

UTILITIES

1. IN ACCORDANCE WITH STATE OF ILLINOIS STATUTE 220 ILCS 50, THE CONTRACTOR IS TO NOTIFY ALL UTILITY COMPANIES NOT MORE THAN 14 DAYS NOR LESS THAN 48 HOURS (EXCLUSION OF SATURDAYS, SUNDAYS, AND HOLIDAYS) IN ADVANCE OF THE START OF EXCAVATION OR DEMOLITION.

J.U.L.I.E. TELEPHONE NUMBER CITY OF BLOOMINGTON
1-800-892-0123 (WATER AND SANITARY SEWER)
1-309-434-2225

2. IN ADDITION TO THE REQUIREMENTS OF SECTIONS 5-5 AND 20-2.16 OF THE STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL, PRIOR TO STARTING EXCAVATION, ASCERTAIN FROM ALL LOCAL UTILITIES, ESPECIALLY GAS AND WATER, THE EXACT LOCATIONS OF ALL MAINS AND BUILDING SERVICES IN HIS AREA OF OPERATIONS, WHETHER SUCH ARE INDICATED ON THE PLANS OR NOT. ANY SUCH MAINS AND SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED. WHENEVER POSSIBLE, BUILDING OWNERS OR OCCUPANTS SHALL BE NOTIFIED IN ADVANCE IF THEIR UTILITY SERVICE IS TO BE DISCONNECTED AND NO BUILDING SHALL BE LEFT WITHOUT SERVICE OVERNIGHT.

WATER MAIN

1. THE WATER MAIN WITH APPURTENANCES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, 'FIFTH EDITION', DATED MAY 1996 AND THE CITY OF BLOOMINGTON MANUAL OF PRACTICE FOR THE DESIGN OF PUBLIC IMPROVEMENTS.

2. NO EXCAVATION FOR OR INSTALLATION OF WATER MAINS SHALL BEGIN UNTIL THE PROJECT IS "STAKED" IN THE FIELD BY THE CONTRACTOR OR HIS REPRESENTATIVE (STAKING INCLUDES PIPE LINE STAKES, PIPE GRADE STAKES, FINISHED GRADE STAKES, FITTING LOCATIONS, ETC.). REFER TO THE SPECIAL PROVISIONS FOR COMPLETE CONSTRUCTION REQUIREMENT.

3. ALL MATERIALS SHALL BE APPROVED BY THE CITY OF BLOOMINGTON PRIOR TO CONSTRUCTION. INQUIRE OF CITY OF BLOOMINGTON WATER RESOURCES MANAGER AT (309)434-2225

4. IN ADDITION TO THE REQUIREMENTS OF SECTIONS 5-5 AND 20-2.16 OF THE STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL, PRIOR TO STARTING EXCAVATION, ASCERTAIN FROM ALL LOCAL UTILITIES THE EXACT LOCATION OF ALL MAINS AND BUILDING SERVICES IN HIS AREA OF OPERATIONS, WHETHER SUCH ARE INDICATED ON THE PLANS OR NOT. ANY SUCH MAINS AND SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED. WHENEVER POSSIBLE, BUILDING OWNERS OR OCCUPANTS SHALL BE NOTIFIED IN ADVANCE IF THEIR UTILITY SERVICE IS TO BE DISCONNECTED, AND NO BUILDING SHALL BE LEFT WITHOUT SERVICE OVERNIGHT.

5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CITY'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCY.

6. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PROTECT PUBLIC AND PRIVATE PROPERTY. IF AT ANY TIME, HE DAMAGES OR DESTROYS PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, RESTORE SUCH PROPERTY TO A CONDITION EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE.

7. ALL SECTIONS, DETAILS, AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.

8. WATER MAINS SHALL BE DUCTILE IRON PIPE SPECIAL CLASS 52 WITH RESTRAINED JOINTS. ALL BENDS, TEES, PLUGS, VALVES AND HYDRANTS SHALL BE RESTRAINED JOINT.

9. CEMENT LINING AND TAR (SEAL) COATING SHALL BE PROVIDED FOR ALL PIPE. ALL PIPE SHALL HAVE PUSH-ON TYPE JOINT UNLESS OTHERWISE CALLED FOR.

10. WHERE RESTRAINED JOINTS ARE SPECIFIED, THEY SHALL MEET ONE OF THE FOLLOWING:

- A. U.S. PIPE: TR FLEX JOINT
- B. AMERICAN DUCTILE IRON PIPE: FLEX-RING JOINT
- C. MOWANE INC. (CLOW): TITON OR FASTITE JOINT
- D. GRIFFIN PIPE: SNAP-LOK OR BOLT-LOK JOINT
- E. STANDARD RETAINER GLANDS FROM APPROVED MANUFACTURERS.
- F. OR APPROVED EQUAL.

