

THE JOHNS HOPKINS UNIVERSITY

APPLIED PHYSICS LABORATORY

CREDIT UNION

SITE ANALYSIS DATA CHART

TOTAL PROJECT AREA	366 ACRES
AREA OF PLAN SUBMISSION	2.5 ACRES
LIMIT OF DISTURBED AREA	2.5 ACRES
PRESENT ZONING	PEC
PROPOSED USE	CREDIT UNION
NUMBER OF PARKING SPACES REQUIRED BY ZONING	2450 PARKING SPACES
PROVIDED ON SITE INCLUDING UNIVERSAL PARKING SPACES AND THIS PROPOSAL	3470+27 UNIVERSAL SPACES
MAXIMUM NUMBER OF EMPLOYEES ON SITE	3500
OPEN SPACE ON SITE, ACRES	297
OPEN SPACE ON SITE, PERCENT OF GROSS AREA	81%
BUILDING COVERAGE OF SITE, ACRES	58.2
BUILDING COVERAGE OF SITE, PERCENTAGE OF GROSS AREA	15.9
APPLICABLE DPZ FILE REFERENCES	SDP 85-100 SDP 98-33 SDP 83-21 SDP 98-54 SDP 86-149 SDP 98-54 AMENDED SDP 87-168 SDP 98-73
APPLICABLE PUBLIC WATER CONTRACT	44-1160
APPLICABLE PUBLIC SEWER CONTRACT	30-1001

BUILDING SQUARE FOOTAGE (FOR PARKING CALCULATIONS PER CREDIT UNION NEEDS STUDY)

BASEMENT	4,900 S.F. - STORAGE/MECHANICAL
FIRST FLOOR	7,706 S.F. - BANK
SECOND FLOOR	8,206 S.F. - OFFICE
TOTAL OFFICE SPACE	8,206 S.F.
TOTAL BANK SPACE	7,706 S.F.

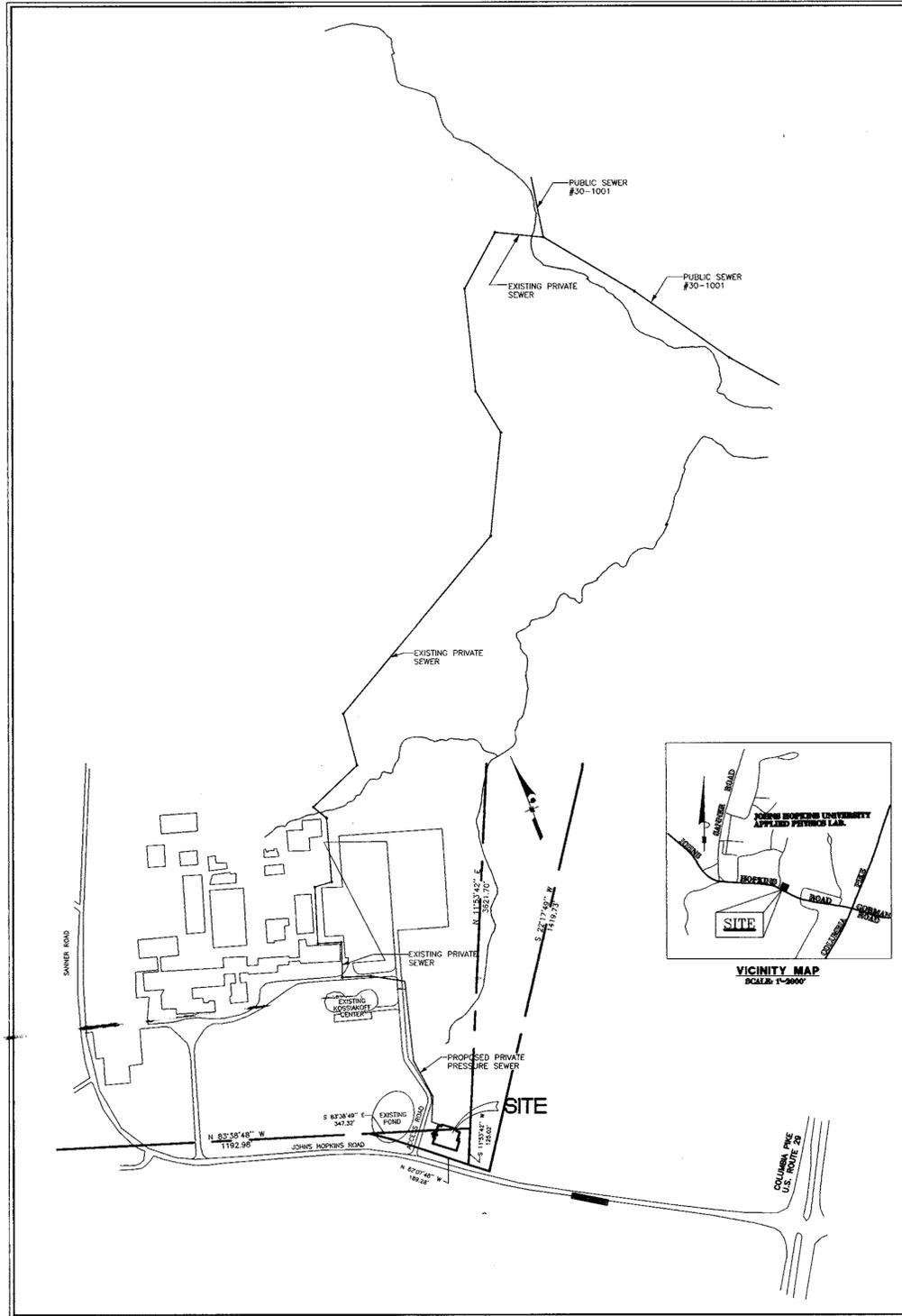
NUMBER OF EMPLOYEES FOR CREDIT UNION	46
NUMBER OF PARKING SPACES REQUIRED FOR A CREDIT UNION	5 PER 1000 S.F. OF FLOOR AREA=39 SPACES
NUMBER OF PARKING SPACES REQUIRED FOR OFFICE SPACE	3.3 PER 1000 S.F. OF FLOOR AREA=27 SPACES
NUMBER OF PARKING SPACES PROVIDED ON-SITE	66 SPACES INCLUDING 4 H.C. SPACES

GROSS BUILDING SQUARE FOOTAGE

BASEMENT	4,900 S.F.
FIRST FLOOR	9,400 S.F.
SECOND FLOOR	8,545 S.F.
TOTAL	22,845 S.F.

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER. AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON HOWARD COUNTY GEODETIC CONTROL (NAVD-29) DATUM TO OBTAIN ELEVATIONS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6" CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR ALL MATERIALS AND CONSTRUCTION METHODS, USE HOWARD DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS
MISS UTILITY - 1-800- MISS UTILITY
THE JOHN HOPKINS UNIVERSITY, APPLIED PHYSICS LABORATORY
MR. JAMES LOESCH 443-778-5134
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE TO BE REMOVED OR PROTECTED AS SHOWN ON THE LANDSCAPE PLAN.
- ALL WATER MAINS TO BE D.I. P. UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.
- NO WETLANDS OR 100-YEAR FLOOD PLAINS EXIST WITHIN 25' OF THIS PROJECTS LIMIT OF DISTURBANCE.



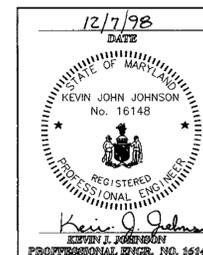
SITE LAYOUT
SCALE: 1"=400'

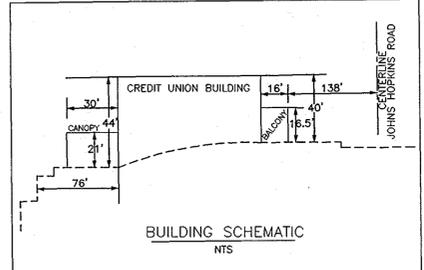
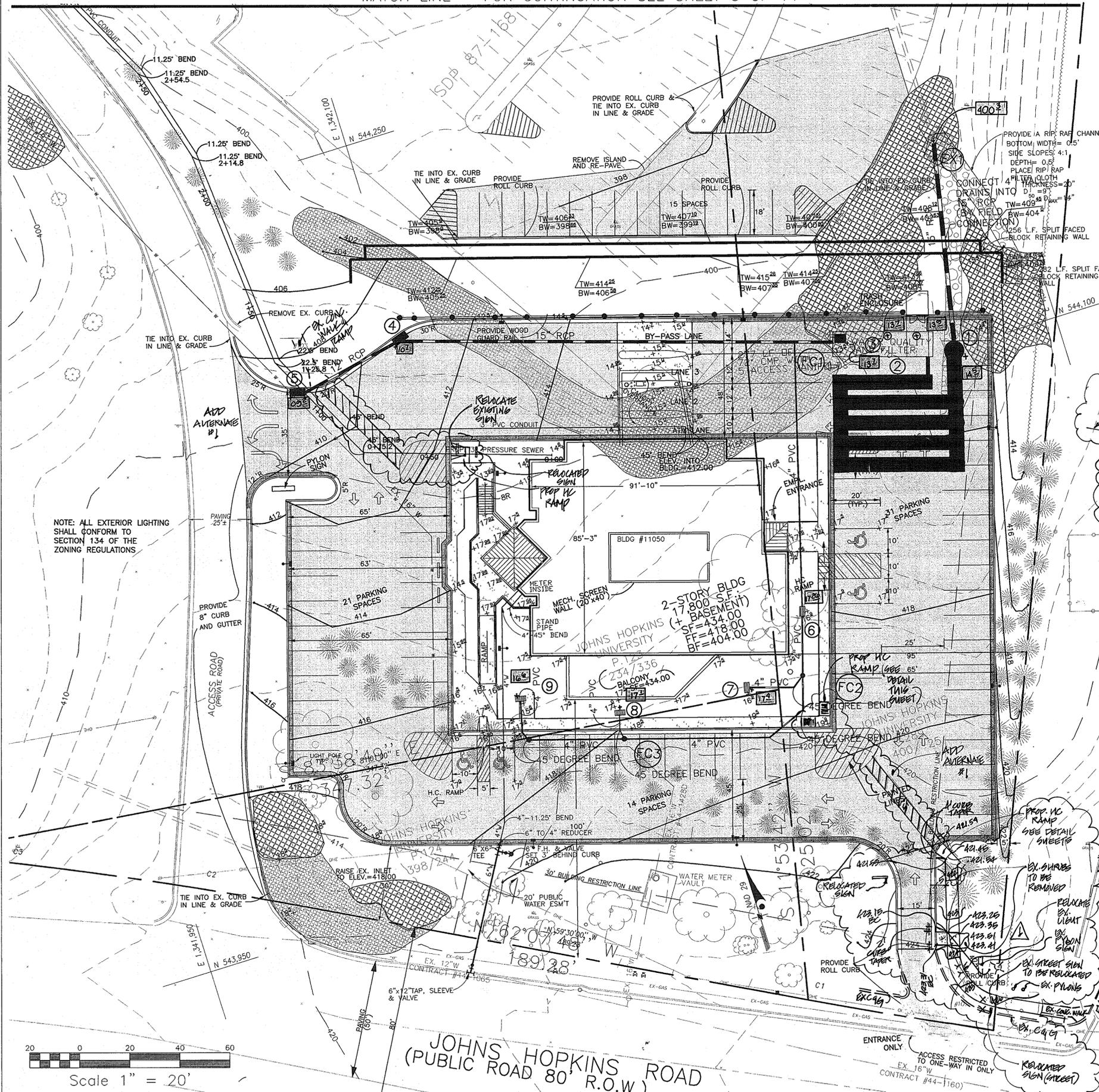
HOWARD COUNTY, MARYLAND ELECTION DISTRICT No. 5 SITE DEVELOPMENT PLAN

SHEET INDEX

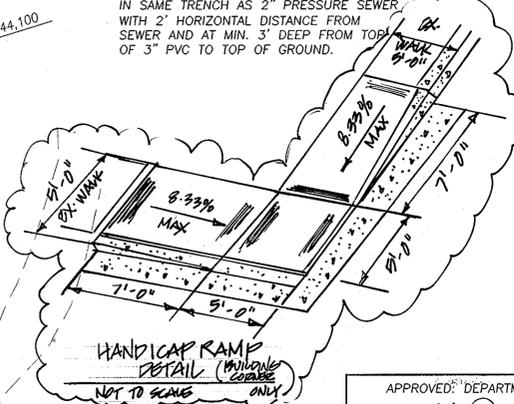
- TITLE SHEET
- DEVELOPMENT PLAN
- SITE DEVELOPMENT PLAN
- SITE DEVELOPMENT PLAN
- SITE NOTES & DETAILS
- SEDIMENT AND EROSION CONTROL PLAN
- SEDIMENT AND EROSION CONTROL PLAN
- SEDIMENT AND EROSION CONTROL PLAN
- SEDIMENT AND EROSION CONTROL NOTES & DETAILS
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT DETAILS
- WATER AND SEWER PROFILES
- SOILS AND DRAINAGE AREA
- LANDSCAPE PLAN

DATE	NUMBER	REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
		<i>John Danner</i> 12/18/98 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
		<i>Cindy Handley</i> 12/22/98 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
		<i>John S. Smith</i> 12/22/98 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE
OWNER: JAMES E. LOESCH FAX NO.: 443-778-6122		
C. COMPANY: JOHN HOPKINS UNIVERSITY, APPLIED PHYSICS LABORATORY		
D. ADDRESS: 1100 JOHNS HOPKINS ROAD		
E. CITY: LAUREL STATE: MARYLAND ZIP: 20723		
DEVELOPER: CARTER SCHILF FAX NO.: 770-422-9479		
C. COMPANY: KDA		
D. ADDRESS: 350 FRANKLIN ROAD		
E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067		





NOTE: 3" PVC CONDUIT FOR FUTURE COMMUNICATION LINE, TO BE INSTALLED IN SAME TRENCH AS 2" PRESSURE SEWER, WITH 2" HORIZONTAL DISTANCE FROM SEWER AND AT MIN. 3' DEEP FROM TOP OF 3" PVC TO TOP OF GROUND.



