#DGN# #REF001 #REF002 #REF003 #REF004 #REF005 #REF006
#DGNLEV #LEV001 #LEV002 #LEV003 #LEV004 #LEV005 #LEV006

SURVEYED BY
SUPERVISED BY AAA
DESIGNED BY BBB

DRAINAGE DESCRIPTION

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
	VA.		143	0143-121-F05, RW-201,RW-202 C-501	4B

SHEET 3

3-1 — 1 - Std. DI-3A Req'd. (precast)
H=1.22m Inv.10.50

3-1 4-10 — 53m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 10.50 Inv.(out) 10.15

SHEET 4

4-1 — 1 - Std. DI-3B Req'd. L=1.8m (precast)
H=1.20 Inv. 9.40

4-1a — 2.89m - Std. MH-1 or MH-2 Req'd.
Inv.7.52 Std. IS-1 Req'd.
1 - Std. MH-1 Frame & Cover Req'd.

4-1 4-1a — 1m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 9.40 Inv.(out) 9.39

4-1a 5-8a — 49m - 0.60m Conc. Pipe Req'd. (2.7m cover)
Inv.(in) 7.52 Inv.(out) 7.17

4-2 — 1 - Std. DI-3A Req'd. (precast)
H=1.20 Inv. 9.85

4-2 4-13 — 1m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 9.85 Inv.(out) 9.84

4-13 4-1a — 73m - 0.60m Conc. Pipe Req'd. (2.5m cover)
Inv.(in) 8.05 Inv.(out) 7.55

4-3 — 1 - Std. DI-3A Req'd. (precast)
H=1.20 Inv.10.00

4-3 4-12 — 1m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 10.00 Inv.(out) 9.99

4-12 4-13 — 16m - 0.60m Conc. Pipe Req'd. (2.5m cover)
Inv.(in) 8.15 Inv.(out) 8.08

4-4 — 1 - Std. DI-3A Req'd. (precast)
H=1.20 Inv.10.25

4-4 4-4a — 1m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 10.25 Inv.(out) 10.24

4-4a — 2.98m- Std. MH-1 or MH-2 Req'd.
Inv.8.27 Std. IS-1 Req'd.
1-Std. MH-1 Frame & Cover Req'd.

4-1a 4-12 — 23m - 0.60m Conc. Pipe Req'd. (2.3m cover)
Inv.(in) 8.27 Inv.(out) 8.15

4-5 — 1 - Std. DI-3B Req'd. L=1.2m (precast)
H= 1.21m Inv.10.30

4-5 4-11 — 1m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 10.30 Inv.(out) 10.29

4-11 4-4a — 19m - 0.60m Conc. Pipe Req'd. (2.3m cover)
Inv.(in) 8.37 Inv.(out) 8.30

4-6 — 1 - Std. DI-3B Req'd. L=1.8m (precast)
H= 1.43m Inv.9.05 Std. IS-1 Req'd.

4-6 5-14 — 42.5m - 0.60m Conc. Pipe Req'd. (0.9m cover)
Inv.(in) 9.05 Inv.(out) 8.84

4-7 — 1 - Std. DI-3B Req'd. L=1.2m (precast)
H= 1.33m Inv. 9.29 Std. IS-1 Req'd.

4-7 4-6 — 23m - 0.450m Conc. Pipe Req'd. (0.9m cover)
Inv.(in) 9.29 Inv.(out) 9.17

4-8 — 1 - Std. DI-3B Req'd. L=1.8m (precast)
H= 1.30m Inv. 9.55 Std. IS-1 Req'd.

4-8 4-7 — 42m - 0.450m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 9.55 Inv.(out) 9.32

4-9 — 1 - Std. DI-3B Req'd. L=1.2m (precast)
H= 1.20m Inv. 9.80 Std. IS-1 Req'd.

SHEET 4 (CONTINUED)

4-9 4-8 — 23m - 0.375m Conc. Pipe Req'd. (0.9m cover)
Inv.(in) 9.80 Inv.(out) 9.65

4-10 — 1 - Std. DI-3B Req'd. L=1.2m (precast)
H= 1.22m Inv.10.13 Std. IS-1 Req'd.

4-10 4-9 — 51m - 0.375m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 10.13 Inv.(out) 9.80

4-11 — 3m - Std MH-1 or MH-2 Req'd.
Inv.8.37 (connect to exist. pipes)
1- Std MH-1 Frame & Cover Req'd. Std. IS-1 Req'd.

4-12 — 2.87m Std MH-1 or MH-2 Req'd.
Inv.8.15 (connect to exist.0.38m pipe)
1- Std MH-1 Frame & Cover Req'd. Std. IS-1 Req'd.

4-13 — 2.89m - Std MH-1 or MH-2 Req'd.
Inv.8.05 (connect to exist.0.30m pipe)
1- Std MH-1 Frame & Cover Req'd. Std. IS-1 Req'd.

SHEET 4C

4C-2 4C-1 — 12m - DBL 1.20m Conc. Pipe Req'd. (0.8m cover)
Inv.(in) 7.40 Inv.(out) 7.30 2-Std.EW-1S Req'd.
35 m.Tons Erosion Control Stone Class 1,Std.EC-1 Placement
Excavate 0.75m and Backfill with
7.2 M.Tons (0.6 m depth) No.3 Stone
Cap with 18 M.Tons (0.15 m depth) Bedding Mat'l.Aggr.No.25 or 26
Extend Bedding Mat'l.Aggr.No.25 or
26 as Class I Backfill per 2001
FB-1 Standards.80 M.Tons Req'd
24 Square Meters Geotextile (Embankment Stabilization) Fabric Req'd.
61 Cubic Meters Minor Structure Excavation
1-Dewatering Basin Req'd.

