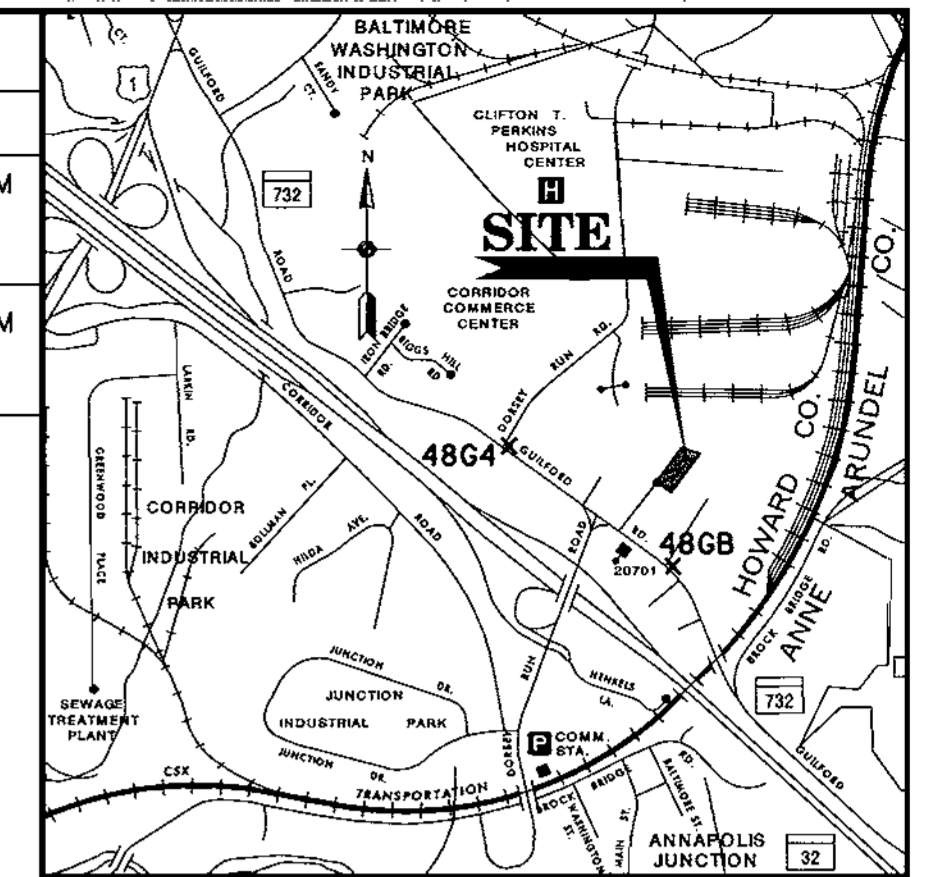


PUMP HOUSE ROAD

(EX. 60' RIGHT-OF-WAY)
CONTRACT NO. F-86-65

HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
48G4	532,530.284	1,370,623.784	228.580	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN
48G8	531,519.241	1,371,653.842	206.628	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN

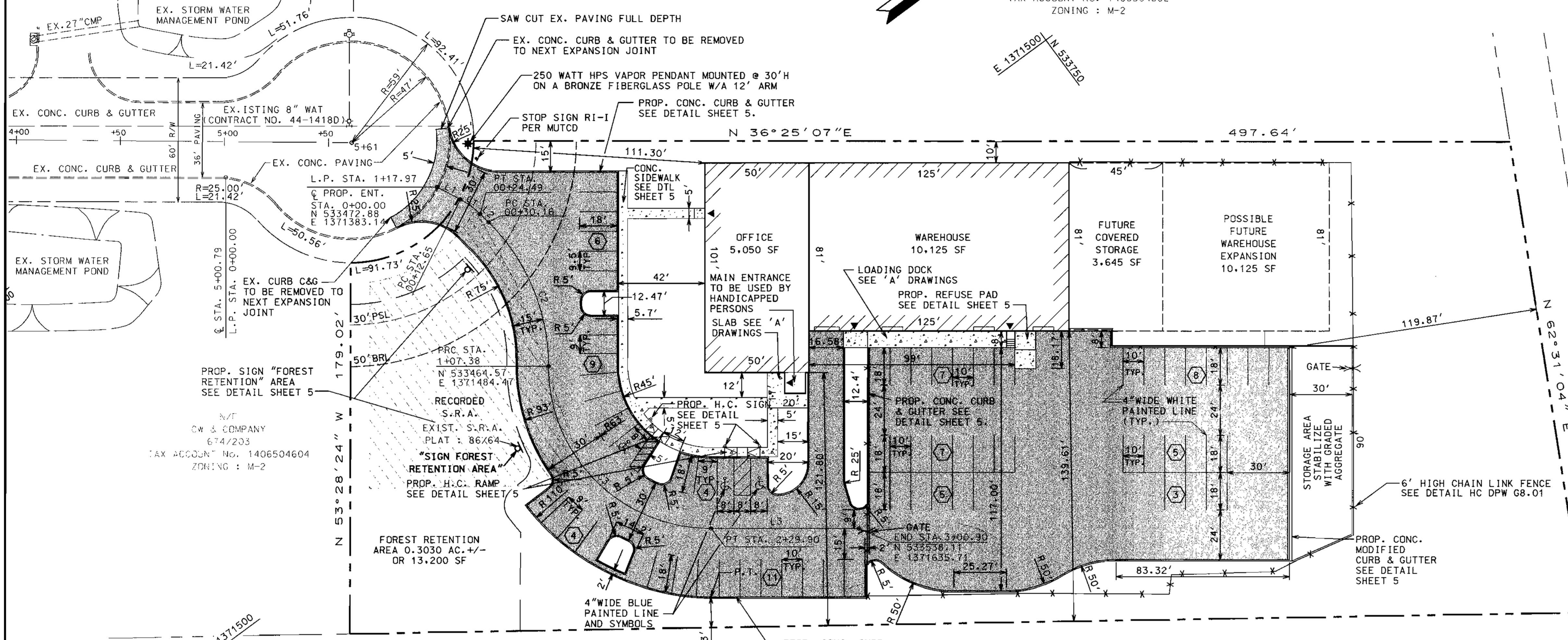


SITE ANALYSIS DATA :

- TOTAL PROJECT AREA SITE: 3.00 ACRES OR 130,680 SQUARE FEET
- LIMIT OF DISTURBED AREA: 2.60 ACRES OR 113,256 SQUARE FEET
- ZONING: M-2 DISTRICT, MANUFACTURING HEAVY
- EXISTING USE: VACANT
- PROPOSED USE: OFFICE AND WAREHOUSE
- GROSS FLOOR AREA:
OFFICE = 5,050 SQUARE FEET
WAREHOUSE = 10,125 SQUARE FEET
FUTURE WAREHOUSE EXPANSION = 10,125 SQUARE FEET
- MAXIMUM NUMBER OF EMPLOYEES ON SITE:
OFFICE = 9
WAREHOUSE = 5
- PARKING SPACES REQUIRED:
OFFICE - 3.3 PER 1,000 S.F. = 0.0033 * 5,050 S.F. = 16.67 SAY 17
WAREHOUSE HYBRID - 2.5 PER 1,000 S.F. = 0.0025 * 20,250 S.F. = 50.61 SAY 51
TOTAL PARKING SPACES REQUIRED = 68 (INCLUDING 3 HANDICAP ACCESSIBLE)
- PARKING SPACES PROVIDED = 51 (INCLUDING 3 HANDICAP ACCESSIBLE)
15 LOADING SPACES
- OPEN SPACE ON SITE: 1.2 ACRES AND 40% OF GROSS AREA
- BUILDING COVERAGE OF SITE: 0.57 AC. AND 19% OF GROSS AREA.
- VARIANCE PETITION TO SECTION 16.137.B OF THE HOWARD COUNTY ZONING REGULATIONS WAS GRANTED TO ALLOW THE CONSTRUCTION OF A PERMANENT STRUCTURE ACROSS A COMMON PROPERTY LINE WITHOUT REQUIRING A RESUBDIVISION PLAT ON FEBRUARY 10, 1986. CASE NO. VP-86-69
- FOREST CONSERVATION ORDINANCE IS COMPLIED WITH BY 0.30 ACRES ON-SITE AND FEE-IN LIEU OF FOR 0.86 ACRES.

GENERAL NOTES : NON RESIDENTIAL DEVELOPMENT PLAN

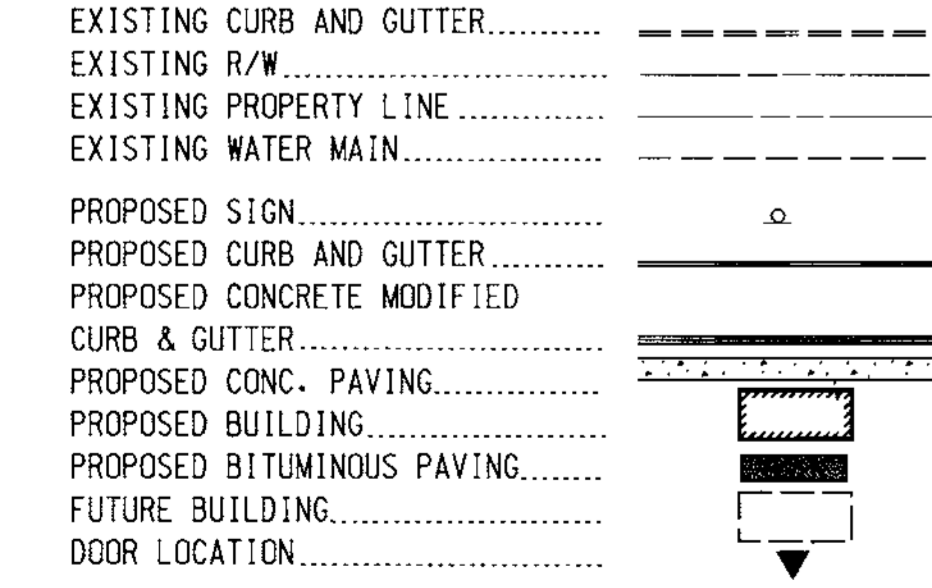
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS & SPECIFICATIONS AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS, SPECIFICATIONS AND DETAILS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- A TRAFFIC STUDY WAS PERFORMED BY LEE CUNNINGHAM & ASSOCIATES, INC. DATE: FEB. 2000 PURSUANT TO THE ADEQUATE PUBLIC FACILITIES ACT.
- COORDINATES BASED ON MARYLAND NAD83 (91) HORIZONTAL AND NGVD29 (VERTICAL) DATUMS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD SOIL CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME I, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME I, HOWARD COUNTY DESIGN MANUAL VOLUME II WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
- WATER IS PUBLIC. (CONTRACT NO. 24-3857-D), ZONE
- SEWER IS PUBLIC. (CONTRACT NO. 24-3857-D), LITTLE PATUXENT DRAINAGE AREA
- PRIVATE STORMWATER MANAGEMENT CONTROL, BY UNDERGROUND FACILITY & BASIN #1 OWNERSHIP & MAINTENANCE RESPONSIBILITY IS THAT OF THE DEVELOPER.
- EXISTING UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.
- THERE ARE NO FLOOD PLAINS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS ON SITE.
- A TRAFFIC STUDY WAS PERFORMED BY LEE CUNNINGHAM & ASSOCIATES, INC. DATE: FEB. 2000 PURSUANT TO THE ADEQUATE PUBLIC FACILITIES ACT.
- THERE ARE NO KNOWN BURIAL GROUNDS ON THE PROPERTY TO BE DEVELOPED.
- NO POSTERS ARE REQUIRED FOR PUBLIC NOTICE FOR PROPOSED ENTRANCE, THERE ARE NO OFF-SITE RESIDENTIAL STRUCTURES WITHIN 200' OF SAID ENTRANCE.
- EXTERIOR LIGHTING WILL BE ATTACHED TO THE BUILDING. OUTSIDE LIGHTING SHALL BE IN COMPLIANCE WITH THE OUTSIDE LIGHTING REQUIREMENT STANDARDS SPECIFIED IN THE ZONING REGULATIONS SECTION 134.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER HIS CONTRACT.
- TOPOGRAPHIC SURVEY PERFORMED BY PURDUM & JESCHKE, LLC., APRIL 2000



CENTER LINE DATA

L1	N 64°25'43" E 12.65'
C1	Δ 16°57'28" R= 40.00' L= 11.84' CHD= N72°54'27" E 11.80'
L2	N 81°23'11" E 5.67'
C2	Δ 45°03'05" R= 98.21' L= 77.22' CHD= S72°54'21" E 75.24'
C3	Δ 90°00'00" R= 78.00' L= 122.52' CHD= N81°26'16" E 110.31'
L3	N 36°26'16" E 71.00'

LEGEND :

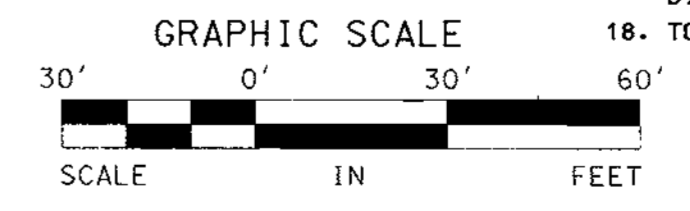


INDEX OF SHEETS :

SHEET 1 OF 12	SITE LAYOUT PLAN.
SHEET 2 OF 12	SITE GRADING PLAN.
SHEET 3 OF 12	SITE UTILITIES & SWM PLAN.
SHEET 4 OF 12	SEDIMENT EROSION CONTROL PLAN.
SHEET 5 OF 12	SITE DETAILS.
SHEET 6 OF 12	SEDIMENT EROSION CONTROL DETAILS.
SHEET 7 OF 12	STORM DRAIN & STORMWATER MANAGEMENT PROFILES & DETAILS.
SHEET 8 OF 12	STORMWATER MANAGEMENT SPECS NOTES & BORING LOGS.
SHEET 9 OF 12	SOIL/DRAINAGE AREA MAPS.
SHEET 10 OF 12	LANDSCAPE PLAN.
SHEET 11 OF 12	FOREST STAND DELINEATION & NATURAL RESOURCES PLAN.
SHEET 12 OF 12	FOREST CONSERVATION PLAN.
SHEET 1 OF 4	TITLE SHEET PUBLIC WATER & SEWER PLAN.
SHEET 2 OF 4	PUBLIC WATER PLAN & PROFILE.
SHEET 3 OF 4	PUBLIC SEWER PLAN & PROFILE.
SHEET 4 OF 4	SEDIMENT CONTROL DETAILS & SPECIFICATIONS

MISS UTILITY

THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 4/14/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 9/29/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10/5/00
 DIRECTOR

OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050



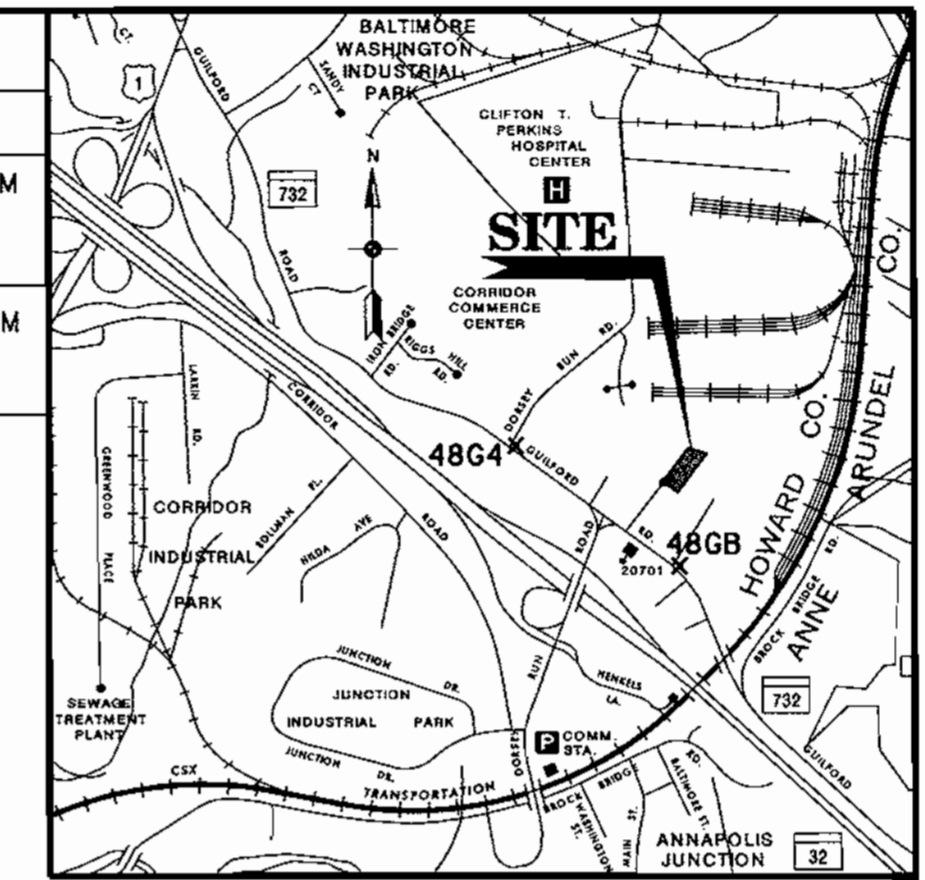
PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental
 The Professional Engineering Center
 8005 Harford Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000
 SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 1 OF 12
 CONTRACT NO.:

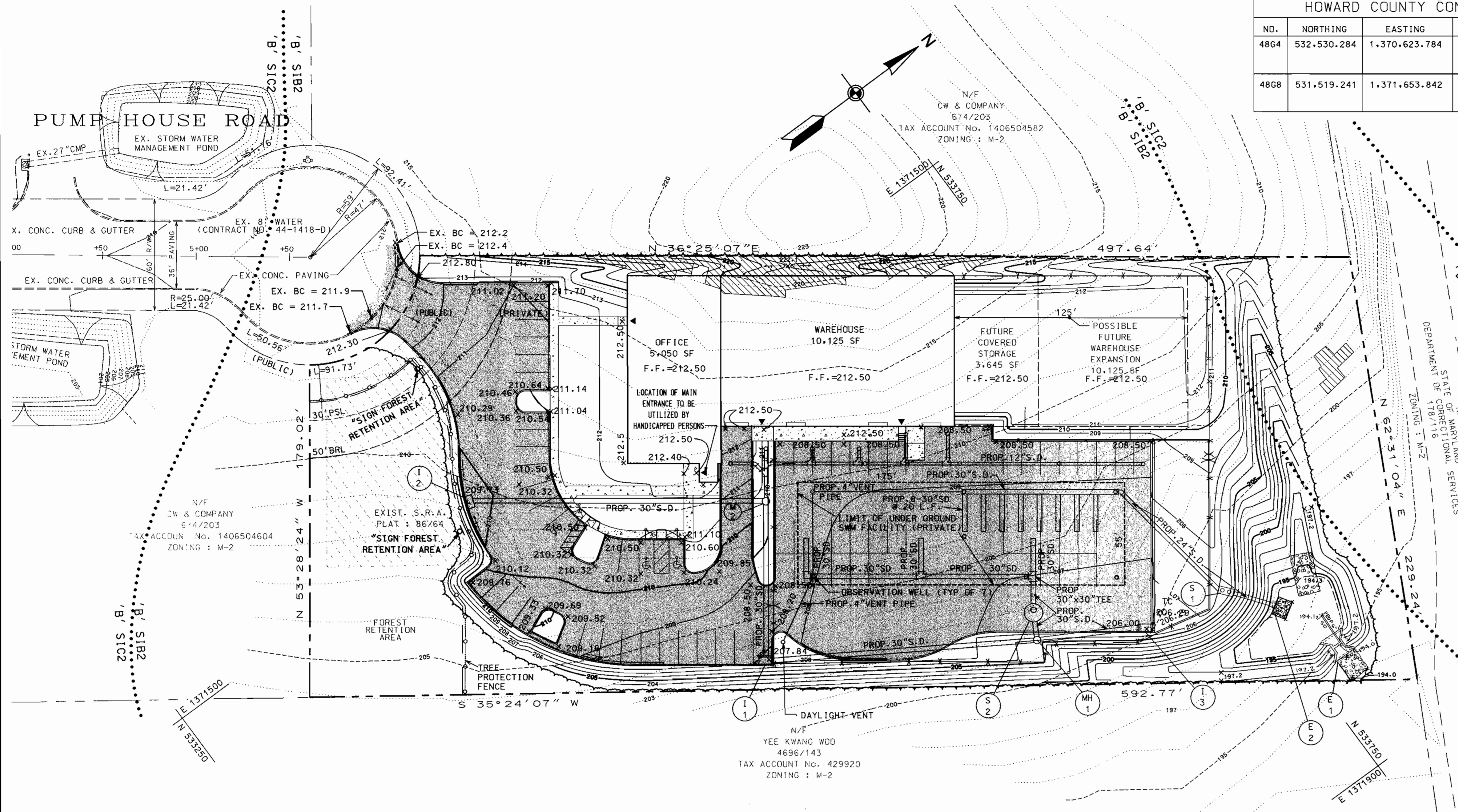
ADDRESS CHART		STREET ADDRESS	
LOT/PARCEL#	A-3 / 68	10920 PUMP HOUSE ROAD	
PERMIT INFORMATION CHART		SECTION AREA	
SUBDIVISION NAME	CW and COMPANY	N/A	A-3/68
PLAT/BLK L/F	1442	GRID#	14
ZONING	M-2	TAX MAP NO.	48
ELECT. DIST.	6th	CENSUS TRACT	6069.01
WATER CODE	B02	WATER CODE	
TITLE: SITE LAYOUT PLAN			
ATLAS PLUMBING CW & COMPANY PARCEL A-3, 686/65 HOWARD COUNTY, MARYLAND			

HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
48G4	532,530.284	1,370,623.784	228.580	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN
48G8	531,519.241	1,371,653.842	206.628	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN



VICINITY MAP
1"=2000'



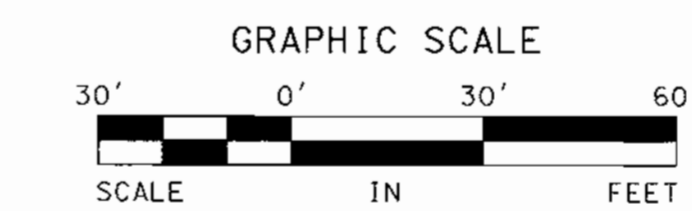
NOTES:

1. THE SUBSURFACE INVESTIGATION SHOWS THAT SOILS ARE RELATIVELY DENSE CLAYEY SANDS AND GRAVEL IN THE DEPTHS TO BE USED AS CONTROLLED COMPACTED FILLS ELSEWHERE ON-SITE. DEPENDING ON THE WEATHER CONDITIONS AT THE TIME OF CONSTRUCTION, THE SOILS MAY REQUIRE MOISTURE CONTENT ADJUSTMENTS IN ORDER TO ACHIEVE THE REQUIRED COMPACTION
2. ALL FILLS SHOULD CONSIST OF MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER.
3. FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 8-INCHES (LOOSE). ALL LIFTS SHOULD BE COMPACTED TO A MINIMUM OF 95% DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D-698 OR AASHTO T-99). IN-PLACE DENSITY TESTING SHOULD BE PERFORMED ON EACH LIFT PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.
4. ALL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER SPECIALIZING IN GEOTECHNICAL ENGINEERING.
5. NO CLEARING, GRADING OR CONSTRUCTION IS TO TAKE PLACE IN THE FOREST RETENTION AREAS EXCEPT FOR THAT PERMITTED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD SOIL CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME I, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME I, HOWARD COUNTY DESIGN MANUAL VOLUME II WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER HIS CONTRACT.
8. UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.

