

# SANITARY SEWER GENERAL NOTES

## A. GENERAL REQUIREMENTS

1. SEWER LINE INSTALLATION SHALL NOT COMMENCE UNTIL A COMPLETE SET OF PLANS HAVE BEEN APPROVED BY THE CITY OF BELLEVILLE AND ARE ON FILE IN THE OFFICE OF THE WASTEWATER SUPERINTENDENT. PRIOR TO COMMENCEMENT OF ANY WORK, THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE PLANS WITH THE ACTUAL DIMENSIONS AND CONDITIONS OF THE SITE. THE GENERAL CONTRACTOR MUST VERIFY THE ENGINEER'S LINES AND GRADES. IF A DISCREPANCY OCCURS FROM WHAT IS SHOWN ON THE PLANS, STANDARD SPECIFICATIONS, AND/OR DETAILS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE AFFECTED WORK. FAILING TO DO SO WILL BE CONSIDERED AS THE GENERAL CONTRACTOR HAVING PROCEEDED AT HIS OWN RISK AND EXPENSE.
2. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEER AND THE WASTEWATER DIVISION AT LEAST 48 HOURS PRIOR TO INSTALLING SANITARY SEWERS, AND BEFORE PERFORMING ANY SANITARY SEWER TESTING. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER.
3. THE CONTRACTOR WILL BE REQUIRED TO JET AND CLEAN ALL STORM AND SANITARY SEWERS THAT COLLECT MUD, DEBRIS, CONCRETE, BUILDING SUPPLIES, ETC. WHILE THE WORK IS UNDER THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL CAPPED SERVICE LATERALS THROUGHOUT CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL MANHOLE ELEVATIONS THROUGHOUT CONSTRUCTION. NO MANHOLE COVERS CAN BE COVERED. SANITARY SEWER MANHOLE RIM ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE. FINAL RIM ELEVATIONS SHALL BE SET TO MATCH THE SURROUNDING FINISH GRADES. ALL COSTS ASSOCIATED WITH THE FINAL RIM ADJUSTMENTS SHALL BE INCIDENTAL TO THE COST OF THE AFFECTED MANHOLE. THE OFFSETS TO ALL MANHOLES ARE GIVEN TO THE CENTER OF THE OPENING AT THE BASE OF THE FRAME AND GRATE OR LID. CONCENTRIC STRUCTURES WERE ASSUMED WHEN CALCULATING THESE DIMENSIONS. LOCATION SIGNS FOR MANHOLES TO BE PROVIDED BY CONTRACTOR.
6. ALL MATERIALS, INSTALLATION, AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, FIFTH EDITION, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, THE ILLINOIS DEPARTMENT OF PUBLIC HEALTH, THE ILLINOIS PLUMBING CODE, AND THE CITY OF BELLEVILLE MUNICIPAL CODE. THE CITY OF BELLEVILLE ACCEPTS NO RESPONSIBILITY FOR THE PROJECT DESIGN AND/OR CONSTRUCTION OF THIS PROJECT NOR ANY OTHER DESIGN CONSIDERATION OR STANDARD UTILIZED IN THIS PROJECT. THE PERMITTEE AND THE DESIGN ENGINEER ARE RESPONSIBLE FOR MEETING OR EXCEEDING ALL PERTINENT FEDERAL, STATE OR LOCAL CODES OR STANDARDS BOTH ON AND OFF THE SITE.
7. ALL TRAFFIC CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE CITY OF BELLEVILLE ACCEPTS THE PROJECT IMPROVEMENTS. ALL WARNING SIGNS, TRAFFIC CONTROL SIGNS, AND REGULATORY SIGNS SHALL CONFORM TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
8. CONTRACTOR TO LEAVE SITE IN A CONDITION EQUAL TO PRE-CONSTRUCTION CONDITIONS. THE CONTRACTOR SHALL NOT DISTURB PROPERTY OUTSIDE OF THIS AREA.
9. ALL WORK AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE RIGHT-OF-WAY AND EASEMENT, IF APPLICABLE. THE CONTRACTOR SHALL NOT DISTURB PROPERTY OUTSIDE OF THIS AREA. SHOULD PROPERTY OUTSIDE THE RIGHT-OF-WAY BE DISTURBED OR DAMAGED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE PROPERTY OWNER, WITH NO ADDITIONAL COMPENSATION.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL UNDERGROUND FACILITIES, UTILITIES AND DRAIN TILE DAMAGED DURING CONSTRUCTION.
11. CONTRACTOR SHALL SUPPLY SUBMITTALS FOR THE ENGINEER'S AND CITY'S APPROVAL, THREE COPIES WILL BE RETAINED BY THE ENGINEER.
12. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS WHICH SHALL BE SUBMITTED TO THE CITY ENGINEER'S OFFICE AND WASTEWATER DIVISION DEPARTMENT. SEWER CONNECTIONS SHALL BE RECORDED BY MEASURING THE NUMBER OF FEET FROM THE DOWNSTREAM MANHOLE, AND SHALL INDICATE THE LENGTH OF OFFSET FROM THE SANITARY SEWER MAIN AND DEPTH OF LATERAL AT ITS TERMINUS POINT. ALL LATERALS SHALL BE FURNISHED WITH AN AIR TIGHT CAP TO FACILITATE AIR TESTING. THE PVC LATERAL SHALL BE EXTENDED FOUR (4) FEET ABOVE THE FINISHED GRADE GROUND SURFACE TO ALLOW RELOCATION OF THE LATERAL IN THE FUTURE. ALL STRUCTURES SHALL HAVE RECORD ELEVATIONS.
13. SANITARY SEWER INVERTS SHOWN ON THE PLANS HAVE BEEN CALCULATED TO THE CENTER OF THE STRUCTURE. THE SANITARY SEWER SLOPES SHOWN ON THE PLANS IS THE PERCENT GRADE FROM CENTER TO CENTER OF STRUCTURE. THE LENGTH OF SANITARY SEWERS SHOWN ON THE PLANS IS THE DISTANCE FROM CENTER TO CENTER OF STRUCTURE.
14. SEE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.

