

GENERAL NOTES

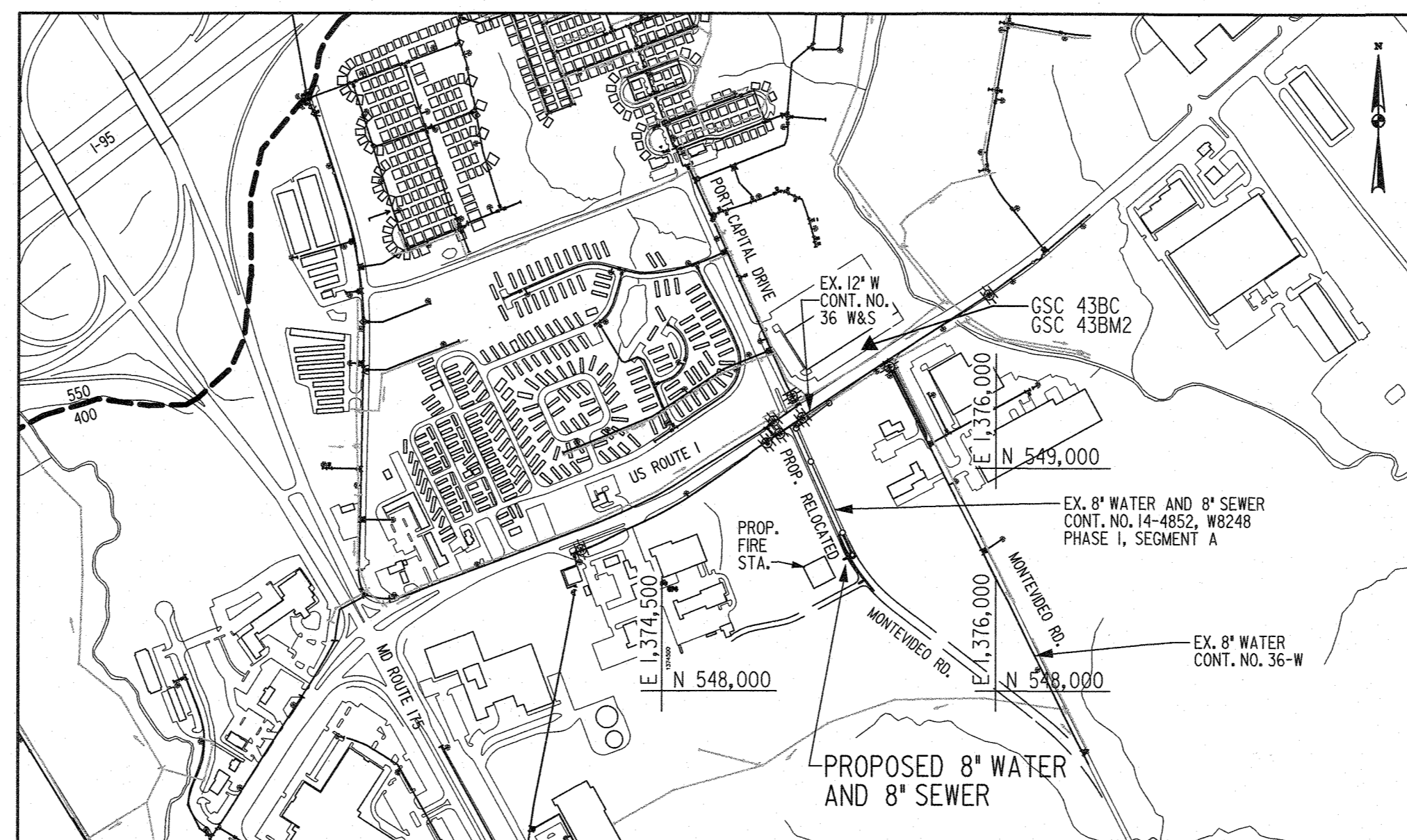
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED MAY AND AUGUST 2011 BY JMT.
- 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 43BC AND 43BM2. ALL VERTICAL CONTROLS ARE BASED ON NAVD 1988 DATUM.
- 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 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 THE EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL \square 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 2 WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST 5 WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 AT&T 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 800-257-7777
 STATE HIGHWAY ADMINISTRATION 410-531-5533
 VERIZON 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 LINE OR 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 5 WORKING DAYS BEFORE ANY 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 18.141(a) OF THE HOWARD COUNTY CODE.
- FOR ROAD WIDENING AND RELOCATION, SEDIMENT CONTROLS, AND TRAFFIC CONTROLS, REFER TO CAPITAL PROJECT NO. J-4206-1B BREAKOUT DRAWINGS.

WATER NOTES

- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM 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 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 SECTIONS 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- TRACER WIRES 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 ANWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATION OR SHOP DRAWING 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. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 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 #57 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 1/2-DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF ANWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.
FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF ANWA C900 AND SHALL BE MULTIFITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF ANWA C-900 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 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 APPROVED EQUAL.

RELOCATED MONTEVIDEO ROAD WATER AND SEWER PLANS PHASE 1, SEGMENT B BREAKOUT HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
CAPITAL PROJECT NO. W8602
CONTRACT NO. 14-5110

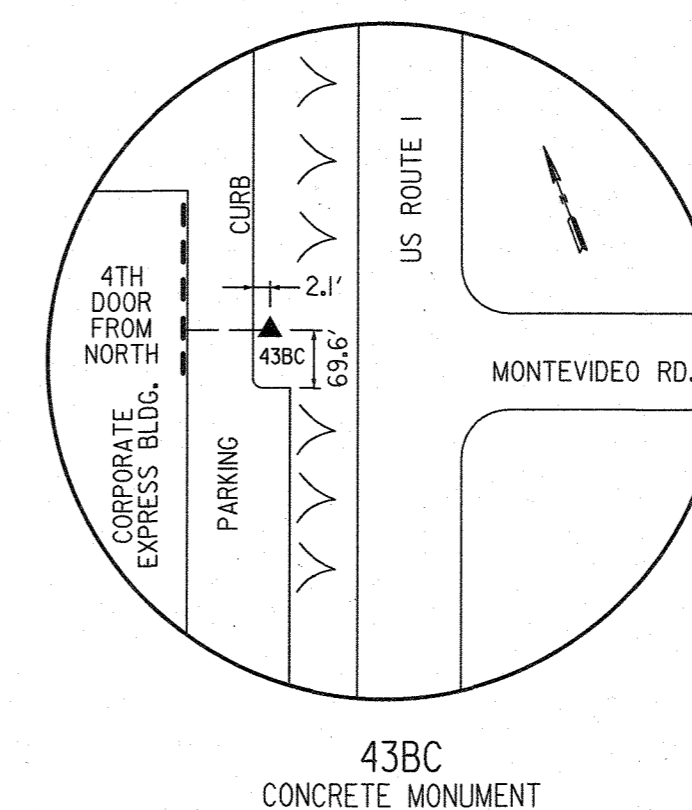


LOCATION MAP

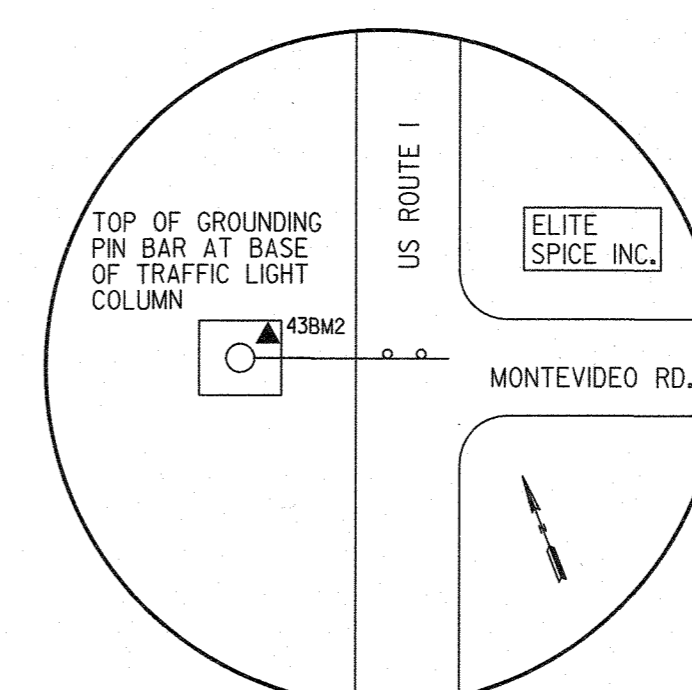
SCALE: 1" = 600'

| | |
|------------------------------|-----------------|
| TYPE OF BUILDING: | FIRE STATION |
| NUMBER OF HOUSE CONNECTIONS: | 0 WHC and 1 SHC |
| DRAINAGE AREA: | PATAPSCO |
| PRESSURE ZONE: | 400 |
| WATER TEST PRESSURE: | 205 PSI |
| WATER TEST GRADIENT: | 474 ELEVATION |

| | |
|---|--|
| HORIZONTAL AND VERTICAL CONTROL BASED ON MARYLAND NAD 1983/1991 AND NAVD 1988 DATUM. HOWARD COUNTY GEODETIC SURVEY CONTROL NUMBERS: | |
| HOWARD COUNTY MONUMENTS | |
| GSC 43BC (Horiz. & Vert.) | GSC 43BM2 (Horiz. & Vert.) |
| N 549,592.108 E 1,375,466.624 ELEV. 214.063 | N 549,600.000 E 1,375,500.00 ELEV. 193.599 |



