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3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN
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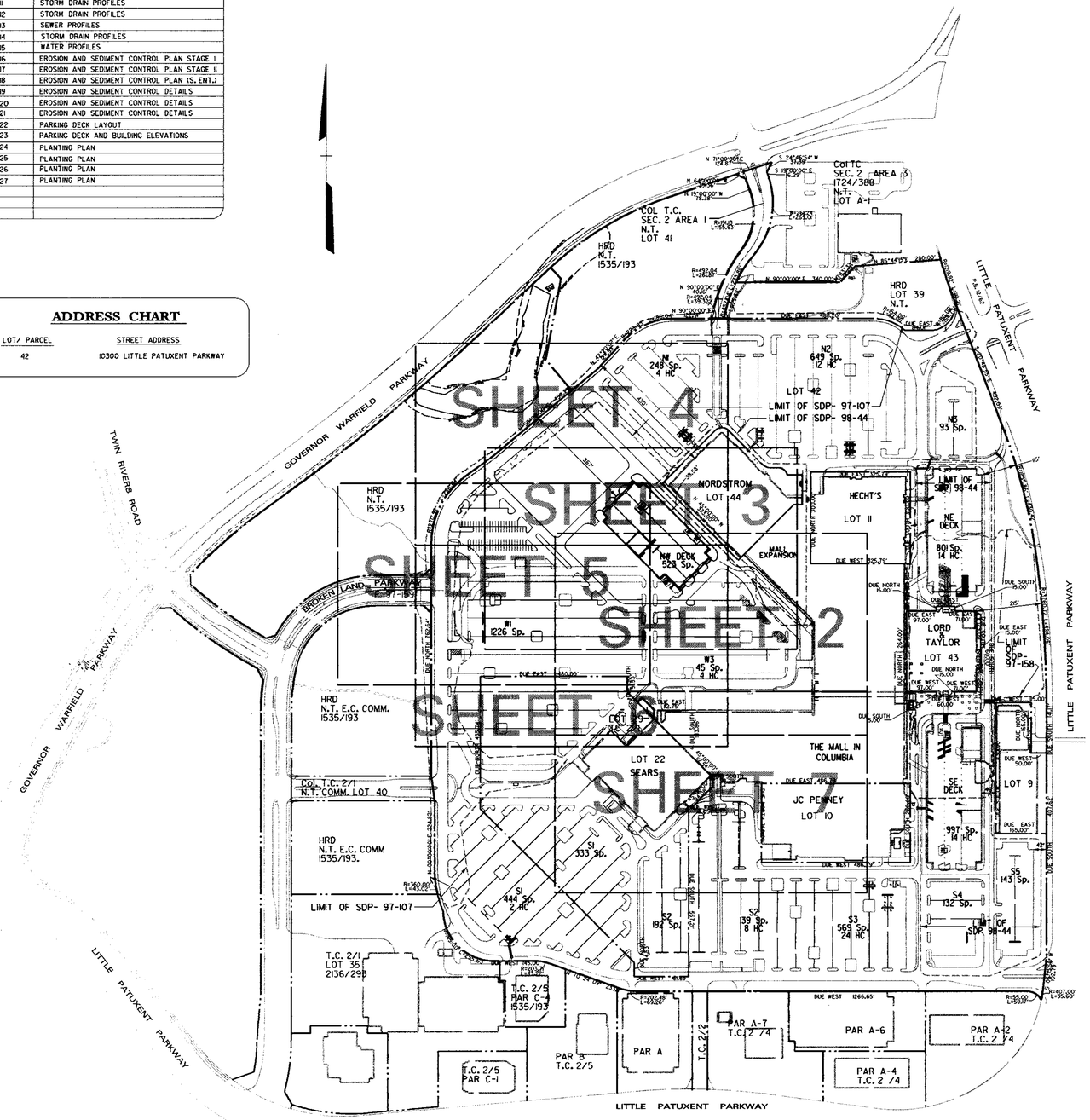
25	PLANTING PLAN
26	PLANTING PLAN
27	PLANTING PLAN

ADDRESS CHART

LOT/ PARCEL	STREET ADDRESS
42	10300 LITTLE PATUXENT PARKWAY



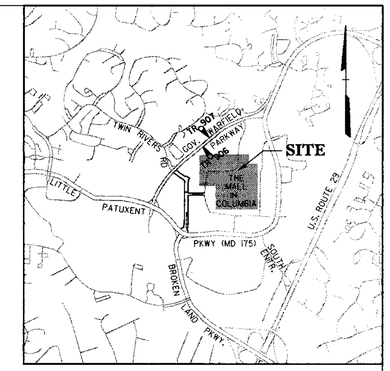
VICINITY MAP
1" = 200'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Maryland Uniform Traffic Control Devices (MUTCD), All street and regulatory signs shall be in place prior to the placement of any asphalt.
5. All plan dimensions are to the face of curb unless otherwise noted.
6. Topography was field run surveyed by Daft-McCune-Walker, Inc. in July 1995, and Fisher, Collins & Carter in 1994, Expanded Per SDP 97-107 & SDP 97-158
7. Coordinates and bearings shown hereon are referred to the Maryland Coordinate system (NAD 27) as projected from the following "Whitman, Requardt & Assoc." traverse stations:

TR 106	N 504280.1630	E 838550.3680
TR 102	N 503630.1300	E 838314.2860

8. Stormwater management is provided on-site by an underground detention facility for quantity, per SDP 97-107 Quality control provided by stormceptors, per SDP 97-107.
9. Stormwater management facilities are privately maintained.
10. No wetlands exist within the limits of disturbance.
11. The existing utilities were located from available records and field survey prepared by Daft-McCune-Walker, Inc. The contractor must dig test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
12. The Soils analysis was prepared by R. Balter Group.
13. Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.01-7.05.
14. Any damage to County owned right-of-way to be corrected at the contractor 's expense.
15. All sidewalks shall be cross sloped at 1/4 inch per foot.
16. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
17. Department of Planning and Zoning reference file numbers: FDP ph.47-A-VI, FDP Ph. 20A, FDP Phase 22A, SDP 80-01, F-97-19, F-97-153, F-97-155, F-97-159, S-96-09, SDP-97-107, SDP-97-158, SDP-98-44, WP 98-81, SDP 98-124
18. All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
19. All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
20. The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 47-A-VI.
21. All on-site driveways and parking areas to be be privately maintained.
22. All curb radii are five foot unless otherwise labeled.
23. All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
24. The contractor shall be responsible for any damage to existing property which may occur as a result of his negligence in the execution of the work.
25. All paving areas indicated are private.
26. All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
27. Existing lights per SDP 97-107 & SDP 97-158 to be relocated as necessary. See sheets for proposed lights. Outdoor lighting shall conform to Section 134 of the Zoning Regulations.
28. There is no floodplain on this site.
29. Traffic study was prepared by Wells and Assoc. dated 10-28-97.
30. Public Water and Sewer is utilized for this site.
31. This plan is exempt from Forest Conservation in accordance with Section 16-1202 (b) (1) (iv).



LOCATION MAP
SCALE: 1" = 2000'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY "FISHER, COLLINS AND CARTER, INC." (NGVD 29 VERTICAL DATUM)

TR 906	N 504280.1630	E 838550.3680	ELEV. 381.500
TR 907	N 504400.6701	E 838647.7701	ELEV. 394.150

SITE ANALYSIS

1. Zoning: New Town - Commercial (Per FDP Ph. 47-A-VI)
2. Phase III Revised Area/Limit of Disturbance = 12.2 Ac. (531,432 SF)
3. Proposed Use: Parking Deck and Parking Lot.
4. Area Tabulation
   - A. 1. Existing Mall & Dept. Store — 1,261,800 SF
     2. Office Space — 5,480 SF
   - B. Phase III revised Limit of Disturbance — 12.2 Ac. (531,432 SF)
   - C. Impervious area — 6.7 Ac. (565,652 SF)
   - D. Green Area — 0.5 Ac. (22,265 SF)
5. Parking Tabulation
   - Parking Spaces Required = 6,320 SP (73 HC)
   - A. 1. Total Mall G.L.A. (1,261,800 SF) = 6,309 SP (5 SP/1,000 SF)
     2. Total Office Space (5,480 SF) = 11 SP (2 SP/1,000 SF)
   - B. Parking Spaces Provided

Existing Parking Per SDP-98-44	Parking Deleted or Restriped Per Phase III revised Construction	Proposed Surface or Restriped Parking Phase III	Prop. NW Deck	Fut. Level 2 on NW Deck	Total
6,704 (86 HC)	1,548 (19 HC)	1061 (21 HC)	341 (6 HC)	174	6558 (94 HC) 6732 (Fut. level 2 on NW Deck)

6. Lot Tabulation

Lot	Owner	Area	Plat Reference
42	The Howard Research and Development Corp. and Columbia Mall, Inc.	70.285 AC.	13191
44	The Howard Research and Development Corp. and Columbia Mall, Inc.	2.373 AC.	13192

Total Project Area = 72.658 A.C.

APPROVED
DEPARTMENT OF PLANNING BOARD
OF HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/16/99
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99
DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND — JOHN W. RANDOLPH — No. 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

SUBDIVISION NAME: COLUMBIA TOWN CTR.		SECTION/AREA: 21	LOT/PARCEL #: 42/44
TAX MAP: 30544-442	BLOCK #: 19,20A,12	ZONE: N.T.	TAX/ZONE MAP: 30,38
ELECT. DISTRICT: 5TH	CENSUS TRACT: 6054	WATER CODE:	SEWER CODE:

TITLE: **REVISED PHASE III SITE DEVELOPMENT PLAN COVER SHEET**

Des. By MJP	Scale AS SHOWN	Proj. No. 95019B	1 OF 27
Drn. By FJZ	Date 6-4-99		
Chk. By JWR	Approved		

SDP-99-186

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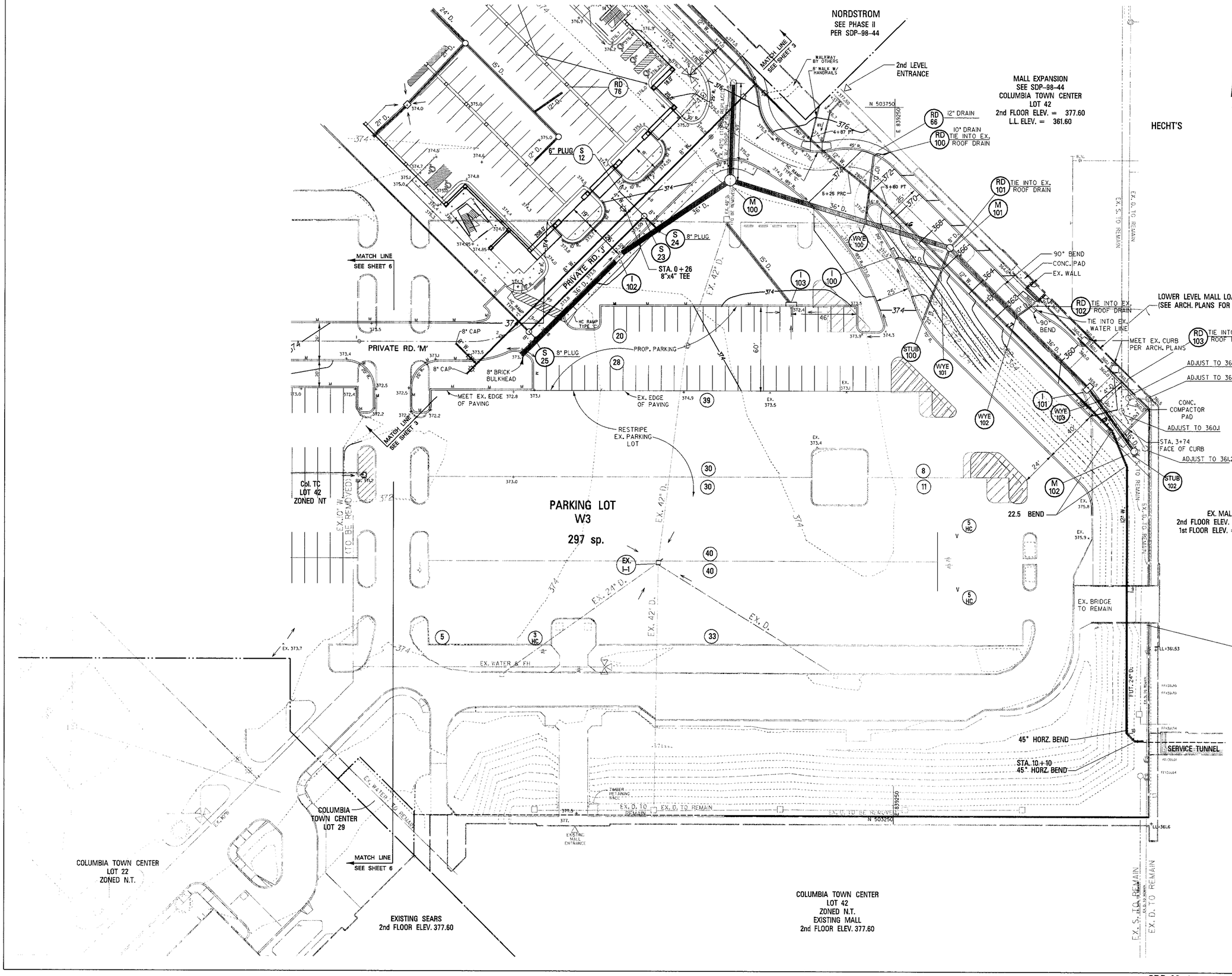

LEGEND

- EX. CONTOUR
- PROP. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. EDGE OF ROAD
- PROP. DRAINS AND WATER
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- EX. CURB TO BE REMOVED

6-7-99
Date

STATE OF MARYLAND
JOHN W. RAMOCCHIA, JR.
No. 10551
REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft·McCune·Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III
SITE DEVELOPMENT PLAN
PARKING LOT W-3

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	KDE	Date	3-15-99	2 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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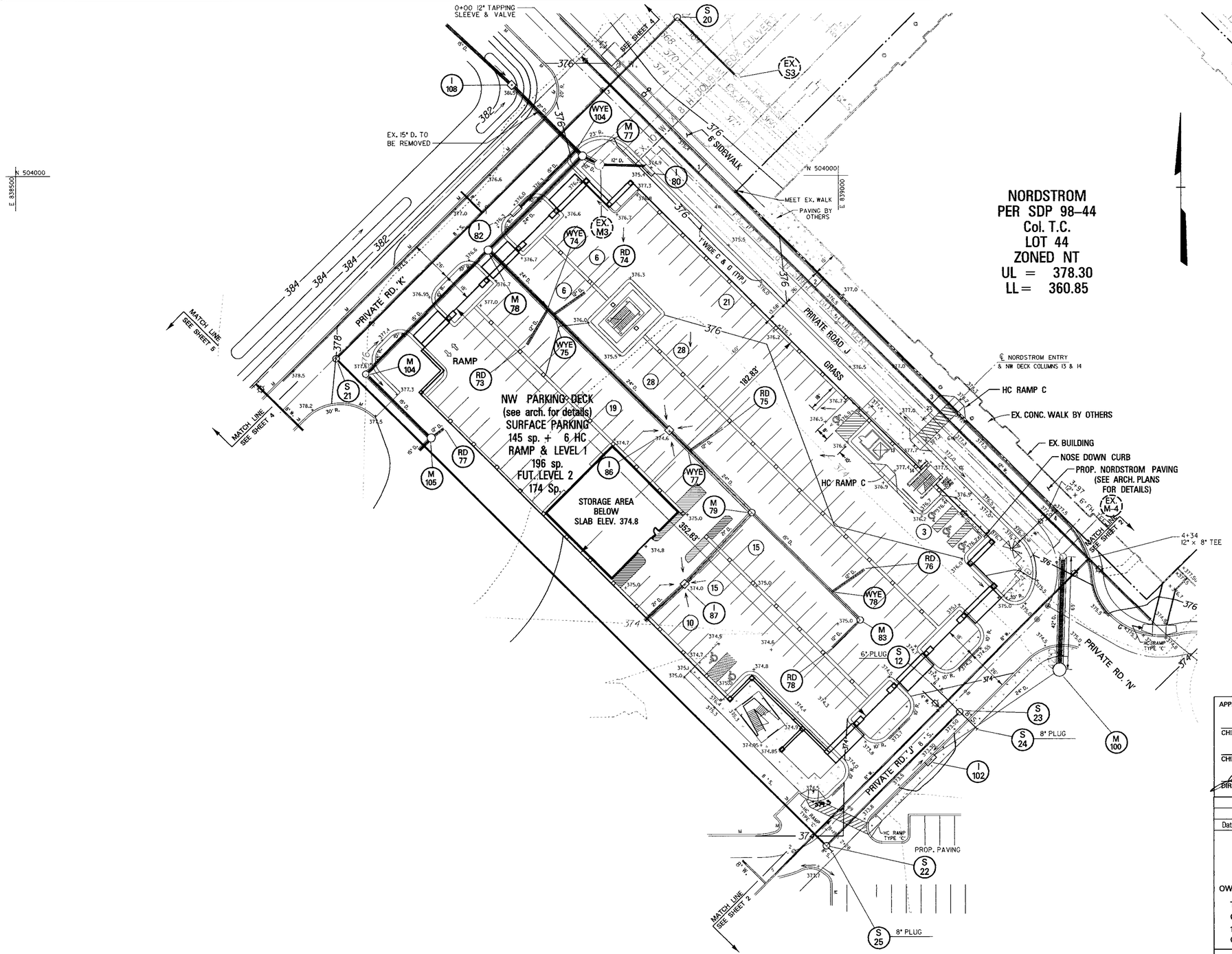

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- LIGHT POLES (BY OTHERS)
- EX. CURB TO BE REMOVED

6-7-99
Date

STATE OF MARYLAND
JOHN W. RAROCCHIA, JR.
No. 7055
REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 16591

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE JULY 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

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Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III
SITE DEVELOPMENT PLAN
NW PARKING DECK

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99	3 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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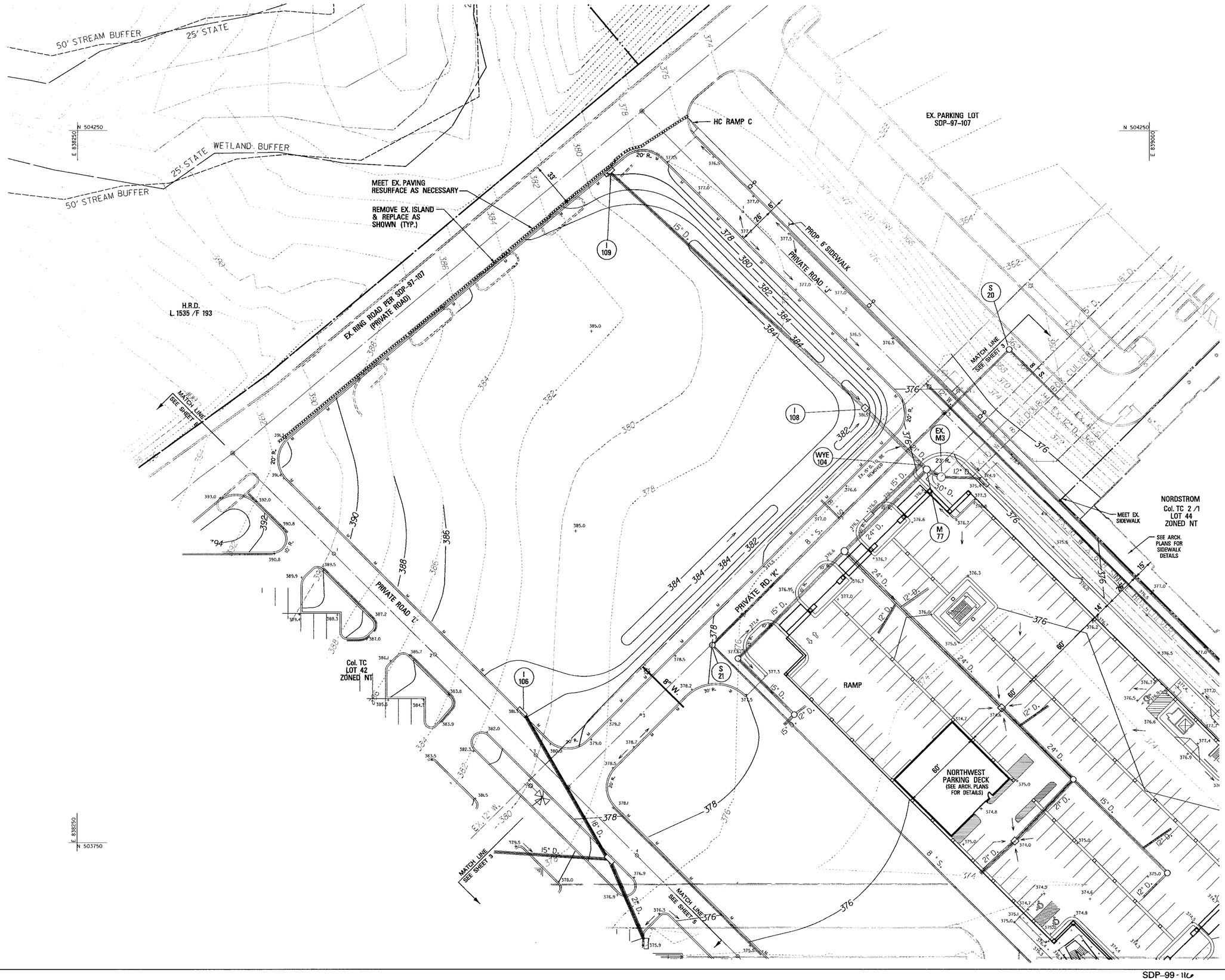

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- LIGHT POLES (BY OTHERS)
- EX. CURB TO BE REMOVED

6-7-99
Date

STATE OF MARYLAND
JOHN W. RANCOCHA
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

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THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

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200 East Pennsylvania Avenue
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(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED SITE DEVELOPMENT PLAN NW PAD AREA

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Dm By	FJZ	Date	6-4-99	4 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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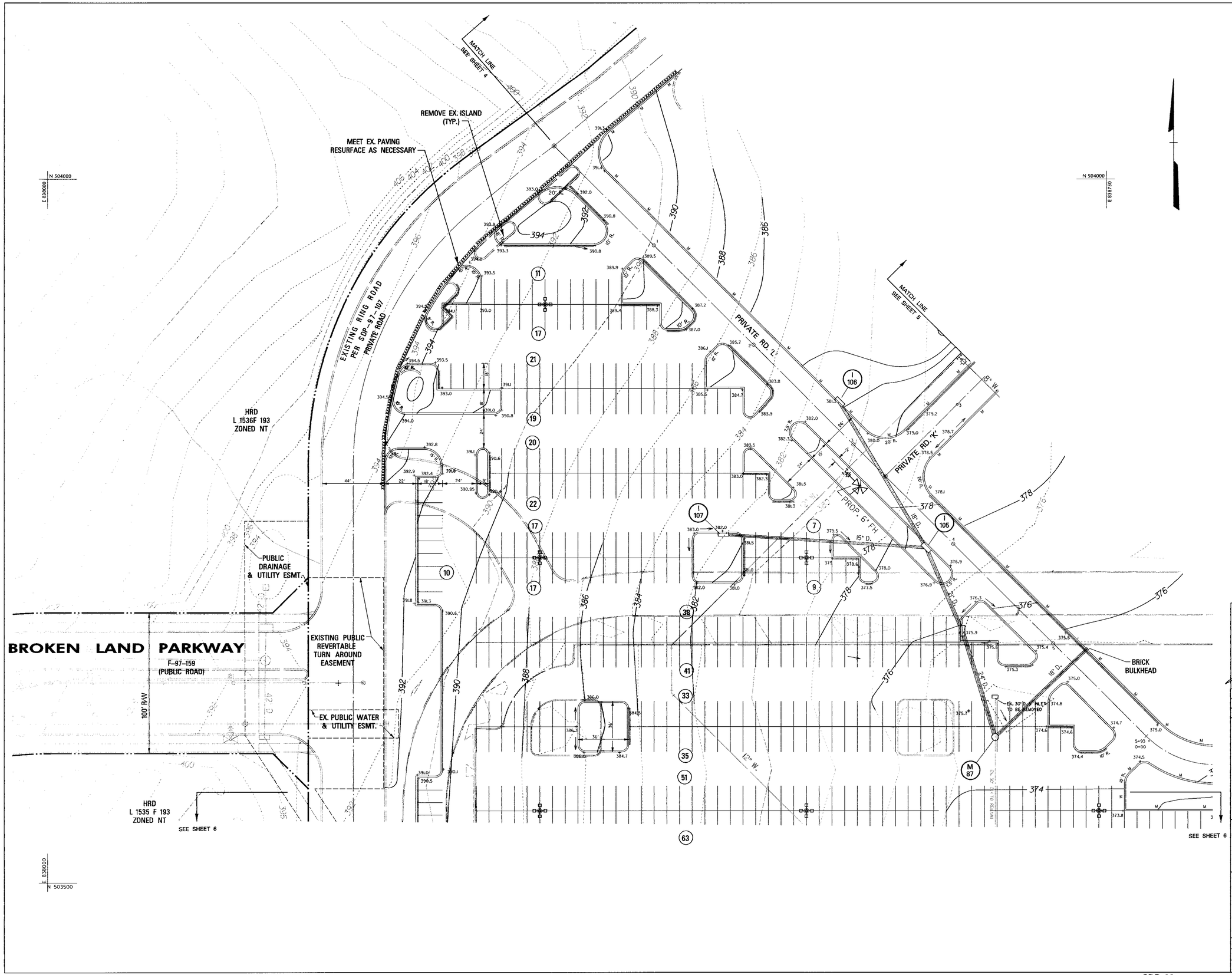

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- LIGHT POLES (BY OTHERS)
- EX. CURB TO BE REMOVED

6-7-99
Date

STATE OF MARYLAND
JOHN W. RANOCCHIA
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
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TITLE

REVISED PHASE III
SITE DEVELOPMENT PLAN
PARKING LOT W-1

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	KDE, FJZ	Date	6-4-99	5 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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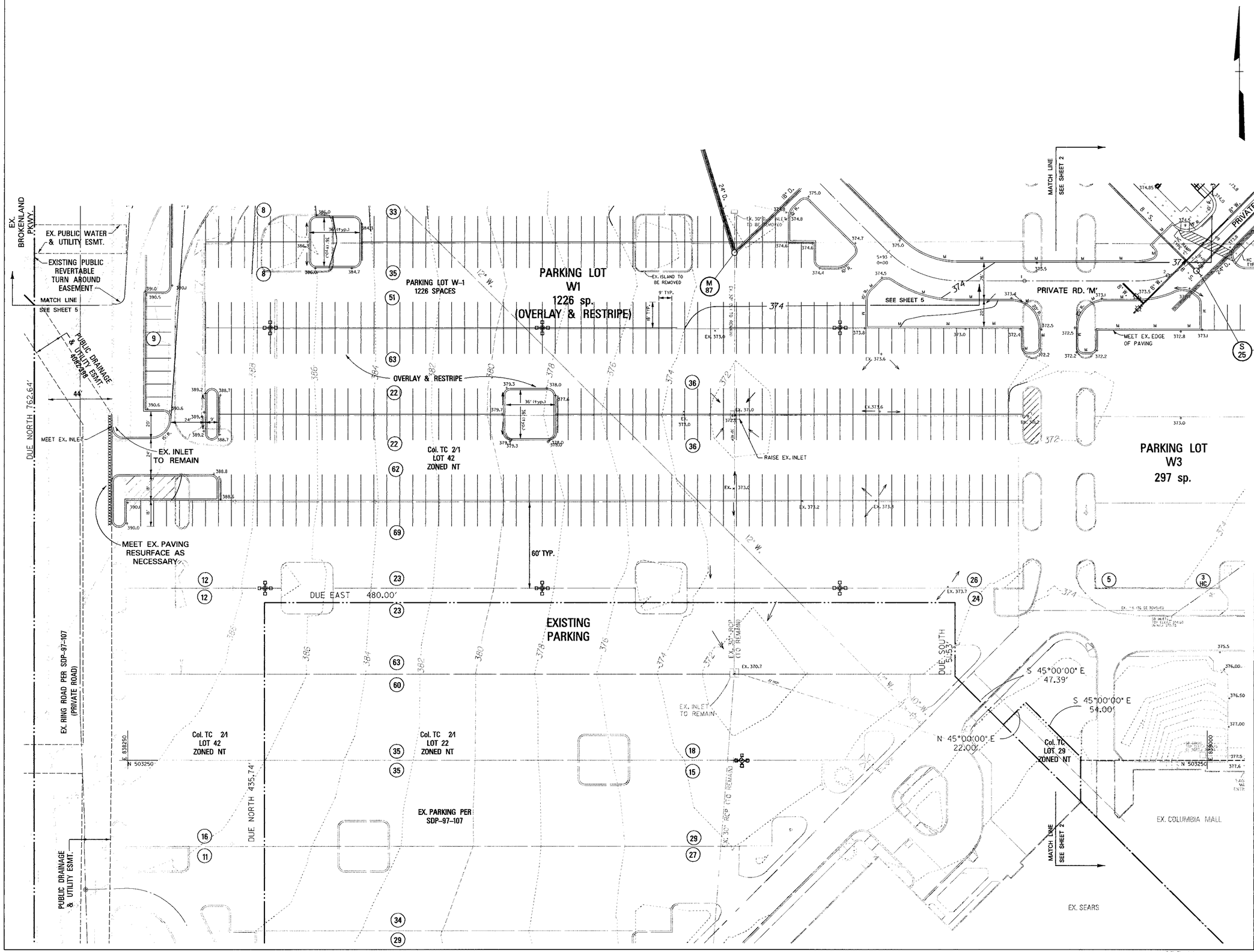

16-7-99
Date

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
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TITLE

