

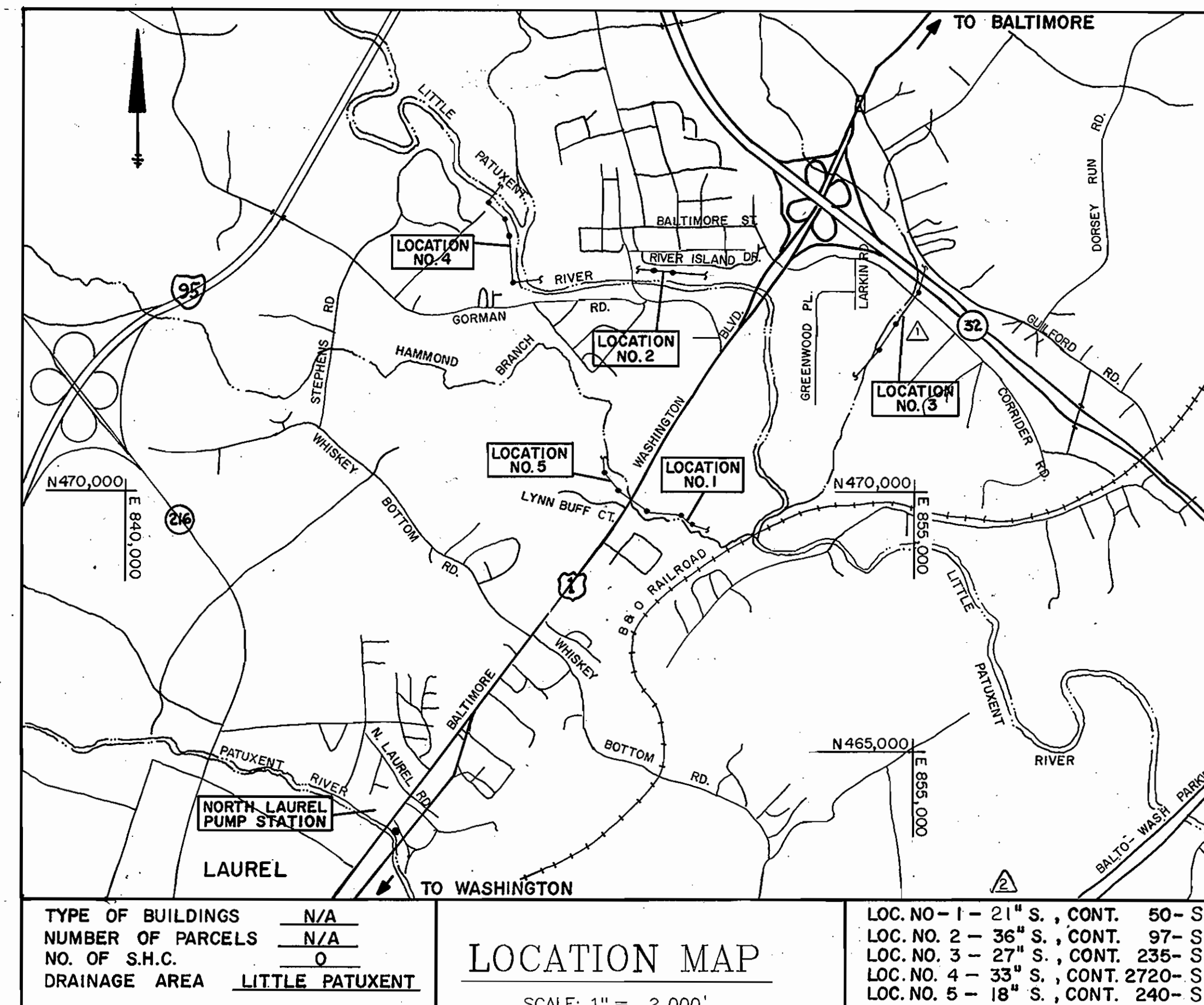
PATUXENT SERVICE AREA - SEWAGE FLOW METERS

CAPITAL PROJECT NO. S-6141

CONTRACT NO 20-1551

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR WILL COMPLY WITH ALL REQUIREMENTS OF SEDIMENT AND EROSION CONTROL SET FORTH IN THE CONTRACT DRAWINGS, THE "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND VOLUME IV - ARTICLE 219 OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.
2. THE CONTRACTOR SHALL NOT PUMP FROM EXCAVATED AREAS DIRECTLY INTO THE HOWARD COUNTY STORM DRAINAGE SYSTEM OR ANY NATURAL WATER COURSE. WHERE GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PORTABLE OR EXCAVATED SEDIMENT TRAPS TO PREVENT SILTED TRENCH WATER FROM ENTERING STORM DRAINAGE SYSTEMS OR NATURAL WATERWAYS.
3. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH WATER WHENEVER POSSIBLE, AND CONFINED TO AN AREA WHERE IT WILL NOT OBSTRUCT THE NORMAL FLOW OR DRAINAGE COURSES.
4. ALL SWALES SHALL BE EQUIPPED WITH A SEDIMENT RETENTION DEVICE TO TRAP SEDIMENT AND FILTER WATER LEAVING THE RIGHT-OF-WAY PRIOR TO ENTERING ANY RUNNING STREAMS.
5. THE CONTRACTOR SHALL PROVIDE STRAW BALE DIKES NORMAL TO SURFACE WATER FLOW AND AROUND ALL VEHICLE AND EQUIPMENT STAGING AREAS AS SHOWN IN "DETAIL OF A STRAW BALE DIKE" ENCLOSED IN SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
6. ROADSIDE DITCHES AND DRAINAGE PIPES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION FOLLOWING COMPLETION OF CONSTRUCTION.
7. THE CONTRACTOR SHALL DISPOSE OF SPOILS IN ACCORDANCE WITH GOOD SOIL CONSERVATION PRACTICE AND IN SUCH A MANNER THAT NONE CAN BE CARRIED INTO ANY DRAINAGE FACILITY OR WATER COURSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOIL OR EXCESS EXCAVATED MATERIAL ON A SITE APPROVED BY THE SOIL CONSERVATION DISTRICT. DOCUMENTATION OF APPROVAL AND SITE SHALL BE PROVIDED TO THE ENGINEER PRIOR TO BEGINNING WORK.
8. THE HOWARD COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED IN WRITING BY THE CONTRACTOR AS TO WHERE EXCESS MATERIAL WILL BE DISPOSED OR BORROW MATERIAL WILL BE OBTAINED. PRIOR TO BEGINNING ANY WORK ON THIS PROJECT, COPIES SHALL BE PROVIDED TO THE ENGINEER.
9. CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT AND EROSION CONTROL DEVICES WILL BE REQUIRED.
10. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL AS REQUIRED BY THE SEDIMENT CONTROL INSPECTOR, AS THE WORK PROGRESSES OR REQUIRES.
11. THE CONTRACTOR SHALL NOTIFY, IN WRITING, A HOWARD COUNTY SEDIMENT CONTROL DIVISION REPRESENTATIVE AT LEAST THREE (3) DAYS PRIOR TO STARTING WORK. CONTACT HOWARD COUNTY: 992-2437. COPIES SHALL BE PROVIDED TO THE ENGINEER.
12. THE CONTRACTOR SHALL PLACE A STABILIZED CONSTRUCTION ENTRANCE AS SHOWN IN THE HOWARD COUNTY STANDARD DETAILS, G6.11, WHERE SHOWN ON THE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER, AND AS NEEDED DURING CONSTRUCTION.
13. SEDIMENT REMOVAL - ALL TRAPPED SEDIMENT IS TO BE REMOVED AND DISPOSED OF AT THE AUTHORIZED LANDFILLS PRIOR TO THE REMOVAL OF SEDIMENT CONTROL STRUCTURES.
14. FOLLOWING INITIAL SOIL DISTURBANCE AND REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - A.) SEVEN (7) CALANDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCHED, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
 - B.) FOURTEEN (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.



GENERAL NOTES

1. APPROXIMATE LOCATION OF SANITARY SEWERS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING SEWERS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENCE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
6. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL (S) AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED IN THE PROJECT SPECIFICATIONS. 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.
7. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC COMPANY - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELEC. CO. - UNDERGROUND DAMAGE CONTROL - 859-9004
 - BALTIMORE GAS & ELEC. CO. - TROUBLE SHOOTING - 298-9001
 - "MISS UTILITY" - 1-800-257-7777
 - COLONIAL PIPELINE COMPANY - 795-1390
 - BUREAU OF UTILITIES HOWARD CO. DEPT. OF PUBLIC WORKS - 992-2366
 - C & P TELEPHONE - 1-800-257-7777
8. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE LIMITS OF CONSTRUCTION ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
10. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED
11. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
12. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

SIXTH ELECTION DISTRICT HOWARD COUNTY MARYLAND

DEVELOPER'S CERTIFICATION
I HAVE CERTIFIED 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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

Robert M. Reisinger 5-27-87
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

ENGINEER'S CERTIFICATION
I CERTIFY THAT THIS PLAN FOR EROSION & 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 COUNTY SOIL CONSERVATION DISTRICT.

George Miles & Buhr 5-15-87
DATE
George, Miles & Buhr
Architects, Engineers, Planners
Salisbury Maryland

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Stephen L. Hinkle 6-9-87
U.S. SOIL CONSERVATION SERVICE DATE

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

Stephen L. Hinkle 6/9/87
APPROVED DATE
HOWARD COUNTY S.C.D.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Reisinger 6-11-87
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Reisinger 6-2-87
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Reisinger 5/27/87
CHIEF, UTILITY DESIGN DIVISION DATE

George, Miles & Buhr
Architects, Engineers, Planners
Salisbury Baltimore



DES: BBB					
DRN: SD/LS					
CHK: BBB	GMB	Minor Revisions		9/88	
DATE: 02/87	GMB	Revised Location 2 and 3		8/88	
	BY	NO.	REVISION	DATE	

