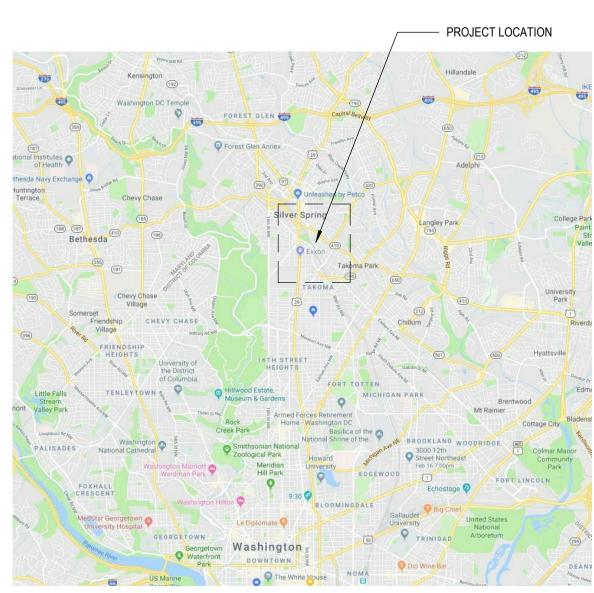
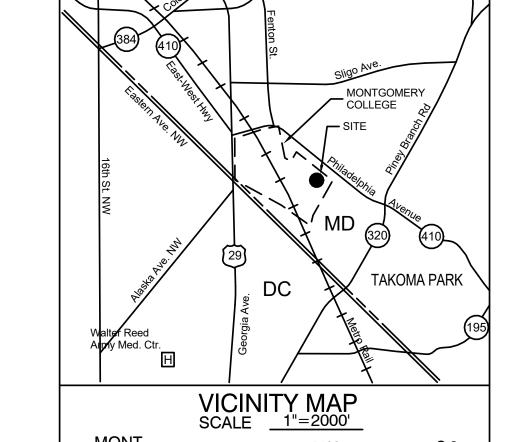


Montgomery College Catherine and Isiah Leggett Math and Science Building Takoma Park / Silver Spring Campus SCHEMATIC DESIGN DRAWINGS January 23, 2019

Montgomery College #: FP16-077 Montgomery College Building # 319 MHEC Project #CC-01-MC16-458 SMITHGROUP Project #12543.000





**LOCATION MAP** 

VICINITY MAP

SHEET NUMBER	SHEET NAME
GENERAL	
G0.1	COVER SHEET AND INDEX
G1.0	BUILDING AREA CALCULATIONS
CIVIL	
C-01	GENERAL INFORMATION SHEET
C-02	EXISTING CONDITIONS PLAN
C-03	SITE CLEARING AND DEMOLITION PLAN
C-04	EROSION AND SEDIMENT CONTROL PLAN - INITIAL PHASE
C-05	EROSION AND SEDIMENT CONTROL PLAN - FINAL PHASE
C-06	EROSION AND SEDIMENT CONTROL DETAILS
C-07	EROSION AND SEDIMENT CONTROL NOTES
C-08	EROSION AND SEDIMENT CONTROL NOTES
C-09	GRADING AND DRAINAGE PLAN
C-10	STORM DRAIN PROFILES
C-11	DETAILED GRADING PLAN
C-12	DETAILED GRADING PLAN
C-13	SITE IMPROVEMENT PLAN
C-14	DETAILED SITE IMPROVEMENT PLAN
C-15	DETAILED SITE IMPROVEMENT PLAN
C-16	SITE IMPROVEMENT DETAILS
C-17	TEMPORARY TRAFFIC CONTROL PLAN
C-18	TEMPORARY TRAFFIC CONTROL NOTES
C-19	SITE UTILITY PLAN
C-20	WSSC SITE UTILITY PLAN
C-21	WSSC SITE UTILITY PROFILES
C-22	PRE-DEVELOPMENT DRAINAGE AREA MAP
C-23	POST-DEVELOPMENT DRAINAGE AREA MAP
LN-101	NATURAL RESOURCE INVENTORY PLAN
MR-09.1	STORMWATER MANAGEMENT CONCEPT PLAN
MR-09.2	STORMWATER MANAGEMENT CONCEPT PLAN - REDEVELOPMENT ANALYSIS
MR-09.3	STORMWATER MANAGEMENT CONCEPT PLAN - REDEVELOPMENT ANALYSIS

	DRAWING INDEX
SHEET NUMBER	SHEET NAME
LANDSCAPE	
L100	ILLUSTRATIVE SITE PLAN
L101	ILLUSTRATIVE FEATURE AREA ENLARGEMENTS
L102	ILLUSTRATIVE FEATURE AREA ENLARGEMENTS
L103	MATERIALS PLAN
L200	HARDSCAPE DETAILS
L201	HARDSCAPE DETAILS
L300	OVERALL PLANTING PLAN
L400	PLANTING DETAILS
ARCHITECTURAL DEMO	DLITION
D1.0	ARCHITECTURAL DEMOLITION PLAN
ARCHITECTURAL	
A0.1	ARCHITECTURAL ABBREVIATIONS AND SYMBOLS
A2.0	GROUND FLOOR PLAN
A2.0.A	GROUND FLOOR AREA A
A2.0.B	GROUND FLOOR AREA B
A2.1	1ST FLOOR PLAN
A2.1.A	1ST FLOOR PLAN AREA A
A2.1.B	1ST FLOOR PLAN AREA B
A2.2	2ND FLOOR PLAN
A2.2.A	2ND FLOOR PLAN AREA A
A2.2B	2ND FLOOR PLAN AREA B
A2.3	PENTHOUSE PLAN
A2.3A	PENTHOUSE AREA A
A2.3B	PENTHOUSE AREA B & PENTHOUSE ROOF
A4.0.1	OVERALL BUILDING ELEVATIONS & SECTIONS
A4.0.2	OVERALL BUILDING ELEVATIONS & SECTIONS
A4.0.3	OVERALL BUILDING SECTIONS
A4.1.1	BUILDING ELEVATIONS
A4.1.2	BUILDING ELEVATIONS
A4.1.3	BUILDING ELEVATIONS
A4.1.4	BUILDING ELEVATIONS
A4.3.1	WALL SECTIONS
A5.1.1	EXTERIOR ASSEMBLIES
AU. I. I	LATENION ASSEMBLIES

SHEET NUMBER	SHEET NAME					
PLUMBING						
P0.1	PLUMBING ABBREVIATIONS SYMBOLS GENERAL NOTES					
P2.0.A	GROUND FLOOR AREA A - PLUMBING					
P2.0.B	GROUND FLOOR AREA B - PLUMBING					
MECHANICAL						
M0.1	MECHANICAL ABBREVIATIONS AND SYMBOLS					
M0.2	SITE PLAN					
M2.3	PENTHOUSE HVAC PLAN					
M2.3.A	PENTHOUSE HVAC PLAN AREA A					
M2.3B	PENTHOUSE HVAC PLAN AREA B					
M3.0	GROUND FLOOR HVAC PIPING PLAN					
M3.0A	GROUND FLOOR HVAC PIPING PLAN AREA A					
M3.0B	GROUND FLOOR HVAC PIPING PLAN AREA B					
M4.0	ENLARGED MECHANICAL PLANS					
M5.0	MECHANICAL AIR RISER DIAGRAMS					
M5.1	CHILLED WATER RISER DIAGRAM					
M5.2	HEATING HOT WATER RISER DIAGRAM					
M8.1	GROUND FLOOR HVAC ZONING PLAN					
M8.2	FIRST FLOOR HVAC ZONING PLAN					
M8.3	SECOND FLOOR HVAC ZONING PLAN					

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

NAME	DATE
TITLE	
DGS APPROVAL	
PROJECT MANAGER	DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

CHIEF OF PM&D

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

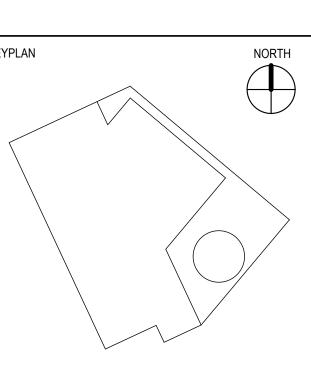
AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPÉ ARCHITECTS

3300 Clipper Mill Road, Suite 200

CHECKED BY: BJ

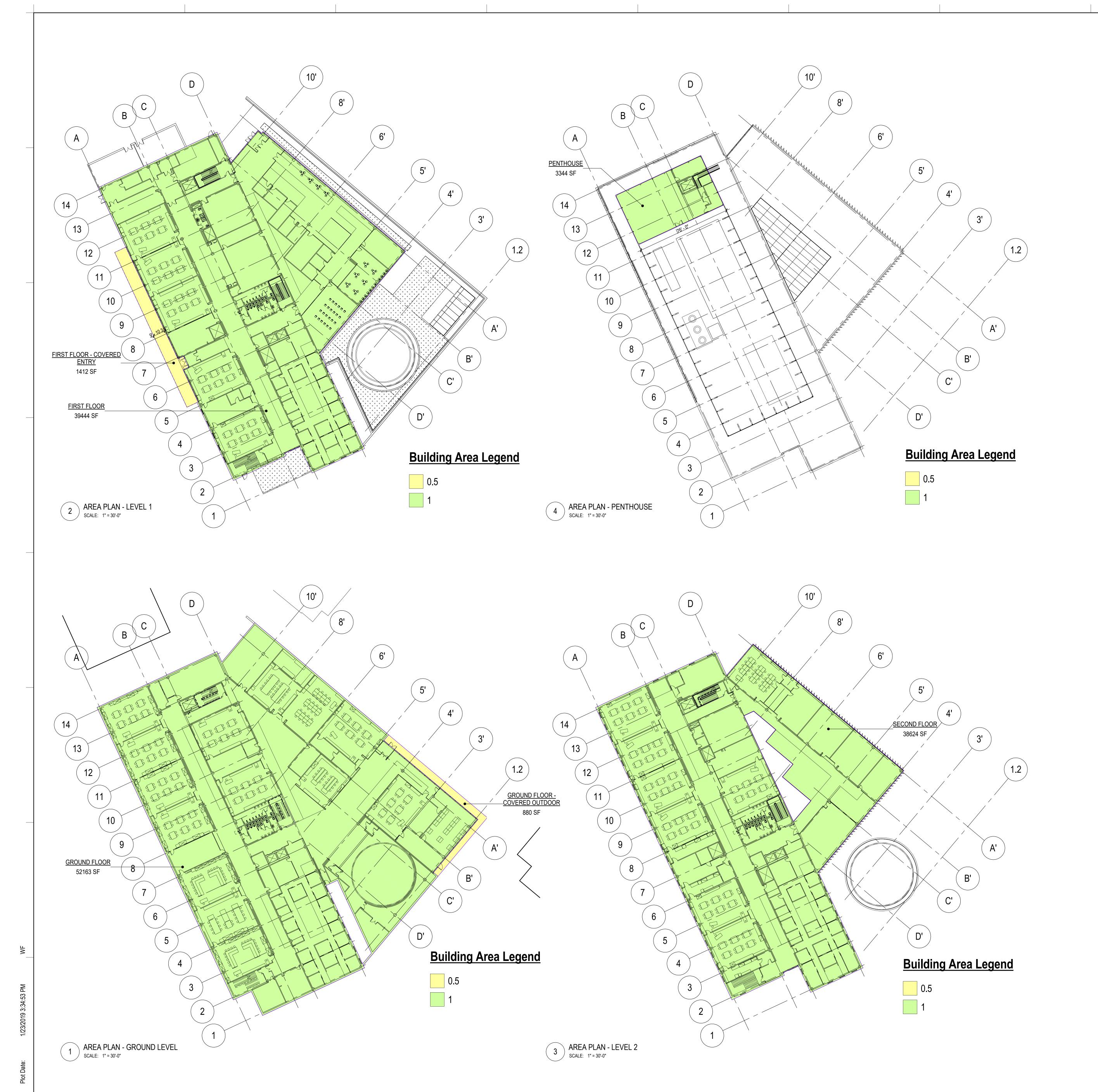




COVER SHEET AND INDEX

12543.000 PROJECT NUMBER

G0.1 SHEET NUMBER



### SUMMARY - AREA, VOLUME & EFFICIENCY

Project: Leggett Math and Science Building Facility: Montgomery College Architect/ Engineer: SmithGroup Project No.: FP16-077 Date: January 23, 2019

ITEMA	AREA (SF)						
ITEM	PROGRAM	SCHEMATIC	DD	CD			
GROSS AREA	88	134,720 SF					
NET ASSIGNABLE AREA		83,255 SF					
GROSS VOLUME		2,170,389 CF	:				
EFFICIENCY FACTOR		1.62	:				
% EFFICIENCY	8	61.8%					
SUBMISSION DATE	6	1/23/2019					

GROSS AREA SCHEDULE							
AREA NAME	LEVEL	ACTUAL AREA	AREA % CALCULATION	AREA CALCULATION			
GROUND FLOOR - COVERED OUTDOOR	GROUND FLOOR	880 SF	0.5	440 SF			
FIRST FLOOR - COVERED ENTRY	1ST FLOOR	1412 SF	0.5	706 SF			
				1146 SF			
GROUND FLOOR	GROUND FLOOR	52163 SF	1	52163 SF			
FIRST FLOOR	1ST FLOOR	39444 SF	1	39444 SF			
SECOND FLOOR	2ND FLOOR	38624 SF	1	38624 SF			
PENTHOUSE	PENTHOUSE	3344 SF	1	3344 SF			
				133574 SF			
TOTAL GROSS AREA				134720 SF			

# Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

USING AGENCY APPROVAL

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER DATE

CHIEF OF PM&D DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200
Baltimore, MD 21211
410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

DWG FILE: BIM 360://Math Science Center TPSS Campus/319\_Leggett\_A.rvt\_

DRAWN BY: WF

CHECKED BY: BJ

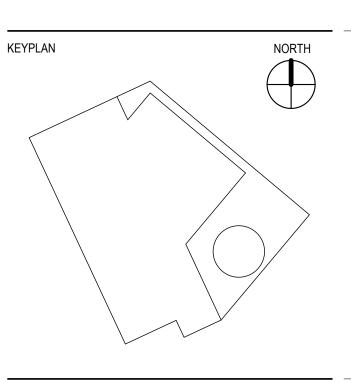
ISSUED FOR

REV DATE

SCHEMATIC DESIGN JA

SEALS AND SIGNATURES





BUILDING AREA CALCULATIONS

PROJECT NUMBER

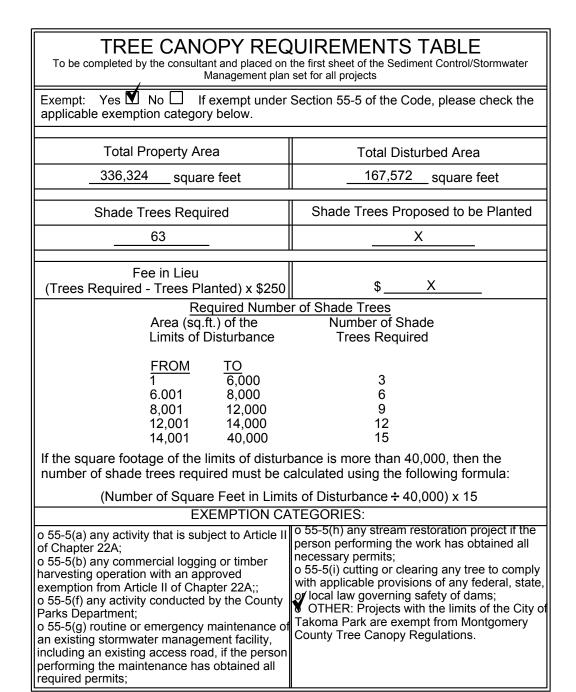
G1.0

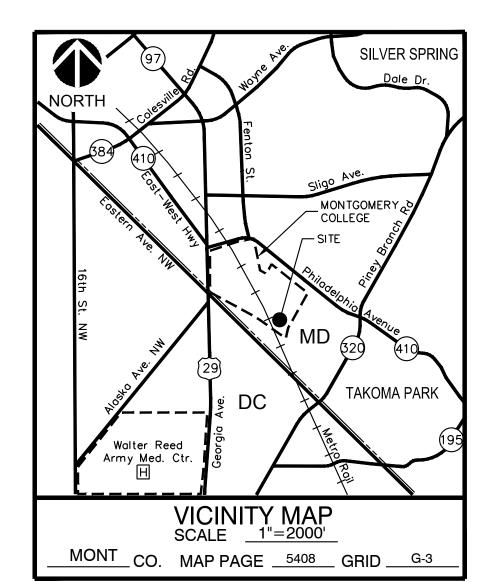
12543.000

# MONTGOMERY COMMUNITY COLLEGE TAKOMA PARK CAMPUS CATHERINE AND ISIAH LEGGETT MATH AND SCIENCE BUILDING

7600 TAKOMA AVENUE TAKOMA PARK, MD 20912

WSSC GRID 209NW01 TAX MAP JN32 PARCEL 3





PROPERTY ADDRESS MONTGOMERY COLLEGE 7600 TAKOMA AVE. TAKOMA PARK, MD 20912

PROPERTY OWNER/APPLICANT MONTGOMERY COLLEGE 9221 CORPORATE BLVD.

ROCKVILLE, MD 20850 ATTN: MARVIN D. MILLS, JR. PH: (240) 567-7357 FAX: (240) 567-7379

## CERTIFICATION OF THE QUANTITIES

"I HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO XX CUBIC YARDS OF EXCAVATION, XX CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 167,572 SQUARE FEET."

DATE DESIGN ENGINEER SIGNATURE 32561 MICHAEL WYCHULIS, P.E. PRINTED NAME MD REGISTRATION NO.

NOTE: THE ABOVE SITE INFORMATION HAS BEEN PROVIDED SOLELY FOR USE BY MC-DPS IN REVIEWING SEDIMENT CONTROL AND IS NOT TO BE RELIED UPON BY ANY CONTRACTOR IN PREPARING BIDS. THE CONTRACTOR SHALL MAKE ITS OWN DETERMINATION OF QUANTITIES, VOLUMES AND/OR AREAS USED IN ESTABLISHING ITS BIDS.

### OWNER'S/DEVELOPER'S CERTIFICATION

"I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING PROJECT."

MARVIN D. MILLS, JR., VICE PRESIDENT OF FACILITIES & SECURITY PRINTED NAME AND TITLE

## DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "2011 MARYLAND" STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL", MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM, 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN DESIGN CRITERIA DATED NOVEMBER, 2013."

DESIGN ENGINEER SIGNATURE MICHAEL WYCHULIS, P.E. 32561 PRINTED NAME MD REGISTRATION NO.

To be completed by the consultar	RELA nt and place	ATED ed on the fir	REQUIRED st sheet of the Sediment Co	PERMITS entrol/Stormwater Manag	gement plan set for <b>all</b> projects
			ITTEE/OWNER OF T OF THE APPROVED		
TYPE OF PERMIT	REQ'D	NOT REQ'D	PERMIT#	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		✓			
WATERWAYS/WETLAND(S):		✓			
a. Corps of Engineers		✓			
b. MDE		✓			
c. MDE Water Quality Certification		✓			
MDE Dam Safety		✓			
*DPS Roadside Trees Protection Plan		<b>✓</b>		Approval Date	
N.P.D.E.S. NOTICE OF INTENT	✓				DATE FILED:
FEMA LOMR (Required Post Construction)		✓			
OTHERS (Please List):					
WSSC SITE UTILITY	✓				
City of Takoma Park Stormwater Management	✓				
City of Takoma Park Work in Public Right-of-Way	✓				

	CIVIL/SITE DRAWING LIST
DWG #	DESCRIPTION
C-01	GENERAL INFORMATION SHEET
C-02	EXISTING CONDITIONS PLAN
C-03	SITE CLEARING AND DEMOLITION PLAN
C-04	EROSION AND SEDIMENT CONTROL PLAN - INITIAL PHASE
C-05	EROSION AND SEDIMENT CONTROL PLAN - FINAL PHASE
C-06	EROSION AND SEDIMENT CONTROL DETAILS
C-07	EROSION AND SEDIMENT CONTROL NOTES
C-08	EROSION AND SEDIMENT CONTROL NOTES
C-09	GRADING AND DRAINAGE PLAN
C-10	STORM DRAIN PROFILES
C-11	DETAILED GRADING PLAN
C-12	DETAILED GRADING PLAN
C-13	SITE IMPROVEMENT PLAN
C-14	DETAILED SITE IMPROVEMENT PLAN
C-15	DETAILED SITE IMPROVEMENT PLAN
C-16	SITE IMPROVEMENT DETAILS
C-17	TEMPORARY TRAFFIC CONTROL PLAN
C-18	TEMPORARY TRAFFIC CONTROL NOTES
C-19	SITE UTILITY PLAN
C-20	WSSC SITE UTILITY PLAN
C-21	WSSC SITE UTILITY PROFILES
C-22	PRE-DEVELOPMENT DRAINAGE AREA MAP
C-23	POST-DEVELOPMENT DRAINAGE AREA MAP
LN-101	NATURAL RESOURCE INVENTORY PLAN
MR-09.1	STORMWATER MANAGEMENT CONCEPT PLAN
MR-09.2	STORMWATER MANAGEMENT CONCEPT PLAN - REDEVELOPMENT ANALYSIS
MD 00 7	STORMWATER MANAGEMENT CONCEPT PLAN - SOILS ANALYSIS

TPPW SWM SHEET OF X

### MCDPS SC SHEET XX OF XX

		NTY DEPARTMEN SES APPROVED F		NOTE: MCDPS APPROVA NEGATE THE NEE MCDPS ACCESS F	D OF A	
Stormwater Management		Sediment Control Technical Requirements:		Administrative Requirements:		
		Reviewed	 Date	Reviewed	Date	
				XXXXXX		
Reviewed	Date	Approved	Date	SEDIMENT CONTROL PERI	MIT NO.	
Approved	Date					
SM FILE #				MCDPS APPROVAL OF THIS PLAN YEARS FROM THE DATE OF AF PROJECT HAS NOT ST	PROVAL IF THE	
DPS approval of a sediment contribution of a sed	ol or stromwater r imply any right to er or other respor ties.	I management plan is for demo o divert or concentrate runoff nsible person of professional I	nstrated compliance w onto any adjacent pr ability or ethical respo	th minimum environmental runnoff operty without that property owner? nsibility for the adequacy of the dr	treatment s permission. It ainage design as	

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE TITLE **DGS APPROVAL** 

DATE

PROJECT MANAGER

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 410-235-6001

AV, IT, ŠECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

DWG FILE: DRAWN BY:

CHECKED BY:

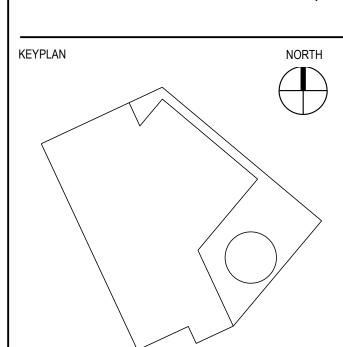
410-712-0390

REV DATE

\_\_\_\_\_

SEALS AND SIGNATURES





GENERAL

PROJECT NUMBER

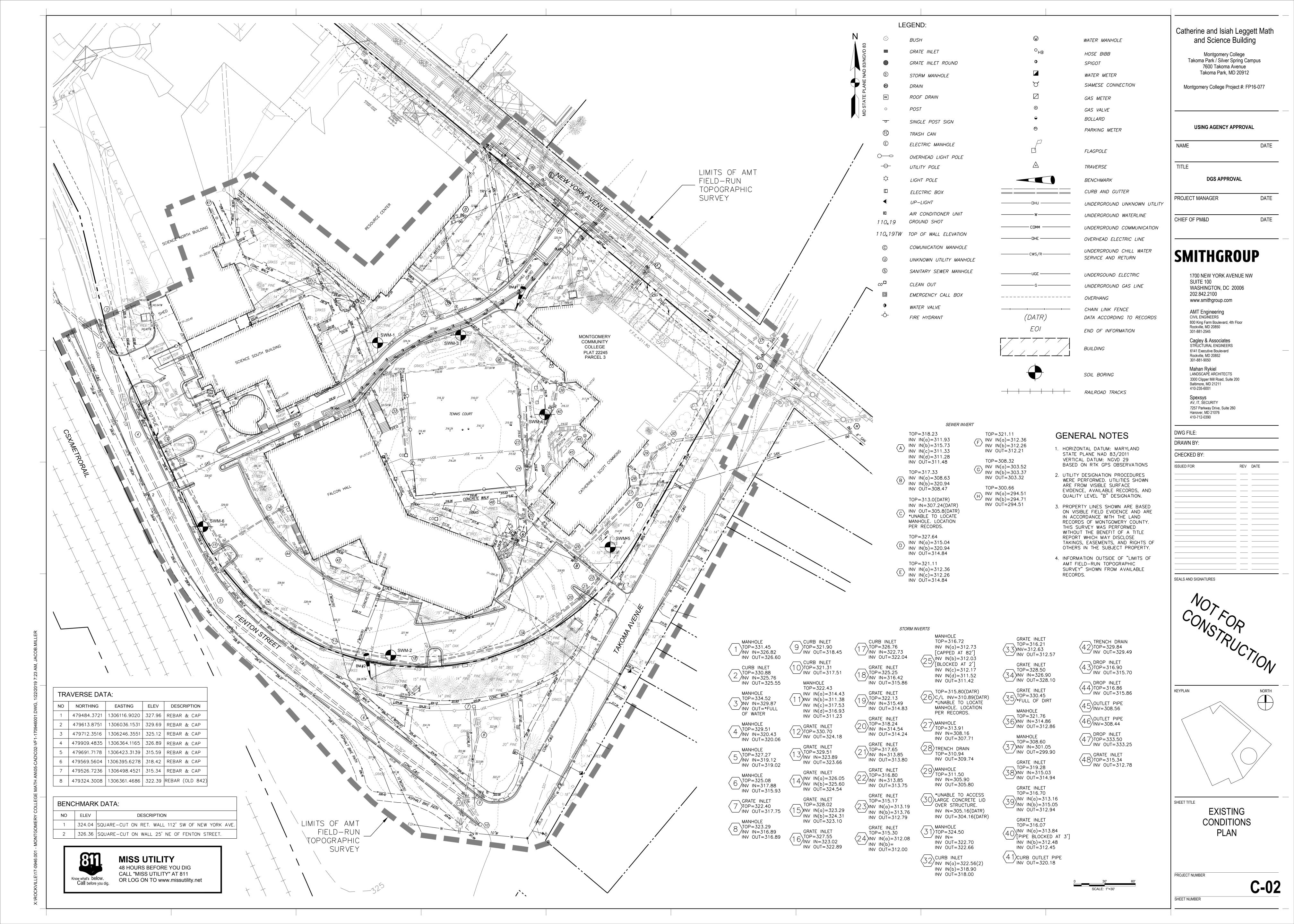
C-01 SHEET NUMBER

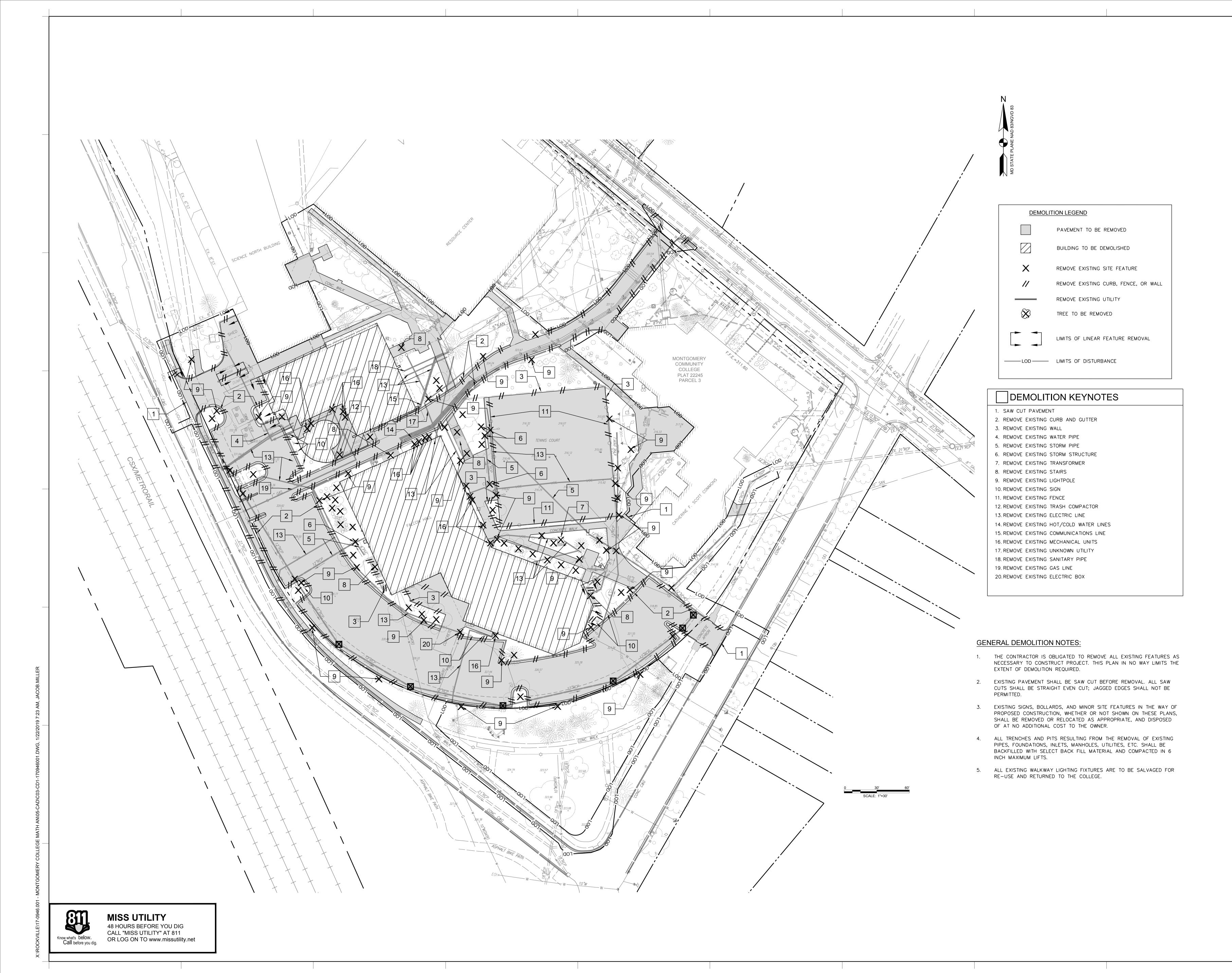


**MISS UTILITY** 48 HOURS BEFORE YOU DIG CALL "MISS UTILITY" AT 811 OR LOG ON TO www.missutility.net

RESERVED FOR TAKOMA PARK

SWM CONCEPT





Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

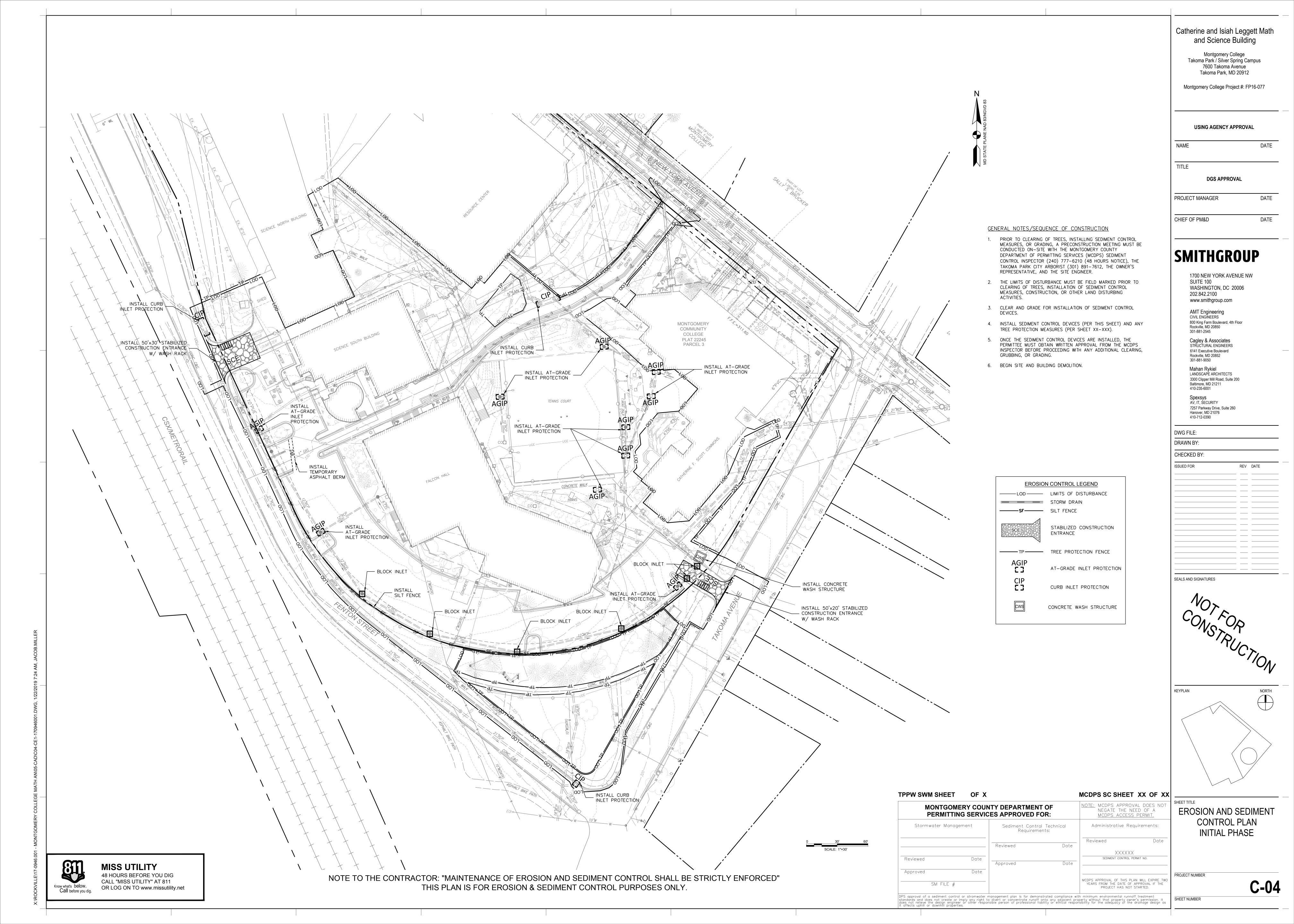
SEALS AND SIGNATURES

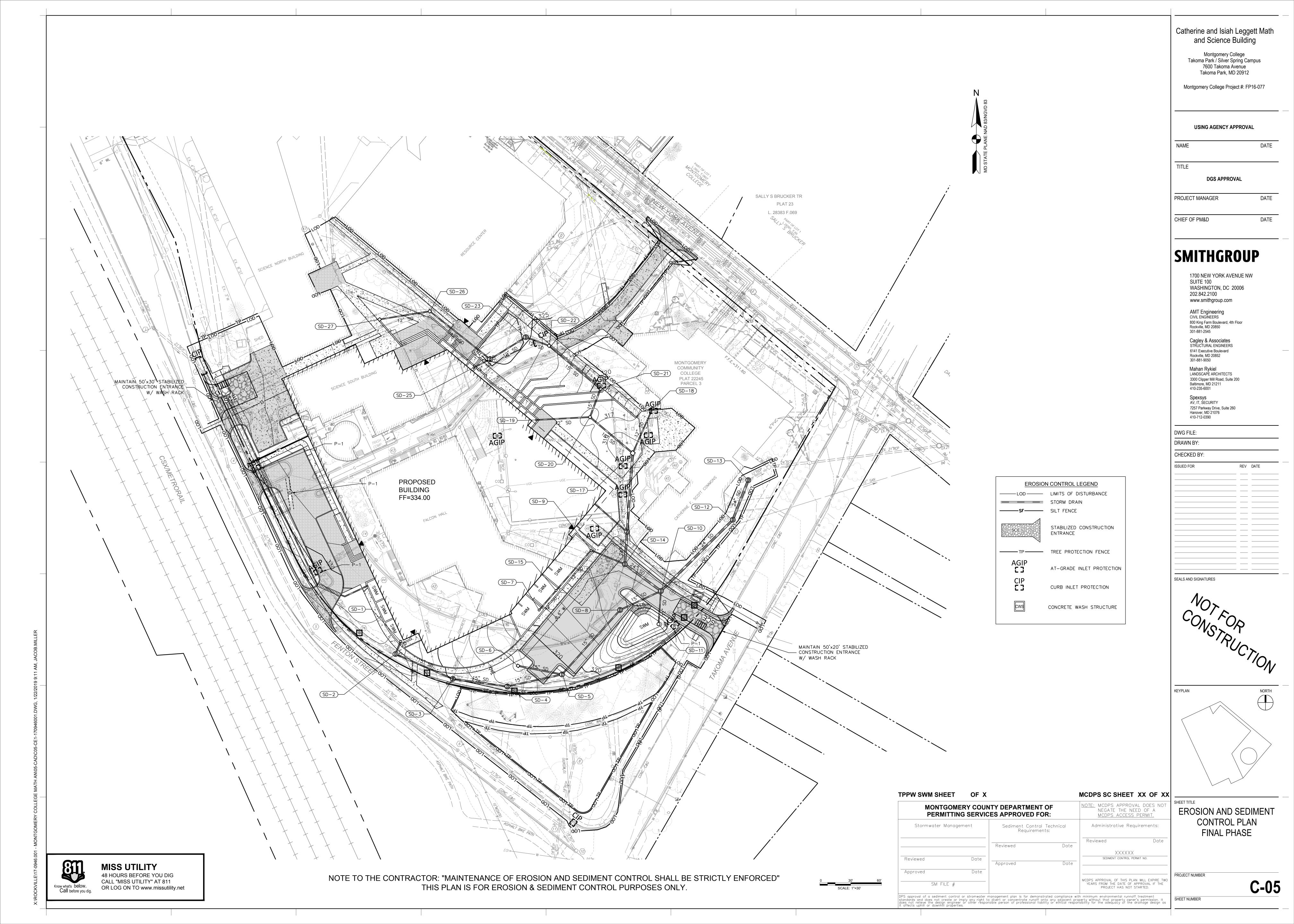


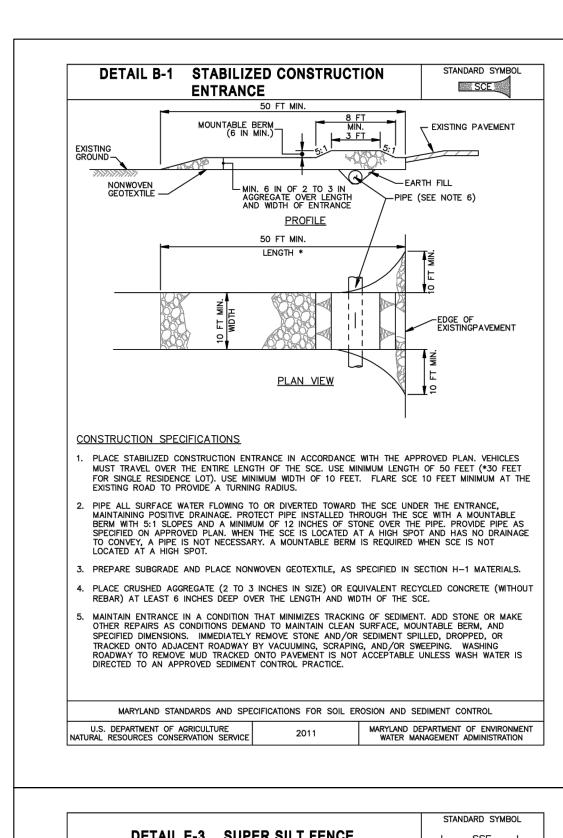
SITE CLEARING AND **DEMOLITION PLAN** 

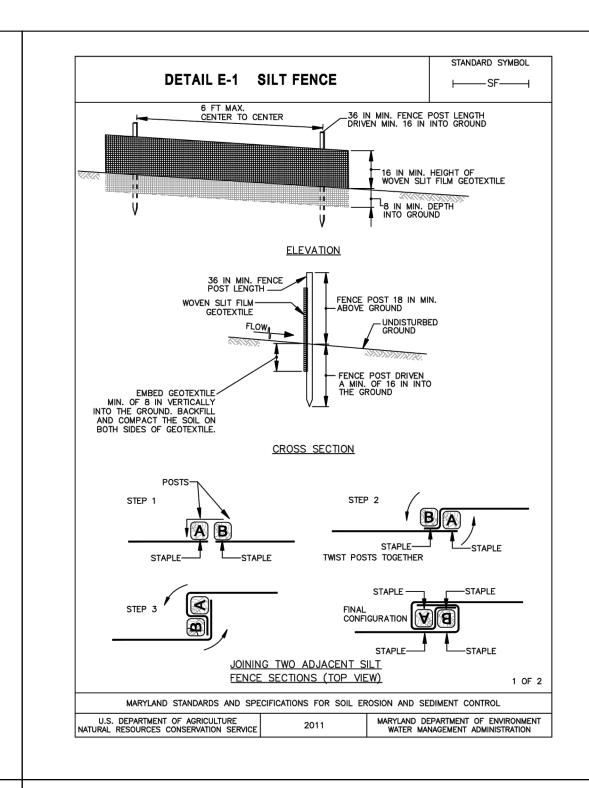
PROJECT NUMBER

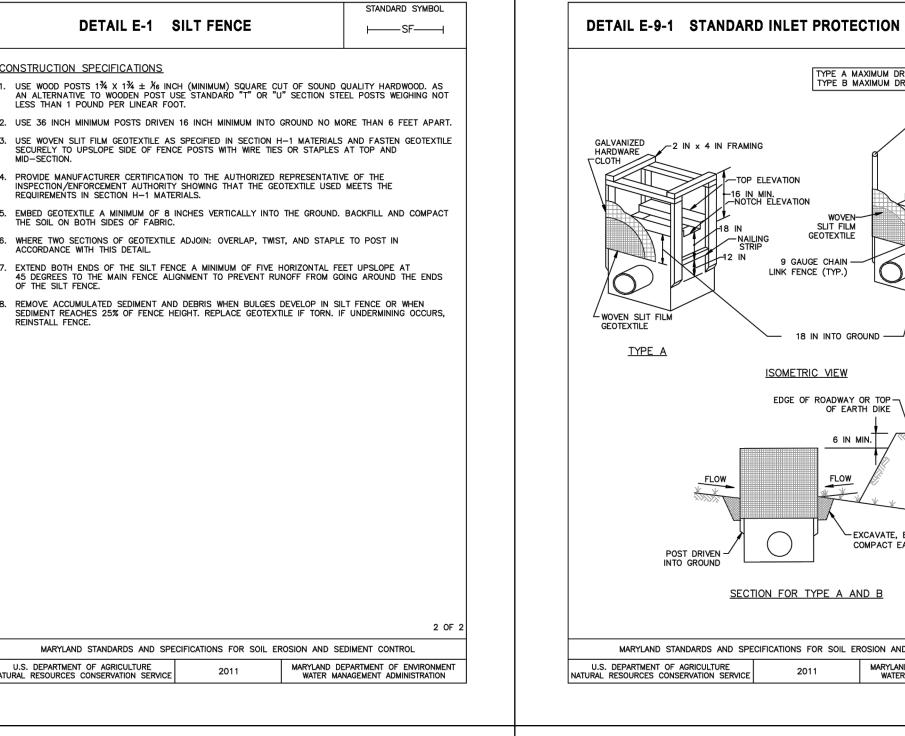
C-03

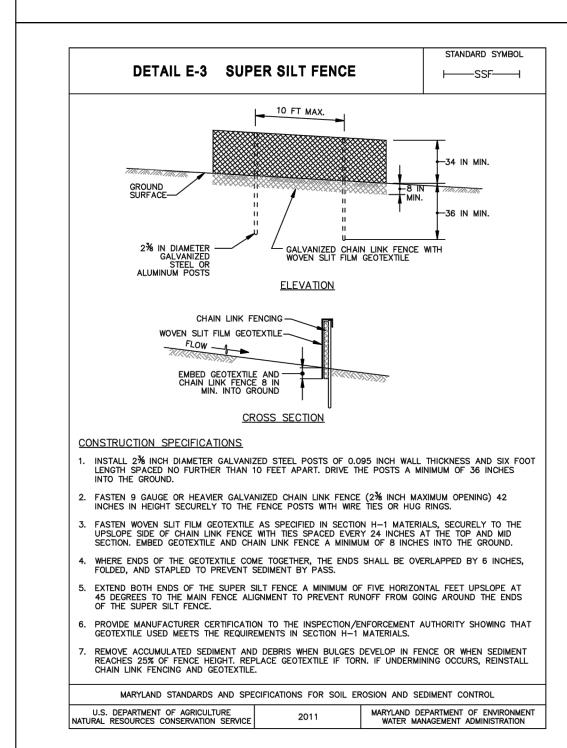


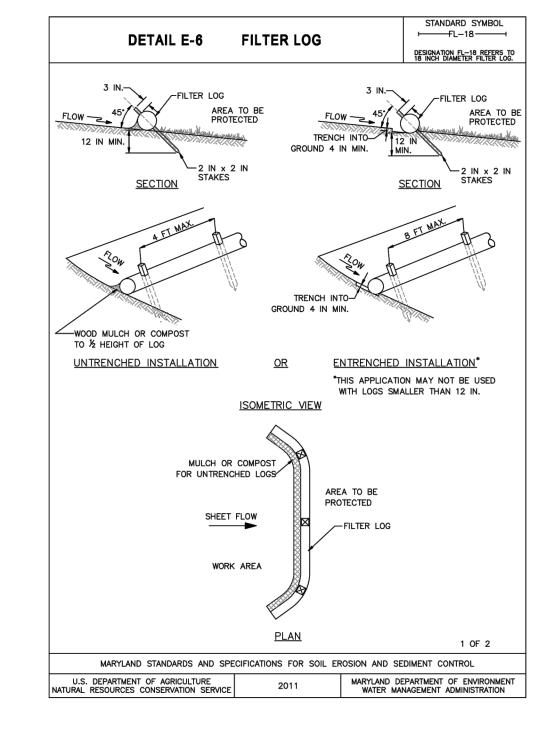


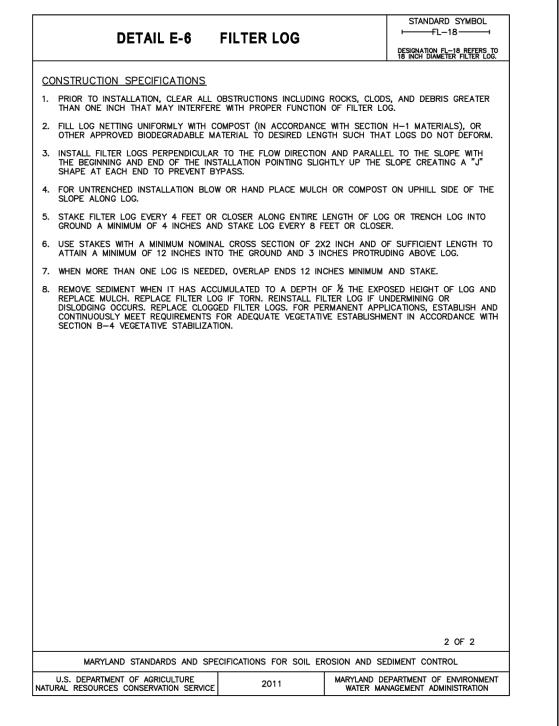


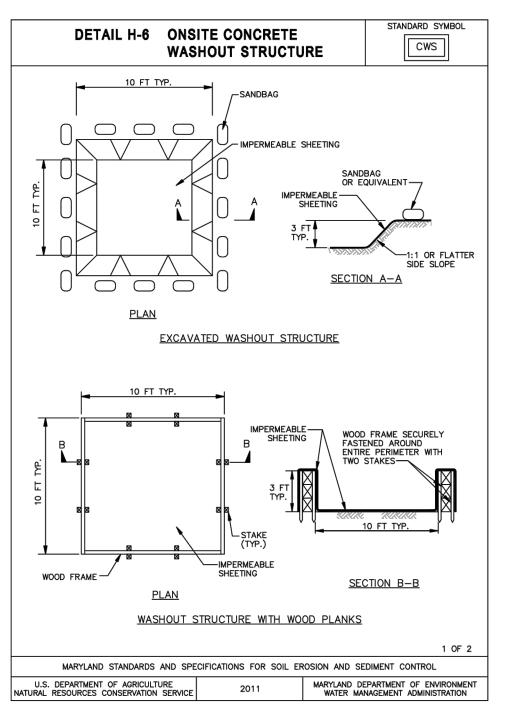










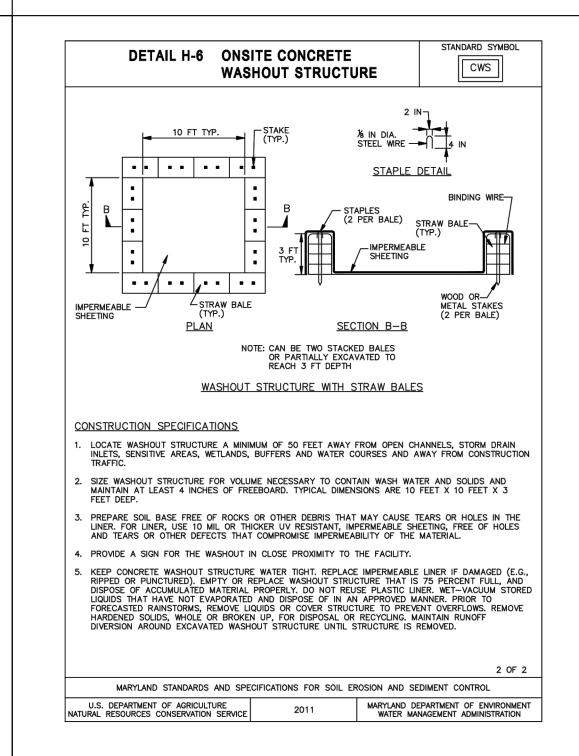


TYPE A MAXIMUM DRAINAGE AREA = 1/4 ACRE TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

TYPE B

6 IN MIN.

TOP ELEVATION



Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

**DGS APPROVAL** 

PROJECT MANAGER

DATE CHIEF OF PM&D

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006

www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

202.842.2100

301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard

Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS

3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

\_\_\_\_\_

SEALS AND SIGNATURES

KEYPLAN

MCDPS SC SHEET XX OF XX TPPW SWM SHEET OF X MONTGOMERY COUNTY DEPARTMENT OF NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A PERMITTING SERVICES APPROVED FOR: MCDPS ACCESS PERMIT. Stormwater Management Administrative Requirements: Sediment Control Technical Requirements:

DPS approval of a sediment control or stromwater management plan is for demonstrated compliance with minimum environmental runnoff treatment standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

Date Reviewed Reviewed Date XXXXXX SEDIMENT CONTROL PERMIT NO. Date Reviewed Date Approved MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TWO YEARS FROM THE DATE OF APPROVAL IF THE PROJECT HAS NOT STARTED. SM FILE #

CONTROL DETAILS

**EROSION AND SEDIMENT** 

PROJECT NUMBER

**C-06** SHEET NUMBER

- 1. THE PERMITTEE SHALL NOTIFY THE DEPARTMENT OF PERMITTING SERVICES (DPS) FORTY—EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING BETWEEN THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT.
- 2. THE PERMITTEE MUST OBTAIN INSPECTION AND APPROVAL BY DPS AT THE FOLLOWING POINTS:
- 2.A. AT THE REQUIRED PRE-CONSTRUCTION MEETING.

AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

- 2.B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
- 2.C. DURING THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS (SEE INSPECTION CHECKLIST ON PLAN). NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
- 2.D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
- 2.E. PRIOR TO FINAL ACCEPTANCE.
- 3. THE PERMITTEE SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY THE DEPARTMENT PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES, SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM
- 4. THE PERMITTEE SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE
- 5. THE PERMITTEE SHALL INSPECT PERIODICALLY AND MAINTAIN CONTINUOUSLY IN EFFECTIVE OPERATING CONDITION, ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIME AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE DEPARTMENT. THE PERMITTEE IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE PERMITTEE OR ANY OTHER PERSON.
- 6. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN: A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STÉEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED
- 7. THE PERMITTEE SHALL APPLY SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS, AND AREAS WITHIN FIFTY (50) FEET OF A BUILDIN UNDER CONSTRUCTION MAY BE EXEMPT FROM THIS REQUIREMENT, PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.
- 8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE PERMITTEE SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREAS WITH REQUIRED SOIL AMENDMENTS AND TOPSOIL, USING SOD OR AN APPROVED PERMANENT SEED MIXTURE AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHEN THE SLOPE DOES NOT EXCEED 10% AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, AN APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.
- 9. THE SITE PERMIT, WORK, MATERIALS, APPROVED SC/SM PLANS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF MONTGOMERY COUNTY.
- 10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE SLOPE AND DRAINAGE AREA TO IT ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
- 11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN 3 CALENDAR DAYS OF ESTABLISHMENT WITH SOD OR SEED WITH AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION
- 12. SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITH PERMISSION OF THE DEPARTMENT, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN
- 13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE
- 14. THE PERMITTEE SHALL INSTALL A SPLASHBLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.
- 15. FOR FINISHED GRADING, THE PERMITTEE SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN TWENTY—FOUR (24) HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS, WHICH MAY DRAIN AS LONG AS FORTY—EIGHT (48) HOURS AFTER THE END OF A
- 16. SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING WHICH IS EXISTING OR UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20 FEET OF A SEDIMENT TRAP OR BASIN.
- 17. ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING ESTABLISHMENT.
- 18. THE SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, AS DEEMED
- 19. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.
- 20. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 21. SEDIMENT TRAP(S)/BASIN(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO THE POINT OF ONE-HALF (1/2) THE WET STORAGE DEPTH OF THE TRAP/BASIN (1/4 THE WET STORAGE DEPTH FOR ST-III) OR WHEN REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.
- 22. SEDIMENT REMOVED FROM TRAPS/BASINS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A
- 23. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THE TWO INCHES IN WIDTH AND FOUR INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.
- 24. NO EXCAVATION IN THE AREAS OF EXISTING UTILITIES IS PERMITTED UNLESS THEIR LOCATION HAS BEEN DETERMINED. CALL "MISS UTILITY" AT 1-800-257-7777, 48 HOURS PRIOR TO THE START OF WORK.
- 25. OFF-SITE SPOIL OR BORROW AREAS MUST HAVE PRIOR APPROVAL BY DPS.
- 26. SEDIMENT TRAP/BASIN DEWATERING FOR CLEANOUT OR REPAIR MAY ONLY BE DONE WITH THE DPS INSPECTOR'S PERMISSION. THE INSPECTOR MUST APPROVE THE DEWATERING METHOD FOR EACH APPLICATION. THE FOLLOWING METHODS MAY BE
- 26.A. PUMP DISCHARGE MAY BE DIRECTED TO ANOTHER ON-SITE SEDIMENT TRAP OR BASIN, PROVIDED IT IS OF SUFFICIENT VOLUME AND THE PUMP INTAKE IS FLOATED TO PREVENT AGITATION OR SUCTION OF DEPOSITED SEDIMENTS; OR
- 26.B. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN UNDISTURBED AREA HROUGH A NON-EROSIVE OUTLET; OR
- 26.C. THE PUMP INTAKE MAY BE FLOATED AND DISCHARGE INTO A DIRT BAG (12 OZ. NON-WOVEN FABRIC), OR APPROVED EQUIVALENT, LOCATED IN AN UNDISTURBED BUFFER AREA.

- REMEMBER: DEWATERING OPERATION AND METHOD MUST HAVE PRIOR APPROVAL BY THE DPS INSPECTOR.
- 27. THE PERMITTEE MUST NOTIFY THE DEPARTMENT OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE
- TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH MDE "STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS".

### SECTION B-4: STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

NOTE: SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING AND VEGETATIVE ESTABLISHMENT.

#### ADEQUATE VEGETATIVE ESTABLISHMENT

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS AND RESEEDINGS WITHIN THE PLANTING SEASON.

- 1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95% GROUNDCOVER.
- 2. IF AN AREA HAS LESS THAN 40% GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
- 3. IF AN AREA HAS BETWEEN 40%-94% GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
- 4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

### SECTION B-4-1: STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

### A. INCREMENTAL STABILIZATION - CUT SLOPES

- 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
- 2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO SECTION B-4-1, FIGURE B.1):
- a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
- b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
- c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
- d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

#### B. INCREMENTAL STABILIZATION - FILL SLOPES

- 1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES. 2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE
- GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
- 3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
- 4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO SECTION B-4-1, FIGURE B.1):
- a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
- b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S). AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
- c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
- d. PLACE PHASE 2 FILL, PREPARE SEEDBED AND STABILIZE.
- e. PERFORM FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

### STANDARD STABILIZATION NOTE

- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:
- a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
- b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

SECTION B-4-2: STDS & SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, & SOIL AMENDMENTS

#### A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

- a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3"-5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS, CHISEL PLOWS, OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH, BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER SHOULD BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- 2. PERMANENT STABILIZATION
- a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT AREA:
- SOIL pH BETWEEN 6.0 AND 7.0.
- SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
- SOIL CONTAINS LESS THAN 40% CLAY, BUT ENOUGH FINE GRAINED MATERIAL (>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT
- SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3"-5".
- APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL
- MIX SOIL AMENDMENTS INTO THE TOP 3"-5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE; REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY HE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVING THE TOP 1"-3" OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE UNNECESSARY ON NEWLY DISTURBED AREAS.

#### B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS 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.
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED 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-NRCS.
- TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
  - 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
- 4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
- 5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
- a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½" IN DIAMETER.
- b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- TOPSOIL SUBSTITUTE 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.

### 6. TOPSOIL APPLICATION

- a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED BY APPLYING TOPSOIL.
- b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5"-8" LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4". SPREADING IS TO 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 MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL MUST NOT BE PLACED IF 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. C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.

- SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING
- 2. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING, AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL BE DELIVERED TO THE SITE, FULLY LABELED ACCORDING TO APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTY OF THE
- 3. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE, AND 98% TO 100% WILL PASS THROUGH A #20 MESH
- OR OTHER SUITABLE MEANS. 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE

SM FILE #

RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3"-5" OF SOIL BY DISKING

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

#### **USING AGENCY APPROVAL**

DATE DGS APPROVAL PROJECT MANAGER CHIEF OF PM&D

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 410-235-6001

AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390 DWG FILE:

ISSUED FOR	REV	DAT

SEALS AND SIGNATURES



\_\_\_\_\_

KEYPLAN

**EROSION AND SEDIMENT** 

**CONTROL NOTES** 

**C-07** 

TPPW SWM SHEET OF X MCDPS SC SHEET XX OF XX

NOTE: MCDPS APPROVAL DOES NO MONTGOMERY COUNTY DEPARTMENT OF NEGATE THE NEED OF A PERMITTING SERVICES APPROVED FOR: MCDPS ACCESS PERMIT. Administrative Requirements: Stormwater Management Sediment Control Technical Requirements: Date Reviewed Reviewed Date XXXXXX SEDIMENT CONTROL PERMIT NO. Date Reviewed Date Approved

PROJECT NUMBER MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TW YEARS FROM THE DATE OF APPROVAL IF THE

SHEET NUMBER

standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties.

#### A. SEEDING

#### 1. SPECIFICATIONS

- a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
- b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
- c. INOCULANTS THE INOCULANTS FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING, NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANTS AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 - 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE INOCULANTS LESS EFFECTIVE
- d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

#### 2. APPLICATION

- a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
- INCORPORATE SEED INTO SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
- APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
- b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
- CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4" OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
- APPLY SEED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER)
- IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN - MAXIMUM OF 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS): 200 POUNDS/ACRE; K20 (POTASSIUM): 200 POUNDS/ACRE.
- LIME USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
- MIX SEED AND FERTILIZER ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY WITHOUT INTERRUPTION. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

#### B. MULCHING

### MULCH MATERIALS (IN ORDER OF PREFERENCE)

- a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
- b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM
- WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
- WCFM. INCLUDING DYE. SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS
- WCFM SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER, AND OTHER ADDITIVES TO FORM A HOMOGENOUS SLURRY. THE MULCH MATERIAL SHALL FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDINGS.
- WCFM SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 mm., DIAMETER APPROXIMATELY 1 mm., pH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM, AND WATER HOLDING CAPACITY OF

### APPLICATION

- a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
- b. WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF 1"-2". APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5
- c. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 LBS OF WOOD CELLULOSE FIBER PER 100

### ANCHORING

- a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION
- A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2". THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
- WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 LBS./ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
- SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK A R OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
- LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

### SECTION B-4-4: STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE.
- 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
- WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.b AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

#### TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

DI ANT CDECIEC	SEE	SEEDING RATE		RECOMMENDED SEEDING DATES					
PLANT SPECIES	LB/AC	LB/1000 SF	DEPTH (INCHES)	HARDINESS ZONE <u>7A</u>					
COOL-SEASON GRASSES									
ANNUAL RYEGRASS (LOLIUM PERENNE SSP. MULTIFLORUM)	40	1.0	0.5	FEB 15 TO APRIL 30, AUG 15 TO NOV 30					
BARLEY (HORDEUM VULGARE)	96	2.2	1.0	FEB 15 TO APRIL 30, AUG 15 TO NOV 30					
OATS (AVENA SATIVA)	72	1.7	1.0	FEB 15 TO APRIL 30, AUG 15 TO NOV 30					
WHEAT (TRITICUM AESTIVUM)	120	2.8	1.0	FEB 15 TO APRIL 30, AUG 15 TO NOV 30					
CEREAL RYE (SECALE CEREALE)	112	2.8	1.0	FEB 15 TO APRIL 30, AUG 15 TO DEC 15					
WARM-SEASON GRASSES	•	•							
FOXTAIL MILLET (SETARIA ITALICA)	30	0.7	0.5	MAY 1 TO AUG 14					
PEARL MILLET (PENNISETUM GLAUCUM)	20	0.5	0.5	MAY 1 TO AUG 14					

FERTILIZER RATE (10-20-20): 436 LB/AC (10 LB/1000 SF) LIME RATE: 2 TONS/AC (90 LB/1000 SF)

- SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES.
- SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS, WHEN PLANTED ALONE. WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS. PEARL MILLET, FOXTAIL MILLET). DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE
- OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
- 2. FOR SANDY SOILS. PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE
- THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

### SECTION B-4-5: STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

### A. SEED MIXTURES

- GENERAL USE
  - a. SELECT ONE OR MORE MIXTURES LISTED IN TABLE B.2 BELOW
  - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
  - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
  - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3½ POUNDS PER 1,000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT

## TABLE B.2: PERMANENT SEEDING FOR SITE STABILIZATION

HARDINESS ZONE: <u>7A</u>						FERTILIZER RATE (10-20-20)		
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	RATE
	HARD FESCUE (FESTUCA TRACHYPHYLLA)	20	555 45 50 455 50	1/4"-1/2"	B/AC 1000 SF)	B/AC 1000 SF)	/AC 000 SF)	TONS/AC LB/1000 SF)
5	PERENNIAL RYEGRASS (LOLIUM PERENNE)	10	FEB 15 TO APR 30 AUG 15 TO OCT 31 NOV 1 TO NOV 30*	1/4"-1/2"				
	FLATPEA (LATHYRUS SYLVESTRIS)	15		1/4"-1/2"				
					$\overline{}$	$\overline{}$	7 PL	Š č
(l	TALL FESCUE (LOLIUM ARUNDINACEUM)	60		1/4"-1/2"	45 (1.0 LB	90 3.0 LB	90 2.0 LB	2 T(
	KENTUCKY BLUEGRASS (POA PRATENSIS)	40	FEB 15 TO APR 30 AUG 15 TO OCT 31 NOV 1 TO NOV 30*	1/4"-1/2"		(2)	(2	
	PERENNIAL RYEGRASS (LOLIUM PERENNE)	20		1/4"-1/2"	1			

\*FREQUENT FREEZING AND THAWING OF WET SOILS MAY RESULT IN FROST-HEAVING OF MATERIALS PLANTED IN LATE FALL, IF PLANTS HAVE NO SUFFICIENTLY ROOTED IN PLACE.

### <u>SECTION H-5: STANDARDS AND SPECIFICATIONS FOR DUST CONTROL</u>

- MULCHES: SEE SECTION B-4-2 SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS, SECTION B-4-3 SEEDING AND MULCHING. AND ECTION B-4-4- TEMPORARY STABILIZATION. MULCH MUST BE ANCHORED TO PREVENT BLOWING.
- 2. <u>VEGETATIVE COVER:</u> SEE SECTION B-4-1 TEMPORARY STABILIZATION.
- 3. TILLAGE: TILL TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT THAT MAY PRODUCE THE DESIRED EFFECT.
- 4. <u>IRRIGATION:</u> SPRINKLE SITE WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. THE SITE MUST NOT BE IRRIGATED TO THE POINT THAT RUNOFF OCCURS.
- 5. BARRIERS:; SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED CONTROL AIR CURRENTS AND SOIL BLOWING.
- 6. CHEMICAL TREATMENT: USE OF CHEMICAL TREATMENT QUIRES APPROVAL BY THE APPROPRIATE PLAN REVIEW AUTHORITY.

#### 2. TURFGRASS MIXTURES

- a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
- b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR
- KENTUCKY BLUEGRASS FULL SUN MIXTURE FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND THE EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS/1000 SQUARE FEET. A MINIMUM OF THREE BLUEGRASS CULTIVARS SHOULD BE CHOSEN, RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.
- KENTUCKY BLUEGRASS/PERENNIAL RYE FULL SUN MIXTURE FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE/1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM 10%-35% OF THE MIXTURE BY WEIGHT.
- TALL FESCUE/KENTUCXY BLUEGRASS FULL SUN MIXTURE FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95%-100%; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0-5%. SEEDING RATE: 5 TO 8 POUNDS/1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
- KENTUCKY BLUEGRASS/FINE FESCUE SHADE MIXTURE FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30-40% AND CERTIFIED FINE FESCUE AND 60-75%. SEEDING RATE: 1-1/2 TO 3 POUNDS/1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY

TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND." NOTE: CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVARS PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

- c. IDEAL TIMES OF SEEDING
- WESTERN MD: MARCH 15-JUNE 1; AUGUST 1-OCTOBER 1 (HARDINESS ZONES: 5b, 6a)
- CENTRAL MD: MARCH 1-MAY 15; AUGUST 15-OCTOBER 15 (HARDINESS ZONE: 6b)
- SOUTHERN MD, EASTERN SHORE: MARCH 1-MAY 15, AUGUST 15-OCTOBER 15 (HARDINESS ZONES: 7a, 7b) d. TILL AREAS AS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2"-4", LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½" IN DIAMETER. THE
- e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (2"-1" EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASON, OR ON

RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER)

#### 1. GENERAL SPECIFICATIONS

ADVERSE SITES.

- a. CLASS OF TURFGRASS MUST BE MARYLAND STATE CERTIFIED. SOD LABELS SHALL BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4", PLUS OR MINUS 1/4", AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- c. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- d. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- e. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION. 2. SOD INSTALLATION
- a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE
  - SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD. b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
- c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
- d. WATER SOD IMMEDIATELY FOLLOWING ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING, AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

### 3. SOD MAINTENANCE

- a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4". WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
- b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
- c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3" UNLESS OTHERWISE SPECIFIED.

CHIEF OF PM&D

DATE **DGS APPROVAL** PROJECT MANAGER DATE

DATE

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

410-712-0390		
DWG FILE:		
DRAWN BY:		
CHECKED BY:		
ISSUED FOR	REV	DATE

SEALS AND SIGNATURES



\_\_\_\_

KEYPLAN

**EROSION AND SEDIMENT** 

**CONTROL NOTES** 

**C-08** 

TPPW SWM SHEET OF X MCDPS SC SHEET XX OF XX

NOTE: MCDPS APPROVAL DOES NO **MONTGOMERY COUNTY DEPARTMENT OF** NEGATE THE NEED OF A PERMITTING SERVICES APPROVED FOR: MCDPS ACCESS PERMIT. Administrative Requirements: Stormwater Management Sediment Control Technical Requirements: Date Reviewed Reviewed Date XXXXXX SEDIMENT CONTROL PERMIT NO. Date Reviewed Date Approved MCDPS APPROVAL OF THIS PLAN WILL EXPIRE TW SM FILE # YEARS FROM THE DATE OF APPROVAL IF THE

standards and does not create or imply any right to divert or concentrate runoff onto any adjacent property without that property owner's permission. It does not relieve the design engineer or other responsible person of professional liability or ethical responsibility for the adequacy of the drainage design as it affects uphill or downhill properties. DPS approval of a sediment control or stromwater management plan is for demonstrated compliance with minimum environmental runnoff treatment

SHEET NUMBER

PROJECT NUMBER

**MISS UTILITY** 48 HOURS BEFORE YOU DIG CALL "MISS UTILITY" AT 811 OR LOG ON TO www.missutility.net Call before you dig.

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050

410-235-6001

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY: ISSUED FOR

REV DATE

SEALS AND SIGNATURES

**GRADING AND** DRAINAGE PLAN

PROJECT NUMBER

**C-09** 

MISS UTILITY

48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

PROJECT NUMBER C-10

STORM DRAIN

**PROFILES** 

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DGS APPROVAL

WASHINGTON, DC 20006

202.842.2100

301-881-2545

www.smithgroup.com

Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS

Baltimore, MD 21211

3300 Clipper Mill Road, Suite 200

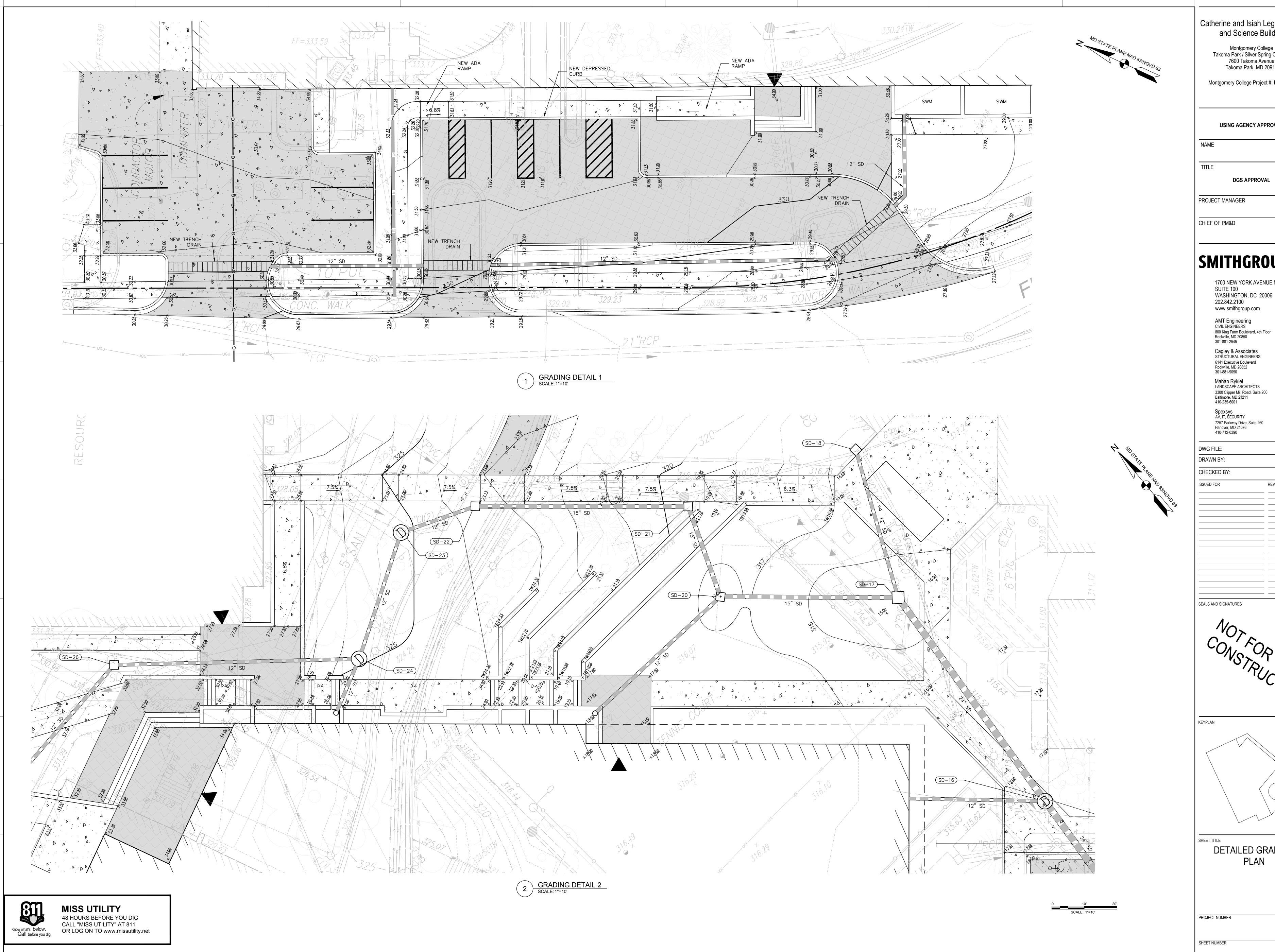
Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

REV DATE

DATE

DATE

DATE



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

**DGS APPROVAL** 

PROJECT MANAGER

DATE CHIEF OF PM&D

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

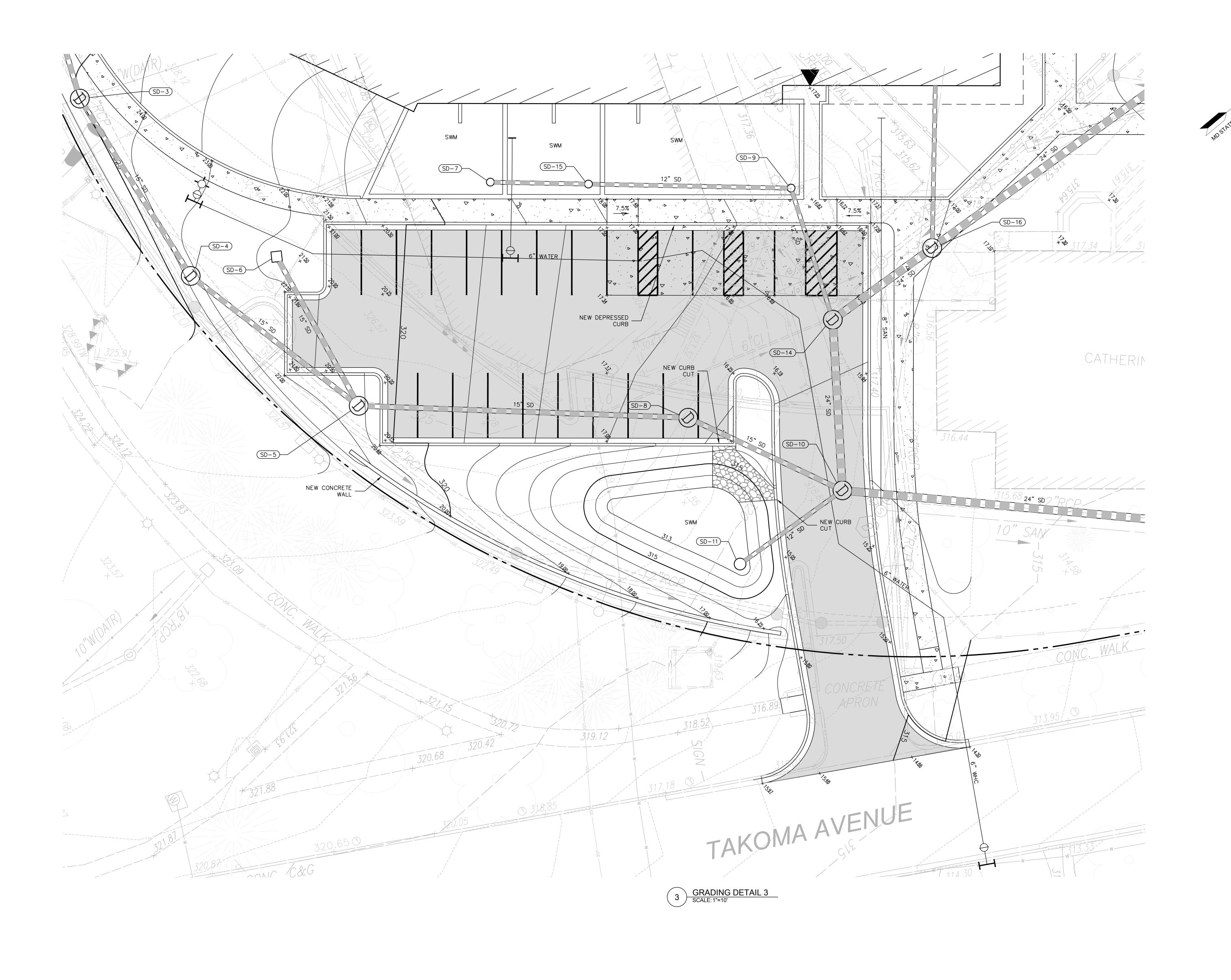
DWG FILE:

CHECKED BY:

DETAILED GRADING PLAN

PROJECT NUMBER

C-11



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

ME DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

THOUSEN IN HIT ISSUE

CHIEF OF PM&D DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering

AMT Engineering
CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850
301-881-2545

Cagley & Associates
STRUCTURAL ENGINEERS

STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN

DETAILED GRADING
PLAN

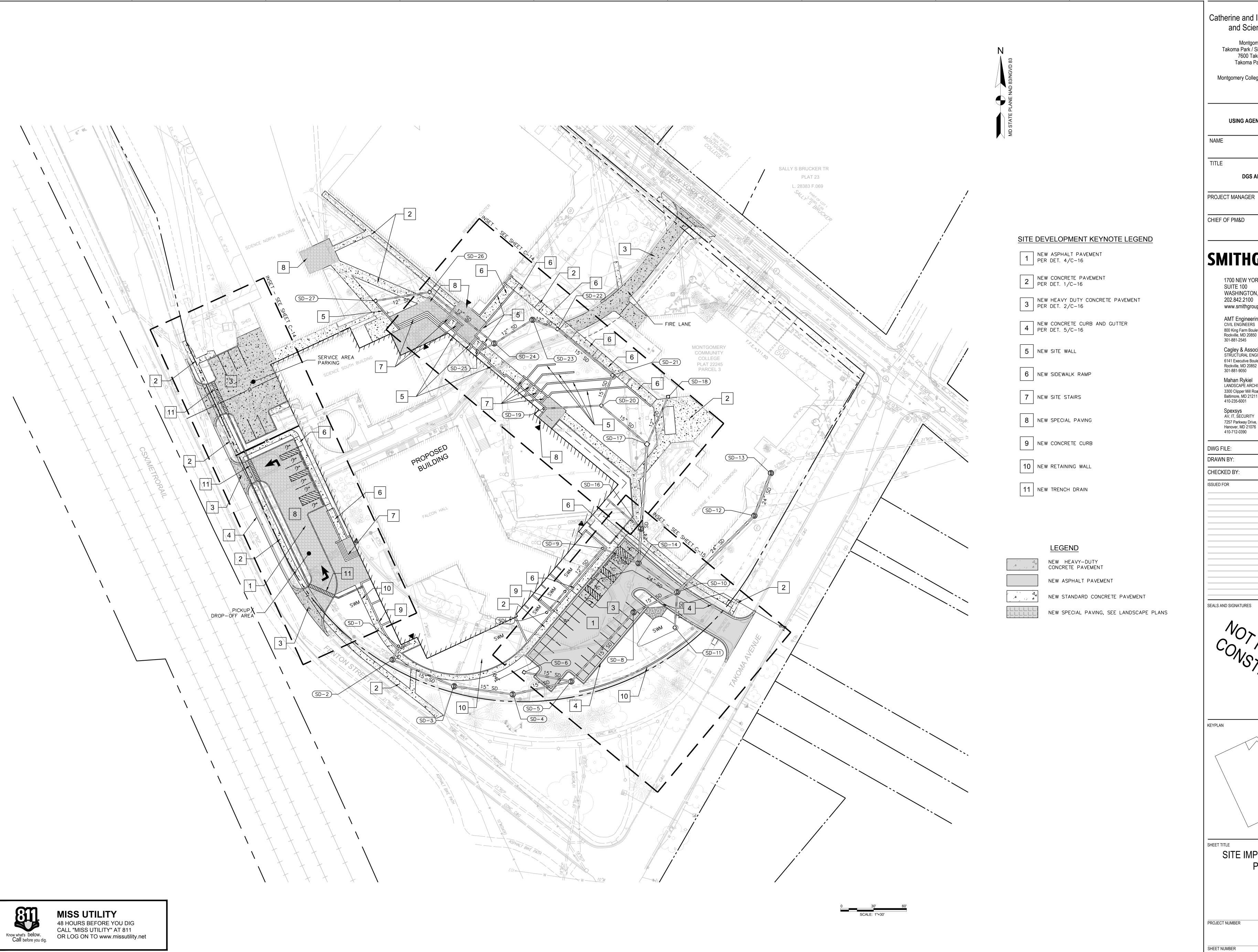
PROJECT NUMBER

C-12
SHEET NUMBER

Know what's below.
Call before you dig

MISS UTILITY

48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

TITLE

**DGS APPROVAL** 

DATE

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

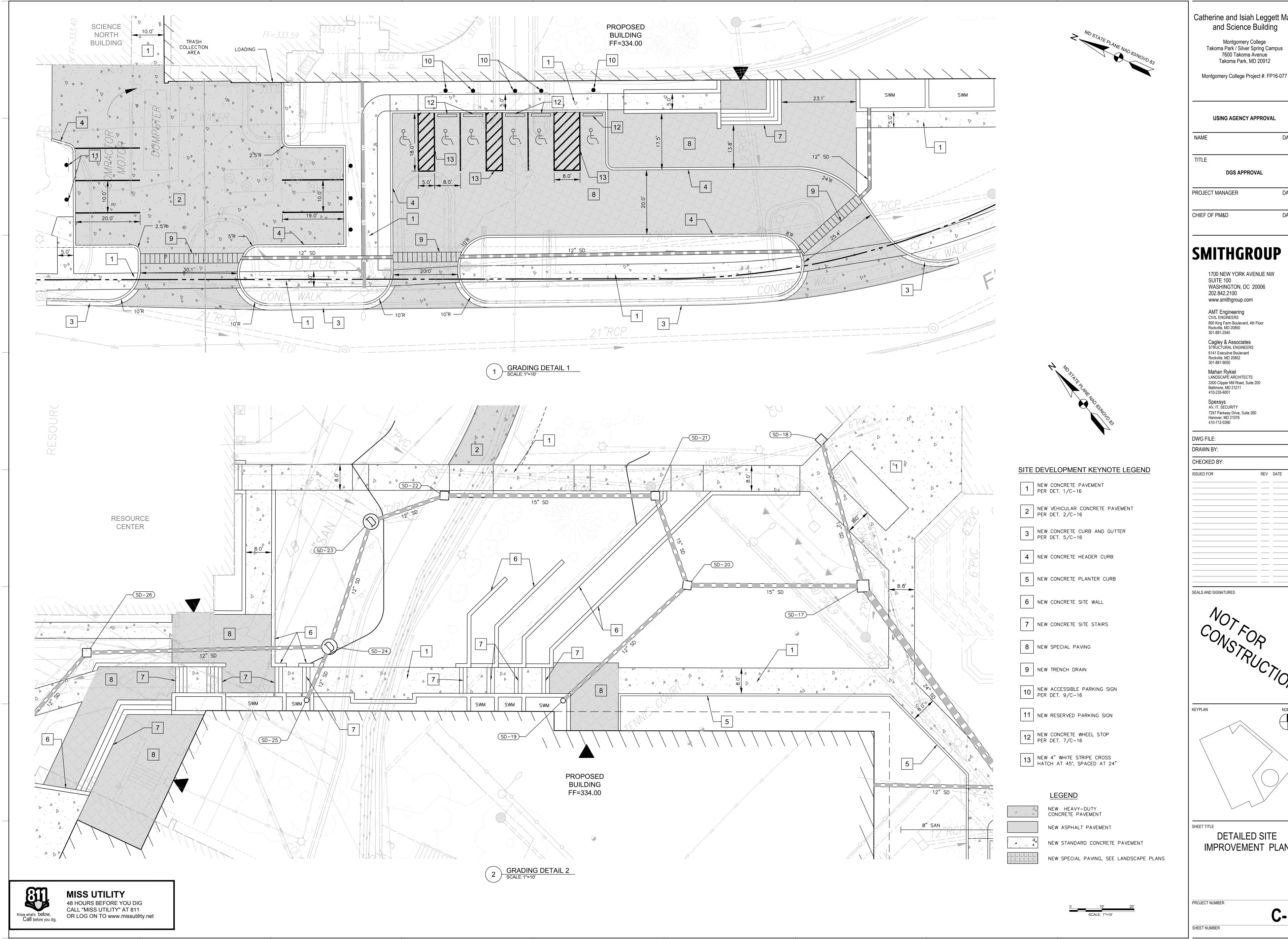
REV DATE

SEALS AND SIGNATURES

SITE IMPROVEMENT PLAN

PROJECT NUMBER

C-13



Montgomery College Takoma Park / Silver Spring Campus

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

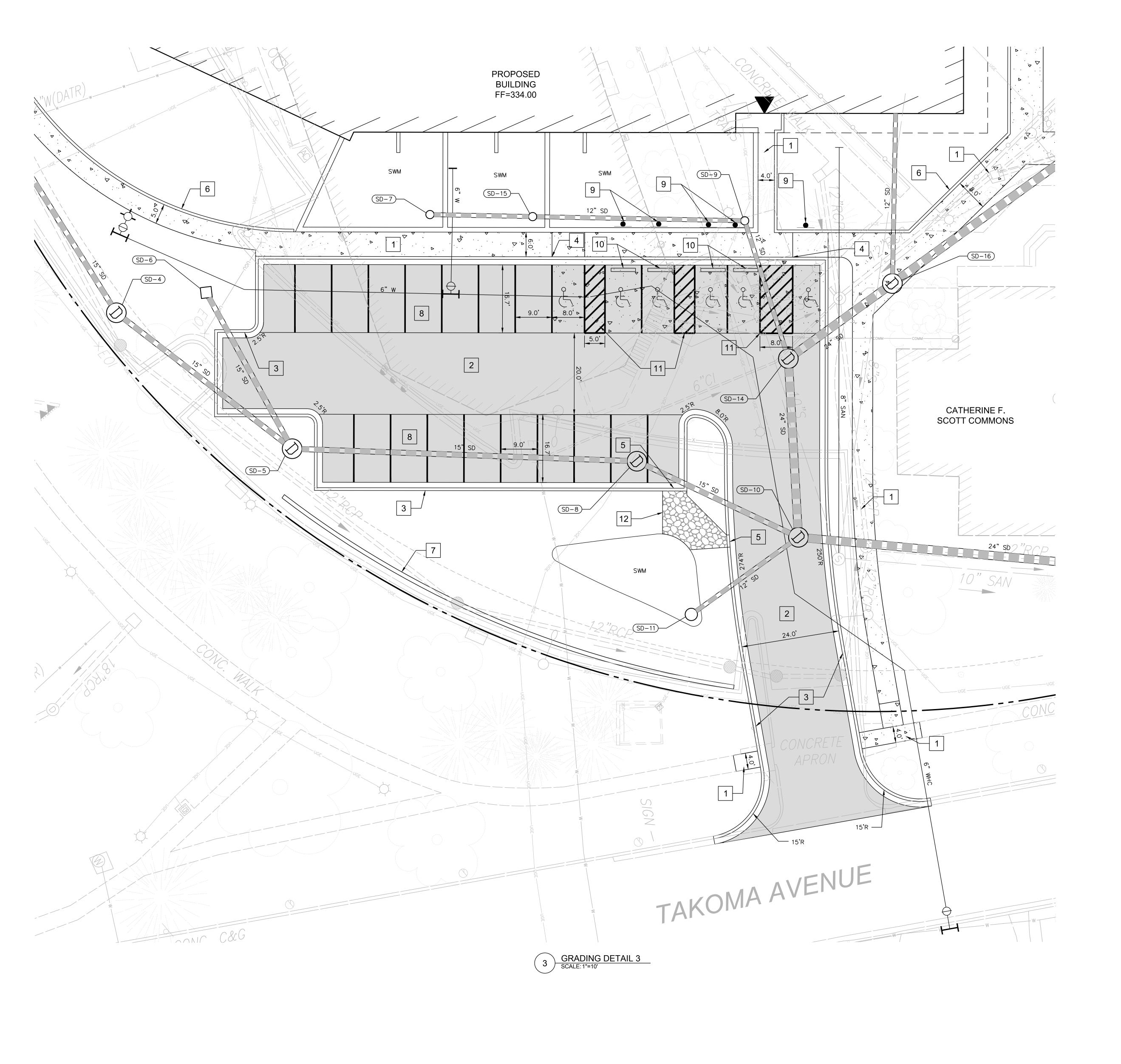
800 King Farm Boulevard, 4th Floor Rockville, MD 20850

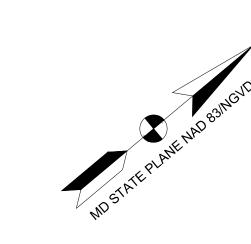
3300 Clipper Mill Road, Suite 200

REV DATE

**DETAILED SITE** IMPROVEMENT PLAN

C-14

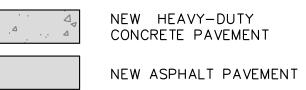




## SITE DEVELOPMENT KEYNOTE LEGEND

- 1 NEW CONCRETE PAVEMENT PER DET. 1/C-16
- 2 NEW ASPHALT PAVEMENT PER DET. 4/C-16
- 3 NEW CONCRETE CURB AND GUTTER PER DET. 5/C-16
- 4 NEW DEPRESSED CURB AND GUTTER PER DET. 5/C-6
- 5 NEW CURB CUT
- 6 NEW CONCRETE PLANTER CURB
- 7 NEW CONCRETE RETAINING WALL
- 8 NEW PERMEABLE PAVERS
- 9 NEW ACCESSIBLE PARKING SIGN PER DET. 9/C-16
- NEW CONCRETE WHEEL STOP PER DET. 7/C-16
- 11 NEW 4" WHITE STRIPE CROSS HATCH AT 45", SPACED AT 24"
- 12 NEW RIP-RAP OUTFALL

### <u>LEGEND</u>



NEW ASFINALT FAVEMENT

A

NEW STANDARD CONCRETE PAVEMENT

NEW SPECIAL PAVING, SEE LANDSCAPE PLANS

0 10'

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

USING AGENCY APPROVAL

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

CHIEF OF PM&D DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006

202.842.2100
www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

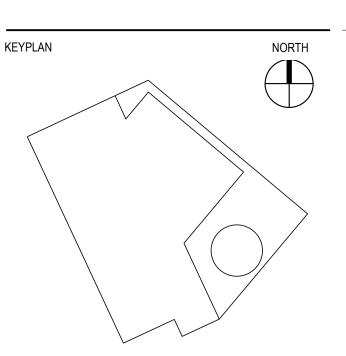
CHECKED BY:

ISSUED FOR

REV DATE

SEALS AND SIGNATURES





DETAILED SITE IMPROVEMENT PLAN

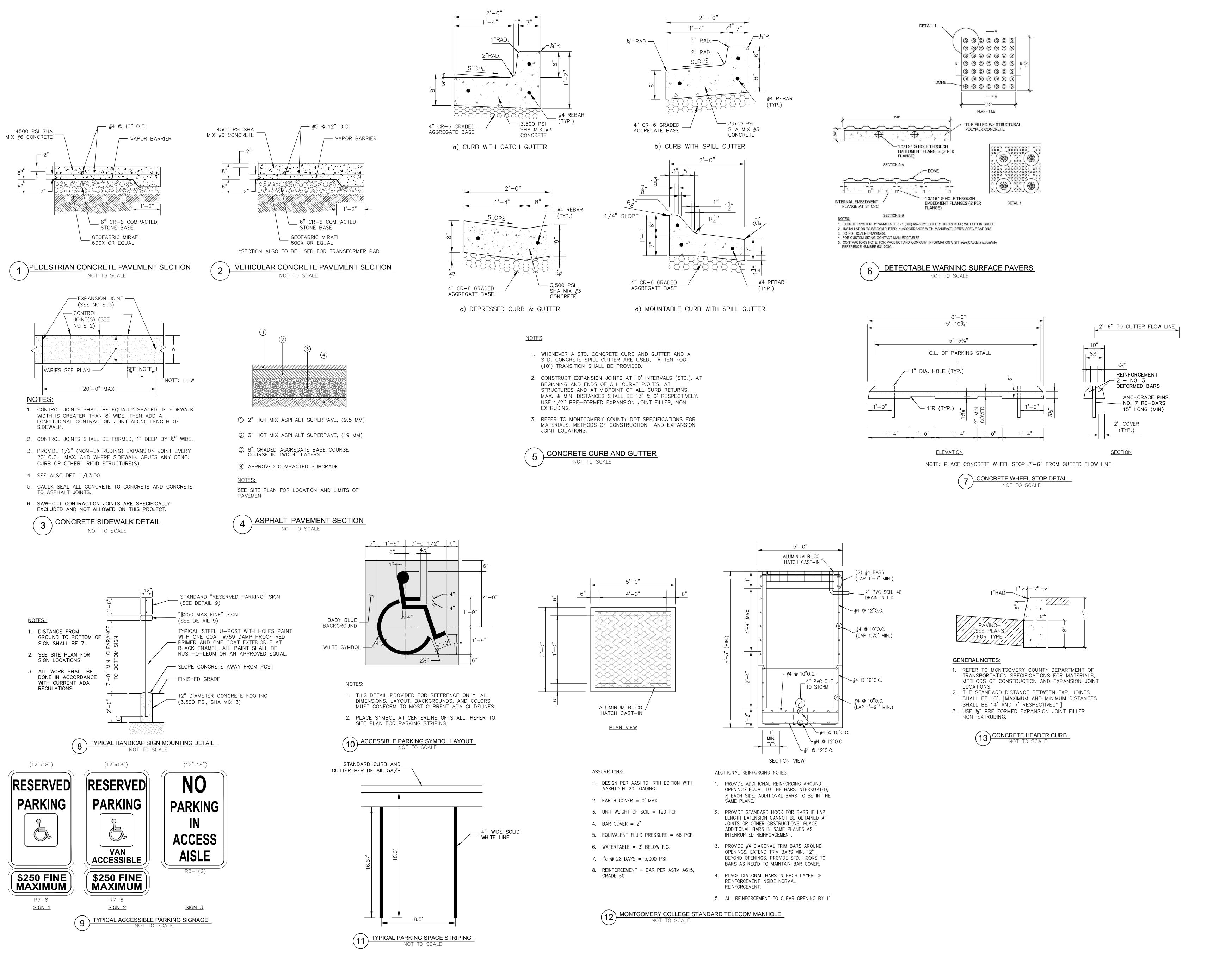
PROJECT NUMBER

C-15
SHEET NUMBER



MISS UTILITY

48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net



> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

TITLE **DGS APPROVAL** 

PROJECT MANAGER

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

SEALS AND SIGNATURES

KEYPLAN

SITE IMPROVEMENT **DETAILS** 

PROJECT NUMBER

SHEET TITLE

**C-16** SHEET NUMBER



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850
301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200

