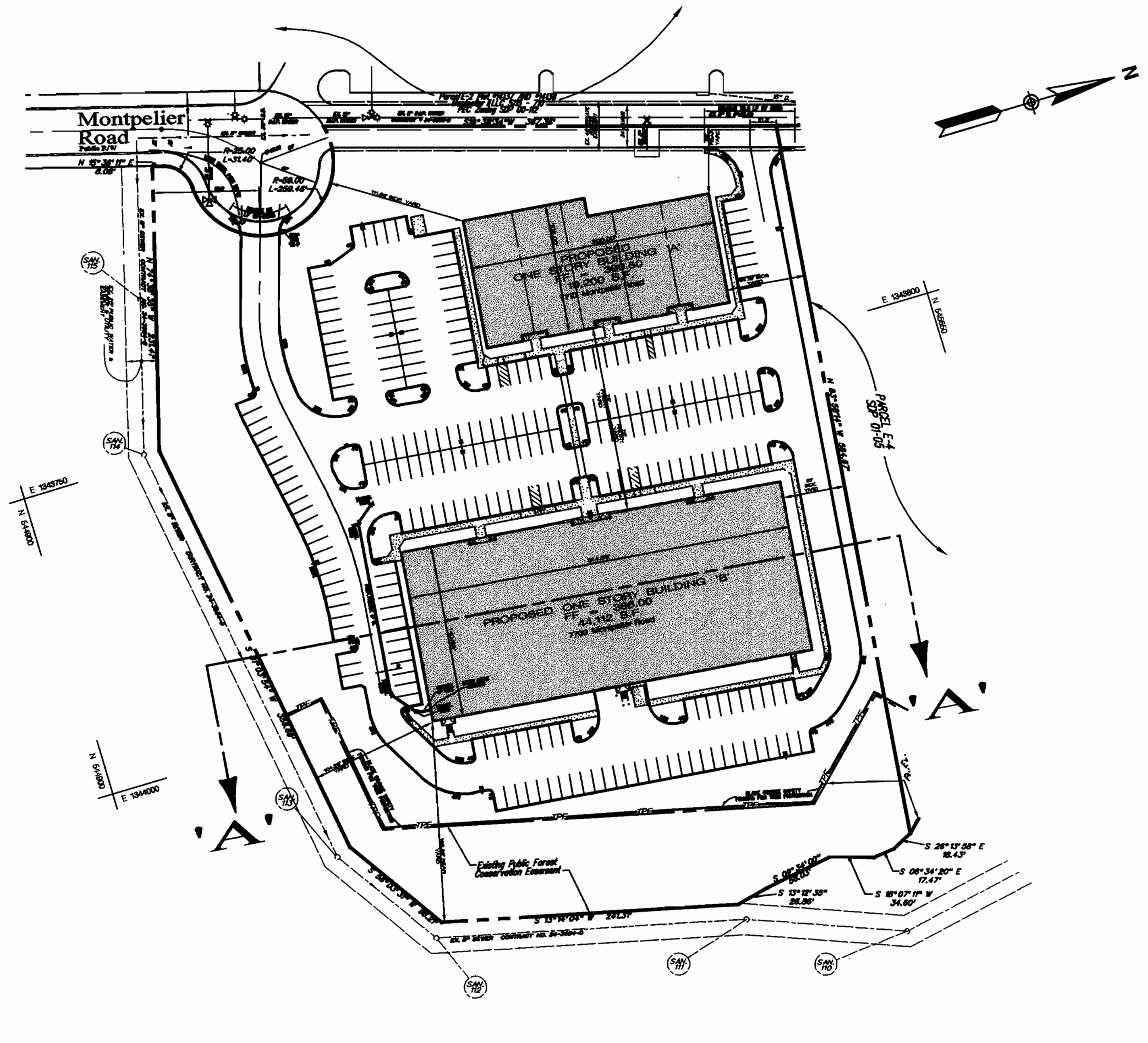
# Site Development Plans for Parcel E-5

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Montpelier Research Park Howard County, Maryland

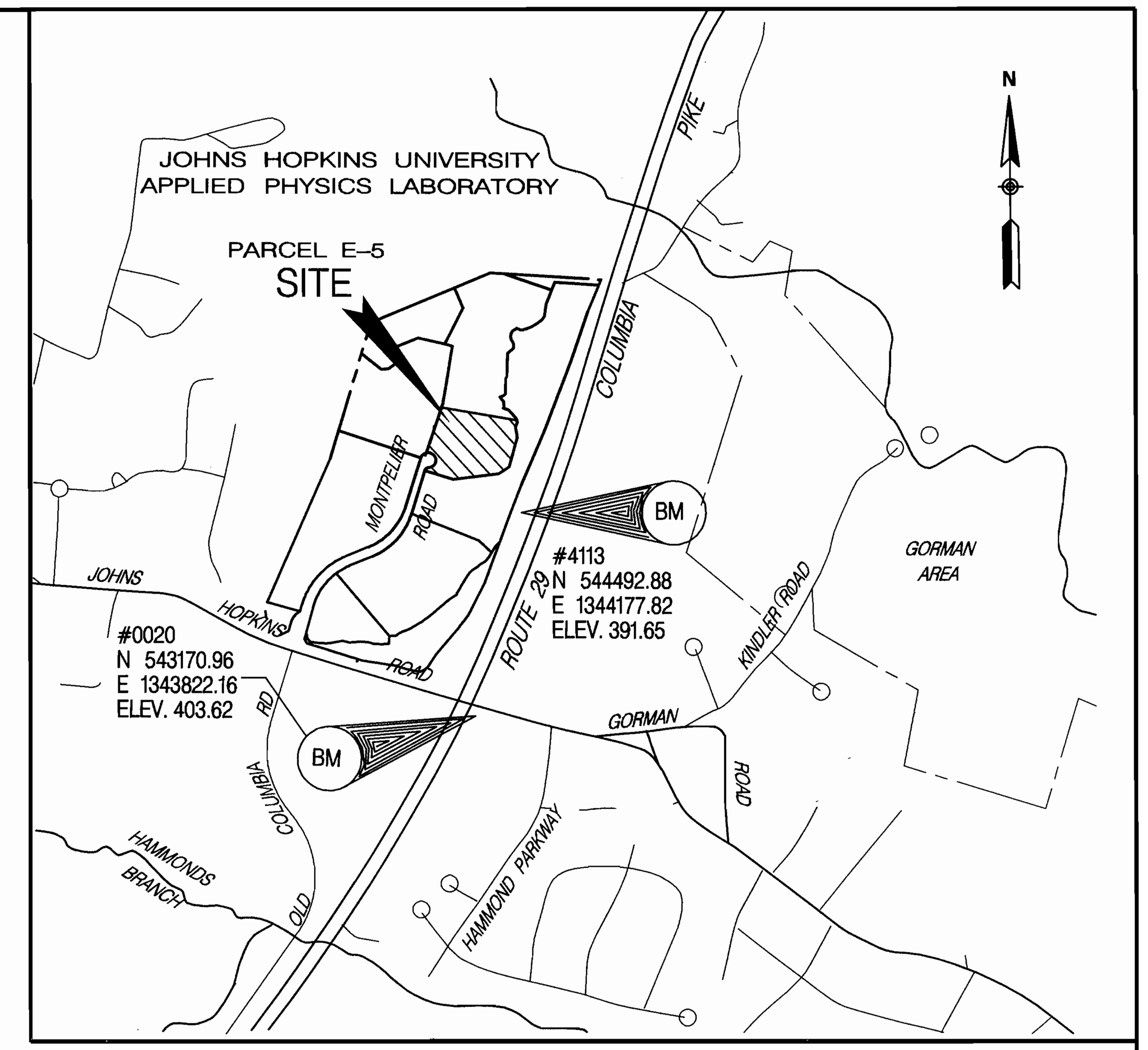
### General Notes

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE OR AS SPECIFIED.
2. APPROXIMATE LOCATION OF EXISTING UTLITIES ARE BASED SOLEY ON AVAILABLE RECORDS. CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITIES WHICH MAY BE IMPACTED BY THE WORK. MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTORS OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
4. THE CONTRACTOR SHALL NOTIFY 'MISS UTILITY' AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE, AND SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK. ANY DAMAGE CAUSED BY THE CONTRACTOR TO EXISTING PUBLIC RIGHT-OF-WAY, EXISTING PAVING, EXISTING CURB AND GUTTER, EXISTING UTILITIES, ETC. SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH MAXIMUM OF 2' CONTOUR INTERVALS PREPARED BY DuVal & ASSOCIATES, P.A. DATED MAY 2000.
6. PUBLIC WATER AND SEWER PROVIDED BY CONTRACT NUMBER 34-3654D AND 30-3789-D.
7. THE SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING ANALYSIS FOR THIS PROJECT WAS MADE BY HILLIS CARNES, INC. IN JUNE 2000.
8. ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH ASHTO T-180, OR AS SPECIFIED BY GEOTECHNICAL ENGINEER
9. REGIONAL STORMWATER MANAGEMENT AND WATER QUALITY ARE PROVIDED IN A WETLAND POND SYSTEM LOCATED ON PARCEL G1, APPROVED PER SDP 99-92.
10. FOREST CONSERVATION REQUIREMENTS ARE PROVIDED PER SDP 98-11, F98-45, SDP 99-92, F 99-191.
11. THERE ARE NO WETLANDS, FLOODPLAIN, OR STREAMS ON THIS SITE.
12. OPERATING EXISTING VALVES, SWITCHES, SERVICES OR START UP OF NEW SERVICES SHALL BE COORDINATED WITH THE OWNERS REPRESENTATIVE. THE BUILDING WILL BE PROVIDED WITH A SPRINKLER SYSTEM.
13. TRENCH COMPACTION FOR STORM DRAINS WITHIN THE ROAD OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL IV, STD. NO. G-2.01.
14. UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED FROM FACE.
15. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
16. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL WATER, SEWER, AND DRAIN HOUSE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
17. THE CONTRACTOR SHALL MAINTAIN 2.0 FEET MINIMUM PROTECTIVE COVER OVER ALL UTILITIES DURING CONSTRUCTION.
18. THERE ARE NO KNOWN CEMETARIES OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES, THE DEVELOPER WILL BE SUBJECT TO SECTION 16.1305 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOP REGULATIONS.
19. ALL SLOPES 3:1 OR GREATER, EXCEPT THOSE ASSOCIATED WITH LANDSCAPE BERMING, SHALL BE MONITORED DURING PLACEMENT BY THE PROJECT GEOTECHNICAL ENGINEER
20. PAVING MARKINGS TO BE "TRAFFIC WHITE"
21. CONTRACTOR SHALL MAINTAIN A MINIMUM 2 FOOT BENCH BEHIND CURB AND GUTTER IN FILL AREAS.
22. ALL FIRE LINE PIPING SHALL MEET THE REQUIREMENTS OF THE NFPA PIPE SHALL BE UL LISTED, FM APPROVED AND MEET THE AWWA STANDARDS FOR FIRE PROTECTION USE. FITTINGS SHALL HAVE PRESSURE CLASS RATINGS COMPATIBLE WITH WITH THE PIPE USED.
23. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4 FEET OF COVER OVER THE PRIVATE WATER MAIN SHOWN HEREON UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE ALL CRIMPS OR VERTICAL BENDS NECESSARY TO MAINTAIN CLEARANCES WITH OTHER UTILITIES.
24. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING OR STRUCTURES ARE TO BE REMOVED, PRIOR TO PLACING A BID ON THOSE ITEMS. THE CONTRACTOR SHALL CLEAR THE CONSTRUCTION AREA OF ALL EXISTING TREES, PAVING, STRUCTURES, ETC., UNLESS NOTED ON PLAN.
25. THE SUBJECT PROPERTY IS ZONED PEC PER 10-18-93 COMPREHENSIVE ZONING PLAN.
26. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
27. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
28. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF $ 29,530.00
29. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY VIRTUE OF BEING THE SUBJECT OF AN APPROVED FOREST CONSERVATION PLAN AS PART OF THE APPROVED SUBDIVISION FOR MONTPELIER RESEARCH PARK.
30. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES(MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
31. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0020 AND 4113 WERE USED FOR THIS PROJECT.
32. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY LEE CUNNINGHAM AND ASSOCIATES, DATED DECEMBER 1997, AND WAS MOST RECENTLY APPROVED JULY 6, 2000. SEE SUBSEQUENT LETTER DATED AUGUST 7, 2000 FROM LEE CUNNINGHAM TO "DEPARTMENT OF PLANNING AND ZONING" CONFIRMING TRIP GENERATION FOR THIS PARTICULAR PROJECT.
33. ALL EXTERIOR LIGHTING SHALL COMPLY WITH SECTION 134, ZONING REGULATIONS.




### Proposed Layout

Scale 1" = 100'




### Location Map

SCALE: 1" = 1,000'

COORDINATES AND BEARING ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS: NAD 83. ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN VERTICAL DATUM-NVD 29 AND ARE BASED ON THE ~~FOLLOWING~~ HOWARD COUNTY SURVEY CONTROL STATIONS: (TRANSLATED METERS TO FEET)
#4113-CONCRETE MONUMENT 4' WEST OF TOP OF BANK OFF SOUTH BOUND MARYLAND ROUTE 29 AT SURFACE.
#0020-STANDARD MBCS SURVEY DISC SET ON CONCRETE MONUMENT, FLUSH WITH THE GROUND.

### Site Analysis Data Chart

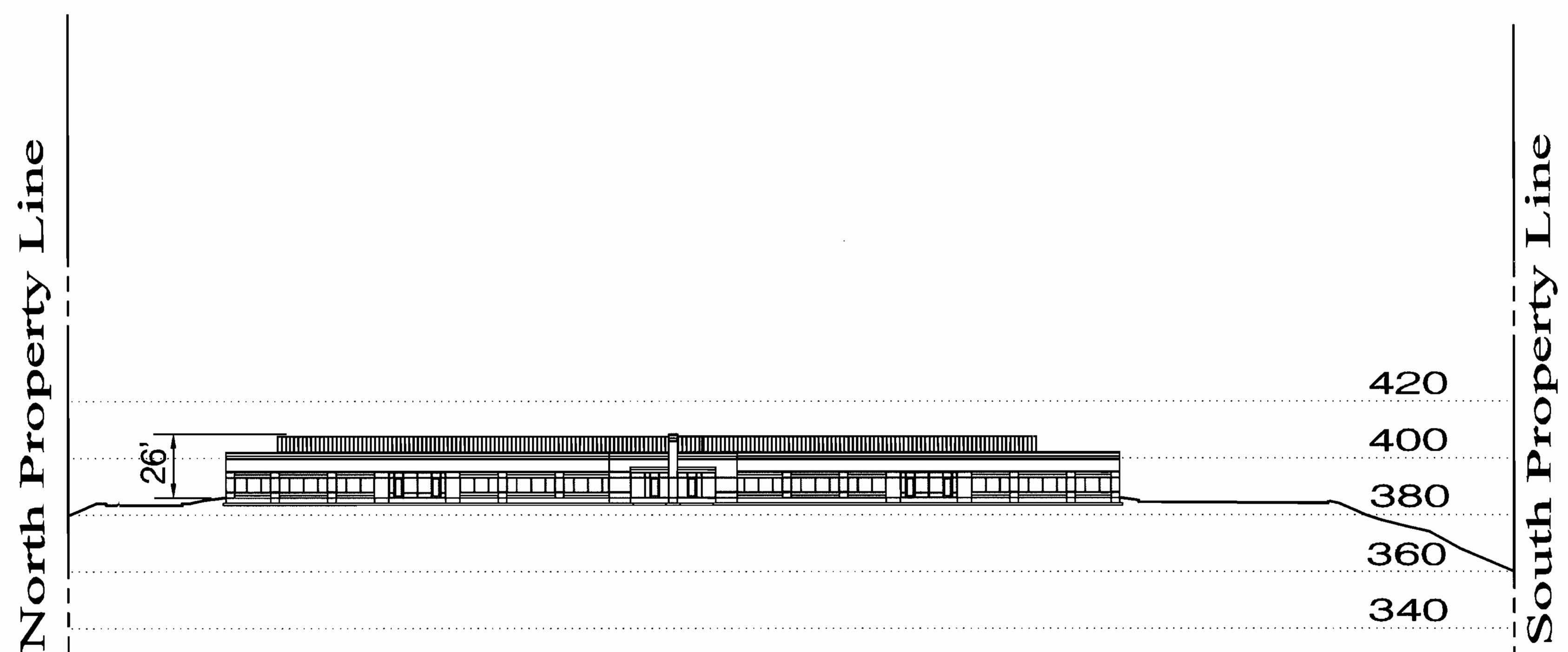
1. GENERAL SITE DATA
   - CURRENT PLAT REFERENCE ........ 14411 + 14412
   - PRESENT ZONING ........ PEC
   - APPLICABLE DPZ FILE REFERENCES: ........ BA 96-31E, PB 190, VP 86-64, WP 91-93, ZB 802 & 767, S 86-47, FDP #1, SDP 88-197, SDP 89-88, F 98-45, SDP 99-92, F 99-191, SDP 98-11, F 00-49, WP 97-21 AND WP 98-37
   - PROPOSED USE: ........ GENERAL OFFICE - 2-ONE STORY OFFICE BUILDINGS(BLDG'A'-44,112 SF, BLDG'B'-19,500 SF)
   - NO. OF OCCUPANTS ........ 210 EMPLOYEES MAXIMUM
   - PROPOSED WATER: ........ PUBLIC
   - PROPOSED SEWER: ........ PRIVATE ONSITE LINE TIES TO PUBLIC SYSTEM
   - WATER AND SEWER CONTRACT NUMBER ........ 34-3903-D
2. AREA TABULATION
   - TOTAL PROJECT AREA: ........ 7.096 ACRES
   - AREA OF THIS PLAN SUBMISSION: ........ 7.096 ACRES
   - TOTAL DISTURBED AREA: ........ 6.5 ACRES
   - FLOOR AREA RATIO: ........ 63,312 SF GROSS FLOOR AREA / 7.096 ACRES = 0.21
   - BUILDING COVERAGE TO SITE ........ 63,312 SF GROUND FLOOR AREA (1.46 acres) / 7.096 ACRES = 21% of gross area
3. OPEN SPACE DATA: N/A OPEN SPACE PROVIDED AS PART OF APPROVED SUBDIVISION
4. PARKING SPACE DATA
   - PARKING REQUIRED: GENERAL OFFICE 63,312 sf
   - @ 3.3 PARKING SPACES PER 1,000 SF ........ 219 SPACES REQUIRED
   - PARKING PROVIDED: ........ 261 SPACES PROVIDED
   - TOTAL INCLUDES
     - 253 STANDARD SPACES @ 9' X 18'
     - 2 STANDARD HANDICAP SPACES @ 21' X 18' TWO SIDE BY SIDE
     - 6 VAN ACCESSIBLE HANDICAP SPACES @ 24' X 18' TWO SIDE BY SIDE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

| Signature | Date |
|---|---|
| Chief, Development Engineering Division | 10/17/00 |
| Chief, Land Development Division | 10/17/00 |
| Director | 10/18/00 |

ADDRESS CHART

| Lot/Parcel No. | Street Address |
|---|---|
| BUILDING A | 7710 Montpelier Road |
| BUILDING B | 7700 Montpelier Road |
| | |




### Section A-A through Site

Scale 1" = 50' Horz. & Vert.

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666


SHEET INDEX

| NO. | SHEET TITLE |
|---|---|
| 1 | COVER SHEET |
| 2 | SITE PLAN- 30 SCALE |
| 3 | DRAINAGE AREA MAP, UTILITY PROFILES |
| 4 | DETAILS |
| 5 | STORM DRAIN PROFILES AND DETAILS |
| 6 | EROSION & SEDIMENT CONTROL PLAN |
| 7 | EROSION & SEDIMENT CONTROL DETAILS |
| 8 | LANDSCAPE PLAN |


PERMIT INFORMATION CHART

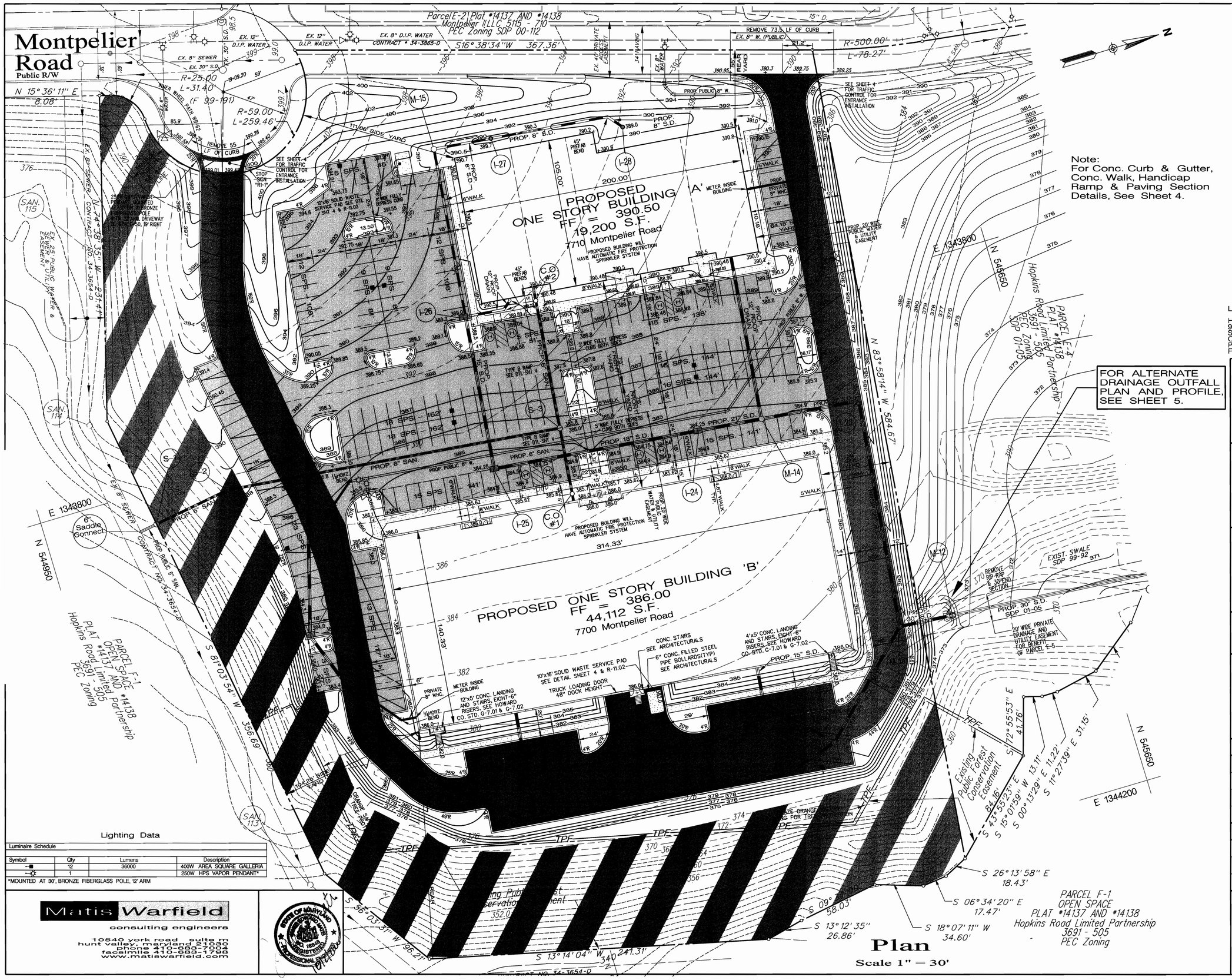
| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~14411 & 14412~~ 14471 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com


STATE OF MARYLAND — PROFESSIONAL ENGINEER — REGISTERED NO. 18848

**Cover Sheet**
**Proposed Offices for The Johns Hopkins University Applied Physics Laboratory**
**Parcel E-5**
**Montpelier Research Park**

Howard County, Maryland
Scale: As Shown
Sheet 1 of 8
October 2, 2000
SDP 01-19




Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E. Matis, P.E. MD 18848 — Date 10/2/2000

DEVELOPER'S CERTIFICATE

" We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

For MOR Montpelier LLC By: R. Cole Schnorf, Senior V.P. — Date 10-2-2000

Reviewed for Howard SCD and meets Technical Requirements

USDA – Natural Resources Conservation Service — Date 10/12/00

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

Howard SCD — Date 10/12/00

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS:

County Health Officer Howard County Health Department — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00

Chief, Land Development Division — Date 10/17/00

Director — Date 10/18/00

ADDRESS CHART

| Lot/Parcel No. | Street Address |
|---|---|
| BUILDING A | 7710 Montpelier Road |
| BUILDING B | 7700 Montpelier Road |

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~14171 AND 14172~~ 14171 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

Lighting Data

Luminaire Schedule

| Symbol | Qty | Lumens | Description |
|---|---|---|---|
| | 12 | 36000 | 400W AREA SQUARE GALLERIA |
| | 1 | | 250W HPS VAPOR PENDANT* |

*MOUNTED AT 30', BRONZE FIBERGLASS POLE, 12' ARM


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7934
facsimile 410-683-7998
www.matiswarfield.com


STATE OF MARYLAND JAMES E. MATIS No. 18848 REGISTERED PROFESSIONAL ENGINEER

# Site Development Plan

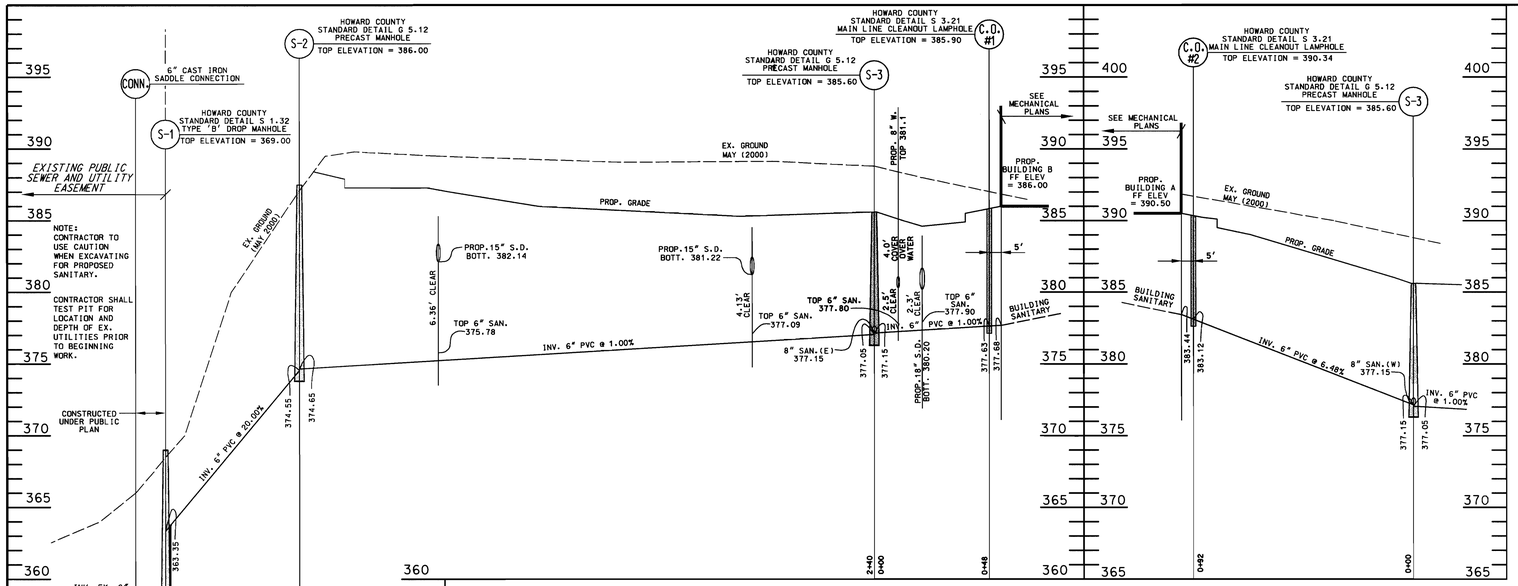
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

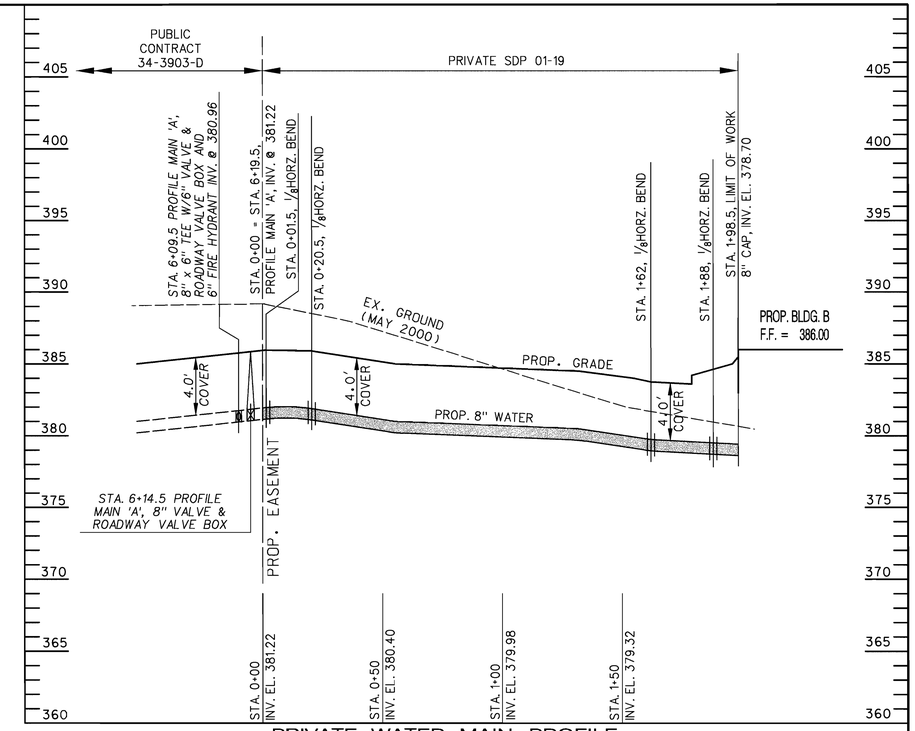
Sheet 2 of 8
October 2, 2000

SDP 01-19




PRIVATE SANITARY SEWER PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'




PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

## STORM DRAIN STRUCTURE SCHEDULE

| NO. | TYPE | INV. IN | INV. OUT | TOP ELEV. | REMARKS |
|---|---|---|---|---|---|
| I-23 | DBL.'S'COMB. | 378.27 | 378.07 | 385.30(TC) | STD. DTL. SD 4.34 ** |
| I-24 | DBL.'S' | 379.77 | 379.52 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-25 | DBL.'S' | 381.00 | 380.75 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-26 | DBL.'S'COMB. | 383.28 | 382.83 | 389.60(TC) | STD. DTL. SD 4.34 ** |
| I-27 | YARD INLET | 384.77 | 384.60 | 389.70(TG) | STD. DTL. SD 4.14 |
| I-28 | YARD INLET | - | 385.27 | 389.00(TG) | STD. DTL. SD 4.14 |
| I-29 | DBL.'S'COMB. | 373.54 | 373.29 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-30 | DBL.'S'COMB. | 375.23 | 374.98 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-31 | DBL.'S'COMB. | 380.03 | 379.83 | 384.60(TC) | STD. DTL. SD 4.34 ** |
| I-32 | DBL.'S'COMB. | - | 382.67 | 388.40(TC) | STD. DTL. SD 4.34 |
| M-12 | 5' MANHOLE | 367.98 | 367.78 | 373.50 | STD. DTL. G 5.05 |
| M-13 | 5' MANHOLE | 371.08 | 370.58 | 382.15 | STD. DTL. G 5.13 |
| M-14 | 4' MANHOLE | 379.18 | 378.98 | 384.65 | STD. DTL. G 5.12 |
| M-15 | 4' MANHOLE | 384.39 | 384.22 | 390.70 | STD. DTL. G 5.12 |
| M-16 | 5' MANHOLE | 372.60 | 372.35 | 379.70 | STD. DTL. G 5.13 |
| M-17 | 4' MANHOLE | 376.25 | 376.05 | 381.00 | STD. DTL. G 5.12 |
| M-18 | 4' MANHOLE | 376.60 | 376.40 | 381.05 | STD. DTL. G 5.12 |
| E-3 | CONC END SECT | | | NA | STD. DTL. SD 5.51* |

**MODIFIED, SEE DETAILS SHT. 5
(TC)=TOP CURB
(TG)=TOP GRATE
*ONLY NECESSARY IF DRAIN SYSYTEM ON PARCEL E-4 HAS NOT BEEN CONSTRUCTED

## PIPE SCHEDULE

| SIZE | TYPE | PIPE LENGTH-FEET |
|---|---|---|
| 8" | HDPE | 260 |
| 12" | HDPE | 153 |
| 15" | RCCP CL IV | 616 |
| 18" | RCCP CL IV | 328 |
| 21" | RCCP CL III | 322 |
| 24" | RCCP CL III | 94 |
| 30" | RCCP CL III | 38 |

## DA MAP LEGEND

ACREAGE — PERCENT IMPERVIOUS

5.40 .90 W 92%

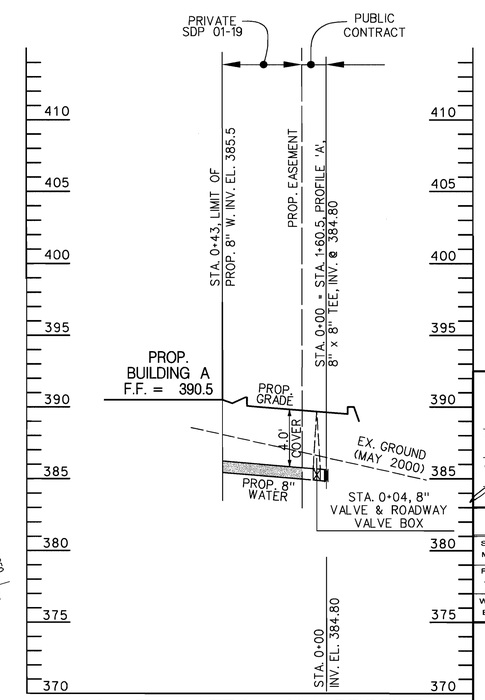
C FACTOR — AREA DESIGNATION

SOILS TYPE

DA BOUNDARY FROM SWM PLAN SDP 99-92

# Drainage Area Map

Scale 1" = 50'




PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00

Chief, Land Development Division — Date 10/17/00

Director — Date 10/18/00

PERMIT INFORMATION CHART

| Subdivision Name | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|
| Montpelier Research Park | | | | E-5 |
| Plat ~~or Liber/Folio~~ 14137, 14138 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | Sewer Code 6440000 | | |

**Drainage Area Map**
**Utility Profiles**
**Proposed Offices for The Johns Hopkins University Applied Physics Laboratory**
**Parcel E-5**
**Montpelier Research Park**

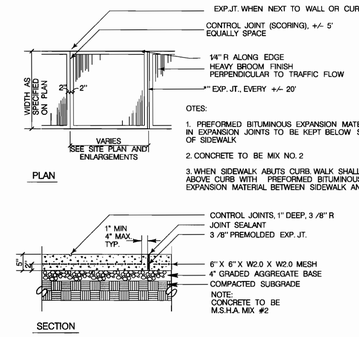
Howard County, Maryland
Scale: As Shown

Sheet 3 of 8
October 2, 2000

SDP 01-19

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7094
facsimile 410-683-1798
www.matiswarfield.com

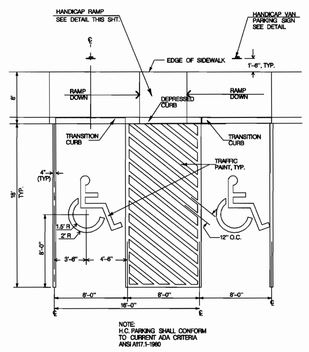
STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER



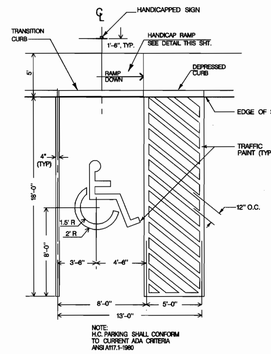

OTES:

1. PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT BELOW SURFACE OF SIDEWALK
2. CONCRETE TO BE MIX NO. 2
3. WHEN SIDEWALK ABUTS CURB, WALK SHALL BE ABOVE CURB WITH PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB

## Detail Concrete Walk
Not To Scale




## Detail Van Accessible Handicap Parking Spaces
Not To Scale



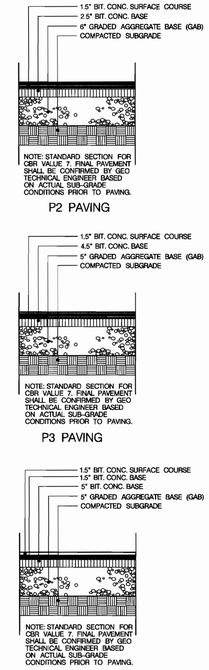

## Detail Handicap Parking Space
Not To Scale

ALL DIMENSIONS ARE IN INCHES

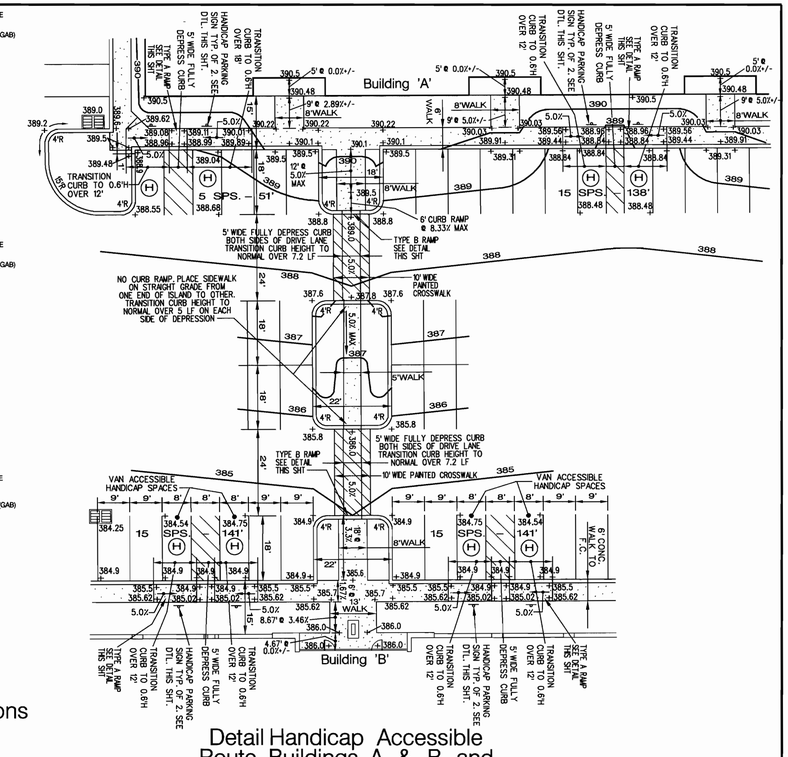
* REDUCE SPACING 50 PERCENT

COLORS
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

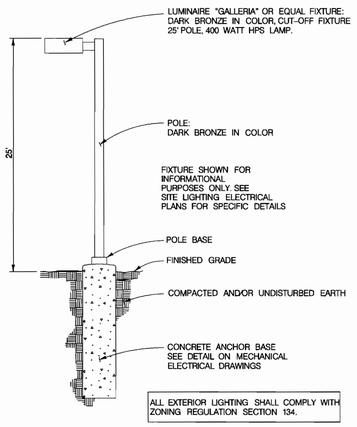
## Detail Handicap Parking Sign
Not To Scale



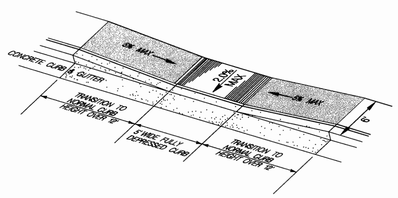

## Detail Paving Sections
Not To Scale



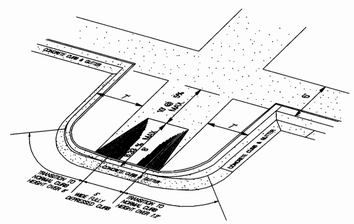

## Detail Handicap Accessible Route Buildings A & B and Between Buildings
Scale: 1" = 20'




## Detail Sharp Cutoff Area Light
Not To Scale



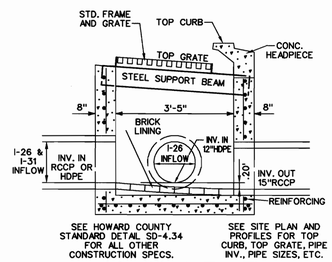

## Type 'A' Handicap Ramp
Not To Scale



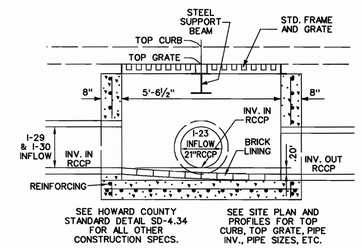

## Type 'B' Curb Ramp
Not To Scale

$98 FINE SIGN / VAN ACCESSIBLE SIGN
SIGN TO UTILIZE AN ALUMINUM BLANK 6" X 12" X 0.080" THICK WITH TWO SINGLE POST MOUNTING HOLES.

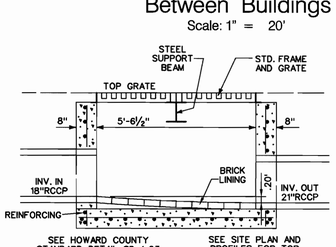
THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS



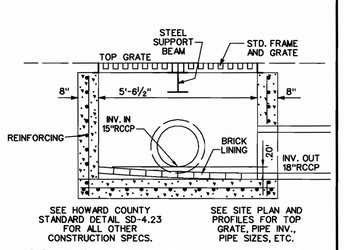

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-26 & 31)
Not To Scale



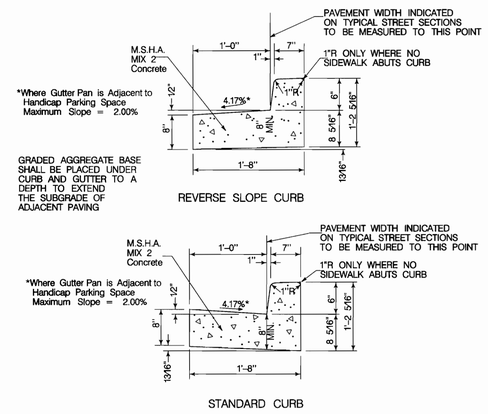

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-23, 29 & 30)
Not To Scale




## Modified For Flow Through Double Type 'S' Inlet (I-24)
Not To Scale

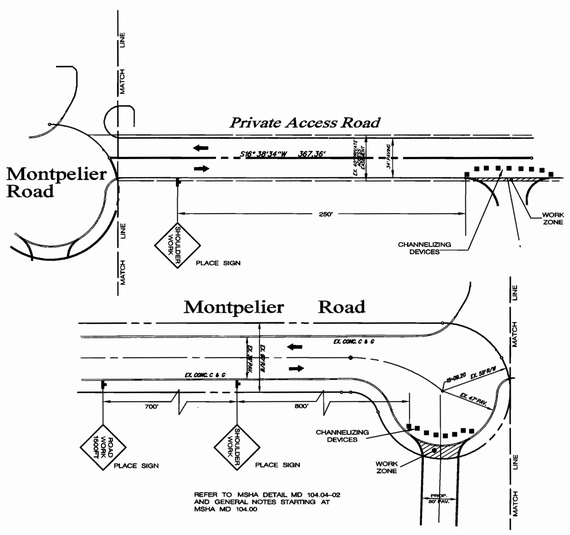



## Modified For Flow Through Double Type 'S' Inlet (I-25)
Not To Scale

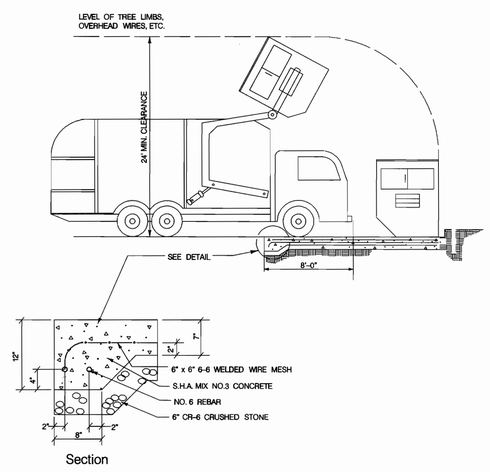



Refer to Howard County Standard Plate R-3.01

## Detail Concrete Curb and Gutter
Not To Scale

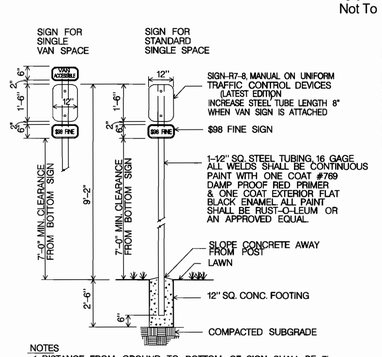



## Work Zone Traffic Control Detail
Not To Scale




Refer to Howard County Standard Plate R -3.01

## Detail Solid Waste Service Pad
Not To Scale




NOTES
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAPPED SIGN.
3. VAN ACCESSIBLE SPACES SHALL INCLUDE "VAN SIGN" AS REQUIRED
4. SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

SIGN COLORS
LETTERS AND BORDER - GREEN
WHITE H.C. SYMBOLS ON BLUE BACKGROUND
BACKGROUND - WHITE

## Detail Handicap Parking Sign & Post
Not To Scale

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

| | |
|---|---|
| Chief, Development Engineering Division | Date 10/17/00 |
| Chief, Land Development Division | Date 10/17/00 |
| Director | Date 10/18/00 |

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~Liber 5 Folio 72~~ 14471 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7094
facsimile 410-683-1798
www.matiswarfield.com


STATE OF MARYLAND NO. 15 REGISTERED PROFESSIONAL ENGINEER

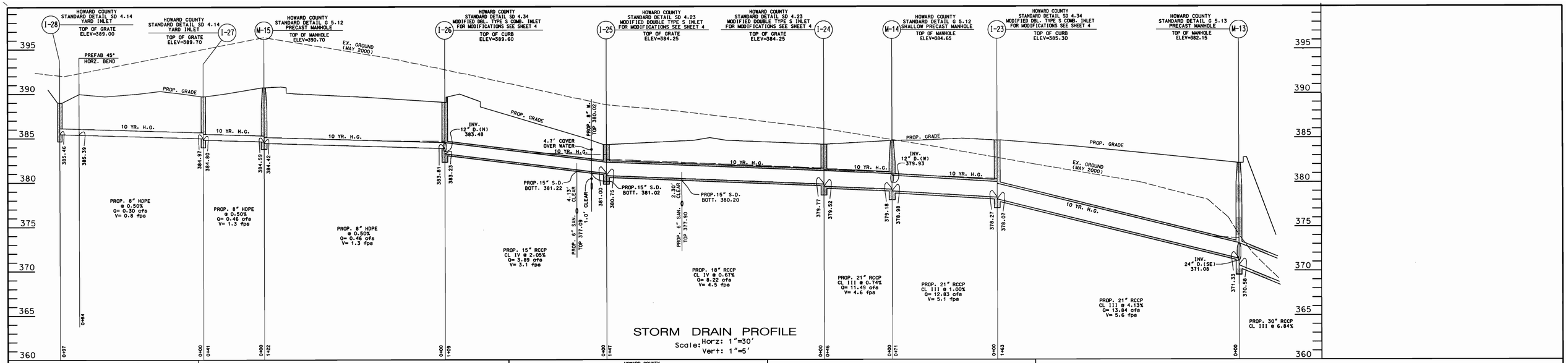
# Details

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

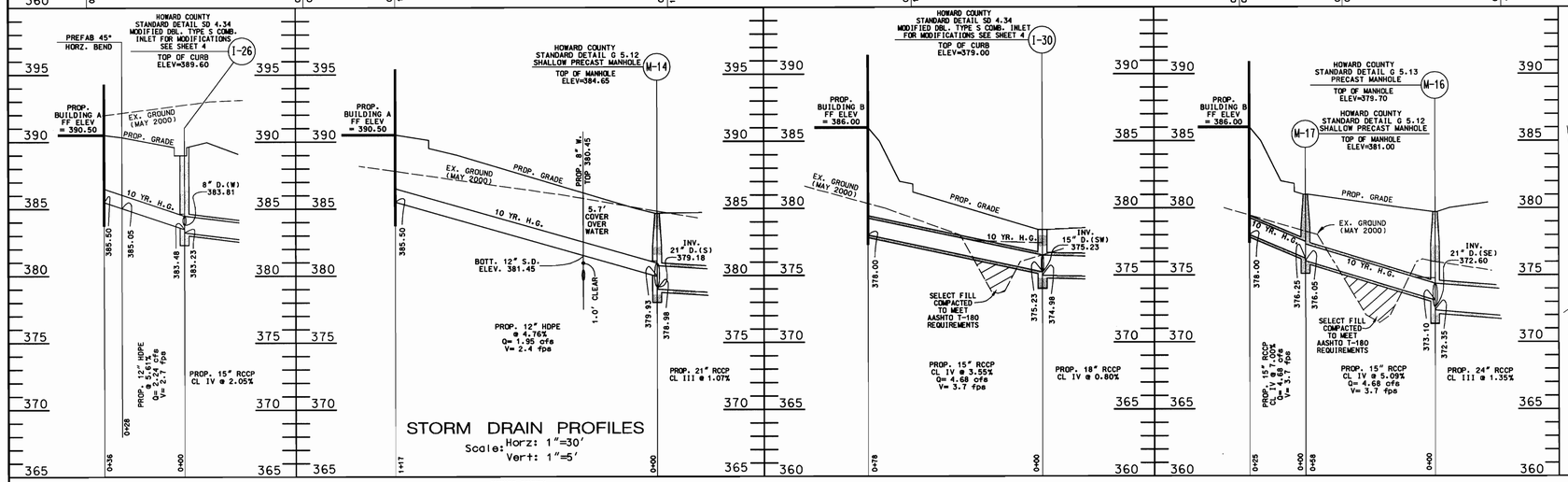
Sheet 4 of 8
October 2, 2000

SDP 01-19



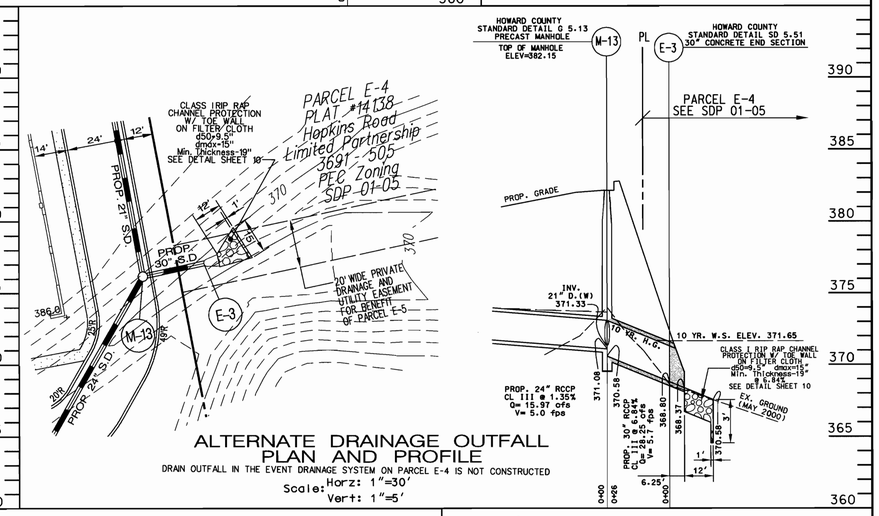

STORM DRAIN PROFILE

Scale: Horz: 1"=30'
Vert: 1"=5'




STORM DRAIN PROFILES

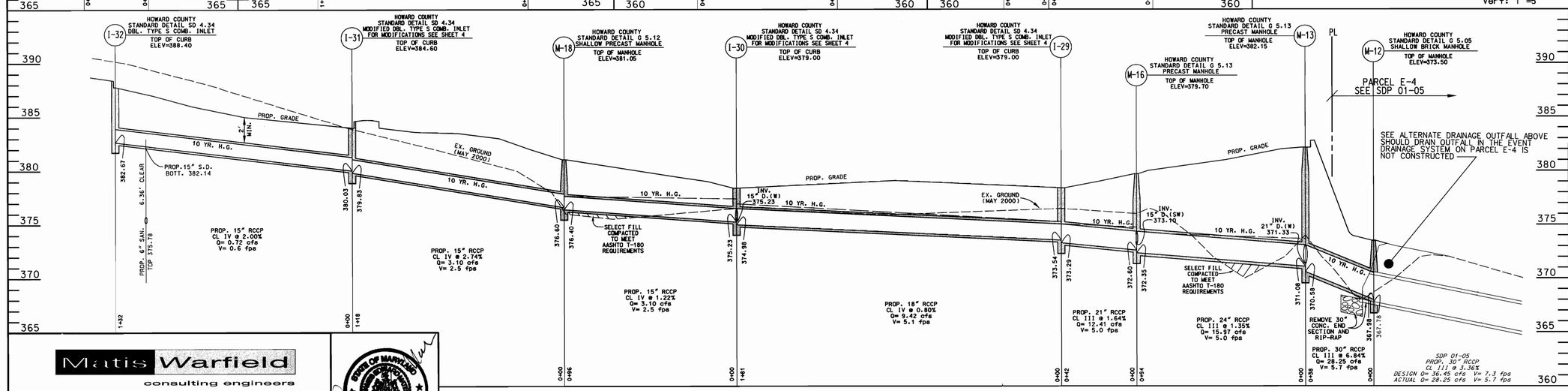
Scale: Horz: 1"=30'
Vert: 1"=5'




ALTERNATE DRAINAGE OUTFALL PLAN AND PROFILE

DRAIN OUTFALL IN THE EVENT DRAINAGE SYSTEM ON PARCEL E-4 IS NOT CONSTRUCTED

Scale: Horz: 1"=30'
Vert: 1"=5'




STORM DRAIN PROFILE

Scale: Horz: 1"=30'
Vert: 1"=5'


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com


STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
1-800-347-2195

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

| | |
|---|---|
| Chief, Development Engineering Division | Date 10/17/00 |
| Chief, Land Development Division | Date 10/17/00 |
| Director | Date 10/18/00 |

PERMIT INFORMATION CHART

| Subdivision Name | Section /Area | Lot/Parcel No. |
|---|---|---|
| Montpelier Research Park | | E-5 |

| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
|---|---|---|---|---|---|
| ~~14371 14418~~ (14571) | 17 | PEC | 41 | 5th | 6051.02 |

| Water Code | Sewer Code |
|---|---|
| E 21 | 6440000 |

# Storm Drain Profiles and Details

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Parcel E-5

## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 5 of 8
October 2, 2000

SDP 01-19

## Legend

| | |
|---|---|
| Existing Contours | ——352—— |
| Proposed Grades | |
| Existing Water | |
| Proposed Private Water | |
| Proposed Public Water | |
| Existing Sanitary | |
| Proposed Private Sanitary | |
| Existing Storm Drain | |
| Proposed Private Storm Drain | |
| Existing Curb and Gutter | |
| Proposed Curb and Gutter | |
| Proposed Light Fixture | |
| Proposed Concrete Paving | |
| Limit of Distrbance | |
| Gabion Inflow Protection | GM |
| Silt Fence | —SF— |
| Earth Dike | |
| Stabilized Construction Entrance | SCE |

SUMMARY TABLE FOR EX. BASIN APPROVED AS PART OF SDP-99-92

| | | |
|---|---|---|
| BASIN NUMBER | | 1 |
| EXISTING DRAINAGE AREA AC. | | 8.7 |
| INTERIM DRAINAGE AREA AC. | | 27.3 |
| PROPOSED DRAINAGE AREA AC. | | 29.5 |
| STORAGE REQUIRED C.F. | WET | 49,140 |
| | DRY | 49,140 |
| | TOTAL | 98,280 |
| STORAGE PROVIDED C.F. | WET | 134,289 |
| | DRY | 239,271 |
| | TOTAL | 373,560 |
| EXISTING GROUND ELEV. | | 340.0 |
| TOP EMBANKMENT ELEV. | | 344.3 |
| RISER CREST ELEV. | | 339.4 |
| WET STORAGE / ELEV. | | 337.0 |
| CLEANOUT ELEV. | | 334.0 |
| BOTTOM ELEV. | | 332.0 |
| Q INTO BASIN C.F.S. 10YR | | 144.01 |
| Q OUT BARREL C.F.S. 10YR | | 12.33 |
| BASIN DEPTH | WET | 5.0 |
| | DRY | 3.6 |
| | TOTAL | 8.8 |
| DESIGN HIGHWATER 100 yr. Clogged | | 342.26 |
| FREEBOARD PROVIDED | | 2.0' |
| BASIN SIDE SLOPES | | 3:1 |
| BARREL DIAMETER | | 48" |
| RISER DIMENSIONS | | 6X6 |
| WET STORAGE ZONE ELEV. | | 332-337 |
| DRY STORAGE ZONE ELEV. | | 337-339.4 |
| BOTTOM DIMENSION | | |
| DIMENSION FROM CLEANOUT ELEV. TO RISER TOP | | 8.6' |
| START PERFORATIONS AT ELEVATION | | 337.0 |

EXISTING SWALES PER SDP 99-92 ARE LINED WITH EROSION CONTROL MATTING

# Plan

Scale 1" = 50'

### ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E. Matis, P.E. MD 18848 — Date 10-2-2000

### DEVELOPER'S CERTIFICATE

" We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

For MOR Montpelier, LLC By: R. Cole Schnorf, Senior VP. Manekin Corporation — Date 10-2-2000

### SEDIMENT CONTROL STANDARD GENERAL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT 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 "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
   B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OF 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 MANUAL," STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SODS, TEMPORARY SEEDING, AND MULCHING (SECTION G). 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 OR SITE | +/-7.096 | ACRES |
| AREA DISTURBED (INCLUDES SWALES A + B) | +/- 6.5 | ACRES |
| AREA TO BE ROOFED OR PAVED | +/- 4.1 | ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | +/- 2.4 | ACRES |
| TOTAL CUT | +/- 13,000 | CUBIC YARDS* |
| TOTAL FILL | +/- 13,000 | CUBIC YARDS* |
| OFF-SITE WASTE/BORROW AREA LOCATION WASTE = N/A | | |

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE DAY, WHICHEVER IS SHORTER.