## B. SPECIFICATIONS

1. ALL SANITARY SEWERS SHALL BE OF THE MATERIAL SPECIFIED ON THE PLANS. ALL PVC SANITARY SEWER PIPES SHALL BE PVC SDR-26 MEETING THE REQUIREMENTS OF ASTM D3034 WITH ELASTOMERIC JOINTS MEETING THE REQUIREMENTS OF ASTM D3212 AND F477. ALL DUCTILE IRON SANITARY SEWER PIPES SHALL BE DUCTILE IRON MEETING THE REQUIREMENTS OF AWWA C600-93 WITH MECHANICAL JOINTS MEETING THE REQUIREMENTS OF AWWA C111 AND C600. LUBRICANT SHALL BE SUITABLE FOR LUBRICATING THE JOINT COMPONENTS. IT SHALL HAVE NO DETERIORATING EFFECT ON THE GASKET OR PIPE MATERIAL AND NO DETRIMENTAL EFFECT ON THE QUALITY OF WASTEWATER TO BE CARRIED BY THE PIPE.
2. BEDDING OF THE PIPE AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH ASTM D2321-89 CLASS 1A (FOR FLEXIBLE PIPE) OR ASTM C12 CLASS B (FOR RIGID PIPE), THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS AND AS SHOWN IN THE PLANS. GRANULAR TRENCH BACKFILL SHALL BE USED AS INDICATED ON THE PLANS AND WHEN THE EDGE OF ANY TRENCH IS WITHIN 2 FT. OF ANY PAVEMENT, CURB, SIDEWALK, OR OTHER STRUCTURE. TRENCH BACKFILL SHALL BE COMPACTED WITH A ROLLER, VIBRATORY PLATE, OR OTHER COMPACTING DEVICE IN 12-INCH LIFTS.
3. ALL SANITARY SEWER MANHOLES SHALL BE PRECAST CONCRETE TYPE A, MINIMUM 48-INCH IN DIAMETER WITH GASKETED INVERTS, ECCENTRIC CONES, AND STEPS IN ACCORDANCE WITH STANDARD DRAWING NO. 3 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS. CONSTRUCTED OF PRECAST CONCRETE AND CONFORM TO ASTM CASTINGS ASTM A48-83 CLASS 35B, OR ASTM A536-80 GRADE 65-45-12 FOR DUCTILE-IRON. CONES AND SECTIONS SHALL BE SUBSTANTIALLY FREE FROM FRACTURES, LARGE OR DEEP CRACKS AND SURFACE ROUGHNESS. JOINTS SHALL BE SEALED WITH A PRE-MOLDED JOINT SEALER AND WRAPPED ON THE OUTSIDE WITH A 9" CONCRETE JOINT WRAP. SANITARY SEWER MANHOLE LIDS SHALL HAVE THE WORD "SANITARY" CAST IN THE FACE AND BE FURNISHED WITH A CONCEALED "PICK HOLE." SANITARY SEWER MANHOLE FRAME AND GRATES SHALL BE NEENAH R-1772.
4. MANHOLES SHALL BE CONSTRUCTED WITH A SILICAFUME ADMIXTURE SPECIFICALLY TO PREVENT HYDROGEN SULFIDE CORROSION OF THE PRE-CAST CONCRETE. SUBMITTALS DETAILING THE TYPE OF SILICAFUME ADMIXTURE AND ITS SUITABILITY FOR THIS APPLICATION SHALL BE SUBMITTED TO THE ENGINEER AND WASTEWATER SUPERINTENDENT FOR APPROVAL.
5. SEWER PIPE CONNECTIONS SHALL BE FLEXIBLE WATER TIGHT CONNECTIONS CONFORMING WITH ASTM C-923 STANDARD SPECIFICATIONS FOR RESILIENT CONNECTORS BETWEEN REINFORCED CONCRETE MANHOLE STRUCTURES AND PIPE. THE PRE-CAST BASE SECTION SHALL BE MONOLITHICALLY CONSTRUCTED WITH A PRE-CAST INVERT TO ALIGN ALL SEWER PIPES TO THE ELEVATIONS AS SHOWN ON THE PLANS.