LEGEND :

EXISTING SLOPES 15-24.9%	
EXISTING SLOPES 25% +	
EXISTING CONTOURS	
EXISTING CURB AND GUTTER	
EXISTING R/W	
EXISTING PROPERTY LINE	
EXISTING WATER LINE	
EXISTING FIRE HYDRANT	
EXISTING TREE LINE	
PROPOSED SPOT ELEVATION	
PROPOSED CONTOURS	
PROPOSED SIGN	
PROPOSED CURB AND GUTTER	
PROPOSED CONCRETE MOUNTABLE CURB & GUTTER	
PROPOSED SIDEWALK	
PROPOSED BUILDING	
PROPOSED BITUMINOUS PAVING	
FUTURE BUILDING	
PROPOSED TREE LINE	
PROPOSED DOOR	

MISS UTILITY
THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/14/00
 [Signature] 9/28/00
 [Signature] 10/5/00

OWNER/DEVELOPER
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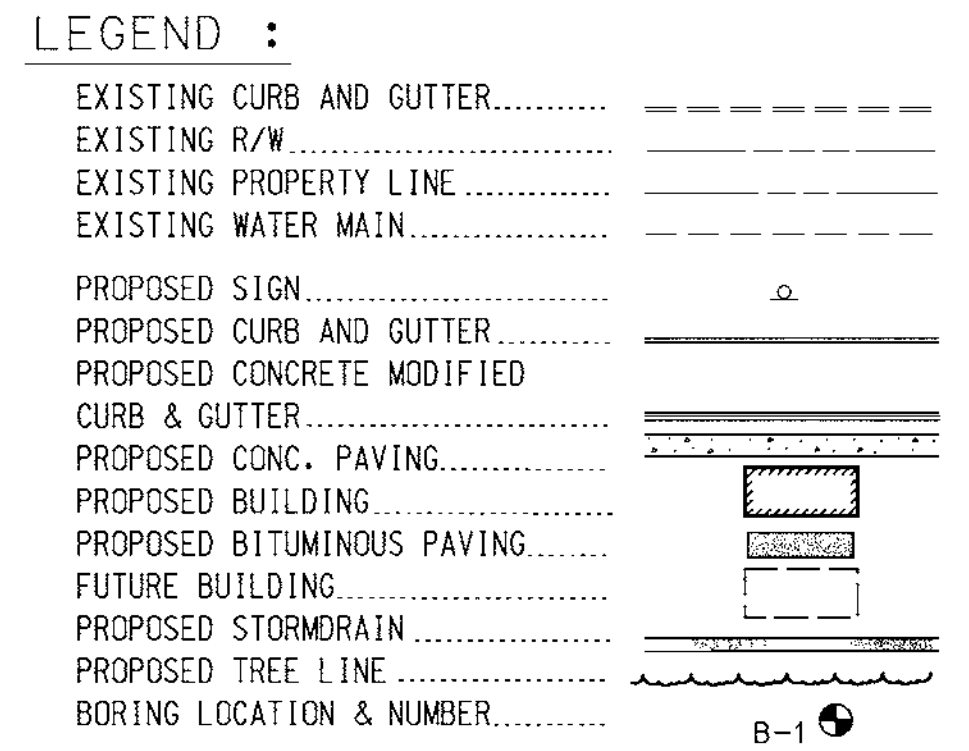
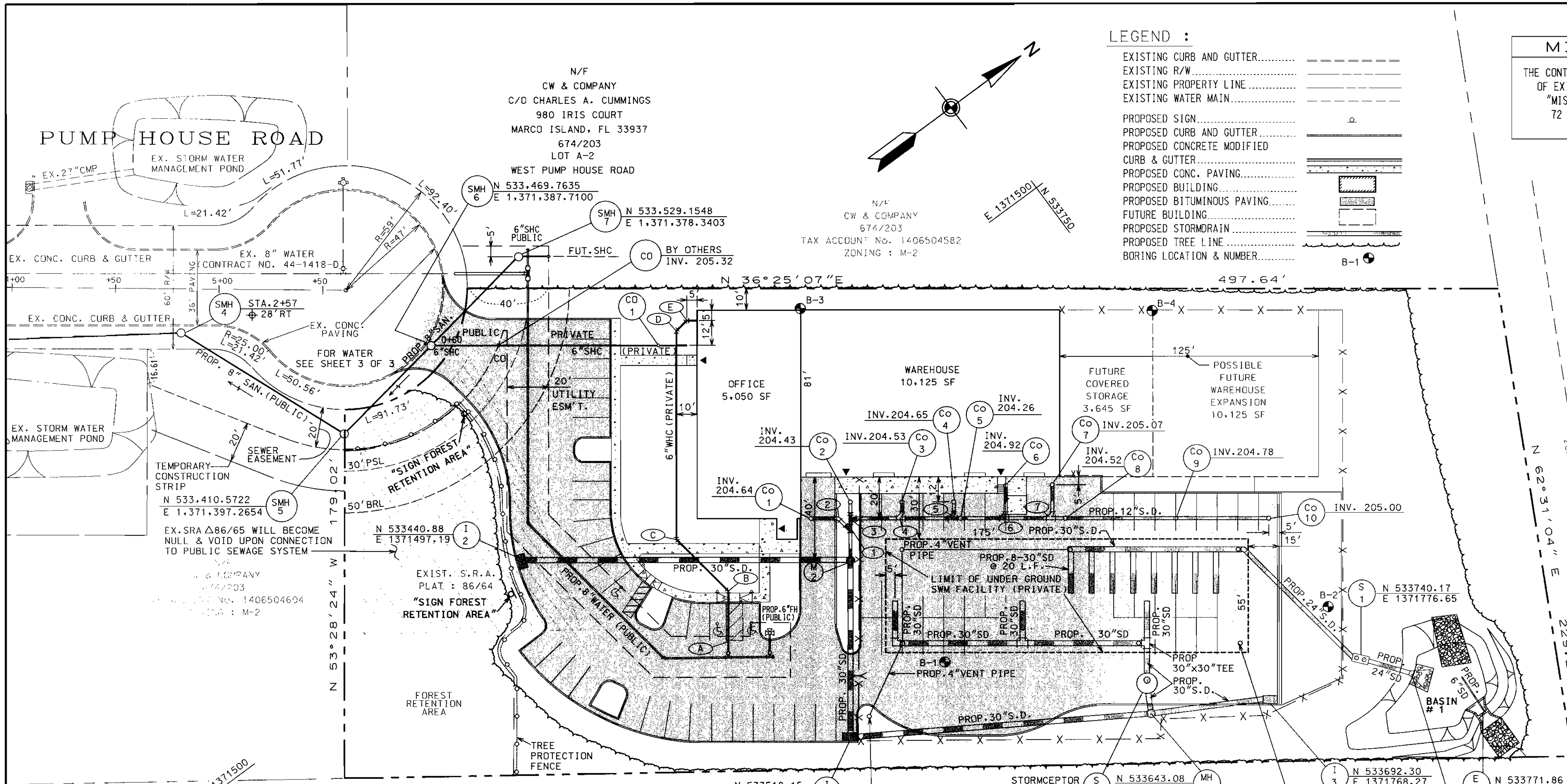
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 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 2 OF 12
 CONTRACT NO.:

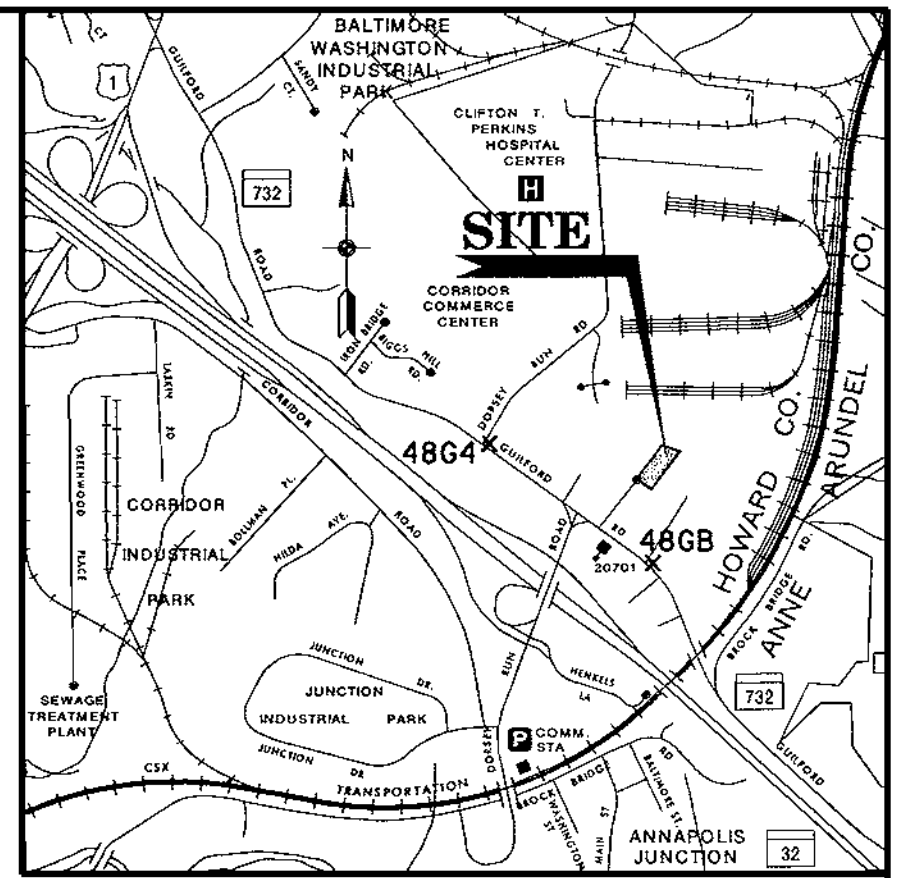
ADDRESS CHART		STREET ADDRESS	
LOT/PARCEL#	A-3 / 68	10920 PUMP HOUSE ROAD	
PERMIT INFORMATION CHART		SECTION AREA	
SUBDIVISION NAME	CW and COMPANY	N/A	LOT/PARCEL A-3/68
PLAT/R/L/F	14442	TAX MAP No.	48
GRID#	14	ELECT. DIST.	6th
ZONING	M-2	CENSUS TRACT	6089.01
WATER CODE	B02	WATER CODE	

TITLE: **SITE GRADING PLAN**
 ATLAS PLUMBING
 CW & COMPANY
 PARCEL A-3, 68/65
 HOWARD COUNTY, MARYLAND

SDP-00-91



MISS UTILITY
 THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



- NOTES :**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD COUNTY CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME 1, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME 1, HOWARD COUNTY DESIGN MANUAL VOLUME 11 WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER THIS CONTRACT.
 - UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.
 - WATER LINES ARE TO HAVE A MINIMUM OF 3.5' OF COVER FROM THE ESTABLISHED GRADE TO THE TOP OF THE PIPE, UNLESS OTHERWISE NOTED ON THE PLANS.
 - THE PROPOSED BUILDINGS WILL HAVE A SPRINKLER SYSTEM FOR FIRE PROTECTION.
 - THE WATER METER WILL BE AN INSIDE FIRE SUPPLY WITH METERED WATER SERVICE.
 - THE 6" FIRE SERVICE IS TO BE DUCTILE IRON PIPE, AND THE 2" WATER HOUSE SERVICE IS TO BE TYPE K ANNEALED COPPER TUBING.
 - SANITARY SEWER, STORM DRAIN (LESS THAN OR EQUAL TO 12" Ø) AND ROOF DRAIN PIPES ARE TO BE PVC. STORM DRAIN PIPE GREATER THAN 12" Ø & SWM PIPES TO BE AS SHOWN ON PROFILE.

WATER SERVICE SCHEDULE

NO	DESCRIPTION
A	LIMIT PUBLIC CONTRACT = STA. 0+00
B	STA. 0+24.50, 6" 45° BEND
C	STA. 0+59.86, 6" 45° BEND
D	STA. 1+60.86, 6" 45° BEND
E	STA. 1+67.93, 6" 45° BEND

ROOF DRAIN SCHEDULE

NO	DESCRIPTION
1	12" x 6" WYE
2	6" 45° BEND
3	12" x 12" WYE & 12" x 6" REDUCER
4	12" x 6" WYE & 6" 45° BEND
5	12" x 6" WYE & 6" 45° BEND
6	12" x 6" WYE & 6" 45° BEND
7	12" x 6" WYE & 6" 45° BEND

STRUCTURE SCHEDULE

NO.	INV. IN	INV. OUT	TOP ELEV.	REMARKS
1-1	202.04	201.94	207.84	DBL 'S' COMB. INLET H.C. DPW SD 4.34
1-2	---	203.27	209.73	DBL 'S' COMB. INLET H.C. DPW SD 4.34
1-3	---	201.50	206.00	DBL 'S' COMB. INLET H.C. DPW SD 4.34
MH-1	201.21	201.11	206.00	STD. 4'-0" PRECAST MANHOLE H.C. DPW 05.12
MH-2	202.57	202.47	210.20	STD. 4'-0" PRECAST MANHOLE H.C. DPW 05.12
S-1	197.20	196.20	207.00	STORMWATER MANAGEMENT RELEASE STRUCTURE
S-2	201.05	200.97	206.79	STC 4800 PRECAST CONC. STORMCEPTOR
E-1	---	194.0	197.0	LOW RISE SWM CONTROL STRUCTURE H. C. DPW SD 7.00
E-2	---	194.30	---	CONCRETE END SECTION

STORMCEPTOR MAINTENANCE GUIDELINES
 The performance of all stormwater quality measures decreases as they fill with sediment. Although the maintenance frequency will be site specific, CSR generally recommends annual maintenance be performed when the sediment volume in the unit reaches 15% of the total storage. This recommendation is based on several factors:

- Minimal performance degradation due to sediment build-up
- Sediment removal is easier when removed on a regular basis (as sediment builds up it compacts and solidifies making maintenance more difficult)
- Development of a routine maintenance interval helps ensure a regular maintenance schedule is followed. Although the frequency of maintenance will depend on site conditions, it is estimated that annual maintenance will be required for most applications; annual maintenance is a routine occurrence which is easy to plan for and remember.

HYDROCARBON SPILLS
 In the event of any hazardous material spill, CSR recommends maintenance be performed immediately. Maintenance should be performed by a licensed liquid waste hauler. You should also notify the appropriate regulatory agencies as required.

RECOMMENDED MAINTENANCE PROCEDURE
 For the "disc" design, oil is removed through the 6" inspection/clean out pipe and sediment is removed through the 24" diameter outlet floor pipe. Alternatively, oil could be removed from the 24" opening if water is removed from the treatment chamber, lowering the oil level below the drop pipes. The depth of sediment can be measured from the surface of the Stormceptor with a dipstick tube equipped with a ball valve (Sludge Judge). CSR recommends maintenance be performed once the sediment depth exceeds the guideline values provided in Table 8.

TABLE 8. SEDIMENT DEPTH INDICATING REQUIRED MAINTENANCE

MODEL	SEDIMENT DEPTH
4800	15"

No entry into the unit is required for routine maintenance of the Inlet Stormceptor or the smaller disc insert models of the In-line stormceptor. Entry to the level of the by-pass may be required for servicing the larger In-line models. Any potential obstructions at the inlet can be observed from the surface. The by-pass chamber has been designed as a platform for authorized maintenance personnel. In the event that an obstruction needs to be removed, drain flushing needs to be performed, or camera surveys are required. Typically, maintenance is performed by the Vacuum Service Industry, a well established sector of the service industry that cleans underground tanks, sewer, and catch-basins. Costs to clean a Stormceptor will vary based on size of the unit and transportation distances. If you need assistance for cleaning a stormceptor unit, contact your CSR representative, or the CSR Stormceptor Information Line at 1800-909-1765.

DISPOSAL
 The requirement for the disposal of material from a stormceptor are similar to that of any other Best Management Practices (BMPs). Local guidelines should be consulted prior to disposal of the separator contents.

In most areas the sediment, once dewatered, can be disposed of in a sanitary landfill. It is not anticipated that the sediment would be classified as hazardous waste. In some areas mixing the water with the sediment will create a slurry that can be discharged into a trunk sanitary sewer. In all disposal options, approval from the disposal facility operator/agency is required. Petroleum waste products collected in stormceptor (oil/chemical/fuel spills) should be removed by a licensed waste management company.

Precast Concrete Stormceptor® Order Request Form

CONTRACTOR INFORMATION
 Name: Nick Goff, Chalked
 Address: 403 W. Atholway Ave
 City: Bayton
 State: MD
 Zip Code: 21724
 Contact: Ed Stilling
 Phone: 410-583-5832
 Fax: 410-583-5832

OWNER INFORMATION
 Name: Atlas Plumbing
 Phone: 301-285-2767
 Fax: 301-330-1940

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT: 1.68

Model: 4800 Inlet Size: 36" Manhole Number: 5-2

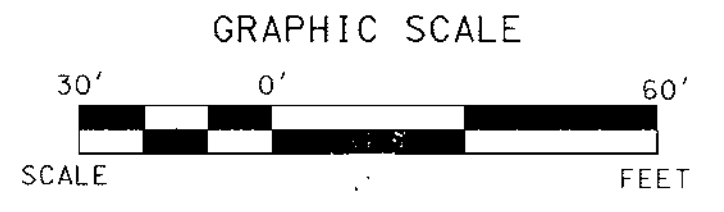
STC: 800 1200 1800 2400

Insert Size: SINGLE DOUBLE

Manhole Inlet (I): 201.05
 Inlet Pipe Invert (I): 200.97
 Type: RPC C-361
 Inlet Pipe Outside Diameter (O): 36"
 Inlet Pipe Inside Diameter (I): 32"
 Outlet Pipe Outside Diameter (O): 30"
 Outlet Pipe Inside Diameter (I): 27"

Project Name: Atlas Plumbing
 Approximate date of delivery (month): 6
 Delivery Address: 10920 Pump House Road
 City: Annapolis Junction State: MD Zip Code: 2
 Designer Company: Purdum & Jeschke, LLC
 Designer Contact: Lanny M'Guire Phone: 410-668-8800 Fax: 410-668-8800

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR, 8005 Harford Road, ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)313-6389 FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)313-6399



SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Valu Cummings 9/14/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/14/00

Cindy Hamata 9/29/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/29/00

David R. Miller 10/5/00
 DIRECTOR
 DATE: 10/5/00

OWNER/DEVELOPER

ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050

PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental

The Professional Engineering Center
 8005 Harford Road - Baltimore, Maryland 21284
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 3 OF 12
 CONTRACT NO.:

ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
A-3 / 68	10920 PUMP HOUSE ROAD

PERMIT INFORMATION CHART

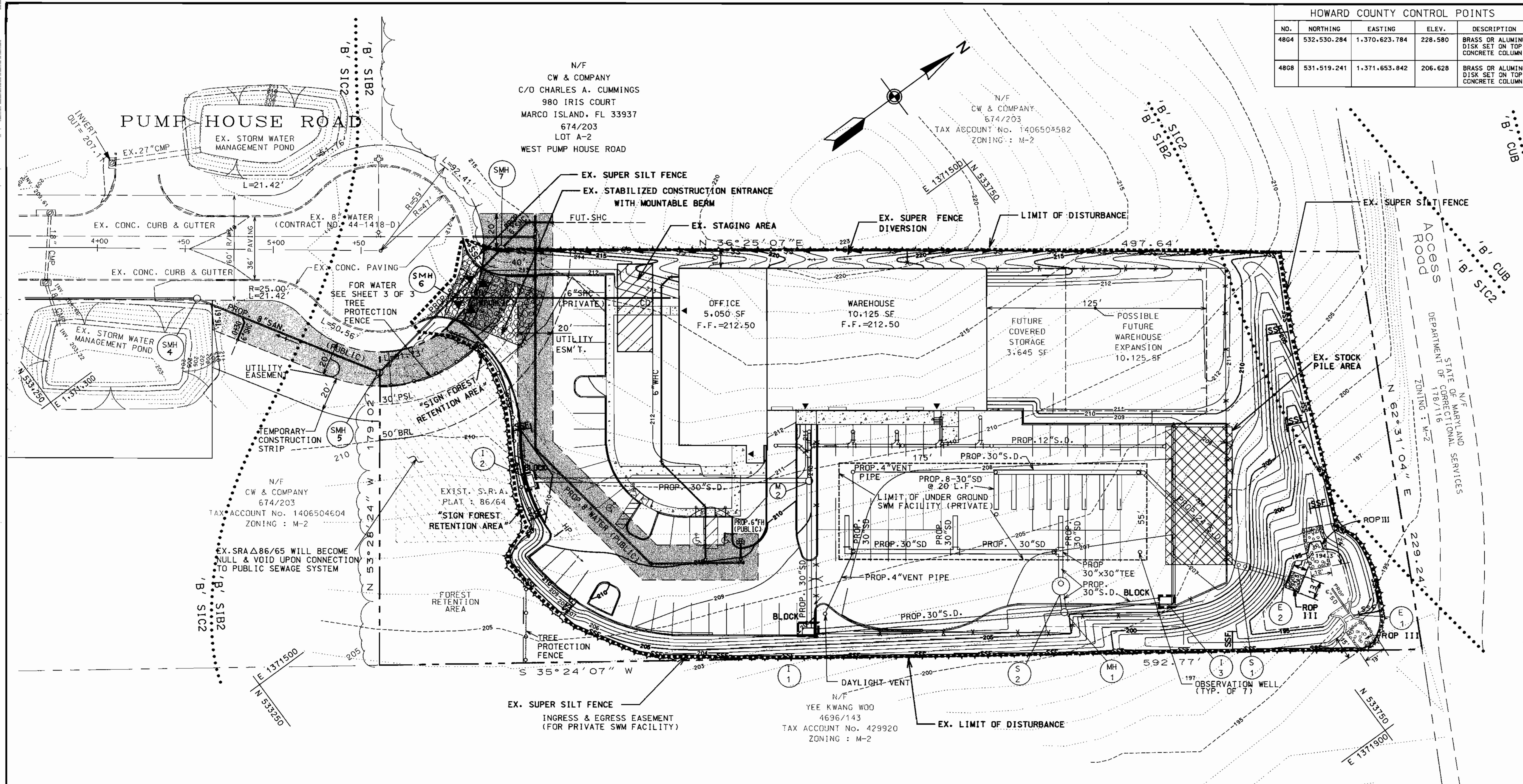
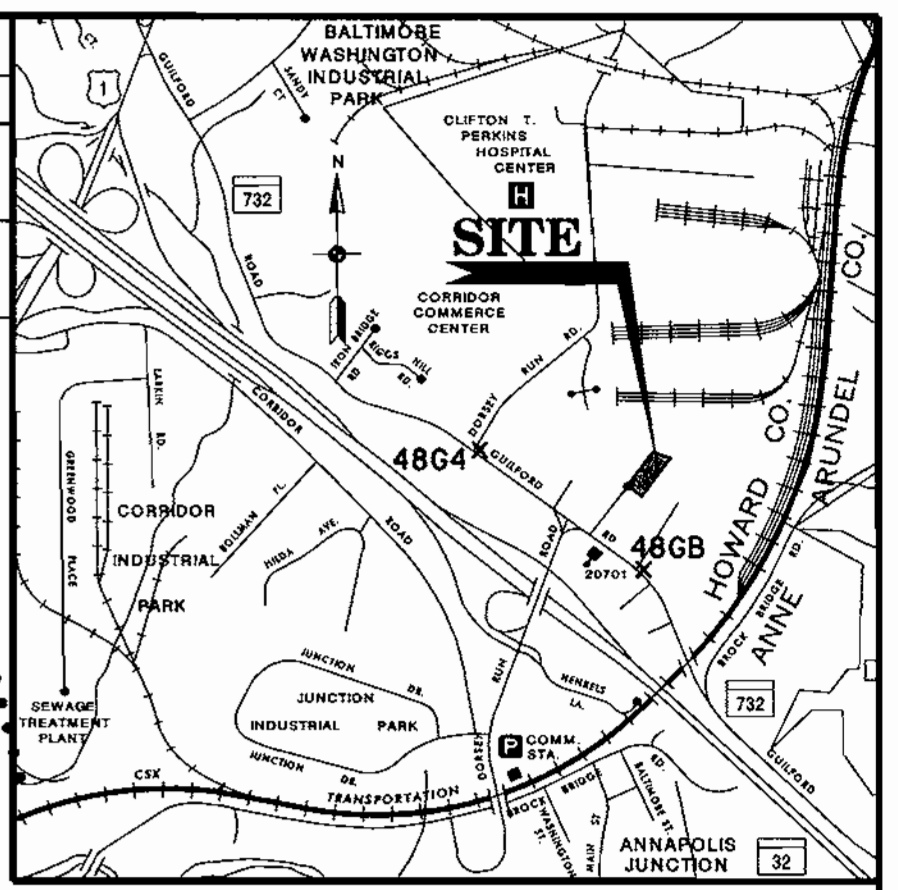
SUBDIVISION NAME	SECTION AREA	LOT/PARCEL
CW and COMPANY	N/A	A-3/68

PLAT: 1442 GRID: 14 ZONING: M-2 TAX MAP NO.: 48 ELECT. DIST.: 6th CENSUS TRACT: 6069.01
 WATER CODE: B02 WATER CODE 1:

TITLE: **UTILITIES, STORM DRAIN & SWM PLAN**

ATLAS PLUMBING
 CW & COMPANY
 P.A.C.B. # 3, A.S. # 65
 HOWARD COUNTY, MARYLAND

HOWARD COUNTY CONTROL POINTS				
NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
48G4	532.530.284	1.370.623.784	228.580	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN
48G8	531.519.241	1.371.653.842	206.628	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN



VICINITY MAP 1"=2000'

SEQUENCE OF CONSTRUCTION :

MASS GRADING ONLY COMPLETED UNDER WAIVER PETITION: WP-0093.SCD MGP-00-157

- OBTAIN A GRADING PERMIT
- NOTIFY THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION, (410) 513-1855 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. (DAY 1)
- CLEAR AND GRUB FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE. (DAY 2)
- CLEAR AND GRUB FOR AND INSTALL SUPER FENCE DIVERSION & SUPER SILT FENCE. NOTIFY THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION UPON COMPLETION OF SAID INSTALLATION. (DAY 2-6)
- MASS GRADE SITE. AS SWALE ALONG NORTHWESTERN BOUNDARY IS BROUGHT TO GRADE INSTALL EROSION CONTROL MATTING AND STABILIZE. (DAY 6-50)

SEQUENCE OF CONSTRUCTION :

(THIS SUBMITTAL)

- AS SITE IS BROUGHT TO GRADE, COMMENCE BUILDING AND UTILITY CONSTRUCTION. INLETS TO BE BLOCKED UNTIL THE AREAS THEY SERVE ARE PERMANENTLY STABILIZED. SEE SHEET 8 OF 10 FOR STORMWATER MANAGEMENT FACILITY SEQUENCE OF CONSTRUCTION. (DAY 51 - 86)
- FINE GRADE SITE AND INSTALL STONE SUBBASE, CURB AND GUTTER, AND PERMANENT PAVING. PERMANENTLY STABILIZE AND LANDSCAPE OPEN SPACE AREAS. (DAY 86 - 93)
- UPON THE COMPLETION OF THE PERMANENT STABILIZATION AND WITH THE PERMISSION OF THE HOWARD SOIL CONSERVATION DISTRICT SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES AS DRAINAGE AREAS THAT THEY SERVE ARE PERMANENTLY STABILIZED. PERMANENTLY STABILIZE ANY AREAS DISTURBED BY THIS PROCESS. (DAY 94 - 99)

ENGINEER'S CERTIFICATION

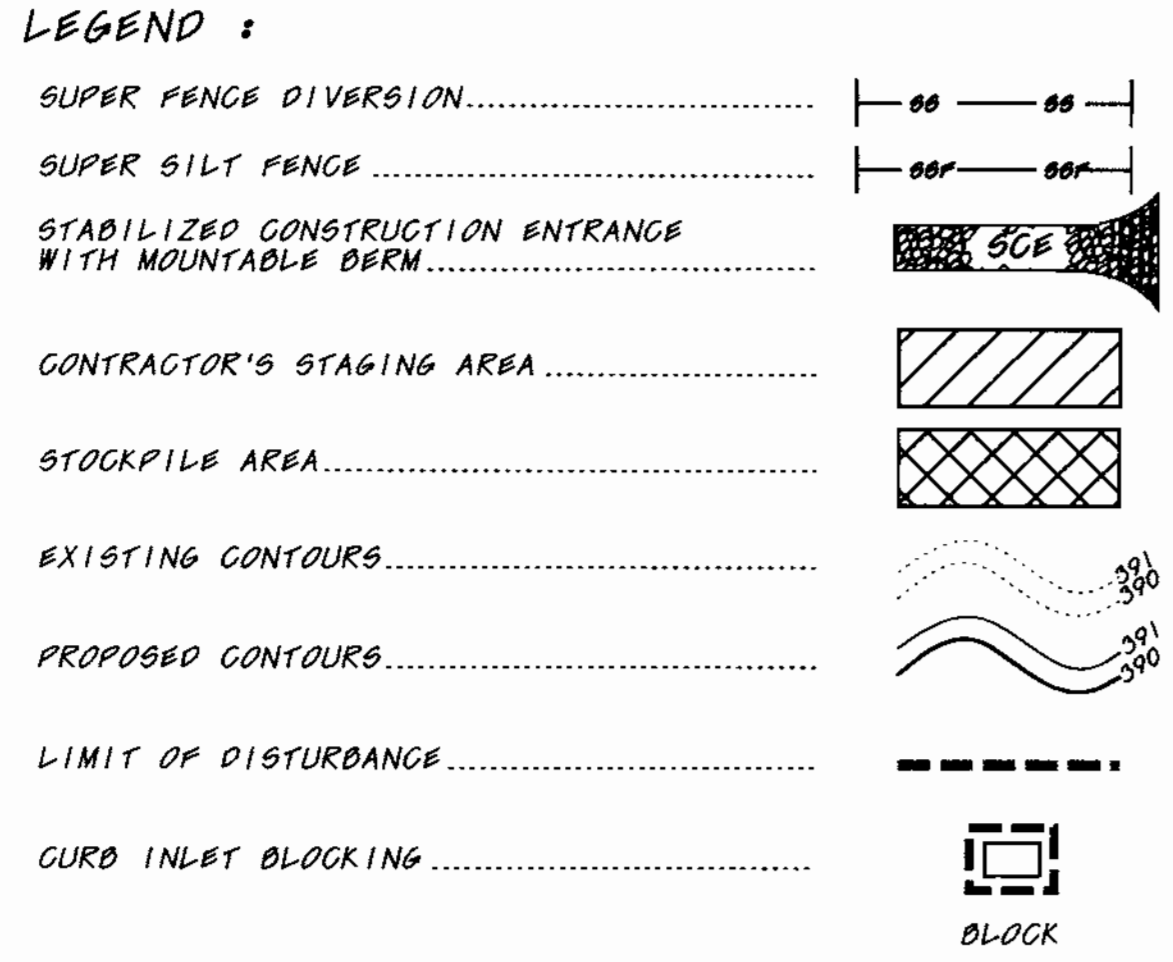
"I CERTIFY THAT THIS PLAN OF SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT."

Signature: *Charles W. Bradley* DATE: 5/8/00
 Signature: *Charles W. Bradley* NO LICENSE NUMBER: 10489

DEVELOPER'S CERTIFICATION

"I, WE HEREBY CERTIFY THAT DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECTS WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY HOWARD COUNTY SOIL CONSERVATION DISTRICT."

