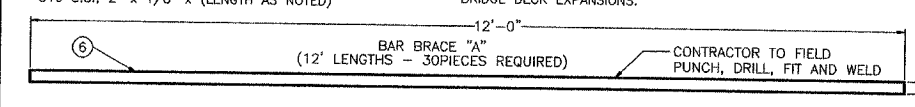
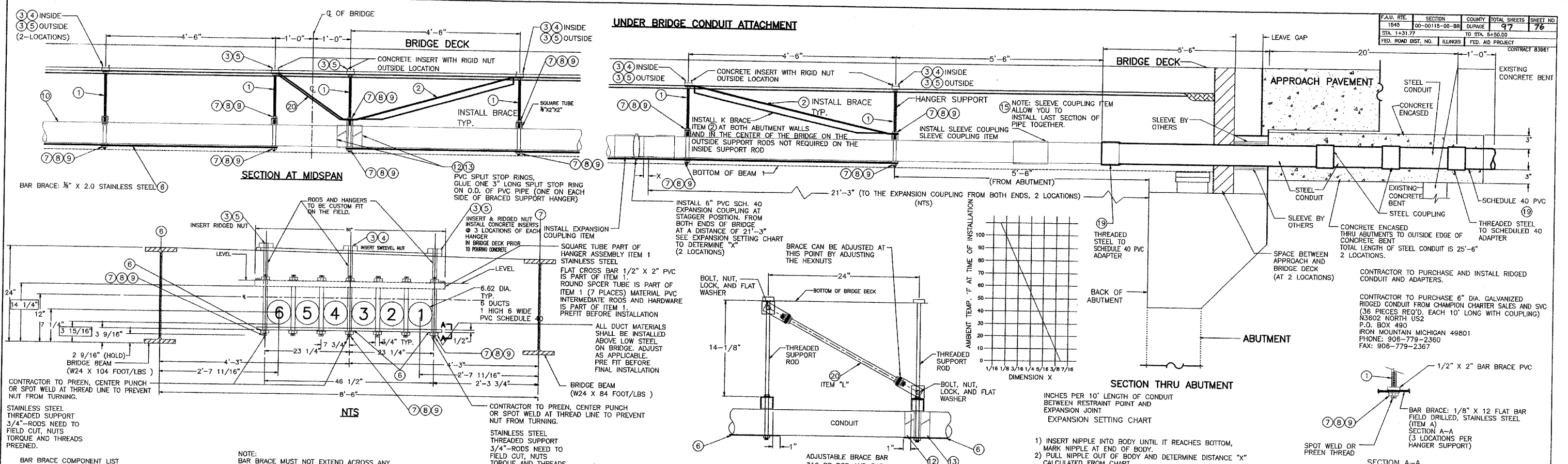


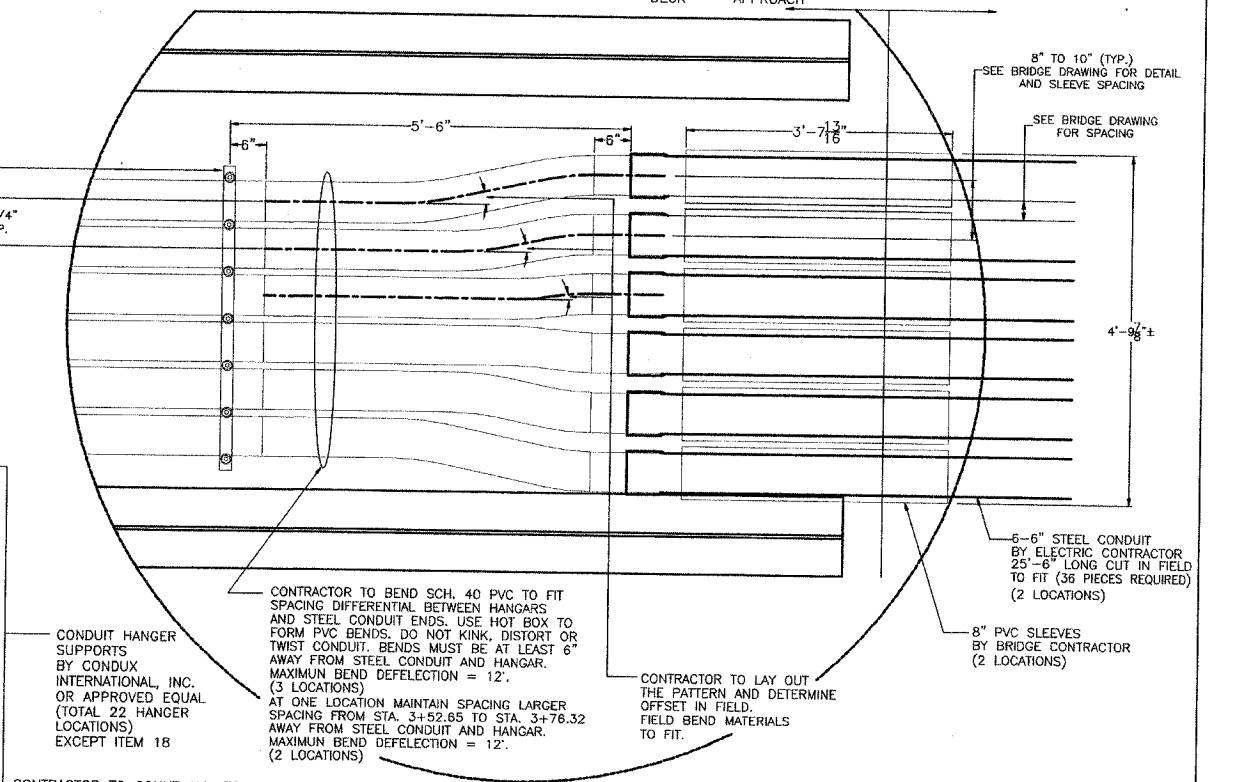
UNDER BRIDGE CONDUIT ATTACHMENT



- BEGIN AT ONE ABUTMENT BY INSTALLING AN ADAPTER COUPLING ONTO THE CONDUIT THAT IS PROTRUDING FROM THE ABUTMENT. THIS CONDUIT IS THREADED STEEL.
- INSTALL AS MANY SUPPORTS AS REQUIRED TO REACH THE FIRST CONDUIT JOINT. THIS REQUIRES THE INSTALLATION OF CONCRETE INSERTS INTO BRIDGE DECK AT TIME OF PLACEMENT OF CONCRETE.
- NEXT INSTALL THE FIRST PIECE OF CONDUIT AND MAKE THE CONNECTION AT THE ABUTMENT ACCORDING TO STANDARD PRACTICES FOR TYPE OF CONDUIT BEING USED. CONTINUE THE PROCESS OF INSTALLING SEGMENTS OF SUPPORTS AND CONDUIT, WORKING FROM ONE ABUTMENT TO THE OTHER. NO JOINT SHOULD BE WITHIN 12 INCHES OF A HANGER.
- EXPANSION JOINTS ARE INSTALLED AT (2) TWO LOCATIONS IN THE CONDUIT SYSTEM DURING THIS ONGOING ASSEMBLY PROCESS. THE EXPANSION JOINTS MUST BE PLACED AS THE REQUIRED LOCATIONS BY ATTACHING THE EXPANSION SLEEVE TO THE CONDUIT THAT IS IN PLACE. IF THE EXPANSION SLEEVE IS OF THE TYPE THAT WILL ACCEPT THE SPIGOT END OF THE NEXT CONDUIT PIECE, THEN THE NEXT CONDUIT PIECE SHOULD BE INSERTED TO THE HALFWAY POINT OF THE SLEEVE ALLOWING FOR EQUAL MOVEMENT IN EITHER DIRECTION. IF THE EXPANSION SLEEVE IS OF THE TYPE THAT REQUIRES AN EXPANSION NIPPLE, THE NIPPLE SHOULD BE ADJUSTED TO THE HALFWAY POINT OF THE SLEEVE AND SUBSEQUENTLY ASSEMBLED TO THE END OF THE NEXT CONDUIT SECTION.
