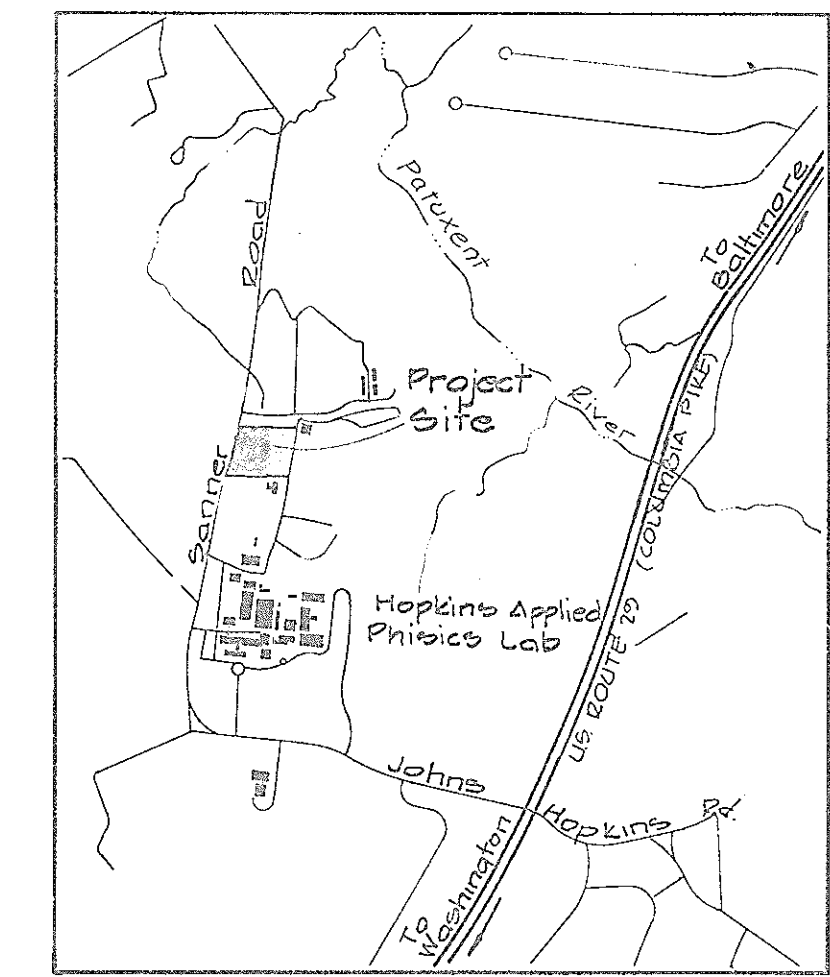


GENERAL NOTES

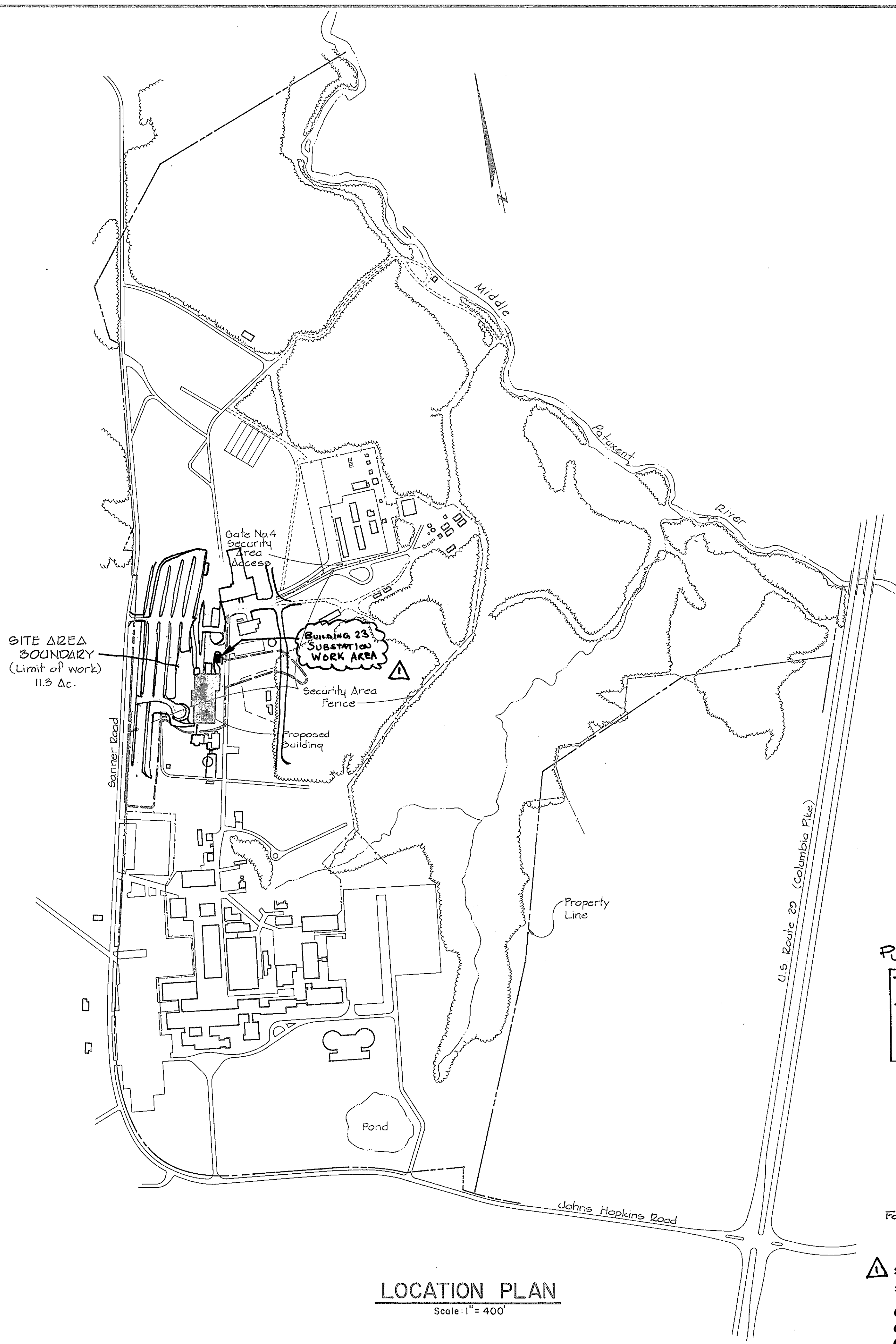
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- THE WATER AND SEWERAGE SYSTEMS ARE PRIVATE. THE INDIVIDUAL WATER AND/OR SEWERAGE SYSTEMS ARE INTERIM AND SHALL BE DISCONTINUED AS PUBLIC FACILITIES BECOME AVAILABLE AND CONNECTION THERE TO IS REQUIRED BY THE AGENCY HAVING JURISDICTION.
- ELEVATIONS SHOWN ARE BASED ON THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY DATUM. JHU-APL DATUM - 0.94' = HOWARD COUNTY DATUM.
- THE CONTRACTOR SHALL CALL MISS UTILITY (301) 559-0100, FIVE DAYS PRIOR TO THE START OF CONSTRUCTION.
- POLY FILTER X FILTER CLOTH BLANKET OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP RAP.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN AN UNINTERRUPTED SERVICE. ANY DAMAGE BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE.
- ACCESS TO THE CONSTRUCTION AREA THROUGH THE SECURE AREA OF THE APPLIED PHYSICS LABORATORY (WITHIN THE FENCED ENCLOSURE) MUST BE ARRANGED IN ADVANCE BY CONTACTING THE LABORATORY SECURITY OFFICE (301) 953-7100.
- SECURITY MUST BE MAINTAINED WITHIN THE EXISTING FENCED AREA. ALL REQUIRED FENCE CONSTRUCTION AND RELOCATION SHALL BE BY THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY. HOW EVER THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH JHU APL AS TO WHEN SUCH WORK IS REQUIRED.
- LANDSCAPING SHALL BE BY JHU-APL.
- THE EXISTING LIGHT POLES, ELECTRICAL CONDUITS, AND GATE HOUSES BETWEEN ROAD "A" AND THE PROPOSED BUILDING SHALL BE REMOVED OR RELOCATED BY JHU-APL. ALL OTHER EXISTING UTILITIES CONFLICTING WITH THE CONSTRUCTION SHALL BE RELOCATED BY JHU-APL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION.
- WHEN THE EXISTING PARKING ADJACENT TO BUILDING NO.36 IS REMOVED AND PRIOR TO THE COMPLETION OF THE PROPOSED PARKING FACILITY, A SHUTTLE BUS SERVICE FROM THE JHU-APL MAIN PARKING LOT WILL BE PROVIDED BY THE OWNER FOR THE EMPLOYEES.
- THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR DAMAGES TO EXISTING PAVEMENT WITHIN THE JHU-APL COMPLEX. THE CONTRACTOR WILL REPLACE ONLY A TEMPORARY PAVING SECTION OF ROAD "A" AFTER THE WATER AND SEWER EXTENSIONS ARE CONSTRUCTED. ALL OTHER PAVING TO BE CONSTRUCTED BY OWNER.
- THE CONTRACTOR SHALL CONTACT MR. ARTHUR STUCKI, PLANT ENGINEER, (301) 953-7100 AT LEAST 5 WORKING DAYS PRIOR TO COMMENCING ANY WORK OR SHUTTING DOWN ANY UTILITIES.
- THE CONTRACTOR SHALL SHUTDOWN AND TIE-IN TO THE EXISTING WATER SYSTEM ONLY AFTER NORMAL WORKING HOURS AT JHU-APL. WORK SHALL BE SCHEDULED ACCORDINGLY. NORMAL WORKING HOURS ARE 8:30 AM TO 5:00 PM, MONDAY THROUGH FRIDAY.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- ALL WATER MAINS SHALL BE DUCTILE IRON PIPE CLASS 52.
- ALL SANITARY SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., A.C.P., OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL MINIMIZE THE NUMBER OF TREES TO BE CUT DURING THE SANITARY SEWER CONSTRUCTION. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE DISPOSAL OF THESE CUT TREES.
- ALL 4 INCH TELEPHONE CONDUITS SHALL BE PLASTIC COATED STEEL AND INSTALLED WITH A MINIMUM OF 3' OF COVER.
- THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION, 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK, AT 992-2417 OR 2418.
- TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3 1/2 FEET OF COVER UNLESS OTHERWISE NOTED.
- ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS.



VICINITY MAP
Scale: 1" = 2000'

SHEET INDEX

- Title Sheet
- Grading Plan
- Roadway & Utility Plan
- Drainage Area Map and Storm Drain Details
- Water and Sewer Profiles & Details
- Sediment Control Plan
- Sediment Control Notes & Details
- Landscape Plan
- Boring Logs



LOCATION PLAN
Scale: 1" = 400'

SITE DATA

1. ZONING	RURAL
2. SITE AREA	11.3 Ac.
3. BUILDING FLOOR AREA (GROSS AREA OF THREE FLOORS)	105,000 SF.
4. ACREAGE OF ENTIRE PROPERTY	366 Ac.
5. EXISTING BUILDING COVERAGE	11.8 Ac. = 3.22%
6. PROPOSED BUILDING COVERAGE	1.2 Ac. = 0.33%
7. MAXIMUM NUMBER OF EMPLOYEES IN THE PROPOSED BUILDING	125
8. TOTAL NUMBER OF EXISTING EMPLOYEES/ PERSONNEL ON THE ENTIRE SITE	3100
9. TOTAL NUMBER OF EXISTING AND PROPOSED EMPLOYEES/PERSONNEL ON THE ENTIRE SITE	3225
10. TOTAL NUMBER OF PARKING SPACES REQUIRED	2258
11. TOTAL NUMBER OF PARKING SPACES PROVIDED	2426 *
* EXISTING SPACES	2335
SPACES REMOVED	- 50
SPACES PROPOSED	+ 141
	2426

LEGEND

- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- LIGHT POLE
- GAS VALVE
- TELEPHONE POLE
- ELECTRIC MANHOLE
- BORING
- WATER TOWER
- OVERHEAD
- EXISTING GASLINE
- EXISTING CONDUIT
- TEMPORARY FENCE
- PERMANENT SECURITY FENCE
- FENCE

PURPOSE OF REVISION:
THE PURPOSE OF REVISION OF 1/25/2010 IS TO REFLECT THE CONSTRUCTION OF SUBSTATION 23 AND THE NECESSARY STORM DRAIN GRADING REVISIONS

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE: 6-30-82



Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.
Joseph F. Nemes 7-19-82
County Health Officer Date
Approved: Storm Drainage Systems And Roads, Howard County Department Of Public Works
Joseph F. Nemes 7-28-82
Director Date
Approved: Chief, Bureau Of Engineering
Joseph F. Nemes 7-28-82
Date
Approved: Howard County Office Of Planning And Zoning
Paul M. Muddman 7-29-82
Planning Director, Acting Date
Paul M. Muddman 7-29-82
Chief, Division Of Land Development And Zoning Administration Date

△ SHEETS REVISED FOR SUBSTATION 23
C-1 △
C-2 △
C-3 △
C-4 △
C-6 △

Note: Building Addition to SDP 81-137.

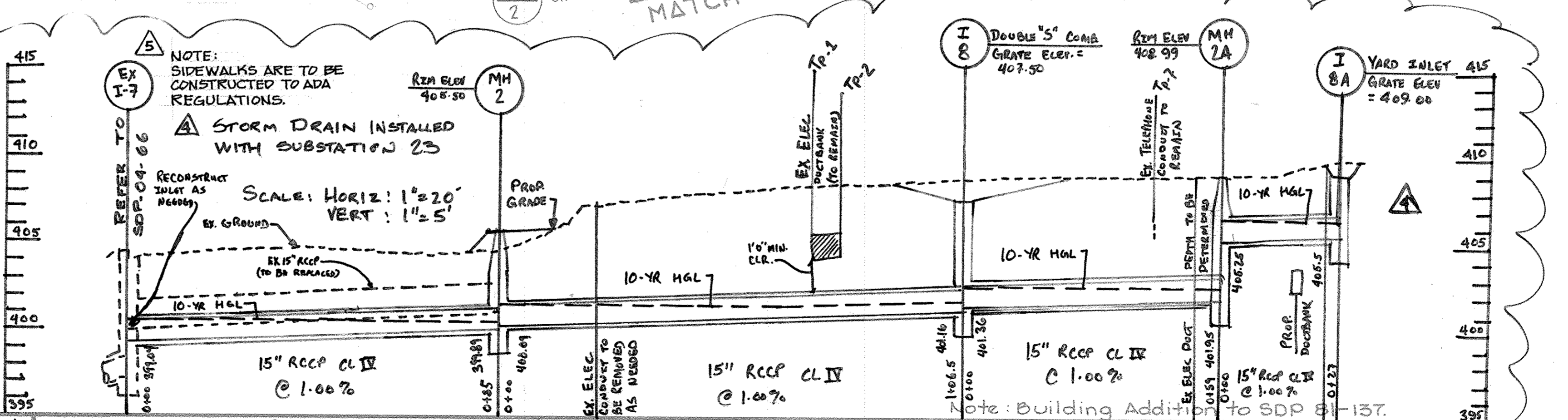
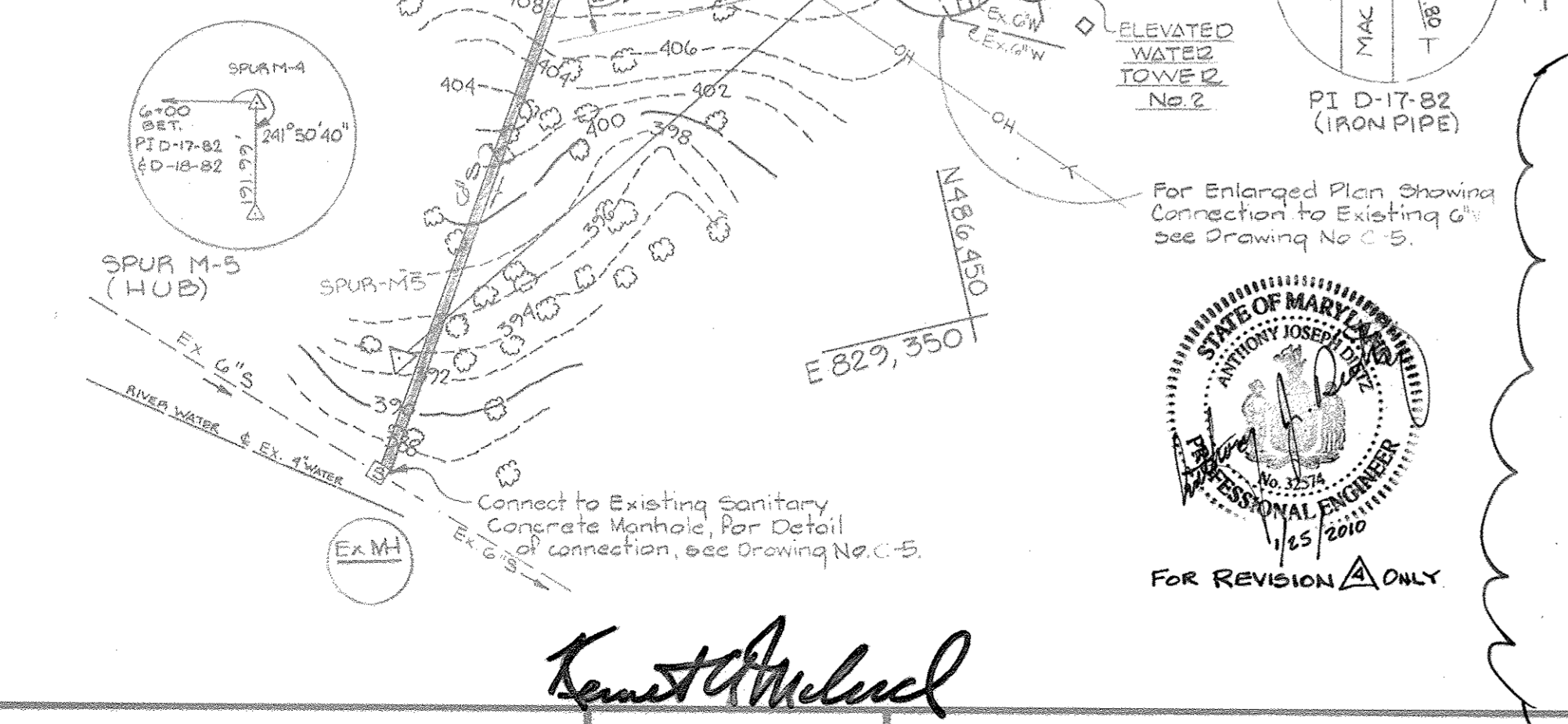
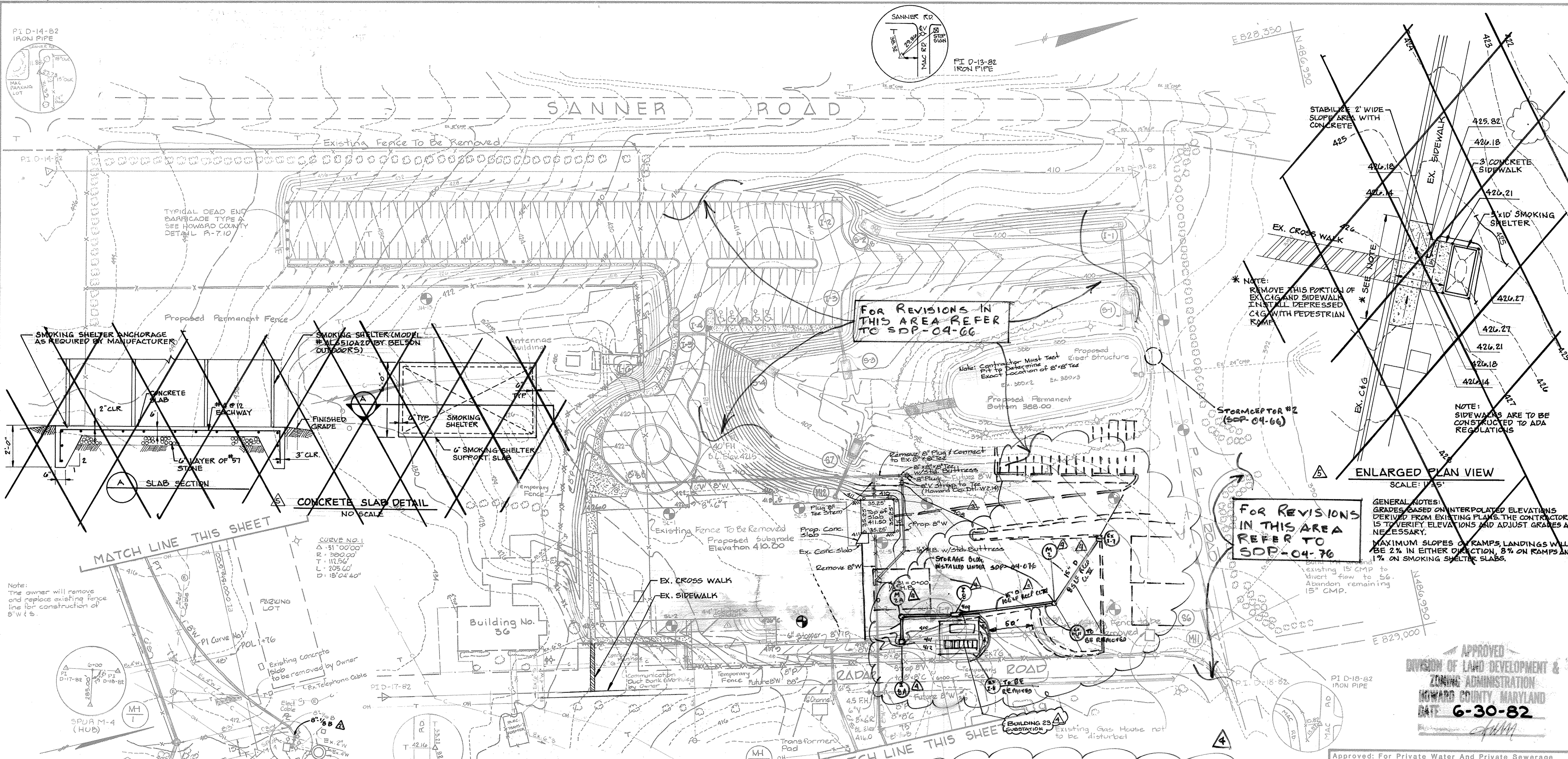
WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218

APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By: *C. J. Smith*
Date: 7-1-82 Title

SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road Laurel, Maryland 20707

TITLE SHEET
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 50 and 123

REVISIONS
△ ADDED SUBSTATION 23 AND REVISED GRADING & STORM DRAINS 1/25/10
SCALE: As Shown
SHEET NO. 1 OF 9
DATE: April 15, 1982
DRAWING C-1



APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 6-30-82

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.

