

# SITE GRADING AND UTILITIES PLAN

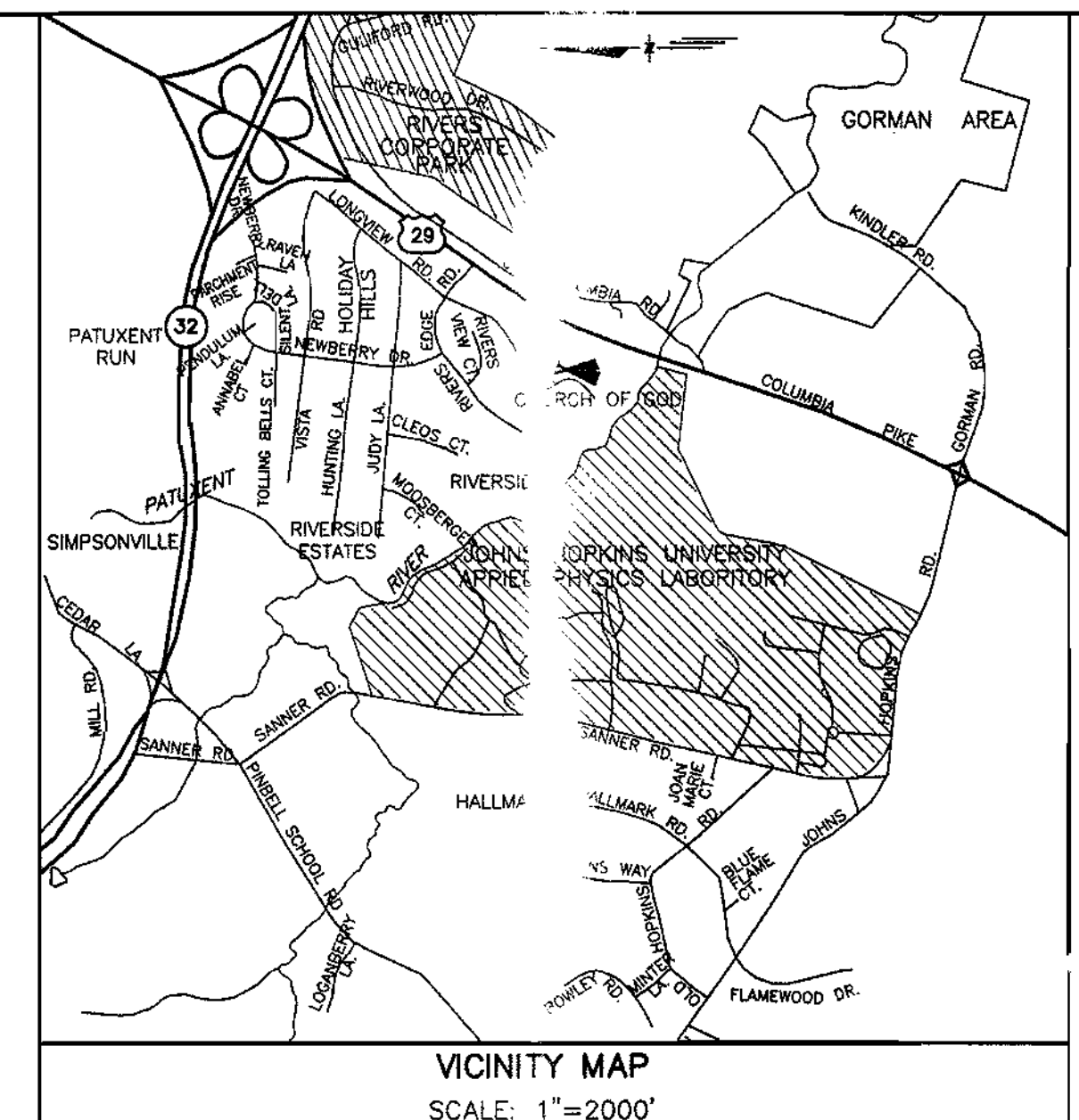
## THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY LOCATED SOUTHEAST INTERSECTION OF ROUTE 29 & 32 IN HOWARD COUNTY, MD

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#### SITE ANALYSIS TOTAL APL PROPERTY:

- A. AREA OF PARCEL/LOT = 361 ACRES, PLAN SUBMISSION/DISTURBED COVERAGE = 18.1 ACRES, 5% OF TOTAL LOT AREA
- B. PRESENT ZONING = PEC
- C. PARKING TABULATION: EXISTING PARKING SPACES = 3,780  
TOTAL SPACES PROVIDED = 4,256

- D. EXISTING BUILDING COVERAGE = 36.2 ACRES GROSS FLOOR AREA, COVERAGE = 18.1 ACRES, 5% OF TOTAL LOT AREA
- E. PROPOSED BUILDING COVERAGE = NO BUILDINGS OTHER THAN UTILITY CONTROL BLDG. ARE PROPOSED WITH THIS PLAN
- F. TOTAL PROPOSED BUILDING COVERAGE = 18.1 ACRES, 5.00% OF TOTAL LOT AREA
- G. PROPOSED DISTURBED AREA = 11.5 ACRES
- H. PROPOSED USE = EDUCATION/RESEARCH
- I. FLOOR SPACE USE = EDUCATION/RESEARCH
- J. MAXIMUM NUMBER OF EMPLOYEES = 3,900
- K. NO LOT SUBDIVISION IS ANTICIPATED.
- L. RELATED DPZ FILES: S-01-12, WP-01-80 AND F-02-40.
- M. SANITARY SEWER / WATER SERVICE SEE GENERAL NOTES.
- N. EXISTING OPEN SPACE AREA (LOT AREA MINUS PARKING AND BUILDINGS) = 308 ACRES, 85.3% OF TOTAL LOT AREA.
- O. PROPOSED OPEN SPACE AREA = 303 ACRES, 83.9% OF TOTAL LOT (PROPOSED BUILDINGS AND PARKING = 5 ACRES)

#### GENERAL NOTES:

1. WATER IS PUBLIC (HOWARD COUNTY)
2. SEWER IS PUBLIC (HOWARD COUNTY)
3. THE FLOODPLAIN LIMITS FOR THIS PROJECT WAS TAKEN FROM HOWARD COUNTY STUDY.
4. DIMENSION TO NEW STRUCTURES ARE PERPENDICULAR TO PROPERTY LINE.
5. THE PURPOSE OF THIS SDP PLAN IS TO REPRESENT RELOCATION OF UTILITIES AND SITE GRADING ASSOCIATED WITH THE LABORATORY OPERATION AND RESEARCH.
6. THE SDP PLAN AREA OF THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN. THE LIMIT OF DISTURBANCE FOR THIS SITE PLAN AREA (10.4 ACRES) OF THE JOHN HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY IS NOT LOCATED IN THE 100 YEAR FLOODPLAIN.
7. ALL EXISTING UTILITIES WITHIN THE FOOTPRINT OF NEW BUILDINGS WILL BE RELOCATED OUTSIDE THE BUILDING AREA AS SHOWN.
8. SOIL MAP USED SHEET NO. 29, SOIL SURVEY JULY 1968 HOWARD COUNTY, MARYLAND, USA.
9. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREA.
10. FOREST CONSERVATION OBLIGATION ADDRESSED WITH F-02-40.
11. STORMWATER MANAGEMENT PONDS ARE PRIVATELY OWNED AND MAINTAINED.
12. THE SUBJECT PROPERTY IS ZONED PEC PER THE OCTOBER 18, 1993 COMPREHENSIVE ZONING PLAN.
13. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. NO LANDSCAPE PLANTINGS ARE REQUIRED FOR THIS PLAN SINCE NO PROPOSED IMPROVEMENTS ARE ADJACENT TO PUBLIC ROAD OR ADJOINING PROPERTY.

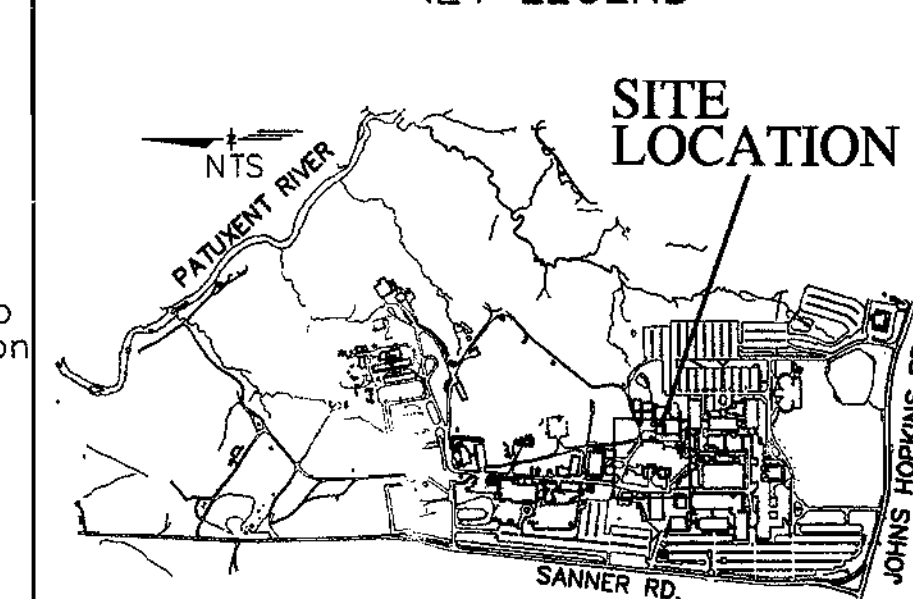
-----GENERAL NOTES CONTINUED ON SHEET #C-2 (T-2)-----

### DEVELOPER & ENGINEER CERTIFICATES

#### 1) BY THE DEVELOPER:

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personal involved in the construction project will have a certificate of attendance at a department of the environment approved training program for the control of sediment and erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "As Built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

#### KEY LEGEND



**CONTACT PERSON FOR OWNER: JEFFREY A. ANDERSON**  
TELEPHONE: 443-778-5960 FAX: 443-778-5960

### ADDRESS CHART

LOT/PARCEL #	STREET ADDRESS
P # 1	11100 JOHNS HOPKINS ROAD, LAUREL
	MD 20723, CONTACT JEFFREY ANDERSON
	443-778-5960

### PERMIT INFORMATION CHART

Subdivision Name	SECTION/AREA	Lot/Parcel No
J.H.U. APPLIED PHYSICS LAB	N/A	1
Plat# or L/F Grid# 15429-15433	Zoning 16 PEC	Tax Map No. 41
		Elect. Distr. 5
		Census Tract 6051
Water Code E-21	Sewer Code 6480000	

Review for HOWARD SCD and meets Technical Requirements.

*J. M. Myers/CB* 5/28/02  
USDA - Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

*Robert A. Warner* 5/28/02  
Howard SCD Date

APPROVED: DEPARTMENT OF PUBLIC WORKS

\_\_\_\_\_  
CHIEF, BUREAU OF HIGHWAYS Date

#### 2) BY THE ENGINEER:

"I certify that the plan for pond construction, erosion and sediment plan represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "As Built" plan of the pond within 30 days of completion."

*Robert A. Warner* 5/10/02  
Design Engineer Signature Date

Robert A. Warner 13403  
Printed Name Registration Number

#### 3) CERTIFICATION BY PROFESSIONAL:

There are no wetlands on the site that will be disturbed. Therefore, the requirement of 401 and 404 wetlands permits from the State of Maryland and Corps of Engineers are not needed.

*Robert A. Warner* 5/10/02  
Professional's Signature Date

Robert A. Warner  
Print Name



**AMT**  
A. MORTON THOMAS AND ASSOCIATES, INC.  
CONSULTING ENGINEERS  
12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
TEL: (301) 881-2545 FAX: (301) 881-0814  
AMT FILE # 95

**Einhorn Yaffee Prescott**

THE FLOUR MILL, 1000 POTOMAC ST. NW, STE. L1  
WASHINGTON, D.C. 20007 (202) 471-5000

DES: B. WARNER  
DRN: S. ITANI  
CHK: S. ITANI  
DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNER ROAD

JOHNS HOPKINS RD.

SHEET ORGANIZATION KEY PLAN

### SITE GRADING AND UTILITIES

REVISIONS:  
1. NOTES  
2. NOTES

DATE:  
03/15/02  
05/10/02

APPLIED PHYSICS LABORATORY  
THE JOHNS HOPKINS UNIVERSITY  
**PARCEL 1**


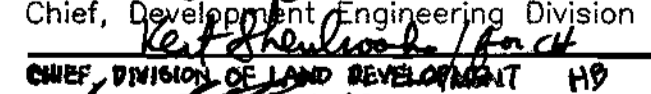
TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

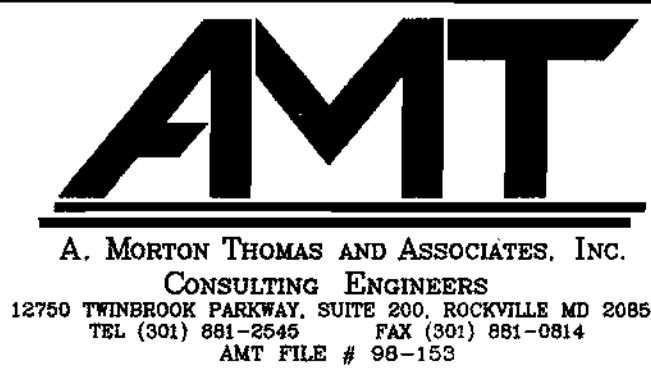
SCALE AS SHOWN  
APL SHEET NO.  
T-1  
COUNTY SHEET NO.  
C-1

**GENERAL NOTES CONTINUED FROM SHEET #C-1 (T-1)**

14. THE TOPOGRAPHIC AND UTILITY INFORMATION SHOWN IN THIS DEVELOPMENT PLAN, WAS OBTAINED FROM FIELD SURVEYS PERFORMED BY WHITMAN, REQUARDT AND ASSOCIATES (TOPOGRAPHY) AND APPLIED PHYSICS LABORATORY (UTILITIES) CONSULTANTS IN NOVEMBER 1998 AND FROM REPORTS PROVIDED BY JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LAB (APL), AND MAY NOT REFLECT CURRENT CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY CURRENT TOPOGRAPHIC AND UTILITY INFORMATION TO HIS OWN SATISFACTION.
15. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY AND MSHA SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, UNLESS OTHERWISE NOTED.
16. ELEVATIONS SHOWN ARE BASED ON AN ASSUMED DATUM PROVIDED BY WHITMAN, REQUARDT AND ASSOCIATES.
17. APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER.
18. ACCESS TO THE CONSTRUCTION AREA THROUGH THE SECURE AREA OF THE APPLIED PHYSICS LABORATORY (WITHIN THE FENCED ENCLOSURE) MUST BE ARRANGED IN ADVANCE BY CONTACTING THE PROGRAM MANAGER, JEFFREY ANDERSON (240) 228-5960.
19. SECURITY MUST BE MAINTAINED WITHIN THE CONSTRUCTION AREA. ALL REQUIRED FENCE CONSTRUCTION AND RELOCATION SHALL BE BY THE CONTRACTOR WHO SHALL BE RESPONSIBLE TO COORDINATE WITH JHU-APL AS TO WHEN SUCH WORK IS REQUIRED.
20. THE CONTRACTOR SHALL CONTACT MR. JEFFREY ANDERSON (240) 228-5960, AT LEAST FIVE DAYS BEFORE STARTING WORK OR NEEDING TO SHUT DOWN ANY UTILITIES.
21. THE CONTRACTOR SHALL TIE-IN TO THE EXISTING UTILITIES ONLY AFTER NORMAL WORKING HOURS AT JHU-APL. WORK MUST BE SCHEDULED ACCORDINGLY THRU JHU-APL. NORMAL WORKING HOURS ARE 8:30 A.M. TO 5:00 P.M., MONDAY THROUGH FRIDAY.
22. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION, 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK, AT (410) 313-1880.
23. CLEAR ALL UTILITIES BY MINIMUM OF 6". CLEAR ALL POLES AND FOUNDATIONS BY 2'-0" MINIMUM, OR TUNNEL AS REQUIRED.
24. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEMS. COORDINATE WITH THE OWNER FOR OPERATING WATERMAIN VALVES.
25. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL STORM DRAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
26. THE CONTRACTOR SHALL PERMANENTLY SEED AND STABILIZE ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED.
27. ALL DRIVEWAYS ARE PRIVATELY OWNED AND MAINTAINED.
28. THE AREA SHOWN IS LOCATED ON TAX MAP #41.
29. THE INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AT ALL CROSSINGS WELL IN ADVANCE OF CONSTRUCTION.
30. ALL SITE UTILITIES ARE THE PROPERTY OF APL. APL WILL HORIZONTALLY LOCATE ALL ACTIVE UTILITIES FOR THE CONTRACTOR.
31. EXISTING PAVEMENTS, (ROADWAY, SIDEWALKS ETC.) REMOVED TO INSTALL PROPOSED UTILITIES, SHALL BE REPLACED "IN-KIND" OR AS DETAILED HEREIN THESE PLANS. TRAFFIC SHALL BE MAINTAINED BY THE CONTRACTOR ALONG EXISTING ROADWAYS DURING PROPOSED WORK, AT ALL TIMES. THE PAVED DRIVE NORTHEAST OF BUILDING #41 SHALL BE OPEN TO ONE LANE OF TRAFFIC (15' WIDE) AT ALL TIMES.
32. SEE DETAIL SHEETS FOR OTHER ITEMS THAT APPLY TO THIS PROJECT.
33. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS SO AS NOT TO DAMAGE EXISTING ADJACENT FACILITIES AND STRUCTURES. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITION OR BETTER UNLESS NOTED OTHERWISE.
34. DUE TO THE PROXIMITY OF LIVE UNDERGROUND UTILITIES, THE OWNER AND A. MORTON THOMAS AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR ANY DAMAGE OR INJURY SUSTAINED DURING CONSTRUCTION BY ANY PERSON, VEHICLES OR EQUIPMENT USED ON OR ADJACENT TO THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES BY TEST PIT OR OTHER MEANS OF INVESTIGATION APPROVED BY THE OWNER BEFORE THE EXCAVATION STARTS. UTILITY PROFILES ON THESE PLANS ARE ILLUSTRATE POSSIBLE UTILITY LOCATIONS. THE FOLLOWING DEPTHS WERE ASSUMED BUT NOT FIELD CONFIRMED: WATER MAINS 4' COVER, GAS PIPE, ELECTRIC CONDUIT/DUCT AND TELECOM CONDUIT/DUCT, 1.5' COVER. CONTRACTOR SHALL CONFIRM ACTUAL DEPTH AND PREPARE REVISED PROFILES IF REQUIRED BY CONFLICTS. ALL REVISION SHALL BE APPROVED BY THE OWNER BEFORE THE START OF THE UTILITY'S CONSTRUCTION.
35. ACCESS TO ALL EXISTING FACILITIES SHALL BE MAINTAINED AT ALL TIMES.
36. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNER OF ANY DEVIATION FROM THESE PLANS PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THESE PLANS WITHOUT WRITTEN AUTHORIZATION BY THE OWNER WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
37. SURFACED STREETS AND PARKING AREAS SHALL BE MAINTAINED IN A CLEAN CONDITION, MUD AND DUST FREE AT ALL TIMES. ADEQUATE MEANS SHALL BE PROVIDED TO CLEAN TRUCKS AND OTHER EQUIPMENT USING EXISTING SURFACED STREETS AND PARKING AREAS.
38. THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO MINIMIZE DAMAGE TO EXISTING TREES DURING CONSTRUCTION.
39. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL MEET CURRENT HOWARD COUNTY DEPARTMENT OF PERMITTING SERVICES STANDARDS AND DIRECTIVES.
40. EXISTING SIGNS, GUARDRAILS AND OTHER MINOR SITE FEATURES IN THE WAY OF PROPOSED CONSTRUCTION, WHETHER OR NOT SHOWN ON THESE PLANS, SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
41. CONTRACTOR SHALL CONTACT JHU-APPLIED PHYSICS LAB PLANT FACILITIES OFFICE (240) 228-5134, 48 HOURS PRIOR START OF THE EXCAVATION AND MUST NOTIFY ALL PUBLIC UTILITY COMPANIES AND THE OWNER OF UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
42. TRENCH AND INSTALLATION OF NEW UTILITIES SHALL BE SCHEDULED SO THAT ALL TRENCHES WILL BE BACK FILLED AT THE END OF EACH DAY. NO TRENCHES WILL BE ALLOWED TO BE OPEN AT THE END OF EACH WORK DAY. TRENCH AREAS SHALL BE MULCHED AND TEMPORARY SEEDING IN NON-PAVED AREA, AND TRAFFIC BARRING TEMPORARY SURFACE SHALL BE INSTALLED IN PAVED AREAS.
43. CONTRACTOR SHALL PREPARE CONSTRUCTION SHOP DRAWING FOR THE NEW UTILITIES AND RETAINING WALL BETWEEN THE WEST SIDE OF BUILDING #24 AND THE PROPOSED EAST SIDE OF BUILDING #17. SHOP DRAWINGS SHALL SHOW IN SECTIONS AND PLANS THE VERTICAL AND HORIZONTAL LOCATION FOR ALL PIPS, CONDUITS, MANHOLES, DUCTBANKS AND RETAINING WALL. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY APL BEFORE START OF WORK IN THIS AREA.
44. CONTRACTOR SHALL CAP ALL ENDS OF WATER PIPING TO REMAIN AS PER HOWARD COUNTY DPW DETAIL #W2.21 "BUTTRESSES FOR CAPS AND HORIZONTAL BENDS". CONTRACTOR SHALL PLUG ALL STORM AND SANITARY ENDS OF PIPE TO REMAIN WITH MORTARED CONCRETE BLOCK, OR POURED IN PLACE CONCRETE 6" THICK WITH #4 BARS 12" ON CENTER EACH WAY. PLUG SHALL SEAL AND COVER THE ENTIRE OUTSIDE EDGE OF THE END OF THE PIPE.
45. ALL NEW WATER MAIN TAPS SHALL BE WET TAPS THAT WILL NOT CAUSE THE INTERRUPTION OF WATER SERVICE AT APL.
46. CONTRACTOR SHALL MAINTAIN CONTINUOUS FLOW IN THE STORM DRAIN PIPES DURING CONSTRUCTION AS CONDENSATE WATER FLOWS IN THE STORM DRAIN PIPES CONTINUOUSLY.

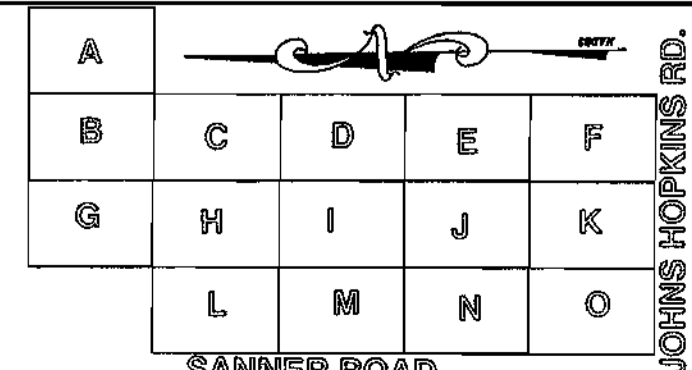
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING


  
 Chief, Development Engineering Division MK Date 5/31/02
   

  
 Director HP DATE 6/11/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02



SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. ADDITION OF NOTE #33-#36  
 2. NOTE

DATE:  
 03/15/02  
 05/10/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY **PARCEL 1**  
**LIST OF DRAWINGS**  
 &  
**GENERAL NOTES**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. T-2  
 COUNTY SHEET NO. C-2



UTILITIES LEGEND

EXISTING

- EXISTING CONTOUR
- TREELINE
- FOREST STAND
- DRAINAGE AREA
- 100 YEAR FLOODPLAIN
- STREAM VALLEY BUFFER
- STREAM SYSTEM
- WETLANDS
- 25' WETLAND BUFFER
- SOIL CLASSIFICATION BOUNDARY
- STREAMS
- DD DRAINAGE DITCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- 8" SAN. EXISTING SANITARY SEWER
- 12" W. EXISTING WATER
- 18" DRAIN. EXISTING STORM DRAIN
- EXISTING FENCE

PROPOSED

- SAN PROPOSED SANITARY LINE
- 154" 36" PROPOSED STORM LINE
- 1/8 MB PROPOSED WATER LINE
- PROPOSED TELECOMMUNICATION
- PROPOSED ELECTRIC
- CWSR PROPOSED CHILLED WATER
- HWSR PROPOSED HOTWATER
- GAS PROPOSED GAS LINE

GENERAL LEGEND

- 26 EXISTING BUILDING
- PARKING LOT
- EDGE OF ROAD
- A1B2 SOILS CLASSIFICATION

- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED STORMCEPTOR
- PROPOSED STORM DRAIN CATCH BASIN
- PROPOSED WATER LINE CONNECTIONS
- PROPOSED TELCOM MANHOLE
- F.H.☞ PROPOSED FIRE HYDRANT

- EXISTING WATER TANK
- CATCH BASIN
- C.B. C.B.
- M.H. EXISTING MANHOLE
- S.M.H. SANITARY SEWER MANHOLE
- PIV. EXISTING POST INDICATOR VALVE
- WV. EXISTING WATER VALVE
- F.H.☞ EXISTING FIRE HYDRANT
- C.O.° EXISTING CLEANOUT

UTILITIES DEMOLITION LEGEND

- 18" DRAIN. EXISTING STORM DRAIN TO BE REMOVED
- 12" W. EXISTING WATER TO BE REMOVED
- 8" SAN. EXISTING SANITARY SEWER TO BE REMOVED
- 8" SAN. EXISTING SANITARY SEWER TO BE ABANDONED
- EXISTING UTILITY TO BE CAPPED
- EXISTING UTILITY TO BE CAPPED & REMOVED
- EXISTING UTILITY TO BE CAPPED & ABANDONED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division MK 5/31/02 Date  
 Chief, Division of Land Development HB 6/3/02 Date  
 Director 6/11/02 Date



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINDROCK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 981-2545 FAX (301) 981-0814  
 AMT FILE # 98-153

**Einhorn  
 Yaffee  
 Prescott**

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

SHEET ORGANIZATION KEY PLAN  
 JOHN'S HOPKINS RD.  
 SANNER ROAD

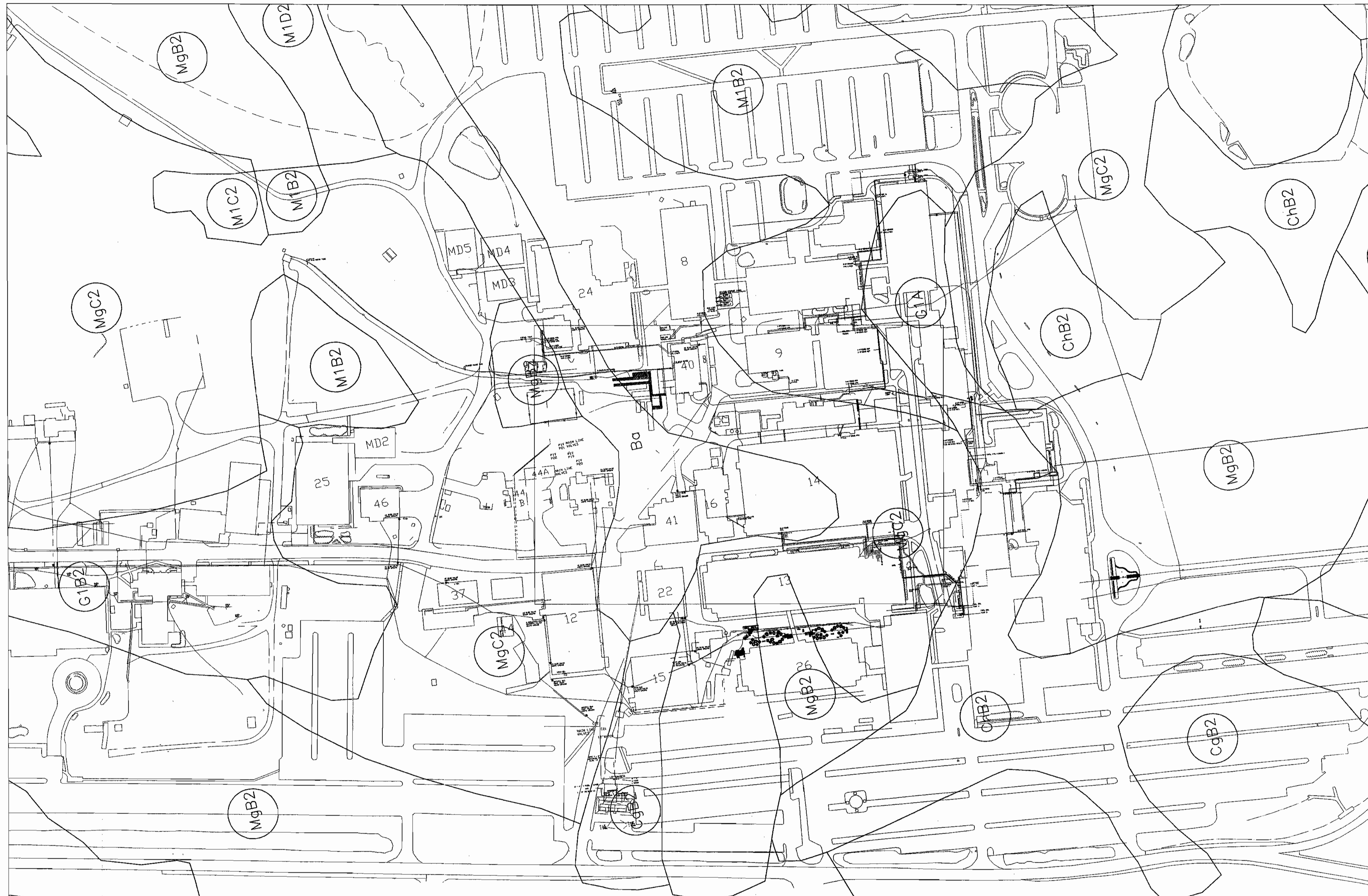
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M	N	O			

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. LEGEND 03/15/02  
 2. LEGEND 05/10/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 GENERAL NOTES **PARCEL 1**  
 &  
**LEGEND**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

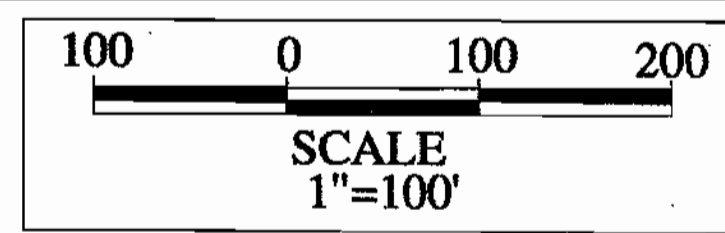
SCALE AS SHOWN  
 APL SHEET NO. T-3  
 COUNTY SHEET NO. C-3



SOURCE: HOWARD COUNTY SOIL SURVEY, MARYLAND

**SOILS MAP LEGEND:**

- Ba BAILE SILT LOAM
- CgB2 CHESTER GRAVELLY SILT LOAM
- ChB2 CHESTER SILT LOAM
- GIA GLENELG LOAM
- GIB2
- MgB2 MANOR GRAVELLY LOAM
- MgC2
- MIB2 MANOR LOAM
- MID2



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE 5/31/02  
 DATE 6/3/02  
 DATE 6/11/02



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TRENBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 881-2540 FAX (301) 881-0814  
 AMT FILE # 58-155

Einhorn  
 Yaffee  
 Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA  
 DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

SANNER ROAD

A	B	C	D	E	F
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JOHNS HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

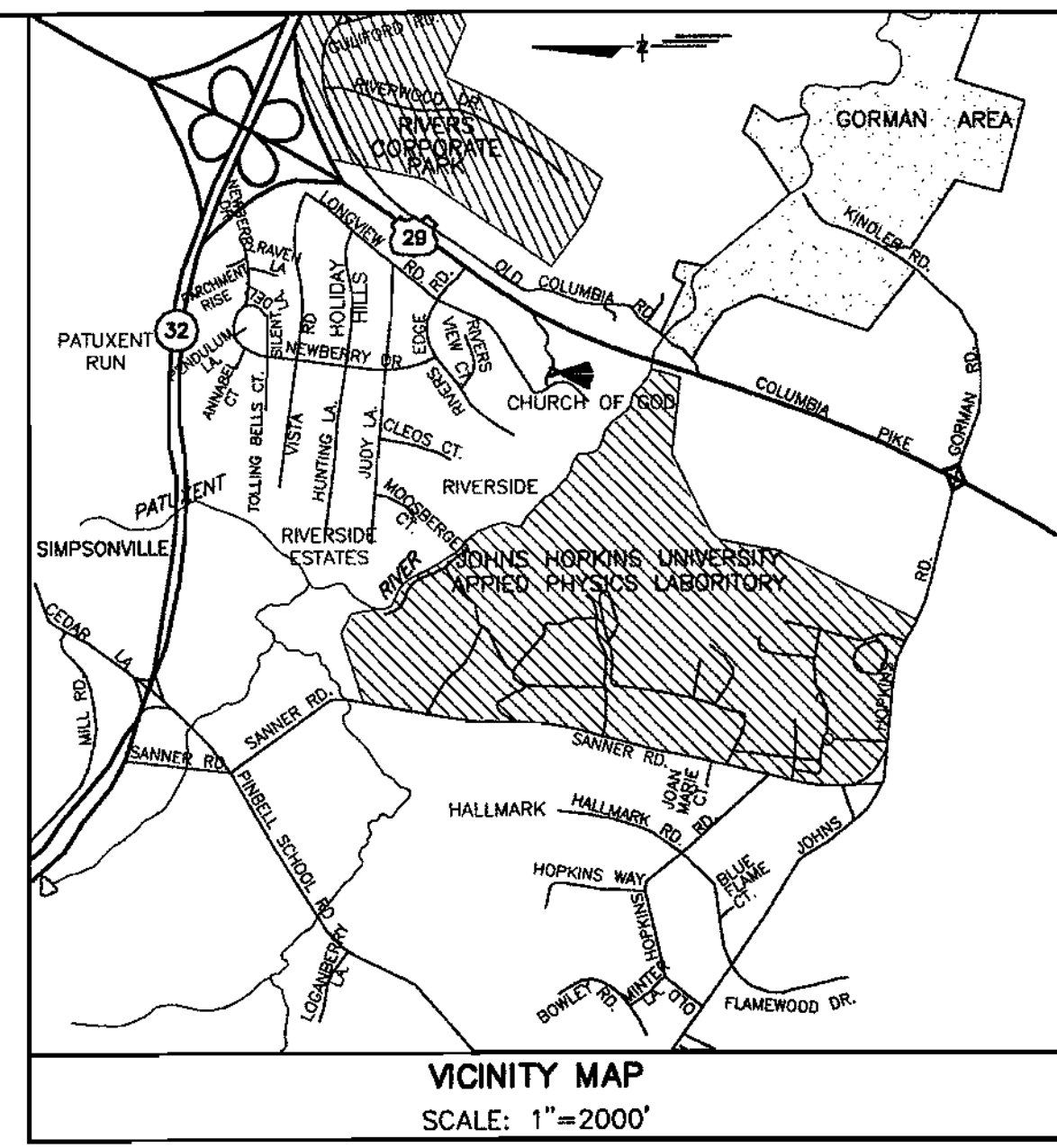
**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. SOIL LEGEND

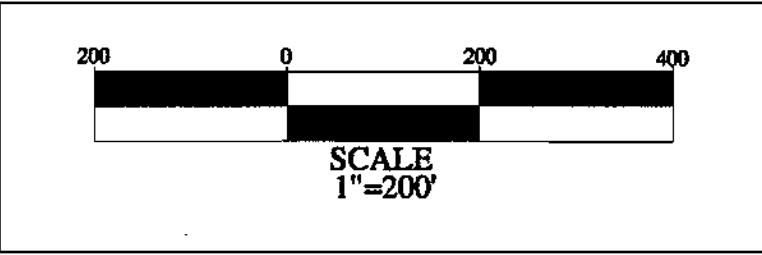
DATE: 03/15/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**SOILS MAP FOR PARCEL 1**  
**PROJECT AREA**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
**CSM-1**  
 COUNTY SHEET NO.  
**C-4**



APPROVED: *[Signature]* DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/24/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 6/9/02  
 DIRECTOR DATE: 6/11/02



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TREBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 981-2545 FAX (301) 981-0814  
 AMT FILE # 98-153

Einhorn  
 Yaffee  
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THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
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JOHNS HOPKINS RD.  
 SANNER ROAD

SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. BLDG #17

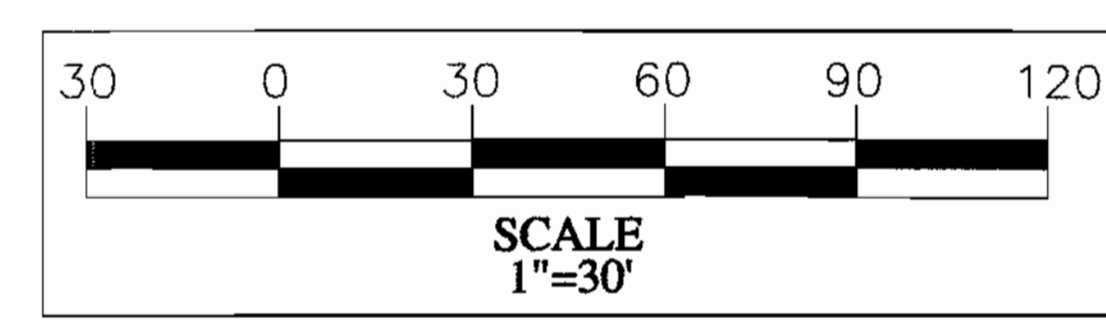
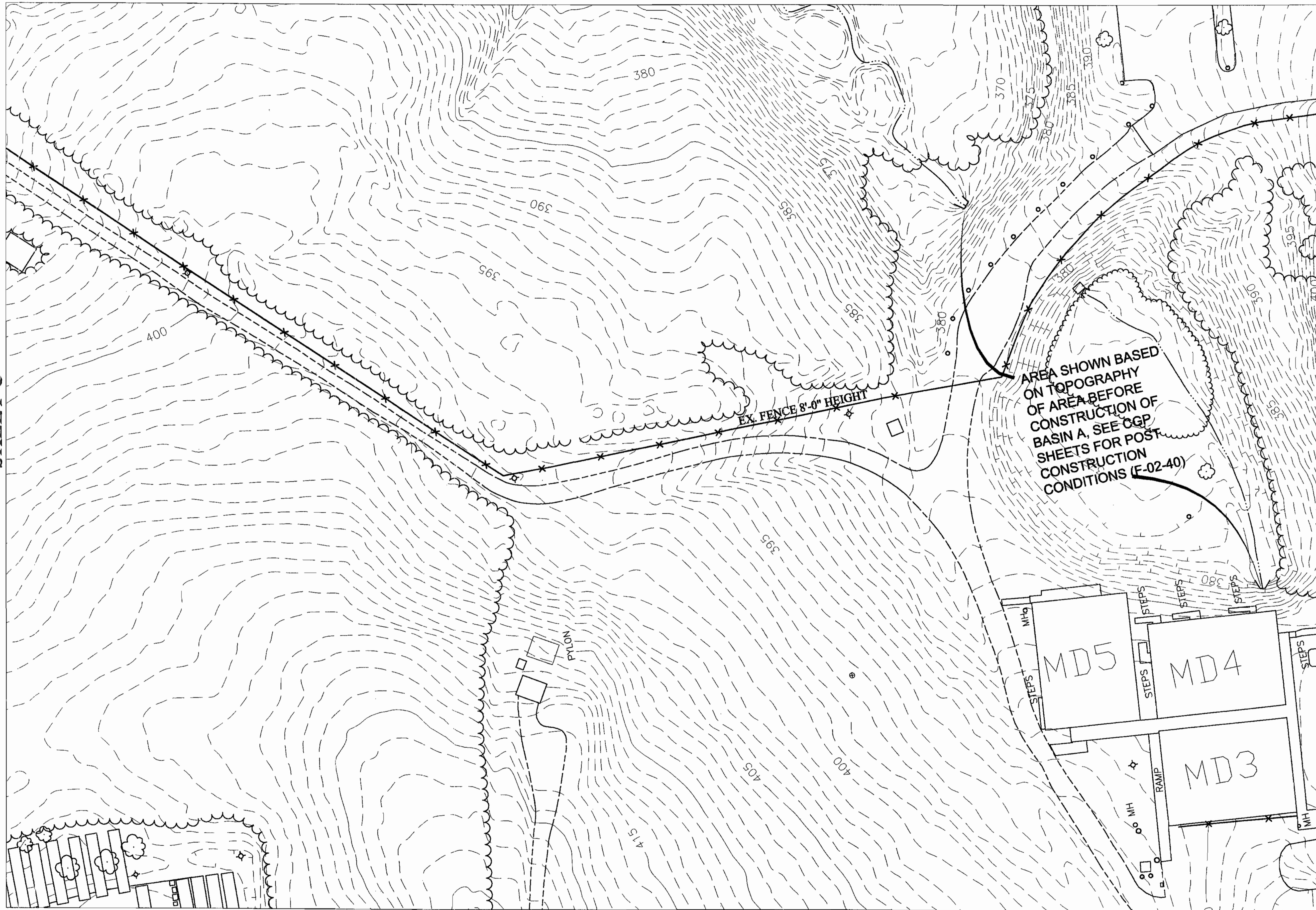
DATE:  
 03/25/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**KEYED MAP PARCEL 1**  
 PLAN  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
**C-1**  
 COUNTY SHEET NO.  
**C-5**

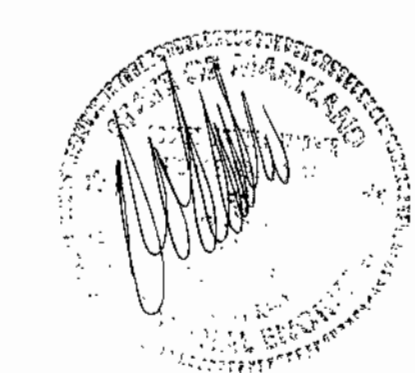
SHEET C

SHEET E



SHEET I

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 5/21/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/3/02  
 DIRECTOR DATE 6/11/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	JOHNS HOPKINS RD.				SHEET ORGANIZATION KEY PLAN
B	C	D	E	F	
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SANNER ROAD

SITE GRADING AND UTILITIES

REVISIONS:  
 1. EX. CONTOUR LINES-DASHED

DATE:  
 04/12/02

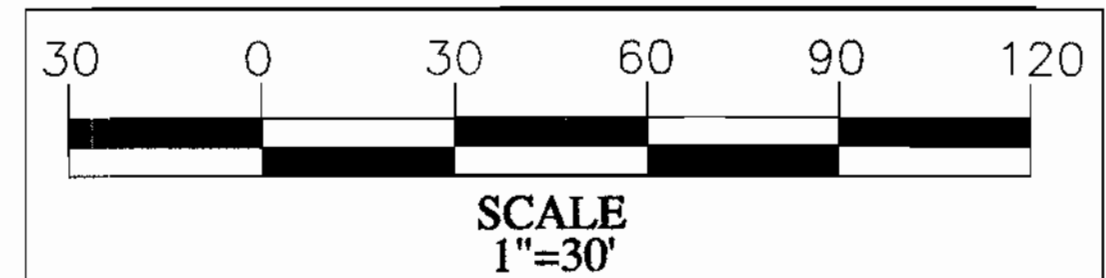
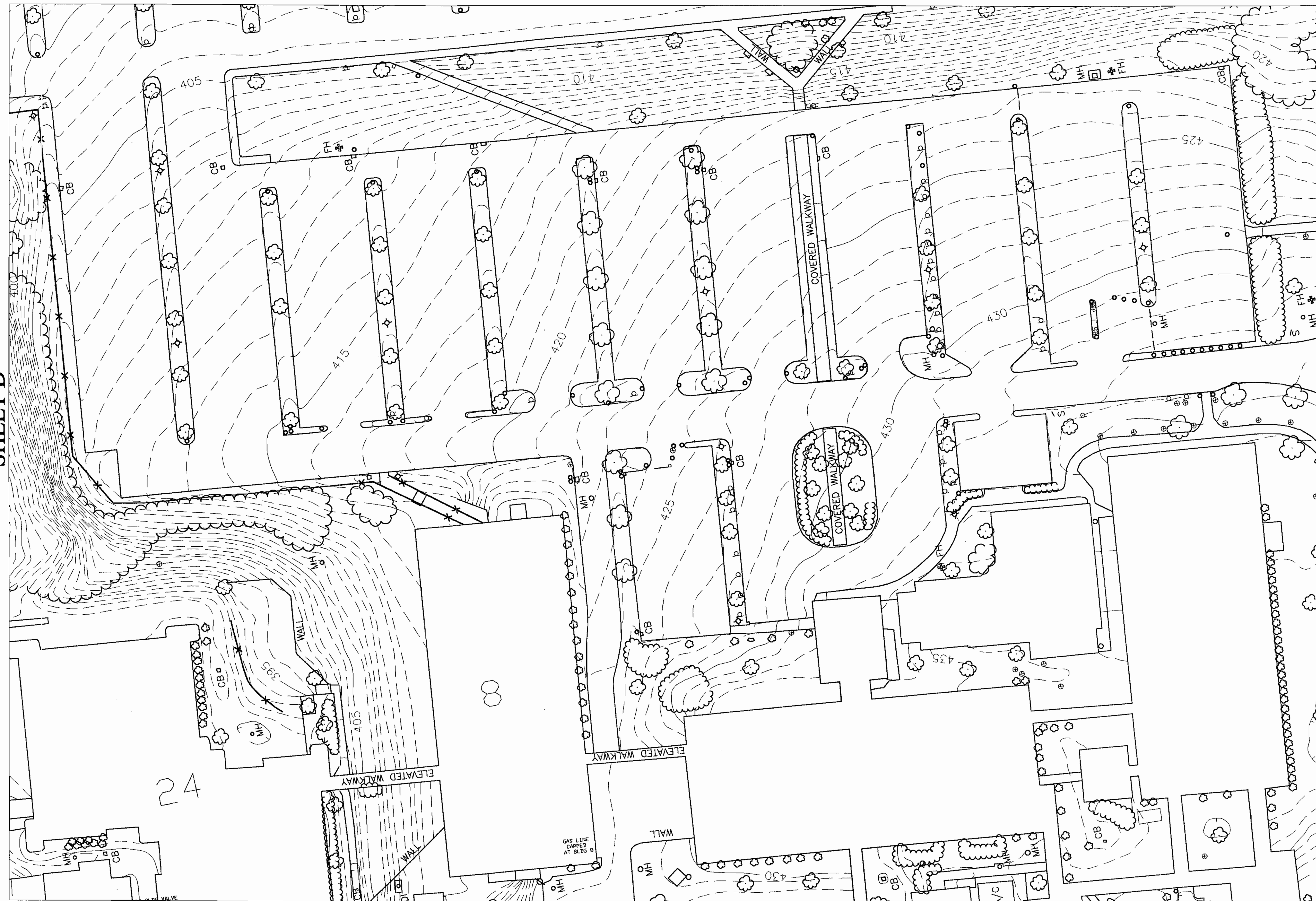
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
 EXISTING CONDITIONS  
 PLAN D  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CTP-1  
 COUNTY SHEET NO.  
 C-6

SHEET D

SHEET F

SHEET J



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE 5/21/02  
*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT WB DATE 6/2/02  
 DIRECTOR DATE 6/14/02



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 681-2842 FAX (301) 681-0814  
 AMT FILE # 98-153

Einhorn  
 Yaffee  
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THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA  
 DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

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SANNER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

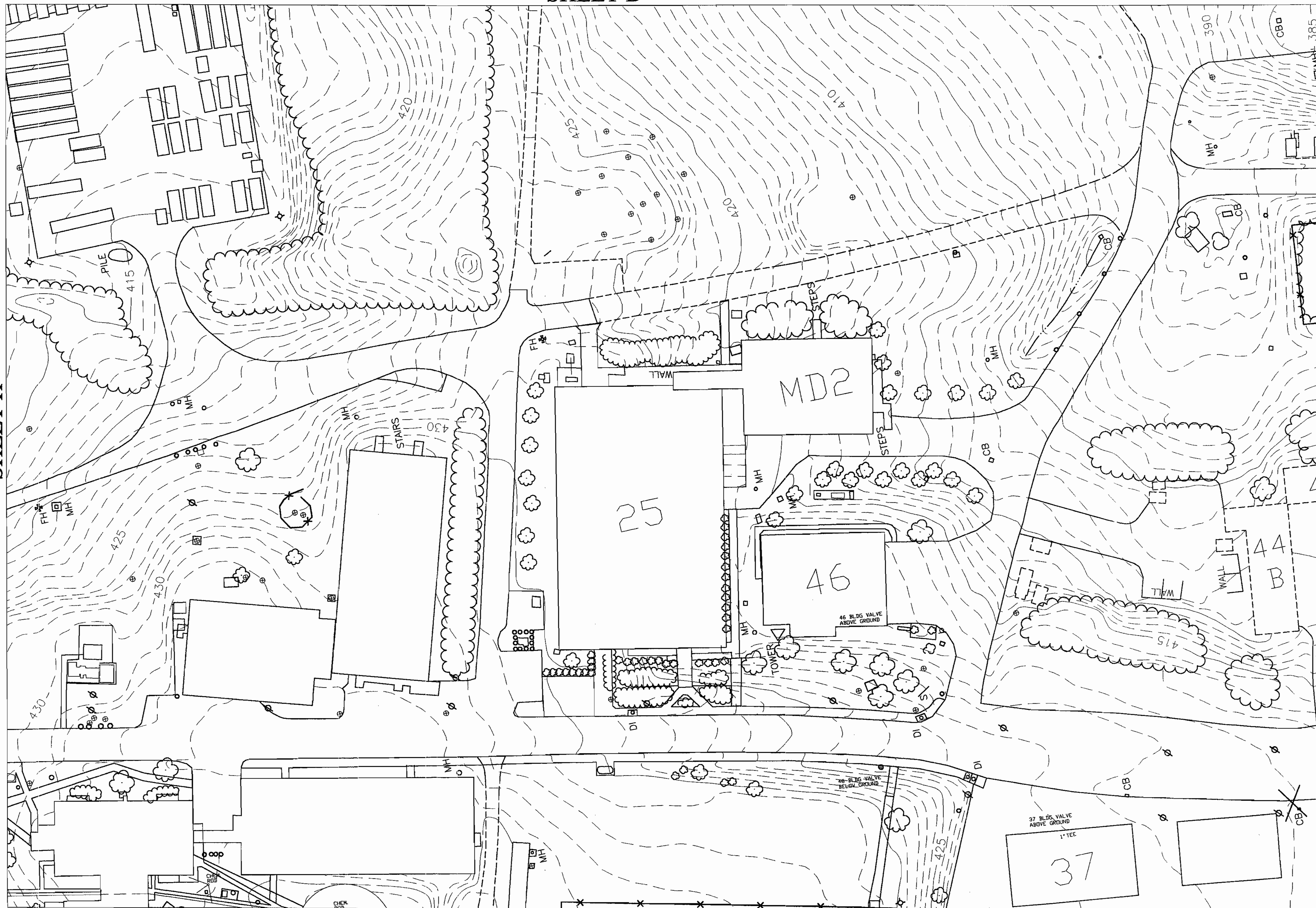
**SITE GRADING AND UTILITIES**  
 REVISIONS:  
 1. EX. CONTOUR LINES-DASHED  
 DATE: 04/12/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY PARCEL  
**EXISTING CONDITIONS**  
**PLAN E**  
 TAX MAP 41 PARCEL 125  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CTP-2  
 COUNTY SHEET NO. C-7

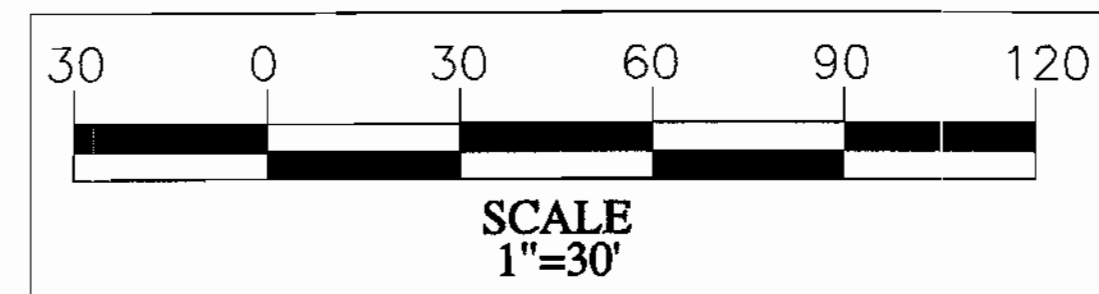
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SHEET D



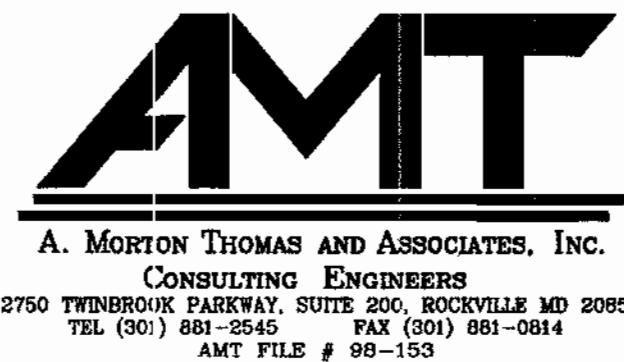
SHEET H

SHEET J



SHEET M

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION (MK) DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/11/02  
 DIRECTOR



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
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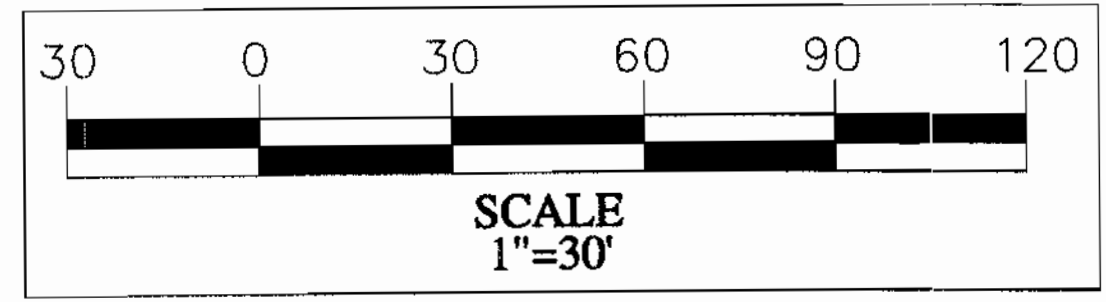
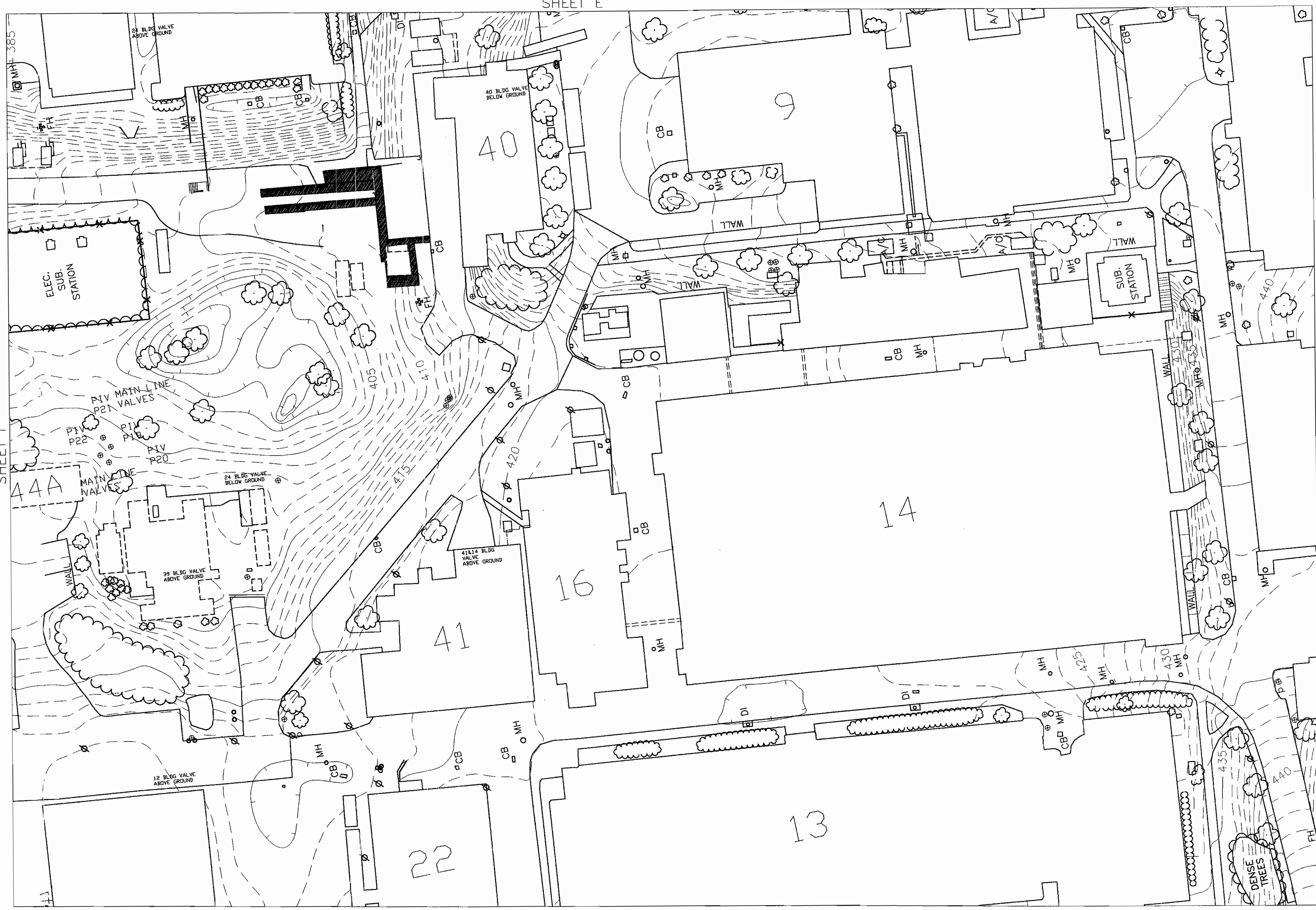
SANNIER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**  
 REVISIONS:  
 1. EX. CONTOUR LINES-DASHED  
 DATE: 04/12/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY **PARCEL 1**  
**EXISTING CONDITIONS**  
**PLAN I**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CTP-3  
 COUNTY SHEET NO. C-8



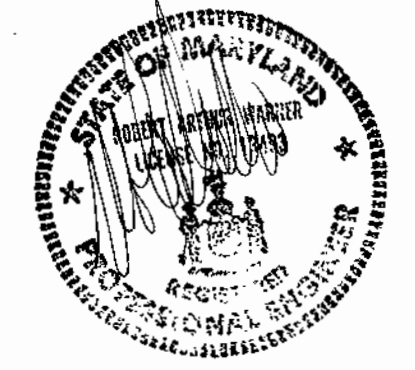


SHEET I

SHEET K

SHEET N

APPROVED: *[Signature]* DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE 5/31/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* DATE 4/3/02  
 DIRECTOR *[Signature]* DATE 6/11/02



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 FREDERICK PARKWAY, SUITE 200, ROCKVILLE MD 20850  
 TEL (301) 881-2545 FAX (301) 881-0814  
 AMT FILE # 99-163

Einhorn  
 Yaffee  
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 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

SHEET ORGANIZATION KEY PLAN

A	B	C	D	E	F
G	H	I	J	K	L
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JOHNS HOPKINS RD.  
 SANNER ROAD

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. EX. CONTOUR LINES-DASHED

DATE: 04/12/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
 EXISTING CONDITIONS  
 PLAN J  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