410-235-6001

Spexsys
AV, IT, SECURITY
7257 Parkway Drive, Suite 260
Hanover, MD 21076
410-712-0390

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

SEALS AND SIGNATURES



YPLAN NOR

TEMPORARY TRAFFIC
CONTROL PLAN

PROJECT NUMBER

C-17

### TEMPORARY TRAFFIC CONTROL (TTC) REQUIREMENTS

- 1. The permittee shall refer to the attached Temporary Traffic Control Plan (TTCP) drawings to select the appropriate work zone temporary traffic controls for each phase of construction. Work zone situations which are not addressed in the attached TTCP shall conform to the guidelines set forth in Section 6 of the MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY (MUTCD), most recent edition.
- 2. The permittee must have a "certified" traffic control manager on site during all phases of construction at all times.
- 3. Each phase of construction, including the follow up restoration operations shall be provided with appropriate work zone traffic controls.
- 4. Road closures of any duration shall require the submittal of a written request to the City of Tokoma Park Public Works Department as to why work activity cannot occur while traffic is being maintained. Road closure shall require additional temporary traffic controls including advance notification, approach, and detour signage, as approved by City's Public Works Department(PWD).
- 5. All sidewalk closures shall require the approval of the City's Public Works Department. Any sidewalk closure greater than two (2) weeks shall require the submittal of a written request to the City's Public Works Department and may require additional temporary traffic controls and/or temporary sidewalk by-pass. Any work affecting sidewalk shall be specified and a proper pedestrian detour shall be shown on plans and submitted for review. Sidewalk closures shall be limited to occur only during the actual work activity. During closure, sidewalks shall be barricaded to physically prevent pedestrian passage and appropriate pedestrian detours shall be posted. During all other times, provisions for safe pedestrian access through the work area, via a temporary walkway shall be provided.
- 6. Any work within the traveled portion of roadways shall be restricted to the hours of 9:00 AM to 3:30 PM, Monday through Friday. Work on holidays and weekends shall not occur unless an exception is granted in writing by the City's PWD Inspector.
- 7. Construction activity, loading or unloading of equipment shall not block any traffic lane other than those delineated within the work zone.
- 8. Exclusive of emergency work, the permittee shall contact occupants of all adjoining properties and inform them of the scope and the timing of construction. A minimum of 24 hours notification shall be required prior to the commencement of any activity on the site.
- 9. Access shall be maintained to all driveways unless permission for closure is granted by the property owner/manager. However, accessibility for emergency vehicles shall be maintained at all times.
- 10. Pavement excavation shall be limited to a maximum of one travel lane at any time unless otherwise specified on the TTCP.
- 11. If any temporary traffic control signs are to be placed along a MSHA roadway or within the limits of an
- incorporated area, the permittee shall notify the appropriate agency of signage to be installed.
- 12. No hazardous materials shall be stored within public right-of-way. No materials or equipment shall be stored on the roadway surfaces or sidewalk during non-work hours.
- 13. All existing traffic control devices (i.e. signs, marking, etc.) that must be removed shall be replaced in their proper location prior to the completion of the project. Cost for the replacement and/or repair of devices damaged as a result of the project shall be assessed to the permittee.
- 14. For merging, shifting, shoulder taper, the MAXIMUM spacing between devices equals the posted speed in
- 15. All temporary traffic control devices shall conform to the most recent edition of the MUTCD. All signs, traffic drums and cones shall be fully reflectorized with high intensity, reflective sheeting as per the MUTCD.
- 16. Provision shall be made for safe maintenance of pedestrian and bicycle traffic, subject to approval of the City's PWD Inspector. At least one 10-foot travel lane shall be available for traffic at all times.
- 17. Signage, traffic drums, traffic cones, and arrow panels shall be placed in accordance with the appropriate typical and spacing chart. Work Area Ahead (W20—1 modified) signs must be installed at the end of each workday when temporary aggregate ramping is implemented. Channelizing devices shall be placed along excavations at ten (10) foot intervals. Arrow Panels (flashing mode only) shall be used at the beginning of any lane closure on a multi-lane roadway.
- 18. Appropriate distances for sign legends are "AHEAD", "500 FT", "1000 FT", "1500 FT", or "1/2 MILE". For distances less than 500 feet, "AHEAD" shall be used.
- 19. All warning signs, unless otherwise specified, shall be a minimum of 48" X 48", black symbol or legend on orange background and diamond shaped. All warning signs not applicable to the actual situation shall be removed or covered during non-applicable periods. All portable signs shall be mounted a minimum of one (1) foot above the level of the roadway, with higher mounting heights desirable.
- 20. During nighttime operations traffic drums shall be used. However, for emergency work activities where traffic drums are not readily available, reflectorized traffic cones that are a minimum of twenty eight (28) inches in height and having six (6) inch and four (4) inch reflective collars within the top sixteen (16) inches of the cone may be used. All work areas left unattended at night shall be delineated with traffic drums.
- 21. When temporary concrete barrier (TCB) is used, reflectorized markers are required as per TTCP 109.02. Also, a 12" X 36" object marker (vertical panel as per TTCP 109.01) shall be installed.
- 22. When pavement markings have been obliterated by the work activity, the permittee shall install any critical interim pavement markings prior to the end of the workday as specified by the City's PWD Inspector and/or the County's Division of Traffic Engineering and Operations. On road sections that are not scheduled to be overlaid, all temporary pavement markings shall be (removable) detour grade marking tape. Any conflicting markings, which need to be temporarily removed, are to be masked using "3M Removable Black Lane Mask" or an approved equal. On road sections that are to be overlaid, temporary markings can be either tape or paint. Any conflicting markings should be removed with a pavement grinder.

#### Flagging Operations

- 1. When possible, two—way traffic shall be maintained, otherwise, flaggers shall be used to control traffic.
- 2. Flaggers shall be Maryland State Highway Administration or AATSA approved flaggers and shall be used at the direction of the City Inspector. Flaggers shall use STOP/SLOW paddles to direct traffic.
- 3. Radio communication shall be required between flaggers at the discretion of the City Inspector or under the following conditions:
- 3.1. If the flaggers cannot see each other. 3.2. If the lane closure exceeds 200 feet.

### Pavement Drop-Off

- 1. Any excavation(s) in the roadway shall be paved to level grade or plated and the roadway reopened to its full cross—section prior to the end of each workday. "STEEL PLATES" (W95—5(1)) signs shall be placed approximately 250 feet in advance of any steel plate. Any excavations in the sidewalk shall be backfilled or plated prior to the end of each workday and sidewalk reopened to its full cross section.
- 2. Traffic shall not be permitted within ten (10) feet of any excavation that results in a vertical drop-off of more than five (5) inches in the level of pavement during <u>non-working hours</u> unless protected by temporary concrete barriers or ramped with aggregate material at a 3:1 or flatter slope from the edge of pavement. When ramping is utilized, Temporary Traffic Control drums shall be positioned adjacent to the edge of the work area on the traffic side of the slope.
- 3. Traffic shall not be permitted within two (2) feet of any excavation that results in a vertical drop-off of more than two (2) inches but no more than five (5) inches in the level of pavement during non-working hours unless either ramped with aggregate material at a 3:1 or flatter slope, provided with an abutting wedge of bituminous material at a 3:1 or flatter slope or protected by traffic drums.
- 4. In areas where a drop-off in the level of pavement is two (2) inches or less, traffic may be allowed to freely cross under the following conditions: 4.1. Where longitudinal paving joints of two (2) inches or less are exposed to traffic, warning signs shall be
- posted indicating "UNEVEN LANES" (W8-11). These signs should be placed 250 feet in advance of the uneven joint and be spaced at appropriate intervals throughout the area of the uneven joint. 4.2. Where lateral paving joints of two (2) inches or less are exposed to traffic, a "BUMP" (W8-1) sign
- shall be posted 100 feet in advance of the joint. 4.3. When milled pavement is left exposed to traffic a "ROUGH ROAD"(W8-8) or "GROOVED PAVEMENT" (W8-8a) sign shall be placed 250 feet in advance of the milled area.

#### Parking Restrictions

- 1. The permittee shall contact the City of Takoma Park a minimum of 48 hours in advance to arrange for payment and the bagging of all parking meters within the work zone. Meter numbers and location must be
- 2. Bagging agreement shall be kept available by the contractor/permittee for inspection by the City's inspector at any time. Prohibiting the use of metered spaces by the contractor/permittee without receipt of 'bagging agreement' is subject to fines.
- 3. Contractor/permittee shall coordinate with the City to make payment for additional bagging and removal whenever more spaces are temporary required.
- 4. All existing City of Takoma Park "Parking" signs shall be covered or bagged by the contractor/permittee for the duration of work; and a temporary "No Parking Anytime" (R7-4) sign shall be installed in the affected parking space(s). Existing City of Takoma Park parking meter pipes/poles shall not be used for temporary
- 5. When it is necessary to restrict parking in a non-metered area to facilitate work activity, the permittee shall contact the appropriate City Police Station/Public Works for temporary "No Parking" signs.
- 6. The contractor/permittee shall restore all affected City of Takoma Park parking signage to their previous

### Inspector Authority

- 1. The City of Takoma Park Public Works Department (PWD) Inspector has the authority to modify the TTCP as deemed necessary. The Inspector has the authority to order the permittee to stop work and vacate the public right-of-way if the TTCP is not complied with.
- 2. The implementation date and continuance of work activities may be altered at the discretion of the City's PWD Inspector in the event of conflicts with previously approved or emergency activities.

#### Miscellaneous

- 1. The permittee will be solely responsible for all accidents and/or damage to persons and/or property damage resulting from his operations.
- 2. Hazardous materials shall not be stored within public right—of—way. No materials or equipment shall be stored on the roadway surface or sidewalk during non-work periods. All stored materials and equipment shall be set back at least six (6) feet behind the curb along a closed section roadway and at least twelve (12) feet from the edge of an open section roadway.
- 3. All Temporary Traffic Control (TTC) devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, TTC devices that are no longer appropriate shall be removed or covered.
- 4. At the completion of work activities, conditions within the public space shall be fully restored to those that existed prior to the work activity.

#### Contact Information

- 1. Contact the MCDOT Transportation Management Center at 240-777-2100 between 5:00 AM and 11:00 PM to inform them of temporary lane closures in the vicinity of any traffic signals.
- 2. The permittee shall contact the City Engineer at 301-891-7620 at least two weeks in advance to coordinate any minor traffic signal work. Major traffic signal work shall be coordinated a minimum of thirty (30) days in advance of the project. The permittee shall contact the Montgomery County Transportation Management Center at 240-777-2100, and Takoma Park Public Works Department at 301-891-7633 a minimum of 72 hours prior to beginning work to have existing traffic signal equipment marked.
- 3. The permittee shall contact City of Takoma Park Public Works Department at 301-891-7633, the City's Fire Marshall at 240-773-4702, The City's Police Department at 301-270-1100 a minimum of ten (10) days prior to the beginning of any work activities within the City of Takoma Park.
- 4. The permittee shall contact the Traffic Engineering Design & Operations Section (TEDO) at 240-777-6000 at least ten (10) working days in advance of the final paving operation to schedule the installation of permanent pavement markings and signs.
- 5. The permittee shall contact the Director of the Bethesda Urban Partnership at 301-215-6660. the Director of the Bethesda — Chevy Chase Regional Services Center at 301—986—4325, and the Bethesda Traffic Sergeant of the Montgomery County Police Department at 301-657-9200, a minimum of one week prior to the beginning of any work activities within the Bethesda Business Distric
- 6. The permittee shall contact the Director of the Upcounty Regional Services Center at 240-777-8000 and the Germantown Traffic Sergeant of the Montgomery County Police Department at 301-840-2650, a minimum of one week prior to the beginning of any work activities within the Germantown Business Area.
- 7. The permittee shall contact the Director at 301-565-7300 of the Silver Spring Regional Services Center and the Silver Spring Traffic Sergeant at 301-565-7740 of the Montgomery County Police Department, a minimum of one week prior to the beginning of any work activities within the Silver Spring Business District.
- 8. The permittee shall contact the Director at 240-777-8100 of the Mid-County Regional Services Center and the Wheaton Traffic Sergeant at 301-217-4400 of the Montgomery County Police Department, a minimum of one week prior to the beginning of any work activities within the Wheaton Business District.
- 9. Field assistance by the MCDOT, Division of Traffic Engineering and Operations is available upon request. Contact Traffic Engineering Design & Operations Section (TEDO) at 240-777-6000.

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

#### **USING AGENCY APPROVAL**

DATE

**DGS APPROVAL** 

DATE

TITLE

PROJECT MANAGER

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001 Spexsys

Mahan Rvkiel

AV. IT. SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY:

ISSUED FOR

CHECKED BY: REV DATE

\_\_\_\_

\_\_\_\_\_

\_\_\_\_ \_\_\_\_\_ \_\_\_\_

SEALS AND SIGNATURES



TEMPORARY TRAFFIC **CONTROL NOTES** 

**C-18** 

PROJECT NUMBER



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

CHIEF OF PM&D

**SMITHGROUP** 

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

202.842.2100 www.smithgroup.com AMT Engineering

AMT Engineering
CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850
301-881-2545

Cagley & Associates
STRUCTURAL ENGINEERS

STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200
Baltimore, MD 21211
410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

ISSUED FOR

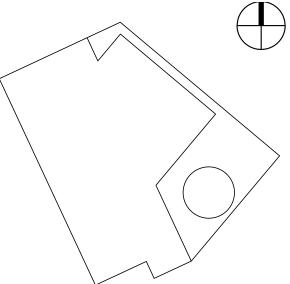
CHECKED BY:

REV DATE

SEALS AND SIGNATURES

NOT FOR

KEYPLAN



SITE UTILITY PLAN

PROJECT NUMBER

C-19

### **GENERAL SITE UTILITY WATER & SEWER NOTES**

- 1. Permit Approval of this plan shall not constitute a commitment for service or an authorization to begin the site utility system construction. The applicant shall obtain a site utility permit from the Development Services Group before construction may commence.
- 2. Permission The applicant shall obtain all necessary permits from any Federal, State and/or local permit authority having jurisdiction over any phase of construction associated with the installation of this site utility system.
- 3. Pretreatment Water and/or sewer service is conditional upon compliance with any current or future Federal, State, and local regulations governing the discharge of wastes to any body of water or to a publicly owned treatment facility. Pretreatment will be required if industrial waste exceeds levels indicated in the WSSC Plumbing and Fuel Gas Code.
- **4. Notification** The site utility contractor shall notify the Contract Manager at 301-206-7363 and the applicant's engineer or agent at least 72 hours prior to commencing construction.
- 5. Coordination When the site utility water and sewer system installation precedes WSSC service connection installation, the applicant is fully responsible for ensuring proper line and grade between the service connection and the site utility system. The applicant is required to provide all controls and stakeout associated with this construction. The site utility contractor shall verify the locations of all WSSC facilities prior to beginning construction. All water and sewer connections shall terminate 5 feet from outside walls of buildings, unless as shown on the approved plans.
- 6. Standards All site utility water and sanitary sewer construction materials and appurtenances shall comply with the latest editions of the Washington Suburban Sanitary Commission's General Conditions & Standard Specifications, Pipeline Design Manual, Standard Details for construction, The Plumbing & Fuel Gas Code and this approved plan.
- 7. **Observation** All work to be performed by the applicant's contractor under the supervision and inspection of the Systems Inspection Group at no cost to WSSC.
- 8. Testing The following tests shall be administered by the site utility contractor and, witnessed and reported by the WSSC Inspector:

Water, Chlorine residual and bacteriological - Results shall be obtained and reported by an independent Maryland certified laboratory and must include the following statement: "This sample meets federal standards for drinking water and is safe for human consumption."

Water, Hydrostatic, 220 psi for 2 hours or as specified on the plans.

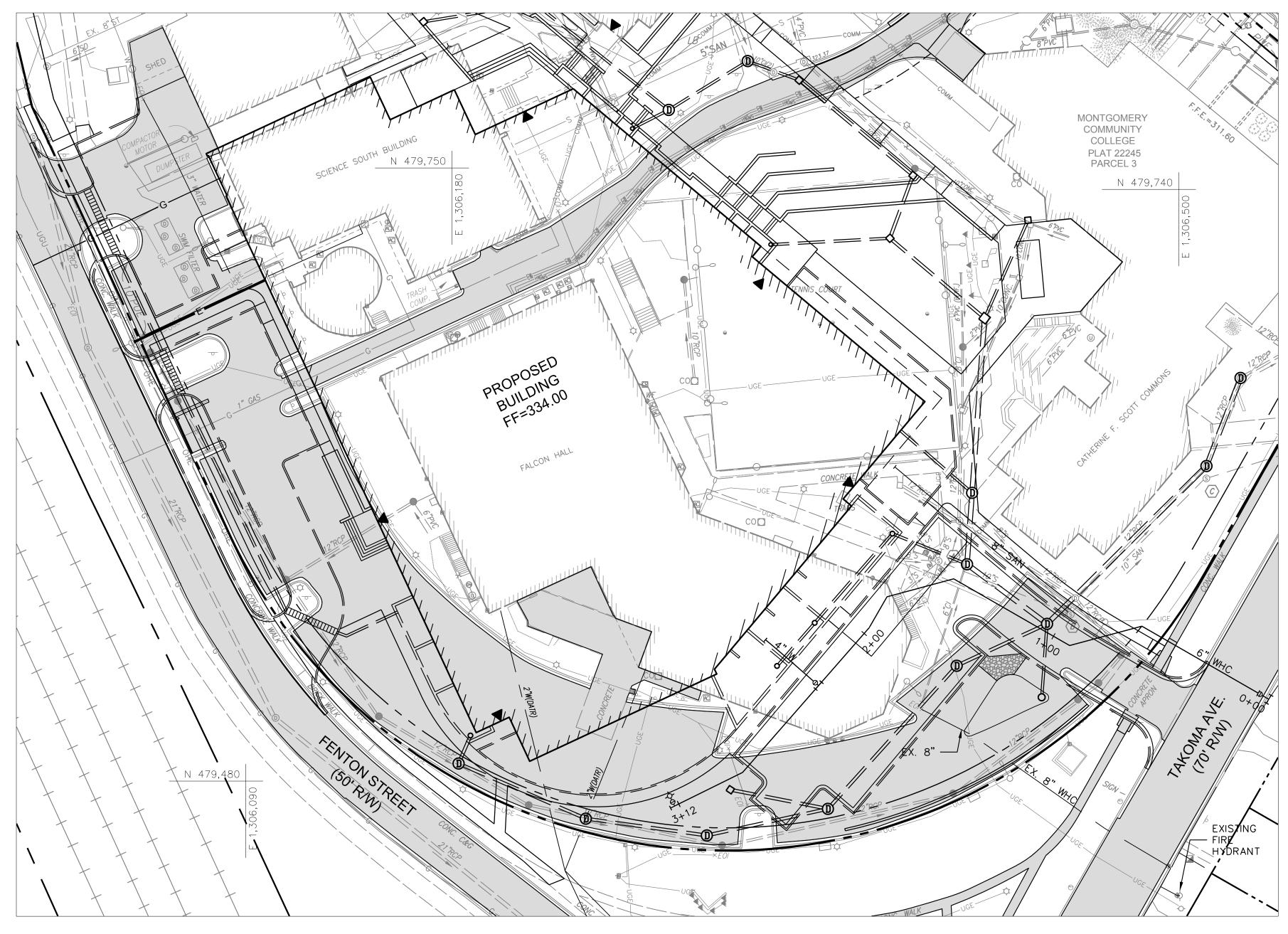
Sewer, Mandrel shall be pulled through all segments 6" and larger.

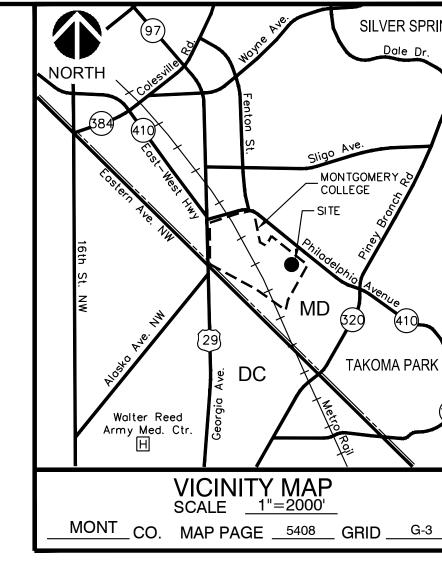
Sewer, Gravity, Air test, 4 psi for 5 minutes, for all segments greater than 25 feet.

Sewer, Pressure, Hydrostatic, 100psi for 2 hours or as specified on this plan. Test Copper Water lines at 100psi for 15 minutes.

All testing equipment shall be furnished by the site utility contractor.

- 9. Water Connection Connection of the site utility water system to a WSSC service connection, WSSC water main or the building water distribution system is prohibited until the chlorine residual, and bacteriological tests as well as the required hydrostatic test have been performed and the results reported. The applicant shall submit the reports to the Systems Inspection Group's Contract Manager for release of the site utility water system.
- 10. Sewer Connection Connection of the site utility sewer system to a WSSC service connection, WSSC sewer main or the building drain is prohibited until the applicable test have been performed, the results reported and found to comply with all requirements. The applicant shall submit reports to the Systems Inspection Group's Contract Manager for release of the site utility sewer system.
- 11. Responsibilities The applicant and agents shall comply with the requirements of any service connection permit (SCP), relocation work (RMS) or main line extension (SEP). At the Systems Inspection Group's discretion, the site utility system may be joined to the service connection prior to connecting to the Commission system.
- 12. As-Built Plans Two print sets of final as-built drawings shall be submitted to the WSSC Systems Inspection Group by a State of Maryland registered professional engineer. The drawing shall reflect any field changes and indicate ties or coordinates for the location of valves, bends, manholes, fire hydrants, appurtenances, etc.
- 13. Building Water and Sewer This plan may designate "building water", "building sewer" or a plumbing appurtenance such as an interceptor. The work, shown in "light line" on this plan is for reference only and shall be installed and inspected under a separate WSSC plumbing permit.
- **14. Fire Hydrant Color** Site utility fire hydrants shall be painted red.
- 15. Follow-up Inspections Manholes and fire hydrants shall receive a follow-up inspection by a WSSC Plumbing Inspector in conjunction with the final plumbing inspection. Manhole construction shall be intact after final paving and grading; and shall meet the Standard Details for Construction. Fire hydrants shall be similarly inspected to ensure valve box access and compliance with WSSC monitoring requirements where applicable.
- **16. Materials** Applicant will provide all materials and material certifications for this site utility system in accordance with the approved drawings and specifications.
- 17. Containment Note All buildings shall have a backflow containment device installed on the outlet side of the water meter, prior to any water uses within the premise, as cited in Section 502.3 of the WSSC Plumbing & Fuel Gas Code. Backflow preventers shall be maintained by the owner as cited in Section 102.3.9.
- 18. Available As-Built Data WSSC takes no responsibility for the accuracy of "as-built" information provided by WSSC or any deviations from design plans of existing pipelines. The Designer may use this information as they desire but is responsible for determining if any changes have been made to the original design of the existing pipeline, performing test pits and field surveys to verify if they plan to utilize this information, and for adjusting their design accordingly. WSSC does not provide any warranty or any assurances that any information provided is accurate and/or up to date.
- 19. Operation of Valves WSSC's inspector shall be present for the operation of any WSSC
- 20. All buildings shall have a backflow containment device installed on the OUTLET side of the water meter, prior to any water uses within the premises, as cited in Section 502.3 of the WSSC Plumbing & Fuel Gas Code.





PIPE SCHEDULE								
TYPE	LENGTH							
	ON-SITE	PUBLIC/WSSC R/W						

# SITE UTILITY # SU-XXXX-2019 SITE UTILITY PLAN MONTGOMERY COMMUNITY COLLEGE CATHERINE AND ISIAH LEGGETT MATH AND SCIENCE BUILDING

**7600 TAKOMA AVENUE** TAKOMA PARK, MD 20912 PARCEL 3 ANACOSTIA RIVER DRAINAGE BASIN / MINI-BASIN #07-091 **ELECTION DISTRICT #13** MONTGOMERY COUNTY, MARYLAND

APPLICANT:

MONTGOMERY COLLEGE 9221 CORPORATE BLVD. ROCKVILLE, MD 20850 PHONE: (240)-567-9141

200'S 209 NW 01

CONTACT: MARVIN D. MILLS, JR

EMAIL: MARVIN.MILLS@MONTGOMERYCOLLEGE.EDU

C-20

NO 1 OF 2

MONTGOMERY COLLEGE TAKOMA PARK

### **SEDIMENT CONTROL NOTES:**

- 1. ALL UTILITY INSTALLATION MUST BE IN CONFORMANCE WITH THE CONDITIONS OF THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES APPROVED SEDIMENT CONTROL PLAN #xxxxxx, APPROVAL DATE xx/xx/xx AND WITH ALL EROSION AND SEDIMENT CONTROL MEASURES CONTAINED WITHIN THIS APPROVED PLAN. THE APPLICANT IS REQUIRED TO NOTIFY THE WSSC SEDIMENT CONTROL INSPECTOR OF ANY CHANGES AND MODIFICATIONS TO THE SCD/COUNTY/MDE APPROVED SEDIMENT CONTROL PLAN.
- 2. CONTACT WSSC ENVIRONMENTAL GROUP 48 HOURS PRIOR TO UTILITY CONSTRUCTION AT 301-206-8077.
- 3. ANY SEDIMENT CONTROLS DISTURBED DURING UTILITY CONSTRUCTION ARE TO BE REPAIRED BY THE END OF EACH WORK DAY. ANY DISTURBANCE OUTSIDE EXISTING SEDIMENT CONTROL IS TO BE STABILIZED BY THE END OF EACH WORK

### **ENGINEERS NOTES:**

1. ALL WATER MAIN SHALL BE DUCTILE IRON CLASS 54 AND TO BE POLYETHYLENE ENCASED IN ACCORDANCE WITH AWWA, C105 METHOD A AND MANUFACTURER'S RECOMMENDATIONS.

2. PROVIDE ONE ACCEPTABLE BACTERIA TEST REPORT FOR EACH LOCATION

- DESIGNATED:
- 3. VERIFY BY TEST PIT OR OTHER MEANS ACTUAL LOCATIONS AND ELEVATIONS OF EXISTING UTILITY STRUCTURES AND APPURTENANCES BEFORE CONSTRUCTION IN THEIR VICINITY. NOTIFY THE ENGINEER IF THE INFORMATION FROM THE TEST PIT DIFFERS FROM WHAT IS SHOWN ON THIS

## **STANDARD RESTRAINT NOTES:**

1. RESTRAIN PIPE FROM STA 0+00 (LINE A) TO STA 3+12 IN ACCORDANCE WITH WSSC'S SPECIFICATIONS AND DETAILS

PROFESSIONAL CERTIFICA	ATION	APPROVAL	DATE	REVISIONS	ENGINEER:
I HEREBY CERTIFY THAT THESE DOCUMENTS					A. MORTON THOMAS & ASSOCIATES, INC.
WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL					800 KING FARM BLVD., 4TH FL.
ENGINEER UNDER THE LAWS OF THE STATE					ROCKVILLE, MD 20850
OF MARYLAND.	SEAL				
MICHAEL C MAYCHILLO DE					PHONE: (301) 881-2545
MICHAEL C. WYCHULIS, P.E. LICENSE NO. 32561					CONTACT: MIKE WYCHULIS  EMAIL: MWYCHULIS@AMTENGINEERING.COM
EXPIRATION DATE: 01/06/20					ENTAGE OF THE PROPERTY OF THE

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

#### **USING AGENCY APPROVAL**

DATE

TITLE **DGS APPROVAL** PROJECT MANAGER

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

CHIEF OF PM&D

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY: CHECKED BY:

ISSUED FOR

REV DATE

\_\_\_\_

SEALS AND SIGNATURES



WSSC SITE UTILITY PLAN

PROJECT NUMBER

SHEET NUMBER

**C-20** 

sheet reserved for wssc water and sewer profiles SITE UTILITY # SU-XXXX-2019 SITE UTILITY PLAN MONTGOMERY COMMUNITY COLLEGE CATHERINE AND ISIAH LEGGETT MATH AND SCIENCE BUILDING MONTGOMERY COLLEGE TAKOMA PARK 7600 TAKOMA AVENUE TAKOMA PARK, MD 20912 PARCEL 3 ANACOSTIA RIVER DRAINAGE BASIN / MINI-BASIN #07-091 ELECTION DISTRICT #13 MONTGOMERY COUNTY, MARYLAND PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND.

SEA APPROVAL DATE REVISIONS APPLICANT:
MONTGOMERY COLLEGE
9221 CORPORATE BLVD.
ROCKVILLE, MD 20850 ENGINEER: A. MORTON THOMAS & ASSOCIATES, INC. 800 KING FARM BLVD., 4TH FL. ROCKVILLE, MD 20850 PHONE: (240)-567-9141 CONTACT: MARVIN D. MILLS, JR EMAIL: MARVIN.MILLS@MONTGOMERYCOLLEGE.EDU C-21 PHONE: (301) 881-2545 MICHAEL C. WYCHULIS, P.E. LICENSE NO. <u>32561</u> EXPIRATION DATE: <u>01/06/20</u> CONTACT: MIKE WYCHULIS NO 2 EMAIL: MWYCHULIS@AMTENGINEERING.COM 200'S 209 NW 01 OF 2

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

ME DATE

**DGS APPROVAL** 

DATE

DATE

TITLE

\_\_\_\_

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200
Baltimore, MD 21211
410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

SEALS AND SIGNATURES

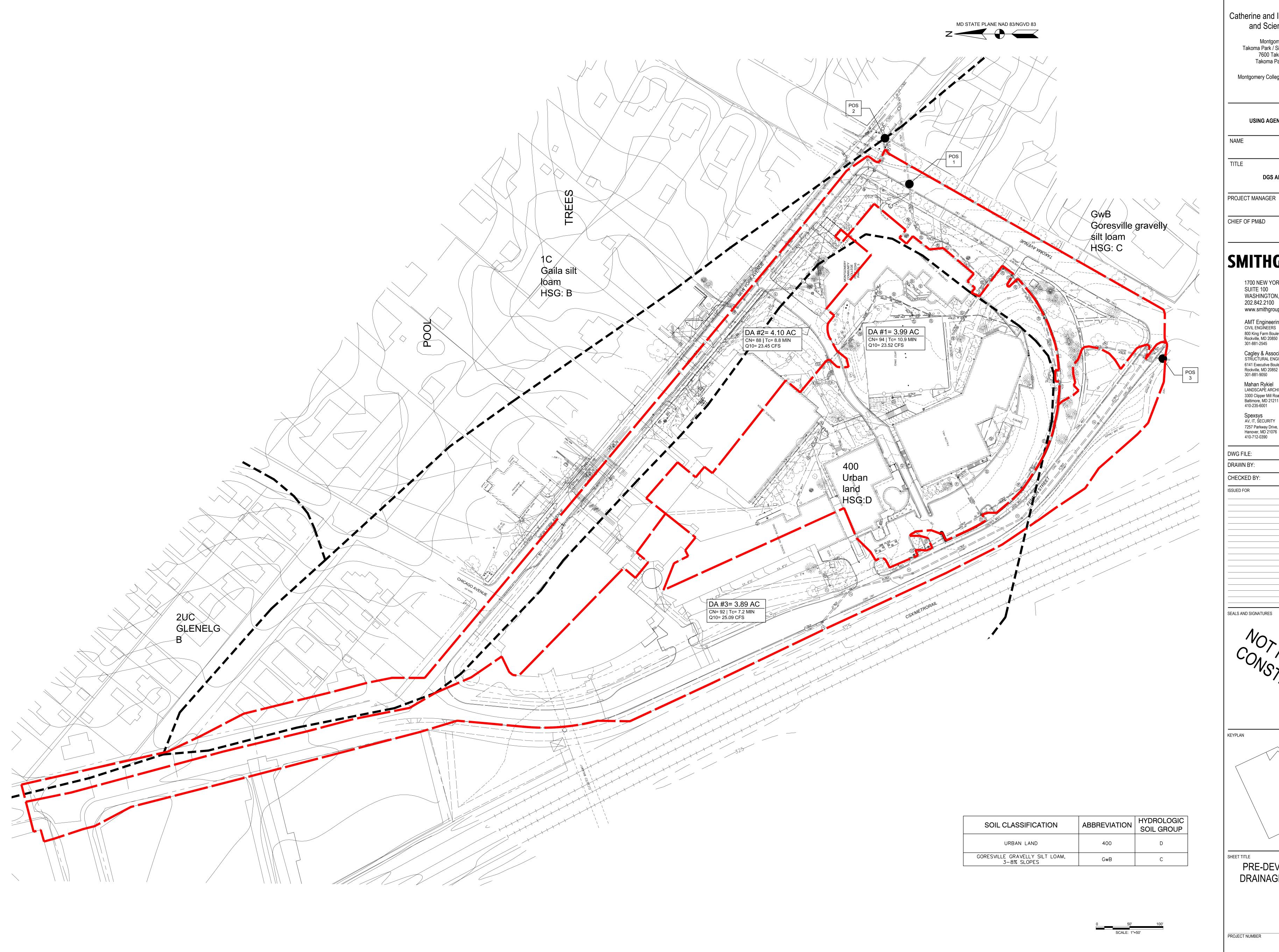
NOT FOR

KEYPLAN

WSSC SITE
UTILITY PROFILES

PROJECT NUMBER

C-21



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DGS APPROVAL

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

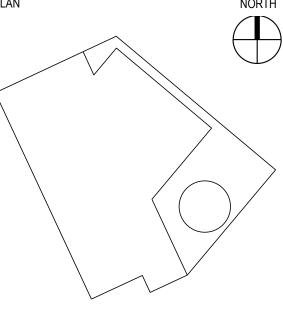
Mahan Rykiel LANDSCAPE ARCHITECTS

3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

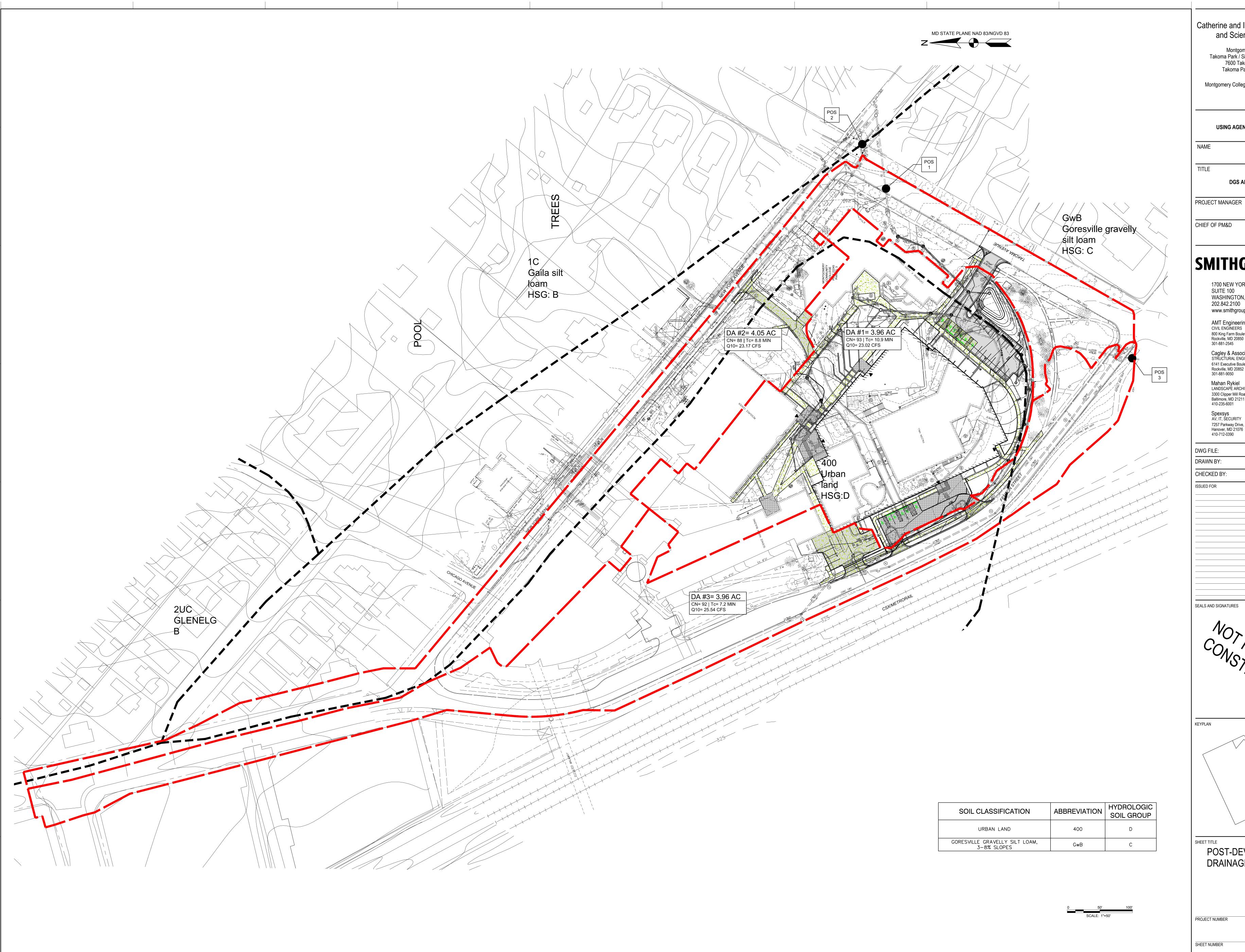
DRAWN BY:



PRE-DEVELOPMENT DRAINAGE AREA MAP

PROJECT NUMBER

**C-22** 



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DGS APPROVAL

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050

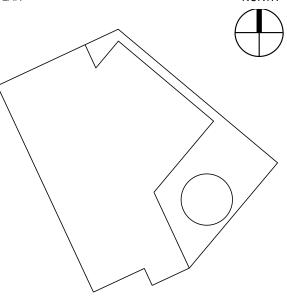
Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

SEALS AND SIGNATURES



POST-DEVELOPMENT DRAINAGE AREA MAP

PROJECT NUMBER

**C-23** 

( IN FEET ) CAUTION:
IF THIS DRAWING IS A REDUCTION, 1 inch = 50 ft. GRAPHIC SCALE MUST BE USED.

**MISS UTILITY** 

CALL "MISS UTILITY AT 1-800-257-7777, 48 HOURS PRIOR TO

THE START OF WORK, THE EXCAVATOR MUST NOTIFY ALL PUBLIC

UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA

BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.

THE EXCAVATOR IS RESPONSIBLE FOR COMPLIANCE WITH

REQUIREMENTS OF THE PRINCE GEORGE'S COUNTY CODE.

OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED

Know what's below.

Call before you dig.

48 HOURS BEFORE YOU DIG

CALL "MISS UTILITY" AT 811

OR LOG ON TO www.missutility.net

(ORIGINAL SIZE = 24"x36")

### PROPERTY INFORMATION:

PARCEL NUMBER: ACCOUNT NUMBER: 03379822 0025 SUBDIVISION NUMBER: ADC MAP/GRID: 37/B11 JN32 TAX MAP: WSSC GRID: 209NW01

### NARRATIVE DESCRIPTION:

TOTAL ACRES:

THIS 7.27 ACRE PARCEL MAKES UP MOST OF THE MONTGOMERY COLLEGE TAKOMA PARK/SILVER SPRING CAMPUS.

THE PROPERTY IS BORDERED BY SINGLE FAMILY RESIDENTIAL DEVELOPMENT TO THE NORTH, EAST, AND SOUTH, WITH RAILROAD TRACKS TO THE WEST.

7.27 AC

NO FOREST EXISTS ON THE SITE. HOWEVER, THERE ARE THREE SPECIMEN TREES ON THE PROPERTY AND ONE DIRECTLY ADJACENT TO THE PROPERTY.

### **GENERAL NOTES**

57B

400

- 1. THE PROPERTY BOUNDARY INFORMATION IS BASED ON AN A. MORTON THOMAS & ASSOCIATES FIELD RUN SURVEY (OCTOBER 2012).
- ZONING FOR THESE PARCELS IS R-60. THE TOPOGRAPHIC SURVEY SHOWN ON THIS PLAN WAS COMPLETED BY A. MORTON THOMAS & ASSOCIATES, INC. IN OCTOBER 2012 AND
- MONTGOMERY COUNTY GIS TOPOGRAPHIC INFORMATION. 4. THE SITE IS LOCATED WITHIN THE SLIGO CREEK WATERSHED WHICH IS
- DESIGNATED USE-I/I-P. 5. THERE IS NO FLOODPLAIN ON THIS SITE AS DETERMINED FROM FEMA FLOOD MAP 24031C0460D.
- 6. THERE ARE NO WETLANDS ONSITE OR WITHIN 100 FEET OF THE PROPERTY LINE AS SUPPLEMENTED BY THE NATIONAL WETLANDS INVENTORY.
- . THE SITE IS NOT WITHIN A SPECIAL PROTECTION AREA. 8. THERE ARE NO KNOWN RECORDS OR READILY OBSERVABLE ARCHAEOLOGICAL, HISTORICAL OR CULTURAL FEATURES ON THIS SITE.
- 9. THE SITE IS NOT ON THE LOCATIONAL ATLAS OR INDEX OF HISTORIC 10. FIELD WORK WAS CONDUCTED BY ANDREW STREAGLE, RLA AND ERIN
- BATLAS OF A. MORTON THOMAS & ASSOCIATES, INC. ON JULY 19, 2018. TREES WERE MEASURED USING A D-TAPE. 11. THERE ARE NO KNOWN RECORDS OR READILY OBSERVABLE RARE,
- THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITATS ON THE 12. THE SIGNIFICANT AND SPECIMEN TREES ON THE SUBJECT PROPERTY
- ARE SHOWN ON THE PLANS. 13. THERE ARE NO MONTGOMERY COUNTY OR STATE CHAMPION TREES ON THIS PARCEL. NO TREES ON THE PARCEL HAVE A DBH ≥ 75% OF THE COUNTY OR STATE CHAMPION.

GAILA SILT LOAM, 8-15% SLOPES

CHILLUM SILT LOAM, 3-8% SLOPES

URBAN LAND

SOILS TABLE										
MAP UNIT SYMBOL	MAP UNIT NAME	K-FACTOR (WHOLE SOIL)	HYDRIC RATING	HIGHLY ERODIBLE	PRIME FARMLAND	SERPENTINITE				

0.32

0.3 NOT HYDRIC

NOT HYDRIC

N/A NOT HYDRIC N/A NO

\*NOTE: K-FACTOR AND ERODIBILITY ARE DETERMINED BY THE MONTGOMERY COUNTY PLANNING DEPARTMENT TREES APPROVED TECHINICAL MANUAL.

#### **SUMMARY TABLE** EXISTING FOREST = 0.00 ACRES WETLANDS = 0.00 ACRES FORESTED WETLANDS = 0.00 ACRES STREAM BUFFER = 0.00 ACRES FORESTED STREAM BUFFER = 0.00 ACRES

100 YEAR FLOODPLAIN = 0.00 ACRES FORESTED 100 YEAR FLOODPLAIN = 0.00 ACRES LINEAR EXTENTS OF STREAMS = 0.00 LINEAR FEET AVERAGE WIDTH OF STREAM BUFFER = 0.00 FEET

TREE IDENTIFICATION, CONDITIONS AND RETENTION POTENTIAL NOTE 1: TREE SPECIES NAMED REPRESENT THE PROFESSIONAL JUDGMENT OF THE PREPARER OR DETERMINATION BY M-NCPPC. THERE ARE A VARIETY OF REASONS IDENTIFICATION CAN BE INCONCLUSIVE: WINTER IDENTIFICATION IS LESS RELIABLE THAN DURING THE GROWING SEASON. PROPER IDENTIFICATION CAN ONLY BE MADE ON THE BASIS OF FLOWERING PARTS, WHICH ARE OFTEN ABSENT. WHILE THE NAMED GENERA ARE FELT TO BE RELIABLE, SOME SPECIES AND HYBRIDS ARE LESS CERTAIN. ONE EXAMPLE IS THE DISTINCTION BETWEEN QUERCUS SPECIES. Q. RUBRA, Q. BOREALIS, Q. PALUSTRIS AND Q. FALCATA ARE ALL CLASSIFIED AS "RED OAKS", AND THEY ARE NOTABLE FOR FREELY HYBRIDIZING. EVEN EXAMINATION OF FLORAL PARTS IS OFTEN INCONCLUSIVE. THE GENERA MALUS AND CRATAEGUS POSE A SIMILAR CHALLENGE.

NOTE 2:NO WARRANTY, EXPRESSED OR IMPLIED, CAN BE MADE WITH RESPECT TO TREE | ADC MAP MONTGOMERY COUNTY SAFETY, FITNESS OR SURVIVAL. THE COMMENTARY ABOUT INDIVIDUAL TREES NOTES SOME ACTUAL OR POTENTIAL DEFECTS TO BE CONSIDERED. HOWEVER, HIDDEN FACTORS AND UNFORESEEABLE EVENTS MAY BE HIGHLY SIGNIFICANT, WHILE SOME OF THE POTENTIAL PROBLEMS NOTED MAY NOT. THE PROPOSED DISTURBANCES WILL HAVE SOME ADVERSE IMPACT UPON THE REMAINING TREES. OTHER STRESSES SUCH AS DISEASE, WIND, SUNSCALD, AIR POLLUTION, REFLECTED HEAT AND LIGHT, INSUFFICIENT OR EXCESS RAINFALL CAN COMBINE TO CAUSE ADDITIONAL DAMAGE OR DEATH TO A TREE. ANY RECOMMENDED ACTIONS ARE INTENDED TO PARTIALLY OFFSET FORESEEABLE DAMAGE. HOWEVER, TREES SHOULD BE MONITORED AND ADDITIONAL

CORRECTIVE MEASURES OR REMOVAL MAY BE NECESSARY.