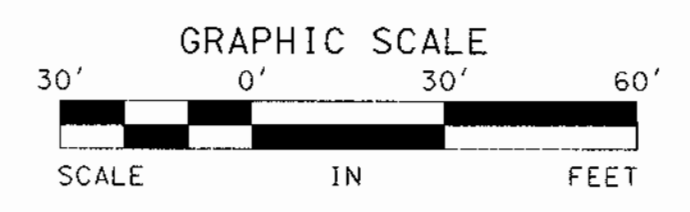
Signature: *Edward J. Stillins* DATE: 5/4/00
 Signature: *Edward J. Stillins* TITLE: OWNER/DEVELOPER



UTILITY NOTES :

- CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKED FILL AND STABILIZED EACH DAY IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY. SILT FENCE SHALL BE PLACED ON THE DOWN HILL SIDE OF TRENCH.
- PLACE ALL EXCAVATED MATERIAL ON THE UP HILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

MISS UTILITY
 THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *John D. Smith* DATE: 9/14/00
 Signature: *Cindy Hanada* DATE: 9/29/00
 Signature: *John D. Smith* DATE: 10/15/00

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 Signature: *Charles Summers* DATE: 9/12/00
 Signature: *John L. Robertson* DATE: 9/12/00

OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050



PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental
 The Professional Engineering Center
 8025 Harford Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

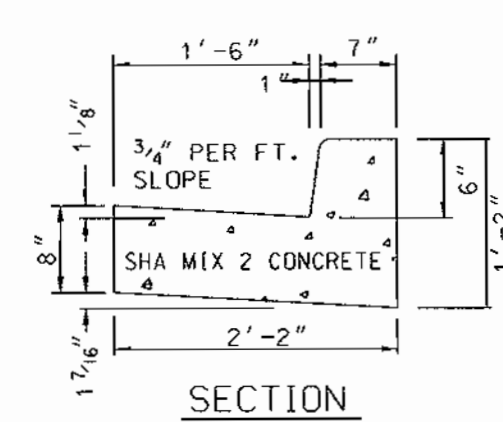
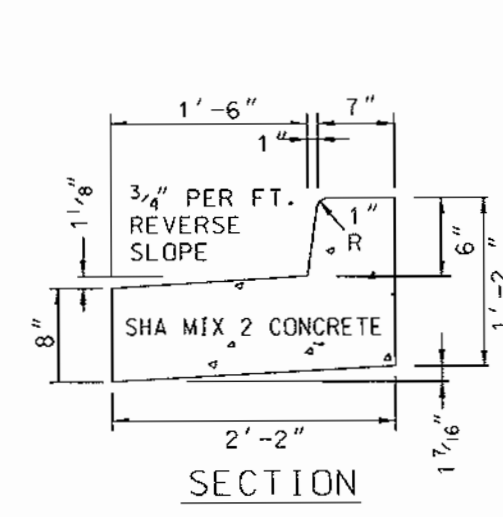
SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 4 OF 12
 CONTRACT NO.:

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
A-3 / 68	10920 PUMP HOUSE ROAD

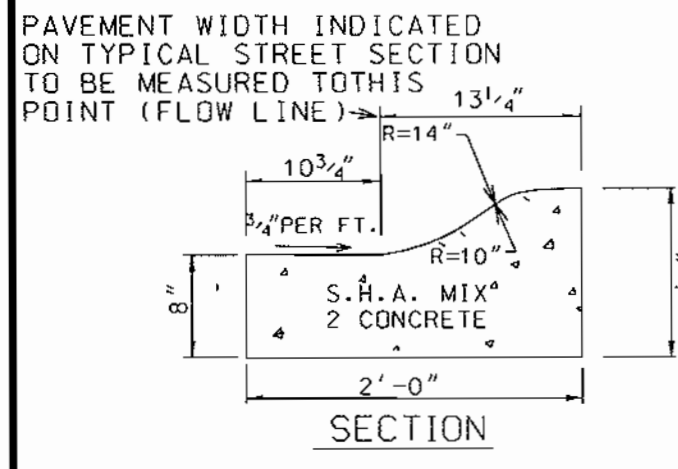
PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION AREA	LOT/PARCEL	DATE
CW and COMPANY	N/A	A-3/68	4/3/00

PLAT/LOT#	GRID#	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
14-112	14	M-2	48	6th	6069.01

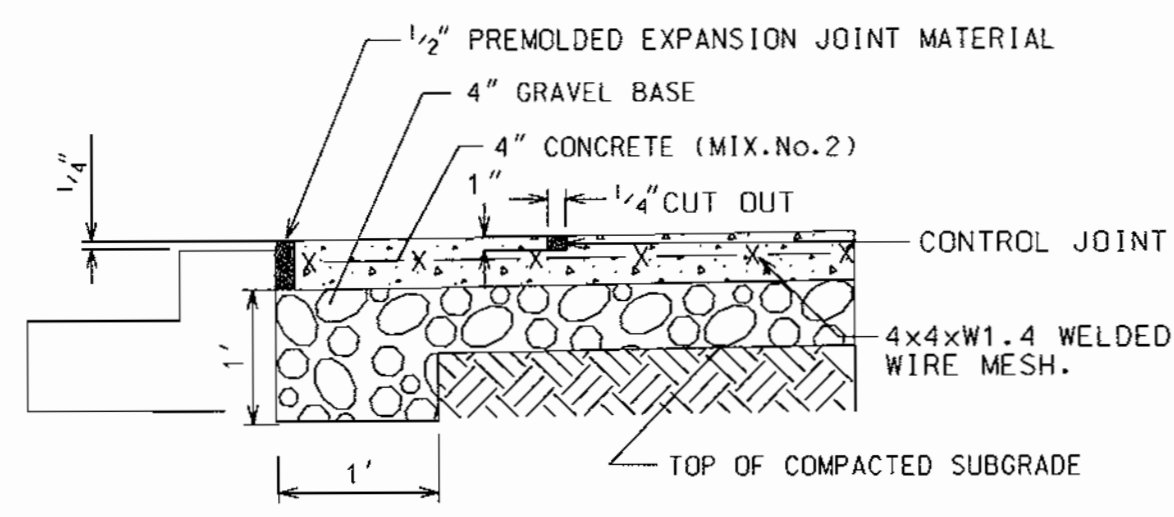
TITLE: **SEDIMENT EROSION CONTROL PLAN**
 ATLAS PLUMBING
 C/W & COMPANY
 PARCEL A-3, 488/65
 HOWARD COUNTY, MARYLAND



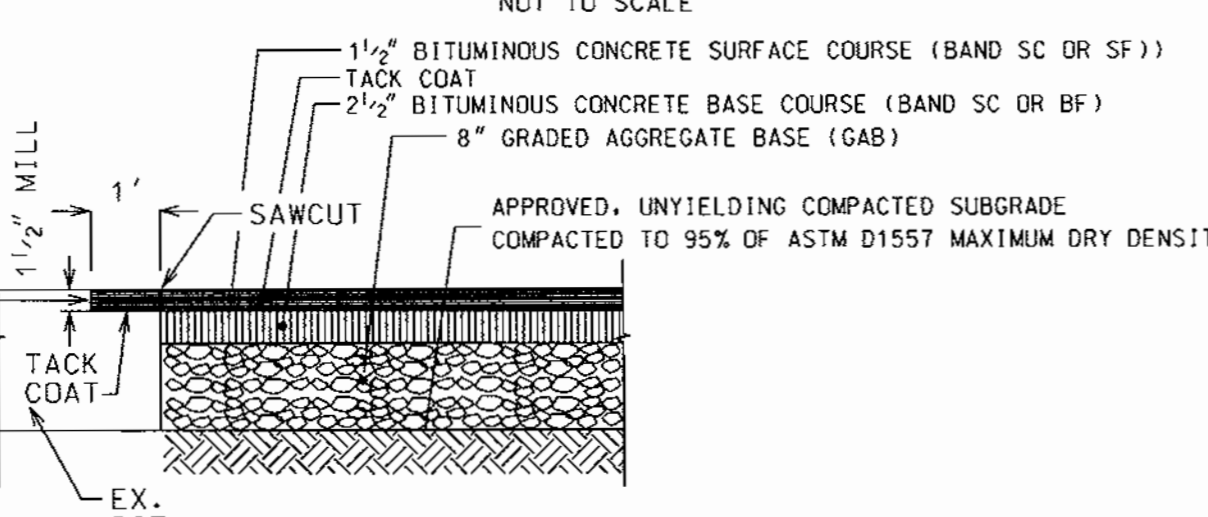
6" COMBINATION CURB & GUTTER
NOT TO SCALE



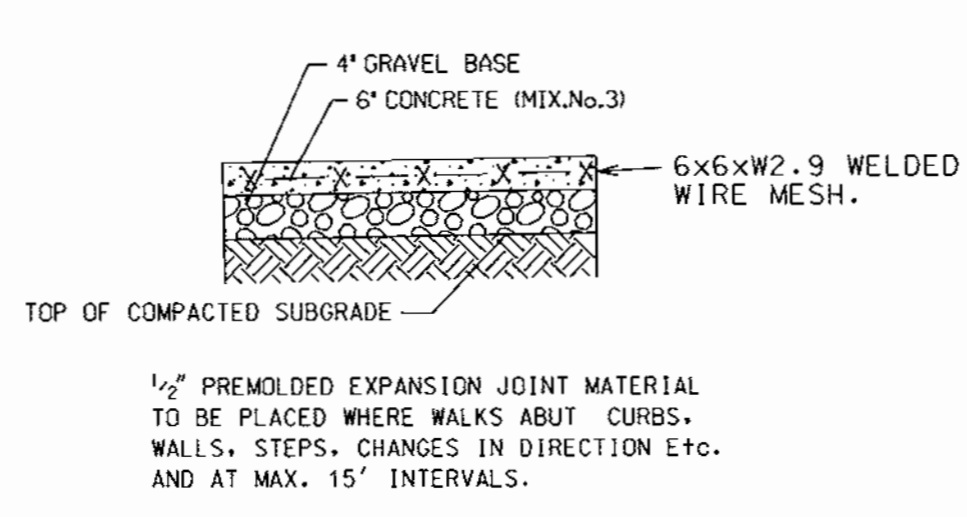
MODIFIED COMBINATION CURB & GUTTER
NOT TO SCALE



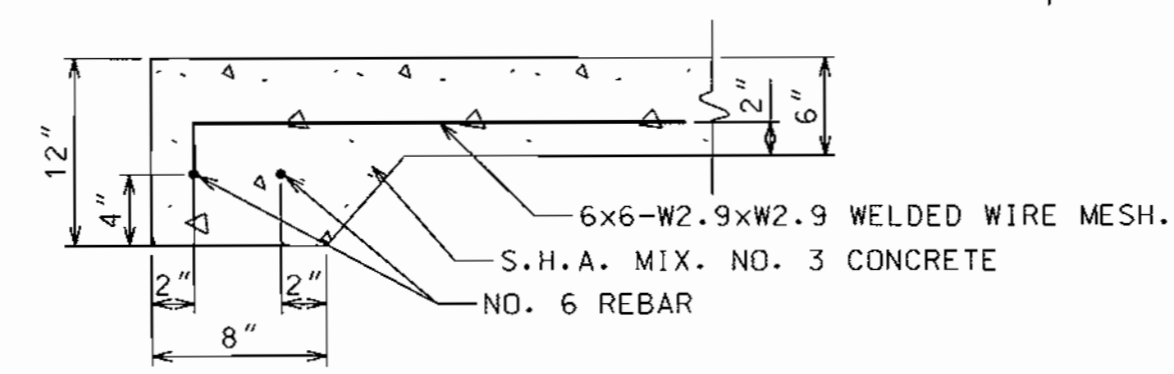
CONCRETE SIDEWALK SECTION
NOT TO SCALE



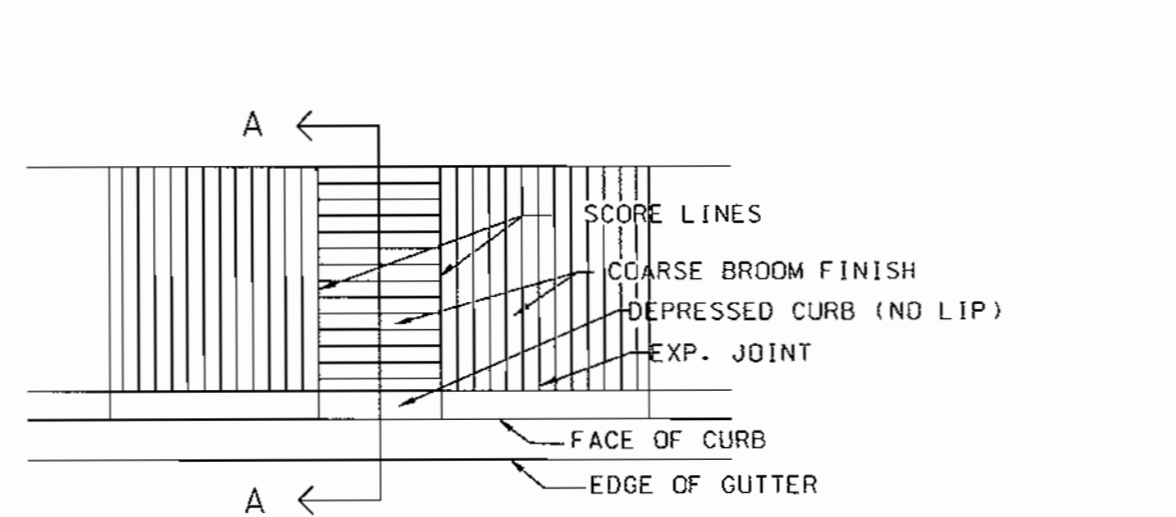
HEAVY DUTY BITUMINOUS PAVING SECTION
NOT TO SCALE



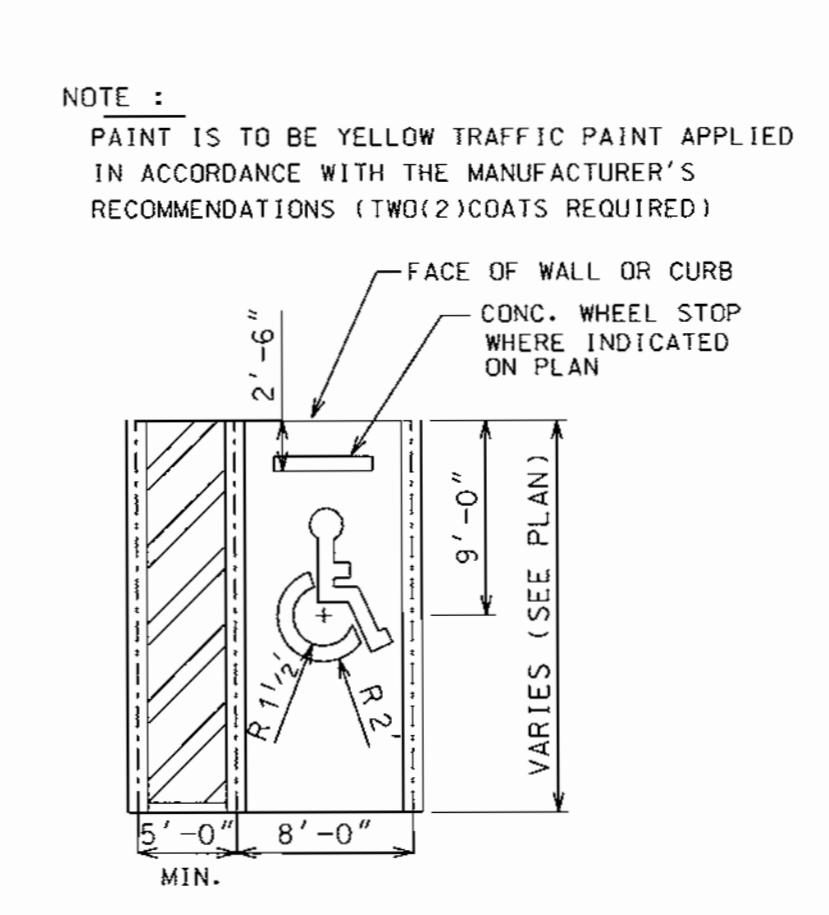
CONCRETE PAVING SECTION
NOT TO SCALE



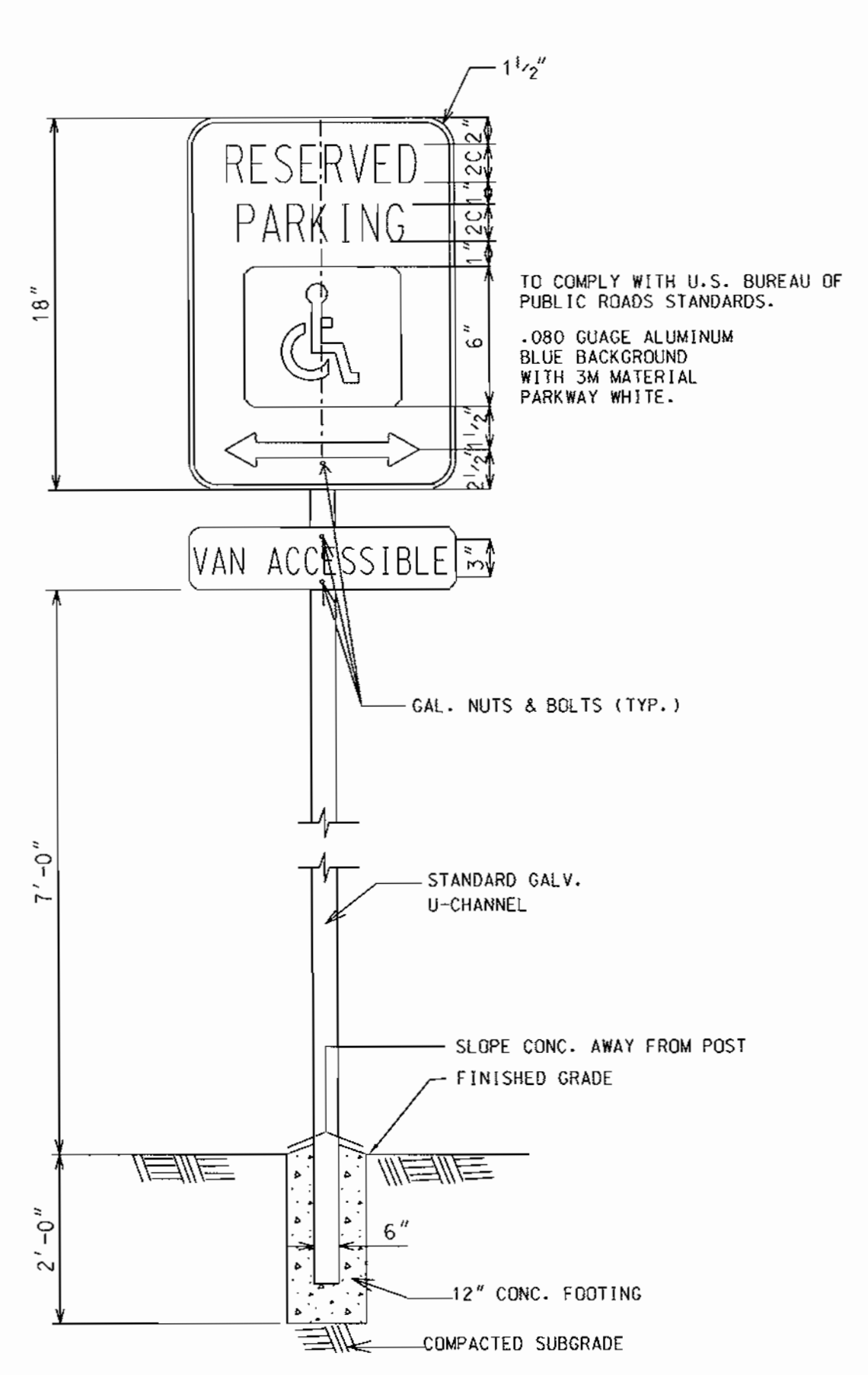
REFUSE PAD DETAIL
NOT TO SCALE



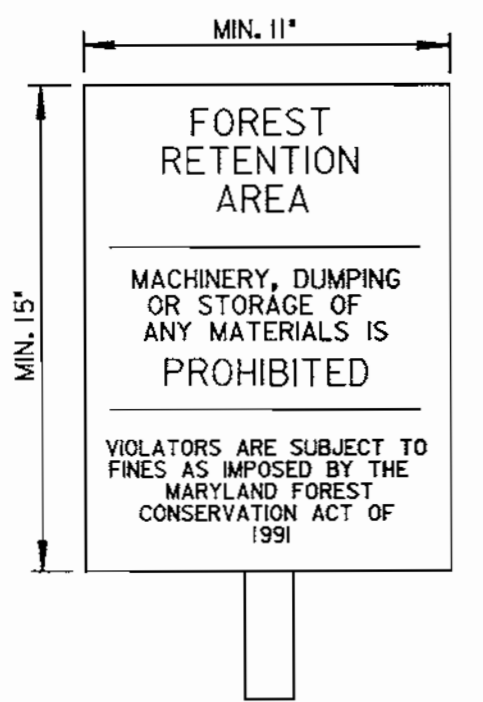
HANDICAPPED RAMP
NOT TO SCALE



HANDICAPPED PARKING
NOT TO SCALE

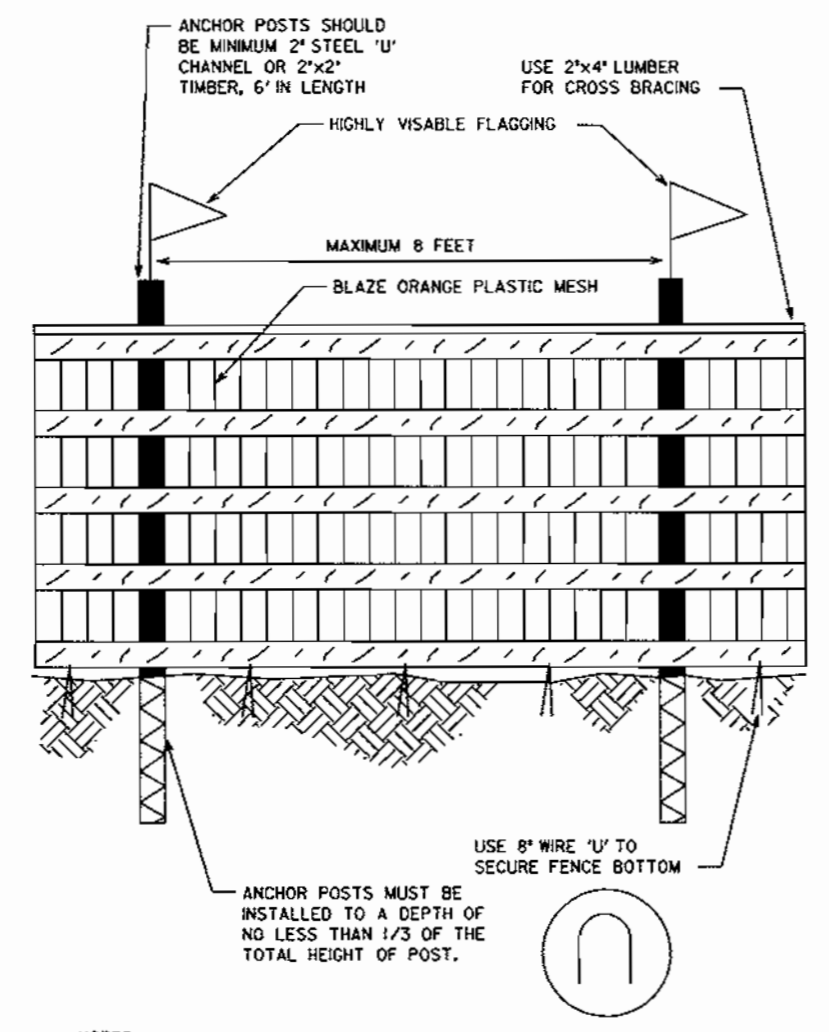


HANDICAP PARKING SIGN DETAIL
NOT TO SCALE



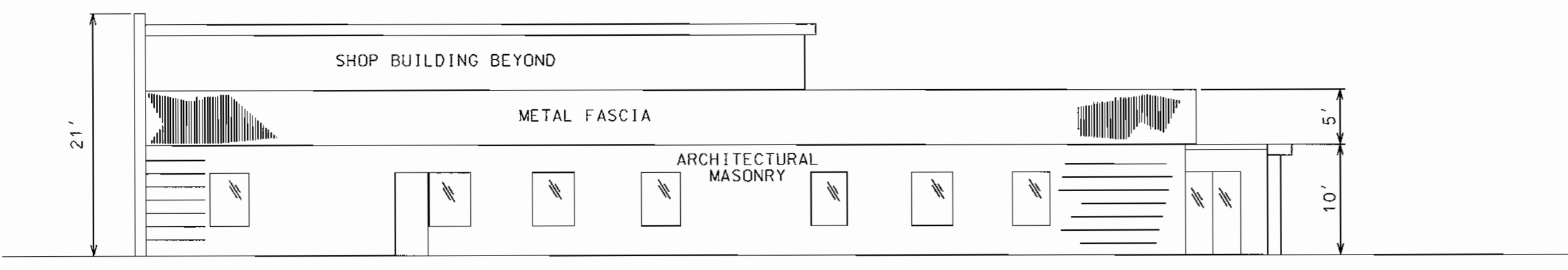
- NOTES:
1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 2. SIGNS TO BE PLACED APPROXIMATELY 50' APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

Permanent Signage

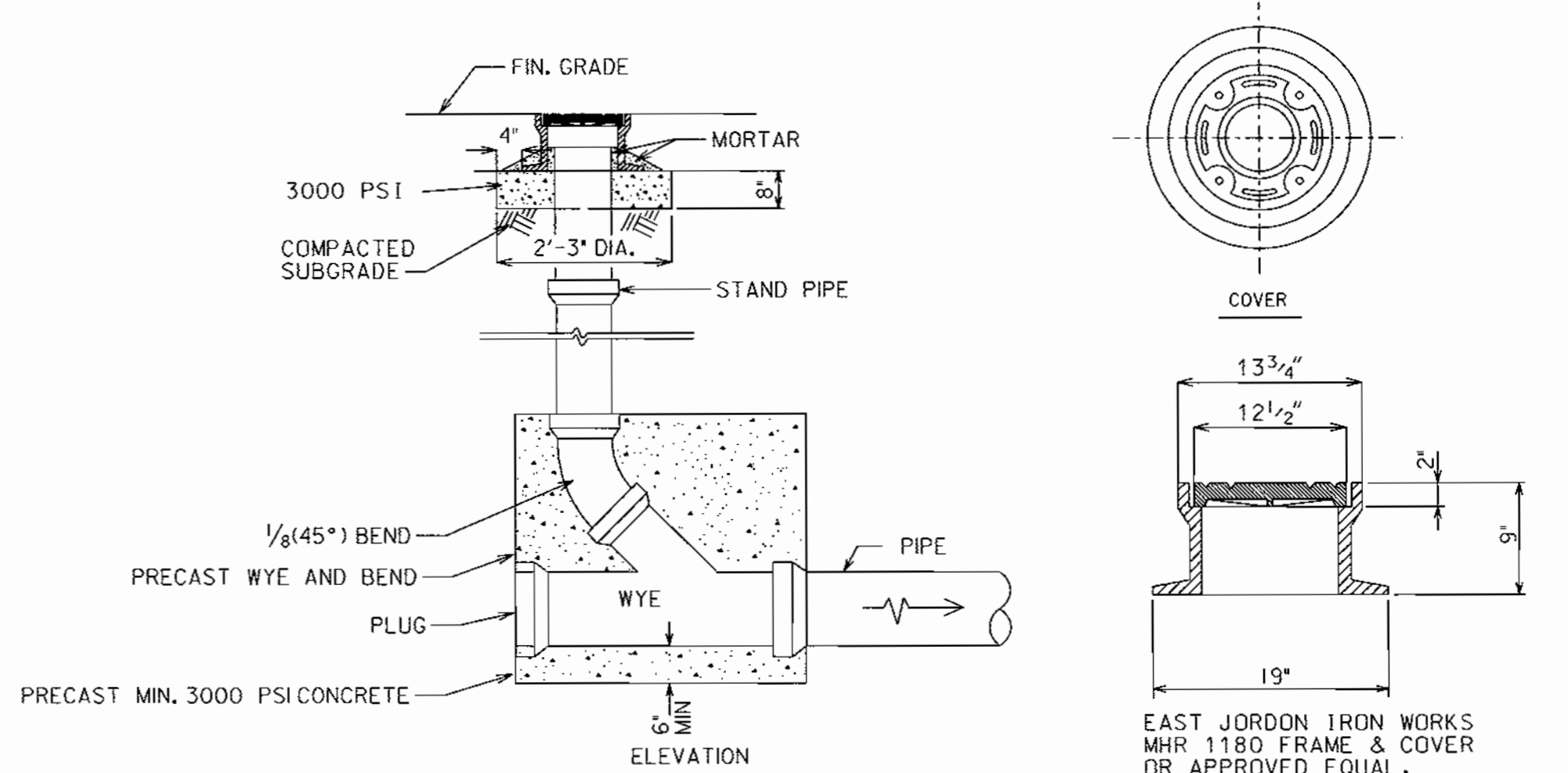


- NOTES:
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICES.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

