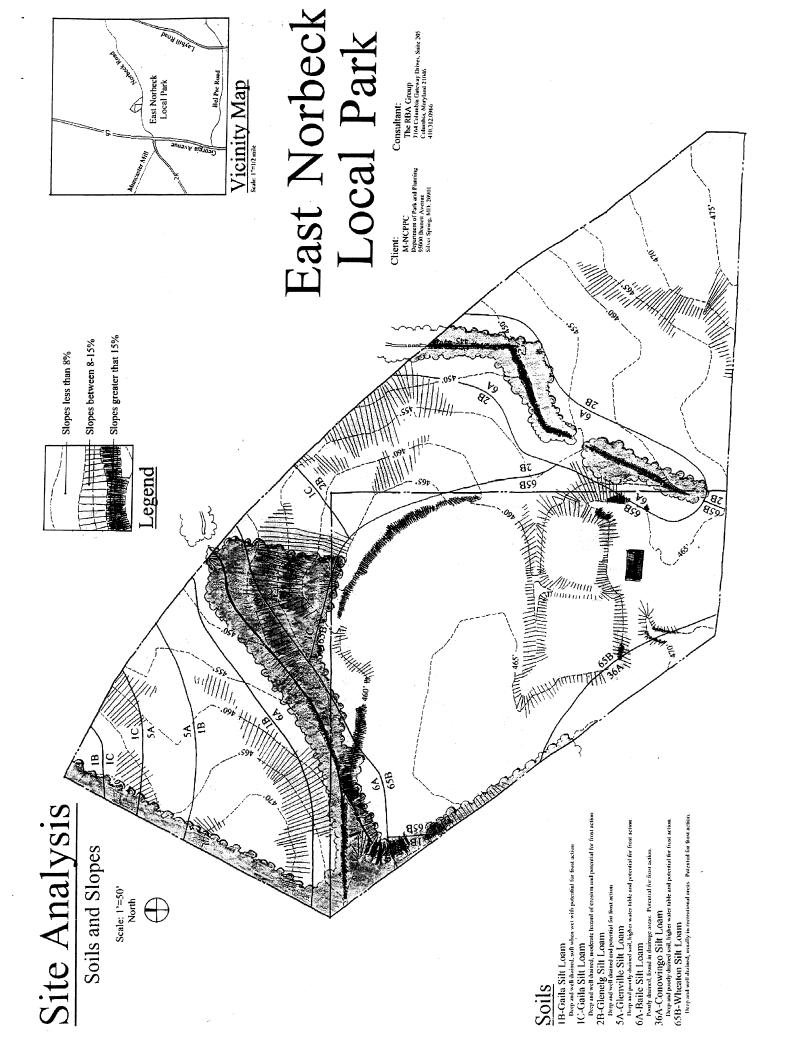
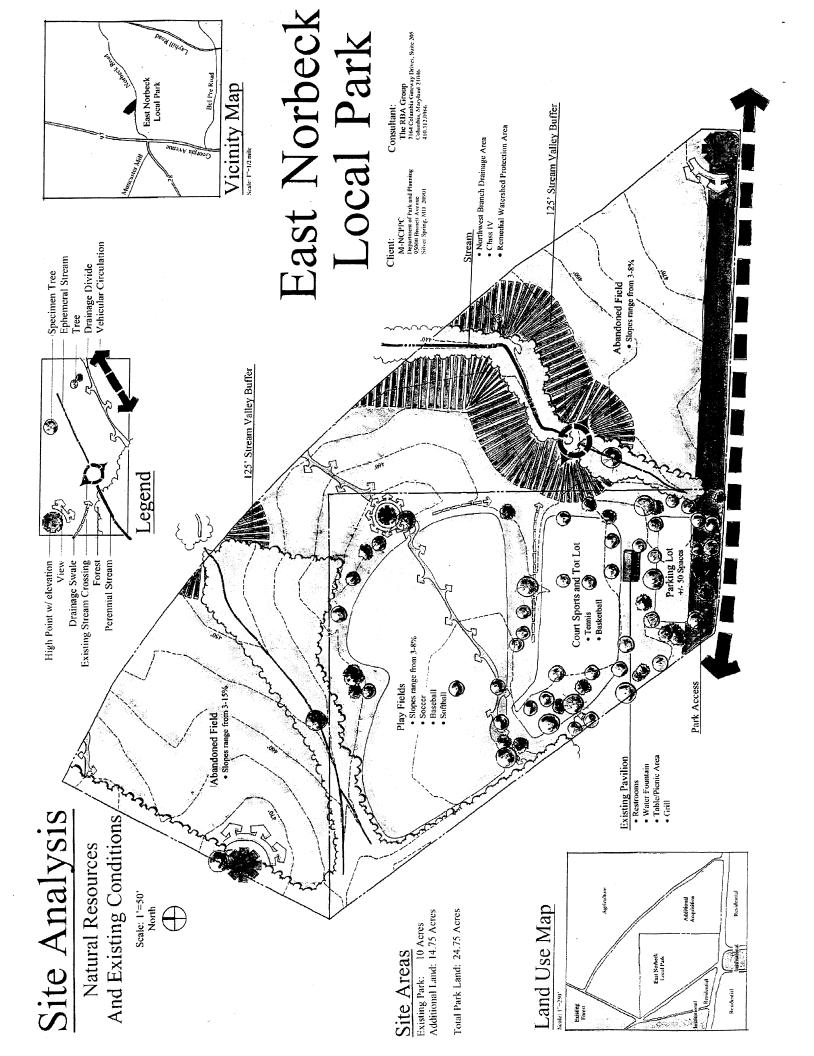