6. IF A GASKETED CONNECTION DOES NOT EXIST, ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY MEANS OF A MECHANICAL CUTTING DEVICE. THE DEVICE SHALL LEAVE A ROUND SMOOTH HOLE, NO LARGER THAN 1/2" GREATER THAN THE OUTSIDE DIAMETER OF THE SANITARY SEWER PIPE TO BE INSERTED. THE CUTTING DEVICE SHALL ALSO BE CAPABLE OF FORMING/CUTTING THE NECESSARY CHANNEL WITHIN THE INTERIOR OF THE MANHOLE. NO PNEUMATIC JACK HAMMERS, HAND HELD SAWS, OR SLEDGE HAMMERS SHALL BE ALLOWED. THE OPENING SHALL BE SEALED WITH A LINK SEAL OR OTHER APPROVED MECHANICAL DEVICE.
7. WHEN CONNECTIONS ARE TO BE MADE TO EXISTING STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATIONS OF THE STRUCTURE PRIOR TO MAKING THE CONNECTION. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF THE EXISTING STRUCTURES ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE DRAWINGS. ALL CONNECTIONS TO EXISTING STRUCTURES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR SANITARY SEWER TYPE AND SIZE SPECIFIED.
8. PROTECTION OF THE WATER MAIN FROM SANITARY SEWER MAINS IS REQUIRED AND SHALL BE MADE IN ACCORDANCE WITH LATEST EDITION OF TITLE 25: ENVIRONMENTAL PROTECTION, SUBTITLE F: PUBLIC WATER SUPPLIES, CHAPTER 11: ENVIRONMENTAL PROTECTION AGENCY, SECTION 653.119: PROTECTION OF WATER MAIN AND WATER SERVICE LINES. THE WATER AND SEWER MAIN AS DELINEATED ON THE DRAWINGS SHALL BE CONSTRUCTED WITH A MINIMUM OF 10' HORIZONTAL SEPARATION AND 1.5' VERTICAL SEPARATION IN ACCORDANCE WITH ARTICLE 41-2.01B AND 41-2.01C OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.
9. NO WATER PIPE SHALL PASS THROUGH OR INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.
10. PVC PIPE SHALL BE STORED UNDER COVER TO PROTECT FROM ULTRAVIOLET LIGHT.
11. CASING SPACERS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), NON-METALLIC AND MOLDED IN SEGMENTS FOR FIELD ASSEMBLY. THE CASING SPACER SHALL HAVE INTEGRALLY MOLDED RUNNERS EXTENDING BEYOND THE BELL, MECHANICAL JOINT, OR RESTRAINER OF THE CARRIER PIPE. INDIVIDUAL SEGMENTS SHALL HAVE A SOLID CORE AND EACH RUNNER SHALL BE WITHIN 1.5" OF THE CASING PIPE TO CENTER THE CARRIER PIPE WITHIN THE CASING. CASING SPACERS SHALL BE SPACED WITHIN TWO FEET OF BOTH ENDS OF EACH INDIVIDUAL CASING PIPE SECTION WITH ALL REMAINING SPACERS ASSEMBLED ALONG THE LENGTH OF THE PIPE SECTION AT AN EQUAL DISTANCE APART NOT EXCEEDING EIGHT FEET IN LENGTH. ALL SPACERS SHALL BE SUPPLIED WITH A MOLDED THERMOPLASTIC RUBBER NON-SLIP BUTTON COMPRISED OF PLIABLE MATERIAL HAVING A HIGH COEFFICIENT OF FRICTION THAT IS DESIGNED TO GRIP ALL TYPES OF PIPE.
12. CASING SPACER END SEALS SHALL BE A PULL-OVER TYPE AND MADE FROM NEOPRENE WITH T-304 STAINLESS STEEL BANDS FOR SECURING THE ENDS OF THE END SEAL TO THE CASING PIPE AND CARRIER PIPE.

FILE NAME = 27855-shr-SANgenote.dgn

USER NAME = maisiegraser	DESIGNED -	REVISED -
PLOT SCALE = 48.0000' / IN.	DRAWN -	REVISED -
PLOT DATE = 3/13/2009	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SANITARY SEWER GENERAL NOTES**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
9274	04-00202-00-BR	ST. CLAIR	55	14
<b>CONTRACT NO. 97369</b>				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT				