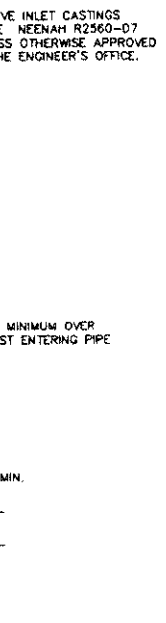
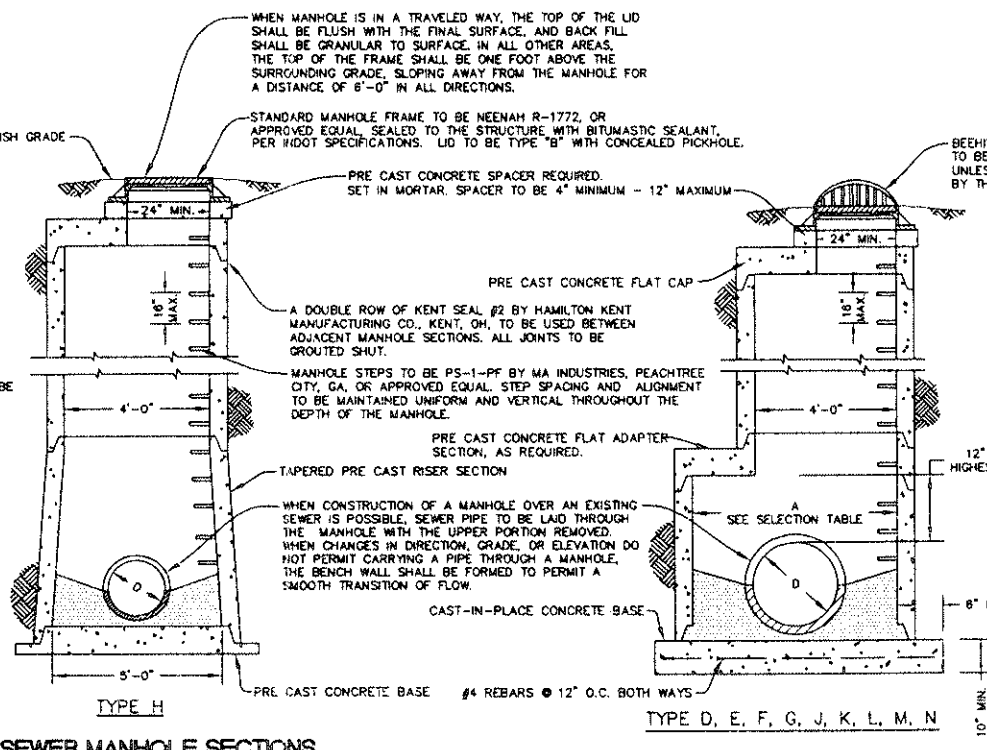
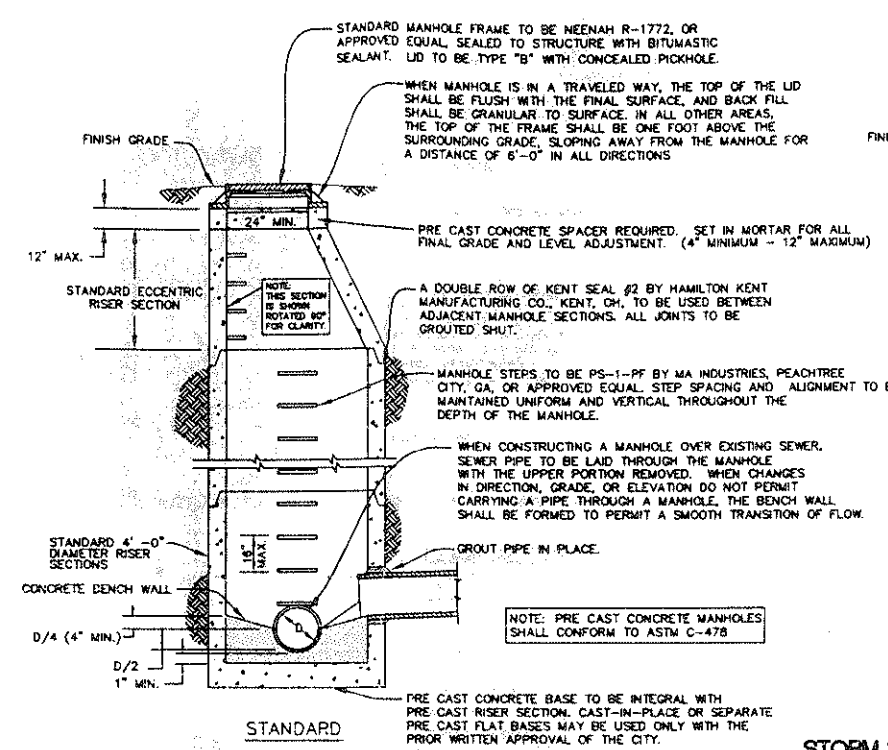