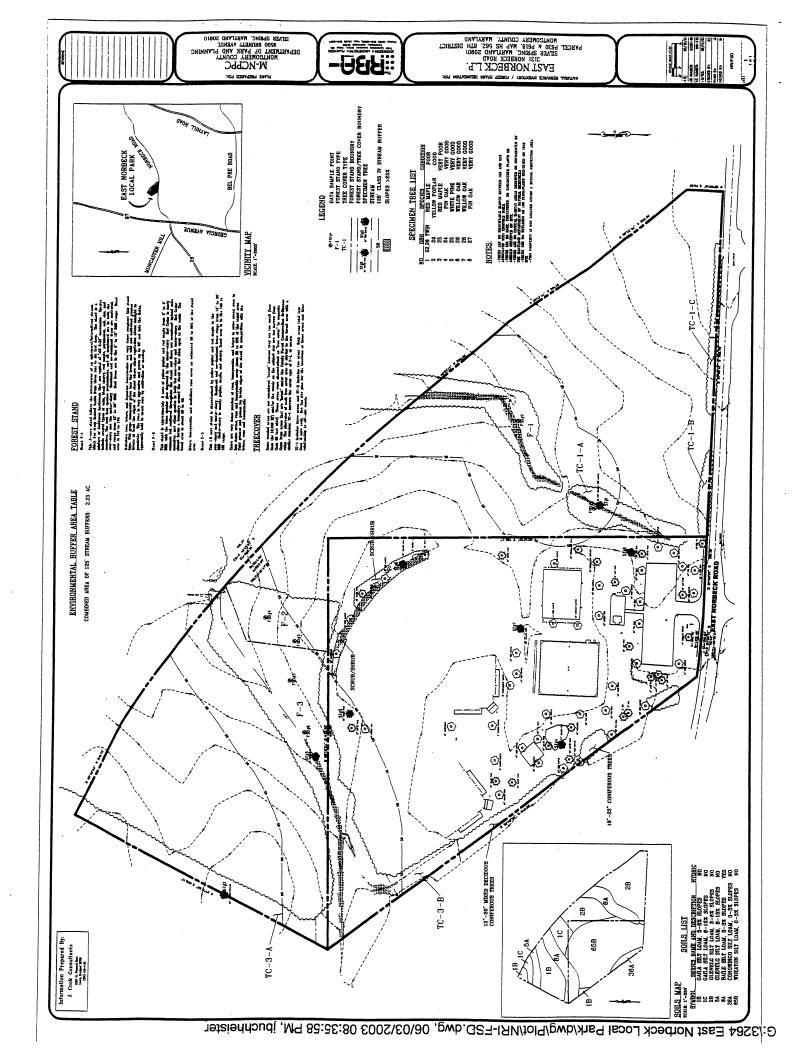
## **APPENDICES**

