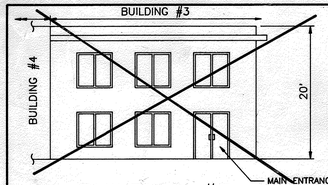
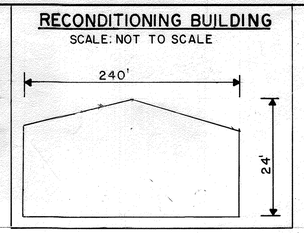
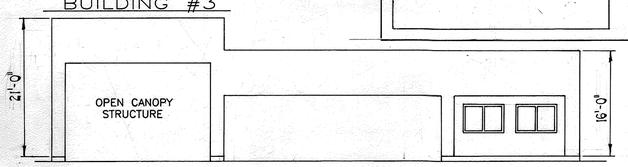
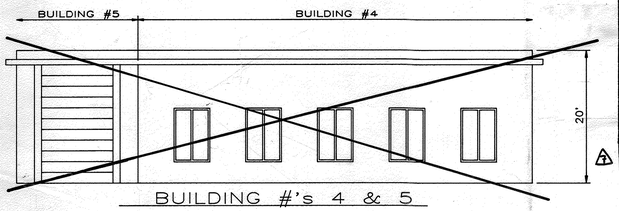
SITE DEVELOPMENT PLAN

BALTIMORE–WASHINGTON AUTO EXCHANGE, INC.









BUILDING SCHEMATIC PLANS

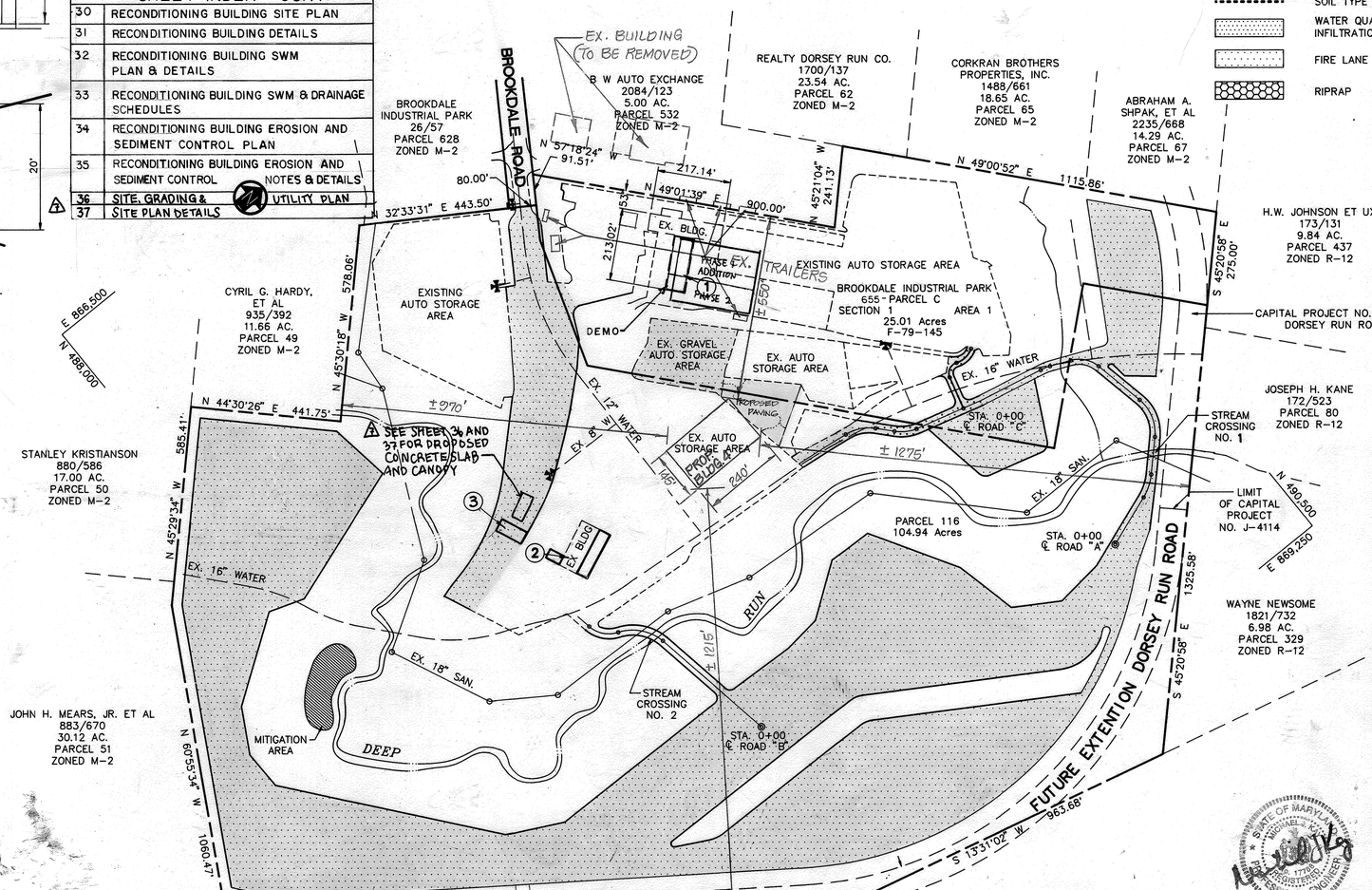
NOT TO SCALE

INDEX OF SHEETS

SHEET INDEX CONT.

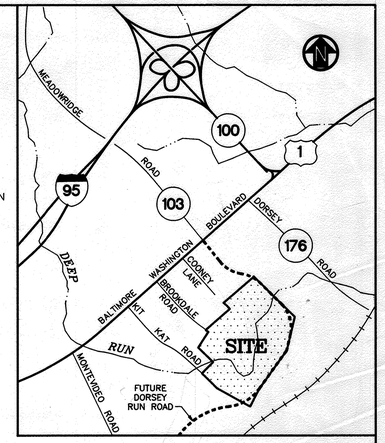
GENERAL NOTES

1. ALL HORIZONTAL CONTROLS ARE BASED ON THE MARYLAND STATE COORDINATE SYSTEM. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
2. TOPOGRAPHY WAS BY FIELD SURVEY IN AUGUST, 1987 BY PURDUM & JESCHKE.
3. ALL DETAIL REFERENCES ARE TO THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION UNLESS OTHERWISE SPECIFIED.
5. HANDICAP FACILITIES TO BE PROVIDED.
6. ALL ROADS AND DRIVEWAYS WITHIN THE LIMITS OF SUBMISSION ARE PRIVATE ROADWAYS.
7. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT 992-7272.
8. AN AGREEMENT WILL BE EXECUTED BETWEEN ANGLO AMERICAN AUTO AUCTION INC., AND HOWARD COUNTY'S DEPARTMENT OF PUBLIC WORKS REGARDING THE DESIGN AND CONSTRUCTION OF CROSSING #1 AND #2 OF DEEP RUN AS LABELLED ON THESE DRAWINGS. THIS AGREEMENT SHALL BE EXECUTED PRIOR TO THE ISSUANCE OF THE PROJECT'S PUBLIC WORKS (DEVELOPERS) AGREEMENT. THE RELEVANT DESIGN DETAILS ON THESE DRAWINGS SHALL BE COORDINATED WITH HOWARD COUNTY'S DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT #J-4114. ANY CORRESPONDING DESIGN OR RIGHT-OF-WAY CHANGES FOLLOWING COUNTY EXECUTION OF THESE DRAWINGS MUST BE SUBMITTED TO HOWARD COUNTY'S DEPARTMENT OF PUBLIC WORKS FOR APPROVAL PRIOR TO IMPLEMENTATION. REFER TO SIGNED AGREEMENT BETWEEN HOWARD COUNTY & ANGLO AMERICAN AUTO AUCTIONS INC. (DECEMBER 1991)
9. SHEETS 23 THROUGH 26 ARE FOR INFORMATION ONLY.
10. REFER TO EASEMENT AND RIGHT-OF-WAY PLATS 10212 THROUGH 10216 RECORDED FEB. 18, 1992.



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING CURB
- PROPOSED CURB
- EXISTING HYDRANT
- PROPOSED HYDRANT
- WATER VALVE
- PROPOSED STORM DRAIN
- PROPOSED WATER MAIN
- EXISTING MANHOLE
- PROPOSED MANHOLE
- PROPERTY LINE
- EXISTING FENCE
- PROPOSED FENCE
- SOIL TYPE BOUNDARY
- WATER QUALITY INFILTRATION TRENCH
- FIRE LANE
- RIPRAP



VICINITY MAP

SCALE : 1"=2000'

SITE ANALYSIS

1. TOTAL AREA OF PARCELS :
   104.93 AC.± – PARCEL 116
   25.01 AC.± – PARCEL 655-PARCEL C
   129.94 AC.±/5,747,306 SF±
2. PRESENT ZONING : M-2
3. MAXIMUM NUMBER OF EMPLOYEES : 230
4. AREA OF PARKING :
   EXISTING – 52,275 SF±
   NEW – 209,565 SF±
   TOTAL – 261,840 SF±
   PARKING SPACES ARE 10'x20' UNLESS NOTED
   AREA OF LANDSCAPED ISLANDS – 14,600 SF±/6.23%
5. PARKING REQUIREMENTS :
   CUSTOMERS PER DAY (MAXIMUM) = 400
   7/10 OFFICE EMPLOYEES = 161
   REQUIRED – 561
   PROVIDED – 602
   AUTO STORAGE – ~~10,811~~ 10,729
6. OPEN SPACE : NONE
7. BUILDING COVERAGE :
   0.68 AC.± / 29,768 SF± OR 0.53% OF SITE
8. FLOOR AREA & USE
   (ALL BLDGS 1 STORY EXCEPT BLDG 1)
   EXISTING
   BLDG. 1 – 7,600 SF± AUTO SALES
   4,500 SF± OFFICE
   BLDG. 2 – CAR WASH
   8860 SF EX.
   5608 SF PROP.
   14,468 TOTAL
   PROPOSED
   BLDG. 3 – 3200 SF± CHECK-IN FACILITY (CANOPY & OFFICE)
   SF± – TOTAL
9. WETLAND PERMITS : 29,768
   U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NO. 90-1444-3
   STATE OF MARYLAND WRA WQC PERMIT NO. 90-WQ-0709
10. VARIANCE/WAIVER PETITIONS FOR THESE PARCELS:
    A. WP-91-201 GRANTED JULY 25, 1991
       1. WAIVE SECTIONS 16.118 (1) AND (5), 16.119, AND 16.120 TO NOT REQUIRE SUBMISSION OF SKETCH AND PRELIMINARY PLANS.
       2. WAIVE SECTIONS 16.116 (a) (1), 16,116 (c) (4), AND 16.116 (C) (6) TO PERMIT DEVELOPMENT ACTIVITIES, CLEARING, AND GRADING WITHIN AREAS OF 100 YEAR FLOODPLAIN, STEEP SLOPES ADJACENT TO WETLANDS AND FLOODPLAINS, WETLANDS AND WETLAND BUFFERS FOR ROAD CROSSINGS, SEDIMENT CONTROL AND STORMWATER MANAGEMENT.
    B. VP-84-71
    C. VP-84-36
11. PROPOSED BUILDING 4
    PAINT & BODY SHOP — 34,800 SF
12. PROPOSED RECONDITIONING BUILDING
    A. DEMOLISH 7,600 SF
    B. PHASE 1 27,840 SF
    C. PHASE 2 18,720 SF

FOR RECONDITIONING BUILDING

FOR 4/23/02 REVISION

12/14/23	⚠ ADDITION OF ELEVATED CONCRETE PAD & CANOPY	RK&K
7/20/92	⚠ DELETE BLDGS. 3,4, & 5	ARW
9/18/92	REVISE SITE ANALYSIS	PWR
10/21/97	ADDED PROP. PAVING	VC
4/23/02	Added Ex. Trailers & Prop. Bldg. 4	DH
12/14/23	ADDED ENTRANCES OFF DORSEY RUN ROAD	MJK
9/28/06	ADDED RECONDITIONING BUILDING	JMS
DATE	DESCRIPTION	BY
	REVISIONS	

RK&K
200 EAST PRATT ST, SUITE 500
BALTIMORE, MD 21202

⚠ PURPOSE STATEMENT: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 19432, EXPIRATION DATE 09/30/24.

ADDRESS CHART	
PARCELS NO.	STREET ADDRESS
116 & 655-PARCEL C	7151 BROOKDALE ROAD

SUBDIVISION NAME		SECT/AREA		LOT/PARCEL #	
BROOKDALE INDUSTRIAL PK.		1/1		116 & 655-PARCEL C	
PLAT # & L/F	BLOCK	ZONE	TAX ZONE	ELECT. DIST.	CENSUS
4255 & 850/147	5	M-2	MAP 43	1st	6012
WATER CODE				SEWER CODE	
B01				2320000	

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 5/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE–WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212

LOCATION PLAN

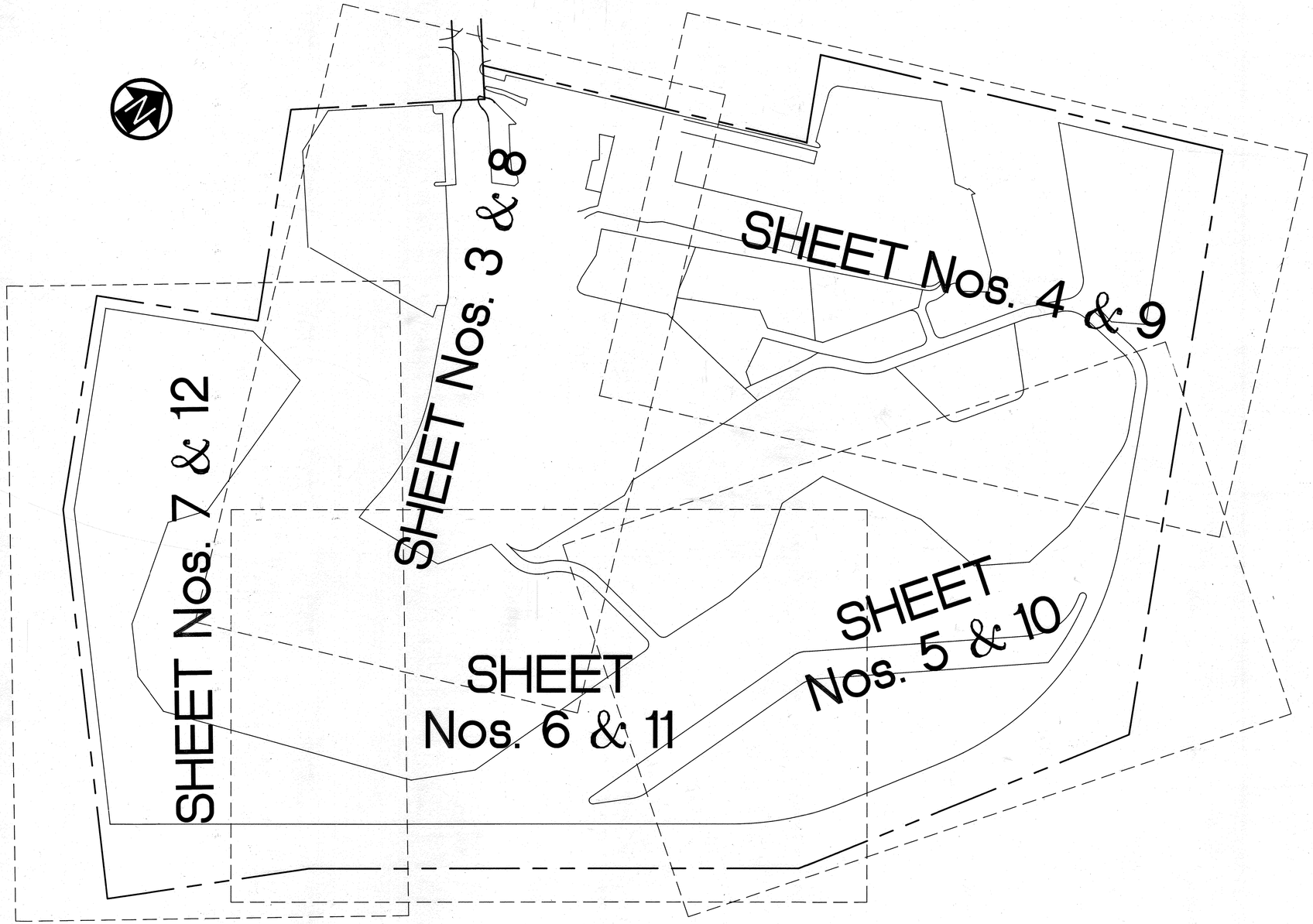
FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=200'

SHEET 1 OF ~~29~~ 37
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

P&J W.O.# 6368-40

6368SHT1



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7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

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HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

LAYOUT OF SHEETS

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=150'

3537
SHEET 2 OF ~~29~~
DES : GDT
DRAWN : REC
CHK : RHB

SDP-91-94

SHTLAY

P&J W.O.# 6368-40

MATCH LINE 1 SEE SHEET 4

EX. TRAILERS

EX. 4" SHC

Existing Conc. Paved Auto Storage

EX. 1 STORY CINDER BLOCK BLDG.

Ex. 2" WHC

EX. 1 STORY CINDER BLOCK BLDG.

Ex. 8" PVC

Ex. Gravel Auto Storage (TO BE PAVED)

Ex. 18" RCP

Ex. 12" RCP

899.86'

N 49°00'19" E

Ex. 6"W

EX. BUILDINGS (TO BE REMOVED)

BALTO-WASHINGTON AUTO EXCHANGE, INC. 2084/123 PARCEL 532 ZONED M-2

Existing Conc. Paved Auto Storage

HANDICAPPED PARKING SIGN (TYP) SEE DETAIL SHT 15

8 HANDICAPPED PARKING SPACES @ 13'x20' EACH

10 PARKING SPACES

19 PARKING SPACES

15 PARKING SPACES

EX. TRAILERS

22 PARKING SPACES

20 PARKING SPACES

16 PARKING SPACES

35'R

Existing Paved Auto Storage

14 PARKING SPACES

REMOVE EX. CURB

FOR LANDSCAPING IN THIS AREA SEE SHEET 15

N 67°16'32" W 135.15'

103.64'

51.51'

80'

BROOKDALE ROAD

EX. 44' PAVING

Ex. 12"W (Cont. 573 W&S)

Ex. 8"W (Cont. 14-1534-D)

N 32°33'31" E 443.50'

BROOKDALE INDUSTRIAL PARK 26/57 PARCEL 628 ZONED M-2

WOODED AREA

PURPOSE STATEMENT: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND... LICENSE NO. 19135, EXPIRATION DATE 5/31/24

5/22/02

FOR 4/23/02 REVISION

REVISIONS		
DATE	DESCRIPTION	BY
12/14/23	⚠4 ADDITION OF ELEVATED CONCRETE PAD AND CANOPY	RKK

CONSTRUCT CHAIN LINK GATE (SEE HO.CO. G8.03)

16' FIRE LANE

14 PARKING SPACES

51 PARKING SPACES

8 PARKING SPACES

24' (TYP)

28 PARKING SPACES

43 PARKING SPACES

39 PARKING SPACES

25 PARKING SPACES

37 PARKING SPACES

12 PARKING SPACES

20 PARKING SPACES

Existing Paved Auto Storage (SDP-85-172)

FOR LANDSCAPING IN THIS AREA SEE SHEET 15

Existing Chain Link Fence

BROOKDALE INDUSTRIAL PARK 26/57 PARCEL 628 ZONED M-2

WOODED AREA

P-5 PAVEMENT LIMITS

CONSTRUCT STD. 7" COMBINATION CURB & GUTTER (SEE HO. CO. R3.01)

EX. CURB TO BE REMOVED

FOR RECONDITIONING BUILDING REVISIONS, SEE SHEETS 30-35

Ex. 8" Water

Ex. 20' R/W L.907 F.285

EX. PAVEMENT (SDP-85-172)

1" CORP & BALL VALVE (TAP AHEAD OF TEE)

18'x8'x6" CONCRETE DUMPSTER PAD

PROP CURB AND GUTTER

EX. CURB TO REMAIN

AUTO TRANSPORT PARKING (LOAD/UNLOAD VEHICLES) / 30 SPACES @ 60'x12'

393.59'

N 71°41'17" W

43°17'51"

35'

35'R

Ex. 21" RCP

EX. "A-10" INLET TO BE MODIFIED (SEE DETAIL SHT 19)

3' CONC. WALK (SEE DETAIL SHT 19)

PROP 1" WHC (PRIVATE)

PROPOSED CANOPY STRUCTURE

40'

80'

1-13'x20' HANDICAP PARKING SPACE W/SIGN

OFFICE

INSIDE METER

⚠3 SEE SHEET 36 AND 37 FOR PROPOSED CONCRETE SLAB AND CANOPY.

LIMIT OF CLEARING

P.O.B FOR NEW CHAIN LINK FENCE

P-2 PAVEMENT

CONSTRUCT 7' CHAIN LINK FENCE (SEE HO. CO. G8.01)

P.O.E FOR NEW FENCE CONSTRUCTION

CONSTRUCT STD. 7" COMBINATION CURB & GUTTER (SEE HO. CO. R3.01)

WOODED AREA

DEEP RUN

RIVER

Ex. 18" San. (Cont. 292-S)

Ex. 20' R/W

FOR RECONDITIONING BUILDING

PROPOSED PAVED AUTO STORAGE (SEE SHT. 7)

E 867,250 N 488,500

NOTE: SEE SHEET 15 FOR PLANTING DETAILS

Existing Paved Auto Storage (SDP-85-172)

① 2" OVERFLOW DRAWOFF FOR SAND-OIL INTERCEPTER

② WASTE-OIL TANK (500 GALLONS) WITH PUMP-OUT CONNECTIONS. PROVIDE CONCRETE SLAB, HOLD-DOWN CABLES AND GRAVEL. BACKFILL PER MFGR'S RECCOMMENDATIONS. TANK SINGLE WALL FIBERGLASS.

③ 2" VENT UP TO U-BEND TERMINATION AND 10'-0" ABOVE GRADE (TYP. OF 3)

Ex. 16" Water (Cont. 654-W)

Ex. 20' R/W L.907 F.285

Ex. 12" Water (Cont. 654-W)

FF = 165.2 PROP. BLDG. 4

240' PROP. 15" RCP

146'

S 49°00'11" W 1392.58'

Ex. 24" CMP

Ex. 30" CMP

ADJUST EX. MH RIM (131.25) TO ELEV. 140.50

FOR CONTINUATION SEE SHEET 6

E 868,500 N 488,500

NEW LOCATION

6" WHC (PRIVATE)

30'

147'-8"

EX. 1 STORY BUILDING

PROPOSED BUILDING ADDITIONS

REV ④ ③ ② ①

PROP 6" SHC

Ex. 8" SHC

PROP 6" SHC

PROP 4" SHC

Ex. 12" CMP

45'

26'-2"

16' FIRE LANE

Existing SWM Basin SDP-85-172

EX. PAVEMENT

EX. CURB TO BE REMOVED (TYPICAL)

WOODED AREA

P.O.E FOR NEW FENCE CONSTRUCTION

CONSTRUCT STD. 7" COMBINATION CURB & GUTTER (SEE HO. CO. R3.01)

WOODED AREA

FOR RECONDITIONING BUILDING

STATE OF MARYLAND JEFFREY MARK JESCHKE 21087 REGISTERED PROFESSIONAL ENGINEER

7/19/07

3537

DATE	DESCRIPTION	BY
7/20/92	⚠1 DELETE BLDGS. 3, 4, & 5	ARW
9/18/92	REVISE CANOPY STRUCTURE	RWR
12/23/92	REVISE WHC LOCATION	BJW
6/24/93	⚠4 LOCATION OF WASTE-OIL TANK	SLC
4/23/02	Added Ex. Trailers & Prop. Bldg. 4	DH
9/28/06	ADDED RECONDITIONING BUILDING	JMS
DATE	DESCRIPTION	BY

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

PURDUM & JESCHKE
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OWNER/DEVELOPER
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7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCELS #116 & #655-PARCEL C, F-79-145 & 850/147, TAX MAP 43

LAYOUT & LANDSCAPING PLAN

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=50'

SHEET 3 OF 29
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4001

P&J W.O.# 6368-40

CURVE DATA

CURV.	RADIUS	LENGTH	TANGENT	Δ	CHD. BEARING & DIST.
1	160.00'	71.12'	36.16'	25°28'08"	N32°36'54"W 70.54'
2	125.00'	122.63'	66.76'	56°12'38"	N73°27'17"W 117.77'
3	90.00'	86.35'	46.82'	54°11'39"	S50°57'19"W 83.07'
4	115.00'	23.08'	11.56'	08°58'22"	S17°43'15"W 23.04'
5	125.00'	71.45'	36.73'	32°45'01"	S31°38'53"W 70.48'
6	125.00'	80.25'	41.56'	36°47'01"	S29°37'53"W 84.39'

DESCRIPTIONS OF EXISTING FOREST COVER

COVER TYPE #	DESCRIPTION	PRIMARY SPECIES	PERCENT (%) COMPOSITION	AVERAGE SIZE CLASS	HEALTH/ CONDITION	SPECIMENS	STAND DENSITY
1	Mixed Oak	Black Oak White Oak Red Oak Scarlet Oak Yellow Poplar Other Hardwoods	25 35 18 7 10 5	10–14" D.B.H.	Fair–due to gypsy moth damage	None	Average
2	Pine–Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	8–12" D.B.H.	Good	None	Average
3	Young Pine–Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	4–10" D.B.H.	Good	None	Light to Moderate
4	Mixed Bottomland Hardwoods	Sycamore Yellow Poplar Ash Black Locust Mixed Oaks	10 40 20 10 20	12–16" D.B.H.	Good	None	Average

REALTY DORSEY RUN CO.
1700/137
PARCEL 62
ZONED M-2

CORKRAN BROTHERS PROPERTIES, INC.
1488/661
PARCEL 135
ZONED M-2

ABRAHAM A. SHPAK, ET AL
2235/668
PARCEL 67
ZONED M-2

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
2084/123
PARCEL 532
ZONED M-2

N 49°00'52" E 1115.86'

N 45°14'47" W 241.02'

N 49°00'19" E 899.96'

Ex. 21" RCP
Ex. 42" RCP
Ex. 18" RCP
Ex. 18" RCP
Ex. 21" RCP
Ex. 18" RCP
Ex. 18" RCP
Ex. 15" RCP
Ex. 12" RCP
Ex. 6"W
Ex. 42" BCCMP
Ex. 18" RCP

E 867,750 N 490,000

Existing Conc. Paved Auto Storage
EX. TRAILERS
Existing Paved Auto Storage (SDP-84-99)
Existing Paved Auto Storage (SDP-89-212)
Existing Gravel Auto Storage (TO BE PAVED)
Existing Paved Auto Storage (SDP-85-172)
Existing SWM Basin (SDP-85-172)
WOODED AREA

Ex. 20' R/W L. 997 F. 209
Ex. 12"W (Cont. 573 W&S)
Ex. 8"S (Cont. 14-1753-D)
Ex. 20' R/W PLAT 14-1763-D7, 8 & 9
Ex. 40' R/W for a Storm Drain
Ex. 20' R/W
Ex. 18" Water
Ex. 18" San.
Ex. 8" PVC

MATCH LINE SHEET 3 SEE SHEET 1

FOR RECONDITIONING BUILDING REVISIONS SEE SHEETS 30-35

FOR RECONDITIONING BUILDING, STORMWATER MANAGEMENT REVISIONS SEE SHEETS 30-35

Ex. Private 4" SHC

Δ = 53°58'11"
R = 65.00'
T = 33.10'
L = 61.23'
S32°07'17"E 13.28'

Δ = 96°34'31"
R = 32.00'
T = 35.90'
L = 53.94'

ROADWAY C

CONSTRUCT GUARDRAIL (SEE HO.CO. R7.01)
CONSTRUCT CHAIN LINK GATE (SEE HO.CO. G8.03)
CONSTRUCT BITUMINOUS CURB (SEE HO.CO. R3.03)
CONSTRUCT 7' CHAIN LINK FENCE (SEE HO.CO. G8.01)

LIMIT OF CLEARING

STA. 7+72.99
STA. 7+88.85
STA. 6+22.50 END GUARDRAIL
STA. 7+86.07
STA. 9+98.57
STA. 10+56.41 ROAD "A" = STA. 0+00 ROAD "C"
STA. 12+73.05
STA. 12+01.60
STA. 13+30.43
STA. 14+10.68
STA. 4+66.38
STA. 3+43.75
STA. 2+32.74
STA. 1+61.62

CURVE #2
CURVE #3
CURVE #4
CURVE #5
CURVE #6

S 49°00'11" W 1392.58'
S 48°01'24" W
S 48°59'30" W 369.96'
S 40°50'56" E 491.53'
S 45°22'47" E 274.86'
S 45°20'58" E 1325.58'
S 49°26'24" W
S 15°16'25" W
S 11°14'22" E
N 45°30'38" W

TYPE 1 FOREST COVER

WATER QUALITY INFILTRATION TRENCH (TYPICAL)
PAVED AUTO STORAGE (P-2 PAVEMENT TYPICAL)
53-WHITE PINE @ 15' O.C.
30' REVERTIBLE GRADING EASEMENT (TYP)
50' STRUCTURE AND USE SETBACK
80' R/W DORSEY RUN ROAD (FUTURE) SEE PLAT #10214
CAPITAL PROJECT # J-4114
END GUARDRAIL
P.O.B. FOR NEW FENCE
20' WATER, SEWER & UTILITY EASEMENT
BEGIN GUARDRAIL
BEGIN GUARDRAIL

STREAM CROSSING #1 (SEE SHT's 23&25) SEE GENERAL NOTE NO. 8

NOTE: CAPITAL PROJECT #J-4114 38'8"x15'9" CULVERT EXTENSION FOR DORSEY RUN ROAD

PROP. 15" RCP
PROP. MAC. PAVING
PROP. CONC CURB (STD. R 3.03)
PROP. MAC. PAVING
PROP. 18" CMP
PROP. 27" CMP
PROP. 30" CMP
Relocated 30" CMP
Relocated 60" CMP
Ex. 24" CMP (TO BE REMOVED)
Ex. CURB TO BE REMOVED
Ex. 42" BCCMP
Existing SWM Basin SDP-89-212 (TO BE REMOVED)
Ex. Grassed Area
REMOVE EX. CURB
P.O.B. FOR NEW FENCE
Ex. 20' R/W L.997 F.885
Existing Chain Link Fence
FF=165.2 PROP. Bldg. 4
DEEP RUN
WOODED AREA

PROP. 8" SAN (CONT. 14-3151-D)
PROP. 18" SAN (CONT. 14-3151-D)
PROP. 8" SAN (CONT. 14-3151-D)
WPD 5.1 UTILITY CROSSING (SEE DETAIL, SHEET 27)
STORM DRAIN UTILITY EASEMENT
NOTE: SEE SHEET 15 FOR PLANTING DETAILS

MATCH LINE SEE SHEET 2
MATCH LINE SEE SHEET 5

FOR RECONDITIONING BUILDING

H.W. JOHNSON ET UX
173/131
PARCEL 437
ZONED R-12

JOSEPH H. KANE
172/523
PARCEL 80
ZONED R-12

WAYNE NEWSOME
1821/732
PARCEL 329
ZONED R-12

N 490,750 E 868,750
N 490,000 E 868,750

STATE OF MARYLAND VICTOR CHEW No. 18548 REGISTERED PROFESSIONAL ENGINEER
10/21/97

STATE OF MARYLAND JEFFREY MARK STARR No. 21609 REGISTERED PROFESSIONAL ENGINEER
5/22/02
FOR 4/23/02 REVISION

STATE OF MARYLAND JEFFREY MARK STARR No. 21609 REGISTERED PROFESSIONAL ENGINEER
11/4/97

3537

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
10/21/97	ADDED PROP. PAVING	VC
4/23/02	Added Ex. Trailers & Prop. Bldg. 4	DH
9/28/06	ADDED RECONDITIONING BUILDING	JMS

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

LAYOUT & LANDSCAPING PLAN

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=50'

SHEET 4 OF 29
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4002

P&J W.O.# 6368-40

DESCRIPTIONS OF EXISTING FOREST COVER

COVER TYPE #	DESCRIPTION	PRIMARY SPECIES	PERCENT (%) COMPOSITION	AVERAGE SIZE CLASS	HEALTH/ CONDITION	SPECIMENS	STAND DENSITY
1	Mixed Oak	Black Oak White Oak Red Oak Scarlet Oak Yellow Poplar Other Hardwoods	25 35 18 7 10 5	10-14" D.B.H.	Fair-due to gypsy moth damage	None	Average
2	Pine-Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	8-12" D.B.H.	Good	None	Average
3	Young Pine-Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	4-10" D.B.H.	Good	None	Light to Moderate
4	Mixed Bottomland Hardwoods	Sycamore Yellow Poplar Ash Black Locust Mixed Oaks	10 40 20 10 20	12-16" D.B.H.	Good	None	Average

WOODED AREA
BrF
RUN
DEEP
HaE
LIMIT OF CLEARING
WATER QUALITY INFILTRATION TRENCH (TYPICAL)
MaF
SaE
CtE2
CtD2
PAVED AUTO STORAGE AREA (P-2 PAVEMENT TYP.)
SaD
LIMIT OF PAVEMENT
WOODED AREA
DEEP
RUN
N 490,000
E 868,750
MATCH LINE 2 SEE SHEET 4
N 19°52'50" W
STA. 0+00 ROAD "A"
PROP. 8" W. (CONT. 144-55-D)
BeC2
20' WATER, SEWER & UTILITY EASEMENT
WOODED AREA
E 868,750
N 488,750
MATCH LINE 3 SEE SHEET 6
1-BEECH
1-SWEETGUM
2-WHITE PINE
10' FIRE LANE
4-WHITE PINE
2-WHITE PINE
3-RED MAPLE
2-WHITE PINE
3-BEECH
1-HONEY LOCUST
2-BEECH
2-SWEETGUM
3-RED MAPLE
2-WHITE PINE
1-RED OAK
BeD2
CONC. WHEEL STOPS @ 12' O.C. (110 TOTAL)
50' STRUCTURE AND USE SET BACK
24'
41'
50' BRL
80' R/W
DORSEY RUN ROAD (FUTURE) SEE PLAT #10218
RD.
RUN
SaE
1,325.58'
WAYNE NEWSOME 1821/732 PARCEL 329 ZONED R-12
PAVED AUTO STORAGE AREA
TYPE 1 FOREST COVER
SID2
DORSEY
LIMIT OF CLEARING
S 43°10'58" E
EXTENSION
FUTURE
113-WHITE PINE @ 15' O.C.
BeC2
N 490,000
E 869,500
CONSTRUCT 7' CHAIN LINK FENCE (SEE HO.CO. G8.01)
30' REVERTIBLE GRADING EASEMENT (TYP)
S 13°41'02" W
963.68'
NEWSOME DORSEY INDUSTRIAL PARK LTD 2113/436 PARCEL 321 ZONED M-2
WOODED AREA
EvB

NOTE:
SEE SHEET 15 FOR PLANTING DETAILS

37
35

REV-4003

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
	REVISIONS	

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/28/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 4/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

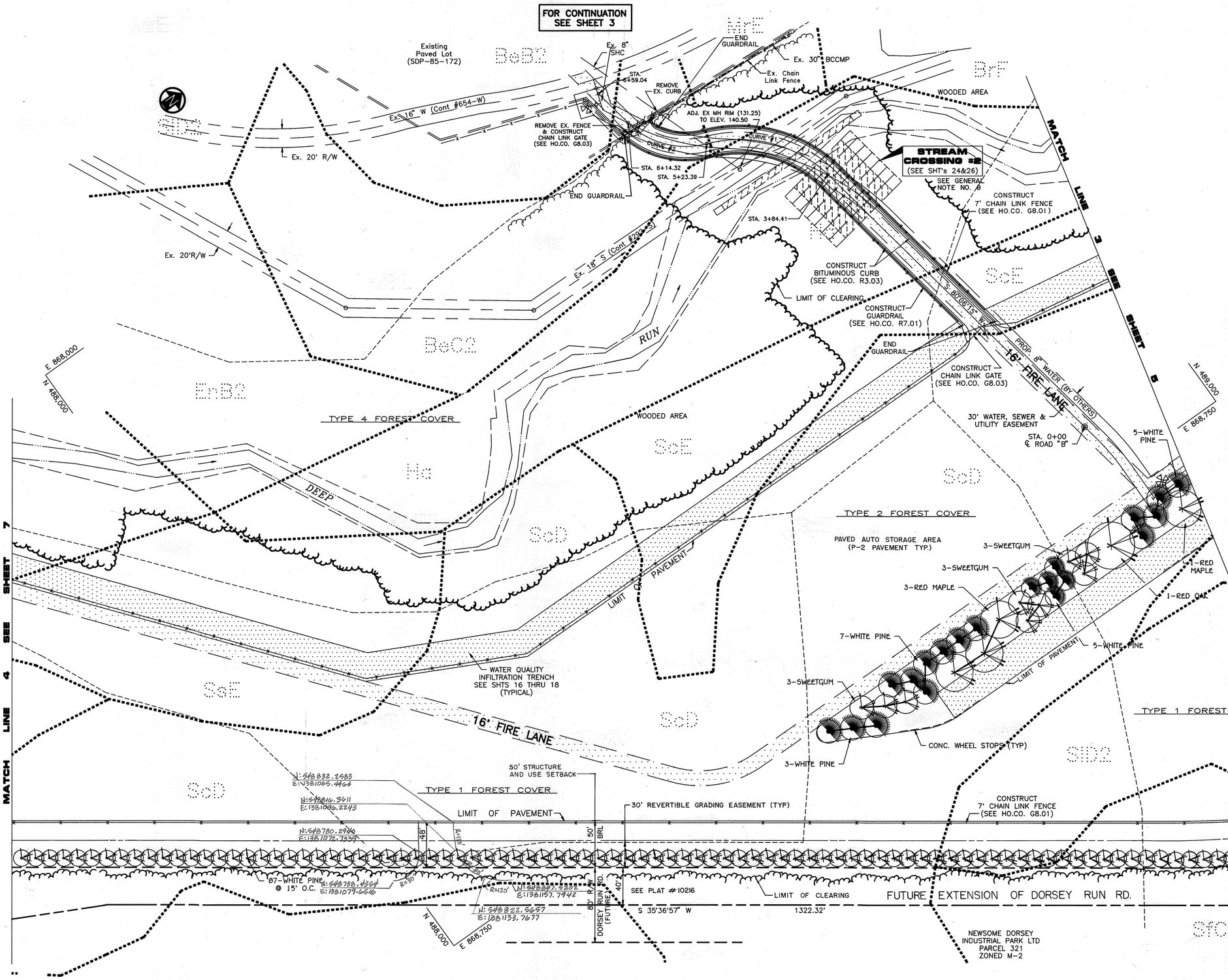
LAYOUT & LANDSCAPING PLAN

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=50'

SHEET 5 OF ~~29~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

P&J W.O.# 6368-40



CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	Δ	CHD. BEARING & DIST.
1	137.91'	138.98'	76.04'	57°44'33"	S49°38'23"W 133.18'
2	87.96'	90.93'	50.00'	59°13'44"	S50°29'22"W 86.94'

DESCRIPTIONS OF EXISTING FOREST COVER

COVER TYPE #	DESCRIPTION	PRIMARY SPECIES	PERCENT (%) COMPOSITION	AVERAGE SIZE CLASS	HEALTH / CONDITION	SPECIMENS	STAND DENSITY
1	Mixed Oak	Black Oak White Oak Red Oak Scarlet Oak Yellow Poplar Other Hardwoods	25 35 18 7 10 5	10-14" D.B.H.	Fair-due to gypsy moth damage	None	Average
2	Pine-Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	8-12" D.B.H.	Good	None	Average
3	Young Pine-Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	4-10" D.B.H.	Good	None	Light to Moderate
4	Mixed Bottomland Hardwoods	Sycamore Yellow Poplar Ash Black Locust Mixed Oaks	10 40 20 10 20	12-16" D.B.H.	Good	None	Average

SOIL TYPE CLASSIFICATION

SYMBOL	SOIL TYPE
AdB2	Aldino silt loam, 3-8% slopes, moderately eroded
BeB2	Beltsville silt loam, 1-5% slopes, moderately eroded
BeC2	Beltsville silt loam, 5-10% slopes, moderately eroded
BeC3	Beltsville silt loam, 5-10% slopes, severely eroded
BeD2	Beltsville silt loam, 10-15% slopes, moderately eroded
BrF	Brandywine loam, 25-60% slopes
ClD2	Chillum gravelly loam, 10-15% slopes, moderately eroded
ClE2	Chillum gravelly loam, 15-30% slopes, moderately eroded
CnB2	Chillum-Fairfax loams, 1-5% slopes, moderately eroded
CnD3	Chillum-Fairfax loams, 5-15% slopes, severely eroded
Co	Codorus silt loam
DeB2	Delanco silt loam, 3-8% slopes, moderately eroded
EnB2	Elsinboro loam, 3-8% slopes, moderately eroded
EvB	Evesboro loamy sand, 1-5% slopes
Ha	Hatboro silt loam
IuB	Iuka loam, local alluvium, 1-5% slopes
KcE3	Kelly clay loam, 15-30% slopes, severely eroded
KhC3	Keyport silt loam, 5-10% slopes, moderately eroded
LeB2	Legore silt loam, 3-8% slopes, moderately eroded
LgC3	Legore silty loam, 8-15% slopes, severely eroded
Ll	Leonardtown silt loam
MrE	Montalto and Relay soils, 15-45% slopes
MsF	Montalto and Relay very stony silt loams, 25-60% slopes
ScB	Sandy and clayey land, gently sloping
ScD	Sandy and clayey land, moderately sloping
ScE	Sandy and clayey land, moderately steep
SfC2	Sassafras gravelly sandy loam, 10-15% slopes, moderately eroded
SfD2	Sassafras gravelly sandy loam, 10-15% slopes, moderately eroded
SlD2	Sassafras loam, 10-15%, moderately eroded
WaB	Watchung silt loam, 3-8%

Shading denotes hydric soils, soils with hydric inclusions, or soils with slopes less than 15% having significant erosion potential.

