

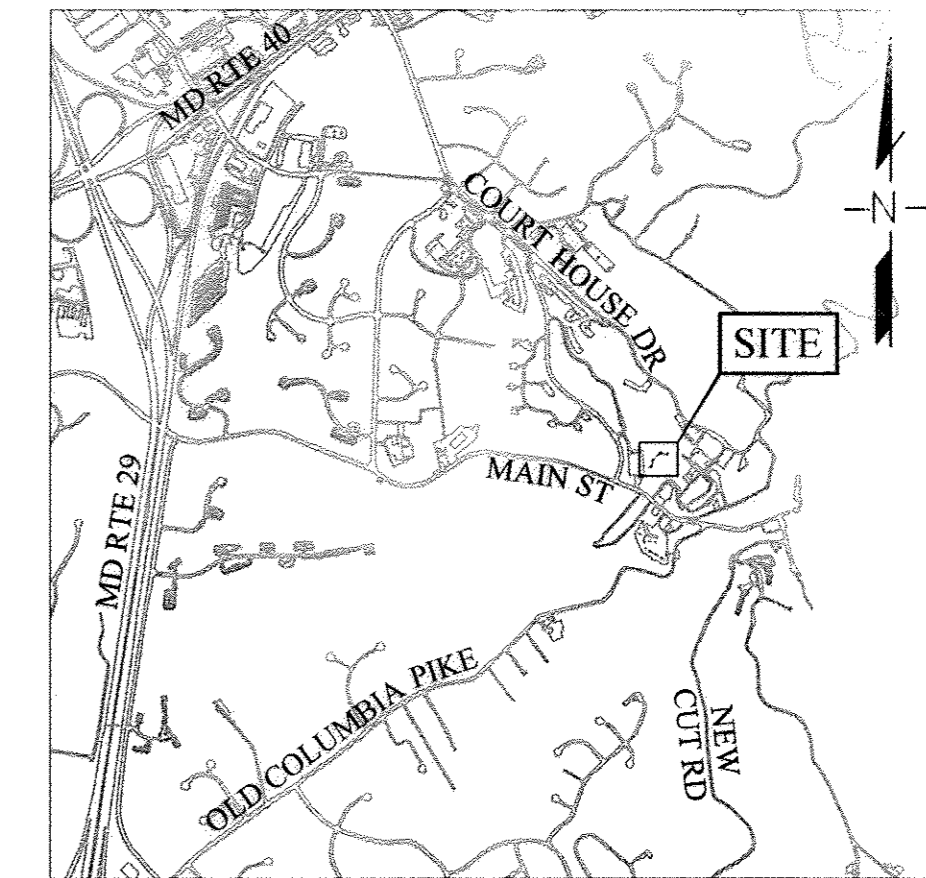


# PARK AVENUE SEWER EXTENSION

## HOWARD COUNTY, MD

### CAPITAL PROJECT NO. S-6289

### CONTRACT NO. 10-4853



**VICINITY MAP**

SCALE: 1"=2000'

**GENERAL NOTES:**

- PART I**
- 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 IN DECEMBER 2013 BY MERCADO 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:
      - SP, PN301, N 583587.525, E 1369480.774, ELEV. 241.565'
      - SP, PN302, N 583784.798, E 1369319.649, ELEV. 255.846'
      - SP, PN303, N 583842.881, E 1369101.523, ELEV. 238.983'
      - SP, PN304, N 583693.320, E 1368972.083, ELEV. 200.311'
    - ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE ALUMINUM STAMPED DISCS.
    - 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 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 TO 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.
  - NO TEST PITS HAVE BEEN PERFORMED FOR THIS PROJECT. 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
BCE (CONSTRUCTION SERVICES)	410.637.8713
BCE (EMERGENCY)	410.685.0123
BUREAU OF UTILITIES	410.313.4900
COLONIAL PIPELINE COMPANY	410.795.1390
MISS UTILITY	1.800.257.7777
STATE HIGHWAY ADMINISTRATION	410.531.5533
VERIZON	1.800.743.0033
MCI WORLDCOM	1.800.624.9675
  - 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 STUMP REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE SEWER.
  - 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.

**PART III - SEWER**

- ALL PROPOSED 8" SEWER MAINS SHALL BE DUCTILE IRON PIPE, THICKNESS CLASS 54, WITH RESTRAINED JOINTS USING MEGALUG, OR EQUAL, WEDGE ANCHORS, OR PIPE MANUFACTURER'S RESTRAINED JOINT PIPE. 4" SEWER SHC SHALL BE PVC, C900, 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 C-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.

**SEQUENCE OF CONSTRUCTION**

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THE EROSION AND SEDIMENT CONTROL PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- WITHOUT DISRUPTING FLOW FROM THE EXISTING SEWER, CORE INTO EX. MH A FOR NEW SEWER. CONSTRUCT NEW SEWER FROM MH A TO MH 4.
- TEST NEW SEWER.
- INSTALL LATERALS TO #3673, #3674, AND #3676 PARK AVENUE.
- CAP/PLUG EXISTING PRIVATE SEWER TO BE ABANDONED AT NEW LATERAL LOCATIONS AND MH A.
- RESTORE AND STABILIZE AREAS DISTURBED BY THE WORK.
- REMOVE EROSION AND SEDIMENT CONTROLS.

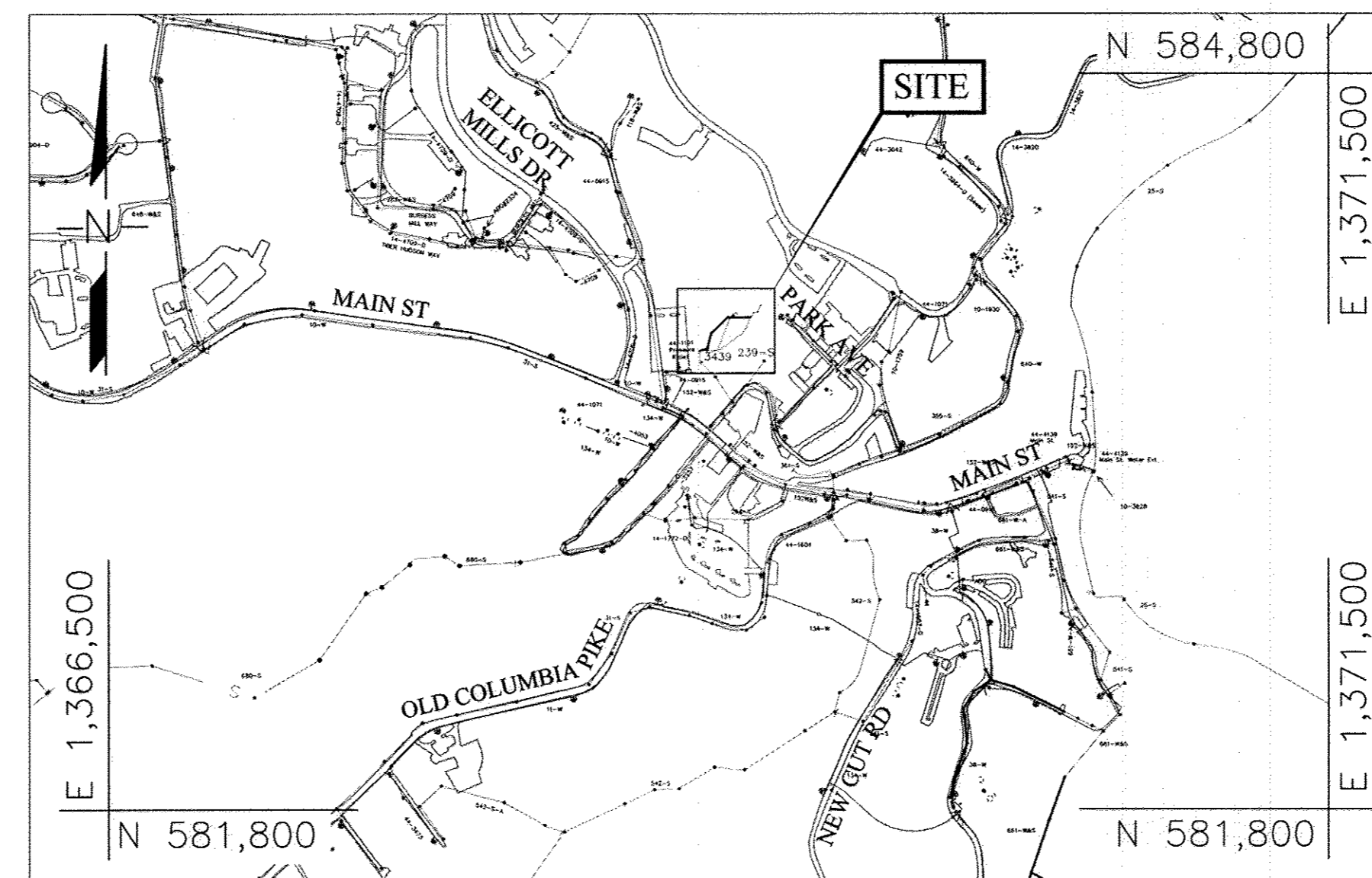
INDEX OF SHEETS	
SHEET SET NO.	DESCRIPTION
1	TITLE SHEET
2	PROP. 8" SEWER MAIN - PLAN & PROFILE
3	EROSION & SEDIMENT CONTROL PLAN
4	EROSION & SEDIMENT CONTROL NOTES & DETAILS

QUANTITIES				
NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 4-4-17				
ITEM	UNITS	QUANTITY ESTIMATED	QUANTITY	AS-BUILT MANUFACTURER / SUPPLIER
8" DIP SEWER MAIN	L.F.	277	280 LF	U.S. PIPE
4" PVC SEWER MAIN	L.F.	30	30 LF	J.M. EAGLE
PRECAST MH HO. CO. STD. G-5.12	EA.	4	4 EA.	CONTRACTORS PRECAST CORP.
TYPE "A" DROP CONNECTION STD. S-1.32	EA.	1	1 EA.	CONTRACTORS PRECAST CORP.
CONCRETE ANCHORS	EA.	4	4 EA.	
WYE BRANCH	EA.	2	2 EA.	HARRINGTON CORP.

**NOTE:**  
1. QUANTITIES IN THIS TABLE ARE SOLELY FOR RECORD PURPOSES. CONTRACTOR SHALL NOT RELY ON THE QUANTITIES IN THE TABLE AND SHALL USE HIS/HER OWN TAKEOFF TO ESTABLISH MATERIALS AND QUANTITIES NEED FOR THIS PROJECT.

**LEGEND:**

<ul style="list-style-type: none"> <li>W — W — W — EXIST. WATER MAIN / VALVE VAULT</li> <li>W — W — W — EXIST. WATER HOUSE CONNECTION</li> <li>— TW — TW — TEMP. WATER MAIN</li> <li>— S — S — S — EXIST. WATER MAIN TO BE ABANDONED</li> <li>— SD — SD — SD — EXIST. SEWER MAIN / MANHOLE</li> <li>— SD — SD — SD — EXIST. SEWER HOUSE CONNECTION</li> <li>— G — G — G — EXIST. STORM DRAIN</li> <li>— G — G — G — EXIST. GAS</li> <li>— G — G — G — EXIST. GAS SERVICE CONNECTION</li> <li>— E — E — E — EXIST. ELECTRIC - UNDERGROUND</li> <li>— O/H — O/H — O/H — EXIST. ELECTRIC - OVERHEAD</li> <li>— FO — FO — FO — EXIST. FIBER OPTIC</li> <li>— T — T — T — EXIST. TELEPHONE - UNDERGROUND</li> <li>— OHT — OHT — OHT — EXIST. TELEPHONE - OVERHEAD</li> <li>— R — R — R — RIGHT OF WAY</li> <li>— G — G — G — GUARDRAIL</li> <li>— X — X — X — FENCE</li> <li>— SF — SF — SF — PROPERTY LINE</li> <li>— SF — SF — SF — SILT FENCE</li> <li>— LOD — LOD — LOD — LIMITS OF DISTURBANCE</li> <li>— R — R — R — ROAD CENTERLINE</li> <li>— Δ — Δ — Δ — TRAVERSE</li> <li>— E — E — E — EXIST. EASEMENT</li> <li>— P — P — P — PROP. PUBLIC SEWER &amp; UTILITY EASEMENT</li> </ul>	<ul style="list-style-type: none"> <li>— · · · — · · · — STREAM / WATERWAY EDGE</li> <li>— 630E / 550 — WATER PRESSURE ZONE BOUNDARY</li> <li>○ — SHRUB</li> <li>□ — PROP. VALVE</li> <li>— X — PROP. FIRE HYDRANT</li> <li>○ — BGE POLE</li> <li>— S — STREET SIGN</li> <li>— SB-## — BORING LOCATION</li> <li>— TP-## — TEST PIT LOCATION</li> <li>— C — CONTINUITY TEST STATION</li> <li>— S — SANITARY MANHOLE ID</li> <li>— [ ] — CURB INLET PROTECT</li> </ul>
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**LOCATION MAP**

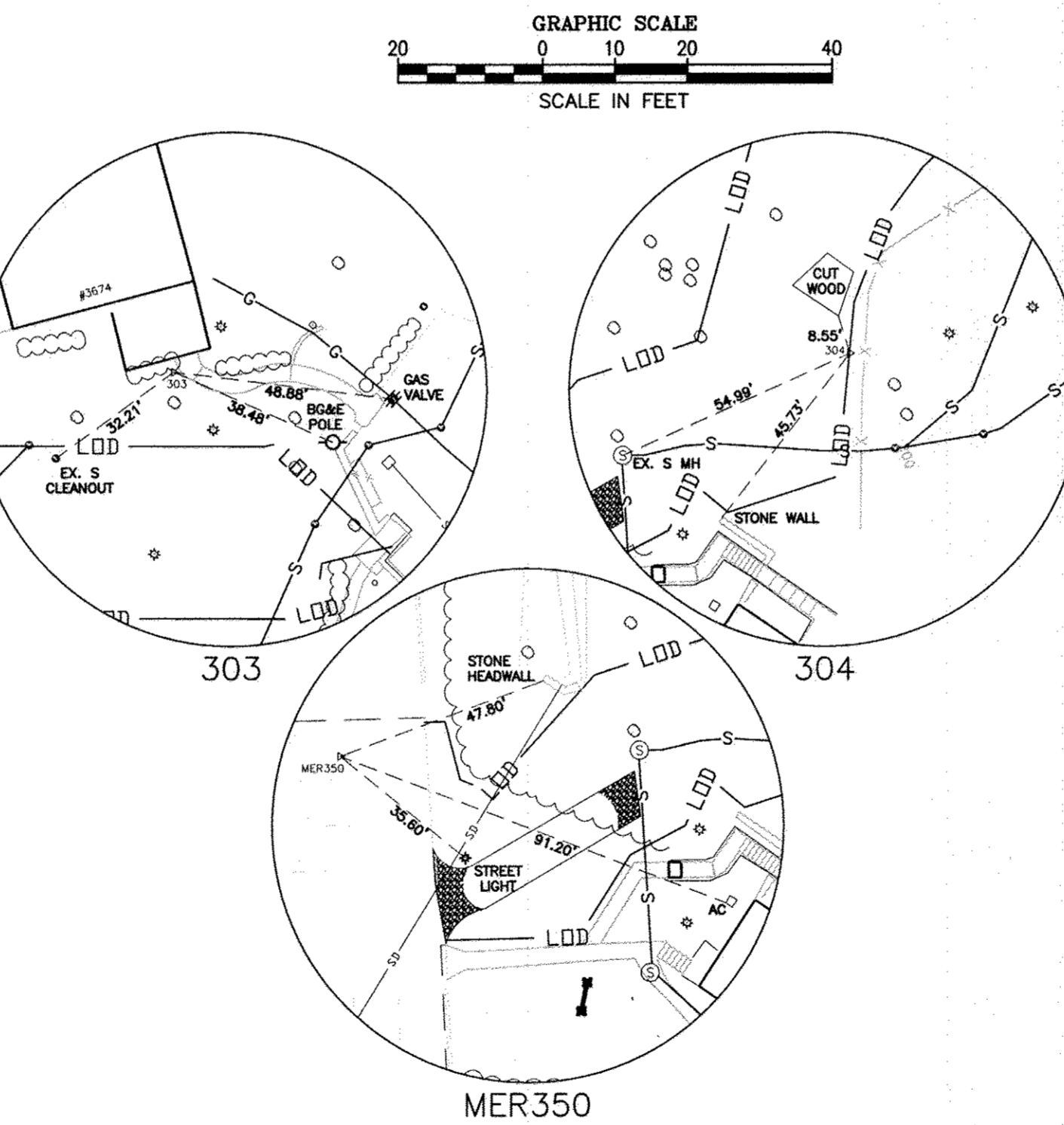
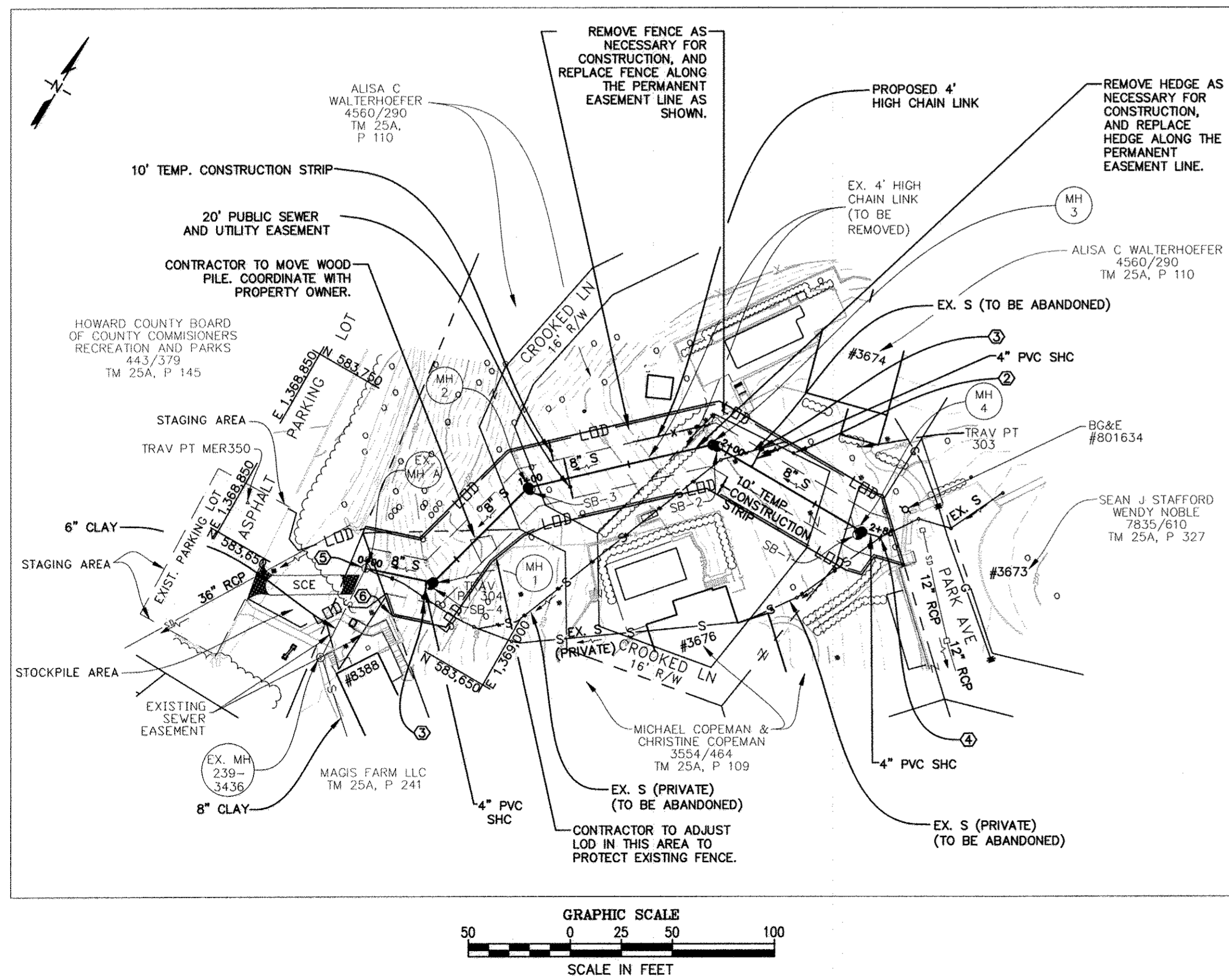
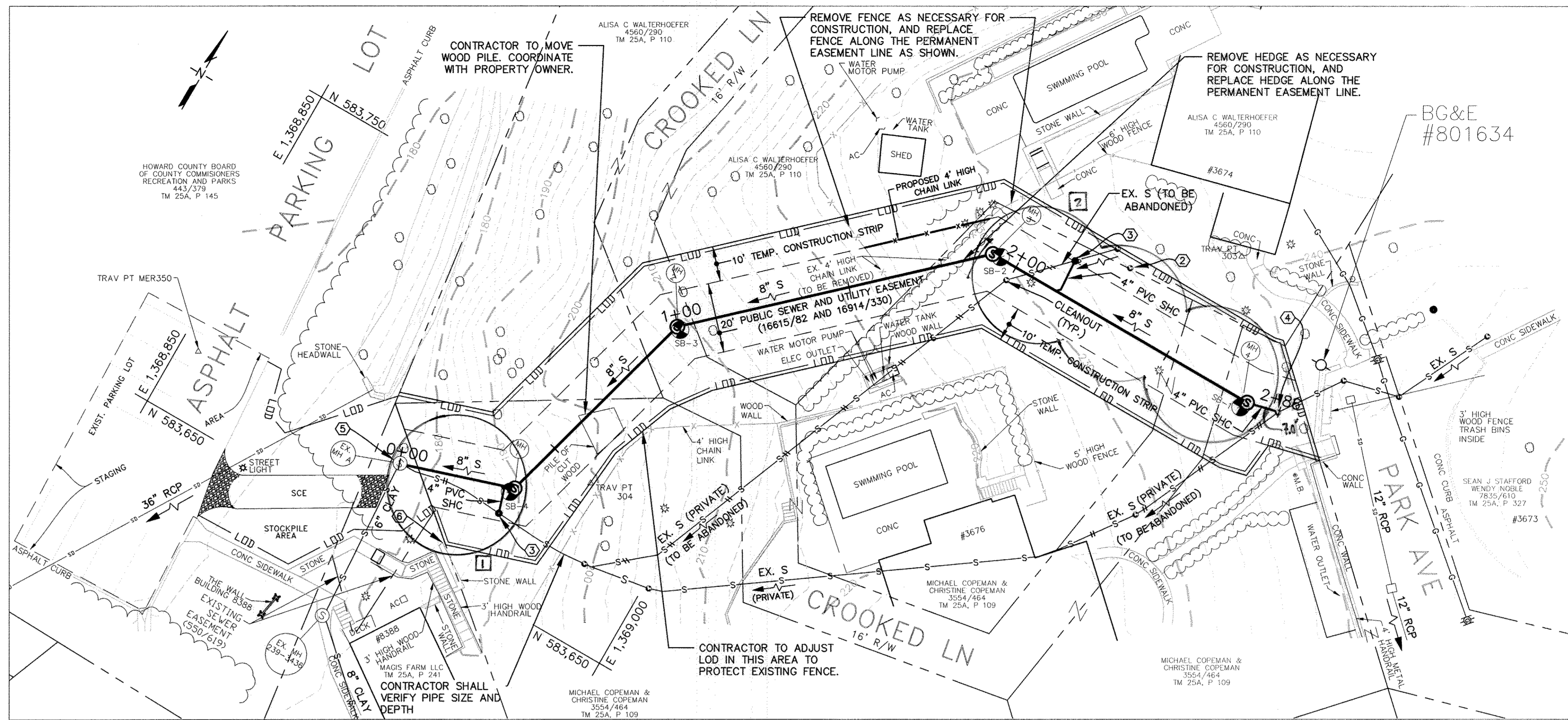
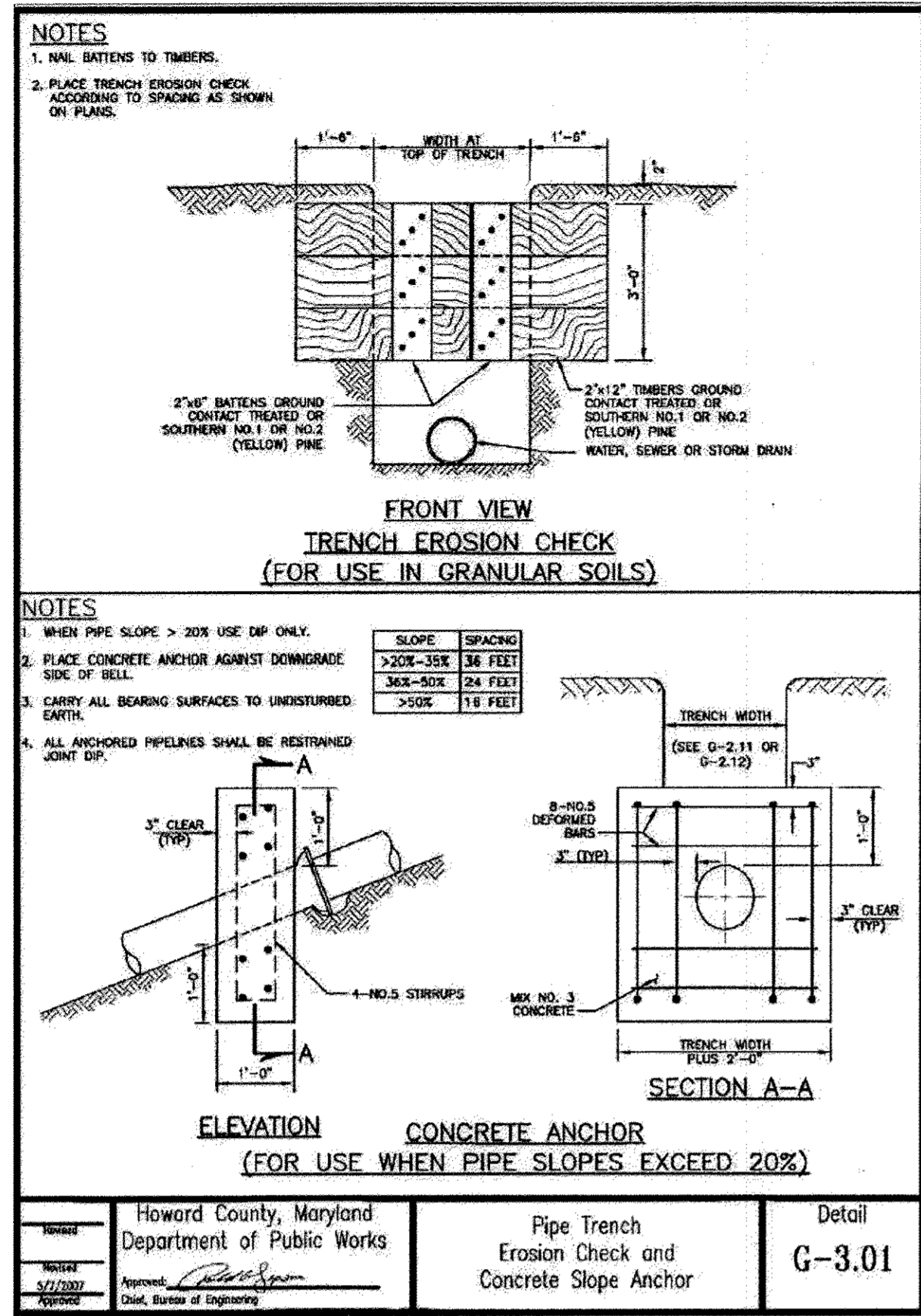
SCALE: 1"=600'

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE				
LOT NO.	OWNER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1	STAFFORD & NOBLE	3673 PARK AVENUE		
LOT 2	WALTERHOEFER	3674 PARK AVENUE		
LOT 3	COPEMAN	3676 PARK AVENUE		

SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION		TOP EL.	INV. IN	INV. OUT
SMH B	EX. MANHOLE	N 583,670.649'	E 1,368,921.769'	178.41	175.43	175.33
SMH 1	PRECAST MH HO. CO. STD. G-5.12 - TYPE "A" DROP	N 583,681.144'	E 1,368,953.939'	190.46*	184.79 181.30	181.20
SMH 2	PRECAST MH HO. CO. STD. G-5.12	N 583,744.428'	E 1,368,971.299'	210.28*	204.21	204.11
SMH 3	PRECAST MH HO. CO. STD. G-5.12	N 583,807.743'	E 1,369,039.268'	230.67*	224.60	224.50
SMH 4	PRECAST MH HO. CO. STD. G-5.12	N 583,807.445'	E 1,369,123.732'	236.96*	230.67	230.33

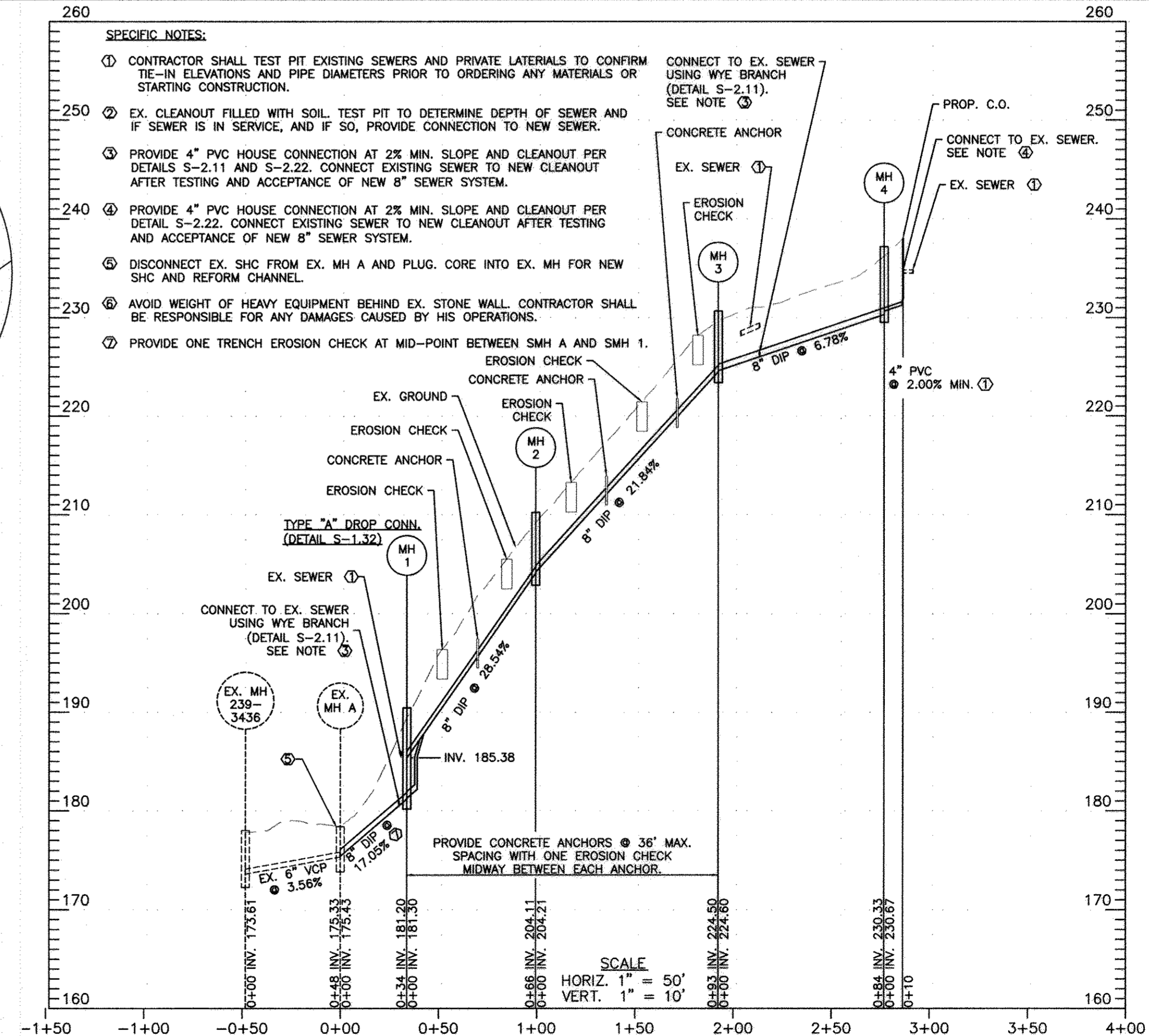
\*APPROX. TOP ELEVATION. ADJUST TOP ELEVATION TO 12" ABOVE GRADE USING PRECAST GRADE RINGS (DETAIL G-5.50).