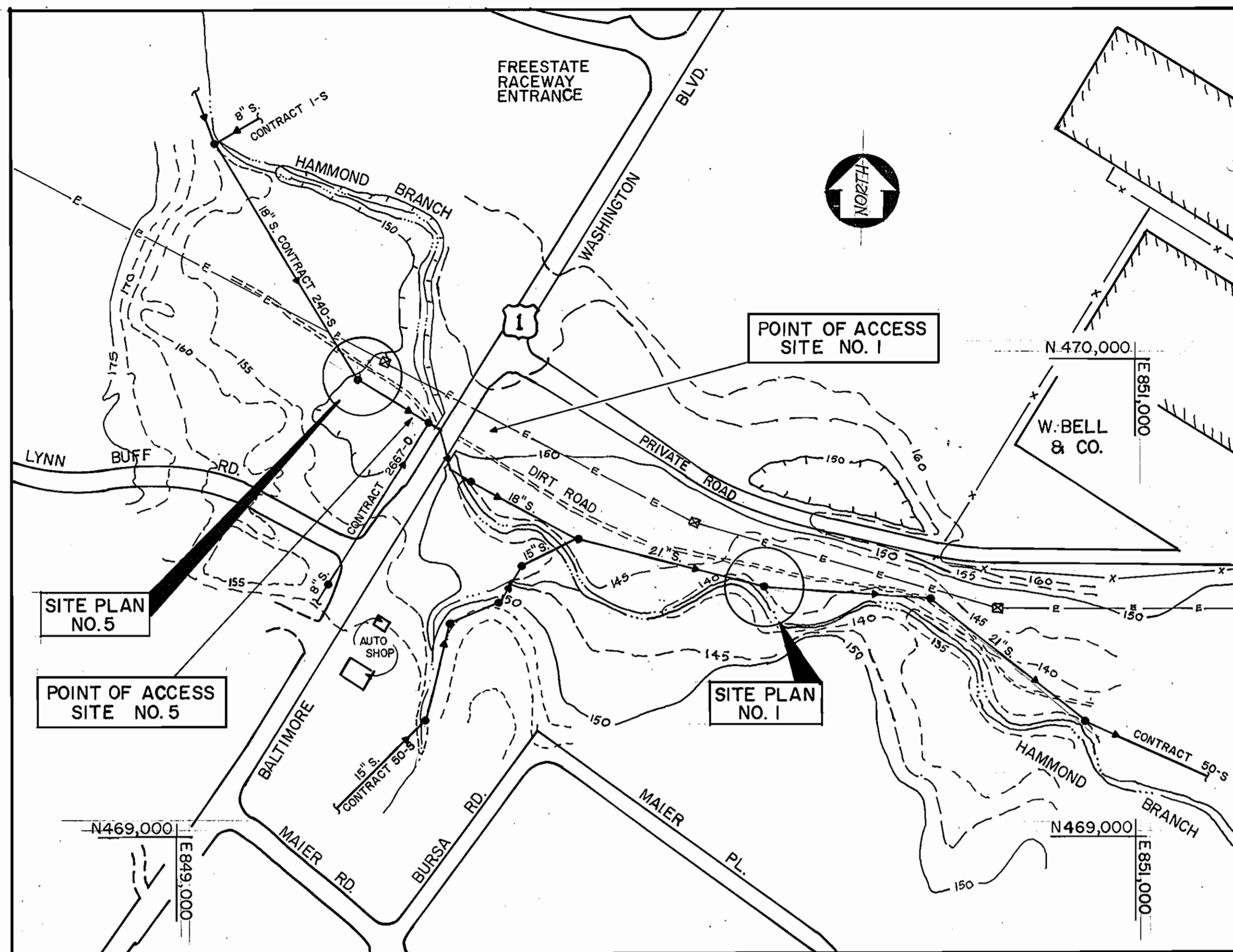
**TITLE SHEET
AND
LOCATION MAP**

600' SCALE MAP NO. 47 BLOCK NO. 10.11.23

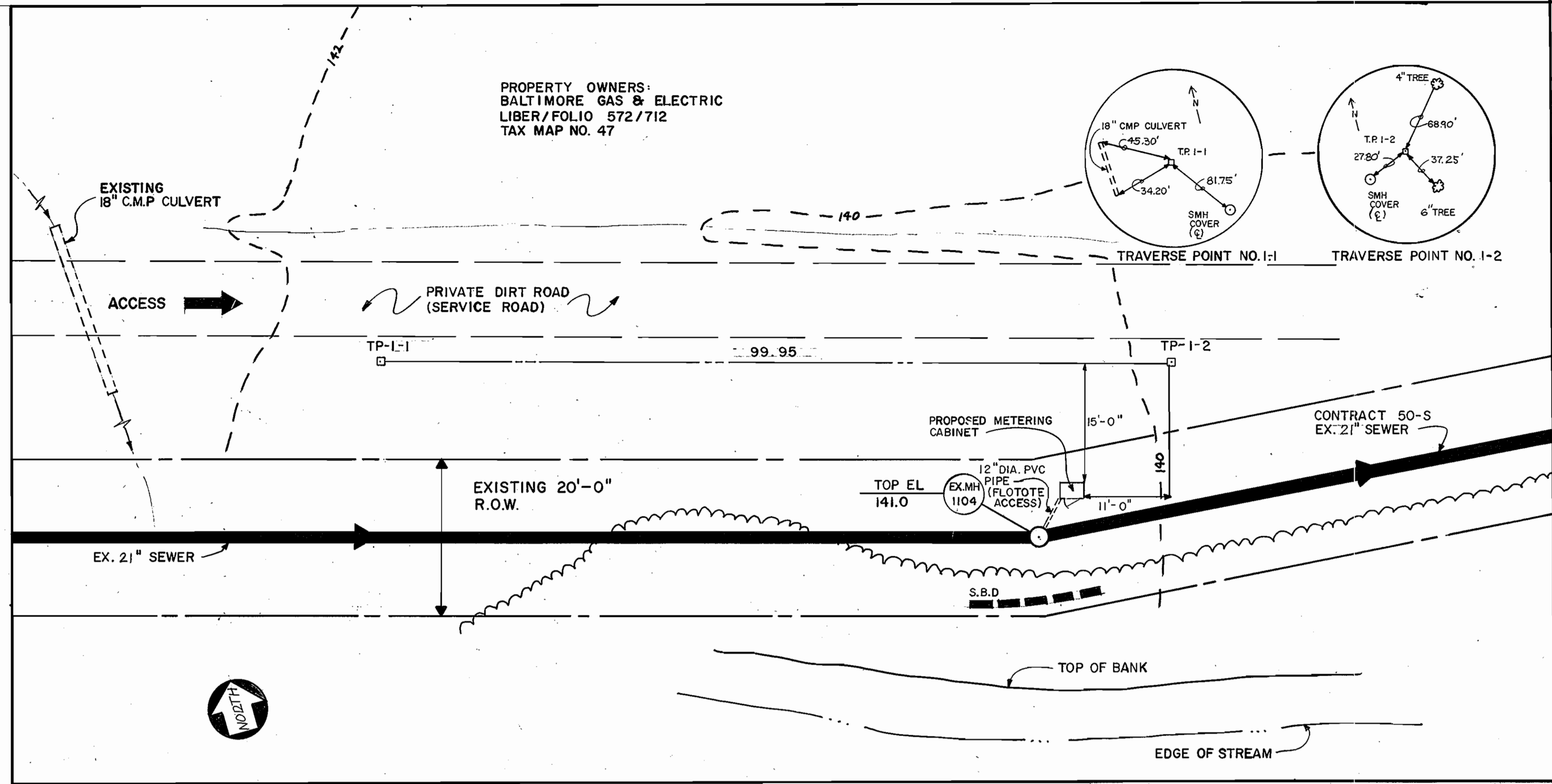
PATUXENT SERVICE AREA - SEWAGE FLOW METERS
CAPITAL PROJECT NO. S-6141
CONTRACT NO. 20-1551
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

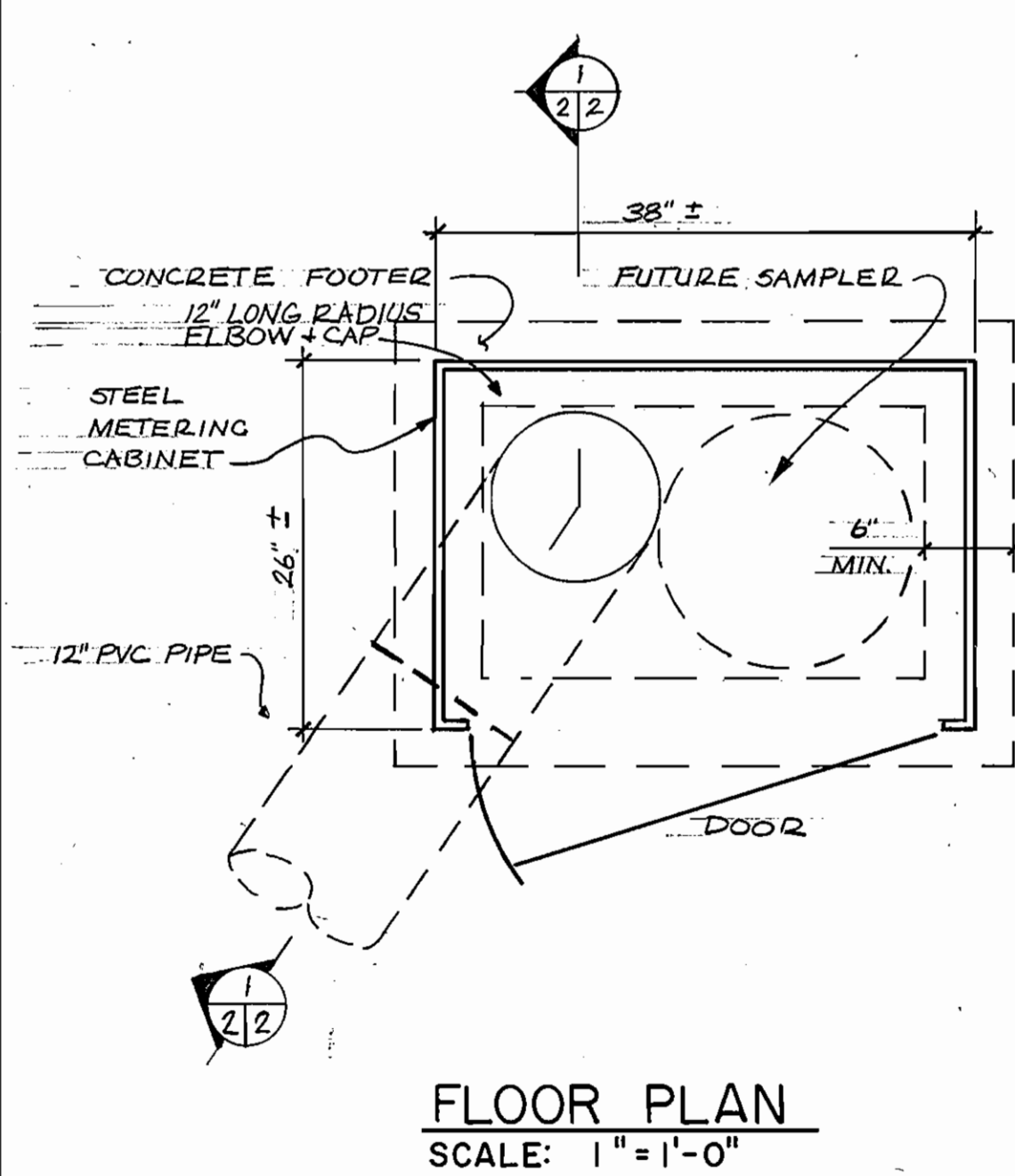
SHEET 1 OF 5



OVERALL PLAN-SITE NOS 1 & 5
SCALE: 1" = 200'



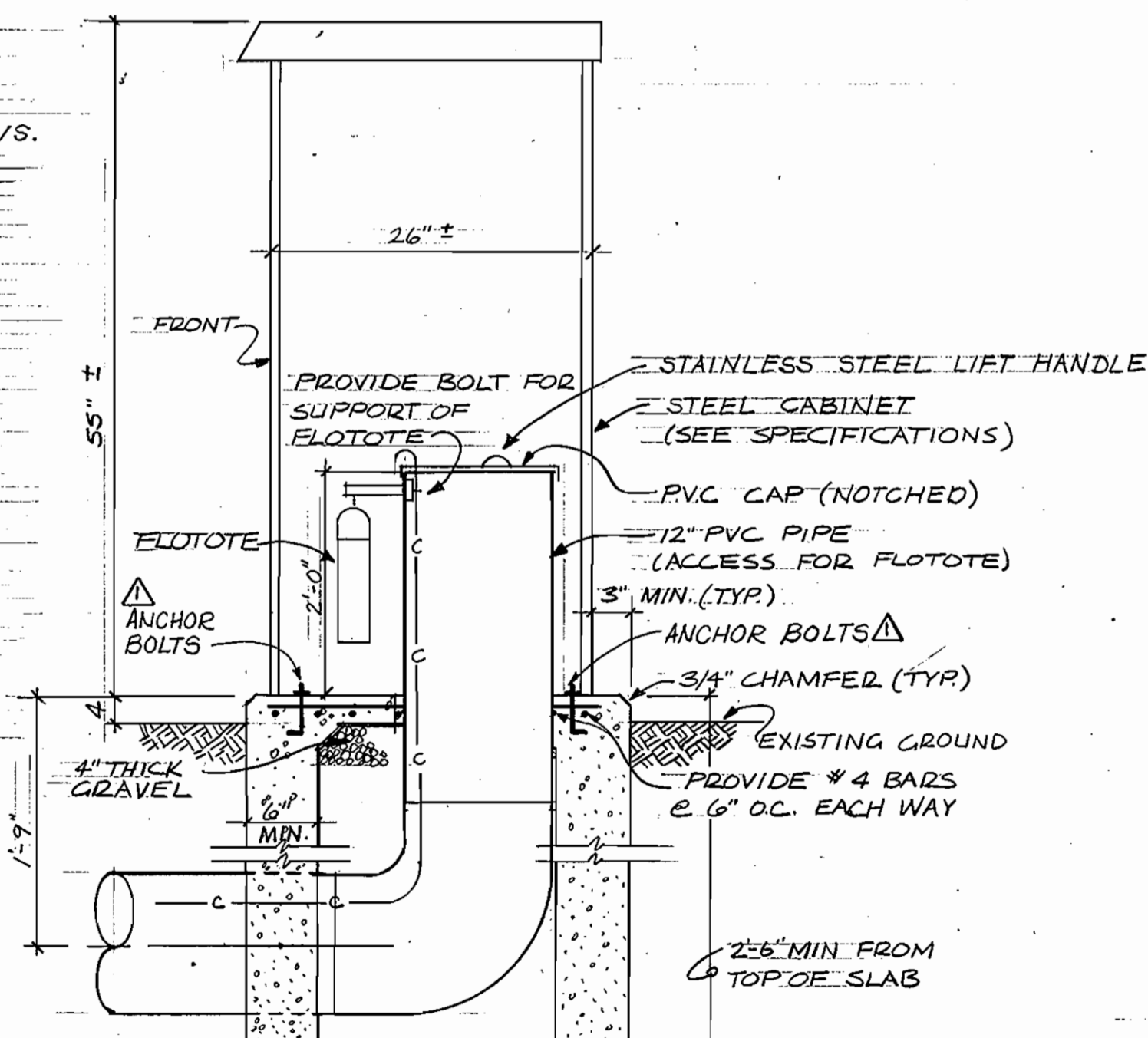
ENLARGEMENT - SITE PLAN NO. 1
SCALE: 1" = 10'