- LEGEND**
- ROAD SIGN
 - UNDO. WATER LINE
 - STAND PIPE
 - FIRE HYDRANT
 - WATER VALVE
 - WELL
 - STORM MH
 - CLEAN OUT
 - SANITARY MH
 - GAS VALVE
 - GROUND LIGHT
 - ELEC. BOX
 - OVERHEAD ELEC.
 - ELEC. MH
 - GUY WIRE
 - LIGHT POLE
 - POWER POLE
 - BUILDING LINE
 - POST
 - CHAIN LINK FENCE
 - IRON PIPE FOUND
 - MONUMENT FOUND
 - TRAVERSE
 - FLY STATION
 - PROPOSED CONTOURS
 - EXISTING CONTOURS
 - PROPOSED SPOTS
 - EXISTING SPOTS
 - CONCRETE
 - EXISTING PAVEMENT
 - EX. CURB & GUTTER
 - PROPOSED CURB & GUTTER
 - PROPOSED REVERSE CURB & GUTTER
 - TRAFFIC FLOW ARROWS
 - 15-24.9% SLOPES
 - 25% OR GREATER SLOPES

NOTE: ALL EXTERIOR LIGHTING SHALL CONFORM TO SECTION 134 OF THE ZONING REGULATIONS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Drummond 12/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Chris Hammit 12/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Kutz 12/22/98
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

OWNER: JAMES E. LOESCH FAX NO.: 443-778-6122
 A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-5134
 C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
 D. ADDRESS: 1100 JOHNS HOPKINS ROAD
 E. CITY: LAUREL STATE: MARYLAND ZIP: 20723

DEVELOPER: CARTER SCHLIF FAX NO.: 770-422-9479
 A. NAME: CARTER SCHLIF B. DAYTIME TELEPHONE: 770-421-1532
 C. COMPANY: KDA
 D. ADDRESS: 350 FRANKLIN ROAD
 E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
P-123	11060 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

Subdivision Name	Section/Area	998 ACRES	Lot/Parcel#
P-123			P-123
L. 9902 F. 148	Zoning PEC	Tax Map 41	Elect. Distr. 5
Water Code E21			Census Tract 000102
			Sewer Code N/A

12/17/98 DATE

KEVIN JOHN JOHNSON
 No. 16148

REGISTERED PROFESSIONAL ENGINEER
 KEVIN J. JOHNSON
 PROFESSIONAL ENGR. NO. 16148

AS BUILT INFO ADDED 10/8/99

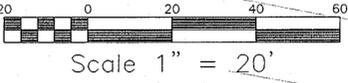
REVISED PER COUNTY COMMENTS	11/6/98
REVISED BLDG LOCATION WITHIN LOT	10/09/98
REVISED PER COUNTY COMMENTS	9/10/98
REVISED PER JHPU & ARCH. PLANS	7/23/98
REVISIONS	DATE

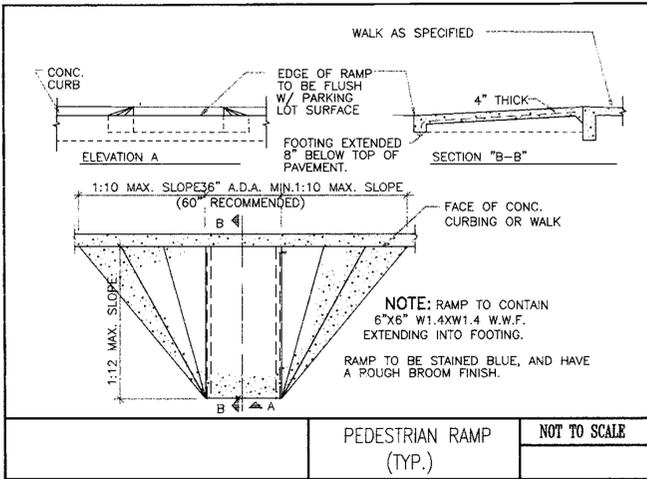
SITE DEVELOPMENT PLAN
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
 JOHNS HOPKINS APPLIED PHYSICS LABORATORY

DATE: 05/26/98
 SCALE: 1"=20'
 DESIGN: GLC DRAWN: GLC
 CHECK: KJJ CHECK: KJJ
 JOB NO.: RK00379800
 P.R. NO.:
 SHEET 2 OF 14
SDP 99-11

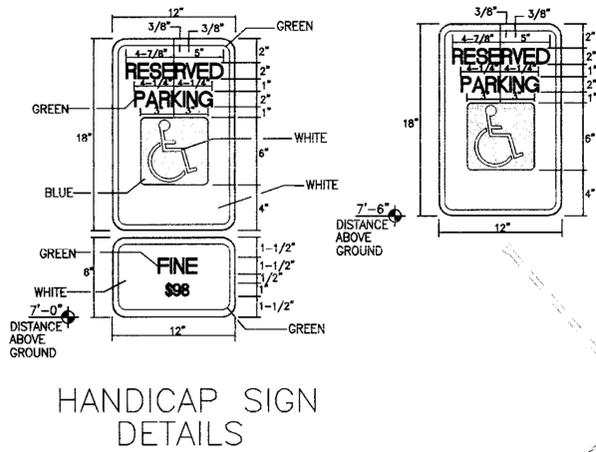
BENGTSON, DeBELL & ELKIN, LTD.
 ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
 170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
 9301 468-9400

OFFICE LOCATIONS
 ◆ PRINCE GEORGES COUNTY, VIRGINIA
 ◆ FAIRFAX COUNTY, VIRGINIA
 ◆ MONTGOMERY COUNTY, MARYLAND
 ◆ LOUDOUN COUNTY, VIRGINIA

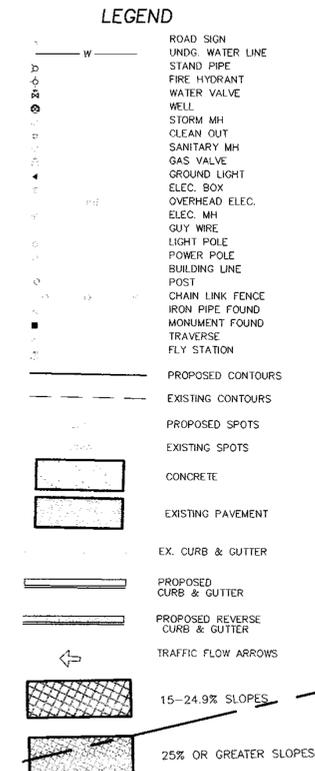




PEDESTRIAN RAMP (TYP.) NOT TO SCALE

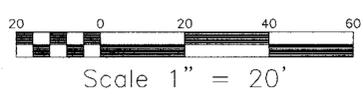
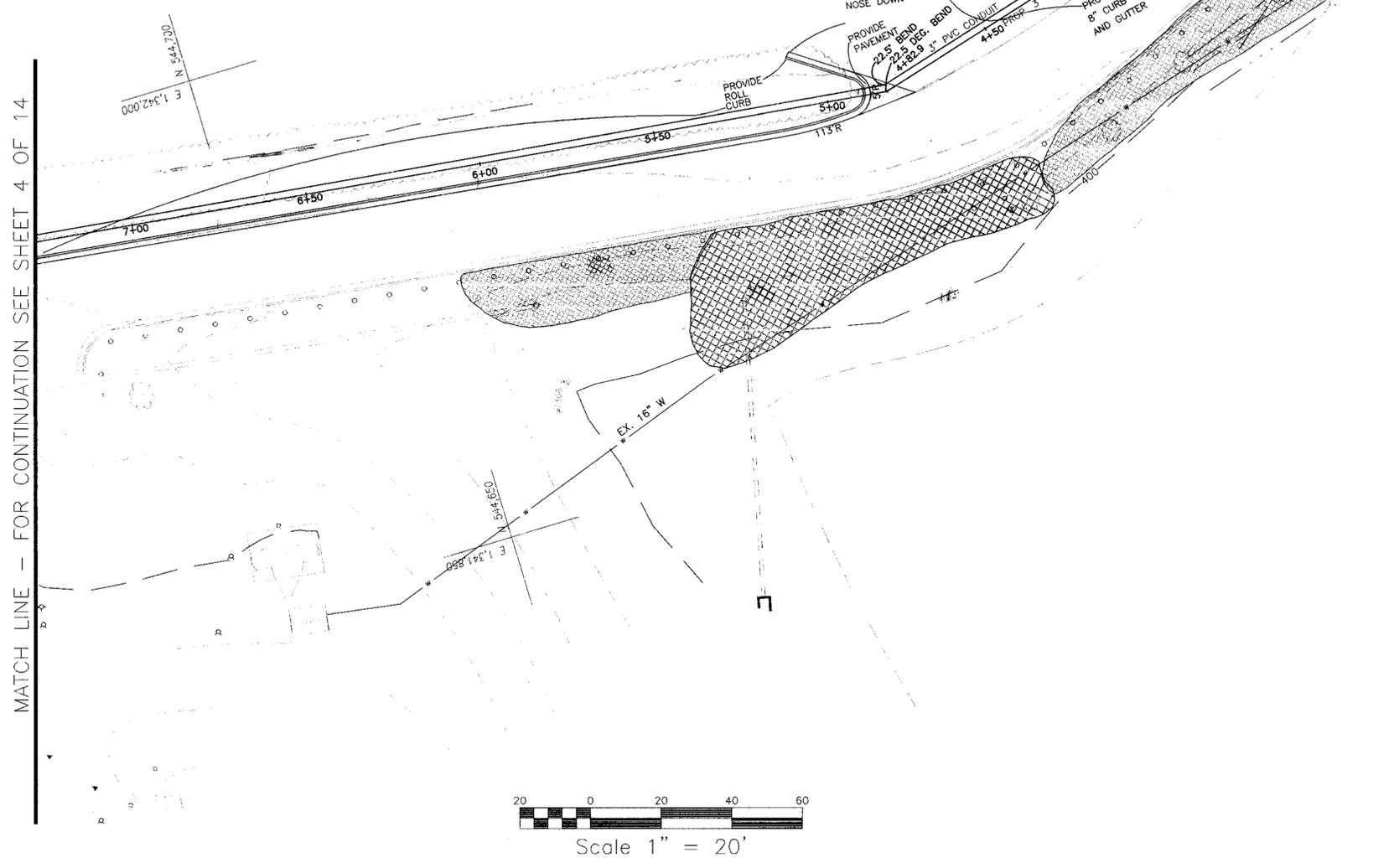


HANDICAP SIGN DETAILS



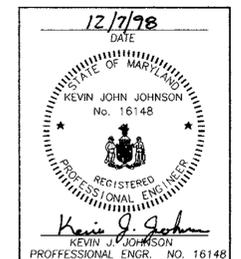
MATCH LINE - FOR CONTINUATION SEE SHEET 4 OF 14

MATCH LINE - FOR CONTINUATION SEE SHEET 2 OF 14



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Kevin Johnson 12/18/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
Kevin Johnson 12/22/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
James R. Butler 12/22/98
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

OWNER FAX NO.: 443-778-6122
 A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-5134
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ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
P-128	11050 JOHNS HOPKINS ROAD

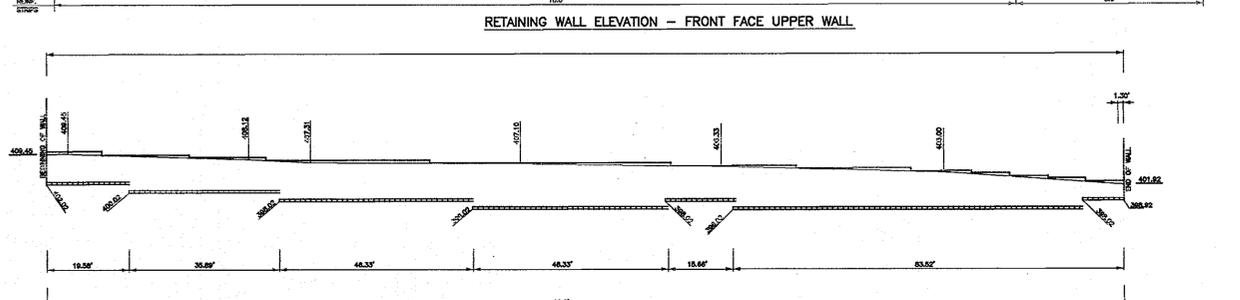
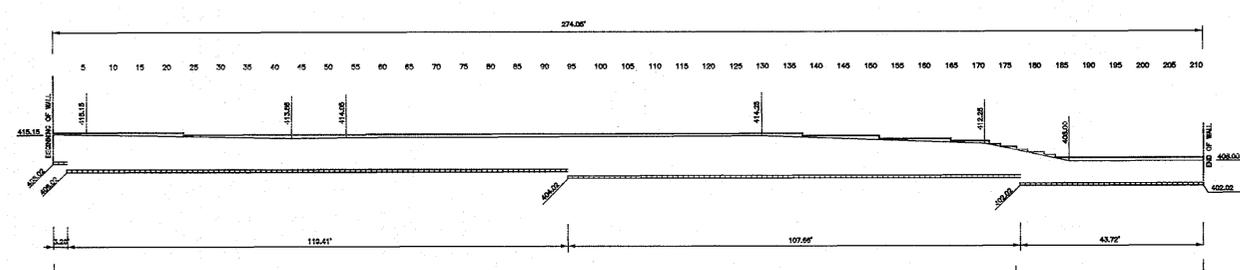
PERMIT INFORMATION CHART				
Subdivision Name	Section/Area	§§§ ACRES	Lot/Parcel#	
P-128			P-128	
L. 3808 F. 148	Zoning PEC	Tax Map 41	Elevat. Distr. 6	Census Tract 608102
Water Code E21	Sewer Code N/A			

REVISIONS	DATE
REVISED PER COUNTY COMMENTS	11/6/98
REVISED PER COUNTY COMMENTS	9/10/98
REVISED PER JHAPU & ARCH. PLANS	7/23/98

SITE DEVELOPMENT PLAN
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
 JOHNS HOPKINS APPLIED PHYSICS LABORATORY
5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

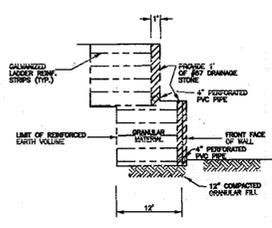
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 DESIGN: GLC DRAWN: GLC
 CHECK: KJJ CHECK:
 JOB NO.: RK00374800
 P.R. NO.:
 SHEET **3** OF **14**
SDP 99-11

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 ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
 170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
 93071 468-9400
 OFFICE LOCATIONS
 ◆ PRINCE GEORGES COUNTY, VIRGINIA
 ◆ VIRGINIA BEACH, VIRGINIA
 ◆ MONTGOMERY COUNTY, MARYLAND
 ◆ LOUDOUN COUNTY, VIRGINIA
BDE
 ◆ CHESTERFIELD COUNTY, VIRGINIA
 ◆ FAIRFAX COUNTY, VIRGINIA