<p style="text-align: center;"><b>DEPARTMENT OF PUBLIC WORKS</b> HOWARD COUNTY, MARYLAND</p> <p>Director of Public Works: <i>[Signature]</i> 2/15/17          Chief, Bureau of Engineering: <i>[Signature]</i> 2/15/17          Chief, Bureau of Utilities: <i>[Signature]</i> 2/16/17          Chief, Utility Design Division: <i>[Signature]</i> 2/15/17</p>	<p><b>Michael Baker International</b>          1304 Concourse Drive, Suite 200          Linthicum, MD 21090-1014          Phone: (410) 988-5400</p>	<p style="text-align: center;"><b>STATE OF MARYLAND</b>          EMMETT R. ANDREWS          REGISTERED PROFESSIONAL ENGINEER          LICENSE NO.: 28602          EXPIRATION DATE: 11/18/17  <i>[Signature]</i> 2/17          EMMETT R. ANDREWS, P.E.</p>	<p>DESIGN: RND          DRAWN: RND          CHECKED: ERA          DATE: 06/16/16</p>	<p>NO. 1          AS-BUILT          REVISION</p>	<p>DATE: 5/1/17          BY: KCF</p>	<p style="text-align: center;">TITLE SHEET</p> <p style="text-align: center;">600 SCALE MAP NO. 25          BLOCK NO. 7</p>	<p style="text-align: center;"><b>PARK AVENUE SEWER EXTENSION</b>          CONTRACT NO.: 10-4853          CAPITAL PROJECT NO.: S-6289          ELECTION DISTRICT 2          HOWARD COUNTY, MARYLAND</p>	<p>SCALE AS SHOWN</p> <p>SHEET 1 OF 4</p>
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**TRAVERSE COORDINATE SCHEDULE**

TRAVERSE POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
303	REBAR & CAP	583842.88'	1369101.52'	238.98
304	REBAR & CAP	583693.32'	1368972.08'	200.31
MER350	MAG. NAIL	583669.56'	1368855.67'	179.41



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Chris J. Smith* 2/15/17  
DIRECTOR OF PUBLIC WORKS  
CHIEF, BUREAU OF UTILITIES

*Dennis J. Butler* 2/15/17  
CHIEF, BUREAU OF ENGINEERING  
CHIEF, UTILITY DESIGN DIVISION

Michael Baker International  
1304 Concord Drive, Suite 200  
Linthicum, MD 21090-1014  
Phone: (410) 368-3400

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.: 28608 EXPIRATION DATE: 11/19/17  
EVAN R. ANDREWS, P.E.

DESIGN: RND  
DRAWN: RND  
CHECKED: ERA  
DATE: 06/16/16

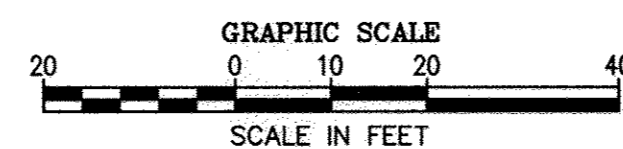
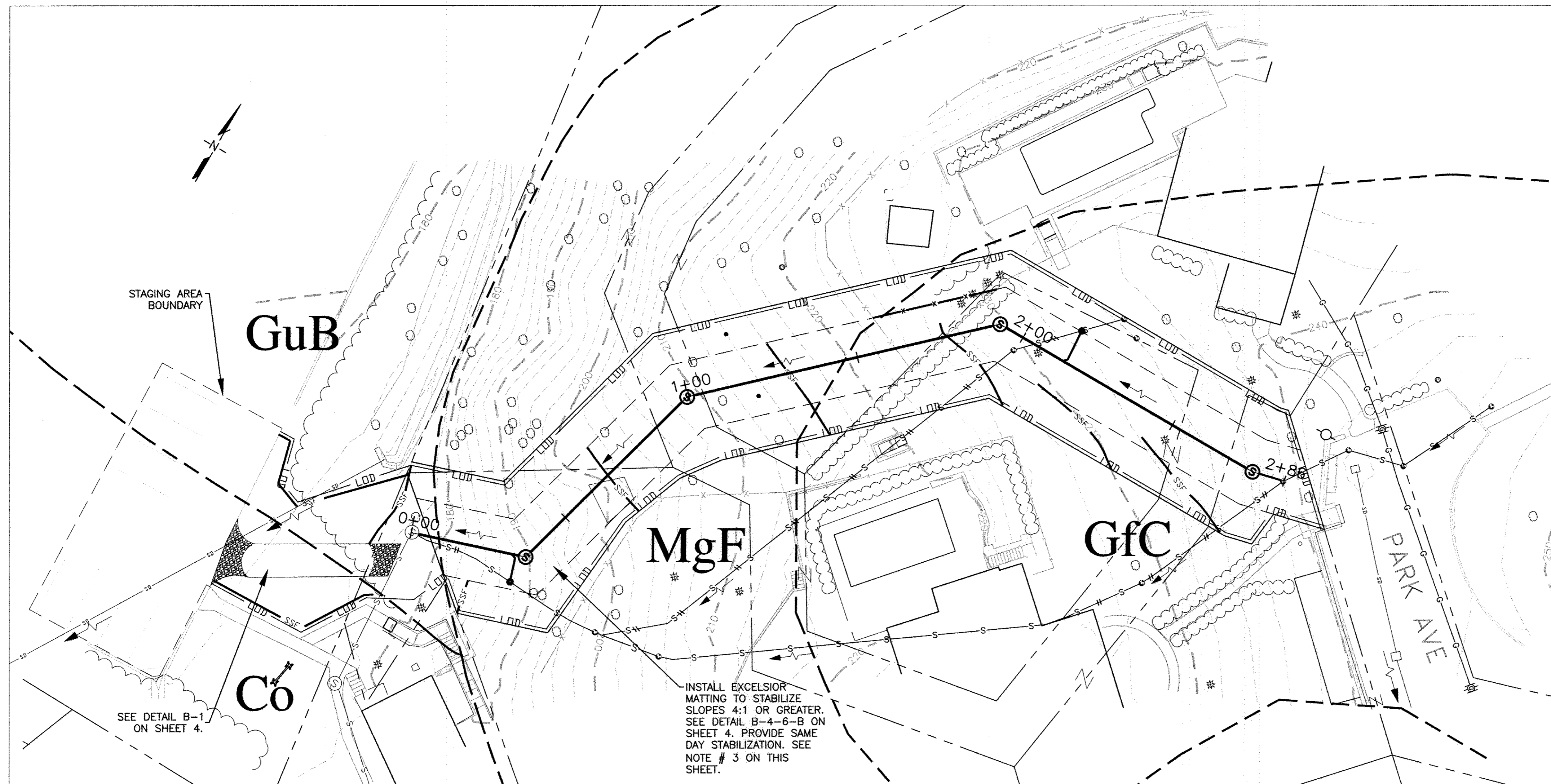
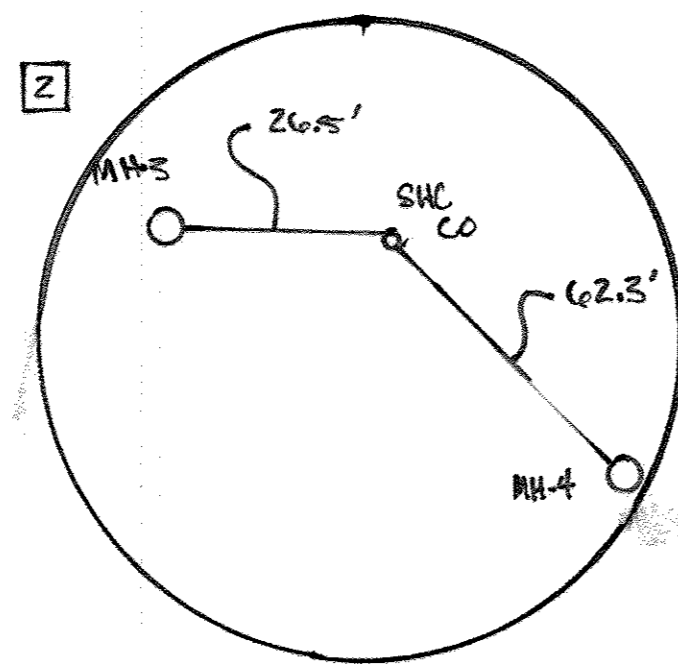
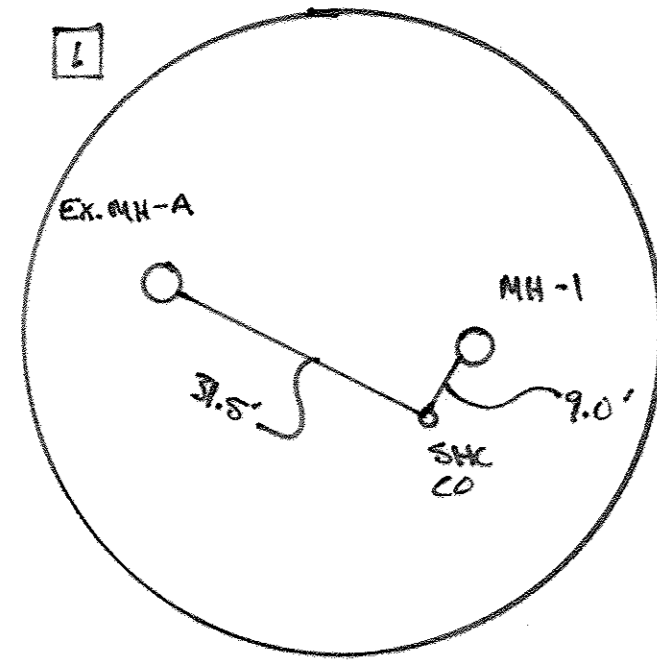
NO. 1 AS-BUILT  
REVISION  
DATE: 06/16/16