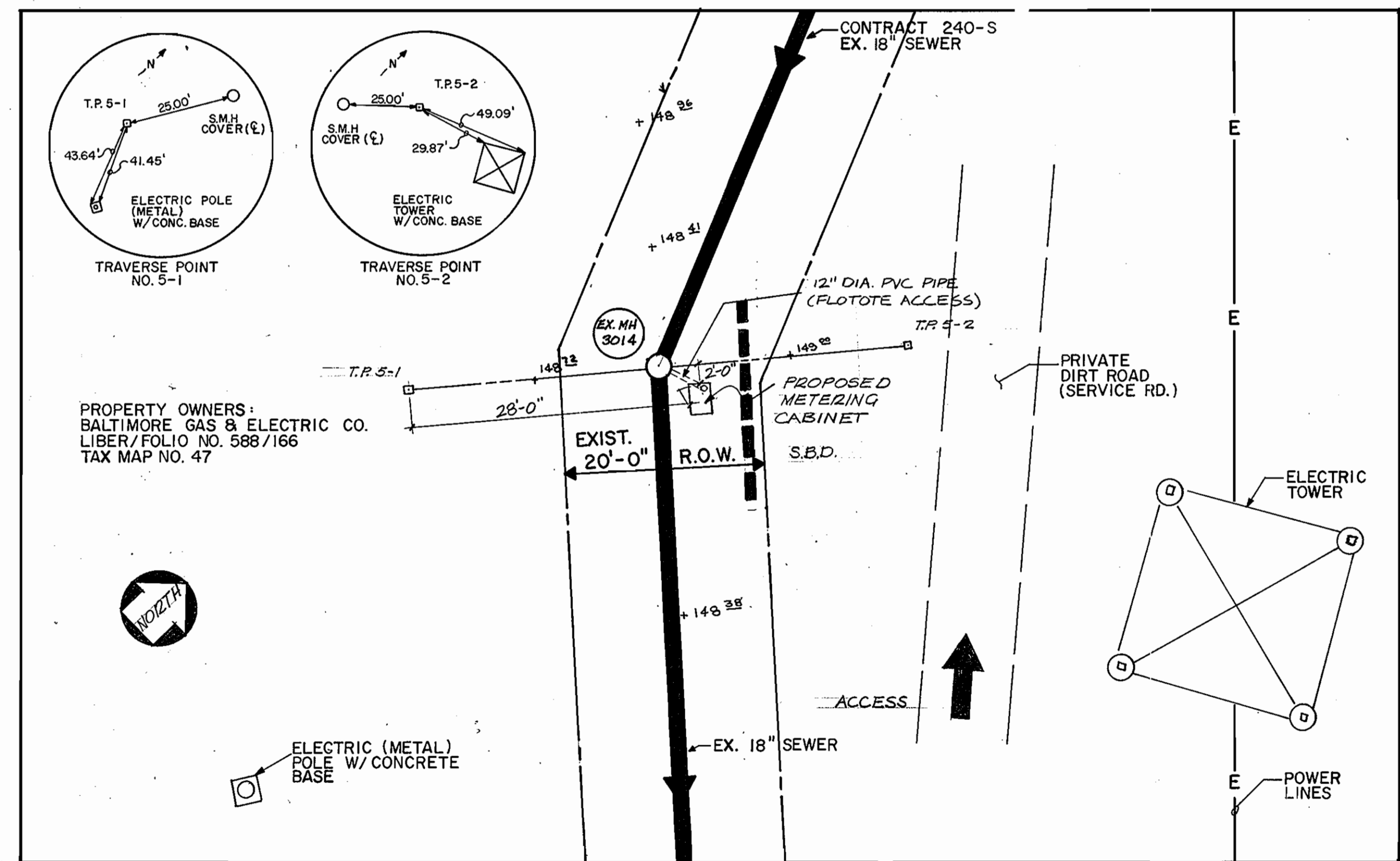
FLOOR PLAN
SCALE: 1" = 1'-0"

NOTES:

1. EXACT DIMENSIONS MAY VARY DEPENDING ON CABINET SUPPLIED.
2. ANCHOR CONTROL CABINET TO SLAB PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE A MINIMUM OF FOUR 6" INCH LONG BY 1" INCH DIAMETER STAINLESS STEEL ANCHOR BOLTS FOR THE BOLTING OF THE CABINET TO THE SLAB.
3. PVC PIPE, SUPPORT, BOLTS, ETC. TO BE INSTALLED PER METERING SUPPLIER'S INSTRUCTIONS.
4. CONTRACTOR SHALL CUT A HOLE THRU EXISTING MANHOLE APPROX. 2' BELOW GRADE, OF SUFFICIENT SIZE TO ACCOMMODATE 12" P.V.C. PIPE. GROUT P.V.C. PIPE IN PLACE. (SEE DETAIL ON SHEET 5).



SECTION
SCALE: NONE



ENLARGEMENT - SITE PLAN NO. 5
SCALE: 1" = 10'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *John F. Nunn* 6-11-87
 Chief, Bureau of Engineering: *Michael L. Smith*
 Chief, Bureau of Utilities: *Robert B. Bennett* 6-2-87
 Chief, Utility Design Division: *James H. Peterson* 5/27/87

George, Miles & Buhr
Architects, Engineers, Planners
Salisbury Baltimore



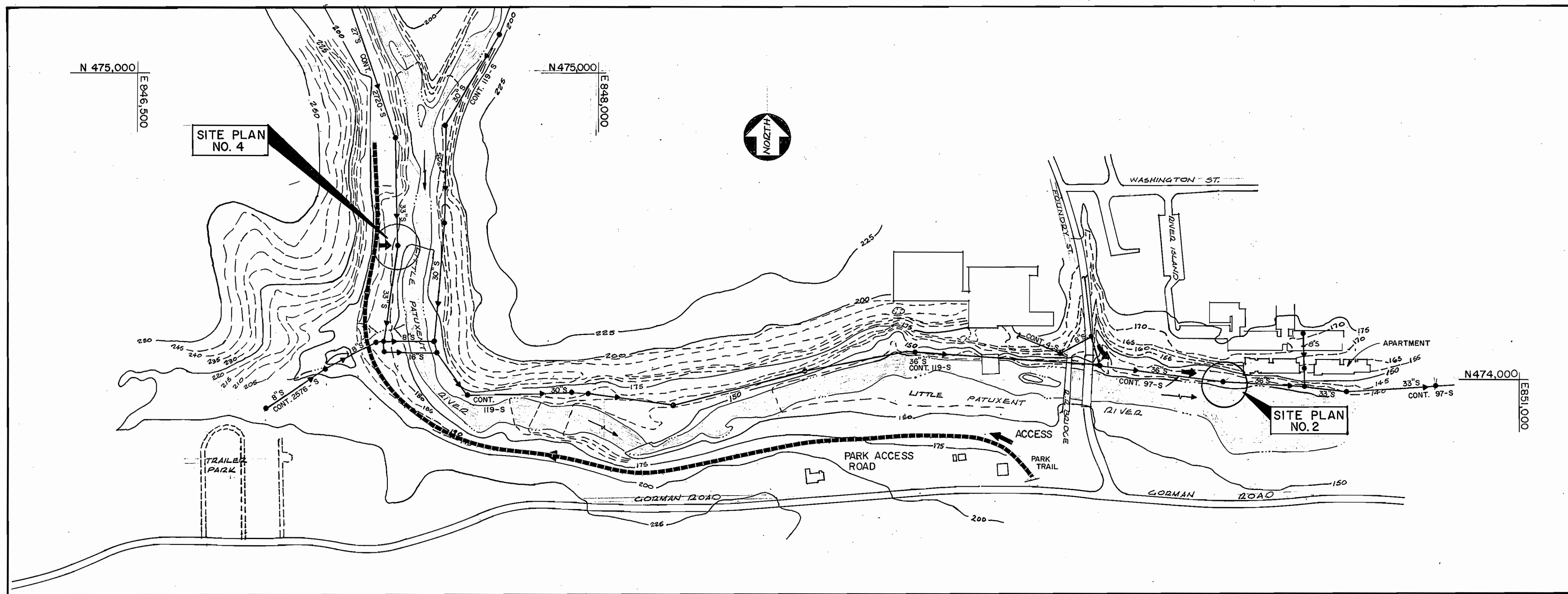
DES:	BBB			
DRN:	EC/SD			
CHK:	BBB			
DATE:	02/87			
GMB	Added Anchor Bolts / Note	8/88		
BY	NO.	REVISION	DATE	

METERING VAULT SITE PLANS
LOCATIONS 1 AND 5

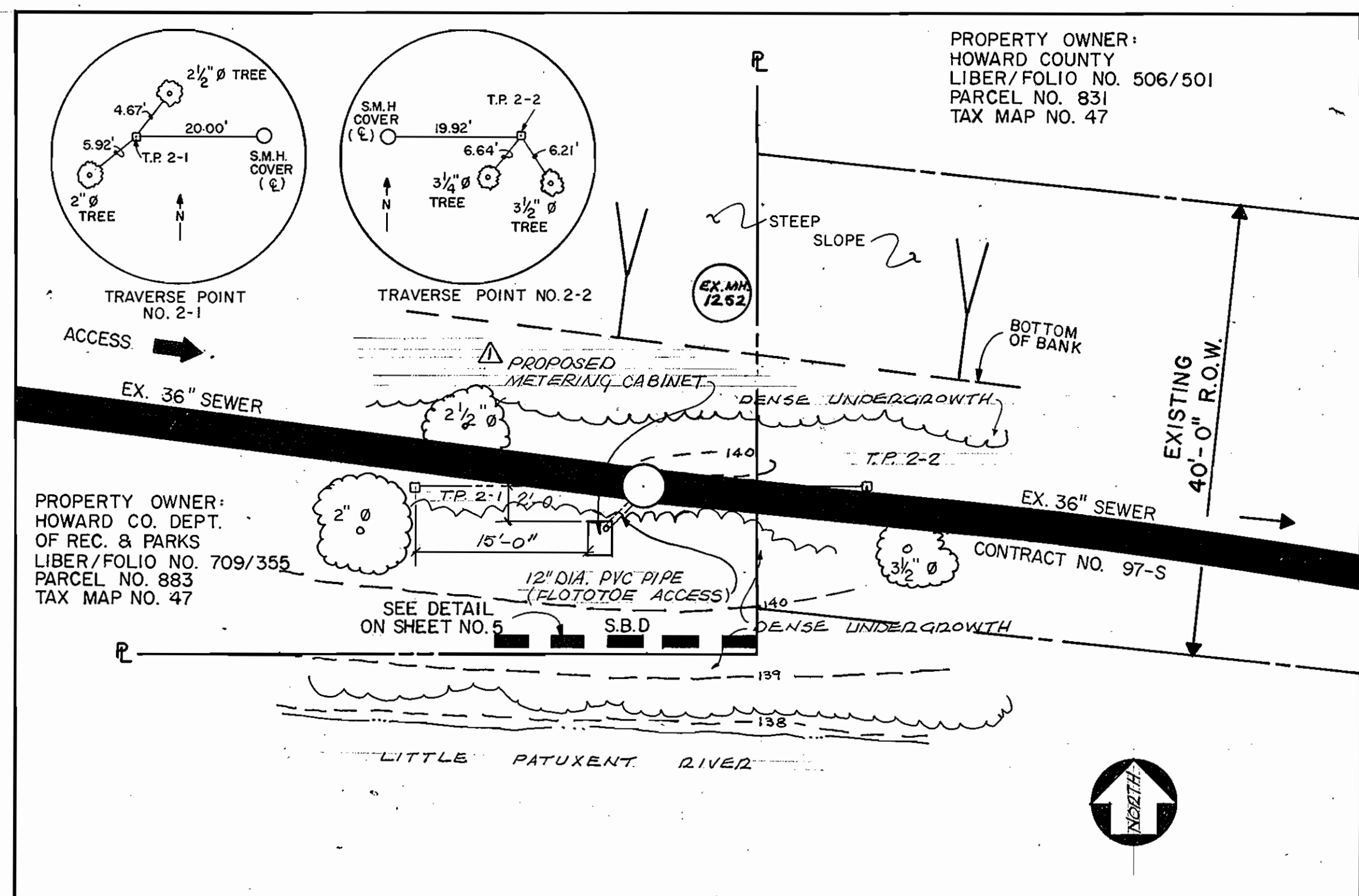
600' SCALE MAP NO. 47 BLOCK NO. 23

PATUXENT SERVICE AREA - SEWAGE FLOW METERS
CAPITAL PROJECT NO. S-6141
CONTRACT NO. 20-1551
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 5