STORM SEWER NOTES

- STORM SEWER PIPE AND APPURTENANCES SHALL CONFORM TO CITY OF LAFAYETTE SPECIFICATIONS FOR DESIGN AND QUALITY OF CONSTRUCTION, AND CITY OF LAFAYETTE ORDINANCE NO. 89-38, THE LAFAYETTE STORM DRAINAGE AND SEDIMENT CONTROL ORDINANCE, FOR DESIGN AND MATERIALS.
- CONSTRUCTION PROCEDURES AND MATERIALS SHALL COMPLY WITH APPLICABLE SECTIONS OF THE INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS LATEST EDITION.
- PIPE AND FITTINGS USED IN STORM SEWER CONSTRUCTION SHALL BE DUCTILE IRON PIPE (AWWA C-151), CONCRETE PIPE (ASTM C-76), PVC PIPE (4"-24" ONLY; ASTM 3034-SDR 35, ASTM F-679, OR ASTM F-794), HOBAS PIPE (24" AND LARGER ONLY; ASTM D3262, D4161, D2412, FIBERGLASS SLEEVE COUPLINGS USING ELASTOMERIC SEALING GASKETS MADE OF EPDM COMPOUND PER ASTM D 4161), ADS N-12 (36") AND ADS N-12HC (42"-48" ONLY) DUAL WALL SINGLE HOLD HOPE PIPE WITH WATER TIGHT INTEGRAL BELL COUPLERS (AASHTO M-294, ASTM F-667). OTHER PIPE AND FITTINGS NOT SPECIFIED HEREIN MAY BE USED ONLY WHEN SPECIFICALLY AUTHORIZED IN WRITING BY THE CITY.
- ALL STORM SEWERS SHALL BE HIGH PRESSURE WATER JET CLEANED. MAINLINE STORM SEWERS (MANHOLE TO MANHOLE) SHALL BE TELEVIEWED. LATERAL STORM SEWERS (MANHOLE TO INLET) IN EXCESS OF 40 FT. SHALL ALSO BE TELEVIEWED. MAINLINE STORM SEWERS AND LATERAL STORM SEWERS THAT ARE 36" DIAMETER OR LESS SHALL BE SUBJECTED TO A DEFLECTION TEST USING A GO-NO-GO MANHOLES (95% DIAMETER) WHEN CONSTRUCTED USING FLEXIBLE PIPE CONDUIT MATERIALS. MAINLINE STORM SEWERS AND LATERAL STORM SEWERS THAT ARE GREATER THAN 36" DIAMETER REQUIRE THIRD PARTY TESTING AND CERTIFICATION (DAILY) OF THE BEDDING INSTALLATION WHEN CONSTRUCTED USING FLEXIBLE PIPE CONDUIT MATERIAL. CLEANING, TESTING AND TELEVIEWING SHALL BE PERFORMED A MINIMUM OF 45 DAYS AFTER INSTALLATION, AND SHALL BE WITNESSED BY THE CITY. ALL COSTS OF CLEANING, TESTING AND TELEVIEWING ARE TO BE BORNE BY THE CONTRACTOR. A COPY OF THE TV TAPE (VHS FORMAT) SHALL BE RETAINED BY THE CITY.
- TRENCHES UNDER PAVED AREAS (EXCLUDING SIDEWALKS) SHALL BE BACK FILLED WITH GRANULAR MATERIAL PER INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS 1999 EDITION SECTION 211 AND COMPACTED IN LIFTS. GRANULAR MATERIAL TO EXTEND FIVE FEET BEYOND THE LIMITS OF THE PAVED AREA WITH A 1:1 SLOPE TO THE BOTTOM OF THE TRENCH.
- CONFIGURATION OF INLETS IN PRIVATE PARKING OR DRIVING AREAS MAY BE VARIED TO ACCOMMODATE THE DIMENSIONS OF THE CASTINGS. PRIOR WRITTEN APPROVAL OF THE CITY IS REQUIRED.
- 18" VERTICAL SEPARATION AND 10'-0" HORIZONTAL SEPARATION TO BE MAINTAINED BETWEEN WATER MAINS, HYDRANTS AND SEWERS (SANITARY AND STORM).
- SEWER PERMIT AND CITY INSPECTION REQUIRED FOR ALL CONNECTIONS TO STORM OR SANITARY SEWER SYSTEMS SEWER PERMIT REQUIRED ON SITE DURING ANY SEWER CONSTRUCTION.
- ALL TAPS TO CONCRETE PIPE SHALL BE MADE WITH BOOT AND SADDLE CONNECTORS.
- ALL INLETS SHALL BE DEPRESSED 0.1 FT. BELOW PLAN GRADE.
- ALL SEWER LINES SHALL HAVE 0.1 FT. DROP THROUGH MANHOLES.
- CASTINGS SHALL BE CENTERED ON OPENING IN STRUCTURES.
- MINIMUM 4" OPENING REQUIRED ON BACK OF CURB INLET CASTING.
- TOP OF MANHOLE FRAMES TO BE SET AT PROPOSED YARD OR SIDEWALK GRADE WHEN LOCATED IN FRONT AREA OF LOT OR RIGHT OF WAY.
- BICYCLE SAFE GRATES REQUIRED IN PAVED AREAS EXCLUDING PAVED FLOW LINES IN SWALES OR DETENTION AREAS.
- ANIMAL GUARDS SHALL BE PERMANENTLY INSTALLED ON ALL PIPE END SECTIONS 18" OR LARGER IN DIAMETER. GUARDS SHALL HAVE A MAXIMUM CLEAR OPENING OF 4" AND BE REMOVABLE.
- IF ANY EXISTING FIELD TILE SYSTEMS ARE ENCOUNTERED DURING THE CONSTRUCTION PROCESS THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONSTRUCTING THE TILE TO ITS ORIGINAL CONDITIONS OR CONNECT IT INTO THE PROPOSED STORM DRAINAGE SYSTEM.
- WHENEVER PROPRIETARY EQUIPMENT IS SPECIFIED OR APPROVED "EQUAL IS IMPLIED" ALL PROPOSALS FOR SUBSTITUTION SHALL BE SUBMITTED TO THE CITY IN WRITING FOR THEIR APPROVAL.