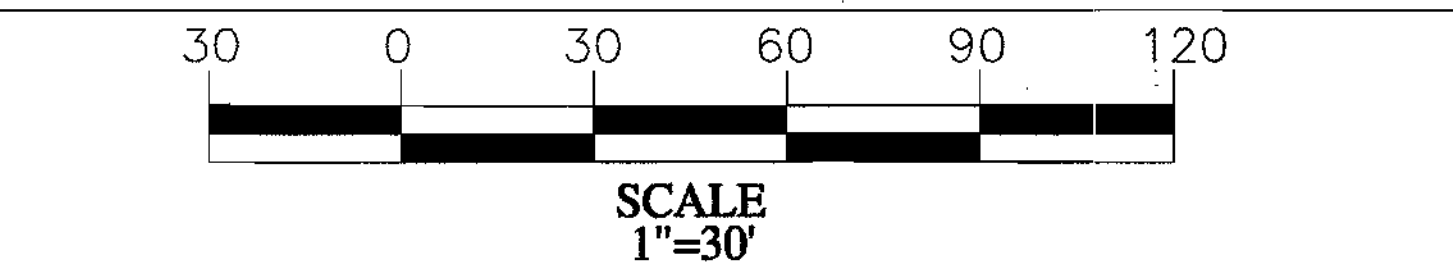
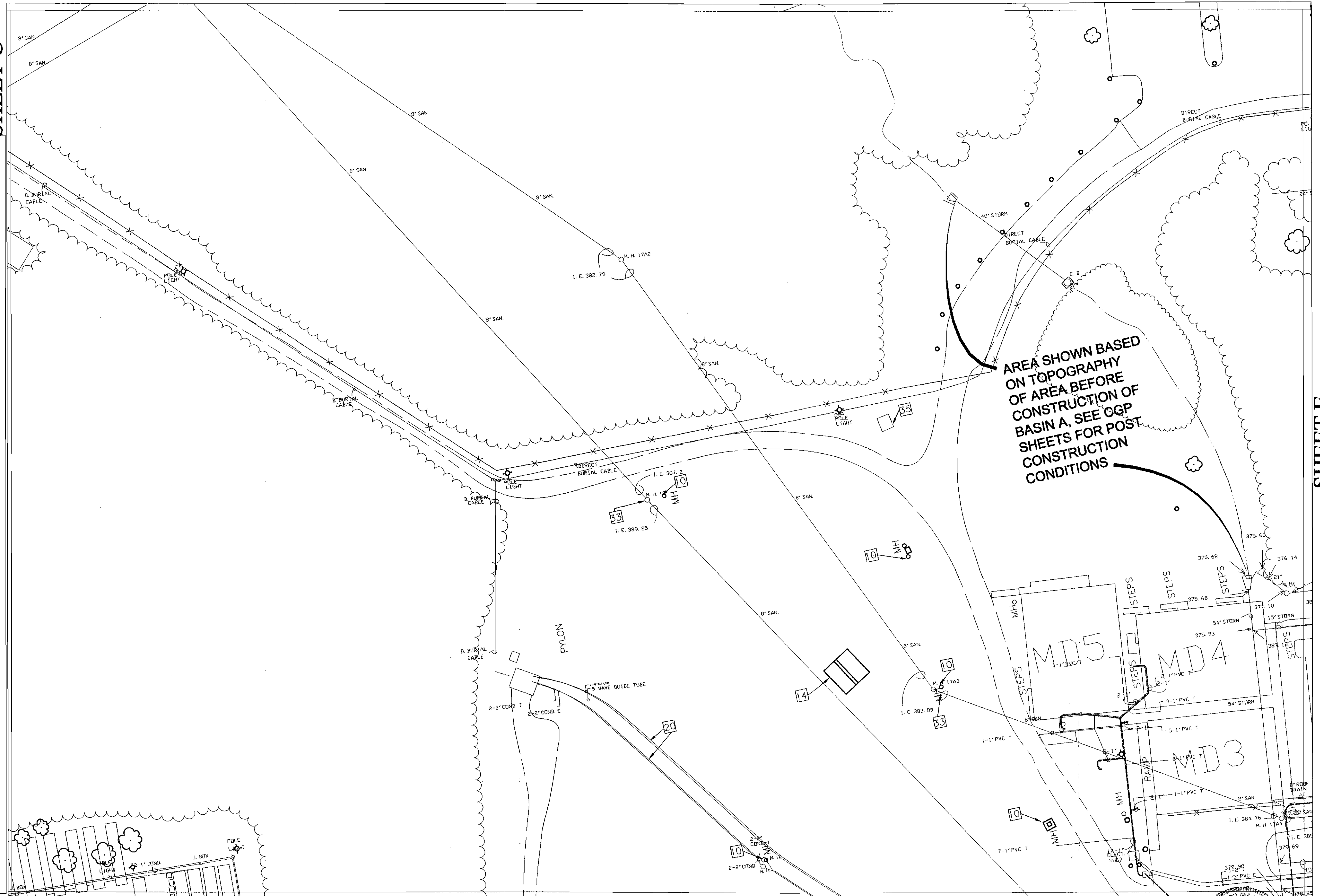
SCALE AS SHOWN  
 APL SHEET NO. CTP-4  
 COUNTY SHEET NO. C-9

KEYED NOTE

KEYED NOTES APPLY TO ALL CDP SHEETS UNLESS NOTED WITH THE CDP NUMBER AT THE END OF THE NOTE THAT REFERENCE A SPECIFIC CDP SHEET NO., EXAMPLE : (1)

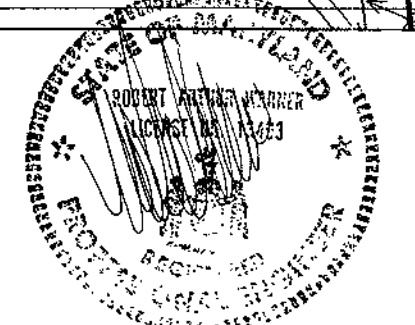
- 1] BUILDING TO BE REMOVED; CONCRETE BLOCK WALLS (12' HIGH) WITH CONCRETE FOOTER (3' DEEP), REMOVE ALL INCLUDING CONCRETE FOOTER.
- 2] EXISTING TREES AND STUMPS TO BE REMOVED.
- 3] 10' OF EXISTING FENCE AND CONCRETE CURB TO BE REMOVED; 12" DIAMETER CONCRETE FOOTER ON EACH FENCE POST SHALL BE REMOVED.
- 4] METAL VEHICLE SHED TO BE REMOVED; CONCRETE FLOOR SLAB AND 3' DEEP PERIMETER FOUNDATION WALL SHALL BE REMOVED. (3&4)
- 5] STORAGE (SHIPPING CONTAINERS) TO BE REMOVED BY APL.
- 6] SOIL BINS TO BE REMOVED; WOOD PLANK SIDES AND POSTS BURIED IN CONCRETE FOUNDATION 4' DEEP PER POST. (3&4)
- 7] TRAILER TO BE REMOVED BY APL. (4)
- 8] ROOF OVERHANG TO BE REMOVED.
- 9] WOOD DECK, STAIRS, HANDRAILS AND SUPPORT POSTS TO BE REMOVED. (4)
- 10] EXISTING SANITARY MANHOLE, STORM DRAIN, ELECTRICAL AND TELECOM DUCT BANKS TO BE REMOVED AND EXISTING PIPES AND DUCTS PLUGGED WITH CONCRETE.
- 11] EXISTING LIGHT POLE, CONCRETE FOUNDATION, CONDUIT AND CONDUCTORS TO BE REMOVED.
- 12] EXISTING WOOD RETAINING WALL TO BE REMOVED (3' HIGH). (4)
- 13] EXISTING ASPHALT TO BE REMOVED, 12" THICK, SAW CUT EDGE TO REMAIN AT LIMIT OF REMOVAL.
- 14] EXISTING CONCRETE PAVEMENT TO BE REMOVED (10" THICK, REINFORCED).
- 15] HAZARDOUS MATERIAL CABINETS AND CONCRETE SLAB TO BE REMOVED. (4)
- 16] ELECTRICAL CONCRETE UNDER TRANSFORMERS TO REMAIN. (4)
- 17] EXISTING CATCH BASIN TO BE REMOVED.
- 18] EXISTING STORM OUT FALL TO BE REMOVED.
- 19] EXISTING WATERLINE VALVES TO BE REMOVED.
- 20] EXISTING ELECTRIC AND TELECOM DUCKBANKS AND STRUCTURES DEMOLITION. SEE ELECTRICAL AND TELECOM DRAWINGS.
- 21] EXISTING CATCH BASIN TO REMAIN.
- 22] EXISTING WATERLINE AND VALVE TO BE ABANDONED IN PLACE AND CAPPED.
- 23] LIMIT OF EXISTING PAVEMENT REMOVAL.
- 24] EXISTING WATERLINE TO REMAIN.
- 25] EXISTING PIPES TO BE REMOVED.
- 26] EXISTING SECURITY LIGHT TO BE REMOVED.
- 27] EXISTING SHIPPING CONTAINERS TO REMAIN. (3)
- 28] EXISTING CONCRETE RAMP TO BE REMOVED. (4)
- 29] EXISTING RETAINING WALL AND FENCE TO REMAIN, EXISTING TREES ALONG FENCE TO BE REMOVED.
- 30] LIMIT OF REMOVAL CAP WATER, AND CAP GAS LINES; PLUG STORM DRAINS, SANITARY LINES AND CONDUIT, IFA NEW STRUCTURE IS NOT INSTALLED AT THAT LOCATION.
- 31] LIMIT OF UTILITY ABANDONMENT, REMOVE SECTION OF UTILITY AND PLUG OR CAP AS PER KEYED NOTE.
- 32] EXISTING WOOD RETAINING WALL (3' HIGH) TO BE REMOVED. (4)
- 33] EXISTING MANHOLE TOP CONE SECTION AND FRAME/COVER TO BE REMOVED, NEW PRECAST CONCRETE SECTIONS ADDED AND CONE SECTION AND FRAME/COVER TO BE REINSTALLED TO MEET NEW GRADES (SEE CDP SHEETS FOR ELEVATIONS). (1)
- 34] EXISTING BUILDING #24 6" FOUNDATION DRAIN GROUND FOR BUILDING TO BE REMOVED. (3)
- 35] EXISTING WELL TO BE REMOVED, CONCRETE BLOCK STRUCTURE WITH 3' DEEP FOUNDATION. (1)
- 36] EXISTING TEST APPARATUS, STEEL POSTS CABLES AND CONCRETE FOUNDATION MIN 5' DEEP. (3)
- 37] EXISTING WELL-HOUSE AND HYDRANT TO BE REMOVED; ONE STORY CONCRETE BLOCK STRUCTURE WITH 3' CONCRETE FOUNDATION REMOVE ALL MECHANICAL AND ELECTRICAL EQUIPMENT. (3)

- X X X EXISTING UTILITY TO BE REMOVED
- - - EXISTING UTILITY TO BE CAPPED
- - - X EXISTING UTILITY TO BE CAPPED & REMOVED
- - - // EXISTING UTILITY TO BE CAPPED & ABANDONED



SHEET I

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT [Signature] DATE 6/11/02  
 DIRECTOR [Signature] DATE



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 881-2545 FAX (301) 881-0814  
 AMT FILE # 98-153

Einhorn  
 Yaffee  
 Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA  
 DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
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SANNER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**  
 REVISIONS:  
 1. LEGEND  
 DATE: 03/15/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 PARCEL 1  
**DEMOLITION PLAN D**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
**CDP-1**  
 COUNTY SHEET NO.  
**C-10**

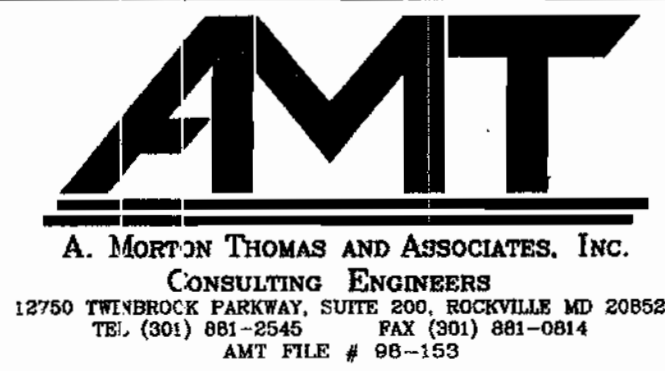
**KEYED NOTE**

KEYED NOTES APPLY TO ALL CDP SHEETS UNLESS NOTED WITH THE CDP NUMBER AT THE END OF THE NOTE THAT REFERENCE A SPECIFIC CDP SHEET NO., EXAMPLE : (1)

- 1] BUILDING TO BE REMOVED; CONCRETE BLOCK WALLS (12' HIGH) WITH CONCRETE FOOTER (3' DEEP), REMOVE ALL INCLUDING CONCRETE FOOTER.
- 2] EXISTING TREES AND STUMPS TO BE REMOVED.
- 3] 10' OF EXISTING FENCE AND CONCRETE CURB TO BE REMOVED; 12" DIAMETER CONCRETE FOOTER ON EACH FENCE POST SHALL BE REMOVED.
- 4] METAL VEHICLE SHED TO BE REMOVED; CONCRETE FLOOR SLAB AND 3' DEEP PERIMETER FOUNDATION WALL SHALL BE REMOVED. (3&4)
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- 12] EXISTING WOOD RETAINING WALL TO BE REMOVED (3' HIGH). (4)
- 13] EXISTING ASPHALT TO BE REMOVED, 12" THICK, SAW CUT EDGE TO REMAIN AT LIMIT OF REMOVAL.
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- 16] ELECTRICAL CONCRETE UNDER TRANSFORMERS TO REMAIN. (4)
- 17] EXISTING CATCH BASIN TO BE REMOVED.
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- 19] EXISTING WATERLINE VALVES TO BE REMOVED.
- 20] EXISTING ELECTRIC AND TELECOM DUCKBANKS AND STRUCTURES DEMOLITION. SEE ELECTRICAL AND TELECOM DRAWINGS.
- 21] EXISTING CATCH BASIN TO REMAIN.
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- 23] LIMIT OF EXISTING PAVEMENT REMOVAL.
- 24] EXISTING WATERLINE TO REMAIN.
- 25] EXISTING PIPES TO BE REMOVED.
- 26] EXISTING SECURITY LIGHT TO BE REMOVED.
- 27] EXISTING SHIPPING CONTAINERS TO REMAIN. (3)
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- X - X - X EXISTING UTILITY TO BE REMOVED
- - - - - EXISTING UTILITY TO BE CAPPED
- - - - - EXISTING UTILITY TO BE CAPPED & REMOVED
- - - - - EXISTING UTILITY TO BE CAPPED & ABANDONED

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE 5/21/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/3/02  
 DIRECTOR DATE 6/14/02



THE FLOUR MILL, 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

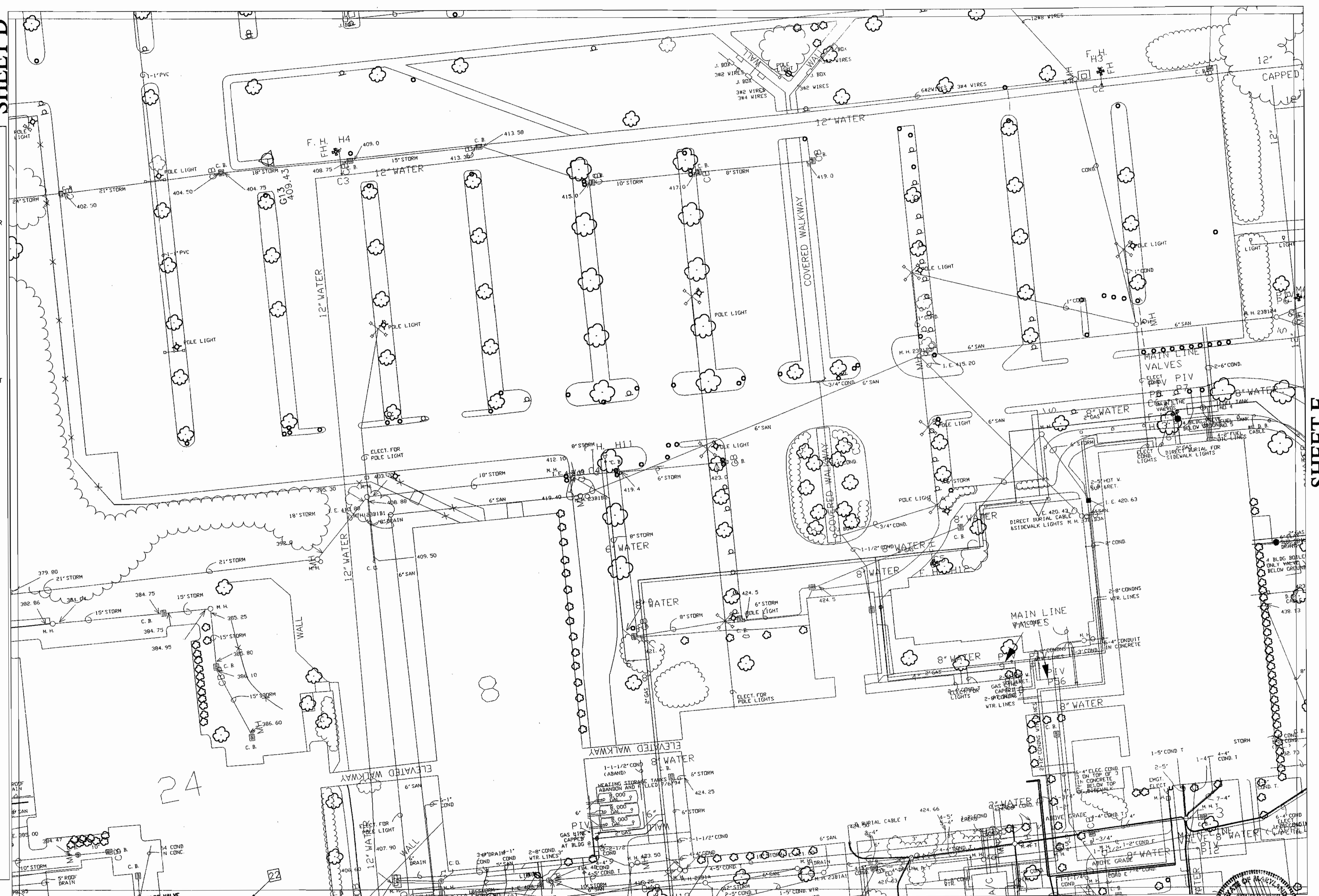
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G	H	I	J	K	L
M	N	O			

SANNIER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

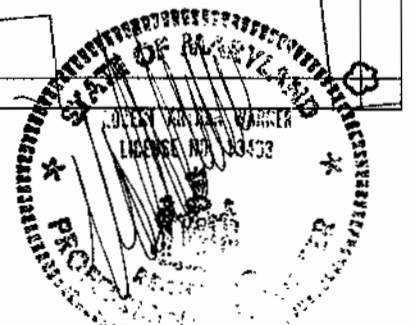
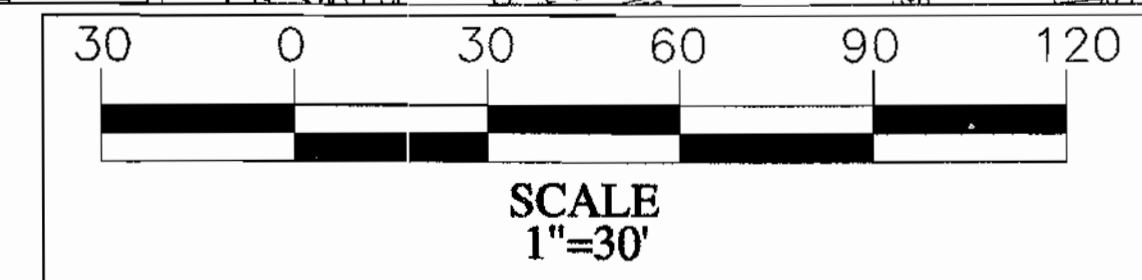
**SITE GRADING AND UTILITIES**  
 REVISIONS:  
 1. LEGEND  
 DATE: 03/15/02

APPLIED PHYSICS LABORATORY  
 THE JOHN'S HOPKINS UNIVERSITY  
**DEMOLITION PLAN E**  
**PARCEL 1**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CDP-2  
 COUNTY SHEET NO. C-11



**SHEET J**



SHEET D

SHEET H

SHEET J

KEYED NOTE

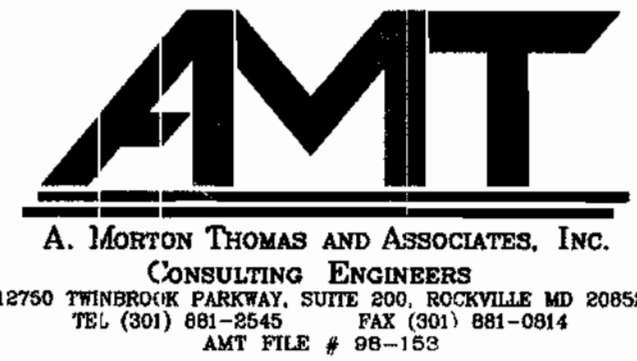
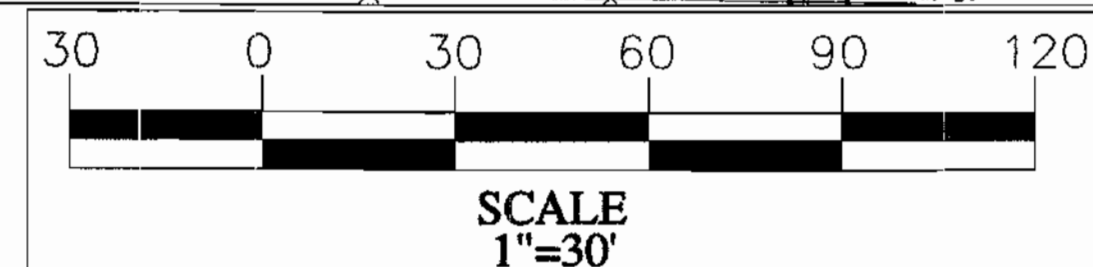
KEYED NOTES APPLY TO ALL CDP SHEETS UNLESS NOTED WITH THE CDP NUMBER AT THE END OF THE NOTE THAT REFERENCE A SPECIFIC CDP SHEET NO., EXAMPLE: (1)

- 1 BUILDING TO BE REMOVED; CONCRETE BLOCK WALLS (12' HIGH) WITH CONCRETE FOOTER (3' DEEP), REMOVE ALL INCLUDING CONCRETE FOOTER.
- 2 EXISTING TREES AND STUMPS TO BE REMOVED.
- 3 10' OF EXISTING FENCE AND CONCRETE CURB TO BE REMOVED; 12" DIAMETER CONCRETE FOOTER ON EACH FENCE POST SHALL BE REMOVED.
- 4 METAL VEHICLE SHED TO BE REMOVED; CONCRETE FLOOR SLAB AND 3' DEEP PERIMETER FOUNDATION WALL SHALL BE REMOVED. (3&4)
- 5 STORAGE (SHIPPING CONTAINERS) TO BE REMOVED BY APL.
- 6 SOIL BINS TO BE REMOVED; WOOD PLANK SIDES AND POSTS BURIED IN CONCRETE FOUNDATION 4' DEEP PER POST. (3&4)
- 7 TRAILER TO BE REMOVED BY APL. (4)
- 8 ROOF OVERHANG TO BE REMOVED.
- 9 WOOD DECK, STAIRS, HANDRAILS AND SUPPORT POSTS TO BE REMOVED. (4)
- 10 EXISTING SANITARY MANHOLE, STORM DRAIN, ELECTRICAL AND TELECOM DUCT BANKS TO BE REMOVED AND EXISTING PIPES AND DUCTS PLUGGED WITH CONCRETE.
- 11 EXISTING LIGHT POLE, CONCRETE FOUNDATION, CONDUIT AND CONDUCTORS TO BE REMOVED.
- 12 EXISTING WOOD RETAINING WALL TO BE REMOVED (3' HIGH). (4)
- 13 EXISTING ASPHALT TO BE REMOVED, 12" THICK, SAW CUT EDGE TO REMAIN AT LIMIT OF REMOVAL.
- 14 EXISTING CONCRETE PAVEMENT TO BE REMOVED (10" THICK, REINFORCED).
- 15 HAZARDOUS MATERIAL CABINETS AND CONCRETE SLAB TO BE REMOVED. (4)
- 16 ELECTRICAL CONCRETE UNDER TRANSFORMERS TO REMAIN. (4)
- 17 EXISTING CATCH BASIN TO BE REMOVED.
- 18 EXISTING STORM OUT FALL TO BE REMOVED.
- 19 EXISTING WATERLINE VALVES TO BE REMOVED.
- 20 EXISTING ELECTRIC AND TELECOM DUCKBANKS AND STRUCTURES DEMOLITION. SEE ELECTRICAL AND TELECOM DRAWINGS.
- 21 EXISTING CATCH BASIN TO REMAIN.
- 22 EXISTING WATERLINE AND VALVE TO BE ABANDONED IN PLACE AND CAPPED.
- 23 LIMIT OF EXISTING PAVEMENT REMOVAL.
- 24 EXISTING WATERLINE TO REMAIN.
- 25 EXISTING PIPES TO BE REMOVED.
- 26 EXISTING SECURITY LIGHT TO BE REMOVED.
- 27 EXISTING SHIPPING CONTAINERS TO REMAIN. (3)
- 28 EXISTING CONCRETE RAMP TO BE REMOVED. (4)
- 29 EXISTING RETAINING WALL AND FENCE TO REMAIN, EXISTING TREES ALONG FENCE TO BE REMOVED.
- 30 LIMIT OF REMOVAL CAP WATER, AND CAP GAS LINES; PLUG STORM DRAINS, SANITARY LINES AND CONDUIT, IF A NEW STRUCTURE IS NOT INSTALLED AT THAT LOCATION.
- 31 LIMIT OF UTILITY ABANDONMENT, REMOVE SECTION OF UTILITY AND PLUG OR CAP AS PER KEYED NOTE.
- 32 EXISTING WOOD RETAINING WALL (3' HIGH) TO BE REMOVED. (4)
- 33 EXISTING MANHOLE TOP CONE SECTION AND FRAME/COVER TO BE REMOVED, NEW PRECAST CONCRETE SECTIONS ADDED AND CONE SECTION AND FRAME/COVER TO BE REINSTALLED TO MEET NEW GRADES (SEE CDP SHEETS FOR ELEVATIONS). (1)
- 34 EXISTING BUILDING #24 6" FOUNDATION DRAIN GROUND FOR BUILDING TO BE REMOVED. (3)
- 35 EXISTING WELL TO BE REMOVED, CONCRETE BLOCK STRUCTURE WITH 3' DEEP FOUNDATION. (1)
- 36 EXISTING TEST APPARATUS, STEEL POSTS CABLES AND CONCRETE FOUNDATION MIN 5' DEEP. (3)
- 37 EXISTING WELL--HOUSE AND HYDRANT TO BE REMOVED; ONE STORY CONCRETE BLOCK STRUCTURE WITH 3' CONCRETE FOUNDATION REMOVE ALL MECHANICAL AND ELECTRICAL EQUIPMENT. (3)

- X --- X --- X --- EXISTING UTILITY TO BE REMOVED
- X --- X --- X --- EXISTING UTILITY TO BE CAPPED
- X --- X --- X --- EXISTING UTILITY TO BE CAPPED & REMOVED
- X --- X --- X --- EXISTING UTILITY TO BE CAPPED & ABANDONED

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] DATE 6/7/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] DATE 6/14/02  
 DIRECTOR

SHEET M



THE FLOUR MILL, 1000 POTOMAC ST. NW STE. 11 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNIER ROAD

JOHNS HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

SITE GRADING AND UTILITIES

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 PARCEL 1  
 DEMOLITION PLAN I  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CDP-3  
 COUNTY SHEET NO.  
 C-12

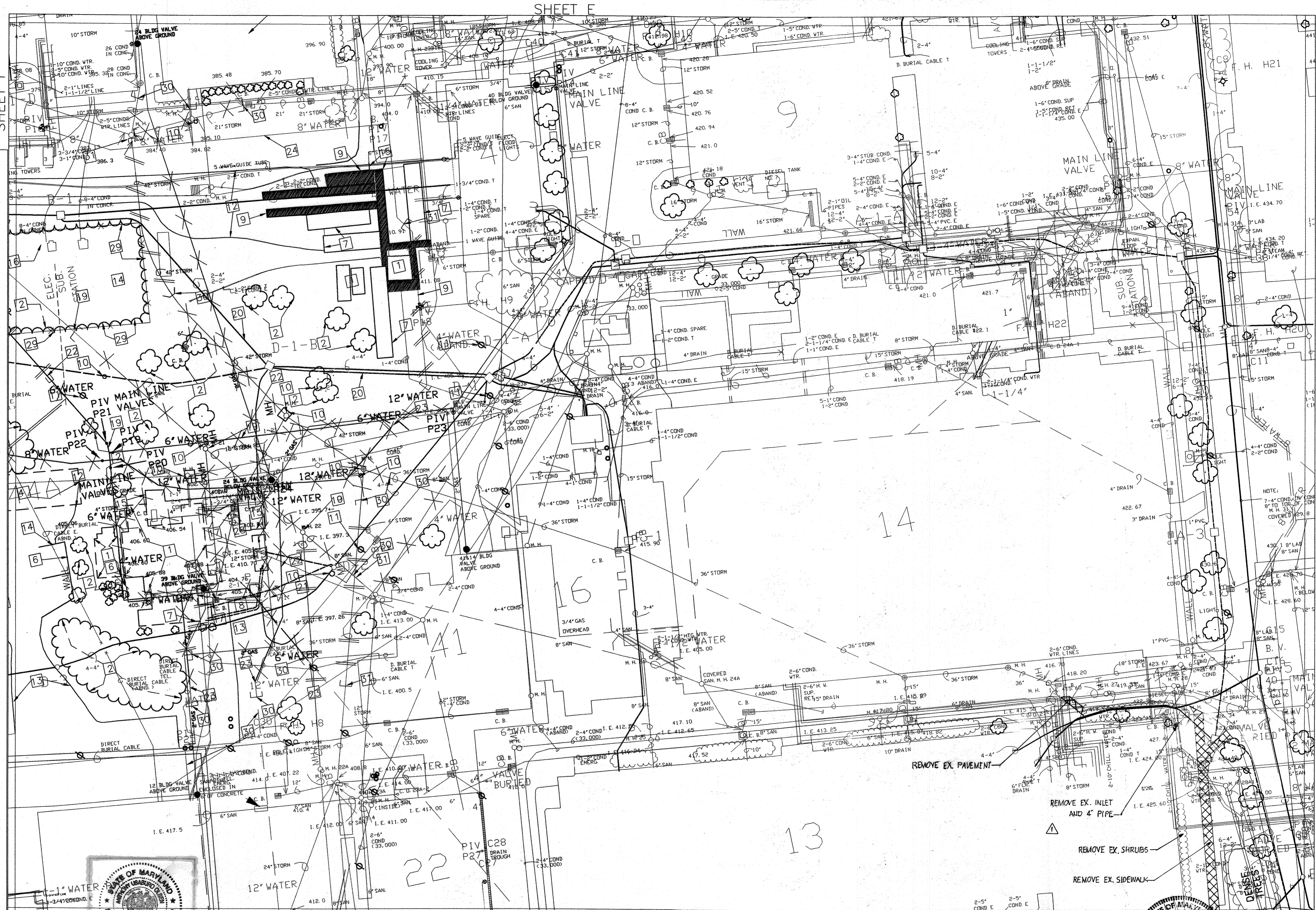
SDP-02-88

**KEYED NOTE**

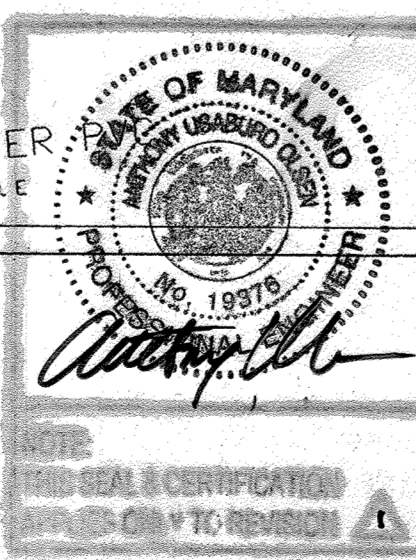
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- 1) BUILDING TO BE REMOVED; CONCRETE BLOCK WALLS (12' HIGH) WITH CONCRETE FOOTER (3' DEEP), REMOVE ALL INCLUDING CONCRETE FOOTER.
- 2) EXISTING TREES AND STUMPS TO BE REMOVED.
- 3) 10' OF EXISTING FENCE AND CONCRETE CURB TO BE REMOVED; 12" DIAMETER METAL VEHICLE SHED TO BE REMOVED; CONCRETE FLOOR SLAB AND 3' DEEP PERIMETER FOUNDATION WALL SHALL BE REMOVED. (3&4)
- 4) STORAGE (SHIPPING CONTAINERS) TO BE REMOVED BY APL.
- 5) SOIL BINS TO BE REMOVED; WOOD PLANK SIDES AND POSTS BURIED IN CONCRETE FOUNDATION 4' DEEP PER POST. (3&4)
- 6) TRAILER TO BE REMOVED BY APL. (4)
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- 8) WOOD DECK, STAIRS, HANDRAILS AND SUPPORT POSTS TO BE REMOVED. (4)
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- 11) EXISTING WOOD RETAINING WALL TO BE REMOVED (3' HIGH). (4)
- 12) EXISTING ASPHALT TO BE REMOVED, 12" THICK, SAW CUT EDGE TO REMAIN AT LIMIT OF REMOVAL.
- 13) EXISTING CONCRETE PAVEMENT TO BE REMOVED (10" THICK, REINFORCED).
- 14) HAZARDOUS MATERIAL CABINETS AND CONCRETE SLAB TO BE REMOVED. (4)
- 15) ELECTRICAL CONCRETE UNDER TRANSFORMERS TO REMAIN. (4)
- 16) EXISTING CATCH BASIN TO BE REMOVED.
- 17) EXISTING STORM OUT FALL TO BE REMOVED.
- 18) EXISTING WATERLINE VALVES TO BE REMOVED.
- 19) EXISTING ELECTRICAL AND TELECOM DUCKBANKS AND STRUCTURES DEMOLITION. SEE ELECTRICAL AND TELECOM DRAWINGS.
- 20) EXISTING CATCH BASIN TO REMAIN.
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- 22) LIMIT OF EXISTING PAVEMENT REMOVAL.
- 23) EXISTING WATERLINE TO REMAIN.
- 24) EXISTING PIPES TO BE REMOVED.
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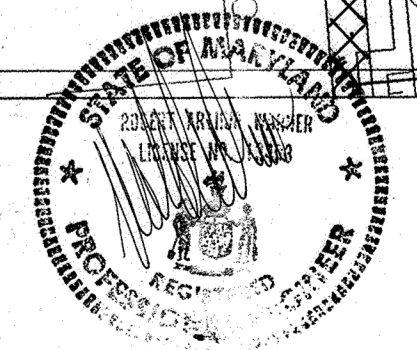
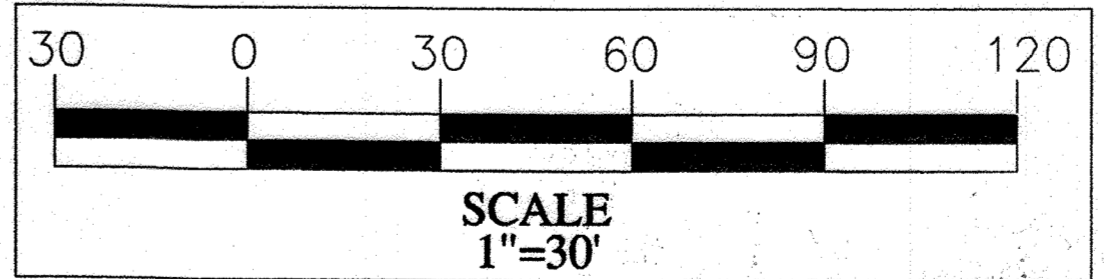
- X X X EXISTING UTILITY TO BE REMOVED
- — — EXISTING UTILITY TO BE CAPPED
- X — EXISTING UTILITY TO BE CAPPED & REMOVED
- // — EXISTING UTILITY TO BE CAPPED & ABANDONED



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 5/31/02  
 DATE: 6/3/02  
 DATE: 4/16/02



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12376. EXPIRATION DATE: SEPTEMBER 22, 2021



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE, MD 20852  
 TEL: (301) 881-0545 FAX: (301) 881-0514  
 AMT FILE # 98-155

**Einhorn Yaffee Prescott**

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANMER ROAD

**SITE GRADING AND UTILITIES**

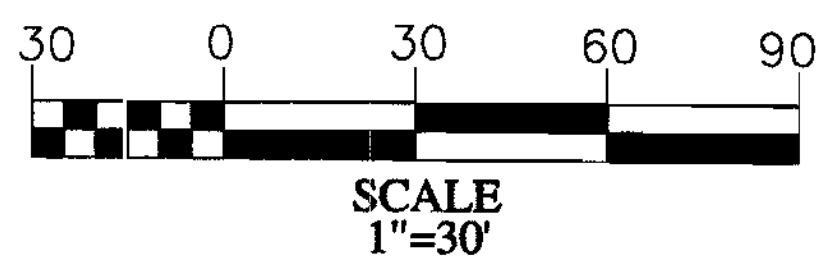
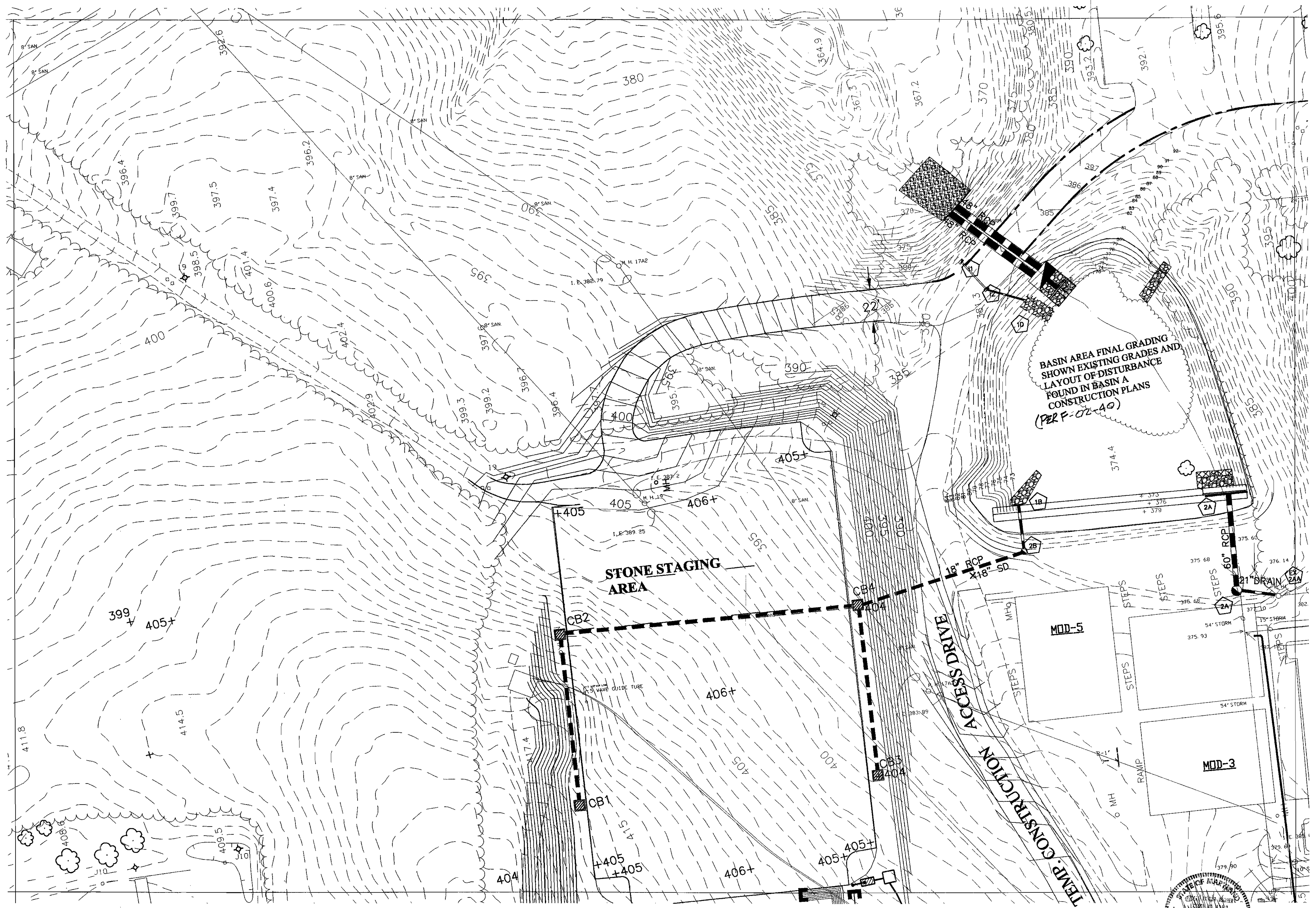
REVISIONS:  
 1. STORM DRAINS ADDED  
 2. REV. FOUNDATION DRAIN OUTFALL & GAS LINE

DATE: 06/21  
 06/23

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**DEMOLITION PLAN J**  
**PARCEL 1**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

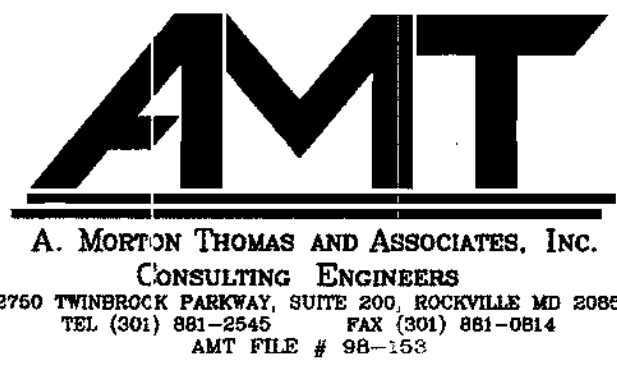
SCALE AS SHOWN  
 APL SHEET NO. CDP-4  
 COUNTY SHEET NO. C-13

SDP-02-88

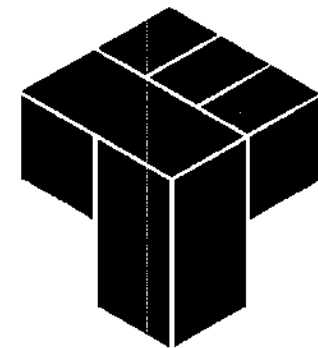


NOTE: GRADES WILL BE THE SAME AFTER INSTALLATION OF UTILITIES UNLESS OTHERWISE NOTED.

APPROVED: *[Signature]* DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 CHIEF, DIVISION OF LAND DEVELOPMENT RB  
 DIRECTOR  
 DATE: 5/31/02  
 DATE: 6/3/02  
 DATE: 6/11/02



Einhorn  
Yaffee  
Prescott



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNEH ROAD

**SITE GRADING AND UTILITIES**

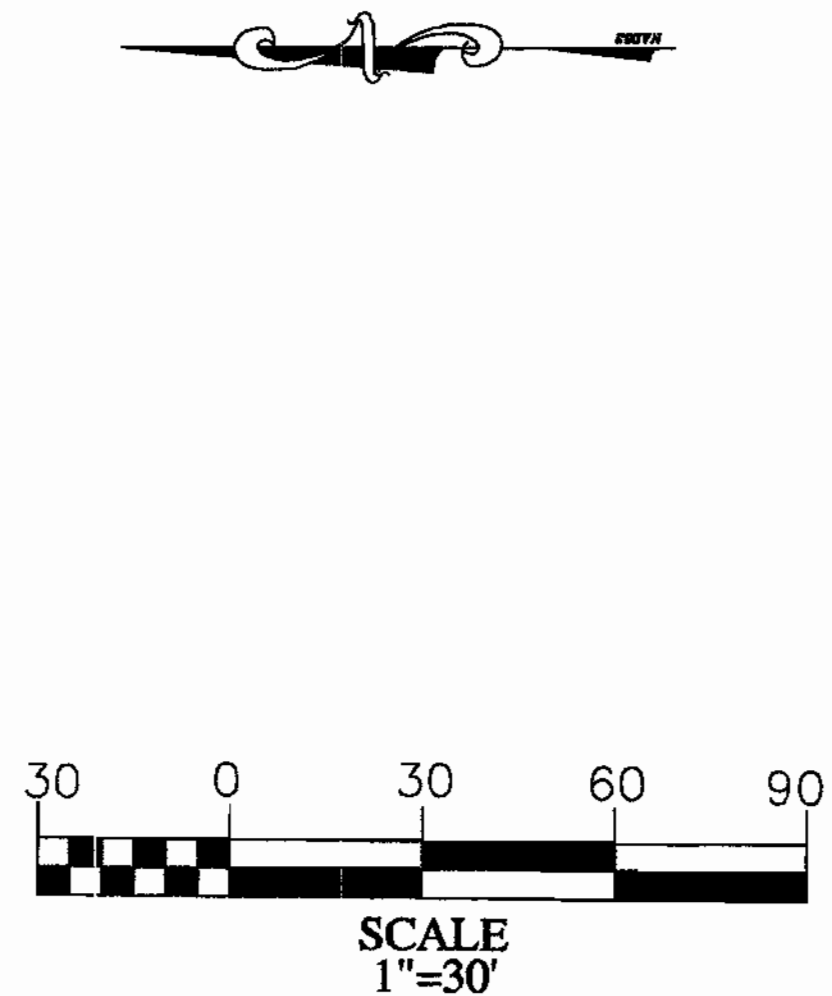
REVISIONS:  
1. GRADING & NOTES

DATE:  
03/15/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY **PARCEL 1**  
**ROUGH GRADING**  
**PLAN D**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

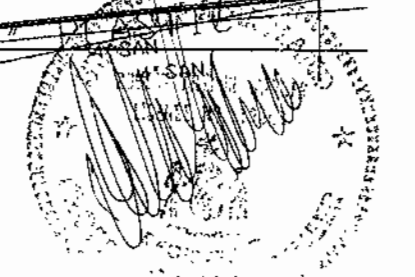
SCALE  
AS  
SHOWN  
 APL SHEET NO.  
**CGP-1**  
 COUNTY SHEET NO.  
 C-14

SDP-02-88



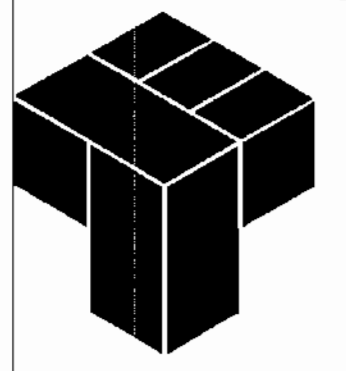
NOTE: GRADES WILL BE THE SAME AFTER INSTALLATION OF UTILITIES UNLESS OTHERWISE NOTED.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] DATE 6/11/02  
 DIRECTOR



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 220, ROCKVILLE MD 20852  
 TEL (301) 881-2545 FAX (301) 881-0814  
 AMT FILE # 08-153

**Einhorn  
 Yaffee  
 Prescott**



THE FLOUR MILL 1000 POTOMAC ST. NW STE. 11  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

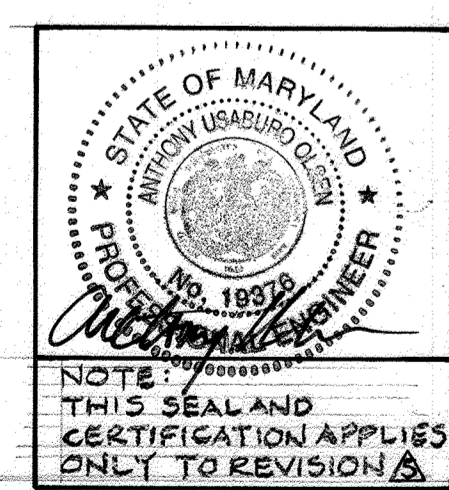
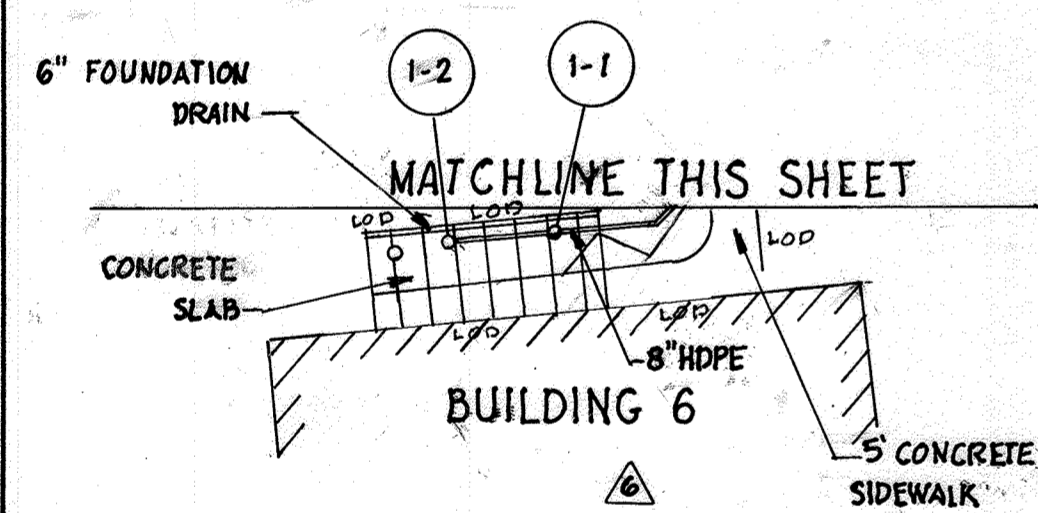
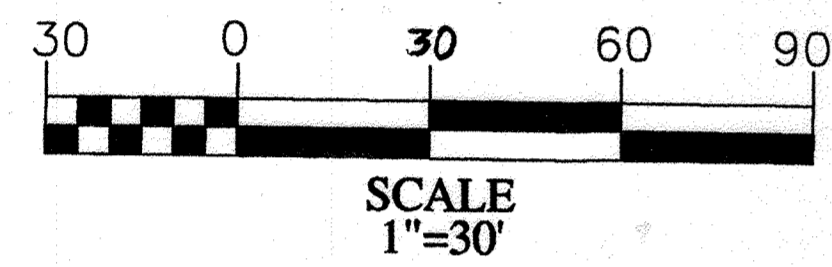
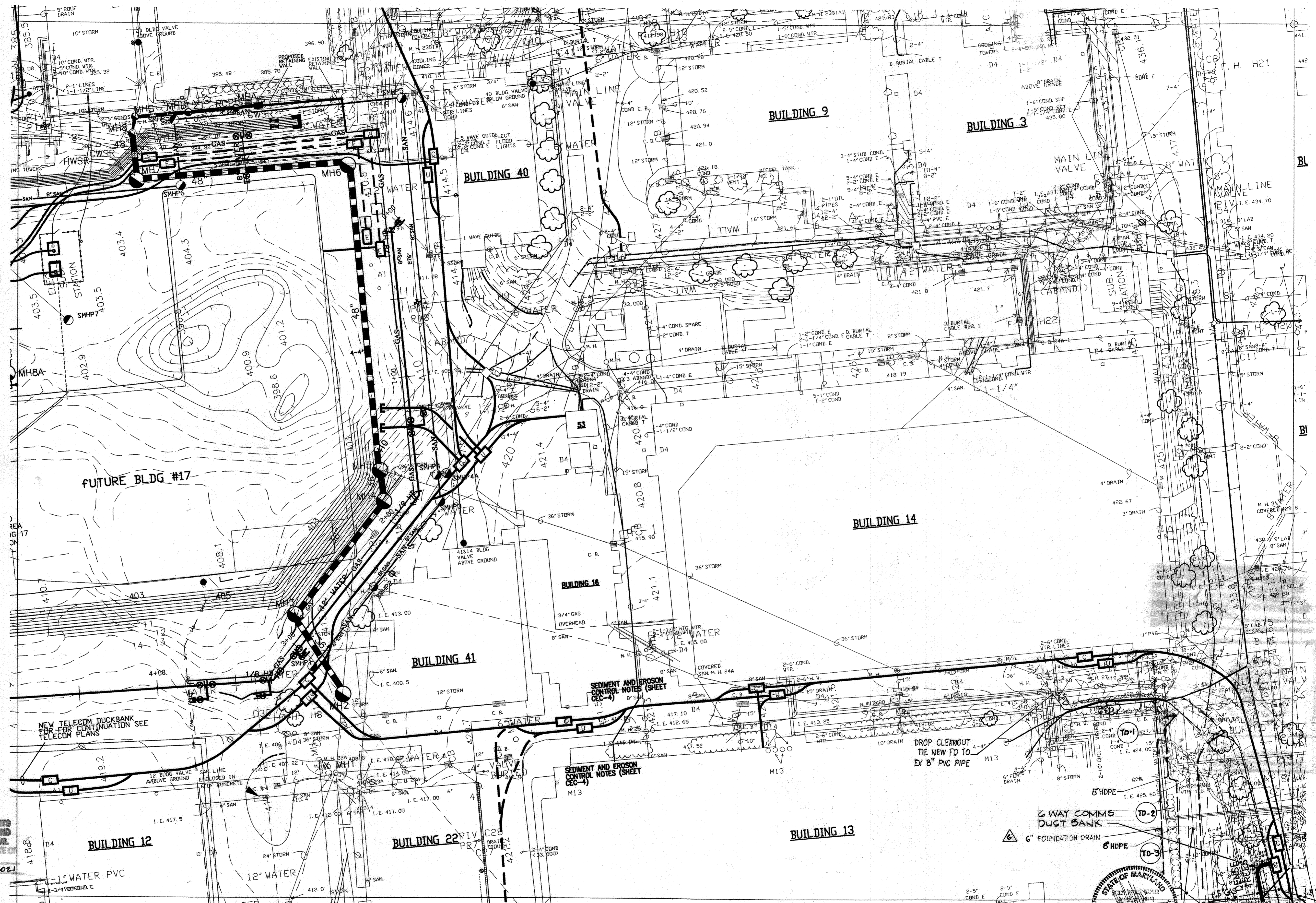
SANNIER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**  
 REVISIONS:  
 1. CROSS SECTIONS DELETED FROM THIS DRAWING  
 2. CORRECTION TO BUILDING NO. 46  
 DATE: 03/28/02

APPLIED PHYSICS LABORATORY  
 THE JOHN'S HOPKINS UNIVERSITY **PARCEL 1**  
**ROUGH GRADING  
 PLAN I**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CGP-2  
 COUNTY SHEET NO.  
 C-15

SDP-02-180

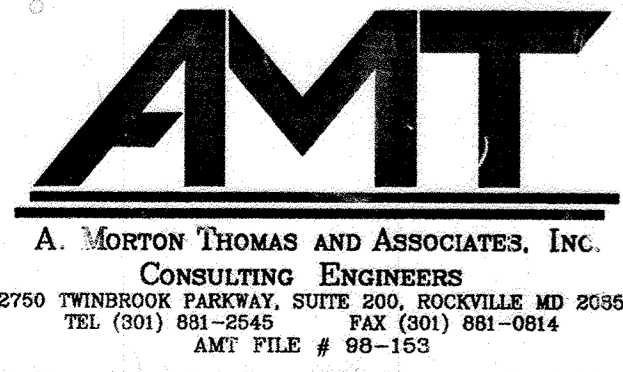


PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED OR APPROVED BY ME, AND  
 THAT I AM A DULY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE OF  
 MARYLAND, LICENSE NO. 19376  
 EXPIRATION DATE: SEPTEMBER 12, 2021

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 DATE: 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/11/02  
 DIRECTOR

NOTE: GRADES WILL BE THE SAME AFTER INSTALLATION OF UTILITIES UNLESS OTHERWISE NOTED.

DATE: 06/2023



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	JOHNS HOPKINS RD.				
B	C	D	E	F	SHEET ORGANIZATION KEY PLAN
G	H	I	J	K	
L	M	N	O		

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. CROSS SECTIONS DELETED FROM THIS DRAWING  
 2. CORRECTION TO BUILDING NO. 12  
 3. CORRECTION TO MH NOS  
 4. NOTE ADDED  
 5. ADD DUCT BANK  
 6. STORM DRAINS ADDED

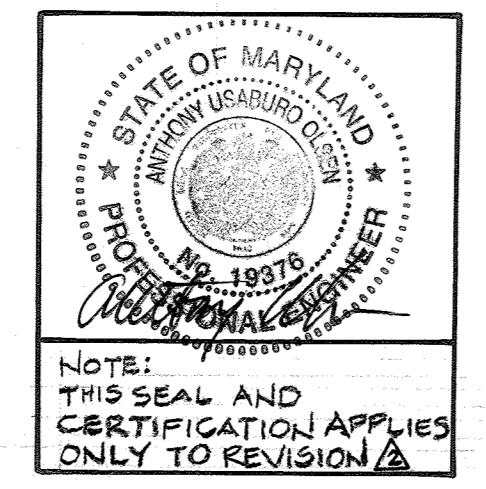
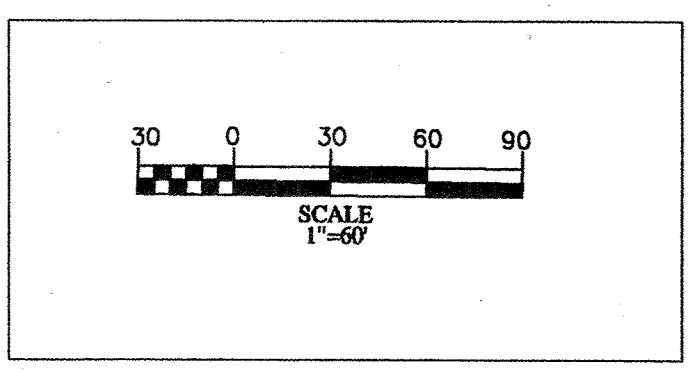
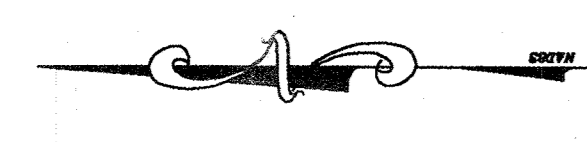
DATE:  
 03/26/02  
 04/12/02  
 11/19  
 8/19/21

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
**ROUGH GRADING PLAN J**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CGP-3  
 COUNTY SHEET NO.  
 C-16

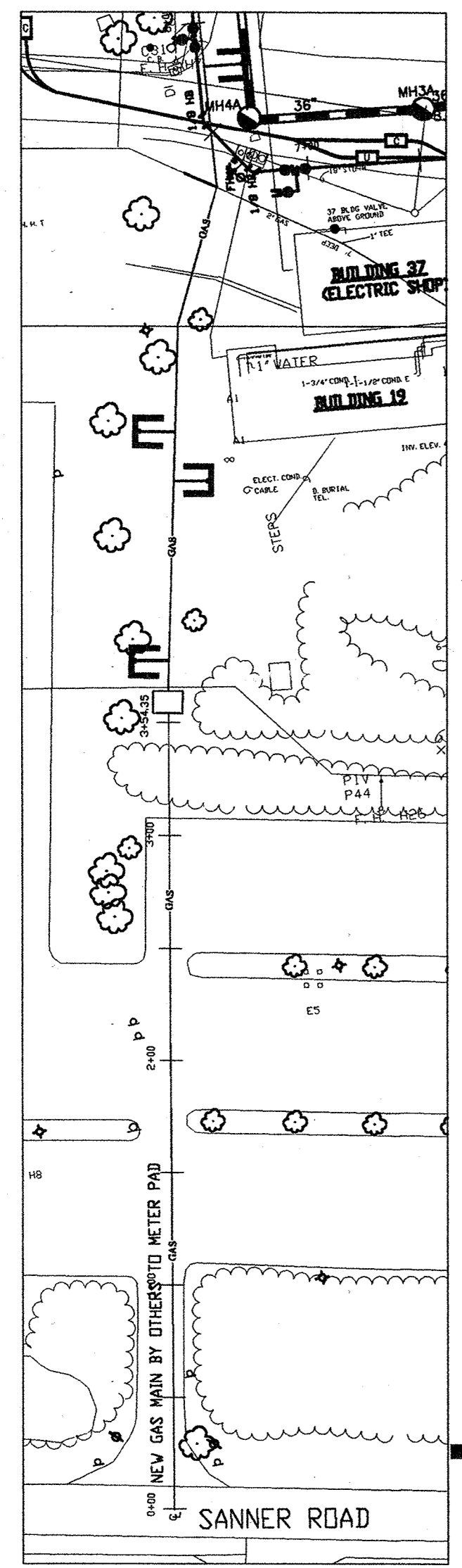
SDP-02-88





NOTE:  
THIS SEAL AND  
CERTIFICATION APPLIES  
ONLY TO REVISION A

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED OR APPROVED BY ME AND  
THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE  
OF MARYLAND, LICENSE NO. 19276  
ISSUED DATE: SEPTEMBER 22, 2001



SHEET C

SHEET H

SHEET M

SHEET N

SHEET F

SHEET K

NOTE:  
1. SECTIONS: A-A, B-B, C-C, D-D AND E-E  
SHOWN ON SHEET # CU-2 (C-18)

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION *mk* DATE 5/31/02  
CHIEF, DIVISION OF LAND DEVELOPMENT *hw* DATE 6/3/02  
DIRECTOR DATE 6/11/02

**AMT**  
A. MORTON THOMAS AND ASSOCIATES, INC.  
CONSULTING ENGINEERS  
12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
TEL (301) 881-2545 FAX (301) 881-0814  
AMT FILE # 98-153

Einhorn  
Yaffee  
Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
DRN: S. ITANI  
CHK: S. ITANI  
DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNER ROAD

JOHNS HOPKINS RD.  
SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**

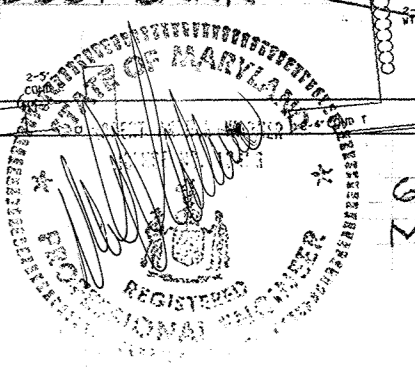
REVISIONS:  
1. NOTES  
2. ADD DUCT BANK

DATE:  
03/15/02  
11/19

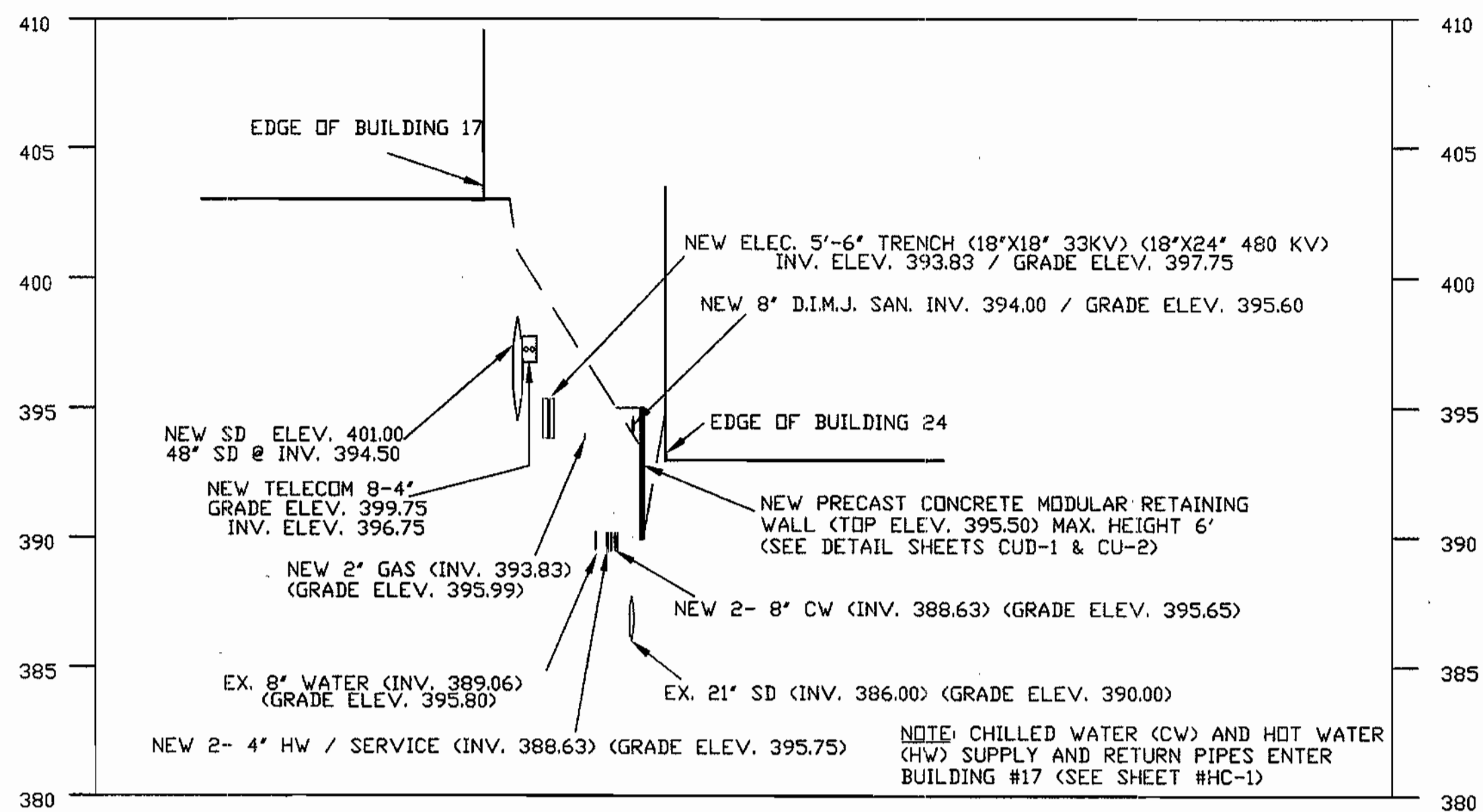
APPLIED PHYSICS LABORATORY  
THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
UTILITIES COMPOSITE LAYOUT

TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

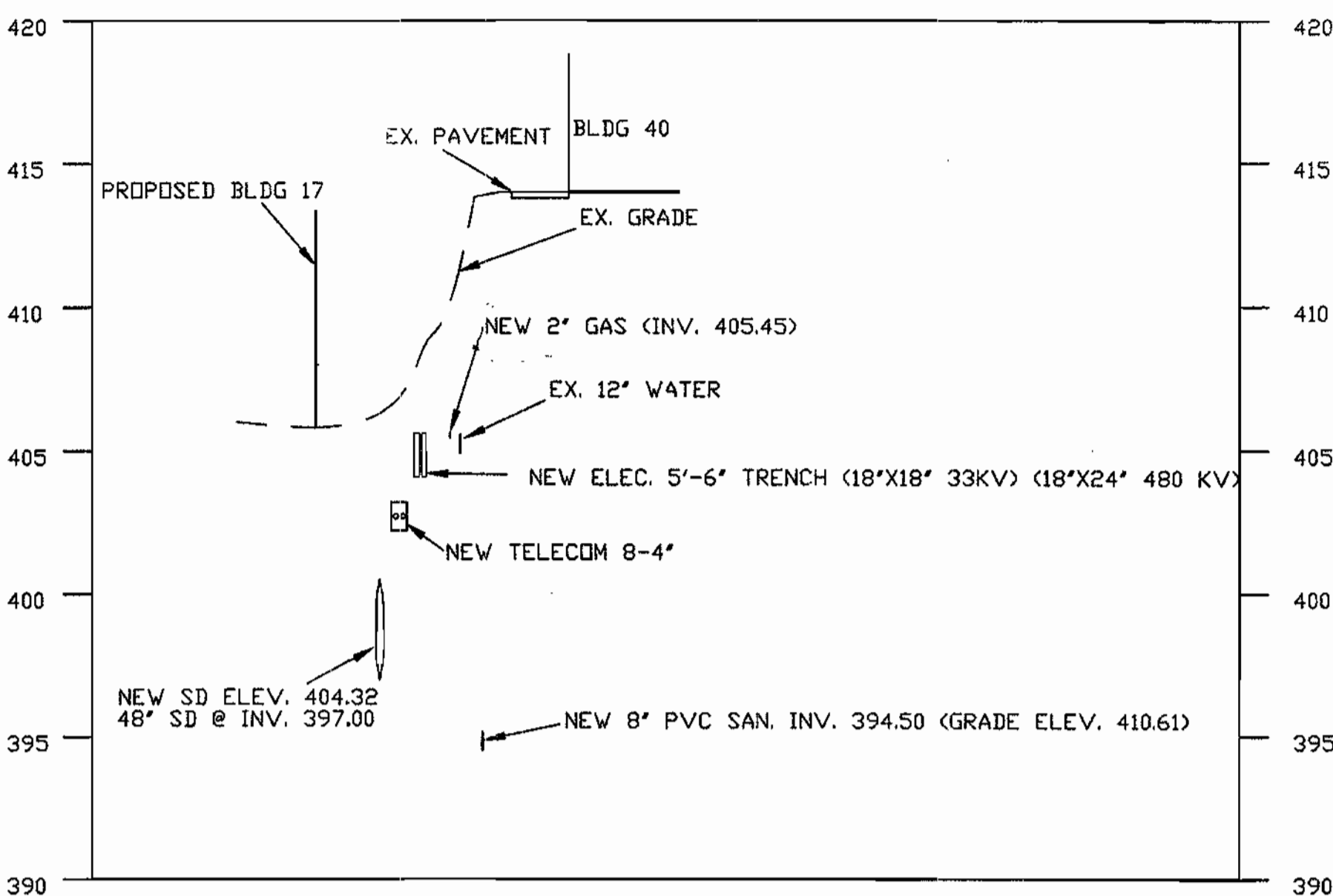
SCALE AS SHOWN  
APL SHEET NO.  
CU-1  
COUNTY SHEET NO.  
C-17



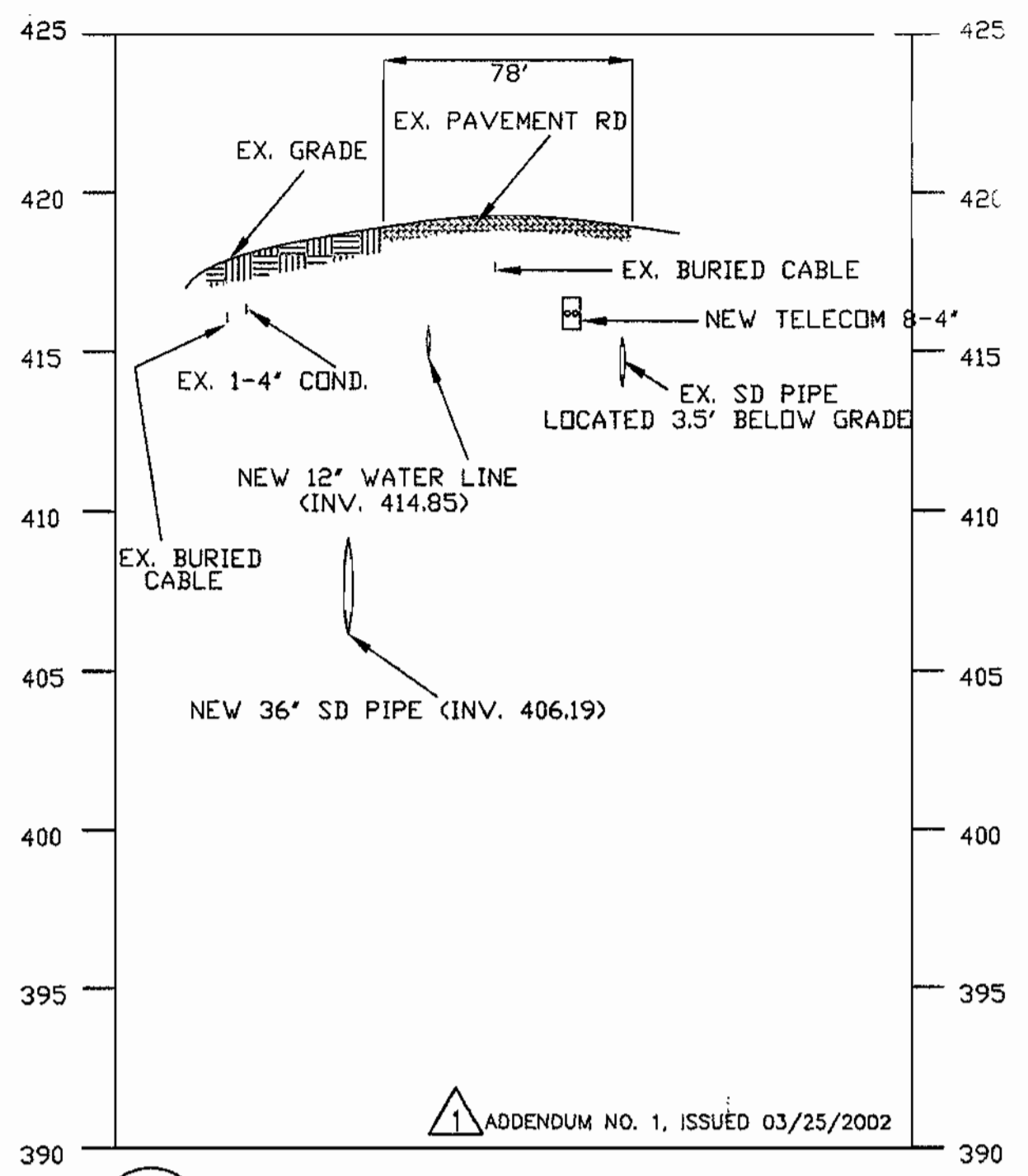
SDP-02-88



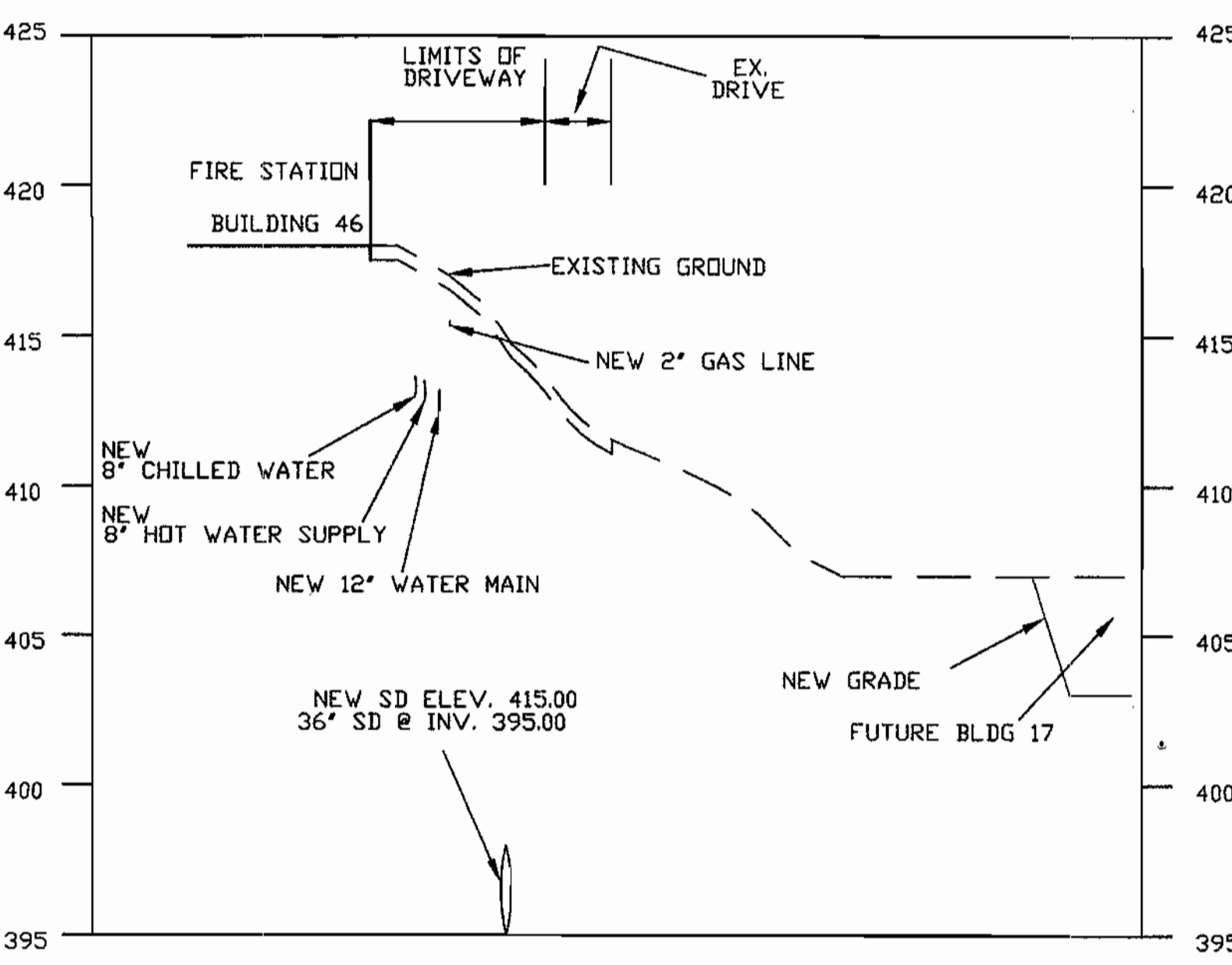
1 EAST SIDE BLDG 17 CROSS SECTION A-A  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



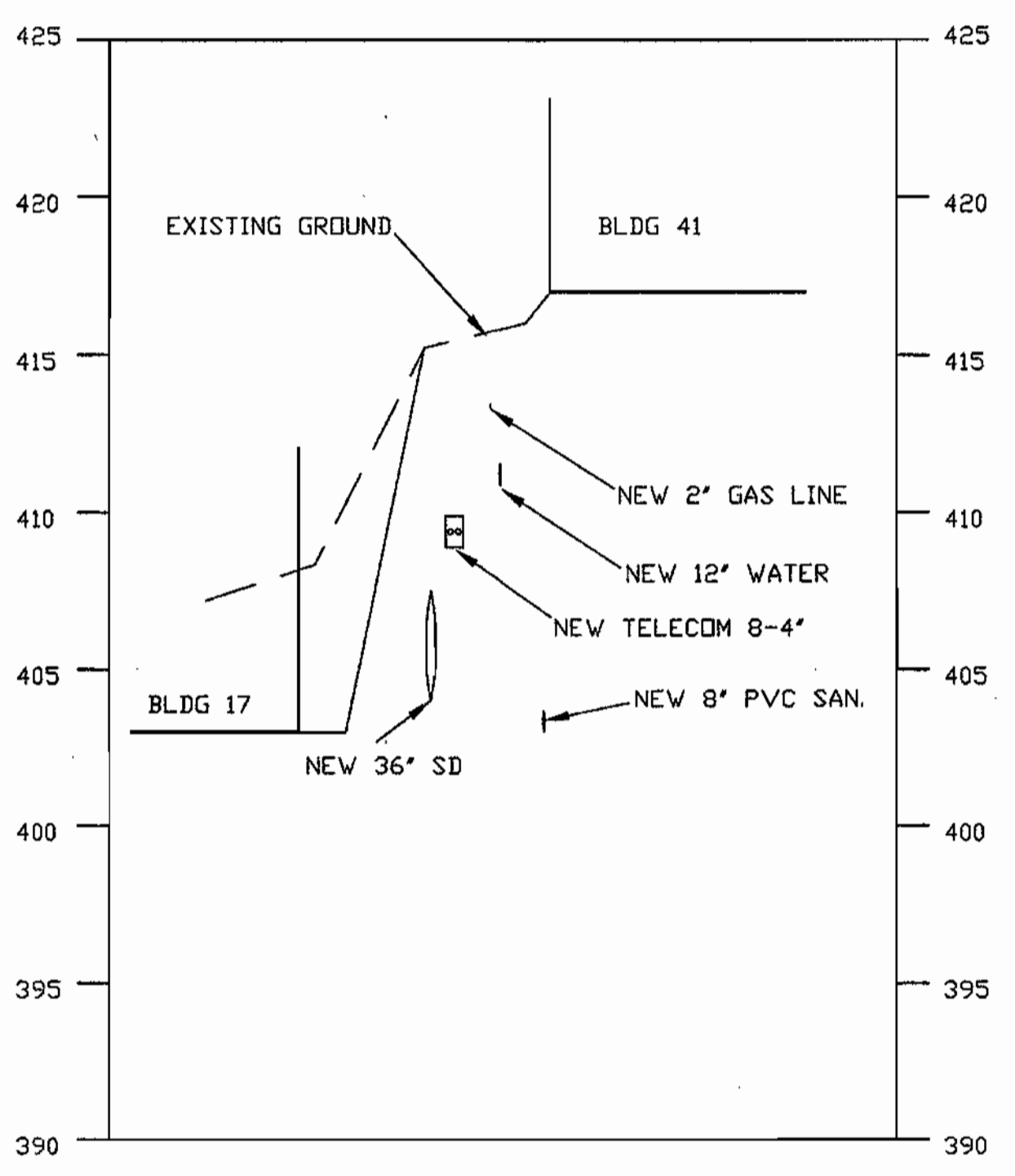
2 SOUTHEAST SIDE BLDG 17 CROSS SECTION C-C  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



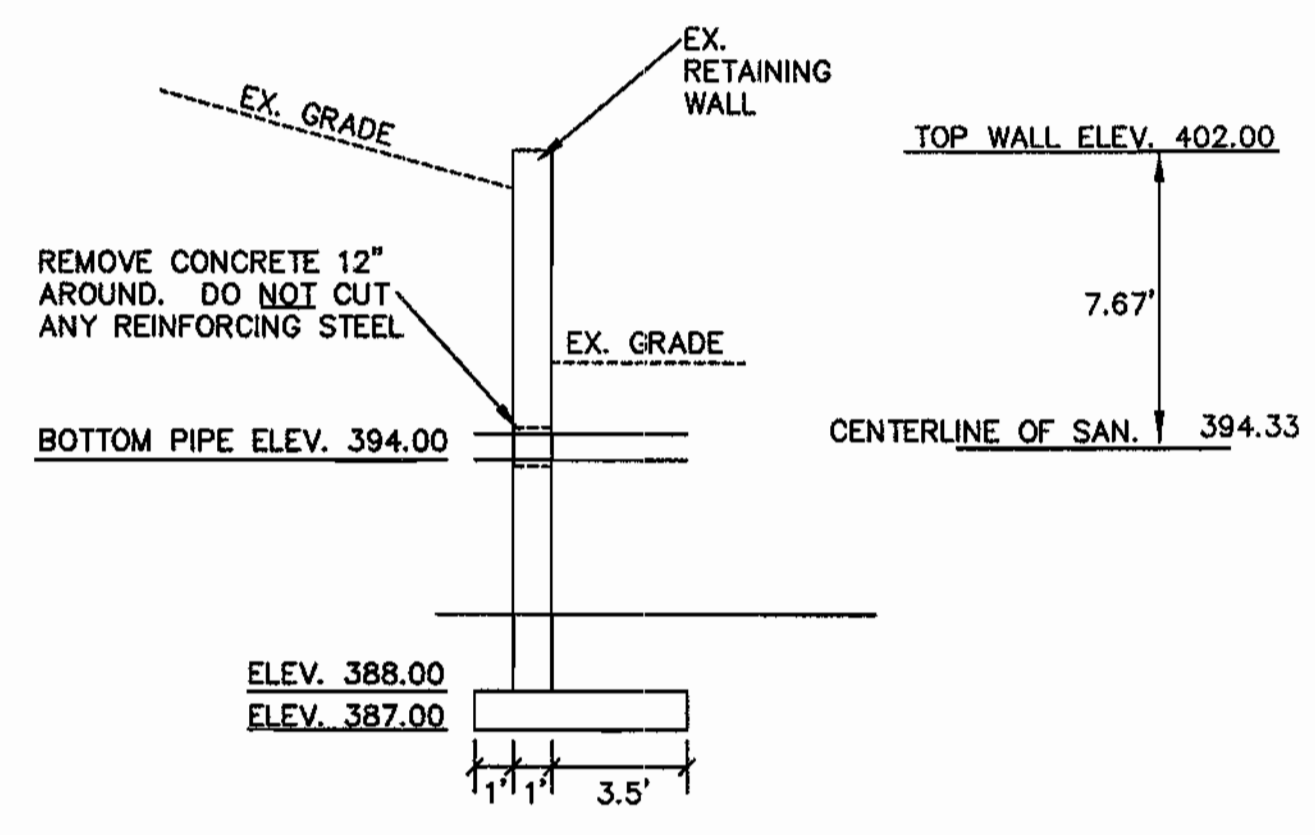
3 WEST SIDE BLDG 17 CROSS SECTION E-E  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



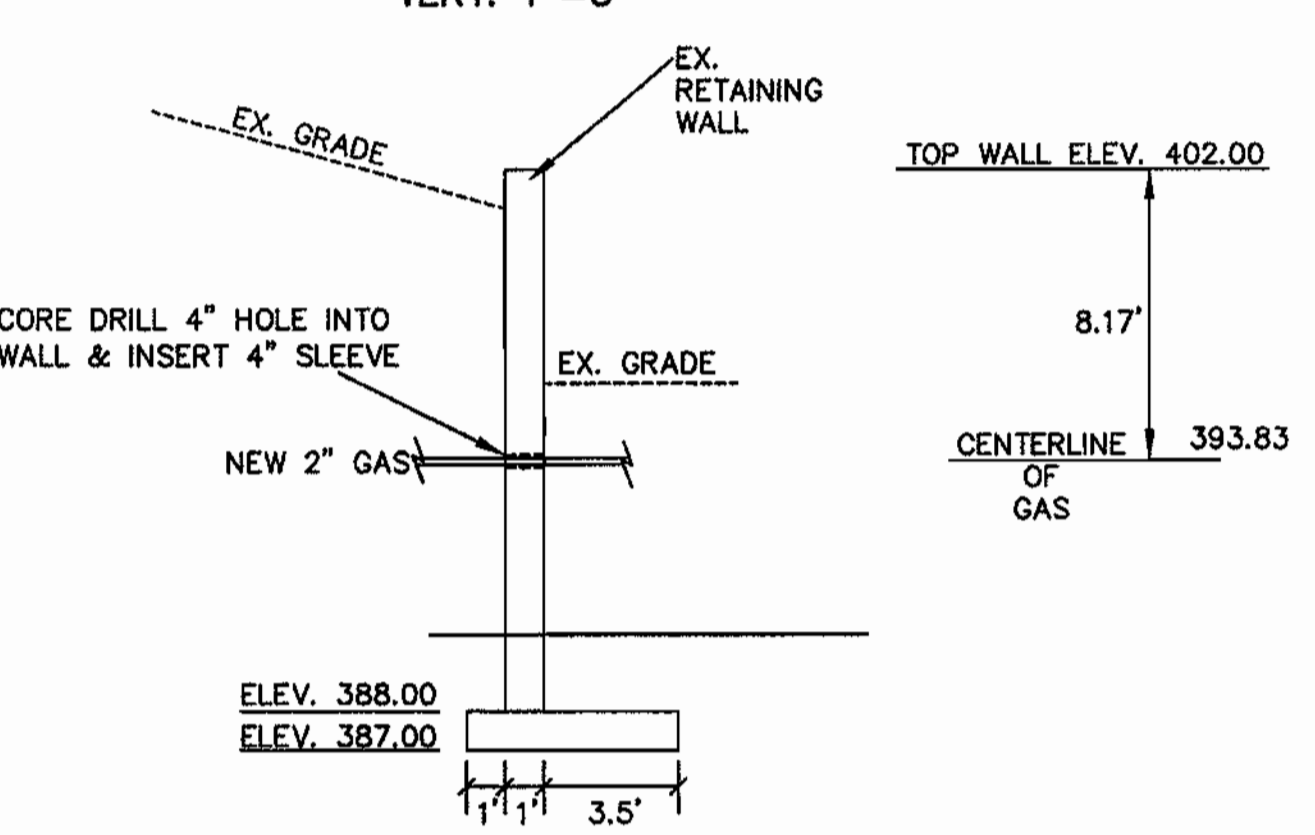
4 NORTH SIDE BLDG 17 CROSS SECTION B-B  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



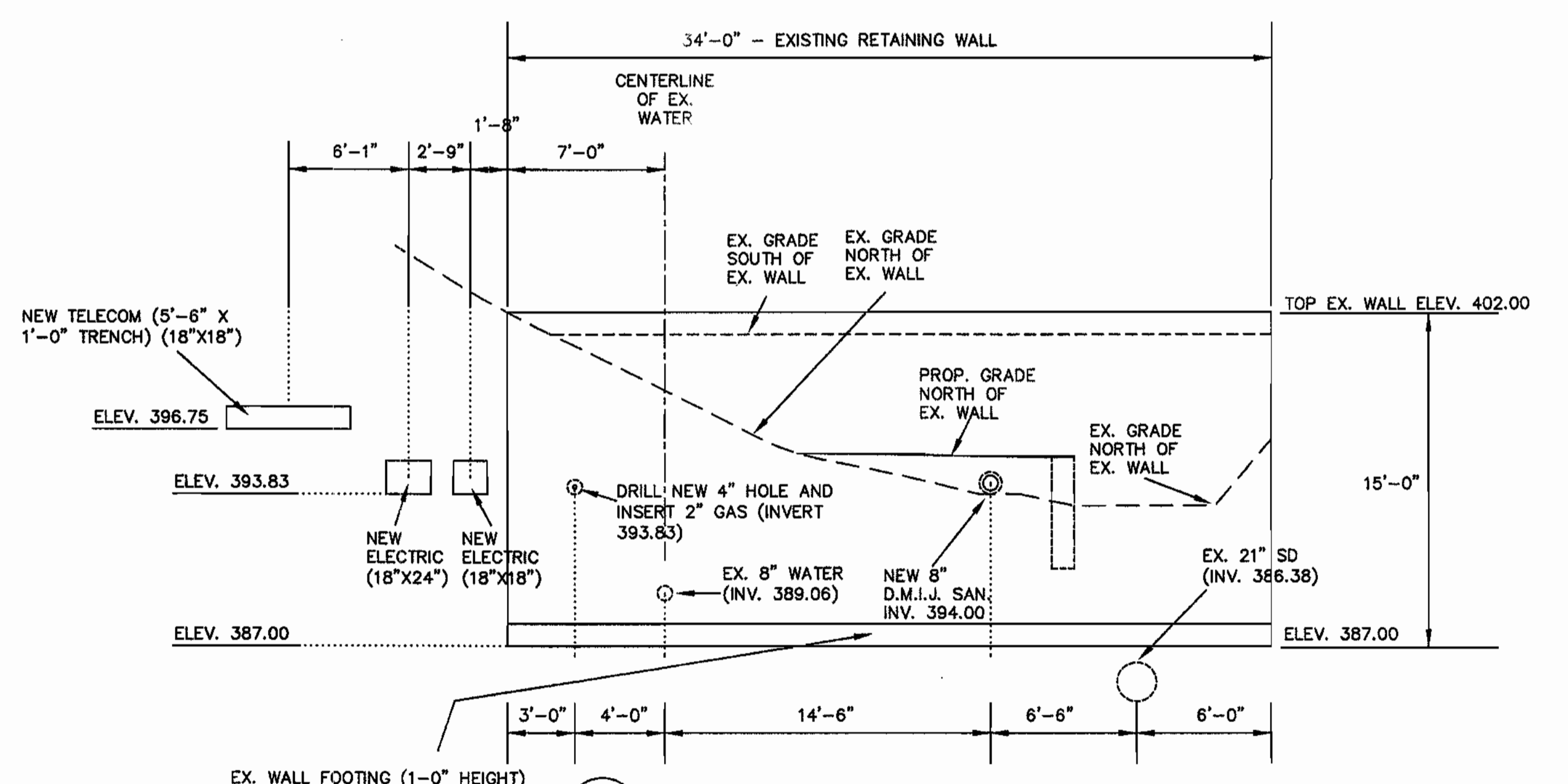
5 SOUTHWEST SIDE BLDG 17 CROSS SECTION D-D  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



7 RETAINING WALL CROSS SECTION OF PROP. 8" SAN.  
SCALE: 1"=5'



8 RETAINING WALL CROSS SECTION OF NEW 2" GAS  
SCALE: 1"=5'



9 EX. RETAINING WALL PENETRATION DETAIL  
SCALE: 1"=5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE 5/3/02  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/3/02  
DIRECTOR DATE 6/11/02

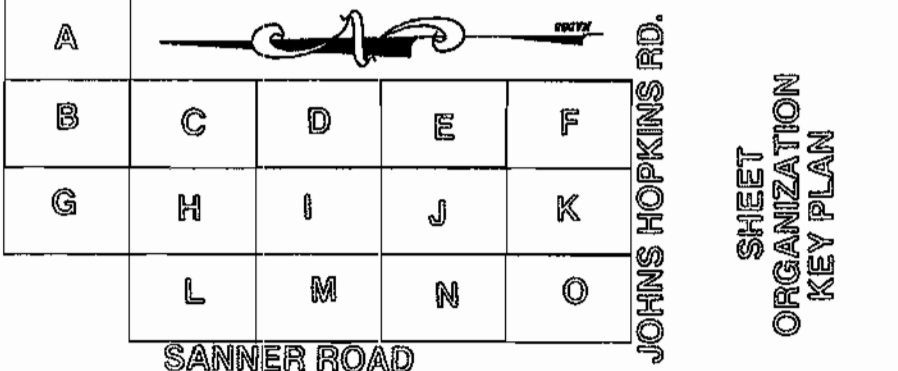


**AMT**  
A. MORTON THOMAS AND ASSOCIATES, INC.  
CONSULTING ENGINEERS  
12750 TIMBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
TEL (301) 861-2545 FAX (301) 681-0814  
AMT FILE # 95-11

Einhorn  
Yaffee  
Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
WASHINGTON, D.C. 20007 (202) 471-5000  
ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
DRN: P. FRIAS  
CHK: S. ITANI  
DATE: 04/12/02

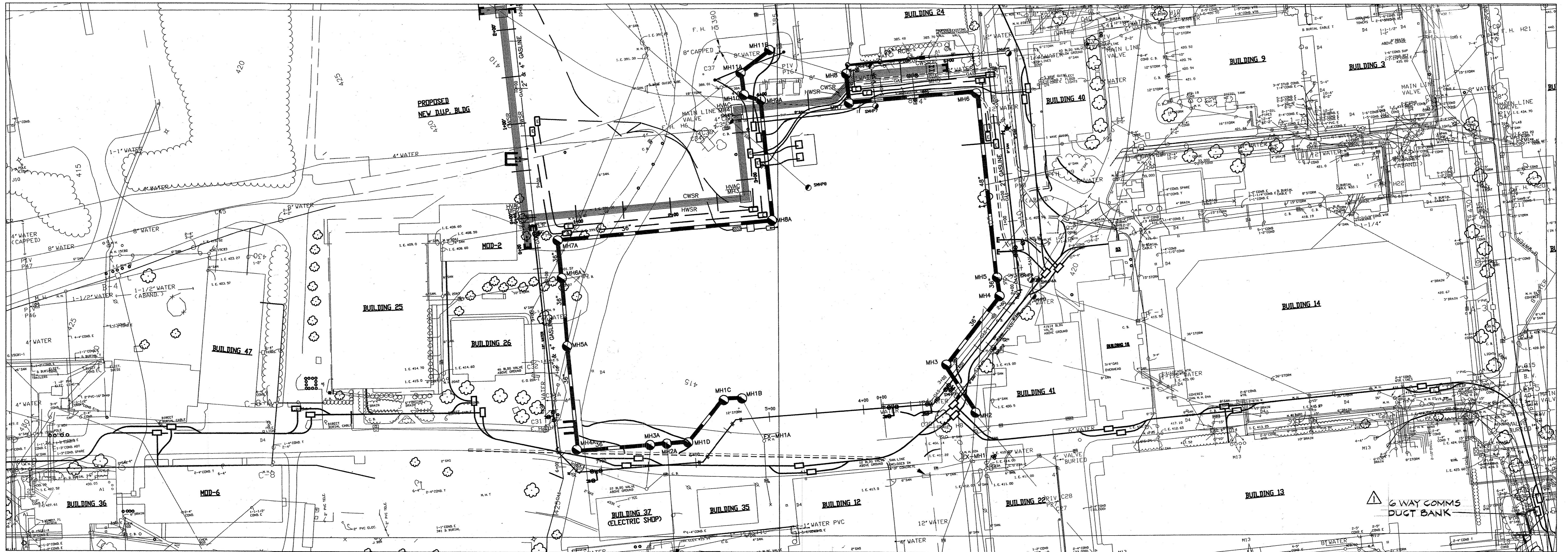


**SITE GRADING AND UTILITIES**  
REVISIONS:  
1. WEST SIDE BLDG 17 CROSS SECTION, WEST SIDE BLDG 17 CROSS SECTION, CROSS SECTIONS & RETAINING WALL PENETRATION DETAIL  
2. CROSS SECTION C-C REVISION - ADDED 2" GAS LINE; REVISED LABEL TO WATER LINE  
DATE 03/27/02  
ADDITION NO. 1, ISSUED 03/25/2002  
04/09/02

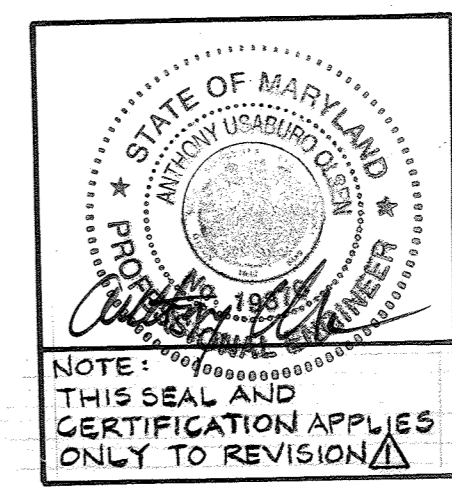
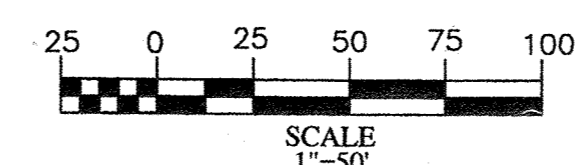
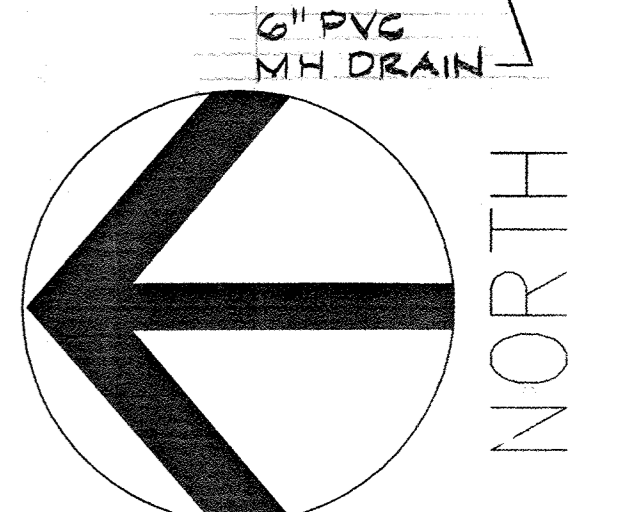
APPLIED PHYSICS LABORATORY  
THE JOHNS HOPKINS UNIVERSITY  
PARCEL 1  
UTILITY COMPOSITE SECTIONS  
TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
APL SHEET NO. CU-2  
COUNTY SHEET NO. C-18

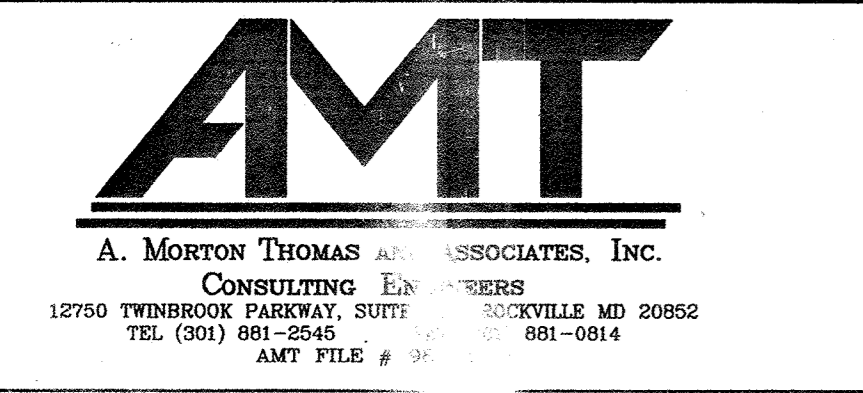
SDP-02-88



1 WATER LAYOUT PLAN (I/J)  
SCALE: HORIZ. 1"=50'



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION, MK DATE 5/31/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT, JH DATE 6/3/02  
 DIRECTOR, DATE 6/11/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
 DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R

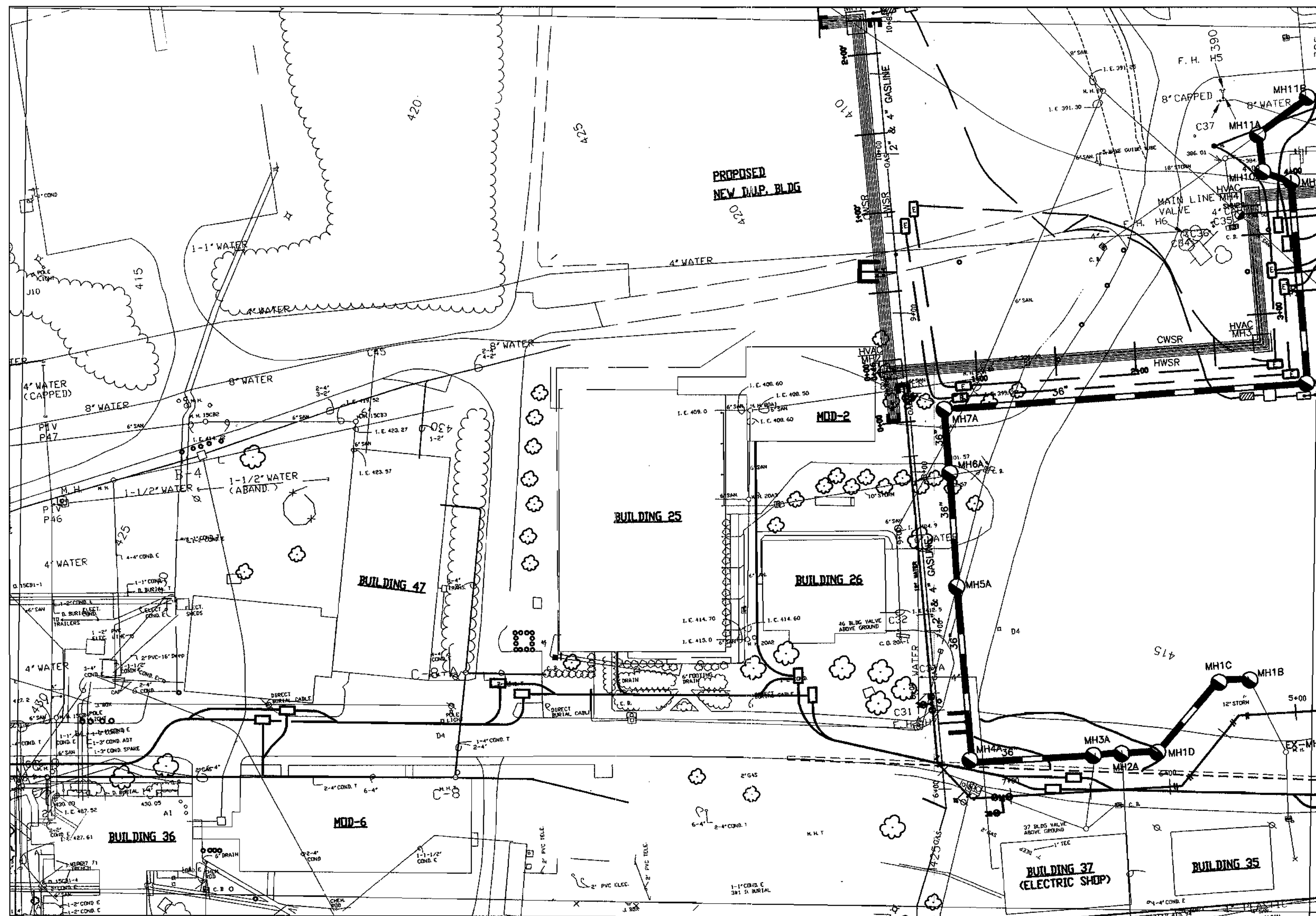
SANNER ROAD

**SITE GRADING AND UTILITIES**  
 REVISION: 1. ADD DUCT BANK  
 DATE: 11/10

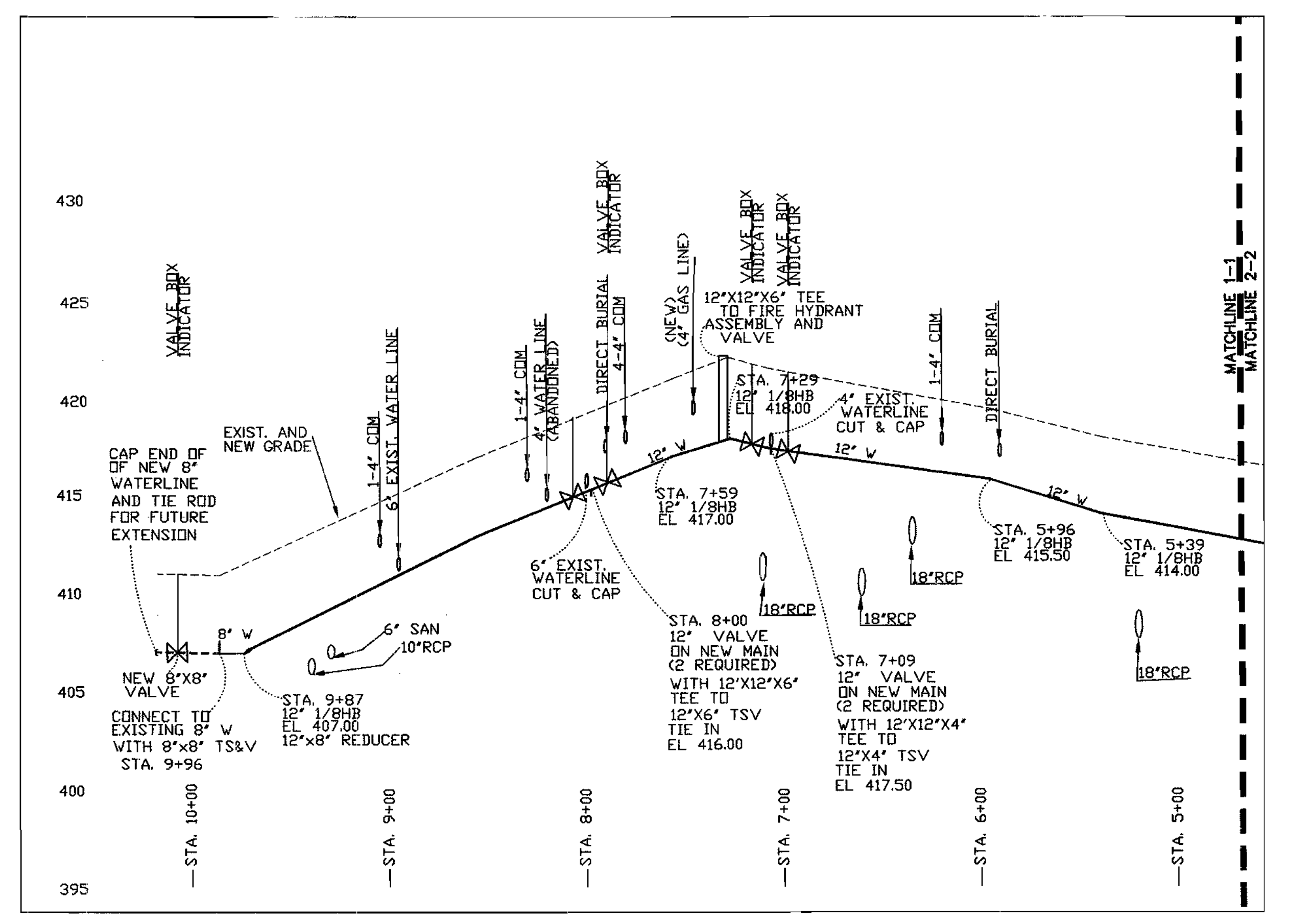
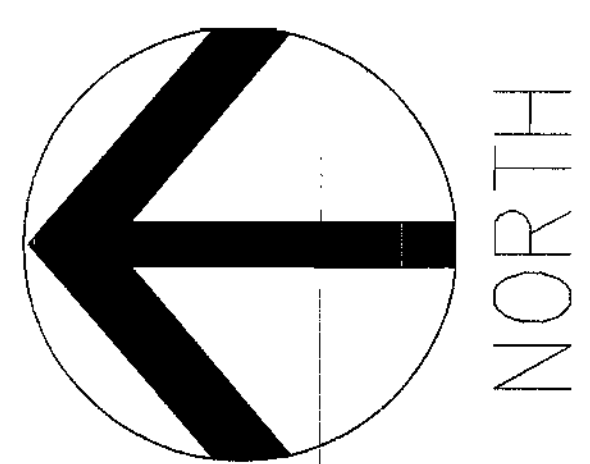
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 THE JOHNS HOPKINS UNIVERSITY  
**PARCEL 1**  
 WATER MAIN LAYOUT PLAN (I/J)  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CW-1  
 COUNTY SHEET NO. C-19

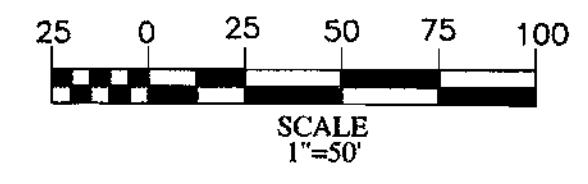
SDP-02-88



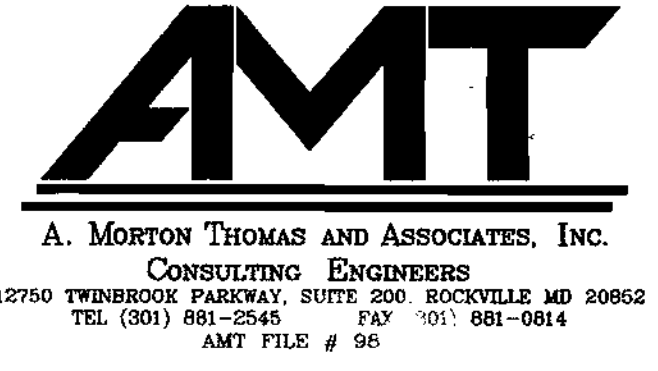
1 WATER MAIN PLAN (I)  
SCALE: HORIZ. 1"=50'



2 WATER MAIN PROFILE FROM STATION 3+72 TO 9+96  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE: 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 [Signature] DATE: 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT HB  
 [Signature] DATE: 6/11/02  
 DIRECTOR



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
 DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

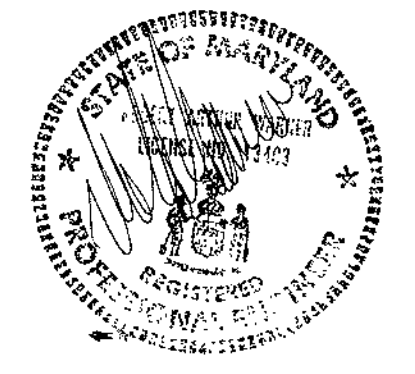
A	C	D	E	F
B	G	H	I	J
K	L	M	N	O

SANNER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

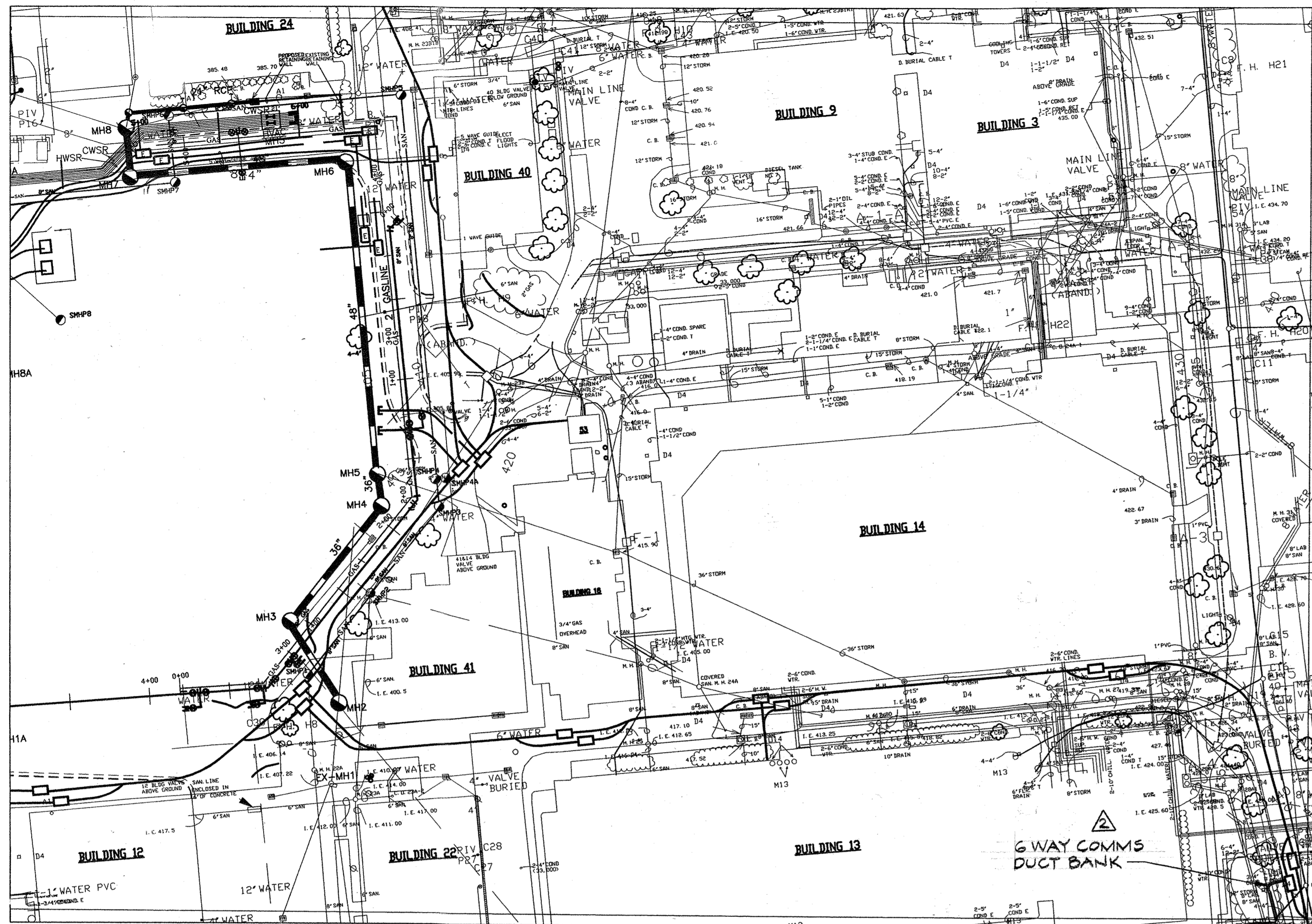
SITE GRADING AND UTILITIES  
 REVISION: \_\_\_\_\_ DATE: \_\_\_\_\_

APPLIED PHYSICS LABORATORY  
 THE JOHN'S HOPKINS UNIVERSITY  
 WATER MAIN PLAN/PROFILE (I)  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

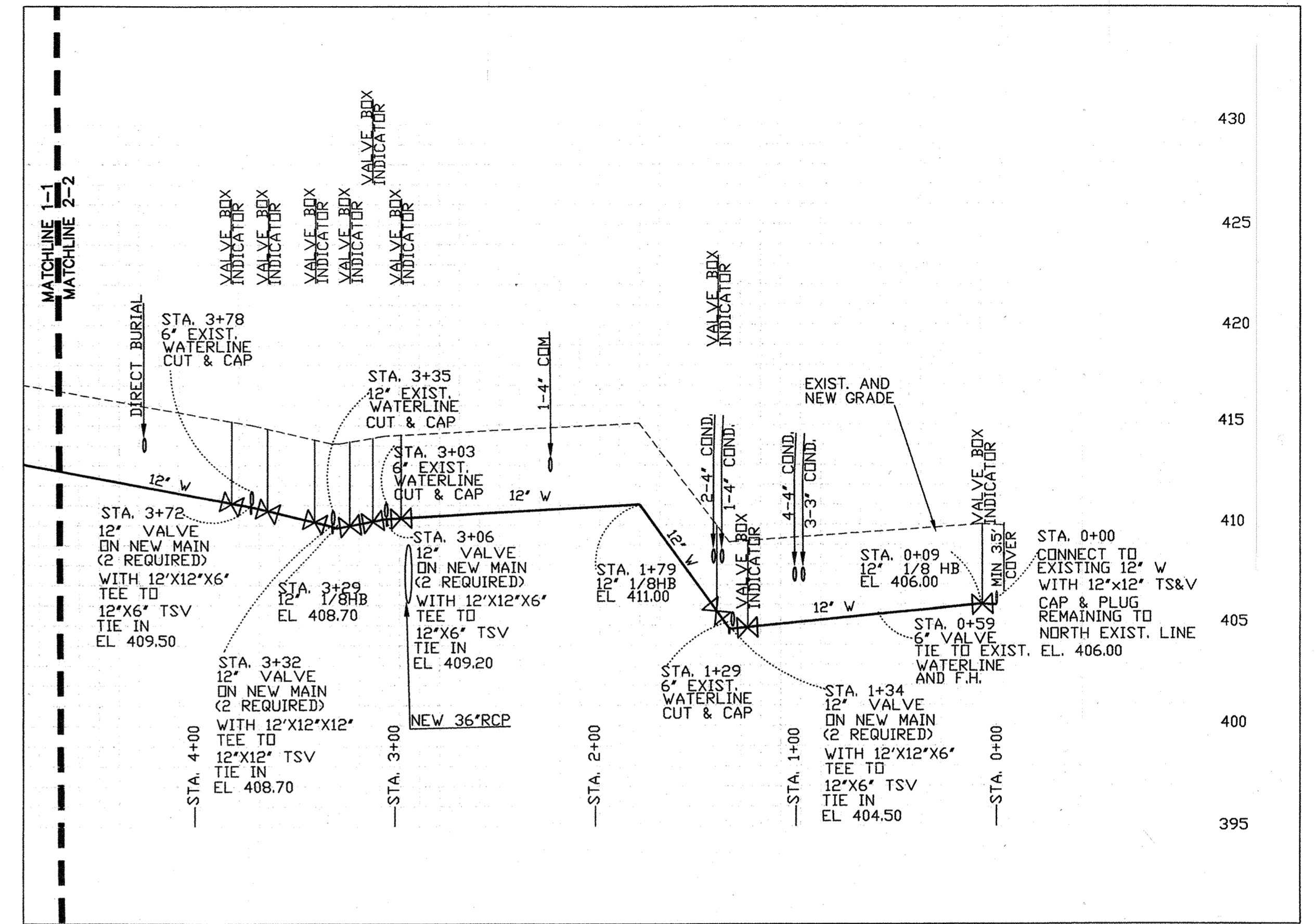
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 APL SHEET NO. CW-2  
 COUNTY SHEET NO. C-20



SP-02-88

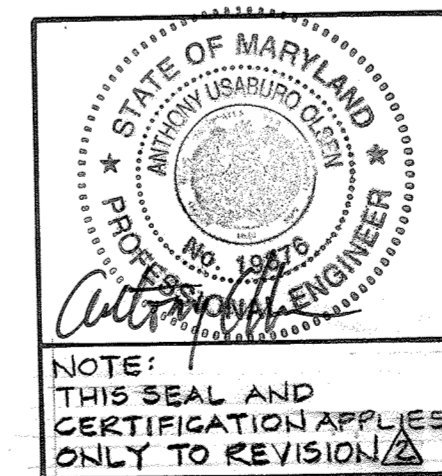


1 WATER MAIN PLAN (J)  
SCALE: HORIZ. 1"=50'

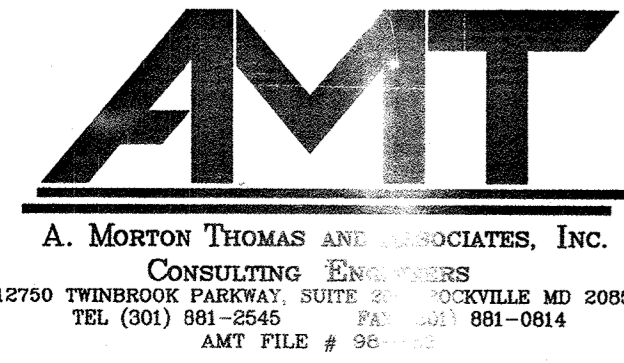
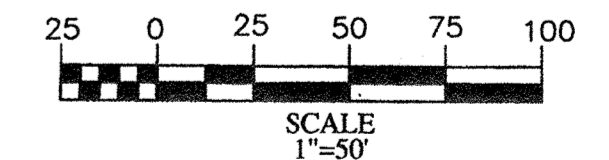


2 WATER MAIN PROFILE FROM SATION 0+00 TO 3+72  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE  
*[Signature]* 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT HB DATE  
 DIRECTOR DATE



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS  
 WERE PREPARED OR APPROVED BY ME, AND  
 THAT I AM A DULY LICENSED PROFESSIONAL  
 ENGINEER UNDER THE LAWS OF THE STATE OF  
 MARYLAND. LICENSE NO. 19376  
 EXPIRATION DATE: SEPTEMBER 23, 2021



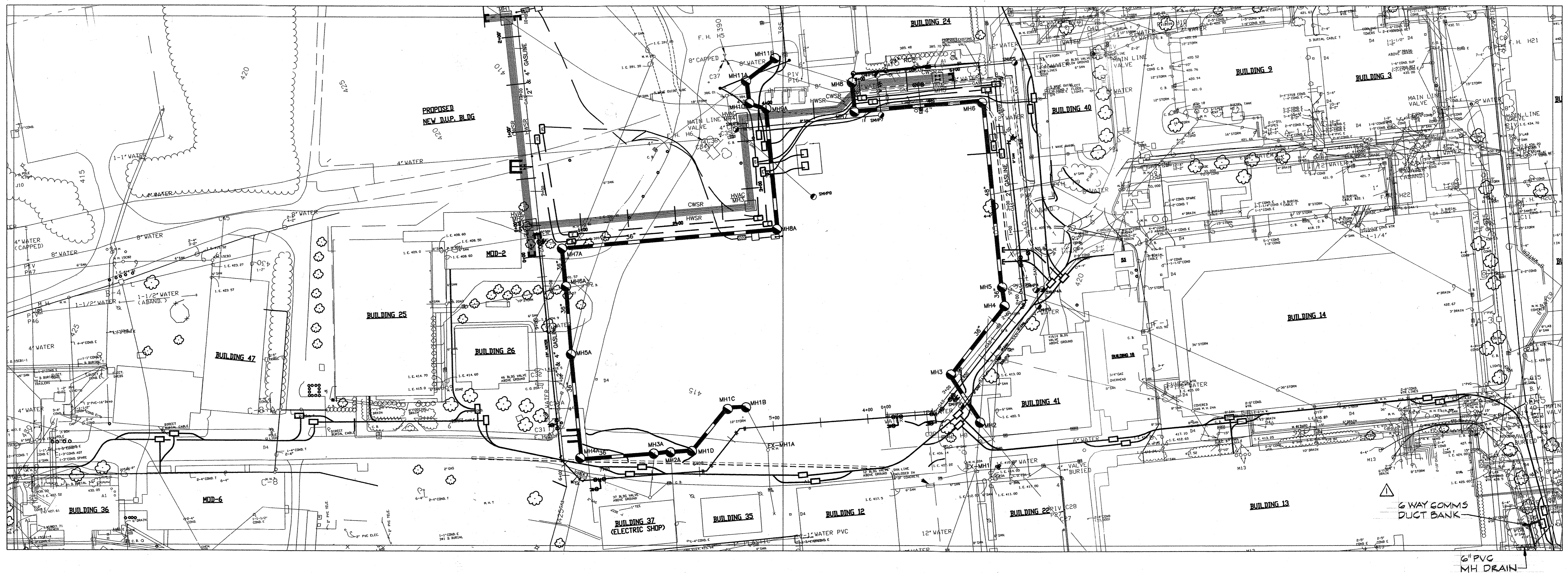
THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	SANNER ROAD				
B	C	D	E	F	G
H	I	J	K	L	M
N	O	JOHNS HOPKINS RD.			