43BC
CONCRETE MONUMENT



43BM2
GROUNDING BAR

| INDEX OF SHEETS | |
|-----------------|-------------------|
| SHEET NO. | DESCRIPTION |
| 1 | TITLE SHEET |
| 2 | PLAN AND PROFILES |

| QUANTITIES Δ | | | | |
|---------------------------------|------|----------|----------|--------------------------|
| ITEM | UNIT | ESTIMATE | AS-BUILT | MATERIAL SUPPLIER |
| 8" W PVC | L.F. | 440 | 440 | NATIONAL PIPE |
| 6" W PVC (FH) | L.F. | 42 | 41 | — |
| 8"X8" TEE | EA. | 1 | 1 | TYLER FOUNDRY |
| 8" 5-5/8 DEG. BEND | EA. | 3 | | |
| 8" HD COUPLING | EA. | 2 | | |
| FIRE HYDRANT | EA. | 1 | 1 | MUELLER |
| 8"X6" TEE (FH) | EA. | 2 | 2 | TYLER FOUNDRY |
| 6" VALVE (FH) | EA. | 2 | 2 | MUELLER |
| 8" VALVE | EA. | 2 | 3 | MUELLER |
| 8" CAP | EA. | 2 | 2 | TYLER FOUNDRY |
| 6" CAP | EA. | 1 | 1 | — |
| 8" S PVC | L.F. | 134 | 133 | NATIONAL PIPE |
| 6" S PVC | L.F. | 36 | 35 | — |
| 24" FRAME & COVER | EA. | 1 | 1 | N/A |
| 4 FT. PRECAST MH | V.F. | 10 | 10 | N/A |
| CLEANOUT | EA. | 1 | 1 | HORNE CONCRETE |
| 11" FRAME & COVER | EA. | 1 | 1 | N/A |
| NAME OF UTILITY CONTRACTOR: HTI | | | | AS-BUILT DATE: 8-17-2021 |

SEWER NOTES

- 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 W.T. IN PLAN AND PROFILES SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL 05.52. 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 ∇ INDICATED THAT THE CELLAR CANNOT BE SERVED.

LEGEND

| | | | |
|----------------------|-----------|-------------------------|-----------|
| FENCE LINE | — X — X — | PROPOSED SEWER MAIN | — ○ — |
| RIGHT OF WAY LINE | — — — — — | PROPOSED SEWER CLEANOUT | — ● — |
| PROPERTY LINE | — — — — — | PROPOSED WATER MAIN | — — — — — |
| LIMIT OF DISTURBANCE | — LOD — | PROPOSED WATER VALVE | φ |
| WATER | — — — — — | PROPOSED FIRE HYDRANT | ⊗ |
| GAS | — G — | PROPOSED WATER CAP | — — — — — |
| SAN. SEWER | — — — — — | EX. WATER VALVE | φ |
| UG ELECTRIC | — E — | EX. FIRE HYDRANT | ⊗ |
| UG TELEPHONE | — T — | EX. WATER METER | ⊗ |
| UTILITY POLE | ⊗ | | |
| TRAVERSE POINT | △ | | |

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 NO. 50328, EXPIRATION DATE: 12/18/2022.

AS-BUILT DRAWINGS HAVE BEEN COMPILED FROM MARK-UPS OBTAINED FROM CONTRACTOR. THE ENGINEER MAKES NO WARRANTY OR GUARANTEE AS TO THE ACCURACY OR THE ACTUAL AS-BUILT FIELD CONDITIONS.

FILE: C:\SWM\080868-001\Montevideo_Road\CD\01\Drawings - B\Revised\14-5110_Montevideo-1B-01.dwg DATE: Tuesday, January 12, 2021 AT 10:26 AM 08/25/21

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 2/5/2021
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 2/5/2021
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 2-8-21
CHIEF, BUREAU OF UTILITIES DATE

[Signature] 2/5/2021
CHIEF, UTILITY DESIGN DIVISION DATE

JMT

STATE OF MARYLAND
PROFESSIONAL ENGINEER
1/2/21

| | | | |
|------------------|-----|----------|----------|
| DES: RAF | | | |
| DRN: RAF | | | |
| CHK: SSP | | | |
| DATE: 01/12/2021 | RAF | AS-BUILT | 8-1-2022 |
| BY NO. | | REVISION | DATE |

TITLE SHEET

RELOCATED MONTEVIDEO ROAD
WATER AND SEWER PLAN
PHASE 1, SEGMENT B BREAKOUT

CAPITAL PROJECT No. W8602
CONTRACT No. 14-5110

ELECTION DISTRICT 2 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2

SHEET NOTES

- CONTRACTOR SHALL COORDINATE AND ADJUST LOCATIONS OF PROPOSED 6" SEWER CONNECTION WITH PROPOSED 6" SEWER CONNECTION FROM FIRE STATION (BY OTHERS) AND PROPOSED 8" WATER MAIN WITH PROPOSED 8" WATER MAIN (CONTRACT 44-5037-D) FROM PROPOSED FIRE STATION (BY OTHER).
- THE EROSION & SEDIMENT CONTROL FOR THE PROPOSED WATER AND SEWER SHOWN ON THIS PLAN IS UNDER CAPITAL PROJECT No. J-4206-1B BREAKOUT UNDER ESC PERMIT NUMBER EP-19-11.

