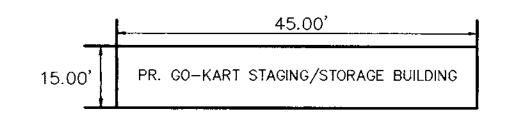
SITE DEVELOPMENT PLAN

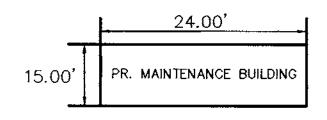
ROUNDING THIRD FAMILY ENTERTAINMENT CENTER GO-KART ADDITION

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND **PREVIOUS SDP# 85-214**

GENERAL NOTES

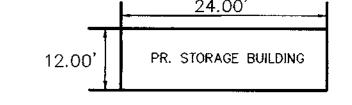
- 1. All construction shall be in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications, as applicable.
- 2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to any work being done in the public road.
- 4. All plan dimensions are to face of curb and face of building unless otherwise noted.
- The coordinates shown hereon are based upon the Howard County Geodetic control which is based upon the Maryland State Plane Coordinate system. Howard County Monument #43B2 N490,906.0 E865,758.6 Elevation 209.59 & #371A N492,566.2 E867,563.8 Elevation 195.75 were used for this project.
- 6. Water is public, contract # 5060 W&S in the Patapsco drainage area. Existing in Amberton Drive
- Sewer is public, contract #5060 W&S in the Patapsco drainage area. Existing in Amberton Drive
- 8. Water Quantity Storm water management for this project is provided in the privately owned and maintained detention pond on site. Water Quality Management is provided via the privately owned and maintained stormceptor on-site. The owner is responsible for the continued Maintenance of
- 9. A 100-year floodplain study is not required for this project.
- 10. A traffic study is not required for this project.
- 11. A noise study is not required for this project
- 12. A geotechnical study has been performed for the pond modifications shown hereon. Study done by Marshall Engineering Inc. dated 4/99
- 13. The boundary for this project is based on a Boundary Survey by Design Tech Associates, Inc. Dated 7/14/98.
- 14. Subject property is zoned M-2.
- 15. The existing topography is taken from field run survey with 2 foot contour intervals prepared by GW Stephens & Assoc. dated 2-6-86, as supplemented & updated by Messick & Assoc.during April of 1999.
- 16. See Department of Planning and Zoning file no. SDP-85-214.
- 17. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- 18. All storm drain pipe bedding shall be Class 'C' as shown in Fig. 11.4, Volume 1 of Howard County Design Manual unless otherwise noted.
- 19. All inlets shall be constructed in accordance with Howard County Standards.
- 20. All pipe elevations shown are invert elevations.
- 21. Storm drain trenches within road right-of-way shall be backfilled and compacted in accordance with the Howard County Design Manual, Volume IV, i.e., Standard Specifications and Details for Construction including the latest amendments.
- 22. All fill areas within roadway and under structures to be compacted to a minimum of 95% compaction of AASHTO T180.
- 23. No public notice posters are required because no new roadway entrances, or wetland mitigation
- 24. For stakeout and construction of Go-Kart track see plans prepared by PETER F. OLESEN and Associates.
- 25. All exterior lighting shall conform to Zoning Regulations, Section 134
- 26. This plan is exempt from the Forest Conservation ordinance in accordance with Section 16.1202(b)(I)(iii)
- 27. This plan is exempt from the APFO traffic study in accordance with Section 16.1107 (a)(2)(iii).
- 28. Existing utilities are based on SDP 85-214 GW Stephens & Assoc 2-6-86
- 29. The Planning Board approved the construction within 30' of the cemetary in accordance with section 16.1300 on August 26, 1999 for the minature golf course & shed on this project.





NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS

NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS



NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS

SITE ORIENTATION MAP 1"=100"

SHEET INDEX 1. TITLE SHEET

- 2. SITE DEVELOPMENT PLAN 3. DRAINAGE AREA MAP/GRADING & SEDIMENT CONTROL PLAN 4. DETAILS AND NOTES
- 5. DETAILS AND NOTES 6. STORM DRAIN PROFILES

7. LANDSCAPE PLAN

- 8. S.W.M. POND PROFILES AND DETAILS
- 9. GO-KART GRADING & COORDINATES BY PETER F. OLESEN & ASSOC.

PROPOSED EVERGREEN TREE EXISTING LANDSCAPING EDGE EXISTING WOODED EDGE (CANOPY LIMITS) ADDRESS CHART PARCEL STREET ADDRESS 6600 AMBERTON DRIVE

ELECT. DIST. - CENSUS TRACT -

SECT./AREA -

SEWER CODE --

ZONING - TAX MAP NO. -

M-2

ROUTE 100 BUSINESS PARK

DEED #. - BLOCK # -4399/393 B

WATER CODE -

DRAINAGE AREA LINE

CONDUIT FLOW AREA'S

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

PROPOSED DECIDUOUS SHADE TREE

CORP. CENTE! VICINITY MAP

SCALE: 1"=2000"

SITE ANALYSIS

4.13AC. (179,724 SQ. FT.) 62,290 SQ. FT.

22,972 SQ. FT. (12.8%)

EXISTING USE: BUILDING COVERAGE (EX.)

AREA OF PARCEL

DISTURBED AREA

PRESENT ZONING

PROPOSED USE: BUILDING COVERAGE (EX.) PR. MAINTENANCE BLDG. PR. GO KART STAGING/STORAGE BLDG.1,633 SQ. FT.

PR. STORAGE BUILDING 336 SQ. FT. TOTAL BUILDING COVERAGE

OF PARKING SPACES REQUIRED 6 BATTING CAGES 1 VIRTUAL REALITY GOLF 1 1/2 COURT BASKETBALL COURT 1 ROCK CLIMBING WALL 4 EMPLOYEES

MINIATURE GOLF GO-KART TRACK PARKING SPACES REQUIRED PARKING SPACES PROVIDED

22,972 SQ. FT. 384 SQ. FT. 25,325 SQ. FT. (14.1%) 1.5 SPACES/CAGE = 9 SPACES1.5 SPACES/HOLE = 1.5 SPACES 6 PEOPLE @ 1 SP./PER. = 6 SPACES 4 PEOPLE @ 1 SP./PER. = 4 SPACES 4 PEOPLE @ 1 SP./PER. = 4 SPACES 18 HOLES @ 1.5 SP./HOLE = 27 SPACES 15 KARTS@ 1.5 SP./KART = 22 SPACES

LEGEND

 \circ

x32.<u>45</u>

EXISTING CURB & GUTTER PROPERTY LINE EXISTING LIGHT POLE EXISTING POWER POLE APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING EXISTING BUILDING EXISTING CONCRETE SIDEWALK EXISTING STORM DRAIN EXISTING SEWER EXISTING TREELINE DEVELOPMENT ENGINEERING DIVISION EXISTING TREE/SHRUB ----- EXISTING OVERHEAD POWER LINE andy Hamotton PROPOSED BUILDING CHIEF, DIVISION OF LAND DEVELOPMENT 42 PROPOSED CONTOUR PROPOSED SPOT SHOT PROPOSED SIDEWALK PROPOSED STORM DRAIN REVISION LIMIT OF DISTURBANCE OWNER/DEVELOPER INLET PROTECTION ROUNDING THIRD SPORTS CENTER, INC.

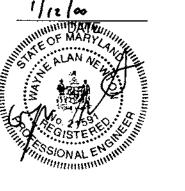
STABILIZED CONSTRUCTION ENTRANCE 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 TRAFFIC FLOW ARROW ATTN: JAMES HARRIS DRAINAGE FLOW ARROW

> PROJECT ROUNDING THIRD FAMILY ENTERTAINMENT CENTER

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

TITLE SHEET

MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212 MESSICK GROUP INC. T/A MERSION AND ASSOCIATES



DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO:

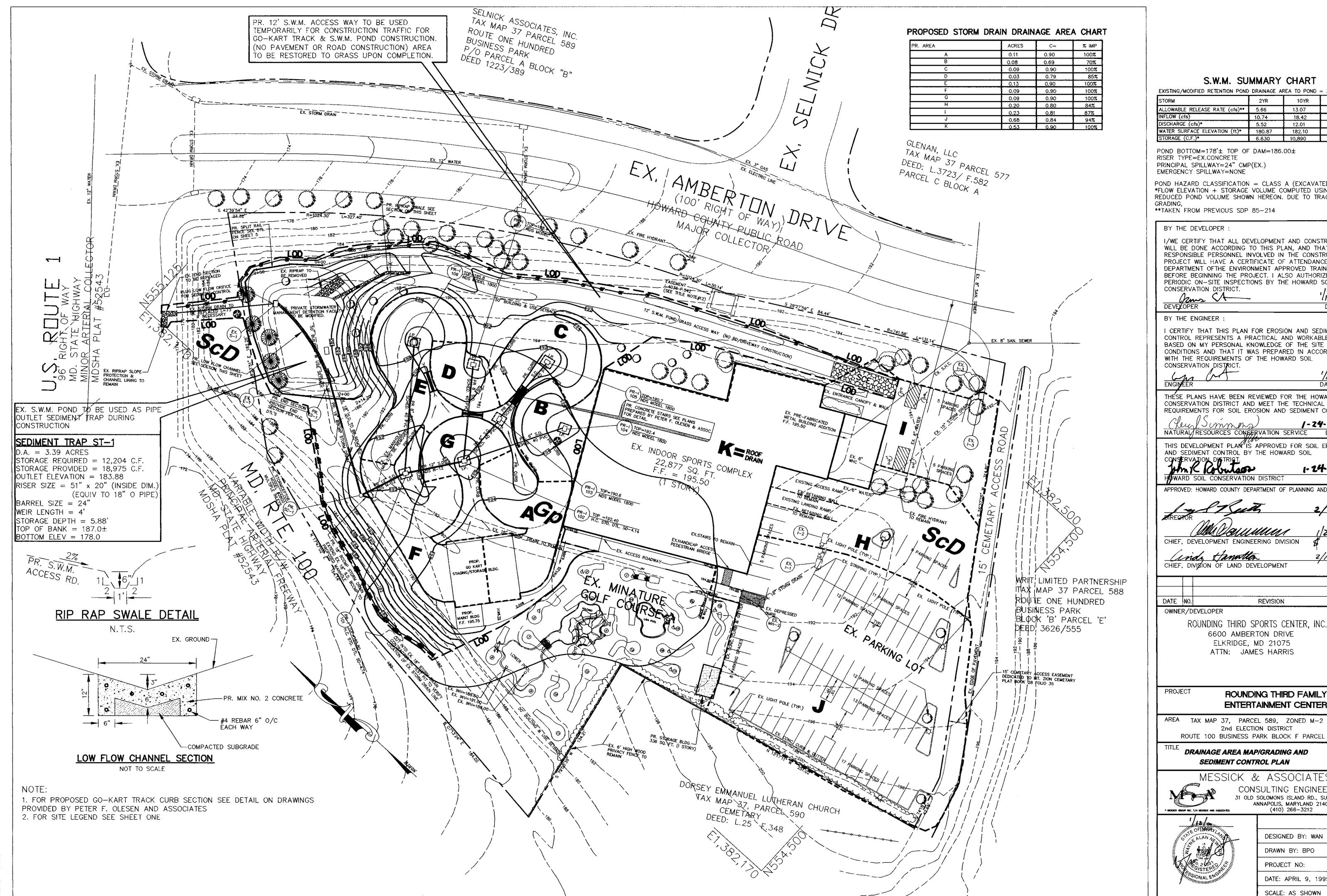
DATE: APRIL 9, 1999 SCALE: AS SHOWN WAYNE A. NEWTON #21591 DRAWING NO.: | OF 9

PROPOSED BUILDING ELEVATION'S

NOT TO SCALE

DRAWING NO.: 2 OF 9

WAYNE A. NEWTON #21591



S.W.M. SUMMARY CHART

EXISTING/MODIFIED RETENTION POND DRAINAGE AREA TO POND = 3.65 AC.

STORM	2YR	10YR	100YR
ALLOWABLE RELEASE RATE (cfs)**	5.66	13.07	23.45
INFLOW (cfs)	10.74	18.42	27.25
DISCHARGE (cfs)*	5.52	12.01	23.43
WATER SURFACE ELEVATION (ft)*	180.87	182.10	182.72
STORAGE (C.F.)*	6.630	10.890	13,590

POND BOTTOM=178'± TOP OF DAM=186.00± RISER TYPE=EX.CONCRETE PRINCIPAL SPILLWAY=24" CMP(EX.)

POND HAZARD CLASSIFICATION = CLASS A (EXCAVATED POND)
*FLOW ELEVATION + STORAGE VOLUME COMPUTED USING
REDUCED POND VOLUME SHOWN HEREON. DUE TO TRACK

**TAKEN FROM PREVIOUS SDP 85-214

BY THE DEVELOPER

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

BY THE ENGINEER

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

DATE

|-2**4-00**

THÈSE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

NATURAL RESOURCES CONSERVATION SERVICE DATE

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

1-24-60

CHIEF. DEVELOPMENT ENGINEERING DIVISION

Lindy Handlar CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER

ROUNDING THIRD SPORTS CENTER, INC. 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 ATTN: JAMES HARRIS

REVISION

PROJECT

ROUNDING THIRD FAMILY **ENTERTAINMENT CENTER**

2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

DRAINAGE AREA MAP/GRADING AND SEDIMENT CONTROL PLAN



MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212



WAYNE A. NEWTON #21591

DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

DRAWING NO .: 3 OF 9

- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, NKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; 8) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDINGS (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ÁLONE CAN ONLY BE DONÉ WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

TOTAL AREA OF SITE AREA TO BE ROOFED OR PAVED TOTAL CUT

AREA TO BE VEGETATIVELY STABILIZED 0.79 CU. YARDS* * CONTRACTOR NOT TO USE CU. YARDS* THESE QUANTITIES FOR PRICING

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL, OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
- 13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF NSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION
- 14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED MITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- 15. BORROW SITE TO BE PRE-APPROVED BY THE SEDIMENT CONTROL INSPECTOR, OR IN CASE OF EXCESS MATERIAL, AN APPROVED SEDIMENT CONTROL PLAN WILL BE NEEDED TO DEPOSIT EXCESS OFF-SITE.

SEQUENCE OF CONSTRUCTION

Several items below may be done concurrently with other items.

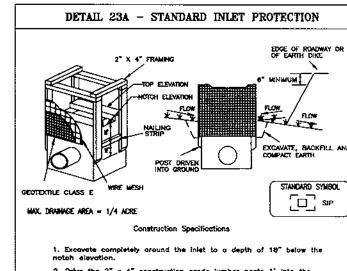
Obtain all necessary approvals, permits, and easements. The contractor must notify the Howard County Department of inspection and permits, Maryland Department of the Environment, and miss utility at least 48 hours prior to beginning work. 2. The contractor shall schedule a pre-construction meeting with the respective agencies to review the plans and permits. 1 day 4. Clear only for and install perimeter sediment control measures (i.e. silt fence, Super Silt Fence, etc.) as shown on the approved plans. Bulkhead ex. low flow orifice and modify riser as noted. .2 days

5. Relocate existing storm drain system and reconstruct pond 6. Rough grade site including pond grading. Excavate for track and install storm drains with inlet protection 4 weeks

7. Construct proposed building's and track surface. (can be done 8. Fine Grade Site, stabilize disturbed areas with seed and mulch,

9. Vegetatively stabilize all remaining disturbed areas with seed and 10. Once the site is stabilized and with the approval of the sediment control inspector, remove all sediment control measure. Re-stabilize areas disturbed due to the removal of the sediment control devices. . 2 days

a) Small temporary stockpiles may be created within the limits of disturbance provided that the stockpiles are perimetered by silt fence. maximum height = 6', side slopes 3H:1V.



2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place noti stripe between the posts on the ends of the Inlet. Assemble the top portion of the 2" x 4" frome using the overlap joint shown on Detail 23A. The top of the frame (veir) must be 6" below adjacent roadways where flooding and safety issues may arise. 3. Stretch the $1/2^{\circ}$ x $1/2^{\circ}$ wire mesh tightly ground the frame and fasten securely. The ends must meet and overlap at a

 Backfill ordund the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides. 6. If the first is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

Following initial soil disturbance or redisturbance, permanent or temporary stabilizatio shall be completed within seven calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days for all other disturbed or graded areas

- A. Soil Test: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of rough grading. Rates and analyses will be provided to the grading inspector as
- 1. Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6 week incubation period to allow oxidation of sulfates.
- B. Seedbed Preparation: Area to be seeded shall be loose and friable to depth of at least 3". The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than acres, apply 100 pounds of dolomitic limestone and 21 pounds of 10-20-20 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3" on slopes flatter than 3:1.
- Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 1 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder drill, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer hydroseeder method. Irrigate if soil moisture is deficient to support adequate growth, until vegetation is firmly established. If other seed mixes are to be used, select from Table 25, entitled "Permanent Seeding For Low Maintenance Areas" from the 1994 Standards and Specifications for Soil Erosion and Sediment Control. Mixes suitable for this area are 1, 3, and 5-7. Mixes 5-7 are suitable in non-mowable

Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading.

of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or

Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:

- (i) Use a mulch anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can
- (ii) Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons
- (iii) Liquid binders may be used and applied heavier at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 1994 Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the
- (iv) Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's

100 pounds of dolomitic limestone per 1,000 square feet. 15 pounds of 10-10-10 per 1000 square feet.

Perennial rye - 0.92 pounds per 1000 square feet (February 1 through April 30 or August 15 through November 1) Millet - 0.92 pounds per 1000 square feet (May 1 through August

Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8". All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code — Article 21, Section 2—308, and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within building grea is to be compacted to a minimum of 95% as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and

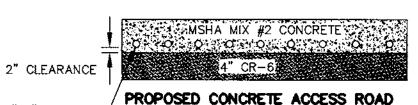
4. Permanent Sod:

Installation of sod should follow permanent seeding dates. Permanent sod is to be tall fescue, state approved sod; lime and fertilize per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes greater than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sad is not to be applied on frozen ground. Sad shall not be harvested or transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to insure established sod.

seeding dates and mixtures:

February 1 through April 30 and August 15 through October 31 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and sericea lespedeza at the rate of 0.5 pounds per 1000 square feet.





DETAIL 19 - STONE OUTLET STRUCTURE PERSPECTIVE VIEW 1 - 6' - 2' | MARRIEU 8" MANAGAM

12" MANAGAM

12" MANAGAM

12" MANAGAM

13" MANAGAM

14" MANAGAM

15" MANAGAM

15" MANAGAM

15" MANAGAM CROSS SECTION

1. Crushed atone shall be used. Gravel may be used if crushed atone is not available. The atone shall be 2^*-3^* in size. 2. The creet of the stone dike shall be at least 8" lower than the lowest elevation of the top of the earth dike and shall be level. 3. The stone outlet structure shall be embedded into the soil a minimum of $\mathbf{4}^n$ 4. The minimum length of the crest of the stone outlet structure shall be 6

The stone outlet structure shall be inspected after each rain. Stone shall be replaced when the structure causes to function and ponding results.

DETAIL 25 - ROCK OUTLET PROTECTION

FILTER CLOTH LINING-

INVERT

182.42

SECTION B-B

TYPE

18" CMP

END SECTION

MODEL 3600

YARD INLET

FIBERGLASS

FIBERGLASS

FIBERGLASS

INIFT

INI FT

INLET

TO

STORMCEPTOR 181.85

YARD INLET 183.09

FIBERGLASS 186.50

FIBERGLASS | 184.06

SYMBOL

ES-1

i−101

1 - 104

I-106

1 - 107

FROM

-106

-104

-105

-103

-107

6. The baffle board shall be extended one foot into the dike, staked and embedded $\mathbf{4}''$ into the existing ground. 7. The drainage area to this structure shall be less than 1/2 acre.

DISCHARGE TO SEMI CONFINED SECTION (MAXIMUM TAILWATER CONDITION)

NOTE: FILTER CLOTH MUST EXTEND A MINIMUM OF 6' DEYOND APRON AND SIDES

SECTION A-A

NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

INVERT

OUT

180.90

184.16

TYPE

SCHED 40 PVC

6" SCHED 40 PVC

SCHED 40 PVC

SCHED 40 PVC

8" SCHED 40 PVC

12" ADS

18" BCCMP

181.60 192.20

182.32 | 189.80

182.99 190.40

186.60 190.60

184*.*80 | 185,40 |

188.90

PIPE SCHEDULE

UPHILL

INV.

181.60

184.40

190.40

188.70

186.50

184.79

183.49

MARYLAND DEPARTMENT OF ENVIRONMENT VATER HANAGEMENT ADMINISTRATION

STRUCTURE SCHEDULE

REMARKS

H.C. STD. SD-3.61

NDS MODEL 1800

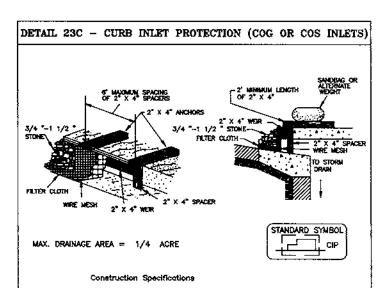
NDS MODEL 1800

NDS MODEL 1800

NDS MODEL 1200

H.C. STD. SD-4.14 N 554,898.08

TOP



Attach a continuous piece of wire mesh $(30^\circ$ minimum width by throat length plus 4") to the 2" x 4" welr (measuring throat length plus 2") as shown on the standard drawing. 2. Place a continuous piece of Geotectile Class E the same dimensions as the wire mesh over the wire mesh and securely ottach R to the 2" x 4" well. 3. Securely not the 2° X 4° welr to a 9° long vertical spacer to be located between the welr and the inlet face (max. 4° apart). 4. Pioce the assembly against the lefet throat and noil (minimum 2' lengths of 2" x 4" to the top of the welr at spacer locations). These 2" x 4" anchors shall extend across the iniet top and be held in place by sandbage or attempts weight.

The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening. 8. Form the 1/2 " x 1/2 " wire mesh and the geotestile fabric to the concrete gutter and against the face of the curb on both sides of the least. Place clean, 3/4 " x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the least under or around the geotextile. This type of protection must be inspected frequently and the filter cloth and stone replaced when clagged with sediment.

ROCK DUTLET PROTECTION

The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall

be repaired by placing another piece of geotextile over the danged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

thickness in one operation and in such a normer as to avoid displacement of underlying materials. The stone for rip-rap or galion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the

smaller stones and spalls filling the voids between the larger stones. Rip-nep shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the nermoment works.

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to

NORTH

N 554,986.16

N 554,911.57

N 554,832.63

N 554,875,76

N 554,959.57

N 554,915.70

DOWNHILL

∃NV.

