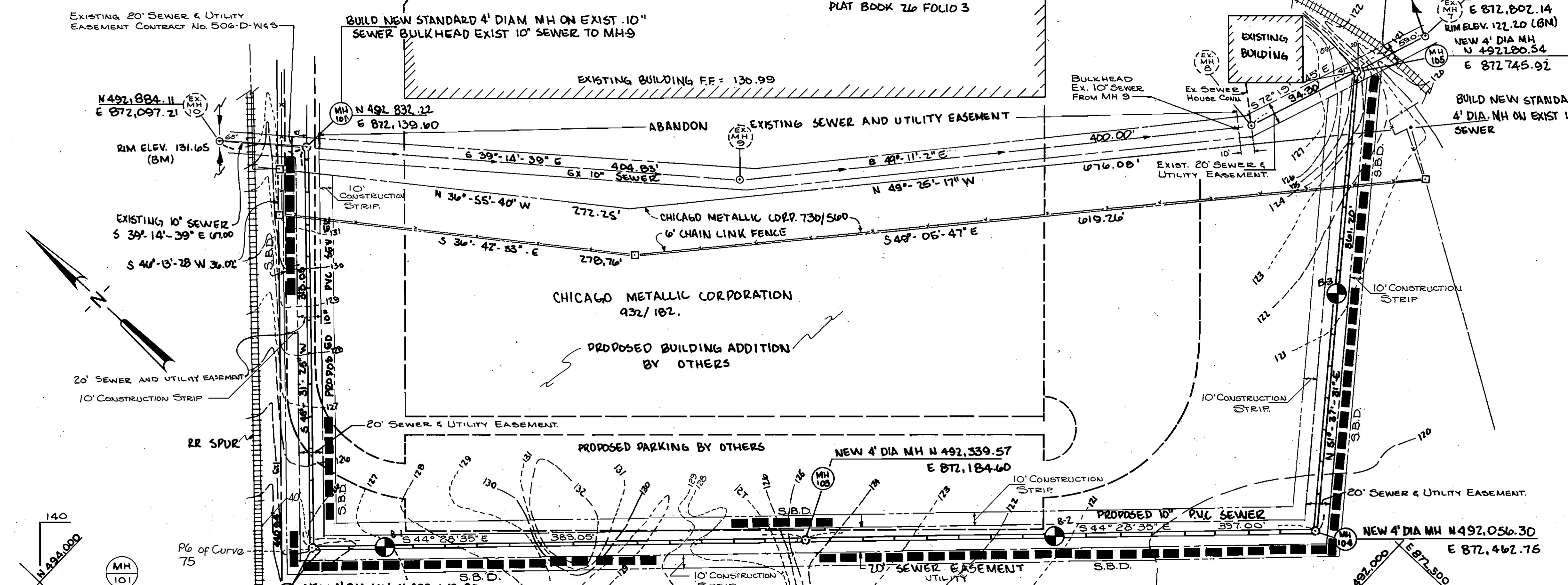


BENCH MARK TABULATION
 BM #10 ELEV. 131.65
 RIM EXISTING MANHOLE #10
 BM #7 ELEV. 122.20
 RIM OF EXISTING MANHOLE #7

CHICAGO METALLIC CORP.
 CMP 668/326

BLOCK "F"
 PARCEL "B"
 PLAT BOOK 76 FOLIO 3

EXIST. CONTRACT No. 506-D-W-5



VICINITY MAP
 SCALE: 1" = 600'

WATER AND SEWER CODE

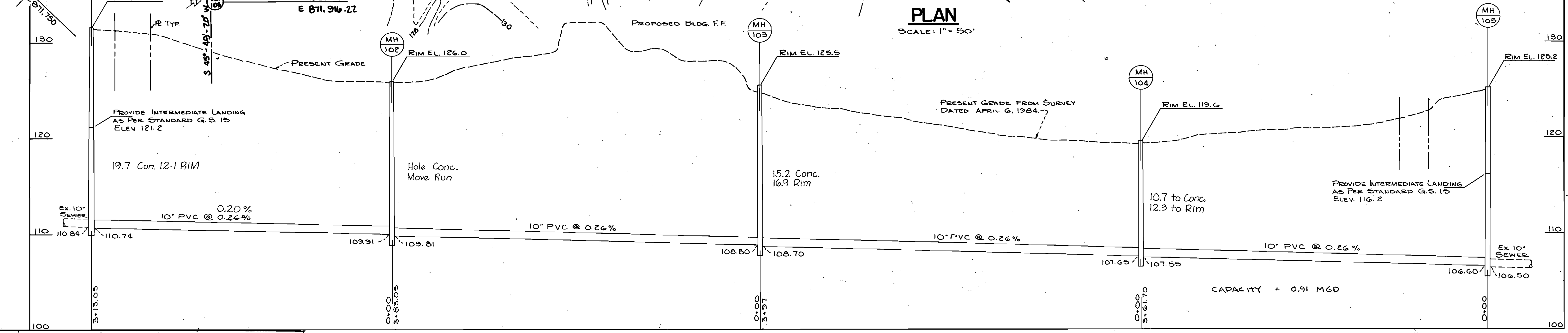
| | |
|------------|---------|
| WATER CODE | NA |
| SEWER CODE | 215:500 |