REVISED PHASE III
SITE DEVELOPMENT PLAN
PARKING LOT W-1

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Dm By	FJZ	Date	6-4-99	6 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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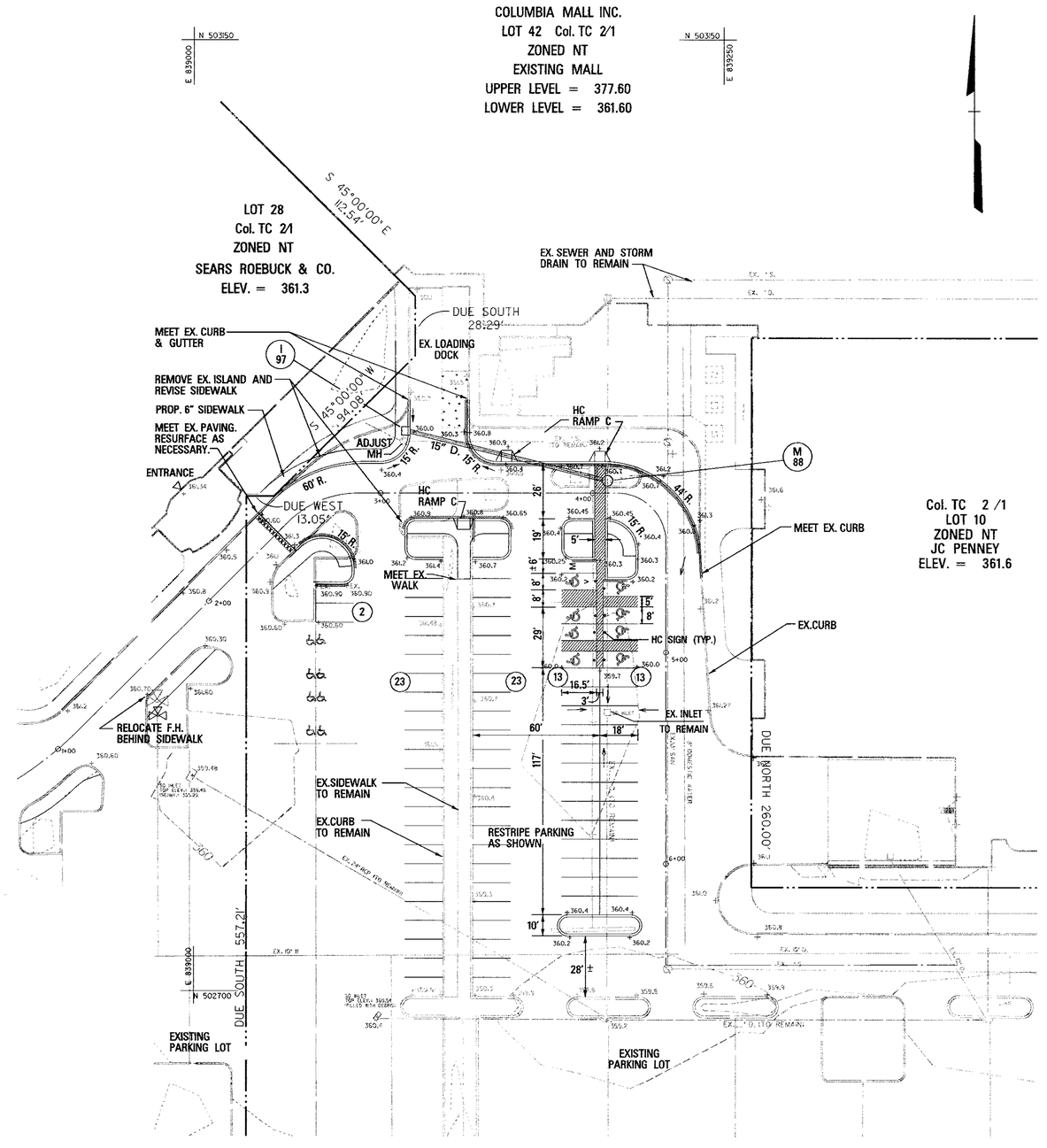
LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- EX. CURB TO BE REMOVED



6-7-99
Date

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
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DMW
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(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

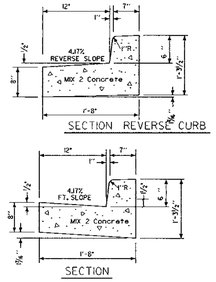
TITLE

SITE DEVELOPMENT PLAN
SOUTH MALL ENTRANCE

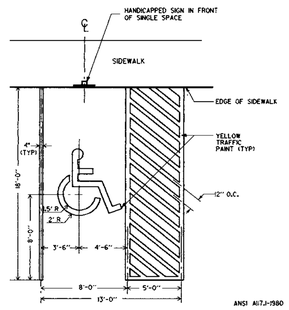
Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99		7 OF 27
Chk By	JWR	Approved			

SDP-99-116

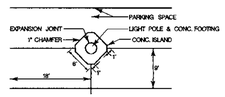
See Sheet 9 For Paving Legend



Concrete Curb, Typ.
Not To Scale



Handicapped Parking Space
Not To Scale



Pole Base Detail
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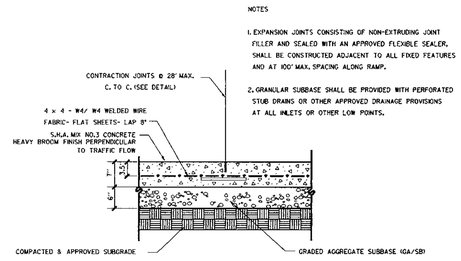
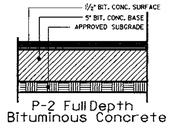
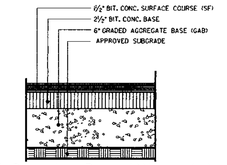


Ramp/Loading Dock Concrete Paving
Not To Scale

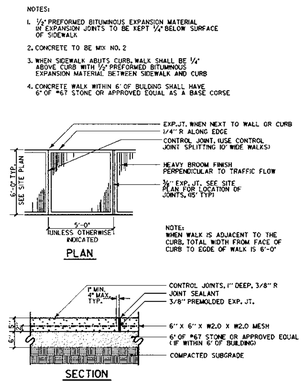


P-2 Full Depth Bituminous Concrete



P-2 Granular Base (Alternate)

Parking & Travel Lane
Typical Paving Section (P-2)
Not To Scale



Concrete Walk
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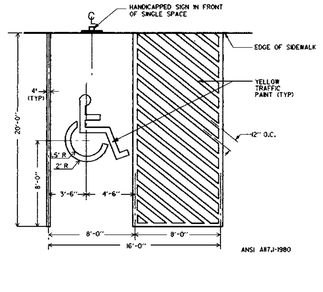
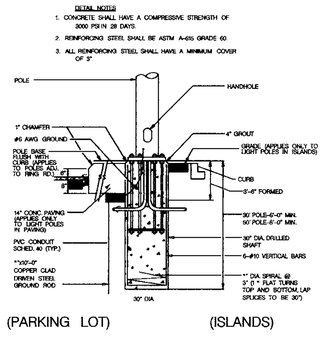
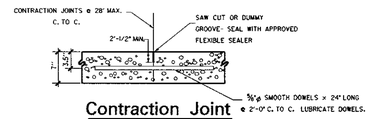


Handicapped Van Parking Space
Not To Scale

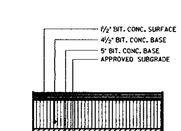


Pole Base Detail
Not To Scale

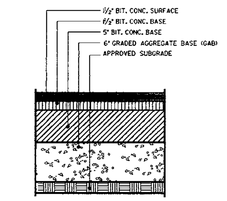


Contraction Joint
Not To Scale

Rigid Pavement Details
by The Robert B. Balter Company
(Geotechnical Engineers) 7-21-98

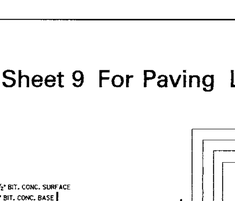


P-5 Full Depth Bituminous Concrete

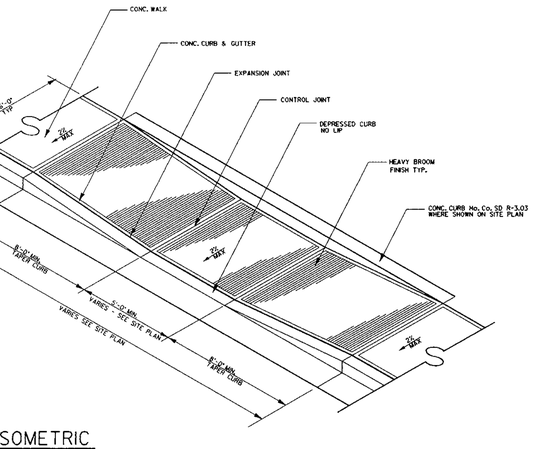


P-5 Granular Base (Alternate)

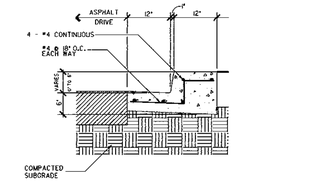
Ring Road
Typical Paving Section (P-5)
Not To Scale



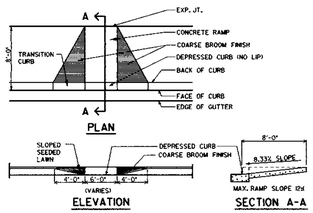
HC RAMP DETAIL C
SCALE: 1"=10'



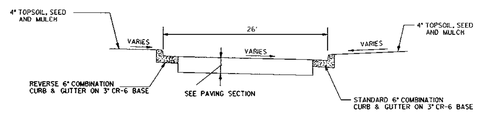
Handicapped Ramp - A
Not To Scale



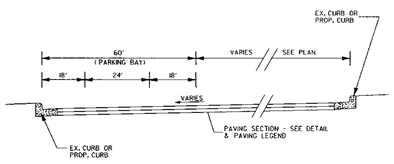
1' Wide Concrete Curb Detail
Not To Scale



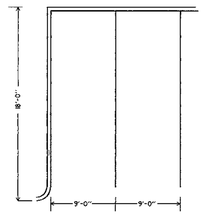
Handicapped Ramp - C
Not To Scale



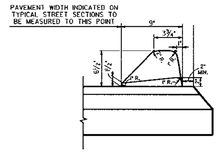
Typical Section
Ring Road (Private Drive)
Not To Scale



Typical Section
Private Parking
Not To Scale



Standard Parking Space
Not To Scale



Standard Bituminous Curb
Not To Scale

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

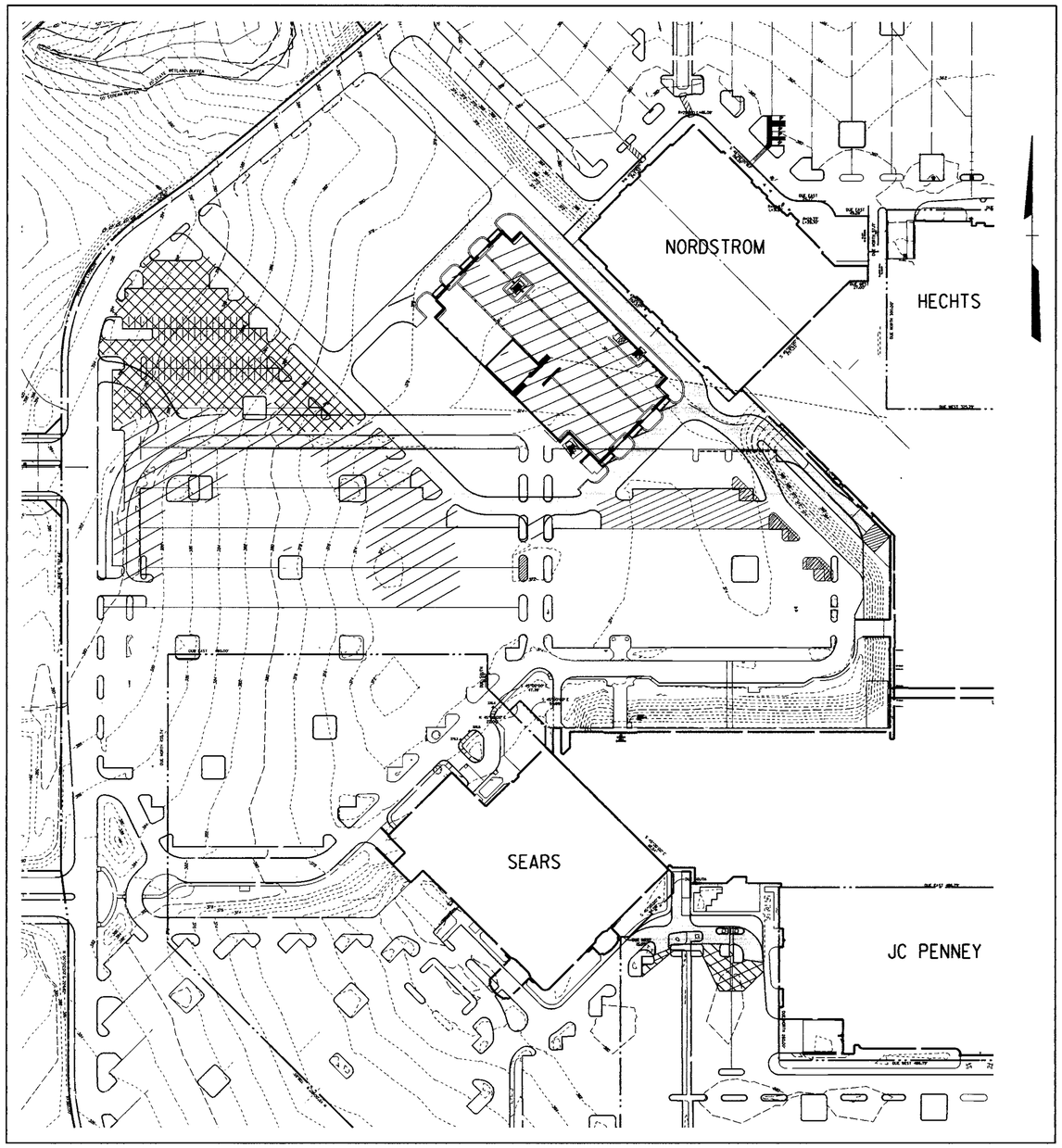
STATE OF MARYLAND — JOHN W. RANCOURT — 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE
REVISED PHASE III
SITE DETAILS

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019 B
Drn By	FJZ	Date	6-4-99		8 OF 27
Chk By	JWR	Approved			

SDP-99-116



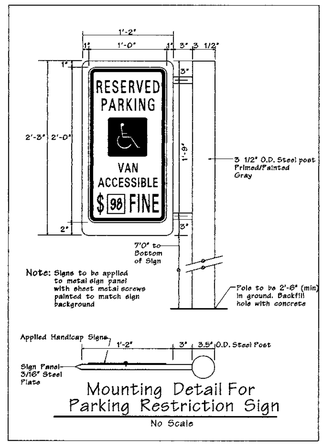
PAVING LEGEND

SCALE: 1" = 100'

LEGEND

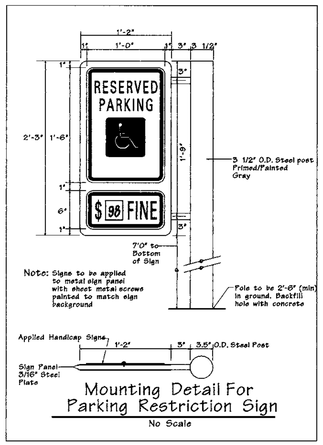
SYMBOL	DESCRIPTION
	P-5 PAVING
	P-2 PAVING
	1" ± OVERLAY
	CONCRETE

SEE SHEET 9 FOR PAVING DETAILS.



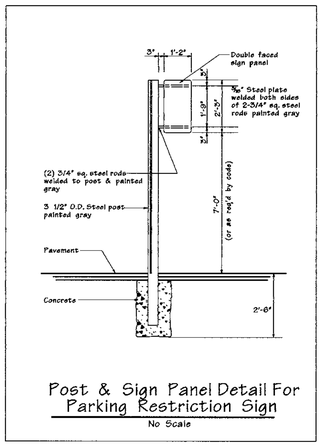
Mounting Detail For Parking Restriction Sign

No Scale



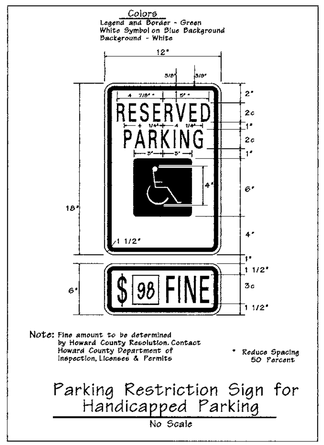
Mounting Detail For Parking Restriction Sign

No Scale



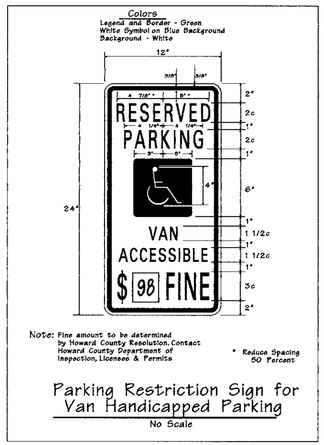
Post & Sign Panel Detail For Parking Restriction Sign

No Scale



Parking Restriction Sign for Handicapped Parking

No Scale



Parking Restriction Sign for Van Handicapped Parking

No Scale

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/14/99 DATE

DIRECTOR — 7/14/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
PHASE III EXPANSION
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND — JOHN W. RANCOCAS — No. 10955 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10955

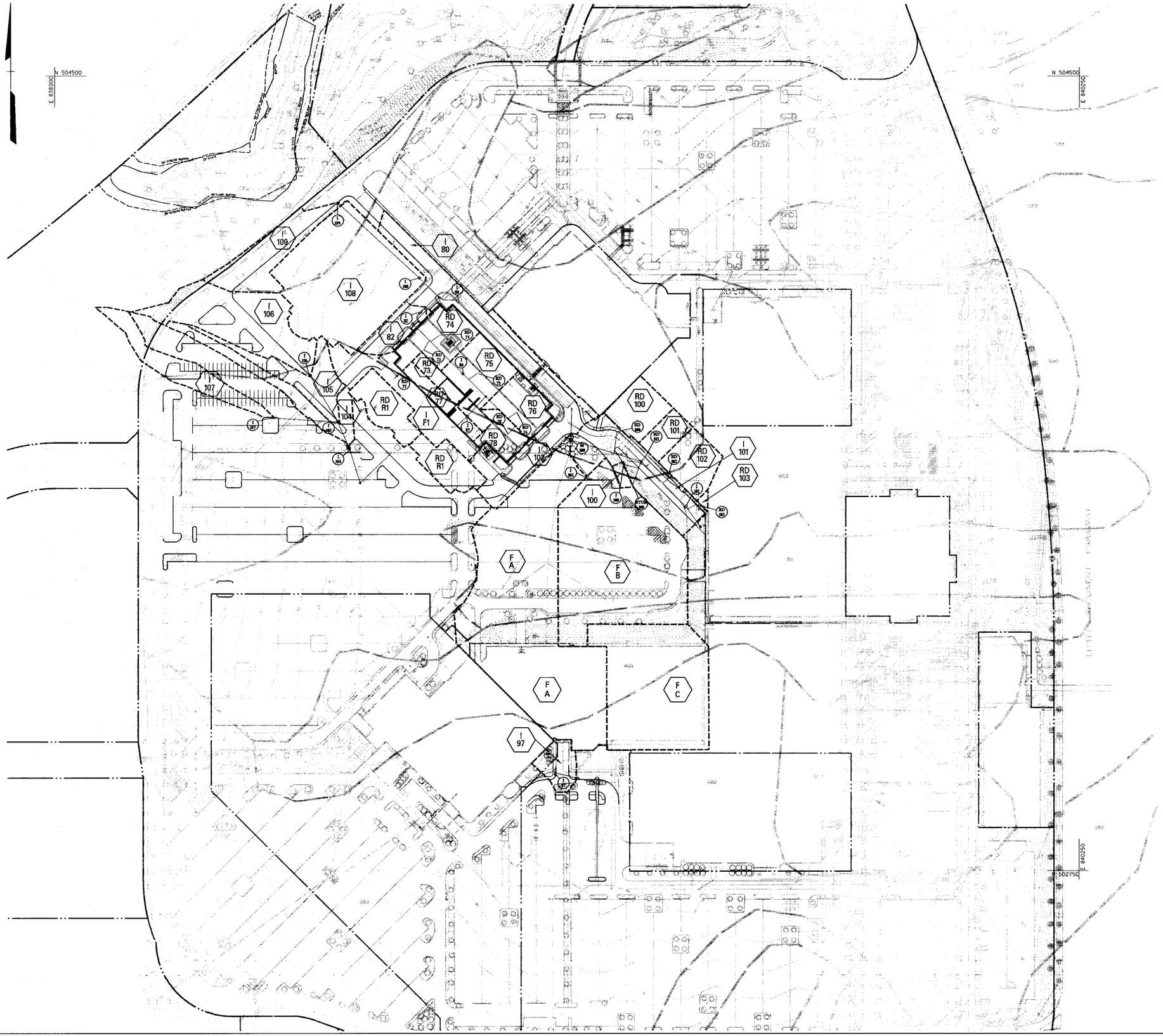
TITLE

PHASE III

PAVING LEGEND & SITE DETAILS

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019 B
Drn By	FJZ	Date	6-4-99	9 OF 27	
Chk By	JWR	Approved			

SDP-99-116



SOILS LEGEND

HYDROLOGIC SOILS	KEY	NAME	SLOPE
D	Ba	BAILE SILT LOAM	
C	BrC2	BRANDYWINE LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	BrD3	BRANDYWINE LOAM	15 TO 25 PERCENT SLOPES, SEVERELY ERODED
B	ChB2	CHESTER SILT LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	GlB2	GLENELG LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	GlC2	GLENELG LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
C	GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT SLOPES, MODERATELY ERODED
B	MlC2	MANOR LOAM	8 TO 15 PERCENT SLOPES, MODERATELY ERODED
B	MlD2	MANOR LOAM	15 TO 25 PERCENT SLOPES, MODERATELY ERODED

SEE SOILS MAP 24

NO.	AREA	C	% IMP
RD 73	0.32	0.95	100
RD 74	0.22	0.95	100
RD 75	0.33	0.95	100
RD 76	0.22	0.95	100
RD 77	0.32	0.95	100
RD 78	0.08	0.95	100
RD 100	0.28	0.95	100
RD 101	0.15	0.95	100
RD 102	0.28	0.95	100
RD 103	0.02	0.95	100
F-A	2.76	0.95	100
F-B	1.94	0.95	100
F-C	1.44	0.95	100
RD R1	0.25	0.95	100
RD R2	0.28	0.95	100
I- F1	0.48	0.95	100
I- 80	0.59	0.95	100
I- 82	0.20	0.95	100
I- 86	—	—	—
I- 87	—	—	—
I- 97	0.17	0.95	100
I- 100	0.03	0.95	100
I- 101	0.67	0.95	100
I- 102	0.60	0.95	100
I- 103	1.54	0.95	100
I- 104	0.31	0.95	90
I- 105	0.34	0.95	90
I- 106	0.84	0.95	90
I- 107	0.37	0.95	90
I- 108	1.49	0.95	100
I- 109	0.50	0.95	90

NOTE: DRAINAGE AREA IS FOR ULTIMATE CONDITION.

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
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(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND
JOHN W. RANDOCCHIA, SR.
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

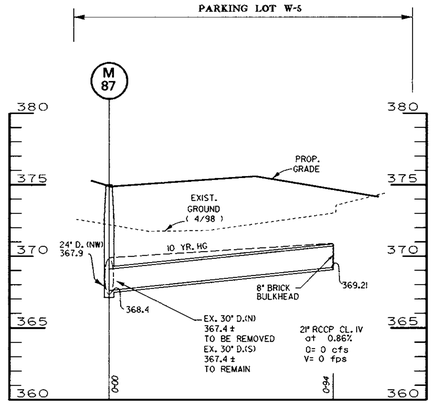
REVISED PHASE III

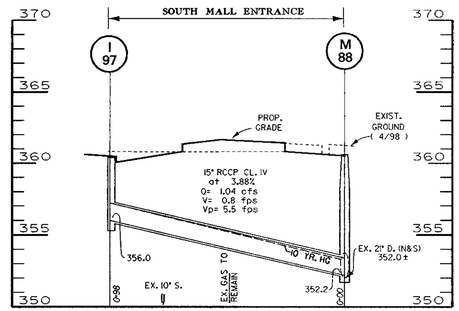
STORM DRAIN DRAINAGE AREA MAP

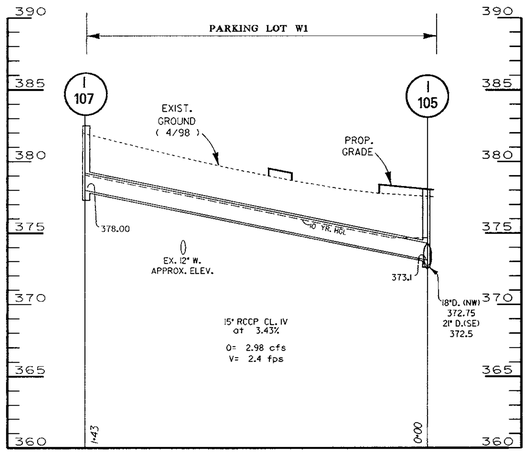
Des By	JS	Scale	1" = 100'	Proj. No.	95019B
Dm By	FJZ	Date	6-4-99	10 OF 27	
Chk By	JWR	Approved			

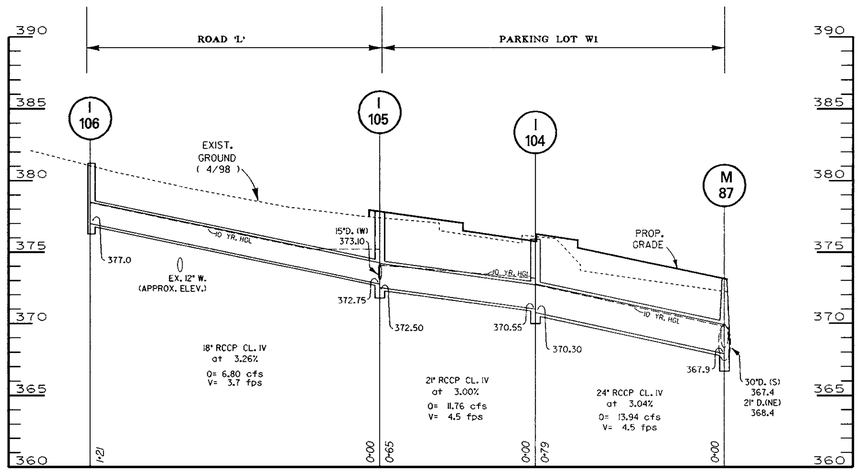
SDP-99-116

Thu Jun 3 13:24:16 1998\95019columbia\mall\95019b3.dml









EXISTING GRADING BASED ON SDP 97-107, 98-44 & 98-158

STRUCTURE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	DETAIL
WYE 74	WYE CONNECTION	12 x 24	364.39	HO. CO. SD 1.11
WYE 75	WYE CONNECTION	12 x 24	364.45	HO. CO. SD 1.11
WYE 77	WYE CONNECTION	12 x 24	366.14	HO. CO. SD 1.11
WYE 78	WYE CONNECTION	12 x 15	369.46	HO. CO. SD 1.11
WYE 100	WYE CONNECTION	10 x 36	353.02	HO. CO. SD 1.11
WYE 101	WYE CONNECTION	12 x 21	353.13	HO. CO. SD 1.11
WYE 102	WYE CONNECTION	10 x 36	353.87	HO. CO. SD 1.11
WYE 103	FIELD CONNECTION	4 X 36	354.45	HO. CO. SD 2.01
WYE 104	WYE CONNECTION	15 x 21	362.86	HO. CO. SD 1.11

ROOF DRAIN LOCATIONS

No.	LOCATION
RD 104	N 503832.8 E 838745.0

STUB LOCATIONS

No.	LOCATION
100	N 503600.0 E 839270.1

MANHOLE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	DETAIL	LOCATION
EX. M-3	———	———	———	376.5	** ———	———
M-77	60" DIA.		361.61	376.0	G 5.13	N 504012.1 E 838844.6
M-78	60" DIA.		363.53	376.7	G 5.13	N 503954.7 E 838787.2
M-79	48" DIA.		366.67	375.3	G 5.12	N 503794.5 E 838947.3
M-83	48" DIA.		370.25	375.2	G 5.12	N 503728.7 E 839013.1
M-87	48" DIA.		367.4 ±	375.0	G 5.12	ROAD 'E' STA. 42 38' LT.
M-88	48" DIA.		352.0 ±	360.6	G 5.12	ROAD 'J' STA. 4+07± 6'± LT.
M-100	96" DIA.		352.32	375.0	SHA 384.09	SEE PLAN
M-101	60" DIA.		353.33	366.56	G 5.13	ROAD 'N' STA. 1+92 0.8' LT
M-102	60" DIA.		354.70	361.5	G 5.13	N 503507.8 E 839418.9
M-103	48" DIA.		356.16	MEET EX. GROUND	G 5.12	N 503257.4 E 839418.9
M-104	48" DIA.		370.45	377.5	G 5.12	ROAD 'K' STA. 2+24 20.2' LT
M-105	48" DIA.		371.80	377.5	G 5.12	N 503839.8 E 838752.1

ALL INVERTS TO BE FULLY DEVELOPED
* PROVIDE GRANITE BOTTOM
** PROVIDE INTERMEDIATE LANDING DETAIL G 5.15

NOTE: AT ALL ROOF DRAIN CONNECTIONS, CONNECT WITH "FERNCO" COUPLING OR APPROVED EQUAL.

