

TOWN OF NORMAL, ILLINOIS

FAU RTE 6356 VIRGINIA AVENUE FROM MAIN STREET (US RTE 51) TO UNIVERSITY STREET McLEAN COUNTY

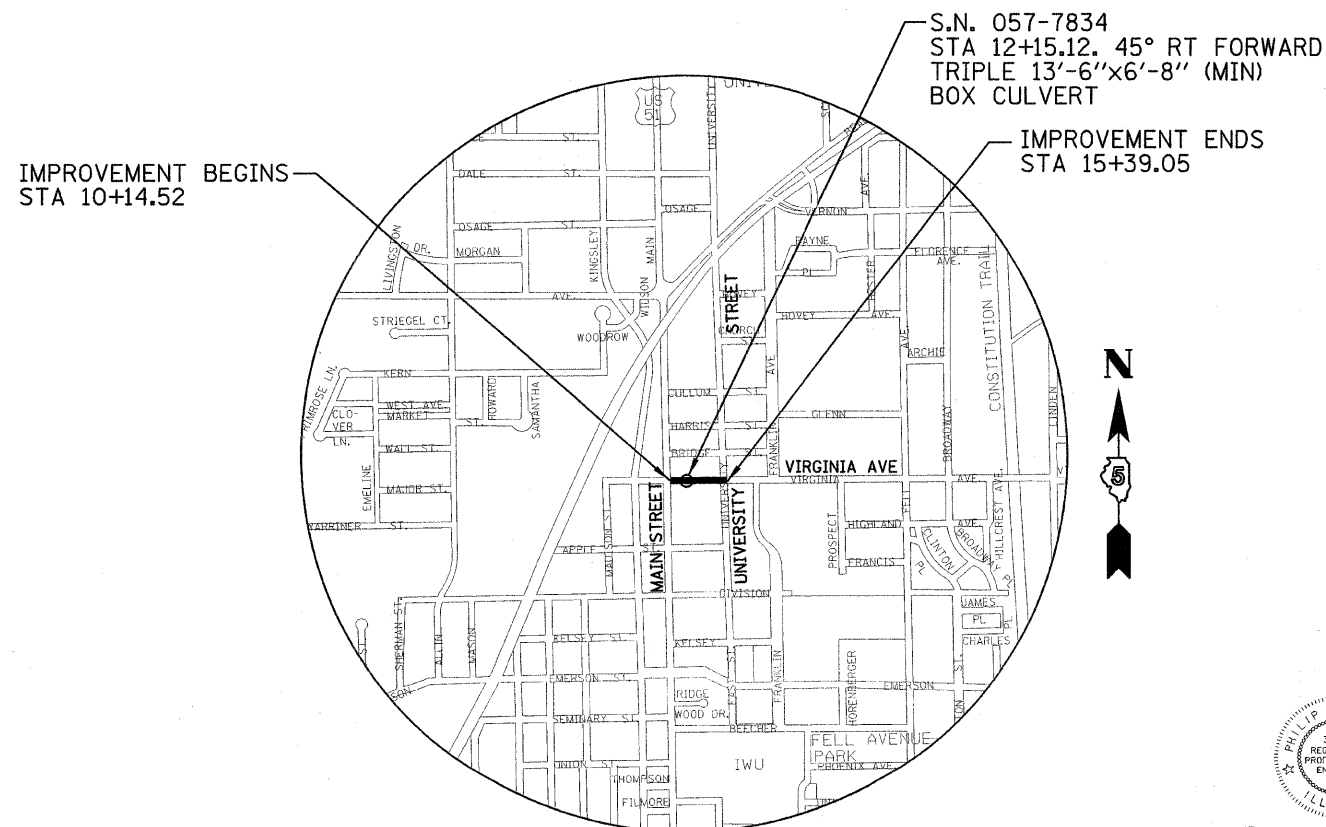
JOB NO. C-95-336-09

SECTION 04-00226-00-BR

FEDERAL PROJECT ARA-5227(053)

INDEX OF SHEETS

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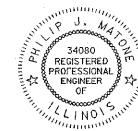


LOCATION MAP

NOT TO SCALE

TOWN OF NORMAL, ILLINOIS

GROSS AND NET LENGTH VIRGINIA AVENUE = 524.53 FT = 0.099 MILES



Philip Matrone 7/31/09
SIGNATURE

EXPIRATION DATE NOV. 30, 2009

Approved	<u>July 31</u> 20 <u>09</u> Gene Brown, City Engineer Town Of Normal
Passed	<u>8/24</u> 20 <u>09</u> District #5 Engineer of Local Roads & Streets
Releasing for Bid Based on Limited Review	<u>8/24/2009</u> Deputy Director of Highways, Region #3 Engineer
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

J.U.L.I.E. PHONE NUMBER 1-800-982-0123

DESIGNED - JDA	REVISED -	TOWN OF NORMAL	COVER SHEET	VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR McLEAN COUNTY	F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 1
CHECKED - PJM	REVISED -				S.N. 057-7834 CONTRACT NO. 91416				
DATE - 07/22/09	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

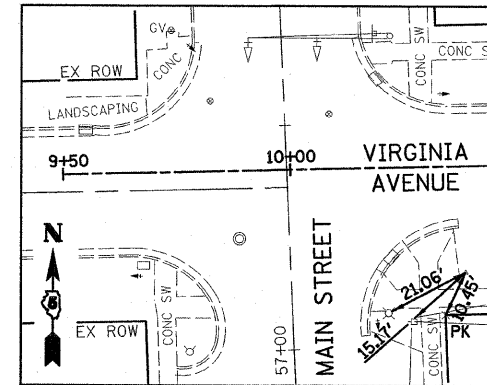
FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

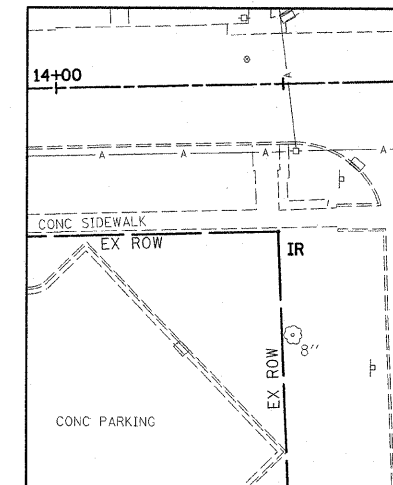
GENERAL NOTES

1. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE TAKEN TO MEAN THE LATEST EDITION OF THE CITED STANDARD.
2. ALL SAW CUTTING OF EXISTING PAVEMENT SHALL BE INCLUDED IN THE RESPECTIVE REMOVAL PAY ITEMS. A SAW CUT ALONG THE EDGES OF HOT-MIX ASPHALT SURFACE REMOVAL BUTT JOINT SHALL BE SAW CUT WITH SMOOTH STRAIGHT LINES INCLUDED IN THE HOT-MIX ASPHALT SURFACE REMOVAL BUTT JOINT UNIT COST.
3. THE EXISTING ROAD SIGNS THAT INTERFERE WITH THE CONSTRUCTION SHALL BE REMOVED BY THE TOWN OF NORMAL. THE CONTRACTOR SHALL GIVE THE TOWN 48 HOURS NOTICE (EXCLUSIVE OF WEEKENDS OR HOLIDAYS) BEFORE COMMENCING ACTIVITIES REQUIRING SIGN REMOVAL AND/OR RELOCATION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR REMOVE CITY SIGNS.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR THEIR MARKING OF THE EXACT LOCATIONS. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
5. THE TOWN OF NORMAL SHALL PROVIDE ALL PERMANENT STREET SIGNAGE NOT SHOWN.
6. SEE THE PAVEMENT MARKING PLAN FOR PAVEMENT MARKING DETAILS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY (ESPECIALLY THE 60" SANITARY SEWER) FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. TELEPHONE NUMBER IS 1-800-892-0123. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED. MEMBERS OF J.U.L.I.E. KNOWN TO BE WITHIN THE PROJECT AREA ARE:

TOWN OF NORMAL	AMEREN I.P.
COMCAST CABLE COMPANY	NICOR
VERIZON	B.N.W.R.D.
8. A MINIMUM OF ONE OPEN LANE OF TRAFFIC MUST BE MAINTAINED ON MAIN STREET/ US RTE 51 BUSINESS AT ALL TIMES. MAIN STREET/ US RTE 51 BUSINESS MAY NOT BE CLOSED TO TRAFFIC OR DETOURED.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE PROJECT. EXISTING INLETS/ MANHOLES TO BE REMOVED SHALL REMAIN IN PLACE AND ACTIVE UNTIL THE PROPOSED INLETS/ MANHOLES ARE CONSTRUCTED AND ACTIVATED TO PROVIDE SUITABLE DRAINAGE.



CONTROL TIE #1
 "X" IN CONC
 STA 10+38.13, 23.58' RT
 N 10000.000
 E 10000.000



CONTROL TIE #3
 IRON ROD
 STA 14+48.20, 33.03' RT
 N 10000.358
 E 10410.181

STATE STANDARDS

- | | |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS ABBREVIATIONS AND PATTERNS |
| 280001-04 | TEMPORARY EROSION CONTROL SYSTEMS |
| 420001-07 | PAVEMENT JOINTS |
| 424001-05 | CURB RAMPS FOR SIDEWALKS |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 602401-02 | MANHOLE TYPE A |
| 602701-02 | MANHOLE STEPS |
| 604001-03 | FRAME AND LIDS TYPE 1 |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER |
| 606401-01 | PAVED DITCH |
| 664001-02 | CHAIN LINK FENCES |
| 701001-02 | OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 4.5 M (15') AWAY |
| 701006-03 | OFF ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE |
| 701501-05 | URBAN LANE CLOSURE, 2L, 2W UNDIVIDED |
| 701601-06 | URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN |
| 701801-04 | LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 720016-02 | MAST ARM MOUNTED STREET NAME SIGNS |
| 780001-02 | TYPICAL PAVEMENT MARKINGS |
| 805001-01 | ELECTRICAL SERVICE INSTALLATION DETAILS |
| 814001-02 | HANDHOLES |
| 814006-02 | DOUBLE HANDHOLES |
| 857001-01 | STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES |
| 862001-01 | UNINTERRUPTABLE POWER SUPPLY (UPS) |
| 873001-02 | TRAFFIC SIGNAL GROUNDING AND BONDING |
| 877001-04 | STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55' |
| 877011-04 | STEEL COMB. MAST ARM ASSEMBLY AND POLE 16' THROUGH 55' |
| 878001-07 | CONCRETE FOUNDATION DETAILS |
| 880006-01 | TRAFFIC SIGNAL MOUNTING DETAILS |

BENCHMARKS:

1. "□" ON TOP OF EAST CONC. RAILING OF BRIDGE ON UNIVERSITY BETWEEN VIRGINIA AVE. & APPLE ST. ELEV. = 765.01 (BK. 2088-22)
2. TOP OF FIRE HYDRANT NORTHWEST CORNER OF VIRGINIA AVE. AND FRANKLIN ST. ELEV. = 772.80 (BK. 2088-22)

UTILITY AGENCIES THAT RECEIVED PLANS

	PRELIMINARY PLANS SENT	FINAL PLANS SENT
TOWN OF NORMAL ENGINEERING	JULY 1ST, 2009	JULY 22ND, 2009
TOWN OF NORMAL WATER DEPARTMENT	JULY 1ST, 2009	JULY 22ND, 2009
AMEREN ILLINOIS POWER	JULY 1ST, 2009	JULY 22ND, 2009
NICOR GAS	JULY 1ST, 2009	JULY 22ND, 2009
COMCAST	JULY 1ST, 2009	JULY 22ND, 2009
CORBELT ENERGY COMPANY	JULY 1ST, 2009	JULY 22ND, 2009
VERIZON	JULY 1ST, 2009	JULY 22ND, 2009
BNWRD	JULY 1ST, 2009	JULY 22ND, 2009

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

GENERAL NOTES, CONTROL TIES AND BENCHMARKS

SCALE: SHEET NO. 2 OF 52 SHEETS STA. TO STA.

**VIRGINIA AVENUE OVER SUGAR CREEK
 SECTION 04-00226-00-BR
 MCLEAN, COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	2
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

X028-2A					
CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY 3000-2A	STRUCTURE 057-7834
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	30	30	
20200100	EARTH EXCAVATION	CU YD	1149	1149	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	300		300
20700220	POROUS GRANULAR EMBANKMENT	CU YD	723		723
* 20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	300		300
20800150	TRENCH BACKFILL	CU YD	230	230	
* 20800250	TRENCH BACKFILL, SPECIAL	CU YD	70	70	
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	300	300	
21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	60	60	
25000110	SEEDING, CLASS 1A	ACRE	0.2	0.2	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18	18	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18	
25100115	MULCH, METHOD 2	ACRE	0.2	0.2	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150	150	
28000400	PERIMETER EROSION BARRIER	FOOT	230	230	
28000500	INLET AND PIPE PROTECTION	EACH	18	18	
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	1650	1650	
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	100	100	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	170	170	
40600990	TEMPORARY RAMP	SU YD	170	170	
40800010	BITUMINOUS MATERIAL (PRIME COAT)	GAL	20	20	
40800050	INCIDENTAL HOT -MIX ASPHALT SURFACING	TON	25	25	
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	45	45	
42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SQ FT	3450	3450	

* SEE SPECIAL PROVISIONS

X028-2A					
CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY 3000-2A	STRUCTURE 057-7834
42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	210	210	
42400800	DETECTABLE WARNINGS	SQ FT	130	130	
44000100	PAVEMENT REMOVAL	SQ YD	1590	1590	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	210	210	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1120	1120	
44000600	SIDEWALK REMOVAL	SQ FT	3750	3750	
44004000	PAVED DITCH REMOVAL	FOOT	157		157
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	77.1		77.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	172.1		172.1
50300260	BRIDGE DECK GROOVING	SQ YD	494		494
50300300	PROTECTIVE COAT	SQ YD	801		801
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1680		1680
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	152,370		152,370
50800515	BAR SPLICERS	EACH	132		132
50900805	PEDESTRIAN RAILING	FOOT	118		118
50901720	BICYCLE RAILING	FOOT	120		120
* 51100300	SLOPE WALL 6 INCH	SQ YD	437		437
* 51205200	TEMPORARY SHEET PILING	SQ FT	2860		2860
51500100	NAME PLATES	EACH	1		1
54003000	CONCRETE BOX CULVERTS	CU YD	366.4		366.4
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	185	185	
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	135	135	
55100300	STORM SEWER REMOVAL 8"	FOOT	50	50	
55100500	STORM SEWER REMOVAL 12"	FOOT	-60	60	

* SEE SPECIAL PROVISIONS

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

SUMMARY OF QUANTITIES

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	3
S.N. 057-7834			CONTRACT NO. 91416	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

X028-2A						
CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY 1000-2A	STRUCTURE 057-7834	
△*	56103000	DUCTILE IRON WATER MAIN, 6"	FOOT	15	15	
△*	56103100	DUCTILE IRON WATER MAIN, 8"	FOOT	90	90	
△	56200300	WATER SERVICE LINE 1"	FOOT	40	40	
△*	56400600	FIRE HYDRANTS	EACH	1	1	
△*	56500600	DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	EACH	3	3	
	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	7		7
	60218300	MANHOLES, TYPE A, 4' - DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	3	3	
*	60220230	MANHOLES, TYPE A, 4' - DIAMETER, WITH SPECIAL FRAME AND GRATE	EACH	2	2	
*	60220240	MANHOLES, TYPE A, 4' - DIAMETER, WITH SPECIAL FRAME, CLOSED LID	EACH	1	1	
	60221000	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1	1	
*	60228110	MANHOLES, SANITARY, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	2	
	60240210	INLETS, TYPE B, TYPE 1 FRAME, OPEN LID	EACH	1	1	
	60255500	MANHOLES TO BE ADJUSTED	EACH	1	1	
	60266600	VALVE BOXES TO BE ADJUSTED	EACH	5	5	
*	60406600	GRATING	SQ FT	8	8	
	60500060	REMOVING INLETS	EACH	6	6	
	60500070	REMOVING MANHOLES TO MAINTAIN FLOW	EACH	1	1	
	60500090	REMOVING INLETS TO MAINTAIN FLOW	EACH	1	1	
	60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	920	920	
	61139900	STORM SEWERS, SPECIAL 6"	FOOT	50	50	
	61140000	STORM SEWERS, SPECIAL 8"	FOOT	50	50	
	61140100	STORM SEWERS, SPECIAL 10"	FOOT	50	50	
	61140200	STORM SEWERS, SPECIAL 12"	FOOT	50	50	
	66400205	CHAIN LINK FENCE, 5'	FOOT	93		93
	67100100	MOBILIZATION	L SUM	1	1	

* SEE SPECIAL PROVISIONS

X028-2A						
CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY 1000-2A	STRUCTURE 057-7834	
*	70103700	TRAFFIC CONTROL COMPLETE	L SUM	1	1	
*	72000205	SIGN PANEL - TYPE 2 (SPECIAL)	SQ FT	28	28	
△	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	200	200	
△	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	210	210	
△	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	50	50	
△	78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	75	75	
△	78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	1900	1900	
△	78001140	PAINT PAVEMENT MARKING - LINE 8"	FOOT	220	220	
△	78001150	PAINT PAVEMENT MARKING - LINE 12"	FOOT	610	610	
△	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	90	90	
△	80500100	SERVICE INSTALLATION, TYPE A	EACH	1	1	
△	81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	85	85	
△	81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	40	40	
△	81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	5	5	
△	81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	360	360	
△	81400100	HANDHOLE	EACH	3	3	
△	81400300	DOUBLE HANDHOLE	EACH	1	1	
△	81702415	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	140	140	
△	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	135	135	
△	82103250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	2	2	
△*	85700205	FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1	
△*	86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1	1	
△	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	990	990	
△	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	800	800	
△	87301815	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 3/C	FOOT	45	45	

* SEE SPECIAL PROVISIONS

△ SPECIALTY ITEMS

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

SUMMARY OF QUANTITIES

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	4
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
REVISED 08/20/09 DRR				

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

REVISED 08/20/09 DRR

24-6082

X-028-2A

CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY J000-2A	STRUCTURE 057-7834
△ 87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2	2	
△ 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1	1	
△ 87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1	1	
△ 87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1	1	
△ * 87704080	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)	EACH	1	1	
△ 87800100	CONCRETE FOUNDATION, TYPE A	FOOT	9	9	
△ 87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3	3	
△ 87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	45	45	
△ 88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6	6	
△ 88100200	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED	EACH	2	2	
△ 88100400	PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED	EACH	3	3	
△ 88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	6	6	
△ 89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1500	1500	
△ * 89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	6	6	
△ * 89502380	REMOVE EXISTING HANDHOLE	EACH	2	2	
△ 89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	6	6	
* Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
△ * Z0067700	STEEL CASINGS 20"	FOOT	148	148	
* LR420029	PORTLAND CEMENT CONCRETE PAVEMENT 8" (SPECIAL)	SQ YD	2050	2050	
△ * XX001490	GATE VALVES, 8"	EACH	2	2	
△ * XX002094	REMOVE AND REINSTALL FIBER OPTIC CABLE IN CONDUIT	L SUM	1	1	
* XX002118	STORM SEWER, DUCTILE IRON 12 INCH	FOOT	140	140	

* SEE SPECIAL PROVISIONS

X028-2A

CODE NUMBER	ITEM	UNIT	TOTAL	ROADWAY J000-2A	STRUCTURE 057-7834
△ * XX002982	GATE VALVES, 6"	EACH	2	2	
△ * XX003526	DUCTILE IRON WATER MAIN FITTING 8" X 6" REDUCER	EACH	2	2	
△ * XX003539	DUCTILE IRON WATER MAIN FITTING 8" X 6" TEE	EACH	1	1	
△ * XX003544	DUCTILE IRON WATER MAIN FITTINGS 6" 90 DEGREE BEND	EACH	1	1	
△ * X0469600	CONNECTION TO EXISTING WATERMAIN	EACH	2	2	
* XX004812	VIDEO TAPING OF SEWERS	FOOT	900	900	
△ * XX006168	SAMPLING TAP	EACH	2	2	
△ XX006228	RESTRAINED JOINT 6"	EACH	6	6	
△ * X0250215	PHOTOCELL CONTROL SYSTEM	EACH	1	1	
△ * XX007027	TRENCH BACKFILL, WATERMAIN	CU YD	260	260	
△ * X0323172	DUCTILE IRON WATER MAIN BEND, 45 DEGREE, 8 INCHES	EACH	4	4	
△ * X0323200	SANITARY SEWER, DUCTILE IRON, 12"	FOOT	120	120	
△ * X0323363	ELECTRIC CABLE IN CONDUIT, NO. 12 3/C	FOOT	405	405	
△ * X0323840	WATER MAIN LINE STOP 6"	EACH	2	2	
△ * X0324932	DUCTILE IRON WATERMAIN 8" IN STEEL CASING	FOOT	150	150	
△ * X0325352	PIPE SUPPORT	EACH	1	1	
* X6020076	INLETS, SPECIAL, WITH SPECIAL FRAME AND GRATE	EACH	9	9	
△ * X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	345	345	

* SEE SPECIAL PROVISIONS

△ SPECIALTY ITEMS

DESIGNED - JDA	REVISED - 09/02/09
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

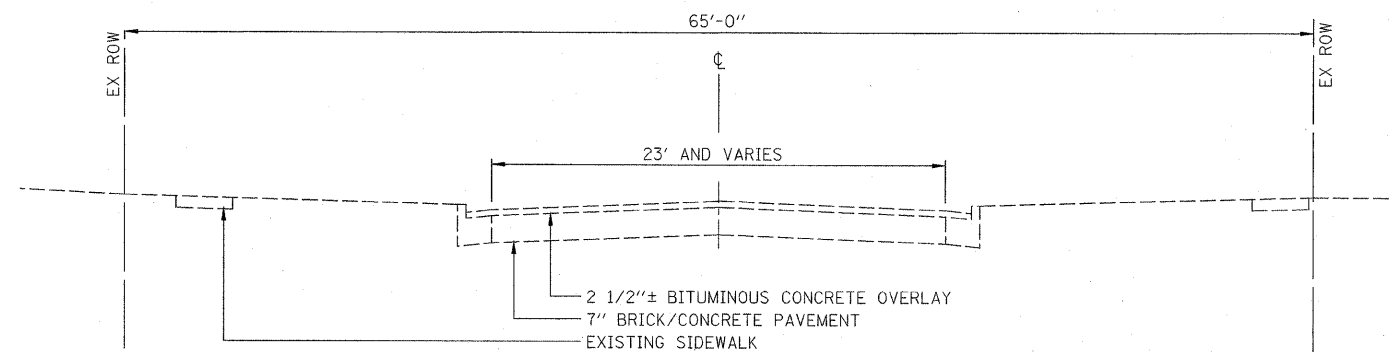
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SUMMARY OF QUANTITIES

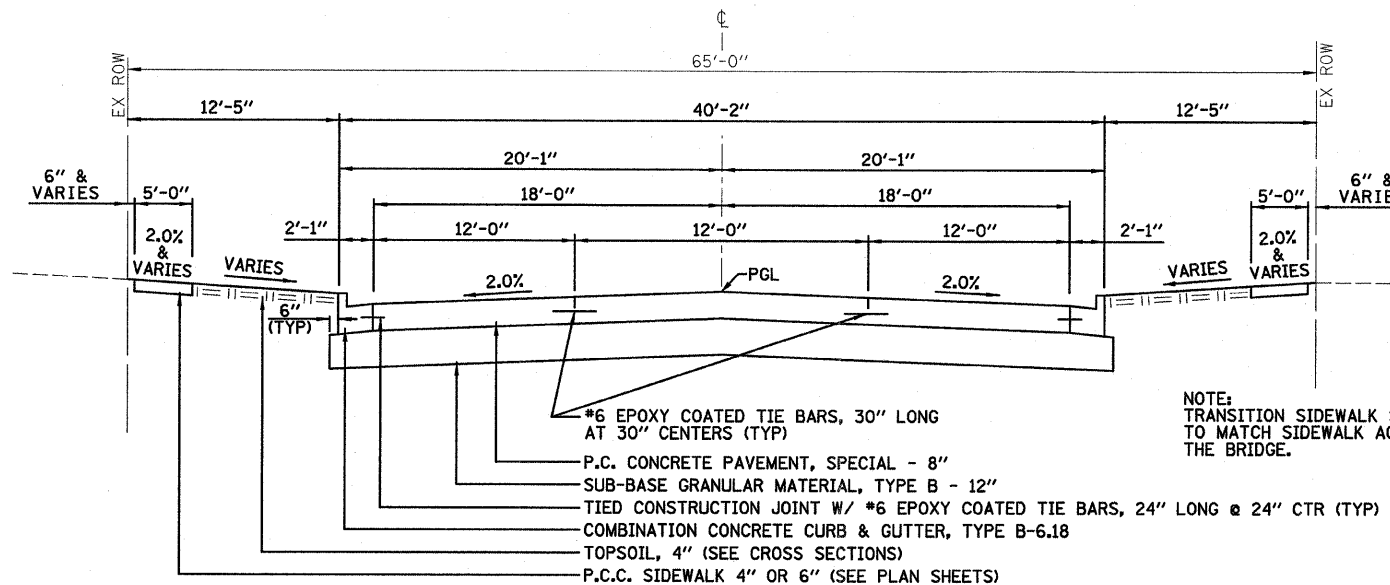
VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	5
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 5 OF 52 SHEETS STA. TO STA.



**EXISTING TYPICAL CROSS SECTION
VIRGINIA AVENUE**



**PROPOSED TYPICAL CROSS SECTION
VIRGINIA AVENUE**

STA 10+14.52 TO STA 15+39.05
BRIDGE OMISSION STA 11+53.15 TO STA 12+75.28

- EXISTING**
- IRON ROD
 - ⊕ BENCHMARK
 - ⊕ SIGN
 - ⊕ MAILBOX
 - ⊕ STREET LIGHT
 - ⊕ POWER POLE
 - ⊕ DOWN GUY
 - ⊕ ELECTRIC HANDHOLE
 - ⊕ FIRE HYDRANT
 - ⊕ WATER VALVE
 - ⊕ GAS VALVE
 - ⊕ TELEPHONE PEDESTAL
 - ⊕ WOODEN POST
 - ⊕ CATCH BASIN
 - ⊕ INLET
 - ⊕ MANHOLE
 - ⊕ FLARED END SECTION
 - ⊕ TRAFFIC SIGNAL
 - ⊕ COMBINATION MASTARM
 - ⊕ EVERGREEN TREE
 - ⊕ TREE
 - ⊕ BUSH
 - RIGHT OF WAY LINE
 - CENTERLINE
 - - - CONTOUR
 - - - FENCE
 - - - SANITARY SEWER
 - - - STORM SEWER
 - - - WATERMAIN
 - - - OVERHEAD ELECTRIC
 - - - GASMAIN
 - - - FIBER OPTIC
 - - - UNDERGROUND ELECTRIC
 - - - UNDERGROUND TELEPHONE

LEGEND

- PROPOSED**
- ▬ COMBINATION CONCRETE CURB & GUTTER TYPE B6.18
 - ⊕ MANHOLE TY A
 - ▬ INLET, TY A
 - ▬ STORM SEWER
 - ▬ DUCTILE IRON SANITARY SEWER
 - ▬ WATER MAIN
 - ▬ FIRE HYDRANT
 - ▬ GATE VALVE
 - ▬ REDUCER
 - - - PROPOSED RIGHT OF WAY
 - ▬ CURB INLET OR MANHOLE
 - ▬ P.C. CONCRETE DRIVEWAY - 6"
 - ▬ TEMPORARY EASEMENT
 - ⊕ TREE TO BE REMOVED
 - ▬ SIDEWALK TO BE REMOVED
 - ▬ COMBINATION CURB & GUTTER TO BE REMOVED
 - ▬ SIDEWALK, P.C. CONCRETE - 4"
 - ▬ SIDEWALK, P.C. CONCRETE - 6"
 - ⊕ ITEM TO BE ADJUSTED
 - ▬ DRIVEWAY PAVEMENT OR PAVEMENT REMOVAL
 - ▬ HOT-MIX ASPHALT SURFACE REMOVAL, BUTT JOINT
 - ▬ INCIDENTAL HOT-MIX ASPHALT SURFACING
 - ▬ DETECTABLE WARNING

NOTE: TRANSITION SIDEWALK SLOPE TO MATCH SIDEWALK ACROSS THE BRIDGE.

- ABBREVIATIONS**
- CL CLASS
 - CLID CLOSED LID
 - D.I. DUCTILE IRON
 - FES FLARED END SECTION
 - FL FLOW LINE
 - FR FRAME
 - GR GRATE
 - INL INLET
 - MH MANHOLE
 - OLID OPEN LID
 - PGL PROFILE GRADE LINE
 - PRC PRECAST REINFORCED CONCRETE
 - RJ RESTRAINED JOINT
 - RW RESILIENT WEDGE
 - SS STORM SEWER
 - TBA TO BE ABANDONED
 - TBF TRENCH BACKFILL
 - TBR TO BE REMOVED
 - TC TOP OF CURB
 - TG TOP OF GRATE
 - TL TRANSIT LINE
 - TLID TOP OF LID
 - T. RIM TOP OF RIM
 - TY TYPE
 - TYP TYPICAL

**VIRGINIA AVENUE
DESIGN DESIGNATION**

FUNCTIONAL CLASSIFICATION: COLLECTOR
2009 ADT: 4,500 ; 2029 ADT: 5,500
T.F.=0.64
PAVEMENT = 8" P.C. CONCRETE
DESIGN SPEED: 35 MPH

MIXTURE TABLE	
MIXTURE USE	INCIDENTAL HOT-MIX ASPHALT SURFACING
AC/PG	PG 64-22
RAP % (MAX)	10
DESIGN AIR VOIDS	4.0% @ NDES=90
MIX COMP (GRADATION)	IL-9.5
FRICTION AGGREGATE	MIX D

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

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TYPICAL CROSS SECTIONS AND LEGEND

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	6
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

20100210 - TREE REMOVAL (OVER 15 UNITS DIAMETER)	
STATION TO STATION	UNIT
15+05 LT	30
TOTAL	30

20800150 TRENCH BACKFILL		
STATION	TO STATION	CU YD
10+30 RT	11+02 RT	13
10+40 LT	10+87 LT	9
10+87 LT	11+02 RT	8
11+02 RT	11+68 RT	43
11+68 RT	11+78 RT	8
11+78 RT	11+92 RT	28
11+92 RT	11+93 RT	9
14+38 RT	14+55 RT	5
14+50 LT	14+63 LT	4
14+52 LT	14+54 LT	2
14+54 LT	14+32 LT	3
14+55 RT	15+14 RT	14
14+65 RT (TBR)	14+99 RT	10
14+99 RT (TBR)	15+05 LT	13
15+05 LT (TBR)	15+12 LT	2
15+07 LT	15+25 LT	12
15+12 RT	15+24 RT	3
15+14 RT	15+07 LT	32
CONTINGENCY		12
TOTAL		230

XX007027 TRENCH BACKFILL (WATER MAIN)		
STATION	TO STATION	CU YD
10+74 LT	10+88 LT	5
10+88 LT	11+01 LT	22
11+01 LT	11+60 LT	110
12+50 LT	12+69 LT	90
12+69 LT	12+76 LT	8
12+76 LT	12+97 LT	7
12+87 LT	12+87 LT	5
CONTINGENCY		13
TOTAL		260

20800250 - TRENCH BACKFILL, SPECIAL (SANITARY SEWER)		
STATION	TO STATION	CU YD
11+74 LT	12+88 LT	63
CONTINGENCY		7
TOTAL		70

28000400 - PERIMETER EROSION BARRIER		
STATION	TO STATION	FOOT
11+22 LT	11+53 LT	31
11+95 RT	12+16 RT	21
12+22 LT	13+07 LT	85
12+86 RT	13+22 RT	36
14+47 RT	14+73 RT	26
14+96 RT	15+15 RT	19
CONTINGENCY		12
TOTAL		230

31101000 - SUBBASE GRANULAR MATERIAL, TYPE B	
STATION TO STATION	TON
VIRGINIA AVENUE	1650
TOTAL	1650

40201000 - AGGREGATE FOR TEMPORARY ACCESS	
STATION	TON
CONTINGENCY	100
TOTAL	100

28000500 - INLET AND PIPE PROTECTION	
STATION (ITEM)	EACH
10+30 LT (PROP. INLET)	1
10+42 RT (PROP. INLET)	1
11+02 RT (STM. MH)	1
11+69 RT (STM. MH)	1
11+78 RT (STM. MH)	1
11+92 RT (STM. MH)	1
14+32 LT (PROP. INLET)	1
14+32 RT (PROP. INLET)	1
14+52 LT (STM. MH)	1
14+52 LT (EX. INLET)	1
14+54 LT (PROP. INLET)	1
14+55 RT (PROP. INLET)	1
14+66 LT (EX. INLET)	1
14+98 RT (EX. INLET)	1
15+07 LT (STM. MH)	1
15+14 RT (PROP. INLET)	1
15+26 LT (PROP. INLET)	1
15+26 RT (PROP. INLET)	1
TOTAL	18

40600982 - HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	
STATION	SQ YD
10+11.52 LT & RT	107.3
14+83.37 RT	27.8
15+44.39 LT & RT	27.8
CONTINGENCY	7.1
TOTAL	170

40600990 - TEMPORARY RAMP	
STATION	SQ YD
10+11.52 LT & RT	107.3
14+83.37 RT	27.8
15+44.39 LT & RT	27.8
CONTINGENCY	7.1
TOTAL	170

40800010 - BITUMINOUS MATERIAL PRIME COAT	
STATION	GAL
10+11.52 LT & RT	10.7
14+83.37 RT	2.8
15+44.39 LT & RT	2.8
CONTINGENCY	3.7
TOTAL	20

40800050 - INCIDENTAL HOT-MIX ASPHALT SURFACING	
STATION	TON
10+11.52 LT & RT	12.3
14+83.37 RT	3.2
15+44.39 LT & RT	3.2
CONTINGENCY	6.3
TOTAL	25

42300200 - PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT 6 INCH	
STATION	SQ YD
10+99 LT	6.7
13+12 LT	13.2
13+62 LT	18.7
CONTINGENCY	6.4
TOTAL	45

LR420029 - PORTLAND CEMENT CONCRETE PAVEMENT (SPECIAL), 8"	
STATION TO STATION	SQ YD
VIRGINIA AVENUE	1975
CONTINGENCY	75
TOTAL	2050

42400100 - PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH		
STATION	TO STATION	SQ FT
9+69 LT	9+74 LT	48
9+69 RT	9+74 RT	23
9+74 LT	9+79 LT	12
9+74 RT	9+82 RT	28
10+27 LT	11+32 LT	495
10+32 RT	11+75 RT	760
12+50 LT	14+61 LT	978
12+99 RT	14+61 RT	865
15+05 RT	15+17 RT	60
15+05 LT	15+21 LT	145
CONTINGENCY		36
TOTAL		3450

42400300 - PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	
STATION	SQ FT
10+99 LT	50
13+12 LT	60
13+62 LT	95
CONTINGENCY	5
TOTAL	210

42400800 - DETECTABLE WARNINGS	
STATION	SQ FT
9+72 LT	10
9+72 RT	10
9+78 LT	10
9+80 RT	10
10+32 LT	20
10+32 RT	10
14+46 LT	10
14+46 RT	10
14+56 LT	10
14+56 RT	10
15+08 LT	10
15+11 RT	10
TOTAL	130

44000100 - PAVEMENT REMOVAL		
STATION	TO STATION	SQ YD
10+14.52	11+94	501.7
12+37	15+39.05	806.8
14+50 LT	15+10 LT	129.8
14+72 RT	14+96 RT	143.1
CONTINGENCY		8.6
TOTAL		1,590

44000200 - DRIVEWAY PAVEMENT REMOVAL	
STATION	SQ YD
10+61.5 RT	87.0
10+99 LT	12.0
12+48 LT	11.0
13+15 LT	16.7
13+60 LT	24.9
57+18.5 LT (MAIN ST)	52.7
CONTINGENCY	5.7
TOTAL	210

44000500 - COMBINATION CURB AND GUTTER REMOVAL		
STATION	TO STATION	FOOT
10+15 RT	11+96 RT	254
10+17 LT	11+67 LT	208
12+30 LT	14+65 LT	256
12+59 RT	14+73 RT	248
14+96 RT	15+43 RT	80
15+02 LT	15+40 LT	52
CONTINGENCY		22
TOTAL		1,120

44000600 - SIDEWALK REMOVAL		
STATION	TO STATION	SQ FT
9+69 LT	9+79 LT	93
9+69 RT	9+74 RT	38
9+74 RT	9+82 RT	38
10+15 LT	11+62 LT	680
12+11 LT	14+61 LT	1,152
15+05 LT	15+23 LT	132
10+15 RT	11+82 RT	780
13+15 RT	14+61 RT	688
15+50 RT	15+21 RT	100
CONTINGENCY		49
TOTAL		3,750

56103000 - DUCTILE IRON WATER MAIN, 6"		
STATION	TO STATION	FOOT
12+87 LT	12+87 LT	15
TOTAL		15

56103100 - DUCTILE IRON WATER MAIN, 8"		
STATION	TO STATION	FOOT
10+74 LT	10+87 LT	13
10+87 LT	11+01 LT	20
11+01 LT	11+16 LT	15
12+64 LT	12+87 LT	23
12+87 LT	12+97 LT	10
CONTINGENCY		9
TOTAL		90

56200300 - WATER SERVICE LINE 1"	
STATION	FOOT
CONTINGENCY	40
TOTAL	40

56400600 - FIRE HYDRANTS	
STATION	EACH
12+97 LT	1
TOTAL	1

Z0067700 - STEEL CASINGS, 20"		
STATION	TO STATION	FOOT
11+16 LT	12+64 LT	148
TOTAL		148

XX001490 - GATE VALVES, 8"	
STATION	EACH
10+80 LT	1
12+82 LT	1
TOTAL	2

XX002982 - GATE VALVES, 6"	
STATION	EACH
12+87 LT	1
12+94 LT	1
TOTAL	2

XX003526 - DUCTILE IRON WATER MAIN FITTING REDUCER, 8"x6"	
STATION	EACH
10+25 LT	1
10+90 LT	1
TOTAL	2

XX003539 - DUCTILE IRON WATER MAIN FITTINGS 8" X 6" TEE	
STATION	EACH
12+87 LT	1
TOTAL	1

XX003544 - DUCTILE IRON WATER MAIN FITTINGS 6" 90 DEGREE BEND	
STATION	EACH
12+87 LT	1
TOTAL	1

XX004731 - CONNECTION TO EXISTING WATER MAIN 6"	
STATION	EACH
10+24 LT	1
12+87 LT	1
TOTAL	2

XX006168 - SAMPLING TAP	
STATION	EACH
10+84 LT	1
12+89 LT	1
TOTAL	2

XX006228 RESTRAINED JOINT 6"		
STATION	TO STATION	EACH
9+76 LT	10+24 LT	3
12+87 LT	13+38 LT	3
TOTAL		6

X0325352 - PIPE SUPPORT	
STATION	EACH
11+80 RT	1
TOTAL	1

X0323172 - DUCTILE IRON WATER MAIN BEND, 45 DEGREE, 8 INCHES	
STATION	EACH
10+87 LT	1
11+01 LT	1
12+69 LT	1
12+77 LT	1
TOTAL	4

X0323840 - WATER MAIN LINE STOP 6"	
STATION	EACH
11+04 LT	1
12+75 LT	1
TOTAL	2

X0324932 - DUCTILE IRON WATERMAIN 8" IN STEEL CASING		
STATION	TO STATION	FOOT
11+16 LT	12+64 LT	148
CONTINGENCY		2
TOTAL		150

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
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TOWN OF NORMAL

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VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	7
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

550A0050 - STORM SEWERS, CLASS A, TYPE 1, 12"		
STATION	TO STATION	FOOT
10+30 RT	11+02 RT	71
10+87 LT	11+02 RT	20
14+32 RT	14+55 RT	20
14+55 RT	15+14 RT	56
15+14 RT	15+26 RT	10
CONTINGENCY		8
TOTAL		185

550A0340 - STORM SEWERS, CLASS A, TYPE 2, 12"		
STATION	TO STATION	FOOT
11+02 RT	11+69 RT	64
11+69 RT	11+78 RT	8
11+78 RT	11+92 RT	18
11+92 RT	11+98 RT	6
15+10 LT	15+14 RT	24
15+14 RT	15+20 RT	6
CONTINGENCY		9
TOTAL		135

55100300 - STORM SEWER REMOVAL, 8"		
STATION	TO STATION	FOOT
14+65 RT	14+99 RT	32
15+05 LT	15+12 LT	6
15+12 LT	15+24 LT	9
CONTINGENCY		3
TOTAL		50

51100500 - STORM SEWER REMOVAL, 12"		
STATION	TO STATION	FOOT
14+50 LT	14+63 LT	13
14+99 RT	15+05 LT	38
CONTINGENCY		9
TOTAL		60

60218300 - MANHOLES, TYPE A, 4' - DIAMETER, TYPE 1 FRAME, OPEN LID		
STATION	TO STATION	EACH
11+68 RT		1
11+78 RT		1
11+92 RT		1
TOTAL		3

60220230 - MANHOLES, TYPE A, 4' - DIAMETER, WITH SPECIAL FRAME AND GRATE		
STATION	TO STATION	EACH
11+02 RT		1
15+14 RT		1
TOTAL		2

60220240 - MANHOLES TYPE A, 4' DIAMETER, WITH SPECIAL FRAME AND CLOSED LID		
STATION	TO STATION	EACH
11+09 LT		1
TOTAL		1

60221000 - MANHOLES, TYPE A, 5' - DIAMETER, TYPE 1 FRAME, OPEN LID		
STATION	TO STATION	EACH
15+07 LT		1
TOTAL		1

60228110 - MANHOLES, SANITARY, 4' - DIAMETER, TYPE 1 FRAME, CLOSED LID		
STATION	TO STATION	EACH
11+74 LT		1
12+88 LT		1
TOTAL		2

60240210 - INLETS, TYPE B, TYPE 1 FRAME, OPEN LID		
STATION	TO STATION	EACH
14+63 LT		1
TOTAL		1

60255500 - MANHOLES TO BE ADJUSTED		
STATION	TO STATION	EACH
14+49 LT		1
TOTAL		1

60266600 - VALVE BOXES TO BE ADJUSTED		
STATION	TO STATION	EACH
14+42 LT		1
14+70 LT		1
14+71 LT		1
15+16 LT		1
CONTINGENCY		1
TOTAL		5

60406600 - GRATING		
STATION	TO STATION	SQ FT
11+68.6 RT		8
TOTAL		8

60500060 - REMOVING INLETS		
STATION	TO STATION	EACH
10+21 LT		1
10+21 RT		1
14+67 RT		1
14+98 RT		1
15+14 LT		1
15+25 LT		1
TOTAL		6

60500070 - REMOVING MANHOLES TO MAINTAIN FLOW		
STATION	TO STATION	EACH
15+07 LT		1
TOTAL		1

60500900 - REMOVING INLETS TO MAINTAIN FLOW		
STATION	TO STATION	EACH
14+50 LT		1
TOTAL		1

60604400 - COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18		
STATION	TO STATION	FOOT
10+15 LT	11+34 LT	158
10+15 RT	11+71 RT	202
12+56 LT	14+65 LT	223
12+95 RT	14+73 RT	198
14+96 RT	15+42 RT	68
15+01 LT	15+42 LT	57
CONTINGENCY		14
TOTAL		920

XX002118 - STORM SEWERS, DUCTILE IRON, 12"		
STATION	TO STATION	FOOT
10+40 LT	10+87 LT	44
10+87 LT	11+02 LT	18
14+32 LT	14+54 LT	21
14+54 LT	14+52 LT	10
15+07 LT	15+26 LT	8
15+07 LT	15+10 LT	16
CONTINGENCY		23
TOTAL		140

X6020076 - INLETS, SPECIAL, WITH SPECIAL FRAME AND GRATE		
STATION	TO STATION	EACH
10+30 RT		1
10+40 LT		1
10+87 LT		1
14+32 LT		1
14+32 RT		1
14+54 LT		1
14+55 RT		1
15+26 LT		1
15+26 RT		1
TOTAL		9

XX004812 - VIDEO TAPING OF SEWERS		
STATION	TO STATION	FOOT
10+32, 140' LT	13+26, 173' RT (1ST)	425
10+32, 140' LT	13+26, 173' RT (2ND)	425
CONTINGENCY		50
TOTAL		900

X0323200 - SANITARY SEWER, DUCTILE IRON, 12"		
STATION	TO STATION	FOOT
11+74 LT	12+88 LT	114
CONTINGENCY		6
TOTAL		120

78000400 - THERMOPLASTIC PAVEMENT MARKING - LINE 6"		
STATION	TO STATION	FOOT
9+69 LT & RT		28
9+74 LT & RT		36
9+80 LT	10+15 LT	67
9+83 RT	10+15 RT	62
CONTINGENCY		7
TOTAL		200

20200100 - EARTHWORK TABLE										
LOCATION	EARTH EXCAVATION (CU YD)	TOPSOIL IN CUT (CU YD)	TOPSOIL IN FILL (CU YD)	EARTH EXC. ADJUSTED FOR TOPSOIL (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE * (CU YD)	EMBANKMENT (CU YD)	EMBANKMENT ADJUSTED FOR TOPSOIL (CU YD)	WASTE (+) OR BORROW (-) (CU YD)	TOPSOIL (SQ YD)	TOPSOIL (CU YD)
VIRGINIA AVENUE	1109	40	10	1149	862	214	204	+ 658	450	50
TOTALS	1109	40	10	1149	862	214	204	+ 658	450	50

* SHRINKAGE FACTOR = 25%

SEEDING, FERTILIZER NUTRIENT AND MULCH				
STATION	TO STATION	SEEDING CLASS 1A (ACRE)	NITROGEN, PHOSPHORUS AND POTASSIUM FERTILIZER NUTRIENT (POUND)	MULCH METHOD 2 (ACRE)
10+15 LT	15+39 LT	0.1	9	0.1
10+15 RT	15+39 RT	0.1	9	0.1
TOTAL		0.2	18	0.2

NOTE: DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED ARE ESTIMATED. NO LOCATIONS WERE IDENTIFIED IN THE FIELD.

