

The Howard Research & Development Corporation
Liber 5289 Folio 330

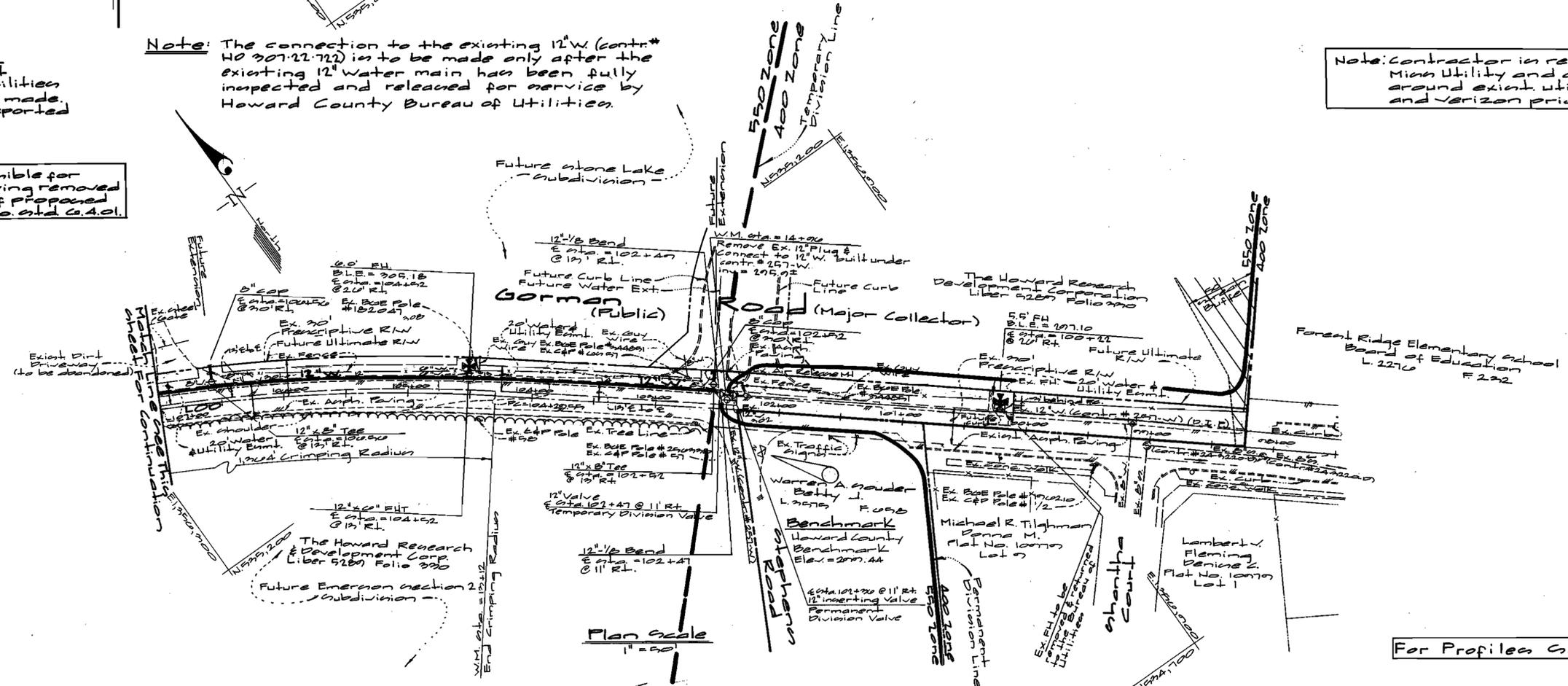
Plan Scale:
1" = 50'

Contractor's Note
Contractor shall verify invert elevations at all existing utilities where connections are being made. Any discrepancies shall be reported immediately to the engineer.

Note: The connection to the existing 12" W (Contr. # HO 307-22-722) is to be made only after the existing 12" water main has been fully inspected and released for service by Howard County Bureau of Utilities.

Note: Contractor is responsible to call Miss Utility and coordinate all work around exist. utilities with BGE and Verizon prior to construction.