QUANTITIES

| ITEM | PROPOSED | AS BUILT | SUPPLIER |
|-----------|-----------|----------|----------|
| 10' SEWER | 1454 I.F. | 1441 | A & P |
| MANHOLES | 5 EA. | 5 EA. | Atlantic |

85.4 Vertical Feet

PLAN
 SCALE: 1" = 50'



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

NOTE: SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 15 OF THE STANDARD SPECIFICATIONS.

SEE SHEET 2 OF 2 FOR GENERAL NOTES

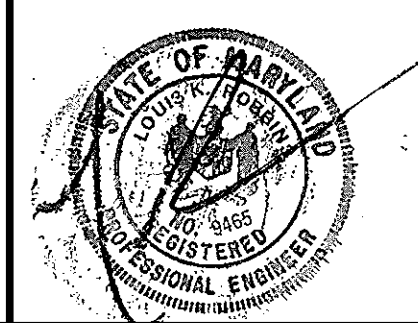
SEWER RELOCATION
 ROUTE 100 INDUSTRIAL PARK
 CONTRACT NO. 10-1284-D

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 Signature: *James M. Stein* Date: 10-2-84
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY CONSERVATION DISTRICT.
 APPROVED: *Stephen L. Huber* Date: 10-2-84
 Howard Soil Conservation District

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: *John E. Nunn* Date: 10-8-84
 Chief, Bureau of Engineering: *William J. Papp* Date: 10/12/84
 Chief, Bureau of Utilities: *Robert M. Beiler* Date: 10-5-84
 Chief - Land Development Div.: *Michael J. Papp* Date: 10/12/84

gpi Greenman - Pedersen, Inc.
 ENGINEERS/ARCHITECTS/PLANNERS
 1046 West St., Laurel, Maryland 20707



| | | | |
|----------|--------|------|----|
| DES | L.R. | | |
| DRN | D.K.B. | | |
| CHK | W.S. | | |
| DATE | 9-5-84 | BY | NO |
| REVISION | | DATE | |