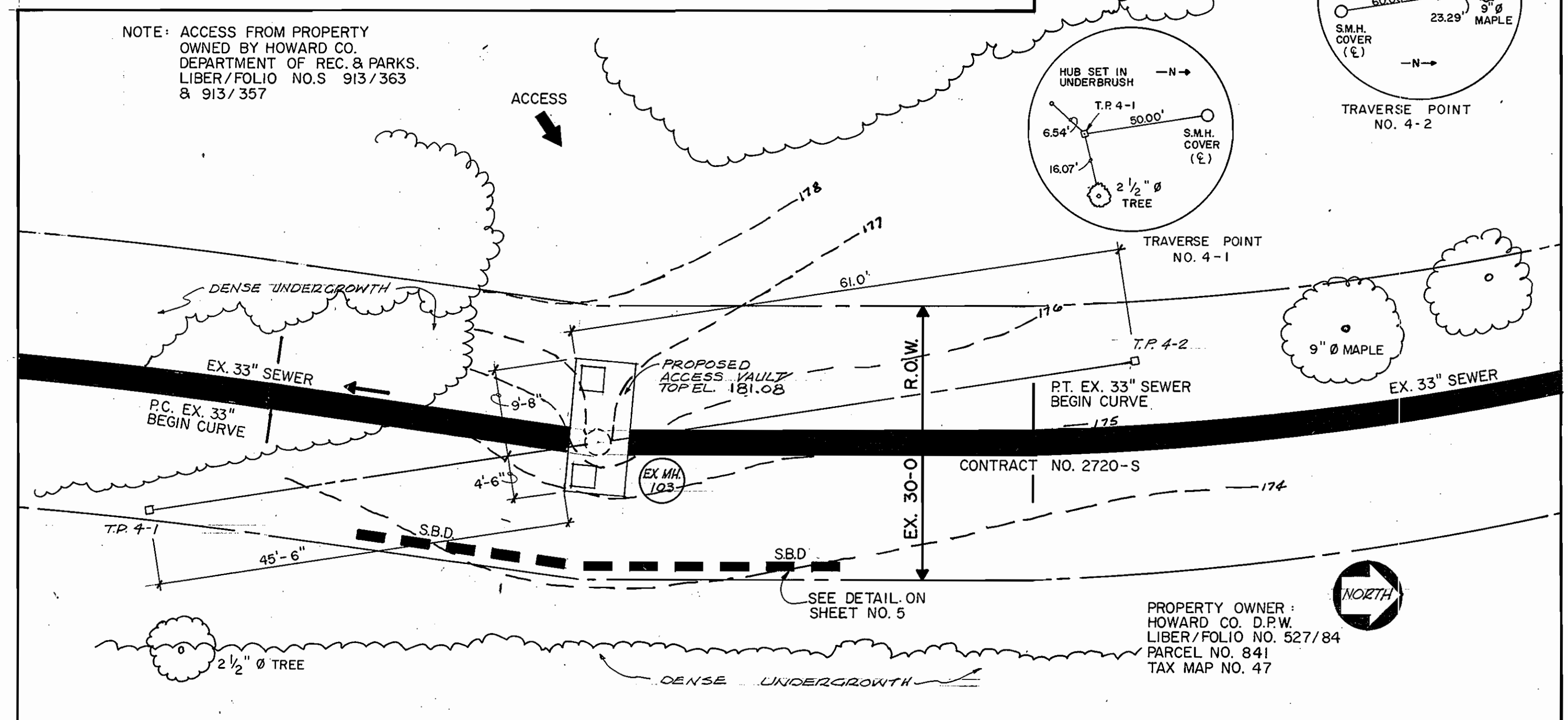


OVERALL PLAN - SITE NO'S 2 & 4
SCALE: 1" = 200'



ENLARGEMENT - SITE PLAN NO. 2
SCALE: 1" = 10'-0"

- NOTE:**
1. ENLARGED SITE PLAN NO. 2 SHOWS ABOVE GROUND METERING CABINET.
 2. IF ADD-ON ALTERNATE NO. 2 IS IMPLEMENTED, CONSTRUCT METERING VAULT AS DETAILED ON SHEET NO. 4.



ENLARGEMENT - SITE PLAN NO. 4
SCALE: 1" = 10'-0"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Bennett 6-11-87
DIRECTOR OF PUBLIC WORKS DATE

Michael H. [Signature] 5/27/87
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Bennett 6-2-87
CHIEF, BUREAU OF UTILITIES DATE

Paul [Signature] 5/27/87
CHIEF, UTILITY DESIGN DIVISION DATE

George, Miles & Buhr
Architects, Engineers, Planners
Salisbury Baltimore



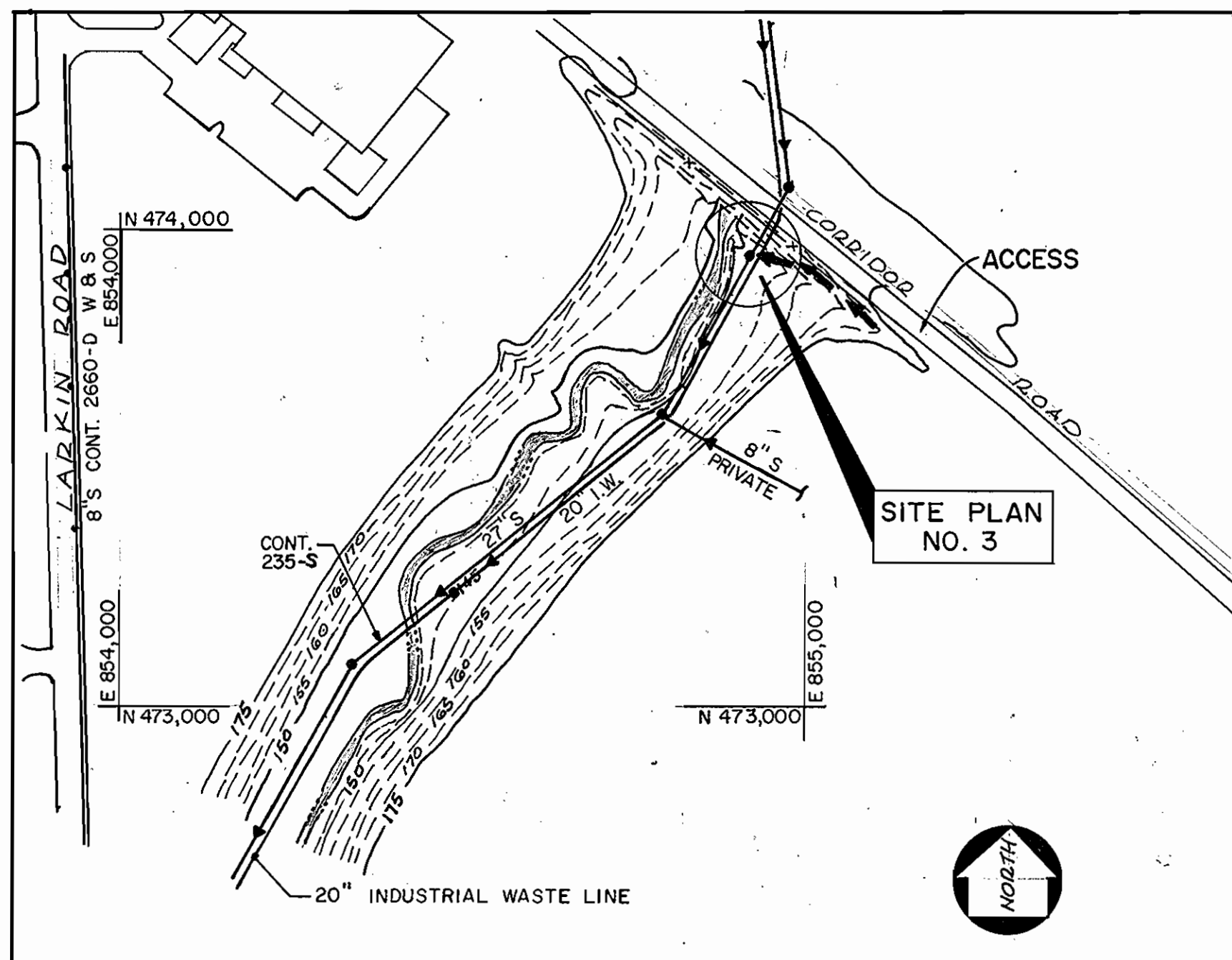
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DRN:	EC/SD		
CHK:	BBB		
DATE:	02/87		
BY:	GMB	Revised Site Plan No. 2	8/88
NO.		REVISION	DATE

METERING VAULT SITE PLANS
LOCATIONS 2 AND 4

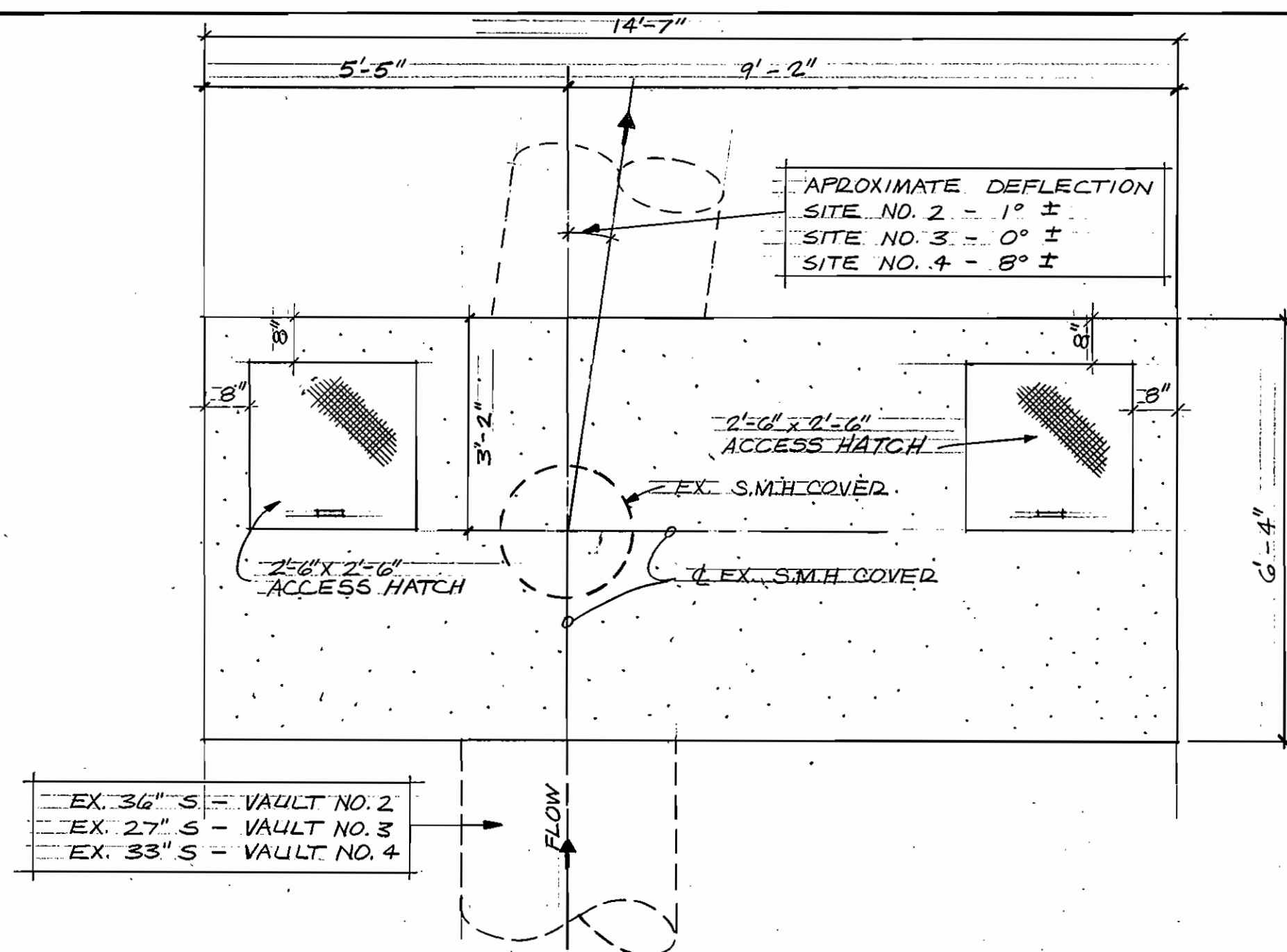
600' SCALE MAP NO. 47 BLOCK NO. 10, 11

PATUXENT SERVICE AREA - SEWAGE FLOW METERS
CAPITAL PROJECT NO. S-6141
CONTRACT NO. 20-1551
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

