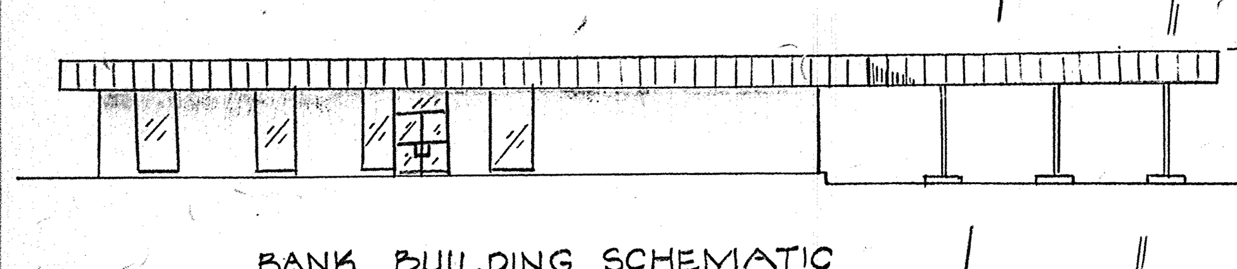
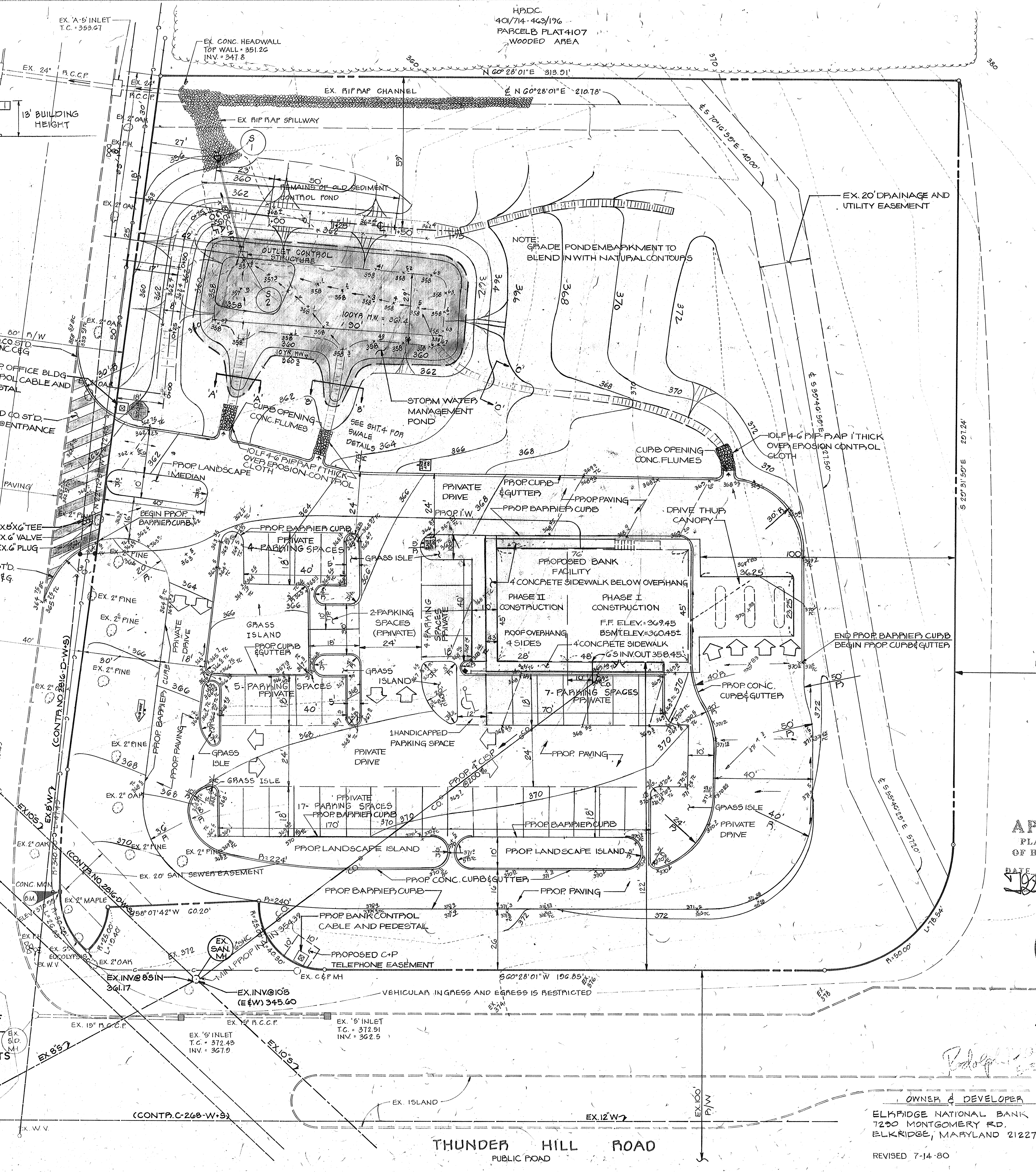
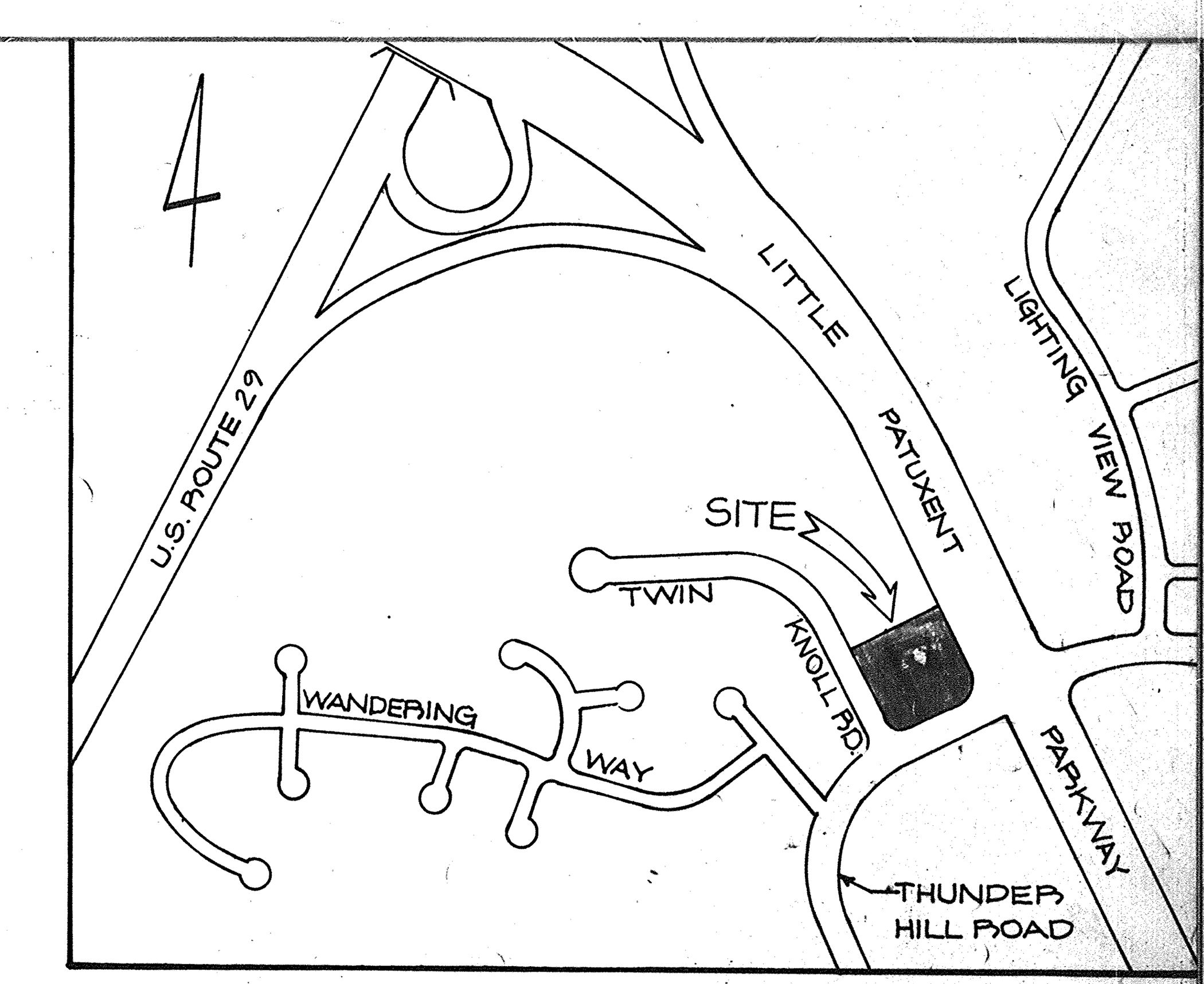


