

**6-INCH WATER MAIN EXTENSION**

**SHC INVERT @ PROPERTY LINE CHART**

STATION	LOT	ELEVATION
@ EX. MH 2-A	EX. MH 2-A TO EX. MH 3	290.24
0+65 FT.	1	290.22
1+00 FT.	MH 600 TO MH 603	299.75

8/27/99  
AS BUILT INFORMATION FOR RED LINE  
REVISION  $\Delta$  TO CONTRACT No. 24-3635-D

W/E & S. CO. # 24-3635-D  
F78-1G

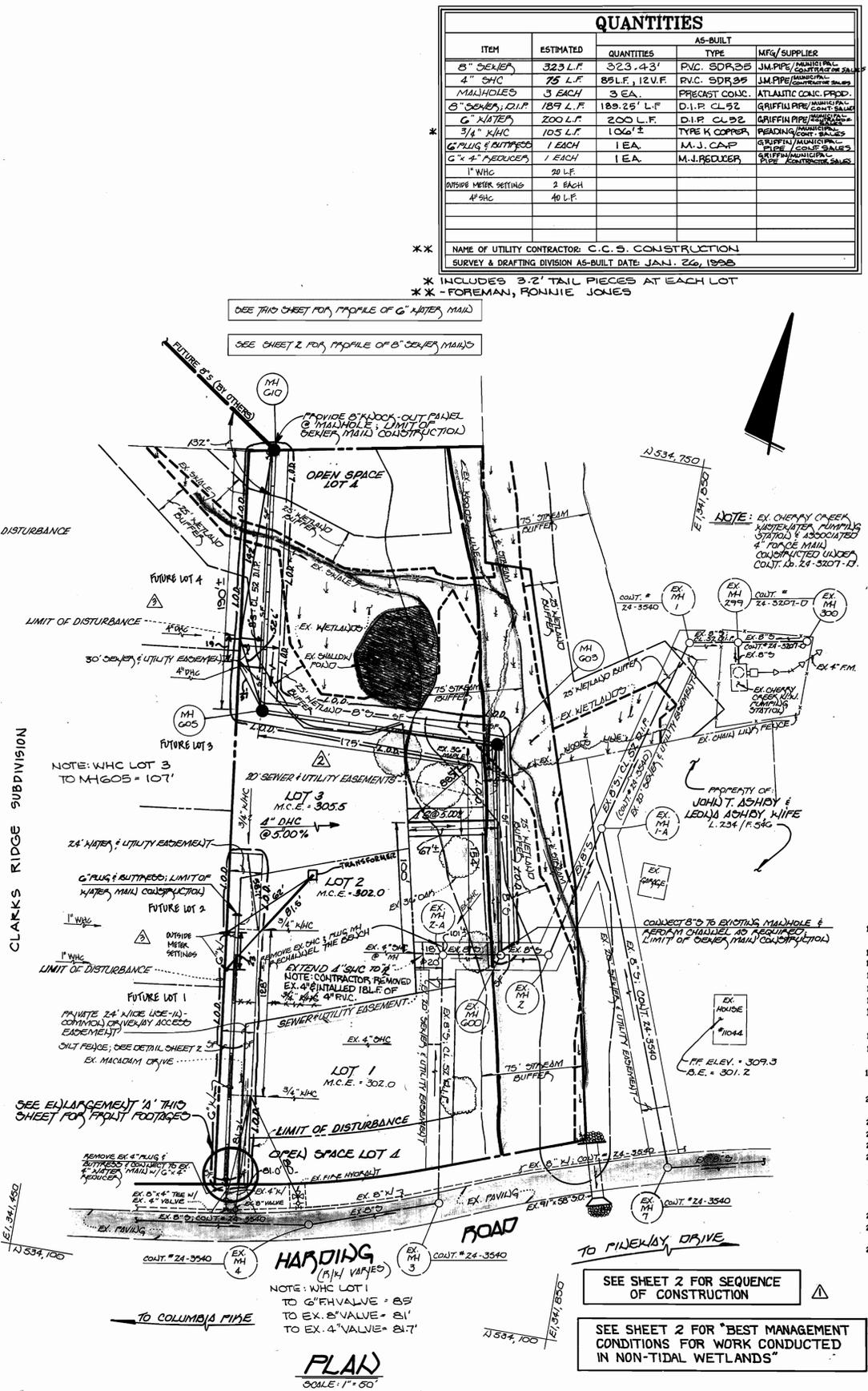
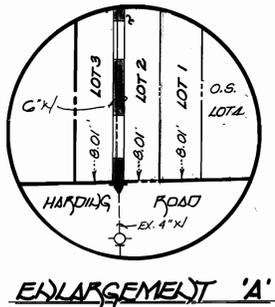
REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Cheryl Simmons* 11/7/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

APPROVED:  
*John B. Robertson* 11/7/97  
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

EROSION CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS.

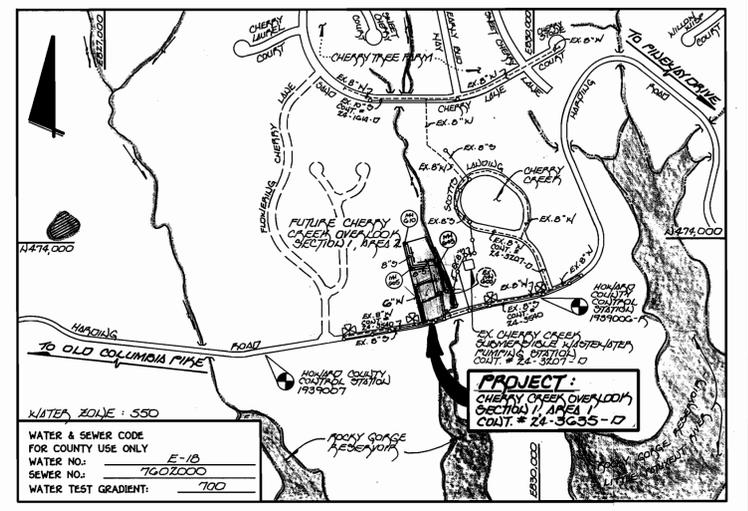


**QUANTITIES**

ITEM	ESTIMATED	AS-BUILT		MFG./SUPPLIER
		QUANTITIES	TYPE	
6" SINKER	323 L.F.	323.4-3'	PVC SDR 35	JM PIPE
4" SHC	75 L.F.	85 L.F., 12 V.F.	PVC SDR 35	JM PIPE
MANHOLES	3 EACH	3 EA.	PRECAST CONC.	ATLANTIC CONC. PROD.
6" SINKER, D.I.P.	189 L.F.	189.25' L.F.	D.I.P. CL 52	GRIFFIN PIPE
6" WATER	200 L.F.	200 L.F.	D.I.P. CL 52	GRIFFIN PIPE
3/4" W/C	105 L.F.	106.3'	TYPE K COPPER	PEADING
6" PLUG & BUTTRESS	1 EACH	1 EA.	M.J. C.A.P.	GRIFFIN/MUNICIPAL
6" x 4" REDUCER	1 EACH	1 EA.	M.J. REDUCER	GRIFFIN/MUNICIPAL
1" W/C	20 L.F.			
OUTSIDE METER SETTING	2 EACH			
4" SHC	40 L.F.			

NAME OF UTILITY CONTRACTOR: C.C.S. CONSTRUCTION  
SURVEY & DRAFTING DIVISION AS-BUILT DATE: JAN. 26, 1998

\* INCLUDES 3'-2" TAIL PIECES AT EACH LOT  
\* FOREMAN, RONNIE JONES



TYPE OF BUILDING: SINGLE FAMILY RESIDENTIAL (3 BUILDINGS)

NUMBER OF LOTS: 4

NO. OF WATER HOUSE CONNECTIONS: 3

NO. OF SEWER HOUSE CONNECTIONS: 1

DRAINAGE AREA: LITTLE PATUXENT

TREATMENT PLANT: LITTLE PATUXENT W/W; VIA CHERRY CREEK & CHERRY TREE PUMP STATIONS

\* THIS (2) OF THE PROPOSED LOTS WILL UTILIZE EXISTING 6" SINKER HOUSE CONNECTIONS CONSTRUCTED UNDER CONTRACT NO. 24-3450.

- GENERAL NOTES**
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
  - ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
  - ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
  - 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 (1991 EDITION) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
  - WHERE TEST PITS HAVE BEEN MADE ON 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
    - STATE HIGHWAY ADMINISTRATION - 531-5533
    - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
    - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9066
    - MESS UTILITY - 1-800-257-7777
    - COLONIAL PIPELINE CO. - 795-1390
    - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
  - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
  - 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.
  - 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.
  - T.B. DENOTES TEST BORING.
  - 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 COVERS, STANDARD DETAIL G 552.
  - WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
  - HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
  - ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
  - MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G 551.
  - WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
  - ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
  - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
  - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W11 AND W213). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
  - ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
  - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 10.10(A) OF THE HOWARD COUNTY CODE.

PLAN REFERENCE NUMBERS:  
F78-1G (PLAN)  
F78-1G (PROFILE)

CONTRACT NO. 24-3635-D  
CHERRY CREEK OVERLOOK  
SECTION 1, AREA 1  
LOT Nos. 1-4  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

AS BUILT

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>John B. Robertson</i> 11-4-97 DATE	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND  <i>Cheryl Simmons</i> 11/13/97 DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK 10272 Baltimore National Pike Elkott City, Maryland 21042 (410) 461-2885	DESIGNED BY: M.J.H. DRAWN BY: M.J.H. CHECKED BY: P.W.C. DATE: SEPTEMBER 1997	M.T. $\Delta$ ADD W/CS & SHCS TO SUPPORT FUTURE SUBDIVISION 4-99 L.M. $\Delta$ REVISE SEWER MAIN ALIGNMENT & EASEMENT: MH 603-MH 602 2-16-98 L.M. $\Delta$ REFERENCE WETLAND NOTES ON SHEET 2 BY NO. REVISION DATE	WATER & SEWER MAINS PLAN & PROFILES  600' SCALE MAP NO. 46 BLOCK NO. 10 11 G F.C.C. WORK ORDER NO. 30203 FILE NAME: CHERRY CREEK OVERLOOK 1/1	CHERRY CREEK OVERLOOK SECTION 1, AREA 1 LOT Nos. 1-4 CONTRACT NO. 24-3635-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  SCALE AS SHOWN SHEET 1 OF 2
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**STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

Using vegetation as cover for barren soil to protect it from erosion...  
 DEFINITION: VEGETATIVE STABILIZATION IS THE USE OF VEGETATION TO PREVENT EROSION...  
 PURPOSE: TO PREVENT EROSION AND TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL...  
 APPLICATION: THIS SPECIFICATION IS APPLICABLE TO ALL DISTURBED AREAS...  
 MATERIALS: VEGETATION SHALL BE SEEDING OR MULCHING...  
 SEEDING: SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY SEEDING NOTES...  
 MULCHING: MULCHING SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY MULCHING NOTES...  
 MAINTENANCE: MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY MAINTENANCE NOTES...

- A. Site Preparation**
1. Erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
  2. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
  3. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed areas over 5 acres.
- B. Soil Amendments (Fertilizers)**
1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil analyses for engineering purposes may also be used for chemical analyses.
  2. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Fertilizer may be substituted for fertilizer approved by the appropriate authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warranty of the producer.
  3. Lime materials shall be ground limestone (hydrated or burnt lime) or dolomite which contains at least 50% total oxides (calcium oxide plus magnesium oxide) plus 5% free lime. The maximum amount of moisture shall be such that it will pass through a #20 mesh sieve and will pass through a #100 mesh sieve and 90-100% will pass through a #20 mesh sieve.
  4. Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.
- C. Seeded Preparation**
1. Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas greater than 3:1 should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
  2. Apply fertilizer and lime as prescribed on the plans.
  3. Incorporate lime and fertilizer into the top 3-5" of soil by diking or other suitable means.