178.00

182.42

185.00

186.60

185.00

183.82

182.92

H.C. STD. SD-4.14 N 554,872.09 E 1,382,246.20

EAST

1,382,222.05

E 1,382,174.76

E 1,382,315.16

E 1.382.343.16

E 1,382,286.62

CL TO CL

LENGTH

100'

55'

40'

43'

E 1,382,304.01

N 554.873.78 E 1,382,287.37

SLOPE

4.19%

1.98%

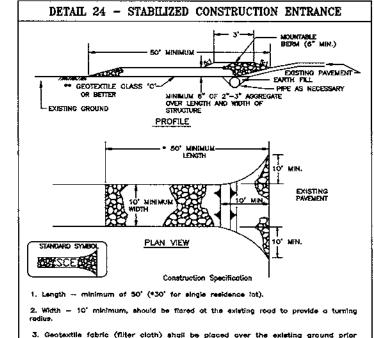
7.01%

3.79%

3.79%

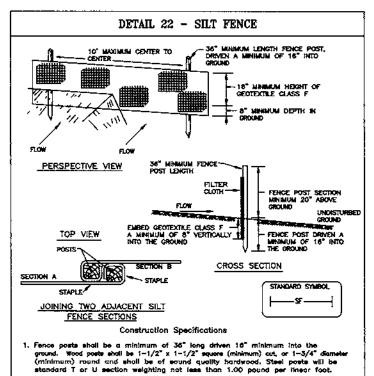
1.33%

1.33%



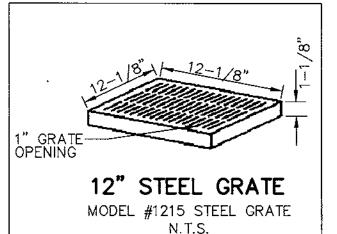
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile. Stone — crushed aggregate (2" to 3") or recidimed or recycled concrete equivolent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Water — all surface water flowing to or diverted toward construction entronces shall be piped through the entrance, maintolining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5t slopes and a minimum of 5" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 5" minimum will be required. Location — A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



folded and stapled to prevent endiment bypass. Sitt Fence shall be inspected after each rainfall event and maintained when buiges occur or when sediment accumulation reached 50% of the fabric height.

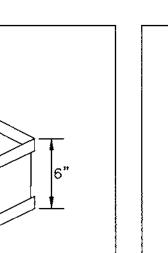




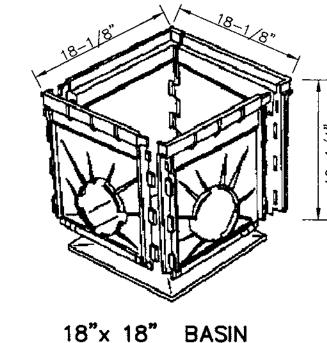
12" BASIN

MODEL #1200 INLET



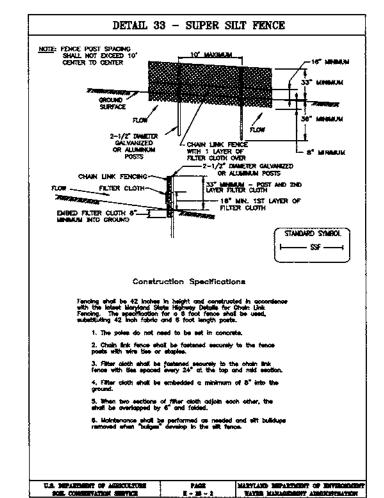


12" RISER EXTENSION MODEL #1216 RISER EXTENSION N.T.S.



MODEL #1800 BASIN N.T.S.

NOTE: FOR INSTALLATION & MAINTENANCE DETAILS SEE MANUFACTURERS SPEC'S. DRAINAGE STRUCTURE'S SHOWN HEREON TAKEN FROM NDS PRODUCT INFORMATION AS DISTRIBUTED BY FORM SERVICES (410) 247-9500



BY THE DEVELOPER I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT /11/00 BY THE ENGINEER

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

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOII

CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

ROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION and Hamilton 2/1/N CHIEF, DIVISION OF LAND DEVELOPMENT

DATE NO. REVISION OWNER/DEVELOPER ROUNDING THIRD SPORTS CENTER, INC.

> 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 ATTN: JAMES HARRIS

> > ENTERTAINMENT CENTER

PROJECT ROUNDING THIRD FAMILY

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

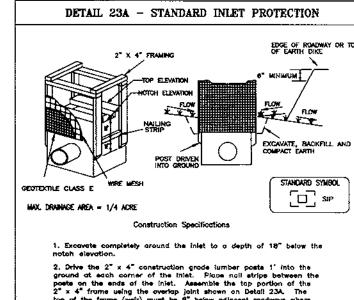
DETAIL AND NOTE SHEET

MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212 * MESSICK GROUP INC. T/A MESSICK AHO ASSOCIATE



DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

WAYNE A. NEWTON #21591 DRAWING NO.: 4 OF 9



4. Stretch the Geatextile Class E tightly over the wire meeh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be averlapped and folded, then fastened down.

Sediment control plans for mining operations must include the following

For seeding dates of May 1 through August 14 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and weeping lovegrass at the rate

of 0.1 pounds per 1000 square feet. NOTE: Use of this information does not preclude meeting all of the requirements of the "1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control."

PROPOSED CONCRETE ACCESS ROAD 4"x4" WELDED-

CONC. PAVEMENT

8" PORTLAND CEMENT

WIRE MESH

U.S. REPARTMENT OF ACRECULTURE PAGE MARTILING DEPARTMENT OF INVIDENCESSOR
SOR. COMMENTATION SERVICE 2 - 16 - 5 VATER MANAGEMENT ADMINISTRATION

12" ADS -101 182.35 38'

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, arubbed and stripped of topsoil. All trees, vegetation roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the 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. For dry stormwater management ponds, a minimum of 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below 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.

Materials — The fill material shall be taken from approved, designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stone greater than 6", frozen or other objectionable materials. Fill material for the embankment shall conform to Unified Soil Classification CL.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of the fill. Fill materials shall be placed in maximum 8" thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 on 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 will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material 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 below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures 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 manually directed 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 the structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

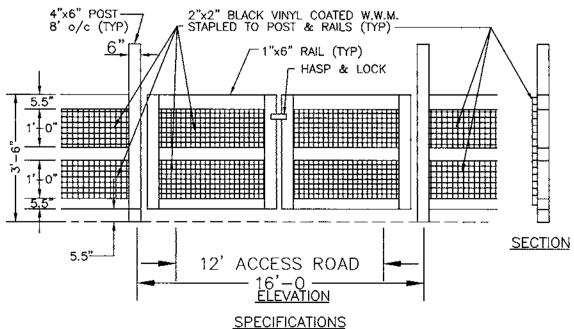
Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

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. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used; Nexon, Plasti--Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-

Aluminum Coated Steel Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Aluminum Pipe - This pipe and its appurtenances shall conform to AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contract 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 between 4 and 9.



1. HORIZONTAL RAILS SHALL BE 1"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE.

2. POSTS 8' o/c SHALL BE 4"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE. 3. GALVANIZED WIRE ON BACK OF FENCE SHALL BE 2"x2" BLACK VINYL COATED WELDED

N.T.S.

4. GATE SHALL BE 8' EACH SIDE (16' TOTAL) SWING GATE WITH HASP AND LOCK.

SPLIT RAIL FENCE AND GATE DETAIL

WIRE MESH STAPLED TO POST & RAILS WITH GALVANIZED STAPLES.

Coupling Bands, anti-seep collars, end sections, etc. must be composed of the same materials as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

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. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less that 24" in diameter: flanges on both ends of the pie, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

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.

Backfilling - Backfilling shall be conform to "Structural Backfill"

Other Details - Other details such as anti-seep collars, valves, etc. shall be as shown on the

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

Laying Pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

Backfilling - Backfilling shall confirm to "Structural Backfill"

Other Details - Other details such as anti-seep collars, valves, etc. shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM

Joints and Connections — Joints and connections to anti-seep collars shall be completely watertight.

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.

Backfilling - Backfilling shall conform to "Structure Backfill

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

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311 & 901.2.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section

3/4" PLYWOOD PERFORATED —

-BOTTOM POND

Care of Water During Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water will be pumped.

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, liming, fertilizing, and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

inetall Collar With Corrugations Vertical

PERMANENT LOW FLOW

(SEDIMENT CONTROL)

TEMPORARY STONE FILTER DETAIL

N.T.S.

ORIFICE INV. EL =178.70

EX. 24" CMP

Weld

7-50-

ANTI-GEEP COLLAR DETAIL

7-947-0

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

Collar To Be Of Same Gage As The Pipe With Which It is Used.

is" isa of Ls"

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DETENTION POND

Routine Maintenance

- 1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
- 2. Top and side slopes of the embankment shall be moved a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be moved as needed.
- 3. Debris and litter shall be removed during regular moving operations and as needed.
- Visible signs or erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance

- 1. Structural components of the pond, such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
- 2. Sediment shall be removed from the pond, and forebay, no later then when the capacity of the pond, or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works

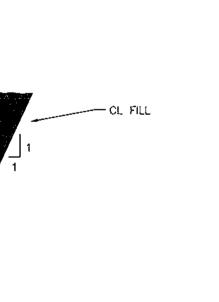
OPERATION AND MAINTENANCE SCHEDULE FOR

The stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.

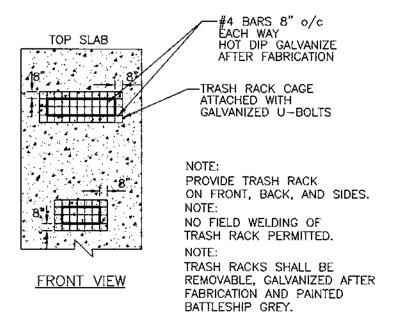
- after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- 4. The inlet and outlet pipes shall be checked for any obstructions at least once very six months. It obstructions are tound the owner shall have them Structural parts of the Stormceptor unit shall be repaired as needed.
- 5. The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available the Howard County officials upon their request.

STORMCEPTOR WATER QUALITY DEVICE

- The Stormceptor water quality structure shall be checked and cleaned immediately
- The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.



PRINCIPAL SPILLWAY EXCAVATION



DETAIL -- TRASH RACK

N.T.S.

Construction Material Opecifications.

2) When Opecified on The Plans, Coating of Collors Chall be

Unassembled Collars Chall Be Marked By Pointing or

Dimassemble College of the Thomas of Detween The The Lap Between The Two Half Bections And Detween The Two Half Bections And Detween The Two Half Bections And Detween The Poet And Connecting Band Chall Be Cauliked With Asphalt Mastic At Time of Installation.

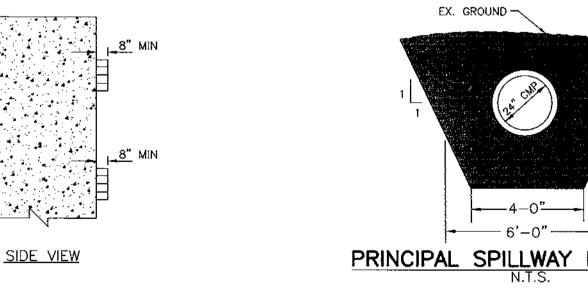
5) Each Collar Chall Be Furnished With Two 1/2" Diameter Rade With Standard Tank Lugs For Connecting Collars

G) Collars Chall Be Located 2" Min. From All Ape Joints.

--- 12"Man. ---

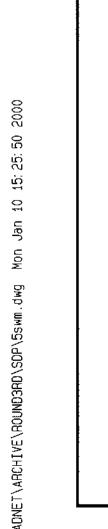
SECTION B'B

TRASH RACK



3/8"ø GALV. NUT AND CUT RACK 3/8"ø GALV. "Ú" BOLT (TYP) -RISER WALL

MOUNTING DETAIL N.T.S.



-HOWARD CO. A-5 INLET W/STEPS

-EX. TRASH RACK No.4

REINFORCED BARS 4"

INSTALL NEW TRASH

(2)-No.4 REINFORCED BARS

(EQUALLY SPACED) TO BE REMAIN. CONTRACTOR TO

INSTALL NEW TRASH RACK

- PERMANENT POND BOTTOM ELEV=177.60

OVER EX. OPENING (SEE

O/C SET 6" IN CONCRETE TO REMAIN.

CONTRACTOR TO

RACK OVER EX. OPENING (SEE DETAIL)

HOWARD STD. SD-4.0

- TOP OF INLET

4'-0"

ELEV.=184.84

PREVIOUSLY BRICKED SHUT WEIR-

TO BE RE-OPENED FOR SEDIMENT CONTROL PURPOSES.

LENGTH = 4' (TO BE

RE-BRICKED SHUT UPON

PREVIOUS INVERT = 183.88.

COMPLETION OF CONSTRUCTION.)

EXISTING WEIR TO BE -

BRICKED SHUT FOR

SEDIMENT CONTROL

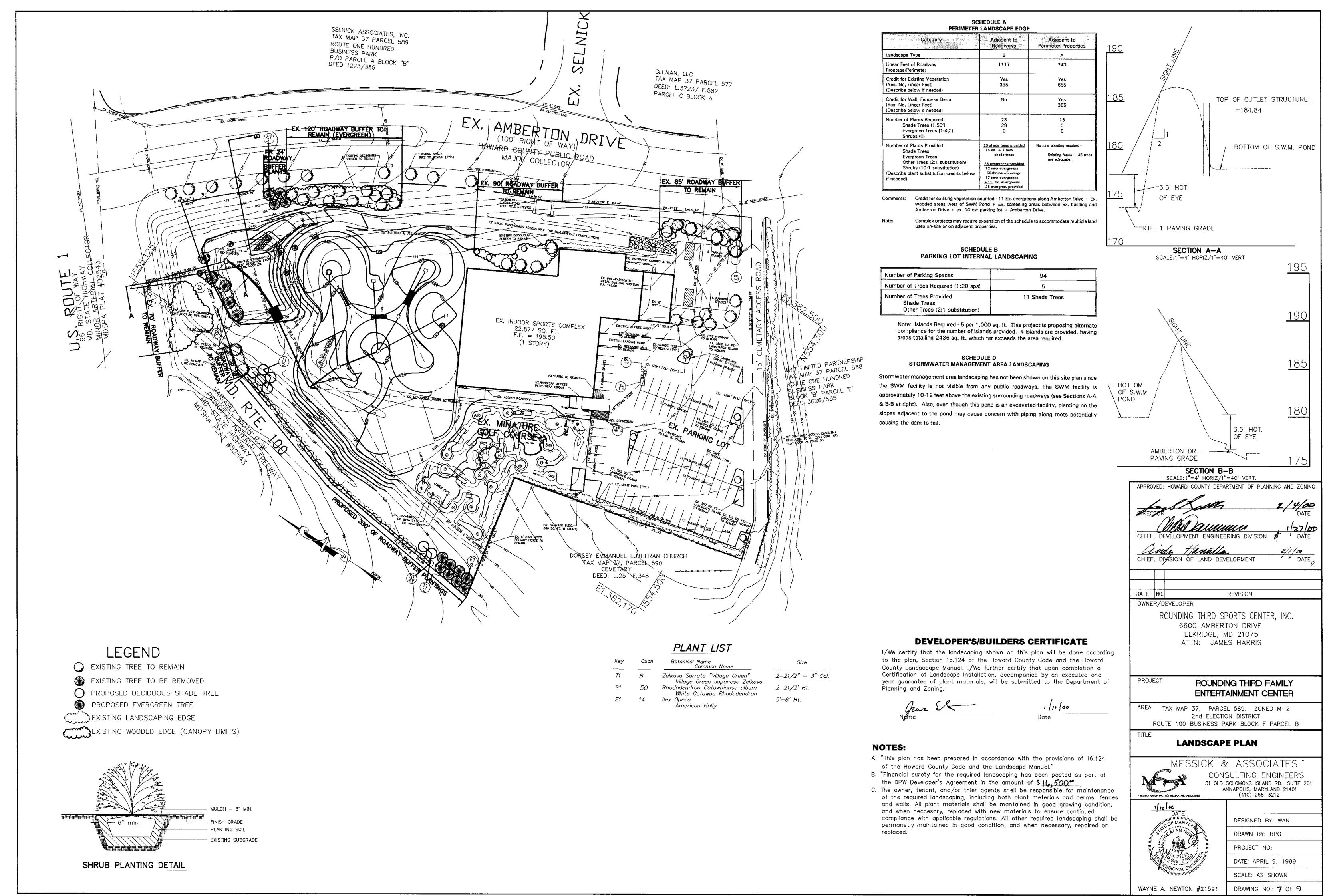
OF PROJECT.

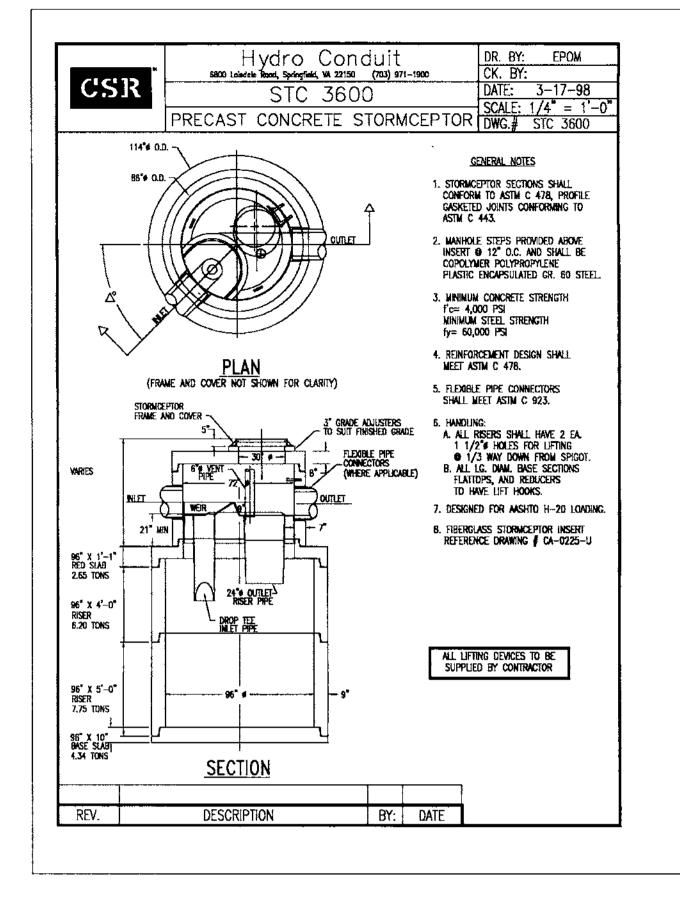
INV.=181.58

O BE RE-OPENED UPON COMPLETION

LOW FLOW ORIFICE

STORAGE BELOW ORIFICE

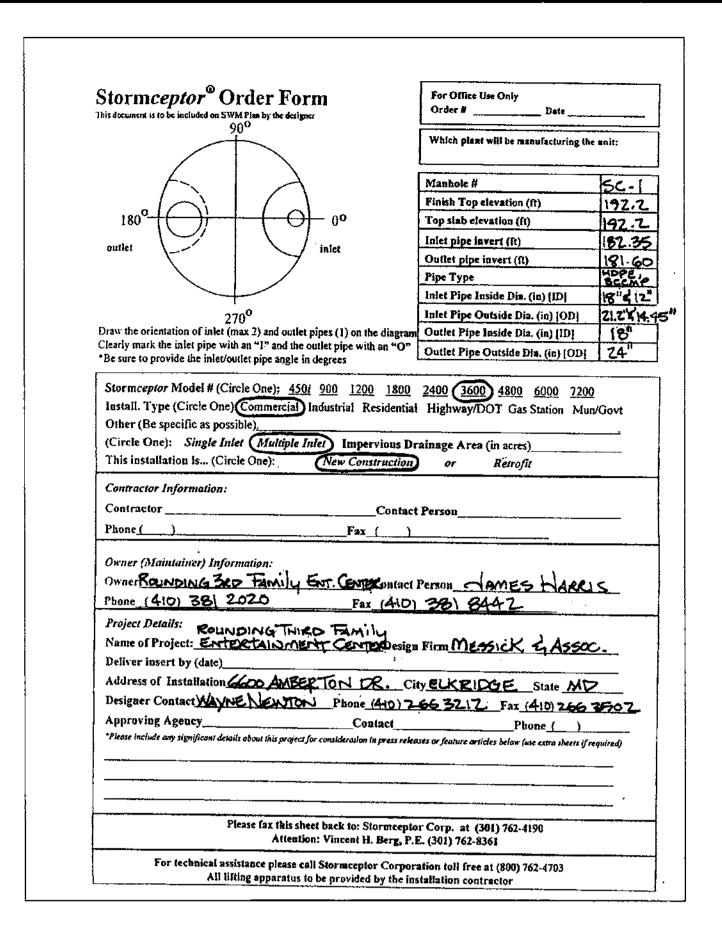


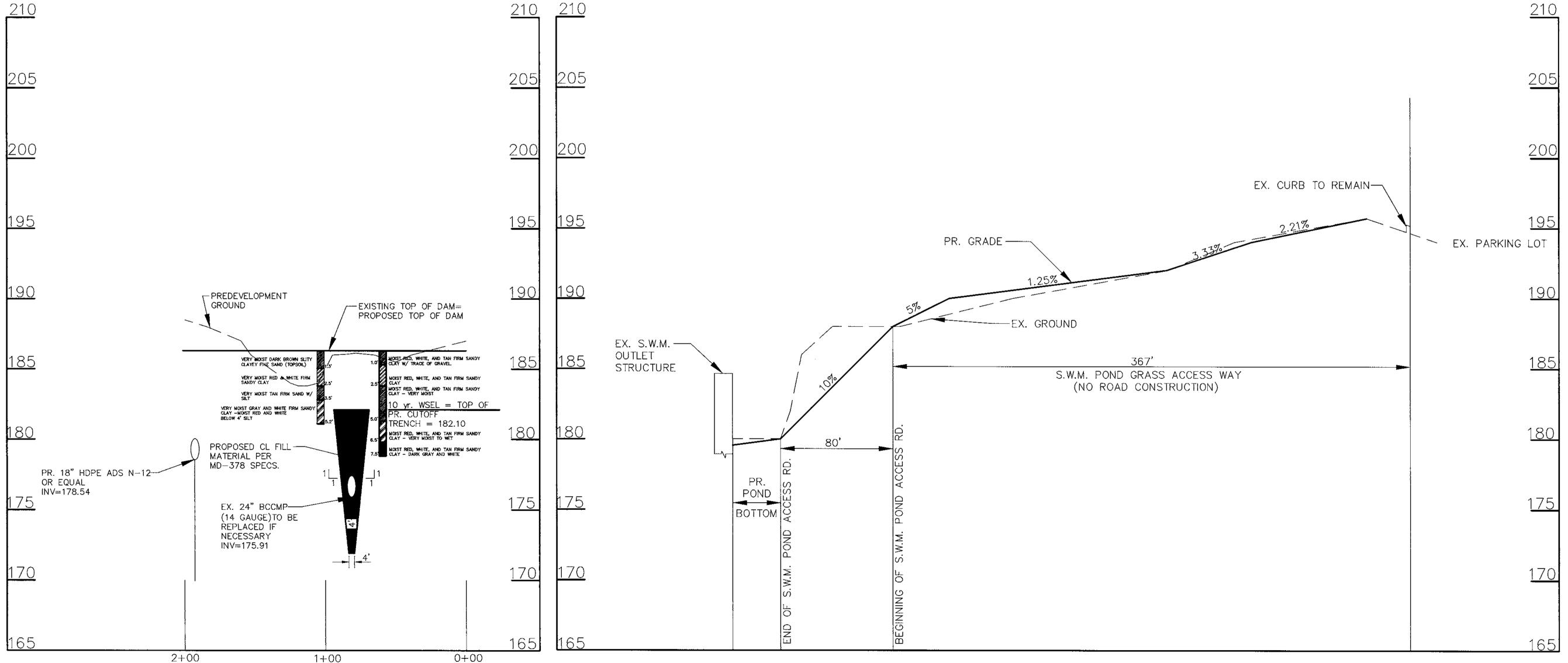


CENTERLINE DAM PROFILE

SCALE: 1"=40' HORIZ

1"=4' VERT





BY THE DEVELOPER : I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. DATE BY THE ENGINEER : I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. 12/60 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL 1-24-60 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT DATE NO. REVISION OWNER/DEVELOPER ROUNDING THIRD SPORTS CENTER, INC. 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 ATTN: JAMES HARRIS PROJECT ROUNDING THIRD FAMILY ENTERTAINMENT CENTER AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B S.W.M. POND PROFILES AND DETAILS