* THE EARTH VOLUME FIGURES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR IS ADVISED TO MAKE HIS OWN CALCULATIONS PRIOR TO PLACING A BID ON THIS ITEM

### SEDIMENT CONTROL SEQUENCE OF OPERATIONS

| TASK | NO. OF DAYS |
|---|---|
| 1. Obtain grading permit | |
| 2. Cleanout and repair existing sediment basin, inspect existing gabion mattress inflow protection and erosion control matting in existing swales and repair if necessary. (Said features installed per SDP 99-72) Install all erosion and sediment control measures. Depending on progression of sitework on adjacent Parcel E-4 (SDP 01-05) Swales A and B may exist or may be in the process of being backfilled and replaced with a closed drainage system in accordance with SDP 01-05. If sitework on Parcel E-4 has not been undertaken contractor shall be responsible for maintaining Swale A and Swale B during the course of this construction. The disturbed area stated hereon includes that area necessary to maintain swale system should development on Parcel E-4 not occur. If sitework on Parcel E-4 has progressed, contractor shall coordinate periodic flushing of sediment through downstream drainage system through Parcel E-4 with site superintendent for Parcel E-4. | 14 |
| 3. Begin grading maintaining positive drainage to Swale A. As fill is placed along east and north sides of property insure that earth dike system is maintained. When fill slope is installed along east side of property, earth dike may be moved to top of slope to prevent scouring of slope. Begin building foundation and utilities installation. Install storm drains beginning with 30" drain starting 13 feet upstream from M-12 at invert 368.9+/-, allowing drain to daylight in channel of existing Swale A. Extend pipe upstream. As drain inlets become operational, leave unprotected to facilitate drainage to existing sediment basin through downstream drain or swale systems as the case may be. Flush drain system periodically, especially following rainfall events to insure the system remains functional and unclogged. Complete utility installations with the exception of the M-12 and the last 13 feet of the 30" storm drain upstream of M-12. Provide control of dust, as required, in accordance with dust control specifications. | 60 |
| 4. Complete remainder of grading and install curb and gutter and stone subbase in parking and drive areas. Install sidewalks. Permanently stabilize any areas to remain grass. | 45 |
| 5. Upon a 5-day clear (no precipitation) weather forecast from the National Weather Service and with the approval of the sediment control inspector complete remaining storm drainage system at M-12. See drain outfall alternate on Sheet 5 of 8 in the event that storm drain system on Parcel E-4 per SDP 01-05 has not progressed. | 10 |
| 6. Flush storm drain system from upstream ends downstream to sediment basin. Remove accumulated sediment from sediment basin. Proceed with paving installation. | 7 |
| 7. With the approval of the sediment control inspector remove remaining sediment control devices and stabilize. | 2 |

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

Reviewed for Howard SCD and meets Technical Requirements

USDA - Natural Resources Conservation Service — Date 10/12/00

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

Howard SCD — Date 10/12/00

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00

Chief, Land Development Division — Date 10/17/00

Director — Date 10/18/00

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~14411 & 14412~~ 14471 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

## Sediment and Erosion Control Plan
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown
Sheet 6 of 8
October 2, 2000
SDP 01-19

## Topsoil Specifications

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition

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

Purpose

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

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slags, coarse fragments, gravel sticks, roots, trash, and other materials larger 1 1/2 inch in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic contents of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

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

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization- Section I- Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slop Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4 9/32 - 8 9/32 higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4 9/32 - 8 9/32 layer and lightly compacted to a minimum thickness of 4 9/32. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

## Permanent / Temporary Seeding Notes

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

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

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
1. PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ. FT.)
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1½ TO 2 TONS PER ACRE (70 - 90 LBS./1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING 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.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 THRU OCTOBER 15, SEED WITH 2½ BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1½ TO 2 TONS PER ACRE (70 - 90 LBS./1000 SQ. FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE ( 5 GAL./1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER. USE 348 GAL. PER ACRE (8 GAL./1000 SQ. FT.) FOR ANCHORING.

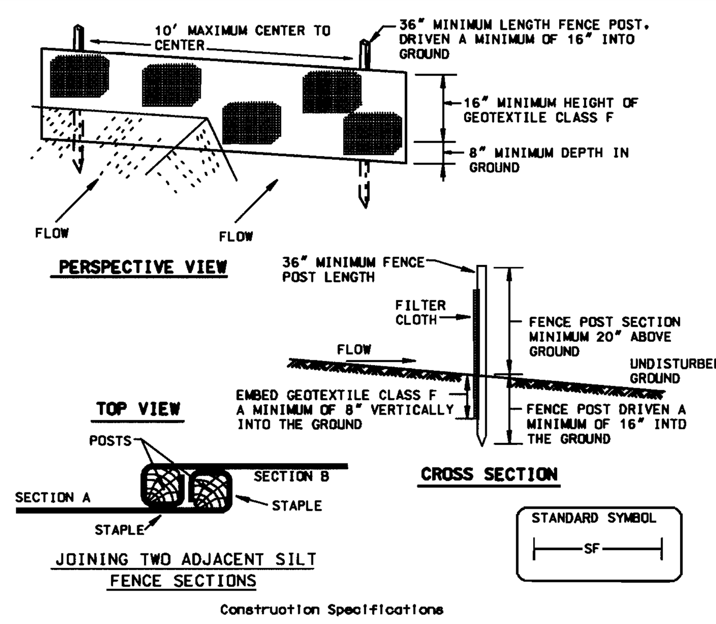
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

## Dust Control Specifications

TEMPORARY METHODS:
1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION - THIS IS GENERALLY DONE AS AN AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW.
5. BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE AFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE - APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS:
1. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

### DETAIL 22 - SILT FENCE




Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. 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:

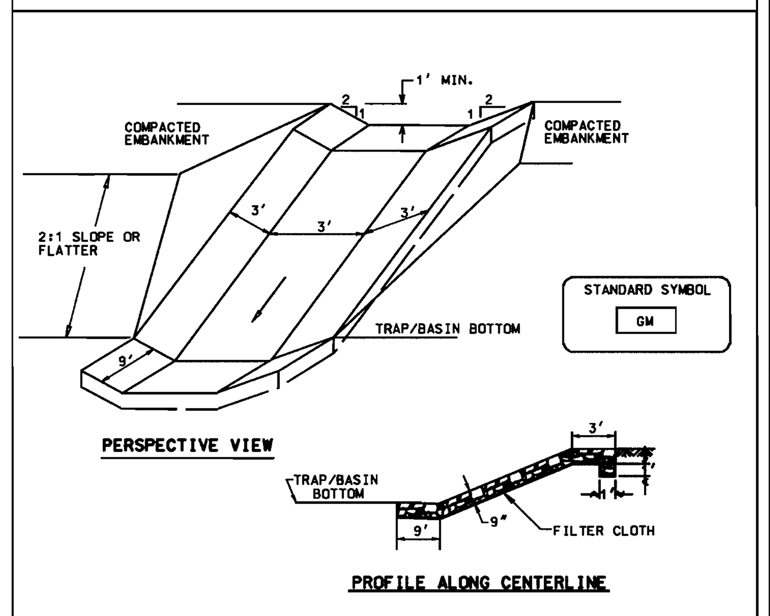
| | | |
|---|---|---|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal ft²/ minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. 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

### DETAIL 6 - GABION INFLOW PROTECTION




Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

2. Geotextile Class C shall be installed under all gabion baskets.

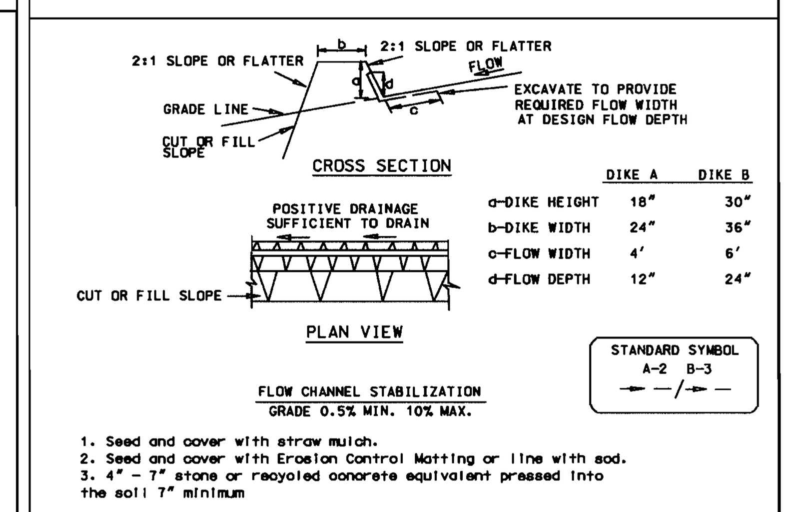
3. The stone used to fill the gabion baskets shall be 4" - 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE B - 7 - 2 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 1 - EARTH DIKE




| | DIKE A | DIKE B |
|---|---|---|
| a-DIKE HEIGHT | 18" | 30" |
| b-DIKE WIDTH | 24" | 36" |
| c-FLOW WIDTH | 4' | 6' |
| d-FLOW DEPTH | 12" | 24" |

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

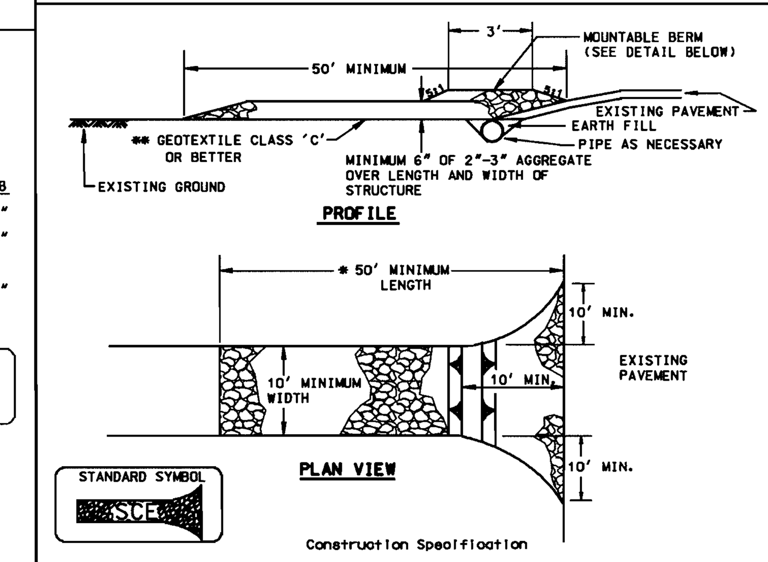
6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE A - 1 - 6 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE




Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

3. 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.

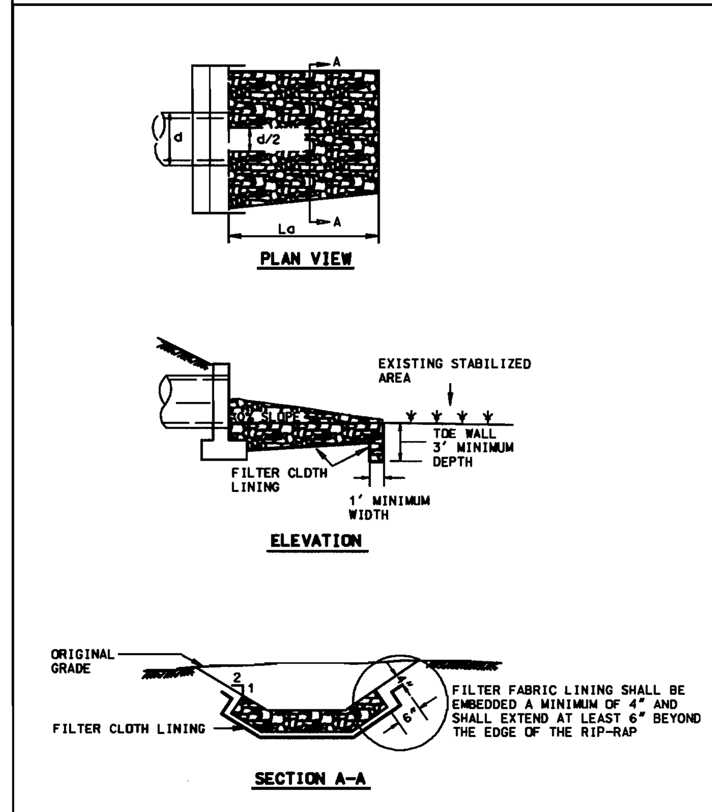
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. 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 mountable 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.

6. 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

### DETAIL 27 - ROCK OUTLET PROTECTION III




NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE F - 18 - 18 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### ROCK OUTLET PROTECTION III

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE F - 18 - 18A | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

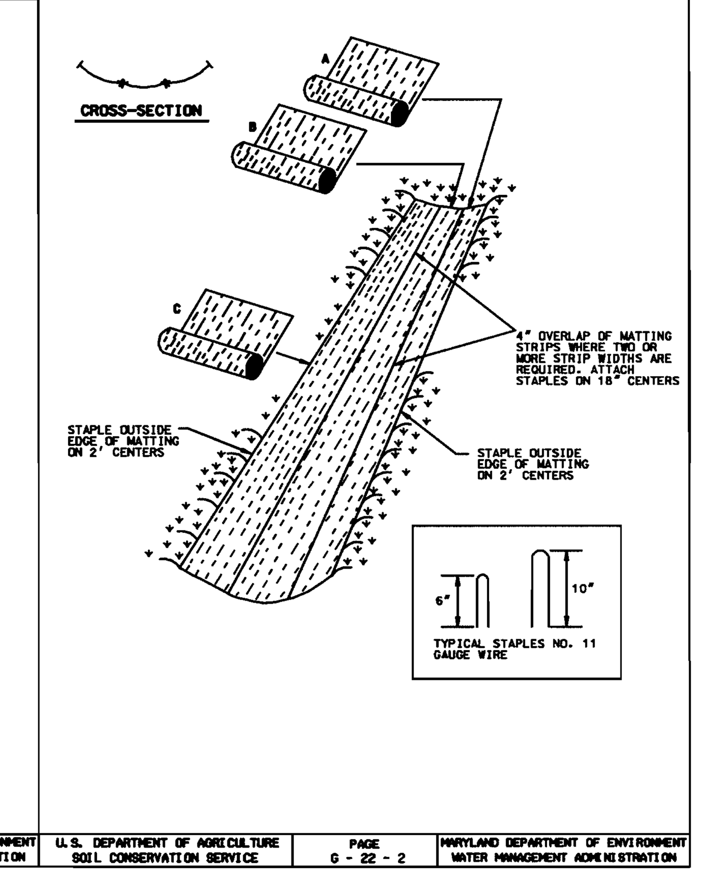
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

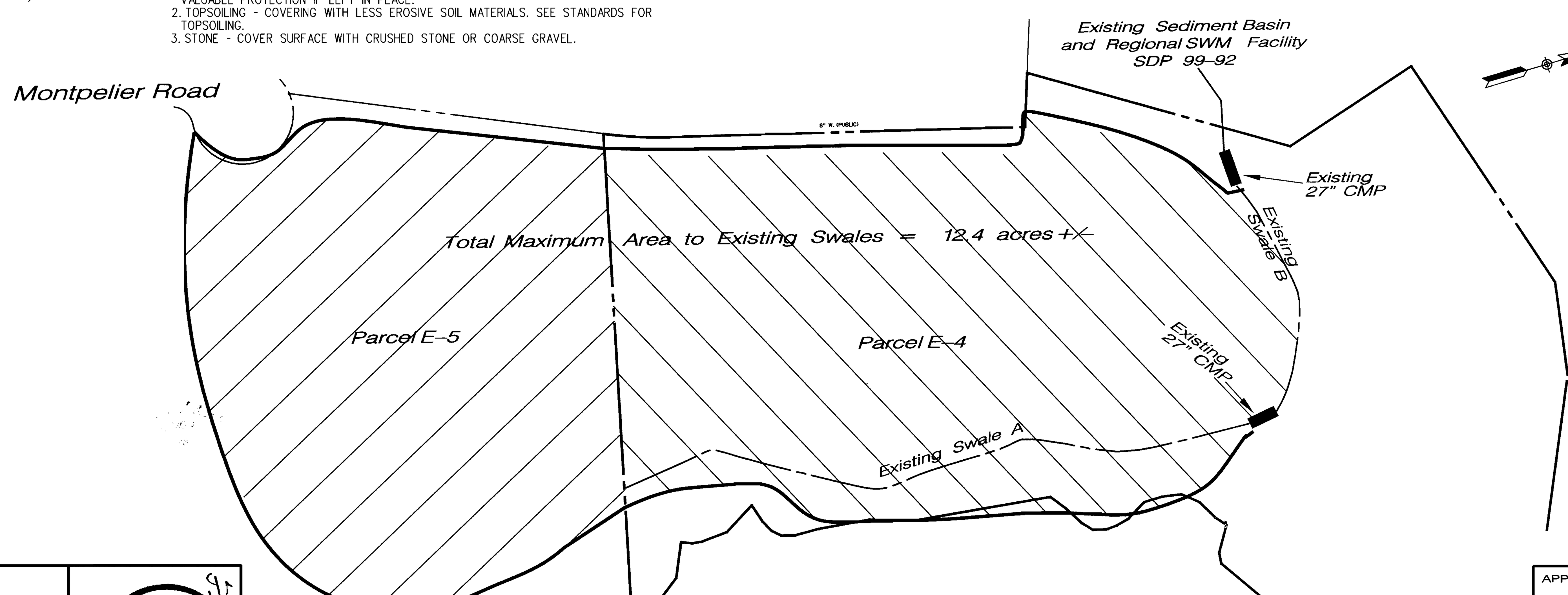
Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE G - 22 - 2A | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL 30 - EROSION CONTROL MATTING




U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE G - 22 - 2 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION




**Drainage Area Map**

Scale 1" = 100'

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser
MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E. Matis, P.E. MD 18848 — Date 10-2-2000

DEVELOPER'S CERTIFICATE

" I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

For MOR Montpelier, LLC By: R. Cole Schnorf, Senior VP. Manekin Corporation — Date 10-2-00

Reviewed for Howard SCD and meets Technical Requirements

USDA Natural Resources Conservation Service — Date 10/12/00

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

Howard SCD — Date 10/12/00

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~14411 & 14412~~ 14471 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00

Chief, Land Development Division — Date 10/17/00

Director — Date 10/18/00


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com


STATE OF MARYLAND — JAMES EDWARD MATIS — NO. 18848 — REGISTERED PROFESSIONAL ENGINEER

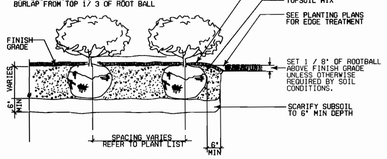
# Sediment and Erosion Control Details

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 7 of 8
October 2, 2000 SDP 01-19

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/ 3 OF ROOT BALL



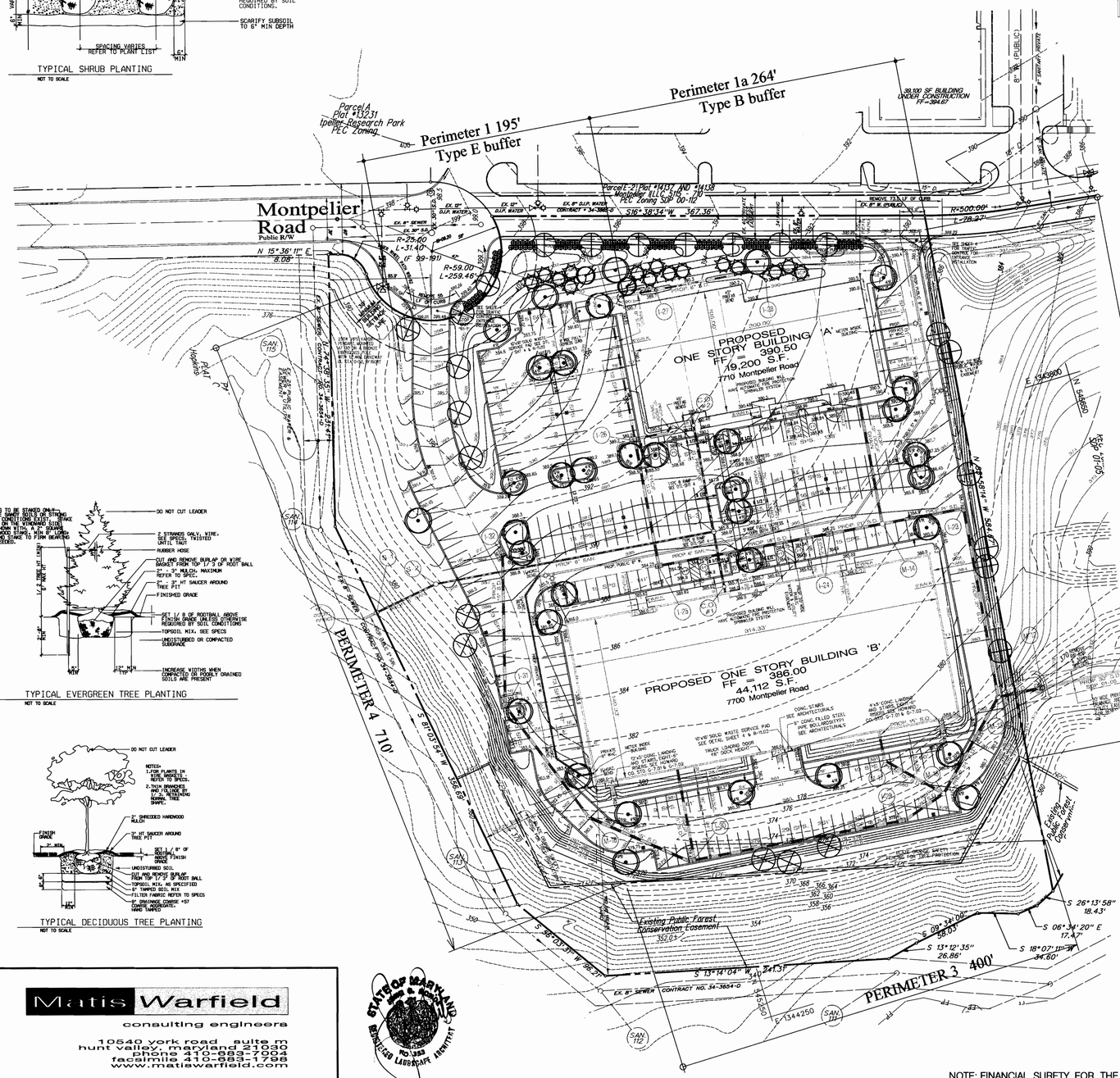

TYPICAL SHRUB PLANTING
NOT TO SCALE




TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE




TYPICAL DECIDUOUS TREE PLANTING
NOT TO SCALE




## SCHEDULE B
## PARKING LOT INTERNAL LANDSCAPING

| | |
|---|---|
| Number of Parking Spaces | 261 |
| Number of Trees Required | @ 1/20 sp. = 13 |
| Number of Trees Provided<br>Shade Trees<br>Other Trees ( 2:1 substitution ) | 32 |
| Number of Islands Required @ 1/20 sp. | 13 |
| Number of Islands Provided | 23 |

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT to ROADWAYS | ADJACENT to PERIMETER PROPERTIES | LANDSCAPE CALCULATIONS |
|---|---|---|---|
| LINEAR FEET OF ROADWAY | PERIMETER 1 - 195 LF TYPE E BUFFER<br>PERIMETER 1a - 264 LF TYPE B BUFFER | | 1 SHADE TREE @ 40' L.F = 5 SHADE TREE / 1 SHRUB @ 4 LF = 49 SHRUBS<br>1 SHADE TREE @ 50 LF = 5 TREES / 1 EVERGREEN TREE @ 40 LF = 7 EVERGREENS |
| FRONTAGE / PERIMETER | | PERIMETER 2<br>630' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>400' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>710' L.F. | NO TREES REQUIRED |
| CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED) | | | NO |
| CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED) | | | NO |
| NUMBER OF PLANTS REQUIRED<br>SHADE TREES<br>EVERGREEN TREES<br>SHRUBS | | | 10 SHADE TREES<br>7 EVERGREEN TREES<br>49 SHRUBS |
| NUMBER OF PLANTS PROVIDED<br>SHADE TREES<br>EVERGREEN TREES<br>OTHER TREES (2 : 1 SUBSTITUTION)<br>SHRUBS (10 : 1 SUBSTITUTION)<br>(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | | | 27 SHADE TREES<br>15 EVERGREEN TREES<br>2 FLOWERING TREES<br>212 SHRUBS |

## PLANT LIST

| KEY | QUANTITY | BOTANICAL NAME<br>COMMON NAME | SIZE | CONDITION | REMARKS |
|---|---|---|---|---|---|
| | 24 | TILIA CORDATA GREENSPIRE<br>GREENSPIRE LITTLELEAF LINDEN | 2 1/2 - 3" CAL | B & B | |
| | 35 | ACER RUBRUM 'RED SUNSET'<br>'RED SUNSET' RED MAPLE | 2 1/2 - 3" CAL | B & B | |
| | 2 | MALUS 'PRAIRIFIRE'<br>'PRAIRIFIRE' CRAB | 1 3/4 - 2" CAL | B & B | |
| | 15 | PINUS STROBUS<br>WHITE PINE | 6 - 7' HT | B & B | 10' O.C. STAGGERED |
| | 121 | ABELIA GRANDIFLORA<br>GLOSSY ABELIA | 18 - 24" HT | CONTAINER | 4' O.C. STAGGERED |

## GENERAL NOTES:

1. Contractor is to notify Miss Utility a minimum of 72 hours prior to digging. Telephone : 1- 800-257- 7777
2. The Landscape Architect is to be notified 48 hours before planting begins. The location of all plant material is to be approved in the field by the Landscape Architect. Call George Walter at SHA Landscape Division 410- 545-8602
3. No tree or shrub planting pits are to be left open or unattended.
4. Shrubs are to be grouped into mulched beds. Beds are to be edged and the grass is to be removed prior to mulching.
5. All areas that are disturbed during construction and are not scheduled to be paved or planted shall be sodded in accordance with MDSHA standard spec.'s.


Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410–997–7222
Fax 410–997–6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1–800–347–2195
Fax 410–312–0666


## Landscape Notes

**A. STANDARDS:**

1. ALL PLANT MATERIAL, CONSTRUCTION METHODS AND MATERIAL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF "AMERICAN STANDARD FOR NURSERY STOCK." AS PURLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS"
2. ALL TREES SHALL BE DELIVERED TO THE SITE BALLED AND BURLAPPED. ALL SHRUBS SHALL BE BALLED AND BURLAPPED OR IN CONTAINERS. ALL GRASSES & PERENNIALS SHALL BE IN CONTAINERS.

**B. MAINTENANCE:**

1. AFTER THE PLANTING HAS BEEN APPROVED BY THE LANDSCAPE ARCHITECT AND THE OWNER, THE MAINTENANCE OF WATERING AND WEEDING OF SUCH PLANTS AND PLANTED AREAS SHALL BE PROVIDED BY THE OWNER. SINCE THE PLANTS ARE TO BE GUARANTEED BY THE CONTRACTOR, THE CONTRACTOR SHALL PERIODICALLY CHECK THE MAINTENANCE CONDUCTED BY THE OWNER. IF THE CONTRACTOR IS NOT SATISFIED WITH THE MAINTENANCE OF THE PLANTS, A WRITTEN REPORT, IN TRIPLICATE, STATING APPROPRIATE CHANGES SHALL BE GIVEN IMMEDIATELY TO THE LANDSCAPE ARCHITECT; TWO COPIES WILL BE FORWARDED TO THE OWNER, BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.
2. MAINTAIN TREES UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER FINAL ACCEPTANCE OF PLANTING. MAINTAIN ALL PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS. AND RESET TREES TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP ALL PLANTS FREE OF INSECTS AND DISEASE.

**C. WATERING**

1. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL NOT BE DONE DURING THE HEAT OF THE DAY. CONTRACTOR SHALL PROVIDE A SEPARATE LUMP SUM PRICE IN THE OVERALL LANDSCAPE BID FOR WATERING TO ALL NEW PLANTINGS DURING ONE GROWING SEASON.

**D. EXCAVATION:**

1. DEPTH AND WIDTH OF EXCAVATION FOR PLANTING OF ALL PLANTS SHALL BE 1.0 TIMES THE DEPTH AND WIDTH OF ROOT BALL OR CONTAINER OF PLANT TO BE INSTALLED, EXCEPT AS NOTED ON DETAILS.