Blaze Orange Plastic Fence
Not To Scale



ELEVATION LOOKING NORTHEAST
NOT TO SCALE



TYPICAL CLEANOUT DETAILS (C.O.)
NOT TO SCALE

SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael Damman 9/14/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cindy Hamilton 7/29/00
CHIEF, DIVISION OF LAND DEVELOPMENT

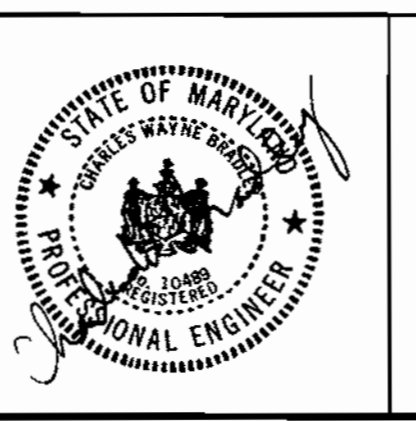
Joseph R. Roth 10/5/00
DIRECTOR

OWNER/DEVELOPER

ATLAS REAL ESTATE
C/O STEVEN F. TURNER, CEO
9095 OWENS CT.
MANASSAS PARK, VA 20111-2393
PHONE: (703)-330-5050

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8005 Harford Road - Baltimore, Maryland 21284
Phone: 410-668-8800 - Fax: 410-668-8801



CHECKED BY: TAM
DESIGNED BY: TAM
DRAWN BY: JRG
DATE: 04/06/2000

SCALE: AS SHOWN
PROJECT NO.: A4382-10
DRAWING NO.: 5 OF 12
CONTRACT NO.:

LOT/PARCEL# A-3 / 68		ADDRESS CHART STREET ADDRESS 10920 PUMP HOUSE ROAD	
SUBDIVISION NAME CW and COMPANY		SECTION AREA N/A	LOT/PARCEL A-3/68
PLAT# 14442	GRID# 14	TAX MAP No. M-2	ELECT. DIST. 48
WATER CODE : B02		CENSUS TRACT 6069.01	

TITLE: **SITE DETAILS**
ATLAS PLUMBING
CW & COMPANY
PARCEL A-3, 486/65
HOWARD COUNTY, MARYLAND

SDP-00-91

20.0 STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation
 I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, or sediment stabilization structures, before any sediment control works.
 II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

B. Soil Amendments (Fertilizer and Lime Specifications)
 I. 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 samples taken for engineering purposes may also be used for chemical purposes.
 II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate authority. Fertilizers shall only 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.
 III. Lime materials shall be ground limestone (hydrated or burnt) lime may be substituted which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a 100 mesh sieve and 98-100% will pass through a 20 mesh sieve.

C. Seeded Preparation
 I. Temporary Seeding
 a. Seeded preparation shall consist of loosening soil to a depth of 2" to 5" by means of suitable agricultural or construction equipment, such as disk harrows or chain plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or graded smooth but left in the roughened condition. Sloped areas (greater than 3%) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 b. Apply fertilizer and lime as prescribed on the plans.
 c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disk or other suitable means.
 II. Permanent Seeding
 a. Minimum soil conditions required for permanent vegetative establishment:
 1. Soil pH shall be between 6.0 and 7.0.
 2. Soluble nitrogen shall be less than 500 parts per million (ppm).
 3. The soil shall contain less than 400 clay but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if low organic or organic content is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
 4. Soil must contain 1.5% minimum organic matter by weight.
 5. Soil must contain sufficient pore spaces to permit adequate root penetration.
 6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specifications to correct.

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 binding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 c. Apply soil amendments as per soil test or as included on the plans.
 d. Mix soil amendments into the top 3 - 5" of topsoil by disk 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 application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen surface. Steep slopes (greater than 3%) 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. Seeding loosening may not be necessary on newly disturbed areas.

D. Seed Specifications
 I. 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 sowing such material on this job.
 Note: Seed tags shall be made available to the Inspector to verify type and rate of seed used.
 II. Inoculant - The inoculant for treating legume seeds in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used other than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate of application. It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80°F will weaken bacteria and make the inoculant less effective.
E. Methods of Seeding
 I. Hydroseeding Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cutspreader seeder.
 a. If fertilizer is being applied at the time of seeding, the application rate amounts will not exceed the following nitrogen maximum of 100 lbs. per acre total of soluble nitrogen P205 phosphorus 200 lbs./acre 420 lbs./acre 200 lbs/acre.
 b. Lime - Use only ground agricultural limestone top 3 tons per acre may be applied by hydroseeding. Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
 II. Dry Seeding This includes use of conventional drop or broadcast spreaders.
 a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good soil to seed contact.
 b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
 III. Drill or Cutspreader Seeding: Mechanized seeders that apply and cover seed with soil.
 a. Cutspreader seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil coverage. Seeded must be firm after planting.
 b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mutch Specifications (in order of preference)
 I. Straw shall consist of threshed wheat, rye or oat straw, reasonably bright in color, and shall not be moldy, rotting, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 II. Wood Cellulose Fiber Mutch (WCFM)
 a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous phytol state.
 b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread struff.
 c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
 d. WCFM materials shall be manufactured and processed in such a manner that the wood fiber will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The much material shall form a bio-film having moisture absorption and permeation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 e. WCFM material shall contain no elements or compounds at concentration levels that will be phytotoxic.
 f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1mm, pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 30% minimum.
 Note: Only sterile straw much should be used in areas where one species of grass is desired.

G. Mulching Seeding Areas - Mutch shall be applied to all seeded areas immediately after seeding.
 I. If grading is completed outside for the seeding season, much shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 II. When straw much is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Much shall be applied to a uniform loose depth of between 1" and 2". Much applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a much anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
 III. Wood cellulose fiber used as a much 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.
H. Securing Straw Mutch (Mutch Anchoring) Much anchoring shall be performed immediately following much 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:
 I. A much anchoring tool is a tractor drawn implement designed to punch and anchor much into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to tractor slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
 II. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 100 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 of water.
 III. Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and on crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders such as Acrylics, DLR Hydrocoat, UCA-70, Polystyrene, Terra Top II, Terra Lock, or other approved sead may be used at rates recommended by the manufacturer to anchor much.
 IV. Lightweight plastic netting may be stapled over the much according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

SECTION IV - SOD
 I. Sod - Sod is a layer of soil, usually 4" to 6" deep, that is used to provide quick cover on disturbed areas (21 grade or flatter).
General Specifications
 I. Class of Turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the Job Foreman and Inspector.
 II. Sod shall be machine cut at a uniform soil thickness of 3/4" plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the supplier with length, maximum allowable deviation from standard width and length shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
 III. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 IV. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) is not within the recommended range.
 V. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.
B. Sod Installation
 I. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
 II. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
 III. Whenever possible, sod shall be laid with the long edges parallel to the contour and with overlapping joints. Sod shall be rolled and tamped, stepped or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
 IV. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and watering shall be completed within eight (8) hours.
C. Sod Maintenance
 I. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the hot part of the day to prevent wilting.
 II. After the first week, sod watering is required as necessary to maintain adequate moisture content.
 III. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS
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 f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm, diameter approximately 1mm, pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 30% minimum.
 Note: Only sterile straw much should be used in areas where one species of grass is desired.

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20.0 STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

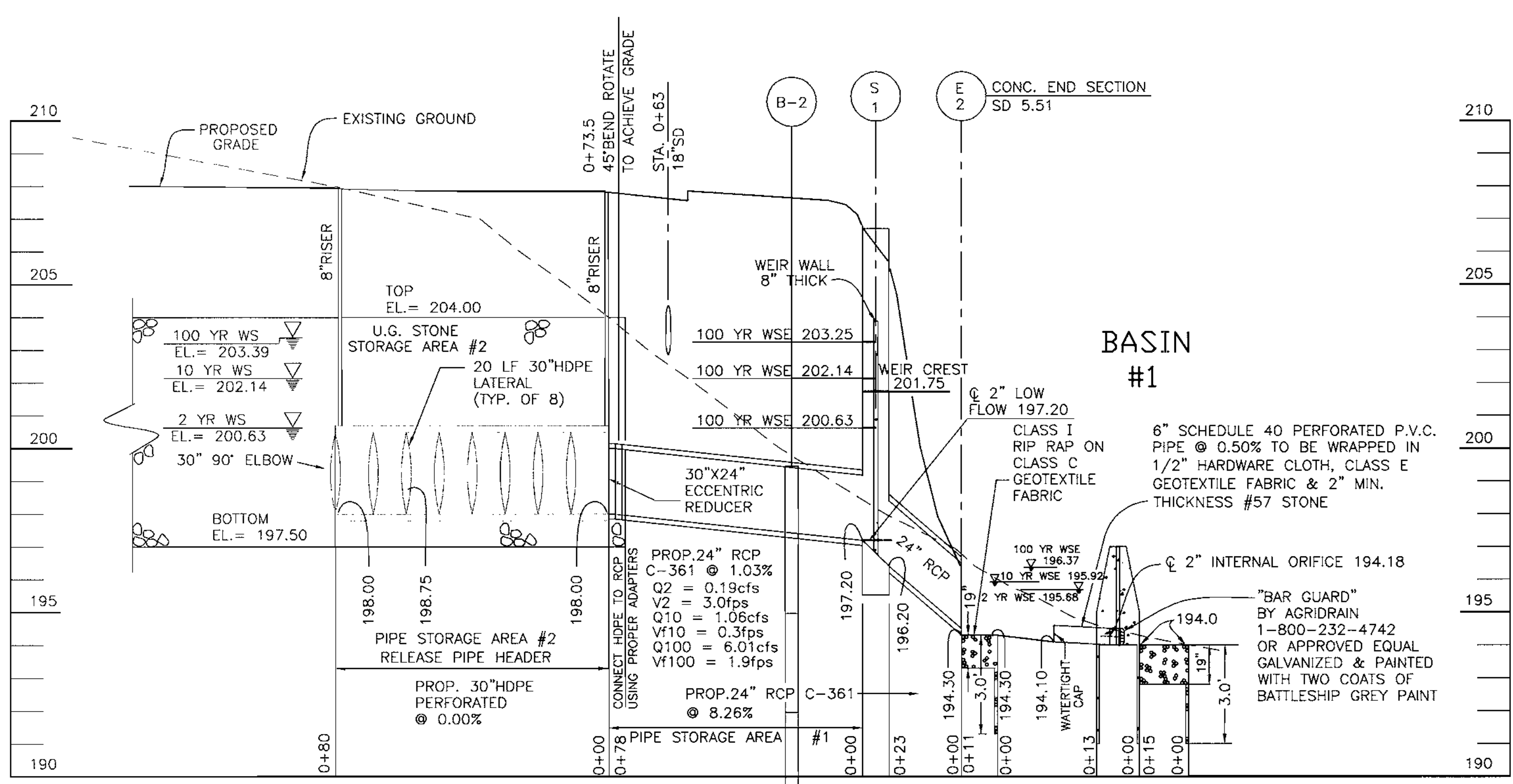
SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation
 I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, or sediment stabilization structures, before any sediment control works.
 II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

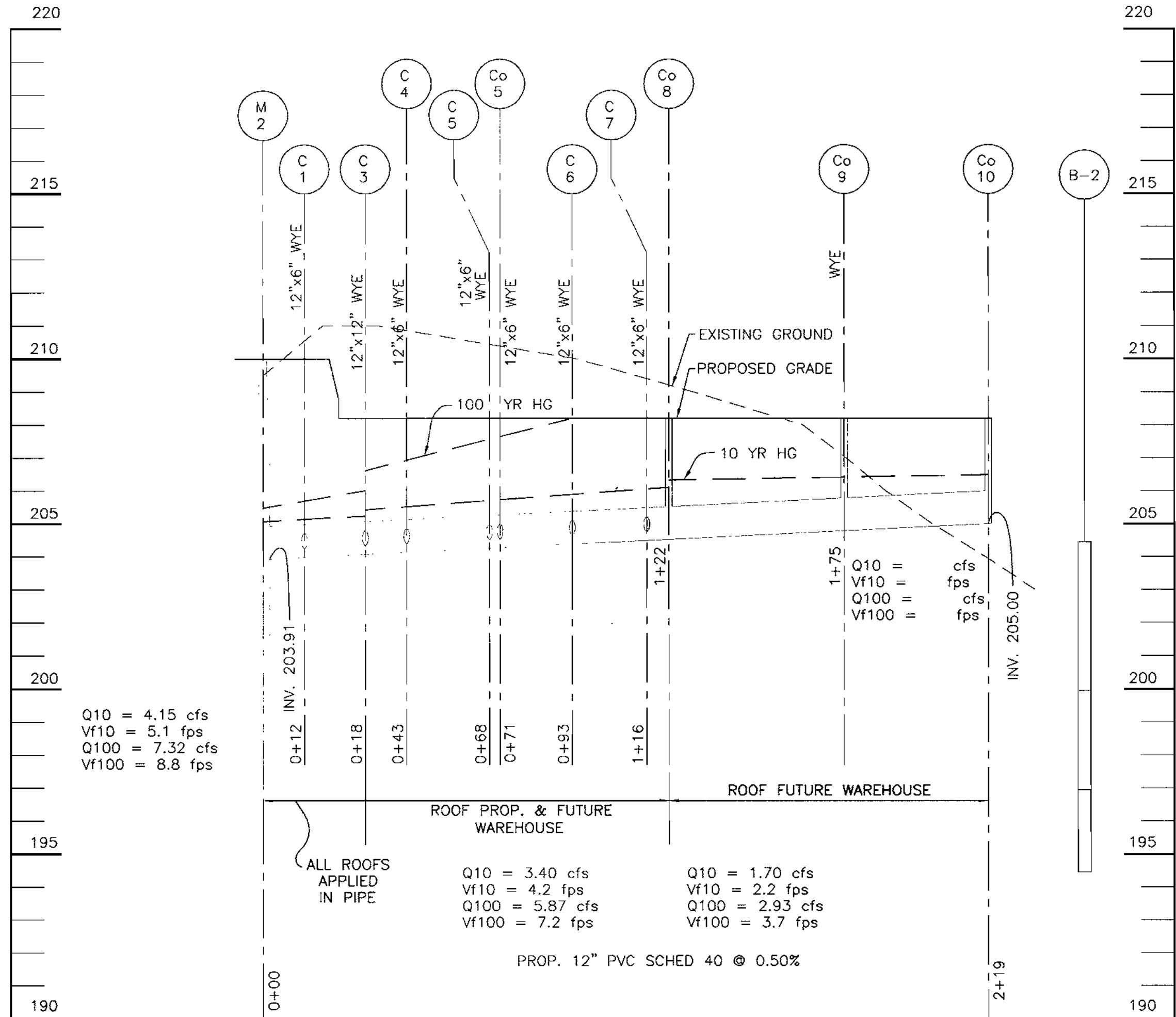
B. Soil Amendments (Fertilizer and Lime Specifications)
 I. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical purposes.
 II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate authority. Fertilizers shall only 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.
 III. Lime materials shall be ground limestone (hydrated or burnt) lime may be substituted which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a 100 mesh sieve and 98-100% will pass through a 20 mesh sieve.

C. Seeded Preparation
 I. Temporary Seeding
 a. Seeded preparation shall consist of loosening soil to a depth of 2" to 5" by means of suitable agricultural or construction equipment, such as disk harrows or chain plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or graded smooth but left in the roughened condition. Sloped areas (greater than 3%) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 b. Apply fertilizer and lime as prescribed on the plans.
 c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disk or other suitable means.
 II. Permanent Seeding
 a. Minimum soil conditions required for permanent vegetative establishment:
 1. Soil pH shall be between 6.0 and 7.0.
 2. Soluble nitrogen shall be less than 500 parts per million (ppm).
 3. The soil shall contain less than 400 clay but enough fine grained material (30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if low organic or organic content is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.
 4. Soil must contain 1.5% minimum organic matter by weight.
 5. Soil must contain sufficient pore spaces to permit adequate root penetration.
 6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specifications to correct.

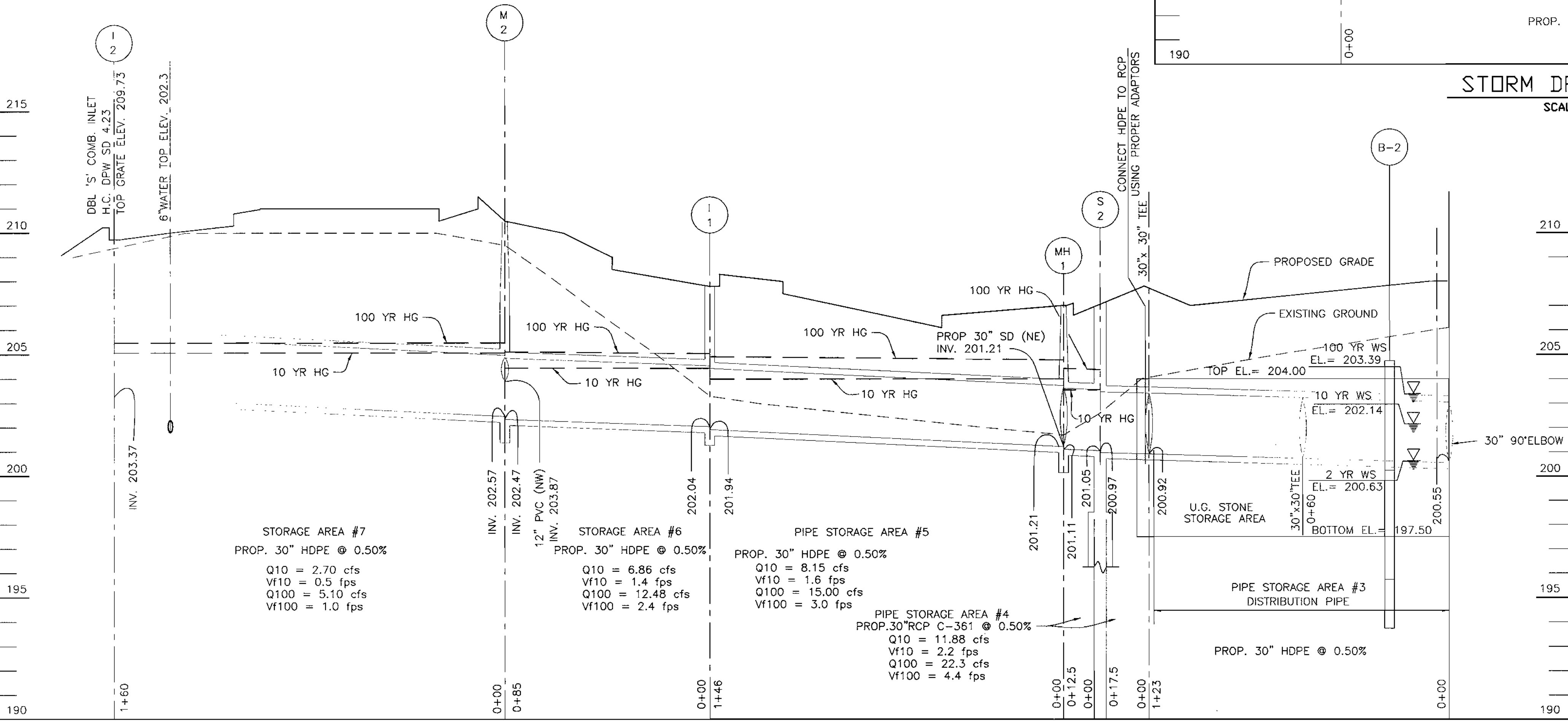
b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit binding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 c. Apply soil amendments as per soil test or as included on the plans.
 d. Mix soil amendments into the top 3 - 5" of topsoil by disk 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 application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen



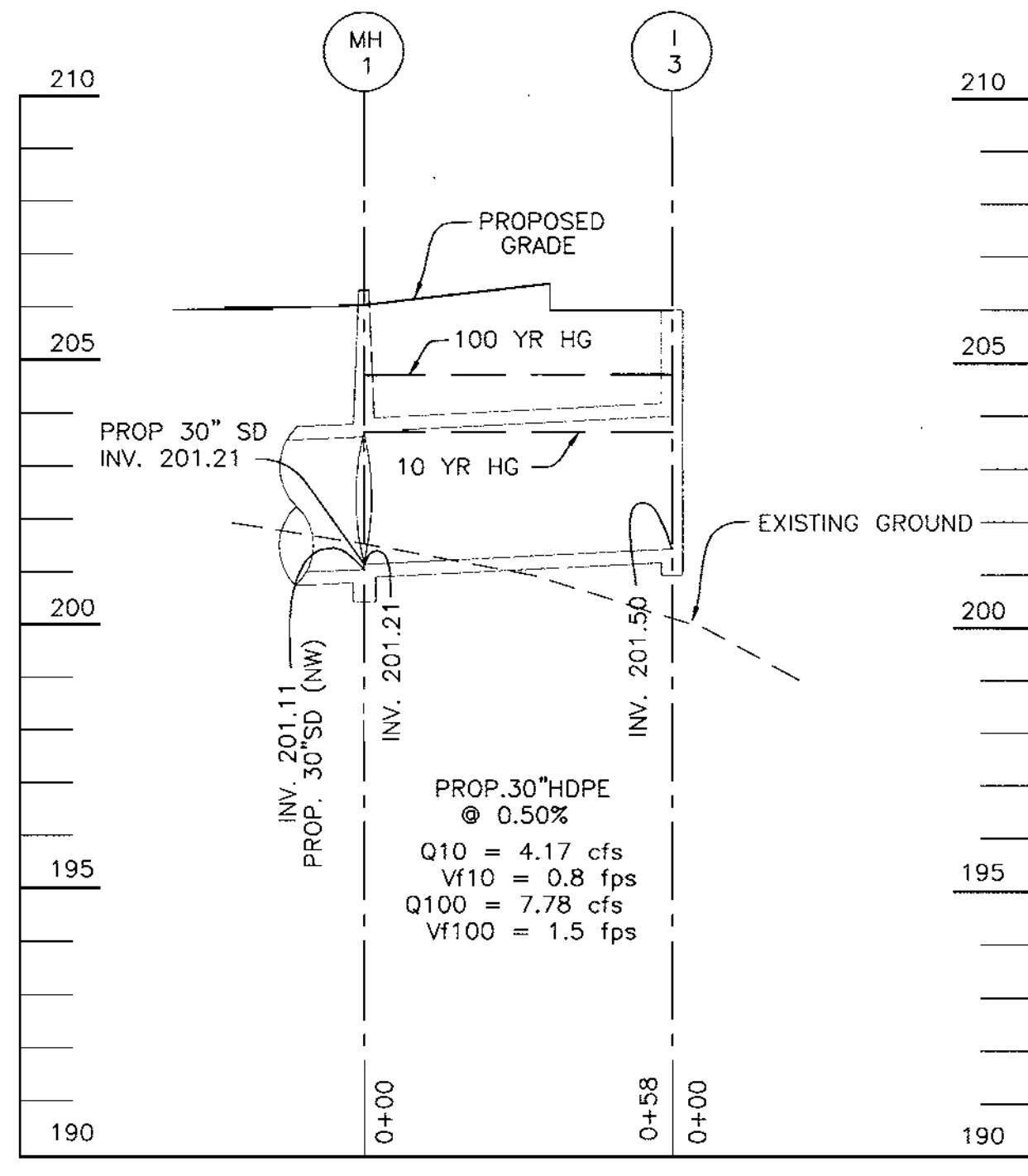
PROFILE RELEASE PIPE & STRUCTURE
 SCALE: HORIZ. 1"=30'
 VERT. 1"=3'



STORM DRAIN PROFILE
 SCALE: HORIZ. 1"=30'
 VERT. 1"=3'



PROFILE WATER QUALITY STRUCTURE & DISTRIBUTION PIPE
 SCALE: HORIZ. 1"=30'
 VERT. 1"=3'



STORM DRAIN PROFILE
 SCALE: HORIZ. 1"=30'
 VERT. 1"=3'

Boring No. B-1		Ground Elev. 205
Depth	Soil Description	Blows per Foot
	BROWN, MOIST, LOOSE TO MED. STIFF SILT WITH SOME CLAY AND TRACE OF SAND (ML)	1-0-2
4.5	SILT LOAM	4-4-8
	BROWN, MOIST, MED. DENSE SILTY SAND WITH TRACE OF CLAY (ML)	9-7-13
9.0	SANDY LOAM	2-17-51/5
	BROWN, MOIST, VERY DENSE MED. SAND AND GRAVEL (SW)	32-51/5
11.0	BOTTOM OF TEST HOLE AT 11.0	

Boring No. B-2		Ground Elev. 200
Depth	Soil Description	Blows per Foot
	BROWN, MOIST, LOOSE TO MED. DENSE SILTY SAND WITH SOME CLAY (ML)	1-1-2
4.5	SANDY LOAM	3-3-5
	BROWN, MOIST, DENSE SILTY SAND (SM)	7-9-15
9.0	SANDY LOAM	
	BROWN, MOIST, DENSE SILTY SAND WITH SOME GRAVEL (SM)	17-16-13-13
10.0	SANDY LOAM	
	BOTTOM OF TEST HOLE AT 10.0	

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development

OWNER/DEVELOPER
ATLAS REAL ESTATE
C/O STEVEN F. TURNER, CEO
9095 OWENS CT.
MANASSAS PARK, VA 20111-2393
PHONE: (703)-330-5050