- CARE MUST BE TAKEN THAT THE EXPANSION JOINTS REMAIN AT MID-TRAVEL DURING THE REMAINDER OF THE INSTALLATION PROCESS. THE JOINT MAY BE WRAPPED WITH TAPE FOR ASSURANCE.
- NO EXPANSION JOINT SHOULD BE CLOSER THAN 12 INCHES TO ANY SUPPORT. THE IDEAL LOCATION IS 1/4 THE DISTANCE TO THE NEXT SUPPORT.
- SPLIT STOP RINGS ARE INSTALLED ON THE CONDUIT AT ANCHOR POINTS WHICH OCCUR AT THE MIDWAY POINT BETWEEN EXPANSION JOINTS. WHICH IS THE CENTER OF THE BRIDGE WHEN AN ANCHOR POINT LOCATION IS REACHED, TWO STOP RINGS SHOULD BE SLIPPED OVER THE CONDUIT SECTION SO THAT ONE FALLS ON EACH SIDE OF THE ANCHOR POINT SUPPORT. AFTER THE CONDUIT CONNECTION HAS BEEN MADE, AND THE LAST EXPANSION JOINT HAS BEEN CHECKED TO MAKE SURE THAT IT HAS NOT MOVED, THE STOP RINGS CAN BE EPOXYED TO THE OUTSIDE OF THE CONDUIT AGAINST EACH SIDE OF THE SUPPORT. PLASTIC CAN BE WRAPPED OR TAPE CAN BE USED TO HOLD THE STOP RINGS IN PLACE UNTIL THE EPOXY HAS CURED.
- IF IT IS CONVENIENT AT THIS TIME TO INSTALL THE ANCHOR POINT BRACING ITEM "K" AND ITEM "L" BETWEEN THE ANCHOR POINT SUPPORT AND THE BRIDGE DECK.
- THE LAST SECTION OF CONDUIT SHOULD BE CUT TO LENGTH SO THAT IT FITS END TO END WITH THE CONDUIT THAT PROTRUDES FROM THE ABUTMENT. IF THE TWO CONDUITS ARE THE SAME, THE CONNECTION CAN BE MADE WITH A SLEEVE COUPLING OR SLIP COUPLING. SIMPLY SLIDE THE SLEEVE ONTO ONE OF THE CONDUITS, APPLY EPOXY TO EACH END, PLACE THE ENDS TOGETHER AND SLIDE THE SLEEVE OVER THE JOINT. IF AN ADAPTER COUPLING IS REQUIRED, THEN THE LAST CONNECTION IS MADE BY RETRACTING THE LAST EXPANSION JOINT, THEREBY ALLOWING ENOUGH SPACE BETWEEN THE CONDUIT ENDS TO INSTALL THE ADAPTER. AFTER THE CONNECTION HAS BEEN MADE, THE EXPANSION JOINT SHOULD BE BACK AT MID-TRAVEL.
- THIS PRINCIPLE HOLDS TRUE FOR A TEMPERATURE RANGE OF APPROX. 50°-70°F ACCOUNT FOR YOUR JOBSITE AMBIENT TEMPERATURE WHEN INSTALLING EXPANSION JOINTS.
- CHECK ALL CONNECTIONS, PREEN THREADS, TACK WELD ALL NUTS TO RODS, CHECK LOW STEEL FOR CLEARANCE.
- CONTRACTOR SHALL PROVIDE FALL PROTECTION.