**E. TOPSOIL, PLANTING MIX, FERTILIZER, MULCH AND SOIL AMENDMENTS:**

1. ALL TOPSOIL SHALL BE WELL GRADED LOAM OF GOOD UNIFORM QUALITY AND SHALL BE A NATURAL FRIABLE SOIL FREE OF OBJECTS LARGER THAN ONE INCH IN ANY DIMENSION, AND FREE OF TOXIC SUBSTANCES, WEEDS AND ANY MATERIAL OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL CONTAIN AT LEAST ORGANIC MATTER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE TO MEET THE DEPTH AS SPECIFIED HEREIN, THE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL. PRIOR TO TOPSOIL DELIVERY, THE CONTRACTOR SHALL OBTAIN THE LANDSCAPE ARCHITECTS APPROVAL OF THE SOURCE FROM WHICH TOPSOIL IS TO BE FURNISHED.
2. FOR PLANTING MIX, MIX THOROUGHLY 2/3 APPROVED TOPSOIL (SEE "TOPSOIL") AND 1/3 APPROVED ORGANIC MATTER.
3. FERTILIZER TABLETS OR SPIKES TO BE PLACED AT EACH TREE AND SHRUB AT A RATE OF 1 PER 2" OF TRUNK CALIPER OR GALLON OF ROOTBALL. TABLETS OR SPIKES SHALL NOT BE IN CONTACT WITH THE ROOTBALL.
4. MULCH MATERIAL SHALL BE OF UNIFORM SIZE, FINE SHREDDED TANBARK, HARDWOOD MULCH OR APPROVED EQUAL. MULCH SHALL BE A REDDISH DARK BROWN COLOR AND SHALL BE LAID TO A UNIFORM MINIMUM DEPTH OF 2 INCHES. MULCH AREAS AROUND TREES AT THE RATE OF 1 OF DIAMETER PER OF TRUNK CALIPER.
5. HYDROGEL ABSORBENT MATERIAL SHALL BE ADDED TO THE PLANTING HOLE FOR EACH TREE AND SHRUB AT THE RATE OF 4 OUNCES PER 2-1/2" CALIPER OR GALLON OF ROOTBALL. HYDROGEL MATERIAL SHALL BE VITERRA "ORLISCAPE", "TERRASORB" OR APPROVED EQUAL.

**F. SUBSTITUTIONS:**

1. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE BIDDING. THE OWNER OR LANDSCAPE ARCHITECT WILL THEN SELECT A REASONABLE ALTERNATE OR INFORM ALL LANDSCAPE CONTRACTORS OF THE AVAILABILITY OF THE ORIGINAL PLANT.

**G. PRUNING, CLEANUP, PROTECTION OF EXISTING MATERIALS AND RESTORATION**

1. THE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE DETAILS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
2. DURING COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED. LAWN AREAS KEPT CLEAR, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE TO ANY EXISTING LAWNS, PAVING, ETC. NOT SCHEDULED FOR REMOVAL. WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEANED UP THOROUGHLY. DUMPS, RUBBISH, SUBSOIL, AND WASTE MATERIALS SHALL BE CLEANED UP AND REMOVED FROM THE PROPERTY. EXISTING GRASS AREAS WHICH HAVE BEEN BURIED BY THE WORK SHALL BE REGRADED AND SODDED TO MATCH THE EXISTING LAWN. THE ENTIRE AREA SHALL BE NEAT AND CLEAN TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
3. CONTRACTOR SHALL, AT ALL TIMES, PROTECT ALL PLANTS AND LAWNS FROM DAMAGE. THE MOVING OF HEAVY EQUIPMENT OR MATERIAL OVER THE LAWN AREAS SHALL BE DONE ON PLANKS OR PONTOONS.
4. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENTS, SODDED OR PLANTED AREAS, STRUCTURES OR SUBSTRUCTURES, NOT SCHEDULED FOR REMOVAL, WHICH ARE DISTURBED BY THE CONTRACTOR DURING PLANTING OPERATIONS. SUCH RESTORATION SHALL BE IN A MANNER SATISFACTORY TO THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

**H. FINAL INSPECTION AND GUARANTEE:**

1. AFTER PLANTING IS COMPLETED (INCLUDING MULCHING AND CLEANUP) THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING TO REQUEST FINAL INSPECTION OF THE TOTAL PLANTING. THE LANDSCAPE ARCHITECT SHALL MAKE A FINAL INSPECTION VISIT AS SOON AS POSSIBLE. LANDSCAPE ARCHITECT SHALL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, WHEN ALL WORK IS SATISFACTORILY COMPLETE. IF WORK IS NOT SATISFACTORILY COMPLETE, THE LANDSCAPE ARCHITECT WILL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, AS TO THE DEFICIENCIES IN THE WORK AND THE NECESSARY CORRECTIVE MEASURES. THE LANDSCAPE CONTRACTOR WILL BE GIVEN A REASONABLE AMOUNT OF TIME TO CORRECT THE DEFICIENCIES, AND ANOTHER FINAL INSPECTION WILL BE SCHEDULED BY THE LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIAL AND LAWN AREAS SHALL BE GUARANTEED TO BE IN A VIGOROUS GROWING CONDITION ONE YEAR FROM THE DATE OF FINAL INSPECTION AND ACCEPTANCE. AT THE TERMINATION OF THIS PERIOD, THE CONTRACTOR SHALL HAVE COMPLETED THE PREVIOUSLY MAINTENANCE SCHEDULE. ANY PLANTS INFECTED WITH DISEASE OR INSECTS WILL BE REMOVED OR TREATED. ALL DEAD OR UNACCEPTABLE PLANTS WILL BE REPLACED BY THE SAME PLANTS AND SIZES SPECIFIED ON THE PLANT LIST. THESE PLANTS SHALL BE PLANTED, MULCHED AND GUY AS SPECIFIED HEREIN AND WITHOUT EXTRA COMPENSATION TO THE CONTRACTOR. AT THE COMPLETION OF ALL SUCH WORK AND WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, THE CONTRACT WILL BE CONSIDERED COMPLETE.

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF $ 29,530.00

# Plan

Scale 1" = 50'

### DEVELOPER'S/BUILDER'S CERTIFICATE:

"I/WE CERTIFY THAT THAT THE LANDSCAPING SHOWN ON THE APPROVED FINAL PLAN SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE CERTIFY THAT HEALTHY PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN AND THAT A 1-YEAR GUARANTEE WILL BE EXECUTED."

NAME R. COLE SCHNORF — DATE 10-2-2000

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/19/00

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ 14413, 14471 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | | Sewer Code 6440000 | | |


Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com

HUMAN & ROHDE, INC.
LANDSCAPE ARCHITECTS
512 Virginia Avenue
Towson, Maryland 21286
410 825 3885


STATE OF MARYLAND — NO. 1255 — REGISTERED LANDSCAPE ARCHITECT

STATE OF MARYLAND — NO. 19048 — REGISTERED PROFESSIONAL ENGINEER — 10/2/2000

## Final Landscape Plan

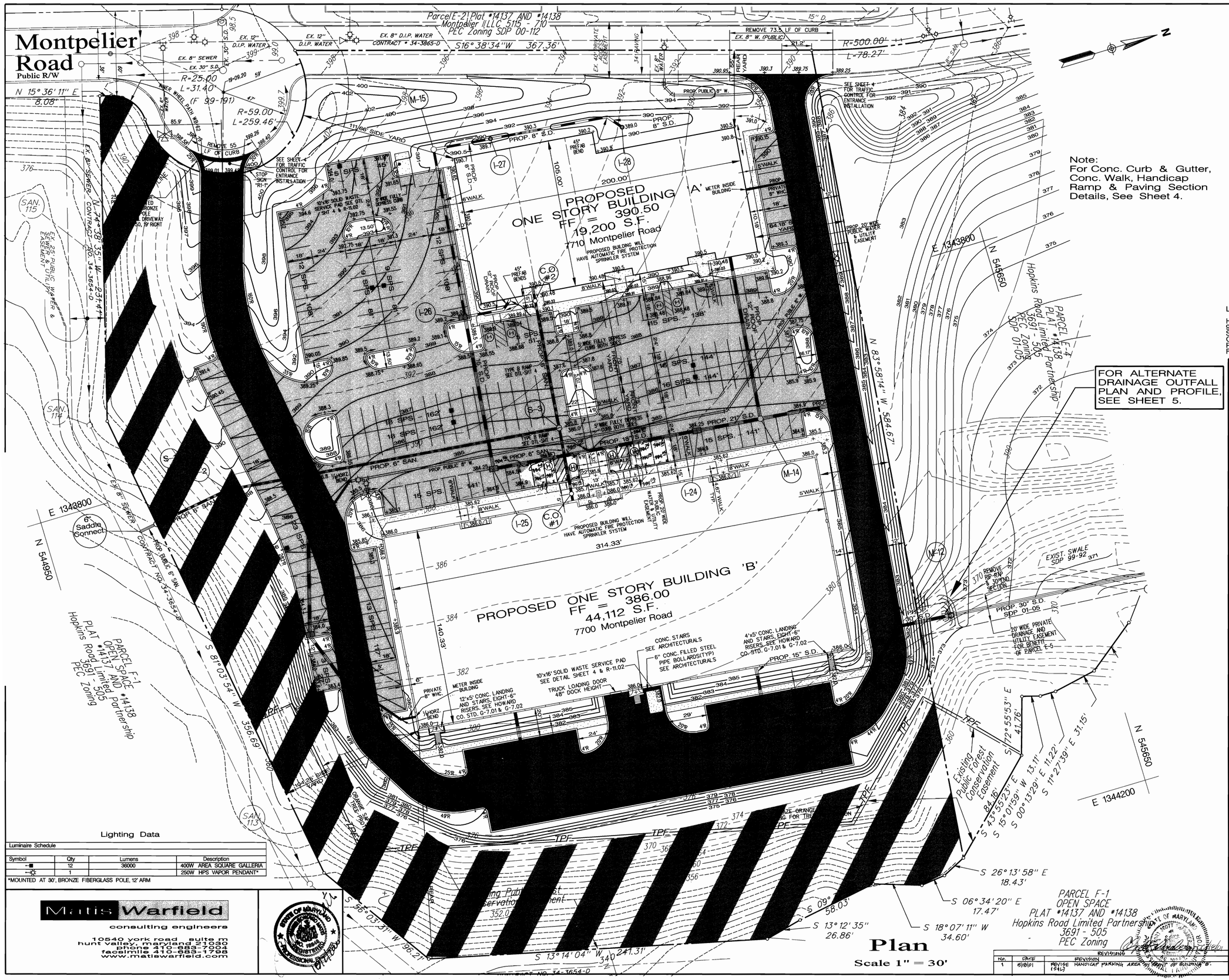
**Proposed Offices for The Johns Hopkins University Applied Physics Laboratory**

**Parcel E-5**

**Montpelier Research Park**

Howard County, Maryland
Scale: As Shown

Sheet 8 of 8
October 2, 2000 SDP 01-19




## Legend

- Existing Contours — 352
- Proposed Grades — 362
- Existing Water
- Proposed Private Water
- Proposed Public Water
- Existing Sanitary
- Proposed Private Sanitary
- Existing Storm Drain
- Proposed Private Storm Drain
- Existing Curb and Gutter
- Proposed Curb and Gutter
- Proposed Light Fixture
- Proposed Concrete Paving
- Handicap Parking Space
- Slopes > 25%
- P3 Paving
- P2 Paving
- P5 Paving
- Tree Protection Fencing — TPF

Legal Owner (current):
Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser
MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E. Matis, P.E. MD 18848 — Date 10/2/2000

DEVELOPER'S CERTIFICATE

" I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

For MOR Montpelier LLC By: R. Cole Schnorf, Senior V.P. — Date 10-2-2000

Reviewed for Howard SCD and meets Technical Requirements

USDA – Natural Resources Conservation Service — Date 10/12/00

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

Howard SCD — Date 10/12/00

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS:

County Health Officer Howard County Health Department — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00

Chief, Land Development Division — Date 10/17/00

Director — Date 10/18/00

ADDRESS CHART

| Lot/Parcel No. | Street Address |
|---|---|
| BUILDING A | 7710 Montpelier Road |
| BUILDING B | 7700 Montpelier Road |
| | |

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpeller Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| 14137 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

Lighting Data

Luminaire Schedule

| Symbol | Qty | Lumens | Description |
|---|---|---|---|
| | 12 | 36000 | 400W AREA SQUARE GALLERIA |
| | 1 | | 250W HPS VAPOR PENDANT* |

*MOUNTED AT 30', BRONZE FIBERGLASS POLE, 12' ARM

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7094
facsimile 410-683-1798
www.matiswarfield.com

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER No. 18848 JAMES E. MATIS

# Plan

Scale 1" = 30'

| No. | DATE | REVISION |
|---|---|---|
| 1 | 01/10/01 | REVISE HANDICAP PARKING AREA AT NORTH OF BUILDING 'B' |

# Site Development Plan

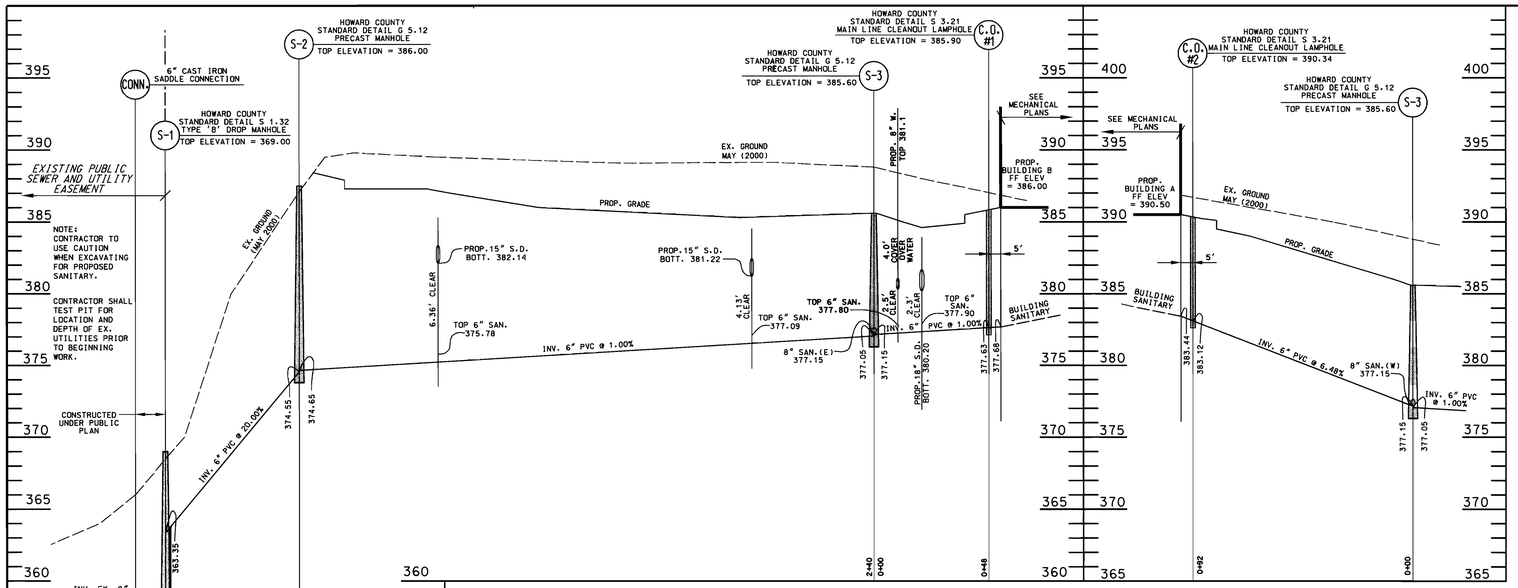
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

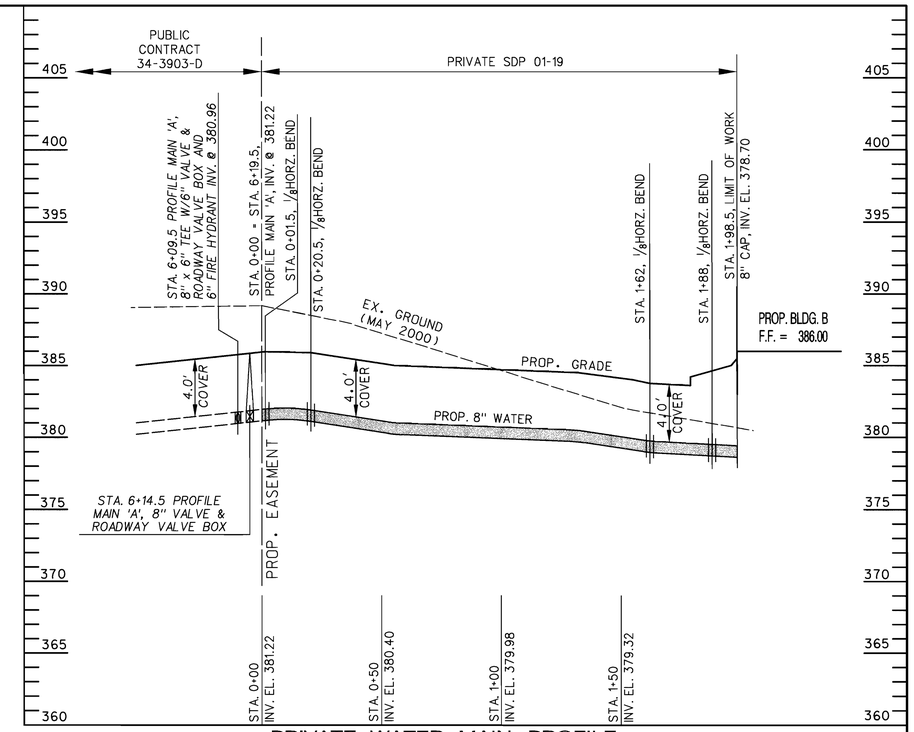
Sheet 2 of 8
October 2, 2000

SDP 01-19




PRIVATE SANITARY SEWER PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'




PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

## STORM DRAIN STRUCTURE SCHEDULE

| NO. | TYPE | INV. IN | INV. OUT | TOP ELEV. | REMARKS |
|---|---|---|---|---|---|
| I-23 | DBL.'S'COMB. | 378.27 | 378.07 | 385.30(TC) | STD. DTL. SD 4.34 ** |
| I-24 | DBL.'S' | 379.77 | 379.52 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-25 | DBL.'S' | 381.00 | 380.75 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-26 | DBL.'S'COMB. | 383.28 | 382.83 | 389.60(TC) | STD. DTL. SD 4.34 ** |
| I-27 | YARD INLET | 384.77 | 384.60 | 389.70(TG) | STD. DTL. SD 4.14 |
| I-28 | YARD INLET | - | 385.27 | 389.00(TG) | STD. DTL. SD 4.14 |
| I-29 | DBL.'S'COMB. | 373.54 | 373.29 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-30 | DBL.'S'COMB. | 375.23 | 374.98 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-31 | DBL.'S'COMB. | 380.03 | 379.83 | 384.60(TC) | STD. DTL. SD 4.34 ** |
| I-32 | DBL.'S'COMB. | - | 382.67 | 388.40(TC) | STD. DTL. SD 4.34 |
| M-12 | 5' MANHOLE | 367.98 | 367.78 | 373.50 | STD. DTL. G 5.05 |
| M-13 | 5' MANHOLE | 371.08 | 370.58 | 382.15 | STD. DTL. G 5.13 |
| M-14 | 4' MANHOLE | 379.18 | 378.98 | 384.65 | STD. DTL. G 5.12 |
| M-15 | 4' MANHOLE | 384.39 | 384.22 | 390.70 | STD. DTL. G 5.12 |
| M-16 | 5' MANHOLE | 372.60 | 372.35 | 379.70 | STD. DTL. G 5.13 |
| M-17 | 4' MANHOLE | 376.25 | 376.05 | 381.00 | STD. DTL. G 5.12 |
| M-18 | 4' MANHOLE | 376.60 | 376.40 | 381.05 | STD. DTL. G 5.12 |
| E-3 | CONC END SECT | | | NA | STD. DTL. SD 5.51* |

**MODIFIED, SEE DETAILS SHT. 5
(TC)-TOP CURB
(TG)-TOP GRATE
*ONLY NECESSARY IF DRAIN SYSYTEM ON PARCEL E-4 HAS NOT BEEN CONSTRUCTED

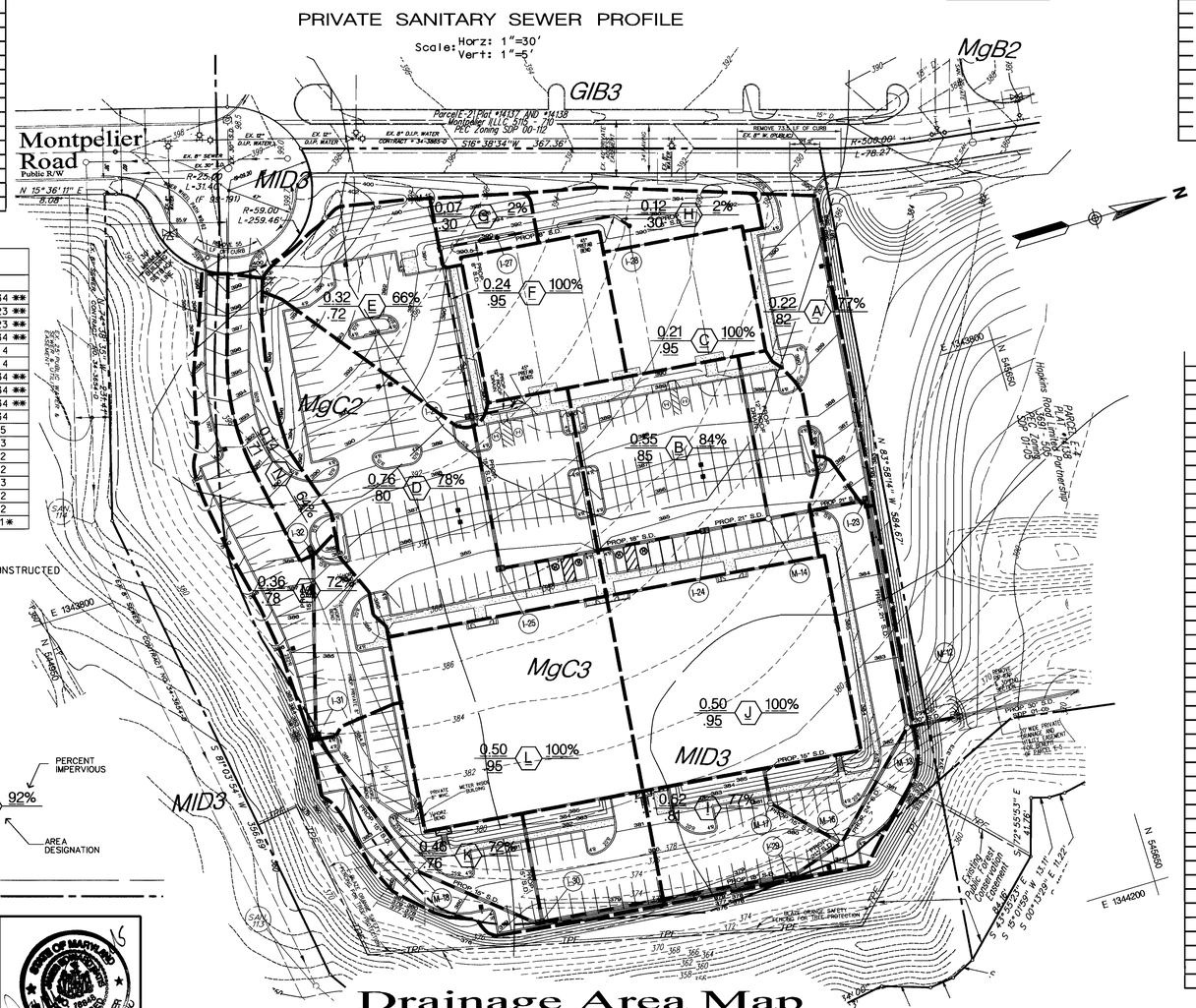
## PIPE SCHEDULE

| SIZE | TYPE | PIPE LENGTH-FEET |
|---|---|---|
| 8" | HDPE | 260 |
| 12" | HDPE | 153 |
| 15" | RCCP CL IV | 616 |
| 18" | RCCP CL IV | 328 |
| 21" | RCCP CL III | 322 |
| 24" | RCCP CL III | 94 |
| 30" | RCCP CL III | 38 |

## DA MAP LEGEND

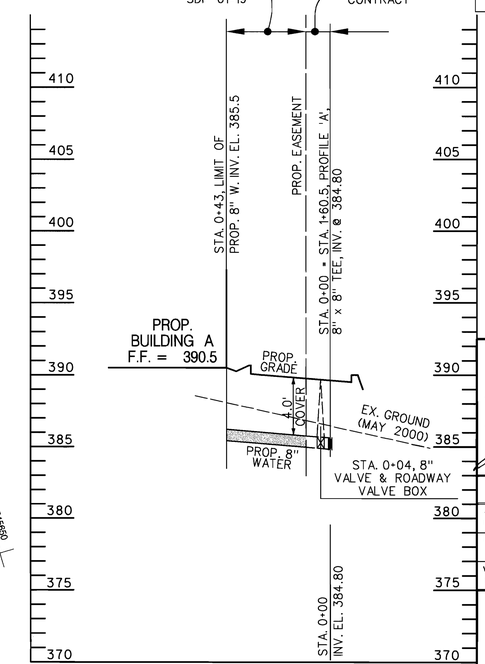
ACREAGE — 5.40 — PERCENT IMPERVIOUS — 92%
.90 — C FACTOR — W — AREA DESIGNATION

SOILS TYPE
DA BOUNDARY FROM SWM PLAN SDP 99-92




# Drainage Area Map

Scale 1" = 50'




PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

| REVISIONS | | |
|---|---|---|
| NO. | DATE | REVISION |
| 1 | 9/18/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING B. (GRL) |

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/18/00

PERMIT INFORMATION CHART

| Subdivision Name | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|
| Montpelier Research Park | | | | E-5 |
| Plat ~~or Liber/Folio~~ 1441 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | Sewer Code 6440000 | | |

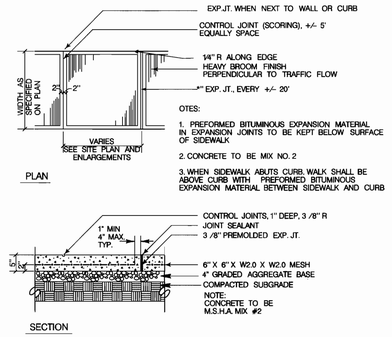
# Drainage Area Map
# Utility Profiles
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 3 of 8
October 2, 2000 SDP 01-19

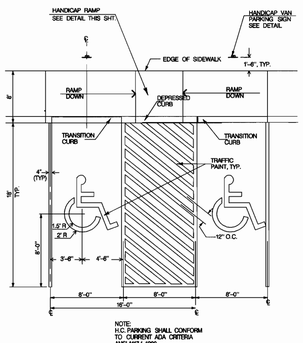

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com


STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER NO. 16818 — 10/17/2000



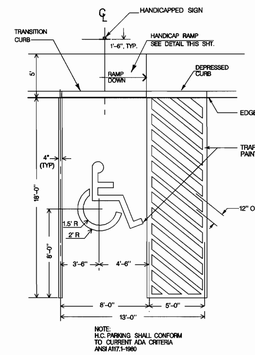

## Detail Concrete Walk

Not To Scale




## Detail Van Accessible Handicap Parking Spaces

Not To Scale




## Detail Handicap Parking Space

Not To Scale

COLORS
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

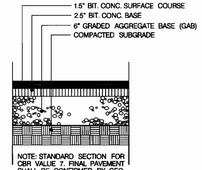
## Detail Handicap Parking Sign

Not To Scale

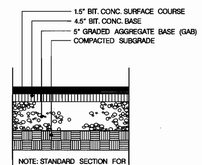
$98 FINE SIGN / VAN ACCESSIBLE SIGN

SIGN TO UTILIZE AN ALUMINUM BLANK 6" X 12" X 0.080" THICK WITH TWO SINGLE POST MOUNTING HOLES.

