MISS UTILITY OF VIRGINIA:

THE CONTRACTOR SHALL CALL "MISS UTILITY" 48 HOURS PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN THE EXISTING ROAD AND/OR RIGHT OF WAY REQUIRED BY THE DEVELOPMENT. CONTACT MISS UTILITY OF VIRGINIA: 1-800-552-7001 (TOLL FREE)

GENERAL NOTES

1. FEBRUARY 1, 2001 EDITION OF ROAD AND BRIDGE SPECIFICATIONS AND FEBRUARY 1, 2001 EDITION OF THE ROAD DESIGNS AND STANDARDS OF THE VIRGINIA DEPARTMENT OF HIGHWAYS SHALL GOVERN THE FOLLOWING:
   A. POURING, CURING, FORMS, WORKMANSHIP, ETC. OF ALL CONCRETE USED ON THIS PROJECT.
   B. STABILIZED BASE COURSE MATERIAL.
   C. MATERIALS AND INSTALLATION OF ALL PIPE CULVERTS.
2. THE VDOT APPROVAL OF THESE PLANS WILL EXPIRE THREE (3) YEARS FROM DATE OF APPROVAL.
3. OWNER WILL FURNISH SURVEY CONTROL OFF SET HUBS FOR ALL ROADS AND EASEMENTS FOR ALIGNMENT AND GRADE. ROADS WILL BE STAKED ON ONLY ONE SIDE. REPLACEMENT OF THESE HUBS AND ANY OTHER STAKING WILL BE DONE BY THE CONTRACTOR AT HIS EXPENSE. THE CONTRACTOR SHALL INSPECT THE CONTROL STAKING MENTIONED ABOVE AND VERIFY BEFORE CONSTRUCTION.
4. ALL GRADE STAKES DESTROYED BY THE CONTRACTOR, SHALL BE REPLACED AT HIS EXPENSE.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE THE EXISTING RIGHT OF WAY STONES. ANY MARKERS DAMAGED SHALL BE REPLACED AT HIS EXPENSE.
6. CLEARING AND GRUBBING SHALL BE COMPLETE WITHIN THE RIGHT OF WAYS AS INDICATED ON LAYOUT PLAN.
7. ALL DRAINAGE EASEMENTS TO BE CLEARED, GRUBBED, AND GRADED TO CONTAIN WATER FROM PIPE CULVERTS AND TO EXTEND TO A NATURAL WATERCOURSE.
8. EXCESS EXCAVATION TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
9. ALL FILLETS AT INTERSECTIONS TO HAVE 35' RADII UNLESS OTHERWISE NOTED.
10. GRADE LINES ON PROFILES DENOTE FINISHED GRADE OF CENTER LINE OF ROAD.
11. BASE MUST BE APPROVED BY VDOT FOR DEPTH, TEMPLATE, AND COMPACTION BEFORE SURFACE TREATMENT IS APPLIED.
12. PERMIT TO TIE INTO EXISTING ROADS, SHALL BE OBTAINED FROM RESIDENT ENGINEER PRIOR TO ROAD CONSTRUCTION.
13. ALL UTILITIES TO BE IN PLACE PRIOR TO LAYING BASE MATERIAL.
14. NO STRUCTURE SHALL BE CONSTRUCTED ON STATE MAINATAINED RIGHTS OF WAY UNLESS SAID STRUCTURES ARE SHOWN ON ROAD CONSTRUCTION PLANS APPROVED BY VDOT OR SUCH STRUCTURES ARE COVERED BY A VDOT LAND USE PERMIT. (OR BY A LETTER OF INTENT FROM THE RESIDENT ENGINEER TO ISSUE SAID PERMIT AT THE TIME OF STATE ACCEPTANCE).