Checked by: TAM
 Designed by: TAM
 Drawn by: JRG
 Date: 04/06/2000

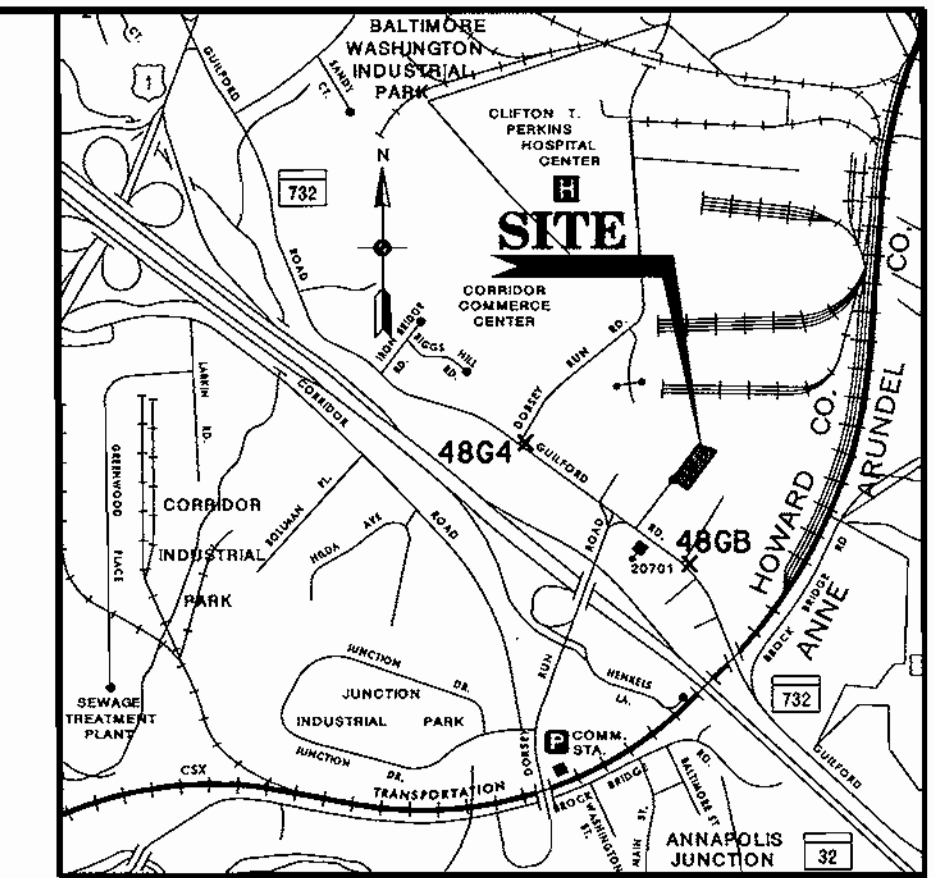
Scale: AS SHOWN
 Project No.: A4382-10
 Drawing No.: 7 OF 12
 Contract No.:

ADDRESS CHART
 LOT/PARCEL # A-3 / 88
 STREET ADDRESS 10920 PUMP HOUSE ROAD

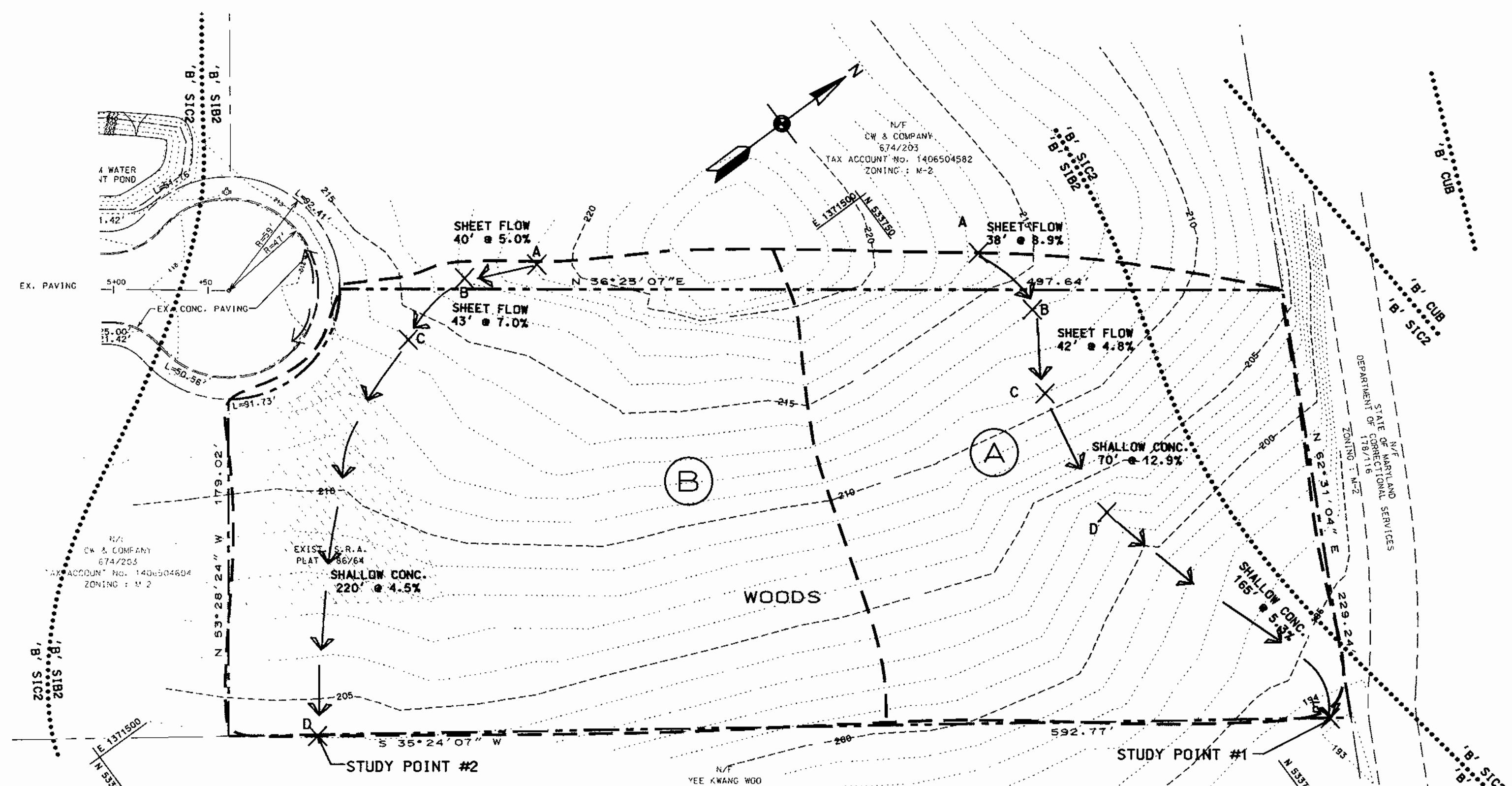
TITLE:
STORM DRAIN & SWM PROFILES & DETAILS
ATLAS PLUMBING
CW & COMPANY
PARCEL A-3, A 88/86
HOWARD COUNTY, MARYLAND

LEGEND :

- TIME OF CONCENTRATION PATH.....
- SOIL & HYDROLOGIC GROUP.....
- TR-55 DRAINAGE AREA DESIGNATION.....
- RATIONAL METHOD DRAINAGE AREA DESIGNATION.....
- EXISTING CONTOURS.....
- PROPOSED CONTOURS.....
- CONCRETE PAVING.....
- BITUMINOUS PAVING.....
- EXISTING WOODS LINE.....
- PROPOSED WOODS LINE.....

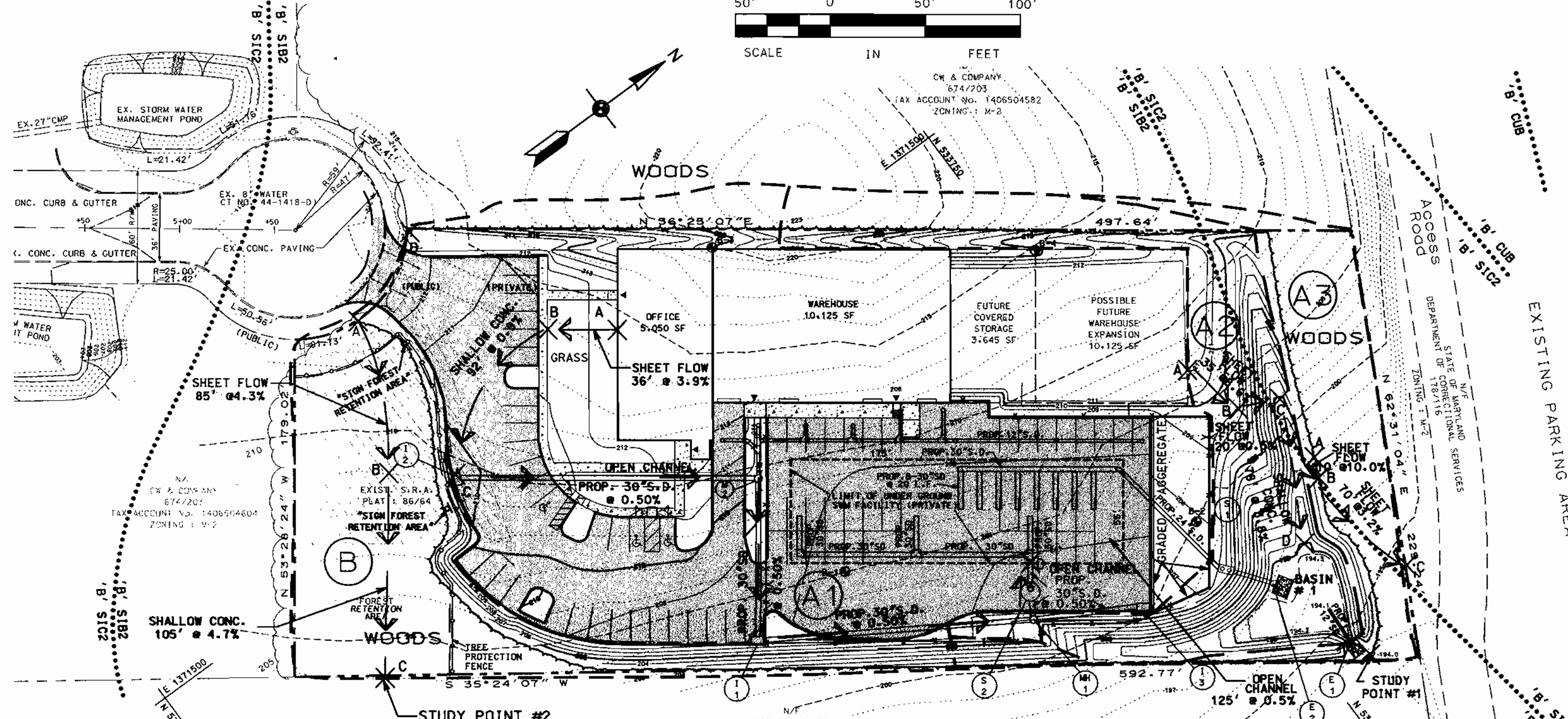
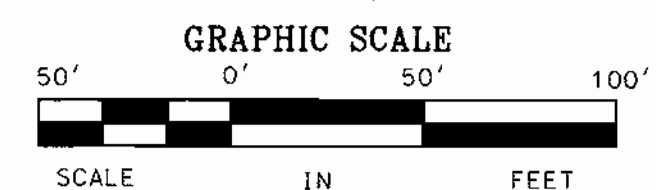


VICINITY MAP
1"=2000'



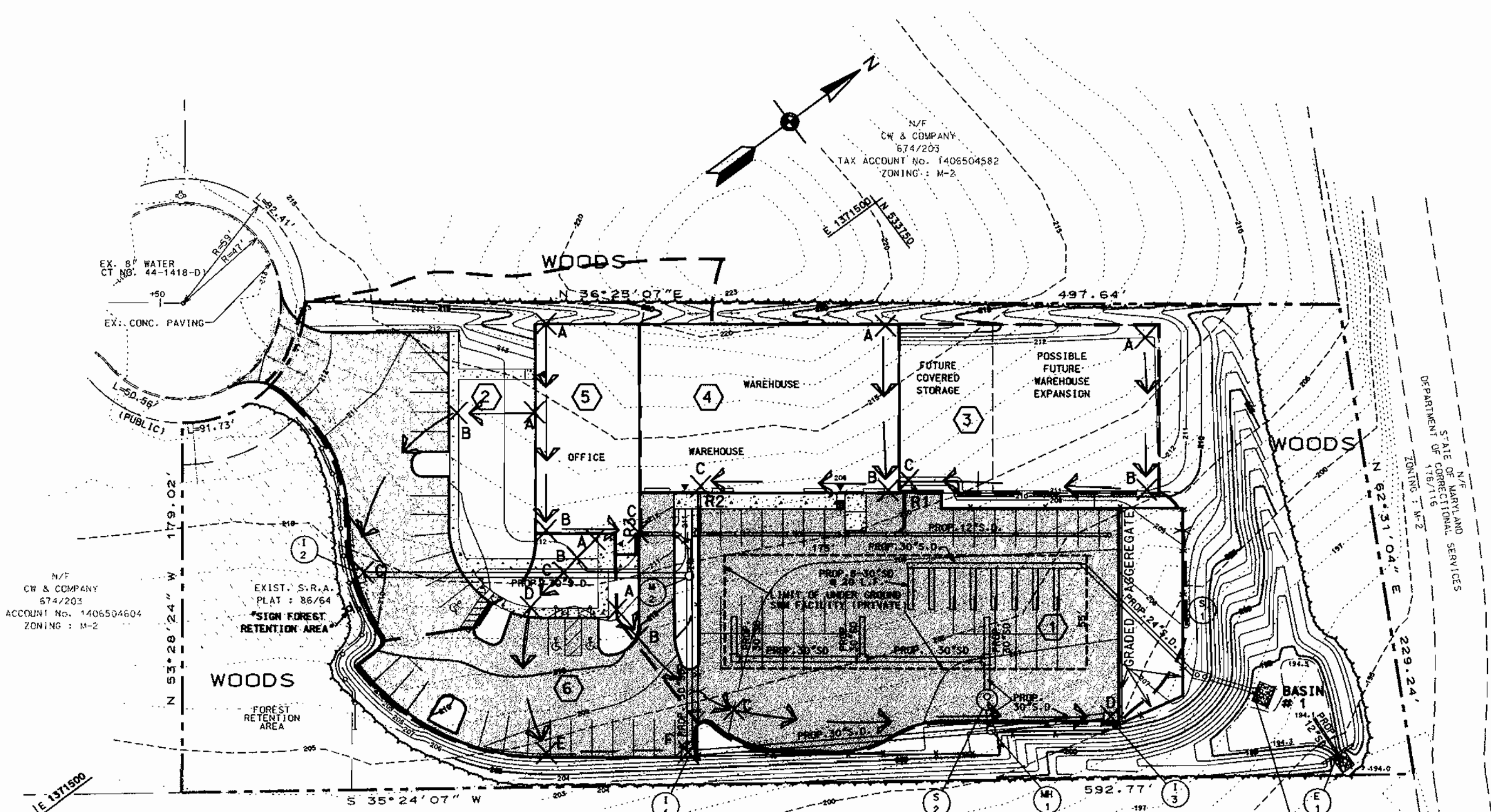
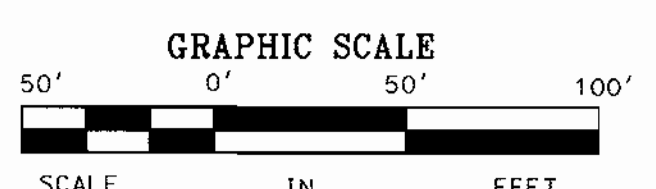
EXISTING CONDITIONS
STORMWATER MANAGEMENT
DRAINAGE AREA MAP

AREA	AREA ACRES	RCN	TIME OF CONCENTRATION
A	1.43	55	0.23
B	1.76	55	0.25



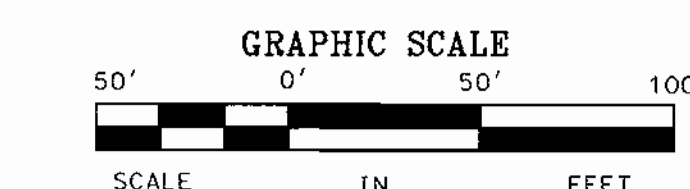
PROPOSED CONDITIONS
STORMWATER MANAGEMENT
DRAINAGE AREA MAP

AREA	AREA ACRES	RCN	TIME OF CONCENTRATION
A1	1.98	94	0.12
A2	0.47	74	0.08
A3	0.26	58	0.25
B	0.48	58	0.24



DRAINAGE AREA MAP
RATIONAL METHOD
STORM DRAIN SYSTEM

AREA	TOTAL DRAINAGE AREA (AC)	% IMPERVIOUS	"C" FACTOR STORM FREQUENCY LESS THAN 25 YEARS
1	0.68	85%*	0.72*
2	0.46	85%*	0.72*
3	0.24	100%	0.85
4	0.24	100%	0.85
5	0.12	100%	0.85
6	0.24	85%*	0.72*

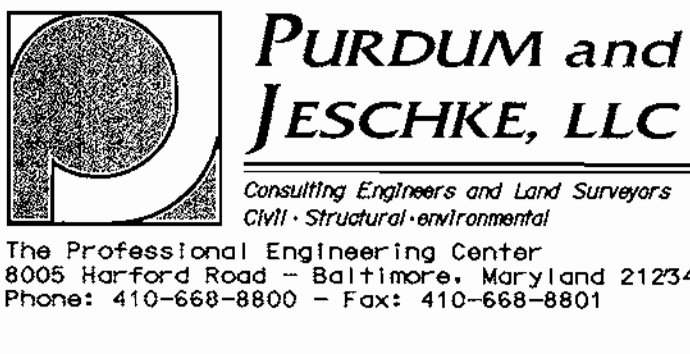
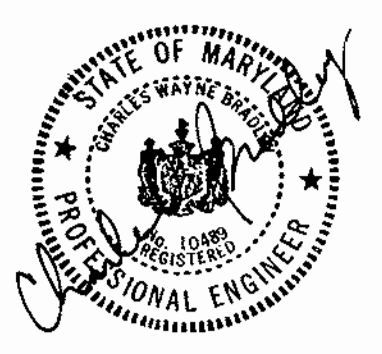


SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature]
 DIRECTOR

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 [Signature]
 USA - NATURAL RESOURCES CONSERVATION SERVICES
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature]
 HOWARD SOIL CONSERVATION DISTRICT

OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050



CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

SCALE: 1" = 50'
 PROJECT NO.: A4382-10
 DRAWING NO.: 9 OF 12
 CONTRACT NO.:

LOT/PARCEL #	ADDRESS CHART	STREET ADDRESS
A-3 / 68		10920 PUMP HOUSE ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION AREA	LOT/PARCEL	
CW and COMPANY	N/A	A-3/68	
PLAT/LOT L/F	GRID#	ZONING	TAX MAP No.
19942	14	M-2	48
WATER CODE :	B02	ELECT. DIST.	6th
		CENSUS TRACT	8069.01

TITLE:
DRAINAGE AREA MAPS
 ATLAS PLUMBING
 CW & COMPANY
 PARCEL A-3, 486/65
 HOWARD COUNTY, MARYLAND

SDP-00-91

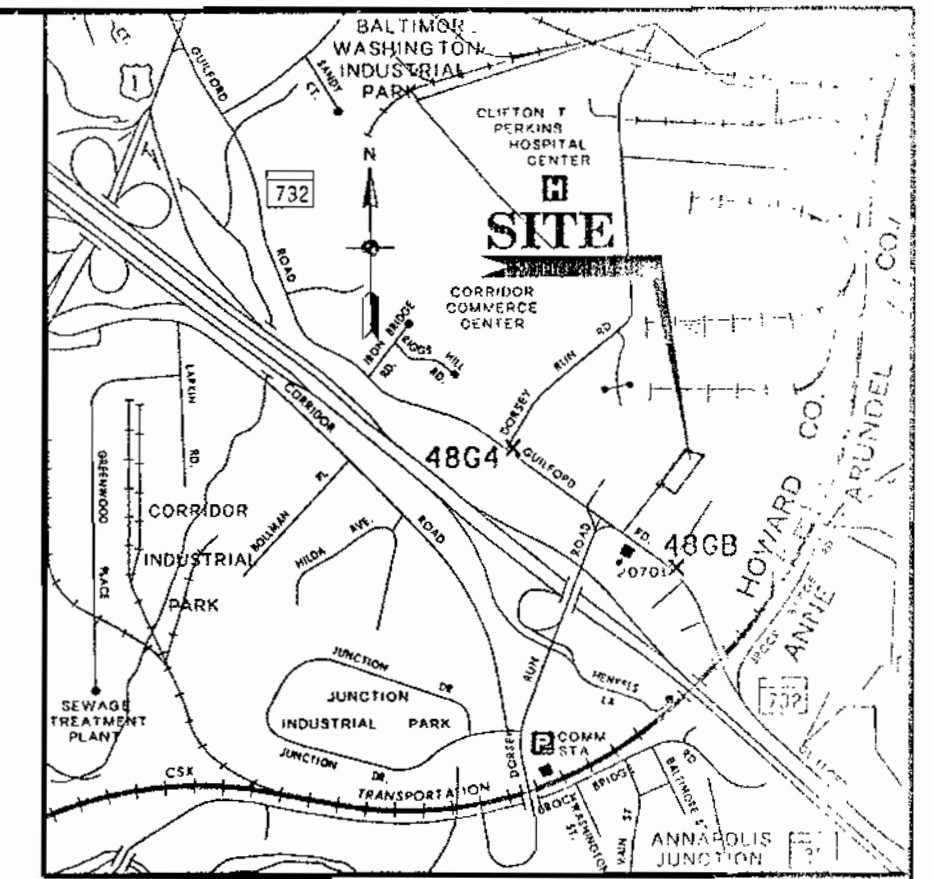
PUMP HOUSE ROAD

60' RIGHT-OF-WAY
(CONTRACT NO. 1413-D)

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	Adjacent to Roadways	Adjacent to Perimeter Properties
LANDSCAPE TYPE	B	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	90 LF	NONE
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 90 LF.	YES
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED	0	6
SHADE TREES		
EVERGREEN TREES		
SHRUBS		
NUMBER OF PLANTS PROVIDED		6 SHADE TREES
SHADE TREES		
EVERGREEN TREES		
OTHER TREES (2:1 SUBSTITUTION)		
SHRUBS (0:1 SUBSTITUTION)		
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	65
NUMBER OF PLANTS REQUIRED	4
NUMBER OF PLANTS PROVIDED	4
SHADE TREES	
OTHER TREES (2:1 SUBSTITUTION)	

COMMENTS: ENTIRE AREA AROUND CUL-DE-SAC WITH EXCEPTION TO 50' ENTRANCE IS WOODED. ADJACENT PROPERTY TO NORTH IS FORESTED UNDER SAME OWNERSHIP. SOUTH PERIMETER IS A TYPE "A" BUFFER AS PROPOSED WOODED.



VICINITY MAP 1"=2000'

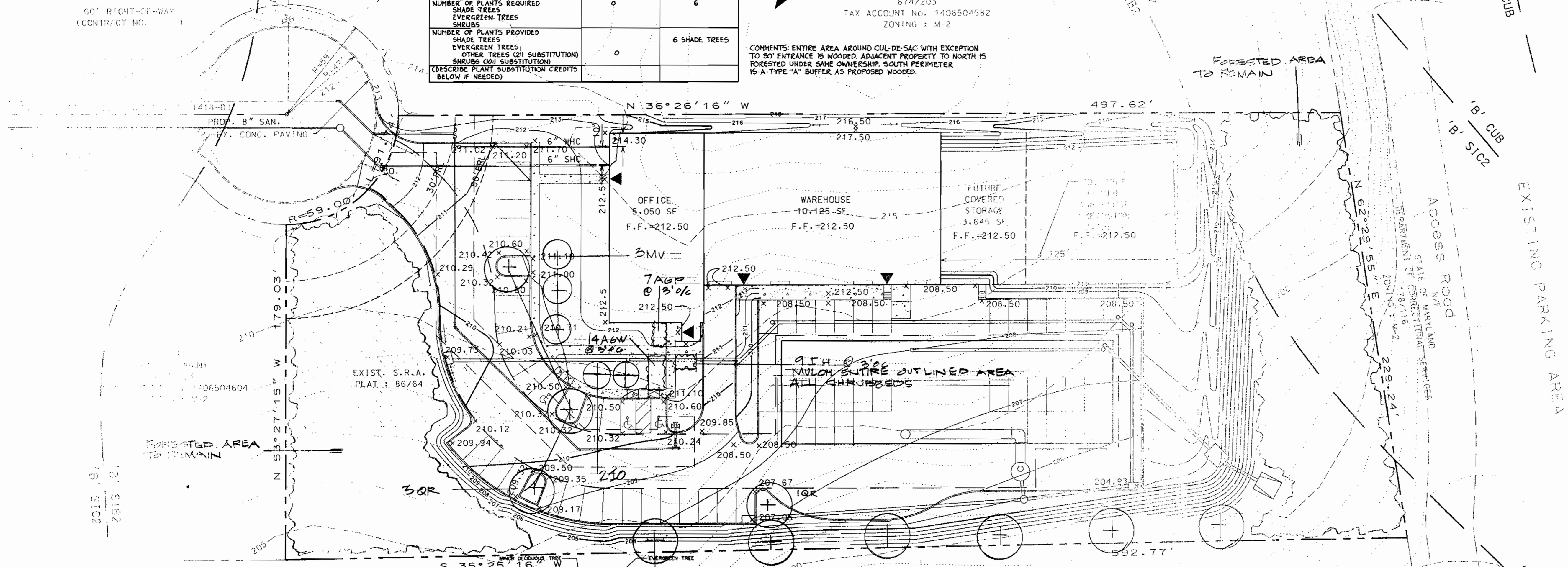
PLANTING NOTES
 *Plant locations shall be field adjusted to avoid utilities. Contractor is responsible for locating utilities prior to start of work.
 *All trees and shrubs shall be mulched to a minimum of 18" beyond the edge of the root ball.
 *Shrub masses shall be planted in continuous multi beds.
 *All wire, plastic and twine ties shall be removed from top of root ball.

LANDSCAPE SPECIFICATIONS
 Landscape specifications shall conform to 3rd edition of the "LCA Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area", including planting procedures and soil preparation for shrub and perennial beds.
 A one-year warranty period shall be required. Maintenance required to honor the one-year warranty shall be performed as part of the contract.
 Special Provisions to LCA Standard Specifications: Contractor is encouraged to perform soil testing. Test results shall be submitted 30 days before planting. Failure to perform testing will not void guarantee provisions.
 Contractor shall review and test subsoil drainage characteristics 30 days prior to planting and notify owner of unacceptable conditions.
 No exceptions to the guarantee provisions are allowed unless agreed to in writing prior to planting.

ONE-YEAR ANNIVERSARY FOLLOW-UP REQUIREMENTS
 Contractor shall schedule site walk thru with owner's representative prior to end of warranty period. As part of the walk thru remove stakes and gyps, prune dead wood and make necessary replacements.

PLANT STANDARDS
 All nursery stock shall be top quality and in accordance with the American Association of Nurserymen, Inc. "American Standards for Nursery Stock", latest edition. Plants of each species shall be provided as marked items. Inferior nursery stock will be subject to rejection by the Landscape Architect. Bare-root shall not be allowed for any tree defined as a major deciduous, minor deciduous or evergreen.