NO NO

NO

NO

	97 SILVER SPRING  Dale Dr.
	NOKIII Colesii
	384 (13)
	clique
	Sligo Ave.  Sligo Ave.  Sligo Ave.  College  College  Site
	COLLEGE COLLEGE  SITE  Anicology  Anicology  College  Col
	St. St.
L E	MD 320 410
S E N	TAKOMA PARK
D 1.	Walter Reed Army Med. Ctr.
). D S	Walter Reed Army Med. Ctr.
7	VICINITY MAP

2004 ED., MAP 37, PAGE 41, GRID B11 TAX MAP: JN32

1" = 2000'

NAME

TITLE

PROJECT MANAGER

CHIEF OF PM&D

LEGEND PROPERTY BOUNDARY EXISTING 1' CONTOUR EXISTING 5' CONTOUR SOIL TYPE

SOILS BOUNDARY EDGE OF TREE CANOPY SIGNIFICANT TREE (24"≤30" DBH) LOCATION & ID SPECIMEN TREE

WSSC GRID: 209NW01

ZONE =1.5' x DBH STEEP SLOPES (25% OR GREATER)

CRITICAL ROOT

(≥30" DBH) LOCATION & ID

NO

NO

NO

			Т	REE TAE	BLE							TREE TA	ABLF		
				CRITICAL							T	CRITICAL			
NO.	COMMON NAME	SCIENTIFIC NAME	D.B.H.	ROOT ZONE (SQ.	CONDITION RATING	CONDITION COMMENTS	PRESERVE/ REMOVE	NO.	COMMON NAME	SCIENTIFIC NAME	D.B.H. (INCHES	ROOT ZONE (SQ.	CONDITION RATING	CONDITION COMMENTS	PRESERVE REMOVE
Т4	Din ook	Quercus palustris	11.5	FT.)	A)/C	Craving around light note	DDECED/E	177	Saucer magnolia	Magnolia x soulangeana	9	<b>FT.)</b> 573	AVG.	Compacted root zone	REMOVE
T1 T2	Pin oak Pin oak	Quercus palustris	5.5	935 214	AVG. GOOD	Growing around light pole	PRESERVE PRESERVE	T78	American holly	Ilex opaca	5.5	214	AVG.	Shaded canopy	REMOVE
T3	Pin oak	Quercus palustris	3.5	87	GOOD		PRESERVE	T79	Sycamore	Platanus occidentalis	18	2290	GOOD/AVG.	Codominant leaders	PRESERVE
T4	Pin oak	Quercus palustris	15	1590	AVG.	Growing around light pole	PRESERVE	T80	American holly	llex opaca	9	573	AVG.	Shaded canopy	PRESERVE
T5	Cherry	Prunus x	14.5	1486	GOOD/AVG.	Damage to surface roots	PRESERVE	T81	White pine	Pinus strobus	17.5	2165	POOR	Almost dead	PRESERVE
T6	Burford Holly	Ilex cornuta 'Burfordii'	10.5	779	AVG.	Crowded canopy	PRESERVE	T82	White pine	Pinus strobus	19.5	2688	AVG.	Crowded canopy	PRESERVE
T7	Burford Holly	llex cornuta 'Burfordii'	10	707	AVG.	Crowded canopy	PRESERVE	T83	White pine	Pinus strobus	12	1018	AVG.	Crowded canopy	PRESERVE
T8	Burford Holly	llex cornuta 'Burfordii'	8.5	511	AVG.	Crowded canopy	PRESERVE	T84	White pine	Pinus strobus	17.5	2165	AVG.	Crowded canopy	PRESERVE
T9	Burford Holly	llex cornuta 'Burfordii'	9	573	AVG.	Crowded canopy	PRESERVE	T85	White pine	Pinus strobus	18	2290	AVG.	Crowded canopy	PRESERVE
T10	Weeping cherry	Prunus subhirtella pendula	4	113	GOOD/AVG.	Some dieback	PRESERVE	T86	Japanese zelkova	Zelkova serrata	18	2290	AVG.	Shaded canopy	PRESERVE
T11	Pin oak	Quercus palustris	7.5	398	GOOD		PRESERVE	T87 T88	Cherry Willow oak	Prunus x  Quercus phellos	14 31	1385 6793	AVG.	Damage to surface roots Some dead limbs	PRESERVE PRESERVE
T12	Red maple	Acer rubrum	5.5	214	GOOD		PRESERVE	T89	Willow oak	Quercus phellos	26.5	4964	AVG.	Some dead limbs, codominant leaders	PRESERVE
T13	Red maple	Acer rubrum	4	113	GOOD		PRESERVE	T90	Japanese snowbell	Styrax japonicus	12	1018	AVG/POOR	In decline	PRESERVE
T14	Red maple	Acer rubrum	5	177	GOOD		PRESERVE	T91	Willow oak	Quercus phellos	38	10207	AVG.	Codominant leaders	PRESERVE
T15	American holly	llex opaca	6	254		Crowded canopy	PRESERVE	T92	Cherry	Prunus x	18	2290	AVG.	Shaded canopy	PRESERVE
T16	American holly	llex opaca	9	573	GOOD/AVG.	Crowded canopy	PRESERVE	T93	Cherry	Prunus x	18	2290	AVG.	Shaded canopy	PRESERVE
T17	American holly	llex opaca	7.5	398		Crowded canopy	PRESERVE	T94	White pine	Pinus strobus	16.5	1924	AVG.	Crowded canopy	PRESERVE
T18	American holly	llex opaca	7	346		Crowded canopy	PRESERVE	T95	White pine	Pinus strobus	18	2290	AVG.	Crowded canopy	PRESERVE
T19	American holly	llex opaca	6.5	299		Crowded canopy	PRESERVE	T96	White pine	Pinus strobus	18.5	2419	AVG.	Crowded canopy	PRESERVE
T20	American holly	llex opaca	8	452		Crowded canopy	PRESERVE	T97	White pine	Pinus strobus	18	2290	AVG.	Crowded canopy	PRESERVE
T21	American holly	llex opaca	9	573		Crowded canopy	PRESERVE	T98	White pine	Pinus strobus	15.5	1698	AVG.	Crowded canopy	PRESERVE
T22	American holly	Ilex opaca	8.5	511		Crowded canopy	PRESERVE	T99	White pine	Pinus strobus	16	1810	AVG.	Crowded canopy	PRESERVE
T23	White oak	Quercus alba	32	7238	<b>+</b>	Some dieback	PRESERVE	T100	White pine	Pinus strobus	19	2552	AVG/POOR	Crowded canopy, poor form	PRESERVE
T24	White oak	Quercus alba	30	6362		Some dieback	PRESERVE	T101	Pin oak	Quercus palustris	22.5	3578	AVG/POOR	Much dieback, in decline	REMOVE
T25	Pin oak	Quercus palustris	14	1385	GOOD	0	PRESERVE	T102	White pine	Pinus strobus	18.5	2419	AVG/POOR	Dead branches	REMOVE
T26	Blue atlas cedar	Cedrus atlantica	16.5	1924	AVG.	Shaded crown	PRESERVE	T103	White pine	Pinus strobus	19	2552	AVG.	Crowded canopy, leaning	PRESERVE
T27	Pin oak	Quercus palustris	16.5	1924	GOOD/AVG.	Codominant leaders	PRESERVE	T104	White pine	Pinus strobus	23.5	3904	AVG.	Crowded canopy	PRESERVE
T28	Japanese Black Pine	Pinus thunbergii	20.5	2971	POOR	In decline	REMOVE	T105	White pine	Pinus strobus	18.5	2419	AVG.	Limbs removed from one side	REMOVE
T29	Saucer magnolia	Magnolia x soulangeana	11	855	POOR	In decline	REMOVE	T106	Bradford pear	Pyrus calleryana 'Bradford'	19	2552	AVG.	Poor form	REMOVE
T30	Bradford pear	Pyrus calleryana 'Bradford'	22.5	3578	AVG.	Dead branches	REMOVE	T107	Bradford pear	Pyrus calleryana 'Bradford'	15.5	1698	AVG.	Poor form	REMOVE
T31	Bradford pear	Pyrus calleryana 'Bradford'	21	3117	AVG.	Dead branches	REMOVE	T108	Bradford pear	Pyrus calleryana 'Bradford'	26	4778	AVG.	Poor form	REMOVE
T32	Bradford pear	Pyrus calleryana 'Bradford'	19.5	2688	AVG.	Dead branches	REMOVE	T109	Pin oak	Quercus palustris	19	2552	POOR	in decline, much dieback	REMOVE
T33	Bradford pear	Pyrus calleryana 'Bradford'	20	2827	AVG.	Dead branches	REMOVE	T110	Pin oak	Quercus palustris	15.5	1698	POOR	in decline, much dieback	REMOVE
T34	Bradford pear	Pyrus calleryana 'Bradford'	24.5	4243	AVG.	Dead branches	REMOVE	T111	Pin oak	Quercus palustris	20	2827	POOR	in decline, much dieback	REMOVE
T35	Norway spruce	Picea abies	6	254		Shaded crown	REMOVE	T112	Dawn redwood	Metasequoia glyptostroboides		1810	POOR	in decline, much dieback	REMOVE
T36	White pine	Pinus strobus	15.5	1698	AVG.	Dead lower limbs	REMOVE	T113	Cherry	Prunus x	20	2827	AVG.	Epicormic growth, some dead branches	REMOVE
T37	Saucer magnolia	Magnolia x soulangeana	4.5 27.5	143		Shaded	REMOVE	T114	Norway spruce	Picea abies	11.5	935	GOOD/AVG.	Leaning form	REMOVE
T38 T39	White oak	Quercus alba Prunus x	11.5	5346 935	AVG. AVG.	Dead limbs, compacted root zone Some dead limbs	REMOVE REMOVE	T115	American holly	llex opaca  Cornus kousa	5	177 254	AVG.	Shaded canopy	REMOVE REMOVE
T40	Cherry White oak	Quercus alba	26.5	4964	<u> </u>	Crowded root zone and canopy	REMOVE	T117	Kousa dogwood	Cornus kousa		452	AVG.	Shaded canopy Shaded canopy	REMOVE
T41	White oak	Quercus alba	21.5	3267	AVG.	Crowded root zone and canopy  Crowded root zone and canopy	REMOVE	T118	Kousa dogwood  Kousa dogwood	Cornus kousa	8	254	AVG.	Shaded canopy Shaded canopy	REMOVE
T42	Amur corktree	Phellodendron amurense	18	2290	AVG/POOR	Dieback	REMOVE	T119	American holly	Ilex opaca	8.5	511	AVG.	Crowded canopy	REMOVE
T43	Burford Holly	Ilex cornuta 'Burfordii'	9	573	AVG/POOR AVG.	Crowded canopy	REMOVE	T120	American holly	Ilex opaca	11	855	AVG.	Crowded canopy	REMOVE
T44	Burford Holly	Ilex cornuta 'Burfordii'	8.5	511	AVG.	Crowded canopy	REMOVE	T121	American holly	llex opaca	8	452	AVG.	Crowded canopy	REMOVE
T45	Burford Holly	Ilex cornuta 'Burfordii'	8.5	511	AVG.	Crowded canopy	REMOVE	T122	American holly	llex opaca	10	707	AVG.	Crowded canopy	REMOVE
T46	Burford Holly	Ilex cornuta 'Burfordii'	10	707	AVG.	Crowded canopy	REMOVE	T123	Dawn redwood	Metasequoia glyptostroboides		1195	POOR	In decline	REMOVE
T47	Crapemyrtle	Lagerstroemia indica	9	573	GOOD/AVG.	Crowded canopy	REMOVE	T124	White oak	Quercus alba	22.5	3578	POOR	In decline much dieback	REMOVE
T48	Crapemyrtle	Lagerstroemia indica	9	573		Crowded canopy	REMOVE	T125	White pine	Pinus strobus	17.5	2165	AVG.	Some dead branches	REMOVE
T49	Crapemyrtle	Lagerstroemia indica	8	452		Crowded canopy	REMOVE	T126	White pine	Pinus strobus	17	2043	AVG.	Crowded root zone, next to transformer	REMOVE
T50	Crapemyrtle	Lagerstroemia indica	9	573		Crowded canopy	REMOVE	T127	White pine	Pinus strobus	13.5	1288	AVG.	Crowded root zone, next to transformer	REMOVE
T51	Crapemyrtle	Lagerstroemia indica	6	254	AVG.	Crowded canopy	REMOVE	T128	White pine	Pinus strobus	13	1195	AVG/POOR	Broken leader	PRESERVE
	Japanese Black Pine	Pinus thunbergii	15	1590	AVG/POOR	In decline	REMOVE	T129	Pin oak	Quercus palustris	18	2290	GOOD/AVG.	Growing around light pole	PRESERVE
T53	Japanese Black Pine	Pinus thunbergii	16	1810		In decline	REMOVE	T130	Pin oak	Quercus palustris	24	4072	AVG.	Pruned at OHE lines	PRESERVE
T55	Redbud	Cercis canadensis	3	64	GOOD		PRESERVE	T131	Littleleaf linden	Tilia cordata	13.5	1288	AVG.	Pruned at OHE lines	PRESERVE
T56	Redbud	Cercis canadensis	4	113	GOOD		PRESERVE	T132	Sugar maple	Acer saccharum	11	855	AVG.	Pruned at OHE lines	PRESERVE
157	Cherry	Prunus x	17.5	2165		Girdling roots	REMOVE	T133	Red oak	Quercus rubra	15.5	1698	AVG.	Pruned at OHE lines	PRESERVE
T58	Cherry	Prunus x	14.5	1486		Girdling roots	REMOVE	T134	Red oak	Quercus rubra	15.5	1698	AVG.	Pruned at OHE lines	PRESERVE
T59	Cherry	Prunus x	17	2043	AVG.	Poor form	REMOVE	T135	Pin oak	Quercus palustris	14.5	1486	AVG.	Pruned at OHE lines	PRESERVE
T60	Cherry	Prunus x	12	1018	AVG/POOR	Poor form	REMOVE	T136	Pin oak	Quercus palustris	15	1590	AVG.	Pruned at OHE lines	PRESERVE
T61	Cherry	Prunus x	11.5	935	AVG/POOR	In decline	REMOVE	T137	Pin oak	Quercus palustris	38.5	10477	GOOD/AVG.	Pruned at OHE lines	PRESERVE
T62	Cherry	Prunus x	10.5	779	AVG/POOR	In decline	REMOVE	T138	Sawtooth oak	Quercus acutissima	15	1590	AVG.	Pruned at OHE lines	PRESERVE
T63	Cherry	Prunus x	6.5	299	AVG/POOR	In decline	REMOVE	T139	Green ash	Fraxinus pennsylvanica	17	2043	AVG/POOR	In decline, much dieback	PRESERVE
64	Cherry	Prunus x	9	573	AVG/POOR	In decline	REMOVE	T140	Pin oak	Quercus palustris	18	2290	AVG.	Some dead branches	PRESERVE
65	Cherry	Prunus x	12.5	1104	AVG/POOR	In decline	REMOVE	T141	Red oak	Quercus rubra	13	1195	AVG.	Some dead branches	PRESERVE
Г66	Saucer magnolia	Magnolia x soulangeana	5	177	AVG/POOR	Major wound on trunk	REMOVE	T142 T143	Baldcy press	Taxodium distichum  Amelanchier arborea	19.5	2688	AVG.	Close to building	PRESERVE PRESERVE
T67	Norway spruce	Picea abies	11.5	935	GOOD		REMOVE	T143	Serviceberry		8	452	GOOD	Crowing into wells	
T68	Norway spruce	Picea abies	12.5	1104	GOOD		REMOVE		Saucer magnolia	Magnolia x soulangeana	14.5	1486	AVG.	Growing into walk	REMOVE
69	White pine	Pinus strobus	11	855	POOR	In decline	REMOVE	T145	River birch	Betula nigra	10	707	AVG.	Shaded canopy	REMOVE
70	Norway spruce	Picea abies	12.5	1104		Shaded canopy	REMOVE	T146	Kousa dogwood	Cornus kousa	4 7	113	GOOD		PRESERVE
71	Amur corktree	Phellodendron amurense	19	2552	AVG.	Broken leader	REMOVE	T147	Blue atlas cedar	Cedrus atlantica	7	346	GOOD		REMOVE
72	Burford Holly	Ilex cornuta 'Burfordii'	10	707	AVG.	Crowded canopy	REMOVE	T148	Pin oak	Quercus palustris	7	346	GOOD	Codominant loadars	REMOVE
	Burford Holly	Ilex cornuta 'Burfordii'	8	452	AVG.	Crowded canopy	REMOVE	T149 T150	Pin oak	Quercus palustris	17	2043	GOOD/AVG.	Codominant leaders	PRESERVE
173 I			-					[ 1150	Pin oak	Quercus palustris	16	1810	POOR	in decline, much dieback	PRESERVE
173 174	Burford Holly	Ilex cornuta 'Burfordii'	9	573	AVG.	Crowded canopy	REMOVE	T151	Pin oak	Quercus palustris	12	1018	GOOD		PRESERVE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW

Catherine and Isiah Leggett Math

and Science Building

Montgomery College

Takoma Park / Silver Spring Campus

7600 Takoma Avenue

Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

**DGS APPROVAL** 

DATE

DATE

DATE

SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor

Rockville, MD 20850 301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel

LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211

AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY:

CHECKED BY:

REV DATE



NATURAL RESOURCE INVENTORY PLAN/ **FOREST** CONSERVATION

**EXEMPTION PLAN** 

PROJECT NUMBER

SHEET NUMBER

LN-101

DOCUMENTS WERE PREPARED UNDER MY SUPERVISION AND IN COMPLIANCE WITH THE FOREST CONSERVATION LAW REQUIREMENTS.

I CERTIFY THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, AND THAT THESE

THIS PLAN IS FOR NATURAL RESOURCE INVENTORY/EXISTING CONDITIONS/FOREST STAND

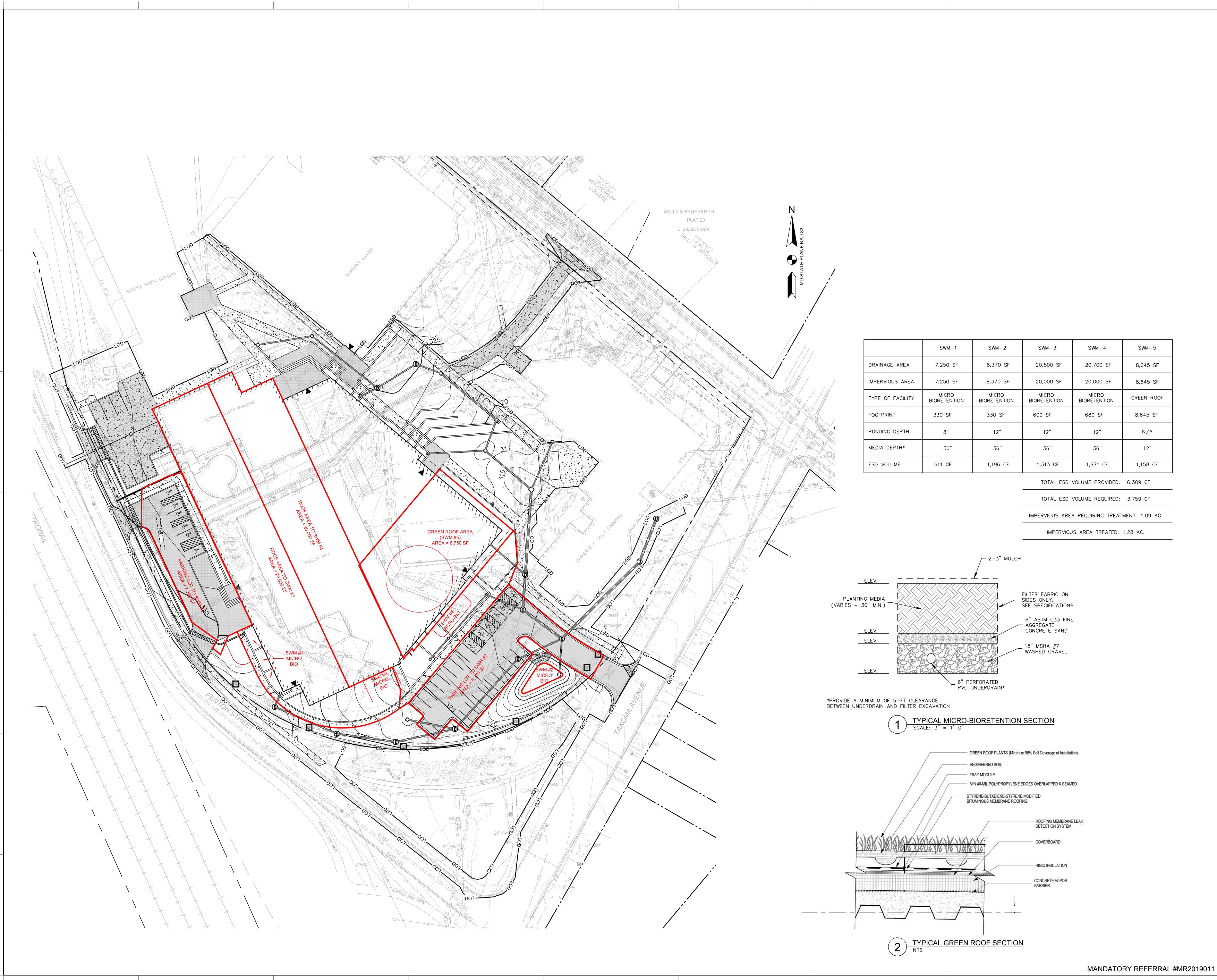
DELINEATION PLAN PURPOSES ONLY

CERTIFICATION

ANDREW E. STREAGLE

LICENSE NUMBER MD RLA #3381

SIMPLIFIED NRI/FCP EXEMPTION 42019092E



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

**DGS APPROVAL** 

DATE

DATE

TITLE

PROJECT MANAGER

CHIEF OF PM&D DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

301-881-9050

Mahan Rykiel

LANDSCAPE ARCHITECTS

LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

-----

CHECKED BY:

ISSUED FOR REV DATE

SEALS AND SIGNATURES

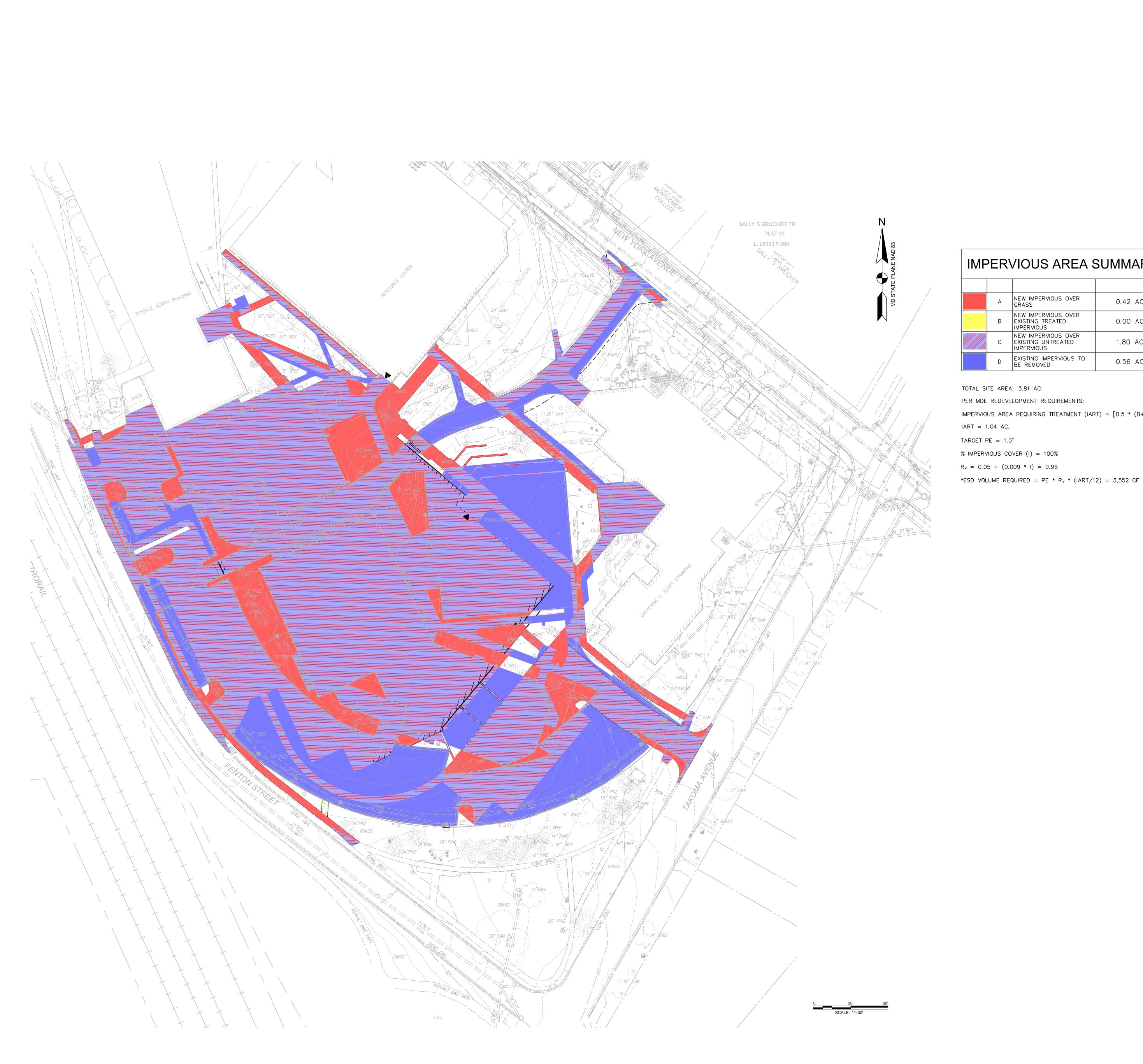
NOT FOR CONSTRUCTION

PLAN NORTH

STORMWATER
MANAGEMENT
CONCEPT PLAN

PROJECT NUMBER

MR-09.1



IMF	PER\	/IOUS AREA S	SUMMARY
	А	NEW IMPERVIOUS OVER GRASS	0.42 AC
	В	NEW IMPERVIOUS OVER EXISTING TREATED IMPERVIOUS	0.00 AC
	С	NEW IMPERVIOUS OVER EXISTING UNTREATED IMPERVIOUS	1.80 AC
	D	EXISTING IMPERVIOUS TO BE REMOVED	0.56 AC

TOTAL SITE AREA: 3.81 AC

PER MDE REDEVELOPMENT REQUIREMENTS:

IMPERVIOUS AREA REQUIRING TREATMENT (IART) = [0.5 \* (B+C+D)] + [(A+C) - (B+C+D)]

IART = 1.04 AC.

TARGET PE = 1.0"

% IMPERVIOUS COVER (I) = 100%

 $R_v = 0.05 + (0.009 * I) = 0.95$ 

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS

3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

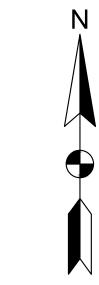
REV DATE

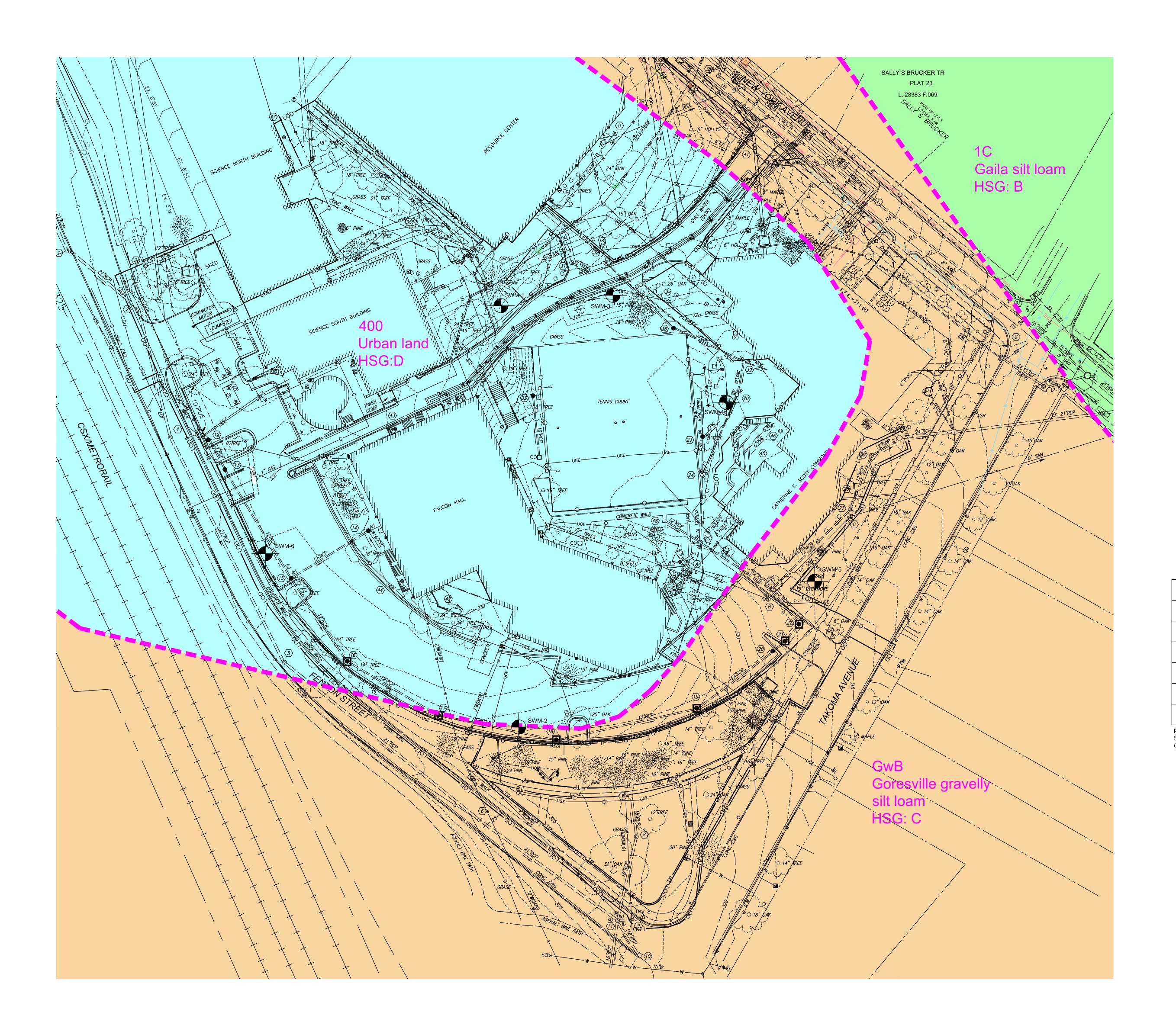
SEALS AND SIGNATURES

STORMWATER MANAGEMENT CONCEPT PLAN REDEVELOPMENT **ANALYSIS** 

PROJECT NUMBER

MR-09.2





BORING NUMBER	SOIL CLASSIFICATION AT TEST DEPTH	INFILTRATION TEST RATE (IN/HR)
SWM-1	SC	2.10
SWM-2	SC	1.20
SWM-3	SC	2.10
SWM-4	SC	0.14
SWM-5	CL	0.20
SWM-6	SC	1.10

PER MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) STORMWATER MANAGEMENT DESIGN MANUAL, AN INFILTRATION RATE GREATER THAN 0.52"/HR IS CONSIDERED SUITABLE.

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS

3300 Clipper Mill Road, Suite 200

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

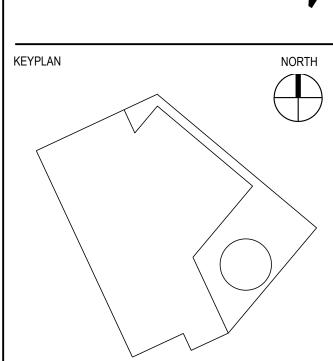
DWG FILE: DRAWN BY:

CHECKED BY:

REV DATE

SEALS AND SIGNATURES





STORMWATER
MANAGEMENT
CONCEPT PLAN
SOILS ANALYSIS

PROJECT NUMBER

MR-09.3

MANDATORY REFERRAL #MR2019011



# **LEGEND**:

- LEGGETT BUILDING
- FACULTY PARKING LOT
- ENTRY/ DROP-OFF
- TERRACED QUAD
- LOADING DOCK
- **EXISTING COMMONS** BLDG.
- **EXISTING SCIENCE** NORTH BLDG.
- **EXISTING RESOURCE** CENTER BLDG
- ENTRY PLAZA
- SERVICE VEHICLE PARKING
- ADA PARKING
- FIRE ACCESS LANE
- ADA PATH
- FIBER SOIL REINFORCED TURF
- PLANTING BED
- BIORETENTION
- WALLED BIORETENTION
- 2nd FLOOR ROOF **MEADOW**
- RETAIN EXISTING **VEGETATION**
- - — PROPERTY LINE

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

### **USING AGENCY APPROVAL**

DATE TITLE **DGS APPROVAL** PROJECT MANAGER DATE

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com AMT Engineering CIVIL ENGINEERS

CHIEF OF PM&D

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

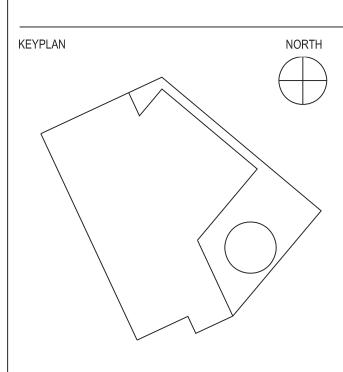
301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY: ARS CHECKED BY: sk

SEALS AND SIGNATURES

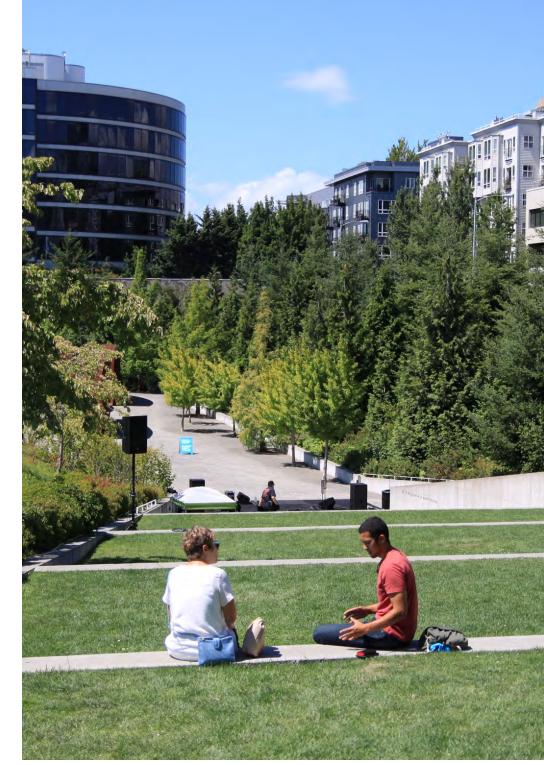




ILLUSTRATIVE SITE PLAN

12543.000 PROJECT NUMBER L100









CAMPUS WALKS

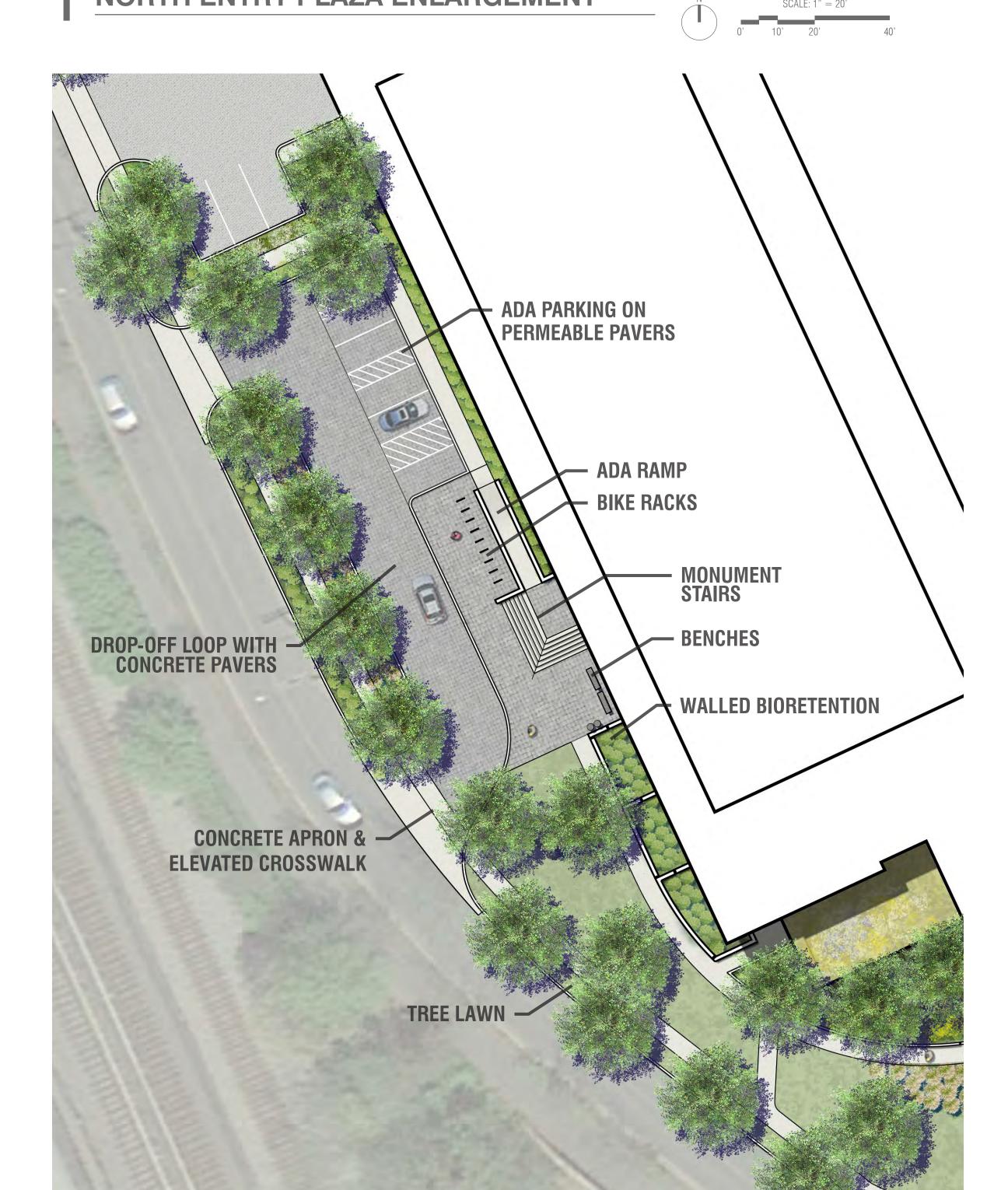
**FORMAL ENTRY PLAZA** 





CONNECTED CAMPUS COLLEGE STANDARD SITE FURNISHINGS

INDOOR/OUTDOOR CONNECTION









PAVERS AT BUILDING ENTRANCE PLAZAS

CONTINUOUS TREE LAWN





PERMEABLE PAVER PARKING

STRUCTURED BIORETENTION

NATURAL PLANTING W/ LAYERED TEXTURES

2 DROP-OFF ENLARGEMENT



PROJECT NUMBER

L101
SHEET NUMBER

USING AGENCY APPROVAL

DATE

Catherine and Isiah Leggett Math

and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

TITLE

DGS APPROVAL

PROJECT MANAGER DATE

CHIEF OF PM&D DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS

CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850
301-881-2545

Cagley & Associates
STRUCTURAL ENGINEERS

STRUCTURAL ENGINEER
6141 Executive Boulevard
Rockville, MD 20852
301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY: ARS

CHECKED BY: SK

ISSUED FOR REV DATE

HEMATIC DESIGN JAN 23, 20

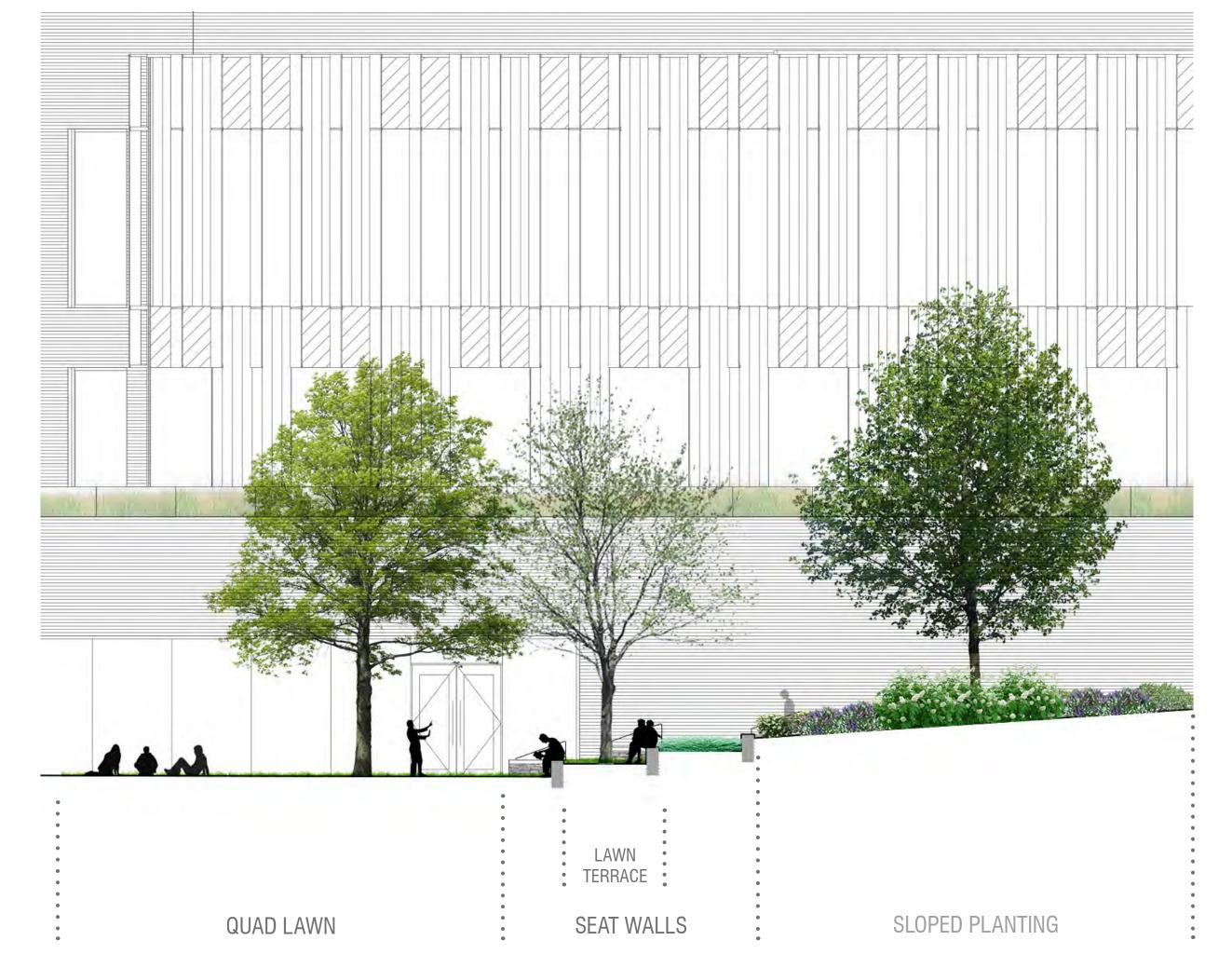
SEALS AND SIGNATURES



KEYPLAN NORTH

ILLUSTRATIVE FEATURE AREA ENLARGEMENTS











SCUPPER @ TERRACED BIORETENTION INFORMAL GATHERING





TERRACED LAWN

FIBER SOIL TURFGRIDS REINFORCED TURF





**CURB CUTS INTO BIORETENTION** 

**BUFFER PLANTINGS** 

ILLUSTRATIVE FEATURE AREA **ENLARGEMENTS** 

Catherine and Isiah Leggett Math

and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

**DGS APPROVAL** 

**SMITHGROUP** 

WASHINGTON, DC 20006

800 King Farm Boulevard, 4th Floor Rockville, MD 20850

Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852

Mahan Rykiel LANDSCAPE ARCHITECTS

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

3300 Clipper Mill Road, Suite 200

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS

202.842.2100

301-881-2545

301-881-9050

Spexsys AV, IT, SECURITY

DWG FILE:

DRAWN BY: ARS

CHECKED BY: sk

SEALS AND SIGNATURES

1700 NEW YORK AVENUE NW SUITE 100

TITLE

PROJECT MANAGER

CHIEF OF PM&D

DATE

DATE

DATE

12543.000 PROJECT NUMBER L102 SHEET NUMBER



EXISTING SHADE TREE TO REMAIN (CANOPY AND CRITICAL ROOT ZONE)

EXISTING EVERGREEN TREE TO REMAIN (CANOPY AND CRITICAL ROOT ZONE)

LAWN (SODDED) WITH REINFORCED

✓ LIGHT POLE, SEE LIGHTING PLAN FOR SCHEDULE SEE 7/L201 FOR FOOTER DETAIL

P1 CAST-IN-PLACE CONCRETE PAVING

P1 CAST-IN-PLACE CONCRETE PAVING (VEHICULAR)

P2 CONCRETE PAVERS (VEHICULAR)

P4 10 PERMEABLE CONCRETE PAVERS (VEHICULAR)

PD 4 DETECTABLE WARNING PAVERS

C1 1 PLANTER CURB/CHEEKWALL @ BIORETENTION

 FIRELANE DIMENSIONS DETERMINED IN CONSULTATION WITH LOCAL FIRE MARSHAL. 2. SEE LIGHTING PLAN FOR LIGHT FIXTURE SCHEDULE.