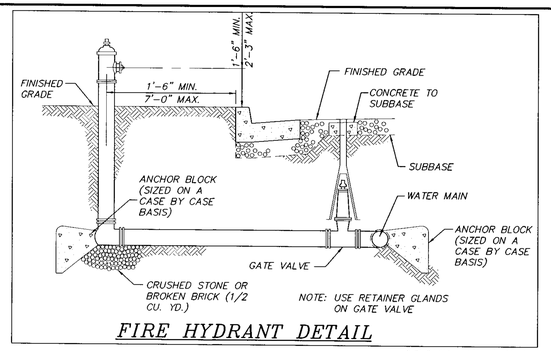
SEWER AND WATER NOTES

1. ALL MATERIALS FOR SEWER AND WATER SYSTEMS SHOWN SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST APPLICABLE SPECIFICATION OF PRINCE GEORGE COUNTY.
2. ALL WORK SHALL BE SUBJECT TO INSPECTION BY UTILITY DEPARTMENT OFFICIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF APPROPRIATE COUNTY OFFICIALS 48 HOURS PRIOR TO START OF WORK.
3. MINIMUM CLEAR COVER FOR ALL WATER PIPE SHALL BE 3.5 FEET.
4. THE UTILITY OWNER IS RESPONSIBLE FOR OBTAINING ANY HIGHWAY PERMITS AND FOR SENDING A COPY TO THE COUNTY PRIOR TO START OF CONSTRUCTION.
5. ANY LOT WITH LESS THAN 50 FEET OF FRONTAGE SHALL HAVE FRONT CORNERS OR END OF 6' CONNECTION STAKED PRIOR TO CONSTRUCTION OF A 6' SEWER SERVICE.
6. SEWER PIPE SHALL BE PVC. ALL SEWER JOINTS SHALL BE CLASS A. BEDDING SHALL BE CLASS B MINIMUM; BEDDING SHALL BE AS SHOWN IN DETAIL ON SHEET 2.
7. SEWER GRADES ARE BASED ON AERIAL PHOTOGRAPHY BY LOUISA AERIAL SURVEYS USING NAVD88 DATUM
8. CONTRACTOR SHALL INSTALL 6" SEWER SERVICE CONNECTIONS TO ALL LOTS (R/W LINE OR EDGE OF EASEMENT) AS SHOWN.
9. ALL WATER SERVICES ARE TO BE COPPER, TYPE K, DRAWN TUBING.
10. THE CONTRACTOR WILL INSTALL ALL WATER CONNECTIONS AND METER BOXES.
11. FIRE HYDRANT PUMPER CONNECTIONS SHALL FACE IN THE DIRECTION OF THE ARROW.
12. THE EXACT MANHOLE TOP SHALL BE ON THE SAME GRADE AS THE FINISHED ROAD GRADE AND AS NOTED ON SEWER CUT SHEETS. THE USE OF HEIGHT ADJUSTMENT RINGS IS PROHIBITED.
13. BACKFILL FOR ALL UTILITIES WITHIN PROPOSED SUBDIVISION STREETS SHALL BE PLACED GENERALLY IN ACCORDANCE WITH PRINCE GEORGE COUNTY SPECIFICATIONS, AND THE FOLLOWING CRITERIA: (1.) NO TRENCH SHALL BE BACKFILLED UNTIL AUTHORIZED BY THE COUNTY. MATERIALS USED FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO 12" (TWELVE INCHES) ABOVE THE PIPE SHALL BE SELECT MATERIAL, FREE FROM FROST, LARGE CLODS, STONES AND DEBRIS, AND SHALL BE THOROUGHLY AND CAREFULLY COMPACTED. 2. BACKFILL SHALL BE COMPACTED BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO INSURE A SUITABLE SUBBASE, ACCEPTABLE TO THE ROAD ENGINEER, IF THE MATERIAL IS TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILLING IT SHALL BE REMOVED AND ACCEPTABLE MATERIAL USED FOR BACKFILLING THE TRENCH.
14. THE ENGINEER WILL CERTIFY THAT THE ROADS ARE WITHIN 6" OF SUBGRADE AND THE EASEMENTS ARE WITHIN 6" OF FINAL GRADE BEFORE WATERLINE CONSTRUCTION CAN BEGIN.
15. FOR SEWER AND WATER INSTALLATION WITHIN EXISTING VDOT R/W, UTILITY CONTRACTORS SHALL NOTIFY VDOT 48 HOURS IN ADVANCE WHEN INSTALLATION BEGINS SO THAT DENSITY CAN BE TESTED (95% @ OPTIMUM MOISTURE +20%).
16. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY, IF: LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, OR IF: THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLAN. TO MISS THE UTILITY CALL "MISS UTILITY" OF CENTRAL VIRGINIA: 1-800-552-7001 (TOLL FREE).