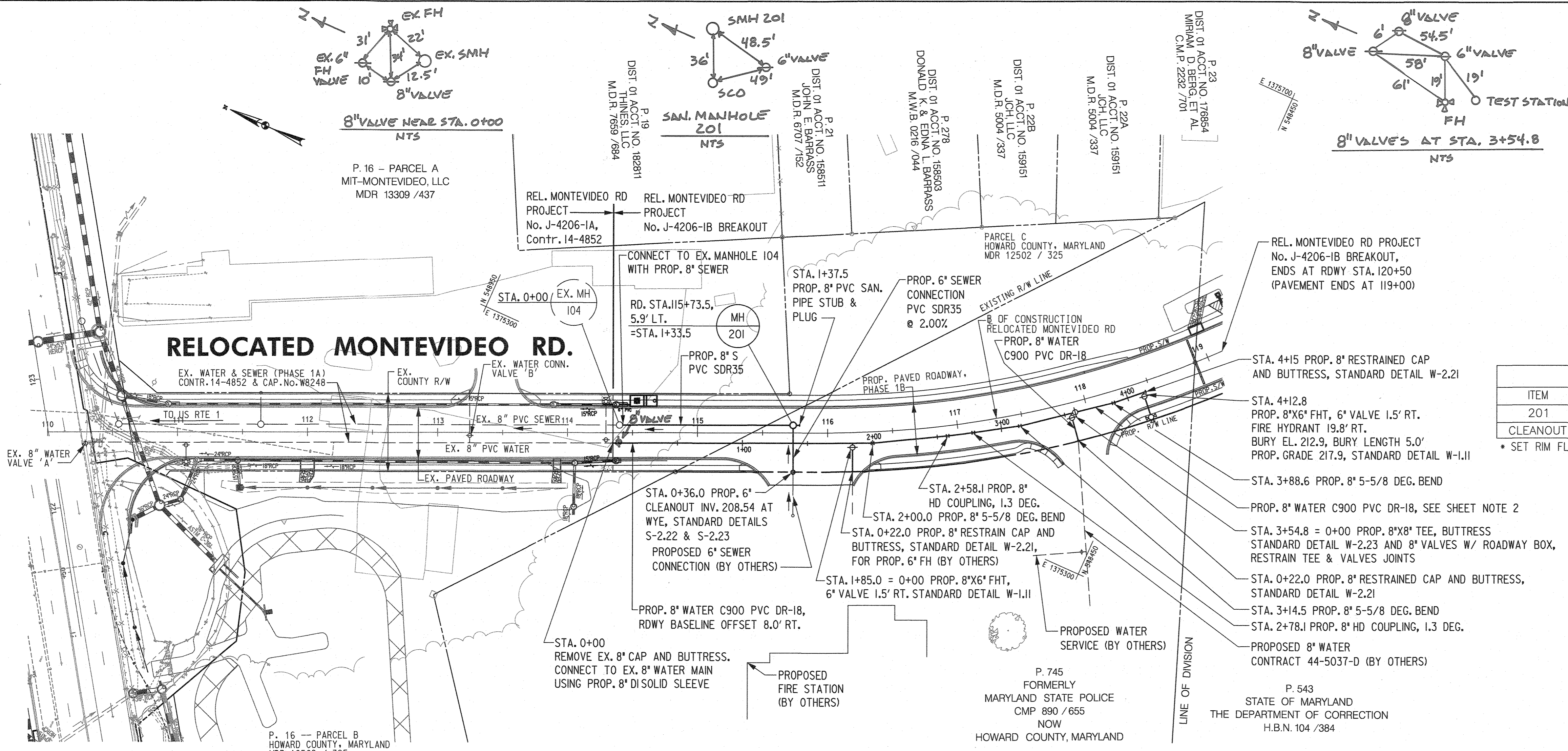
| STATION | ITEM | INVERT | NORTHING | EASTING |
|---------|-------------------------------------|--------|-----------|------------|
| 0+00 | CONN. TO EX. | 210.5 | 548818.07 | 1375244.57 |
| 1+85.0 | 8"X6" FHT | 210.5 | 548649.62 | 1375320.23 |
| 2+00.0 | 5- ¹ / ₈ BEND | 211.2 | 548635.62 | 1375326.52 |
| 2+58.1 | HD COUPLING | 211.3 | 548585.26 | 1375355.37 |
| 2+78.1 | HD COUPLING | 211.4 | 548568.27 | 1375365.63 |
| 3+14.5 | 5- ¹ / ₈ BEND | 211.5 | 548537.52 | 1375385.17 |
| 3+54.8 | 8"X8" TEE | 211.6 | 548505.82 | 1375409.99 |
| 3+88.6 | 5- ¹ / ₈ BEND | 211.3 | 548479.22 | 1375430.81 |
| 4+12.8 | 8"X6" FHT | 211.0 | 548461.71 | 1375447.53 |
| 0+22.0 | 8" CAP | 211.4 | 548492.08 | 1375393.37 |

| ITEM | RIM EL. | INV. IN | INV. OUT | NORTHING | EASTING | STD. DTL. NO. |
|----------|---------|---------|----------|-----------|------------|---------------|
| 201 | 218.1 * | 207.75 | 207.65 | 548697.00 | 1375314.11 | G-5.12 |
| CLEANOUT | 219.7 * | 208.54 | - | 548681.64 | 1375282.43 | S-2.23 |

* SET RIM FLUSH WITH FINISHED GRADE, PAVEMENT

CORROSION CONTROL GENERAL NOTES (PVC):

- ALL NEW DUCTILE IRON FITTINGS, VALVES, TAPPING SLEEVES, AND FIRE HYDRANT PIPE ALONG THE PVC WATER MAIN ARE TO BE PROVIDED WITH CORROSION PROTECTION, SEE STANDARD DETAILS C-5.01, -5.03, C-5.04, 5-5.05, C-5.07, C-5.08, AND C-5.09.
- FOR THERMITE WELD TO CONNECTOR PLATE, SEE STANDARD DETAIL C-5.13.
- FOR HORIZONTAL THERMITE WELDS TO DUCTILE IRON PIPE, SEE STANDARD DETAIL C-3.04. FOR VERTICAL THERMITE WELDS TO DUCTILE IRON PIPE, SEE STANDARD DETAIL C-3.05.
- FOR PLACEMENT OF ANODES, SEE STANDARD DETAILS C-5.14 OR C-5.15.
- DO NOT MAKE THERMITE WELDS TO PVC PIPE.
- POLYETHYLENE ENCASEMENT SHALL NOT BE INSTALLED ON NEW DUCTILE IRON WATER PIPING.
- DUCTILE IRON PIPE THAT WILL BE IN DIRECT CONTACT WITH POURED CONCRETE, SUCH AS AT THRUST BLOCKS, ETC., SHALL BE FIELD COATED WITH 20 MILS OF MASTIC (ROYSTON R28 OR APPROVED EQUAL). THE MASTIC COATING SHALL BE APPLIED IN TWO COATS, EACH COAT TO BE A MINIMUM OF 10 MILS IN THICKNESS.
- INSTALL SEPARATOR MESH ON WATER MAIN AT EXISTING UTILITY CROSSINGS IF THERE IS LESS THAN 12 INCHES OF SPACING BETWEEN THEM, SEE STANDARD DETAIL C-4.06.
- CONTRACTOR TO NOTIFY ENGINEER 72 HOURS PRIOR TO INSTALLATION OF CORROSION CONTROL COMPONENTS.



SUGGESTED SEQUENCE OF CONSTRUCTION

SUGGESTED SEQUENCES OF CONSTRUCTION ARE PROVIDED BELOW. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DEVELOPING THEIR OWN SEQUENCE OF CONSTRUCTION TO THEIR OWN SATISFACTION, WITH COUNTY REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.

THE WATER AND SEWER SUGGESTED SEQUENCES BELOW SHALL BE COORDINATED WITH THE OVERALL HOWARD COUNTY CAPITAL PROJECT No. J-4206-1B BREAKOUT MONTEVIDEO ROAD. SEQUENCE OF CONSTRUCTION PRIOR TO STARTING WORK.

REFER TO CAPITAL PROJECT No. J-4206-1B DRAWINGS FOR STAKEOUT CONTROLS, LODS, ESC (PERMIT # EP-19-11) AND FINAL SITE RESTORATION.