11. FITTINGS SHALL CONFORM TO A.N.S.I./A.W.W.A. C110/A21.10 OR A.N.S.I./A.W.W.A. C153 AND A.N.S.I./A.W.W.A. C111/A21.11 (250 PSI) RATED PRESSURE. ALL FITTINGS SHALL HAVE THE SAME LININGS AND COATINGS AS THE PIPE SUPPLIED. ALL FITTINGS (INCLUDING BUT NOT LIMITED TO BENDS, TEES, REDUCERS, AND PLUGS) SHALL BE RESTRAINED WITH RETAINER GLANDS OR A MANUFACTURED JOINT RESTRAINING SYSTEM APPROVED BY THE DIRECTOR OF ENGINEERING.

12. ALL VALVES SHALL BE RESILIENT WEDGE GATE VALVES MEETING A.W.W.A. C509.

13. VALVE BOXES SHALL BE PROVIDED AND INSTALLED. ALL VALVE BOXES SHALL HAVE NOT LESS THAN A 5/4" SHAFT. THE EXTENSIONS OF THE VALVE BOX AND SHAFT NECESSARY TO REACH THE GROUND ELEVATION SHALL BE INCLUDED. VALVE BOXES SHALL BE TYLER PIPE TWO PIECE, SCREW TYPE, 6850 SERIES WITH THE WORD "WATER" CAST ON LID OR AN APPROVED EQUAL.

14. MINIMUM COVER OVER WATERMAINS SHALL BE 48"

15. ALL TRENCHES WITHIN TWO FEET OF EXISTING PAVEMENT, DRIVEWAYS, AND SIDEWALKS SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL. THE AREA BETWEEN EDGE-TO-EDGE OF PAVEMENT SHALL BE CAPPED WITH TEMPORARY SURFACE OVER TRENCH.

16. ALL EXCESS EARTH FROM THE TRENCHES SHALL BE DISPOSED OF BY THE CONTRACTOR OFFSITE. DISPOSING OF EXCESS EARTH SHALL BE INCIDENTAL TO THE CONSTRUCTION OF THE WATER MAIN.

SANITARY SEWER

1. ALL SANITARY SEWERS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION", THEN CURRENT EDITION.

2. SANITARY SEWER PIPE SHALL BE DUCTILE IRON PIPE CLASS 150 CONFORMING TO ANSI A21.51. PIPE JOINTS SHALL BE MECHANICAL JOINT OR RUBBER RING (SLIP SEAL OR PUSH ON) JOINTS. RESTRAINED JOINTS SHALL BE USED FOR ALL PIPE CONSTRUCTED WITHIN STEEL CASING PIPE. RESTRAINED JOINTS SHALL MEET ONE OF THE MATERIALS SPECIFIED IN NOTE 10 OF THE WATER MAIN NOTES.

3. A GRANULAR CRADLE (BEDDING OR HAUNCHING) WILL BE REQUIRED FOR ALL SANITARY SEWERS AS SHOWN IN THE STANDARD DETAILS AND IN ACCORDANCE WITH SECTION 20-2.20B OF THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION".

4. ALL TRENCHES UNDER ANOTHER SEWER OR WATER MAIN, OR UNDER OR WITHIN 2 FT OF EXISTING OR PROPOSED STREETS, EXISTING SIDEWALKS AND DRIVEWAYS SHALL BE BACKFILLED WITH TRENCH BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 20B OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

5. MATERIAL FOR TRENCH BACKFILL SHALL COMPLY WITH ARTICLE 1003.04 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", EXCEPT THAT THE FOLLOWING GRADUATIONS MAY BE USED IN ADDITION TO FA6: CA6, CA10, CA13 AND CA16 AND EXCEPT THAT THE MAXIMUM SIZE SHALL BE 3 INCHES AND THAT NO MATERIAL OVER 1/2 INCH SHALL BE USED BELOW 1 FOOT OVER THE TOP OF THE SEWER.

6. ALL SEWER TRENCHES UNDER STREETS, DRIVEWAYS OR SIDEWALKS SHALL BE COMPACTED BY JETTING, MECHANICAL COMPACTOR OR AS DIRECTED BY THE DIRECTOR OF ENGINEERING.