Joseph J. Smith 7-19-82
City Health Officer Date

Approved: Storm Drainage Systems And Roads
Howard County Department Of Public Works
John N. Nunn 7-28-82
Director Date

William S. Ryan 7-28-82
Chief, Bureau Of Engineering Date

Approved: Howard County Office Of
Planning And Zoning
John W. Munn 7-28-82
Planning Director Date

John W. Munn 7-28-82
Chief, Division Of Land Development
And Zoning Administration Date

WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218

APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By:
C. J. Smith
Date 4-15-82 Title

SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road Laurel, Maryland 20707

GRADING PLAN
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 50 and 123

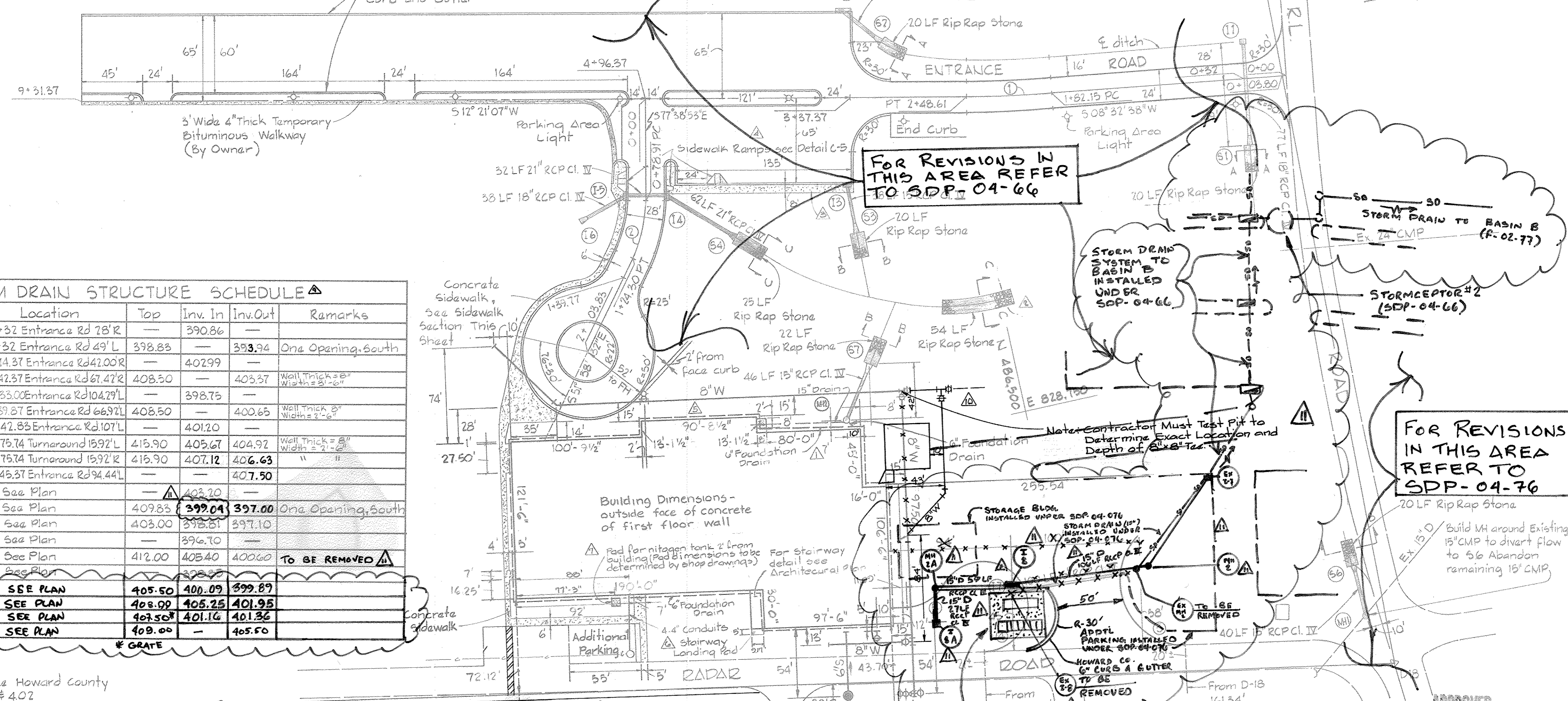
REVISIONS
Change and clarify grades 9-1-82
Identify 8" W-1/2 B @ Sta 0+15.0-9-7-82
Modified 8" W/S Grading 10-29-91
ADDED SUBSTATION 23 AND REVER GRADING AND STORM DRAINS 1-25-10
APPROVED 04-15-1992

SCALE: 1" = 50'
SHEET NO. 2 OF 9
DATE: April 16, 1992
DRAWING C-2

SDP-82-118

Note:
All internal island radii are 5'

Standard 7" Combination Curb and Gutter

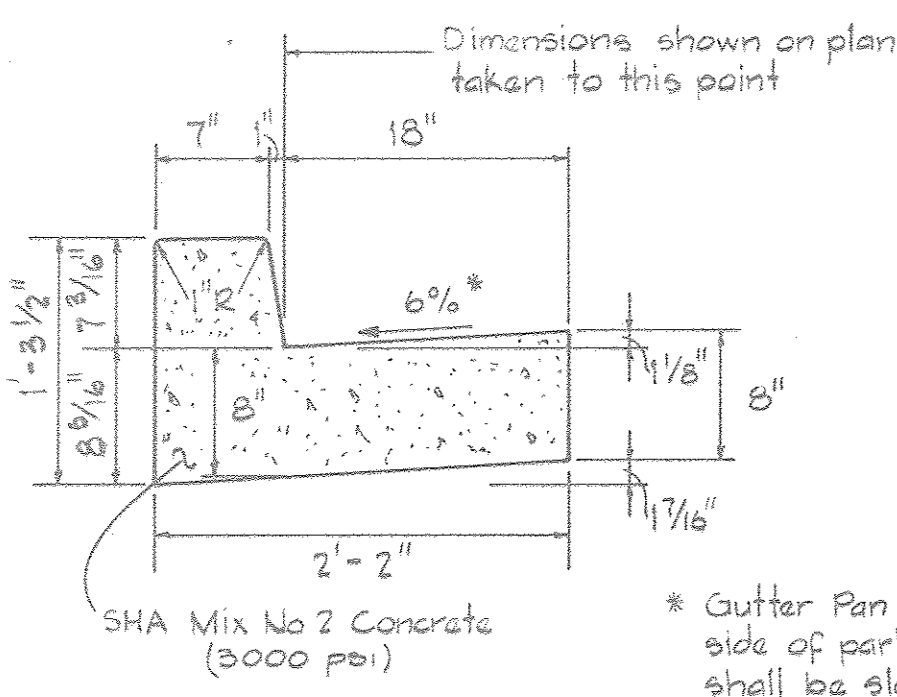


FOR REVISIONS IN THIS AREA REFER TO SDP-04-66

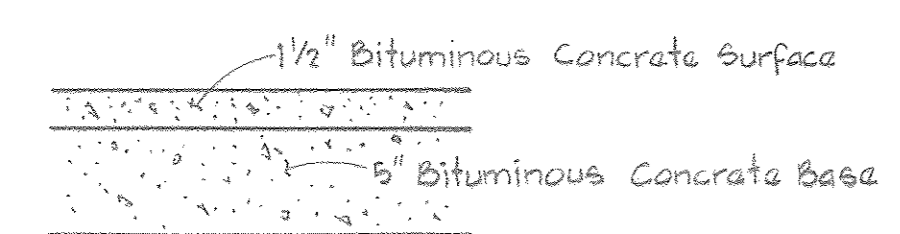
FOR REVISIONS IN THIS AREA REFER TO SDP-04-76

Struc	Type	Location	Top	Inv. In	Inv. Out	Remarks
S1	18" Precast	0+32 Entrance Rd 78'R	—	390.86	—	
I1	D	0+32 Entrance Rd 49'L	398.83	—	393.94	One Opening, South
S2	18" Precast	3+14.37 Entrance Rd 42.00'R	—	402.99	—	
I2	A-10	3+42.37 Entrance Rd 67.47'R	408.50	—	403.57	Wall Thick 8" Width 2'-6"
S3	15" Precast	3+33.00 Entrance Rd 104.29'L	—	398.75	—	
I3	A-5	3+29.87 Entrance Rd 66.92'L	408.50	—	400.65	Wall Thick 8" Width 2'-6"
S4	21" Precast	4+42.83 Entrance Rd 107'L	—	401.20	—	
I4	A-5	0+75.74 Turnaround 159.2'L	415.90	405.67	404.92	Wall Thick 8" Width 2'-6"
I5	A-5	0+75.74 Turnaround 159.2'L	415.90	407.12	406.63	" "
I6	18" Precast	5+45.37 Entrance Rd 94.44'L	—	407.90	—	
S5	15" Precast	See Plan	—	403.20	—	
I7	D	See Plan	409.83	399.04	397.00	One Opening, South
M1	Standard	See Plan	403.00	398.81	397.10	
S6	15" Precast	See Plan	—	396.70	—	
M2	Standard	See Plan	412.00	403.40	400.60	TO BE REMOVED
S7	15" Precast	See Plan	—	398.70	—	
MH2	STANDARD	SEE PLAN	405.50	400.09	399.89	
MH2A	STANDARD	SEE PLAN	408.00	405.25	401.95	
I-8	DOUBLE'S COMBO	SEE PLAN	403.50	401.16	401.36	
I-8A	D INLET	SEE PLAN	409.00	—	405.60	

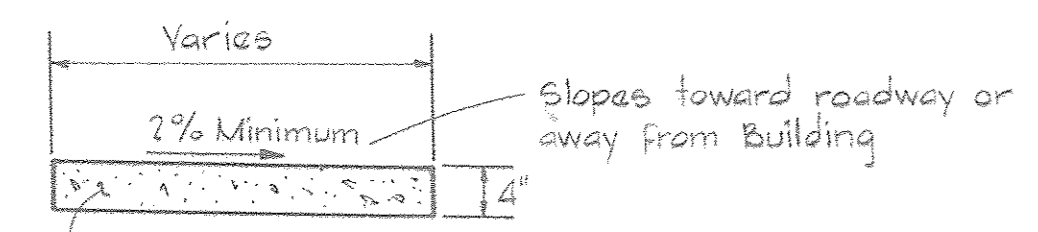
- Notes:
- 1) For A Inlet details see Howard County Standards SD 4.01 & 4.02
 - 2) For D Inlet detail see Howard County Standard SD 4.11
 - 3) For MH1 detail see Howard County Standard G 3.01
 - 4) For Foundation drain drawings see structural sheets
 - 5) For MH2 and MH2A detail see Howard County Standard G 5.12
 - 6) For I-8 detail see MD SHA Standard MD 374.71
 - 7) For I-8A detail see Howard County Standard SD 4.10 or SD 4.11



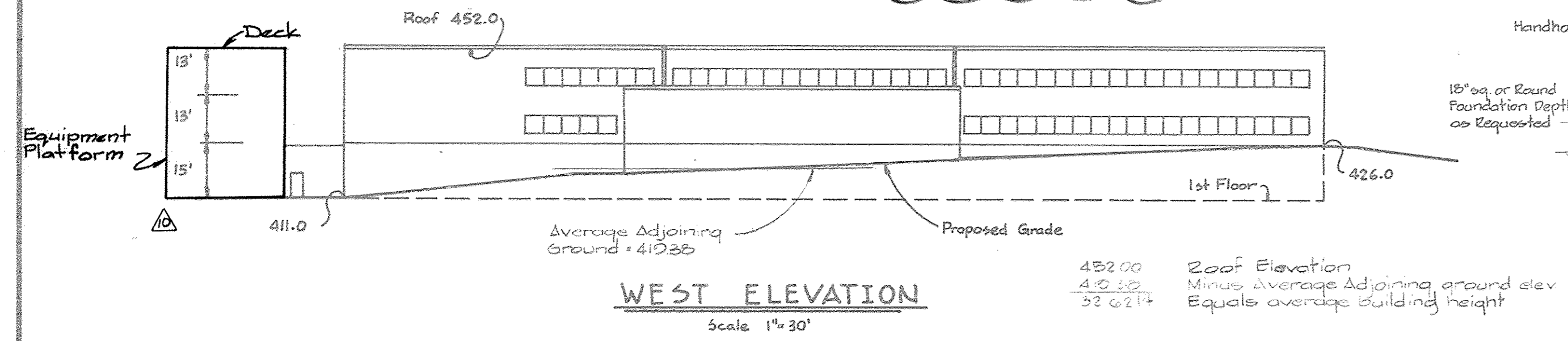
STANDARD 7" COMBINATION CURB & GUTTER (BY OWNER)
Scale: 1"=1'-0"



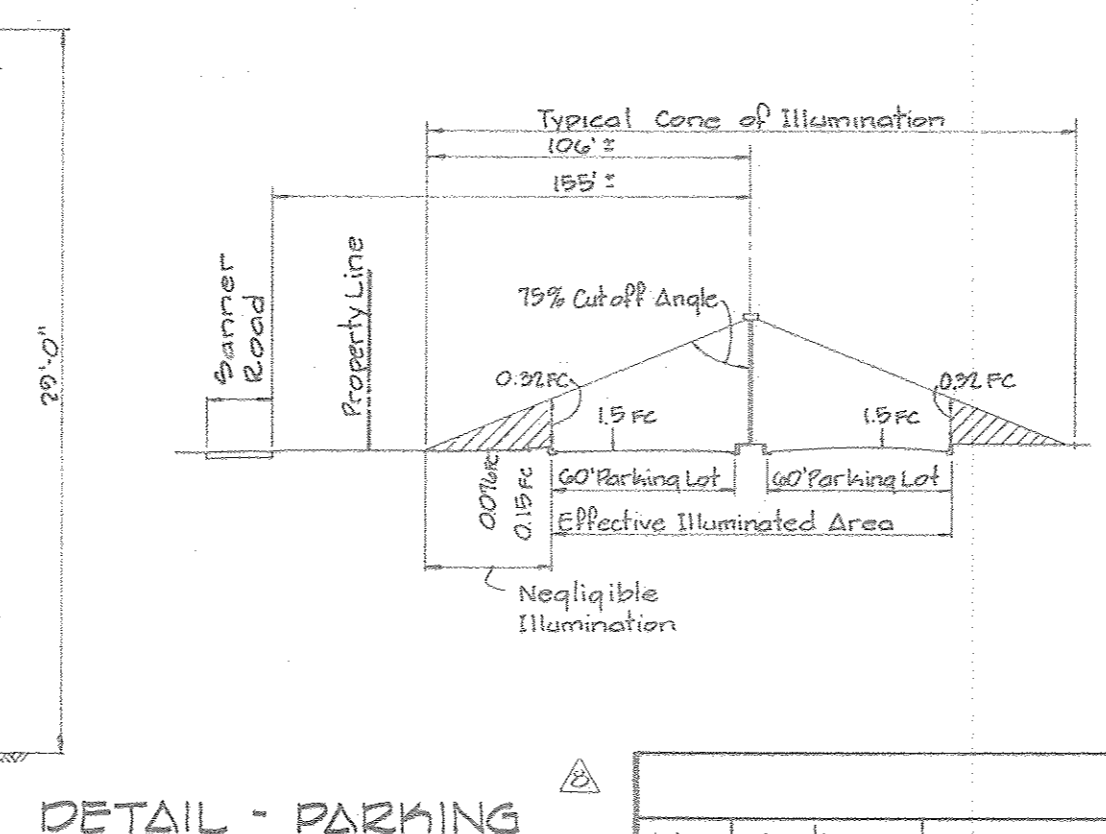
PAVING SECTION (BY OWNER)
Not To Scale



SIDEWALK SECTION
Not To Scale



Kenneth Milner



DETAIL - PARKING AREA LIGHTING
No Scale

No	Radius	Arc	Δ	Tan	Chord	Chord Bearing
1	1000.00	66.47'	03°48'29"	33.25'	66.45'	S10°26'53"W
2	100.00	45.39'	76°00'21"	23.03'	45.00'	S64°38'42"E
3	50.00	157.08'	180°00'00"	—	100.00'	S78°54'38"E
4	35.00	146.39'	239°38'16"	—	—	—
5	35.00	36.03'	58°59'09"	19.80'	34.46'	N19°03'19"W

Note: Building Addition to SDP 81-157.

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 6-30-82

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.

