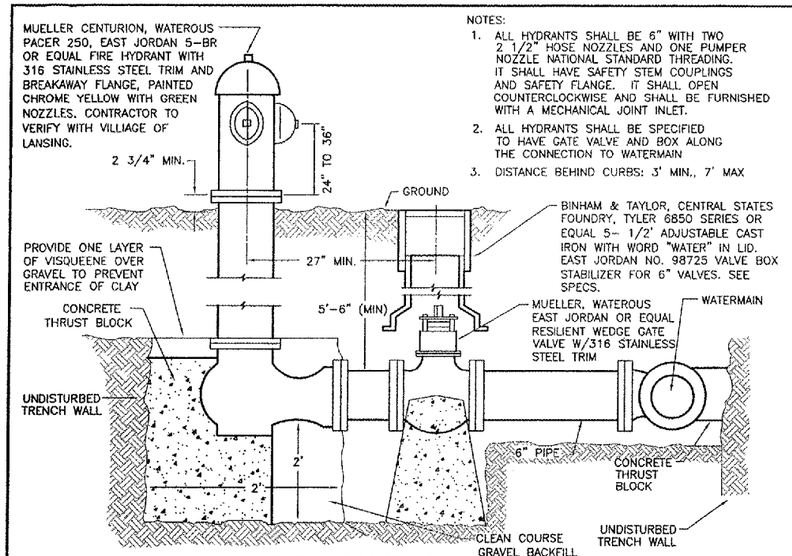
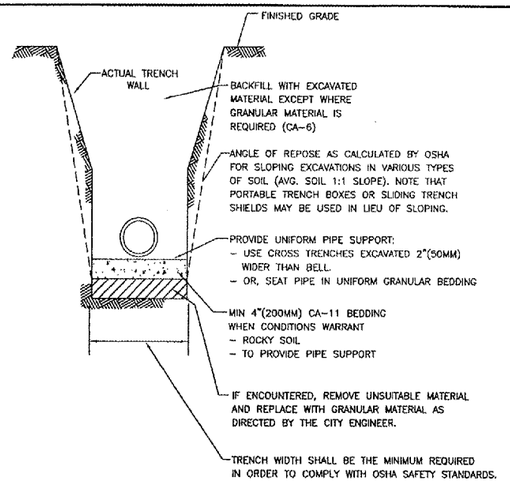


NOTES:

1. ALL HYDRANTS SHALL BE 6" WITH TWO 2 1/2" HOSE NOZZLES AND ONE PUMPER NOZZLE NATIONAL STANDARD THREADING. IT SHALL HAVE SAFETY STEM COUPLINGS AND SAFETY FLANGE. IT SHALL OPEN COUNTERCLOCKWISE AND SHALL BE FURNISHED WITH A MECHANICAL JOINT INLET.
2. ALL HYDRANTS SHALL BE SPECIFIED TO HAVE GATE VALVE AND BOX ALONG THE CONNECTION TO WATERMAIN
3. DISTANCE BEHIND CURBS: 3' MIN., 7' MAX

FIRE HYDRANT DETAIL

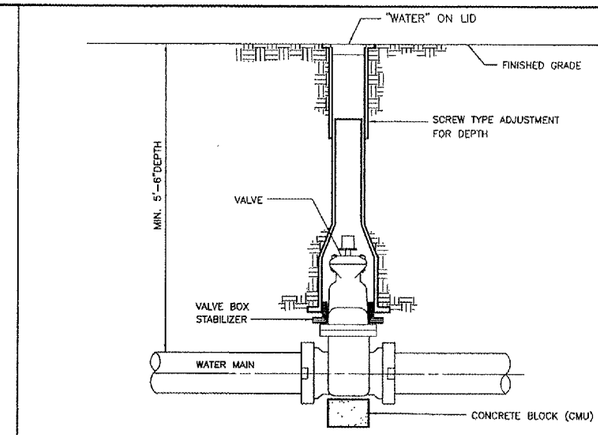
N.T.S.