MESSICK & ASSOCIATES *

* MESSICK GROUP INC. T/A MESSICK AND ASSOCIATE

WAYNE A. NEWTON #21591

CONSULTING ENGINEERS
31 OLD SOLOMONS ISLAND RD., SUITE 201
ANNAPOLIS, MARYLAND 21401
(410) 266-3212

DESIGNED BY: WAN

DATE: APRIL 9, 1999

DRAWING NO.: 8 OF 9

SCALE: AS SHOWN

DRAWN BY: BPO

PROJECT NO:

PROFILE ALONG S.W.M. POND ROAD/GRASS ACCESS WAY

1"=4' VERT

SCALE: 1"=40' HORIZ

NUMBER	lc	Da	CD	ा हा	R FT	L FT	LC FT
C1	170'24'11"	286'28'44"	N 67'25'03" W	238.25	20,00	59,48	39.86
C2	65'21'21"	249'06'44"	N 50'27'42" E	14,75	23.00	26.24	24.84
C3	67'22'41"	249'06'44"	N 49'27'02" E	15.33	23.00	27.05	25.52
C4	219'07'51"	249'06'44"	S 54'40'23 E	64.72	23.00	87.96	43.34
C5	152'50'39"	249'06'44"	S 21'31'48" E	95.23	23.00	61.36	44,71
C6	209'54'54"	249'06'44"	S 07'00'20" W	86.09	23.00	84.27	44,44
C7	99'28'41"	249'06'44"	S 62'13'26" W	27,16	23.00	39.93	35.10
C8	214°23'59"	260'26'07"	N 60'18'55" W	71.07	22.00	82.32	42.03
C9	199'30'14"	260'26'07	N 52'52'02" W	128.01	22.00	76.60	43.36
C10	66'45'41"	212'57'28"	S 15'35'48" E	6.59	10.00	11.65	11,00
C11	88'20'08"	212'57'28"	N 83'08'43" W	6.79	10.00	11.93	11.23
C12	68'20'08"	254'38'52"	N 83'08'43" W	15,27	22.50	25.84	25.27
C13	66'45'41"	25 4'38'52 "	N 15'35'48 W	14.83	22.50	26.22	24,76

ic = DELTA ANGLE
Do = DEGREE OF CURVATURE ARC
CD = CHORD DIRECTION
T FT = TANGENT LENGTH IN FEET

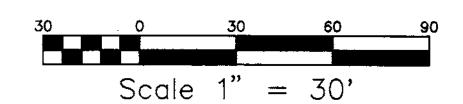
R FT = RADIUS IN FEET L FT = ARC LENGTH IN FEET LC FT = CHORD LENGTH IN FEET

CURVE DATA

PT. NO.	NORTH	EAST	DESC.
1	554,879.44	1,382,204.32	RP
2	554,870.29	1,382,222.08	PC
3	554,885.59	1,382,185.28	PT
4	554,899.61	1,382,213.93	RP
5	554,906.63	1,382,192.03	PC
6	554,922.44	1,382,211.18	PT
7	554,949.05	1,382,239.79	RP
8	554,926.22	1,382,242.53	PC
9	554,942.80	1,382,261.92	PT
10	554,957.91	1,382,290.08	RP
11	554,964.16	1,382,267.95	PC
12	554,939.09	1,382,303.31	PT
13	554,913.16	1,382,306.41	RP
14	554,931.97	1,382,293.18	PC
15	554,890.38	1,382,309.59	PT
16	554,872.29	1,382,346.34	RP
17	554,895.07	1,382,343,16	PC
18	554,850.96	1,382,337.74	PT
19	554,836.00	1,382,313.32	RP
20	554,857.33	1,382,321.93	PC
21	554,840.97	1,382,290.87	PT
22	554,827.01	1,382,265.24	RP
23	554,822.25	1,382,286.72	PC
24	554,843.07	1,382,250.21	PT
25	554,869.87	1,382,246.64	RP
26	554,853.81	1,382,261.68	PC
27	554,879.98	1,382,227.11	PT
28	554,807.92	1,382,228.29	RP
29	554,799.04	1,382,232.87	PC
30	554,800.38	1,382,221.72	PT
31	554,838.40	1,382,193.25	RP
32	554,841.46	1,382,183.73	PC
33	554,792.18	1,382,225.05	RP
34	554,796.35	1,382,281.07	PT@B/C
35	554,772.63	1,382,235.14	PC@B/C
36	554,775.58	1,382,210.61	PT@B/C
37	554,832.82	1,382,178.33	RP
38	554,816.23	1,382,163.89	PC@B/C
39	554,839.54	1,382,157.38	PT@B/C
40	554,910.45	1,382,180.13	PT@B/C
41	554,834.56	1,382,190.04	CORNER
42	554,805.03	1,382,223.99	CORNER
43	554,783.15	1,382,204.96	CORNER
44	554,812.68	1,382,171.01	CORNER
45	554,822.99	1,382,181.63	RP ISLAND
46	554,795.10	1,382,131.53	RP ISLAND
47	554,789.06	1,382,208.45	
48	554,816.96	1,382,176.38	RP ISLAND
	- 10.00	1,006,170.30	

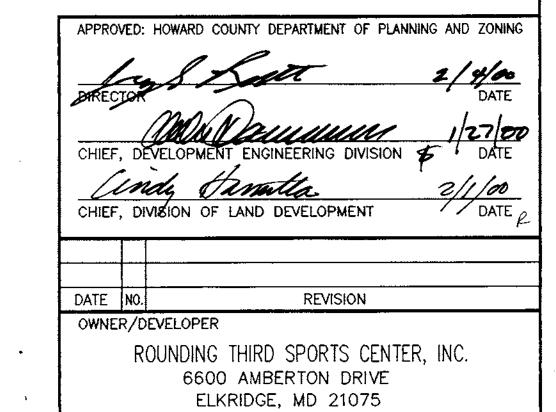
RP = CENTER POINT OF CURVE PC = POINT OF CURVATURE PT = POINT OF TANGENCY B/C = BACK OF CURB

TRACK COORDINATES



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THIS SHEET PROVIDED BY PETER F. OLESEN & ASSOC.



PROJECT ROUNDING THIRD FAMILY **ENTERTAINMENT CENTER**

ATTN: JAMES HARRIS

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

> GO KART TRACK GRADING AND COORDINATES

MESSICK & ASSOCIATES * CONSULTING ENGINEERS
31 OLD SOLOMONS ISLAND RD., SUITE 201
ANNAPOLIS, MARYLAND 21401
(410) 266-3212

9/3/99 DATE

WAYNE A. NEWTON #21591

* NESSECK GROUP INC. T/A MESSECK AND ASSOCIATE

DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

DRAWING NO.: 9 OF 9

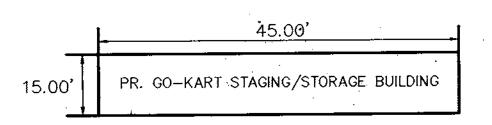
SITE DEVELOPMENT PLAN ROUNDING THIRD FAMILY ENTERTAINMENT CENTER

GO-KART ADDITION

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND **PREVIOUS SDP# 85-214**

GENERAL NOTES

- 1. All construction shall be in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications, as applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work
- 3. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to any work being done in the public road.
- 4. All plan dimensions are to face of curb and face of building unless otherwise noted.
- The coordinates shown hereon are based upon the Howard County Geodetic control which is based upon the Maryland State Plane Coordinate system. Howard County Monument #43B2 N490,906.0 E865,758.6 Elevation 209.59 & #371A N492,566.2 E867,563.8 Elevation 195.75 were used for this project.
- Water is public, contract # 5060 W&S in the Patapsco drainage area. Existing in Amberton Drive.
- Sewer is public, contract #5060 W&S in the Patapsco drainage area. Existing in Amberton Drive
- Water Quantity Storm water management for this project is provided in the privately owned and maintained detention pond on site. Water Quality Management is provided via the privately owned and maintained stormceptor on-site. The owner is responsible for the continued Maintenance of
- 9. A 100-year floodplain study is not required for this project.
- 10. A traffic study is not required for this project
- 11. A noise study is not required for this project.
- 12. A geotechnical study has been performed for the pond modifications shown hereon. Study done by Marshall Engineering Inc. dated 4/99
- 13. The boundary for this project is based on a Boundary Survey by Design Tech Associates, Inc. Dated 7/14/98.
- 14. Subject property is zoned M−2.
- 15. The existing topography is taken from field run survey with 2 foot contour intervals prepared by GW Stephens & Assoc. dated 2-6-86, as supplemented & updated by Messick & Assoc.during April of 1999.
- 16. See Department of Planning and Zoning file no. SDP-85-214.
- 17. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- 18. All storm drain pipe bedding shall be Class 'C' as shown in Fig. 11.4, Volume 1 of Howard County Design Manual unless otherwise noted.
- 19. All inlets shall be constructed in accordance with Howard County Standards.
- 20. All pipe elevations shown are invert elevations.
- 21. Storm drain trenches within road right-of-way shall be backfilled and compacted in accordance with the Howard County Design Manual, Volume IV, i.e., Standard Specifications and Details for Construction including the latest amendments.
- 22. All fill areas within roadway and under structures to be compacted to a minimum of 95% compaction of AASHTO T180.
- 23. No public notice posters are required because no new roadway entrances, or wetland mitigation
- 24. For stakeout and construction of Go-Kart track see plans prepared by PETER F. OLESEN and Associates.
- 25. All exterior lighting shall conform to Zoning Regulations, Section 134
- 26. This plan is exempt from the Forest Conservation ordinance in accordance with Section 16.1202(b)(l)(iii)
- 27. This plan is exempt from the APFO traffic study in accordance with Section 16.1107 (a)(2)(iii). 28. Existing utilities are based on SDP 85-214 GW Stephens & Assoc 2-6-86
- 29. The Planning Board approved the construction within 30' of the cemetary in accordance with section 16.1300 on August 26, 1999 for the minature golf course & shed on this project.



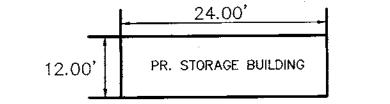
NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE

BUILDING DETAILS AND ELEVATIONS

PR. MAINTENANCE BUILDING

NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS

NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS



THIS RECORD DRAWING BASED ON

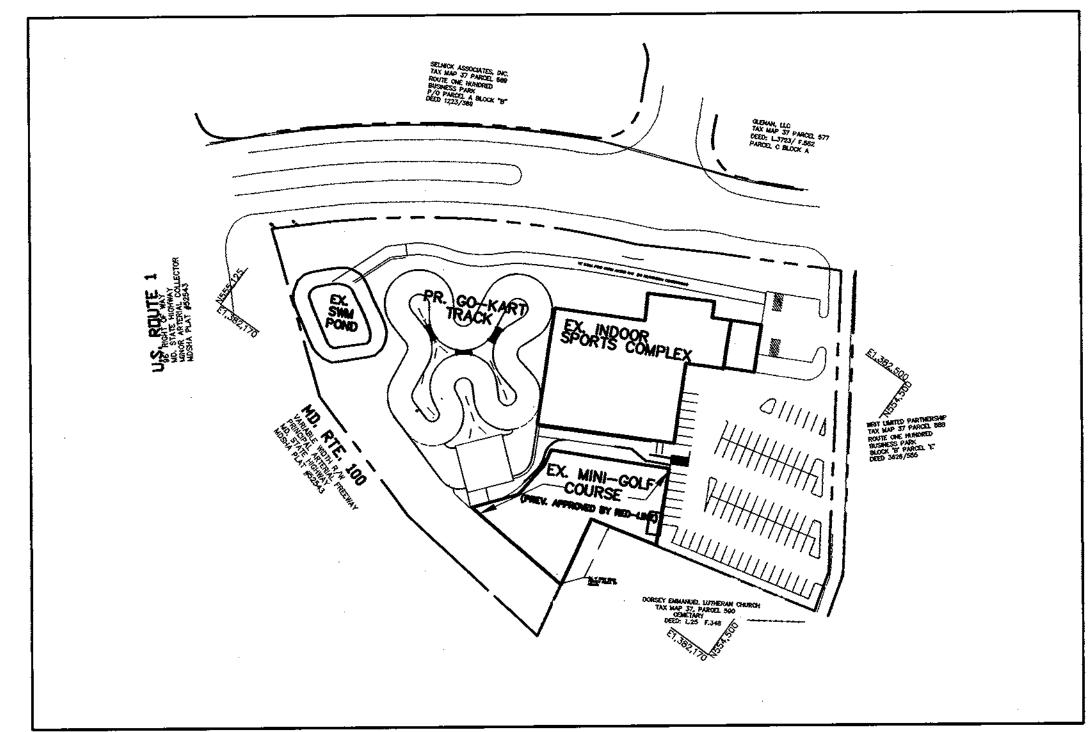
SURVEYS BY: DESIGN TECH. A SSOC.

VISUAL OBSERVATION BY:

MESSICK GROUPING. AND

PROPOSED BUILDING ELEVATION'S

NOT TO SCALE



SITE ORIENTATION MAP 1"=100

SHEET INDEX 1. TITLE SHEET

- 2. SITE DEVELOPMENT PLAN 3. DRAINAGE AREA MAP/GRADING & SEDIMENT CONTROL PLAN
- 4. DETAILS AND NOTES 5. DETAILS AND NOTES
- 6. STORM DRAIN PROFILES 7. LANDSCAPE PLAN
- 8. S.W.M. POND PROFILES AND DETAILS 9. GO-KART GRADING & COORDINATES BY PETER F. OLESEN & ASSOC.

SUBDIVISION NAME -

WATER CODE -



ADDRESS CHART PARCEL

DRAINAGE AREA LINE

CONDUIT FLOW AREA'S

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

PROPOSED EVERGREEN TREE

EXISTING LANDSCAPING EDGE

PROPOSED DECIDUOUS SHADE TREE

STREET ADDRESS 6600 AMBERTON DRIVE

2370000

EXISTING WOODED EDGE (CANOPY LIMITS)

SECT./AREA -ROUTE 100 BUSINESS PARK ELECT. DIST. - CENSUS TRACT -DEED #. - BLOCK # -ZONING - TAX MAP NO. -M-2

CORP. CENTER VICINITY MAP

22,972 SQ. FT. (12.8%)

SITE ANALYSIS

4.13AC. (179,724 SQ. FT.) AREA OF PARCEL DISTURBED AREA 62,290 SQ. FT. PRESENT ZONING

EXISTING USE:

BUILDING COVERAGE (EX.)

PROPOSED USE: 22,972 SQ. FT. BUILDING COVERAGE (EX.) 384 SQ. FT. PR. MAINTENANCE BLDG. PR. GO KART STAGING/STORAGE BLDG.1.633 SQ. FT.

336 SQ. FT. PR. STORAGE BUILDING TOTAL BUILDING COVERAGE

OF PARKING SPACES REQUIRED 6 BATTING CAGES 1 VIRTUAL REALITY GOLF 1 1/2 COURT BASKETBALL COURT 1 ROCK CLIMBING WALL 4 EMPLOYEES

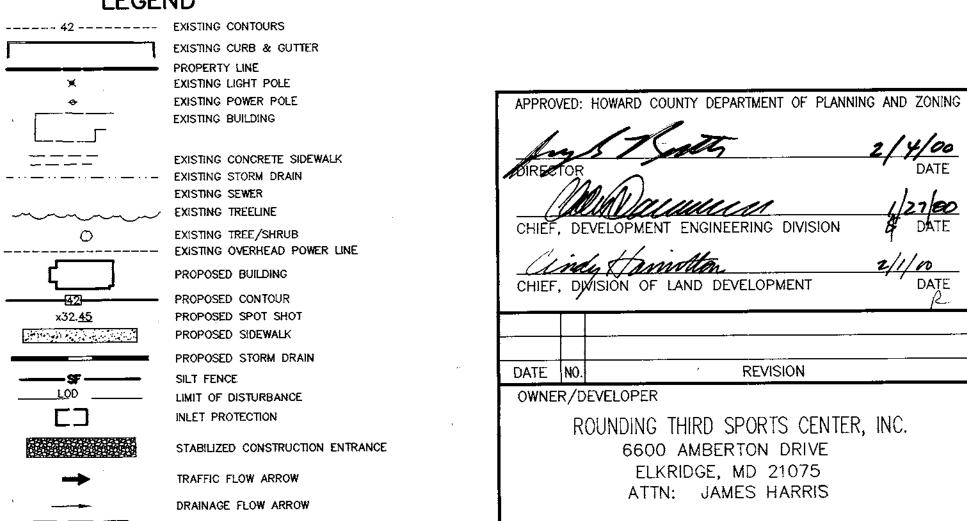
MINIATURE GOLF GO-KART TRACK PARKING SPACES REQUIRED PARKING SPACES PROVIDED

25,325 SQ. FT. (14.1%) 1.5 SPACES/CAGE = 9 SPACES 1.5 SPACES/HOLE = 1.5 SPACES 6 PEOPLE @ 1 SP./PER. = 6 SPACES 4 PEOPLE @ 1 SP./PER. = 4 SPACES 4 PEOPLE @ 1 SP./PER. = 4 SPACES 18 HOLES @ 1.5 SP./HOLE = 27 SPACES 15 KARTS@ 1.5 SP./KART = 22 SPACES

LEGEND

 \circ

x32.<u>45</u>



PROJECT ROUNDING THIRD FAMILY

AREA TAX MAP 37, PARCEL 589, ZONED M-2

2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

ENTERTAINMENT CENTER

TITLE SHEET

MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401



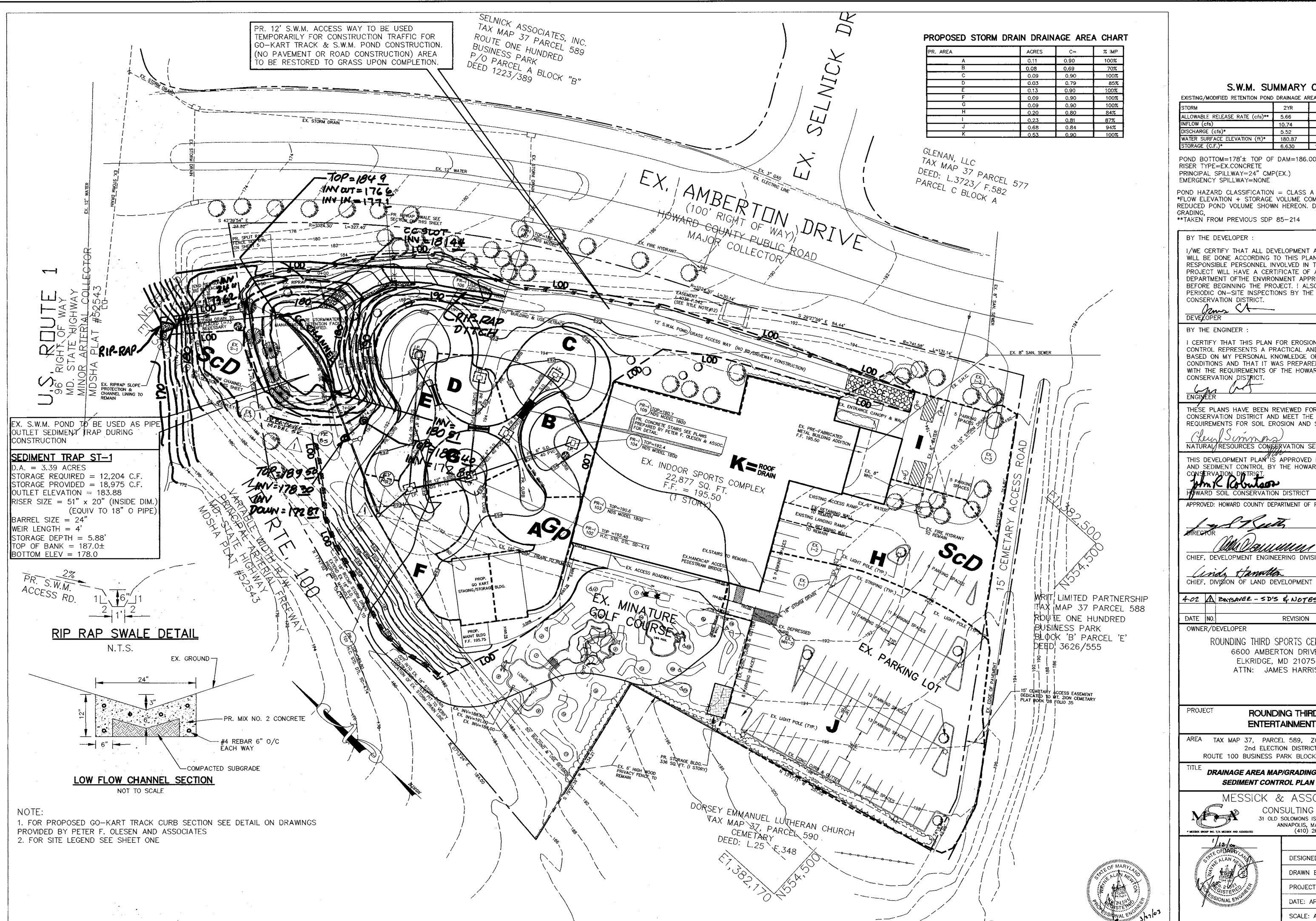
WAYNE A. NEWTON #21591

DESIGNED BY: WAN DRAWN BY: BPO

PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

(410) 266-3212

DRAWING NO.: | OF 9 **SDP-99-131**



S.W.M. SUMMARY CHART

EXISTING/MODIFIED RETENTION POND DRAINAGE AREA TO POND = 3.65 AC						
STORM	2YR	10YR	100YR			
ALLOWABLE RELEASE RATE (cfs)**	5.66	13.07	23.45			
INFLOW (cfs)	10.74	18.42	27.25			
DISCHARGE (cfs)*	5.52	12.01	23.43			
WATER SURFACE ELEVATION (ft)*	180.87	182.10	182.72			
STORAGE (C.E.)*	6.630	10.800	17 500			

POND BOTTOM=178'± TOP OF DAM=186.00± RISER TYPE=EX.CONCRETE

PRINCIPAL SPILLWAY=24" CMP(EX.) EMERGENCY SPILLWAY=NONE

POND HAZARD CLASSIFICATION = CLASS A (EXCAVATED POND) *FLOW ELEVATION + STORAGE VOLUME COMPUTED USING REDUCED POND VOLUME SHOWN HEREON. DUE TO TRACK

**TAKEN FROM PREVIOUS SDP 85-214

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

DATE

/12/00

1-24-60

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

CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

1-24-00 NATURAL/RESOURCES CONSERVATION SERVICE DATE

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

REVISION

4.02 A BAYSAVER - SD'S & NOTES

ROUNDING THIRD SPORTS CENTER, INC. 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 ATTN: JAMES HARRIS

ROUNDING THIRD FAMILY **ENTERTAINMENT CENTER**

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

DRAINAGE AREA MAP/GRADING AND SEDIMENT CONTROL PLAN

> MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212

KECORO DRAWING

03/03

DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

WAYNE A. NEWTON #21591 DRAWING NO.: 3 OF 9

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN
- FOR SOIL AND EROSION CONTROL, AND ALL SUBSEQUENT REVISIONS FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT

CONFORMANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS

- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDINGS (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES. DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF
- 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 7. SITE ANALYSIS:
 - TOTAL AREA OF SITE AREA DISTURBED ACRES AREA TO BE ROOFED OR PAVED ACRES AREA TO BE VEGETATIVELY STABILIZED 0.79 CU. YARDS* * CONTRACTOR NOT TO USE CU. YARDS* THESE QUANTITIES FOR PRICING WASTE TO BE DISPOSED OF ON A SITE WITH AN OPEN GRADING PERMIT
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED
- 10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING
- 11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- 12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL, OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
- 13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION
- 14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED
- 15. BORROW SITE TO BE PRE-APPROVED BY THE SEDIMENT CONTROL NSPECTOR, OR IN CASE OF EXCESS MATERIAL, AN APPROVED SEDIMENT CONTROL PLAN WILL BE NEEDED TO DEPOSIT EXCESS OFF-SITE.