Note: Contractor is responsible for replacing existing paving removed during construction of proposed 12" water main see Ho. Co. std. C.4.01.



Plan Scale:
1" = 50'

For Profiles See Sheet 3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Bainger 5-21-01
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[Signature] 5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONTOWNE OFFICE PARK
BURTONTOWNE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1020 DC/VA: 301-989-2524 FAX: 301-421-4186



DES: WnJ					
DRN: WnJ					
CHK:					
DATE: 5/21/01	BY	NO	REVISION	DATE	

WATER PLAN
SCALE: AS SHOWN
600' SCALE MAP NO. 47 BLOCK NO. 0/10

STONE LAKE ~ PHASE III
LIBER 5289 FOLIO 330
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 6
CONTRACT No. 44-77A97-D

SCALE AS SHOWN
SHEET 2 OF 5

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 313-1855
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seedings and mulching (Sec. C). Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:
 Total Area of Site : 0.81 Acres
 Area Disturbed : 0.81 Acres
 Area to be roofed or paved : 0.03 Acres
 Area to be vegetatively stabilized : 0.78 Acres
 Total Cut : N/A Cu. Yds.
 Total Fill : N/A Cu. Yds.
 Off-site waste/borrow area location: N/A

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within 1 working day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs straw per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance: Inspect 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.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 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 sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted, weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

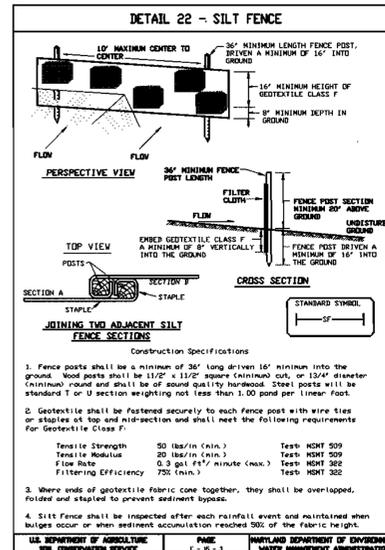
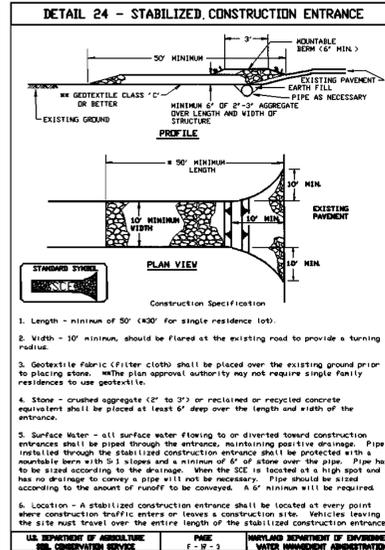
CONDITIONS WHERE PRACTICE APPLIES

- I. This practice is limited to areas having 2:1 or flatter slopes where:
 - a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplied of moisture and plant nutrients.
 - c. The original soil to be vegetated contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
- II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
 - i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - ii. Topsoil shall be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- II. For sites having disturbed areas under 5 acres:
 - i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- III. For sites having disturbed areas over 5 acres:
 - i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - b. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
 - d. No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.
 - ii. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

- Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.



DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

Signature: [Signature] Date: 5/10/01

ENGINEER'S CERTIFICATE

"I 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 Soil Conservation District."

Signature: Michael J. Troppan Date: 5-22-01

Sequence of Construction

1. Obtain grading permit and arrange on-site pre-construction meeting with Sediment Control Inspector (1 day).
2. Install stabilized construction entrances and silt fence (3 days).
3. Construct water main extension. Only expose as much trench as can be backfilled and stabilized in one day. Stockpile excavated material uphill of the trench as site conditions allow. (2 weeks)
4. When areas draining to sediment controls have been stabilized and permission has been granted by the inspector, remove all silt fence and stabilized construction entrances. (1 week)

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Signature: [Signature] Date: 5/14/01
Howard S.C.D.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Signature: [Signature] Date: 5/19/01
Natural Resources Conservation Service