GENERAL NOTES (FOR RETAINING WALL)
DESIGN CRITERIA

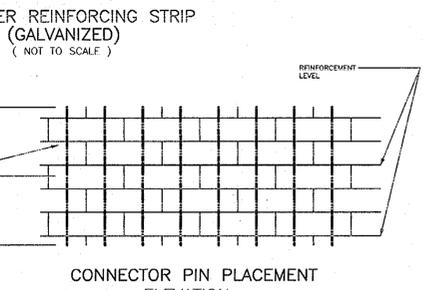
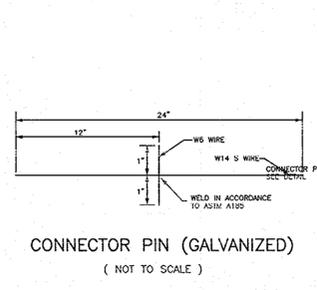
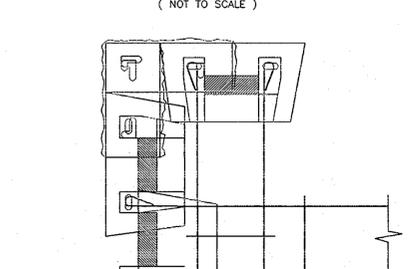
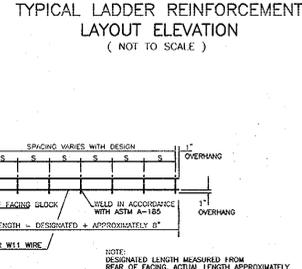
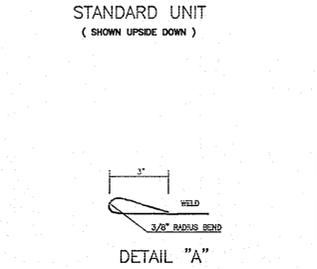
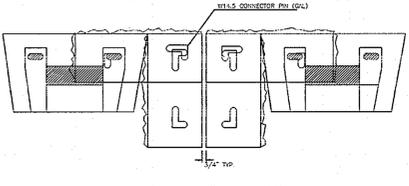
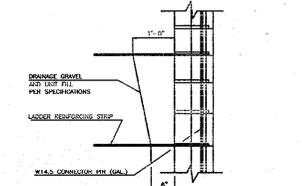
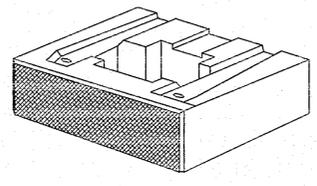
- DESIGN IS BASED ON THE ASSUMPTION THAT THE SELECT BACKFILL MATERIAL WITHIN THE REINFORCED VOLUME, METHODS OF CONSTRUCTION AND CONSTRUCTION AND QUALITY OF PREFABRICATED MATERIALS SHALL CONFORM TO THE CONTRACTING AGENCY'S TECHNICAL SPECIFICATIONS FOR PYRAMID MODULAR BLOCK RETAINING WALLS.
- SOILS CHARACTERISTICS ASSUMED FOR DESIGN:
REINFORCED BACKFILL = 30 degrees, c = 0 p.s.f., = 120 p.c.f.
GRADATION
SIEVE SIZE % PASSING
4 inch 100
3 inch 75 - 100
no. 200 0 - 30
RANDOM BACKFILL = 30 degrees, c = 0 p.s.f., = 120 p.c.f.
MODULAR BLOCK/ DRAINAGE FILL GRADATION
SIEVE SIZE % PASSING
1 inch 100
no. 4 75 - 100
no. 200 0 - 5
- IF THE ACTUAL CHARACTERISTICS OF THE SOIL MATERIALS DIFFER SIGNIFICANTLY FROM THOSE ABOVE, THE REINFORCED EARTH COMPANY SHOULD BE NOTIFIED PRIOR TO CONSTRUCTION TO EVALUATE THE NEED FOR REDESIGN OF THE WALL.
- THE MAXIMUM APPLIED BEARING PRESSURE AT THE FOUNDATION LEVEL AS SHOWN ON THE WALL ELEVATIONS FOR EACH DESIGN CASE. IT IS THE RESPONSIBILITY OF THE ENGINEER TO DETERMINE THAT THIS APPLIED BEARING PRESSURE IS ALLOWABLE FOR THAT LOCATION.
- ANY UNSUITABLE FOUNDATION MATERIAL BELOW THE REINFORCED VOLUME AS DETERMINED BY THE ENGINEER, SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL OR OTHERWISE STABILIZED AS DIRECTED BY THE ENGINEER.
- LADDER REINFORCING STRIPS FOR PYRAMID WALLS SHALL BE SHOP FABRICATED OF COLD DRAWN STEEL WIRE CONFORMING TO THE PHYSICAL AND MECHANICAL PROPERTIES OF ASTM A-32, AND WELDED INTO THE FINISHED STRIP CONFIGURATION IN ACCORDANCE WITH ASTM A-185. GALVANIZATION SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF ASTM A-123.



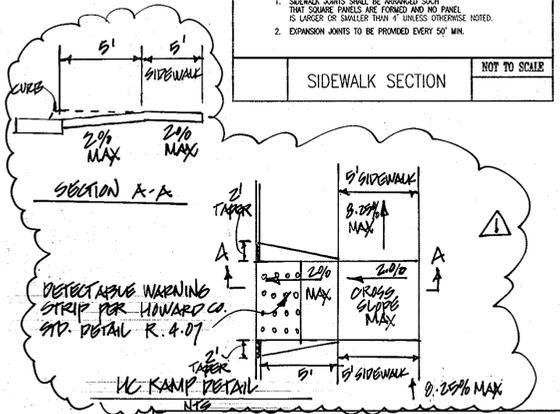
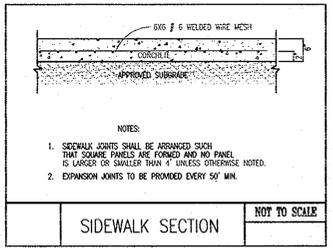
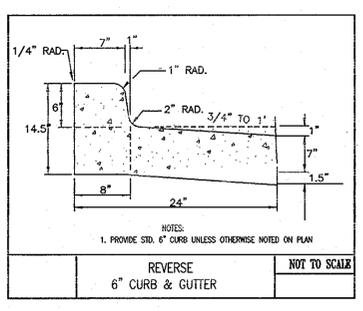
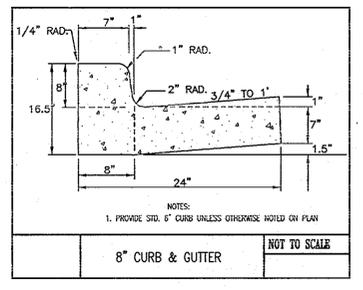
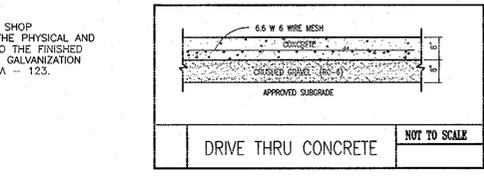
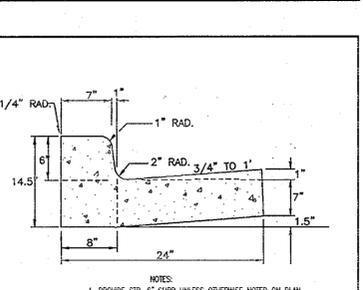
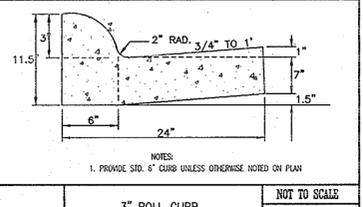
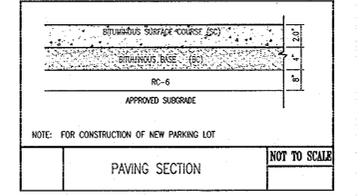
- WALL CONSTRUCTION AND ALIGNMENT OF PYRAMID WALLS SEE PLAN.
- IF MANHOLES AND DROP INLETS ARE PRESENT, THEY SHALL BE LOCATED AS SHOWN ON THE WALL ELEVATIONS.
- AT THE END OF EACH DAY'S WORK BACKFILL SHALL BE GRADED TO SLOPE AWAY FROM WALL FACE IN ORDER TO DIVERT WATER RUNOFF FROM THE STRUCTURE AREA. OTHER MEASURES SHALL BE EMPLOYED, IF NECESSARY, TO DIVERT WATER RUNOFF AWAY FROM THE STRUCTURE AREA.
- IF PILES ARE LOCATED WITHIN THE REINFORCED VOLUME, THEY SHALL BE DRIVEN PRIOR TO CONSTRUCTION OF THE PYRAMID WALL UNLESS A METHOD TO PROTECT THE STRUCTURE, WHICH IS ACCEPTABLE TO THE ENGINEER AND THE REINFORCED EARTH COMPANY, IS PROPOSED AND APPROVED IN WRITING.
- BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR PYRAMID WALLS TO A LEVEL OF 2" (4) ABOVE THE CONNECTION ELEVATION. INSTALLATION OF LADDER REINFORCING STRIPS SHALL BE PERMITTED ONLY AFTER PLACEMENT AND COMPACTION OF THE BACKFILL MATERIAL HAS REACHED THE REQUIRED LEVEL.
- COMPACTION AND OPERATION EQUIPMENT SHALL BE KEPT A MINIMUM DISTANCE OF 3'-0" FROM THE BACK FACE OF THE MODULAR BLOCK UNITS. COMPACTION WITHIN 3'-0" OF THE BLOCK UNITS SHALL BE ACHIEVED WITH AT LEAST THREE (3) PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, ROLLER OR VEGETATION SYSTEM.
- IF STRUCTURES IN EXCESS OF 12' IN HEIGHT OCCUR, THE FINISHED GRADE IN FRONT OF THE WALL SHALL BE PLACED AND COMPACTED BEFORE WALL CONSTRUCTION EXCEEDS A HEIGHT OF 12'.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY GUARDRAIL POSTS WITHIN THE REINFORCED VOLUME. PRIOR TO PLACEMENT OF THE TOP LAYER OF REINFORCEMENTS, INDIVIDUAL LADDER STRIPS MAY BE SYSTEMATICALLY SHIFTED TO AVOID THE POST LOCATIONS IF AUTHORIZED BY THE REINFORCED EARTH COMPANY. ANY DAMAGE DONE TO THE LADDER REINFORCING STRIPS DUE TO INSTALLATION OF GUARDRAIL POSTS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- IF EXISTING OR FUTURE STRUCTURES, PIPES, FOUNDATIONS, OR GUARDRAIL POSTS WHICH ARE WITHIN THE REINFORCED VOLUME INTERFERE WITH THE NORMAL PLACEMENT OF LADDER REINFORCING STRIPS AND SPECIFIC DIRECTION HAS NOT BEEN PROVIDED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE REINFORCED EARTH COMPANY TO DETERMINE WHAT COURSE OF ACTION SHOULD BE TAKEN.
- ALL DETAILING AND CHECKING OF REINFORCING STEEL FOR ANY C.I.P. CONCRETE WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- FOR OTHER INFORMATION PERTAINING TO WALL CONSTRUCTION PLEASE REFER TO THE PYRAMID CONSTRUCTION MANUAL.
- OWNER'S GEOTECHNICAL ENGINEER SHALL APPROVE THE BOTTOM OF ALL WALL EXCAVATIONS PRIOR TO BEGINNING WALL CONSTRUCTION.

- MATERIALS NOTES
- NOMINAL STRIP LENGTH
 - THE NOMINAL LADDER REINFORCING STRIP LENGTHS, L, SHOWN ON THE PLANS ARE MEASURED FROM THE BACK FACE OF THE MODULAR BLOCK UNITS. THE ACTUAL FABRICATED STRIP LENGTHS ARE APPROXIMATELY 8 INCHES LONGER THAN THE NOMINAL LENGTH, L, TO PERMIT CONNECTION OF THE STRIPS TO THE MODULAR BLOCK FACING UNITS. THE REQUIRED HORIZONTAL LIMIT OF REINFORCED BACKFILL (INCLUDING UNIT AND DRAINAGE FILL) IS EQUAL TO THE NOMINAL STRIP LENGTH. ADDITIONAL GRANULAR BACKFILL BEYOND THE NOMINAL STRIP LENGTH IS NOT REQUIRED BY CALCULATION.
 - REINFORCED BACKFILL QUANTITY
 - THE REINFORCED BACKFILL QUANTITY INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING THE NOMINAL STRIP LENGTHS, L, SHOWN ON THE PLANS MINUS ONE FOOT AVERAGE THICKNESS OF THE DRAINAGE/UNIT FILL BY THEIR TRIBUTARY WALL SURFACE AREA AND CONVERTING THE RESULTS TO A NEATLINE CUBIC YARD QUANTITY. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO REPRESENT THE ACTUAL QUANTITY REQUIRED TO COMPLETE THE WORK. THE CONTRACTOR MUST CALCULATE HIS OWN EXCAVATION AND BACKFILL QUANTITIES BASED UPON THE SPECIFIC CONDITIONS OF THE PROJECT.
 - DRAINAGE/UNIT FILL
 - THE DRAINAGE/UNIT FILL INDICATED BY THE REINFORCED EARTH COMPANY IS CALCULATED BY MULTIPLYING 1.2 CU. FT. PER SQ. FT. OF WALL FACING BY THE SURFACE AREA OF THE WALL AND CONVERTING THE RESULT TO A NEATLINE CUBIC YARD QUANTITY. THIS QUANTITY ASSUMES THE AVERAGE THICKNESS OF DRAINAGE/UNIT FILL BEHIND THE MODULAR BLOCK UNITS IS 12 INCHES. THIS INFORMATION IS FURNISHED FOR THE CONTRACTOR'S INFORMATION ONLY AND IS NOT INTENDED TO REPRESENT ACTUAL QUANTITY REQUIRED TO COMPLETE THE WORK. QUANTITIES WILL VARY BASED ON WORKMANSHIP AND INSTALLATION PROCEDURES. THE CONTRACTOR MUST CALCULATE HIS OWN DRAINAGE/UNIT FILL QUANTITY FOR CONSTRUCTION.
 - MODULAR BLOCK FINISH
 - PYRAMID MODULAR BLOCKS FOR THIS PROJECT SHALL HAVE A SPLIT FACE FINISH UNLESS OTHERWISE SPECIFIED.
 - ADHESIVE FOR CAP UNITS
 - IF CAP UNITS ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADHESIVE BELOW THE CAP UNITS IN ACCORDANCE WITH CONSTRUCTION MANUAL TO SECURE THE CAP UNITS AGAINST WANDALISM. THE ADHESIVE SHALL BE EITHER DAP 4000 OR LIQUID WALLS ADHESIVE, OR AN APPROVED EQUAL BY THE REINFORCED EARTH COMPANY.
 - NOTE TO CONTRACTORS
 - ONLY THE FOLLOWING MATERIALS ARE SUPPLIED BY THE REINFORCED EARTH COMPANY:
--- DRYCAST CONCRETE MODULAR BLOCKS
--- LADDER REINFORCING STRIPS
--- CONNECTOR PINS
 - ANY OTHER MATERIALS CALLED FOR IN THE CONTRACT PLANS OR SPECIFICATIONS ARE TO BE SUPPLIED BY THE CONTRACTOR. ANY JOINT MATERIALS SHOWN AT THE INTERFERENCE OF MODULAR BLOCK UNITS AND CAST-IN-PLACE CONCRETE STRUCTURES ARE TO BE SUPPLIED BY THE ERECTION CONTRACTOR. ALL PAINTING, ADHESIVES, SEALERS OR OTHER SPECIAL APPLIED COATINGS ARE TO BE SUPPLIED AND INSTALLED BY CONTRACTOR IN THE FIELD.