DESIGNED - JDA	REVISED - 09/02/09
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

SCHEDULE OF QUANTITIES

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN, COUNTY

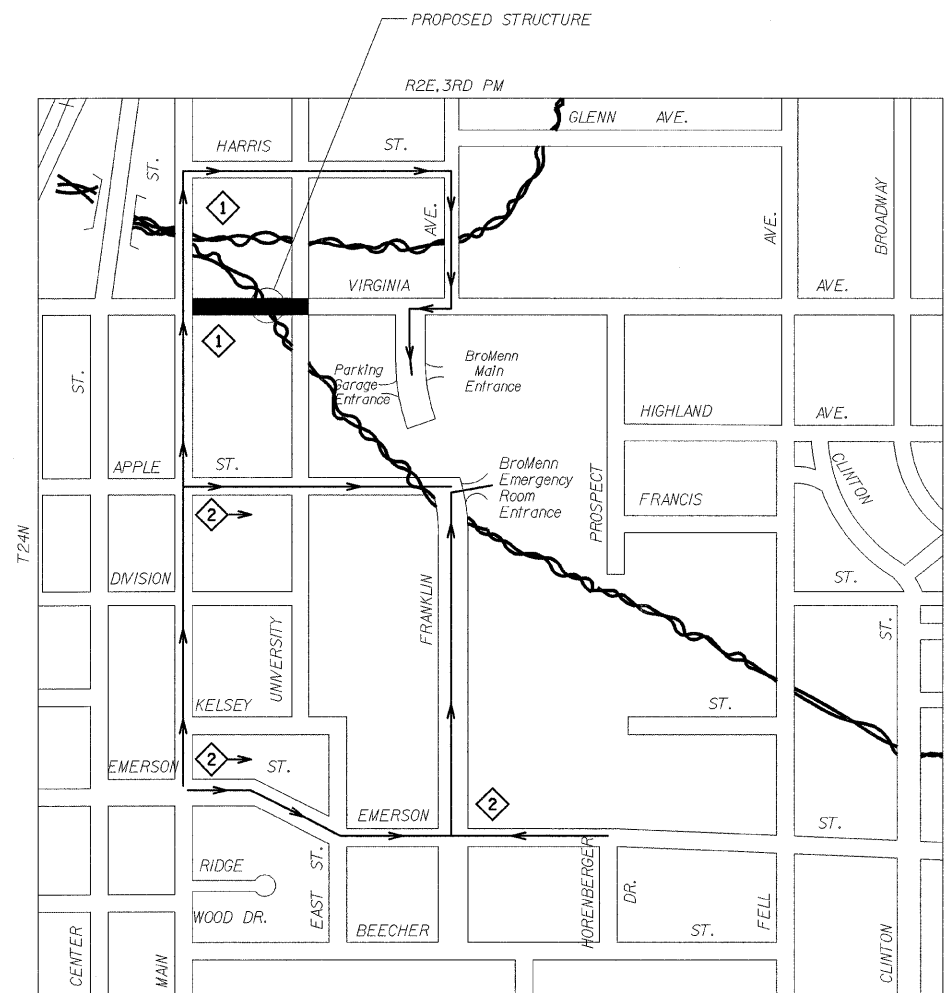
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	8
S.N. 057-7834			CONTRACT NO. 91416	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

REVISED 08/20/09 DRR

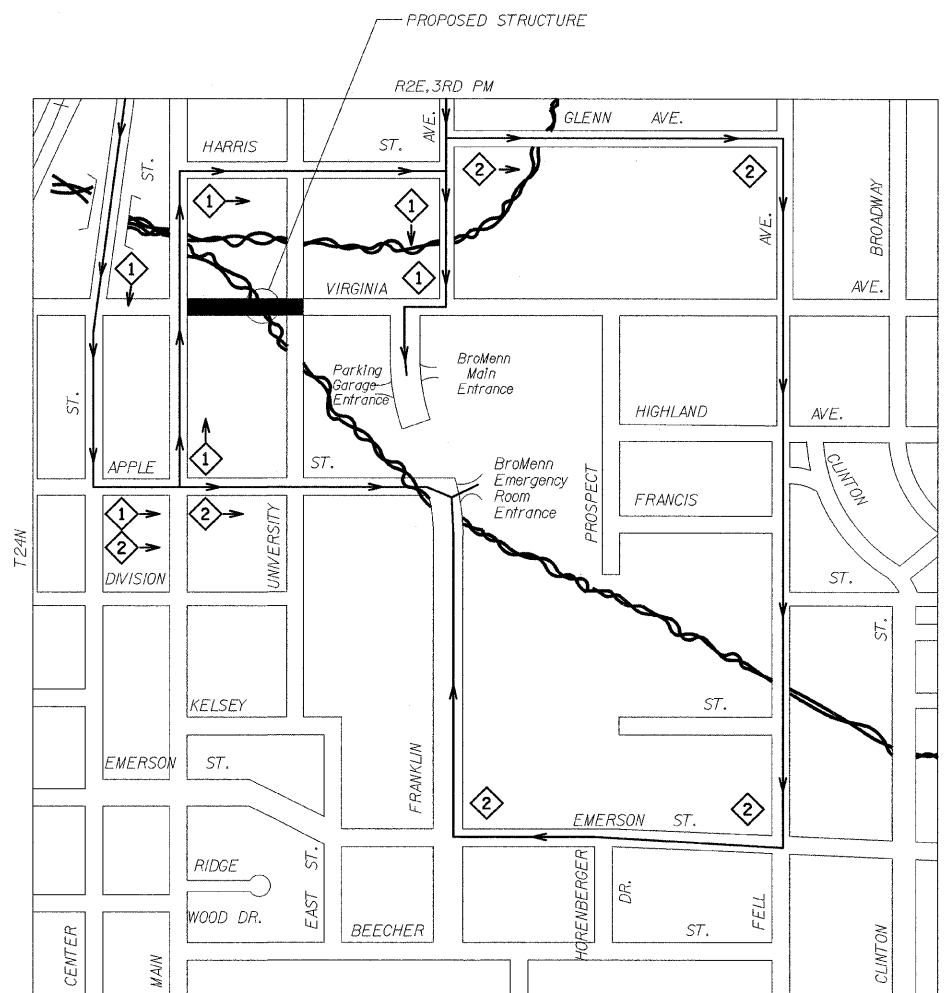
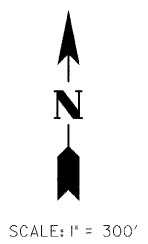
24-6082

FARNSWORTH GROUP, INC.

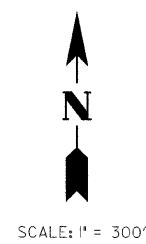
CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX



DETOUR MAP FROM THE SOUTH



DETOUR MAP FROM THE NORTH



LEGEND

- ① DETOUR TO BROMENN HOSPITAL
- ② DETOUR TO BROMENN EMERGENCY ROOM

NOTE:
 1. MULTIPLE DETOUR ROUTES ARE SHOWN IN CASE APPLE STREET CONSTRUCTION HAS NOT BEEN CONCLUDED.
 2. DURING CONSTRUCTION AT THE INTERSECTION OF VIRGINIA AVENUE AND UNIVERSITY STREET, DETOURED TRAFFIC WILL NEED TO USE HARRIS STREET TO FRANKLIN AVENUE TO VIRGINIA AVENUE.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
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DATE - 07/22/09	REVISED -

TOWN OF NORMAL

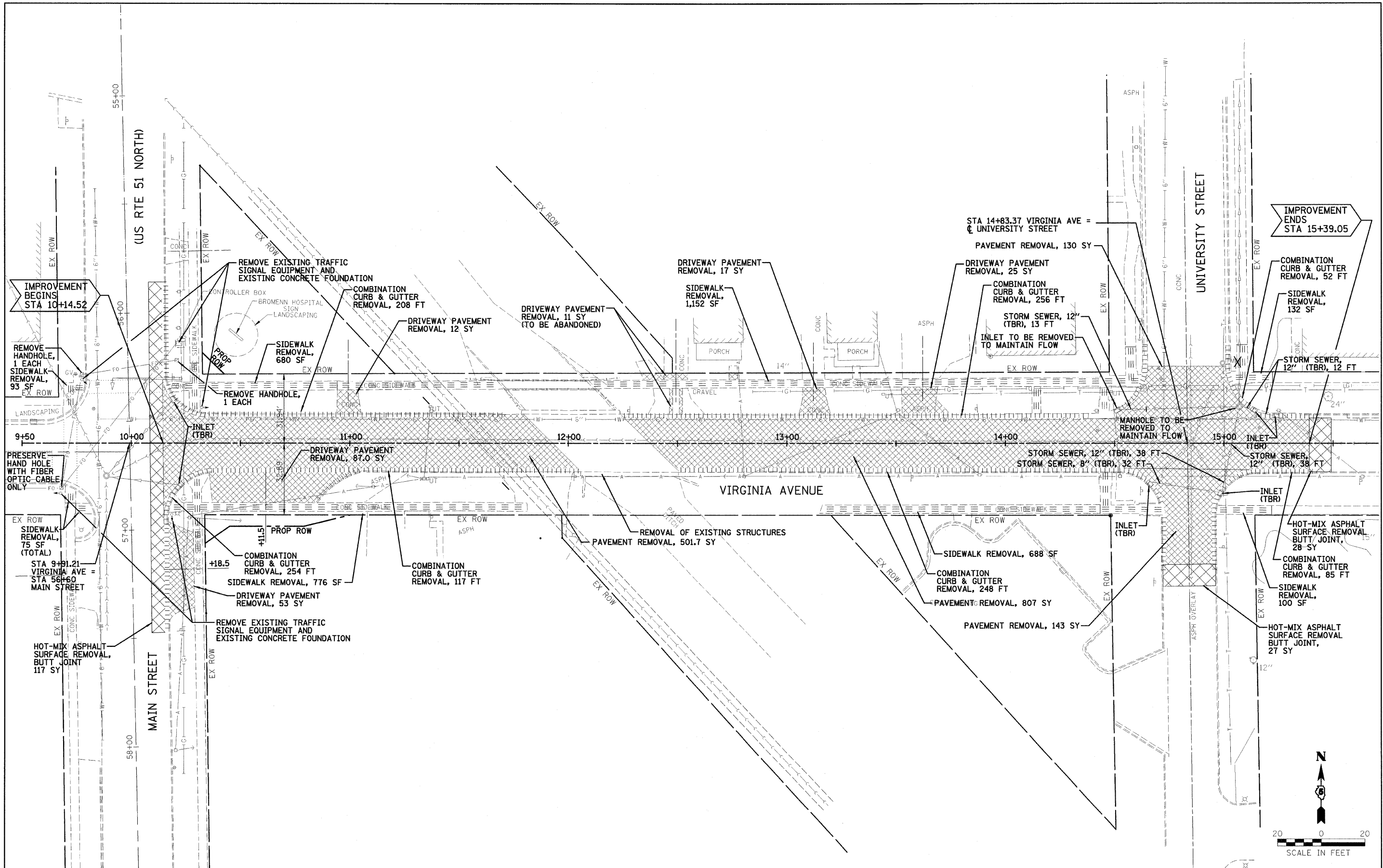
DETOUR PLAN

SCALE: SHEET NO. 9 OF 52 SHEETS STA. TO STA.

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 9
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DETOUR MAP



DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

REMOVAL PLAN

SCALE: 1"=20' SHEET NO. 10 OF 52 SHEETS STA. 10+14.52 TO STA. 15+39.05

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

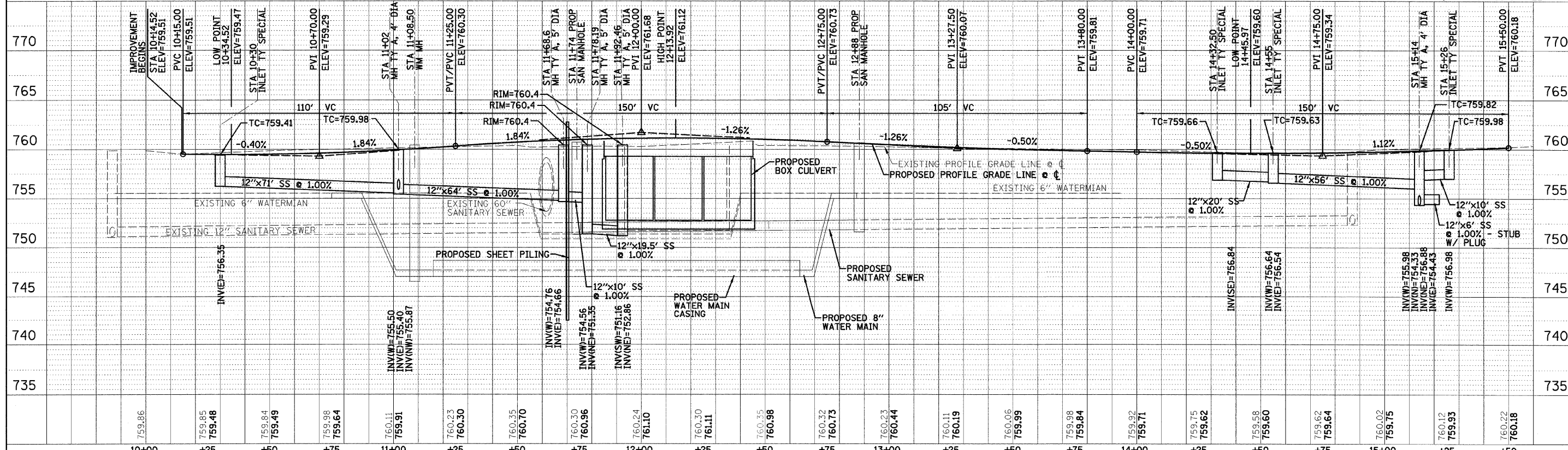
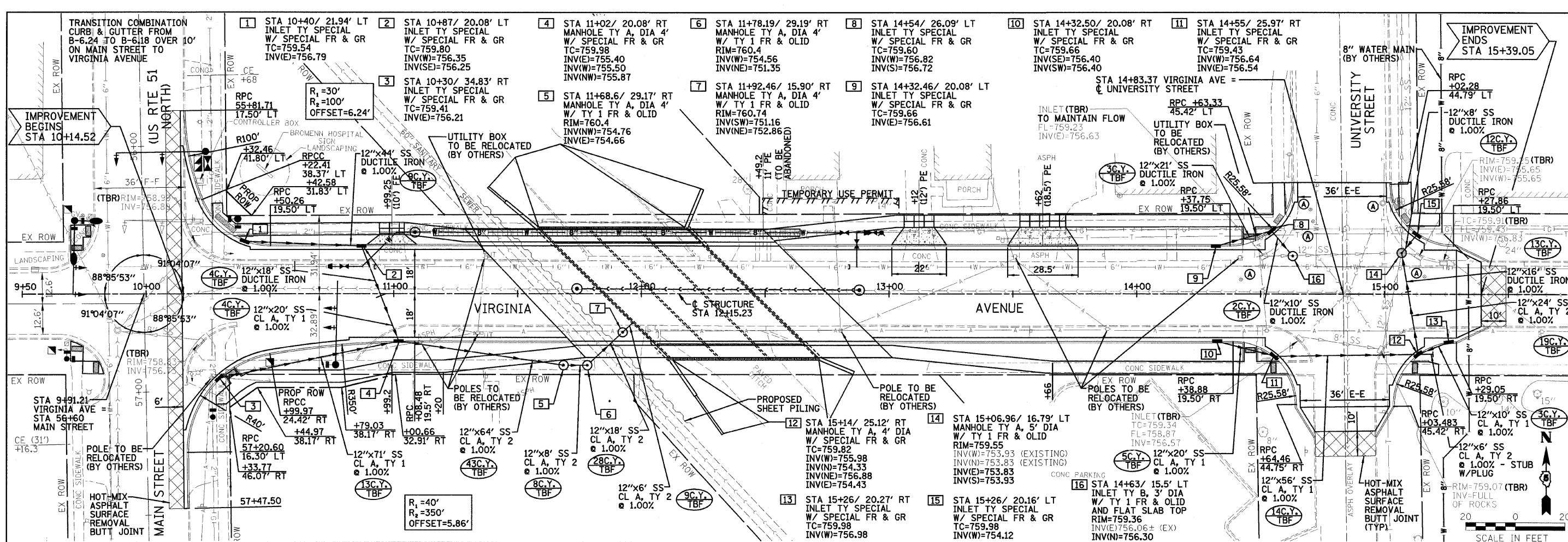
F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 10
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-6082

DATE: _____ BY: _____
 SURVEYED _____ PLOTTED _____
 PLAN _____ CHECKED _____
 NOTE BOOK _____ NO. _____
 FILE: _____ DATE: _____



DESIGNED - JDA	REVISED - 09/02/09	TOWN OF NORMAL	VIRGINIA AVENUE PLAN AND PROFILE	VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN, COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - DRR	REVISED -				6356	04-00226-00-BR	MCLEAN	52	11
CHECKED - PJM	REVISED -				S.N. 057-7834		CONTRACT NO. 91416		
DATE - 07/22/09	REVISED -				FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FARNSWORTH GROUP, INC.

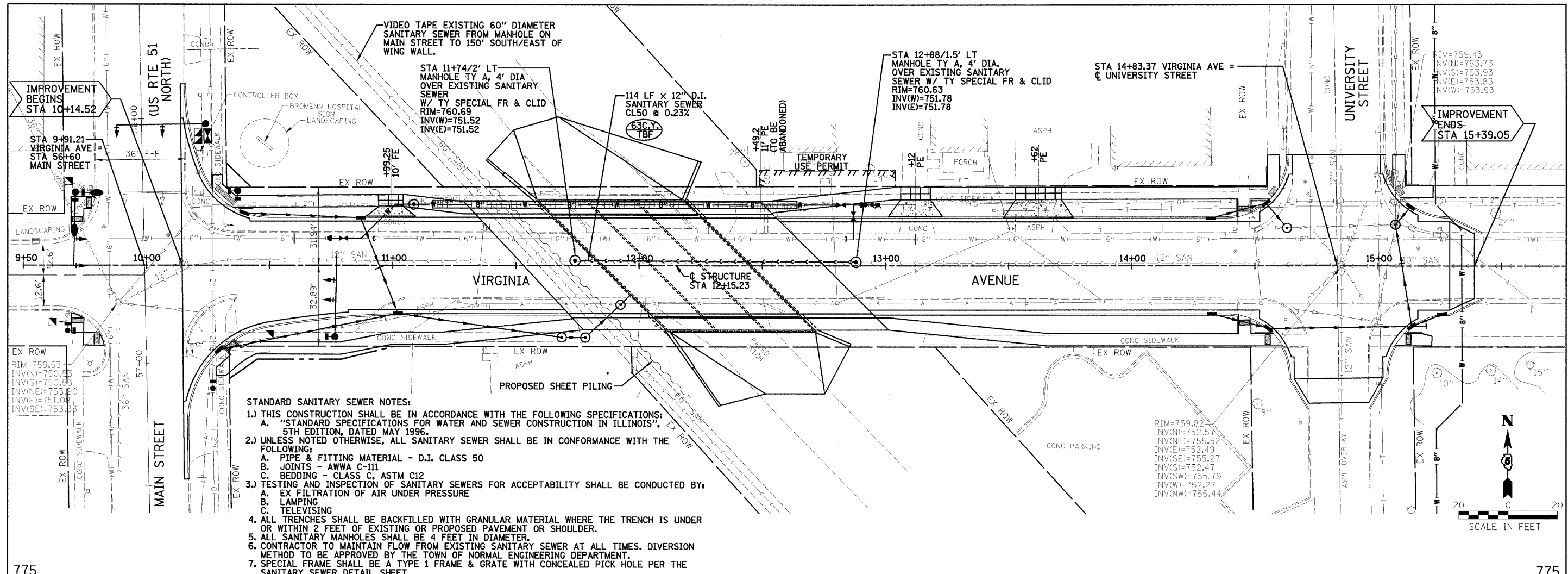
CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-6082

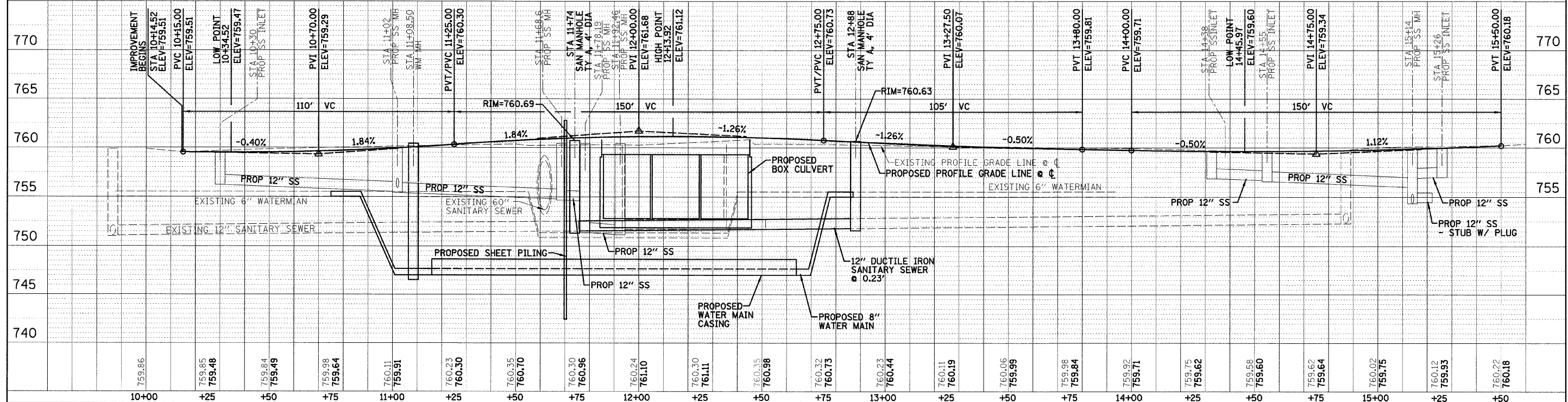
PLAN	DATE
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PROFILES	DATE
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FILE: DATE:



- STANDARD SANITARY SEWER NOTES:**
- THIS CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
 - "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", 5TH EDITION, DATED MAY 1996.
 - UNLESS NOTED OTHERWISE, ALL SANITARY SEWER SHALL BE IN CONFORMANCE WITH THE FOLLOWING:
 - PIPE & FITTING MATERIAL - D.I. CLASS 50
 - JOINTS - AWWA C-111
 - BEDDING - CLASS C, ASTM C12
 - TESTING AND INSPECTION OF SANITARY SEWERS FOR ACCEPTABILITY SHALL BE CONDUCTED BY:
 - EX FILTRATION OF AIR UNDER PRESSURE
 - LAMPING
 - TELEVISION
 - ALL TRENCHES SHALL BE BACKFILLED WITH GRANULAR MATERIAL WHERE THE TRENCH IS UNDER OR WITHIN 2 FEET OF EXISTING OR PROPOSED PAVEMENT OR SHOULDER.
 - ALL SANITARY MANHOLES SHALL BE 4 FEET IN DIAMETER.
 - CONTRACTOR TO MAINTAIN FLOW FROM EXISTING SANITARY SEWER AT ALL TIMES. DIVERSION METHOD TO BE APPROVED BY THE TOWN OF NORMAL ENGINEERING DEPARTMENT.
 - SPECIAL FRAME SHALL BE A TYPE 1 FRAME & GRATE WITH CONCEALED PICK HOLE PER THE SANITARY SEWER DETAIL SHEET.

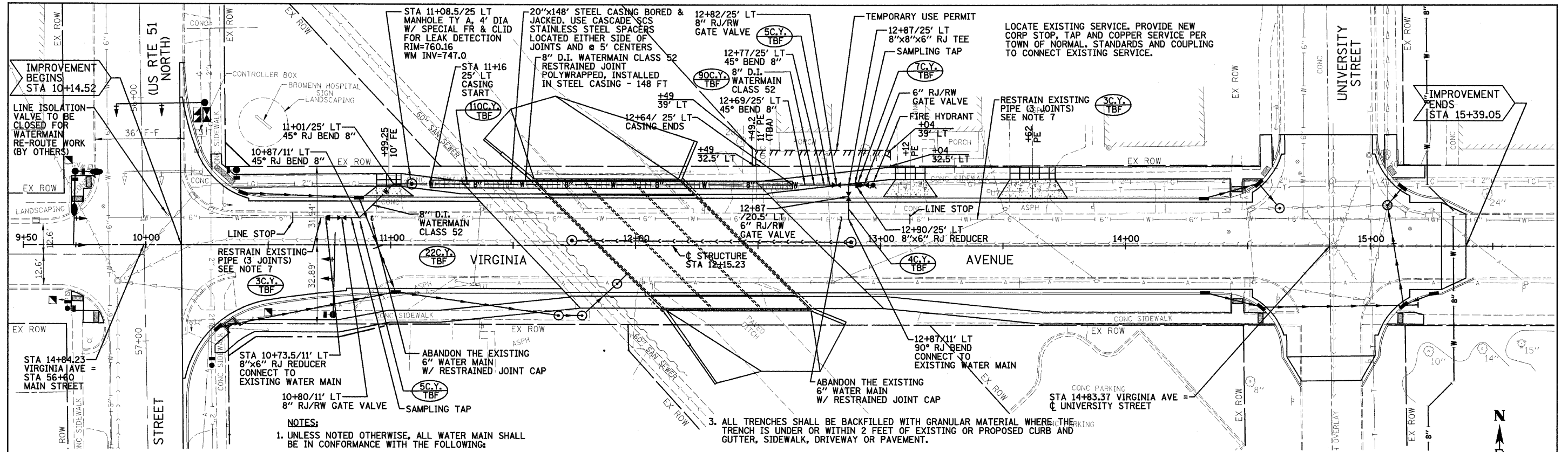


DESIGNED - JDA	REVISED -	TOWN OF NORMAL		VIRGINIA AVENUE SANITARY SEWER PLAN AND PROFILE					VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN, COUNTY					F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 12										
DRAWN - DRR	REVISED -			SCALE: 1"=20'					SHEET NO. 12 OF 52 SHEETS					STA. 10+14.52 TO STA. 15+39.05					S.N. 057-7834					CONTRACT NO. 91416				
CHECKED - PJM	REVISED -													FED. ROAD DIST. NO.					ILLINOIS FED. AID PROJECT									
DATE - 07/22/09	REVISED -																		REVISED 07/08/09 DRR					24-6082				

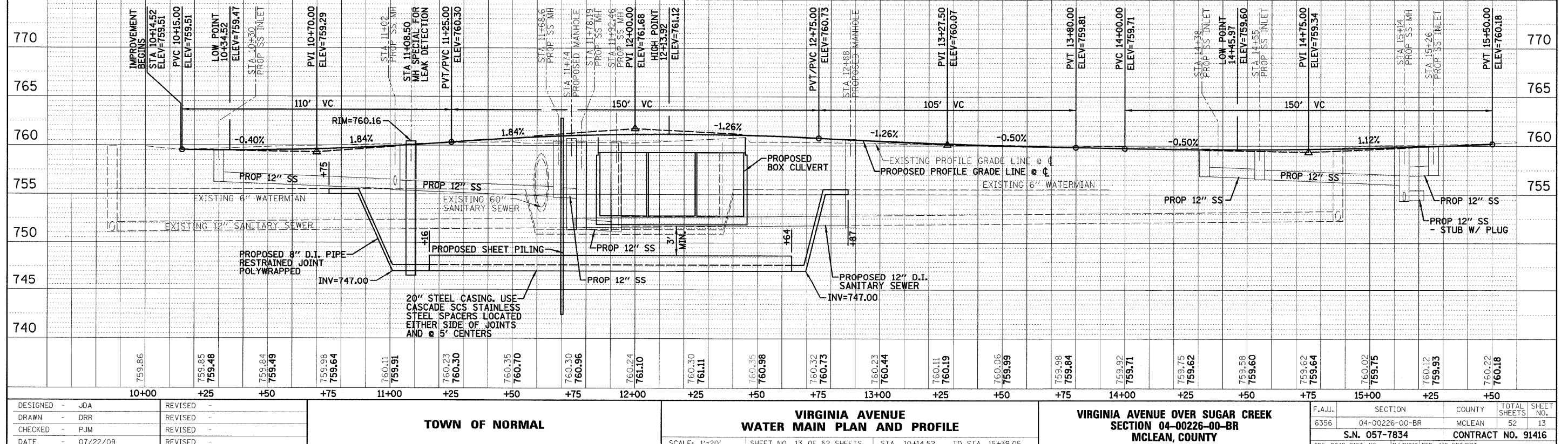
FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

REVISED 07/08/09 DRR



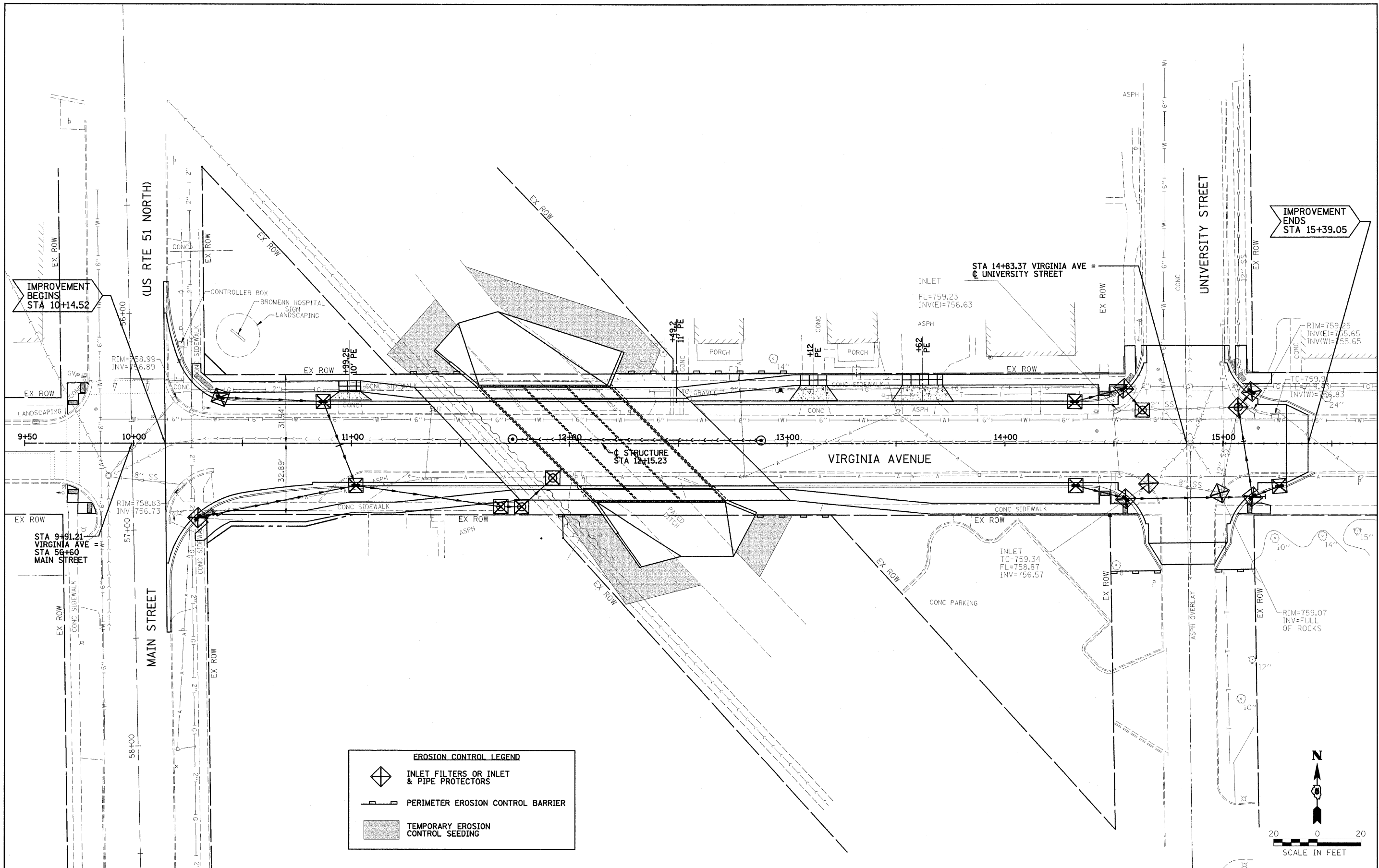
- NOTES:**
- UNLESS NOTED OTHERWISE, ALL WATER MAIN SHALL BE IN CONFORMANCE WITH THE FOLLOWING:
 - PIPE MATERIAL - DUCTILE IRON PIPE AWWA C-150, AWWA C-151 MECHANICAL OR PUSH-ON JOINT, SPECIAL CLASS 52 OR AS SHOWN ON THE PLANS.
 - LINING - AWWA C-104 CEMENT MORTAR WITH SEAL COAT.
 - RUBBER-GASKET JOINTS - AWWA C-111, BOLTS AND NUTS COR-TEN (HIGH STRENGTH, LOW-ALLOY STEEL) OR EQUIVALENT.
 - FITTINGS: - DUCTILE IRON AWWA C-110 OR AWWA C-153 WITH JOINTS, COATINGS AND LINGINGS SAME AS PIPE.
 - ALL WATER SERVICES SHALL BE 1" COPPER PIPE, TYPE K.
 - ALL TRENCHES SHALL BE BACKFILLED WITH GRANULAR MATERIAL WHERE THE TRENCH IS UNDER OR WITHIN 2 FEET OF EXISTING OR PROPOSED CURB AND GUTTER, SIDEWALK, DRIVEWAY OR PAVEMENT.
 - ALL BENDS, TEES, PLUGS AND VALVES SHALL BE RESTRAINED JOINT. ALL RESTRAINED JOINTS SHALL BE MEG-A-LUG OR EQUIVALENT.
 - ENCASE ALL NEW D.I. PIPE IN 8 MIL. POLYETHYLENE ENCASEMENT WRAP ALL FITTINGS AND VALVES IN 8 MIL. POLYETHYLENE SHEETS SECURED WITH PVC TAPE. POLYETHYLENE ENCASEMENT SHALL CONFORM TO AWWA C105/ANSI A21.5-99.
 - GATE VALVES SHALL BE CLOW RW F6100 OR EQUIVALENT.
 - EXISTING PIPE JOINT TO BE RESTRAINED BY EBAA IRON OR EQUIVALENT.
 - SEE MISCELLANEOUS DETAIL SHEET FOR CASING DETAIL AND LEAK DETECTION MANHOLE DETAIL.
 - LINE STOPS SHALL BE PURCHASED BY THE CONTRACTOR AND PREPARATION FOR THEIR INSTALLATION SHALL BE BY THE CONTRACTOR. THE TOWN OF NORMAL WATER DEPARTMENT SHALL PERFORM THE INSTALLATION.



