PARKING TABULATION

PARKING REQUIRES [2] [3]

1st FL OFFICE -	19,296 Sq. Ft. @ 3.3 Spaces Per 1,000 Sq. Ft. =	64	Spaces
2nd FL WAREHOUSE -	92,069 Sq. Ft. @ .85 Spaces Per 1,000 Sq. Ft. =	78	Spaces
MEZZANINE (OFFICE - 3,310 Sq. Ft. @ 3.3 Spaces Per 1,000 Sq. Ft.		11	Spaces
MEZZANINE (STORAGE - 1,313 Sq. Ft. @ .05 Spaces Per 1,000 Sq. Ft. =		1	Space
	TOTAL REQUIRED	135	Spaces
	(Includes 6 Handicapped)	182	Spaces

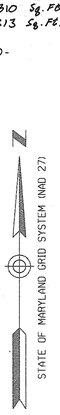
PARKING PROVIDED -

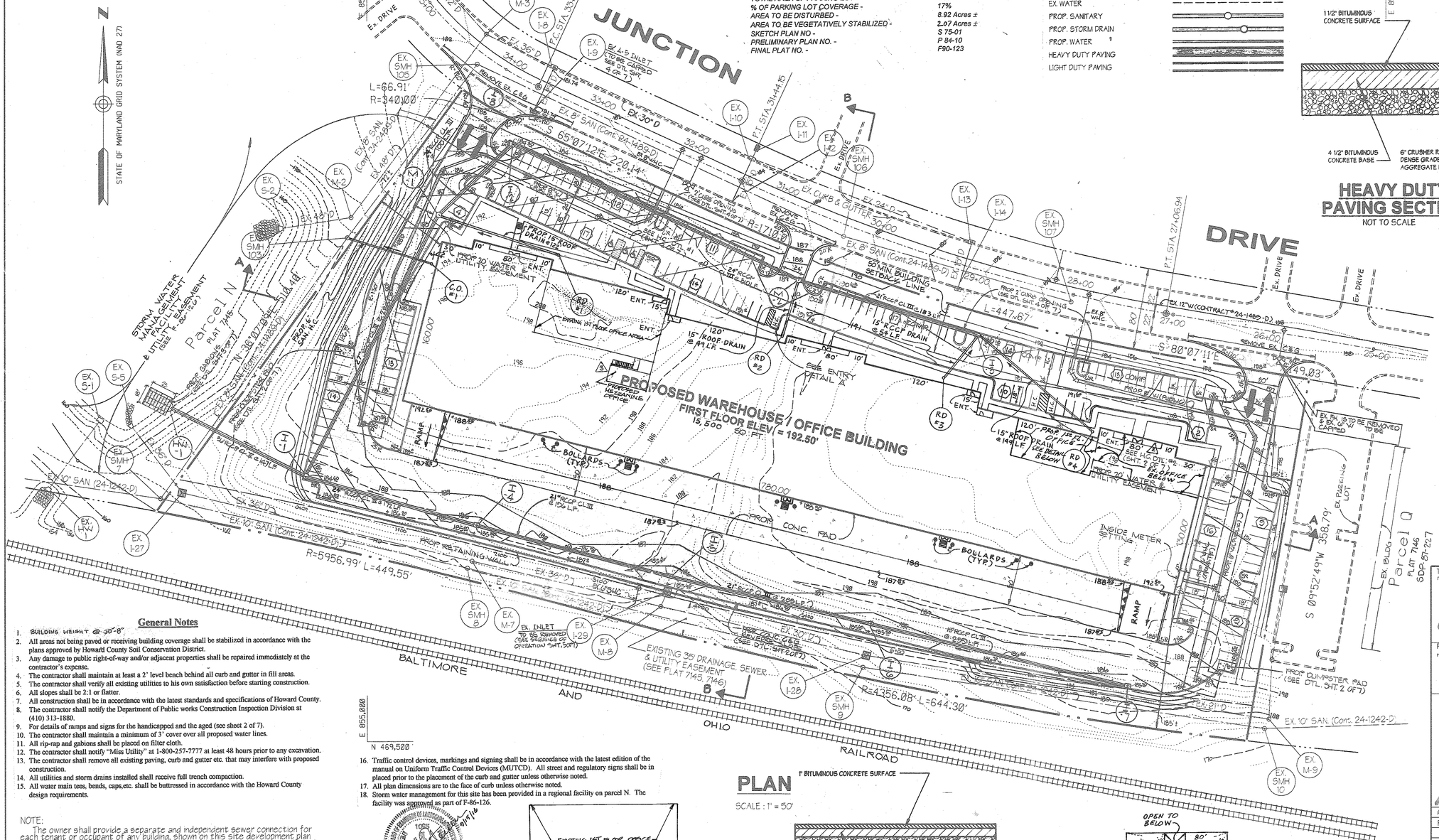
SITE DATA

TOTAL AREA OF SITE -	8.9747 Acres ±
EXISTING ZONING -	M-2
PROPERTY REFERENCE -	3410/223
EXISTING USE -	VACANT
PROPOSED USE -	WAREHOUSE/OFFICE
BUILDING COVERAGE -	2.682 Acres ±
% BUILDING COVERAGE	30%
FLOOR AREA -	115,500 SQ. FT. or 2.65 Acres ±
FLOOR AREA RATIO -	0.3
AREA TO BE PAVED PLUS BUILDING AREA -	6.525
OPEN SPACE -	2.44 Acres ±
TOTAL AREA OF PARKING LOT -	1.52 Acres ±
% OF PARKING LOT COVERAGE -	17%
AREA TO BE DISTURBED -	8.92 Acres ±
AREA TO BE VEGETATIVELY STABILIZED -	2.07 Acres ±
SKETCH PLAN NO -	S 75-01
PRELIMINARY PLAN NO. -	P 84-10
FINAL PLAT NO. -	F90-123

LEGEND

EX. 2' CONTOURS
EX. 10' CONTOURS
PROP. 2' CONTOURS
PROP. 10' CONTOURS
EX. CURB & GUTTER
PROP. CURB & GUTTER
BLDG. RESTRICTION LINE
EX. SANITARY
EX. STORM DRAIN
EX. WATER
PROP. SANITARY
PROP. STORM DRAIN
PROP. WATER
HEAVY DUTY PAVING
LIGHT DUTY PAVING





General Notes

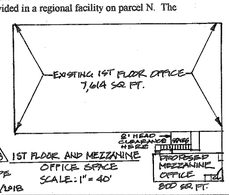
1. BUILDING HEIGHT @ 30'-8".
2. All areas not being paved or receiving building coverage shall be stabilized in accordance with the plans approved by Howard County Soil Conservation District.
3. Any damage to public right-of-way and/or adjacent properties shall be repaired immediately at the contractor's expense.
4. The contractor shall maintain at least a 2' level bench behind all curb and gutter in fill areas.
5. The contractor shall verify all existing utilities to his own satisfaction before starting construction.
6. All slopes shall be 2:1 or flatter.
7. All construction shall be in accordance with the latest standards and specifications of Howard County.
8. The contractor shall notify the Department of Public works Construction Inspection Division at (410) 313-1880.
9. For details of ramps and signs for the handicapped and the aged (see sheet 2 of 7).
10. The contractor shall maintain a minimum of 3' cover over all proposed water lines.
11. All rip-rap and gabions shall be placed on filter cloth.
12. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation.
13. The contractor shall remove all existing paving, curb and gutter etc. that may interfere with proposed construction.
14. All utilities and storm drains installed shall receive full trench compaction.
15. All water main tees, bends, caps,etc. shall be buttressed in accordance with the Howard County design requirements.
16. Traffic control devices, markings and signing shall be in accordance with the latest edition of the manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in placed prior to the placement of the curb and gutter unless otherwise noted.
17. All plan dimensions are to the face of curb unless otherwise noted.
18. Storm water management for this site has been provided in a regional facility on parcel N. The facility was approved as part of F-86-126.

NOTE:
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

FOR REVISION NO. 3

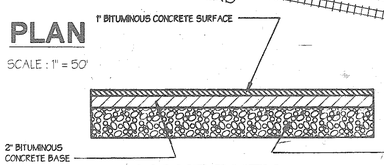
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 1025, EXPIRATION DATE: 7/26/1998

[3] 1ST FLOOR AND MEZZANINE OFFICE SPACE
SCALE: 1" = 40'



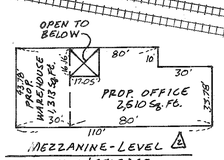
PLAN

SCALE: 1" = 50'



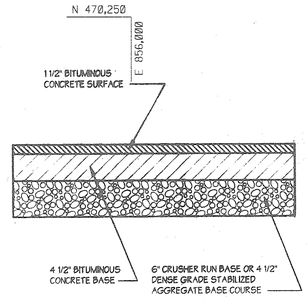
LIGHT DUTY PAVING SECTION - P-1

NOT TO SCALE



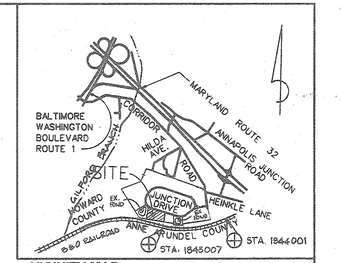
MEZZANINE - LEVEL
OFFICE / STORAGE
SCALE: 1" = 40'

[3] REV. 7/27/16 - ADDED MEZZANINE OFFICE SPACE, REVISED PARKING TABULATION



HEAVY DUTY PAVING SECTION - P-4

NOT TO SCALE



VICINITY MAP

SCALE: 1" = 2000'

BENCHMARK

SQUARE CUT TOP CONC. CURB @ END
ELEVATION 210.71'

CONTROL REFERENCE

MONUMENT #1844001
R.B. 27' +/- OFF N. SIDE BROCK BRIDGE
RD. 1' BELOW SURFACE 170.974
MONUMENT #1843007
R.B. 14' +/- S. OFF CENTERLINE OF
BROCK BRIDGE RD. 3' BELOW SURFACE
ELEVATION 174.606'

SHEET INDEX

SHEET #1 -	SITE PLAN
SHEET #2 -	SECTIONS & DETAILS
SHEET #3 -	DRAINAGE AREA MAP & PROFILES
SHEET #4 -	PROFILES
SHEET #5 -	SEDIMENT CONTROL PLAN
SHEET #6 -	SEDIMENT CONTROL DETAILS
SHEET #7 -	LANDSCAPE PLAN

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — PLAN NUMBER — DATE 7/24/96

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/29/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/11/96

DIRECTOR — DATE 8/12/96

ADDRESS CHART

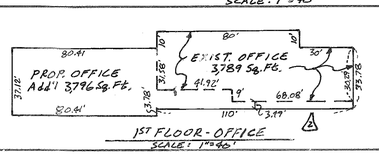
PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
JUNCTION INDUSTRIAL PARK	TWO	O-1

PLAT #	BLOCK #	ZONE	TAX / ZONE MAP	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE C04 — SEWER CODE 4,020,000

REVISIONS:
9/3/96 - REV. FRONT BLDG. WALL PARKING, ROOF DRAINS, ADDED RAMPS & STAIRS AT REAR OF BLDG. REV. DOCK WT. TO 4.17' REV. SAN. CONN.
[3] ADDED MEZZANINE AND OFFICE AND REVISED PARKING TABULATION BY GWS DATED 6/03/03



PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

DEVELOPER CERTIFICATION:

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

Developer — Date 7/29/96

Name DAVID GARBE

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED
PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

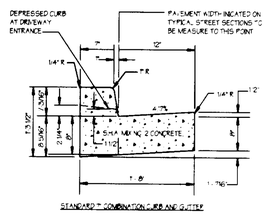
Site Development Plan
Parcel O-1
Junction Industrial Park

PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; F-90-123

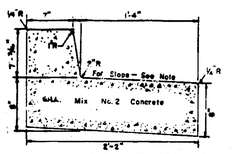
Scale: 1"=50' — January 30, 1996
6th Election District — Sheet 1 of 7 — Howard County, Maryland

P/N: 7772 sasetopo.dgn E.M.T. 02-09-96

SDP-96-96



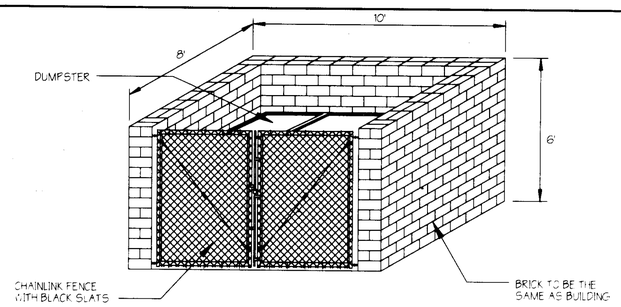
STANDARD "C" COMBINATION CURB AND GUTTER



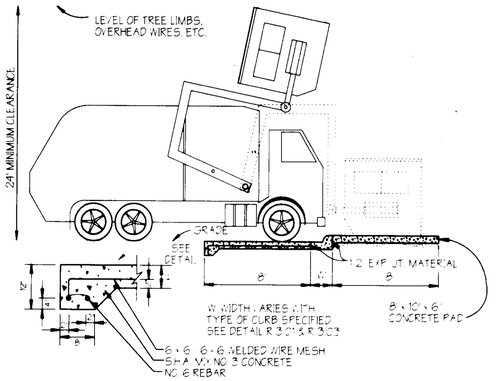
NOTE: SLOPE AT SAME RATE AS LINEAR SLOPE ACROSS PAVING.

REVERSE SLOPE CURB AND GUTTER

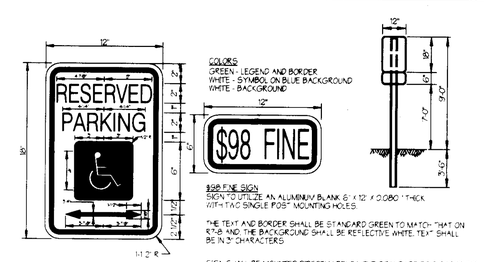
HOWARD COUNTY
CURB AND GUTTER DETAIL
NOT TO SCALE



PROPOSED DUMPSTER ENCLOSURE
NOT TO SCALE



SOLID WASTE SERVICE PAD
NOT TO SCALE



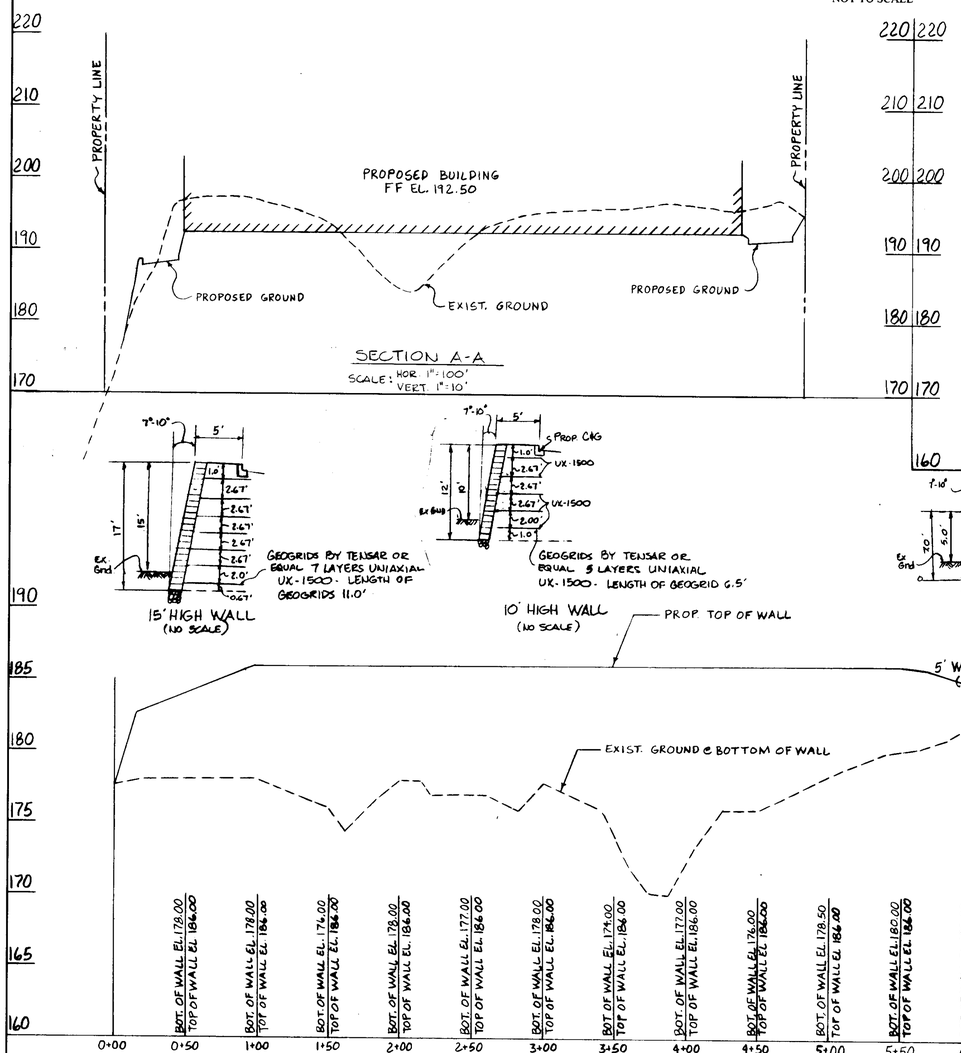
COLORS:
GREEN - LEGEND AND BORDER
WHITE - SYMBOL ON BLUE BACKGROUND
WHITE - BACKGROUND

R3B FINE SIGN
SIGN TO UTILIZE AN ALUMINUM BLANK 6' x 12' x 0.080" THICK WITH TAG SINGLE POST MOUNTING HOLES.

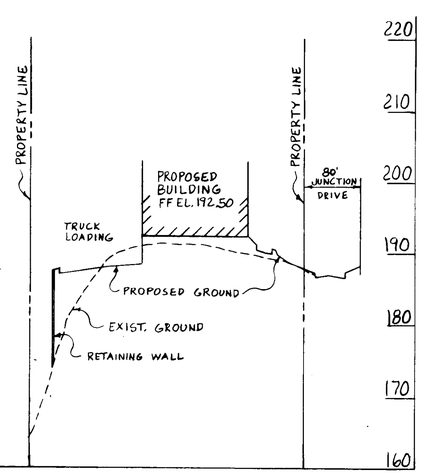
THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS

SIGN SHALL BE MOUNTED DIRECTLY BELOW THE STANDARD R7-8 RESERVED PARKING FOR HANDICAPPED SIGN. ITS BOTTOM EDGE SHALL BE NO LESS THAN 7 FEET ABOVE GROUND. IF THE SIGN IS PLACED AGAINST A BUILDING, STRUCTURE OR OTHER LOCATION WHERE VEHICLE OR PEDESTRIAN TRAFFIC IS NOT OBSTRUCTED, THE BOTTOM EDGE OF THE SIGN SHALL BE AT LEAST 6 FEET BUT NOT MORE THAN 10 FEET ABOVE GROUND

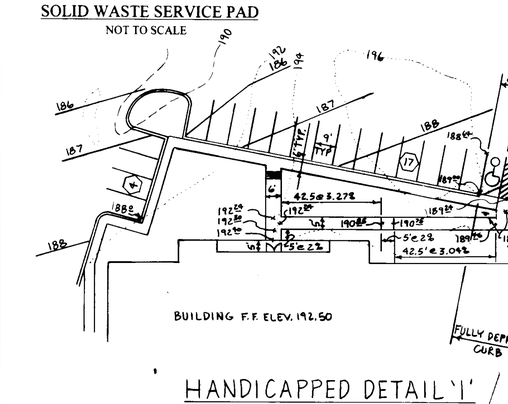
HANDICAPPED SIGN DETAIL
NOT TO SCALE



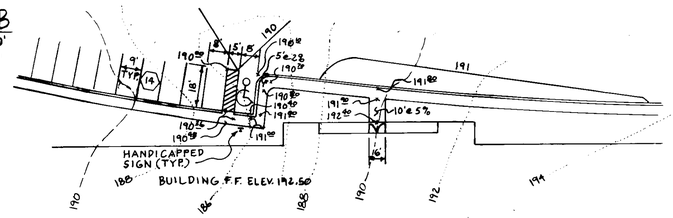
KEYSTONE RETAINING WALL PROFILE
SCALE: HORZ. 1"=50'
VERT. 1"=5'



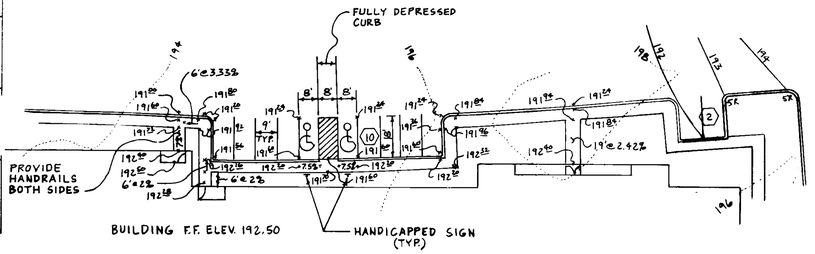
SECTION B-B
SCALE: HORZ. 1"=100'
VERT. 1"=10'



HANDICAPPED DETAIL '1'
SCALE: 1"=30'



ENTRY DETAIL 'A'
SCALE: 1"=30'



HANDICAPPED DETAIL '2'
SCALE: 1"=30'

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/24/96

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — VJC — DATE 7/29/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — TC — DATE 8/1/96

DIRECTOR — DATE 8/2/96

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
JUNCTION INDUSTRIAL PARK	TWO	O-1

PLAT #	BLOCK #	ZONE	TAX MAP / ZONE	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE C04 — SEWER CODE 4,020,000

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

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

Developer Name: DAVID EHRLICH, Partner — Date 2/22/96

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED
PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

REVISIONS:
9/3/96 - REV. HANDICAPPED DETAILS

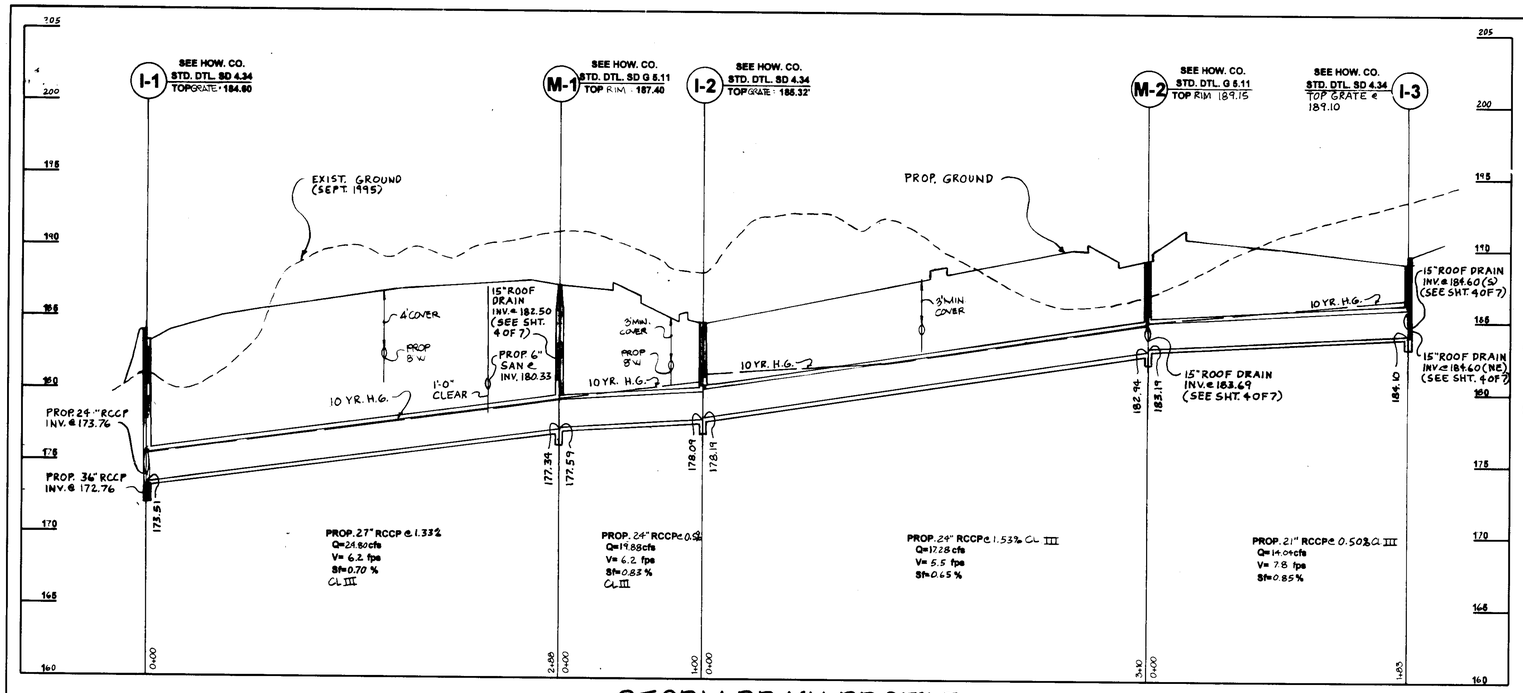
Sections and Details
Parcel O-1
Junction Industrial Park

PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; F-90-123

Scale: 1"=50' — January 30, 1996
6th Election District — Sheet 2 of 7 — Howard County, Maryland

DN: 7770 — E.M.T. 01-30-96

SDP-96-96

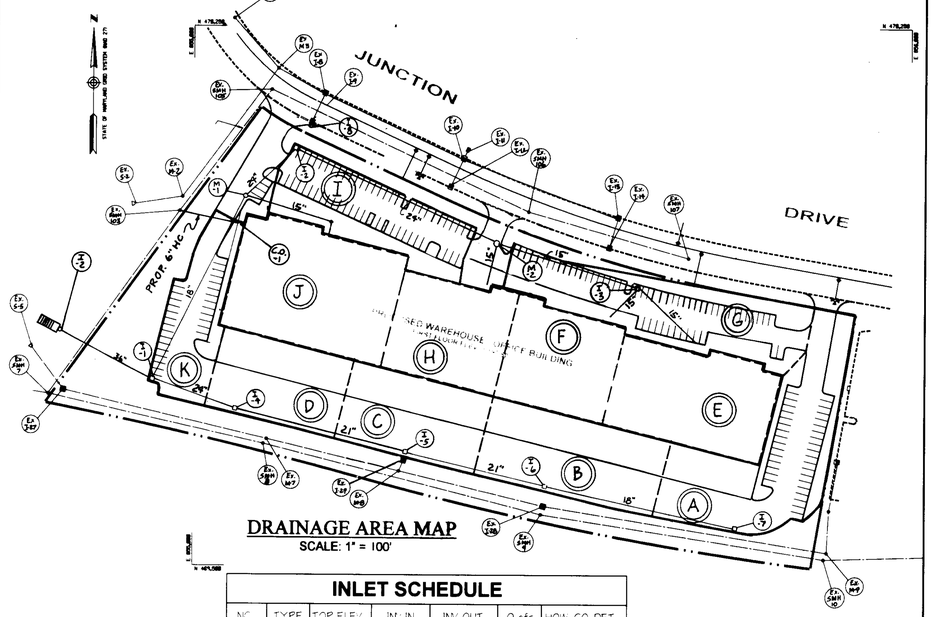


STORM DRAIN PROFILE

HORZ. 1" = 50'

SCALE:

VERT. 1" = 5'



DRAINAGE AREA MAP

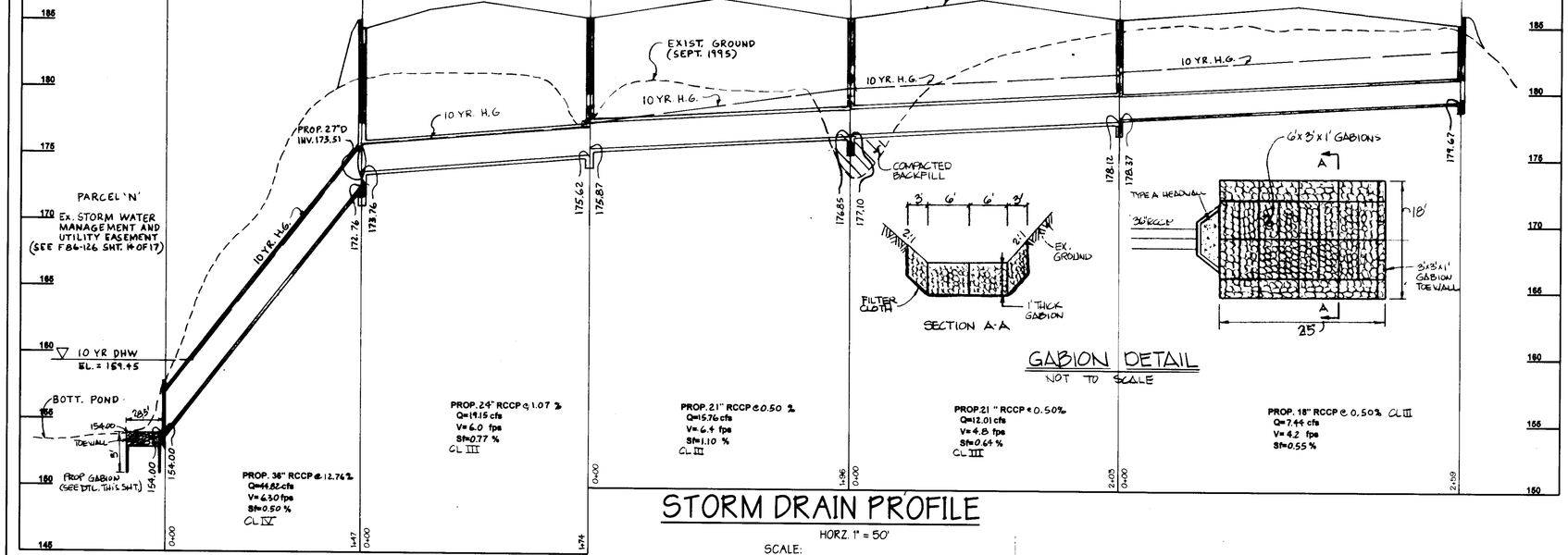
SCALE: 1" = 100'

INLET SCHEDULE

NO.	TYPE	TOP ELEV.	IN. IN	INV OUT	Q cfs	HOW. CO. DET.
I-1	DOUBLE 6' COMB. INLET	184.60	173.51	172.76	3.28	SD 4.34
I-2	DBL. 5' COMB. INLET	185.32	178.19	178.09	3.92	SD 4.34
I-3	DBL. 5' COMB INLET	189.10	184.60	174.10	4.96	SD 4.34
I-4	DOUBLE INLET	185.50	175.87	175.62	4.51	SD 4.23
I-5	DBL. 5' INLET	185.50	177.10	176.85	4.68	SD. 4.23
I-6	DBL. 5' INLET	185.50	178.37	178.12	5.53	SD 4.23
I-7	DOUBLE 5' COMB INLET	185.30	—	179.67	7.44	SD 4.34
I-8	A-5	TIDEGAT OPENING 183.45	—	175.13	2.56	SD 4.40

STRUCTURE SCHEDULE

NO.	TYPE	TOP ELE.	INV. IN	IN. OUT	HOW. CO. DET.
M-1	STAND. PRECAST MANHOLE	187.40	177.59	177.34	SD G 5.11
M-2	STD. PRECAST MANHOLE	189.15	183.19	182.19	SD G 5.11
HW-1	STD PRECAST MANHOLE	181.58	154.00	—	SD G 5.11



STORM DRAIN PROFILE

HORZ. 1" = 50'

SCALE:

VERT. 1" = 5'

GABION DETAIL

NOT TO SCALE

AREA	ACREAGE	'C'
A	0.95	0.84
B	0.60	0.95
C	0.51	0.95
D	0.48	0.95
E	0.71	0.95
F	0.54	0.95
G	0.71	0.74
H	0.54	0.95
I	0.56	0.75
J	0.86	0.95
K	0.41	0.85

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/24/96

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/24/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/1/96

DIRECTOR — DATE 8/2/96

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
JUNCTION INDUSTRIAL PARK	TWO	O-1

PLAT #	BLOCK #	ZONE	TAX MAP / ZONE	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE C04 — SEWER CODE 4,020,000

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
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Developer _____, Partner Date 2/22/96

Name

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED
PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

REVISIONS:
9/4/96 - REV. DRAIN SITES, FLOWS & D.A. MAP

Drainage Area Map & Storm Drain Profiles
Parcel O-1
Junction Industrial Park

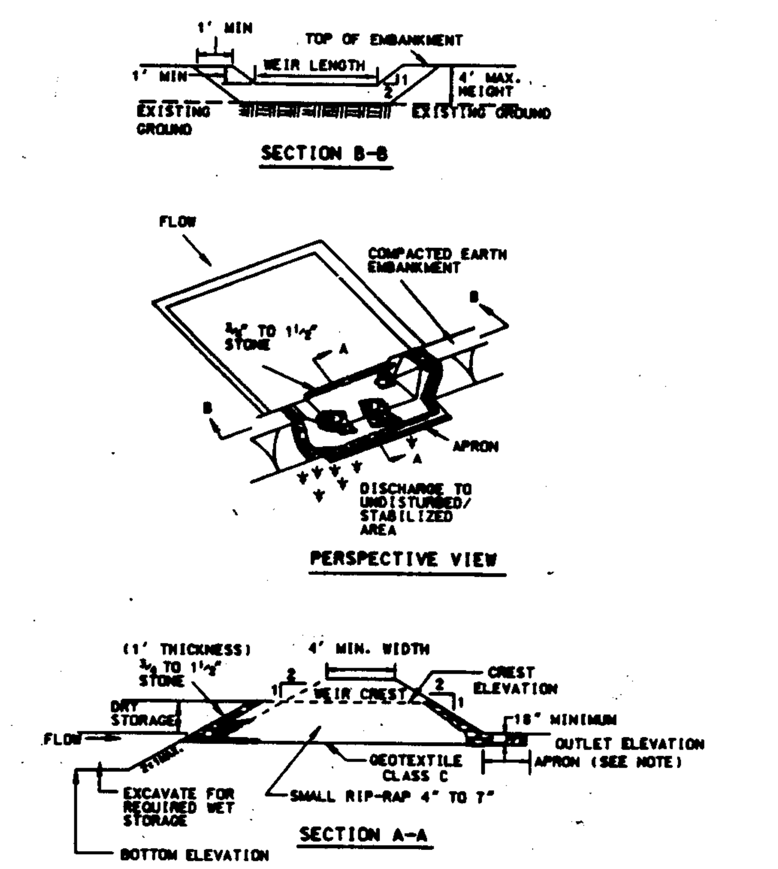
PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; P-90-123

Scale : 1"=50' , 1996

6th Election District Sheet 3 of 7 Howard County, Maryland

SDP-96-96

DETAIL 10A - STONE / RIP-RAP OUTLET SEDIMENT TRAP - ST IV



NOTE: 5' MIN LENGTH UP TO 5 ACRES. OVER 5 ACRES USE 10' MIN

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 18	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STONE / RIP-RAP OUTLET SEDIMENT TRAP - ST IV

Construction Specifications

1. The 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 or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.

3. All cut and fill slopes shall be 2:1 or flatter.

4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.

5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 9).

6. Geotextile Class C shall be placed over the bottom and sides of the outlet channelprior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6" into existing ground at entrance of outlet channel.

7. 4" - 7" stone shall be used to construct the weir and 4" - 12" or Class I rip-rap shall be used to construct the outlet channel.

8. Outlet - An outlet shall include a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge point shall be provided as necessary.

9. Outlet channel must have positive drainage from the trap.

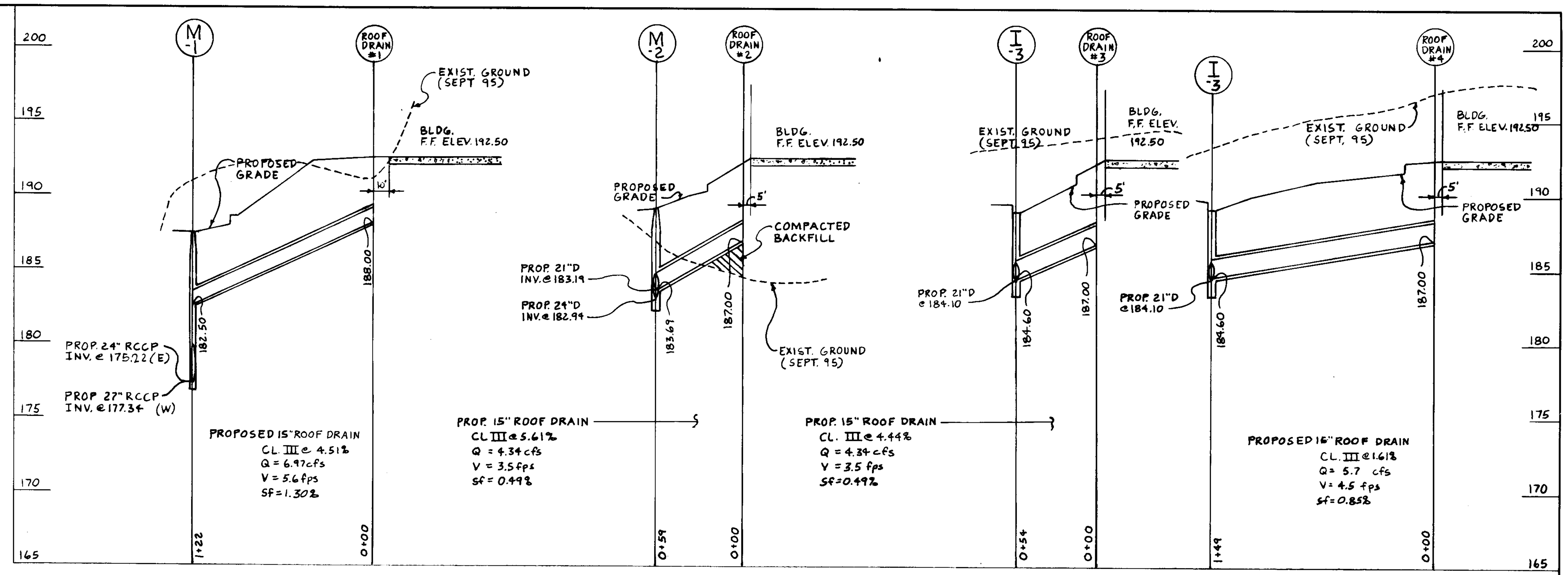
10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ of the wet storage depth of the trap (900 cf/ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

11. The structure shall be inspected periodically after each rain and repaired as needed.

12. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

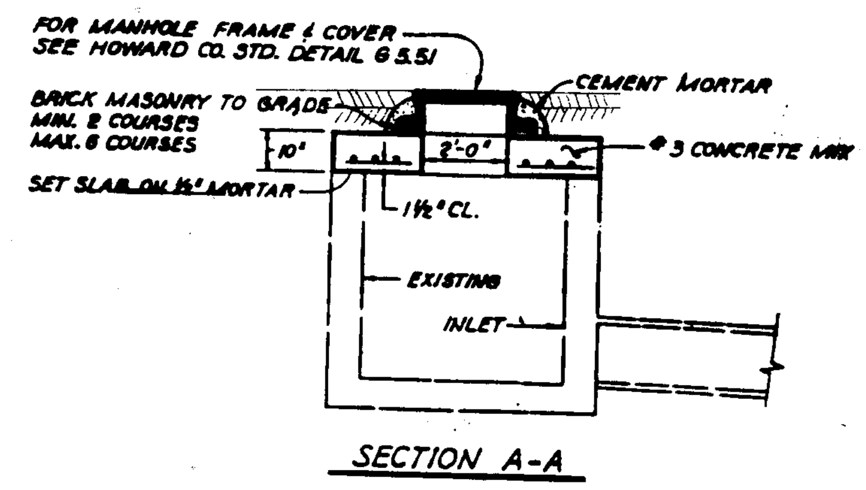
13. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 18A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

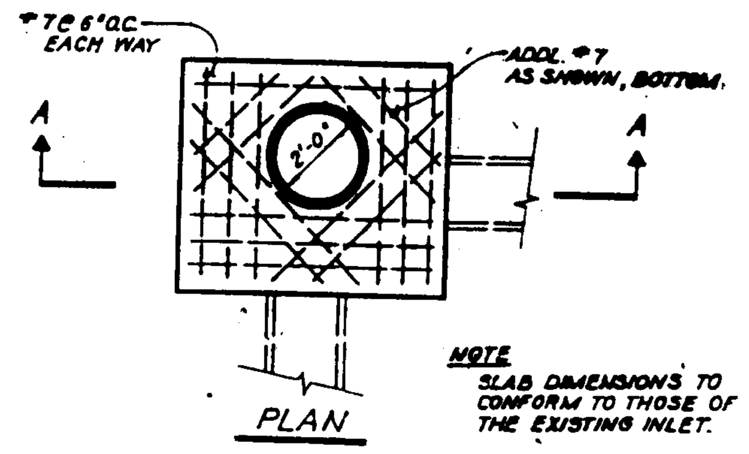


ROOF DRAIN PROFILES

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



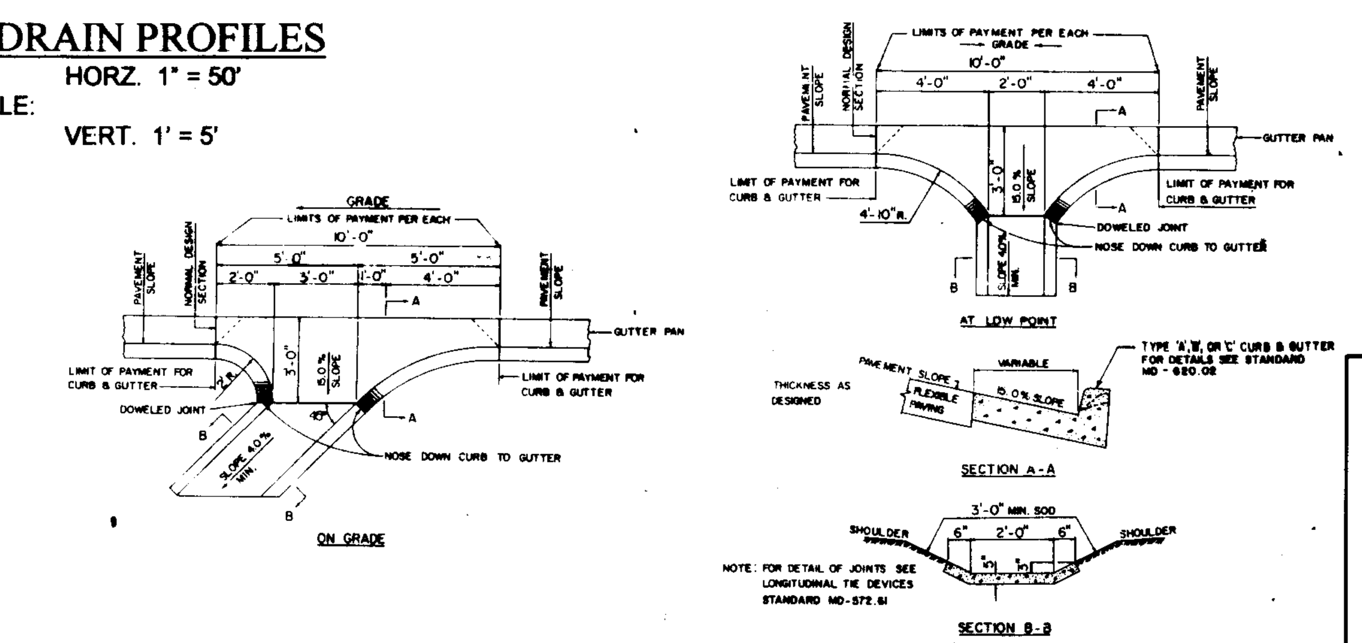
SECTION A-A



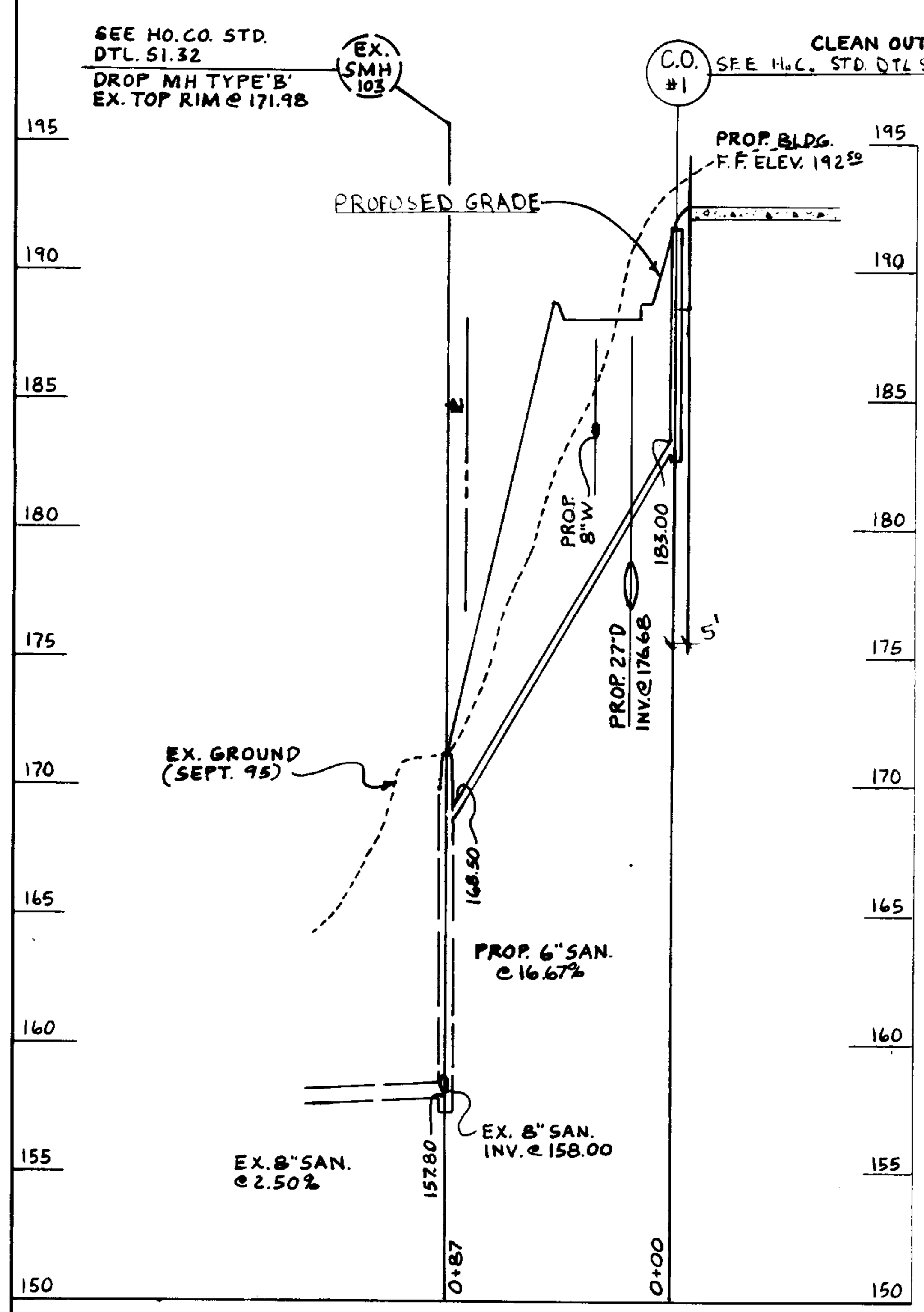
NOTE
SLAB DIMENSIONS TO CONFORM TO THOSE OF THE EXISTING INLET.