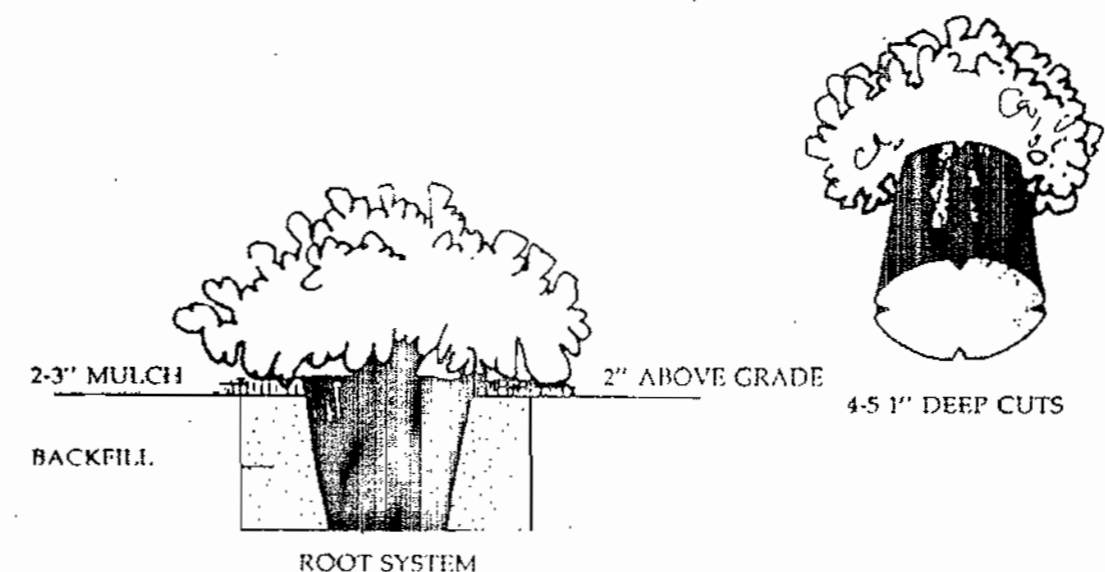
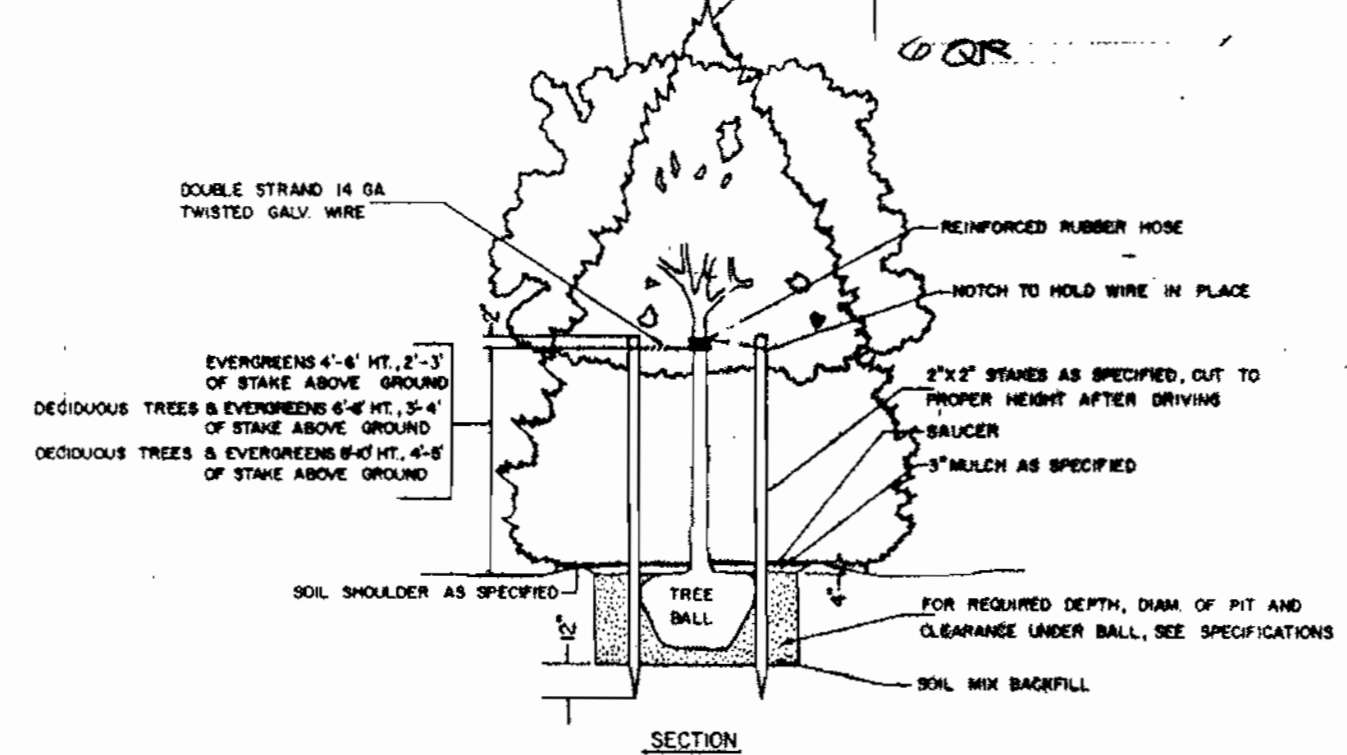
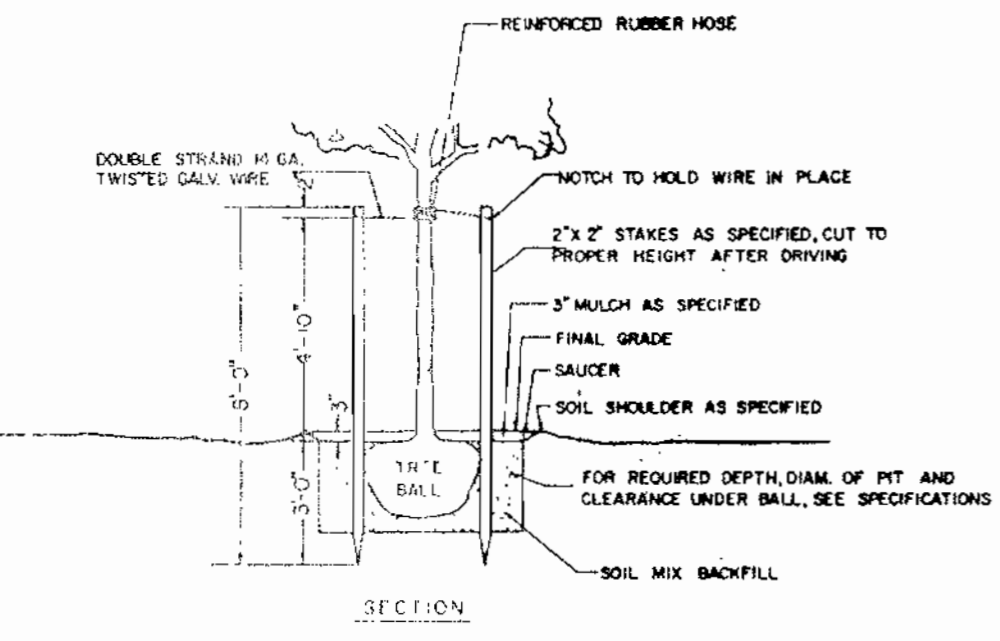
CHANGES MAY IMPACT REQUIRED CERTIFICATION
 Plant types (deciduous trees, everg, etc.), quantities, spacing, locations, and species shown on the approved landscape plan are based on requirements stated in the latest Baltimore County Landscape Manual. Any change in these items may affect the required approval and certification of the installed planting. Owner is required to arrange and pay for certification by Landscape Architect.



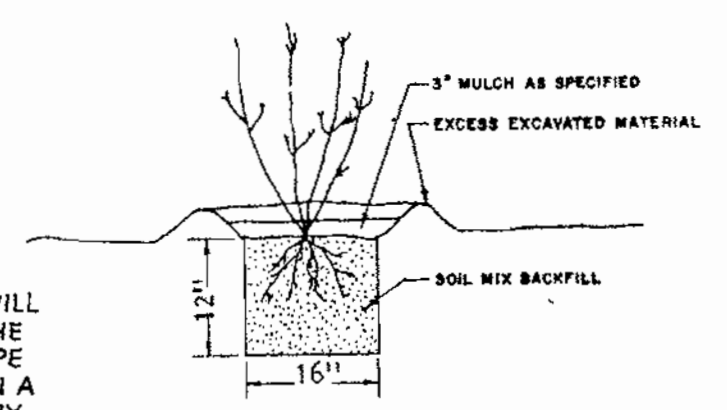
N/F
 YEE KWANG WOO
 4696/143
 TAX ACCOUNT NO. 429920
 ZONING : M-2

- PLANTING PROCEDURES FOR ALL CONTAINER-GROWN TREES & SHRUBS:
- Remove the plant either by cutting or inverting the container.
 - Use a knife or sharp blade to make 4-5 1" cuts the length of the root ball.
 - Plant shrub or tree 1-2" above the existing grade.
 - Apply 2-3" thick layer of shredded hardwood mulch.

Key	Quan.	Botanical Name/Common Name	Size/Condition
AGP	7	Azalea Gumpo Pink	18" hgt./B&B or container
AGW	14	Azalea Gumpo White	18" hgt./B&B or container
IH	9	Ilex crenata helleri/Heller Holly	18" hgt./B&B or container
IO	2	Ilex opaca/American Holly	8" hgt./B&B
MV	3	Magnolia virginiana/Sweetbay Magnolia	8" hgt./B&B
QR	10	Quercus rubra/Red Oak	2-1/2" Cal./B&B



TYPICAL SHRUB PLANTING CONTAINER
 SCALE: NONE



TYPICAL SHRUB PLANTING SDP-00-91

LANDSCAPING NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS A PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$3,00000

MISS UTILITY
 BEFORE THE START OF CONSTRUCTION, THE CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.

DEVELOPER'S/ BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THE PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF THE PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Edward J. Siding 5/9/00
 NAME DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Andy Damman 9/14/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Andy Hamata 9/29/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul S. Kuttler 10/5/00
 DIRECTOR DATE

OWNER/DEVELOPER

WILLIAM F. KIRWIN, INC.
 Land Planning/Landscape Architecture
 28 E. Susquehanna Avenue
 Towson, MD 21286-5218
 Phone: (410) 337-0075
 Fax: (410) 823-3827

ATLAS REAL ESTATE
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393



PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil • Structural • Environmental

The Professional Engineering Center
 8005 Harwood Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

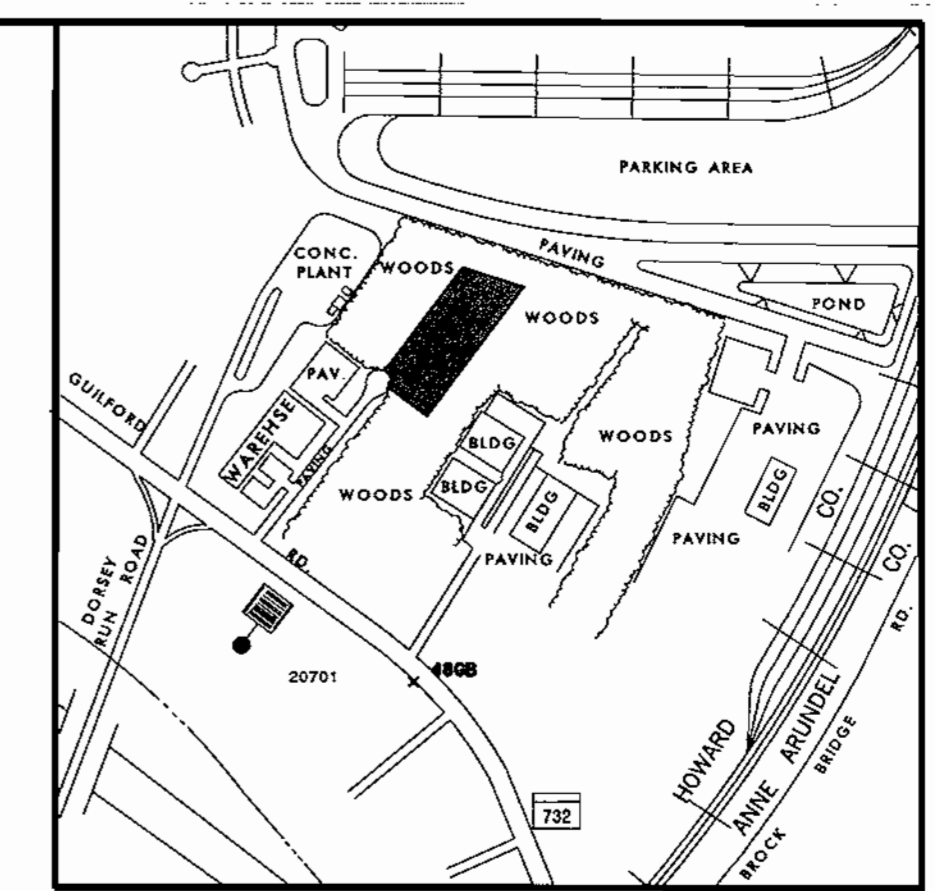
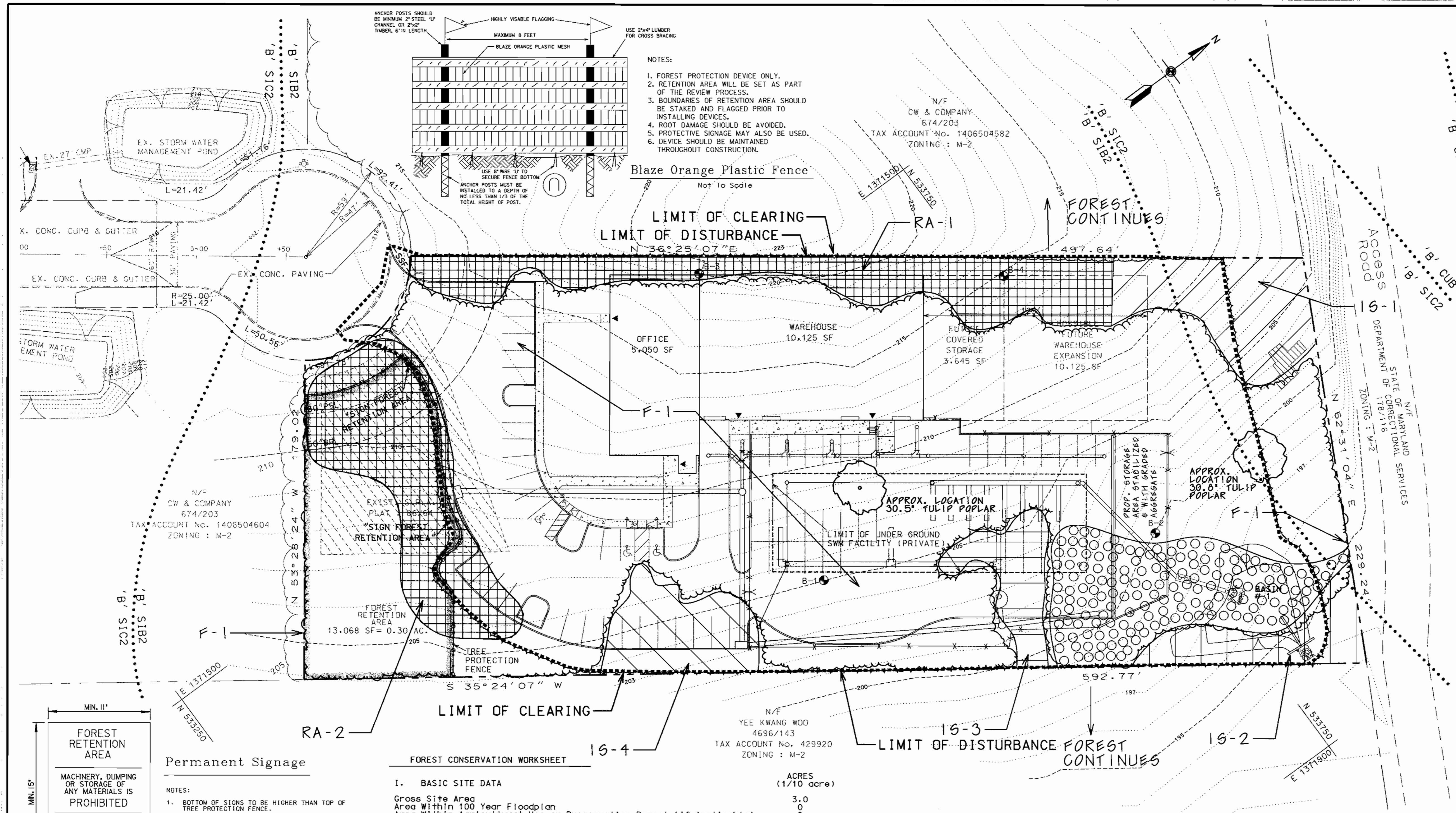
CHECKED BY:	TAM	SCALE:	1"=30'
DESIGNED BY:	TAM	PROJECT NO.:	A4382-1
DRAWN BY:	JRG	DRAWING NO.:	10 OF 12
DATE:	04/06/2000	CONTRACT NO.:	

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
A-3 / 68	PUMP HOUSE ROAD

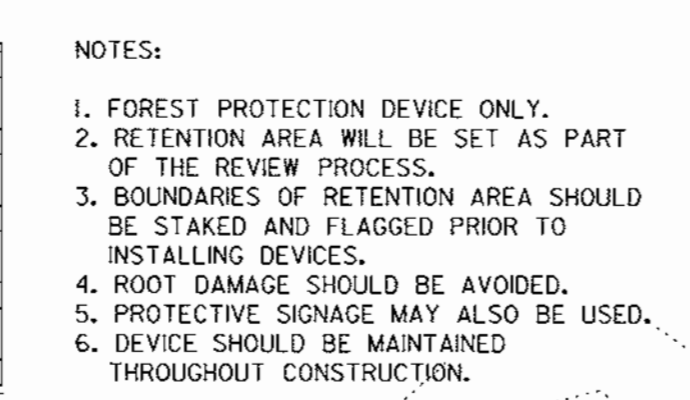
PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION AREA	LOT/PARCEL#
CW and COMPANY	N/A	A-3/68
PILOT/NO. I/F	GRID#	ZONING
1442	14	M-2
WATER CODE:	B02	ELECT. DIST.
		48
		6th
		6069.01

TITLE: **LANDSCAPE PLAN**
 CW & COMPANY
 PARCEL A-3, 486/65
 HOWARD COUNTY, MARYLAND



VICINITY MAP
1"=600'



Blaze Orange Plastic Fence
Not To Scale

NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICES.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

LEGEND :

	EXISTING	TO BE CLEARED
F-1	1.96 AC. +/-	1.02 AC. +/-
RA-1	0.24 AC. +/-	0.24 AC. +/-
RA-2	0.20 AC. +/-	0.04 AC. +/-
15-1	0.14 AC. +/-	0.06 AC. +/-
15-2	0.06 AC. +/-	0.04 AC. +/-
15-3	0.06 AC. +/-	0.06 AC. +/-
15-4	0.10 AC. +/-	0.10 AC. +/-
6C-1	0.22 AC. +/-	0.20 AC. +/-
TOTAL	3.00 AC. +/-	2.60 AC. +/-

F-1 - PRIMARY FOREST (MAJOR DECIDUOUS)
RA - TREE SPECIES REGENERATION.
15 - OPEN AREA DOMINATED BY INVASIVE SPECIES.
6C - EXOTIC INVASIVE GROUND COVER.

SLOPES 15-25%

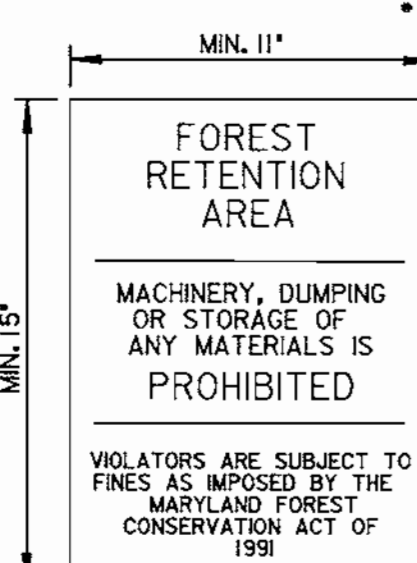
NOTES :

1. THE GROSS & NET AREA OF THE PROJECT = 3.00 AC.
2. A FEE IN LIEU OF REFORESTATION REQUIREMENT OF 0.86 ACRES IS TO BE PAID. THE FEE WILL BE CALCULATED BASED ON THE 2:1 REPLACEMENT IS 2x0.86 ACRES = 1.72 ACRES. THEREFORE, THIS PROJECT IS IN COMPLIANCE WITH SECTION 16-1200 OF THE HOWARD COUNTY CODE.

FOREST STAND NOTES :

1. SEE ATTACHED REPORT FOR NARRATIVE, THRESHOLD CALCULATIONS, FIELD DATA SHEETS ETC.
2. THERE ARE NO ENVIRONMENTALLY SENSITIVE AREAS ON THIS SITE. SURROUNDING USERS ARE INDUSTRIAL AND FULLY DEVELOPED.
3. THERE ARE NO SLOPES EXCEEDING 25%
4. THERE ARE TWO TULIP POPLAR OVER 30" ON SITE. SEE PLAN
5. A LETTER HAS BEEN SENT TO MARYLAND NATURAL HERITAGE TO DETERMINE THE PRESENCE OF RARE AND ENDANGERED SPECIES. THEY RESPONDED THAT ACCORDING TO THEIR DATA BASE THE GLASSY DARTER WAS KNOWN TO OCCUR IN DORSEY RUN IN THE VICINITY OF THE PROJECT.
6. THIS SITE DOES NOT PROVIDE A SIGNIFICANT WILDLIFE HABITAT. THERE WAS NO VISIBLE EVIDENCE OF WILDLIFE OBSERVED IN THE FIELD.
7. THERE ARE NO STREAMS, SEEPS OR FLOODPLAINS ON THE SITE.
8. CONTRACTOR IS REQUIRED TO ERECT 4' HIGH ORANGE PLASTIC FENCING, ATTACHED TO 2"x2" POST LOCATED ON 8' CENTERS. BETWEEN AREAS OF CONSTRUCTION AND FOREST AREAS TO REMAIN.

Permanent Signage



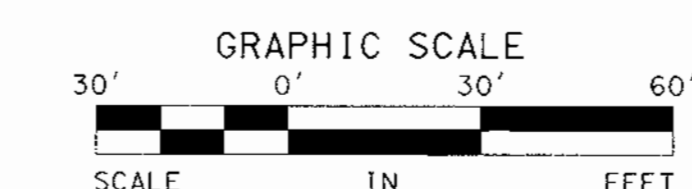
- NOTES:
1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 2. SIGNS TO BE PLACED APPROXIMATELY 50' APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION WORKSHEET

	ACRES (1/10 acre)
I. BASIC SITE DATA	
Gross Site Area	3.0
Area Within 100 Year Floodplain	0
Area Within Agricultural Use or Preservation Parcel (If Applicable)	0
Net Tract Area	3.0
Land Use Category (R-RLD, R-RMD, R-S, C/I/O, I)	M-2
II INFORMATION FOR CALCULATIONS	
A. Net Tract Area	3.00
B. Reforestation Threshold (15 % x A)	0.45
C. Afforestation Minimum (% x A)	0.45
D. Existing Forest on Net Tract Area	2.62
E. Forest Areas to be Cleared*	2.33
F. Forest Areas to be Retained	.29
III DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION	
1. REFORESTATION	
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing the forest areas is proposed, reforestation requirements may apply.	
GO TO SECTION IV	
IV REFORESTATION CALCULATIONS	
A. Net Tract Area	3.0
B. Reforestation Threshold (15 % x A)	0.45
C. Existing Forest on Net Tract Area	2.62
D. Forest Areas to be Cleared*	2.33
E. Forest Areas to be Retained	.29
F. Forest Areas Cleared Above Reforestation Threshold (D - F, if F equals or is greater than B, Alternate 1) (D - B, if F is less than B, Alternate 2)	2.17
G. Forest Areas Cleared Below Reforestation Threshold (B - F, if applicable)	.16
H. Forest Areas Retained Above Reforestation Threshold (F - B, Retention Credit, if applicable)	0

SELECT THE ALTERNATIVE THAT APPLIES:

	ACRES (1/10 acre)
1. CLEARING ABOVE THE THRESHOLD ONLY	
If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:	
Reforestation for clearing above threshold	.54
Credit for forest areas retained above threshold	0
Total Reforestation required (G x 1/4) - 1	.54
2. CLEARING BELOW THE THRESHOLD	
If forest areas to be retained are less than the reforestation threshold (if F is less than B), the follow calculations apply:	
Reforestation for clearing above threshold	.54
Reforestation for clearing below threshold	.32
H x 2	.16
Total Reforestation required (G x 1/4) + (H x 2)	.86



APPROVED: DEPARTMENT OF PLANNING AND ZONING

William F. Kirwin, Inc.
9/14/00
DATE

Cindy Harter
10/15/00
DATE

WILLIAM F. KIRWIN, INC.
Land Planning / Landscape Architecture
28 E. Susquehanna Avenue
Towson, MD 21286-5218
Phone : (410) 337-0075
Fax : (410) 823-3827

OWNER/DEVELOPER

ATLAS REAL ESTATE
CO STEVEN F. TURNER, CEO
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CHECKED BY: TAM
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SCALE: 1" = 30'
PROJECT NO.: A4382-10
DRAWING NO.: 12 OF 12
CONTRACT NO.:

SDP-00-91

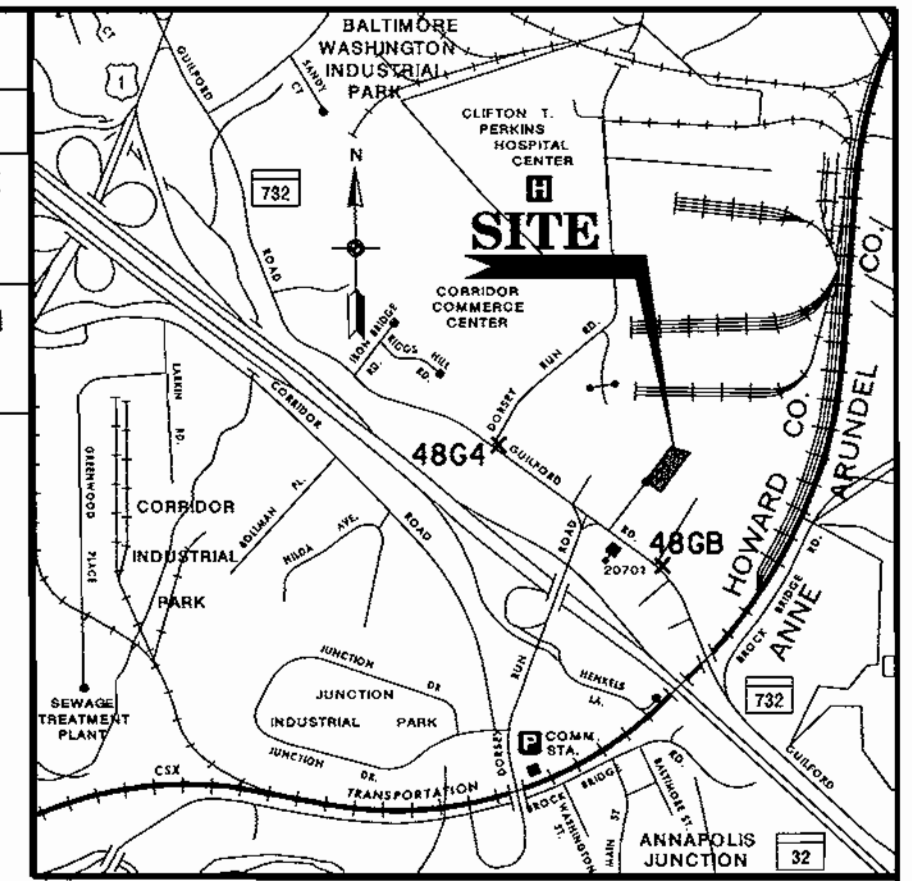
ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
A-3 / 68	PUMP HOUSE ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION AREA	LOT/PARCEL	
CW & COMPANY	N/A	A-3/68	
PLAT/LOT L/F	GRID#	ZONING	TAX MAP No. ELECT. DIST. CENSUS TRACT
14442	14	M-2	48 6th 6069.01
WATER CODE :	B02	WATER CODE :	

