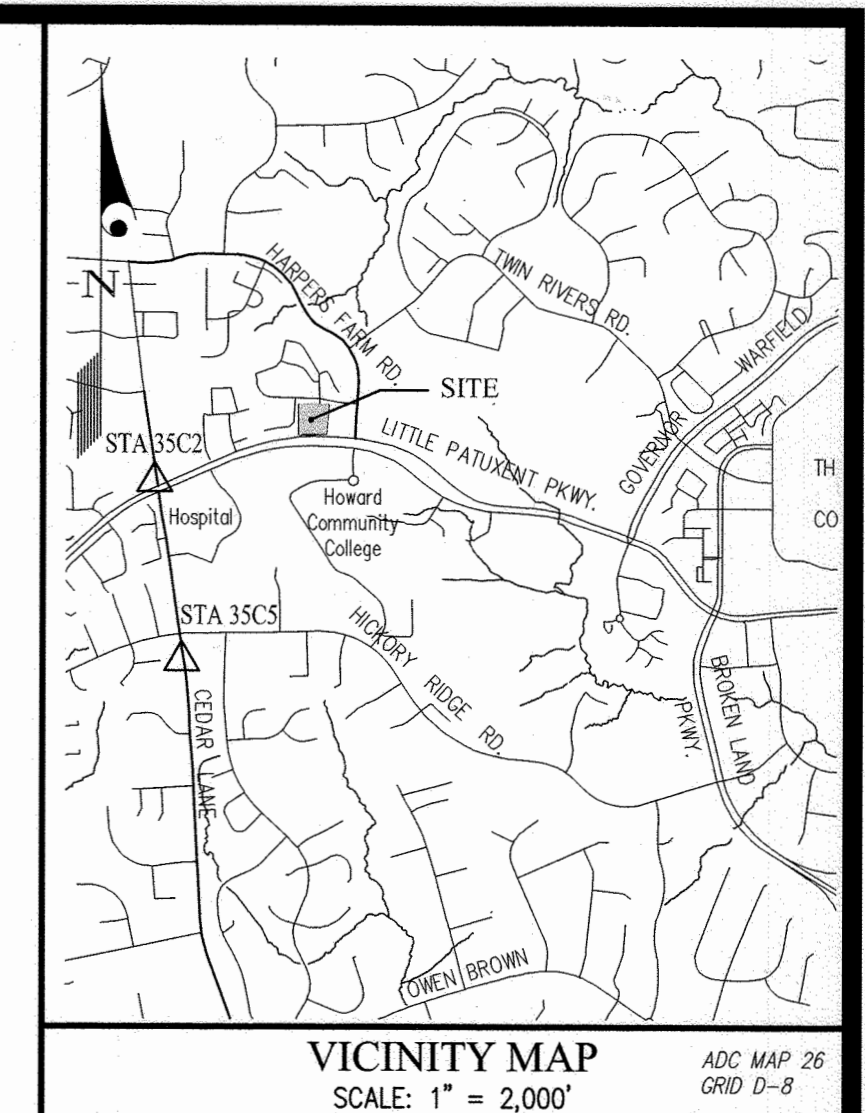


QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" SEWER MAIN (PVC)	8 LF			
8" WATER MAIN C-900 DR 10	456 LF			
6" WATER MAIN C-900 DR 10	10 LF			
6" WATER MAIN (DIP)	33 LF			
12" 8" T.S.V.	2 EA.			
8" 6" F.H.T.	3 EA.			
8" 6" T.	1 EA.			
8" 8" T.	1 EA.			
8" VALVE	2 EA.			
6" VALVE	1 EA.			
8" 1/2" H.B.	3 EA.			
8" 1/2" H.B.	2 EA.			
8" 5" SWEEP	2 EA.			
8" 3" HDC	1 EA.			
8" 2.5" HDC	3 EA.			
8" 2" HDC	3 EA.			
8" 1/2" L.V.B.	1 EA.			
8" 1/2" U.V.B.	1 EA.			
FIRE HYDRANT	3 EA.			
CONTINUITY TEST STATION	3 EA.			
CLEANOUT	1 EA.			