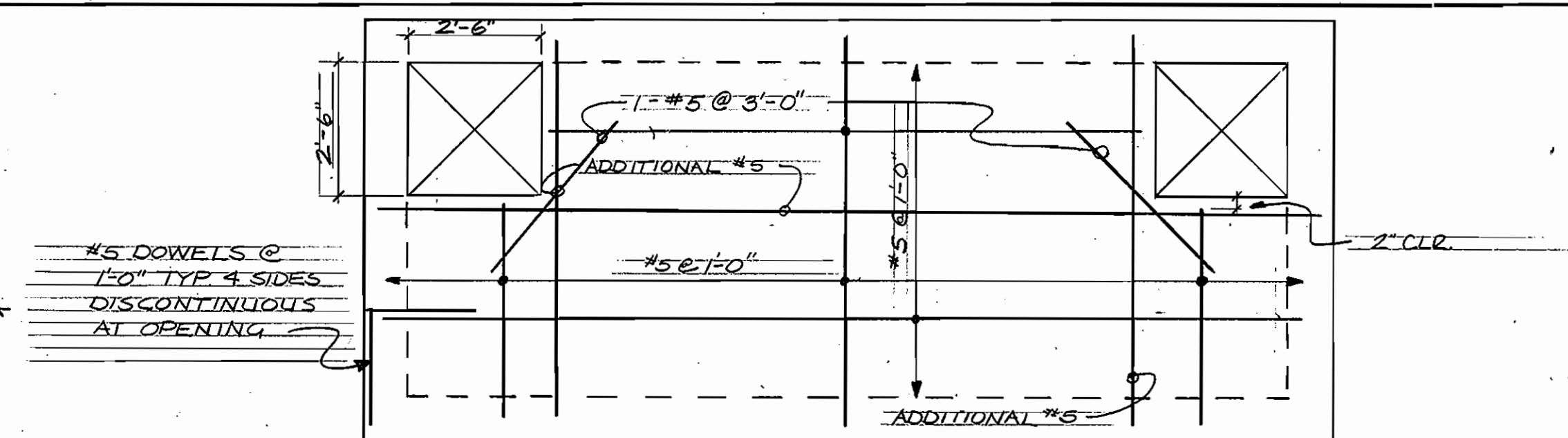
SCALE AS SHOWN
SHEET 3 OF 5



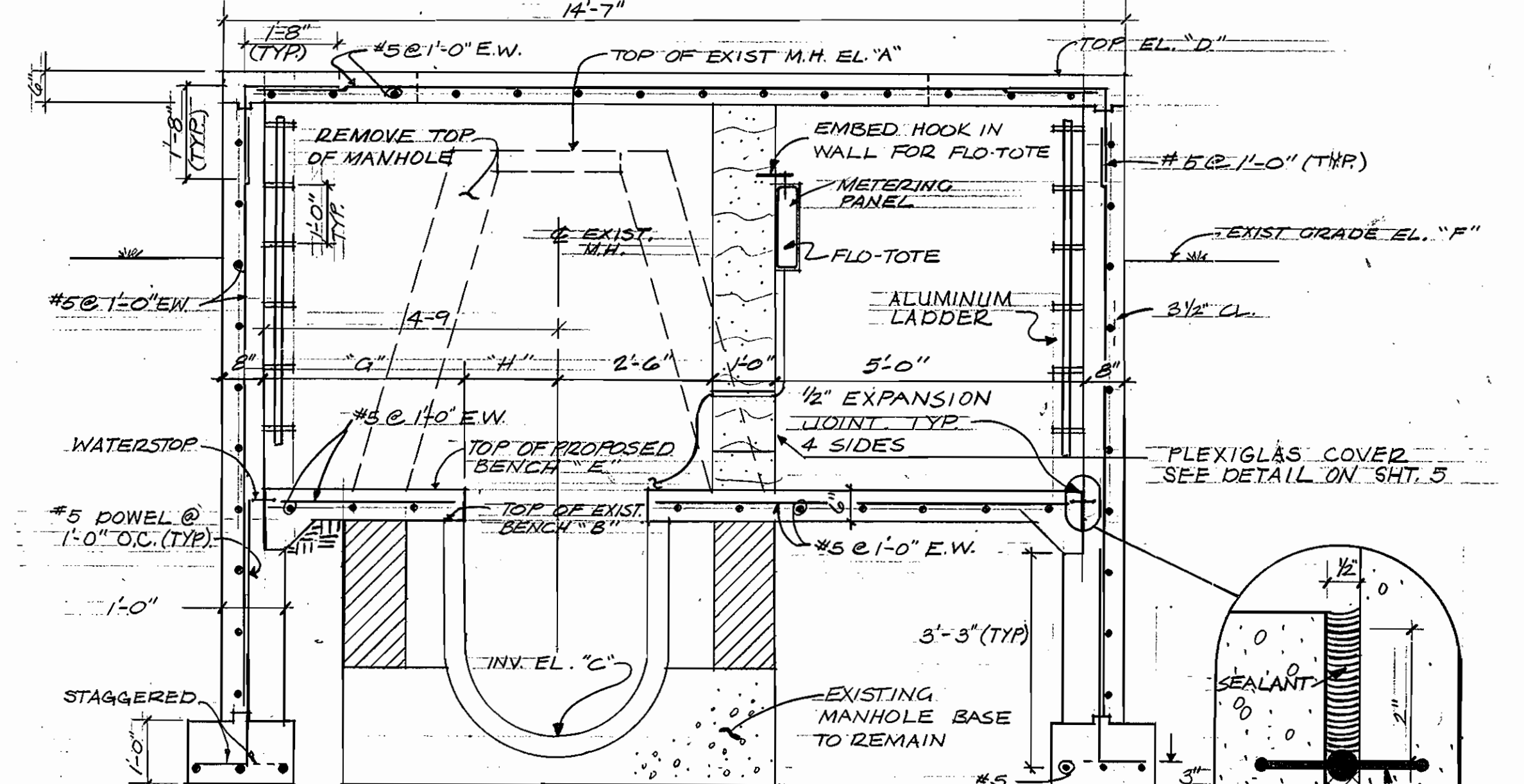
OVERALL PLAN - SITE NO. 3
SCALE: 1" = 200'



TOP SLAB PLAN - ACCESS VAULT SITE NO. 2, 3 & 4
SCALE: 1/2" = 1'-0"

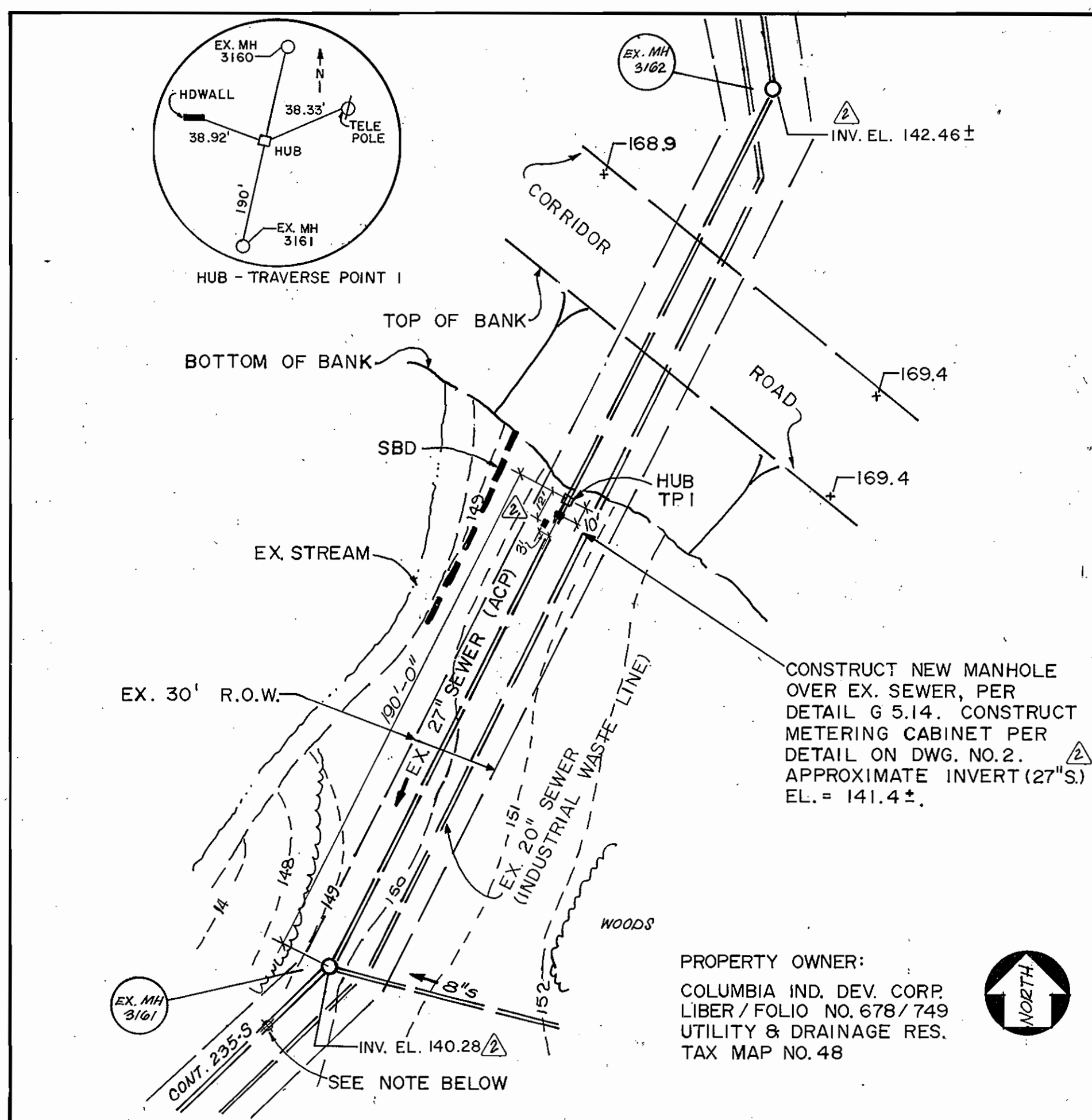


TOP SLAB REINFORCING PLAN
SCALE: 1/2" = 1'-0"



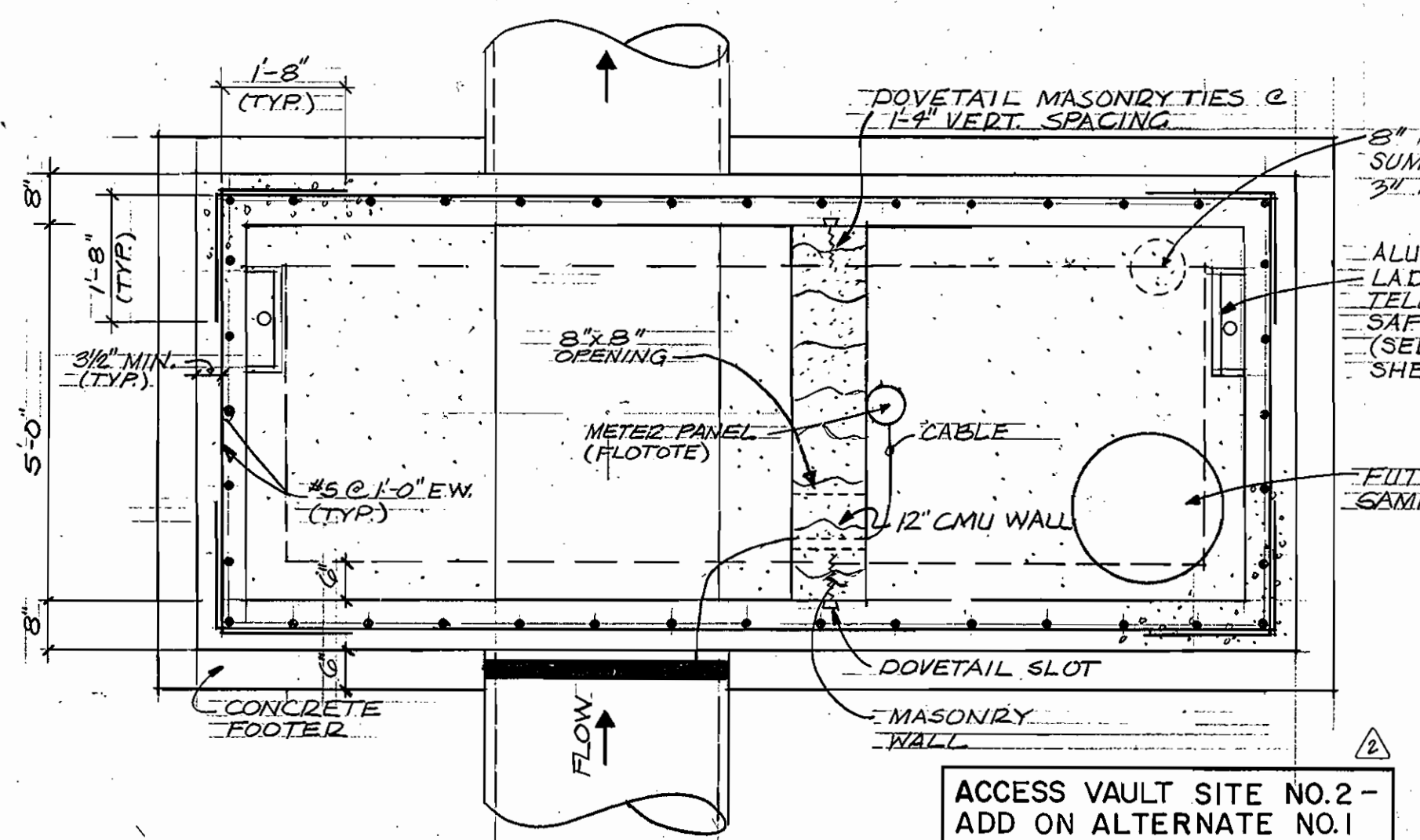
SECTION - ACCESS VAULT SITE NO. 2 & 4
SCALE: 1/2" = 1'-0"

ACCESS VAULT NO.	A	B	C	D	E	F	G	H
2	EL. 140.0	EL. 134.66	INV. 131.16	EL. 142.32	EL. 139.25	EL. 139.25	3'-3"	1'-6"
4	EL. 176.97	EL. 173.25	INV. 169.74	EL. 181.08	EL. 173.75	EL. 177.00	3'-4 1/2"	1'-9 1/2"