PURDUM & JESCHKE
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OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
12/16/03	ADDED ENTRANCES OFF DORSEY RUN ROAD	MJK

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

LAYOUT & LANDSCAPING PLAN

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=50'

SHEET 6 OF ~~29~~ 37 35
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4004

P&J W.O.# 6368-40

DESCRIPTIONS OF EXISTING FOREST COVER

COVER TYPE #	DESCRIPTION	PRIMARY SPECIES	PERCENT (%) COMPOSITION	AVERAGE SIZE CLASS	HEALTH/ CONDITION	SPECIMENS	STAND DENSITY
1	Mixed Oak	Black Oak White Oak Red Oak Scarlet Oak Yellow Poplar Other Hardwoods	25 35 18 7 10 5	10–14" D.B.H.	Fair–due to gypsy moth damage	None	Average
2	Pine–Hardwoods	Virginia Pine Pitch Pine Misc. Hardwoods	40 40 20	8–12" D.B.H.	Good	None	Average
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4	Mixed Bottomland Hardwoods	Sycamore Yellow Poplar Ash Black Locust Mixed Oaks	10 40 20 10 20	12–16" D.B.H.	Good	None	Average

MrE
BeC3
Ha
IuB
SfD2
DeB2
Co
SeE
SsE
BeC3
SeD
KeE3
SfD2
BeC3
CnD3
WaB
CnB2
BeB2
L1
RUN
DEEP
DEEP
RUN
Ex. 18" San. (Cont. 292-S)
Ex. 20'R/W
Ex. 20' R/W
LIMIT OF VEGETATIVE BUFFER
FIRELANE TURN-AROUND
PROP. 6" WATER (BY OTHERS)
20' WATER, SEWER & UTILITY EASEMENT
SEE SHEET 13 FOR MITIGATION PLAN
MATCH LINE 4 SEE SHEET 8
50' STRUCTURE AND USE SETBACK
80' R/W
DORSEY RUN ROAD
SEE PLAT # 10216
NEWSOME DORSEY INDUSTRIAL PARK LTD PARCEL 321 ZONED M-2
30' REVERTIBLE GRADING EASEMENT (TYP)
37-WHITE PINE @ 15' O.C.
16' FIRE LANE
TYPE 2 FOREST COVER
TYPE 4 FOREST COVER
TYPE 3 FOREST COVER
TYPE 1 FOREST COVER
LIMIT OF CLEARING
WOODED AREA
LIMIT OF PAVEMENT
WATER QUALITY INFILTRATION TRENCH (TYPICAL)
CONSTRUCT 7' CHAIN LINK FENCE (SEE HO.CO. G8.01)
LIMIT OF CLEARING
FUTURE DORSEY RUN RD. EXTENSION
Ex. 16" Water (Cont. 654-W)
CYRIL G. HARDY, ET AL 935/392 PARCEL 49 ZONED M-2
N 45°30'18" W 578.06'
N 44°30'26" E
441.75'
N 45°29'34" W
585.41'
N 60°55'34" W
1060.47'
551.72'
S 27°06'57" W
LIMIT OF PAVEMENT
STANLEY KRISTIANSON 880/586 PARCEL 50 ZONED M-2
JOHN H. MEARS, JR., ET AL 883/670 PARCEL 51 ZONED M-2
N 488,000
E 867,000
E 868,000
N 487,250

NOTE:
SEE SHEET 15 FOR PLANTING DETAILS

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
12/16/03	ADDED ENTRANCES OFF DORSEY RUN ROAD	MJK

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER 5-5-92 DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR 4/27/92 DATE
CHIEF, BUREAU OF ENGINEERING 4-27-92 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR 5/8/92 DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 5/7/92 DATE

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

LAYOUT & LANDSCAPING PLAN

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : 1"=50'

SHEET 7 OF ~~29~~ ~~35~~ 37
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4005
P&J W.O.# 6368-40

MATCH LINE 1 SEE SHEET 9

FOR CONTINUATION SEE SHEET 11

E 868,500
N 486,500

Existing Paved Auto Storage

EX. 1 STORY CINDER BLOCK BLDG. FF = 187.00

EX. 1 STORY CINDER BLOCK BLDG. FF = 186.50

Main Entrance

186.95

5' Level Landing

186.6

186.2

899.94'

Ex. 8" PVC

Ex. 18" RCP

Ex. 12" RCP

Ex. Gravel Auto Storage (TO BE PAVED)

Ex. Riprap Channel

S 49°00'11" W 1390.58'

Ex. 20' Water, Sewer & Utility Esm't.

L. 3097 F. 285
Ex. 20' W. & S. Esm't.

Ex. 12" RCP

Ex. 8" DI

FF = 165.2 PROP. BLDG. 4

6" Water PROP.

Guard Rail

Existing Paved Auto Storage (SDP-85-172)

25%± STEEP SLOPE AREA (TYPICAL)

Ex. 24" CMP.

L. 3097 F. 285
Ex. 20' ESMT.

Ex. 30" CMP

INLET PROTECTION

LIMIT OF 100 YEAR FLOODPLAIN

CONSTRUCT RIPRAP OUTLET PROTECTION

30'

45'

PROP. 30" RCP 485'±

PROP. OUTLET STRUCTURE

EX. SWM FACILITY (#4) TO BE RETAINED TO PROVIDE WATER QUALITY

BALTO.-WASHINGTON AUTO EXCHANGE, INC. 2084/123 PARCEL 532 ZONED M-2

186.7 187 185.7 185.5 184.5 186.1 185.9 184.9

N 489,500
E 867,250

N 40°06'16" E

Existing Paved Auto Storage

S 71°41'17" E 395.59'

147'-8"

30'

EX. 1 STORY BUILDING FF = 186.00

155.00±

45'

26'-2"

Ex. 12" CMP

Ex. 21" RCP

Ex. 21" RCP

PROPOSED CANOPY STRUCTURE

MAIN ENTRANCE

80'

40'±

153.45

153.45

D.A. TRAP #1 6.00 AC. OFFICE F.F. 153.50

I-30

I-31

I-32

I-29

I-28

S-12

123 L.F. 30" BCCMP

SEE PROFILE SHEET 19

STABILIZED CONSTRUCTION ENTRANCE (WITH MOUNTABLE BERM)

N 57°16'32" W 195.15'

91.5'

EX. PAVING

EX. BROOKDALE ROAD

TEMPORARY BERM

180 L.F. 18" BCCMP

176 L.F. 21" BCCMP

151 L.F. 24" BCCMP

210 L.F. 27" BCCMP

196 L.F. 30" BCCMP

A-3 A-4 A-3 A-1

I-33

LIMIT OF DISTURBANCE

EARTH DIKE

SEE SHEET 36 AND 37 FOR PROPOSED CONCRETE SLAB AND CANOPY.

STOCKPILE AREA

TRAP #1

100 YEAR FLOODPLAIN

25' WETLANDS BUFFER

DEEP RUN RIVER

LIMIT OF WETLANDS (TYPICAL)

BROOKDALE INDUSTRIAL PARK 26/57 PARCEL 628 ZONED M-2

N 32°33'51" E 443.50'

Existing Paved Auto Storage (SDP-85-172)

EX. UNDERGROUND SWM FACILITY TO BE RETAINED TO PROVIDE WATER QUALITY ENHANCEMENT (FACILITY #4) (FOR DETAILS SEE SHT. 22 & SDP-85-172)

Ex. 24" CMP

E 867,250
N 488,500

PROPOSED PAVED AUTO STORAGE (SEE SHT. 7)

FOR RECONDITIONING BUILDING EROSION AND SEDIMENT CONTROL REVISIONS SEE SHEETS 30-35

FOR RECONDITIONING BUILDING

RIPRAP OUTLET SEDIMENT TRAP #1

BOTTOM DIMENSIONS =	65'x20'
DRAINAGE AREA =	6.0 AC.±
L =	14'
VOLUME REQ'D =	10800 C.Y.
VOLUME PROVIDED =	11250 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	135
TOP OF EMBANKMENT =	142
OUTLET WEIR CREST ELEV. =	140
CLEANOUT ELEV. =	137.5

PURPOSE STATEMENT: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO 4943, EXPIRATION DATE 09/31/24

Charles Martin III 4943

STATE OF MARYLAND — JEFFREY MARK BERICH — REGISTERED PROFESSIONAL ENGINEER — 1/19/07

5/22/02

FOR 4/23/02 REVISION

DATE	DESCRIPTION	BY
12/14/23	⚠ ADDITION OF ELEVATED CONCRETE PAD AND CANOPY	RK&K

REVISIONS

DATE	DESCRIPTION	BY
7/20/92	⚠ DELETE BLDGS. 3, 4 & 5	ARW
9/18/92	REVISE CANOPY STRUCTURE	PWR
4/29/02	Added Prop. Bldg. 4	DH
9/28/06	ADDED RECONDITIONING BUILDING	JMS
DATE	DESCRIPTION	BY

REVISIONS

Reviewed for Howard Soil Conservation District and meets technical requirements

U.S. Soil Conservation Service — 4/16/92 Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 4/16/92 Date — 37

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.

7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

JIM COOK — 10/10/91 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5-7-92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/27/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/8/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCELS # 116 & # 655 - PARCEL C, F-79-145 & 850/147, TAX MAP 43
GRADING, SEDIMENT CONTROL & STORM DRAINAGE
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=50'

SHEET 8 OF ~~29~~ 37
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4001

P&J W.O.# 6368-40

MATCH-LINE SEE THIS SHEET

REALTY DORSEY RUN CO.
1700/137
PARCEL 62
ZONED M-2

CORKRAN BROTHERS PROPERTIES, INC.
1488/661
PARCEL 65
ZONED M-2

ABRAHAM A. SHPAK, ET AL
2235/668
PARCEL 67
ZONED M-2

KAR-CO SERVICE CENTER
752/632
PARCEL 532
ZONED M-2

Existing Paved Auto Storage (SDP-84-99)

Existing Paved Auto Storage (SDP-89-212)

Existing Paved Auto Storage (SDP-85-172)

EXISTING SWM FACILITY (#1) SDP-85-172

EX. RISER TO BE REPLACED

LIMIT OF DISTURBANCE

D.A. TRAP #1 2.90 AC.

D.A. TRAP #2 1.10 AC.

D.A. TRAP #3 3.75 AC.

D.A. TRAP #4 4.00 AC.

D.A. TRAP #4A 0.55 AC.

D.A. TRAP #5 0.50 AC.

D.A. TRAP #6 0.30 AC.

D.A. TRAP #7A 0.55 AC.

D.A. TRAP #7 0.25 AC.

PIPE OUTLET SEDIMENT TRAP #4

DRAINAGE AREA =	4.00 Ac.±
VOLUME REQUIRED =	7200 C.F.
VOLUME PROVIDED =	7425 C.F.
DEPTH =	5'
BOTTOM ELEV. =	135
TOP OF EMBANKMENT =	142
OUTLET PIPE ELEV. =	135.0
CLEANOUT ELEV. =	137.5
BOTTOM DIMENSIONS =	35'x13'
OUTLET PIPE SIZE =	18" BCCMP
SIDE SLOPES =	2:1
RIPRAP	
L =	10'
W =	11.5'
d_{50} =	6"
DEPTH =	14"

STONE OUTLET SEDIMENT TRAPS

	#2	#3	#4A	#5	#6	#7	#7A
BOTTOM DIMENSIONS =	11'x10'	52'x22'	10'x5'	10'x5'	10'x5'	7'x2'	10'x5'
DRAINAGE AREA =	1.10 AC.±	3.75 AC.±	0.55 AC.±	0.50 AC.±	0.30 AC.±	0.25 AC.±	0.55 AC.±
L =	5'	5'	5'	5'	5'	5'	5'
VOLUME REQ'D =	1980 C.Y.	6750 C.Y.	990 C.Y.	900 C.Y.	540 C.Y.	450 C.Y.	900 C.Y.
VOLUME PROVIDED =	2100 C.Y.	6820 C.Y.	1200 C.Y.	1200 C.Y.	1200 C.Y.	600 C.Y.	1200 C.Y.
DEPTH =	5'	5'	4'	4'	4'	4'	4'
BOTTOM ELEV. =	139	121	132	114	115	114	121
TOP OF EMBANKMENT =	145	127	137	119	120	119	126
OUTLET WEIR CREST ELEV. =	144	126	136	118	119	118	125
CLEANOUT ELEV. =	141.5	123.5	134	116	117	116	123
TRAP DEPTH =	5'	5'	4'	4'	4'	4'	4'

FOR SWM, EROSION AND SEDIMENT CONTROL REVISIONS SEE SHEETS 30-35

FOR RECONDITIONING BUILDING EROSION AND SEDIMENT CONTROL REVISIONS SEE SHEETS 30-35

SEE NOTE 1 SHEET 11

WPD 3.1 (TYP) FOR RIPRAP SWALES, EXTEND RIPRAP DOWN STREAM BANK TO STREAM. SEE NOTE 1 SHEET 11

WPD 1.1 DEWATERING BASIN SEE DETAIL, SHEET 27

H.W. JOHNSON ET UX
173/131
PARCEL 437
ZONED R-12

JOSEPH H. KANE
172/523
PARCEL 80
ZONED R-12

WAYNE NEWSOME
1821/732
PARCEL 329
ZONED R-12

DORSEY RUN ROAD CAPITAL PROJECT J-4114

NOTE: CAPITAL PROJECT J-4114 38'8" x15'9" CULVERT EXTENSION FOR DORSEY RUN ROAD

38'8"x15'9" ARCH CULVERT

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — 11/16/92 Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 11/16/92 Date

REVISION DONE BY CAPITOL DEVELOPMENT DESIGN, INC. ON 10/21/97. REMOVED EX. POND, GRADED AND PROP. PAVING

10/21/97

11/19/01

5/22/02

FOR 4/23/02 REVISION

Rev. 4/23/02 Added Prop. Bldg. 4 DH

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER
BALTIMORE WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

JIM COOK — 10/10/91 DATE

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RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5-5-92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/27/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE

CD 4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/8/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 1-16, F-79-145 & 850/147, TAX MAP 43

GRADING, SEDIMENT CONTROL & WATER QUALITY INFILTRATION TRENCHES

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=50'

SHEET 9 OF ~~29~~ 35

DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4002

P&J W.O.# 6368-30

MATCH LINE SEE THIS SHEET

STONE OUTLET SEDIMENT TRAP #10

BOTTOM DIMENSIONS =	55'x5'
DRAINAGE AREA =	2.65 AC.±
L =	11'
VOLUME REQ'D =	4770 C.Y.
VOLUME PROVIDED =	4875 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	134
TOP OF EMBANKMENT =	140
OUTLET WEIR CREST ELEV. =	139
CLEANOUT ELEV. =	136.5
TRAP DEPTH =	5'

STONE OUTLET SEDIMENT TRAP #11

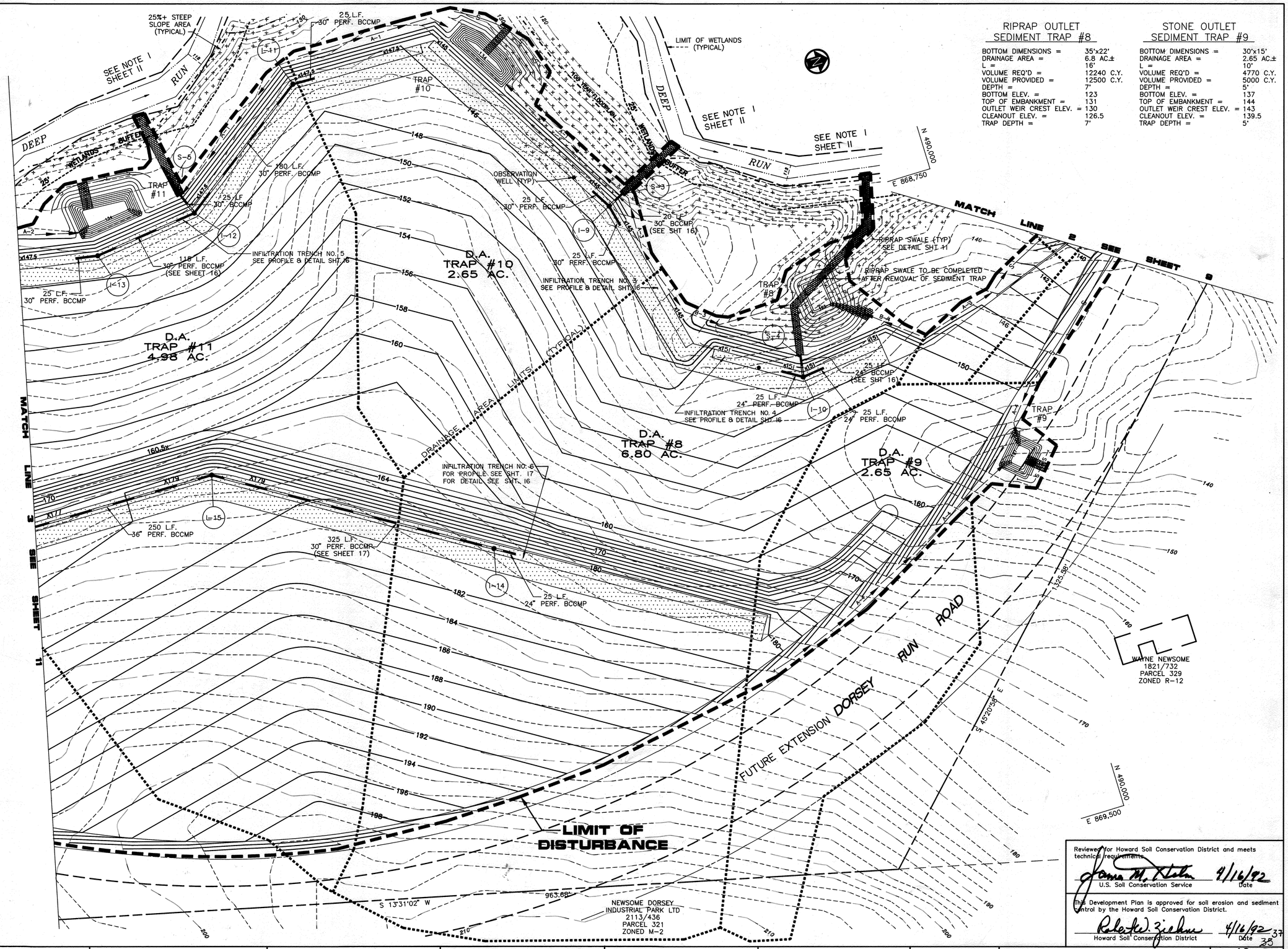
BOTTOM DIMENSIONS =	50'x21'
DRAINAGE AREA =	4.98 AC.±
L =	20'
VOLUME REQ'D =	8964 C.Y.
VOLUME PROVIDED =	9300 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	137
TOP OF EMBANKMENT =	144
OUTLET WEIR CREST ELEV. =	143
CLEANOUT ELEV. =	139.5
TRAP DEPTH =	5'

RIPRAP OUTLET SEDIMENT TRAP #8

BOTTOM DIMENSIONS =	35'x22'
DRAINAGE AREA =	6.8 AC.±
L =	16'
VOLUME REQ'D =	12240 C.Y.
VOLUME PROVIDED =	12500 C.Y.
DEPTH =	7'
BOTTOM ELEV. =	123
TOP OF EMBANKMENT =	131
OUTLET WEIR CREST ELEV. =	130
CLEANOUT ELEV. =	126.5
TRAP DEPTH =	7'

STONE OUTLET SEDIMENT TRAP #9

BOTTOM DIMENSIONS =	30'x15'
DRAINAGE AREA =	2.65 AC.±
L =	10'
VOLUME REQ'D =	4770 C.Y.
VOLUME PROVIDED =	5000 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	137
TOP OF EMBANKMENT =	144
OUTLET WEIR CREST ELEV. =	143
CLEANOUT ELEV. =	139.5
TRAP DEPTH =	5'



Reviewed for Howard Soil Conservation District and meets technical requirements

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

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HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — DATE 5-5-92

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — DATE 4/27/92

CHIEF, BUREAU OF ENGINEERING — DATE 4-22-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/8/92

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

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TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

GRADING, SEDIMENT CONTROL & WATER QUALITY INFILTRATION TRENCHES

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=50'

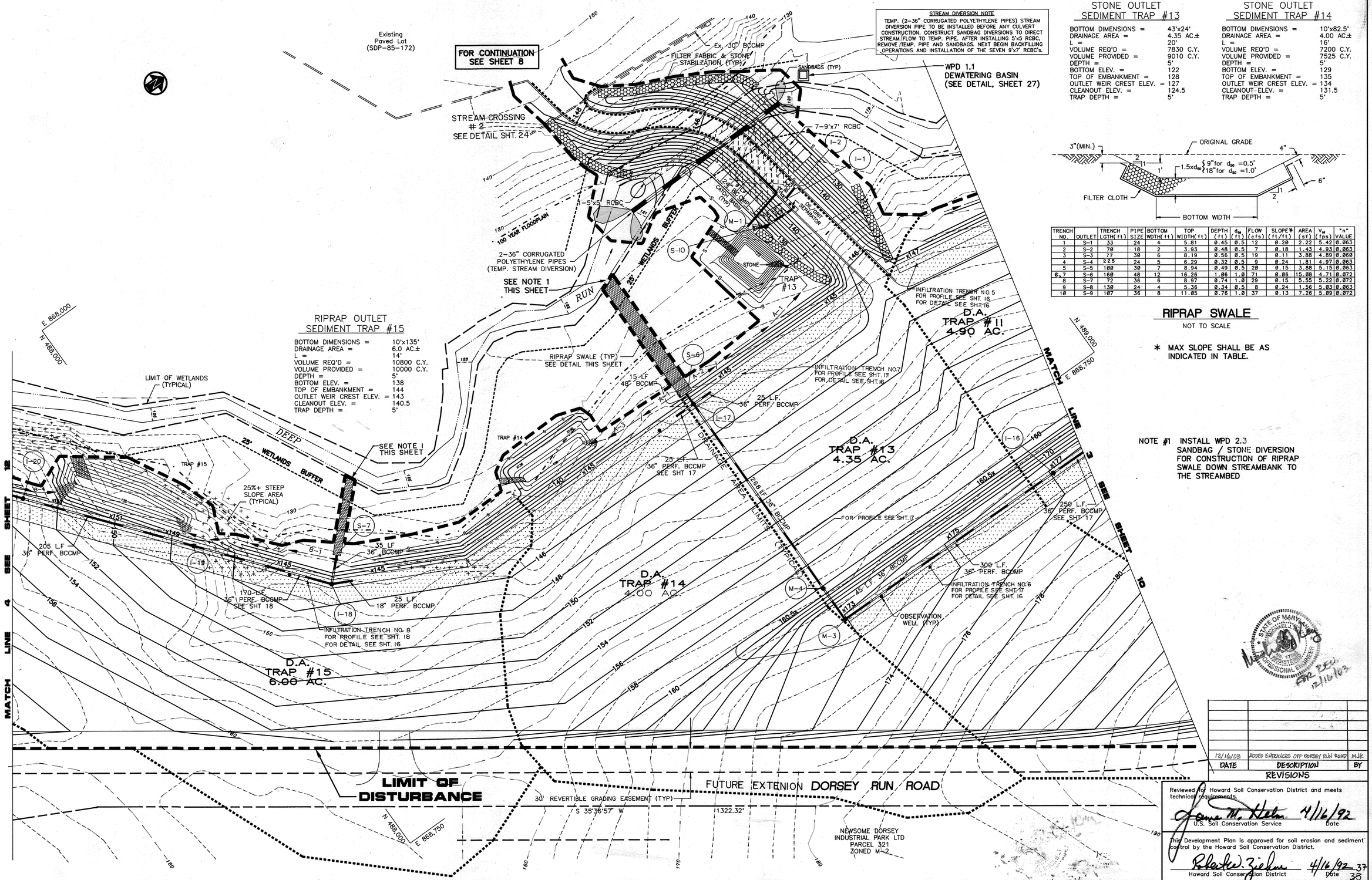
SHEET 10 OF ~~29~~ 35

DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4003

P&J W.O.# 6368-40



STREAM DIVERSION NOTE

TEMP. (2-36" CORRUGATED POLYETHYLENE PIPES) STREAM DIVERSION PIPE TO BE INSTALLED BEFORE ANY CULVERT CONSTRUCTION. CONSTRUCT SANDBAG DIVERSIONS TO DIRECT STREAM FLOW TO TEMP. PIPE. AFTER INSTALLING 5'x5 RCBC, REMOVE /TEMP. PIPE AND SANDBAGS. NEXT BEGIN BACKFILLING OPERATIONS AND INSTALLATION OF THE SEVEN 9'x7' RCBC's.

STONE OUTLET SEDIMENT TRAP #13

BOTTOM DIMENSIONS =	43'x24'
DRAINAGE AREA =	4.35 AC.±
L =	20'
VOLUME REQ'D =	7830 C.Y.
VOLUME PROVIDED =	9010 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	122
TOP OF EMBANKMENT =	128
OUTLET WEIR CREST ELEV. =	127
CLEANOUT ELEV. =	124.5
TRAP DEPTH =	5'

STONE OUTLET SEDIMENT TRAP #14

BOTTOM DIMENSIONS =	10'x82.5'
DRAINAGE AREA =	4.00 AC.±
L =	16'
VOLUME REQ'D =	7200 C.Y.
VOLUME PROVIDED =	7525 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	129
TOP OF EMBANKMENT =	135
OUTLET WEIR CREST ELEV. =	134
CLEANOUT ELEV. =	131.5
TRAP DEPTH =	5'

RIPRAP OUTLET SEDIMENT TRAP #15

BOTTOM DIMENSIONS =	10'x135'
DRAINAGE AREA =	6.0 AC.±
L =	14'
VOLUME REQ'D =	10800 C.Y.
VOLUME PROVIDED =	10000 C.Y.
DEPTH =	5'
BOTTOM ELEV. =	138
TOP OF EMBANKMENT =	144
OUTLET WEIR CREST ELEV. =	143
CLEANOUT ELEV. =	140.5
TRAP DEPTH =	5'

TRENCH NO.	OUTLET	TRENCH LGTH(ft)	PIPE SIZE	BOTTOM WIDTH(ft)	TOP WIDTH(ft)	DEPTH (ft)	d_{50} (ft)	FLOW (cfs)	SLOPE* (ft/ft)	AREA (sf)	V_{50} (fps)	"n" VALUE
1	S-1	33	24	4	5.81	0.45	0.5	12	0.20	2.22	5.42	0.063
2	S-2	70	18	2	3.93	0.48	0.5	7	0.18	1.43	4.93	0.063
3	S-3	77	30	6	8.19	0.56	0.5	19	0.11	3.88	4.89	0.060
4	S-4	225	24	5	6.29	0.32	0.5	9	0.24	1.81	4.97	0.063
5	S-5	100	30	7	8.94	0.49	0.5	20	0.15	3.88	5.15	0.063
6,7	S-6	160	48	12	16.26	1.06	1.0	71	0.06	15.08	4.71	0.072
8	S-7	72	36	6	8.97	0.74	1.0	29	0.15	5.55	5.22	0.072
9	S-8	138	24	4	5.36	0.34	0.5	8	0.24	1.56	5.03	0.063
10	S-9	107	36	8	11.65	0.76	1.0	37	0.13	7.26	5.09	0.072

RIPRAP SWALE

NOT TO SCALE

* MAX SLOPE SHALL BE AS INDICATED IN TABLE.

NOTE #1 INSTALL WPD 2.3 SANDBAG / STONE DIVERSION FOR CONSTRUCTION OF RIPRAP SWALE DOWN STREAMBANK TO THE STREAMBED

STATE OF MARYLAND — MICHAEL J. KEBO — No. 21611 — REGISTERED PROFESSIONAL ENGINEER — 12/16/03

DATE	DESCRIPTION	BY
12/16/03	ADDED ENTRANCES OFF DORSEY RUN ROAD	MJK

REVISIONS

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92 37 ~~38~~

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DM COOK — DATE 10/10/91

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RICHARD H. BERICH, P.E. — DATE 10/10/91

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/19/92

STATE OF MARYLAND — RICHARD H. BERICH — No. 10988 — REGISTERED PROFESSIONAL ENGINEER

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BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
GRADING, SEDIMENT CONTROL & WATER QUALITY INFILTRATION TRENCHES
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=50'

SHEET 11 OF ~~29~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB

REV-4004

P&J W.O.# 6368-40

STONE OUTLET SEDIMENT TRAP #16

BOTTOM DIMENSIONS =	60'x12'
DRAINAGE AREA =	2.60 AC.±
L =	10'
VOLUME REQ'D =	4680 C.F.
VOLUME PROVIDED =	7700 C.F.
DEPTH =	5'
BOTTOM ELEV. =	142
TOP OF EMBANKMENT =	148
OUTLET WEIR CREST ELEV. =	147
CLEANOUT ELEV. =	144.5
TRAP DEPTH =	5'

STONE OUTLET SEDIMENT TRAP #17

BOTTOM DIMENSIONS =	50'x21'
DRAINAGE AREA =	4.95 AC.±
L =	20'
VOLUME REQ'D =	8910 C.F.
VOLUME PROVIDED =	9300 C.F.
DEPTH =	5'
BOTTOM ELEV. =	133
TOP OF EMBANKMENT =	139
OUTLET WEIR CREST ELEV. =	138
CLEANOUT ELEV. =	135.5
TRAP DEPTH =	5'

STONE OUTLET SEDIMENT TRAP #18

BOTTOM DIMENSIONS =	45'x12'
DRAINAGE AREA =	3.20 AC.±
L =	13'
VOLUME REQ'D =	5760 C.F.
VOLUME PROVIDED =	6050 C.F.
DEPTH =	5'
BOTTOM ELEV. =	143
TOP OF EMBANKMENT =	149
OUTLET WEIR CREST ELEV. =	148
CLEANOUT ELEV. =	145.5
TRAP DEPTH =	5'

12/16/03	ADDED ENTRANCES OFF DORSEY RUN ROAD	MJK
DATE	DESCRIPTION	BY
REVISIONS		

MATCH LINE 4 SEE SHEET 11

DEEP RUN

25' WETLANDS BUFFER

TRAP #18

TRAP #17

TRAP #16

LIMIT OF WETLANDS (TYPICAL)

E 865,000

N 485,000

N 45°30'18" W 318.06'

CYRIL G. HARDY, ET AL
935/392
PARCEL 49
ZONED M-2

441.75'

25 L.F. 30" PERF. BCCMP

INFILTRATION TRENCH NO. 10
FOR PROFILE SEE SHT. 18
FOR DETAIL SEE SHT. 16

OBSERVATION WELL (TYP.)

172 L.F. 36" PERF. BCCMP

SEE NOTE 1 SHEET 11

SEE SHEET 13 FOR MITIGATION PLAN

30 LF 36" BCCMP

SEE NOTE 11 SHEET

RIPRAP SWALE (TYP.) SEE DETAIL SHT. 11

50 LF 24" BCCMP

140 L.F. 24" PERF. BCCMP

100 YEAR FLOODPLAIN

D.A. TRAP #18 3.20 AC.

D.A. TRAP #17 4.95 AC.

D.A. TRAP #15 6.00 AC.

150 L.F. 30" PERF. BCCMP

INFILTRATION TRENCH NO. 8
FOR PROFILE SEE SHT. 18
FOR DETAIL SEE SHT. 16

150 L.F. 24" PERF. BCCMP SEE SHEET 18

25 L.F. 18" PERF. BCCMP

140 L.F. 21" PERF. BCCMP SEE SHEET 18

INFILTRATION TRENCH NO. 9
FOR PROFILE SEE SHT. 18
FOR DETAIL SEE SHT. 16

WATER QUALITY INFILTRATION TRENCH (TYPICAL)

LIMIT OF PAVEMENT

D.A. TRAP #16 2.60 AC.

N 44°30'26" E 441.75'

N 45°29'34" W 585.41'

N 60°55'34" W 1060.47'

N 488,000 E 867,000

E 868,000 N 487,250

STANLEY KRISTIANSON
880/586
PARCEL 50
ZONED M-2

JOHN H. MEARS, JR., ET AL
883/670
PARCEL 51
ZONED M-2

25%+ STEEP SLOPE AREA (TYPICAL)

LIMIT OF DISTURBANCE

NEWSOME DORSEY INDUSTRIAL PARK LTD
PARCEL 321
ZONED M-2

DORSEY RUN ROAD

S 27°09'57" W 551.72'

FUTURE EXTENSION OF

30' REVERTIBLE GRADING EASEMENT (TYP)

STATE OF MARYLAND — MICHAEL J. KRAUSS — No. 17788 — REGISTERED PROFESSIONAL ENGINEER

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — 4/16/92 Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 4/16/92 Date — 37 / 38

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DIRECTOR — 5/8/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 6/1/92 DATE

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PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

GRADING, SEDIMENT CONTROL & WATER QUALITY INFILTRATION TRENCHES

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=50'

SHEET 12 OF ~~29~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

REV-4005

P&J W.O.# 6368-40

PLANT LIST

TREES

QUANTITY	BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	CONDITIONS	PRIMARY VALUATION
24	ACER RUBRUM	RED MAPLE	FAC	6'	B&B	WILDLIFE EROSION CONTROL
20	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAC	6'	B&B	WILDLIFE EROSION CONTROL
16	FRAXINUS PENNSYLVANICA	GREEN ASH	FACW	6'	B&B	WILDLIFE EROSION CONTROL
10	BETULA NIGRA 'HERITAGE'	RIVER BIRCH 'HERITAGE'	FACW	6'	B&B	EROSION CONTROL AESTHETICS
8	QUERCUS PALUSTRIS	PIN OAK	FACW	6'	B&B	WILDLIFE EROSION CONTROL
6	QUERCUS PHELLOS	WILLOW OAK	FAC+	6'	B&B	WILDLIFE EROSION CONTROL
7	PLATANUS OCCIDENTALIS	SYCAMORE	FACW-	6'	B&B	EROSION CONTROL AESTHETICS

SHRUBS

QUANTITY	BOTANICAL NAME	COMMON NAME	INDICATOR	SIZE	CONDITIONS	PRIMARY VALUATION
110	VIBURNUM DENTATUM	ARROW-WOOD	FAC	2'-3'	CONTAINER	WILDLIFE EROSION CONTROL
75	LINDERA BENZOIN	SPICE BUSH	FACW-	2'-3'	CONTAINER	WILDLIFE
50	CORNUS AMOMUM	SILKY DOGWOOD	FACW	2'-3'	CONTAINER	WILDLIFE EROSION CONTROL
25	VACCINIUM CORYMBOSUM	HIGH BUSH BLUEBERRY	FACW-	2'-3'	CONTAINER	WILDLIFE
12	SAMBUCUS CANADENSIS	ELDERBERRY	FACW-	2'-3'	CONTAINER	WILDLIFE
10	ILEX VERTICILLATA	WINTERBERRY HOLLY	FACW+	2'-3'	CONTAINER	WILDLIFE AESTHETICS

NOTES: SHRUBS ARE TO BE PLANTED 10' O.C. WITHIN THE MITIGATION AREA, TO IMITATE A NATURAL WOODLAND AREA.

WETLANDS LIMITS

EXISTING FLOOD PLAIN

DEEP RUN

WETLANDS LIMITS

EXISTING TREE LINE

1- WILLOW OAK
4- GREEN ASH
5- RED MAPLE
1- SYCAMORE

1- RIVER BIRCH
6- GREEN ASH
1- SWEET GUM
1- RIVER BIRCH
3- RED MAPLE
1- SYCAMORE
3- PIN OAK
1- WILLOW OAK
1- GREEN ASH
1- SYCAMORE
4- SWEET GUM
1- WILLOW OAK
1- PIN OAK
1- SYCAMORE
5- RED MAPLE
3- GREEN ASH

EXISTING 100 YR. FLOODPLAIN

1- GREEN ASH
1- RIVER BIRCH
1- SYCAMORE
1- PIN OAK
5- RED MAPLE

DRAINAGE AREA = 6.43 AC
Q10 = 54 CFS

RIP- RAP

36" BCCMP

20' WIDE GRASS FILTER STRIP

EXISTING TREE LINE

EARTH DIKE B-1

PROPOSED 100 YR. FLOODPLAIN

RIP- RAP

PROPOSED AUTO STORAGE AREA

DRAINAGE AREA = 1.35 AC
Q10 = 11 CFS

36" BCCMP

1- PIN OAK
1- GREEN ASH
3- RIVER BIRCH
3- WILLOW OAK
1- SWEET GUM

3- RED MAPLE
1- SYCAMORE
1- PIN OAK
LIMIT OF DISTURBANCE
EXISTING TREE LINE

EARTH DIKE B-1

1- PIN OAK
1- SWEET GUM
3- RED MAPLE
1- SYCAMORE
3- RIVER BIRCH

PROPOSED 100/YR. FLOODPLAIN

WETLAND LIMITS

EXISTING 100 YR. FLOOD PLAIN

NOTE: REFER TO MDE MITIGATION PLAN SET FOR CROSS-SECTIONS.

NOTE: MITIGATION AREA = 0.66 Ac.

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

37
35

EXPLORATION RESEARCH, INC.
Environmental Consultants
8318 Forrest Avenue, Suite 101
Historic Ellicott City, MD 21043
Tel: (301)750-1150, FAX: (301)750-7350

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT
JIM COOK — DATE 10/10/91

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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
RICHARD H. BERICH, P.E. — DATE 10/10/91

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92
4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

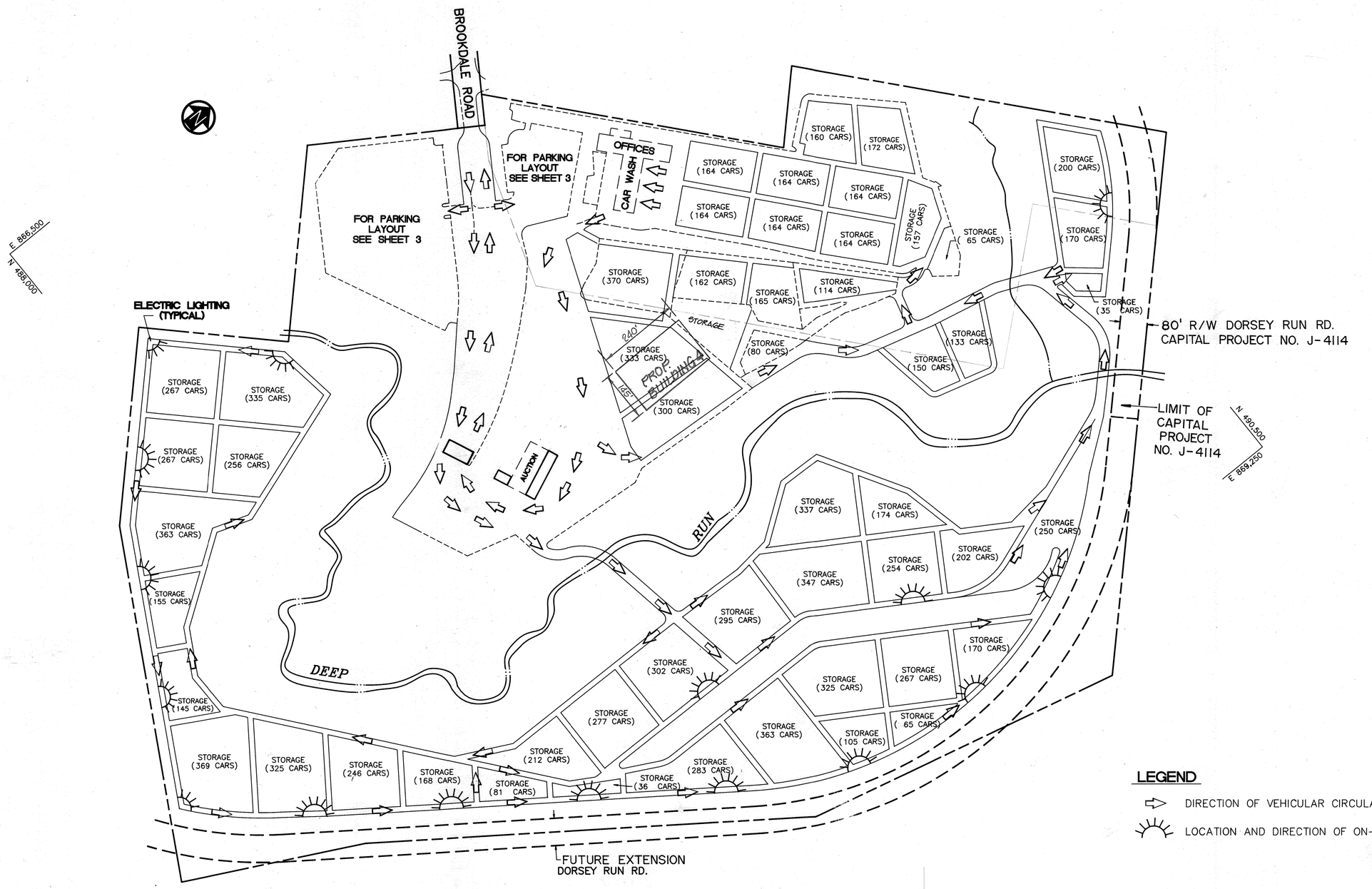
MITIGATION PLAN

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : MAY 31, 1991 — SCALE : 1"=20'

SHEET 13 OF 29
DES : MAM
DRAWN : JLB
CHK : DER/SLH
SDP-91-94

6368MIT

P&J W.O.# 6368-40



LEGEND

- DIRECTION OF VEHICULAR CIRCULATION
- LOCATION AND DIRECTION OF ON-SITE ILLUMINATION

STATE OF MARYLAND — VICTOR CHEW — NO. 19945 — REGISTERED PROFESSIONAL ENGINEER
10/21/97

5/22/02
FOR 4/23/02 REVISION

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
7/20/92	⚠ DELETE BLDGS. 3,4 & 5	ARW
10/21/97	REMOVE SWIM AREA, REPLACE BY STORAGE	V.C.
4/23/02	Added Prop. Bldg. 4	DH

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92
CD 4/30/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCELS #116 & #655 - PARCEL C, F-79-145 & 850/147, TAX MAP 43

CAR STORAGE & CIRCULATION PLAN

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=150'

SHEET 14 OF ~~29~~ 37 ~~35~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB

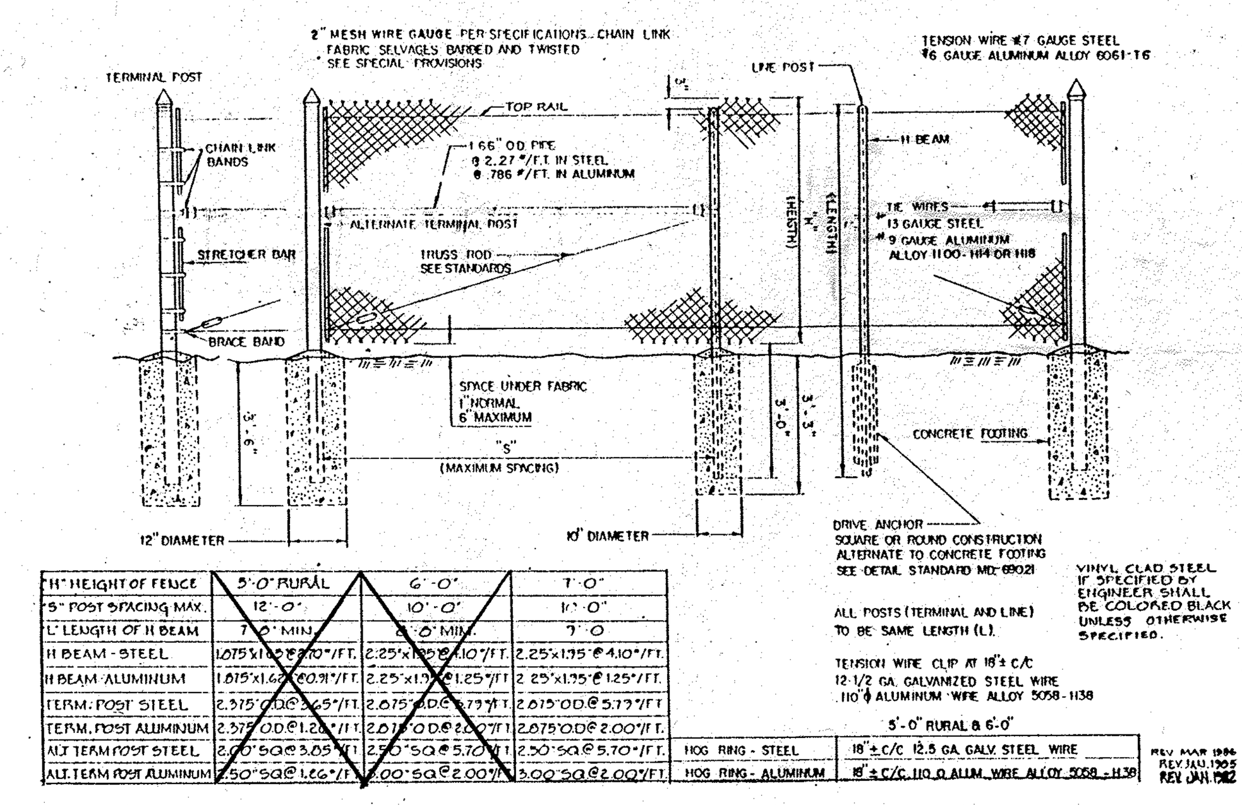
SDP-91-94

6368CAR
P&J W.O.# 6368-40

PLANTING LIST

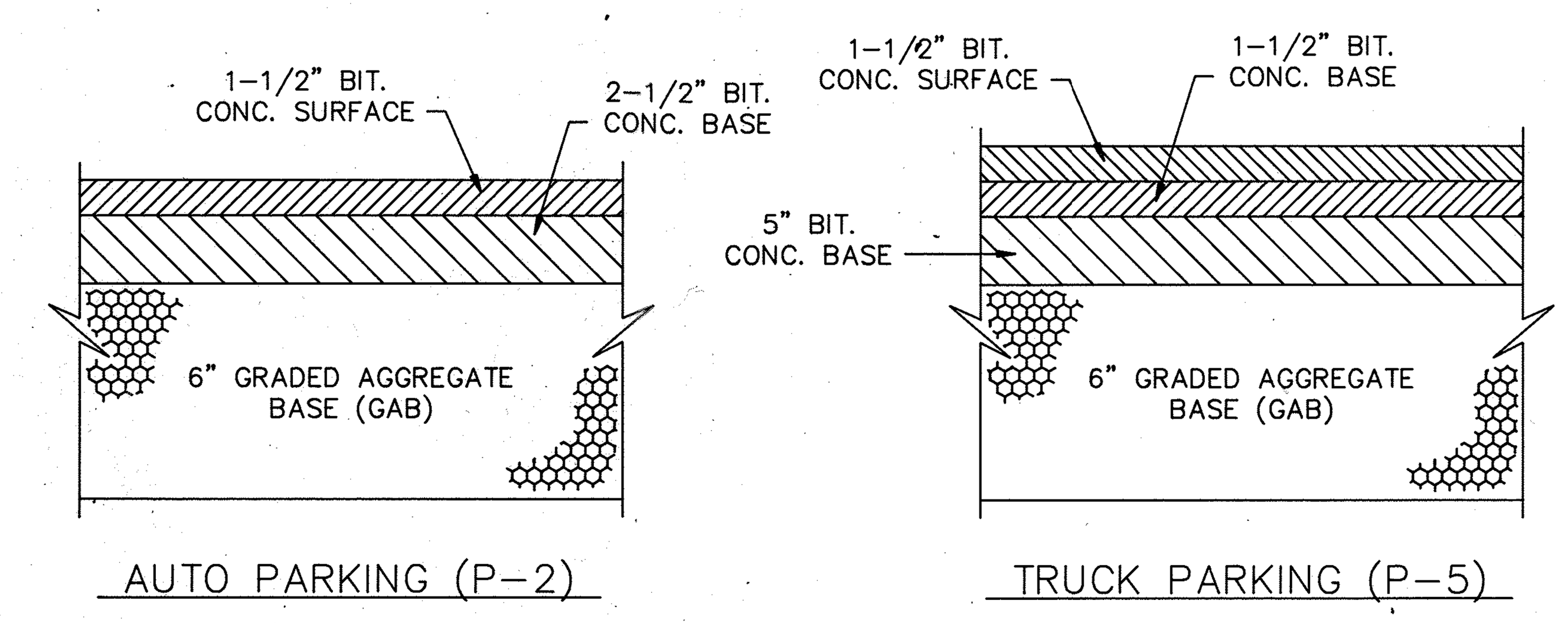
BOTANICAL NAME	COMMON NAME	NO.	SIZE	SPACING
TREES				
ACER RUBRUM	RED MAPLE	17	8'-10'	AS SHOWN
FAGUS GRANDIFOLIA	BEECH	6	8'-10'	AS SHOWN
GLEDITSIA TRIACANTHOS	HONEY LOCUST	1	8'-10'	AS SHOWN
LAGERSTROEMIA INDICA	CRAPEMYRTLE	56	4'-6'	AS SHOWN
LIQUIDAMBAR STYRACIFLUA	SWEETGUM	12	8'-10'	AS SHOWN
MAGNOLIA SOULANGEANA	SAUCER MAGNOLIA	4	6'-8'	AS SHOWN
PINUS NIGRA	JAPANESE BLACK PINE	33	4'-6'	AS SHOWN
PINUS STROBUS	WHITE PINE	306	8'-10'	AS SHOWN
PRUNUS CAROLINIANA	CAROLINA CHERRY LAUREL	4	6'-8'	AS SHOWN
QUERCUS RUBRA MAXIMA	EASTERN RED OAK	4	8'-10'	AS SHOWN
SALIX BABYLONICA	WEEPING WILLOW	2	8'-10'	AS SHOWN
SHRUBS				
ABELIA GRANDIFLORA	ABELIA	13	5 GAL.	8' O.C.
ELAEGNUS PUNGENS	ELAEAGNUS	18	5 GAL.	6' O.C.
PHOTINIA FRASERI	RED TIP PHOTINIA	49	8'-10'	AS SHOWN
GROUNDCOVERS				
LIRIOPE SPECIATA	LIRIOPE	4770	4" POT	2'0" O.C.
PACHYSANDRA TERMINALIS	JAPANESE SPURGE	120	4" POT	1'6" O.C.