7. THE LEAKAGE TEST WILL BE BY THE LOW PRESSURE AIR METHOD. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN THE SEWER IS READY FOR TESTING. THE GROUND SHALL BE LEVELED AND ALL MANHOLES SHALL BE ACCESSIBLE TO THE AIR TESTING EQUIPMENT.

8. THE CONTRACTOR SHALL PLACE WOOD STUDS (2x4'S) EXTENDING FROM THE BOTTOM OF THE SEWER SERVICE TO 2 FEET ABOVE THE GROUND AT THE LOCATION WHERE EACH SEWER SERVICE TERMINATES. THESE MARKERS SHALL BE INSTALLED AT THE TIME THE SERVICES ARE CONSTRUCTED.

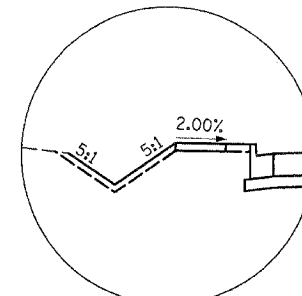
9. AT THE TIME THE CURB AND GUTTER IS POURED, THE CONTRACTOR SHALL MARK THE TOP OF THE CURB WITH A PERMANENT "S" FOR SEWER TO MARK LOCATION OF SAID SERVICES.

10. FINAL GRADE FOR ALL MANHOLE CASTINGS WILL BE DETERMINED AFTER THE CURB AND GUTTER HAS BEEN POURED AND THE SUBGRADE AND/OR BASE HAS BEEN CONSTRUCTED. FINAL ADJUSTMENT OF THE FRAME AND GRATE SHALL BE MADE IN THE FOLLOWING MANNER: AFTER THE CURB AND GUTTER HAS BEEN POURED AND THE BASE CONSTRUCTED THE FINAL ELEVATION WILL BE DETERMINED BY THE DIRECTOR OF ENGINEERING. THE FRAME AND GRATE WILL BE ADJUSTED TO THIS ELEVATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. ANY MATERIAL DISTURBED WHILE ADJUSTING THE FRAME AND GRATE WILL BE DISPOSED OF AND ALL FILL MADE WITH LEAN CONCRETE. A MAXIMUM OF 18 INCHES OF ADJUSTING RINGS SHALL BE ALLOWED.

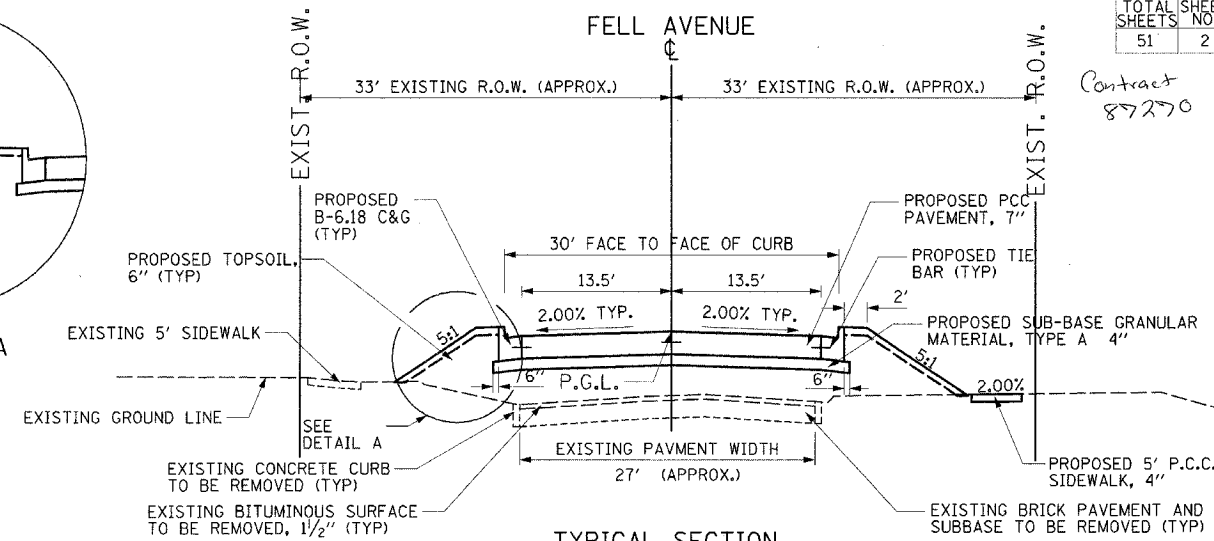
60" COMBINED SEWER

- 1. REINFORCED CONCRETE ENCASEMENT SHALL BE CONSTRUCTED PRIOR TO BEGINNING ANY OTHER CONSTRUCTION ACTIVITIES.
- 2. CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED OVER THE 60" COMBINED SEWER OUTSIDE THE LIMITS OF ENCASEMENT.