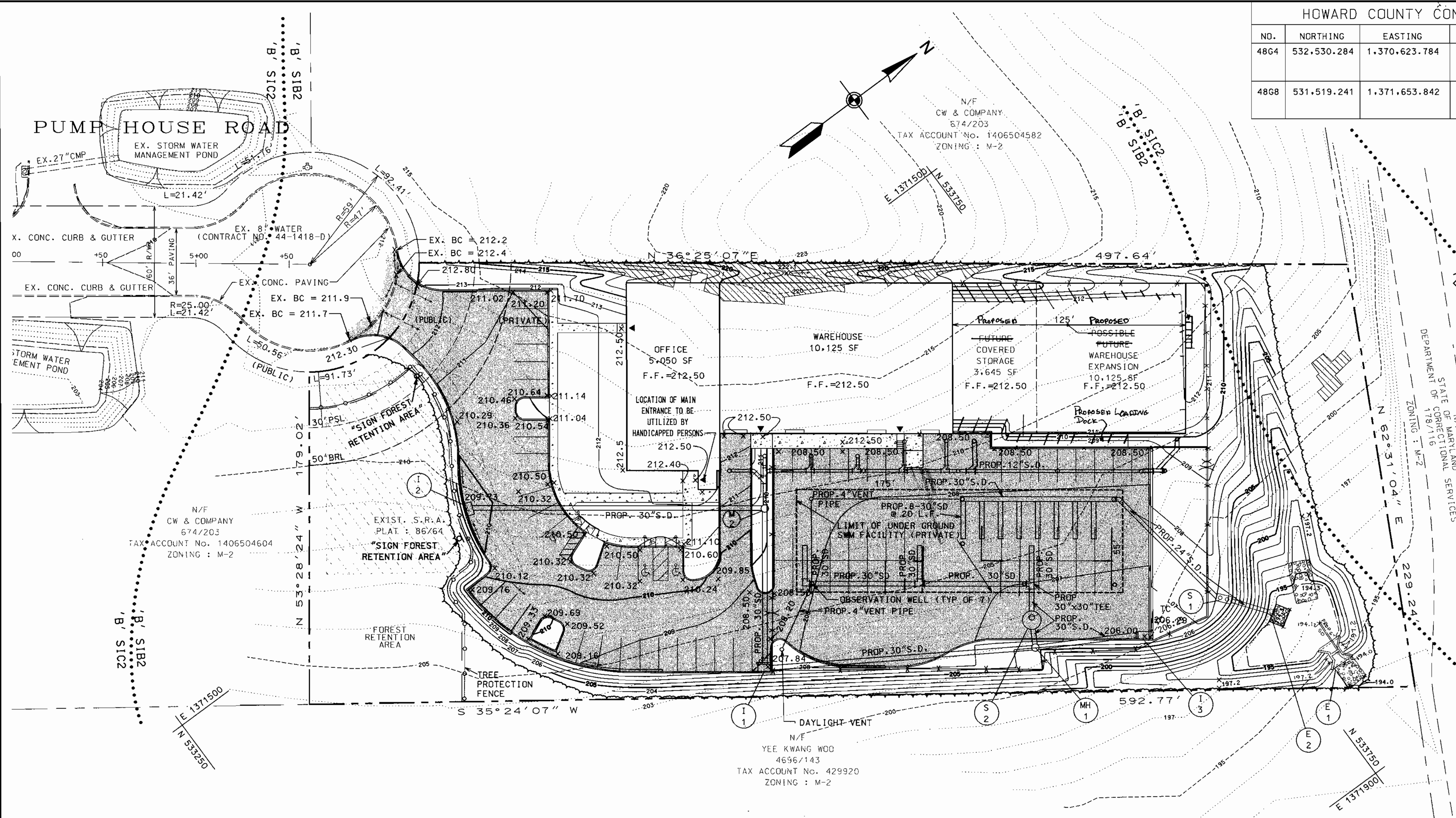
TITLE: **FOREST CONSERVATION PLAN**
ATLAS PLUMBING
CW & COMPANY
PARCEL A-3, 686/65
HOWARD COUNTY, MARYLAND

HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
48G4	532,530.284	1,370,623.784	228.580	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN
48G8	531,519.241	1,371,653.842	206.628	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN



VICINITY MAP
1"=2000'



NOTES:

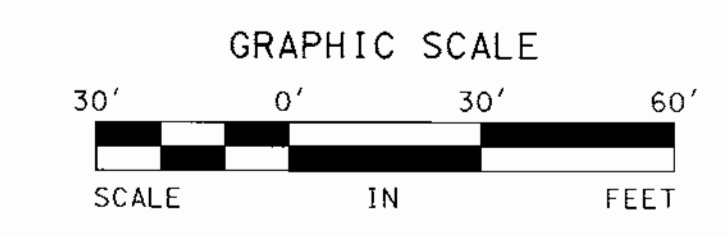
1. THE SUBSURFACE INVESTIGATION SHOWS THAT SOILS ARE RELATIVELY DENSE CLAYEY SANDS AND GRAVEL IN THE DEPTHS TO BE USED AS CONTROLLED COMPACTED FILLS ELSEWHERE ON-SITE. DEPENDING ON THE WEATHER CONDITIONS AT THE TIME OF CONSTRUCTION, THE SOILS MAY REQUIRE MOISTURE CONTENT ADJUSTMENTS IN ORDER TO ACHIEVE THE REQUIRED COMPACTION
2. ALL FILLS SHOULD CONSIST OF MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER.
3. FILL SHOULD BE PLACED IN LIFTS NOT EXCEEDING 8-INCHES (LOOSE). ALL LIFTS SHOULD BE COMPACTED TO A MINIMUM OF 95% DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D-698 OR AASHTO T-99). IN-PLACE DENSITY TESTING SHOULD BE PERFORMED ON EACH LIFT PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS.
4. ALL WORK SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER SPECIALIZING IN GEOTECHNICAL ENGINEERING.
5. NO CLEARING, GRADING OR CONSTRUCTION IS TO TAKE PLACE IN THE FOREST RETENTION AREAS EXCEPT FOR THAT PERMITTED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD SOIL CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME I, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME I, HOWARD COUNTY DESIGN MANUAL VOLUME 11 WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER HIS CONTRACT.
8. UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.

LEGEND :

EXISTING SLOPES 15-24.9%	
EXISTING SLOPES 25% +	
EXISTING CONTOURS	
EXISTING CURB AND GUTTER	
EXISTING R/W	
EXISTING PROPERTY LINE	
EXISTING WATER LINE	
EXISTING FIRE HYDRANT	
EXISTING TREE LINE	
PROPOSED SPOT ELEVATION	
PROPOSED CONTOURS	
PROPOSED SIGN	
PROPOSED CURB AND GUTTER	
PROPOSED CONCRETE MOUNTABLE CURB & GUTTER	
PROPOSED SIDEWALK	
PROPOSED BUILDING	
PROPOSED BITUMINOUS PAVING	
FUTURE BUILDING	
PROPOSED TREE LINE	
PROPOSED DOOR	

MISS UTILITY

THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.

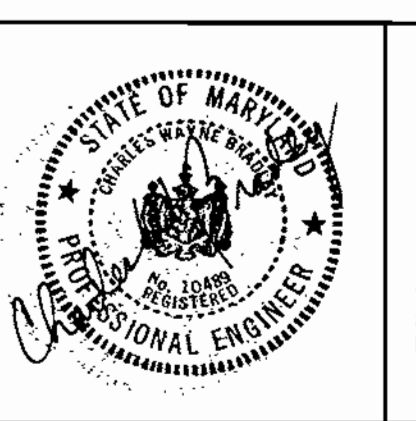


SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signatures and dates for approval]

NO.	DATE	REVISION
1	11.30.01	PER CO. COMMENTS

OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050

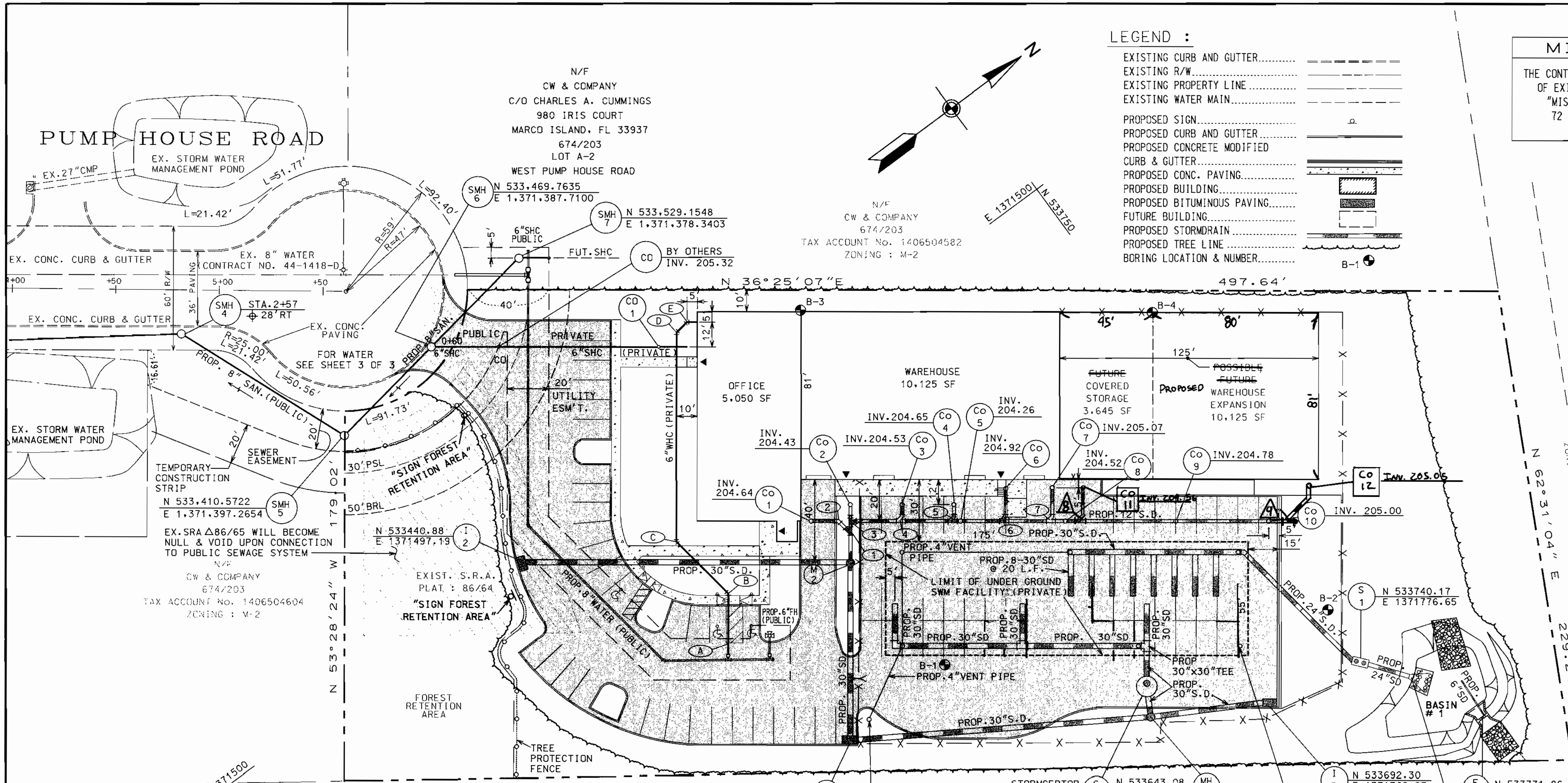


PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental
 The Professional Engineering Center
 8005 Harford Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM	SCALE: 1" = 30'
DESIGNED BY: TAM	PROJECT NO.: A4382-10
DRAWN BY: JRG	DRAWING NO.: 2 OF 12
DATE: 04/06/2000	CONTRACT NO.:

ADDRESS CHART			
LOT/PARCEL# A-3 / 88	STREET ADDRESS 10920 PUMP HOUSE ROAD		
PERMIT INFORMATION CHART			
SUBDIVISION NAME CW and COMPANY	SECTION AREA N/A	LOT/PARCEL A-3/88	
PLAT/BLK L/F 14442	GRID# 14	TAX MAP NO. M-2	ELECT. DIST. 48
WATER CODE: B02	CENSUS TRACT 6069.01		
TITLE: SITE GRADING PLAN ATLAS PLUMBING CW & COMPANY PARCEL A-3, 486/85 HOWARD COUNTY, MARYLAND			

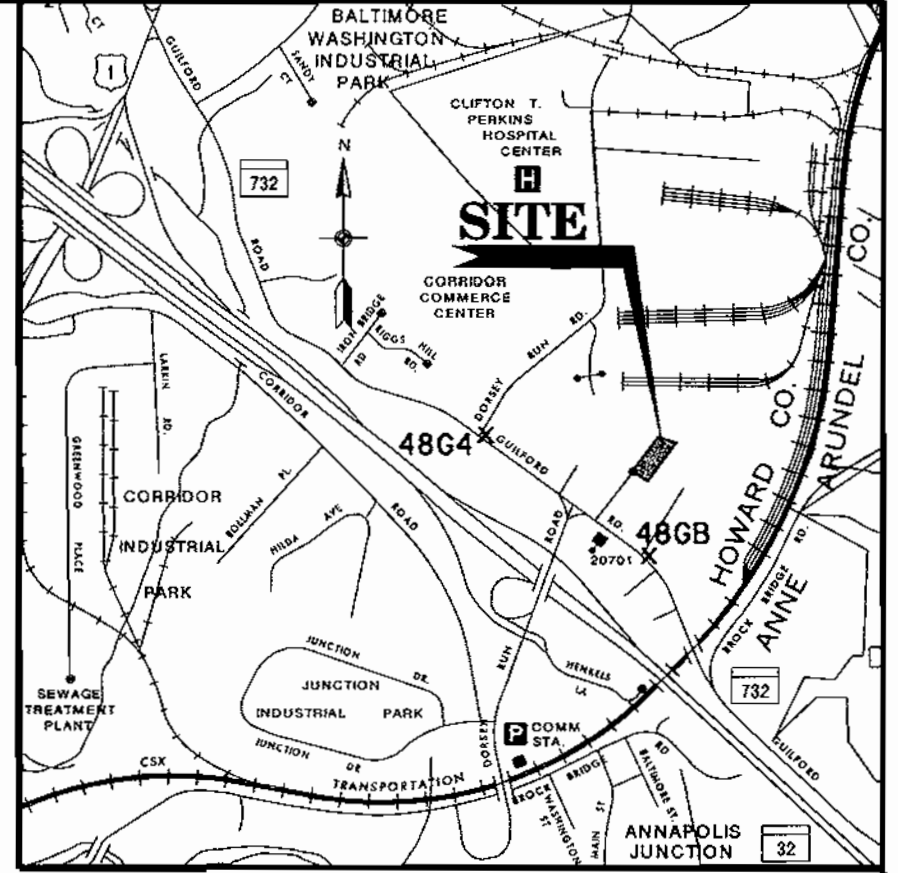
SDP-00-91



LEGEND :

EXISTING CURB AND GUTTER.....	-----
EXISTING R/W.....	-----
EXISTING PROPERTY LINE.....	-----
EXISTING WATER MAIN.....	-----
PROPOSED SIGN.....	-----
PROPOSED CURB AND GUTTER.....	-----
PROPOSED CONCRETE MODIFIED CURB & GUTTER.....	-----
PROPOSED CONC. PAVING.....	-----
PROPOSED BUILDING.....	-----
PROPOSED BITUMINOUS PAVING.....	-----
FUTURE BUILDING.....	-----
PROPOSED STORMDRAIN.....	-----
PROPOSED TREE LINE.....	-----
BORING LOCATION & NUMBER.....	B-1

MISS UTILITY
 THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



- NOTES :**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD COUNTY CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME 1, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME 1, HOWARD COUNTY DESIGN MANUAL VOLUME 1: WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
 - THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER THIS CONTRACT.
 - UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.
 - WATER LINES ARE TO HAVE A MINIMUM OF 3.5' OF COVER FROM THE ESTABLISHED GRADE TO THE TOP OF THE PIPE, UNLESS OTHERWISE NOTED ON THE PLANS.
 - THE PROPOSED BUILDINGS WILL HAVE A SPRINKLER SYSTEM FOR FIRE PROTECTION.
 - THE WATER METER WILL BE AN INSIDE FIRE SUPPLY WITH METERED WATER SERVICE.
 - THE 6" FIRE SERVICE IS TO BE DUCTILE IRON PIPE, AND THE 2" WATER SERVICE IS TO BE TYPE K ANNEALED COPPER TUBING.
 - SANITARY SEWER, STORM DRAIN (LESS THAN OR EQUAL TO 12" Ø) AND ROOF DRAIN PIPES ARE TO BE PVC. STORM DRAIN PIPE GREATER THAN 12" Ø & SWM PIPES TO BE AS SHOWN ON PROFILE.

WATER SERVICE SCHEDULE

NO	DESCRIPTION
A	LIMIT PUBLIC CONTRACT = STA. 0+00
B	STA. 0+24.50, 6" 45° BEND
C	STA. 0+59.86, 6" 45° BEND
D	STA. 1+60.86, 6" 45° BEND
E	STA. 1+67.93, 6" 45° BEND

ROOF DRAIN SCHEDULE

NO	DESCRIPTION
1	12" x 6" WYE
2	6" 45° BEND
3	12" x 12" WYE & 12" x 6" REDUCER
4	12" x 6" WYE & 6" 45° BEND
5	12" x 6" WYE & 6" 45° BEND
6	12" x 6" WYE & 6" 45° BEND
7	12" x 6" WYE & 6" 45° BEND
8	12" x 6" WYE & 6" 45° BEND
9	12" x 6" WYE & 6" 45° BEND

STRUCTURE SCHEDULE

NO.	INV. IN	INV. OUT	TOP ELEV.	REMARKS
1-1	202.04	201.94	207.84	DBL 'S' COMB. INLET H.C. DPW SD 4.34
1-2	---	203.27	203.73	DBL 'S' COMB. INLET H.C. DPW SD 4.34
1-3	---	201.50	206.00	DBL 'S' COMB. INLET H.C. DPW SD 4.34
MH-1	201.21	201.11	206.00	STD. 4'-0" PRECAST MANHOLE H.C. DPW 05.12
MH-2	202.57	202.47	210.20	STD. 4'-0" PRECAST MANHOLE H.C. DPW 05.12
S-1	197.20	196.20	207.00	STORMWATER MANAGEMENT RELEASE STRUCTURE
S-2	201.05	200.97	206.79	STC 4800 PRECAST CONC. STORMCEPTOR
E-1	---	194.0	197.0	LOW RISE SWM CONTROL STRUCTURE H. C. DPW SD 7.00
E-2	---	194.30	---	CONCRETE END SECTION

STORMCEPTOR MAINTENANCE GUIDELINES
 The performance of all stormwater quality measures decrease as they fill with sediment. Although the maintenance frequency will be site specific, CSR generally recommends annual maintenance be performed when the sediment volume in the unit reaches 15% of the total storage. This recommendation is based on several factors:
 - Minimal performance degradation due to sediment build-up
 - Sediment removal is easier when removed on a regular basis (as sediment builds up it compacts and solidifies making maintenance more difficult)
 - Development of a routine maintenance interval helps ensure a regular maintenance schedule is followed. Although the frequency of maintenance will depend on site conditions, it is estimated that annual maintenance will be required for most applications
 annual maintenance is a routine occurrence which is easy to plan for and remember.

HYDROCARBON SPILLS
 In the event of any hazardous material spill, CSR recommends maintenance be performed immediately. Maintenance should be performed by a licensed liquid waste hauler. You should also notify the appropriate regulatory agencies as required.

RECOMMENDED MAINTENANCE PROCEDURE
 For the 'disc' design, oil is removed through the 6" inspection/clean out pipe and sediment is removed through the 24" diameter riser pipe. Alternatively, oil could be removed from the 24" opening if water is removed from the treatment chamber, lowering the oil level below the drop pipes.
 The depth of sediment can be measured from the surface of the Stormceptor with dipstick tube equipped with a ball valve (Sludge Judge). CSR recommends maintenance be performed once the sediment depth exceeds the guideline values provided in Table 8.

TABLE 8. SEDIMENT DEPTH INDICATING REQUIRED MAINTENANCE

MODEL	SEDIMENT DEPTH
4800	15"

No entry into the unit is required for routine maintenance of the Inlet Stormceptor or the smaller disc insert models of the In-Line stormceptor. Entry to the level of the by-pass may be required for servicing the larger In-Line models. Any potential obstructions at the inlet can be observed from the surface. The by-pass chamber has been designed as a platform for authorized maintenance personnel. In the event that an obstruction needs to be removed, drain flushing needs to be performed, or camera surveys are required.
 Typical maintenance is performed by the Vacuum Service Industry, a well established sector of the service industry that cleans underground tanks, sewers, and catch-basins. Costs to clean a Stormceptor will vary based on size of the unit and transportation distances. If you need assistance for cleaning a stormceptor unit, contact your CSR representative, or the CSR Stormceptor Information Line at (800) 909-7763.

DISPOSAL
 The requirement for the disposal of material from a stormceptor are similar to that of any other Best Management Practices (BMPs). Local guidelines should be consulted prior to disposal of the separator contents.
 In most areas the sediment, once dewatered, can be disposed of in a sanitary landfill. If it is not anticipated that the sediment would be classified as hazardous waste, in some areas, mixing the water with the sediment will create a slurry that can be discharged into a trunk sanitary sewer. In all disposal options, approval from the disposal facility operator/agency is required. Petroleum waste products collected in stormceptor (oil/chemical/fuel spills) should be removed by a licensed waste management company.

Precast Concrete Stormceptor® Order Request Form

CONTRACTOR INFORMATION
 Name: Atlas Plumbing
 Address: 223 W. Altheim Ave
 City: Gaithersburg
 State: MD
 Zip Code: 20878
 Contact: J. Williams
 Phone: 301-583-9832
 Fax: 301-583-1424

OWNER INFORMATION
 Name: Atlas Plumbing
 Phone: 301-285-2267
 Fax: 763-330-1424

INFORMATION DRAINAGE AREA FOR THIS UNIT: 1.68

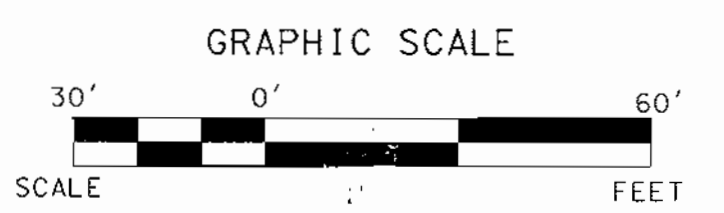
Stormceptor® Model	Insert Size	Module Number
576	3600	5-7
900	4800	5-8
1200	6000	5-9
1800	7200	5-10
2400	8400	5-11

Module Number: 5-7

Top Elevation (ft): 201.05
 Inlet Pipe Inlet (ft): 200.97
 Pipe Type: RCP C-361
 Inlet Pipe Inside Diameter (ft): 30"
 Inlet Pipe Outside Diameter (ft): 32"
 Outlet Pipe Inside Diameter (ft): 30"
 Outlet Pipe Outside Diameter (ft): 32"

Project Name: Atlas Plumbing
Approximate date of delivery (month): 6/01
Delivery Address: Street 10920 Pump House Road
 City: Annapolis Junction State: MD Zip Code: 20702
Design Company: Purdum & Jeschke, LLC
Designer Contact: Tammy McGuire Phone: 410-668-8899 Fax: 410-668-8801

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR Hydrex Consultants
 ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)515-6589
 FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE: (703)515-6599



SDP-00-91

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John Cummings 9/14/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/14/00

Cindy Hamata 9/29/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 10/5/00

NO. DATE REVISION

1	10.28.01	Per Co. COMMENTS
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OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050

PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental
 The Professional Engineering Center
 8005 Harford Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 3 OF 12
 CONTRACT NO.:

ADDRESS CHART
 LOT/PARCEL# A-3 / 68 STREET ADDRESS 10920 PUMP HOUSE ROAD

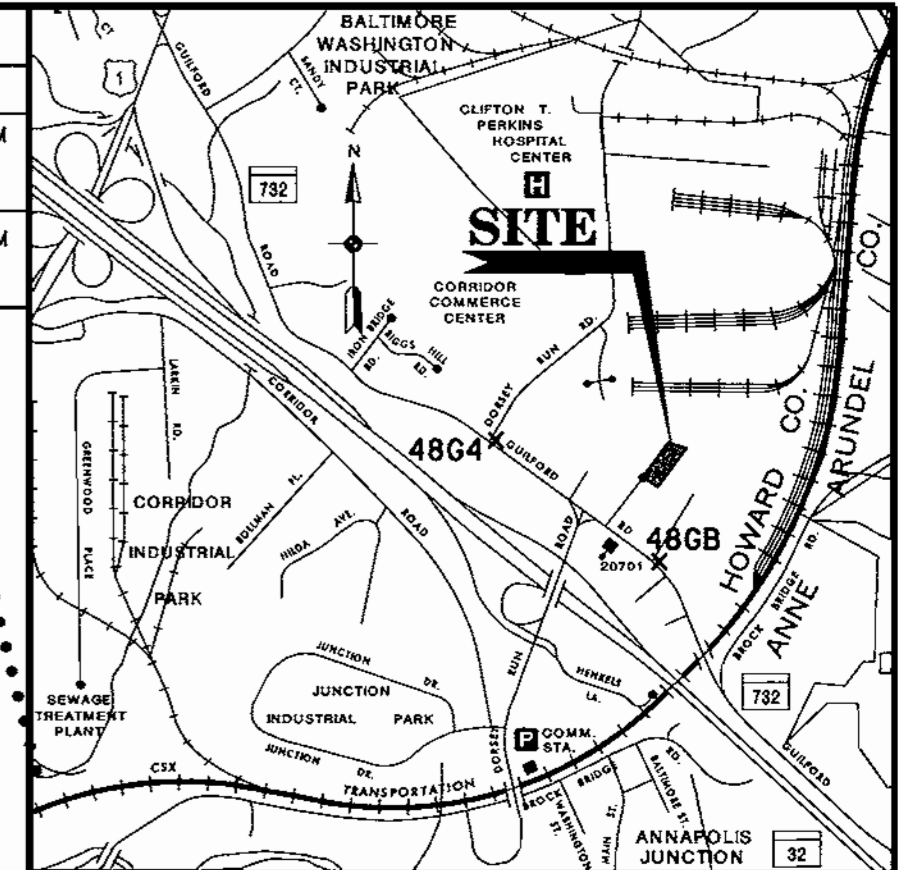
PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION AREA	LOT/PARCEL
CW and COMPANY	N/A	A-3/68

PLAT/NO. L/F: H442 GRID: 14 ZONING: M-2 TAX MAP NO.: 48 ELECT. DIST.: 8th CENSUS TRACT: 6089.01
 WATER CODE: B02 WATER CODE:

TITLE: UTILITIES, STORM DRAIN & SWM PLAN
ATLAS PLUMBING
 CW & COMPANY
 PARCEL A-3, 486/65
 HOWARD COUNTY, MARYLAND

HOWARD COUNTY CONTROL POINTS			
NO.	NORTHING	EASTING	ELEV.
4864	532,530.284	1,370,623.784	228.580
4868	531,519.241	1,371,653.842	206.628