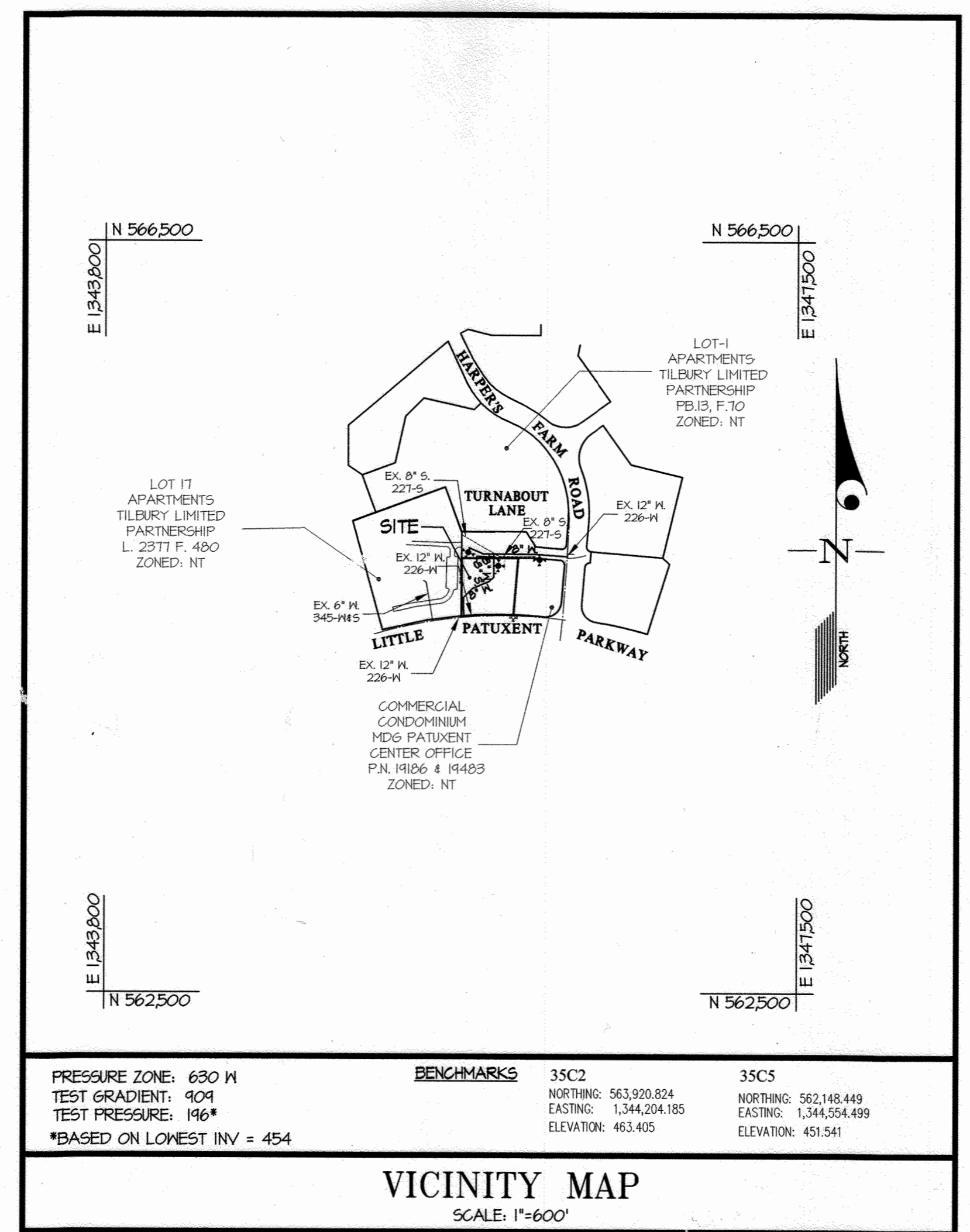
NAME OF UTILITY CONTRACTOR: \_\_\_\_\_

SURVEY AND DRAFTING DIV. CHECKBOX: \_\_\_\_\_ AS-BUILT DATE: \_\_\_\_\_

TYPE OF BUILDING	APARTMENTS
NUMBER OF UNITS	82
NUMBER OF S.H.C.'s	1
NUMBER OF W.H.C.'s	1
AREA OF COMMERCIAL LOT/PARCEL	2.01 ACRES
SEWER SHED	LITTLE PATUXENT TREATMENT PLANT
PUMPING STATION	N/A



HC CONTROL STATIONS	
33C2	NORTHING: 563,920.824 EASTING: 1,344,204.185 ELEVATION: 463.405 (LATEST ADJ. FEB. 2014)
33C5	NORTHING: 562,148.449 EASTING: 1,344,554.499 ELEVATION: 451.541 (LATEST ADJ. FEB. 2014)



**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.
- The existing topography performed by Gutschick Little & Weber, P.A.
- Horizontal and Vertical Survey Controls: The coordinates shown on the drawings are based on Maryland State Reference System NAD '83/11 as projected by Howard County Geodetic Control Stations No. 306A and No. 36AA. All vertical controls are based on NAVD '83.
- 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 tracing of poles as shown on the drawings. In the event the contractor's work requires the tracing of additional poles, any cost incurred by the owner for the tracing of additional poles or damages shall be deducted from monies owed the contractor. The contractor shall coordinate with the utility companies to schedule the tracing of the poles.
- For details not shown on the drawing, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (2017). 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  $\odot$  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)	410-637-8713
BGE (Emergency)	410-685-0123
Bureau of Utilities	410-313-4100
Colonial Pipeline Co.	410-785-1940
Miss Utility	1-800-251-7777
State Highway Administration	410-531-5533
Verizon	1-800-743-0033

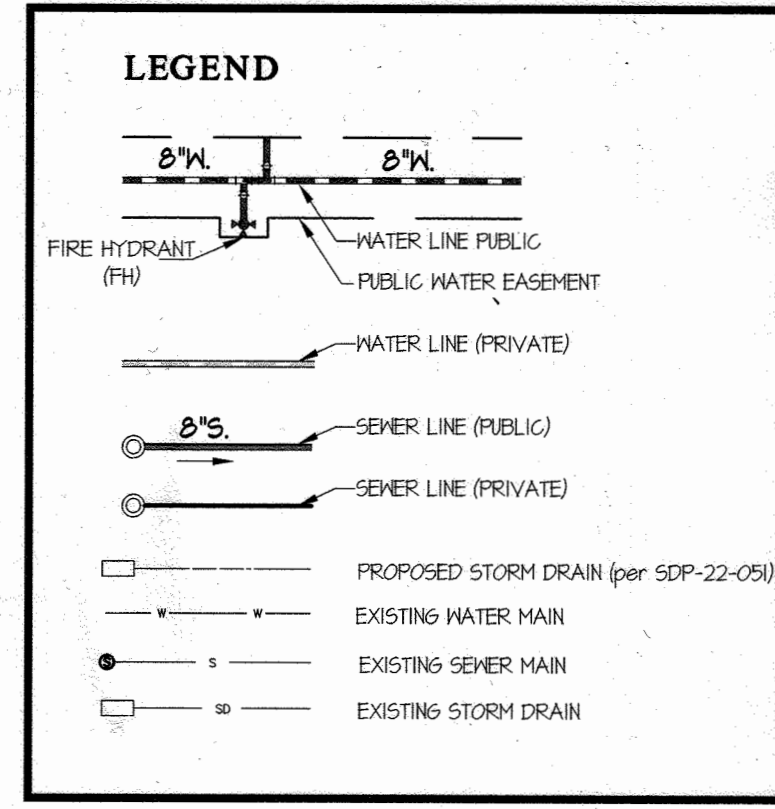
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included 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 roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPM requirements per Section 10.11(4)(a) of the Howard County Code.