17. THE INSTALLATION OF BACK FLOW DEVICE IS REQUIRED IN ALL HOUSES WHERE THE FINISHED FLOOR ELEVATION IS LOWER THAN UPGRADE MANHOLES. THIS DEVICE WILL BE INSPECTED BY THE COUNTY BUILDING INSPECTOR.
18. INDIVIDUAL WATER SERVICES TO BE 3/4".
19. ALL WATERLINE VALVES MUST BE LOCATED ON THE TEE OR CROSS WHEN APPLICABLE.
20. ALL MANHOLES IN UTILITY EASEMENTS ARE TO HAVE THE CONCRETE SECTION EXTENDED ONE FOOT ABOVE THE GROUND.
21. A SMOOTH TRANSITION OF DROP MANHOLE MUST BE PROVIDED FOR EACH LATERAL OR SANITARY SEWER ENTERING A SANITARY MANHOLE.
22. ALL FIRE HYDRANTS SHALL BE O.S.H.A. RED IN COLOR.
23. METER BOXES PROVIDED SHALL BE CAST IRON 12"x18"x24" HIGH WITH CAST IRON LIDS. THE METER ASSEMBLIES ARE TO BE SUPPLIED WITH NEPTUNE PROREAD ENCODERS AND R900I PIT MIU (RF) ATTACHED TO THE METER. METERS ARE TO BE COMPATIBLE WITH THE PROPOSED SYSTEM. A WAND TYPE VISUAL READER COMPATIBLE WITH THE PROREAD SYSTEM WILL BE SUPPLIED TO THE UTILITY DEPARTMENT WITH THE WATER METERS.
24. FIRE HYDRANTS ARE TO BE MUELLER TYPE BE INSTALLED USING TEES.
25. ALL SANITARY LATERALS ARE TO HAVE THE CLEANOUT INSTALLED AT EITHER THE EDGE OF THE EASEMENT OR RIGHT OF WAY IN ACCORDANCE WITH PRINCE GEORGE COUNTY SPECIFICATIONS. A CARSONITE MARKER SHALL ALSO BE INSTALLED TO INDICATE THEIR LOCATION. THIS MARKER MUST BE INSTALLED IMMEDIATELY FOLLOWING THE CONSTRUCTION OF THE LATERAL CONNECTION.
26. ALL HYDRANTS SHALL BE EQUIPPED WITH A MUELLER HYDRANT DEFENDER, SECURING THE OPERATING NUT AND IT SHALL BE SUPPLIED WITH 4 CODED KEYS THAT WILL WORK WITH THEALL NOZZLE CAPS. THE CODED LOCK/KEY COMBINATION. KEYS SHALL BE SENT DIRECTLY TO THE COUNTY ENGINEER AT PRINCE GEORGE COUNTY.
27. ALL HYDRANTS AND BENDS SHALL BE EQUIPPED WITH MEGA LUGS, KICKERS AND THRUST BLOCKS.
28. ALL MANHOLES SHALL BE SEALED AT THE JOINTS WITH AN EXTERNAL RUBBER SLEEVE SIMILAR TO THE INFI-SHIELD SEAL WRAP AS MANUFACTURED BY SEALING SYSTEMS, INC. THE SEAL SHALL BE MADE OF EPDM (ETHYLENE PROPYLENE DIENE MONOMER) RUBBER WITH A MINIMUM THICKNESS OF 65 MILS. EACH UNIT SHALL HAVE A 2-INCH WIDE MASTIC STRIP ON THE TOP AND BOTTOM EDGE OF THE RUBBER WRAP. THE MASTIC SHALL BE NON-HARDENING BUTYL RUBBER SEALANT, WITH A MINIMUM THICKNESS OF 125 MILS. THE SEAL SHALL BE DESIGNED TO PREVENT LEAKAGE OF WATER THROUGH THE JOINT SECTIONS OF A MANHOLE. THIS IS IN ADDITION TO THE NORMAL O-RING INSTALLATION.
29. UTILITY INSPECTOR SHALL BE CONTACTED BEFORE INDIVIDUAL SERVICE CONNECTIONS ARE COVERED.
30. ALL INDIVIDUAL WATER SERVICES SHALL BE MADE OF USING DOUBLE BANDED EPOXY COATED STAINLESS STEEL SADDLES.
31. A 'W' AND 'S' SHALL BE STAMPED ON THE CURB WHILE THE CONCRETE IS STILL WET. THESE MARKS SHALL INDICATE THE ACTUAL LOCATION OF THE WATER AND SEWER CONNECTIONS FOR EACH LOT.
32. ALL WATER LINE VALVES LOCATED OUTSIDE THE PAVEMENT NEED TO BE ENCLOSED IN A 12"X12"X6" CONCRETE ENCLOSURE.

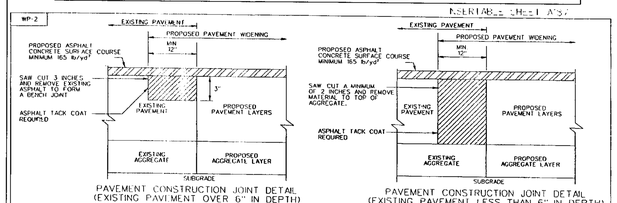
CERTIFICATION

I, WE HEREBY CERTIFY THAT THE LOT LINES, LOT NUMBERS, BLOCK NUMBERS AND THE STREET NAMES SHOWN ON THESE PLANS ARE IDENTICAL TO THOSE SHOWN ON THE OFFICIAL RECORDED PLAT, AND NO CHANGES WILL BE MADE WITHOUT PRIOR APPROVAL FROM THE UTILITY DEPARTMENT. IF ANY CHANGES ARE APPROVED, REVISED WATER AND/OR SEWER PLANS WILL BE SUBMITTED WITHIN 48 HOURS AFTER APPROVAL

SIGNATURE: Roger Robbins

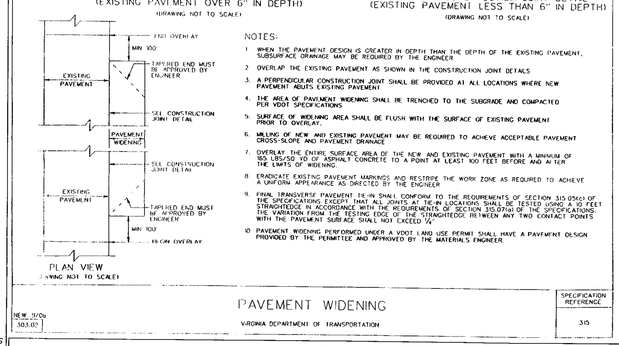


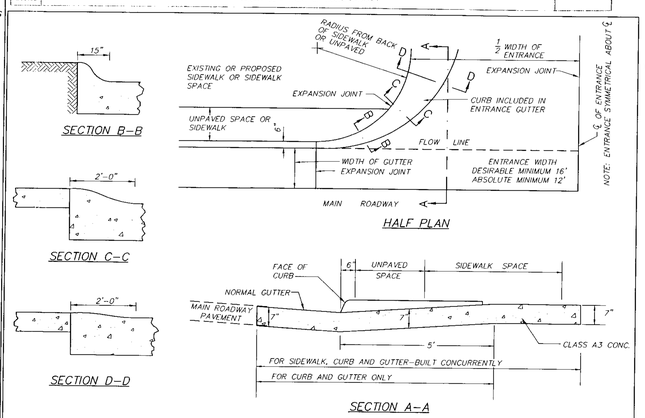
FIRE HYDRANT DETAIL



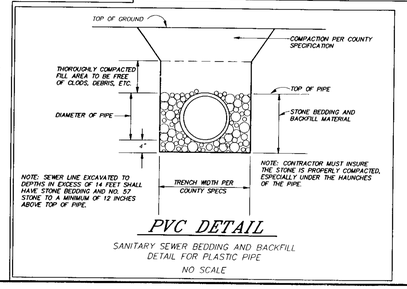
PAVEMENT CONSTRUCTION JOINT DETAIL (EXISTING PAVIMENT OVER 6" IN DEPTH)
(DRAWING NOT TO SCALE)

PAVEMENT CONSTRUCTION JOINT DETAIL (EXISTING PAVEMENT LESS THAN 6" IN DEPTH)
(DRAWING NOT TO SCALE)

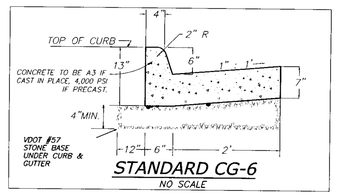




STANDARD ENTRANCE GUTTER
CG - 9D
NO SCALE



PVC DETAIL
SANITARY SEWER BEDDING AND BACKFILL DETAIL FOR PLASTIC PIPE
NO SCALE



STANDARD CG-6
NO SCALE

Padlocks 3750 Series Fire/Police Rapid Entry System

Knox heavy-duty, steel bodied, weather resistant Medeco® padlocks secure perimeter or fire access gates. They are also used to lock industrial equipment yards, fire sprinkler control systems, hazardous chemical supplies, and residential storage areas. Knox Padlocks may be accessed by the same Knox Master Key used for other Knox Rapid Entry System devices.

Features and Benefits

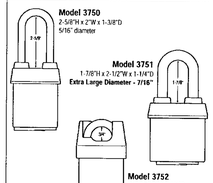