NOTES: 3" PINE BARK MULCH ON ALL PLANTING BEDS



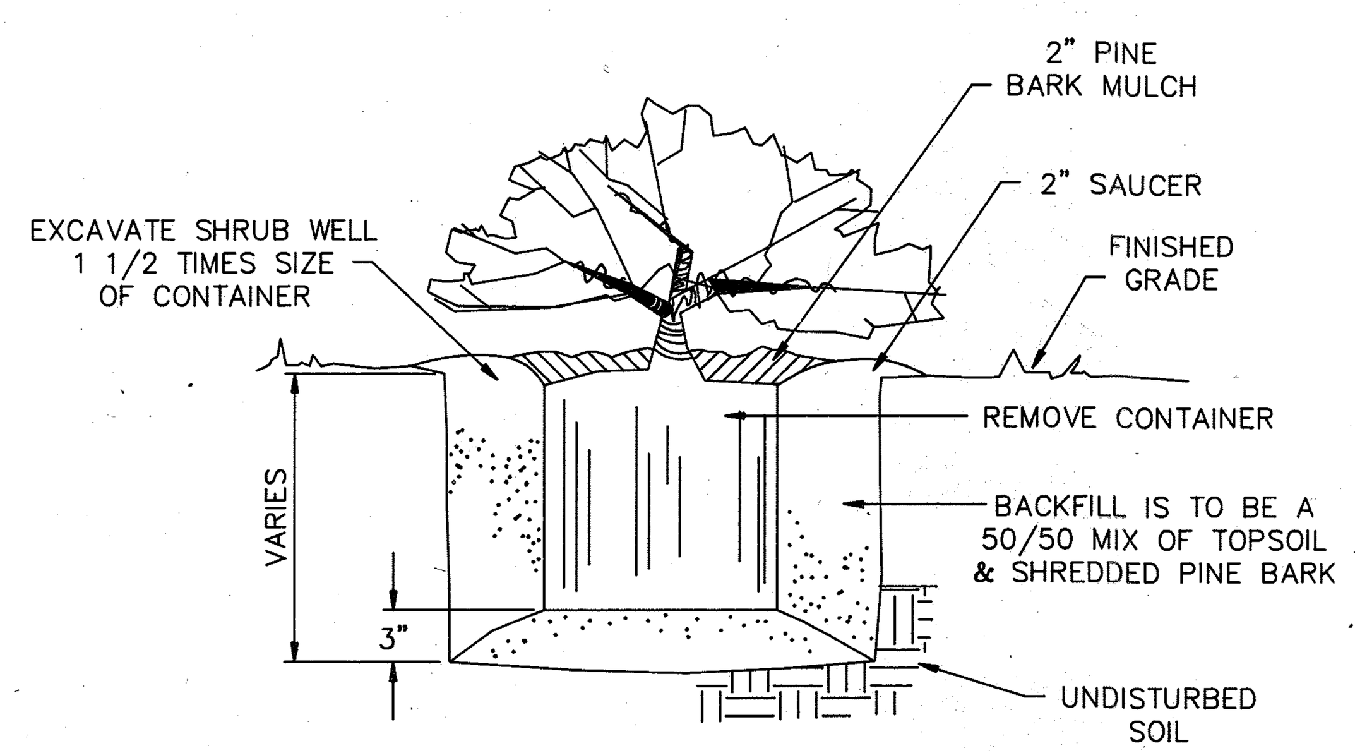
CHAIN LINK FENCE

NOT TO SCALE



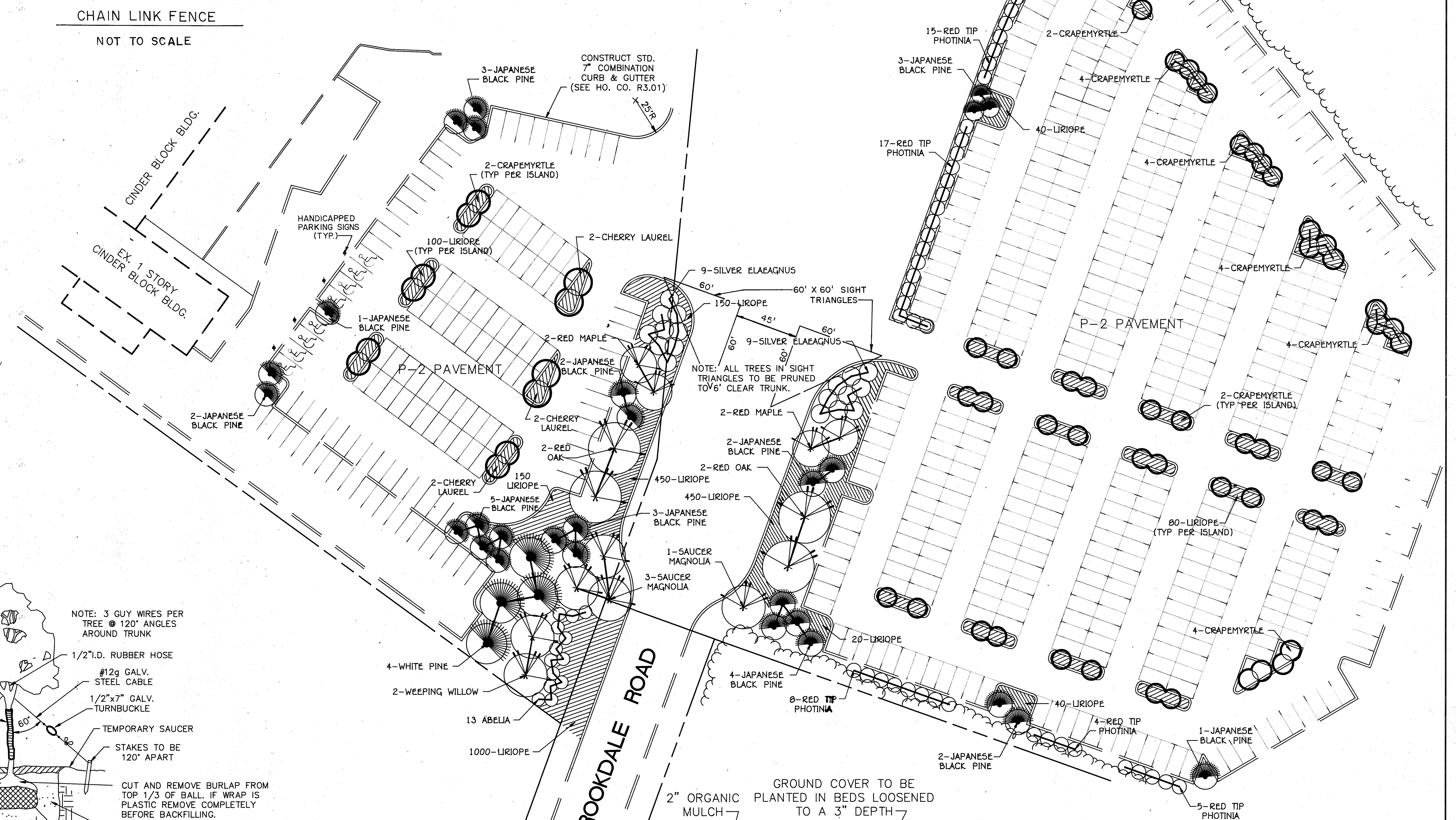
PAVEMENT SECTION DETAILS

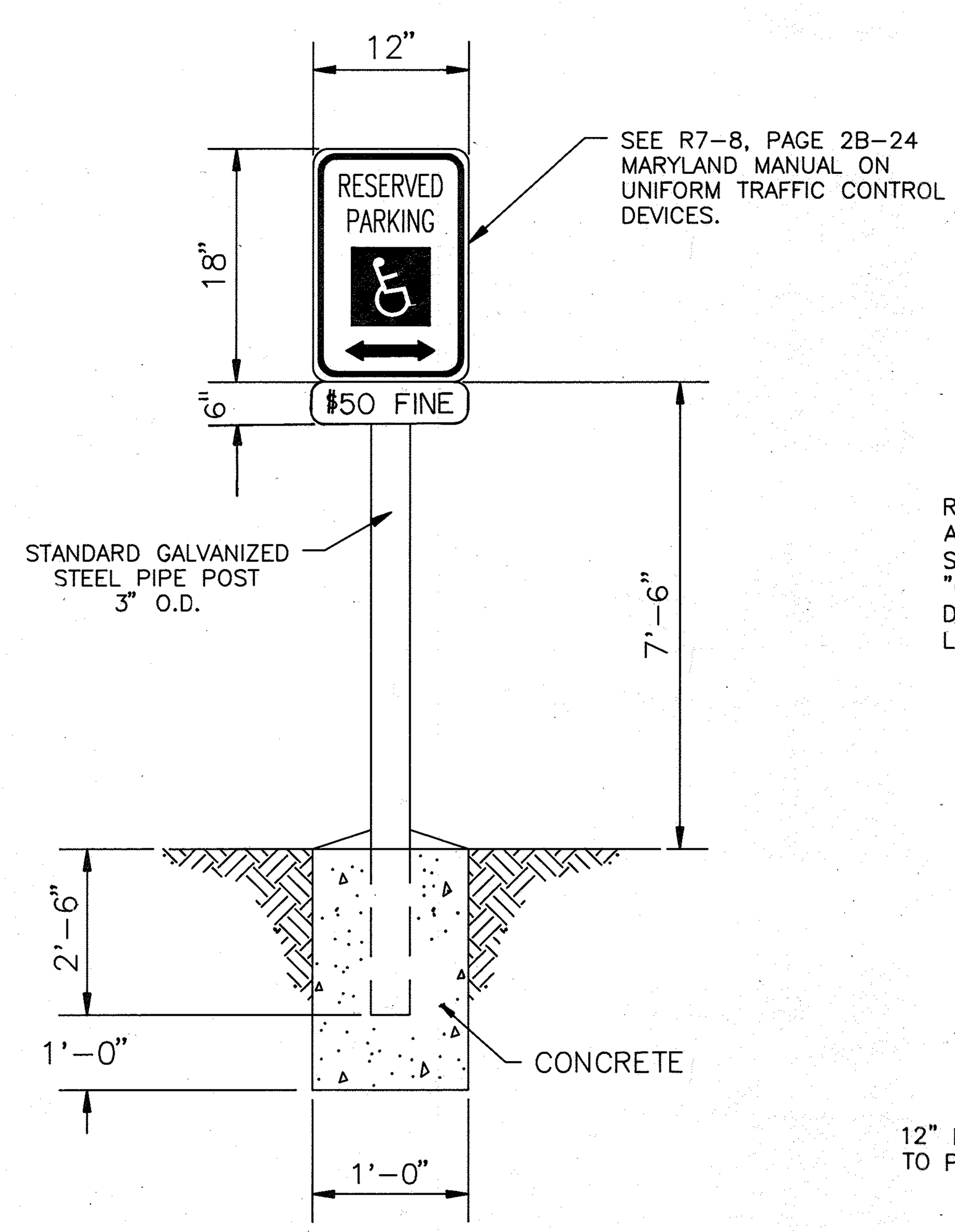
NOT TO SCALE



CONTAINER SHRUB PLANTING DETAIL

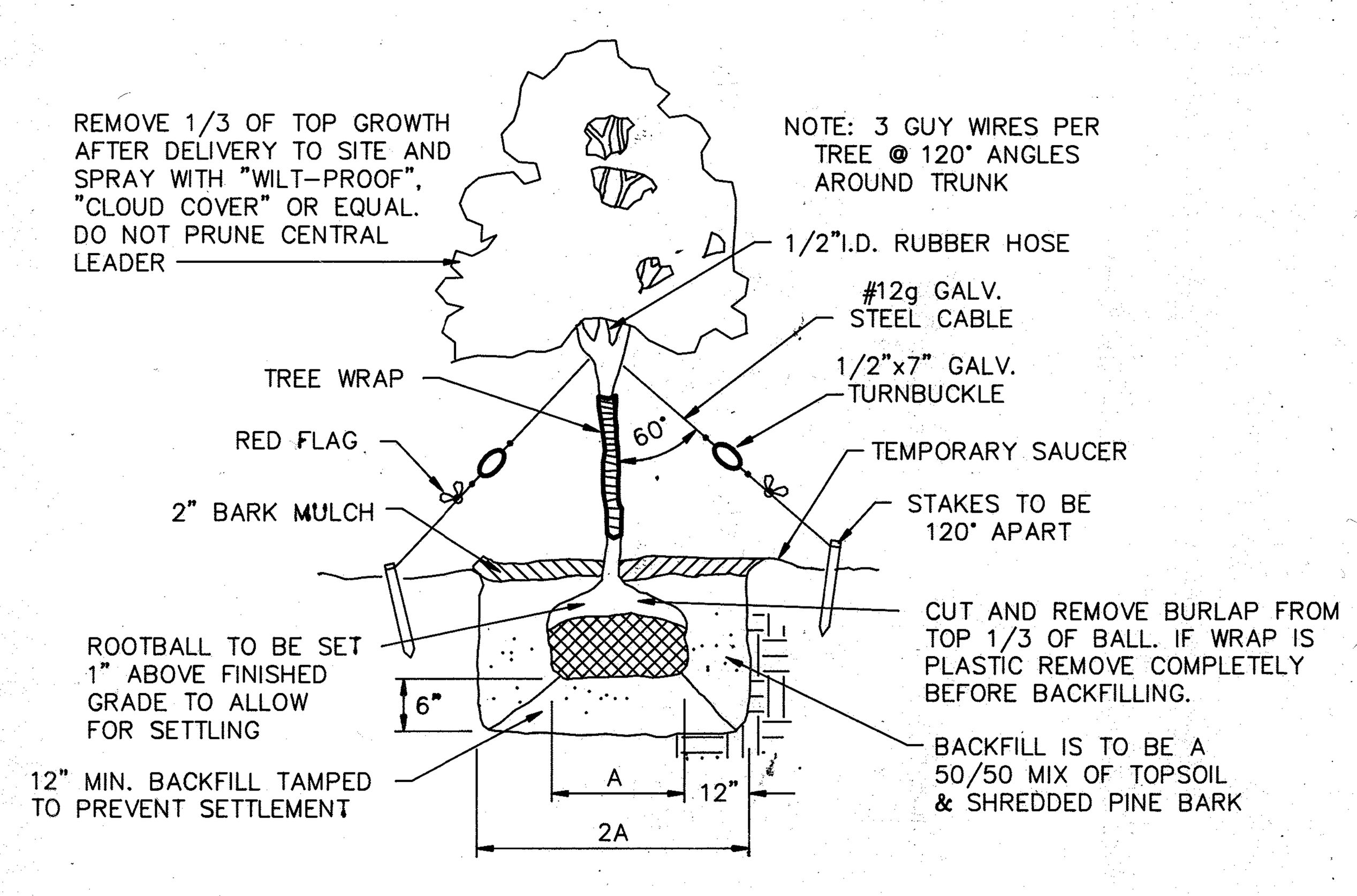
NOT TO SCALE





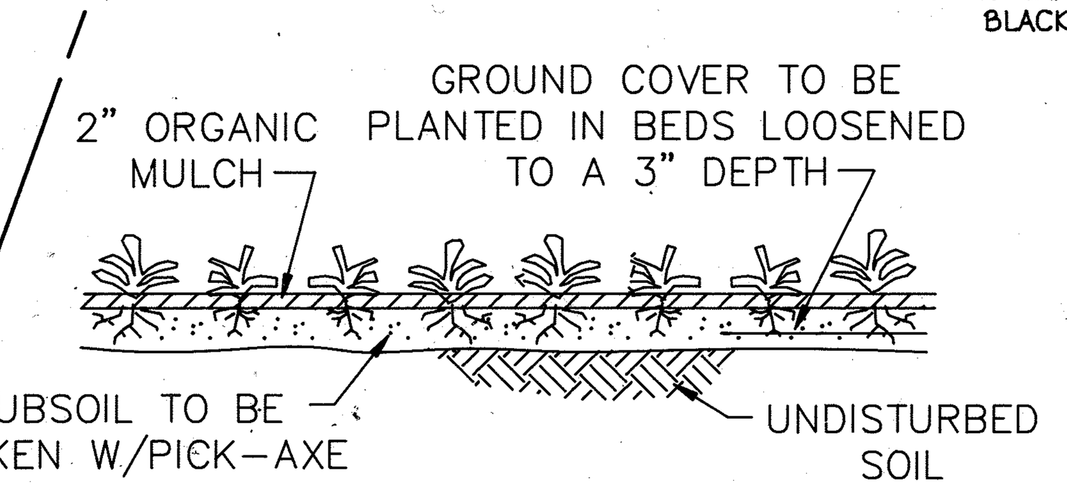
HANDICAPPED PARKING SIGN DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE



GROUNDCOVER PLANTING DETAIL

NOT TO SCALE

37
~~35~~

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OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
	REVISIONS	

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
5-5-92
COUNTY HEALTH OFFICER — DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
4/27/92
DIRECTOR — DATE
4-27-92
CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
5/8/92
DIRECTOR — DATE
5/7/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

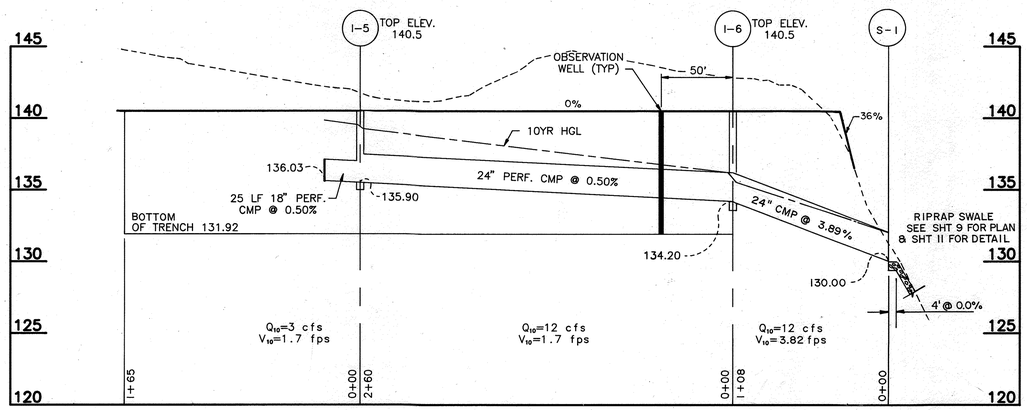
LANDSCAPING PLAN & DETAILS
REQUIRED PARKING AREA

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : 1"=40'

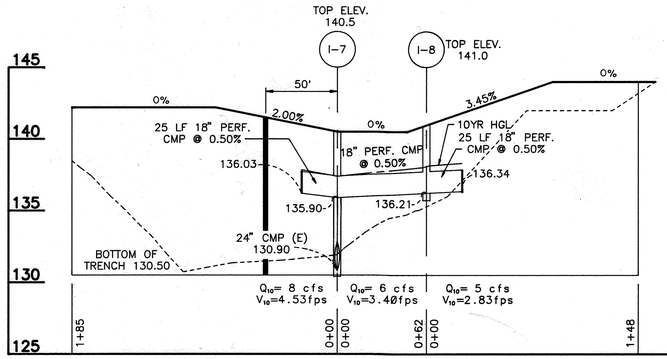
SHEET 15 OF ~~29~~
DES : GDT
DRAWN : REC
CHK : RHB
SDP-91-94

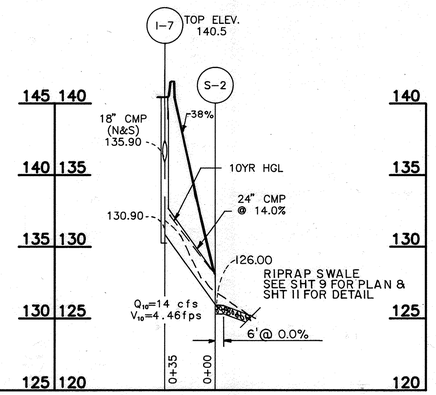
6368LSP

P&J W.O.# 6368-40

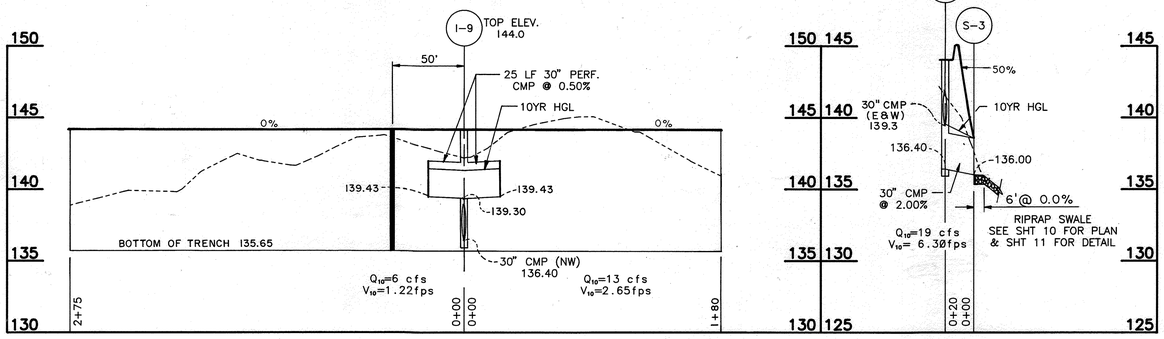


INFILTRATION TRENCH NO.1
SEE PLAN SHT 9

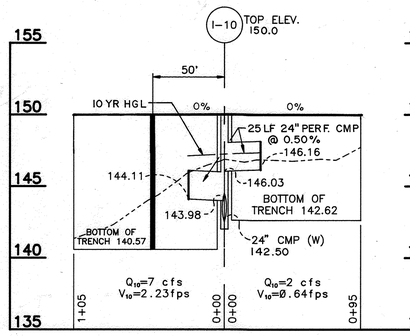


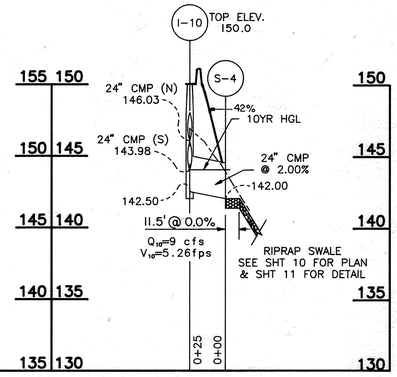


INFILTRATION TRENCH NO.2
SEE PLAN SHT 9

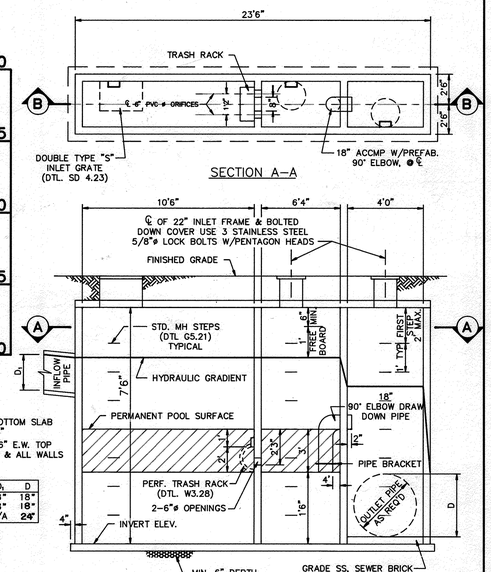


INFILTRATION TRENCH NO.3
SEE PLAN SHT 10



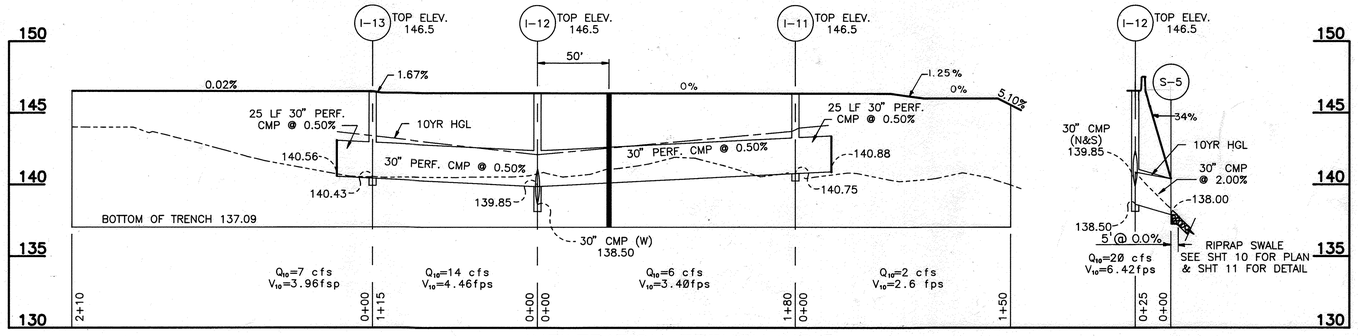


INFILTRATION TRENCH NO.4
SEE PLAN SHT 10

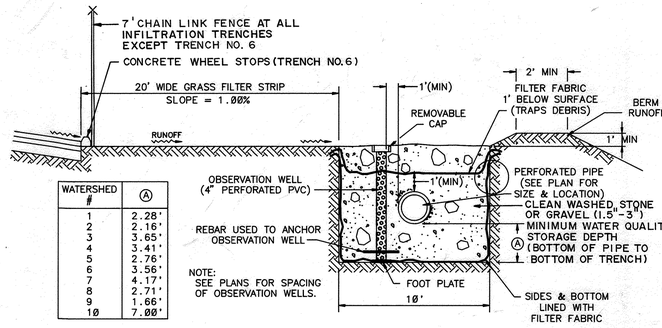


NOTES: TOP SLAB, BOTTOM SLAB & ALL WALLS ARE 8" REINFORCING – #4@6" E.W. TOP SLAB, BOTTOM SLAB & ALL WALLS

STRUCT #	D_1	D
1	18"	18"
2	18"	18"
3	N/A	24"



INFILTRATION TRENCH NO.5
SEE PLAN SHT 10



WATERSHED #	Ⓐ
1	2.28'
2	2.16'
3	3.65'
4	3.41'
5	2.76'
6	3.56'
7	4.17'
8	2.71'
9	1.66'
10	7.00'

WATER QUALITY INFILTRATION TRENCH
NOT TO SCALE

Reviewed for Howard Soil Conservation District and meets technical requirements

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
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Tel:(301)837-0194
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OWNER/DEVELOPER
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7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION
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JIM COOK — DATE 10/10/91

ENGINEER'S CERTIFICATION
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RICHARD H. BERICH, P.E. — DATE 10/10/91

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

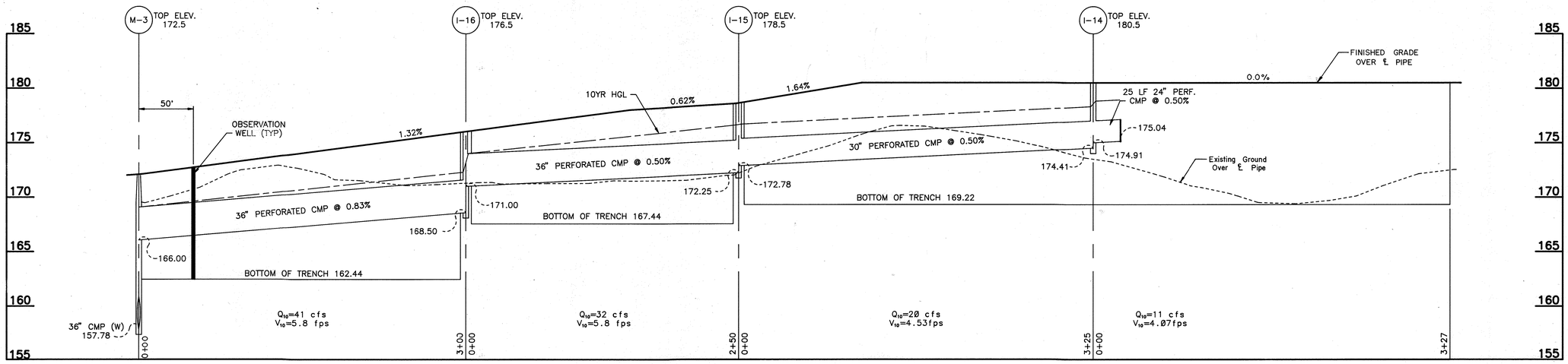
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92
(D 4/27/92)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

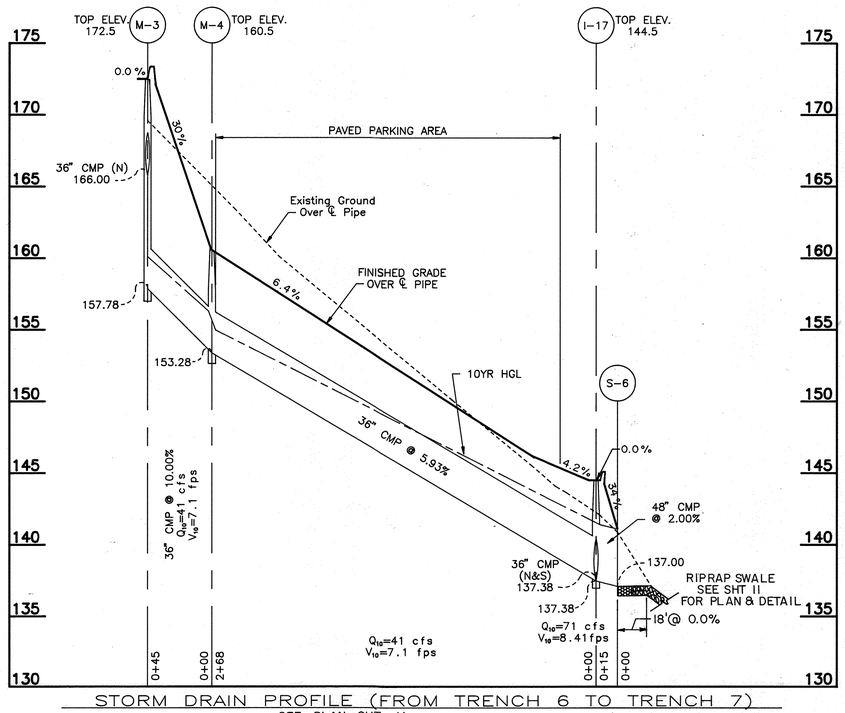
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
WATER QUALITY
INFILTRATION TRENCH PROFILES
FIRST ELECTION DISTRICT HOWARD COUNTY, MD
DATE : 9/20/91 SCALE: H.1"=50'/V.1"=5'

SHEET 16 OF 29
DES : GDT/DPW
DRAWN : REC
CHK : RHB
SDP-91-94

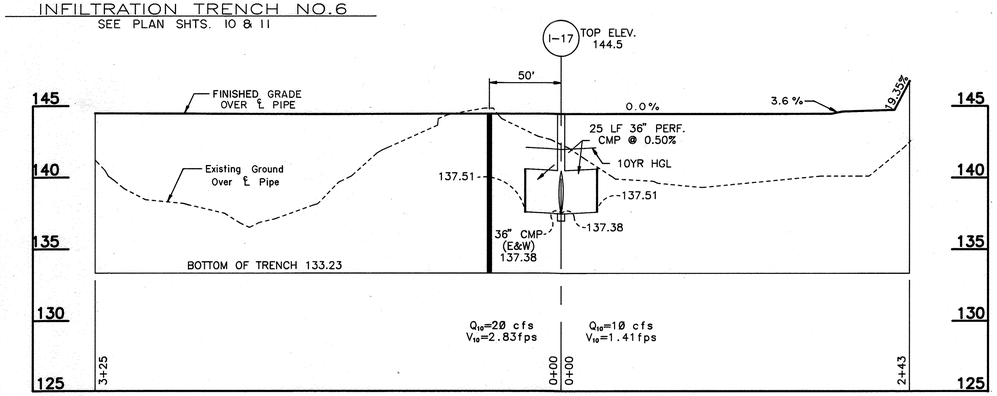
6368WQP1
P&J W.O.# 6368-40



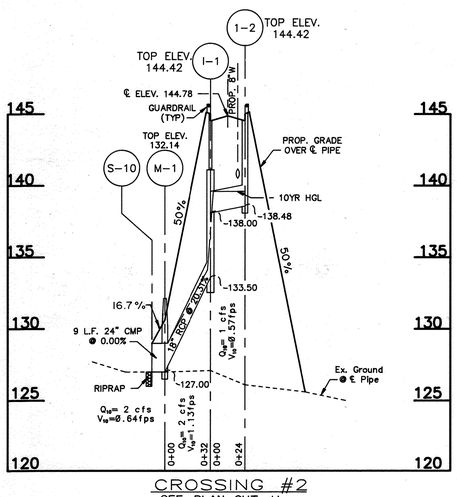
INFILTRATION TRENCH NO.6
SEE PLAN SHTS. 10 & 11



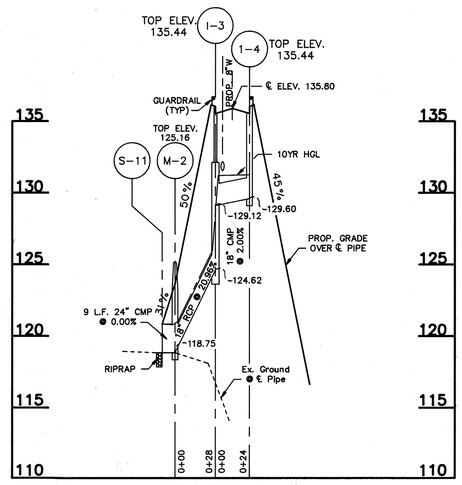
STORM DRAIN PROFILE (FROM TRENCH 6 TO TRENCH 7)
SEE PLAN SHT. 11



INFILTRATION TRENCH NO.7
SEE PLAN SHT. 11

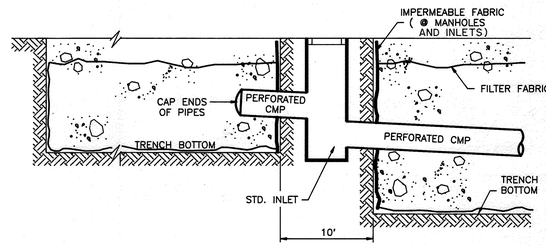


CROSSING #2
SEE PLAN SHT. 11

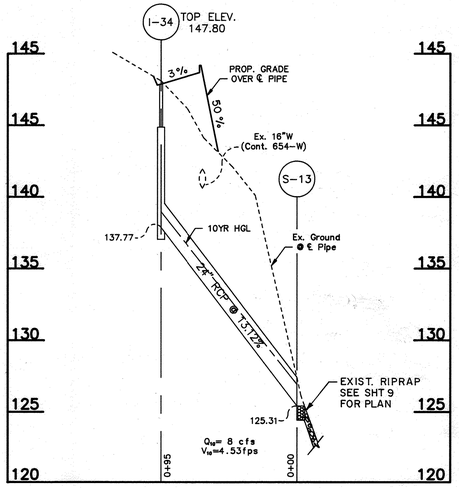


CROSSING #1
SEE PLAN SHT. 9

STORM DRAIN PROFILES @ STREAM CROSSINGS



WATER QUALITY INFILTRATION TRENCH
NOT TO SCALE



STORM DRAIN PROFILE
SEE PLAN SHT. 9

Reviewed by Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

37
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PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT
JIM COOK — DATE 10/10/91

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RICHARD H. BERICH, P.E. — DATE 10/10/91

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

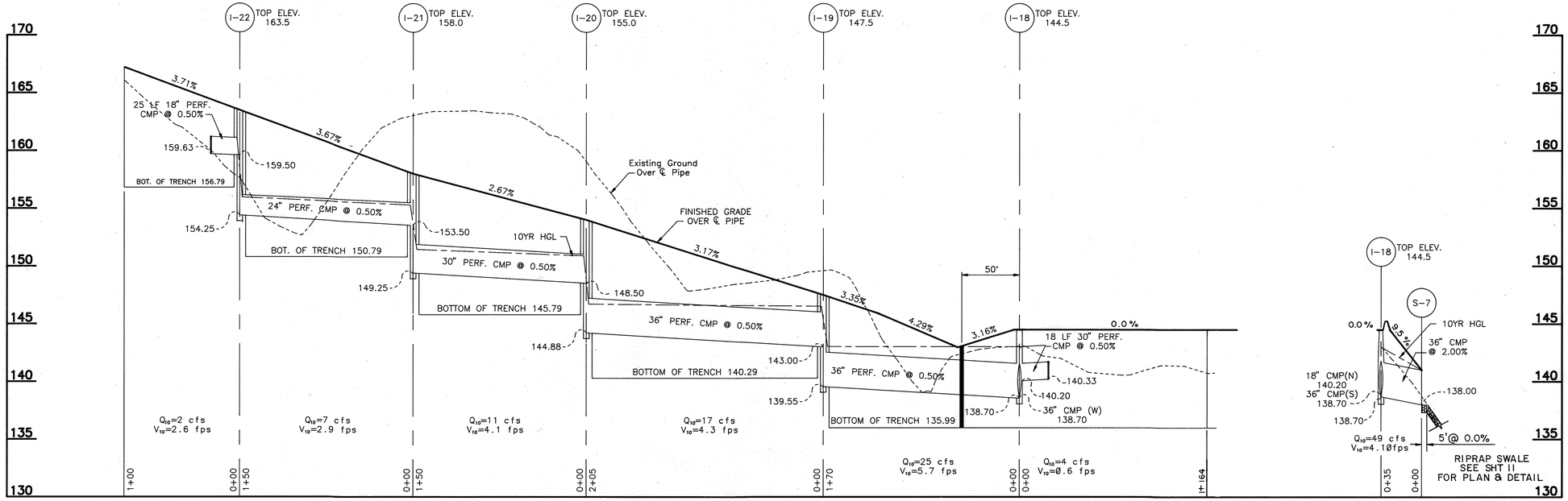
APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/20/92
CHIEF, BUREAU OF ENGINEERING — DATE 4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/6/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
WATER QUALITY
INFILTRATION TRENCH PROFILES
FIRST ELECTION DISTRICT HOWARD COUNTY, MD
DATE : 9/20/91 SCALE: H.1"=50'/V.1"=5'