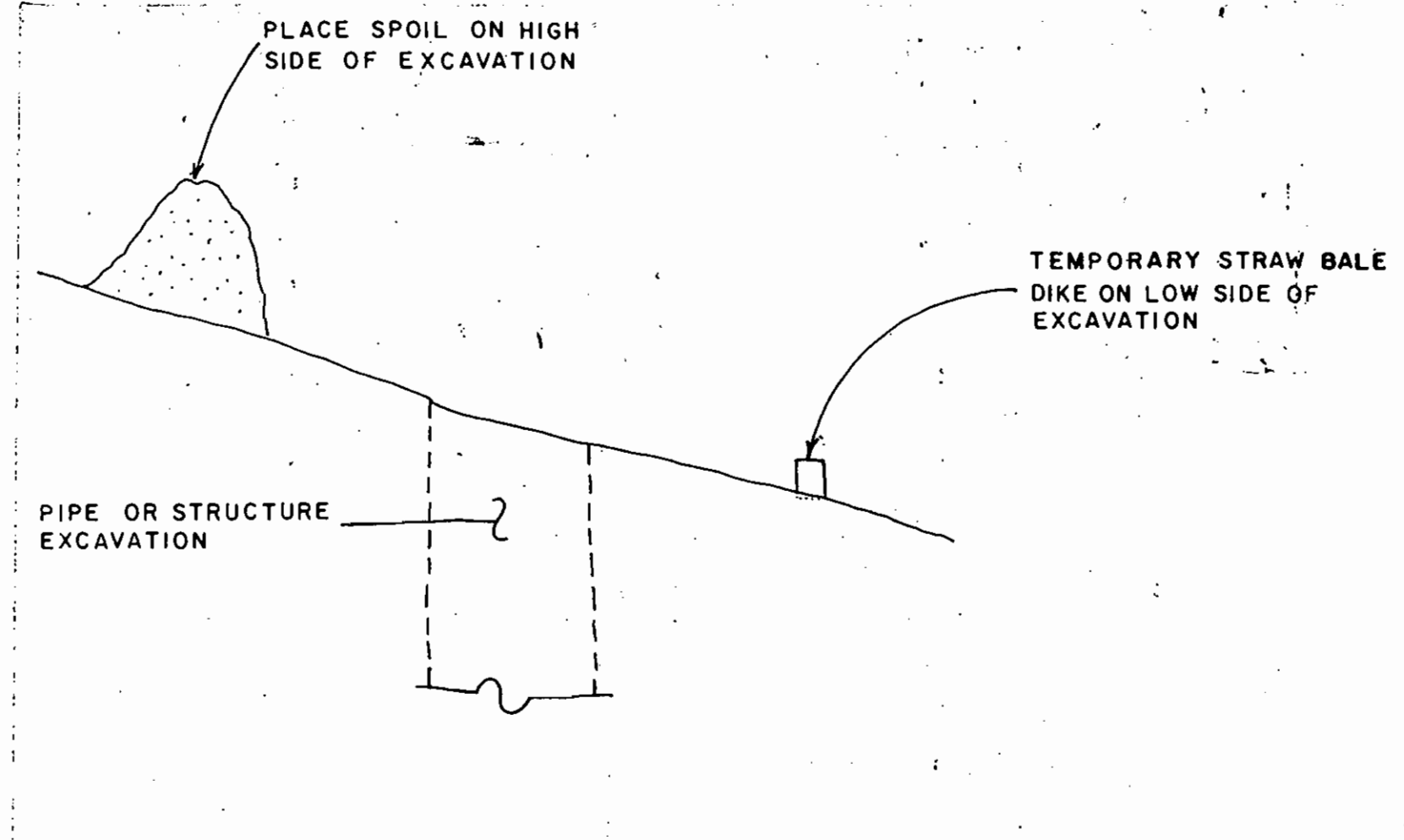
PLAN OF
 SEWER MAIN RELOCATION
 600 SCALE MAP NO. 36 BLOCK NO.

