

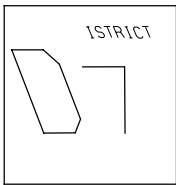
STATE JOB NO. 478493

PROJECT NO. ***-***

PID NO. 80873

FED. No. E110-208*

PLAN PREPARED BY:

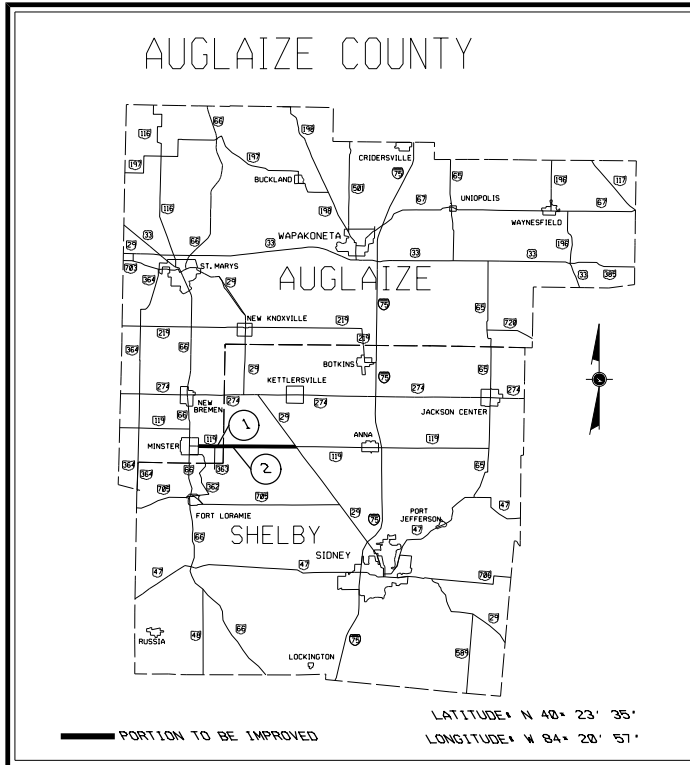


STATE OF OHIO

OHIO DEPARTMENT OF TRANSPORTATION

AUG/SHE-119-5.81/0.00

LOCATION MAP



MAINTENANCE

TWO-LANE RESURFACING

PROJECT EARTH DISTURBED AREA - 2.85 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA - N/A
NOTICE OF INTENT EARTH DISTURBED AREA - N/A

2010 SPECIFICATIONS

THE STANDARD 2010 SPECIFICATIONS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND THE PROPOSAL SHALL GOVERN THESE IMPROVEMENTS.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

DATE APPROVED

DISTRICT DEPUTY DIRECTOR

DATE APPROVED

DIRECTOR, DEPARTMENT OF TRANSPORTATION

PROJECT DESCRIPTION: THE WORK PROPOSED BY THIS PROJECT CONSISTS OF BERM STABILIZATION AND RESURFACING OF THE EXISTING ROADWAY WITH ASPHALT CONCRETE AS SET FORTH IN THESE PLANS.

- 1 AUG-119-5.81, FROM EAST CORPORATION LIMITS OF MINSTER TO AUG-SHE COUNTY LINE.
- 2 SHE-119-0.00, FROM AUG-SHE COUNTY LINE TO SR 29.

INDEX OF SHEETS

- 1 - TITLE SHEET
- 2 - PAVEMENT DATA
- 3 - 4 BERM STABILIZATION
- 5 - APPROACH TYPICALS
- 6 - 7 - GENERAL NOTES
- 8 THRU 11 - BRIDGE DATA
- 12 - RAISED PAVEMENT MARKERS
- 13 - GENERAL SUMMARY

ENGINEER'S SEAL



Signed _____

Date _____

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

STANDARD DRAWINGS

STANDARD DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10-19-07	MT-99.20	1-16-09	TC-52.10	1-19-07		
DM-4.3	04-17-09			TC-52.20	1-19-07	800	1-21-11
DM-4.4	04-17-09	MT-105.10	1-16-09				
				TC-65.10	1-21-05	832	5-5-09
MT-97.10	10-15-10	TC-41.20	1-19-01	TC-65.11	1-21-05		
		TC-42.20	7-16-04				
MT-97.12	10-15-10			TC-71.10	1-15-10		

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN IN THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE STRUCTURE AND PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS, WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD. PLANS OF THE EXISTING STRUCTURES MAY BE EXAMINED AT THE DISTRICT SEVEN OFFICE IN SIDNEY, OHIO OR THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