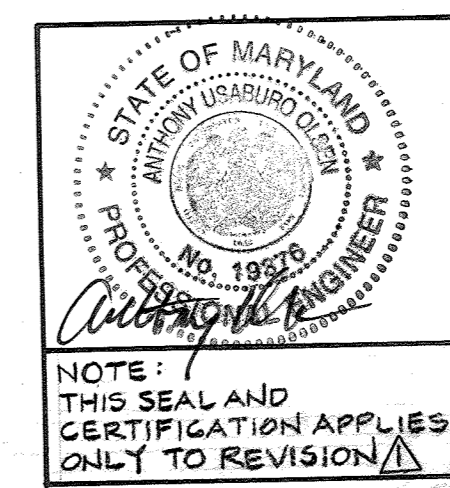
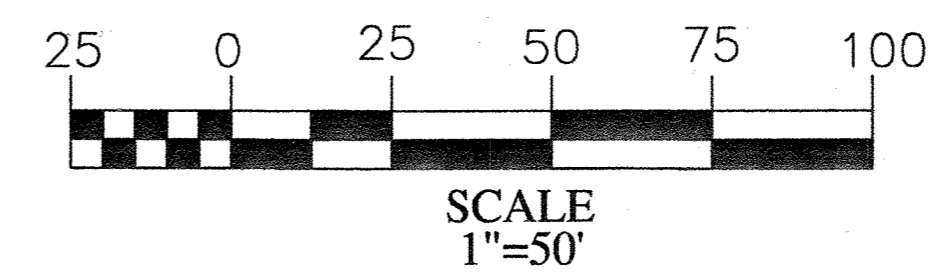
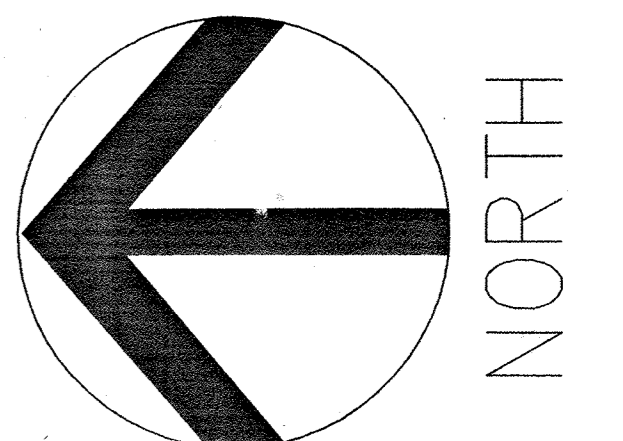
SITE GRADING AND UTILITIES  
 REVISION:  
 1. ADD 'SD' CROSSING  
 2. ADD DUCT BANK  
 DATE: 03/25/02  
 11/15

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 WATER MAIN PLAN/PROFILE (J)  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CW-3  
 COUNTY SHEET NO. C-21



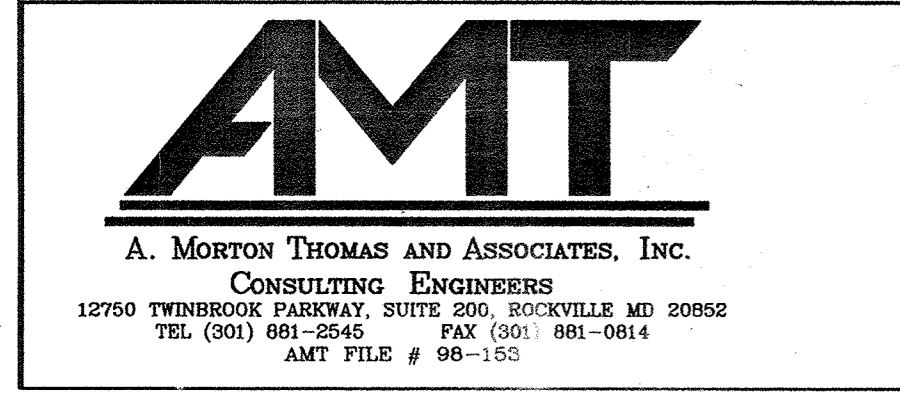
1 SANITARY LAYOUT PLAN (I/J)  
SCALE: HORIZ. 1"=50'



PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED OR APPROVED BY ME, AND  
THAT I AM A FULLY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF  
MARYLAND. LICENSE NO. 12376  
EXPIRATION DATE: SEPTEMBER 22, 2021



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 5/31/02  
DATE: 6/3/02  
DATE: 6/11/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
WASHINGTON, D.C. 20007 (202) 471-5000  
ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
NEW YORK CITY, NY LOS ANGELES, CA  
DES: J. KASPA  
DRN: P. FRIAS  
CHK: B. WARNER  
DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

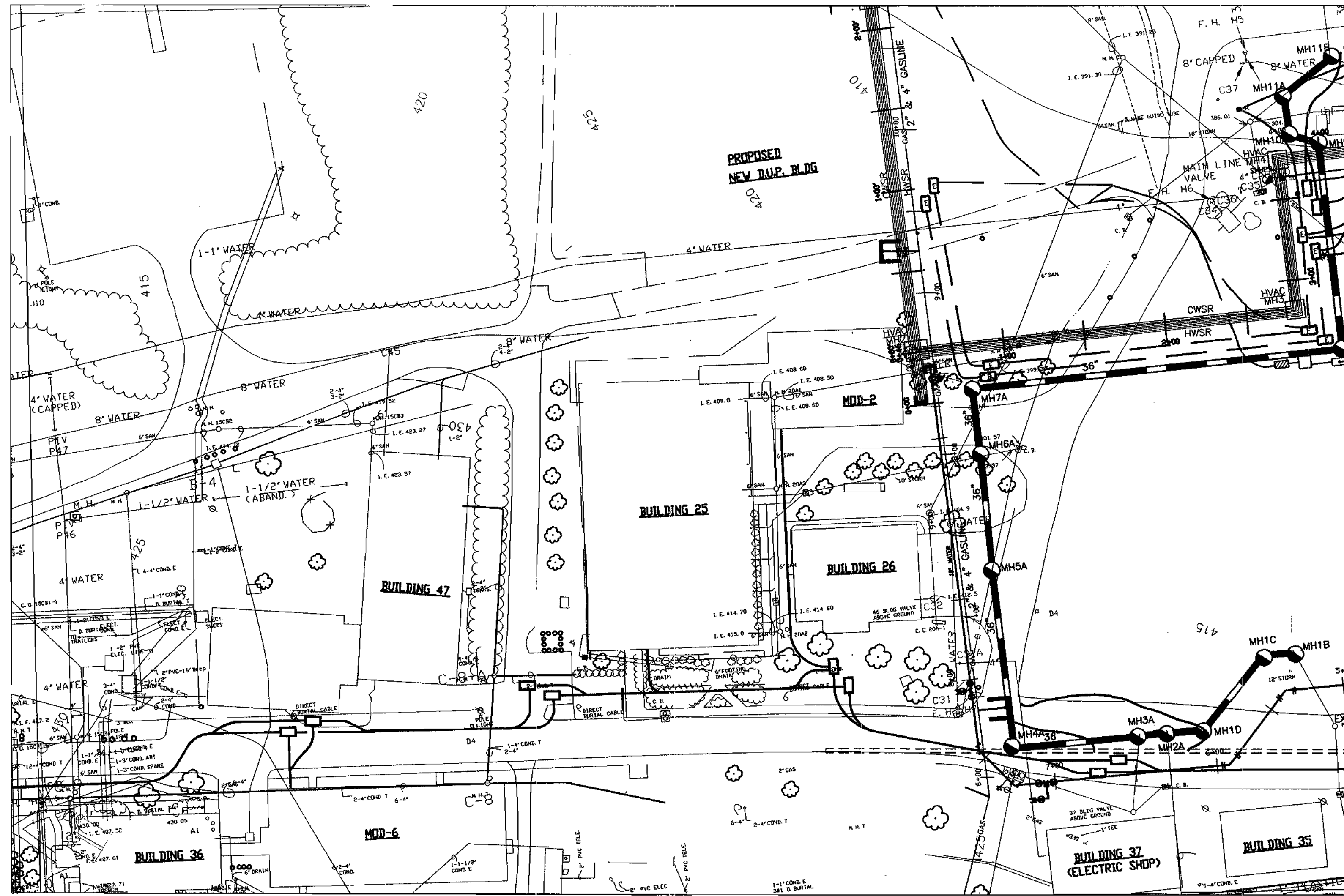
JOHNS HOPKINS RD.  
SHEET ORGANIZATION KEY PLAN  
SANNER ROAD

SITE GRADING AND UTILITIES  
REVISION: 1. ADD DUCT BANK  
DATE: 11/13

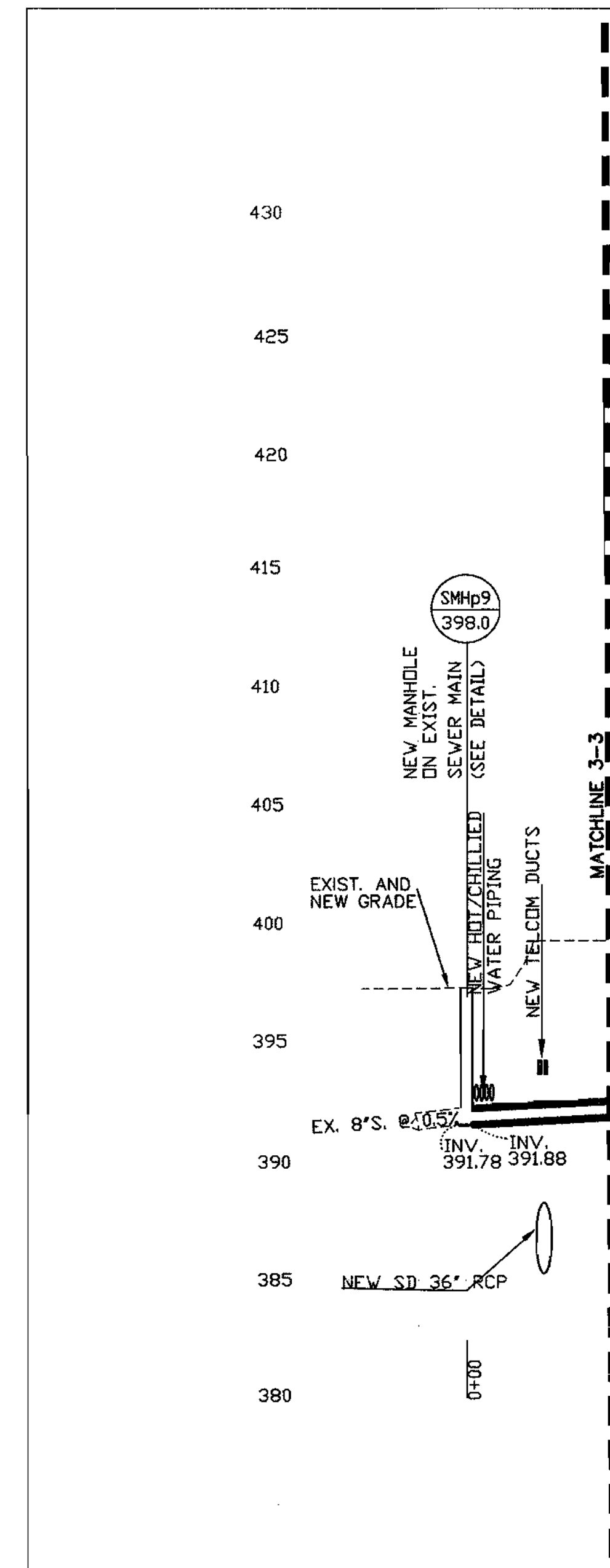
APPLIED PHYSICS LABORATORY  
THE JOHNS HOPKINS UNIVERSITY  
SANITARY LAYOUT PLAN (I/J)  
PARCEL 1  
TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
APL SHEET NO. CS-1  
COUNTY SHEET NO. C-22

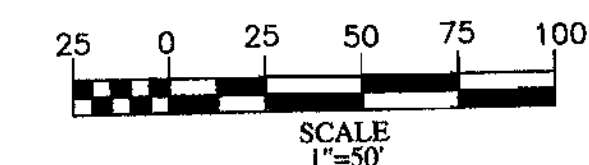
SDP-02-88



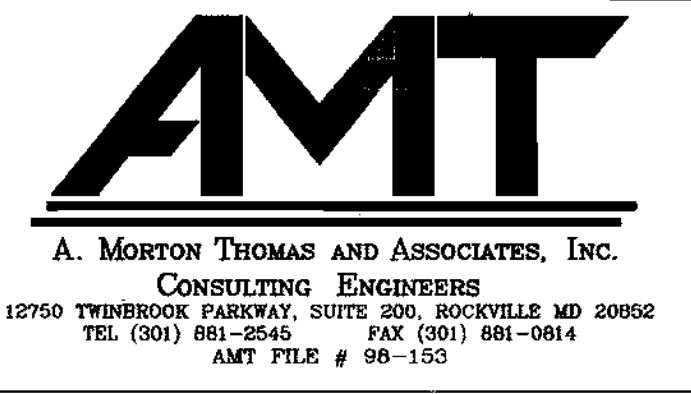
1 SANITARY PLAN (I)  
SCALE: HORIZ. 1"=50'



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



APPROVED: *[Signature]* 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 6/14/02  
 DIRECTOR



DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNER ROAD

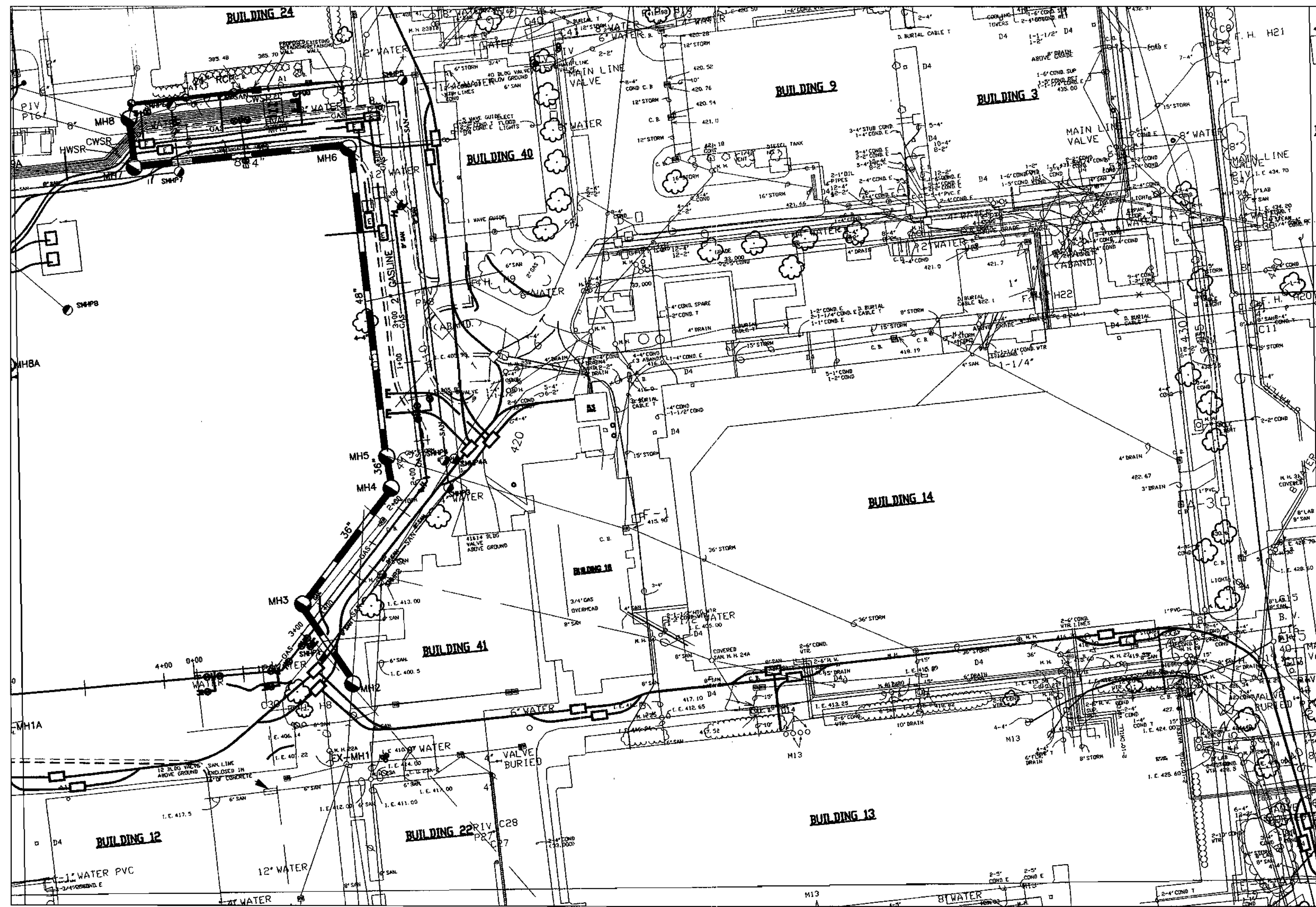
**SITE GRADING AND UTILITIES**

REVISION: 1. ADD PIPE SLOPE, INV.  
 DATE: 03/25/02

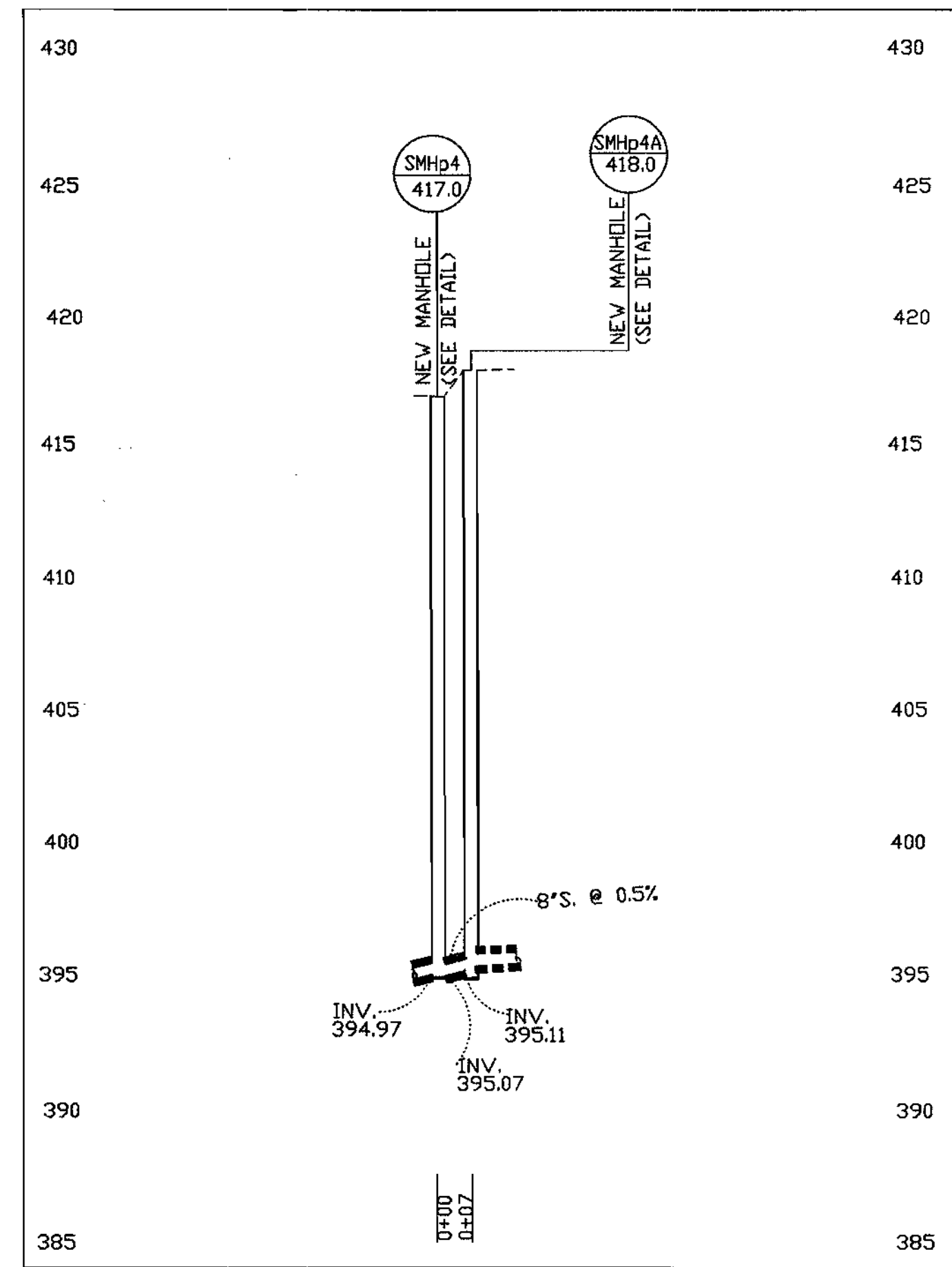
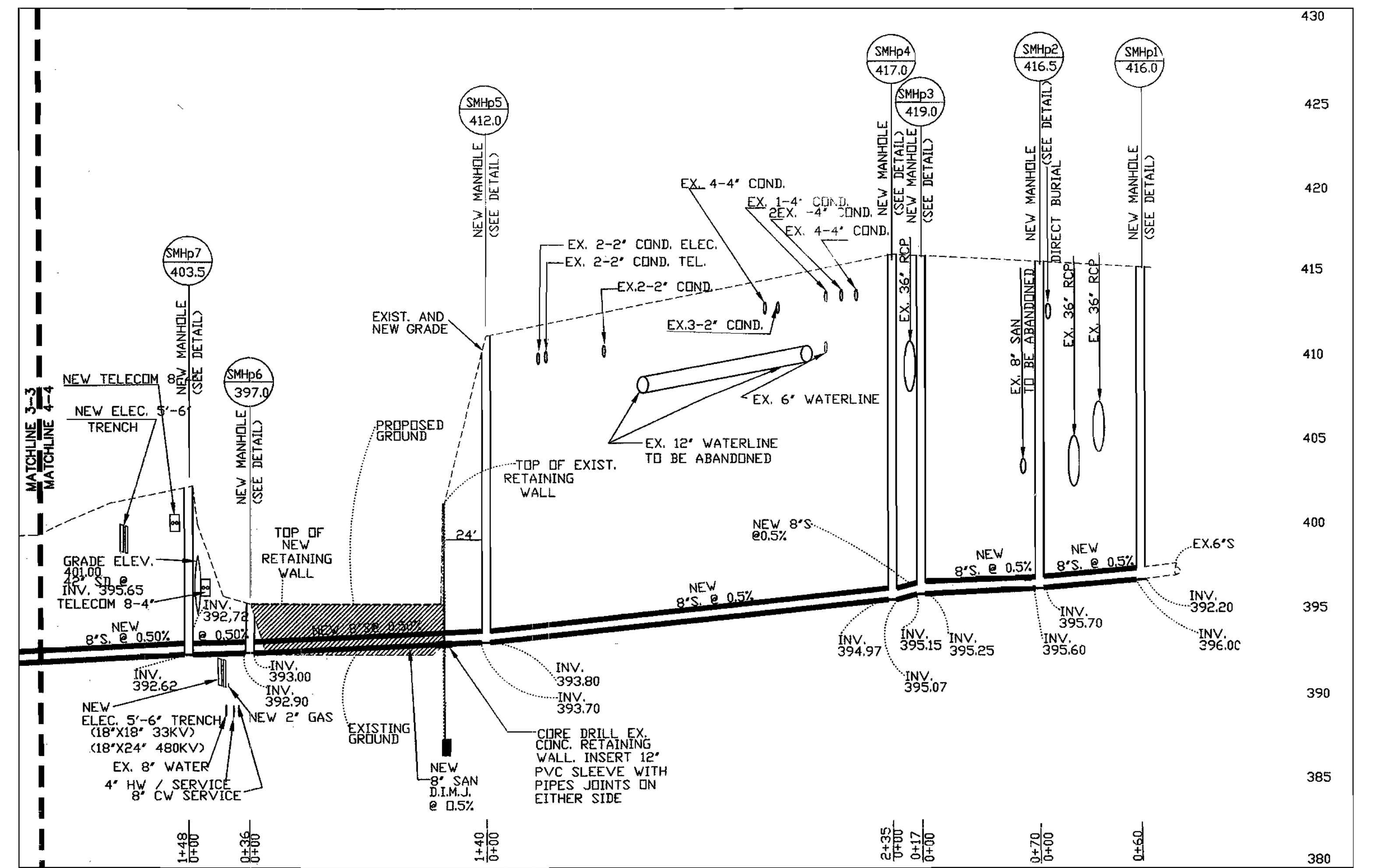
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**SANITARY PLAN/PROFILE (I)**  
**PARCEL 1**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CS-2  
 COUNTY SHEET NO. C-23

SDP-02-88

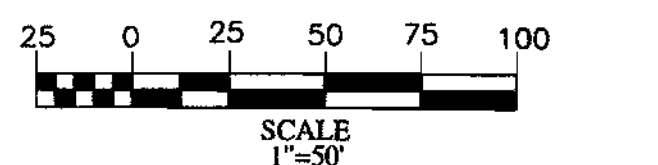
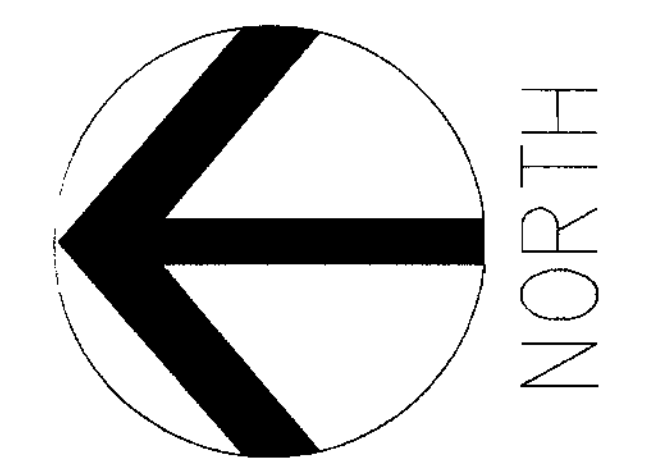


1 SANITARY PLAN (J)  
SCALE: HORIZ. 1"=50'



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

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



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 5/31/02  
 DATE: 6/3/02  
 DATE: 6/1/02

**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINDROCK PARKWAY  
 TEL: (301) 881-2545  
 FAX: (301) 881-0814

**Einhorn Yaffee Prescott**

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA  
 DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R

SANNER ROAD

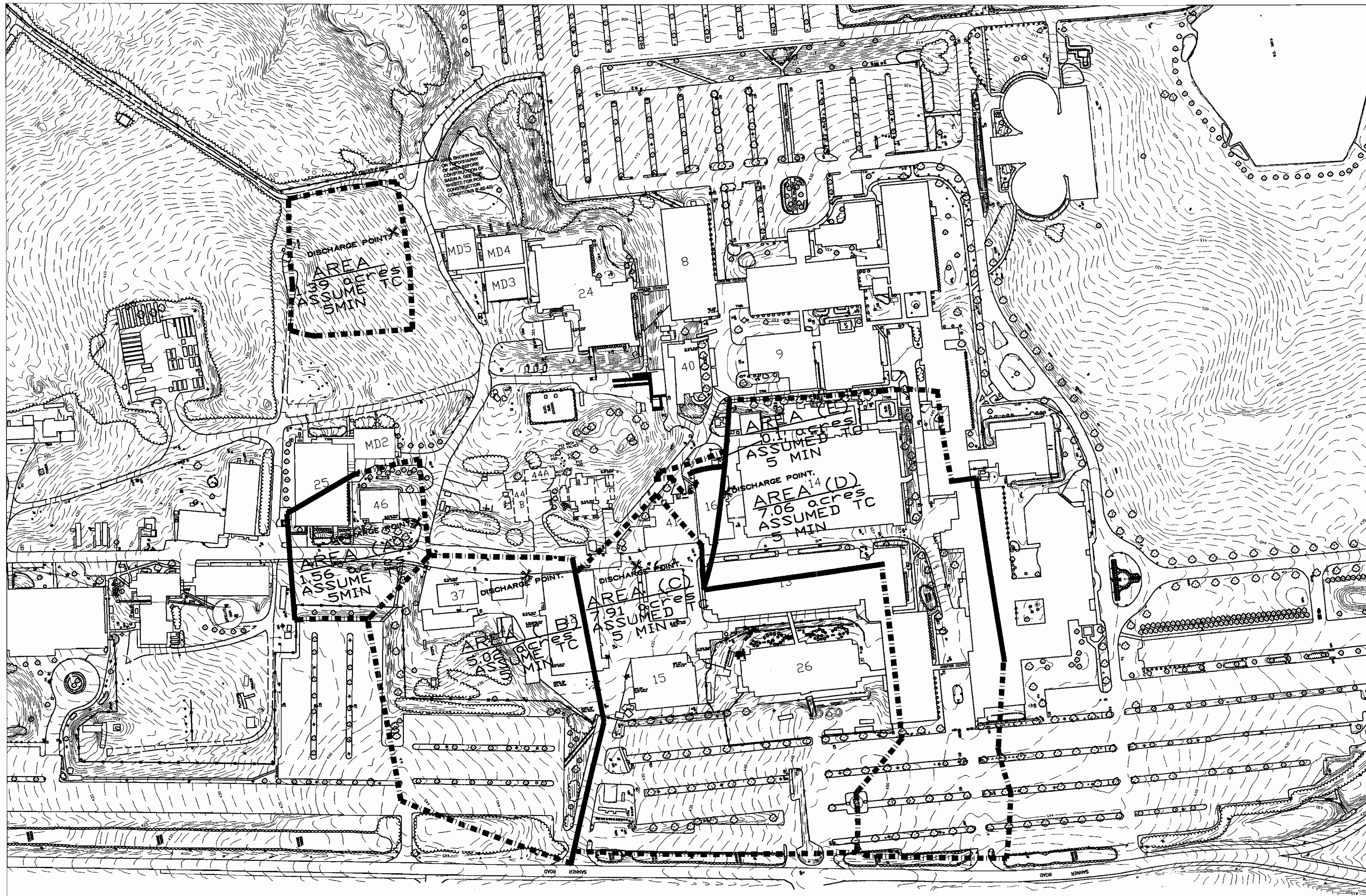
**SITE GRADING AND UTILITIES**  
 REVISION: 1. ADD SD. CROSSING, SLOPE, INV.  
 DATE: 03/25/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**SANITARY PLAN/PROFILE (J)**  
**PARCEL 1**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

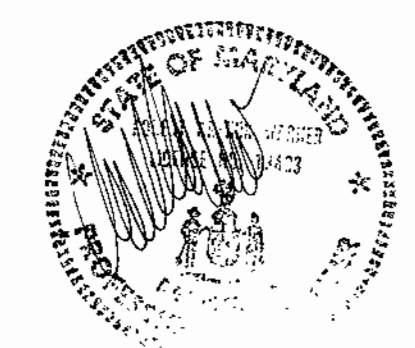
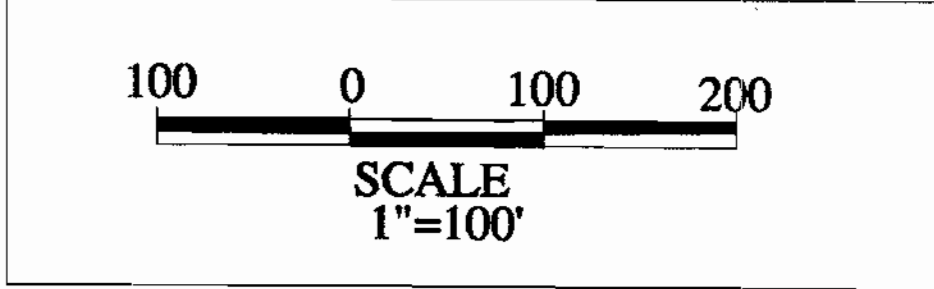
SCALE AS SHOWN  
 APL SHEET NO. CS-3  
 COUNTY SHEET NO. C-24

SDP-02-88





APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 [Signature] DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT HB  
 [Signature] DATE 6/11/02  
 DIRECTOR



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWENBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20850  
 TEL (301) 881-2545 FAX (301) 881-0814  
 AMT FILE # 06-153

Einhorn  
 Yaffee  
 Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA  
 DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

JOHNS HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN  
 SANNER ROAD

**SITE GRADING AND UTILITIES**

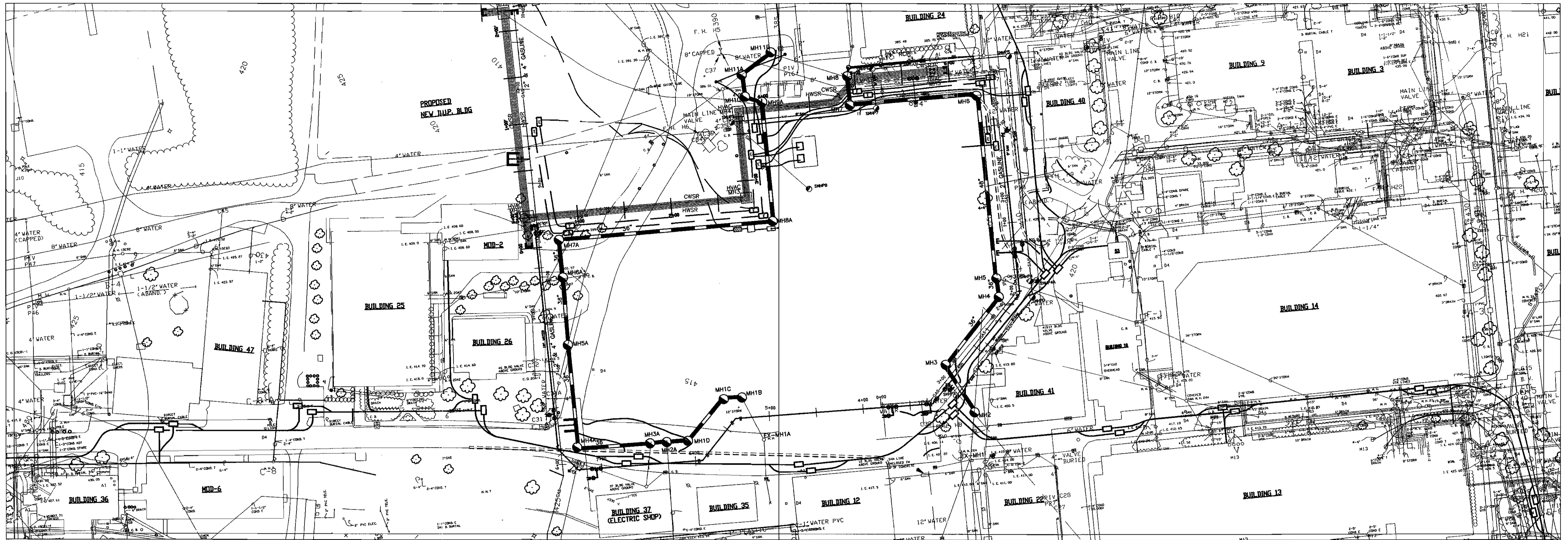
REVISIONS:  
 1. SCALE  
 2. EX. CONTOUR LINES-DASHED

DATE:  
 03/15/02  
 04/12/02

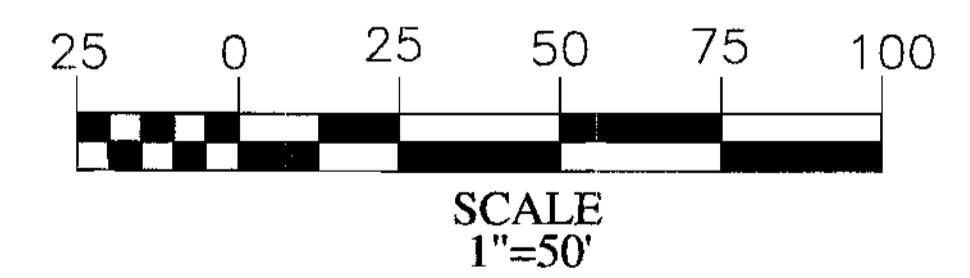
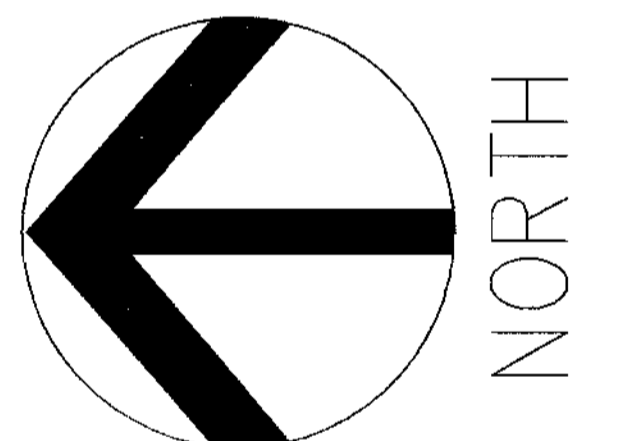
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY **PARCEL 1**  
**DRAINAGE AREA PLAN**  
 D/E/F/I/J/K/M/N/O  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
**CD-1**  
 COUNTY SHEET NO.  
**C-25**

SDP-02-88



1 STORM DRAINAGE LAYOUT PLAN (1/J)  
SCALE: HORIZ. 1"=50'



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 6/11/02



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWENBROOK PARKWAY, SUITE 200, ROCKVILLE MD 20852  
 TEL (301) 881-2545 FAX (301) 881-0814  
 AMT FILE # 98-

Einhorn  
 Yaffee  
 Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: J. KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

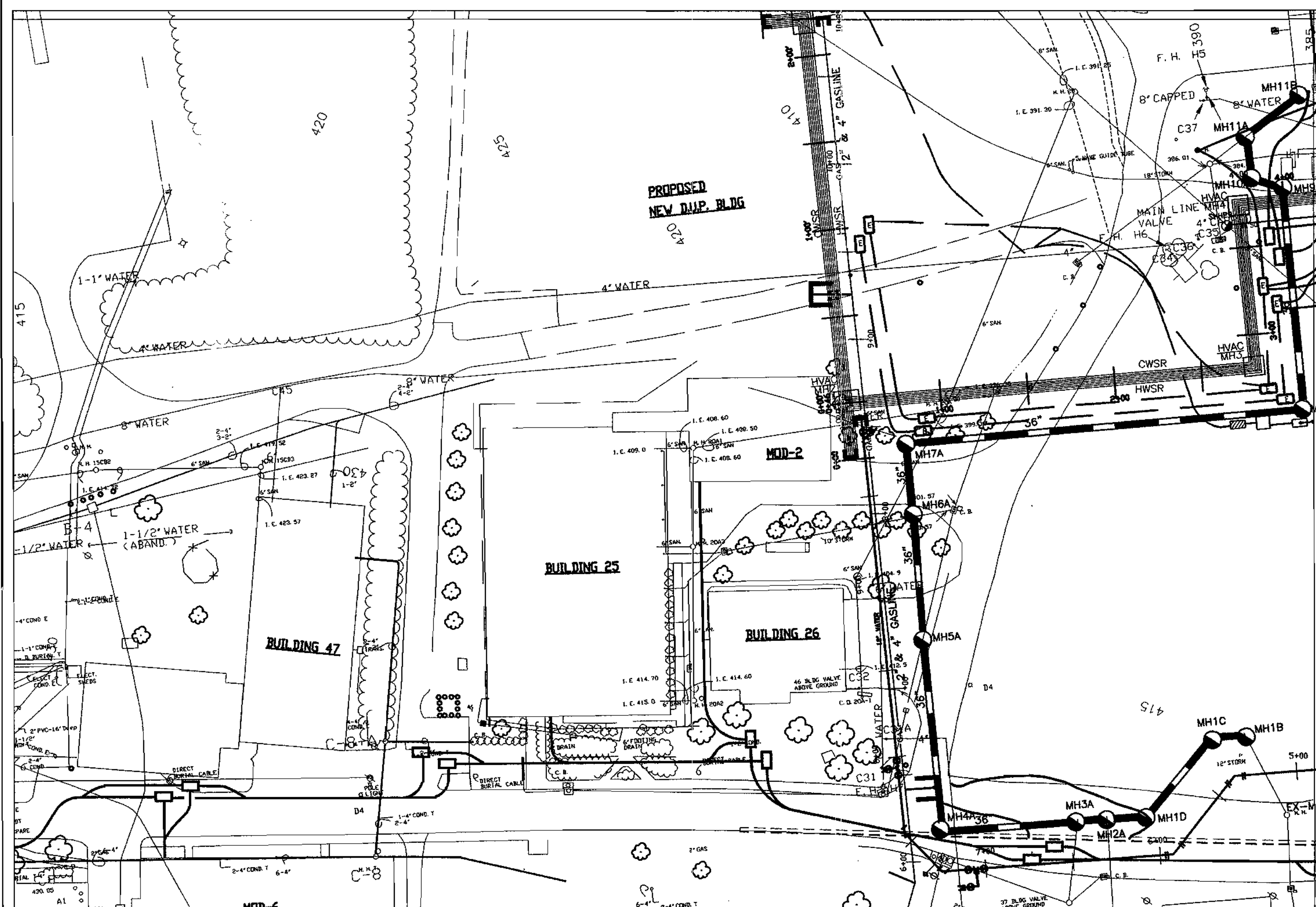
SANNER ROAD  
 JOHN'S HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**  
 REVISION: \_\_\_\_\_ DATE: \_\_\_\_\_

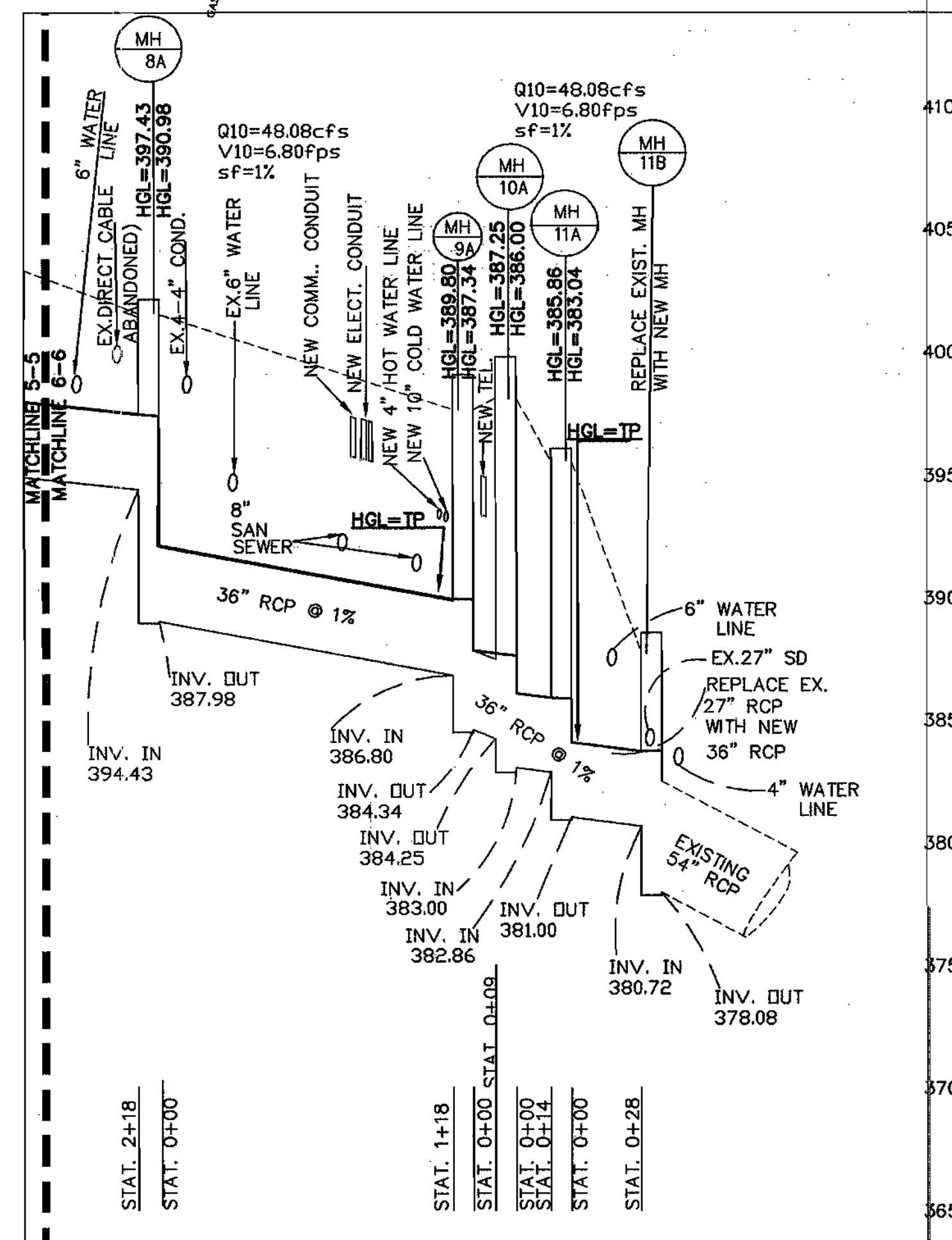
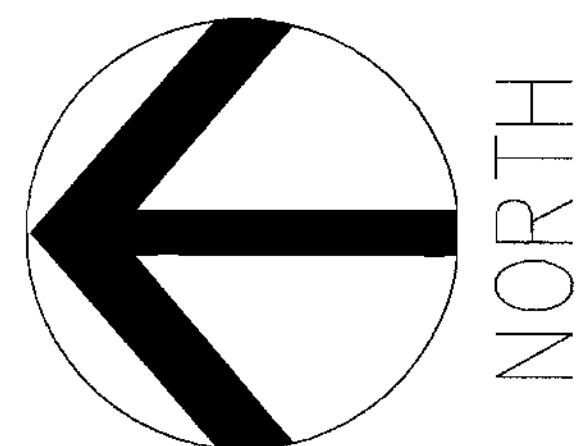
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**PARCEL 1**  
 STORM DRAINAGE LAYOUT PLAN (1/J)  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CD-2  
 COUNTY SHEET NO.  
 C-26

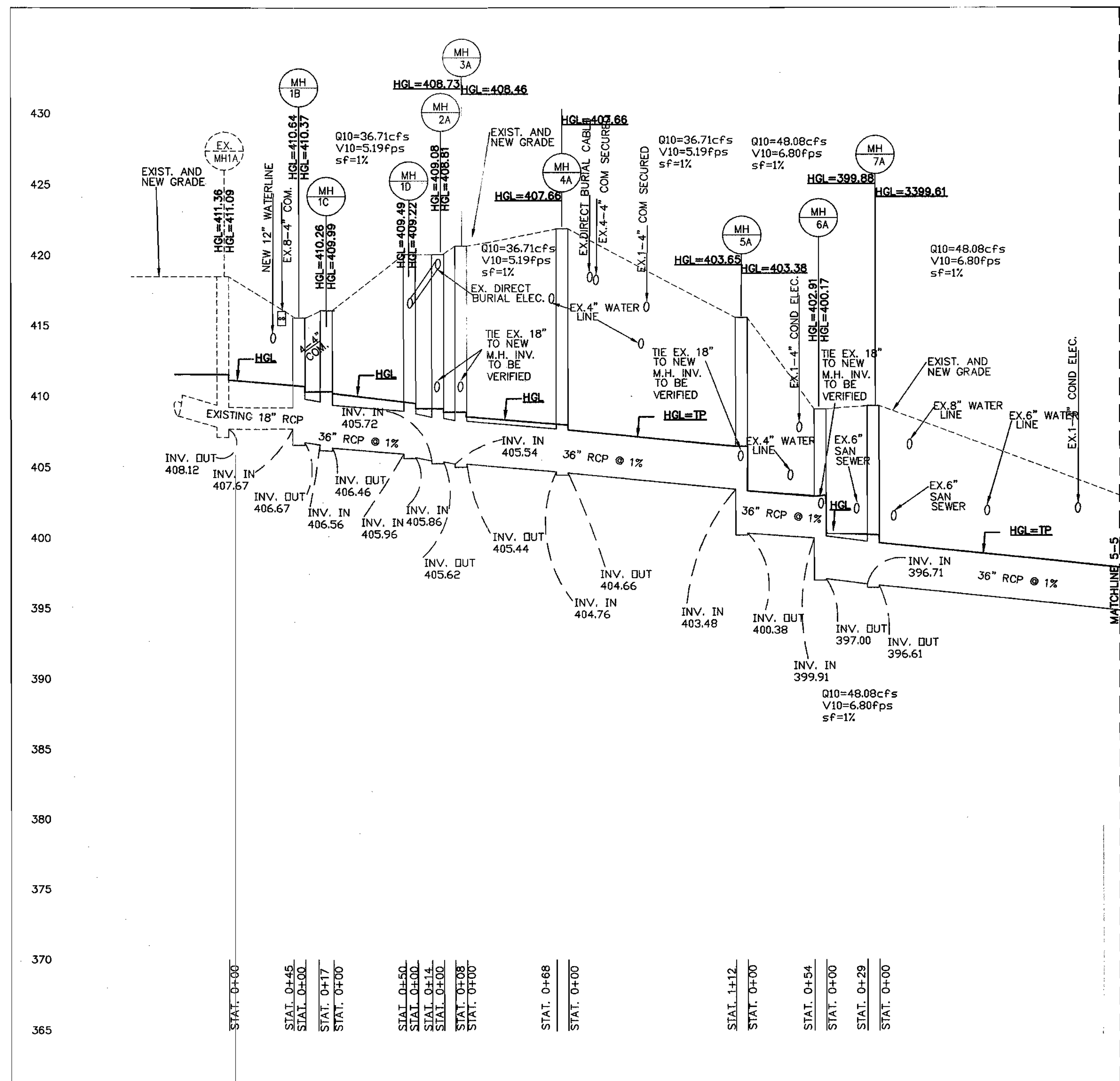
SDP-02-88



1 PLAN OF BLOCK I  
SCALE: HORIZ. 1"=50'



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



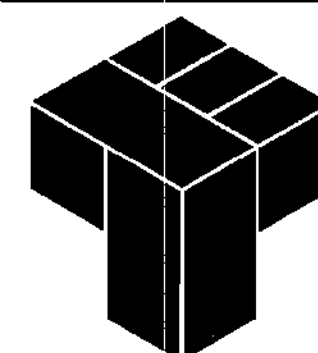
3 STORM DRAIN PROFILE  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



APPROVED: [Signature] DATE: 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] DATE: 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] DATE: 6/11/02



Einhorn  
Yaffee  
Prescott



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: JELLA KASPA  
 DRN: P. FRIAS  
 CHK: B. WARNER  
 DATE: 04/12/2002

A	B	C	D	E	F	G
H	I	J	K	L	M	N
O	P	Q	R	S	T	U

SHEET ORGANIZATION KEY PLAN  
 JOHNS HOPKINS RD.  
 SANNER ROAD

SITE GRADING AND UTILITIES

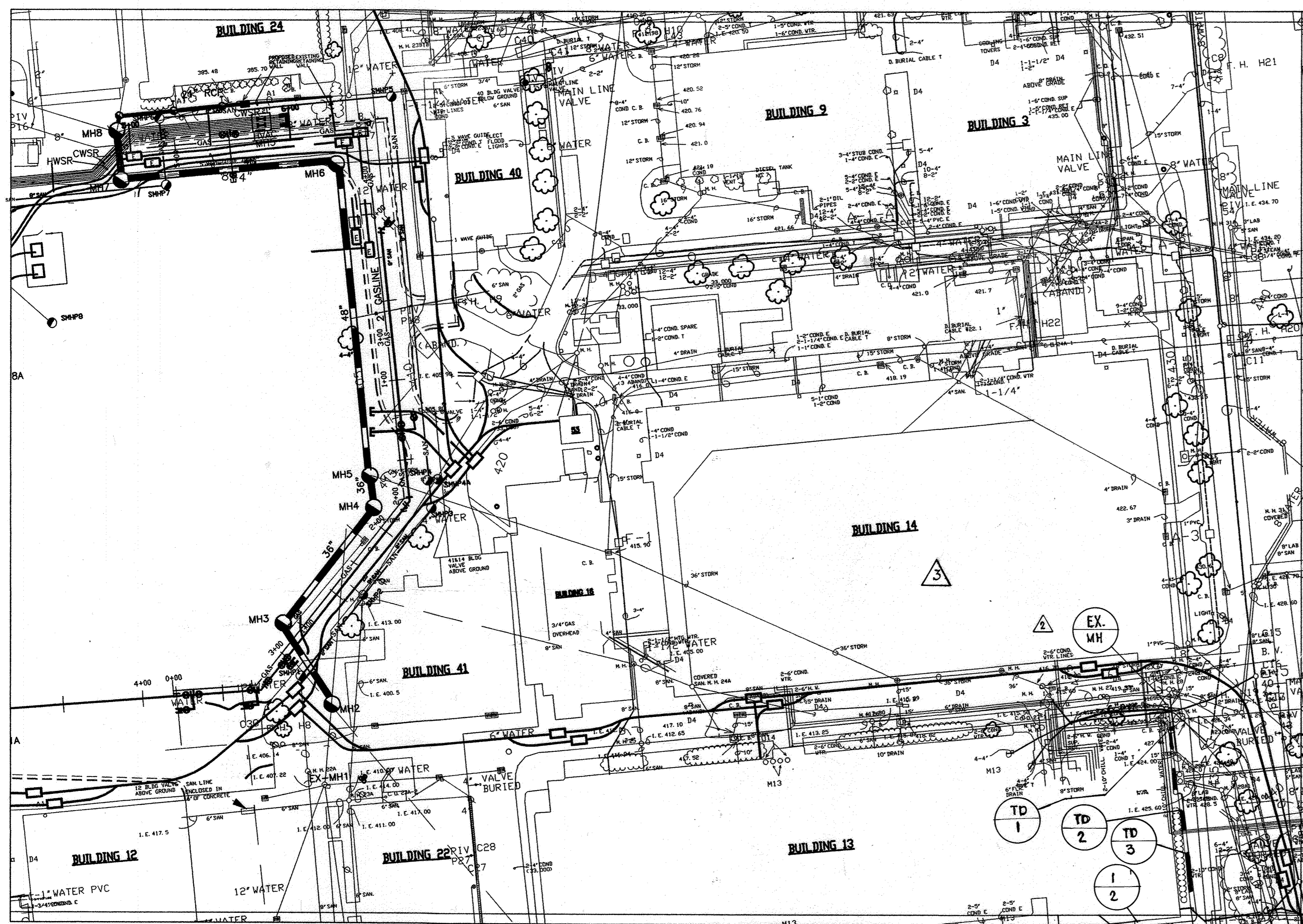
REVISION:  
 1. ADD SD, WATER CROSSING, NEW TEL.