PLAN	DATE
SURVEYED	BY
PLOTTED	DATE
CHECKED	DATE
NO. OF WAY CHECKED	
NO.	
FILE NAME	
ADD FILE NAME	

PROF. FILE	DATE
SURVEYED	BY
PLOTTED	DATE
CHECKED	DATE
NO. OF WAY CHECKED	
NO.	
FILE NAME	
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DESIGNED - JDA	REVISED -	TOWN OF NORMAL VIRGINIA AVENUE WATER MAIN PLAN AND PROFILE	VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN, COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - DRR	REVISED -			6356	04-00226-00-BR	MCLEAN	52	13
CHECKED - PJM	REVISED -			S.N. 057-7834		CONTRACT NO. 91416		
DATE - 07/22/09	REVISED -			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



DESIGNED - JDA	REVISED -
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DATE - 07/22/09	REVISED -

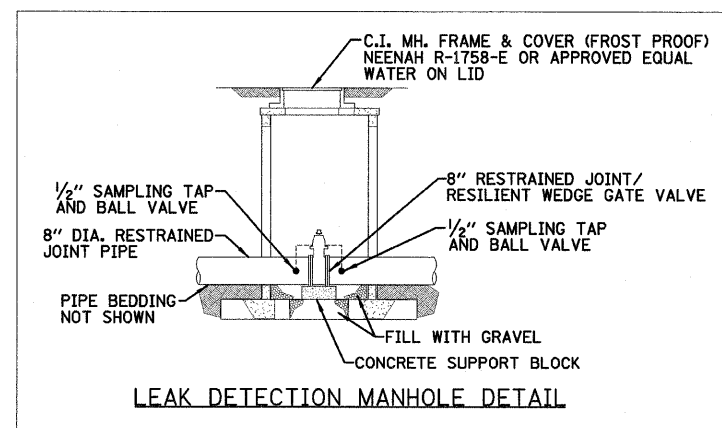
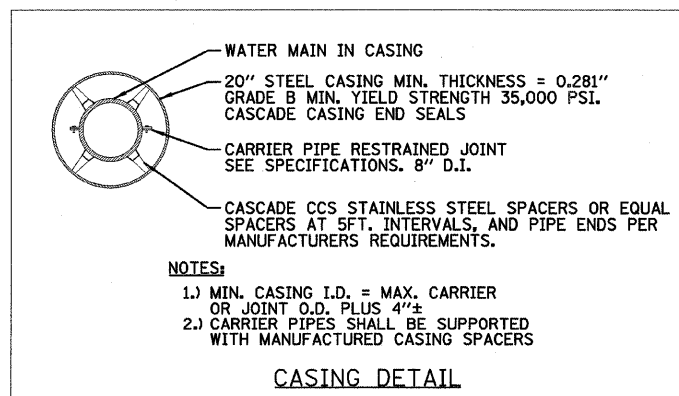
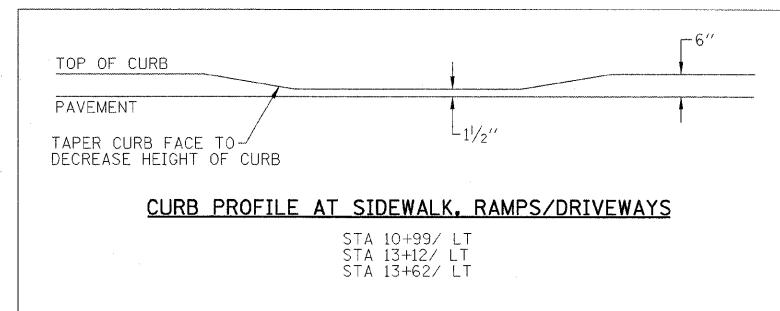
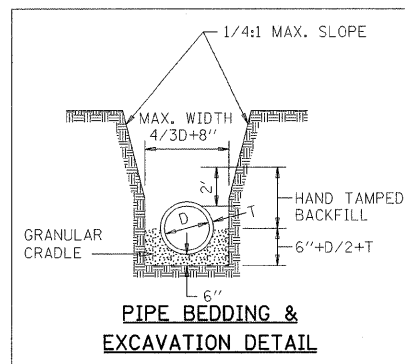
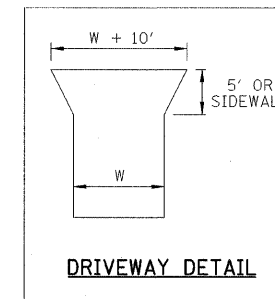
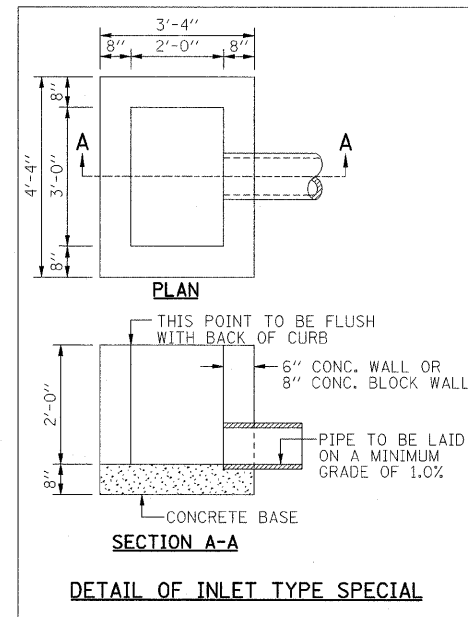
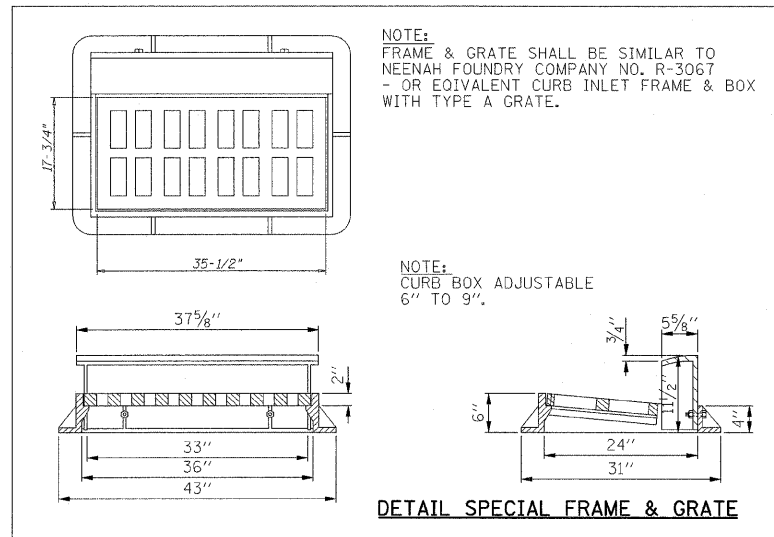
TOWN OF NORMAL

EROSION CONTROL PLAN (SWPPP)

SCALE: 1"=20' SHEET NO. 14 OF 52 SHEETS STA. 10+14.52 TO STA. 15+39.05

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 14
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



DESIGNED - JDA	REVISED - 09/02/09
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

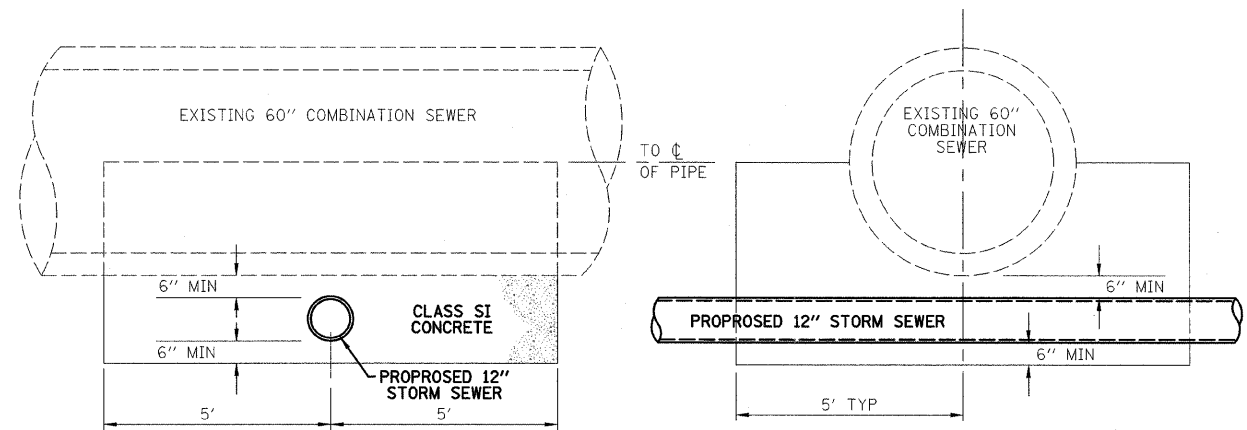
TOWN OF NORMAL

MISCELLANEOUS DETAILS

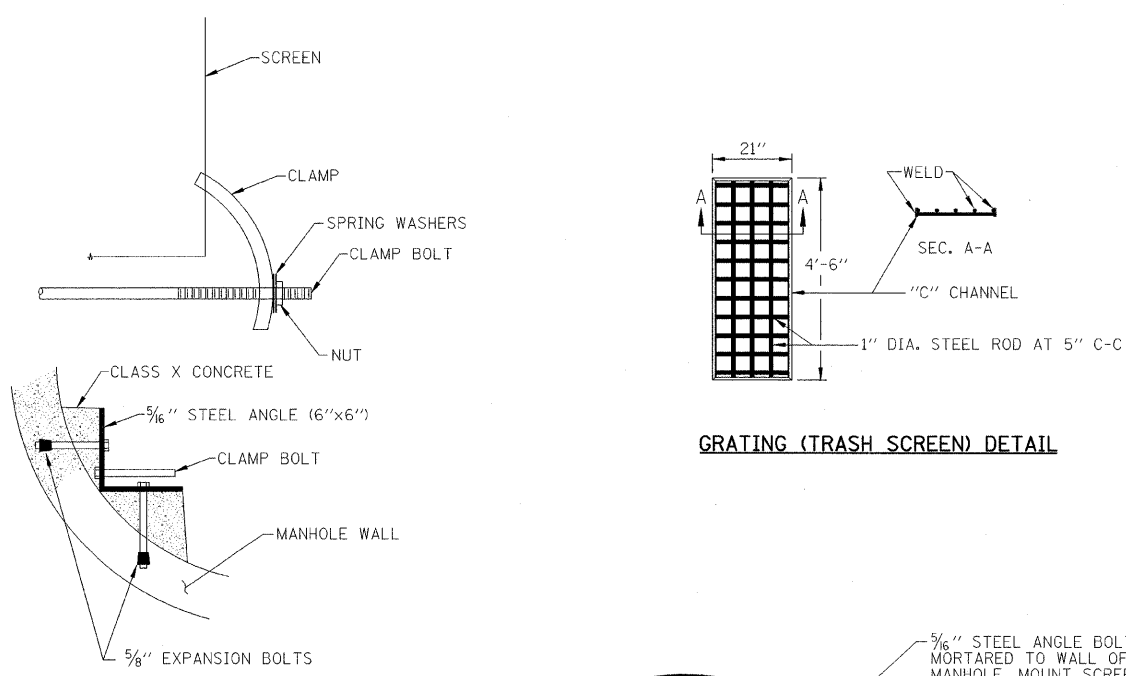
**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	15
S.N. 057-7834			CONTRACT NO. 91416	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 15 OF 52 SHEETS STA. TO STA.

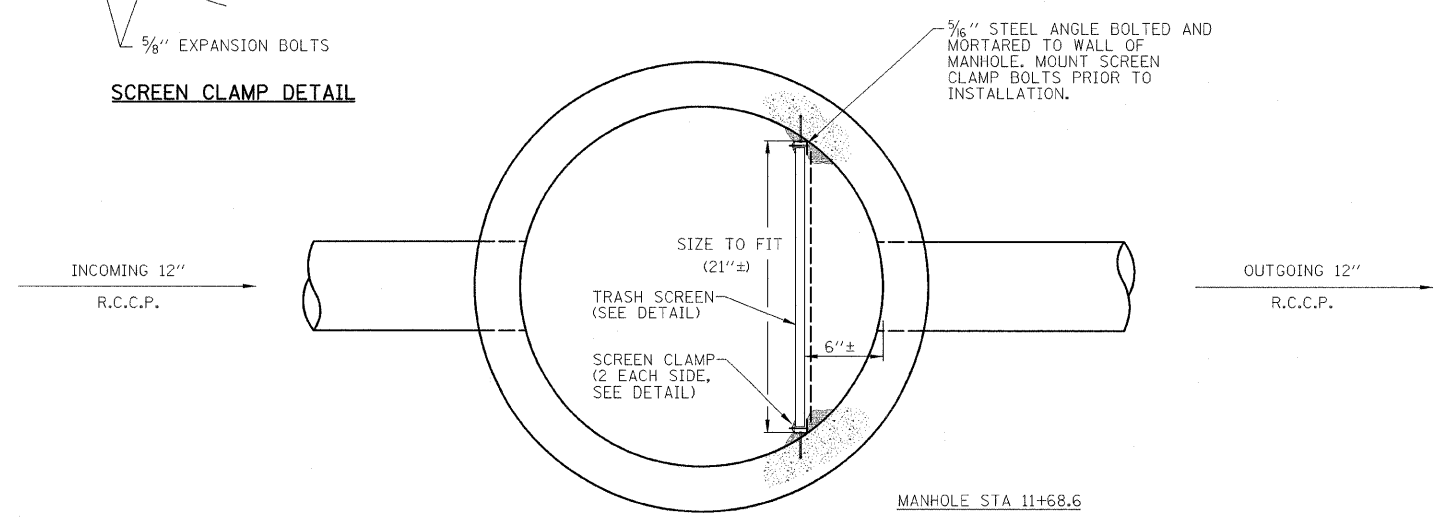


PIPE SUPPORT DETAIL

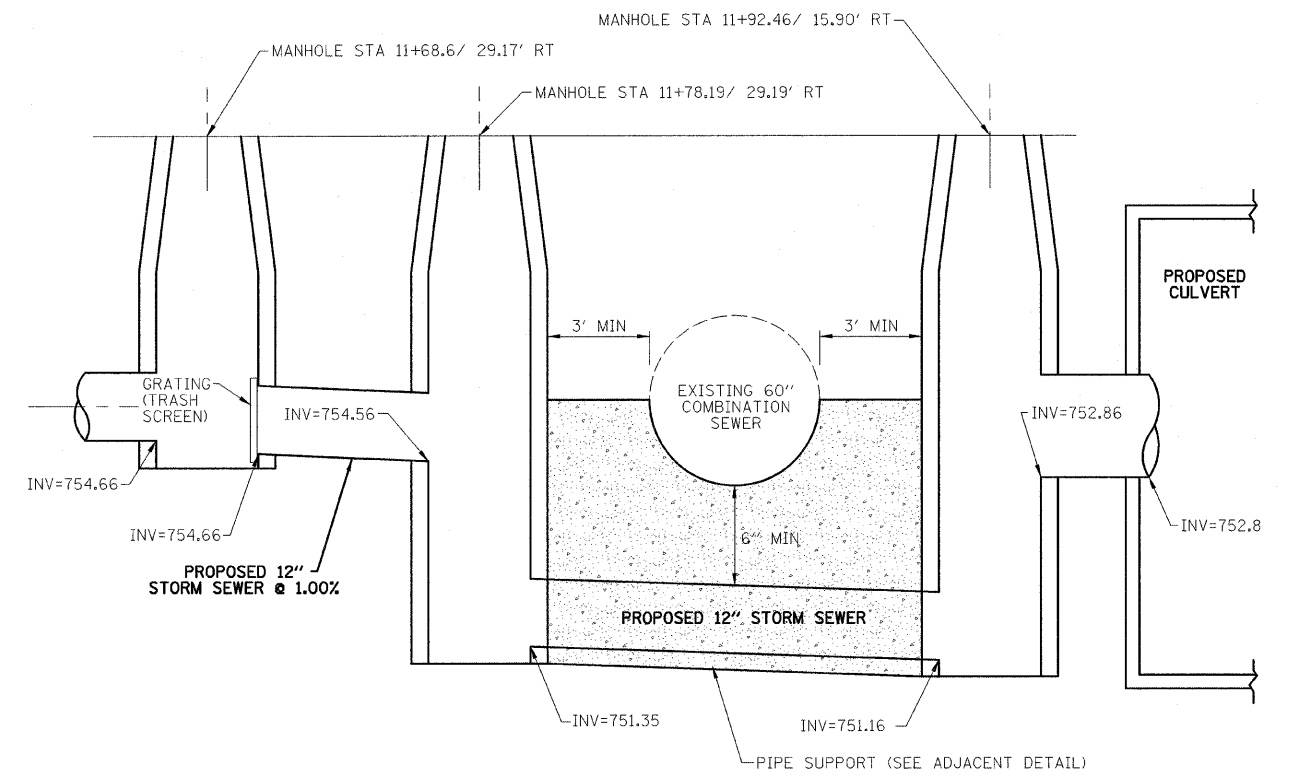


SCREEN CLAMP DETAIL

GRATING (TRASH SCREEN) DETAIL



MANHOLE STA 11+68.6



SIPHON PROFILE DETAIL

NTS

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 01/22/09	REVISED -

TOWN OF NORMAL

STORM SEWER DETAILS

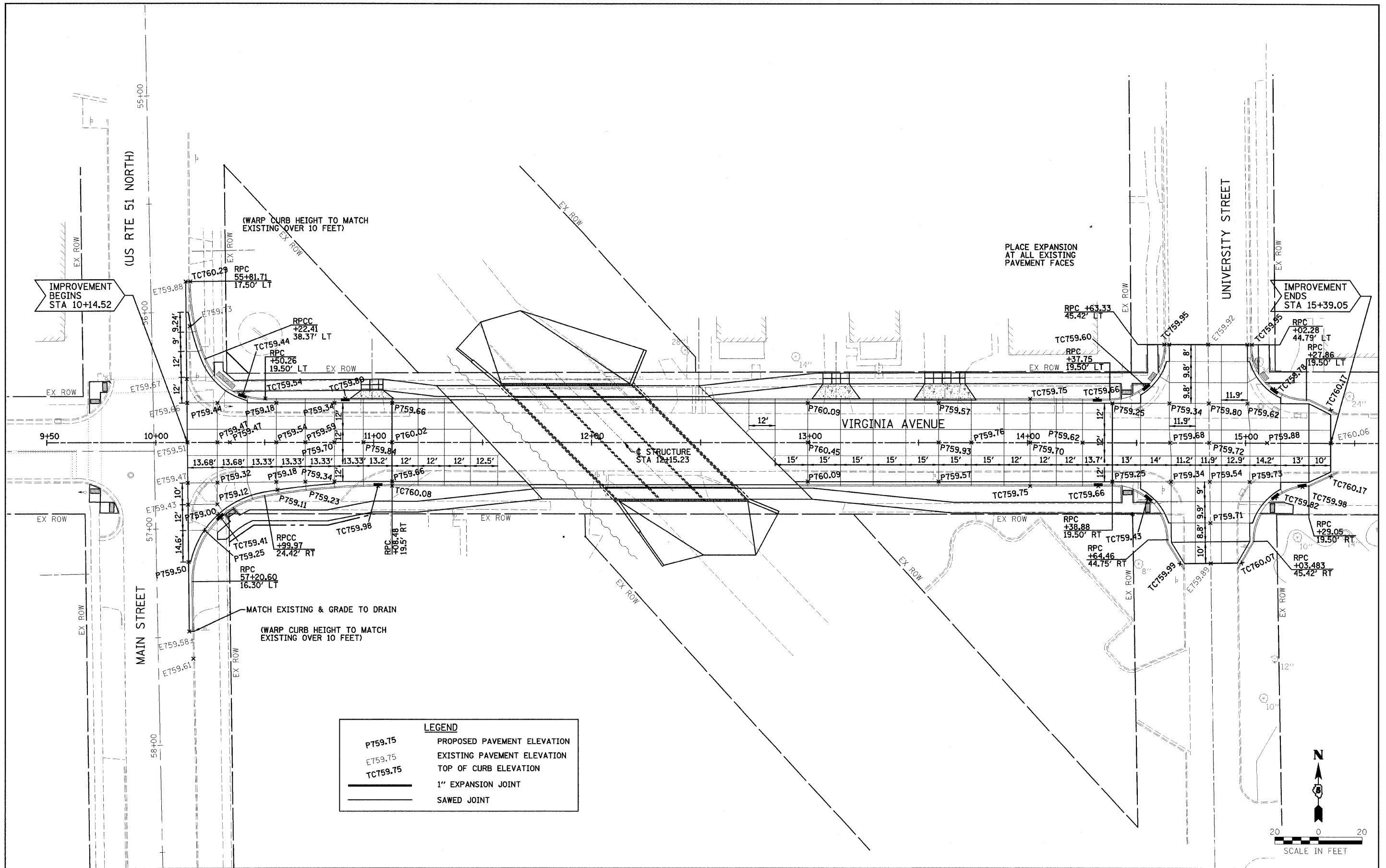
VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	16
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-6082



LEGEND

P759.75	PROPOSED PAVEMENT ELEVATION
E759.75	EXISTING PAVEMENT ELEVATION
TC759.75	TOP OF CURB ELEVATION
	1" EXPANSION JOINT
	SAWED JOINT

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

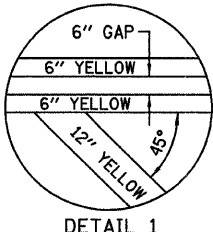
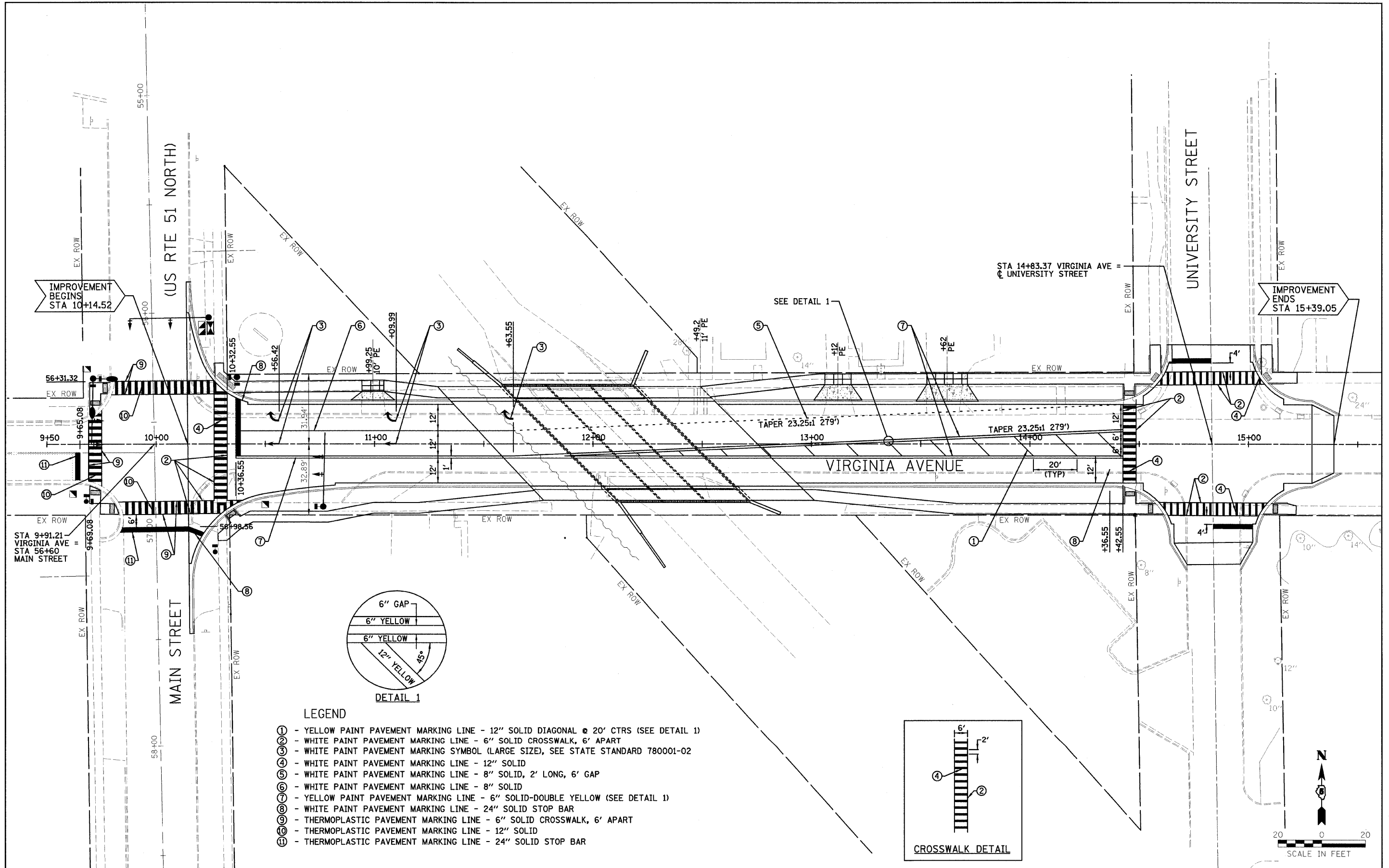
TOWN OF NORMAL

SAW JOINT DETAILS AND ELEVATION PLAN

SCALE: SHEET NO. 17 OF 52 SHEETS STA. TO STA.

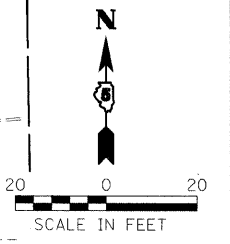
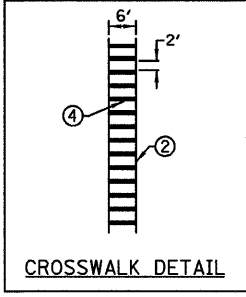
**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 17
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



LEGEND

- ① - YELLOW PAINT PAVEMENT MARKING LINE - 12" SOLID DIAGONAL @ 20' CTRS (SEE DETAIL 1)
- ② - WHITE PAINT PAVEMENT MARKING LINE - 6" SOLID CROSSWALK, 6' APART
- ③ - WHITE PAINT PAVEMENT MARKING SYMBOL (LARGE SIZE), SEE STATE STANDARD 780001-02
- ④ - WHITE PAINT PAVEMENT MARKING LINE - 12" SOLID
- ⑤ - WHITE PAINT PAVEMENT MARKING LINE - 8" SOLID, 2' LONG, 6' GAP
- ⑥ - WHITE PAINT PAVEMENT MARKING LINE - 8" SOLID
- ⑦ - YELLOW PAINT PAVEMENT MARKING LINE - 6" SOLID-DOUBLE YELLOW (SEE DETAIL 1)
- ⑧ - WHITE PAINT PAVEMENT MARKING LINE - 24" SOLID STOP BAR
- ⑨ - THERMOPLASTIC PAVEMENT MARKING LINE - 6" SOLID CROSSWALK, 6' APART
- ⑩ - THERMOPLASTIC PAVEMENT MARKING LINE - 12" SOLID
- ⑪ - THERMOPLASTIC PAVEMENT MARKING LINE - 24" SOLID STOP BAR



DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

PAVEMENT MARKING PLAN

SCALE: 1"=20" SHEET NO. 18 OF 52 SHEETS STA. 10+14.52 TO STA. 15+39.05

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

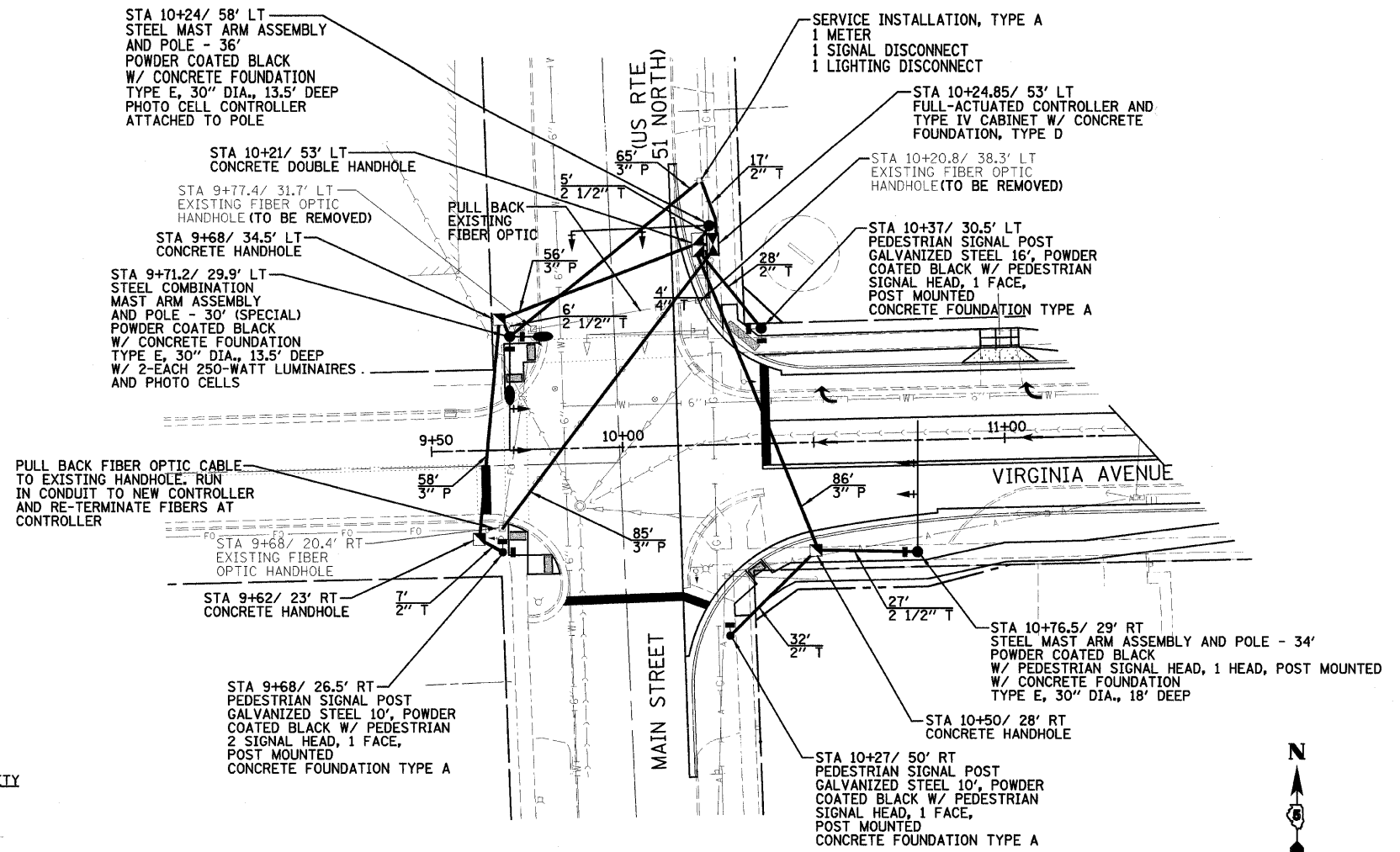
F.A.J. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 18
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

LEGEND

- PROPOSED
- PEDESTRIAN SIGNAL HEAD
 - LUMINAIRE
 - ☒ CONTROLLER CABINET
 - ☒ SIGNAL HEAD WITH BACKPLATE
 - STEEL MAST ARM & POLE
 - TRAFFIC SIGNAL POST
 - ☒ HANDHOLE
 - ☒ DOUBLE HANDHOLE
 - 110' / 2" T CONDUIT LENGTH AND SIZE IN TRENCH
 - 110' / 2" P CONDUIT LENGTH AND SIZE PUSHED
 - SIGNAL CONDUIT
 - LIGHTING CONDUIT
 - SERVICE INSTALLATION, TYPE A

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY
72000205	SIGN PANEL - TYPE 2 (SPECIAL)	SQ FT	28
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	85
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	40
81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	5
81018700	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	360
81400100	HANDHOLE	EACH	3
81400300	DOUBLE HANDHOLE	EACH	1
81702415	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	140
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	135
82103250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	2
85700205	FULL ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
86200200	UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	990
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	800
87301815	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 3/C	FOOT	45
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 10 FT.	EACH	2
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
87704080	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 30 FT. (SPECIAL)	EACH	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	9
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	45
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
88100200	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED	EACH	2
88100400	PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED	EACH	3
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	6
89502300	REMOVE ELECTRICAL CABLE FROM CONDUIT	FOOT	1500
89502380	REMOVE EXISTING HANDHOLE	EACH	2
89592375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	6
89592385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	6
XX002094	REMOVE AND REINSTALL FIBER OPTIC CABLE IN CABINET	L SUM	1
XX006380	PHOTO CELL CONTROLLER	EACH	1
X0323363	ELECTRIC CABLE IN CONDUIT, NO. 12 3/C	FOOT	405
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	345



GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNAL. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO BEGINNING WORK TO OBTAIN THE UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY, INCIDENTAL TO THE CONTRACT.
3. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR PLACING CONDUIT AT GREATER THAN 2 FEET MINIMUM DEPTH TO AVOID OBSTACLES SUCH AS UNDERGROUND UTILITIES.
4. GROUND RODS SHALL BE SOLID COPPER ALLOY OR COPPER CLAD STEEL. CONTROLLER CABINET GROUNDING ROD SHALL BE PLACED IN THE DOUBLE HANDHOLE INCIDENTAL TO THE CONTRACT.
5. ALL SIGNAL BASES SHALL BE LOCATED A MINIMUM OF 6 FEET FROM THE FACE OF CURB UNLESS OTHERWISE REQUESTED BY THE ENGINEER.
6. ALL MAST ARM POLE BASES SHALL BE PROTECTED BY A STAINLESS STEEL MESH SCREENING AROUND THE BASE BOLTS TO PREVENT RODENT ENTRY. THE MESH SHALL BE SECURED TO THE BASE BY STAINLESS STEEL BANDING AS INCIDENTAL TO THE INDIVIDUAL MAST ARM ASSEMBLY PAY ITEM.
7. A #10 STRANDED COPPER WIRE SHALL HAVE SIX (6) FEET OF SLACK AND SHALL BE FURNISHED AND LEFT IN PLACE IN ALL CONDUITS BETWEEN HANDHOLES AND FOUNDATIONS OR CONTROLLER AS INCIDENTAL TO THE RESPECTIVE CONDUIT PAY ITEM.
8. ALL THREADS OF BOLTS USED IN ASSEMBLY OF TRAFFIC SIGNAL COMPONENTS SHALL BE COATED WITH A NON-LEAD BASED ANTI-SEIZE COMPOUND, SIMILAR TO LEAD PLATE, PRIOR TO ASSEMBLY.
9. ALL LED SIGNAL LENSES SHALL BE OF THE SAME TYPE, DESIGN, AND APPEARANCE AND BE FROM THE SAME MANUFACTURER FOR A GIVEN INTERSECTION.
10. ALL MAST ARM MOUNTED SIGNAL HEADS ON AN INDIVIDUAL MAST ARM SHALL BE MOUNTED SO THAT THE RED INDICATIONS ARE LEVEL WITH EACH OTHER. THE ELECTRICAL CONDUCTORS FOR ALL TRAFFIC SIGNAL HEADS SHALL BE SOLID, SOFT COPPER.
11. THE CONTROLLER CABINET SHOULD BE PLACED SO THAT A TECHNICIAN MAY SEE AS MUCH OF THE INTERSECTION AS POSSIBLE OVER THE TOP OF THE CABINET WHILE WATCHING THE COMPONENTS IN THE CABINET.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE CABINET ENERGIZED, FULLY FUNCTIONAL AND READY FOR TESTING A MINIMUM OF 48 HOURS PRIOR TO SCHEDULED SIGNAL TURN ON. CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 72 HOURS BEFORE THE CABINET IS ENERGIZED.
13. THE ENGINEER SHALL BE NOTIFIED AT LEAST 72 HOURS PRIOR TO SIGNAL TURN ON. SIGNAL TURN ON SHALL BE SCHEDULED BETWEEN 9 AND 10 A.M. A FACTORY REPRESENTATIVE SHALL BE PRESENT DURING TURN ON.
14. ALL CONDUIT SHALL COMPLY WITH SECTION 1088.01 OF THE MOST CURRENT IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION EXCEPT THAT ALL CONDUIT SHALL BE EITHER SCH. 80 PVC OR SCH. 80 HDPE.
15. THE EXACT LOCATION OF THE AERIAL ELECTRICAL LINE IS TO BE DETERMINED AT A LATER DATE. THE CONTRACTOR SHALL COORDINATE, BUT VERIFY WITH AMEREN IP WHICH CORNER THE SERVICE SHALL BE LOCATED.
16. THE CONTRACTOR SHALL PROVIDE 3 FEET OF SLACK CABLE IN EACH TRAFFIC SIGNAL STRUCTURE: MAST ARM, POST, CONTROLLER. THE SLACK IS IN ADDITION TO THE VERTICAL LENGTH OF CABLE DEFINED IN THE SPECIFICATIONS.
17. ALL PEDESTRIAN SIGNAL HEADS SHALL MEET THE CURRENT MUTCD LOCATION STANDARDS.
18. THE DOUBLE HANDHOLE SHALL BE FURNISHED WITH RECESSED, INTEGRAL HINGED LIDS.
19. THE TOWN OF NORMAL SHALL ASSIST WITH THE PROGRAMMING OF THE TRAFFIC SIGNAL CONTROLLER. THE CONTRACTOR SHALL PROVIDE THE TOWN WITH THE CONTROLLER, CONFLICT MONITOR AND ONE SET OF THE CABINET PRINTS A MINIMUM OF 72 HOURS PRIOR TO ENERGIZING THE CABINET.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

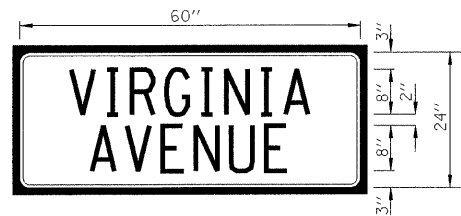
TOWN OF NORMAL

SIGNAL PLAN

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY**

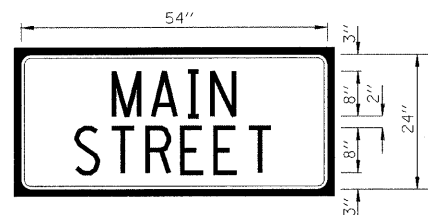
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	19
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SCALE: SHEET NO. 19 OF 52 SHEETS STA. TO STA.



SIGN PANEL TYPE II, SPECIAL

ILLUMINATED SIGN, EDGE-LIT LED SIGN R409
 0.8" BORDER
 1 REQUIRED OF VIRGINIA AVENUE = 10.0 SQ FT
 TOTAL REQUIRED = 10.0 SQ FT
 8" SERIES D LETTERS
 MAST ARM MOUNTED

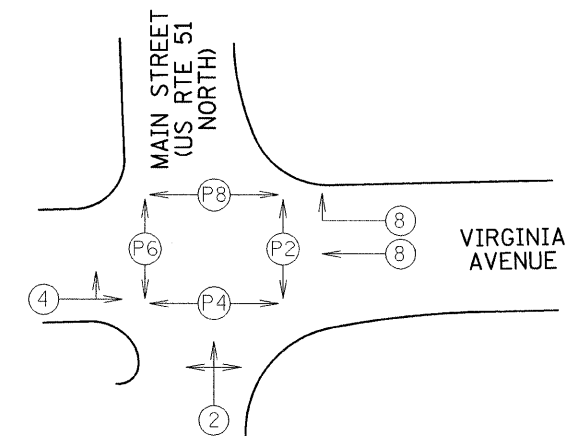
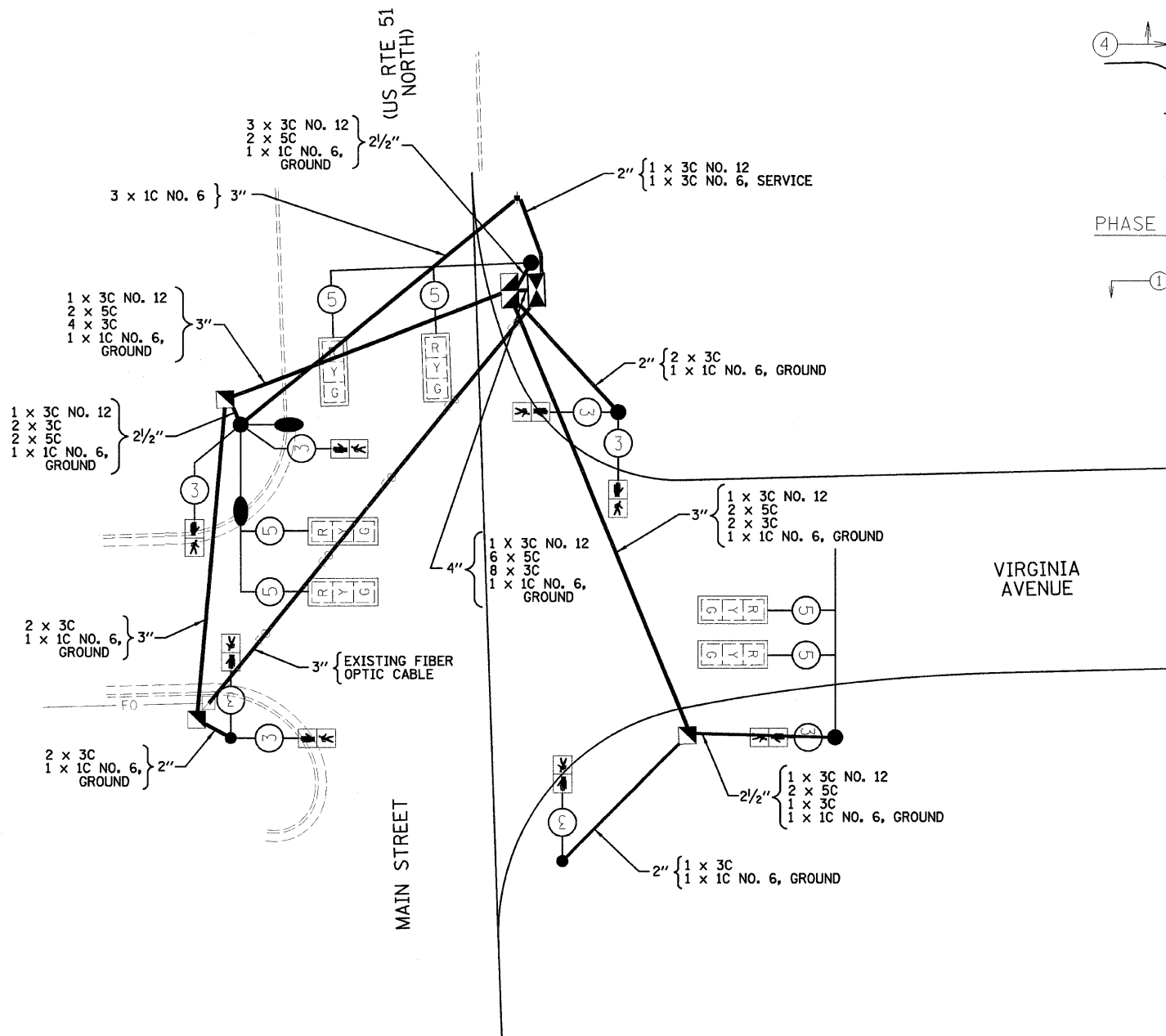


SIGN PANEL TYPE II, SPECIAL

ILLUMINATED SIGN, EDGE-LIT LED SIGN R409
 0.8" BORDER
 2 REQUIRED OF MAIN STREET = 9 SQ FT
 TOTAL REQUIRED = 18 SQ FT
 8" SERIES D LETTERS
 MAST ARM MOUNTED

CABLE PLAN LEGEND

- SERVICE INSTALLATION, TYPE A
- ⑦ DENOTES NUMBER OF CONDUCTORS. ALL CABLE TO BE NO. 14 EXCEPT AS INDICATED.
- SIGNAL FACE WITH BACKPLATE
- 2" { 2x5C DENOTES 2 WIRES 5 CONDUCTOR EACH IN 2" CONDUIT
- CONDUIT
- MAST ARM AND POLE
- LUMINAIRE
- TRAFFIC SIGNAL POST
- CONTROLLER CABINET
- PEDESTRIAN SIGNAL HEAD
- HANDHOLE
- DOUBLE HANDHOLE



PHASE DESIGNATION DIAGRAM
 NTS

① VEHICULAR MOVEMENT

NOTE:
 SEE SPECIAL PROVISIONS FOR DETAILS
 ABOUT SERVICE INSTALLATIONS AND
 PHOTO CELL CONTROLLER



DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

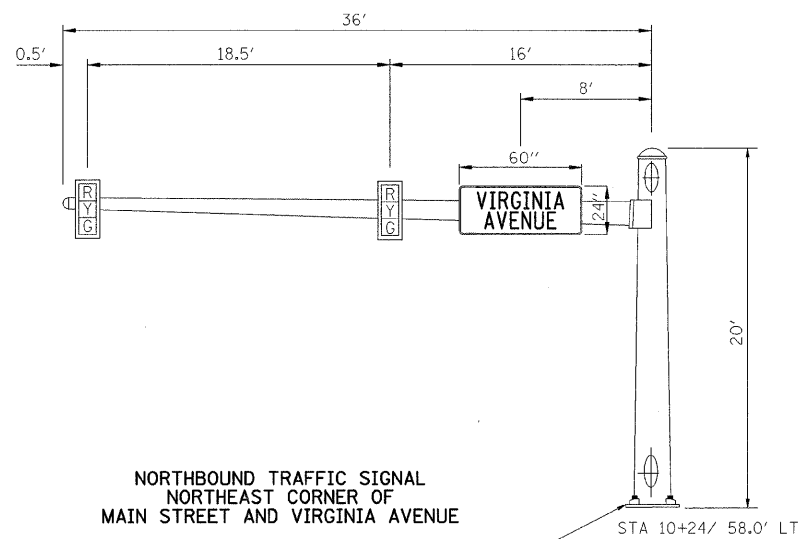
TOWN OF NORMAL

CABLE PLAN

SCALE: SHEET NO. 20 OF 52 SHEETS STA. TO STA.

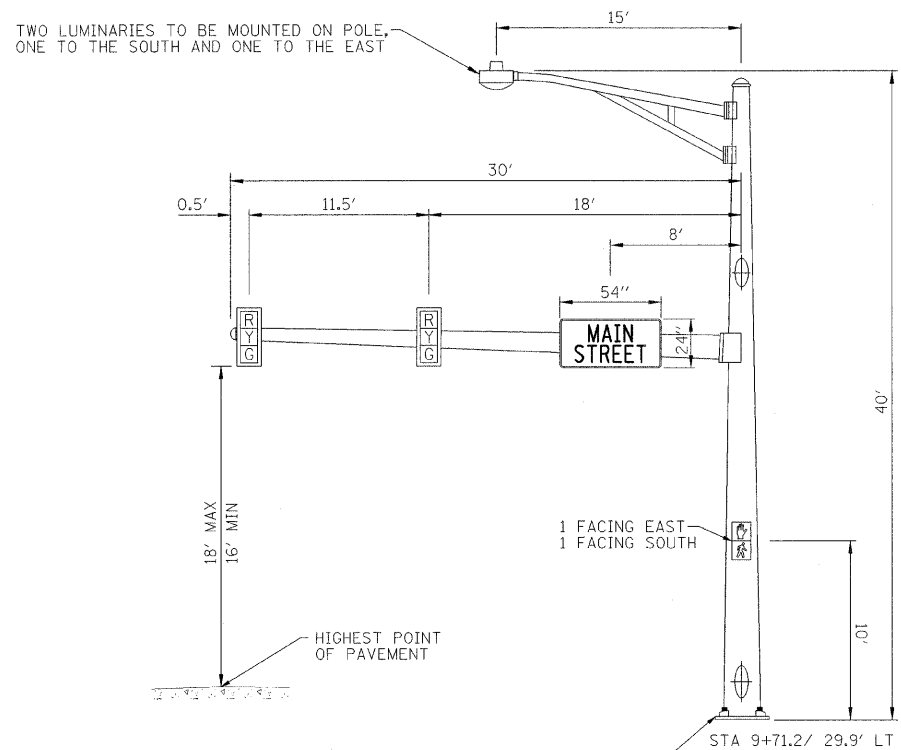
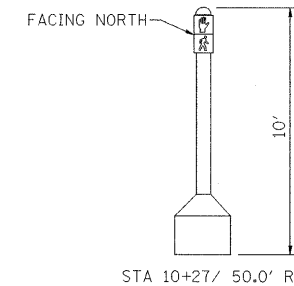
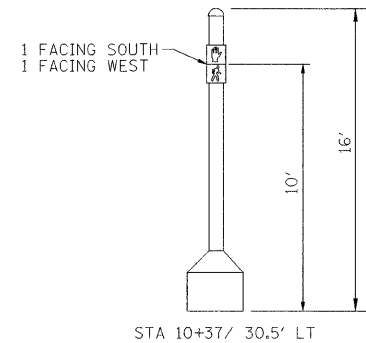
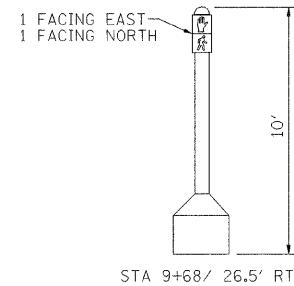
**VIRGINIA AVENUE OVER SUGAR CREEK
 SECTION 04-00226-00-BR
 MCLEAN, COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	20
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



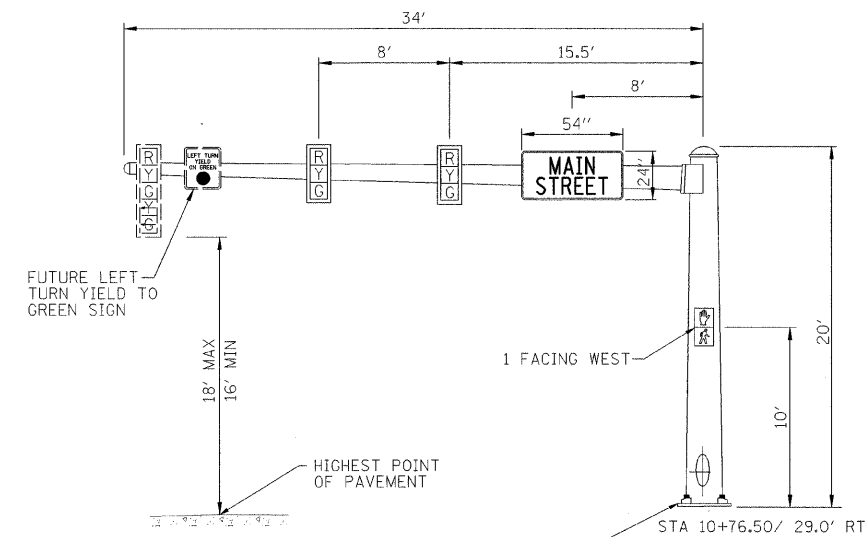
NORTHBOUND TRAFFIC SIGNAL
NORTHEAST CORNER OF
MAIN STREET AND VIRGINIA AVENUE

TOP OF FOUNDATION 6" ABOVE
PROPOSED FINISHED GRADE.
FOUNDATION DEPTH IS 13.5'
BELOW GRADE.



WESTBOUND VIRGINIA AVENUE TRAFFIC SIGNAL
NORTHWEST CORNER OF
MAIN STREET AND VIRGINIA AVENUE

TOP OF FOUNDATION 6" ABOVE
PROPOSED FINISHED GRADE.
FOUNDATION DEPTH IS 13.5'
BELOW GRADE.



EASTBOUND VIRGINIA AVENUE TRAFFIC SIGNAL
SOUTHEAST CORNER OF
MAIN STREET AND VIRGINIA AVENUE

TOP OF FOUNDATION 6" ABOVE
PROPOSED TOP OF CURB.
FOUNDATION DEPTH IS 18'
BELOW GRADE.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

MAST ARM LOADING PLAN

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	21
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

SCALE: SHEET NO. 21 OF 52 SHEETS STA. TO STA.

- Benchmarks:
- 1.) "D" on top of East conc. railing of bridge on University Street between Virginia Avenue & Apple Street, Elevation = 765.01
 - 2.) Top of fire hydrant NW corner of Virginia Ave. and University Street, Elevation = 762.81
 - 3.) Top of fire hydrant SW corner of Virginia Avenue and Main Street, Elevation = 763.64

Existing Structure:

Consists of a single-span bridge with concrete slab and concrete thru girders. The structure has a bituminous overlay on reinforced concrete closed abutments supported by concrete footings. The structure is skewed 45 degrees right forward and is approximately 28'-0" out to out deck and 45'-0" back to back abutments. There is a separate pedestrian concrete bridge approximately 40'-0" long which shall also be removed as part of Removal of Existing Structures. No salvage for either structure.

DESIGN SPECIFICATIONS

AASHTO 2002

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

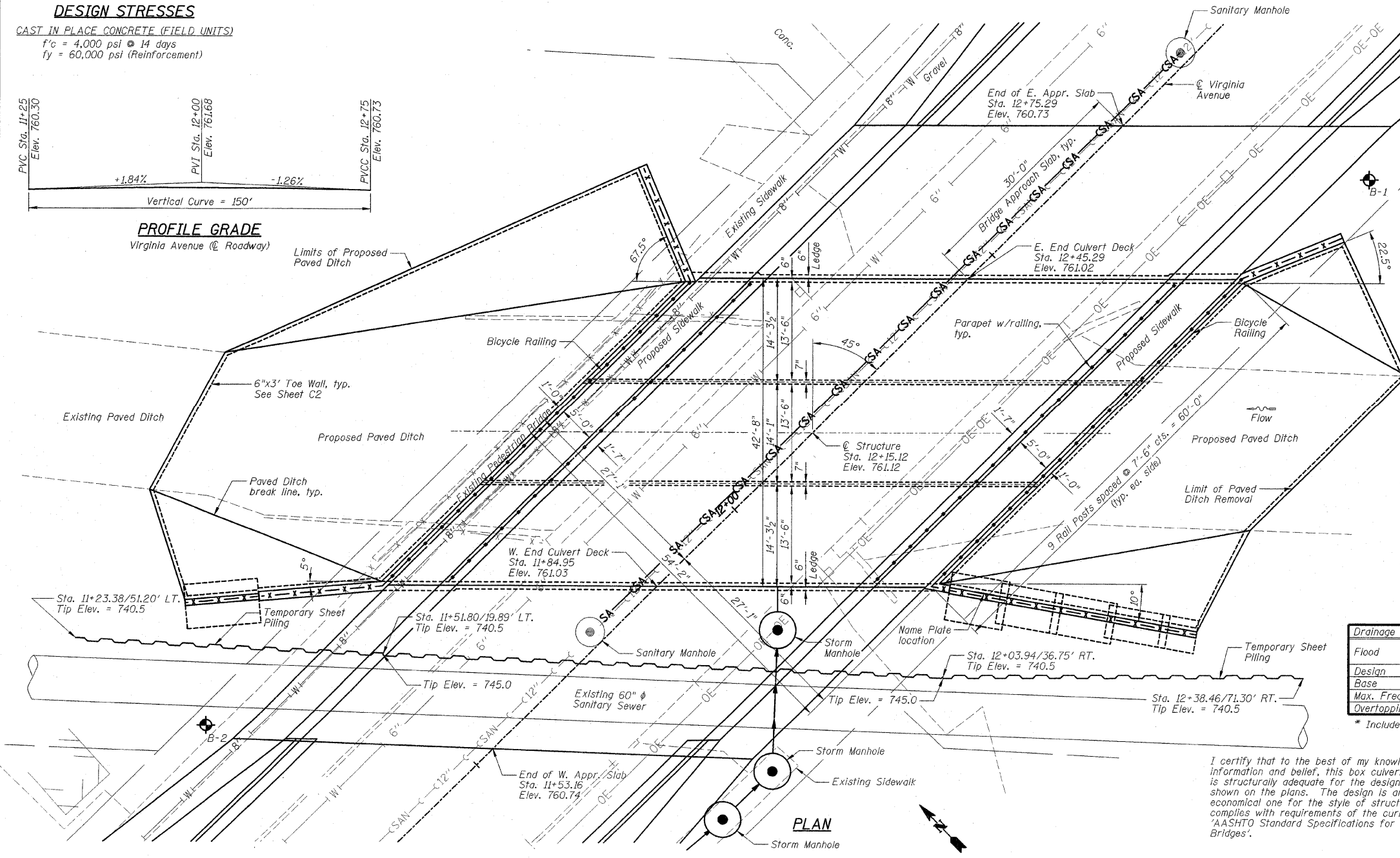
DESIGN STRESSES

CAST IN PLACE CONCRETE (FIELD UNITS)

$f'_c = 4,000 \text{ psi @ 14 days}$
 $f_y = 60,000 \text{ psi (Reinforcement)}$

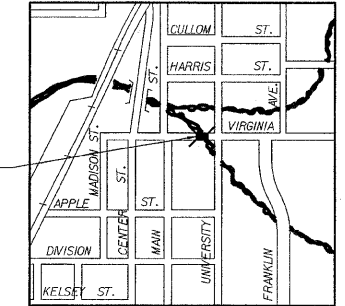
PROFILE GRADE

Virginia Avenue @ Roadway



ELEVATION AT @ CULVERT

Note: Horizontal dimensions are at right angles to the roadway.



LOCATION MAP

VIRGINIA AVENUE OVER SUGAR CREEK
 BUILT 20... BY TOWN OF NORMAL
 SECTION 04-00226-00-BR
 LOADING HS20
 STR. NO. 057-7834

NAME PLATE DETAIL

See Standard 515001

INDEX TO SHEETS

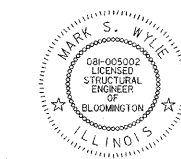
SHEET NO.	TITLE
C1	GENERAL PLAN AND ELEVATION
C2	BILL OF MATERIAL, GENERAL NOTES AND MISCELLANEOUS DETAILS
C3	TEMPORARY SHEET PILING DETAIL
C4	BOTTOM SLAB REINFORCEMENT AND SECTION
C5	BOTTOM SLAB COVER PLATE
C6	TOP SLAB REINFORCEMENT
C7-C8	CULVERT WALL SECTIONS
C9	CULVERT CROSS SECTION
C10	PARAPET ELEVATION, SECTION AND DETAIL
C11	TOP OF WEST APPROACH SLAB ELEVATIONS
C12-C13	WEST APPROACH SLAB
C14	TOP OF EAST APPROACH SLAB ELEVATIONS
C15	EAST APPROACH SLAB
C16	PARAPET TRANSITION DETAILS
C17	NORTHEAST WINGWALL
C18	SOUTHWEST WINGWALL
C19	SOUTHWEST CORNER DETAIL AND RETAINING WALL
C20	NORTHWEST WINGWALL AND RETAINING WALL
C21	WINGWALLS & RETAINING WALLS BILL OF MATERIAL AND DETAILS
C22	BAR SPLICER ASSEMBLY DETAILS
C23	SOIL BORING LOGS

WATERWAY INFORMATION

Flood		Q		Opening (Sq. Ft.)		Nat.		Head-Ft.		Headwater El.	
Year	Freq.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
30	1700	168	249	761.77	0.01*	0.0*	761.78*	761.77*			
100	2360	168	249	762.57	0.01*	0.0*	762.58*	762.57*			

* Includes flow over road

I certify that to the best of my knowledge, information and belief, this box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'.



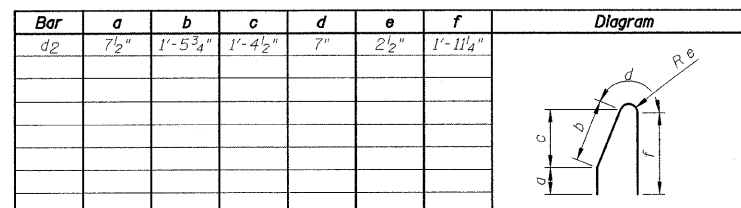
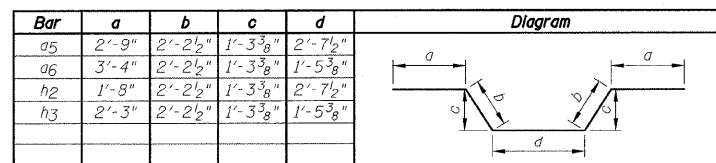
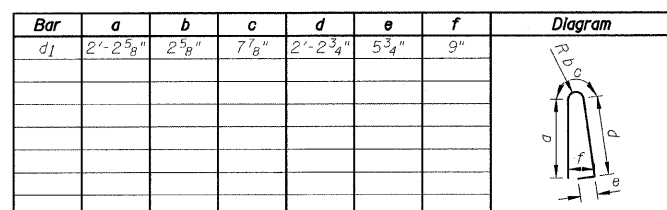
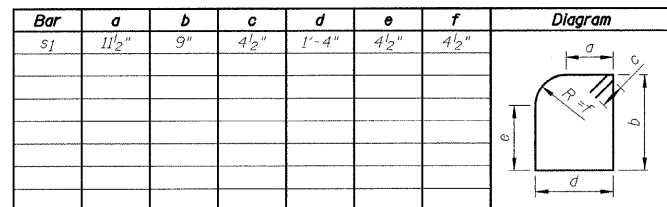
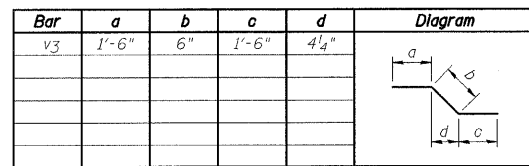
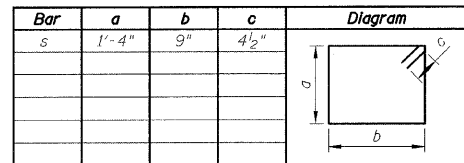
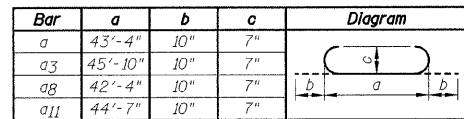
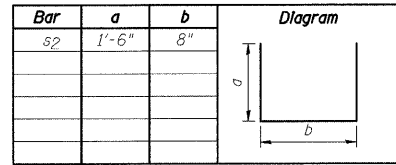
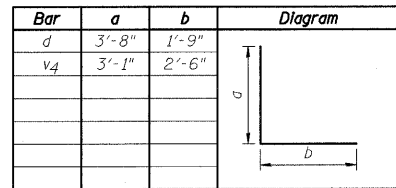
Mark S. Wylie Date 7/22/09
 MARK S. WYLIE
 ILLINOIS STRUCTURAL ENGINEER
 NO. 081-005002
 Exp. Date 11/30/10

DESIGNED - SDH	REVISD -	TOWN OF NORMAL	GENERAL PLAN AND ELEVATION			VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
DRAWN - JWK	REVISD -		SCALE:	SHEET NO. C1	OF 23 SHEETS		STA.	TO STA.	6366	04-00226-00-BR	MCLEAN	52	22
CHECKED - MSW	REVISD -								S.N. 057-7834		CONTRACT NO. 91416		
DATE - 07/22/2009	REVISD -								FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

CULVERT BAR BENDING DIAGRAMS



CULVERT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	32	#7	45'-0"	
a1	66	#7	43'-4"	
a2	32	#7	24'-0"	
a3	82	#7	47'-6"	
a4	82	#7	45'-10"	
a5	63	#7	12'-7"	
a6	63	#7	12'-7"	
a7	66	#7	12'-4"	
a8	32	#7	44'-0"	
a9	32	#7	24'-0"	
a10	82	#7	44'-7"	
a11	82	#7	46'-3"	
d	88	#4	5'-5"	
d1	132	#5	5'-7"	
d2	132	#5	4'-8"	
e	32	#4	16'-2"	
e1	4	#8	16'-2"	
e2	32	#4	7'-0"	
e3	4	#8	7'-0"	
e4	16	#4	12'-3"	
e5	4	#8	12'-3"	
h	88	#5	32'-1"	
h1	88	#5	37'-7"	
h2	44	#5	10'-5"	
h3	44	#5	10'-5"	
h4	16	#5	30'-9"	
h5	532	#5	20'-4"	
h6	129	#5	26'-6"	
h7	16	#7	31'-4"	
h8	4	#5	5'-0"	
h9	4	#5	1'-6"	
s	61	#4	4'-11"	
s1	61	#4	4'-9"	
s2	154	#4	3'-8"	
v	466	#5	3'-9"	
v1	158	#5	5'-6"	
v2	308	#5	6'-9"	
v3	152	#4	3'-6"	
v4	152	#5	5'-7"	

Item	Unit	Quantity
Concrete Box Culverts	Cu. Yd.	311.9
Reinforcement Bars, Epoxy Coated	Pound	88,030
Bar Splicers	Each	132
Porous Granular Embankment, Special	Cu. Yd.	300

GENERAL NOTES

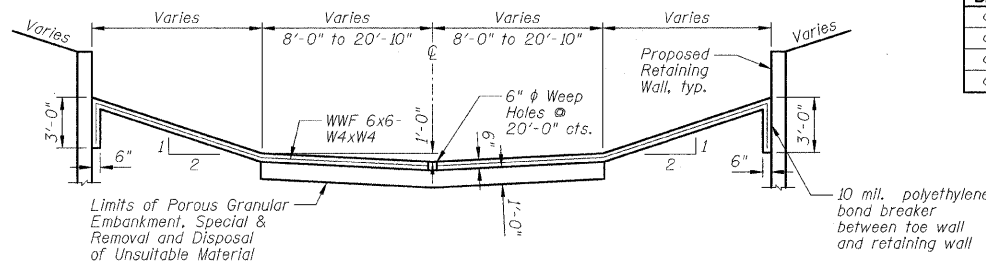
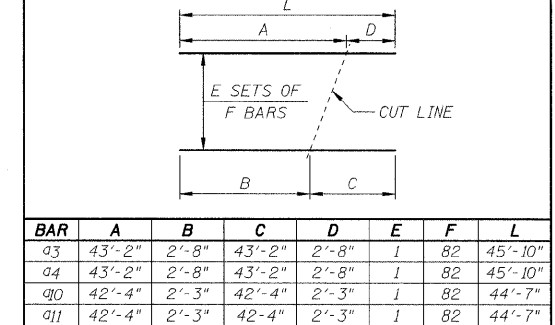
- At least 10'-0" of this culvert barrel shall be poured monolithically with the wingwalls.
- Exposed edges shall be beveled 3/4".
- Class SI Concrete shall be used throughout except Class BD Concrete shall be used for the top slab. Optional use of Precast Concrete Box Culverts is not allowed.
- Reinforcement Bars shall conform to the requirements of ASTM A706, Grade 60 (IL Modified). See Special Provision.
- For backfilling and embankment, see Standard Specifications and Roadway Plans.
- If shall be the responsibility of the Contractor to divert the stream flow and any storm sewer flow during construction in order to keep the construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included with "Concrete Box Culverts".
- Contractor to field locate all utilities before starting construction and protect all utilities. Contractor to submit information regarding protecting utilities to the Engineer before starting construction.
- For field data, See Farnsworth Group field book No. 2337.
- The pay item "Removal And Disposal Of Unsuitable Material" shall include the excavation of unsuitable material for a depth to 1'-6" below the structure for a width of 52'-10" within the limits of the toe walls as shown in the plans. The actual amount shall be determined in the field by the Engineer.
- The pay item "Porous Granular Embankment, Special" shall include the placement of CA-1 and CA-7 below the structure for a width of 52'-10" within the limits of the toe walls as shown on the plans. The actual amount shall be determined in the field by the Engineer.
- All Reinforcement Bars shall be epoxy coated.
- E.F. denotes Each Face I.F. denotes Inside Face O.F. denotes Outside Face B.F. denotes Back Face F.F. denotes Front Face
- There will be no additional compensation should any reinforcement need to be cut or bent in the field.
- Construction Joints shall be bonded in accordance with Section 503.09(b) of the Standard Specifications.
- The layout of the paved ditch may be varied in the field to suit ground conditions as directed by the Engineer.
- Minimum bar lap lengths are as follows, unless noted otherwise.
Barrels: Bar Size Min. Lap Length Wingwalls: Bar Size Min. Lap Length
#4 1'-4" #4 1'-8"
#5 1'-8" #5 2'-2"
#6 2'-0" #6 2'-7"
#7 2'-9" #7 3'-5"
#8 3'-8" #8 4'-6"
#9 4'-7" #9 5'-9"
- The concrete for the culvert top slab finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of culvert. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.
- If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
- The concrete in the retaining walls shall be paid for as "Concrete Box Culverts".
- Contractor to protect the 60" sanitary sewer. Positive means will be required including sheet piling. Contractor to submit information regarding protecting utilities to the Engineer before starting construction. Price included with "Temporary Sheet Piling".
- "Parapet Railing" and "Pedestrian Railing" are equivalent for this plan set. Parapet Railing items are included in the pay item for Pedestrian Railing.
- All railing to be white to match railing on Apple Street bridge.
- Removal of the bituminous wearing surface on the existing bridge shall be included in the rest of Removal of Existing Structures.
- The Paved Ditch shall be paid for as "Slope Wall 6 Inch".

STRUCTURAL TOTAL BILL OF MATERIAL

ITEMS	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu Yd	300
Porous Granular Embankment	Cu Yd	723
Porous Granular Embankment, Special	Cu Yd	300
Paved Ditch Removal	Foot	157
Removal of Existing Structures	Each	1
Concrete Structures	Cu Yd	77.1
Concrete Superstructure	Cu Yd	172.1
Bridge Deck Grooving	Sq Yd	494
*Protective Coat	Sq Yd	801
Furnishing and Erecting Structural Steel	Pound	1,680
Reinforcement Bars, Epoxy Coated	Pound	152,370
Bar Splicers	Each	132
Pedestrian Railing	Foot	118
Bicycle Railing	Foot	120
Temporary Sheet Piling	Sq Ft	2,860
Name Plates	Each	1
Concrete Box Culverts	Cu Yd	366.4
Controlled Low Strength Material	Cu Yd	7
Chain Link Fence, 5'	Foot	93
Slope Wall 6"	Sq Yd	437

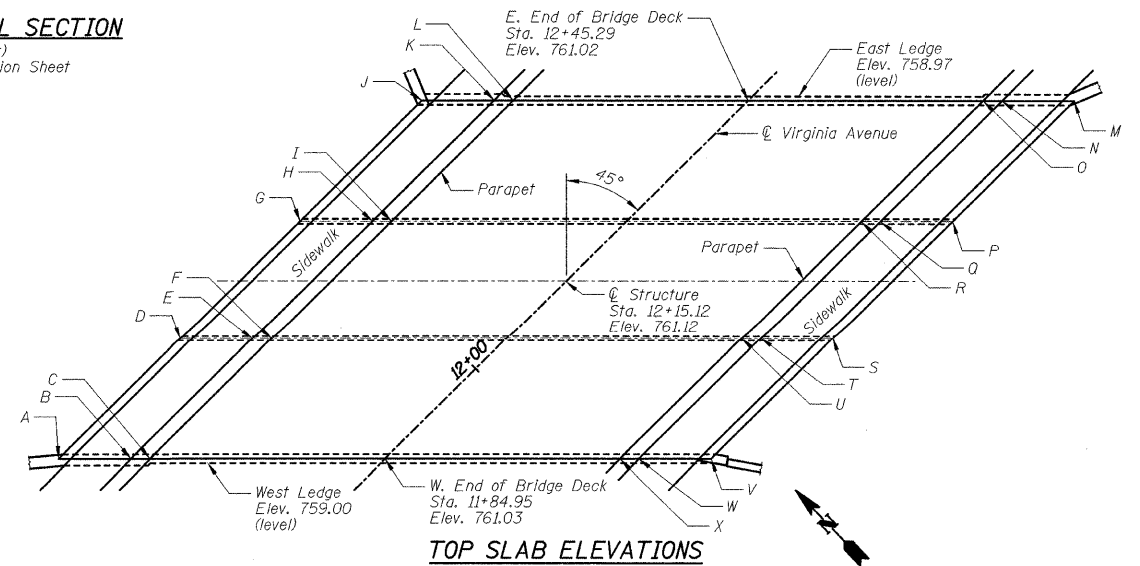
*Quantity is for top surface of deck, sidewalk, parapet, and approach slab.

BAR CUTTING DIAGRAM



PAVED DITCH TYPICAL SECTION
(Looking Northwest)
See General Plan & Elevation Sheet

Location	Station	Offset	Elevation
A	11+57.87	27.08' LT.	760.25
B	11+63.87	21.08' LT.	760.44
C	11+65.45	19.50' LT.	760.49
D	11+78.08	27.08' LT.	760.44
E	11+84.08	21.08' LT.	760.60
F	11+85.66	19.50' LT.	760.65
G	11+98.00	27.08' LT.	760.55
H	12+04.00	21.08' LT.	760.69
I	12+05.58	19.50' LT.	760.72
J	12+18.21	27.08' LT.	760.57
K	12+24.21	21.08' LT.	760.69
L	12+25.79	19.50' LT.	760.71
M	12+72.37	27.08' RT.	760.22
N	12+66.37	21.08' RT.	760.41
O	12+64.79	19.50' RT.	760.46
P	12+52.16	27.08' RT.	760.42
Q	12+46.16	21.08' RT.	760.59
R	12+44.58	19.50' RT.	760.63
S	12+32.24	27.08' RT.	760.54
T	12+26.24	21.08' RT.	760.68
U	12+24.66	19.50' RT.	760.72
V	12+12.03	27.08' RT.	760.58
W	12+06.03	21.08' RT.	760.69
X	12+04.45	19.50' RT.	760.72



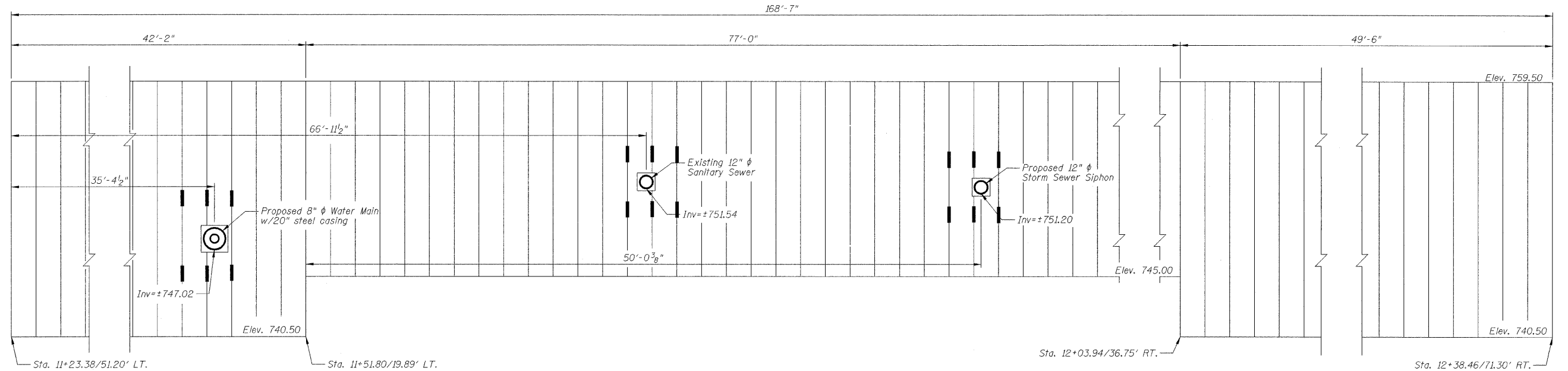
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

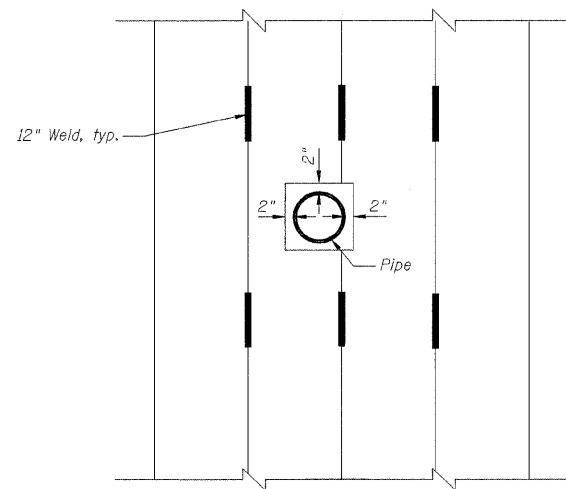
BILL OF MATERIAL, GENERAL NOTES AND MISCELLANEOUS DETAILS

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	23
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



TEMPORARY SHEET PILING ELEVATION



SHEET PILING DETAIL AROUND PIPES

TEMPORARY SHEET PILING DATA

Top Elevation = 759.5'
 Tip Elevation = 745.0' within limits of box culvert
 Tip Elevation = 740.5' within limits of retaining wall
 Min. Section Modulus = 7.3 in³/ft.
 Area = 2860 ft²

NOTES:

- 1.) Contractor to locate utilities, especially the 60" sanitary sewer, before driving sheet piling.
- 2.) The unit price bid for Temporary Sheet Piling shall also include any "Block Outs" or cutting necessary for utilities.
- 3.) See Sheet C1 for temporary sheet piling locations.

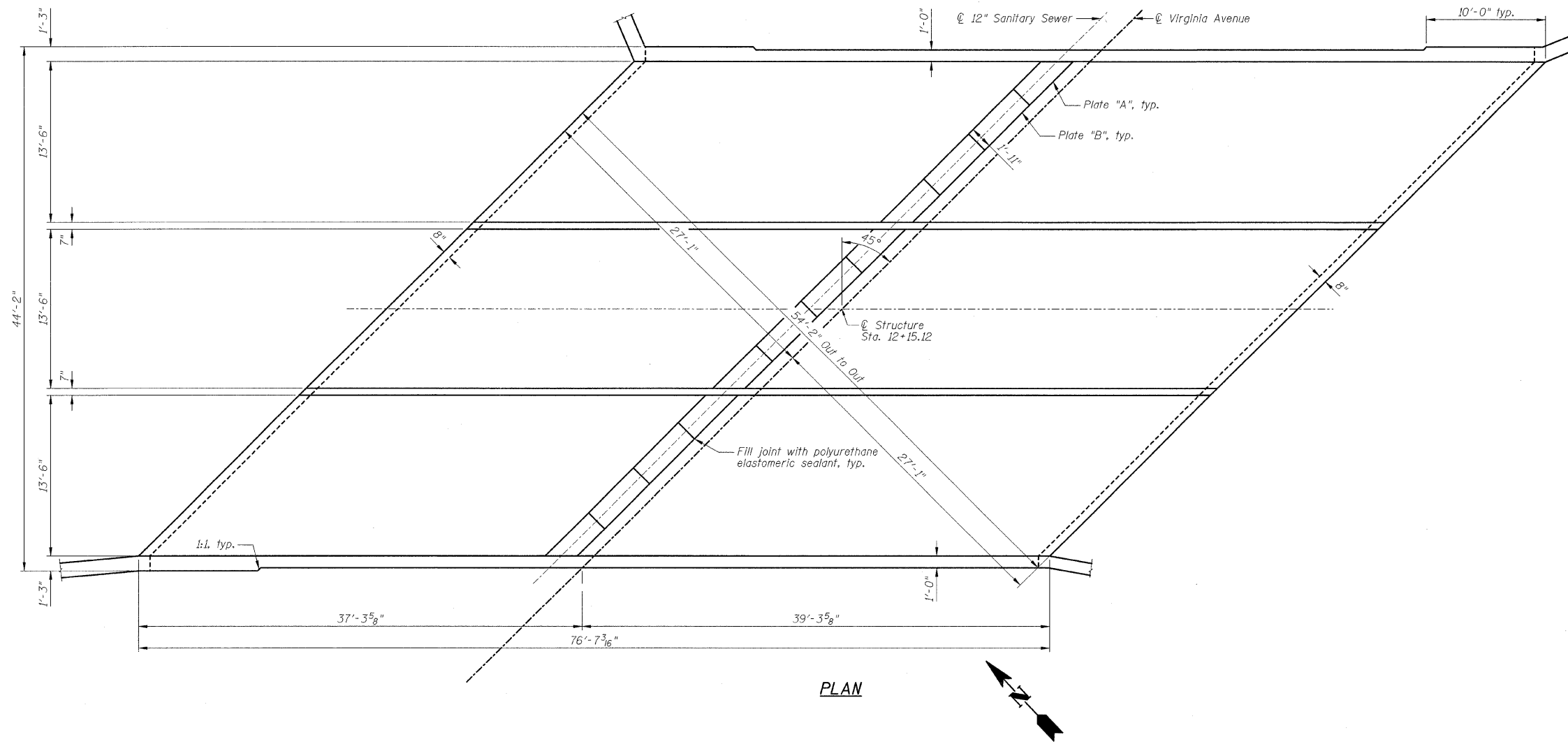
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL	
-----------------------	--

TEMPORARY SHEET PILING DETAIL			
SCALE:	SHEET NO. 03 OF 23 SHEETS	STA.	TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCLEAN COUNTY	

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	24
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN

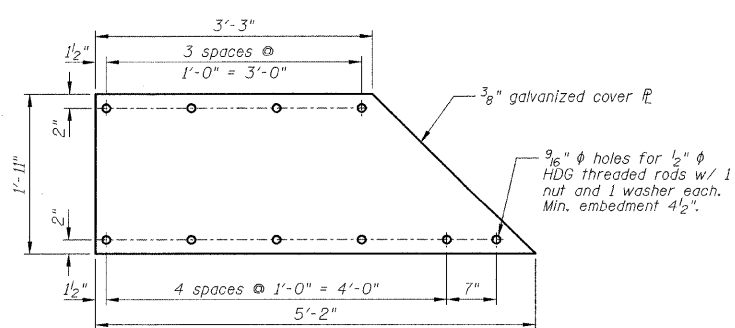


PLATE "A"

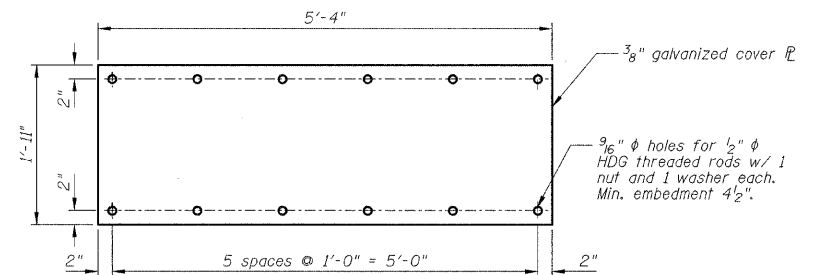


PLATE "B"

- NOTES:**
- 1.) Cover plates shall conform to the requirements of ASTM A36.
 - 2.) 1/2" diameter threaded rods shall conform to the requirements of ASTM A 193, Grade B7.
 - 3.) All connection components included in the cost for Furnishing and Erecting Structural Steel.
 - 4.) Polyurethane elastomeric sealant shall conform to the requirements of ASTM C920. Cost included with Furnishing and Erecting Structural Steel.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