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



DES:					
DRN:	HKJ				
CHK:	CAD				
DATE:	MAR 2001	BY	NO	REVISION	DATE

SEDIMENT CONTROL DETAIL SHEET

600' SCALE MAP NO. 47 BLOCK NO. 9/10

STONE LAKE ~ PHASE III
LIBER 5289 FOLIO 330
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 6
CONTRACT No. 44-3949-D

SCALE AS SHOWN

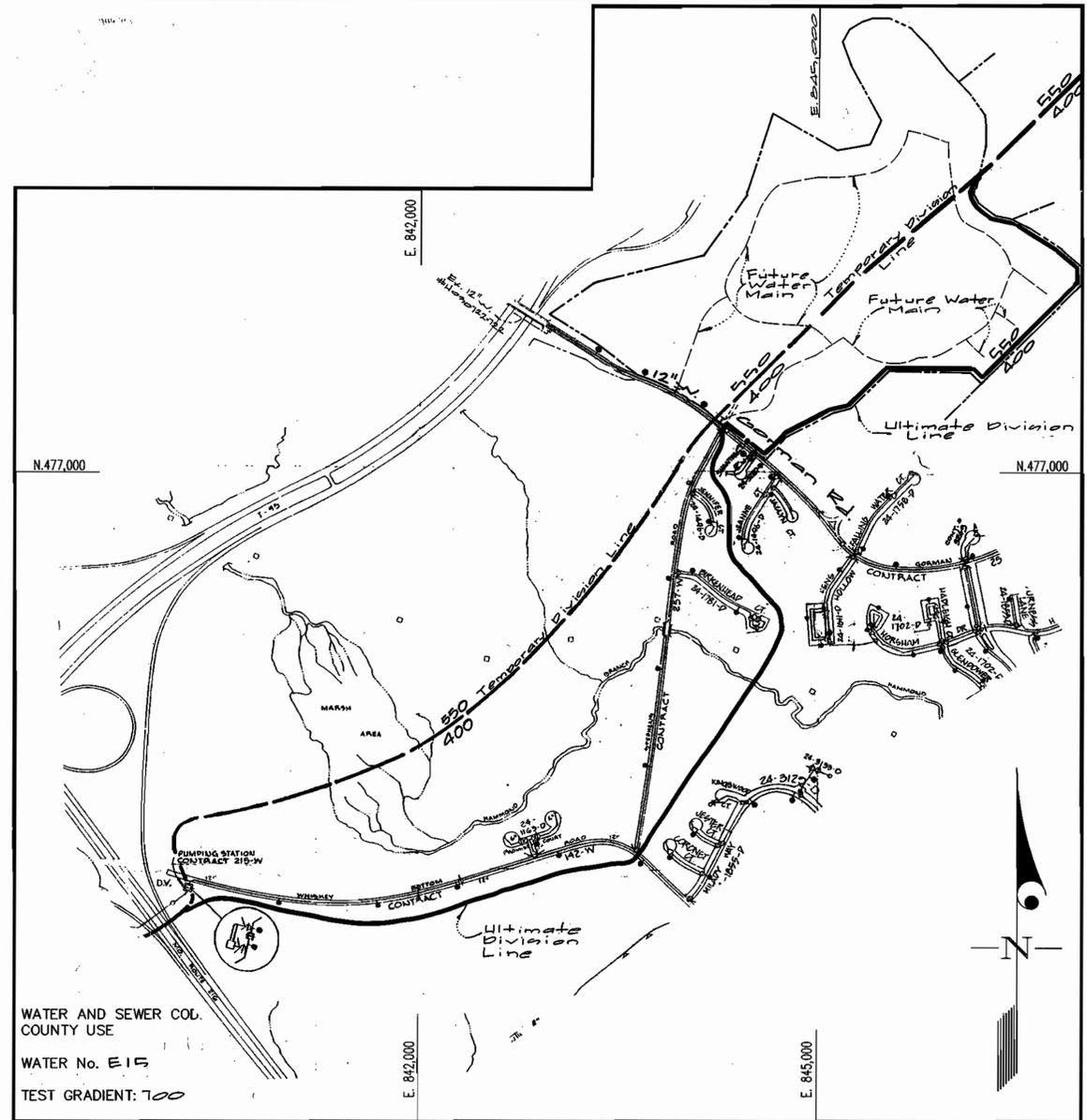
SHEET 5 OF 5

QUANTITIES			AS-BUILT	
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
12" W. Δ	1520 LF.			
12" x 6" F.H.T.	3 EA.			
12" x 1/8 H.B.	5 EA.			
6" W. Δ	80 LF.			
8" W. Δ	272 LF.			
Fire Hydrants	4 EA.			
12" Valve	2 EA.			
6" Valve	2 EA.			
8" Valve	2 EA.			
12" x 8" T.S. Δ	1 EA.			
12" x 12" T.S. Δ	1 EA.			

NAME OF UTILITY CONTRACTOR: _____

SURVEY AND DRAFTING DIV. CHECKBOX: _____ AS-BUILT DATE: _____

- Sheet Index**
- Cover Sheet
 - Water Plan
 - Water Profiles
 - Sediment Control Plan
 - Sediment Control Details



VICINITY MAP
SCALE: 1"=600'

CONTRACT No. 44-3949-D
STONE LAKE ~ PHASE III
LIBER 5289 FOLIO 330
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

Michael J. Troppen

TYPE OF BUILDING	N/A
NUMBER OF UNITS	N/A
NUMBER OF S.H.C.'s	N/A
NUMBER OF W.H.C.'s	N/A
DRAINAGE AREA	MIDDLE PATUXENT
TREATMENT PLANT	LITTLE PATUXENT WATER RECLAMATION PLANT

GENERAL NOTES

- PART I
- 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 [North American Datum 1983 (NAD '83)].
 - All vertical controls are based on U.S.G.S. data.
 - 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. 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 money 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 Detail 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 \oplus 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 two weeks in advance of construction operations at his own expense.