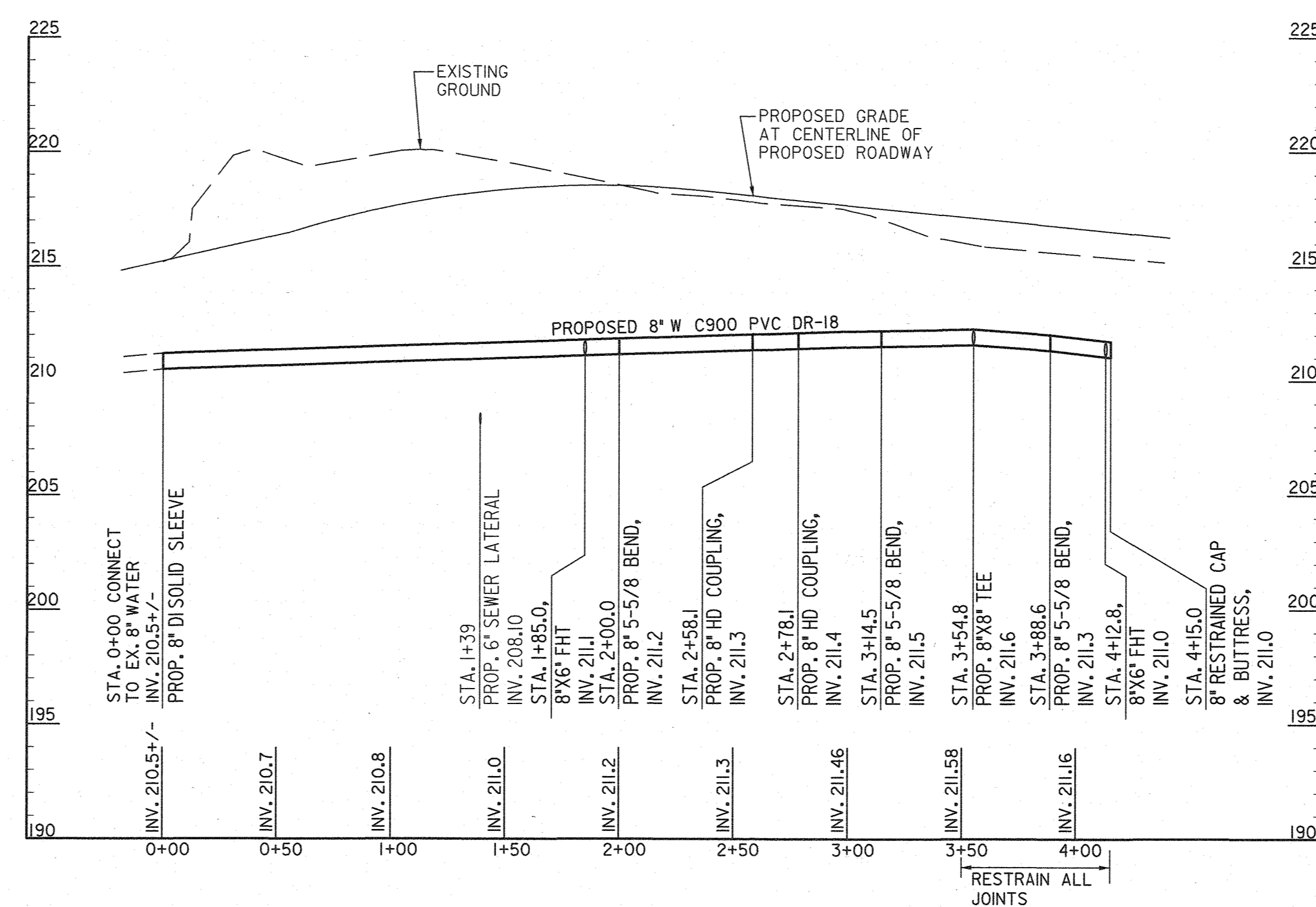
INSTALLATION OF PROPOSED WATER

- VERIFY EXISTING 8" WATER MAIN LOCATION PRIOR TO INSTALLING PROPOSED 8" WATER MAIN.
- INSTALL PROPOSED 8" WATER MAIN AS SHOWN ON DRAWING AND DO NOT CONNECT TO EXISTING WATER MAIN.
- PRESSURE TEST AND DISINFECT PROPOSED 8" WATER MAIN.
- NOTIFY AND COORDINATE WITH HOWARD COUNTY DPW TO REQUEST CLOSURE OF EXISTING WATER VALVE 'A' AND 'B' AS SHOWN ON PLAN.
- CLOSE VALVES (BY DPW).
- CONNECT TO EXISTING WATER MAIN.
- OPEN VALVES (BY DPW).
- RESTORE AREA PER CONTRACT J-4206-1B BREAKOUT.

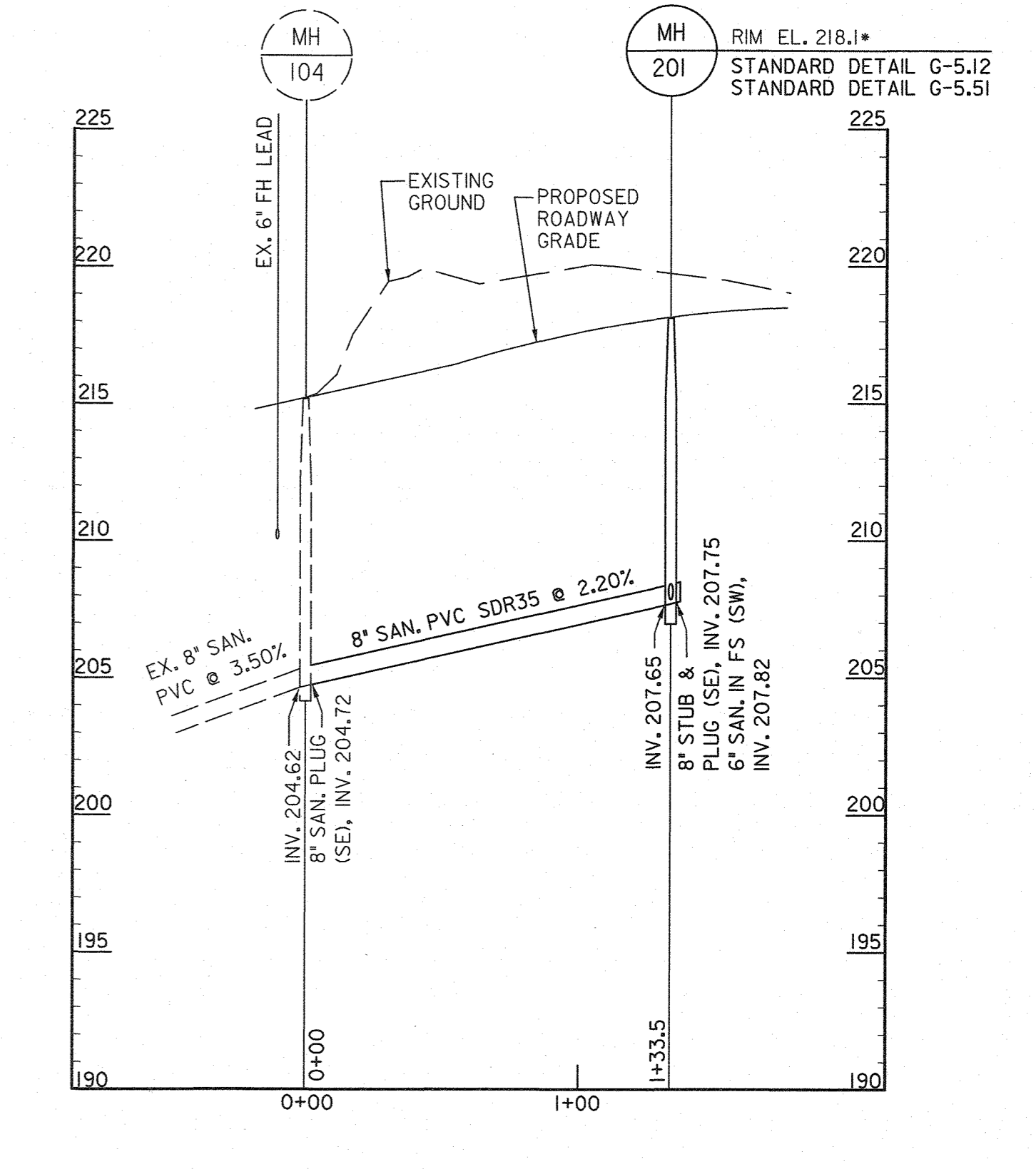
INSTALLATION OF PROPOSED SEWER

- VERIFY EXISTING SEWER MANHOLE LOCATION AND PIPE INVERT PRIOR TO INSTALLING PROPOSED 8" SEWER MAIN.
- INSTALL PROPOSED 8" SEWER MAIN AND PROPOSED 6" SEWER CONNECTION AS SHOWN ON DRAWING.
- PERFORM ACCEPTANCE TESTING PROPOSED 8" SEWER MAIN AND PROPOSED 6" SEWER CONNECTION.
- RESTORE AREA PER CONTRACT J-4206-1B BREAKOUT.

PLAN
SCALE: 1"=50'



WATER PROFILE
SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'



SEWER PROFILE
SCALE: HORIZONTAL 1"=50'
VERTICAL 1"=5'

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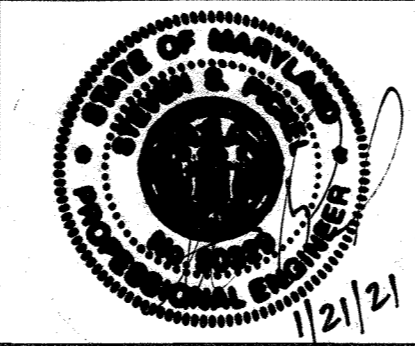
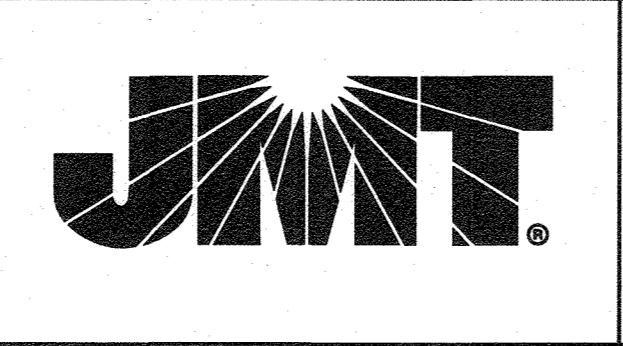
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Malcolm 2/9/2021
DIRECTOR OF PUBLIC WORKS DATE

John 2/9/2021
CHIEF, BUREAU OF UTILITIES DATE

John 2/5/2021
CHIEF, BUREAU OF ENGINEERING DATE

John 2/9/2021
CHIEF, UTILITY DESIGN DIVISION DATE



| | |
|-----------|------------|
| DES: | RAF |
| DRN: | RAF |
| CHK: | SSP |
| DATE: | 01/12/2021 |
| BY: | RAF |
| NO.: | AS-BUILT |
| REVISION: | |
| DATE: | 8-1-2022 |