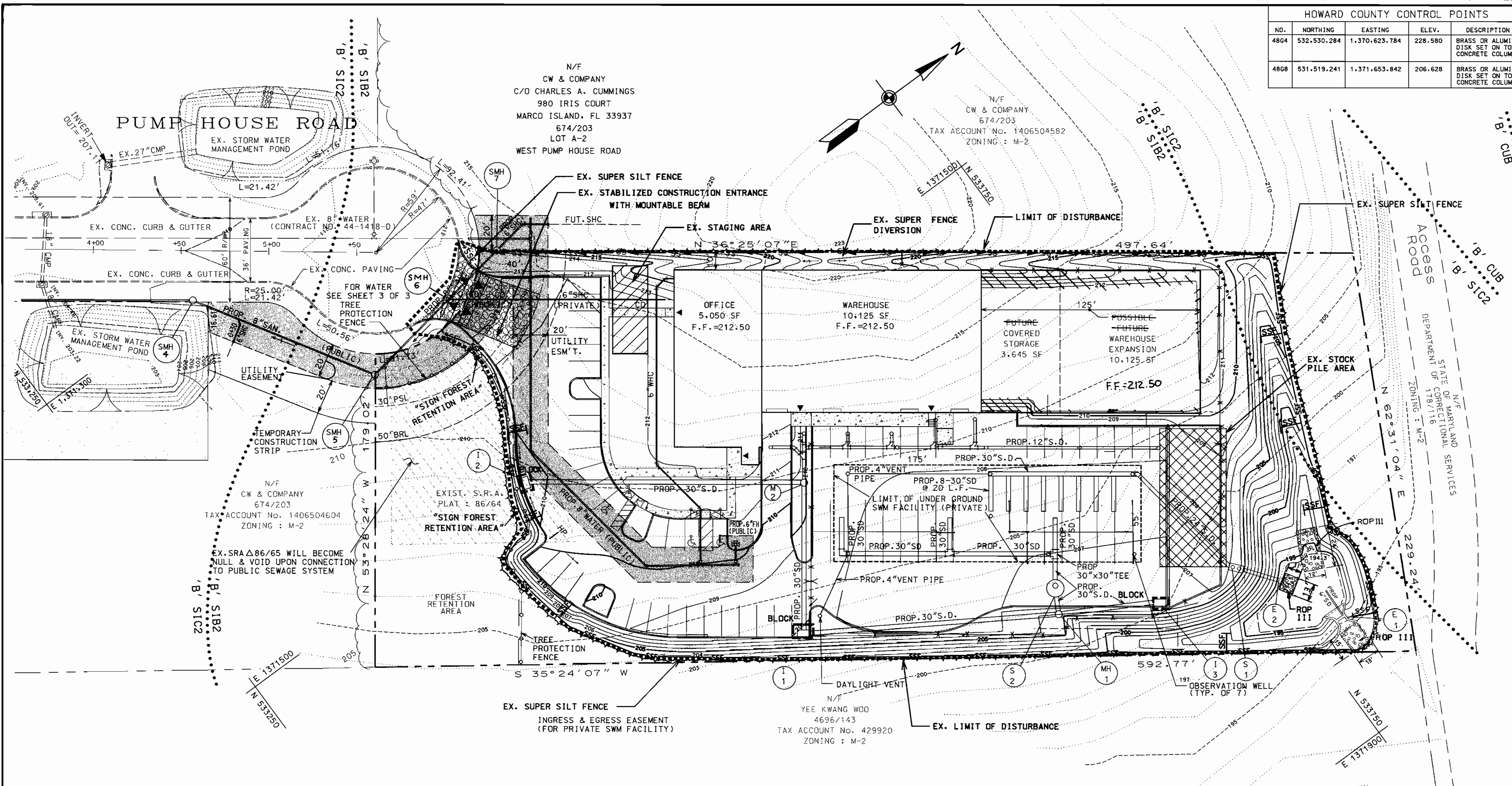
VICINITY MAP
1"=2000'

SEQUENCE OF CONSTRUCTION :
MASS GRADING ONLY COMPLETED UNDER
WAIVER PETITION: WP-0093, SCD #GP-00-157

- OBTAIN A GRADING PERMIT
- NOTIFY THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION, (410) 313-1855, AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION. (DAY 1)
- CLEAR AND GRUB FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE. (DAY 2)
- CLEAR AND GRUB FOR AND INSTALL SUPER FENCE DIVERSION & SUPER SILT FENCE. NOTIFY THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION UPON COMPLETION OF SAID INSTALLATION. (DAY 2-6)
- MASS GRADE SITE. AS SWALE ALONG NORTHWESTERN BOUNDARY IS BROUGHT TO GRADE INSTALL EROSION CONTROL MATTING AND STABILIZE. (DAY 6-50)

SEQUENCE OF CONSTRUCTION :
(THIS SUBMITTAL)

- AS SITE IS BROUGHT TO GRADE, COMMENCE BUILDING AND UTILITY CONSTRUCTION. INLETS TO BE BLOCKED UNTIL THE AREAS THEY SERVE ARE PERMANENTLY STABILIZED. SEE SHEET 8 OF 10 FOR STORMWATER MANAGEMENT FACILITY SEQUENCE OF CONSTRUCTION. (DAY 51 - 86)
- FINE GRADE SITE AND INSTALL STONE SUBBASE, CURB AND GUTTER, AND PERMANENT PAVING. PERMANENTLY STABILIZE AND LANDSCAPE OPEN SPACE AREAS. (DAY 86 - 93)
- UPON THE COMPLETION OF THE PERMANENT STABILIZATION AND WITH THE PERMISSION OF THE HOWARD SOIL CONSERVATION DISTRICT SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES AS DRAINAGE AREAS THAT THEY SERVE ARE PERMANENTLY STABILIZED. PERMANENTLY STABILIZE ANY AREAS DISTURBED BY THIS PROCESS. (DAY 94 - 99)



ENGINEER'S CERTIFICATION
I CERTIFY THAT THIS PLAN OF SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

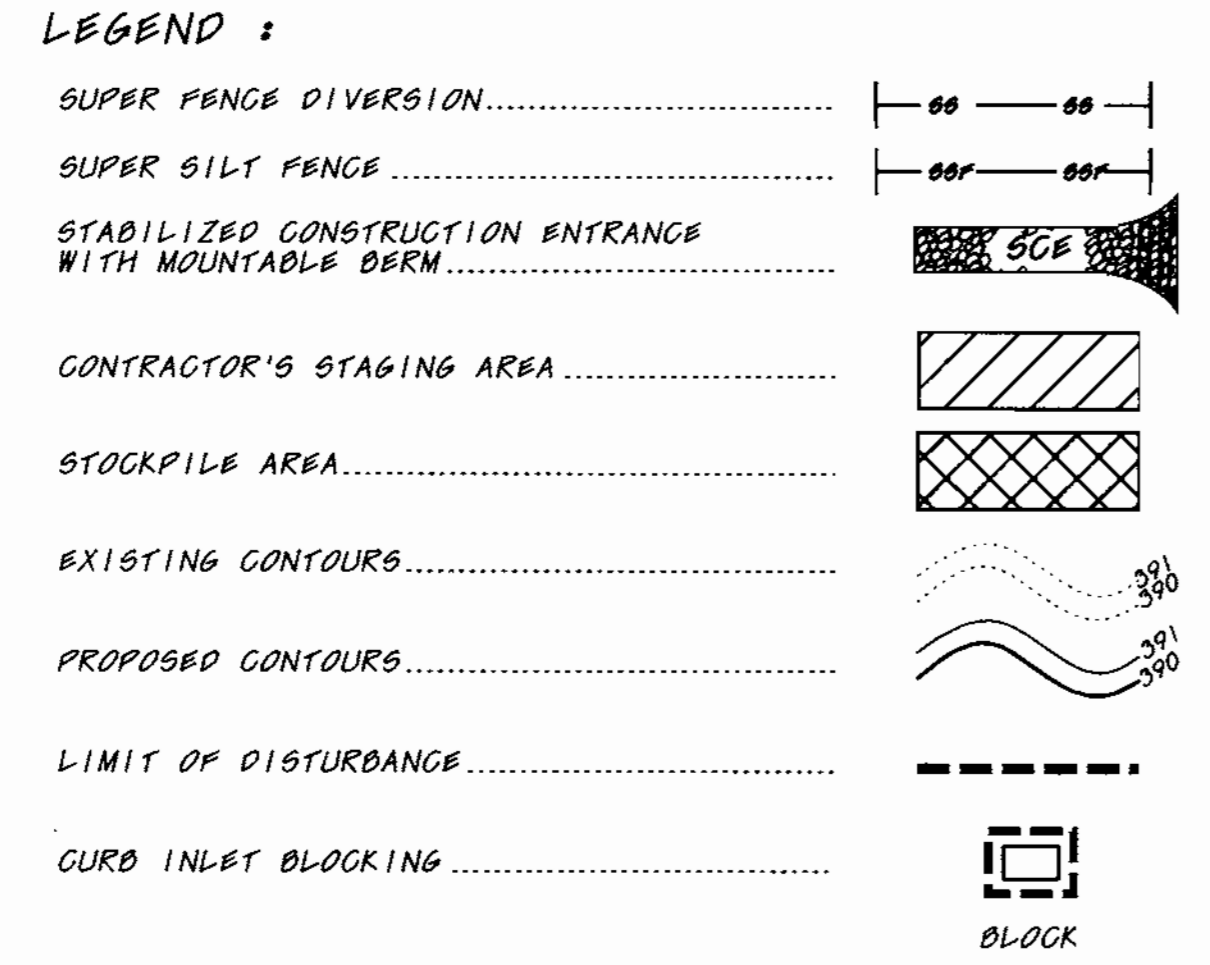
Charles W. Bradley 5/8/00
SIGNATURE OF ENGINEER DATE

Charles W. Bradley 10489
PRINT NAME NO LICENSE NUMBER

DEVELOPER'S CERTIFICATION
I HEREBY CERTIFY THAT DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECTS WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.

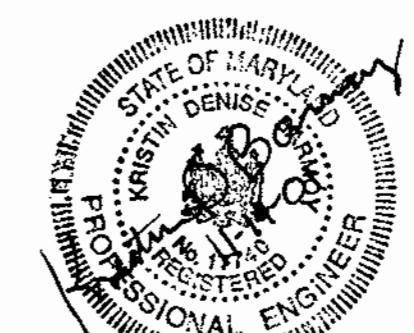
Edward J. Stikulis 5/9/00
SIGNATURE OF OWNER/DEVELOPER DATE

Edward J. Stikulis 10489
PRINT NAME NO LICENSE NUMBER



- UTILITY NOTES :**
- CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKED FILL AND STABILIZED EACH DAY IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY. SILT FENCE SHALL BE PLACED ON THE DOWN HILL SIDE OF TRENCH.
 - PLACE ALL EXCAVATED MATERIAL ON THE UP HILL SIDE OF TRENCH.
 - ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

MISS UTILITY
THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Ally Dammann 9/14/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamada 9/29/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Scott Smith 10/5/00
DIRECTOR DATE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Cheryl Summers 9/12/00
USDA - NATURAL RESOURCES CONSERVATION SERVICES DATE

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

John L. Robinson 9/12/00
HOWARD SOIL CONSERVATION DISTRICT DATE

OWNER/DEVELOPER

ATLAS REAL ESTATE
C/O STEVEN F. TURNER, CEO
9095 OWENS CT.
MANASSAS PARK, VA 20111-2393
PHONE: (703)-330-5050



PURDUM and JESCHKE, LLC
Consulting Engineers and Land Surveyors
Civil - Structural - Environmental
The Professional Engineering Center
8005 Harford Road - Baltimore, Maryland 21234
Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
DESIGNED BY: TAM
DRAWN BY: JRG
DATE: 04/06/2000

SCALE: 1" = 30'
PROJECT NO.: A4382-10
DRAWING NO.: 4 OF 12
CONTRACT NO.:

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
A-3 / 68	10920 PUMP HOUSE ROAD

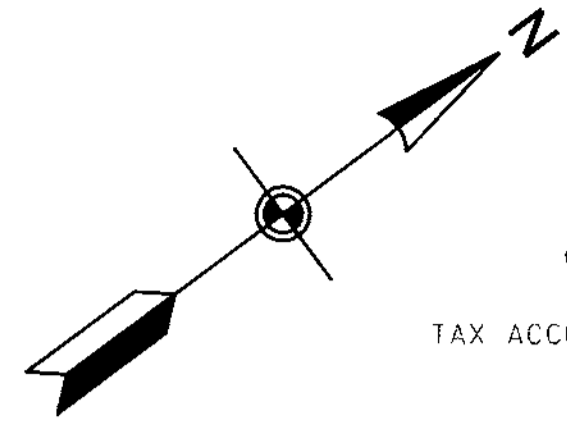
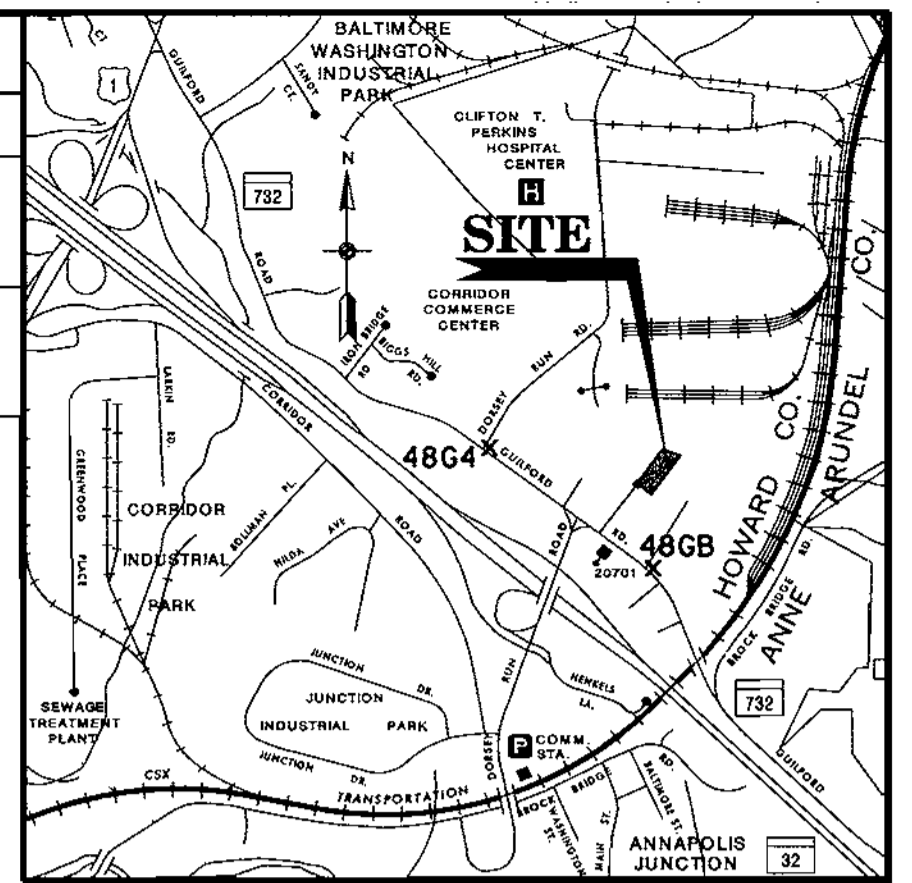
PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECTION AREA	LOT/PARCEL	
CW & COMPANY	N/A	A-3/68	
PLAT/BLK L/F	GRID#	ZONING	TAX MAP NO. / ELECT. DIST. / CENSUS TRACT
14-42	14	M-2	48 / 6th / 8069.01
WATER CODE :	B02	WATER CODE :	

TITLE: **SEDIMENT EROSION CONTROL PLAN**
ATLAS PLUMBING
CW & COMPANY
PARCEL A-3, 886/65
HOWARD COUNTY, MARYLAND

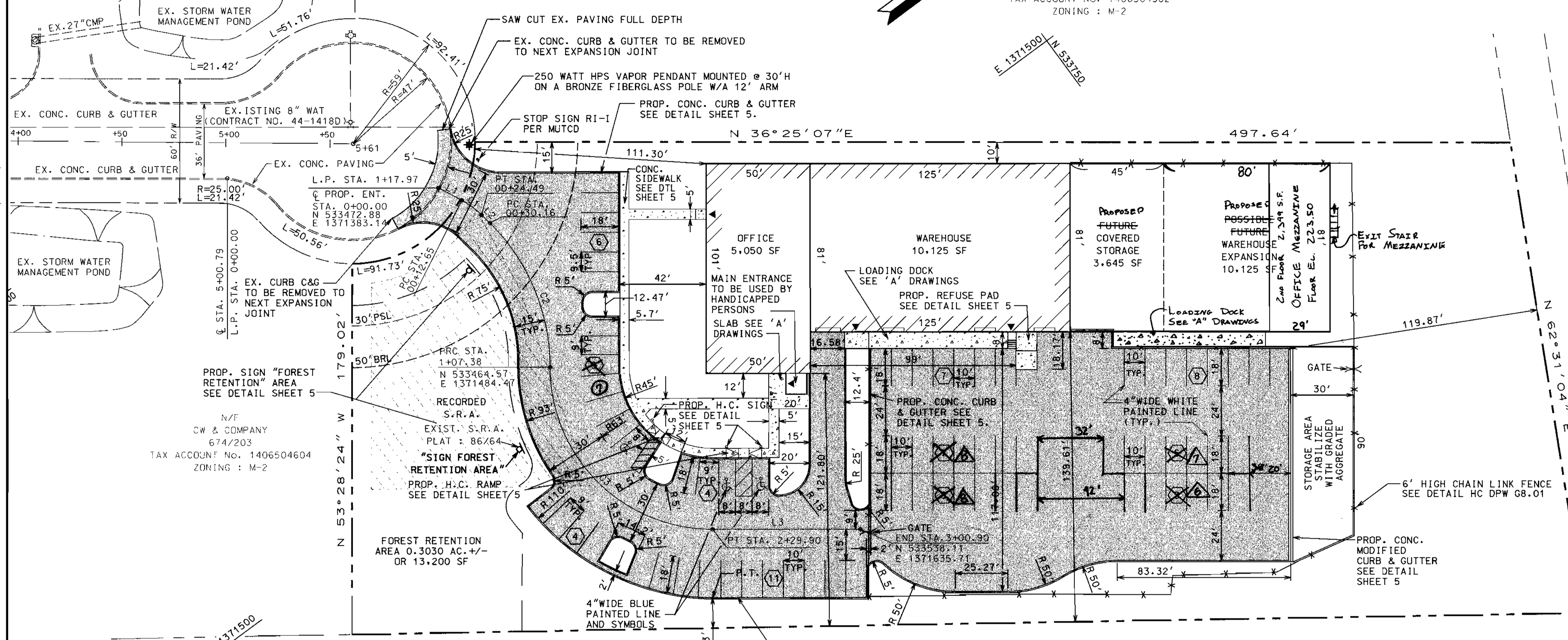
PUMP HOUSE ROAD
(EX. 60' RIGHT-OF-WAY)
CONTRACT NO. F-86-65

HOWARD COUNTY CONTROL POINTS

NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
48G4	532,530.284	1,370,623.784	228.580	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN
48G8	531,519.241	1,371,653.842	206.628	BRASS OR ALUMINUM DISK SET ON TOP CONCRETE COLUMN



N/F
CW & COMPANY
674/203
TAX ACCOUNT No. 1406504582
ZONING : M-2



SITE ANALYSIS DATA :

- TOTAL PROJECT AREA SITE: 3.00 ACRES OR 130,680 SQUARE FEET
- LIMIT OF DISTURBED AREA: 2.60 ACRES OR 113,256 SQUARE FEET
- ZONING: M-2 DISTRICT, MANUFACTURING HEAVY
- EXISTING USE: VACANT
- PROPOSED USE: OFFICE AND WAREHOUSE
- GROSS FLOOR AREA:
OFFICE - 5,050 SQUARE FEET - 7,399 S.F.
WAREHOUSE - 10,125 SQUARE FEET
Proposed Warehouse Expansion - 10,125 SQUARE FEET
- MAXIMUM NUMBER OF EMPLOYEES ON SITE:
OFFICE - 8
WAREHOUSE - 5
- PARKING SPACES REQUIRED:
OFFICE - 3.3 PER 1,000 S.F. = 0.0033 * 7,399 S.F. = 24.42 SAY 25
WAREHOUSE HYBRID - 2.5 PER 1,000 S.F. = 0.0025 * 20,250 S.F. = 50.61 SAY 51
TOTAL PARKING SPACES REQUIRED = 76 (INCLUDING 3 HANDICAP ACCESSIBLE)
- PARKING SPACES PROVIDED = 76 (INCLUDING 3 HANDICAP ACCESSIBLE)
- OPEN SPACE ON SITE: 1.2 ACRES AND 40% OF GROSS AREA
- BUILDING COVERAGE OF SITE: 0.57 AC. AND 19% OF GROSS AREA.
- VARIANCE PETITION TO SECTION 16.137.B OF THE HOWARD COUNTY ZONING REGULATIONS WAS GRANTED TO ALLOW THE CONSTRUCTION OF A PERMANENT STRUCTURE ACROSS A COMMON PROPERTY LINE WITHOUT REQUIRING A RESUBDIVISION PLAN ON FEBRUARY 10, 1986. CASE NO. VP-86-69
- FOREST CONSERVATION ORDINANCE IS COMPLIED WITH BY 0.30 ACRES ON-SITE AND FEE-IN LIEU OF FOR 0.86 ACRES.

GENERAL NOTES : NON RESIDENTIAL DEVELOPMENT PLAN

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY STANDARDS & SPECIFICATIONS AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS, SPECIFICATIONS AND DETAILS.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- A TRAFFIC STUDY WAS PERFORMED BY LEE CUNNINGHAM & ASSOCIATES, INC. DATE: FEB. 2000 PURSUANT TO THE ADEQUATE PUBLIC FACILITIES ACT.
- COORDINATES BASED ON MARYLAND NAD83 (91) HORIZONTAL AND NGVD29 (VERTICAL) DATUMS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, HOWARD SOIL CONSERVATION DISTRICT, MDE STORMWATER MANAGEMENT DESIGN MANUAL VOLUME I, HOWARD COUNTY STORM DRAIN DESIGN MANUAL VOLUME I, HOWARD COUNTY DESIGN MANUAL VOLUME II WATER & SEWER AND THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS AND DETAILS.
- WATER IS PUBLIC. (CONTRACT NO. 24-3857-D), ZONE
- SEWER IS PUBLIC. (CONTRACT NO. 24-3857-D), LITTLE PATUXENT DRAINAGE AREA
- PRIVATE STORMWATER MANAGEMENT CONTROL, BY UNDERGROUND FACILITY & BASIN #1 OWNERSHIP & MAINTENANCE RESPONSIBILITY IS THAT OF THE DEVELOPER.
- EXISTING UTILITIES SHOWN HEREON ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO HIS SATISFACTION PRIOR TO COMMENCING CONSTRUCTION.
- THERE ARE NO FLOOD PLAINS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS ON SITE.
- A TRAFFIC STUDY WAS PERFORMED BY LEE CUNNINGHAM & ASSOCIATES, INC. DATE: FEB. 2000 PURSUANT TO THE ADEQUATE PUBLIC FACILITIES ACT.
- THERE ARE NO KNOWN BURIAL GROUNDS ON THE PROPERTY TO BE DEVELOPED.
- NO POSTERS ARE REQUIRED FOR PUBLIC NOTICE FOR PROPOSED ENTRANCE, THERE ARE NO OFF-SITE RESIDENTIAL STRUCTURES WITHIN 200' OF SAID ENTRANCE.
- EXTERIOR LIGHTING WILL BE ATTACHED TO THE BUILDING. OUTSIDE LIGHTING SHALL BE IN COMPLIANCE WITH THE OUTSIDE LIGHTING REQUIREMENT STANDARDS SPECIFIED IN THE ZONING REGULATIONS SECTION 134.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ANY EXISTING SEDIMENT AND EROSION CONTROL DEVICES ENCOUNTERED AND DISTURBED IN THE COURSE OF CONSTRUCTION UNDER HIS CONTRACT.
- TOPOGRAPHIC SURVEY PERFORMED BY PURDUM & JESCHKE, LLC., APRIL 2000

CENTER LINE DATA

L1	N 64°25'43" E 12.65'
C1	Δ 16°57'28" R= 40.00' L= 11.84' CHD= N72°54'27" E 11.80'
L2	N 81°23'11" E 5.67'
C2	Δ 45°03'05" R= 98.21' L= 77.22' CHD= S72°54'27" E 75.24'
C3	Δ 90°00'00" R= 78.00' L= 122.52' CHD= N81°26'16" E 110.31'
L3	N 36°26'16" E 71.00'

LEGEND :

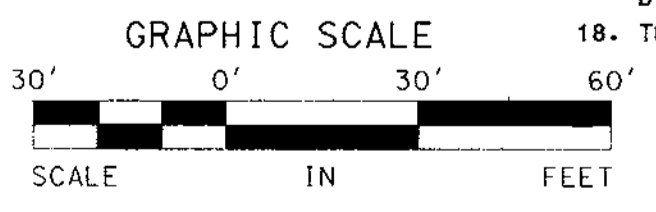
EXISTING CURB AND GUTTER.....	---
EXISTING R/W.....	---
EXISTING PROPERTY LINE.....	---
EXISTING WATER MAIN.....	---
PROPOSED SIGN.....	□
PROPOSED CURB AND GUTTER.....	---
PROPOSED CONCRETE MODIFIED CURB & GUTTER.....	---
PROPOSED CONC. PAVING.....	▨
PROPOSED BUILDING.....	▩
PROPOSED BITUMINOUS PAVING.....	▨
FUTURE BUILDING.....	▩
DOOR LOCATION.....	⊠

INDEX OF SHEETS :

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MISS UTILITY

THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777) 72 HOURS PRIOR TO THE START OF CONSTRUCTION.



REVISIONS MADE TO SHEETS 1,2,3,4,9,10,12 ARE TO SHOW PROPOSED WAREHOUSE, PARKING, & 2ND STORY OFFICE MEZZANINE, AND WAS PERFORMED BY MARYLAND LAND DESIGN INC. ON 11/14/01 & 11/20/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature] 4/14/02
 [Signature] 9/21/00
 [Signature] 10/5/00

No.	DATE	REVISION
1	10.20.01	PER Co. COMMENTS
2	11.20.01	PER Co. COMMENTS

OWNER/DEVELOPER
ATLAS REAL ESTATE
 C/O STEVEN F. TURNER, CEO
 9095 OWENS CT.
 MANASSAS PARK, VA 20111-2393
 PHONE: (703)-330-5050



PURDUM and JESCHKE, LLC
 Consulting Engineers and Land Surveyors
 Civil - Structural - Environmental
 The Professional Engineering Center
 8005 Harford Road - Baltimore, Maryland 21234
 Phone: 410-668-8800 - Fax: 410-668-8801

CHECKED BY: TAM
 DESIGNED BY: TAM
 DRAWN BY: JRG
 DATE: 04/06/2000

SCALE: 1" = 30'
 PROJECT NO.: A4382-10
 DRAWING NO.: 1 OF 12
 CONTRACT NO.:

ADDRESS CHART		STREET ADDRESS	
LOT/PARCEL#	A-3 / 68	10920 PUMP HOUSE ROAD	
PERMIT INFORMATION CHART		SECTION AREA	
SUBDIVISION NAME	CW and COMPANY	N/A	A-3/68
PLAT/LOT L/F	1442	TAX MAP No.	48
GRID#	14	ZONING	M-2
WATER CODE	B02	ELECT. DIST.	6th
		CENSUS TRACT	6069.01
TITLE: SITE LAYOUT PLAN			
ATLAS PLUMBING CW & COMPANY PARCEL A-3, 68/65 HOWARD COUNTY, MARYLAND			