BANK BUILDING SCHEMATIC

SCALE: HOR: 1" = 20' VER: 1" = 20'





VICINITY MAP
SCALE 1" = 600'

CERTIFICATION OF THE ENGINEER

I CERTIFY THAT THIS PLAN FOR A POND 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 COUNTY SOIL CONSERVATION DISTRICT.

Rodolph May Jr.

RODOLPH L. MAY, JR.

LEGEND

1. STANDARD 7" COMBINATION CURB & GUTTER (FOR DETAIL SEE SHT. 3 OF 5)
2. STANDARD BARRIER CURB (FOR DETAIL SEE SHT. 3 OF 5)

GENERAL NOTES

1. DEED REFERENCE: PARCEL 'A' TWIN KNOLL 'VILLAGE OF OAKLAND MILLS' SECTION 3, AREA 1 PLATBOOK 4107
2. TAX MAP 30
3. EXISTING ZONING = FDP 43-A-I EMPLOYMENT CENTER, COMMERICAL
4. PROPOSED SITE USE: BRANCH BANK
5. HORIZONTAL CONTROL COORDINATES FROM P.B. 4107. ELEV.'S FROM INFORM. BY HUDKINS ASSOC.
6. AREA OF SITE: 2.620 AC.
7. PARKING REQUIREMENTS: PARKING SPACE 4/1000 S.F. 5,580 S.F. OF BLDG. (2160 S.F. BASEMENT, 3420 S.F. F.F.) PARKING SPACES REQUIRED 22.3 = 24 PARKING SPACES PROVIDED: 40 INCLUDING 1 HANDICAPPED SPACE.
8. EXTERIOR LIGHTING SHALL BE DIRECTED AWAY FROM PUBLIC R.O.W. AND RESIDENTIAL DISTRICTS.
9. BUILDING DOWNSPOUTS TO DISCHARGE INDIRECTLY INTO THE STORM WATER MANAGEMENT POND.
10. TOTAL BUILDING COVERAGE OF PARCEL 4263 SF.
11. TOTAL OPEN SPACE PROVIDED: 1.697 AC. (INCLUDING LANDSCAPING)
12. LANDSCAPED ISLANDS IN PARKING LOT 5669 SQ. FT.
13. TOTAL AREA OF RETAIL SALES SPACE: NONE
14. THUNDER HILL ROAD AND TWIN KNOLLS ROAD ARE EXISTING AND PUBLIC ROADS.
15. PUBLIC WATER AND SEWER TO BE UTILIZED, CONTR. 2816 D.W.&S.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT.

Joyce M. Boyd, M.D. per: P.F.W.	8-21-80
COUNTY HEALTH OFFICER	DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

Thomas G. Harris	8-25-80
PLANNING DIRECTOR	DATE
(acting)	8/22/80
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

Gloy F. Neimeyer	8-8-80
DIRECTOR	DATE
William E. Riley	8-8-80
CHIEF, BUREAU OF ENGINEERING	DATE

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

DEVELOPER DATE

DEVELOPER WILL PROVIDE THE HO.CO. S.C.D. WITH A RED LINED "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION

OWNER & DEVELOPER

ELKRIDGE NATIONAL BANK
7290 MONTGOMERY RD.
ELKRIDGE, MARYLAND 21227

REVISED 7-14-80

Rodolph May Jr. 5-30-80

SITE PLAN

TITLE: & STORM WATER MANAGEMENT PLAN			
PROJECT: ELKRIDGE NATIONAL BANK V.O.M. 3/1 PARCEL A			
LOCATION: 6TH ELECTION DISTRICT		HOWARD COUNTY, MD.	
DATE: MAY 1980	DESIGN BY: W.H.N.	DRAWN BY: GM/J.J.B./WN	CHECKED BY: R.L.M.
SCALE: 1" = 20'	JOB NO.: 79149	DRAWING NO.: 1 OF 5	

boender associates
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1286

engineers surveyors planners

SDP 80-150c

H.P.D.C.
401/14-463/196
PARCEL B PLAT 4107
WOODED AREA

SEDIMENT TRAP SCHEDULE

TRAP NO.	D.A.	MIN. VOL.	SIZE OF TRAP	VOL. PROV'D	EXCAVATE	EL@CLEANOUT	RISER CREST
ST-4 @ S-2	1.9 AC.	127.3 C.Y.S.	90'x28'x 2.5' deep	233 C.Y.S.	130 C.Y.S.	358.7	359.55

REVIEWED FOR HO.CO. SOIL ... WHICH MEETS TECHNICAL REQUIREMENTS.

J. Helm Jr. 8-4-80
U.S.S.C. ... SERVICE DATE

THIS DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL FOR THE HO.CO. SOIL CONSERVATION DISTRICT.