Jayman
County Health Officer
Date 7-19-82

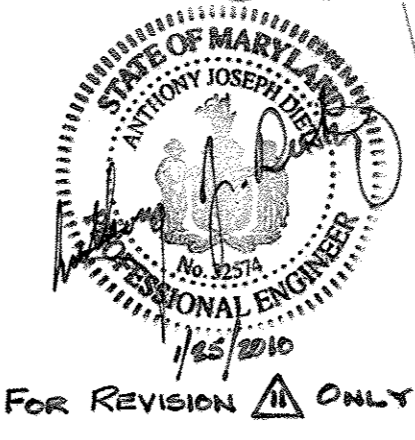
Approved: Storm Drainage Systems And Roads
Howard County Department Of Public Works
Date 7-29-82

William E. Row
Chief, Bureau Of Engineering
Date 7-28-82

Approved: Howard County Office Of Planning And Zoning
Date 7-27-82

William E. Row
Planning Director, Acting
Date 7-27-82

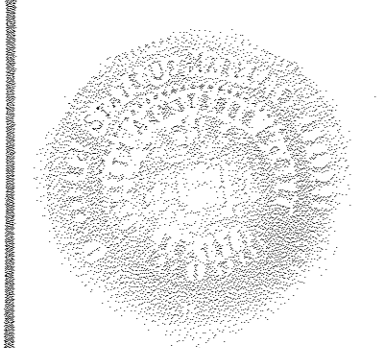
William E. Row
Chief, Division Of Land Development And Zoning Administration
Date 7-28-82



FOR REVISION ONLY

ADDED SUBSTATION 23 AND REVISION GRADING AND STORM DRAINS 1-25-80

WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218



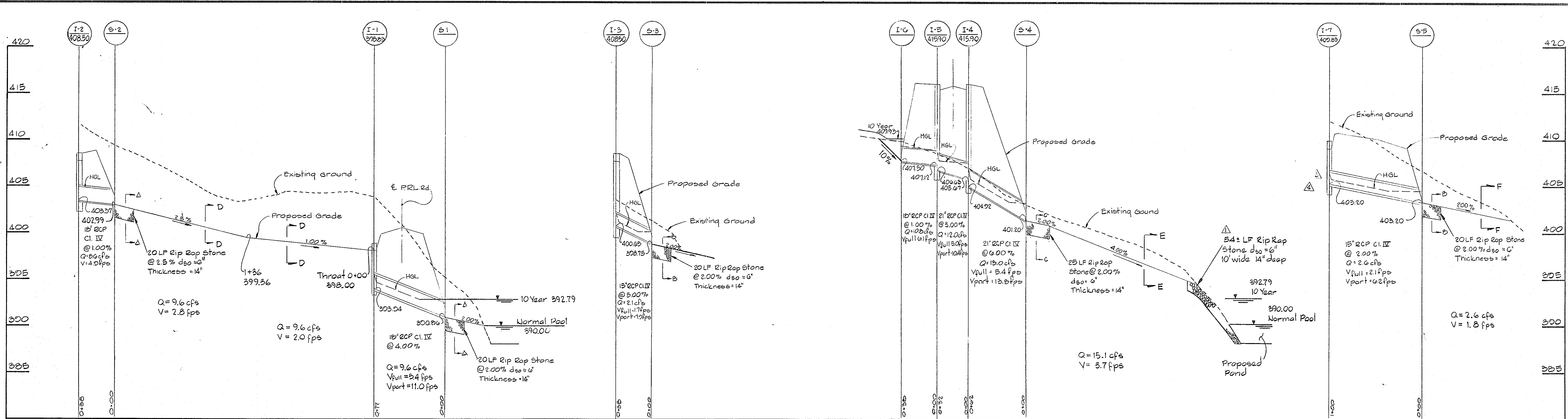
APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By:
Date 4-15-82 Title *O.J. Air*

SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road
Laurel, Maryland 20707

ROADWAY & UTILITY PLAN
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 50 and 123

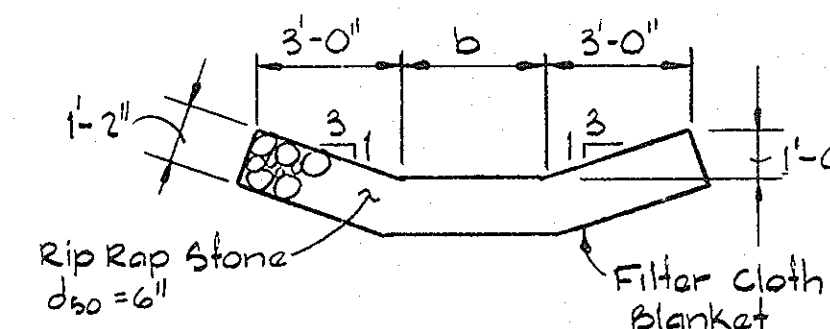
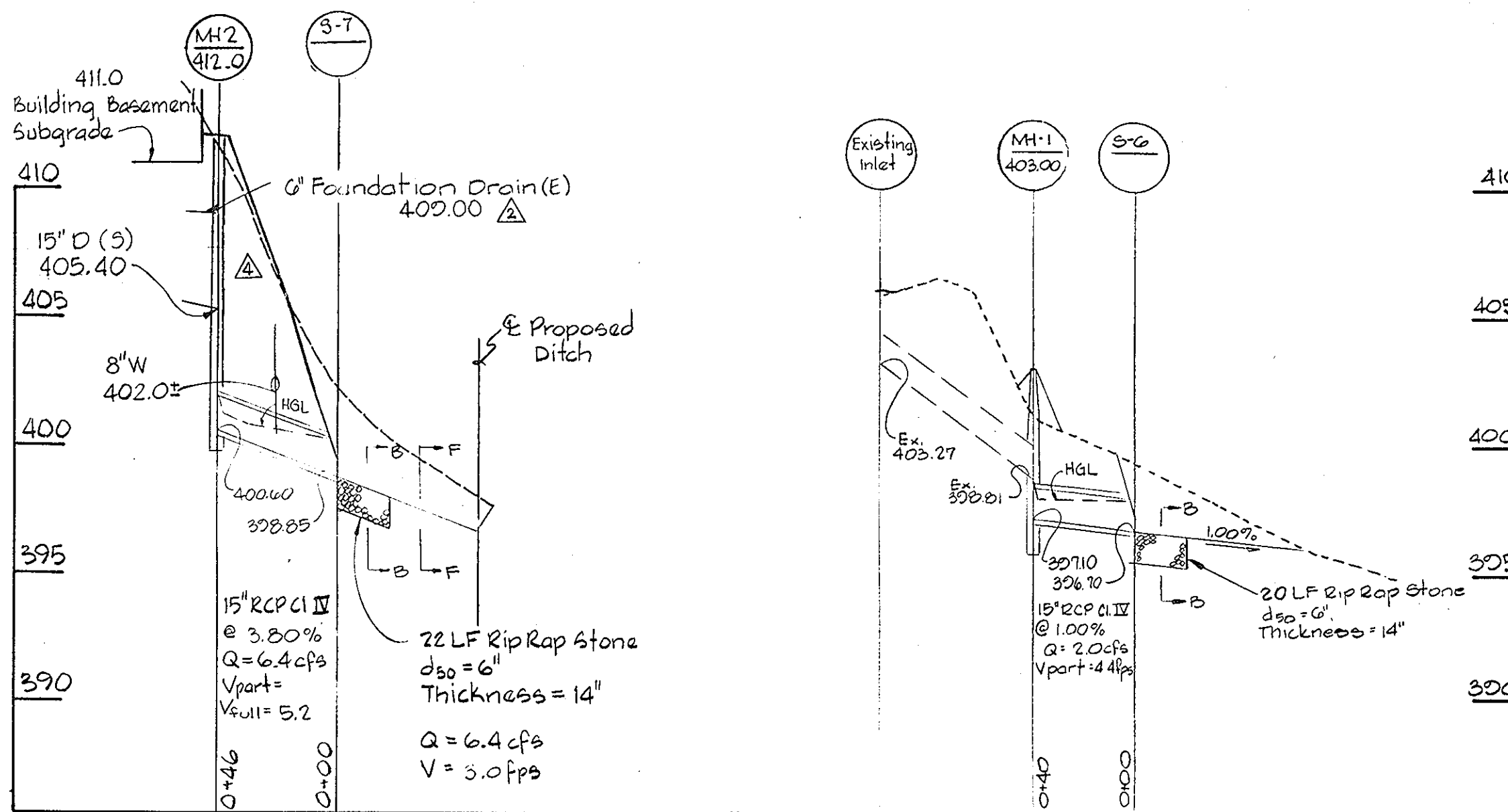
REVISIONS
Building Dimension & Stakeout 5-21-82
Extend Rip Rap to Pond Bottom 5-21-82
Widen Sidewalk to 8' 5-21-82
Sidewalk Ramps 5-21-82
Add Foundation Drains 5-21-82
Add Telephone Conduit 5-21-82
Add Pad for Nitrogen Tank 6-9-82
Add Parking Area Light Detail 6-9-82
Correct Inverts 9-9-82

SCALE: As Shown
SHEET NO. 3 OF 9
DATE April 15, 1982
DRAWING C-3



STORM DRAIN PROFILES

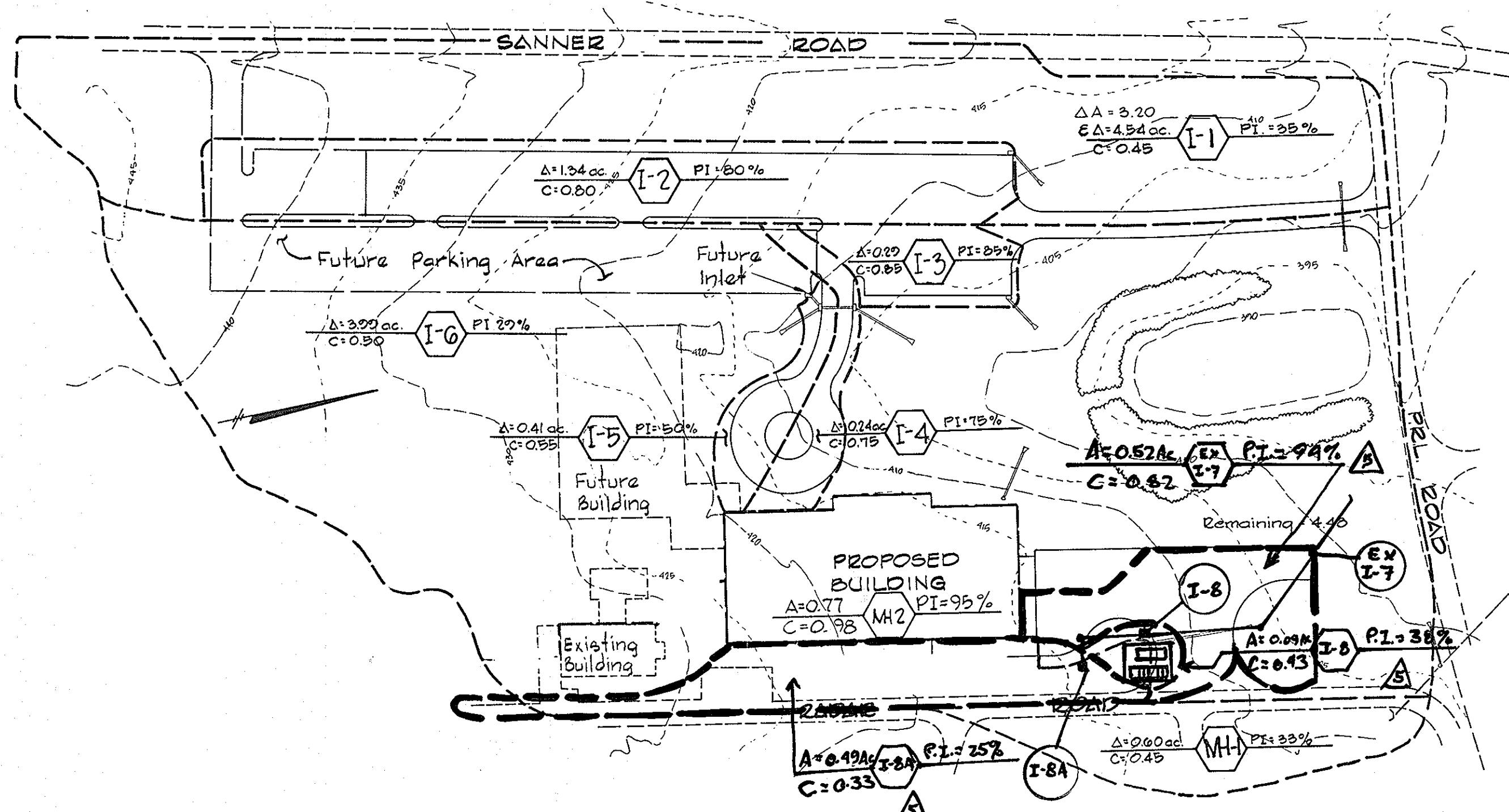
Scale: Horz. 1"=50'
Vert. 1"=5'



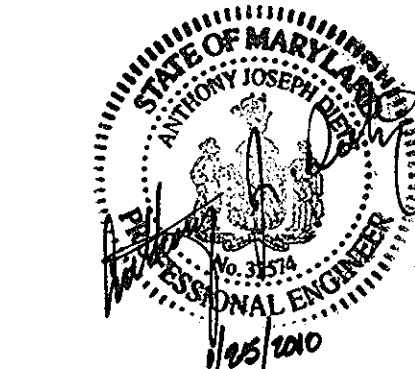
SECTION WIDTH, b

AA	3.0'
BB	2.5'
CC	3.5'

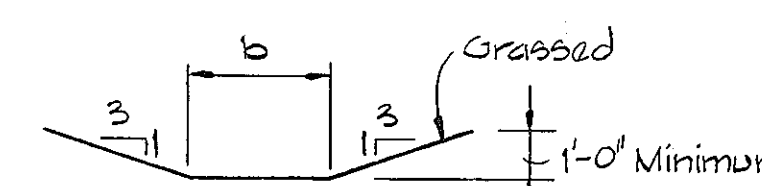
SECTIONS A-A, B-B, C-C
Scale: 1/4"=1'-0"



DRAINAGE AREA MAP
Scale: 1"=100'



FOR REVISION ONLY



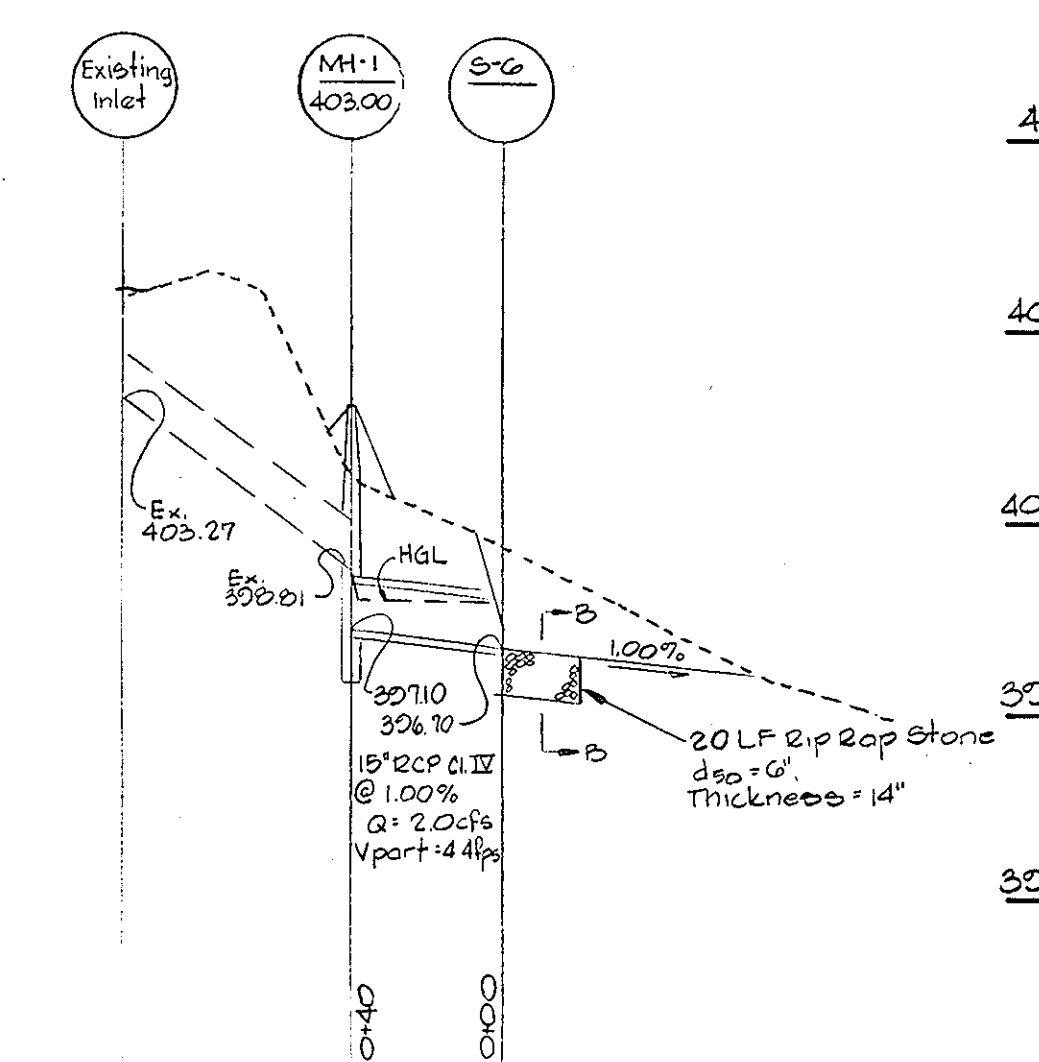
SECTION WIDTH, b

DD	3.0'
EE	3.5'
FF	2.5'

SECTIONS DD, EE, FF
Scale: 1/4"=1'-0"

STORM DRAIN PROFILE

Scale: Horz. 1"=50'
Vert. 1"=5'



APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE **6-30-82**

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.

Jaym Boyles
County Health Officer
Date: **7-17-82**

Approved:
Storm Drainage Systems And Roads
Howard County Department Of Public Works
How F. Nunn
Director
Date: **7-28-82**

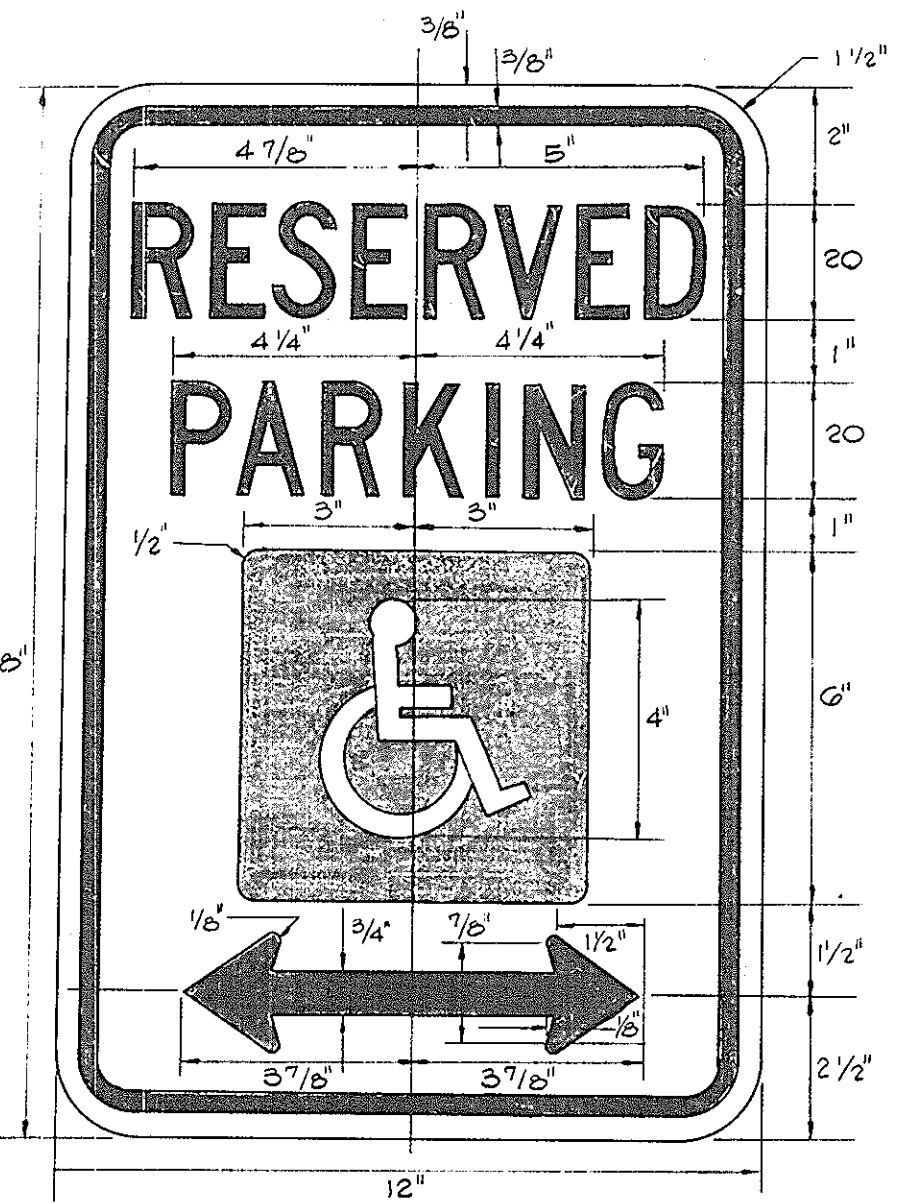
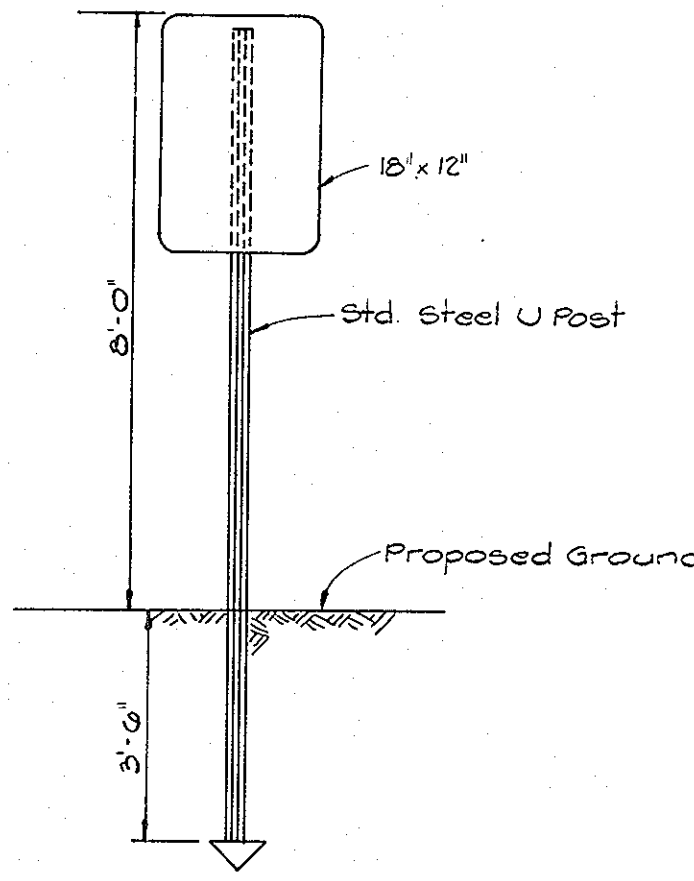
W. J. ...
Chief, Bureau Of Engineering
Date: **7-28-82**