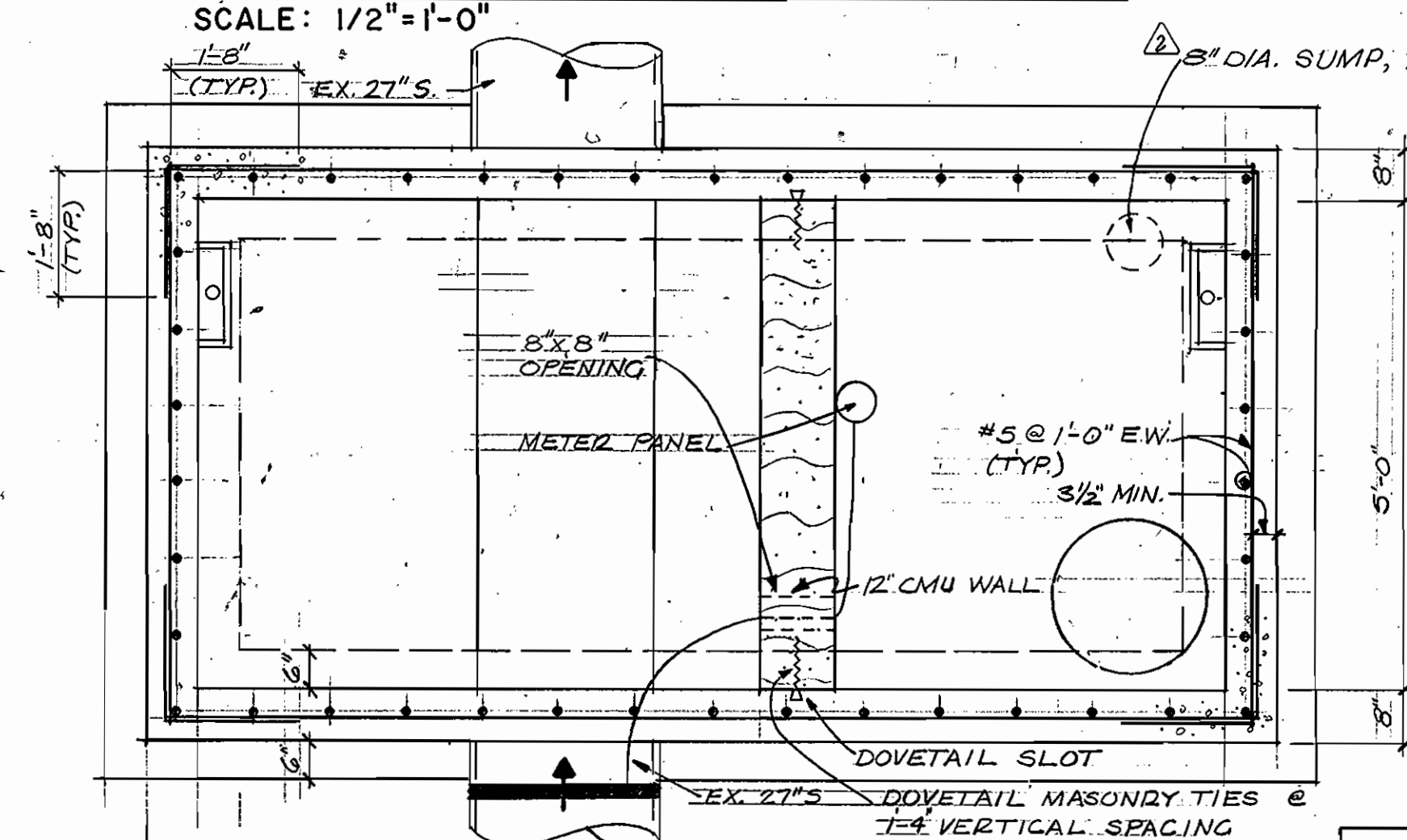


ENLARGEMENT - SITE PLAN NO. 3
SCALE: 1" = 40'-0"

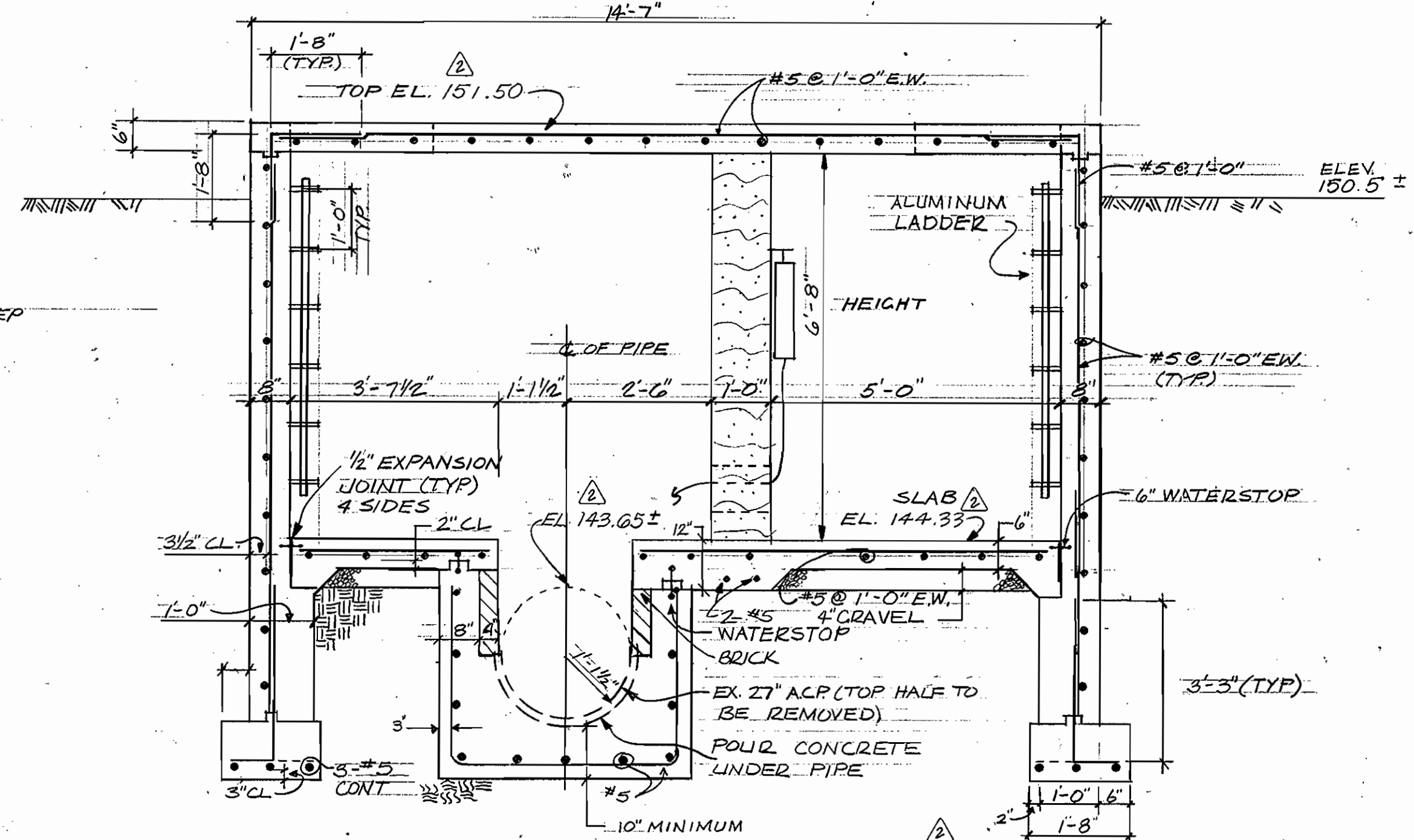
NOTES:
1. TEST PIT LOCATION @ PIPE MATERIAL - ACP, PIPE SIZE - 27" INVERT @ MH 3161 - EL. 140.28 TOP MH 3161 - EL. 150.09 TOP ACP PIPE - EL. 142.60



PLAN - ACCESS VAULT SITE NO. 2 & 4
SCALE: 1/2" = 1'-0"



PLAN - ACCESS VAULT SITE NO. 3
SCALE: 1/2" = 1'-0"

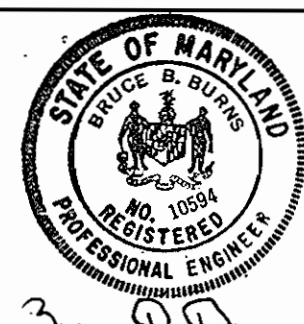


SECTION - ACCESS VAULT SITE NO. 3
SCALE: NONE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert Benish* 6-2-87
Chief, Bureau of Engineering: *Robert Benish* 5/27/87
Chief, Utility Design Division: *Robert Benish* 5/27/87

George, Miles & Buhr
Architects, Engineers, Planners
Salisbury Baltimore

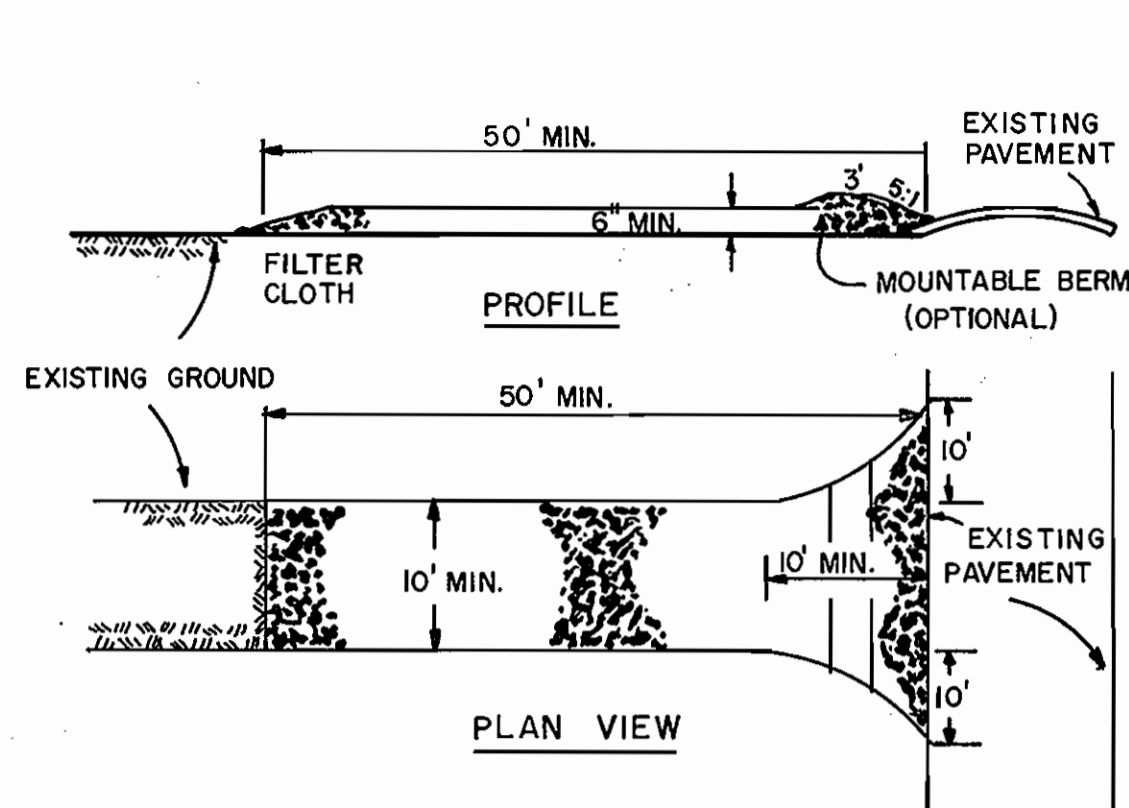


DES:	BBB				
DRN:	EC/SD				
CHK:	BBB	GMB	Minor Revisions		9/88
DATE:	02/87	GMB	Revised Site Plan No. 3		8/88
BY:	NO.		REVISION		

METERING VAULT SITE PLANS AND MISCELLANEOUS DETAILS

PATUXENT SERVICE AREA - SEWAGE FLOW METERS
CAPITAL PROJECT NO. S-6141
CONTRACT NO. 20-1551
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

