MICROFILMED
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FHWA REGION	STATE	PROJECT	DATE
5	OHIO	BHF-67(17)	1982

1/21

SUM-18-10.55

BHF-67(17)

CONVENTIONAL SIGNS

CENTERLINE	14 — 15
EXIST. STORM SEWER	SS — SS
EXIST. SANITARY SEWER	S — S
EXIST. WATER MAIN	W — W
EXIST. GAS MAIN	G — G
LIGHT POLE	
POWER POLE	

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SUM - 18 - 10.55
CITY OF AKRON - SUMMIT COUNTY
E. MARKET STREET BRIDGE
OVER STATE ROUTE 8
DECK RECONSTRUCTION

1981 SPECIFICATIONS

The Standard Specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal, shall govern this improvement.

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 on these plans and estimates.

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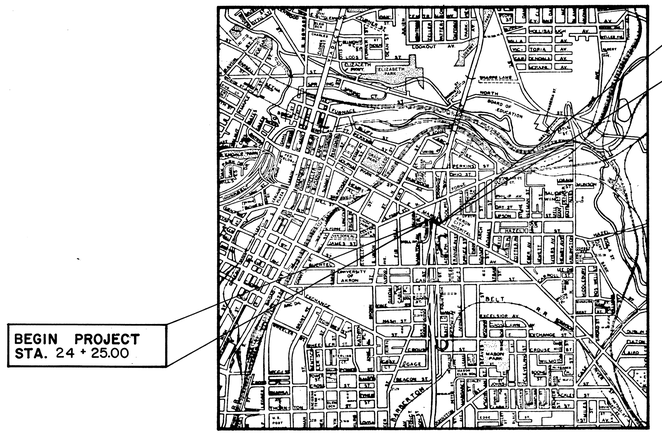


LOCATION MAP

PORTION TO BE IMPROVED
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (1982)	16,300
DESIGN YEAR (2002) ADT	23,200
DHV	2,010
D (DIRECTIONAL DISTRIBUTION)	56% - 44%
T (PERCENTAGE B & C TRUCKS)	4%
V (DESIGN SPEED) M.P.H.	35

LINE DATA

BEGIN PROJECT	STA. 24 + 25.00
END PROJECT	STA. 26 + 25.00
LENGTH OF PROJECT	200.00 L.F. = 0.038 MILES
BEGIN WORK	STA. 23 + 83.60
END WORK	STA. 26 + 46.90
TOTAL LENGTH OF WORK	263.30 L.F. = 0.050 MILES

CITY OF AKRON

SUBMITTED Pawan K. Khaitan
DATE 10/28/82 MANAGER, DESIGN DIVISION

SUBMITTED J. Bucket
DATE 10-28-82 MANAGER, CONSTRUCTION DIVISION

SUBMITTED J. Watson
DATE 10-28-82 CITY ENGINEER

APPROVED
DATE 11.1.82 DIRECTOR OF PUBLIC SERVICE

O.D.O.T.

APPROVED William M. Goldman DJL
DATE 12/7/82 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED Robert B Pfeifer
DATE 12-28-82 ENGINEER, BUREAU OF BRIDGES AND STRUCTURAL DESIGN

APPROVED Wayne H. Faulds
DATE 2-8-83 CHIEF ENGINEER, PLANNING AND DESIGN

APPROVED Warren J. Smith
DATE 2-8-83 DIRECTOR, DEPARTMENT OF TRANSPORTATION

ODOT STANDARD CONSTRUCTION DRAWINGS						SUPP. SPECS		CITY OF AKRON STANDARD	
Drawing No.	Date	Drawing No.	Date	Drawing No.	Date	Number	Date	Drwg. No	Date
BP-7	12-6-76					845	3-2-81		
BP-11	1-3-75					849	10-19-81		
BP-5	7-16-81					824	10-8-82		
MC-3	6-1-73					953	8-21-80		
MC-9A	5-1-81					836	3-12-75		
TC-35.10	10-5-77					1001	1-3-77		
						921	12-472		

STATE OF OHIO NIRMAL K. SINGH E-45280 REGISTERED PROFESSIONAL ENGINEER

Project: SUM-18-10.55
Date of Letting ____ Contract No. ____

Nirmal K. Singh
N. K. SINGH REGISTERED ENGINEER NO. 45280

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

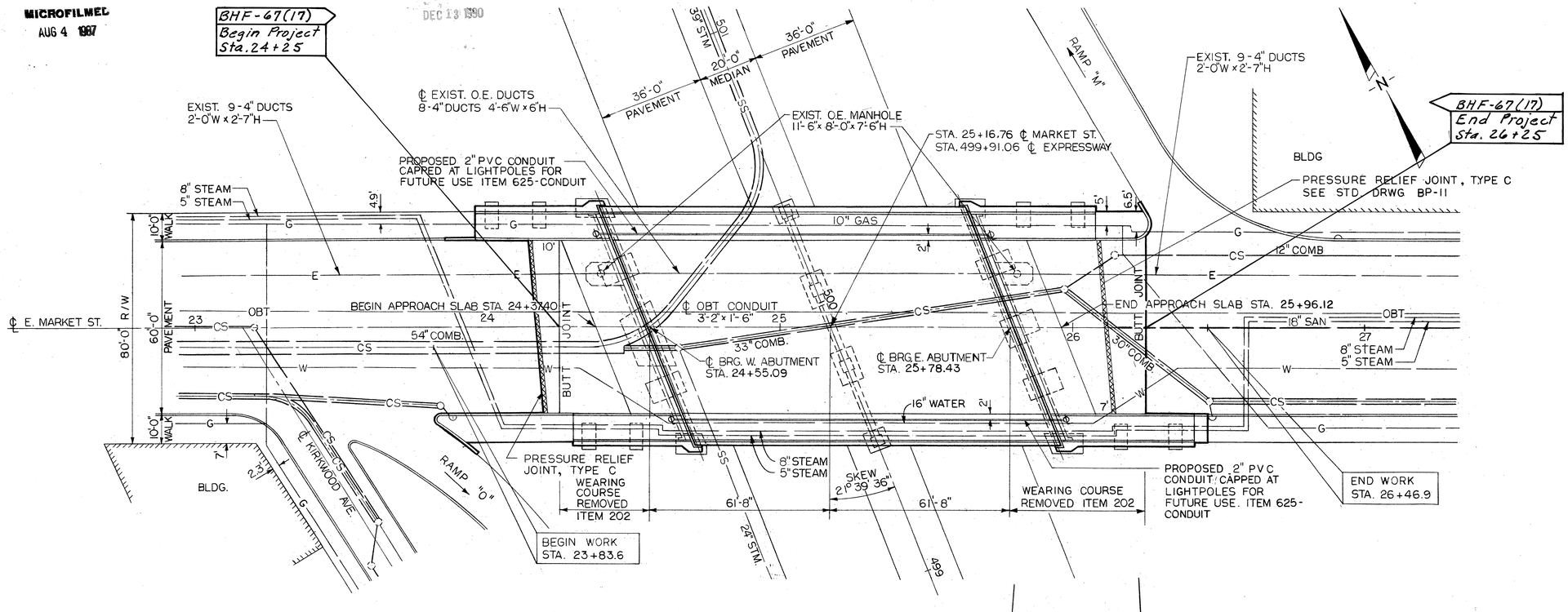
Approved
DIVISION ADMINISTRATOR DATE

MICROFILMED
AUG 4 1987
MICROFILMED
DEC 13 1990

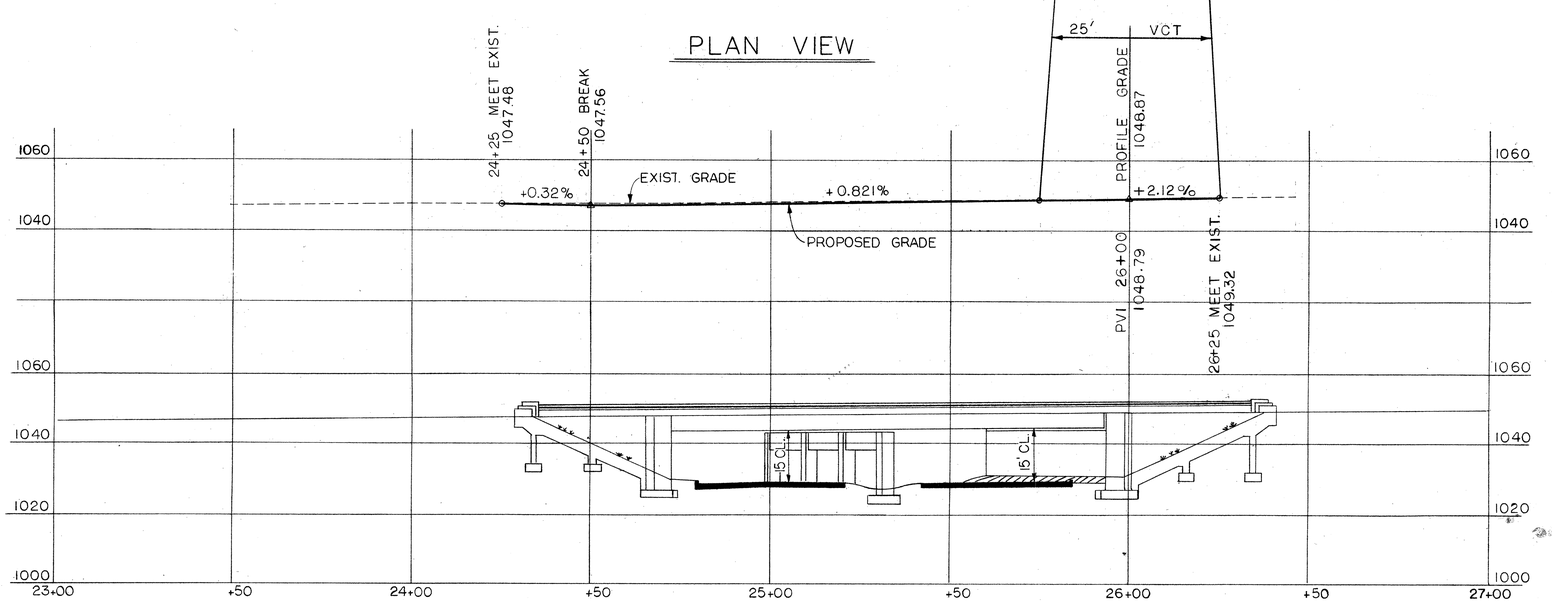
FHWA	STATE	PROJECT	DATE
5	OHIO		1982

2/21

SUM - 18 - 10.55



PLAN VIEW



ELEVATION

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 2 @ 61'-8" CENTER TO CENTER BEARINGS

ROADWAY: 60'-0" WITH TWO 10'-0" SIDEWALK

LOADING: CF 600 LOAD FREQUENCY

SKEW: 21° 39' 36"

WEARING SUFACE: 2 1/2" ASPHALTIC CONCRETE

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 2 @ 61'-8" CENTER TO CENTER BEARING

ROADWAY: 60'-0" WITH TWO 10'-0" SIDEWALKS

LOADING: HS 20-44 (CASE II) AND ALTERNATE MILITARY LOADING

SKEW: 21° 39' 36"

WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE WEARING COURSE

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

SITE PLAN

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1997

GENERAL NOTES

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

3
21

SUM-18-10.55

DESIGN SPECIFICATIONS FOR SUPERSTRUCTURE

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1977 ALONG WITH THE 1978, 1979 AND 1980 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA FOR SUPERSTRUCTURE AND APPLICABLE SUBSTRUCTURE

DESIGN LOADING: HS 20-44 (CASE II) AND ALTERNATE MILITARY LOADING.
CONCRETE CLASS "C" - UNIT STRESS 1333 P.S.I. FOR SUBSTRUCTURE.
CONCRETE CLASS "S" - UNIT STRESS 1800 P.S.I. FOR SUPERSTRUCTURE.
STRUCTURAL STEEL - ASTM A36 - UNIT STRESS 20,000 P.S.I.
REINFORCING STEEL - ASTM A615, A616 OR A617 - UNIT STRESS 20,000 P.S.I.
DECK PROTECTIVE METHOD - EPOXY COATED REINFORCING STEEL, TOP MAT ONLY;
LATEX MODIFIED CONCRETE WEARING COARSE.

ITEM 624 - MOBILIZATION, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQUARE FEET OF FLOOR SPACE WHICH SHALL BE IN ACCORDANCE WITH 619.01 AND 619.02. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 624 - MOBILIZATION, AS PER PLAN.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATVIE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE 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.

TRAFFIC MAINTENANCE

FOR TRAFFIC MAINTENANCE, SEE SHEETS 7/21 AND 8/21 OF THE PLANS.

CONTINGENCY QUANTITIES

The contractor shall not order materials or perform work for plan items set up to be used "as directed by the engineer" unless authorized by the Engineer. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITY LINES

THE FOLLOWING IS A LIST OF THE UTILITIES WITHIN THE LIMITS OF THIS PROJECT:

SEWER MAINTENANCE
CITY OF AKRON
1055 HOME AVENUE
AKRON, OHIO 44310
PHONE: (216) 375-2616

WATER DEPARTMENT
CITY OF AKRON
65 SOUTH HIGH STREET
AKRON, OHIO 44308
PHONE: (216) 375-2690

EAST OHIO GAS COMPANY
2100 EASTWOOD AVENUE
AKRON, OHIO 44305
PHONE: (216) 798-7131

OHIO EDISON COMPANY
III CASCADE PLAZA
AKRON, OHIO 44308
PHONE: (216) 384-5100

OHIO BELL TELEPHONE
2525 STATE ROAD
CUYAHOGA FALLS, OHIO 44223
PHONE: (216) 922-2421

RECYCLE ENERGY SYSTEM
(STEAM LINES)
225 OPPORTUNITY PARKWAY
AKRON, OHIO 44308
PHONE: (216) 376-5250
MR. BRIAN LORMAN

AT LEAST 48 HOURS BEFORE DIGGING, THE CONTRACTOR SHOULD CALL THE OHIO UTILITIES PROTECTION SERVICE, TOLL FREE, AT 800-362-2764. NON-MEMBER UTILITY COMPANIES MUST BE CALLED DIRECTLY.

UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FORTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

PORTIONS OF STRUCTURE REMOVED

REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE AS SHOWN ON THE CONTRACT DRAWINGS SHALL CONFORM IN ALL RESPECT TO ITEM 202 OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL PREPARE DETAILED PROCEDURES AND PLANS FOR REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE INCLUDING METHODS OF PROTECTING EXISTING OR RELOCATED UTILITIES AND PROTECTING THE PEDESTRIAN AND THE VEHICULAR TRAFFIC WITHIN THE LIMITS OF THE PROJECT. (NOTE: CONTRACTOR IS HEREBY MADE AWARE TO EXERCISE CAUTION WHEN WORKING WITH OR AROUND THE MATERIAL THAT MAKES UP THE OHIO BELL AND OHIO EDISON DUCTS ON THE UNDERSIDE OF THE BRIDGE DECK. IT IS TRANSITE AND IS EASILY DAMAGED IF STRUCK BY OBJECTS OR EQUIPMENT.) SUCH PLANS SHALL INCLUDE INFORMATION AS TO EQUIPMENT AND MATERIALS TO BE USED, PERSONNEL, SUPERVISION, THE HOURS OF OPERATION AND DURATION OF THE JOB.

THESE PLANS SHALL BE APPROVED BY THE ENGINEER BEFORE COMMENCING ANY REMOVAL OPERATIONS. THE REVIEW AND APPROVAL BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF HIS FULL RESPONSIBILITY FOR SAFE REMOVAL OPERATIONS. THE CONTRACTOR SHALL BE AND SHALL REMAIN RESPONSIBLE FOR THE REMOVAL OPERATION.

ONCE THE CONTRACTOR HAS OBTAINED THIS APPROVAL HE SHALL REMOVE AND DISPOSE OF ALL ASPHALT CONCRETE FROM THE BRIDGE DECK, ALL BULB ANGLE GUTTERS, ALL SCUPPERS, ALL CONCRETE FROM THE BRIDGE DECK, CURBS, SIDEWALKS, WINGWALLS AND ABUTMENTS AS INDICATED ON THESE PLANS. IN ADDITION, REMOVE AND DISPOSE OF THE PORTIONS OF STRUCTURAL STEEL AND REINFORCING STEEL AS NOTED ON THE PLANS. *ANY PAINT DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT HIS EXPENSE, AND TO THE APPROVAL OF THE ENGINEER.* CARE SHALL BE EXERCISED IN WORKING AROUND REINFORCING STEEL SO AS NOT TO DAMAGE THE REINFORCING STEEL THAT IS TO REMAIN IN PLACE OR SHATTER THE CONCRETE AROUND THAT SECTION TO BE REPAIRED. REINFORCING THAT IS EXPOSED UNDER THIS REMOVAL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING OR AS DIRECTED BY THE ENGINEER.

BRIDGE RAILING AND WOODEN WALKWAY REMOVAL

REMOVAL OF THE EXISTING WOODEN WALKWAY ON THE NORTHWEST CORNER OF THE BRIDGE AND THE BRIDGE RAILING IS INCLUDED IN ITEM 202 - LUMP SUM - PORTIONS OF STRUCTURE REMOVED. THE CONTRACTOR SHALL STOCKPILE ALL MATERIALS THAT MAKE UP THE WOODEN WALKWAY, THE BRIDGE RAILING AND POSTS IN A NEAT MANNER FOR SALVAGE BY THE CITY OF AKRON. THE CITY OF AKRON, DEPARTMENT OF HIGHWAY MAINTENANCE, WILL PICK UP THESE MATERIALS AFTER THEIR REMOVAL.

ITEM SPECIAL - TEMPORARY BRACING AND SHORING

THIS ITEM SHALL CONSIST OF RAISING AND LOWERING THE EXISTING BEAMS WHERE NECESSARY AND THE DESIGN, FABRICATION, INSTALLATION, MAINTENANCE AND REMOVAL OF TEMPORARY BRACING AND SHORING FOR THE PURPOSE OF SUPPORTING THE EXISTING BEAMS DURING THE REPAIR OF THE ABUTMENT SEATS AND RESETTING OF THE ROCKER BEARINGS.

THE JACKING SYSTEM, BRACING, SHORING AND PROTECTION TO BE USED FOR THE WORK INVOLVED IN THIS PROJECT SHALL BE DESIGNED AND DETAILED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER, HAVING AT LEAST TEN (10) YEARS OF EXPERIENCE WITH SUCH WORK. ALL DRAWINGS, COMPUTATIONS, SPECIFICATIONS, ETC., PREPARED BY THE CONTRACTOR FOR JACKING SYSTEM, BRACING AND SHORING SHALL BEAR THE SIGNATURE AND SEAL OF THE REGISTERED ENGINEER.

THE CONTRACTOR SHALL PREPARE THE WORKING DRAWINGS, COMPUTATIONS AND CONSTRUCTION PROCEDURE IN ACCORDANCE WITH THE ACCEPTED PRACTICE OF THE CITY OF AKRON AND THE OHIO DEPARTMENT OF TRANSPORTATION AND SHALL SUBMIT FIVE (5) COPIES OF THE SAME TO THE DIRECTOR.

THE DETAILS OF THE JACKING SYSTEM, TEMPORARY BRACING AND SHORING SHALL BE SUBMITTED TO THE STATE OF OHIO FOR APPROVAL BEFORE ANY SUCH WORK IS STARTED. THE REVIEW AND APPROVAL OF THE JACKING SYSTEM, BRACING AND SHORING BY THE STATE OF OHIO SHALL NOT RELIEVE THE CONTRACTOR OF HIS FULL RESPONSIBILITY FOR PROPER AND SAFE OPERATION OF THE JACKING SYSTEM, BRACING AND SHORING. THE CONTRACTOR SHALL BE AND SHALL REMAIN RESPONSIBLE FOR THE JACKING SYSTEM AND TEMPORARY BRACING AND SHORING THROUGHOUT THE DURATION OF THIS PROJECT.

PAYMENT FOR THIS ITEM SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL-TEMPORARY BRACING AND SHORING AND SHALL CONSTITUTE FULL COMPENSATION FOR JACKING SYSTEM, BRACING, SHORING AND PROTECTION PLANS, ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT REQUIRED FOR THE SAFE EXECUTION OF THIS ITEM

ITEM SPECIAL - BEARINGS RESET

THIS ITEM SHALL CONSIST OF FURNISHING ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO RESET ROCKER BEARINGS AS DIRECTED BY THE ENGINEER IN ORDER THAT THEY CONFORM IN ALL APPLICABLE RESPECTS TO 516.05. (*THE MATERIALS, ETC., ARE EXCLUSIVE OF THOSE REQUIRED FOR THE BRACING AND SHORING.*)
PAYMENT FOR THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL - BEARINGS RESET. THIS PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIALS, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO SATISFACTORILY COMPLETE THIS ITEM.

FOR INFORMATIONAL PURPOSES ONLY, IT IS ESTIMATED THAT TWENTY-FOUR (24) BEARINGS NEED TO BE RESET. THE ACTUAL NUMBER OF BEARINGS TO BE RESET SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

GRAVEL AGGREGATE

GRAVEL AGGREGATE WILL NOT BE PERMITTED IN ANY PORTLAND CEMENT CONCRETE.

REFERENCES

REFERENCE SHALL BE MADE TO THE FOLLOWING:

STANDARD DRAWING BP-7 DATED 12-6-76
STANDARD DRAWING BP-11 DATED 1-3-75
STANDARD DRAWING MC-9A DATED 5-1-81

SUPPLEMENTAL SPECIFICATION 845 DATED 3-2-81
SUPPLEMENTAL SPECIFICATION 849 DATED 10-19-81
SUPPLEMENTAL SPECIFICATION 953 DATED 8-21-80
SUPPLEMENTAL SPECIFICATION 824 DATED 10-8-82

CUTTING AND BENDING OF REINFORCING BARS

ANY CUTTING OR BENDING OF THE EXISTING REINFORCING BARS AS INDICATED ON THE PLANS OR NECESSARY TO PROVIDE PROPER CLEARANCE SHALL BE INCLUDED IN THE PRICE BID PER POUND FOR ITEM 509-REINFORCING STEEL.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

GENERAL NOTES

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1987

GENERAL NOTES

ITEM 517 - RAILING (CONCRETE PARAPET W/ALUMINUM RAIL)

DESCRIPTION: THIS ITEM SHALL CONSIST OF THE CONSTRUCTION AND INSTALLATION OF AN ALUMINUM RAILING ON A CONCRETE PARAPET AT THE LOCATIONS AND TO THE CONFIGURATION AND GRADES SHOWN ON THE PLANS, ACCORDING TO ITEM 517 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.

MATERIAL: SHALL BE AS FOLLOWS:

POSTS: FABRICATED WROUGHT ALUMINUM ASTM B221, ALLOY 6061-T6 OR ALLOY 6351-T5.

RAIL: EXTRUDED ALUMINUM ASTM B221, ALLOY 6061-T6 OR 6351-T5.

RIVET, RAIL SPLICE, CLAMP BAR: ALUMINUM ASTM B221, ALLOY 6061-T6. SPLICE BAR DIMPLED IN SIX (6) PLACES FOR INTERFERENCE FIT.

END CAP: CAST ALUMINUM ASTM B26, ALLOY SG 70 A-F (ALUMINUM ASSOCIATION DESIGNATION A 356-F).

RAIL TO POST HARDWARE:

(4) (4 PER HANDRAIL) 3/8" N.C. x 7/8" LONG HEXAGON HEAD BOLTS, STAINLESS A.S.T.M. A 193, B8.
(4) (4 PER HANDRAIL) 3/4" O.D. x 3/8" I.D. x 1/16" THICK WASHERS, ALUMINUM A.S.T.M. B209, ALCLAD 2024-T4.
(4) (4 PER BARRIER RAIL) 1/2" - 13 N.C. x 1" LONG HEXAGON HEAD BOLTS, STAINLESS A.S.T.M. A 193, B8.
(4) (4 PER BARRIER RAIL) 7/8" O.D. x 1/2" I.D. x 1/16" THICK WASHER, ALUMINUM A.S.T.M. B 209, ALCLAD 2024-T3.

ANCHOR HARDWARE:

(2) FRONT BOLTS, 3/4" x 9" LONG STAINLESS A.S.T.M. A 276, TYPE 430 HEXAGON BOLTS WITH 3/4" - 10 ALUMINUM NUTS, A.S.T.M. B 211, ALLOY 6061-T6 OR 6062-T6.
(2) FRONT WASHERS, 1-1/2" O.D. x 13/16" I.D. x 1/8" THICK ALUMINUM WASHERS A.S.T.M. B 209, ALCLAD 2024-T3.
(2) REAR BOLTS, 5/8" x 9" LONG STAINLESS A.S.T.M. A 276, TYPE 430 BOLTS WITH 5/8" - 11 ALUMINUM HEXAGON NUTS, A.S.T.M. B 211, ALLOY 6061-T6 OR 6062-T6.
(2) REAR WASHERS, 1-1/2" O.D. x 13/16" I.D. x 1/8" THICK, ALUMINUM A.S.T.M. B 209, ALLOY ALCLAD 2024-T3.
(2) CHANNEL BARS, DIAGONALLY CROSSED AND WELDED, 1-3/4" WITH 3/4" -60° WING BEND x 1/8" THICK. A.S.T.M. A36.

POST BASES TO BE PAINTED WITH ZINC CHROMATE CAULKING COMPOUND. SHIM MATERIAL SHALL CONFORM TO A.S.T.M. B 209, ALLOY 1100-0.

ALL THE ALUMINUM METALLIC COMPONENTS SHALL HAVE ANODIC COATING.

EXPANSION JOINT FILLER

1/4" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN THE CONTRACTION JOINTS OF THE CONCRETE PARAPET AND INCLUDED WITH ITEM 517 RAILING FOR PAYMENT. THE FILLER SHALL CONSIST OF GRAY SPONGE OR GRAY CELLULAR POLYVINYL CHLORIDE SPONGE. THE FILLER SHALL CONFORM TO AASHTO M-153, TYPE I, EXCEPT DENSITY OF PVC SPONGE SHALL NOT BE LESS THAN 20 LB. PER CUBIC FOOT.

THE CONCRETE PARAPETS SHALL BE PLACED IN ALTERNATE SECTIONS BY THE USE OF BULKHEADS. CLOSING SECTIONS SHALL BE PLACED AFTER REMOVAL OF BULKHEADS AND AFTER PLACEMENT OF THE 1/4" SPONGE FILLER. THE FILLER SHALL BE FLUSH WITH THE SURFACE OF THE CONCRETE AND EXPOSED EDGE SHALL BE FREE OF MORTAR.

THE EXTERIOR SURFACE OF THE OUTSIDE PARAPETS WHICH ARE EXPOSED TO VIEW WILL BE GIVEN A LIGHT TEXTURED FINISH, TO BE APPROVED BY THE CITY OF AKRON, IN ORDER TO INSURE A UNIFORM APPEARANCE OF THE VARIOUS CONCRETE POURS. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE PRICE BID FOR ITEM 517 RAILING.

SHOP DRAWINGS: SHOP DRAWINGS SHALL BE SUBMITTED IN SIX (6) COPIES FOR APPROVAL PRIOR TO FABRICATION.

INSTALLATION: THE ALUMINUM RAILING SHALL BE INSTALLED RIGID AND SECURE TO THE LINES AND GRADES INDICATED IN THE CONTRACT PLANS. RAILING SPLICES ARE TO BE LOCATED SO THAT EACH RAIL SEGMENT SHALL BE CONNECTED TO NOT LESS THAN TWO (2) POSTS NOR MORE THAN THREE (3).

MEASUREMENT: THE QUANTITY TO BE PAID FOR SHALL BE THE NUMBER OF LINEAR FEET OF RAILING INCLUDING END POSTS, INSTALLED AND ACCEPTED. THE NUMBER OF LINEAR FEET SHALL BE DETERMINED FROM THE APPROVED SHOP DRAWINGS. RAILING SHALL INCLUDE THE CONCRETE PARAPET AND ALUMINUM RAIL AND ACCESSORIES AS DETAILED IN THE PLANS.

PAYMENT: THE QUANTITY MEASURED AS ABOVE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR ITEM 517, RAILING (CONCRETE PARAPET WITH ALUMINUM RAIL) WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, FABRICATING, AND INSTALLING EACH ITEM AND FOR ALL MATERIALS, LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THIS ITEM.

ITEM SPECIAL - PENETRATING SILANE WATER REPELLENT TREATMENT FOR EXPOSED CONCRETE SURFACES

DESCRIPTION: THIS ITEM SHALL CONSIST OF THE NECESSARY LABOR, MATERIALS, TOOLS AND EQUIPMENT TO TREAT PORTLAND CEMENT CONCRETE SURFACES, AS SHOWN IN THE SKETCHES, WITH A PENETRATING SILANE WATER REPELLENT TREATMENT INCLUDING PREPARATION AND APPLICATION IN ACCORDANCE WITH THESE SPECIFICATIONS.

MATERIALS: THE SILANE SOLUTION SHALL CONSIST OF A 40% SOLUTION BY WEIGHT OF ALKYL-TRIALKOXY SILANE IN ETHYL ALCOHOL AND SHALL BE CHEM-TRETE BSM 40 WHICH IS MANUFACTURED BY DYNAMIT NOBEL OF AMERICA, INC., AND DISTRIBUTED LOCALLY BY SWASEY AND COMPANY, 15515 DETROIT AVENUE, CLEVELAND, OHIO 44107, TELEPHONE (216) 521-4600 AND MIDWEST CHEMICAL CONSULTANTS, INC., P. O. BOX 551, 132 E. LIBERTY, SUITE 206, WOOSTER, OHIO 44691, TELEPHONE (216) 263-0688. DRUMS OR CONTAINERS SHALL BE DELIVERED TO THE JOB SITE UNOPENED AND WITH THE MANUFACTURER'S NUMBERED SEAL INTACT.

MANUFACTURER'S REPRESENTATIVE: THE CONTRACTOR SHALL GIVE THE MANUFACTURER'S TECHNICAL REPRESENTATIVE NOTICE OF THE INTENDED DATE OF APPLICATION. HE SHALL HAVE THE MANUFACTURER'S REPRESENTATIVE PRESENT DURING THE INITIAL INSTALLATION.

SURFACE PREPARATION: THE SURFACE SHALL BE THOROUGHLY CLEANED TO REMOVE DUST, DIRT, OIL, WAX, CURING COMPOUNDS, EFFLORESCENCE, COATINGS, AND OTHER FOREIGN MATERIALS. THE USE OF CHEMICALS AND OTHER CLEANING COMPOUNDS TO FACILITATE THE REMOVAL OF THESE FOREIGN MATERIALS SHALL BE APPROVED BY THE MANUFACTURER OR ITS REPRESENTATIVE BEFORE THEIR USE.

CLEANING EQUIPMENT SHALL BE FITTED WITH SUITABLE TRAPS, FILTERS, DRIP-PANS AND OTHER DEVICES TO PREVENT OIL AND OTHER FOREIGN MATERIAL FROM BEING DEPOSITED ON THE CONCRETE.

ONE OF THE CLEANING METHODS FOR EACH OF THE FOLLOWING CATEGORIES IS REQUIRED.

A. NEW EXPOSED CONCRETE SURFACES WHICH ARE WATER CURED,
   1. THE CONCRETE SURFACE SHALL BE CLEANED BY POWER SWEEPING OR AIR BROOMING TO REMOVE DUST. A LIGHT SWEEP SANDBLAST MAY BE REQUIRED TO REMOVE ANY FOREIGN SUBSTANCES. IF REQUIRED, THE SANDBLAST SHALL BE FOLLOWED BY POWER SWEEPING OR AIR BROOMING.
B. NEW EXPOSED CONCRETE SURFACES WHERE CURING COMPOUNDS ARE USED.
   1. A WATER BLAST WITH 7,000 PSI MINIMUM COLD WATER.
   2. A SWEEP SANDBLAST FOLLOWED BY AIR BROOMING OR POWER SWEEPING TO REMOVE DUST AND SAND FROM THE SURFACES AND OPENED PORES.
C. EXISTING CONCRETE SURFACES.
   1. HIGH PRESSURE HEATED WATER (1,800 PSI MINIMUM NOZZLE PRESSURE AND 160 DEGREES E WATER TEMPERATURE).
   2. A WATER BLAST WITH 7,000 PSI MINIMUM COLD WATER.
   3. A SWEEP SANDBLAST FOLLOWED BY AIR BROOMING OR POWER SWEEPING TO REMOVE DUST AND SAND FROM THE SURFACE AND OPENED PORES.

CAST-IN-PLACE CONCRETE SHALL HAVE CURED A MINIMUM OF 28 DAYS PRIOR TO APPLICATION OF THE SILANE.

APPLICATION: THE SILANE SOLUTION SHALL BE APPLIED UNDER THE OBSERVATION OF THE ENGINEER. ALSO IT SHALL BE APPLIED AS SUPPLIED. IT SHALL NOT BE DILUTED OR ALTERED IN ANY WAY. THE SILANE SOLUTION SHALL BE SPRAYED ONTO CONCRETE SURFACES USING LOW PRESSURE SPRAY EQUIPMENT IN A ONE-PASS APPLICATION; ON VERTICAL SURFACES.

A SECOND PASS MAY BE REQUIRED IMMEDIATELY (WITHIN 10 TO 15 MINUTES) TO ACHIEVE ABSORPTION AT THE APPLICATION RATE PRESCRIBED UNDER COVERAGE.

THE FOLLOWING ARE ENVIRONMENTAL REQUIREMENTS:

A. DO NOT PROCEED WITH APPLICATION OF THE SILANE IF THE AMBIENT TEMPERATURE IS BELOW 35 DEGREES F, UNLESS A LOWER TEMPERATURE IS APPROVED BY THE ENGINEER, OR WHEN THE AMBIENT TEMPERATURE IS EXPECTED TO FALL BELOW 32 DEGREES F WITHIN 12 HOURS AFTER APPLICATION.
B. DO NOT PROCEED WITH APPLICATION OF THE SILANE IN RAINY CONDITIONS OR IF RAIN IS ANTICIPATED WITHIN 2 HOURS AFTER APPLICATION. THE SILANE SHALL NOT BE APPLIED WHEN STANDING WATER IS PRESENT OR WHEN THE SURFACE APPEARS DAMP. THE SURFACE SHALL BE SUFFICIENTLY DRY FOR THE APPLICATOR TO OBSERVE THE SPRAY PATTERN DURING APPLICATION.

NO PROTECTION IS REQUIRED FOR ADJOINING SURFACES SUCH AS ALUMINUM OR STEEL. ASPHALT AND MASTIC TYPE SURFACES SHALL BE PROTECTED FROM SILANE SPILLAGE AND HEAVY OVERSPRAY. PROTECT PLANTS AND VEGETATION FROM OVERSPRAY. COMPATIBILITY WITH JOINT SEALERS SHALL BE VERIFIED BY THE SEALER OR SILANE MANUFACTURER.

PRIOR TO BEGINNING THE APPLICATION, THE APPLICATOR SHALL SPRAY A MEASURED TEST COVERAGE AREA ON THE STRUCTURE, USING AT LEAST ½ GALLON OF SILANE IN A HAND SPRAYER, TO OBTAIN A VISUAL ILLUSTRATION OF THE REQUIRED ABSORPTION NECESSARY TO ACHIEVE THE SPECIFIED COVERAGE RATE. THERE SHALL BE MEASURED TEST COVERAGE AREAS FOR BOTH HORIZONTAL AND VERTICAL SURFACES.

HORIZONTAL SURFACES: ON HORIZONTAL SURFACES, THE SOLUTION SHALL BE UNIFORMLY SPRAYED TO SATURATE/FLOOD THE SURFACE. PROPER QUANTITIES ARE BEING APPLIED WHEN THE SILANE SOLUTION STANDS FOR A FEW SECONDS BEFORE COMPLETELY PENETRATING.

VERTICAL SURFACES: ON VERTICAL SURFACES, THE SOLUTION SHALL BE UNIFORMLY SPRAYED TO SATURATE/FLOOD THE SURFACE. PROPER QUANTITIES ARE BEING APPLIED WHEN EXCESS SILANE SOLUTION RUNS 6 TO 8 INCHES BELOW THE SPRAY PATTERN.

IF THE APPLICATOR IS UNABLE TO COMPLETE THE ENTIRE APPLICATION AT ONE TIME AND THEREFORE STOPS FOR LUNCH, NIGHTFALL, A LACK OF MATERIAL, AN EQUIPMENT BREAKDOWN OR FOR SOME OTHER REASON, THE PLACE WHERE THE APPLICATION WAS STOPPED SHALL BE CLEARLY MARKED.

TRAFFIC CONTROL: TRAFFIC MAY BE ALLOWED AFTER THE SOLUTION HAS COMPLETELY PENETRATED AND THE SURFACE APPEARS TOTALLY DRY, USUALLY ½ TO 1 HOUR AFTER THE SILANE HAS BEEN APPLIED.

COVERAGE: THE SILANE SOLUTION SHALL BE APPLIED AT A COVERAGE RATE NOT TO EXCEED 125 SQUARE FEET PER GALLON TO ALL SURFACES SUBJECT TO ABRASIVE WEAR (BRIDGE DECKS AND SIDEWALKS), AND AT A RATE NOT TO EXCEED 175 SQUARE FEET PER GALLON TO THOSE SURFACES NOT SUBJECT TO ABRASIVE WEAR OR DIRECT ROADWAY DRAINAGE (FOR EXAMPLE, PARAPETS, ABUTMENTS, PIER CAPS AND MEDIAN DIVIDERS).