Approved: Howard County Office Of Planning And Zoning
John W. ...
Planning Director
Date: **7-29-82**

John W. ...
Chief, Division Of Land Development And Zoning Administration
Date: **7-29-82**

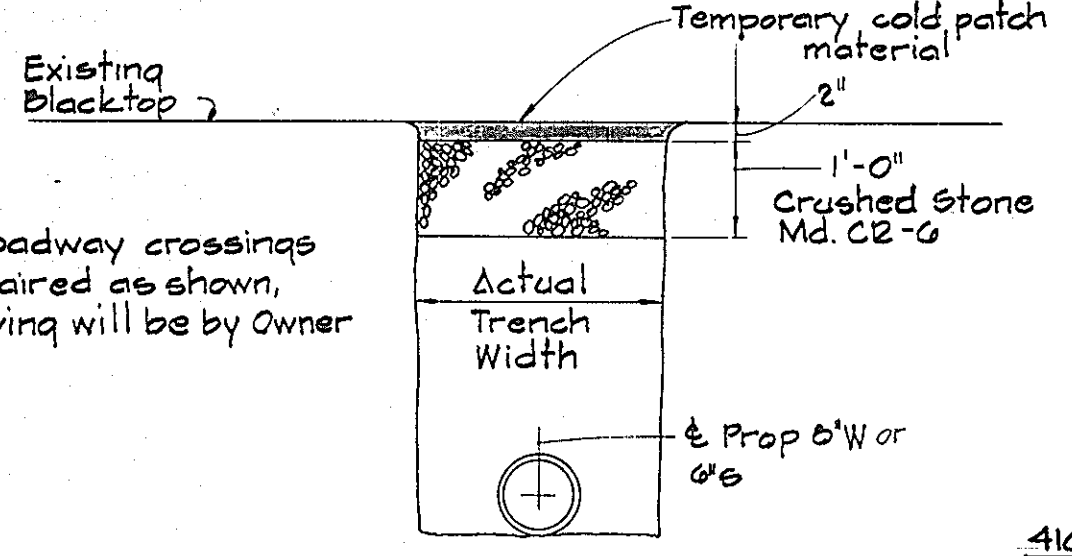
Note: Building Addition to SDP 81-137.

WHITMAN, REQUARDT AND ASSOCIATES 2315 SAINT PAUL STREET BALTIMORE, MARYLAND 21218		APPLIED PHYSICS LABORATORY THE JOHNS HOPKINS UNIVERSITY Johns Hopkins Road Howard County, Maryland Approved For The University By: <i>C. J. ...</i> Date: 4-15-82 Title:	SPACE SYSTEMS INTEGRATION AND TEST BUILDING THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY 11100 Johns Hopkins Road Laurel, Maryland 20707	DRAINAGE AREA MAP AND STORM DRAIN PROFILES Fifth Election District Howard County, MD. Tax Map 41 Parcel 50 and 123	REVISIONS Extend Rip Rap to Pond Bottom 5-21-82 Add Drain Connections 5-21-82 Add Drain Connections 5-21-82 Delete Drain Connection C-30-82. ADDED SUBSTATION 23 & REVISED GRADING & STORM DRAINS 1-25-80	SCALE: As Shown SHEET NO. 4 OF 9 DATE: April 15, 1982	DRAWING C-4
		SDP-82-118					



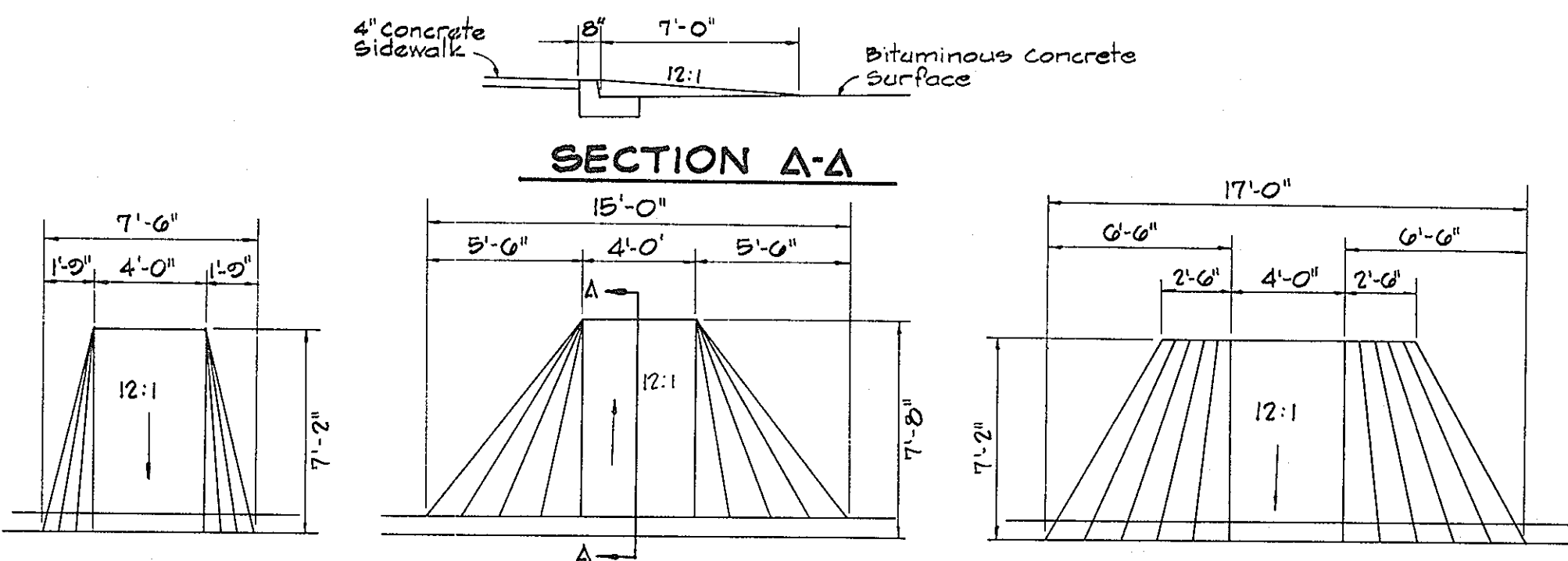
COLORS
Legend and Border - Green
White Symbol on Blue Background
Background - White

SIGN DETAIL FOR HANDICAPED
No Scale

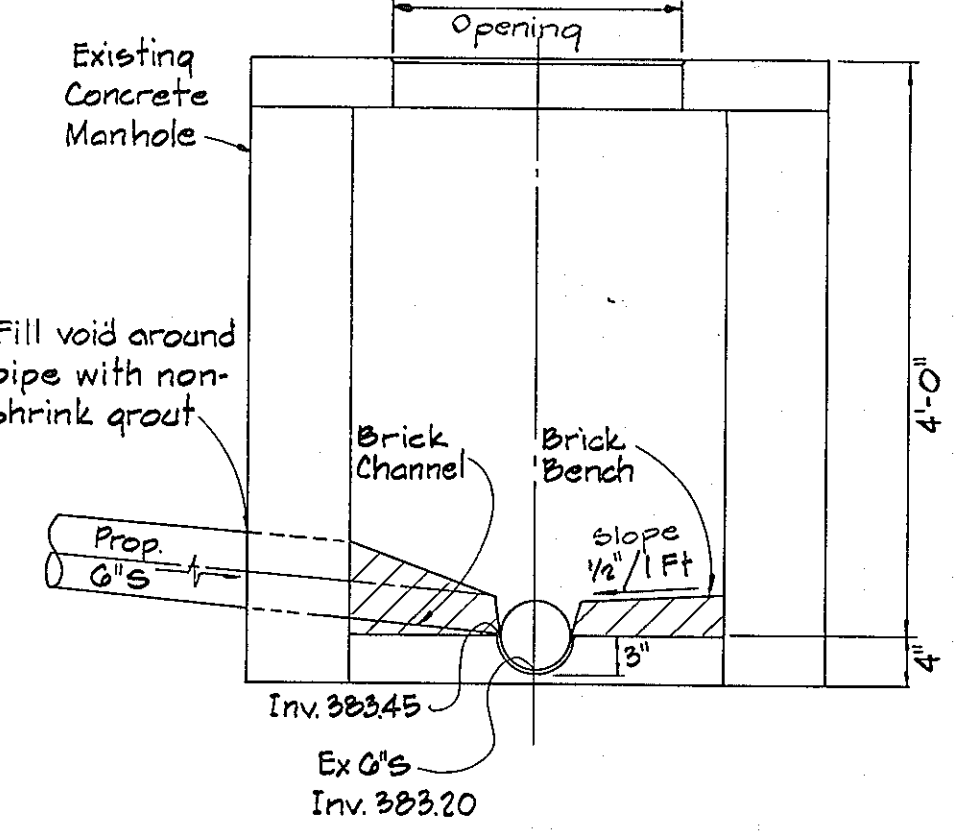
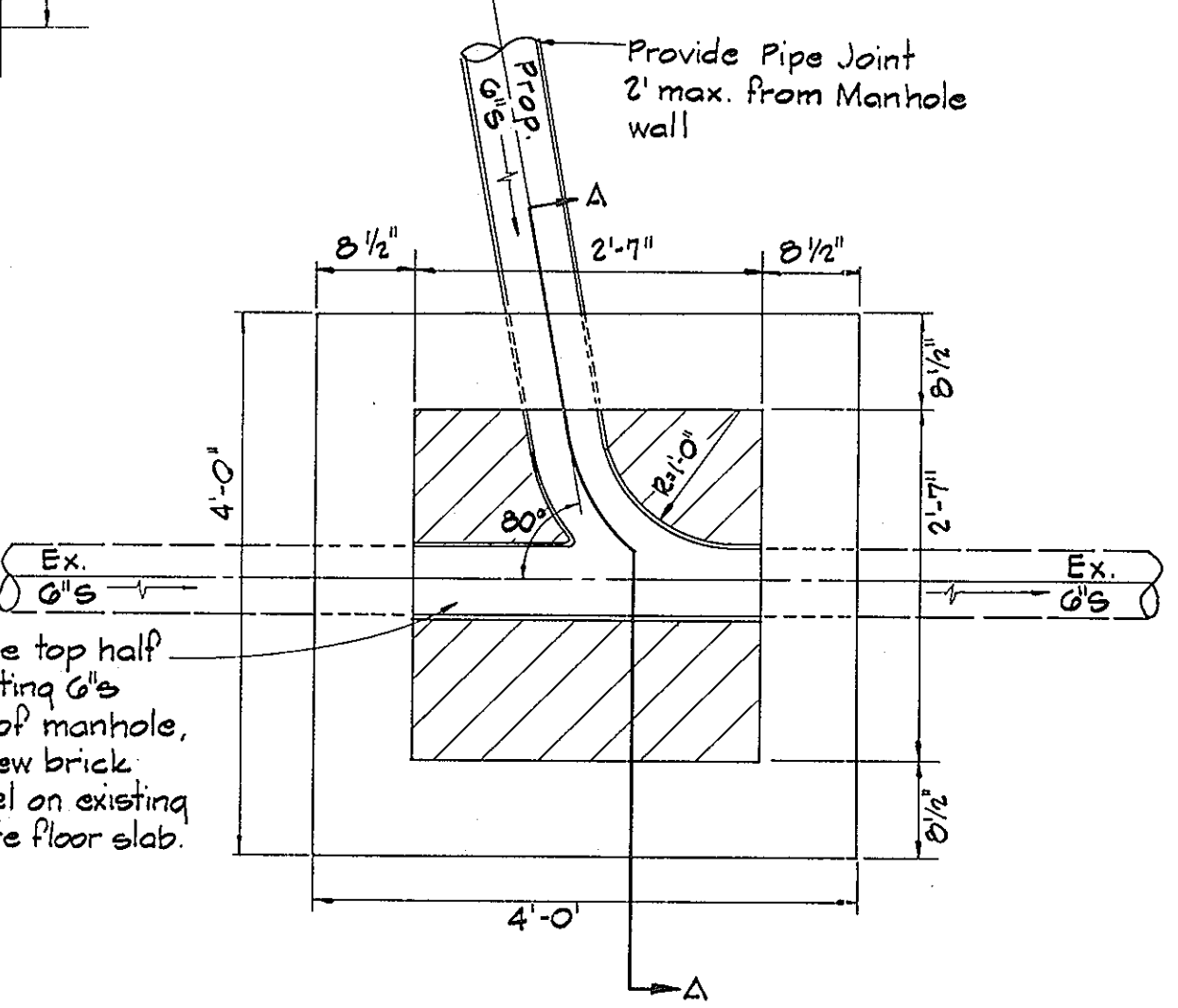


REPAIR OF EXISTING ROADWAYS
Scale: 1/2"=1'-0"

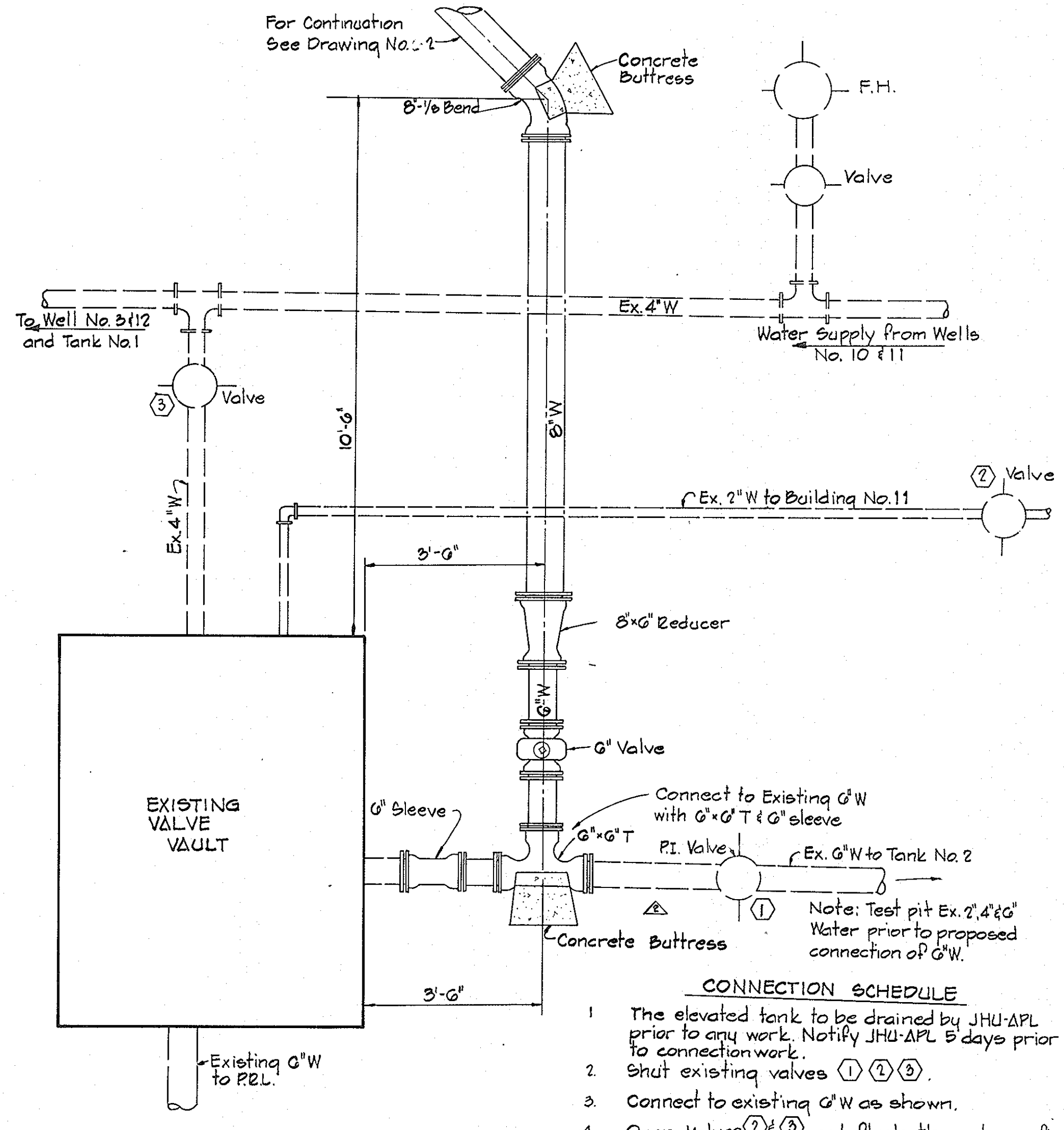
Note: Surface texture of ramps shall be coarse brooming or non-skid type surface.