SHEET 17 OF ~~29~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB
SDP-91-94

6368WGP2
P&J W.O.# 6368-40

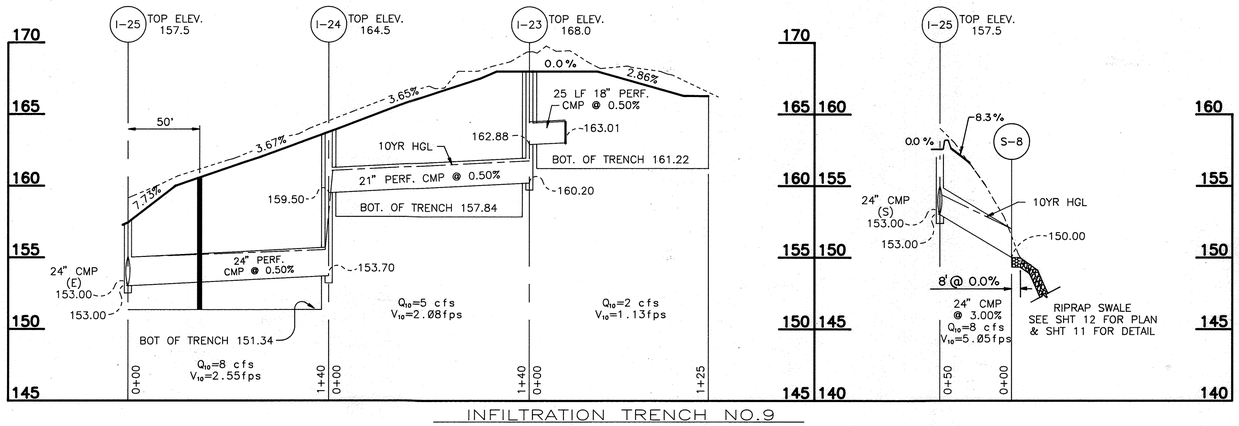


INFILTRATION TRENCH NO.8

SEE PLAN SHTS. 11 & 12

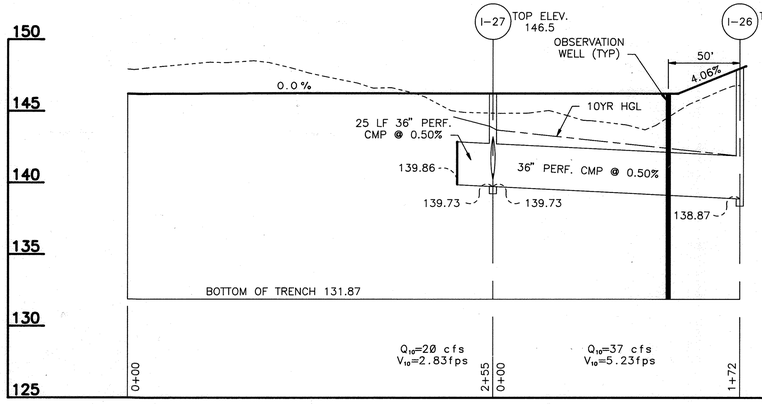
STRUCTURE SCHEDULE

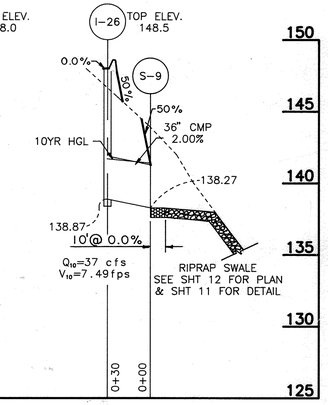
TRENCH #	STRUCT	RIM ELEV	INV IN	INV OUT	DETAIL #
1	I-5	140.50	135.50	135.50	SD 4.21
	I-6	140.50	134.20	134.20	SD 4.21
	S-1	—	—	130.00	SD 5.61
2	I-7	140.50	135.90	130.90	SD 4.21
	I-8	141.00	136.21	136.21	SD 4.21
	S-2	—	—	126.00	SD 5.61
3	I-9	144.00	139.30	136.40	SD 4.21
	S-3	—	—	136.00	SD 5.61
4	I-10	150.00	143.98	142.50	SD 4.21
	S-4	—	—	142.00	SD 5.61
5	I-11	146.50	140.75	140.75	SD 4.21
	I-12	146.50	139.85	138.50	SD 4.21
	I-13	146.50	140.43	140.43	SD 4.21
	S-5	—	—	138.00	SD 5.61
6,7	I-14	180.50	174.91	174.41	SD 4.21
	I-15	178.50	172.78	172.25	SD 4.21
	I-16	176.50	171.00	168.50	SD 4.21
	M-3	172.50	166.00	157.78	G 5.13
	M-4	160.50	153.28	153.28	G 5.13
	I-17	144.50	137.38	137.38	SD 4.21
	S-6	—	—	137.00	SD 5.61
8	I-22	163.50	159.50	154.25	SD 4.21
	I-21	158.00	153.50	149.25	SD 4.21
	I-20	155.00	148.50	144.88	SD 4.21
	I-19	147.50	143.00	139.55	SD 4.21
	I-18	144.50	140.20	138.70	SD 4.21
	S-7	—	—	138.00	SD 5.61
9	I-23	168.00	162.88	160.20	SD 4.21
	I-24	164.50	159.50	153.70	SD 4.21
	I-25	157.50	153.00	153.00	SD 4.21
	S-8	—	—	150.00	SD 5.61
10	I-26	148.50	138.87	138.87	SD 4.21
	S-9	—	—	138.27	SD 5.61
	I-27	146.50	139.23	139.73	SD 4.21
	I-1	144.42	138.00	133.50	W 3.26
	I-2	144.42	—	138.48	SD 4.34
	I-3	135.44	129.12	124.62	W 3.26
	I-4	135.44	—	129.60	SD 4.34
	I-34	147.80	—	137.77	W 3.26
	M-1	132.14	127.00	127.00	G 5.13
	M-2	125.16	118.75	118.75	G 5.13
	S-10	—	—	127.00	SD 5.61
	S-11	—	—	118.75	SD 5.61
	S-13	—	—	126.31	SD 5.61



INFILTRATION TRENCH NO.9

SEE PLAN SHT. 12





INFILTRATION TRENCH NO.10

SEE PLAN SHT. 12

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

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Howard Soil Conservation District — Date 4/16/92

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HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — DATE 5-5-92

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HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — DATE 4/22/92

CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — DATE 5/8/92

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
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TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

WATER QUALITY
INFILTRATION TRENCH PROFILES

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SDP-91-94

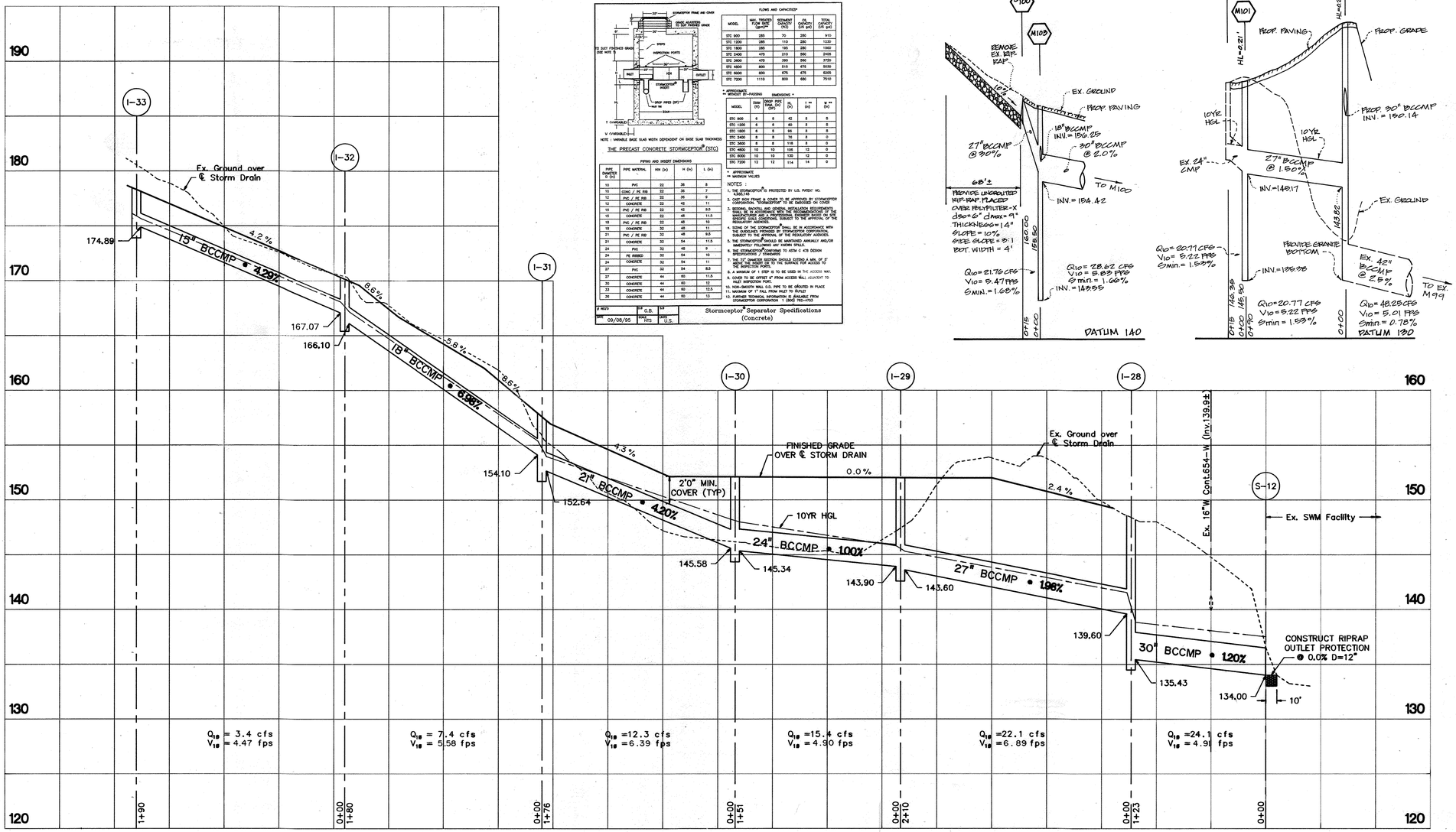
SHEET 18 OF 29

DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

6368WQP3

P&J W.O.# 6368-40



THE PRECAST CONCRETE STORMCEPTOR® (STC)

PIPING AND INSERT DIMENSIONS

PIPE DIAMETER 'D' (in)	PIPE MATERIAL	MIN. (in)	H (in)	L (in)
10	PVC	22	36	8
10	CONC. / PE RIB	22	36	7
12	PVC / PE RIB	22	36	9
12	CONCRETE	22	42	11
15	PVC / PE RIB	22	42	8.5
15	CONCRETE	22	48	11.5
18	PVC / PE RIB	22	48	10
18	CONCRETE	32	48	11
21	PVC / PE RIB	32	48	9.5
21	CONCRETE	32	54	11.5
24	PVC	32	48	9
24	PE RIBBED	32	54	10
24	CONCRETE	32	54	11
27	PVC	32	54	8.5
27	CONCRETE	44	60	11.5
30	CONCRETE	44	60	12
33	CONCRETE	44	60	12.5
36	CONCRETE	44	60	13

# REVS	BY	C.O.	LS
DATE 09/08/95	DRN. NTS	CHK'D U.S.	

Stormceptor® Separator Specifications (Concrete)

FLOWS AND CAPACITIES*

MODEL	MAX. TREATED FLOW RATE (gpm)**	SEDIMENT CAPACITY (YD³)	OIL CAPACITY (US gal)	TOTAL CAPACITY (US gal)
STC 300	285	70	280	910
STC 1200	285	110	280	1330
STC 1800	285	155	280	1860
STC 2400	475	210	550	2405
STC 3600	475	300	550	3720
STC 4800	800	515	675	5030
STC 6000	800	675	675	6305
STC 7200	1110	800	680	7510

* APPROXIMATE
** WITHOUT BY-PASSING

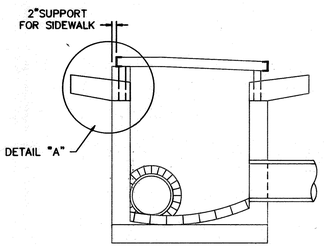
DIMENSIONS *

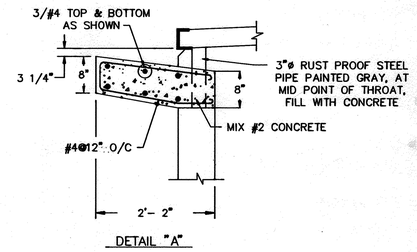
MODEL	Diam (FT)	DROP PIPE TANK (IN) (DP)	HL (in)	L** (in)	W** (in)
STC 300	6	6	42	8	6
STC 1200	6	6	60	8	6
STC 1800	6	6	86	8	6
STC 2400	8	8	76	8	8
STC 3600	8	8	118	8	8
STC 4800	10	10	106	12	8
STC 6000	10	10	130	12	8
STC 7200	12	12	114	14	8

* APPROXIMATE
** MINIMUM VALUES

NOTES :
1. THE STORMCEPTOR® IS PROTECTED BY U.S. PATENT NO. 4,985,148
2. CAST IRON FRAME & COVER TO BE APPROVED BY STORMCEPTOR AND MARKED WITH "STORMCEPTOR" TO BE EMBOSSED ON COVER
3. BEDDING, BACKFILL AND GENERAL INSTALLATION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER AND A PROFESSIONAL ENGINEER BASED ON SITE SPECIFIC GEOTECHNICAL DATA, SUBJECT TO THE APPROVAL OF THE REGULATORY AGENCIES.
4. SIZING OF THE STORMCEPTOR® SHALL BE IN ACCORDANCE WITH THE GUIDELINES PROVIDED BY STORMCEPTOR CORPORATION, SUBJECT TO THE APPROVAL OF THE REGULATORY AGENCIES.
5. THE STORMCEPTOR® SHOULD BE CLEANED OUT ANNUALLY AND/OR IMMEDIATELY FOLLOWING ANY KNOWN SPILLS.
6. THE STORMCEPTOR® CONFORMS TO ASTM C 478 DESIGN SPECIFICATIONS / STANDARDS
7. THE 27" DIAMETER SECTION SHOULD EXTEND A MIN. OF 3" ABOVE FINISH GRADE TO THE SURFACE FOR ACCESS TO INSPECTION PORTS.
8. A MINIMUM OF 1 STEP IS TO BE USED IN THE ACCESS WAY.
9. COVER TO BE OFFSET 9° FROM ACCESS WALL ALIGNMENT TO AVOID IMPINGING PIPES.
10. NON-SMOOTH WALL O.D. PIPE TO BE GROUTED IN PLACE
11. MAXIMUM OF 1" FALL FROM INLET TO OUTLET
12. FURTHER TECHNICAL INFORMATION IS AVAILABLE FROM STORMCEPTOR CORPORATION 1 (800) 752-4703

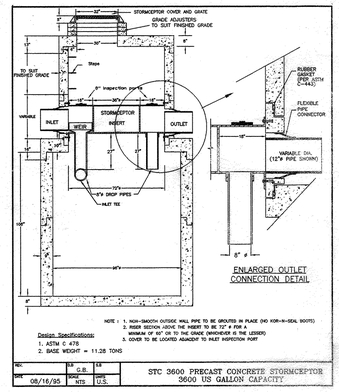
STRUCTURE SCHEDULE				
STRUCT	RIM ELEV	INV IN	INV OUT	DETAIL #
I-28	148.40	139.60	135.43	SD 4.34
I-29	152.03	143.90	143.60	SD 4.34
I-30	152.11	145.58	145.34	SD 4.34
I-31	157.59	145.10	152.64	SD 4.34
I-32	170.16	167.07	166.10	SD 4.34
I-33	178.31	—	174.89	SD 4.34
S-12	—	—	134.00	SD 5.61





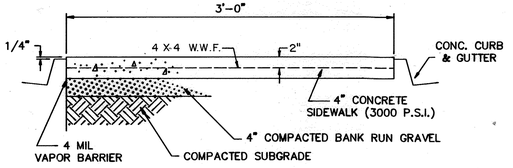
MODIFICATION OF EXISTING A-10 INLET

NOT TO SCALE



STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50'/VERT. 1"=5'
(SEE PLAN SHEET 8)



CONCRETE SIDEWALK SECTION

NOT TO SCALE

REVISION DONE BY CAPITOL DEVELOPMENT DESIGN, INC. ON 10-21-97. ADDED STORM DRAIN PROFILES, SIR M103 TO S100 ; EX. I100 TO M100. ADDED STORMCEPTOR DETAILS AND CONSTRUCTION NOTES. ADDED OPERATION AND MAINT. SCHEDULE FOR STORMCEPTOR.

STATE OF MARYLAND — VICTOR CHEN — No. 15881 — REGISTERED PROFESSIONAL ENGINEER

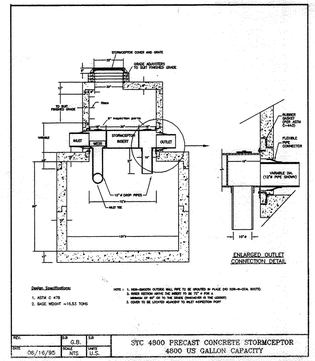
10/21/97

CONSTRUCTION NOTES FOR STORMCEPTOR

1. SILT AND DEBRLS SHALL NOT BE ALLOWED TO ENTER THE STORMCEPTOR UNTIL CONTRIBUTING DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED. SILT MAY BE ALLOWED TO ENTER STORMCEPTOR IF IT IS BEING USED AS A FINAL SEDIMENT CONTROL DEVICE.
2. ALL OPENING TO STRUCTURES SHALL BE PROTECTED WITH THE END OF THE APPROPRIATE SEDIMENT CONTROL MEASURED DURING CONSTRUCTION.
3. THE STORMCEPTOR MUST BE PUMPED OUT AND CLEANED AT THE END OF THE CONSTRUCTION PROJECT.

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

1. STORMCEPTOR WATER QUALITY STRUCTURES WILL REQUIRE PERIODIC INSPECTION AND CLEANING TO MAINTAIN OPERATION AND FUNCTION. OWNERS WILL HAVE THE STORMCEPTOR UNIT INSPECTED YEARLY OR AS REQUIRED BY HOWARD COUNTY, UTILIZING THE STORM-CEPTOR INSPECTION/MONITORING FORM. INSPECTIONS CAN BE DONE BY USING A CLEAR PLEXIGLAS TUBE ("SLUDGE JUDGE") TO EXTRACT A WATER COLUMN SAMPLE. WHEN SEDIMENT DEPTHS EXCEED THE SPECIFIED LEVEL (TABLE 9 OF TECHNICAL MANUAL) THEN CLEANING OF THE UNIT IS REQUIRED.
2. STORMCEPTOR WATER QUALITY STRUCTURES MUST BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLELIM SPILLS, CONTACT APPROPRIATE REGULATORY AGENCIES.
3. MAINTENANCE OF STORMCEPTOR UNITS SHOULD BE DONE BY A VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS AND OTHER MATERIALS IN UNIT. THE PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED.
4. INLET AND OUTLET PIPES MUST BE CHECKED FOR ANY OBSTRUCTIONS AND IF ANY OBSTRUCTIONS ARE FOUND THEY MUST BE REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR WILL BE REPAIRED AS NEEDED.
5. OWNER SHALL RETAIN AND MAKE STORMCEPTOR INSPECTION / MONITORING FORMS AVAILABLE TO HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.



Reviewed for Howard Soil Conservation District and meets technical requirements.

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COUNTY HEALTH OFFICER — 5-5-92 DATE

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HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — 4/29/92 DATE
CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE
4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — 6/8/92 DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

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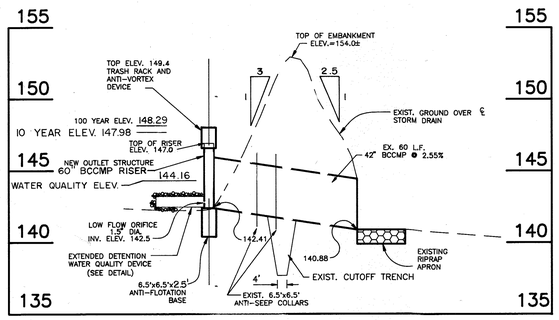
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
STORM DRAIN PROFILES & MISCELLANEOUS DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE: AS SHOWN

SHEET 19 OF 29
DES : GDT/EAB
DRAWN : REC/SC
CHK : RHB
SDP-91-94

SD-PRFL

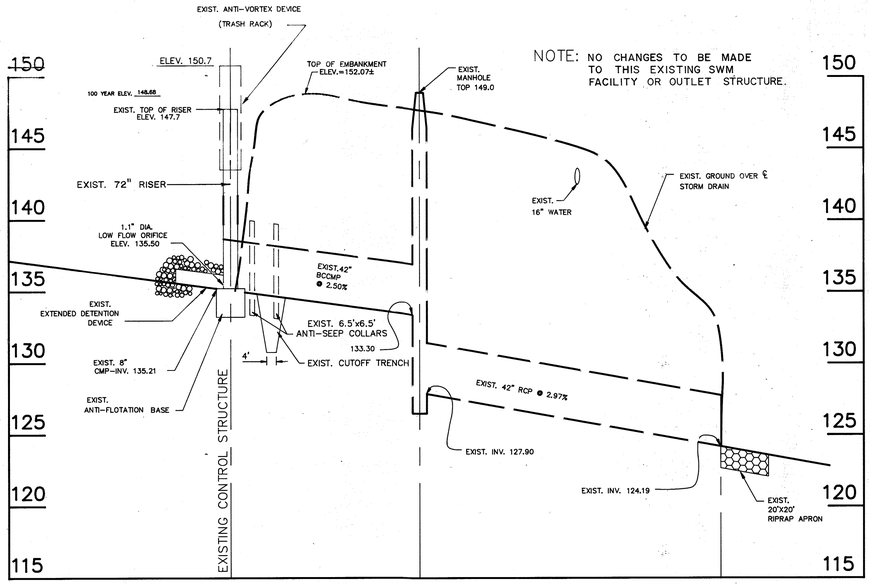
P&J W.O.# 6368-40



NOTE: REMOVE AND DISPOSE OF THE EXISTING OUTLET STRUCTURE AND INSTALL THE NEW OUTLET STRUCTURE AS SHOWN.

WATER QUALITY BASIN #1(EX. SWM FAC. SDP-85-68)

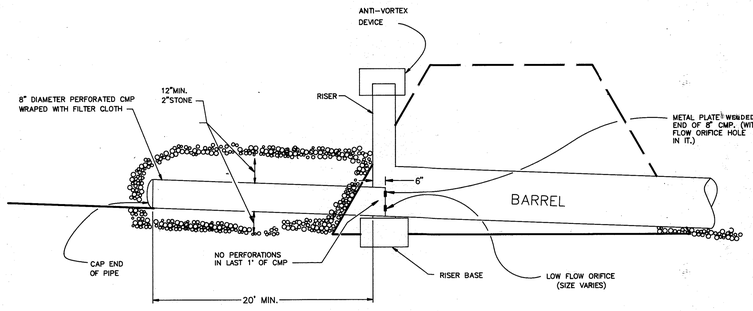
SCALE: HORIZ. 1"=30'/VERT. 1"=5'



NOTE: NO CHANGES TO BE MADE TO THIS EXISTING SWM FACILITY OR OUTLET STRUCTURE.

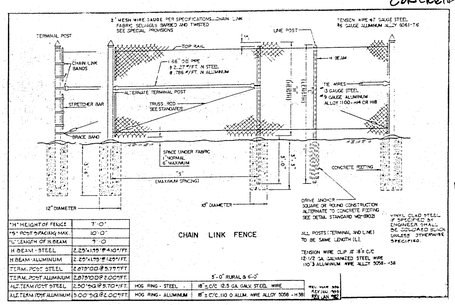
WATER QUALITY BASIN #2(EX. SWM FAC. SDP-89-212)

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



BASIN #1 & #2 EXTENDED DETENTION / DEWATERING DEVICE

NOT TO SCALE



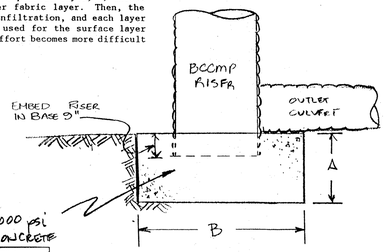
"H" HEIGHT OF FENCE	7'-0"
"S" POST SPACING MAX.	10'-0"
"L" LENGTH OF STREAM	9'-0"
H BEAM - STEEL	2.25 LBS/FT MIN/TYP
H BEAM - ALUMINUM	2.25 LBS/FT MIN/TYP
TERM. POST STEEL	2.27 LBS/FT MIN/TYP
TERM. POST ALUMINUM	2.27 LBS/FT MIN/TYP
LINE POST STEEL	1.50 LBS/FT MIN/TYP
LINE POST ALUMINUM	1.00 LBS/FT MIN/TYP

CHAIN LINK FENCE

NOTE: RISER BASE IS SQUARE IN PLAN VIEW

RISER BASE

NTS



WATER QUALITY BASIN	A	B
#1	2.5'	6.5'
#2	EXISTING TO REMAIN	
#3	2.5'	8.0'

MAINTENANCE REQUIREMENTS FOR INFILTRATION TRENCHES

Routine Maintenance

The routine maintenance requirements of trenches are not great. However, getting property owners to actually perform them may be very difficult. Trenches are smaller and more inconspicuous than most other BMPs, and when located underground, may not be visible or accessible. As a result, residents are not likely to exhibit much concern over trench maintenance as they might for more visible BMPs, such as wet or extended detention ponds. For these reasons, a public sector commitment to regularly inspect privately owned trenches is a necessity. Property owners will need to be educated about the function and maintenance requirements of the trench. A legally binding maintenance agreement should be included with the property deed that clearly describes maintenance tasks and schedules. Further, the agreement should grant access for regular inspections, and enable the public sector to perform maintenance (and bill the owners) if the trench has been neglected. Some of the normal maintenance tasks for trenches are detailed below.

INSPECTION

The trench should be inspected several times in the first few months of operation, and then annually thereafter. The inspections should be conducted after large storms to check for surface ponding that might indicate local or wide spread clogging. Water levels in the observation well should be recorded over several days to check trench drainage. Surface trenches can be inspected by hand by digging with a trowel down to the first layer of filter fabric located one foot below the surface.

BUFFER MAINTENANCE

The condition of the grass buffer strips in surface trenches should be inspected annually. Growth should be vigorous and dense. Bare spots, eroded areas, or "burned out" areas (from road salt or gasoline spills) should be reseeded or re-sodded. Watering and/or fertilization should be provided during the first few months after the strip is established, and may periodically be needed in times of drought.

MOWING

Grass filter strips should be mowed at least twice a year to prevent woody growth as well as for aesthetic reasons. Filter strips in residential areas will need to be mowed more frequently (10 to 14 times per year). Filter strip performance will be impaired if the grass is cut too short (Tollner, 1976). To prevent lawn clippings from clogging the trench, mowers should be equipped with baggers or at a minimum be directed away from the trench.

SEDIMENT REMOVAL

The pre-treatment inlets of underground trenches should be checked periodically and cleaned out when sediment depletes more than 10% of available capacity. This can be done manually or by a vacuum pump. Inlet and outlet pipes should be checked for clogging and vandalism.

TREE PRUNING

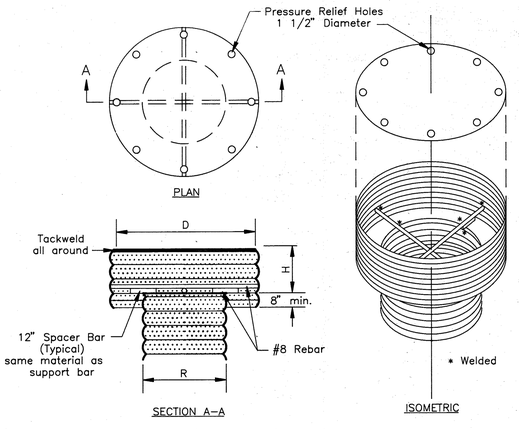
Adjacent trees may need to be trimmed if their drip-line (i.e. the reach of the branches) extends over a surface trench so that tree leaves do not clog the trench. In addition, pioneer trees that start to grow in the vicinity of a trench should be removed immediately thereby avoiding root puncture of the filter fabric through which sediment might enter the structure.

Non-Routine Maintenance

The primary non-routine maintenance task involves rehabilitation of the trench after it becomes clogged. Unfortunately, acceptably designed trenches have only recently come into use in the Washington, D.C. area. As a result, there is no reliable estimate as to how long trenches will function before they clog. Emphasis throughout this chapter has been on designs and procedures which minimize the likelihood of clogging. However, it is probable that some trenches will eventually clog despite careful design, construction and maintenance. Md WRA (1985b) suggests that the longevity of trenches may be on order of 10-15 years.

Clogging in surface trenches is most likely to occur near the top of the trench, between the upper layer of stone and the protective layer of filter fabric. Surface clogging can be relieved by carefully removing the top layer of stone, removing the clogged filter fabric, installing new filter fabric, and cleaning or replacing the top stone layer. The costs for rehabilitating a surface trench are not known, but are not likely to exceed 20% of the initial construction cost.

Clogging of underground trenches is a much more serious problem, as it is likely to occur at the bottom of the trench, at the filter fabric/soil interface. Rehabilitation of an underground trench requires the removal of 1) the topsoil/vegetation layer, 2) the protective plastic layer, 3) entire stone aggregate layer, and 4) the bottom filter fabric layer. Then, the subsoil layer must be tilled to promote better infiltration, and each layer must be replaced. If pavement or concrete are used for the surface layer (instead of topsoil/grass), the rehabilitation effort becomes more difficult and costly.



Top is 12 gauge corrugated metal or 1/8" steel plate. Pressure relief holes may be omitted if ends of corrugations are left fully open when corrugated top is welded to cylinder. Cylinder is 14 gauge corrugated metal pipe or fabricated from 1/8" steel plate.

Notes :
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to top of the riser or attached by straps bolted to top of riser.

BASIN#	D	H	R
1	90"	29"	60"
2	102"	36"	72"(EXISTING

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

NOT TO SCALE

MAINTENANCE REQUIREMENTS FOR EXTENDED DETENTION PONDS

Extended detention ponds have moderate to high maintenance requirements, depending on the extent to which future maintenance needs are anticipated during the design stage. Responsibilities for both routine and non-routine maintenance tasks need to be clearly understood and enforced. If regular maintenance and inspections are not undertaken, the pond will not achieve its intended purpose. For example, in two recent surveys, 40-50% of conventional dry ponds built in suburban Maryland were found to be structurally unsatisfactory as a result of poor or no maintenance (Geiss et al., 1984; Md WRA, 1986a). The basic elements of a dry extended detention pond maintenance program are described below.

Routine Maintenance

MOWING

The upper stage, side-slopes, embankment and emergency spillway of an extended detention dry pond must be mowed at least twice a year to discourage woody growth and control weeds. More frequent mowing may be required in residential areas by adjacent home-owners. This usually entails about 14 mowings annually, and constitutes the largest routine maintenance expense. Soggy conditions can make mowing costly and difficult within the pond unless a two-stage design is used. The use of native or introduced grasses which are water-tolerant, hardy and slow-growing are recommended. Some representative species, such as K-31 Tall Fescue, Crown Vetch, and Switchgrass are listed in the basin landscaping guide provided in Chapter 9 (see also Table 51 in Md SCS, 1983).

INSPECTIONS

Ponds should be inspected on an annual basis to ensure that the structure operates in the manner originally intended. When possible, inspections should be conducted during wet weather to determine if the pond is meeting the targeted detention times. In particular, the extended detention control device should be regularly inspected for evidence of clogging, or conversely, for too rapid a release. The upper stage pilot channel, and the flow path to the lower stage should be checked for erosion problems. Other problems which should be checked for include: subsidence, erosion, cracking or tree growth on the embankment; the condition of the emergency spillway; the accumulation of sediment around the riser; the adequacy of upstream/downstream channel erosion control measures; erosion of the pond's bed and banks; and modifications to the pond or its contributing watershed that may influence pond performance. Inspections should be carried out with as-built pond plans in hand.

DEBRIS AND LITTER REMOVAL

Debris and litter will accumulate near the extended detention control device and should be removed during regular mowing operations. Particular attention should be paid to floatable debris that can eventually clog the control device or riser.

EROSION CONTROL

The pond side-slopes, emergency spillway and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems. Similarly, the riprap that connects the pilot channel of the upper stage with the lower stage may periodically need to be regrouted or repaired.

NUISANCE CONTROL

Standing water or soggy conditions within the lower stage of an extended dtention pond can create nuisance conditions for nearby residents. Odors, mosquitos, weeds and litter are all occasionally perceived to be problems in dry ponds (Adams et al., 1983). Host of these problems are generally a sign that regular inspections and maintenance are not being performed (e.g., mowing, debris removal, clearing the extended detention control device). Nuisance problems can be concentrated into the lower stage if a two stage design is used. Also, wetland plants established in the lower stage can harbor birds and predacious insects that serve as a natural check on mosquitos, and will also conceal trash and debris.

Non-Routine Maintenance

STRUCTURAL REPAIRS AND REPLACEMENT

Eventually, the various inlet/outlet and riser works in a pond will deteriorate and must be replaced. Some local public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 years, whereas reinforced concrete barrels and risers may last from 50 to 75 years (HNCPPC, 1985). No stormwater management ponds have been in the ground for more than twenty years in the Washington region, and as a result, there is not much local experience in this area. However, since the various water works constitute about 25% of the initial construction cost (Wiegand et al., 1986), their replacement will be a significant future expense.

SEDIMENT REMOVAL

When properly designed, dry extended detention ponds will accumulate significant quantities of sediment over time. Sediment accumulation is a serious maintenance concern in dry extended detention ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the pond. The best available estimate is that approximately 1% of the storage volume capacity associated with the two year design storm can be lost annually (a more precise estimate can be be made using the Simple Method in Chapter 1). Thus, as much as 20% of a pond's total storage capacity can be lost within 20 years. Even more storage capacity can be lost if the pond receives large sediment input during the construction phase. Second, unlike wet extended detention ponds (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention ponds very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device of dry extended detention ponds. Sediment deposition increases the risk that either the orifice or the filter medium will become clogged, and also gradually reduces storage capacity reserved for pollutant removal in the lower stage.

For these reasons, accumulated sediment may need to be removed from the lower stage every 5 to 10 years in a dry extended detention pond. More frequent spot clean-outs may be needed around the detention control device for some designs. Sediment removal operations are relatively simple if access for heavy equipment is provided. Front-end loaders or backhoes can be used to scrape off the bulk of the accumulated sediment, followed by manual removal of sediment deposited around the the control device. The disturbed area should be immediately stabilized with vegetation after removal operations are completed to prevent the control device from clogging again. The cost of mechanical sediment removal in extended detention ponds typically ranges from $5 to $10 per cubic yard (cy), depending on the size and accessibility of the pond. If an on-site disposal area is not available, then transport and landfill tipping fees may double or even triple the total cost of sediment removal operations.

The procedures and cost associated with sediment removal in wet extended detention ponds are somewhat different, and are discussed in greater detail in Chapter 4.

Although sediment removal must be performed more frequently in dry extended detention ponds than in wet ponds, the removal cost per clean-out cycle may be lower. One reason is that the sediment in extended detention ponds can dry out between storms, and consequently has a greater density than wet pond sediments (i.e., a ton of sediment will displace less volume in an extended detention pond). In addition, the relatively dry extended detention pond sediments do not need to be "de-watered" in special holding sites prior to disposal. Finally, the more expensive drag-line or hydraulic dredging methods required for sediment removal in larger wet ponds are not needed.

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

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OWNER/DEVELOPER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.

7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

SW COOK — 10/10/91 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5-5-92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/29/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE

4/29/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/6/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

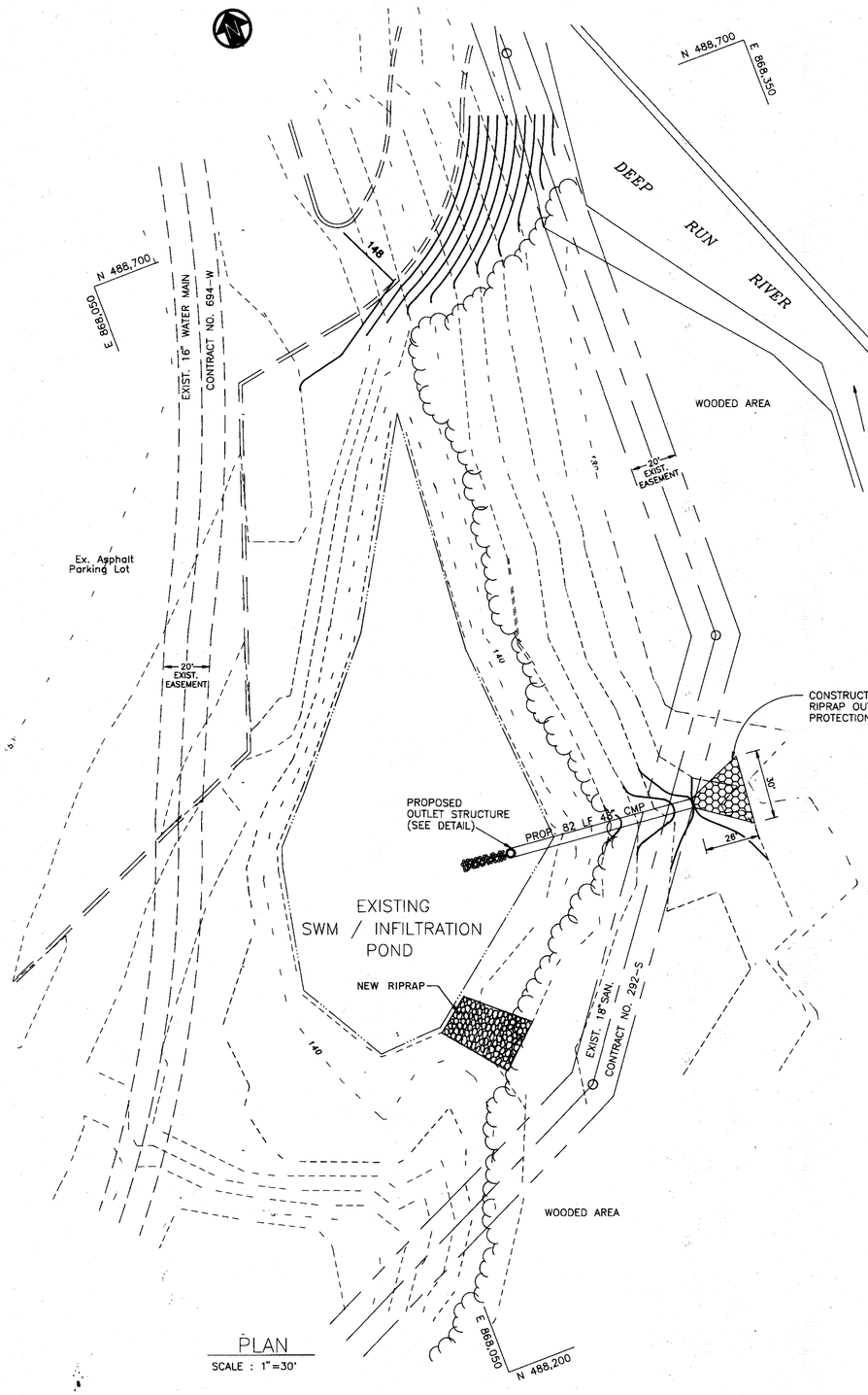
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
WATER QUALITY FACILITY #1 & #2
PROFILES & DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : AS SHOWN

SHEET 20 OF 29
DES : GDT/DPW
DRAWN : SLC
CHK : RHB

SDP-91-94

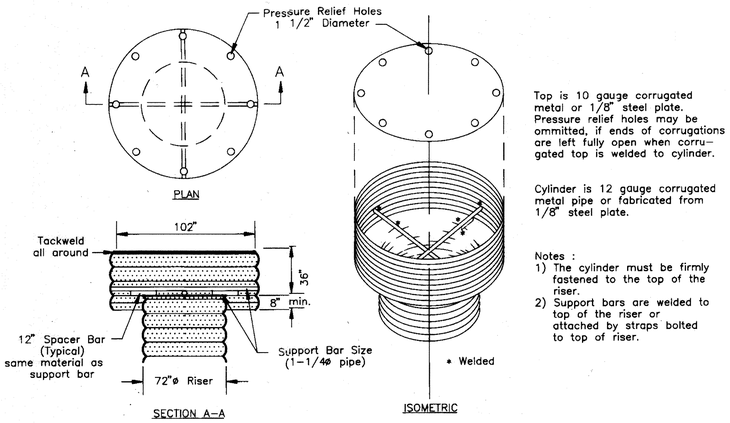
BASINDET

P&J W.O.# 6368-40



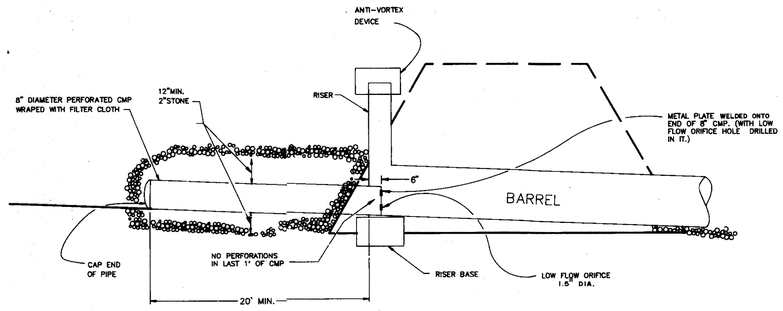
PLAN

SCALE : 1"=30'



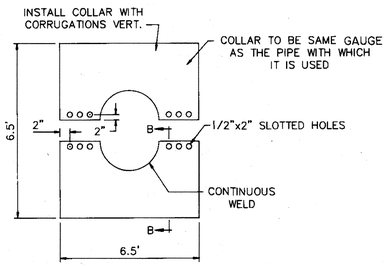
CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