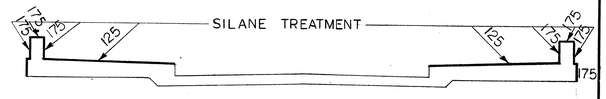
EQUIPMENT: THE SILANE SOLUTION SHALL BE SPRAYED ONTO CONCRETE SURFACES USING A LOW PRESSURE APPARATUS (15 PSI MAXIMUM NOZZLE PRESSURE WITH A COARSE FAN-SPRAY NOZZLE) SUCH AS A GARDEN, FORM OIL, HORTICULTURE OR OTHER LOW PRESSURE SPRAYER. THE SPRAY EQUIPMENT, TANKS, HOSES, ETC. SHALL BE THOROUGHLY CLEAN, FREE OF FOREIGN MATTER, OIL RESIDUE AND WATER PRIOR TO USE FOR SPRAYING THE SILANE.

PRECAUTIONS: THE SILANE SOLUTION IS FLAMMABLE. DO NOT USE NEAR HEAT, SPARKS OR AN OPEN FLAME. DO NOT SMOKE IN THE VICINITY WHERE IT IS BEING APPLIED. FOLLOW NORMAL PRECAUTIONS AS WITH ANY SOLVENT TYPE MATERIAL.

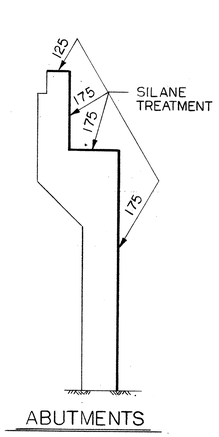
METHOD OF MEASUREMENT: PAYMENT SHALL BE MADE FOR THE NUMBER OF SQUARE YARDS OF SURFACE TREATED INCLUDING SURFACE PREPARATION, MATERIAL AND APPLICATION.

BASIS OF PAYMENT: PAYMENT FOR COMPLETED WORK WILL BE MADE AT THE CONTRACT PRICE FOR:

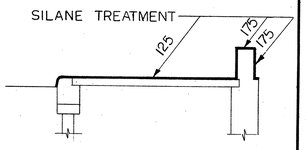
ITEM	UNIT	DESCRIPTION
SPECIAL	SQUARE YARD	SILANE TREATMENT, APPLICATION 125
SPECIAL	SQUARE YARD	SILANE TREATMENT, APPLICATION 175



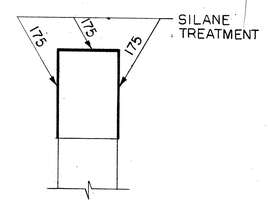
SUPERSTRUCTURE



ABUTMENTS



WINGWALLS



PIER CAPS

Revised: 2-15-83

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

GENERAL NOTES

BRIDGE NO SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1987

GENERAL NOTES

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

SUM - 18 - 10.55

5/21

ITEM 516 - ELASTOMERIC STRIP SEALS (AS PER PLAN)

DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EXPANSION JOINT DEVICES, (HEREINAFTER REFERRED TO AS THE EXPANSION JOINT) INCLUDING FURNISHING AND INSTALLING SIDEWALK COVER PLATES FOR BRIDGE JOINTS OF THE SIZES SPECIFIED, IN ACCORDANCE WITH THESE SPECIFICATIONS AND WITHIN REASONABLY CLOSE CONFORMITY TO THE LINES, ELEVATIONS, LOCATIONS, DETAILS AND NOTES SHOWN ON THE PLANS.

THE EXPANSION JOINT SHALL BE:

1. 'ACME STRIP SEAL' AS MANUFACTURED BY THE ACME HIGHWAY PRODUCTS, CORPORATION, 168 CREEKSIDE DRIVE, AMHERST, N.Y. 14150.

2. 'WABO STRIP SEAL' AS MANUFACTURED BY THE WATSON BOWMAN ASSOCIATES, INC., 1280 NIAGARA STREET, BUFFALO, N.Y. 14213.

THE EXPANSION JOINT SHALL BE OF THE TYPE THAT WILL SEAL THE DECK SURFACE, GUTTERS AND CURBS TO PREVENT WATER AND OTHER CONTAMINANTS FROM DESCENDING ON TO THE SUBSTRUCTURE. THE ANCHORAGE SYSTEM FOR THE EXPANSION JOINT SHALL BE AS DETAILED ON THE PLANS. THERE SHALL BE NO APPRECIABLE CHANGE IN THE DECK SURFACE DUE TO THE EXPANSION AND CONTRACTION MOVEMENT OF THE EXPANSION JOINT.

EXPANSION AND CONTRACTION MOVEMENTS OF THE BRIDGE DECK SHALL BE TAKEN ENTIRELY BY DEFORMATION OF THE NEOPRENE SEAL ELEMENT. THE NEOPRENE SEAL ELEMENT SHALL BE DESIGNED TO BE SELF-CLEANING AND POSITIVELY GRIPPED BY THE EXTRUDED STEEL SECTIONS OR STEEL RETAINERS THROUGHOUT THE RANGE OF THE ANTICIPATED MOVEMENT. THE SEAL ELEMENT SHALL BE FURNISHED AND INSTALLED IN ONE PIECE.

MATERIALS

A. GENERAL

ALL PARTS AND ELEMENTS SHALL BE OF THE MATERIAL AND DESIGN INDICATED IN THE MANUFACTURER'S CATALOG EXCEPT AS OTHERWISE SPECIFIED IN THESE SPECIFICATIONS OR ON THE PLANS. THE CONTRACTOR SHALL FURNISH A GENERAL CERTIFICATION STATING THAT THE MATERIALS FURNISHED CONFORM TO THE REQUIREMENTS OF THESE SPECIFICATIONS.

B. METALS

ALL METALS USED IN FABRICATION OF THE EXPANSION JOINT SHALL MEET THE REQUIREMENTS OF SECTION 513 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE OHIO DEPARTMENT OF TRANSPORTATION (HEREINAFTER REFERRED TO AS STANDARD SPECIFICATIONS) AND AS SPECIFIED IN THE GENERAL NOTES ON THE PLANS AND THE FOLLOWING:

THE EXTRUDED STEEL SECTIONS OR STEEL RETAINERS AND THE SUPPORT BARS SHALL BE FABRICATED FROM SOLID HIGH-STRENGTH LOW ALLOY STRUCTURAL STEEL MEETING THE REQUIREMENTS OF ASTM A588.

ALL OTHER STEEL PLATES, BARS AND SHAPES SHALL BE FABRICATED FROM CARBON STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A36, AND SHALL BE GALVANIZED.

THE METAL SURFACES IN DIRECT CONTACT WITH THE NEOPRENE SEAL ELEMENTS SHALL BE SANDBLASTED AND AN ADHESIVE USED TO PROVIDE A HIGH STRENGTH BOND BETWEEN THE NEOPRENE SEAL AND THE MATING METAL SURFACES.

ALL WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 513.17 OF THE STANDARD SPECIFICATIONS.

STEEL FABRICATION SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTION 513 OF THE STANDARD SPECIFICATIONS.

C. NEOPRENE SEAL

THE NEOPRENE SEAL ELEMENTS SHALL CONFORM TO ASTM DESIGNATION D2628, EXCEPT AS NOTED HEREIN:

PROPERTY	REQUIREMENTS	ASTM METHOD
HARDNESS, TYPE A DUROMETER	60± 7	D2240 (MODIFIED)
EXCLUDE RECOVERY TEST REQUIREMENTS		

D. ADHESIVE

ADHESIVE FOR BONDING THE NEOPRENE SEAL IN PLACE SHALL BE A ONE-PART MOISTURE-CURING, POLYURETHANE AND HYDROCARBON SOLVENT MIXTURE MEETING OR EXCEEDING THE FOLLOWING PROPERTIES.