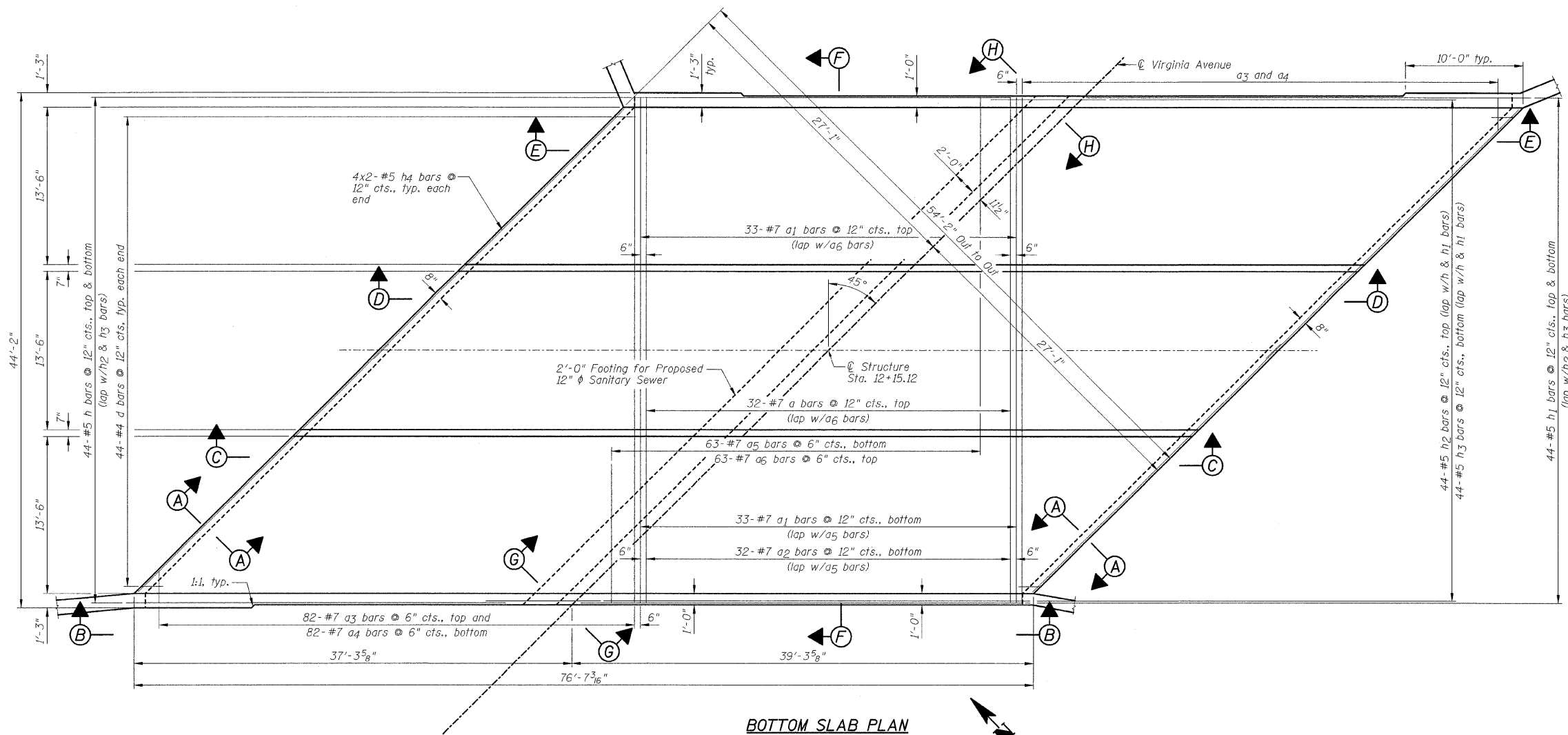
TOWN OF NORMAL

BOTTOM SLAB COVER PLATE

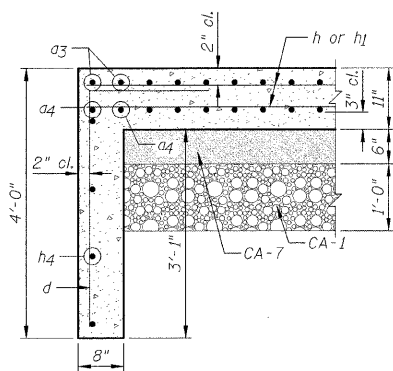
SCALE: SHEET NO. 05 OF 23 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY

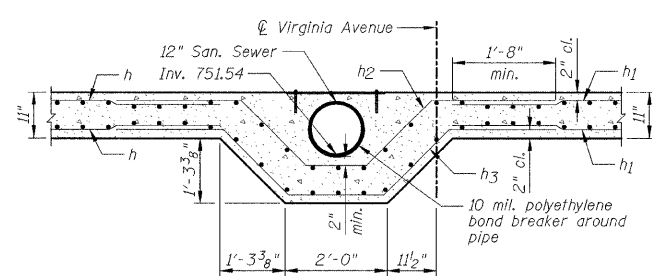
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	25
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



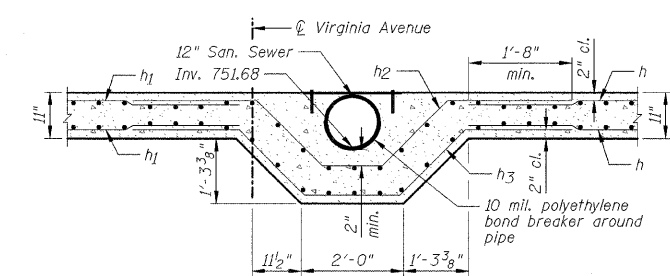
BOTTOM SLAB PLAN



SECTION A-A



WEST END PIPE DETAIL (SECTION G-G)



EAST END PIPE DETAIL (SECTION H-H)

NOTES:

- 1.) Order a3 and a4 bars Full length, cut according to Bar Cutting Diagram on Sheet C2. Use remainder of bars in opposite end.
- 2.) For bar lap lengths, see the General Notes on Sheet C2.
- 3.) See Sheet C2 for Bill of Materials.
- 4.) See Sheet C5 for Cover Plate Detail.
- 5.) See Sheet C7 for View B-B and Section C-C.
- 6.) See Sheet C8 for Section D-D and Section E-E.
- 7.) See Sheet C9 for Section F-F.
- 8.) Cut a thru a4 bars as required to miss 12\"/>

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

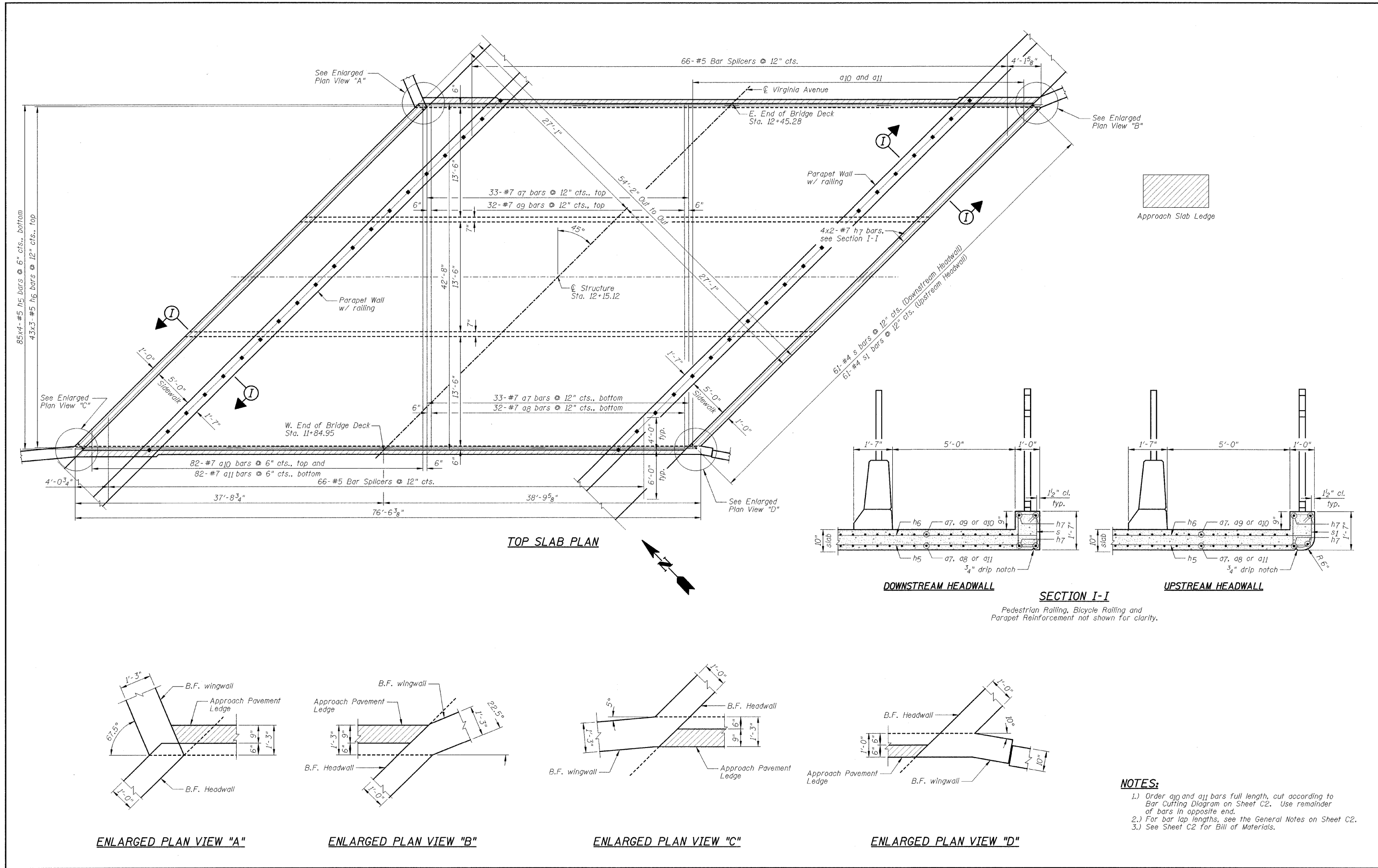
TOWN OF NORMAL

BOTTOM SLAB REINFORCEMENT AND SECTION

SCALE: SHEET NO. C4 OF 23 SHEETS STA. TO STA.

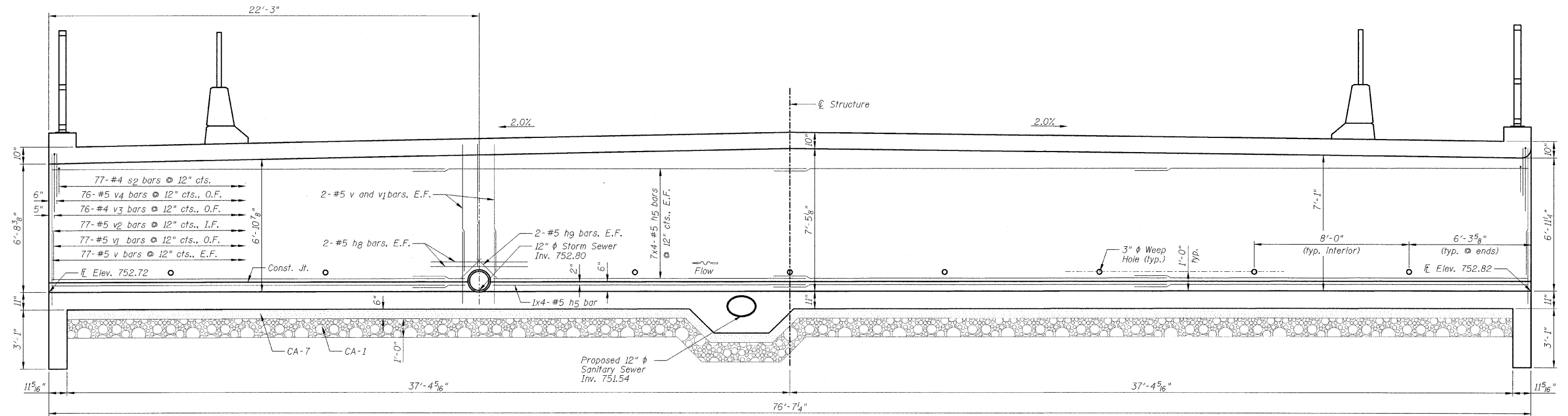
VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	26
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

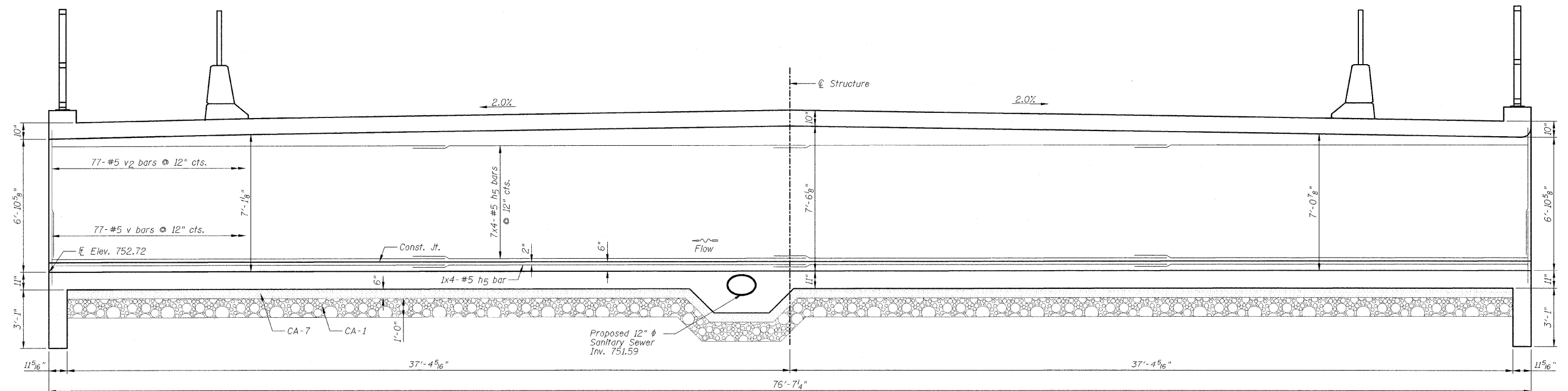


- NOTES:**
- 1.) Order a10 and a11 bars full length, cut according to Bar Cutting Diagram on Sheet C2. Use remainder of bars in opposite end.
 - 2.) For bar lap lengths, see the General Notes on Sheet C2.
 - 3.) See Sheet C2 for Bill of Materials.

DESIGNED - SDH	REVISED -	TOWN OF NORMAL	TOP SLAB REINFORCEMENT		VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
DRAWN - JWK	REVISED -		SCALE:	SHEET NO. C6 OF 23 SHEETS		STA.	TO STA.	6366	04-00226-00-BR	MCLEAN	52	27
CHECKED - MSW	REVISED -							S.N. 057-7834		CONTRACT NO. 91416		
DATE - 07/22/2009	REVISED -							FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



WEST EXTERIOR WALL (VIEW B-B)
(Looking Northeast)



WEST INTERIOR WALL (SECTION C-C)
(Looking Northeast)

NOTES:

- 1.) See Sheet C4 for location of sections.
- 2.) Steel reinforcement in slabs not shown for clarity.
- 3.) Cut hg, v and v1 bars as necessary to miss 12" ϕ Storm Sewer.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

CULVERT WALL SECTIONS

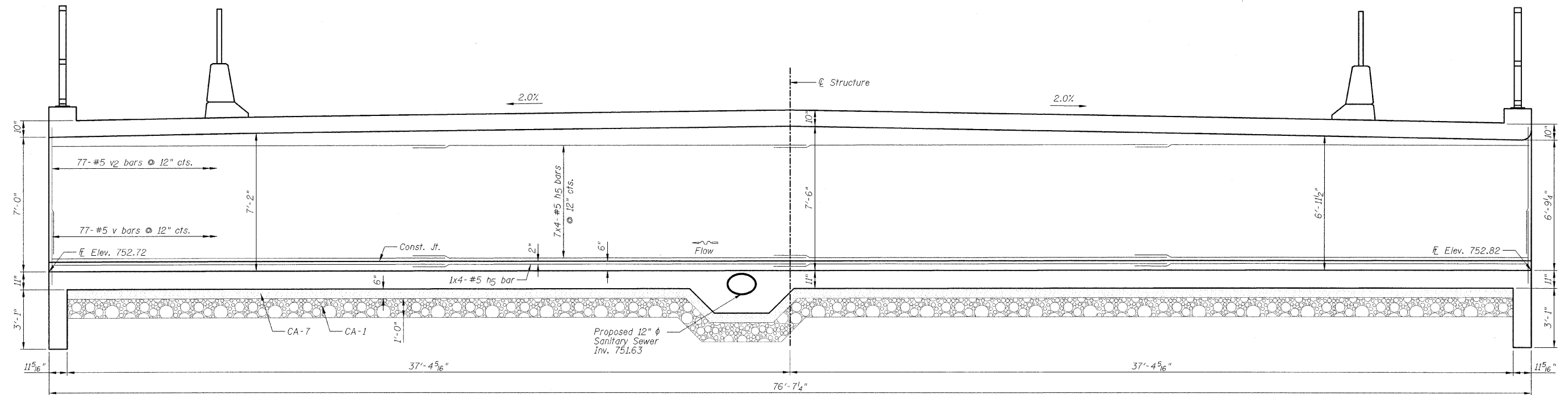
**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY**

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	28
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

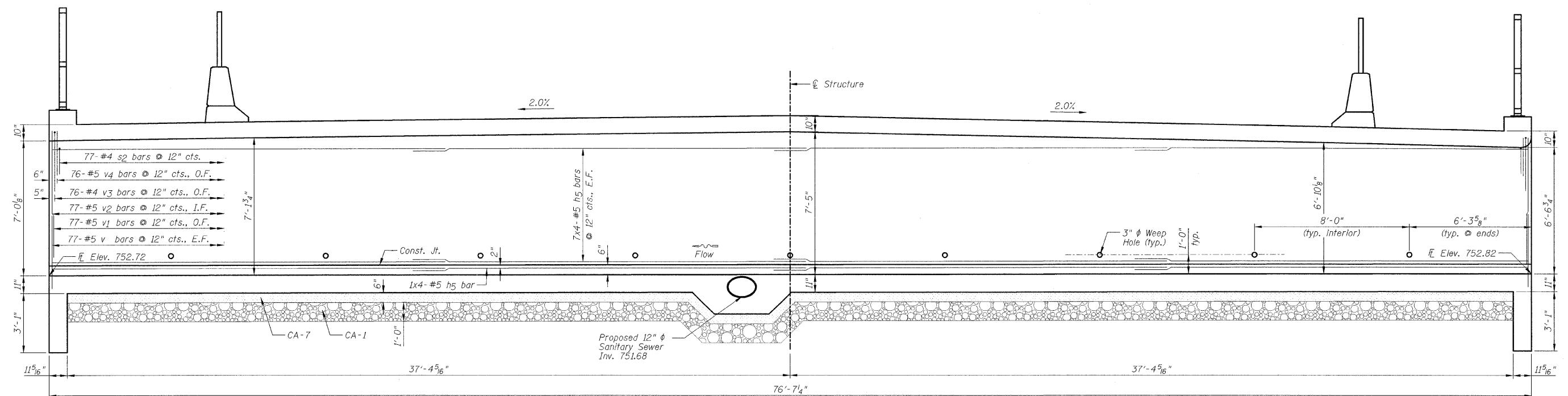
FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-6082



EAST INTERIOR WALL (SECTION D-D)
(Looking Northeast)



EAST EXTERIOR WALL (SECTION E-E)
(Looking Northeast)

NOTES:

- 1.) See Sheet C4 for location of sections.
- 2.) Steel reinforcement in slabs not shown for clarity.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

CULVERT WALL SECTIONS

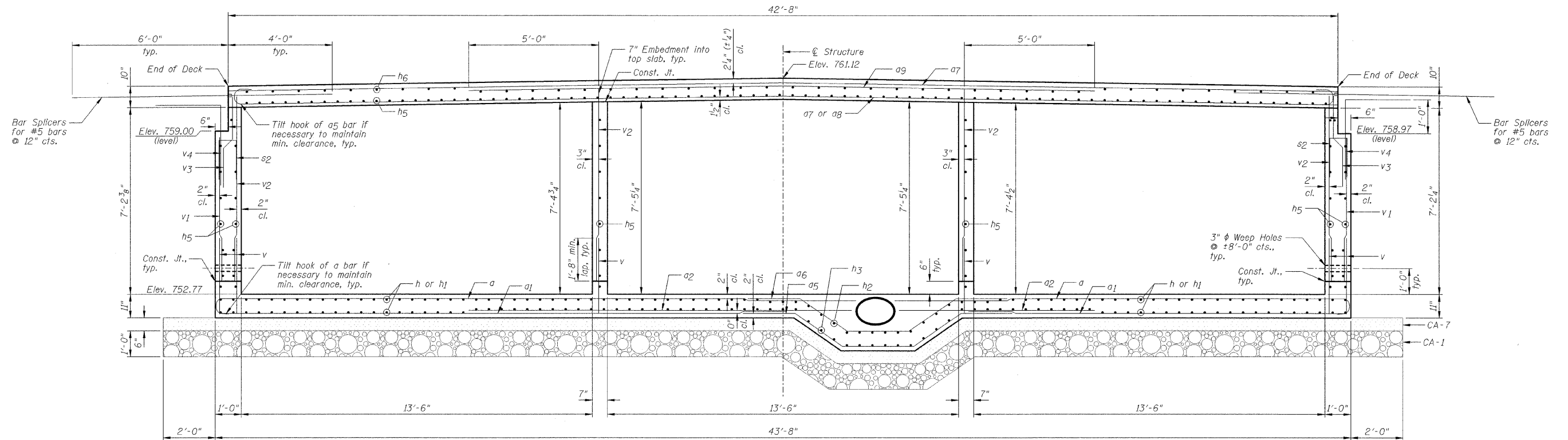
**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	29
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

FARNSWORTH GROUP, INC.

CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

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CROSS SECTION (SECTION F-F)
(Looking Northwest)

NOTES:

- 1.) Wall heights vary, see Sheets C7 and C8.
- 2.) See Sheet C4 for location of Section F-F.

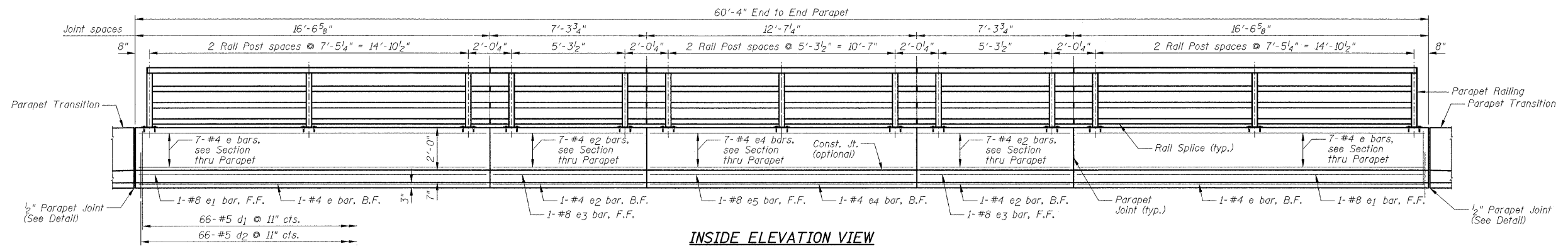
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL	
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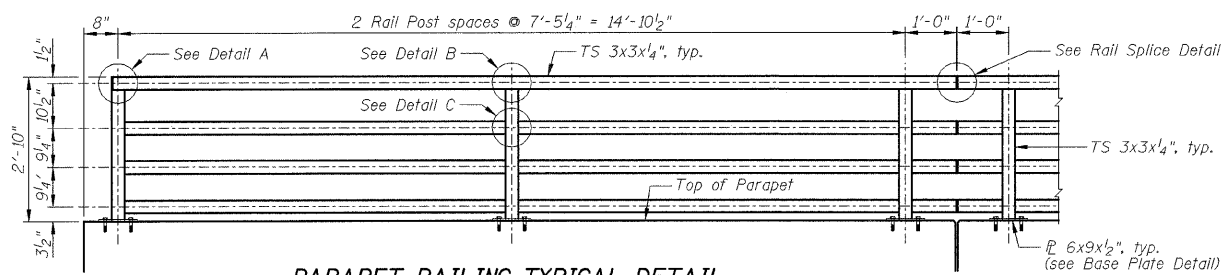
CULVERT CROSS SECTION	
SCALE:	SHEET NO. 09 OF 23 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCLEAN COUNTY	

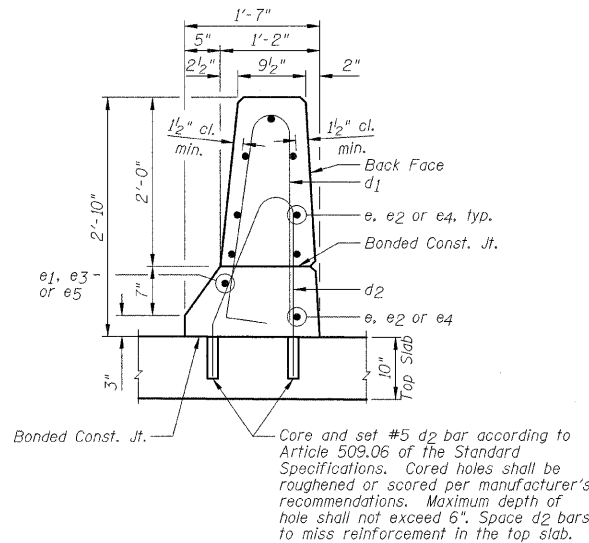
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	30
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



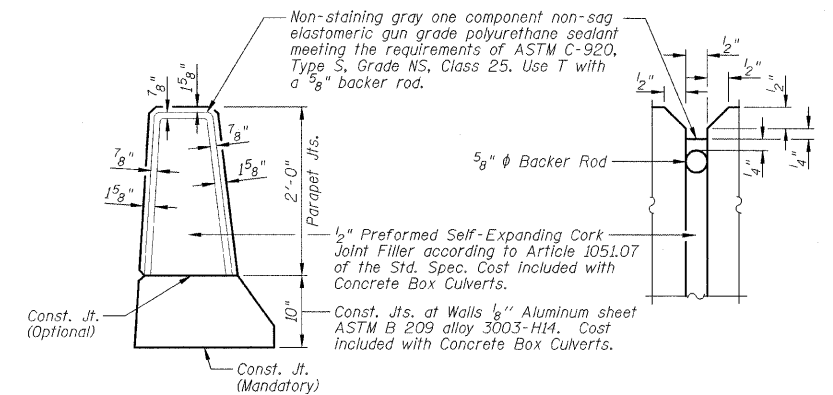
INSIDE ELEVATION VIEW



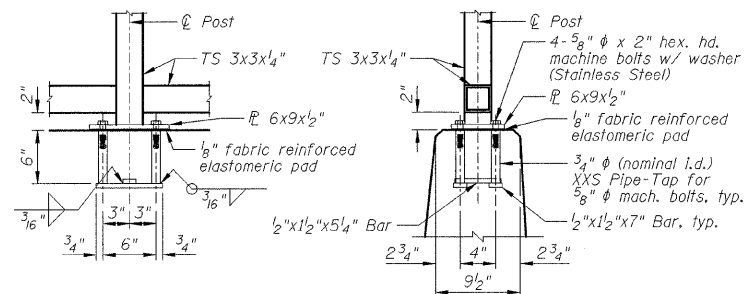
PARAPET RAILING TYPICAL DETAIL



SECTION THRU PARAPET

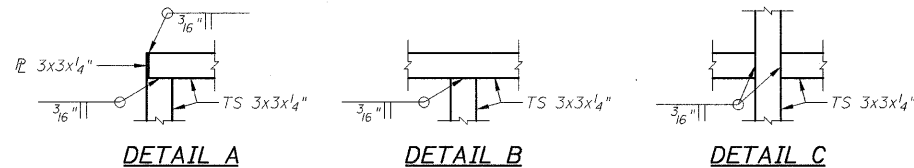


PARAPET JOINT DETAILS



ANCHOR BOLT DETAILS

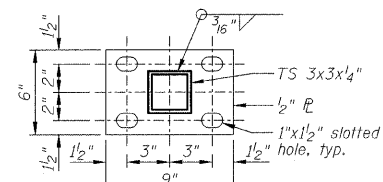
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



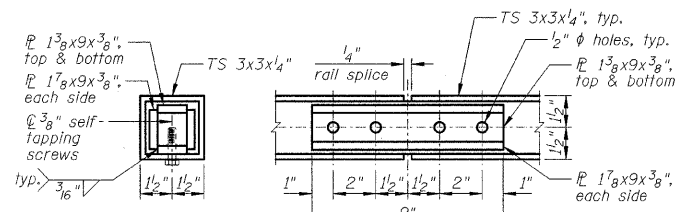
DETAIL A

DETAIL B

DETAIL C



BASE PLATE DETAIL



RAIL SPLICE DETAIL

NOTE:

All posts, railing, splices, anchor devices, and bent plates shall be painted using the Shop and Field Applied Paint System or the Shop Applied Point System. Color will be chosen by the Owner.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

PARAPET ELEVATION, SECTION AND DETAIL

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	31
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SCALE: SHEET NO. C10 OF 23 SHEETS STA. TO STA.

NORTH BACK OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+28.87	-26.08	759.85
A	11+38.87	-26.08	760.01
B	11+48.87	-26.08	760.16
W. End Culvert Deck	11+58.87	-26.08	760.28

NORTH FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+33.52	-21.08	760.03
A	11+43.87	-21.08	760.19
B	11+53.87	-21.08	760.32
W. End Culvert Deck	11+63.87	-21.08	760.44

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+35.00	-19.50	760.08
A	11+45.45	-19.50	760.24
B	11+55.45	-19.50	760.37
W. End Culvert Deck	11+65.45	-19.50	760.48

☉ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+53.16	0.00	760.74
A	11+64.95	0.00	760.87
B	11+74.95	0.00	760.96
W. End Culvert Deck	11+84.95	0.00	761.03

SOUTH EDGE OF PAVEMENT

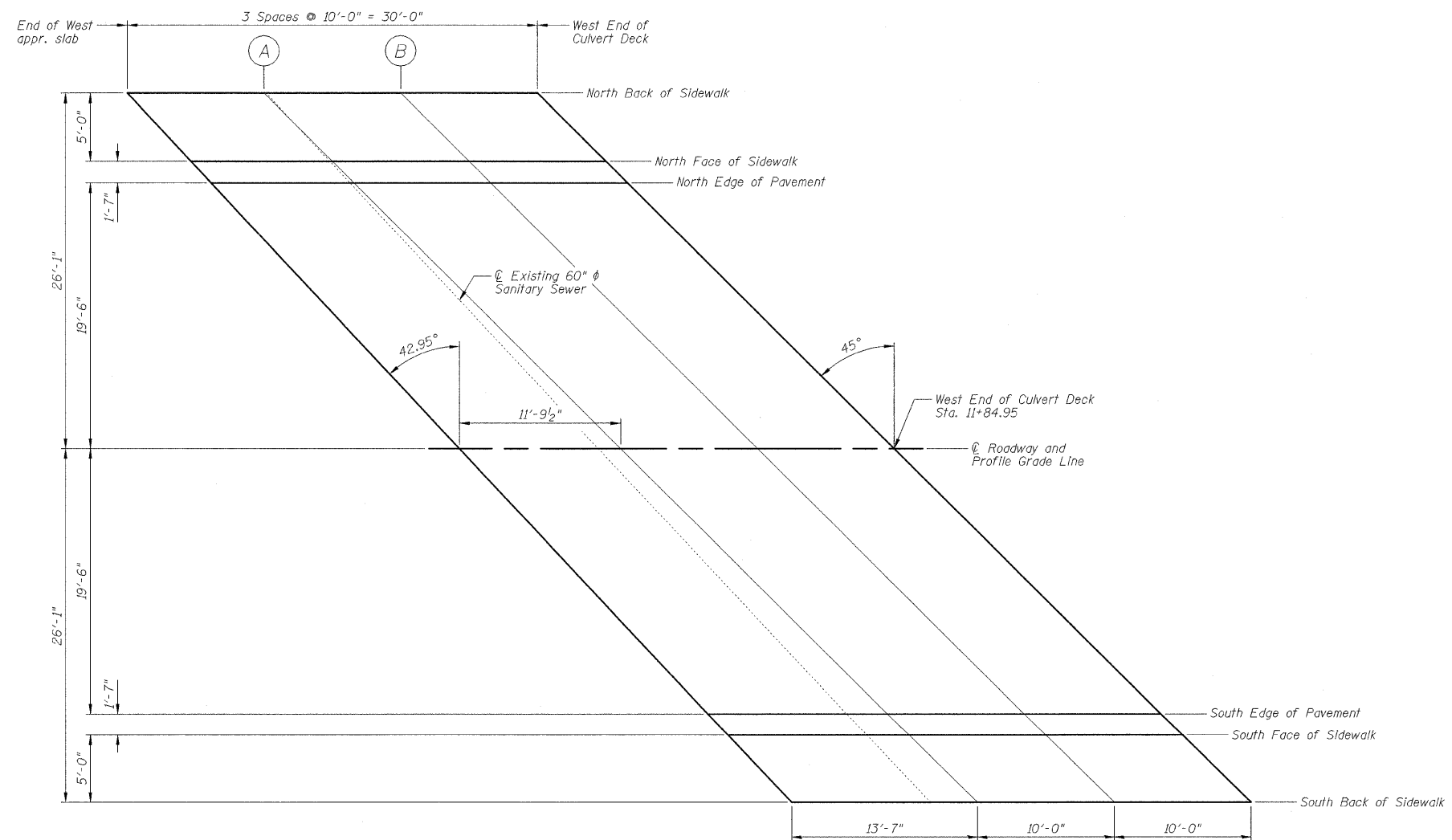
Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+71.32	19.50	760.54
A	11+84.45	19.50	760.64
B	11+94.45	19.50	760.69
W. End Culvert Deck	12+04.45	19.50	760.72

SOUTH FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+72.80	21.08	760.52
A	11+86.03	21.08	760.62
B	11+96.03	21.08	760.66
W. End Culvert Deck	12+06.03	21.08	760.69

SOUTH BACK OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	11+81.03	26.08	760.46
A	11+91.03	26.08	760.54
B	12+01.03	26.08	760.58
W. End Culvert Deck	12+11.03	26.08	760.59



WEST APPROACH SLAB PLAN



DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

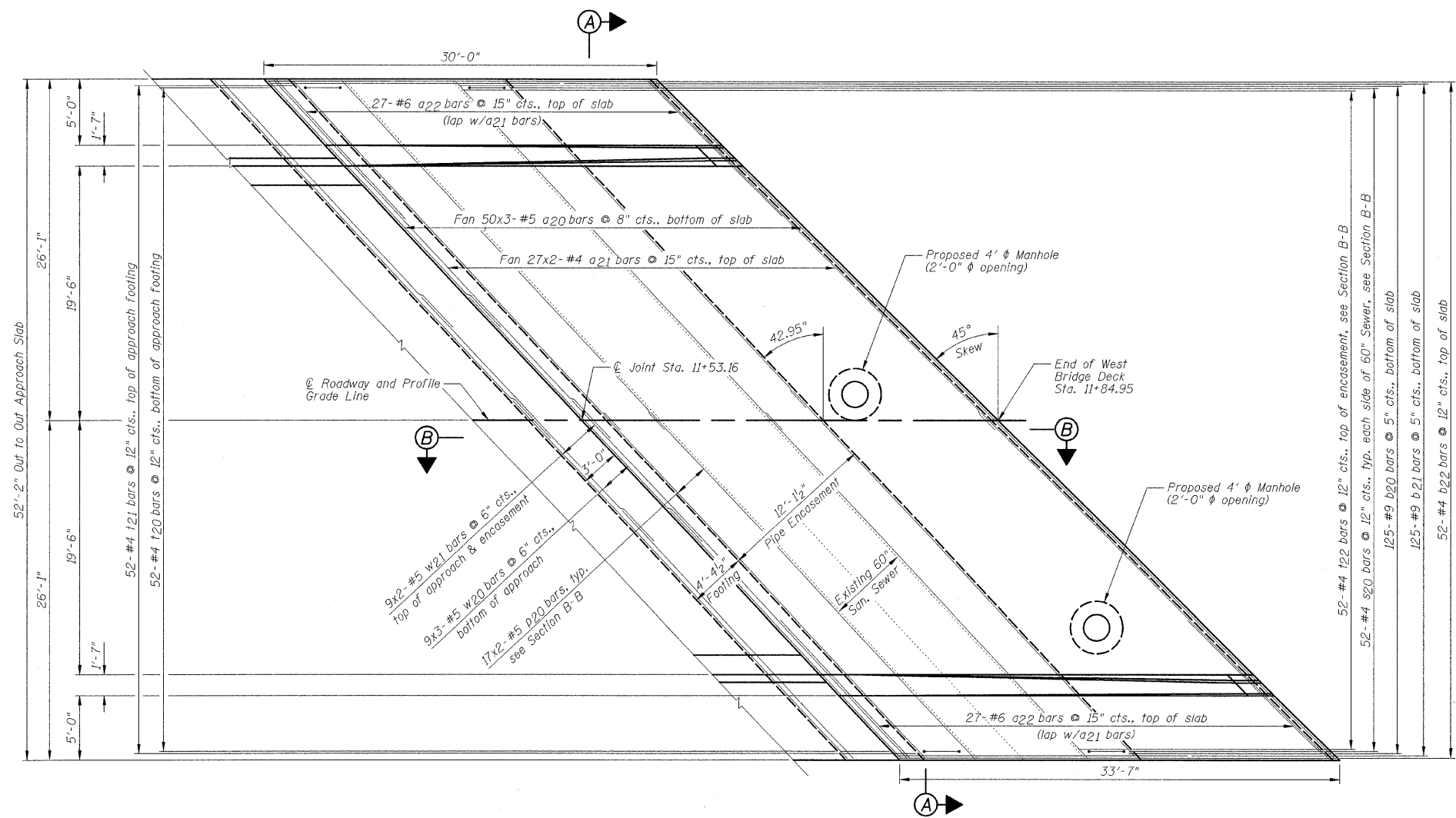
TOWN OF NORMAL

TOP OF WEST APPROACH SLAB ELEVATIONS

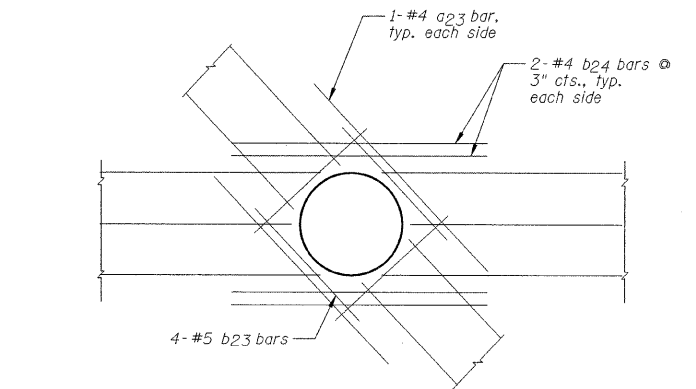
SCALE: SHEET NO. 11 OF 23 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY

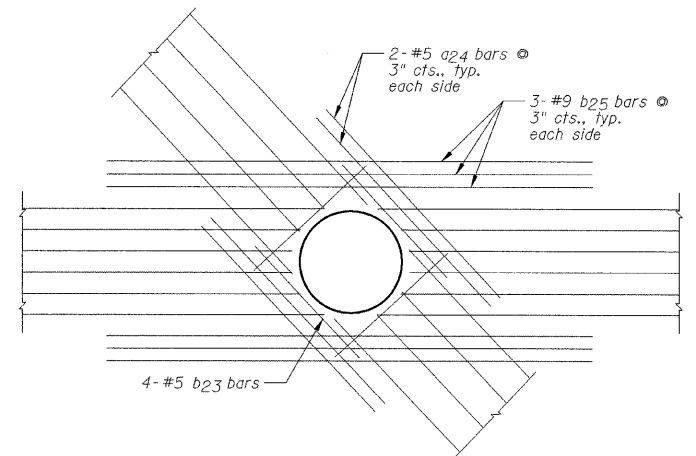
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	32
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



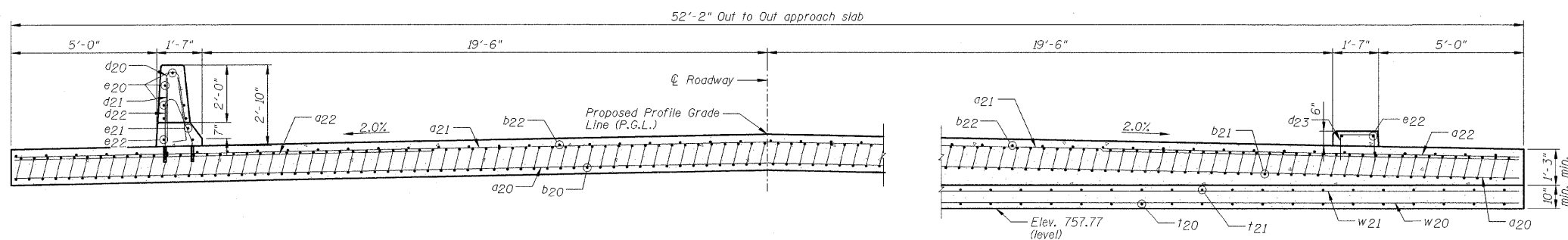
WEST APPROACH PLAN



TOP OF SLAB REINFORCEMENT AROUND 4' Ø MANHOLE



BOTTOM OF SLAB REINFORCEMENT AROUND 4' Ø MANHOLE



NEAR ABUTMENT

AT APPROACH FOOTING

SECTION A-A

BAR LAP	
#4	1'-4"
#5	1'-8"
#9	4'-5"

NOTES:

- 1.) a20 thru a22 bar spacings measured perpendicular to \bar{C} Roadway.
- 2.) Tilt b20 and b21 bars as required to maintain clearance.
- 3.) Approach Slab shall be paid for as Concrete Superstructure.
- 4.) Approach Footing concrete shall be paid for as Concrete Structures.
- 5.) Pipe Encasement shall be paid for as Concrete Structures.
- 6.) Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- 7.) For v4 bar details, see Sheet C2.
- 8.) The Approach Footing maximum applied service bearing pressure (Q_{max}) = 2.0 ksf.
- 9.) See Sheet C22 for Bar Splicer Details.
- 10.) Cost of excavation for Approach Footing Included with Concrete Structures.
- 11.) Order b22 bars full length, cut to fit within top slab. Discard remainder of b22 bars.
- 12.) Cut a20, a21, a22, b20 and b22 bars as necessary to miss manholes.