PLAN AND PROFILE

600' SCALE MAP NO. 43 BLOCK NO. 9

**RELOCATED MONTEVIDEO ROAD
WATER AND SEWER PLAN
PHASE I, SEGMENT B BREAKOUT**

CAPITAL PROJECT No. W8602
CONTRACT No. 14-5110

ELECTION DISTRICT 2
HOWARD COUNTY, MARYLAND

| | |
|-------|----------|
| SCALE | AS SHOWN |
| SHEET | 2 OF 2 |

FILE: D:\SMD\0808-000\Montevideo_Road\CD\09\Drawn - 10.dwg P:\001-Montevideo-Road.dwg
DATE: Tuesday, January 12, 2021 AT 04:26 PM

GENERAL NOTES

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- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON DECEMBER 2018 BY AB CONSULTANTS 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. 24DC, NO. 24AB AND NO. 24M7. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88 VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE AB CONSULTANTS, INC. (ENGINEERING /SURVEY FIRM SHALL PROVIDE DESCRIPTION OF VERTICAL CONTROL POINTS, I.E. IRON BARS, CROSS CUTS ON CONCRETE STRUCTURES, ETC).
- 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 DRAWING 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 ARE 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) 410-686-0123
 - 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
- 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 WATERSEWER 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.

SEWER NOTES

- 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 W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. 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 THE CELLAR CANNOT BE SERVED.

ABBREVIATIONS

- ACP.....ASBESTOS CEMENT PIPE
- DIP.....DUCTILE IRON PIPE
- EA.....EACH
- EX.....EXISTING
- INV.....INVERT
- LF.....LINEAR FEET
- PR.....PROPOSED
- RCP.....REINFORCED CONCRETE PIPE
- STA.....STATION

DRAWING INDEX

- SHEET 23 - SEWER REPLACEMENT TITLE SHEET
- SHEET 24 - SEWER REPLACEMENT PLAN AND PROFILE

QUANTITIES

| ITEM | UNIT | ESTIMATE | AS-BUILT | MATERIAL SUPPLIER |
|---|------|----------|----------|-------------------------|
| 8" DIP, CL 54 | LF | 20 | 18 | AMERICAN CAST IRON PIPE |
| SMITH-BLAIR NO. 441 COUPLING | EA | 2 | 2 | SMITH BLAIR COMPANY |
| NAME OF UTILITY CONTRACTOR: HTI CONTRACTORS | | | | |
| AS-BUILT DATE: 1/11/22 | | | | |

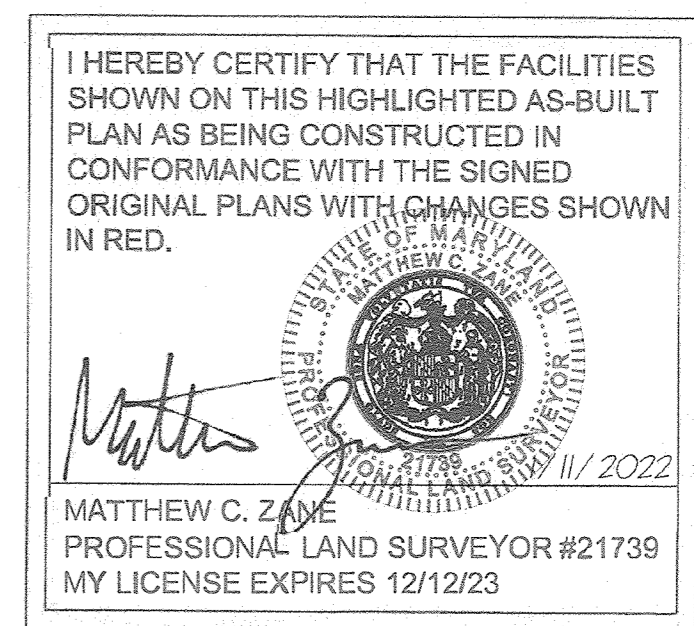
HOWARD COUNTY

Capital Project #W8602 Contract No. 186A Carrigan Drive Outfall Stabilization Sewer Plans



6/8/2022
PROFESSIONAL CERTIFICATE

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 NO. 30912, EXPIRATION DATE: 8/15/2022



PURPOSE STATEMENT

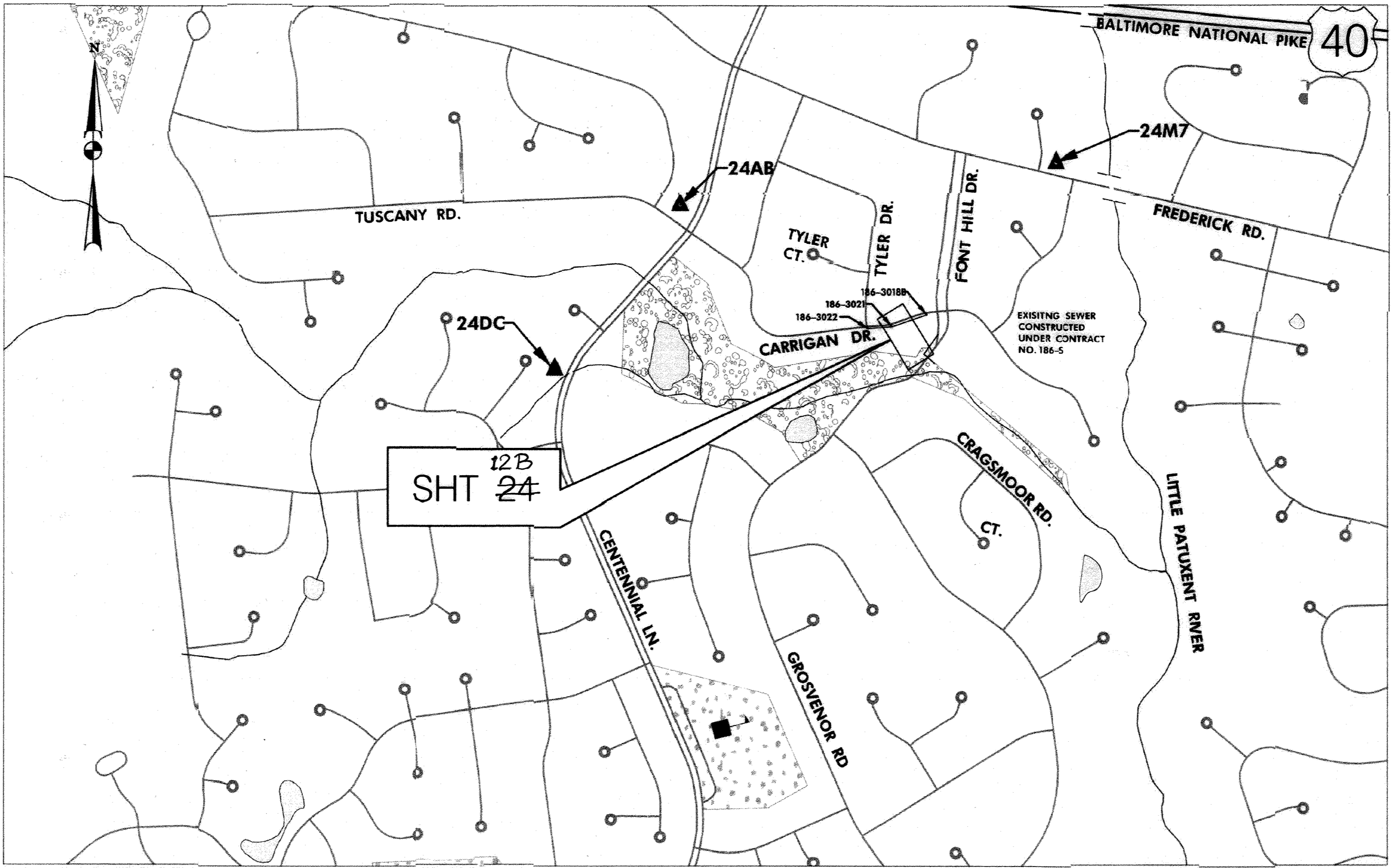
THE PURPOSE OF THIS PROJECT IS TO REMOVE AND REPLACE AN EXISTING 8" SEWER LINE IN COORDINATION WITH THE OUTFALL STABILIZATION PROJECT, CAPITAL PROJECT D-160

DESIGN CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENT OF THE HOWARD SOIL CONSERVATION DISTRICT

John Shen 2/19/2021
DESIGNERS SIGNATURE DATE

JOHN SHEN MD REGISTRATION NO. 30912
PRINTED NAME P.E., R.L.S., OR R.L.A.