Robert W. Zahn 8-4-80
SOIL CONSERVATION DISTRICT DATE

13' BUILDING HEIGHT

BANK BUILDING SCHEMATIC
SCALE: HOR: 1" = 20'
VER: 1" = 20'

CERTIFICATION OF THE ENGINEER

I CERTIFY THAT THIS PLAN FOR A POND 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 COUNTY SOIL CONSERVATION DISTRICT.

Rodolph May Jr.
RODOLPH L. MAY JR.

STATE OF MARYLAND — RODOLPH L. MAY JR. — NO. 8709 — REGISTERED PROFESSIONAL ENGINEER

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. NOTIFY HOWARD COUNTY BUREAU OF LICENSE INSPECTIONS AND PERMITS 24 HOURS PRIOR TO GRADING OPERATIONS
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE, WHICH WILL TRAP SEDIMENT BELOW PROPOSED DAM DURING 18" BCCMP PIPE INSTALLATION AT THIS TIME.
4. CONSTRUCT S-2 WITH TRASHRACK AND ST-4 SEDIMENT TRAP, INSTALL P.D. (TO BECOME A PERMANENT BERM.)
5. GRADE AND CONSTRUCT STORM WATER MANAGEMENT DAM TO SPECIFICATIONS SHOWN HEREIN.
6. UTILITIES MAY BE INSTALLED AT THIS TIME.
7. GRADE PARKING LOT AND DRIVES. STABILIZE ROADS WITH BASE AND SURFACE COURSES.
8. CONSTRUCT BUILDING.
9. FINE GRADE AND STABILIZE LANDSCAPED AREAS IN ACCORDANCE WITH PERMANENT STABILIZATION MEASURES AS OUTLINED IN THE SPECIFICATIONS ON SHEET 2 OF 5.
10. REMOVE TEMPORARY SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE HOWARD COUNTY BUREAU OF LICENSE, INSPECTIONS AND PERMITS.

LEGEND

1. —— STANDARD 7" COMBINATION CURB & GUTTER (FOR DETAIL SEE SHT. 3 OF 5)
2. —— STANDARD BARRIER CURB (FOR DETAIL SEE SHT. 3 OF 5)

GENERAL NOTES

1. DEED REFERENCE: PARCEL 'A' TWIN KNOLL VILLAGE OF OAKLAND MILLS' SECTION 3 AREA
2. TAX MAP 30
3. ZONING: NT-D (PB 393 A EMPLOYMENT CENTER) COMMERCIAL
4. PROPOSED SITE USE: BRANCH BANK
5. HORIZONTAL CONTROL COORDINATES FROM PB 4107, ELEVS FROM INFORM. BY HUDKINS ASSOC.
6. AREA OF SITE: 2.620 AC.
7. PARKING REQUIREMENTS: PARKING SPACE: 1/1000 SF (1/200 SF BASEMENT) AREA OF BLDG: 3420 SF F.F. PARKING SPACES REQUIRED: 22 = 24 PARKING SPACES PROVIDED: 40 INCLUDING 1 HANDICAPPED SPACE.
8. EXTERIOR LIGHTING SHALL BE DIRECTED AWAY FROM PUBLIC R.O.W. AND RESIDENTIAL DISTRICTS.
9. BUILDING DOWNSPOUTS TO DISCHARGE INDIRECTLY INTO THE STORM WATER MANAGEMENT POND.
10. TOTAL BUILDING COVERAGE OF PARCEL 12695 SF.
11. TOTAL OPEN SPACE PROVIDED: 1.697 AC. (INCLUDING LANDSCAPING)
12. LANDSCAPED ISLANDS IN PARKING LOT 5669 SQ. FT.
13. TOTAL AREA OF RETAIL SALES SPACE: NONE
14. THUNDER HILL ROAD AND TWIN KNOLLS ROAD ARE EXISTING AND PUBLIC ROADS.
15. PUBLIC WATER AND SEWER TO BE UTILIZED. CONTR. 2B16D W & S.

SITE ANALYSIS

AREA PAVED: 0.90 AC.±
AREA REVEGETATED: 1.0 AC±
AREA UNDISTURBED: 0.72 AC.
TOTAL AREA OF SITE: 2.62 AC

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-21-80

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
PLANNING DIRECTOR — DATE 8-25-80

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/22/80

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
DIRECTOR — DATE 8-8-80

CHIEF, BUREAU OF ENGINEERING — DATE 8-8-80

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

H. W. Smith — 5-29-80
DEVELOPER — DATE

DEVELOPER WILL PROVIDE THE HO.CO. S.C.D. WITH A RED LINED "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 7-16-80

Rodolph May Jr. 7-18-80

OWNER & DEVELOPER
ELKRIDGE NATIONAL BANK
7230 MONTGOMERY RD
ELKRIDGE, MARYLAND 21227

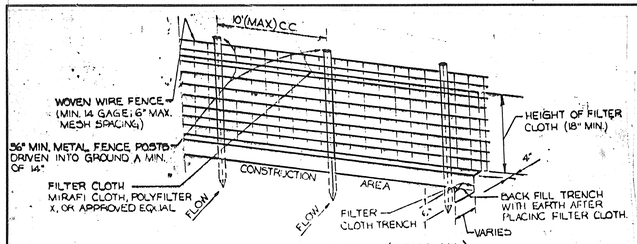
REVISED 7-14-80

DRAINAGE AREA MAP & SEDIMENT CONTROL PLAN
ELKRIDGE NATIONAL BANK
VOM 3/1 PARCEL A
HOWARD COUNTY, MD.

SCALE 1" = 20' — DATE MAY 1980 — DRAWN WN — CHECKED BY RLM — JOB NO. 2 5

boender associates
SUITE 1-C, THE WYN & COUNTRY PROFESSIONAL BUILDING, ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301 465 7777 SALISBURY 301 749 1288
engineers surveyors planners

SDP-80-150.

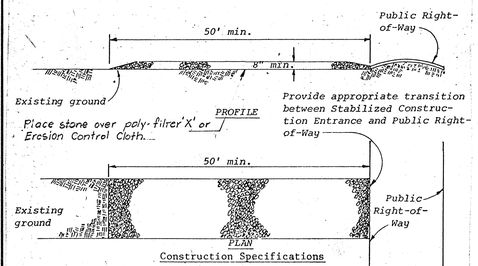


SILT FENCE DETAIL (OPTIONAL)
NO SCALE

NOTES

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24'+24"
3. SILT FENCE TO BE PLACED IN LIEU OF STRAW BALES AND/OR DIVERSION DIKES AT THE OPTION OF THE DEVELOPER.
4. SILT FENCE TO BE INSTALLED ON THE CONTOUR WHENEVER POSSIBLE.