INLET SCHEDULE

NO.	TYPE	Q 2YR	INV. OUT	** TOP ELEV.	DETAIL	WIDTH	LOCATION
I-80	A-10	3.30	368.71	374.5	SD 4.41	2'-6"	ROAD 'B' STA. 3+11
I-86	'S'	———	365.76	374.60 GRATE	SD 4.22	———	N 503844.4 E 838897.4
I-87	'S'	———	367.39	374.0 GRATE	SD 4.22	———	N 503751.0 E 838906.5
I-97	A-5	0.71	356.00	376.5	SD 4.40	2'-6"	———
I-109	A-10	2.83	375.1	379.6	SD 4.41	2'-6"	SEE PLAN
I-100	A-10	0.18	357.33	373.00	SD 4.41	2'-6"	
I-101	DOUBLE 'S' INLET	3.78	354.28	* 359.8	SD 4.23	———	ROAD 'N' STA. 3+31 ON ℄
I-102	A-10	3.36	353.00	373.80	SD 4.41	3'-6"	ROAD 'J' STA. 8+44
I-103	A-10	8.63	368.40	372.9	SD 4.41	2'-6"	SEE PLAN
I-104	A-10	1.71	370.30	376.4	SD 4.41	3'-6"	SEE PLAN
I-105	A-10	1.89	372.5	377.8	SD 4.41	3'-6"	ROAD 'L' STA. 3+88
I-106	A-10	4.72	377.0	381.8	SD 4.41	2'-6"	ROAD 'L' STA. 2+72
I-107	A-10	2.06	378.0	383.3	SD 4.41	2'-6"	SEE PLAN
I-108	'S' INLET	N/A	368.46	381.50	SD 4.22	———	N 504055.2 E 838801.5
I-82	A-10	1.12	372.0	376.5	SD 4.41	2'-6"	ROAD 'K' STA. 0+89

ALL INVERTS TO BE FULLY DEVELOPED
* PROVIDE GRANITE BOTTOM
* GRATE ELEVATION
** TC ELEV. UNLESS NOTED
*** PROVIDE RETICULAR GRATE TOP ELEV. = GRATE

AT ALL ROOF DRAIN CONNECTIONS, CONNECT WITH "FERNCO" COUPLING OR APPROVED EQUAL.

No.	LOCATION
RD 74	N 503929.2 E 838845.7
RD 75	N 503846.1 E 838929.8
RD 76	N 503759.8 E 839015.7
RD 77	N 503846.3 E 838759.8
RD 78	N 503718.8 E 838996.1
RD 100	N 503716.8 E 839235.3
RD 101	N 503660.4 E 839297.6
RD 102	N 503681.2 E 839346.8
RD 103	N 503556.3 E 839409.6

6-7-99

STATE OF MARYLAND — JOHN W. RANCOURT — No. 19551 — PROFESSIONAL ENGINEER

Professional Engr. No. (19551)

SDP-99-116

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

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Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III STORM DRAIN PROFILES

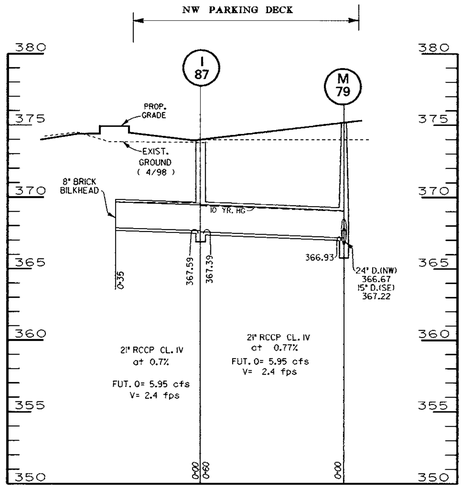
Des By RLH	Scale HORZ. 1" = 30' VERT. 1" = 5'	Proj. No. 95019B	
Drn By KDE	Date 6-4-99	11 OF 27	
Chk By JWR	Approved		

6-7-99
Date

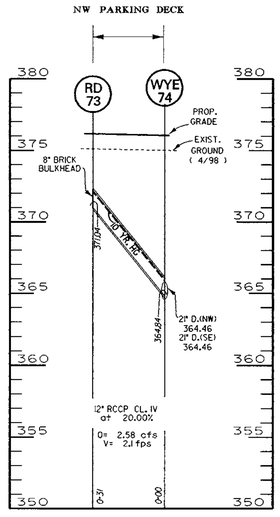
Professional Engr. No. 10951

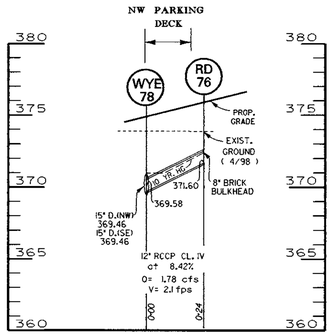
APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

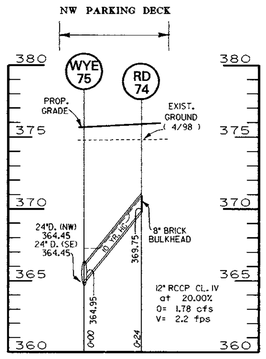
NW PARKING DECK



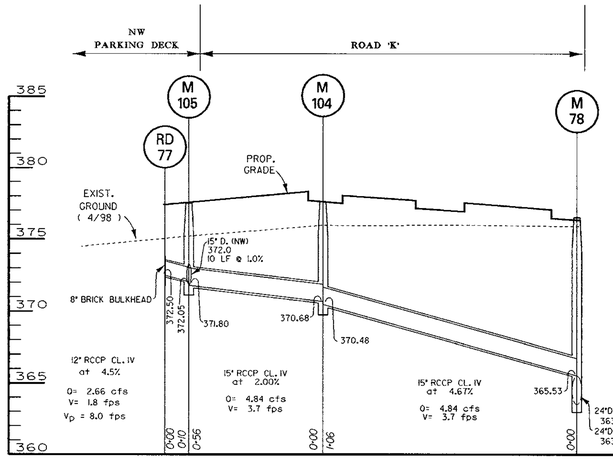
NW PARKING DECK

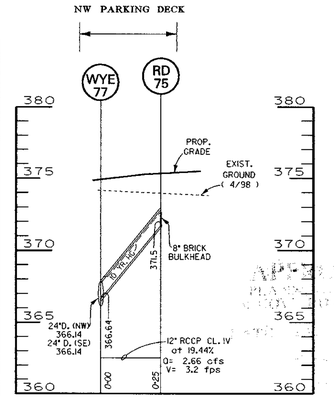


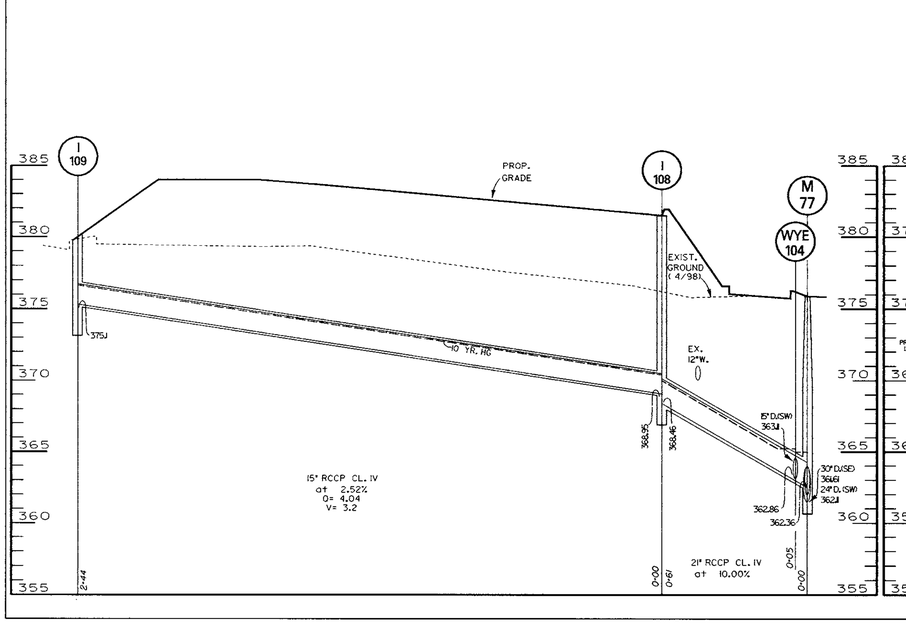


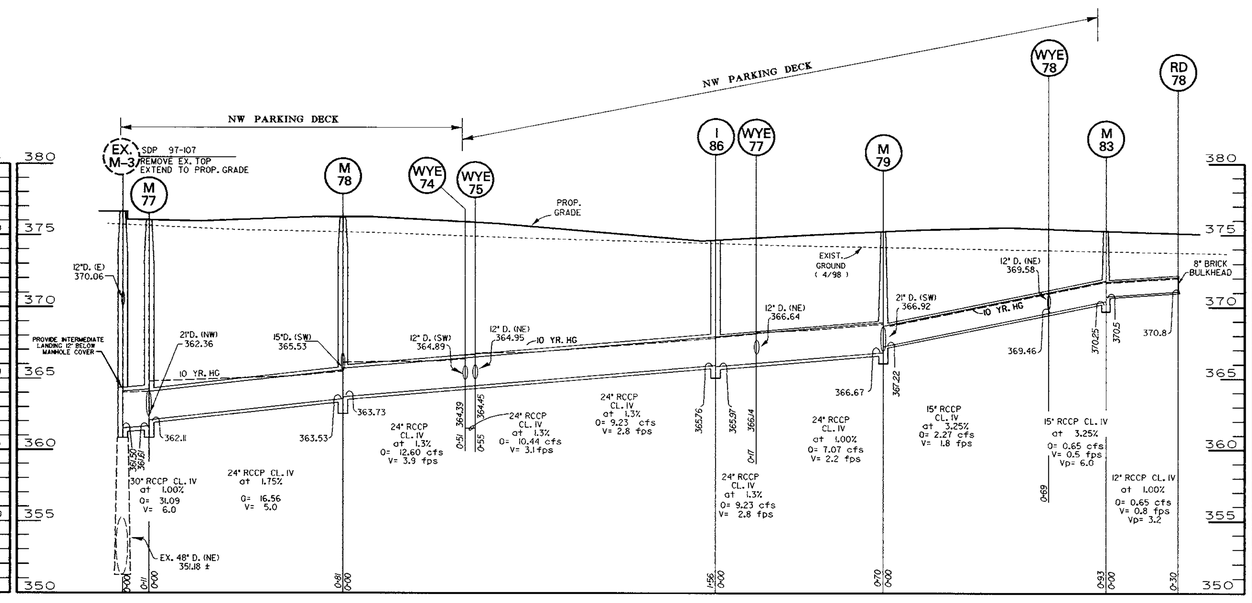


INLET SCHEDULE









APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/2/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/6/99

DIRECTOR — DATE 7/2/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE
REVISED PHASE III
STORM DRAIN PROFILES

Des By	RLH	Scale	HORZ 1" = 50' VERT 1" = 5'	Proj. No.	95019B
Drn By	KDE	Date	6-4-99	12 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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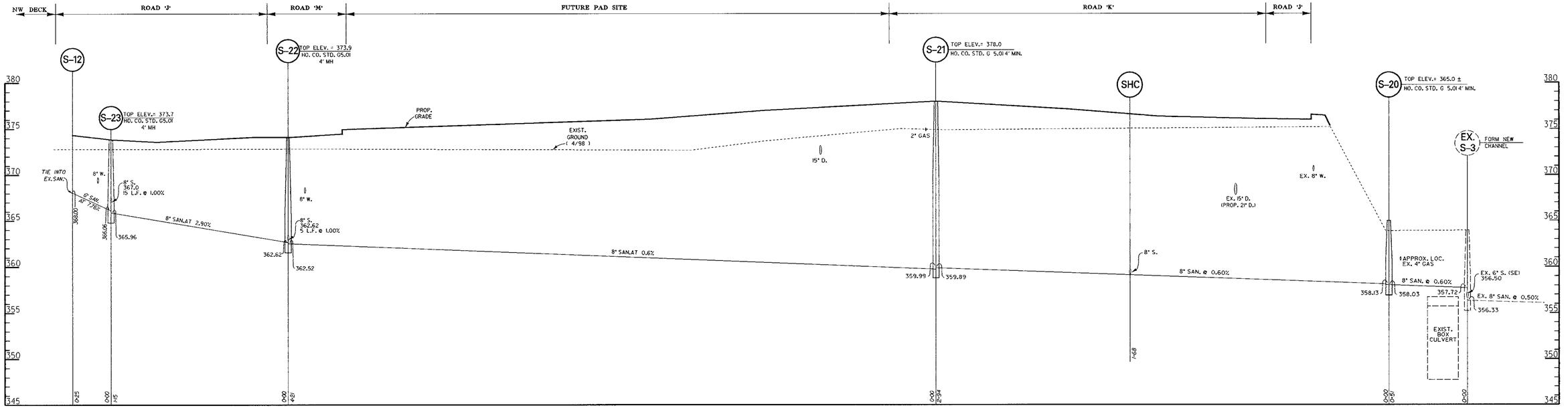

SANITARY SEWER PROFILE

SCALE: HORIZ. 1"=30'
VERT. 1"=5'

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99 R

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND
JOHN W. RANDOCCHIA, JR.
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE
REVISED PHASE III
SEWER PROFILES

Des By	RLH	Scale	HORZ. 1"=30' VERT. 1"=5'	Proj. No.	95019B
Drn By	KDE	Date	6-4-99	13 OF 27	
Chk By	JWR	Approved			

SANITARY MANHOLE SCHEDULE

NO.	LOCATION
SMH 60	ROAD 'B' STA.10+60 8' LT.
SMH 60A	ROAD 'B' STA.10+15 7' LT.
SMH 61	ROAD 'B' STA.9+40 6.7' LT.
SMH 62	ROAD 'B' STA.8+97 7.9' LT.
SMH 63	ROAD 'B' STA.8+03 16' LT.
SMH 64	ROAD 'G' STA.0+35 10.5' LT.
SMH 65	ROAD 'G' STA.1+37 10.5' LT.
S-10	ROAD 'B' 16' RT.
S-11	ROAD 'G' 17' LT.
S-12	ROAD 'G' 18' RT.
S-13	ROAD 'G' 17' LT.
S-14	ROAD 'B' STA.9+87 17' LT.
S-15	ROAD 'B' STA. 8+73 13' LT.
S-16	ROAD 'B' STA. 8+24 13' LT.

SANITARY CONNECTIONS

NO.	COORDINATES	
S-24	N 503662.2	E 839084.1
S-25	N 503587.5	E 838995.9

SANITARY MANHOLE SCHEDULE

NO.	COORDINATES	
S-20	N 504096.3	E 838902.3
S-21	N 503888.72	E 838694.70
S-22	N 503591.04	E 838992.37
S-23	N 503672.77	E 839073.44

SDP-99-116

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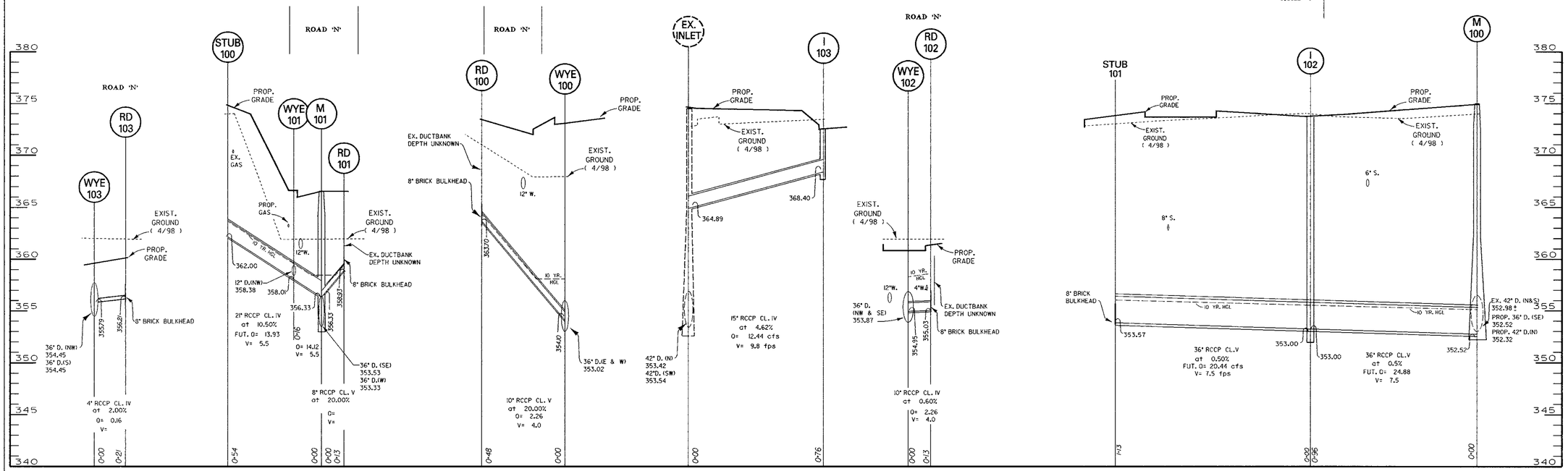
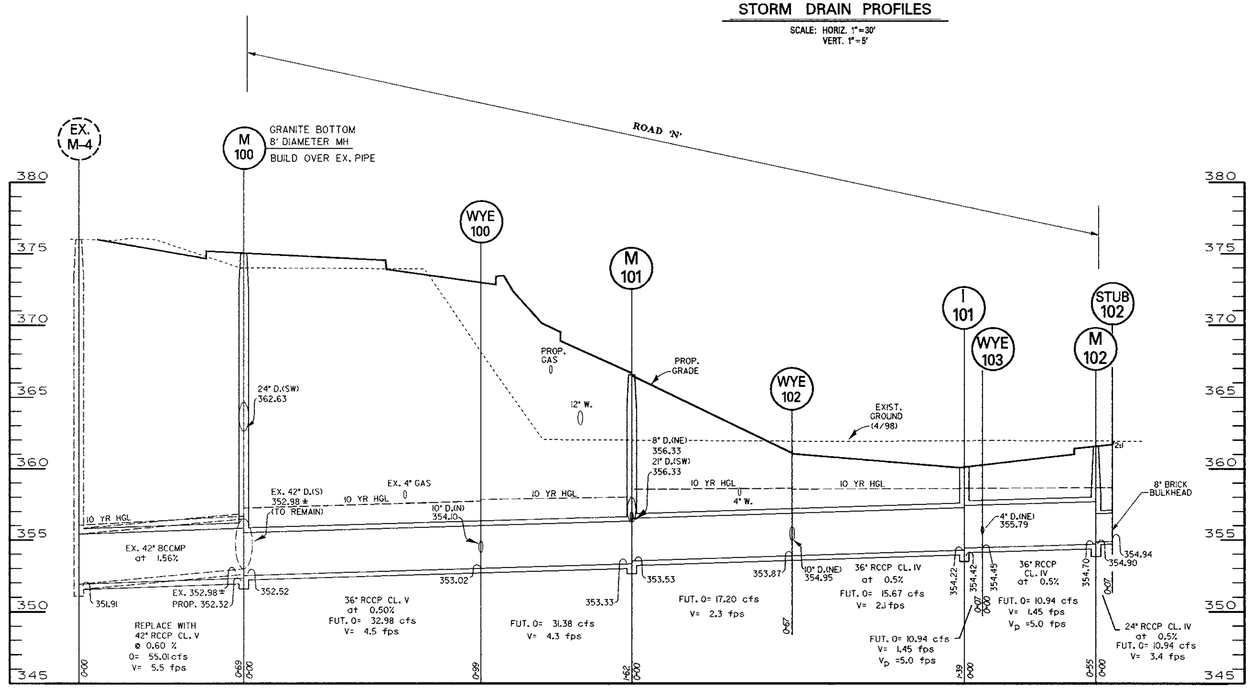


STORM DRAIN PROFILES

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

6-7-99
Date

STATE OF MARYLAND
JOHN W. NARCOCHE SR.
No. 11431
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 11431

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

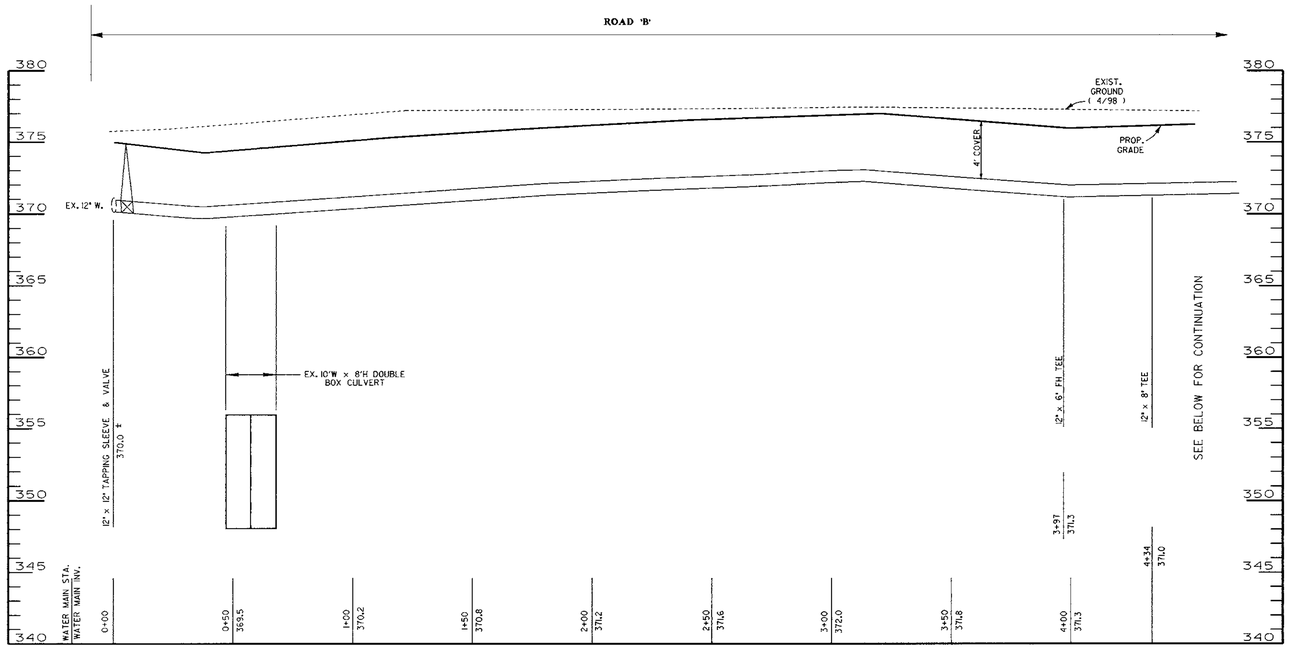
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

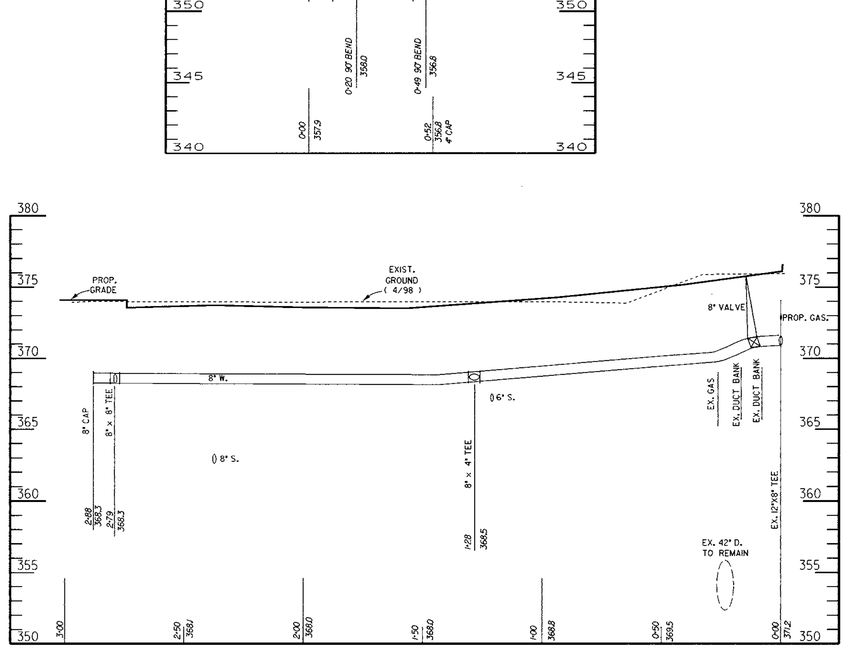
TITLE

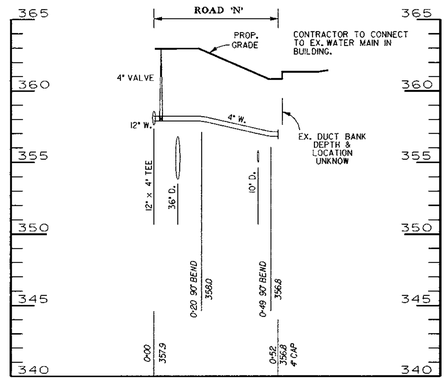
REVISED PHASE III STORM DRAIN PROFILES

Des By	RLH	Scale	HORZ 1"=30' VERT. 1"=5'	Proj. No.	95019B
Drn By	KDE	Date	6-4-99	14 OF 27	
Chk By	JWR	Approved			

SDP-99-116

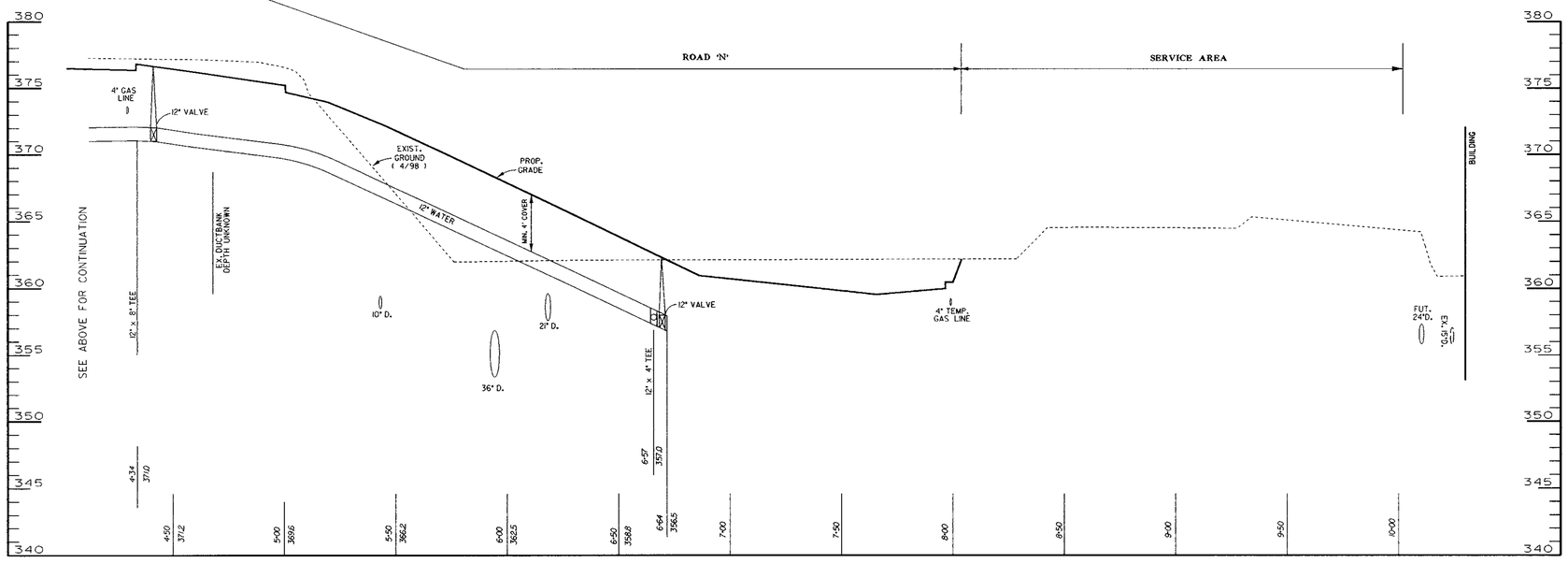






WATER MAIN PROFILES

SCALE: HORIZ. 1"=30'
VERT. 1"=5'



PROPOSED 8" WATER

STATION		COORDINATES
0+00	TEE	N 503766.0 E 839151.8
2+88	CAP	N 503561.3 E 838948.8

PROPOSED 12" WATER

STATION		COORDINATES
4+34	EX. END	N 503766.0 ± E 839151.8 ±
4+87	PC	N 503728.9 E 839189.1
5+25	PRC	N 503704.0 E 839217.7
5+60	PT	N 503681.3 E 839244.1
6+62	END	

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

6-7-99
Date

STATE OF MARYLAND
JOHN W. BARCOCHAK JR.
No. 19551
PROFESSIONAL ENGINEER

Professional Engr. No. 19551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/19/99 DATE

DIRECTOR — 7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III WATER PROFILES

Des By	RLH	Scale	HORZ 1" = 30' VERT 1" = 5'
Drn By	KDE	Date	6-4-99
Chk By	JWR	Approved	

Proj. No. 95019B

15 OF 27

SDP-99-116

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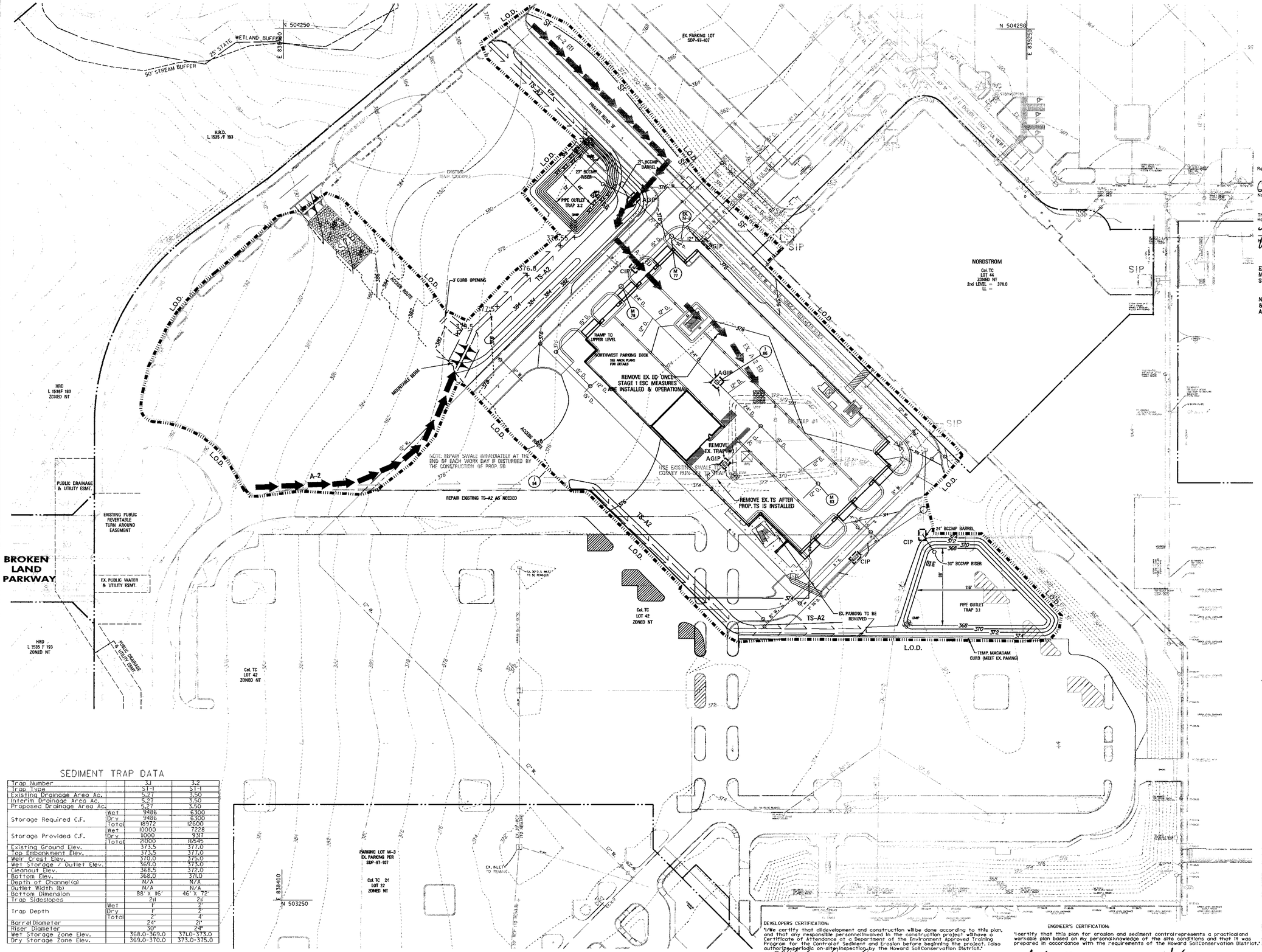


Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Natural Resources Conservation Service — 6/30/99 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Howard Soil Conservation District — 6/30/99 Date

EXISTING EROSION AND SEDIMENT CONTROL MEASURES ARE FROM SHEET 15 OF 30, SDP-98-44.