DATE:  
 03/25/02

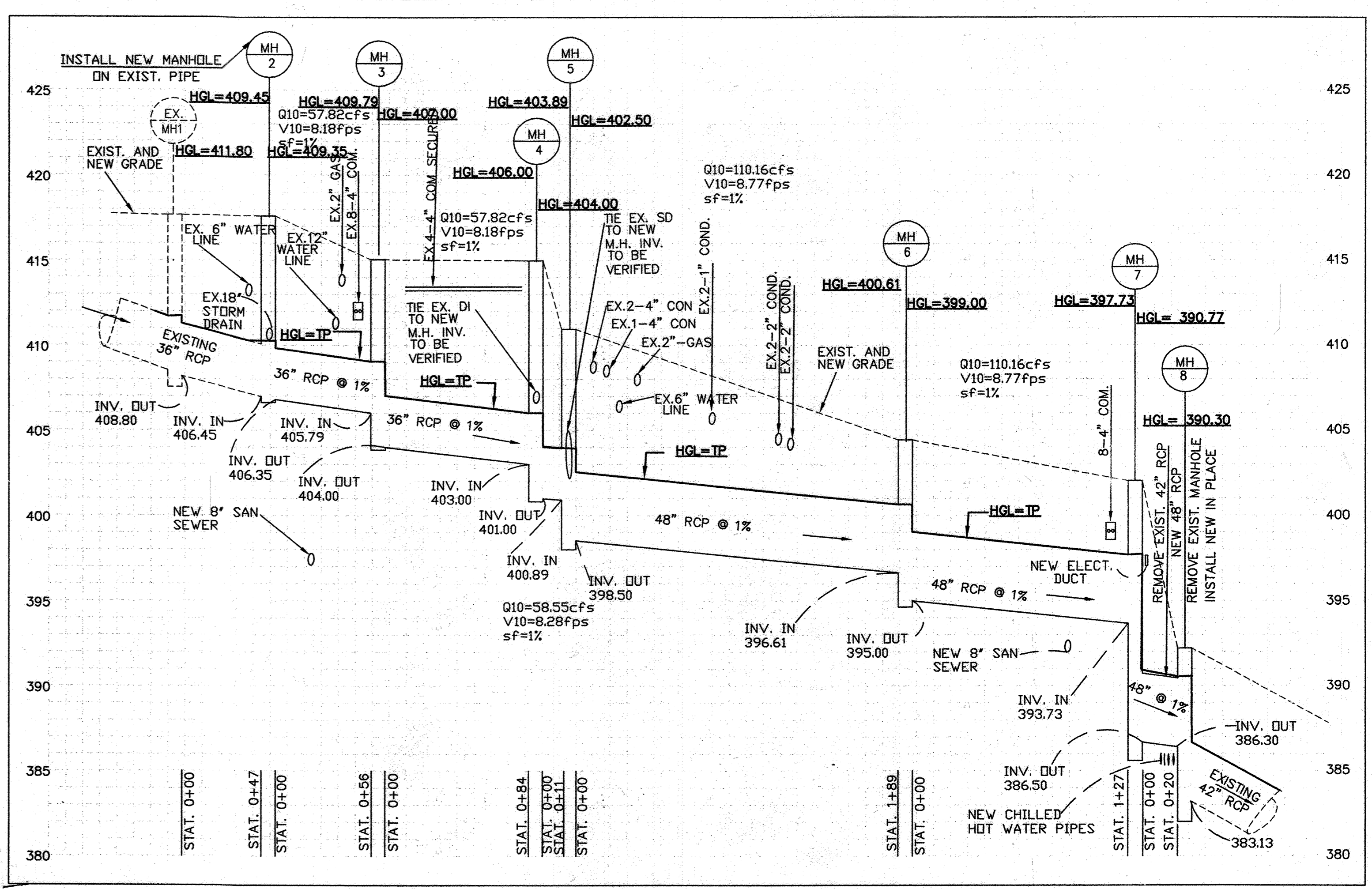
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
**PARCEL 1**  
**STORM PROFILES**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CD-3  
 COUNTY SHEET NO. C-27

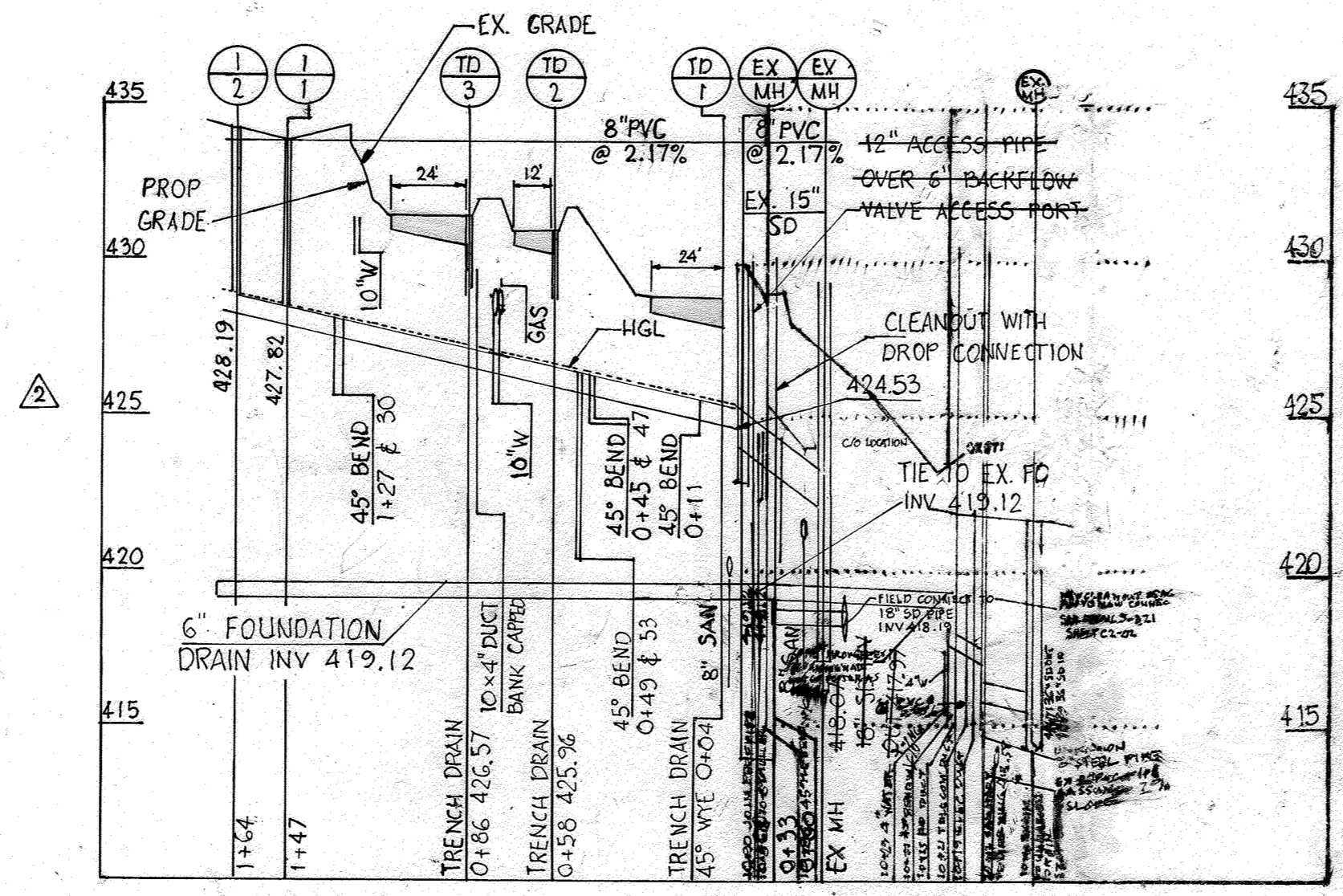
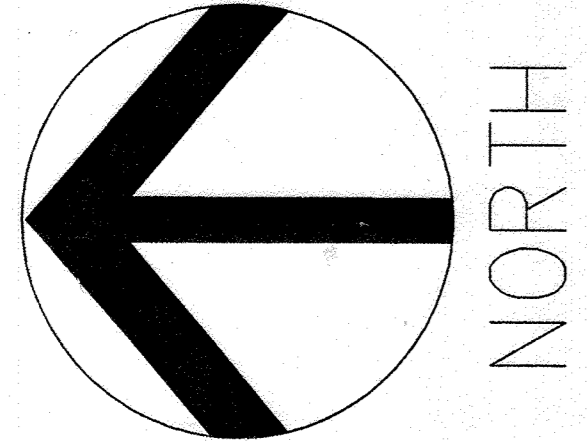
SDP-A2-08



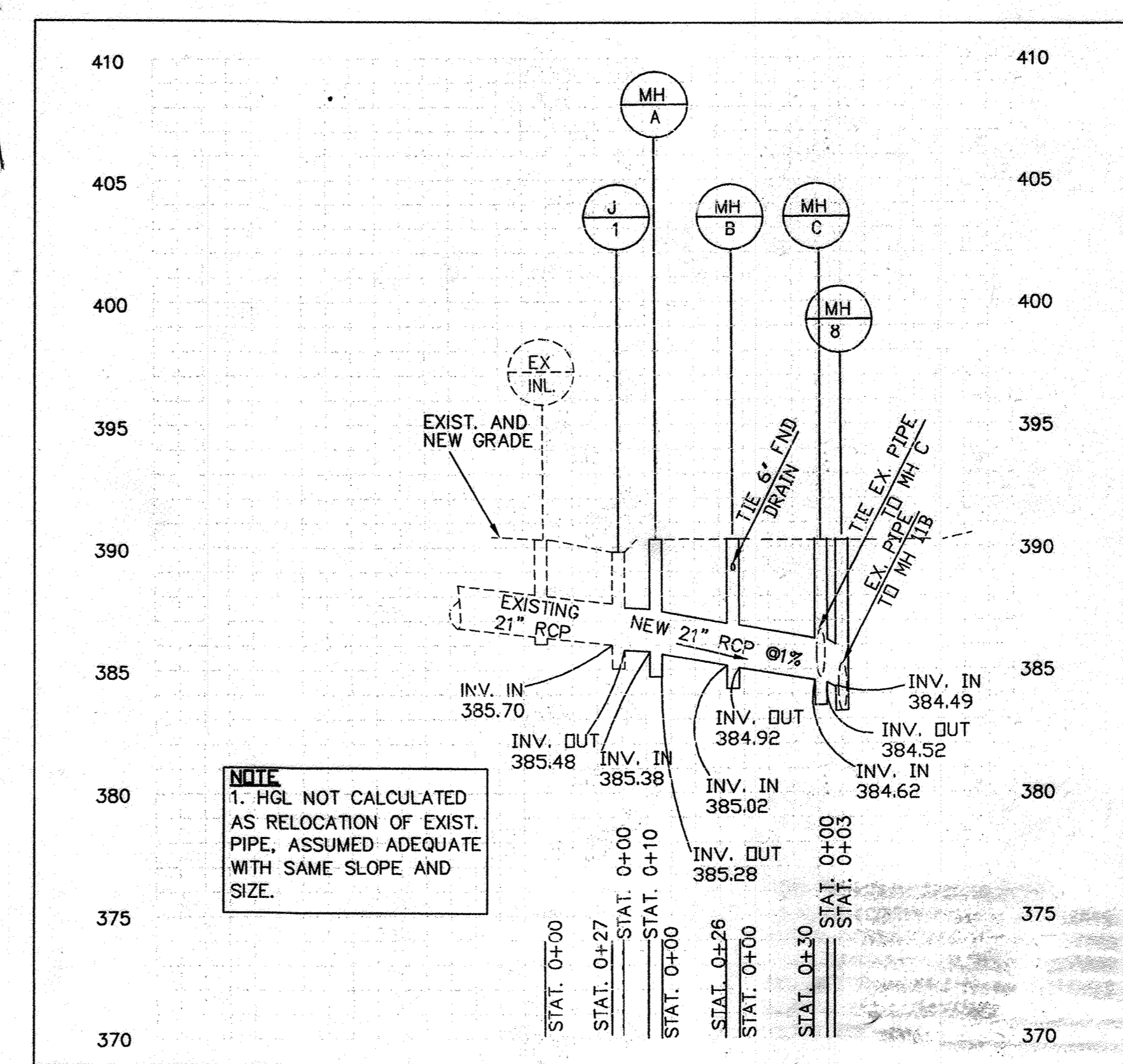
1 STORM DRAINAGE PLAN (J)  
SCALE: HORIZ. 1"=50'



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

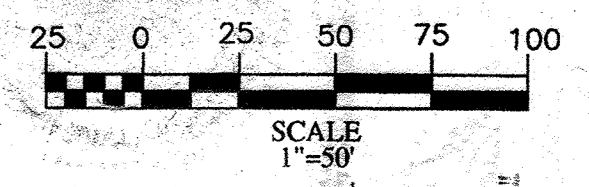
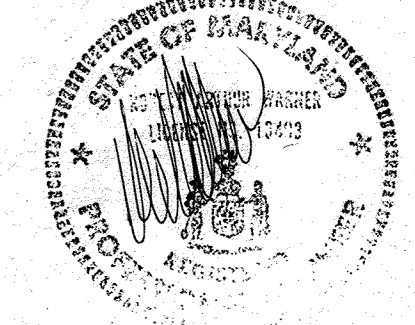
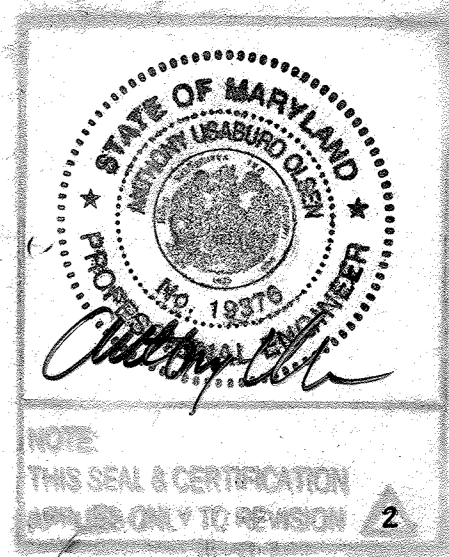


4 STORM DRAINAGE PROFILE  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'

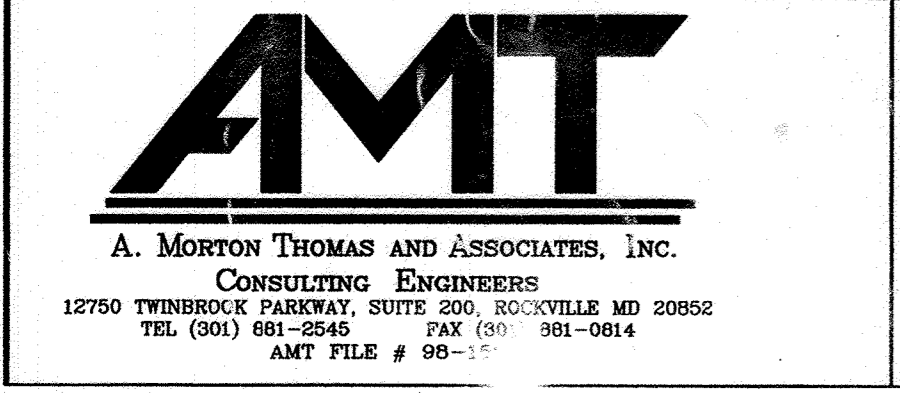


3 STORM DRAINAGE PROFILE  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED OR APPROVED BY ME, AND  
THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF  
MARYLAND. LICENSE NO. 19376  
EXPIRES IN DATE: SEPTEMBER 22, 2021



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mr. Cummings* 5/21/02  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*Kat Sheehy* 6/30/02  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Logan Smith* 6/11/02  
DIRECTOR



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
WASHINGTON, D.C. 20007 (202) 471-5000  
DES: JELLA KASPA  
DRN: P. FRIAS  
CHK: B. WARNER  
DATE: 04/12/2002

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

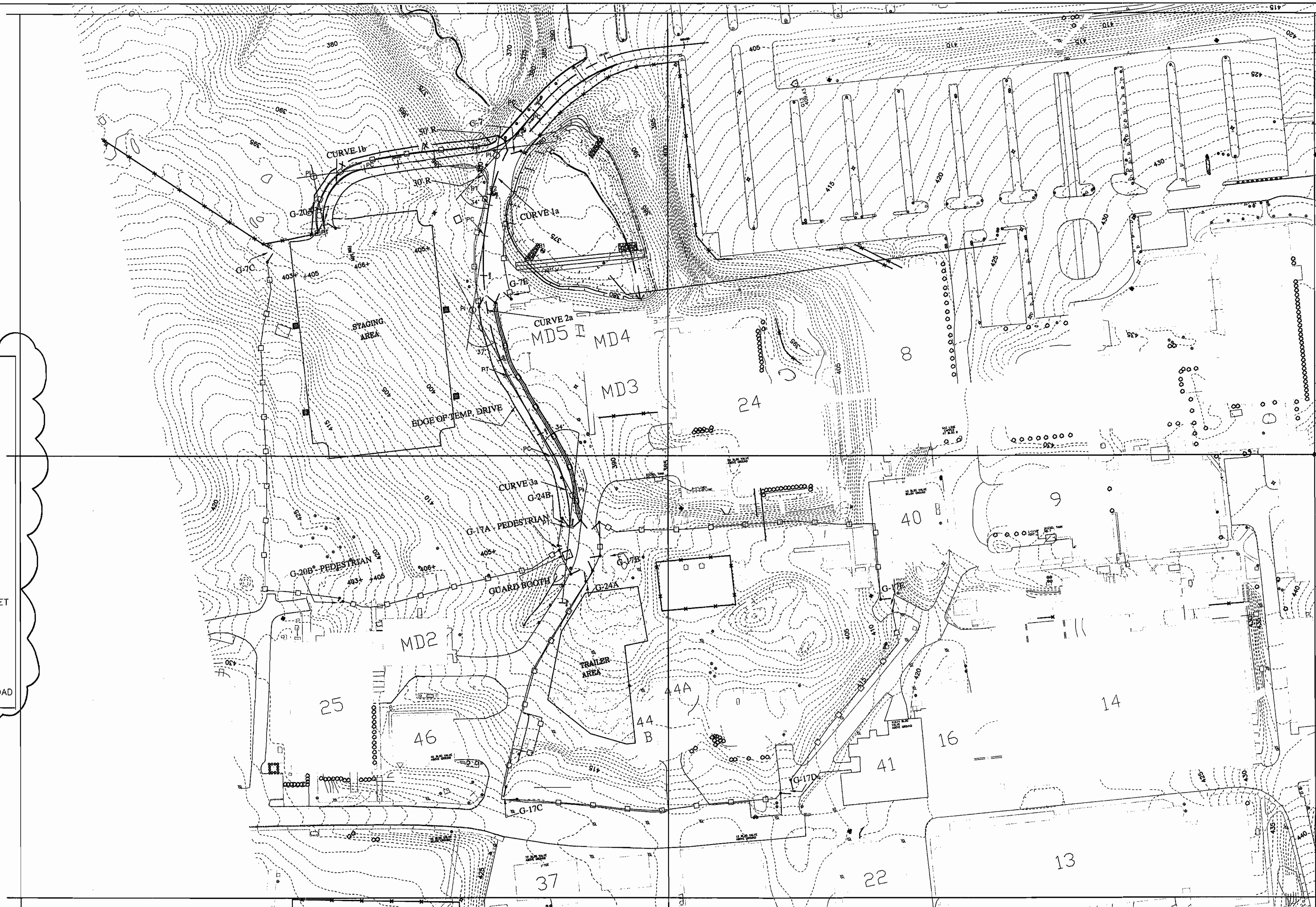
SANNER ROAD  
JOHNS HOPKINS RD.  
SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**  
REVISION:  
1. ADD SD, CROSSING, ELEC DUCT, SS, CW/HW  
2. STORM DRAINS ADDED  
3. REV. FOUNDATION DRAIN OUTFALL REVERSED & GAS LINE  
DATE: 03/25/02 06/21

APPLIED PHYSICS LABORATORY  
THE JOHNS HOPKINS UNIVERSITY  
STORM DRAINAGE PROFILES (J)  
PARCEL 1  
TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND  
SCALE AS SHOWN  
APL SHEET NO. CD-4  
COUNTY SHEET NO. C-28

SDP-02-88

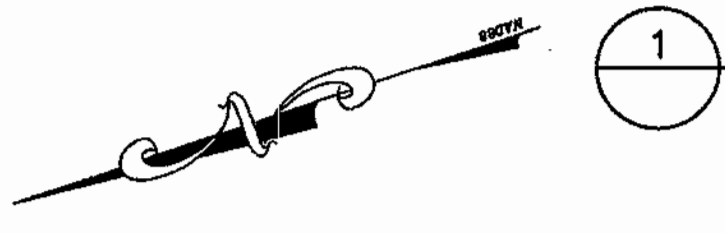




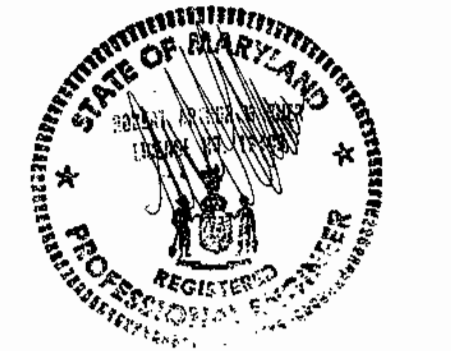
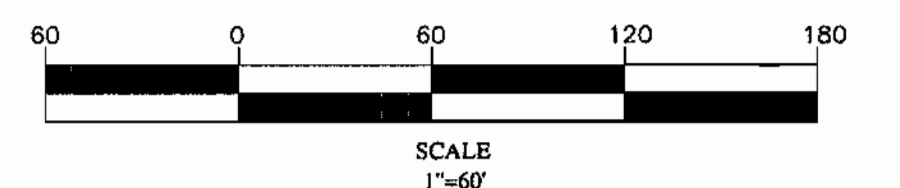
**LEGEND**

- EXISTING CONTOUR
- NEW FENCE
- TEMPORARY FENCE
- EXISTING FENCE
- PROPOSED GATES
- LIMITS OF TEMPORARY DRIVE
- PROPOSED STORM DRAIN INLET
- EXISTING STREAM
- EX. BUILDING
- EX. TREES
- CENTERLINE OF PROPOSED ROAD

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 6/14/02  
 DIRECTOR



1 FENCE STAGING AREA & ROAD LAYOUT D/E/I/J  
 SCALE: 1"=60'



**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE, MD 20852  
 TEL (301) 881-2540 FAX (301) 881-0814  
 AMT FILE # 99

Einhorn  
 Yaffee  
 Prescott

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNER ROAD

JOHNS HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**

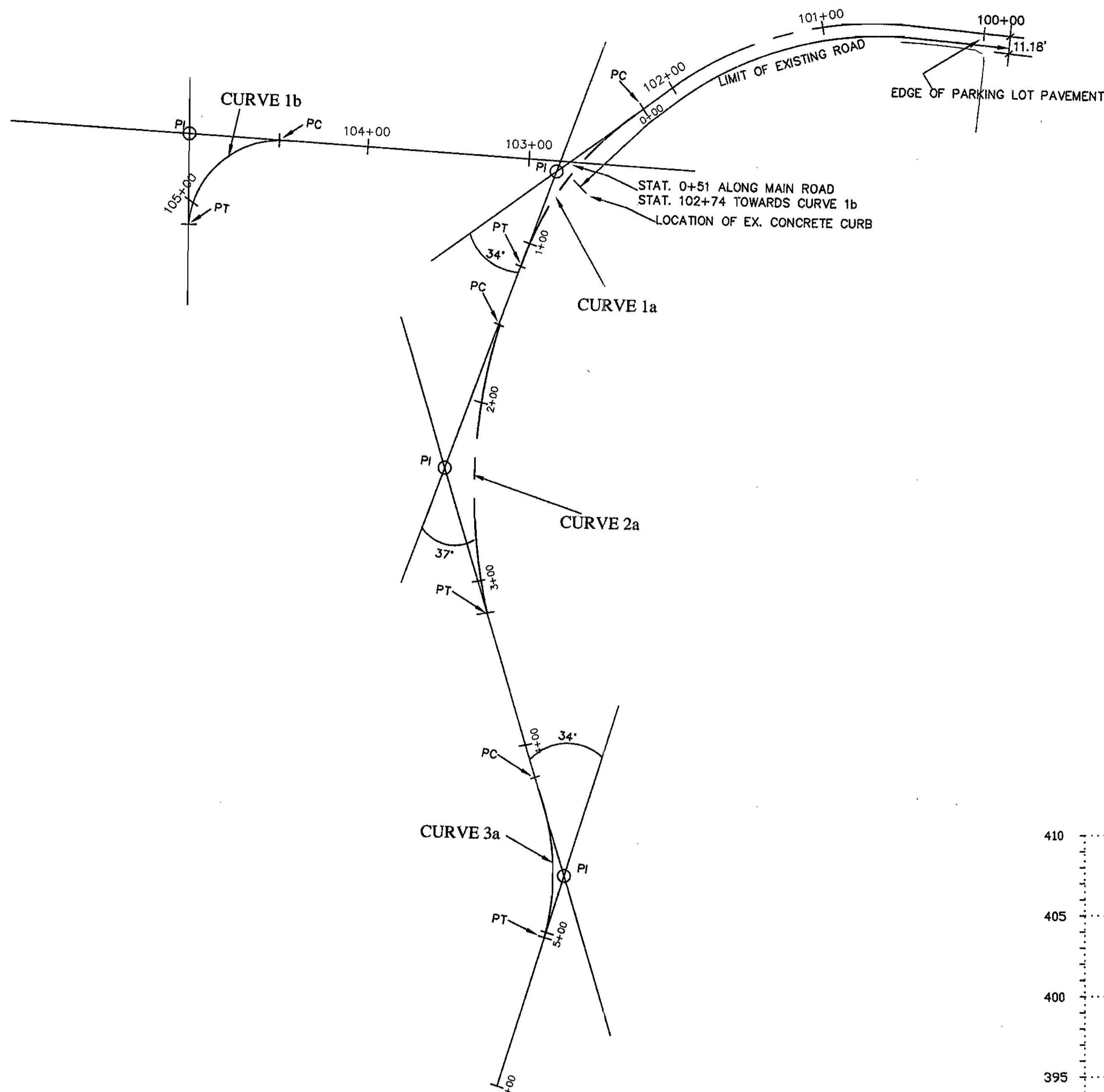
REVISIONS:  
 1. TRIMMED P.V.C. & P.V.T. EXTENSION LINES; ADDED LEGEND  
 2. EX. CONTOUR LINES DASHED

DATE: 03/29/02  
 04/11/02

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 FENCE STAGING AREA & ROAD LAYOUT D/E/I/J

TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

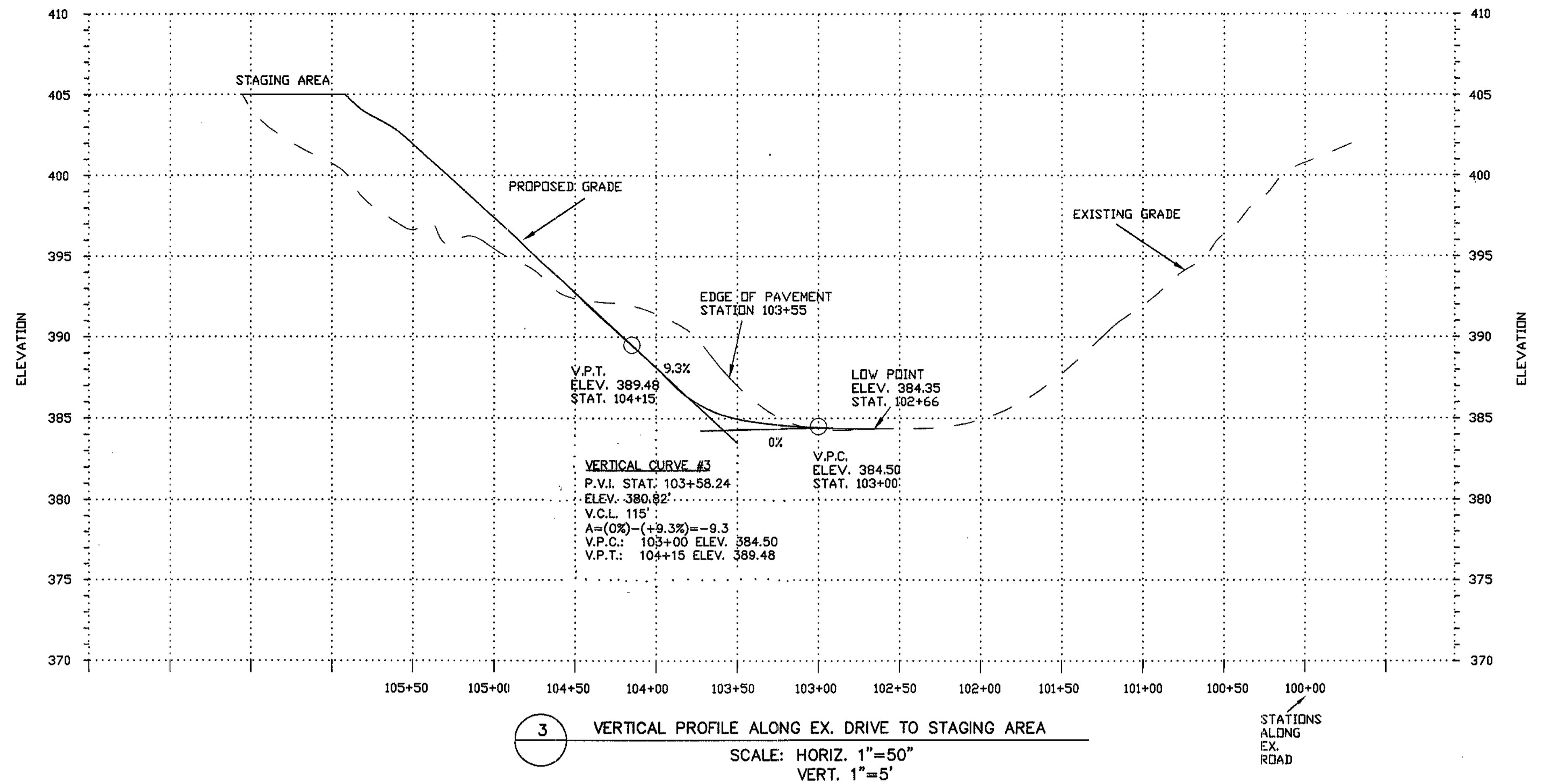
SCALE AS SHOWN  
 APL SHEET NO. CTEM-1  
 COUNTY SHEET NO. C-30



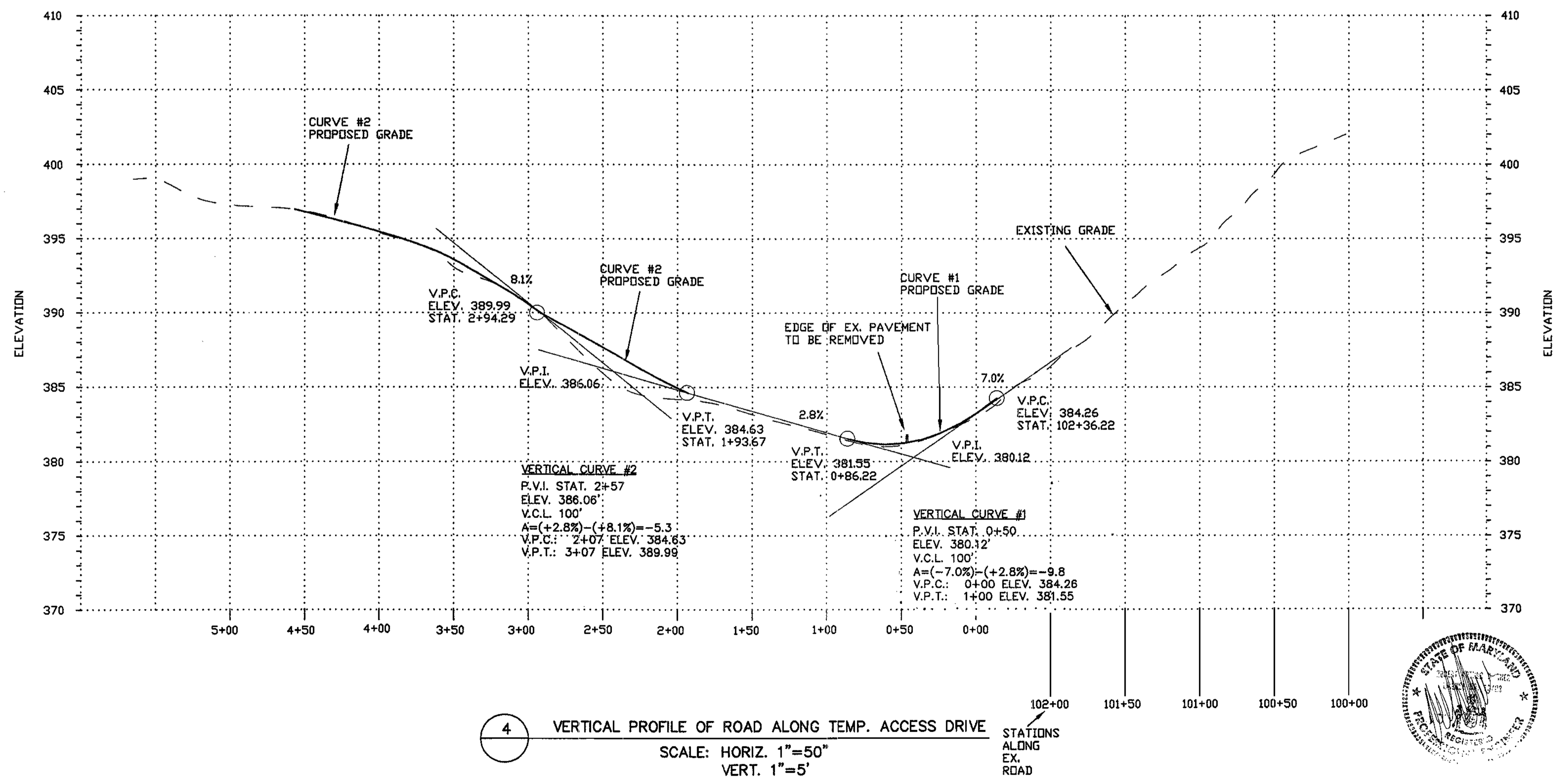
1 HORIZONTAL CENTERLINE LAYOUT OF TEMPORARY STONE DRIVE  
SCALE: 1"=50'

	CURVE 1a	CURVE 2a	CURVE 3a	CURVE 1b
PI	0+62.7	2+38	4+73	104+75
Δ	34°	37°	34°	86°
T	62.7'	100.4'	45.9'	55.9'
L.C.	119.9'	190.4'	87.7'	81.8'
M	8.9'	15.5'	6.55'	16.1'
E	9.4'	16.3'	6.9'	22.0'
D	27.9'	19.1'	38.2'	95.5'
L	121.6'	193.7'	89.0'	90.1'
B.C.	0+00	1+37.6	4+27.1	104+19.1
E.C.	1+21.6	3+31.3	5+16.1	105+9.2

2 HORIZONTAL CENTERLINE LAYOUT OF TEMPORARY STONE DRIVE

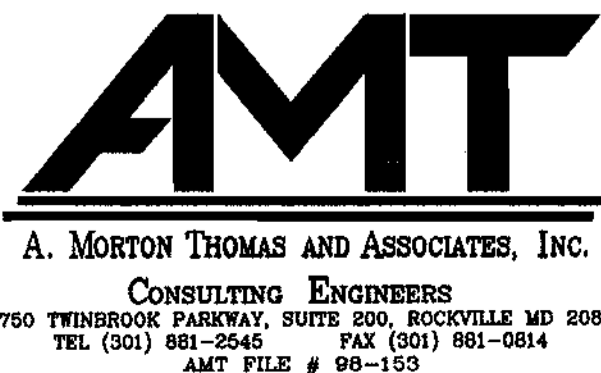
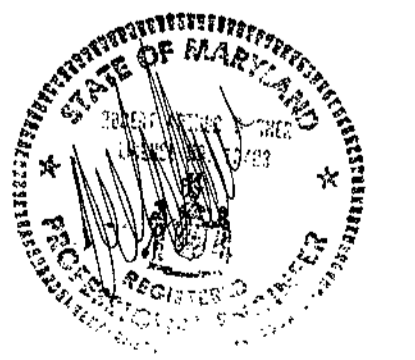


3 VERTICAL PROFILE ALONG EX. DRIVE TO STAGING AREA  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'



4 VERTICAL PROFILE OF ROAD ALONG TEMP. ACCESS DRIVE  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'

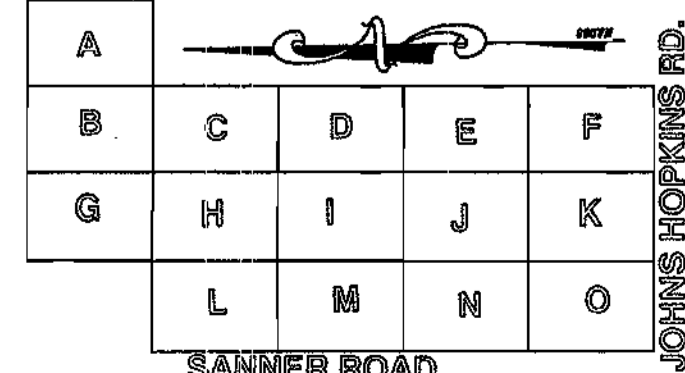
APPROVED: [Signature] 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 6/14/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: P. FRIAS  
 CHK: S. ITANI  
 DATE: 03/01/02



SHEET ORGANIZATION KEY PLAN

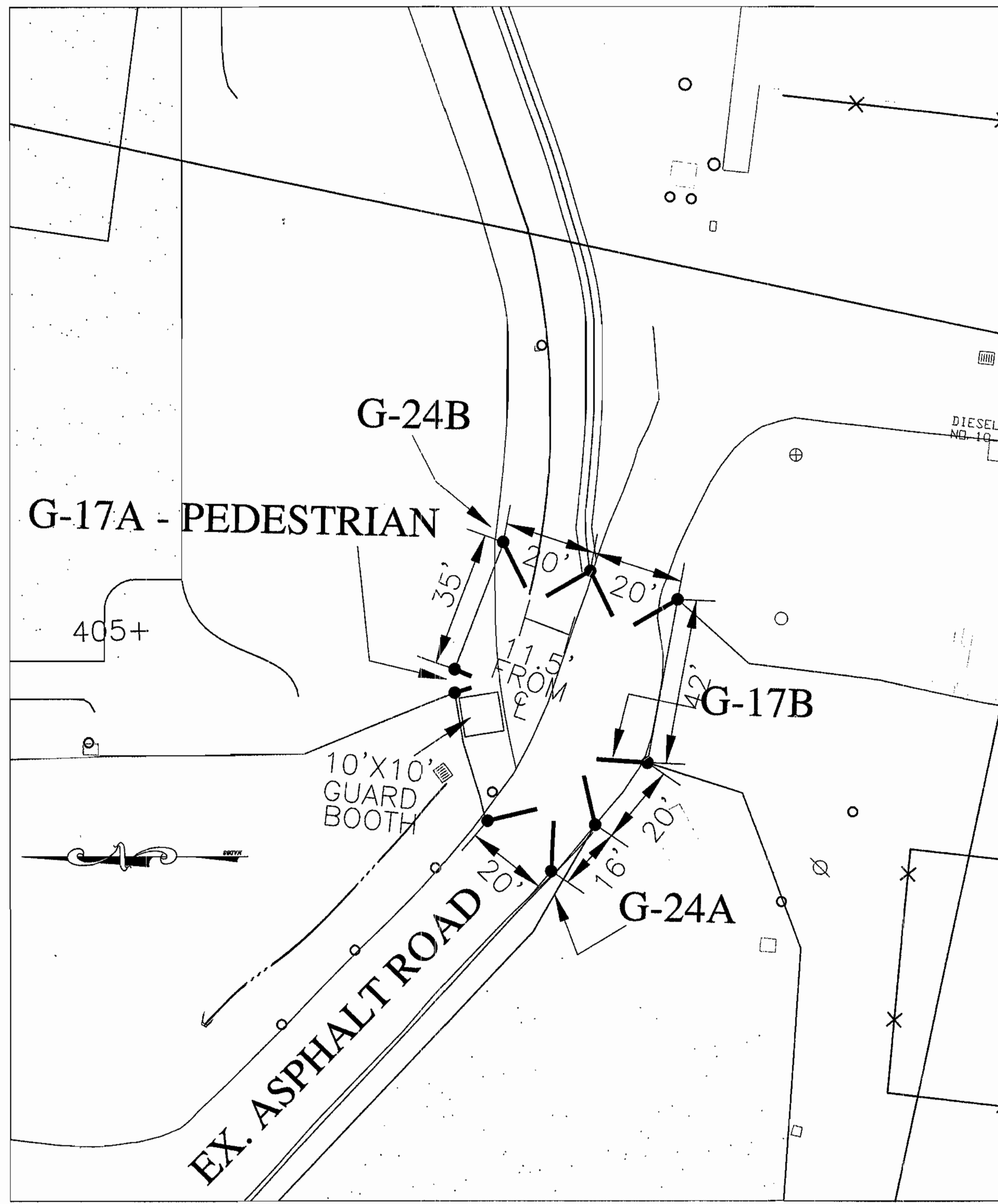
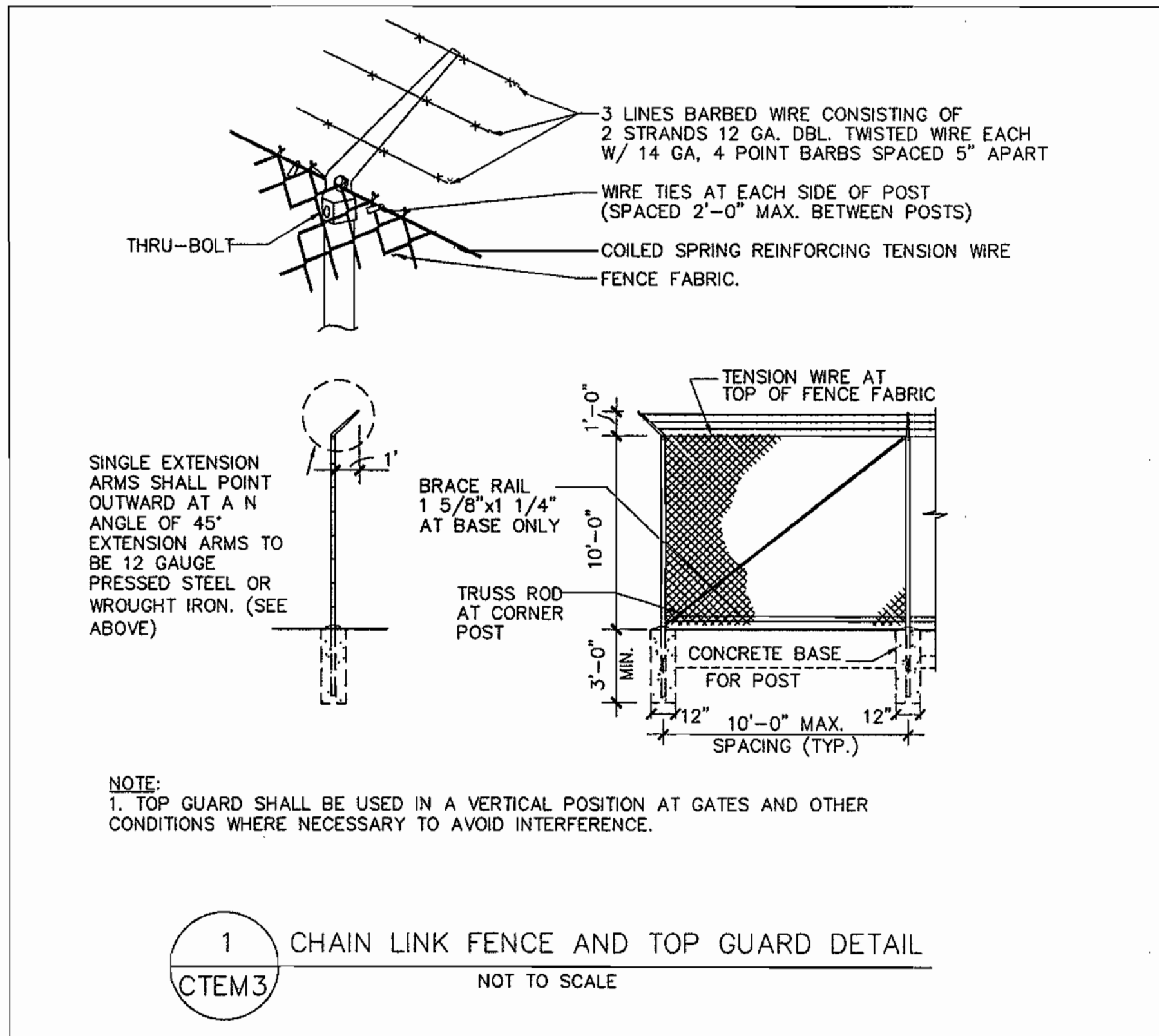
SITE GRADING AND UTILITIES

REVISIONS:  
 1. ADDITION OF VERTICAL CURVE CALCULATIONS;  
 REVISIONS TO VERTICAL CURVE CALCULATIONS

DATE  
 03/25/02

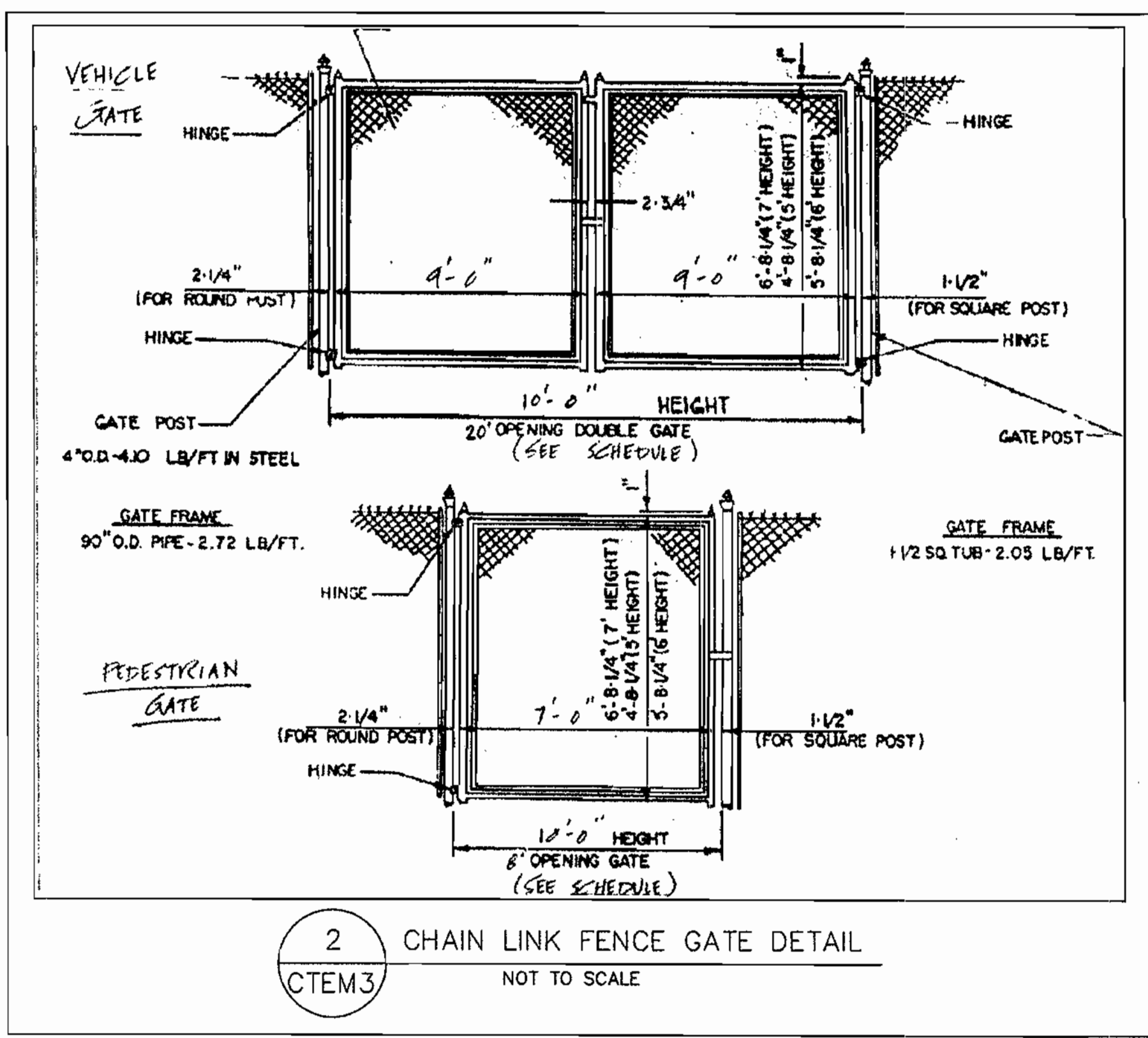
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 TEMP. DRIVE PLAN / PROFILE  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO.  
 CTEM-2  
 COUNTY SHEET NO.  
 C-31

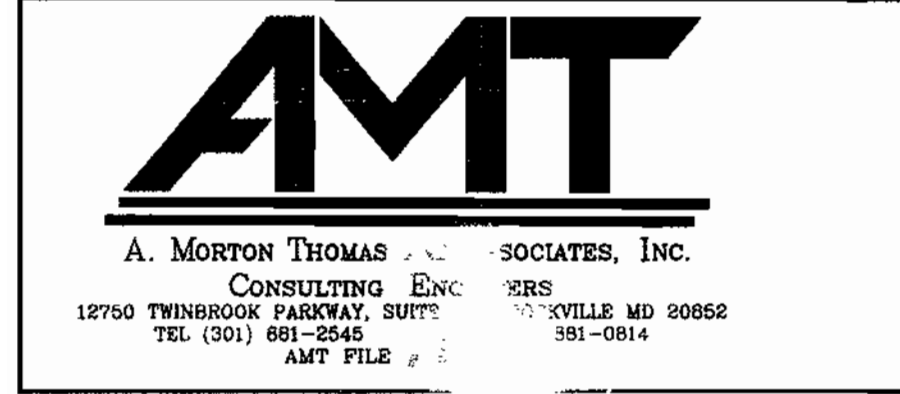


GATE	TYPE	OPENING WIDTH	HEIGHT
G-24B	VEHICLE	20'	10'-0"
G-17B	VEHICLE	20'	10'-0"
G-24A	VEHICLE	20'	10'-0"
G-17A	PEDESTRIAN	8'	10'-0"

4 GATE SCHEDULE  
CTEM3



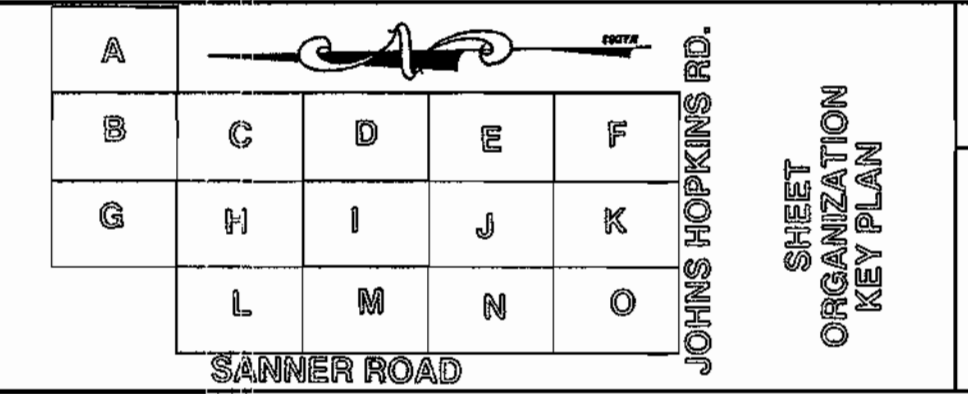
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK DATE 5/31/02  
 CHIEF DIVISION OF LAND DEVELOPMENT DATE 6/3/02  
 DIRECTOR DATE 6/14/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: P. FRIAS  
 CHK: S. ITANI  
 DATE: 04/12/02

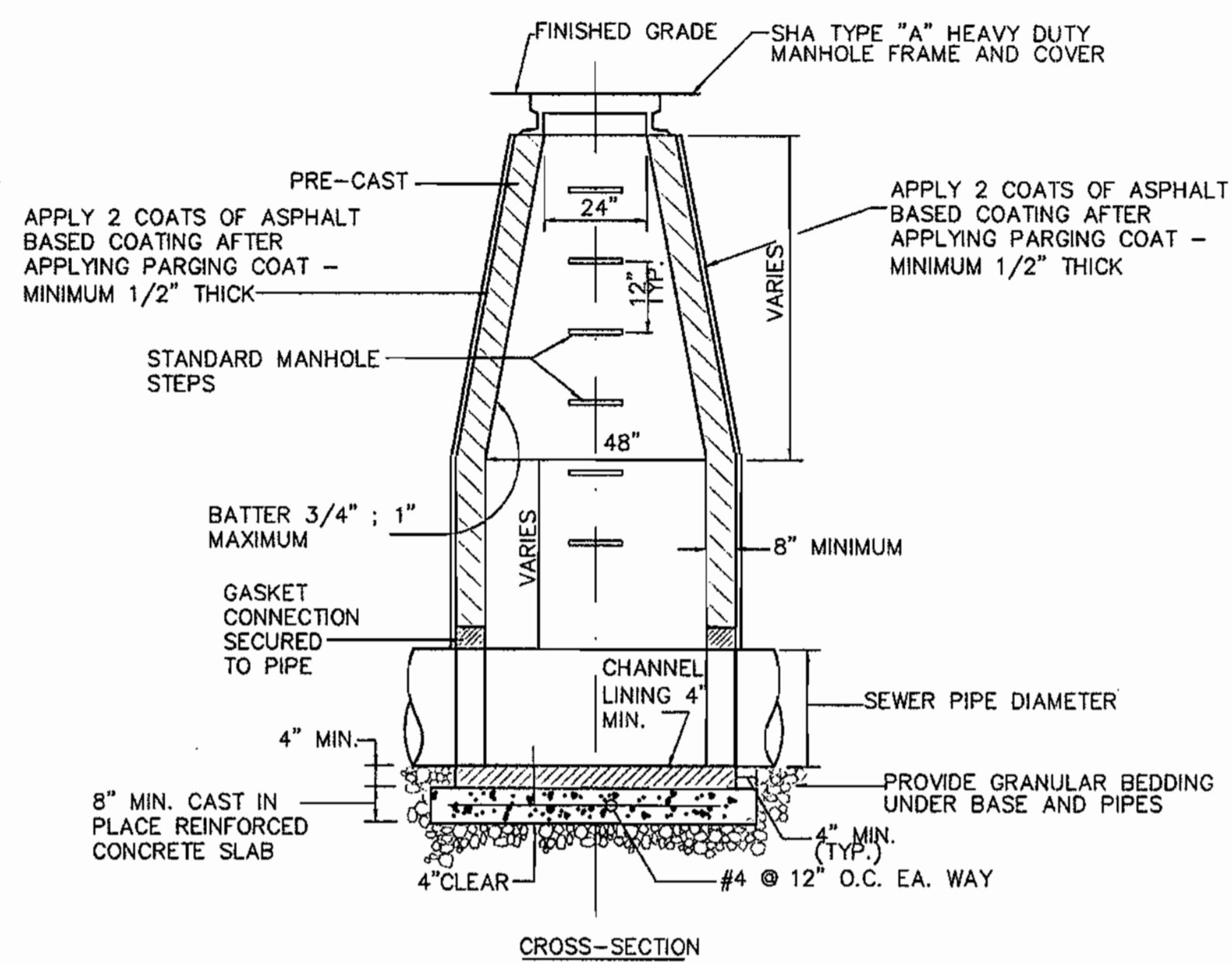


**SITE GRADING AND UTILITIES**

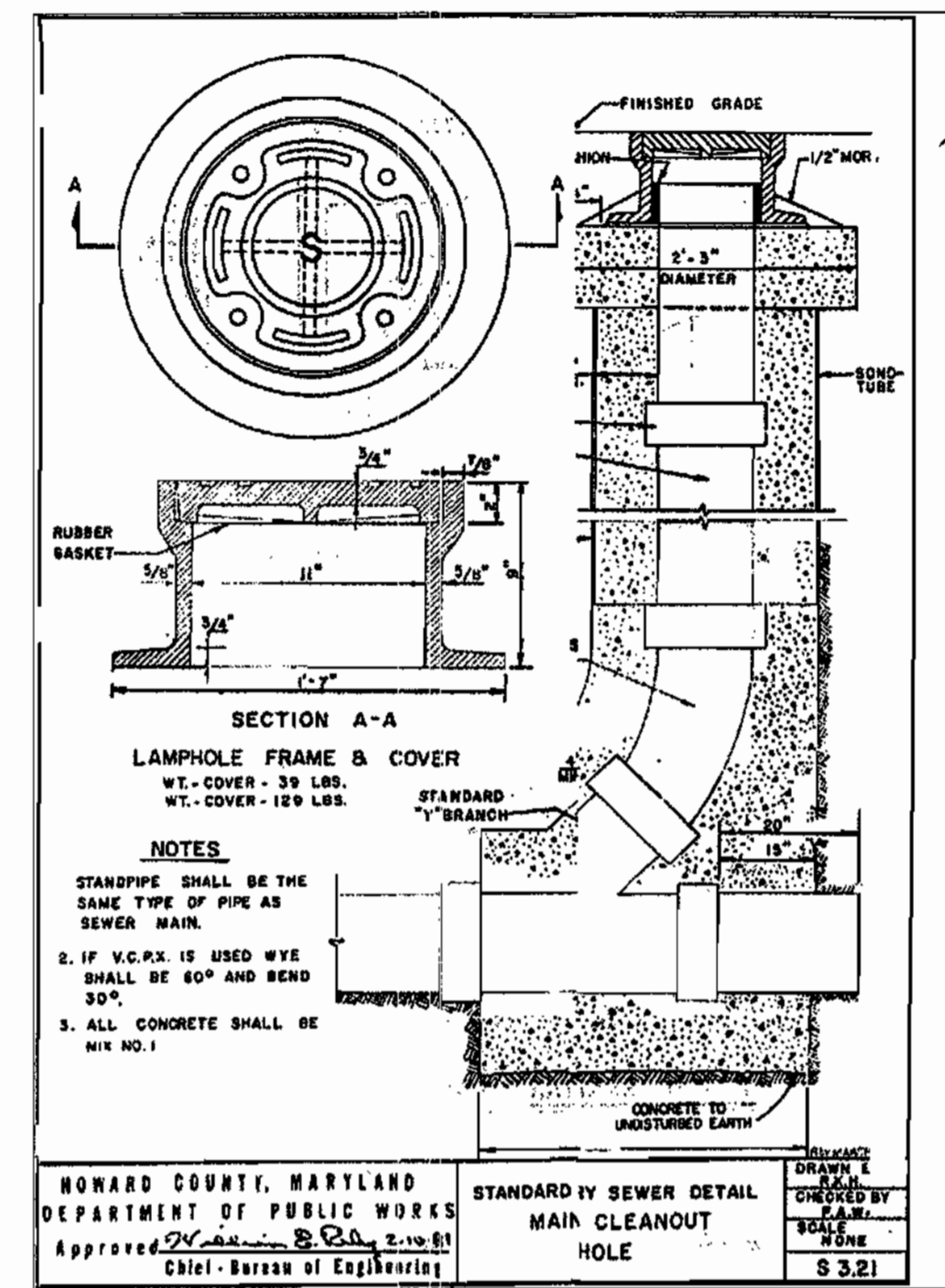
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 TEMPORARY SECURITY  
 FENCE DETAILS  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CTEM-3  
 COUNTY SHEET NO. C-32