AVERAGE WEIGHT, LBS. PER GALLON	8+10%
SOLIDS CONTENT BY WEIGHT	65%
MATERIAL TO REMAIN FLUID FROM	5° TO 120°F
FILM STRENGTH (ASTM D-412)	2000 PSI
ELONGATION	250%

CONSTRUCTION REQUIREMENTS

THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF SECTION 501.05 OF THE STANDARD SPECIFICATIONS. THE SHOP DRAWINGS SHALL INDICATE ALL MATERIAL SPECIFICATIONS AND DIMENSIONS AND ANY ADDITIONAL DETAILS NOT SHOWN ON THE PLANS. APPROVAL OF SHOP DRAWINGS BY THE ENGINEER SHALL BE REQUIRED PRIOR TO INSTALLATION OF THE EXPANSION JOINT.

A REPRESENTATIVE OF THE JOINT SEAL MANUFACTURER SHALL BE PRESENT PRIOR TO AND DURING INITIAL SEAL INSTALLATION TO FURNISH TECHNICAL ASSISTANCE AND GUIDANCE TO THE CONTRACTOR AND ENGINEER. HE SHALL REMAIN ON THE PROJECT UNTIL HE IS SATISFIED THAT THE INSTALLATION OF THE SEALS IS BEING ACCOMPLISHED TO HIS SATISFACTION.

WHERE SPECIAL INSTRUCTIONS ARE NOT CONTAINED HEREIN, DIRECTION FOR THE INSTALLATION SHALL BE ACCORDING TO THE RECOMMENDATIONS OF THIS REPRESENTATIVE.

THE EXPANSION JOINT SHALL BE SET AND CAREFULLY SHIMMED TO LINE AND GRADE UNTIL THE JOINT'S UPPERMOST PLANE IS 1/4" BELOW THE FINISHED ROADWAY SURFACE AND MATCHES THE ROADWAY GRADIENT.

THE JOINT SHALL HAVE THE STRIP SEAL SECURELY ATTACHED TO THE STEEL EXTRUSIONS OR RETAINERS TO PROVIDE A CONTINUOUS WATERTIGHT SEAL.

THE JOINT SHALL BE SHOP FABRICATED FOR THE FULL WIDTH OF PHASE I CONSTRUCTION INCLUDING THE ATTACHMENT OF THE CONTINUOUS (WITHOUT TRANSVERSE JOINTS) NEOPRENE SEAL ELEMENT. THE NEOPRENE SEAL ELEMENT SHALL BE OF SUFFICIENT LENGTH TO COVER THE FULL LENGTH OF PHASE I AND PHASE II CONSTRUCTION. THE PART OF THE NEOPRENE SEAL ELEMENT THAT IS TO BE INSTALLED UNDER PHASE II OF CONSTRUCTION SHALL BE ROLLED, COVERED AND PROTECTED BY THE CONTRACTOR UNTIL SUCH INSTALLATION TAKES PLACE. THERE WILL BE ONLY ONE TRANSVERSE FIELD WELDED JOINT ALLOWED IN THE STEEL RETAINING ELEMENTS, WHICH SHALL OCCUR AT THE CONNECTION OF PHASE I AND PHASE II.

THE EXPANSION JOINT SHALL BE INSTALLED BY THE CONTRACTOR AT THE PROPER JOINT SETTING DIMENSION ADJUSTED FOR PROPER AMBIENT TEMPERATURE, AS SHOWN ON PLANS.

THE EXPANSION JOINT INSTALLATION SHALL BE ADEQUATELY PROTECTED TO ENSURE THAT IT IS NOT DAMAGED DURING THE PLACEMENT AND FINISHING OF THE CONCRETE OR ANY OTHER SUBSEQUENT CONSTRUCTION.

METHOD OF MEASUREMENT

THIS WORK WILL BE MEASURED CONTINUOUSLY BY LINEAR FOOT AS THE HORIZONTAL LENGTH OF THE JOINT ACCEPTABLY INSTALLED, ALONG THE CENTERLINE OF THE JOINT, BETWEEN THE INSIDE FACES OF THE CONCRETE PARAPET ON THE BRIDGE DECK SLAB.

BASIS OF PAYMENT

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT OF ITEM 516 - 'ELASTOMERIC STRIP SEALS (AS PER PLAN)', WHICH SHALL CONSTITUTE FULL COMPENSATION FOR ALL MATERIAL, LABOR, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM ACCORDING TO THESE SPECIFICATIONS. NO EXTRA PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING SIDEWALK COVER PLATES, BUT THE COST THEREOF SHALL BE INCLUDED IN THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 516 - 'ELASTOMERIC STRIP SEAL (AS PER PLAN)'.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

GENERAL NOTES

BRIDGE NO. SUM - 18 - 10.55
EAST MARKET STREET
OVER ROUTE 8

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MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	
5	OHIO		

5A
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SUM-18-10.55

TEMPORARY PAVEMENT MARKINGS
NOTE B

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND WHEN NECESSARY, REMOVE TEMPORARY RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION DURING THE REQUIRED SERVICE PERIOD TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISIBILITY AND/OR REFLECTIVITY AT NO ADDITIONAL COST TO THE STATE.

MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE OF PAINT, PAVEMENT MARKING TAPE OR REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE).

A. PAINT

PAINT SHALL COMPLY WITH 708.14 AND SHALL BE APPLIED IN ACCORDANCE WITH 621 EXCEPT AS MODIFIED HEREIN.

B. PAVEMENT MARKING TAPE

FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE SHALL HAVE STRAIGHT EDGES AND BE FREE OF CRACKS. THE TAPE SHALL CONSIST OF PIGMENT AND FILLERS WITH SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING A REFRACTIVE INDEX MEETING THE MINIMUM REFLECTIVE INTENSITY STANDARD STATED IN THE MANUFACTURERS INFORMATION. THE TAPE SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE", OR AN APPROVED EQUAL.

THE GLASS BEADS SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE TAPE WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.

PAVEMENT MARKING TAPE SHALL COMPLY WITH THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.

IN ADDITION TO THE FOREGOING, ALL TEMPERATURE APPLICATION REQUIREMENTS AND OTHER APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS SHALL BE FOLLOWED.

WHEN APPROVED BY THE ENGINEER THE CONTRACTOR MAY USE REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE), IN LIEU OF THAT DESCRIBED ABOVE, TO FACILITATE REMOVAL OF MARKINGS.

C. REMOVABLE PAVEMENT MARKING TAPE (TYPE R TAPE)

THE MARKING MATERIAL SHALL BE A MIXTURE OF POLYMERIC MATERIALS, PIGMENTS, REINFORCING MEDIUM TO FACILITATE REMOVAL, GLASS BEADS THROUGHOUT THE PIGMENTED PORTION, AND A RETROREFLECTIVE LAYER OF GLASS BEADS BONDED TO THE TOP SURFACE.

THE TAPE SHALL BE PRECOATED WITH A PRESSURE SENSITVE ADHESIVE CAPABLE OF TEMPORARILY BONDING TO ASPHALT CONCRETE OR PORTLAND CEMENT CONCRETE PAVEMENT AT AN AMBIENT TEMPERATURE OF NOT LESS THAN 50° F AND RISING, AT A PAVEMENT TEMPERATURE OF NOT LESS THAN 50° F NOR MORE THAN 150° F, WITHOUT THE USE OF HEAT, SOLVENTS, AND ADDITIONAL ADHESIVES OR ACTIVATORS.