NOTE: CONTRACTOR TO BLOCK ALL UNCONNECTED & UNPROTECTED STORM DRAIN FROM RUNOFF AT ALL TIMES.

6.7.99 Date

STATE OF MARYLAND — JOHN W. BAROCCINI, JR. — 10974 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10974

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/2/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/99 DATE

DIRECTOR — 7/19/99 DATE

SEDIMENT TRAP DATA

Trap Number		3.1	3.2
Trap Type		ST-I	ST-I
Existing Drainage Area Ac.		5.27	3.50
Interim Drainage Area Ac.		5.27	3.50
Proposed Drainage Area Ac.		5.27	3.50
Storage Required C.F.	Wet	9486	6300
	Dry	9486	6300
	Total	18972	12600
Storage Provided C.F.	Wet	10000	7228
	Dry	1000	9317
	Total	21000	16545
Existing Ground Elev.		373.5	377.0
Top Embankment Elev.		373.5	377.0
Weir Crest Elev.		370.0	375.0
Wet Storage / Outlet Elev.		369.0	373.0
Cleanout Elev.		368.5	372.0
Bottom Elev.		368.0	371.0
Depth of Channel(a)		N/A	N/A
Outlet Width (b)		N/A	N/A
Bottom Dimension		88' X 116'	46' X 72'
Trap Sideslopes		2:1	2:1
Trap Depth	Wet	1'	2'
	Dry	1'	2'
	Total	2'	4'
Barrel Diameter		24"	21"
Riser Diameter		30"	24"
Wet Storage Zone Elev.		368.0-369.0	371.0-373.0
Dry Storage Zone Elev.		369.0-370.0	373.0-375.0

DEVELOPERS CERTIFICATION:
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

DEVELOPER — 6-8-99 Date

ENGINEER'S CERTIFICATION:
"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."

6/7/99 Date

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

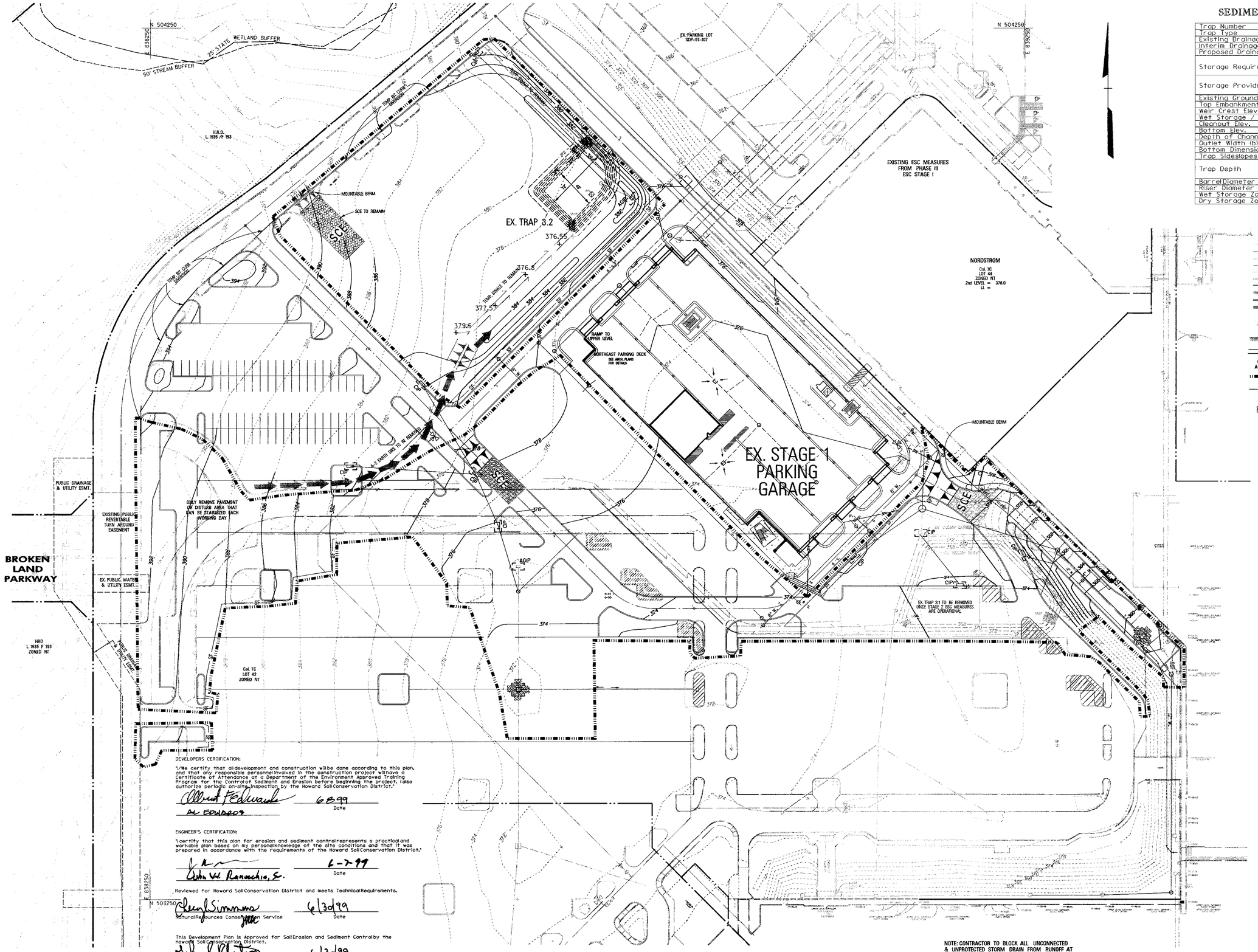
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III EROSION & SEDIMENT CONTROL STAGE I

Des By	MJP	Scale	1" = 50'	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99		16 OF 27
Chk By	JWR	Approved			

SDP-99-116



SEDIMENT TRAP DATA

Trap Number		3.2
Trap Type		ST-I
Existing Drainage Area Ac.		3.50
Interim Drainage Area Ac.		1.69
Proposed Drainage Area Ac.		1.69
Storage Required C.F.	Wet	6300
	Dry	6300
	Total	12600
Storage Provided C.F.	Wet	7228
	Dry	9317
	Total	16545
Existing Ground Elev.		377.0
Top Embankment Elev.		377.0
Weir Crest Elev.		375.0
Wet Storage / Outlet Elev.		373.0
Cleanout Elev.		372.0
Bottom Elev.		371.0
Depth of Channel(a)		N/A
Outlet Width (b)		N/A
Bottom Dimension		46' X 72'
Trap Sideslopes		2:1
Trap Depth	Wet	2'
	Dry	2'
	Total	4'
Barrel Diameter		21"
Riser Diameter		24"
Wet Storage Zone Elev.		371.0-373.0
Dry Storage Zone Elev.		373.0-375.0

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- EARTH DIKE
- TEMPORARY SWALE
- CIP / AGIP — INLET PROTECTION
- LIMIT OF DISTURBANCE
- SSF — SUPER SILT FENCE
- SSF / AGIP — LOW POINT INLET PROTECTION
- 15" D. — SD BUILT UNDER STAGE I

6-7-99
Date

STATE OF MARYLAND — JOHN W. RANOSCHIA JR. — No. 10901 — PROFESSIONAL ENGINEER

Professional Engr. No. 10901

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

DEVELOPERS CERTIFICATION:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Albert Fedwick — 6-8-99
AL EDWARDS — Date

ENGINEER'S CERTIFICATION:

"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."

John W. Ranoschia, Jr. — 6-7-99
Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Glenn Simmons — 6/30/99
Natural Resources Conservation Service — Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. Robertson — 6/30/99
Howard Soil Conservation District — Date

NOTE: CONTRACTOR TO BLOCK ALL UNCONNECTED & UNPROTECTED STORM DRAIN FROM RUNOFF AT ALL TIMES.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/99 DATE

DIRECTOR — 7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA

REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Dan McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III EROSION & SEDIMENT CONTROL STAGE 2

Des By	MJP	Scale	1" = 50'	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99	17 OF 27	
Chk By	JWR	Approved			

SDP-99-116

Thu Jun 3 13:39:38 1999 S:\95019\columbia\sht\95019b3.es2

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

CONDITIONS WHERE PRACTICE APPLIES

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvages from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2"ø in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

ii. For sites having disturbed areas under 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4⅜ - 5⅜ higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4⅜ - 5⅜ layer and lightly compacted to a minimum thickness of 4⅜. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding. MD-VA. Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

SEQUENCE OF CONSTRUCTION

STAGE 1

1. OBTAIN GRADING PERMIT. (2 DAYS)
2. INSTALL STAGE 1 EROSION AND SEDIMENT CONTROL MEASURES AND 21" DRAIN FROM RISER TO M-77. ONCE STAGE 1 EROSION AND SEDIMENT CONTROLS ARE OPERATIONAL, AND WITH PERMISSION OF INSPECTOR, REMOVE EXISTING CONTROLS EXCEPT PORTION OF TEMPORARY SWALE USED IN STAGE 1. (21 DAYS)
3. CLEAR SITE DRAINING TO STAGE 1 CONTROLS. (7 DAYS)
4. ROUGH GRADE SITE DRAINING TO STAGE 1 CONTROLS. ADJUST EROSION AND SEDIMENT CONTROLS AS NECESSARY TO MAINTAIN POSITIVE FLOW TO TRAPS. CONSTRUCT UTILITIES AND PROPOSED PARKING GARAGE AND ASSOCIATED ACCESS ROADS. PROVIDE INLETS WITH INLET PROTECTION.* (120 DAYS)
5. AFTER STAGE 1 GRADING IS COMPLETE, INSTALL STAGE 2 EROSION AND SEDIMENT CONTROL MEASURES. ONCE STAGE 2 EROSION AND SEDIMENT CONTROLS ARE OPERATIONAL, AND WITH PERMISSION OF INSPECTOR, REMOVE ALL STAGE 1 CONTROLS EXCEPTING TRAP 3.2 AND ITS ASSOCIATED DIKES AND SWALES AND THE TEMPORARY BITUMINOUS BERMS. (21 DAYS)

STAGE 2

1. BEGIN STAGE 2 GRADING OF PROPOSED PARKING LOT (21 DAYS).
2. CONSTRUCT STORM DRAINAGE AND INSTALL INLET PROTECTION. (30 DAYS)
3. CONSTRUCT WATER, SEWER, AND UTILITIES. (30 DAYS)
4. FINE GRADE AND CONSTRUCT PROPOSED PARKING LOTS. (120 DAYS)
5. FLUSH STORM DRAIN SYSTEM. (1 DAY)
6. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROL MEASURES AND STABILIZE. (7 DAYS)

* CONTRACTOR TO BLOCK ALL UNCONNECTED & UNPROTECTED STORM DRAINS FROM RUNOFF AT ALL TIMES AND BRICK SHUT ALL ROOF DRAIN CONNECTIONS (RD).

STORM DRAIN ABANDONMENT

1. IF PIPE IS TO BE LEFT IN PLACE:
   a) PLACE ANY DISTURBED SOIL ON UPSTREAM SIDE OF TRENCH
   b) BULKHEAD AND GROUT PIPES
   c) REFILL TRENCH & STABILIZE
2. IF PIPE IS TO BE MOVED:
   a) ONLY DISTURB AREA WHICH CAN BE STABILIZED AT END OF EACH DAY.
   b) PLACE ANY DISTURBED SOIL ON UPSTREAM SIDE OF TRENCH
   c) REMOVE PIPE
   d) BACKFILL & STABILIZE

DEVELOPERS CERTIFICATION:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Albert P. Edwards — 6-8-99 — Date

AL EDWARDS

ENGINEER'S CERTIFICATION:

"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."

John H. Ramoccha, Jr. — 6-7-99 — Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

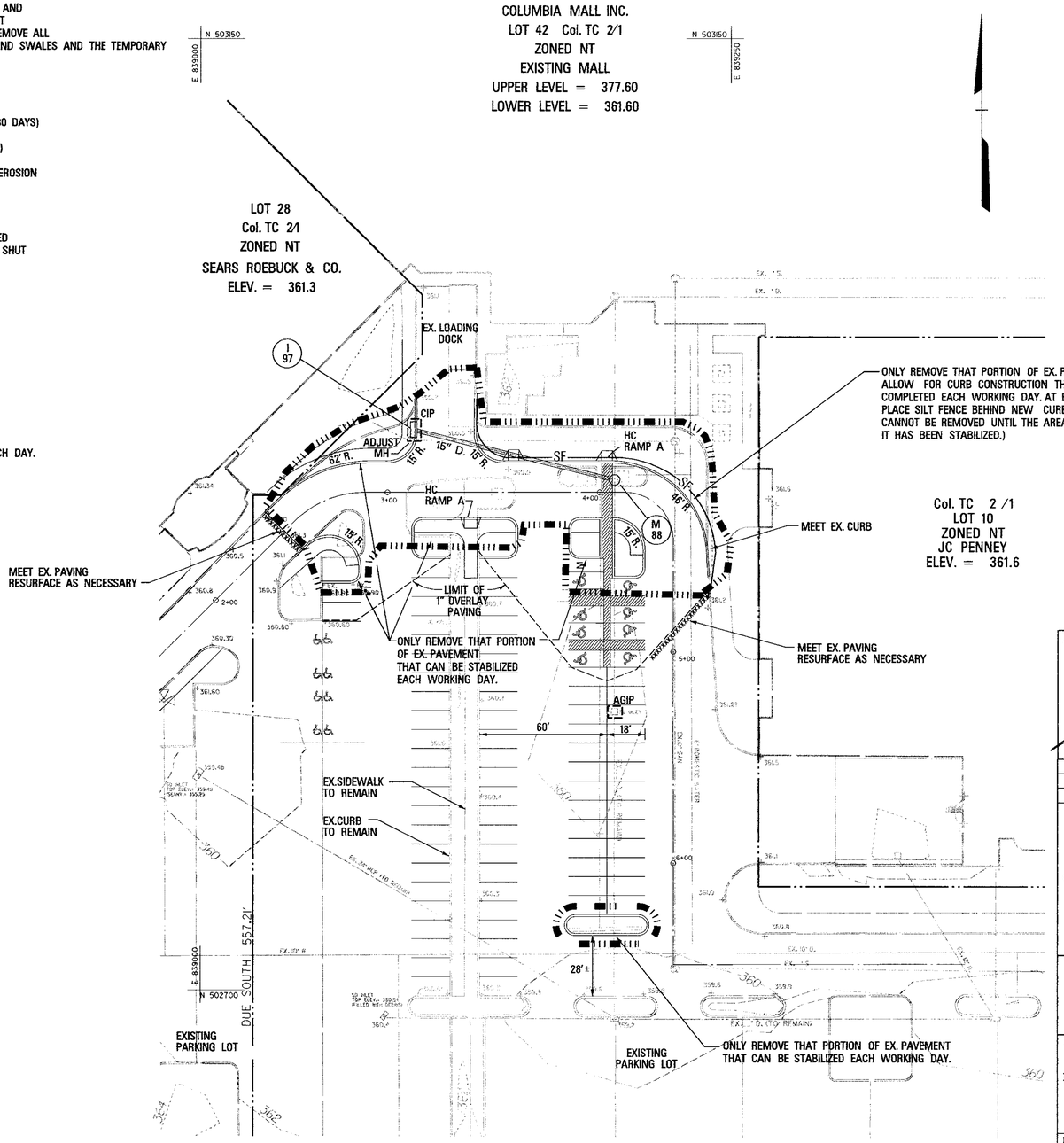
Natural Resources Conservation Service — 6/30/99 — Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Howard Soil Conservation District — 6/30/99 — Date

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- 6" STANDARD COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- CIP / AGIP — INLET PROTECTION
- LIMIT OF DISTURBANCE
- EARTH DIKE
- TEMPORARY SWALE
- SF — SF SILT FENCE



SOUTH MALL ENTRANCE

6-7-99
Date

STATE OF MARYLAND — JOHN H. RAMOCCHA, JR. — No. 10501 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10501

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1999

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/6/99 DATE

DIRECTOR — 7/12/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2, AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

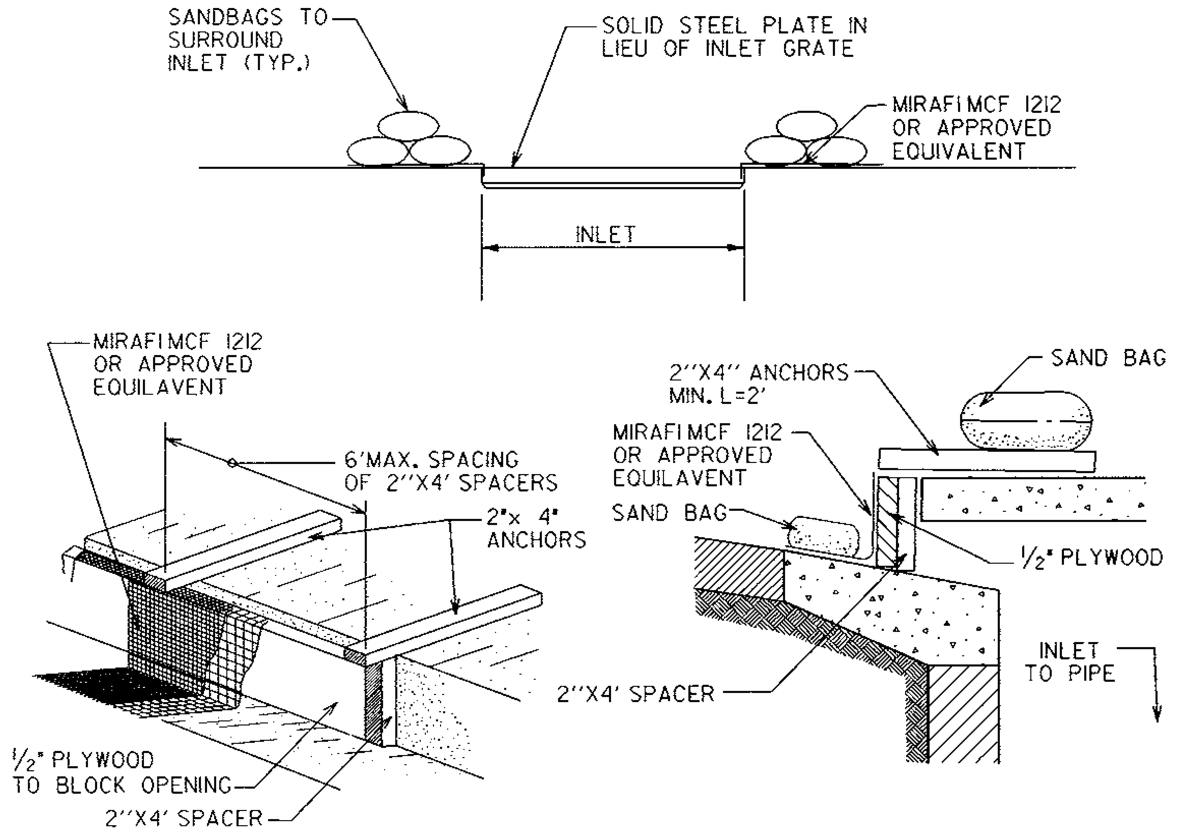
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE
REVISED PHASE III
EROSION & SEDIMENT CONTROL PLAN
(SOUTH ENTRANCE)

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	KDE	Date	6-4-99		
Chk By	JWR	Approved			18 OF 27

SDP-99-116

Thu Jun 3 13:31:11 1999 h:\95019\columbiamall\95019b3.asg



E - 16 - 5D

INLET CAPPING /BLOCKING DETAIL

DUST CONTROL SPECIFICATIONS

Temporary Methods:

1. Mulches - See Standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soilblowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point the runoff begins to flow.
5. Barriers - Solid board fences, snow fences, burlap fences, straw bales, and similar material can be used to control air curents and soilblowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are affective in controlling soilblowing.
6. Calcium Chloride - Apply at a rate that will keep surface moist. May need retreatment.

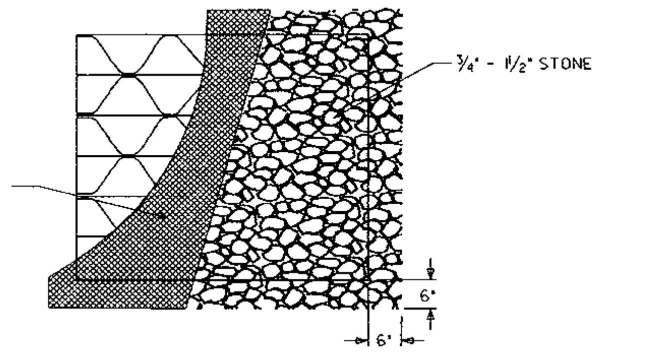
Permanent Methods:

1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling - Covering with less erosive soilmaterials. See standards for topsoiling.
3. Stone - Cover surface with crushed stone or coarse gravel.

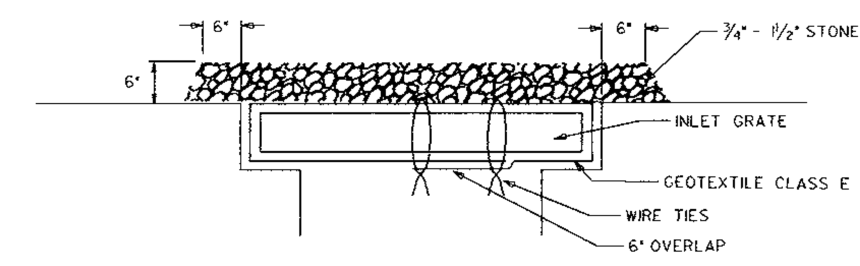
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE *H - 30 - 1* *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

DUST CONTROL SPECIFICATIONS

NOT TO SCALE



PLAN/CUT AWAY VIEW



STANDARD SYMBOL AGIP

CROSS SECTION

MAX. DRAINAGE AREA = 1/4 ACRE

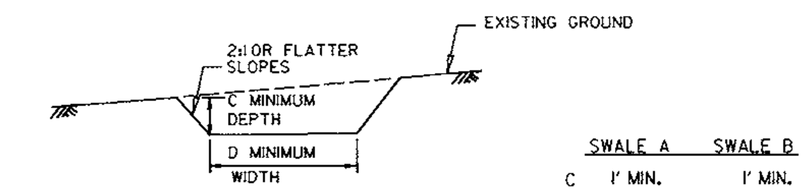
Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
2. Place 3/4" to 1 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE *E - 16 - 5A* *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

AT GRADE INLET PROTECTION

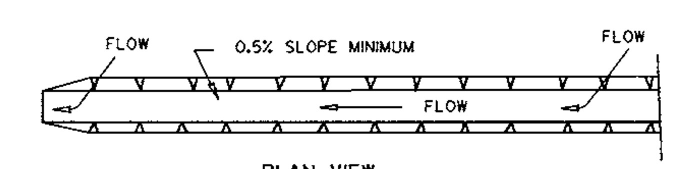
NOT TO SCALE



CROSS SECTION

	SWALE A	SWALE B
C	1' MIN.	1' MIN.
D	4' MIN.	6' MIN.

OUTLET AS REQUIRED



PLAN VIEW

DRAINAGE AREA = 10 ac (MAX)
SLOPE = 10% (MAX)

STANDARD SYMBOL A - 2 / B - 3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4"-7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.

Construction Specifications

1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
5. The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill, if necessary, shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE *A - 2 - 4* *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

TEMPORARY SWALE

NOT TO SCALE

Table 28 Stone Size

	SIZE RANGE	D 50	D 100	AASHTO	WEIGHT
NUMBER 57*	3/8" - 1 1/2"	1/2"	1 1/2"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIP-RAP**	4" - 7"	5 1/2"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb max.
CLASS II	N/A	16"	24"	N/A	700lb max.
CLASS III	N/A	23"	34"	N/A	2000lb max.

* This classification is to be used on the inside face of stone outlets and check dams.
** This classification is to be used when ever smallrip-rap is required. The State Highway Administration designation for this stome is Stone For Gabions (905.01.04)

Stone For Gabion Baskets

BASKET THICKNESS		SIZE OF INDIVIDUAL STONES	
INCHES	MM	INCHES	MM
6	150	3 - 5	75 - 125
9	225	4 - 7	100 - 175
12	300	4 - 7	100 - 175
18	460	4 - 7	100 - 175
36	910	4 - 12	100 - 300

NOTE: Recycled concrete equivalent may be substituted for all stone classifications. Recycled concrete equivalent shall be concrete broken into the sizes meeting the appropriate classification, shall contain no steel reinforcement, and shall have a density of 150 pounds per cubic foot.

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30**	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

* US Std. Sieve CW-02215 ** .50 mm max. for Super Silt Fence

The properties shall be determined in accordance with the following procedures:
- Apparent opening size MSMT 323
- Grab tensile strength ASTMD 1682: 4x8" specimen, 1x2" clamps, 12"/min. strain rate in both principal directions of geotextile fabric.
- Burst strength ASTMD D 3786

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotectile fabric shall resist deterioration from ultraviolet exposure.

In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

Silt Fence
Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

MATERIALS SPECIFICATIONS

H - 24 - 1

DEVELOPERS CERTIFICATION:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Albert PEdwards — AL EDWARDS — 6 8 99 Date

ENGINEER'S CERTIFICATION:

"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."

John W Ranocchia — 6-7-99 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl Simmons — Natural Resources Conservation Service — 6/30/99 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John Robertson — Howard Soil Conservation District — 6/30/99 Date

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
1. PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.)
2. ACCEPTABLE - APPLY 2 TOMS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BE RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHLAT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

PERMANENT SEEDING NOTES

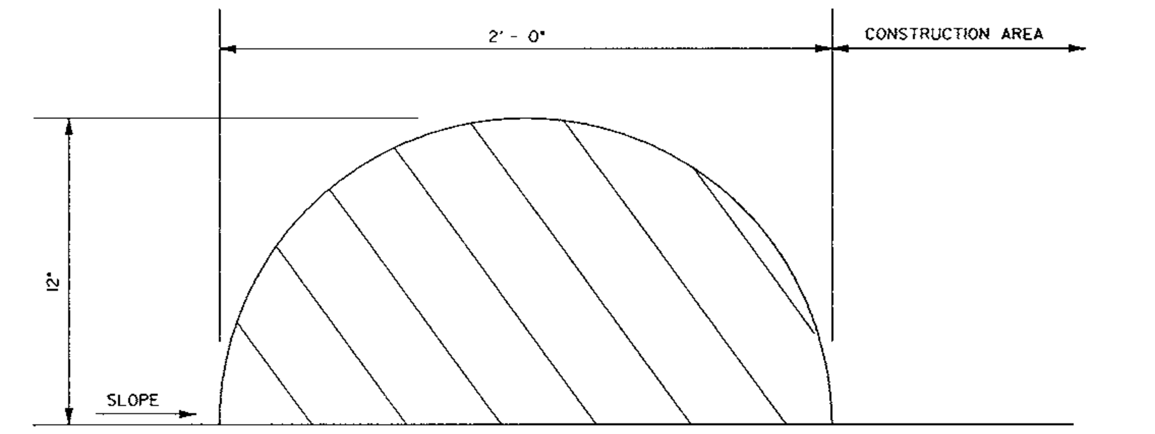
1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL."
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
   A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
   B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 7, OF THE "HOWARD COUNTY DESIGN MANUAL," STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SECTION G). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
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	84.12	ACRES
AREA DISTURBED	12.2	ACRES
AREA TO BE ROOFED OR PAVED	8.2	ACRES
AREA TO BE VEGETATIVELY STABILIZED	4.0	ACRES
TOTAL CUT	14,000	CY.
TOTAL FILL	13,000	CY.
* OFF-SITE WASTE / BORROW AREA LOCATION	TO BE HAULED TO APPROVED SITE WITH CURRENT GRADING PERMIT	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, 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 AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITES ARE LIMITED TO 3 PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

* SITE PREVIOUSLY MASS GRADED PER SDP 97-107 & SDP 97-158 & 98-44 EXCESS MATERIAL SHALL BE HAULED TO AN APPROVED SITE WITH A CURRENT GRADING PERMIT. NO TEMP. SWM IS REQUIRED. PERMANENT SWM IN PLACE AS PER SDP-97-107.