SHEET 5

5-2 5B-1 — 83m - Std. 2.13m x 1.82m BDD1.5 Req'd.
Inv.(in) 6.52 Inv.(out) 6.30
4 - Std. BW-21 Req'd.
10 deg.Inlet & 5 deg.outlet skew.Debris Rack Req'd at inlet end.
Excavate 1.0 m and Backfill with
1205 M.Tons Bedding Mat'l. Aggr. No. 25 or 26
3482 Cubic Meters Minor Structure Excavation
107 Metric Tons Erosion Control Stone Class 1 Req'd.
Std. EC-1 Placement 1-Dewatering Basin Req'd.
Sleeve exist. san. sewer thru box, see sheet 16(5)
Std. HR-1 on Wingwalls & Headwalls Req'd.
(connect to exist. 375mm pipe)
See Sheet 16(25) for Waterline Crossing Details

5-3 — 1 - Std. DI-3AA Req'd.
H= 3.01m Inv. 6.99 Std. IS-1 Req'd.

5-3 Box — 28.5m - 0.60m Conc. Pipe Req'd. (2.4m cover)
Inv.(in) 6.99 Inv.(out) 6.81 (tie into proposed box culvert)

5-4 — 1 - Std. DI-3AA Req'd. (precast)
H= 2.89m Inv. 7.20 Std. IS-1 Req'd.

5-4 5-3 — 36m - 0.60m Conc. Pipe Req'd. (2.4m cover)
Inv.(in) 7.20 Inv.(out) 7.02

5-5 — 1 - Std. DI-3AA Req'd. (precast)
H= 2.44m Inv. 7.40 Std. IS-1 Req'd.

5-5 5-4 — 35m - 0.60m Conc. Pipe Req'd. (2.0m cover)
Inv.(in) 7.40 Inv.(out) 7.23

5-6 5-5 — 16m 0.60m Conc. Pipe Req'd. (1.8m cover)
Inv.(in) 7.50 Inv.(out) 7.40

5-6 — 1 - Std. DI-3C Req'd. L=1.8m (precast)
H= 2.34m Inv.7.50 Std. IS-1 Req'd.

5-7 — 1 - Std. DI-3AA Req'd. (precast)
H= 3.34m Inv.6.91
1 - Std. SL-1 Req'd. Std. IS-1 Req'd.

5-7 Box — 15m - 0.60m Conc. Pipe Req'd. (2.7m cover)
Inv.(in) 6.91 Inv.(out) 6.81 (tie into proposed box culvert)

5-8 — 1 - Std. DI-3BB Req'd. L=1.8m (precast)
H= 3.25m Inv.7.04
1 - Std. SL-1 Req'd. Std. IS-1 Req'd.

5-8 5-7 — 15m - 0.60m Conc. Pipe Req'd. (2.7m cover)
Inv.(in) 7.04 Inv.(out) 6.94

SHEET 5 (CONTINUED)

5-8a — 3.06m- Std. MH-1 or MH-2 Req'd.
Inv.7.14
1 - Std. MH-1 Frame & Cover Req'd. Std. IS-1 Req'd.

5-8a 5-8 — 12.5m - 0.60m Conc. Pipe Req'd. (2.4m cover)
Inv.(in) 7.14 Inv.(out) 7.07

5-9 — 1 - Std. DI-4B Req'd. L=1.8m (precast)
H= 2.40m Inv.7.65 Std. IS-1 Req'd.

5-9 Box — 27m - 0.90m Conc. Pipe Req'd. (2.2m cover)
Inv.(in) 7.65 Inv.(out) 6.98
Excavate 0.6m and Backfill with
0.3 M.Tons Bedding Matl.Aggr.No.25 or 26
(tie into proposed box culvert)
54 Square Meters Geotextile (Embankment Stabilization) Fabric Req'd.

5-10 — 1 - Std. DI-4B Req'd. L=1.8m (precast)
H= 2.20m Inv.7.73 Std. IS-1 Req'd.

5-10 5-9 — 32m - 0.90m Conc. Pipe Req'd. (1.5m cover)
Inv.(in) 7.73 Inv.(out) 7.68
Excavate 0.6m and Backfill with
98 M.Tons Bedding Matl.Aggr.No.25 or 26
64 Square Meters Geotextile (Embankment Stabilization) Fabric Req'd.

5-11 — 1 - Std. DI-4A Req'd. (precast)
H= 2.10m Inv.7.76 Std. IS-1 Req'd.

5-11 5-10 — 22.5m - 0.90m Conc. Pipe Req'd. (1.3m cover)
Inv.(in) 7.76 Inv.(out) 7.73
Excavate 0.6m and Backfill with
69 M.Tons Bedding Matl.Aggr.No.25 or 26
45 Square Meters Geotextile (Embankment Stabilization) Fabric Req'd.

5-12 — 1 Std. DI-4C Req'd. L=2.4m (precast)
H= 1.94m Inv.7.83 Std. IS-1 Req'd.

5-12 5-11 — 27.5m - 0.90m Conc. Pipe Req'd. (1m cover)
Inv.(in) 7.83 Inv.(out) 7.79
Excavate 0.6m and Backfill with
85 M.Tons Bedding Matl.Aggr.No.25 or 26
55 Square Meters Geotextile (Embankment Stabilization) Fabric Req'd.

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
	0143-121-F05		4B

#TNEXT.NAME

FIGURE 2D - 2 SAMPLE DRAINAGE DESCRIPTION SHEET*

* Rev. 1/07