ROUTE 100
 INDUSTRIAL PARK
 ELECTION DISTRICT NO. 1
 CONTRACT NO. 10-1284-D

SCALE
 AS SHOWN
 SHEET
 1 OF 2

GENERAL NOTES

- ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS (VOLUME IV DESIGN MANUAL) DATED JANUARY, 1984. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- BORINGS SHOWN ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE OWNER AND/OR ENGINEER DOES NOT GUARANTEE THE COMPLETENESS OR ACCURACY OF THE INFORMATION SHOWN. THE CONTRACTOR MAY, WITH SCHEDULING APPROVAL, PERFORM HIS OWN SUBSURFACE INVESTIGATION. BORINGS WERE PERFORMED MAY 23, 1984.
- CONSTRUCTION STAKEOUT OF MAJOR ITEMS WILL BE THE RESPONSIBILITY OF THE OWNER.
- THE CONTRACTOR SHALL APPLY WATER AND/OR CALCIUM CHLORIDE FOR DUST CONTROL AS REQUIRED AND AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROTECT AND SUPPORT EXISTING UNDERGROUND UTILITIES IN THEIR EXISTING LOCATION, AS REQUIRED FOR THE DURATION OF THE CONTRACT.
- EXISTING UTILITIES SHOWN WERE TAKEN FROM AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF THESE AS WELL AS OTHERS THAT MAY BE ON THE SITE PRIOR TO START OF CONSTRUCTION. ANY UTILITIES DAMAGED DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE IMMEDIATELY REPAIRED AT HIS EXPENSE. THE CONTRACTOR SHALL CONTACT THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES 561-2585
- UNDER GROUND DAMAGE CONTROL - 234-5621
- TROUBLE SHOOTING - 298-9013
MISS UTILITY - 1-559-0100
COLONIAL PIPELINE CO. 795-1390
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE EXISTENCE OF PROPERTY LINE MARKERS, PIPES, MONUMENTS, STAKES, ETC., ADJACENT TO OR WITHIN THE CONSTRUCTION LIMITS. THESE MARKERS ARE TO BE RETAINED. IN THE EVENT THESE MARKERS ARE REMOVED, BROKEN OR DESTROYED BY THE CONTRACTOR, THEY SHALL BE REPLACED IN KIND BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS CAUTIONED TO AVOID DISTURBING ANY EXISTING FENCES, SIDEWALKS, CURBS, MAILBOXES, TREES, SHRUBS, SIGNS, ETC., THAT ARE ADJACENT TO THE CONSTRUCTION SITE. THE COST OF REPAIRING OR ADJUSTING ANY SUCH DISTURBED AREAS, AS ORDERED BY THE ENGINEER, WILL BE AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE POSSIBILITY OF ENCOUNTERING GROUNDWATER DURING THE COURSE OF THE CONSTRUCTION. THE COST OF ANY Dewatering OPERATIONS WILL BE INCLUDED IN THE PRICE BID FOR THE PROJECT.
- THE CONTRACTOR SHALL SUBMIT AND CERTIFY TO THE ENGINEER, A RED-LINED PRINT SHOWING "AS BUILT" CONDITIONS. NO DIRECT PAYMENT SHALL BE MADE FOR THIS WORK.
- DURING THE RESTORATION OPERATION, THE CONTRACTOR SHALL INSURE THE ELIMINATION OF ANY DEPRESSION THAT MAY COLLECT WATER AND GRADE THE AREA TO DRAIN.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- ALL NEW SEWER MAINS SHALL BE PVC PIPE CONFORMING TO ASTM D-3034.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2' - 0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4' - 0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND FOR 100% OF THE BID, PAYABLE TO THE OWNER AND/OR HOWARD COUNTY.
- ALL EXCAVATIONS OVER 5' IN DEPTH ARE TO BE SHEETED PER CODE.



SEDIMENT CONTROL DETAIL

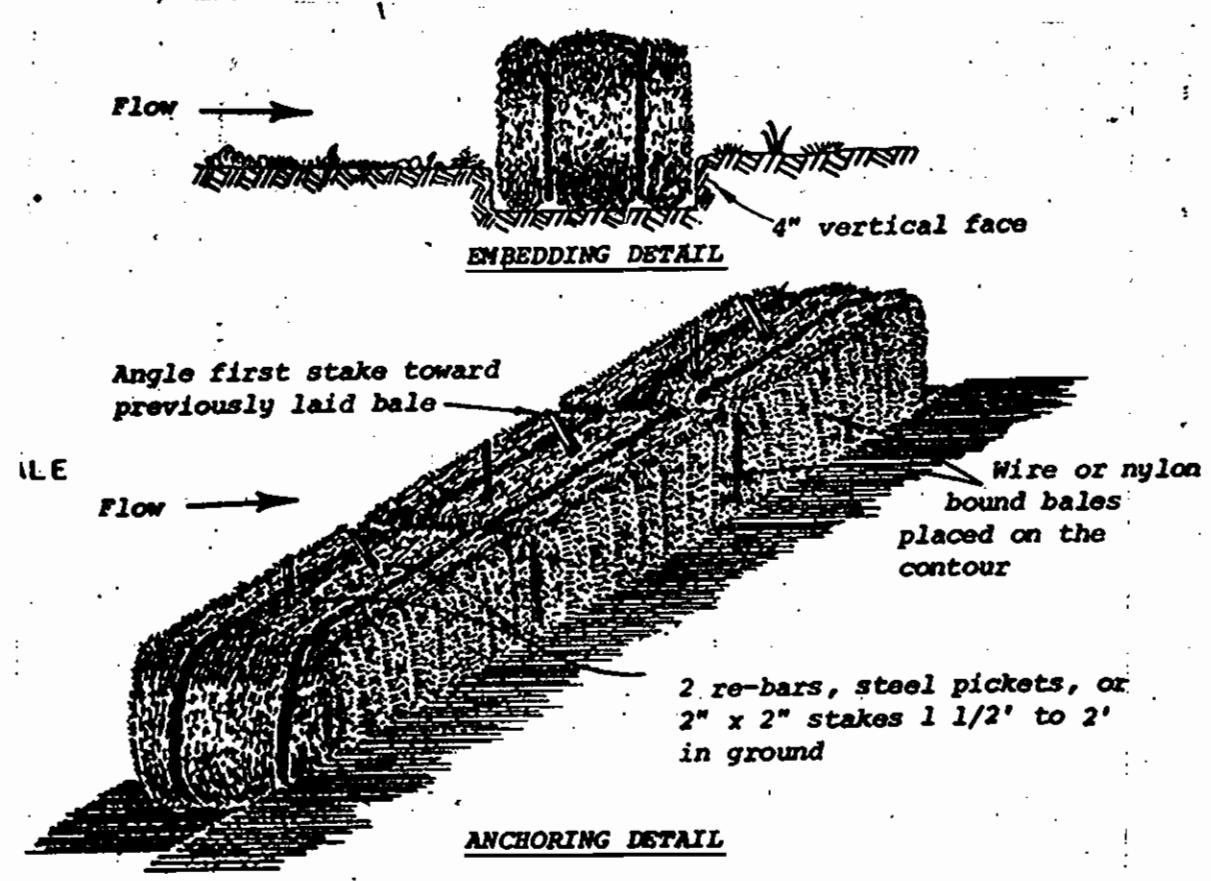
N.T.S.