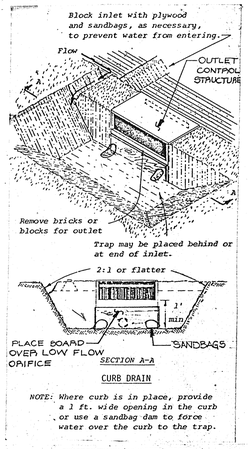
STABILIZED CONSTRUCTION ENTRANCE
(not to scale)



Construction Specifications

1. Stone size - Use MSHA size No. 2 (2-1/2" to 1") or AASHTO designation M43, size No. 2 (2-1/2" to 1-1/2"). Use crushed stone.
2. Length - As effective, but not less than 50 feet.
3. Thickness - Not less than eight (8) inches.
4. Width - Not less than full width of all points of ingress or egress.
5. 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 watercourse through use of sand bags, gravel, boards or other approved methods.
6. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing SCE-1



CURB DRAIN

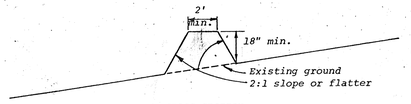
NOTE: Where curb is in place, provide a 1 ft. wide opening in the curb or use a sandbag dam to force water over the curb to the trap.

CONSTRUCTION SPECIFICATIONS

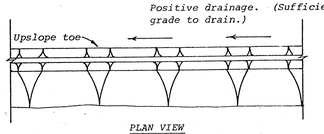
1. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The structure shall be inspected after each rain and repairs made as needed.
3. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
4. The sediment trap shall be removed and area stabilized when the remaining drainage area has been properly stabilized.
5. All cut and fill slopes shall be 2:1 or flatter.

STORM INLET SEDIMENT TRAP @ S-2	Standard Drawing ST-4

PERIMETER DIKE*
(not to scale)



CROSS SECTION



PLAN VIEW

Construction Specifications

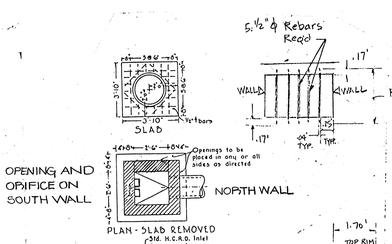
1. All dikes shall be machine compacted.
2. All perimeter dikes shall have positive drainage to an outlet.
3. A. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area or into a level spreader or grade stabilization structure.
   B. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as sediment trap or a sediment basin or to an area protected by any of these practices.
4. Stabilization, when required, shall be done in accordance with Standard and Specifications for Grassed Waterway. The minimum area to be stabilized shall be the channel flow area.
5. Periodic inspection and required maintenance shall be provided.

Standard Symbol PD

* Drainage area less than 5 acres

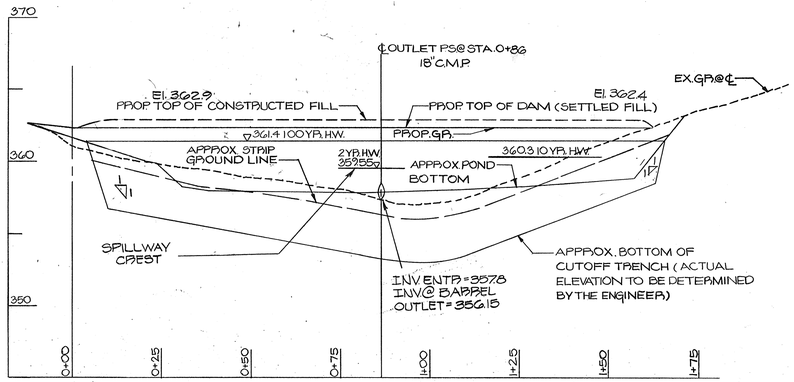
PERIMETER DIKE	Standard Drawing PD-1

REF. SCS ST'D. 12.01

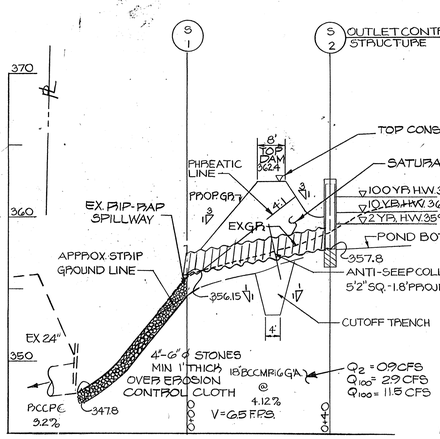


S-2
MODIFIED
Howard County Standard CLASS "C" INLET
DWG. G4-C PAGE 119-C

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 8-21-80
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
PLANNING DIRECTOR — DATE 8-25-80
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/22/80
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
DIRECTOR — DATE 8-8-80
CHIEF, BUREAU OF ENGINEERING — DATE 8-8-80



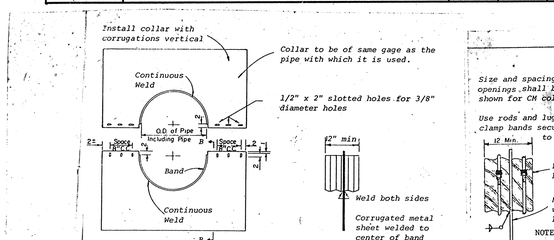
PROFILE ALONG DAM
SCALE: HOR. 1"=20'
VER. 1"=5'



SECTION THUR DAM
SCALE: HOR. 1"=20'
VER. 1"=5'

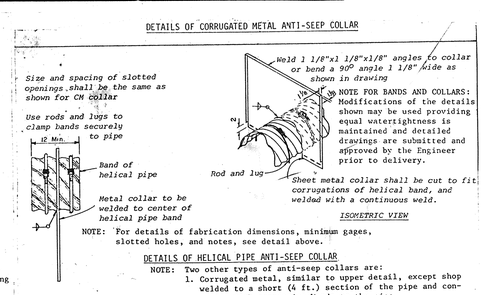
PROPOSED STRUCTURE SCHEDULE

STRUCT NO	TYPE OF STRUCTURE	INV IN	INV OUT	TOP EL	REMARKS
S-1	STD 18" DIA. METAL END SECTION	356.15	356.15	357.65	SEE DETAIL SHT.
S-2	MODIFIED HOWARD CO. CLASS 'C' INLET	357.8	357.8	362.73	SEE DETAIL THIS SHT.



NOTES FOR COLLARS:
1. All materials to be in accordance with construction and construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two 1/2" ϕ diameter rods with standard tank lugs for connecting collars to pipe.

DETAILS OF CORRUGATED METAL ANTI-SEEP COLLAR



NOTE: For details of fabrication dimensions, minimum gages, slotted holes, and notes, see detail above.

DETAILS OF HELICAL PIPE ANTI-SEEP COLLAR

NOTE: Two other types of anti-seep collars are:
1. Corrugated metal, similar to upper detail, except shop welded to a short (4 ft.) section of the pipe and connected with connecting bands to the pipe.
2. Concrete, six inches thick formed around the pipe with #3 rebar spaced 15" horizontally and vertically.

Ref: Engr. Field Manual

NOTE: SCS. DET. A-19.25

DEVELOPER WILL PROVIDE THE HO. CO. S.C.D. WITH A PRINTED LINED "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

CERTIFICATION OF THE ENGINEER

I CERTIFY THAT THIS PLAN FOR A POND 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 COUNTY SOIL CONSERVATION DISTRICT.