SEDIMENT CONTROL GENERAL NOTES



BITUMINOUS CURB DIVERSION

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES

1. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH.
2. IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY STABILIZED (MULCHED, SEEDED, AND/OR SODDED MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY.
3. SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED LONGER THAN ONE (1) WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING - E-15-3)
4. THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY.
5. ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE WITH THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS." ANY EROSION AND SEDIMENT CONTROL PRACTICES DAMAGED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL

6-7-99
Date

Professional Engr. No. 10551

SDP-99-116

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	7/12/99 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	7/16/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft·McCune·Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

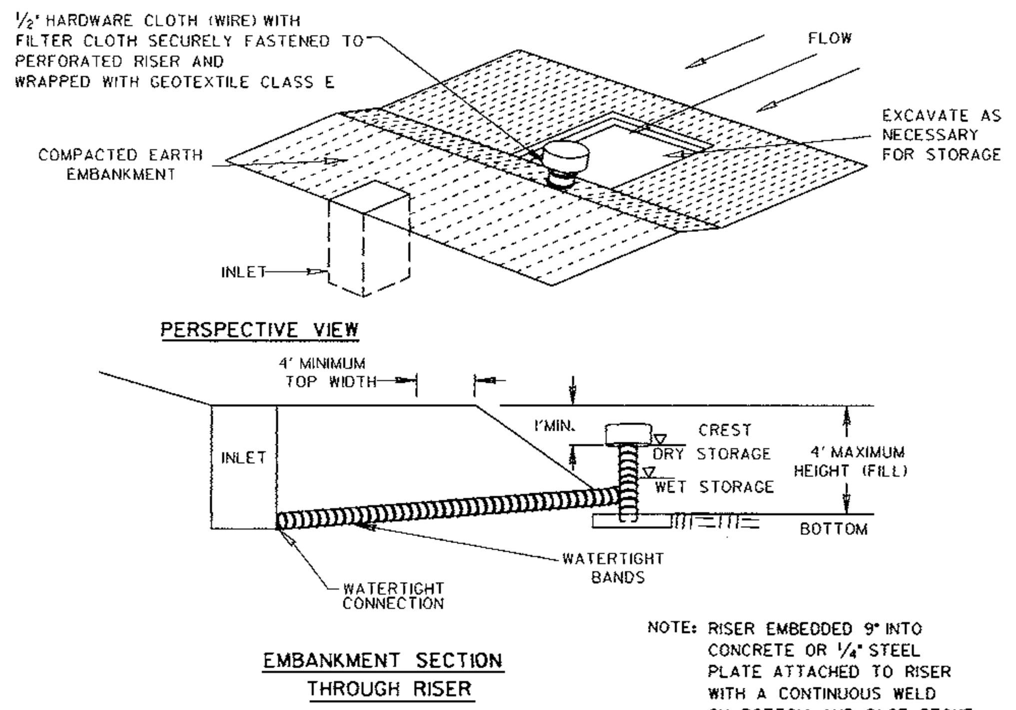
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III EROSION & SEDIMENT CONTROL DETAIL SHEET

Des By	CRW/JLS	Scale AS SHOWN	Proj. No. 95019B	
Drn By	FJZ	Date 6-4-99	19 OF 27	
Chk By	JWR	Approved		

Thu Jun 3 13:43:44 1999 \95019columbiamall\95019b3.es7



NOTE: RISER EMBEDDED 9" INTO CONCRETE OR ¼" STEEL PLATE ATTACHED TO RISER WITH A CONTINUOUS WELD ON BOTTOM AND 2' OF STONE PLACED ON STEEL PLATE TWICE THE RISER DIAMETER (MIN.)

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *C - 9 - 7* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

PIPE OUTLET SEDIMENT TRAP - ST I

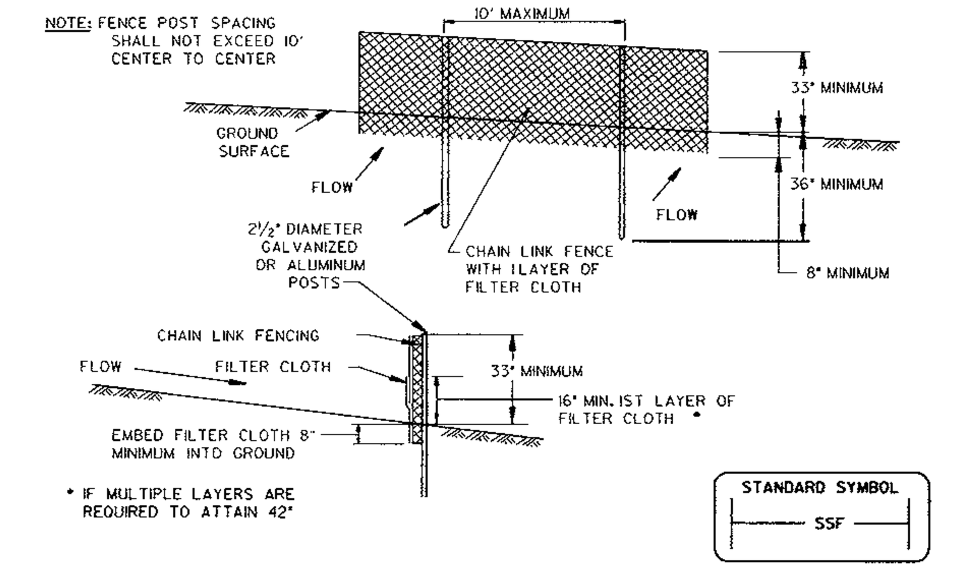
Construction Specifications

1. The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be ≥ 1' above the riser crest elevation.
4. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (900cf/ac). The sediment shall be deposited in a suitable area and in such a manner that it will not erode.
5. The structure shall be inspected periodically and after each rain and repairs made as necessary.
6. Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
7. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
8. All cut and fill slopes shall be 2:1 or flatter.
9. All pipe connections shall be watertight.
10. Above the wet storage elevation, the riser shall be perforated with ½" wide by 6" long slits or 1" diameter holes spaced 6" vertically and horizontally. No perforations will be allowed within 6" of the horizontal barrel.
11. The riser shall be wrapped with ½" hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6" above the highest slit and 6" below the lowest slit. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass. Filter cloth shall be replaced as necessary to prevent clogging.
12. Straps or connecting bands shall be used to hold the filter cloth and wire fabric in place. They shall be placed at the top and bottom of the cloth.
13. Fill material around the pipe spillway shall be hand compacted in 4" layers. A minimum of 2' of hand-compacted backfill shall be placed over the pipe spillway before crossing it with construction equipment.
14. The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12" deep with the riser embedded 9". Steel plate bases shall be at least twice the riser diameter, ¼" minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertight connection. Then place 2' of stone, gravel or tamped earth on the plate.
15. Concentric trash rack and anti-vortex device design details are on Detail C-10-26 AND C-10-26A.
16. Refer to Section D for dewatering requirements of sediment traps.
17. Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel.
18. Where discharge occurs at the property line, local ordinances and drainage easement requirements shall be met.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *C - 9 - 7A* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

PIPE OUTLET SEDIMENT TRAP - ST I

NOT TO SCALE



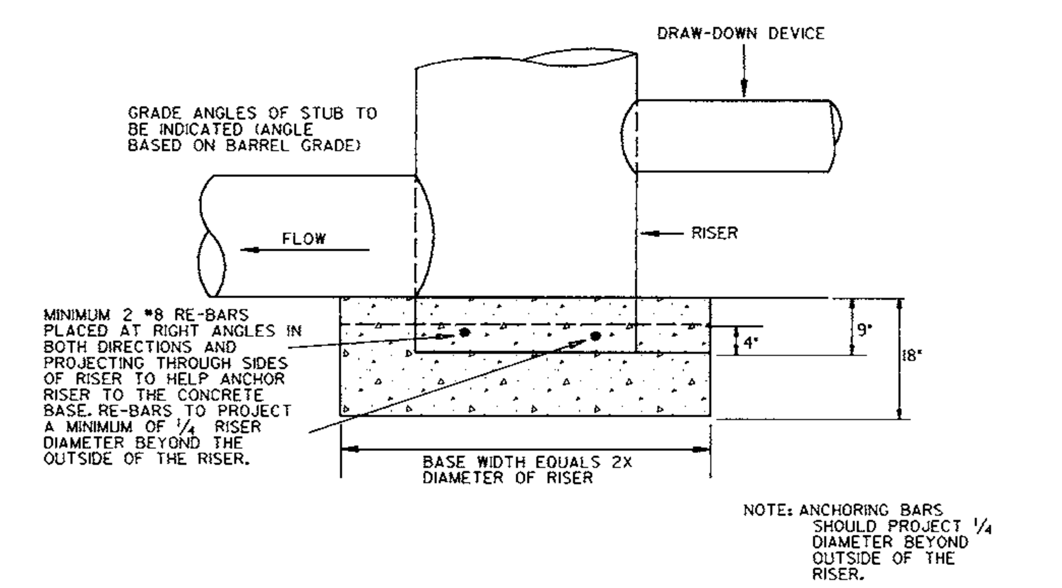
Construction Specifications

1. Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. The posts do not need to be set in concrete.
3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) guage or heavier.
4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
5. Filter cloth shall be embedded a minimum of 8" into the ground.
6. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *H - 26 - 3* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

SUPER SILT FENCE

NOT TO SCALE



NOTE: ANCHORING BARS SHOULD PROJECT ¼ DIAMETER BEYOND OUTSIDE OF THE RISER.

Construction Specifications

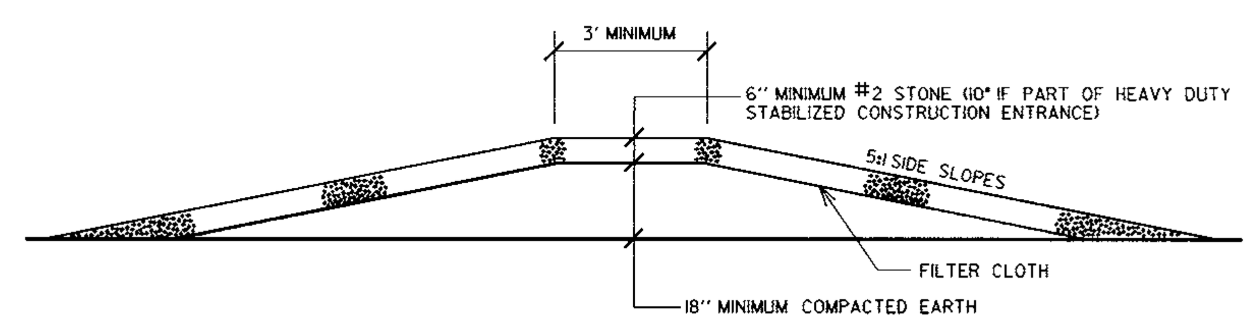
The riser shall have a base attached with a watertight connection and shall have sufficient weight to prevent flotation of the riser. Two approved bases for risers 10' or less in height are:

1. A concrete base 18" thick with the riser embedded 9" in the base.
2. A ¼" minimum thickness steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2' of stone, gravel, or compacted earth placed on it to prevent flotation. In either case, each side of the square base shall be twice the riser diameter.

Note: For risers greater than ten feet high computations shall be made to design a base which will prevent floatation. The minimum factor of safety shall be 1.20 (downward forces = 1.20 x upward forces).

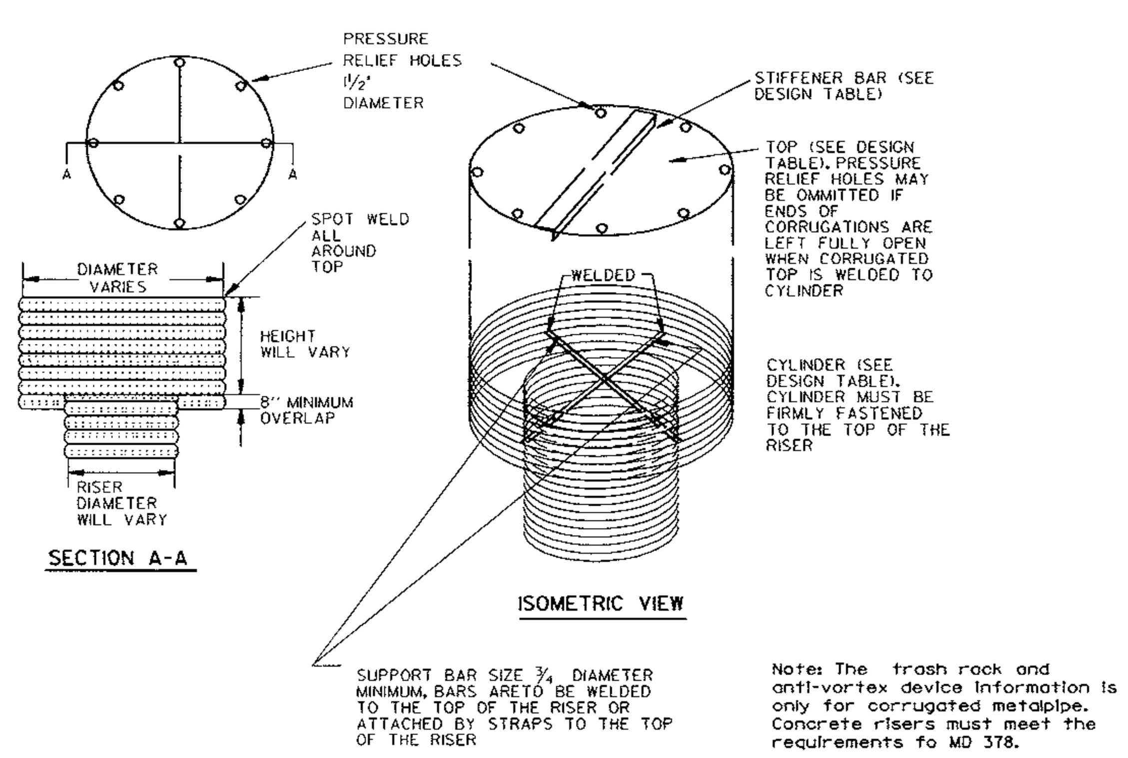
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *C - 10 - 25* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

RISER BASE DETAIL



IF MOUNTABLE BERM IS PART OF A "B" CLASS DIKE. COMPACTED EARTH MUST BE 30" MINIMUM.

MOUNTABLE BERM DETAIL



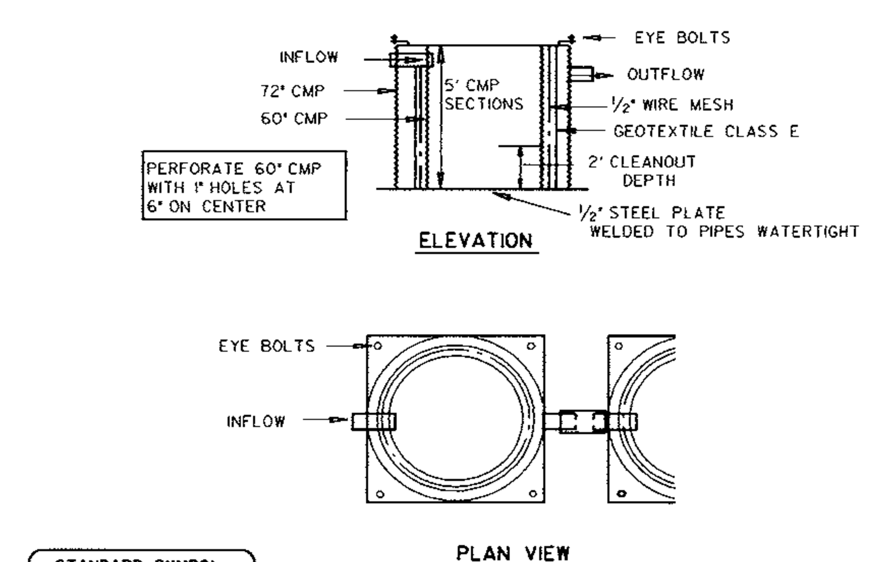
Note: The trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements fo MD 378.

Riser Diam., In.	Trash Rack Cylinder Diam. In.	Trash Rack Cylinder Thick., gage	H. In.	Minimum Size Support Bar	Minimum Top Thickness	Minimum Top Stiffener
12	18	16	6	#6 Rebar	16 ga.	--
15	21	16	7	"	"	--
18	27	16	8	"	"	--
21	30	16	11	"	"	--
24	36	16	13	"	14 ga.	--
27	42	16	15	"	14 ga.	--
36	54	14	17	#8 Rebar	12 ga.	--
42	60	14	19	"	"	--
48	72	12	21	1-1/4" pipe or 1-1/4 x 1-1/4 x 1/4 angle	10 ga.	--
54	78	12	25	"	"	--
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	8 ga.	--
66	96	10	33	2" pipe or 2x2x3/16 angle	8 ga., w/stiffener	2x2x1/4 angle
72	102	10	36	"	"	2-1/2x2-1/2x1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2x2-1/2x 5/16 angle

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *C - 10 - 26* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

NOT TO SCALE



STANDARD SYMBOL

☒ PST

Construction Specifications

1. The following formula should be used in determining the storage volume of the sediment tank: 1 cubic foot of storage for each gallon per minute of pump discharge capacity.
2. An example of a typical sediment tank is shown above. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.
3. Tanks may be connected in series.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *D - 14 - 2* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

PORTABLE SEDIMENT TANK

DEVELOPERS CERTIFICATION:

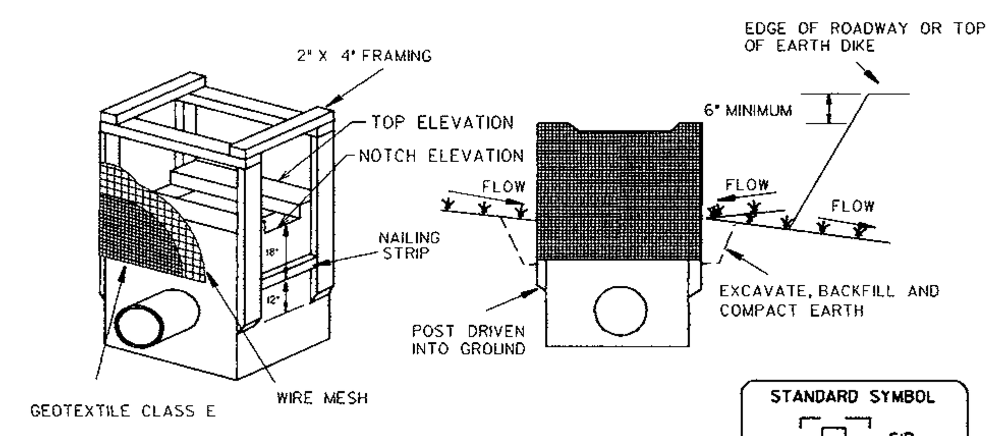
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Al Edwards — 6-8-99 Date

ENGINEER'S CERTIFICATION:

"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."

John W. Ranocchia, Sr. — 6-7-99 Date



STANDARD SYMBOL

SIP

MAX. DRAINAGE AREA = ¼ ACRE

Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.
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. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
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.
5. Backfill around 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 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 clogged.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE — *E - 16 - 5* — *MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION*

STANDARD INLET PROTECTION

NOT TO SCALE

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

Cheryl Simmons — Natural Resources Conservation Service — 6/30/99 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. Robertson — Howard Soil Conservation District — 6/30/99 Date

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/99 DATE

DIRECTOR — 7/15/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
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HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
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10275 LITTLE PATUXENT PARKWAY
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A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99 Date

Professional Engr. No. 10851

TITLE

REVISED PHASE III EROSION & SEDIMENT CONTROL DETAIL SHEET

Des By	CRW/JLS	Scale	AS SHOWN	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99	20 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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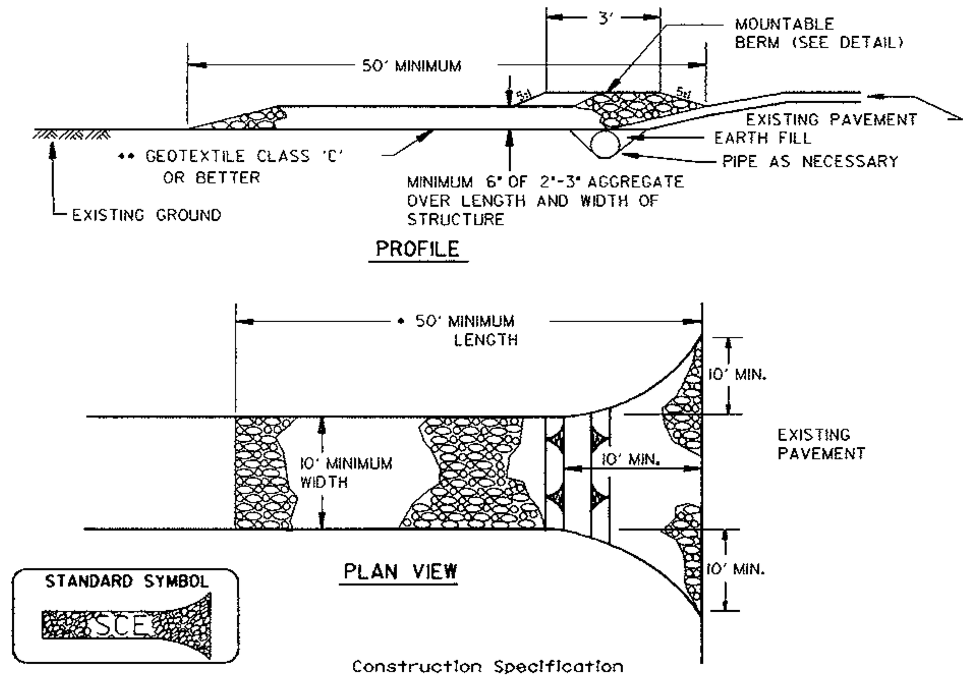


Construction Specification

1. 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.

3. Geotextile fabric Class C (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.

4. 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.

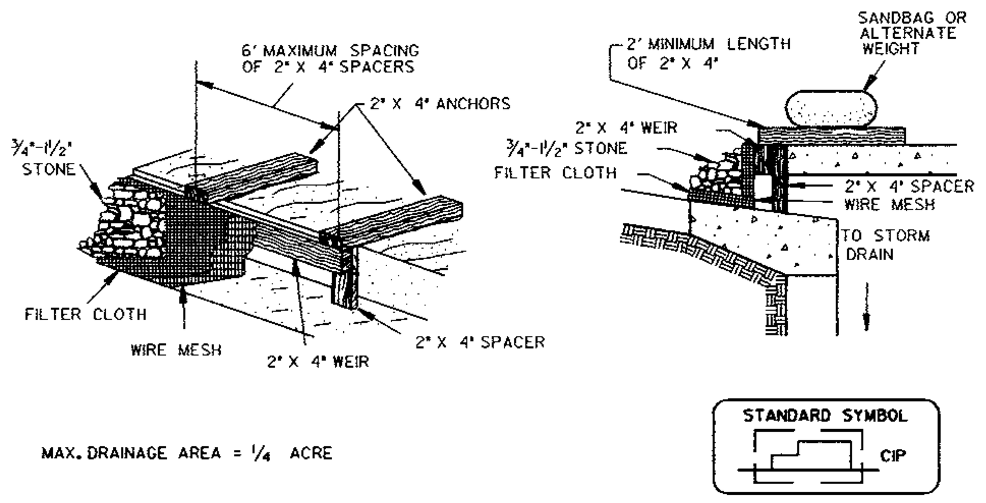
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone 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
SOIL CONSERVATION SERVICE — F - 17 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. Attach a continuous piece of 1/2" X 1/2" 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 drawing.

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 nail 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 nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend 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.

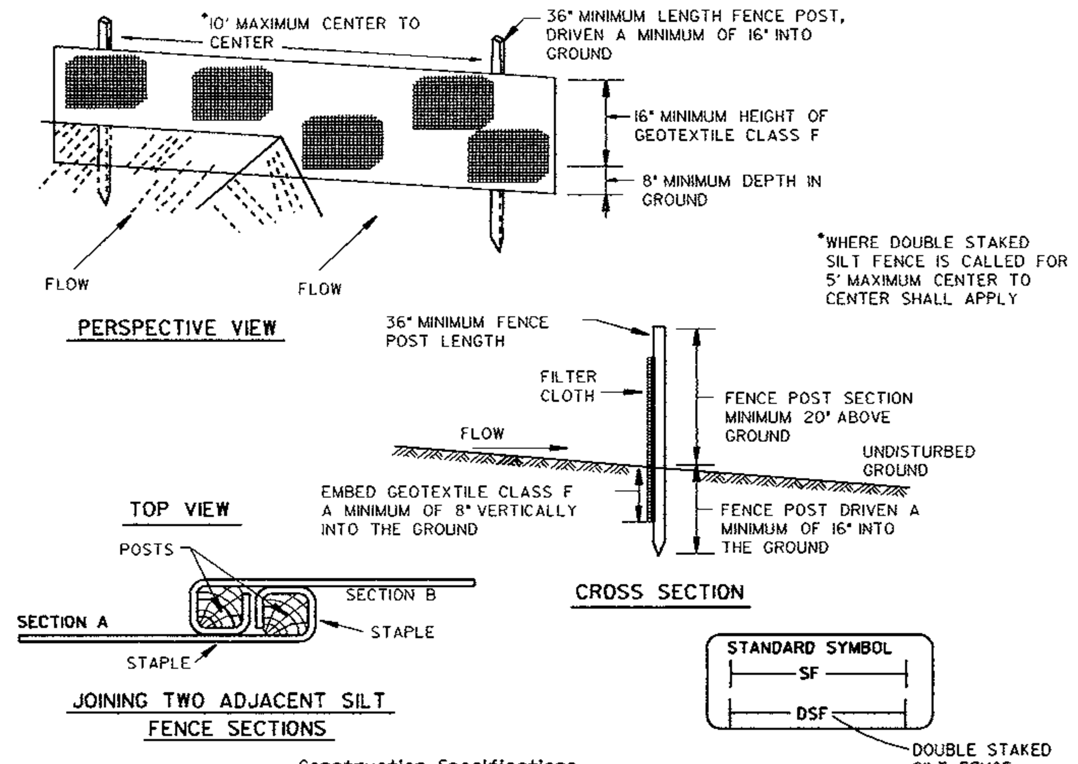
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

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.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — E - 16 - 5B — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

CURB INLET PROTECTION (COG OR COS INLETS)

NOT TO SCALE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft/minute (max.)	Test: MSTM 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

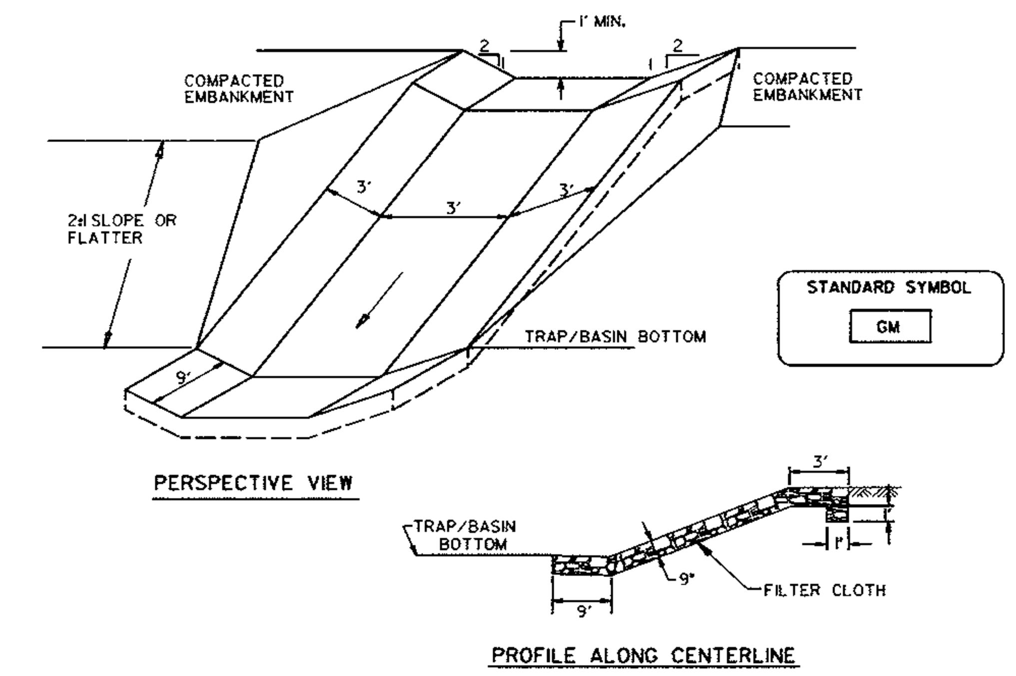
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

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

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — E - 15 - 3 — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SILT FENCE

NOT TO SCALE



Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

2. Geotextile Class C shall be installed under all gabion baskets.

3. The stone used to fill the gabion baskets shall be 4" - 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — B - 7 - 2 — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

GABION INFLOW PROTECTION

NOT TO SCALE

DEVELOPERS CERTIFICATION:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

[signature] AL EDWARDS — 6-8-99 Date

ENGINEER'S CERTIFICATION:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

[signature] John W. Ranocchia — 6-7-99 Date

Reviewed for Howard Soil Conservation District and meets Technical Requirements.