SEQUENCE OF CONSTRUCTION

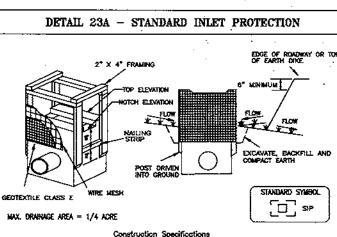
Several items below may be done concurrently with other items. . Obtain all necessary approvals, permits, and easements. The contractor must notify the Howard County Department of inspection and permits, Maryland Department of the Environment, and miss utility at least 48 hours prior to beginning work.

2. The contractor shall schedule a pre-construction meeting with the respective agencies to review the plans and permits. day 4. Clear only for and install perimeter sediment control measures (i.e. silt fence, Super Silt Fence, etc.) as shown on the approved plans. Bulkhead ex. low flow orifice and modify riser as noted. .2 days

6. Rough grade site including pond grading. Excavate for track and install storm drains with inlet protection 4 weeks 7. Construct proposed building's and track surface. (can be done 8. Fine Grade Site, stabilize disturbed areas with seed and mulch,

9. Vegetatively stabilize all remaining disturbed areas with seed and control inspector, remove all sediment control measure. Re-stabilize areas disturbed due to the removal of the sediment control devices. . 2 days

a) Small temporary stockpiles may be created within the limits of disturbance provided that the stockpiles are perimetered by silt fence. maximum height = 6', side slopes 3H:1V.



1. Excavate completely around the inlet to a depth of 18" below the 2. Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the intet. Place not stripe between the posts on the ends of the intet. Assemble the top portion of the 2" x 4" frome using the overlap joint shown on Detail 23A. The top of the frame (self) must be 8" below adjacent readways where 3. Stretch the $1/2^n \times 1/2^n$ wire mesh tightly around the frame and faster securely. The ends must meet and overlap at a

4. Stretch the Geotextile Class E tightly over the wire meeh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fosten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and Backfill around the Inlet in comparted 6" layers until the layer of earth is level with the notch elevation on the ends and top slevation on the sides.

7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF ACCUUATURE PAGE MARYLAND DEPARTMENT OF ENVIRONME SCI. CONTERVATION SERVER E - 13 - 5 WATER MARAGEMENT ADMINISTRATION

DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within seven calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days for all other disturbed or graded areas on the project site.

- A. Soil Test: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of rough grading. Rates and analyses will be provided to the grading inspector as
- Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6 week incubation period to allow oxidation of sulfates.
- B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3". The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than acres, apply 100 pounds of dolomitic limestone and 21 pounds of 10-20-O fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3" on slopes flatter than 3:1.
- C. Seeding: Apply 5-6 pounds per 1,000 square feet of tail fescue between February 1 and April, 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder drill, recommended on steep slopes only). Maximum seed depth should be 1/4" in clayey soils and 1/2" in sandy soils when using other than the hydroseeder method. Irrigate if soil moisture is deficient to support adequate growth, until vegetation is firmly established. If other seed mixes are to be used, select from Table 25, entitled "Permanent Seeding For Low Maintenance Areas" from the 1994 Standards and Specifications for Soil Erosion and Sediment Control. Mixes suitable for this area are 1, 3, and 5-7. Mixes 5-7 are suitable in non-mowable

Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading.

Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches.

- Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:
- (i) Use a mulch anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can
- (ii) Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons
- (iii) Liquid binders may be used and applied heavier at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 1994 Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the
- (iv) Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's

100 pounds of dolomitic limestone per 1,000 square feet.

Fertilizer: 15 pounds of 10-10-10 per 1000 square feet. Perennial rye - 0.92 pounds per 1000 square feet (February 1 through April 30 or August 15 through November 1)

Millet - 0.92 pounds per 1000 square feet (May 1 through Augus

Mulch: Same as 1 D and E above. 3. No fills may be placed on frozen ground. All fill to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8". All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code - Article 21, Section 2-308, and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within building area is to be compacted to a minimum of 95% as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and

4. Permanent Sod:

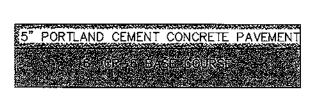
nstaliation of sod should follow permanent seeding dates. Permanent sod is to be tall fescue, state approved sod; time and fertilize per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid or the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes greater than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be applied on frozen ground. Sod shall not be harvested or transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to insure established sod.

5. Mining Operations:

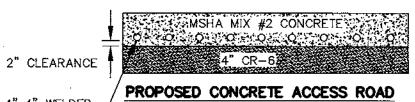
Sediment control plans for mining operations must include the following seeding dates and mixtures:

February 1 through April 30 and August 15 through October 31 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and sericea lespedeza at the rate of 0.5 pounds per 1000 square feet. For seeding dates of May 1 through August 14 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and weeping lovegrass at the rate of 0.1 pounds per 1000 square feet.

NOTE: Use of this information does not preclude meeting all of the requirements of the "1994 Maryland Standards and Specifications for Soil



GO-KART TRACK SECTION



WIRE MESH

8" PORTLAND CEMENT _ CONC. PAVEMENT

DETAIL 19 - STONE OUTLET STRUCTURE

PERSPECTIVE MEW LEVEL CREST 18" MAHMUM CROSS SECTION

Construction Specifications 1. Crushed stone shall be used. Gravel may be used if crushed stone is not available. The stone shall be $2^n\!-\!3^n$ in size. 2. The crest of the stone dike shall be at least 6" lower than the lowest elevation of the top of the earth dike and shall be level. 3. The stone outlet structure shall be embedded into the soil a minimum of $\mathbf{4}^{*}$.

 The stone outlet structure shall be inspected after each rain. Stone shall be replaced when the structure ceases to function and ponding results. The baffle board shall be extended one foot into the dike, staked and embedded 4" into the existing ground.

4. The minimum length of the crest of the stone cutlet structure shall be 6

7. The drainage area to this structure shall be less than 1/2 acre.

U.S. DEPARTMENT OF ACRECULATING PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SCIL CONSERVATION SERVICE 2 - 11 - 2 TATES MANAGEMENT ADMINISTRATION

DETAIL 25 - ROCK OUTLET PROTECTION

PLAN VIEW

FILTER CLOTH LINING

INVERT

182.42

184.06

SECTION B-B

TYPE

18" CMP

END SECTION

BAYSAVER

YARD INLET

INLET

INLET

INLET

INLET

INLET

FIBERGLASS

FIBERGLASS

FIBERGLASS

FIBERGLASS

FIBERGLASS

SYMBOL

1-105

1-106

DISCHARGE TO SENT CENTINE SECTION (MAXIMUM TAILVATE) CONDITIONS

DEPTH DICTATED BY CHANNEL SECTION AT END OF APRON

SECTION A-A

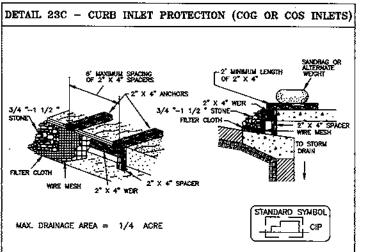
INVERT

OUT

188,40

184.80

184.16



. Attach a continuous piece of wire mesh (30° minimum width by throat length plus 4°) to the 2° x 4° well (measuring throat length plus 2°) as shown on the standard direction. 2. Place a continuous place of Geotsville Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2° x 4° well. 3. Securely notil the 2" X 4" well to a 9" long vertical space: to be lacated between the well and the inlet face (max 4" apart). 4. Place the assembly against the injet throat and noil (minimum 2' lengths of $2^{\circ} \times 4^{\circ}$ to the top of the weir at spacer locations). These $2^{\circ} \times 4^{\circ}$ anchors shall extend across the injet top and be held in place by sandbags or attendes weight. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2 " x 1/2 " wire mesh and the gestextile fabric to the concrete gutter and against the face of the curb on both sides of the fallet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotestile in such a manner to prevent water from entering the inlet under or around the geotestile, This type of protection must be inspected frequently and the filter cloth and stone replaced when alogged with sediment. U.S. DEPARTMENT OF AGRICULTURE PACE MATTLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE I - 16 - 58 VATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION

1. The subgrade for the filter, rip-rap, or gabion shall be

prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

3. Geotextile shall be protected from punching, cutting, or

tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlops whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid

displacement of underlying materials. The stone for rip-ray or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the

smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter bianket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will see an adjacent to

U.S. BEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SIDL CONSERVATION SERVICE F - 18 - 84 VATER MANAGEMENT ADMINISTRATION

NORTH

N 554,986.16

N 554,9**62.03**

554.872.09

N 554,873.78

N 554,832.63

N 554,875.76

N 554,959.57

N 554,915.70

EAST

1,382,222.05

1,382,**200.0**6

E 1,382,209.47

E 1,382,246.20

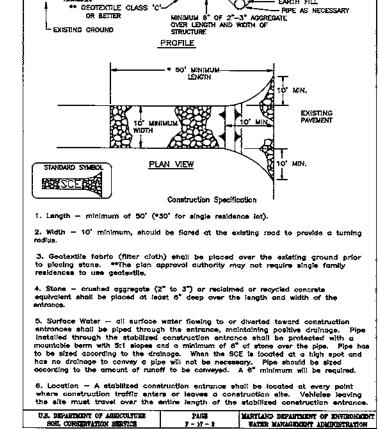
E 1,382,315.16

E 1,382,343.16

E 1,382,286.62

E 1,382,304.01

E 1,382,287.37



12-1/8"-1/8"

MODEL #1200 INLET

12" STEEL GRATE

MODEL #1215 STEEL GRATE

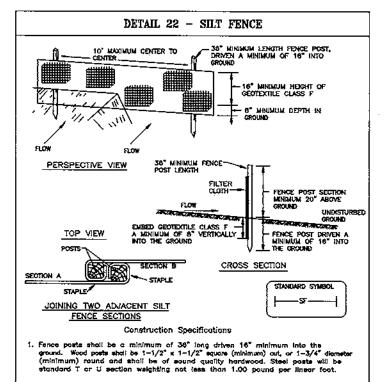
N.T.S.

12" RISER EXTENSION

MODEL #1216 RISER EXTENSION

N.T.S.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



50 lbs/ln (min.) Test: MSMT 509
20 lbs/ln (min.) Test: MSMT 509
0.3 gcl ft / minute (max.) Test: MSMT 322
75% (min.) Test: MSMT 322 Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

Sitt Fence shall be inspected after each ruinfull event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

18" RISER EXTENSION

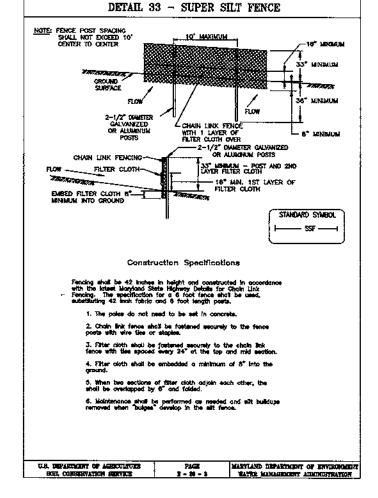
MODEL #1816 RISER EXTENSION

18" STEEL GRATE

MODEL #1815 STEEL GRATE

18"x 18" BASIN

MODEL #1800 BASIN



BY THE DEVELOPER

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

BY THE ENGINEER

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

12/00

2/1/N

/ / DATE

CONSERVATION DISTRICT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

SOURCES CONSERVATION SERVICE THIS DEVELOPMENT PLAN IS CONTROL BY THE HOWARD SOIL

1-2416 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Manum 27/00

CHIEF, DIVISION OF LAND DEVELOPMENT 4.02 A SCHEDULES - BAYSAVER

and Hamilton

DATE NO. OWNER/DEVELOPER

> ROUNDING THIRD SPORTS CENTER, INC. 6600 AMBERTON DRIVE ELKRIDGE, MD 21075 ATTN: JAMES HARRIS

PROJECT

ROUNDING THIRD FAMILY **ENTERTAINMENT CENTER**

REVISION

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

DETAIL AND NOTE SHEET

MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212 MESSICK GROUP INC. T/A MESSICK AND ASSOCIATES

MARY!

DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999

SCALE: AS SHOWN WAYNE A. NEWTON #21591 DRAWING NO.: 4 OF 9

PIPE SCHEDULE

STRUCTURE SCHEDULE

REMARKS

H.C. STD. SD-3.61

STD, SD-4.14

NDS MODEL 1800

NDS MODEL 1800

NDS MODEL 1800

NDS MODEL 1800

NDS MODEL 1200

H.C. STD. SD-4.14 N 554,898.08

TOP

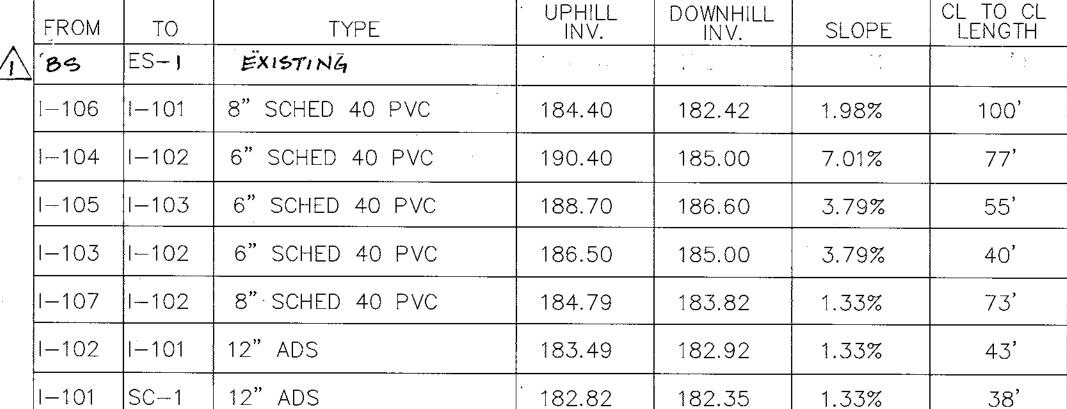
EL.

189.80

190.70

185.40

188.90



NOTE: FOR INSTALLATION & MAINTENANCE DETAILS SEE MANUFACTURERS SPEC'S, DRAINAGE STRUCTURE'S SHOWN HEREON TAKEN FROM NDS PRODUCT INFORMATION AS DISTRIBUTED BY FORM SERVICES (410) 247-9500

RECORD DRAWING 03/03

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the 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. For dry stormwater management ponds, a minimum of 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below 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.

Earth Fill

Materials — The fill material shall be taken from approved, designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stone greater than 6", frozen or other objectionable materials. Fill material for the embankment shall conform to Unified Soil Classification CL.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of the fill. Fill materials shall be placed in maximum 8" thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 on 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 will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material 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 below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures 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 manually directed 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 the structure. Under no stances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

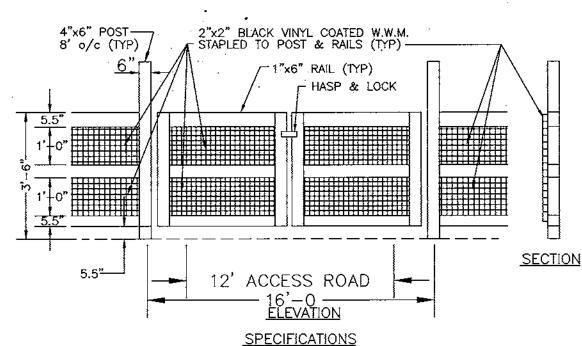
Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

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. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01, inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used; Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-

Aluminum Coated Steel Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Aluminum Pipe - This pipe and its appurtenances shall conform to AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contract 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 between 4 and 9.



1. HORIZONTAL RAILS SHALL BE 1"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE.

2. POSTS 8' o/c SHALL BE 4"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE.

WIRE MESH STAPLED TO POST & RAILS WITH GALVANIZED STAPLES. 4. GATE SHALL BE 8' EACH SIDE (16' TOTAL) SWING GATE WITH HASP AND LOCK.

SPLIT RAIL FENCE AND GATE DETAIL

N.T.S.

3. GALVANIZED WIRE ON BACK OF FENCE SHALL BE 2"x2" BLACK VINYL COATED WELDED

Coupling Bands, anti-seep collars, end sections, etc. must be composed of the same materials as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

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. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less that 24" in diameter: flanges on both ends of the pie, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with 0-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead

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.

Backfilling — Backfilling shall be conform to "Structural Backfill"

Other Details - Other details such as anti-seep collars, valves, etc. shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

Bedding -- All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

Laying Pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

Backfilling - Backfilling shall confirm to "Structural Backfill"

Other Details - Other details such as anti-seep collars, valves, etc. shall be as shown on the

Polyvinyi Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride

Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

Joints and Connections - Joints and connections to anti-seep collars shall be completely

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.

Backfilling - Backfilling shall conform to "Structure Backfill"

Other details - Other details such as anti-seep collars, valves, etc. shall be as shown on the

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414,

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311 & 901.2.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprop in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09.

2'-0" MIN. 3/4" PLYWOOD PERFORATED — 16" — PERMANENT LOW FLOW ORIFICE INV. EL =178.70-BOTTOM POND EX. 24" CMP/ (SEDIMENT CONTROL)

TEMPORARY STONE FILTER DETAIL

N.T.S.

Care of Water During Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water will be pumped.

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, liming, fertilizing, and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

inefall Collar With Corrugations Vertical

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

Collar To Be Of Same Gage As The Ape With Which It is Used.

7-208-1

ANTI-GEEP COLLAR DETAIL

7-947-9

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED **DETENTION POND**

Routine Maintenance

- 1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be moved a minimum of two (2) times per year, once in June and once in September, Other side slopes and maintenance access shall be moved as needed.
- 3. Debris and litter shall be removed during regular moving operations and as needed.
- 4. Visible signs or erosion in the pond as well as the rip—rap or gabion outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance

NOTES: ANTI-SEEP COLLARS

1) All Materials to Be in Accordance With Construction and

Construction Material Opecifications.

2) When Opecified on The Plans, Coating of Collars Chall be in Accordance With Construction and Construction Material

specifications.

3) Unaesembled Collars Chall Be Marked by Pointing or Togging To Identify Matching Parts.

d) The Lap Between The Two Half Sections And Between The Poe And Connecting Band Chall Be Coulked With Aeptalit Meetic At Time of Installation.

5) Each Collar Gnall Be Furnished With Two 1/2" Diameter Pade With Standard Tonk Lugs For Connecting Collars To Exercise.

G) Collars Chail Be Located 2" Min. From All Pipe Joints.

BECTION B'B'

- 1. Structural components of the pond, such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
- 2. Sediment shall be removed from the pond, and forebay, no later then when the capacity of the pond, or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

BAYSAVER MAINTENANCE

BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILARDEVICE MAINTENNICE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE
EXCERTS 2 PEET, WANNAM INSPECTION IS RECOMMENDED
THICE A YEAR TO MAINTHIN OPERATION AND PLACTION
OF BAYSAVER.

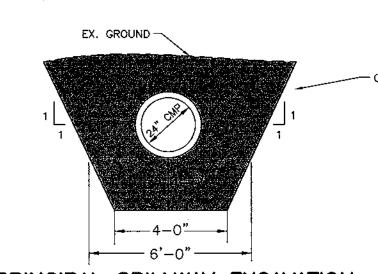


CONTANIMENT STORAGE MANHOLE

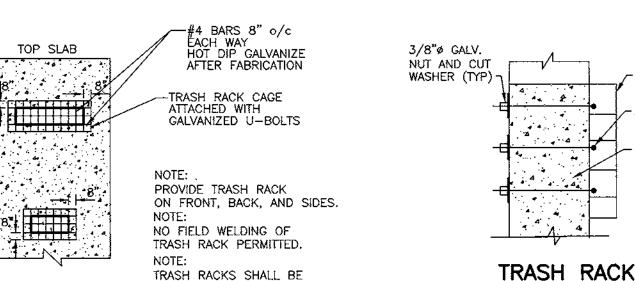
- 1. REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED
- 2. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MARHOLE USING A HIGH PRESSURE HOSE AND REMOVE PLUSHING WATER BY VACUUM TRUCK, MAKE CERTANI MANHOLE IS CLEAN.