RODOLPH L. MAY JR.
STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

H. W. Smith, Asst. — DEVELOPER — DATE 7/16/80

REVISED 7-14-80

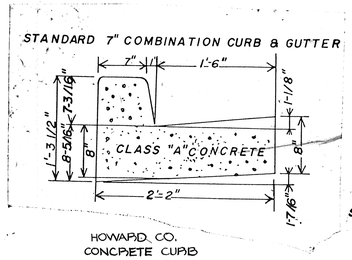
APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 7-16-80

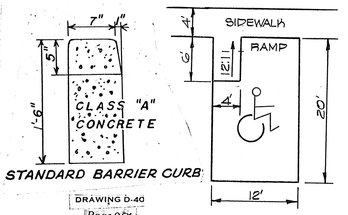
NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE HO. CO. ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

PAVING SPECIFICATIONS

1. TO BE CONSTRUCTED IN ACCORDANCE WITH THE HO. CO. ROAD CONST. CODE AND ST'D. SPECIFICATION
2. BASE WILL BE PRIMED IN ACCORDANCE WITH SECT. C 30-3 AS PROVIDED IN THE HO. CO. ROAD CONST. CODE AND STANDARD SPECIFICATIONS.
3. TACK COAT IN ACCORDANCE WITH SECTION C 31-4 OF THE HOWARD CO. ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

STANDARD 7" COMBINATION CURB & GUTTER

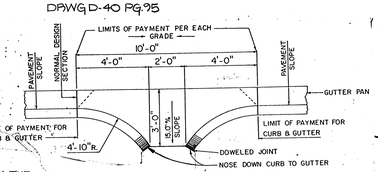




STANDARD BARRIER CURB

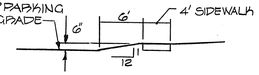
DRAWING D-40
Page 95

HOWARD. CO. CONCRETE CURB DRWG. D-40 PG. 95



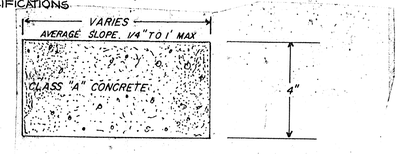
STANDARD CURB OPENING DETAIL

PROP. PARKING LOT GRADE



RAMP FOR HANDICAPPED TO & FROM PARKING SPACE
NOT TO SCALE

TYPICAL SECTION
"SIDEWALKS, BUSWAY AND PARKING AREAS."
HO. CO. DPW. D-13 PG. 68



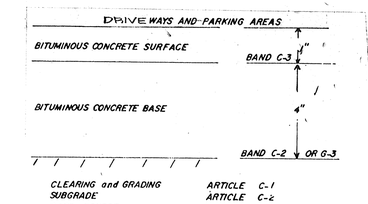
THIS SIDEWALK TO BE CONSTRUCTED IN ACCORDANCE WITH ARTICLE C-35 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS

THIS SIDEWALK TO BE USED ON ALL STREETS TO BE MAINTAINED BY THE COUNTY IN N.T. DISTRICTS AS DEFINED IN THE 1961 EDITION OF THE HOWARD COUNTY ZONING REGULATIONS AMENDMENT 16 SECTION 17

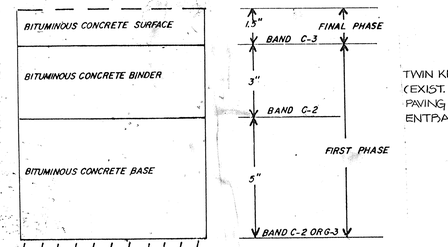
TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS

Standard Concrete Sidewalk
DRAWING D-14 (MAY, 1968)
Page 69

ON SITE PRIVATE DRIVES & PRIVATE PARKING



TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS



TWIN KNOLLS P.D. (EXIST. HO. CO. ROAD) PAVING SECTION @ ENTRANCE

"COMMERCIAL-INDUSTRIAL STREET" DETAIL
HO. CO. DRWG. D-12 PG. 67

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS

OWNER & DEVELOPER
ELKRIDGE NATIONAL BANK
7290 MONTGOMERY ROAD
ELKRIDGE MD 21227

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER

Rodolph May Jr. 5-30-80

STORM WATER MANAGEMENT, SEDIMENT CONTROL AND PAVING DETAILS

PROJECT	ELKRIDGE NATIONAL BANK — VOM. 3-1 PARCEL A
LOCATION	6TH ELECTION DISTRICT — HOWARD COUNTY, MD.
DATE: MAY, 1980	DESIGN BY: W.H.N. — DRAWN BY: W.C.L. — CHECKED BY: P.L.M.
SCALE: AS SHOWN	JOB NO.: 79149 — DRAWING NO.: 3 OF 5

boender associates
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1286
engineers surveyors planners

SDP-80-150c

SOIL CONSERVATION SERVICE
MARYLAND
CONSTRUCTION SPECIFICATIONS
FOR
PONDS

These specifications are appropriate to ponds within the scope of the Standard for practice 378.

I. SITE PREPARATION

Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

A. Corrugated Metal Pipe

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

Helically corrugated pipe in addition to the requirements above shall have either continuously welded seams or have lock seams which are caulked, during fabrication, with a neoprene bead.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie 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.

8. 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. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. Placing Temperature - Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications shown on or accompanying the drawings.

V. CONCRETE

1. Materials

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. 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.

d. 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.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. 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.

3. 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.

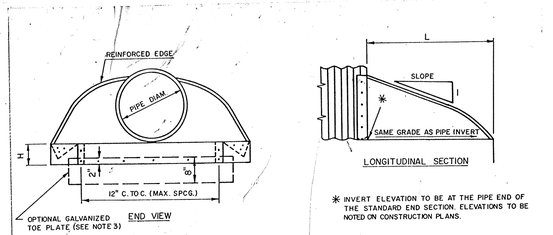
4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. 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.

6. 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.



* INVERT ELEVATION TO BE AT THE PIPE END OF THE STANDARD END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS.

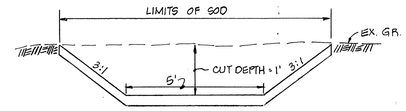
NOTES:

1. ALL 3 PIECE BODIES TO HAVE 12 GA. SIDES AND 10 GA. CENTER PANELS. WIDTH OF CENTER PANELS TO BE GREATER THAN 20% OF THE PIPE PERIPHERY. MULTIPLE PANEL BODIES TO HAVE LAP SEAMS WHICH ARE TO BE TIGHTLY JOINED BY $\frac{3}{8}$" Ø GALVANIZED RIVETS OR BOLTS.
2. FOR 60" THRU 84" SIZES, REINFORCED EDGES TO BE SUPPLEMENTED WITH GALVANIZED STIFFENER ANGLES. THE ANGLES WILL BE 2" X 2" X $\frac{1}{4}$" FOR 60" THRU 72" DIAMETER AND 2$\frac{1}{2}$" X 2$\frac{1}{2}$" X $\frac{1}{4}$" FOR 78" AND 84" DIAMETER. THE ANGLES TO BE ATTACHED BY $\frac{3}{8}$" Ø GALVANIZED NUTS AND BOLTS.
3. TOE PLATE SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF TOE PLATE TO BE INCLUDED IN BID PRICE PER EACH OF METAL END SECTION.