**Part II WATER**

- All water mains shall be P.V.C., 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 bolted 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 install any water main valves on the existing water system.
- Tracer wire and continuity test stations shall be installed on all DIP and PVC water mains in accordance with the 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 ANNA 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, 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. Seventeen (17) pound Magnesium anodes shall be installed on all valves and ductile iron fittings including restraints and harnesses. Twelve (12) pound 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 one full pipe length (20-foot long) on either side of the high deflection coupling or 5-degree sweep. The contractor shall use a vibratory plate compactor or other approved means to thoroughly compact the #1 stone on both sides 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 deflection of 3-degrees (1/4-degree on either end of the coupling), shall be rated for a minimum 200 psi meeting the requirements of ANNA C900, shall have a minimum lay length of 4-inches and shall have center stops. PVC High deflection couplings shall be CertainTeed PVC High Deflection (HD) Stop Couplings or equal.
- Five degree sweeps shall be bell by spigot, rated for a minimum 225 psi, DR 18 meeting the requirements of ANNA C900 and shall be Multi Fittings (pex) 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 ANNA C-100 PVC pipelines, the contractor shall install 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 incorporates an expansion retention spring to allow for pipe expansion and contraction. The bell stops shall be Series 3000 Mega-Stop, as manufactured by EBAA Iron, Inc. or approved equal.

**Part III SEWER**

- All sewer mains shall be D.I.P. or 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 "A.T." in plan and profile shall have watertight frame and cover, Standard Detail 6552. 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 the cellar cannot be served.



**SHEET INDEX**

- COVER SHEET
- WATER & SEWER PLAN & PROFILES
- WATER & SEWER DEMOLITION PLAN

CONTRACT No. 24-5203-D  
**RANLEIGH COURT APARTMENTS**  
 VILLAGE OF HARPTER'S CHOICE  
 SECTION 3, AREA 2  
 LOT 18 (Plat Book 13 PG. 89 )  
**HOWARD COUNTY, MARYLAND**  
 DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SDP-22-051, SECTION 308 OF THE SPECIFICATIONS AT FINAL ROAD PLAN STAGE.

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

APPROVED: *Abdullah Butchki* 02/01/23  
 HOWARD S.C.D. Date

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*David B. ...* 1/23/23  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND

*...* 2.6.23  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE

**GLW**  
 PLANNING | ENGINEERING | SURVEYING

3909 NATIONAL DRIVE | SUITE 200 | BURTONSVILLE, MD 20886 | OLWPA.COM  
 PHONE: 301-421-4024 | BALT: 410-689-1820 | DC/VA: 301-689-2524 | FAX: 301-421-4188

DESIGNED BY: **WJ**  
 DRAWN BY: **WJ**  
 CHECKED BY: **DDS**

DATE: JAN., 2023

G.L.W. No. 21111

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975, EXP. DATE: MAY 26, 2024