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard

Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS

3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY: ARS

CHECKED BY: SK

ISSUED FOR

REV DATE

SEALS AND SIGNATURES



KEYPLAN

**MATERIALS** 

12543.000

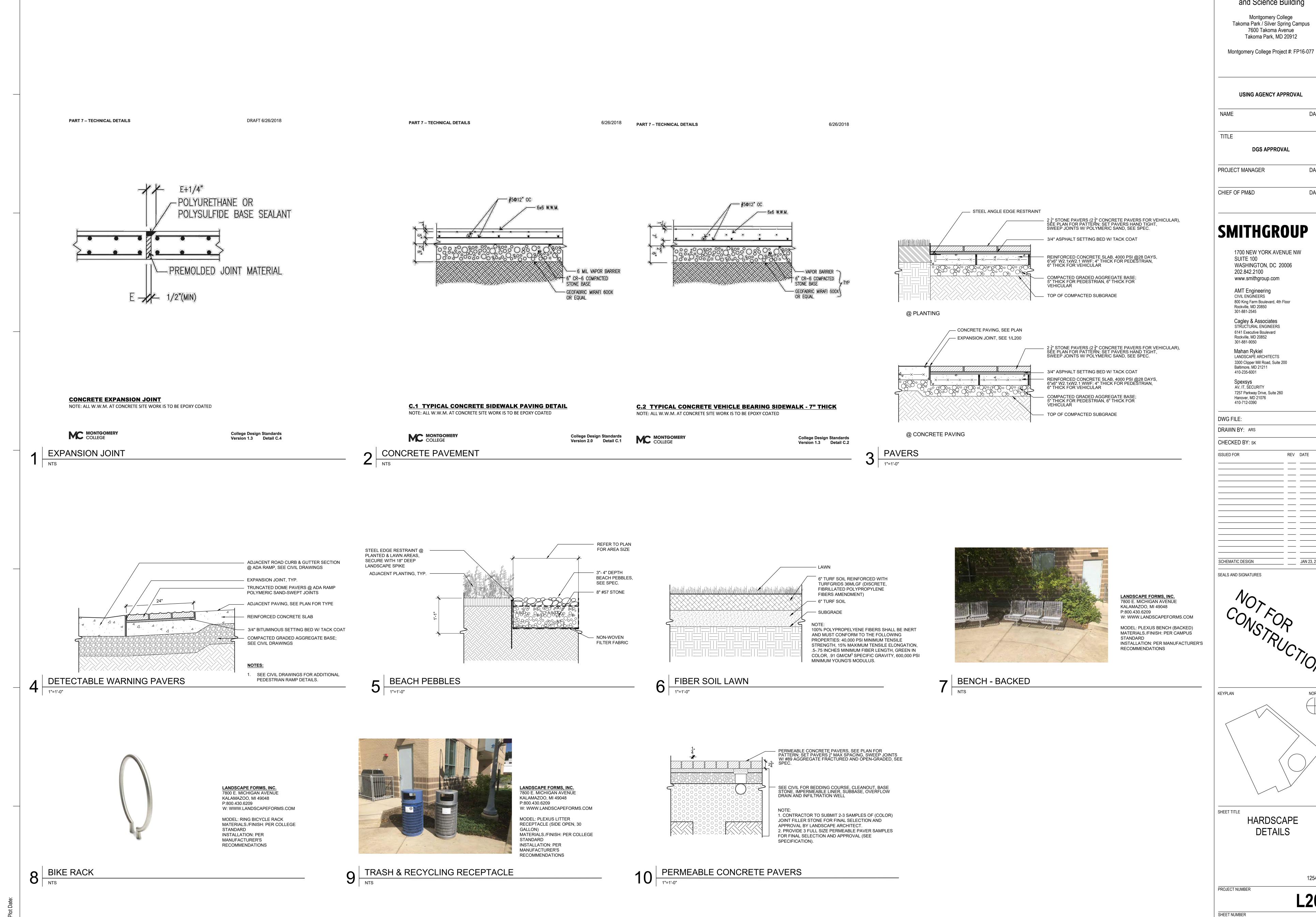
L103

PROJECT NUMBER

SHEET NUMBER

1 MATERIALS PLAN

1" = 30'



> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue

**USING AGENCY APPROVAL** 

DATE

**DGS APPROVAL** 

DATE

DATE

# **SMITHGROUP**

1700 NEW YORK AVENUE NW

www.smithgroup.com AMT Engineering CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

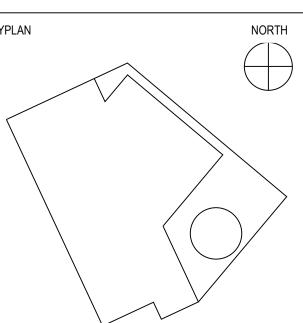
Mahan Rykiel LANDSCAPE ARCHITECTS

Baltimore, MD 21211 AV, IT, ŠECURITY

7257 Parkway Drive, Suite 260 Hanover, MD 21076

REV DATE

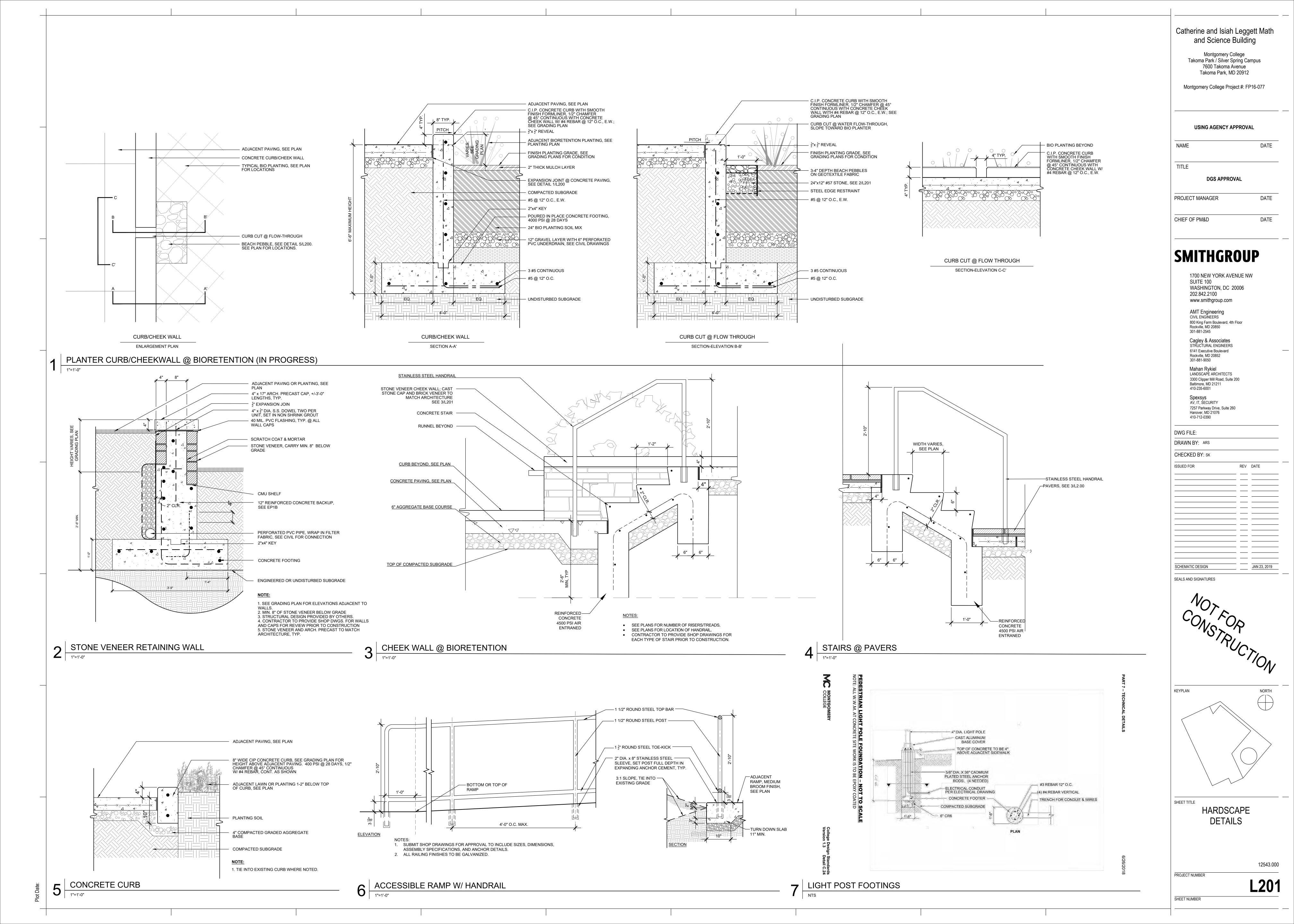




HARDSCAPE **DETAILS** 

12543.000

**L200** 





### **LEGEND**

EXISTING SHADE TREE TO REMAIN (CANOPY AND CRITICAL ROOT EXISTING EVERGREEN TREE TO REMAIN (CANOPY AND CRITICAL ROOT ZONE)

SHADE TREE (2.5" CAL., B&B)

ORNAMENTAL TREE (8-10' HT., B&B) PLANTING AREA 70% SHRUBS 30% PERENNIALS & GRASSES

BIORETENTION PLANTING

40% SHRUBS, 60% PERENNIALS & LAWN (SODDED) WITH REINFORCED

LIMIT OF DISTURBANCE ------ PROPERTY LINE ✓ LIGHT POLE, SEE LIGHTING PLAN FOR SCHEDULE

FIBER SOIL

AREAS INSIDE THE L.O.D. THAT ARE IDENTIFIED AS PLANTING AREAS ON THE MATERIALS PLAN (L103) BUT NOT IDENTIFIED HERE AS PLANTING BED OR BIORETENTION TO BE SOD LAWN

### TREE PLANT SCHEDULE

QTY.	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT	COMMENTS
		SHADE TREES			
4	AB	Acer rubrum 'Bowhall' Bowhall Maple	2.5" Cal	B&B	Central Leader Full Crown
15	AR	Acer rubrum 'Franksred' Red Sunset Maple	2.5" Cal	B&B	Central Leader Full Crown
7	AS	Acer saccharum Sugar Maple	2.5" Cal	B&B	Central Leader Full Crown
2	BN	Betula nigra 'Dura Heat' Birch	2.5" Cal	B&B	Multi-stem, 3 canes min. 5 canes max. Full Crown
2	CC	Carpinus caroliniana American Hornbeam	8-10' Ht.	B&B	Multi-stem, 3-5 canes Matched
3	СВ	Carpinus betulus 'Fastigiata' European Hornbeam	2.5" Cal	B&B	Central Leader Full Crown
2	LT	Liriodendron tulipifera 'JFS-Oz' Emerald City Tulip Tree	2.5" Cal.	B&B	Multi-Stem, 3-5 canes Matched
8	QP	Quercus phellos Willow Oak	2.5" Cal	B&B	Central Leader Full Crown
21	QR	Quercus rubra Red Oak	2.5" Cal	B&B	Central Leader Full Crown
5	TT	Tilia tomentosa Silver Linden	2.5" Cal	B&B	Central Leader Full Crown
		ORNAMENTAL TREES			
6	AC	Amelanchier canadensis Shadblow Serviceberry	8-10' Ht.	B&B	Multi-stem, 3-5 canes Matched
8	MV	Magnolia virginiana	8-10' Ht.	B&B	Multi-stem, 3-5 canes

### PLANTING BED & BIORETENTION PLANT PALETTE

Flowering Magnolia

KEY	BOTANICAL/COMMON NAME	SIZE	ROOT	COMMENTS	
AZ	SHRUBS Azalea Robin Hill 'Lady Robin' Lady Robin Azalea	#3	Cont.	24" Spd.	
CS	Cornus sericea 'Bayleyi' Dwarf Redtwig Dogwood	#3	Cont.	24" Spd.	
IV	Itea virginiana 'Sprich' Sweetspire	#3	Cont.	24" Spd.	
IG	llex glabra Inkberry	#3	Cont.	18" Ht.	
RA	Rhus aromatica 'Gro Lo' Dwarf Fragrant Sumac	#3	Cont.	18" Spd. 3' O.C.	
VD	Viburnum dentatum Arrowood Viburnum	#7	Cont.	36" Spd.	
	PERENNIALS & GRASSES				
ASC	Asclepias tuberosa Butterfly Weed	#1	Cont.	18" Ht. 18" O.C.	
CAR	Carex pensylvanica Pennsylvania Sedge	#1	Cont.	12" Ht. 18" O.C.	
IRI	Iris versicolor Northern Blue Flag Iris	#1	Cont.	24" Ht. 18" O.C.	
JUN	Juncus effuses Soft Rush	#1	Cont.	24" Ht. 18" O.C.	
LIR	Liriope muscari Lilyturf	#1	Cont.	24" Ht. 12" O.C.	
PAN	Panicum virgatum 'Shenandoah' Switchgrass	#1	Cont.	24" Ht. 30" O.C.	
POL	Polystichum acrostichoides Christmas Fern	#1	Cont.	24" Ht. 24" O.C.	
RUD	Rudbeckia fulgida var. fulgida Black-eyed Susan	#1	Cont.	24" Ht. 18" O.C.	
SOL	Solidago sphacelata 'Golden Fleece' Golden Fleece Goldenrod	#1	Cont.	12" Ht. 18" O.C.	
SPO	Sporobolus heterolepis Prairie Dropseed	#1	Cont.	12" Ht. 18" O.C.	

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

#### **USING AGENCY APPROVAL**

DATE NAME TITLE **DGS APPROVAL** PROJECT MANAGER DATE

# **SMITHGROUP**

DATE

CHIEF OF PM&D

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

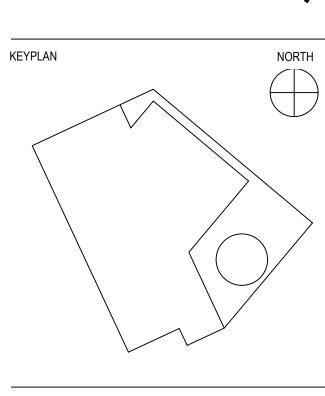
Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY: ARS

CHECKED BY: SK ISSUED FOR





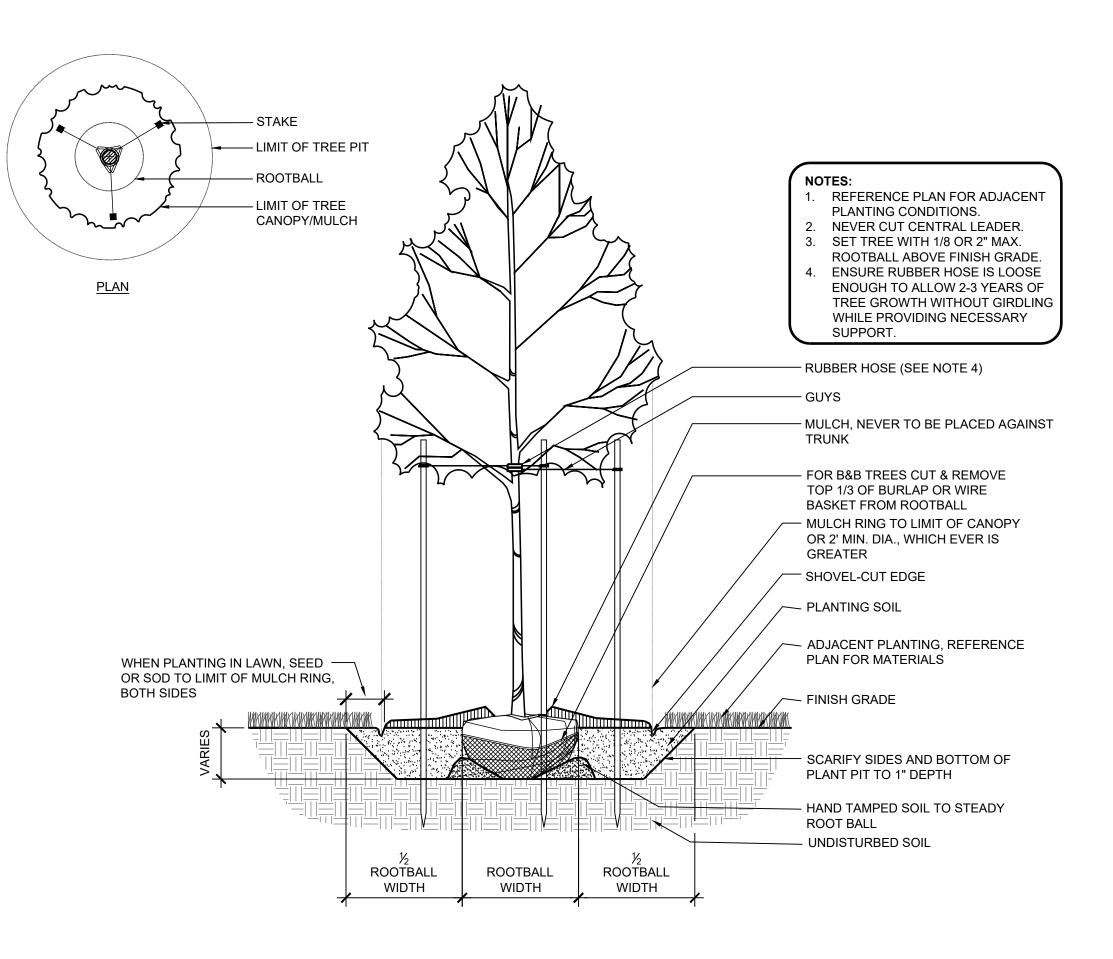
OVERALL PLANTING PLAN

12543.000

PROJECT NUMBER

SHEET NUMBER

L300



PLANTING- SINGLE LEADER TREES 2.5"-4" CALIPER AND LESS THAN 14' HT. 1/2"=1'-0"

**SEQUENCE OF CONSTRUCTION (GENERAL)** 

3. TILL SOIL AND APPLY AMENDMENTS TO

8. PLACE MULCH OVER ENTIRE PLANT BED. 9. WATER ENTIRE PLANT BED THOROUGHLY.

5. INSTALL FERTILIZER TABLETS IN EACH PLANT

1. STAKE OUT PLANT/BED LOCATIONS.

REFER TO SPECIFICATIONS

4. INSTALL PLANTS.

6. PLACE BACKFILL.

4 SHRUB PLANTING

1/2"=1'-0"

THOROUGHLY.

2. CUT EDGE OF PLANT BED

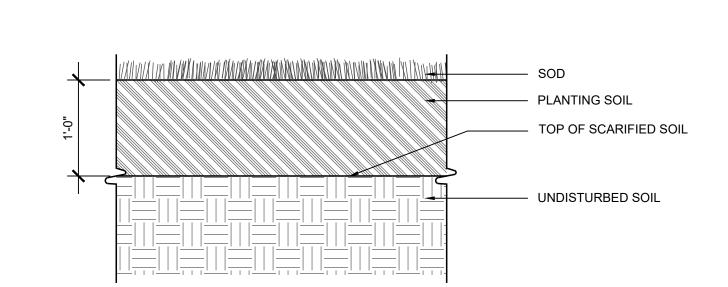
ENTIRE PLANTING AREA.

7. WATER EACH INDIVIDUAL PLANT

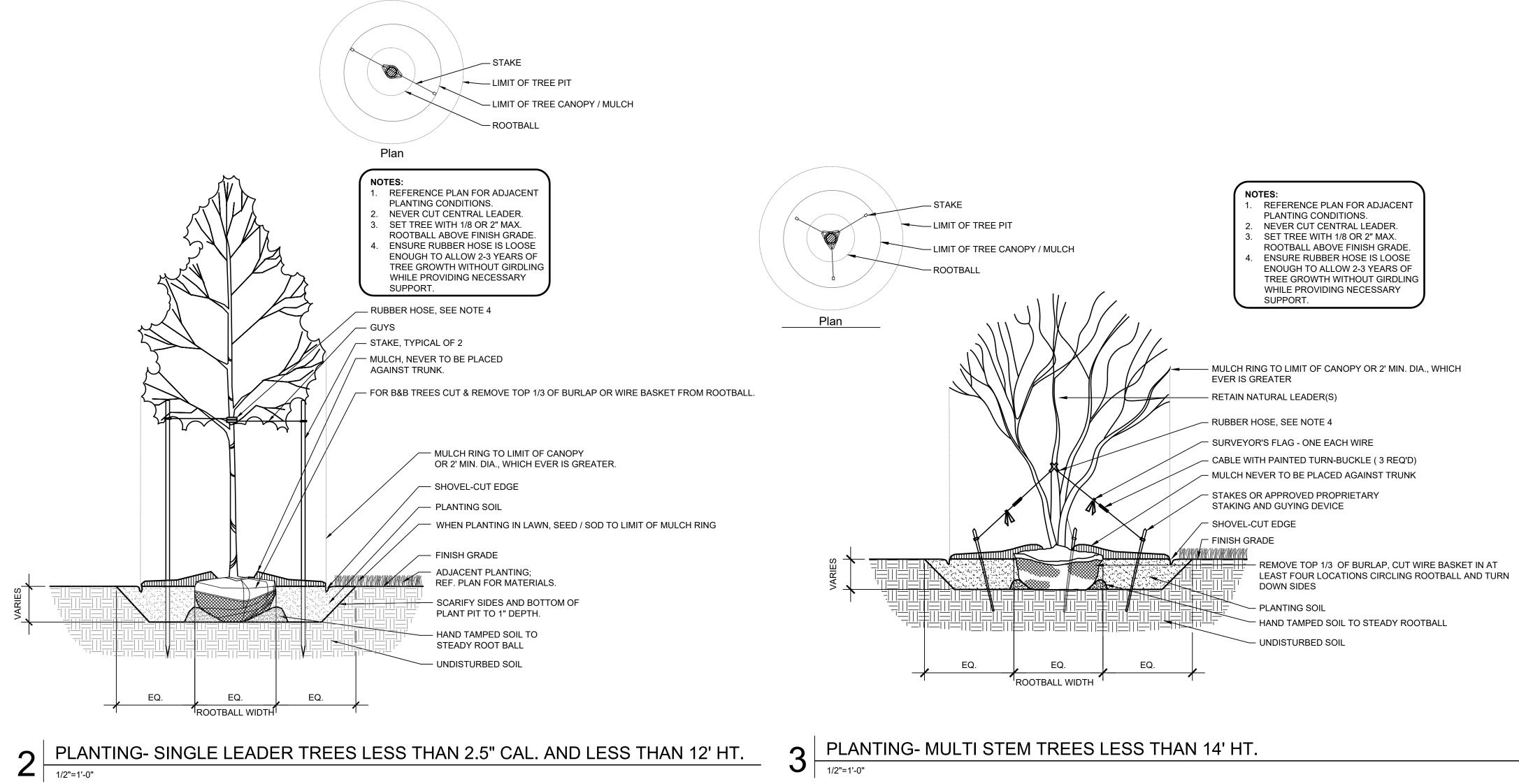
FIRST LATERAL ROOT FLUSH WITH FINISH GRADE MULCH (TYP.)(2" DEPTH) - TOOLED BED EDGE, MIN. 4" DEPTH, ALIGN LIMIT OF MULCH WITH PLANT CANOPY UNLESS OTHERWISE INDICATED ON PLAN (TYP.) FINISH GRADE, CONDITION VARIES SEE PLAN  $\overline{\phantom{a}}$  REMOVE  $\frac{1}{3}$  OF BURLAP FROM TOP OF ROOTBALL — SOIL MIX AS SPECIFIED — COMPACTED OR UNDISTURBED SOIL TAMPED SOIL UNDER ROOTBALL TO PREVENT SETTLING TILLED SOIL

GROUNDCOVER AS SPECIFIED. REFER TO PLANT LIST FOR SPACING.

5 PLANT SPACING



6 LAWN



3 PLANTING- MULTI STEM TREES LESS THAN 14' HT.

Catherine and Isiah Leggett Math and Science Building

> Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** DATE NAME

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D DATE

## **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

301-881-9050 Mahan Rykiel LANDSCAPÉ ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY: ARS

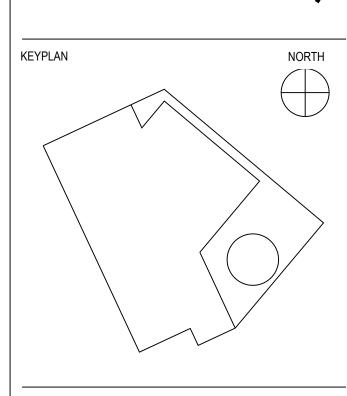
CHECKED BY: SK

ISSUED FOR REV DATE

SEALS AND SIGNATURES

SCHEMATIC DESIGN





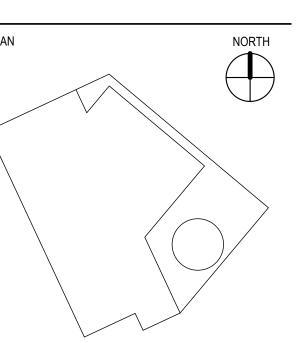
**PLANTING DETAILS** 

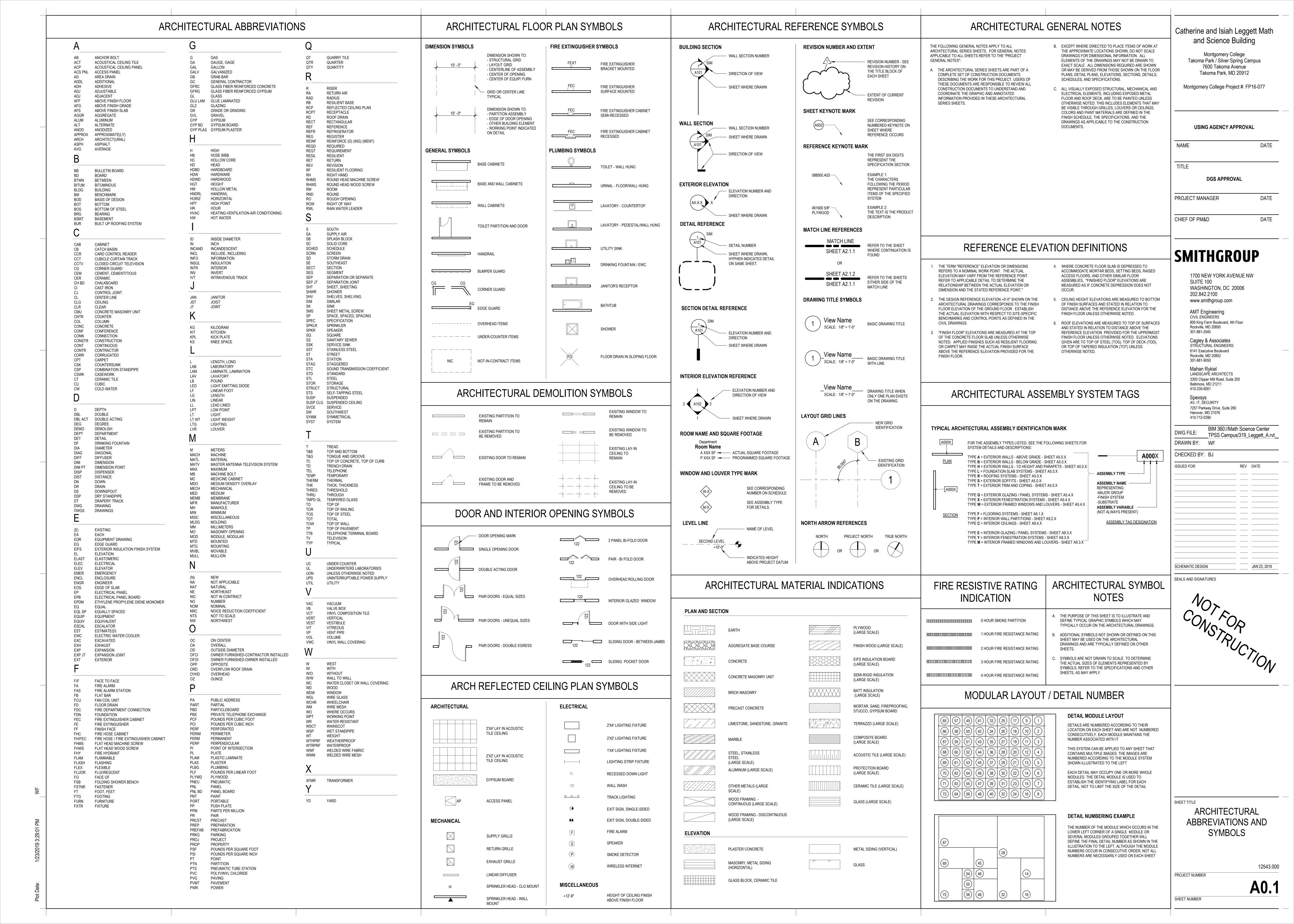
12543.000

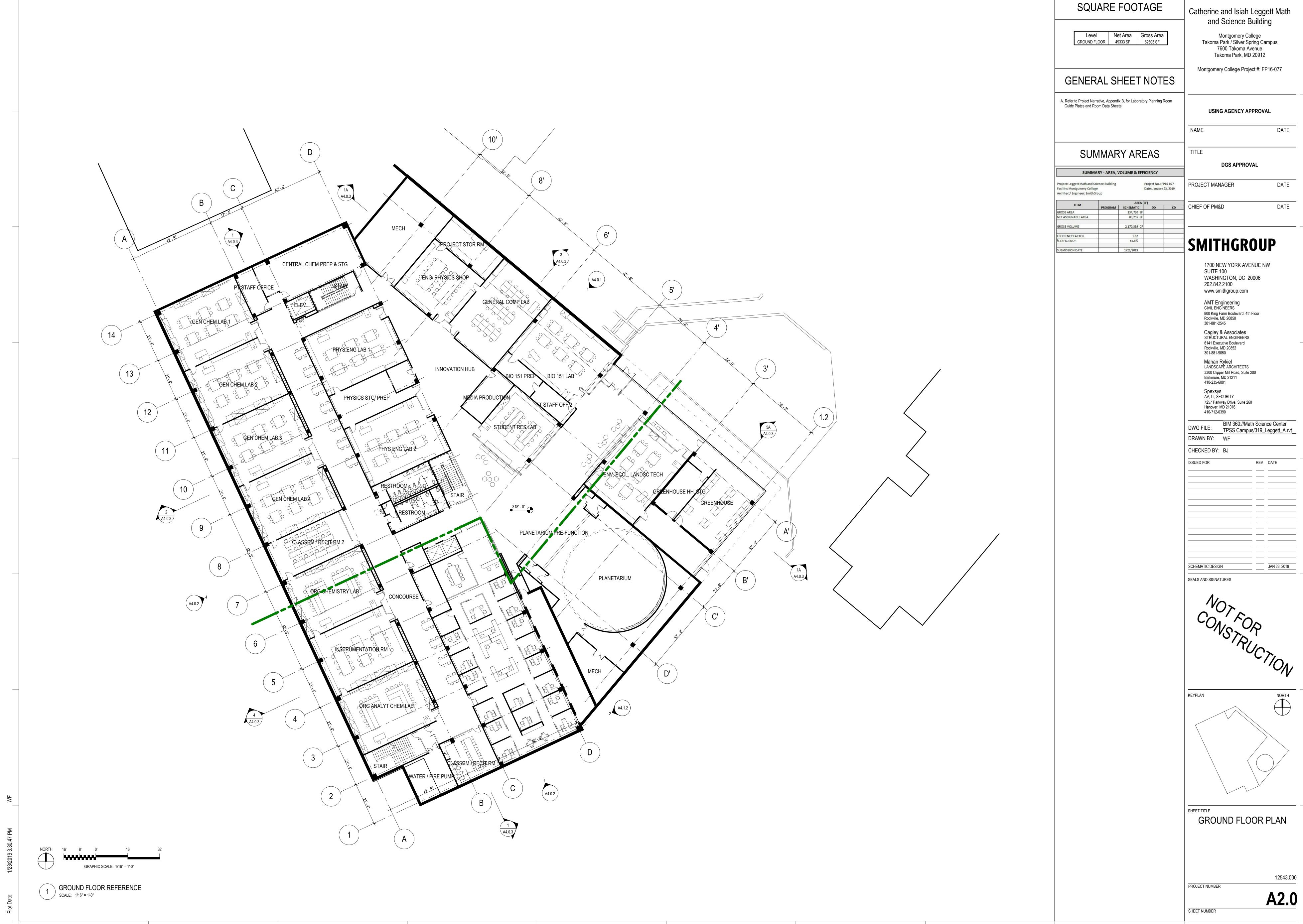
L400

PROJECT NUMBER



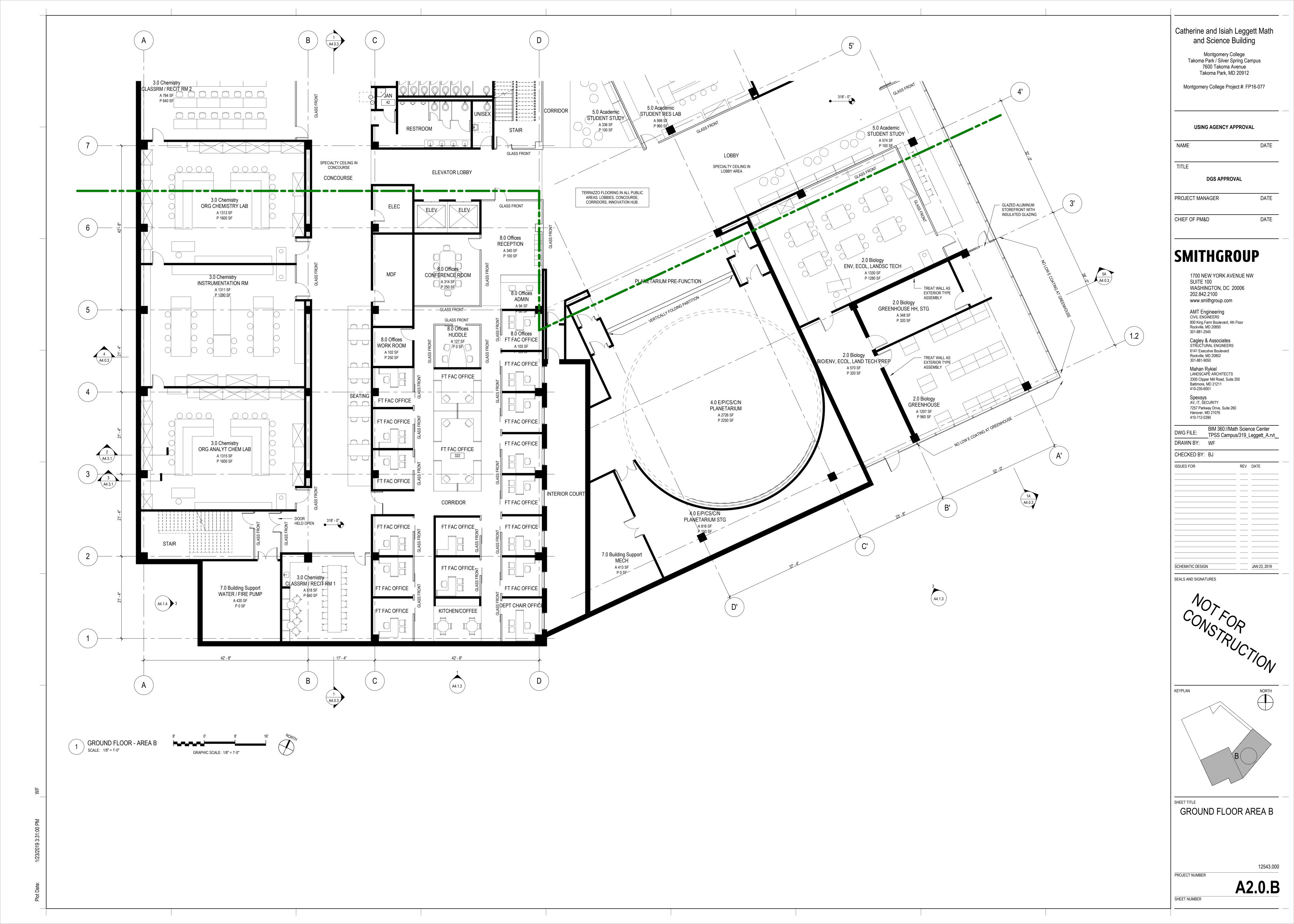


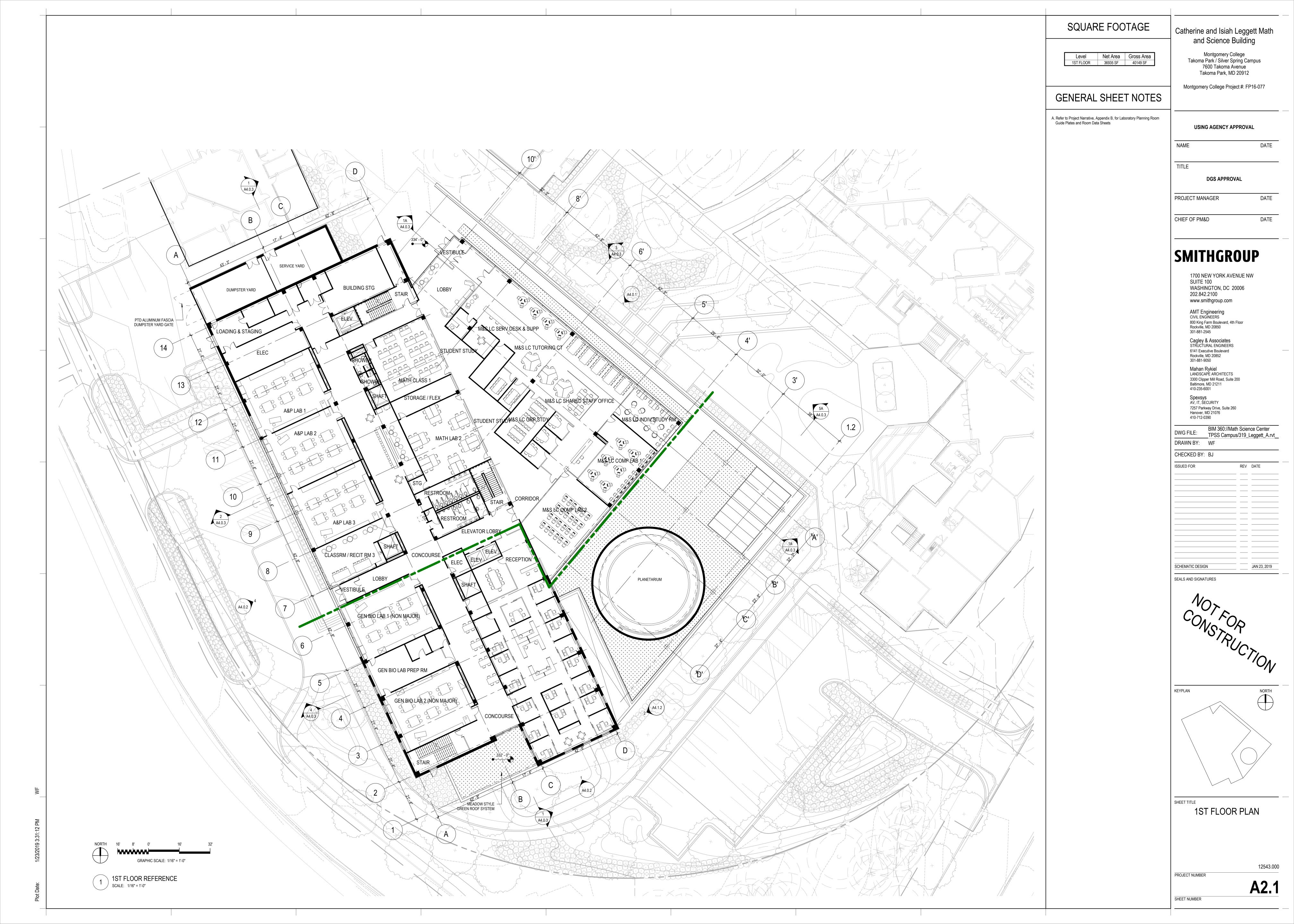


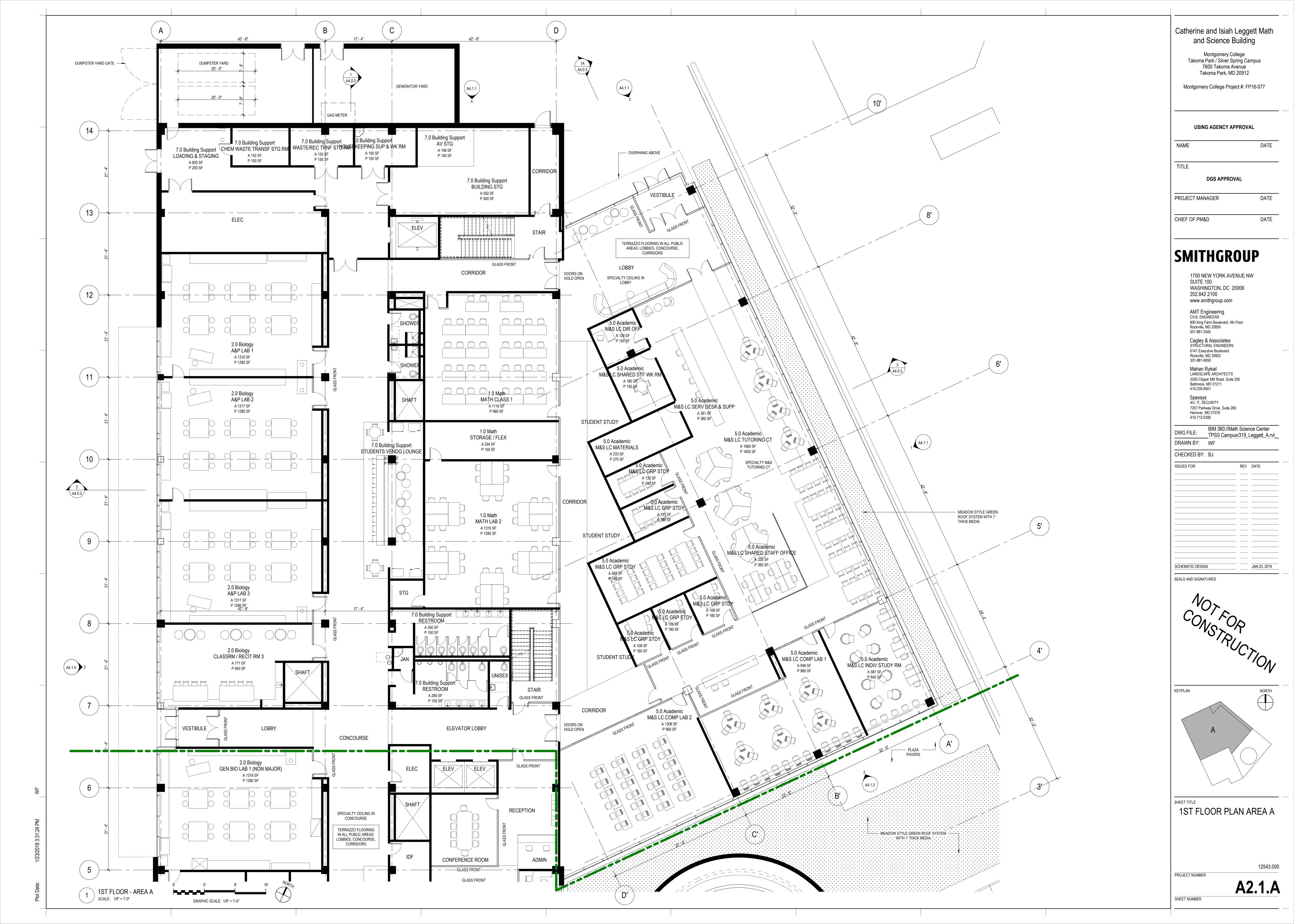


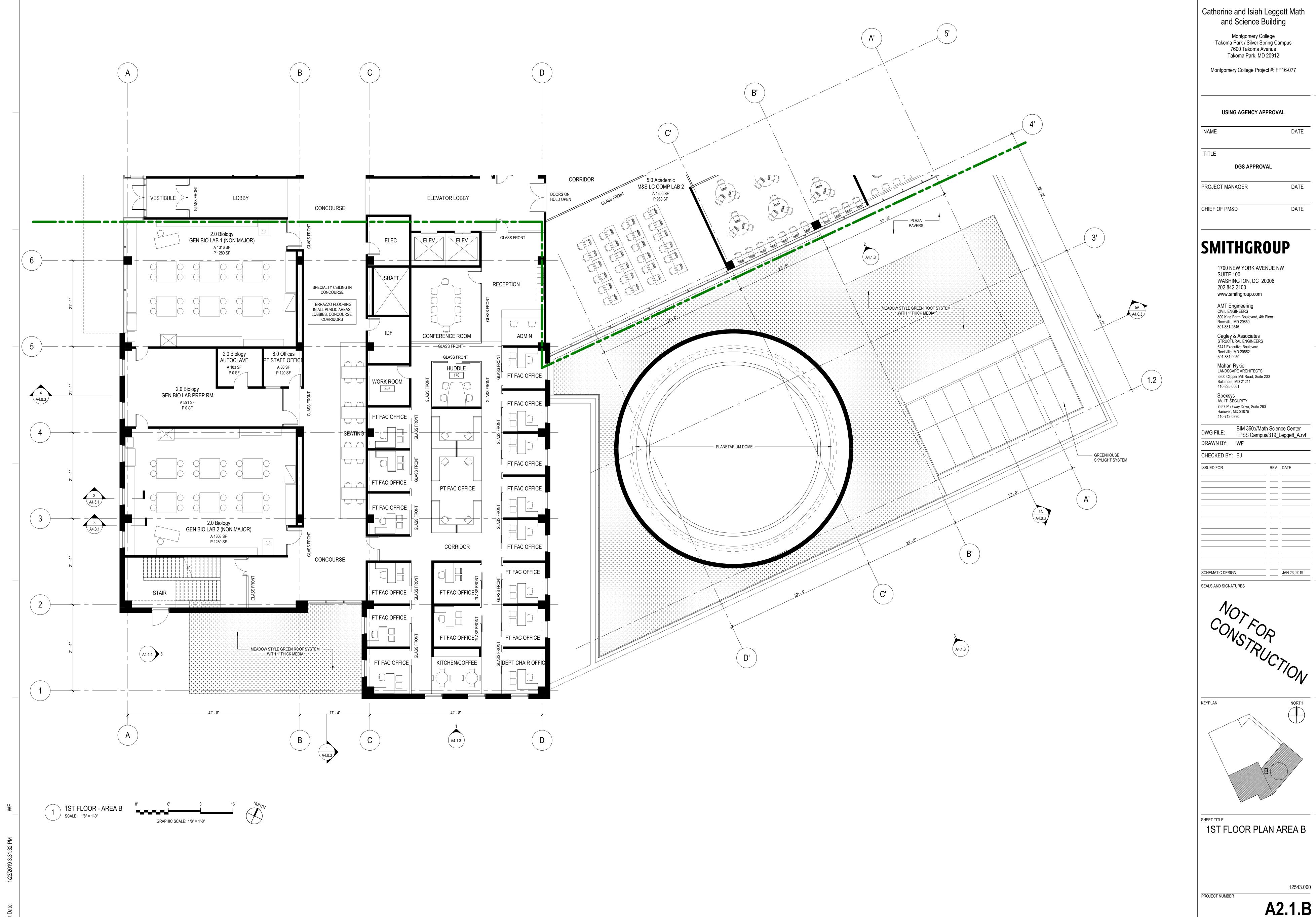
DATE

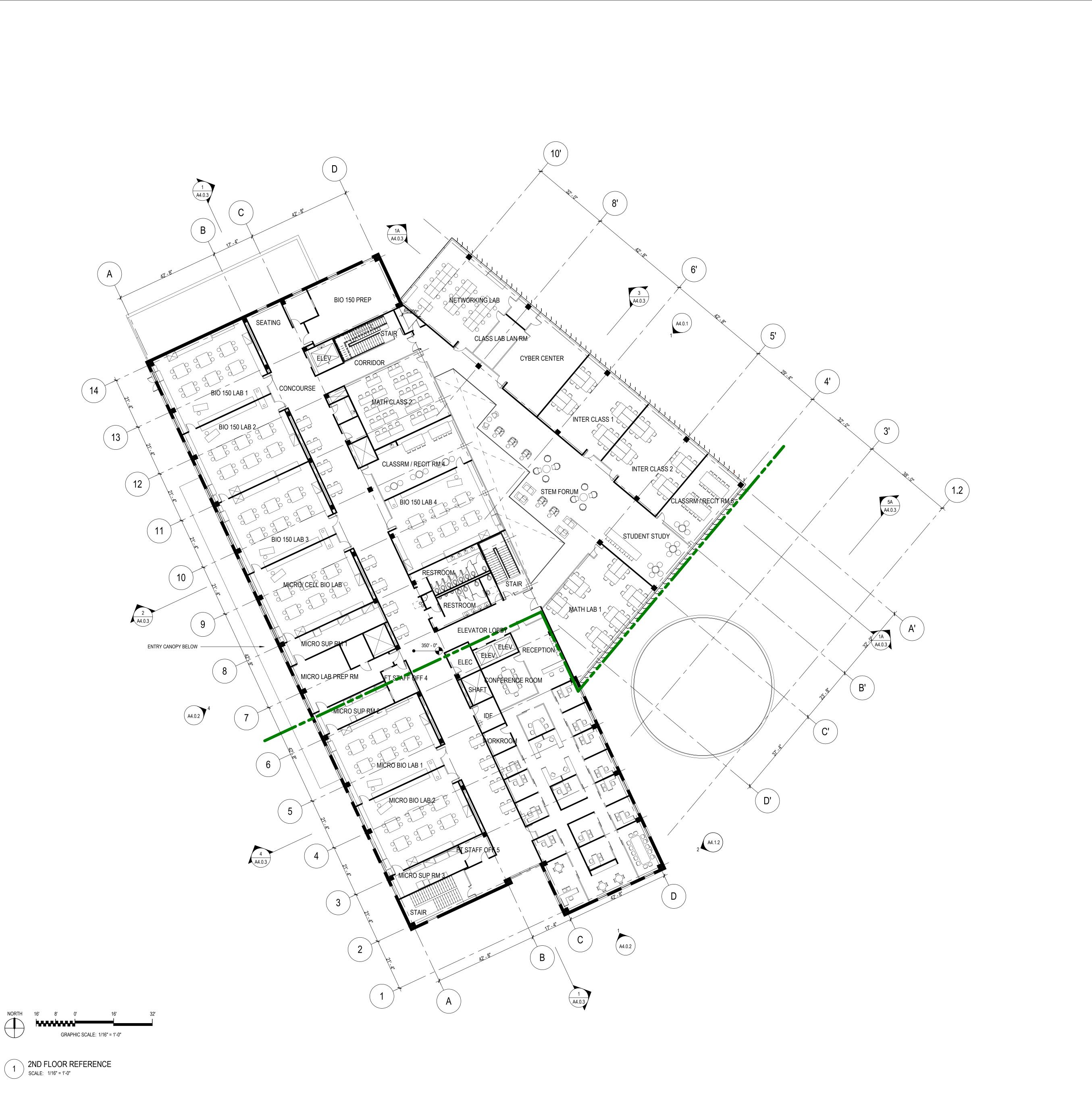












SQUARE FOOTAGE

LevelNet AreaGross Area2ND FLOOR35940 SF38624 SF

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Catherine and Isiah Leggett Math