Appendix A: Site Analysis

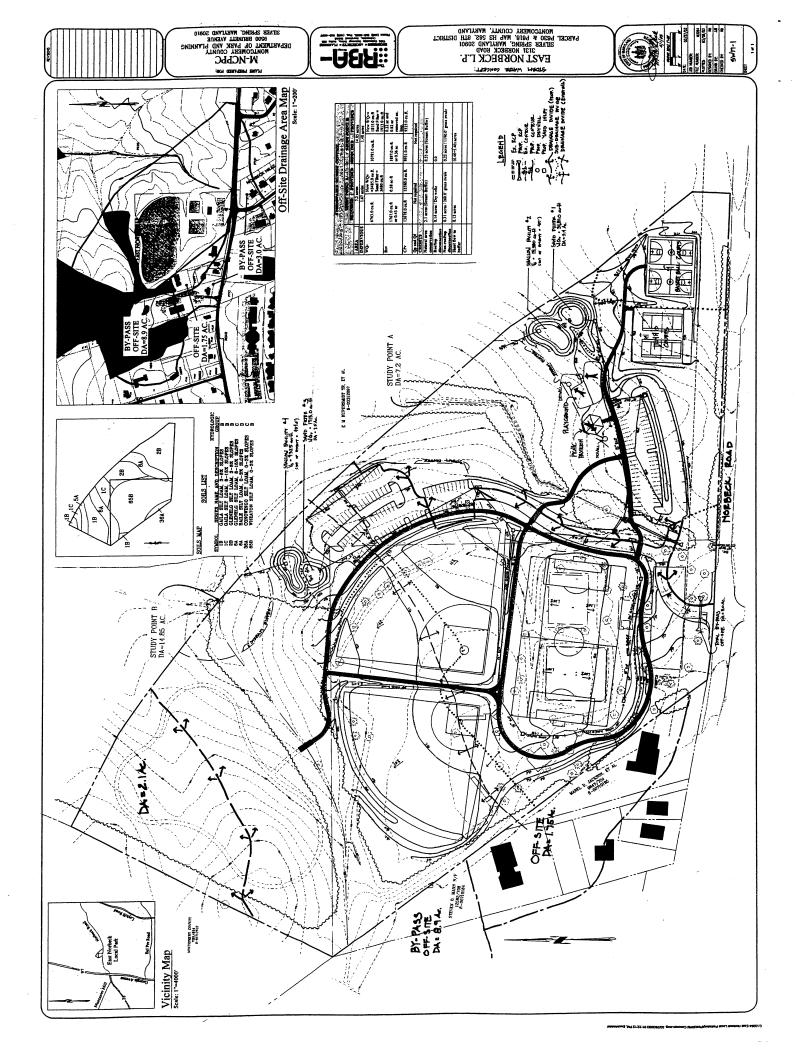




Appendix B: Natural Resources Inventory/Forest Stand Delineation (NRI/FSD)