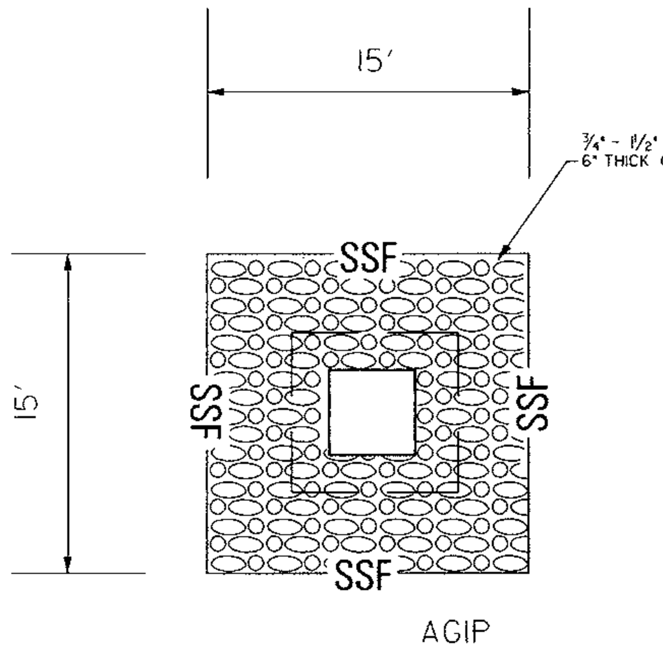
[signature] Natural Resources Conservation Service — 6/30/99 Date

This Development Plan is Approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

[signature] Howard Soil Conservation District — 6/30/99 Date

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE July 2, 1998



AGIP

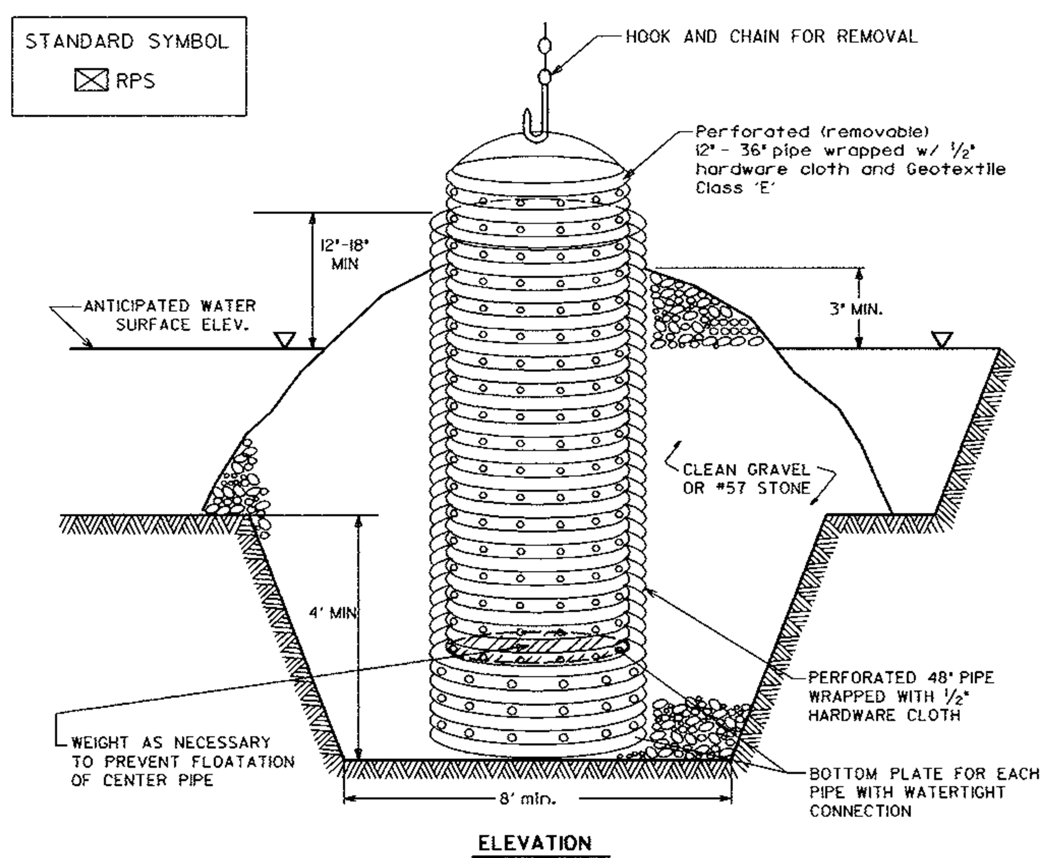
THIS DETAIL IS IN ADDITON TO THE TYPICAL INLET PROTECTION

After fine grading area draining to low point inlet immediately stabilize with erosion control matting and seed or stone subbase.

LOW POINT INLET PROTECTION

NOT TO SCALE

STANDARD SYMBOL
RPS



Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

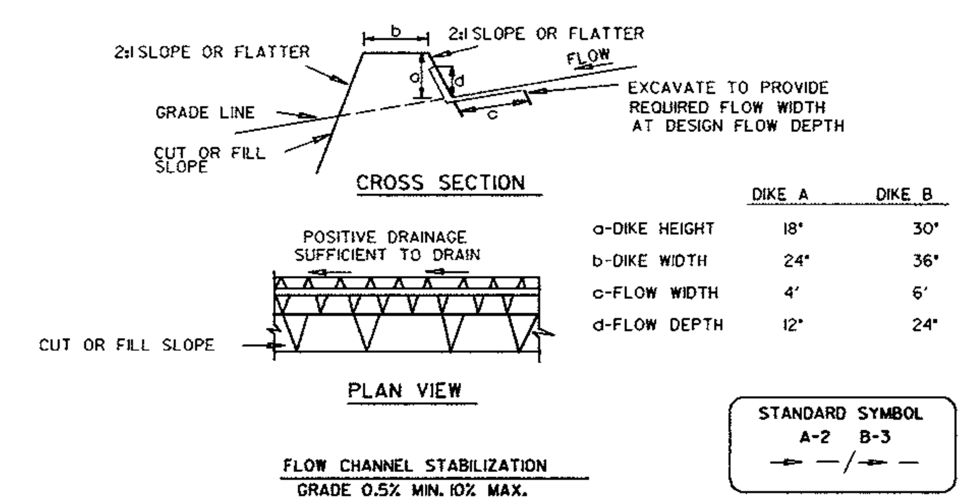
3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — D - 12 - 6 — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

REMOVABLE PUMPING STATION

NOT TO SCALE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

STANDARD SYMBOL
A-2 B-3

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

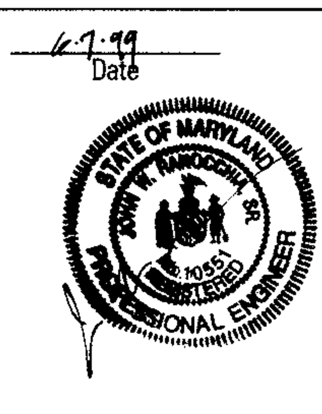
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE — A - 1 - 6 — MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

EARTH DIKE

NOT TO SCALE

6-7-99
Date



Professional Engr. No. 10551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

[signature] CHIEF, DIVISION OF LAND DEVELOPMENT — 7/6/99 DATE

[signature] DIRECTOR — 7/19/99 DATE

Date	No.	Revision Description

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TOWN CENTER
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LOTS 42, 44

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(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

**REVISED PHASE III
EROSION & SEDIMENT CONTROL
DETAIL SHEET**

Des By CRW/JLS	Scale AS SHOWN	Proj. No. 95019B	
Drn By FJZ	Date 6-4-99	21 OF 27	
Chk By JWR	Approved		

SDP-99-116

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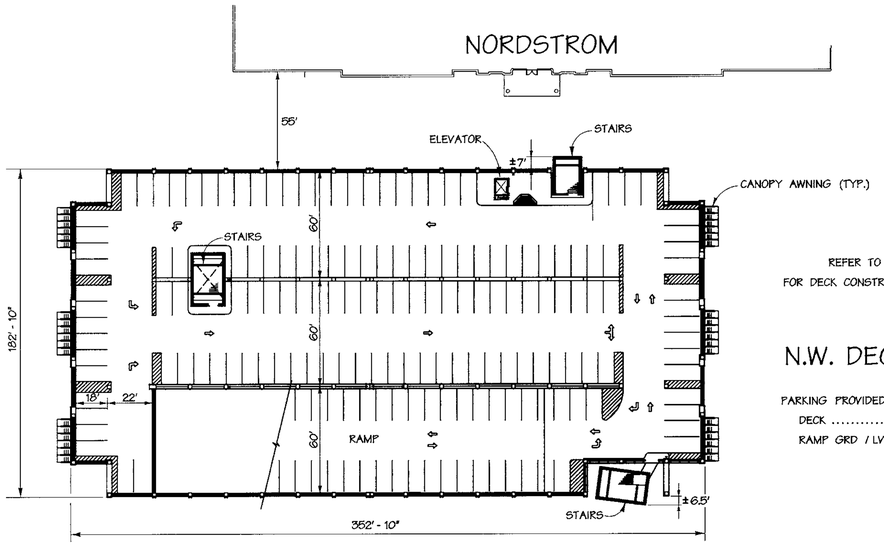
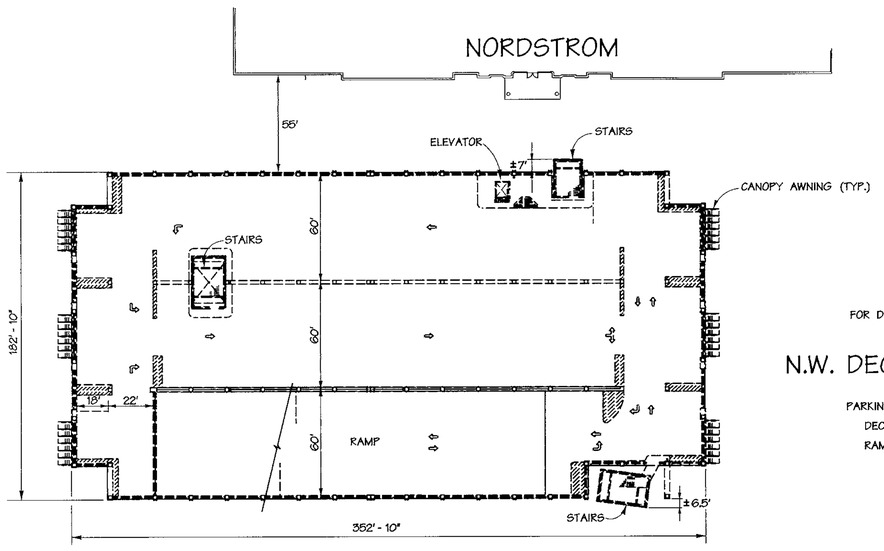


REFER TO ARCH. PLANS
FOR DECK CONSTRUCTION AND DETAILS

N.W. DECK LEVEL 1

PARKING PROVIDED..... 196
DECK 136
RAMP GRD / LV 1..... 60

SCALE: 1" = 40' - 0"



REFER TO ARCH. PLANS
FOR DECK CONSTRUCTION AND DETAILS

N.W. DECK FUTURE LEVEL 2

PARKING PROPOSED 174
DECK 120
RAMP LV 1/LV 2 54

SCALE: 1" = 40' - 0"

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99
DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND
JOHN W. RANOCCHIA, SR.
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

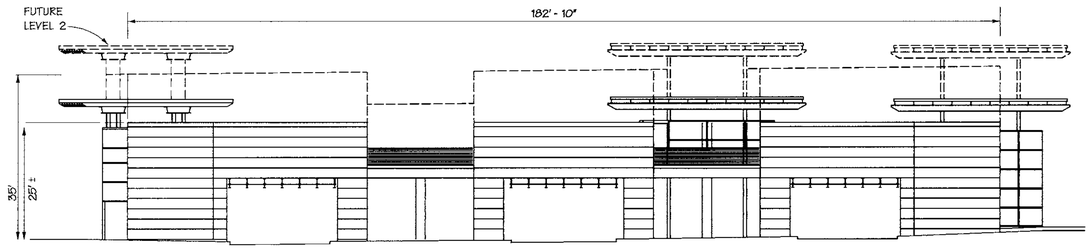
REVISED PHASE III

PARKING DECK LAYOUT

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Drn By	FWK	Date	6-4-99	22 OF 27	
Chk By	JWR	Approved			

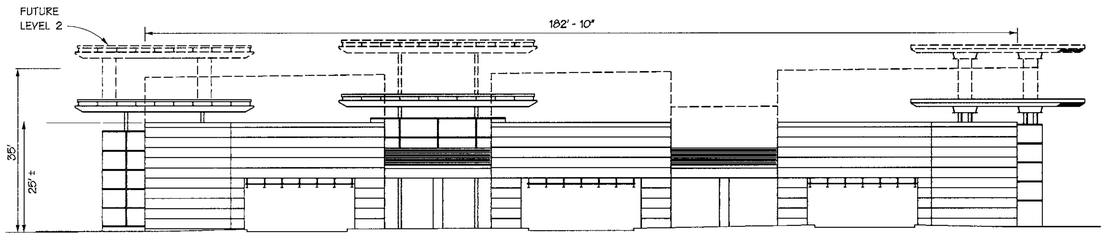
SDP 99-160

Fri Jun 4 08:21:08 1999\95019columbiamall\95019b3.pd



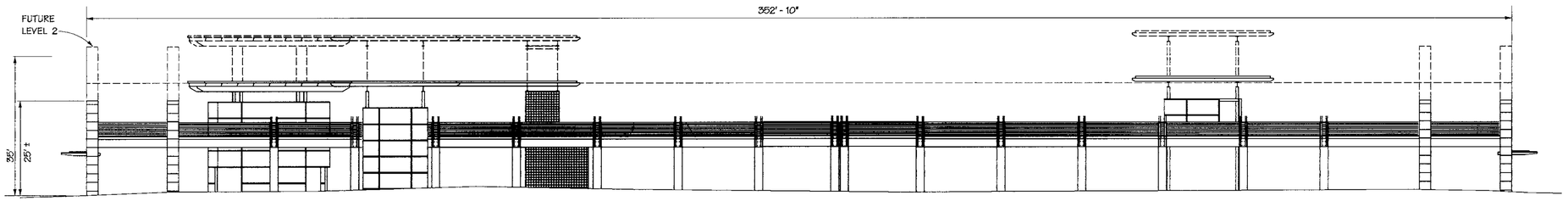
PARKING DECK NORTHWEST ELEVATION

N.T.S



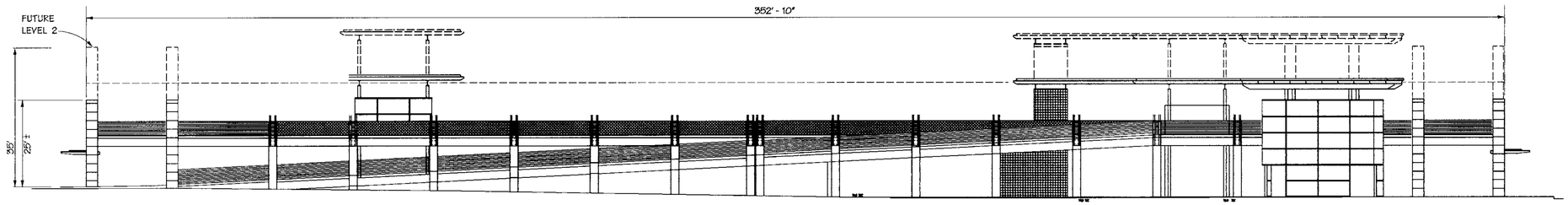
PARKING DECK SOUTHEAST ELEVATION

N.T.S



PARKING DECK NORTHEAST ELEVATION

N.T.S



PARKING DECK SOUTHWEST ELEVATION

N.T.S

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1999

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3353
Fax 296-4706

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND — JOHN W. RAMSBURG, SR. — No. 10551 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 10551

TITLE

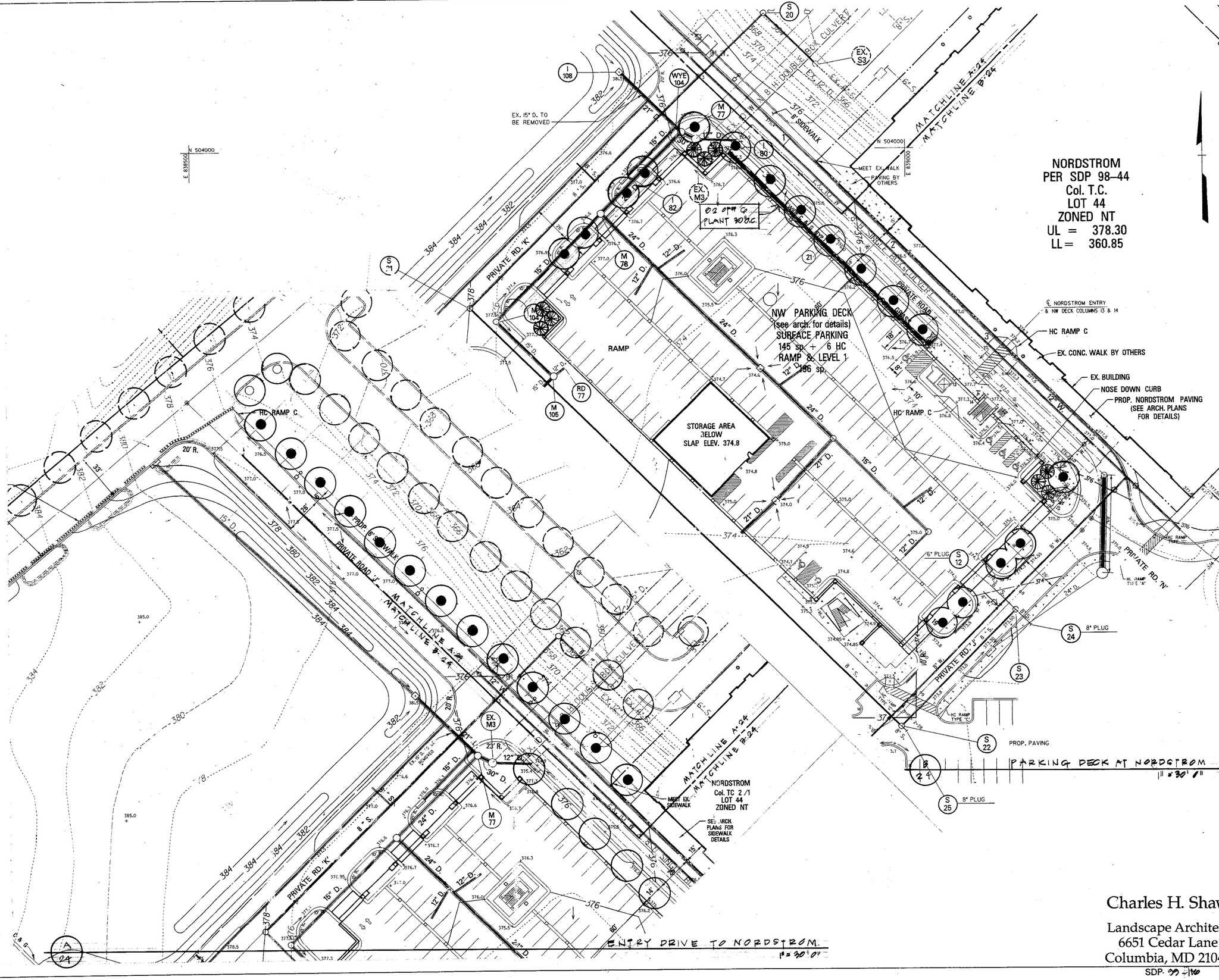
REVISED PHASE III

PARKING DECK ELEVATIONS

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Dm By	FWK	Date	6-4-99		
Chk By	JWR	Approved			23 OF 27

SDP-99-116

Thu Jun 3 13:47:04 1999 N:\95019\columbia\95019b3.pd



LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- LIGHT POLES (BY OTHERS)
- EX. CURB TO BE REMOVED

3-23-99
Date

STATE OF MARYLAND
CHARLES H. SHAW, JR.
NO. 219
REGISTERED LANDSCAPE ARCHITECT

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	7/12/99 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	7/16/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE PLANTING PLAN

REVISED PHASE III
SITE DEVELOPMENT PLAN
NW PARKING DECK

Charles H. Shaw
Landscape Architect
6651 Cedar Lane
Columbia, MD 21044

Des By Shaw	Scale 1" = 30'	Proj. No. 95019B
Drn By Shaw	Date 3-23-98	24 OF 27
Chk By	Approved	

SDP-99-116

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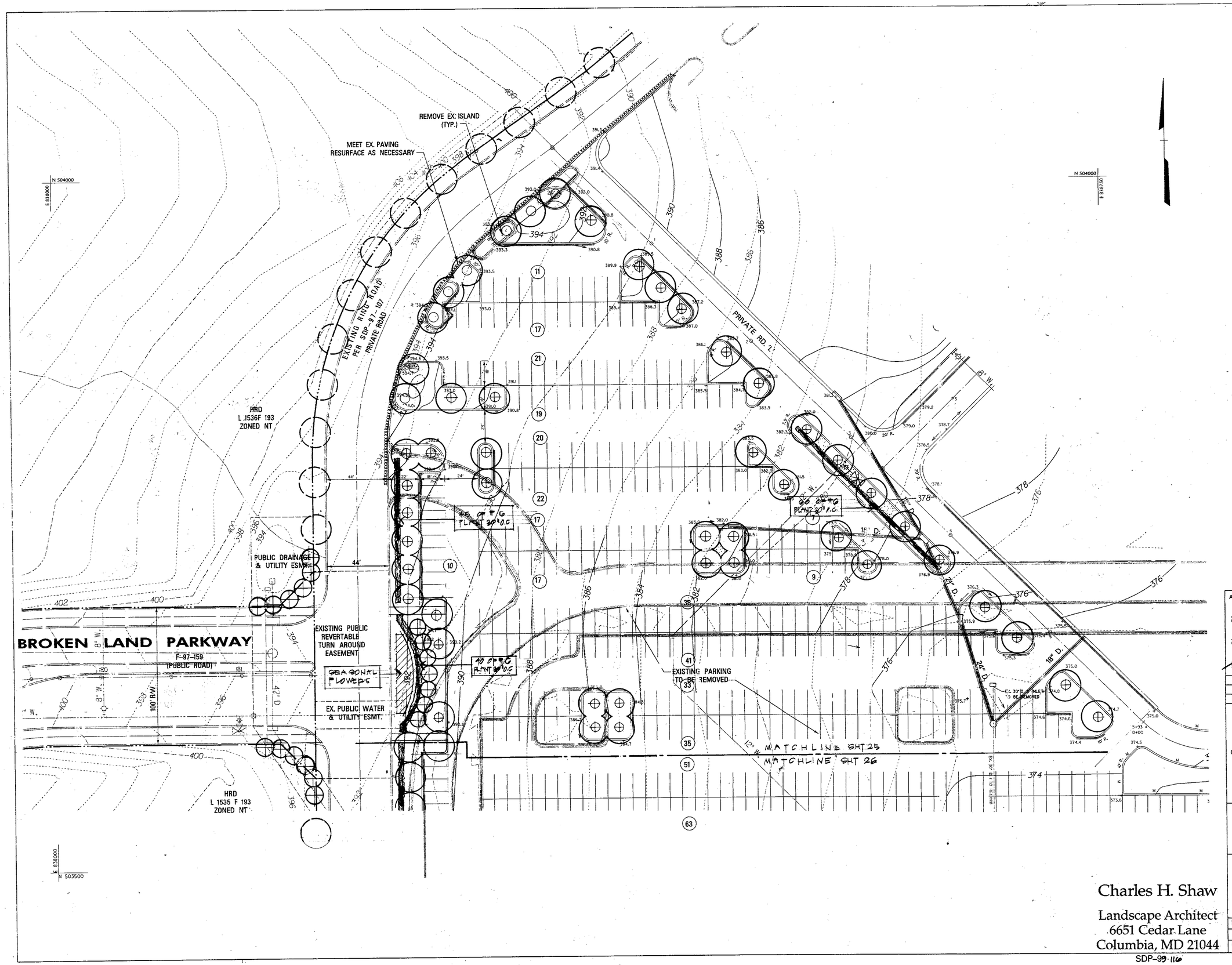

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
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STATE OF MARYLAND
CHARLES H. SHAW, JR.
NO. 219
REGISTERED LANDSCAPE ARCHITECT

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

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CHIEF, DIVISION OF LAND DEVELOPMENT	7/14/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
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TOWN CENTER
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HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

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Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410)296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE PLANTING PLAN

REVISED PHASE III
SITE DEVELOPMENT PLAN
PARKING LOT W-2

Charles H. Shaw
Landscape Architect
6651 Cedar Lane
Columbia, MD 21044

Des By Shaw	Scale 1" = 30'	Proj. No. 95019B	
Drn By Shaw	Date 3-23-99	25 OF 27	
Chk By	Approved		

SDP-99-116

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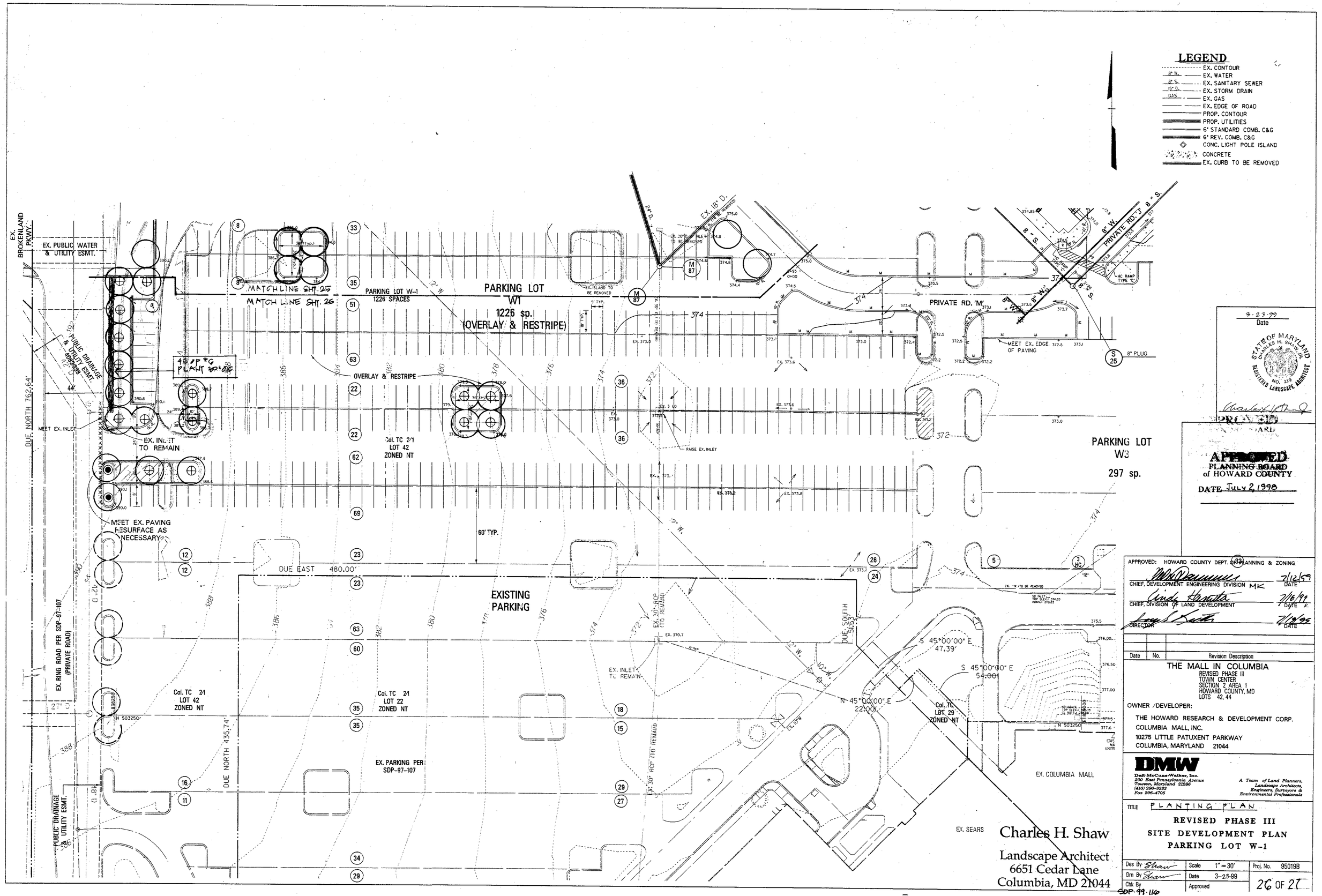

3-23-99
Date

STATE OF MARYLAND
CHARLES H. SHAW, JR.
NO. 219
REGISTERED LANDSCAPE ARCHITECT

PROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

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CHIEF, DIVISION OF LAND DEVELOPMENT	7/16/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

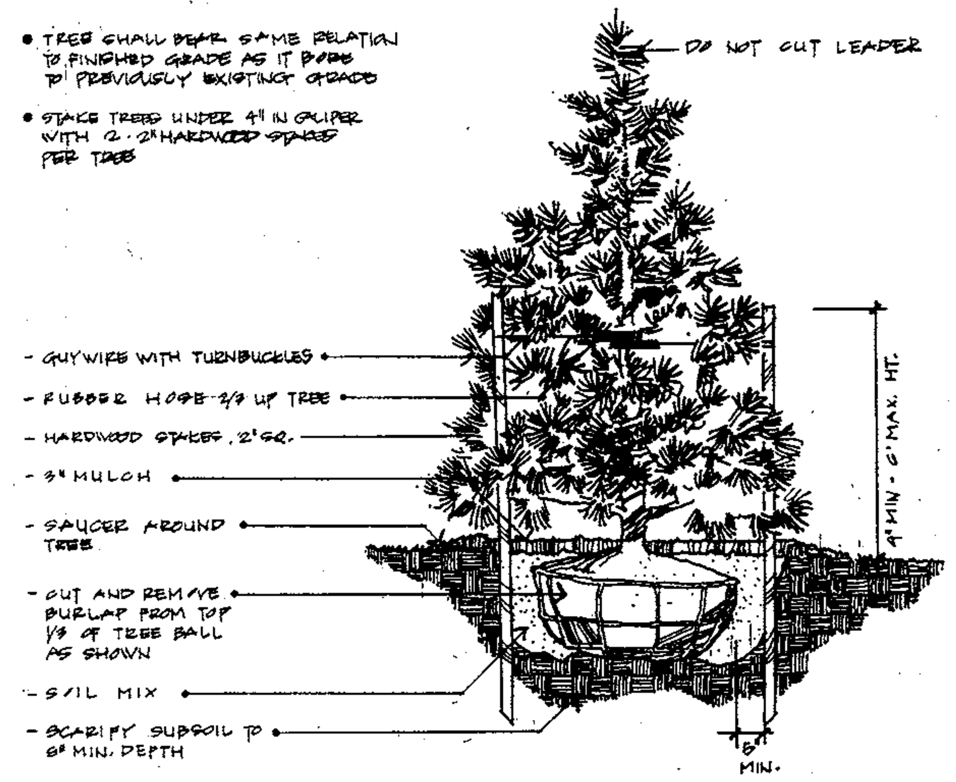
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE PLANTING PLAN