SIDEWALK RAMPS
Scale: 3/16"=1'-0"

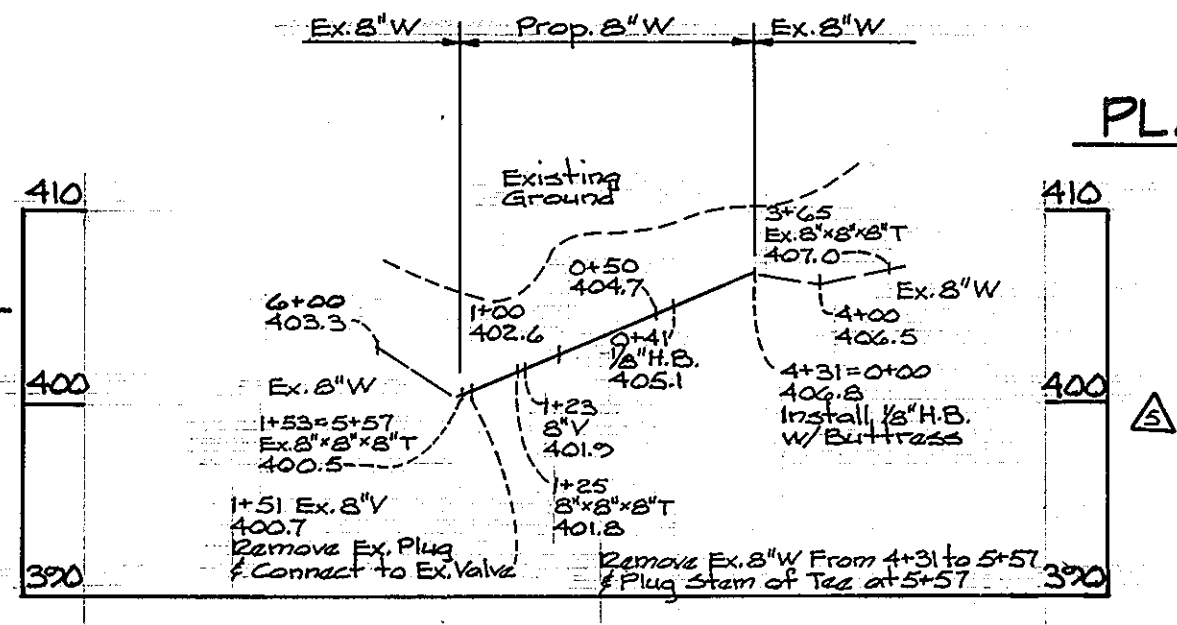


CONNECTION TO EXISTING SANITARY MANHOLE
Scale: 3/4"=1'-0"

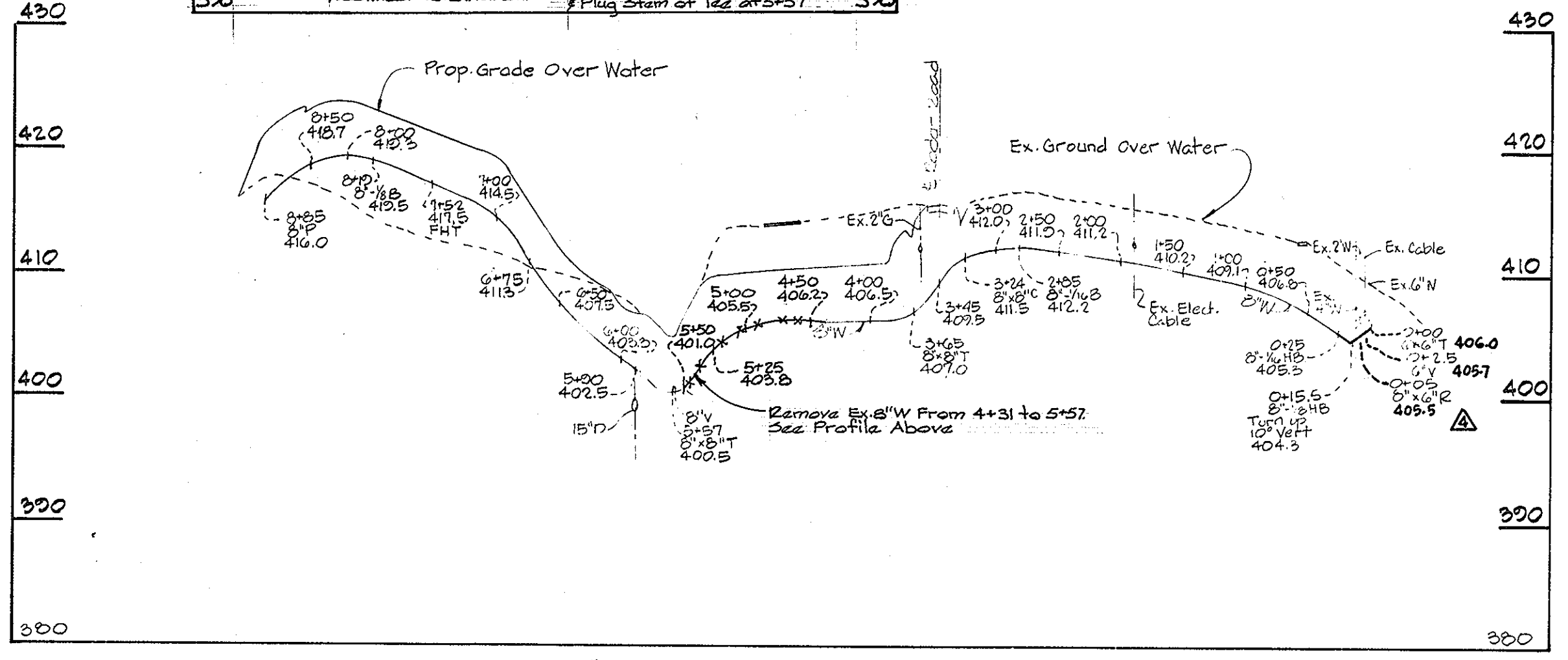


DETAIL OF PROPOSED CONNECTION TO EXISTING G" W AT ELEVATED TANK NO. 2
Scale: 1/2"=1'-0"

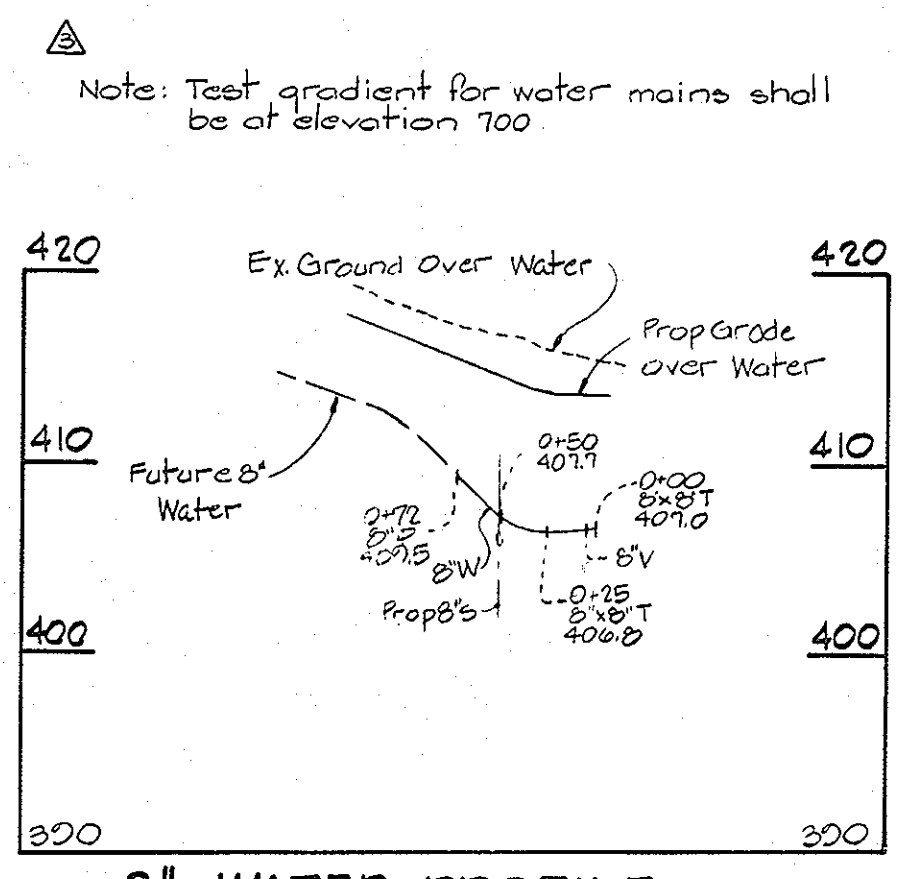
- CONNECTION SCHEDULE**
1. The elevated tank to be drained by JHU-APL prior to any work. Notify JHU-APL 5 days prior to connection work.
 2. Shut existing valves ① ② ③.
 3. Connect to existing G" W as shown.
 4. Open Valves ② ③ and flush through new fire Hydrant.
 5. Open ① to fill tank (by JHU-APL)
 6. Test for leaks at connections.



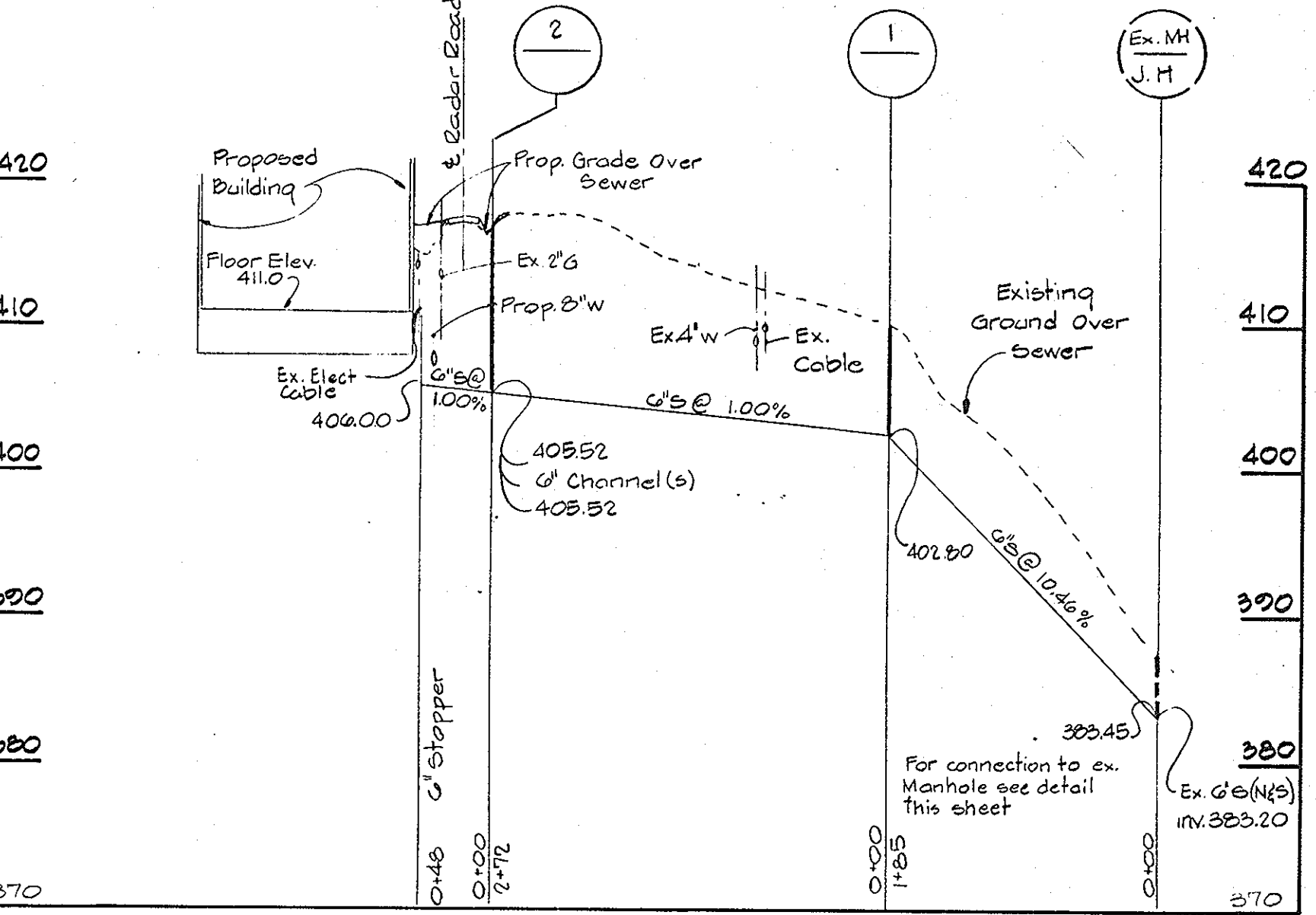
8" WATER PROFILE
Scale: Horz. 1"=100'
Vert. 1"=10'



8" WATER PROFILE
Scale: Horz. 1"=100'
Vert. 1"=10'



8" WATER PROFILE
Scale: Horz. 1"=100'
Vert. 1"=10'

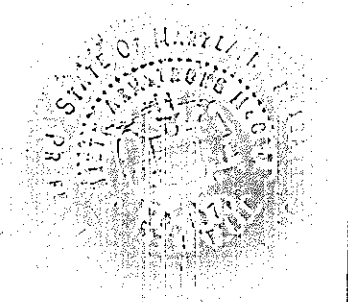


G" SEWER PROFILE
Scale: Horz. 1"=100'
Vert. 1"=10'

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE: 6-30-82

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.
County Health Officer: *[Signature]* Date: 7-19-82
Approved: Storm Drainage Systems And Roads, Howard County Department Of Public Works. Director: *[Signature]* Date: 7-23-82
Approved: Chief, Bureau Of Engineering. *[Signature]* Date: 7-28-82
Approved: Planning Director, Acting. *[Signature]* Date: 7-29-82
Approved: Chief, Division Of Land Development And Zoning Administration. *[Signature]* Date: 7-29-82

WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218



APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By: *[Signature]*
Date: Title: *[Signature]*

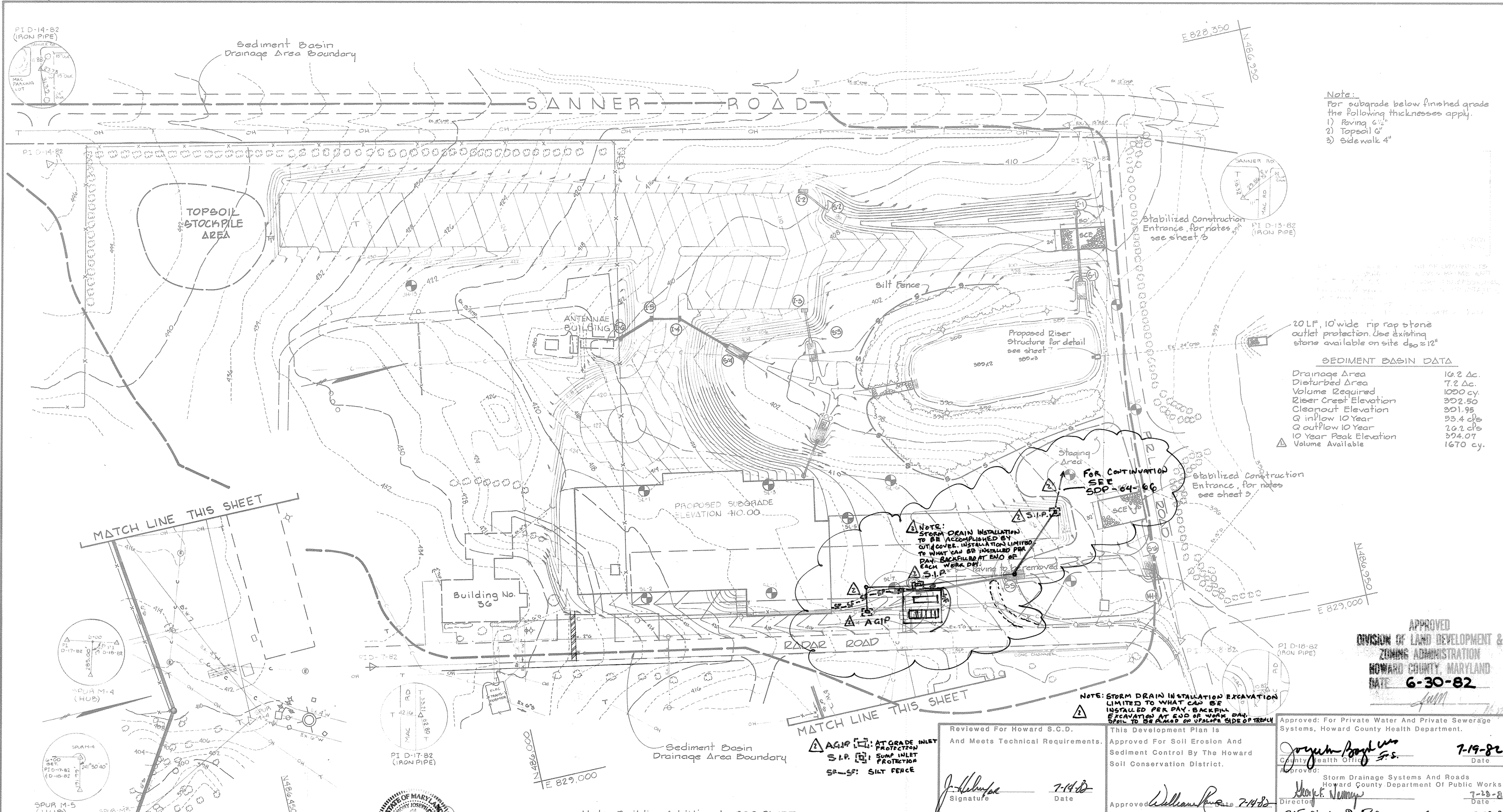
SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road
Laurel, Maryland 20707

WATER AND SEWER PROFILES & DETAILS
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 50 and 123

REVISIONS
▲ Add Sidewalk Ramp Details 5-21-82
▲ Revised Connection Schedule 5-20-82
▲ Add Test Gradient Elevation
▲ Add Water Inverts 9-9-82
▲ Modified 8" W Main Profile 10-25-91

SCALE: As Shown
SHEET NO. 5 OF 9
DATE: April 15, 1982
DRAWING C-5

Note: Building Addition to SDP 81-137.



Note:
 For subgrade below finished grade the following thicknesses apply:
 1) Paving 6"
 2) Topsoil 6"
 3) Sidewalk 4"

20 LF, 10' wide rip rap stone outlet protection. Use existing stone available on site $d_{50} \approx 12"$

SEDIMENT BASIN DATA

Drainage Area	16.2 Ac.
Disturbed Area	7.2 Ac.
Volume Required	1000 cy.
Zieler Crest Elevation	302.50
Cleanout Elevation	301.95
Q inflow 10 Year	53.4 cfs
Q outflow 10 Year	26.2 cfs
10 Year Peak Elevation	304.07
Volume Available	1670 cy.

APPROVED
 DIVISION OF LAND DEVELOPMENT &
 ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE: 6-30-82

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.
 Approved: *Joyce Boyd* 7-19-82
 County Health Officer
 Approved: *George Neunoy* 7-23-82
 Director, Storm Drainage Systems And Roads
 Howard County Department Of Public Works
 Approved: *William S. Ray* 7-28-82
 Chief, Bureau Of Engineering

Approved: Howard County Office Of Planning And Zoning
 Approved: *John W. Madsen* 7-29-82
 Planning Director
 Approved: *John W. Madsen* 7-29-82
 Chief, Division Of Land Development And Zoning Administration

Reviewed For Howard S.C.D. And Meets Technical Requirements.
 Signature: *J. Williams* 7-14-82
 U.S. Soil Conservation Service
 This Development Plan is Approved For Soil Erosion And Sediment Control By The Howard Soil Conservation District.
 Approved: *William S. Ray* 7-14-82
 Howard S.C.D.

Note: Building Addition to SDP 81-137.

RESPONSIBLE PERSONNEL CERTIFICATION "I hereby certify that any responsible personnel involved in the construction project will have a certificate of attendance from a department of natural resources approved training program for the control of sediment and erosion before beginning the project." <i>C. J. Sin</i> Signature Of Developer 4-15-82 Date	CERTIFICATION 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." <i>Kenneth Michael</i> Signature Of Engineer 4-15-82 Date	CERTIFICATION BY THE DEVELOPER "I certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary." <i>C. J. Sin</i> Signature Of Developer 4-15-82 Date
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WHITMAN, REQUARDT AND ASSOCIATES
 2315 SAINT PAUL STREET
 BALTIMORE, MARYLAND
 21218

APPLIED PHYSICS LABORATORY
 THE JOHNS HOPKINS UNIVERSITY
 Johns Hopkins Road Howard County, Maryland
 Approved For The University By: *C. J. Sin*
 Date 4-15-82 Title

SPACE SYSTEMS INTEGRATION AND TEST BUILDING

THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
 11100 Johns Hopkins Road
 Laurel, Maryland 20707

SEDIMENT CONTROL PLAN

Fifth Election District Howard County, MD.
 Tax Map 41 Parcel 50 and 123

REVISIONS
 Add Volume Available to Basin Data 6-4-82
 ADDED SUBSTATION 23 AND REVISED GRADING AND STORM DRAINS 1/25/10

SCALE: 1" = 50'
 SHEET NO. 6 OF 9
 DATE: April 15, 1982

DRAWING C-6

SEDIMENT CONTROL NOTES

- ALL SEDIMENT CONTROL PROCEDURES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED PLANS AND THE CRITERIA OF THE HOWARD SOIL CONSERVATION DISTRICT AND THE U.S. SOIL CONSERVATION SERVICE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" (HEREINAFTER REFERRED TO AS "STANDARDS AND SPECIFICATIONS").
- ALL DISTURBED AREAS WHICH ARE TO BE EXPOSED FOR MORE THAN 60 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING AND MULCHING IMMEDIATELY FOLLOWING ROUGH GRADING IN ACCORDANCE WITH PAGES 50.01 THROUGH 50.03 OF THE "STANDARDS AND SPECIFICATIONS."
- THESE GRADING AND SEDIMENT CONTROL DRAWINGS SHALL BE USED FOR THE GRADING AND CONSTRUCTION OF SEDIMENT CONTROL PRACTICES ONLY. FOR ALL OTHER CONSTRUCTION SEE THE "FINAL DEVELOPMENT PLANS".
- THE STABILIZED CONSTRUCTION ENTRANCE WILL BE IN ACCORDANCE WITH PAGE 16.03 OF THE "STANDARDS AND SPECIFICATIONS".
- NO TEMPORARY SEDIMENT CONTROL DEVICE OR STRUCTURE MAY BE REMOVED OR DESTROYED WITHOUT APPROVAL OF THE HOWARD SOIL CONSERVATION DISTRICT.