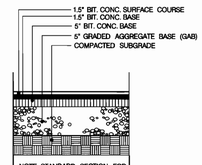
THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS




P2 PAVING



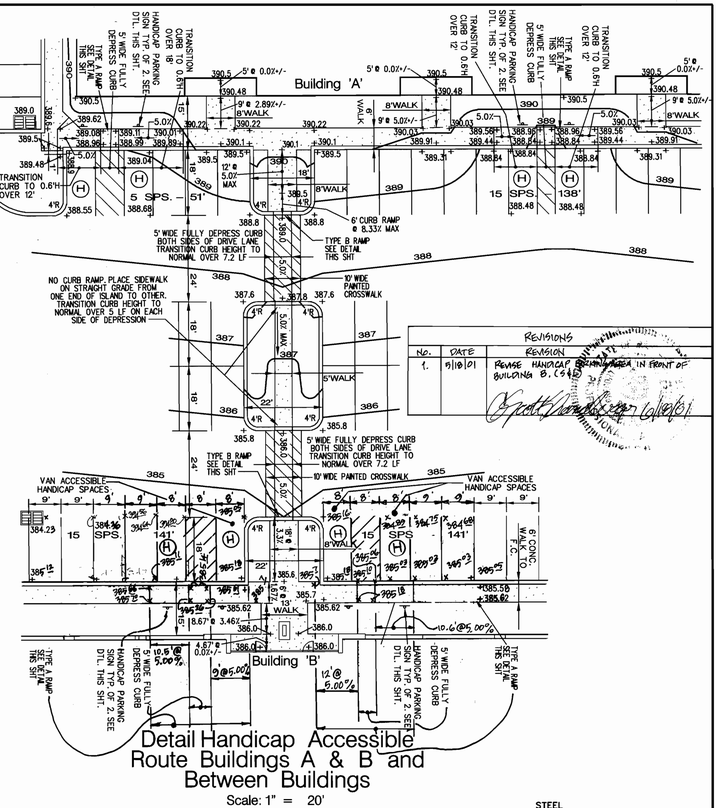

P3 PAVING




P5 PAVING

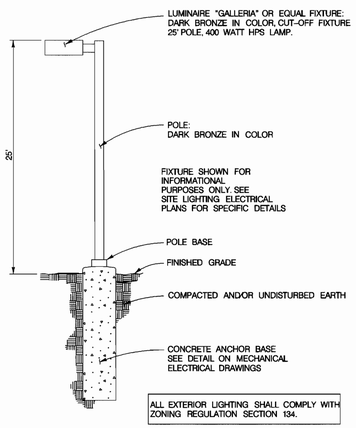
## Detail Paving Sections

Not To Scale



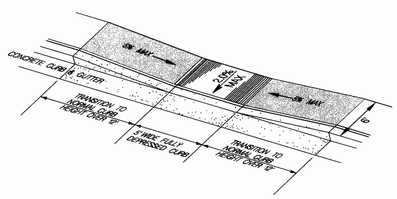

## Detail Handicap Accessible Route Buildings A & B and Between Buildings

Scale: 1" = 20'



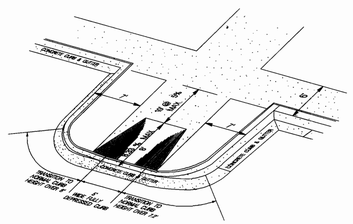

## Detail Sharp Cuttoff Area Light

Not To Scale



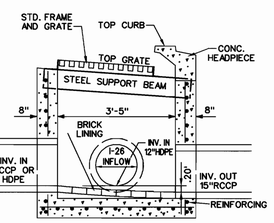

## Type 'A' Handicap Ramp

Not To Scale



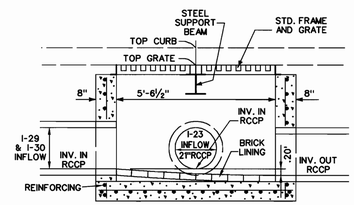

## Type 'B' Curb Ramp

Not To Scale



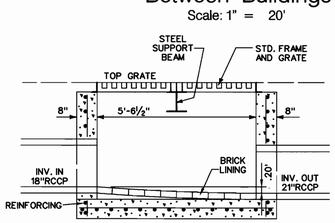

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-26 & 31)

Not To Scale



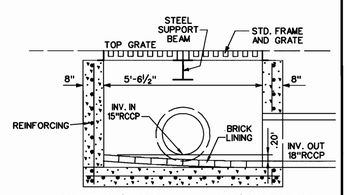

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-23, 29 & 30)

Not To Scale



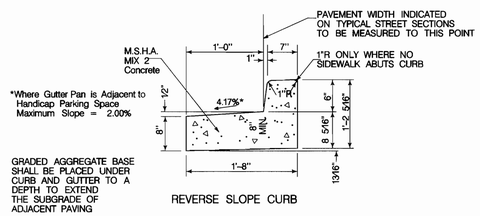

## Modified For Flow Through Double Type 'S' Inlet (I-24)

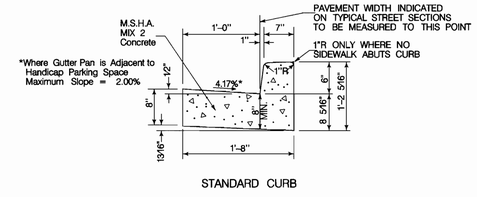
Not To Scale




## Modified For Flow Through Double Type 'S' Inlet (I-25)

Not To Scale

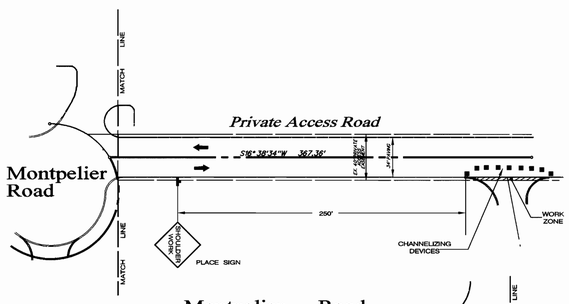


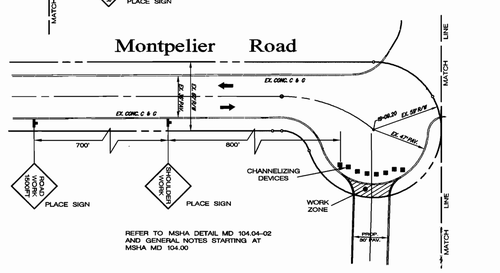




Refer to Howard County Standard Plate R-3.01

## Detail Concrete Curb and Gutter

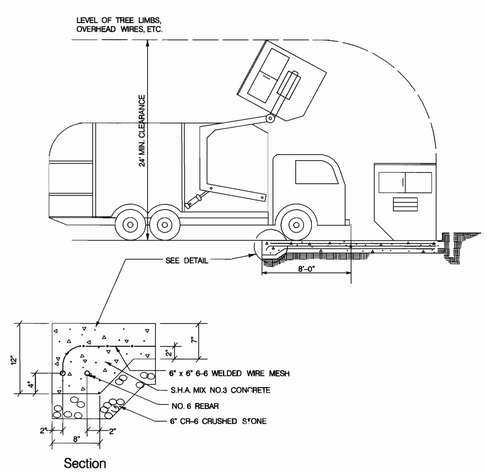
Not To Scale




## Work Zone Traffic Control Detail

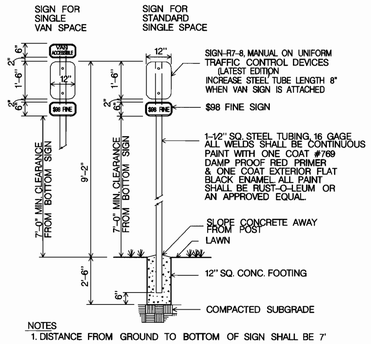
Not To Scale




Refer to Howard County Standard Plate R -3.01

## Detail Solid Waste Service Pad

Not To Scale




NOTES
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAPPED SIGN.
3. VAN ACCESSIBLE SPACES SHALL INCLUDE "VAN SIGN" AS REQUIRED
4. SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

SIGN COLORS
LETTERS AND BORDER - GREEN
WHITE H.C. SYMBOLS ON BLUE BACKGROUND
BACKGROUND - WHITE

## Detail Handicap Parking Sign & Post

Not To Scale

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/18/00

PERMIT INFORMATION CHART

| Subdivision Name | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|
| Montpelier Research Park | | | | E-5 |
| Plat ~~or Liber/Folio~~ 14471 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | Sewer Code 6440000 | | |

# Details

**Proposed Offices for The Johns Hopkins University Applied Physics Laboratory**
**Parcel E-5**
**Montpelier Research Park**

Howard County, Maryland
Scale: As Shown

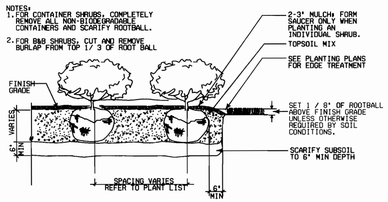
Sheet 4 of 8
October 2, 2000

SDP 01-19

Matis Warfield
consulting engineers
10640 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/ 3 OF ROOT BALL



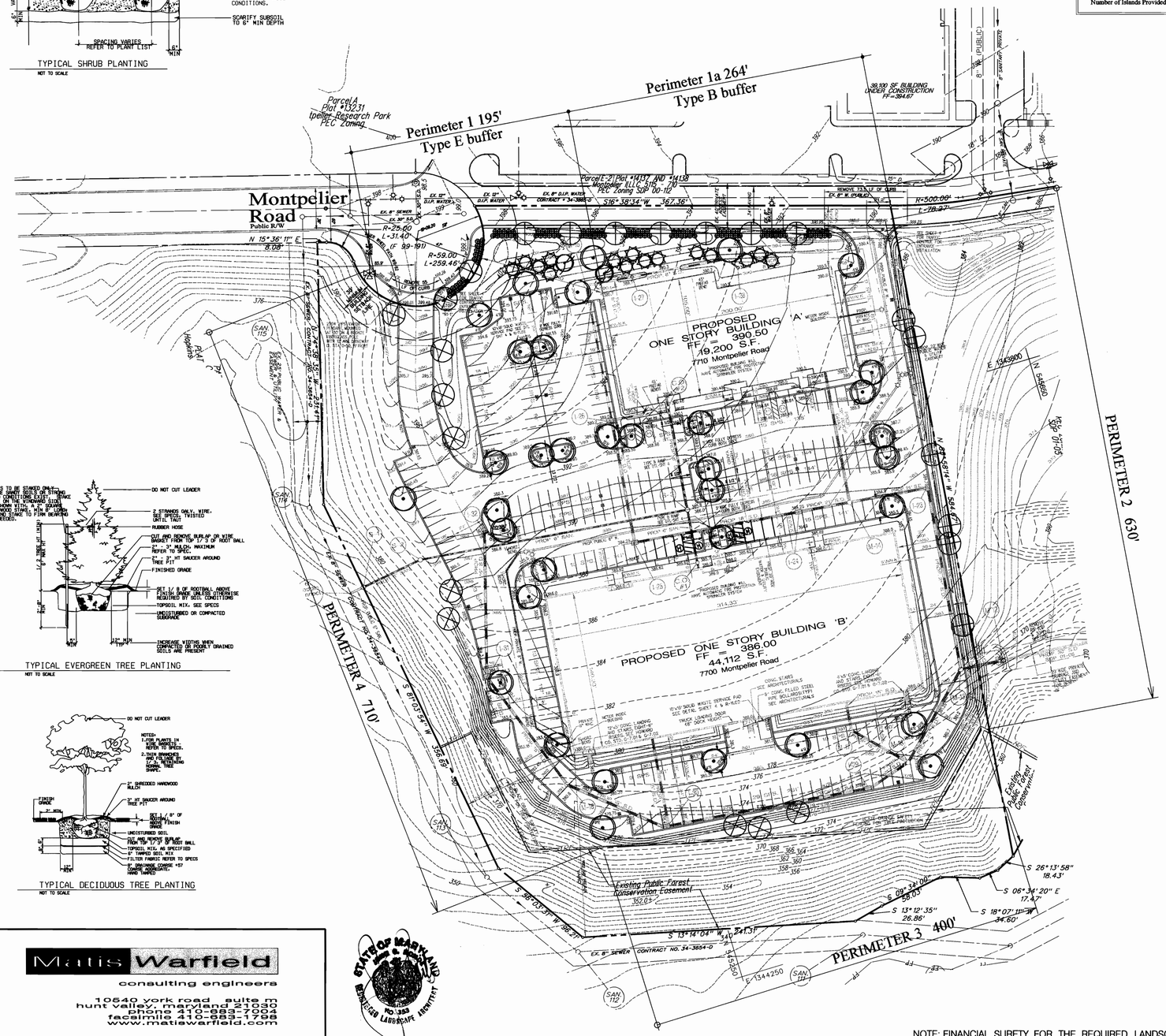

TYPICAL SHRUB PLANTING
NOT TO SCALE




TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE




TYPICAL DECIDUOUS TREE PLANTING
NOT TO SCALE




## SCHEDULE B
## PARKING LOT INTERNAL LANDSCAPING

| | |
|---|---|
| Number of Parking Spaces | 261 |
| Number of Trees Required | @ 1/20 sp. = 13 |
| Number of Trees Provided<br>Shade Trees<br>Other Trees ( 2:1 substitution ) | 32 |
| Number of Islands Required @ 1/20 sp. | 13 |
| Number of Islands Provided | 23 |

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT to ROADWAYS | ADJACENT to PERIMETER PROPERTIES | LANDSCAPE CALCULATIONS |
|---|---|---|---|
| LINEAR FEET OF ROADWAY | PERIMETER 1 - 195 LF TYPE E BUFFER<br>PERIMETER 1a - 264 LF TYPE B BUFFER | | 1 SHADE TREE @ 40' L.F = 5 SHADE TREE / 1 SHRUB @ 4 LF = 49 SHRUBS<br>1 SHADE TREE @ 50 LF = 5 TREES / 1 EVERGREEN TREE @ 40 LF = 7 EVERGREENS |
| FRONTAGE / PERIMETER | | PERIMETER 2<br>630' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>400' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>710' L.F. | NO TREES REQUIRED |
| CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED) | | | NO |
| CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED) | | | NO |
| NUMBER OF PLANTS REQUIRED<br>SHADE TREES<br>EVERGREEN TREES<br>SHRUBS | | | 10 SHADE TREES<br>7 EVERGREEN TREES<br>49 SHRUBS |
| NUMBER OF PLANTS PROVIDED<br>SHADE TREES<br>EVERGREEN TREES<br>OTHER TREES (2 : 1 SUBSTITUTION)<br>SHRUBS (10 : 1 SUBSTITUTION)<br>(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | | | 27 SHADE TREES<br>15 EVERGREEN TREES<br>2 FLOWERING TREES<br>212 SHRUBS |

## PLANT LIST

| KEY | QUANTITY | BOTANICAL NAME<br>COMMON NAME | SIZE | CONDITION | REMARKS |
|---|---|---|---|---|---|
| | 24 | TILIA CORDATA GREENSPIRE<br>GREENSPIRE LITTLELEAF LINDEN | 2 1/2 - 3" CAL | B & B | |
| | 35 | ACER RUBRUM 'RED SUNSET'<br>'RED SUNSET' RED MAPLE | 2 1/2 - 3" CAL | B & B | |
| | 2 | MALUS 'PRAIRIFIRE'<br>'PRAIRIFIRE' CRAB | 1 3/4 - 2" CAL | B & B | |
| | 15 | PINUS STROBUS<br>WHITE PINE | 6 - 7' HT | B & B | 10' O.C. STAGGERED |
| | 121 | ABELIA GRANDIFLORA<br>GLOSSY ABELIA | 18 - 24" HT | CONTAINER | 4' O.C. STAGGERED |

## GENERAL NOTES:

1. Contractor is to notify Miss Utility a minimum of 72 hours prior to digging. Telephone : 1- 800-257- 7777
2. The Landscape Architect is to be notified 48 hours before planting begins. The location of all plant material is to be approved in the field by the Landscape Architect. Call George Walker at SHA Landscape Division (410) 545-6602
3. No tree or shrub planting pits are to be left open or unattended.
4. Shrubs are to be grouped into mulched beds. Beds are to be edged and the grass is to be removed prior to mulching.
5. All areas that are disturbed during construction and are not scheduled to be paved or planted shall be sodded in accordance with MDSHA standard specs.

## Landscape Notes

### A. STANDARDS:

1. ALL PLANT MATERIAL, CONSTRUCTION METHODS AND MATERIAL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS."

2. ALL TREES SHALL BE DELIVERED TO THE SITE BALLED AND BURLAPPED. ALL SHRUBS SHALL BE BALLED AND BURLAPPED OR IN CONTAINERS. ALL GRASSES & PERENNIALS SHALL BE IN CONTAINERS.

### B. MAINTENANCE:

1. AFTER THE PLANTING HAS BEEN APPROVED BY THE LANDSCAPE ARCHITECT AND THE OWNER, THE MAINTENANCE, OF WATERING AND WEEDING OF SUCH PLANTS AND PLANTED AREAS SHALL BE PROVIDED BY THE OWNER. SINCE THE PLANTS ARE TO BE GUARANTEED BY THE CONTRACTOR, THE CONTRACTOR SHALL PERIODICALLY CHECK THE MAINTENANCE CONDUCTED BY THE OWNER. IF THE CONTRACTOR IS NOT SATISFIED WITH THE MAINTENANCE OF THE PLANTS, A WRITTEN REPORT, IN TRIPLICATE, STATING APPROPRIATE CHANGES SHALL BE GIVEN IMMEDIATELY TO THE LANDSCAPE ARCHITECT; TWO COPIES WILL BE FORWARDED TO THE OWNER, BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.

2. MAINTAIN TREES UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER FINAL ACCEPTANCE OF PLANTING. MAINTAIN ALL PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP ALL PLANTS FREE OF INSECTS AND DISEASE.

### C. WATERING

1. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL NOT BE DONE DURING THE HEAT OF THE DAY. CONTRACTOR SHALL PROVIDE A DEDICATED LUMP SUM PRICE IN THE OVERALL LANDSCAPE BID FOR WATERING TO ALL NEW PLANTINGS DURING ONE GROWING SEASON.

### D. EXCAVATION:

1. DEPTH AND WIDTH OF EXCAVATION FOR PLANTING OF ALL PLANTS SHALL BE TO TWICE THE DEPTH AND WIDTH OF ROOT BALL OR CONTAINER OF PLANT TO BE INSTALLED, EXCEPT AS NOTED ON DETAILS.

### E. TOPSOIL, PLANTING MIX, FERTILIZER, MULCH AND SOIL AMENDMENTS:

1. ALL TOPSOIL SHALL BE WELL GRADED LOAM OF GOOD UNIFORM QUALITY AND SHALL BE A NATURAL FRIABLE SOIL FREE OF OBJECTS LARGER THAN ONE INCH IN ANY DIMENSION, AND FREE OF TOXIC SUBSTANCES, WEEDS AND ANY MATERIAL OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL CONTAIN AT LEAST ORGANIC MATTER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE TO MEET THE DEPTH AS SPECIFIED HEREIN, THE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL. PRIOR TO TOPSOIL DELIVERY, THE CONTRACTOR SHALL OBTAIN THE LANDSCAPE ARCHITECT'S APPROVAL OF THE SOURCE FROM WHICH TOPSOIL IS TO BE FURNISHED.

2. FOR PLANTING MIX, MIX THOROUGHLY 2/3 APPROVED TOPSOIL (SEE "TOPSOIL") AND 1/3 APPROVED ORGANIC MATTER.

3. FERTILIZER TABLETS OR SPIKES TO BE PLACED AT EACH TREE AND SHRUB AT A RATE OF 1 PER 2" OF TRUNK CALIPER OR GALLON OF ROOTBALL. TABLETS OR SPIKES SHALL NOT BE IN CONTACT WITH THE ROOTBALL.

4. MULCH MATERIAL SHALL BE OF UNIFORM SIZE, FINE SHREDDED TANBARK HARDWOOD MULCH OR APPROVED EQUAL. MULCH SHALL BE A REDDISH DARK BROWN COLOR AND SHALL BE LAID TO A UNIFORM MINIMUM DEPTH OF 2 INCHES. MULCH AREAS AROUND TREES AT THE RATE OF 1" OF DIAMETER PER OF TRUNK CALIPER.

5. HYDROGEL ABSORBENT MATERIAL SHALL BE ADDED TO THE PLANTING HOLE FOR EACH TREE AND SHRUB AT THE RATE OF 4 OUNCES PER 3 FOOT CALIPER OF GALLON OF ROOTBALL. HYDROGEL MATERIAL SHALL BE VITERRA "GELSCAPE", "TERRASORB" OR APPROVED EQUAL.

### F. SUBSTITUTIONS:

1. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE BIDDING. THE OWNER OR LANDSCAPE ARCHITECT WILL THEN SELECT A REASONABLE ALTERNATE OR INFORM ALL LANDSCAPE CONTRACTORS OF THE AVAILABILITY OF THE ORIGINAL PLANT.

### G. PRUNING, CLEANUP, PROTECTION OF EXISTING MATERIALS AND RESTORATION

1. THE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE DETAILS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

2. DURING COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED. LAWN AREAS MUST CLEAR, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE TO ANY EXISTING LAWNS, PAVING, ETC. NOT SCHEDULED FOR REMOVAL WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEANED UP THOROUGHLY. DEBRIS, RUBBISH, SUBSOIL AND WASTE MATERIALS SHALL BE CLEANED UP AND REMOVED FROM THE PROPERTY. EXISTING GRASS AREAS WHICH HAVE BEEN INJURED BY THE WORK SHALL BE REGRADED AND SODDED TO MATCH THE EXISTING LAWN. THE ENTIRE AREA SHALL BE NEAT AND CLEAN TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.

3. CONTRACTOR SHALL AT ALL TIMES, PROTECT ALL PLANTS AND LAWNS FROM DAMAGE. THE MOVING OF HEAVY EQUIPMENT OR MATERIAL OVER THE LAWN AREAS SHALL BE DONE ON PLANKS OR PONTOONS.

4. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENTS, SODDED OR PLANTED AREAS, STRUCTURES OR SUBSTRUCTURES, NOT SCHEDULED FOR REMOVAL WHICH ARE DISTURBED BY THE CONTRACTOR DURING PLANTING OPERATIONS. SUCH RESTORATION SHALL BE IN A MANNER SATISFACTORY TO THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

### H. FINAL INSPECTION AND GUARANTEE:

1. AFTER PLANTING IS COMPLETED (INCLUDING MULCHING AND CLEANUP), THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING TO REQUEST FINAL INSPECTION OF THE TOTAL PLANTING. THE LANDSCAPE ARCHITECT SHALL MAKE A FINAL INSPECTION VISIT AS SOON AS POSSIBLE. LANDSCAPE ARCHITECT SHALL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, WHEN ALL WORK IS SATISFACTORY COMPLETE. IF WORK IS NOT SATISFACTORY COMPLETE, THE LANDSCAPE ARCHITECT WILL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, AS TO THE DEFICIENCIES IN THE WORK, AND THE NECESSARY CORRECTIVE MEASURES. THE LANDSCAPE CONTRACTOR WILL BE GIVEN A REASONABLE AMOUNT OF TIME TO CORRECT THE DEFICIENCIES, AND ANOTHER FINAL INSPECTION WILL BE SCHEDULED BY THE LANDSCAPE ARCHITECT.

2. ALL PLANT MATERIAL AND LAWN AREAS SHALL BE GUARANTEED TO BE IN A VIGOROUS GROWING CONDITION ONE YEAR FROM THE DATE OF FINAL INSPECTION AND ACCEPTANCE. AT THE TERMINATION OF THIS PERIOD, THE CONTRACTOR SHALL HAVE COMPLETED THE PRECEDING MAINTENANCE SCHEDULE. ANY PLANTS INFECTED WITH DISEASE OR INSECTS WILL BE REMOVED OR TREATED. ALL DEAD OR UNACCEPTABLE PLANTS WILL BE REPLACED BY THE SAME PLANTS AND SIZES DESIGNATED ON THE PLANT LIST. THESE PLANTS SHALL BE PLANTED, MULCHED AND GUY AS SPECIFIED HEREIN AND WITHOUT EXTRA COMPENSATION TO THE CONTRACTOR. AT THE COMPLETION OF ALL SUCH WORK AND WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, THE CONTRACT WILL BE CONSIDERED COMPLETE.


Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666


REVISIONS

| No. | DATE | |
|---|---|---|
| 1. | 5/18/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING 'B' (SAL) |

### DEVELOPER'S/BUILDER'S CERTIFICATE:

"I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THE APPROVED FINAL PLAN SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE CERTIFY THAT HEALTHY PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN AND THAT A 1-YEAR GUARANTEE WILL BE EXECUTED."

NAME R. COLE SCHNORF — DATE 10-2-2000

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/19/00

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ 14137 & 14138 14137 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | | Sewer Code 6440000 | | |

# Plan
Scale 1" = 50'

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF $ 29,530.00


Matis Warfield
consulting engineers
10640 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com

HUMAN & ROHDE, INC.
LANDSCAPE ARCHITECTS
512 Virginia Avenue
Towson, Maryland 21286
410 825 3885

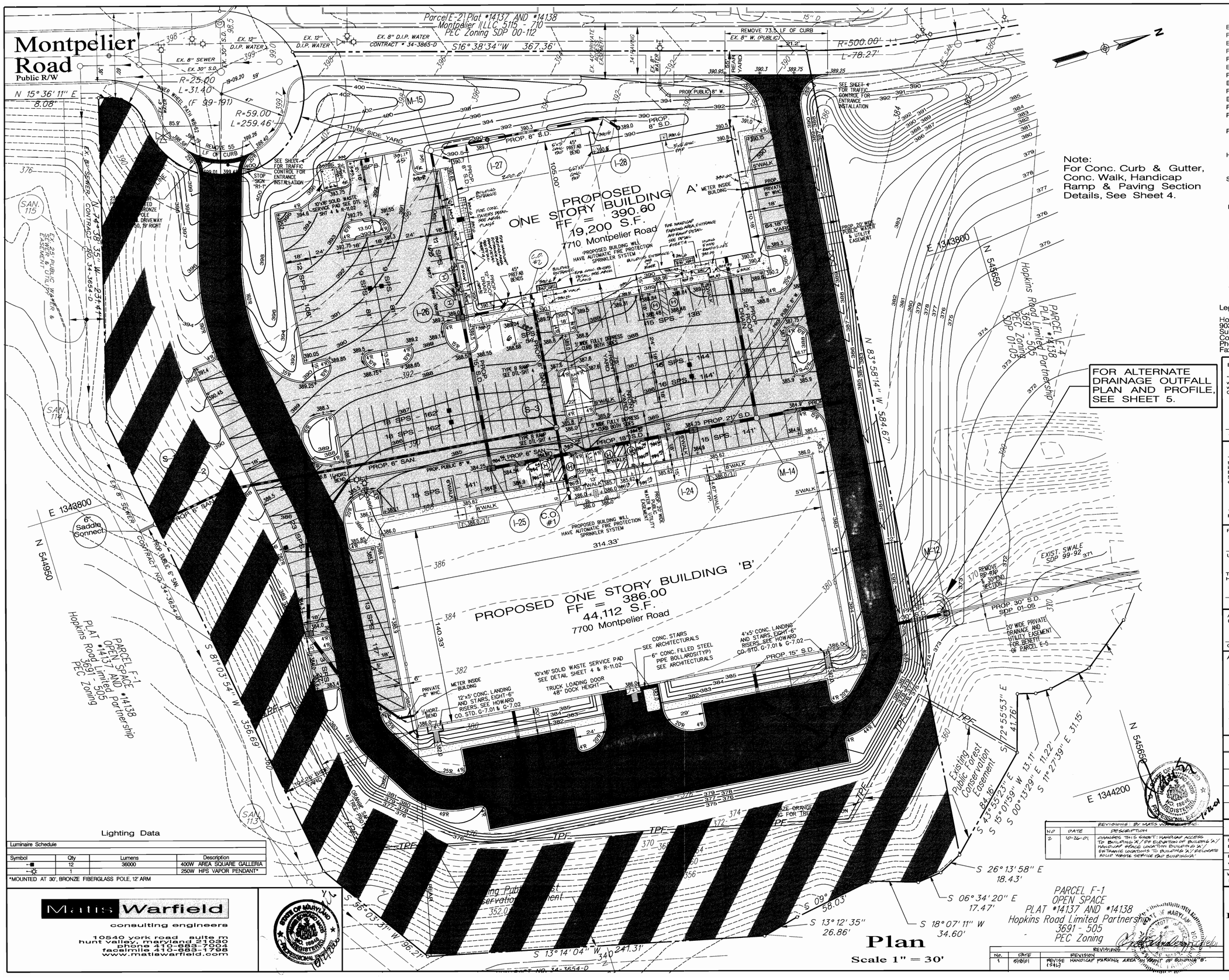

STATE OF MARYLAND REGISTERED LANDSCAPE ARCHITECT NO. 1383

STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER NO. 19048 10/2/2000

# Final Landscape Plan
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 8 of 8
October 2, 2000 SDP 01-19




Note:
For Conc. Curb & Gutter, Conc. Walk, Handicap Ramp & Paving Section Details, See Sheet 4.