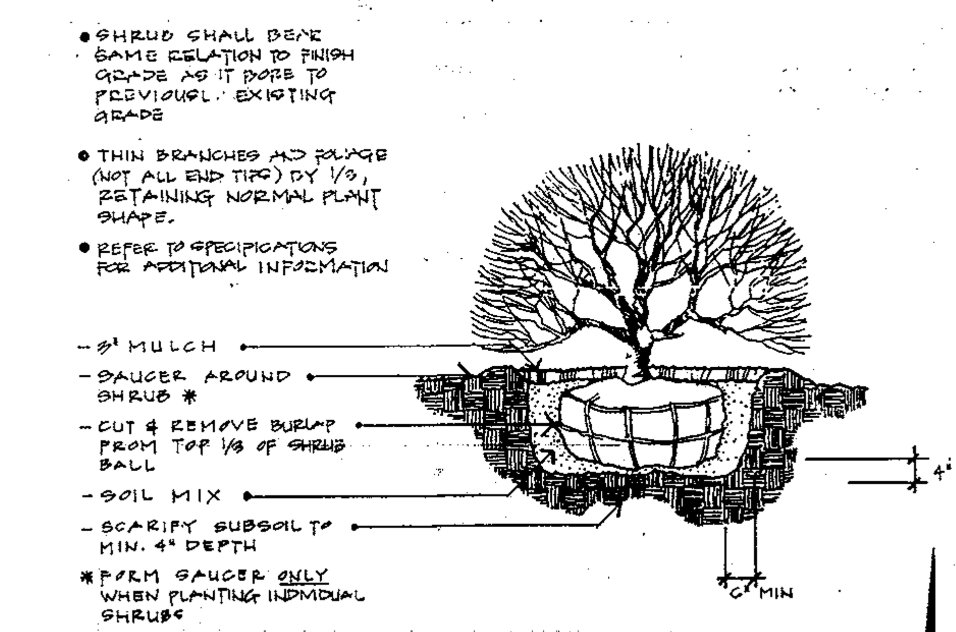
REVISED PHASE III
SITE DEVELOPMENT PLAN
PARKING LOT W-1

Des By Shaw	Scale 1" = 30'	Proj. No. 95019B
Drn By Shaw	Date 3-23-99	26 OF 27
Chk By	Approved	

SDP-99-116



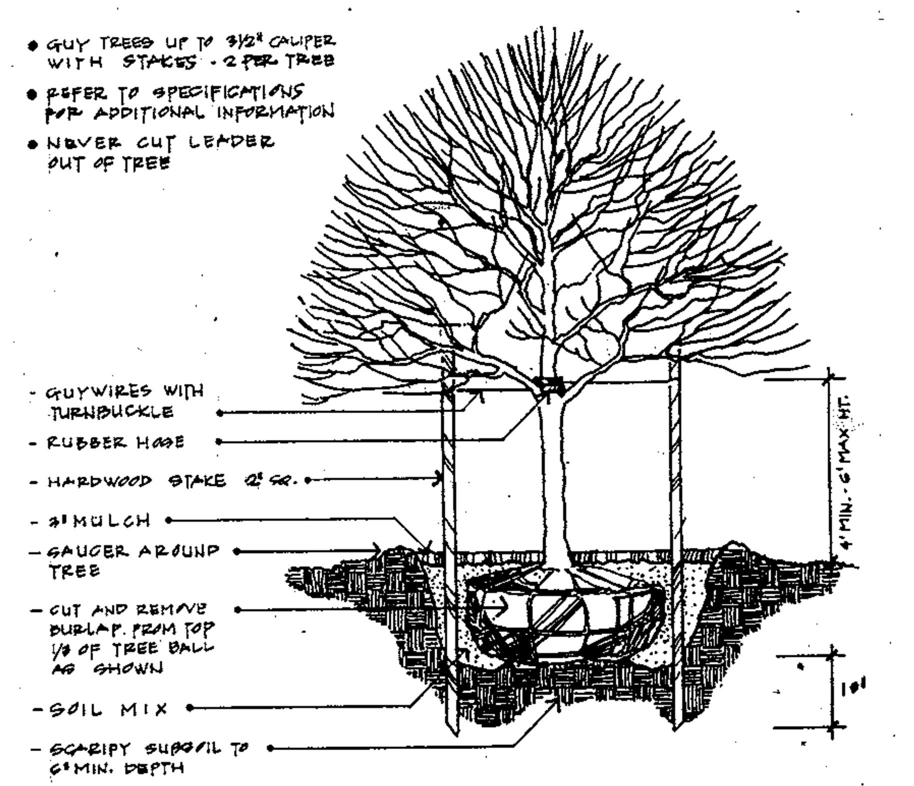
TYPICAL EVERGREEN PLANTING DETAIL



TYPICAL SHRUB PLANTING DETAIL

General Planting Notes

1. All plant material to meet A.A.N. Standards
2. Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAMW
3. No substitutions to be made without consent of Landscape Architect or Owner
4. All beds to be topped with three inches of hardwood mulch.
5. Landscape Contractor to verify location of utilities with Owner before planting.
6. Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owners discretion, specimen and other plant material will be selected.
7. Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At time of final inspection with acceptance, all electric, water, drainage, and fountain utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
8. Contractor shall notify Miss Utility 72 hours prior to construction.



TYPICAL DECIDUOUS TREE PLANTING DETAIL

PLANT LIST

NO.	SYMBOL	QUAN	PLANT NAMES	SIZE	ROOT	REMARK
1.	◉	30	ACER RUBRUM COLUMN. 'ARMSTRONG' ARMSTRONG MAPLE	3-3½" CAL	B&B	FULL HEADS
2.	⊛	9	ILEX X NELLIE R. STEVENS NELLIE R. STEVENS HOLLY	8-10' HGT	B&B	FULL SHAPE
3.	⊕	19	MALUS 'SNOWDRIFT' 'SNOWDRIFT' CRABAPPLE	2-2½" CAL	B&B	FULL HEADS
4.	◎	17	PLATANUS ACERIFOLIA LONDON PLANETREE	2½-3" CAL	B&B	FULL HEADS
5	⊕	57	QUERCUS PALUSTRIS PIN OAK	2½-3" CAL	B&B	FULL HEADS
6	▬	272	TAXUS MEDIA 'DENSIFORMIS' DENSIFORMA YEW	30" SPR HEDGE	B&B	FULL SHAPE
7	◉	2	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA	2½-3" CAL.	B&B.	FULL HEADS
8	(·)		INDICATES TREES PLANTED OR SHOWN ON SDP-PHASE II NOT INCLUDED IN THIS COUNT			
9			ALL AREAS DISTURBED TO BE FINE GRADED & SEEDED, REFER TO SEDIMENT EROSION CONTROL PLAN			
10						

11. SITE LIGHTING TO BE IN ACCORDANCE WITH MECH./ELECTRIC DRAWINGS IN ENGINEERS/SITE PLANS SET.

12. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE & THE LANDSCAPE MANUAL FOLLOWING THE ALTERNATIVE COMPLIANCE METHOD. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPE TREES IN THE AMOUNT OF * $15000.00 MUST BE POSTED AS PART OF THE GRADING PERMIT
- 115 SHADE TREES
- 19 FLOWERING TREES
- 272 SHRUBS

13. LANDSCAPE PLANS ARE FOR LANDSCAPE PLANTING ONLY

* 14. SCHEDULE B
A) SURFACE PARKING PROPOSED = 996 SP.
B) NUMBER OF PLANTS REQ'D = 50 TREES (1/20)
C) BONDING AMOUNT 50 x 300 = $15000.00

9. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS & BERMS, FENCES & WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, & WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION & WHEN NECESSARY, REPAIRED OR REPLACED.

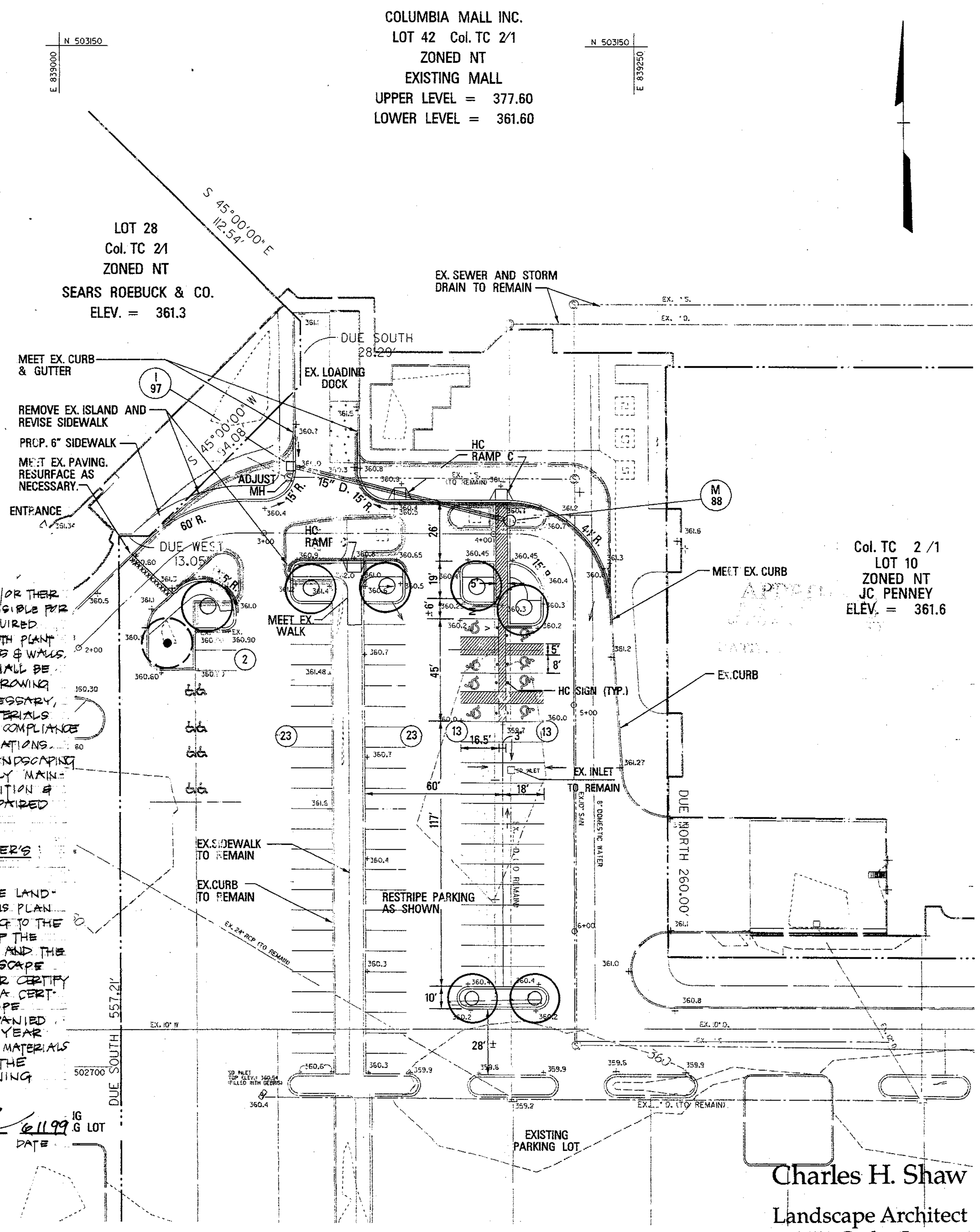
10. DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING & ZONING

Albert F. Edwards 6/11/99
NAME DATE

LEGEND

- - - - -	EX. CONTOUR
8" W.	EX. WATER
8" S.	EX. SANITARY SEWER
15" D.	EX. STORM DRAIN
GAS	EX. GAS
———	EX. EDGE OF ROAD
———	PROP. CONTOUR
═══	PROP. UTILITIES
═══	6' STANDARD COMB. C&G
═══	6' REV. COMB. C&G
◇	CONC. LIGHT POLE ISLAND
░░	CONCRETE
▒▒▒	EX. CURB TO BE REMOVED



SOUTH MALL ENTRANCE

3·23·99
Date

STATE OF MARYLAND CHARLES H. SHAW, JR. REGISTERED LANDSCAPE ARCHITECT NO. 219

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	7/12/99 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	7/16/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft·McCune·Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

Charles H. Shaw
Landscape Architect
6651 Cedar Lane
Columbia, MD 21044

TITLE
SITE DEVELOPMENT PLAN
SOUTH MALL ENTRANCE

Des By Shaw	Scale 1" = 30'	Proj. No. 95019B
Drn By Shaw	Date 3-23-99	27 OF 27
Chk By	Approved	

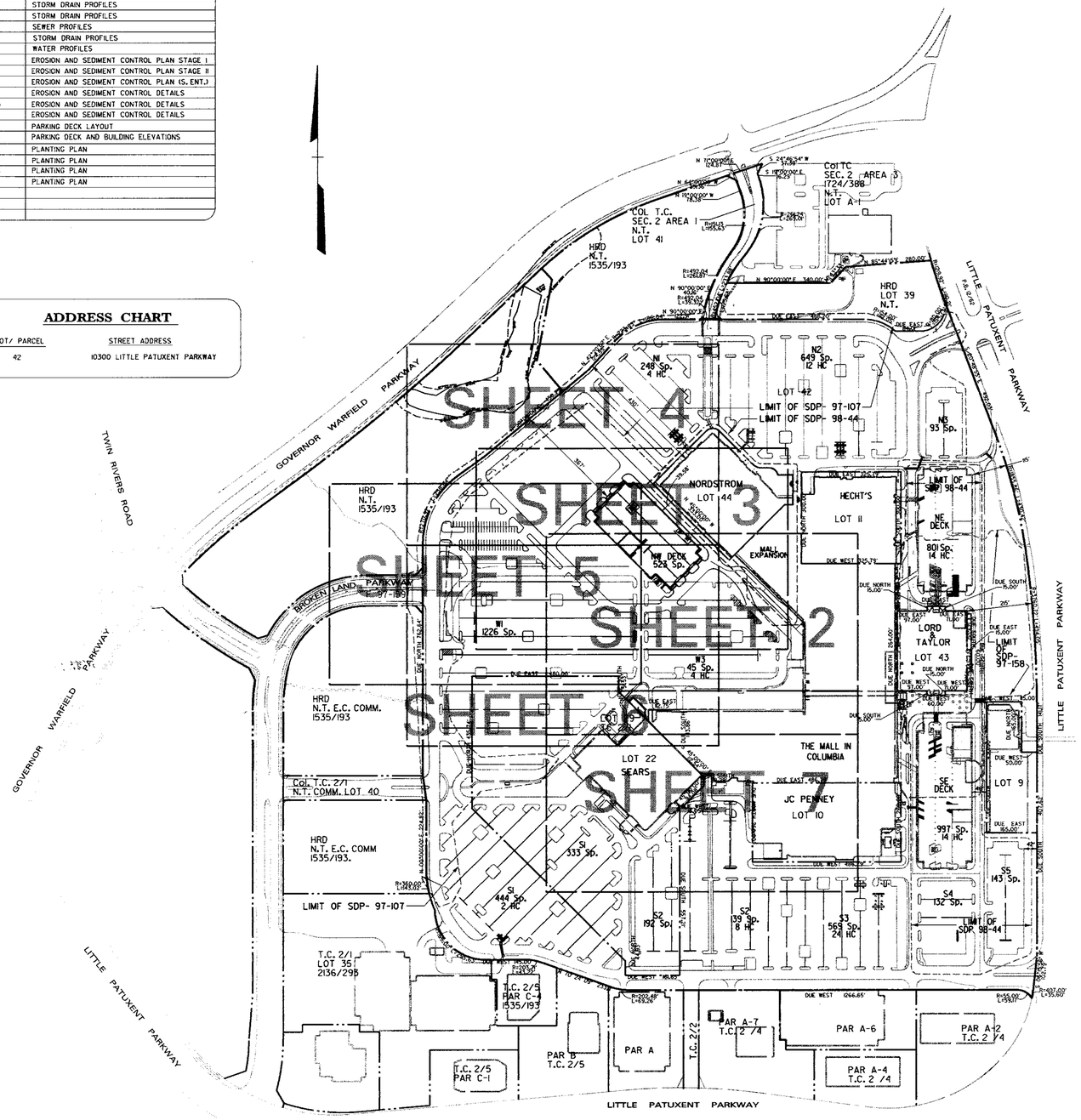
SDP-99-116

SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN
5	SITE DEVELOPMENT PLAN
6	SITE DEVELOPMENT PLAN
7	SITE DEVELOPMENT PLAN
8	SITE DETAILS
9	PAVING LEGEND & SITE DETAILS
10	STORM DRAINAGE AREA AND SOILS MAP
11	STORM DRAIN PROFILES
12	STORM DRAIN PROFILES
13	SEWER PROFILES
14	STORM DRAIN PROFILES
15	WATER PROFILES
16	EROSION AND SEDIMENT CONTROL PLAN STAGE I
17	EROSION AND SEDIMENT CONTROL PLAN STAGE II
18	EROSION AND SEDIMENT CONTROL PLAN (S. ENT.)
19	EROSION AND SEDIMENT CONTROL DETAILS
20	EROSION AND SEDIMENT CONTROL DETAILS
21	EROSION AND SEDIMENT CONTROL DETAILS
22	PARKING DECK LAYOUT
23	PARKING DECK AND BUILDING ELEVATIONS
24	PLANTING PLAN
25	PLANTING PLAN
26	PLANTING PLAN
27	PLANTING PLAN

ADDRESS CHART

LOT/ PARCEL	STREET ADDRESS
42	10300 LITTLE PATUXENT PARKWAY



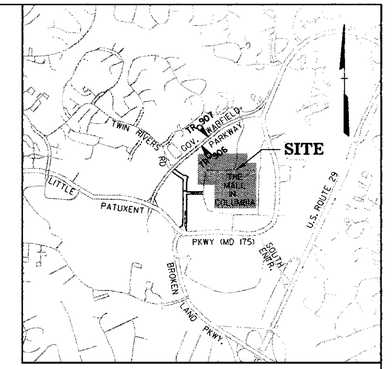
VICINITY MAP
1" = 200'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Maryland Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
5. All plan dimensions are to the face of curb unless otherwise noted.
6. Topography was field run surveyed by Daft-McCune-Walker Inc. in July 1995, and Fisher, Collins & Carter in 1994, Expanded Per SDP 97-107 & SDP 97-158
7. Coordinates and bearings shown hereon are referred to the Maryland Coordinate system (NAD 27) as projected from the following "Whitman, Requardt & Assoc." traverse stations:

TR 101	N 503690.8580	E 837802.2760
TR 102	N 505690.7010	E 838314.2860

8. Stormwater management is provided on-site by an underground detention facility for quantity, per SDP 97-107 Quality control provided by stormceptors, per SDP 97-107.
9. Stormwater management facilities are privately maintained.
10. No wetlands exist within the limits of disturbance.
11. The existing utilities were located from available records and field survey prepared by Daft-McCune-Walker, Inc. The contractor must dig test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
12. The Soils analysis was prepared by R. Balter Group.
13. Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.01-7.05.
14. Any damage to County owned right-of-way to be corrected at the contractor 's expense.
15. All sidewalks shall be cross sloped at ¼ inch per foot.
16. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
17. Department of Planning and Zoning reference file numbers: FDP ph.47-A-VI, FDP Ph. 01A, FDP Phase 224A, SDP 80-01, F-97-19, F-97-153, F-97-155, F-97-159, S-96-09, SDP-97-107, SDP-97-158, SDP-98-44, WP 98-81, SDP 98-124
18. All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
19. All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
20. The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 47-A-VI.
21. All on-site driveways and parking areas to be privately maintained.
22. All curb radii are five foot unless otherwise labeled.
23. All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
24. The contractor shall be responsible for any damage to existing property which may occur as a result of his negligence in the execution of the work.
25. All paving areas indicated are private.
26. All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
27. Existing lights per SDP 97-107 & SDP 97-158 to be relocated as necessary. See sheets for proposed lights. Outdoor lighting shall conform to Section 134 of the Zoning Regulations.
28. There is no floodplain on this site.
29. Traffic study was prepared by Wells and Assoc. dated 10-28-97.
30. Public Water and Sewer is utilized for this site.
31. This plan is exempt from Forest Conservation in accordance with Section 16-1202 (b) (1) (iv).



LOCATION MAP
SCALE: 1" = 2000'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY "FISHER, COLLINS AND CARTER, INC." (NGVD 29 VERTICAL DATUM)

TR 906	N 504280.1630	E 838550.3680	ELEV. 381.500
TR 907	N 504400.6701	E 838647.7701	ELEV. 394.150

SITE ANALYSIS

1. Zoning: New Town - Commercial (Per FDP Ph. 47-A-VI)
2. Phase III Revised Area/Limit of Disturbance = 12.2 Ac. (531,432 SF)
3. Proposed Use: Parking Deck, PARKING LOT AND BUILDING EXPANSION.
4. Area Tabulation
   - A. 1. EXISTING MALL & DEPT. STORE 1,261,800 SF
     2. PROPOSED BUILDING EXPANSIONS 698 SF
     3. PROPOSED MALL & DEPT. STORES 1,262,398 SF
     4. OFFICE Space 5,480 SF
   - B. Phase III revised Limit of Disturbance — 12.2 Ac. (531,432 SF)
   - C. Impervious area — 11.7 Ac. (569,652 SF)
   - D. Green Area — 0.5 Ac. (22,265 SF)
5. Parking Tabulation
   - Parking Spaces Required = 6,320 SP (73 HC)
   - A. 1. Total Mall G.L.A. (1,261,800 SF) = 6,309 SP (5 SP/1,000 SF)
     2. Total Office Space (5,480 SF) = 11 SP (2 SP/1,000 SF)
   - B. Parking Spaces Provided

Existing Parking Per SDP-98-44	Parking Deleted or Restriped Per Phase III revised Construction	Proposed Surface or Restriped Parking Phase III	Prop. NW Deck	Fut. Level 2 on NW Deck	Total
6,704 (86 HC)	1,548 (9 HC)	1061 (21 HC)	341 (6 HC)	174	6558 (94 HC) 6732 (Fut. level 2 on NW Deck)

6. Lot Tabulation

Lot	Owner	Area	Plat Reference
42	The Howard Research and Development Corp. and Columbia Mall, Inc.	70.285 AC.	13191
44	The Howard Research and Development Corp. and Columbia Mall, Inc.	2.373 AC.	13192

Total Project Area = 72,658 A.C.

APPROVED
DEPARTMENT OF PLANNING AND ZONING
BOARD OF HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/2/98 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/98 DATE

DIRECTOR — 7/15/98 DATE

Date	No.	Revision Description
6-18-98	1	REV. SITE ANALYSIS.

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2, AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

6-7-99
Date

STATE OF MARYLAND — JOHN W. RANDOLPH — No. 10951 — PROFESSIONAL ENGINEER

Professional Engr. No. 10951

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME: COLUMBIA TOWN CTR.		SECTION/AREA: 21	LOT/PARCEL #: 42 /44
TAX MAP: 30	GRID: 4A-442	PARCEL: 19,208 1,2	ZONE: N.T.
TAX/ZONE MAP: 30,36	ELECT. DISTRICT: 5TH	CENSUS TRACT: 6054	
WATER CODE:	SEWER CODE:		

TITLE
REVISED PHASE III
SITE DEVELOPMENT PLAN
COVER SHEET

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Dm By	FJZ	Date	6-4-99	1 OF	27
Chk By	JWR	Approved			

SDP-99-186

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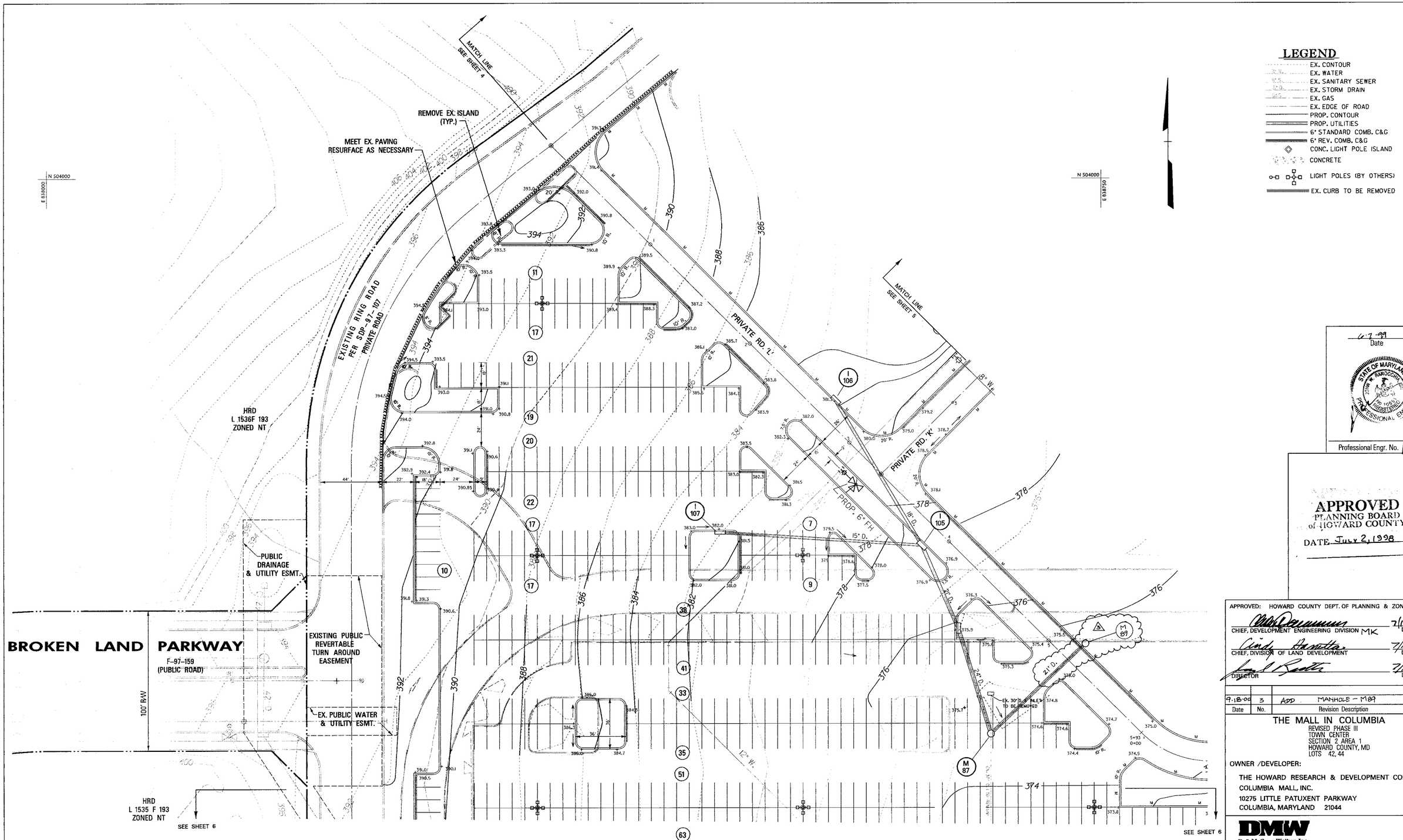


LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- LIGHT POLES (BY OTHERS)
- EX. CURB TO BE REMOVED

7-7-99
Date

STATE OF MARYLAND — JOHN F. RANCOURT — No. 12525 — REGISTERED PROFESSIONAL ENGINEER

Professional Engr. No. 12525

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/2/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/99 DATE

DIRECTOR — 7/19/99 DATE

Date	No.	Revision Description
9-18-00	3	ADD MANHOLE - M89

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

REVISED PHASE III SITE DEVELOPMENT PLAN PARKING LOT W-1

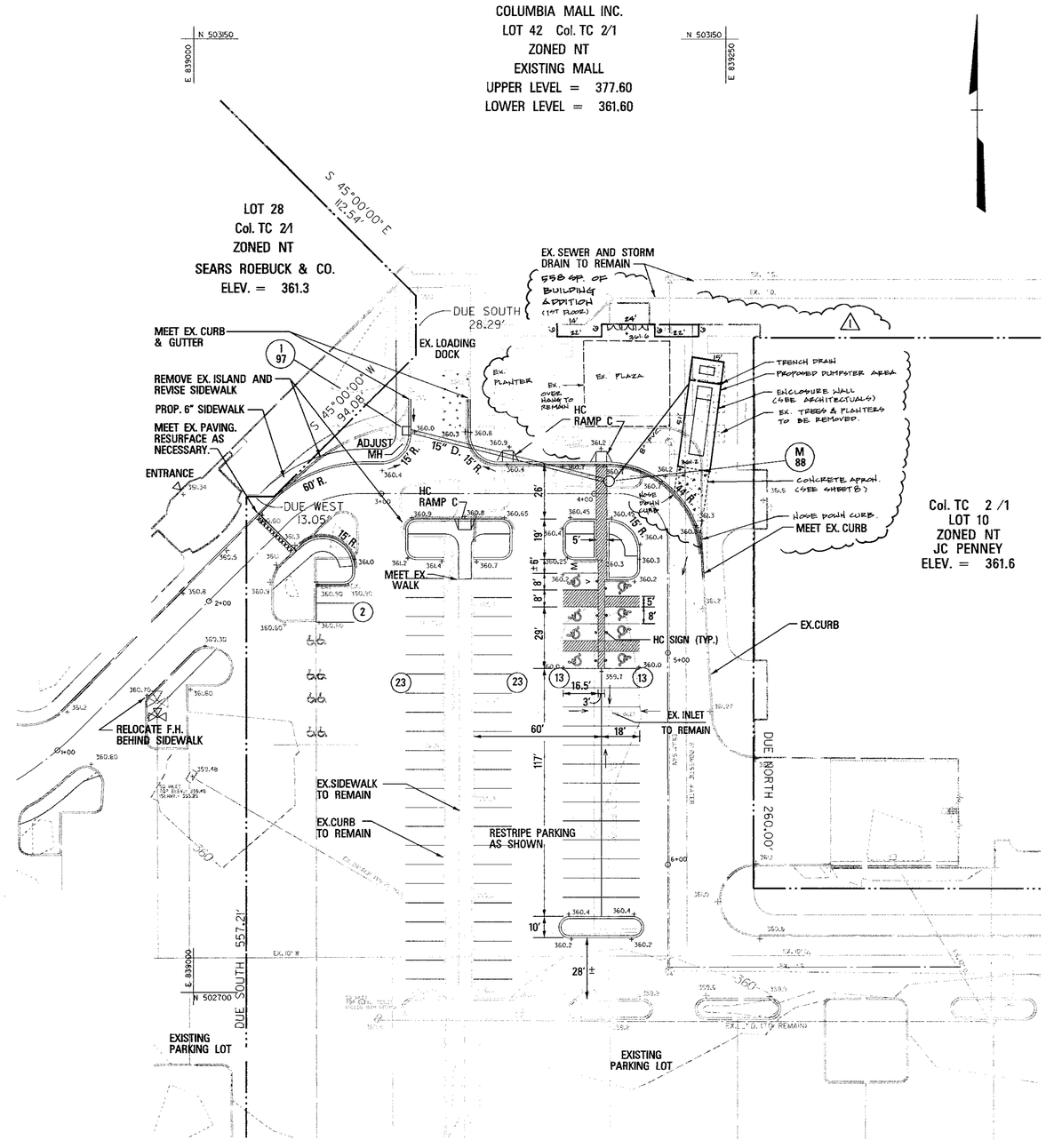
Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Dm By	KDE, FJZ	Date	6-4-99		5 OF 27
Chk By	JWR	Approved			

SDP-99-116

Thu Jun 3 13:17:26 1999 \\950\9501\columbia\ail\950191e3.dgn

LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- EX. CURB TO BE REMOVED



6-7-99
Date

STATE OF MARYLAND
JOHN W. RANOCCHIA, JR.
No. 10551
REGISTERED
PROFESSIONAL ENGINEER

Professional Engr. No. 10551

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	7/12/99 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	7/16/99 DATE
DIRECTOR	7/19/99 DATE

Date	No.	Revision Description
5-18-00	1	ADD 558 SF. OF RETAIL & DUMPSTER.