THE CONTRACTOR SHALL FURNISH UNLOAD DELIVER AND INSTALL THE FOLLOWING MATERIALS PER CITY OF NAPERVILLE'S SPECIFICATION FOR W.F. #58199 AT THE BAILEY RD. BRIDGE. MATERIAL LIST FOR BRIDGE WORK. CONDUX INTERNATIONAL, INC. P.O. BOX 247 MANKATO, MN 56002-0247 ATTN: BRIAN BAYNES (1-800-533-2077)

ITEM	BILL OF MATERIALS (UNDER BRIDGE SUPPORT SYSTEM) PURCHASE BY CONTRACTOR	UNIT	QTY.	PRODUCT NO.
1	HANGER, 1/4"-6W, FIBERGLASS & STAINLESS STEEL, OPENING FOR 6" PVC DUCT	ASSEMBLY	22	TBA
2	THREADED RODS, 3/4"-10 X 24.75 LONG WITH NUTS, BOLTS AND WASHERS			
3	HANGER BRACE (ITEM K)	EACH	8	TBA
4	INSERT, CONCRETE ADJ-BODY M-26 CONCRETE INSERT BODY; M-26	EACH	92	08409925
5	INSERT, CON 3/4 NUT SWIVEL M-26 CONCRETE INSERT SWIVEL NUT; 3/4-10 UNC	EACH	32	08409961
6	INSERT, CON 3/4 NUT RIDGE M-26 CONCRETE INSERT RIDGE NUT; 3/4-10 UNC	EACH	60	08409938
7	FLAT BAR: 1/8 X 2.0 X 12 FT. STAINLESS STEEL (BAR BRACE A) (30 PIECES)	FEET	460'	00166100
8	HEX NUT: 3/4-10 UNC STAINLESS STEEL	EACH	15	02125100
9	LOCK WASHER: 3/4" STAINLESS STEEL	EACH	15	02125300
10	FLAT WASHER: 3/4" STAINLESS STEEL	EACH	15	02125200
11	CONDUIT, SCH 40/6.00" UL CONDUIT; 6" PVC SCH 40 UL MEETING NEMA TC-2, UL651 (10' LENGTH)	FEET	1300'	05101160
12	CPLG, EXP PVC-6.62 SC40-6IN EXPANSION JOINT; 6" SCH 40 WITH O-RING	EACH	12	06101360
13	CPLG, 6.62 ID PVC-STOP COUPLING STOP; 6" SCH 40 PVC	EACH	12	05210080
14	RING, STOP, 6.50 ID-PVC-SCH 40	EACH	12	08501960
15	ADAPTER, 6" PVC TO 6" THREADED FEMALE	EACH	12	08519103
16	SOLVENT CEMENT, 32 OZ-FAST SET AS REQUIRED	EACH	12	TBA
17	CPLG, 6.62 ID PVC-COUPLING SLEEVE; 6" SCH 40 PVC	EACH	12	TBA
18	ADAPTER, 6" PVC TO 6" THREADED FEMALE	EACH	12	TBA
19	COUPLING 5 DEGREE STOP PVC SCH 40	EACH	36	TBA
20	ADJUSTABLE BRACE BAR ITEM "L"	EACH	4	TBA



CONTRACTOR TO COUNT ALL ITEMS AND PREFIT PRIOR TO INSTALLATION ANY ITEMS MISSING SHALL BE ORDERED BY THE CONTRACTOR WITH SUFFICIENT LEAD TIME TO AVOID DELAYS.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT FILE	2054	OLD FILE NO.	
PROJECT DESCRIPTION	BAILEY RD. BRIDGE DUCTBANK INSTALLATION	DATE	05-18-97
COORDINATED WITH	BRIDGE IMPROVEMENT	DATE	05-18-97
ENGINEER	NTS	DATE	05-18-97
PROJECT NO.	58199	DATE	05-18-97
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SHEET 10 OF 23