- ii. Permanent Seeding**
1. Soil pH shall be between 6.0 and 7.0.
  2. Soluble salts shall be less than 500 parts per million (ppm).
  3. The soil shall contain less than 40% clay, but enough fine grained material (D300) silt plus clay to provide the capacity to hold a moderate amount of moisture. An exception is if loess or silt loess is to be planted, then a sandy silt (K0X silt plus clay) would be acceptable.
  4. Soil shall contain 1.5% minimum organic matter by weight.
  5. Soil must contain sufficient pore space to permit adequate root penetration.
  6. If these conditions cannot be met by soil, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
- b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.**
1. Apply soil amendments as per soil test or as indicated on the plans.
  2. Mix soil amendments into the top 3-5" of soil by diking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

- D. Seed Specifications**
1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of seed material on this job.
  2. Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
  3. Incubant - The incubant for treating legume seed in the seed mixtures shall be a pure culture of *Rhizobium* species specific for the species. Incubant shall not be used later than the date indicated on the container. Add fresh incubant as directed on package. Use four times the recommended amount. Note: It is very important to keep incubant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the incubant less effective.
- E. Methods of Seeding**
1. Hydroseeding - Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seed.
  2. Broadcast Seeding - Apply seed uniformly with broadcast spreader.
  3. Drill or Cultipacker Seeding - Mechanized seeders that apply and cover seed with soil.
  4. Cultipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seeded must be firm after planting.
  5. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

- F. Mulch Specifications (in order of preference)**
1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be chaff, weed, or excessively dusty and shall be free of obvious weed seeds as specified in the Maryland Seed Law.
  2. Wood Cellulose Fiber Mulch - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous material.
  3. WCFM shall be dyed green or contain a green dye in the package that will provide adequate visual inspection of the uniform spread slurry.
  4. WCFM, including dye, shall contain no germination or growth inhibiting factors.
  5. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a slurry-like ground cover on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
  6. WCFM materials shall contain no elements or compounds in concentrations that will be phytotoxic.
  7. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of less than 10%.
  8. Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

- G. Seeding Rates**
1. If grading is completed outside the seeding season, mulch and seeding can be performed in accordance with these specifications.
  2. When straw mulch is used, it shall be spread over all seeded areas at a rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
  3. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
  4. Securing Straw Mulch (Mulch Anchoring) - Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference, depending upon size of area and erosion hazard):
    - a. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This method is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping areas, the mulch anchoring tool shall be used at a rate of 100 lbs. per 100 gallons.
    - b. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons.
    - c. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be applied uniform after binder application. Synthetic binders such as acrylic latex, DCA-70 Polymer, Terra-Tack, Terra-Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
    - d. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

- H. Seeding Rates**
1. For the periods March 1 through April 30, and August 1 through November 15, seed with 1/2 bushel/acre of annual ryegrass (1.5 lbs./acre) or vernal ryegrass (1.7 lbs./acre) for the period November 16 thru February 28. Protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - seed with 100 lbs./acre Kentucky 31 tall fescue and mulch with two tons/acre well anchored straw. All slopes should be hydroseeded.
  2. For the periods March 1 through April 30, and August 1 through October 15, seed with 100 lbs./acre (2.3 lbs./1,000 sq.ft.) of Kentucky 31 tall fescue for the period May 1 through July 31, seed with 60 lbs./acre (1.4 lbs./1,000 sq.ft.) Kentucky 31 tall fescue and 1.5 lbs./acre (0.05 lbs./1,000 sq.ft.) of seeding lovegrass. During the period of October 16 through February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring. Option (3) - seed with 100 lbs./acre Kentucky 31 tall fescue and mulch with two tons/acre well anchored straw. All slopes should be hydroseeded.