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

TITLE

SITE DEVELOPMENT PLAN
SOUTH MALL ENTRANCE

Des By	MJP	Scale	1" = 30'	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99	7 OF 27	
Chk By	JWR	Approved			

SDP-99-116

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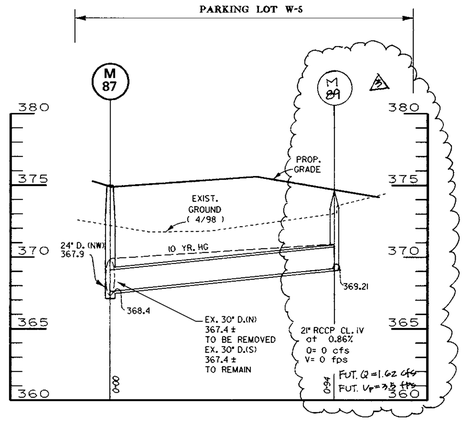

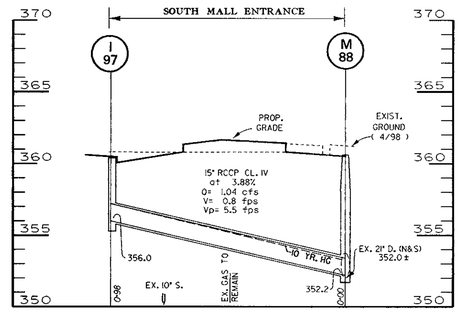

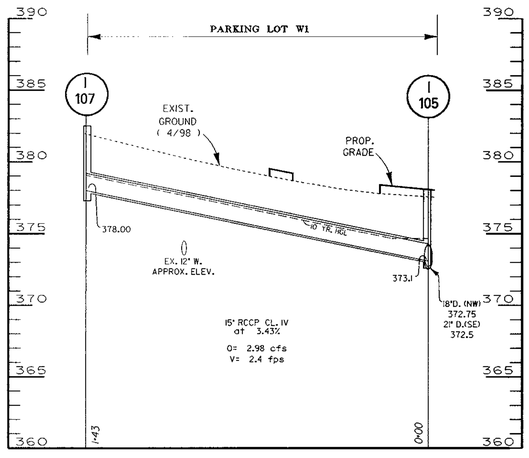

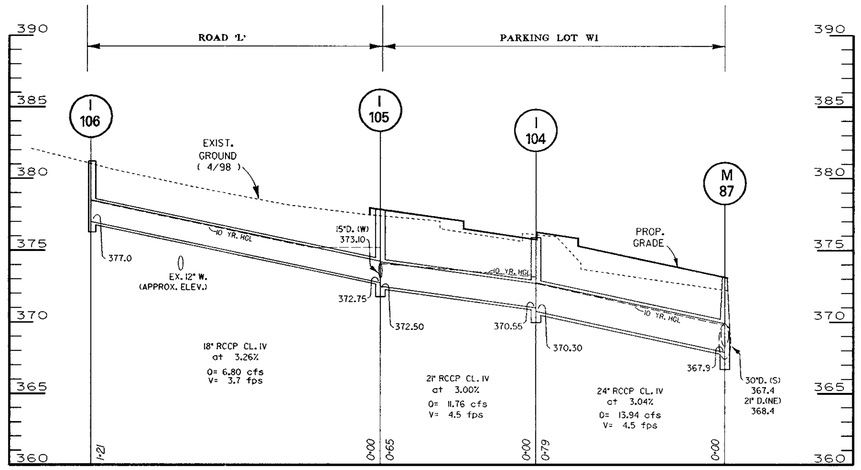

EXISTING GRADING BASED ON SDP 97-107, 98-44 & 98-158

STRUCTURE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	DETAIL
WYE 74	WYE CONNECTION	12 x 24	364.39	HO. CO. SD 1.11
WYE 75	WYE CONNECTION	12 x 24	364.45	HO. CO. SD 1.11
WYE 77	WYE CONNECTION	12 x 24	366.14	HO. CO. SD 1.11
WYE 78	WYE CONNECTION	12 x 15	369.46	HO. CO. SD 1.11
WYE 100	WYE CONNECTION	10 x 36	353.02	HO. CO. SD 1.11
WYE 101	WYE CONNECTION	12 x 21	353.13	HO. CO. SD 1.11
WYE 102	WYE CONNECTION	10 x 36	353.87	HO. CO. SD 1.11
WYE 103	FIELD CONNECTION	4 X 36	354.45	HO. CO. SD 2.01
WYE 104	WYE CONNECTION	15 x 21	362.86	HO. CO. SD 1.11

ROOF DRAIN LOCATIONS

No.	LOCATION
RD 104	N 503832.8 E 838745.0

STUB LOCATIONS

No.	LOCATION
100	N 503600.0 E 839270.1

MANHOLE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	DETAIL	LOCATION
EX. M-3	——	——	——	376.5	**	——
M-77	60" DIA.		361.61	376.0	G 5.13	N 504012.1 E 838844.6
M-78	60" DIA.		363.53	376.7	G 5.13	N 503954.7 E 838787.2
M-79	48" DIA.		366.67	375.3	G 5.12	N 503794.5 E 838947.3
M-83	48" DIA.		370.25	375.2	G 5.12	N 503728.7 E 839013.1
M-87	48" DIA.		367.4 ±	375.0	G 5.12	ROAD 'E' STA. 42 38' LT.
M-88	48" DIA.		352.0 ±	360.6	G 5.12	ROAD 'J' STA. 4+07± 6'± LT.
M-100	96" DIA.		352.32	375.0	SHA 384.09	SEE PLAN
M-101	60" DIA.		353.33	366.56	G 5.13	ROAD 'N' STA. 1+92 0.8' LT
M-102	60" DIA.		354.70	361.5	G 5.13	N 503507.8 E 839418.9
M-103	48" DIA.		356.16	MEET EX. GROUND	G 5.12	N 503257.4 E 839418.9
M-104	48" DIA.		370.45	377.5	G 5.12	ROAD 'K' STA. 2+24 20.2' LT
M-105	48" DIA.		371.80	377.5	G 5.12	N 503839.8 E 838752.1
M-89	48" DIA.		369.21	375.4	G 5.12	N 503668.4 E 838739.0

ALL INVERTS TO BE FULLY DEVELOPED
* PROVIDE GRANITE BOTTOM
** PROVIDE INTERMEDIATE LANDING DETAIL G 5.15

NOTE: AT ALL ROOF DRAIN CONNECTIONS, CONNECT WITH "FERNCO" COUPLING OR APPROVED EQUAL.

INLET SCHEDULE

NO.	TYPE	Q 2YR	INV. OUT	**TOP ELEV.	DETAIL	WIDTH	LOCATION
I-80	A-10	3.30	368.71	374.5	SD 4.41	2'-6"	ROAD 'B' STA. 3+11
I-86	'S'	——	365.76	374.60 GRATE	SD 4.22	——	N 503844.4 E 838897.4
I-87	'S'	——	367.39	374.0 GRATE	SD 4.22	——	N 503751.0 E 838906.5
I-97	A-5	0.71	356.00	376.5	SD 4.40	2'-6"	——
I-109	A-10	2.83	375.1	379.6	SD 4.41	2'-6"	SEE PLAN
I-100	A-10	0.18	357.33	373.00	SD 4.41	2'-6"	——
I-101	DOUBLE 'S' INLET	3.78	354.28	* 359.8	SD 4.23	——	ROAD 'N' STA. 3+31 ON ℄
I-102	A-10	3.36	353.00	373.80	SD 4.41	3'-6"	ROAD 'J' STA. 8+44
I-103	A-10	8.63	368.40	372.9	SD 4.41	2'-6"	SEE PLAN
I-104	A-10	1.71	370.30	376.4	SD 4.41	3'-6"	SEE PLAN
I-105	A-10	1.89	372.5	377.8	SD 4.41	3'-6"	ROAD 'L' STA. 3+88
I-106	A-10	4.72	377.0	381.8	SD 4.41	2'-6"	ROAD 'L' STA. 2+72
I-107	A-10	2.06	378.0	383.3	SD 4.41	2'-6"	SEE PLAN
I-108	'S' INLET	N/A	368.46	381.50	SD 4.22	——	N 504055.2 E 838801.5
I-82	A-10	1.12	372.0	376.5	SD 4.41	2'-6"	ROAD 'K' STA. 0+89

ALL INVERTS TO BE FULLY DEVELOPED
*PROVIDE GRANITE BOTTOM

* GRATE ELEVATION
** TC ELEV. UNLESS NOTED
*** PROVIDE RETICULAR GRATE TOP ELEV. = GRATE

AT ALL ROOF DRAIN CONNECTIONS, CONNECT WITH 'FERNCO' COUPLING OR APPROVED EQUAL.

No.	LOCATION
RD 74	N 503929.2 E 838845.7
RD 75	N 503846.1 E 838929.8
RD 76	N 503759.8 E 839015.7
RD 77	N 503846.3 E 838759.8
RD 78	N 503711.8 E 838996.1
RD 100	N 503716.8 E 839235.3
RD 101	N 503660.4 E 839297.6
RD 102	N 503611.2 E 839346.8
RD 103	N 503556.3 E 839409.6

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/12/99

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/99

DIRECTOR — DATE 7/19/99

Date	No.	Revision Description
9.18.00	3	ADD MANHOLE M-89

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:
THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Dart-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date
DONALD W. RANCOURT
STATE OF MARYLAND
No. 10580
PROFESSIONAL ENGINEER
Professional Engr. No. 10580

TITLE
REVISED PHASE III
STORM DRAIN PROFILES

Des By RLH	Scale HORZ. 1" = 30' VERT. 1" = 5'	Proj. No. 95019B	
Drn By KDE	Date 6-4-99	11 OF 27	
Chk By JWR	Approved		

SDP-99-116

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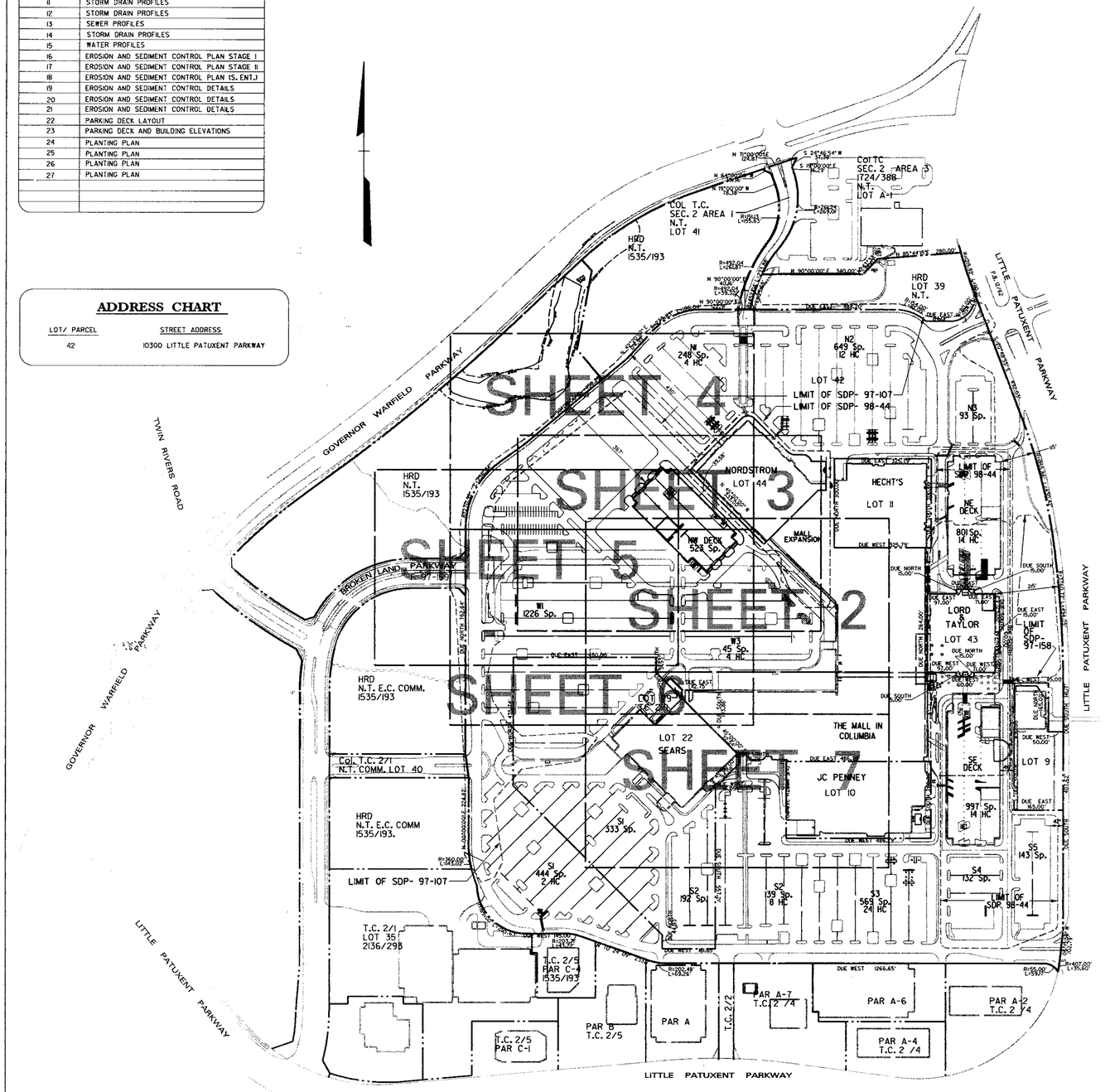
SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SITE DEVELOPMENT PLAN
5	SITE DEVELOPMENT PLAN
6	SITE DEVELOPMENT PLAN
7	SITE DEVELOPMENT PLAN
8	SITE DETAILS
9	PAVING LEGEND & SITE DETAILS
10	STORM, DRAINAGE AREA AND SOILS MAP
11	STORM DRAIN PROFILES
12	STORM DRAIN PROFILES
13	SEWER PROFILES
14	STORM DRAIN PROFILES
15	WATER PROFILES
16	EROSION AND SEDIMENT CONTROL PLAN STAGE I
17	EROSION AND SEDIMENT CONTROL PLAN STAGE II
18	EROSION AND SEDIMENT CONTROL PLAN (S. ENT.)
19	EROSION AND SEDIMENT CONTROL DETAILS
20	EROSION AND SEDIMENT CONTROL DETAILS
21	EROSION AND SEDIMENT CONTROL DETAILS
22	PARKING DECK LAYOUT
23	PARKING DECK AND BUILDING ELEVATIONS
24	PLANTING PLAN
25	PLANTING PLAN
26	PLANTING PLAN
27	PLANTING PLAN

ADDRESS CHART

LOT/ PARCEL	STREET ADDRESS
42	10300 LITTLE PATUXENT PARKWAY



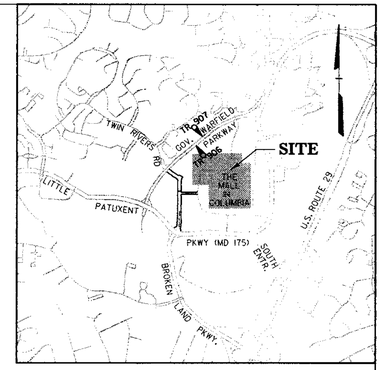
VICINITY MAP
1" = 200'

GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
3. The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. 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 the placement of any asphalt.
5. All plan dimensions are to the face of curb unless otherwise noted.
6. Topography was field run surveyed by Daft-McCune-Walker, Inc. in July 1995, and Fisher, Collins & Carter in 1994. Expanded Per SDP 97-107 & SDP 97-158
7. Coordinates and bearings shown hereon are referred to the Maryland Coordinate system (NAD 27) as projected from the following "Whitman, Requardt & Assoc." traverse stations:

TR 101	N 503690.6580	E 839012.5760
TR 102	N 503690.7010	E 838341.2860

8. Stormwater management is provided on-site by an underground detention facility for quantity, per SDP 97-107 Quality control provided by stormceptors, per SDP 97- 107.
9. Stormwater management facilities are privately maintained.
10. No wetlands exist within the limits of disturbance.
11. The existing utilities were located from available records and field survey prepared by Daft-McCune-Walker, Inc. The contractor must dig test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
12. The Soils analysis was prepared by R. Balter Group.
13. Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.01-7.05.
14. Any damage to County owned right-of-way to be corrected at the contractor 's expense.
15. All sidewalks shall be cross sloped at 1/4inch per foot.
16. Trench bedding for storm drainage structures shall be in accordance with Howard County Standard 62.01.
17. Department of Planning and Zoning reference file numbers: FDP ph.47-A-VI, FDP Ph. 10A, FDP Phase 22A, SDP 80-01, F-97-19, F-97-153, F-97-155, F-97-159, S-96-09, SDP-97-107, SDP-97-158, SDP-98-44, WP 98-81, SDP 98-124
18. All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
19. All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
20. The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 47-A-VI.
21. All on-site driveways and parking areas to be privately maintained.
22. All curb radii are five foot unless otherwise labeled.
23. All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
24. The contractor shall be responsible for any damage to existing property which may occur as a result of his negligence in the execution of the work.
25. All paving areas indicated are private.
26. All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
27. Existing lights per SDP 97-107 & SDP 97-158 to be relocated as necessary. See sheets for proposed lights. Outdoor lighting shall conform to Section 134 of the Zoning Regulations.
28. There is no floodplain on this site.
29. Traffic study was prepared by Wells and Assoc. dated 10-28-97.
30. Public Water and Sewer is utilized for this site.
31. This plan is exempt from Forest Conservation in accordance with Section 16-1202 (b) (1) (iv).



LOCATION MAP
SCALE: 1" = 2000'

ELEVATIONS SHOWN HEREON ARE BASED ON THE FOLLOWING TRAVERSE STATIONS ESTABLISHED BY "FISHER, COLLINS AND CARTER, INC." (NGVD 29 VERTICAL DATUM)

TR 906	N 504280.1630	E 838550.3680	ELEV. 381.500
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2. Phase III Revised Area/Limit of Disturbance = 12.2 Ac. (531,432 SF)
3. Proposed Use: Parking Deck, PARKING LOT AND BUILDING EXPANSION.
4. Area Tabulation
   - A. 1. EXISTING MALL & DEPT. STORE 1,261,800 SF
     2. PROPOSED BUILDING EXPANSION 806 SF
     3. TEXTRON, MALL DEPT. STORE 7,267 (606 SF
     4. OFFICE SPACE 5,480 SF
   - B. Phase II revised Limit of Disturbance — 12.2 Ac. (531,432 SF)
   - C. Impervious area — 11.7 Ac. (509,652 SF)
   - D. Green Area — 0.5 Ac. (22,265 SF)
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   - Parking Spaces Required = 6,320 SP (73 HC)
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44	The Howard Research and Development Corp. and Columbia Mall, Inc.	2.373 AC.	13192

Total Project Area = 72,658 A.C.

APPROVED
HOWARD COUNTY PLANNING BOARD
OF HOWARD COUNTY
DATE July 2, 1998

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — DATE 7/16/98
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/16/98
DIRECTOR — DATE 7/15/98

Date	No.	Revision Description
9-18-00	3	REV. SITE ANALYSIS.
5-18-00	1	REV. SITE ANALYSIS.

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

DMW
Daft McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

6-7-99
Date

STATE OF MARYLAND — JOHN W. RANNOCHIO — No. 10991 — PROFESSIONAL ENGINEER

Professional Engr. No. 10991

SUBDIVISION NAME: COLUMBIA TOWN CTR.		SECTION/AREA 2/1	LOT/PARCEL # 42/44
LIBER 3054A	FOLIO 442	ZONE N.T.	TAX/ZONE MAP 30,36
ELECT. DISTRICT 5TH	CENSUS TRACT 6054		
WATER CODE	SEWER CODE		

TITLE
REVISED PHASE III
SITE DEVELOPMENT PLAN
COVER SHEET

Des By	MJP	Scale	AS SHOWN	Proj. No.	95019B
Drn By	FJZ	Date	6-4-99	1 OF	27
Chk By	JWR	Approved			

SDP-99-160

Thu Jun 3 13:08:54 1999 \\9509\columbiamall\95019b3.tif

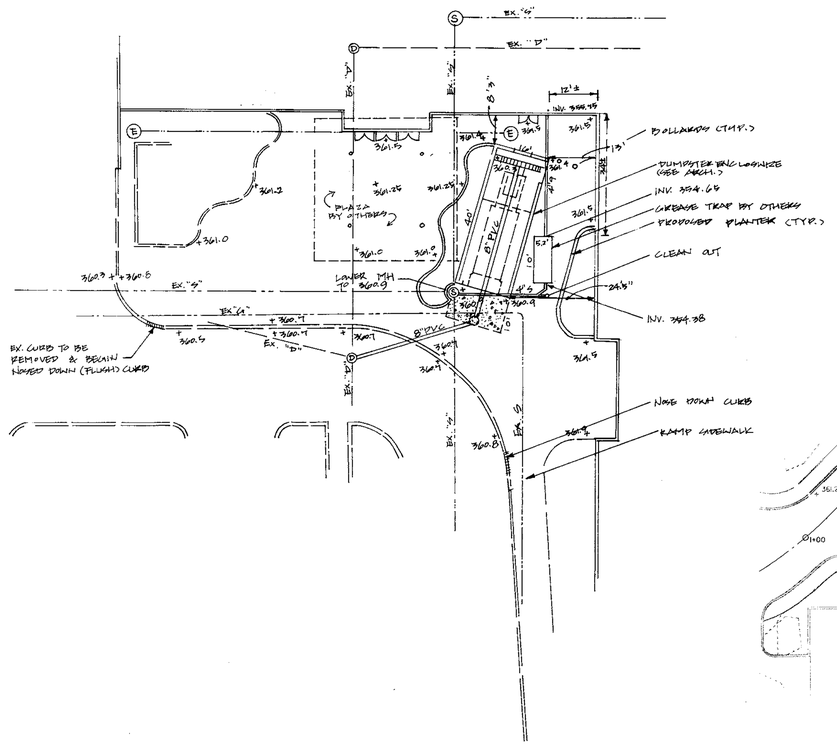
LEGEND

- EX. CONTOUR
- EX. WATER
- EX. SANITARY SEWER
- EX. STORM DRAIN
- EX. GAS
- EX. EDGE OF ROAD
- PROP. CONTOUR
- PROP. UTILITIES
- 6" STANDARD COMB. C&G
- 6" REV. COMB. C&G
- CONC. LIGHT POLE ISLAND
- CONCRETE
- EX. CURB TO BE REMOVED

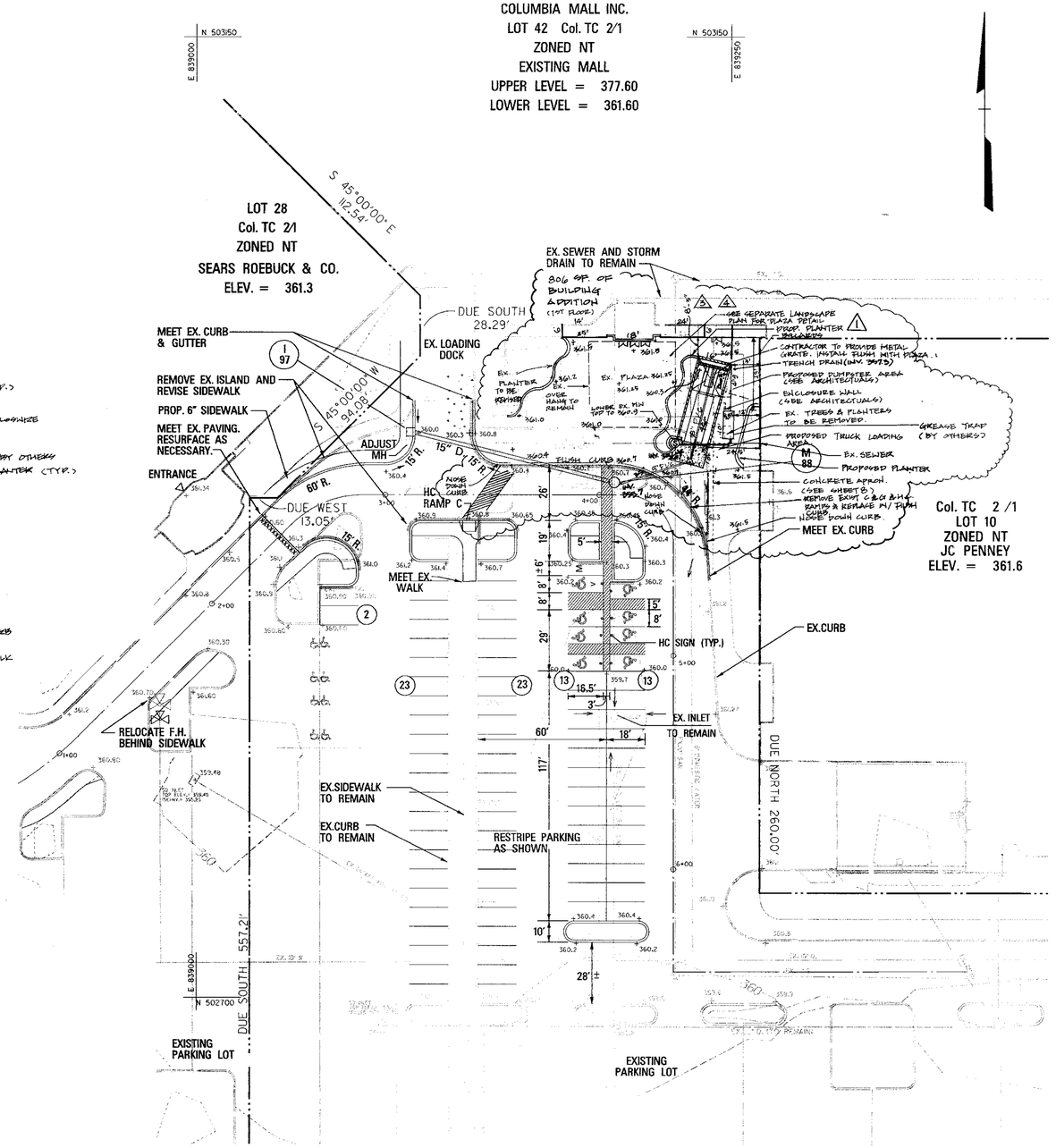
COLUMBIA MALL INC.
LOT 42 Col. TC 2/1
ZONED NT
EXISTING MALL
UPPER LEVEL = 377.60
LOWER LEVEL = 361.60

LOT 28
Col. TC 2/1
ZONED NT
SEARS ROEBUCK & CO.
ELEV. = 361.3

Col. TC 2/1
LOT 10
ZONED NT
JC PENNEY
ELEV. = 361.6



DETAIL PLAN 4
1" = 20'



6-7-99
Date

Professional Engr. No. 16751

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE July 2, 1999

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK — 7/12/99 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 7/16/99 DATE

DIRECTOR — 7/19/99 DATE

Date	No.	Revision Description
9-18-00	3	ADD 248 SF OF RETAIL
5-18-00	1	ADD 656 SF. OF RETAIL & DUMPSTER.

THE MALL IN COLUMBIA
REVISED PHASE III
TOWN CENTER
SECTION 2 AREA 1
HOWARD COUNTY, MD
LOTS 42, 44

OWNER / DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP.
COLUMBIA MALL, INC.
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044

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TITLE

SITE DEVELOPMENT PLAN
SOUTH MALL ENTRANCE

Des By	MJP	Scale	1" = 30'
Drn By	FJZ	Date	6-4-99
Chk By	JWR	Approved	

Proj. No. 95019B

7 OF 27

Oct. 6, 2000	4	REV. DUMPSTER ENCL., ADD GREASE TRAP & DETAIL

SDP-99-116