TELEVISION INSPECTION CRITERIA

- STORM SEWERS**
- SEWERS SHALL BE "FLOODED" BEFORE TELEVISION INSPECTION. THE IMAGE SHALL BE CLEAR ENOUGH TO ENABLE THE CITY REPRESENTATIVE AND OTHERS VIEWING THE MONITOR TO EASILY EVALUATE THE INTERIOR CONDITION OF THE PIPE.
- ALL UNACCEPTABLE CONDITIONS FOUND DURING TELEVISION INSPECTION MUST BE CORRECTED BY THE CONTRACTOR AND RETELEVIEWED. UNACCEPTABLE CONDITIONS ARE CONDITIONS THAT ADVERSELY EFFECT THE ABILITY OF THE SYSTEM TO FUNCTION AS DESIGNED OR TO BE PROPERLY MAINTAINED AND MAY INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
- PROTRUDING TAPS
 - CRACKED OR FAULTY PIPE
 - MISALIGNED OR DEFORMED PIPE
 - DEBRIS IN LINE
 - INFILTRATION/EXFILTRATION
 - EXCESSIVE GAPS AT JOINTS
 - BELLIES OR SACS WITH A DEPTH GREATER THAN OR EQUAL TO 10% (OR A MAXIMUM OF 3") OF PIPE DIAMETER AND/OR A LENGTH GREATER THAN 25 FEET
- DETAILS AS TO REQUIRED TELEVISION EQUIPMENT AND REQUIRED TELEVISION INSPECTION REPORT ARE AVAILABLE FROM THE CITY ENGINEER'S OFFICE.

