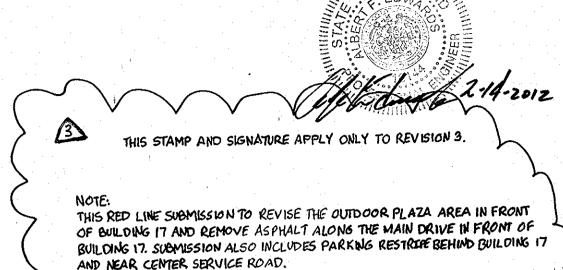
# THE JOHNS HOPKINS UNIVERSITY





SITE PLAN UTILITY PLAN STORM DRAIN DRAINAGE AREA MAPS BULDING 17 PLAZA SERVICE AREA LOT RESTRIPING. CENTRAL SERVICE ROAD LOT PARKING RESTRIPING. BUILDING 17 PLAZA GRADING & EROSION & SEDIMENT CONTROLS

THIS RED LINE SUBMISSION IS TO REALIGN THE SERVICE ROAD TO BUILDINGS 7, B AND 9.

Fun A Revision

THE FOLLOWING SHEETS ARE MODIFIED

16 COVER SHEET

OF 16 SITE PLAN

### **VICINITY MAP**

Scale: 1"=2000'

0002: N 544836.5284 E 1340825.353 NGVD ELEV. 444.991 41CA: N 550124.8623 E 1342960.8820 NGVD ELEV. 295.397 ADC MAP 19 GRID A2

# APPLIED PHYSICS LABORATORY

**LOCATION MAP** 

## LEGEND

 $\times$  387.6 EX. SPOT ELEVATION EX. FIRE HYDRANT EX. STORM DRAIN EX. WATER LINE EX. SANITARY SEWE EX. ELECTRIC LINE EX. COMMUNICATIONS LINE EX. MANHOLE EX. INLET  $\sim\sim\sim\sim\sim$ EX. TREE LINE EX. BUILDING EX. CURB AND GUTTER ------EX. BITUMINOUS PAVING EX. CONCRETE SIDEWALK EX. FENCE EX. WALL EX. CLEANOUT EX. LIGHT STANDARD ex. Bush EX. TREE EX. PIPE BOLLARD EX. UTILITY POLE PROP. MINOR CONTOUR PROP. MAJOR CONTOUR

CENTRAL BORROW \ GREEN TITITITI BUILDINGS TO BE REMOVED

3 OF 16 GRADING PLAN 5 OF 16 UTILITY PROFILES & NOTES GOF 16 STORM DRAIN DRAINAGE AREA MAPE PLOW TABULATIONS EROSION & SEDIMENT CONTROL 10 OF 16 EROSION & SEDIMENT CONTROL 15 OF 16 EROSION & SEDIMENT CONTROL 16 DEMOLITION THIS SDP IS A REVISION TO PREVIOUSLY APPROVED SDP08-061 AND REFLECTS THE CONSOLIDATION OF SUBSTATIONS #2 AND #3, AND THE INSTALLATION OF RELATED ÉLECTRICAL AND TELE -COMMUNICTIONS DUCT BANKS.

FINAL PLAN REFERENCES SDP-04-76: SERVICES AREA COMPLEX F-02-40: SWM BASIN 'A', APFO, FOREST CONSERVATION SDP-04-35: SWM BASIN 'G' SDP-90-218: BUILDING No. 31 AND SWM BASIN 'G' SDP-99-63: B52 F-02-77: SWM BASIN 'B' SDP-04-66: MAIN PARKING LOT SDP-04-133: BASIN 'C' SWM FACILITIES AND LAYDOWN AREA SDP-05-042: JHU/LIBRARIES SERVICE CENTER (FOREST CONSERVATION AND WETLANDS UPDATES) SDP-03-043: SANNER ROAD IMPROVEMENTS (NEW APFO SDP-05-050: BUILDINGS 12 AND 15. CENTER SERVICE ROAD SDP-05-133: PRECINCT 21, BUILDINGS 21 AND 43 (PARKING RATIO 1.62/1000) SDP-07-080: MP-6 CONDUIT PATHWAY F-04-188: FOREST CONSERVATION EASEMENT RE-PLAT F-04-140: SANNER ROAD SWM, STORM DRAINS AND UTILITY F-07-035: FOREST CONSERVATION, RE-PLAT EASEMENT

PREVIOUS SDP AND

#### SITE ANALYSIS CHART

TOTAL PROJECT AREA: (JHU/APL CAMPUS) 357.98 ACRES/15,593,609 SQ.FT B. AREA OF PLAN SUBMISSION: (CENTRAL GREEN) 2.91 AC. ± (BORROW AREA) 1.74 AC. ± (STOCKPILE PRL SITE AREA) 1.72 AC. ± C. LIMIT OF DISTURBED AREA: (CENTRAL GREEN) 2.91 AC.  $\pm$ (BORROW AREA) 1.74 AC. ±

(STOCKPILE PRE SITE AREA) 1.72 AC. ± PRESENT ZONING DESIGNATION: PEC PROPOSED USES FOR SITE AND STRUCTURES: RESEARCH CAMPUS PARK FLOOR SPACE ON EACH LEVEL OF BUILDING(S) PER USE: N/A TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT AS SHOWN ON FINAL PLAT: N/A

TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION: N/A MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE: 3937 NUMBER OF PARKING SPACES REQUIRED BY HOWARD COUNTY ZONING REGULATIONS AND/OR FDP CRITERIA: 2450 (SDP-11) NUMBER OF PARKING SPACES PROVIDED ON SITE: 4940 (SDP-0466) 3 L. OPEN SPACE ON SITE: N/A

AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS: N/A BUILDING COVERAGE OF SITE: N/A APPLICABLE DPZ FILE REFERENCES: N/A ANY OTHER INFORMATION WHICH MAY BE RELAVENT: N/A

. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY PLUMBING CODE AND DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND DETAILS. IN CASE OF CONFLICT OR DISCREPANCY, THE PLUMBING CODE SHALL APPLY. EXISTING SITE FEATURES AND UTILITIES SHOWN HAVE BEEN BASED UPON SURVEYS AND OTHER SOURCES BELIEVED TO BE RELIABLE. THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION SHOWN IS NOT GUARANTEED. THE

**GENERAL NOTES** 

FIVE WORKING DAYS PRIOR TO CONSTRUCTION. CONTROL DEVICES ENCOUNTERED AND DISTURBED DURING THE COURSE OF CONSTRUCTION

 THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND DEPTH OF ALL EXISTING UTILITIES, AS NECESSARY PRIOR TO INSTALLING STORM DRAINS, REPORT ANY DISCREPANCIES FROM THE PLANS TO CENTURY ENGINEERING, INC. ALL UTILITIES SHALL BE RETAINED UNLESS LABELED OTHERWISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND WOF REQUIRED TO ADJUST EXISTING AND PROPOSED UTILITIES AND APPURTENANCES TO FINISH GRADES WITHIN THE LIMITS OF WORK. DAMAGE TO EXISTING CONDITIONS AND UTILITIES SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR. THE ULTIMATE STATUS OF ALL EXISTING ELECTRIC, TELEPHONE AND LIGHT POLES WITHIN THE LIMIT OF DISTURBANCE SHALL BE COORDINATED WITH FIELD ENGINEER FROM JHU/APL.

12. THE CONTRACTOR SHALL HAVE ALL PRIVATE UTILITIES LOCATED PRIOR TO ANY

13. EXISTING UTILITIES WHICH ARE NOT TO BE REMOVED OR ABANDONED SHALL REMAIN OPERATIONAL AT ALL TIMES. APPROPRIATE EXISTING UTILITIES SHALL REMAIN IN SERVICE UNTIL REPLACEMENT/RELOCATED UTILITIES ARE OPERATIONAL.

14. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ALL CTILITIES TO AVOID CONSTRUCTION PROBLEMS/CONFLICTS WITH EROSION AND SEDIMENT CONTROL MEASURES. SEE APPROVED SEDIMENT CONTROL PLAN. 15. THE CONTRACTOR SHALL MAINTAIN 2.0 FEET MINIMUM COVER OVER ALL UTILITIES

DURING CONSTRUCTION.

16. UNLESS OTHERWISE NOTED, ALL PROPOSED WATER LINES SHALL HAVE FOUR FEET MINIMUM COVER, 1.0 FEET MINIMUM VERTICAL CLEARANCE FROM ALL STORM DRAIN LINES, AND 1.0 FEET MINIMUM VERTICAL CLEARANCE ABOVE SANITARY SEWER LINES. THE SUBJECT PROPERTY IS ZONED PEC PER THE FEBRUARY 2, 2004 COMPREHENSIVE

ZONING PLAN AND THE COMP-LITE ZONING AMENDMENT. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN ANY REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS. FOREST CONSERVATION EASEMENT AREAS AND/OR 100 YEAR FLOODPLAIN, NONE ARE

LOCATED WITHIN 100 FEET OF THE LIMIT OF DISTURBANCE. THE COORDINATES HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, GEODETIC

CONTROLS 0002 AND 41CA. O. WATER SERVICE IS PUBLIC.

21. SEWER SERVICE IS PUBLIC. 22. THE SITE IS LOCATED IN THE MIDDLE PATUXENT WATERSHED.

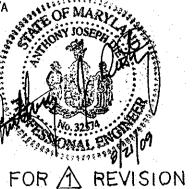
23. STORMWATER MANAGEMENT PROVIDED FOR CENTRAL GREEN IN ON-CAMPUS STORMWATER MANAGEMENT FACILITY SWM BASIN 'A'. IMPERVIOUS COVER REMOVED: 2.40 ACRES, IMPERVIOUS COVER ADDED (OR RESURFACED): 0.22 ACRES. IMPERVIOUS COVER REDUCED BY 2.18 ACRES OR 90% STOCKPILE/LAYDOWN AREA PROVIDED FOR IN SWM BASIN 'C'. NO CHANGE IN IMPERVIOUS AREA. PRL SITE SWM PROVIDED FOR BY OVERMANAGEMENT IN SWM BASIN 'A

24. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT BECAUSE NO TRAFFIC IS GENERATED BY THE APPROVAL OF THIS PROJECT.

25. THERE ARE NO STEEP SLOPES, FLOODPLAINS OR WETLANDS LOCATED IN THE AREAS 35

26. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY F-02-40. 27. NO PERIMETER LANDSCAPING IS REQUIRED FOR THIS PLAN DUE TO INTERIOR LOCATION

28. SOIL MAP IS SHEET NUMBER 29, HOWARD COUNTY SOIL SURVEY.



11100 JOHNS HOPKINS ROAD PERMIT INFORMATION CHART | DIAMS HOPKINS UNIV.—APL | N/)
| PLAT OR L/F | CRID | ZONING TAX MAP No. | E |
| 15429/15433 | 16 | PEC | 41 |
| WATER CODE | SEWER CODE | CLASSES

ADDRESS CHART

#### BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF

JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED

TO A THIRD PARTY AND SHALL NOT

PROP. SPOT ELEVATION

PROP. CURB & GUTTER

APPROVED: DEPARTMENT OF PLANNING AND ZONING Chief. Division of Land Development BU

+ 385.58

PURPOSE OF PLAN

THIS SITE DEVELOPMENT PLAN IS FOR THE DEVELOPMENT OF THE CENTRAL GREEN.

PHASE 1 COVERED THE DEMOLITION OF EXISTING STRUCTURES. PHASE 2 IS FOR THE

SITE WORK NEEDED TO CREATE THE CENTRAL GREEN "PARK". THE BORROW AREA IS

THE SOURCE OF FILL MATERIAL AND THE PRL SITE IS THE LOCATION WHERE CONCRETE

RUBBLE FROM THE REMOVED BUILDING FOUNDATIONS WILL BE CRUSHED AND STOCKPILED

CONSULTING ENGINEERS - PLANNERS 10710 Gilroy Road, Hunt Valley, MD 21031 Phone: 443,589,2400 Fax: 443,589,2401



PROFESSIONAL CERTIFICATION

APPROVED BY ME, AND THAT ! AM A DULY LICENSED PROFESSIONAL

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR

ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND

| •.                              | WAS MADE | DESIGN BY:                           |     |           |   |     |
|---------------------------------|----------|--------------------------------------|-----|-----------|---|-----|
| <b>7</b>                        | 088      | A.J.D.                               |     |           |   |     |
| $\frac{\mathbf{I}}{\mathbf{G}}$ |          | DRAWN BY: M.S.S. CHECKED BY: A.J.10. |     | ,         |   |     |
|                                 |          |                                      | AFE | <b>A</b>  | BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING<br>BEHIND BUILDING 17 AND CENTER SERVICE LOT | 2/1 |
|                                 |          |                                      | REB |           | SERVICE ROAD REALIGNMENT TO BUILDINGS 7, 8, 9   | 3/  |
|                                 | 327      | DATE:                                | RDT | $\Lambda$ | ADD SUBSTATION CONSOLIDATION & DUCT BANKS   | 05  |
|                                 | ONALPRA  | FEB. 15, 2008                        | BY  | NO.       | REVISION  | D/  |

## THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY

Q. FLOOR AREA RATIO (FAR): N/A

11100 JOHNS HOPKINS ROAD LAUREL, MARYLAND 20723-6099 443-778-5134

# "CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY TAX MAP: 41

ELECTION DISTRICT 5-05 HOWARD COUNTY, MARYLAND SHEET 1 OF 16 (RESTRICTED FILE)

AS SHOWN

C.E.I. PPOJECT

NUMBER

22172.25

SHEET INDEX

UTILITY PROFILES AND NOTES

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SEDIMENT CONTROL PLAN

14 EROSION & SEDIMENT CONTROL

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CONTROL DRAINAGE AREA MAP

12 PRL SITE STOCKPILE AREA EROSION &

13 PRL SITE STOCKPILE AREA EROSION &

SEDIMENT CONTROL DRAINAGE AREA MAP

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AND FLOW TABULATIONS

STORM DRAIN DRAINAGE AREA MAP

EROSION & SEDIMENT CONTROL PLAN

BORROW AREA EROSION & SEDIMENT

1 COVER SHEET

SITE PLAN

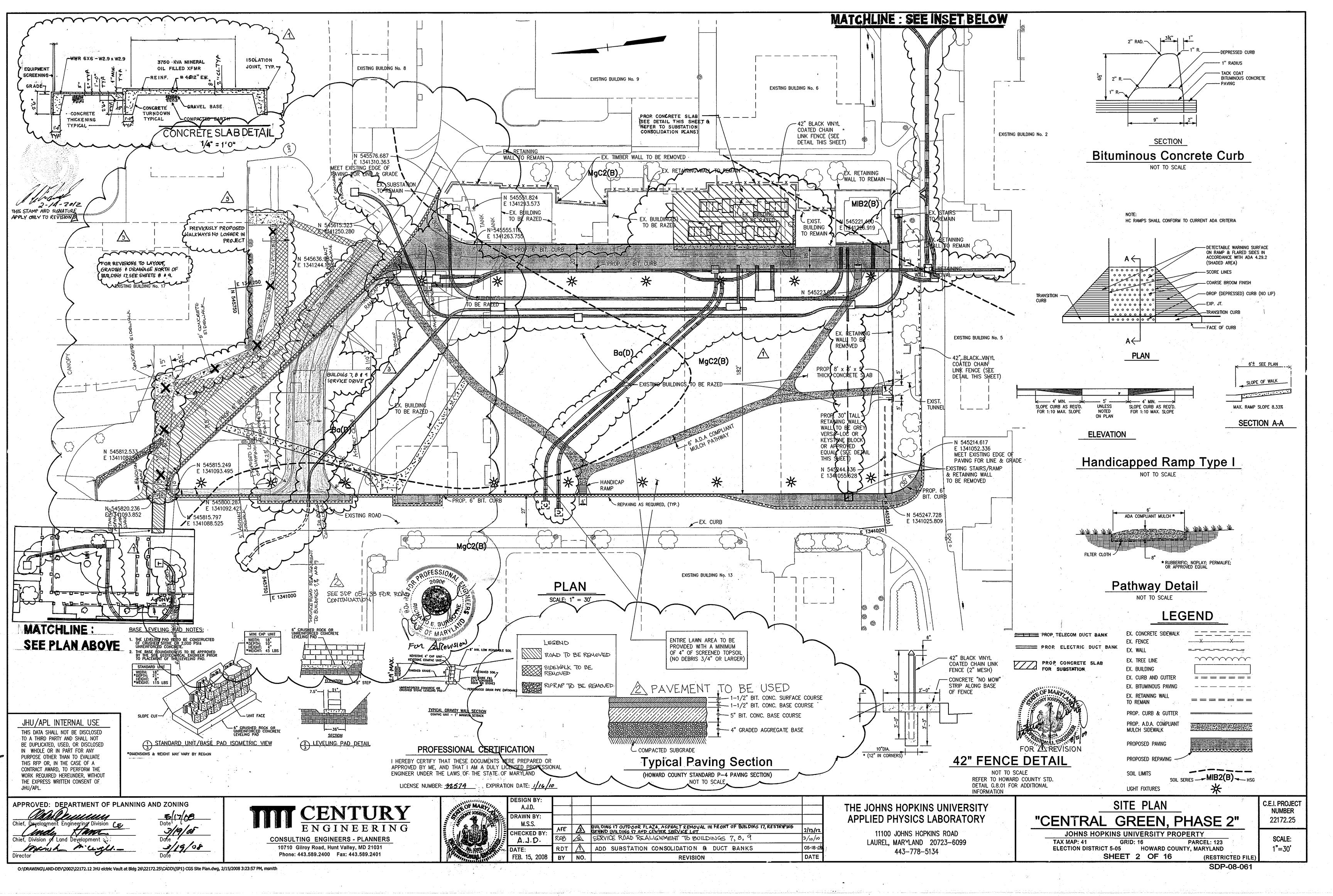
GRADING PLAN

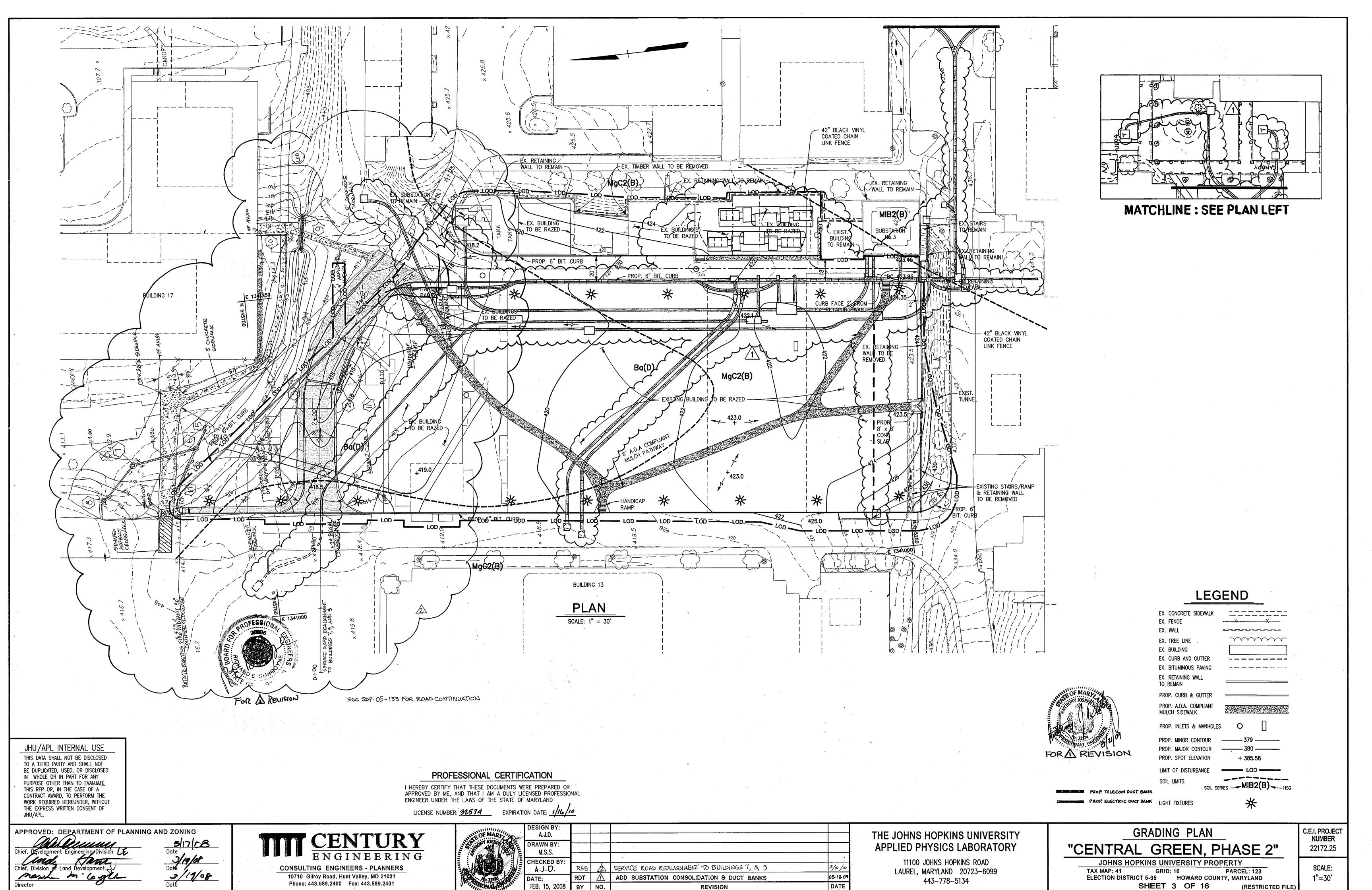
UTILITY PLAN

CONTROL PLAN

16 DEMOLITION PLAN

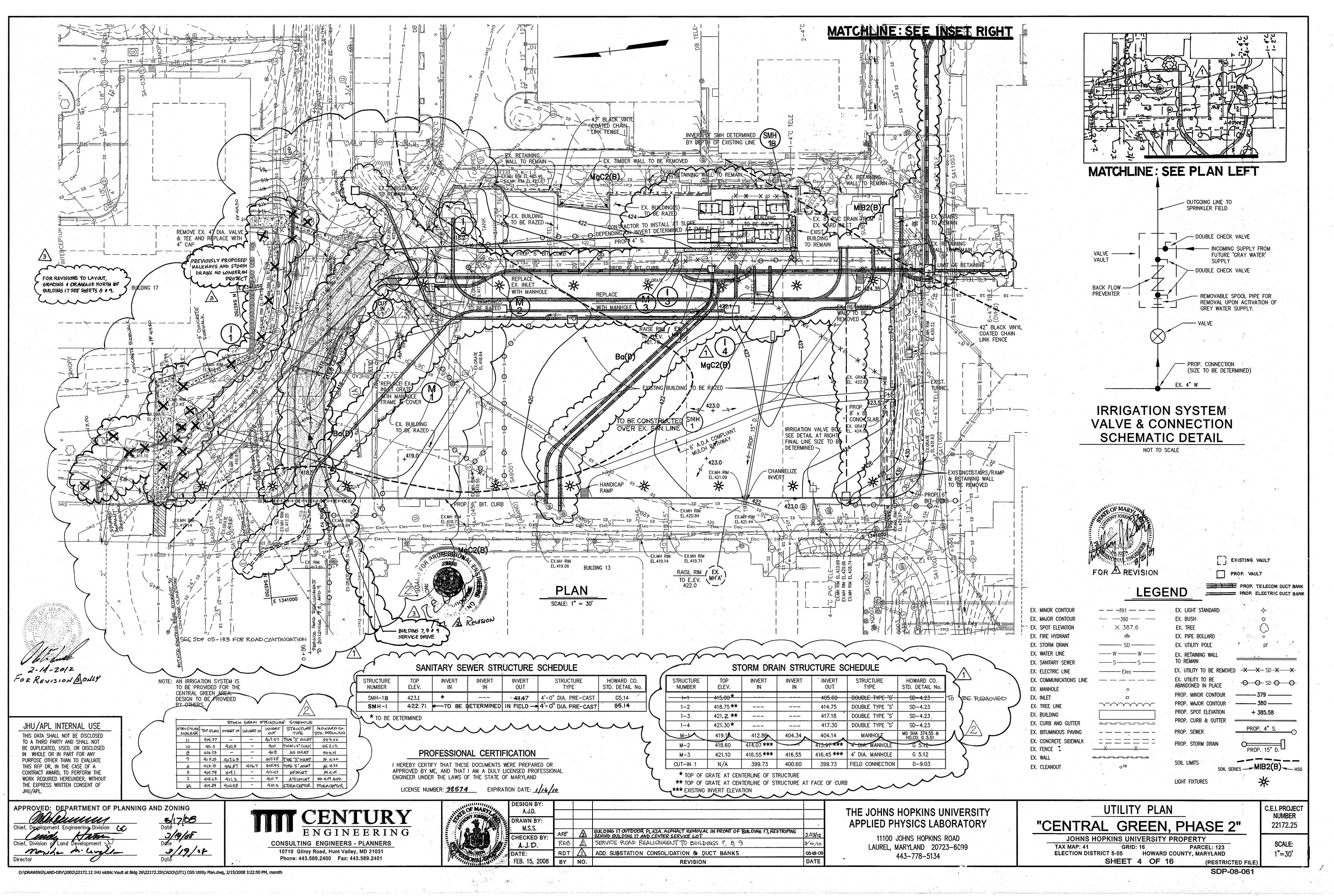
SDP-08-061

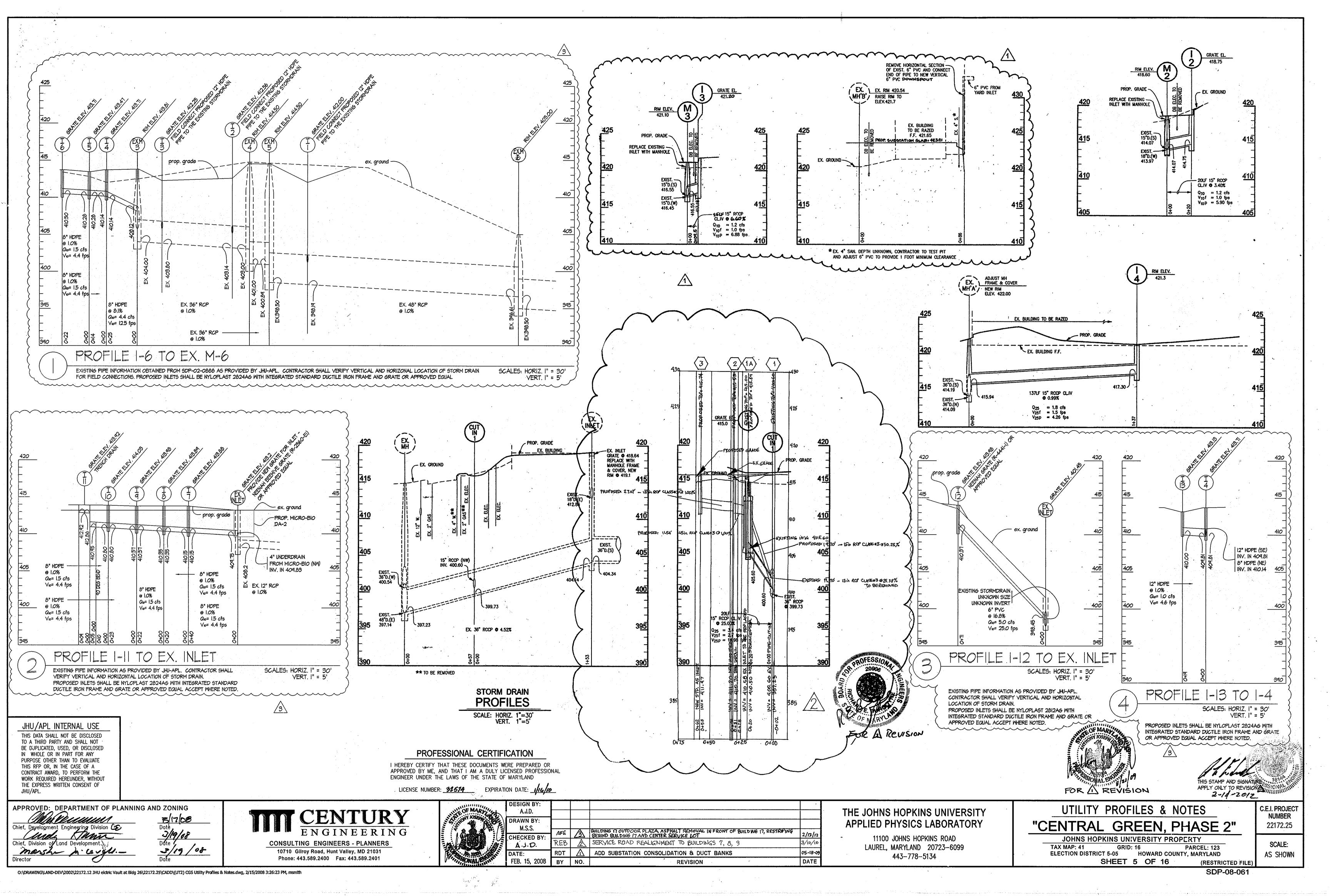


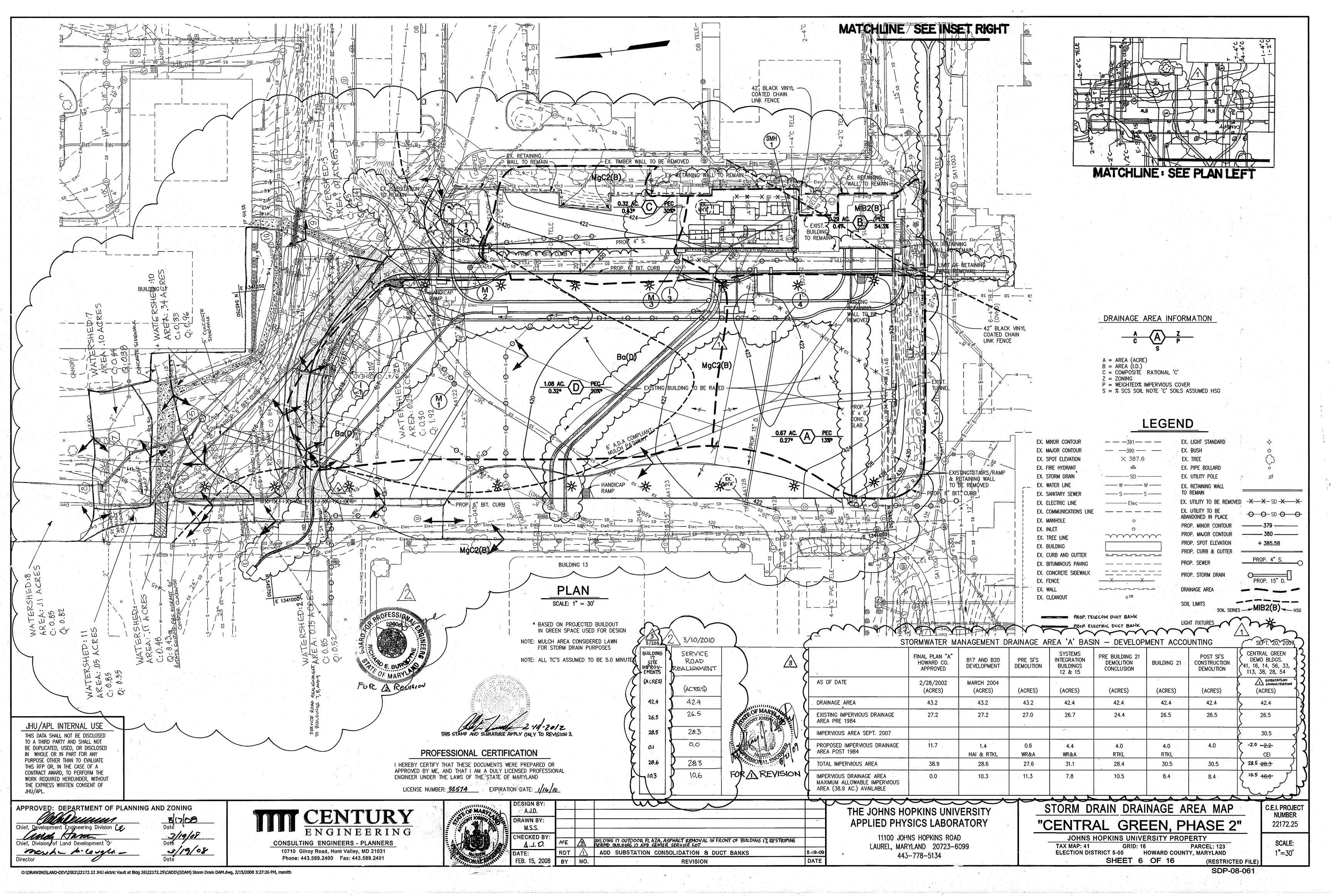


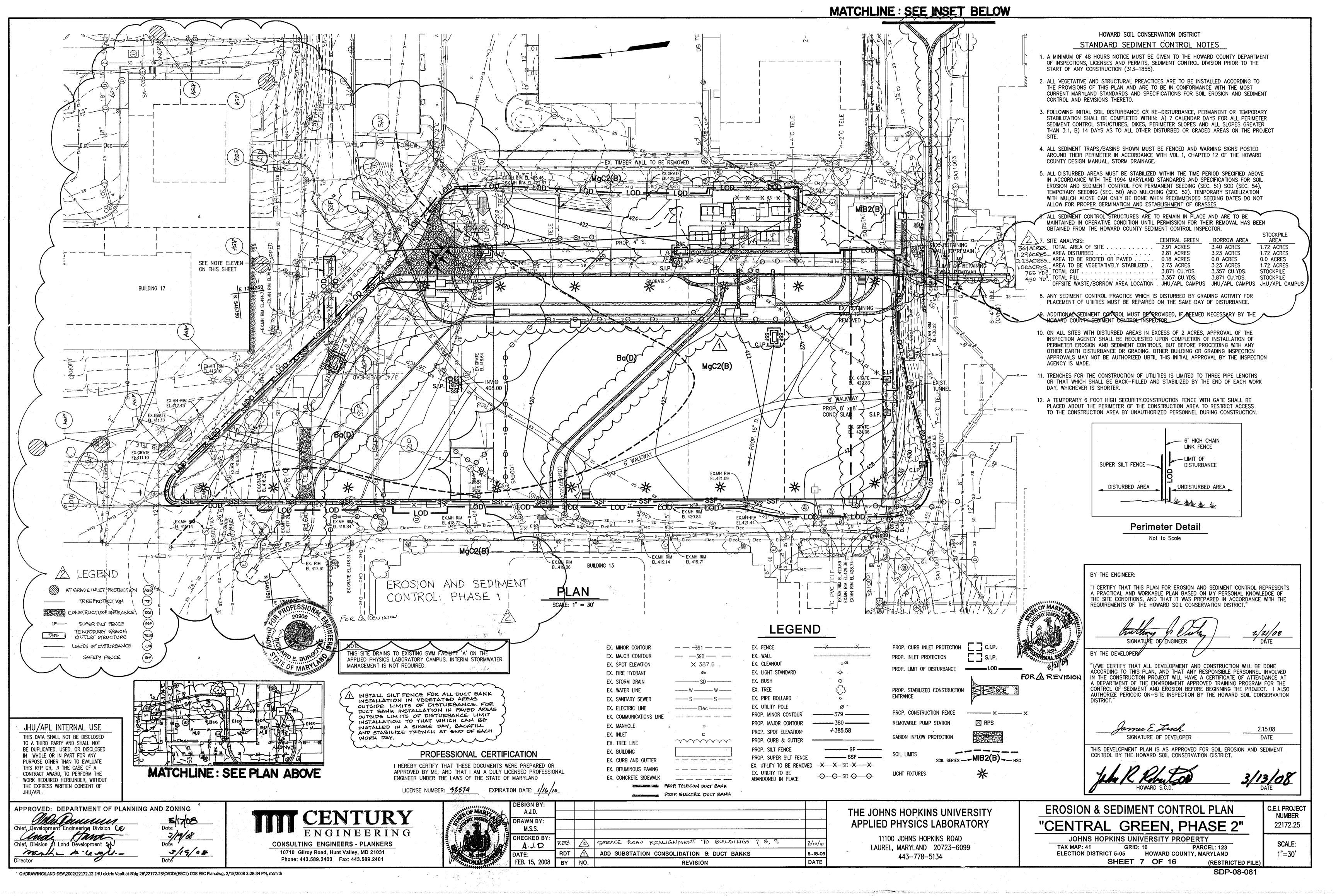
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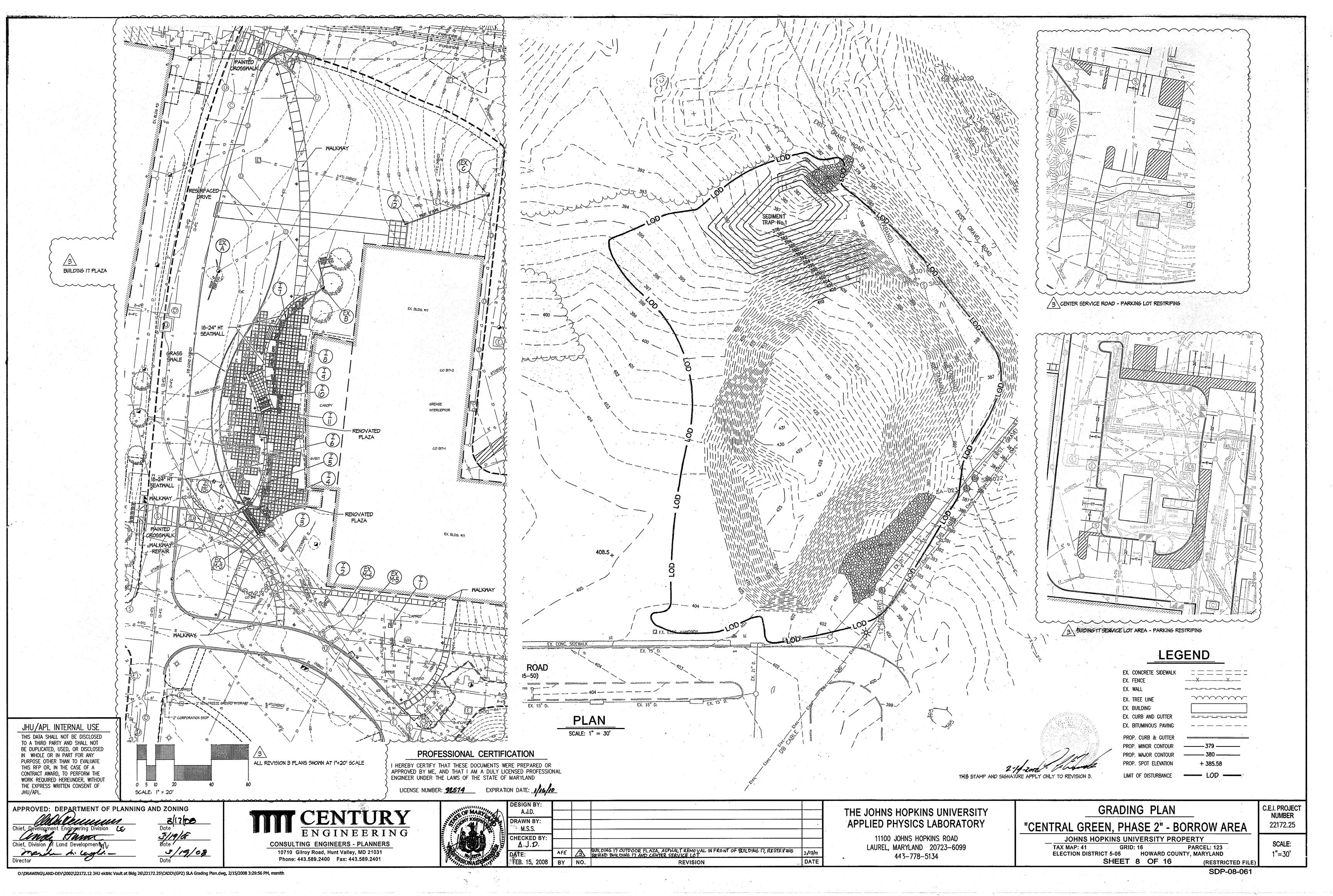
SDP-08-061