WATERMAIN EMBEDMENT DETAIL

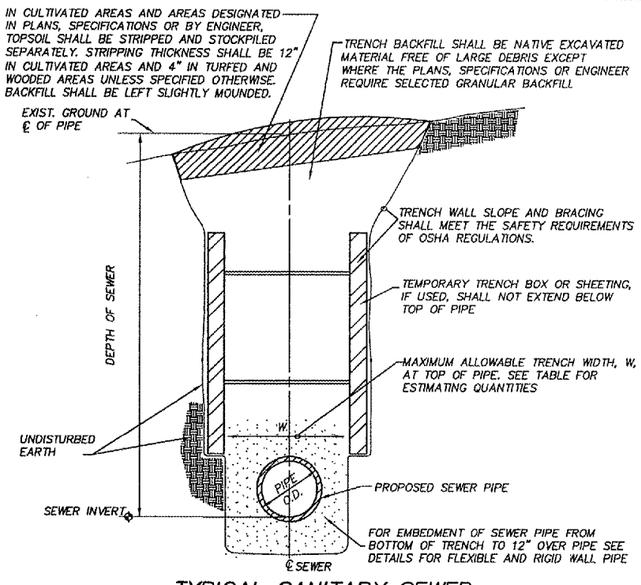
N.T.S.

IN PAVED AREAS ALL TRENCHES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 701.-3.7 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS.



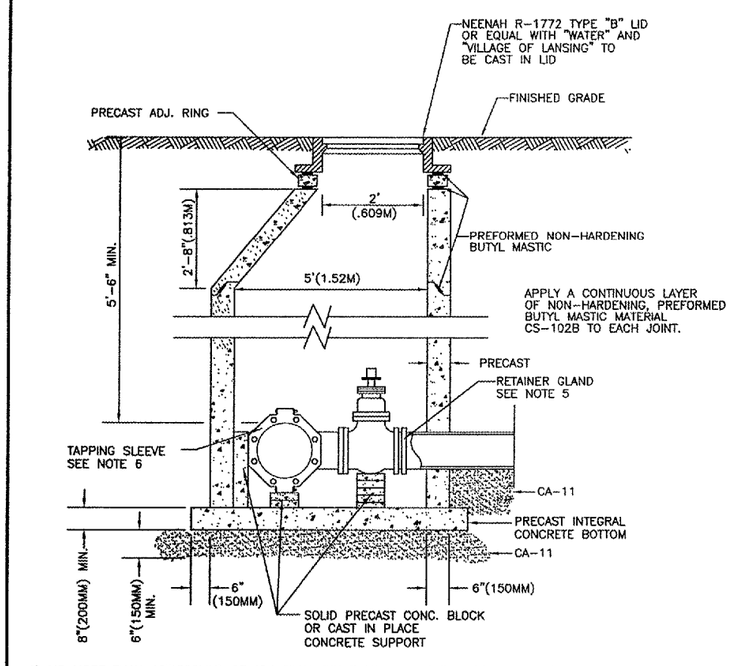
TYPICAL VALVE BOX INSTALLATION

N.T.S.



TYPICAL SANITARY SEWER AND WATERMAIN INSTALLATION

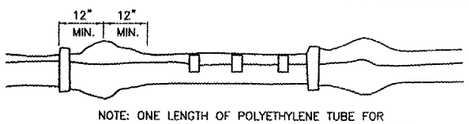
N.T.S.



1) NO MORE THAN 12"(300MM) OF ADJUSTING RINGS MAY BE USED: HOWEVER NO MORE THAN ONE 2"(50MM) ADJUSTING RING OR TWO RINGS IN TOTAL MAY BE USED.
2) VALVE SHALL ALIGN WITH THE CENTER OF VAULT OPENINGS.
3) CONES SHALL BE ECCENTRIC.
4) WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (CS-102B OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF 12"(300MM). (ONE 2"(50MM) RING MAX.)
5) TYLER OR MUELLER CLASS 350 MECHANICAL JOINT WITH MEGALUGS OR EQUAL.
6) TAPPING SLEEVES SHALL BE HEAVY-DUTY STAINLESS STEEL BY MUELLER OR EQUAL.

TAPPING VALVE AND VAULT

N.T.S.



NOTE: ONE LENGTH OF POLYETHYLENE TUBE FOR EACH LENGTH OF PIPE, OVERLAPPED AT JOINT.

TAKE UP SLACK IN THE TUBE ALONG THE BARREL OF THE PIPE TO MAKE A SNUG, BUT NOT TIGHT, FIT.

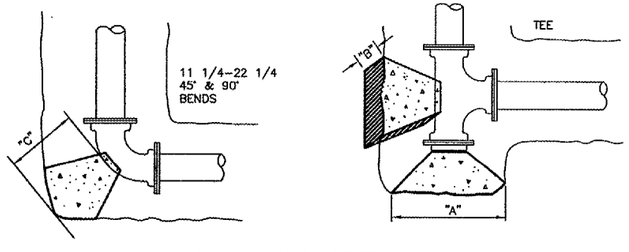
FOLD EXCESS POLY-ETHYLENE BACK OVER THE TOP OF THE PIPE

SECURE THE FOLD AT SEVERAL LOCATIONS ALONG THE PIPE BARREL (APPROX. EVERY THREE FEET).