B PRIMARY SEPARATION NAMELS

- 1. USING A SUBMERSIBLE PUMP, PUMP THE CLEANWATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATERLEVEL FALLS TO 1 FOOT ABOVE THE SECTIMENT LAYER.
- REMOVE THE SETTLED SEPIMENT AND RENAMING WATER BY
- 3. CLEAN THE MANHOLE WALLS AND FLISH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE PLUSHING WISTER. BY VACUUM TRUCK, MAKE CERTAIN MANHOLEIS CLEAN.
- 4. CONTAMINATED MATERIAL REMOVED PRONTHE MOUNDLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACILIM, TRUBE.



PRINCIPAL SPILLWAY EXCAVATION

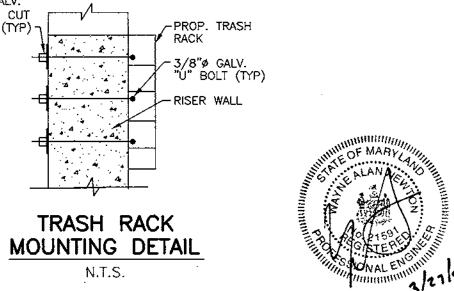


BATTLESHIP GREY. DETAIL -- TRASH RACK N.T.S.

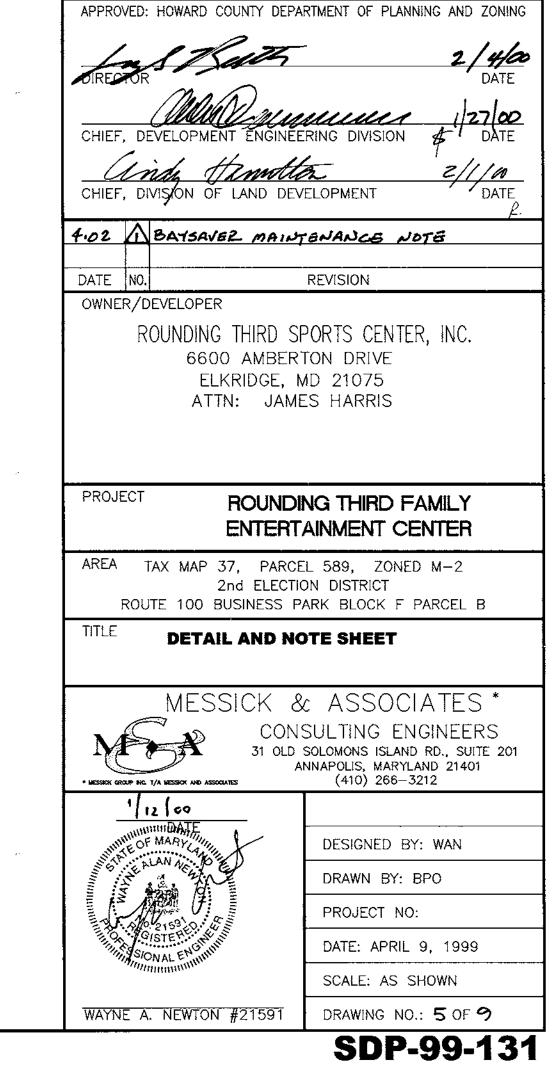
REMOVABLE, GALVANIZED AFTER

FABRICATION AND PAINTED

FRONT VIEW



RECORD DRAWING 03/03



-HOWARD CO. A-5 INLET W/STEPS HOWARD STD. SD-4.01

TOP OF INLET 184.9

-STORAGE BELOW ORIFICE

CONTROL IS REMOVED.

DEEP \times 97-7/8" TALL

NOT TO BE EXCAVATED UNTIL

AREA IS STABILIZED & SEDIMENT

EX. RISERS OUTSIDE DIMENSIONS = 75" WIDE x 44"

RISER DETAIL OF EX. S.W.M. OUTLET STRUCTURE

N.T.S.

-EX. TRASH RACK No.4

REINFORCED BARS 4"

CONCRETE TO REMAIN.

O/C SET 6" IN

CONTRACTOR TO

RACK OVER EX.

INSTALL NEW TRASH

OPENING (SEE DETAIL)

+(2)-No.4 REINFORCED BARS

(EQUALLY SPACED) TO BE

REMAIN, CONTRACTOR TO

OVER EX. OPENING (SEE

-EX. 24" CMP INV. 19070007=176.6

NOTE: ALL DIMENSIONS &

ELEVATIONS ARE AS-BUILT

INSTALL NEW TRASH RACK

PERMANENT POND 177.

BOTTOM ELEV=177.00

PREVIOUSLY BRICKED SHUT WEIR-

SEDIMENT CONTROL PURPOSES.

COMPLETION OF CONSTRUCTION.)

EXISTING WEIR TO BE -

OF PROJECT. INV.=161.98

!NV.=178.70

LOW FLOW ORIFICE

BRICKED SHUT FOR

SEDIMENT CONTROL. TO BE RE-OPENED

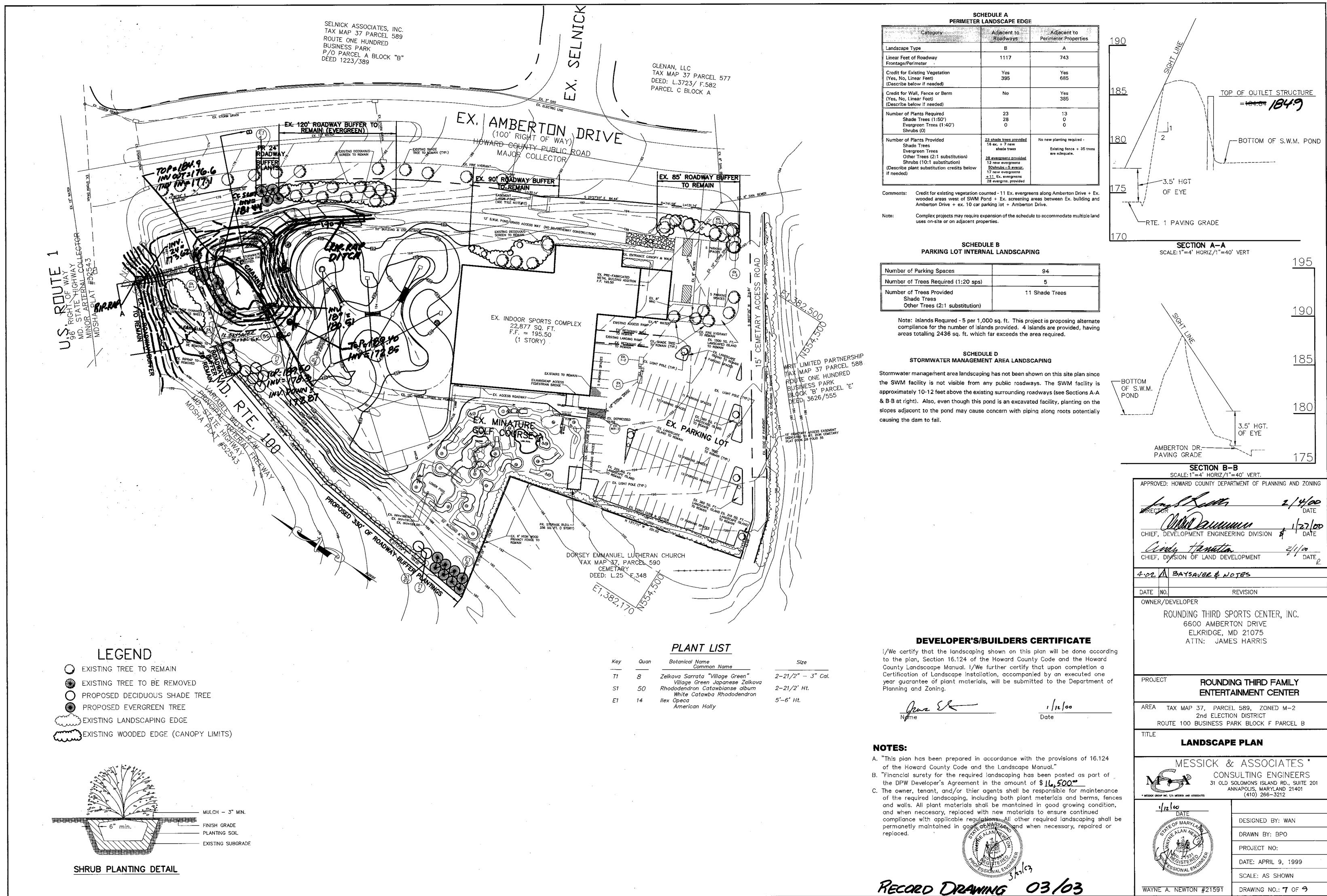
UPON COMPLETION

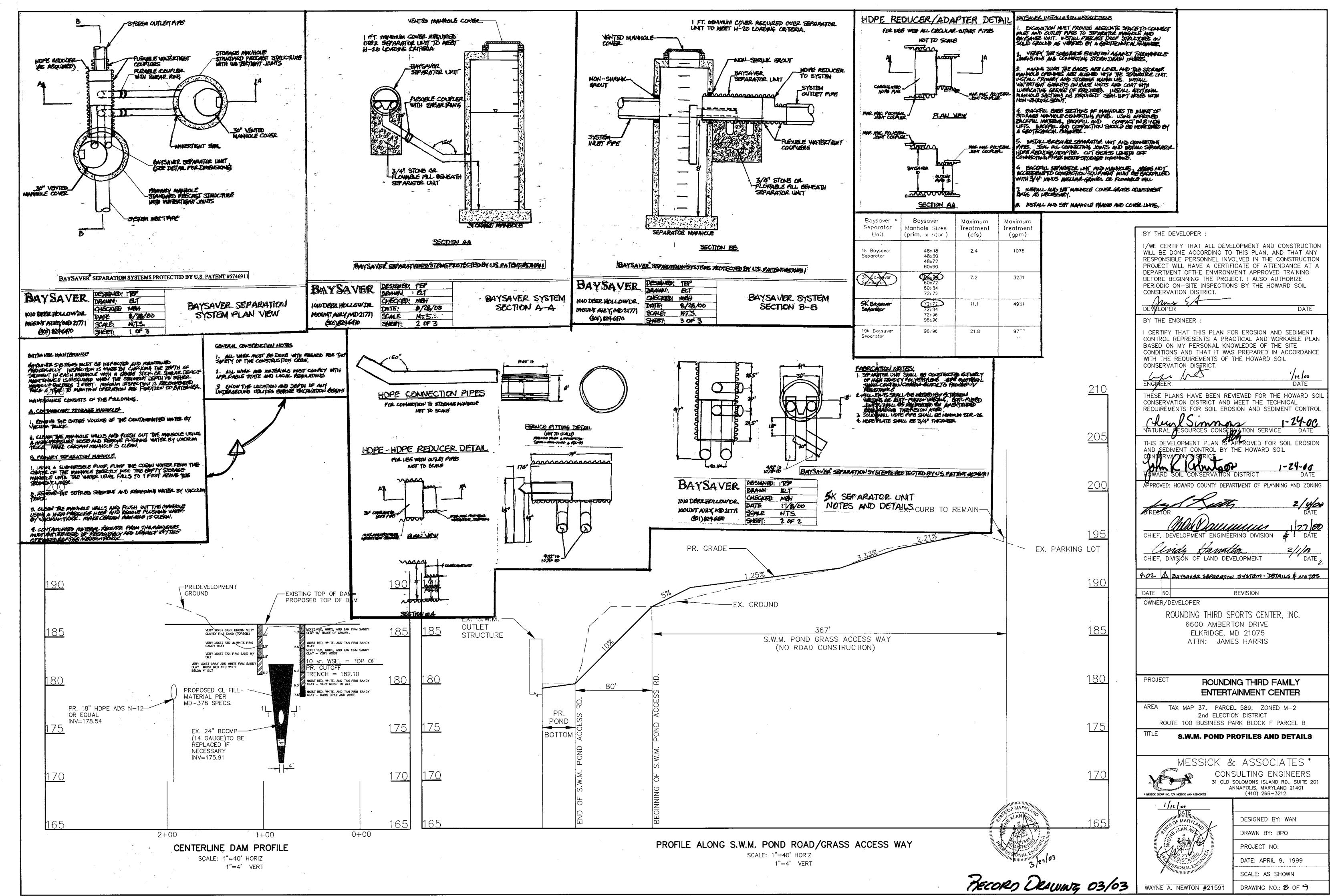
PREVIOUS INVERT = 183.88.

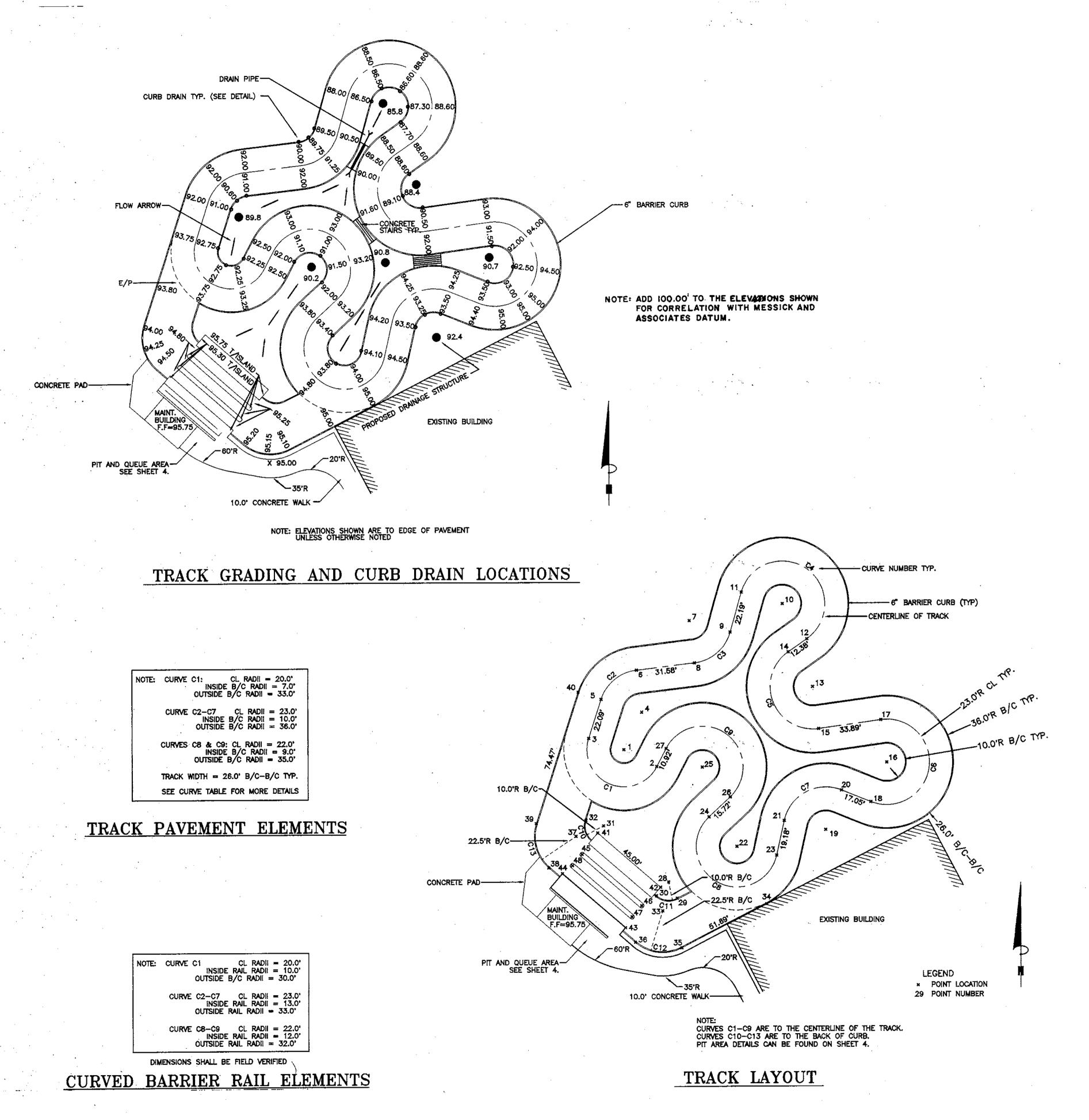
TO BE RE-OPENED FOR

LENGTH = 4' (TO BE

RE-BRICKED SHUT UPON







NOTE:
CURVES C1—C10 ARE TO THE CENTERLINE OF THE TRACK.
CURVES C11—C14 ARE TO THE BACK OF CURB.

NUMBER	lc	Dα	CD	ा हा	R FT	L FT	LC FT
C1	170"24"11"	286'28'44"	N 67'25'03" W	238,25	20.00	59.48	39.86
C2	65'21'21"	249'06'44"	N 50'27'42" E	14,75	23.00	26.24	24.84
C3	6722'41"	249'06'44"	N 49°27°02" E	15.33	23.00	27.05	25,52
C4	219'07'51"	249'06'44"	S 54'40'23 E	64.72	23.00	87.96	43,34
C5	152'50'39"	249'06'44"	S 21'31'48" E	95,23	23.00	61.36	44,71
C6	209'54'54"	249'06'44"	S 0700'20" W	86.09	23.00	84.27	44,44
C7	99'28'41"	249'05'44"	S 62'13'26 W	27.16	23.00	39.93	35,10
C8	214"23'59"	260'26'07"	N 60'18'55" W	71.07	22.00	82.32	42.03
Ç9	199'30'14"	260'26'07'	N 52'52'02" W	128.01	22.00	76.60	43,36
C10	66'45'41"	212'57'28"	S 15'35'48" E	6.59	10.00	11.65	11.00
C11	68'20'08"	212'57'28"	N 83"08"43" W	6.79	10.00	11.93	11.23
C12	68'20'08"	254'38'52"	N 83'08'43" W	15.27	22.50	26.84	25.27
04.7	EC151447	054*70*50*	N 15'35'49" W	14 97	22.50	26 22	24 76

IC = DELTA ANGLE
Da = DEGREE OF CURVATURE ARC
CD = CHORD DIRECTION
T FT = TANGENT LENGTH IN FEET

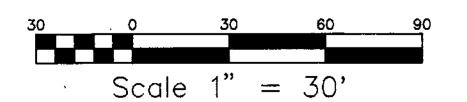
R FT = RADIUS IN FEET L FT = ARC LENGTH IN FEET LC FT = CHORD LENGTH IN FEET

CURVE DATA

PT. NO.	NORTH	EAST	DESC.
1	554,879.44	1,382,204.32	RP
2	554,870.29	1,382,222.08	PC
3	554,885.59	1,382,185.28	PT
. 4	554,899.61	1,382,213.93	RP
5	554,906.63	1,382,192.03	PC
6	554,922.44	1,382,211.18	PT
7	554,949.05	1,382,239.79	RP
8	554,926.22	1,382,242.53	PC
9	554,942.80	1,382,261.92	PT
10	554,957.91	1,382,290.08	RP
11	554,964.16	1,382,267.95	PC
12	554,939.09	1,382,303.31	PT
13	554,913.16	1,382,306.41	RP
14	554,931.97	1,382,293.18	PC
15	554,890.38	1,382,309.59	PT
16	554,872.29	1,382,346.34	RP
17	554,895.07	1,382,343,16	PÇ
18	554,850.96	1,382,337.74	PT
19	554,836.00	1,382,313.32	RP .
20	554,857.33	1,382,321.93	PC
21	554,840.97	1,382,290.87	PT
22	554,827.01	1,382,265.24	RP
23	554,822.25	1,382,286.72	PC
24	554,843.07	1,382,250.21	PT
25	554,869.87	1,382,246.64	RP
26	554,853.81	1,382,261.68	PC
. 27	554,879.98	1,382,227.11	PT
28	554,807.92	1,382,228.29	RP
29	554,799.04	1,382,232.87	PC
30	554,800.38	1,382,221.72	PT
31	554,838.40	1,382,193.25	RP
32	554,841.46	1,382,183.73	PC
33	554,792.18	1,382,225.05	RP
34	554,796.35	1,382,281.07	PT@B/C
35	554,772.63	1,382,235.14	PC@B/C
36	554,775.58	1,382,210.61	PT@B/C
37	554,832.82	1,382,178.33	RP
38	554,816.23	1,382,163.89	PC@B/C
39	554,839.54	1,382,157.38	PT@B/C
40	554,910.45	1,382,180.13	PT@B/C
41	554,834.56	1,382,190.04	CORNER
. 42	554,805.03	1,382,223.99	CORNER
43	554,783.15	1,382,204.96	CORNER
44	554,812.68	1,382,171.01	CORNER
45	554,822.99	1,382,181.63	RP ISLAND
46	554,795.10	1,382,213.70	RP ISLAND
47	554,789.06	1,382,208.45	RP ISLAND
48	554,816.96	1,382,176.38	RP ISLAND

RP = CENTER POINT OF CURVE PC = POINT OF CURVATURE PT = POINT OF TANGENCY B/C = BACK OF CURB

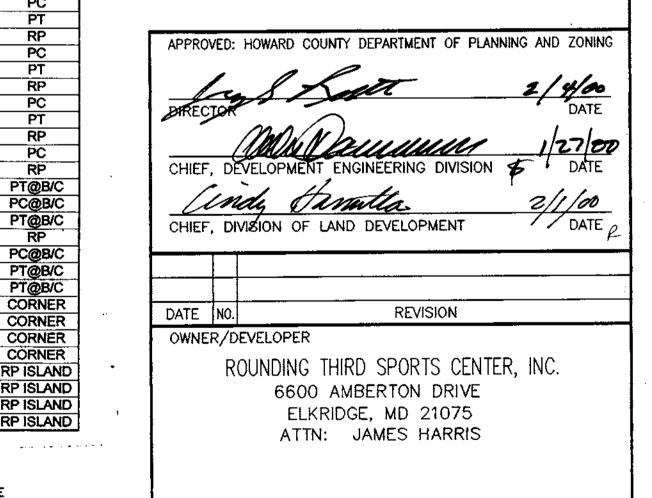
TRACK COORDINATES



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RECORD DRAWING 03/03

THIS SHEET PROVIDED BY PETER F. OLESEN & ASSOC.