NOT TO SCALE



EXTENDED DETENTION / DEWATERING DEVICE

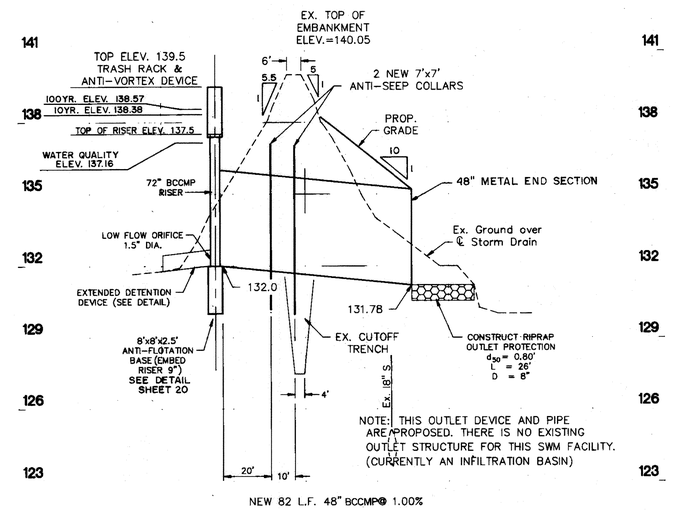
NOT TO SCALE



DETAILS OF CORRUGATED STEEL ANTI-SEEP COLLAR

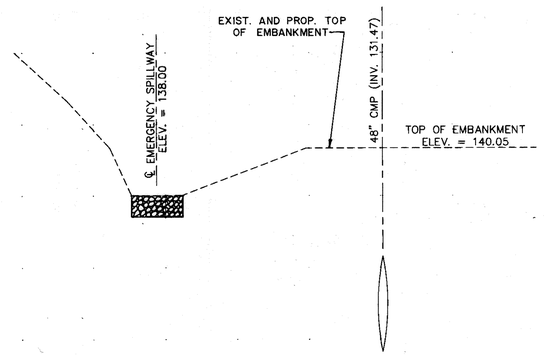
ALTERNATE METAL SHEET

NO SCALE



STORM DRAIN PROFILE

SCALE: HORIZ. 1"=30'/VERT. 1"=3'



EMBANKMENT PROFILE

SCALE: HORIZ. 1"=30'/VERT. 1"=3'

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — Date 4/16/92

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Howard Soil Conservation District — Date 4/16/92

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JIM COOK — 10/10/91 DATE

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RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5-1-92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/27/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4.27.92 DATE

@ 4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/8/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 9/7/92 DATE

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WATER QUALITY FACILITY #3
PLAN, PROFILES & DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE: AS SHOWN

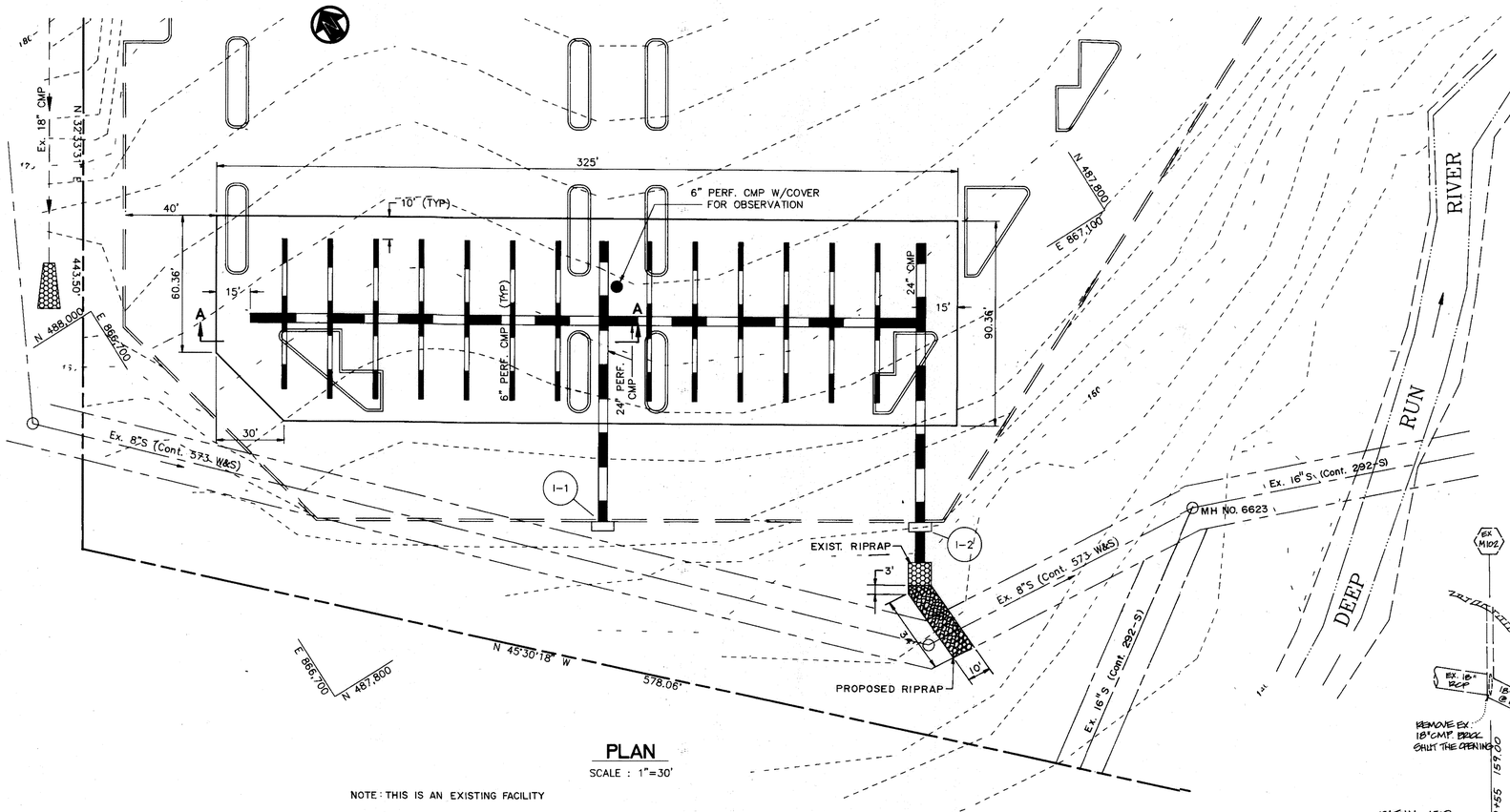
SHEET 21 OF 29

DES : GDT/DPW
DRAWN : SLC/RC
CHK : RHB

SDP-91-94

BASIN3

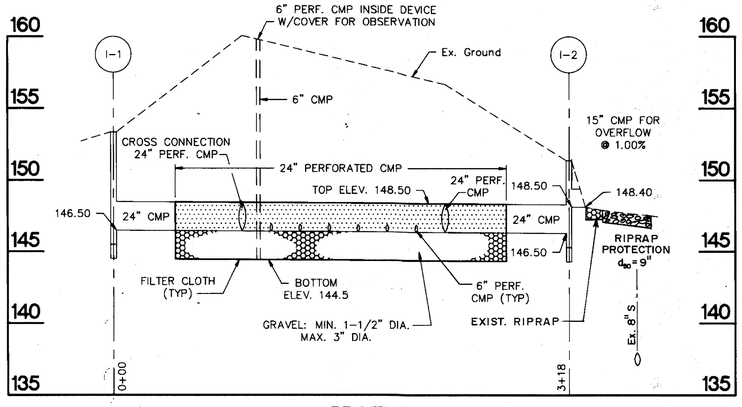
P&J W.O.# 6368-40



PLAN

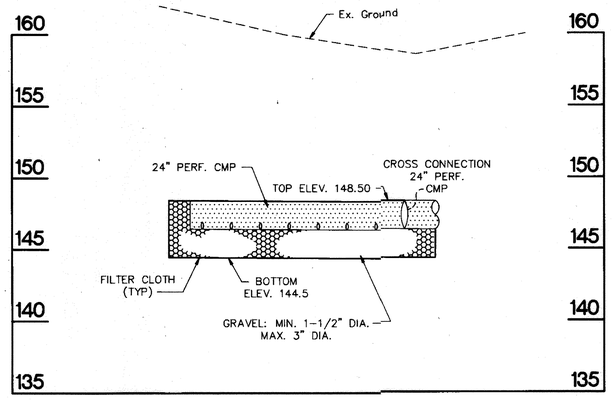
SCALE : 1"=30'

NOTE : THIS IS AN EXISTING FACILITY



PROFILE

SCALE: HORIZ. 1"=50' VERT. 1"=5'



SECTION A-A

SCALE: HORIZ. 1"=50' VERT. 1"=5'

REVISION DONE BY CAPITOL DEVELOPMENT DESIGN INC. ON 10-21-97: ADDED SD PROFILE EX.M102 TO EX 499. ADDED NEW STRUCTURE SCHEDULE, PIPE SUMMARY; ADDED INSTALLATION INSTRUCTION FOR PRECAST STORMCEPTOR.

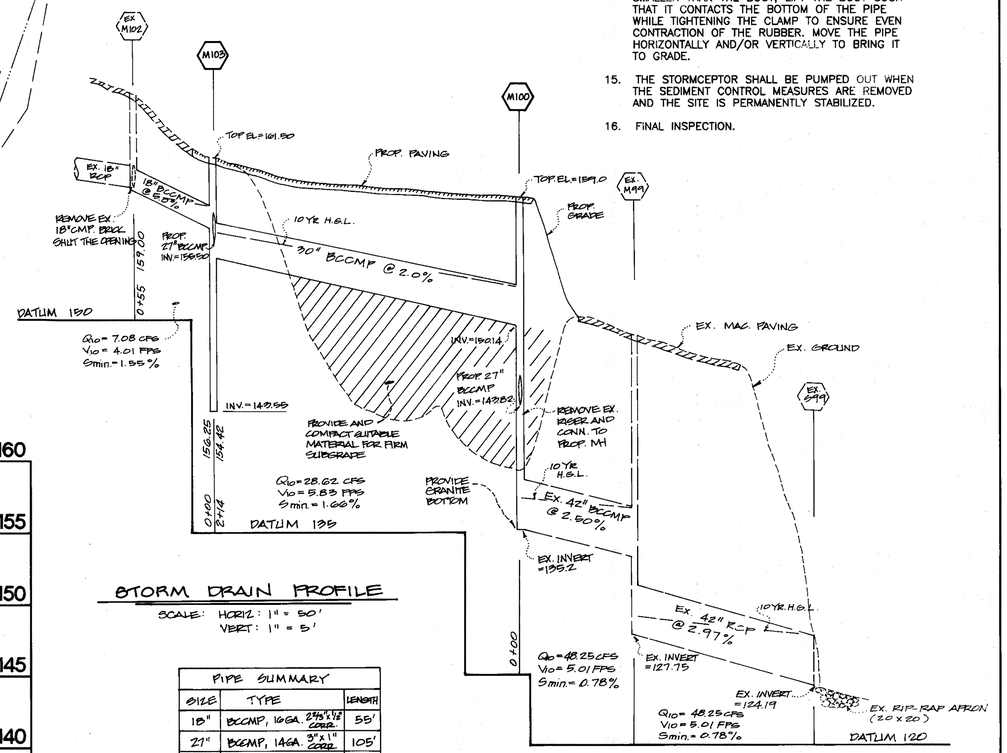
STATE OF MARYLAND — JAMES M. JESCHKE — No. 7615 — REGISTERED PROFESSIONAL ENGINEER

10/21/97

INSTALLATION INSTRUCTIONS:
PRECAST CONCRETE STORMCEPTOR

1. PRIOR TO THE START OF INSTALLING THE STORMCEPTOR, THE COUNTY OR CITY INSPECTOR MUST BE CALLED 48 HOURS IN ADVANCE (PRECONSTRUCTION MEETING).
2. STAKE-OUT LOCATION OF THE STORMCEPTOR UNIT AND EXCAVATE THE HOLE. EXCAVATE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPE TO UNIT. SECURE INSPECTOR APPROVAL OF SUBGRADE AND SUBBASE. INSTALL A 12" DEEP (OR AS REQUIRED) COMPACTED AGGREGATE SUBBASE AS BOTTOM OF EXCAVATION. INSTALL MULE OR SHORING, AS NEED.
3. CHECK ELEVATION OF UNIT BY MEASURING ITS SECTIONS FROM BASE OF UNIT (BOTTOM OF UNIT'S SLAB) TO INVERT OF STORMCEPTOR INLET BYPASS (FIBERGLASS INSERT). SUBTRACT THIS DISTANCE FROM DESIGN INVERT ELEVATION OF INSTALLED SUBBASE GRAVEL TO CROSS CHECK PROPERTY SUBBASE ELEVATION. ADJUST AS NEEDED.
4. INSTALL STORAGE CHAMBER. INSTALL SCREW INSERTS INTO BASE OF STORAGE CHAMBER. ATTACH CABLES OR CHAINS TO ALL THREE LIFTING LUGS ON THE BASE SLAB. USING LARGE EQUIPMENT OR CRANE, LIFT PLACE STORMCEPTOR BASE SECTION IN EXCAVATED HOLE ON THE SUBBASE. MAKE SURE THAT THE BASE IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS NOT REQUIRED. INSTALL RUBBER GASKET ON BASE UNIT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT), IF NOT PRELUBRICATED. INSTALL ADDITIONAL STORAGE CHAMBER SECTIONS, AS REQUIRED (PROCEDURE SAME AS STEP F).

   (FOR STORMCEPTOR MODELS STC-900, STC-1200, AND STC-1800 SKIP STEP 5 AND GO TO STEP 6)
5. INSTALL REDUCING SLAB, (STORMCEPTOR MODELS STC-2400, STC-3600, STC-4800, STC-6000, AND STC-7200), CHECK THAT THE SECTION IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. INSTALL RUBBER GASKET ON THE TRANSITION SLAB SPIGOT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT).
6. INSTALL BYPASS CHAMBER OF STORMCEPTOR WITH FACTORY INSTALLED STORMCEPTOR INSERT. LIFT BYPASS SECTION AND INSTALL, WHILE CHECKING ALIGNMENT AND GRADE OF INLET AND OUTLET DRAINAGE PIPES. CHECK TO MAKE SURE BYPASS CHAMBER IS SET FLUSH, LEVEL, AND IS AT PROPER ELEVATION. THE BYPASS CHAMBER IS ORIENTED SUCH THAT INLET PIPE DISCHAGES INTO V-SHAPED WEIRS (INSIDE INSERT). INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.
7. INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE.
8. INSTALL RISER SECTION. LIFT RISER SECTION AND INSTALL, WHILE CHECKING THAT SECTION IS SET FLUSH AND IS AT PROPER ELEVATION AND THAT UNIT IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS REQUIRED, IF STEPS ARE NOTE: FOR SHALLOW INSTALLATIONS, THIS SECTION MAY NOT BE REQUIRED.
9. PLUG LIFT HOLES WITH NON-SHIRK GROUT.
10. INSTALL TOP CAP WITH OPENING FOR STORMCEOTPR COVER. IF OPENING IS OFFSET (NOT CENTERED) THE TOP CAP OPENING SHOULD BE ORIENTED ABOVE STORMCEPTOR INLET INSPECTION PORT (PLUG).
11. BACKFILL STORMCEPTOR WITH APPROVED BACFILL MATERIAL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL MATERIAL AND COMPACTION TO MEET LOCAL AND STATE REQUIREMENTS.
12. INSTALL AND SET GRADE ADJUSTING RINGS, AS NEEDED.
13. INSTALL AND SET STORMCEPTOR FRAME AND COVER.
14. INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SHRINK GROUT WHEN NO FLEXIBLE BOOTS AND PROVIDED. THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH WITH THE INVERT OF THE PROCEDURES: CENTER THE PIPE IN THE BOOT OPENING. LUBRICATE THE OUTSIDE OF THE PIPE AND/OR THE INSIDE OF BOOT IF THE PIPE OUTSIDE DIAMETER IS THE SAME AS THE INSIDE DIAMETER OF THE BOOT. POSITION THE PIPE CLAMP SCREW TO 60 INCH-POUNDS. IF THE PIPE IS MUCH SMALLER THAN THE BOOT, LIFT THE BOOT SUCH THAT IT CONTACTS THE BOTTOM OF THE PIPE WHILE TIGHTENING THE CLAMP TO ENSURE EVEN CONTRACTION OF THE RUBBER. MOVE THE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING IT TO GRADE.
15. THE STORMCEPTOR SHALL BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED AND THE SITE IS PERMANENTLY STABILIZED.
16. FINAL INSPECTION.



STORM DRAIN PROFILE

SCALE: HORIZ: 1" = 50'
VERT: 1" = 5'

PIPE SUMMARY		
SIZE	TYPE	LENGTH
18"	RCCMP, 16GA. 2⅔"x½" corr.	55'
27"	RCCMP, 14GA. 3"x1" corr.	105'
30"	RCCMP, 14GA. 3"x1" corr.	214'

STRUCTURE SCHEDULE				
STR. No.	STRUCTURE TYPE	ELEVATION TOP	ELEVATION INV.	STANDARD DETAIL
M 100	STD 5'-0"ϕ PRECAST MH	159.00	135.20	HOWARD DPW G 5.13
M 101	CONC. STORMCEPTOR STC 3600	153.50	135.38	SEE SPECIAL DETAIL THIS SHEET
M 103	CONC. STORMCEPTOR STC 1800	161.50	143.55	SEE SPECIAL DETAIL THIS SHEET
E 100	METAL END SECTION	—	160.00	HOWARD DPW SD 5.61

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — 4/16/92 Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 4/16/92 Date

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CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION
I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT
JIM COOK — 10/10/91 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — 4/27/92 DATE
CHIEF, BUREAU OF ENGINEERING — 4-29-92 DATE

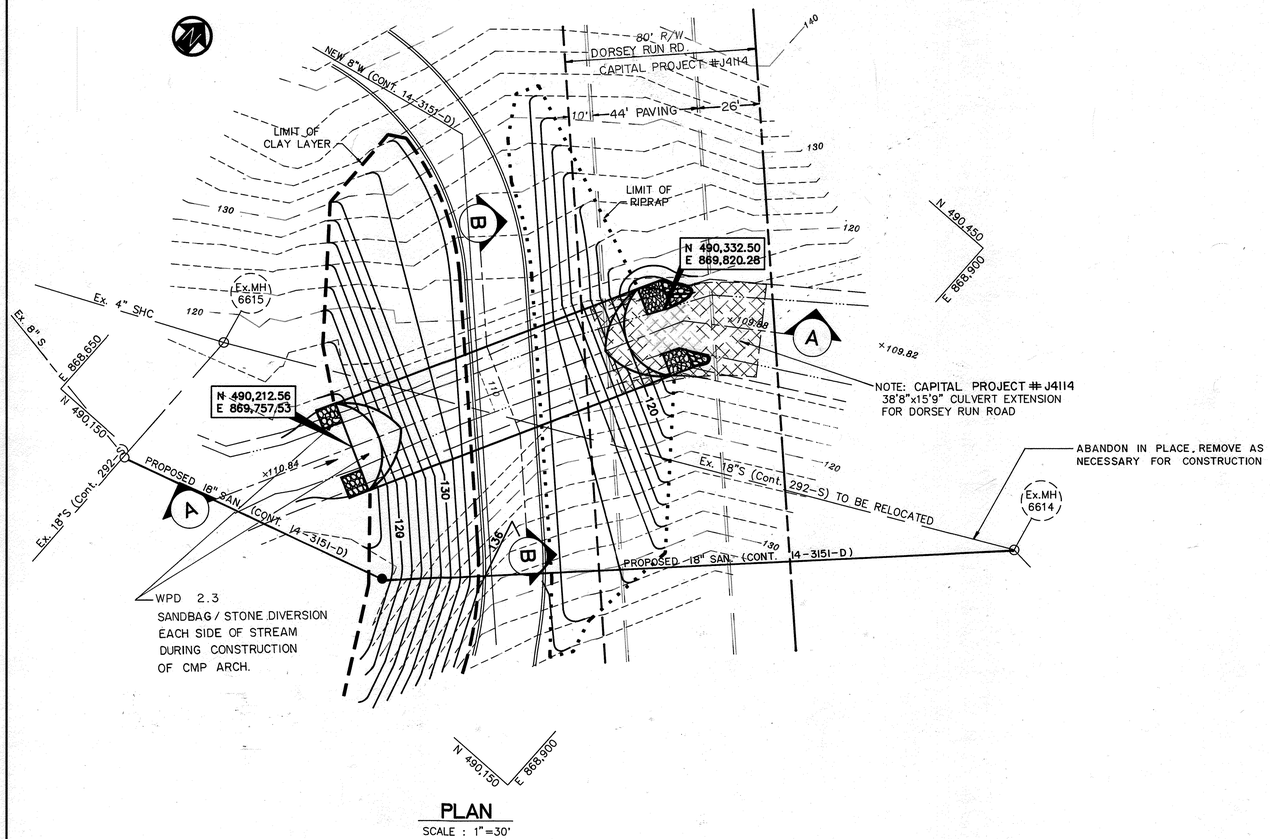
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — 5/8/92 DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
WATER QUALITY FACILITY #4
PLAN & DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — SCALE : AS SHOWN

SHEET 22 OF 29
DES : GDT/DPW
DRAWN : REC
CHK : RHB
SDP-91-94

BASIN4

P&J W.O.# 6368-40



PLAN
SCALE : 1"=30'

STR. # M103

Precast Concrete **Stormceptor**® Order Request Form

Contractor Information
Name: TREY CONTRACTING CORP.
Address: 1160 BALTIMORE AVE. # 118
City: BRUNSVILLE
State: MARYLAND
Zip Code: 20705
Contact: REGINALD BERNER
Phone: (301) 419-9505
Fax:

Owner Information
Name: BALT. WASH. AUTO EXCH.
Phone: (410) 796-8899
Fax:

INV. = 196.29 (90° I) INV. = 198.50 (I, 27° / 180°) INV. = 194.42 (O, 30°) 112° 270

Please draw orientation of inlet and outlet pipes on diagram along with the pipe inside diameter (in), and invert elevation (ft). Clearly mark inlet pipes with an "I" and outlet pipes with an "O". Please provide the inlet/outlet pipe angle in degrees.

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT

Stormceptor® Model — STC: 900 ☐ 3600 ☐ / 1200 ☐ 4800 ☒ / 1800 ☐ 6000 ☐ / 2400 ☐ 7200 ☐

Insert Size — SINGLE INLET DISC: ☐ / MULTIPLE INLET DISC: ☒ / CUSTOM: ☐

Manhole Number: M103
Top Elevation (ft): 201.50
Inlet Pipe Invert (ft): 196.29 & 196.50
Outlet Pipe Invert (ft): 194.42
Pipe Type: CMP
Inlet Pipe Inside Diameter (ID): 24 & 27
Inlet Pipe Outside Diameter (OD):
Outlet Pipe Inside Diameter (ID):
Outlet Pipe Outside Diameter (OD): 30

Project Name: BROOKDALE INDUSTRIAL PARK
Approximate time frame of delivery (weeks):
Delivery Address: Street:
City: State: MARYLAND Zip Code:
Designer Company: CAPITOL DEVELOPMENT DESIGN INC.
Designer Contact: VICTOR CHEN Phone: 301-982-1181 Fax: 301-982-1994

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR Hydro Conduit
ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)313-6389
FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)313-6399

STR. # M101

Precast Concrete **Stormceptor**® Order Request Form
* TO BE INCLUDED ON THE PLAN BY DESIGNER

Contractor Information
Name: TREY CONTRACTING CORP.
Address: 1160 BALTIMORE AVE. # 118
City: BRUNSVILLE
State: MARYLAND
Zip Code: 20705
Contact: REGINALD BERNER
Phone: (301) 419-9505
Fax:

Owner Information
Name: BALT. WASH. AUTO EXCH.
Phone: (410) 796-8899
Fax:

INV. = 149.90 (90° I) INV. = 149.17 (I, 27° / 180°) 242° 270

Please draw orientation of inlet and outlet pipes on diagram along with the pipe inside diameter (in), and invert elevation (ft). Clearly mark inlet pipes with an "I" and outlet pipes with an "O". Please provide the inlet/outlet pipe angle in degrees.

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT

Stormceptor® Model — STC: 900 ☐ 3600 ☒ / 1200 ☐ 4800 ☐ / 1800 ☐ 6000 ☐ / 2400 ☐ 7200 ☐

Insert Size — SINGLE INLET DISC: ☐ / MULTIPLE INLET DISC: ☒ / CUSTOM: ☐

Manhole Number: M101
Top Elevation (ft): 155.85
Inlet Pipe Invert (ft): 149.90 & 149.50
Outlet Pipe Invert (ft): 149.17
Pipe Type: CMP
Inlet Pipe Inside Diameter (ID): 24
Inlet Pipe Outside Diameter (OD):
Outlet Pipe Inside Diameter (ID):
Outlet Pipe Outside Diameter (OD): 27

Project Name: BROOKDALE INDUSTRIAL PARK
Approximate time frame of delivery (weeks):
Delivery Address: Street:
City: State: MARYLAND Zip Code:
Designer Company: CAPITOL DEVELOPMENT DESIGN INC.
Designer Contact: VICTOR CHEN Phone: 301-982-1181 Fax: 301-982-1994

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR Hydro Conduit
ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)313-6389
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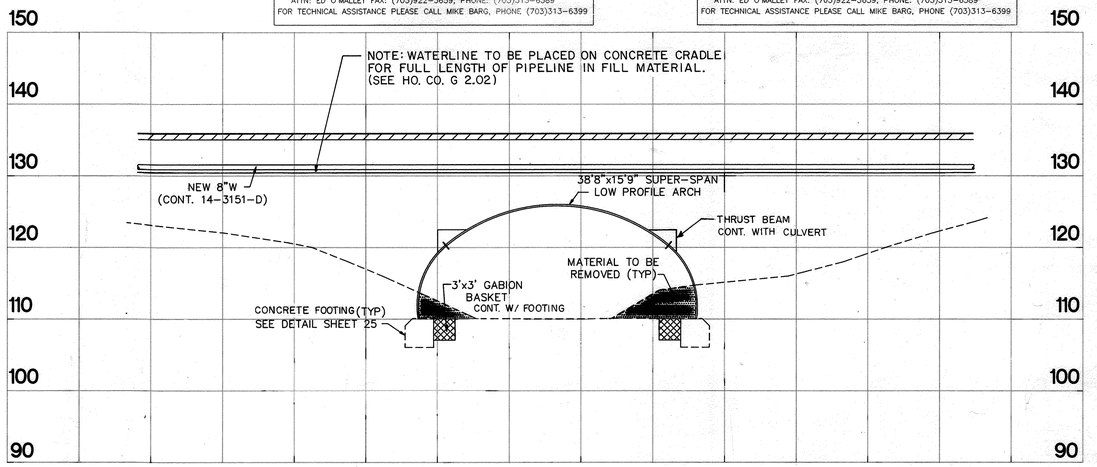
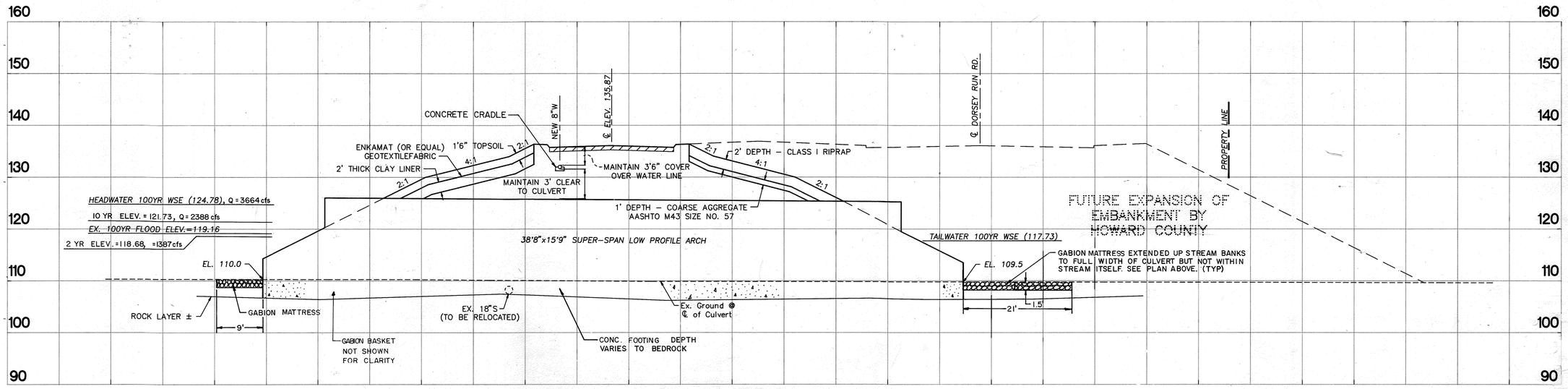


SECTION B-B
SCALE : 1"=10' HORIZONTAL & VERTICAL



SECTION A-A
SCALE : 1"=10' HORIZONTAL & VERTICAL

STATE OF MARYLAND — VICTOR CHEN — REG. 19568 — REGISTERED PROFESSIONAL ENGINEER — 10/21/97

REVISION DONE BY CAPITOL DEVELOPMENT DESIGN, INC. ON 10-21-97. STORMCEPTOR ORDER FORM WERE ADDED

37
~~35~~

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
9/11/97	ADD STORMCEPTOR ORDER FORM	VC

REVISIONS

PROVED: FOR PUBLIC WATER AND SEWER SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINA AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

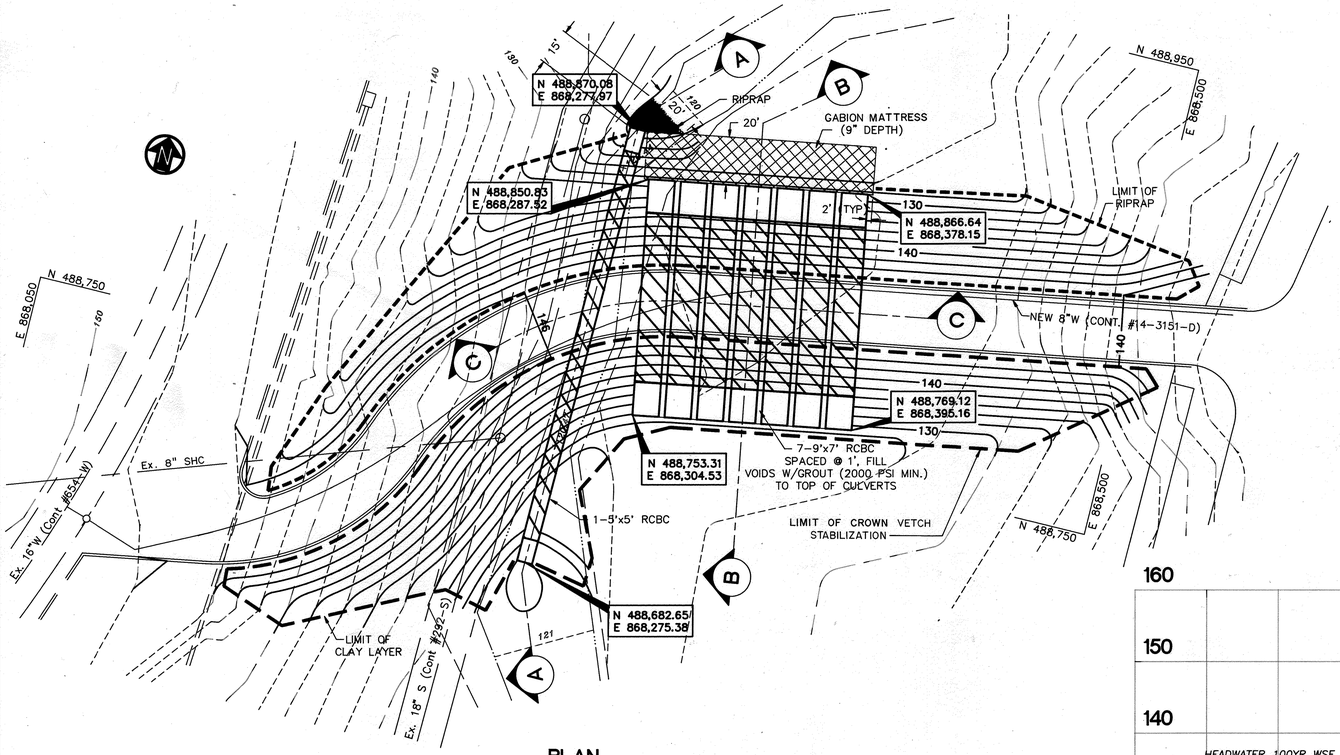
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY LANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
STREAM CROSSING #1
PLAN & SECTIONS
FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : AS SHOWN

SHEET 23 OF ~~29~~ 37
DES : GDT/CTM
DRAWN : REC
CHK : RHB

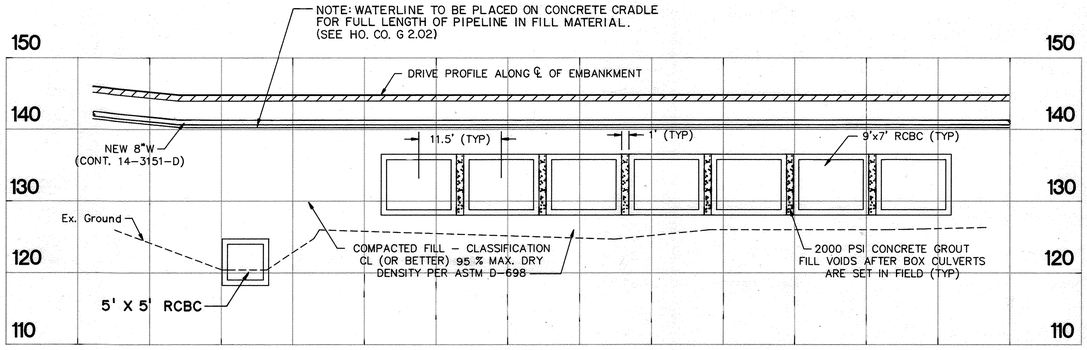
SDP-91-94

XING1
P&J W.O.# 6368-40



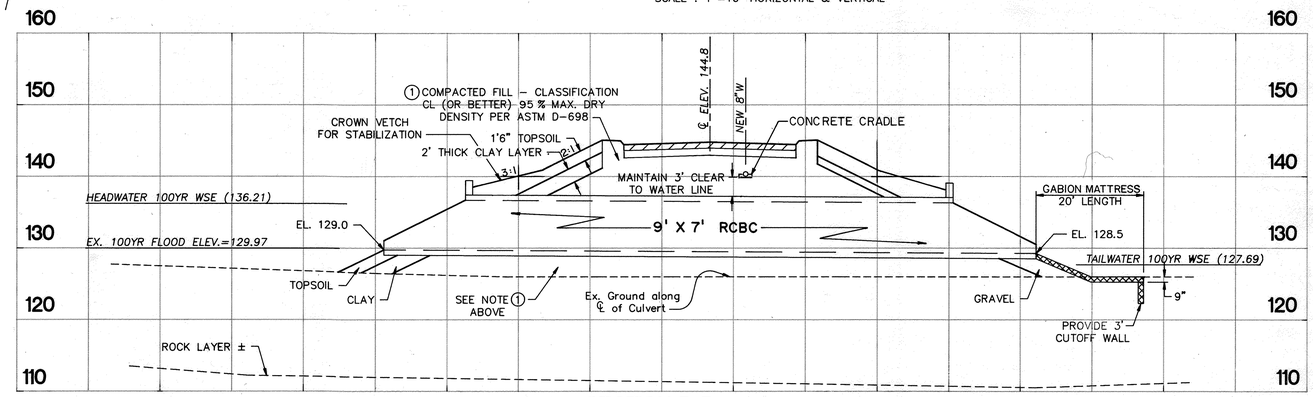
PLAN

SCALE : 1"=30'



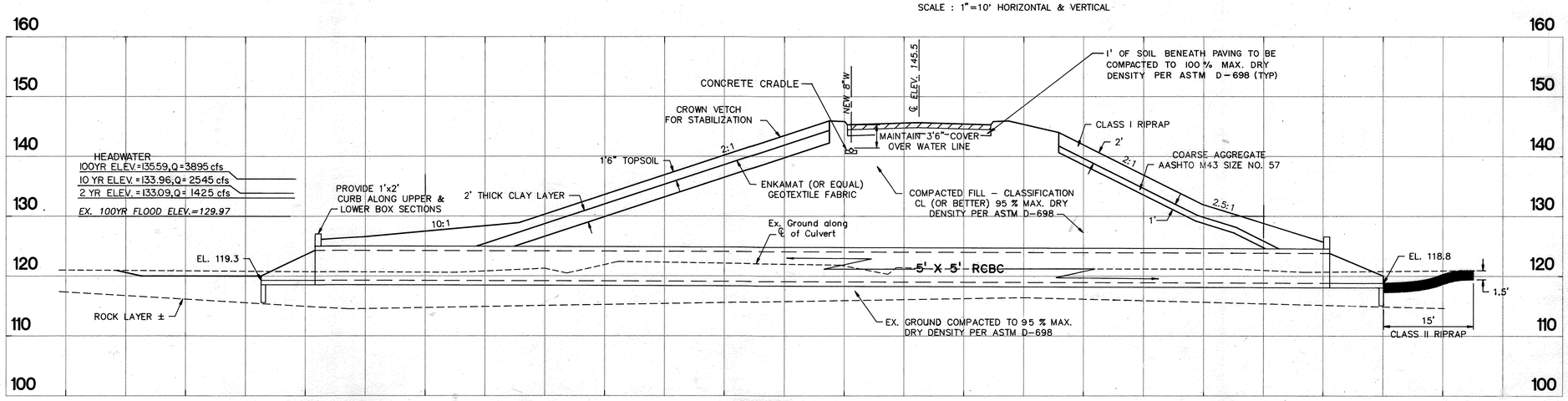
SECTION C-C

SCALE : 1"=10' HORIZONTAL & VERTICAL



SECTION B-B

SCALE : 1"=10' HORIZONTAL & VERTICAL



SECTION A-A

SCALE : 1"=10' HORIZONTAL & VERTICAL

37
~~35~~

PURDUM & JESCHKE
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OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY
	REVISIONS	

PROVED: FOR PUBLIC WATER AND SEWER SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINA AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/22/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92
4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/8/92
CHIEF DIVISION OF COMMUNITY LANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

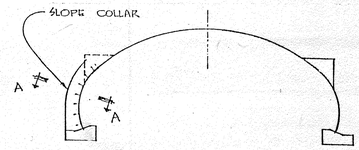
STREAM CROSSING #2
PLAN & SECTIONS

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE : AS SHOWN

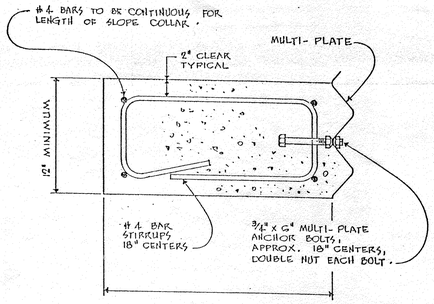
SHEET 24 OF ~~29~~
DES : GDT/CTM
DRAWN : REC
CHK : RHB

SDP-91-94

P&J W.O.# 6368-40



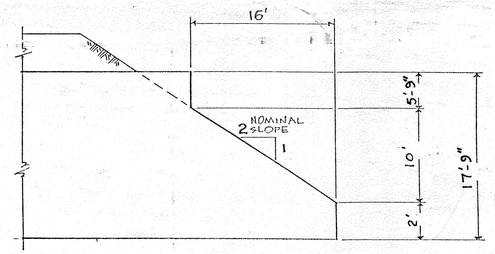
STRUCTURE END VIEW



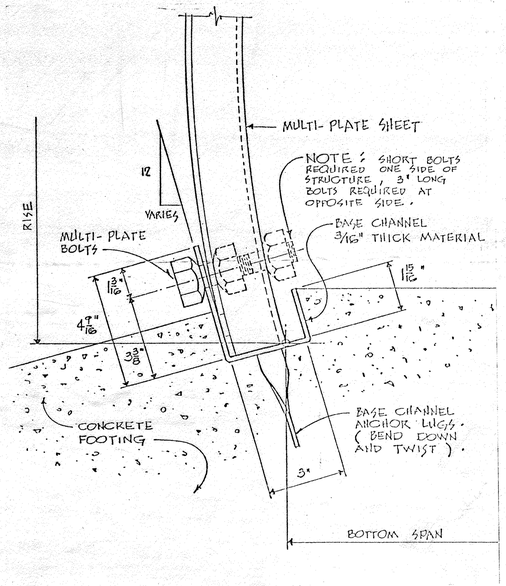
SECTION A-A

THIS DETAIL SHOWS MINIMUM DIMENSIONS RECOMMENDED FOR STRUCTURAL SOUNDNESS. CERTAIN HYDRAULIC CONDITIONS MAY REQUIRE A LARGER SLOPE COLLAR OR OTHER END TREATMENT.

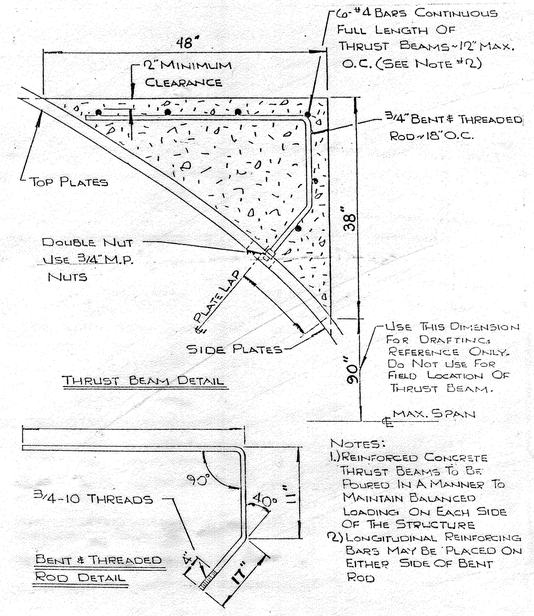
MULTI-PLATE SUPER SPAN
MINIMUM SLOPE COLLAR DETAIL



MULTI-PLATE SUPER SPAN
STEP BEVEL END TREATMENT

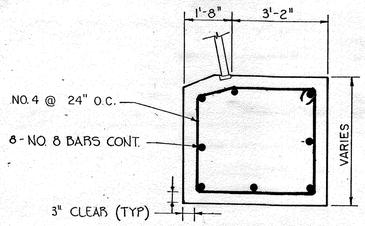


MULTI-PLATE SUPER SPAN
BASE CHANNEL DETAIL

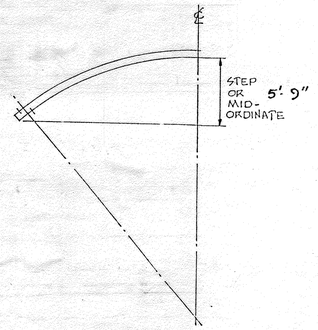


NOTES:
1) REINFORCED CONCRETE THRUST BEAMS TO BE POURED IN A MANNER TO MAINTAIN BALANCED LOADING ON EACH SIDE OF THE STRUCTURE
2) LONGITUDINAL REINFORCING BARS MAY BE PLACED ON EITHER SIDE OF BENT ROD

MULTI-PLATE SUPER SPAN
THRUST BEAM DETAIL



SPAN FOOTING DETAIL
N.T.S.