POLYETHYLENE ENCASEMENT

N.T.S.

NOTE: REPAIR ALL SMALL RIPS, TEARS OR OTHER TUBE DAMAGE WITH ADHESIVE TAPE.



THRUST BLOCK DETAIL

N.T.S.

NOTES:

1. ALL BENDS, TEES, PLUGS, FITTINGS OR OTHER SIGNIFICANT CHANGES SHALL BE BRACED WITH POURED CONCRETE THRUST BLOCKS AS SHOWN ON THIS DETAIL.
2. DIMENSIONS A, B, C APPLY TO ALL BEND CONDITIONS SHOWN.
3. ALL B & C DIMENSIONS TO BE AS REQUIRED TO REACH UNDISTURBED EARTH BUT NOT LESS THAN LISTED ON THRUST BLOCK TABLE.
4. ALL POURED CONCRETE SHALL BE 3500 P.S.I. @ 14 DAYS.
5. INSTALL PLUGS AT ALL RUNS OR BRANCHES DISCONTINUED FOR FUTURE SERVICE.
6. WHEN POURING AGAINST PLUGS AND BLIND FLANGES, SET A PIECE OF 3 MIL PLASTIC AGAINST FITTINGS TO KEEP CONCRETE OFF BOLTS.

SIZE	90° BEND			45° BEND			22-1/2° BEND			11-1/4° BEND			TEE OR PLUG		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
6"	2'-3"	1'-2"	8"	1'-3"	1'-2"	8"	0'-8"	1'-2"	8"	0'-6"	1'-2"	7"	1'-8"	1'-2"	8"
8"	3'-7"	1'-4"	9"	2'-3"	1'-4"	9"	1'-4"	1'-4"	9"	0'-7"	1'-4"	8"	3'-2"	1'-4"	9"
10"	5'-0"	1'-6"	10"	2'-8"	1'-6"	10"	1'-5"	1'-6"	10"	0'-8"	1'-6"	8"	3'-6"	1'-6"	10"
12"	5'-10"	1'-10"	1'-0"	3'-2"	1'-10"	11"	1'-10"	1'-8"	11"	0'-8"	1'-8"	8"	4'-2"	1'-0"	1'-10"

QUANTITIES PER LINEAL FOOT OF CONDUIT						
INSIDE DIAMETER OF CONDUIT "D" IN INCHES	MAXIMUM TRENCH WIDTH IN FEET	BEDDING C.Y./FOOT WHERE ELIGIBLE	HAUNCHING C.Y./FOOT WHERE ELIGIBLE	INITIAL BACKFILL C.Y./FOOT WHERE ELIGIBLE	FINAL BACKFILL C.Y./FOOT PER FOOT	PERMANENT PAVEMENT REMOVAL AND REPLACEMENT S.Y./FOOT
6	3.58	0.04	0.03	0.17	0.13	0.62
8	3.78	0.05	0.05	0.19	0.14	0.64
10	3.97	0.05	0.06	0.20	0.15	0.66
12	4.17	0.05	0.07	0.22	0.15	0.69
14	4.36	0.09	0.08	0.24	0.16	0.71
15	4.46	0.06	0.09	0.25	0.17	0.72
16	4.56	0.06	0.10	0.26	0.17	0.73
18	4.75	0.06	0.11	0.29	0.18	0.75
20	4.94	0.06	0.12	0.31	0.18	0.77
21	5.04	0.06	0.13	0.32	0.19	0.78
24	5.33	0.07	0.15	0.35	0.20	0.81
27	5.63	0.07	0.17	0.38	0.21	0.85
28	5.72	0.07	0.18	0.39	0.21	0.86
30	5.92	0.07	0.20	0.41	0.22	0.88
33	6.21	0.08	0.22	0.45	0.23	0.91
36	6.50	0.08	0.24	0.48	0.24	0.94

BASED ON STANDARD DRAWING NO. 2 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.

TABLE OF QUANTITIES FOR ESTIMATING PURPOSES

LA034

PATH: K:\0329702\sheets\
FILE: waterdtl.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Fri 3/26/04 2:56pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

WATERMAIN DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 26 OF 50 SHEETS