PROJECT ROUNDING THIRD FAMILY ENTERTAINMENT CENTER

AREA TAX MAP 37, PARCEL 589, ZONED M-2
2nd ELECTION DISTRICT
ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

GO KART TRACK GRADING AND COORDINATES

MESSICK & ASSOCIATES *

CONSULTING ENGINEERS

31 OLD SOLOMONS ISLAND RD., SUITE 201

ANNAPOLIS, MARYLAND 21401

(410) 266-3212

WAYNE A. NEWTON #21591

DESIGNED BY: WAN

DRAWN BY: BPO

PROJECT NO:

DATE: APRIL 9, 1999

SCALE: AS SHOWN

DRAWING NO.: 9 OF 9

SITE DEVELOPMENT PLAN

ROUNDING THIRD FAMILY ENTERTAINMENT CENTER

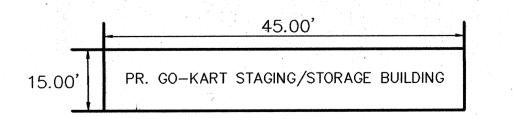
GO-KART ADDITION

1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PREVIOUS SDP# 85-214

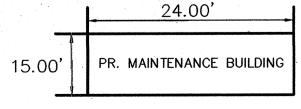
GENERAL NOTES

- 1. All construction shall be in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications, as applicable.
- 2. The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to any work being done in the public road.
- 4. All plan dimensions are to face of curb and face of building unless otherwise noted
- The coordinates shown hereon are based upon the Howard County Geodetic control which is based upon the Maryland State Plane Coordinate system. Howard County Monument #43B2 N490,906.0 E865,758.6 Elevation 209.59 & #371A N492,566.2 E867,563.8 Elevation 195.75 were used for this project.
- 6. Water is public, contract # 5060 W&S in the Patapsco drainage area. Existing in Amberton Drive.
- Sewer is public, contract #5060 W&S in the Patapsco drainage area. Existing in Amberton Drive
- Water Quantity Storm water management for this project is provided in the privately owned and maintained detention pond on site. Water Quality Management is provided via the privately owned and maintained stormceptor on-site. The owner is responsible for the continued Maintenance of
- A 100-year floodplain study is not required for this project.
- A traffic study is not required for this project.
- 11. A noise study is not required for this project.
- 12. A geotechnical study has been performed for the pond modifications shown hereon. Study done by Marshall Engineering Inc. dated 4/99
- 13. The boundary for this project is based on a Boundary Survey by Design Tech Associates, Inc. Dated 7/14/98.
- 14. Subject property is zoned M-2.
- 15. The existing topography is taken from field run survey with 2 foot contour intervals prepared by GW Stephens & Assoc. dated 2-6-86, as supplemented & updated by Messick & Assoc.during April of 1999.
- 16. See Department of Planning and Zoning file no. SDP-85-214.
- 17. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- 18. All storm drain pipe bedding shall be Class 'C' as shown in Fig. 11.4, Volume 1 of Howard County Design Manual unless otherwise noted.
- 19. All inlets shall be constructed in accordance with Howard County Standards.
- 20. All pipe elevations shown are invert elevations.
- 21. Storm drain trenches within road right-of-way shall be backfilled and compacted in accordance with the Howard County Design Manual, Volume IV, i.e., Standard Specifications and Details for Construction including the latest amendments.
- 22. All fill areas within roadway and under structures to be compacted to a minimum of 95% compaction of AASHTO T180.
- 23. No public notice posters are required because no new roadway entrances, or wetland mitigation
- 24. For stakeout and construction of Go-Kart track see plans prepared by PETER F. OLESEN and Associates.
- 25. All exterior lighting shall conform to Zoning Regulations, Section 134
- 26. This plan is exempt from the Forest Conservation ordinance in accordance with Section 16.1202(b)(I)(iii)
- 27. This plan is exempt from the APFO traffic study in accordance with Section 16.1107 (a)(2)(iii).
- 28. Existing utilities are based on SDP 85-214 GW Stephens & Assoc 2-6-86
- 29. The Blanning Board approved the construction within 30' of the cemetary in accordance with section 16.1300 on August 26, 1999 for the minature golf course & shed on this project

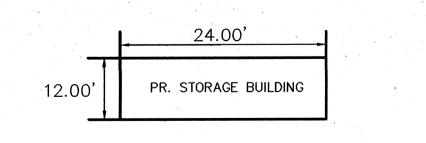


NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE

BUILDING DETAILS AND ELEVATIONS



NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS



SURVEYS BY: DESIGN TECH. A SSOC.

THIS RECORD DRAWING BASED ON

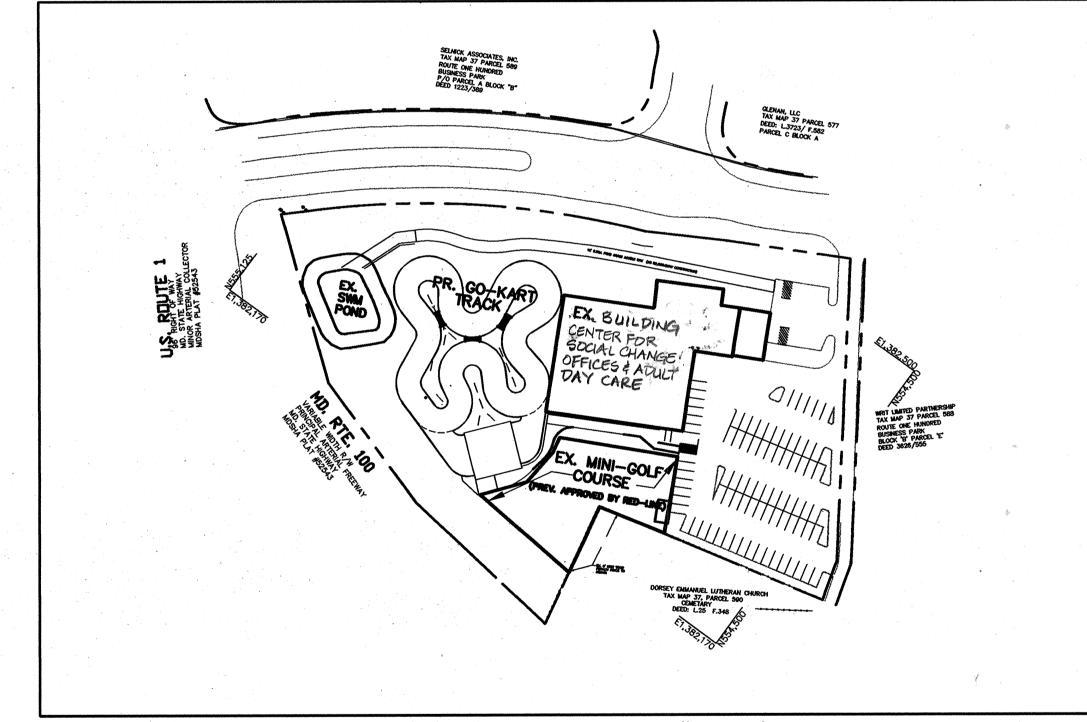
VISUAL OBSERVATION BY:

MESSICK GROUPING. AND

NOTE: SEE ARCHITECTURAL DRAWINGS FOR COMPLETE BUILDING DETAILS AND ELEVATIONS

PROPOSED BUILDING ELEVATION'S

NOT TO SCALE



SITE ORIENTATION MAP 1"=100"

SHEET INDEX

- 1. TITLE SHEET 2. SITE DEVELOPMENT PLAN 3. DRAINAGE AREA MAP/GRADING & SEDIMENT CONTROL PLAN 4. DETAILS AND NOTES
- 5. DETAILS AND NOTES 6. STORM DRAIN PROFILES 7. LANDSCAPE PLAN

RECORD DRAWING 03/03

8. S.W.M. POND PROFILES AND DETAILS 9. GO-KART GRADING & COORDINATES BY PETER F. OLESEN & ASSOC.



SECT./AREA -**ROUTE 100 BUSINESS PARK** ELECT. DIST. - CENSUS TRACT -TAX MAP NO. -4399/393 M-2SEWER CODE WATER CODE -2370000

PARCEL

LEGEND

EXISTING CONTOURS

PROPERTY LINE

EXISTING CURB & GUTTER

EXISTING LIGHT POLE

EXISTING POWER POLE

EXISTING STORM DRAIN

EXISTING TREE/SHRUB

PROPOSED BUILDING

PROPOSED CONTOUR

PROPOSED SPOT SHOT

PROPOSED SIDEWALK

LIMIT OF DISTURBANCE INLET PROTECTION

TRAFFIC FLOW ARROW

DRAINAGE FLOW ARROW

DRAINAGE AREA LINE

CONDUIT FLOW AREA'S

EXISTING TREE TO REMAIN

EXISTING TREE TO BE REMOVED

PROPOSED EVERGREEN TREE

EXISTING LANDSCAPING EDGE

PROPOSED DECIDUOUS SHADE TREE

EXISTING WOODED EDGE (CANOPY LIMITS)

ADDRESS CHART

STREET ADDRESS

6600 AMBERTON DRIVE

STABILIZED CONSTRUCTION ENTRANCE

EXISTING SEWER

EXISTING TREELINE

----- EXISTING OVERHEAD POWER LINE

x32.<u>45</u>

EXISTING CONCRETE SIDEWALK

EXISTING BUILDING

CORP. CENTER VICINITY MAP

SITE ANALYSIS

AREA OF PARCEL DISTURBED AREA PRESENT ZONING

4.13AC. (179,724 SQ. FT.) 62,290 SQ. FT.

EXISTING USE: ENTERTAINMENT CENTER BUILDING COVERAGE (EX.)

22,972 SQ. FT. (12.8%)

PROPOSED USE: ADULT DAY CARE/SUPPORTED EMPLOYMENT/OFFICES 22,972 SQ. FT. BUILDING COVERAGE (EX.) 384 SQ. FT. PR. MAINTENANCE BLDG. PR. GO KART STAGING/STORAGE BLDG.1.633 SQ. FT.

336 SQ. FT. PR. STORAGE BUILDING 25,325 SQ. FT. (14.1%) TOTAL BUILDING COVERAGE

OF PARKING SPACES REQUIRED

ADULT DAY CARE 7358 SF @ SUPPORTED EMPLOYMENT 3970 SF @

3SPACES/1000 = 22SPACES 3.3SPACES/QQQ = 1.3SPACES

MINIATURE GOLF GO-KART TRACK PARKING SPACES REQUIRED* 18 HOLES @ 1.5 SP./HOLE = 27 SPACES

SHARED PARKING RECREATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Lindy Tamotton CHIEF, DIVISION OF LAND DEVELOPMENT 1/22/04 2 OWNER, USE & PARKING

DATE NO. OWNER/DEVELOPER

CENTER FOR SOCIAL CHANGE 9300 LIBERTY ROAD RANDALLS TOWN, MD 21133 ATTN: DR. JOSEPH MATHEW . 410-655-5267

PROJECT CENTER FOR SOCIAL CHANGE OFFICES & ADULT DAY CARE

TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

TITLE SHEET

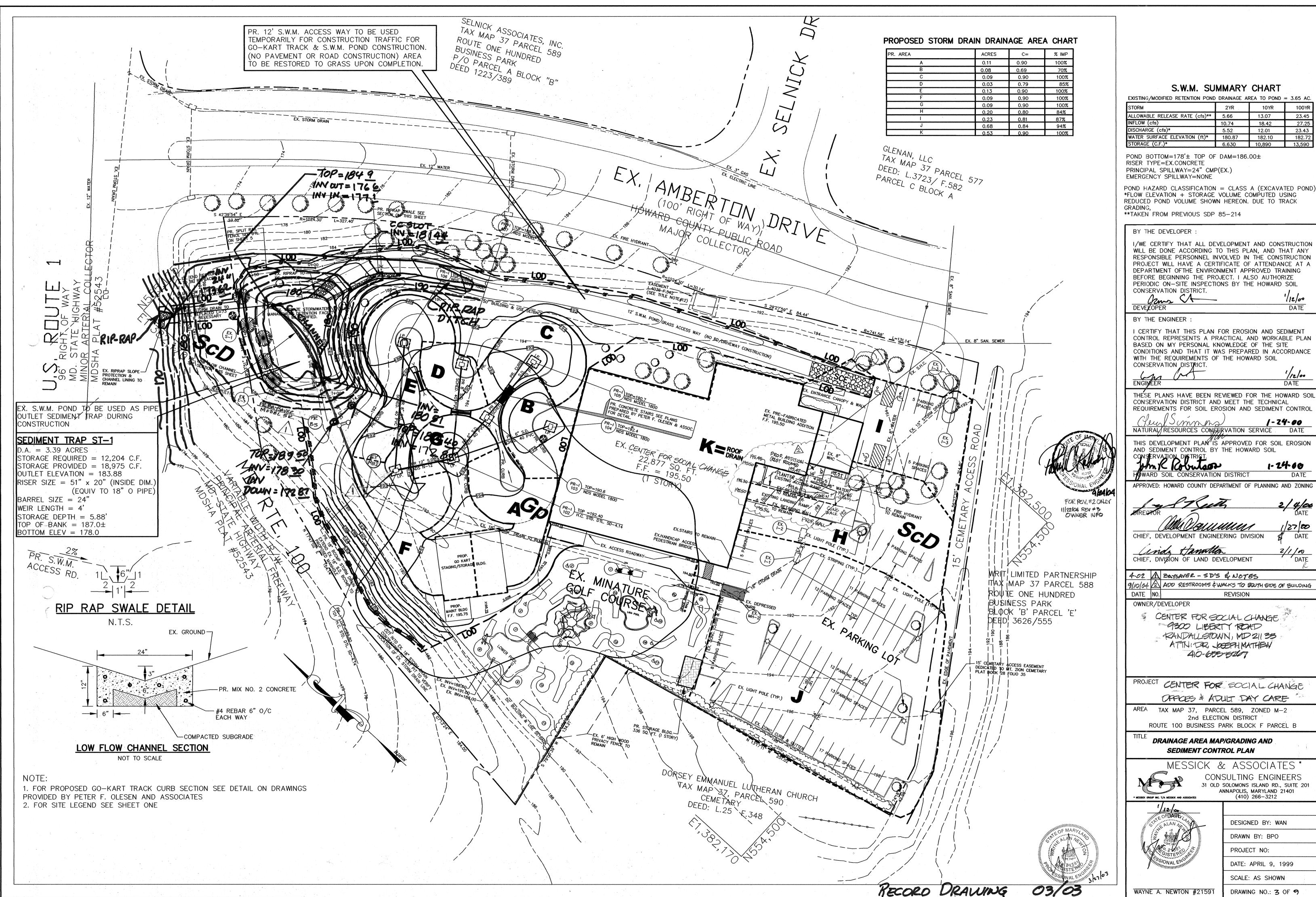
MESSICK & ASSOCIATES *

CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266+3212 MESSICK GROUP INC. T/A MESSICK AND ASSOCIATI

DESIGNED BY: WAN

DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

WAYNE A. NEWTON #21591 DRAWING NO.: | OF 9 **SDP-99-131**



- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT
- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM
- 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDINGS MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF
- 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY
- SEDIMENT CONTROL INSPECTOR.

TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED 0.79

- CU. YARDS* * CONTRACTOR NOT TO USE D.
 CU. YARDS* THESE QUANTITIES FOR PRICING ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT

11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES

CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING

- CLEAN OUT ELEVATION SHOWN ON THE PLANS. 12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL, OR EMBANKMENT MATERIAL, NOR OO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF
- UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF 13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR
- 14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED

WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION

15. BORROW SITE TO BE PRE-APPROVED BY THE SEDIMENT CONTROL INSPECTOR, OR IN CASE OF EXCESS MATERIAL, AN APPROVED SEDIMENT CONTROL PLAN WILL BE NEEDED TO DEPOSIT EXCESS OFF-SITE.

SEQUENCE OF CONSTRUCTION

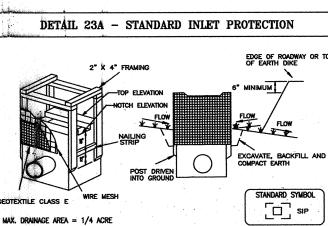
Several items below may be done concurrently with other items. 1. Obtain all necessary approvals, permits, and easements. The contractor must notify the Howard County Department of inspection and permits, Maryland Department of the Environment, and miss utility at least 48 hours prior to beginning work. 2. The contractor shall schedule a pre-construction meeting with the respective agencies to review the plans and permits. 1 day

4. Clear only for and install perimeter sediment control measures (i.e. silt fence. Super Silt Fence, etc.) as shown on the approved plans. Bulkhead ex. low flow orifice and modify riser as noted. .2 days 5. Relocate existing storm drain system and reconstruct pond 6. Rough grade site including pond grading. Excavate for track and install storm drains with inlet protection 4 weeks

8. Fine Grade Site, stabilize disturbed areas with seed and mulch, 9. Vegetatively stabilize all remaining disturbed areas with seed and 10. Once the site is stabilized and with the approval of the sediment control inspector, remove all sediment control measure. Re-stabilize

7. Construct proposed building's and track surface. (can be done

ateas disturbed due to the removal of the sediment control devices. . 2 days Small temporary stockpiles may be created within the limits of disturbance provided that the stockpiles are perimetered by silt



fence. maximum height = 6', side slopes 3H:1V.

1. Excavate completely around the inlet to a depth of 18" below the 2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where 3. Stretch the $1/2" \times 1/2"$ wire mesh tightly around the fram and fasten securely. The ends must meet and overlap at a

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotixtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame. 7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clagged.

U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMES SOIL CONSERVATION SERVICE E - 16 - 6 WATER MANAGEMENT ADMINISTRATION

DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT

Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within seven calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days for all other disturbed or graded areas

- A. Soil Test: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of rough grading. Rates and analyses will be provided to the grading inspector as
 - Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6 week incubation period to allow oxidation of sulfates.
- B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3". The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds of dolomitic limestone and 21 pounds of 10-20-20 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into
- C. Seeding: Apply 5—6 pounds per 1,000 square feet of tall fescue between February 1 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder drill, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be 1/4" in clayey soils and 1/2" in sandy soils when using other than the hydroseeder method. Irrigate if soil moisture is deficient to support adequate growth, until vegetation is firmly established. If other seed mixes are to be used, select from Table 25, entitled "Permanent Seeding For Low Maintenance Areas" from the 1994 Standards and Specifications for Soil Erosion and Sediment Control. Mixes suitable for

Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch

Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or

E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted:

(i) Use a mulch anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can

(ii) Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed

(iii) Liquid binders may be used and applied heavier at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 1994 Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the

(iv) Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's

100 pounds of dolomitic limestone per 1,000 square feet. Fertilizer: 15 pounds of 10-10-10 per 1000 square feet

Perennial rye - 0.92 pounds per 1000 square feet (February through April 30 or August 15 through November 1)

Millet - 0.92 pounds per 1000 square feet (May 1 through August

Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill to be placed in approximatel horizontal layers, each layer having a loose thickness of not more than 8". All fill in roadways and parking areas is to be classified Type 2 as per Anne Arundel County Code - Article 21. Section 2-308. and compacted to 90% density; compaction to be determined by ASTM D-1557-66T (Modified Proctor). Any fill within building area is to be compacted to a minimum of 95% as determined by methods previously mentioned. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and

4. Permanent Sod:

Installation of sod should follow permanent seeding dates. Permanent sod is to be tall fescue, state approved sod; lime and fertilize per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid or he contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes greater than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for stablishment may be required. Sod is not to be applied on frozen ground. Sod shall not be harvested or transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to insure established sod.

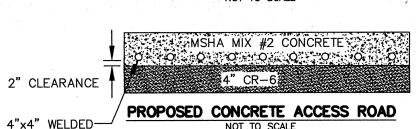
Sediment control plans for mining operations must include the following

February 1 through April 30 and August 15 through October 31 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and sericea lespedeza at the rate of 0.5 pounds per 1000 square feet For seeding dates of May 1 through August 14 use seed mixture of tall fescue at the rate of 2 pounds per 1000 square feet and weeping lovegrass at the rate

NOTE: Use of this information does not preclude meeting all of the requirements of the "1994 Maryland Standards and Specifications for Soil

PORTLAND CEMENT CONCRETE PAVEMENT 6" CR-6 BASE COURSE

GO-KART TRACK SECTION



WIRE MESH

8" PORTLAND CEMENT CONC. PAVEMENT

DETAIL 19 - STONE OUTLET STRUCTURE PERSPECTIVE VIEW L = 6' 2' MINIMUM LEVEL CREST 6° MIN.

18° MINIMUM

18° MINIMUM

Construction Specifications 1. Crushed stone shall be used. Gravel may be used if crushed stone is not available. The stone shall be 2"-3" in size. 2. The crest of the stone dike shall be at least 6" lower than the lowest elevation of the top of the earth dike and shall be level. The stone outlet structure shall be embedded into the soil a minimum

4. The minimum length of the crest of the stone outlet structure shall be 6 The stone outlet structure shall be inspected after each rain. Stone shall be replaced when the structure ceases to function and ponding results.

6. The baffle board shall be extended one foot into the dike, staked and embedded $\mathbf{4}^{*}$ into the existing ground.

DÉTAIL 25 - ROCK OUTLET PROTECTION I

SECTION A-A

PAGE MARYLAND DEPARTMENT OF ENVIRONMENT F - 18 - 8 WATER MANAGEMENT ADMINISTRATION

INVERT

OUT

182.32

190.40

184.80

184.16

PLAN VIEW

MINIMUM DEPTH = DISCHARGE OR TAILWATER DEPTH. WHICHEVER IS GREATER

SECTION B-B

TYPE

END SECTION

BAYSAVER

YARD INLET

YARD INLET

FIBERGLASS

FIBERGLASS

FIBERGLASS

FIBERGLASS

FIBERGLASS

INLET

INLET

INLET

INLET

INLET

18" CMP

INVERT

182.42

184.06

SYMBOL

ES-1

I-101

1-104

1 - 106

7. The drainage area to this structure shall be less than 1/2 acre.

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS) MAX. DRAINAGE AREA = 1/4 ACR

 Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard described. 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2° x 4° weir. 3. Securely noil the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and noil (minimum 2' lengths of " x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall xtend across the inlet top and be held in place by sandbags or alternate weight. 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening. 6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

ROCK OUTLET PROTECTION

prepared to the required lines and grades. Any fill required

in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the danaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course

thickness in one operation and in such a manner as to avoid

displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger

stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to

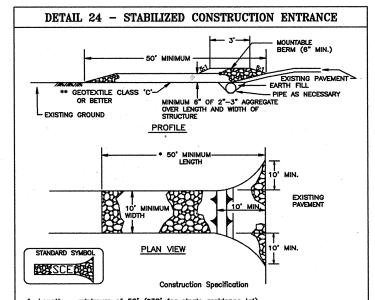
U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SITU. CONSERVATION SERVICE F - 18 - 84 WATER MANAGEMENT ADMINISTRATION

NORTH

N 554,986.16

N 554,9**62.03**

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.