BY	NO	REVISION	DATE

600' SCALE MAP NO. 36 BLOCK NO. 2

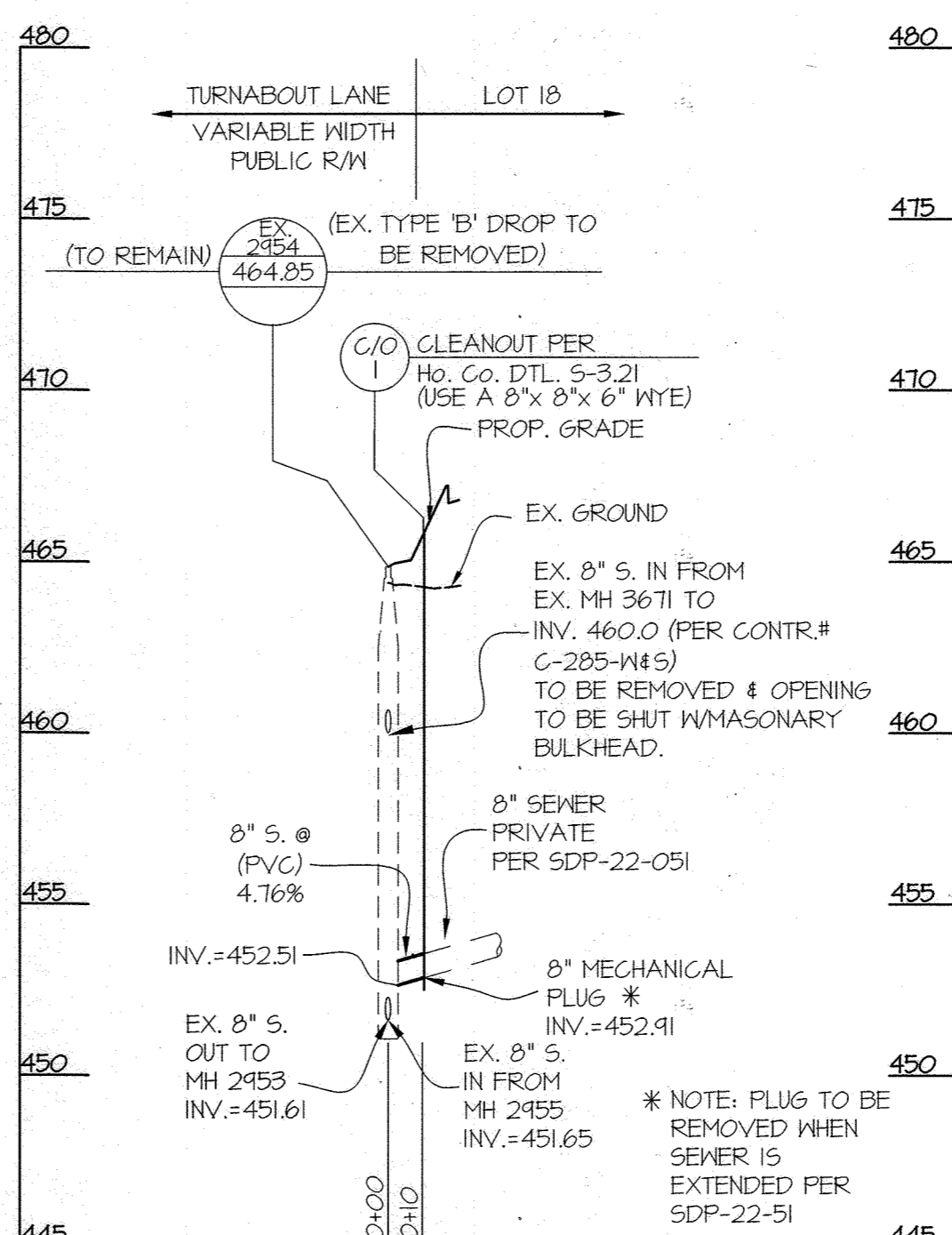
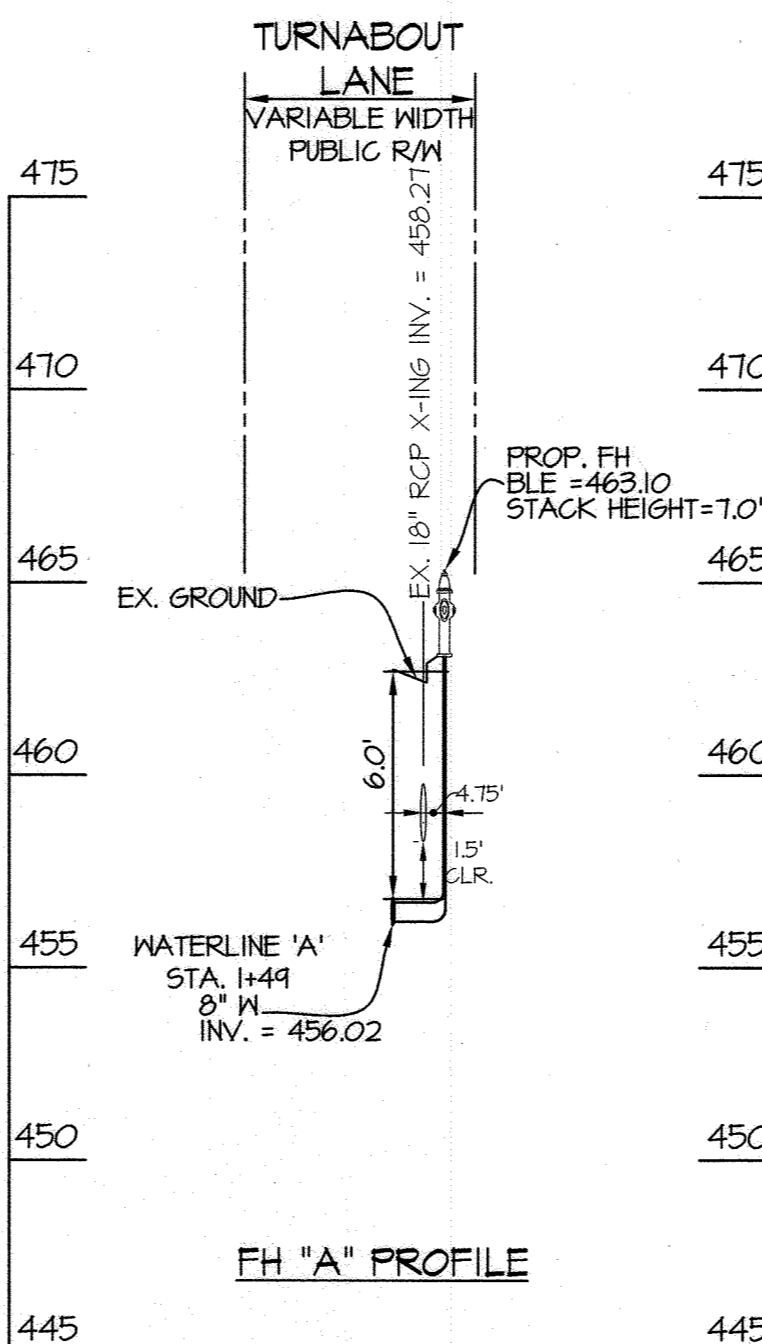