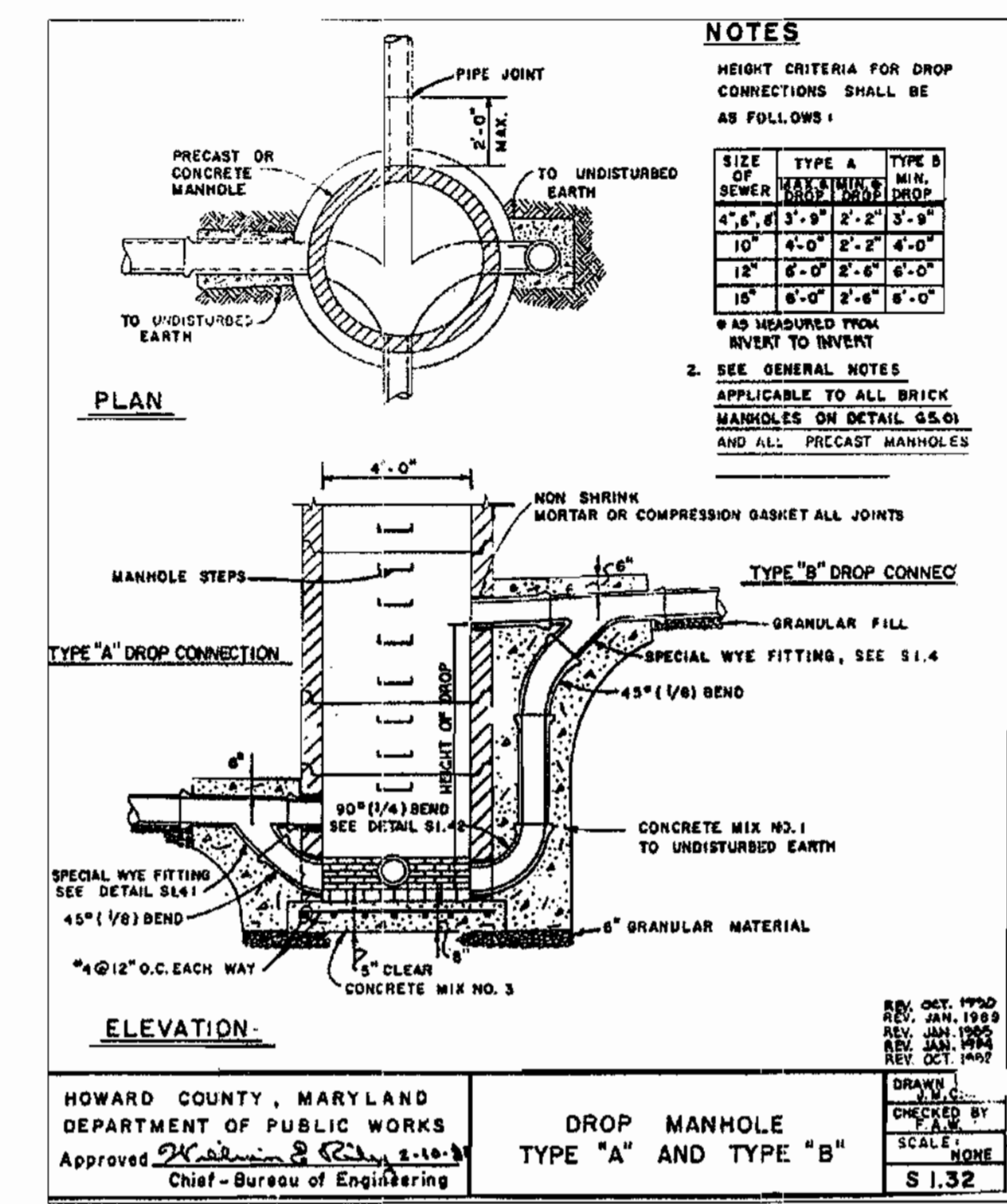




1 STANDARD SANITARY MANHOLE DETAIL  
CSD1 NOT TO SCALE

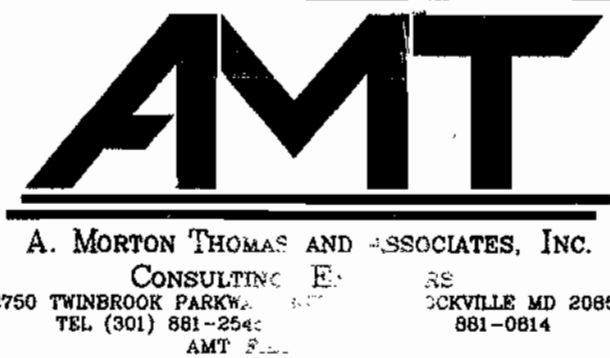


2 STANDARD SANITARY MANHOLE DETAIL  
CSD1 NOT TO SCALE



3 DROP MANHOLE TYPE "A" AND TYPE "B"  
CSD1 NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 DATE: 5/31/02  
 DATE: 6/3/02  
 DATE: 6/14/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: P. FRIAS  
 CHK: S. ITANI  
 DATE: 03/01/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNER ROAD

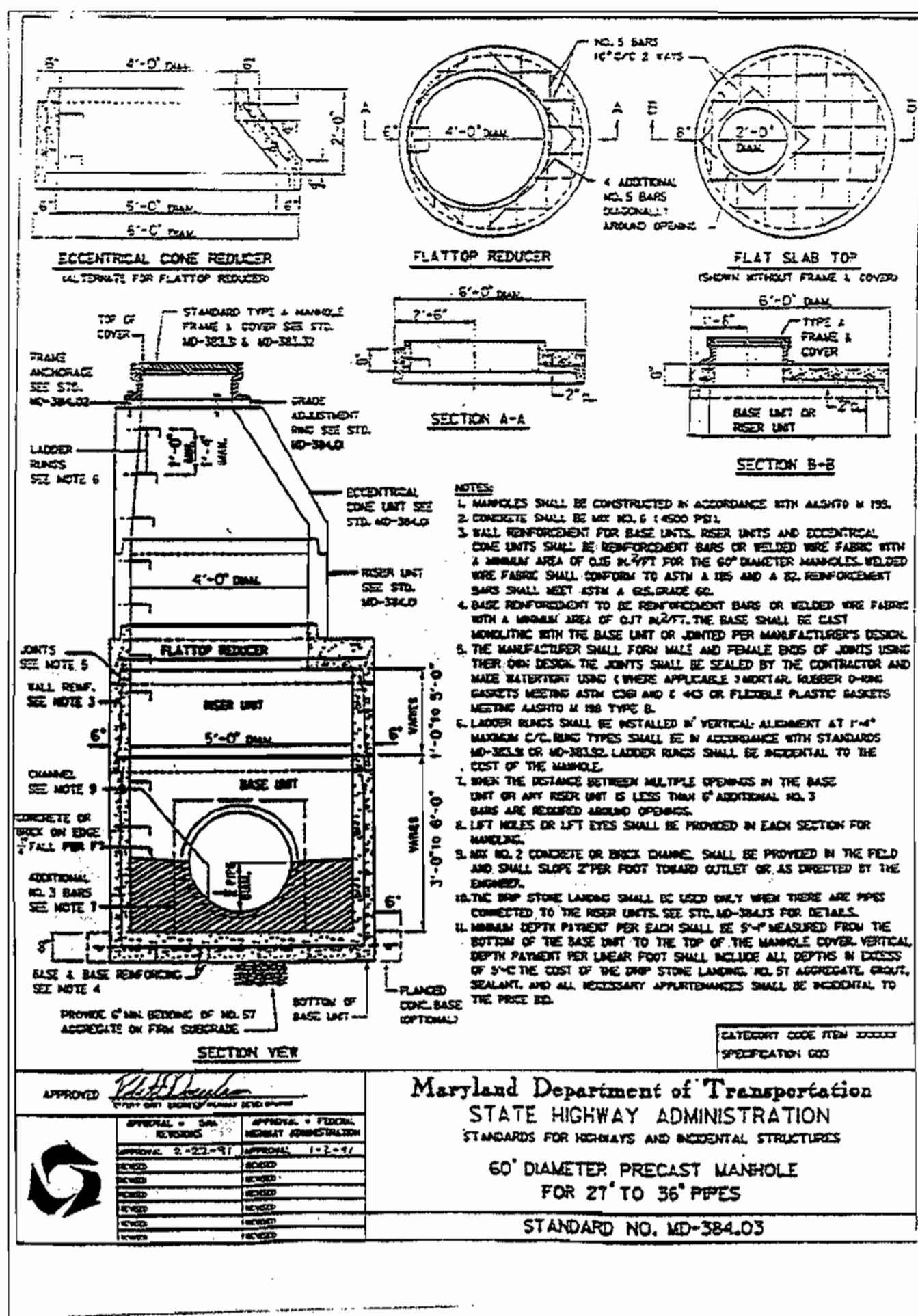
JOHNS HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

SITE GRADING AND UTILITIES  
 REVISIONS:  
 1. REMOVED CLEANOUT COVER ASSEMBLY DETAIL  
 DATE: 03/25/02

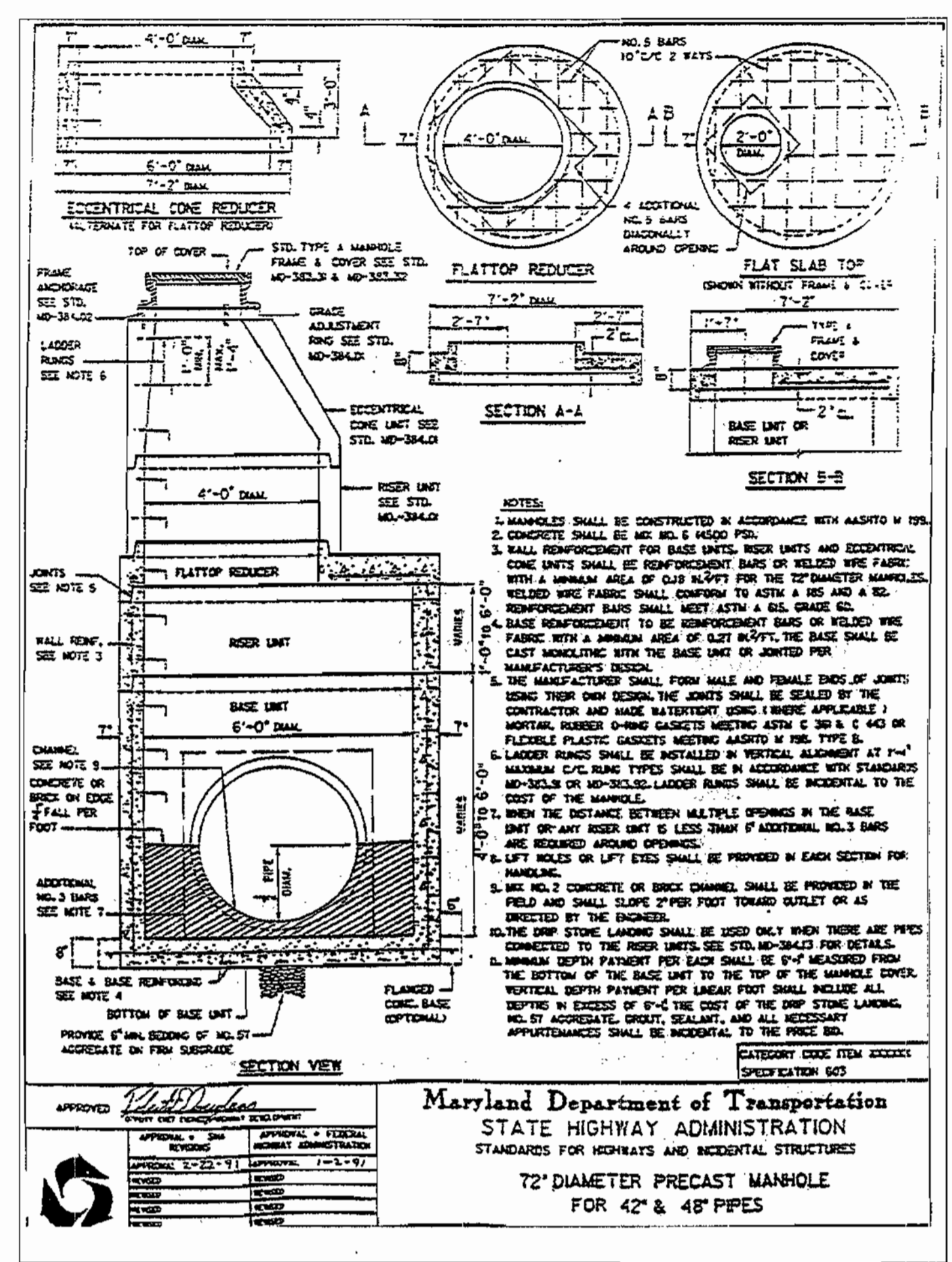
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY  
 SANITARY SEWER DETAILS  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CSD-1  
 COUNTY SHEET NO. C-33

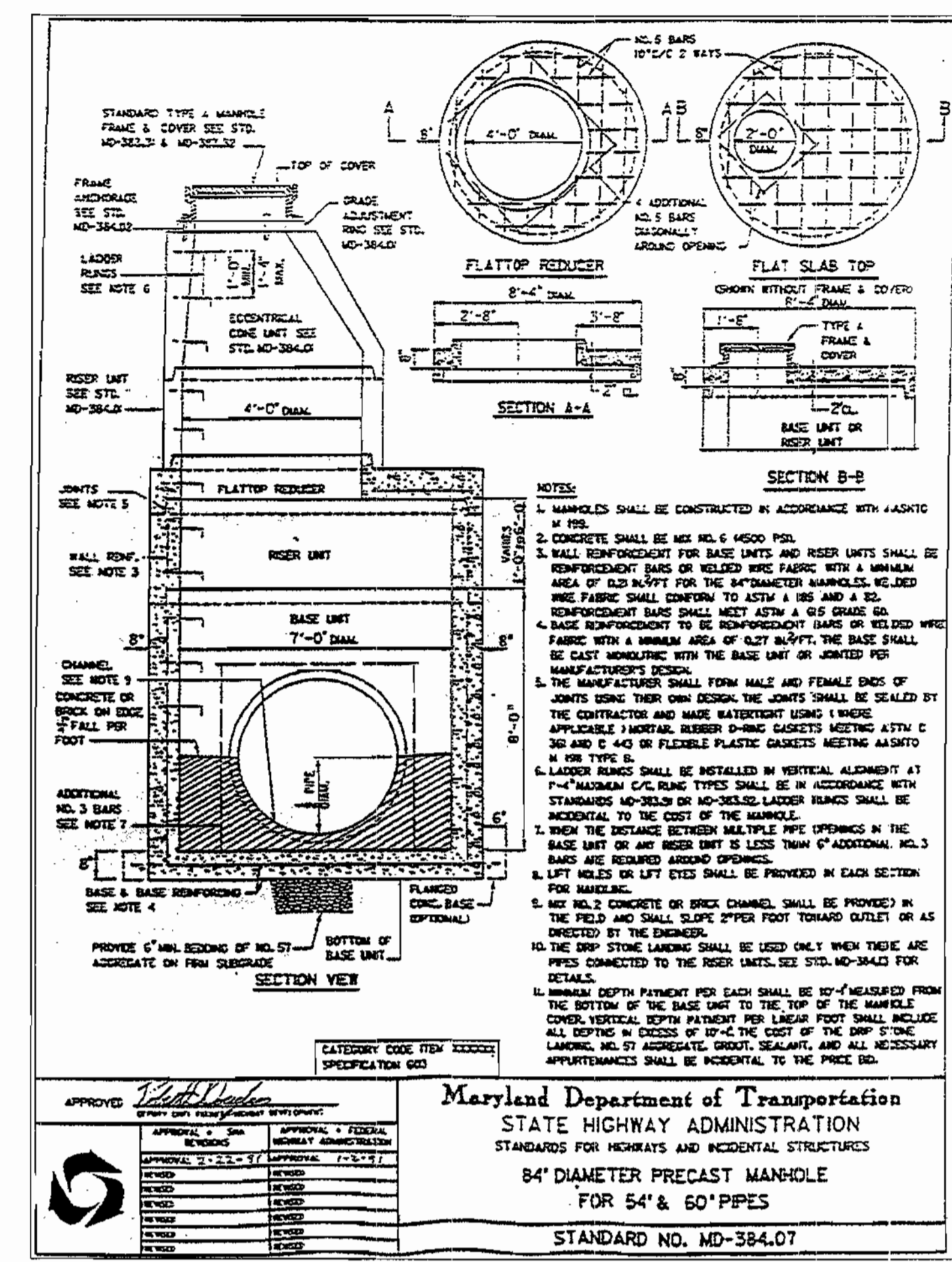
SDP-02-88



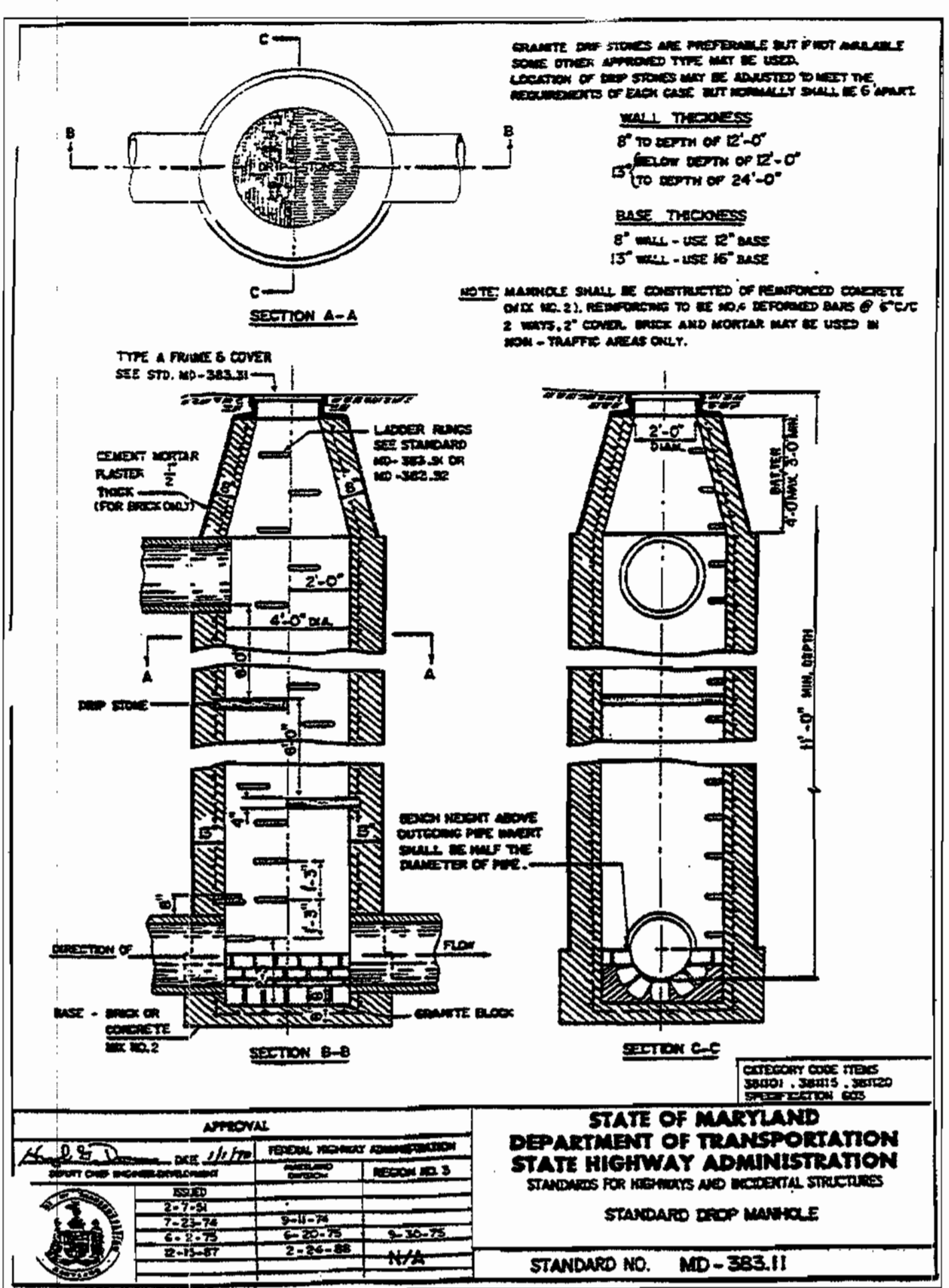
1 60" DIAMETER PRECAST MANHOLE FOR 27" TO 36" PIPES  
CDD1 NOT TO SCALE



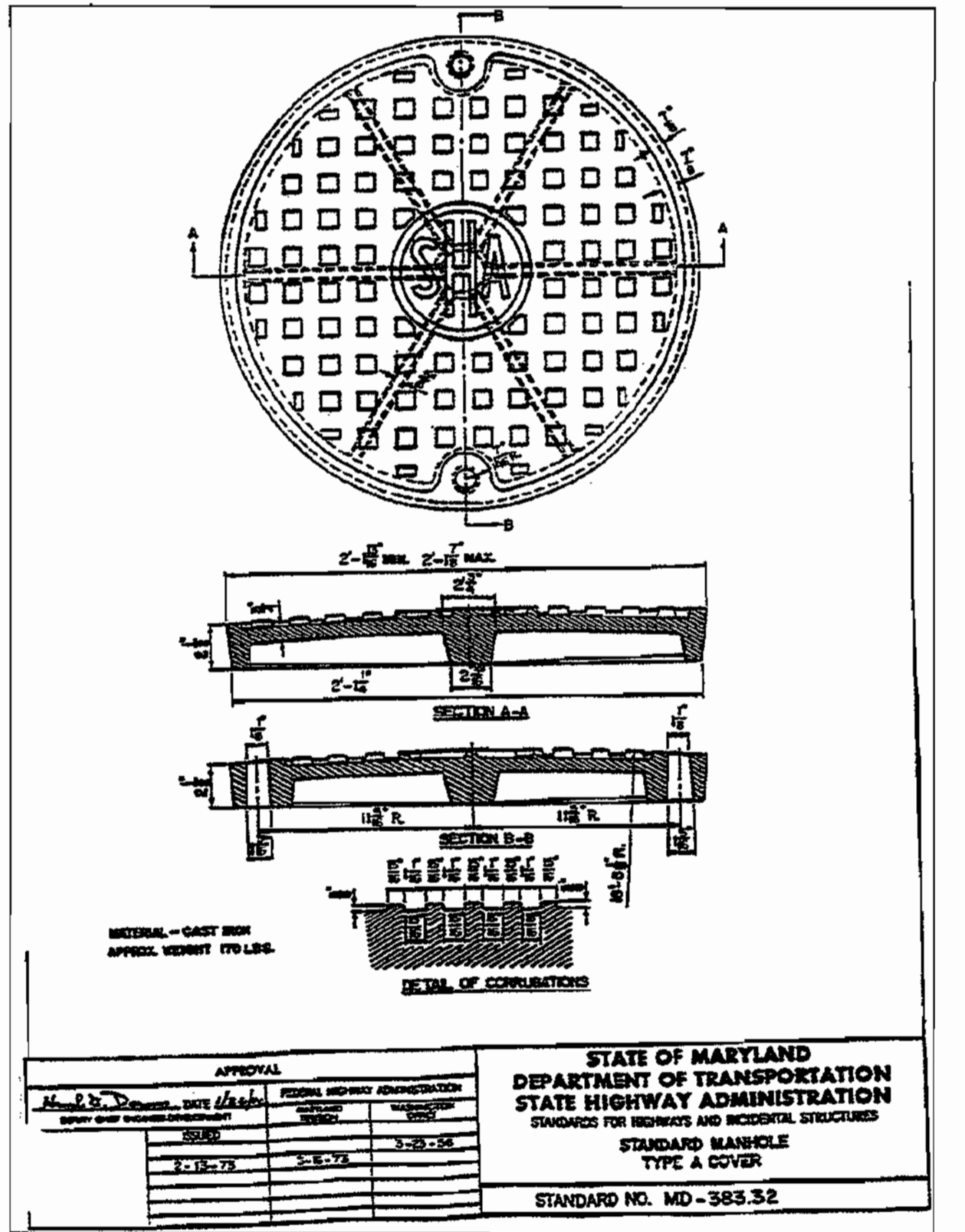
2 72" DIAMETER PRECAST MANHOLE FOR 42" & 48" PIPES  
CDD1 NOT TO SCALE



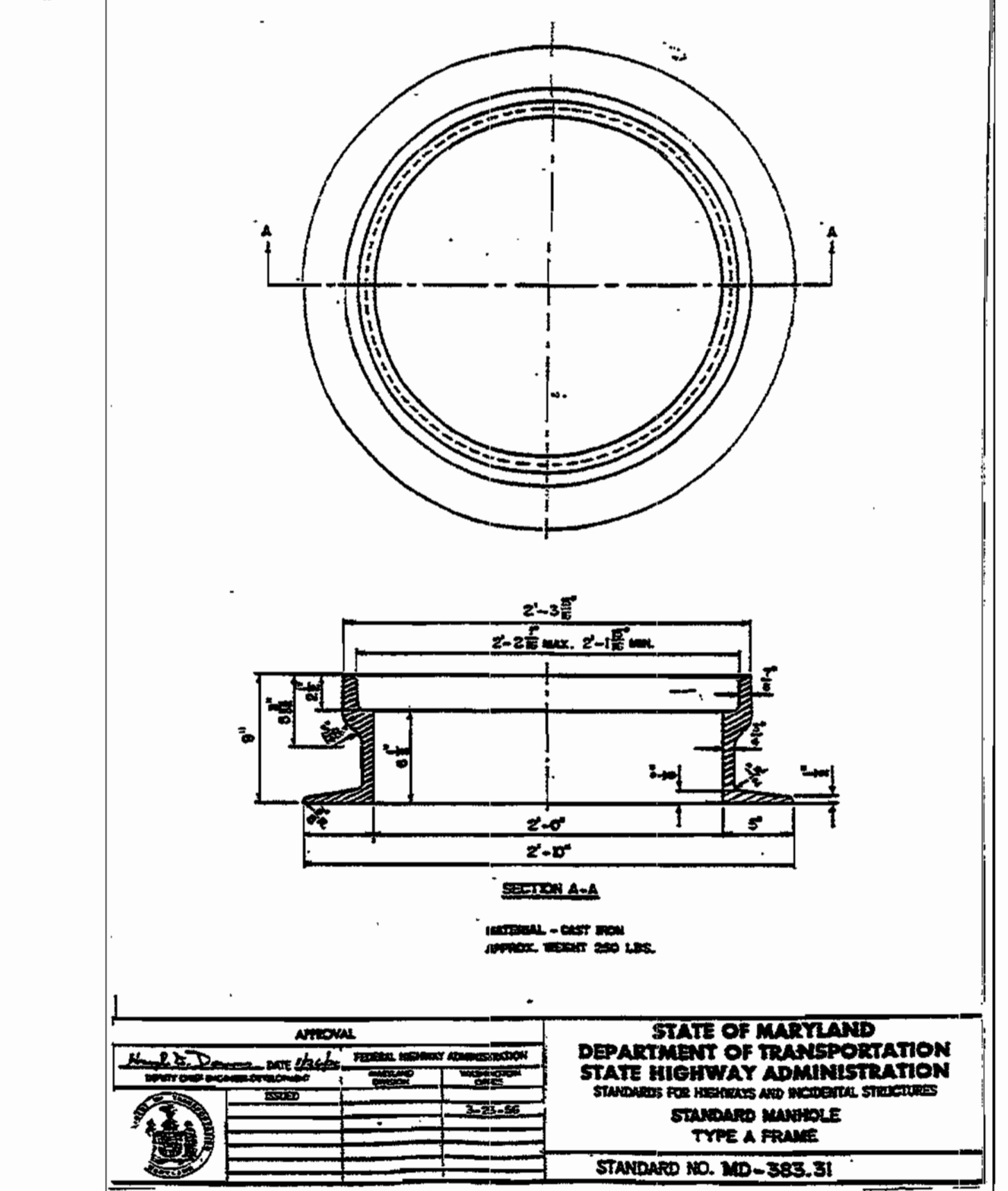
3 84" DIAMETER PRECAST MANHOLE FOR 54" & 60" PIPES  
CDD1 NOT TO SCALE



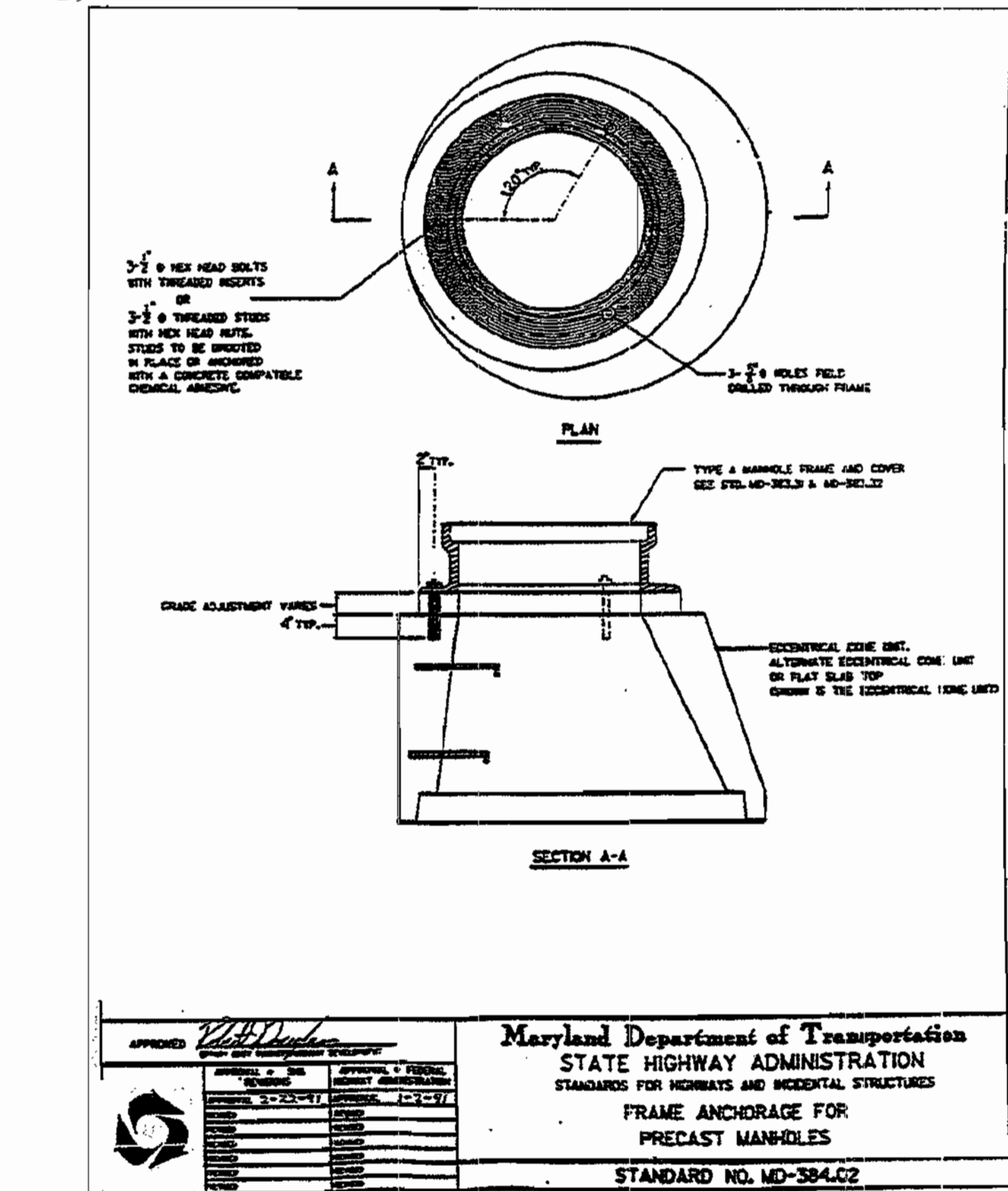
4 STANDARD DROP MANHOLE  
CDD1 NOT TO SCALE



5 STANDARD MANHOLE COVER TYPE A  
CDD1 NOT TO SCALE

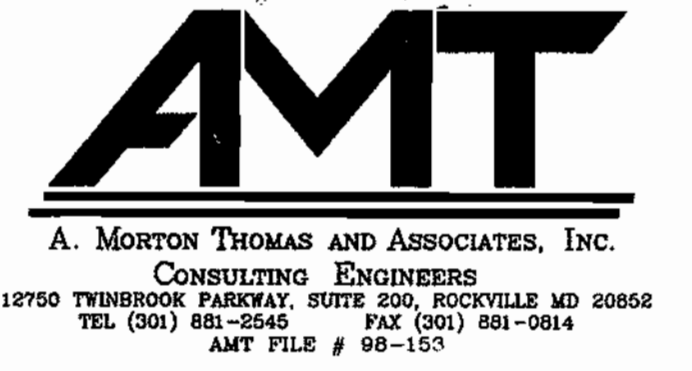


6 STANDARD MANHOLE TYPE A FRAME  
CDD1 NOT TO SCALE



7 FRAME ANCHORAGE FOR PRECAST MANHOLES  
CDD1 NOT TO SCALE

APPROVAL: DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 5/21/02  
 DATE: 6/7/02  
 DATE: 6/11/02



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: P. FRIAS  
 CHK: S. ITANI  
 DATE: 03/01/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SHEET ORGANIZATION KEY PLAN  
 JOHNS HOPKINS RD.

SITE GRADING AND UTILITIES

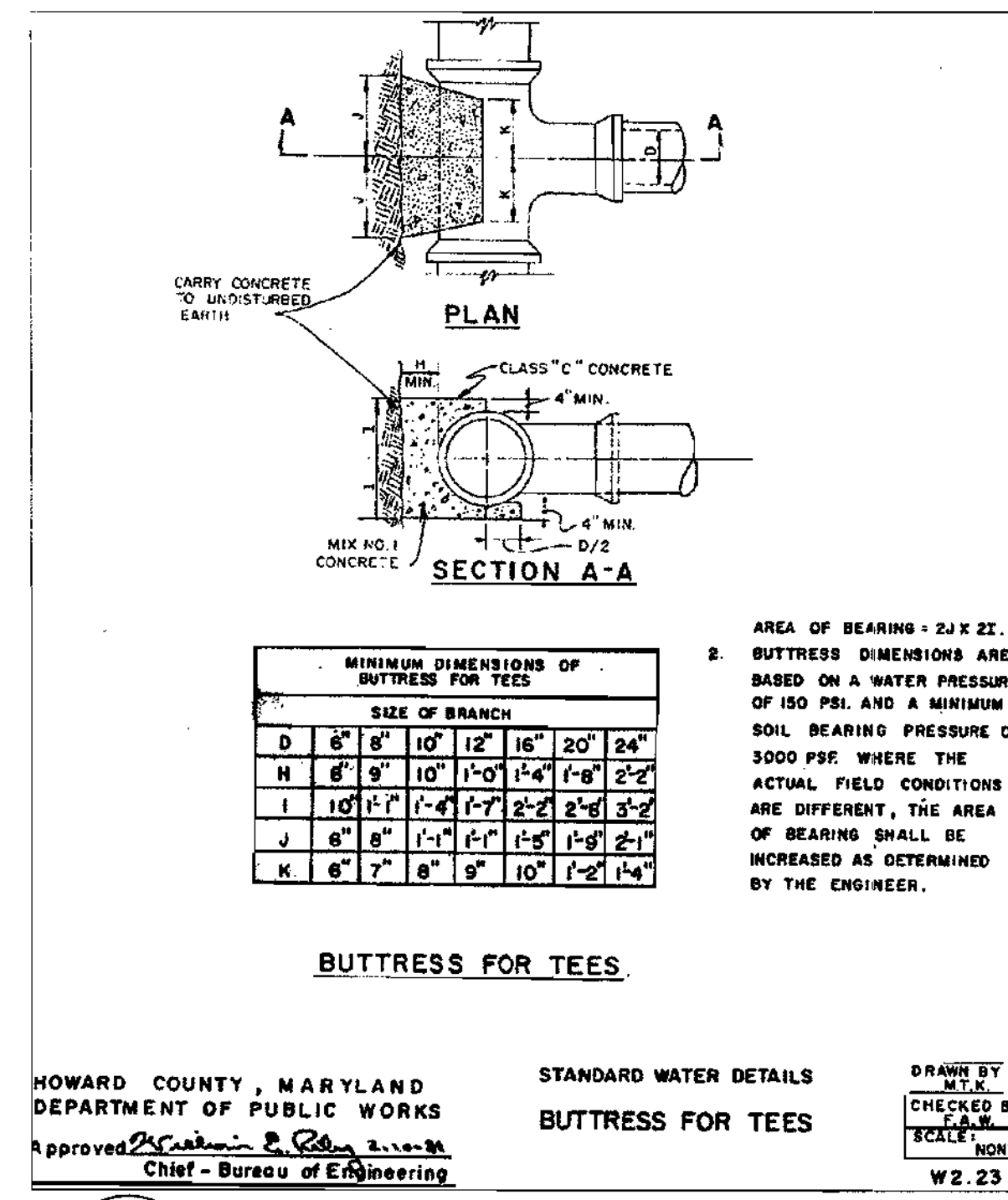
REVISIONS:  
 1. ADDITION OF DETAILS STANDARD MH TYPE A FRAME, FRAME ANCHORAGE DETAIL, & STANDARD MD TYPE A MH COVER

DATE: 03/25/02

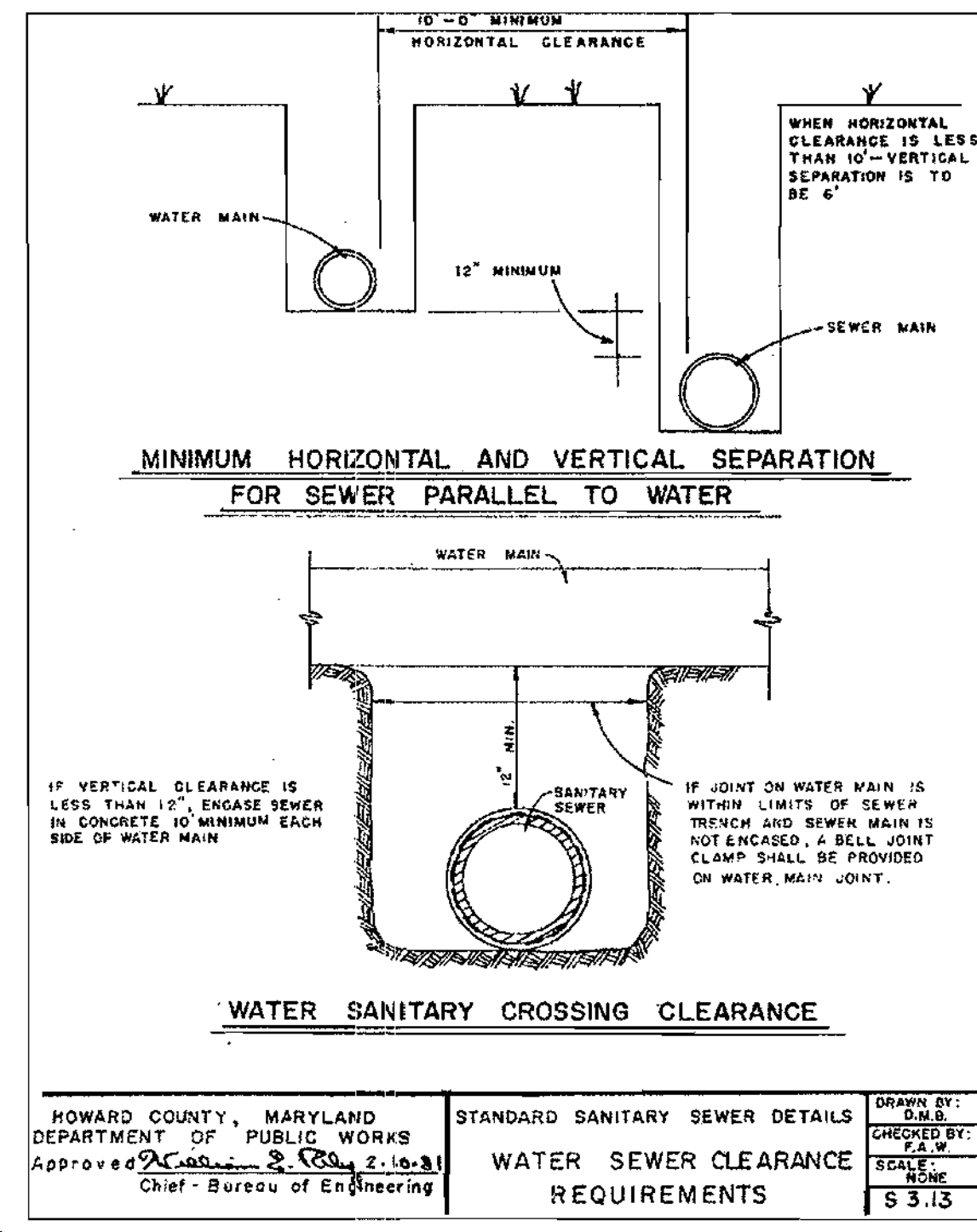
APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY

STORM DRAINAGE DETAILS  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

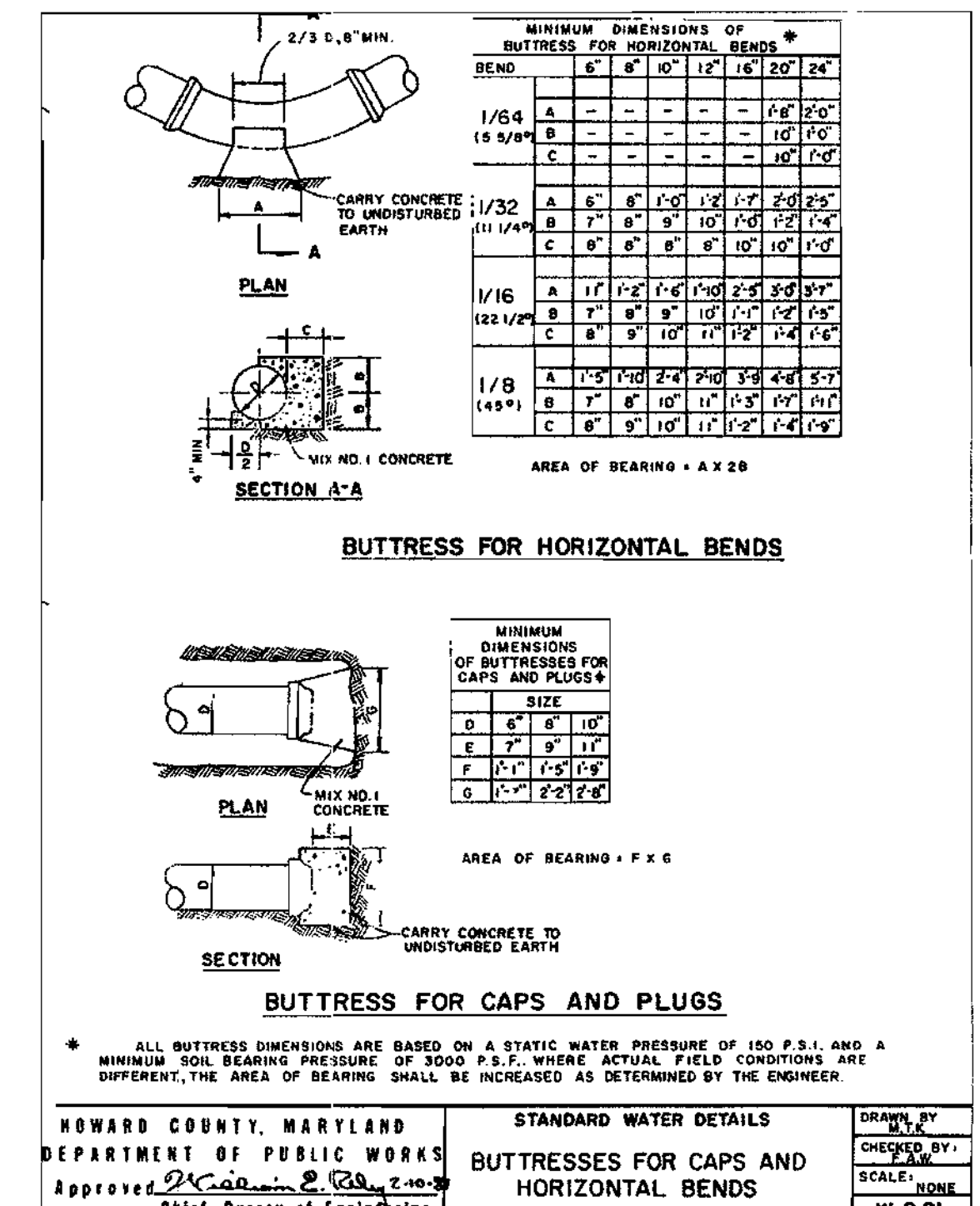
SCALE AS SHOWN  
 APL SHEET NO. CDD-1  
 COUNTY SHEET NO. C-34



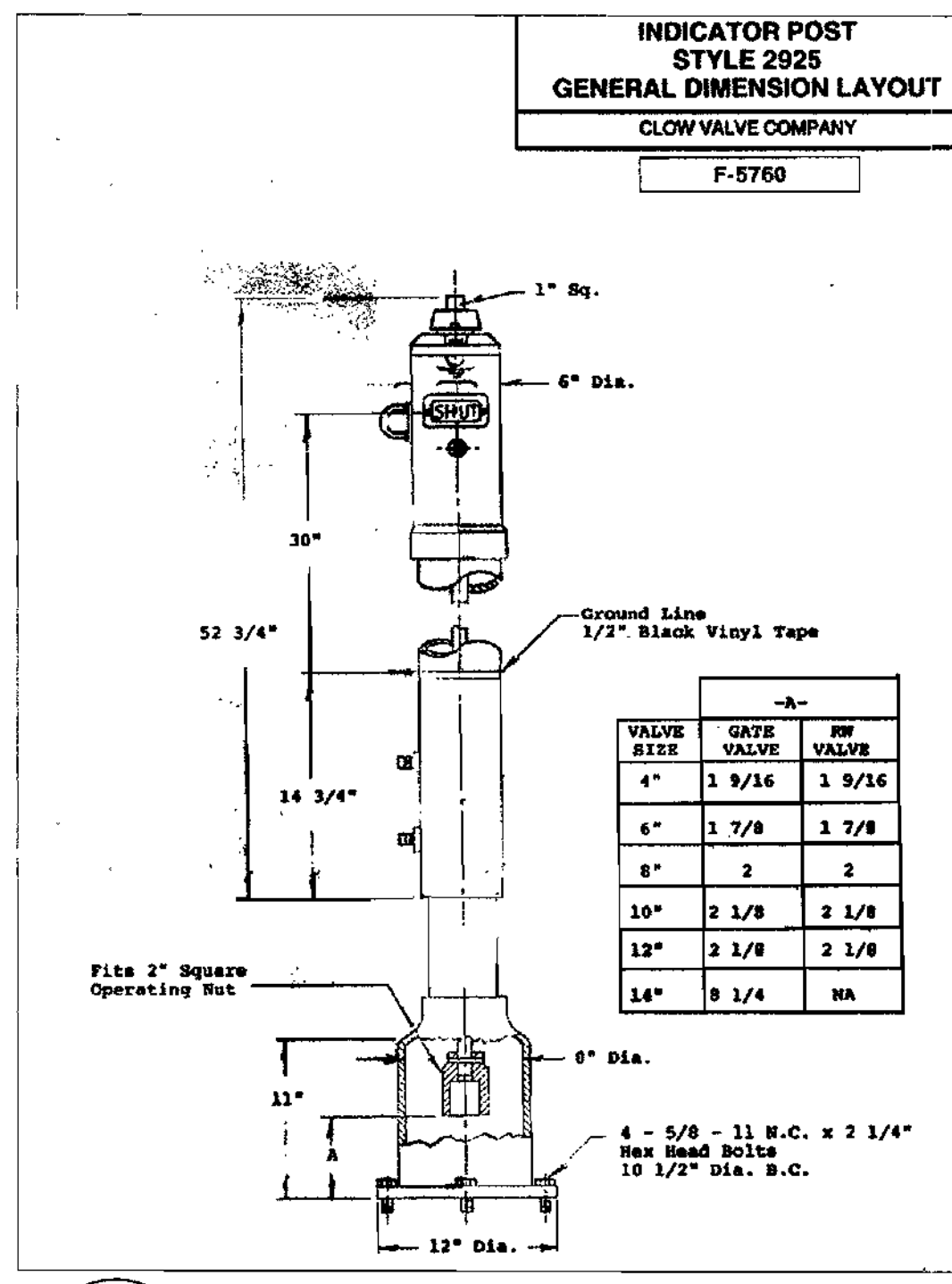
1 STANDARD BUTTRESS DETAIL  
CWD1 NOT TO SCALE



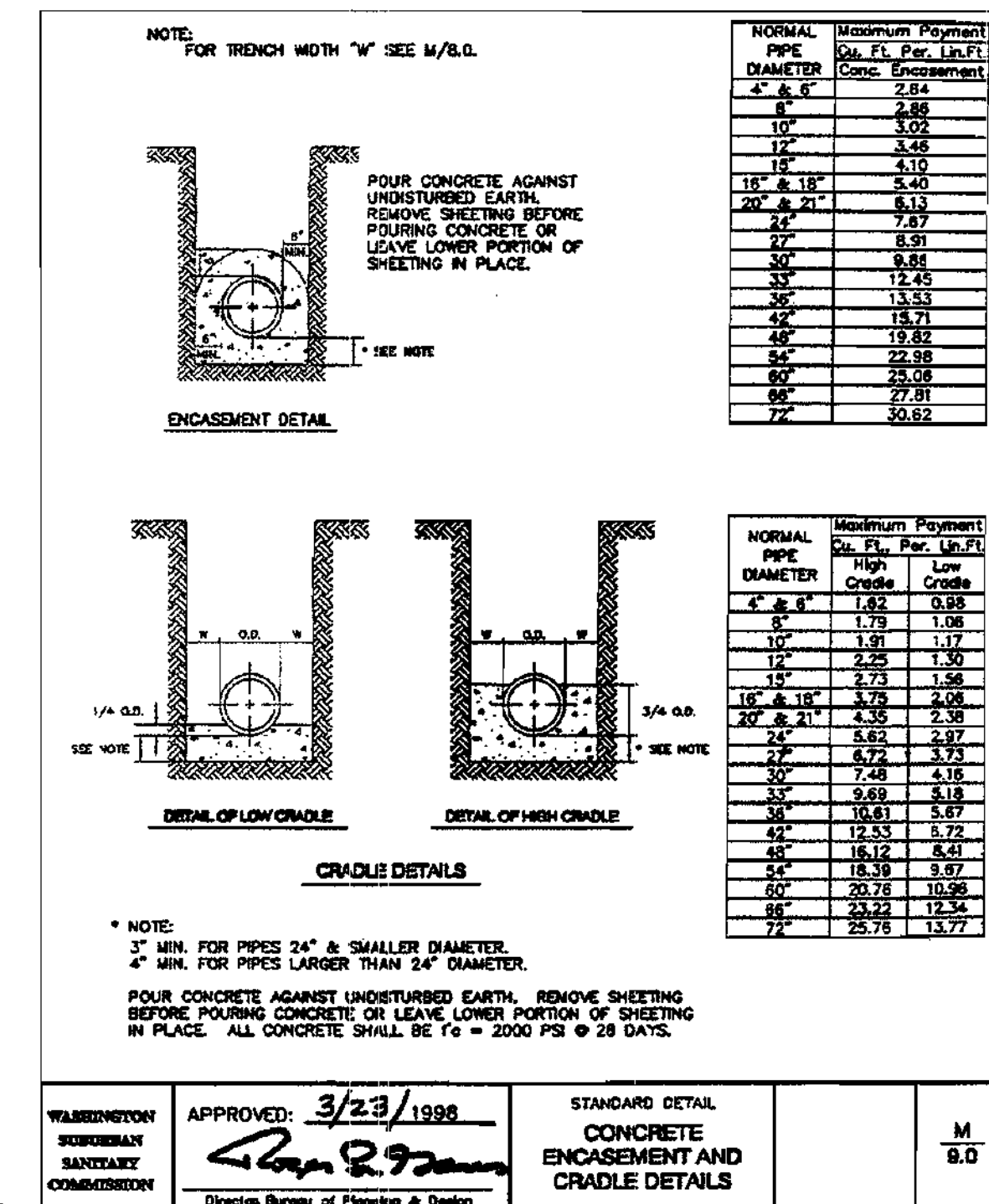
3 WATER-SANITARY CROSSING CLEARANCE  
CWD1 NOT TO SCALE



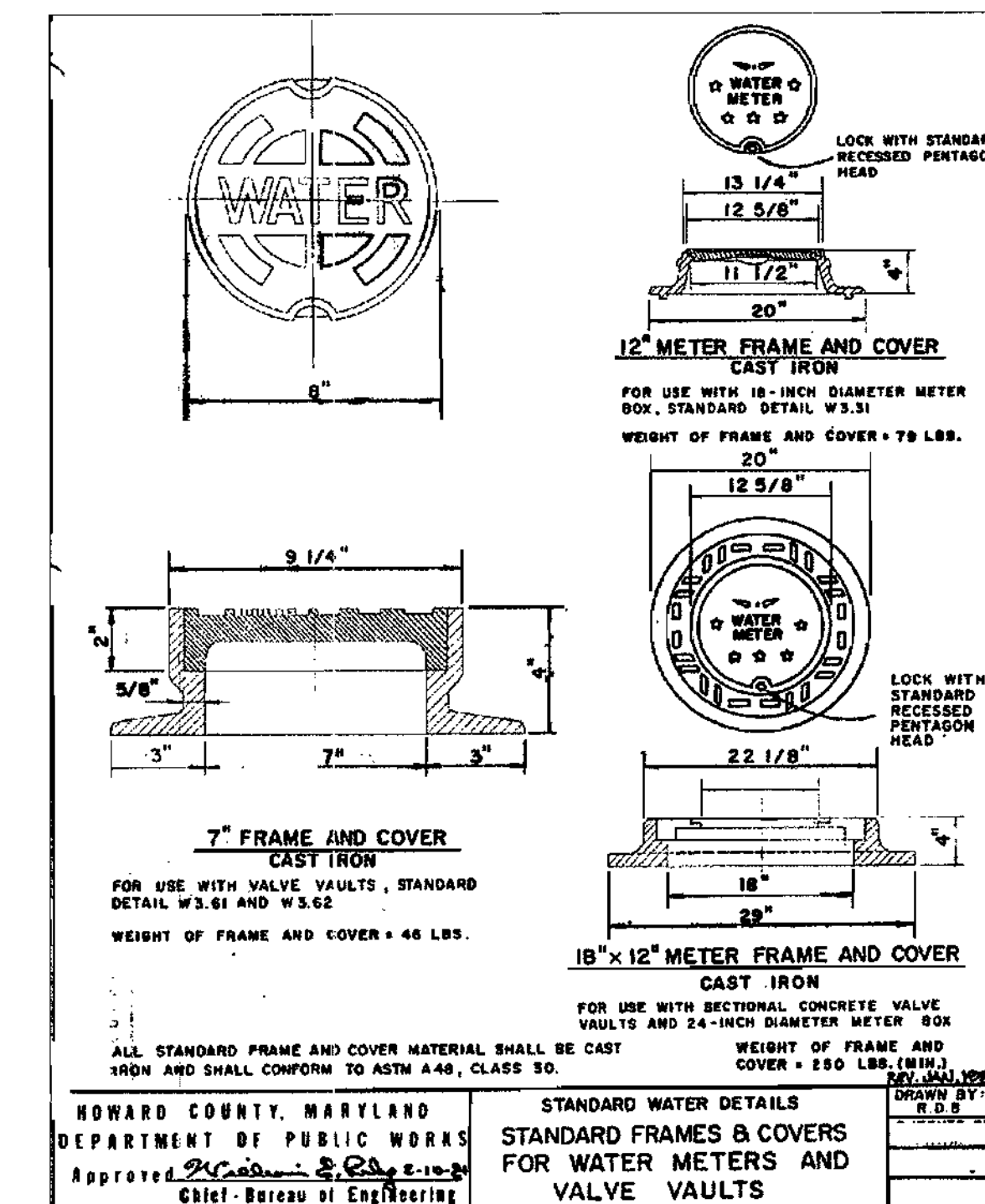
5 BUTTRESS DETAIL FOR HORIZONTAL BENDS  
CWD1 NOT TO SCALE



2 INDICATOR POST STYLE 2925  
CWD1 NOT TO SCALE

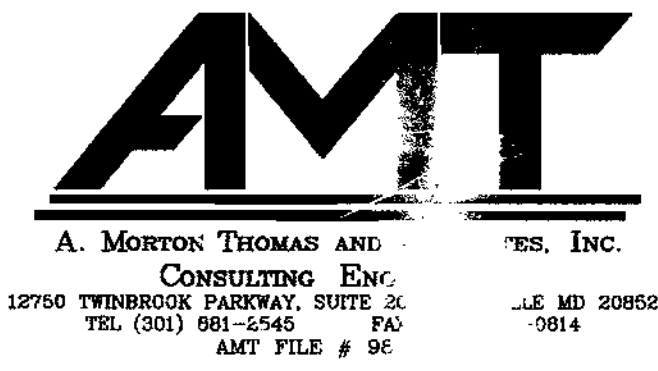


4 CONCRETE ENCASEMENT AND CRADLE DETAILS  
CWD1 NOT TO SCALE

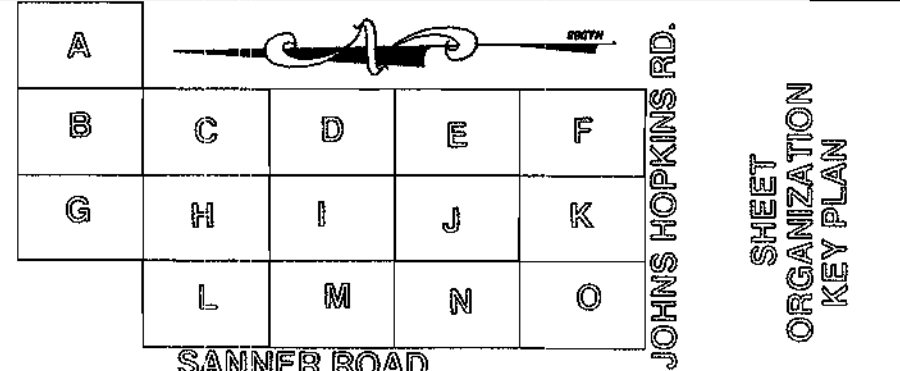


6 STANDARD WATER METER VALVE COVERS  
CWD1 NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
DATE: 5/31/02  
CHIEF DEVELOPMENT ENGINEERING DIVISION  
DATE: 6/3/02  
CHIEF DIVISION OF LAND DEVELOPMENT  
DATE: 6/11/02