. Length - minimum of 50° (*30° for single residence lot 2. Width — 10' minimum, should be flared at the existing road to provide a turning radius. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

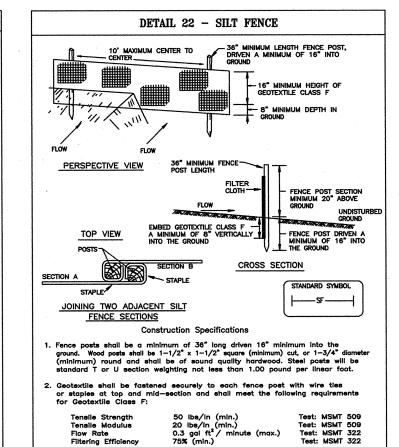
5. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 8" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required. 6. Location — A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIS SOIL CONSERVATION SERVICE F - 27 - 3 WATER MANAGEMENT ADMINISTS

12-1/8" / 12-1/8

MODEL #1200 INLET

12" STEEL GRATE

MODEL #1215 STEEL GRATE



5. Where ends of geotextile fabric come together, they shall be overlapped,

18" RISER EXTENSION

MODEL #1816 RISER EXTENSION

18" STEEL GRATE

MODEL #1815 STEEL GRATE

N.T.S.

18"x 18" BASIN

MODEL #1800 BASIN N.T.S.

NOTE: FOR INSTALLATION & MAINTENANCE DETAILS SEE MANUFACTURERS

INFORMATION AS DISTRIBUTED BY FORM SERVICES (410) 247-9500

SPEC'S. DRAINAGE STRUCTURE'S SHOWN HEREON TAKEN FROM NDS PRODUCT

BY THE DEVELOPER

DETAIL 33 - SUPER SILT FENCE

Construction Specifications

2. Chain link fence skall be fastened securely to the fence posts with wire ties or staples.

Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the around.

When two sections of filter cloth adjoin each other, the shall be overlapped by 6" and folded.

6. Maintenance shall be performed as needed and slit buildups removed when "bulges" develop in the slit fence.

1. The poles do not need to be set in concrete.

LOW _____FILTER CLOTH____

EMBED FILTER CLOTH 8"_______
MINIMUM INTO GROUND

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

STANDARD SYMBOL

_____ SSF ____

DATE

BY THE ENGINEER

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

DATE THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL

REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL SOURCES CONSERVATION DATE

THIS DEVELOPMENT PLAN IS A 12416

2/4/00 DEVELOPMENT ENGINEERING DIVISION windy trameta

CHIEF, DIVISION OF LAND DEVELOPMENT 4.02 A SCHEDULES - BAYSAVER 11/22/04 2 OWNER INFO

DATE NO. OWNER/DEVELOPER

CENTER FOR SOCIAL CHANGE 9300 LIBERTY ROAD RANDALLSTOWN, MD 21133 ATTN: DR. JOSEPH MATHEN

410-655-5267

REVISION

PROJECT CENTER FOR SOCIAL CHANGE OFFICES & ADULT DAY CARE

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

DETAIL AND NOTE SHEET



CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212

DESIGNED BY: WAN



WAYNE A. NEWTON #21591

DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999 SCALE: AS SHOWN

RECORD DRAWING 03/03

H.C. STD. SD-4.14 N 554,898.08 E 1,382,209.47 N 554,872.09 E 1,382,246.20 H.C. STD. SD-4.14 NDS MODEL 1800 N 554,873.78 E 1,382,287.37 NDS MODEL 1800 192.40 N 554,832.63 E 1,382,315.16 E 1,382,343.16 NDS MODEL 1800 N 554,875.76 190.70 12" RISER EXTENSION 185.40 NDS MODEL 1800 N 554,959.57 E 1,382,286.62 MODEL #1216 RISER EXTENSION N.T.S. E 1,382,304.01 N 554,915.70 NDS MODEL 1200 188.90

EAST

1,382,222.05

1,382,**200.0**6

PIPE SCHEDULE

STRUCTURE SCHEDULE

REMARKS

H.C. STD. SD-3.61

TOP

FROM	ТО	TYPE	UPHILL INV.	DOWNHILL INV.	SLOPE	CL TO CL LENGTH
83	ES-1	EXISTING				
I—106	I-101	8" SCHED 40 PVC	184.40	182.42	1.98%	100'
I-104	I-102	6" SCHED 40 PVC	190.40	185.00	7.01%	77'
I-105	I-103	6" SCHED 40 PVC	. 188.70	186.60	3.79%	55'
I - 103	I-102	6" SCHED 40 PVC	186.50	185.00	3.79%	40'
I—107	I-102	8" SCHED 40 PVC	184.79	183.82	1.33%	73'
I-102	l-101	12" ADS	183.49	182.92	1.33%	43'
I-101	SC-1	12" ADS	182.82	182.35	1.33%	38'

	FROM	ТО	TYPE	UPHILL INV.	DOWNHILL INV.	SLOPE	CL TO CL LENGTH
$\overline{\Lambda}$	85	ES-1	EXISTING				
	I-106	I-101	8" SCHED 40 PVC	184.40	182.42	1.98%	100'
	I-104	I-102	6" SCHED 40 PVC	190.40	185.00	7.01%	77'
	I-105	I-103	6" SCHED 40 PVC	. 188.70	186.60	3.79%	55'
	l-103	l-102	6" SCHED 40 PVC	186.50	185.00	3.79%	40'
	I-107	I-102	8" SCHED 40 PVC	184.79	183.82	1.33%	73'
	I-102	I-101	12" ADS	183.49	182.92	1.33%	43'
	I-101	SC-1	12" ADS	182.82	182.35	1.33%	38'

SDP-99-131

DRAWING NO.: 4 OF 9

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the 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. For dry stormwater management ponds, a minimum of 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below 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.

Earth Fill

Materials — The fill material shall be taken from approved, designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stone greater than 6", frozen or other objectionable materials. Fill material for the embankment shall conform to Unified Soil Classification CL.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of the fill. Fill materials shall be placed in maximum 8" thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 on 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 will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material 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 below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures 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 manually directed 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 the structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

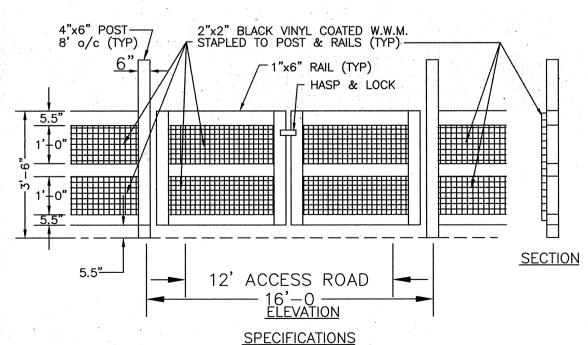
All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

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. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used; Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Aluminum Coated Steel Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Aluminum Pipe - This pipe and its appurtenances shall conform to AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contract 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 between 4 and 9.



1. HORIZONTAL RAILS SHALL BE 1"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE.

2. POSTS 8' o/c SHALL BE 4"x6" PRESSURE TREATED #2 SOUTHERN YELLOW PINE 3. GALVANIZED WIRE ON BACK OF FENCE SHALL BE 2"x2" BLACK VINYL COATED WELDED

WIRE MESH STAPLED TO POST & RAILS WITH GALVANIZED STAPLES. 4. GATE SHALL BE 8' EACH SIDE (16' TOTAL) SWING GATE WITH HASP AND LOCK.

SPLIT RAIL FENCE AND GATE DETAIL

Coupling Bands, anti-seep collars, end sections, etc. must be composed of the same materials as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

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. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less that 24" in diameter: flanges on both ends of the pie, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

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.

Backfilling - Backfilling shall be conform to "Structural Backfill"

Other Details - Other details such as anti-seep collars, valves, etc. shall be as shown on the

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

Materials — Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

Laying Pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

Backfilling — Backfilling shall confirm to "Structural Backfill"

Other Details — Other details such as anti-seep collars, valves, etc. shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM

Joints and Connections - Joints and connections to anti-seep collars shall be completely

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

Backfilling - Backfilling shall conform to "Structure Backfill'

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

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414,

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311 & 901.2.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section

3/4" PLYWOOD PERFORATED —

-BOTTOM POND

Care of Water During Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water will be pumped.

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, liming, fertilizing, and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD—342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Inetall Collar With

- PERMANENT LOW FLOW ORIFICE INV. EL =178.70

(SEDIMENT CONTROL)

TEMPORARY STONE FILTER DETAIL

N.T.S.

EX. 24" CMP

Corrugations Vertical

- 7'- 5" E'-1

ANTI-GEEP COLLAR DETAIL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

Collar To Be Of Same Gage As The Ape With Which It is Used.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED **DETENTION POND**

Routine Maintenance

- 1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
- 2. Top and side slopes of the embankment shall be moved a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be moved as needed.
- 3. Debris and litter shall be removed during regular moving operations and as needed.
- 4. Visible signs or erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance

- 1. Structural components of the pond, such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
- 2. Sediment shall be removed from the pond, and forebay, no later then when the capacity of the pond, or forebay, is half full of sediment, or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

BAYSAVER MAINTENANCE

BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE PERIODICALLY, INSTACTION IS MINDE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMLAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 PEET, MINIMUM INSPECTION IS RECOMMENDED TIMES A YEAR TO MAINTAIN OPERATION AND FUNCTION OF RAYSAVER.

NAINTENANCE CONSISTS OF THE POLLOWING

A. CONTAINMENT STORAGE MANHOLE

1. REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.

CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE PLUSHING WATER BY VACUUM TRUCK, MAKE CERTAIN MANHOLE IS CLEAN.

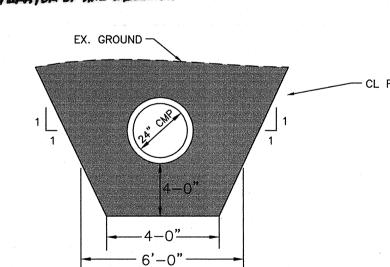
B. PRIMARY SEPARATION MANHOLE

1. USING A SUBMERSIBLE PUMP, PUMP THE CLEANWATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FAILS TO 1 FOOT ABOVE THE SEDIMENT LAYER.

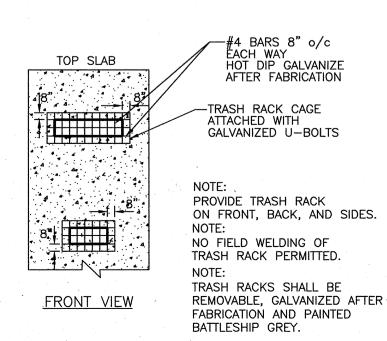
REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.

3. CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER. BY VACUUM TRUCK. MAKE CERTAIN MANHOLEIS CLEAN.

4. CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISADSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.



PRINCIPAL SPILLWAY EXCAVATION



NOTES: ANTI-SEEP COLLARS

1) All Materials to be in Accordance With Construction and Construction Material Opecifications.

2) When Opecified on The Plans, Coating of Callars Chall Be

5) Unassembled Coljars Chall Be Marked By Pointing or Togging To Identify Matching Pairs.

1) The Lap Between The Two Half Bections And Between The Pipe And Connecting Band Chall Be Caulked With Asphalt Mastic At Time of Installation.

5) Each Collar Bhall Be Furnished With Two 1/2" Diameter Pads With Standard Tank Lugs For Connecting Collars To Page

G) Collars Onall Be Located 2' Min. From All Ape Joints.

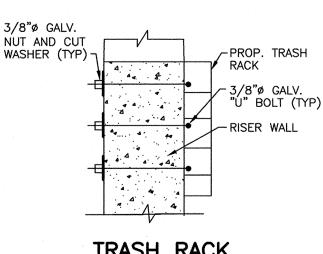
-12"Min.-

BECTION 'B'-B'

NO SCALE

DETAIL -- TRASH RACK N.T.S.

SIDE VIEW



TRASH RACK MOUNTING DETAIL

RECORD DRAWING 03/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING CHIEF, DIVISION OF LAND DEVELOPMENT 4.02 A BAYSAVER MAINTENANCE NOTE 11/22/04 2 OWNER INFO DATE NO. REVISION OWNER/DEVELOPER CENTER FOR SOCIAL CHANGE 9300 LIBERTY ROAD RANDALLSTOWN, MD 21133 ATTN: DR. JOSEPH MATHEW 410-655-5267 PROJECT CENTER FOR SOCIAL CHANGE OFFICES & ADULT DAY CARE AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B **DETAIL AND NOTE SHEET** MESSICK & ASSOCIATES * CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212MESSICK GROUP INC. T/A MESSICK AND ASSOCIATE 1/12/00 OF MARY DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999

EXISTING WEIR TO BE BRICKED SHUT FOR SEDIMENT CONTROL. TO BE RE-OPENED UPON COMPLETION OF PROJECT. INV.=191.38 .44 (2)-No.4 REINFORCED BARS (EQUALLY SPACED) TO BE LOW FLOW ORIFICE REMAIN, CONTRACTOR TO INV.=178.70 INSTALL NEW TRASH RACK OVER EX. OPENING (SEE - STORAGE BELOW ORIFICE -EX. 24" CMP OUT = 176.6 NOT TO BE EXCAVATED UNTIL AREA IS STABILIZED & SEDIMENT NOTE: ALL DIMENSIONS & CONTROL IS REMOVED. ELEVATIONS ARE AS-BUILT EX. RISERS OUTSIDE DIMENSIONS = 75" WIDE x 44" DEEP \times 97-7/8" TALL RISER DETAIL OF EX. S.W.M. OUTLET STRUCTURE N.T.S.

PREVIOUSLY BRICKED SHUT WEIR-

SEDIMENT CONTROL PURPOSES.

COMPLETION OF CONSTRUCTION.)

PREVIOUS INVERT = 183.88.

TO BE RE-OPENED FOR

LENGTH = 4' (TO BE

RE-BRICKED SHUT UPON

-HOWARD CO. A-5 INLET W/STEPS

TOP OF INLET 184.9

-EX. TRASH RACK No.4

REINFORCED BARS 4" O/C SET 6" IN

CONCRETE TO REMAIN

INSTALL NEW TRASH

OPENING (SEE DETAIL)

- PERMANENT POND 177.

BOTTOM ELEV=177.00

CONTRACTOR TO

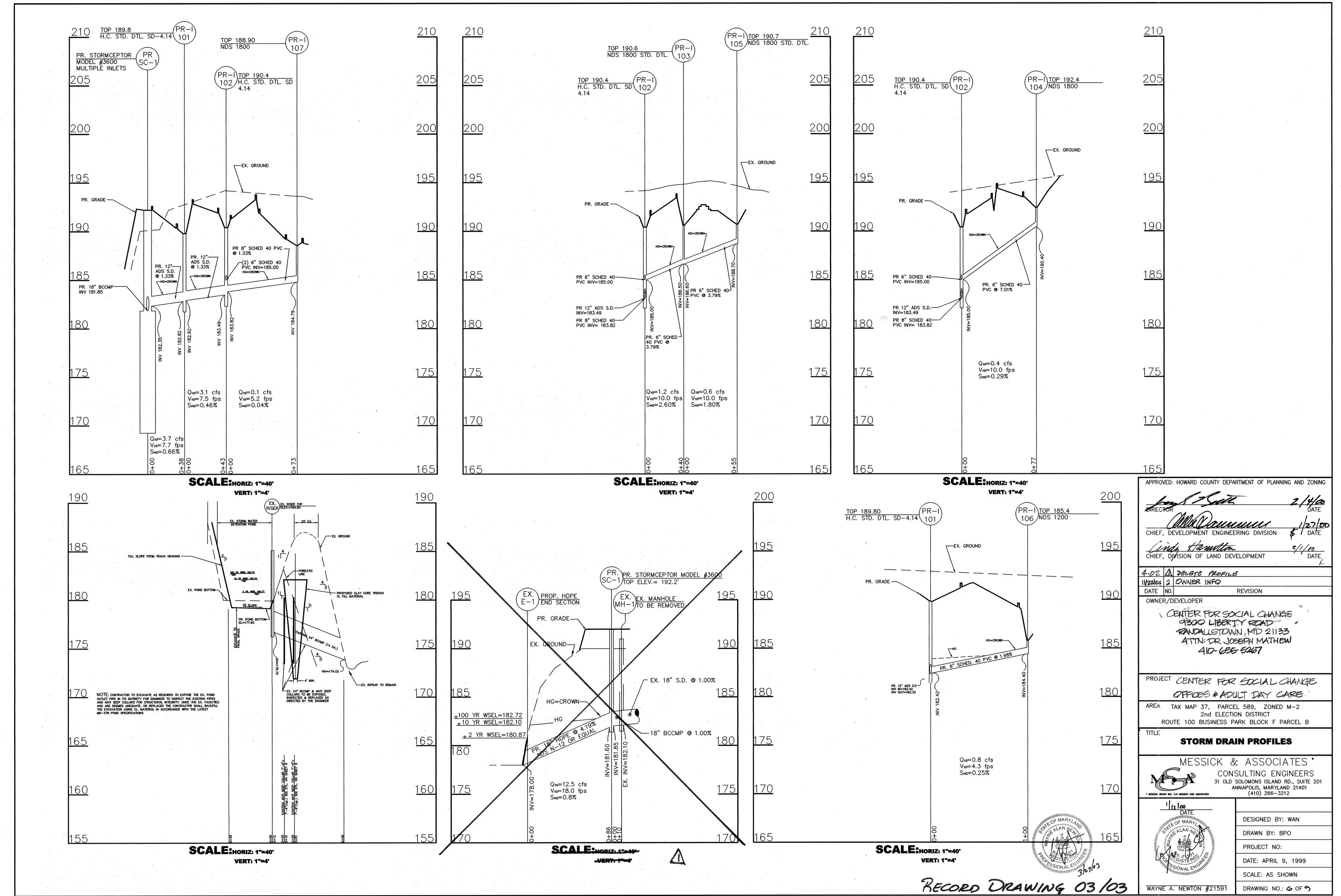
RACK OVER EX.

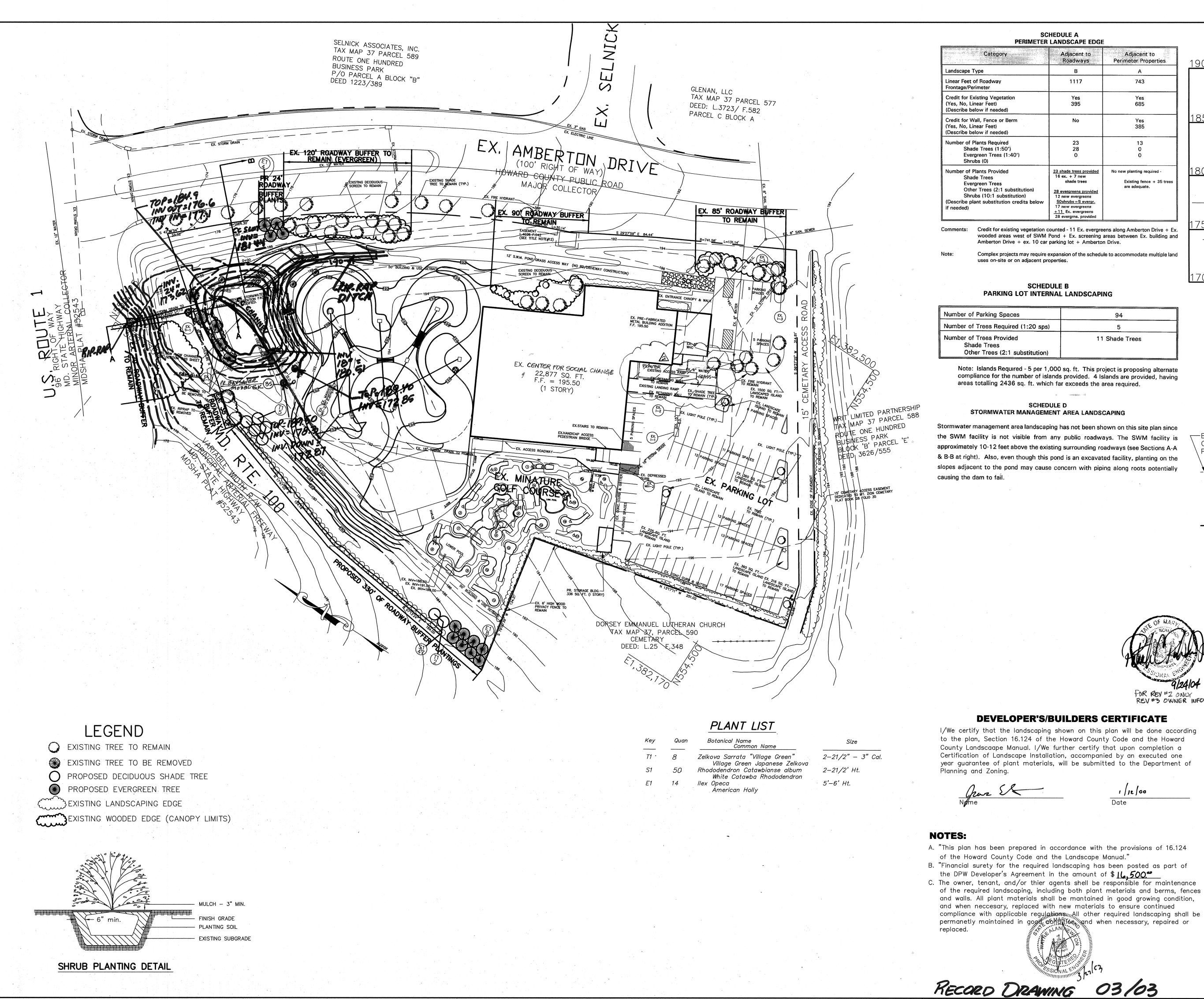
HOWARD STD. SD-4.01

DRAWING NO.: 5 OF 9

SCALE: AS SHOWN

WAYNE A. NEWTON #21591





SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	В	А
Linear Feet of Roadway Frontage/Perimeter	1117	743
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	Yes 395	Yes 685
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	Yes 385
Number of Plants Required Shade Trees (1:50') Evergreen Trees (1:40') Shrubs (0)	23 28 0	13 0 0
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	23 shade trees provided 16 ex. + 7 new shade trees 28 evergreens provided 12 new evergreens 50shrubs = 5 evergr. 17 new evergreens + 11 Ex. evergreens 28 evergrns. provided	No new planting required - Existing fence + 35 trees are adequate.

Credit for existing vegetation counted - 11 Ex. evergreens along Amberton Drive + Ex. wooded areas west of SWM Pond + Ex. screening areas between Ex. building and Amberton Drive + ex. 10 car parking lot + Amberton Drive.

Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

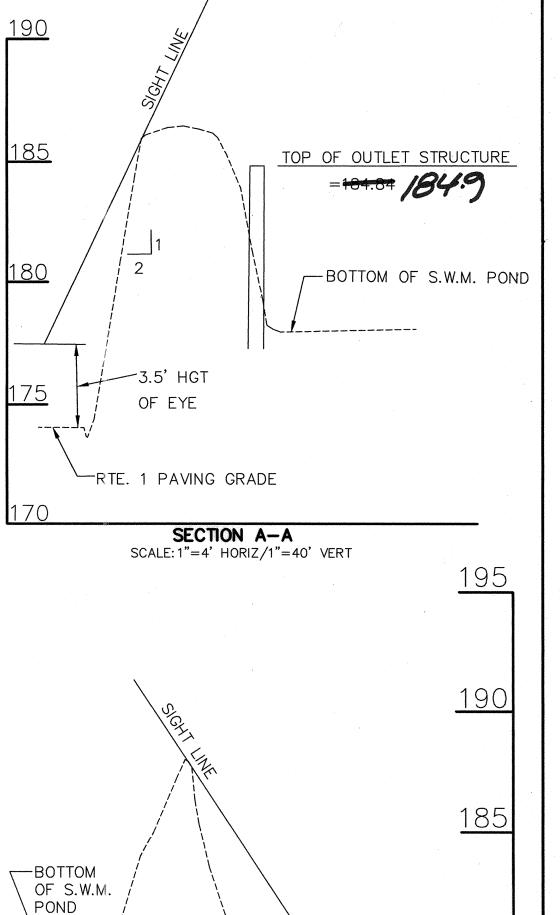
Number of Parking Spaces	94
Number of Trees Required (1:20 sps)	5
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	11 Shade Trees

Note: Islands Required - 5 per 1,000 sq. ft. This project is proposing alternate compliance for the number of islands provided. 4 Islands are provided, having areas totalling 2436 sq. ft. which far exceeds the area required.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

Stormwater management area landscaping has not been shown on this site plan since the SWM facility is not visible from any public roadways. The SWM facility is approximately 10-12 feet above the existing surrounding roadways (see Sections A-A & B-B at right). Also, even though this pond is an excavated facility, planting on the slopes adjacent to the pond may cause concern with piping along roots potentially causing the dam to fail.

DEVELOPER'S/BUILDERS CERTIFICATE



SECTION B-B SCALE: 1"=4' HORIZ/1"=40' VERT.

3.5' HGT. OF EYE

180

CHIEF, DIVISION OF LAND DEVELOPMENT 4.02 A BAYSAVER & NOTES

7/10/04 ADD RESTROOMS & WALKS TO SOUTH SIDE OF BUILDING

AMBERTON DR.-PAVING GRADE

OWNER/DEVELOPER

FOR REV #2 ONLY REV #3 OWNER INFO

CENTER FOR SOCIAL CHANGE 9300 LIBERTY ROAD RANDALLSTOWN, MD 21133 ATTN: DR. JOSEPH MATHEW 410-655-5267

PROJECT CENTER FOR SOCIAL CHANGE

OFFICES & ADULT DAY CARE

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

LANDSCAPE PLAN

MESSICK & ASSOCIATES

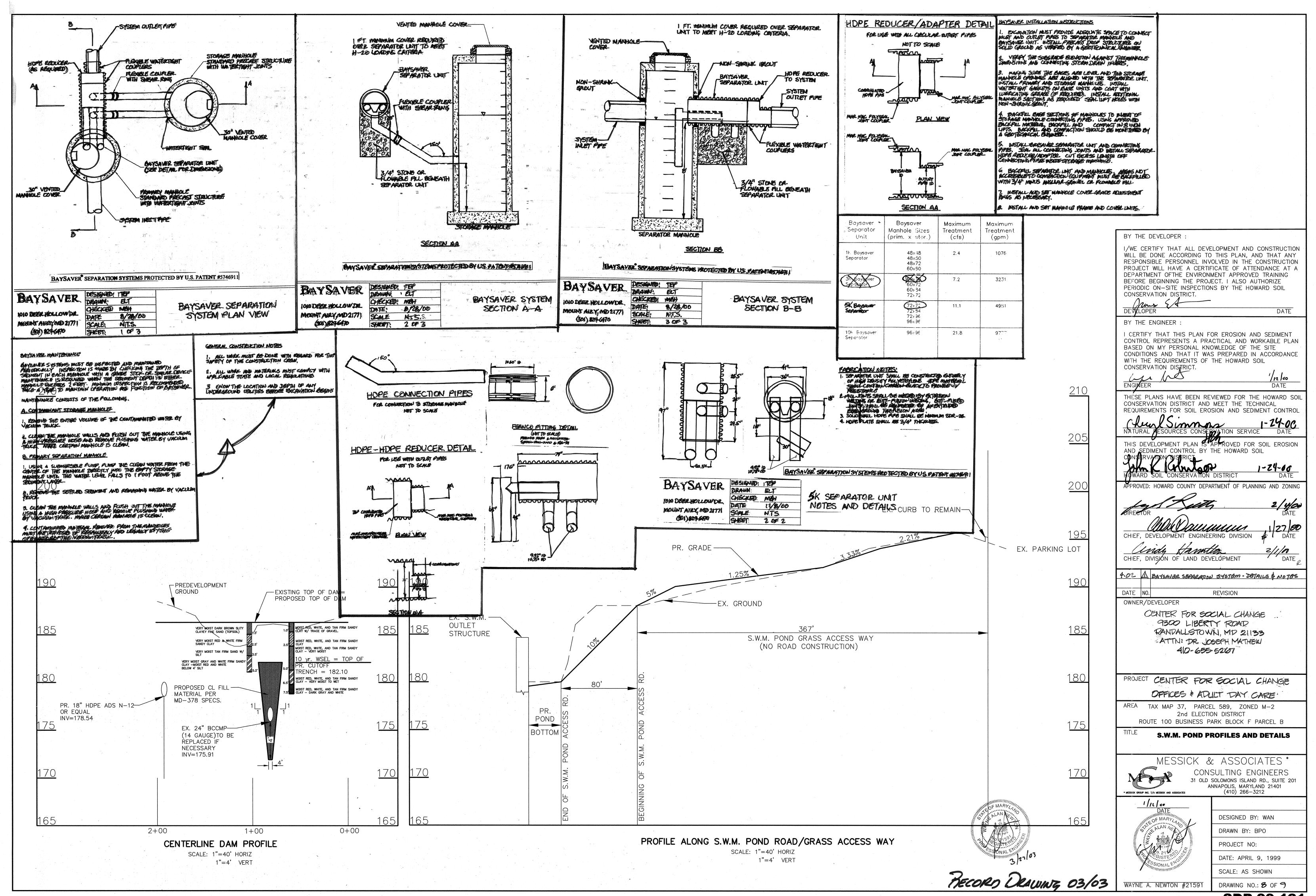
31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212 * MESSICK GROUP INC. T/A MESSICK AND ASSOCIATES

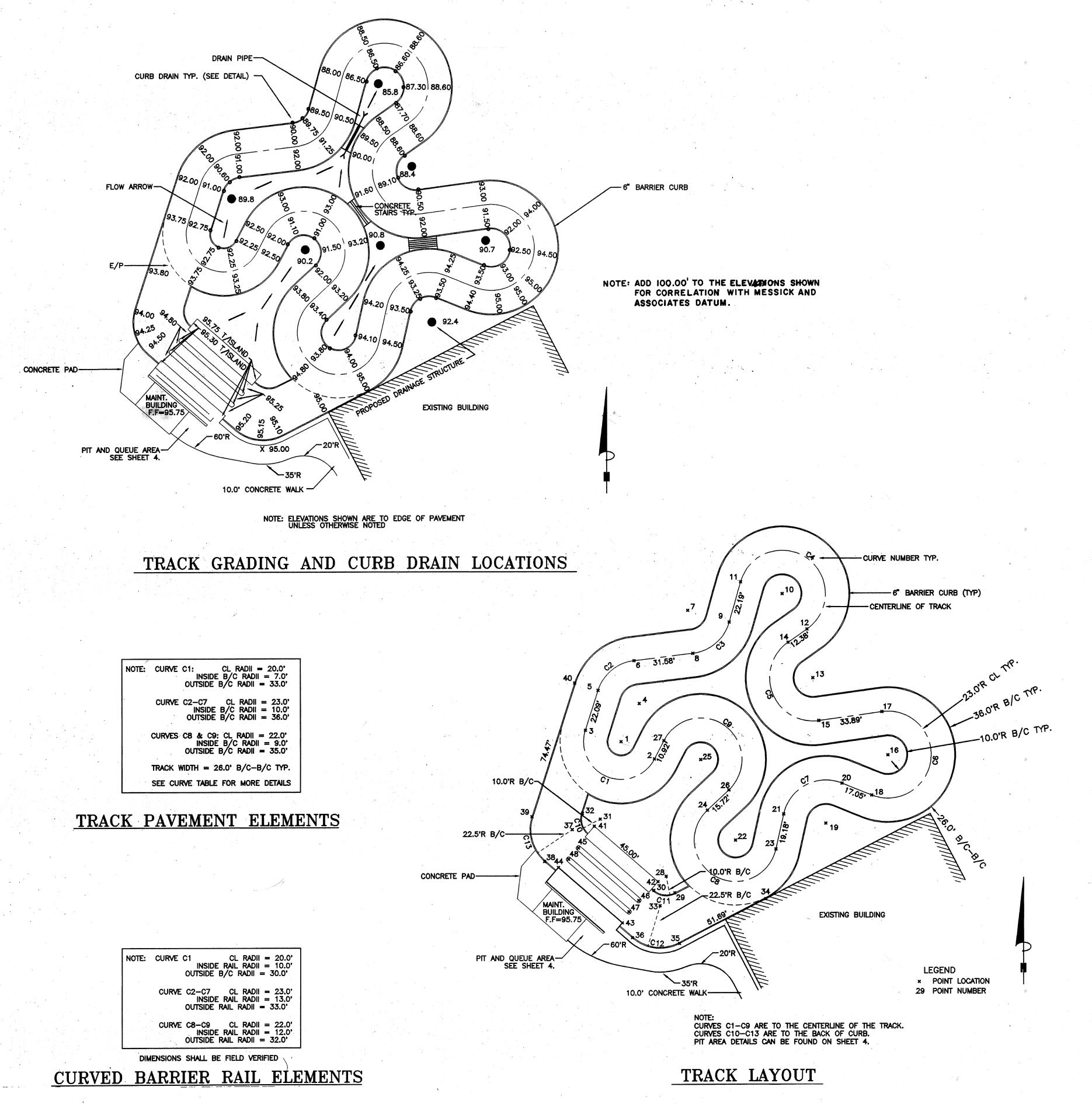
WAYNE A. NEWTON #21591

DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO:

DATE: APRIL 9, 1999 SCALE: AS SHOWN

DRAWING NO.: 7 OF 9 **SDP-99-131**





NOTE: CURVES C1-C10 ARE TO THE CENTERLINE OF THE TRACE

NUMBER	lc	Da	CD	T FT	R FT	L FT	LC FT
C1	170'24'11"	286'28'44"	N 67'25'03" W	238.25	20.00	59.48	39.86
C2	65'21'21"	249'06'44"	N 50°27°42" E	14.75	23.00	26.24	24,84
C3	67'22'41"	249'06'44"	N 49°27'02" E	15.33	23.00	27.05	25,52
C4	219'07'51"	249'06'44"	S 54'40'23" E	64.72	23.00	87.96	43,34
C5	152'50'39"	249'06'44"	S 21'31'48" E	95.23	23.00	61.36	44,71
C6	209'54'54"	249'06'44"	S 07"00'20" W	86.09	23.00	84.27	44.44
C7	99'28'41"	249'06'44"	S 62°13'26" W	27.16	23.00	39.93	35,10
C8	214'23'59"	260'26'07"	N 60'18'55" W	71.07	22.00	82.32	42.03
C9	199'30'14"	260'26'07"	N 52'52'02" W	128.01	22.00	76.60	43.36
C10	66'45'41"	212'57'28"	S 15'35'48" E	6,59	10.00	11.65	11.00
C11	68'20'08"	212'57'28"	N 83'08'43" W	6.79	10.00	11.93	11.23
C12	68'20'08"	254'38'52"	N 83'08'43" W	15.27	22.50	26.84	25.27
017	BC*45144"	254.30150	M 15'75'49" W	14 93	22.50	26.22	24 76

ic = DELTA ANGLE
Da = DEGREE OF CURVATURE ARC
CD = CHORD DIRECTION
T FT = TANGENT LENGTH IN FEET

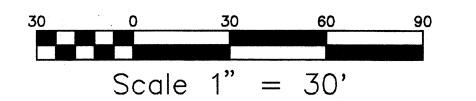
L FT = RADIUS IN FEET L FT = ARC LENGTH IN FEET LC FT = CHORD LENGTH IN FEET

CURVE DATA

			DECC.
1	554,879.44	1,382,204.32	RP
2	554,870.29	1,382,222.08	PC
3	554,885.59	1,382,185.28	PT
4	554,899.61	1,382,213.93	RP
5	554,906.63	1,382,192.03	PC
6	554,922.44	1,382,211.18	PT
7	554,949.05	1,382,239.79	RP
8	554,926.22	1,382,242.53	PC
9	554,942.80	1,382,261.92	PT
10	554,957.91	1,382,290.08	RP
11	554,964.16	1,382,267.95	PC
12	554,939.09	1,382,303.31	PT
13	554,913.16	1,382,306.41	RP
14	554,931.97	1,382,293.18	PC
15	554,890.38	1,382,309.59	PT
16	554,872.29	1,382,346.34	RP
17	554,895.07	1,382,343,16	PC
18	554,850.96	1,382,337.74	PT
19	554,836.00	1,382,313.32	RP
20	554,857.33	1,382,321.93	PC
21	554,840.97	1,382,290.87	PT
22	554,827.01	1,382,265.24	RP
23	554,822.25	1,382,286.72	PC
24	554,843.07	1,382,250.21	PT
25	554,869.87	1,382,246.64	RP
26	554,853.81	1,382,261.68	PC
27	554,879.98	1,382,227.11	PT
28	554,807.92	1,382,228.29	RP
29	554,799.04	1,382,232.87	PC
30	554,800.38	1,382,221.72	PT
31	554,838.40	1,382,193.25	RP
32	554,841.46	1,382,183.73	PC
33	554,792.18	1,382,225.05	RP
34	554,796.35	1,382,281.07	PT@B/C
35	554,772.63	1,382,235.14	PC@B/C
36	554,775.58	1,382,210.61	PT@B/C
37	554,832.82	1,382,178.33	RP
38	554,816.23	1,382,163.89	PC@B/C
39	554,839.54	1,382,157.38	PT@B/C
40	554,910.45	1,382,180.13	PT@B/C
41	554,834.56	1,382,190.04	CORNER
42	554,805.03	1,382,223.99	CORNER
43	554,783.15	1,382,204.96	CORNER
44	554,812.68	1,382,171.01	CORNER
45	554,822.99	1,382,181.63	RP ISLAND
46	554,795.10	1,382,213.70	RP ISLAND
47	554,789.06	1,382,208.45	RP ISLAND
48	554,816.96	1,382,176.38	RP ISLAND

RP = CENTER POINT OF CURVE PC = POINT OF CURVATURE PT = POINT OF TANGENCY B/C = BACK OF CURB

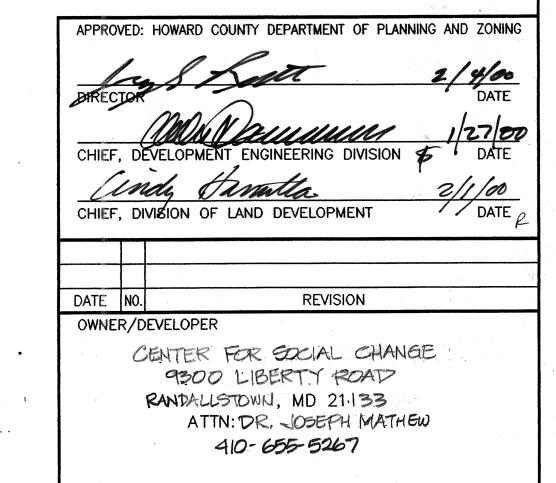
TRACK COORDINATES



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RECORD DRAWING 03/03

THIS SHEET PROVIDED BY PETER F. OLESEN & ASSOC.



PROJECT CENTER FOR SOCIAL CHANGE OFFICES & ADUCT PAY CARE

AREA TAX MAP 37, PARCEL 589, ZONED M-2
2nd ELECTION DISTRICT
ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

GO KART TRACK GRADING AND COORDINATES

AND COORDINATES

MESSICK & ASSOCIATES *



CONSULTING ENGINEERS
31 OLD SOLOMONS ISLAND RD., SUITE 201
ANNAPOLIS, MARYLAND 21401
(410) 266-3212

Plaige
DATE

MARY

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DESIGNED BY: WAN

DRAWN BY: BPO

PROJECT NO:

DATE: APRIL 9, 1999

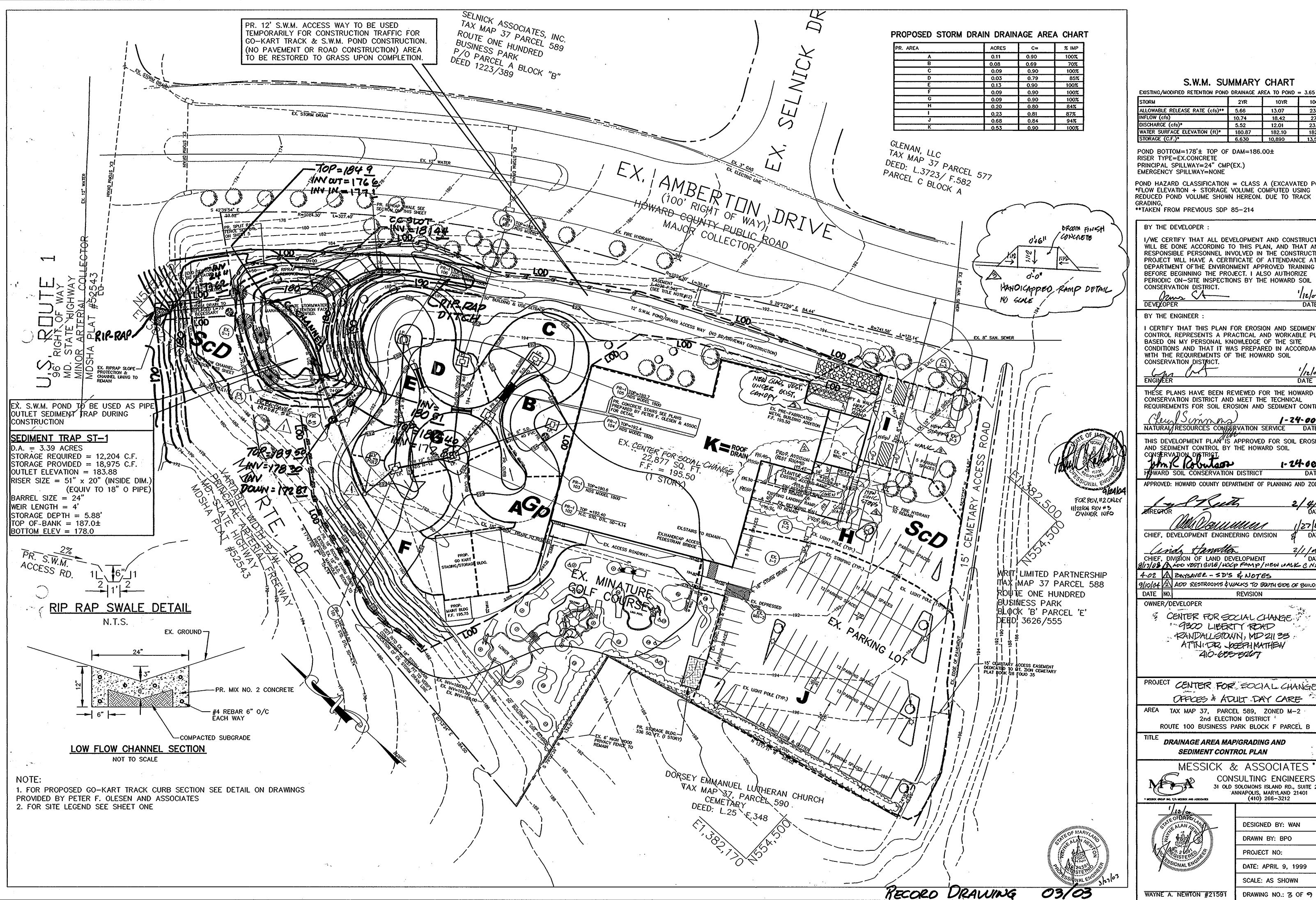
SCALE: AS SHOWN

DRAWING NO.: 9 OF 9

SDP-99-131

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S.W.M. SUMMARY CHART

EXISTING/MODIFIED RETENTION POND DRAINAGE AREA TO POND = 3.65 AC.			
STORM	2YR	10YR	100'rR
ALLOWABLE RELEASE RATE (cfs)**	5.66	13.07	23.45
INFLOW (cfs)	10.74	18.42	27.25
DISCHARGE (cfs)*	5.52	12.01	23.43
WATER SURFACE ELEVATION (ft)*	180.87	182.10	182.72

6.630 10,890 13,590

POND BOTTOM=178'± TOP OF DAM=186.00± RISER TYPE=EX.CONCRETE PRINCIPAL SPILLWAY=24" CMP(EX.) EMERGENCY SPILLWAY=NONE

POND HAZARD CLASSIFICATION = CLASS A (EXCAVATED POND)
*FLOW ELEVATION + STORAGE VOLUME COMPUTED USING
REDUCED POND VOLUME SHOWN HEREON. DUE TO TRACK **TAKEN FROM PREVIOUS SDP 85-214

BY THE DEVELOPER :

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

DATE

BY THE ENGINEER

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT 1/12/00

DATE

1-24-00

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL

(Keuf Jummas 1-24-00 NATURAL/RESOURCES CONSERVATION SERVICE DATE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION

CHIEF. DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT DATE
8/17/08/3 ADD VESTIBULE/HOCP FAMP/HEW WALK C NE GNT 4.02 A BAYSAVER - SD'S & NOTES

9/10/04 2 ADD RESTROOMS &WACKS TO SOUTH SIDE OF BUILDING REVISION

OWNER/DEVELOPER

CENTER FOR SOCIAL CHANGE 9300 LIBERTY ROAD KANDALLSTOWN, MD 21133 ATTIVITIES LOSEPH MATHEW 410-655-5267

PROJECT CENTER FOR SOCIAL CHANGE OFFICES & ADULT DAY CARE

AREA TAX MAP 37, PARCEL 589, ZONED M-2 2nd ELECTION DISTRICT 1 ROUTE 100 BUSINESS PARK BLOCK F PARCEL B

TITLE DRAINAGE AREA MAP/GRADING AND SEDIMENT CONTROL PLAN



CONSULTING ENGINEERS 31 OLD SOLOMONS ISLAND RD., SUITE 201 ANNAPOLIS, MARYLAND 21401 (410) 266-3212



DESIGNED BY: WAN DRAWN BY: BPO PROJECT NO: DATE: APRIL 9, 1999

SCALE: AS SHOWN

DRAWING NO .: 3 OF 9

WAYNE A. NEWTON #21591