INLET CAPPING DETAIL

NO SCALE

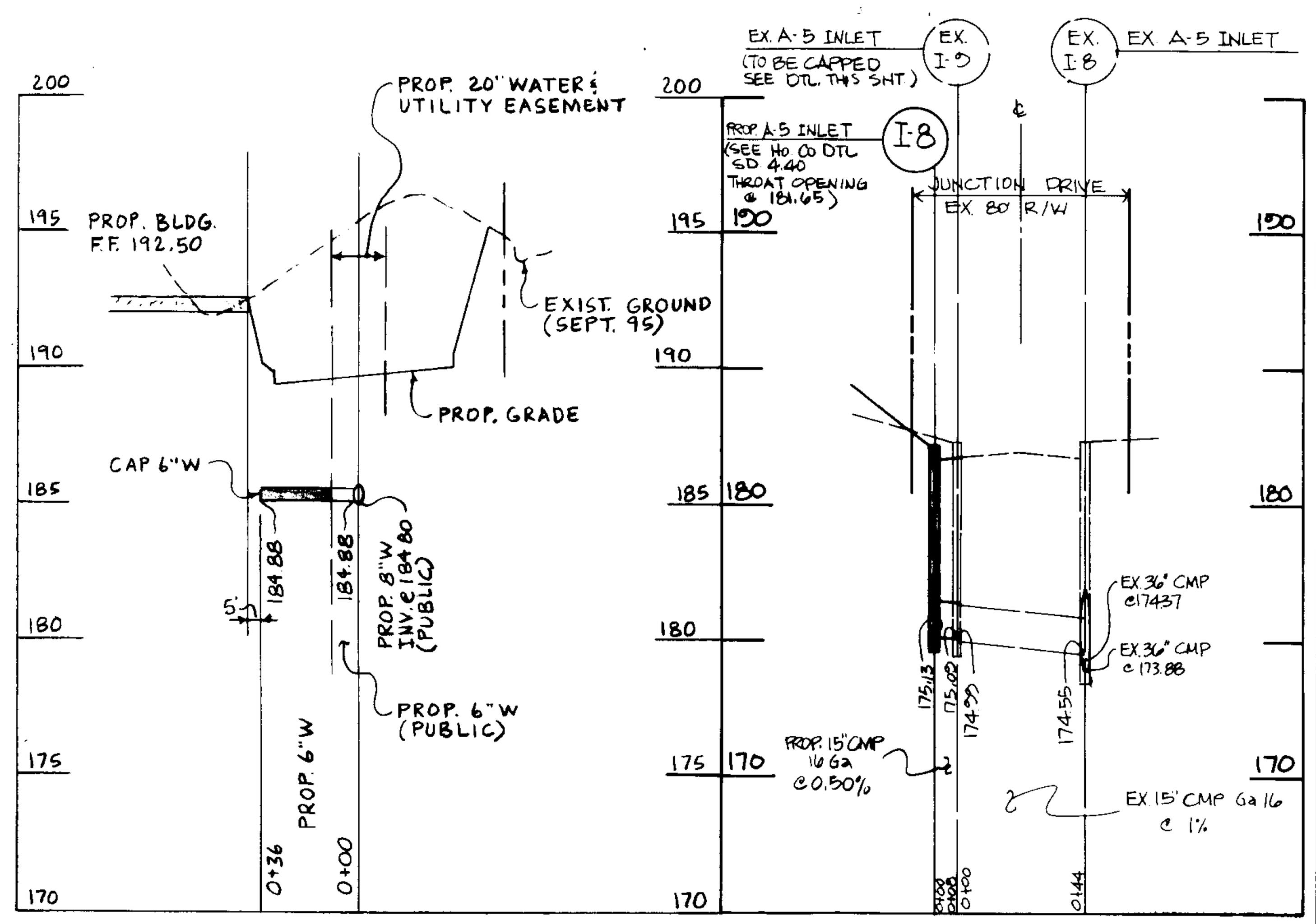


APPROVAL			STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION
DEPUTY CHIEF ENGINEER-DEVELOPMENT DATE	FEDERAL HIGHWAY ADMINISTRATION MARYLAND DIVISION	WASHINGTON OFFICE	STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
ISSUED 3-15-82			STANDARD CURB OPENING DETAIL CURB & GUTTER SECTION
5-4-84	3-1-84		STANDARD NO. MD-640.02



SANITARY SEWER PROFILE

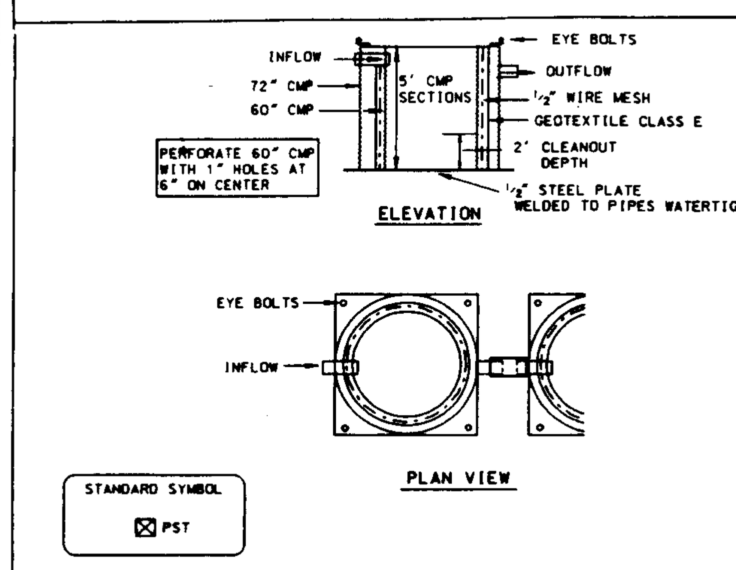
SCALE: HORZ. 1" = 50'
VERT. 1' = 5'



PROPOSED 6" WATER H.C.

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

DETAIL 21 - PORTABLE SEDIMENT TANK



Construction Specifications

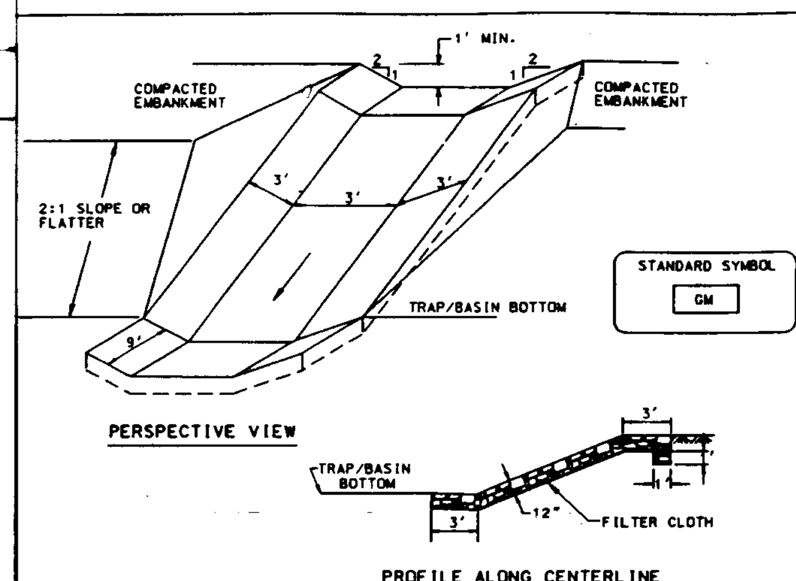
1. The following formula should be used in determining the storage volume of the sediment tank: 1 cubic foot of storage for each gallon per minute of pump discharge capacity.

2. An example of a typical sediment tank is shown above. Other container designs can be used if the storage volume is adequate and approval is obtained from the local approving agency.

3. Tanks may be connected in series.

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

DETAIL 6 - GABION INFLOW PROTECTION



Construction Specifications

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

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

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

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

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

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

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/24/96

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/29/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/1/96

DIRECTOR — DATE 8/2/96

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME		SECTION NAME		PARCEL #
JUNCTION INDUSTRIAL PARK		TWO		O-1

PLAT #	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE	C04	SEWER CODE	4,020,000

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

DEVELOPER CERTIFICATION:

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

Developer ______, Partner Date 2/22/96
Name DAVID BAUAR

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

ENGINEER CERTIFICATION:

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

Engineer ______ Date 2/12/96
Name R.L. UMBARGER PE # 10568

REVISIONS:
9/4/96 - REV. ROOF DRAINS

Profiles and Details
Parcel O-1
Junction Industrial Park

PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; F-90-123

Scale : As Shown , 1996
6th Election District Sheet 4 of 7 Howard County, Maryland

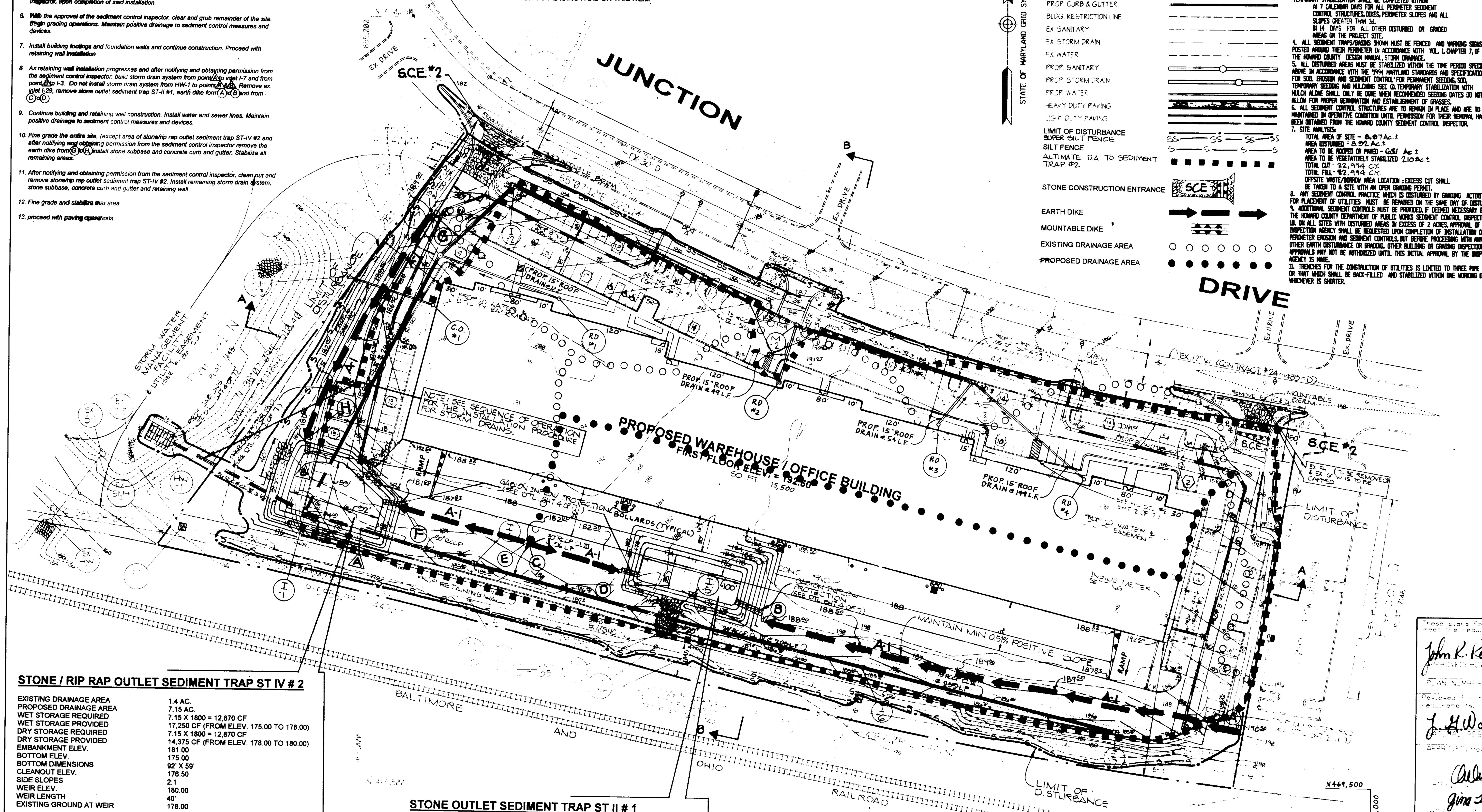
SDP-96-96

SEQUENCE OF OPERATIONS

1. Obtain grading permit.
2. Notify the Howard County Department of permits and Licenses Inspector, 48 hours before beginning work.
3. Clear, grub for and installed stabilized construction entrances SCE #1 and SCE #2.
4. Clear, grub for and installed all sediment control measures and devices.
5. Notify the Howard County Department of Permits and Licenses, Sediment and Control Inspector, upon completion of said installation.
6. With the approval of the sediment control inspector, clear and grub remainder of the site. Begin grading operations. Maintain positive drainage to sediment control measures and devices.
7. Install building footings and foundation walls and continue construction. Proceed with retaining wall installation
8. As retaining wall installation progresses and after notifying and obtaining permission from the sediment control inspector, build storm drain system from point A to inlet I-7 and from point B to I-3. Do not install storm drain system from HW-1 to points A & B. Remove ex. inlet I-29, remove stone outlet sediment trap ST-II #1, earth dike form A to B and from C to D.
9. Continue building and retaining wall construction. Install water and sewer lines. Maintain positive drainage to sediment control measures and devices.
10. Fine grade the entire site, (except area of stone/rip rap outlet sediment trap ST-IV #2 and after notifying and obtaining permission from the sediment control inspector remove the earth dike from G to H, install stone subbase and concrete curb and gutter. Stabilize all remaining areas.
11. After notifying and obtaining permission from the sediment control inspector, clean out and remove stone/rip rap outlet sediment trap ST-IV #2. Install remaining storm drain system, stone subbase, concrete curb and gutter and retaining wall.
12. Fine grade and stabilize that area
13. proceed with paving operations.

NOTE:

1. FOLLOWING EVERY STORM ENSURES ALL PIPES EMPTYING INTO PROPOSED STONE / RIP RAP OUTLET SEDIMENT TRAP ST IV # 2 ARE KEPT CLEAN OF SEDIMENT.
2. THIS SHEET IS TO BE USED FOR INSTALLATION AND MAINTENANCE OF THE SEDIMENT CONTROL MEASURES AND DEVICES ONLY. SEE SITE DEVELOPMENT PLAN SHEET 1 FOR MORE SPECIFIC DETAILS.
3. ALL EXCESS MATERIAL AND / OR BORROW MATERIAL SHALL EITHER BE HAULED OR TAKEN FROM AN AREA WITH AN APPROVED SEDIMENT CONTROL PLAN.
4. EARTH QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. CONTRACTOR IS ADVISED TO PERFORM HIS OWN ANALYSIS PRIOR TO PLACING A BID ON THIS ITEM.

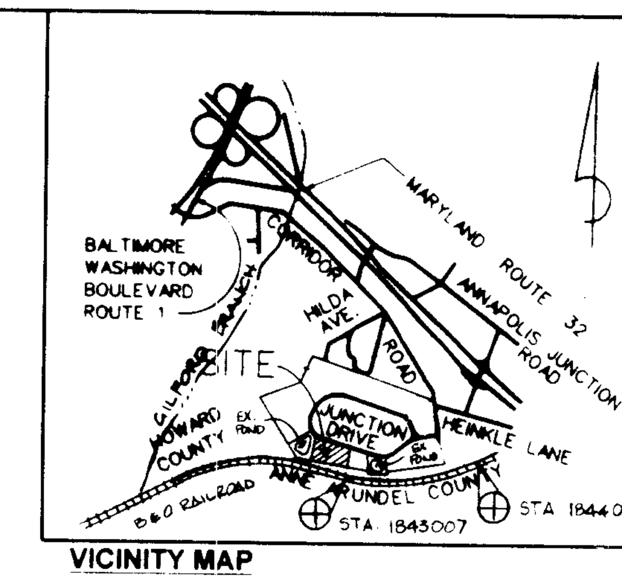


LEGEND

- EX. 2' CONTOURS
- EX. 10' CONTOURS
- PROP. 2' CONTOURS
- PROP. 10' CONTOURS
- EX. CURB & GUTTER
- PROP. CURB & GUTTER
- BLDG. RESTRICTION LINE
- EX. SANITARY
- EX. STORM DRAIN
- EX. WATER
- PROP. SANITARY
- PROP. STORM DRAIN
- PROP. WATER
- HEAVY DUTY PAVING
- LIGHT DUTY PAVING
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE (SS)
- SILT FENCE (S)
- ALTIMATE D.A. TO SEDIMENT TRAP #2
- STONE CONSTRUCTION ENTRANCE (SCE)
- EARTH DIKE
- MOUNTABLE DIKE
- EXISTING DRAINAGE AREA
- PROPOSED DRAINAGE AREA

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 "1994 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 FOR 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 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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 - 8.07 Ac.±
   - AREA DISTURBED - 8.92 Ac.±
   - AREA TO BE ROOFED OR PAVED - 6.51 Ac.±
   - AREA TO BE VEGETATIVELY STABILIZED 2.10 Ac.±
   - TOTAL CUT - 22,994 C.Y.
   - TOTAL FILL - 22,994 C.Y.
   - OFFSITE WASTE/BORROW AREA LOCATION : EXCESS CUT SHALL BE TAKEN TO A SITE WITH AN OPEN GRADING PERMIT.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 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 WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



VICINITY MAP

BENCHMARK

CONTROL REFERENCE

SHEET INDEX

SHEET #1	SITE PLAN
SHEET #2	SECTIONS & DETAILS
SHEET #3	DRAINAGE AREA MAP & PROFILES
SHEET #4	PROFILES
SHEET #5	SEDIMENT CONTROL PLAN
SHEET #6	SEDIMENT CONTROL DETAILS
SHEET #7	LANDSCAPE PLAN

STONE / RIP RAP OUTLET SEDIMENT TRAP ST IV # 2

EXISTING DRAINAGE AREA	1.4 AC.
PROPOSED DRAINAGE AREA	7.15 AC.
WET STORAGE REQUIRED	7.15 X 1800 = 12,870 CF
WET STORAGE PROVIDED	17,250 CF (FROM ELEV. 175.00 TO 178.00)
DRY STORAGE REQUIRED	7.15 X 1800 = 12,870 CF
DRY STORAGE PROVIDED	14,375 CF (FROM ELEV. 178.00 TO 180.00)
EMBANKMENT ELEV.	181.00
BOTTOM ELEV.	175.00
BOTTOM DIMENSIONS	92' X 59'
CLEANOUT ELEV.	176.50
SIDE SLOPES	2:1
WEIR ELEV.	180.00
WEIR LENGTH	40'
EXISTING GROUND AT WEIR	178.00

STONE OUTLET SEDIMENT TRAP ST II # 1

EXISTING DRAINAGE AREA	4.38 AC.
PROPOSED DRAINAGE AREA	2.70 AC.
WET STORAGE REQUIRED	4.38 X 1800 = 7884 CF
WET STORAGE PROVIDED	8144 CF (FROM ELEV. 174.00 TO 176.00)
DRY STORAGE REQUIRED	4.38 X 1800 = 7884 CF
DRY STORAGE PROVIDED	10,560 CF (FROM ELEV. 176.00 TO 178.00)
EMBANKMENT ELEV.	179.00
BOTTOM ELEV.	174.00
BOTTOM DIMENSIONS	35' X 100'
CLEANOUT ELEV.	175.00
SIDE SLOPES	2:1
WEIR ELEV.	178.00
WEIR LENGTH	20'
EXISTING GROUND AT WEIR	176.00

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/24/96

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/29/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/1/96

DIRECTOR — DATE 8/2/96

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
JUNCTION INDUSTRIAL PARK	TWO	O-1

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE C04 — SEWER CODE 4,020,000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

DEVELOPER CERTIFICATION:

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

Developer: ______, Partner Date 2/22/96
Name: DAVID BAVAR

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

ENGINEER CERTIFICATION:

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

Engineer ______ Date 2/6/96
Name ______ PE # 10568

REVISIONS:
9/5/96 - REV. FRONT BLDG. WALL ADDED RAMPS & STAIRS REAR OF BLDG.

SEDIMENT & EROSION CONTROL
Parcel O-1
Junction Industrial Park

PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; F-90-123

Scale : 1"=50' — January 30, 1996
6th Election District — Sheet 5 of 7 — Howard County, Maryland

SDP-96-96

Stabilization Specifications

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation

i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples may be taken for engineering purposes may also be used for chemical analyses.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

v. Soil Amendments : Use only one of the following schedules

1. Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. / 100 s.f.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. / 100 s.f.). Before seeding, harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9.1 lbs / 100 s.f.).

ii. Acceptable - Apply 2 tons per acre dolomitic limestone (92lbs. / 1000 s.f.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. / 1000 s.f.) before seeding, harrow or disc upper three inches of soil.

C. Seedbed Preparation

I. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should not be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

II. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material in this job.

ii. Inoculant - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. NOTE: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 - 80 degrees F. can weaken bacteria and make inoculant less effective.

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total soluble nitrogen; P205 (phosphorus): 200 lbs./ac.; K20 (potassium): 200 lbs./ac.

b. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summeries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods(listed by preference), depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on the crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3000 feet long.

Section II - Temporary Seeding

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed Mixtures - Permanent Seeding

i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or esthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

Section III - Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

A. Seed Mixtures - Permanent Seeding

i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or esthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

A. General specifications

i. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approval. Sod labels shall be made available to the job foreman and inspector.

ii. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.

iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

vi. Site Preparation : Fertilizer and Lime application rates will be determined by soil test. Under unusual circumstances where there is insuffiicent time for a complete soil test, fertilizer and lime may be applied in amounts shown under vi-b, below.

a. Prior to sodding, the surface will be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing, or maintenance operations.

b. Where soil is acid or composted of heavy clays, ground limestone will be spread at the rate of 2 tons per acre(100 lbs. / 1000 s.f.). In all soils 1000 lbs. per acre (25 lbs. / 1000 s.f.) of 10-10-10 fertilizer or equivalent will be uniformly applied and mixed into the top thre inches of soil with the required time.

c. All areas recieving sod will be uniformly fine graded. Hard packed earth will be scarified prior to placement of sod.

B. Sod Installation

i. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.

ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause drying of the roots.

iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.

iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.

ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.

iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

Section IV - Turfgrass Establishment

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

NOTE: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. Turfgrass Mixtures

i. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/ Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate 5 to 8 lb./1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: certified Kentucky Bluegrass Cultivars 30 - 40% and certified Fine Fescue and 60 - 70%. Seeding rate: 1 1/2 - 3 lbs./1000 square feet. A minimum of 3 Kentucky bluegrass cultivars must be chosen, with each cultiver ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

NOTE: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland".

B. Ideal times of seeding

Western MD: March 15-June 1, August 1-October 1 (Hardiness Zones - 5b, 6a)

Central MD: March 1-May 15, August 15-October 15 (Hardiness Zones - 6b)

Southern MD, Eastern Shore: March 1-May 15, August 15-October 15 (Hardiness Zones - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. Repairs and Maintenance

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

ii. If the stand provides less than 40% ground coverage, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations.

iii. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.

iv. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" Bulletin No. 171.

Fertilizer Rates

Temporary Seeding

Fertilizer Rate (10-10-10)	Lime Rate
600 lb/ac (15lb/1000 s.f.)	2 Tons/ac (100lb/1000 s.f.)

Permanent Seeding

Fertilizer Rate (10-20-20)			Lime Rate
N	P205	K20	
90 lb/ac (2.0lb/ 1000 s.f.)	175 lb/ac (4.0lb/ 1000 s.f.)	175 lb/ac (4.0lb/ 1000 s.f.)	2 tons/ac (100 lb/ 1000 s.f.)

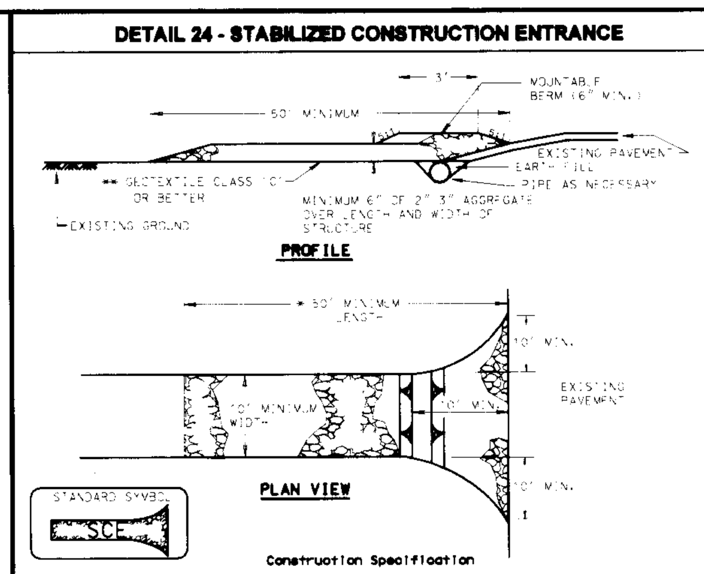
Table 25 - Permanent Seeding for Low Maintenance Areas

MIX	SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE)	PLANTING RATE LBS./AC.	PLANTING RATE LBS./1000 SQ. FT.	SITE CONDITIONS	USDA HARDINESS ZONES	3/1 - 5/15	3/15 - 6/1	5/16 - 8/14	6/2 - 7/31	8/1 - 10/1	8/15 - 10/15	8/15 - 11/15	NOTES
1	TALL FESCUE (75%) CANADA BLUEGRASS (10%) KENTUCKY BLUEGRASS (10%) REDTOP (5%)	150	3.4	MOIST TO DRY	5b		X			X			A
					6a		X			X			
					6b (circled)	X					X		
					7a	X						X	
					7b	X						X	
2	KENTUCKY BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150	3.4	MOIST TO MODERATELY DRY TO DRY	5b		X			X			B
					6a		X			X			
					6b (circled)	X					X		
3	TALL FESCUE (85%) PERENNIAL RYEGRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	2.9 .34 .23	MOIST TO DRY	5B		X			X			C
					6A		X			X			
					6B (circled)	X					X		
					7A	X						X	
					7B	X						X	
4	RED FESCUE OR CHEWINGS FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 60 15	.92 .92 .34	MOIST TO DRY	5b		X			X			D
					6a		X			X			
					6b (circled)	X					X		
5	TALL FESCUE (85%) OR PERENNIAL RYEGRASS (50%) PLUS CROWNVETCH OR FLATPEA	110 20 20 20	2.5 .46 .46 .46	MOIST TO DRY	5b		X			X			E
					6a		X			X			
					6b (circled)	X					X		
					7a	X						X	
					7b	X						X	
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (83%)	4 20	.09 .46	DRY TO VERY DRY	6a	X		X					F
					7a	X		X					
					7b	X		X					
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) PLUS SERECIA LESPEDEZA (15%)	110 3 20	2.5 .07 .46	DRY TO VERY DRY	5b		X		X	X			G
					6a		X		X	X			
					6b (circled)	X		X			X		
					7a	X		X				X	
					7b	X		X				X	
8	REED CANARYGRASS (75%) REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	40 3 10	.92 .07 .23	WET TO MODERATELY DRY	5b		X			X			H
					6a		X			X			
					6b (circled)	X					X		
					7a	X						X	
					7b	X						X	
9	TALL FESCUE (86%) POA TRIVIALIS (7%) BIRDSFOOT TREEFOIL (7%)	125 10 10	2.9 .23 .23	WET TO MODERATELY DRY	5b		X			X			I
					6a		X			X			
					6b (circled)	X					X		
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3.4 .69	WET TO DRY	5b		X			X			J
					6a		X			X			
					6b (circled)	X					X		
					7a	X						X	
					7b	X						X	
11	HARD FESCUE (100%)	75	1.7	MOIST TO DRY	5b		X			X			K
					6a		X			X			
					6b (circled)	X					X		
					7a	X						X	

Table 26 - Temporary Seeding Rates, Depths, and Dates

SPECIES	MINIMUM SEEDING RATES PER ACRE	MINIMUM SEEDING RATES LBS./1000 SQ. FT.	PLANTING DEPTH INCHES	7a and 7b 2/1 - 4/30	7a and 7b 5/1 - 8/14	7a and 7b 8/15 - 11/30	6b 3/1 - 4/30	6b 5/1 - 8/14	6b 8/15 - 11/15	6a and 5b 3/15 - 5/31	6a and 5b 6/1 - 7/31	6a and 5b 8/1 - 10/31
CHOOSE ONE:												
BARLEY	2.5 B.U. (122 lbs.)	2.80	1 - 2	X	-	BY 10/15	X	-	BY 10/15	X	-	BY 10/1
OATS	3 B.U. (96 lbs.)	2.21	1 - 2	X	-	-	X	-	-	X	-	-
RYE	2.5 B.U. (140 lbs.)	3.22	1 - 2	X	-	X	X	-	X	X	-	X
BARLEY OR RYE PLUS FOXTAIL MILLET	150 lbs.	3.45	1	X X	X X	10/15 X	X X	X X	10/15 X	X X	X X	10/1 X
WEEPING LOVEGRASS	4 lbs.	.09	1/4 - 1/2	-	X	-	-	X	-	-	X	-
ANNUAL RYEGRASS	50 lbs.	1.15	1/4 - 1/2	X	-	11/1	X	-	11/1	X	-	8/15
MILLET	50 lbs.	1.15	1/2	-	X	-	-	X	-	-	X	-

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



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.

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24.0 MATERIALS SPECIFICATIONS

Table 27 Geotextile Fabrics

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

* US Std. Sieve CW-02215

The properties shall be determined in accordance with the following procedures:

- Apparent opening size — MSMT 323
- Grab tensile strength — ASTM D 1682: 4 x 8" specimen, 1x2" clamps, 12" /min. strain rate in both principal directions of geotextile fabric.
- Burst strength — ASTM D 3786

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

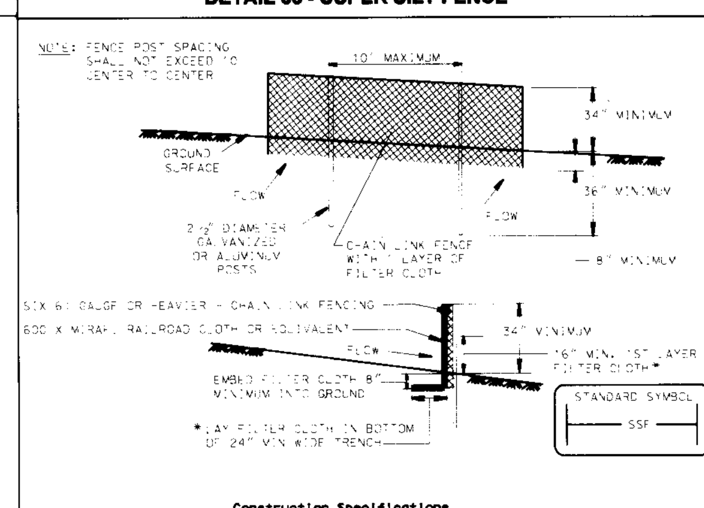
In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

Silt Fence

Class F geotextile fabrics for silt fence have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft.²/min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322.

Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The SHA specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six gauge (6) or heavier

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

5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

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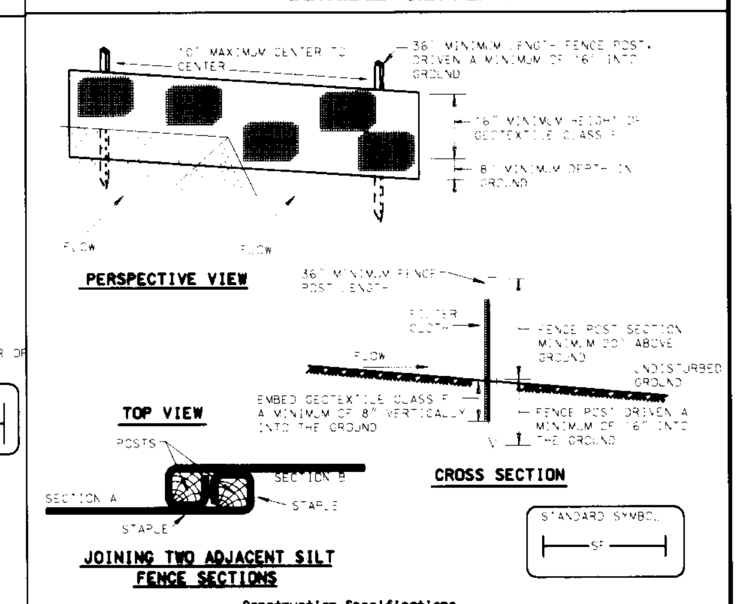
DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

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

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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

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

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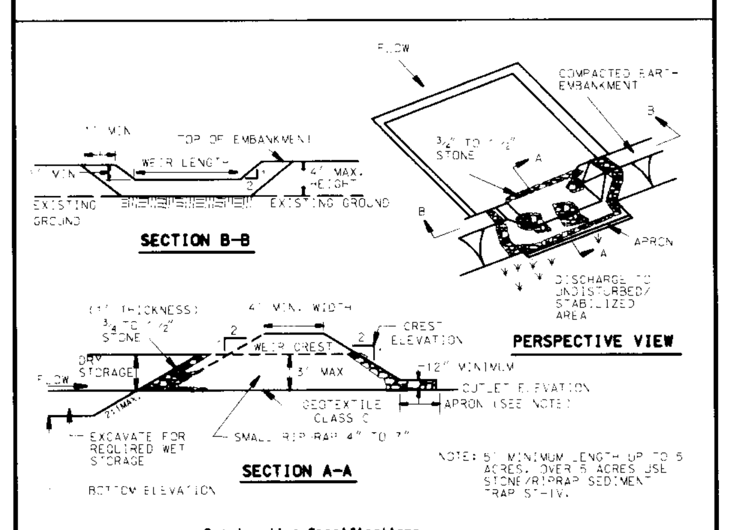
DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



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 objectionable 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 rip-rap 4" to 7" in size with a 1' thick layer of ¾" to 1½" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

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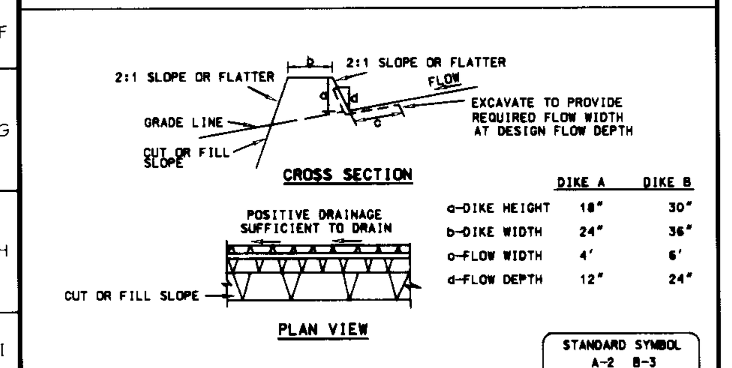
DETAIL 1 - EARTH DIKE



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

STANDARD SYMBOL A-2 B-3

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

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

Construction Specifications

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

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

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

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

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

6. Fill shall be compacted by earth moving equipment.

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

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

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NOTE : PROJECT IS IN USDA HARDINESS ZONE 6b

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/24/96

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/24/96

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/29/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 8/1/96

DIRECTOR — DATE 8/2/96

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
O-1	9070 JUNCTION DRIVE

SUBDIVISION NAME	SECTION NAME	PARCEL #
JUNCTION INDUSTRIAL PARK	TWO	O-1

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
9402	19	M-2	48	6th	6069.02

WATER CODE C04 — SEWER CODE 4,020,000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
658 Kenilworth Drive, Suite 100
Towson, Maryland 21204
(410) 825-8120

DEVELOPER CERTIFICATION:

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

Developer Name — , Partner — Date 2/22/96
DAVID BAUER

OWNER/DEVELOPER

JUNCTION PROPERTIES LIMITED PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

ENGINEER CERTIFICATION:

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

Engineer — Date 2/22/96

Name R.L. UMBARGER — PE # 10568

Sediment Control Notes and Details
Parcel O-1
Junction Industrial Park

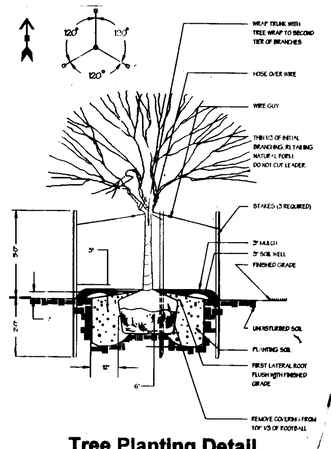
PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01; P-84-10; F-90-123

Scale : As Shown — **January 31, 1996**
6th Election District — **Sheet 6 of 7** — **Howard County, Maryland**

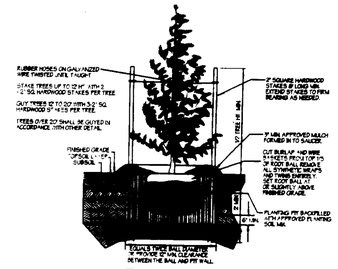
P/N: 7772 E.M.T. 02-21-96

SDP-96-96

/users/data/towson/7772/cad/sednot Feb. 21, 1996 13:35:54 PLOT FOR VALEK ZARSKI E.M.T. 02-21-96



Tree Planting Detail
NOT TO SCALE



Evergreen Planting Detail
NOT TO SCALE

Shrub Planting Detail
NOT TO SCALE

LEGEND

- EX. 2' CONTOURS
- EX. 10' CONTOURS
- PROP. 2' CONTOURS
- PROP. 10' CONTOURS
- EX. CURB & GUTTER
- PROP. CURB & GUTTER
- BLDG. RESTRICTION LINE
- EX. SANITARY
- EX. STORM DRAIN
- EX. WATER
- PROP. SANITARY
- PROP. STORM DRAIN
- PROP. WATER
- HEAVY DUTY PAVING
- LIGHT DUTY PAVING

EXIST. SHADE TREE TO REMAIN

PROP. SHADE TREE

PROP. MINOR SHADE TREE

PROP. EVERGREEN TREE

PROP. SHRUBS

SCHEDULE A
PERIMETER LANDSCAPE EDGE

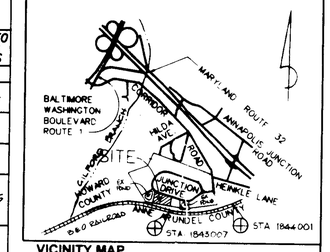
CATAGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES	
Landscape Type	B	E	A	C
Linear Feet of Roadway Frontage Perimeter	884	670	870	1094
Credit for existing Vegetation (Yes, No Linear Feet)	YES① 800'			
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)		YES② 200'		
Number of Plants Required: Shade Trees	1 per 30 LF 29.3	16.75	14.5	27.55
Evergreen Trees		117.5		54.7
Shrubs				
Number of Plants Provided: Shade Trees	2	17		
Evergreen Trees 2:1	25 (12.5)		16	19
Other Trees (2x sub.)	10 (5)	21 (10.5)	6 (3)	38 (19)
Shrubs (10x sub.)	100 (10)	120 (12)		

Comments: ① CREDIT FOR ~10 EXIST. 4" CAL SHADE TREES ALONG JUNCTION DRIVE.
② 200 L.F. OF PARKING LOT IS 8'-6' BELOW THE AD'J. ELEV. OF JUNCTION DR.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	187
Number of Trees Required	9.35
Number of Trees Provided	10
Shade Trees	10
Other Trees (2x sub.)	

Number of landscaped islands req. 9.35
Number of landscaped islands provided 10



VICINITY MAP

BENCHMARK

CONTROL REFERENCE

SHEET INDEX

SHEET #1	SITE PLAN
SHEET #2	SECTIONS & DETAILS
SHEET #3	DRAINAGE AREA MAP & PROFILES
SHEET #4	PROFILES
SHEET #5	SEDIMENT CONTROL PLAN
SHEET #6	SEDIMENT CONTROL DETAILS
SHEET #7	LANDSCAPE PLAN

PLANT SCHEDULE

KEY	QUANT.	BOTANICAL NAME / COMMON NAME	SIZE / COND.	SPACING	REMARKS
TREES					
AR	13	Acer rubrum 'Octobar Glory'/ October Glory Red Maple	2 1/2-3 "cal./ B&B	as shown	full crown
LS	19	Liquidambar styraciflua / Sweetgum	2 1/2-3 "cal./B&B	as shown	full crown
LP	21	Platanus x acerifolia "Bloodgood" /Bloodgood London Planetree	2 1/2-3 "cal./B&B	as shown	full crown
PS	14	Pinus strobus / Eastern White Pine	6-8' ht. / B&B	10' O.C. as shown	sheared
PA	24	Picea abies / Norway Spruce	6-8' ht. / B&B	10' O.C. as shown	
MS	16	Malus sargi 'Calocarpa' / Zumi Crab	1-1 1/2 "cal / B&B	as shown	
PP	19	Prunus subhirtella 'Pendula'/ Weeping Japanese Cherry	1-1 1/2 "cal / B&B	as shown	
PN	16	Pinus nigra / Austrian Pine	6-8' ht. / B&B	10' O.C as shown	sheared
JV	15	Juniperus viginiana 'Emerald Sentinel / Emerald Sentinel Juniper	6-8' ht. / B&B	as shown	
SHRUBS					
GA	53	Abelia x grandiflora 'Edward Goucher'/ Edward Goucher Abelia	18 - 24" spr./ cont.	4'-6" O.C.	
RP	67	Rhododendron P.J.M. / P.J.M. Rhododendron	24 -30" ht. / cont.	4'-6" O.C. as shown	
VB	56	Viburnum x burkwoodi / Burkwood Viburnum	24 -30" ht./ cont.	5' O.C. as shown	
TB	44	Taxus baccata Repandens/Spreading English Yew	24-30" / B&B	3' O.C.	

PLANTING NOTES
PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK.
ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS.
ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS
ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., "AMERICAN STANDARDS FOR NURSERY STOCK," LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE-ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN.

CHANGES MAY IMPACT REQUIRED CERTIFICATION
PLANT TYPES (DECIDUOUS TREES, EVERGREEN, ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST HOWARD COUNTY LANDSCAPE MANUAL. ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE NOTES

LANDSCAPE SPECIFICATIONS
LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA, INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS.
A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

SPECIAL PROVISION 5 TO LCA STANDARD SPECIFICATIONS
CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS.

CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS.

NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 120 LANDSCAPE TREES, IN THE AMOUNT OF _____ IS PART OF THE DEVELOPER'S AGREEMENT.

These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

John R. Robertson — 7/24/96
DIRECTOR, HOWARD SOIL CONSERVATION DISTRICT — DATE

Reviewed for the Howard Conservation District and meets technical requirements.

J. H. Warfield/jm — 7/24/96
HOWARD SOIL CONSERVATION SERVICE — DATE

Approved: Howard County Department of Planning and Zoning

Chief, Development Engineering Division — VJC — 7/29/96 — DATE

Director of Planning and Zoning — TC — 8/1/96 — DATE

Developer — 8/2/96 — DATE

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O-1	9070 JUNCTION DRIVE

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Corporate Officer: _____ Partner — Date 2/22/96
Name: DAVID BENNER

OWNER/DEVELOPER
JUNCTION PROPERTIES LIMITED
PARTNERSHIP
TIMONIUM ONE
1966 GREENSPRING DRIVE
SUITE 508
TIMONIUM, MD. 21093
(410) 560 - 0300

REVISIONS:
9/5/96 - REV. FRONT BLDG. ADDED RAMPS & STAIRS REAR OF BLDG.

LANDSCAPE PLAN
Parcel O-1
Junction Industrial Park

PREVIOUS DEPT. OF PLANNING AND ZONING FILE NOS.: S-75.01 ; P-84-10 ; F-90-123

Scale : 1'=50' — January 30, 1996
6th Election District — Sheet 7 of 7 — Howard County, Maryland

SDP-96-96