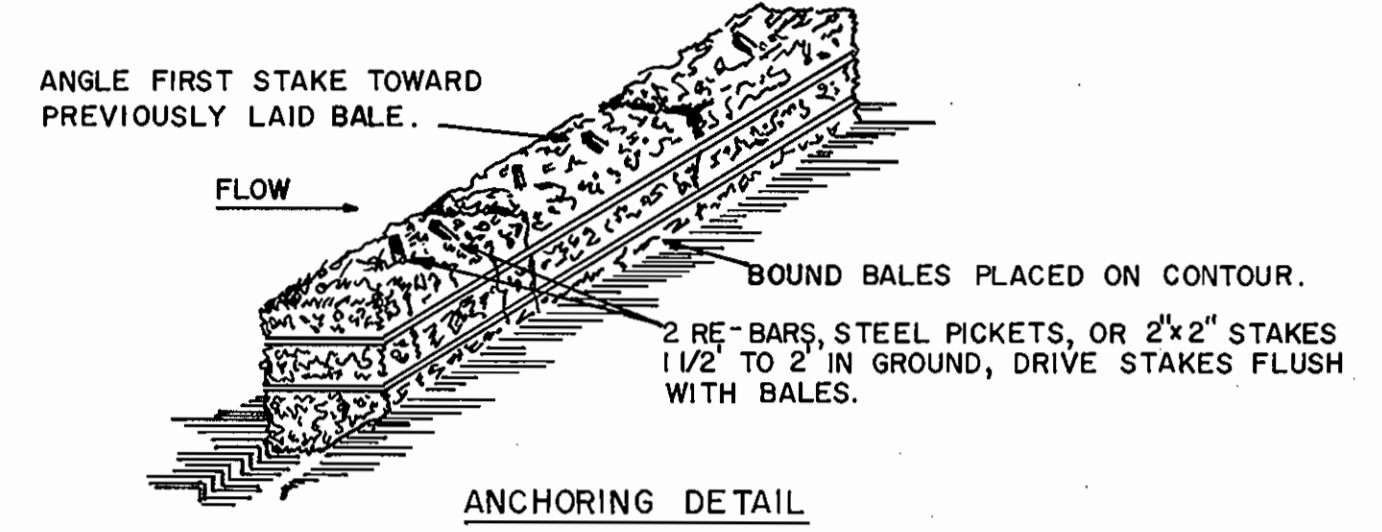
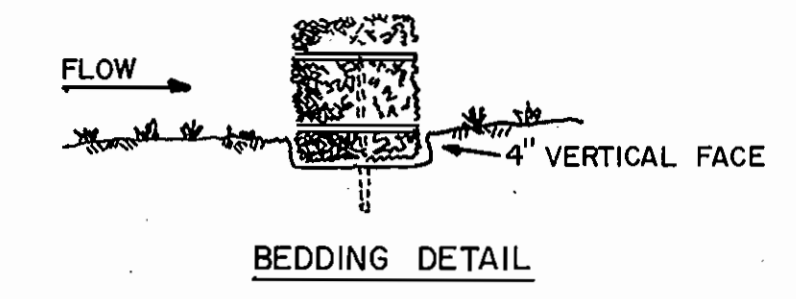
SCALE AS SHOWN
SHEET 4 OF 5



- NOTES:
1. SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL NOTES CONCERNING STABILIZED CONSTRUCTION ENTRANCE.
 2. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
 3. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
 4. THICKNESS - NOT LESS THAN SIX (6) INCHES.
 5. WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 6. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.

STABILIZED CONSTRUCTION ENTRANCE

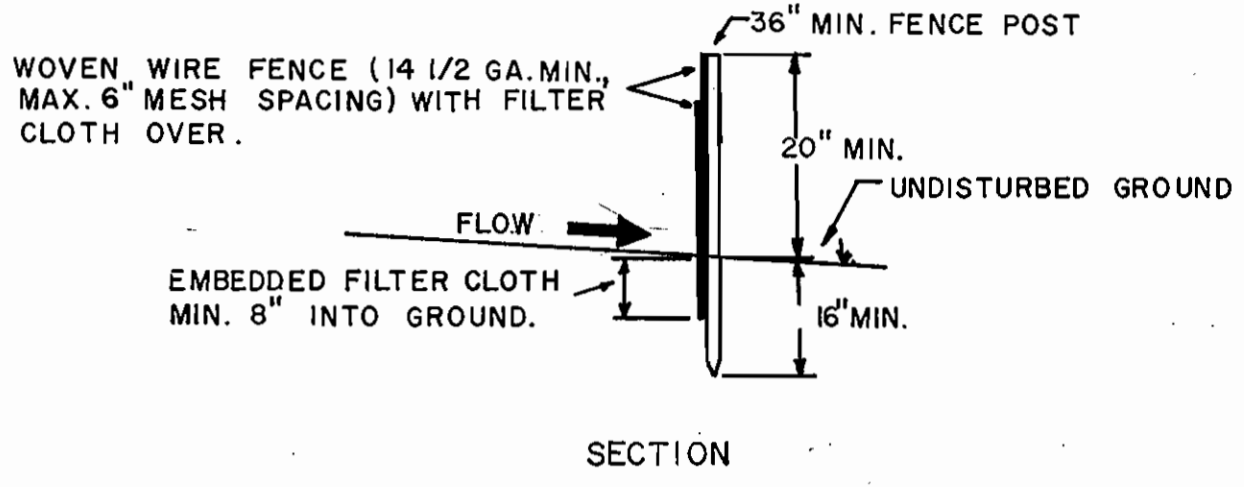
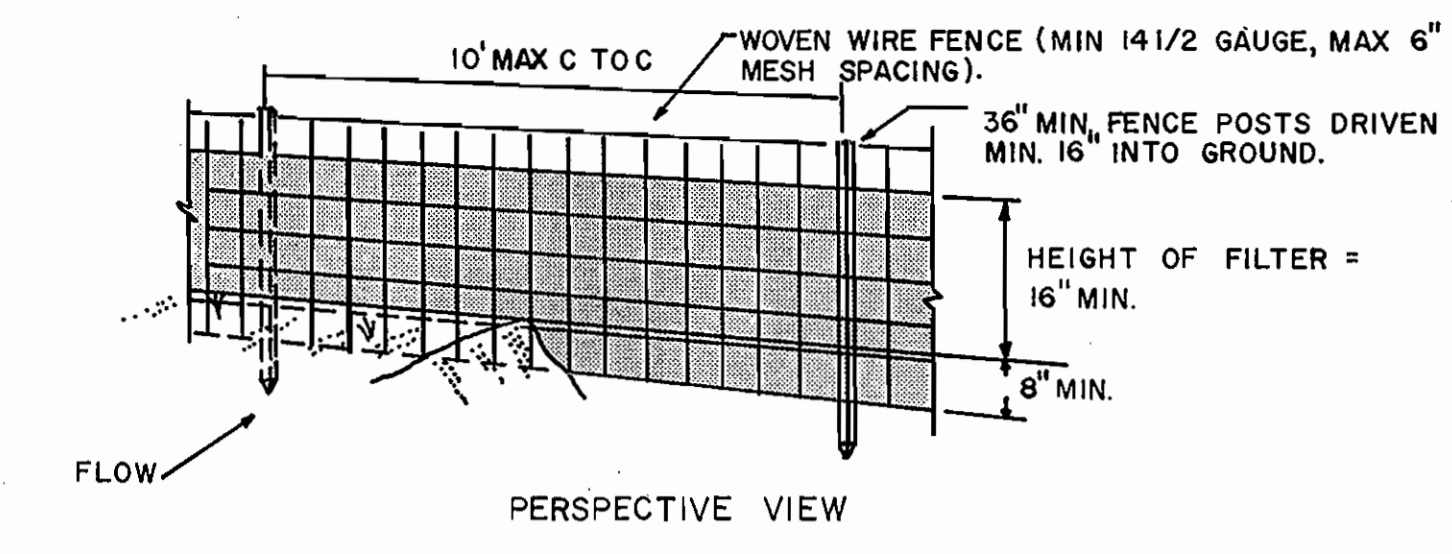
NO SCALE



- NOTES:
1. SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL NOTES CONCERNING STRAW BALE DIKES.
 2. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 3. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
 4. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.

STRAW BALE DIKE DETAIL

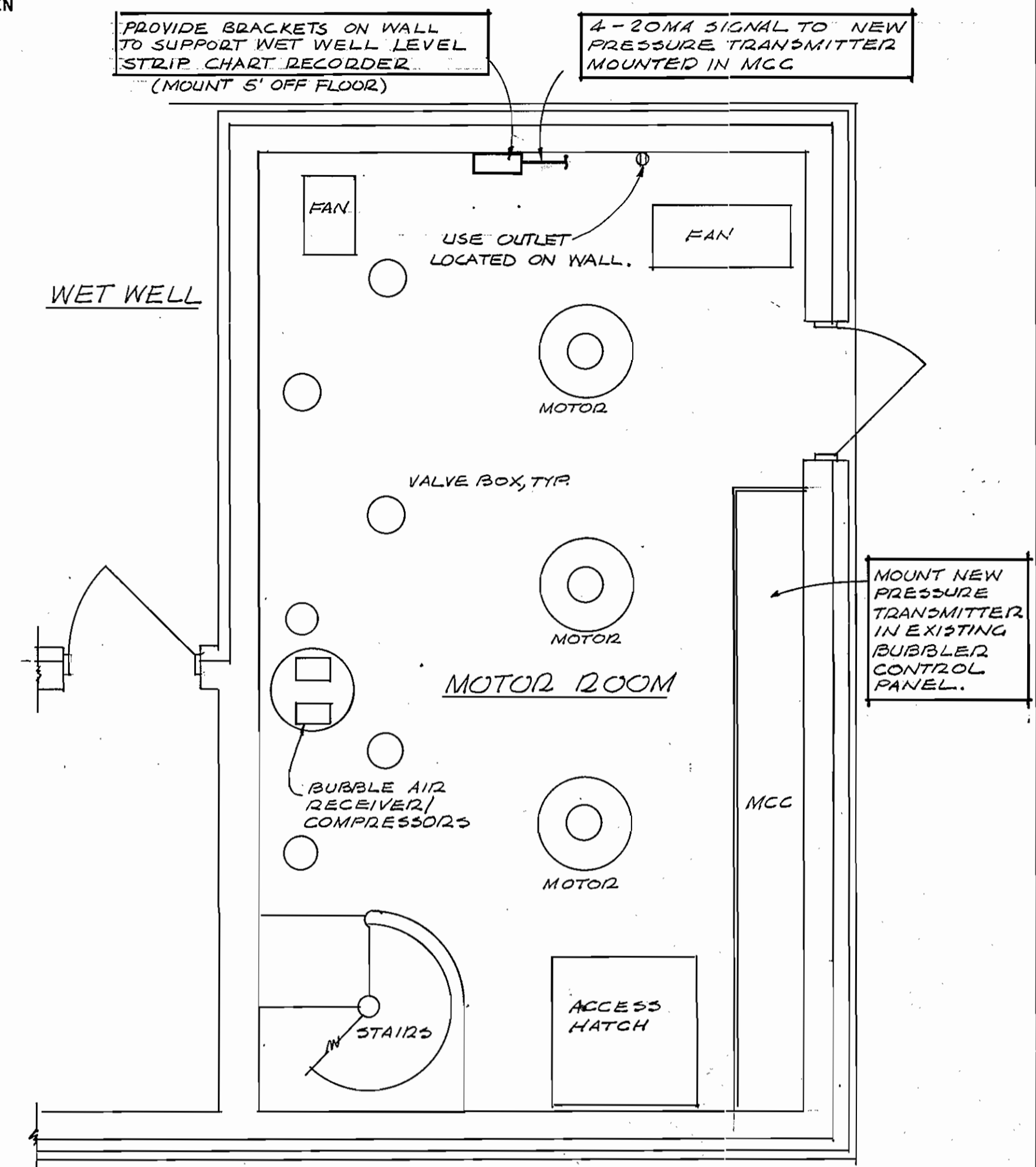
NO SCALE



- NOTES:
1. SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL NOTES CONCERNING SILT FENCE INSTALLATION AND MAINTENANCE.
 2. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 4. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 5. FILTER CLOTH SHALL BE GEOTAB, ENVIROFENCE OR EQUAL.