TABLE OF DIMENSIONS

PIPE DIAM.	GA.	A ±"	B MAX.	H ±"	L ±"	W ±"	APPROX. SLOPE	BODY
18"	16	8"	10"	6"	31"	36"	2$\frac{1}{2}$	IPC

STANDARD METAL END SECTION
ROUND METAL PIPE



TYPICAL SWALE SECTION

NOT TO SCALE

SECTION	Q	FLOW d	MAX. SLOPE	V
A-A	5.2 CFS	0.18'	6.7%	4.7 FPS
B-B	2.0 CFS	0.10'	17.0%	4.7 FPS
C-C	0.7 CFS	0.10'	12.5%	2.7 FPS

SEE SHT. 1 FOR SECTION LOCATIONS

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

J. W. Smith, Pres. — 5/29/80
DEVELOPER — DATE

DEVELOPER WILL PROVIDE THE HO.CO. S.C.D. WITH A RED-LINED "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION.

CERTIFICATION OF THE ENGINEER

I CERTIFY THAT THIS PLAN FOR A POND 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 COUNTY SOIL CONSERVATION DISTRICT.

Rodolph May Jr.
RODOLPH L. MAY JR.

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 REGISTERED PROFESSIONAL ENGINEER

THESE PLANS FOR SMALL POND CONSTRUCTION MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Robert W. Zieken — 8-4-80
APPROVED Ho. Co. S.C.D. — DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

J. Helm — 8-4-80
U.S. SOIL CONSERVATION SERVICE — DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS.
HOWARD COUNTY HEALTH DEPARTMENT.
Joyce M. Beck, M.D. for P.E.W. — 8-21-80
COUNTY HEALTH OFFICER — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
Thomas H. Harrison — 8-25-80
PLANNING DIRECTOR — DATE
Robert J. Keighley — 8/22/80
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
Henry F. Nunnery — 8-20-80
DIRECTOR — DATE
Benjamin E. Reiley — 8-8-80
CHIEF, BUREAU OF ENGINEERING — DATE

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 REGISTERED PROFESSIONAL ENGINEER

Rodolph L. May Jr.
RODOLPH L. MAY JR. MD. P.E. 8700

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 7-16-80
T. B. Harrison

OWNER AND DEVELOPER
ELKRIDGE NATIONAL BANK
7290 MONTGOMERY ROAD
ELKRIDGE, MD. 21227

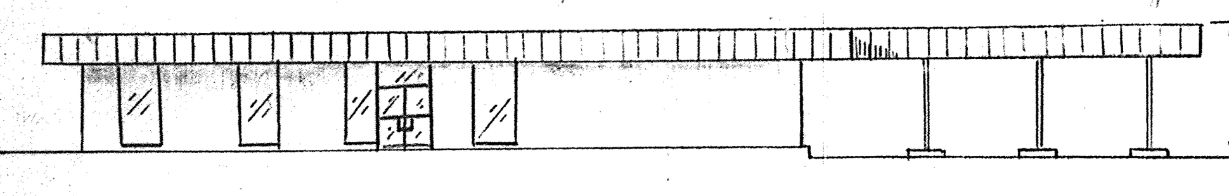
REVISED 7-14-80

TITLE: POND CONSTRUCTION SPECIFICATIONS AND DETAILS
PROJECT: ELKRIDGE NATIONAL BANK — VOM 3/1 PARCEL A
LOCATION: 6TH ELECTION DISTRICT — HOWARD COUNTY, MD.

DATE:	DESIGN BY:	DRAWN BY:	CHECKED BY:
MAY, 1980	W.N	W.H.N.	B.L.M.
SCALE: NONE	JOB NO.: 79140	DRAWING NO.: 4 OF 5	

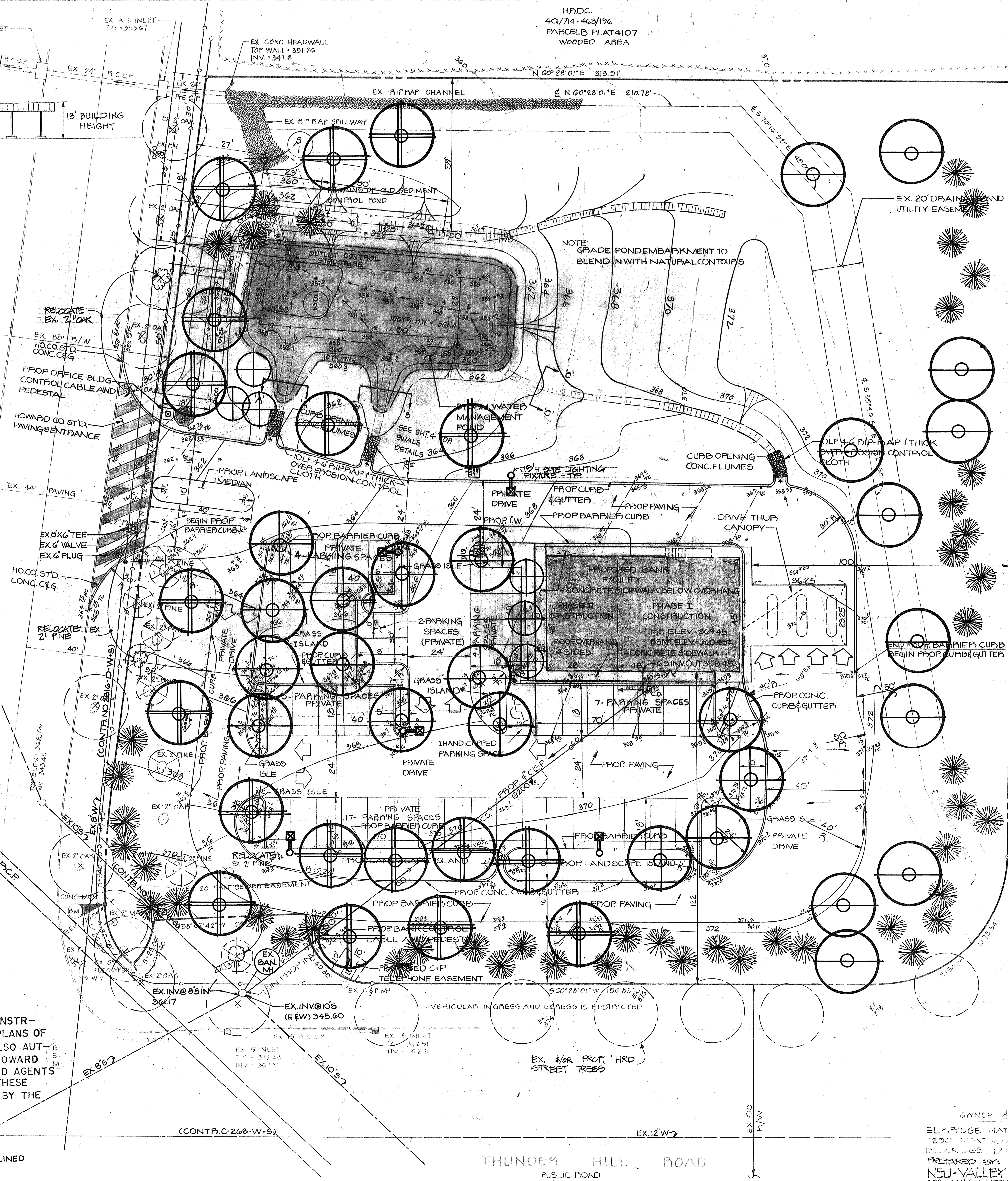
boender associates
SUITE 102-107 TOWN & COUNTRY PROFESSIONAL BUILDING
ELLICOTT CITY, MARYLAND 21043
BALTIMORE 301-465-7777 SALISBURY 301-749-1286
engineers
surveyors
planners