SEDIMENT CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS."
- ALL SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAINAGE SYSTEM (I.E. THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS).
- CONSTRUCTION OR INSTALLATION OF ALL TEMPORARY OR PERMANENT SEDIMENT CONTROL STRUCTURES AND PIPES TO BE PRIOR TO INITIAL GRADING.
- ALL SOIL STABILIZATION IS TO BE DONE CONCURRENTLY WITH FINE GRADING.
- MINOR FIELD ADJUSTMENTS MAY BE MADE TO ACCOMPLISH INTENDED PURPOSE.
- ALL TEMPORARY PERIMETER DIKES TO BE TEMPORARILY STABILIZED BY SEEDING AND MULCHING IMMEDIATELY AFTER CONSTRUCTION OF THE DIKES.
- CONTINUOUS INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES MUST BE PROVIDED TO INSURE THE INTENDED PURPOSE IS ACCOMPLISHED. SEDIMENT CONTROL DEVICES ARE TO BE MAINTAINED UNTIL THE ENTIRE DRAINAGE AREA IS PERMANENTLY STABILIZED WHEN TEMPORARY SEDIMENT CONTROL DEVICES ARE NO LONGER REQUIRED. THEY SHALL THEN BE REMOVED AND THE AREA PERMANENTLY STABILIZED.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL AREAS REMAINING OR INTENDED TO REMAIN DISTURBED FOR LONGER THAN 30 DAYS SHALL BE STABILIZED IN ACCORDANCE WITH THE USDA, SOIL CONSERVATION SERVICE'S "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" FOR CRITICAL AREA STABILIZATION.
- THE SEDIMENT CONTROL APPROVALS ON THIS PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK.
- DISTURBED AREA = 0.9 AC.
- AREA TO VEGETATIVELY STABILIZED = 0.9 AC.
- ALL AREAS SHALL BE PERMANENTLY STABILIZED WHEN SITE DEVELOPMENT WORK, GRADING AND/OR OTHER RELATED CONSTRUCTION-RELATED ACTIVITIES CEASE TO BE CONTINUOUS OR ONGOING FOR PERIODS EXCEEDING 45 DAYS. THESE DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS." THE INPLACE SEDIMENT CONTROL MEASURES WILL BE MAINTAINED ON A CONTINUING BASIS UNTIL THE SITE IS PERMANENTLY STABILIZED AND ALL PERMIT REQUIREMENTS ARE MET.

SEQUENCE OF CONSTRUCTION

- | | | |
|---------|----|---|
| 2 DAYS | 1. | MOBILIZE AND STAKE OUT. |
| 2 DAYS | 2. | INSTALL TEMPORARY SEDIMENT AND EROSION CONTROLS. |
| 15 DAYS | 3. | INSTALL PIPE AND MANHOLES, MAINTAIN FLOW IN EXISTING PIPES. |
| 1 DAY | 4. | TEST NEW SYSTEM. |
| 1 DAY | 5. | DIVERT FLOW TO NEW MAINS AND ABANDON EXISTING SYSTEM BETWEEN MANHOLES 10A & 8. |
| 3 DAYS | 6. | TOPSOIL AND PERMANENTLY STABILIZE ALL DISTURBED AREAS. |
| 1 DAY | 7. | REMOVE SEDIMENT CONTROL DEVICES WHEN ALL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED. |



Construction Specifications

- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
- Each bale shall be embedded in the soil a minimum of 4".
- Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE

SEEDING AND SODDING NOTES

- ALL DISTURBED AREAS SHALL BE SEEDDED AND MULCHED OR SODDED AS DIRECTED BELOW.
- SEED BED PREPARATION:
PERMANENT:
APPLY 90 POUNDS PER 1,000 SQUARE FEET OF GROUND LIMESTONE AND 25 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT. THOROUGHLY MIX INTO SOIL TO A MINIMUM DEPTH OF THREE INCHES.
TEMPORARY:
APPLY 75 POUNDS PER 1,000 SQUARE FEET OF GROUND LIMESTONE AND 15 POUNDS PER 1,000 SQUARE FEET OF 10-20-20 FERTILIZER OR EQUIVALENT. THOROUGHLY MIX INTO SOIL TO A MINIMUM DEPTH OF THREE INCHES.
- SEEDING:
USE KENTUCKY 31 TALL FESCUE AT A RATE OF SIX POUNDS PER 1,000 SQUARE FEET WHEN DONE BETWEEN FEBRUARY 1 TO APRIL 30 AND AUGUST 15 TO NOVEMBER 1. ADD WEEPING LOVEGRASS AT A RATE OF .05 POUNDS PER 1,000 SQUARE FEET WHEN DONE BETWEEN MAY 1 TO AUGUST 14. AT ALL OTHER TIMES, THE DISTURBED AREA SHALL BE PROTECTED WITH A TEMPORARY STRAW MULCH COVER APPLIED AT A RATE OF 1-1/2 TONS TO 2 TONS PER ACRE. THIS IS 70 TO 90 POUNDS PER 1,000 SQUARE FEET. NO LATER THAN 30 DAYS AFTER THE NEXT SEEDING SEASON, PROVIDED GROUND IS NOT FROZEN, THE DISTURBED AREA SHALL BE SEEDDED OR SODDED AS DESCRIBED HEREIN.
IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH UNTIL THEY ARE FIRMLY ESTABLISHED. IF FEASIBLE, THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.
- MULCHING:
USE CLEAN STRAW AT A RATE OF 1-1/2 TO 2 TONS PER ACRE. APPLY EMULSIFIED ASPHALT AT A RATE OF 5 GALLONS PER 1,000 SQUARE FEET.
- SODDING:
IF SODDING IS USED IN LIEU OF SEEDING, THE PERMANENT SODDING IS TO BE ROOTED CERTIFIED KENTUCKY 31, TALL FESCUE WITH NOT MORE THAN 20 PERCENT MARION BLUE GRASS. SOD SHALL BE OF SUFFICIENT THICKNESS TO PREVENT BREAKAGE AND NOT LESS THAN 3/4 INCHES. ALL SOD SHALL BE TRANSPORTED WITHIN 36 HOURS OF HARVESTING. FERTILIZATION AND LIMING ARE TO BE ACCOMPLISHED IN THE SAME MANNER AS PER PERMANENT SEEDING. ON SLOPES, PLACE SOD WITH LONG EDGES PARALLEL TO CONTOURS, STARTING AT BOTTOM OF SLOPE. EACH STRIP OF SOD PLACED ON A SLOPE OF 3:1 OR GREATER SHALL BE STAKED WITH AT LEAST TWO STAKES, SPACED NOT MORE THAN TWO FEET APART WITH FLAT SIDES AGAINST THE SLOPES. ALL SLOPES 2:1 OR GREATER SHALL BE SODDED. ALL SOD TO BE ROLLED TO ASSURE FIRM CONTACT WITH THE SOIL AND NO AIR POCKETS. WATER AS NECESSARY.
TEMPORARY SEEDING:
USE PERENNIAL RYE GRASS APPLIED AT A RATE OF ONE POUND PER 1,000 SQUARE FEET. MULCHED WITH HAY OR STRAW. MULCH AT A RATE OF 70 POUNDS PER 1,000 SQUARE FEET.
TEMPORARY SEEDING DATES: FEBRUARY 1 TO APRIL 30, AUGUST 15 TO NOVEMBER 30.
- ALL SEEDING AND SODDING SHALL BE COMPLETED WITHIN A MAXIMUM OF 45 DAYS AFTER BEGINNING OF GRADING.
- DISCING OR HARROWING SHALL BE DONE ON CONTOUR.