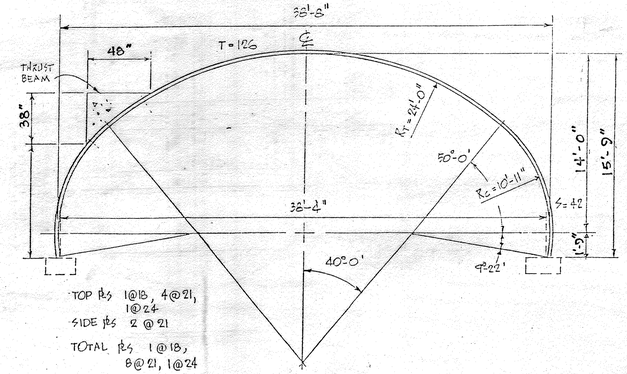


DIMENSION FROM INSIDE AT CROWN TO LOWER TIP OF PLATE AS SHOWN.

* THESE ARE MINIMUM STEP DIMENSIONS NECESSARY TO AVOID CUTTING INTO TOP PLATES.

BOTTOM STEP SHOULD BE SAME AS TOP STEP FOR MAXIMUM ECONOMY IN CUT END IN A HORIZONTAL ELLIPSE.

SUPER-SPAN STEP DIMENSIONS
FOR STEP BEVELED ENDS



TOP PLS 1@18, 4@21, 1@24
SIDE PLS 2 @ 21
TOTAL PLS 1@18, 8@21, 1@24
AREA: 490 SQ. FT.

ALL DIMENSIONS TO INSIDE UNLESS NOTED.

MULTI-PLATE SUPER SPAN
38'-8" SPAN x 15'-9" RISE

Reviewed for Howard Soil Conservation District and meets technical requirements.

U.S. Soil Conservation Service — 4/16/92 Date

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — 4/16/92 Date — 37 / 35

PURDUM & JESCHKE
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LAND SURVEYORS
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JIM COOK — 10/10/91 DATE

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RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — 5-5-92 DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — 4/27/92 DATE
CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE
4/27/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — 5/8/92 DATE
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

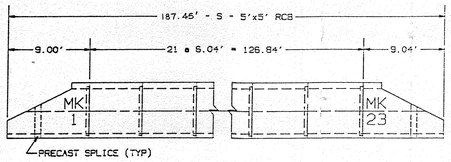
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43
STREAM CROSSING #1
CULVERT DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE :

SHEET 25 OF 29
DES :
DRAWN :
CHK : RHB
SDP-91-94

P&J W.O.# 6368-40

REFERENCES:

BC-0558-00 5'x5' PRECAST BOXES. MDOT/ASTM HS-27 FOR 15' TO 20' FILL.



ELEVATION

FLOW
INV. IN = 119.30'

THESE BOXES MEET OR EXCEED MDOT, AASHTO, AND ASTM SPECIFICATIONS.

LAY
INV. OUT = 118.80'

GENERAL NOTES:

1) JOINING AT SECTIONS TO BE IN ACCORDANCE WITH PROJECT PLANS AND STATE SPECIFICATIONS. MASTIC 305 OR 1 1/2" CONSEAL IS RECOMMENDED.

2) INSTALLATION CRITERIA TO BE IN ACCORDANCE WITH AASHTO DIVISION II SECTION 28 AND STATE SPECIFICATIONS.

FEET		INCHES					TONS	FEET	INCHES	SQUARE INCHES / LINEAR FOOT							SQ.IN/FT(WIDTH)	
BOX GEOMETERY							STD SECTION WEIGHT	DESIGN FILL RANGE		CIRCUMFERENTIAL REINFORCEMENT							LONGITUDINAL DISTRIBUTION REINFORCEMENT	
SPAN	RISE	Tt	Tb	Trw	Tlw	H			Mt Mb	As1	As2	As3	As4	As7	As8		As5	As6
5	5	8	7	6	6	6	5,948	15-20	20 20	0.192	0.250	0.261	0.144	0.192	0.168		---	---

REINFORCEMENT AS SHOWN IS SCHEMATIC ONLY.

REINFORCEMENT UNITS MAY BE COMBINED PROVIDED THAT THE REQUIREMENTS OF EACH UNIT ARE MET.

WELDED WIRE FABRIC AREAS AND WIRE STYLES LISTED MAY BE SUBSTITUTED PROVIDED THAT THE REQUIREMENTS OF EACH UNIT ARE MET.

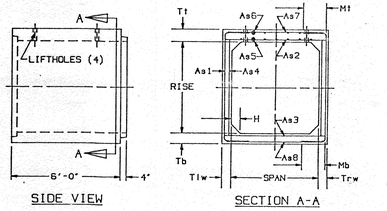
CIRCUMFERENTIAL WIRE SPACING TO BE NOT LESS THAN 2 IN., NOR MORE THAN 4 IN.

LONGITUDINAL WIRE SPACING TO BE NOT LESS THAN 2 IN. USING WELDED WIRE FABRIC, 4 IN. USING DEFORMED BARS, NOR MORE THAN 8 IN.

LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY BE WELDED WIRE FABRIC AND/OR DEFORMED BARS.

WELDED WIRE FABRIC DATA

POSITION	REINF. DES.	LAYERS	AREA (SQ. IN/L.F.) CIRC. / LONG.	WIRE STYLES
OUTSIDE WALL	As1	1	0.192 / 0.060	2x8 W3.2 / W4.0
INSIDE TOP	As2	1	0.250 / 0.060	2x8 W4.3 / W4.0
INSIDE BOTTOM	As3	1	0.250 / 0.060	2x8 W4.3 / W4.0
INSIDE WALL	As4	1	0.192 / 0.060	2x8 W3.2 / W4.0
OUTSIDE TOP	As7	1	0.192 / 0.060	2x8 W3.2 / W4.0
OUTSIDE BOTTOM	As8	1	0.192 / 0.060	2x8 W3.2 / W4.0
TOP INSIDE LONG	As5	-	--- ---	
TOP OUTSIDE LONG	As6	-	--- ---	



SIDE VIEW SECTION A-A

DESIGN CRITERIA: AASHTO SECTION 17.

MATERIALS AND PURCHASING CRITERIA: ASTM C789 AND/OR C850.

INSTALLATION CRITERIA: AASHTO DIVISION II SECTION 28, AND STATE SPECIFICATIONS.

CONCRETE COVER OVER REINFORCEMENT (CCOR):
TOP OUTSIDE = 1.5 IN.
TOP INSIDE = 1.5 IN.
ALL OTHER = 1.5 IN.

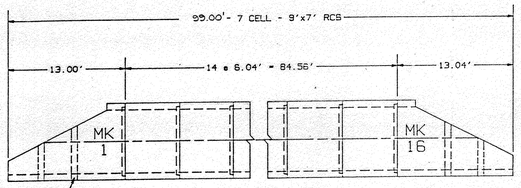
MATERIAL PROPERITIES:
f'c = 5000 PSI MIN
fy = 65000 PSI MIN

THESE BOXES MEET OR EXCEED MDOT-SHA, AASHTO, AND ASTM SPECIFICATIONS.

5'x5' PRECAST BOXES
MDOT/ASTM HS-27 FOR 15' TO 20' FILL.

REFERENCES:

BC-0558-01 9'x7' PRECAST BOXES. MDOT/ASTM HS-27 FOR 05' TO 10' FILL.



ELEVATION

FLOW
INV. IN = 129.00'

THESE BOXES MEET OR EXCEED MDOT, AASHTO, AND ASTM SPECIFICATIONS.

LAY
INV. OUT = 128.50'

GENERAL NOTES:

1) JOINING AT SECTIONS TO BE IN ACCORDANCE WITH PROJECT PLANS AND STATE SPECIFICATIONS. MASTIC 305 OR 1 1/2" CONSEAL IS RECOMMENDED.

2) INSTALLATION CRITERIA TO BE IN ACCORDANCE WITH AASHTO DIVISION II SECTION 28 AND STATE SPECIFICATIONS.

FEET		INCHES					TONS	FEET	INCHES	SQUARE INCHES / LINEAR FOOT							SQ.IN/FT(WIDTH)	
BOX GEOMETERY							STD SECTION WEIGHT	DESIGN FILL RANGE		CIRCUMFERENTIAL REINFORCEMENT							LONGITUDINAL DISTRIBUTION REINFORCEMENT	
SPAN	RISE	Tt	Tb	Trw	Tlw	H			Mt Mb	As1	As2	As3	As4	As7	As8		As5	As6
9	7	9	9	9	9	9	12,524	05-10	20 20	0.216	0.315	0.339	0.216	0.216	0.216		---	---

REINFORCEMENT AS SHOWN IS SCHEMATIC ONLY.

REINFORCEMENT UNITS MAY BE COMBINED PROVIDED THAT THE REQUIREMENTS OF EACH UNIT ARE MET.

WELDED WIRE FABRIC AREAS AND WIRE STYLES LISTED MAY BE SUBSTITUTED PROVIDED THAT THE REQUIREMENTS OF EACH UNIT ARE MET.

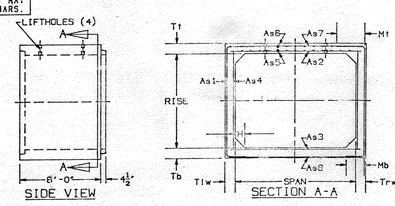
CIRCUMFERENTIAL WIRE SPACING TO BE NOT LESS THAN 2 IN., NOR MORE THAN 4 IN.

LONGITUDINAL WIRE SPACING TO BE NOT LESS THAN 2 IN. USING WELDED WIRE FABRIC, 4 IN. USING DEFORMED BARS, NOR MORE THAN 8 IN.

LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY BE WELDED WIRE FABRIC AND/OR DEFORMED BARS.

WELDED WIRE FABRIC DATA

POSITION	REINF. DES.	LAYERS	AREA (SQ. IN/L.F.) CIRC. / LONG.	WIRE STYLES
OUTSIDE WALL	As1	1	0.220 / 0.060	2x8 W3.7 / W4.0
INSIDE TOP	As2	1	0.330 / 0.060	2x8 W5.5 / W4.0
INSIDE BOTTOM	As3	1	0.360 / 0.060	2x8 W6.0 / W4.0
INSIDE WALL	As4	1	0.220 / 0.060	2x8 W3.7 / W4.0
OUTSIDE TOP	As7	1	0.220 / 0.060	2x8 W3.7 / W4.0
OUTSIDE BOTTOM	As8	1	0.220 / 0.060	2x8 W3.7 / W4.0
TOP INSIDE LONG	As5	-	--- ---	
TOP OUTSIDE LONG	As6	-	--- ---	



SIDE VIEW SECTION A-A

DESIGN CRITERIA: AASHTO SECTION 17.

MATERIALS AND PURCHASING CRITERIA: ASTM C789 AND/OR C850.

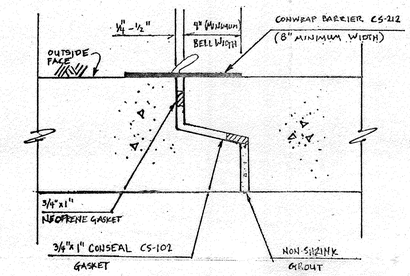
INSTALLATION CRITERIA: AASHTO DIVISION II SECTION 28, AND STATE SPECIFICATIONS.

CONCRETE COVER OVER REINFORCEMENT (CCOR):
TOP OUTSIDE = 1.5 IN.
TOP INSIDE = 1.5 IN.
ALL OTHER = 1.5 IN.

MATERIAL PROPERITIES:
f'c = 5000 PSI MIN
fy = 65000 PSI MIN

THESE BOXES MEET OR EXCEED MDOT-SHA, AASHTO, AND ASTM SPECIFICATIONS.

9'x7' PRECAST BOXES
MDOT/ASTM HS-27 FOR 5' TO 10' FILL.

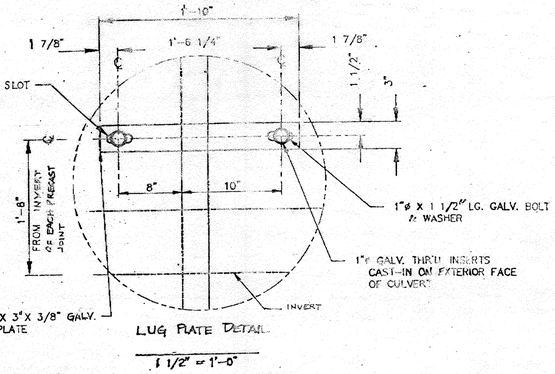


JOINT DETAIL
NTS

PRECAST BOX CULVERT JOINT SPECIFICATIONS

1. INSTALL CONSEAL CS-102 (BY CONCRETE SEALANTS, INC.) GASKET BETWEEN CULVERT JOINTS, STARTING AT DOWNSTREAM END OF CULVERT WITH BELL FACING UPSTREAM. PLACE NEXT UPSTREAM PRECAST SECTION AND PULL TOGETHER WITH COME-A-LONG SYSTEM AS SUGGESTED BY CULVERT MANUFACTURER.
2. INSTALL CONWRAP BARRIER CS-212 (BY CONCRETE SEALANTS, INC.) AROUND THE OUTSIDE SURFACE OF ALL JOINTS.
3. CONNECT EACH PRECAST SECTION WITH LUG PLATES.
4. GROUT ALL JOINTS INSIDE CULVERT WITH NON-SHRINK GROUT.

SIDE VIEW ELEVATION
N.T.S



LUG PLATE DETAIL
1 1/2" = 1'-0"

Reviewed for Howard Soil Conservation District and meets technical requirements

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92

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PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

OWNER/DEVELOPER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.

7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

JIM COOK — 10/10/91 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5-5-92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/27/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/8/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

STATE OF MARYLAND — No. 10058 — PROFESSIONAL ENGINEER

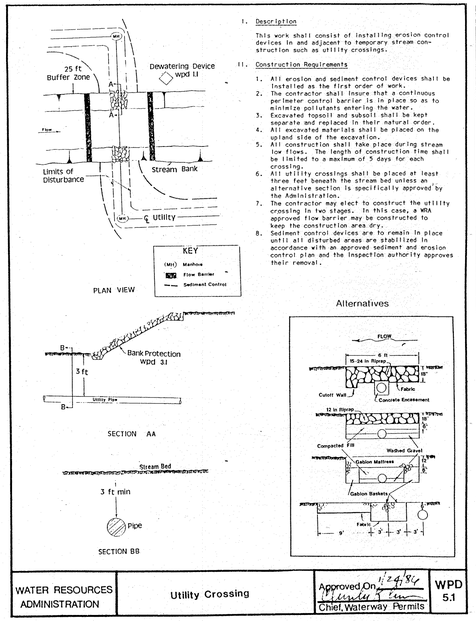
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

STREAM CROSSING #2 CULVERT DETAILS

FIRST ELECTION DISTRICT HOWARD COUNTY, MD
DATE :

SHEET 26 OF 29
DES :
DRAWN :
CHK : RHB
SDP-91-94

P&J W.O.# 6368-40



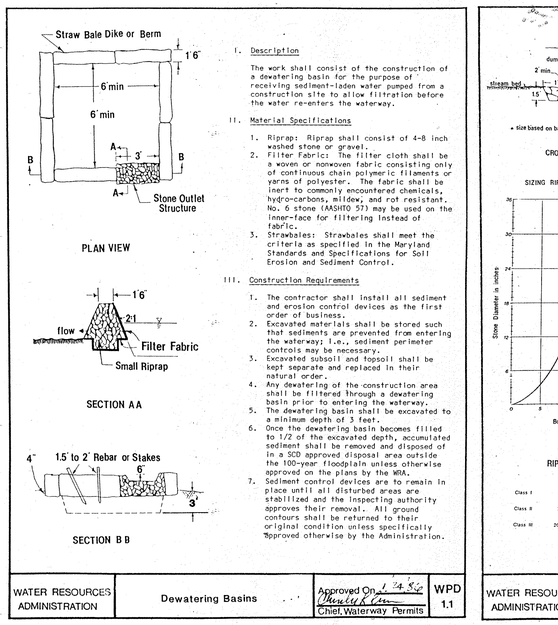
I. Description

This work shall consist of installing erosion control devices in and adjacent to temporary stream construction such as utility crossings.

II. Construction Requirements

1. All erosion and sediment control devices shall be installed as the first order of work.
2. The contractor shall insure that a continuous perimeter control barrier is in place so as to minimize pollutants entering the water.
3. Excavated topsoil and subsoil shall be kept separate and replaced in their natural order.
4. All excavated materials shall be placed on the upland side of the excavation.
5. All construction shall take place during stream low flows. The length of construction time shall be limited to a maximum of 5 days for each crossing.
6. All utility crossings shall be placed at least three feet beneath the stream bed unless an alternative section is specifically approved by the Administration.
7. The contractor may elect to construct the utility crossing in two stages. In this case, a WRA approved flow barrier may be constructed to keep the construction area dry.
8. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.

WATER RESOURCES ADMINISTRATION	Utility Crossing	Approved On 1/24/84 Chief, Waterway Permits	WPD 5.1



I. Description

The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.

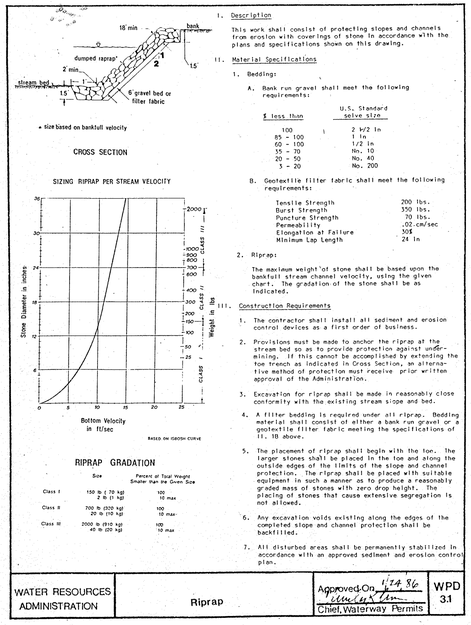
II. Material Specifications

1. Riprap: Riprap shall consist of 4-8 inch washed stone, rock or gravel.
2. Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, and rot resistant. No. 6 stone (AASHTO 57) may be used on the inner-face for filtering instead of fabric.
3. Strawbales: Strawbales shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as the first order of business.
2. Excavated materials shall be stored such that sediments are prevented from entering the waterway; i.e., sediment perimeter controls may be necessary.
3. Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
4. Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
5. The dewatering basin shall be excavated to a minimum depth of 3 feet.
6. Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

WATER RESOURCES ADMINISTRATION	Dewatering Basins	Approved On 1/24/84 Chief, Waterway Permits	WPD 1.1



I. Description

This work shall consist of protecting slopes and channels from erosion with coverings of stone in accordance with the plans and specifications shown on this drawing.

II. Material Specifications

1. Beddings:

A. Bank run gravel shall meet the following requirements:

% less than	U.S. Standard sieve size
100	2 1/2 in
85 - 100	1 in
60 - 100	1/2 in
35 - 70	No. 10
20 - 50	No. 40
3 - 20	No. 200

B. Geotextile filter fabric shall meet the following requirements:

Tensile Strength	200 lbs.
Burst Strength	350 lbs.
Puncture Strength	70 lbs.
Permeability	.02 cm/sec
Elongation at Failure	50%
Minimum Lap Length	24 in

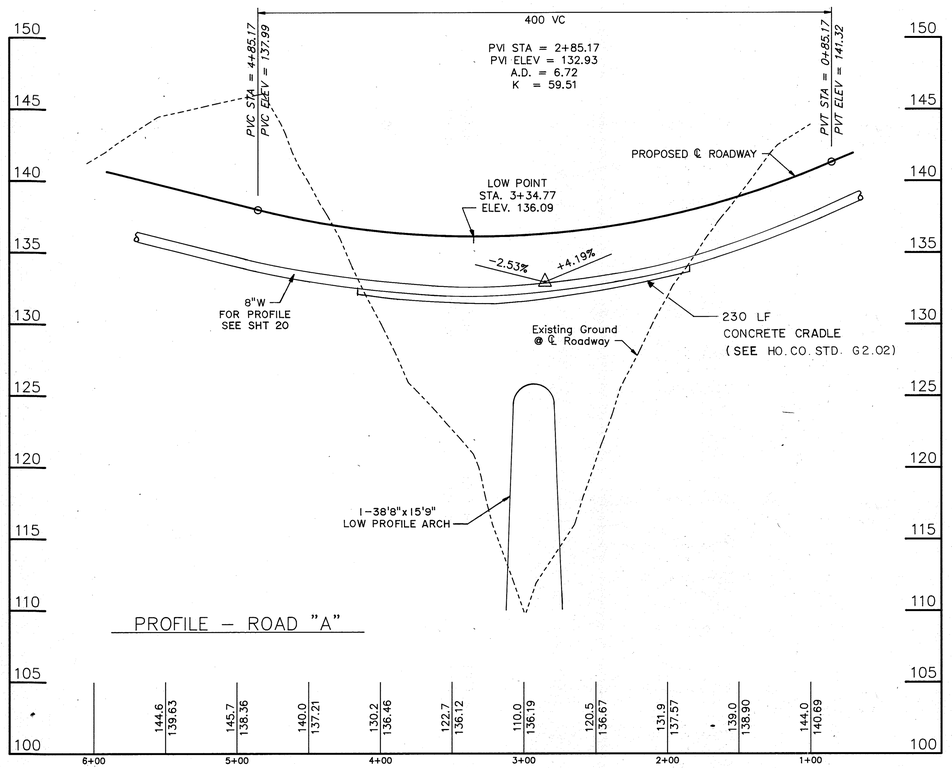
2. Riprap:

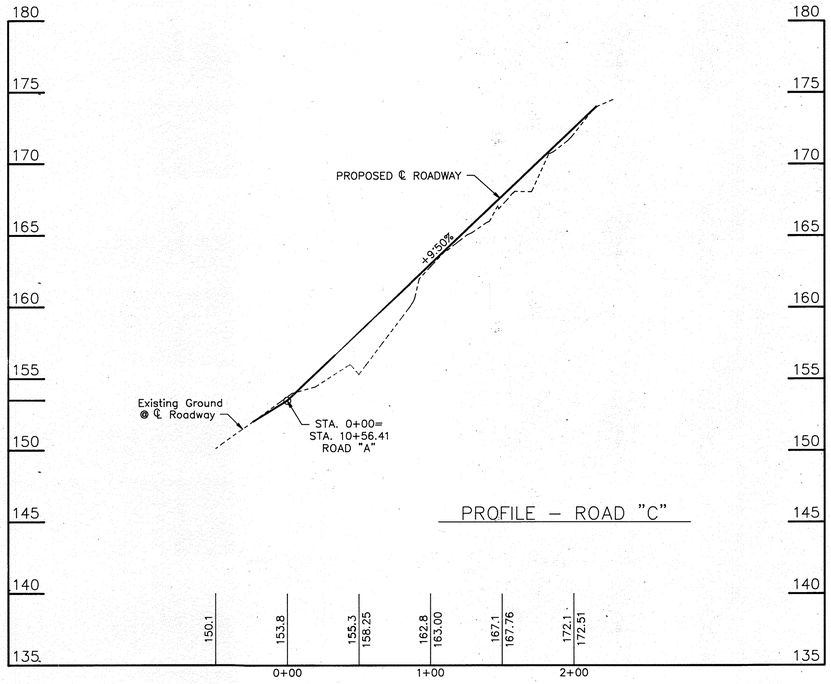
The maximum weight of stone shall be based upon the bankfull stream channel velocity, using the given chart. The gradation of the stone shall be as indicated.

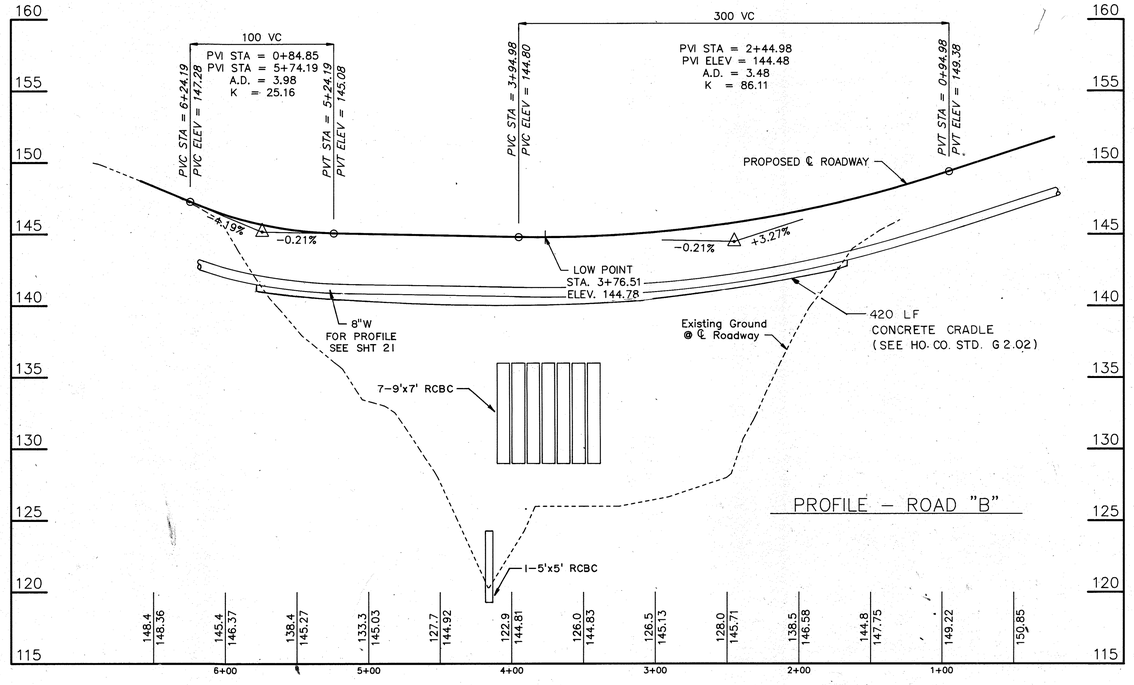
III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as a first order of business.
2. Provisions must be made to anchor the riprap at the stream bed so as to provide protection against undermining. If this cannot be accomplished by extending the toe trench as indicated in Cross Section, an alternative method of protection must receive prior written approval of the Administration.
3. Excavation for riprap shall be made in reasonably close conformity with the existing stream slope and bed.
4. A filter bedding is required under all riprap. Bedding material shall consist of either a bank run gravel or a geotextile filter fabric meeting the specifications of II. 1B above.
5. The placement of riprap shall begin with the toe. The larger stones shall be placed in the toe and along the outside edges of the limits of the slope and channel protection. The riprap shall be placed with suitable equipment in such a manner as to produce a reasonably graded mass of stones with zero drop height. The placing of stones that cause extensive segregation is not allowed.
6. Any excavation voids existing along the edges of the completed slope and channel protection shall be backfilled.
7. All disturbed areas shall be permanently stabilized in accordance with an approved sediment and erosion control plan.

WATER RESOURCES ADMINISTRATION	Riprap	Approved On 1/24/84 Chief, Waterway Permits	WPD 3.1







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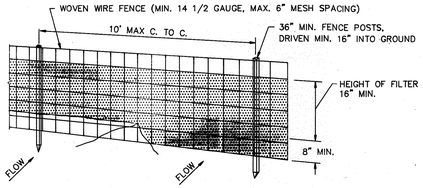
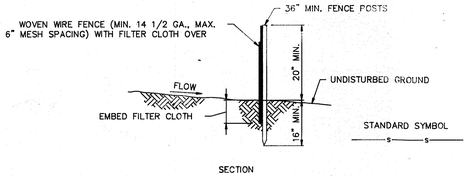
PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 Tel: (301)837-0194 Fax: (301)837-3431	OWNER/DEVELOPER BALTIMORE-WASHINGTON AUTO EXCHANGE, INC. 7151 BROOKDALE ROAD BALTIMORE, MARYLAND 21227	DATE / DESCRIPTION / BY — REVISIONS	APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT COUNTY HEALTH OFFICER 5-5-92 DATE	APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS HOWARD COUNTY DEPT. OF PUBLIC WORKS DIRECTOR 4/27/92 DATE; CHIEF, BUREAU OF ENGINEERING 4-27-92 DATE	APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. DIRECTOR 5/8/92 DATE; CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 5/7/92 DATE	STATE OF MARYLAND NO. 10950 REGISTERED PROFESSIONAL ENGINEER	BALTIMORE-WASHINGTON AUTO EXCHANGE, INC. BROOKDALE INDUSTRIAL PARK INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212 PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43 **ROADWAY PROFILES** FIRST ELECTION DISTRICT HOWARD COUNTY, MD DATE : 9/20/91 SCALE: H.1"=50'/V.1"=5'	SHEET 27 OF ~~29~~ DES : GDT/DPW DRAWN : REC CHK : RHB **SDP-91-94**

6368RD

P&J W.O.# 6368-40



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WORE TIES OF STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FABRIC WITH TIES SPACED EVERY 24" AT TOP AND MIDSECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVOLPED IN THE SILT FENCE.

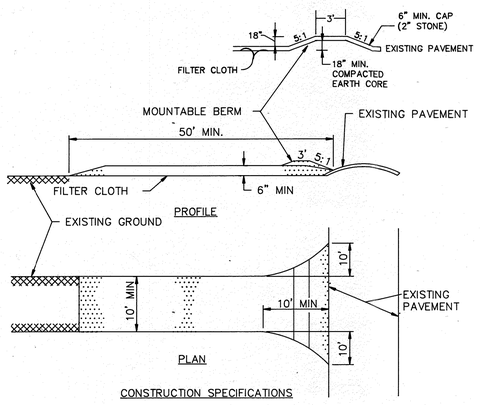
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 GA. MIN., 6" MAX. MESH OPENING

FILTER CLOTH: MIRAFI 100X, STABI-LINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

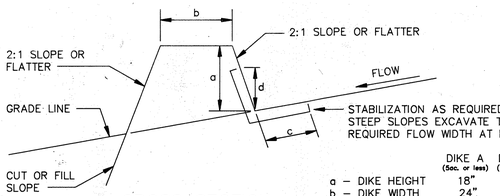
SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESI-DENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS- NOT LESS THAN SIX (6) INCHES.
4. WIDTH- TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH- WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING- WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENCE SHALL BE PROVIDED AFTER EACH RAIN.

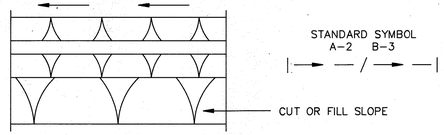
STABILIZED CONSTRUCTION ENTRANCE



	DIKE A (5ac. or less)	DIKE B (5 - 10ac.)
a - DIKE HEIGHT	18"	36"
b - DIKE WIDTH	24"	36"
c - FLOW WIDTH	4"	6"
d - FLOW DEPTH	8"	15"

CROSS SECTION

POSITIVE DRAINAGE - GRADE SUFFICIENT TO DRAIN



CONSTRUCTION SPECIFICATION

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE : (A) IN ACCORDANCE WITH STANDARD SPECIFICATION FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

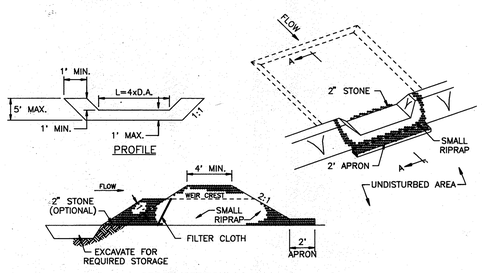
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5 - 3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1 - 5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1 - 8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIPRAP 4 - 8"
4	8.1 - 20%	LINED RIPRAP 4 - 8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLE CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT .
B. RIPRAP TO BE 4 - 8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENT CAN BE SUBSTITUTED FOR ANY OF THE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE



CROSS SECTION A-A

OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER 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 AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONAL MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"-8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA : 5 ACRES

STONE OUTLET SEDIMENT TRAP

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 acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 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/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
2) Acceptable: - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs/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 application using mulch anchoring tool or218 gallons/acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons/acre (8 gal/1000 sq. ft.) for anchoring

Maintenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

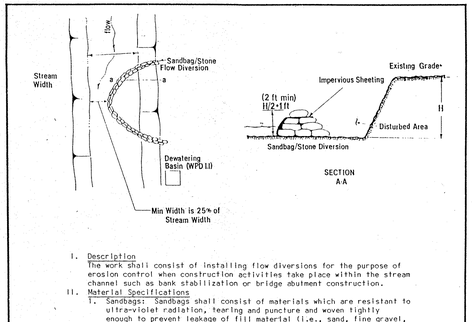
TEMPORARY SEEDING NOTES

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 by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 60 lbs/ acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)
Seeding: For Periods March 1 thru April 30 and August 15 thru October 15, seed with 2-1/2 bushel/acre of annual rye (3.2 lbs/1000 sq. ft.) For the period May 1 thru August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons/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/acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal/acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gal/acre (8 gal/1000 sq. ft.) for anchoring.

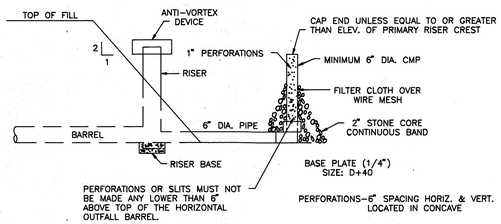


I. Description
The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.

II. Material Specifications
1. Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
2. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
3. Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.

III. Construction Requirements
1. All erosion and sediment control devices shall be installed as the first order of work.
2. The diversion structure shall be installed from upstream to downstream.
3. The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross-section view.
4. All excavated materials shall be disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
5. All dewatering of the construction area shall be pumped to a dewatering basin prior to re-entering the stream.
6. Sheeting shall be overlapped such that the upstream portion covers the downstream portion with at least an 18-inch overlap.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.

WATER RESOURCES ADMINISTRATION	Sandbag/Stone Diversion	Approved On 1/24/84 Chief, Waterway Permits	WPD 2.3



SEDIMENT TRAP DEWATERING DEVICE

NOT TO SCALE

EROSION AND SEDIMENT CONTROL SECTION NOTES

The Contractor will comply with all requirements of Sediment and Erosion Control as set forth in the Howard County Sediment Control Manual.

All sediment controls and critical slopes must be stabilized within seven calendar days. All other disturbed areas on the project site must be stabilized within 14 calendar days.

All utilities to be constructed first, prior to any construction on the site.

No pumping from foundation excavations will be allowed into County system unless it is filtered by way of sediment traps or filter.

All excavated material shall be placed on the high side whenever possible and confined to an area where it will not obstruct the normal flow of drainage courses.

Continuous inspection and maintenance of all sediment control devices will be required.

The Contractor shall notify in writing the Howard County Sediment Control Representative at least three working days prior to starting any work.

On all sites with disturbed areas in excess of two acres, the permittee shall request that a Howard County Erosion and Sediment Control Inspector inspect and approve the work, completed at the stages of construction specified below to ensure accordance with the approved erosion and sediment control plan, the grading or building permit, and this Manual:

a. Upon completion of installation of perimeter erosion and sediment controls, prior to proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until initial approval by the Inspection agency is made, and

b. Upon final stabilization before removal of sediment controls.

Howard County Sediment Control Section must be notified in writing where any excess material will be disposed of or where any borrowed material will come from.

The Owner/Contractor shall not deviate from the approved sediment and erosion control plans without prior approval of the Howard County Sediment Control Representative. Variations to the plan must be submitted in writing, accompanied by a copy of the originally approved plan modified to show the requested changes, for his approval. Substantial changes will necessitate amending the building and/or grading permit if applicable.

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
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 1983 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) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 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. 1, Chapter 12, 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of 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	116.96 Acres
Area Disturbed	42.01 Acres
Area to be roofed or paved	40.77 Acres
Area to be vegetatively stabilized	1.24 Acres
Total Cut	180550 Cu. yds.
Total Fill	97090 Cu. yds.
Offsite waste/borrow area location	N/A

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.

SEQUENCE OF CONSTRUCTION

1. Obtain proper permits.
2. Notify the Howard County Soil Conservation District and the Howard County Bureau of Licenses, Inspections and Permits at least 48 hours before any work begins.
3. Place stone construction entrance as shown on plan.
4. Install silt fence.
5. Construct sediment traps and earth diversion dikes as shown on plans, stabilize with temporary seeding.
6. Stream crossing construction:
   A. For the upper crossing, install temporary diversion pipe and sandbags at both upstream and downstream limits of proposed pipe as shown on the plans. Redirect flow through the temporary CMP.
   B. For lower crossing, create stream diversion to begin bottomless arch culvert construction. Alternate the stream diversion to each side of the stream as required to construct each side of the arch culvert. See Note *
   C. Install the permanent culverts.
   D. Re-divert flow through the permanent culverts by removing sandbags.
   E. Remove temporary culvert and stream diversion measures.
   F. Restore grade at location of temporary culvert.
   G. Begin filling operations over culverts to provide construction vehicle access across the stream.
7. Modify existing stormwater management basins #1 and #3 as shown on the plans (install new risers and/or culverts) to provide water quality.
8. Begin earthwork operations beginning with topsoil removal and stockpiling.
9. Start major grading, maintain positive drainage to sediment control structures.
10. Stabilize rough graded areas per permanent seeding notes.
11. Install water lines and hydrants.
12. Fine grade roads and parking areas and install CR-6 base.
13. Sediment trap No. 4 shall be maintained and in use until the area around it is completely stabilized with CR-6. After all grading in the drainage area is complete (including the installation of the water quality infiltration trenches) and the area stabilized, dewater the trap if necessary, and remove any accumulated sediment to a suitable upland location. Fill in the sediment trap, grade and stabilize with CR-6. The area can then be paved. Outlet pipe shall be capped and abandoned in place.
14. Construct water quality exfiltration trenches and outlets. Install rip-rap protection at outlets.
15. Provide inlet protection and diversion berms along all water quality trenches until site is completely stabilized.
16. Sediment shall be removed from the sediment traps when the clean-out elevation has been reached.
17. Provide paving for all parking areas.
18. The sediment traps shall be dewatered by pumping. The sediment from the traps shall be placed up grade from the traps in such a manner as not to interfere with construction operations or cause erosion downgrade from the sediment trap.
19. Install landscaping.
20. Upon approval of Sediment Control Inspection, remove all sediment control devices and stabilize per permanent seeding notes.
21. Fine grade areas where sediment controls are removed and stabilize as specified by the approved sediment control plan.

* NOTE: Design and construction of lower crossing #1 will be coordinated with and approved by Howard County DPW Division of Roads, Bridges, and Storm Drainage. See General Note # 8 sheet 1 this set

Reviewed for Howard Soil Conservation District and meets technical requirements

U.S. Soil Conservation Service — Date 4/16/92

This Development Plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date 4/16/92 37 38

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel:(301)837-0194
Fax:(301)837-3431

6368SCD

OWNER/DEVELOPER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.

7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DEVELOPER'S CERTIFICATION

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF ANY SEDIMENT EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

JAY COOK — 10/10/91 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 CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

RICHARD H. BERICH, P.E. — 10/10/91 DATE

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS

HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — 5.5.92 DATE

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

HOWARD COUNTY DEPT. OF PUBLIC WORKS

DIRECTOR — 4/20/92 DATE

CHIEF, BUREAU OF ENGINEERING — 4-27-92 DATE

4/21/92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR — 5/6/92 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 5/7/92 DATE

STATE OF MARYLAND — RICHARD HOWARD BERICH — No. 10058 — PROFESSIONAL ENGINEER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

SEDIMENT CONTROL DETAILS & NOTES

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE : 9/20/91 — NO SCALE

SHEET 28 OF 29
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

P&J W.O.# 6368-40

CROSS SECTION	EXISTING 100-YR WSE	PROPOSED 100-YR WSE
1	143.77	144.14
1.5	141.43	141.90
2	139.43	140.03
2.5	138.41	138.39
3	134.67	136.01
4	131.85	136.16
4.9	128.88	136.00
6	126.20	126.98
6.4	125.00	125.93
7	122.97	124.27
7.4	119.84	123.72
8	118.31	124.05
9	118.12	123.89
10	116.78	117.26
11	114.90	115.30

PROPOSED 100-YR FLOODPLAIN ELEVATIONS ARE SHOWN THUS (115.30)

100 YR. FLOODPLAIN

EXISTING

PROPOSED

37
35

PURDUM & JESCHKE
CONSULTING ENGINEERS
LAND SURVEYORS
1029 North Calvert Street
Baltimore, Maryland 21202
Tel: (301)837-0194 Fax: (301)837-3431

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

DATE	DESCRIPTION	BY

REVISIONS

APPROVED: FOR PUBLIC WATER AND SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER — DATE 5-5-92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE, AND PUBLIC ROADS
HOWARD COUNTY DEPT. OF PUBLIC WORKS
DIRECTOR — DATE 4/27/92
CHIEF, BUREAU OF ENGINEERING — DATE 4-27-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DIRECTOR — DATE 5/18/92
CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 5/7/92

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCEL C & 116, F-79-145 & 850/147, TAX MAP 43

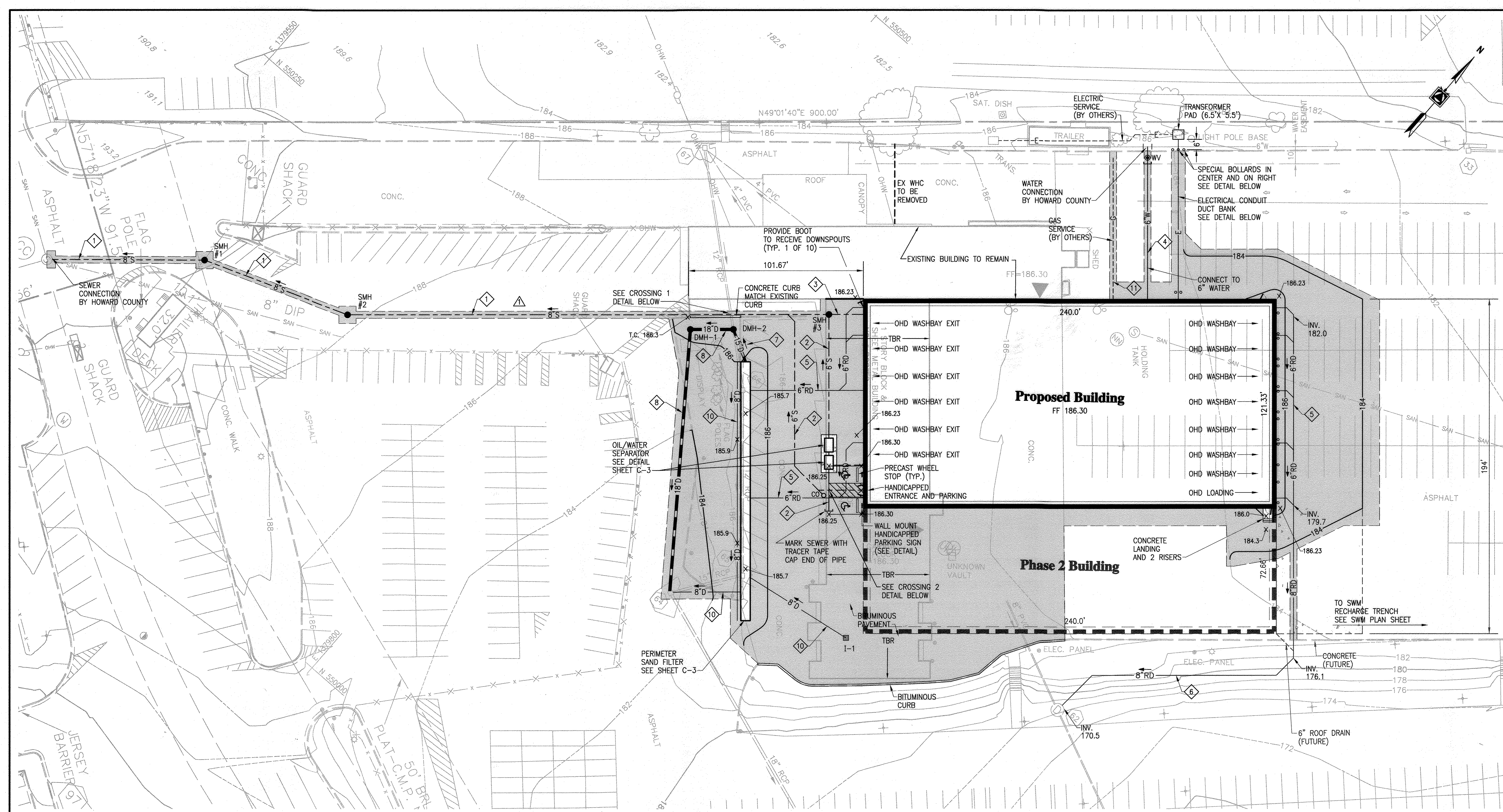
FLOODPLAIN DELINEATION SHEET

FIRST ELECTION DISTRICT
DATE : 9/20/91
HOWARD COUNTY, MD
SCALE: 1"=100'

SHEET 29 OF ~~29~~
DES : GDT/DPW
DRAWN : REC
CHK : RHB

SDP-91-94

P&J W.O.# 6368-40



LEGEND

GENERAL CIVIL / SITE

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING CONTOUR
- EXISTING FENCE
- EXISTING TREELINE
- EXISTING CURB & GUTTER
- EXISTING EDGE OF PAVEMENT
- EXISTING STORM DRAIN PIPE
- EXISTING UNKNOWN MANHOLE
- EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN INLET
- EXISTING SANITARY SEWER
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SANITARY SEWER CLEANOUT
- EXISTING OVERHEAD ELECTRIC
- EXISTING UTILITY POLE
- EXISTING LAMP POST
- EXISTING FIRE HYDRANT
- EXISTING POST OR BOLLARD
- EXISTING SIGN
- SMH — PROPOSED SANITARY MANHOLE
- DMH — PROPOSED STORM DRAIN MANHOLE
- PROPOSED BOLLARD
- BITUMINOUS PAVING
- CONCRETE PAVING
- TBR — TO BE REMOVED

GENERAL NOTES

1. THE TOPOGRAPHY IS BASED ON INFORMATION FROM THE OWNER RECEIVED 6/2006.
2. HORIZONTAL AND VERTICAL CONTROL PROVIDED IN THE SURVEY FILE.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITIONS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER.
4. THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE, AND INVERT ELEVATION BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES TO REMAIN.
5. THE TOPS, FRAMES, AND COVERS OF EXISTING UTILITIES TO REMAIN SHALL BE ADJUSTED TO NEW GRADES, IF REQUIRED.
6. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO EXCAVATION.
7. CONNECTIONS TO THE WATER AND SEWER SHALL BE IN ACCORDANCE WITH HOWARD COUNTY REQUIREMENTS.