NOTE: WALL CONSTRUCTION AND BACKFILL MUST BE MONITORED AND CERTIFIED BY A PROFESSIONAL ENGINEER/GEOTECHNICAL ENGINEER

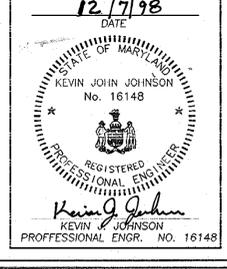
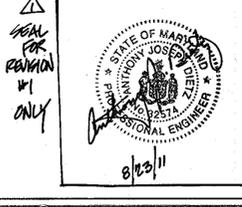


NOTE:
RETAINING WALL DETAILS,
SECTIONS, AND NOTES PROVIDED
BY "REINFORCED EARTH COMPANY"



BY-CENTURY ENGINEERING
1070 BIRCHWOOD ROAD
HUNT VALLEY, MD 21091 (410) 999-2400

OWNER	FAX NO.: 443-778-8122
A. NAME: JAMES E. LOESCH	B. DAYTIME TELEPHONE: 443-778-5134
C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY	
D. ADDRESS: 1100 JOHNS HOPKINS ROAD	
E. CITY: LAUREL STATE: MARYLAND ZIP: 20723	
DEVELOPER	FAX NO.: 770-422-9479
A. NAME: CARTER SCHILF	B. DAYTIME TELEPHONE: 770-421-1532
C. COMPANY: KDA	
D. ADDRESS: 350 FRANKLIN ROAD	
E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067	



ADDRESS CHART				
LOT/PARCEL#	STREET ADDRESS			
P-123	1100 JOHNS HOPKINS ROAD			
PERMIT INFORMATION CHART				
Subdivision Name	Section/Area	886 ACRES	Lot/Parcel#	P-123
L. 8902 F. 148	Zoning	PEC	Tax Map	41
Water Code	E81	Sewer Code	N/A	

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division MKK 12/18/98
 Chief, Division of Land Development 12/22/98
 Director, Department of Planning and Zoning 12/22/98

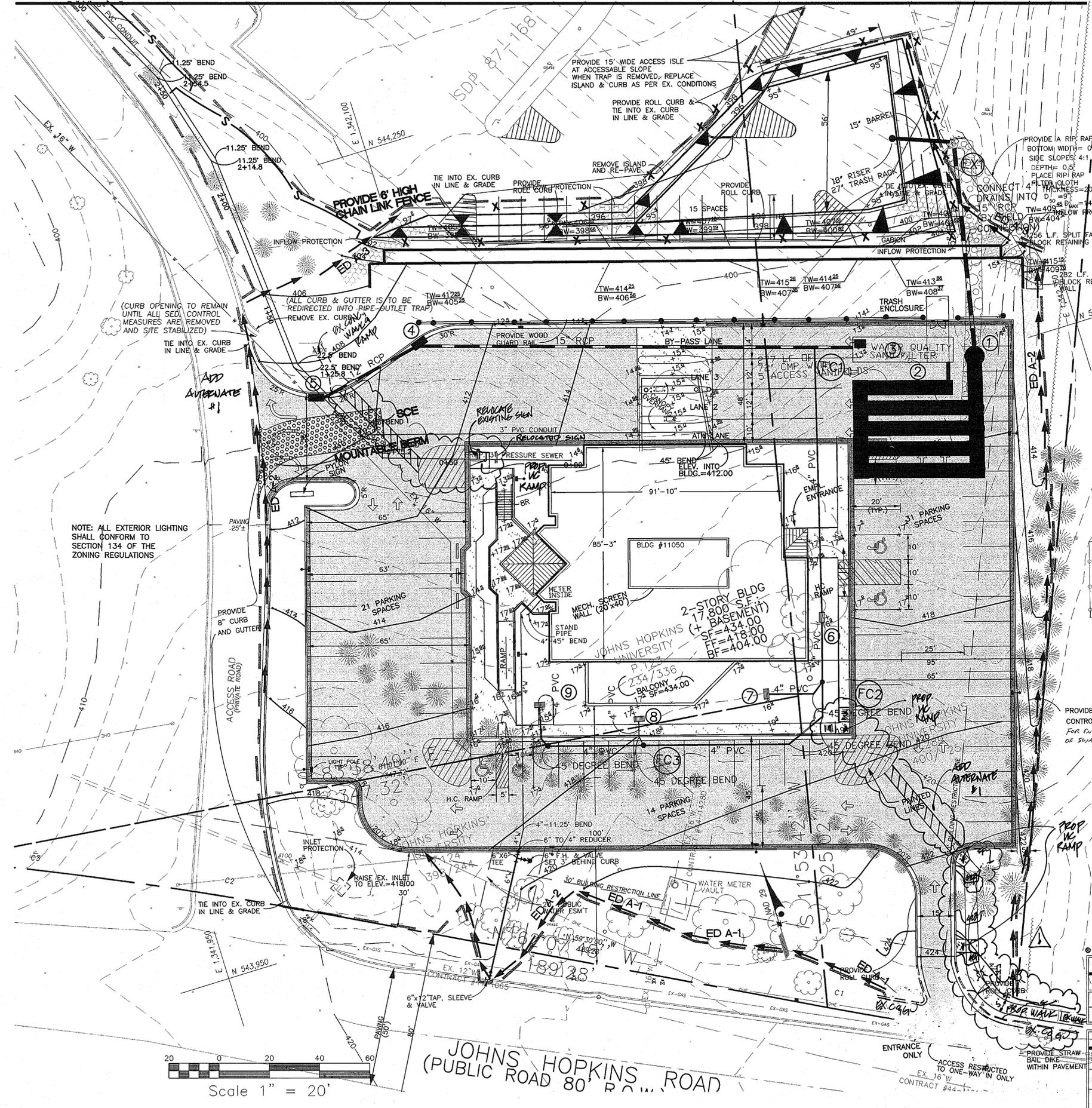
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DESIGN: GLC	DRAWN: GLC
CHECK: KJJ	CHECK:
JOB NO.: RK00374800	
P.R. NO.:	
SHEET 5 OF 14	
SDP 99-11	

SITE NOTES AND DETAILS
 APL CREDIT UNION
 11100 JOHNS HOPKINS ROAD
 JOHNS HOPKINS APPLIED PHYSICS LABORATORY
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

BENGTSON, DeBELL & ELKIN, LTD.
 ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
 170 ROLLINS AVENUE, ROCKVILLE, MARYLAND 20852
 (301) 468-8400
 OFFICE LOCATIONS
 ◆ PRINCE GEORGES COUNTY, VIRGINIA
 ◆ WASHINGTON COUNTY, VIRGINIA
 ◆ WISCONSIN COUNTY, MARYLAND
 ◆ HOWARD COUNTY, MARYLAND
 ◆ GORHAM COUNTY, VIRGINIA

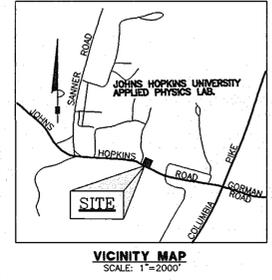


MATCH LINE - FOR CONTINUATION SEE SHEET 7 OF 14



PIPE OUTLET SEDIMENT TRAP #1

DRAINAGE AREA	1.90 ACRE
STORAGE REQUIRED	7,200 CF
STORAGE PROVIDED	7,265 CF
DEPTH	2.6 FT
DRY (CREST) STORAGE ELEVATION	396.95 FT
WET STORAGE ELEVATION	396.2 FT
EMBANKMENT ELEVATION	398 FT
BOTTOM ELEVATION	395.4 FT
TRASH RACK DIAM.	27 IN.
RISER DIAM.	18 IN.
BARREL DIAM.	15 IN.
BOTTOM AREA	4,171 SF
SIDE SLOPE	CUT 2:1 FILL 1:1
CLEANOUT ELEVATION	395.8 FT
DRY (CREST) STORAGE VOLUME	7,265 CF
WET STORAGE VOLUME	3,410 CF



LEGEND

- W ROAD SIGN
- UNDG. WATER LINE
- STAND PIPE
- FIRE HYDRANT
- WATER VALVE
- WELL
- STORM MH
- CLEAN OUT
- SANITARY MH
- GAS VALVE
- GROUND LIGHT
- ELEC. BOX
- OVERHEAD ELEC.
- ELEC. MH
- DUY WIRE
- LIGHT POLE
- POWER POLE
- BUILDING LINE
- POST
- CHAIN LINK FENCE
- IRON PIPE FOUND
- MONUMENT FOUND
- TRAVERSE
- FLY STATION
- PROPOSED CONTOURS
- EXISTING CONTOURS
- PROPOSED SPOTS
- EXISTING SPOTS
- CONCRETE
- EXISTING PAVEMENT
- EX. CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED REVERSE CURB & GUTTER
- TRAFFIC FLOW ARROW
- PROPOSED TEMP. CHAIN LINK FENCE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mike Vannoy 12/10/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy Hamilton 12/22/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James Butler 12/22/98
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

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.

Kevin J. Johnson 12/1/98
SIGNATURE OF ENGINEER DATE
PRINT NAME: KEVIN J. JOHNSON

BY THE DEVELOPER

"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."

Ray Wilson 12/1/98
SIGNATURE OF DEVELOPER DATE
PRINT NAME: RAY WILSON

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simms/os 12/15/99
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Kevin J. Johnson 12/15/99
HOWARD S.C.D. DATE

REVISION #1:
CENTURY ENGINEERING
10710 BERRY ROAD
HUNT VALLEY, MD 21091



OWNER

A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-6122
C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
D. ADDRESS: 1100 JOHNS HOPKINS ROAD
E. CITY: LAUREL STATE: MARYLAND ZIP: 20723

DEVELOPER

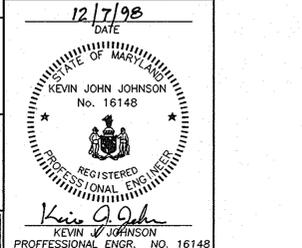
A. NAME: CARTER SCHILF B. DAYTIME TELEPHONE: 770-422-9479
C. COMPANY: JKA
D. ADDRESS: 350 FRANKLIN ROAD
E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
P-123	11050 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

Subdivision Name	Section/Area	800 ACRES	Lot/Parcel#
L. 9802 F. 148	Zoning PEC	Tax Map 41	Elect Distr. 6
Water Code E21	B sewer Code N/A		Census Tract 005102



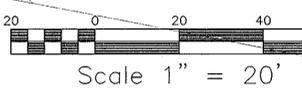
DATE: 05/26/96
SCALE: 1"=20'
DESIGN: GLC DRAWN: GLC
CHECK: KJJ CHECK:
JOB NO.: RK00379800
P.R. NO.:
SHEET 6 OF 14
SDP 99-11

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170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
(301) 468-9400

OFFICE LOCATIONS
◆ MONTGOMERY COUNTY, MARYLAND
◆ PRINCE WILLIAM COUNTY, VIRGINIA
◆ VIRGINIA BEACH, VIRGINIA
◆ CHESTERFIELD COUNTY, VIRGINIA
◆ FAIRFAX COUNTY, VIRGINIA

BDE

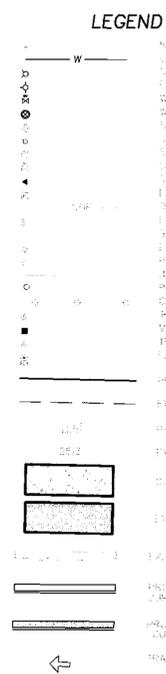
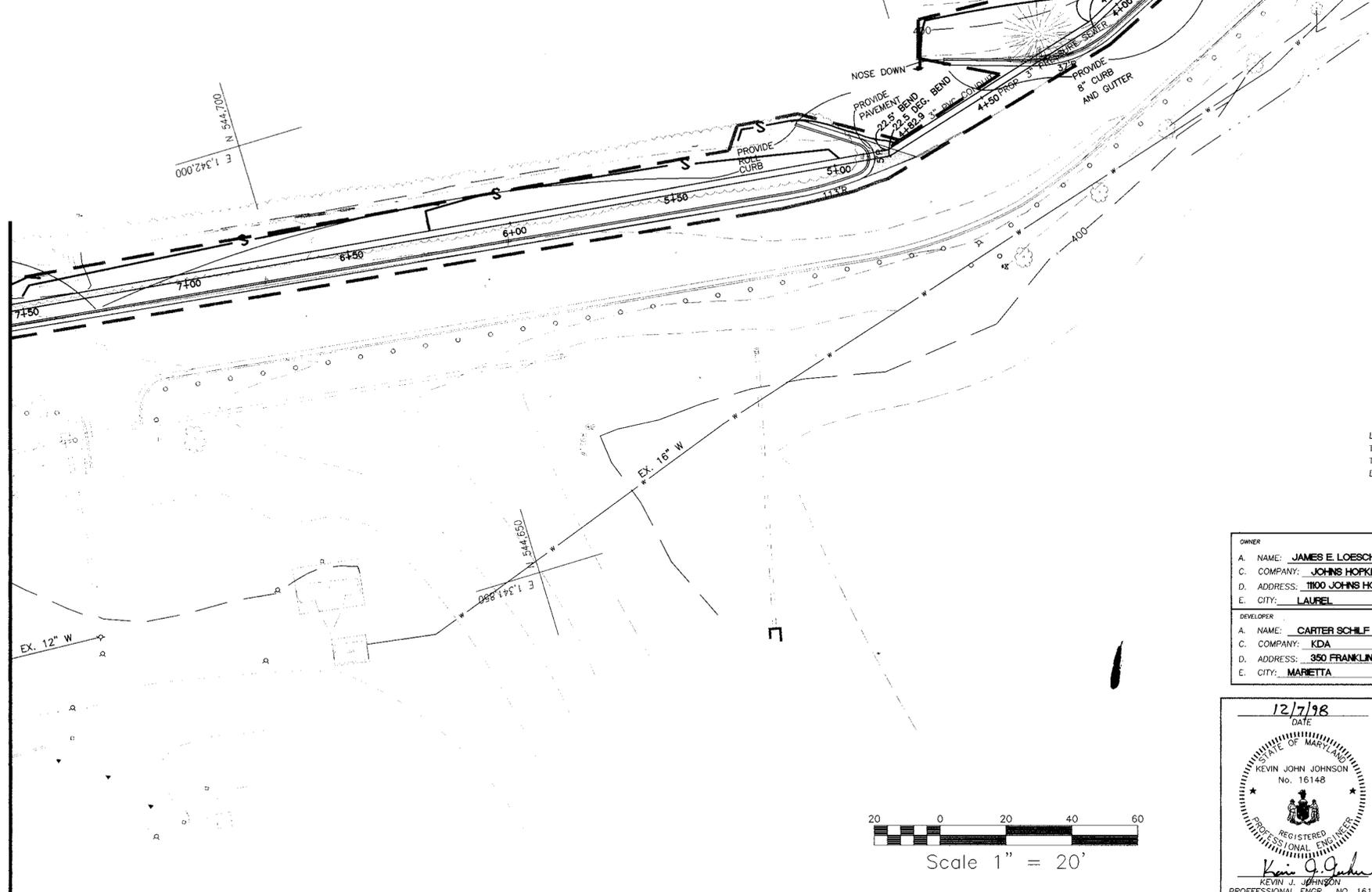
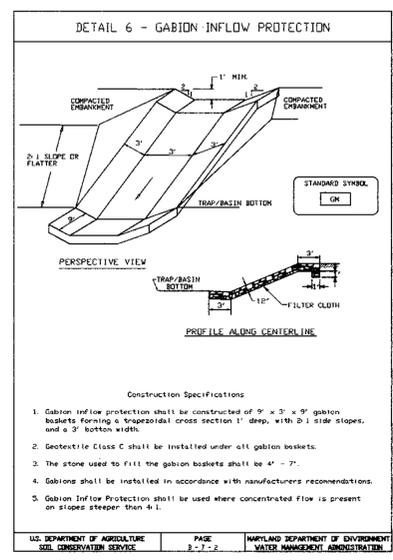
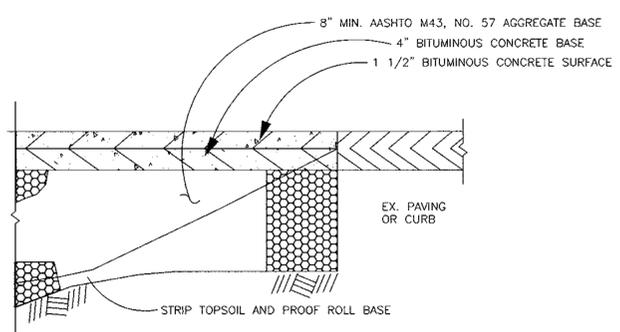
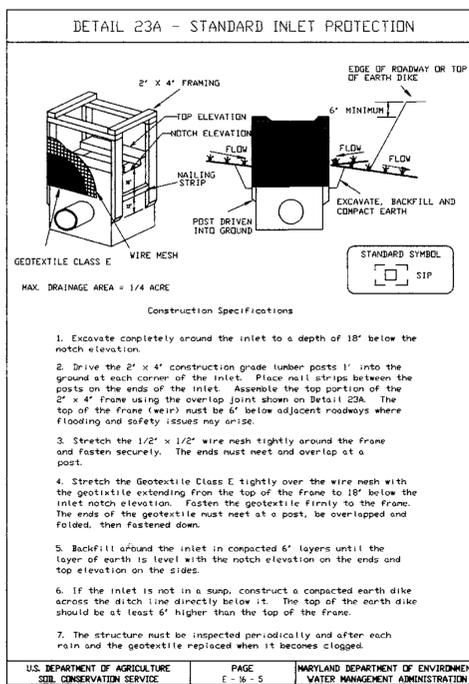
SEDIMENT AND EROSION PLAN
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
JOHNS HOPKINS APPLIED PHYSICS LABORATORY



JOHNS HOPKINS ROAD
(PUBLIC ROAD 80' R.O.W.)