NUMBER OF LOTS (NA)
WATER HOUSE CONNECTIONS (NA)
NUMBER OF SEWER HOUSE CONNECTIONS (NA)
NUMBER OF BUILDINGS /STRUCTURES (NA)
DRAINAGE AREA (42.8 ACRES)
TREATMENT PLANT SERVICE AREA (PATAPSCO SERVICE AREA)
WATER CODE (NA)
SEWER CODE (NA)

SURVEYOR'S CERTIFICATE
I hereby certify that the as-constructed information shown hereon and the field survey work associated with it (shown in red) is, to the best of my knowledge information and belief, accurate, and was prepared by me or under my direct supervision in compliance with COMAR 09.13.06.12.

Matthew C. Zane 1/11/22
MATTHEW C. ZANE 21739
PROFESSIONAL LAND SURVEYOR
MARYLAND REGISTRATION No. 21739
LICENSE EXPIRES 12/12/2023

PROFESSIONAL CERTIFICATE
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 NO. 30912, EXPIRATION DATE: 8/15/2022

OWNERS/DEVELOPERS CERTIFICATE

"I/WE HEREBY CERTIFY THAT ANY CLEARING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO THE BEGINNING OF THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Matthew C. Zane 3/25/2021
OWNER/DEVELOPER SIGNATURE DATE

LEGEND

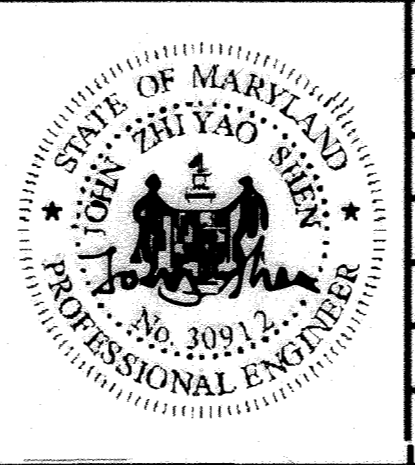
- EX. PARCEL BOUNDARY
- EX. EASEMENT
- EX. CURB
- EX. SPLIT RAIL FENCE
- EX. MAIL BOX
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. 100 YEAR FLOODPLAIN
- EX. STREAM BUFFER
- EX. TREE
- EX. WATERS OF THE U.S.
- EX. SANITARY LINE
- EX. DRAIN PIPE
- EX. WATER UNDERGROUND
- ELECTRIC LINE OVER
- EX. ELECTRIC UNDERGROUND
- EX. GAS LINE (APPROXIMATE LOCATION)
- EX. UTILITY POLE
- EX. SANITARY MH
- EX. FIRE HYDRANT
- EX. WATER VALVE
- EX. INLET
- EX. TELEPHONE PED
- PR. SANITARY LINE

UT-01 OF 02

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Matthew C. Zane 3/23/2021
DIRECTOR OF PUBLIC WORKS DATE
John Shen 3/12/21
CHIEF, BUREAU OF UTILITIES DATE

PREPARED BY
Stantec / STRAUGHAN ENVIRONMENTAL
a joint venture
6110 FROST PLACE
LAUREL, MD 20707
TEL. 301.982.2800
FAX. 301.220.2619
www.stantec.com