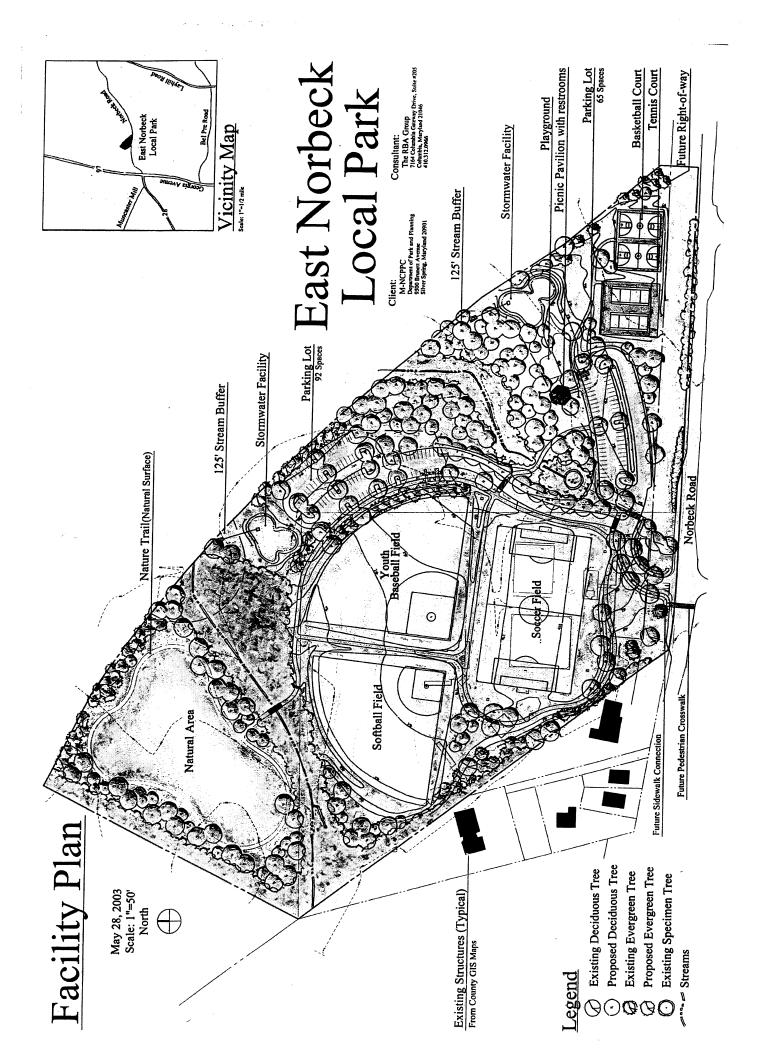


Appendix C: Storm Water Management (SWM) Concept



Appendix D: Preliminary Forest Conservation Plan (FCP)

Appendix E: Final Facility Plan



Appendix F: Cost Estimate

## CONSTRUCTION COST ESTIMATE - EAST NORBECK LOCAL PARK Facility Plan

06/17/03

		<u>.</u>			UNIT		TAL
ITEM & DESCRIPTION		AMOUNT	UNIT		COSTIUNT		SUBTOTAL
Certified As Built Drawings		1	l.s.	\$	5,000.00	\$	5,000.00
Demolition-tree clearing, removal and disposal of all unwanted materials		1	l.s.	\$	67,350.00	<b>\$</b>	67,350.00
Construction Stakeout		1	l.s.	\$	10,000.00	\$	10,000.00
Earthwork							
Strip and Stockpile Topsoil		1	l.s.	\$	25,000.00	\$	25,000.00
Excavation, filling, and grading		1	l.s.		100,000.00	\$	100,000.00
Respread topsoil		1	l.s.	\$	20,000.00	\$	20,000.00
Seeding and mulching		60000	s.y	\$	2.00	\$	120,000.00
	Subtotal:					\$	265,000.00
Sediment Control (30% of Earthwork Costs)		1	l.s.	\$	79,500.00	\$	79,500.00
Utilities							
trenching		750	l.f.	\$	3.50	\$	2,625.00
water service		750	l.f.	\$	4.50	\$	` 3,375.00
connect to existing service		1	l.s.	\$	2,000.00	\$	2,000.00
electric service		750	l.f.	\$	3.50	\$	2,625.00
connect to existing service		1	l.s.	\$	1,000.00	\$	1,000.00
sanitary service		750	l.f.	\$	4.50	\$	3,375.00
connect to existing service		1	l.s.	\$	2,000.00	\$	2,000.00
WSSC fees, application, inspections, misc.		1	l.s.	\$	5,000.00	\$	5,000.00
, , ,	Subtotal:				·	\$	22,000.00
Paving							
Roads, entrance, and parking lots							
4" base course using graded aggregate		8072	s.y.	\$	4.50	\$	36,324.00
3" paving course		8072	s.y.	\$	7.00		56,504.00
1-1/2" Asphalt surface Course		8072	s.y.	\$	4.85	\$	39,149.20
Acel/decel lanes							
6" base course using graded aggregate		600	s.y.	\$	6.50	\$	3,900.00
9" Asphalt		600	s.y.	\$	20.00	\$	12,000.00
Asphalt walk-6' wide							
3" asphalt surface course MSHA type 'SF' mix,		200	s.y.	\$	10.00	\$	2,000.00
4" CR-6 stone base		200	s.y.	\$	6.00	\$	1,200.00
Asphalt walk-8' wide							
3" asphalt surface course MSHA type 'SF' mix,		4150	s.y.	\$	10.00	\$	41,500.00
4" CR-6 stone base		4150	s.y.	\$	6.00	\$	24,900.00
	Subtotal:			-		\$	217,477.20

Concrete wheel stops	11	each	\$	32.00	\$	352.00	
Concrete curb and gutter	4395	1.f.	\$	15.00	\$	65,925.00	
Pedestrian bridge	1	each	\$	30,000.00	\$	30,000.00	
Planting							
Major tree	140	each	\$	350.00	\$	49,000.00	
Minor tree	35	each	\$	250.00	\$	8,750.00	
	65					· ·	
Evergreen tree		each	\$	200.00	\$	13,000.00	
Shrubs	500	each	\$	35.00	\$	17,500.00	
Perennials/grasses (1 gal. Container)	500	each	\$	15.00	\$	7,500.00	
Custom Transplanting (6 trees, 12"-16" caliper)	1	l.s.	\$	28,000.00	\$	28,000.00	
After Care-water/mulch (30 weeks, 2x per week)	1	l.s.	\$	20,000.00	\$	20,000.00	
Subto	otal:			,	\$	143,750.00	
Soccer field	1	l.s.	\$	40,000.00	\$	40,000.00	
calcite clay, 6" topsoil, 2" compost, player's benches		1.5.	Ψ	40,000.00	Ψ	40,000.00	i
Baseball field	1	l.s.	\$	60,000.00	\$	60,000.00	
skinned infield, fencing with mow strips, timber edging,			•	,	•	00,000.00	
players benches, backstop, blue stone dust, 6" topsoil, 2"							
• •							
compost							
Softball field	1	l.s.	\$	60,000.00	\$	60,000.00	
skinned infield, fencing with mow strips, timber edging,							
players benches, hooded backstop, blue stone dust,							
6" topsoil, 2" compost, etc.							
						·	
Basketball courts	2	l.s.	\$	35,000.00	\$	70,000.00	
1-1/2" Bit. Concrete surface, 3" Asphalt Base Course,				·		•	
3" CR-6 Stone Base, Backboards, netting, etc., lighting				•			
T	0		•	50.000.00	•	400 000 00	
Tennis courts	2	l.s.	\$	50,000.00	\$	100,000.00	
1-1/2" Asphalt surface course, 3" asphalt base course,				•			
3" CR-6 Compacted stone base, color coating,							
fencing w/gate,benches, practice board,							
accessories-posts, nets, cleats, etc., lighting							
Playground	1	l.s.	\$	80,000.00	\$	80,000.00	
equipment, concrete edging, 12" Fibar mulch and	•	1.3.	Ψ	00,000.00	Ψ	00,000.00	
• • •							
underdrain system, benches							
Picnic Pavilion with ADA compliant restrooms,	1	each	\$ -	150,000.00	\$	150,000.00	
10 picnic tables and 2 grills				•		•	
Additional lighting							
	4	1.0	æ	70 000 00	æ	70,000,00	
parking lots	1	l.s.		70,000.00	\$	70,000.00	
driveways	1	l.s.	\$	25,000.00	\$	25,000.00	
Subtot	tal:				\$	95,000.00	

Site amenities				
benches	7	each	\$ 750.00	\$ 5,250.00
drinking fountains-frost free	2	each	\$ 2,000.00	\$ 4,000.00
trenching for water line	500	l.f.	\$ 3.50	\$ 1,750.00
bike racks	3	each	\$ 700.00	\$ 2,100.00
site signage(entrance, parking lot, and misc. site signage)	1	l.s.	\$ 5,000.00	\$ 5,000.00
Subtotal:				\$ 18,100.00
Reforestation/Afforestation/tree protection fencing/signage	1.1	acre	\$ 15,000.00	\$ 16,500.00
Bioretention (Soil Modification and Planting)	3300	s.f.	\$ 8.00	\$ 26,400.00
SWM (Sand Filters and Shallow Facilities)	2	each	\$20,000.00	\$ 40,000.00
Storm Drain System				
15" RCP	1320	l.f.	\$ 35.00	\$ 46,200.00
18" RCP	320	l.f.	\$ 40.00	\$ 12,800.00
24" RCP	475	l.f.	\$ 45.00	\$ 21,375.00
Curb Inlets	6	each	\$ 3,500.00	\$ 21,000.00
Yard Inlets	6	each	\$ 2,800.00	\$ 16,800.00
Subtotal:				\$ 118,175.00
Grand Total:				\$ 1,780,529.20

Appendix G: Picnic Pavilion Survey and Analysis

# EXISTING CONDITIONS SURVEY PICNIC STRUCTURE EAST NORBECK LOCAL PARK

## RBA PROJECT #M3264.00

#### June 12, 2002

On May 24, 2002 a conditions survey was conducted of the existing picnic structure. The building is open on three sides with an enclosed area that houses male and female restrooms and a utility room. The floor is concrete.

Following are observations made during the survey and recommendations for correcting deficiencies.

## 1. Floor: Concrete slab on grade.

- Cracks across entire length of shelter area.
- Diagonal cracks at four corners of enclosed area of facility extending from the walls to exterior edges of the concrete slab.
- Settlement of slab at water fountain. Water ponds along wall in alcove.

## Recommendation:

Replace slab.

- 2. Superstructure: Wood post and beam (glue lam) with tongue and groove wood decking.
  - Structure in good condition.
  - Steel plates connecting post and beams rusted. Bolt missing at two plates.

#### Recommendation:

Clean rust from plates and paint. Add missing bolts. Refinish wood decking and beams.

## Roof: Asphalt shingle on asphalt felt.

- In fair condition.
- No sign of leaks visible from below, i.e., rotted decking.

#### Recommendations:

Keep existing roofing.

## 4. Doors: Hollow metal doors and frames.

• Doors are generally  $3'-0'' \times 7'-0''$ .

- Doors to women's restroom (W): Frame and door are rusted at lower corner of assembly on hinge side. Hinge is also rusted.
- Door to men's restroom: Frame and door are rusted at lower corner of assembly, hinge side.
- Door to utility room in fair condition. No visible problems.

#### Recommendations:

Replace door and frame to both restrooms.

- 5. Walls: Painted masonry block on exterior and utility room. Glazed block in toilets.
  - Walls in sound structural condition.
  - Excessive amount of graffiti on exterior walls.

#### Recommendations:

Repaint exterior walls with graffiti resistant paint.

- 6. HVAC: Wall mounted cabinet heaters in three enclosed rooms. Ventilation provided by louvers above doors and in wall on shelter side.
  - Vents in wall on shelter side are damaged and in generally poor condition.
  - Wall mounted cabinet heaters are rusted but functional.

#### Recommendations:

Replace wall louvers. Replace cabinet heaters.

#### 7. Electric

- a. Lighting: Surface mounted at entrance to toilets. Single wall mounted serving shelter area. Bare compact fluorescent lamp in utility room. Toilets have wall mounted, fluorescent strip fixtures.
  - All fixtures functional.
  - Exterior fixtures at toilets have insects within lens.

#### Recommendations:

Clean lens.

b. Wiring: Electric wiring on the outside of the building is not protected. It seems as if this wiring serves the lights in the adjacent parking lot. Not confirmed.

#### Recommendations:

Protect wiring by placing in conduit.

- 8. Plumbing: Flush valve floor mounted water closets. Wall mounted lavatory. Floor mounted stainless steel utility sink.
  - All plumbing fixtures are functional.

#### 9. ADA Review

- a. Toilets:
  - Floor has settled at entrance to women's restroom resulting in a threshold height that does not comply with ADA requirements.
  - Clearance between edge of door and adjacent wall on push side of both restroom doors are approximately 9-1/2". A minimum of 12" is required.
  - Configuration of toilets does not allow for a 5'-0" diameter clear turning area within each room.
  - Grab bars, although included in various locations, are not properly located to meet ADA requirements.
  - Water closet height and mounting distance from nearest adjacent wall does not comply with ADA requirements.
  - The lavatory mounting height does not comply with ADA requirements.
- b. Barbeque area: Insufficient area provided for access around pit.

#### Recommendations:

Generally, the facility does not comply with ADA. Compliance will require that the size of the toilets be increased. The plumbing fixtures should also be replaced and plumbing modified to accommodate the new configuration/location of plumbing fixtures. Doors and frames should be replaced due to corrosion and provided with hardware that complies with ADA standards. The floor slab outside the women's toilet should also be removed and replaced to provide a smooth transition into the toilet.

### Summary:

The building super-structure is in good condition. However, given the extent of repair/replacement needed to secure the integrity of the facility and to comply with the American's with Disabilities Act (ADA), it is our recommendation that the construction of a new facility be considered.

A new facility would allow for amenities that will better serve the expanded park.

Prepared by:

Horace Walker, R.A. Vice President

Appendix H: SWM Concept Approval Letter



## DEPARTMENT OF PERMITTING SERVICES

Douglas M. Duncan
County Executive

April 11, 2003

Robert C. Hubbard

Director

Ms. Ruth Davila The RBA Group 7164 Columbia Gateway Drive, Suite 205 Columbia, MD 21046

Re:

Stormwater Management CONCEPT Request

for East Norbeck Local Park Preliminary Plan #: N/A SM File #: 207537

Tract Size/Zone: 24.15 acres / RE-2 Total Concept Area: 15.6 acres

Lots/Block: N/A Parcel(s): P630, P618

Watershed: Northwest Branch

Dear Ms. Davila:

Based on a review by the Department of Permitting Services Review Staff, the stormwater management concept for the above mentioned site is **acceptable**. The stormwater management concept consists of on-site channel protection measures via construction of two detention ponds; on-site water quality control via grassed swales and Montgomery County Sand Filters (MCSF's); and onsite recharge via grassed swales and storage within the water quality facilities.

The following **items** will need to be addressed **during** the detailed sediment control/stormwater management plan stage:

- 1. Prior to permanent vegetative stabilization, all disturbed areas must be topsoiled per the latest Montgomery County Standards and Specifications for Topsoiling.
- 2. A detailed review of the stormwater management computations will occur at the time of detailed plan review.
- 3. An engineered sediment control plan must be submitted for this development.
- 4. The sand filters must be designed per the latest Montgomery County Sand Filter (MCSF) design specification. Flows must be delivered to these facilities via flow splitting. Flow splitters must be designed to function based upon the water quality storage elevation in the quality facility, and flows in excess of the water quality volume must be piped around the sand filter to the detention facility.
- 5. Dry wells are not required for the playground or the gazebo.

This list may not be all-inclusive and may change based on available information at the time.

Payment of a stormwater management contribution in accordance with Section 2 of the Stormwater Management Regulation 4-90 is not required.



This letter must appear on the sediment control/stormwater management plan at its initial submittal. Any divergence from the information provided to this office; or additional information received during the development process; or a change in an applicable Executive Regulation may constitute grounds to rescind or amend any approval actions taken, and to reevaluate the site for additional or amended stormwater management requirements. If there are subsequent additions or modifications to the development, a separate concept request shall be required.

If you have any questions regarding these actions, please feel free to contact Mark Etheridge at 240-777-6338.

Sincerely,

Richard R. Brush, Manager Water Resources Section

Division of Land Development Services

RRB:dm mce

CC:

M. Shaneman

S. Federline

SM File # 207537

QN -ON; Acres: 15.6 QL - ON; Acres: 15.6 Recharge is provided