CONSTRUCTION NOTES

1. CONCRETE CURB – HOWARD COUNTY DETAIL R3.03.
2. CONCRETE PAVING – SHALL BE 8" THICK 4500psf MIX CONCRETE.
3. BITUMINOUS PAVING – HOWARD COUNTY DETAIL R2.01.
4. PIPE BEDDING HOWARD COUNTY DETAIL G2.01 – TRENCH FOR PVC AND HDPE, AND TRENCH WITH GRAVEL BACKFILL BELOW SUBGRADE.
5. TRENCH REPAIR HOWARD COUNTY DETAIL G4.01.
6. TRANSFORMER PAD AND CONDUIT ACCORDING TO BGE REQUIREMENTS.
7. SWM CONSTRUCTION WILL REQUIRE AS-BUILT SURVEY AND ENGINEERING CERTIFICATION.
8. PAVEMENT SUBGRADE SHALL BE PROOF-ROLLED AND OBSERVED BY AN INDEPENDENT GEOTECHNICAL ENGINEER. SUBGRADE FAILURES SHALL BE REPAIRED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
9. PERIMETER SAND FILTER – SEE SWM PLAN & DETAILS C-3.
10. PIPES ARE NOTED WITH A "◇". SEE PIPE SCHEDULE FOR DETAILS.
11. SEE STRUCTURES SCHEDULE ON C-4.

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

30 0 30 60
SCALE IN FEET

37

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.28.7
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/2/08
DIRECTOR — DATE 1/3/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE

NO.	DESCRIPTION	BY	DATE
1	REVISE ALIGNMENT OF PRIVATE SEWER	RM	12/4/07
2	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

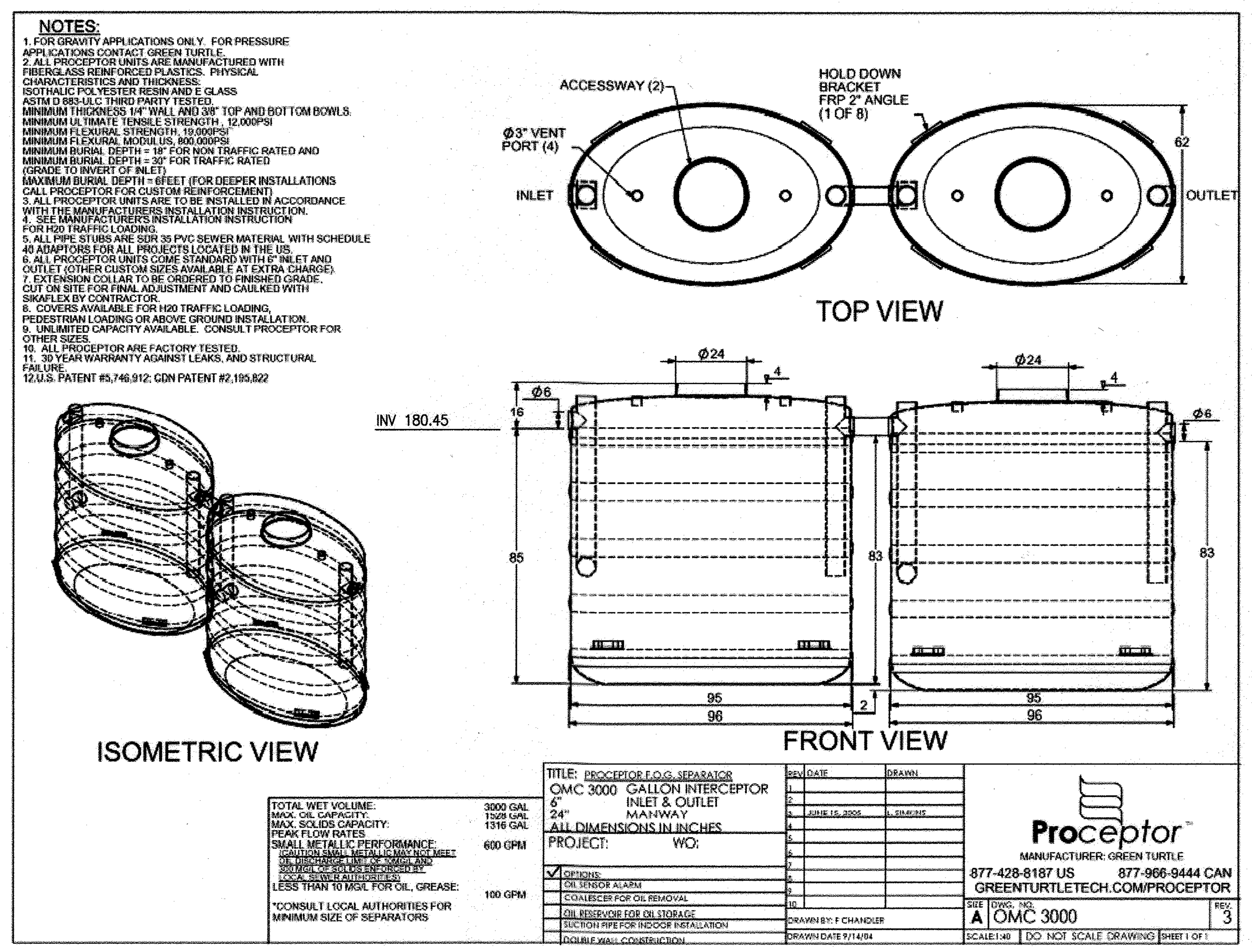
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILIDNG SITE PLAN

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: 1"=30'

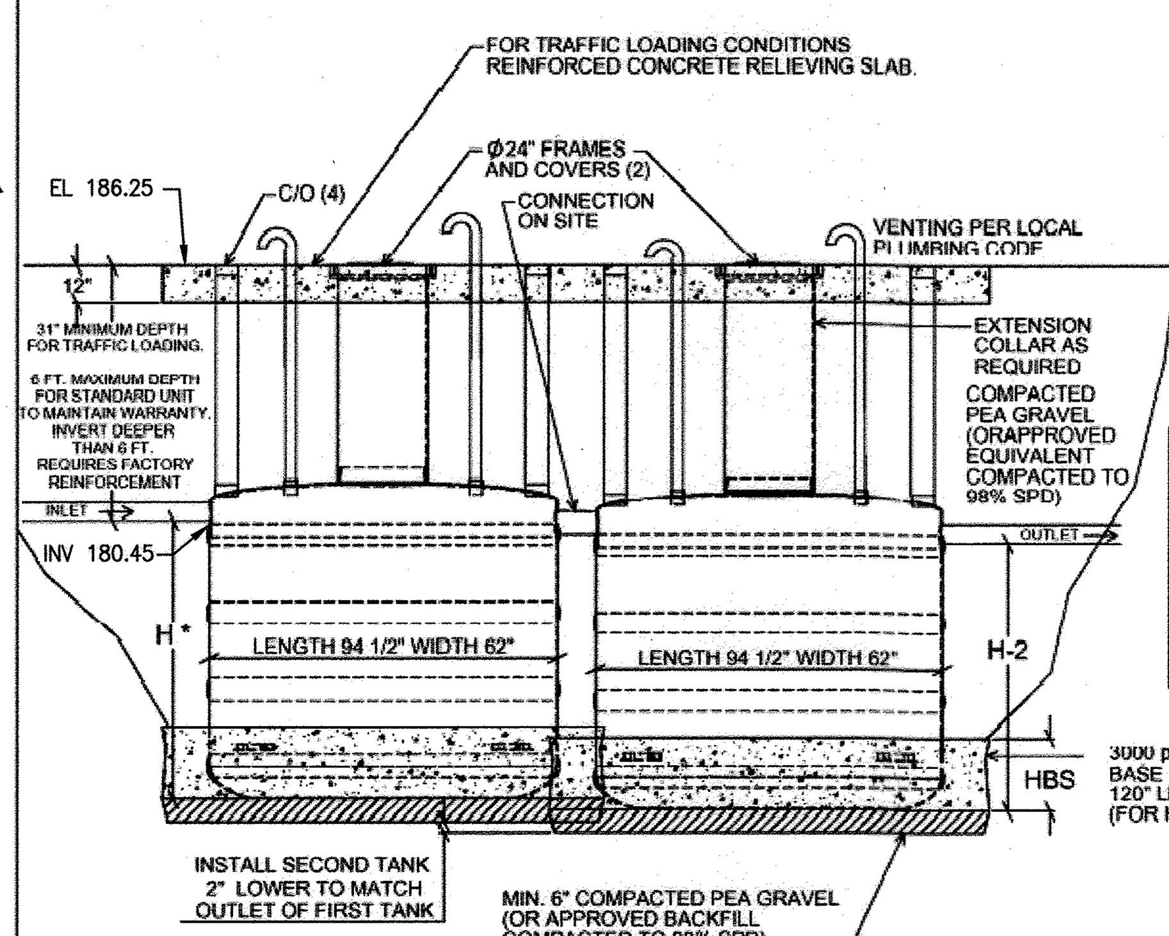
SHEET 30 OF ~~35~~ 38
DES: JMS/RM
DRAWN: SJM
CHK: JMS

SDP-91-94

H:\46898\Civil\Planset\46898C SP.dwg, 12/5/2007 8:44:44 AM, kjernigan



OMC 1000(2), 1500(2), 2000, 2600 AND 3000 INSTALLATION PROCEDURE



NOTES:

...

8. FILL SEPARATOR WITH WATER UP TO THE INLET/OUTLET PIPES.
9. BACKFILL UP TO INLET/OUTLET PIPES WITH COMPACTED PEA GRAVEL (OR APPROVED EQUIVALENT COMPCATED TO 98% S.P.D.) IN 6" TO 8" LAYERS
10. CONNECT THE INLET, OUTLET, AND VENT PIPING. VENT PER LOCAL PLUMBING CODE.
11. INSTALL EXTENSION COLLAR. USE FIBERGLASS SIKAFLEX CAULKING FOR WATERTIGHT SEAL IF DESIRED. INSTALL CLEANOUT EXTENSIONS.
12. BACKFILL WITH COMPACTED PEA GRAVEL, (OR APPROVED EQUIVALENT COMPACTED TO 98% SPD) TO MINIMUM 6" ABOVE THE BASE OF THE EXTENSION COLLAR.
13. FOR TRAFFIC LOADING CONDITIONS, POUR REINFORCED BEARING SLAB AT SURFACE GRADE WITH TRAFFIC LOADING FRAME AND COVER EMBEDDED IN SLAB AND CENTRED OVER EXTENSION COLLAR. FOR TRAFFIC LOADING SLAB, CONSULT WITH STRUCTURAL ENGINEER.
14. US PATENT # 5,746,912; CDN PATENT # 2,195,822

PROCEPTOR F.O.G. SEPARATOR MODEL	INLET INVERT TO TANK BOTTOM (H*)	HEIGHT OF BUOYANCY SLAB (HBS)	DRY WEIGHT OF UNIT *
OMC 1000(2)	32"	18"	1000 lbs
OMC 1500(2)	45"	19"	1150 lbs
OMC 2000	59"	26"	1300 lbs
OMC 2600	74"	35"	1490 lbs
OMC 3000	85"	41"	1610 lbs

* Weight includes both tanks without covers and collars

3000 psi CONCRETE READY MIX POUR 12" ALL AROUND BASE OF TANK TO HEIGHT OF BUOYANCY SLAB (SEE TABLE) 120" LENGTH X 84" WIDTH X HBS EACH TANK (FOR HIGH WATER CONDITIONS ONLY)

(PROCEPTOR SEPARATORS MUST BE INSTALLED IN ACCORDANCE WITH ALL RELEVANT FEDERAL, PROVINCIAL/STATE, AND LOCAL CODES INCLUDING LOCAL PLUMBING CODE)

* ACTUAL HEIGHT MAY VARY SLIGHTLY.

TITLE: PROCEPTOR F.O.G. SEPARATOR INSTALLATION PROCEDURE FOR OMC MODELS 1500(2) - 3000

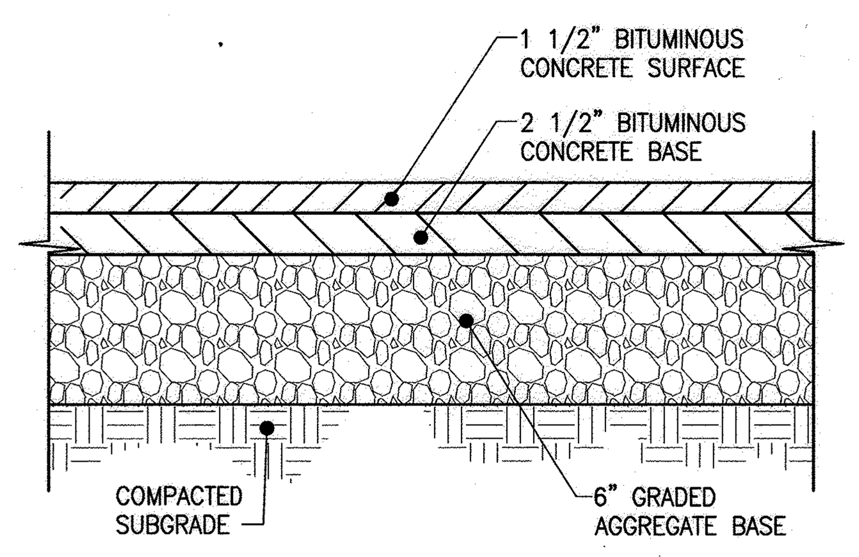
ALL DIMENSIONS IN INCHES

Proceptor — MANUFACTURER: GREEN TURTLE — 877-428-8187 US 877-966-9444 CAN — GREENTURTLETECH.COM/PROCEPTOR

A INSTALL OMC 1000(2)-3000 7

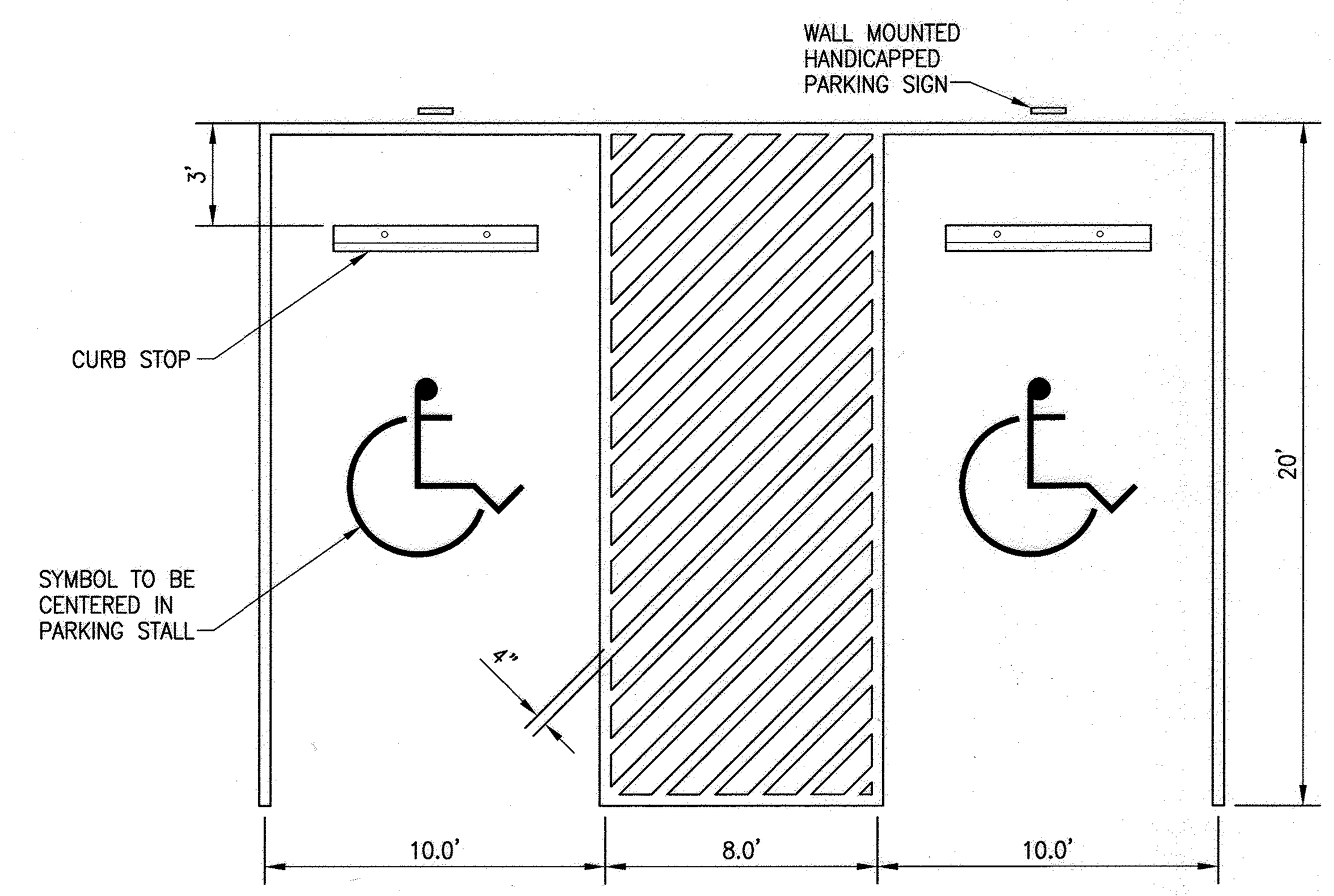
OIL- WATER SEPARATOR

SCALE: NOT TO SCALE



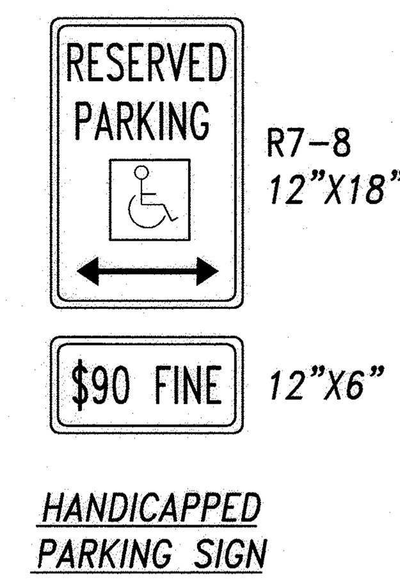
BITUMINOUS PAVING

SCALE: NOT TO SCALE

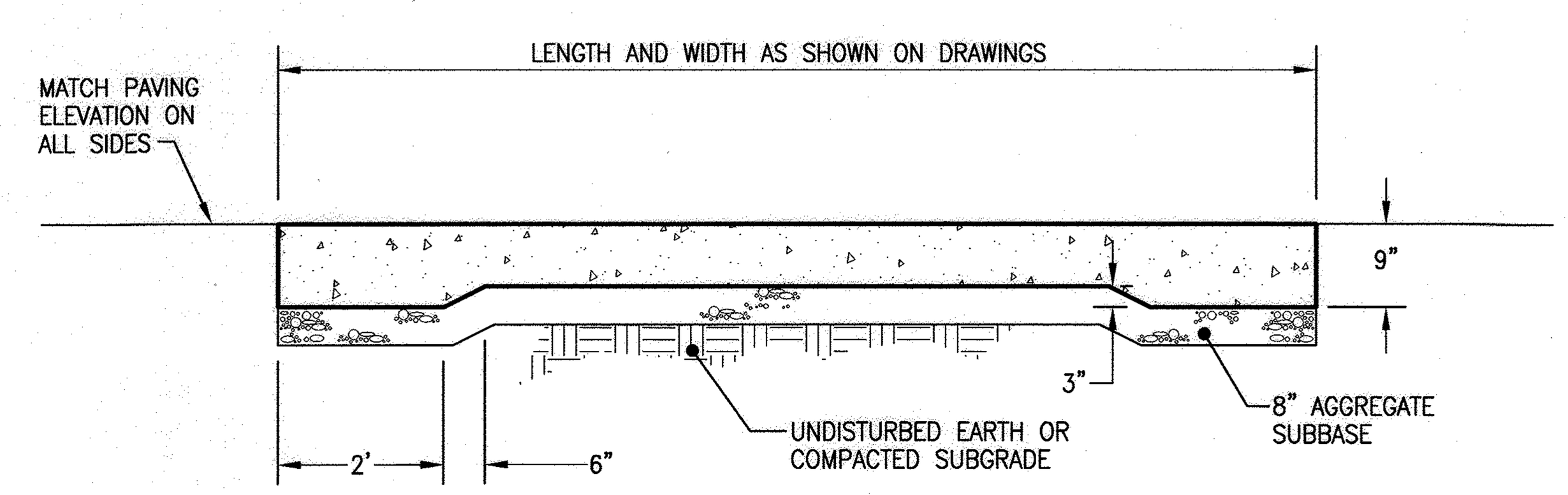


HANDICAPPED PARKING

SCALE: 1"= 5'



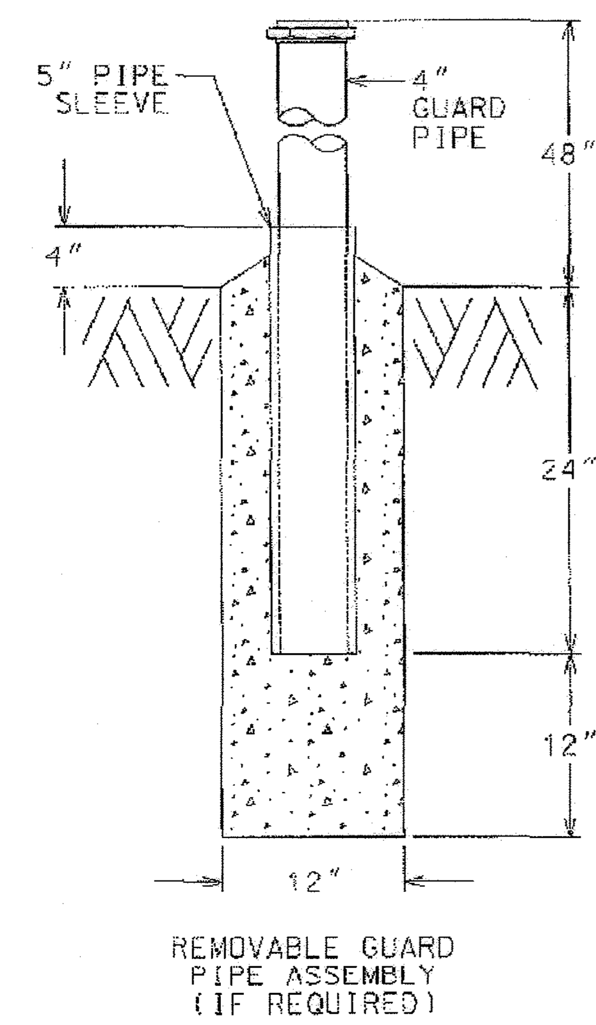
HANDICAPPED PARKING SIGN



NOTE: PARKING PAD SHALL BE 9" THICK 4,000 PSI CONCRETE. REINFORCING SHALL CONSIST OF #5 @ 12" BOTH WAYS WITH 2" OF COVER. PADS SHALL BE CONSTRUCTED ON STABILIZED SUBGRADE.

CONCRETE PAVING

SCALE: NOT TO SCALE

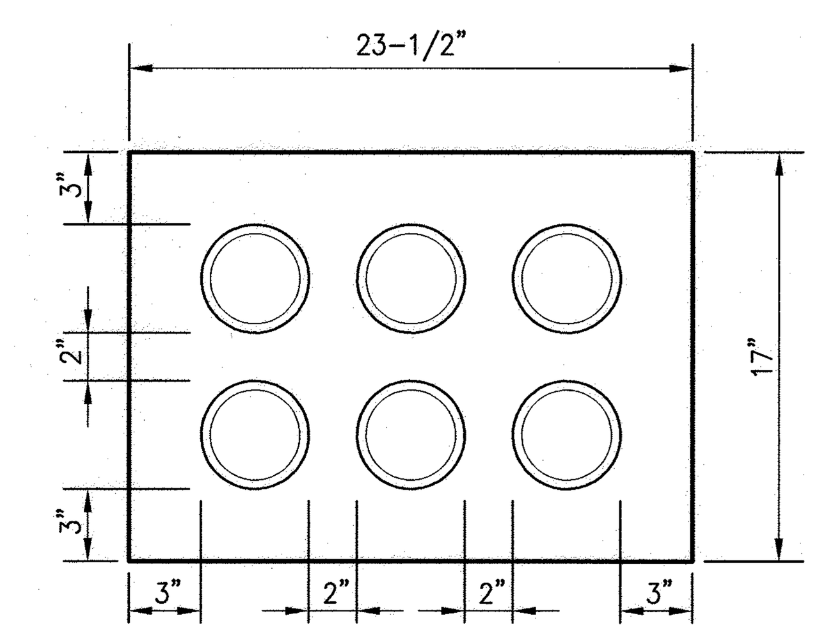


For Commercial & Industrial Meter Protection:

- Steel pipe bollards 4" diameter that extend at least 48" from final grade and filled with concrete are adequate protection.
- Each bollard to be shall be placed in a minimum of a 12" x 12" x 36" high concrete footer. At least 24" of the bollard to be shall be encased in the footer.
- *From the piece of equipment protruding furthest from* the metering assembly, the bollards should be located a minimum of 3 feet outwards from this point.
- There should be not more than 3 feet center-to-center spacing between each bollard. If required, additional bollards should be installed between the two outer bollards to provide additional protection
- BGE may require the installation of removable a bollard if the location is interfering with the placement of the meter.

BGE REMOVABLE BOLLARD

SCALE: NOT TO SCALE



ELECTRICAL DUCT BANK

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

DEVELOPER/OWNER
MANHEIM SERVICES CORPORATION d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE 7120 DORSEY RUN RD. BALTIMORE, MD 21075 PHONE: 615-781-3274

ADDRESS CHART	
PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12-28-07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/2/08

DIRECTOR — DATE 1/3/08

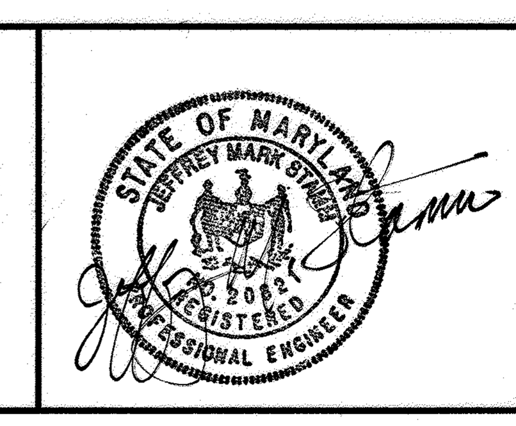
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT — DATE

NO.	DESCRIPTION	BY	DATE
1	REVISE GROUND ELEVATION	RM	12/4/07
2	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460



BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING SITE DETAILS

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: AS SHOWN

SHEET 31 OF 37

DES: JMS/RM
DRAWN: SJM
CHK: JMS

SDP-91-94

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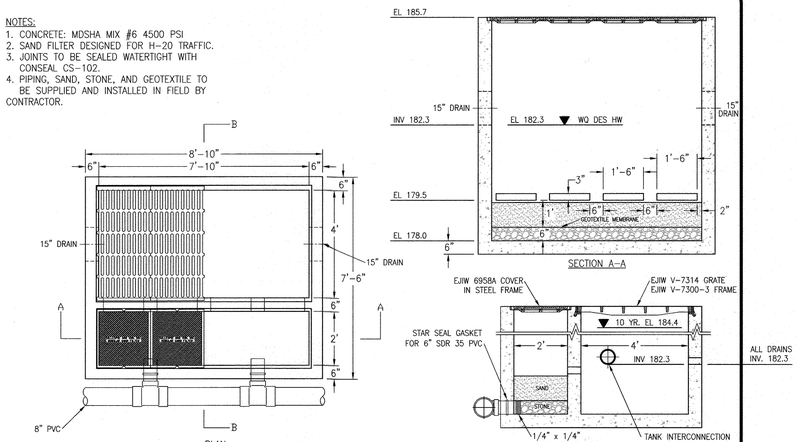
NOTES:
1. CONCRETE: MDSHA MIX #6 4500 PSI
2. SAND FILTER DESIGNED FOR H-20 TRAFFIC.
3. JOINTS TO BE SEALED WATERTIGHT WITH CONSEAL CS-102.
4. PIPING, SAND, STONE, AND GEOTEXTILE TO BE SUPPLIED AND INSTALLED IN FIELD BY CONTRACTOR.



PLAN
(covers and grates removed for detail)

SECTION A-A

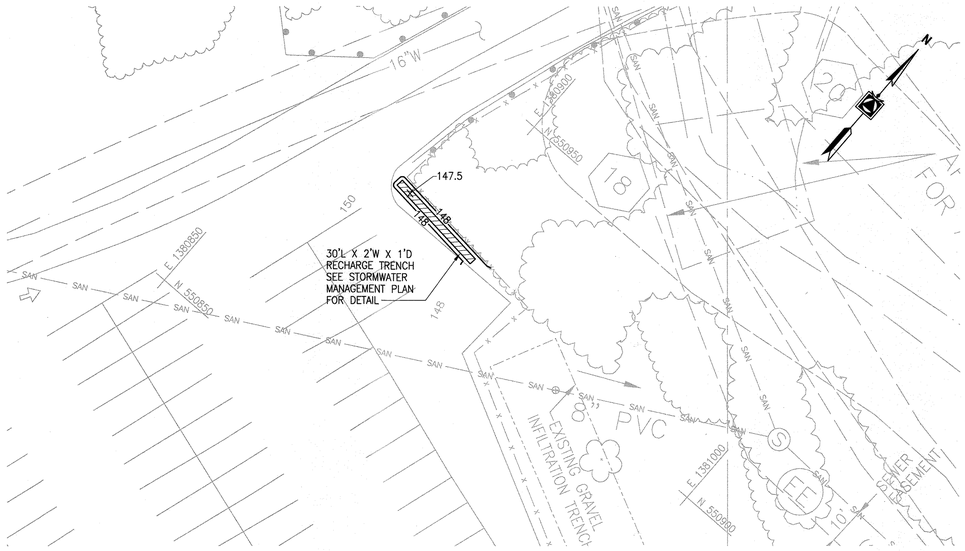
SECTION B-B

GILLESPIE PRECAST LLC
1-800-638-6884
www.gillespieprecast.com

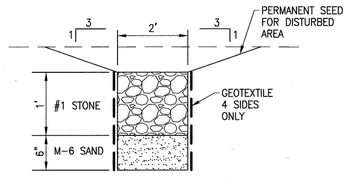
MD MODULAR SAND FILTER

DRAWN BY:	DWG.:
Eric Bishop	1 of 1
SCALE: 3/8" = 1'-0"	DATE: 3-3-05

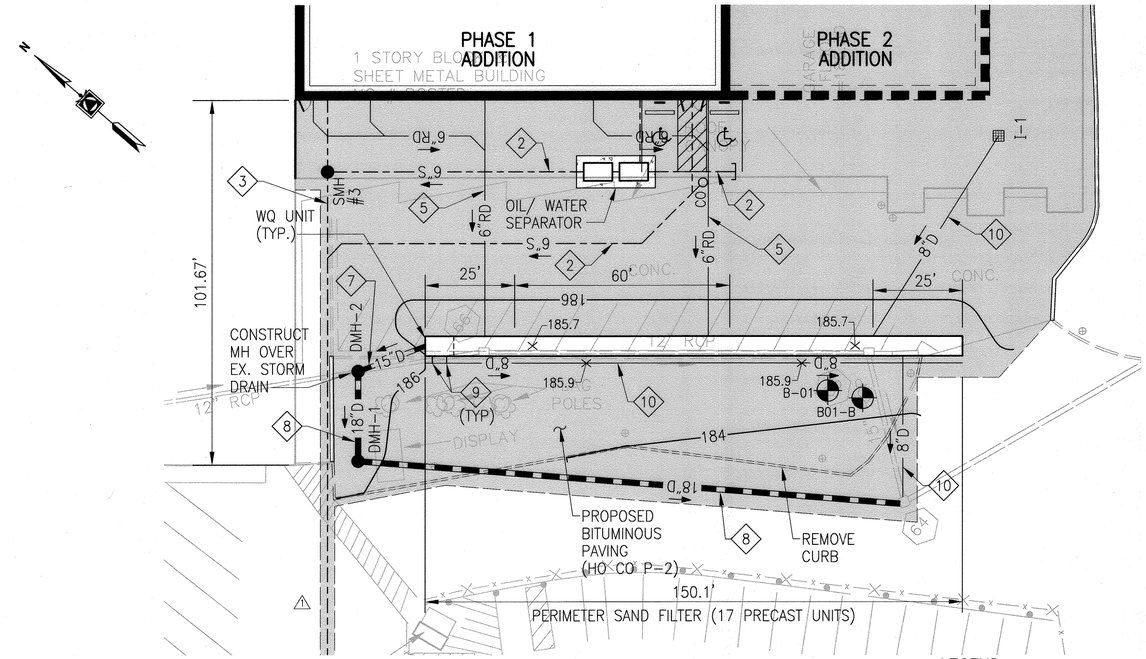
GEOTEXTILE IS MARYLAND APPLICATION CLASS 1 NON-WOVEN



SWM RECHARGE TRENCH PLAN
SCALE: 1"=20'



RECHARGE TRENCH
SCALE: NOT TO SCALE



PLAN
SCALE: 1"= 20'

LEGEND
BITUMINOUS PAVING
(8) PIPE ID NO.- SEE 8 OF 8 FOR PIPE SCHEDULE

STORMWATER MANAGEMENT SUMMARY

DA	AREA ac	PI	WQv cf	WQv cf	Rev cf	Rev cf	Cpv Cf	1-Yr	1-Yr	10-Yr	10-Yr	100-Yr	100-Yr
			REQ	PRO	REQ	PRO	REQ	PRO	REQ	PRO	REQ	PRO	REQ
A*	2.49	100	2,119	3,246	45	49	NA	10.3	7.8	21.0	16.0	30.0	23.1
B	0.66	100	NA	NA	NA	NA	NA	2.8	2.8	5.8	5.8	8.3	8.3
C	0.56	97	NA	NA	NA	NA	NA	2.6	1.5	5.3	3.1	7.7	4.5
D**	0.82	100	20%	NA	NA	NA	NA	4.0	7.8	8.1	15.9	11.5	22.7
TOTAL			2,119	3,246	NA	NA	NA	19.7	19.9	40.2	40.8	57.5	58.6

* Perimeter Sand Filter and Recharge Trench
** There is in excess of a 20% reduction in area from 1.68 ac to 0.82 ac.

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07
JEFFREY M. STAHM

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 OF DEVELOPER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07
MARK WANAMAKER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.28.07
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/6/08
DIRECTOR — DATE 1/3/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

20 0 20 40
SCALE IN FEET

NO.	DESCRIPTION	BY	DATE
1	REVISE ALIGNMENT OF PRIVATE SEWER	RM	12/4/07
2	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

STATE OF MARYLAND — JEFFREY MARK STAHM — No. 21981 — REGISTERED PROFESSIONAL ENGINEER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/20/07

37

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING STORMWATER MANAGEMENT PLAN AND DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: AS SHOWN

SHEET 32 OF 38
DES: JMS/RM
DRAWN: SJM
CHK: JMS
SDP-91-94

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MAINTENANCE SCHEDULE

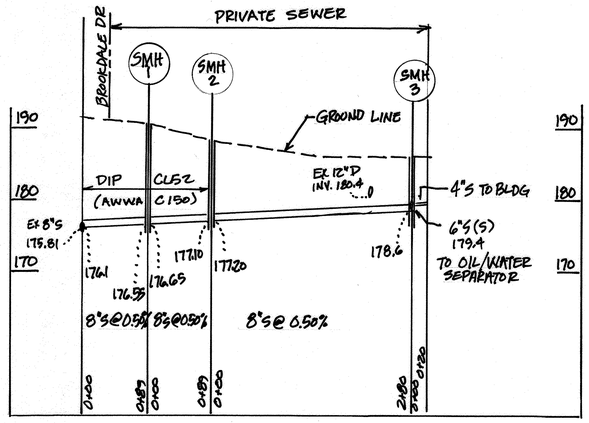
SWM FACILITY COMPONENTS	INSPECTION/ MAINTENANCE FREQUENCY	REQUIRED MAINTENANCE ACTIVITY
OUTLET STRUCTURES		
GRACE MAINTENANCE DEBRIS OBSTRUCTION CORROSION CONTROL	 A AND S A AND S	 REMOVE OBSTRUCTIONS GALVANIZE IF COATING HAS DETERIORATED/ REPLACE IF DAMAGE TO STEEL
EXCESSIVE SEDIMENT	A AND S	CLEAN OUT SEDIMENT
CONCRETE/ MASONRY CONDITION CRACKS OR DISPLACEMENT MINOR SPALLING (<1") MINOR SPALLING (REBARS EXPOSED) JOINT FAILURES WATER TIGHTNESS	 A AND S A AND S A AND S A AND S A AND S	 PATCH WITH NON-SHRINK GROUT PATCH WITH NON-SHRINK GROUT FORM AND POUR CONCRETE TO DESIGN DIMENSIONS REPLACE OR REPAIR PIPE PLUG WITH NON-SHRINK GROUT
PRETREATMENT BASIN		
SEDIMENTATION NOTED	A	CLEAN OUT SEDIMENT
SEDIMENT >6"	M	CLEAN OUT SEDIMENT
SEDIMENT CHAMBER DRAWDOWN TIME	M	N/A

THE FOLLOWING DESCRIBES THE COMPONENTS OF THE STORMWATER MANAGEMENT FACILITY FOUND ON THE STORMWATER MANAGEMENT PLAN. FOR EACH COMPONENT THERE ARE ASPECTS THAT MUST BE INSPECTED AND MAINTAINED IN GOOD WORKING ORDER IDENTIFIED FOR EACH, FOR THE LIFE OF THE FACILITY. THE MAINTENANCE OF THESE COMPONENTS SHALL BE PERFORMED BY MAINTENANCE STAFF OF M.V.A.

A = ANNUAL

M = MONTHLY

S = AFTER MAJOR STORM



SEWER PROFILE

SCALE: HOR 1"=100'
VER 1"=10'

△3

FOR REVISION △3 ONLY

STATE OF MARYLAND JEFFREY MARK STAMM No. 20852 REGISTERED PROFESSIONAL ENGINEER 2/6/08

BWAA RECONDITIONING BUILDING STRUCTURE SCHEDULE

Structure No.	Description	Detail No.	Top Elevation	Pipe Size / Invert In	Pipe Size / Invert In	Pipe Size / Invert Out	Location	Comments
EX			190.82	8"/176.10		8"/175.80		
△ SMH-1	STD PRECAST MH	SEE DETAILS	190.10	8"/176.65	-	8"/176.55	SEE STAKEOUT SHEET	
3 SMH-2	STD PRECAST MH	SEE DETAILS	188.20	8"/177.~~10~~ 20	-	8"/177.~~20~~ 10	SEE STAKEOUT SHEET	
SMH-3	STD PRECAST MH	MD-368.03	186.20	4"/179.4	6"/179.4	8"/178.60	SEE STAKEOUT SHEET	
S-SAN	OIL/WATER SEPARATOR	SEE DETAILS	184.00	6"/180.6	6"/180.6	6"/180.45	SEE STAKEOUT SHEET	
EX INLET			181.70	18"/177.9	8"/177.9	18"/177.80		
DMH-1	48" Square S'td Manhole	MD-383.00	186.20	18"/178.8		18"/178.60	SEE STAKEOUT SHEET	
DMH-2	48" Square S'td Manhole	MD-383.00	186.20	12"/180.4	15"/180.4	18"/178.90	SEE STAKEOUT SHEET	
SF	SAND FILTER	SEE DETAILS	185.70			15"/182.30	SEE STAKEOUT SHEET	
I-1	GRATE INLET	HO CO SD4.143	185.50	NA	NA	8"/183.60	SEE STAKEOUT SHEET	

INSPECTION REQUIREMENTS DURING CONSTRUCTION FOR AS-BUILT CERTIFICATION

1. INFILTRATION TRENCH:

   DURING EXCAVATION TO SUBGRADE;
   DURING PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEMS;
   DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA;
   DURING CONSTRUCTION OF APPURTENANT CONVEYANCE SYSTEMS SUCH AS INLETS AND OUTLETS AND UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMENENT STABILIZATION.