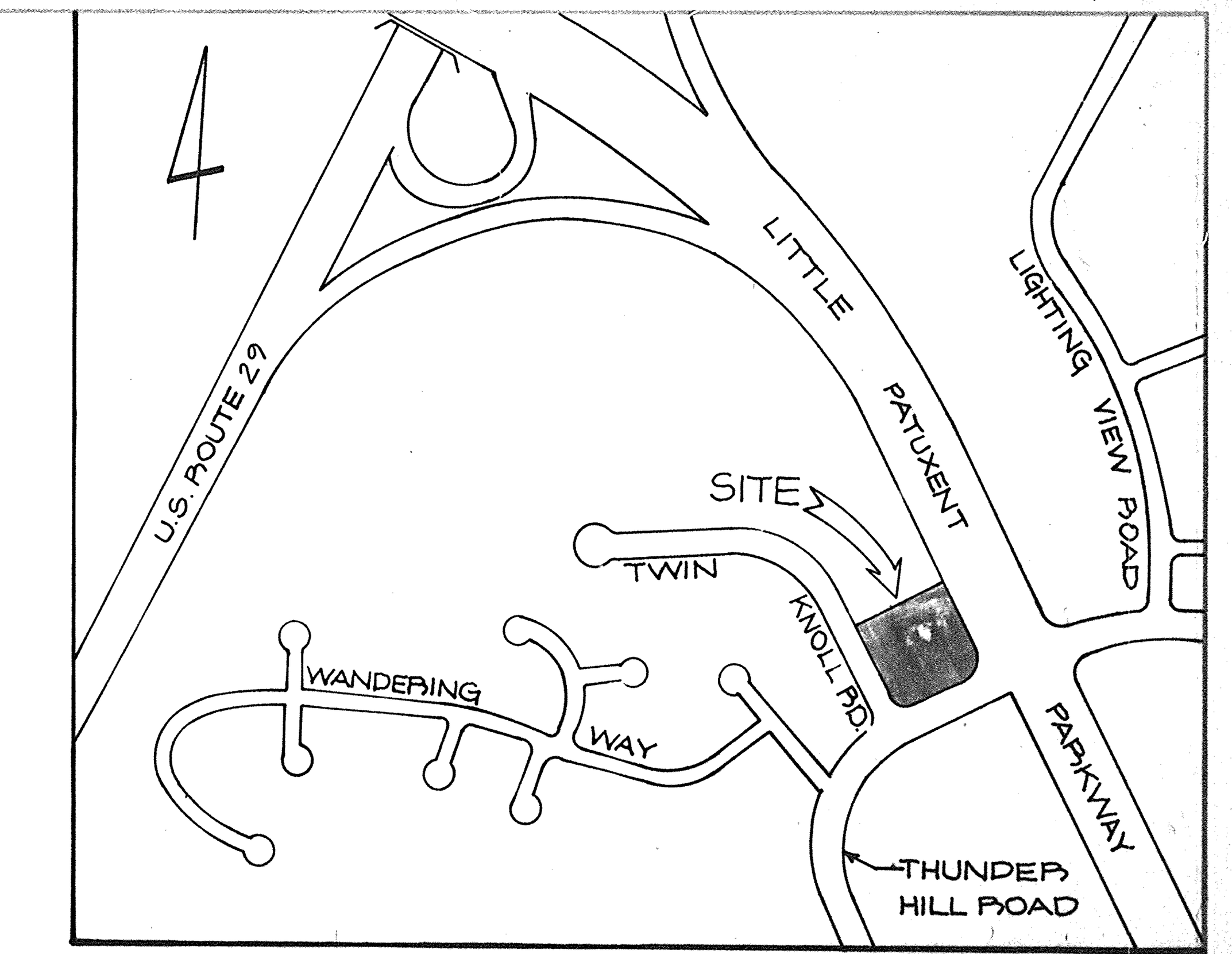
SDP-80-150c



BANK BUILDING SCHEMATIC

SCALE: HOR: 1" = 20'
VER: 1" = 20'





VICINITY MAP
SCALE 1" = 600'

CERTIFICATION OF THE ENGINEER

I CERTIFY THAT THIS PLAN FOR A POND 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 COUNTY SOIL CONSERVATION DISTRICT.

Rodolph May Jr.
RODOLPH L. MAY JR.

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.	
Joyce M. Boyd, M.D. per R.A. — COUNTY HEALTH OFFICER	8-21-80 DATE
APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.	
Thomas G. Harris Jr. — PLANNING DIRECTOR	8-25-80 DATE
[signature] — CHIEF, DIVISION OF LAND DEVELOPMENT	8/22/80 DATE
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.	
Gary F. Nemeyer — DIRECTOR	8-8-80 DATE
William E. Riley — CHIEF, BUREAU OF ENGINEERING	8-8-80 DATE

CERTIFICATION BY THE DEVELOPER

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS OF DEVELOPMENT AND PLANS FOR A POND AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATIONS FROM THESE PLANS WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