 - Contractor shall notify the following utility companies or agencies at least (5) working days before starting work shown on these plans:
 - State Highway Administration 410-531-5533
 - BCE Contractor Services 410-850-4620
 - BCE Under Ground Damage Control 410-291-4607
 - Miss Utility 1-800-257-7777
 - Colonial Pipeline Co. 410-549-4120
 - Howard County Department of Public Works Bureau of Utilities 313-4900
 - Verizon 1-800-446-5266
 - 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 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) 313-2450 at least five (5) working days before any open cut of any County road or boring/jacking operation on County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirement per Section 18.114(a) of the Howard County Code.
- PART II - WATER
- All water mains to 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 elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with the Standard Details. 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 water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
 - For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications & with these drawings.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

Jin Nguyen/CS 5/14/01
SIGNATURE DATE

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

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

APPROVED: *[Signature]* 5/14/01
HOWARD S.C.O. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ruth Berman 5-21-01
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

[Signature] 5/24/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4188

DES: WSJ			
DRN: WSJ/CAD			
CHK: MJT	WSJ	Rev. Quantities Box	4/2/2009
DATE: MAR, 2001		Rev. Quantities Box	7/11/2002
		Rev. 12" water alignment per waterline abandonment	5/20/02
	BY NO	REVISION	DATE