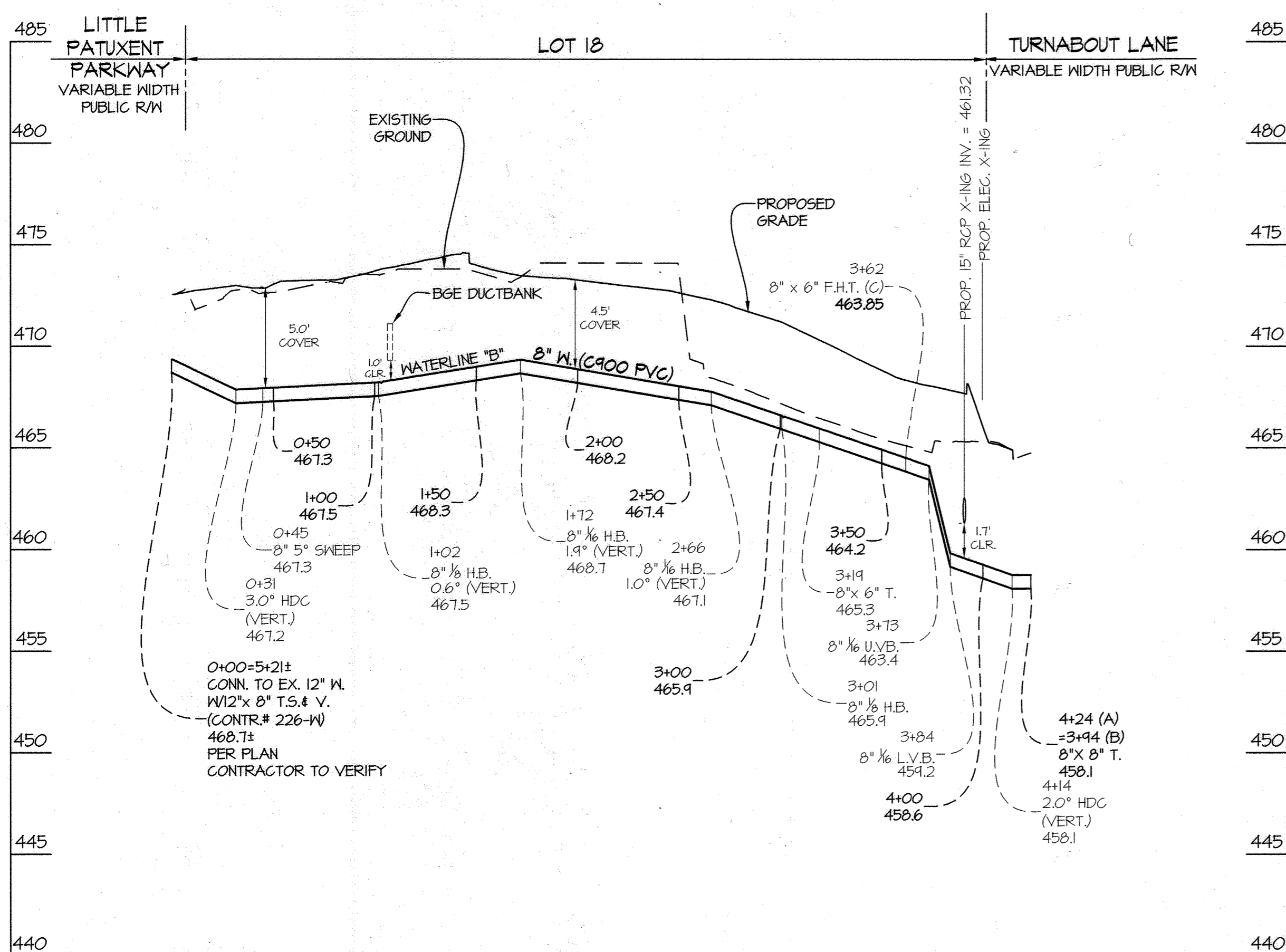
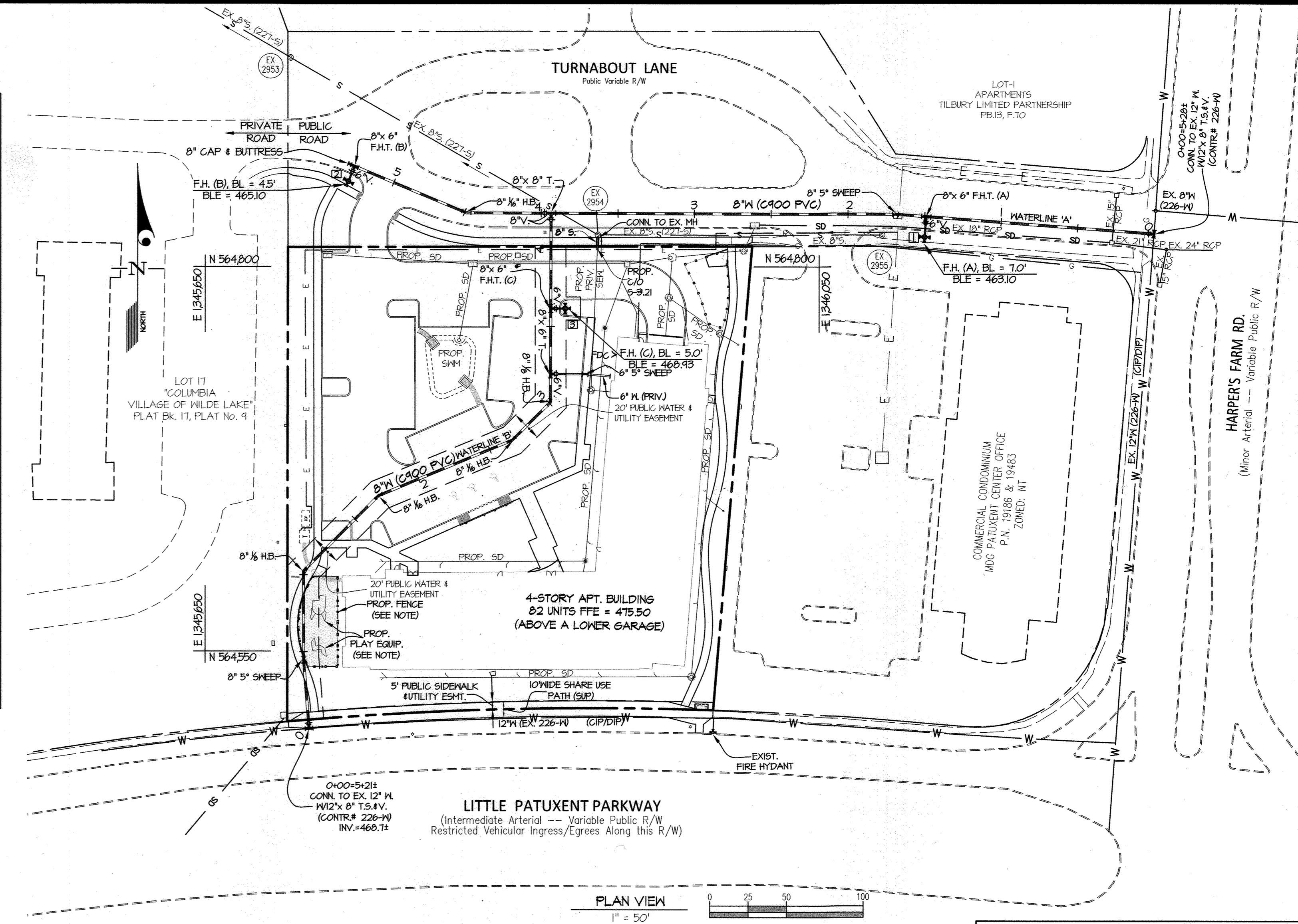
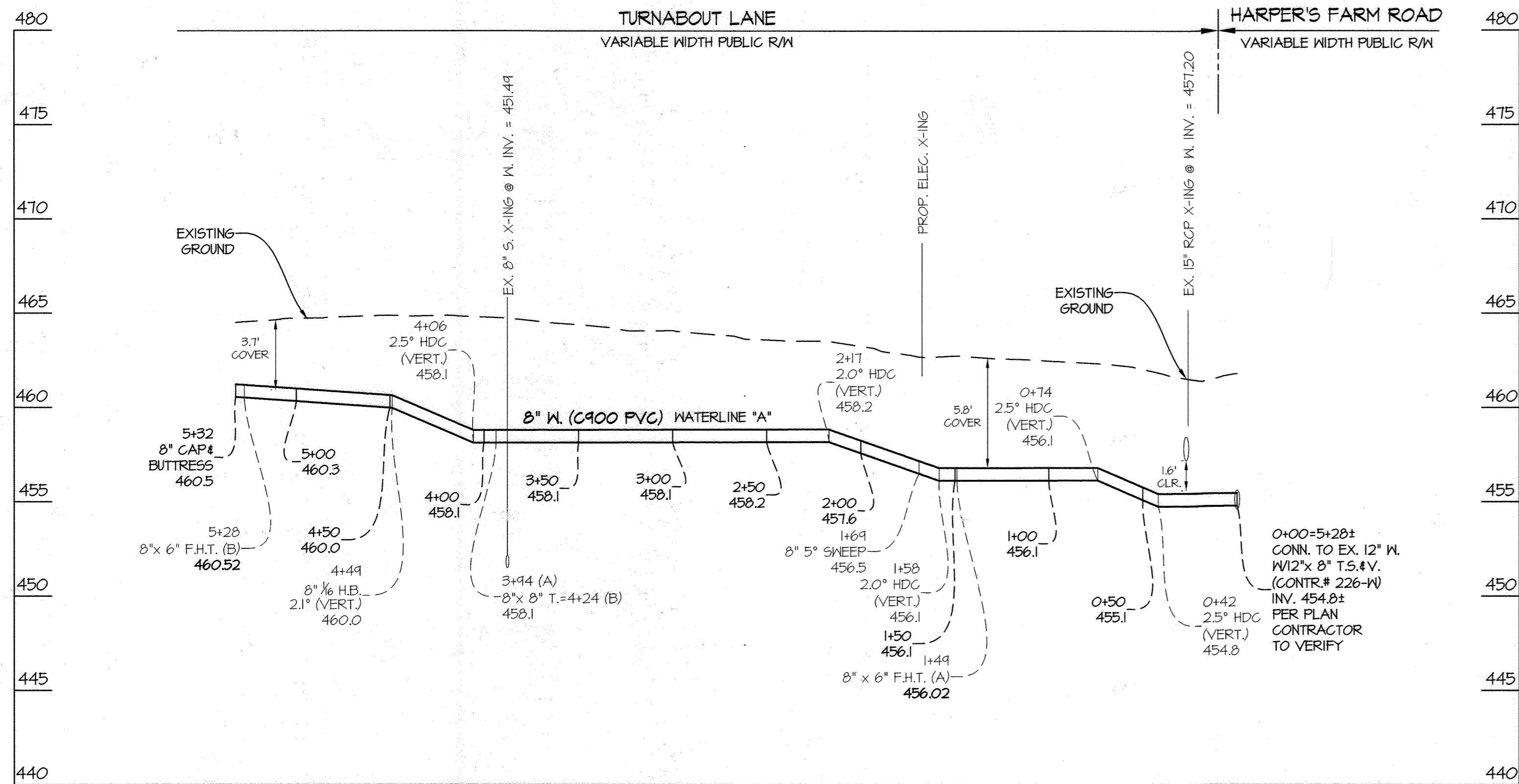
PREPARED FOR:

**Enterprise**  
 Enterprise Community Homes Housing LLC (Owner)  
 Enterprise Community Development, Inc. (Developer)  
 875 Hollin Street, Suite 202, Baltimore, MD 21201  
 410-332-7400

**Ranleigh Court Apartment**  
 CONTRACT No. 24-5203-D  
 Village of Harpter's Choice, Section 3, Area 2  
 Lot 18, Plat Book 13 Pg. 89  
 Howard County, Maryland  
 Election District No. 5

SCALE AS SHOWN  
 SHEET 1 OF 3

L:\CADD\DRAWINGS\21111\PLANS BY GLW\W&S\FINAL MKS\21111-PL-1.dwg, PLOTTED: 7/2/2023, 10:18 AM, LAST SAVED: 7/1/2023, 1:44 PM, PLOTTED BY: Waymond L. Joyner



**FITTING CHART**

STATION	FITTING	NAD '83/'91 COORDINATES
WATERLINE 'A'		
0+00	12" x 8" T.S.&V.	N 564821.42 E 1346268.33
1+49	8" x 6" F.H.T.	N 564832.57 E 1346119.71
1+69	8" x 5" SNEEP	N 564834.07 E 1346099.67
3+94	8" x 8" T.	N 564834.83 E 1345875.16
4+44	8" x 1/2" H.B.	N 564835.05 E 134582.00
5+28	8" x 6" F.H.T.	N 564865.47 E 1345147.24
5+32	8" x 6" CAP	N 564861.24 E 1345143.00
WATERLINE 'B'		
0+00	12" x 8" T.S.&V.	N 564500.00 E 1345111.60
0+45	8" x 5" SNEEP	N 564544.53 E 1345114.03
1+02	8" x 1/2" H.B.	N 564602.35 E 1345113.97
1+72	8" x 1/2" H.B.	N 564651.27 E 1345162.74
2+66	8" x 1/2" H.B.	N 564681.24 E 1345044.84
3+01	8" x 1/2" H.B.	N 564711.77 E 1345074.58
3+19	8" x 6" T.	N 564730.25 E 1345074.81
3+62	8" x 6" F.H.T.	N 564772.86 E 1345074.96
4+24	8" x 8" T.	N 564834.83 E 1345075.16