MATCH LINE - FOR CONTINUATION SEE SHEET 8 OF 14

MATCH LINE - FOR CONTINUATION SEE SHEET 6 OF 14



NOTE:
LENGTH OF TRENCH DISTURBANCE IS LIMITED TO THREE (3) PIPE LENGTHS AT ANY ONE TIME TO BE STABILIZED BY THE END OF EACH WORK DAY.

OWNER		FAX NO.: 443-778-6122
A. NAME: JAMES E. LOESCH	B. DAYTIME TELEPHONE: 443-778-5134	
C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY		
D. ADDRESS: 1100 JOHNS HOPKINS ROAD		
E. CITY: LAUREL	STATE: MARYLAND	ZIP: 20723
DEVELOPER		FAX NO.: 770-422-9479
A. NAME: CARTER SCHILF	B. DAYTIME TELEPHONE: 770-421-1532	
C. COMPANY: KDA		
D. ADDRESS: 350 FRANKLIN ROAD		
E. CITY: MARIETTA	STATE: GEORGIA	ZIP: 30067

APPROVED: DEPARTMENT OF PLANNING AND ZONING

12/10/98
DATE

12/22/98
DATE

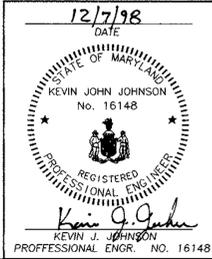
12/22/98
DATE

12/19/98
DATE

12/9/98
DATE

12/9/98
DATE

12/9/98
DATE



ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
P-128	11060 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

Subdivision Name	p-128	Section/Area	888 ACRES	Lot/Parcel#	p-128			
L. 2002 F. 168	Zoning	PEC	Tax Map	41	Elect. Distr.	6	Conserv. Trust	6081.02
Water Code	E21	Sewer Code	N/A					

REVISED PER COUNTY COMMENTS	11/6/98
REVISED PER COUNTY COMMENTS	9/10/98
REVISED PER JHAPU & ARCH. PLANS	7/23/98
REVISIONS	DATE

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9307 468-9400

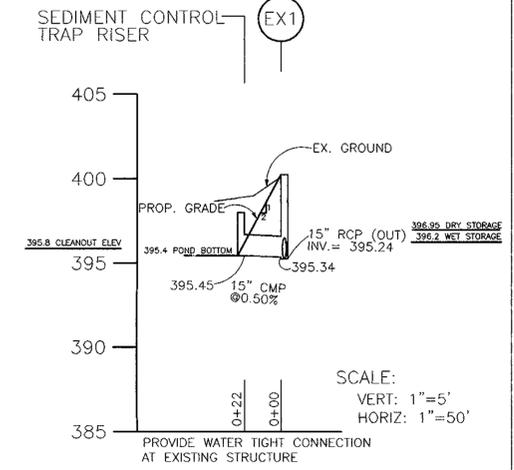
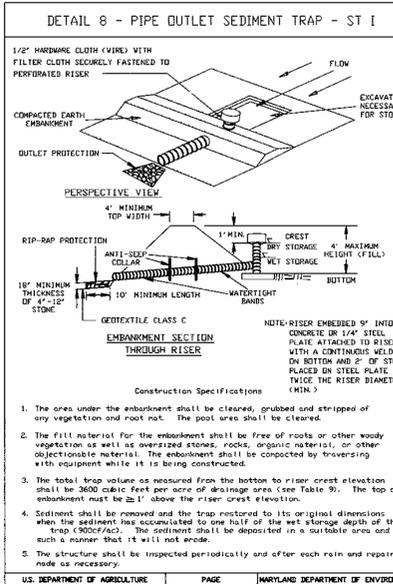
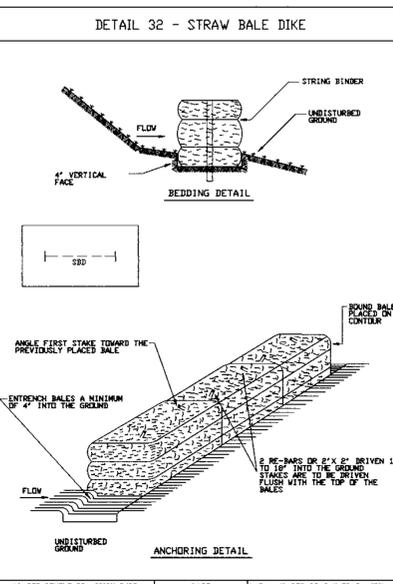
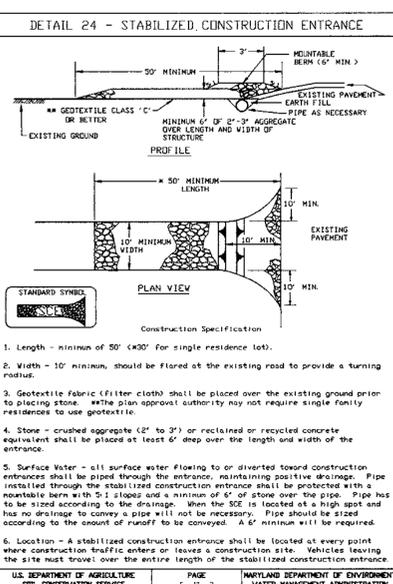
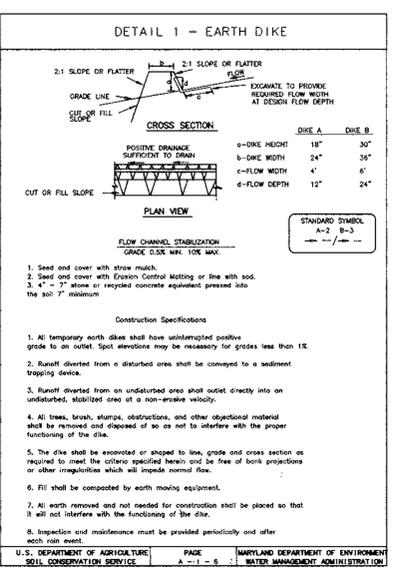
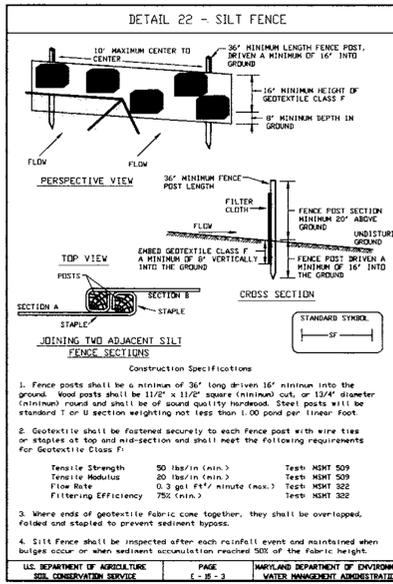
OFFICE LOCATIONS:
◆ PRINCE GEORGES COUNTY, VIRGINIA
◆ VIRGINIA BEACH, VIRGINIA
◆ MONTGOMERY COUNTY, MARYLAND
◆ LOUDOUN COUNTY, VIRGINIA

BDE

CHESTERFIELD COUNTY, VIRGINIA
FAIRFAX COUNTY, VIRGINIA

SEDIMENT AND EROSION PLAN
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
JOHNS HOPKINS APPLIED PHYSICS LABORATORY
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DATE: 05/26/98
SCALE: 1"=20'
DESIGN: GLC DRAWN: GLC
CHECK: KJJ CHECK:
JOB NO.: RK00379800
P.R. NO.:
SHEET 7 OF 14
SDP 99-11



VEGETATIVE STABILIZATION

PERMANENT AND TEMPORARY SEEDING, SOODING AND MULCHING

I. SITE PREPARATION

PERMANENT OR TEMPORARY VEGETATION SHALL BE ESTABLISHED WITHIN SEVEN (7) DAYS ON THE SURFACE OF ALL SEDIMENT CONTROL STRUCTURES, BERMS, WATERWAYS, SEDIMENT CONTROL BASINS, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND WITHIN 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. MULCHING MAY ONLY BE USED ON DISTURBED AREAS AS TEMPORARY COVER WHERE VEGETATION IS NOT FEASIBLE OR WHERE SEEDING CAN NOT BE COMPLETED BECAUSE OF WEATHER.

II. SEED PREPARATION AND SEEDING APPLICATION

LOOSEN THE TOP LAYER OF THE SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE MECHANICAL OR CONSTRUCTION EQUIPMENT SUCH AS DISC HARROWS, CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF THE SOIL BY DISCING OR BY OTHER SUITABLE MEANS. ROUGH AREAS SHOULD NOT BE ROLLED OR DRAGGED SMOOTH, BUT LEFT IN A ROUGHENED CONDITION. STEEP SLOPES GREATER THAN 3:1 SHOULD BE TRACKED BY A DOZER, LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO SLOPES AND FURROWS.

PERMANENT COVER MAY REQUIRE AN APPLICATION OF TOPSOIL. IF SO, IT MUST MEET THE REQUIREMENTS SET FORTH IN SECTION 21-D STANDARDS AND SPECIFICATIONS FOR TOPSOIL FROM THE 1994 STANDARDS AND SPECIFICATIONS.

III. SOIL AMENDMENTS

SOIL TESTS SHALL BE MADE ON SITES OVER FIVE ACRES TO DETERMINE THE EXACT REQUIREMENTS FOR BOTH LIME AND FERTILIZER. FOR SITES UNDER 5 ACRES, IN LIEU OF A SOIL TEST, APPLY THE FOLLOWING:

FERTILIZER	NITROGEN	2 LBS/1000 SF (90 LBS/AC)
	P205	4 LBS/1000 SF (175 LBS/AC)
	K2O	4 LBS/1000 SF (174 LBS/AC)

GROUND LIMESTONE 2 TONS/AC

IV. SEDIMENT CONTROL PRACTICE SEEDING

SELECT A SEEDING MIXTURE FROM TABLE 25 OR 26 IN SECTION "C" OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BELOW.

NOTE: IF SEDIMENT CONTROL PRACTICES ARE IN FOR LONGER THAN 12 MONTHS, PERMANENT SEEDING IS REQUIRED.

V. TEMPORARY PERMANENT SEEDING MIXTURES AND RATES

SELECT A SEEDING MIXTURE FROM APPROPRIATE TABLE 25 OR 26 IN SECTION "C" OF THE 1994 STANDARDS AND SPECIFICATIONS OR SELECT DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BELOW.

TEMPORARY SEEDING MIXTURE SUMMARY				FERTILIZER RATE (10-10-10)	LIME RATE
SEED MIXTURE/HARDNESS ZONE 7a)					
NO.	SPECIES	APPLICATION RATE (LBS/AC)	SEEDING DATE		
1	BARLEY OR RYE PLUS FORTAIL MILLET	8/15-11/30	8/15-11/30	600 LB/AC (15 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)

PERMANENT SEEDING MIXTURE SUMMARY				FERTILIZER RATE (10-20-20)	LIME RATE
SEED MIXTURE/HARDNESS ZONE 7a)					
NO.	SPECIES	APPLICATION RATE (LBS/AC)	SEEDING DATE		
3	TOLL FESCUE (85%) FESCUE (10%) KENTUCKY BLUE GRASS (5%)	8/15-11/30	8/15-11/30	1000 SF/1000 SF (1000 SF)	2 TONS/AC (100 LB/1000 SF)

VII. TURFGRASS ESTABLISHMENT

THIS INCLUDES LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. AREA TO RECEIVE SEED SHALL BE FILLED BY DISCING OR BY OTHER APPROVED METHODS TO A DEPTH OF 3 TO 5 INCHES. LEVELLED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OR CHOICE A TURFGRASS MIXTURE FROM PATE C-20 OF THE 1994 STANDARDS AND SPECIFICATIONS OR SELECT FROM THE LIST IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MIMCO #77, TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND. SEE MIMCO AT END OF THIS SECTION.

VIII. MULCHING

ALL SEEDING REQUIRE MULCHING. ALSO MULCH DURING NON-SEEDING DATES UNTIL SEEDING CAN BE DONE.

MULCH SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS/ACR OR 90 LBS/1000 SF (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS/ACR. MULCH MATERIAL SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS OF MULCH TO WIND. THIS MAY BE DONE BY MULCH NETTINGS, MULCH ANCHORING TOLL, WOOD CELLULOSE FIBER OR LIQUID MULCH BINDERS.

APPLY WOOD CELLULOSE FIBER AT A DRY WEIGHT OF 1,500 LBS/ACR. IF MIXED WITH WATER, USE 50 LBS. OF WOOD CELLULOSE FIBER PER 1000 GALLONS OF WATER.

LIQUID BINDER SHOULD BE APPLIED HEAVIER AT THE EDGE, WHERE WIND CATCHES MULCH IN VALLEYS, AND ON CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. APPLY RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR AND MULCH. STABLE LIGHT WEIGHT, PLASTIC NETTING OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

IX. SOODING 1

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD IS TO BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR USING STAGGERED JOINTS WITH ALL ENDS TIGHTLY ABUTTED AND NOT OVER LAPPING. SOD SHALL BE ROLLED AND THOROUGHLY WATERED AFTER INSTALLATION. WATERING TO MAINTAIN A 1 INCH DEPTH OF MOISTURE FOR THE FIRST WEEK IS REQUIRED IN THE ABSENCE OF RAINFALL. SOD IS NOT TO BE APPLIED ON FROZEN GROUND.

X. MAINTENANCE

A. IRRIGATE-APPLY MINIMUM 1" OF WATER EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE. WHEN SOIL MOISTURE BECOMES DEFICIENT TO PREVENT LOSS OF STAND OF PROTECTIVE VEGETATION.

B. REPAIRS-IF STAND PROVIDES BETWEEN 40% TO 90% GROUND COVERAGE, OVERSEED AND FERTILIZER USING HALF OF THE RATES ORIGINALLY APPLIED. IF STAND PROVIDES LESS THAN 40% COVERAGE, REESTABLISH AND STAND FOLLOWING ORIGINAL RATES AND PROCEDURES.

NOTE: USE OF THIS INFORMATION DOES NOT PRECLUDE MEETING ALL OF THE REQUIREMENTS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL VEGETATIVE PRACTICES.

STANDARDS AND SPECIFICATION FOR TOPSOIL

PURPOSE	DEFINITION
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIAL TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.	

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE 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.
 - 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.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE TO A DEPTH OF 7 TO 8 D. REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY SHALL BE USED IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS-SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CLINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVELS, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO INSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET. FOR 3:1 SLOPE, IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE OUTLET, SOILS, SEEPS, ROCK OUTCROPS, ETC. SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.
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CONSTRUCTION SEQUENCE

- SET UP PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR (410) 313-1855, AND NOTIFY JIM LOESCH AT APL (443-778-5134) A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY WORK.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE EARTH DIKES, SILT FENCE AND PIPE OUTLET SEDIMENT TRAP.
- BEGIN CLEARING, GRADING, TREE REMOVAL, BUILDING, PAVING, RETAINING WALL, AND UTILITY CONST.
- UPON INSTALLATION OF THE 15" STORM PIPE OUTSIDE OF THE LIMIT OF DISTURBANCE, NEAR EX. 1, STABILIZE AREA IMMEDIATELY EROSION CONTROL MATTING AND SEED.
- WHEN CONSTRUCTION IS COMPLETE STABILIZE SITE WITH WRITTEN PERMISSION FROM SEDIMENT CONTROL INSPECTOR, AND JIM LOESCH AT APL, REMOVE ALL SEDIMENT CONTROL DEVICES.

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- WHEN CONSTRUCTION IS COMPLETE STABILIZE SITE WITH WRITTEN PERMISSION FROM SEDIMENT CONTROL INSPECTOR, AND JIM LOESCH AT APL, REMOVE ALL SEDIMENT CONTROL DEVICES.