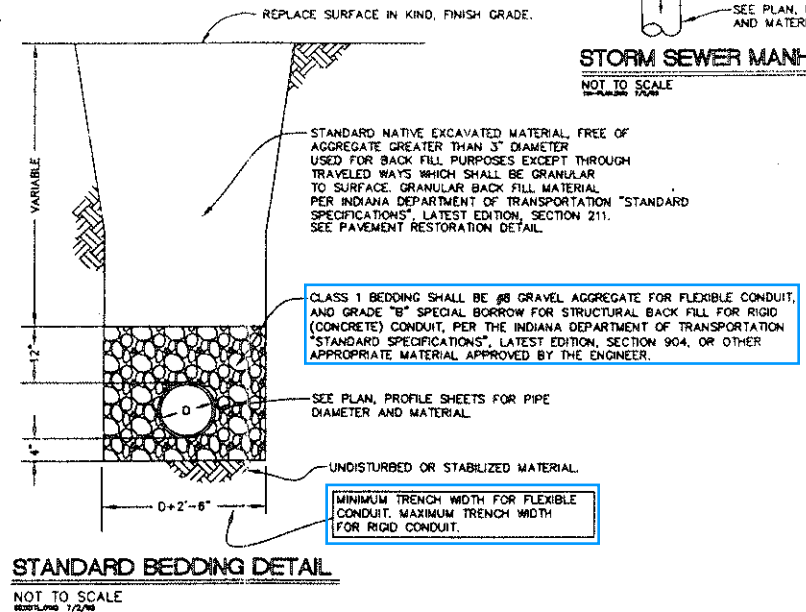
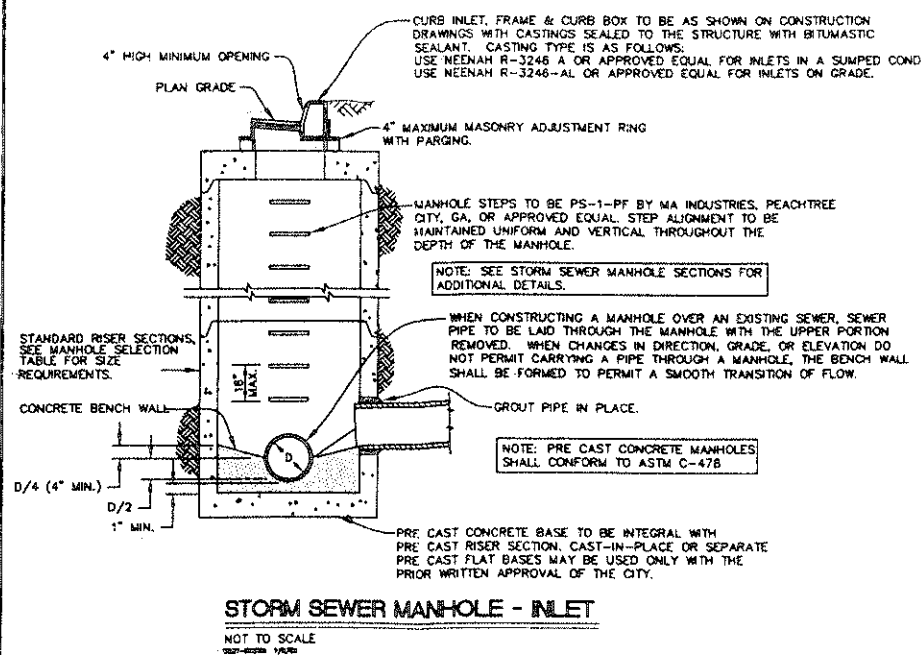
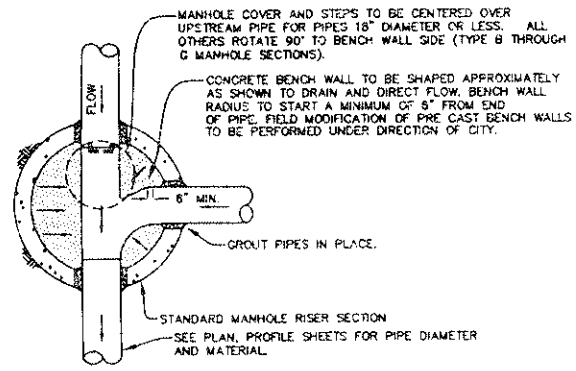


MANHOLE SELECTION TABLE - CIRCULAR

TYPE	PIPE DIAMETER D	RISER DIAMETER A	MAXIMUM PIPE SIZE FOR MAIN LINE	MAXIMUM PIPE SIZE 90° TO MAIN LINE
STANDARD	UP TO 24"	46"	24"	24"
H	24"-36"	50"	36"	36"
J	24"-36"	60"	36"	30"
K	36"-48"	72"	48"	36"
L	48"-60"	84"	48"	48"
M	54"-72"	102"	72"	66"
N	72"-84"	108"	84"	72"

MANHOLE SELECTION TABLE RECTANGULAR

TYPE	PIPE DIAMETER D	WIDTH
STANDARD	UP TO 24"	48"
D	27"-42"	50"
E	48"-60"	78"
F	66"-84"	108"
G	90"-108"	132"



IMINARY



<p>CITY OF LAFAYETTE</p> <p>(800) 382-5544 HOLEY MOLEY</p> <p>(765) 478-4471 CITY ENGINEER</p> <p>(765) 478-4550 WATER POLLUTION CONTROL-SEWERS</p> <p>(765) 478-4581 WATER STORES</p> <p>(765) 478-4400 FIRE DEPT.</p> <p>(765) 478-4442 POLICE DEPT.</p>		<p>PROJECT NAME</p> <p>20 NORTH SIXTH STREET</p> <p>LAFAYETTE, INDIANA 47901</p>		<p>PROJECT SHEET NUMBER</p> <p>of</p>	
		<p>DATE</p> <p>JUNE 2003</p>		<p>SHEET</p> <p>10</p> <p>OF</p> <p>12</p>	