PLAN & PROFILE

600 SCALE MAP NO. 25 BLOCK NO. 7

PARK AVENUE SEWER EXTENSION  
CONTRACT NO.: 10-4853  
CAPITAL PROJECT NO.: S-6289  
ELECTION DISTRICT 2  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 4



**ADDITIONAL SEDIMENT CONTROL NOTES:**

1. SEE SHEET 4 FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
2. CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO EARTH DISTURBANCE.
3. TEMPORARY SOIL STABILIZATION MATTING (TSSMS) APPLICATION TO BE USED ON ALL 4:1 OR GREATER SLOPES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES REQUIRED.
5. ONCE GRADING IS COMPLETE, AREA SHALL BE STABILIZED AND SEEDED.
6. NO AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
7. SPOIL FROM TRENCHING SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCHING OPERATION.

**E&S LEGEND:**

— LOD — LOD	LIMIT OF DISTURBANCE
---	SOIL BOUNDARY
abc	SOIL TYPE
---	EX. MINOR CONTOUR
---	EX. MAJOR CONTOUR
[Pattern]	SCE
— SSF — SSF	SUPER SILT FENCE (SSF)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Charles S. [Signature]* 2/15/17  
DIRECTOR OF PUBLIC WORKS DATE

*Thomas E. [Signature]* 2/15/17  
CHIEF, BUREAU OF ENGINEERING DATE

*Jan [Signature]* 2/15/17  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 2/15/17  
CHIEF, UTILITY DESIGN DIVISION DATE

**Michael Baker INTERNATIONAL**

MICHAEL BAKER INTERNATIONAL, INC.  
1304 Concourse Drive, Suite 200  
Linthicum, MD 21090-1014  
Phone: (410) 588-3400

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.

EXPIRATION DATE: 11/18/17

*Evan R. [Signature]* 2/15/17  
EVAN R. ANDREWS, P.E.

DESIGN: RND					
DRAWN: RND					
CHECKED: ERA					
NO. 1	AS-BUILTS	REVISION	6/1/17	KCI	DATE BY
DATE: 06/16/16					

EROSION AND SEDIMENT CONTROL PLAN

800 SCALE MAP NO. 25 BLOCK NO. 7

**PARK AVENUE SEWER EXTENSION**  
CONTRACT NO.: 10-4853  
CAPITAL PROJECT NO.: S-6289  
ELECTION DISTRICT 2  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 4