TITLE SHEET
SCALE: AS SHOWN

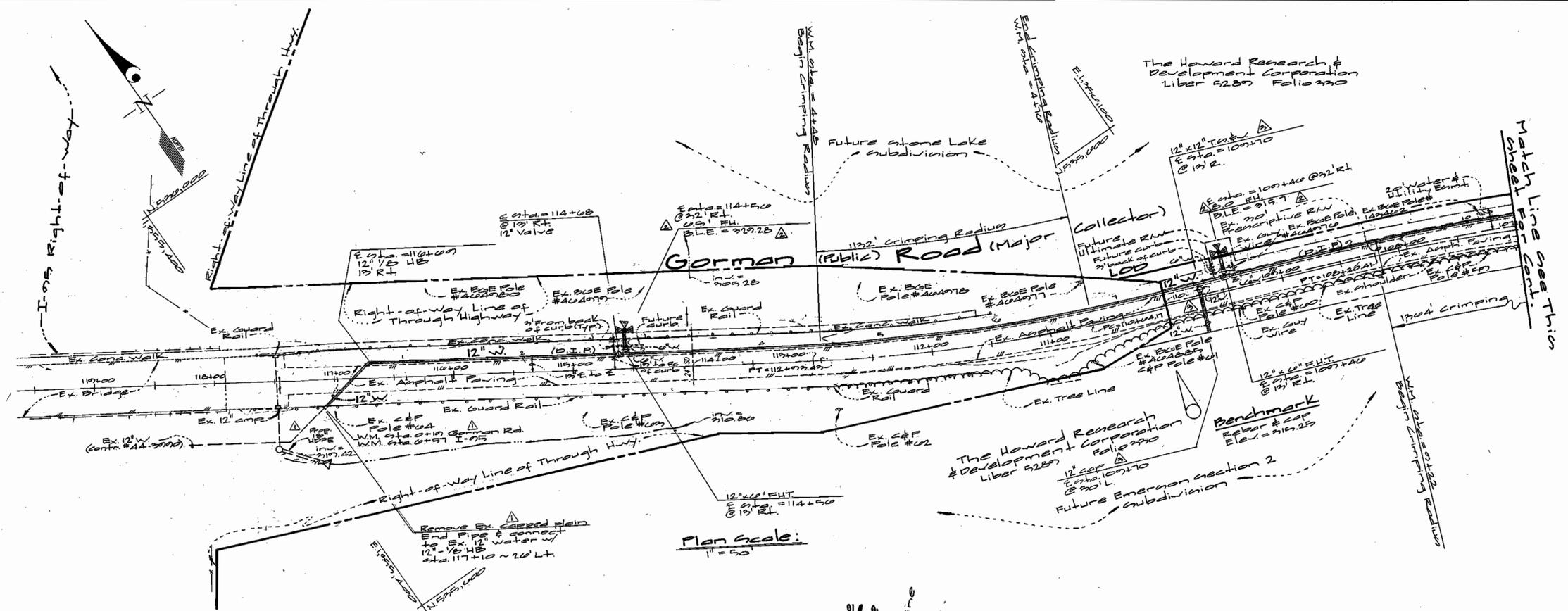
600' SCALE MAP NO. 47 BLOCK NO. 9/10

STONE LAKE ~ PHASE III
LIBER 5289 FOLIO 330
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 6
CONTRACT No. 44-3949-D