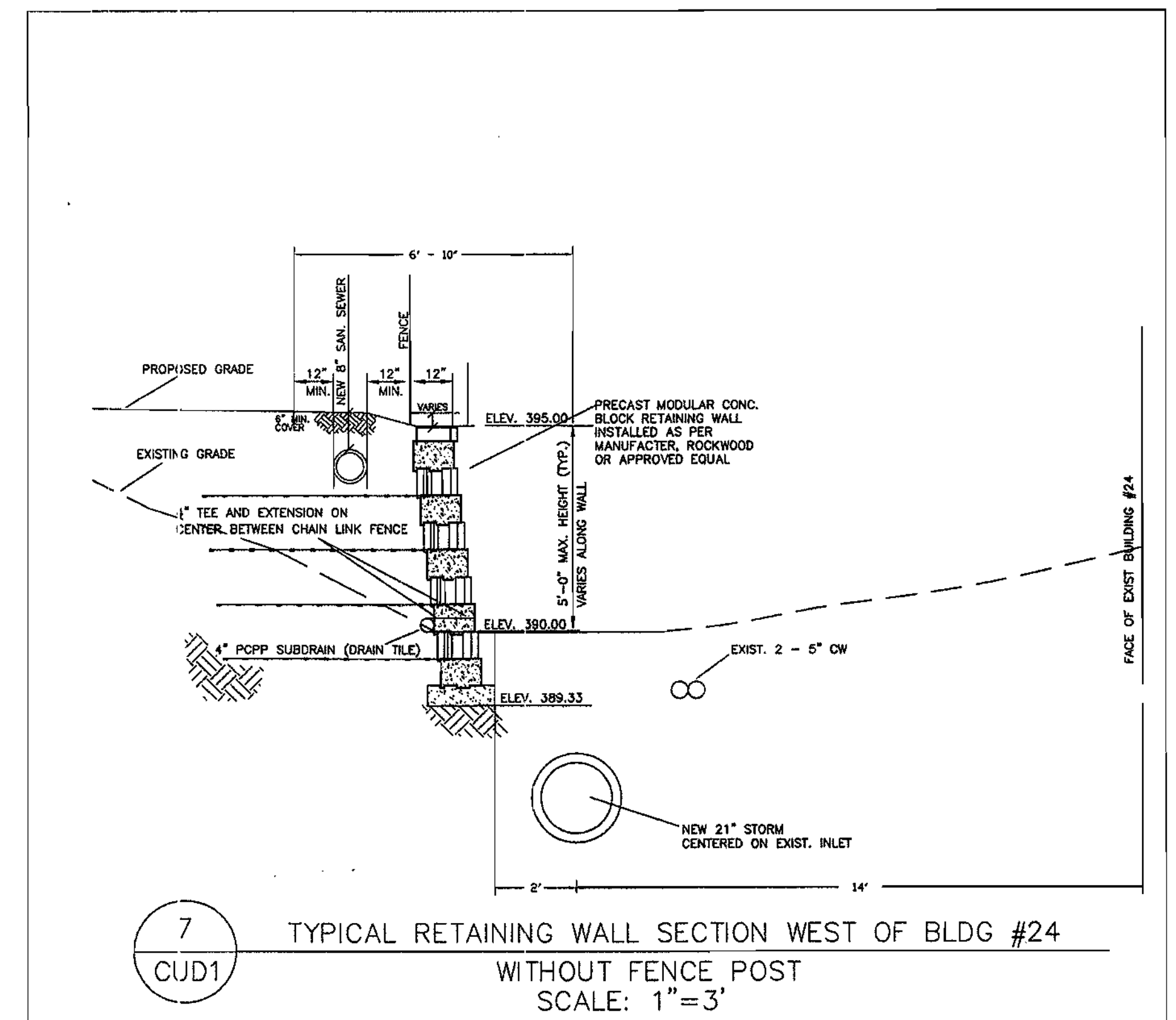
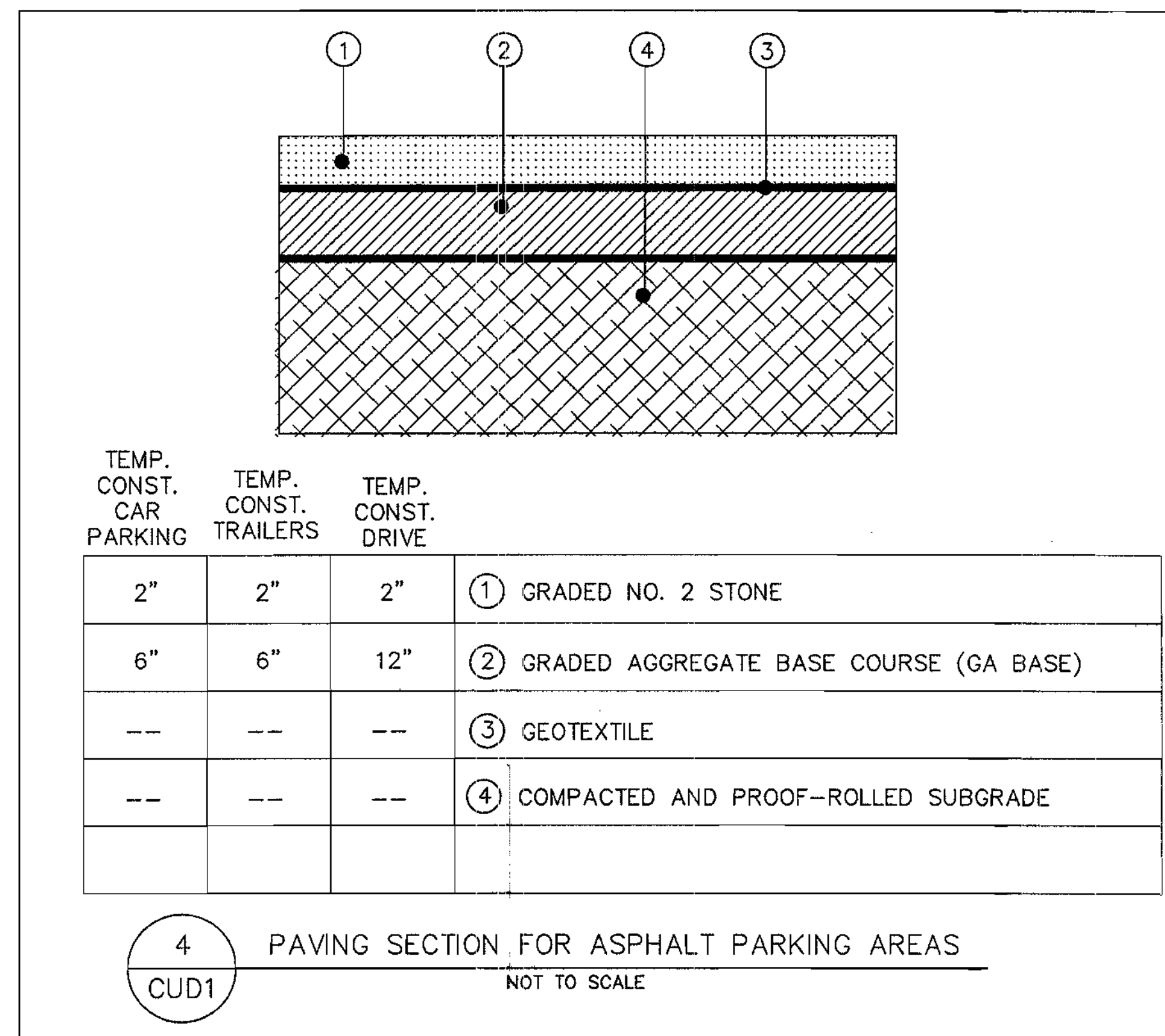
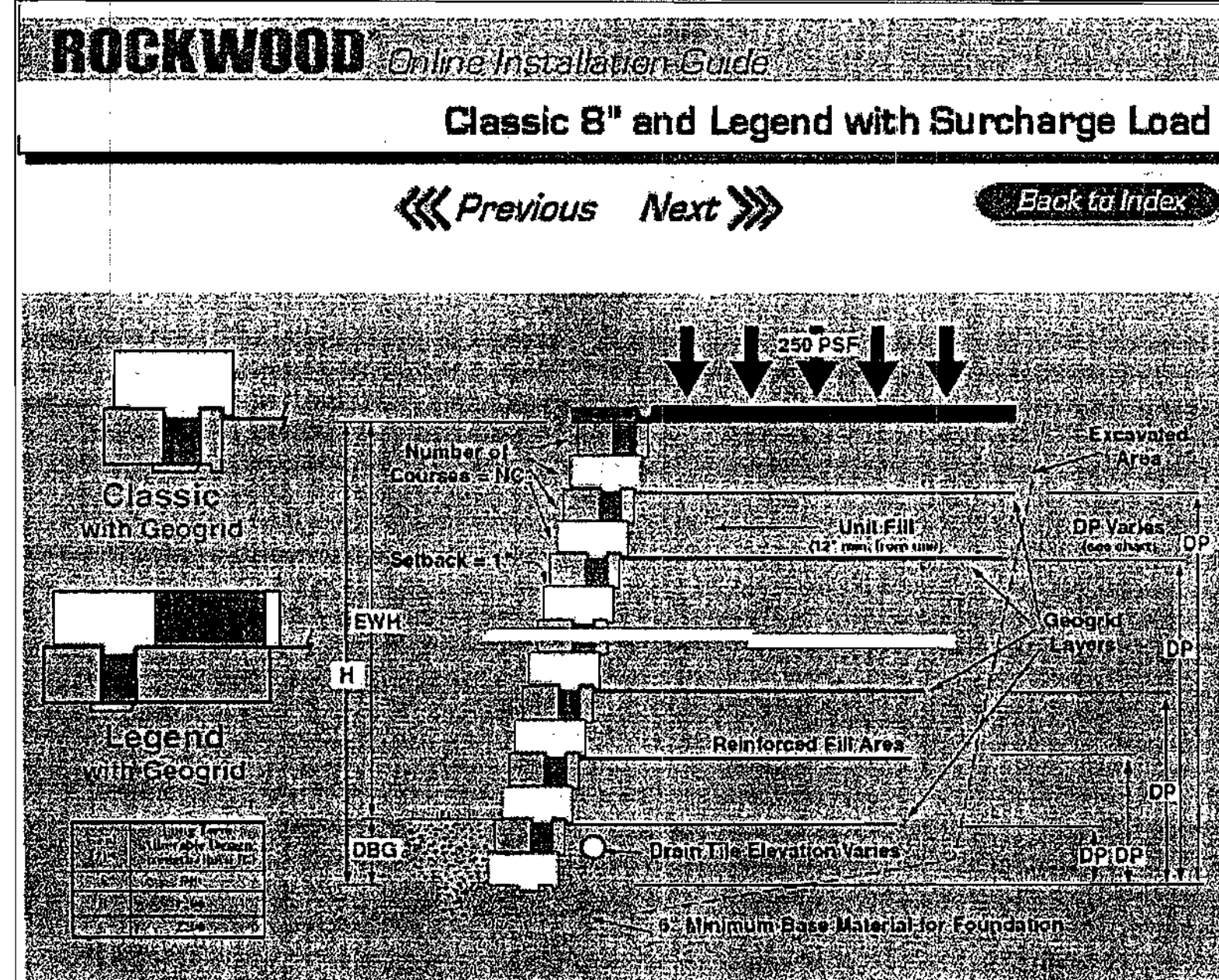
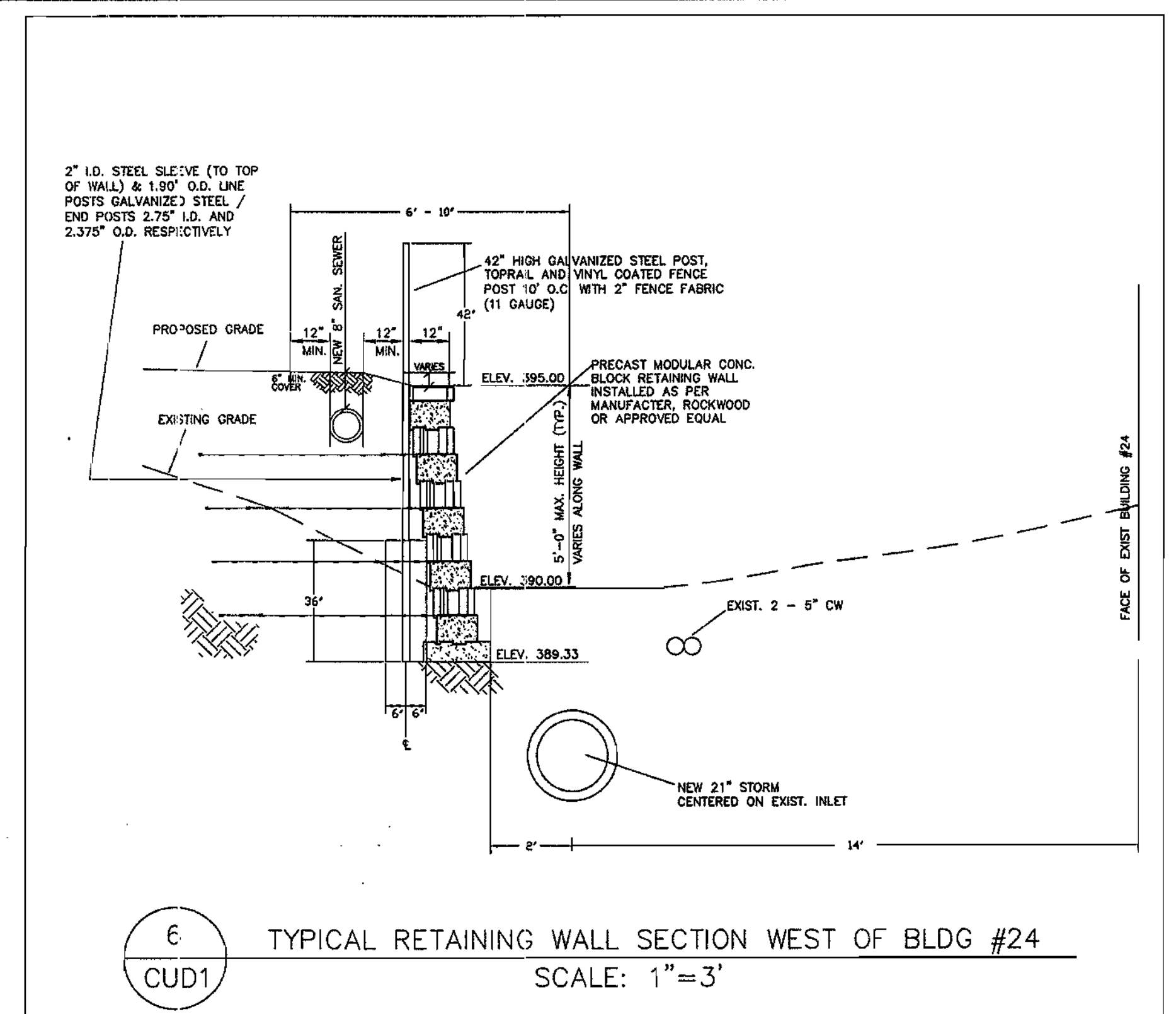
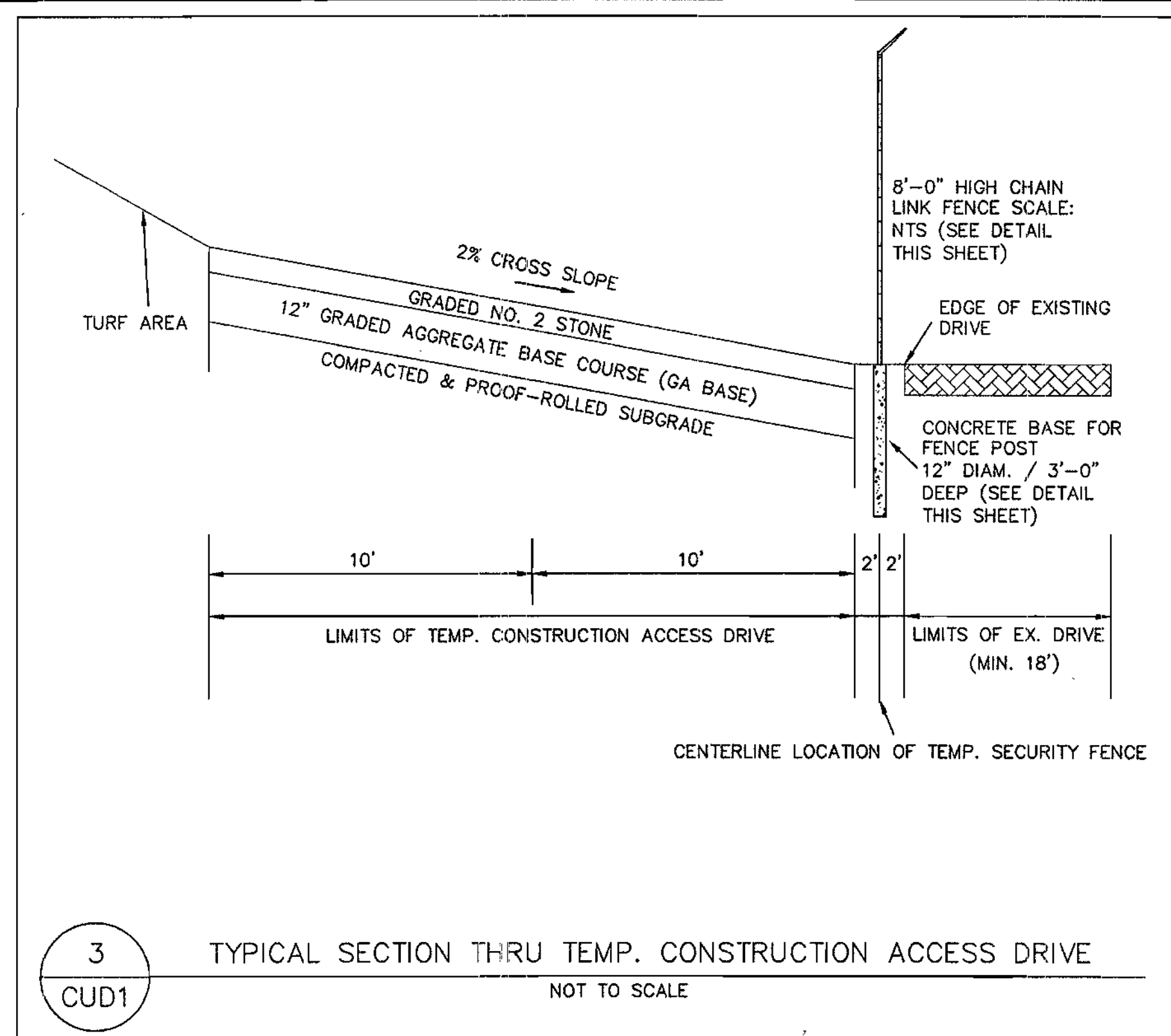
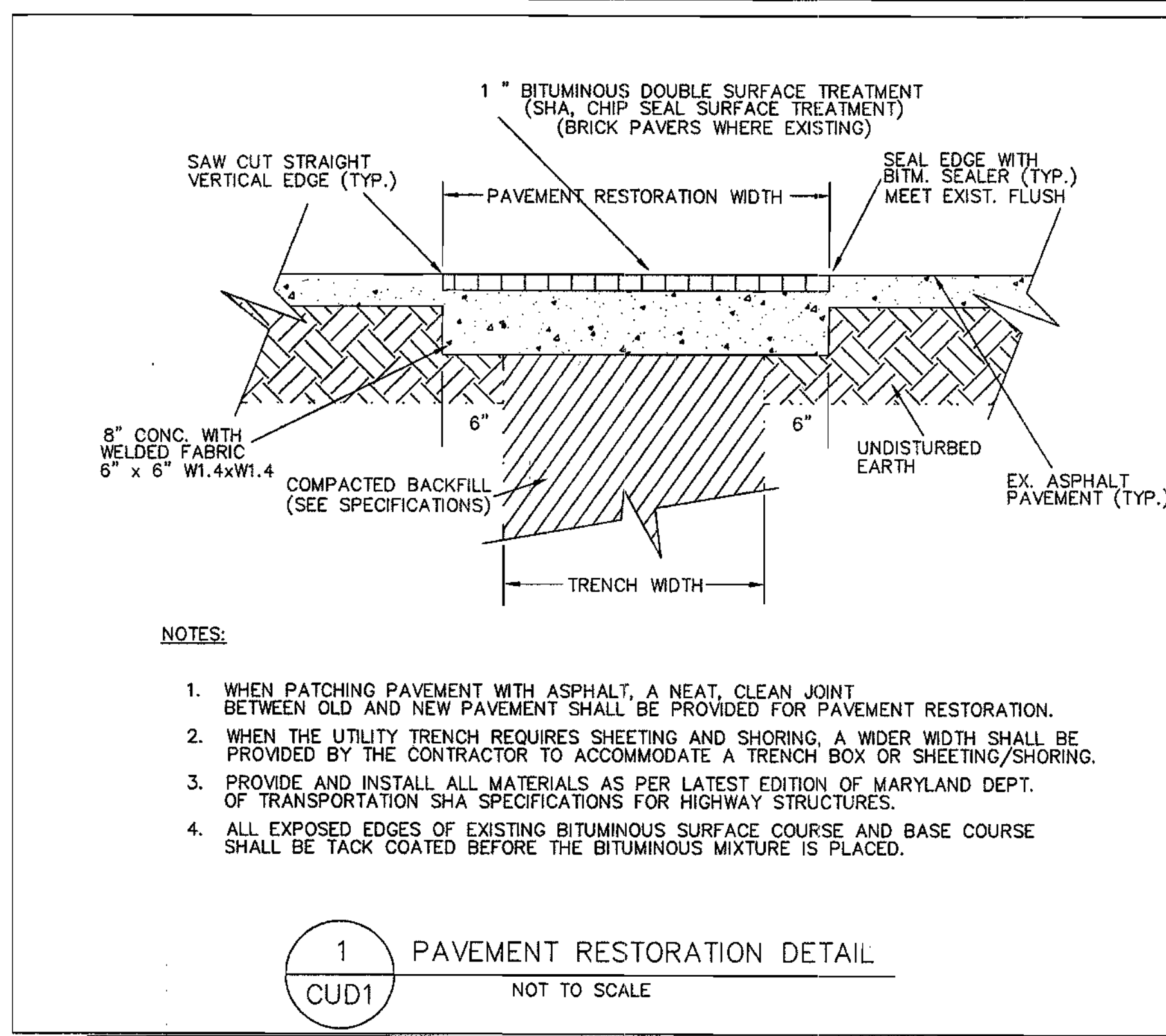
THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA  
DES: B. WARNER  
DRN: S. ITANI  
CHK: S. ITANI  
DATE: 04/12/02



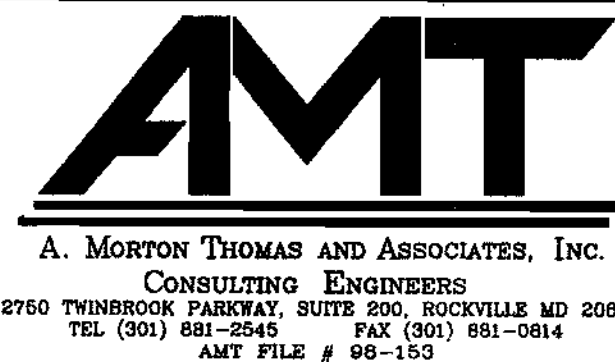
SITE GRADING AND UTILITIES

APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY  
WATER MAIN DETAILS PARCEL 1  
TAX MAP 41 PARCEL 123 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
APL SHEET NO. CWD-1  
COUNTY SHEET NO. C-35

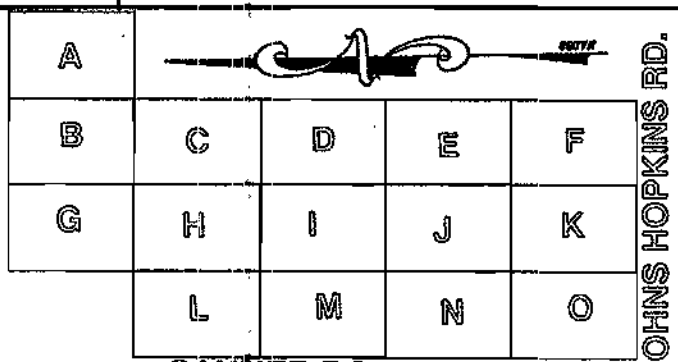


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] DATE: 5/31/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE: 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT WB DATE: 6/11/02  
 DIRECTOR DATE:



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1  
 WASHINGTON, D.C. 20007 (202) 471-5000

DES: B. WARNER  
 DRN: P. FRIAS  
 CHK: S. ITANI  
 DATE: 04/12/02



**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. ADDED TYPICAL SECTION RETAINING WALL DETAILS; REMOVED GRAVITY RETAINING WALL SECTION  
 DATE: 03/22/02

APPENDUM NO. 1, ISSUED 03/25/2002.

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY

**UTILITIES DETAILS**  
 PARCEL 1  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CUD-1  
 COUNTY SHEET NO. C-36

SDP-02-88

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THIS PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT AN APPROVED TRAINING PROGRAM FOR EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*James E. Loesch* 5/13/02  
 SIGNATURE OF DEVELOPER James E. Loesch  
 PRINT NAME BELOW SIGNATURE

BY THE ENGINEER:  
 I CERTIFY THAT THIS PLAN FOR EROSION CONTROL CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert A. Warner* 6/16/02  
 SIGNATURE OF ENGINEER Robert A. Warner  
 PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*John L. C.* 5/21/02  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE

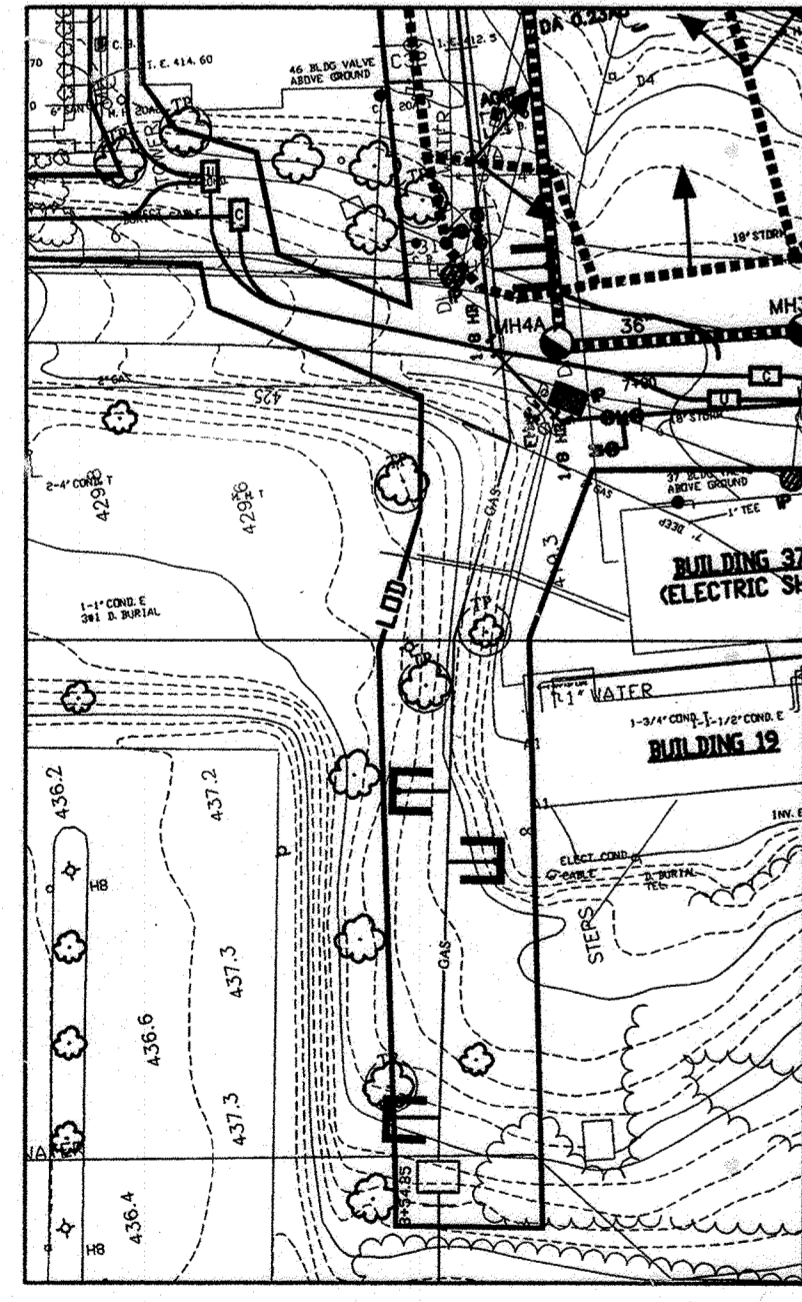
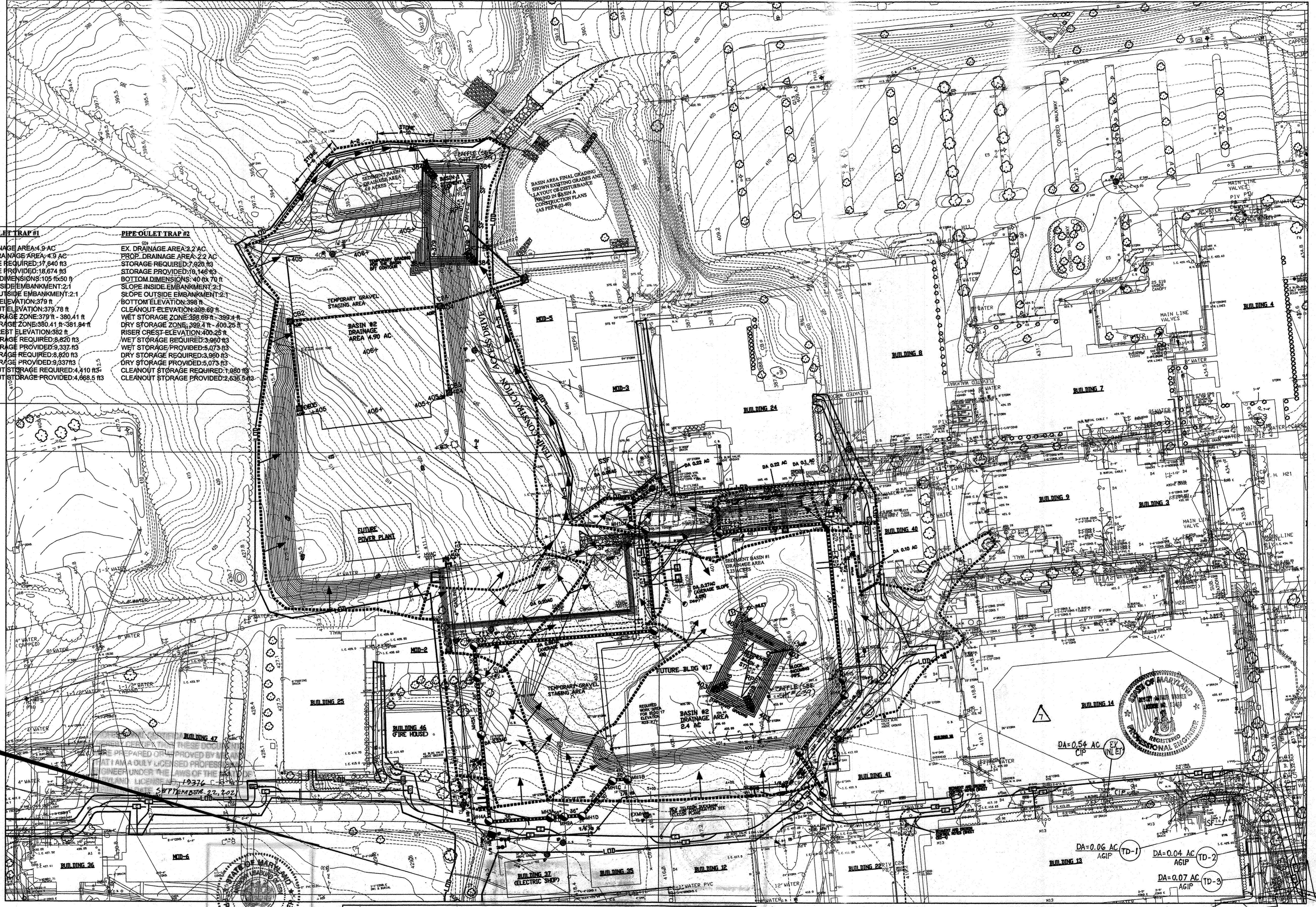
THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John L. C.* 5/21/02  
 HOWARD SOIL CONSERVATION DISTRICT

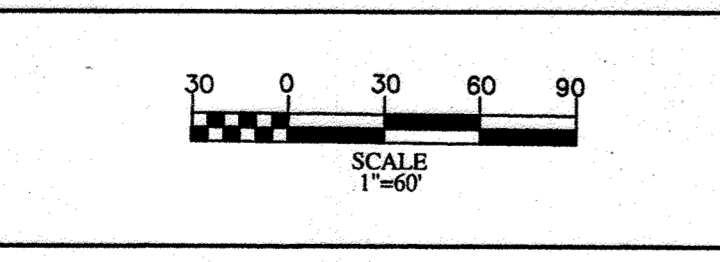
**EROSION CONTROL LEGEND**

	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	TREE PROTECTION
	CURB INLET PROTECTION
	AT GRADE INLET PROTECTION
	STANDARD INLET PROTECTION
	EARTH DIKE
	RIPRAP
	SEDIMENT BASIN
	SEDIMENT BASIN

PIPE OULET TRAP #1	PIPE OULET TRAP #2
EX. DRAINAGE AREA: 4.9 AC PROP. DRAINAGE AREA: 4.9 AC STORAGE REQUIRED: 7,840 ft <sup>3</sup> STORAGE PROVIDED: 18,874 ft <sup>3</sup> BOTTOM DIMENSIONS: 105' x 50' ft SLOPE INSIDE EMBANKMENT: 2:1 SLOPE OUTSIDE EMBANKMENT: 2:1 BOTTOM ELEVATION: 379 ft CLEANOUT ELEVATION: 379.78 ft WET STORAGE ZONE: 379 ft - 380.41 ft DRY STORAGE ZONE: 380.41 ft - 381.84 ft RISER CREST ELEVATION: 382 ft WET STORAGE REQUIRED: 8,820 ft <sup>3</sup> WET STORAGE PROVIDED: 8,337 ft <sup>3</sup> DRY STORAGE REQUIRED: 8,820 ft <sup>3</sup> DRY STORAGE PROVIDED: 8,337 ft <sup>3</sup> CLEANOUT STORAGE REQUIRED: 4,410 ft <sup>3</sup> CLEANOUT STORAGE PROVIDED: 4,868.5 ft <sup>3</sup>	EX. DRAINAGE AREA: 2.2 AC PROP. DRAINAGE AREA: 2.2 AC STORAGE REQUIRED: 7,820 ft <sup>3</sup> STORAGE PROVIDED: 18,146 ft <sup>3</sup> BOTTOM DIMENSIONS: 40' x 70' ft SLOPE INSIDE EMBANKMENT: 2:1 SLOPE OUTSIDE EMBANKMENT: 2:1 BOTTOM ELEVATION: 398 ft CLEANOUT ELEVATION: 398.69 ft WET STORAGE ZONE: 398 ft - 399.4 ft DRY STORAGE ZONE: 399.4 ft - 400.25 ft RISER CREST ELEVATION: 400.25 ft WET STORAGE REQUIRED: 3,960 ft <sup>3</sup> WET STORAGE PROVIDED: 5,073 ft <sup>3</sup> DRY STORAGE REQUIRED: 3,960 ft <sup>3</sup> DRY STORAGE PROVIDED: 5,073 ft <sup>3</sup> CLEANOUT STORAGE REQUIRED: 1,980 ft <sup>3</sup> CLEANOUT STORAGE PROVIDED: 2,538.5 ft <sup>3</sup>



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 5/21/02  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK  
 DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT WB  
 DATE 6/11/02  
 DIRECTOR

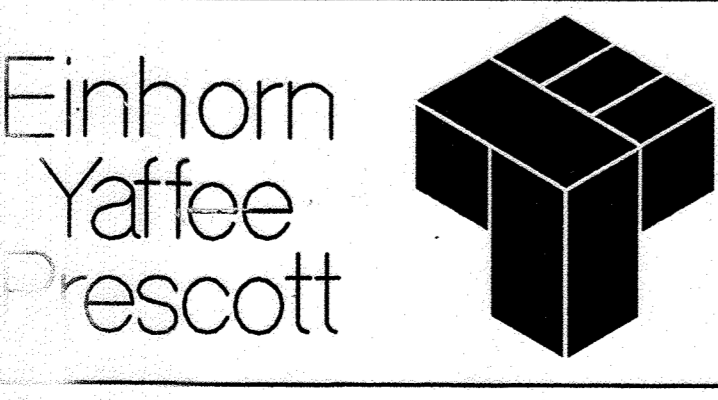
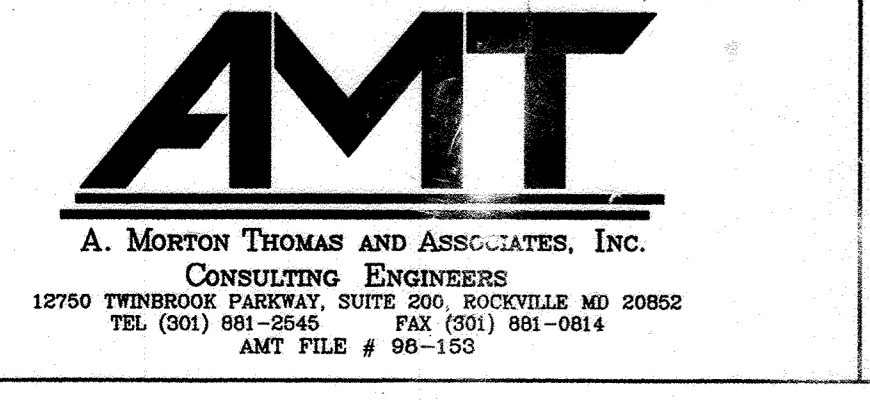


**KEYED NOTES:**

- CONNECT PIPE OULET TO EXISTING STORM DRAIN INLET
- ALL UTILITY PIPES
- PROPOSED STORM WILL NOT BE USED UNTIL STABILIZED

	SEDIMENT BASIN #1	SEDIMENT BASIN #2
BOTTOM DIM.	50' x 105'	70' x 40'
TOP DIM.	70' x 125'	90' x 60'
DEPTH	5'	5'

DA=0.01 AC AGIP (1-2) BUILDING 6 (1-1) DA=0.04 AC AGIP  
 DA=0.06 AC AGIP (TD-1) DA=0.04 AC AGIP (TD-2)  
 DA=0.07 AC AGIP (TD-3)  
 NOTE: LOD FOR 6/15-4722-SF



DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	JOHNS HOPKINS RD.				
B	C	D	E	F	SANNIER ROAD
G	H	I	J	K	
L	M	N	O		

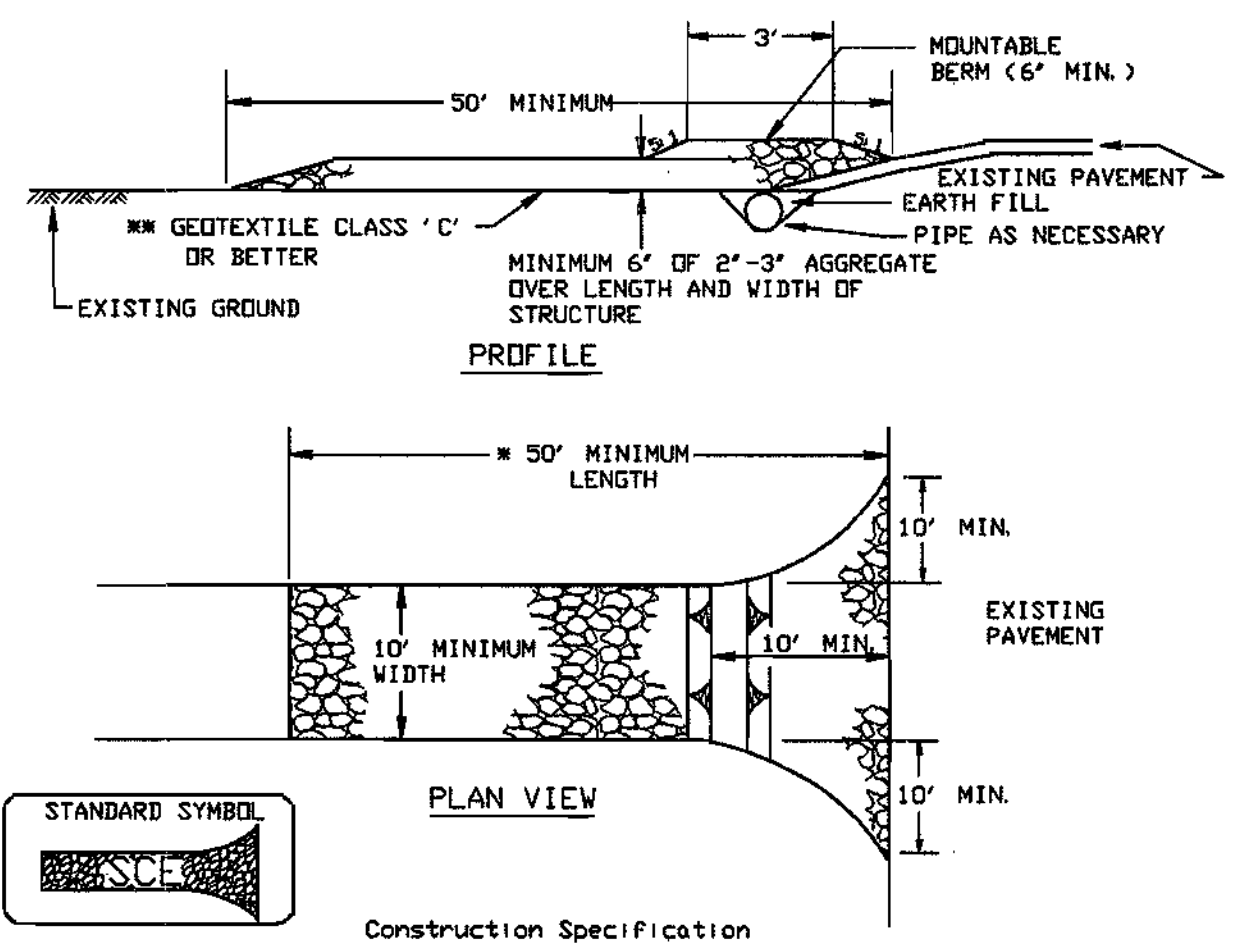
**SITE GRADING AND UTILITIES**  
 REV. FOUNDATION DRAIN OUTFALL & GAS LINE 06/23  
 REVISIONS:  
 1. SEDIMENT & EROSION 03/26/02  
 2. LEGEND  
 3. BASIN 2 04/12/02  
 4. BASIN SIZE, INLET PROTECTION, DRAINAGE AREAS AND SEDIMENT BASINS GRADING 05/06/02  
 5. SEDIMENT BASIN, DRAINAGE AND CONTOURS  
 6. STORM DRAINS ADDED 06/21

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
 SEDIMENT/EROSION CONTROL PLAN D/E/I/J  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CEC-1  
 COUNTY SHEET NO. C-37

SDP-02-89

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

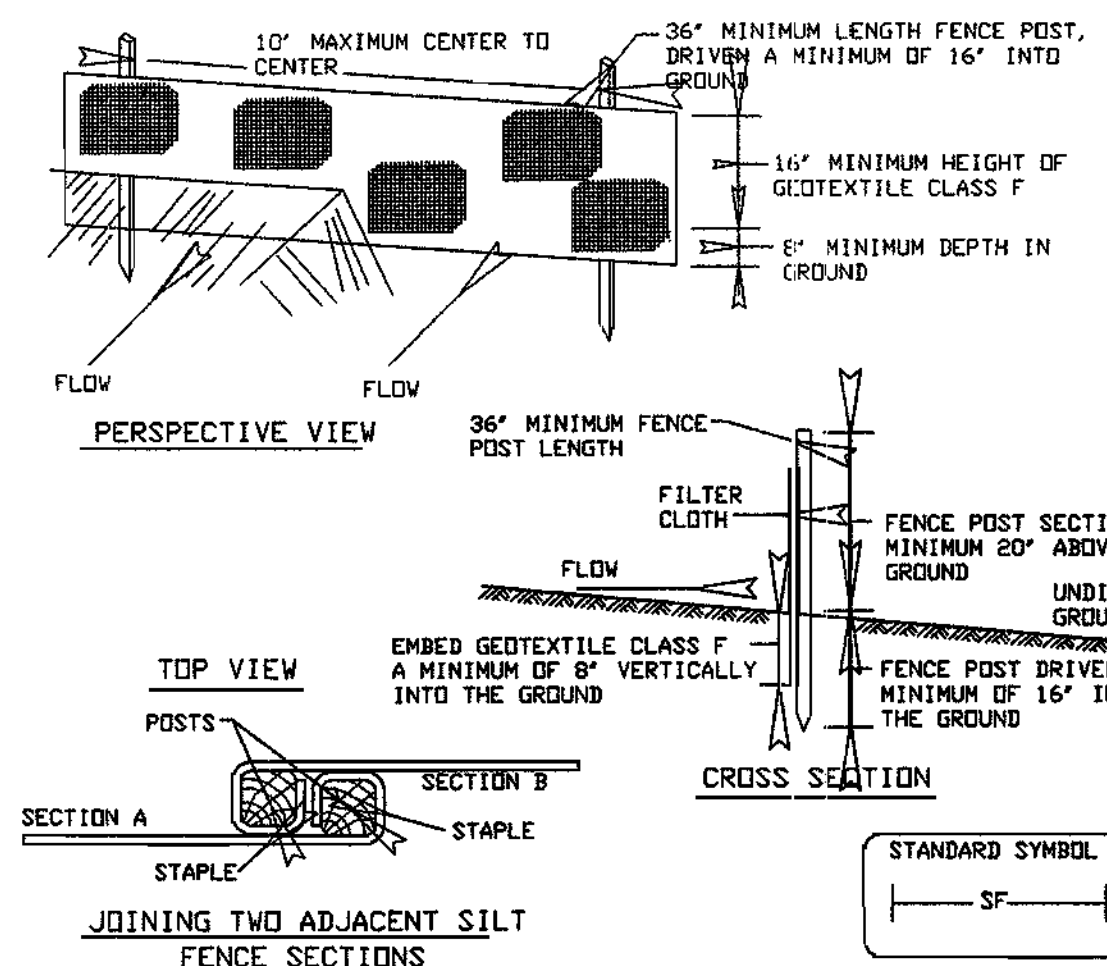


- Construction Specification
- Length - minimum of 50' (#30' for single residence lot).
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2' to 3') or reclaimed or recycled concrete equivalent shall be placed at least 6' deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 5:1 slopes and a minimum of 6' of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6' minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**EROSION CONTROL LEGEND**

	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	TREE PROTECTION
	CURB INLET PROTECTION
	AT GRADE INLET PROTECTION
	STANDARD INLET PROTECTION
	EARTH DIKE
	RIPRAP
	SEDIMENT BASIN
	SEDIMENT BASIN

DETAIL 22 - SILT FENCE



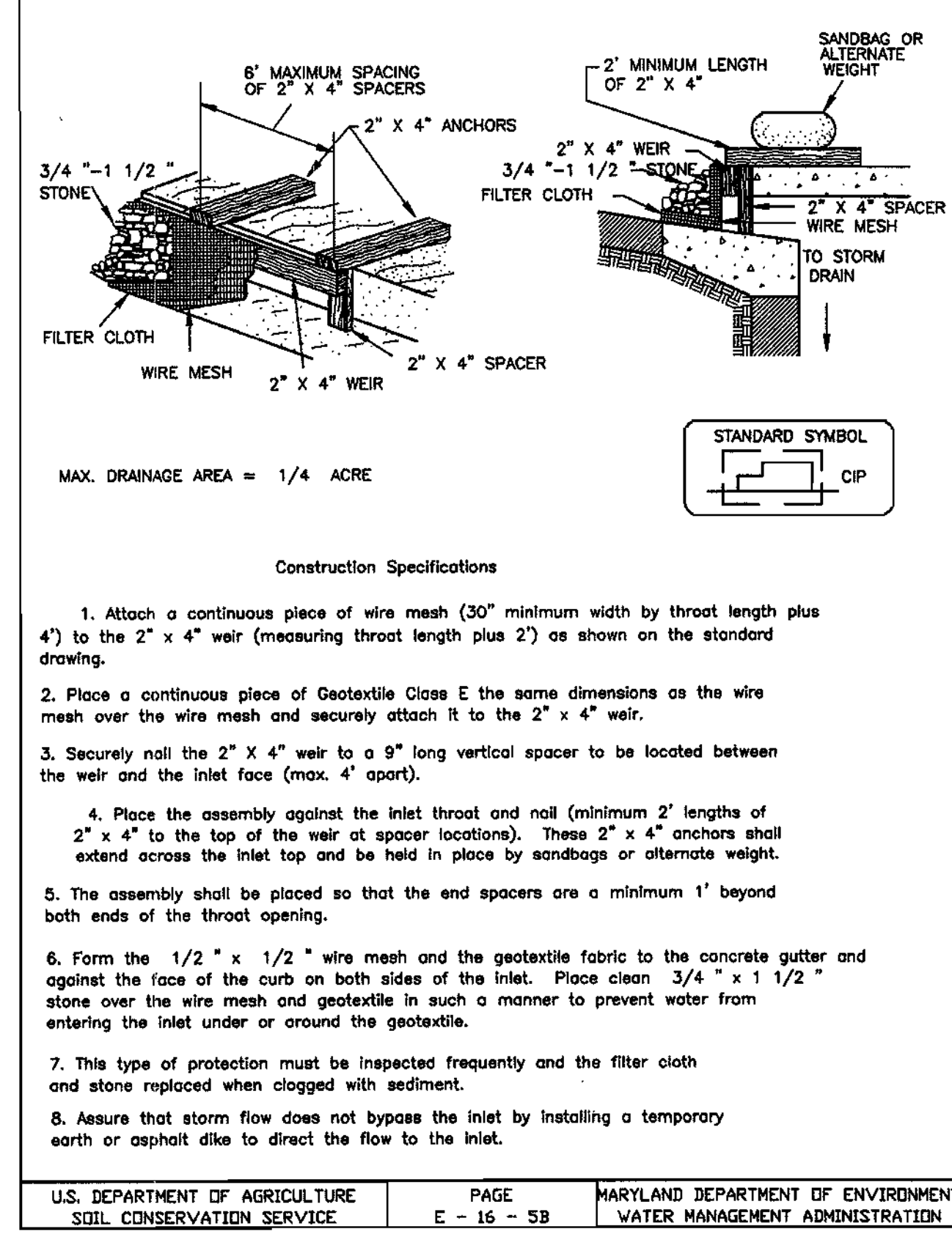
- Construction Specifications
- Fence posts shall be a minimum of 36' long driven 16' minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut) or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard "T" or "U" section weighing not less than 1.00 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test MSMT 509	posts.
Tensile Modulus	20 lbs/in (min.)	Test MSMT 509	
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test MSMT 322	
Filtering Efficiency	75% (min.)	Test MSMT 322	
  - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent bypass.
  - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

PIPE OUTLET SEDIMENT TRAP - ST 1

- Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure Criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
  - The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
  - All cut and fill slopes shall be 2:1 or flatter.
  - All pipe connections shall be watertight.
  - Above the wet storage elevation, the riser shall be perforated with 1/2" wide by 6" long slits or 1" diameter holes spaced 6" vertically and horizontally. No perforations will be allowed within 6" of the horizontal barrel.
  - The riser shall be wrapped with 1/2" hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6' above the highest slit and 6' below the lowest slit. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass. Filter cloth shall be replaced as necessary to prevent clogging.
  - Straps or connecting bands shall be used to hold the filter cloth and wire fabric in place. They shall be placed at the top and bottom of the cloth.
  - Fill material around the pipe spillway shall be hand compacted in 4" layers. A minimum of 2' of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
  - The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12" deep with the riser embedded 9". Steel plate bases shall be at least twice the riser diameter, 1/4" minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertight connection. Then place 2' of stone, gravel or tamped earth on the plate.
  - Anti seep collars shall be constructed in accordance with plans (ref. table 16 and Details 13 and 14).
  - Concentric trash rack and anti-vortex device design details are on Detail 16.
  - Refer to Section D for dewatering requirements of sediment traps.
  - Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel.
  - Where discharge occurs at the property line, local ordinances and drainage easement requirements shall be met.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-9-7A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)



- Construction Specifications
- Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
  - Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
  - Securely nail the 2" x 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4" apart).
  - Place the assembly against the inlet throat and nail (minimum 2' length of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
  - The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
  - Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
  - This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
  - Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-16-5B MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

**BY THE DEVELOPER:**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

*James E. Loesch* 5/13/02 Date  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE

**BY THE ENGINEER:**

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

*Robert A. Warner* 5/13/02 Date  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

*Jim Meyer* 5/24/02 Date  
USDA-NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John Adair* 5/23/02 Date  
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chief, Development Engineering Division* 5/31/02 Date  
Chief, Division of Land Development 6/3/02 Date  
Director 6/11/02 Date

SILT FENCE

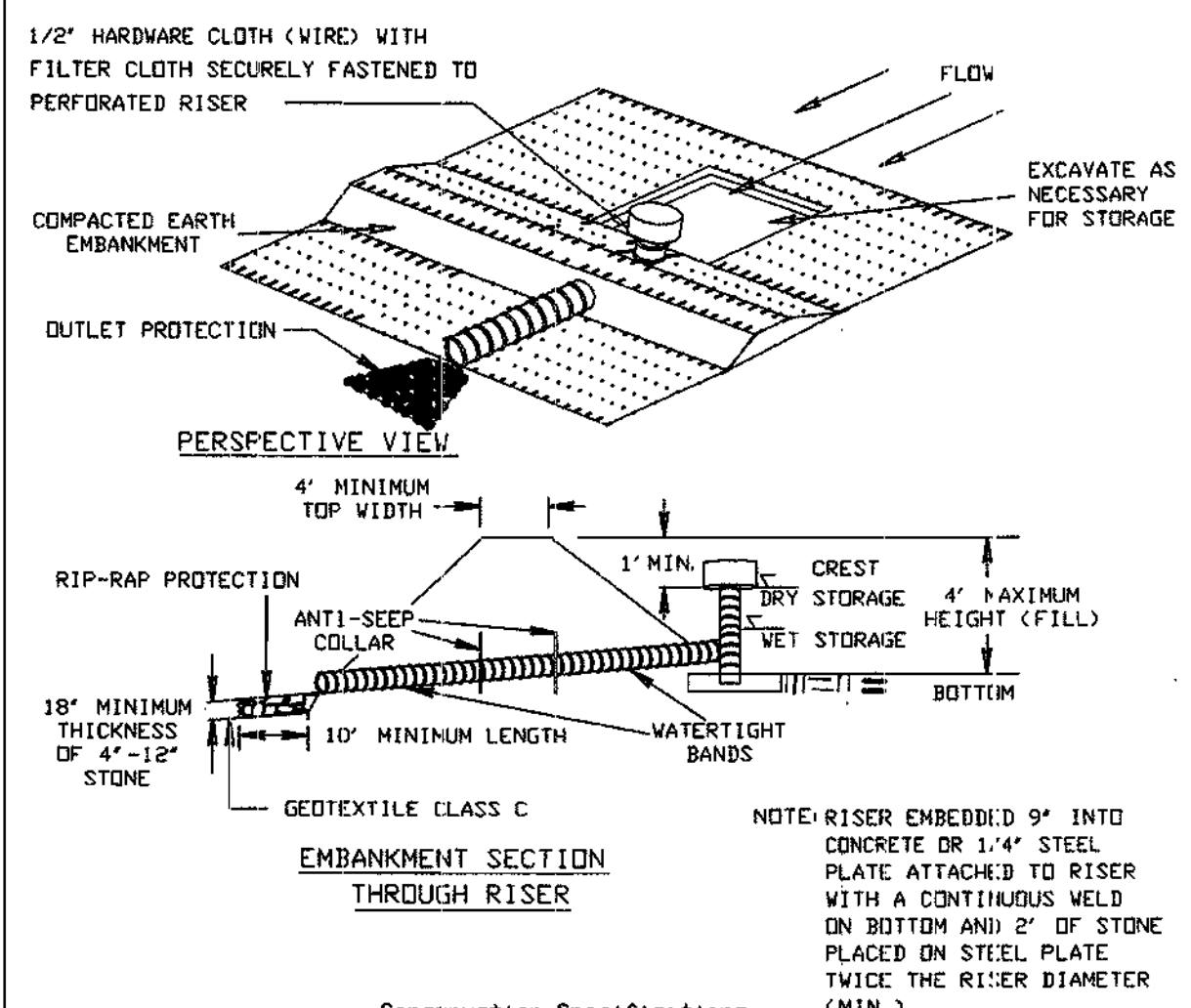
Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

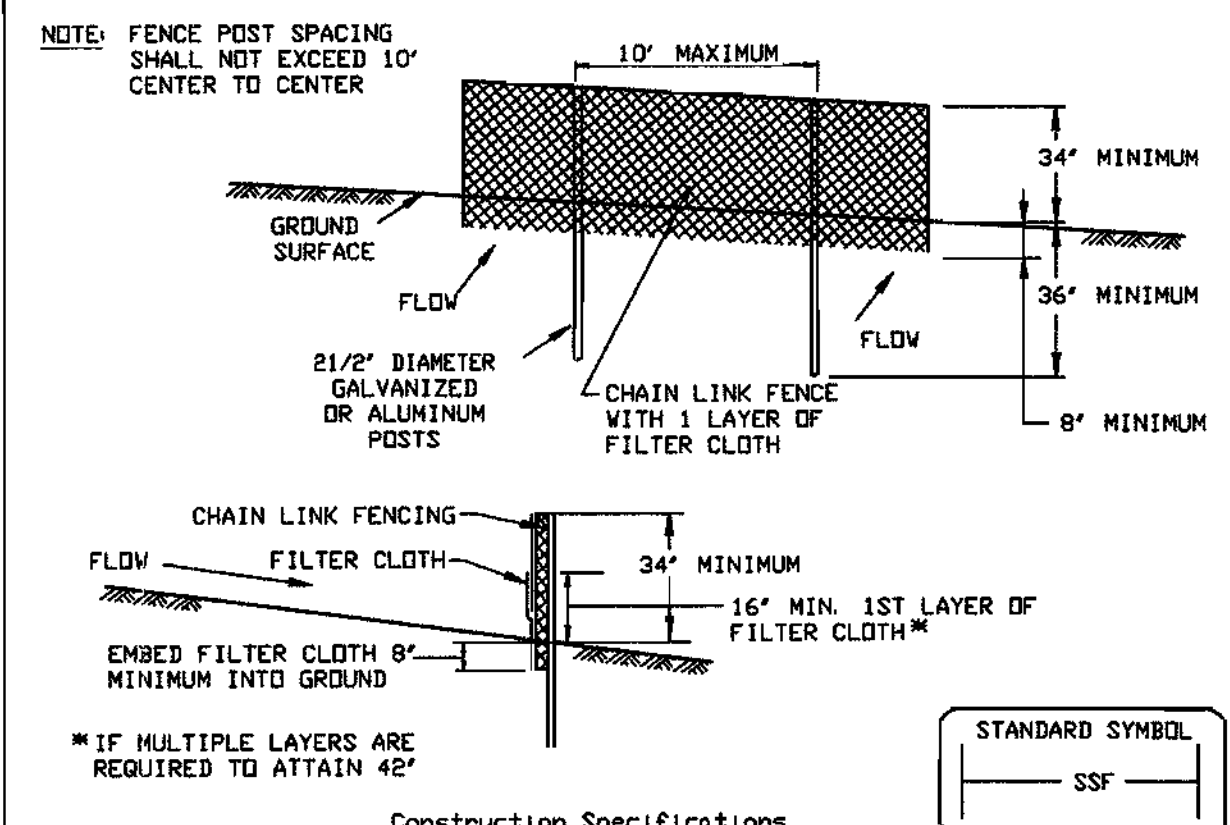
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 8 - PIPE OUTLET SEDIMENT TRAP - ST 1



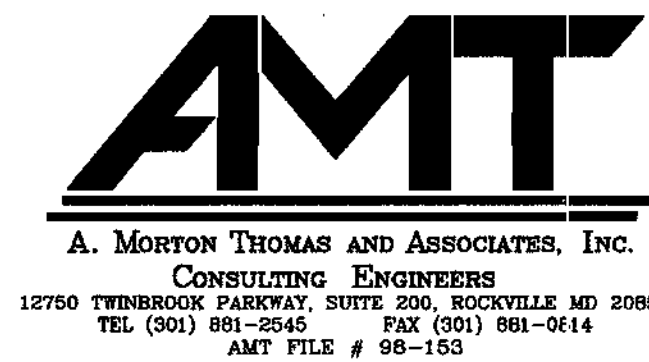
- Construction Specifications
- The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
  - The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be 2' above the riser crest elevation.
  - Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (900cf/ac). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  - The structure shall be inspected periodically and after each rain and repairs made as necessary.
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-9-7 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE



- Construction Specifications
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
  - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt builds up removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
  - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
 

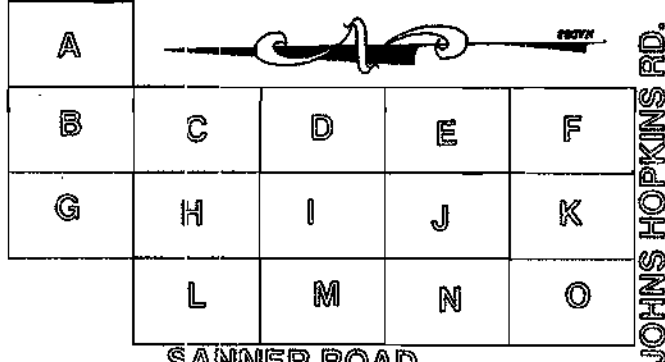
Tensile Strength	50 lbs/in (min.)	Test MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test MSMT 322
Filtering Efficiency	75% (min.)	Test MSMT 322
- U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
DRN: S. ITANI  
CHK: S. ITANI  
DATE: 04/12/02



**SITE GRADING AND UTILITIES**

REVISIONS:  
2. NOTES REVISED

DATE: 05/06/02

APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
SEDIMENT & EROSION  
DETAILS / SCH.  
TAX MAP 41 PARCEL 12-3  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
APL SHEET NO. CEC-2  
COUNTY SHEET NO. C-38

Figure 2. Temporary Sediment Basin Design Data Sheet

Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Total area draining to basin: 4.9 acres (ac)

Notes:  
 1. Also see Surface Area Design #30, this form.  
 2. To convert # to yd<sup>3</sup>, divide # by 27. To convert # to yd<sup>3</sup>, divide # by 9.  
 3. Annual volume of basin = 3600 #/ac x 4.9 ac drainage = 17,640 #  
 4. Actual volume of basin = 10,146 #  
 5. Difference = 7,494 # to obtain required capacity.  
 6. Vol. at design elev. = 1900 #/ac x 4.9 ac = 9,310 #  
 7. Vol. of basin at design = 900 #/ac x 4.9 ac = 4,410 #  
 8. Difference corresponding to min. required volume of basin (rise crest elevation) = 3,900 #  
 9. Permanent pool elevation = 277.1 ft.  
 10. Distance from rise crest elevation to permanent pool elevation = 0.8 ft.  
 11. Basin crest elevation = 277.9 ft.  
 12. Distance from rise crest elevation to cleanup elevation = 1.6 ft.