## Legend

- Existing Contours
- Proposed Grades
- Existing Water
- Proposed Private Water
- Proposed Public Water
- Existing Sanitary
- Proposed Private Sanitary
- Existing Storm Drain
- Proposed Private Storm Drain
- Existing Curb and Gutter
- Proposed Curb and Gutter
- Proposed Light Fixture
- Proposed Concrete Paving
- Handicap Parking Space
- Slopes > 25%
- P3 Paving
- P2 Paving
- P5 Paving
- Tree Protection Fencing — TPF —

Legal Owner (current):
Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser
MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E. Matis, P.E. MD 18848 — Date 10/2/2000

DEVELOPER'S CERTIFICATE

" I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

For MOR Montpelier LLC By: R. Cole Schnorf, Senior V.P. — Date 10-2-2000

Reviewed for Howard SCD and meets Technical Requirements

USDA – Natural Resources Conservation Service — Date 10/12/00

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

Howard SCD — Date 10/12/00

APPROVED: FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWERAGE SYSTEMS:

County Health Officer Howard County Health Department — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/18/00

ADDRESS CHART

| Lot/Parcel No. | Street Address |
|---|---|
| BUILDING A | 7710 Montpelier Road |
| BUILDING B | 7700 Montpelier Road |

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ 14137 AND 14138 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | | Sewer Code 6440000 | | |

| No. | DATE | DESCRIPTION |
|---|---|---|
| 2 | 10-26-01 | CHANGES THIS SHEET: HANDICAP ACCESS TO BUILDING 'A' / FF ELEVATION OF BUILDING 'A' / HANDICAP SPACE LOCATION BUILDING 'A' / ENTRANCE LOCATIONS TO BUILDING 'A' / RELOCATE SOLID WASTE SERVICE PAD BUILDING 'A' |

| No. | DATE | REVISION |
|---|---|---|
| 1 | 01/08/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING 'B'. |

Lighting Data

Luminaire Schedule

| Symbol | Qty | Lumens | Description |
|---|---|---|---|
| | 12 | 36000 | 400W AREA SQUARE GALLERIA |
| | 1 | | 250W HPS VAPOR PENDANT* |

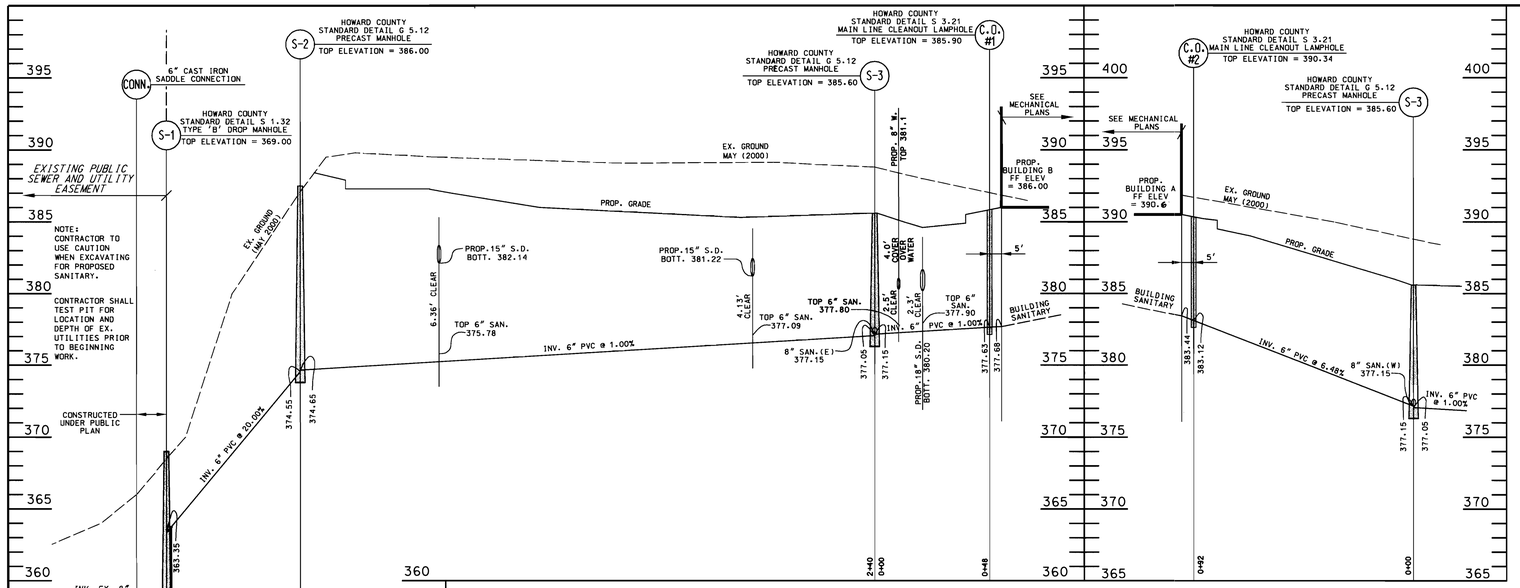
*MOUNTED AT 30', BRONZE FIBERGLASS POLE, 12' ARM

Plan
Scale 1" = 30'

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com

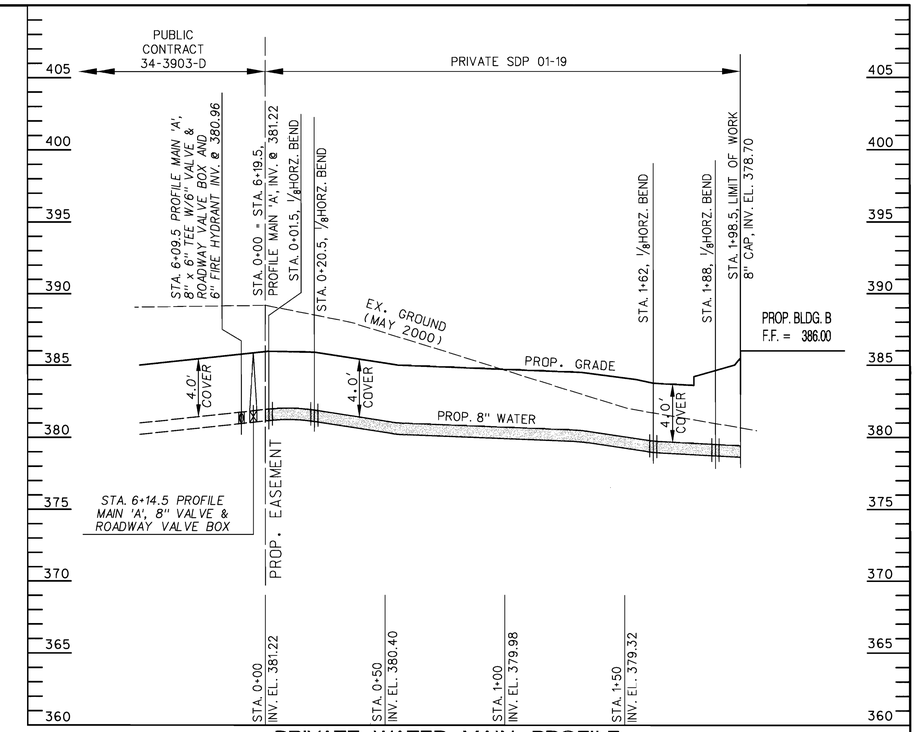
# Site Development Plan
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown
Sheet 2 of 8
October 2, 2000
SDP 01-19




## PRIVATE SANITARY SEWER PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'




## PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

| REVISIONS | | |
|---|---|---|
| NO | DATE | DESCRIPTION |
| 2 | 10-26-01 | CHANGES THIS SHEET: FIRST FLOOR ELEVATION OF BUILDING A |

BY: MATIS WARFIELD INC.

| REVISIONS | | |
|---|---|---|
| NO. | DATE | REVISION |
| 1 | 9/18/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING B. (GHL) |

## STORM DRAIN STRUCTURE SCHEDULE

| NO. | TYPE | INV. IN | INV. OUT | TOP ELEV. | REMARKS |
|---|---|---|---|---|---|
| I-23 | DBL. 'S' COMB. | 378.27 | 378.07 | 385.30(TC) | STD. DTL. SD 4.34 ** |
| I-24 | DBL. 'S' | 379.77 | 379.52 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-25 | DBL. 'S' | 381.00 | 380.75 | 384.25(TG) | STD. DTL. SD 4.23 ** |
| I-26 | DBL. 'S' COMB. | 383.28 | 382.83 | 389.60(TC) | STD. DTL. SD 4.34 ** |
| I-27 | YARD INLET | 384.77 | 384.60 | 389.70(TG) | STD. DTL. SD 4.14 |
| I-28 | YARD INLET | – | 385.27 | 389.00(TG) | STD. DTL. SD 4.14 |
| I-29 | DBL. 'S' COMB. | 373.54 | 373.29 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-30 | DBL. 'S' COMB. | 375.23 | 374.98 | 379.00(TC) | STD. DTL. SD 4.34 ** |
| I-31 | DBL. 'S' COMB. | 380.03 | 379.83 | 384.60(TC) | STD. DTL. SD 4.34 ** |
| I-32 | DBL. 'S' COMB. | – | 382.67 | 388.40(TC) | STD. DTL. SD 4.34 |
| M-12 | 5' MANHOLE | 367.98 | 367.78 | 373.50 | STD. DTL. G 5.05 |
| M-13 | 5' MANHOLE | 371.08 | 370.58 | 382.15 | STD. DTL. G 5.13 |
| M-14 | 4' MANHOLE | 379.18 | 378.98 | 384.65 | STD. DTL. G 5.12 |
| M-15 | 4' MANHOLE | 384.39 | 384.22 | 390.70 | STD. DTL. G 5.12 |
| M-16 | 5' MANHOLE | 372.60 | 372.35 | 379.70 | STD. DTL. G 5.13 |
| M-17 | 4' MANHOLE | 376.25 | 376.05 | 381.00 | STD. DTL. G 5.12 |
| M-18 | 4' MANHOLE | 376.60 | 376.40 | 381.05 | STD. DTL. G 5.12 |
| E-3 | CONC END SECT | | | NA | STD. DTL. SD 5.51* |

**MODIFIED. SEE DETAILS SHT. 5
(TC)-TOP CURB
(TG)-TOP GRATE
*ONLY NECESSARY IF DRAIN SYSYTEM ON PARCEL E-4 HAS NOT BEEN CONSTRUCTED

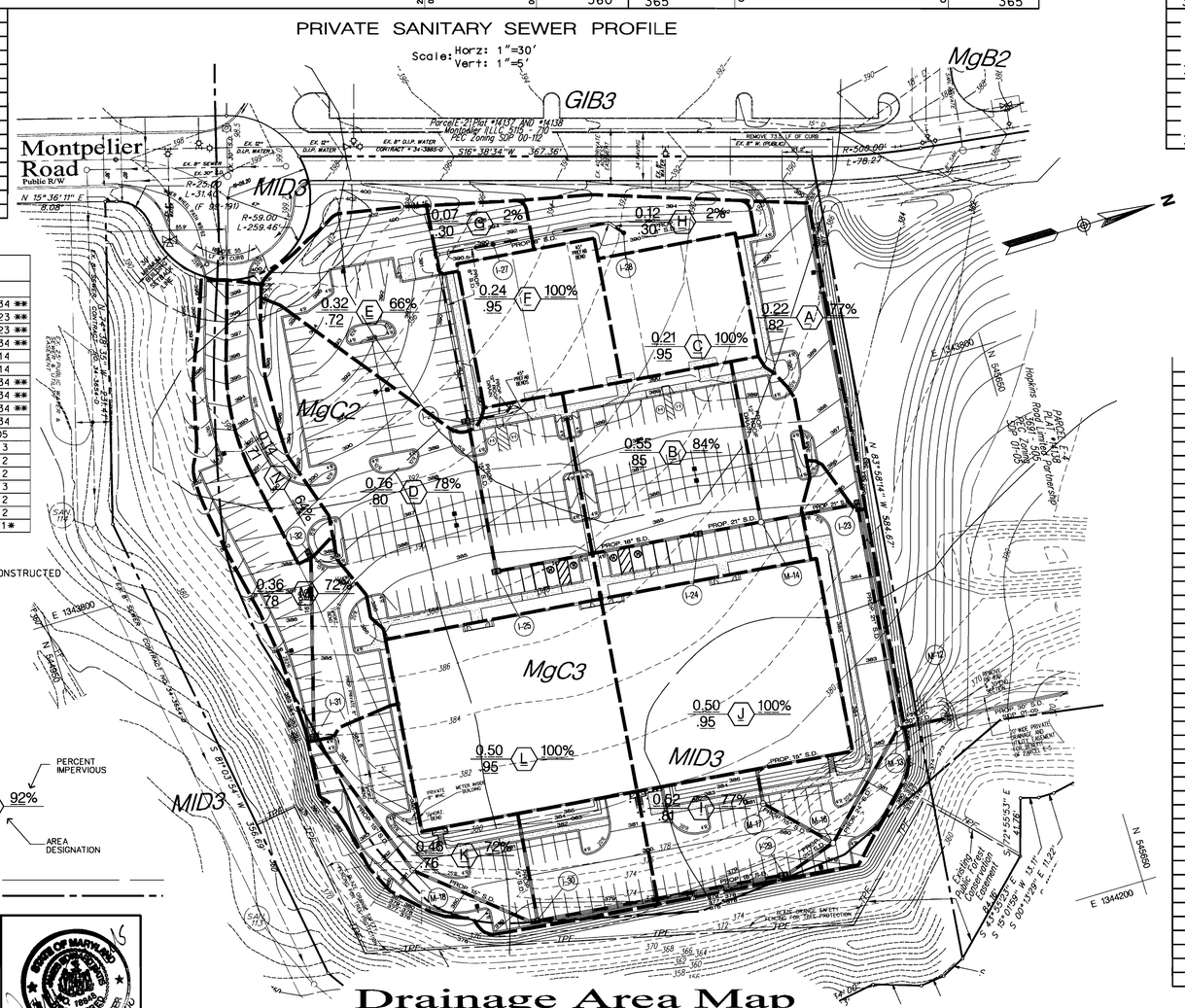
## PIPE SCHEDULE

| SIZE | TYPE | PIPE LENGTH-FEET |
|---|---|---|
| 8" | HDPE | 260 |
| 12" | HDPE | 153 |
| 15" | RCCP CL IV | 616 |
| 18" | RCCP CL IV | 328 |
| 21" | RCCP CL III | 322 |
| 24" | RCCP CL III | 94 |
| 30" | RCCP CL III | 38 |

## DA MAP LEGEND

ACREAGE — PERCENT IMPERVIOUS
5.40 / .90 — W — 92%
C FACTOR — AREA DESIGNATION

SOILS TYPE
DA BOUNDARY FROM SWM PLAN SDP 99-92




# Drainage Area Map

Scale 1" = 50'

PRIVATE SDP 01-19 — PUBLIC CONTRACT

STA. 0+43, LIMIT OF PROP. 8" W. INV. EL. 385.5 — PROP. EASEMENT — STA. 0+00 = STA. 1+60.5 PROFILE 'A', 8" x 8" TEE, INV. @ 384.80

PROP. BUILDING A F.F. = 390.6 — PROP. GRADE — 4.0' COVER — EX. GROUND (MAY 2000) — PROP. 8" WATER — STA. 0+04, 8" VALVE & ROADWAY VALVE BOX — STA. 0+00 INV. EL. 384.80

## PRIVATE WATER MAIN PROFILE

Scale: Horz: 1"=30' Vert: 1"=5'

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/18/00

PERMIT INFORMATION CHART

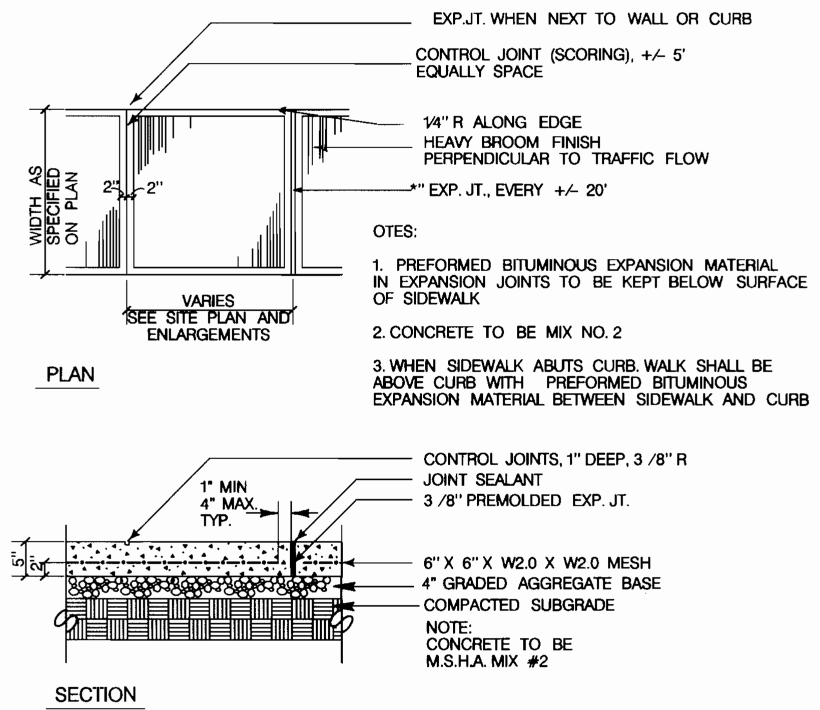
| Subdivision Name | | | Section / Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ ~~14137, 14138~~ 14471 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | | Sewer Code 6440000 | | |

# Drainage Area Map
# Utility Profiles
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

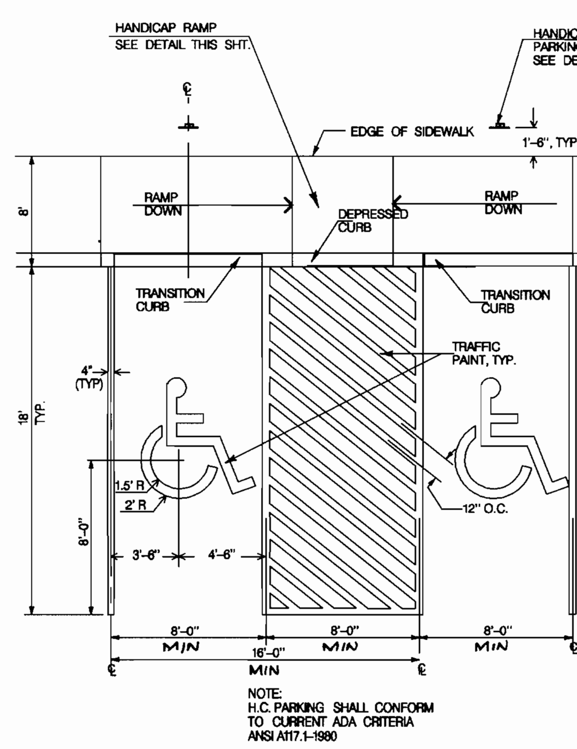
Howard County, Maryland
Scale: As Shown

Sheet 3 of 8
October 2, 2000
SDP 01-19

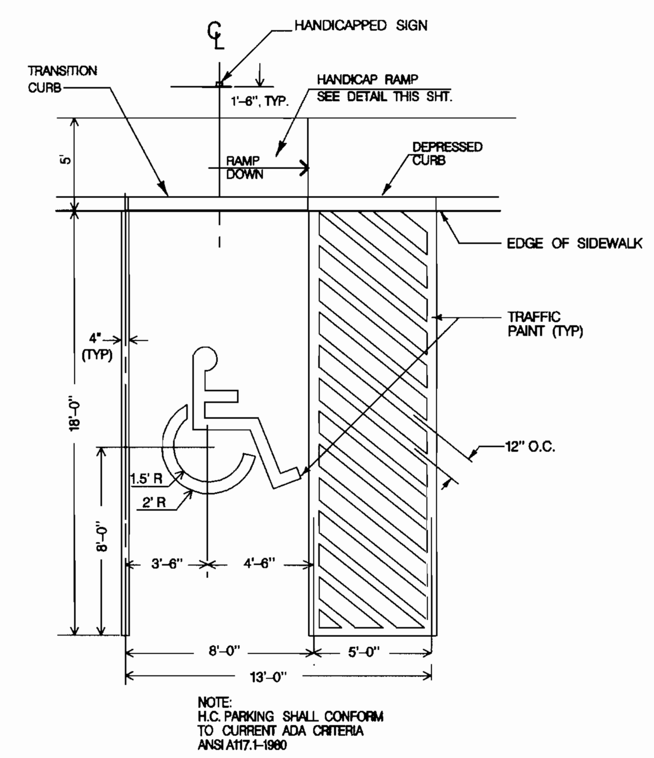
Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com




## Detail Concrete Walk
Not To Scale




## Detail Van Accessible Handicap Parking Spaces
Not To Scale



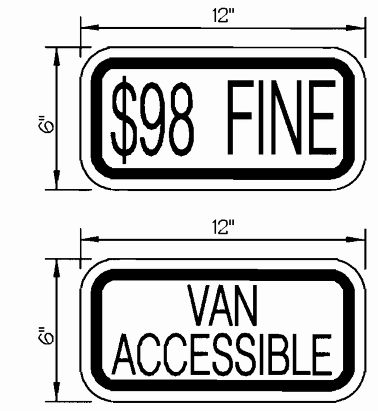

## Detail Handicap Parking Space
Not To Scale

ALL DIMENSIONS ARE IN INCHES

* REDUCE SPACING 50 PERCENT

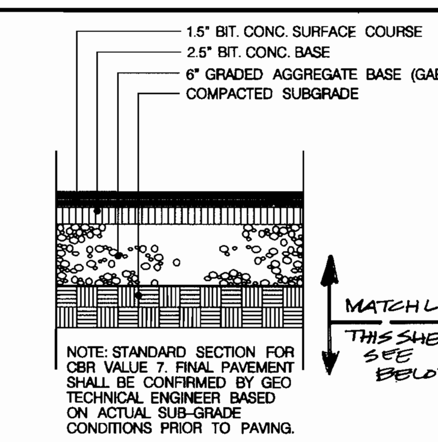
COLORS
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

## Detail Handicap Parking Sign
Not To Scale

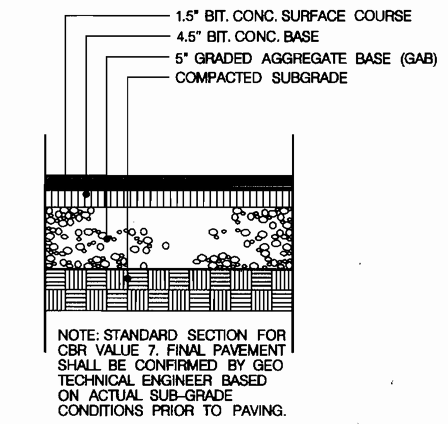



$98 FINE SIGN / VAN ACCESSIBLE SIGN
SIGN TO UTILIZE AN ALUMINUM BLANK 6" X 12" X 0.080" THICK WITH TWO SINGLE POST MOUNTING HOLES.

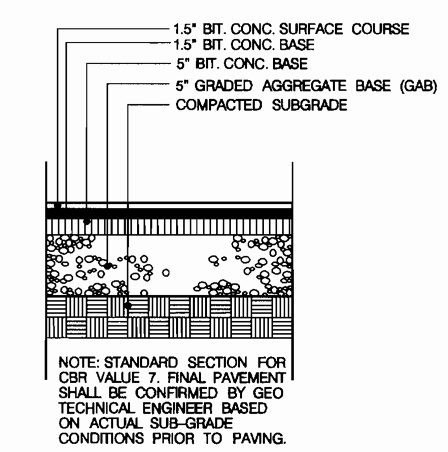
THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS




P2 PAVING

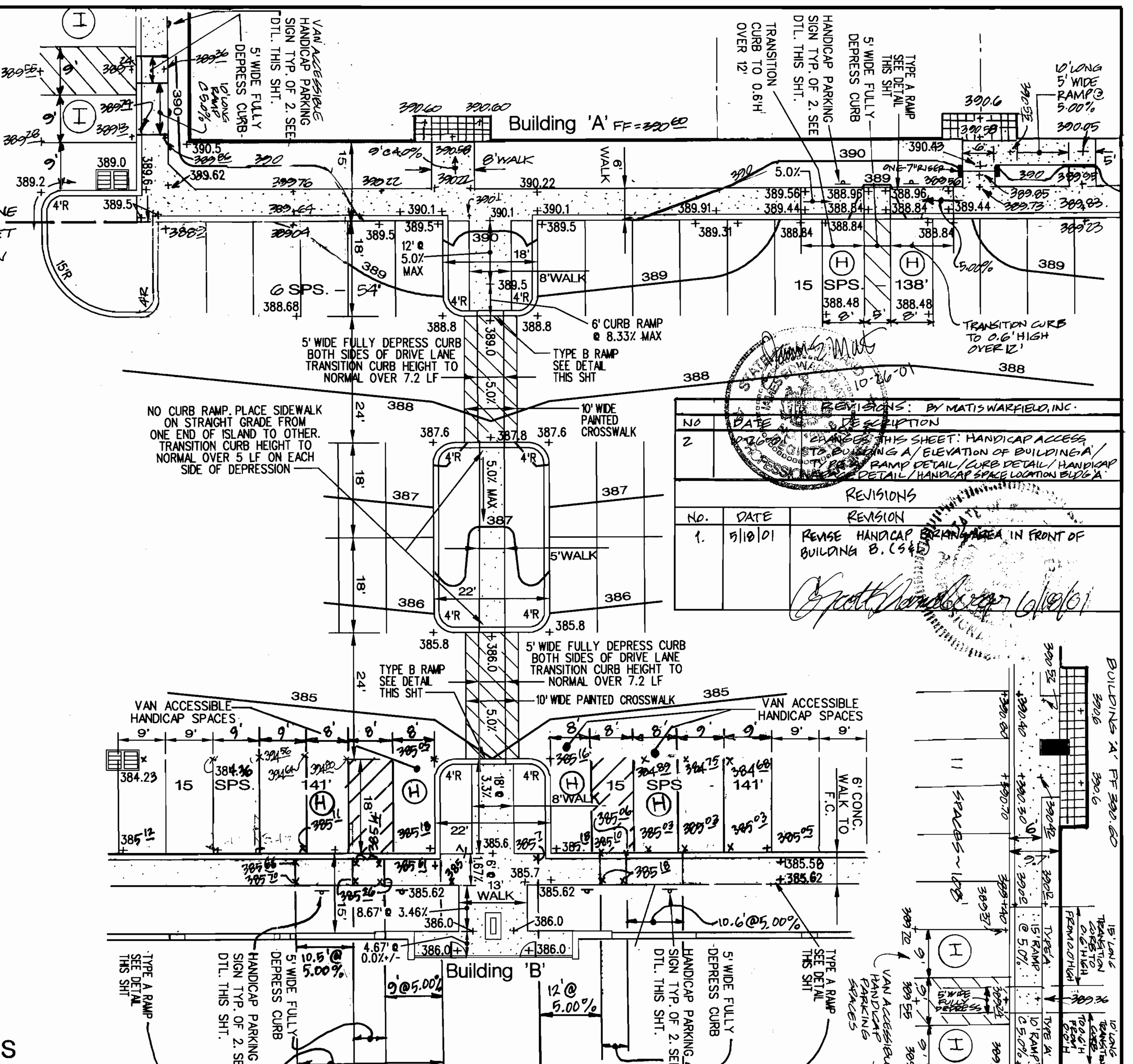



P3 PAVING




P5 PAVING

## Detail Paving Sections
Not To Scale




| REVISIONS: BY MATIS WARFIELD, INC. | | |
|---|---|---|
| NO | DATE | DESCRIPTION |
| 2 | | CHANGES THIS SHEET: HANDICAP ACCESS, BUILDING A/ ELEVATION OF BUILDING A/ TYPE A RAMP DETAIL/CURB DETAIL/ HANDICAP DETAIL/ HANDICAP SPACE LOCATION BLDG A |

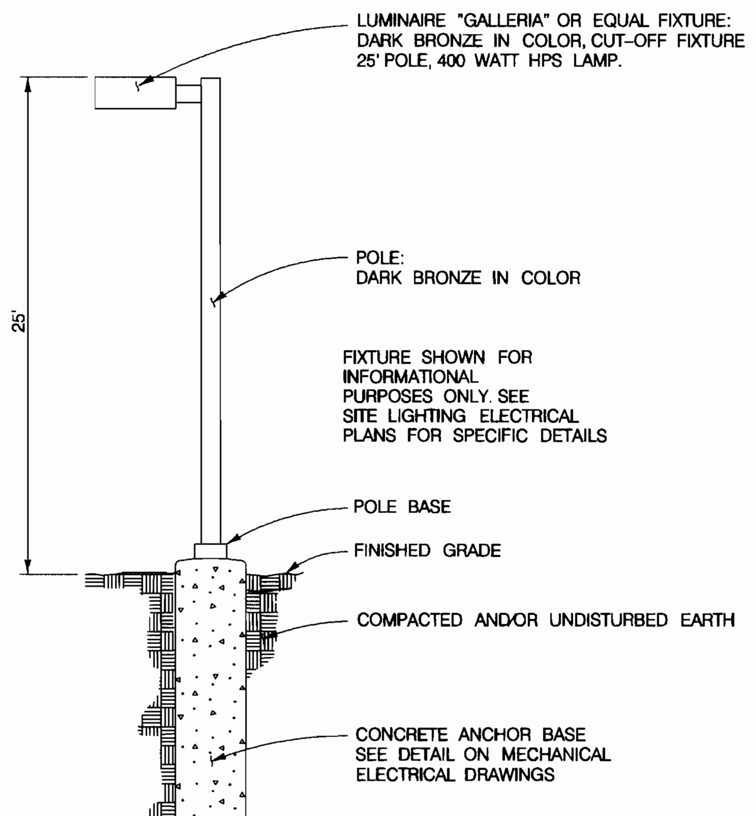
REVISIONS

| No. | DATE | REVISION |
|---|---|---|
| 1. | 5/18/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING B. (S4) |

10-26-01

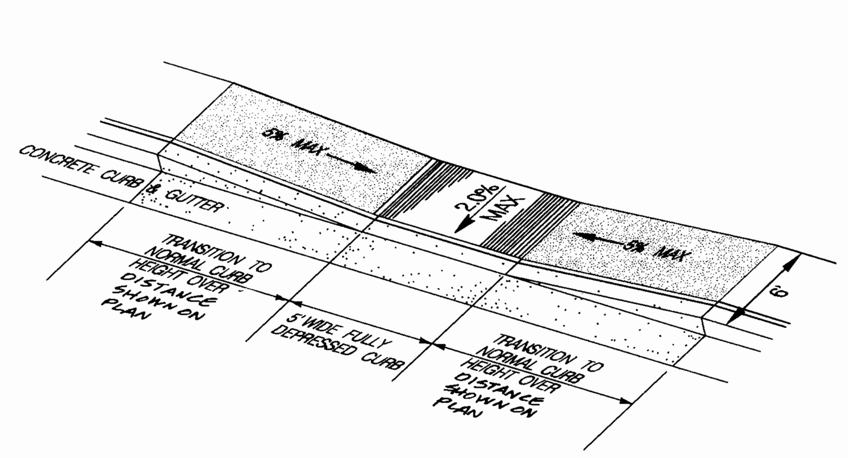
6/19/01

## Detail Handicap Accessible Route Buildings A & B and Between Buildings
Scale: 1" = 20'

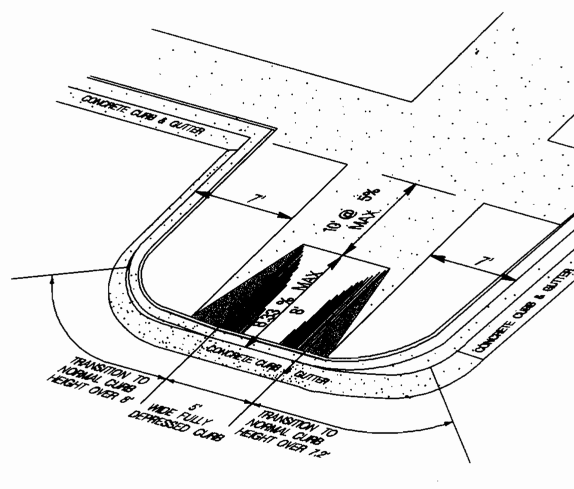



ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATION SECTION 134.