and Science Building

Montgomery College Project #: FP16-077

Takoma Park, N

GENERAL SHEET NOTES

A. Refer to Project Narrative, Appendix B, for Laboratory Planning Room
 Guide Plates and Room Data Sheets

**USING AGENCY APPROVAL** 

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

EOT WITH TOLIT

CHIEF OF PM&D DATE

DATE

### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

DWG FILE: BIM 360://Math Science Center TPSS Campus/319\_Leggett\_A.rvt\_

DRAWN BY: WF

CHECKED BY: BJ

410-712-0390

ISSUED FOR

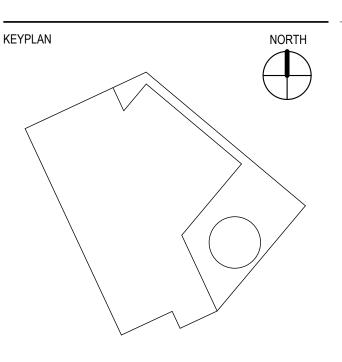
REV DATE

SCHEMATIC DESIGN

JAN 23, 2

SEALS AND SIGNATURES

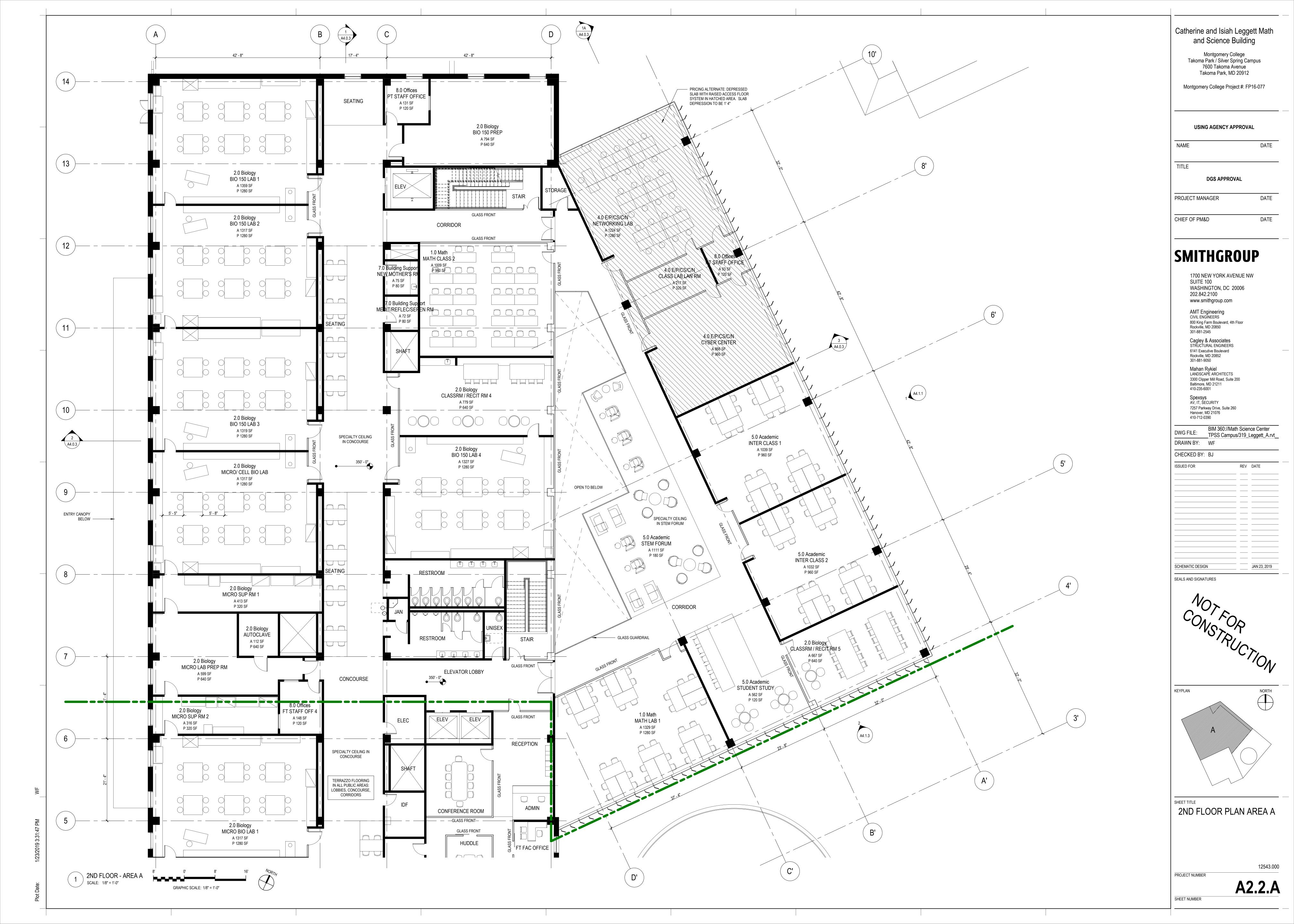


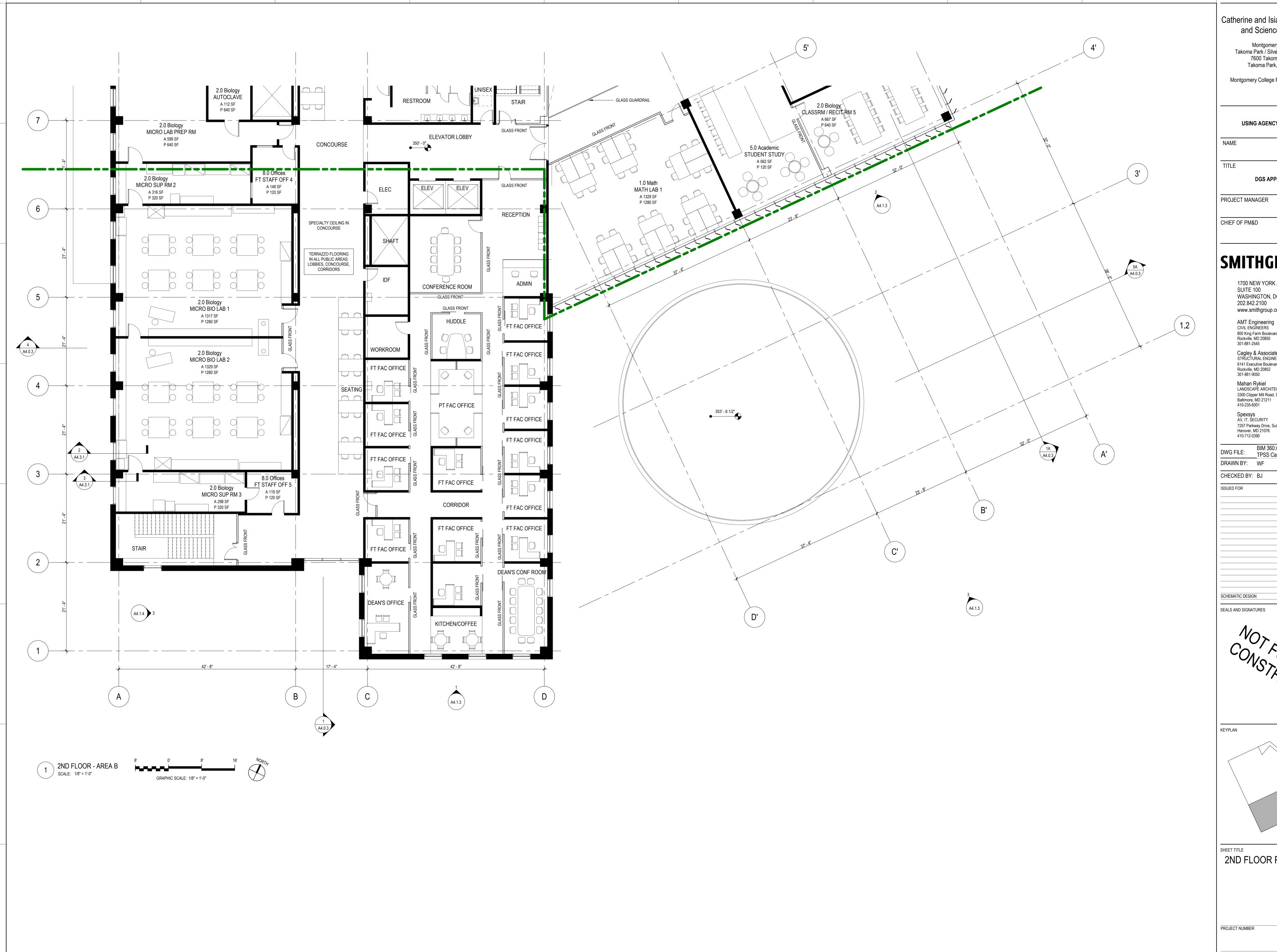


2ND FLOOR PLAN

12543.000 PROJECT NUMBER

A2.2





Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE **DGS APPROVAL** 

DATE

DATE

## **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

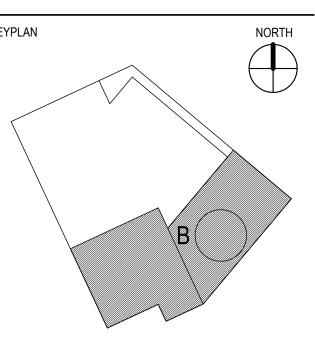
Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

BIM 360://Math Science Center TPSS Campus/319\_Leggett\_A.rvt\_

REV DATE

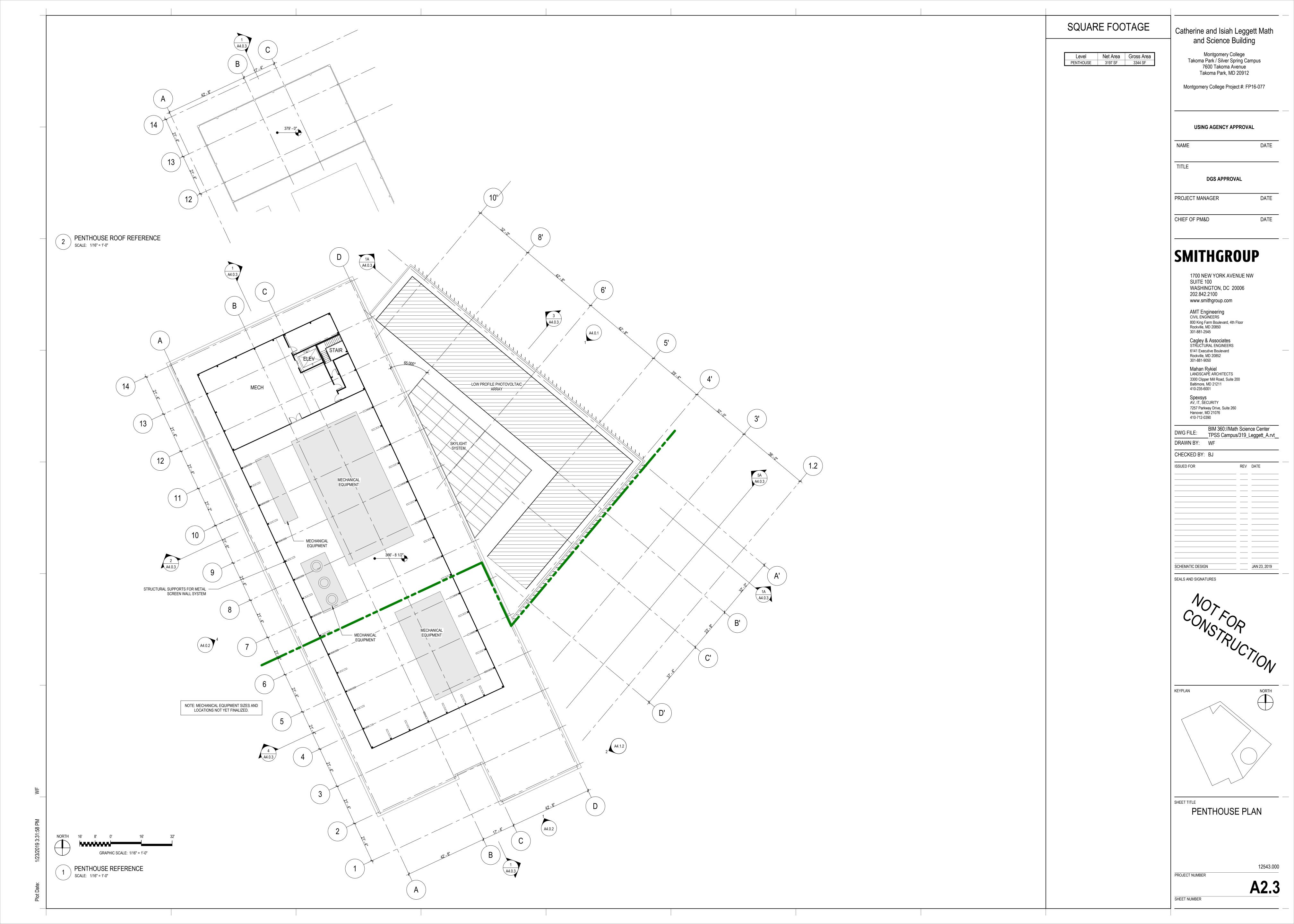


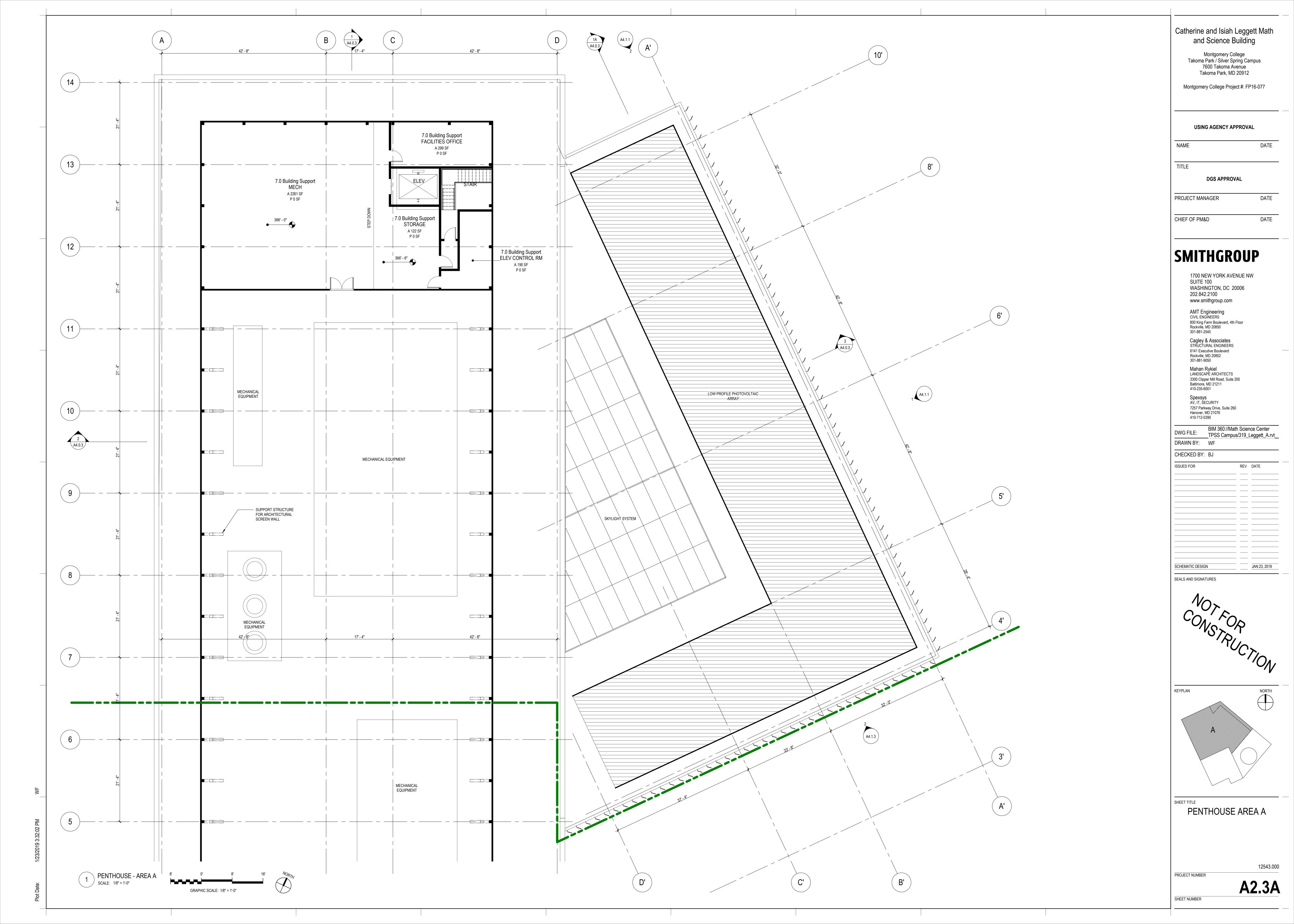


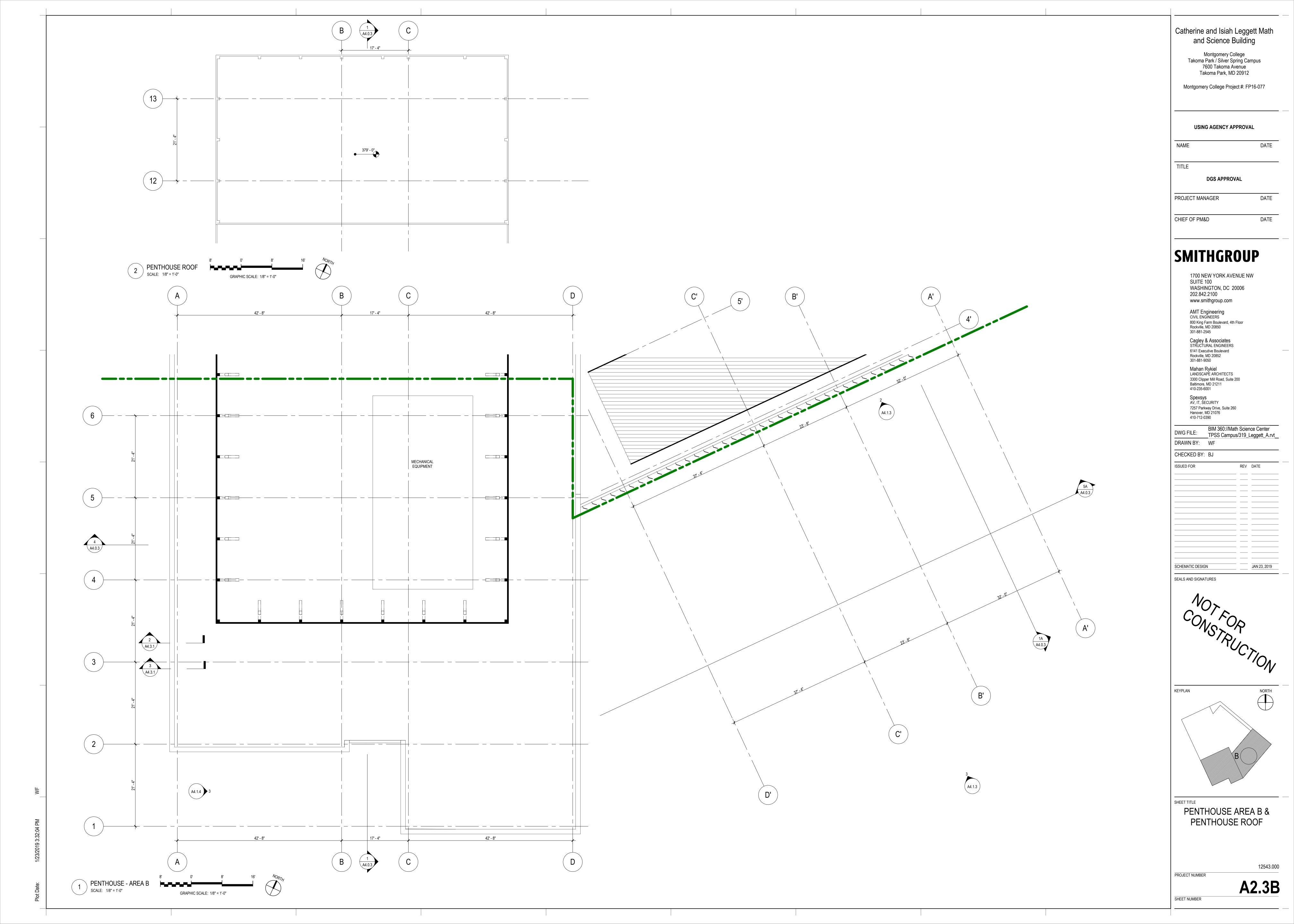
2ND FLOOR PLAN AREA B

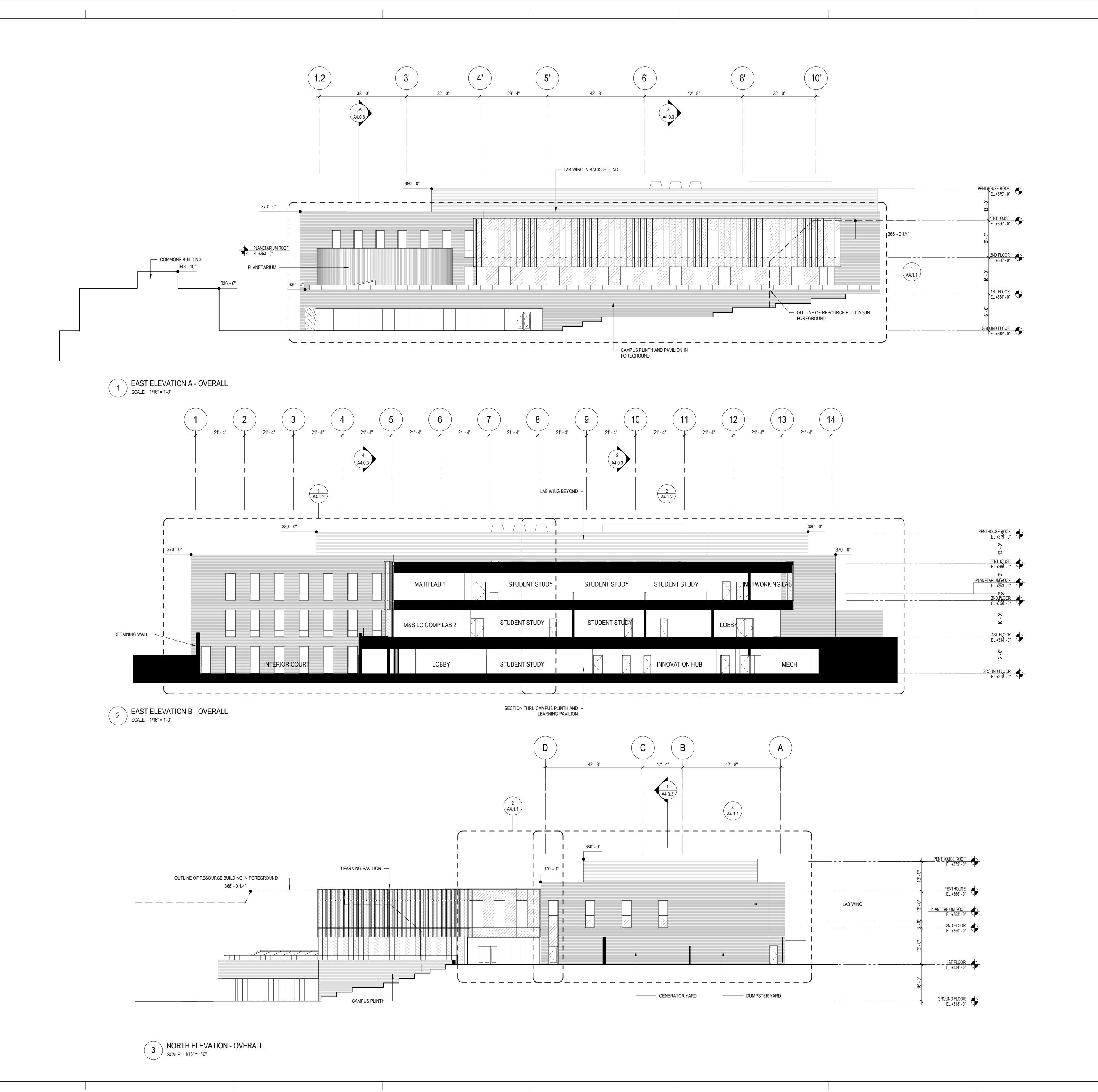
12543.000

**A2.2B** 









Montgomery College
Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D DATE

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW

SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

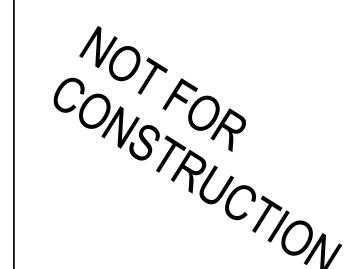
BIM 360://Math Science Center DWG FILE: \_\_TPSS Campus/319\_Leggett\_A.rvt\_ DRAWN BY: WF

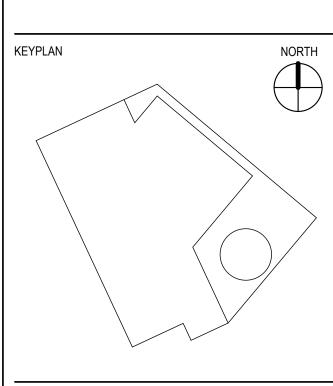
CHECKED BY: BJ

ISSUED FOR REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES

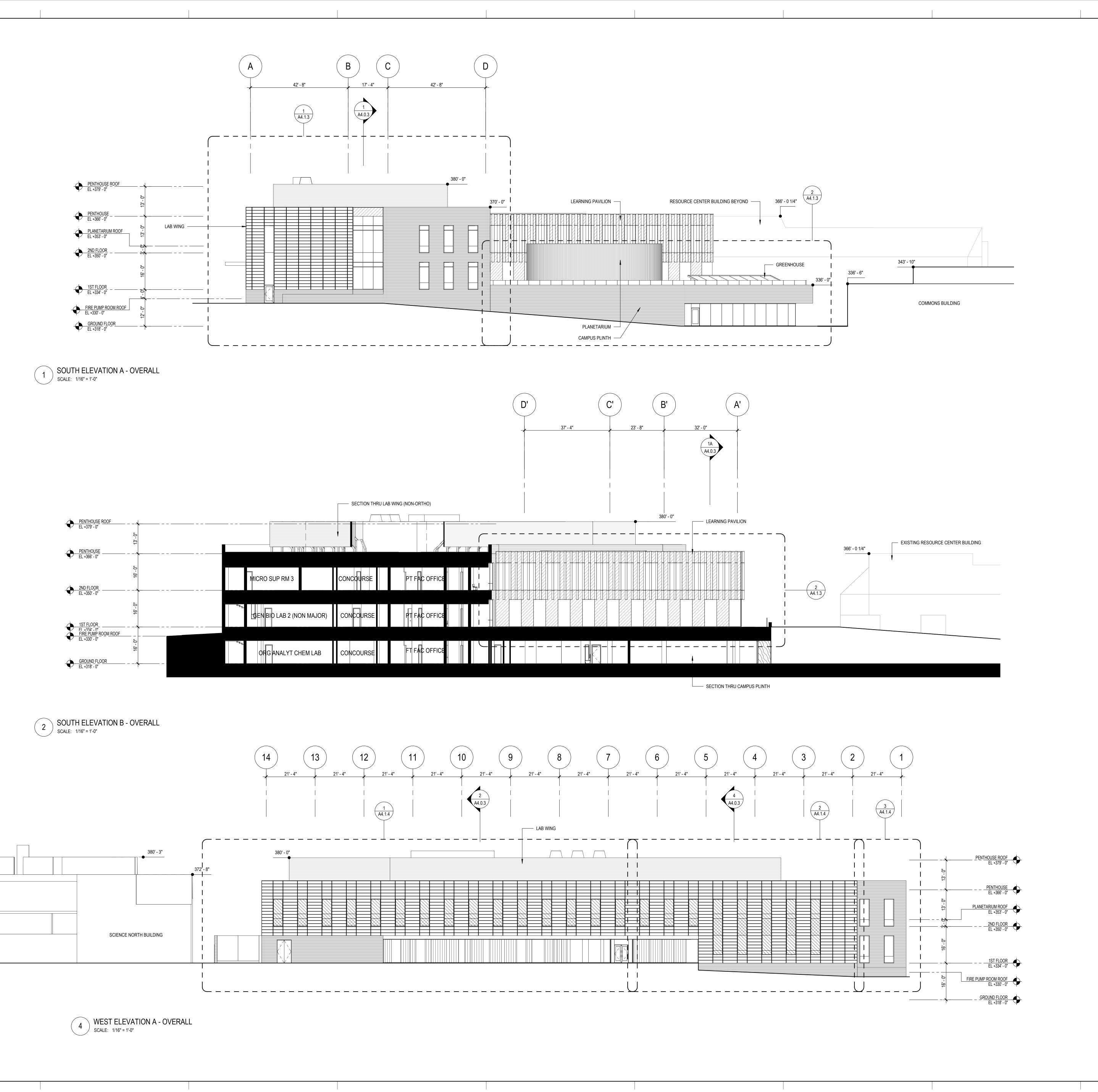




OVERALL BUILDING **ELEVATIONS & SECTIONS** 

12543.000

PROJECT NUMBER A4.0.1



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

AME DATE

**DGS APPROVAL** 

DATE

TITLE

PROJECT MANAGER

CHIEF OF PM&D DATE

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850
301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200
Baltimore, MD 21211
410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

410-712-0390

DWG FILE:

BIM 360://Math Science Center
TPSS Campus/319\_Leggett\_A.rvt\_

DRAWN BY: WF

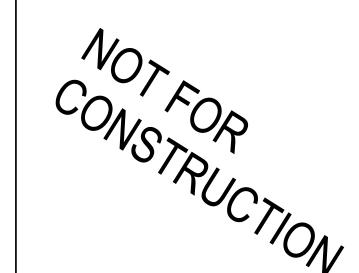
CHECKED BY: BJ

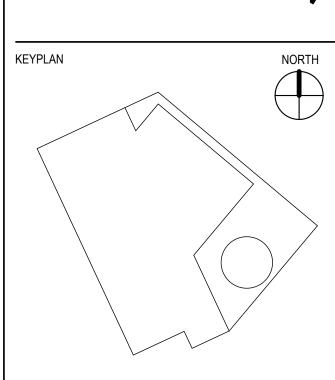
ISSUED FOR REV DATE

SCHEMATIC DESIGN

JAN 23, 20

SEALS AND SIGNATURES



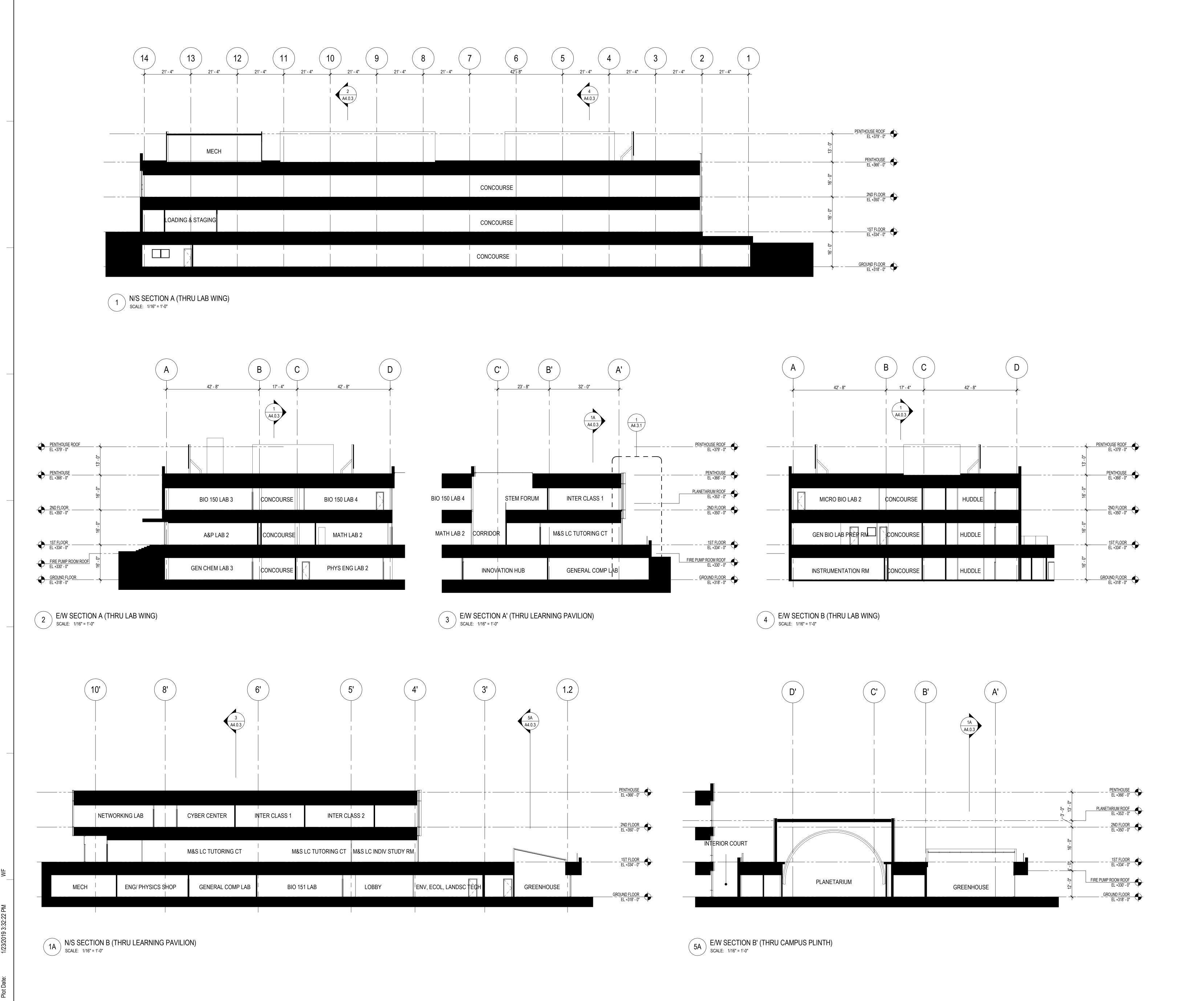


OVERALL BUILDING
ELEVATIONS & SECTIONS

PROJECT NUMBER

**A4.0.2**SHEET NUMBER

Plot Date:



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

301-881-9050 Mahan Rykiel LANDSCAPÉ ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

410-712-0390

BIM 360://Math Science Center DWG FILE: \_TPSS Campus/319\_Leggett\_A.rvt\_

DRAWN BY: WF

CHECKED BY: BJ

ISSUED FOR

REV DATE

SCHEMATIC DESIGN

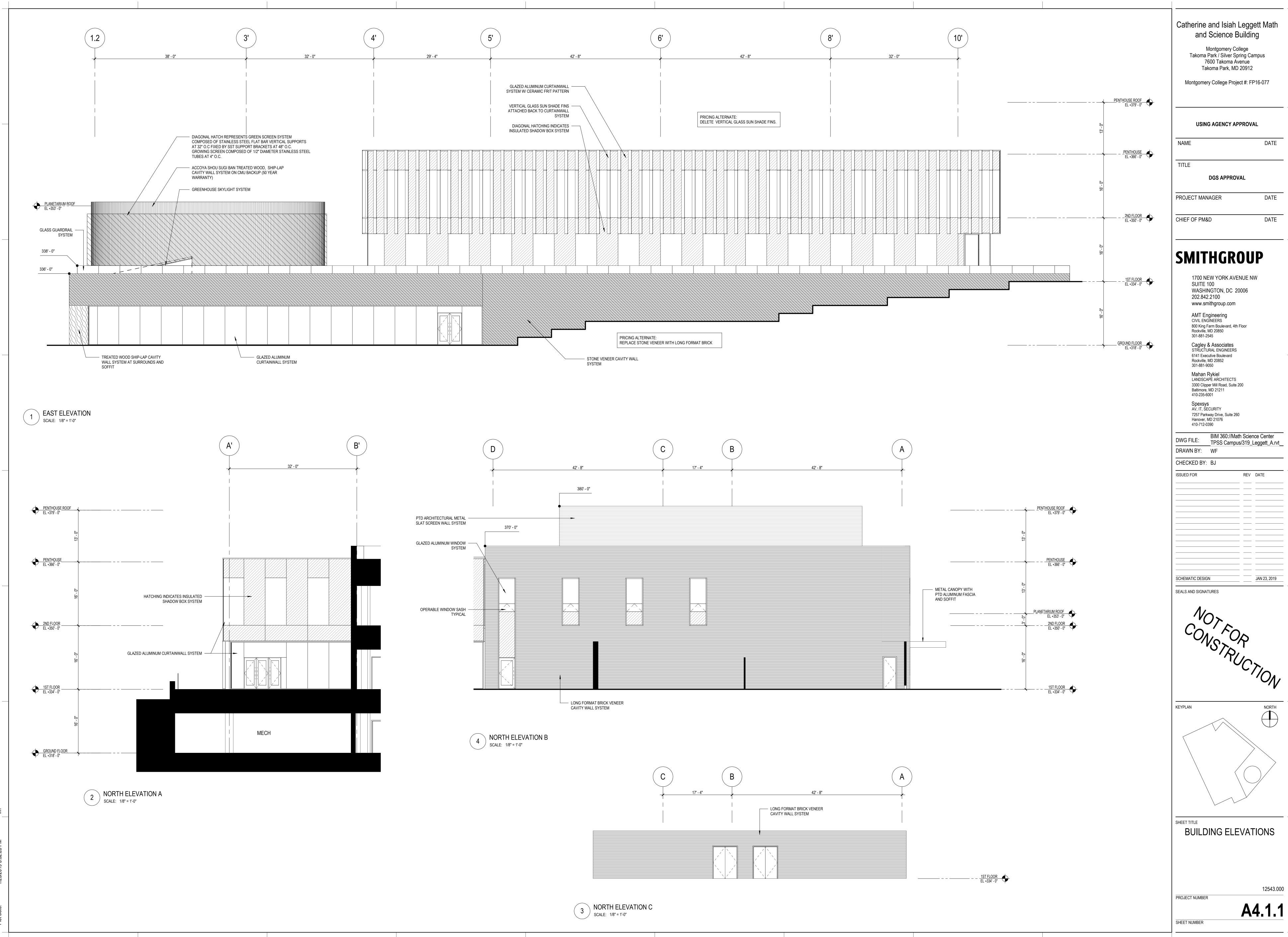
SEALS AND SIGNATURES

KEYPLAN

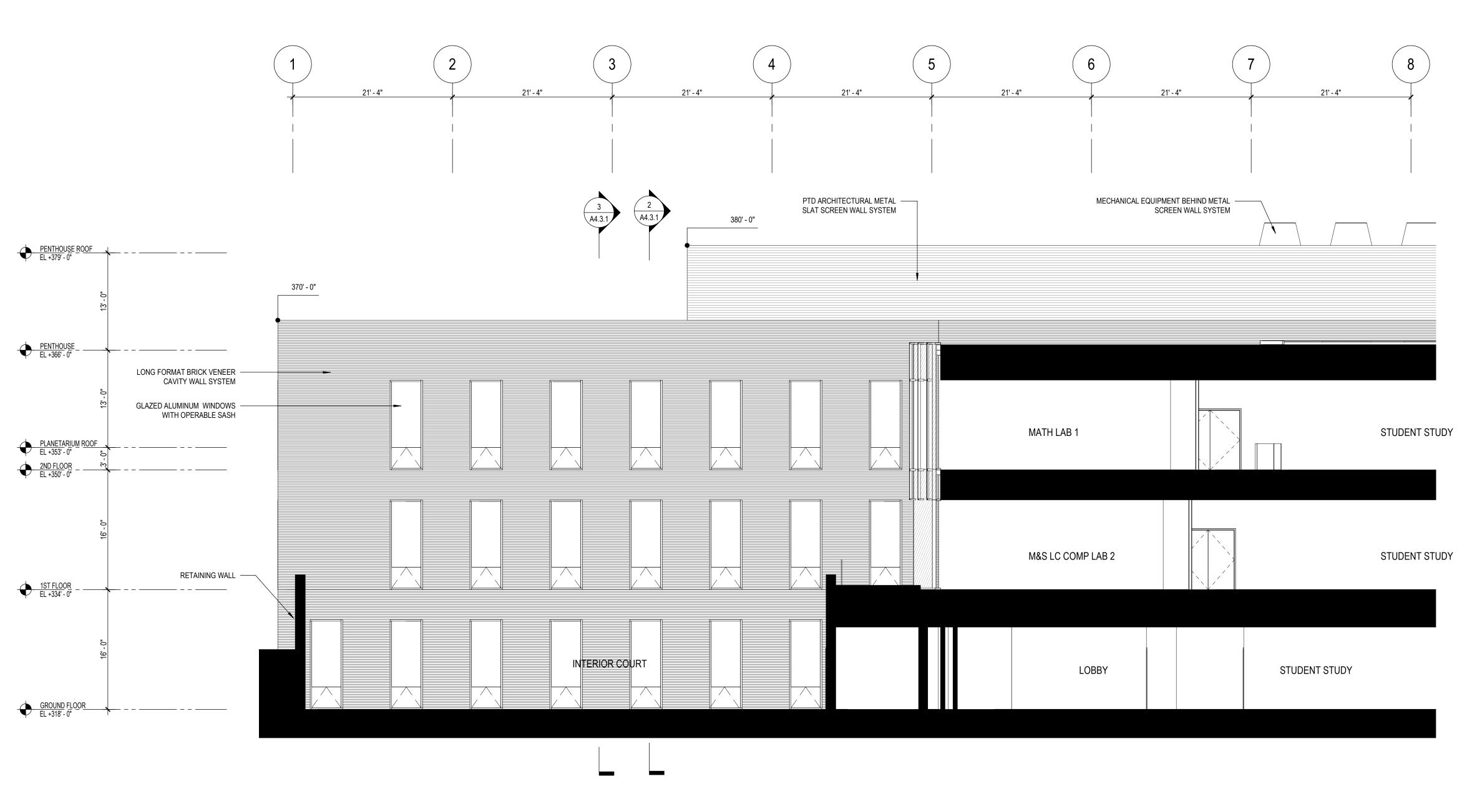
SHEET TITLE **OVERALL BUILDING** SECTIONS