**FIRE HYDRANT CHART**

FH	NAD '83/'91 COORDINATES
A	N 5648014.25 E 1346118.71
B	N 564855.69 E 1345143.15
C	N 564772.83 E 1345084.35

**CONTINUITY TEST STATION CHART**

STR.	WATERLINE STATION	OFFSET	REMARKS
WATERLINE 'A'			
1	1+41	1' LEFT	HO. CO. STD. DETAIL W-115
2	5+28	10' LEFT	HO. CO. STD. DETAIL W-115
WATERMAIN 'B'			
3	3+62	9' RIGHT	HO. CO. STD. DETAIL W-115

NOTE: IN AN EMAIL FROM DPW DATED 12/13/22, THE PLAY EQUIPMENT ENCROACHMENTS INTO THE WATER EASEMENT WERE ALLOWED. THE NECESSARY APPROVALS AND AGREEMENTS TO ALLOW SUCH WILL BE INCORPORATED INTO THE DEVELOPMENT AGREEMENT PROCESS BY REAL ESTATE SERVICES

L:\CADD\DRAWINGS\2023\PLANS BY QMW\WSP\FINAL\W&S\21111-FW-2.dwg, PLOTTED: 1/12/2023 10:21 AM, LAST SAVED: 1/12/2023 9:53 AM, PLOTTED BY: Waymond Joyner

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]*  
1/23/23  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]*  
2.6.23  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**GLW**  
PLANNING ENGINEERING SURVEYING

3900 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20886 | QMW@P.A.COM  
PHONE: 301-421-4024 | BALT: 410-980-1820 | DC&VA: 301-989-2624 | FAX: 301-421-4186

DESIGNED BY: Wsj  
DRAWN BY: Wsj  
CHECKED BY: DDS

DATE: JAN, 2023

G.L.W. No. 21111

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975  
EXP. DATE: MAY 28, 2024

*[Signature]*  
1-12-23

BY	NO	REVISION	DATE

FINAL WATER & SEWER PLAN and PROFILE

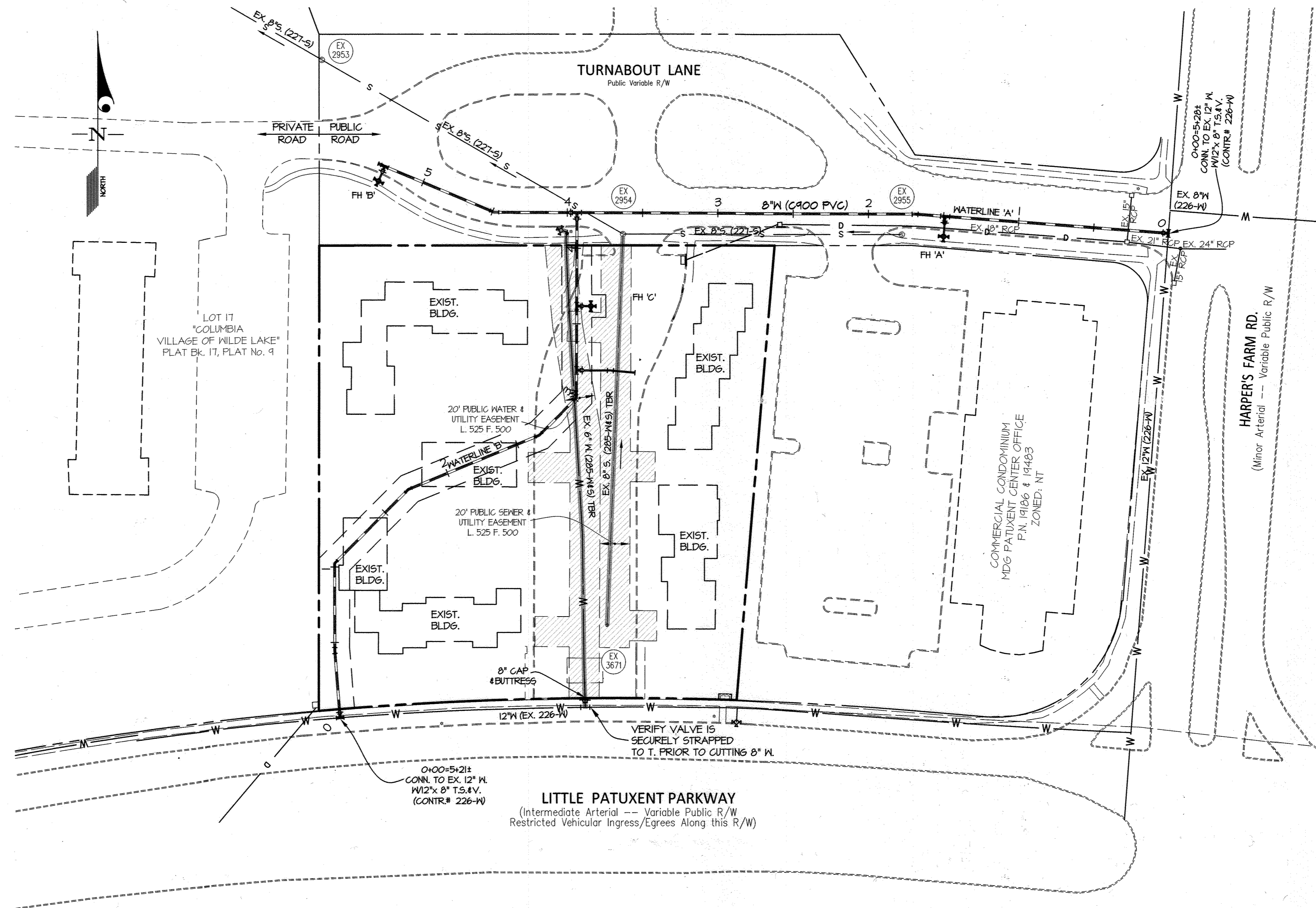
600' SCALE MAP NO. 36 BLOCK NO. 2

PREPARED FOR:

**Enterprise**  
Enterprise Community Homes Housing LLC (Owner)  
Enterprise Community Development, Inc. (Developer)  
875 Hollin Street, Suite 202, Baltimore, MD 21201  
410-332-7400

Ranleigh Court Apartment  
CONTRACT No. 24-5203-D  
Village of Harper's Choice, Section 3, Area 2  
Lot 18, Plat Book 13 Pg. 89  
Howard County, Maryland  
Election District No. 5

SCALE
1" = 50'
SHEET
2 OF 3



**NOTES:**

1. WATERLINES 'A' AND 'B' MAY BE INSTALLED CONCURRENTLY PROVIDED THE PROPER COVER CAN BE PROVIDED OVER WATERLINE 'B' AND THE EXISTING FIRE HYDRANT ON TURNABOUT LANE IS NOT OUT OF SERVICE FOR AN EXTENDED PERIOD OF TIME PRIOR TO PLACING THE NEW HYDRANTS INTO SERVICE. CONTACT HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS FOR ALLOWABLE HYDRANT SHUTDOWN. WATERLINE 'A' AND 'B' MAY BE TESTED, SERIALIZED, AND DISINFECTED AT THE SAME TIME IN THIS SCENARIO.

**SEQUENCE OF CONSTRUCTION:**

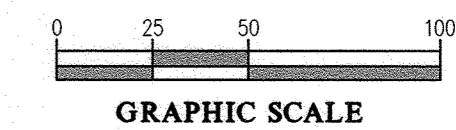
(SEE SDP-22-51 FOR ADDITIONAL INFORMATION)

1. DISCONNECT ALL EXISTING STRUCTURES FROM PUBLIC WATER AND SEWER MAINS.
2. OBTAIN A DEMOLITION PERMIT(S) AND DEMOLISH ALL EXISTING STRUCTURES.
3. INSTALL WATERLINE A, AND HYDRANTS A & B. INSTALL VALVE JUST BEYOND TEE @ 3414. CLOSE VALVE AND INSTALL TEMP. 8" CAP. TEST, STERILIZE, AND DISINFECT INSTALLED WATER MAIN IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS. SEE NOTE 1.
4. CLOSE EX VALVE @ CONNECTION TO 12" W. VERIFY VALVE IS SECURELY STRAPPED TO EXISTING 'T'. INSTALL 8" CAP JUST BEYOND VALVE.
5. REMOVE OR ABANDON ALL EXISTING WATER AND SEWER ON SITE, INCLUDING THE MODIFICATION TO EX. MH 2454 TO REMOVE THE EXISTING DROP CONNECTION. ANY ABANDONMENT MUST BE DONE IN ACCORDANCE WITH DESIGN MANUAL VOLUME 2. EXISTING WATERLINE WITHIN PROPOSED PUBLIC WATER EASEMENT MUST BE REMOVED.
6. ONCE SITE IS GRADED, INSTALL WATERLINE B AND ANY REMAINING PUBLIC WATER. MODIFY EXISTING SEWER MANHOLE 2454 AND INSTALL PUBLIC SEWER. TEST, STERILIZE, AND DISINFECT REMAINING WATER MAIN IN ACCORDANCE WITH HOWARD COUNTY STANDARDS AND SPECIFICATIONS. TIE WATERLINE 'B' INTO WATERLINE 'A'.

**LEGEND**

- EXISTING WATER MAIN (TO BE REMOVED)
- EXISTING SEWER MAIN (TO BE REMOVED)
- EASEMENTS (TO BE ABANDONED)

L:\CADD\DRAWINGS\2011\PLANS BY BLM\WAS\FINAL W&S\21111-FW-5.dwg, PLOTTED: 1/12/2023 10:27 AM, LAST SAVED: 1/11/2023 2:18 PM, PLOTTED BY: Waymond Joyner



GRAPHIC SCALE

PREPARED FOR:  
**Enterprise**  
 Enterprise Community Homes Housing LLC (Owner)  
 Enterprise Community Development, Inc. (Developer)  
 875 Hollis Street, Suite 202, Baltimore, MD 21201  
 410-332-7400

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
  
 CHIEF, BUREAU OF UTILITIES

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

**GLW**  
 PLANNING | ENGINEERING | SURVEYING  
 3809 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20986 | GLWPA.CCM  
 PHONE: 301-421-4024 | BALT: 410-880-1520 | DC&VA: 301-989-2524 | FAX: 301-421-4186

DESIGNED BY: Wsj  
 DRAWN BY: Wsj  
 CHECKED BY: DDS

DATE: JAN., 2023  
 G.L.W. No.: 21111

PROFESSIONAL CERTIFICATION  
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 LICENSE NO. 12975  
 EXP. DATE: MAY 26, 2024

BY	NO	REVISION	DATE

FINAL WATER & SEWER DEMOLITION PLAN  
 600' SCALE MAP NO. 36 BLOCK NO. 2

Ranleigh Court Apartment  
 CONTRACT No. 24-5203-D  
 Village of Harper's Choice, Section 3, Area 2  
 Lot 18, Plat Book 13 Pg. 89  
 Howard County, Maryland  
 Election District No. 3

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