PIPE OUTLET SEDIMENT TRAP - ST 1

6. Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

7. The structure shall be removed and area stabilized when the drainage area has been properly stabilize.

8. All cut and fill slopes shall be 2:1 or flatter.

9. All pipe connections shall be watertight.

10. Above the wet storage elevation, the riser shall be perforated with 1/2" wide by 4" long slots or 1" diameter holes spaced 6" vertically and horizontally. No perforations will be allowed within 6" of the horizontal barrel.

11. The riser shall be wrapped with 1/2" hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6" above the highest silt and 6" below the lowest silt. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass. Filter cloth shall be replaced as necessary to prevent clogging.

12. Straps or connecting bands shall be used to hold the filter cloth and wire fabric in place. They shall be placed at the top and bottom of the cloth.

13. Fill material around the pipe shall be hand compacted in 4" layers. A minimum of 6" of hand-compacted backfill shall be placed over the pipe fill before crossing it with construction equipment.

14. The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12" deep with the riser extended 9". Steel plate bases shall be at least twice the riser diameter, 1/4" minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertight connection. Then place 2" of stone, gravel or tamped earth on the plate.

15. Anti seep collars shall be constructed in accordance with plans (ref. 16 and Detail 13 and 14).

16. Concentric trench rock and anti-vortex device design details are on Detail 16.

17. Refer to Section D for dewatering requirements of seepage traps.

18. Outlet - An outlet shall be provided, which includes a means of covering the discharge in an erosion free manner to an existing stable channel.

19. Where discharge occurs at the property line, local ordinances and drainage easement requirements shall be met.

DATE: NUMBER REVISION DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John J. Johnson 12/10/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy Hamilton 12/09/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Jim Loesch 12/22/98
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

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.

Kevin J. Johnson 12/15/98
SIGNATURE OF ENGINEER DATE

Jim Loesch 12/15/98
PRINT NAME SIGNATURE DATE

BY THE DEVELOPER

"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 SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Jim Loesch 12/15/98
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Jim Loesch 12/15/98
U.S.D. A NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Jim Loesch 12/15/98
HOWARD S.C.D. DATE

OWNER: FAX NO.: 443-778-6122

A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-5134

C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY

D. ADDRESS: 1100 JOHNS HOPKINS ROAD

E. CITY: LAUREL STATE: MARYLAND ZIP: 20723

DEVELOPER: FAX NO.: 770-422-9479

A. NAME: CARTER SCHLIF B. DAYTIME TELEPHONE: 770-421-1532

C. COMPANY: KDA

D. ADDRESS: 350 FRANKLIN ROAD

E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

12/17/98 DATE

KEVIN JOHN JOHNSON NO. 16148

PROFESSIONAL ENGR. NO. 16148

REVISED PER COUNTY COMMENTS 11/6/98

REVISED PER COUNTY COMMENTS 9/10/98

REVISED PER JHAPU & ARCH. PLANS 7/23/98

REVISIONS DATE

BENGTSON, DeBELL & ELKIN, LTD.
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
170 ROLLINS AVENUE, ROCKVILLE, MARYLAND 20852
(301) 468-9400

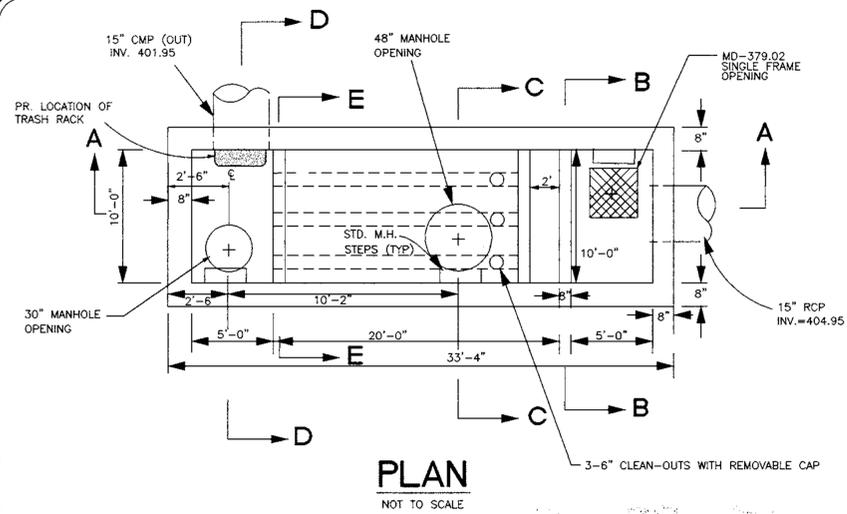
OFFICE LOCATIONS
◆ PRINCE WILLIAM COUNTY, VIRGINIA
◆ MONTGOMERY COUNTY, MARYLAND
◆ FARMAS COUNTY, VIRGINIA
◆ CHESTERFIELD COUNTY, VIRGINIA
◆ DOODAN COUNTY, VIRGINIA

BDE

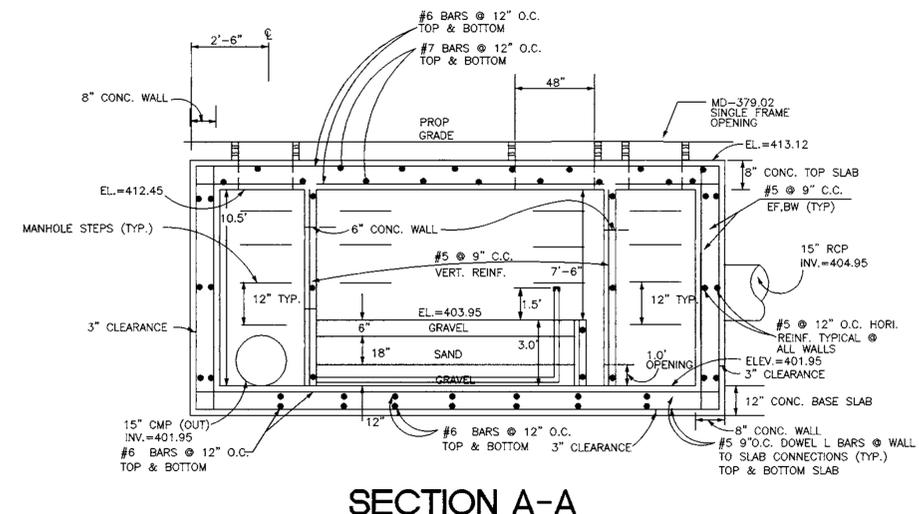
SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

APL CREDIT UNION
1100 JOHNS HOPKINS ROAD
JOHNS HOPKINS APPLIED PHYSICS LABORATORY
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

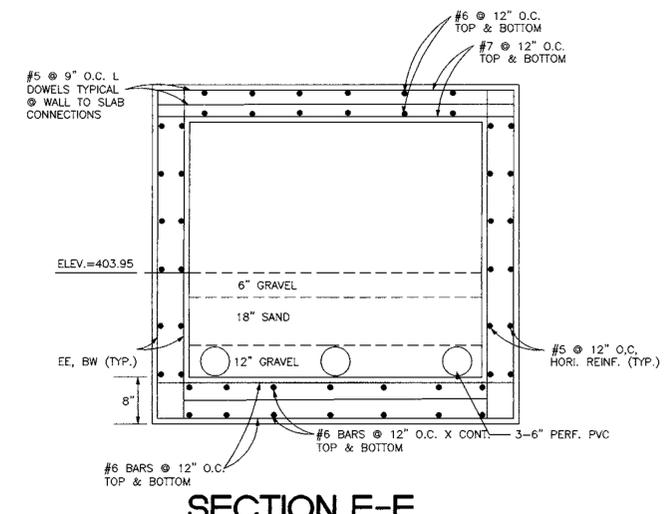
DATE: 7/17/98
SCALE: AS NOTED
DESIGN: CLC DRAWN: CLC
CHECK: KJU CHECK:
JOB NO.: RK00379800
P.R. NO.:
SHEET 9 OF 14
SDP 99-11



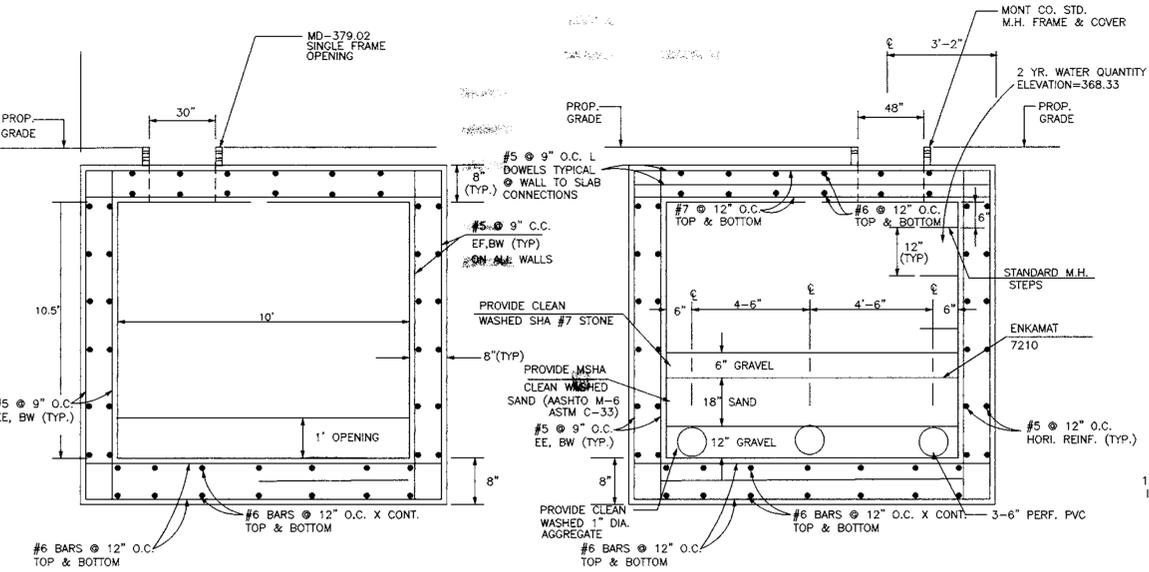
PLAN
NOT TO SCALE



SECTION A-A
NOT TO SCALE

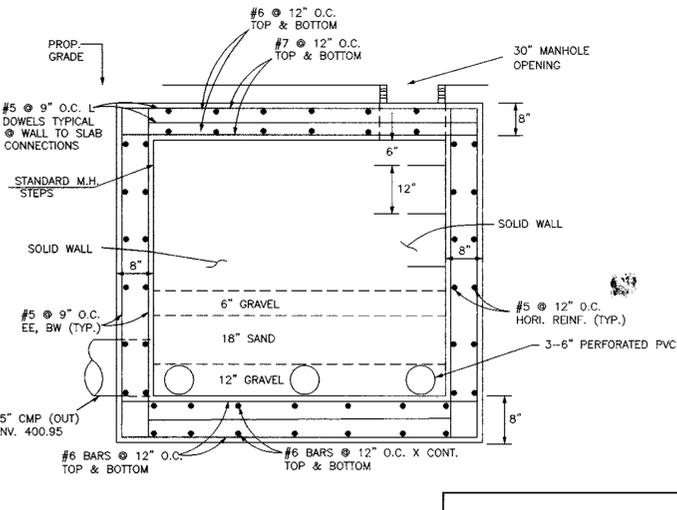


SECTION E-E
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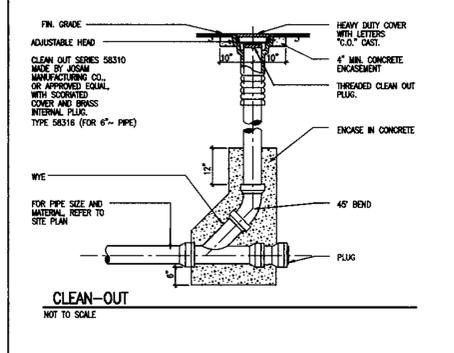


SECTION B-B
NOT TO SCALE

SECTION C-C
NOT TO SCALE



SECTION D-D
NOT TO SCALE



WATER TIGHT BAND DETAIL
NOT TO SCALE

- SAND FILTER OPERATION AND MAINTENANCE SCHEDULE**
1. MONITOR THE WATER LEVEL IN THE FILTER CHAMBER ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM. A LOG OF THE RESULTS SHOULD BE MAINTAINED, INDICATING THE RATE OF DEWATERING AFTER EACH STORM AND THE WATER DEPTH OF EACH OBSERVATION.
 2. THE FIRST CHAMBER MUST BE PUMPED OUT SEMI-ANNUALLY. IF THE CHAMBER CONTAINS AN OIL SKIM, IT SHOULD BE REMOVED BY A FIRM SPECIALIZING IN OIL RECOVERY AND RECYCLING. THE REMAINING MATERIAL MAY THEN BE REMOVED BY A VACUUM PUMP TRUCK AND DISPOSED OF IN AN APPROVED LANDFILL. AFTER EACH CLEANING, REFILL THE FIRST CHAMBER TO A DEPTH OF THREE FEET WITH CLEAN WATER TO REESTABLISH THE WATER SEAL.
 3. AFTER THREE YEARS, OR WHEN THE DRAW DOWN TIME EXCEEDS 72 HOURS, REMOVE AND REPLACE WITH NEW GRAVEL (UPPER LAYER) AND GEOTEXTILE FABRIC. NEW/CLEAN MATERIALS MUST CONFORM TO THE ORIGINAL SPECIFICATIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John Johnson 12/18/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Charles Hamilton 12/22/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Smith 12/22/98
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

OWNER: FAX NO.: 443-778-6122

A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-5134

C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY

D. ADDRESS: 1100 JOHNS HOPKINS ROAD

E. CITY: LAUREL STATE: MARYLAND ZIP: 20728

DEVELOPER: FAX NO.: 770-422-9479

A. NAME: CARTER SCHLIF B. DAYTIME TELEPHONE: 770-421-1532

C. COMPANY: KDA

D. ADDRESS: 350 FRANKLIN ROAD

E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

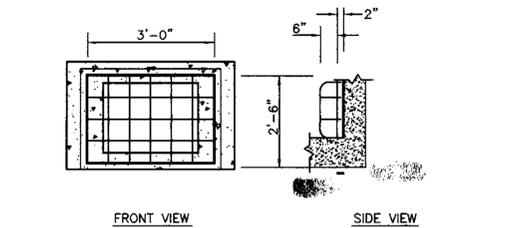
ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
P-128	11060 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART			
Subdivision Name	Section/Area	888 ACRES	Lot/Parcel#
p-128			p-128
L. 3002 F. 148	Zoning PEC	Tax Map 41	Elect. Distr. 6
			Census Tract 005102
Water Code E21			Sewer Code N/A



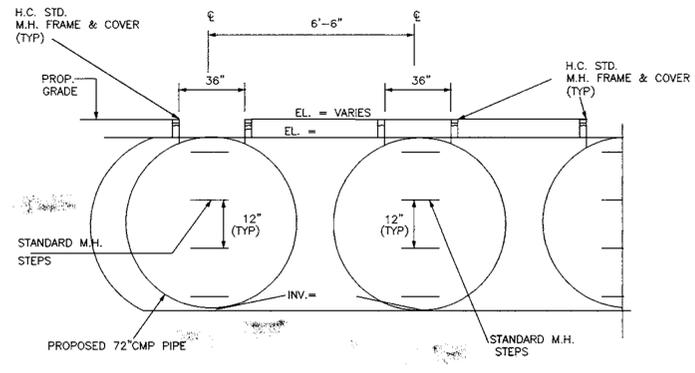
REVISIONS	DATE
REVISED PER COUNTY COMMENTS	11/6/98
REVISED TRASH RACK PER CONTRACTOR	10/8/98
REVISED STRUCTURE ELEVATIONS	10/1/98
REVISED PER COUNTY COMMENTS	9/10/98
REVISED PER JHAPU & ARCH. PLANS	7/23/98

DATE:	7/17/98
SCALE:	AS NOTED
DESIGN:	GLC
DRAWN:	GLC
CHECK:	KJ
CHECK:	
JOB NO.:	RK00379800
P.R. NO.:	
SHEET 11 OF 14	
SDP 99-11	

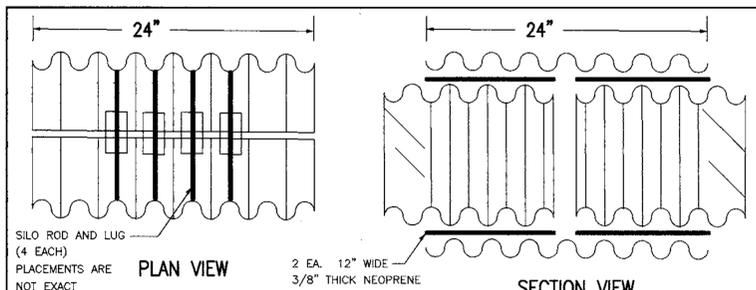


TRASH RACK TO BE L3"x2"x1/4" FRAME. WELD TRASH RACK TO FRAME. #4 SMOOTH BARS. TRASH RACK & FRAME TO BE HOT DIPPED GALVANIZED. BOLTED TO CONCRETE STRUCTURE (3" FRAME LEG TO CONC). #4 BARS TO BE SPACED 6" O/C EA WAY. INSIDE FRAME DIMS = 3'-0" x 2'-6".