OWNER'S/DEVELOPER'S CERTIFICATION

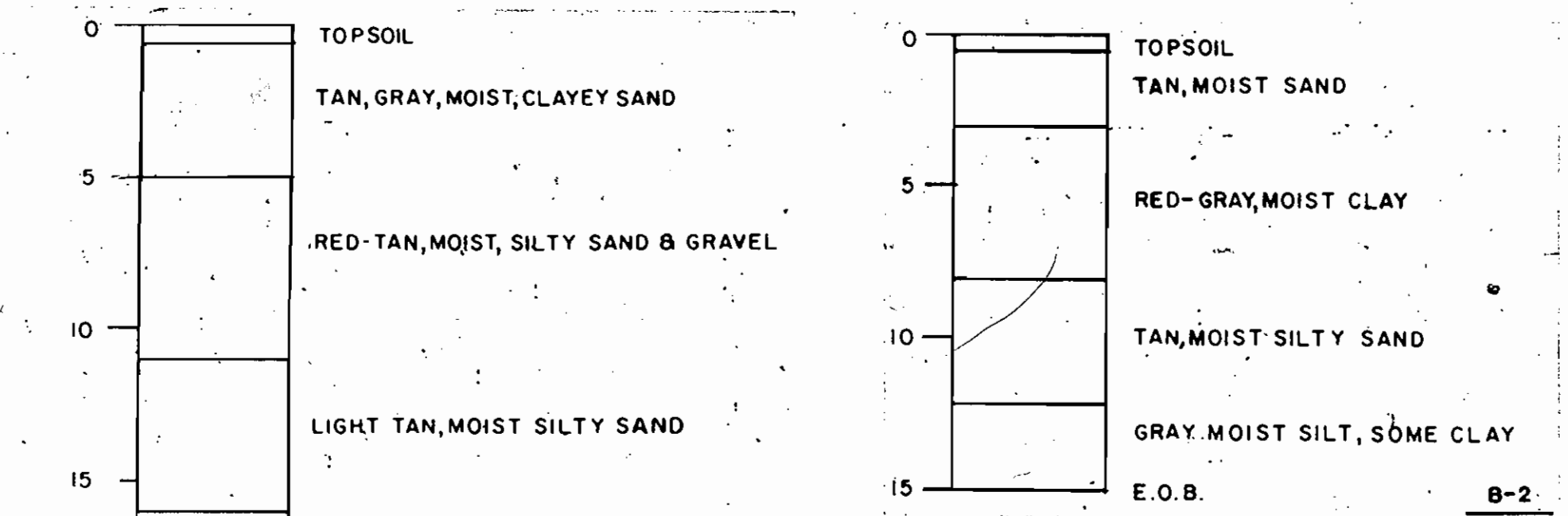
"I/WE HEREBY CERTIFY THAT I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN AND THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

SIGNATURE Warren L. Strasinger DATE 9/2/84
NAME WARREN L. STRASINGER TITLE Gen. Mgr. PHONE NO. 796-4770
FIRM CHICAGO METALLIC CORP. ADDRESS 6754 SANTA BARBARA CT BALTIMORE, MD. 21227

CONSULTANT'S CERTIFICATION

"I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND 'STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR DEVELOPING AREAS'. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER."

SIGNATURE Louis Robbins MD. LIC. # 9465 DATE 9/27/84
NAME LOUIS ROBBINS
FIRM GPI ADDRESS 1046 WEST ST. LAUREL, MD. 20707



SOIL BORING LOGS

| | | | | | | | | | | | |
|--|--|---|--|---|--|---|--|---|--|--------------------------------------|--|
| DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <u>Robert W. Benning</u> DATE <u>10-5-84</u> Chief - Bureau of Utilities | | GPI Greenman - Pedersen, Inc. ENGINEERS/ARCHITECTS/PLANNERS 1046 West St., Laurel, Maryland 20707 Chief: <u>Robert W. Benning</u> DATE <u>10/5/84</u> Chief - Land Development Div. | | DES L.R. DRN D.K.B. CHK W.S. DATE 9-5-84 BY NO REVISION DATE | | PLAN OF SEWER MAIN RELOCATION 600 SCALE MAP NO. <u>36</u> BLOCK NO. | | ROUTE 100 INDUSTRIAL PARK ELECTION DISTRICT NO. 1 CONTRACT NO. 10-1284-D | | SCALE AS SHOWN SHEET 2 OF 2 | |
|--|--|---|--|---|--|---|--|---|--|--------------------------------------|--|