SEEDING NOTES

- ALL DISTURBED AREAS ARE TO BE STABILIZED AND SEEDED AS SOON AS GRADING IS COMPLETED.
- THE SURFACE PREPARATION SHALL INCLUDE 6" OF TOPSOIL WITH AN APPLICATION OF GROUND LIMESTONE AT 50 LBS/1000 SF. LIME, WHEN APPLIED HYDRAULICALLY, SHALL BE A SINGLE, SEPARATE OPERATION.
- ALL DISTURBED AREAS ARE TO BE FERTILIZED AND SEEDED WITH A HYDROSEED SLURRY. THE SLURRY SHALL CONTAIN:
 - 10-10-10 FERTILIZER @ 25 LBS/1000 SF.
 - KENTUCKY 31 TALL FESCUE @ 60 LBS/ACRE.
 - KOREAN LESPEDEZA @ 20 LBS/ACRE.
 - SUITABLE MULCH
- THE MULCH SHALL BE STRAW @ 50 LBS/1000 SF. OR WOOD CELLULOSE @ 1200 LBS/ACRE. THE WOOD CELLULOSE MULCH SHALL BE ADDED ONLY AFTER THE SEED AND FERTILIZER HAVE BEEN THOROUGHLY MIXED.
- THE FERTILIZER, SEED, AND MULCH SHALL BE MIXED WITH SUFFICIENT WATER TO PRODUCE A SLURRY. THE SLURRY SHALL BE APPLIED UNDER PRESSURE AT THE RATE SPECIFIED OR AS DIRECTED WITH HYDRAULIC EQUIPMENT APPROVED PRIOR TO USE.
- ANY AREA INADEQUATELY COVERED SHALL BE RESEED.

SEQUENCE OF CONSTRUCTION OPERATIONS

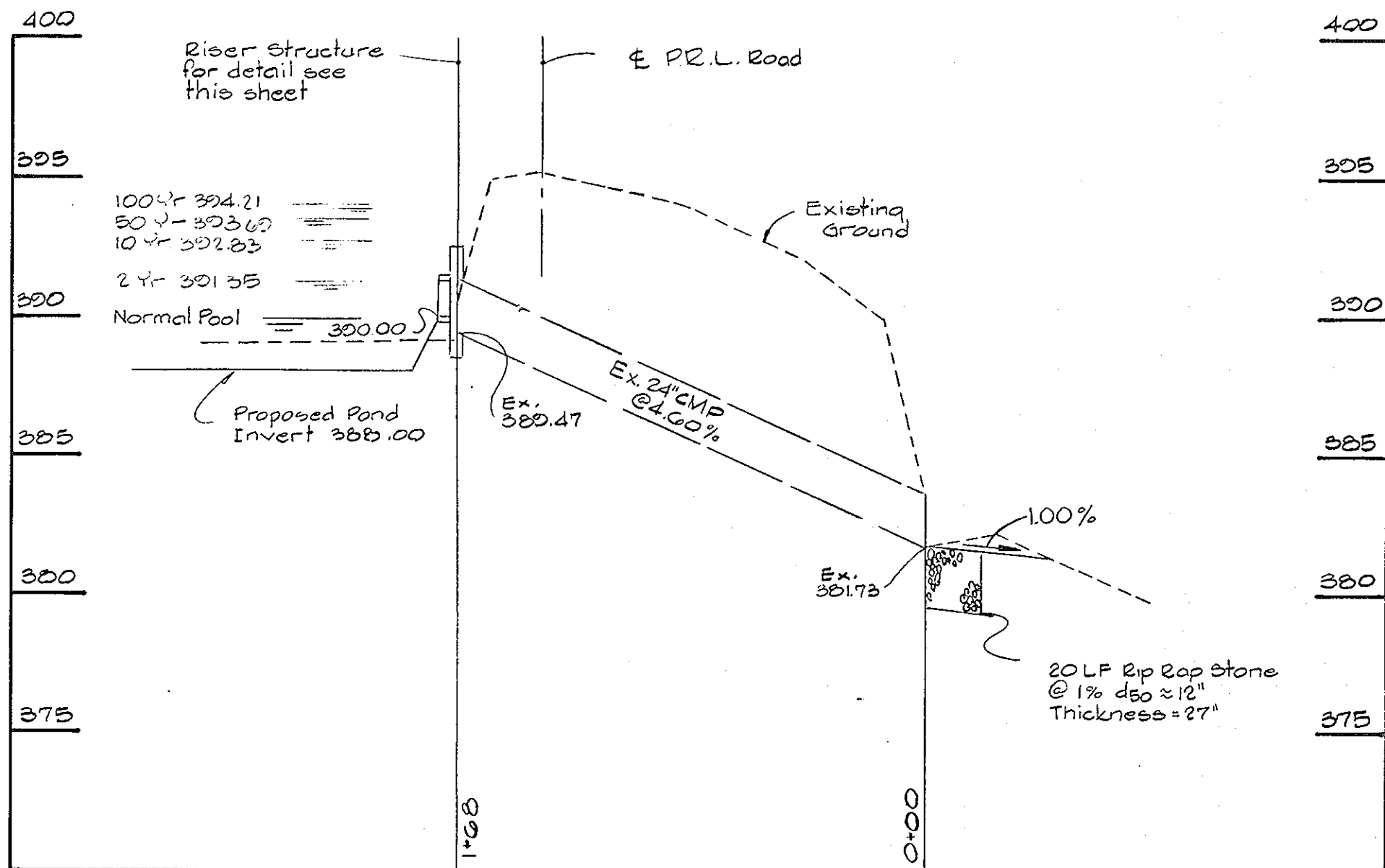
- NOTIFY THE HOWARD SOIL CONSERVATION DISTRICT AND THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS, AND PERMITS 48 HOURS BEFORE ANY WORK BEGINS.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES, PLACE SILT FENCE, AND CONSTRUCT SEDIMENT BASIN RISER STRUCTURE AND OUTLET PROTECTION.
- BLOCK THE 15" RCP OF THE SEDIMENT BASIN RISER STRUCTURE.
- REMOVE THE EXISTING PARKING AREA IN THE VICINITY OF THE PROPOSED BUILDING.
- STRIP THE TOPSOIL IN THE VICINITY OF THE PROPOSED BUILDING AND THE PROPOSED PARKING AREA. STOCK PILE TOPSOIL IN DESIGNATED AREA. DO NOT STRIP TOPSOIL IN THE VICINITY OF THE STORM DRAIN SYSTEM FOR S4.
- EXCAVATE FOR THE BUILDING FOUNDATION TO SUBGRADE ELEVATION 410.00.
- FILL IN ALL APPROPRIATE AREAS EXCEPT IN THE VICINITY OF THE STORM DRAIN SYSTEM FOR S4.
- STRIP AND STOCKPILE TOPSOIL FROM THE REMAINING AREAS TO BE GRADED.
- CONSTRUCT STORM DRAIN SYSTEM FOR S4.
- FINISH GRADING THE SITE.
- CONSTRUCT ALL OTHER STORM DRAINS AND UTILITIES.
- CONSTRUCT CURB AND GUTTER, PAVEMENT, SIDEWALK, AND OTHER SITE IMPROVEMENTS.
- SEED AND STABILIZE PROPOSED GRASSED AREAS.
- PUMP THE STANDING CLEAN WATER IN SEDIMENT BASIN OVER RISER.
- EXCAVATE THE POND TO THE PROPOSED ELEVATIONS AND STABILIZE. DISPOSE OF THE SEDIMENT FROM THE POND IN A MANNER APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- REMOVE THE TEMPORARY 15" CONCRETE PLUG FROM THE RISER STRUCTURE.

Note: Developer will provide the Howard Soil Conservation District with an as built plan of the pond within 30 days of completion.

STABILIZED CONSTRUCTION

ENTRANCE

- STONE SIZE - USE MSHA SIZE NO.2 (2-3" TO 1") OR AASHTO DESIGNATION M43 SIZE NO.2 (2-1/2" TO 1-1/2"). USE CRUSHED STONE.
- LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
- THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
- WIDTH - NOT LESS THAN FULL WIDTH OF PROPOSED PAVING.
- WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER-COURSE THROUGH USE OF SAND BAGS, GRAVEL, OR OTHER APPROVED METHODS.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.



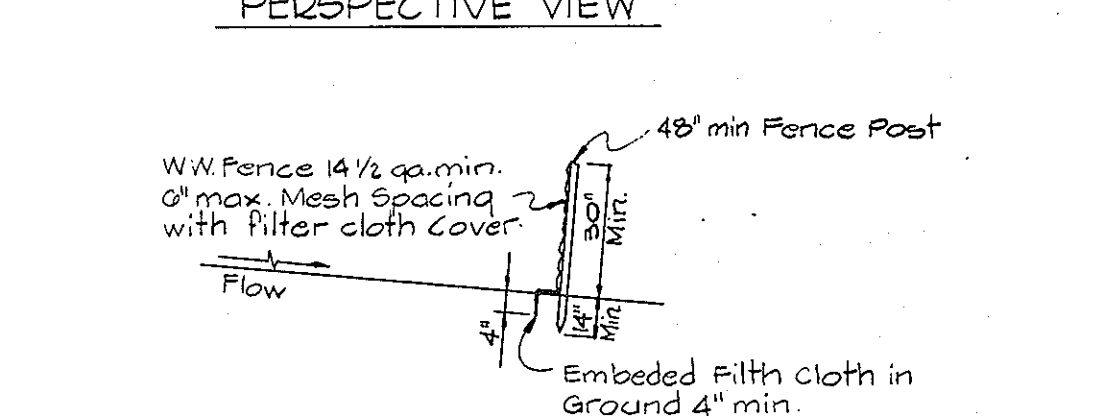
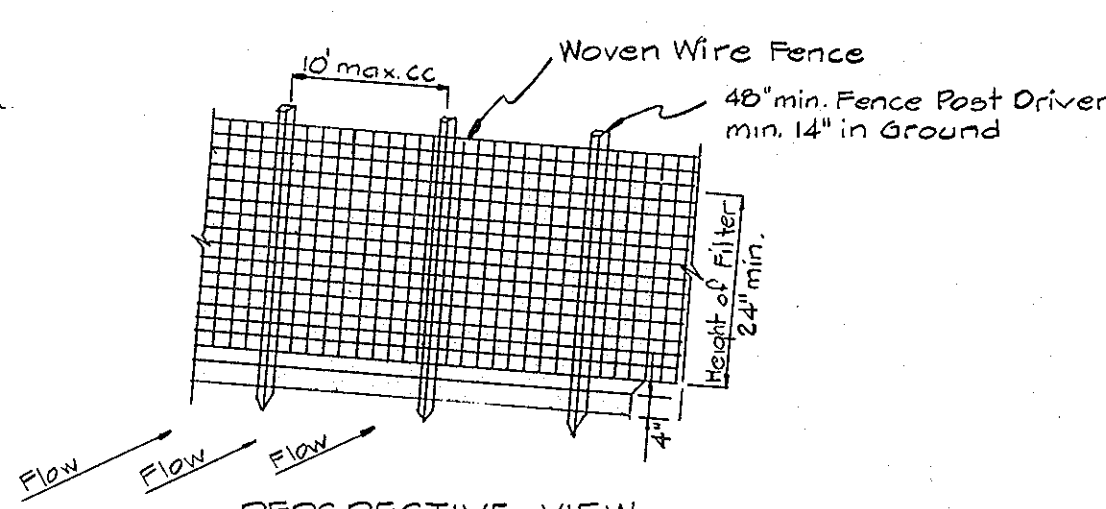
PRINCIPAL SPILLWAY

Scale: Horiz. 1" = 50'
Vert. 1" = 5'

STORM WATER MANAGEMENT SPECIFICATIONS

CONCRETE

- MATERIALS**
 - CEMENT - NORMAL PORTLAND CEMENT SHALL CONFORM TO THE LATEST ASTM SPECIFICATION C-150.
 - WATER - THE WATER USED IN CONCRETE SHALL BE CLEAN, FREE FROM OIL, ACID, ALKALI, SCALES, ORGANIC MATTER OR OTHER OBJECTIONABLE SUBSTANCES.
 - SAND - THE SAND USED IN CONCRETE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND SHALL BE WELL GRADED WITH 100 PERCENT PASSING A ONE-QUARTER INCH SIEVE. LIMESTONE SAND SHALL NOT BE USED.
 - COARSE AGGREGATE - THE COARSE AGGREGATE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND FREE FROM CLAY OR DIRT. IT SHALL BE WELL GRADED WITH A MAXIMUM SIZE OF ONE AND ONE-HALF (1-1/2) INCHES.
 - REINFORCING STEEL - THE REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE BILLET STEEL OR RAIL STEEL CONFORMING TO ASTM SPECIFICATION A-615.
- DESIGN MIX - THE CONCRETE SHALL BE MIXED IN THE FOLLOWING PROPORTIONS, MEASURED BY WEIGHT, THE WATER-CEMENT RATIO SHALL BE 5-1/2 TO 6 U.S. GALLONS OF WATER PER 94 POUND BAG OF CEMENT. THE PROPORTION OF MATERIALS FOR THE TRIAL MIX SHALL BE 1:2:3-1/2. THE COMBINATION OF AGGREGATES MAY BE ADJUSTED TO PRODUCE A PLASTIC AND WORKABLE MIX THAT WILL NOT PRODUCE HARSHNESS IN PLACING OR HONEYCOMBING IN THE STRUCTURE.
- MIXING - THE CONCRETE INGREDIENTS SHALL BE MIXED IN BATCH MIXERS UNTIL THE MIXTURE IS HOMOGENEOUS AND OF UNIFORM CONSISTENCY. THE MIXING OF EACH BATCH SHALL CONTINUE FOR NOT LESS THAN ONE AND ONE-HALF MINUTES AFTER ALL THE INGREDIENTS, EXCEPT THE FULL AMOUNT OF WATER, ARE IN THE MIXER. THE MINIMUM MIXING TIME IS PREDICTED ON PROPER CONTROL OF THE SPEED OF ROTATION OF THE MIXER AND OF THE INTRODUCTION OF THE MATERIALS, INCLUDING WATER, INTO THE MIXER. WATER SHALL BE ADDED PRIOR TO, DURING, AND FOLLOWING THE MIXER-CHARGING OPERATIONS. EXCESSIVE OVERMIXING REQUIRING THE ADDITION OF WATER TO PRESERVE THE REQUIRED CONCRETE CONSISTENCY SHALL NOT BE PERMITTED. TRUCK MIXING WILL BE ALLOWED PROVIDED THAT THE USE OF THIS METHOD SHALL CAUSE NO VIOLATION OF ANY APPLICABLE PROVISIONS OF THE SPECIFICATIONS GIVEN HERE.
- FORMS - THE FORMS SHALL HAVE SUFFICIENT STRENGTH AND RIGIDITY TO HOLD THE CONCRETE AND TO WITHSTAND THE NECESSARY PRESSURE, TAMPING, AND VIBRATION WITHOUT DEFLECTION FROM THE PRESCRIBED LINES. THEY SHALL BE MORTAR-TIGHT AND CONSTRUCTED SO THAT THEY CAN BE REMOVED WITHOUT HAMMERING OR PRYING AGAINST THE CONCRETE. THE INSIDE OF FORMS SHALL BE OILED WITH A NON-STAINING MINERAL OIL OR THOROUGHLY WETTED BEFORE CONCRETE IS PLACED.
- REINFORCING STEEL - ALL REINFORCING MATERIAL SHALL BE FREE OF DIRT, RUST, SCALE, OIL, PAINT OR ANY OTHER COATINGS. THE STEEL SHALL BE ACCURATELY PLACED AND SECURELY TIED AND BLOCKED INTO POSITION SO THAT NO MOVEMENT OF THE STEEL WILL OCCUR DURING PLACEMENT OF CONCRETE.
- CONSOLIDATING - CONCRETE SHALL BE CONSOLIDATED WITH INTERNAL TYPE MECHANICAL VIBRATORS. VIBRATION SHALL BE SUPPLEMENTED BY SPADING AND HAND TAMPING AS NECESSARY TO INSURE SMOOTH AND DENSE CONCRETE ALONG FORM SURFACES, IN CORNERS, AND AROUND EMBEDDED ITEMS.
- FINISHING - DEFECTIVE CONCRETE, HONEYCOMBED AREAS, VOIDS LEFT BY THE REMOVAL OF THE RODS, RIDGES ON ALL CONCRETE SURFACES PERMANENTLY EXPOSED TO VIEW OR EXPOSED TO WATER ON THE FINISHED STRUCTURE, SHALL BE REPAIRED IMMEDIATELY AFTER THE REMOVAL OF FORMS. ALL VOIDS SHALL BE REAMED AND COMPLETELY FILLED WITH DRY-PATCHING MORTAR.
- PROTECTION AND CURING - EXPOSED SURFACES OF CONCRETE SHALL BE PROTECTED FROM THE DIRECT RAYS OF THE SUN FOR AT LEAST THE FIRST THREE (3) DAYS. ALL CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR AT LEAST TEN (10) DAYS AFTER BEING PLACED. MOISTURE MAY BE APPLIED BY SPRAYING OR SPRINKLING AS NECESSARY TO PREVENT THE CONCRETE FROM DRYING.
- PLACING TEMPERATURE - CONCRETE MAY NOT BE PLACED AT TEMPERATURES BELOW 37°F WITH THE TEMPERATURE FALLING, OR 34°F WITH THE TEMPERATURE RISING.

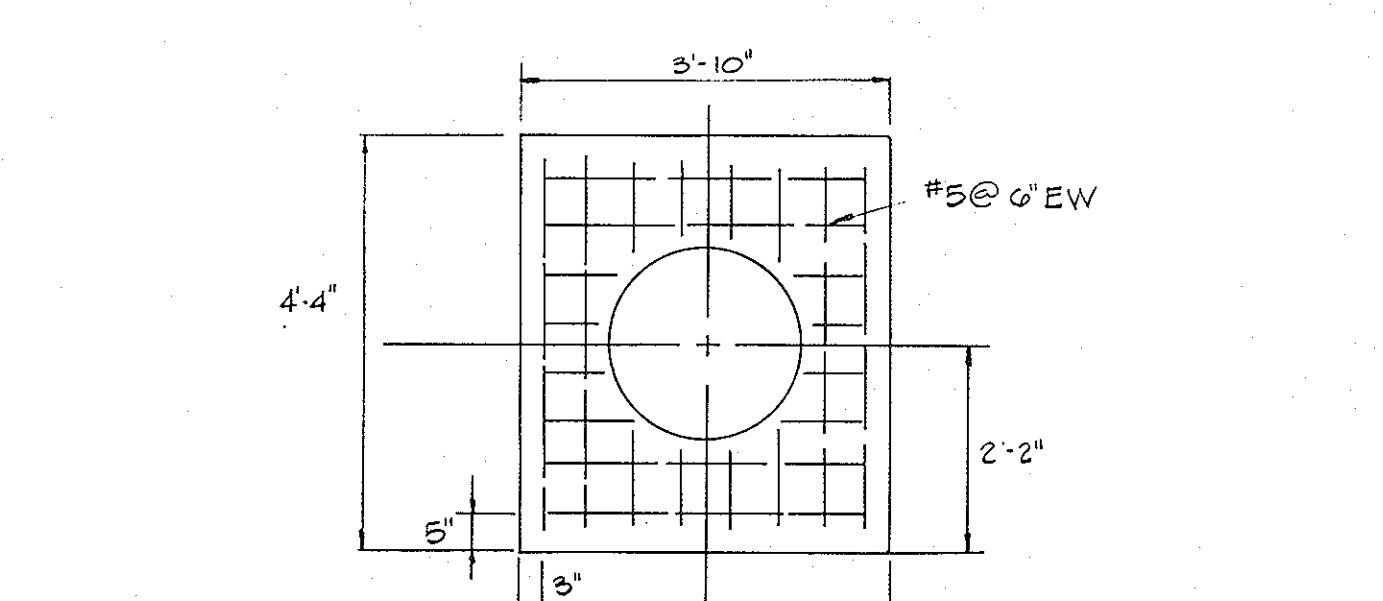
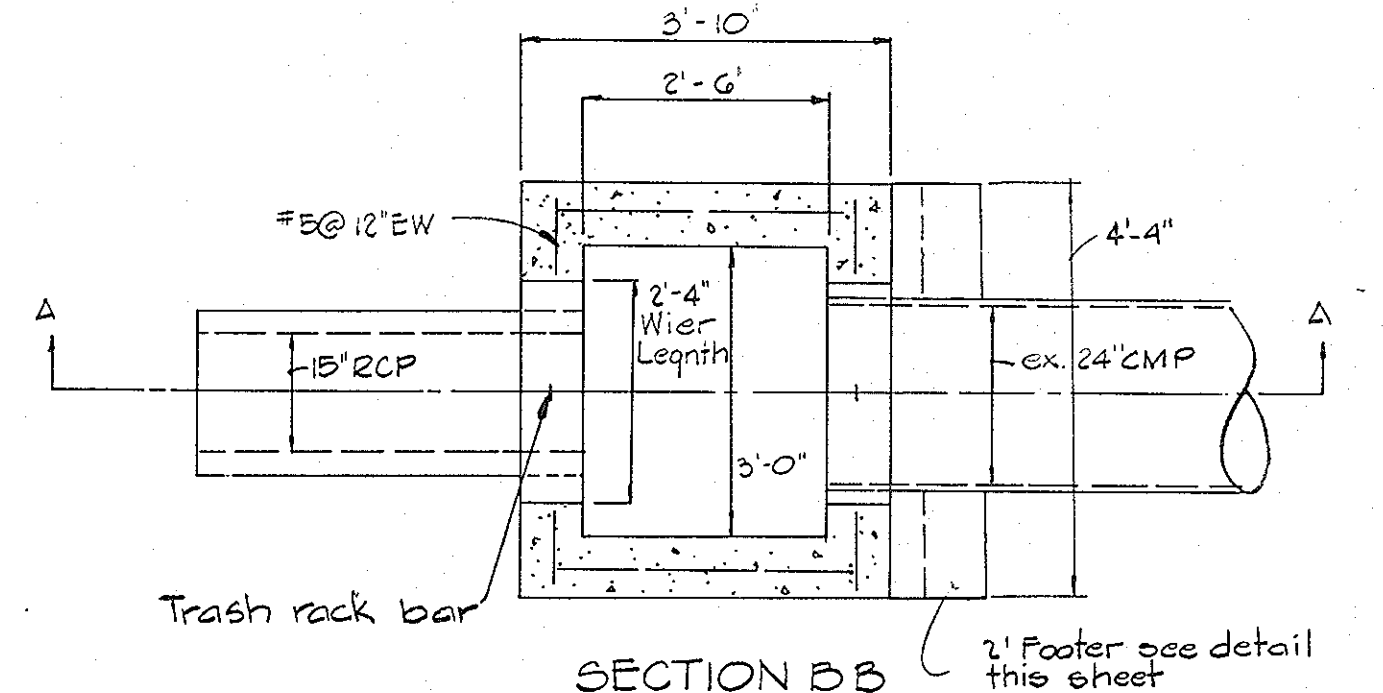


- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 - Filter cloth to be fastened securely to woven wire fence with wire ties spaced every 24" at top and mid section.
- Posts: Steel either Tor U type or 2" hardwood
Fence: Woven wire 1/4" ga. max. 6" mesh opening
Filter Cloth: Filter x Wirt 100x Laurel erosion control cloth
Bidim Polyfilter x or equal

SILT FENCE DETAIL

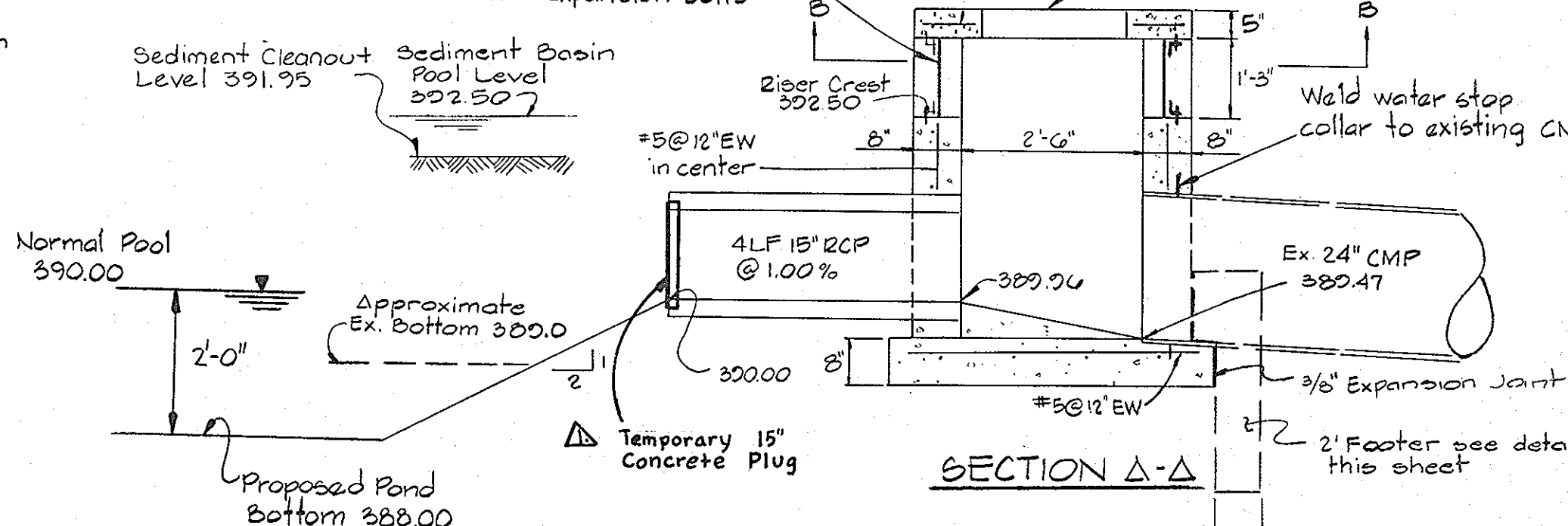
Not to scale

Note: Building Addition to SDP 81-137.



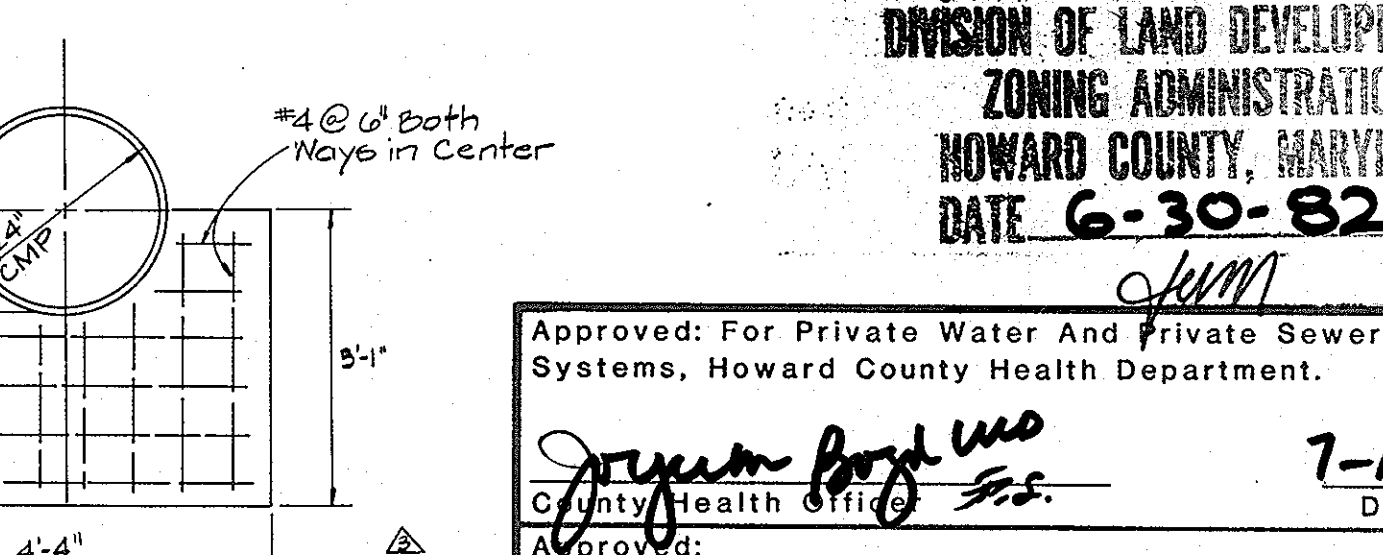
DETAIL RISER STRUCTURE

Scale: 1/2" = 1'-0"



DETAIL 2' FOOTER

Scale: 1/2" = 1'-0"



APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 6-30-82

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.

Signature: [Signature]
County Health Office S.S.
Date: 7-19-82

Approved: Storm Drainage Systems And Roads
Howard County Department Of Public Works
Signature: [Signature]
Director
Date: 7-28-82

Approved: [Signature]
Chief, Bureau Of Engineering
Date: 7-28-82

Approved: Howard County Office Of Planning And Zoning
Signature: [Signature]
Planning Director, Acting
Date: 7-27-82

Approved: [Signature]
Chief, Division Of Land Development And Zoning Administration
Date: 7-27-82

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
Signature: [Signature]
Date: 7-14-82
U.S. Soil Conservation Service

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Signature: [Signature]
Date: 7-14-82
Howard S.C.D.

RESPONSIBLE PERSONNEL CERTIFICATION
"I hereby certify that any responsible personnel involved in the construction project will have a certificate of attendance from a Department of Natural Resources Approved Training Program for the control of sediment and erosion before beginning the project."
Signature: [Signature]
Date: 4-15-82

CERTIFICATION 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: [Signature]
Date: 4-15-82

CERTIFICATION BY THE DEVELOPER
"I certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as deemed necessary."
Signature: [Signature]
Date: 4-15-82

Approved: Howard County Office Of Planning And Zoning
Signature: [Signature]
Date: 7-27-82

WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218

APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By: [Signature]
Date: 4-15-82 Title: [Title]

SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road
Laurel, Maryland 20707

SEDIMENT CONTROL NOTES & DETAILS
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 60 and 123

REVISIONS
Add Temporary 15" Concrete Plug
Revise Sequence Notes 14, 15, 16
Add 2' Footer 5/20/82
Add S.W.M. Specifications

SCALE: As Shown
SHEET NO. 7 OF 9
DATE: April 15, 1982
DRAWING C-7

PI D-14-82
IRON PIPE

E 828,350
N 486,350

SANNER ROAD

PLANT LIST

KEY	BOTANICAL AND COMMON NAME	AMT.	SIZE	REMARKS
SHADE TREES:				
⊕	ACER RUBRUM - RED MAPLE	5	2-2 1/2" CAL.	'OCTOBER GLORY'
⊙	LIQUIDAMBAR STYRACIFLUA - SWEETGUM	3	2-2 1/4" CAL.	
⊙	QUERCUS PALUSTRIS - PIN OAK	1	3 1/2" CAL.	
⊙	QUERCUS PALUSTRIS - PIN OAK	3	2-2 1/2" CAL.	
FLOWERING TREES:				
⊗	CERCIS CANADENSIS - AMERICAN REDBUD	3	2-2 1/2" CAL.	HEAVY
⊕	PYRUS CALLERYANA 'BRADFORD' - BRADFORD PEAR	1	2 1/2"-3" CAL.	
SHRUBS:				
⊙	AZALEA - DELAWARE VALLEY WHITE	7	24"-30"	CONTAINER
⊙	AZALEA - MOTHER'S DAY RED	3	24"-30"	CONTAINER
⊙	CORNUS STOLONIFERA - REDOSIER DOGWOOD	26	4'-5'	B&B
⊙	COTONEASTER DAMMERI - BEARBERRY COTONEASTER	40	15"-18"	CONTAINER
⊕	PYRACANTHA 'LOWBOY'	34	24"-30"	CONTAINER
⊕	VIBURNUM Plicatum 'TOMENTOSUM' - DOUBLE FILE VIBURNUM	34	2 1/2"-3'	B&B
⊙	EXISTING TREES (CONIFERS)			
⊙	TRANSPLANTED PINES FROM SITE			

NOTES:

- 1 ALTERNATE: RED MAPLE
- 2 ISLAND: 18" MOUNDED TOP SOIL
- 3 PLACE GRASS DIVIDER AT SHRUB BORDER ALONG BUILDINGS
- 4 RYERSON STEEL EDGING TO BE PLACED AROUND ISLAND PLANTING BETWEEN SOD AND AZALEA BED.
- 5 LANDSCAPING SHALL BE BY THE OWNER, JHU/APL.

APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 6-30-82
JMM

Approved: For Private Water And Private Sewerage Systems, Howard County Health Department.

City Health Officer
Date 7-19-82

Approved: Storm Drainage Systems And Roads
Howard County Department of Public Works
Director
Date 7-28-82

Approved: Chief, Bureau of Engineering
Date 7-28-82

Approved: Howard County Office of Planning And Zoning
Planning Director
Date 7-28-82

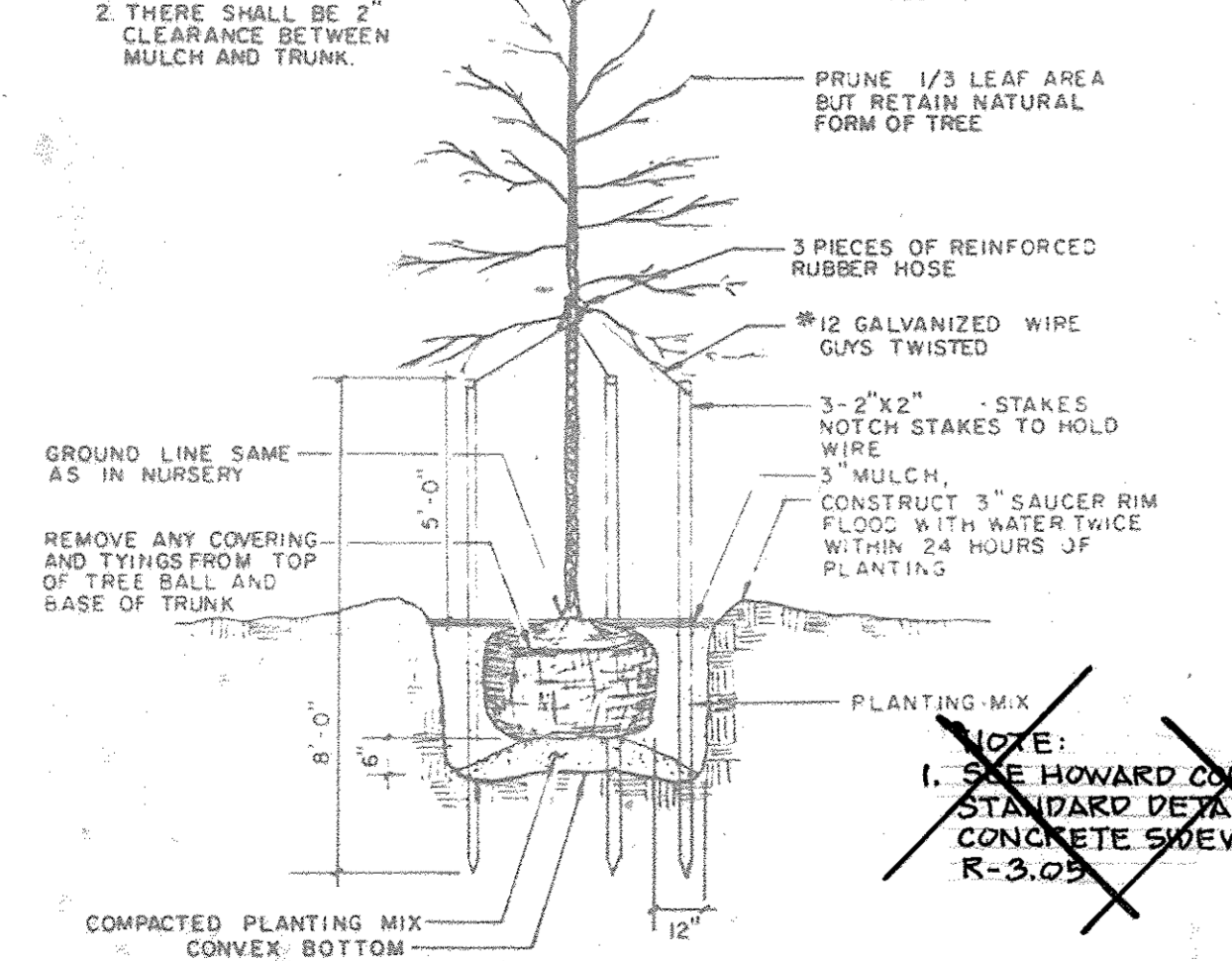
Approved: Chief, Division Of Land Development And Zoning Administration
Date 7-29-82

Approved: Chief, Division Of Land Development And Zoning Administration
Date 7-29-82

PLANTING DETAIL FOR EVERGREENS AND DECIDUOUS SHRUBS
NOT TO SCALE

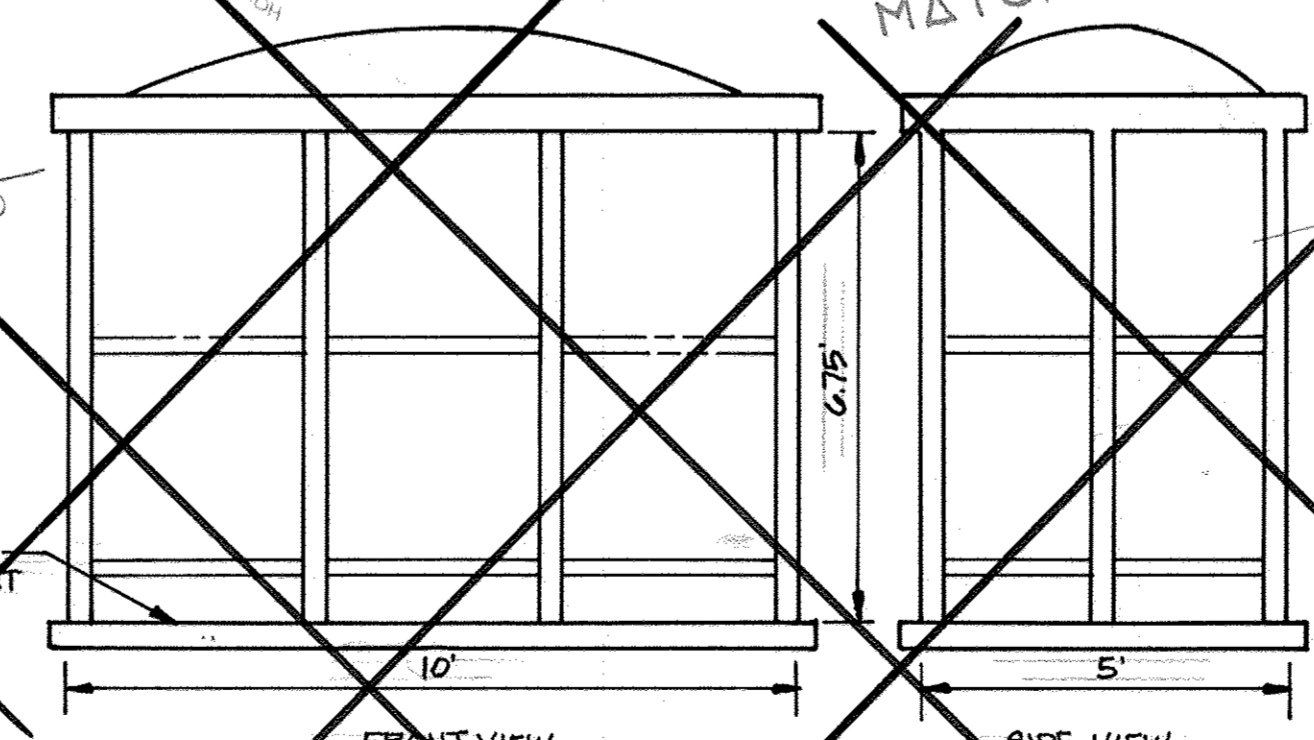
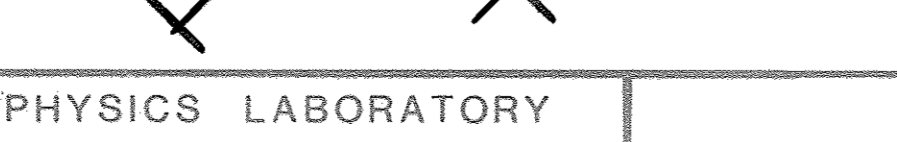


- NOTES:
- 1 FLOOD PLANTS TWICE WITHIN FIRST 24 HOURS OF PLANTING.
 - 2 ERICACEOUS PLANTS TO RECEIVE A SURFACE APPLICATION OF ALUMINUM SULFATE AT THE RATE OF 1/2 POUND PER 10 SQUARE FEET AND WATERED INTO SOIL. OTHER PLANTS TO RECEIVE LIME AT THE RATE OF 2 POUNDS PER PLANT.
 - 3 BALL SHOULD HAVE 6" CLEARANCE TO BOTTOM OF PIT, AND 9" CLEARANCE ON ALL SIDES.

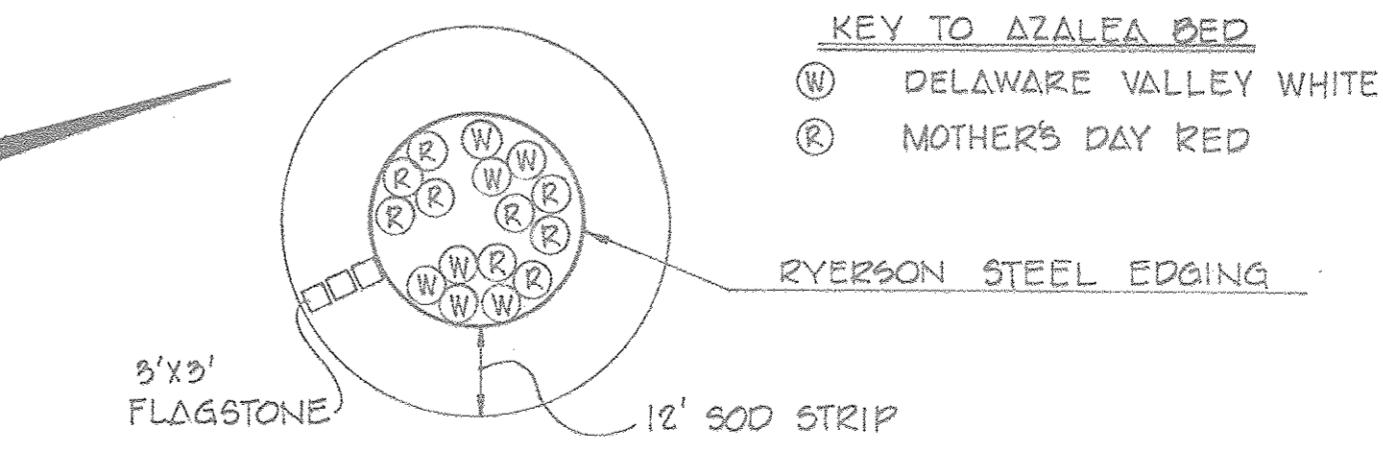


PLANTING DETAIL FOR TREES 1/4" - 4" CAL.
NOT TO SCALE

SMOKING SHELTER CONCRETE SIDEWALK DETAIL
NO SCALE



SMOKING SHELTER-ELEVATION VIEWS
NO SCALE



DETAIL 'A' ISLAND PLANTING
NOT TO SCALE

Note: Building Addition to SDP 81-137.

WHITMAN, REQUARDT AND ASSOCIATES
2315 SAINT PAUL STREET
BALTIMORE, MARYLAND
21218

APPLIED PHYSICS LABORATORY
THE JOHNS HOPKINS UNIVERSITY
Johns Hopkins Road Howard County, Maryland
Approved For The University By: [Signature]
Date 4-15-82 Title

SPACE SYSTEMS INTEGRATION AND TEST BUILDING
THE JOHNS HOPKINS UNIVERSITY APPLIED PHYSICS LABORATORY
11100 Johns Hopkins Road Laurel, Maryland 20707

LANDSCAPE PLAN
Fifth Election District Howard County, MD.
Tax Map 41 Parcel 50 and 123

REVISIONS
Change east stairway grade and adjacent planting 5-21-82
APPROVED SMOKING SHELTER 04/15/82

SCALE: As Shown
DRAWING SHEET NO. 8 OF 9 C-8
DATE: April 15, 1982

<p>PITTSBURGH TESTING LABORATORY</p> <p>LOG OF BORING</p> <p>Job No. BTL-558</p> <p>Client: WHITMAN-REQUARDT & ASSOCIATES</p> <p>Project: JHU-APL 7812-1 LABORATORY BLDG.</p> <p>Boring No. SL-1 Date: 2-22-82 Sheet 1 of 2</p> <p>Type of Boring: HSA - Rig: RMD2/MOBILE B-1</p> <p>Casing used: 5" - Drilling mud used</p> <p>Boring began: 2-22-82 Boring completed: 2-22-82</p> <p>Ground Elevation: 418.9 - referred to Datum</p> <p>Water Level: 418.9 - referred to Datum</p> <p>Time: Completion</p> <p>Field Party: S. Winstead, H. 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1/2"	72	73	Same	73	74	3/8" 1/2"	74	75	Same	75	76	3/8" 1/2"	76	77	Same	77	78	3/8" 1/2"	78	79	Same	79	80	3/8" 1/2"	80	81	Same	81	82	3/8" 1/2"	82	83	Same	83	84	3/8" 1/2"	84	85	Same	85	86	3/8" 1/2"	86	87	Same	87	88	3/8" 1/2"	88	89	Same	89	90	3/8" 1/2"	90	91	Same	91	92	3/8" 1/2"	92	93	Same	93	94	3/8" 1/2"	94	95	Same	95	96	3/8" 1/2"	96	97	Same	97	98	3/8" 1/2"	98	99	Same	99	100	3/8" 1/2"	<p>PITTSBURGH TESTING LABORATORY</p> <p>LOG OF BORING</p> <p>Job No. BTL-559</p> <p>Client: WHITMAN-REQUARDT & ASSOCIATES</p> <p>Project: JHU-APL 7812-1 LABORATORY BLDG.</p> <p>Boring No. SL-3 Date: 2-22-82 Sheet 1 of 2</p> <p>Type of Boring: HSA - Rig: RMD2/MOBILE B-1</p> <p>Casing used: 5" - Drilling mud used</p> <p>Boring began: 2-22-82 Boring completed: 2-22-82</p> <p>Ground Elevation: 418.7 - referred to Datum</p> <p>Water Level: 418.7 - referred to Datum</p> <p>Time: Completion</p> <p>Field Party: S. 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1/2"	62	63	Same	63	64	3/8" 1/2"	64	65	Same	65	66	3/8" 1/2"	66	67	Same	67	68	3/8" 1/2"	68	69	Same	69	70	3/8" 1/2"	70	71	Same	71	72	3/8" 1/2"	72	73	Same	73	74	3/8" 1/2"	74	75	Same	75	76	3/8" 1/2"	76	77	Same	77	78	3/8" 1/2"	78	79	Same	79	80	3/8" 1/2"	80	81	Same	81	82	3/8" 1/2"	82	83	Same	83	84	3/8" 1/2"	84	85	Same	85	86	3/8" 1/2"	86	87	Same	87	88	3/8" 1/2"	88	89	Same	89	90	3/8" 1/2"	90	91	Same	91	92	3/8" 1/2"	92	93	Same	93	94	3/8" 1/2"	94	95	Same	95	96	3/8" 1/2"	96	97	Same	97	98	3/8" 1/2"	98	99	Same	99	100	3/8" 1/2"	<p>PITTSBURGH TESTING LABORATORY</p> <p>LOG OF BORING</p> <p>Job No. BTL-559</p> <p>Client: WHITMAN-REQUARDT & ASSOCIATES</p> <p>Project: JHU-APL 7812-1 LABORATORY BLDG.</p> <p>Boring No. SL-4 Date: 2-22-82 Sheet 2 of 2</p> <p>Type of Boring: HSA - Rig: RMD2/MOBILE B-1</p> <p>Casing used: 5" - Drilling mud used</p> <p>Boring began: 2-22-82 Boring completed: 2-22-82</p> <p>Ground Elevation: 418.7 - referred to Datum</p> <p>Water Level: 418.7 - referred to Datum</p> <p>Time: Completion</p> <p>Field Party: S. Winstead, H. Brown</p> <p>DESIRES VISUAL DESCRIPTION</p> <p>Soil type, color, texture, consistency, sampler driving notes, blow per foot on casing, depths with water lost, observed fluctuations in water level, notes on drilling case, etc.</p> <table border="1"> <tr><th>DEPTH IN FEET</th><th>LOG</th><th>DESCRIPTION</th></tr> <tr><td>10</td><td>11</td><td>Brown & Gray Micaceous Sandy Silt</td></tr> <tr><td>11</td><td>12</td><td>3/8" 1/2"</td></tr> <tr><td>12</td><td>13</td><td>Same</td></tr> <tr><td>13</td><td>14</td><td>3/8" 1/2"</td></tr> <tr><td>14</td><td>15</td><td>Same</td></tr> <tr><td>15</td><td>16</td><td>3/8" 1/2"</td></tr> <tr><td>16</td><td>17</td><td>Same</td></tr> <tr><td>17</td><td>18</td><td>3/8" 1/2"</td></tr> <tr><td>18</td><td>19</td><td>Same</td></tr> <tr><td>19</td><td>20</td><td>3/8" 1/2"</td></tr> <tr><td>20</td><td>21</td><td>Same</td></tr> <tr><td>21</td><td>22</td><td>3/8" 1/2"</td></tr> <tr><td>22</td><td>23</td><td>Same</td></tr> <tr><td>23</td><td>24</td><td>3/8" 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1/2"	30	31	Same	31	32	3/8" 1/2"	32	33	Same	33	34	3/8" 1/2"	34	35	Same	35	36	3/8" 1/2"	36	37	Same	37	38	3/8" 1/2"	38	39	Same	39	40	3/8" 1/2"	40	41	Same	41	42	3/8" 1/2"	42	43	Same	43	44	3/8" 1/2"	44	45	Same	45	46	3/8" 1/2"	46	47	Same	47	48	3/8" 1/2"	48	49	Same	49	50	3/8" 1/2"	50	51	Same	51	52	3/8" 1/2"	52	53	Same	53	54	3/8" 1/2"	54	55	Same	55	56	3/8" 1/2"	56	57	Same	57	58	3/8" 1/2"	58	59	Same	59	60	3/8" 1/2"	60	61	Same	61	62	3/8" 1/2"	62	63	Same	63	64	3/8" 1/2"	64	65	Same	65	66	3/8" 1/2"	66	67	Same	67	68	3/8" 1/2"	68	69	Same	69	70	3/8" 1/2"	70	71	Same	71	72	3/8" 1/2"	72	73	Same	73	74	3/8" 1/2"	74	75	Same	75	76	3/8" 1/2"	76	77	Same	77	78	3/8" 1/2"	78	79	Same	79	80	3/8" 1/2"	80	81	Same	81	82	3/8" 1/2"	82	83	Same	83	84	3/8" 1/2"	84	85	Same	85	86	3/8" 1/2"	86	87	Same	87	88	3/8" 1/2"	88	89	Same	89	90	3/8" 1/2"	90	91	Same	91	92	3/8" 1/2"	92	93	Same	93	94	3/8" 1/2"	94	95	Same	95	96	3/8" 1/2"	96	97	Same	97	98	3/8" 1/2"	98	99	Same	99	100	3/8" 1/2"
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<p>PITTSBURGH TESTING LABORATORY</p> <p>LOG OF BORING</p> <p>Job No. BTL-559</p> <p>Client: WHITMAN-REQUARDT & ASSOCIATES</p> <p>Project: JHU-APL 7812-1 LABORATORY BLDG.</p> <p>Boring No. SL-5 Date: 2-22-82 Sheet 1 of 2</p> <p>Type of Boring: HSA - Rig: RMD2/MOBILE B-1</p> <p>Casing used: 5" - Drilling mud used</p> <p>Boring began: 2-22-82 Boring completed: 2-22-82</p> <p>Ground Elevation: 418.7 - referred to Datum</p> <p>Water Level: 418.7 - referred to Datum</p> <p>Time: Completion</p> <p>Field Party: S. Winstead, H. Brown</p> <p>DESIRES VISUAL DESCRIPTION</p> <p>Soil type, color, texture, consistency, sampler driving notes, blow per foot on casing, depths with water lost, observed fluctuations in water level, notes on drilling case, etc.</p> <table border="1"> <tr><th>DEPTH IN FEET</th><th>LOG</th><th>DESCRIPTION</th></tr> <tr><td>19</td><td>20</td><td>Brown & Gray Micaceous Sandy Silt, Trace of Rock Fragments</td></tr> <tr><td>20</td><td>21</td><td>3/8" 1/2"</td></tr> <tr><td>21</td><td>22</td><td>Same</td></tr> <tr><td>22</td><td>23</td><td>3/8" 1/2"</td></tr> <tr><td>23</td><td>24</td><td>Same</td></tr> <tr><td>24</td><td>25</td><td>3/8" 1/2"</td></tr> <tr><td>25</td><td>26</td><td>Same</td></tr> <tr><td>26</td><td>27</td><td>3/8" 1/2"</td></tr> <tr><td>27</td><td>28</td><td>Same</td></tr> <tr><td>28</td><td>29</td><td>3/8" 1/2"</td></tr> <tr><td>29</td><td>30</td><td>Same</td></tr> <tr><td>30</td><td>31</td><td>3/8" 1/2"</td></tr> <tr><td>31</td><td>32</td><td>Same</td></tr> <tr><td>32</td><td>33</td><td>3/8" 1/2"</td></tr> <tr><td>33</td><td>34</td><td>Same</td></tr> <tr><td>34</td><td>35</td><td>3/8" 1/2"</td></tr> <tr><td>35</td><td>36</td><td>Same</td></tr> <tr><td>36</td><td>37</td><td>3/8" 1/2"</td></tr> <tr><td>37</td><td>38</td><td>Same</td></tr> <tr><td>38</td><td>39</td><td>3/8" 1/2"</td></tr> <tr><td>39</td><td>40</td><td>Same</td></tr> <tr><td>40</td><td>41</td><td>3/8" 1/2"</td></tr> <tr><td>41</td><td>42</td><td>Same</td></tr> <tr><td>42</td><td>43</td><td>3/8" 1/2"</td></tr> <tr><td>43</td><td>44</td><td>Same</td></tr> <tr><td>44</td><td>45</td><td>3/8" 1/2"</td></tr> <tr><td>45</td><td>46</td><td>Same</td></tr> <tr><td>46</td><td>47</td><td>3/8" 1/2"</td></tr> <tr><td>47</td><td>48</td><td>Same</td></tr> <tr><td>48</td><td>49</td><td>3/8" 1/2"</td></tr> <tr><td>49</td><td>50</td><td>Same</td></tr> <tr><td>50</td><td>51</td><td>3/8" 1/2"</td></tr> <tr><td>51</td><td>52</td><td>Same</td></tr> <tr><td>52</td><td>53</td><td>3/8" 1/2"</td></tr> <tr><td>53</td><td>54</td><td>Same</td></tr> <tr><td>54</td><td>55</td><td>3/8" 1/2"</td></tr> <tr><td>55</td><td>56</td><td>Same</td></tr> <tr><td>56</td><td>57</td><td>3/8" 1/2"</td></tr> <tr><td>57</td><td>58</td><td>Same</td></tr> <tr><td>58</td><td>59</td><td>3/8" 1/2"</td></tr> <tr><td>59</td><td>60</td><td>Same</td></tr> <tr><td>60</td><td>61</td><td>3/8" 1/2"</td></tr> <tr><td>61</td><td>62</td><td>Same</td></tr> <tr><td>62</td><td>63</td><td>3/8" 1/2"</td></tr> <tr><td>63</td><td>64</td><td>Same</td></tr> <tr><td>64</td><td>65</td><td>3/8" 1/2"</td></tr> <tr><td>65</td><td>66</td><td>Same</td></tr> <tr><td>66</td><td>67</td><td>3/8" 1/2"</td></tr> <tr><td>67</td><td>68</td><td>Same</td></tr> <tr><td>68</td><td>69</td><td>3/8" 1/2"</td></tr> <tr><td>69</td><td>70</td><td>Same</td></tr> <tr><td>70</td><td>71</td><td>3/8" 1/2"</td></tr> <tr><td>71</td><td>72</td><td>Same</td></tr> <tr><td>72</td><td>73</td><td>3/8" 1/2"</td></tr> <tr><td>73</td><td>74</td><td>Same</td></tr> <tr><td>74</td><td>75</td><td>3/8" 1/2"</td></tr> <tr><td>75</td><td>76</td><td>Same</td></tr> <tr><td>76</td><td>77</td><td>3/8" 1/2"</td></tr> <tr><td>77</td><td>78</td><td>Same</td></tr> <tr><td>78</td><td>79</td><td>3/8" 1/2"</td></tr> <tr><td>79</td><td>80</td><td>Same</td></tr> <tr><td>80</td><td>81</td><td>3/8" 1/2"</td></tr> <tr><td>81</td><td>82</td><td>Same</td></tr> <tr><td>82</td><td>83</td><td>3/8" 1/2"</td></tr> <tr><td>83</td><td>84</td><td>Same</td></tr> <tr><td>84</td><td>85</td><td>3/8" 1/2"</td></tr> <tr><td>85</td><td>86</td><td>Same</td></tr> <tr><td>86</td><td>87</td><td>3/8" 1/2"</td></tr> <tr><td>87</td><td>88</td><td>Same</td></tr> <tr><td>88</td><td>89</td><td>3/8" 1/2"</td></tr> <tr><td>89</td></tr></table>	DEPTH IN FEET	LOG	DESCRIPTION	19	20	Brown & Gray Micaceous Sandy Silt, Trace of Rock Fragments	20	21	3/8" 1/2"	21	22	Same	22	23	3/8" 1/2"	23	24	Same	24	25	3/8" 1/2"	25	26	Same	26	27	3/8" 1/2"	27	28	Same	28	29	3/8" 1/2"	29	30	Same	30	31	3/8" 1/2"	31	32	Same	32	33	3/8" 1/2"	33	34	Same	34	35	3/8" 1/2"	35	36	Same	36	37	3/8" 1/2"	37	38	Same	38	39	3/8" 1/2"	39	40	Same	40	41	3/8" 1/2"	41	42	Same	42	43	3/8" 1/2"	43	44	Same	44	45	3/8" 1/2"	45	46	Same	46	47	3/8" 1/2"	47	48	Same	48	49	3/8" 1/2"	49	50	Same	50	51	3/8" 1/2"	51	52	Same	52	53	3/8" 1/2"	53	54	Same	54	55	3/8" 1/2"	55	56	Same	56	57	3/8" 1/2"	57	58	Same	58	59	3/8" 1/2"	59	60	Same	60	61	3/8" 1/2"	61	62	Same	62	63	3/8" 1/2"	63	64	Same	64	65	3/8" 1/2"	65	66	Same	66	67	3/8" 1/2"	67	68	Same	68	69	3/8" 1/2"	69	70	Same	70	71	3/8" 1/2"	71	72	Same	72	73	3/8" 1/2"	73	74	Same	74	75	3/8" 1/2"	75	76	Same	76	77	3/8" 1/2"	77	78	Same	78	79	3/8" 1/2"	79	80	Same	80	81	3/8" 1/2"	81	82	Same	82	83	3/8" 1/2"	83	84	Same	84	85	3/8" 1/2"	85	86	Same	86	87	3/8" 1/2"	87	88	Same	88	89	3/8" 1/2"	89
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