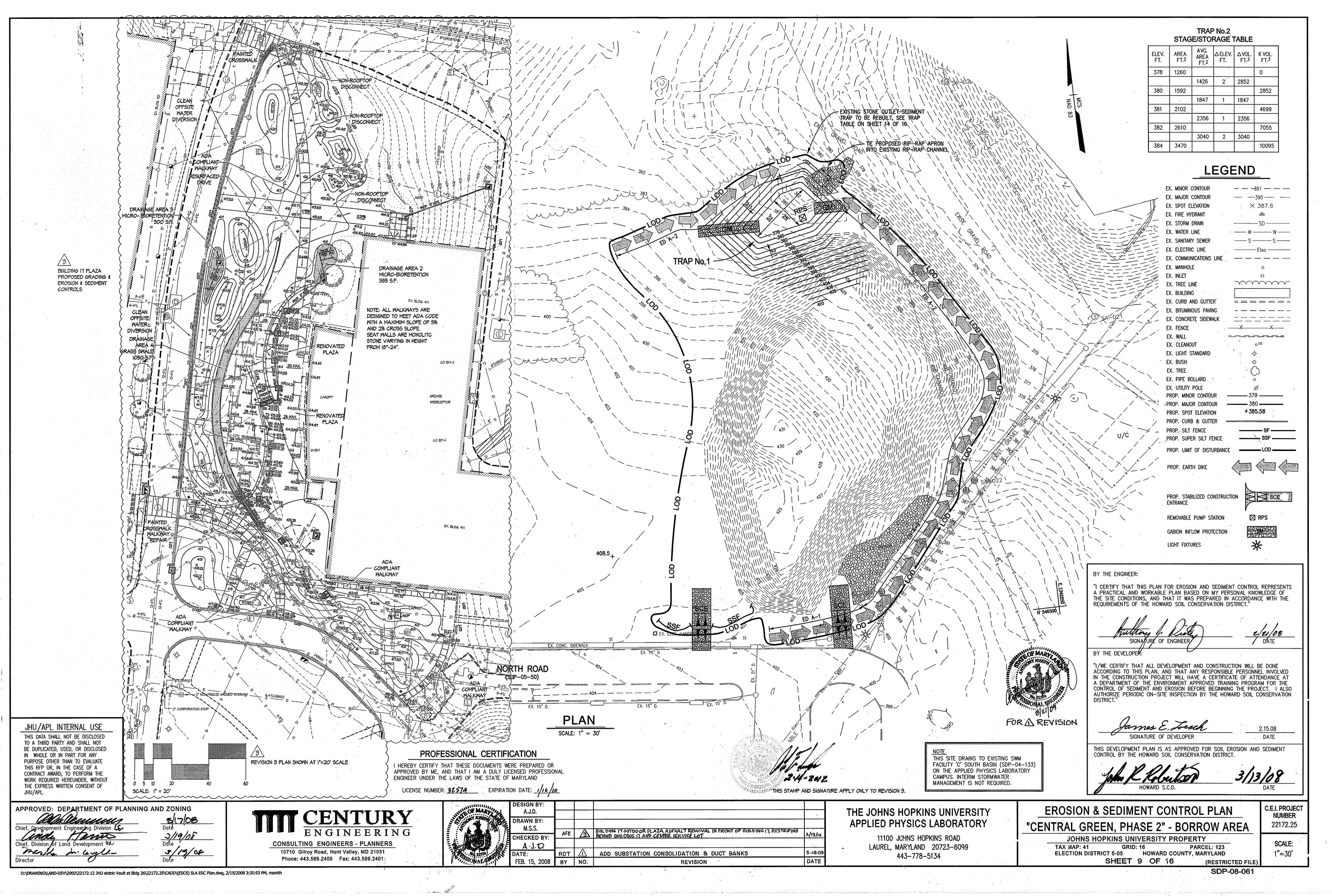


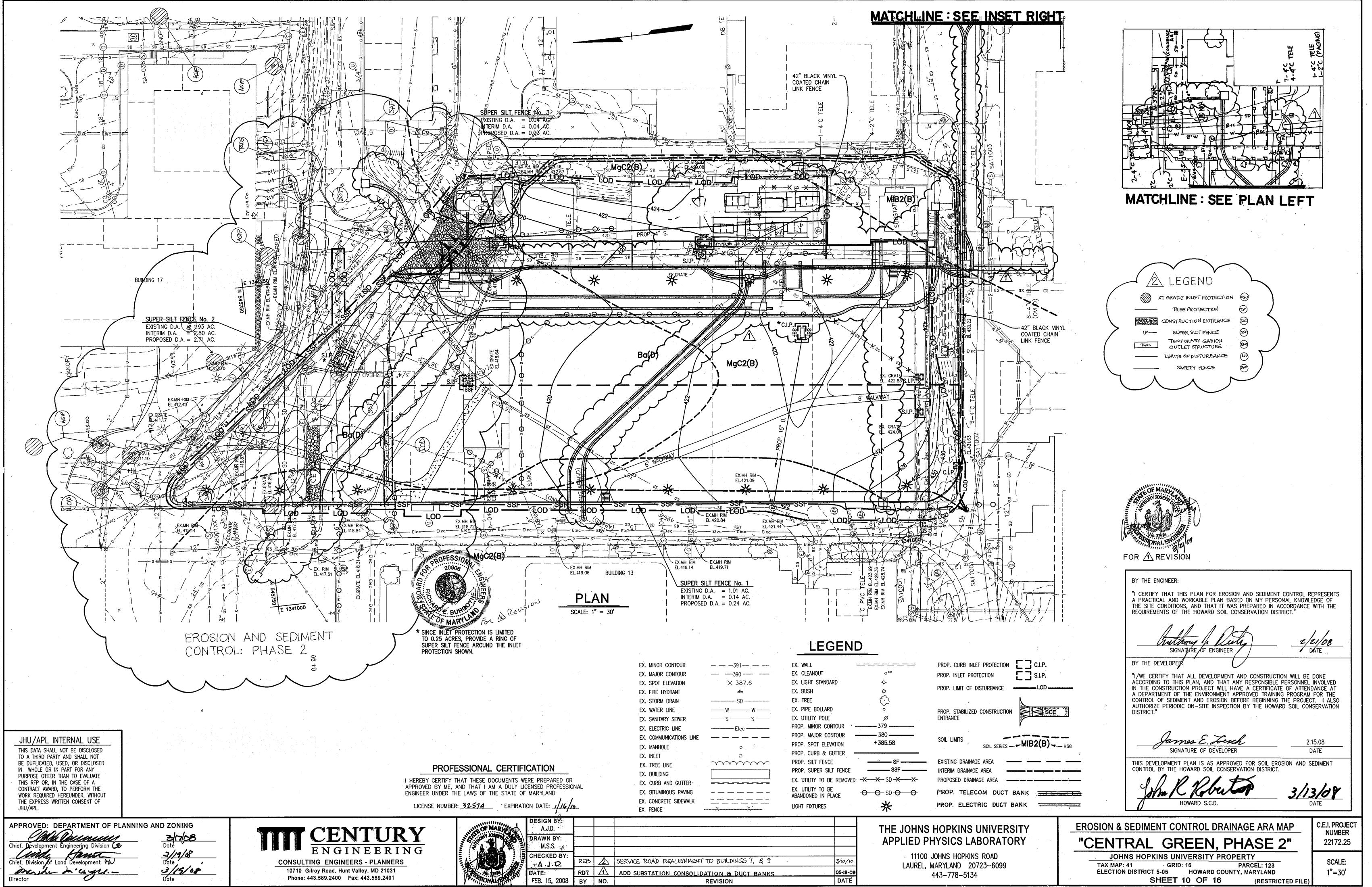






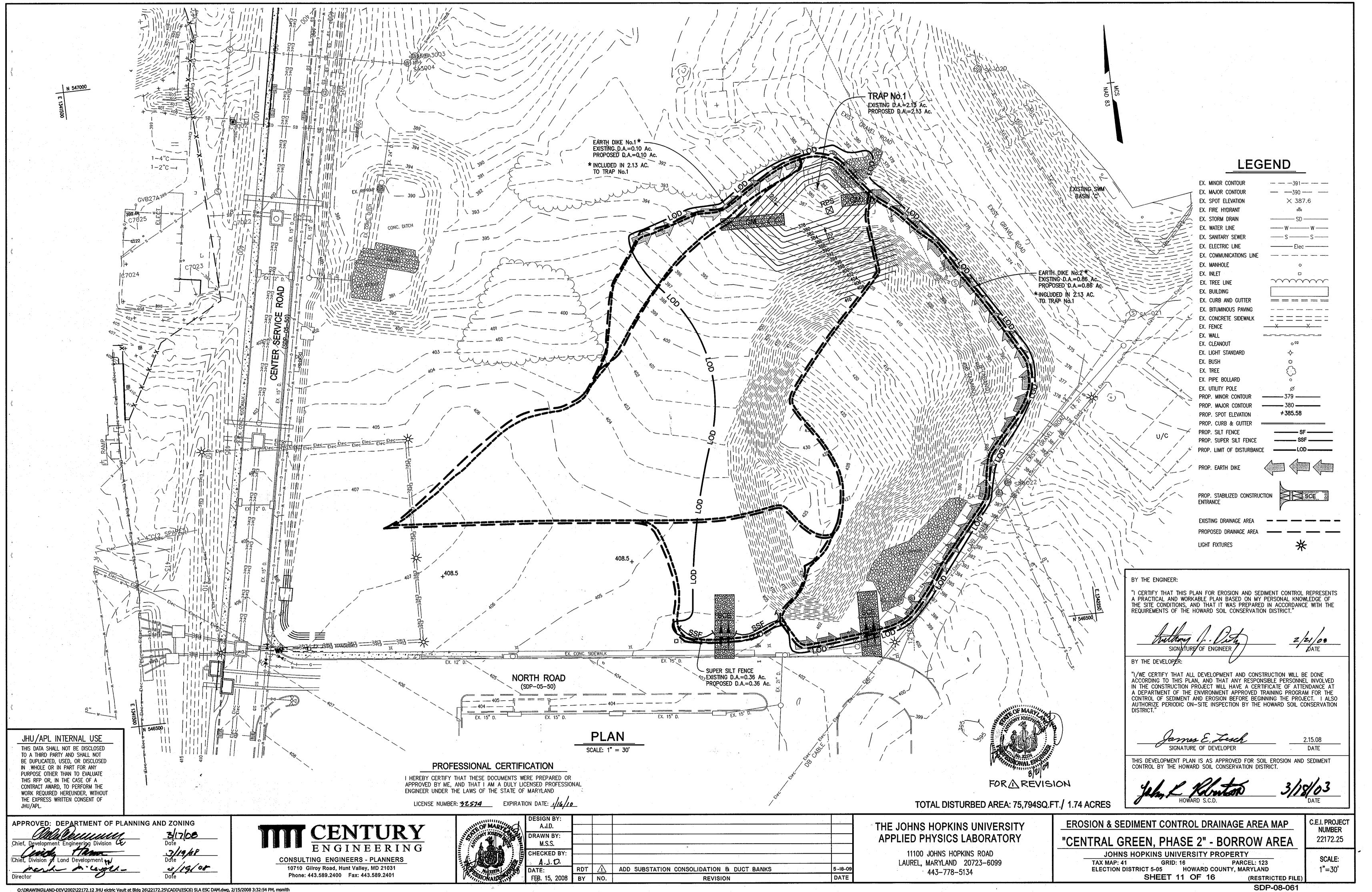




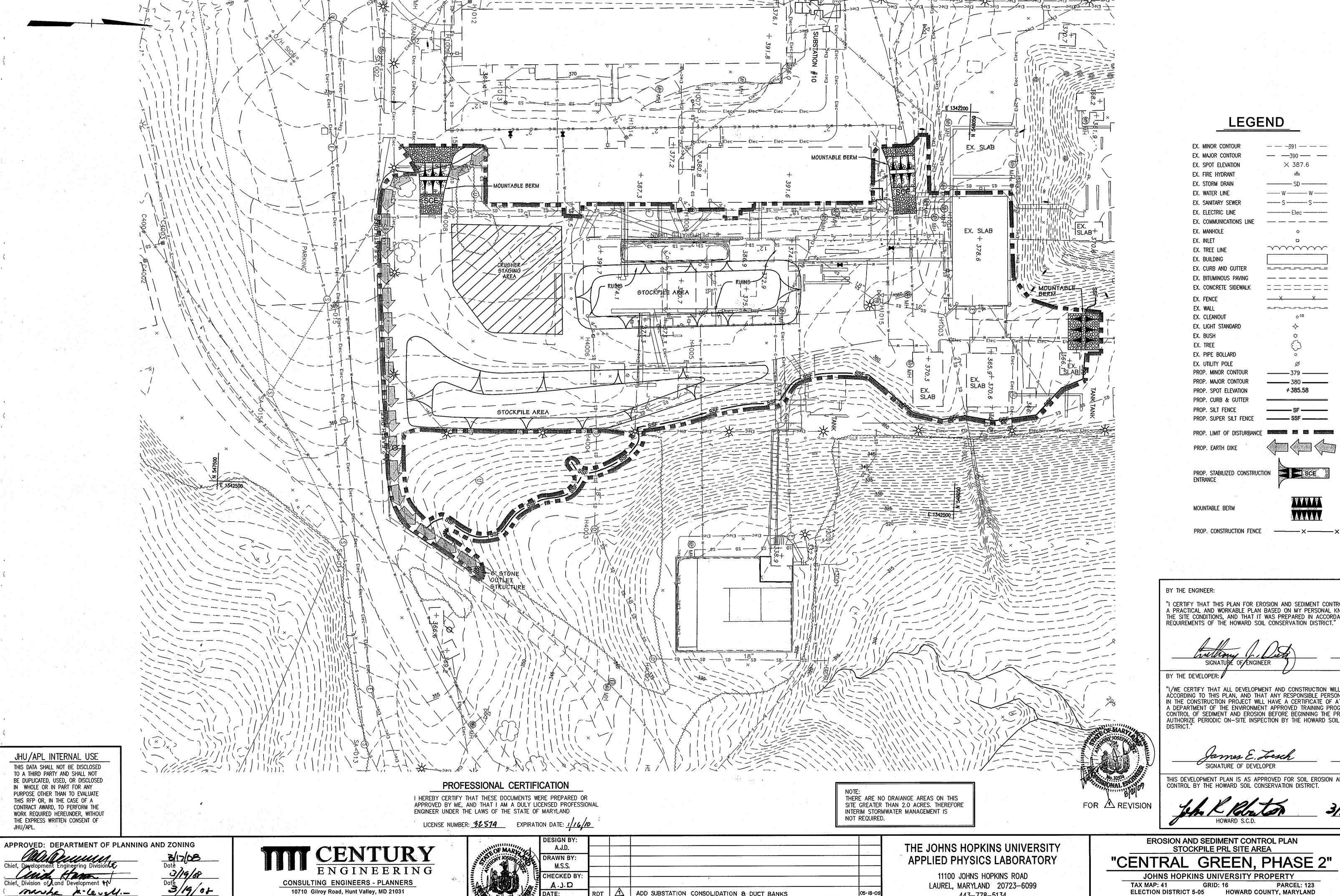


SDP-08-061

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O:\DRAWING\LAND-DEV\2002\22172.12 JHU elctric Vault at Bldg 26\22172.25\CADD\(ESC6) SLA ESC DAM.dwg, 2/15/2008 3:32:54 PM, msmith



 $\sim\sim\sim\sim\sim$ 

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

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

2.15.08 DATE

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

marche

Phone: 443.589.2400 Fax: 443.589.2401

RDT ADD SUBSTATION CONSOLIDATION & DUCT BANKS 05-18-09 DATE BY NO. REVISION

443-778-5134

"CENTRAL GREEN, PHASE 2"

SHEET 12 OF 16

SCALE: 1"=30'

(RESTRICTED FILE)

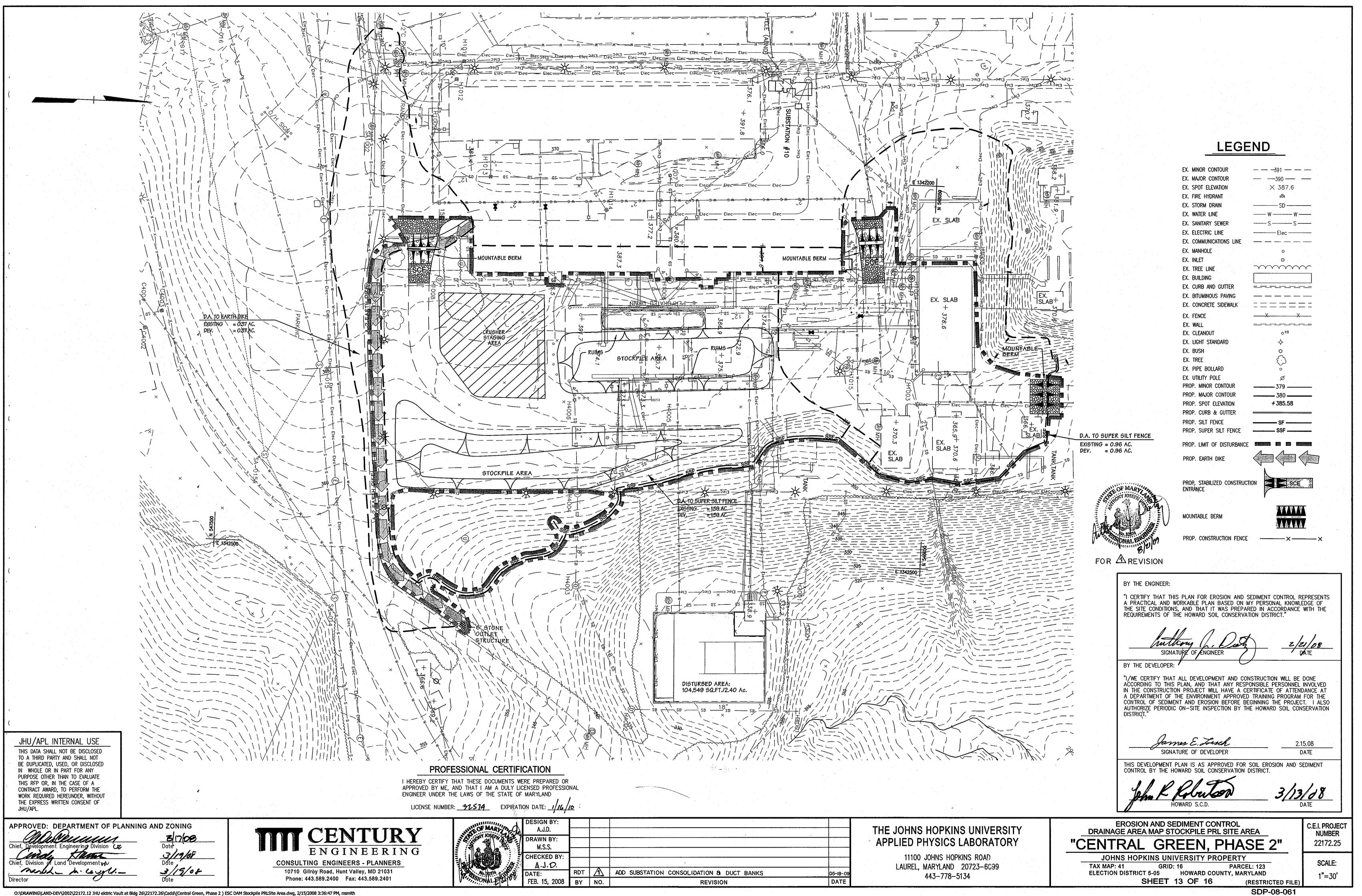
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22172.25

C.E.I. PROJECT

NUMBER

SDP-08-061



#### HOWARD SOIL CONSERVATION DISTRICT

#### PERMANENT SEEDING NOTES (BORROW & STOOCKPILE AREAS)

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

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

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 1. PREFERRED APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92,000 LBS/1000 SQ. FT) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT) BEFORE SEEDING, HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).
- 2. ACCEPTABLE APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

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

MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

#### PERMANENT SEEDING NOTES (CENTRAL GREEN)

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

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. PROVIDE A MINIMUM OF 4" OF SCREENED TOP-SOIL (NO DEBRIS 3/4" OR LARGER)

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 1. PREFERRED APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92,000 LBS/1000 SQ. FT) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).
- 2. ACCEPTABLE -- APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 - MAY 15 AND AUGUST 15 - OCTOBER 15, SEED WITH 125 LBS/ACRE (2.9 LBS/1000 SF) 3-WAY TALL FESCUE MIX & 25 LBS/ACRE (0.6 LBS/1000 SF) OF PERENNIAL RYE GRASS. FOR THE PERIOD MAY 15 - AUGUST 14, SEED WITH 125 LBS/ACRE (2.9 LBS/100 SF) OF 3-WAY TALL FESCUE MIX & 25 LBS/ACRE (0.6 LBS/1000 SF) OF PERENNIAL RYE GRASS. DURING THE PERIOD OF OCTOBER 16— FEBRUARY 28, PROTECT SITE BY: OPTION 1 - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION 2 - USE SOD. OPTION 3-SEED WITH 125 LBS/ACRE 3-WAY TALL FESCUE MIX AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS. REPLACEMENTS AND RESEEDINGS.

#### TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS

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

SOIL AMENDMENTS - APPLY 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

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

MULCHING - APPLY 1 1/2 TO 2 TONS/ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FT. OR HIGHER, USE 348 GAL. PER ACRÉ (8 GAL/1000 SQ. FT.) FOR ANCHORING.

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

#### UTILITY NOTES

- 1. CONTRACTOR SHOULD OPEN THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE) THE TRENCH.
- 2. PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- 3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTUCTION ARE TO BE REPAIRED IMMEDIATELY.

### JHU/APL INTERNAL USE

THIS DATA SHALL NOT BE DISCLOSED TO A THIRD PARTY AND SHALL NOT BE DUPLICATED, USED, OR DISCLOSED IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS RFP OR, IN THE CASE OF A CONTRACT AWARD, TO PERFORM THE WORK REQUIRED HEREUNDER, WITHOUT THE EXPRESS WRITTEN CONSENT OF

## PROFESSIONAL CERTIFICATION

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

LICENSE NUMBER: 32514 EXPIRATION DATE: 1/16/60

#### CENTRAL GREEN TIMETABLE SEQUENCE OF CONSTRUCTION 1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY. 1 WEEK 2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS 1 DAY LABORATORY AT 443-778-5134 AT LEAST 10 DAYS PRIOR TO BEGINNING WORK. 3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS 1 DAY & LICENSES, GRADING AND SEDIMENT CONTROL INSPECTIONS AT 410-313-1855. AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. 1 WEEK 4. INSTALL PERIMETER SECURITY FENCE, SILT FENCE/SUPER SILT FENCE AND STABILIZED CONSTRUCTION ENTRANCE. 5. RAZE BUILDINGS 14, 16, 38, 56, 28, 54, 113 53 AND 41. 1 MONTH CONTRACTOR TO COORDINATE WITH JHU-APL FACILITIES PERSONNEL FOR TERMINATION OF UTILITY SERVICES AND COMMUNICATION LINES. 6. CONSTRUCT NEW 4" SANITARY SEWER FOR BUILDING 2 WEEKS NUMBER 3 FROM EXISTING MANHOLE TO SMH No. 1. SEVER EXISTING SERVICE AT SMH No. 1. 7. REMOVE BUILDING NUMBER 16 SLAB. 1 WEEK 1 MONTH 8. REMOVE REMAINING BUILDING SLABS AND GRADE SITE. PLACE A MINIMUM OF 36" OF EARTH FILL AGAINST REMAINING RETAINING WALLS ON EAST SIDE OF DISTURBED AREA. CONSTRUCT NEW TUNNEL ENTRANCE AND RETAINING WALLS AT SUBSTATION IN SOUTHEAST CORNER OF THE SITE 2 WEEKS 9. REMOVE OR ABANDON IN PLACE THOSE STORM DRAINS, WATER AND SEWER LINES DESIGNATED AS SUCH ON THE SITE DEVELOPMENT PLAN. 1 WEEK 10. FINE GRADE ROAD. 11. INSTALL NEW STORM DRAINS AND INLETS. PROVIDE INLET 2 WEEKS

PROTECTION. INSTALL SUPER SILT FENCE AROUND INLET PROTECTION AS SHOWN. 12. INSTALL ROAD SUBBASE AND FOR ANY NEW PAVING ALONG PERIMETER OF SITE.

13. PAVE ALL ROAD SURFACES AND INSTALL 6" BITUMINOUS 1 WEEK CONCRETE CURB. 14. INSTALL A.D.A. COMPLIANT MULCH WALKWAY. 2 DAYS

2 DAYS

2 DAYS

1 WEEK

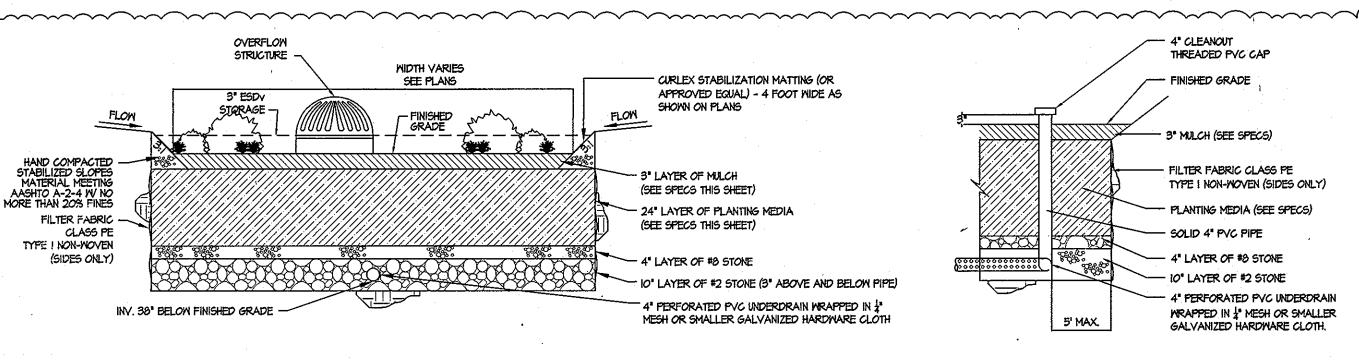
15. FINE GRADE AND STABILIZE ALL REMAINING NON-PAVED SURFACES.

16. REMOVE SEDIMENT CONTROLS, FINE GRADE AND STABILIZE THOSE AREAS.

## MICRO-BIORETENTION SUMMARY TABLE

| PROPOSED<br>SWM FACILITY | SURFACE<br>ELEVATION | BOTTOM<br>ELEVATION | UNDERDRAIN<br>ELEVATION |        |
|--------------------------|----------------------|---------------------|-------------------------|--------|
|                          | FT                   | FT                  | FT                      | FT     |
| DA-2 MICRO-BIORETENTION  | 413.0                | 409.6               | 409.83                  | 413.25 |
| DA-3 MICRO-BIORETENTION  | 416.5                | 413.1               | 4 3,33                  | 416.75 |

BORROW AREA STOCKPILE AREA TIMETABLE SEQUENCE OF CONSTRUCTION TIMETABLE SEQUENCE OF CONSTRUCTION 1 WEEK 1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY. 1 WEEK 1. OBTAIN ALL REQUIRED PERMITS FROM HOWARD COUNTY. 1 DAY 2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS 1 DAY 2. NOTIFY JAMES LOESCH, PE AT THE APPLIED PHYSICS LABORATORY AT 443-778-5134 AT LEAST 10 DAYS LABORATORY AT 443-778-5134 AT LEAST 10 DAYS PRIOR TO BEGINNING WORK. PRIOR TO BEGINNING WORK. 3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS 1 DAY 3. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS 1 DAY & LICENSES, GRADING AND SEDIMENT CONTROL & LICENSES, GRADING AND SEDIMENT CONTROL INSPECTIONS AT 410-313-1855, AT LEAST 48 HOURS INSPECTIONS AT 410-313-1855, AT LEAST 48 HOURS PRIOR TO BEGINNING WORK. PRIOR TO BEGINNING WORK. 4. INSTALL STABILIZED CONSTRUCTION ENTRANCE, EARTH 1 WEEK 4. INSTALL STABILIZED CONSTRUCTION ENTRANCE, REBUILD 1 WEEK DIVERSION DIKE, MOUNTABLE BERM, SILT FENCE, EXISTING STONE OUTLET SEDIMENT TRAP NUMBER ONE. SUPERSILT FENCE, AND STONE OUTLET STRUCTURE. INSTALL EARTH DIKES. SILT FENCE AND SUPER SILT FENCE. 5. CLEAR AND GRUB STOCKPILE AREAS AND DEPLOY 2 WEEKS 5 MONTHS 5. BEGIN GRADING IS CONJUNCTION WITH OPERATIONS AT STONE/ROCK CRUSHER ON-SITE. CENTRAL GREEN. 6. BEGIN STONE/ROCK CRUSHING OF CONCRETE FROM 5 MONTH 6. FINE GRADE AND STABILIZE ALL AREAS. 2 DAYS CENTRAL GREEN SITE AND STOCKPILE RECYCLED CONCRETE ON-SITE IN DESIGNATED STOCKPILE AREAS. 7. SEDIMENT CONTROLS TO REMAIN IN PLACE FOR FUTURE STOCKPILE NEEDS. 7. FINE GRADE AND STABILIZE STOCKPILE 2 DAYS 8. SEDIMENT CONTROLS TO REMAIN IN PLACE FOR FUTURE STOCKPILE NEEDS.



"PONDING DEPTH = 4" MAX CHANNEL SLOPE = 196 Q6 = 1.0 CFS

ICRO-BIORETENTION

GRASS SWALE

DEPTH OF FLOW AT IO YR STORM = 4,1" MAX. VELOCITY AT ESDV = 0.44 FPS

NOT TO SCALE

#### TRAP TABLE

NOT TO SCALE

| TRAP NUMBER                      |       | 1                |  |
|----------------------------------|-------|------------------|--|
| TRAP TYPE                        |       | ST II            |  |
| EXISTING DRAINAGE AREA: ACRES    | 2.13  |                  |  |
| INTERIM DRAINAGE AREA: ACRES     | N/A   |                  |  |
| PROPOSED DRAINAGE AREA: ACRES    | 2.13  |                  |  |
|                                  | WET   | 3,834            |  |
| STORAGE REQUIRED: CUBIC FEET     | DRY   | 3,834            |  |
|                                  | TOTAL | 7,668            |  |
|                                  | WET   | 4,935            |  |
| STORAGE PROVIDED: CUBIC FEET     | DRY   | 5,160            |  |
|                                  | TOTAL | 10,095           |  |
| EXISTING GROUND ELEVATION        |       | 383.9            |  |
| TOP EMBANKMENT ELEVATION         |       | 385.0            |  |
| WEIR CREST OR RISER CREST* ELEV. |       | 384.0            |  |
| WET STORAGE ELEVATION            | 381.1 |                  |  |
| CLEANOUT ELEVATION               | 379.5 |                  |  |
| BOTTOM ELEVATION                 |       | 378.0            |  |
| DEPTH OF CHANNEL (a)             |       | 1.0              |  |
| OUTLET WIDTH (b)                 |       | 10'              |  |
| BOTTOM DIMENSION                 | •     | 28' x 52' (AVG.) |  |
| TRAP SIDESLOPES .                | ·     | 2:1              |  |
|                                  | WET   | 3.1'             |  |
| TRAP DEPTH                       | DRY   | 2.9'             |  |
|                                  | TOTAL |                  |  |
| BARREL DIAMETER                  |       | N/A              |  |
| RISER DIAMETER                   |       | N/A              |  |
| WET STORAGE ZONE ELEVATION       |       | 381.1-378.0      |  |
| DRY STORAGE ZONE ELEVATION       |       | 384.0-381.1      |  |

5-18-09

DATE

2'-0" MIN. CONSTRUCTION AREA

CAPPED CLEANOUT

NOT TO SCALE

CLEAN WATER DIVERSION NOT TO SCALE

#### SEQUENCE OF CONSTRUCTION

Assure that Grading Permit and all other necessary permits are obtained 2. Notify Howard County Department of Public Works at least 48 hours before start of work. Notify the Howard County Bureau of Engineering Construction Inspection Division prior to start of any land disturbances. The Contractor shall notify JHJAPL Construction Manager, Greg Drenning of

and sediment control installation. 4. The Contractor shall notify their inspection Engineer at least 5 business days prior to beginning work so that the SMM as-built construction

443-250-9271 at least 48 hours prior to any work on site including utilities

- rspection may be completed. 5. With the approval of the sediment control inspector, clear and arub for and install sediment controls including super slit fence, inlet protection, tred
- protection fencing, and bituminous diversion berm. . Notify Howard County sediment control inspector upon completion of the installation and receive approval to begin construction. The Contractor shall provide access to Building 17 throughout the construction process to the south west side doors or south doors in cooperation with APL. Field adjustments to the sediment controls to provide access may be necessary and should be reviewed with the Howard County sediment control inspector. Remove existing sidewalks, existing roadway, existing patio, and existing storm drain inlets and drain pipe as shown on the demolition plan. 8. Do not disturb any utilities to remain. Field adjustments to the temporary bituminous diversion berm may be necessary as field conditions dictate to
- provide access to building 17 and the contractor should make adjustments as necessary with the consultation with the Howard County Inspector. Install storm drain structures and connecting pipes. Block up inlet/manholes openings within structures that will remain. Install inlet protection on new 10. Bring proposed plaza area to subgrade level. Construct seat walls and
- plaza hardscape and paving. Construct proposed malkmays. Do not begin installation of micro-bloretention facilities within DA-2 or 3 shown on SNM plans until areas draining to the facilities are stabilized. Once these areas are stabilized, construction micro-bioretention facilities
- per the approved Stormmater Management Plans. 12. Fine grade all remaining areas. 13. Provide landscaping installation.
- 14. Permanently stabilize all remaining areas within the LOD according to the stabilization notes and the specifications. 15. Upon stabilization of the site with established vegetation and with the permission of the sediment control inspector, remove sediment control measures and stabilize those areas disturbed by this process.

OPERATION AND MAINTENANCE SCHEDULE

MICRO-BIORETENTION AREAS (M-6) Inspection shall be performed during met meather to determine if the facility is functioning property. Visual inspection of all components shall be completed by the Owner. All drains shall be opened by the Owner once a year. The Owner shall keep notes of each inspection.