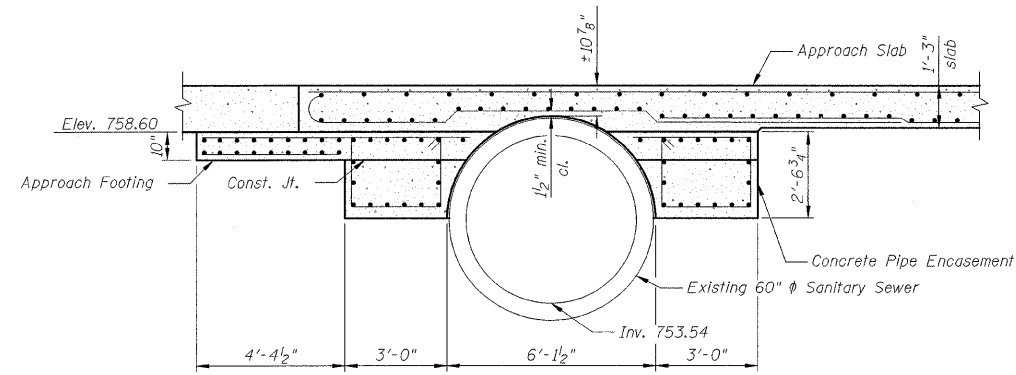
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL	
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WEST APPROACH SLAB	
SCALE:	SHEET NO. C12 OF 23 SHEETS STA. TO STA.

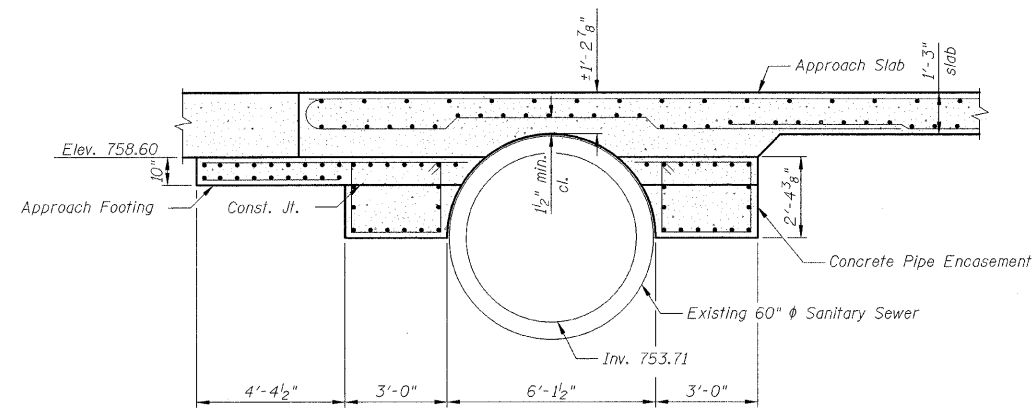
VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCLEAN COUNTY	

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	33
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



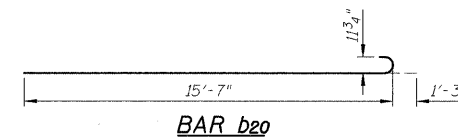
**WEST APPROACH FOOTING,
NORTH END**

Note: See Section B-B for reinforcement callouts and details.

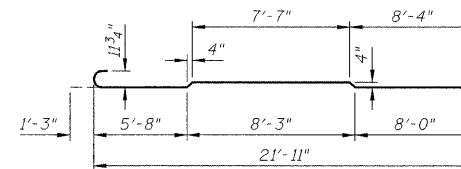


**WEST APPROACH FOOTING,
SOUTH END**

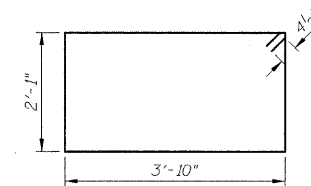
Note: See Section B-B for reinforcement callouts and details.



BAR b20



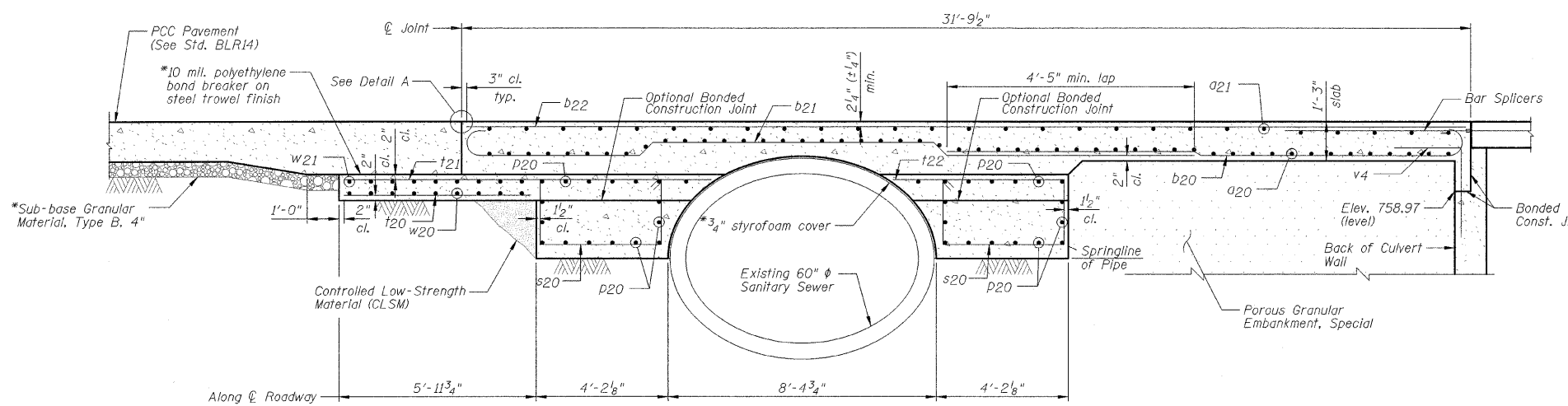
BAR b21



BAR s20

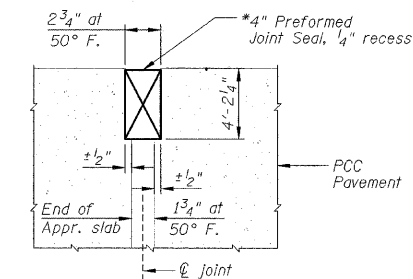
**WEST APPROACH SLAB
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
o20	150	#5	25'-7"	
o21	54	#4	37'-4"	
o22	54	#6	14'-6"	
o23	2	#4	5'-0"	
o24	4	#5	6'-0"	
b20	125	#9	16'-10"	
b21	125	#9	23'-5"	
b22	52	#4	33'-3"	
b23	8	#5	4'-0"	
b24	4	#4	5'-0"	
b25	6	#9	9'-6"	
d20	28	#5	3'-10"	
d21	28	#5	4'-6"	
d22	28	#5	4'-8"	
d23	30	#5	2'-10"	
e20	14	#4	18'-9"	
e21	2	#8	15'-2"	
e22	4	#4	29'-7"	
p20	68	#5	37'-6"	
s20	104	#4	12'-7"	
t20	52	#4	5'-6"	
t21	52	#4	10'-8"	
t22	52	#4	4'-8"	
w20	27	#5	25'-7"	
w21	18	#5	37'-6"	
Item	Unit	Quantity		
Concrete Superstructure	Cu. Yd.	89.4		
Concrete Structures	Cu. Yd.	54.3		
Reinforcement Bars, Epoxy Coated	Pound	31,540		
Controlled Low-Strength Material	Cu. Yd.	4		



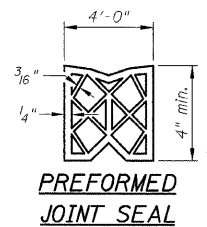
SECTION B-B

(of Roadway Looking North)



RIGID PAVEMENT

DETAIL A



NOTE:

*Cost included with Concrete Superstructure.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

WEST APPROACH SLAB

**VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY**

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	34
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

NORTH BACK OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+19.21	-26.08	760.59
A	12+29.21	-26.08	760.57
B	12+39.21	-26.08	760.53
End East Appr. Slab	12+49.21	-26.08	760.47

NORTH FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+24.21	-21.08	760.68
A	12+34.21	-21.08	760.65
B	12+44.21	-21.08	760.60
End East Appr. Slab	12+54.21	-21.08	760.53

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+25.79	-19.50	760.71
A	12+35.79	-19.50	760.68
B	12+45.79	-19.50	760.62
End East Appr. Slab	12+55.79	-19.50	760.55

☉ ROADWAY & PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+45.29	0.00	761.01
A	12+55.29	0.00	760.94
B	12+65.29	0.00	760.84
End East Appr. Slab	12+75.29	0.00	760.73

SOUTH EDGE OF PAVEMENT

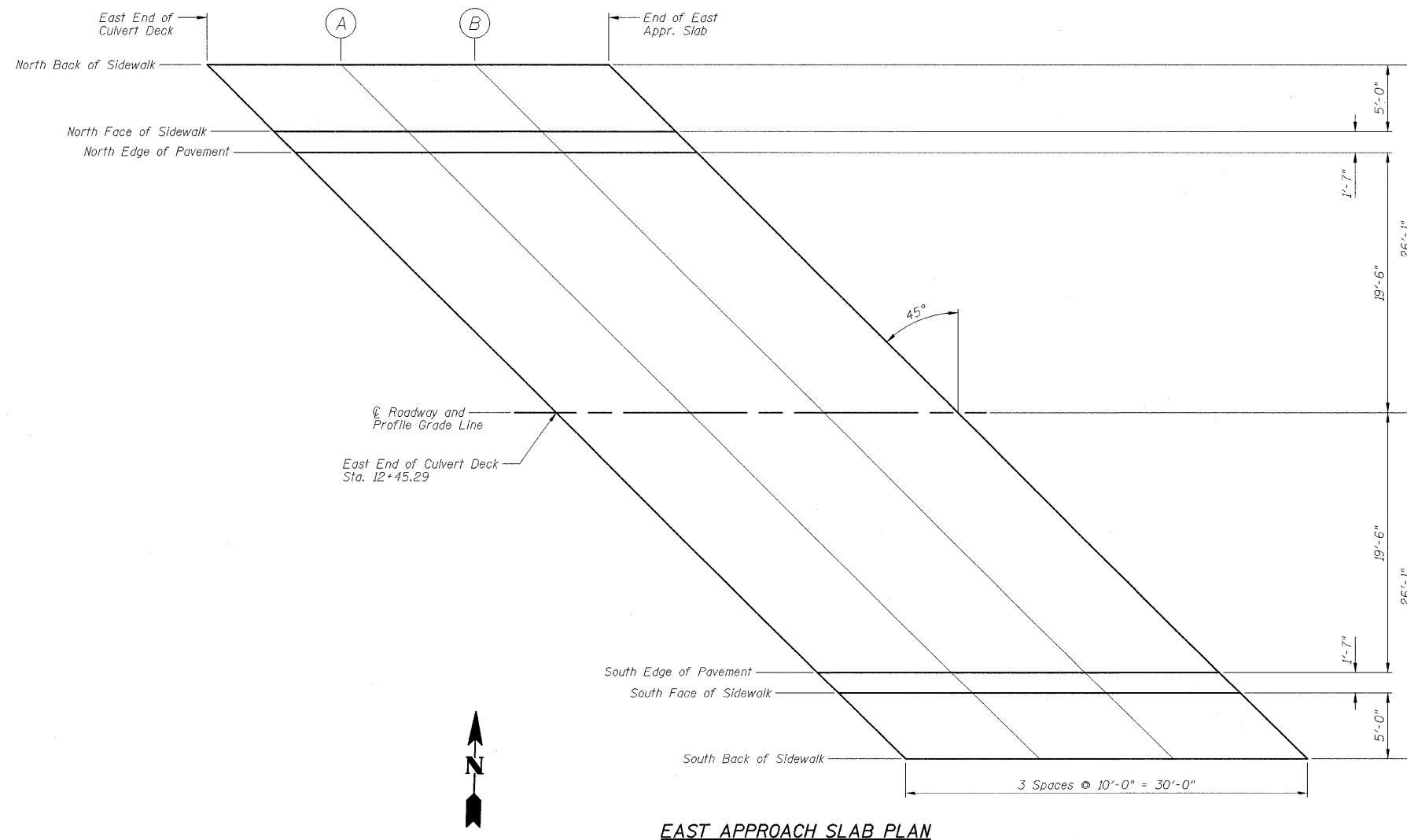
Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+64.79	19.50	760.46
A	12+74.79	19.50	760.34
B	12+84.79	19.50	760.21
End East Appr. Slab	12+94.79	19.50	760.05

SOUTH FACE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+66.37	21.08	760.41
A	12+76.37	21.08	760.29
B	12+86.37	21.08	760.15
End East Appr. Slab	12+96.37	21.08	759.99

SOUTH BACK OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
E. End Culvert Deck	12+71.37	18.92	760.25
A	12+81.37	18.92	760.12
B	12+91.37	19.58	759.97
End East Appr. Slab	13+01.37	19.58	759.80



DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

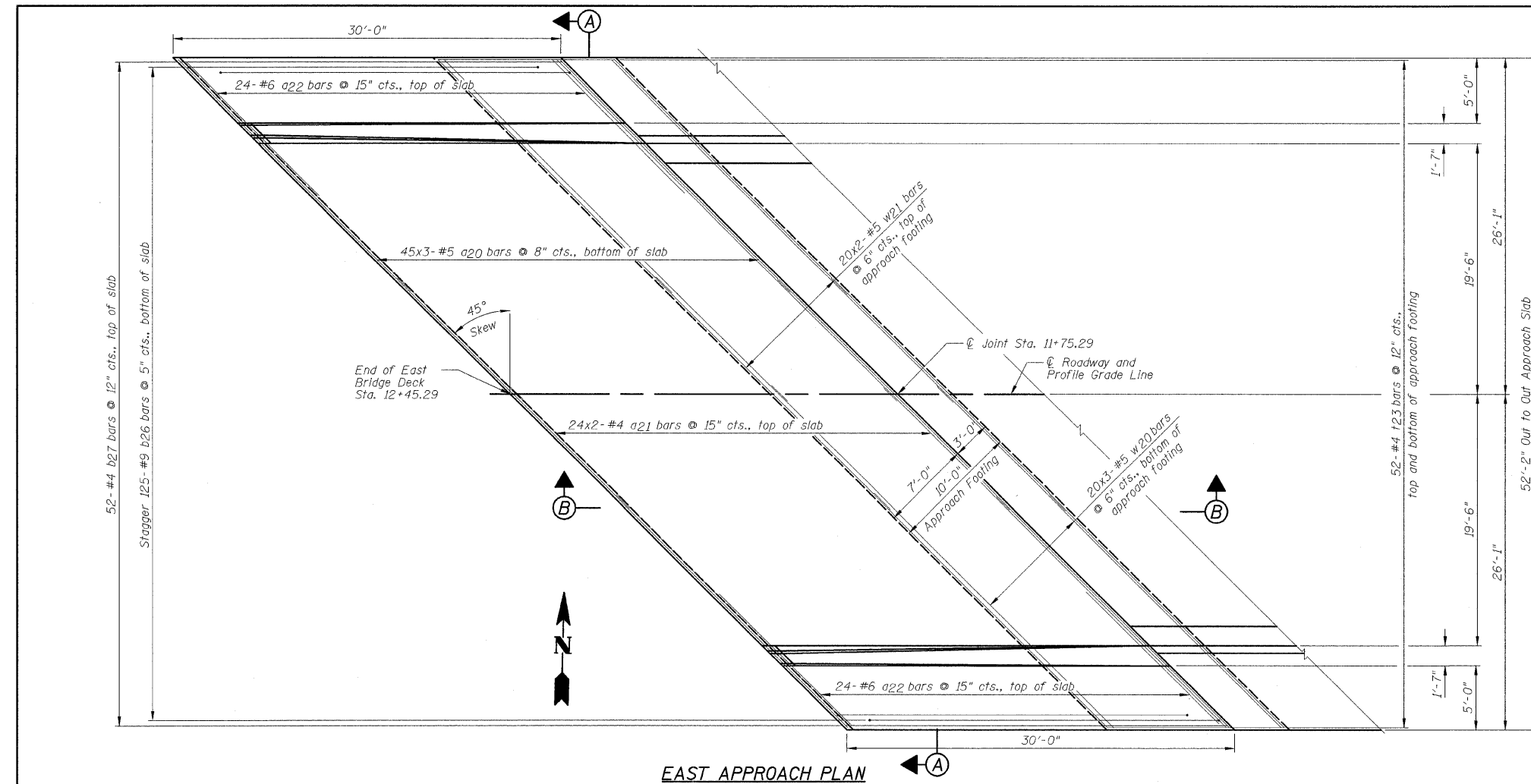
TOWN OF NORMAL

TOP OF EAST APPROACH SLAB ELEVATIONS

SCALE: SHEET NO. C14 OF 23 SHEETS STA. TO STA.

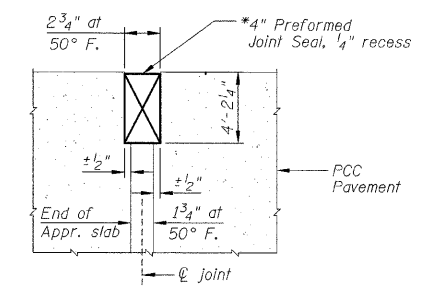
VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	35
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

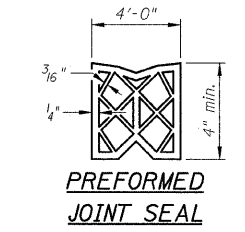


**EAST APPROACH SLAB
BILL OF MATERIAL**

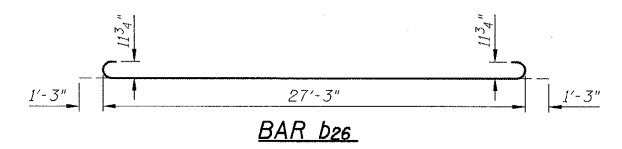
Bar	No.	Size	Length	Shape
a20	135	#5	25'-7"	—
a21	48	#4	37'-4"	—
a22	48	#6	14'-6"	—
b26	125	#9	29'-9"	U
b27	52	#4	29'-8"	—
d20	28	#5	3'-10"	U
d21	28	#5	4'-6"	U
d22	28	#5	4'-8"	U
d23	30	#5	2'-10"	U
e20	14	#4	18'-9"	—
e21	2	#8	15'-2"	—
e22	4	#4	29'-7"	—
t23	104	#4	13'-8"	—
w20	60	#5	25'-7"	—
w21	40	#5	37'-6"	—
Item	Unit	Quantity		
Concrete Superstructure	Cu. Yd.	82.7		
Concrete Structures	Cu. Yd.	22.8		
Reinforcement Bars, Epoxy Coated	Pound	24,440		



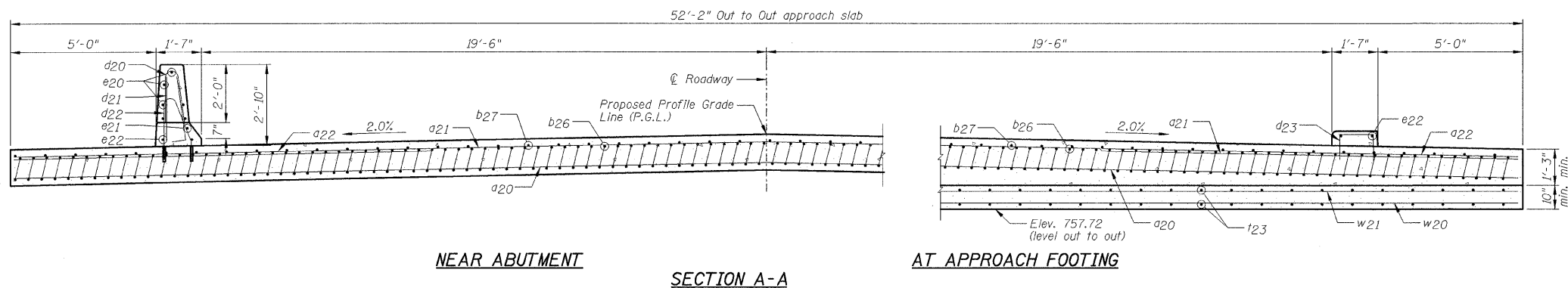
**RIGID PAVEMENT
DETAIL A**



**PREFORMED
JOINT SEAL**



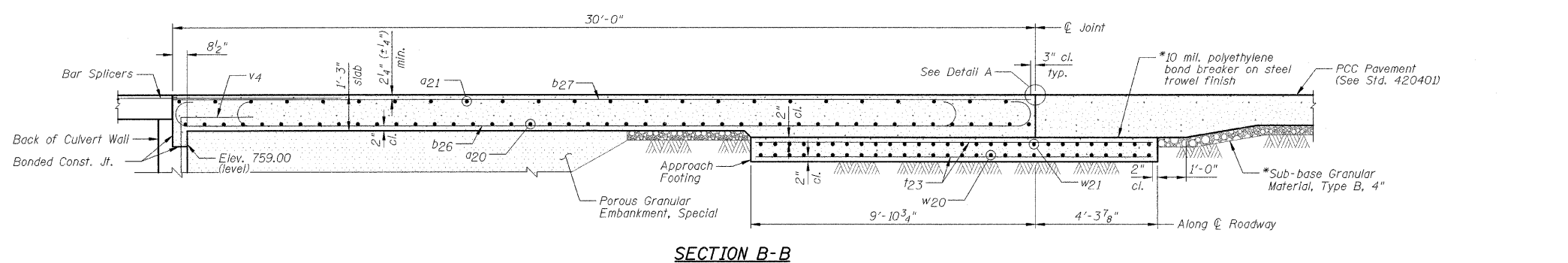
BAR b26



NEAR ABUTMENT

SECTION A-A

AT APPROACH FOOTING

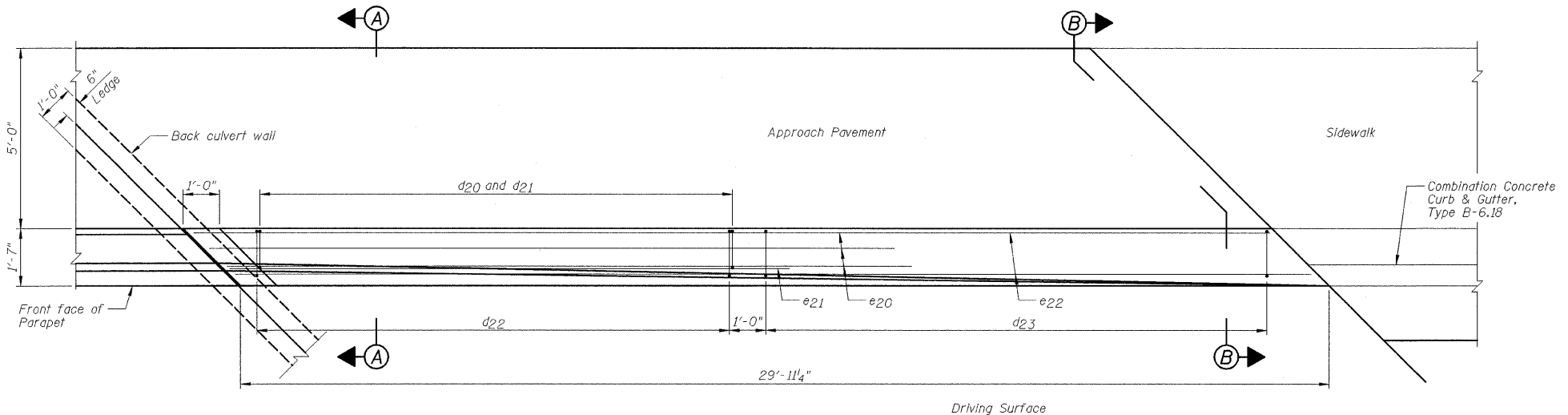


SECTION B-B

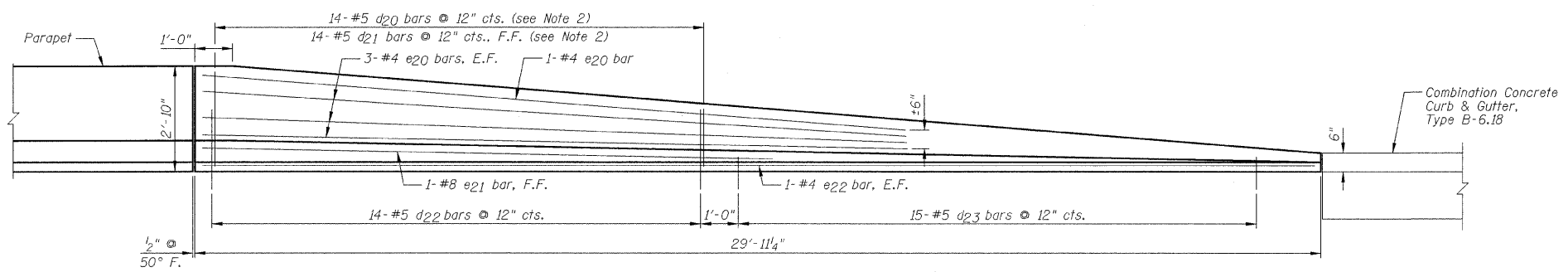
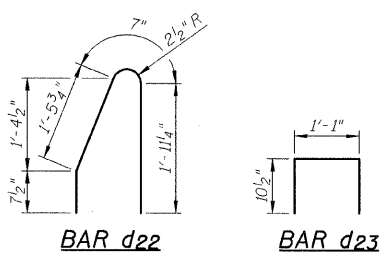
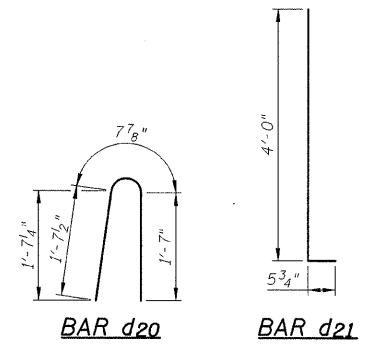
NOTES:

- a20 thru a22 bar spacings measured perpendicular to ϕ Roadway.
- Tilt #9 b26 bars as required to maintain clearance.
- Approach Slab shall be paid for as Concrete Superstructure.
- Approach Footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v4 bar details, see Sheet C2.
- The Approach Footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
- See Sheet C22 for Bar Splicer Details.
- Cost of excavation for Approach Footing included with Concrete Structures.
- Included in cost for Concrete Superstructure.

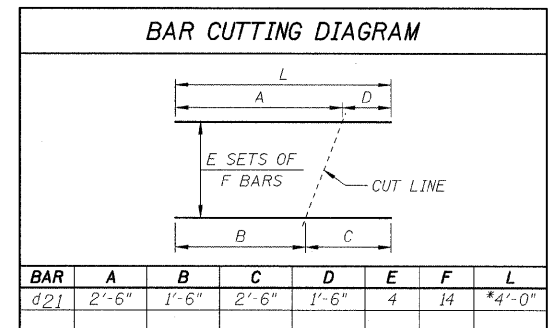
DESIGNED - SDH	REVISD -	TOWN OF NORMAL	EAST APPROACH SLAB		VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - JWK	REVISD -		6366	04-00226-00-BR		MCLEAN	52	36		
CHECKED - MSW	REVISD -		SCALE: SHEET NO. C15 OF 23 SHEETS STA. TO STA.			S.N. 057-7834 CONTRACT NO. 91416				
DATE - 07/22/2009	REVISD -					FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
						CONTRACT NO. 91416				



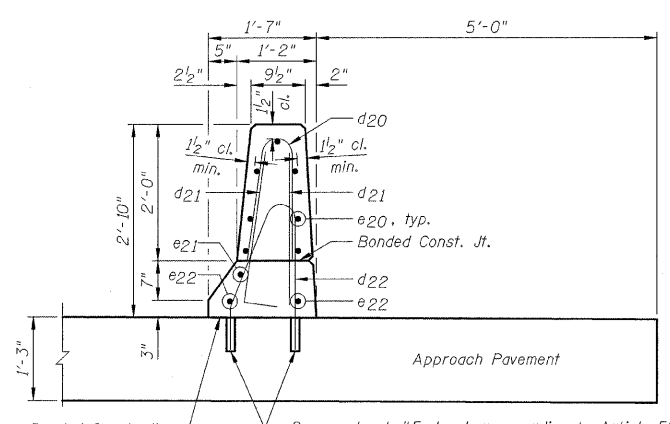
TYPICAL PLAN



TYPICAL INSIDE ELEVATION VIEW

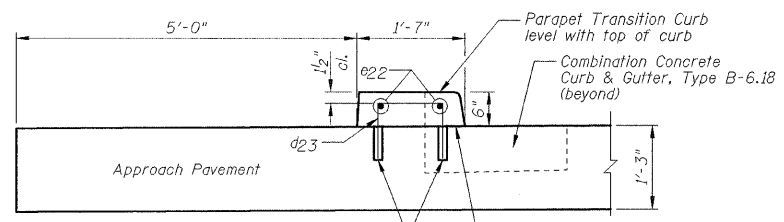


* Length does not include 5 3/4" hook at end.



SECTION A-A

Bonded Const. Jt. Core and set #5 d22 bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6".



SECTION B-B

Core and set #5 d23 bar according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of hole shall not exceed 6".

NOTES:

- 1.) Cut bars as required to maintain clearance.
- 2.) Order d20 bars and d21 bars full length. Cut d21 according to Bar Cutting Diagram. Use remainder of d21 bars in B.F., opposite end. Discard remainder of d20 bars.
- 3.) Parapet transition concrete shall be paid for as Concrete Superstructure.

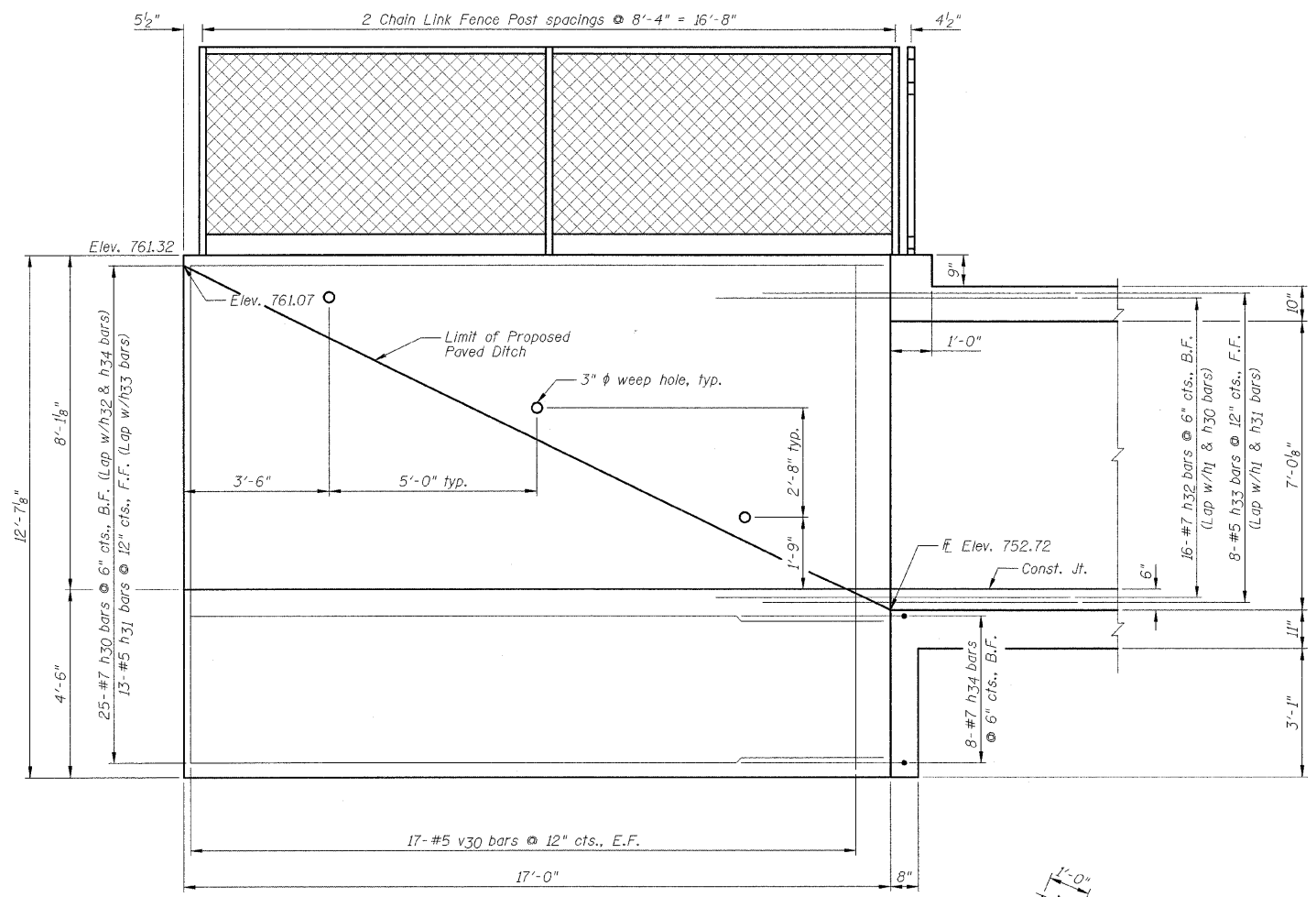
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

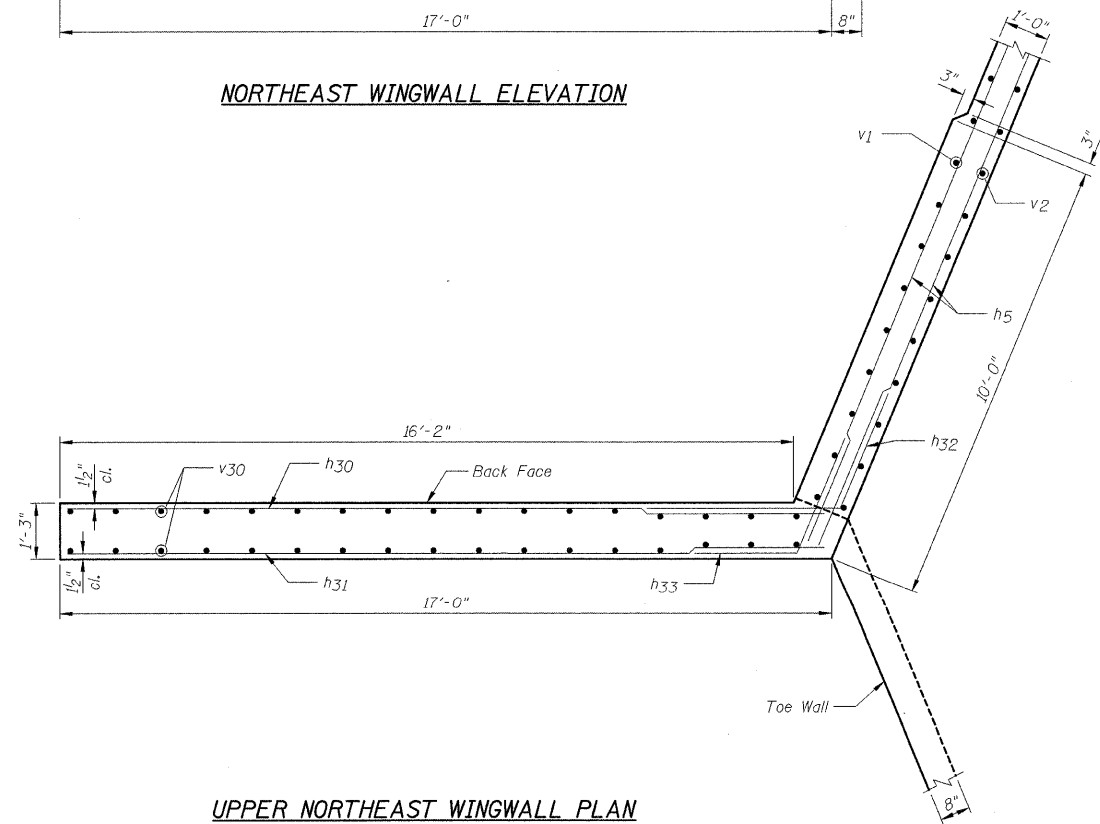
PARAPET TRANSITION DETAILS

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN COUNTY

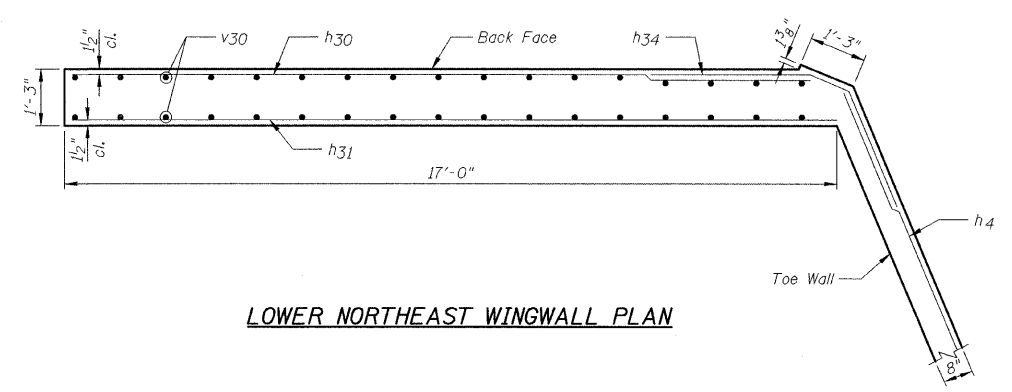
F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	37
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



NORTHEAST WINGWALL ELEVATION



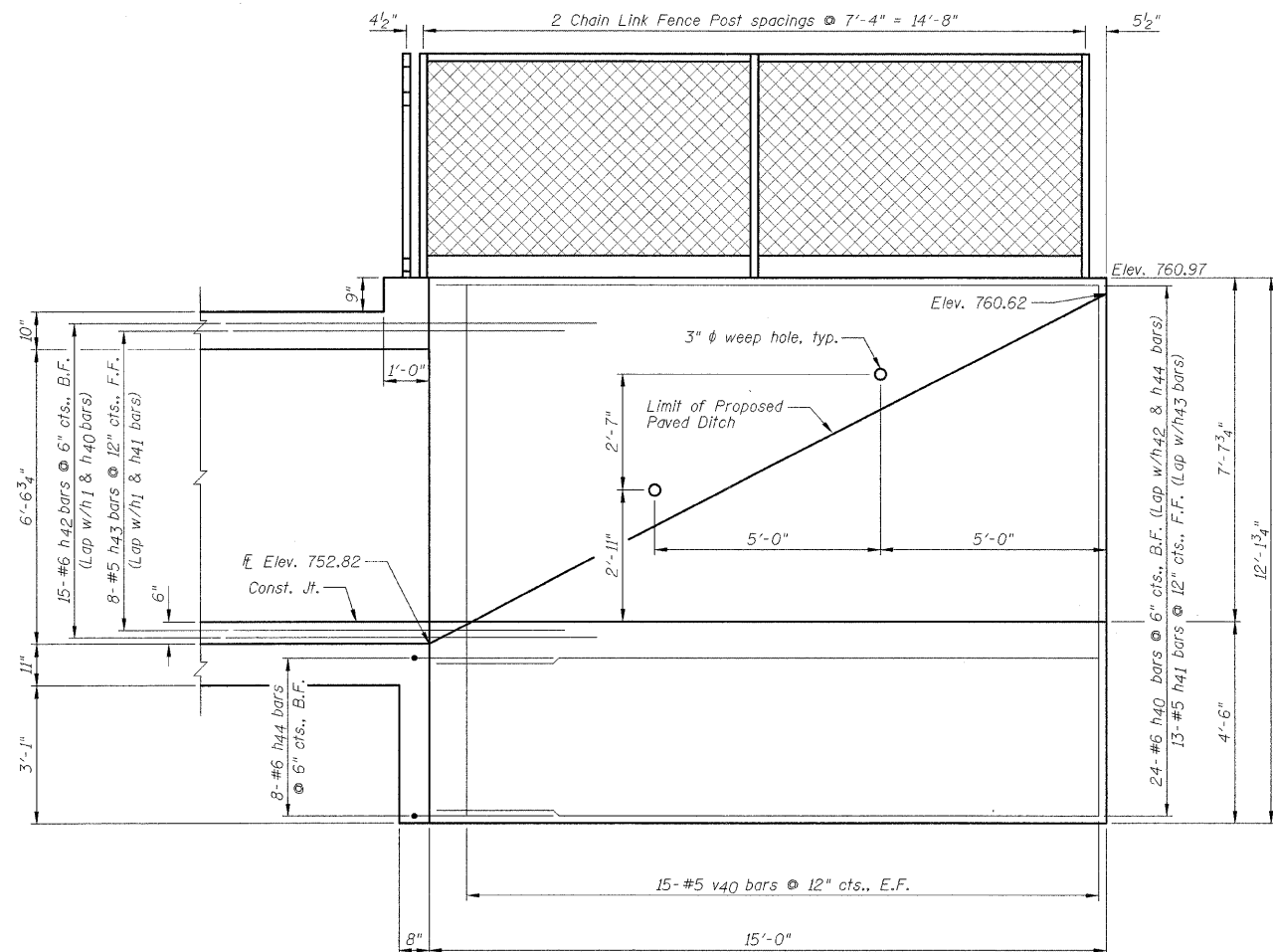
UPPER NORTHEAST WINGWALL PLAN



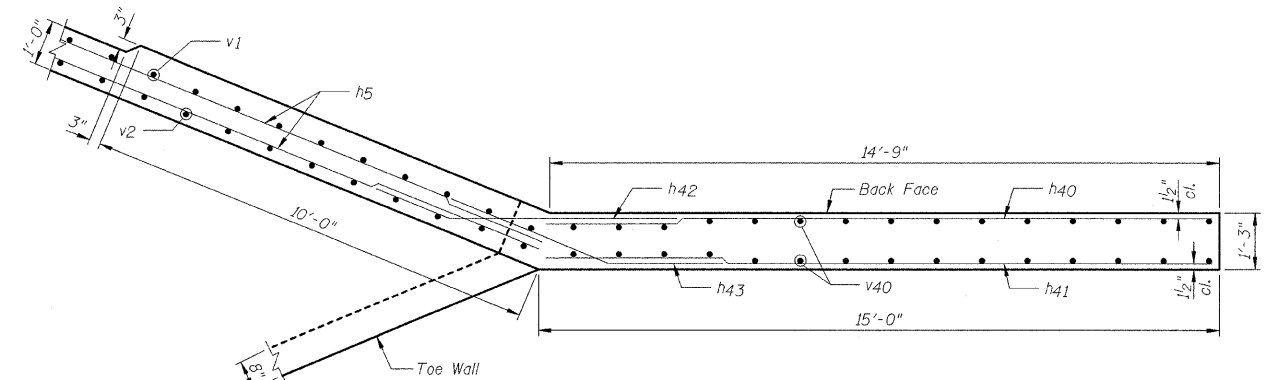
LOWER NORTHEAST WINGWALL PLAN

- NOTES:**
- 1.) See Sheet C21 for Bar Bending Diagrams, Bill of Material and Joint details.
 - 2.) For bar lap lengths, see the General Notes on Sheet C2.