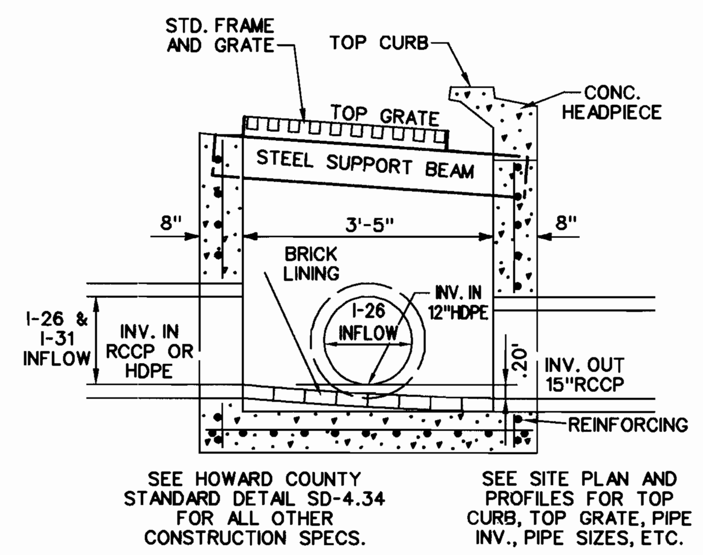
## Detail Sharp Cuttoff Area Light
Not To Scale



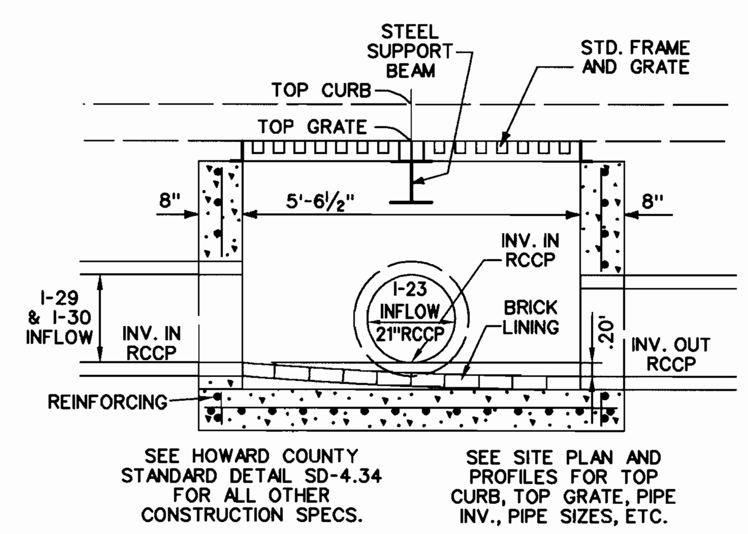

## Type 'A' Handicap Ramp
Not To Scale



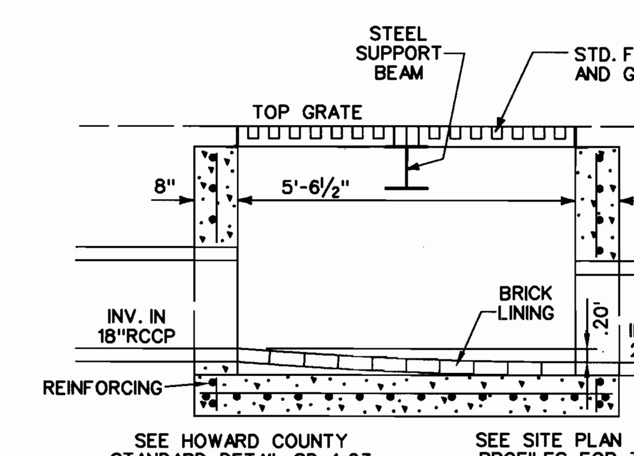

## Type 'B' Curb Ramp
Not To Scale



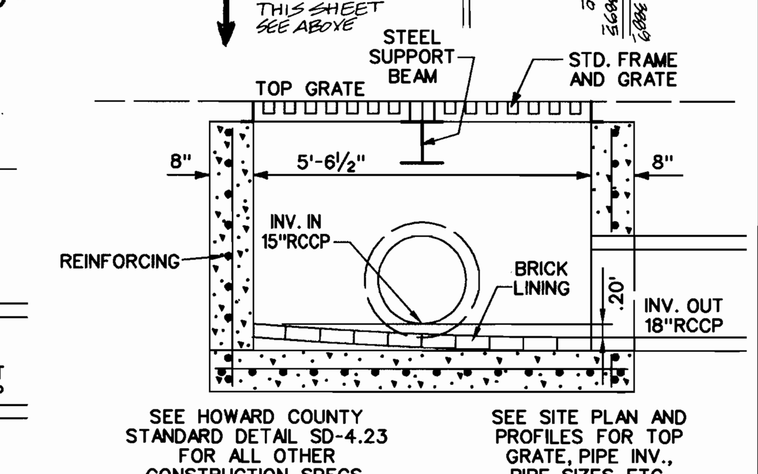

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-26 & 31)
Not To Scale



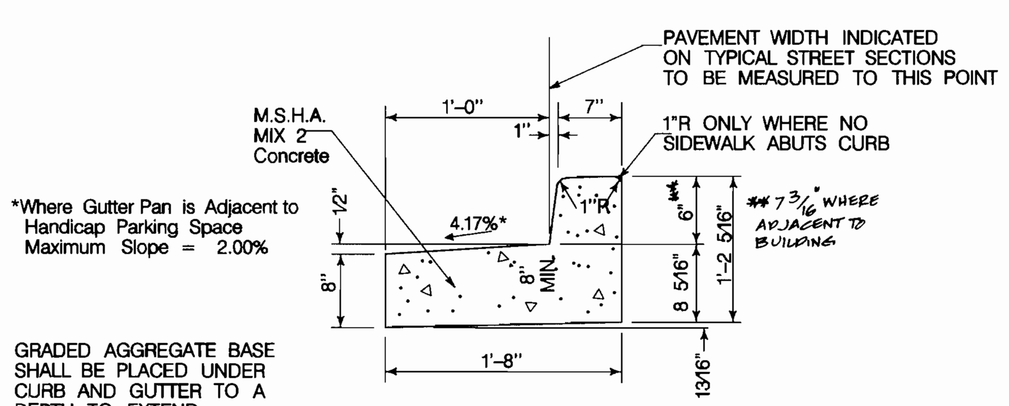

## Modified For Flow Through Double Type 'S' Comb. Inlet (I-23, 29 & 30)
Not To Scale



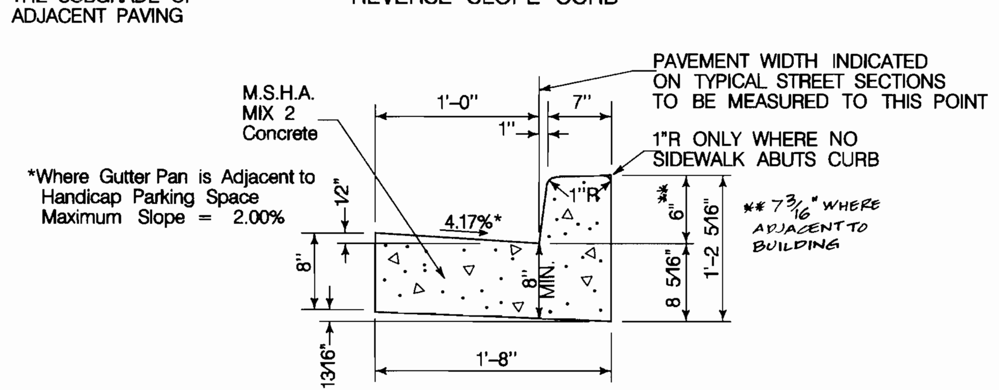

## Modified For Flow Through Double Type 'S' Inlet (I-24)
Not To Scale




## Modified For Flow Through Double Type 'S' Inlet (I-25)
Not To Scale



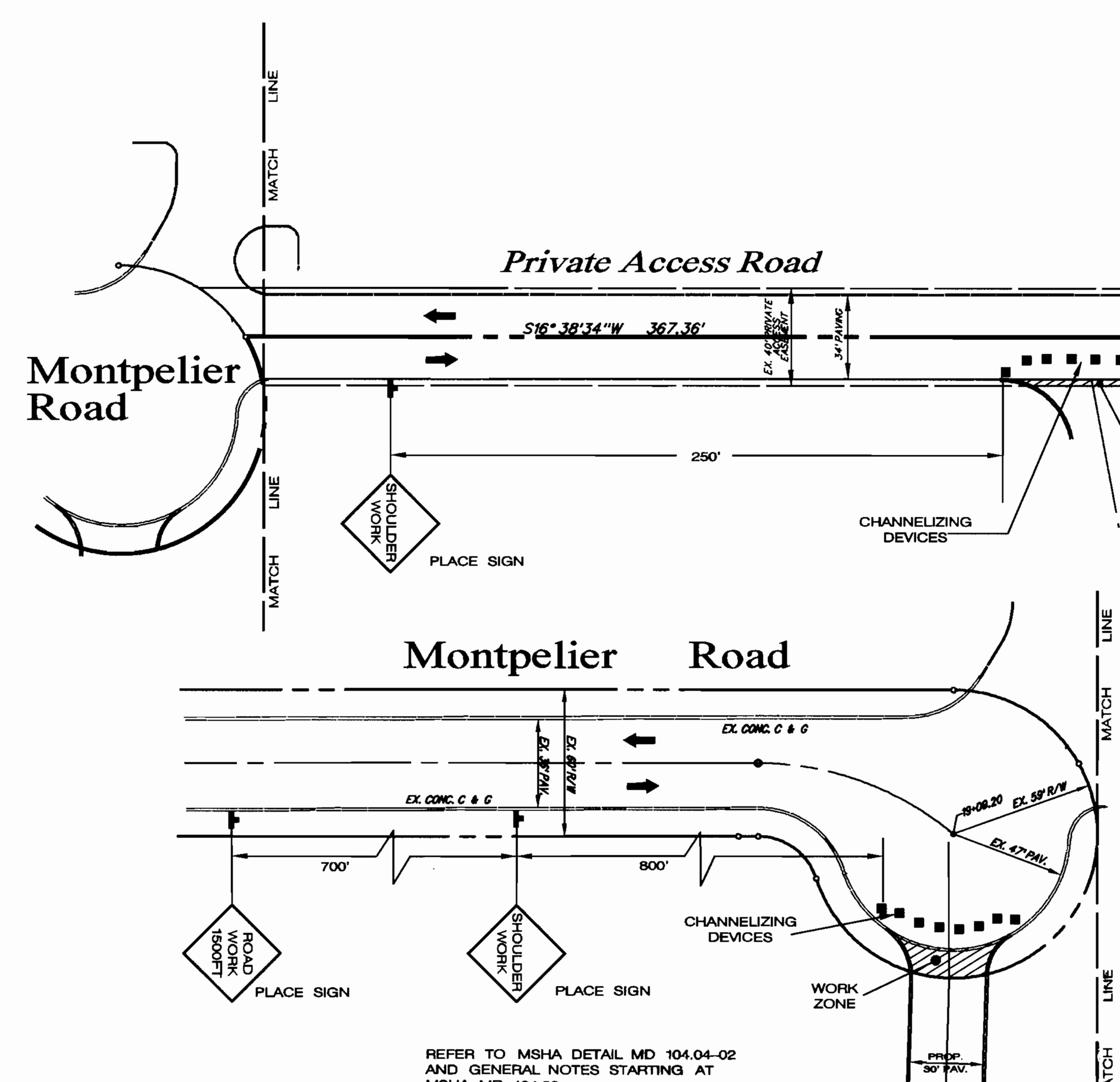

REVERSE SLOPE CURB



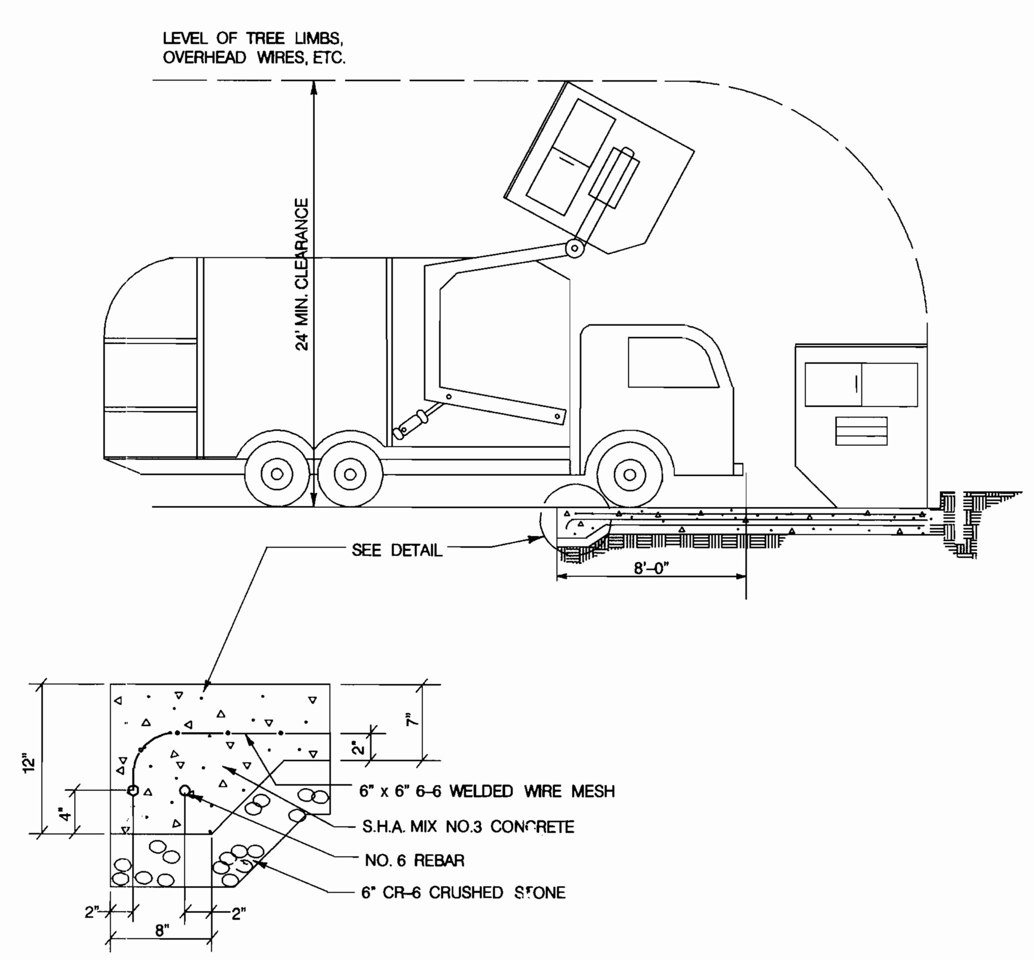

STANDARD CURB

Refer to Howard County Standard Plate R-3.01

## Detail Concrete Curb and Gutter
Not To Scale



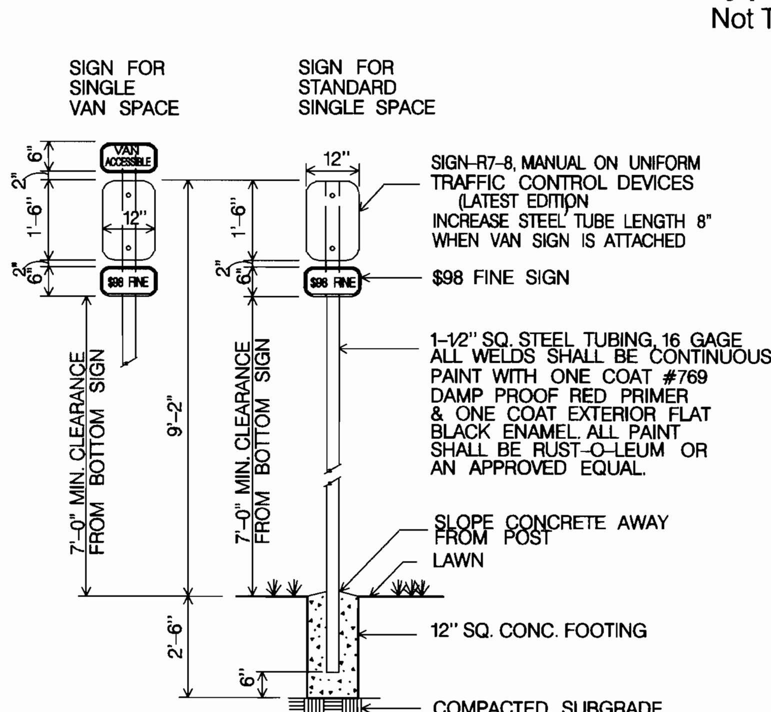

## Work Zone Traffic Control Detail
Not To Scale




Section

Refer to Howard County Standard Plate R -3.01

## Detail Solid Waste Service Pad
Not To Scale




NOTES
1. DISTANCE FROM GROUND TO BOTTOM OF SIGN SHALL BE 7'
2. SEE HANDICAPPED PARKING SPACE DETAIL THIS SHEET FOR LOCATION OF HANDICAPPED SIGN.
3. VAN ACCESSIBLE SPACES SHALL INCLUDE "VAN SIGN" AS REQUIRED
4. SIGNS SHALL CONFORM TO CURRENT ADA CRITERIA.

SIGN COLORS
LETTERS AND BORDER - GREEN
WHITE H.C. SYMBOLS ON BLUE BACKGROUND
BACKGROUND - WHITE

## Detail Handicap Parking Sign & Post
Not To Scale

Legal Owner (current):
Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser
MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 10/17/00
Director — Date 10/18/00

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| ~~14411 & 14412~~ 14471 | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

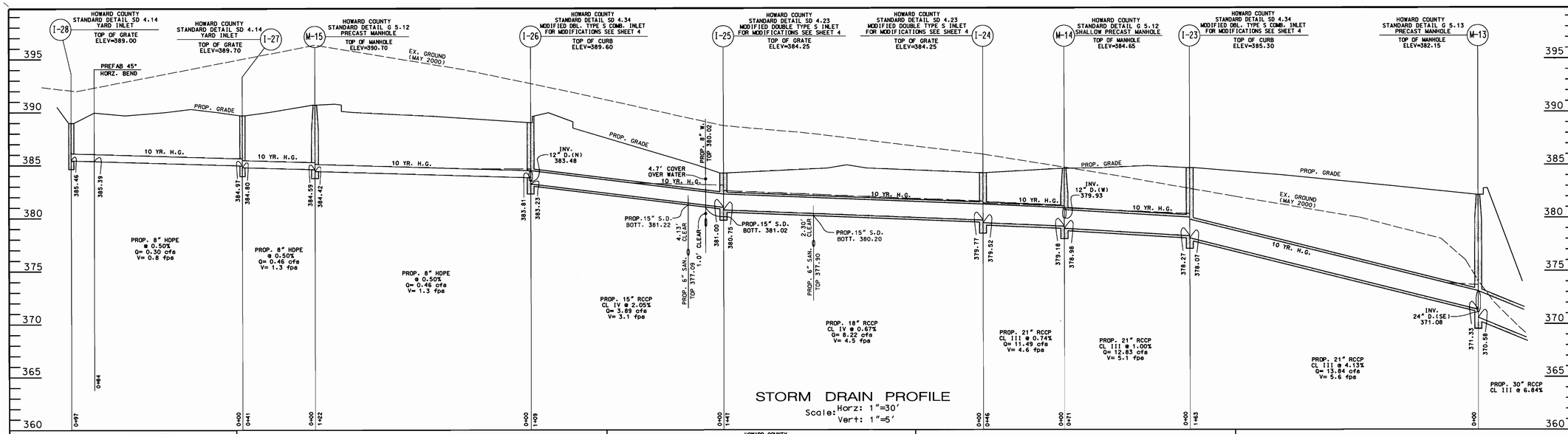
Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7004
facsimile 410-683-1798
www.matiswarfield.com

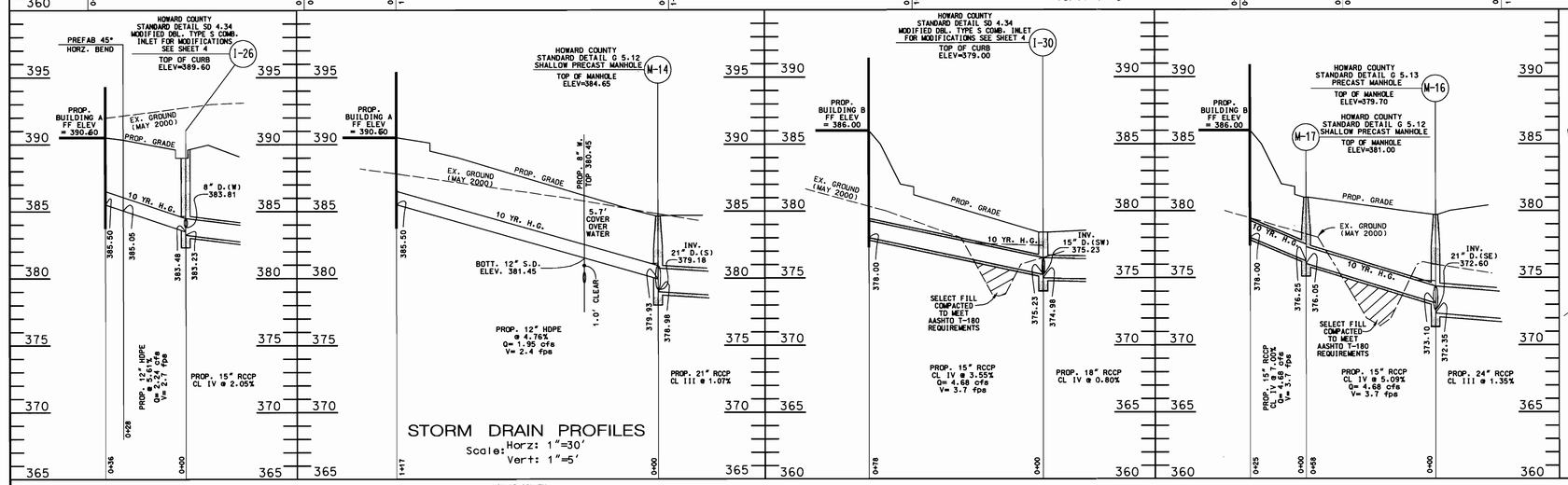
# Details

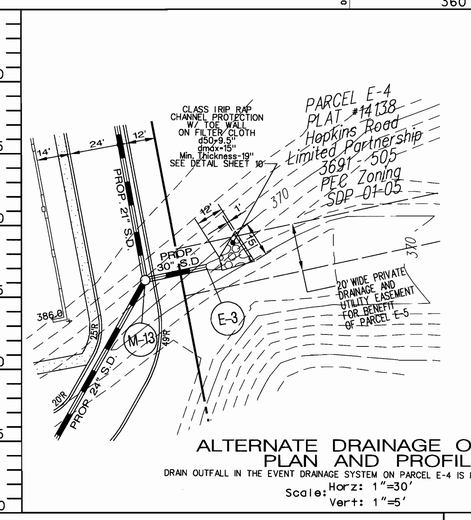
**Proposed Offices for The Johns Hopkins University Applied Physics Laboratory**
**Parcel E-5**
**Montpelier Research Park**

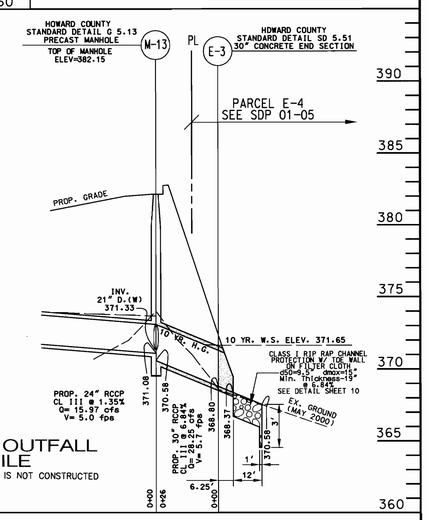
Howard County, Maryland
Scale: As Shown

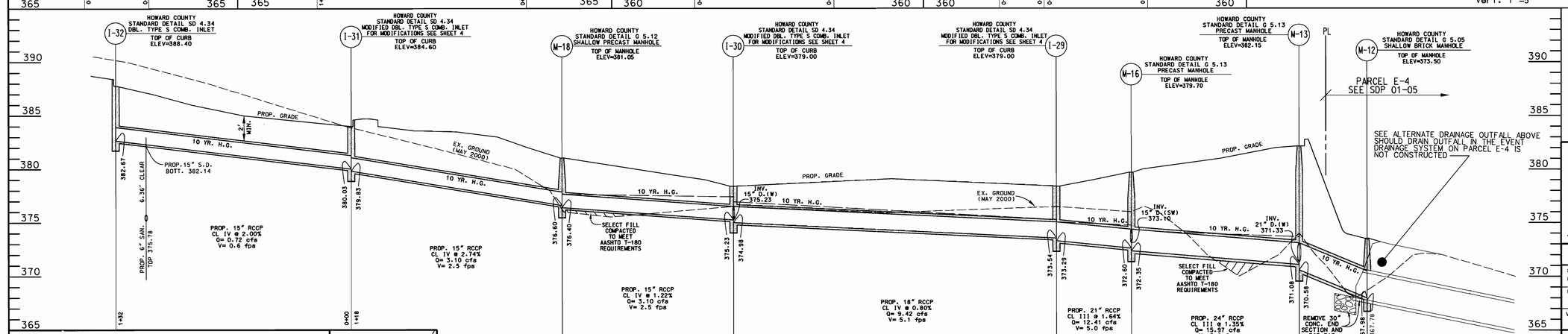
Sheet 4 of 8
October 2, 2000
SDP 01-19




Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
1-800-347-2195

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

| | |
|---|---|
| Chief, Development Engineering Division | Date 10/12/00 |
| Chief, Land Development Division | Date 10/12/00 |
| Director | Date 10/18/00 |

PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ ~~14412/71~~ 14471 | Grid # | Zoning | Tax Map No. | Election District | Census Tract |
| | 17 | PEC | 41 | 5th | 6051.02 |
| Water Code | | | Sewer Code | | |
| E 21 | | | 6440000 | | |

| REVISIONS | | |
|---|---|---|
| NO | DATE | DESCRIPTION |
| 2 | 10-26-01 | CHANGES THIS SHEET: FIRST FLOOR ELEVATION OF BUILDING A |

BY: MATIS WARFIELD, INC.