GLW FILE No. 99140

SCALE AS SHOWN

SHEET 1 OF 5



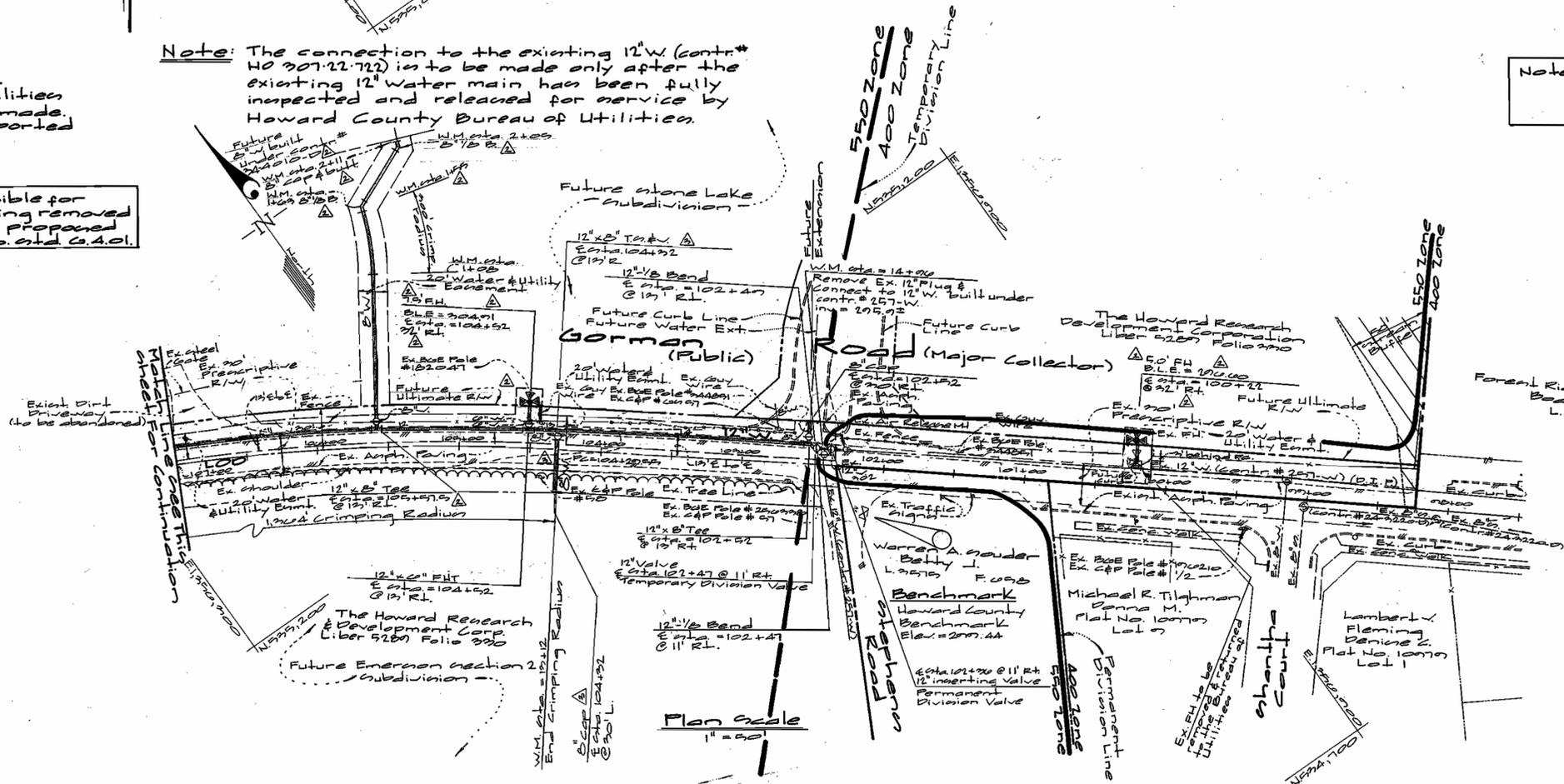
Plan Scale:
1" = 50'

Note: The connection to the existing 12" W. (contr. # 907-22-72) is to be made only after the existing 12" water main has been fully inspected and released for service by Howard County Bureau of Utilities.

Contractor's Note
Contractor shall verify invert elevations at all existing utilities where connections are being made. Any discrepancies shall be reported immediately to the engineer.

Note: Contractor is responsible for replacing existing paving removed during construction of proposed 12" water main. See Ho. Co. Ord. 0.401.

Note: Contractor is responsible to call Miss Utility and coordinate all work around exist. utilities with EXE and Verizon prior to construction.



Plan Scale:
1" = 50'

For Profiles See Sheet 3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert M. Bergeron 5-21-01
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[Signature] 5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-980-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



DES: wsl					
DRN: wsl					
CHK:	wsl	Δ	Add 6" 12" water conn. at Sta. 421+00 to 421+20 and 100' to 100' 20'.	7/1/02	
	wsl	Δ	Correct FH location.	5/23/02	
DATE: 5/23/02	BY: NO		REVISION	DATE	

WATER PLAN
SCALE: AS SHOWN
600' SCALE MAP NO. 47 BLOCK NO. 0/1C

STONE LAKE ~ PHASE III
LIBER 5287 FOLIO 220
HOWARD COUNTY, MARYLAND
ELECTION DISTRICT No. 6
CONTRACT No. 44-207A07-D
SCALE AS SHOWN
SHEET 2 OF 5