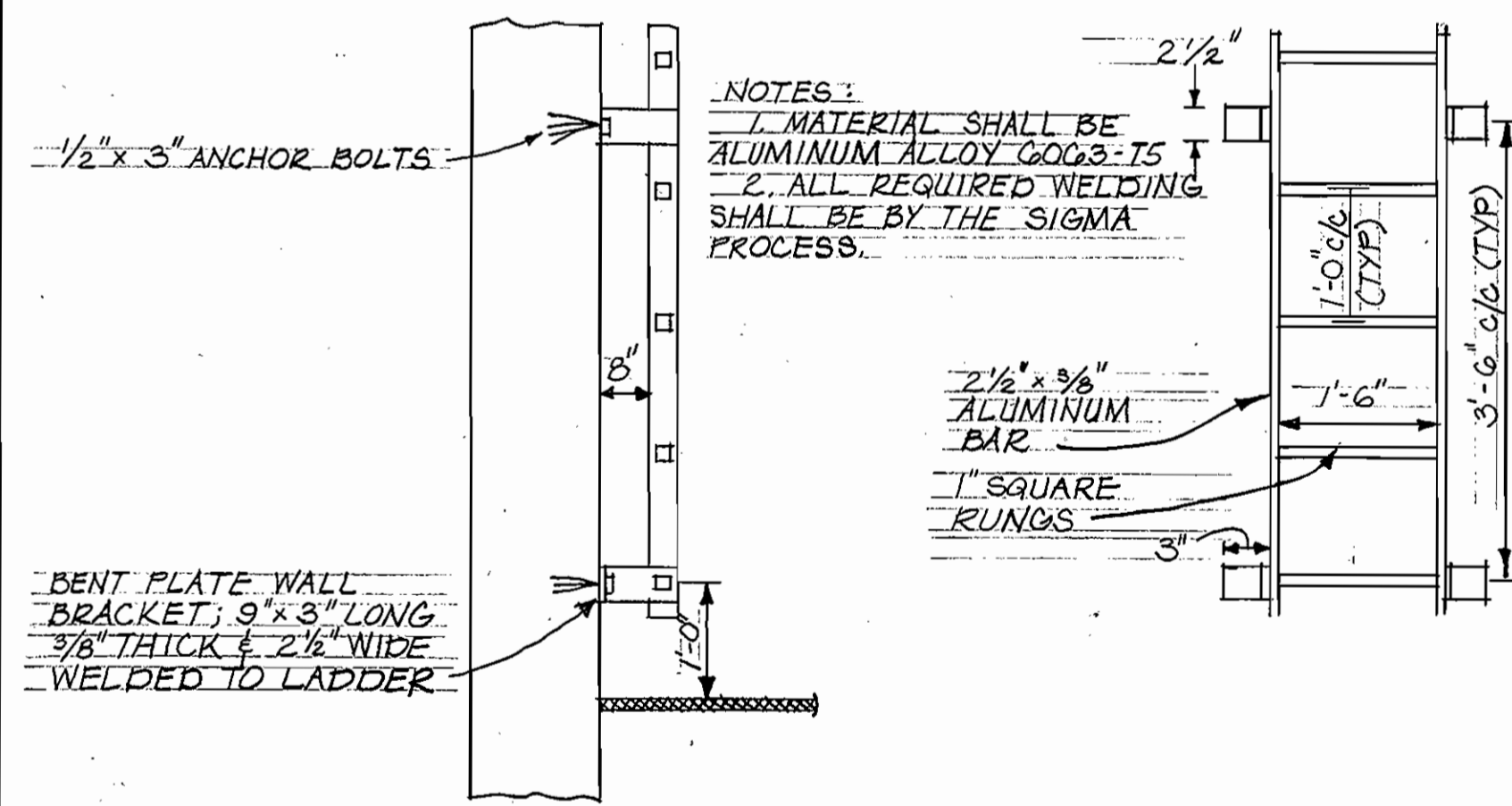
FILTER FENCE DETAIL

NO SCALE



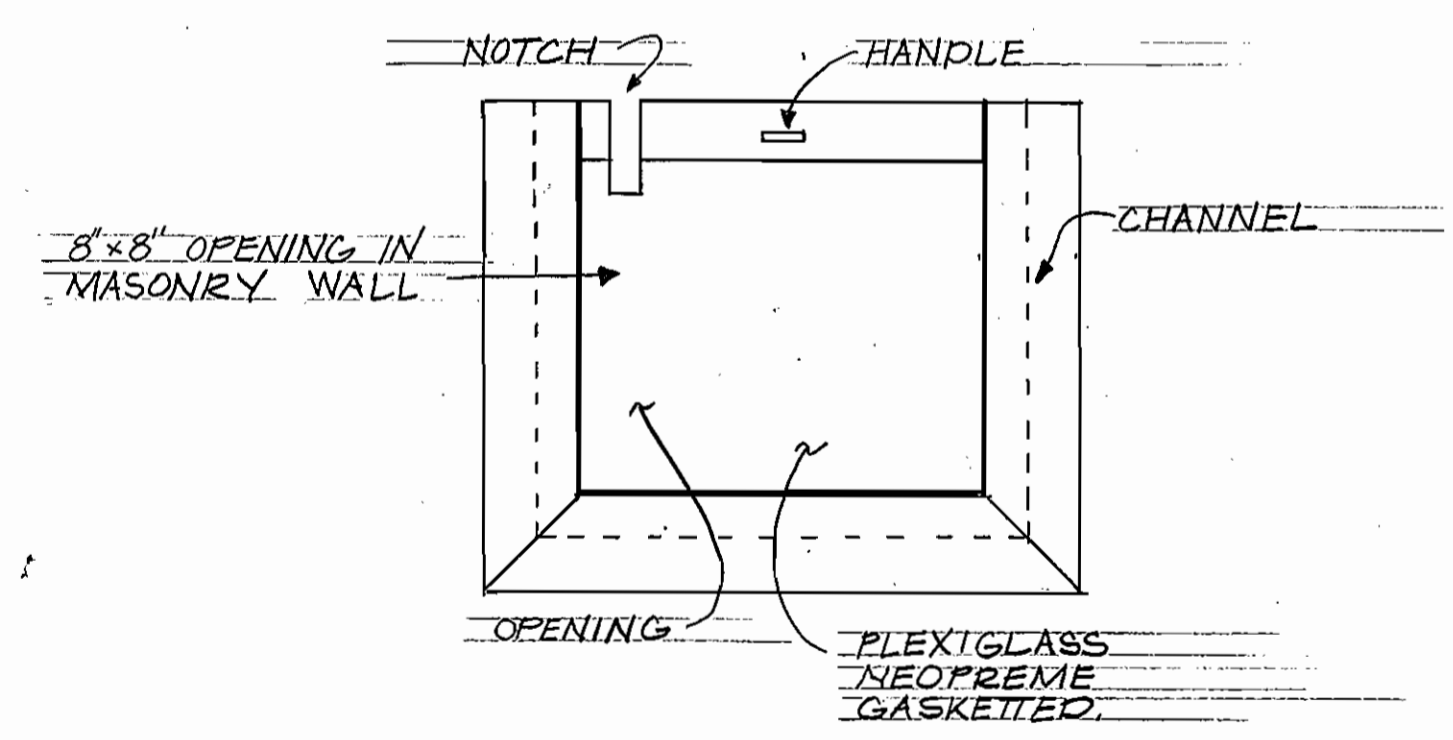
PLAN - NORTH LAUREL PUMP STATION MOTOR ROOM

NO SCALE



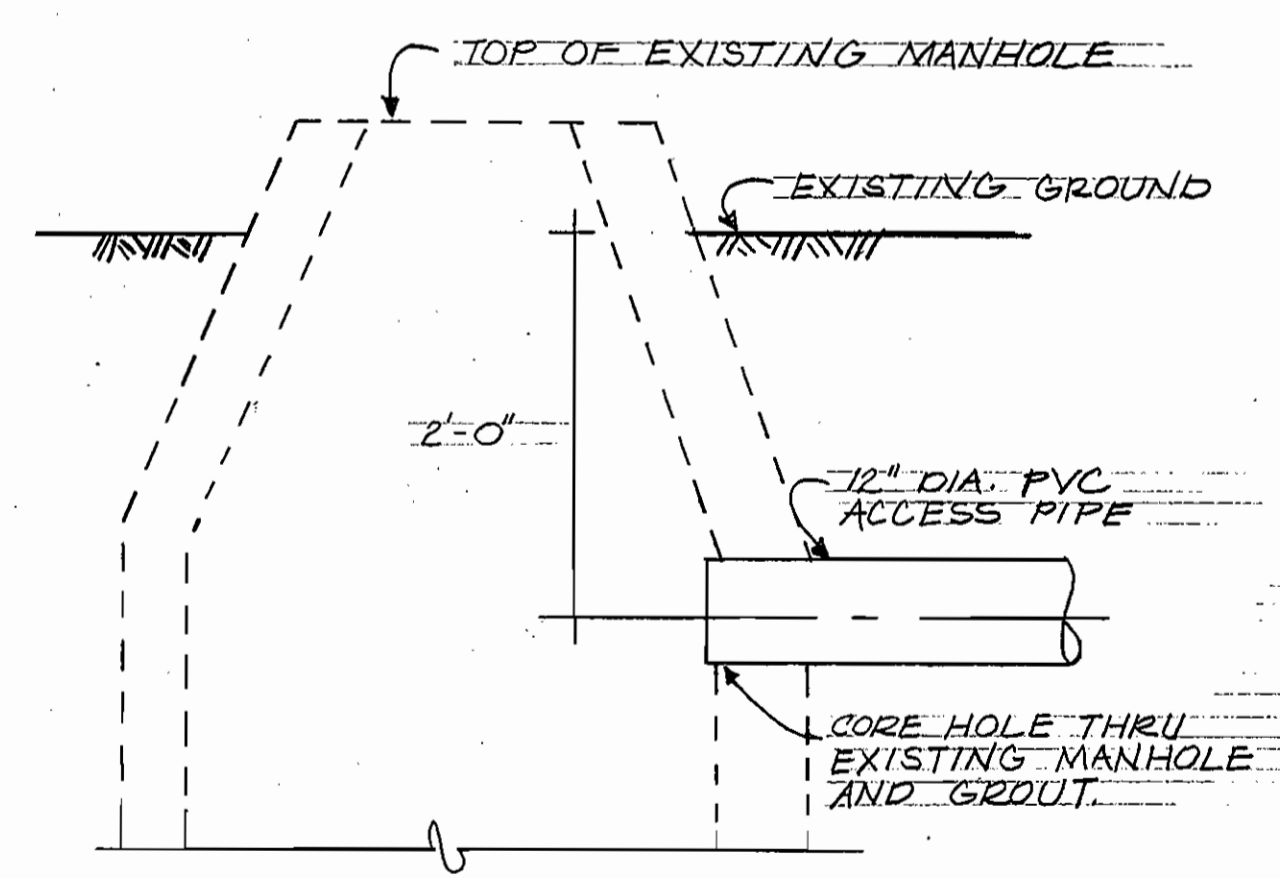
DETAIL - ALUMINUM ACCESS LADDER

NO SCALE



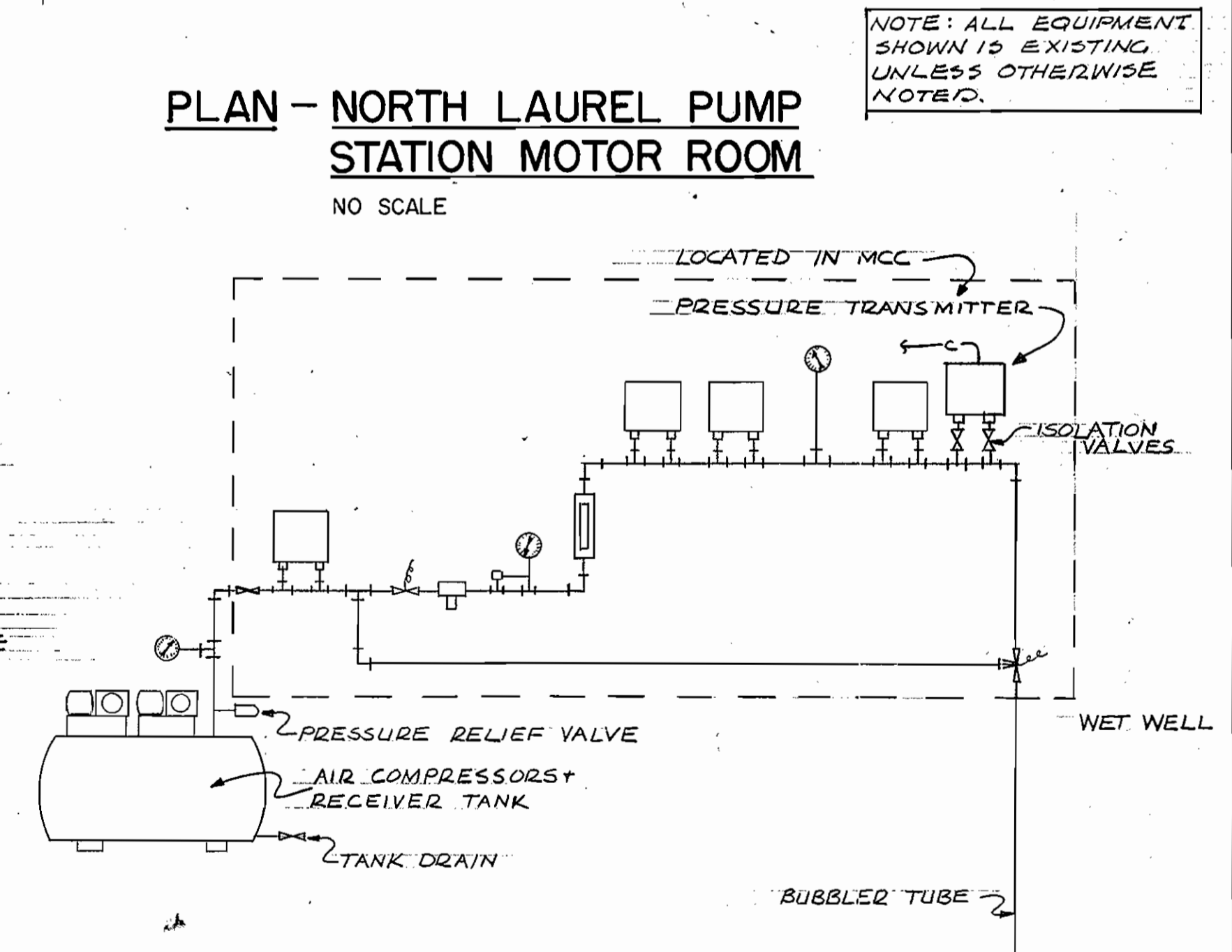
DETAIL - PLEXIGLAS COVER

NO SCALE



DETAIL - CONNECTION TO EXISTING MANHOLE

NO SCALE



SCHEMATIC - EXISTING BUBBLER SYSTEM

NO SCALE