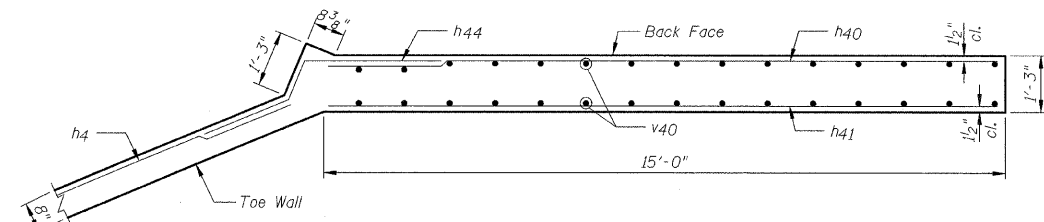
DESIGNED - SDH	REVISED -	TOWN OF NORMAL	NORTHEAST WINGWALL		VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - JWK	REVISED -		6366	04-00226-00-BR		MCLEAN	52	38		
CHECKED - MSW	REVISED -		SCALE: SHEET NO. 017 OF 23 SHEETS STA. TO STA.			S.N. 057-7834 CONTRACT NO. 91416				
DATE - 07/22/2009	REVISED -		FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



SOUTHEAST WINGWALL ELEVATION



UPPER SOUTHEAST WINGWALL PLAN



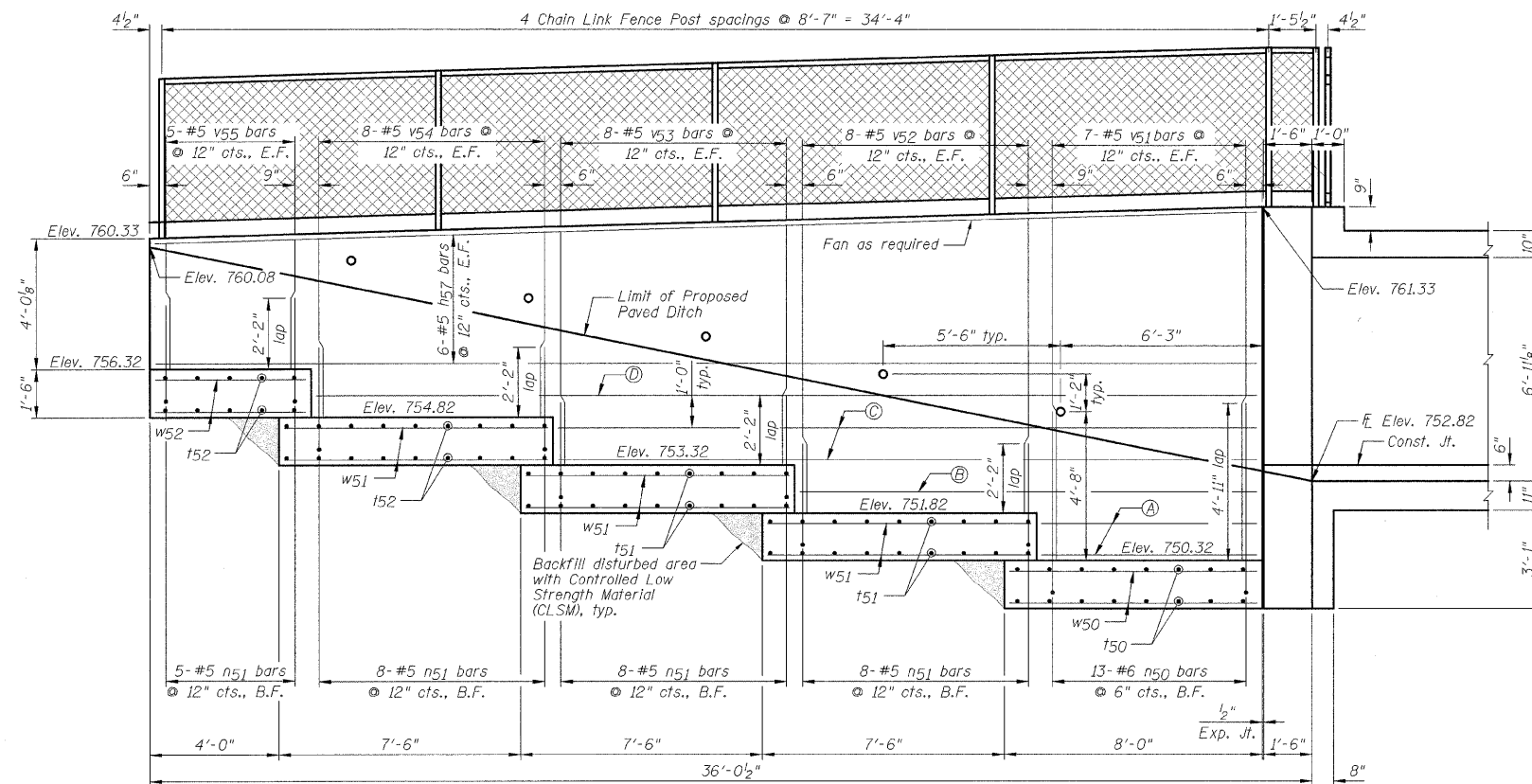
LOWER SOUTHEAST WINGWALL PLAN



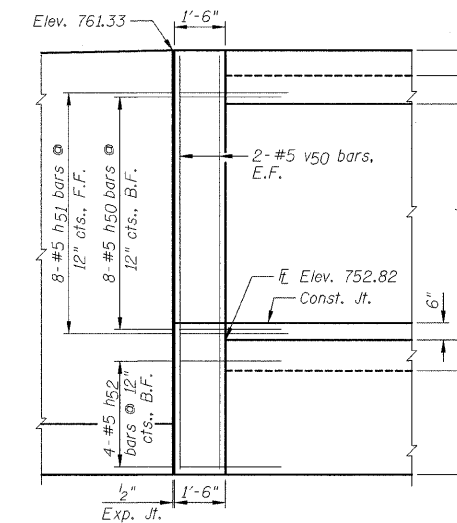
NOTES:

- 1.) See Sheet C21 for Bar Bending Diagrams, Bill of Material and joint details.
- 2.) For bar lap lengths, see the General Notes on Sheet C2.

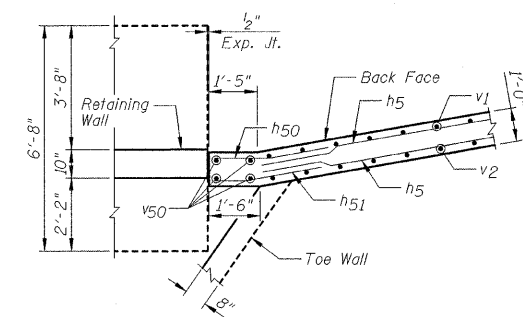
DESIGNED - SDH	REVISED -	TOWN OF NORMAL	SOUTHEAST WINGWALL		VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN - JWK	REVISED -		6366	04-00226-00-BR		MCLEAN	52	39		
CHECKED - MSW	REVISED -		SCALE: SHEET NO. C18 OF 23 SHEETS STA. TO STA.			S.N. 057-7834 CONTRACT NO. 91416				
DATE - 07/22/2009	REVISED -					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



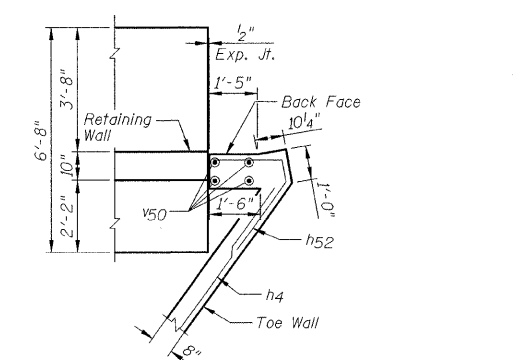
SOUTHWEST RETAINING WALL ELEVATION



SOUTHWEST CORNER ELEVATION



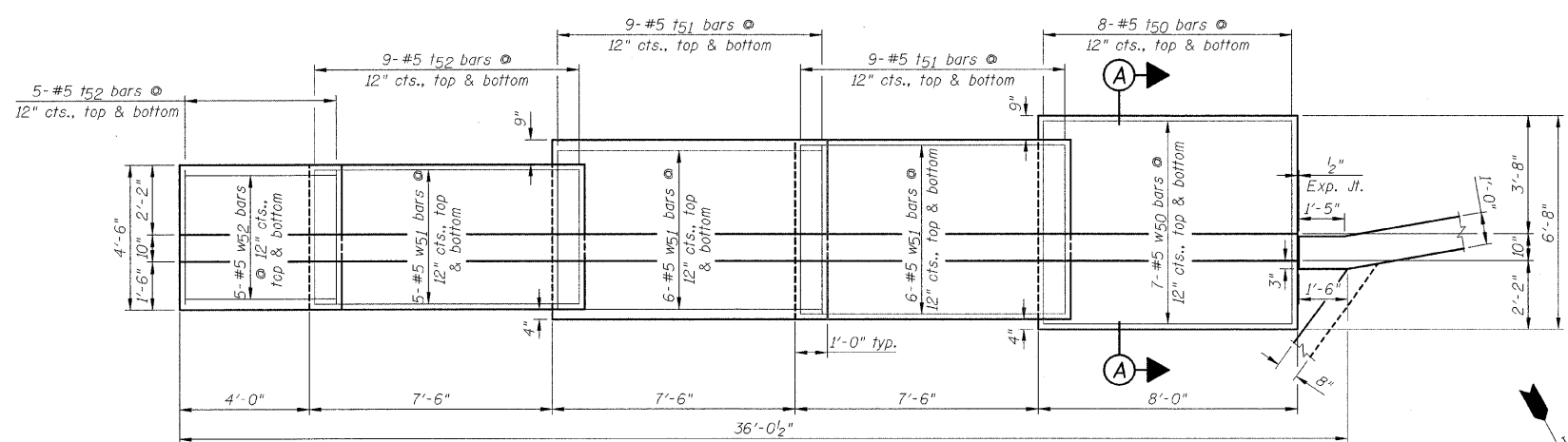
UPPER SOUTHWEST CORNER PLAN



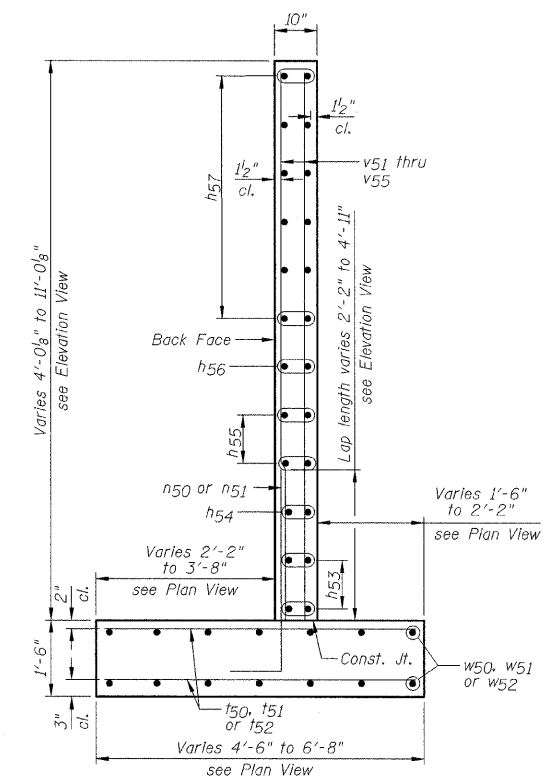
LOWER SOUTHWEST CORNER PLAN

BAR DESIGNATION

	Bar	No. (E.F.)	Size	Spacing
(A)	h53	2	#5	12"
(B)	h54	1	#5	N/A
(C)	h55	2	#5	12"
(D)	h56	1	#5	N/A



SOUTHWEST RETAINING WALL PLAN



SECTION A-A

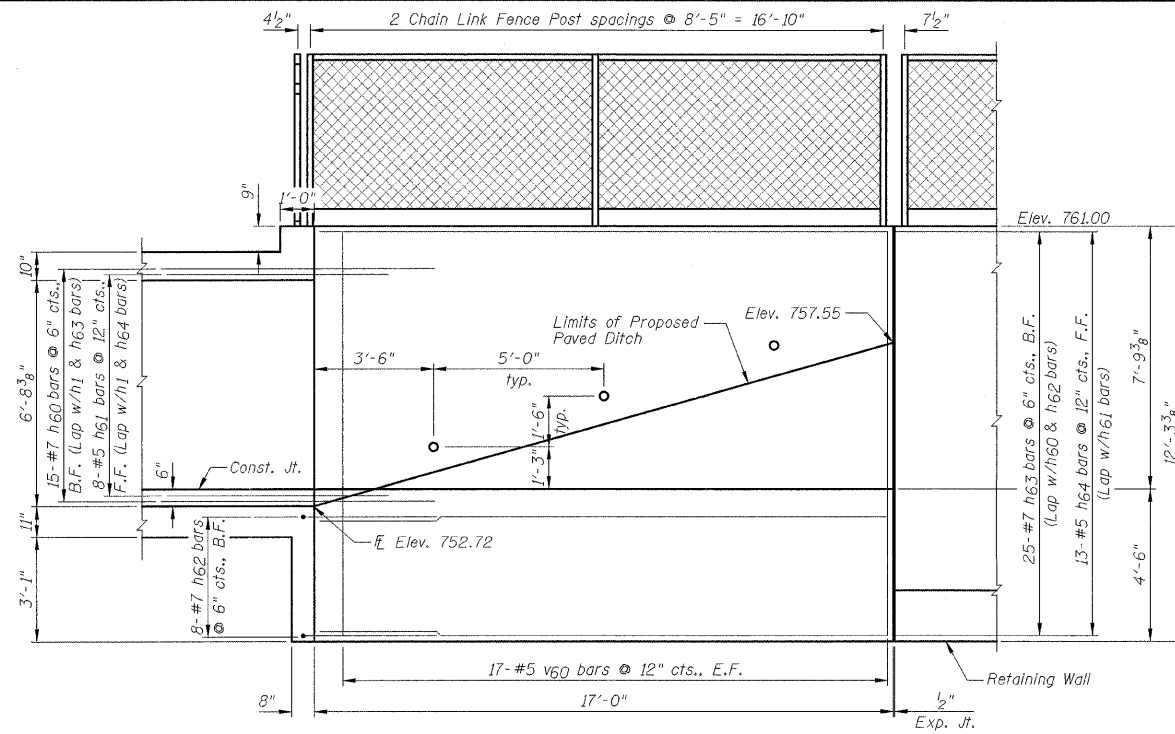
- NOTES:**
- 1.) See Sheet C21 for Bar Bending Diagrams, Bill of Material and joint details.
 - 2.) Calculated maximum soil pressure = 2090 psf.
 - 3.) Bend or cut vertical bars as required to fit.
 - 4.) For bar lap lengths, see the General Notes on Sheet C2.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

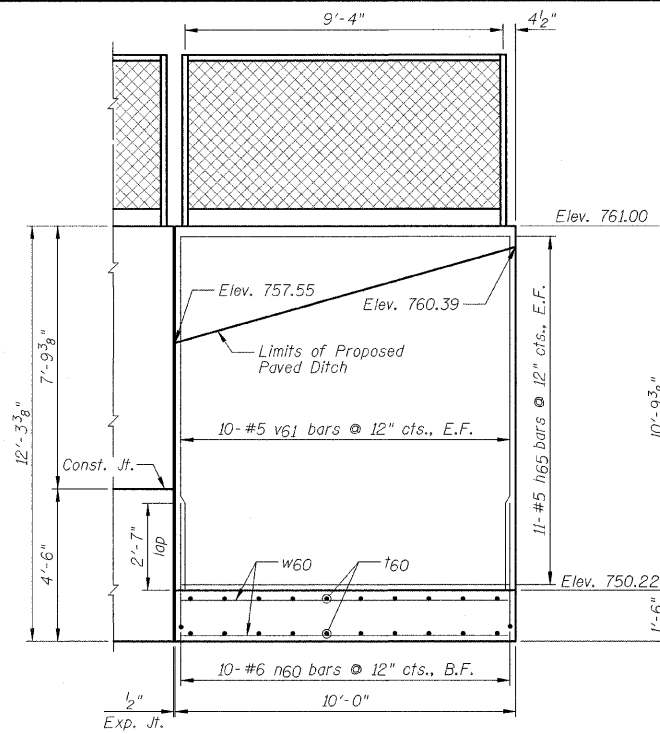
TOWN OF NORMAL		SOUTHWEST CORNER DETAIL AND RETAINING WALL	
SCALE:	SHEET NO. C19 OF 23 SHEETS	STA.	TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	
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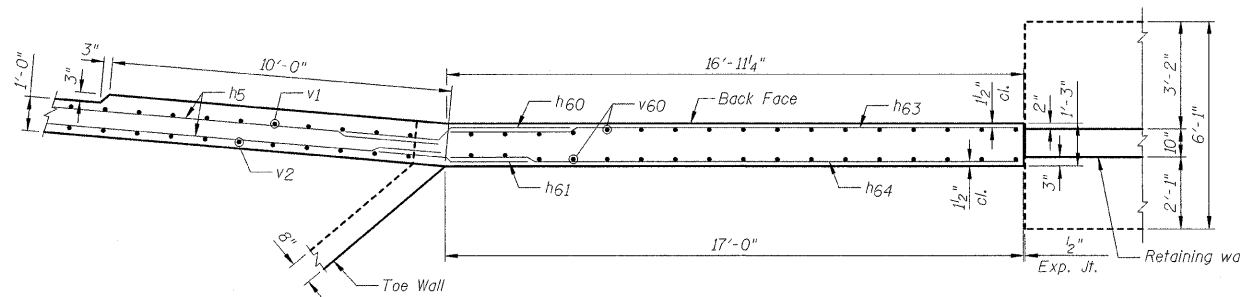
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	40
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



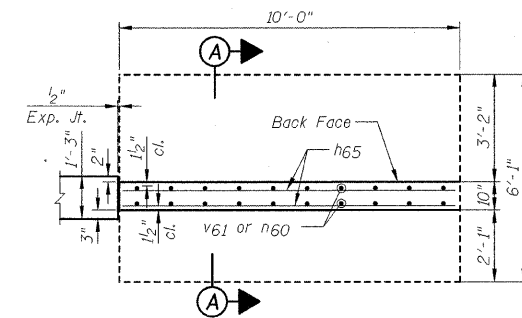
NORTHWEST WINGWALL ELEVATION



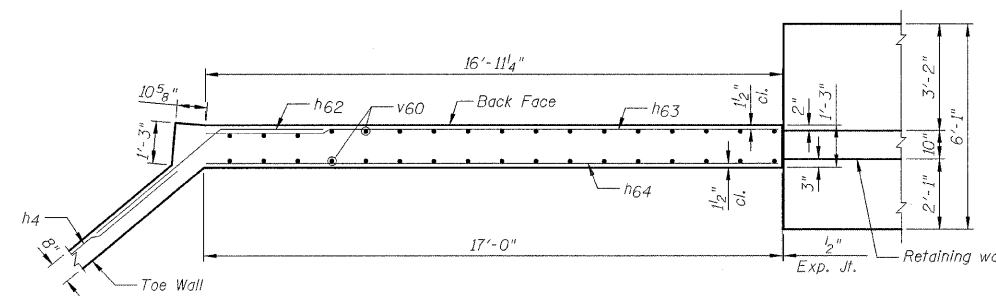
NORTHWEST RETAINING WALL ELEVATION



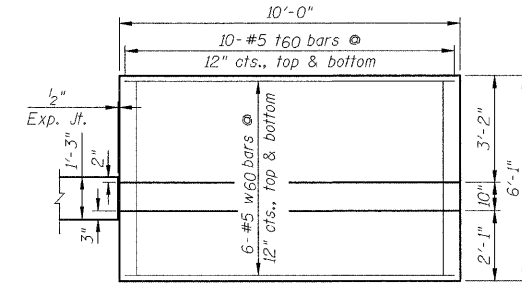
UPPER NORTHWEST WINGWALL PLAN



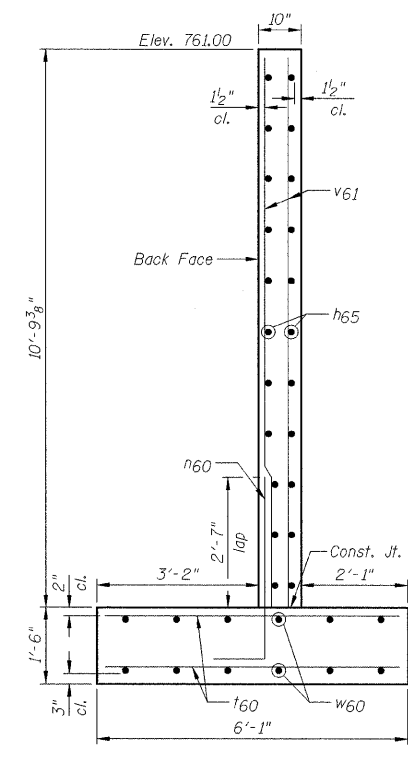
UPPER NORTHWEST RETAINING WALL PLAN



LOWER NORTHWEST WINGWALL PLAN



LOWER NORTHWEST RETAINING WALL PLAN



SECTION A-A

NOTES:

- 1.) See Sheet C21 for Bar Bending Diagrams, Bill of Material and joint details.
- 2.) Calculated maximum soil pressure = 2010 psf.
- 3.) For bar lap lengths, see the General Notes on Sheet C2.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL

NORTHWEST WINGWALL AND RETAINING WALL

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	41
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

**BILL OF MATERIAL -
NORTHEAST WINGWALL**

Bar	No.	Size	Length	Shape
h30	25	#7	16'-8"	
h31	13	#5	16'-8"	
h32	16	#7	7'-0"	
h33	8	#5	5'-0"	
h34	8	#7	7'-2"	
v30	34	#5	12'-3"	
Item	Unit	Quantity		
Concrete Box Culverts	Cu. Yd.	9.7		
Reinforcement Bars, Epoxy Coated	Pound	1,900		

**BILL OF MATERIAL -
SOUTHEAST WINGWALL**

Bar	No.	Size	Length	Shape
h40	24	#6	14'-8"	
h41	13	#5	14'-8"	
h42	15	#6	6'-9"	
h43	8	#5	6'-3"	
h44	8	#6	5'-11"	
v40	30	#5	11'-10"	
Item	Unit	Quantity		
Concrete Box Culverts	Cu. Yd.	8.4		
Reinforcement Bars, Epoxy Coated	Pound	1,370		

**BILL OF MATERIAL -
SOUTHWEST RETAINING WALL**

Bar	No.	Size	Length	Shape
h50	8	#5	3'-4"	
h51	8	#5	3'-2"	
h52	4	#5	5'-2"	
h53	4	#5	6'-8"	
h54	2	#5	14'-2"	
h55	4	#5	21'-8"	
h56	2	#5	29'-2"	
h57	12	#5	34'-2"	
n50	13	#6	7'-2"	
n51	29	#5	4'-3"	
f50	16	#5	6'-4"	
f51	36	#5	5'-3"	
f52	28	#5	4'-2"	
v50	4	#5	12'-2"	
v51	14	#5	10'-10"	
v52	16	#5	9'-2"	
v53	16	#5	7'-5"	
v54	16	#5	5'-9"	
v55	10	#5	4'-0"	
w50	14	#5	7'-8"	
w51	34	#5	8'-2"	
w52	10	#5	4'-8"	
Item	Unit	Quantity		
Concrete Box Culverts	Cu. Yd.	20.0		
Reinforcement Bars, Epoxy Coated	Pound	2,480		
Controlled Low- Strength Material	Cu. Yd.	3		

**BILL OF MATERIAL -
NORTHWEST WINGWALL
AND RETAINING WALL**

Bar	No.	Size	Length	Shape
h60	15	#7	6'-9"	
h61	8	#5	4'-5"	
h62	8	#7	7'-9"	
h63	25	#7	16'-8"	
h64	13	#5	16'-8"	
h65	22	#5	8'-8"	
n60	10	#6	4'-10"	
f60	20	#5	5'-9"	
v60	34	#5	11'-11"	
v61	20	#5	10'-7"	
w60	12	#5	9'-8"	
Item	Unit	Quantity		
Concrete Box Culverts	Cu. Yd.	16.4		
Reinforcement Bars, Epoxy Coated	Pound	2,610		

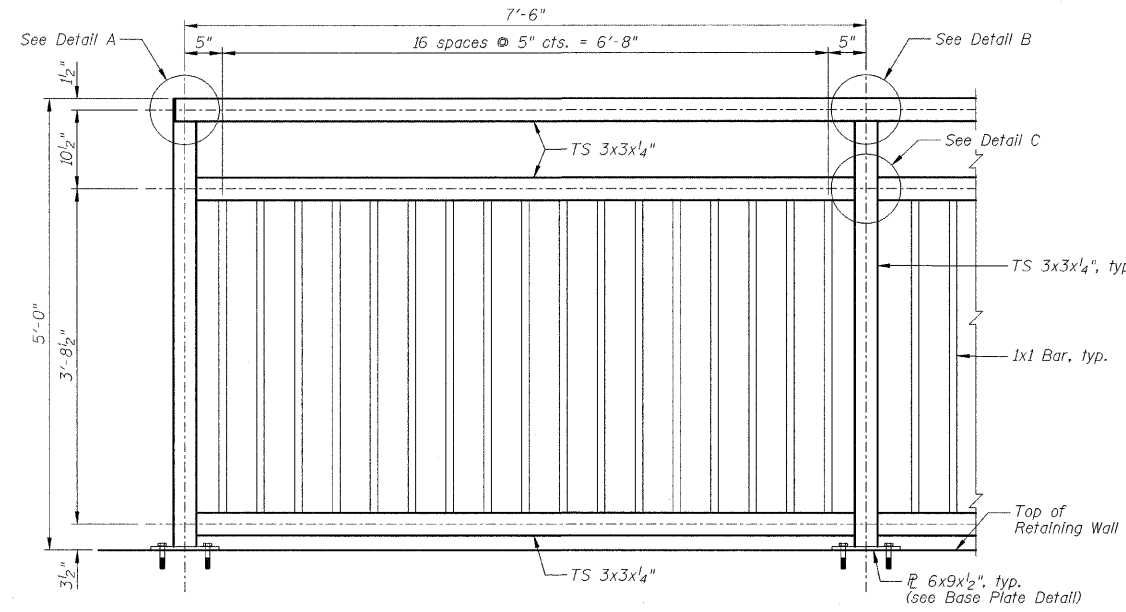
BAR BENDING DIAGRAMS

Bar	a	b	Diagram
n50	6'-2"	1'-0"	
n51	3'-5"	10"	
n60	3'-10"	1'-0"	

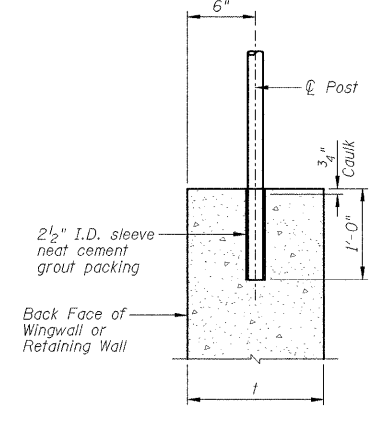
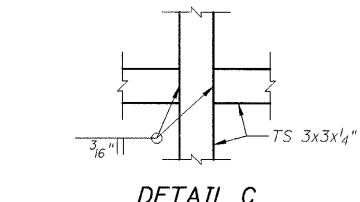
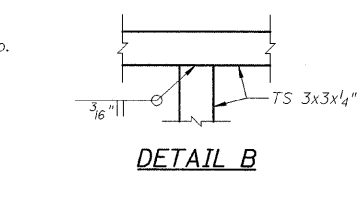
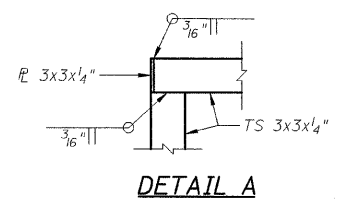
Bar	a	b	c	d	Diagram
h32	4'-3"	2'-9"	2'-6 1/2"	1'-0 5/8"	
h33	2'-9"	2'-3"	2'-1"	10 3/8"	
h42	5'-0"	1'-9"	8"	1'-7 3/8"	
h43	3'-9"	2'-6"	11 1/2"	2'-3 3/4"	
h50	1'-9"	1'-7"	3 1/4"	1'-6 3/4"	
h51	2'-3"	11"	1 7/8"	10 7/8"	

Bar	a	b	c	d	e	Diagram
h34	3'-6"	11"	10 1/8"	2'-9"	2'-3"	
h44	3'-0"	11"	4 1/4"	2'-0"	9 1/8"	
h60	2'-9"	6"	3 7/8"	3'-6"	3 5/8"	
h61	2'-3"	2 1/2"	1 1/2"	2'-0"	2 1/2"	

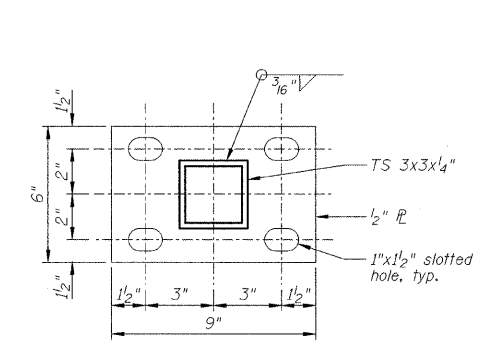
Bar	a	b	c	d	e	Diagram
h52	2'-0"	8"	1 3/8"	2'-6"	1'-5 1/4"	
v53						
v54						



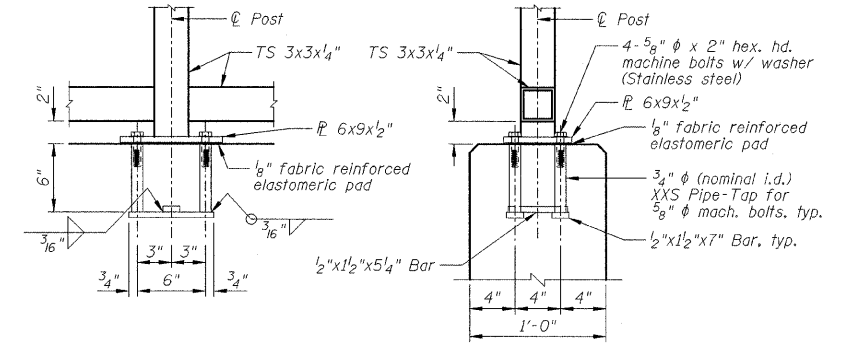
BICYCLE RAILING TYPICAL DETAIL



CHAIN LINK FENCE POST ANCHORAGE DETAIL

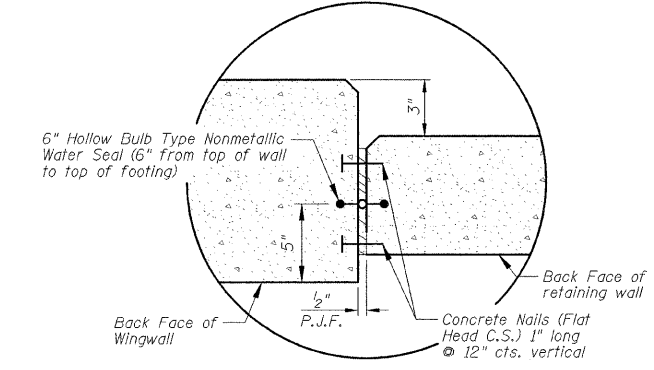


BASE PLATE DETAIL

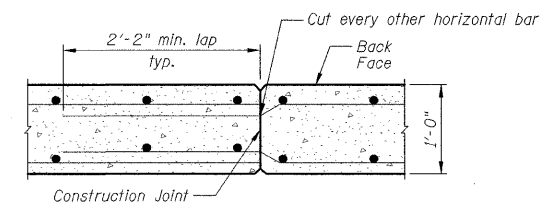


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8 inch diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



DETAIL A



CONSTRUCTION JOINT DETAIL

NOTE:

All posts, railing, splices, anchor devices, and bent plates shall be painted using the Shop and Field Applied Paint System or the Shop Applied Paint System. Color will be chosen by the Owner.

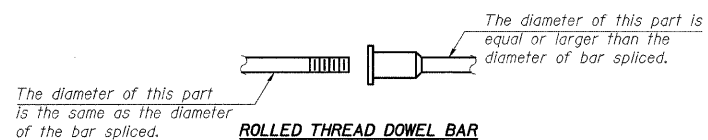
DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 01/22/2009	REVISED -

TOWN OF NORMAL	
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WINGWALLS & RETAINING WALLS BILL OF MATERIAL AND DETAILS	
SCALE:	SHEET NO. C21 OF 23 SHEETS

VIRGINIA AVENUE OVER SUGAR CREEK SECTION 04-00226-00-BR MCLEAN COUNTY	
--	--

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	42
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

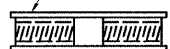


ROLLED THREAD DOWEL BAR



**** ONE PIECE**

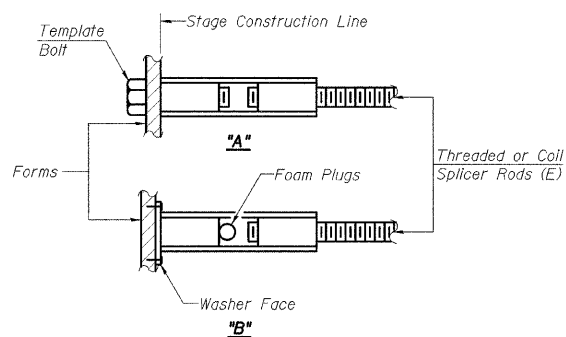
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



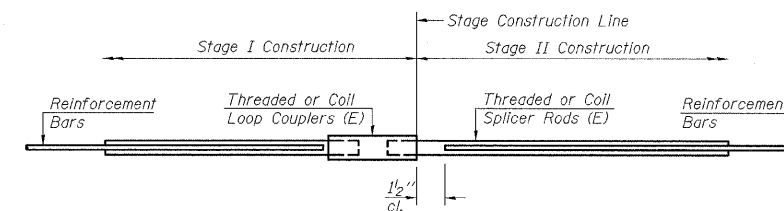
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES
 Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_s$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete.

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



STANDARD

Bar Size	No. Assemblies Required	Location
#5	132	Top Slab

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

TOWN OF NORMAL	
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BAR SPLICER ASSEMBLY DETAILS	
SCALE:	SHEET NO. C22 OF 23 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCLEAN COUNTY	

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCLEAN	52	43
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LOG OF BORING NO. 1									
OWNER		ARCHITECT/ENGINEER							
Town of Normal, IL		Farnsworth & Wylie, P.C.							
SITE		PROJECT							
Virginia Ave. East of Main Street Normal, Illinois		Virginia Avenue Bridge							
GRAPHIC LOG	DESCRIPTION	DEPTH (FT.)	SAMPLES					TESTS	
			USCS SYMBOL	NUMBER	TYPE	RECOVERY	SPT. N** BLOWS / FT.	MOISTURE, %	DRY DENSITY PCF
	Approx. Surface Elev.: 761 ft.								
	4" Topsoil		CL/OL	1	HS				
	Fill, Dark Gray Sandy Lean Clay trace Gravel and Organics	755.5	CL/OL	2	HS	8	9	27.3	*1500
	Lean Clay, Dark Gray, Medium	752	CL	3	HS	6	12	33.2	*2500
	Sandy Lean Clay trace Gravel, Brown to Brown Gray to Gray, Stiff to Hard (Numerous sand seams and layers)		CL	4	HS	7	13	26.5	*1500
			CL	5	SS	4	31	13.8	*2500
			CL	6	SS	10	30	10.1	*9000
			CL	7	SS	19	8	14.8	*4000
			CL	8	SS	24	8	14.9	*3000
			CL	9	SS	24	19	14.8	*5000
			CL	10	AS			14.3	
	41	720							
	BOTTOM OF BORING								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES. IN-SITU, THE TRANSITION MAY BE GRADUAL. Calibrated Hand Penetrometer* CME Autotamper Used**

WATER LEVEL OBSERVATIONS				BORING STARTED 5-6-98			
WL	15'	WD	19'	BCR	BORING COMPLETED 5-6-98		
WL	13-1/2'	ACR			RIG	20	FOREMAN SAS
WL					APPROVED	RAL	JOB # 10985030

LOG OF BORING NO. 2									
OWNER		ARCHITECT/ENGINEER							
Town of Normal, IL		Farnsworth & Wylie, P.C.							
SITE		PROJECT							
Virginia Ave. East of Main Street Normal, Illinois		Virginia Avenue Bridge							
GRAPHIC LOG	DESCRIPTION	DEPTH (FT.)	SAMPLES					TESTS	
			USCS SYMBOL	NUMBER	TYPE	RECOVERY	SPT. N** BLOWS / FT.	MOISTURE, %	DRY DENSITY PCF
	Approx. Surface Elev.: 761 ft.								
	4" Topsoil		SW	1	SS	8	7	18.1	*500
	Fill, Gray, Well Graded Sand	759	OL	2	HS	6	11	25.4	*3500
	Lean Clay trace Organics, Dark Gray, Stiff	755.5	CL	3	HS	9	11	28.5	*2000
	Lean Clay, Dark Brown, Stiff		CL	4	HS	8	17	14.3	*2500
	Sandy Lean Clay trace Gravel, Brown, Stiff to Very Stiff (Numerous sand seams and layers) (Apparent boulder or cobbles at 18-1/2' to 21-1/2'.)	752	CL	5	SS	0	12		
			CL	6	AS			13.0	
			CL	7	SS	0	17		
			CL	8	SS	7	18	12.0	*4000
			CL	9	SS	5	68	14.7	
	Silty Sand and Well Graded Sand with Silt, Gray and Brown, Very Dense to Medium Dense	728	SM	10	SS	16	24	20.4	
			CL	11	AS			15.1	
	46	715							
	BOTTOM OF BORING								

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES. IN-SITU, THE TRANSITION MAY BE GRADUAL. Calibrated Hand Penetrometer* CME Autotamper Used**

WATER LEVEL OBSERVATIONS				BORING STARTED 5-6-98			
WL	21'	WD	18'	ACR	BORING COMPLETED 5-6-98		
WL					RIG	20	FOREMAN SAS
WL					APPROVED	RAL	JOB # 10985030

NOTE:
See Sheet C1 for boring locations.