STRUCTURAL DESIGN TRAFFIC:	YEAR	2015
PV =	1729	SU = 138 MU = 98
ROAD/STREET CLASSIFICATION:	CLASS	III
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE		
P =	50	S = 50 M = 50
TRAFFIC FACTOR:	ACTUAL TF =	0.73
	MINIMUM TF =	0.50
SUBGRADE SUPPORT RATING:		
SSR =	POOR	(STA. 10+25 TO 14+60)



DETAIL A

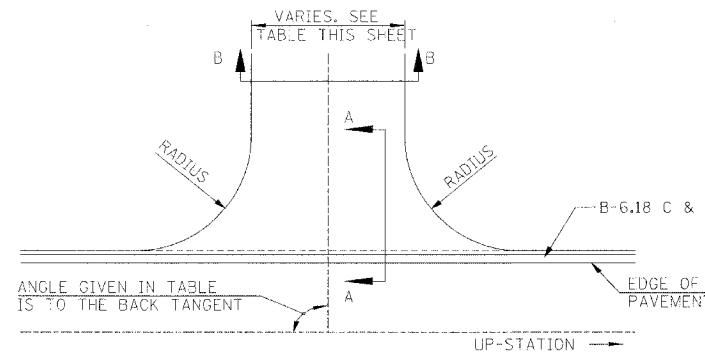


TYPICAL SECTION FELL AVENUE

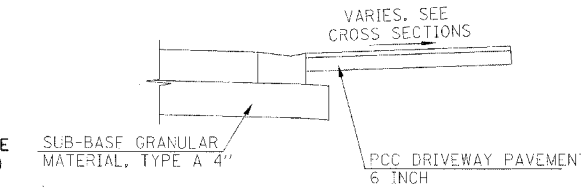
STA. 10+25 TO STA. 11+77
BRIDGE OMISSION STA. 11+77 TO STA. 13+17
STA. 13+17 TO STA. 14+60

LEGEND

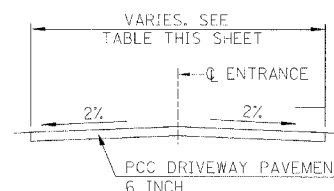
EXISTING	PROPOSED	
---	---	PAVEMENT, CURB AND GUTTER, SIDEWALK, DRIVEWAY, RETAINING WALL, SLOPEWALL
---	---	EDGE OF WATER
---	---	RIGHT-OF-WAY
---	---	TEMPORARY EASEMENT
---	---	PROPERTY LINE
---	---	LOT LINE
---	---	SANITARY SEWER
---	---	STORM SEWER
---	---	FORCE MAIN
---	---	WATER LINE
---	---	WATER SERVICE LINE
---	---	GAS LINE
---	---	AERIAL ELECTRIC
---	---	FIBER OPTIC
---	---	CABLE TV (AERIAL)
---	---	PERIMETER EROSION BARRIER
---	---	DECIDUOUS TREE
---	---	EVERGREEN TREE
---	---	INLET
---	---	MANHOLE
---	---	FLARED END SECTION
---	---	TELEPHONE SPLICE BOX ABOVE GROUND
---	---	STREET LIGHT
---	---	POWER POLE
---	---	LIGHT POLE
---	---	WATER VALVE
---	---	FIRE HYDRANT



ENTRANCE DETAIL



SECTION A-A



SECTION B-B

ENTRANCES			
LOCATION	ANGLE	WIDTH	RADIUS/COMMENT
10+73.32, RT	90.00°	12.0'	5' / P.E.
11+32.81, RT	90.00°	18.5'	5' / P.E.
11+99.26, LT	90.00°	12.0'	10' / C.E.
13+48.89, RT	90.00°	15.5'	5' / P.E.
13+67.66, LT	90.00°	13.0'	5' / P.E.
14+06.59, RT	90.00°	12.0'	5' / P.E.
14+66.61, LT	90.00°	22.0'	5' / P.E.

GENERAL NOTES AND TYPICAL SECTION FELL AVENUE BRIDGE REPLACEMENT

DRAWN MH 10-6-03 DESIGNED MH 10-6-04
CHECKED LDK 10-25-04 CHECKED LDK 10-25-04
FILE: 03S2019 DATE: 2-2-05

TOTAL SHEET SHEETS NO. 51 2

Contract 87270