TRASH RACK DETAIL (FOR LOCATION SEE PLAN VIEW)
N.T.S.



MANIFOLD DETAIL
NOT TO SCALE



PLAN VIEW
SECTION VIEW
WATER TIGHT BAND DETAIL
NOT TO SCALE

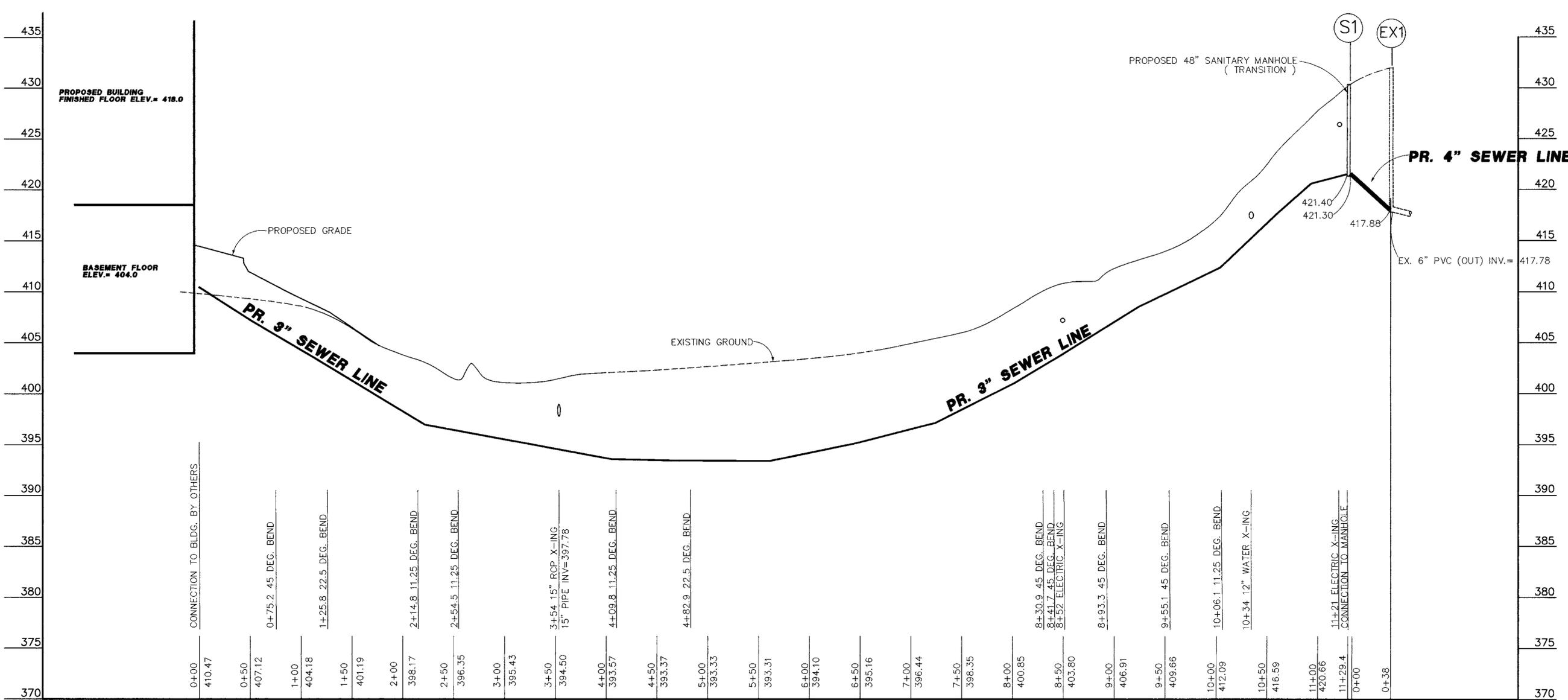
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ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
(301) 468-9400

OFFICE LOCATIONS
◆ CHESTERFIELD COUNTY, VIRGINIA
◆ PRINCE WILLIAM COUNTY, VIRGINIA
◆ VIRGINIA BEACH, VIRGINIA
◆ MONTGOMERY COUNTY, MARYLAND
◆ LOUDOUN COUNTY, VIRGINIA

BDE

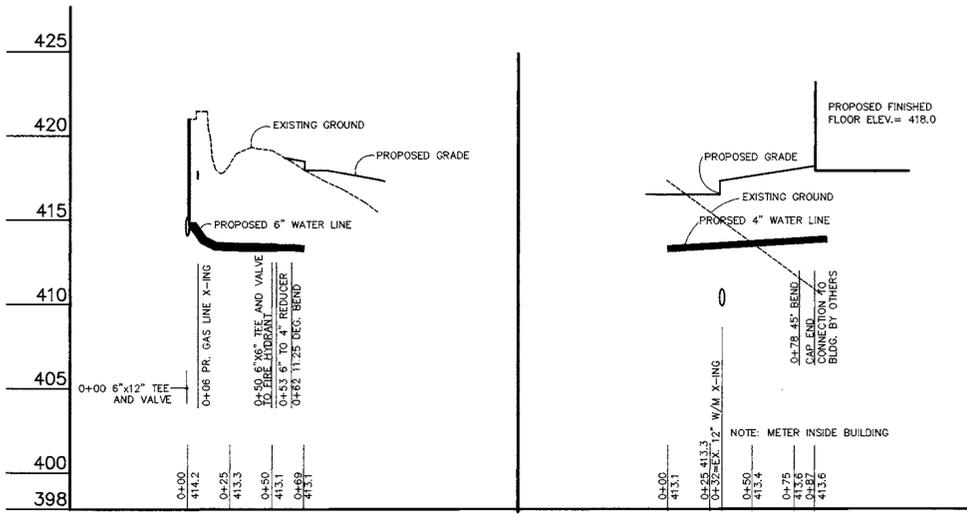
STORMWATER MANAGEMENT DETAILS AND STORM DRAIN PROFILES

APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
JOHNS HOPKINS APPLIED PHYSICS LABORATORY
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



SEWER LINE PROFILE

SCALE: HORIZ. 1" = 50'
VER. 1" = 5'



WATER AND SEWER QUANTITIES

ITEM	ESTIMATE	REMARKS
WATER		
4" DIP	103 L.F.	
4" 11.25' BEND	1 EA.	
6" TO 4" REDUCER	1 EA.	
6"x12" TAP SLEEVE AND VALVE	1 EA.	
6" D.I.P.	53 L.F.	
6"x6" TEE	1 EA.	
6" VALVE	1EA.	
SANITARY SEWER		
3"PVC	1126 L.F.	
4"PVC	38 L.F.	
48" SAN. SEW. MH	1 EA.	TRANSITION M.H.
4" PVC CLEANOUT	1 EA.	
2" 45' BEND	5 EA.	
2" 22.5' BEND	1 EA.	
2" 11.25' BEND	5 EA.	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kevin Johnson
CHIEF, DEVELOPMENT ENGINEERING DIVISION **mk** 12/18/98 DATE

Kevin Johnson
CHIEF, DIVISION OF LAND DEVELOPMENT 12/24/98 DATE

Kevin Johnson
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING 12/22/98 DATE

OWNER: JAMES E. LOESCH FAX NO.: 443-778-6122
 A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-584
 C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
 D. ADDRESS: 1100 JOHNS HOPKINS ROAD
 E. CITY: LAUREL STATE: MARYLAND ZIP: 20723

DEVELOPER: CARTER SCHILF FAX NO.: 770-422-9479
 A. NAME: CARTER SCHILF B. DAYTIME TELEPHONE: 770-421-1532
 C. COMPANY: KDA
 D. ADDRESS: 350 FRANKLIN ROAD
 E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
P-123	11060 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

Subdivision Name	p-123	Section/Area	200 ACRES	Lot/Parcel#	p-123
L. 9902 F. 148		Zoning	Tax Map	Elect. Distr.	Census Tract
		PEC	41	5	060102
Water Code	221	Sewer Code	N/A		



REVISIONS	DATE
REVISED PER COUNTY COMMENTS	9/29/98
REVISED PER JHAPU & ARCH. PLANS	9/10/98
REVISED PER JHAPU & ARCH. PLANS	7/23/98

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 170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
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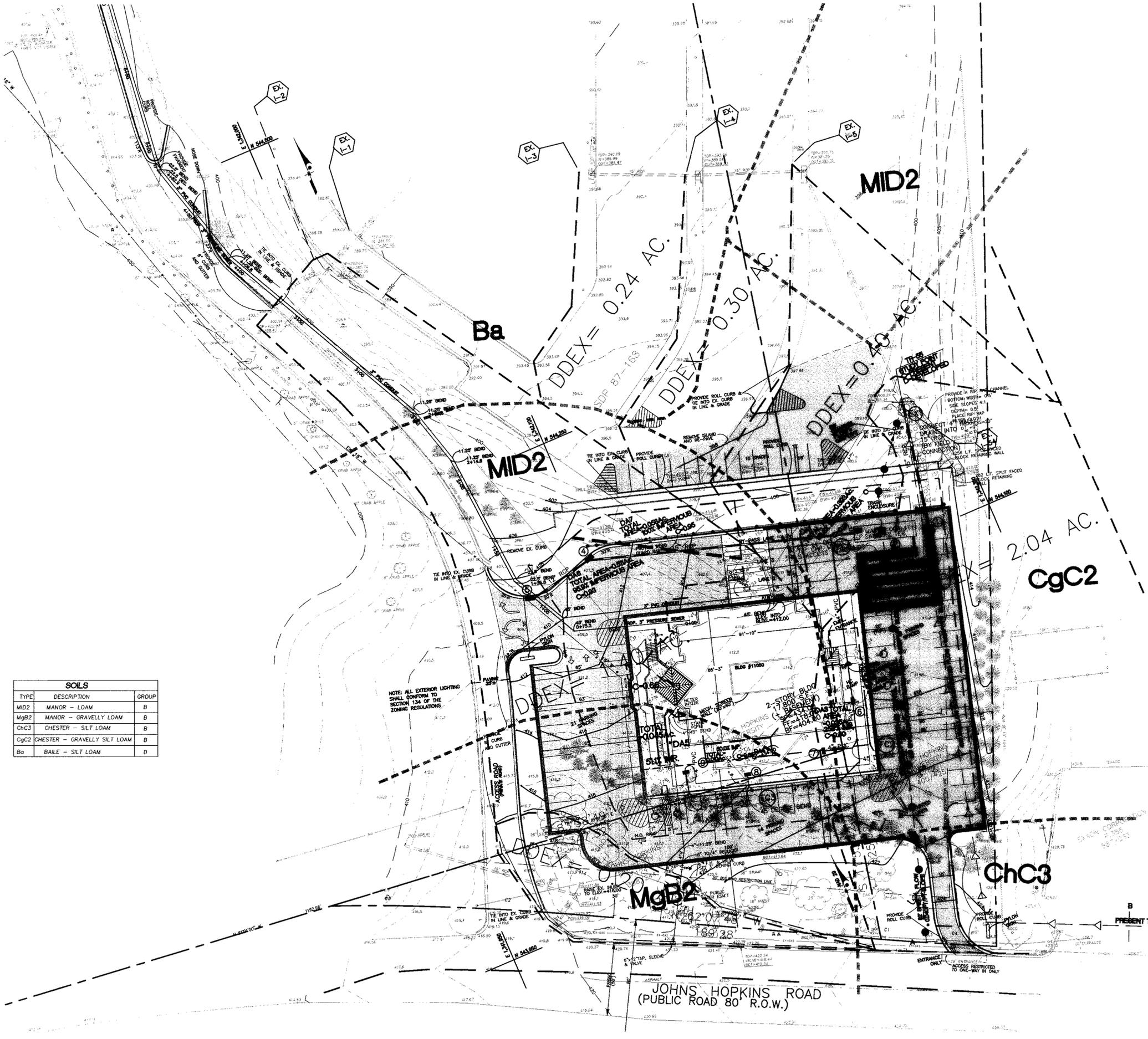
OFFICE LOCATIONS:
 ◆ PRINCE WILLIAM COUNTY, VIRGINIA
 ◆ VIRGINIA BEACH, VIRGINIA
 ◆ MONTGOMERY COUNTY, MARYLAND
 ◆ LOUDOUN COUNTY, VIRGINIA

BDE
 ◆ CHESTERFIELD COUNTY, VIRGINIA
 ◆ FAIRFAX COUNTY, VIRGINIA

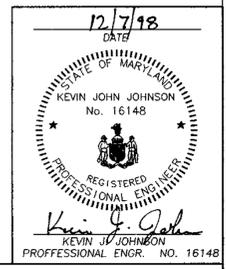
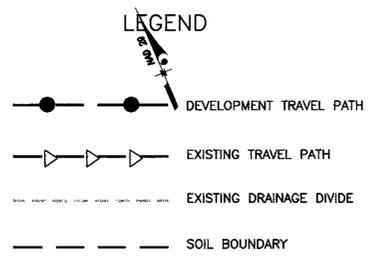
WATER AND SEWER LINE PROFILES
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
 JOHNS HOPKINS APPLIED PHYSICS LABORATORY

5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DATE: 7/20/98
 SCALE: NONE
 DESIGN: PWR DRAWN: PWR
 CHECK: GLC CHECK: KJJ
 JOB NO.: R0379800
 P.R. NO.:
 SHEET 12 OF 14
SDP 99-11



SOILS		
TYPE	DESCRIPTION	GROUP
MID2	MANOR - LOAM	B
MgB2	MANOR - GRAVELLY LOAM	B
ChC3	CHESTER - SILT LOAM	B
CgC2	CHESTER - GRAVELLY SILT LOAM	B
Ba	BAILE - SILT LOAM	D



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kevin J. Johnson 12/18/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cordy Hamilton 10/22/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James S. Smith 12/22/98
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

OWNER: JAMES E. LOESCH FAX NO.: 443-778-6122
 A. NAME: JAMES E. LOESCH B. DAYTIME TELEPHONE: 443-778-5134
 C. COMPANY: JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
 D. ADDRESS: 1100 JOHNS HOPKINS ROAD
 E. CITY: LAUREL STATE: MARYLAND ZIP: 20723