DESIGNED - SDH	REVISED -
DRAWN - JWK	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/2009	REVISED -

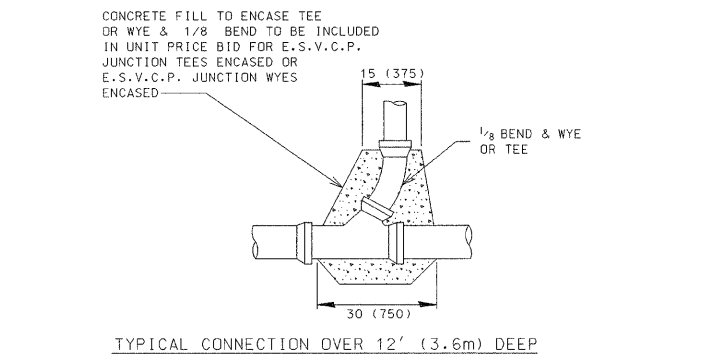
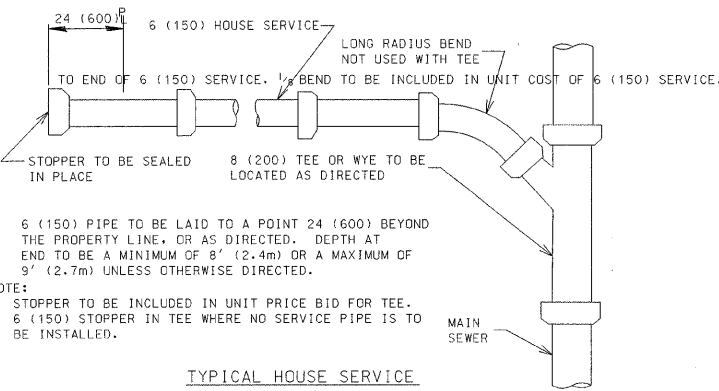
TOWN OF NORMAL	
SOIL BORING LOGS	
SCALE:	SHEET NO. C23 OF 23 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCCLEAN COUNTY	

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6366	04-00226-00-BR	MCCLEAN	52	44
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

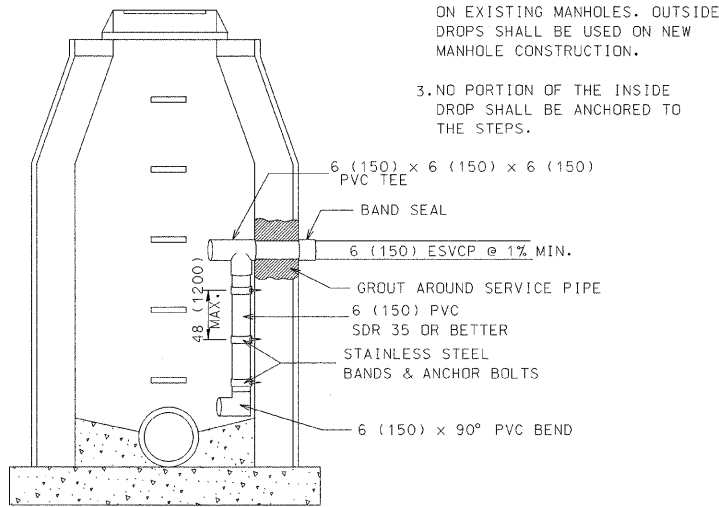
FARNSWORTH GROUP, INC.	
CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX	

NOTE: 6 (150) SERVICE TO BE PAID FOR BY MEASURING FROM CENTERLINE MAIN SEWER

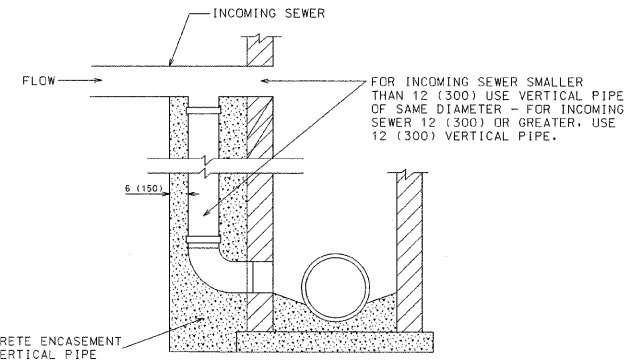


INSIDE SERVICE DROP IN EXISTING SANITARY MANHOLE

- NOTES:
1. DROPS ARE REQUIRED WHEN INVERT OF SERVICE IS GREATER THAN 600 (24) ABOUT BOTTOM OF MANHOLE.
 2. INSIDE DROPS ARE ONLY ALLOWED ON EXISTING MANHOLES. OUTSIDE DROPS SHALL BE USED ON NEW MANHOLE CONSTRUCTION.
 3. NO PORTION OF THE INSIDE DROP SHALL BE ANCHORED TO THE STEPS.



ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



DROP MANHOLE CONNECTION

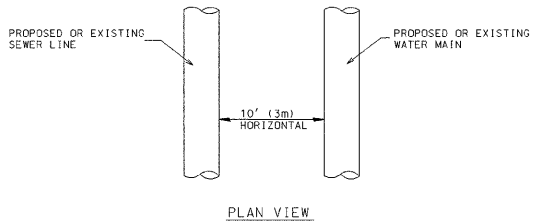
- NOTES
- PAYMENT FOR DROP MANHOLE CONNECTION TO BE MADE AT CONTRACT UNIT PRICE PER EACH "DROP MANHOLE CONNECTION".
- TO BE USED IN CONJUNCTION WITH TYPE "A" MANHOLES WHERE SEWER ENTERS 24 (600) OR MORE ABOVE LOWEST INVERT. NOT TO BE USED FOR INLET OR CATCH BASIN CONNECTION.
- THIS DETAIL APPLIES TO INCOMING SEWERS OF 18 (450) DIA. OR LESS.

DESIGN BY: TYPICAL HOUSE CONNECTIONS	REVISION: 1	APPROVED BY: 1	TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT
STANDARD 7.07C			

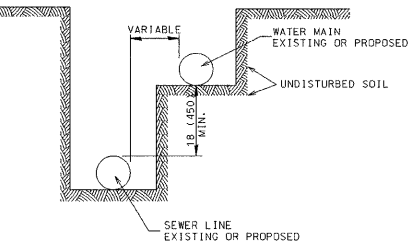
DESIGN BY: INSIDE DROP SERVICE CONNECTION	REVISION: 1	APPROVED BY: 1	TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT
STANDARD 7.07B-2			

DESIGN BY: STANDARD DROP MANHOLE DETAILS	REVISION: 1	APPROVED BY: 1	TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT
STANDARD 7.07B-1			

WHEN PROPOSED SEWER (OR WATER) IS LOCATED 10' (3m) OR MORE FROM EXISTING WATER (OR SEWER), NO SPECIAL CONSTRUCTION IS REQUIRED

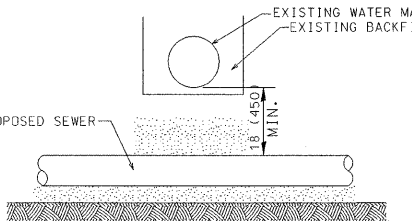


WHEN PROPOSED SEWER (OR WATER) IS LOCATED LESS THAN 10' (3m) FROM EXISTING WATER (OR SEWER), DETAILS BELOW SHALL APPLY.



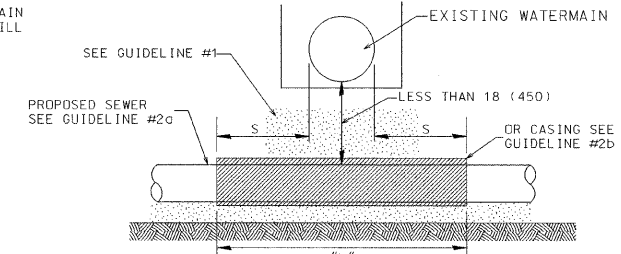
All dimensions are in inches (millimeters) unless otherwise shown.

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH 18 (450) MINIMUM VERTICAL SEPARATION



- GUIDELINES
1. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
 2. MAINTAIN 18 (450) MIN. VERTICAL SEPARATION FOR 10' (3m) HORIZONTALLY.

PROPOSED SEWER LINE BELOW EXISTING WATER MAIN WITH LESS THAN 18 (450) VERTICAL SEPARATION



- GUIDELINES
1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO 12 (300) OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT FOR "S" ON EACH SIDE OF THE WATER MAIN.
 - 2a. CONSTRUCT "L" OF PROPOSED SEWER OR WATER MAIN MATERIAL AND PRESSURE TEST. OR:
 - b. USE "L" OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
 3. POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
 4. PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

All dimensions are in inches (millimeters) unless otherwise shown.

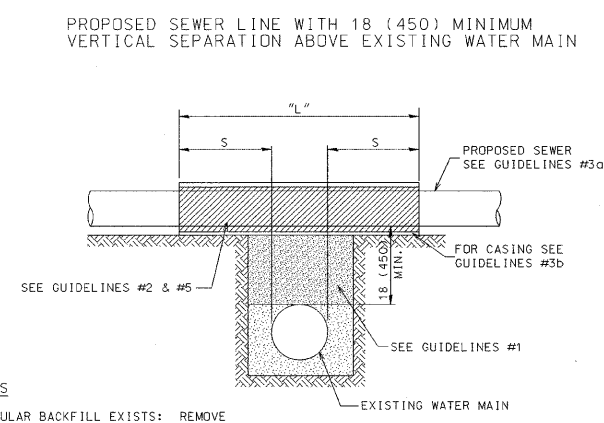
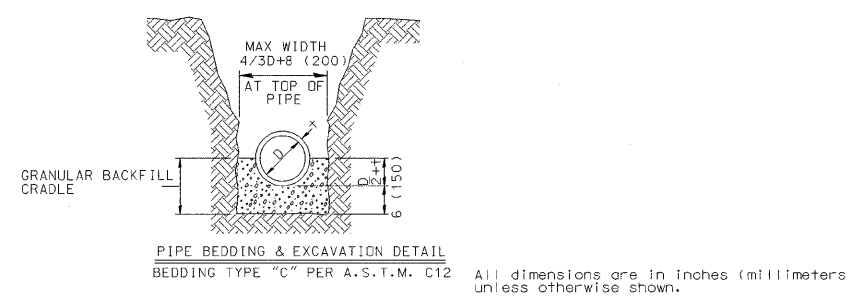
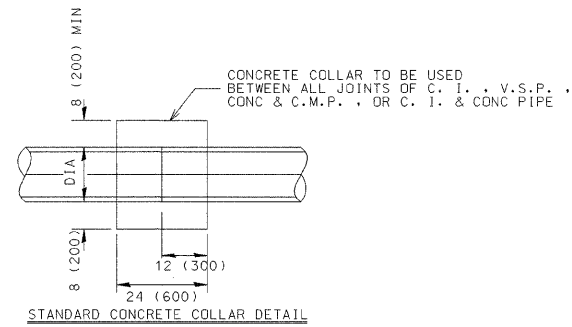
DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL	
SANITARY SEWER DETAILS	
SCALE:	SHEET NO. 45 OF 52 SHEETS STA. TO STA.

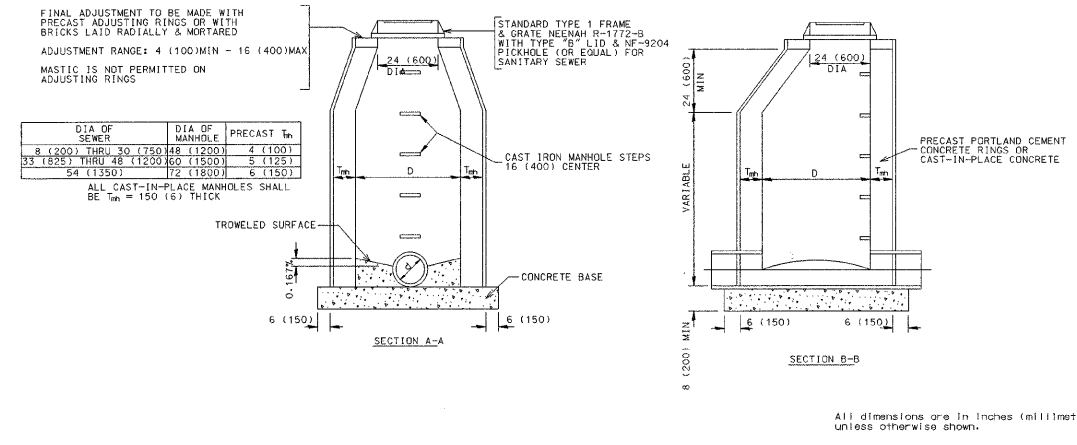
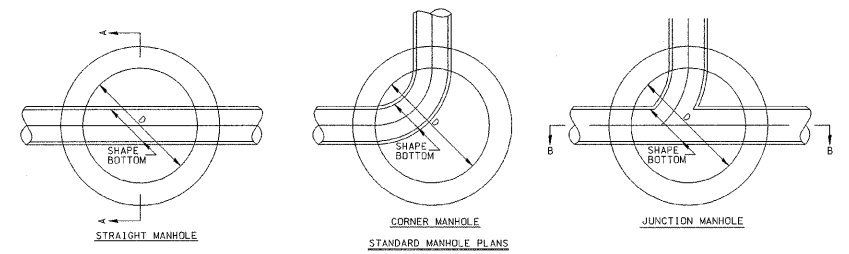
TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT	
SHEET 1 OF 1	

VIRGINIA AVENUE OVER SUGAR CREEK	
SECTION 04-00226-00-BR	
MCLEAN, COUNTY	

F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 45
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



- GUIDELINES**
- IF SELECT GRANULAR BACKFILL EXISTS: REMOVE WITHIN WIDTH OF PROPOSED SEWER TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
 - OMIT SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO 12 (300) OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
 - a. CONSTRUCT "L" OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR: b. USE "L" OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
 - POINT LOADS SHALL NOT BE ALLOWED BETWEEN SEWER OR SEWER CASING AND WATER MAIN.
 - PROVIDE ADEQUATE SUPPORT FOR EXISTING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.
- NOTE: "S" THE LENGTH NECESSARY TO PROVIDE 10' (3m) OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING WATER MAIN.
- All dimensions are in inches (millimeters) unless otherwise shown.



TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT

REVISION 1: STANDARD CONCRETE COLLAR & PIPE BEDDING & EXC. DETAILS STANDARD 7-07D

TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT

REVISION 1: STANDARD MANHOLE DETAILS - SANITARY STANDARD 7-07A

TOWN OF NORMAL, ILLINOIS ENGINEERING DEPARTMENT

REVISION 1: WATER & SEWER SEPARATION REQUIREMENTS (VERT.) STANDARD 7-07E

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

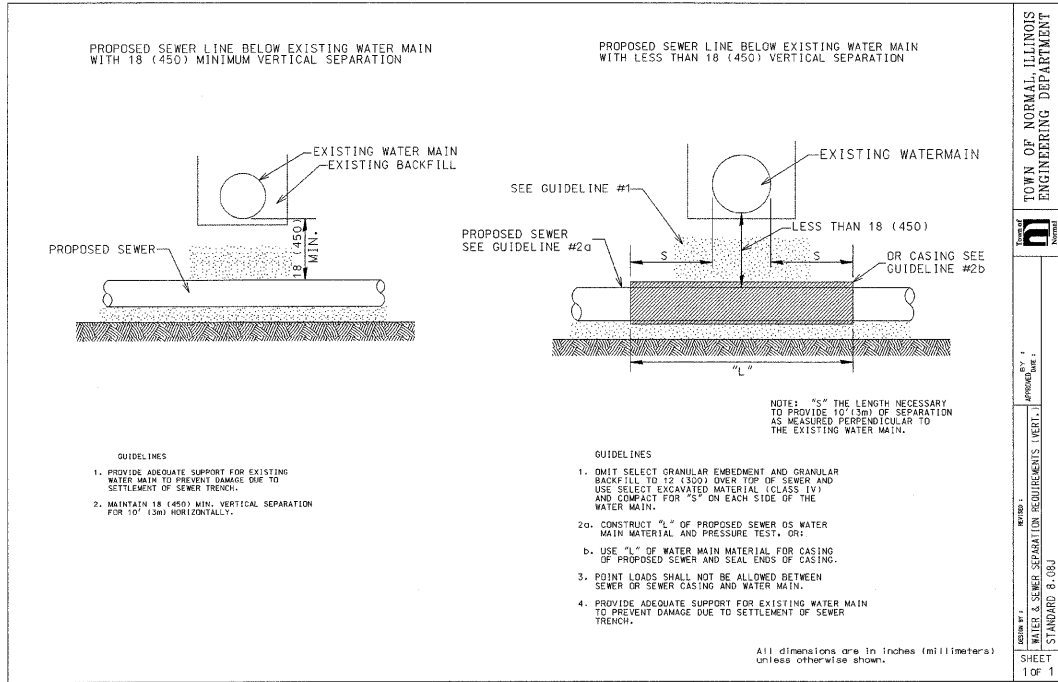
TOWN OF NORMAL

SANITARY SEWER DETAILS

SCALE: SHEET NO. 46 OF 52 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	46
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



TOWN OF NORMAL, ILLINOIS
ENGINEERING DEPARTMENT

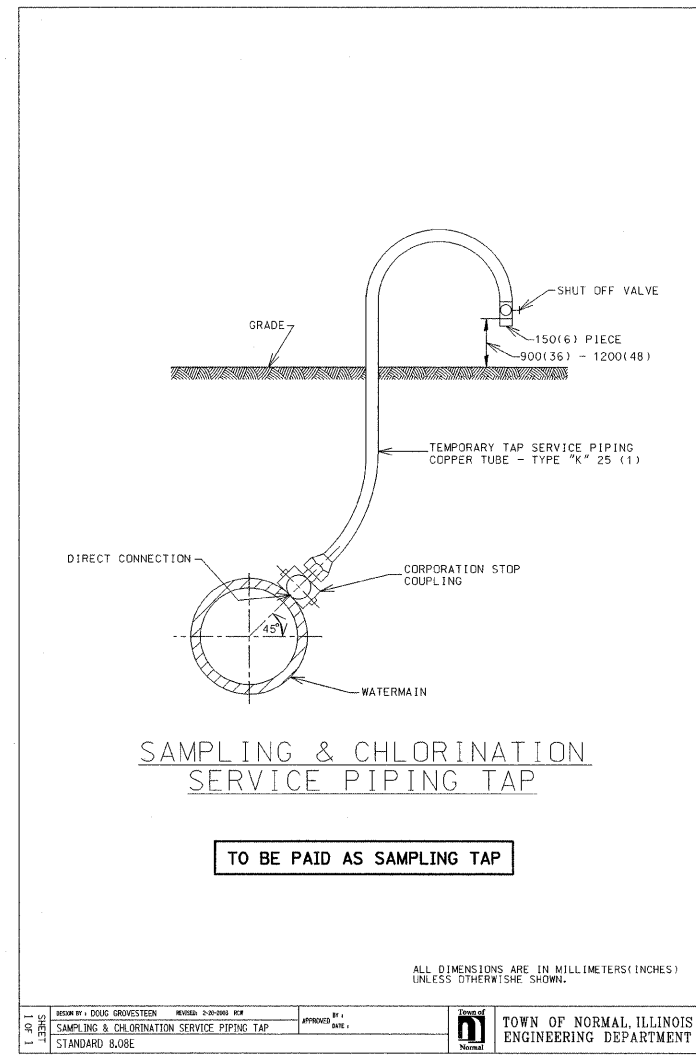
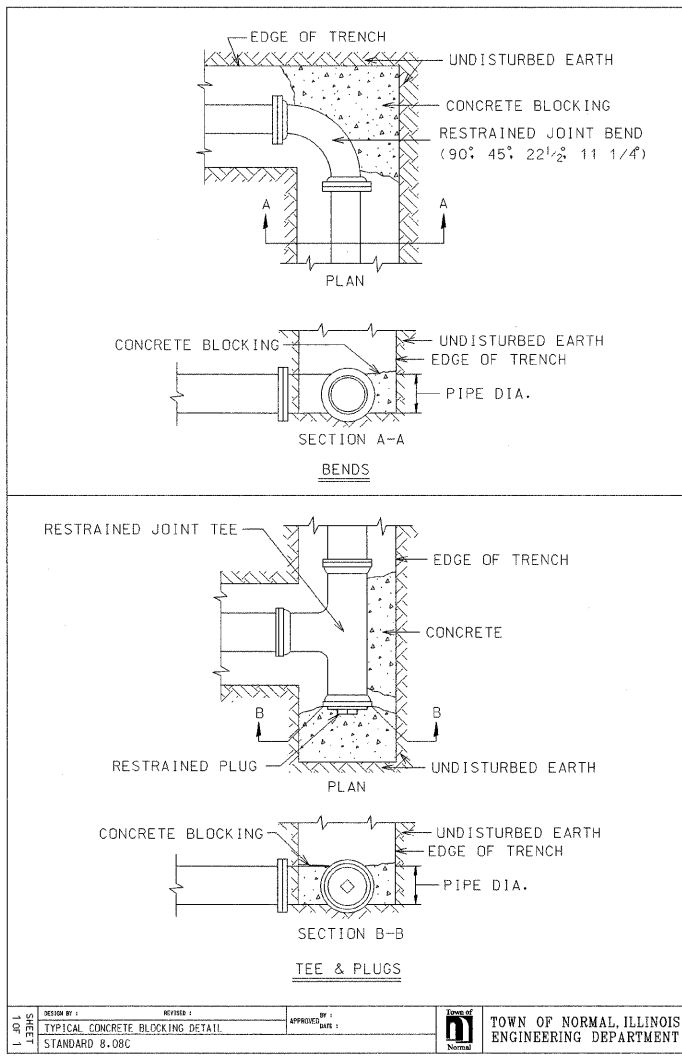
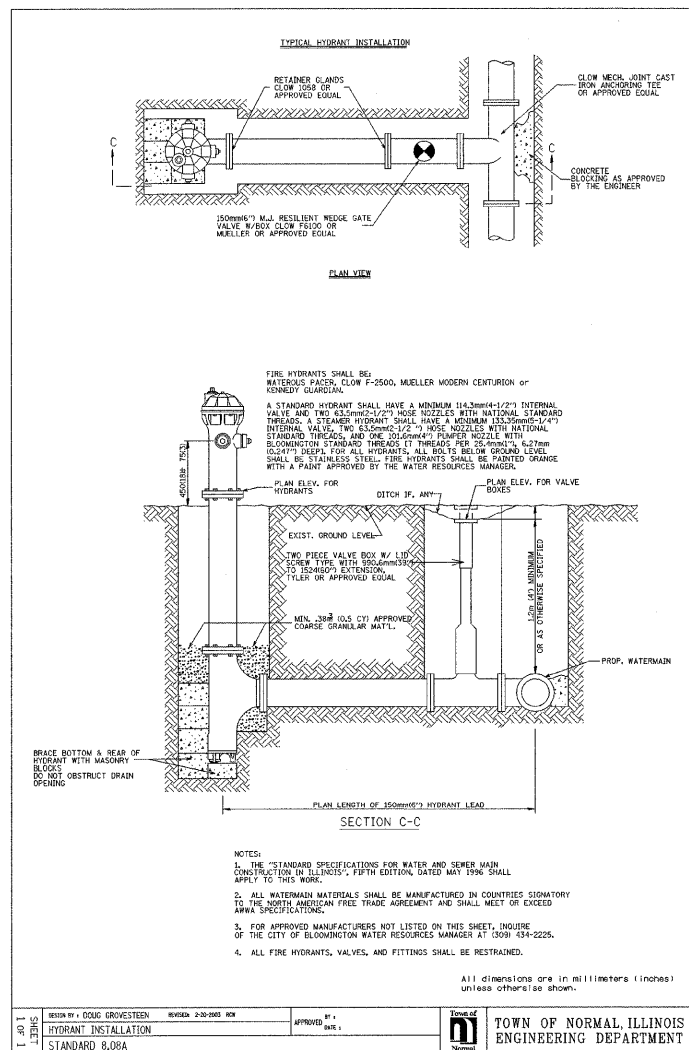
REVISIONS

APPROVED BY: [Signature]

DATE: [Date]

STANDARD 8.08A

SHEET 1 OF 1



DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - PJM	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

WATER MAIN DETAILS

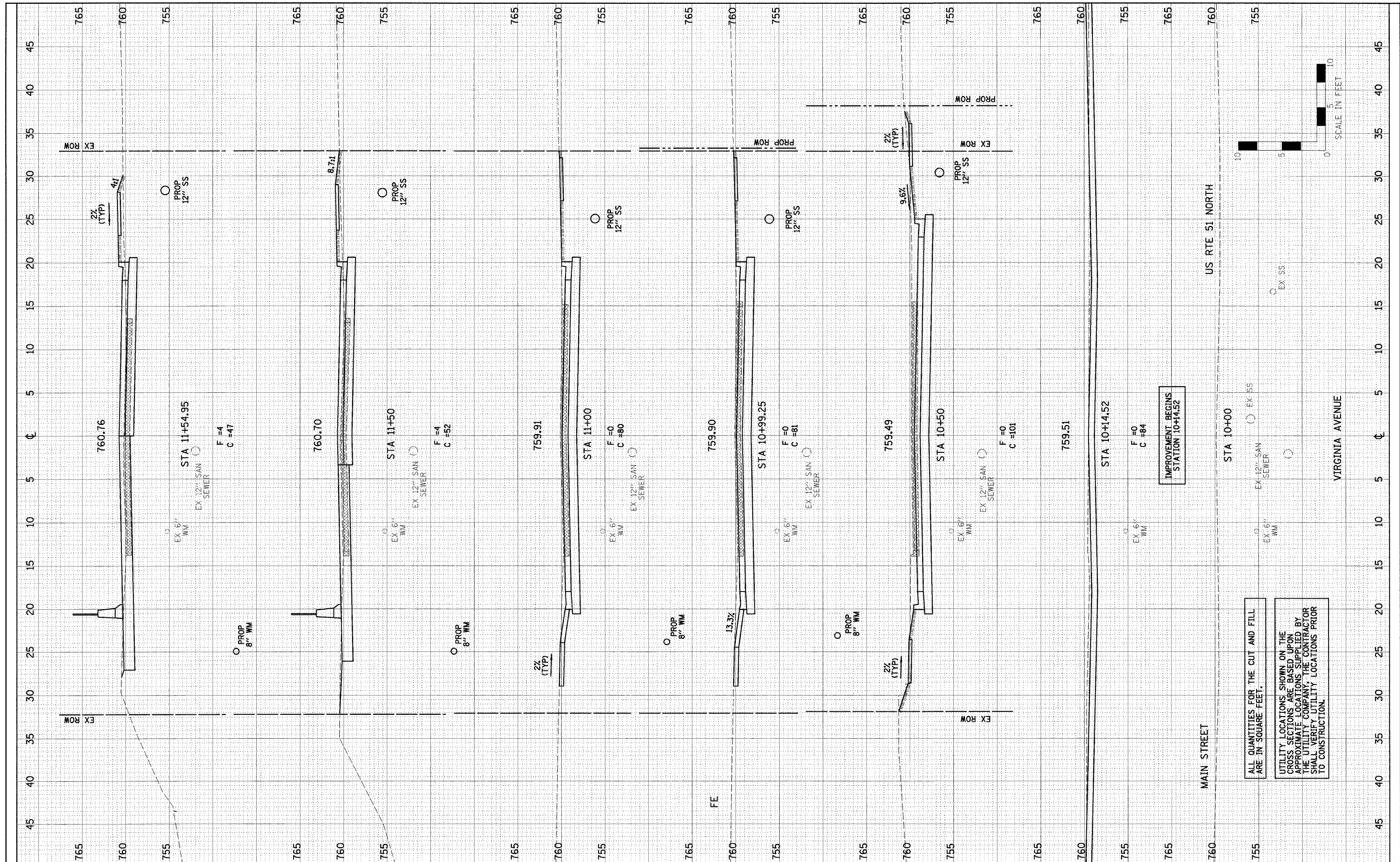
SCALE: SHEET NO. 48 OF 52 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	48
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

FINISH SURVEYED SURVEY PLOTTED TEMPLATE AREAS CHECKED
 NO. BY DATE

ORIGINAL SURVEYED SURVEY PLOTTED TEMPLATE AREAS CHECKED
 NO. BY DATE



DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

CROSS SECTIONS
 SCALE: SHEET NO. 49 OF 52 SHEETS STA. TO STA.

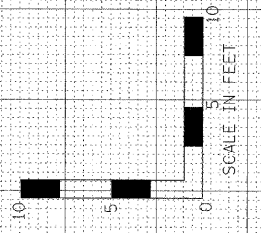
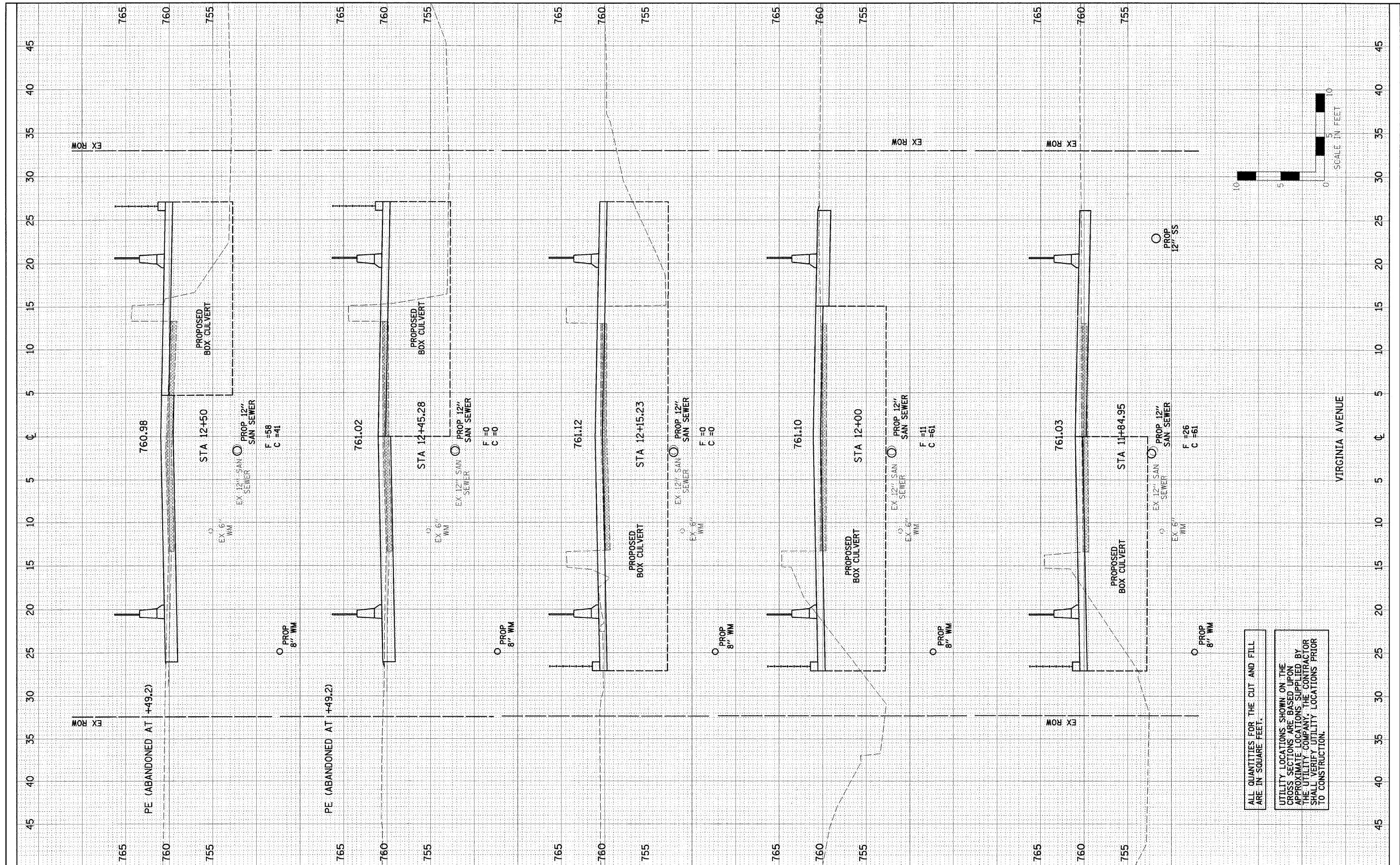
**VIRGINIA AVENUE OVER SUGAR CREEK
 SECTION 04-00226-00-BR
 MCLEAN, COUNTY**

F.A.U. 6356	SECTION 04-00226-00-BR	COUNTY MCLEAN	TOTAL SHEETS 52	SHEET NO. 49
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

ALL QUANTITIES FOR THE CUT AND FILL ARE IN SQUARE FEET.
 UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED UPON APPROXIMATE LOCATIONS SUPPLIED BY THE UTILITY COMPANY. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

FINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	
	AREAS CHECKED	

ORIGINAL SURVEY	CHECKED	DATE
NOTE BOOK	PLOTTED	
NO.	TEMPLATE	
	AREAS CHECKED	
	AREAS CHECKED	



ALL QUANTITIES FOR THE CUT AND FILL ARE IN SQUARE FEET.

UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED UPON APPROXIMATE LOCATIONS SUPPLIED BY THE UTILITY COMPANY. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

CROSS SECTIONS

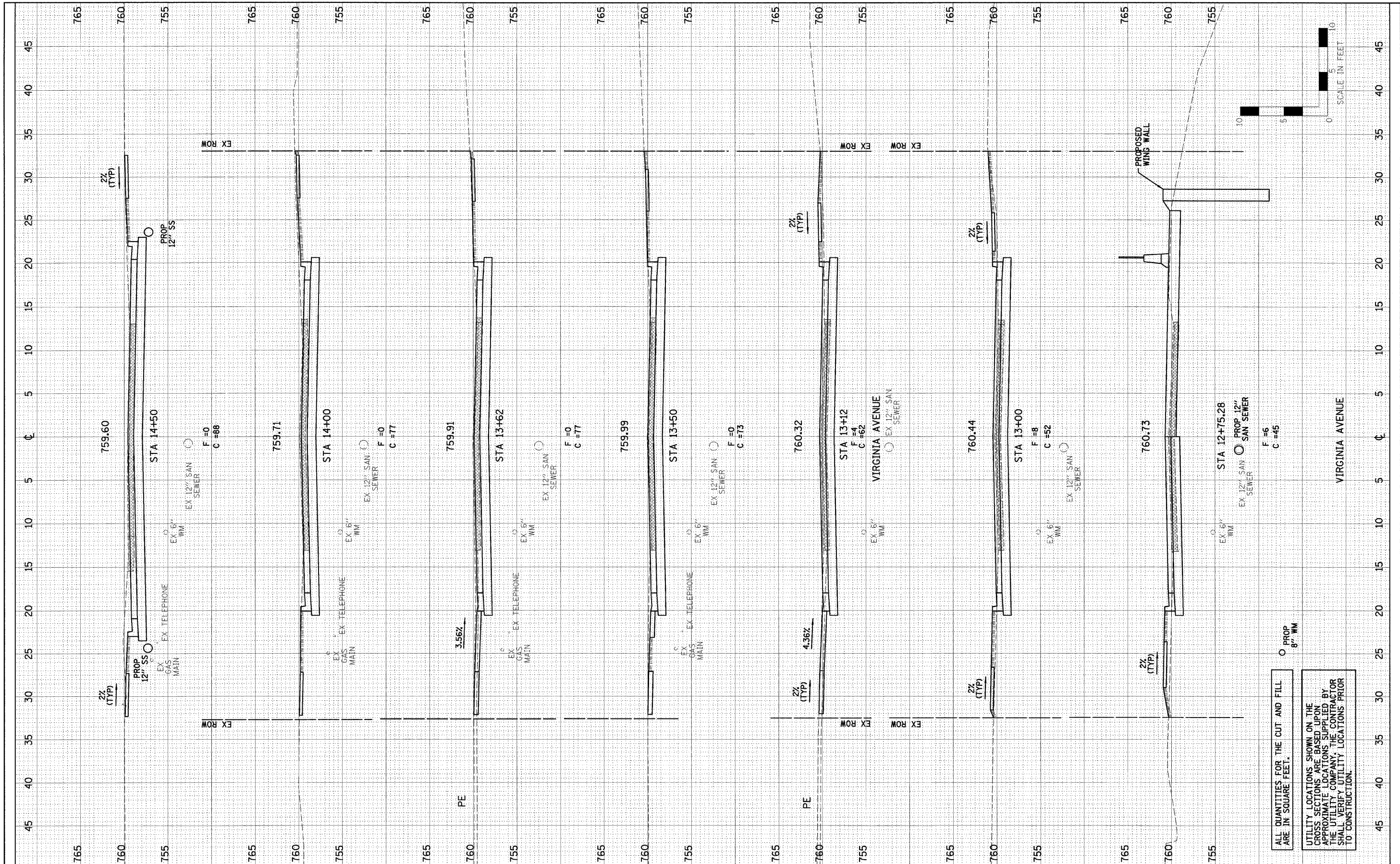
SCALE: SHEET NO. 50 OF 52 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00225-00-BR
MCLEAN, COUNTY

F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	50
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				

NO.	AREAS CHECKED	DATE	BY
	ORIGINAL SURVEY		
	NOTED BOOK		
	TEMPLATE		
	AREAS CHECKED		

NO.	AREAS CHECKED	DATE	BY
	ORIGINAL SURVEY		
	NOTED BOOK		
	TEMPLATE		
	AREAS CHECKED		



DESIGNED	JDA	REVISED	-
DRAWN	DRR	REVISED	-
CHECKED	MSW	REVISED	-
DATE	07/22/09	REVISED	-

REVISED	-
REVISED	-
REVISED	-

TOWN OF NORMAL

CROSS SECTIONS

SCALE: SHEET NO. 51 OF 52 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00226-00-BR
MCLEAN, COUNTY

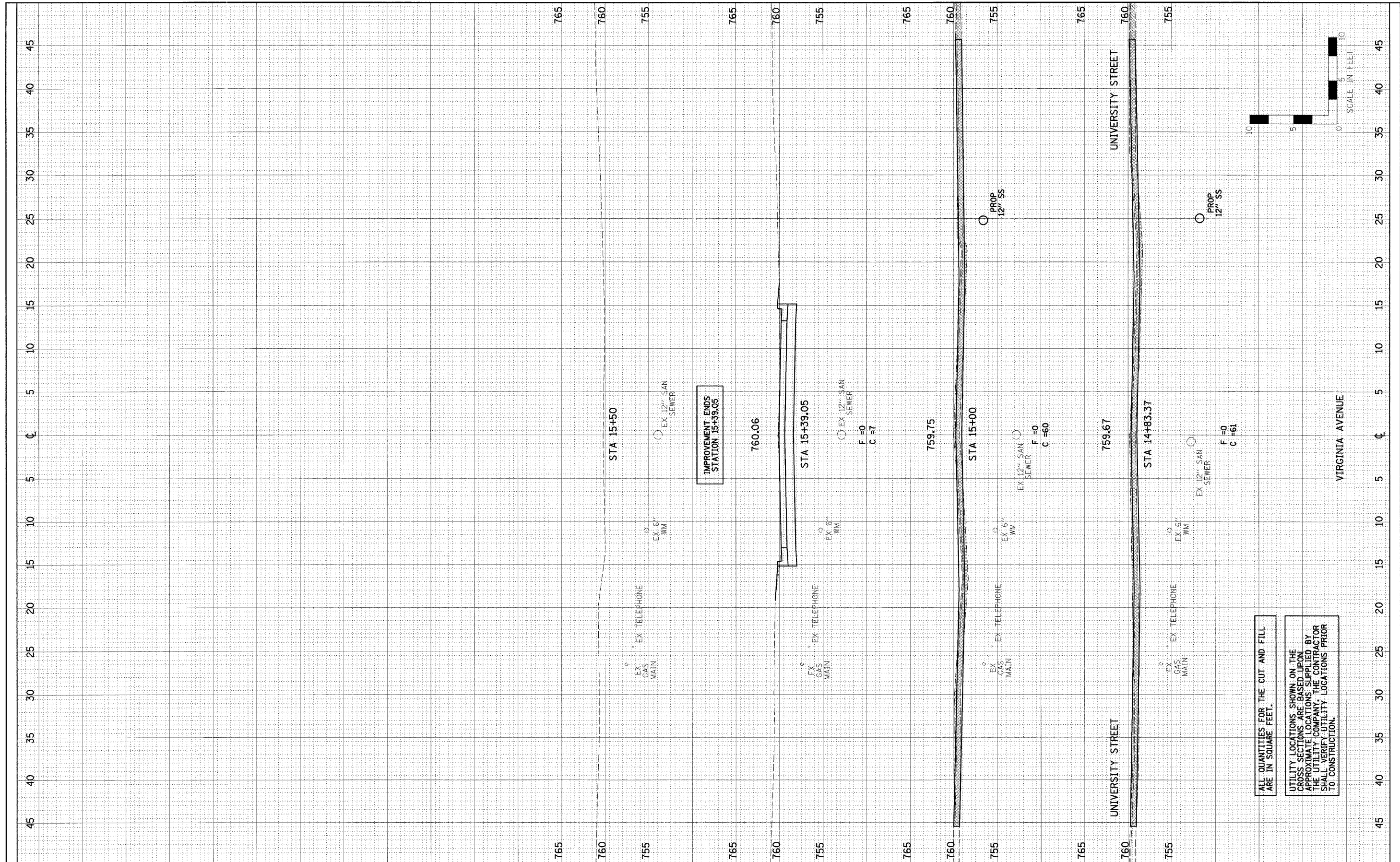
F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	51
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. 6 (ILLINOIS) FED. AID PROJECT				

ALL QUANTITIES FOR THE CUT AND FILL ARE IN SQUARE FEET.

UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED UPON APPROXIMATE LOCATIONS SUPPLIED BY THE UTILITY COMPANY. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	CHECKED		



ALL QUANTITIES FOR THE CUT AND FILL ARE IN SQUARE FEET.

UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED UPON APPROXIMATE LOCATIONS SUPPLIED BY THE UTILITY COMPANY. THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

DESIGNED - JDA	REVISED -
DRAWN - DRR	REVISED -
CHECKED - MSW	REVISED -
DATE - 07/22/09	REVISED -

TOWN OF NORMAL

CROSS SECTIONS

SCALE: SHEET NO. 52 OF 52 SHEETS STA. TO STA.

VIRGINIA AVENUE OVER SUGAR CREEK
SECTION 04-00225-00-BR
MCLEAN, COUNTY

F.A.J.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6356	04-00226-00-BR	MCLEAN	52	52
S.N. 057-7834		CONTRACT NO. 91416		
FED. ROAD DIST. NO. 6 ILLINOIS FED. AID PROJECT				