- Annual maintenance of plant material, mulch layer and soil layer is required Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.

  3. Debris and litter shall be removed as a regular operation and as needed
- All appurtenances shall be kept free of trash. 4. Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires. Watering of plant
- material may be required during prolonged any periods.

  5. Mulch shall be inspected each spring. Replace mulch annually where practice treats areas with high concentrations of heavy metals. Otherwise, replace top 2-3 inches of mulch as necessary. 6. Soil erosion to be addressed on an as needed basis, with a minimum of
- once per month and after heavy storm events. 7. Remove accumulated sediment from the surface of the filter bed when accumulation exceeds one inch.
- 8. When water ponds for more than 48 hours, the top few inches of filter media should be removed and replaced. 9. All required maintenance shall be performed by the Owner or the Owner's

#### representative at the Owner's expense. GRASS SWALES (M-8)

## weeds and woody plants and shrubs.

- Inspect smales annually, to assess slope integrity, vegetative health, soil stability, compaction, erosion, ponding, and sedimentation. Remove sediment, debris, or obstructions as heeded. Repair and stabilize slopes where 3. Schedule of plant inspection will be twice a year in spring and fall. This Inspection will include removal of dead and diseased vegetation
- considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires. Watering of plant material may be required during prolonged dry periods.

STORMWATER MANAGEMENT \$ **EROSION & SEDIMENT CONTROL** DETAILS FOR BUILDING IT PLAZA 

BY THE ENGINEER:

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

SIGNATURE OF ENGINEER

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

SIGNATURE OF DEVELOPER

2.15.08 DATE

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



C.E.I. PROJECT

NUMBER

22172.25

SCALE:

AS SHOWN

**EROSION & SEDIMENT CONTROL SPECIFICATIONS and NOTES** THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY

11100 JOHNS HOPKINS ROAD

LAUREL, MARYLAND 20723-6099

443-778-5134

FOR A REVISION &

'CENTRAL GREEN, PHASE 2"

JOHNS HOPKINS UNIVERSITY PROPERTY **GRID: 16** TAX MAP: 41 PARCEL: 123 **ELECTION DISTRICT 5-05** HOWARD COUNTY, MARYLAND

**SHEET 14 OF 16** 

(RESTRICTED FILE)

SDP-08-061

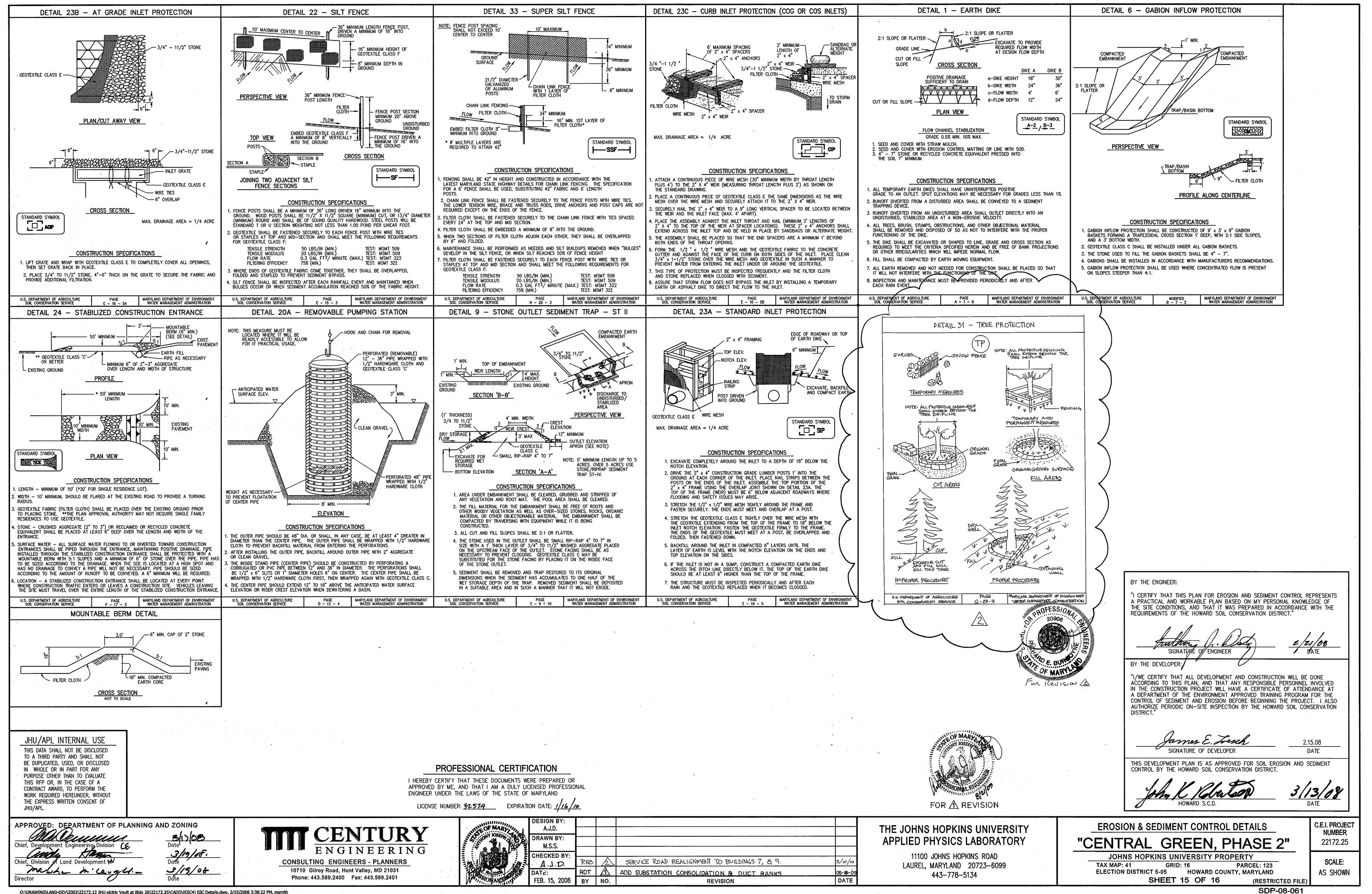
APPROVED: DEPARTMENT OF PLANNING AND ZONING 3/17/08 Engineering Division 🕼 Tam Chief, Division of Land Development 🕪 A -level.

ENGINEERING CONSULTING ENGINEERS - PLANNERS

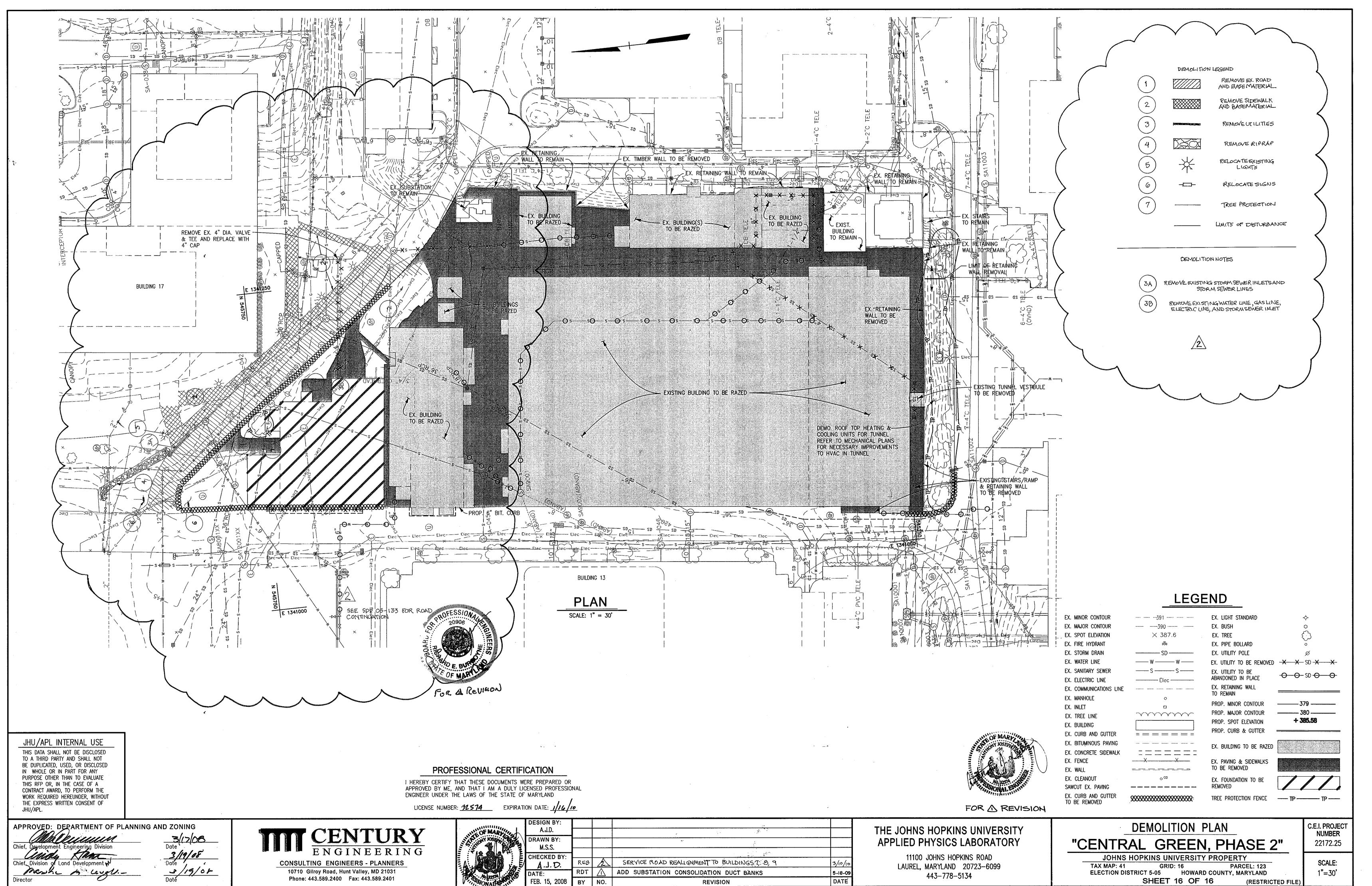
10710 Gilroy Road, Hunt Valley, MD 21031

Phone: 443.589.2400 Fax: 443.589.2401

DESIGN BY: OF MARY A.J.D. DRAWN BY: M.S.S. AFE BUILDING 17 OUTDOOR PLAZA, ASPHALT REMOVAL IN FRONT OF BUILDING 17, RESTRIPING BEIND BUILDING 17 AND CENTER SERVICE LOT CHECKED BY RDT // ADD SUBSTATION CONSOLIDATION & DUCT BANKS DATE: FEB. 15, 2008 BY NO. REVISION



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