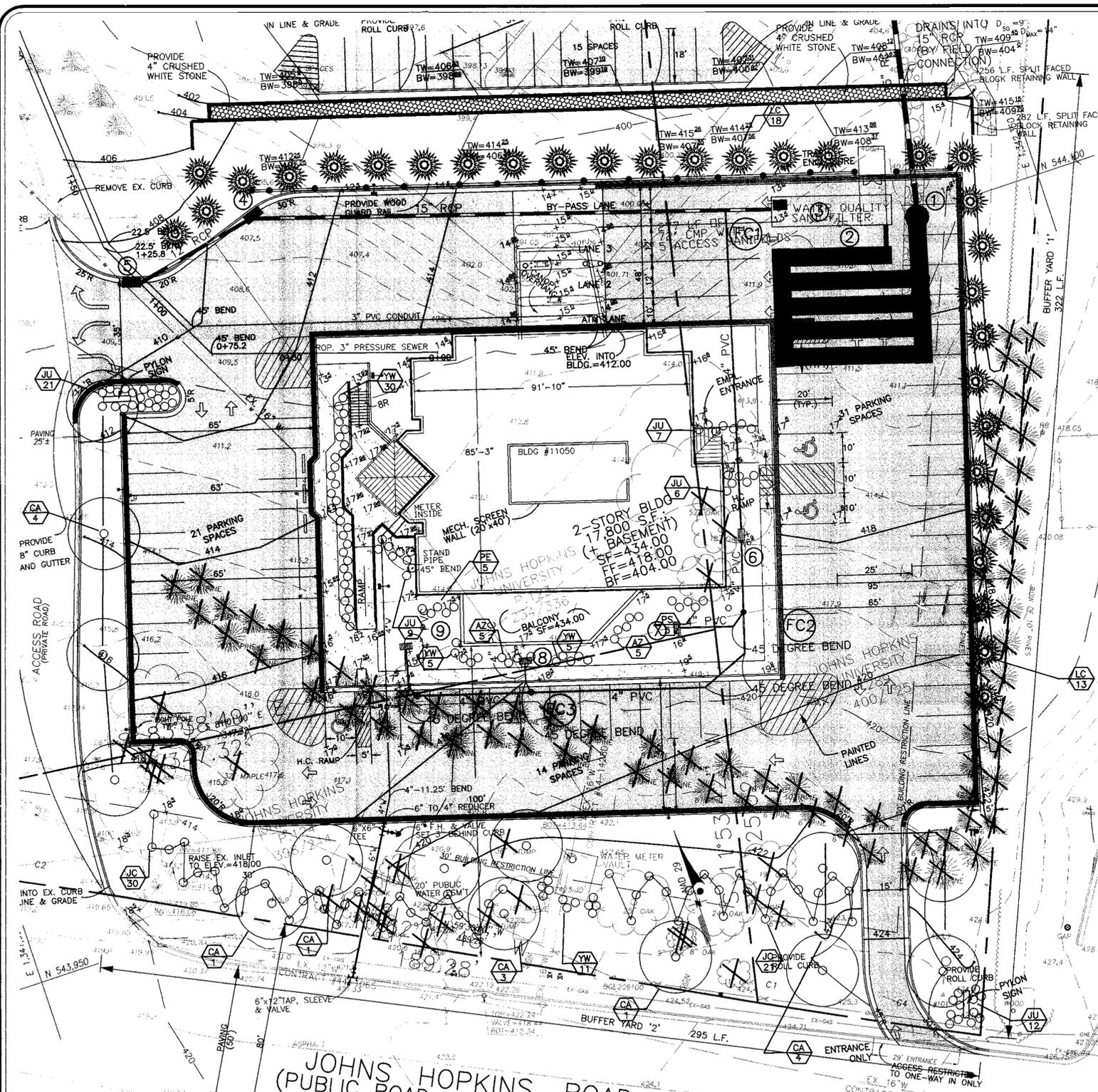
DEVELOPER: CARTER SCHILF FAX NO.: 770-422-9479
 A. NAME: CARTER SCHILF B. DAYTIME TELEPHONE: 770-421-1532
 C. COMPANY: KDA
 D. ADDRESS: 350 FRANKLIN ROAD
 E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

DRAINAGE AREA MAP
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
 JOHNS HOPKINS APPLIED PHYSICS LABORATORY
5th ELECTION DISTRICT
 HOWARD COUNTY/MARYLAND

DATE: 07/06/98
 SCALE: 1"=30'
 DESIGN: GJC DRAWN: GJC
 CHECK: KJJ CHECK:
 JOB NO.: RK003798000
 P.R. NO.:
 SHEET 13 OF 14
SDP 99-11

BDE
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 (301) 468-9400

OFFICE LOCATIONS
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 ◆ PRINCE WILLIAM COUNTY, VIRGINIA
 ◆ VIRGINIA BEACH, VIRGINIA
 ◆ MONTGOMERY COUNTY, MARYLAND
 ◆ LOUDOUN COUNTY, VIRGINIA



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	BUFFER YARD '2'	BUFFER YARD '1'
LANDSCAPE TYPE	E	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	295 FT.	322 FT.
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES TWO OAK TREES 24' & 25'	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED		
SHADE TREES	1 SHADE TREE/40' = 8	1 SHADE TREE/60' = 6
EVERGREEN TREES	1 SHRUB/4' = 74	
NUMBER OF PLANTS PROVIDED		
SHADE TREES	12 SHADE TREES	13 EVERGREEN TREES (2/SUB)
EVERGREEN TREES		
OTHER TREES(2:1 SUBSTITUTION) SHRUBS(10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	74 SHRUBS	

SCHEDULE 'B' PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	66 SPACES
NUMBER OF TREES REQUIRED	1 TREE PER 20 SPACES = 4 SHADE TREES
NUMBER OF TREES PROVIDED	18 EVERGREEN TREES USING AREA BETWEEN EX. LOT AND NEW LOT AS INTERNAL GREEN/LANDSCAPE AREA
OTHER TREES (2:1 SUBSTITUTION)	

COUNTY NOTES

- "This plan has been prepared in accordance with the provisions of SECTION 16.124 of the Howard County Code and the Landscape Manual."
- "Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of \$17,580.00."
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

LANDSCAPE LEGEND

- TREES TO BE REMOVED
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUBS
- CRUSHED WHITE STONE
- PROPOSED SHADE TREE

SPECIFICATIONS FOR PLANTING

Plant Identification -- All plants shall be properly marked for identification and checking.

List of Plant Material -- The quantities given in the plant list are approximate only. The contractor will verify plant quantities prior to bidding and any discrepancies shall be brought to the attention of the landscape architect. The contractor shall furnish and plant all plants required to complete the work as shown on the drawings. Substitutions shall not be made.

Plant Quality -- All plants shall be sound, free of plant disease, infestation, or insect eggs and shall have a healthy, normal root system. Plants shall be freshly dug and not heeled-in stock, nor stock from cold storage. All plants shall be nursery grown. Plants shall not be pruned prior to delivery. The shape of the plant shall, in general, conform to its natural growth proportions unless otherwise specified. All plants, including container grown, shall conform to the branching, caliper and height specifications of the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANS1260.1-1990 or latest edition, and shall have a well-shaped, heavy-branched structure for the species. Evergreen trees are to have an internode no greater than 24" and shall be uniformly well-shaped. Plants of a given size shall not measure less than the minimum size set forth in the American Standard for Nursery Stock, ANS1260.1-1990 or latest edition.

Plant Spacing -- Plant spacing is to scale on plan.

Soil Mix -- Soil mix will be 2/3 existing topsoil, 1/3 leafmold thoroughly mixed and homogenized.

Rootball Size -- The ball size shall conform to the American Association of Nurserymen's Publication entitled American Standard for Nursery Stock, ANS1260.1-1990 or latest edition, and shall be wrapped in untreated burlap.

Excavation -- Holes for all plants shall be 18" larger in diameter than size of ball or container and shall have vertical sides. Organic material (leafmold) will be incorporated into plant beds by tilling open to a depth of 8". Proportions of soil to organic material will be two parts existing soil to one part organic material.

Planting -- Backfilling shall be done with soil mix previously described, reasonably free of stones, subsoil, clay lumps, stumps, roots, weeds, Bermuda grass, litter, toxic substances, or any other material which may be harmful to plant growth or hinder grading, planting, or maintenance operations. Plants shall be set plumb and straight and trees shall be cued or staked at the time of planting. Backfill shall be well worked about the roots and seated by watering. Plants will be planted higher than surrounding grade. Trees will be 3" higher. Remove rope from round tree trunks and lay burlap and wire baskets from 1/2 of all B&B material (Nylon, plastic, or vinyl rope and/or burlap) will be completely removed from all plant material prior to planting. Maintenance during the contract shall be the responsibility of the contractor. The contractor shall be responsible for keeping the planting and work incidental thereto in good condition by replanting, plant replacement, watering, weeding, cultivating, pruning, spraying, restaking and cleaning up, and by performing all other necessary operations of care for the promotion of good plant growth so that work is in satisfactory condition at the time of acceptance at no additional cost to the owner.

Fertilizer -- All fertilizer shall be granular, packet or pellet type with 35 to 90 percent of the total nitrogen in a slowly available form. For trees, fertilizer shall be a complete fertilizer with a minimum analysis of 10 percent nitrate nitrogen, 8 percent phosphorous and 4 percent potassium. Fertilizer shall be added depending on the size of the plant and the manufacturer's recommendation using the following application rate:

- Trees: Use 1/2 lb. of 10-6-4 fertilizer per inch of trunk diameter.

Guarantee and Replacement -- All plant material shall be unconditionally guaranteed for one year. The guarantee will begin on the date of that acceptance of the work. After a plant has been determined to be dead, dying or damaged from handling or installation, it will be replaced during the next growing season or, for example, if a percent phosphorous and 4 percent potassium. It will be replaced during the fall planting season. The guarantee will end for all plant material one year after acceptance. During the guarantee period, the Contractor will not be responsible for mechanical injury or vandalism caused by other parties.

Material Inspection -- Owner shall, at his discretion, inspect plant material before and during delivery and installation. Plant material will be properly delivered in covered trucks, and promptly uncovered when delivered to prevent damage. Material will be unloaded and properly handled in such a way as not to damage plants. Plants will be inspected and may be rejected upon delivery and/or installation by the owner for mechanical damage, and damage that will subsequently cause mishap or deformed material. Owner will have authority to observe site preparation and planting installations, and have the right to reject any work if the specifications and construction documents are not followed. All plant material shall be of the quality specified and installed as described above, and unless these minimum standards are satisfied, the plants will be rejected.

PLANT LIST

KEY QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
JU 55	JUNIPERUS CHINENSIS 'PFIZERIANA'	COMPACT PFIZER JUNIPER	2 1/2' SP	4' O.C., B & B
AZ 10	AZALEA 'EXBURY'	EXBURY AZALEA (WHITE)	2'-2 1/2'	B & B
PS 5	ILEX X MESERVEAE 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	2'-2 1/2'	B & B
PE 5	ILEX X MESERVEAE 'BLUE PRINCE'	BLUE PRINCE HOLLY	2'-2 1/2'	B & B
YW 55	TAXUS BACCATA 'REPANDENS'	SPREADING ENGLISH YEW	18"-24"SP	B & B
CA 14	MALUS FLORIBUNDA 'INDIA MAGIC'	FLOWERING CRABAPPLE	3" CAL.	B & B
ZE 18	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	7' HT.	B & B
LC 31	CUPRESSOCYPARIS LEYLANDI	LEYLAND CYPRESS	7' HT.	B & B
JC 51	JUNIPERUS CHINENSIS	HETZI JUNIPER	4'-5'	B & B

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
P-123	11050 JOHNS HOPKINS ROAD

PERMIT INFORMATION CHART

Subdivision Name	Section/Acre	366 ACRES	Lot/Parcel#	P-123
L 3902 F. 148	Zoning	PEC	Tax Map	41
	Elect. Distr.	5	Census Tract	6051.02
Water Code	E21	Sewer Code	N/A	

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, SECTION 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: *James E. Loesch* Date: 12-21-98

OWNER: JAMES E. LOESCH B. DAYTIME TELEPHONE: (443)-778-6122
 COMPANY: JOHNS HOPKINS UNIVERSITY PHYSICS LABORATORY
 D. ADDRESS: 11100 JOHNS HOPKINS ROAD
 E. CITY: LAUREL STATE: MD. ZIP: 20723

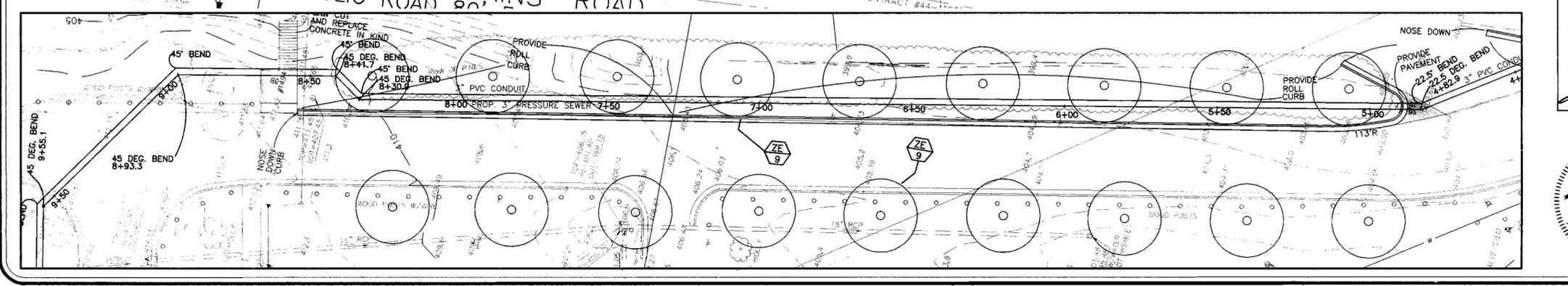
DEVELOPER: CARTER SCHLIF B. DAYTIME TELEPHONE: (770) 422-9479
 COMPANY: KDA
 D. ADDRESS: 350 FRANKLIN ROAD
 E. CITY: MARIETTA STATE: GEORGIA ZIP: 30067

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John J. Johnson 12/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy Hanalta 12/24/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James E. Loesch 12/22/98
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE



12/7/98

KEVIN JOHN JOHNSON
 No. 16148
 REGISTERED PROFESSIONAL ENGINEER
 State of Maryland

REVISIONS	DATE
REVISED PER COUNTY COMMENTS	11/12/98
REVISED PER APL COMMENTS	9/25/98
REVISED PER COUNTY COMMENTS	9/10/98
REVISED PER JHAPU & ARCH PLANS	7/23/98

BENGTSON, DeBELL & ELKIN, LTD.
 ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
 170 ROLLINS AVENUE ROCKVILLE, MARYLAND 20852
 (301) 469-9400

OFFICE LOCATIONS:
 • PRINCE WILLIAM COUNTY, VIRGINIA
 • VIRGINIA BEACH, VIRGINIA
 • MONTGOMERY COUNTY, MARYLAND
 • LOUDOUN COUNTY, VIRGINIA

BDE

LANDSCAPE
APL CREDIT UNION
11100 JOHNS HOPKINS ROAD
JOHNS HOPKINS PHYSICS LABORATORY

5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DATE: 7/17/98
 SCALE: 1"=20'
 DESIGN: GLC DRAWN: GLC
 CHECK: KJJ CHECK:
 JOB NO.: RK0374800
 P.R. NO.:
 SHEET: 14 OF 14
 SDP 99-11