H. W. Smith — DEVELOPER   DATE

DEVELOPER WILL PROVIDE THE HO.CO. S.C.D. WITH A RED LINED "AS BUILT" OF THE POND WITHIN 30 DAYS OF COMPLETION

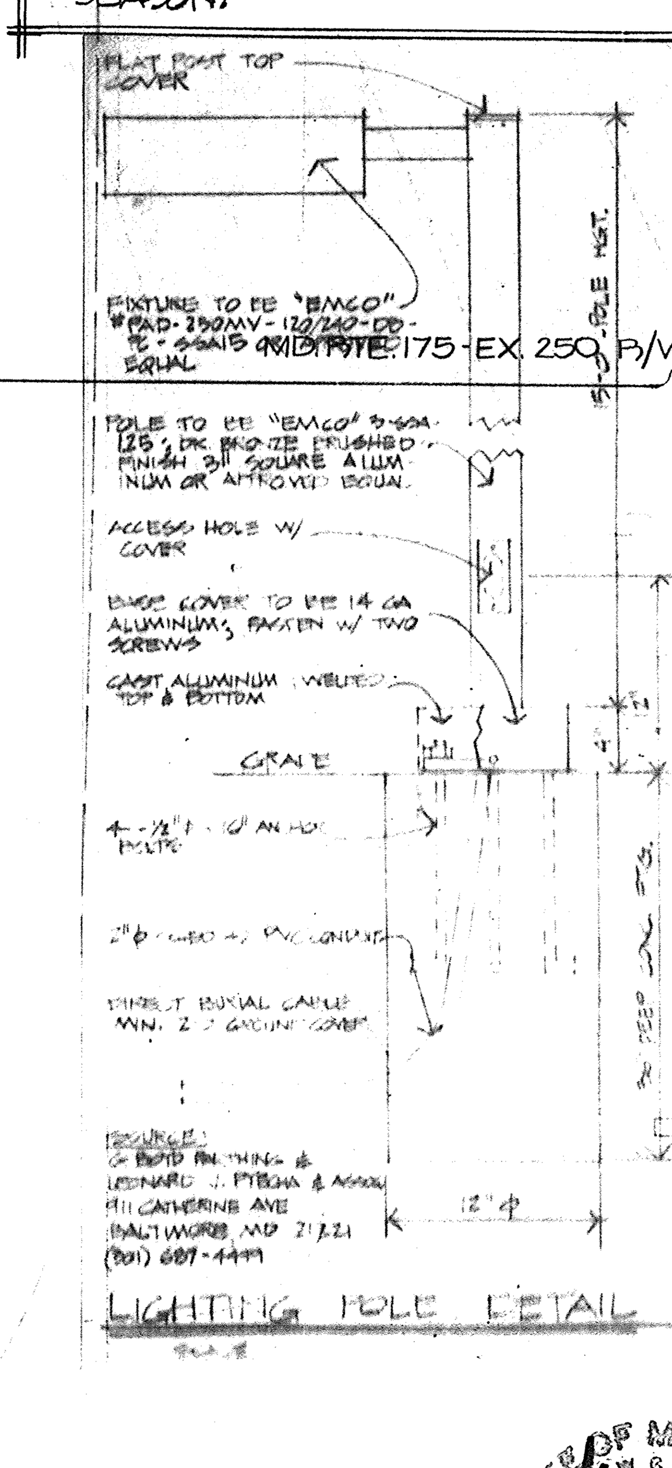
PLANT LIST

SYMBOL	QUANT.	PLANT NAME
(symbol)	15	ACER RUBRUM 2½-3" AMERICAN RED MAPLE
(symbol)	18	FRAXINUS P. 'LANCEOLATA' 2½-3" SEEDLESS GREEN ASH
(symbol)	11	QUERCUS PALUSTRIS 2½-3" PIN OAK
(symbol)	6	PRUNUS S. 'KWANZAN' 8'-10' FLOWERING CHERRY
(symbol)	48	PINUS STROBUS 6'-8' EASTERN WHITE PINE

NOTE: THE CONTRACTOR RESERVES THE RIGHT TO RELOCATE ALL PROPOSED PLANT MATERIAL BASED ON FIELD CONDITIONS; IE. UNDERGROUND UTILITIES, ROCKS, ETC. CONTRACTOR ALSO RESERVES THE RIGHT TO SUBSTITUTE ALL PROPOSED PLANT MATERIAL BASED ON AVAILABILITY & PLANTING SEASON.

LEGEND

1. STANDARD 7" COMBINATION CURB & GUTTER (FOR DETAIL SEE SHT. 3 OF 5)
2. STANDARD BARRIER CURB (FOR DETAIL SEE SHT. 3 OF 5)



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 7-16-80
[signature]

GENERAL NOTES

1. DEED REFERENCE: PARCEL 'A' TWIN KNOLL 'VILLAGE OF OAKLAND MILLS' SECTION 3, AREA 1 PLATBOOK 4107
2. TAX MAP 30
3. EXISTING ZONING: FDP43-A-1 EMPLOYMENT CENTER, COMMERICAL
4. PROPOSED SITE USE: BRANCH BANK
5. HORIZONTAL CONTROL COORDINATES FROM P.B. 4107, ELEV.'S FROM INFORM. BY HUDKINS ASSOC.
6. AREA OF SITE: 2.620 AC.
7. PARKING REQUIREMENTS: PARKING SPACE 4/1000 SF 5580 SF OF BLDG (2160 SF BASEMENT, 3420 SF F.F.) PARKING SPACES REQUIRED 22.3 = 24 PARKING SPACES PROVIDED: 40 INCLUDING 1 HANDICAPPED SPACE.
8. EXTERIOR LIGHTING SHALL BE DIRECTED AWAY FROM PUBLIC R.O.W. AND RESIDENTIAL DISTRICTS.
9. BUILDING DOWNSPOUTS TO DISCHARGE INDIRECTLY INTO THE STORM WATER MANAGEMENT POND.
10. TOTAL BUILDING COVERAGE OF PARCEL 4263 SF.
11. TOTAL OPEN SPACE PROVIDED: 1.697 AC. (INCLUDING LANDSCAPING)
12. LANDSCAPED ISLANDS IN PARKING LOT 5669 SQ. FT.
13. TOTAL AREA OF RETAIL SALES SPACE: NONE
14. THUNDER HILL ROAD AND TWIN KNOLLS ROAD ARE EXISTING AND PUBLIC ROADS.
15. PUBLIC WATER AND SEWER TO BE UTILIZED, CONTR. 2816 D.W.& S.

STATE OF MARYLAND — RODOLPH L. MAY, JR. — NO. 8700 — REGISTERED PROFESSIONAL ENGINEER

Rodolph May Jr.
7-18-80

STATE OF MARYLAND — MATTHEW G. ANACKER — NO. 295
7-11-80

OWNER & DEVELOPER
ELKRIDGE NATIONAL BANK
7290 MONTGOMERY RD.
ELKRIDGE, MARYLAND 21227

PREPARED BY:
NEU-VALLEY NURSERY 796-4195
628 WASHINGTON BLVD.; ELKRIDGE, MD. 21227
PROJECT # 80-002

LANDSCAPE DEVELOPMENT & SITE LIGHTING PLAN

ELKRIDGE NATIONAL BANK

V.O.M. 3/1 PARCEL A

5 5

SDP-80-150