- Hardened boron alloy steel shackle provides up to 15,000 pounds of resistance to bolt cutter attacks
- Hardened steel inserts protect against drilling damage
- Lock design and heavy-duty steel body resists pull attacks
- Weather resistant cover protects padlock from harsh weather conditions
- Medeco cylinder has a UL® 437 rating not offered by most padlock manufacturers

Fire department Knox Padlock linked to property owner's padlock allows entry by either party.

Order Specifications

The following specifications are consistent with all Series 3750 Knox Padlocks. To insure procurement and delivery, it is suggested that the following specification paragraph be used.

Padlock: Heavy-duty UL Listed cylinder
Lock: UL Listed. Double action locking tumblers and hardened steel pins accessed by a broach cut key.
Finish: Steel body with thermoplastic cover. Black body with yellow reflective tape.
P/N: 3750 Series Knox Padlock (with cat. ID)
Mfr's Name: KNOX COMPANY



Model 3750
2-5/8"H x 2"W x 1-3/8"D
5/16" diameter

Model 3751
1-7/8"H x 2-1/2"W x 1-1/4"D
Extra Large Diameter - 7/16"

Model 3752
3/4"H x 2"W x 1-1/4"D
Shrouded 5/16" diameter

Knox Rapid Entry System
The Knox Company manufacturers a complete line of high security products including Knox-Boxes, key vaults, cabinets, key switches, padlocks and electronic master key security devices. For more information or technical assistance, please call Customer Service at 1-800-552-5669.