- MULCHING**
1. APPLY 1 TO 2 TONS PER ACRE (60 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GALLONS PER 1,000 SQ.FT.) OF ENHANCED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALLONS PER 1,000 SQ.FT.) FOR ANCHORING.
- MAINTENANCE**
- PROTECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

- TEMPORARY SEEDING NOTES**
- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDING PREPARATION**
- LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS**
- APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (4 LBS./1,000 SQ.FT.)
- SEEDING**
- FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1/2 BUSHEL/ACRE OF ANNUAL RYE (1.5 LBS./ACRE) OR VERNAL RYEGRASS (1.7 LBS./1,000 SQ.FT.) FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

- MULCHING**
- APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALLONS/1,000 SQ.FT.) OF ENHANCED ASPHALT ON FLAT AREAS ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALLONS/1,000 SQ.FT.) FOR ANCHORING.
- REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN THE REQUIRED GRADING PERMIT.
  2. NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK (6-000-257-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410)313-1870.
  3. INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON SHEET C OF THIS CONTRACT. THE SITE OF CONSTRUCTION ON THE WETLAND / WETLAND BUFFER SHALL BE LIMITED TO A 5-DAY CLEAR WEATHER PERIOD FROM THE EXCAVATION AND INSTALLATION OF THE UTILITY / SEWER MAINS, ONLY WITHIN THE DESIGNATED SEWER AND UTILITY EASEMENTS (1 DAY).
  4. CLEAR AND GRASS AS NECESSARY ONLY AS NECESSARY FOR EXCAVATION AND INSTALLATION OF THE UTILITY / SEWER MAINS, ONLY WITHIN THE DESIGNATED SEWER AND UTILITY EASEMENTS (1 DAY).
  5. NOTE: THE LENGTH OF OPEN WATER CHANNEL TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE (1) WORKING DAY.
  6. CONSTRUCT THE UTILITY / SEWER MAINS AND APPROVED THE CONTRACTOR'S PLAN OF PERFORMANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGNATION AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS AND BUFFER AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGNATION AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS AND BUFFER AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGNATION AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS AND BUFFER AREAS.
  7. STABILIZE SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET. THE WETLAND / WETLAND BUFFER SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET. THE WETLAND / WETLAND BUFFER SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
  8. AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES (1 DAY).

- DEVELOPER'S CERTIFICATION**
- I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THE PLAN OF DEVELOPMENT AND PLAN FOR PERSONAL AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENTATION (EROSION) DEFENSE DESIGNATING THE PROJECT. I ALSO AUTHORIZE PERSONNEL ON-SITE INSPECTED BY THE HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY.
- Signature: *Donald R. Reuniger, Jr.* Date: 10-30-97

- ENGINEER'S CERTIFICATION**
- I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND 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 CONSERVATION DISTRICT.
- Signature: *Paul W. Koedel* Date: 07/22/97

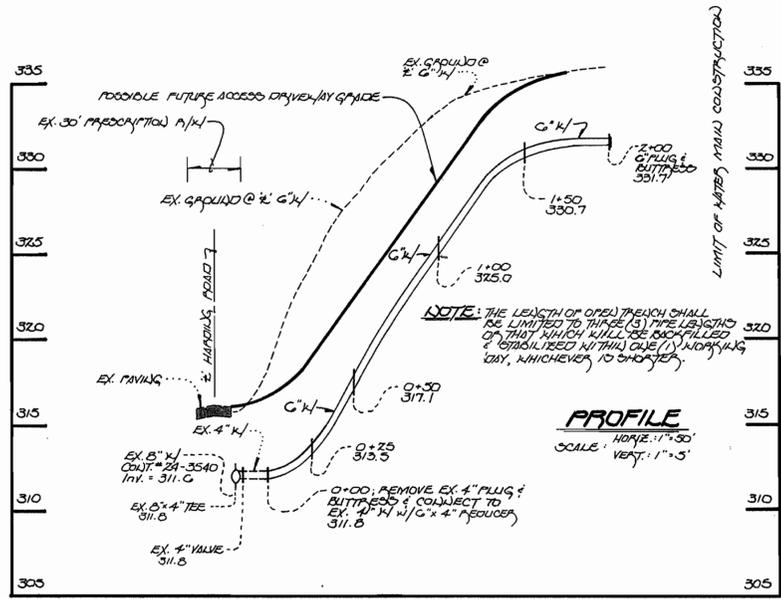
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND

11-4-97 DATE  
 4/15/97 DATE

**SEDIMENT CONTROL NOTES**

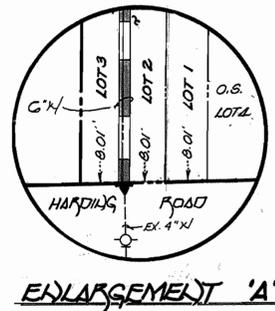
1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (G31-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 31, 61, 77, 141, 181, 241, 281, 341, 381, 441, 481, 541, 581, 641, 681, 741, 781, 841, 881, 941, 981, 1041, 1081, 1141, 1181, 1241, 1281, 1341, 1381, 1441, 1481, 1541, 1581, 1641, 1681, 1741, 1781, 1841, 1881, 1941, 1981, 2041, 2081, 2141, 2181, 2241, 2281, 2341, 2381, 2441, 2481, 2541, 2581, 2641, 2681, 2741, 2781, 2841, 2881, 2941, 2981, 3041, 3081, 3141, 3181, 3241, 3281, 3341, 3381, 3441, 3481, 3541, 3581, 3641, 3681, 3741, 3781, 3841, 3881, 3941, 3981, 4041, 4081, 4141, 4181, 4241, 4281, 4341, 4381, 4441, 4481, 4541, 4581, 4641, 4681, 4741, 4781, 4841, 4881, 4941, 4981, 5041, 5081, 5141, 5181, 5241, 5281, 5341, 5381, 5441, 5481, 5541, 5581, 5641, 5681, 5741, 5781, 5841, 5881, 5941, 5981, 6041, 6081, 6141, 6181, 6241, 6281, 6341, 6381, 6441, 6481, 6541, 6581, 6641, 6681, 6741, 6781, 6841, 6881, 6941, 6981, 7041, 7081, 7141, 7181, 7241, 7281, 7341, 7381, 7441, 7481, 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**6-INCH WATER MAIN EXTENSION**

**SHC INVERT @ PROPERTY LINE CHART**

STATION	LOT	ELEVATION
@ EX. MH 2-A	EX. MH 2-A TO EX. MH 3	290.24
0+65 FT.	1	290.22
1+00 LT.	MH 600 TO MH 605	299.75



K/S 5 COY. # 24-3635-D  
F98-16

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
**Cheryl Simmons** 11/7/97  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
**John B. Robertson** 11/7/97  
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS.

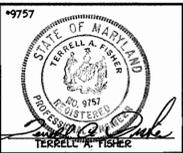
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

**John B. Robertson** 11-4-97  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

**Cheryl Simmons** 11/13/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**Fisher, Collins & Carter, Inc.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK  
10272 Baltimore National Pike  
Ellicott City, Maryland 21042  
(410) 481-2885



DESIGNED BY:	M.J.M.
DRAWN BY:	M.J.M. / J.M.H.
CHECKED BY:	P.W.K.
DATE:	8/27/1997
BY NO.	REVISION
1	ADD W.H.C.'S & S.H.C.'S TO SUPPORT FUTURE SUBDIVISION
2	REVISE SEWER MAIN ALIGNMENT & EASEMENT: MH # 603-MH # 610
3	REFERENCE "WETLAND NOTES" ON SHEET 2

**WATER & SEWER MAINS PLAN & PROFILES**

600' SCALE MAP NO. 40 BLOCK NO. 10 & 16  
F.C.C. WORK ORDER NO. 30003  
FILE NAME: CHERRY CREEK OVERLOOK'S 1/1

PLAN REFERENCE NUMBERS  
F98-16 (PLAN ONLY)

AS BUILT

**CHERRY CREEK OVERLOOK SECTION 1, AREA 1 LOT Nos. 1-4**

CONTRACT NO. 24-3635-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

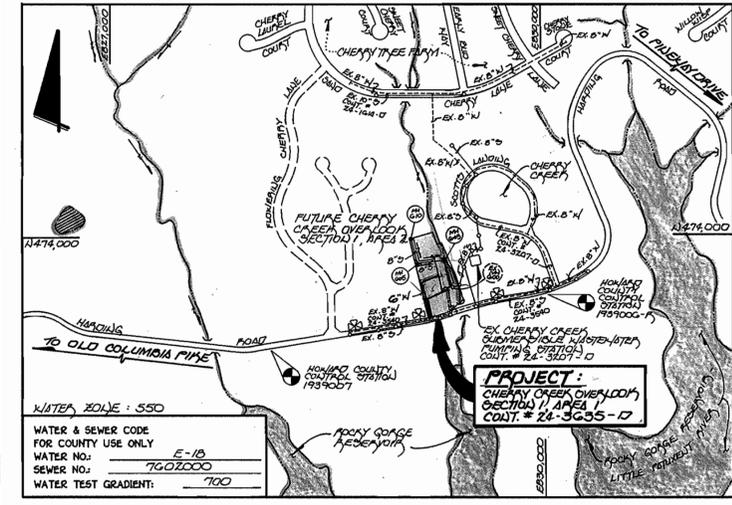
SCALE AS SHOWN  
SHEET 1 OF 2

**QUANTITIES**

ITEM	ESTIMATED	QUANTITIES	TYPE	MFG/SUPPLIER
8" SENER	323 L.F.	323.43'	P.V.C. SDR 35	J.M.P.P.E./MANHOLE
4" S.H.C.	75 L.F.	89.1 F., 12 V.F.	P.V.C. SDR 35	J.M.P.P.E./MANHOLE
MANHOLES	3 EACH	3 EA.	PRECAST CONC.	ATLANTIC CONC. PROD.
8" SENER, D.I.P.	189 L.F.	189.25' L.F.	D.I.P. CL 92	GRIFFIN PIPE
6" WATER	200 L.F.	200 L.F.	D.I.P. CL 92	GRIFFIN PIPE
3/4" K.H.C.	105 L.F.	106.2'	TYPE K COPPER	READING MANUFACTURING
6" PLUG & BUTTRESS	1 EACH	1 EA.	M.J. CAP	GRIFFIN MANUFACTURING
6" x 4" REDUCER	1 EACH	1 EA.	M.J. REDUCER	GRIFFIN MANUFACTURING
1" W.H.C.	20 L.F.			
8" SENER METER SETTING	3 EACH			
4" S.H.C.	40 L.F.			

NAME OF UTILITY CONTRACTOR: C.C.S. CONSTRUCTION  
SURVEY & DRAFTING DIVISION AS-BUILT DATE: JAN. 26, 1998

\* INCLUDES 3.2' TAIL PIECES AT EACH LOT  
\* \* - FOREMAN, RONNIE JONES



TYPE OF BUILDING: SINGLE FAMILY RESIDENTIAL  
NUMBER OF LOTS: 4 (3 BUILDABLE)  
NO. OF WATER HOUSE CONNECTIONS: 3  
NO. OF SEWER HOUSE CONNECTIONS: 1  
DRAINAGE AREA: LITTLE PATRUMENT  
TREATMENT PLANT: LITTLE PATRUMENT WHP; VIA CHERRY CREEK & CHERRY TREE PLAIN W.H.P.S.

**GENERAL NOTES**

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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 (991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
  - STATE HIGHWAY ADMINISTRATION - 531-5533
  - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4520
  - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
  - MISS UTILITY - 1-800-257-7777
  - COLONIAL PIPELINE CO. - 795-1390
  - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 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.
- 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.
- T.D. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G 5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" 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 THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W11 AND W21). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (410) 313-2150 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 10.14(a) OF THE HOWARD COUNTY CODE.

SEE SHEET 2 FOR SEQUENCE OF CONSTRUCTION

SEE SHEET 2 FOR "BEST MANAGEMENT CONDITIONS FOR WORK CONDUCTED IN NON-TIDAL WETLANDS"

**PLAN**  
SCALE: 1"=60'