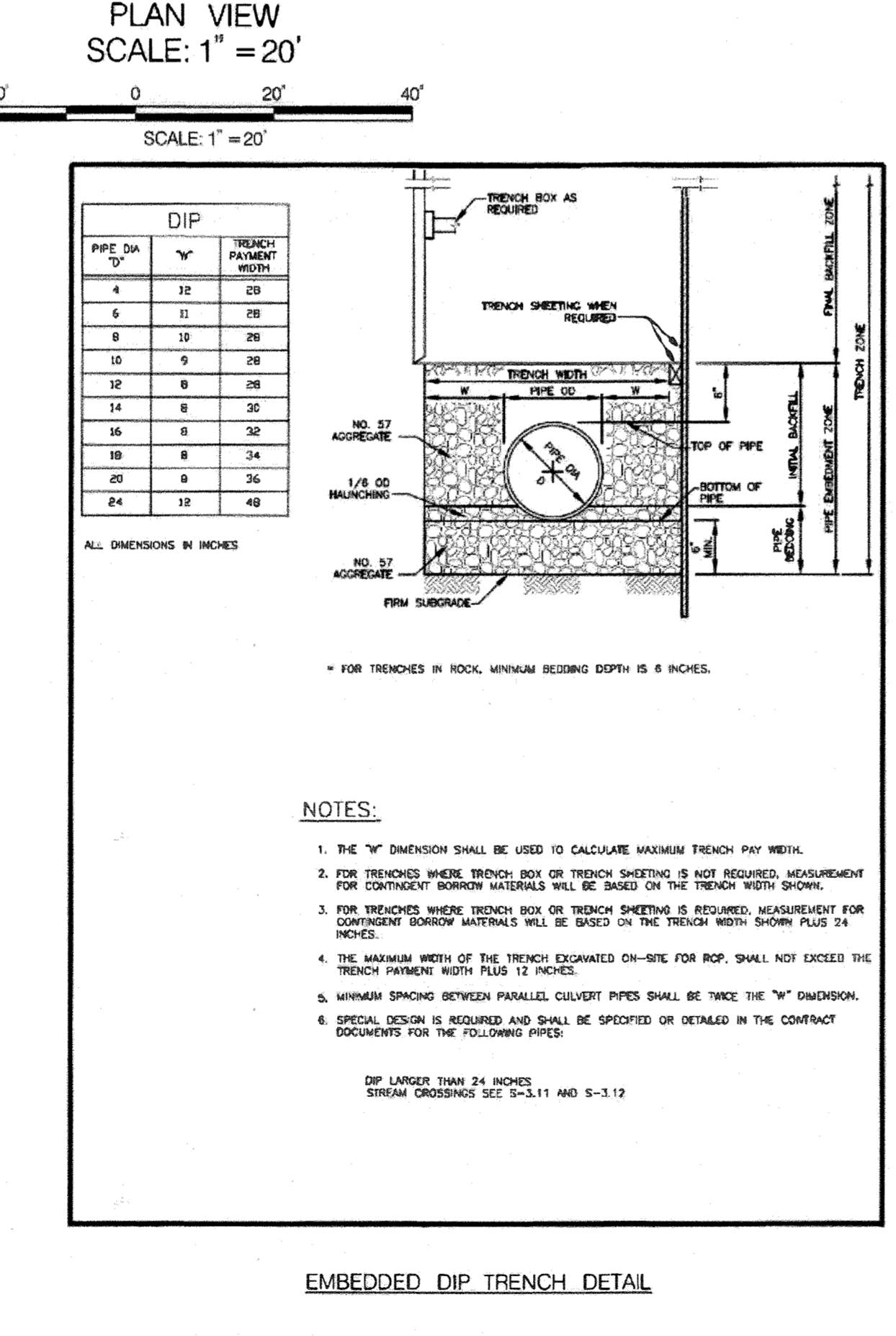
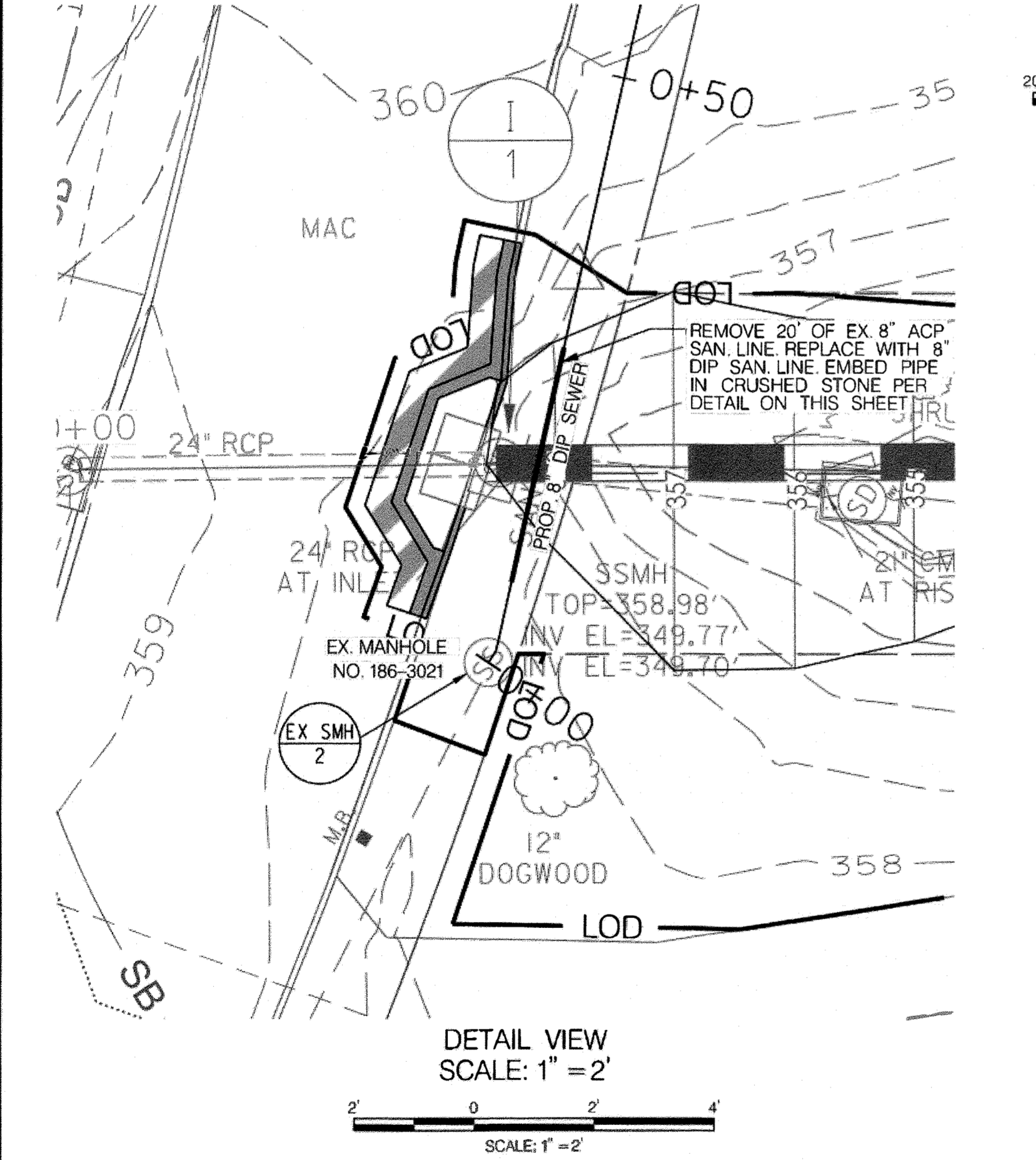
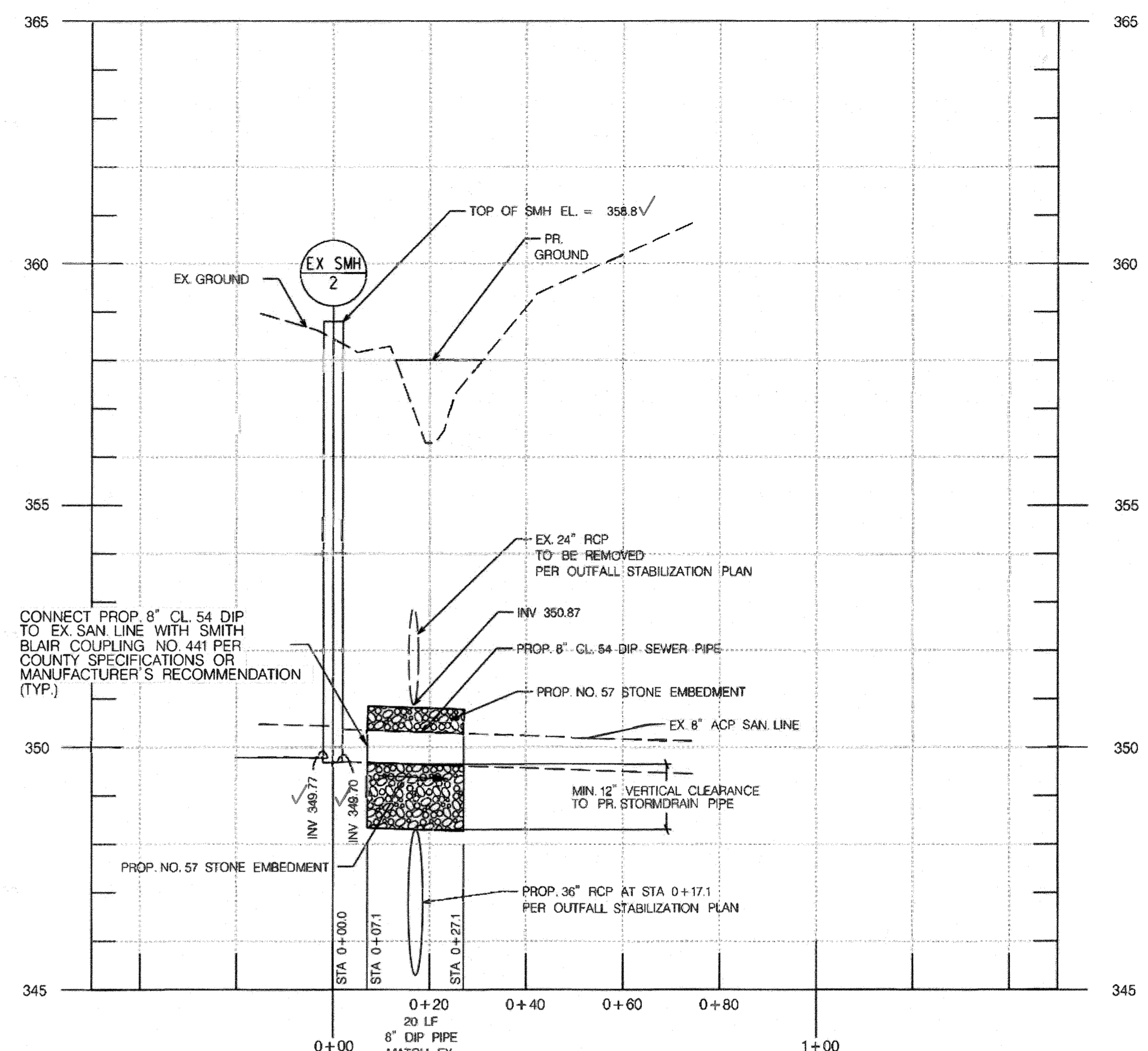
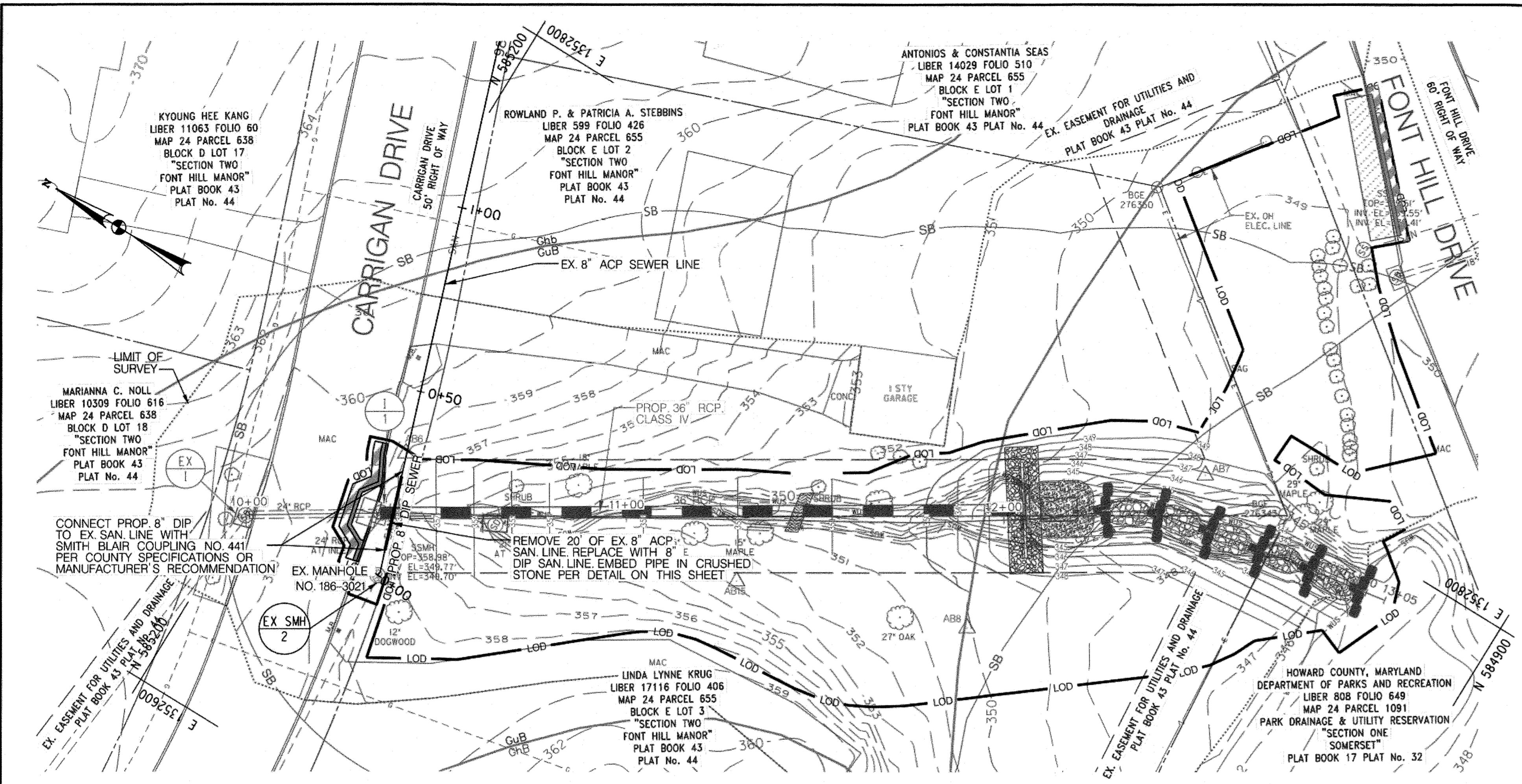
Howard County MARYLAND
Bureau of Engineering
7125 Riverwood Drive, Suite B
Columbia, Maryland 21046
(410) 313-2040