12543.000 PROJECT NUMBER

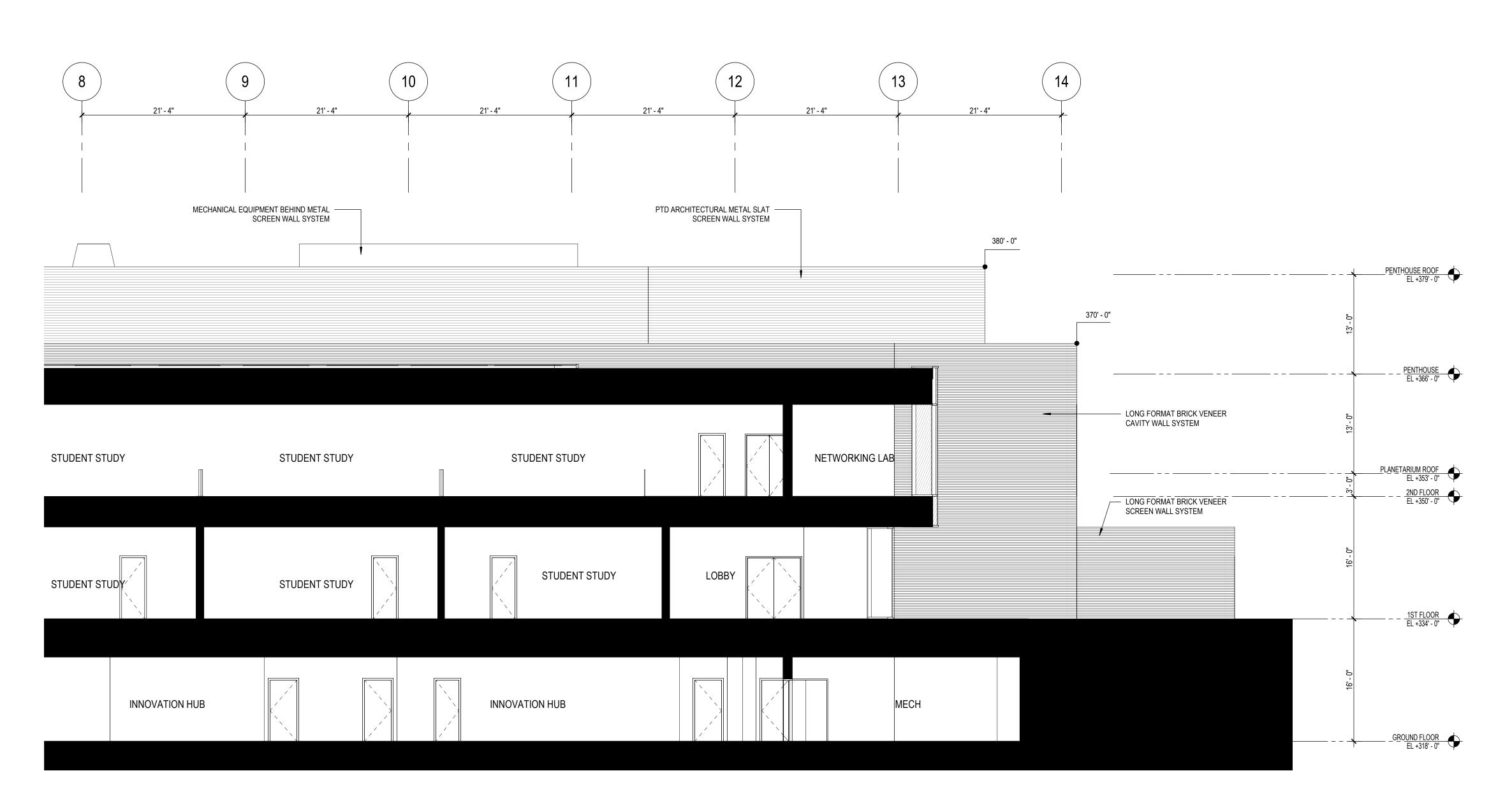
A4.0.3 SHEET NUMBER



DATE



# 1 EAST ELEVATION B - PART 1 SCALE: 1/8" = 1'-0"



2 EAST ELEVATION - PART 2 SCALE: 1/8" = 1'-0"

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

**DGS APPROVAL** 

DATE

TITLE

PROJECT MANAGER

DATE CHIEF OF PM&D

### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

BIM 360://Math Science Center DWG FILE: TPSS Campus/319\_Leggett\_A.rvt\_ DRAWN BY: WF

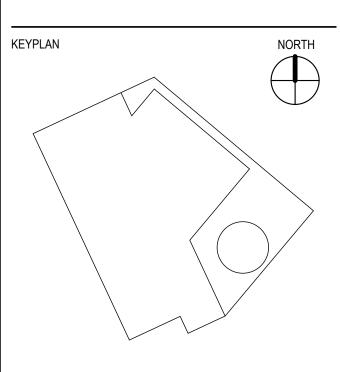
CHECKED BY: BJ

ISSUED FOR REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES

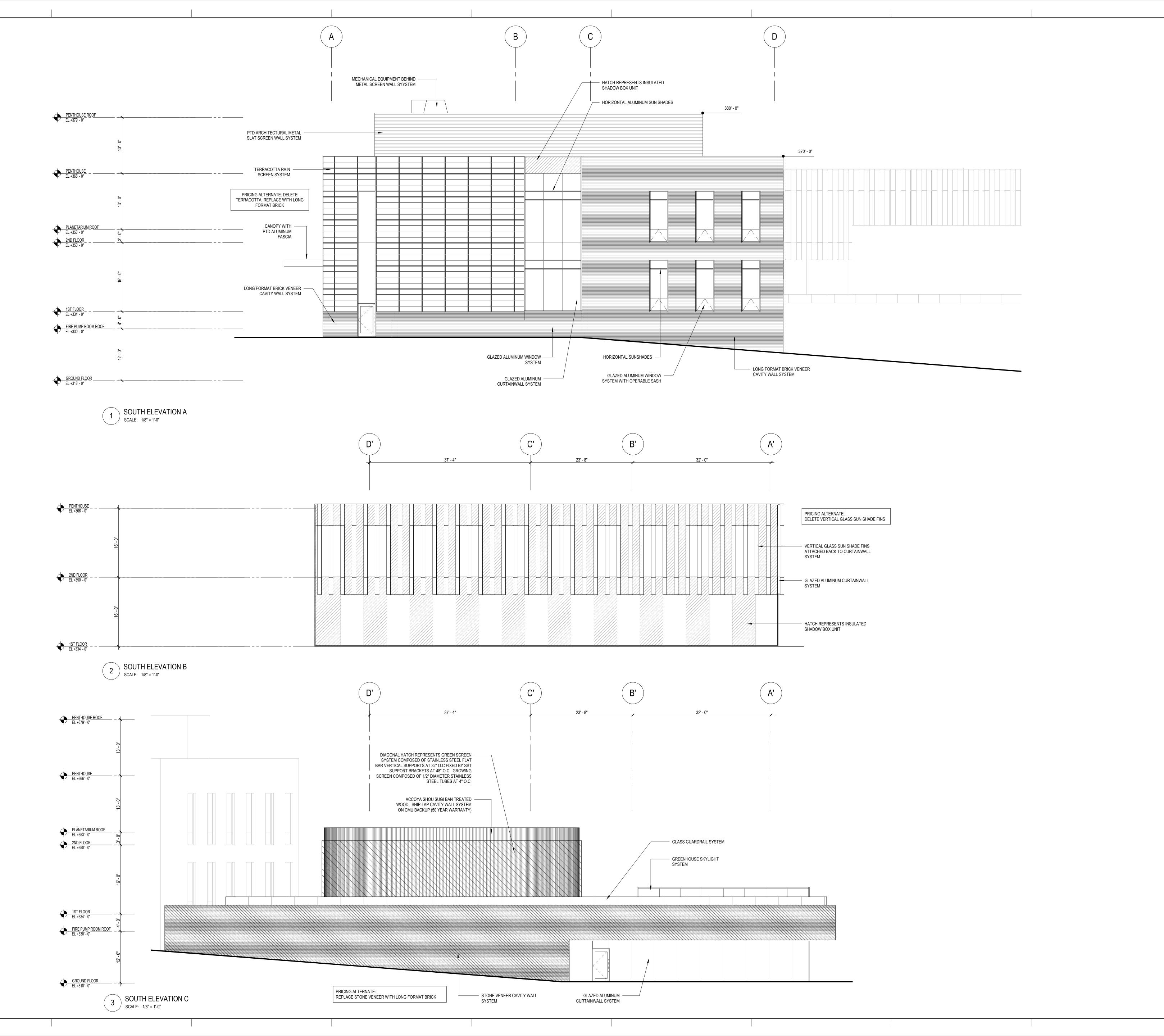




**BUILDING ELEVATIONS** 

12543.000

PROJECT NUMBER A4.1.2



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

USING AGENCY APPROVAL

IE DATE

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

PROJECT WANAGER

CHIEF OF PM&D

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

BIM 360://Math Science Center
TPSS Campus/319\_Leggett\_A.rvt\_
DRAWN BY: WF

CHECKED BY: BJ

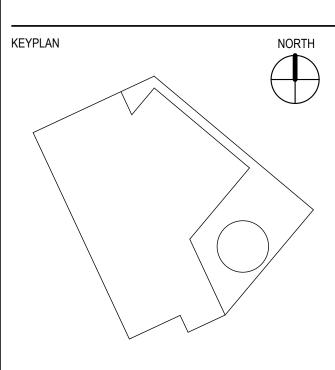
-----

ISSUED FOR REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES





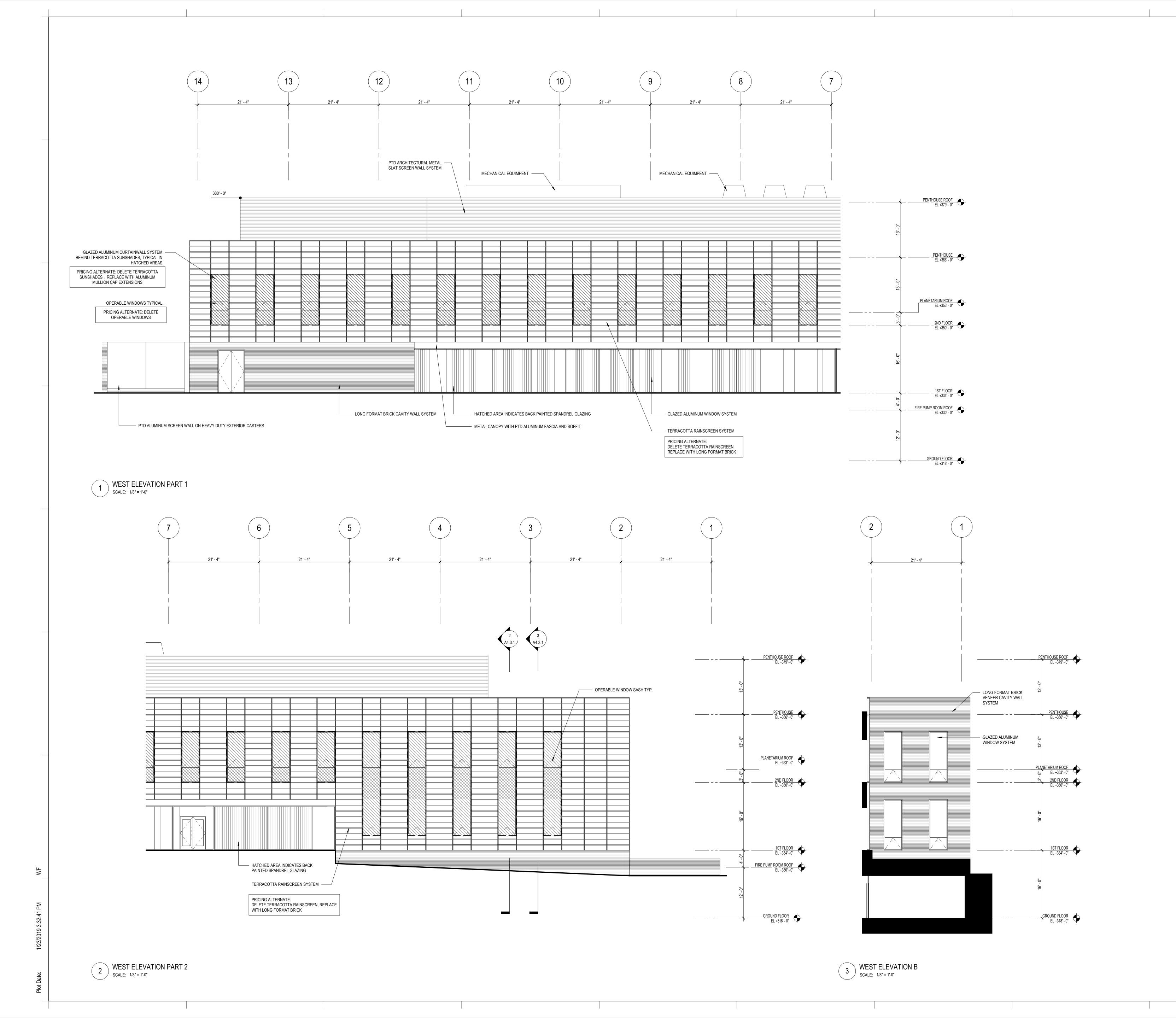
BUILDING ELEVATIONS

PROJECT NUMBER

SHEET NUMBER

12543.000

A4.1.3



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

CHIEF OF PM&D

DATE

DATE

## **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852

301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS

301-881-2545

3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

BIM 360://Math Science Center DWG FILE: \_\_TPSS Campus/319\_Leggett\_A.rvt\_ DRAWN BY: WF

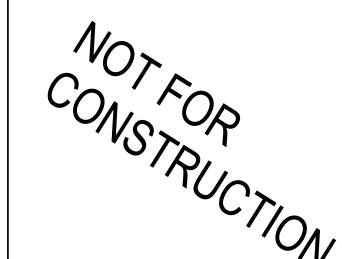
CHECKED BY: BJ

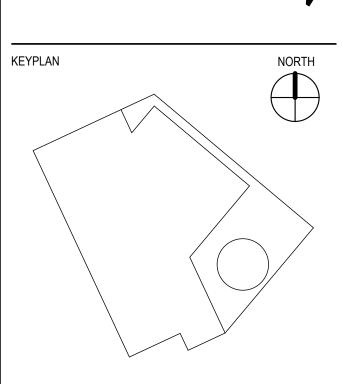
ISSUED FOR

REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES

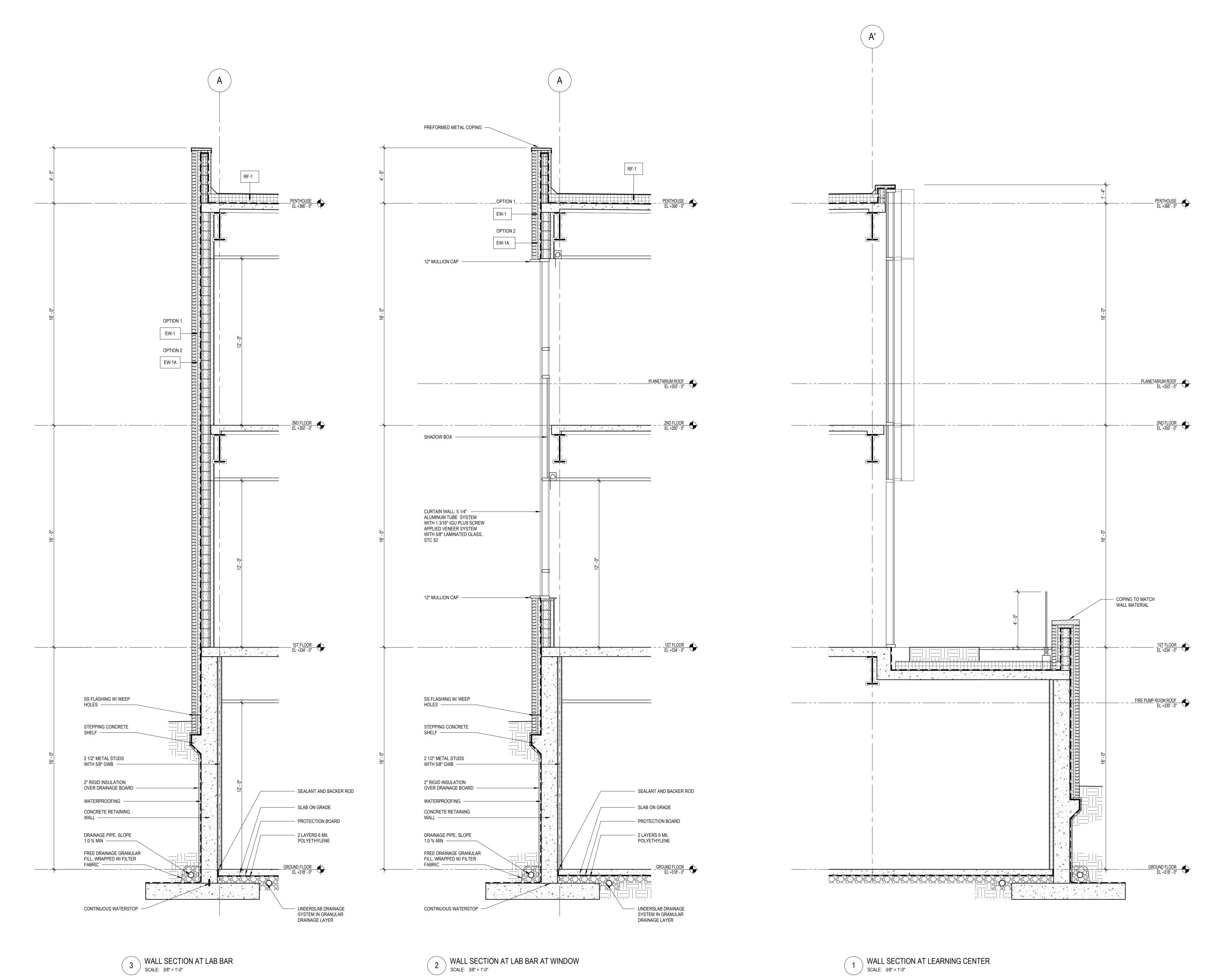




**BUILDING ELEVATIONS** 

12543.000

PROJECT NUMBER



> Montgomery College
> Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

TITLE **DGS APPROVAL** 

PROJECT MANAGER

CHIEF OF PM&D DATE

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW

SUITE 100 WASHINGTON, DC 20006 202.842.2100

www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850

301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard

Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076

410-712-0390 BIM 360://Math Science Center DWG FILE: \_\_TPSS Campus/319\_Leggett\_A.rvt\_

DRAWN BY: WF

CHECKED BY: BJ

ISSUED FOR

REV DATE

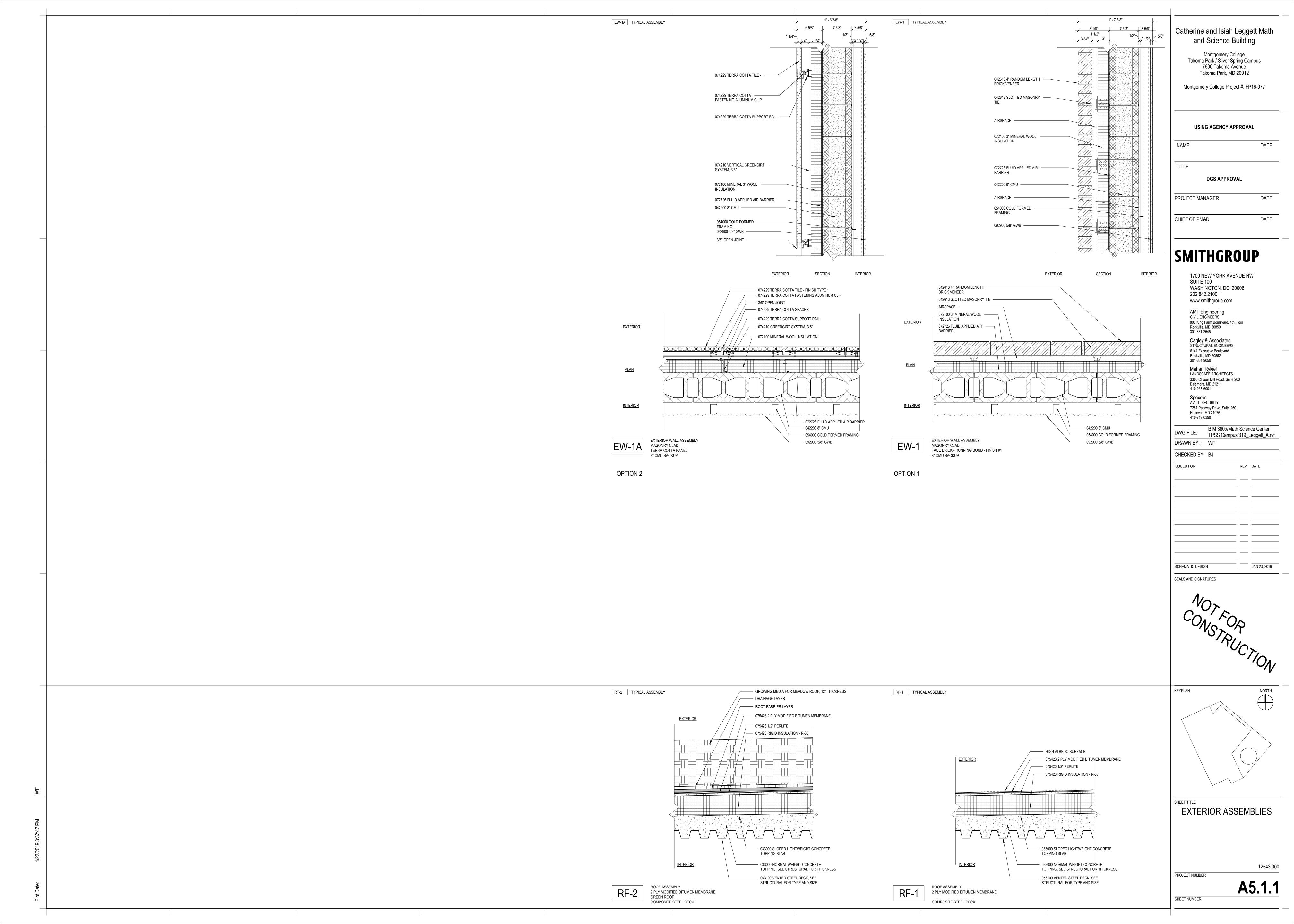
SCHEMATIC DESIGN

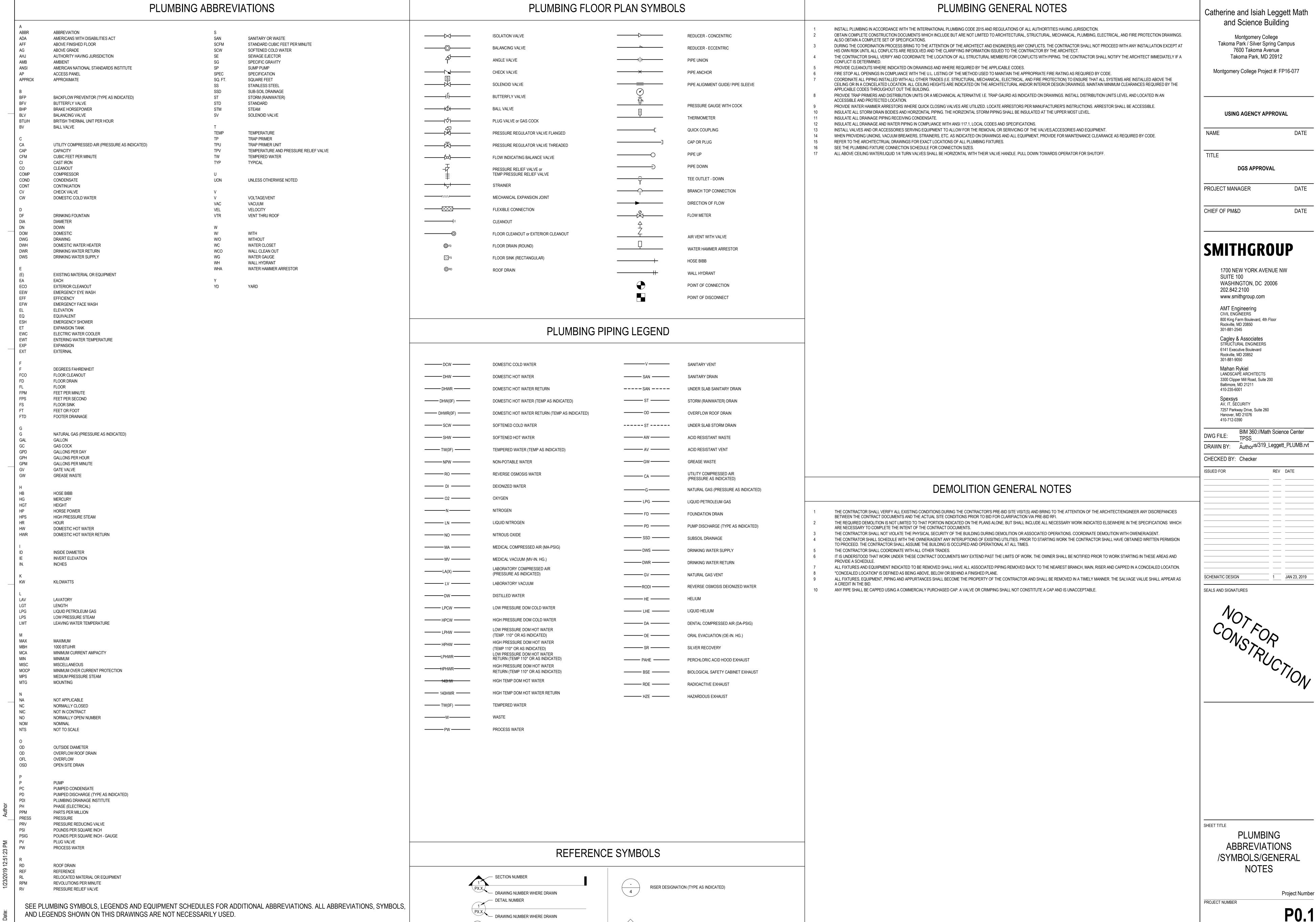
SEALS AND SIGNATURES

KEYPLAN

SHEET TITLE WALL SECTIONS

12543.000 PROJECT NUMBER

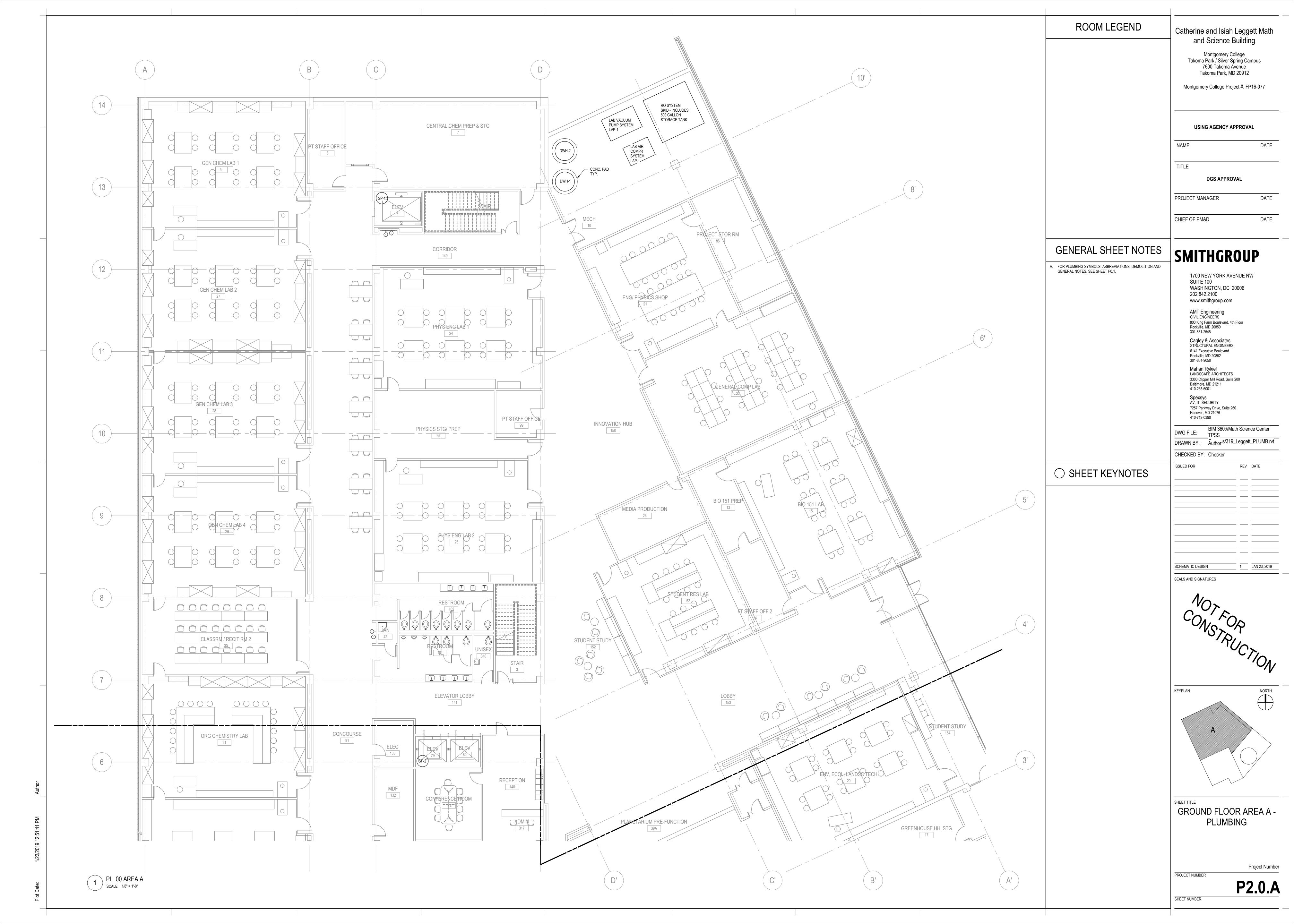


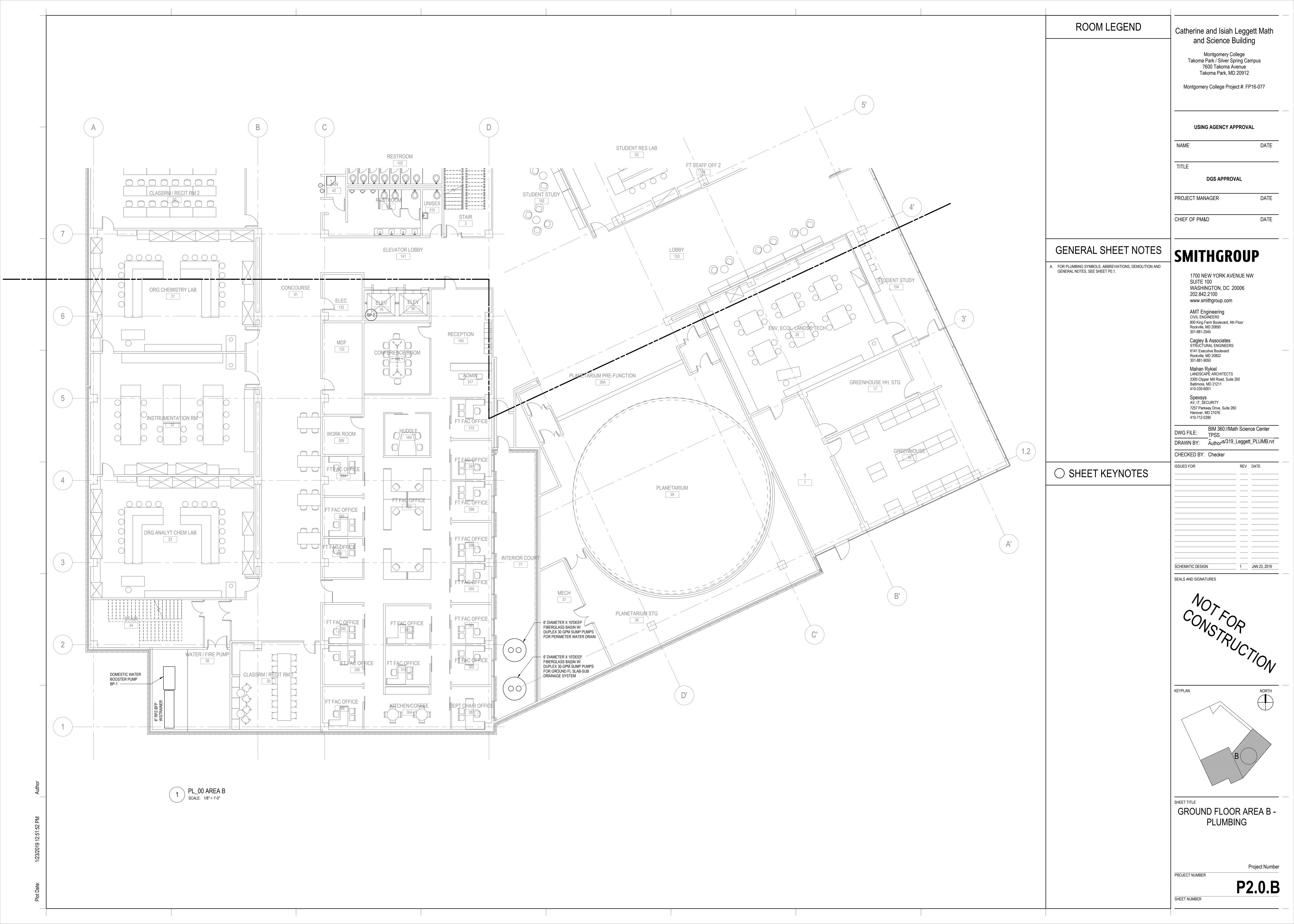


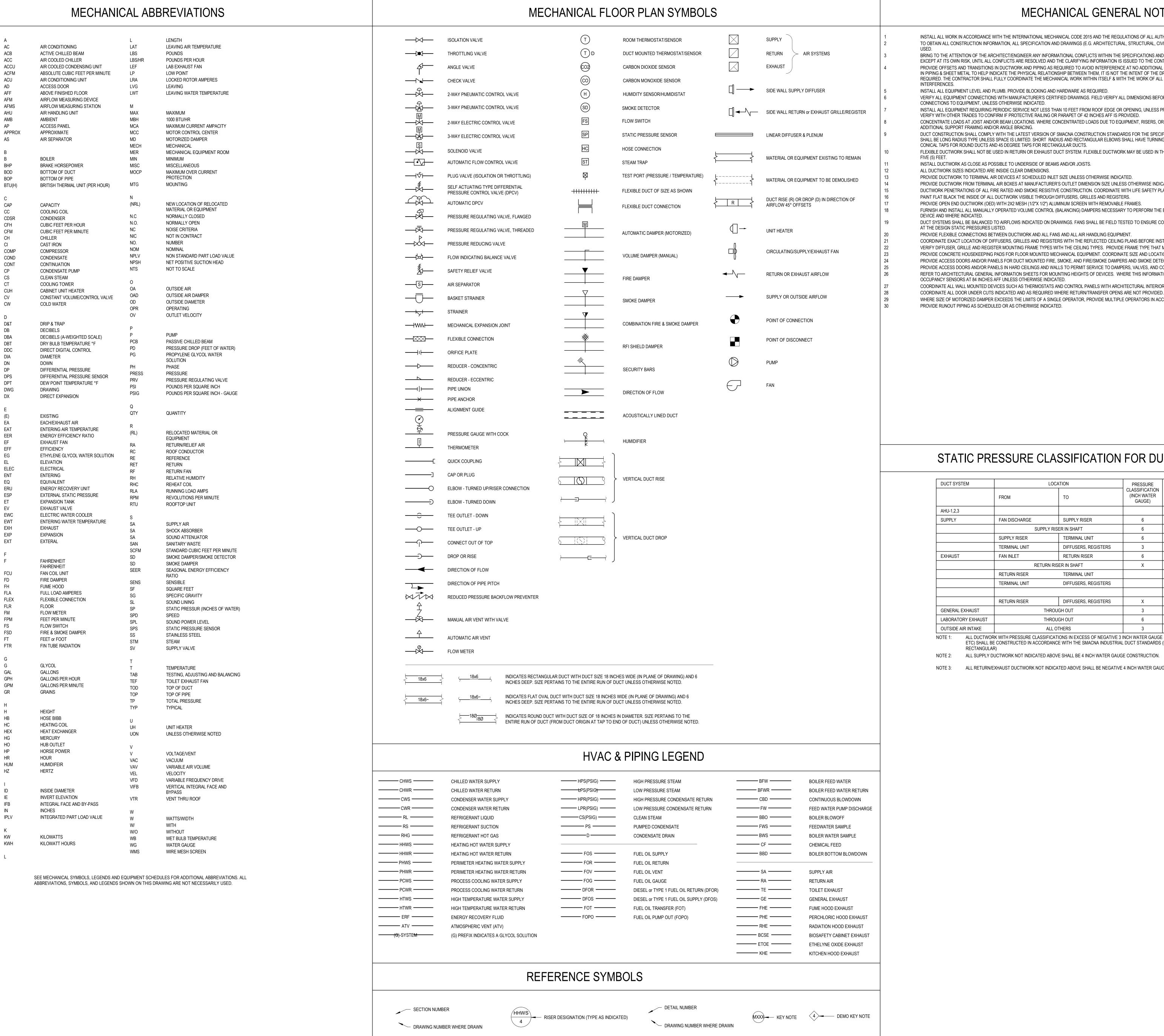
———— DEMO KEY NOTE

SHEET NUMBER

— KEY NOTE







#### MECHANICAL GENERAL NOTES

INSTALL ALL WORK IN ACCORDANCE WITH THE INTERNATIONAL MECHANICAL CODE 2015 AND THE REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION. TO OBTAIN ALL CONSTRUCTION INFORMATION, ALL SPECIFICATION AND DRAWINGS (E.G. ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION) MUST BE

BRING TO THE ATTENTION OF THE ARCHITECT/ENGINEER ANY INFORMATIONAL CONFLICTS WITHIN THE SPECIFICATIONS AND DRAWINGS. THE CONTRACTOR(S) SHALL NOT PROCEED WITH ANY WORK, EXCEPT AT ITS OWN RISK, UNTIL ALL CONFLICTS ARE RESOLVED AND THE CLARIFYING INFORMATION IS ISSUED TO THE CONTRACTOR(S) BY THE ARCHITECT/ENGINEER. PROVIDE OFFSETS AND TRANSITIONS IN DUCTWORK AND PIPING AS REQUIRED TO AVOID INTERFERENCE AT NO ADDITIONAL COST TO THE OWNER. THOUGH SOME OFFSETS & TRANSITIONS ARE SHOWN IN PIPING & SHEET METAL TO HELP INDICATE THE PHYSICAL RELATIONSHIP BETWEEN THEM, IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL PIPING & SHEET METAL OFFSETS & TRANSITIONS

REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF & WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE & OPERABLE SYSTEMS WITHOUT

INSTALL ALL EQUIPMENT LEVEL AND PLUMB. PROVIDE BLOCKING AND HARDWARE AS REQUIRED. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF WORK. PROVIDE TRANSITIONS AND MAKE FINAL CONNECTIONS TO EQUIPMENT, UNLESS OTHERWISE INDICATED.

INSTALL ALL EQUIPMENT REQUIRING PERIODIC SERVICE NOT LESS THAN 10 FEET FROM ROOF EDGE OR OPENING, UNLESS PROTECTIVE RAILING OR PARAPET OF 42 INCHES AFF. HAS BEEN PROVIDED. VERIFY WITH OTHER TRADES TO CONFIRM IF PROTECTIVE RAILING OR PARAPET OF 42 INCHES AFF IS PROVIDED. CONCENTRATE LOADS AT JOIST AND/OR BEAM LOCATIONS. WHERE CONCENTRATED LOADS DUE TO EQUIPMENT, RISERS, OR SPECIAL DUCT CONSTRUCTION OCCUR AT OTHER LOCATIONS, PROVIDE ADDITIONAL SUPPORT FRAMING AND/OR ANGLE BRACING.

DUCT CONSTRUCTION SHALL COMPLY WITH THE LATEST VERSION OF SMACNA CONSTRUCTION STANDARDS FOR THE SPECIFIC PRESSURE CLASSIFICATIONS INDICATED BELOW. ALL 90 DEGREE ELBOWS SHALL BE LONG RADIUS TYPE UNLESS SPACE IS LIMITED. SHORT RADIUS AND RECTANGULAR ELBOWS SHALL HAVE TURNING VANES. UNLESS OTHERWISE NOTED FOR BRANCH CONNECTIONS, PROVIDE CONICAL TAPS FOR ROUND DUCTS AND 45 DEGREE TAPS FOR RECTANGULAR DUCTS.

FLEXIBLE DUCTWORK SHALL NOT BE USED IN RETURN OR EXHAUST DUCT SYSTEM. FLEXIBLE DUCTWORK MAY BE USED IN THE SUPPLY SYSTEM PROVIDED THE LENGTH IS LIMITED TO A TOTAL LENGTH OF NAME

INSTALL DUCTWORK AS CLOSE AS POSSIBLE TO UNDERSIDE OF BEAMS AND/OR JOISTS. ALL DUCTWORK SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.

PROVIDE DUCTWORK TO TERMINAL AIR DEVICES AT SCHEDULED INLET SIZE UNLESS OTHERWISE INDICATED.

PROVIDE DUCTWORK FROM TERMINAL AIR BOXES AT MANUFACTURER'S OUTLET DIMENSION SIZE UNLESS OTHERWISE INDICATED. PROVIDE TRANSITIONS AS REQUIRED DUCTWORK PENETRATIONS OF ALL FIRE RATED AND SMOKE RESISTIVE CONSTRUCTION. COORDINATE WITH LIFE SAFETY PLANS FOR LOCATIONS. PENETRATION ASSEMBLY TO BE U.L. LISTED. PAINT FLAT BLACK THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH DIFFUSERS. GRILLES AND REGISTERS.

PROVIDE OPEN END DUCTWORK (OED) WITH 2X2 MESH (1/2"X 1/2") ALUMINUM SCREEN WITH REMOVABLE FRAMES. FURNISH AND INSTALL ALL MANUALLY OPERATED VOLUME CONTROL (BALANCING) DAMPERS NECESSARY TO PERFORM THE BALANCING WORK, AT EACH BRANCH TAKEOFF. AT EACH AIR TERMINAL DEVICE AND WHERE INDICATED.

DUCT SYSTEMS SHALL BE BALANCED TO AIRFLOWS INDICATED ON DRAWINGS. FANS SHALL BE FIELD TESTED TO ENSURE COMPLIANCE WITH SCHEDULED FAN PERFORMANCE AND SCHEDULED AIRFLOW AT THE DESIGN STATIC PRESSURES LISTED.

PROVIDE FLEXIBLE CONNECTIONS BETWEEN DUCTWORK AND ALL FANS AND ALL AIR HANDLING EQUIPMENT. COORDINATE EXACT LOCATION OF DIFFUSERS, GRILLES AND REGISTERS WITH THE REFLECTED CEILING PLANS BEFORE INSTALLATION. PROVIDE SYMMETRY WITH THE ROOM LIGHTING SYSTEMS.

VERIFY DIFFUSER, GRILLE AND REGISTER MOUNTING FRAME TYPES WITH THE CEILING TYPES. PROVIDE FRAME TYPE THAT MATCHES CEILING CONFIGURATION. PROVIDE CONCRETE HOUSEKEEPING PADS FOR FLOOR MOUNTED MECHANICAL EQUIPMENT, COORDINATE SIZE AND LOCATION WITH ALL TRADES.

PROVIDE ACCESS DOORS AND/OR PANELS FOR DUCT MOUNTED FIRE, SMOKE, AND FIRE/SMOKE DAMPERS AND SMOKE DETECTORS PROVIDE ACCESS DOORS AND/OR PANELS IN HARD CEILINGS AND WALLS TO PERMIT SERVICE TO DAMPERS, VALVES, AND CONCEALED EQUIPMENT

REFER TO ARCHITECTURAL GENERAL INFORMATION SHEETS FOR MOUNTING HEIGHTS OF DEVICES. WHERE THIS INFORMATION IS NOT PROVIDED, MOUNT ROOM THERMOSTATS AT 48 INCHES AFF AND OCCUPANCY SENSORS AT 84 INCHES AFF UNLESS OTHERWISE INDICATED. COORDINATE ALL WALL MOUNTED DEVICES SUCH AS THERMOSTATS AND CONTROL PANELS WITH ARCHITECTURAL INTERIOR ELEVATIONS.

WHERE SIZE OF MOTORIZED DAMPER EXCEEDS THE LIMITS OF A SINGLE OPERATOR, PROVIDE MULTIPLE OPERATORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE RUNOUT PIPING AS SCHEDULED OR AS OTHERWISE INDICATED.

#### STATIC PRESSURE CLASSIFICATION FOR DUCT CONSTRUCTION

DUCT SYSTEM	LOCATION		PRESSURE	DUCTWORK	REMARKS
	FROM	то	CLASSIFICATION (INCH WATER GAUGE)	SEAL/LEAKAGE CLASS	
AHU-1,2,3					
SUPPLY	FAN DISCHARGE	SUPPLY RISER	6	А	
	SUPPLY RISER IN SHAFT		6	А	
	SUPPLY RISER	TERMINAL UNIT	6	А	
	TERMINAL UNIT	DIFFUSERS, REGISTERS	3	А	
EXHAUST	FAN INLET	RETURN RISER	6	А	
	RETURN RISER IN SHAFT		X	X	
	RETURN RISER	TERMINAL UNIT			
	TERMINAL UNIT	DIFFUSERS, REGISTERS			
	RETURN RISER	DIFFUSERS, REGISTERS	X	X	
GENERAL EXHAUST	THROUGH OUT		3	А	
LABORATORY EXHAUST	THROUGH OUT		6	А	
OUTSIDE AIR INTAKE	ALL OTHERS		3	А	

ALL DUCTWORK WITH PRESSURE CLASSIFICATIONS IN EXCESS OF NEGATIVE 3 INCH WATER GAUGE (I.E. -4,-5,-6, -10 ETC) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SMACNA INDUSTRIAL DUCT STANDARDS (ROUND &

ALL SUPPLY DUCTWORK NOT INDICATED ABOVE SHALL BE 4 INCH WATER GAUGE CONSTRUCTION

ALL RETURN/EXHAUST DUCTWORK NOT INDICATED ABOVE SHALL BE NEGATIVE 4 INCH WATER GAUGE CONSTRUCTION.

#### Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

TITLE

**DGS APPROVAL** 

PROJECT MANAGER

DATE

DATE CHIEF OF PM&D

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006

202.842.2100 www.smithgroup.com AMT Engineering CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545 Cagley & Associates

STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS

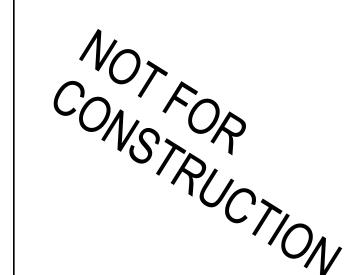
3300 Clipper Mill Road, Suite 200 Baltimore MD 21211 410-235-6001 AV, IT, SECURITY

7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:		
DRAWN BY:		
CHECKED BY:		
ISSUED FOR	REV	DATE
	- — - —	

JAN 23, 2019

SCHEMATIC DESIGN SEALS AND SIGNATURES



SHEET TITLE **MECHANICAL** ABBREVIATIONS AND

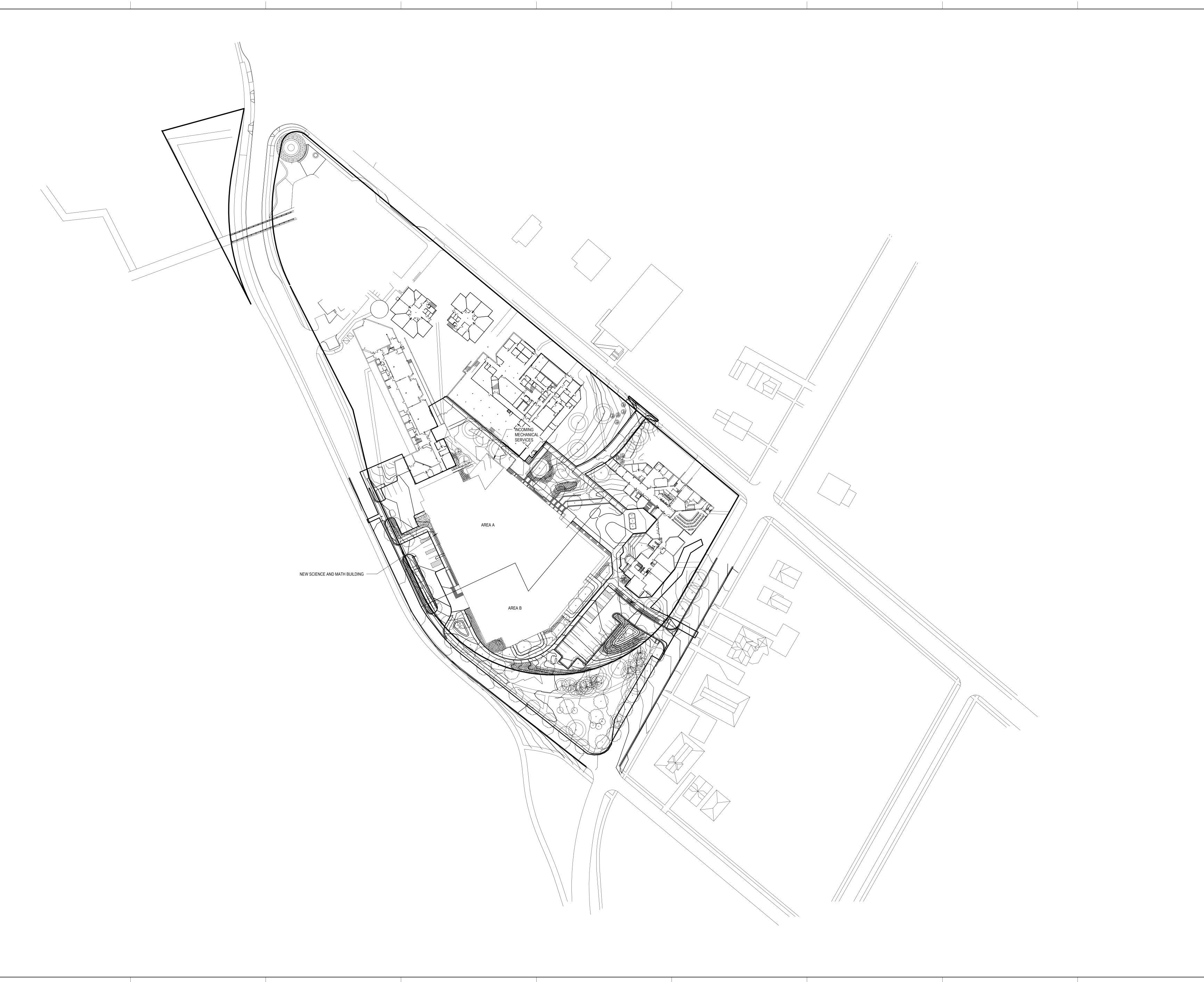
PROJECT NUMBER

SHEET NUMBER

**SYMBOLS** 

Project Number

M0.1



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE

DATE

DATE

TITLE

DGS APPROVAL

PROJECT MANAGER

CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006

202.842.2100

www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050

Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

SEALS AND SIGNATURES

SCHEMATIC DESIGN

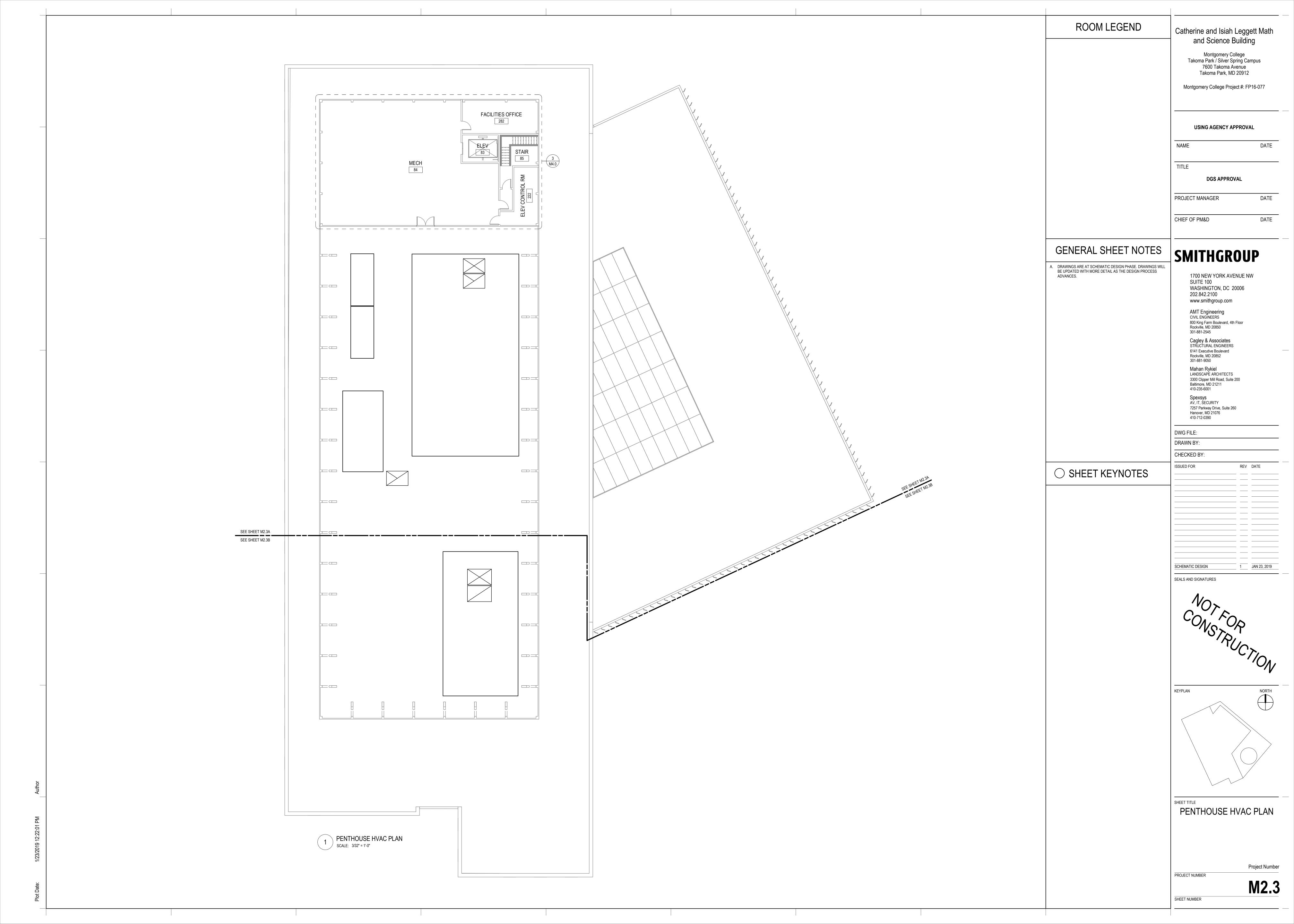
SITE PLAN

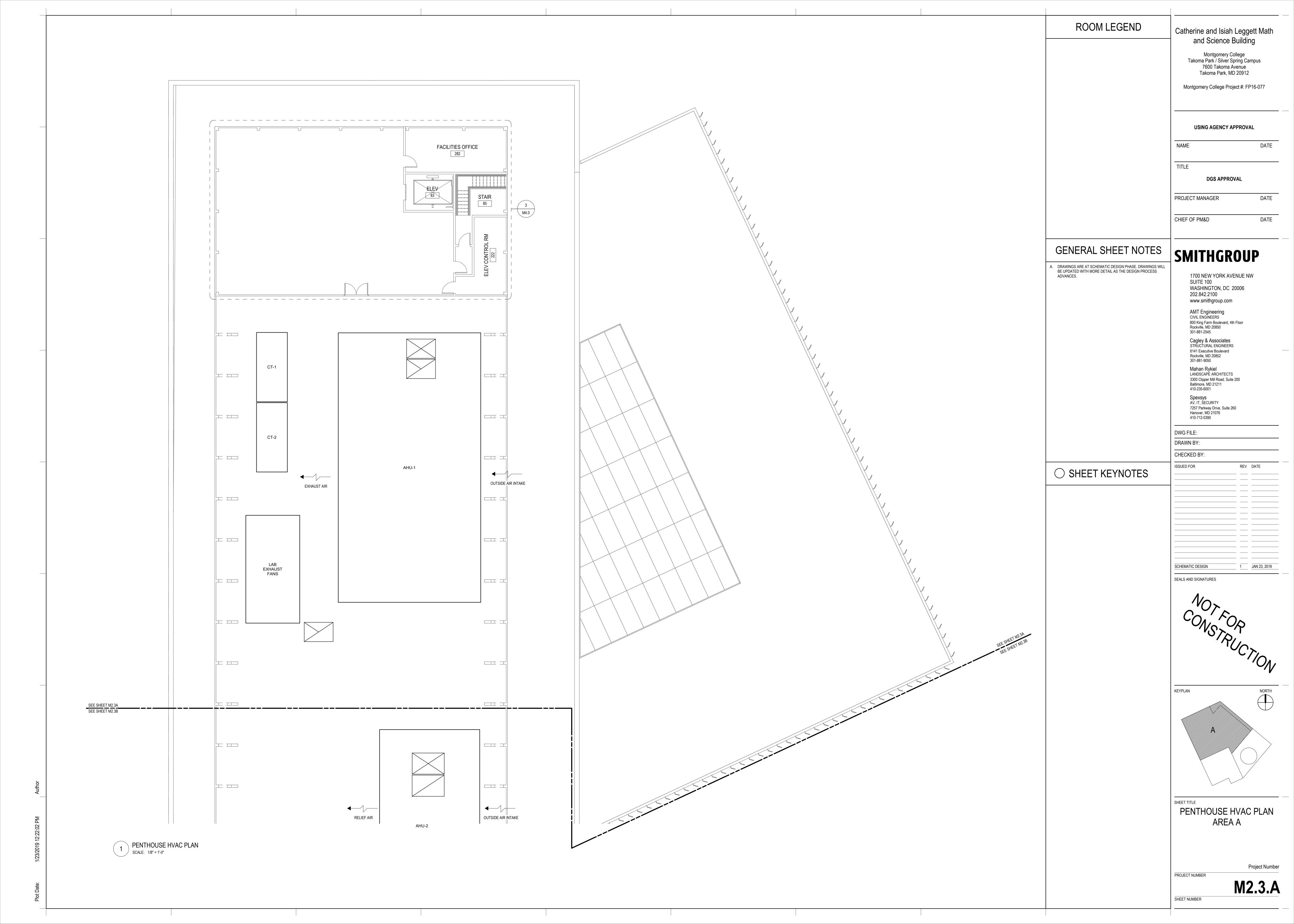
Project Number

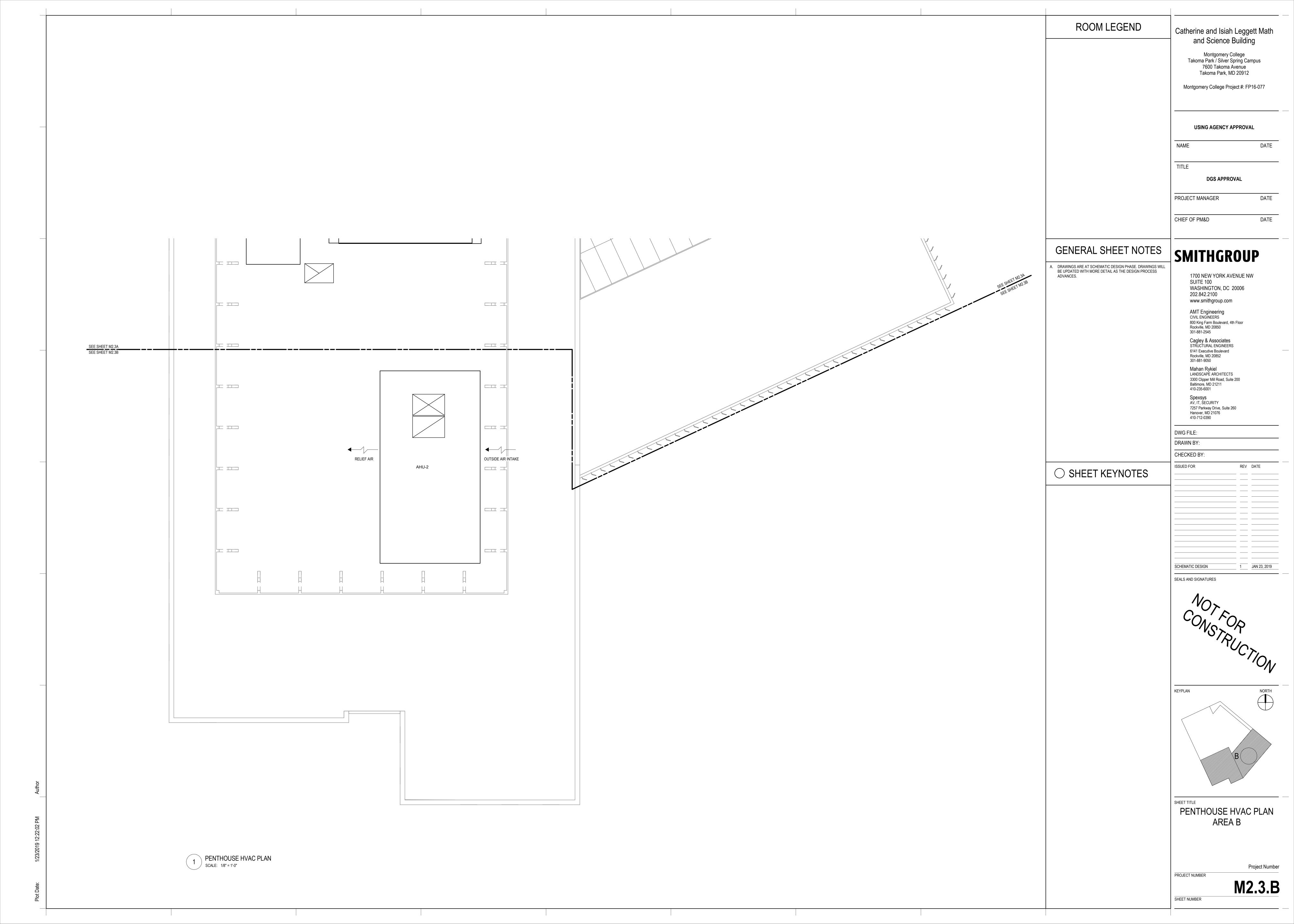
SHEET NUMBER

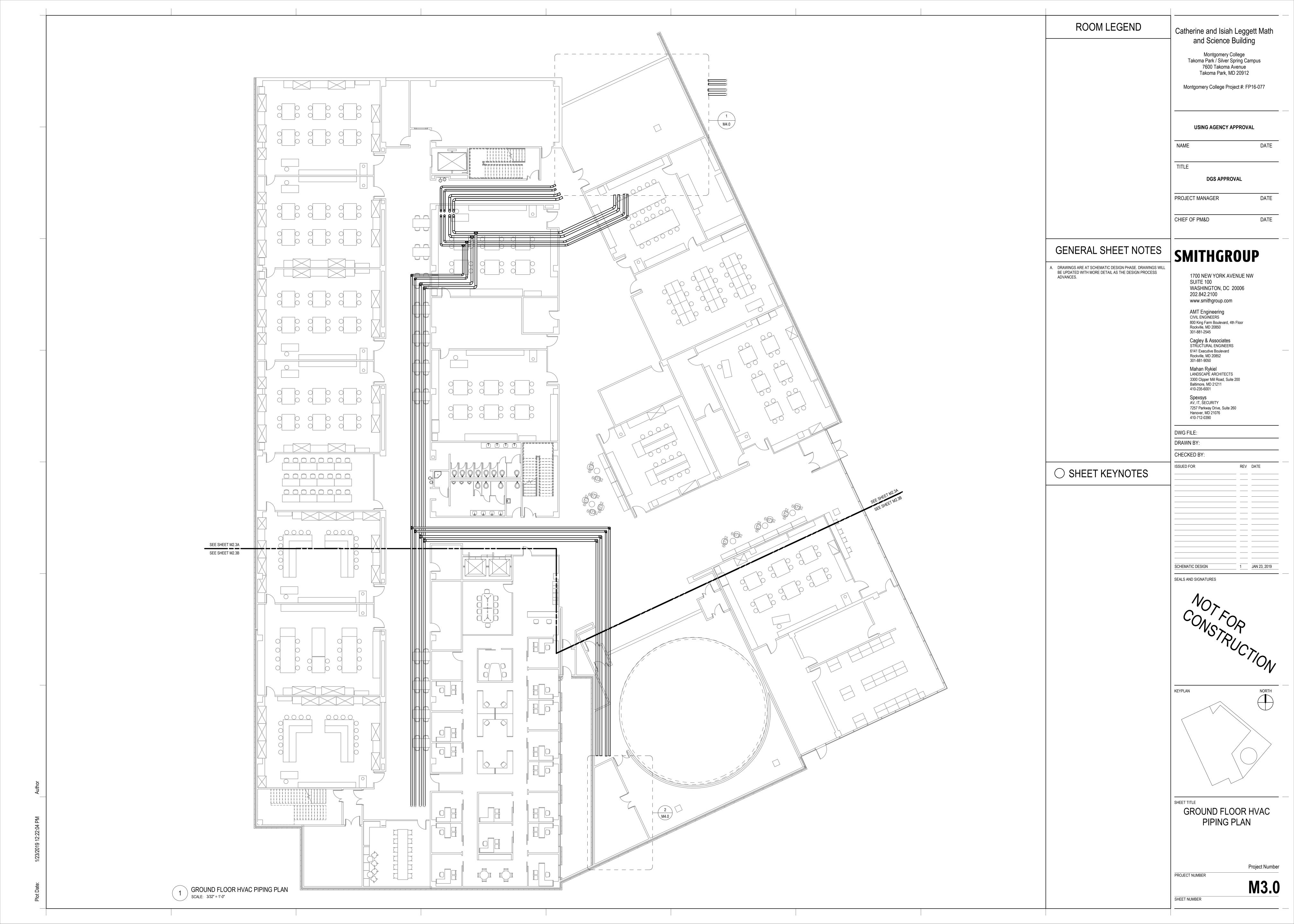
PROJECT NUMBER

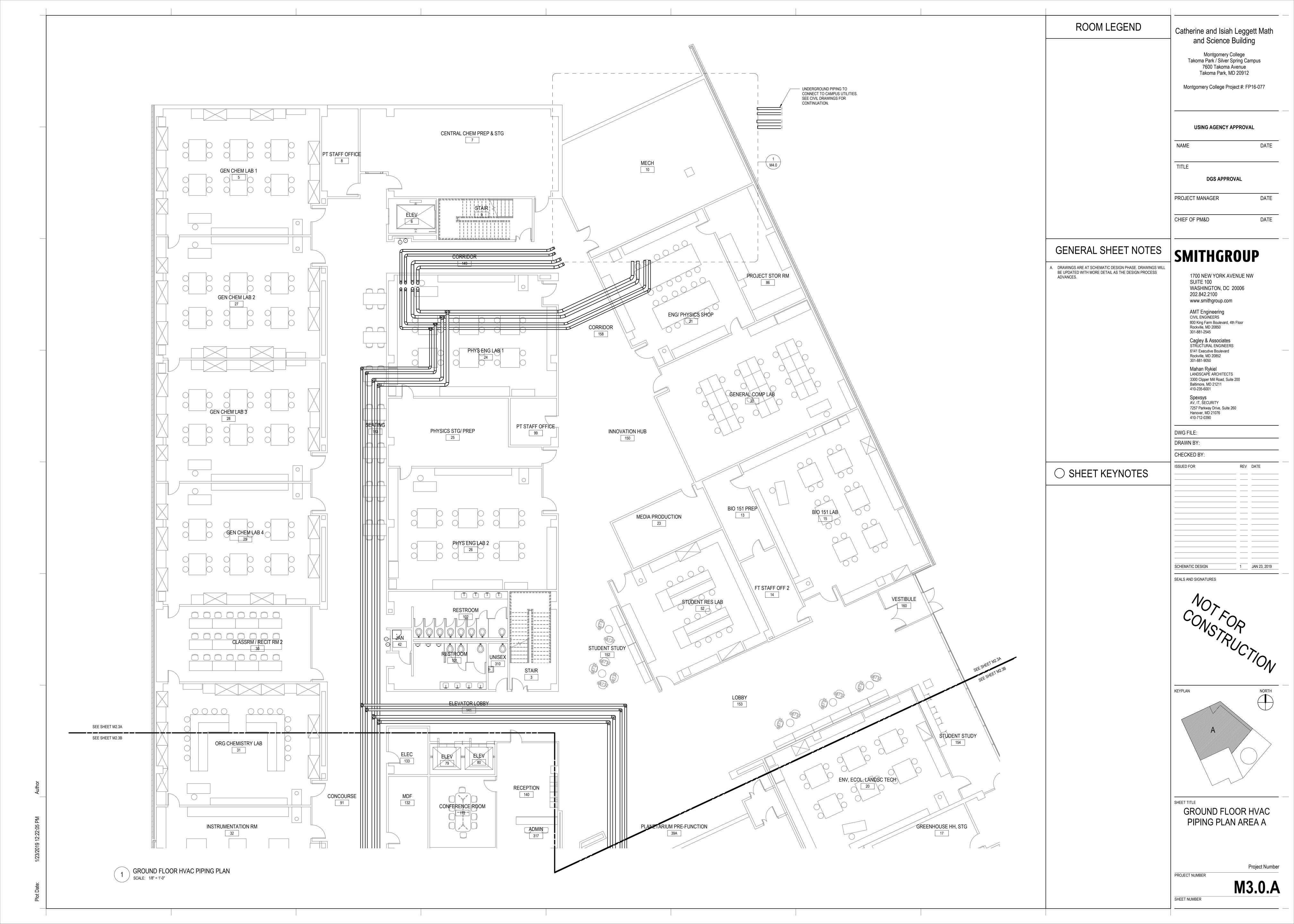
M0.2

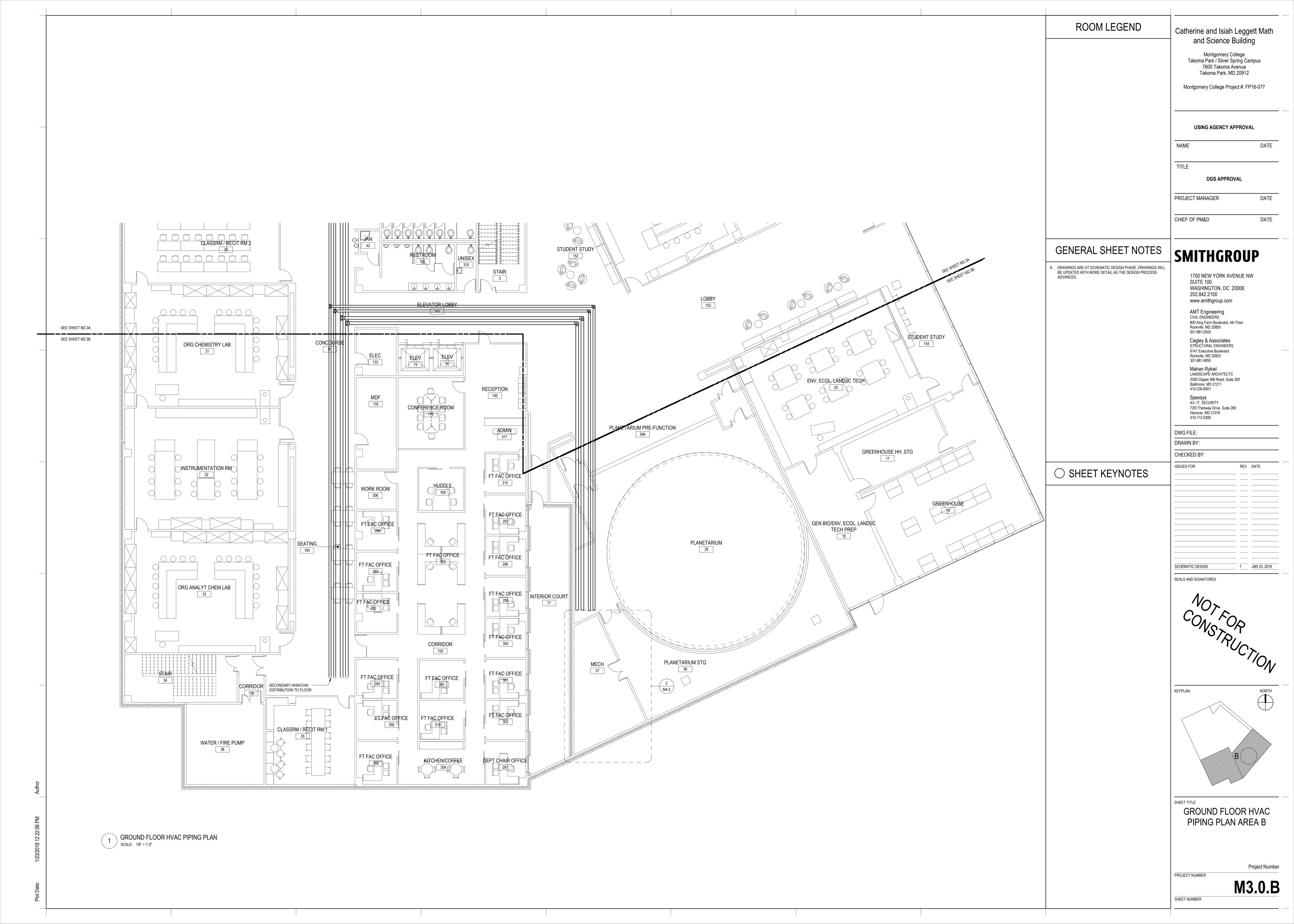


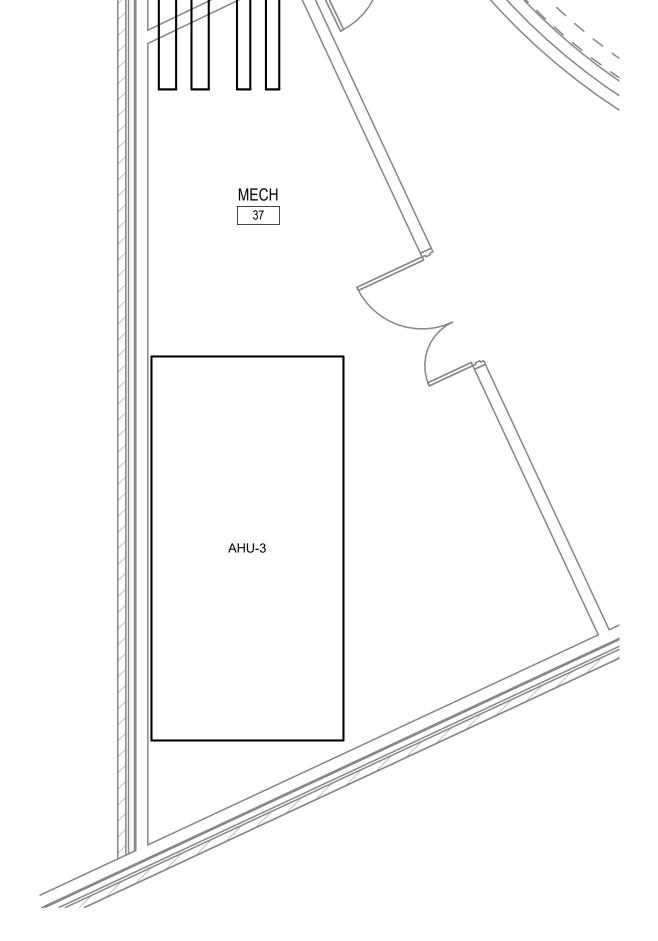




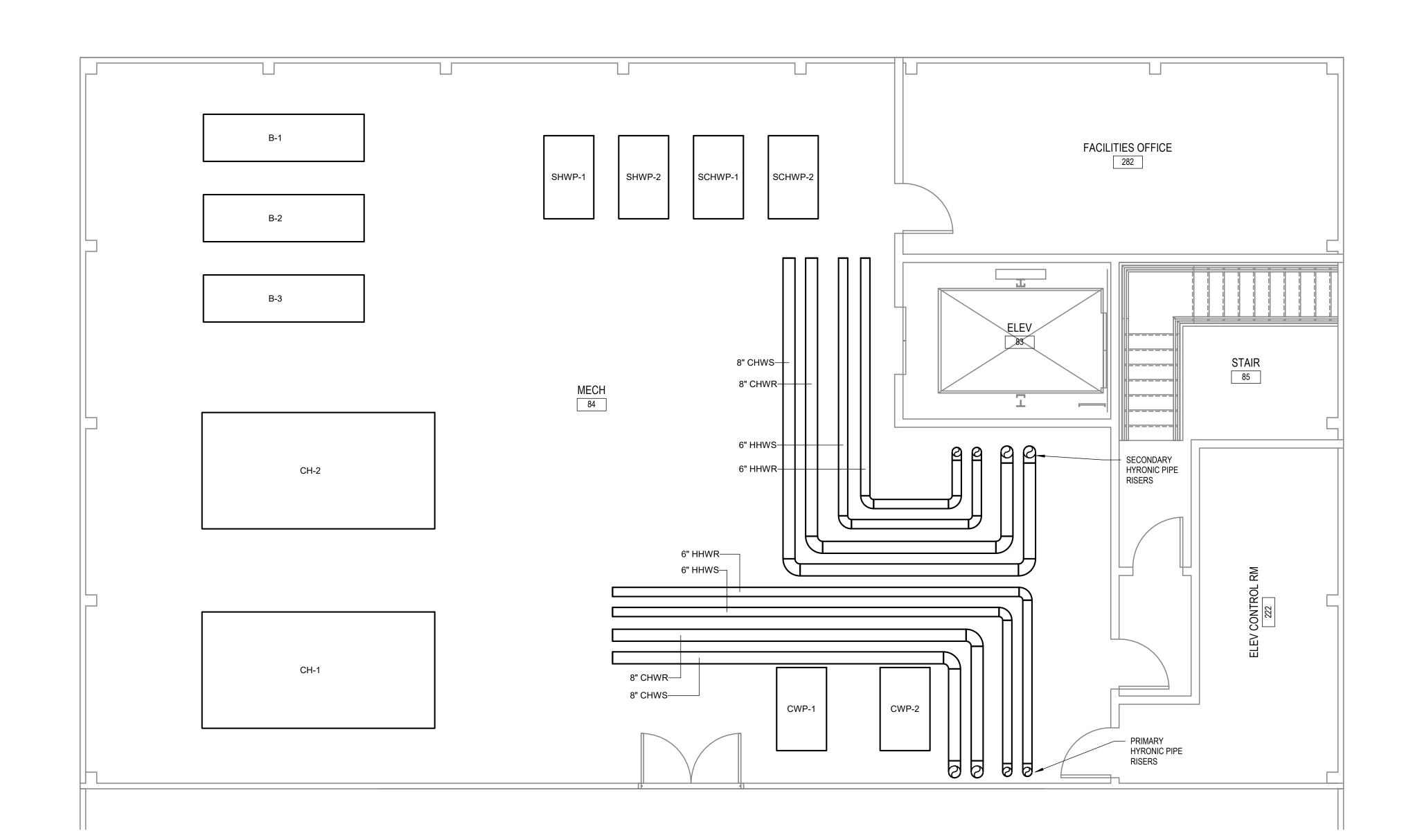








BASEMENT MECHANICAL ROOM 37 ENLARGED SCALE: 1/4" = 1'-0"



3 ENLARGED MECHANICAL PENTHOUSE SCALE: 1/4" = 1'-0"

1 BASEMENT MECHANICAL ROOM ENLARGED PLAN SCALE: 1/4" = 1'-0"

Catherine and Isiah Leggett Math and Science Building

Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE TITLE **DGS APPROVAL** DATE PROJECT MANAGER DATE CHIEF OF PM&D

# **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006 202.842.2100

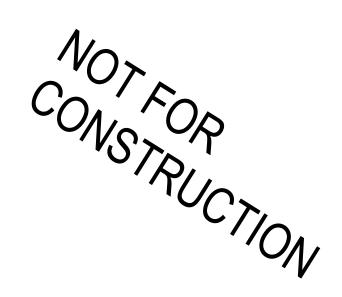
www.smithgroup.com AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates STRUCTURAL ENGINEERS 6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

DWG FILE: DRAWN BY: CHECKED BY: ISSUED FOR REV DATE SCHEMATIC DESIGN

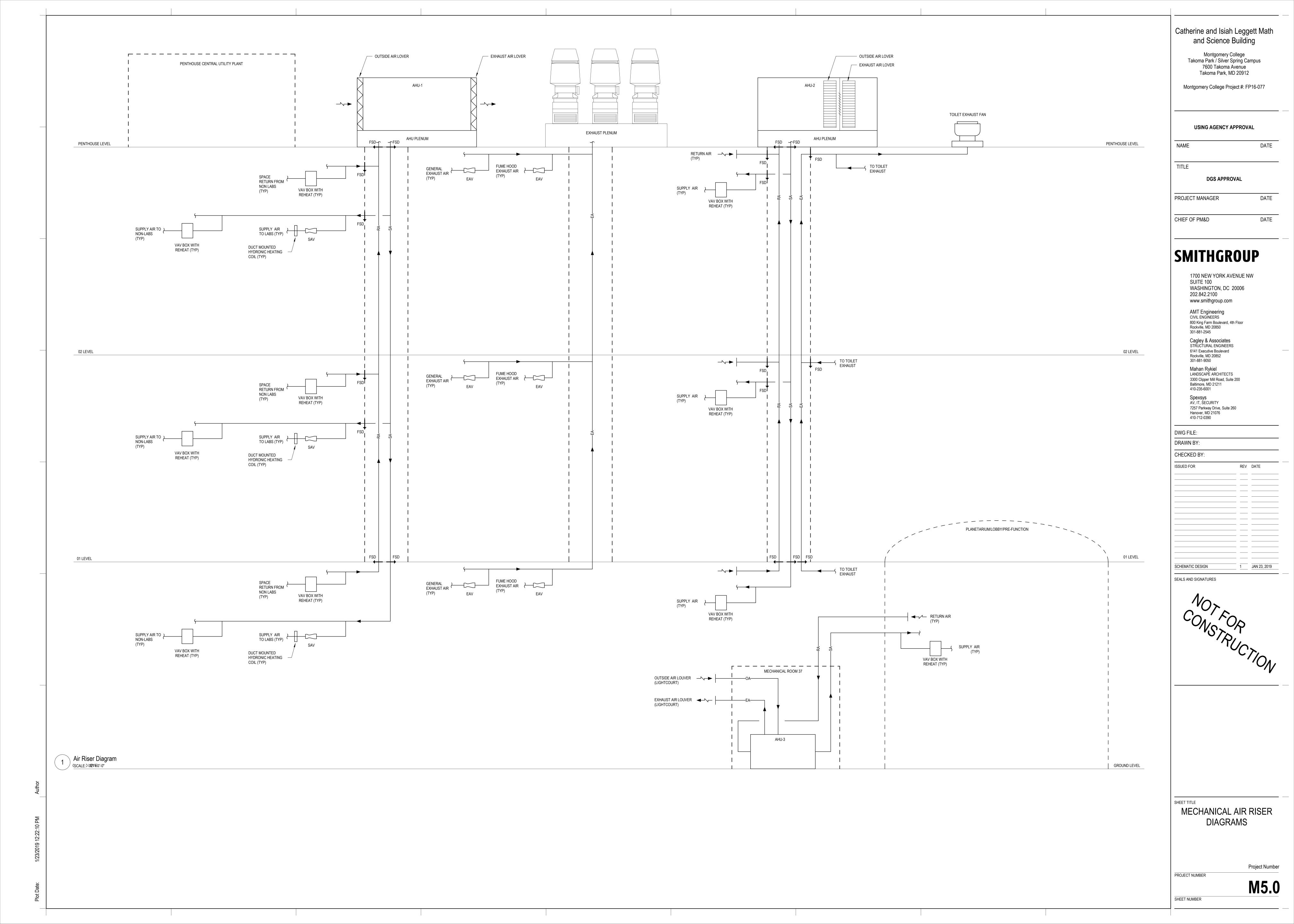
SEALS AND SIGNATURES

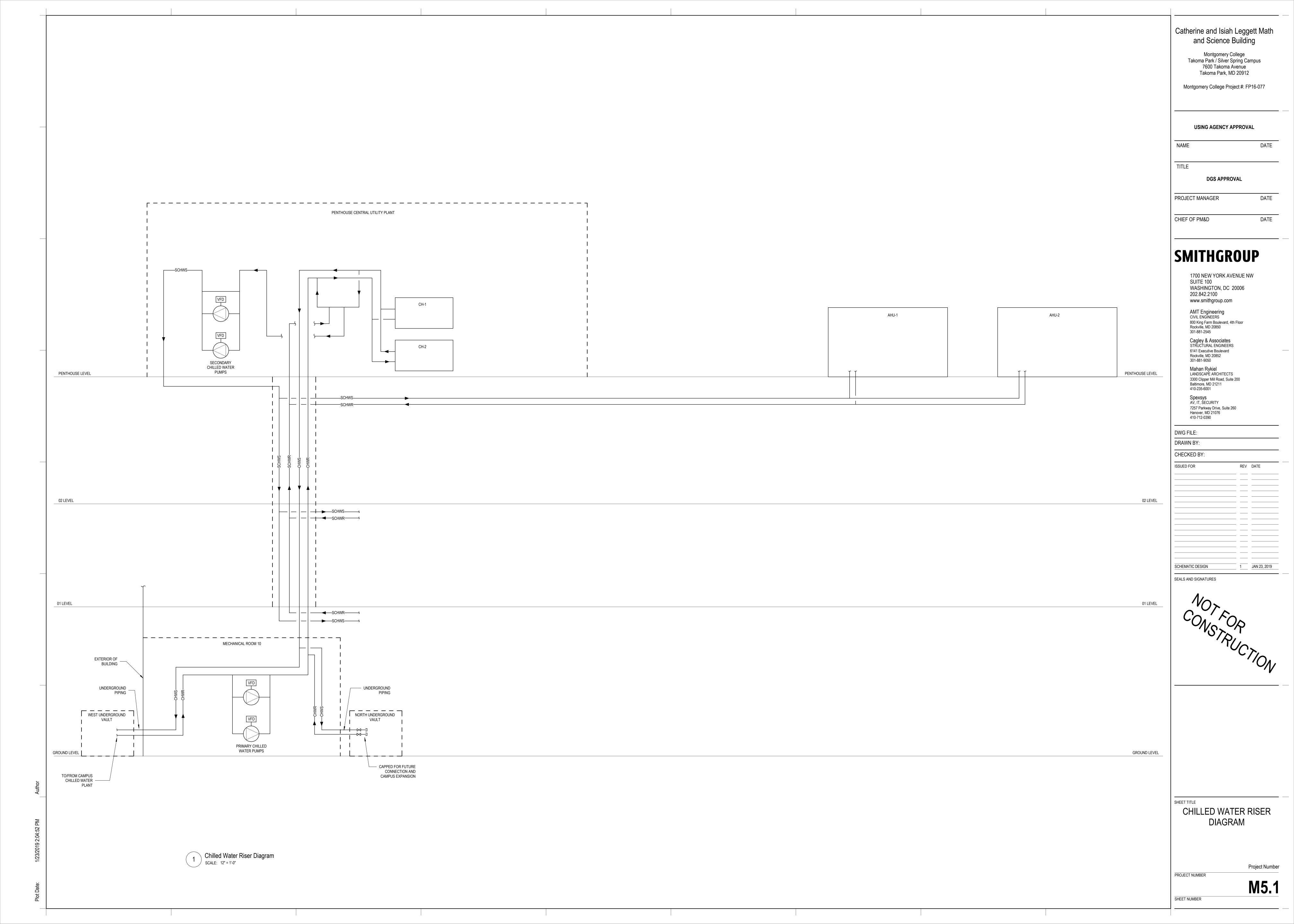


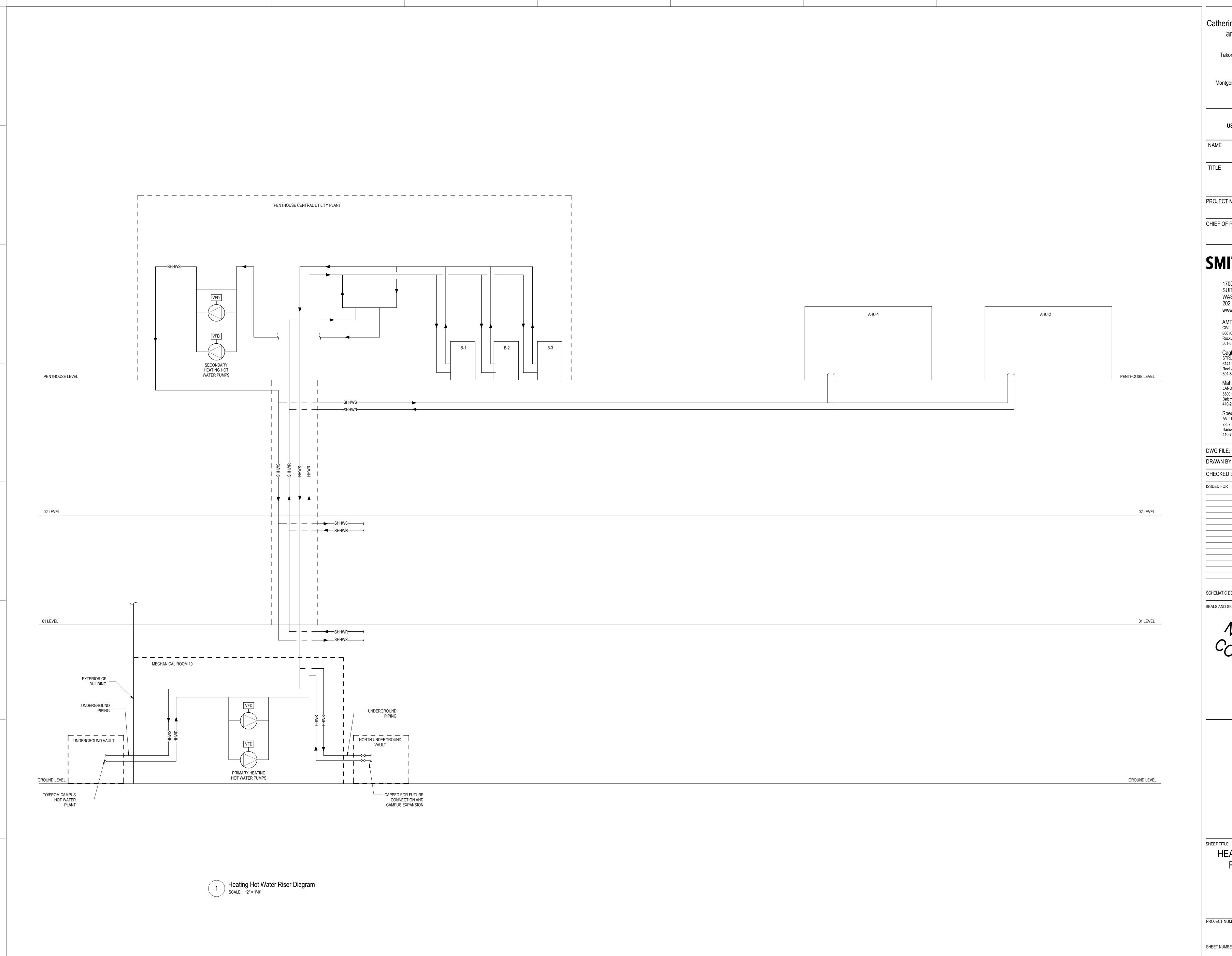
**ENLARGED MECHANICAL** PLANS

Project Number

PROJECT NUMBER **M4.0** 







Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

DATE TITLE **DGS APPROVAL** 

DATE PROJECT MANAGER

DATE CHIEF OF PM&D

### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100 WASHINGTON, DC 20006

202.842.2100 www.smithgroup.com AMT Engineering CIVIL ENGINEERS

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard Rockville, MD 20852 301-881-9050 Mahan Rykiel LANDSCAPE ARCHITECTS 3300 Clipper Mill Road, Suite 200 Baltimore, MD 21211 410-235-6001

Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

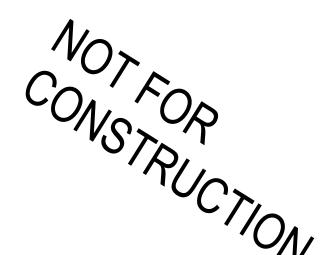
DWG FILE: DRAWN BY:

CHECKED BY:

REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES



**HEATING HOT WATER** RISER DIAGRAM

Project Number

PROJECT NUMBER M5.2



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

NAME DATE

TITLE

DGS APPROVAL

DATE

DATE

PROJECT MANAGER

CHIEF OF PM&D

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering CIVIL ENGINEERS 800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545

Cagley & Associates
STRUCTURAL ENGINEERS
6141 Executive Boulevard
Rockville, MD 20852
301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200

Spexsys
AV, IT, SECURITY
7257 Parkway Drive, Suite 260
Hanover, MD 21076
410-712-0390

410-712-0390 DWG FILE:

DRAWN BY:
CHECKED BY:

ECKED BY: \_\_\_\_\_\_ FD FOR

REV DATE

TIC DESIGN 1 JAN 23, 2

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

TITLE CROUND FLO

GROUND FLOOR HVAC ZONING PLAN

Project Numbe

PROJECT NUMBER

M8.1

Plot Date:



Montgomery College Takoma Park / Silver Spring Campus 7600 Takoma Avenue Takoma Park, MD 20912

Montgomery College Project #: FP16-077

**USING AGENCY APPROVAL** 

NAME DATE

**DGS APPROVAL** 

DATE

DATE

TITLE

PROJECT MANAGER

CHIEF OF PM&D

#### **SMITHGROUP**

1700 NEW YORK AVENUE NW SUITE 100

SUITE 100 WASHINGTON, DC 20006 202.842.2100 www.smithgroup.com

AMT Engineering
CIVIL ENGINEERS
800 King Farm Boulevard, 4th Floor
Rockville, MD 20850

800 King Farm Boulevard, 4th Floor Rockville, MD 20850 301-881-2545 Cagley & Associates STRUCTURAL ENGINEERS

6141 Executive Boulevard
Rockville, MD 20852
301-881-9050

Mahan Rykiel
LANDSCAPE ARCHITECTS
3300 Clipper Mill Road, Suite 200

Baltimore, MD 21211 410-235-6001 Spexsys AV, IT, SECURITY 7257 Parkway Drive, Suite 260 Hanover, MD 21076 410-712-0390

410-712-0390

DWG FILE:

DRAWN BY:

CHECKED BY:

ISSUED FOR

REV DATE

SCHEMATIC DESIGN

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

IEET TITLE

SECOND FLOOR HVAC ZONING PLAN

Project Numbe

M8.3

SHEET NUMBER

PROJECT NUMBER