PROPOSED WORK - AUG-119-06.16

REMOVE 2" OF EXISTING ASPHALT CONCRETE WEARING COURSE FROM BRIDGE DECK. GRIND 150' FROM EACH EDGE OF BRIDGE FOR A SMOOTH TRANSITION. OVERLAY DECK WITH 1.75" ASPHALT CONCRETE. SEAL EXPANSION JOINTS WITH POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

PROPOSED WORK - SHE-119-02.86

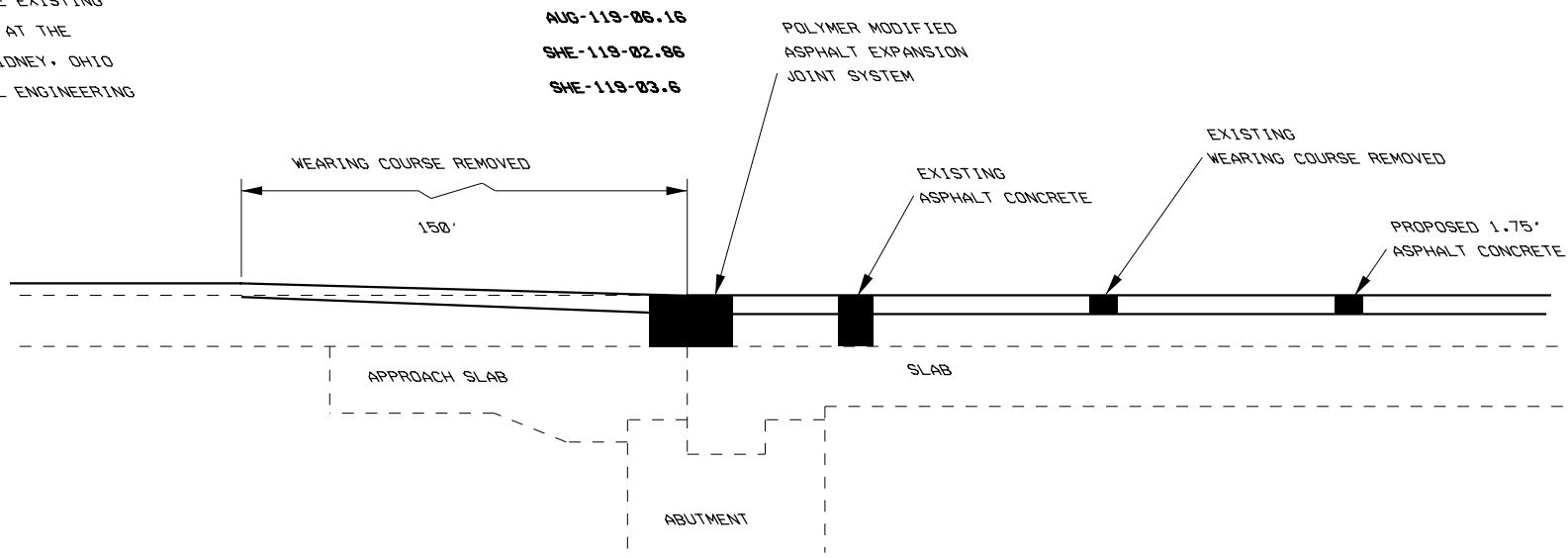
REMOVE 1.75" OF EXISTING ASPHALT CONCRETE WEARING COURSE FROM BRIDGE DECK. GRIND 150' FROM EACH EDGE OF BRIDGE FOR A SMOOTH TRANSITION. OVERLAY DECK WITH 1.75" ASPHALT CONCRETE. SEAL EXPANSION JOINTS WITH POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

SEE INSERT SHEETS. ALL ASPHALT DIMENSIONS ARE MEASURED AT THE EDGE OF THE STRUCTURE. THE ACTUAL DEPTH OF THE JOINT WILL BE THICKER AT THE CENTER OF THE ROADWAY. REMOVAL OF THE EXISTING JOINT SEALER SHALL BE INCLUDED IN THIS ITEM.

PROPOSED WORK - SHE-119-03.6

REMOVE 2.5" OF EXISTING ASPHALT CONCRETE WEARING COURSE FROM BRIDGE DECK. GRIND 150.0' FROM EACH EDGE OF BRIDGE FOR A SMOOTH TRANSITION. OVERLAY DECK WITH 1.75" ASPHALT CONCRETE. SEAL EXPANSION JOINTS WITH POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



CALCULATED

CHECKED

AUGLAIZE/SHELBY COUNTY
AUG/SHE-119-5.81/0.00

BRIDGE - PROPOSED WORK

9
13

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION JOINTS AS PER THESE DETAILS AND THE MANUFACTURERS REQUIREMENTS USING A POLYMER MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE APPROVED APPLICATORS*SUPPLIERS, AS LISTED ON THE WEBSITE BELOW, WHO WILL FURNISH MATERIAL AND*OR INSTALL THE NEW AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE*S* HAS BEEN COMPLETED. THE APPLICATOR SHALL BE AN APPROVED SUPPLIER AND*OR OBTAIN A LETTER OF CERTIFICATION FROM THE APPROVED SUPPLIER TO INSTALL. THE LETTER OF CERTIFICATION SHALL INCLUDE THE STATE PROJECT NUMBER AND PID NUMBER FOR THE PROJECT IT IS INTENDED.

HTTP**WWW.DOT.STATE.OH.US*DIVISIONS*HIGHWAYOPS*STRUCTURES*STANDARD*BRIDGES*PLAN@20INSERT@20SHEETS*POLY*04-15-05*V8.PDF

THE APPROVED APPLICATORS LISTED ON THE WEBSITE SHALL BE IN EFFECT FOR THIS PROJECT FOURTEEN *14* CALENDAR DAYS PRIOR TO THE BID LETTING DATE.

MATERIALS:	
BRIDGING PLATE:	MILD STEEL 1/8" OR 1/4" THICK PLATE, 8' WIDE OR 18 GAUGE ALUMINUM, 8' WIDE.
BINDER:	
TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 MM. MAX. AT 140 DEGREES F.
PENETRATION:	9 MM. MAX. AT 77 DEGREES F. 1 MM. MAX AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 CM. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ± 0.05
POURING TEMP:	350 - 390 DEGREES F.
AGGREGATE:	
TYPE:	CRUSHED, DOUBLE WASHED AND DRIED GRANITE OR BASALT
GRADATION	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT

BACKER ROD:

THE BACKER ROD SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:
SAWING AND SEALING PREPARATION

AFTER ALL PAVING OPERATIONS ARE COMPLETED, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN 2' DEEP *28' CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED*. REMOVE ALL MATERIAL, INCLUDING WATERPROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR *HCA* LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: *PRESTRESSED BOX OR CONCRETE SLAB*

THE EXPANSION JOINT CAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATE SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SET UP BEFORE THE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE MINIMUM OF 1" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN ONE HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO, A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY. NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED, WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS. MINIMUM 2 INCHES. THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH A BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

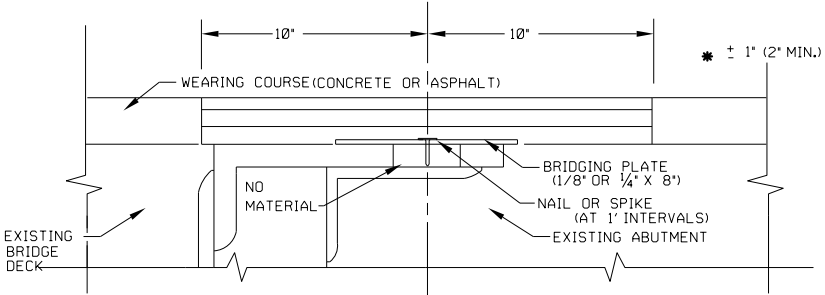
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF 2 INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

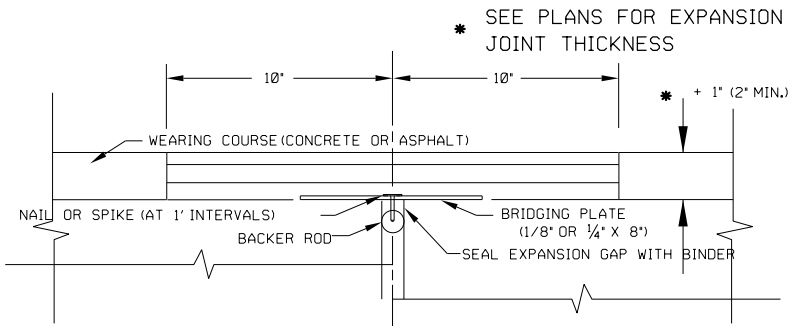
CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE ODOT OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF CUBIC YARDS AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, CUBIC YARD, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



TYPICAL STEEL BEAM EXPANSION JOINT



TYPICAL PRESTRESSED BOX BEAM OR CONCRETE SLAB JOINT

CALCULATED	AUGLAIZE/SHELBY COUNTY	GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	<div>11 13</div>
CHECKED	AUG/SHE-119-5.81/0.00		