| BY | NO. | REVISIONS | DATE |
|-----|-----|-----------------------|---------|
| MCZ | 1 | AS CONSTRUCTED SURVEY | 1/11/22 |

SCALE AS SHOWN
DESIGNED BY JSPC
DRAWN BY PC
CHECKED BY JS
DATE: 2/19/2021 SHEET NO. 23 OF 24

CARRIGAN DRIVE OUTFALL STABILIZATION
CAPITAL PROJECT W8602
AS-BUILT
SEWER REPLACEMENT TITLE SHEET
ELECTION DISTRICT NO. 01, HOWARD CO. MD TAX MAP 24 GRID NO. 8



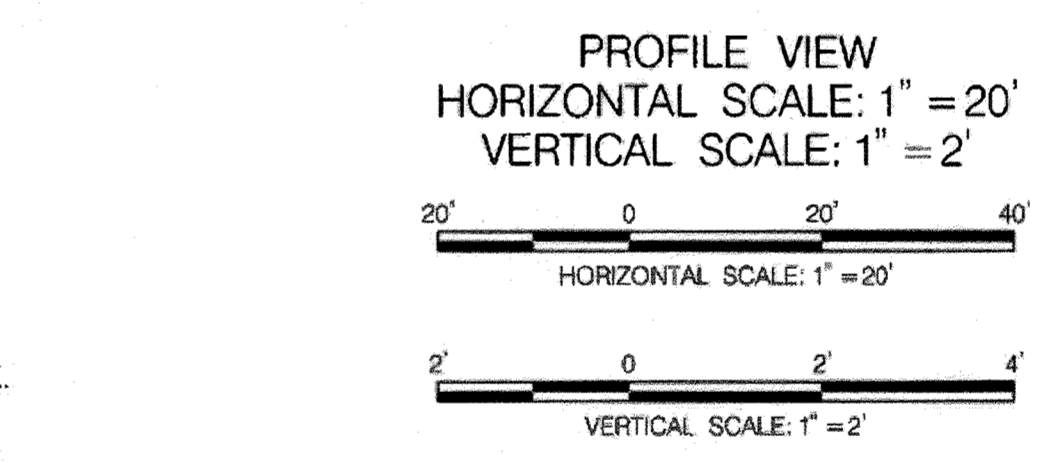
NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL REGULATIONS DURING WORK TO REMOVE AND DISPOSE OF THE EXISTING ACP SEWER.
2. SEWER REPLACEMENT SHALL BE DONE WHEN THE DITCH IS DRY, OTHERWISE ADDITIONAL EROSION AND SEDIMENT CONTROL AND DOWATERING MEASURES WILL BE REQUIRED.
3. SEE SHEET GR-01 FOR STORM DRAIN PLANS.
4. GAS LINES BASED ON INFORMATION PROVIDED BY BGE.
5. CONTRACTOR TO FOLLOW SEQUENCE OF CONSTRUCTION IN OUTFALL STABILIZATION PLANS FOR THE UTILITY WORK.
6. CONTRACTOR SHALL USE SMITH BLAIR NO. 441 COUPLINGS IN ACCORDANCE WITH COUNTY SPECIFICATIONS.
7. THE CONTRACTOR SHALL MAINTAIN UNINTERRUPTED SERVICE OF THE EXISTING SEWER LINE WITH A BYPASS SYSTEM OR TEMPORARY CONNECTION CAPABLE OF HANDLING 74,390 GPD. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE PROPOSED BYPASS SYSTEM OR CONNECTION TO THE COUNTY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
8. REFER TO OUTFALL STABILIZATION EROSION AND SEDIMENT CONTROL PLAN SHEETS FOR ALL E&S CONTROLS FOR SEWER WORK.

| TEMPORARY SEWER BYPASSING | | | |
|---------------------------|----|--|--|
| 1 | LS | | |

| SEWER PIPE SCHEDULE | | | |
|---------------------|----------|--------------------|--------------|
| FROM | TO | PIPE LENGTH (L.F.) | PIPE SIZE |
| STA 0+23 | STA 0+43 | 20 | 8" DIP CL 54 |

| REMOVE EXISTING SEWER STRUCTURES | | | |
|--|----------|-----------|----------------------------|
| FROM | TO | QTY. (LF) | REMARKS |
| STA 0+07 | STA 0+27 | 20 | EXISTING 8" ACP SEWER PIPE |
| *THE ITEM IS INCIDENTAL TO SEWER PIPE ABOVE. | | | |

| SMITH-BLAIR NO. 441 COUPLING | |
|------------------------------|----|
| 2 | EA |



I HEREBY CERTIFY THAT THE FACILITIES SHOWN ON THIS HIGHLIGHTED AS-BUILT PLAN AS BEING CONSTRUCTED IN CONFORMANCE WITH THE SIGNED ORIGINAL PLANS WITH CHANGES SHOWN IN RED.

Matthew C. Zame
PROFESSIONAL LAND SURVEYOR #21739
MY LICENSE EXPIRES 12/12/23



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 NO. 30912, EXPIRATION DATE: 8/15/2022

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 NO. 30912, EXPIRATION DATE: 8/15/2022

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, BUREAU OF UTILITIES DATE CHIEF, UTILITY DESIGN DIVISION DATE

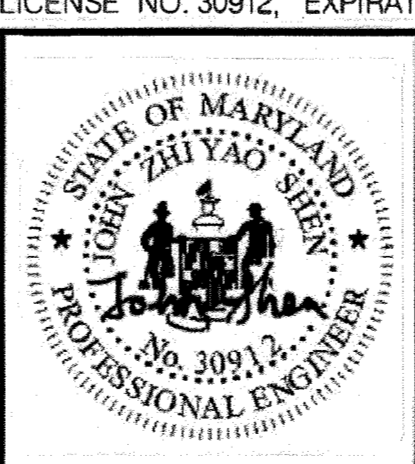
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Howard County
MARYLAND

Bureau of Engineering
7125 Riverwood Drive, Suite B
Columbia, Maryland 21046
(410) 313-2040



| BY | NO. | REVISIONS | DATE |
|-----|-----|-----------|----------|
| MCZ | 1 | AS-BUILT | 01/11/22 |

SCALE 1" = 20'

DESIGNED BY JSPC
DRAWN BY PC
CHECKED BY JS

DATE: 2/19/2021 SHEET NO. 24 OF 24
12B

CARRIGAN DRIVE OUTFALL STABILIZATION
CAPITAL PROJECT W8602

AS-BUILT
SEWER REPLACEMENT PLAN

ELECTION DISTRICT NO. 01, HOWARD CO. MD TAX MAP 24 GRID NO. 8

UT-02 OF 02