# Storm Drain Profiles and Details
## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory
## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 5 of 8
October 2, 2000

SDP 01-19

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com

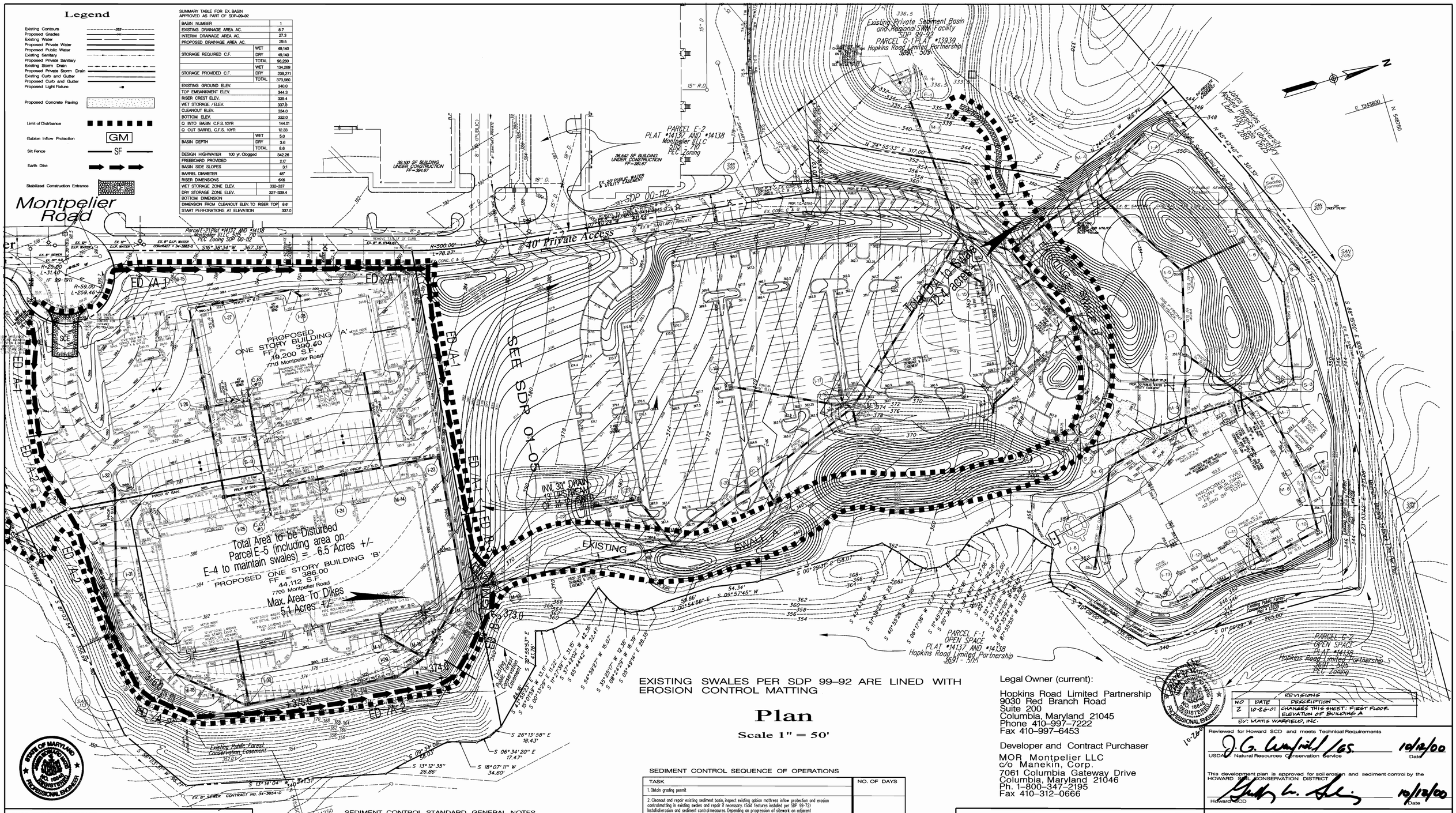
STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER

## Legend

- Existing Contours
- Proposed Grades
- Existing Water
- Proposed Private Water
- Proposed Public Water
- Existing Sanitary
- Proposed Private Sanitary
- Existing Storm Drain
- Proposed Private Storm Drain
- Existing Curb and Gutter
- Proposed Curb and Gutter
- Proposed Light Fixture
- Proposed Concrete Paving
- Limit of Distrbance
- Gabion Inflow Protection — GM
- Silt Fence — SF
- Earth Dike
- Stabilized Construction Entrance

SUMMARY TABLE FOR EX. BASIN
APPROVED AS PART OF SDP-89-92

| | | |
|---|---|---|
| BASIN NUMBER | | 1 |
| EXISTING DRAINAGE AREA AC. | | 8.7 |
| INTERIM DRAINAGE AREA AC. | | 27.3 |
| PROPOSED DRAINAGE AREA AC. | | 29.5 |
| STORAGE REQUIRED C.F. | WET | 49,140 |
| | DRY | 49,140 |
| | TOTAL | 98,280 |
| STORAGE PROVIDED C.F. | WET | 134,269 |
| | DRY | 239,211 |
| | TOTAL | 373,580 |
| EXISTING GROUND ELEV. | | 340.0 |
| TOP EMBANKMENT ELEV. | | 344.3 |
| RISER CREST ELEV. | | 339.4 |
| WET STORAGE /ELEV. | | 337.0 |
| CLEANOUT ELEV. | | 334.0 |
| BOTTOM ELEV. | | 332.0 |
| Q INTO BASIN C.F.S. 10YR | | 144.01 |
| Q OUT BARREL C.F.S. 10YR | | 12.33 |
| BASIN DEPTH | WET | 5.0 |
| | DRY | 3.6 |
| | TOTAL | 8.6 |
| DESIGN HIGHWATER 100 yr. Clogged | | 342.26 |
| FREEBOARD PROVIDED | | 2.0' |
| BASIN SIDE SLOPES | | 3:1 |
| BARREL DIAMETER | | 48" |
| RISER DIMENSIONS | | 6X6 |
| WET STORAGE ZONE ELEV. | | 332-337 |
| DRY STORAGE ZONE ELEV. | | 337-339.4 |
| BOTTOM DIMENSION | | |
| DIMENSION FROM CLEANOUT ELEV.TO RISER TOP | | 8.6' |
| START PERFORATIONS AT ELEVATION | | 337.0 |




EXISTING SWALES PER SDP 99-92 ARE LINED WITH EROSION CONTROL MATTING

# Plan

Scale 1" = 50'

Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666

| NO | DATE | REVISIONS DESCRIPTION |
|---|---|---|
| 2 | 10-26-01 | CHANGES THIS SHEET: FIRST FLOOR ELEVATION OF BUILDING A |

BY: MATIS WARFIELD, INC.

10-26-01

Reviewed for Howard SCD and meets Technical Requirements

J. G. Warfield /GS. 10/12/00
USDA - Natural Resources Conservation Service — Date

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

10/12/00
Howard SCD — Date

ENGINEER'S CERTIFICATE

" I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District"

James E Matis 10-2-2000
James E. Matis, P.E. MD 18848 — Date

DEVELOPER'S CERTIFICATE

" We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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 inspection by the Howard Soil Conservation District"

10-17-2000
For MOR Montpelier, LLC By: R. Cole Schnorf, Senior VP, Manekin Corporation — Date

## SEDIMENT CONTROL STANDARD GENERAL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT 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 "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
   B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OF 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 MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SODS, TEMPORARY SEEDING, AND MULCHING (SECTION D). 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 OR SITE | +/-7.096 | ACRES |
| AREA DISTURBED (INCLUDES SWALES A + B) | +/- 6.5 | ACRES |
| AREA TO BE ROOFED OR PAVED | +/- 4.1 | ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | +/- 2.4 | ACRES |
| TOTAL CUT | +/- 13,000 | CUBIC YARDS* |
| TOTAL FILL | +/- 13,000 | CUBIC YARDS* |
| OFF-SITE WASTE/BORROW AREA LOCATION | WASTE - N/A | |

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE DAY, WHICHEVER IS SHORTER.

* THE EARTH VOLUME FIGURES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR IS ADVISED TO MAKE HIS OWN CALCULATIONS PRIOR TO PLACING A BID ON THIS ITEM

## SEDIMENT CONTROL SEQUENCE OF OPERATIONS

| TASK | NO. OF DAYS |
|---|---|
| 1. Obtain grading permit | |
| 2. Cleanout and repair existing sediment basin, inspect existing gabion mattress inflow protection and erosion control matting in existing swales and repair if necessary. (Said features installed per SDP 89-72) Install silt fence and sediment control measures. Depending on progression of sitework on adjacent Parcel E-4 (SDP 01-05) Swales A and B may exist or may be in the process of being backfilled and replaced with a closed drainage system in accordance with SDP 01-05. If sitework on Parcel E-4 has not been undertaken contractor shall be responsible for maintaining Swale A and Swale B during the course of this construction. The disturbed area stated hereon includes that area necessary to maintain swale system should development on Parcel E-4 not occur. If sitework on Parcel E-4 has progressed, contractor shall coordinate periodic flushing of sediment through downstream drainage system through Parcel E-4 with site superintendent for Parcel E-4. | 14 |
| 3. Begin grading maintaining positive drainage to Swale A. As fills is placed along east and north sides of property insure that earth dike system is maintained. When fill slope is installed along east side of property, earth dike may be moved to top of slope to prevent scouring of slope. Begin building foundation and utilities installation. Install storm drains beginning with 30" drain starting 13 feet upstream from M-12 at invert 368.9+/-, allowing drain to daylight in channel of existing Swale A. Extend pipe upstream. As drain inlets become operational, leave unprotected to facilitate drainage to existing sediment basin through downstream drain or swale systems as the case may be. Flush drain system periodically, especially following rainfall events to insure the system remains functional and unclogged. Complete utility installations with the exception of the M-12 and the last 13 feet of the 30" storm drain upstream of M-12. Provide control of dust, as required, in accordance with dust control specifications. | 60 |
| 4. Complete remainder of grading and install curb and gutter and stone subbase in parking and drive areas. Install sidewalks. Permanently stabilize any areas to remain grass. | 45 |
| 5. Upon a 5-day clear (no precipitation) weather forecast from the National Weather Service and with the approval of the sediment control inspector complete remaining storm drainage system at M-12. See drain outfall alternate on Sheet 5 of 8 in the event that storm drain system on Parcel E-4 per SDP 01-05 has not progressed. | 10 |
| 6. Flush storm drain system from upstream ends downstream to sediment basin. Remove accumulated sediment from sediment basin. Proceed with paving installation. | 7 |
| 7. With the approval of the sediment control inspector remove remaining sediment control devices and stabilize. | 2 |

Matis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

| | |
|---|---|
| Chief, Development Engineering Division | 10/17/00 Date |
| Chief, Land Development Division | 10/17/00 Date |
| Director | 10/18/00 Date |

PERMIT INFORMATION CHART

| Subdivision Name | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|
| Montpelier Research Park | | | | E-5 |
| Plat ~~or Liber/Folio~~ ~~14137 & 14138~~ 14147 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | Sewer Code 6440000 | | |

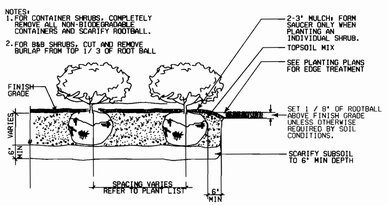
# Sediment and Erosion Control Plan

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Parcel E-5
## Montpelier Research Park

Howard County, Maryland — Sheet 6 of 8
Scale: As Shown — October 2, 2000 — SDP 01-19

NOTES:
1. FOR CONTAINER SHRUBS: COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL.
2. FOR B&B SHRUBS: CUT AND REMOVE BURLAP FROM TOP 1/ 3 OF ROOT BALL



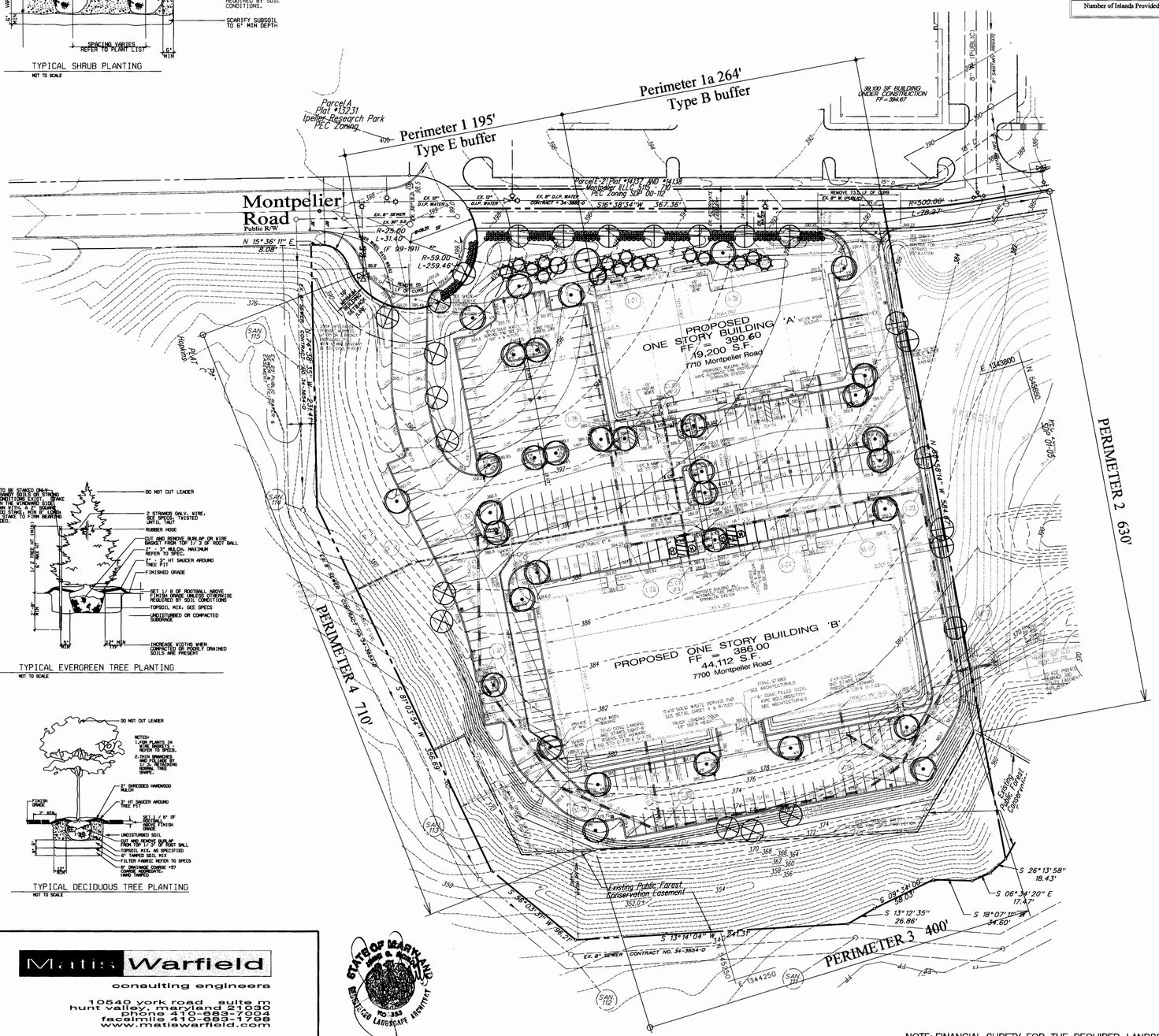

TYPICAL SHRUB PLANTING
NOT TO SCALE




TYPICAL EVERGREEN TREE PLANTING
NOT TO SCALE




TYPICAL DECIDUOUS TREE PLANTING
NOT TO SCALE




## SCHEDULE B
## PARKING LOT INTERNAL LANDSCAPING

| | |
|---|---|
| Number of Parking Spaces | 261 |
| Number of Trees Required | @ 1/20 sp. = 13 |
| Number of Trees Provided<br>Shade Trees<br>Other Trees ( 2:1 substitution ) | 32 |
| Number of Islands Required @ 1/20 sp. | 13 |
| Number of Islands Provided | 23 |

## SCHEDULE A
## PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT to ROADWAYS | ADJACENT to PERIMETER PROPERTIES | LANDSCAPE CALCULATIONS |
|---|---|---|---|
| LINEAR FEET OF ROADWAY | PERIMETER 1 - 195 LF TYPE E BUFFER<br>PERIMETER 1a - 264 LF TYPE B BUFFER | | 1 SHADE TREE @ 40' L.F = 5 SHADE TREE / 1 SHRUB @ 4 LF = 49 SHRUBS<br>1 SHADE TREE @ 50 LF = 5 TREES / 1 EVERGREEN TREE @ 40 LF = 7 EVERGREENS |
| FRONTAGE / PERIMETER | | PERIMETER 2<br>630' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>400' L.F. | NO TREES REQUIRED |
| | | PERIMETER 2<br>710' L.F. | NO TREES REQUIRED |
| CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED) | | | NO |
| CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED) | | | NO |
| NUMBER OF PLANTS REQUIRED<br>SHADE TREES<br>EVERGREEN TREES<br>SHRUBS | | | 10 SHADE TREES<br>7 EVERGREEN TREES<br>49 SHRUBS |
| NUMBER OF PLANTS PROVIDED<br>SHADE TREES<br>EVERGREEN TREES<br>OTHER TREES (2 : 1 SUBSTITUTION)<br>SHRUBS (10 : 1 SUBSTITUTION)<br>(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | | | 27 SHADE TREES<br>15 EVERGREEN TREES<br>2 FLOWERING TREES<br>212 SHRUBS |

## PLANT LIST

| KEY | QUANTITY | BOTANICAL NAME<br>COMMON NAME | SIZE | CONDITION | REMARKS |
|---|---|---|---|---|---|
| | 24 | TILIA CORDATA GREENSPIRE<br>GREENSPIRE LITTLELEAF LINDEN | 2 1/2 - 3" CAL | B & B | |
| | 35 | ACER RUBRUM 'RED SUNSET'<br>'RED SUNSET' RED MAPLE | 2 1/2 - 3" CAL | B & B | |
| | 2 | MALUS 'PRAIRIFIRE'<br>'PRAIRIFIRE' CRAB | 1 3/4 - 2" CAL | B & B | |
| | 15 | PINUS STROBUS<br>WHITE PINE | 6 - 7' HT | B & B | 10' O.C. STAGGERED |
| | 121 | ABELIA GRANDIFLORA<br>GLOSSY ABELIA | 18 - 24" HT | CONTAINER | 4' O.C. STAGGERED |

## GENERAL NOTES:

1. Contractor is to notify Miss Utility a minimum of 72 hours prior to digging. Telephone : 1- 800-257- 7777
2. The Landscape Architect is to be notified 48 hours before planting begins. The location of all plant material is to be approved in the field by the Landscape Architect. Call George Walter at SHA Landscape Division 410- 545-8602
3. No tree or shrub planting pits are to be left open or unattended.
4. Shrubs are to be grouped into mulched beds. Beds are to be edged and the grass is to be removed prior to mulching.
5. All areas that are disturbed during construction and are not scheduled to be paved or planted shall be sodded in accordance with MDSHA standard specs.

| REVISIONS | | |
|---|---|---|
| NO | DATE | DESCRIPTION |
| 2 | 10-26-01 | CHANGES THIS SHEET - FIRST FLOOR ELEVATION OF BUILDING A |

BY: MATIS WARFIELD, INC.

## Landscape Notes

### A. STANDARDS:

1. ALL PLANT MATERIAL, CONSTRUCTION METHODS AND MATERIAL PLACEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. THE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS."
2. ALL TREES SHALL BE DELIVERED TO THE SITE BALLED AND BURLAPPED. ALL SHRUBS SHALL BE BALLED AND BURLAPPED OR IN CONTAINERS. ALL GRASSES & PERENNIALS SHALL BE IN CONTAINERS.

### B. MAINTENANCE:

1. AFTER THE PLANTING HAS BEEN APPROVED BY THE LANDSCAPE ARCHITECT AND THE OWNER, THE MAINTENANCE OF WATERING AND WEEDING OF SUCH PLANTS AND PLANTED AREAS SHALL BE PROVIDED BY THE OWNER. SINCE THE PLANTS ARE TO BE GUARANTEED BY THE CONTRACTOR, THE CONTRACTOR SHALL PERIODICALLY CHECK THE MAINTENANCE CONDUCTED BY THE OWNER. IF THE CONTRACTOR IS NOT SATISFIED WITH THE MAINTENANCE OF THE PLANTS, A WRITTEN REPORT, IN TRIPLICATE, STATING APPROPRIATE CHANGES SHALL BE GIVEN IMMEDIATELY TO THE LANDSCAPE ARCHITECT; TWO COPIES WILL BE FORWARDED TO THE OWNER, BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING.
2. MAINTAIN TILLS UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER FINAL ACCEPTANCE OF PLANTING. MAINTAIN ALL PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KILL ALL PLANTS FREE OF INSECTS AND DISEASE.

### C. WATERING

1. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK, AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL NOT BE DONE DURING THE HEAT OF THE DAY. CONTRACTOR SHALL PROVIDE A SEPARATE LUMP SUM PRICE IN THE OVERALL LANDSCAPE BID FOR WATERING TO ALL NEW PLANTINGS DURING ONE GROWING SEASON.

### D. EXCAVATION:

1. DEPTH AND WIDTH OF EXCAVATION FOR PLANTING OF ALL PLANTS SHALL BE 150 WIDE THE DEPTH AND WIDTH OF ROOT BALL OR CONTAINER OF PLANT TO BE INSTALLED. EXCEPT AS NOTED ON PLANS.

### E. TOPSOIL, PLANTING MIX, FERTILIZER, MULCH AND SOIL AMENDMENTS:

1. ALL TOPSOIL SHALL BE WELL GRADED LOAM OF GOOD UNIFORM QUALITY AND SHALL BE A NATURAL FRIABLE SOIL FREE OF OBJECTS LARGER THAN ONE INCH IN ANY DIMENSION, AND FREE OF TOXIC SUBSTANCES, WEEDS AND ANY MATERIAL OR SUBSTANCES THAT MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL CONTAIN AT LEAST ORGANIC MATTER. IF SUFFICIENT TOPSOIL IS NOT AVAILABLE ON THE SITE TO MEET THE DEPTH AS SPECIFIED HEREIN, THE CONTRACTOR SHALL FURNISH ADDITIONAL TOPSOIL. PRIOR TO TOPSOIL DELIVERY, THE CONTRACTOR SHALL OBTAIN THE LANDSCAPE ARCHITECTS APPROVAL OF THE SOURCE FROM WHICH TOPSOIL IS TO BE FURNISHED.
2. FOR PLANTING MIX, MIX THOROUGHLY 2/3 APPROVED TOPSOIL (SEE "TOPSOIL") AND 1/3 APPROVED ORGANIC MATTER.
3. FERTILIZER TABLETS OR SPIKES TO BE PLACED AT EACH TREE AND SHRUB AT A RATE OF 1 PER 2" OF TRUNK CALIPER OR GALLON OF ROOTBALL. TABLETS OR SPIKES SHALL NOT BE IN CONTACT WITH THE ROOTBALL.
4. MULCH MATERIAL SHALL BE OF UNIFORM SIZE. FINE SHREDDED TANBARK HARDWOOD MULCH OR APPROVED EQUAL. MULCH SHALL BE A REDDISH-DARK BROWN COLOR AND SHALL BE LAID TO A UNIFORM MINIMUM DEPTH OF 2 INCHES. MULCH AREAS AROUND TREES AT THE RATE OF 1 CF DIAMETER PER 2" TRUNK CALIPER.
5. HYDROGEL ABSORBENT MATERIAL SHALL BE ADDED TO THE PLANTING HOLE FOR EACH TREE AND SHRUB AT THE RATE OF 4 OUNCES PER 2-1/2" CALIPER OR GALLON OF ROOTBALL. HYDROGEL MATERIAL SHALL BE VITERRA "CELSCAPE", "TERRASORB" OR APPROVED EQUAL.

### F. SUBSTITUTIONS:

1. IF A PLANT IS FOUND NOT TO BE SUITABLE OR AVAILABLE, THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE LANDSCAPE ARCHITECT BEFORE BIDDING. THE OWNER OR LANDSCAPE ARCHITECT WILL THEN SELECT A REASONABLE ALTERNATE OF BID FROM ALL LANDSCAPE CONTRACTORS OF THE AVAILABILITY OF THE ORIGINAL PLANT.

### G. PRUNING, CLEANUP, PROTECTION OF EXISTING MATERIALS AND RESTORATION

1. THE CONTRACTOR SHALL PRUNE PLANT MATERIAL WITHIN TWO (2) DAYS OF INSTALLATION IN ACCORDANCE WITH THE SPECS AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
2. DURING COURSE OF PLANTING, EXCESS AND WASTE MATERIALS SHALL BE CONTINUOUSLY AND PROMPTLY REMOVED. LAWN AREAS KEPT CLEAN, AND ALL REASONABLE PRECAUTIONS TAKEN TO AVOID DAMAGE TO ANY EXISTING LAWNS, PAVING, ETC. NOT SCHEDULED FOR REMOVAL. WHEN PLANTING IN AN AREA HAS BEEN COMPLETED, THE AREA SHALL BE CLEANED UP THOROUGHLY. DEBRIS, RUBBISH, SUBSOIL, AND WASTE MATERIALS SHALL BE CLEANED AND REMOVED FROM THE PROPERTY. EXISTING GRASS AREAS WHICH HAVE BEEN INJURED BY THE WORK SHALL BE REGRADED AND SODDED TO MATCH THE EXISTING LAWN. THE ENTIRE AREA SHALL BE NEAT AND CLEAN TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
3. CONTRACTOR SHALL AT ALL TIMES PROTECT ALL PLANTS AND LAWNS FROM DAMAGE. THE MOVEMENT OF HEAVY EQUIPMENT OR MATERIAL OVER THE LAWN AREAS SHALL BE DONE ON PLANKS OR PONTOONS.
4. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ALL PAVEMENTS, SODDED OR PLANTED AREAS, STRUCTURES OR SUBSTRUCTURES, NOT SCHEDULED FOR REMOVAL, WHICH ARE DISTURBED BY THE CONTRACTOR DURING PLANTING OPERATIONS. SLOW RESTORATION SHALL BE IN A MANNER SATISFACTORY TO THE LANDSCAPE ARCHITECT AND AT NO ADDITIONAL COST TO THE OWNER.

### H. FINAL INSPECTION AND GUARANTEE:

1. AFTER PLANTING IS COMPLETED (INCLUDING MULCHING AND CLEANUP), THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING TO REQUEST FINAL INSPECTION OF THE TOTAL PLANTING. THE LANDSCAPE ARCHITECT SHALL MAKE A FINAL INSPECTION VISIT AS SOON AS POSSIBLY. LANDSCAPE ARCHITECT SHALL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, WHEN ALL WORK IS SATISFACTORY COMPLETE. IF WORK IS NOT SATISFACTORILY COMPLETE, THE LANDSCAPE ARCHITECT WILL NOTIFY THE LANDSCAPE CONTRACTOR, IN WRITING, AS TO THE DEFICIENCIES IN THE WORK AND THE NECESSARY CORRECTIVE MEASURES. THE LANDSCAPE CONTRACTOR WILL BE GIVEN A REASONABLE AMOUNT OF TIME TO CORRECT THE DEFICIENCIES, AND ANOTHER FINAL INSPECTION WILL BE SCHEDULED BY THE LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIAL AND LAWN AREAS SHALL BE GUARANTEED TO BE IN A VIGOROUS GROWING CONDITION ONE YEAR FROM THE DATE OF FINAL INSPECTION AND ACCEPTANCE. AT THE TERMINATION OF THIS PERIOD, THE CONTRACTOR SHALL HAVE COMPLETED THE PRECEDING MAINTENANCE SCHEDULE. ANY PLANTS INFECTED WITH DISEASE OR INSECTS WILL BE REMOVED OR TREATED. ALL DEAD OR UNACCEPTABLY PLANTS WILL BE REPLACED BY THE SAME PLANTS AND SIZES DESIGNATED ON THE PLANT LIST. THESE PLANTS SHALL BE PLANTED, MULCHED AND GUY AS SPECIFIED HEREIN AND WITHOUT EXTRA COMPENSATION TO THE CONTRACTOR. AT THE COMPLETION OF ALL SUCH WORK AND WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT, THE CONTRACT WILL BE CONSIDERED COMPLETE.


Legal Owner (current):

Hopkins Road Limited Partnership
9030 Red Branch Road
Suite 200
Columbia, Maryland 21045
Phone 410-997-7222
Fax 410-997-6453

Developer and Contract Purchaser

MOR Montpelier LLC
c/o Manekin, Corp.
7061 Columbia Gateway Drive
Columbia, Maryland 21046
Ph. 1-800-347-2195
Fax 410-312-0666


| REVISIONS | | |
|---|---|---|
| No | DATE | |
| 1. | 5/18/01 | REVISE HANDICAP PARKING AREA IN FRONT OF BUILDING 'B' (G.H.) |

### DEVELOPER'S/BUILDER'S CERTIFICATE:

"I/WE CERTIFY THAT THAT THE LANDSCAPING SHOWN ON THE APPROVED FINAL PLAN SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE CERTIFY THAT HEALTHY PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE APPROVED LANDSCAPE PLAN AND THAT A 1-YEAR GUARANTEE WILL BE EXECUTED."

NAME R. COLE SCHNORF — DATE 10-2-2000

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 10/17/00
Chief, Land Development Division — Date 11/1/00
Director — Date 10/9/00

### PERMIT INFORMATION CHART

| Subdivision Name | | | Section /Area | | Lot/Parcel No. |
|---|---|---|---|---|---|
| Montpelier Research Park | | | | | E-5 |
| Plat ~~or Liber/Folio~~ 13471 | Grid # 17 | Zoning PEC | Tax Map No. 41 | Election District 5th | Census Tract 6051.02 |
| Water Code E 21 | | | Sewer Code 6440000 | | |

Mattis Warfield
consulting engineers
10540 york road suite m
hunt valley, maryland 21030
phone 410-683-7904
facsimile 410-683-1798
www.matiswarfield.com

HUMAN & ROHDE, INC.
LANDSCAPE ARCHITECTS
512 Virginia Avenue
Towson, Maryland 21286
410 825 3885

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF $ 29,530.00

# Plan

Scale 1" = 50'

# Final Landscape Plan

## Proposed Offices for The Johns Hopkins University Applied Physics Laboratory

## Parcel E-5
## Montpelier Research Park

Howard County, Maryland
Scale: As Shown

Sheet 8 of 8
October 2, 2000

SDP 01-19