Basin Volume Design

Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Total area draining to basin: 2.2 acres (ac)

Notes:  
 1. Also see Surface Area Design #30, this form.  
 2. To convert # to yd<sup>3</sup>, divide # by 27. To convert # to yd<sup>3</sup>, divide # by 9.  
 3. Annual volume of basin = 3600 #/ac x 2.2 ac drainage = 7,920 #  
 4. Actual volume of basin = 10,146 #  
 5. Difference = 2,226 # to obtain required capacity.  
 6. Vol. at design elev. = 1900 #/ac x 2.2 ac = 4,180 #  
 7. Vol. of basin at design = 900 #/ac x 2.2 ac = 1,980 #  
 8. Difference corresponding to min. required volume of basin (rise crest elevation) = 2,200 #  
 9. Permanent pool elevation = 277.1 ft.  
 10. Distance from rise crest elevation to permanent pool elevation = 0.8 ft.  
 11. Basin crest elevation = 277.9 ft.  
 12. Distance from rise crest elevation to cleanup elevation = 1.6 ft.

Emergency Spillway

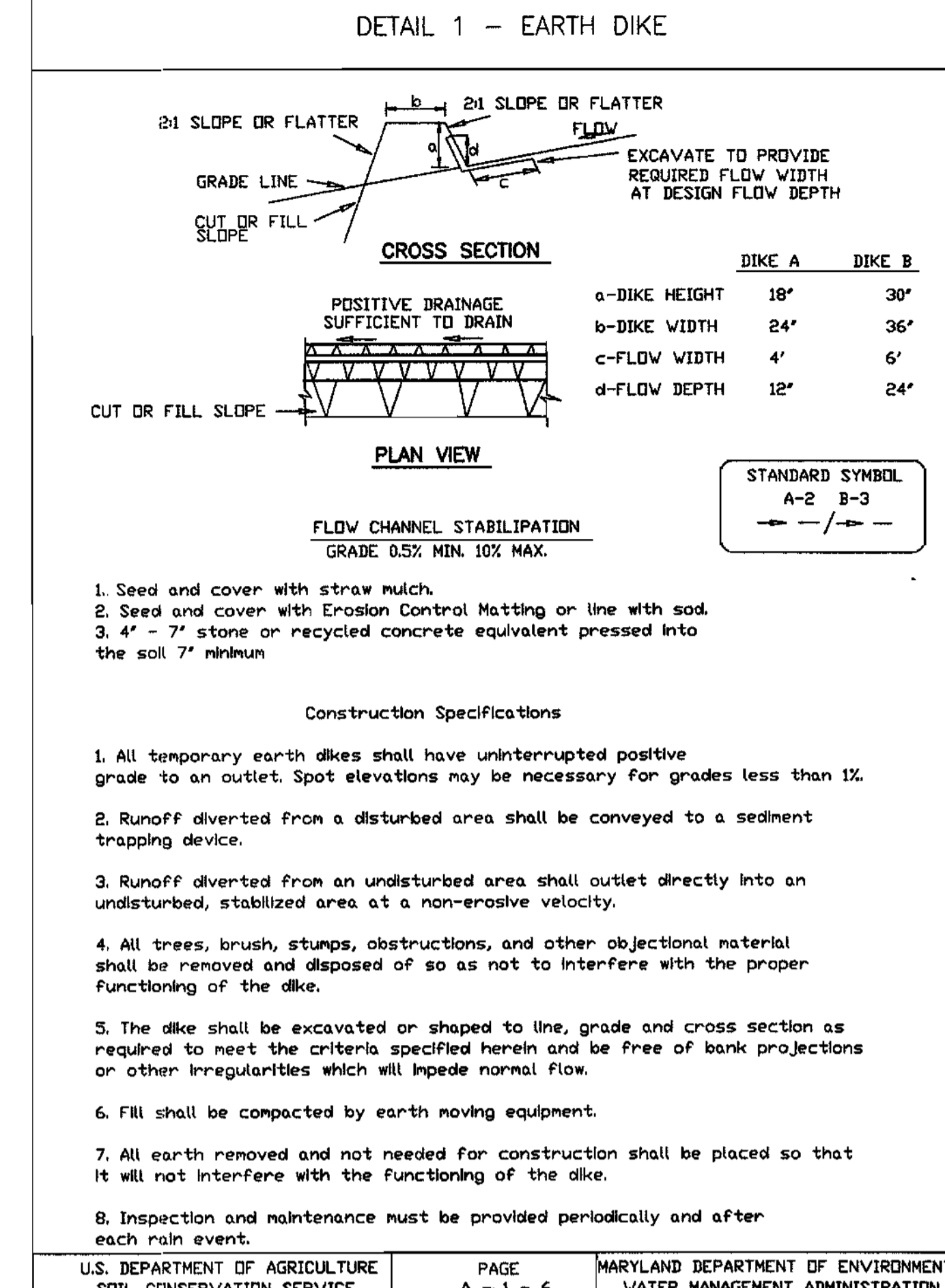
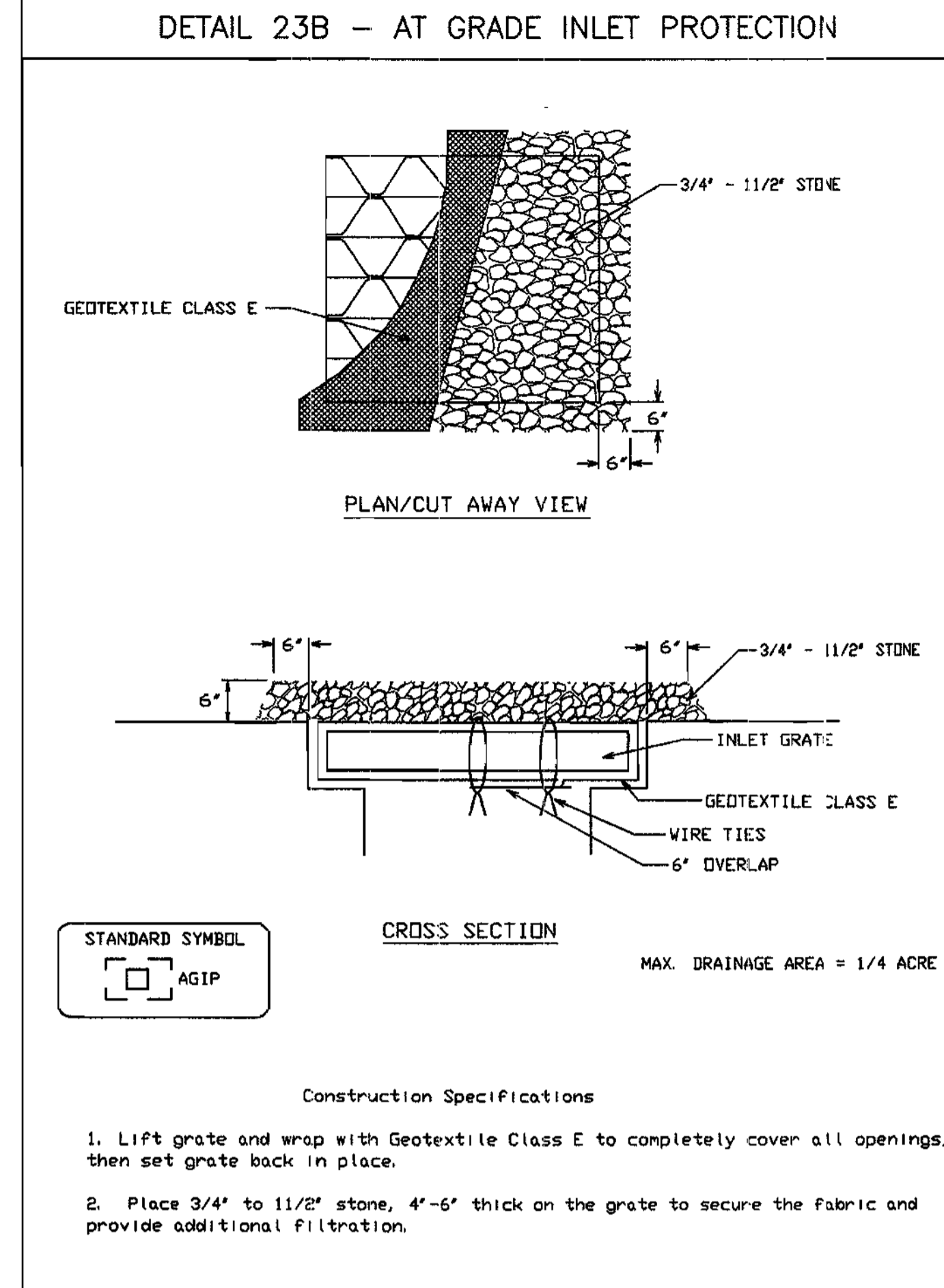
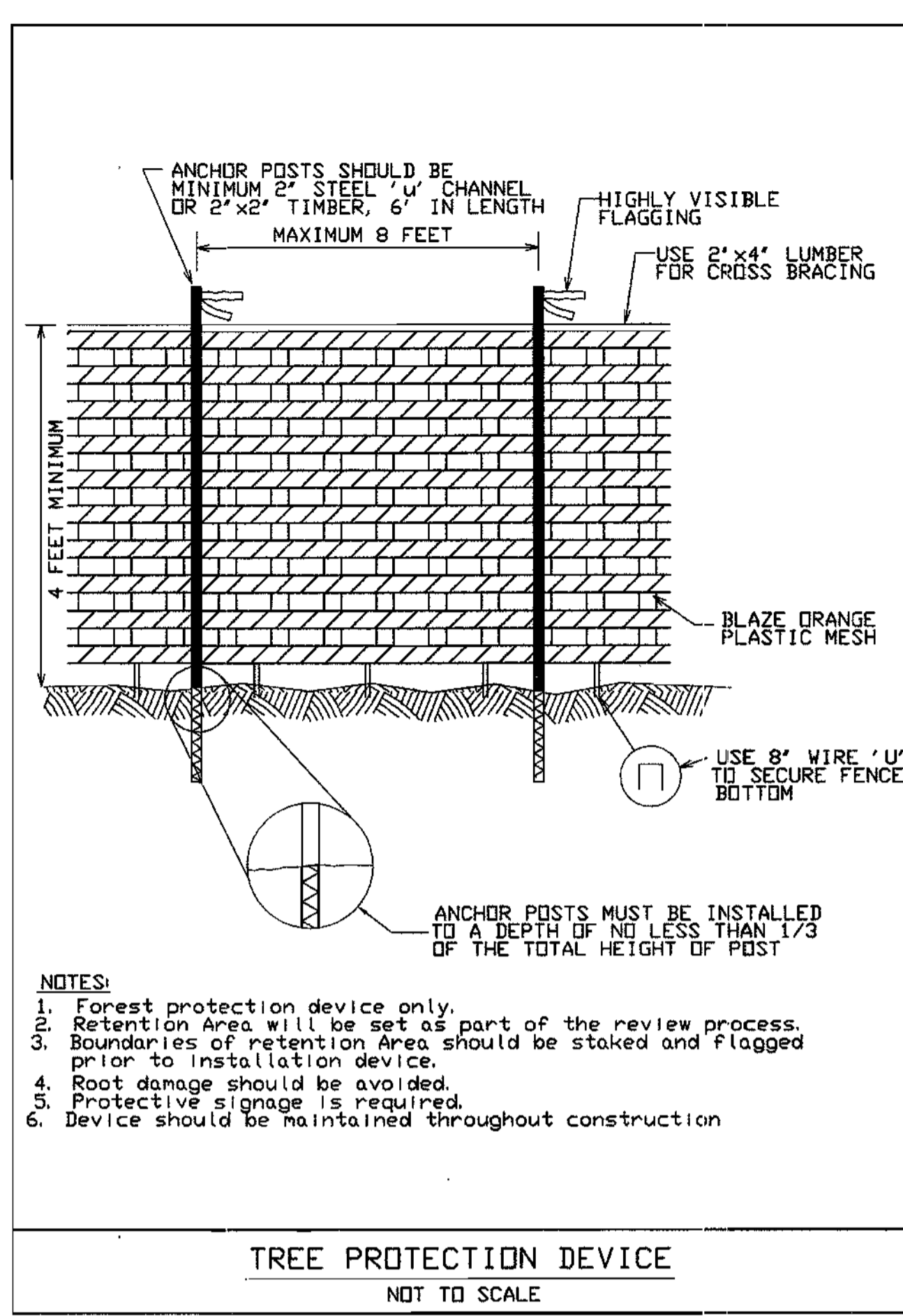
Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Notes:  
 1. Lift gate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.  
 2. Place 3/4" to 1 1/2" stone, 4'-6" thick on the grate to secure the fabric and provide additional filtration.

Emergency Spillway

Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Notes:  
 1. Lift gate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.  
 2. Place 3/4" to 1 1/2" stone, 4'-6" thick on the grate to secure the fabric and provide additional filtration.



Emergency Spillway

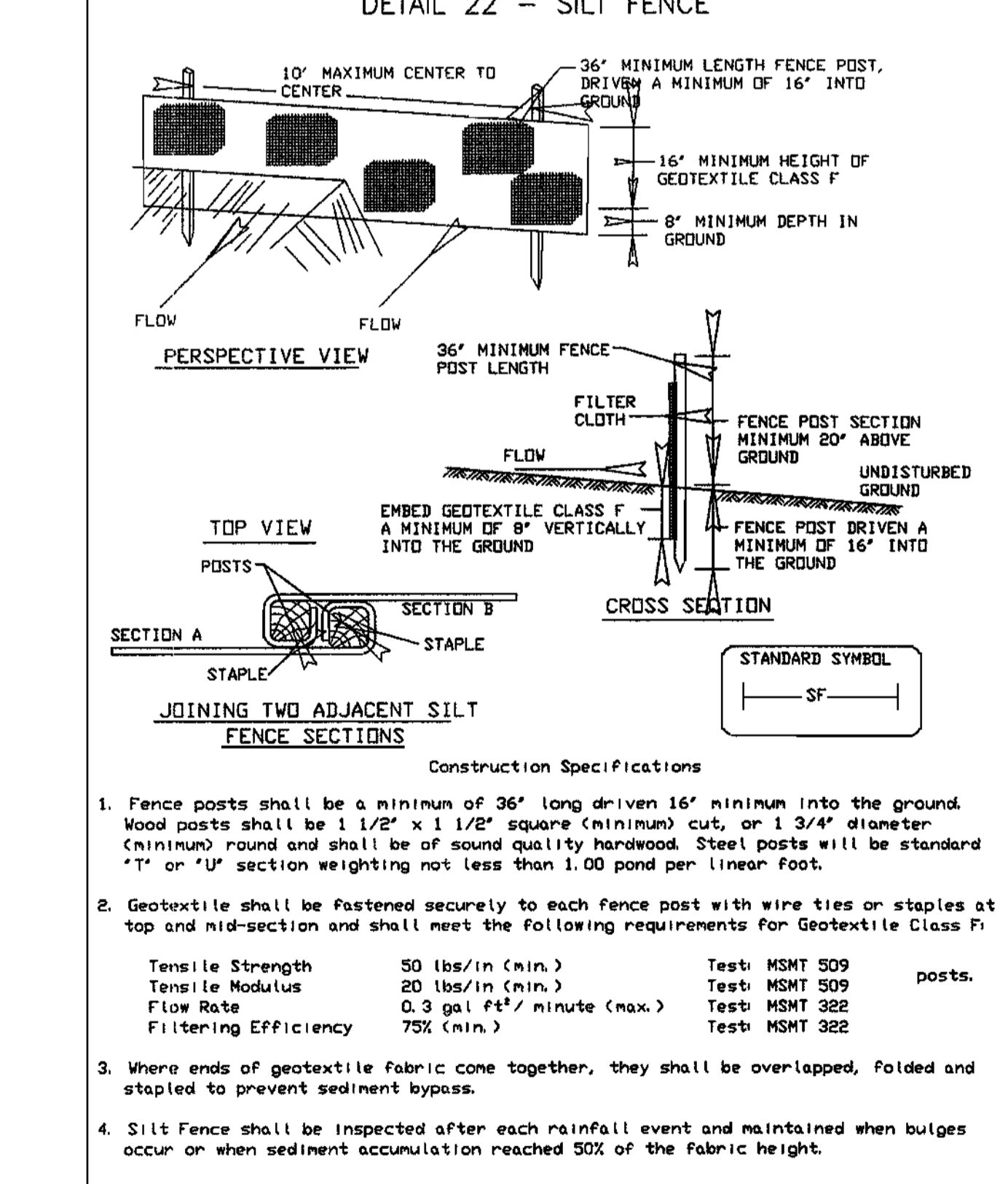
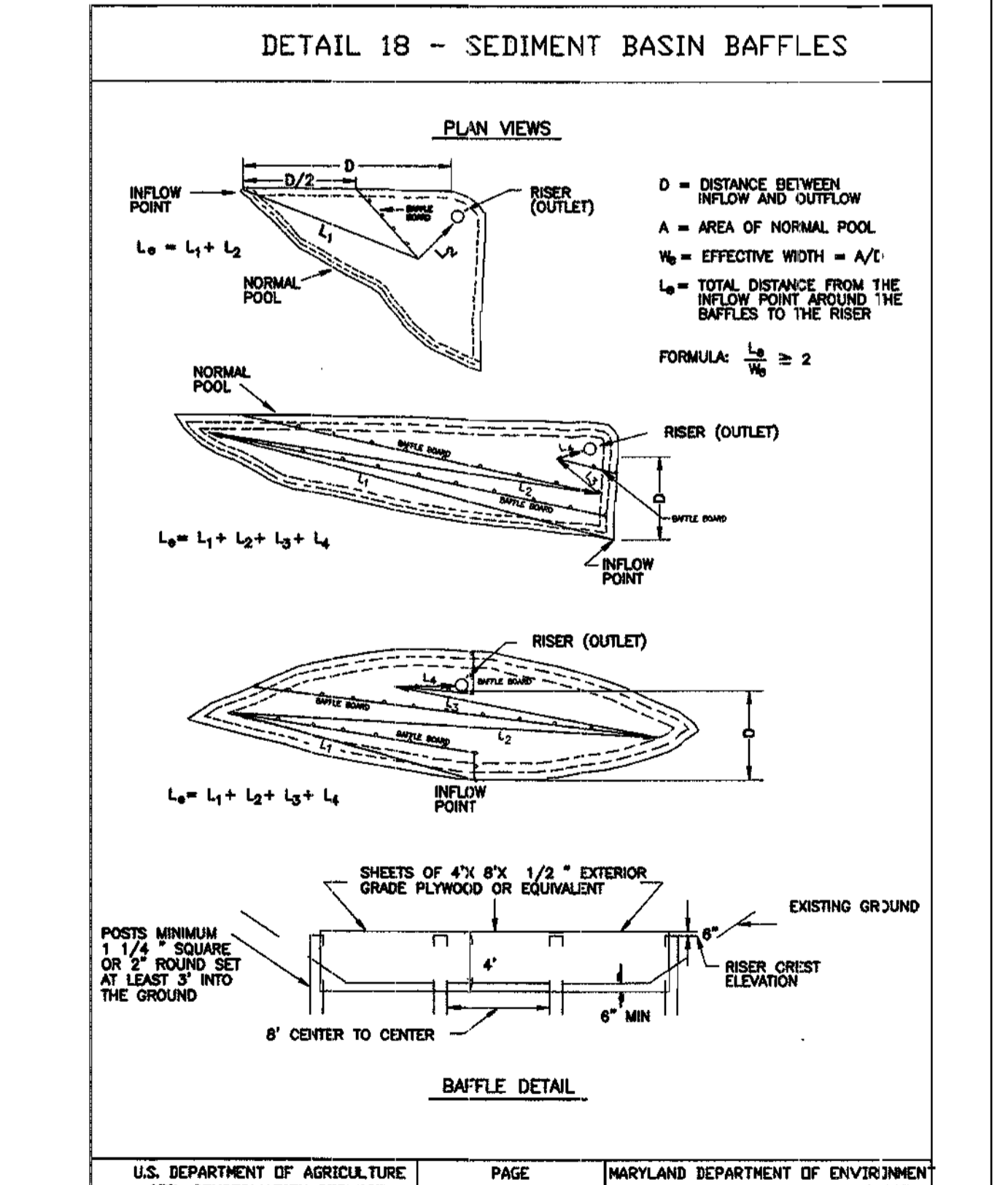
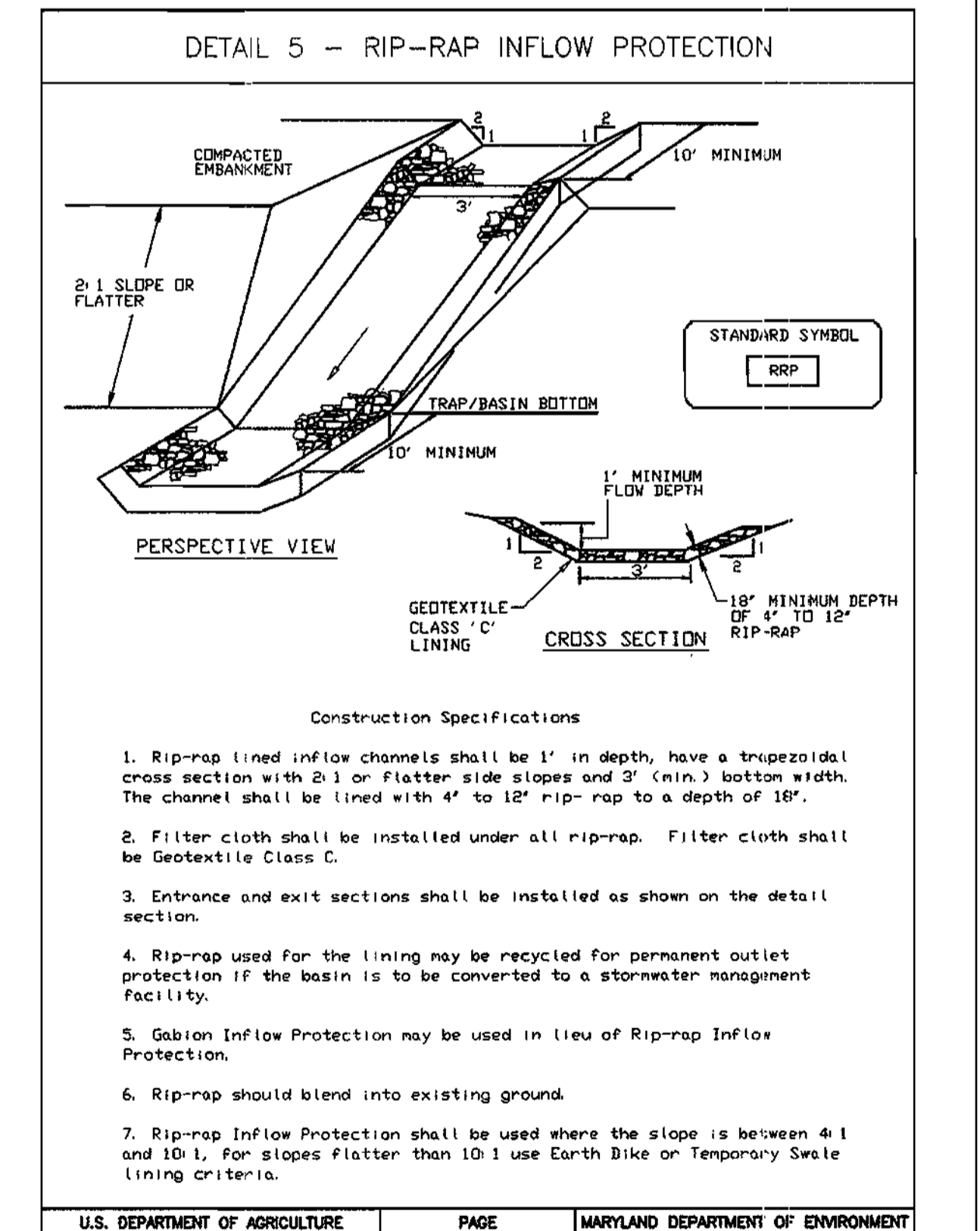
Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Notes:  
 1. Lift gate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.  
 2. Place 3/4" to 1 1/2" stone, 4'-6" thick on the grate to secure the fabric and provide additional filtration.

Emergency Spillway

Designed by: AMT Date: 5/13/02 Checked by: AMT Date: 5/13/02  
 Project name: APL 123 Basin # 2  
 Location: APL 123

Notes:  
 1. Lift gate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.  
 2. Place 3/4" to 1 1/2" stone, 4'-6" thick on the grate to secure the fabric and provide additional filtration.



BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: James E. Loesch Date: 5/13/02  
 PRINT NAME BELOW SIGNATURE

BY THE ENGINEER:

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

Signature: Rita A. Warner Date: 5/13/02  
 PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Signature: James E. Loesch Date: 5/28/02  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: James E. Loesch Date: 5/28/02  
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: James E. Loesch Date: 5/28/02  
 Chief, Development Engineering Division

Signature: James E. Loesch Date: 5/11/02  
 Director

BAFFLE CALCULATION:

Basin sediment #1

D=31.50ft  
 A=8750ft<sup>2</sup>

Le=L1+L2+L3+L4+L5+L6+L7  
 Le=26.66+71.39+106.58+104.19+105.58+104.77+63.90  
 Le=583.07

We=A/D  
 We=8750/31.50  
 We=277.78

Le/We >= 2  
 =583.07/277.78  
 =2.1 > 2

Basin sediment #2

D=64.10ft  
 A=5400ft<sup>2</sup>

Le=L1+L2+L3  
 Le=70.08+61.29+40.18  
 Le=171.55

We=A/D  
 We=5400/64.10  
 We=84.24

Le/We >= 2  
 =171.55/84.24  
 =2.0 > 2

DETAIL 5 - RIP-RAP INFLOW PROTECTION

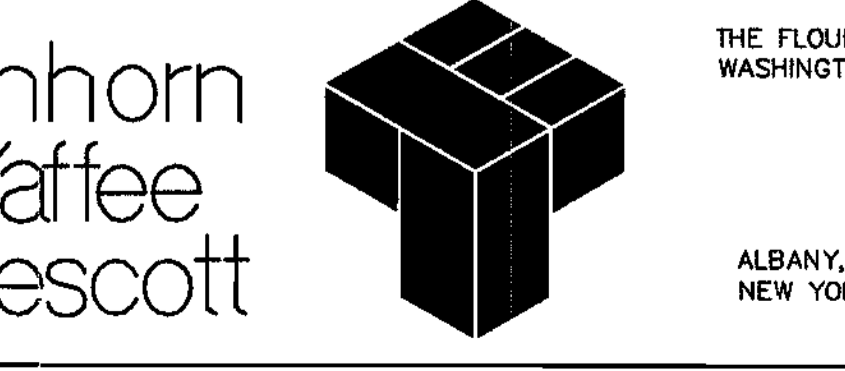
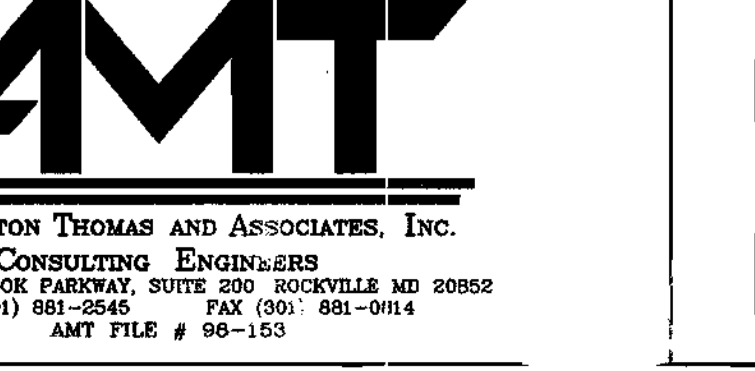
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8 - 6 - 2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 18 - SEDIMENT BASIN BAFFLES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C - 10 - 20 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E - 15 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

SITE GRADING AND UTILITIES

REVISIONS:  
 1. SEDIMENT BASINS CALCULATIONS  
 2. NOTES REVISED

DATE:  
 04/12/02  
 05/06/02

APL SHEET NO. CEC-3  
 COUNTY SHEET NO. C-39

APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY PARCEL 123  
 SEDIMENT & EROSION DETAILS / SCH.  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SDP-02-88

**BY THE DEVELOPER:**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.  
 I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *James E. Loesch* Date: 5/13/02  
 SIGNATURE OF DEVELOPER *James E. Loesch* Date  
 PRINT NAME BELOW SIGNATURE

**BY THE ENGINEER:**  
 I CERTIFY THAT THIS PLAN FOR UTILITIES CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Robert A. Warner* Date: 5/13/02  
 SIGNATURE OF ENGINEER *Robert A. Warner* Date  
 PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Signature: *John M. Lee* Date: 5/13/02  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John M. Lee* Date: 5/13/02  
 HOWARD SOIL CONSERVATION DISTRICT

- 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH-DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO LENGTHS THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY (MAXIMUM 100 FT./DAY/CREW). ALL DISTURBED NON-PAVED TRENCH AREAS SHALL BE MULCHED AND SEEDED AT THE END OF EACH DAY TO ESTABLISH TURF. ALL DISTURBED PAVED TRENCH AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT TRAFFIC BEARING COVER.

DURATION (WEEKS):	SEQUENCE OF CONSTRUCTION (S.O.C.):
4	1. CONTRACTOR SHALL OBTAIN A GRADING PERMIT. CONTRACTOR SHALL PREPARE A SEQUENCE FOR SEDIMENT CONTROL. THE OWNER SHALL REVIEW AND APPROVE THE WRITTEN SEQUENCE PERFORMING S.O.C. #2
3	2. NOTIFY APL AND COUNTY SEDIMENT CONTROL INSPECTOR AT LEAST 14 DAYS PRIOR TO BEGINNING WORK TO ARRANGE FOR A PRE-CONSTRUCTION MEETING.
2	3. INSTALL TEMPORARY SECURITY FENCE OUTSIDE CONSTRUCTION AREA AND GAIN APPROVAL OF FENCE INSTALLATION.
1	4. PERFORM CLEARING ONLY AS NECESSARY TO INSTALL TREE PROTECTION, STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SEDIMENT TRAP, INLET PROTECTION AND ALL OTHER SEDIMENT CONTROL FACILITIES WITHIN THE PROJECT LIMIT.
1	5. ESTABLISH STAGING AREA FOR CONSTRUCTION. DO NOT START S.O.C. #6 UNTIL FIRST RECEIVING PERMISSION FROM THE INSPECTOR TO PROCEED.
10	6. ROUGH GRADE SITE AND EXCAVATE TRENCH FOR CONSTRUCTION NEW UTILITIES. CONTRACTOR SHALL PROVIDE MEANS OF MAINTAINING CONDENSATE FLOW FROM THE STORM DRAINS THROUGH THE CONSTRUCTION OF THE NEW UTILITIES AND OUTLET WORKS. FILL AND STABILIZE TRENCHES WITH VEGETATION AT THE END OF EACH DAY. MAXIMUM LENGTH OF TRENCH PER DAY 100 FEET PER CREW. REMOVE ANY SEDIMENT AT THE END OF EACH DAY FROM THE PAVED AREAS.
1	8. PERFORM FINE GRADING AND PERMANENT STABILIZATION OF THE SITE INCLUDING SOD, RIP-RAP, LANDSCAPE PLANTING, GABIONS, AND VEGETATIVE STABILIZATION.
1	9. CLEAN BASIN A (APPROVED PERMIT F-02-40) OF ANY SEDIMENTS TO ITS APPROVED GRADE AND REQUEST FINAL INSPECTION FROM COUNTY SEDIMENT CONTROL INSPECTOR.
1	10. WITH COUNTY SEDIMENT CONTROL INSPECTOR'S APPROVAL TO REMOVE CONTROLS BASED ON SITE CONDITIONS, REMOVE SEDIMENT CONTROL FACILITIES.
1	11. GRADED AREA AROUND TRAP #2 NEEDS TO BE STABILIZED AND NEW STORM DRAINAGE FUNCTIONING. EXISTING STORM DRAINAGE TO BE DISCONNECTED AND REMOVED. AT THE SAME TIME AS BASIN #2 IS TO BE DEMOLISHED. PORTABLE SEDIMENT TRAP TO BE USED FOR DEWATERING DURING PIPE REMOVAL. STABILIZE ALL DISTURBED AREA.
1	11. PROVIDE AND INSTALL PERMANENT SECURITY FENCE ALONG THE NEW ROAD AND GATE WHERE EXISTING GATE WAS LOCATED AT THE START OF CONSTRUCTION.
1	12. AFTER APPROVAL OF NEW FENCE BY APL, REMOVE TEMPORARY SECURITY FENCE AND RESTORE FENCE AREA DISTURBED BY THIS OPERATION.
27	TOTAL TIME

**SEDIMENT CONTROL NOTES**

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THE FOLLOWING: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1. B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 7) SITE ANALYSIS:
 

TOTAL AREA OF SITE	361.0 to 5	361.0	ACRES
AREA DISTURBED	109.0 to 1	104	ACRES
AREA TO BE ROOFED OR PAVED	0.1 to 0.5	0.0	ACRES
AREA TO BE VEGETATIVELY STABILIZED	108.9 to 0.5	104	ACRES (TEMPORARY STONE 1.8 AC)
TOTAL CUT	37,500 to 6,600	37,000	CU.YDS.
TOTAL FILL	6,800 to 6,300		CU.YDS.
OFF SITE WASTE/BORROW AREA LOCATION			CU. YDS.
- 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE PREPARED ON THE SAME DAY OF DISTURBANCE.

\* ANY CUT WILL BE TRANSFERRED TO A SITE WITH APPROVED AND ACTIVE PERMITTED PROJECT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: *Robert A. Warner* Date: 5/13/02  
 Chief, Development Engineering Division  
 Signature: *John M. Lee* Date: 5/13/02  
 Chief, Division of Land Development  
 Signature: *John M. Lee* Date: 5/13/02  
 Director

**TEMPORARY SEEDING NOTES:**

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

**SEEDED PREPARATION:**

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS:**

APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.) ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SEEDING:**

FOR THE PERIOD MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1-1/2 BUSHEL PER ANNUAL RYE (3.2 LBS./1,000 SQ. FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS/ACRE OF WEEPING LOVE GRASS (0.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED RAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

**MULCHING:**

APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1,000 SQ.FT) OF EMULSIFIED ASPHALT ON FLAT ACRES. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATES AND METHODS NOT COVERED.

**PERMANENT SEEDING NOTES:**

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

**SEEDBED PREPARATION:**

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

**SOIL AMENDMENTS:**

APPLY TWO TONS PER ACRE DOLOMITIC LIME STONE (92 LBS/1,000 SQ.FT) AND 600 LBS PER ACRE 0-20-20 FERTILIZER (14 LBS/1,000 SQ.FT) BEFORE SEEDING HARROW OR DISCING INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LNS PER ACRE 38-0-0 UREAFORM FERTILIZER (9 LBS/1,000 SQ. FT.) AND 500 LBS PER ACRE (11.5 LBS/1,000 SQ. FT.) OF 10-20-20 FERTILIZER.

**SOIL AMENDMENTS:**

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS PER ACRE (2.3 LBS/1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 21, SEED WITH 60 LBS/ACRE (1.4 LBS/1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS PER ACRE (0.05 LBS/1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRINGS OPTION (2) - USE 500, OPTION (3) - SEED WITH 100 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STAW. ALL SLOPES SHOULD BE HYDROSEEDED.

**MULCHING:**

APPLY 1-1/2 TO 2 TONS PER ACRE (10 TO 90 LBS/1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL/1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES. ON SLOPES 8 FEET OR HIGHER USE 348 GALLONS PER ACRE (8 GAL/1,000 SQ.FT.) FOR ANCHORING.

**MAINTENANCE:**

INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS. FOR PUBLIC PONDS, SUBSTITUTE CHEMUNG CROWN VETCH AT 15 LBS/ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS THE SEEDING REQUIREMENT. OPTIMUM SEEDING DATE FOR THIS MISTURE IS MARCH 1 TO APRIL 30.

TOP SOIL SPECIFICATIONS - SOIL TO BE USED AS TOP SOIL MUST MEET THE FOLLOWING: S TOPSOIL SHALL BE A SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURE SUBSOIL AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDEES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS TASH, OR OTHER MATERIALS LARGER THAN 1-1/2" IN DIAMETER.

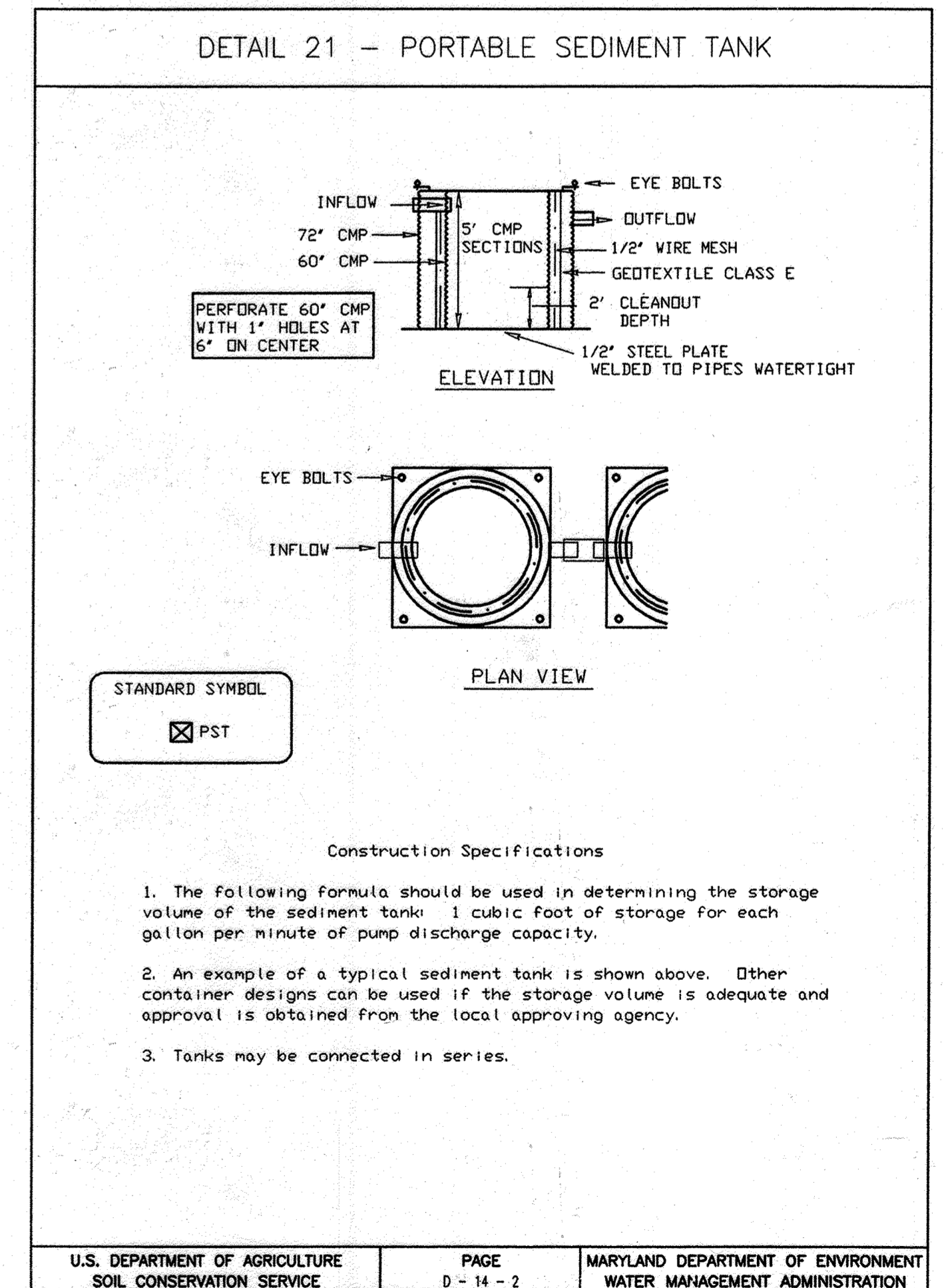
TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

WHERE THE TOPSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIME STONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS/1000 SQ.FT.) PRIOR TO THE PLACEMENT OF TOPSOIL, LIME SHALL BE DISTURBED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

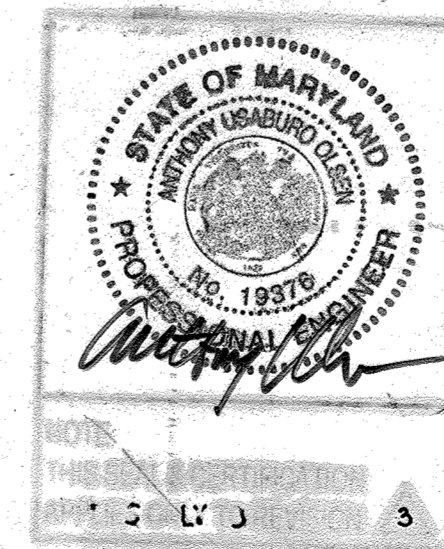
FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES: PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

ALLITERATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZERS, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

- A.) COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
  - B.) COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
  - C.) COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQ.FT. PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
- COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LBS/1,000 SQ. FT. AND 1/3 THE NORMAL LIME APPLICATION RATE.



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALIFIED LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRES SEPTEMBER 23, 2021



FOR EROSION AND SEDIMENT CONTROL ONLY

**AMT**  
 A. MORTON THOMAS AND ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 12750 TWINBROOK PARKWAY, SUITE 200, ROCKVILLE, MD 20852  
 TEL (301) 981-2545 FAX (301) 981-0814  
 AMT FILE # 88-153

**Einhorn Yaffee Prescott**

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000  
 ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A B C D E F  
 G H I J K  
 L M N O

SANNER ROAD

**SITE GRADING AND UTILITIES**

REVISIONS:  
 1. NOTES REVISED  
 2. NOTES REVISED  
 3. NOTES REVISED  
 4. NOTES REVISED

DATE:  
 04/12/02  
 05/06/02  
 07/21  
 06/23

APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY  
**SEDIMENT & EROSION NOTES / SPEC.**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. CEC-4  
 COUNTY SHEET NO. C-40



### DETAIL 17 - TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE

(ALL CONNECTOR BANDS REQUIRE NEOPRENE GASKETS)

**SIDE VIEW ANNULAR COUPLING BAND**

**STANDARD LAP-TYPE COUPLING BANDS FOR ANNULAR OR HELICAL CORRUGATED STEEL PIPE**

**ROD AND LUG TYPE COUPLING BAND 3" CORRUGATIONS 24" WIDE**

**ONE PIECE LAP-TYPE COUPLING FOR ANNULAR OR HELICAL PIPE 12" TO 24" IN DIAMETER**

**TWO PIECE LAP-TYPE COUPLING FOR ANNULAR OR HELICAL PIPE 12" TO 24" IN DIAMETER**

**BAR AND STRAP CONNECTOR CHANNEL COUPLING BAND FOR FLANGED END CORRUGATED STEEL PIPE**

**CONTINUOUS CORRUGATION ANNULAR BAND**

NOTE: UNDER NO CIRCUMSTANCES WILL THE DIMPLE (UNIVERSAL) CONNECTOR BAND BE ACCEPTABLE FOR USE IN ANY SEDIMENT CONTROL OR STORMWATER MANAGEMENT STRUCTURE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-27 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 13 - ANTI-SEEP COLLAR DESIGN

where:  $p$  = vertical projection of anti-seep collar (ft.)  
 $L_s$  = length of pipe in the saturated zone (ft.)  
 $y$  = distance in feet from upstream invert of pipe to highest normal water level expected to occur during the life of the structure, usually the top of the riser.  
 $z$  = slope of upstream embankment as a ratio of  $z$  ft. horizontal to one ft. vertical.  
 $s_0$  = slope of pipe in feet per foot.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-23 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 15 - RISER BASE DETAIL

Construction Specifications

The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers 10' or less in height are:

- A concrete base 18" thick with the riser embedded 9" in the base.
- A 1/4" minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2" of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

Note: For risers greater than ten feet high computations shall be made to design a base which will prevent flotation. The minimum factor of safety shall be 1.20 (downward forces = 1.20 x upward forces).

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-25 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 16 - CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

Construction Specifications

The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers 10' or less in height are:

- A concrete base 18" thick with the riser embedded 9" in the base.
- A 1/4" minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2" of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

Note: For risers greater than ten feet high computations shall be made to design a base which will prevent flotation. The minimum factor of safety shall be 1.20 (downward forces = 1.20 x upward forces).

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER *James E. Loesch* DATE 5/13/02

PRINT NAME BELOW SIGNATURE

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER *Robert A. Warner* DATE 5/21/02

PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE 5/28/02

THESE PLANS FOR SOIL RESOURCES AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE 5/21/02

### BASIN DRAWDOWN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

Construction Specifications

- Perforations in the draw-down device may not extend into the wet storage.
- The total area of the perforations must be greater than 2 times the area of the internal orifice.
- The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
- Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3" minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-30 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 20A - REMOVABLE PUMPING STATION

Construction Specifications

- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
- After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
- The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.
- The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE D-12-5 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

Riser Diam., in.	Trash Rack Cylinder Dian., in.	Trash Rack Thick., in.	Trash Rack H., in.	Minimum Size Support Bar	Minimum Top Thickness, in.	Minimum Top Stiffener
12	18	16	6	#6 Rebar	16 ga.	---
15	21	16	7	"	"	---
18	27	16	8	"	"	---
21	30	16	11	"	"	---
24	36	16	13	"	14 ga.	---
27	42	16	15	"	14 ga.	---
36	54	14	17	#8 Rebar	12 ga.	---
42	60	14	19	"	"	---
48	72	12	21	1-1/4" pipe or 1-1/4 x 1-1/4 x 1/4 angle	10 ga.	---
54	78	12	25	"	"	---
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	8 ga.	---
66	96	10	33	2" pipe or 2x2x3/16 angle	8 ga.	2x2x1/4 w/stiffener angle
72	102	10	36	"	"	2-1/2x2-1/2x1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2 x 2-1/2x 5/16 angle

Note: The above trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements of MD 378.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chief, Development Engineering Division* DATE 5/21/02

*Director* DATE 6/11/02

**AMT**  
A. MORTON THOMAS AND ASSOCIATES, INC.  
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AMT FILE # 96-155

**Einhorn Yaffee Prescott**

THE FLOUR MILL 1000 POTOMAC ST. NW STE. L1 WASHINGTON, D.C. 20007 (202) 471-5000

ALBANY, NY BOSTON, MA WHITE PLAINS, NY NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
DRN: S. ITANI  
CHK: S. ITANI  
DATE: 04/12/02

JOHNS HOPKINS RD.  
SHEET ORGANIZATION KEY PLAN  
A B C D E F  
G H I J K  
L M N O  
SANNER ROAD

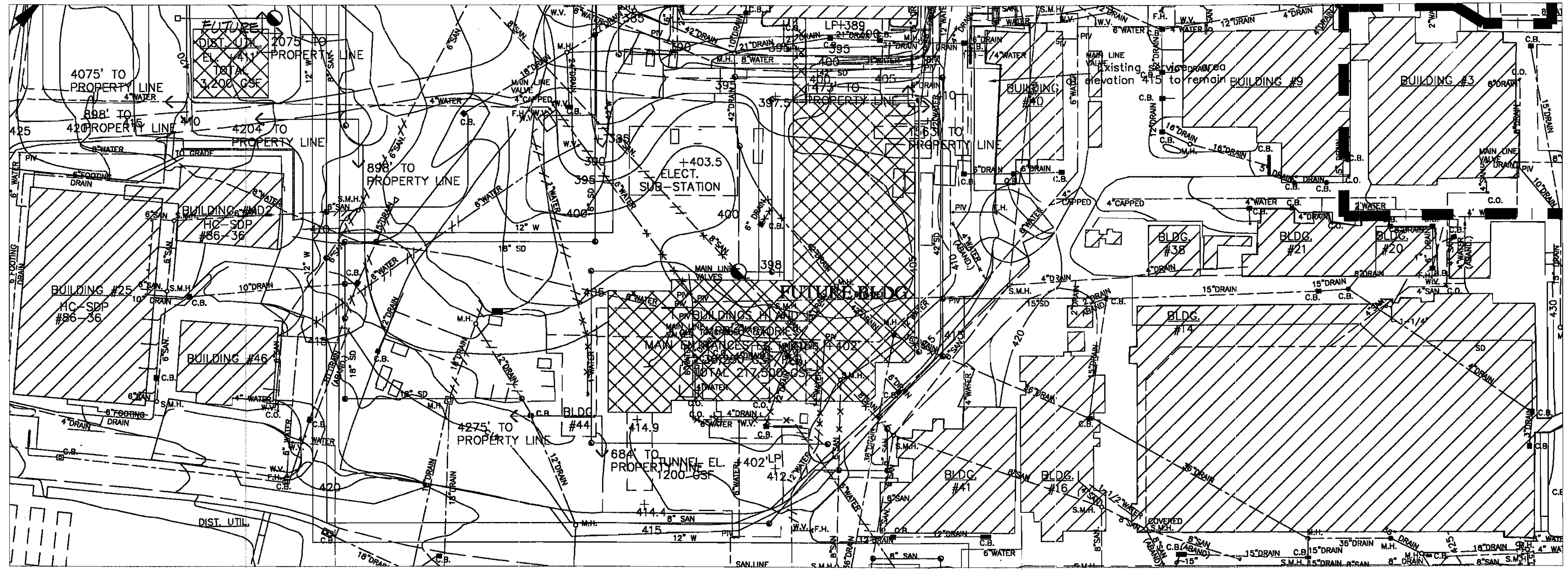
**SITE GRADING AND UTILITIES**

REVISIONS:  
1. NEW SHEET ADDED  
2. NOTES REVISED

DATE: 04/12/02 05/06/02

APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY PARCEL 1  
**SEDIMENT & EROSION DETAILS / SCH.**  
TAX MAP 41 PARCEL 123  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
APL SHEET NO. CEC-5  
COUNTY SHEET NO. C-41



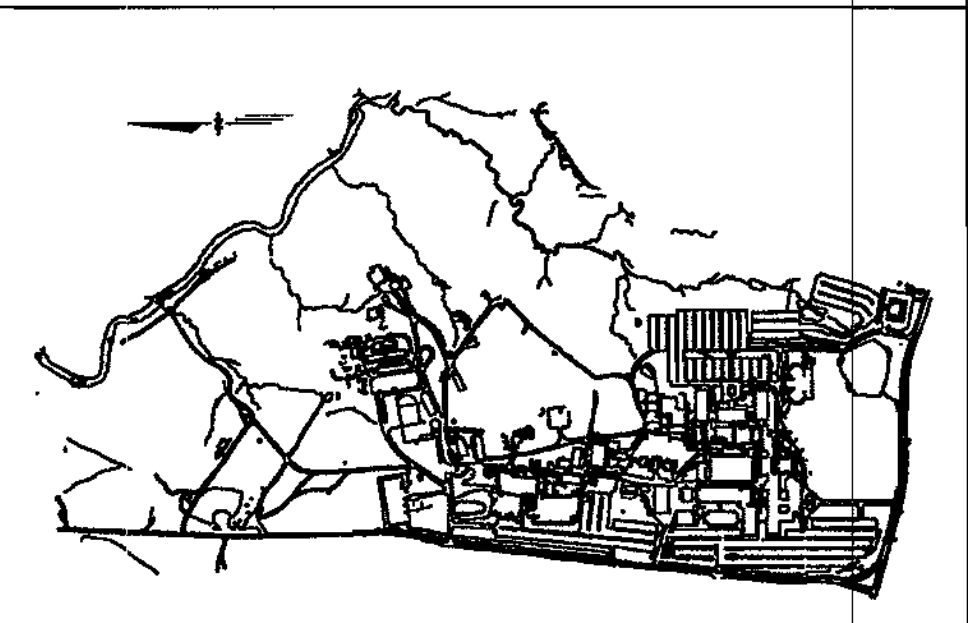
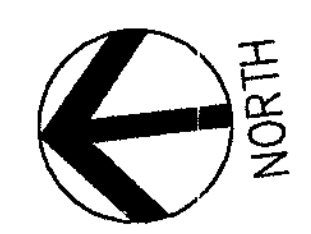
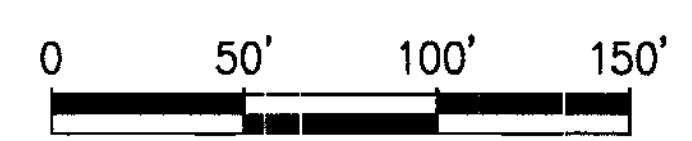
**LEGEND**

- EXISTING CONTOUR
- TREELINE
- FOREST STAND
- DRAINAGE AREA
- 100 YEAR FLOODPLAIN
- STREAM VALLEY BUFFER
- STREAM SYSTEM
- WETLANDS
- 25' WETLAND BUFFER
- SOIL CLASSIFICATION BOUNDARY
- STREAMS
- DRAINAGE DITCH
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- 8" SAN. EXISTING SANITARY SEWER
- 8" SAN. PROPOSED SANITARY SEWER
- 12" W. EXISTING WATER
- 12" W. PROPOSED WATER
- 18" DRAIN. EXISTING STORM DRAIN
- 18" SD. PROPOSED STORM DRAIN
- 18" DRAIN. EXISTING STORM DRAIN TO BE REMOVED
- 12" W. EXISTING WATER TO BE REMOVED
- 8" SAN. EXISTING SANITARY SEWER TO BE REMOVED
- 8" SAN. EXISTING SANITARY SEWER TO BE ABANDONED
- EXISTING STORM WATER MANAGEMENT POND
- WETLANDS
- SLOPES >25%
- SLOPES 15% - 25%
- EXISTING BUILDING
- FUTURE PROPOSED BUILDING
- PARKING LOT
- EDGE OF ROAD
- OBSERVATION AREA
- 30" DBH TREE
- SOILS CLASSIFICATION
- PROPOSED INFILTRATION TRENCH
- CATCH BASIN
- EXISTING MANHOLE
- SANITARY SEWER MANHOLE
- PROPOSED MANHOLE
- PROPOSED STORMCEPTOR
- EXISTING POST INDICATOR VALVE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING CLEANOUT
- PROPOSED STORM DRAIN CATCH BASIN
- PROPOSED STORM WATER MANAGEMENT POND

APPROVED: *[Signature]* DEPARTMENT OF PLANNING AND ZONING 5/31/02  
 CHIEF, DEPARTMENT OF PLANNING AND ZONING DIVISION MK DATE 6/3/02  
 CHIEF, DIVISION OF LAND DEVELOPMENT RB DATE 6/11/02  
 DIRECTOR DATE 6/11/02

OWNER/DEVELOPER  
 APPLIED PHYSICS LABORATORY-  
 THE JOHNS HOPKINS UNIVERSITY  
 11100 JOHNS HOPKINS ROAD  
 LAUREL, MARYLAND 20707

SURVEYOR  
 WHITMAN, REQUART AND ASSOCIATES  
 2315 SAINT PAUL STREET  
 BALTIMORE, MARYLAND 21218



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 AMT FILE # 02-153

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 ALBANY, NY BOSTON, MA WHITE PLAINS, NY  
 NEW YORK CITY, NY LOS ANGELES, CA

DES: B. WARNER  
 DRN: S. ITANI  
 CHK: S. ITANI  
 DATE: 04/12/02

A	B	C	D	E	F
G	H	I	J	K	L
M	N	O			

SANNERS ROAD  
 JOHN HOPKINS RD.  
 SHEET ORGANIZATION KEY PLAN

**SITE GRADING AND UTILITIES**

APPLIED PHYSICS LABORATORY  
 THE JOHNS HOPKINS UNIVERSITY **PARCEL 1**  
**NEW BUILDINGS LOCATION**  
 TAX MAP 41 PARCEL 123  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 APL SHEET NO. **CBL-1**  
 COUNTY SHEET NO. **C-42**