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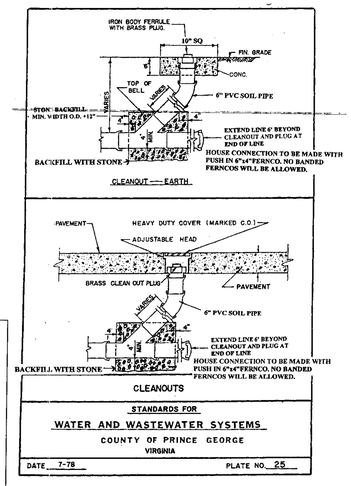
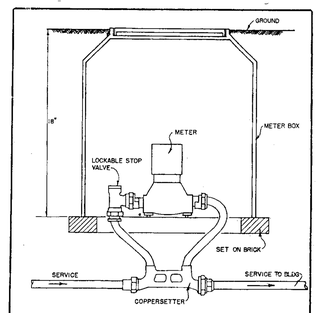
KNOX COMPANY
1182 A Hastings Avenue, Irvine, California 92614-5728 • (800) 552-5669 • (949) 252-8181 • Fax (949) 252-0482 • Web: www.knoxbox.com • E-mail: info@knoxbox.com

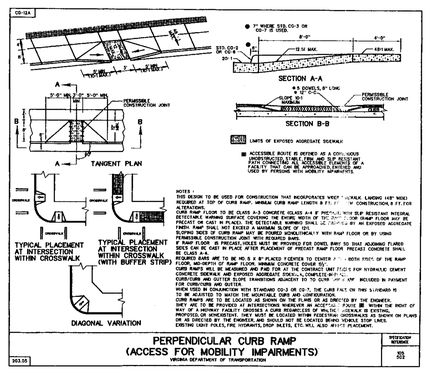


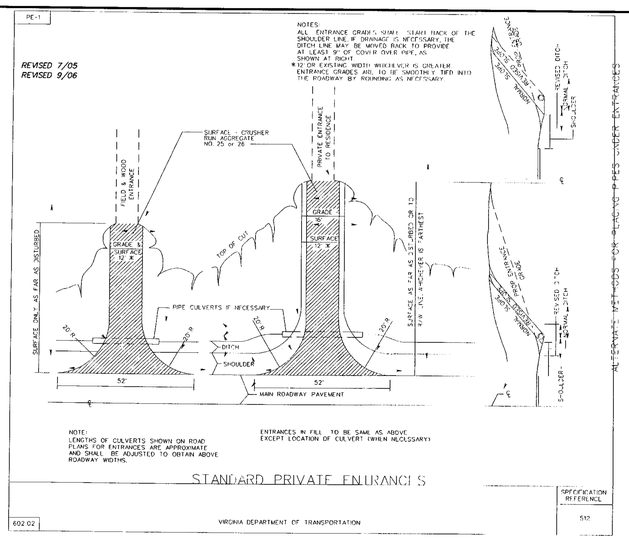
CLEANOUTS
STANDARDS FOR
WATER AND WASTEWATER SYSTEMS
COUNTY OF PRINCE GEORGE
VIRGINIA
DATE 7-78 PLATE NO. 25



NOTE
DETAIL IS FOR 5/8" THRU 1" DISC METERS

METER SETTING
STANDARDS FOR
WATER AND WASTEWATER SYSTEMS
COUNTY OF PRINCE GEORGE
VIRGINIA
DATE 7-78 PLATE NO. 8





SANITARY SEWER SCHEDULE

MH-MH	DIRECTION	DISTANCE
6-5	S 56°34'41" E	45.07'
5-EX 1	S 35°15'42" E	174.99'
4-2	S 23°09'20" E	99.07'
2-1	N 71°20'57" E	351.33'
1-EX 1	N 67°55'27" E	240.56'

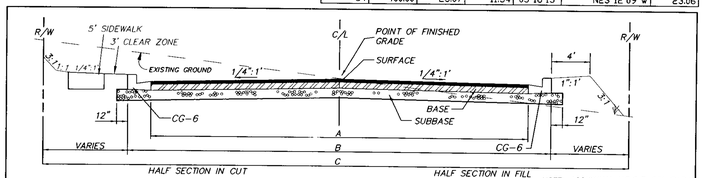
C/L ROAD DATA

LINE TABLE

LINE	LENGTH	BEARING
L1	96.27	S68°03'55"W
L2	307.63	S68°26'59"W
L3	5.67	N66°49'30"W
L4	39.73	N21°33'02"W
L5	168.42	N24°51'17"W

CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	500.00	113.51	57.00	13°00'26"	S74°53'43"W	113.27
C2	500.00	113.03	56.76	12°57'10"	S47°55'21"W	112.79
C3	400.00	312.87	164.93	44°48'57"	N44°25'01"W	304.96
C4	400.00	23.07	11.54	03°18'15"	N23°12'09"W	23.06



NOTE: ADDITIONAL V.D.O.T. STANDARD CD-1 & CD-2 UNDERDRAINS SHALL BE INSTALLED AS REQUIRED BY VDOT OR THE ENGINEER.

TYPICAL SECTION
NO SCALE
MONCOL DRIVE, PFOST AVENUE, AND ANDY CIRCLE

ROAD CLASSIFICATION SCHEDULE

ROAD NAMES ③ STA. TO STA.	VPD	PAVEMENT DESIGN ①② SUBBASE	BASE	SURFACE	"A" PI'M'T WIDTH E/P - E/P	"B" B/C-B/C	"C" R/W WIDTH
MONCOL DRIVE STA. 0+21 TO STA. 6+30	440	6" 21-B	3.0" BM-25.0	1.5" SM-9.5A	32	37	55
PFOST AVENUE STA. 0+16 TO STA. 3+33	100		6" 21-B	2" SM-9.5A	24	29	50.5
ANDY CIRCLE STA. 0+00 TO STA. 2+30	40		6" 21-B	2" SM-9.5A	24	29	50.5

① PAVEMENT SECTIONS ARE BASED ON A MINIMUM DESIGN CBR VALUE OF 10. PAVEMENT DESIGN MAY BE REVISED DUE TO ACTUAL SUBGRADE CONDITIONS.
② A PRIME COAT SHALL BE APPLIED BETWEEN THE AGGREGATE BASE AND ASPHALT COURSES IN ACCORDANCE WITH V.D.O.T. STANDARDS. REFER TO PLAN SHEET FOR THE END OF CURB AND GUTTER.

STORM SEWER SCHEDULE

NOTES:
1. PIPE LENGTHS ARE MEASURED FROM CENTER TO CENTER OF STRUCTURE
2. VDOT STD. ST-1 STEPS ARE REQUIRED FOR ALL STRUCTURES WITH A HEIGHT GREATER THAN OR EQUAL TO 4.0 FT.
3. INSTALL GEOTEXTILE FILTER FABRIC AROUND THE WEEP HOLE FOR ALL SAG DROP INLETS (DI-3C5).

1A	DI-3B, L=8', TOP=112.90, H=4.00'
1B	117.53 LF OF 15" CL. III CONC. PIPE @ 0.50% INV. IN=108.60, INV. OUT=108.01
1C	MH-1, TOP=112.36, H=4.45'
1D	129.86 LF OF 15" CL. III CONC. PIPE @ 2.35% INV. IN=107.91, INV. OUT=104.86
1E	DI-3B, L=6', TOP=108.79, H=4.03'
1F	133.76 LF OF 15" CL. III CONC. PIPE @ 0.97% INV. IN=104.76 INV. OUT=103.46
1G	40 LF OF 15" CL. III CONC. PIPE @ 0.50% INV. IN=108.90 INV. OUT=108.70
1H	DI-3B, L=4', TOP=112.90, H=4.30'
1	DI-3C, L=6', TOP=107.36, H=4.00'
2	116 LF OF 15" CL. III CONC. PIPE @ 14.00% INV. IN=103.36, INV. OUT=87.12
3	MH-1, TOP=100.10, H=16.98', W/SL-1
4	80 LF OF 15" CL. III CONC. PIPE @ 15.74% INV. IN=83.12, INV. OUT=70.52
4A	MH-1, TOP=73.61, H=5.09'
4B	16 LF OF 18" CL. III CONC. P