2. FILTERING SYSTEMS:

   DURING EXCAVATION TO SUBGRADE;
   DURING PLACEMENT AND BACKFILL OF UNDERDRAIN SYSTEMS;
   DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA;
   DURING CONSTRUCTION OF APPURTENANT CONVEYANCE SYSTEMS SUCH AS DIVERSION STRUCTURES, PRE-FILTERS AND FILTERS, INLETS, OUTLETS, AND FLOW DISTRIBUTION STRUCTURES; AND
   UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMENENT STABILIZATION.

3. ONCE CONSTRUCTION IS COMPLETE, AS-BUILT PLAN CERTIFICATION SHALL BE SUBMITTED TO THE ADMINISTRATION BY EITHER A PROFESSIONAL ENGINEER OR PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MARYLAND TO ENSURE THAT CONSTRUCTED STORMWATER MANAGEMENT PRACTICES AND CONVEYANCE SYSTEMS COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE APPROVED PLANS. AT A MINIMUM, AS-BUILT CERTIFICATION SHALL INCLUDE A SET OF DRAWINGS COMPARING THE APPROVED STORMWATER MANAGEMENT PLAN WITH WHAT WAS CONSTRUCTED. THE ADMINISTRATION MAY REQUIRE ADDITIONAL INFORMATION.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE STROMWATER MANAGEMENT FACILITY SHOWN ON THE PLANS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS APPROVED BY HOWARD COUNTY, EXCEPT AS NOTED IN RED ON THE "AS BUILT" DRAWINGS.

NAME _____ SIGNATURE _____

MARYLAND REGISTRATION NUMBER _____ DATE _____

MDE NO. _____ FACILITY IDENTIFICATION (NUMBER AND/ OR TYPE) _____

"CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE INSPECTIONS AND MATERIAL TESTS CONDUCTED DURING CONSTRUCTION.

SCHEDULE OF NEW PIPE

ID NO.	SIZE	MATERIAL	CLASS	FUNCTION
1	8"	PVC	SDR 35	SAN
2	6"	PVC	SDR35	SAN
3	4"	PVC	SDR 35	SAN
4	6"	DIP	CL 52	POTABLE WATER
5	6"	HDPE	N-12	ROOF DR
6	8"	HDPE	N-12	ROOF DR
7	15"	HDPE	N-12	STORM DR
8	18"	HDPE	N-12	STORM DR
9	6"	PVC	SCH 40	SOLID DR
10	8"	PVC	SCH 40	SOLID DR
11	2"	BL STEEL		GAS

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE 12/10/07

JEFFREY M. STAMM

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE 12/10/07

MARK WANAMAKER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 12-28-07

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 1/2/08

DIRECTOR DATE 1/3/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT DATE

△2

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

NO.	DESCRIPTION	BY	DATE
△1	REVISE ALIGNMENT OF PRIVATE SEWER	RM	12/4/07
△2	REVISE DEVELOPER/OWNER	RM	12/4/07
△3	ADD PROFILE; CORRECT INVERTS	RM	2/6/08

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

STATE OF MARYLAND JEFFREY MARK STAMM No. 20852 REGISTERED PROFESSIONAL ENGINEER

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT 12/20/07 DATE

37

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING SWM MAINTENANCE, STRUCTURE AND PIPE SCHEDULES
FIRST ELECTION DISTRICT HOWARD COUNTY, MD
DATE: 12/8/06 MAP 43 GRID 5 PARCEL 116 SCALE: NONE

SHEET 33 OF 38

DES: JMS/RM
DRAWN: SJM
CHK: JMS

SDP-91-94

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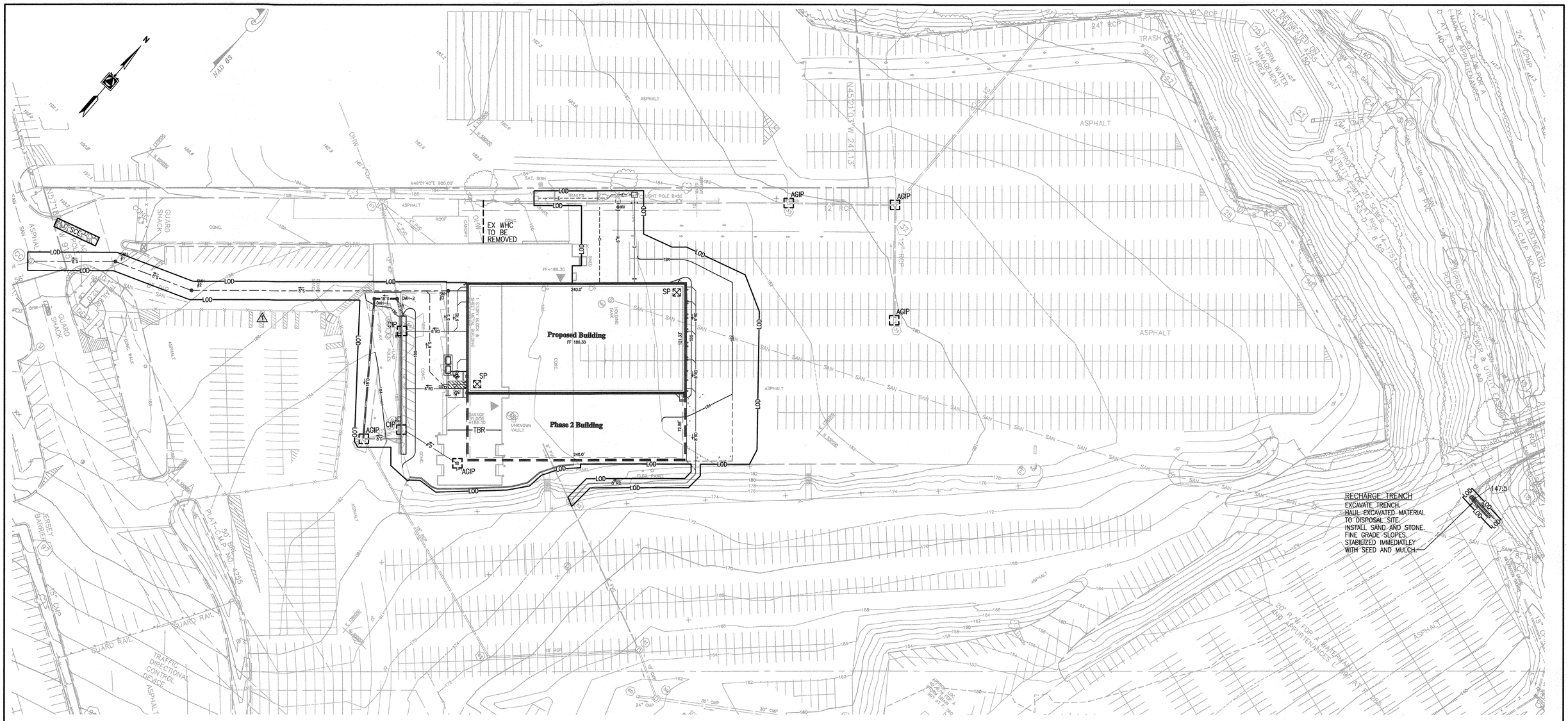

LEGEND

AGIP	AT GRADE INLET PROTECTION
CIP	CURB INLET PROTECTION
SP	SUMP PIT
—LOD—	LIMIT OF DISTURBANCE
SCE	STABILIZED CONSTRUCTION ENTRANCE

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

JEFFREY M. STAHL

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 OF DEVELOPER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

MARK WANAMAKER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.28.7

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/2/08

DIRECTOR — DATE 1/3/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

50 0 50 100
SCALE IN FEET

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE — DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/20/07

37

NO.	DESCRIPTION	BY	DATE
1	REVISE ALIGNMENT OF PRIVATE SEWER	RM	12/4/07
2	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

STATE OF MARYLAND — JEFFREY MARK STAHL — No. 21437 — REGISTERED PROFESSIONAL ENGINEER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING EROSION AND SEDIMENT CONTROL PLAN

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: 1"=50'

SHEET 34 OF 38

DES: JMS/RM
DRAWN: SJM
CHK: JMS

SDP-91-94

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STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION 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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO 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. 1, CHAPTER 12 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 SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF 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	2.6 ACRES
AREA DISTURBED	2.6 ACRES
AREA TO BE ROOFED OR PAVED	2.6 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.0 ACRES
TOTAL CUT	100 CU. YDS.
TOTAL FILL	100 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	0

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 CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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 UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

PHASE 1

1. OBTAIN A GRADING PERMIT
2. INSTALL SEDIMENT CONTROL AS SHOWN ON THE PLAN IN ACCORDANCE WITH THE DETAILS.
3. NOTIFY THE SEDIMENT CONTROL DIVISION OF THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS 3 DAYS IN ADVANCE OF CONSTRUCTION.
4. INSTALL INLET PROTECTION
5. DEMOLISH THE STRUCTURE. STABILIZE THE AREA IMMEDIATELY.
6. REMOVE PAVEMENT FOR THE BUILDING. MAKE SUMP PITS. STABILIZE THE AREA IMMEDIATELY.
7. EXCAVATE FOR AND POUR FOOTERS. BUILD FOUNDATION TO ELEV.186.39.
8. STABILIZE AREA OUTSIDE FOUNDATION WITH GRAVEL.
9. FILL FOUNDATION TO SUBGRADE. DO NOT TRACK DIRT ONTO PAVEMENT.
10. PLACE GRAVEL ONTO SUBGRADE AND POUR BUILDING SLAB.
11. CONSTRUCT BUILDING.
12. INSTALL UNDERGROUND UTILITIES. PLACE EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH. CLOSE TRENCH AND STABILIZE AT THE END OF EACH WORKING DAY. HAUL EXCESS MATERIAL FROM THE SITE. DO NOT TRACK DIRT ONTO PAVEMENT.
13. INSTALL INLET PROTECTION AT NEW INLET.
14. GRADE FOR SITE PAVING. INSTALL STONE BASE DAILY TO COVER ERODIBLE SUBGRADE.
15. INSTALL PERIMETER SAND FILTER AND RECHARGE TRENCH. FINE GRADE, SEED AND MULCH THE RECHARGE TRENCH IMMEDIATELY.
16. FINE GRADE AND PAVE THE SITE.
17. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL INLET PROTECTIONS AND STABILIZE WITH PAVING.

PHASE 2

1. OBTAIN A GRADING PERMIT
2. INSTALL SEDIMENT CONTROL AS SHOWN ON THE PLAN IN ACCORDANCE WITH THE DETAILS.
3. NOTIFY THE SEDIMENT CONTROL DIVISION OF THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS 3 DAYS IN ADVANCE OF CONSTRUCTION.
4. INSTALL INLET PROTECTION
5. REMOVE PAVEMENT FOR THE BUILDING. MAKE SUMP PITS.
6. EXCAVATE FOR AND POUR FOOTERS. BUILD FOUNDATION TO ELEV.186.39.
7. STABILIZE AREA OUTSIDE FOUNDATION WITH GRAVEL.
8. FILL FOUNDATION TO SUBGRADE. DO NOT TRACK DIRT ONTO PAVEMENT.
9. PLACE GRAVEL ONTO SUBGRADE AND POUR BUILDING SLAB.
10. CONSTRUCT BUILDING.
11. INSTALL UNDERGROUND UTILITIES. PLACE EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH. CLOSE TRENCH AND STABILIZE AT THE END OF EACH WORKING DAY. HAUL EXCESS MATERIAL FROM THE SITE. DO NOT TRACK DIRT ONTO PAVEMENT.
12. GRADE FOR SITE PAVING. INSTALL STONE BASE DAILY TO COVER ERODIBLE SUBGRADE.
13. FINE GRADE AND PAVE THE SITE.
14. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL.
15. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL INLET PROTECTIONS AND STABILIZE WITH PAVING.

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/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS/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/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.)
2. ACCEPTABLE – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/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 – APRIL 30, AND AUGUST 1 – OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 – JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS/ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 – FEBRUARY 28, PROTECT SITE BY:

- OPTION 1 – TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.
- OPTION 2 – USE SOD.
- OPTION 3 – SEER: WITH 60 LBS/ACRE KENTUCKY 30 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 APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 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 RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A SHORT-TERM 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.

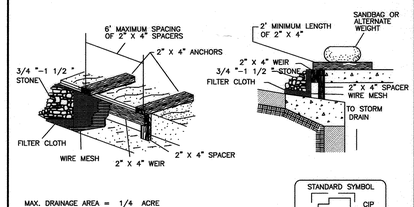
SOIL AMENDMENTS: APPLY 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

SEEDING: FOR PERIODS MARCH 1 – APRIL 30 AND FROM 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 – AUGUST 14, SEED WITH 3 LBS/ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ. FT.) FOR THE PERIOD NOVEMBER 16 – FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/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/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 ASPHALT ON FLAT AREAS. ON SLOPE 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.

CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

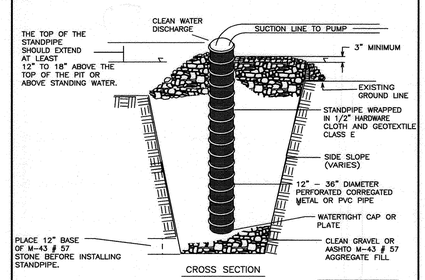
STANDARD SYMBOL: CIP

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard 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	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUMP PIT



CROSS SECTION

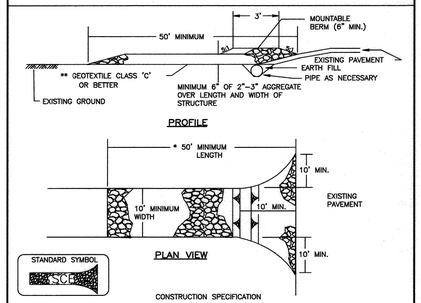
STANDARD SYMBOL: SP

Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slits or 1" diameter holes.
3. A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 13 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE



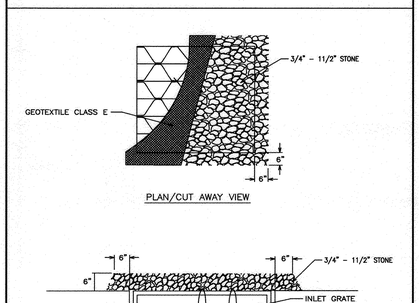
STANDARD SYMBOL: SCE

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 (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	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

AT GRADE INLET PROTECTION



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 11/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

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

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

JEFFREY M. STAMM

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 OF DEVELOPER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

MARK WANAMAKER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.28.07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/2/08

DIRECTOR — DATE 1/3/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

⚠

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE — DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/20/07

37

NO.	DESCRIPTION	BY	DATE
⚠	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

STATE OF MARYLAND — JEFFREY MARK STAMM — No. 21585 — PROFESSIONAL ENGINEER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: NONE

SHEET 35 OF 35
DES: JMS/RM
DRAWN: SJM
CHK: JMS
SDP-91-94

H:\46898\Civil\Planset\46898C_ESCN1.dwg, 12/5/2007 8:54:34 AM, kjernigan

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION 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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO 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. 1, CHAPTER 12 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 SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF 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	2.6 ACRES
AREA DISTURBED	2.6 ACRES
AREA TO BE ROOFED OR PAVED	2.6 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.0 ACRES
TOTAL CUT	100 CU. YDS.
TOTAL FILL	100 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	0

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 CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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 UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

PHASE 1

1. OBTAIN A GRADING PERMIT
2. INSTALL SEDIMENT CONTROL AS SHOWN ON THE PLAN IN ACCORDANCE WITH THE DETAILS.
3. NOTIFY THE SEDIMENT CONTROL DIVISION OF THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS 3 DAYS IN ADVANCE OF CONSTRUCTION.
4. INSTALL INLET PROTECTION
5. DEMOLISH THE STRUCTURE. STABILIZE THE AREA IMMEDIATELY.
6. REMOVE PAVEMENT FOR THE BUILDING. MAKE SUMP PITS. STABILIZE THE AREA IMMEDIATELY.
7. EXCAVATE FOR AND POUR FOOTERS. BUILD FOUNDATION TO ELEV.186.39.
8. STABILIZE AREA OUTSIDE FOUNDATION WITH GRAVEL.
9. FILL FOUNDATION TO SUBGRADE. DO NOT TRACK DIRT ONTO PAVEMENT.
10. PLACE GRAVEL ONTO SUBGRADE AND POUR BUILDING SLAB.
11. CONSTRUCT BUILDING.
12. INSTALL UNDERGROUND UTILITIES. PLACE EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH. CLOSE TRENCH AND STABILIZE AT THE END OF EACH WORKING DAY. HAUL EXCESS MATERIAL FROM THE SITE. DO NOT TRACK DIRT ONTO PAVEMENT.
13. INSTALL INLET PROTECTION AT NEW INLET.
14. GRADE FOR SITE PAVING. INSTALL STONE BASE DAILY TO COVER ERODIBLE SUBGRADE.
15. INSTALL PERIMETER SAND FILTER AND RECHARGE TRENCH. FINE GRADE, SEED AND MULCH THE RECHARGE TRENCH IMMEDIATELY.
16. FINE GRADE AND PAVE THE SITE.
17. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL INLET PROTECTIONS AND STABILIZE WITH PAVING.

PHASE 2

1. OBTAIN A GRADING PERMIT
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14. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL.
15. AFTER THE SITE IS PERMANENTLY STABILIZED AND PERMISSION IS GRANTED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL INLET PROTECTIONS AND STABILIZE WITH PAVING.

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/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS/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/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.)

2. ACCEPTABLE - APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/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 - APRIL 30, AND AUGUST 1 - OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 - JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS/ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 - FEBRUARY 28, PROTECT SITE BY:

OPTION 1 - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.
OPTION 2 - USE SOD.
OPTION 3 - SEER: WITH 60 LBS/ACRE KENTUCKY 30 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 APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 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 RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A SHORT-TERM 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.

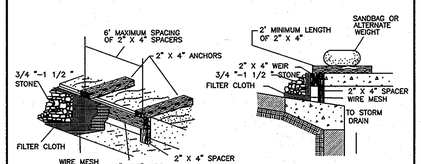
SOIL AMENDMENTS: APPLY 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

SEEDING: FOR PERIODS MARCH 1 - APRIL 30 AND FROM 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 - AUGUST 14, SEED WITH 3 LBS/ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ. FT.) FOR THE PERIOD NOVEMBER 16 - FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/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/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 ASPHALT ON FLAT AREAS. ON SLOPE 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.

CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL: CIP

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard 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.

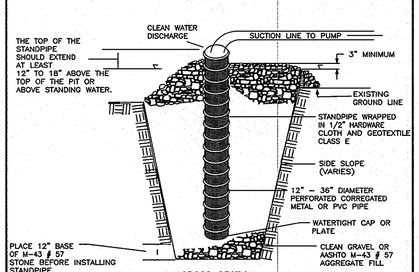
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

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	PAGE E - 16 - 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUMP PIT



CROSS SECTION

STANDARD SYMBOL: SP

Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.

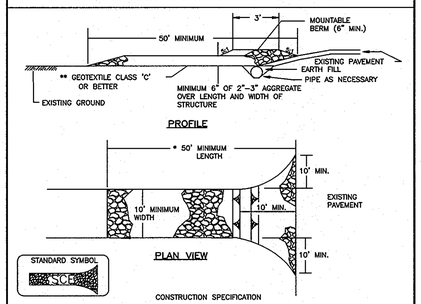
2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slits or 1" diameter holes.

3. A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.

4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 13 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE



STANDARD SYMBOL: SCE

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 (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.

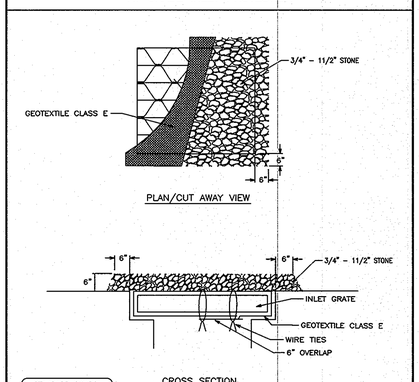
4. STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.

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	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

AT GRADE INLET PROTECTION



CROSS SECTION

STANDARD SYMBOL: AGIP

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	PAGE E - 16 - 5A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

JEFFREY M. STAMM

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 OF DEVELOPER (PRINT NAME BELOW SIGNATURE) — DATE 12/10/07

MARK WANAMAKER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 12.28.07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 1/2/08

DIRECTOR — DATE 1/8/08

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS

N/A

COUNTY HEALTH OFFICER, HOWARD COUNTY HEALTH DEPARTMENT — DATE

DEVELOPER/OWNER

MANHEIM SERVICES CORPORATION
d/b/a BALTIMORE WASHINGTON AUTO EXCHANGE
7120 DORSEY RUN RD.
BALTIMORE, MD 21075
PHONE: 615-781-3274

ADDRESS CHART

PARCELS NO.	116 & 655- PARCEL C
STREET ADDRESS	7151 BROOKDALE ROAD
ZONE	M-2
TAX ZONE	MAP 43 BLK 5

PLAT NO. M.D.R. 10212, RECORDED 2/18/1992

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE — DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 12/20/07

NO.	DESCRIPTION	BY	DATE
1	REVISE DEVELOPER/OWNER	RM	12/4/07

Gannett Fleming
4701 MT. HOPE DRIVE
BALTIMORE, MARYLAND 21215
410-585-1460

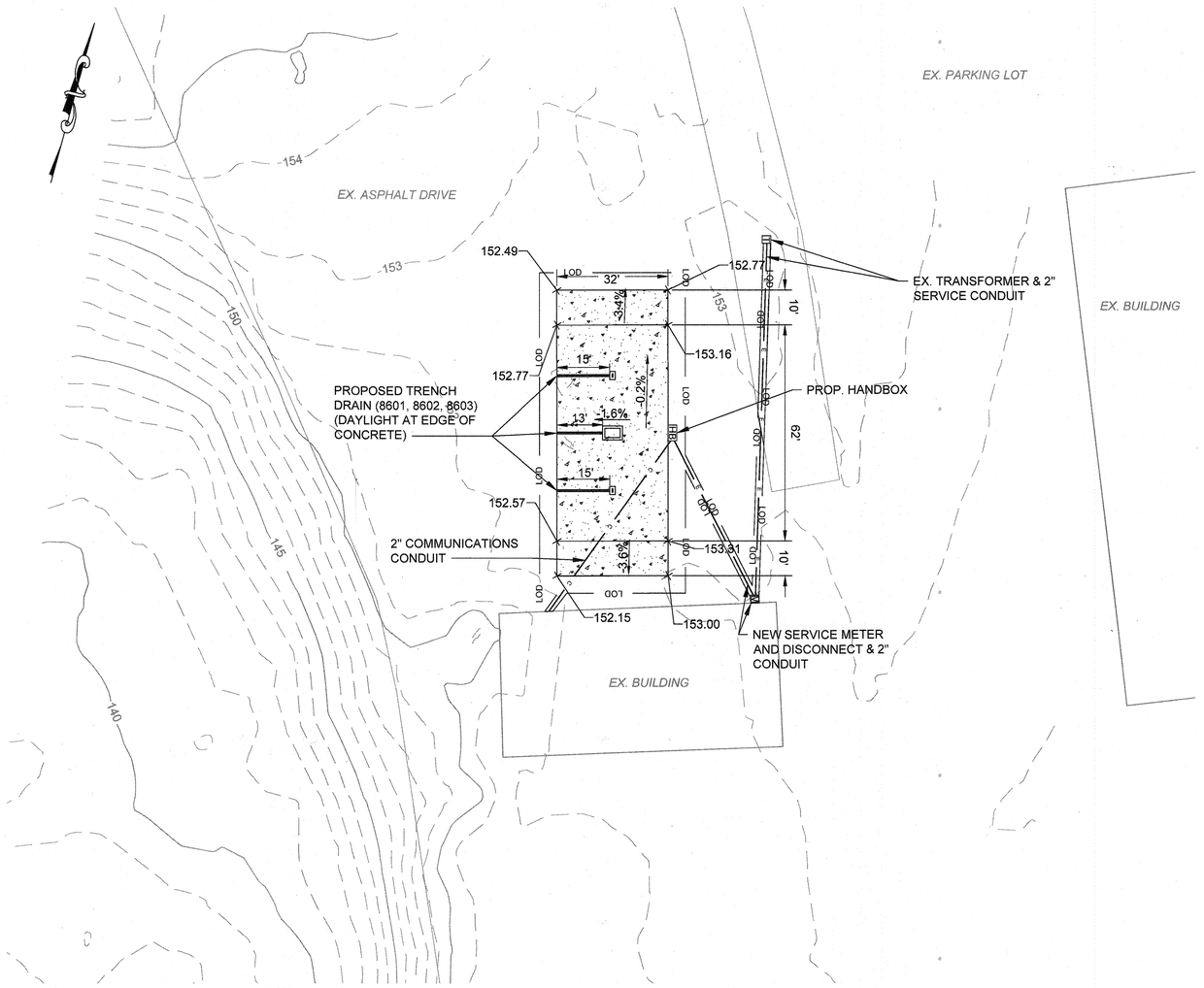
STATE OF MARYLAND — JEFFREY M. STAMM — No. 15836 — REGISTERED PROFESSIONAL ENGINEER

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP'S 80-38, 84-99, 85-68, 85-172 & 89-212
REVISED SITE DEVELOPMENT PLAN
RECONDITIONING BUILDING EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/8/06 — MAP 43 GRID 5 PARCEL 116 — SCALE: NONE

SHEET 35 OF 35
DES: JMS/RM
DRAWN: SJM
CHK: JMS
SDP-91-94

H:\V6898\Civil\Plansets\V6898C ESCN1.dwg, 12/5/2007 8:54:34 AM, kjernigan



LEGEND

175	EXISTING CONTOURS
178.02	SPOT ELEVATION
	PROPOSED CONCRETE
5%	SLOPE
LOD	LIMIT OF DISTURBANCE
E E	2" ELECTRIC CONDUIT
C C	2" COMMUNICATIONS CONDUIT

GENERAL NOTES

1. THE TOPOGRAPHIC INFORMATION SHOWN HEREON, WAS OBTAINED FROM NEARMAP. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTEE ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
2. BEARINGS, COORDINATES AND ELEVATIONS SHOWN ON THIS PLAN ARE SHOWN IN MARYLAND STATE PLANE. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88.
3. ALL WORK MUST BE IN COMPLIANCE WITH THE HOWARD COUNTY VOLUME IV DESIGN MANUAL (STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION).

HOWARD COUNTY STANDARD SEDIMENT CONTROL NOTES

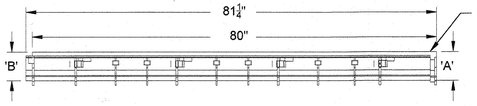
1. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
2. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
3. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESSOF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
4. 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 CID.
5. SITE ANALYSIS:
   - *TOTAL AREA OF SITE: 0.096 ACRES
   - *AREA DISTURBED: 0.096 ACRES
   - *AREA TO BE ROOFED OR PAVED: 0.093 ACRES
   - *AREA TO BE VEGETATIVELY STABILIZED: 0.003 ACRES
   - *TOTAL CUT: 93 CU. YDS.
   - *TOTAL FILL: 5 CU. YDS.
   - OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED BY CONTRACTOR.
6. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
7. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY OWNER. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS
   PART OF EVERY INSPECTION AND SHOULD INCLUDE:
   - INSPECTION DATE
   - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
   - NAME AND TITLE OF INSPECTOR
   - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
   - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
   - EVIDENCE OF SEDIMENT DISCHARGES
   - IDENTIFICATION OF PLAN DEFICIENCIES
   - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
   - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
   - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
   - PHOTOGRAPHS
   - MONITORING/SAMPLING
   - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
   - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
8. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
9. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D.
10. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
11. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
12. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

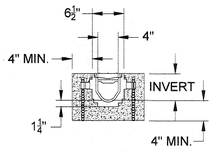
SITE & UTILITY PLAN GENERAL NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT EXIST.
2. ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO INLETS, MANHOLES, HAND HOLES, MECHANICAL LIDS, FIRE HYDRANTS, VALVE BOXES, ETC. WITHIN THE LIMITS OF DISTURBANCE TO BE ADJUSTED TO FINISHED GRADE UNLESS OTHERWISE NOTED.
3. ALL EXISTING FEATURES OUTSIDE OF THE LIMITS OF DISTURBANCE ARE TO REMAIN, UNLESS OTHERWISE NOTED.
4. ALL CUTS OF EXISTING PAVEMENT SHALL BE NEAT AND IN A STRAIGHT LINE TO FACILITATE NEW PAVING. CONTRACTOR SHALL REMOVE TWO FEET OF THE SURFACE COURSE OF PAVEMENT (2" DEPTH) BEYOND ANY SAW CUTS TO OVERLAP PAVEMENT PATCHES.
5. CONTRACTOR TO PROTECT EXITING UTILITIES TO REMAIN WITHIN LOD DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING "MISS UTILITY" AT 1-800-257-7777 THREE DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.
7. THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
8. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL EXISTING AND PROPOSED BUILDING ENTRANCES DURING ALL PHASES OF CONSTRUCTION, UNLESS OTHERWISE NOTED IN THESE DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER / OWNER IF EXISTING OR PROPOSED CONDITIONS RESTRICT ABILITY TO ACHIEVE POSITIVE DRAINAGE FROM BUILDINGS PRIOR TO THE START OF CONSTRUCTION.
9. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES WHEN WORKING ADJACENT TO OR CROSSING EXISTING UTILITIES.
10. PROTECT PERIMETER OF WORK AREA WITH SILT FENCE ON PAVEMENT PER MDE DETAIL E-2.

EROSION SEDIMENT CONTROL NOTES (PROJECTS < 30,000 SF)

1. CUTS/FILLS SHALL NOT EXCEED 10' IN DEPTH.
2. NO EARTH DISTURBANCE SHALL OCCUR WITHIN THE LIMITS OF ANY 100 YEAR FLOORPLAIN OR 100 FEET OF ANY STREAM OR WATER BODY.
3. THE PROPOSED WORK DOES NOT REQUIRE A STATE WATERWAY OR WETLAND PERMIT.
4. EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCE) SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE EXCEPT THAT NECESSARY FOR INSTALLATION OF THE CONTROLS.
5. ALL EROSION SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
6. ALL CLEARING AND GRADING SHALL BE COMPLETED IN THE FOLLOWING SEQUENCE:
   a. LIMIT INITIAL CLEARING AND GRUBBING FOR THE INSTALLATION OF THE CONSTRUCTION ENTRANCE, PERIMETER CONTROLS AND ANY REMAINING CONTROLS.
   b. CLEAR, GRUB AND GRADE THE REMAINDER OF THE SITE AS SPECIFIED BY THE LIMITS OF DISTURBANCE SHOWN ON THE ATTACHED PLAT.
   c. CONSTRUCT ANY STRUCTURES AND UTILITIES.
   d. PROVIDE FINAL GRADING AND STABILIZATION ACCORDING TO THE SEEDING OR SODDING SPECIFICATIONS (MINIMUM STABILIZATION BY SEEDING AND MULCHING).
   e. AFTER THE SITE HAS BEEN STABILIZED WITH ADEQUATE VEGETATION REMOVE SEDIMENT CONTROL PRACTICES AND STABILIZE REMAINING DISTURBED AREAS.
7. ALL EROSION SEDIMENT CONTROL DEVICES REQUIRE CONTINUAL MAINTENANCE. ANY CONTROLS THAT ARE DAMAGED OR DISTURBED SHALL BE RESTORED OR REPAIRED BEFORE THE END OF EACH DAY.
8. DEVELOPMENT ACTIVITIES SHALL NOT IMPAIR ANY DRAINAGE, CREATE AN EROSION HAZARD, OR CREATE A SOURCE OF SEDIMENT TO ANY ADJACENT WATERCOURSE, WETLAND OR PROPERTY.
9. ANY PUMPING OF WATER MUST BE FILTERED OR DONE ACCORDING TO THE CRITERIA CONTAINED IN THE MOST CURRENT VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
10. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS FOR ALL SEDIMENT CONTROL STOCKPILES, AND 3:1 OR GREATER SLOPES AND SEVEN (7) DAYS FOR ALL OTHER DISTURBED AREAS ON THE SITE NOT BEING ACTIVELY GRADED.
11. ALL CONCRETE AND ASPHALT PAVEMENT AREAS REQUIRE SAME DAY STABILIZATION.





NOTES:
1. ACTUAL CHANNEL LENGTH IS 81¼" TO ALLOW FOR OVERLAP.
2. CONTRACTOR TO CUT IN FIELD PER DIMENSIONS SPECIFIED ON PLAN.
3. SECTION 8603 SHALL HAVE NO CAP AT DOWNSTREAM END.

TRENCH No.	'A' INV.	'B' INV.
8601	3.50"	4.10"
8602	4.10"	4.70"
8603	4.70"	5.30"

ZURN Z886 6" WIDE REVEAL TRENCH DRAIN SYSTEM

NOT TO SCALE

LANDCOVER SUMMARY

LIMITS OF DISTURBANCE.....4,170 SF
EX. IMPERVIOUS AREA.....4,060 SF
PROP. IMPERVIOUS AREA.....4,060 SF
CUT..... 93 CY
FILL..... 5 CY

20 10 0 20 40
SCALE: 1" = 20'

RK&K
P: 410.728.2900
700 E. Pratt Street, Suite 500 | Baltimore, MD 21202
Engineers | Construction Managers | Planners | Scientists
www.rkk.com
Responsive People | Creative Solutions

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 2.7.24

Chief, Division of Land Development — Date 2/13/24

Director — Date 2/13/24

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

REVISIONS		
NO.	DATE	DESCRIPTION
1	12/14/23	NEW SHEET: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 49432 EXPIRATION DATE: May 31, 2024
12/14/23

BALTIMORE–WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCELS #116 & #655 - PARCEL C, F-79-145 & 850/147, TAX MAP 43

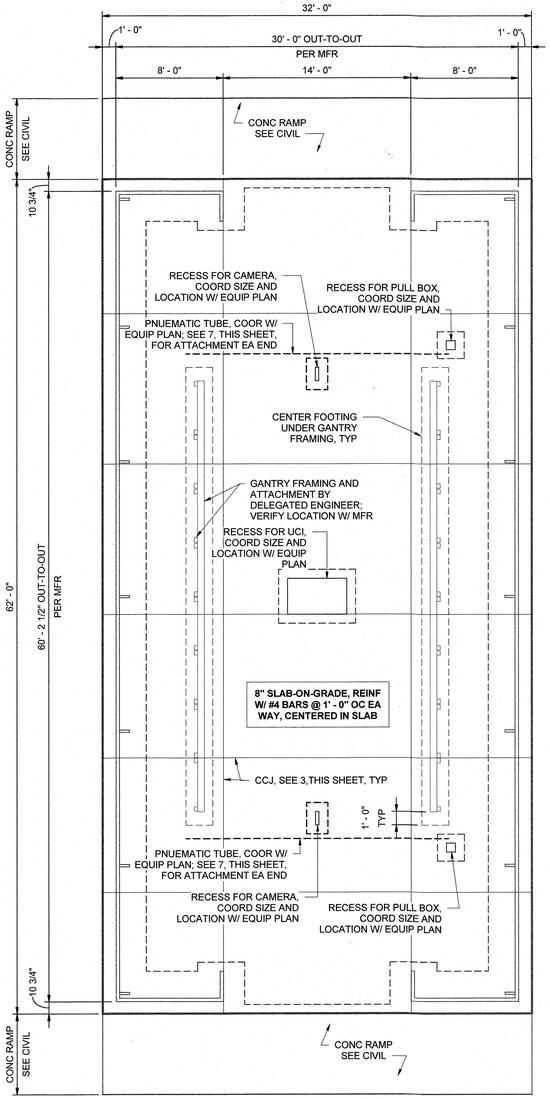
SITE PLAN GRADING & UTILITY PLAN

FIRST ELECTION DISTRICT
DATE: 12/14/23
HOWARD COUNTY, MD
SCALE 1"=20'

SHEET 36 OF 37
DES: EWK
DRAWN: JCP
CHK: CWWM
SDP-91-94

SDP-91-94

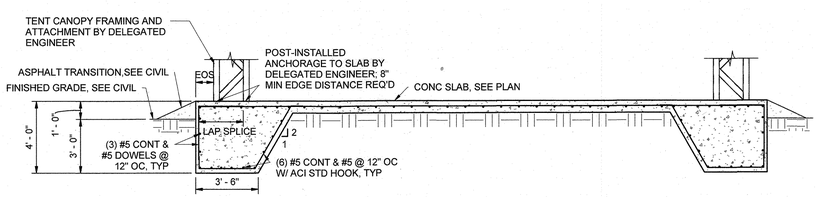
\\ad.rkk.com\fs\Cloud\Projects\2023\2327\1_CoxAutoSDP\CADD\Plans\C2.10 Site Plan (Revised).dwg



NOTE: SEE CIVIL FOR LOCATION OF TRENCH DRAINS. SEE DETAIL 8, THIS SHEET (SIM), FOR SLAB AT TRENCH DRAIN. DRAIN SHALL MAINTAIN 1'-0" MINIMUM CLEARANCE FROM GANTRY POST LOCATIONS, AND 2'-0" MINIMUM CLEARANCE FROM CANOPY FRAME LOCATIONS.

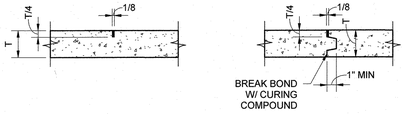
1 POST RECON GANTRY FOUNDATION PLAN

SCALE: 3/16" = 1'-0"



2 FOUNDATION SECTION

SCALE: NTS

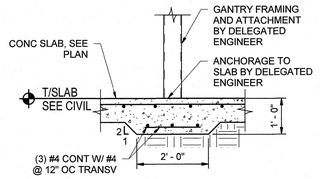


CRACK CONTROL JOINT (CCJ) **CONSTRUCTION JOINT (CJ)**

NOTES:
1. CCJ SHALL BE PREFORMED OR SAWED. IF SAWED, SAWING MUST TAKE PLACE WITHIN 12 HRS OF SLAB PLACEMENT.
2. CONSTRUCTION JOINTS SHALL BE USED INSTEAD OF CRACK CONTROL JOINT WHEREVER CONSTRUCTION IS STOPPED OR WHERE CALLED FOR ON PLAN.

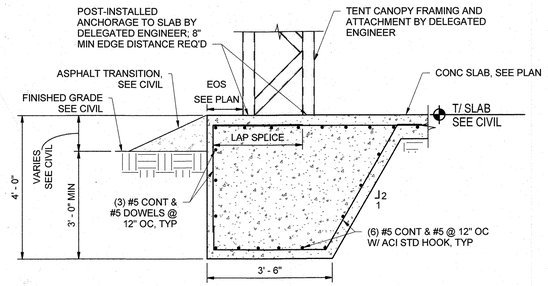
3 TYP CONC SLAB-ON-GRADE JOINTS

SCALE: NTS



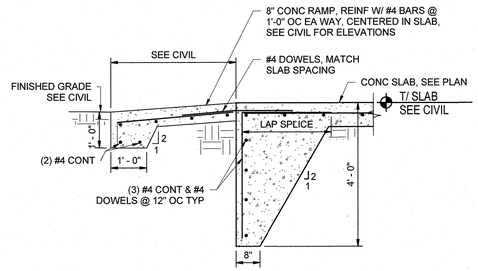
4 TYP INTERIOR FTG DETAIL

SCALE: NTS



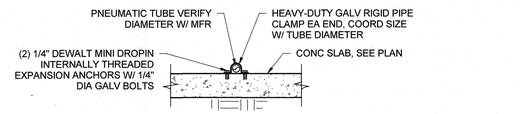
5 TYP PERIMETER COL FTG DETAIL

SCALE: NTS



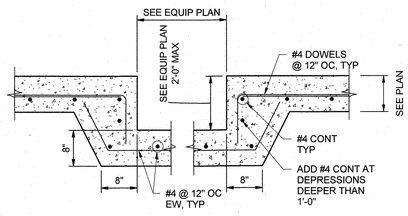
6 TYP PERIMETER TURNDOWN DETAIL

SCALE: NTS



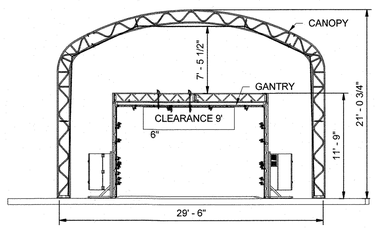
7 TYP PNEUMATIC TUBE CLAMP DETAIL

SCALE: NTS



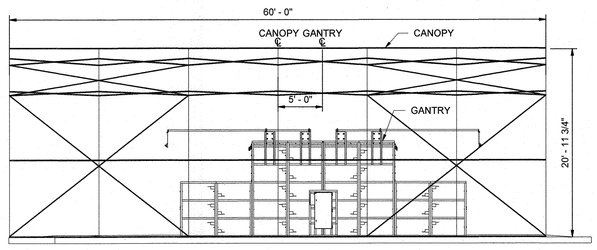
8 TYP RECESS DETAIL

SCALE: NTS



9 FRONT/REAR ELEVATION

SCALE: NTS



10 SIDE ELEVATION

SCALE: NTS

UNFACTORED CANOPY BASE REACTIONS

LOAD CASES		REACTIONS Ry (kip)	REACTIONS Rz (kip)
DEAD LOAD, SELF WEIGHT	DL	0.54	-0.04
SNOW LOAD/ ROOF LIVE LOAD	SL/RLL	4.86	-0.95
WIND LOAD, MAXIMUM	WLZ	-2.80	3.03
WIND LOAD, MINIMUM	WLZ	-4.14	2.49

RS&H
Reynolds, Smith and Hills, Inc. a/k/a RS&H, Inc.
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Jacksonville, Florida 32256-0597
904-256-2500 Fax 904-256-2503
www.rsandh.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 2.7.24

Chief, Division of Land Development — Date 2/13/24

Director — Date 2/13/24

STATE OF MARYLAND — JOSEPH M FENTON — PROFESSIONAL ENGINEER — 12-14-23

PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,
LICENSE NO. 57757
EXPIRATION DATE: 06/07/2025

OWNER/DEVELOPER
BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
7151 BROOKDALE ROAD
BALTIMORE, MARYLAND 21227

REVISIONS NO.	DATE	DESCRIPTION
1	12/14/23	NEW SHEET: ADDITION OF ELEVATED CONCRETE PAD AND CANOPY

BALTIMORE-WASHINGTON AUTO EXCHANGE, INC.
BROOKDALE INDUSTRIAL PARK
INDUSTRIAL BUILDINGS & VEHICLE STORAGE ADDITIONS
TO SDP's 80-38, 84-99, 85-68, 85-172 & 89-212
PARCELS #116 & #655-PARCEL C, F-79-145 & 650/147, TAX MAP 43

SITE DETAILS

FIRST ELECTION DISTRICT — HOWARD COUNTY, MD
DATE: 12/14/23 — SCALE 1"=20'

SHEET 37 OF 37

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