MATERIALS SHALL CONFORM TO THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL BE REMOVABLE FROM APSHALT AND PORTLAND CEMENT CONCRETE INTACT OR IN LARGE PIECES AT TEMPERATURES ABOVE 40° F WITHOUT USE OF HEAT, SOLVENTS, GRINDING, OR SANDBLASTING. REMOVAL SHALL NOT RESULT IN DAMAGE TO OR OBJECTIONABLE STAINING OF THE PAVEMENT.

GLASS BEADS SHALL BE PROVIDED IN A PROPER SIZE, QUANTITY AND DISTRIBUTION TO ASSURE OPTIMUM RETROREFLECTIVITY AS THE FILM WEARS. THE FOLLOWING INITIAL AVERAGE REFLECTANCE VALUES AT 86.0 ENTRANCE ANGLE AS MEASURED IN ACCORDANCE WITH THE TESTING PROCEDURES OF FEDERAL TEST METHOD 370 SHALL BE CERTIFIED:

	WHITE		YELLOW	
OBSERVATION ANGLE	0.2	0.5	0.2	0.5
SPECIFIC LUMINANCE (MCD/FT^2)/FC	1770	1270	1310	810

THE TAPE SHALL BE 3-M COMPANY'S "STAMARK, DETOUR GRADE (SERIES 57LO, 571I, 6270, 621I)" OR AN APPROVED EQUAL.

THE CONTRACTOR SHALL FURNISH TO THE ENGINEER CERTIFICATION THAT THE MATERIAL SUPPLIED MEETS THE PROPERTIES SPECIFIED HEREIN.

LAYOUT

THE TEMPORARY MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, EDGE LINE, OR CHANNELIZING LINE WHERE PERMANENT MARKINGS WOULD LIE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PLACEMENT

TEMPORARY MARKINGS SHALL BE PLACED IN ACCORDANCE WITH LAYOUTS ON SHEETS _____ AND THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS ARE NO LONGER NEEDED, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134 AND NECESSARY PAVEMENT MARKINGS INSTALLED BEFORE THE FLOW OF TRAFFIC IS CHANGED TO THE NEXT PHASE OR RETURNED TO ITS NORMAL CHANNEL.

WHERE PERMANENT PAVEMENT MARKINGS ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL FURNISH AND PLACE THE PERMANENT MARKINGS WITHIN 30 CALENDAR DAYS FOLLOWING COMPLETION OF ALL SURFACE COURSES IN A SINGLE ROADWAY OR PRIOR TO THE END OF THE CONSTRUCTION SEASON, WHICHEVER COMES FIRST. PERMANENT MARKINGS SHALL NOT BE PLACED OVER ANY TAPE MARKINGS.

A. CLASS I MARKINGS

CLASS I MARKINGS SHALL BE AS DEFINED IN 621, EXCEPT AS FOLLOWS:
1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

GORE MARKINGS SHALL CONSIST OF TWO CHANNELIZING LINES PLACED AT THE THEORETICAL OR TEMPORARY GORE OF RAMPS AND DIVERGING OR CONVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR SOLID 4-INCH LINES, 24 GALLONS PER MILE FOR SOLID 6-INCH LINES, 48 GALLONS PER MILE FOR SOLID 12-INCH LINES, AND 4 GALLONS PER MILE FOR 4-INCH DASHED LINES.

B. CLASS II MARKINGS

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

CHANNELIZING LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 20-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 50-FOOT BY 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR GORE MARKINGS, 0.8 GALLONS PER MILE FOR CHANNELIZING LINE, AND 0.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE.

CONFLICTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. DASHED LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
~~614~~	~~MILES~~	~~TEMPORARY LANE LINES, CLASS ____, (PAINT, TAPE OR TYPE R TAPE)~~
614 0.57	MILES	TEMPORARY CENTER LINES, CLASS I, (~~PAINT~~, TAPE ~~OR TYPE R TAPE~~)
614 380	~~MILES~~/LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS I, (~~PAINT~~, TAPE ~~OR TYPE R TAPE~~)
614 0.24	MILES	TEMPORARY EDGE LINES, CLASS I, (~~PAINT~~, TAPE ~~OR TYPE R TAPE~~)
~~614~~	~~LIN. FT.~~	~~TEMPORARY CORE MARKING, CLASS II, (PAINT, TAPE OR TYPE R TAPE)~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY STOP LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY CROSSWALK LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)~~
~~614~~	~~EACH~~	~~TEMPORARY LANE ARROWS, CLASS I, (PAINT, TAPE OR TYPE R TAPE)~~
~~614~~	~~EACH~~	~~TEMPORARY WORD "ONLY" ON PAVEMENT, 72 INCH, CLASS I, (PAINT OR TAPE)~~
~~614~~	~~LIN. FT.~~	~~TEMPORARY TRANSVERSE LINES, CLASS I, (PAINT, TAPE OR TYPE R TAPE)~~
614	0.04 MILE	TEMPORARY CENTER LINES, CLASS II, TAPE
614	0.08 MILE	TEMPORARY LANE LINES, CLASS II, TAPE

PERMANENT PAVEMENT MARKINGS SHALL BE INSTALLED BY THE CITY OF AKRON.

5/13/82

MICROFILMED
AUG 4 1987

SUMMARY

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

6/21

SUM – 18 – 10.55

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUT.	PIER	WINGWALLS	APP. WALKS	APP. CURBS	GEN'L	APPROACH
202	LUMP		PORTIONS OF STRUCTURE REMOVED							LUMP	LUMP
202	570	S.Y.	WEARING COURSE REMOVED (APPROACHES)								570
404	34	C.Y.	ASPHALT CONCRETE, AC-20							34	
509	35,524	LBS.	REINFORCING STEEL	28,995	868		402	1,960	2,199	1,100	
510	100	EA.	DOWEL HOLES							100	
511	120	C.Y.	CONCRETE, CLASS "C", AS PER PLAN		79		10	25	6		
511	285	C.Y.	CONCRETE, CLASS "S", AS PER PLAN (SEE PROPOSAL NOTE)	285							
513	5,614	LBS.	STRUCTURAL STEEL, GALVANIZED (AISC CERTIFICATION NOT REQUIRED)	5,614							
513	790	LBS.	STRUCTURAL STEEL, ASTM A-36, (AISC CERTIFICATION NOT REQUIRED)	790							
514	LUMP		FIELD PAINTING OF NEW STRUCTURAL STEEL, SYSTEM B	LUMP							
516	173	L.F.	ELASTOMERIC STRIP SEALS, AS PER PLAN	173							
516	130	L.F.	JOINT SEALER, HOT APPLIED							130	
516	75	S.F.	1/2" PREFORMED EXPANSION JOINT FILLER		10		65				
516	14	S.F.	1" PREFORMED EXPANSION JOINT FILLER							14	
517	398	L.F.	RAILING (CONCRETE PARAPET W/ALUMINUM RAILING)	251	19		128				
520	370	S.F.	PNEUMATICALLY PLACED MORTAR			370					
605	222	L.F.	6" UNCLASSIFIED PIPE UNDERDRAIN (FOR PRESSURE RELIEF JOINTS)							222	
608	630	S.F.	CONCRETE WALK, 6" THK.							630	
609	124	L.F.	CURB, *Standard Type 6*							124	
625	266	L.F.	2" P.V.C. CONDUIT							266	
845	826	S.Y.	LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THK.) (SEE PROPOSAL NOTE)	826							
SPEC	518	S.Y.	SILANE TREATMENT, APPLICATION 125 (SEE PROPOSAL NOTE)	279	24			215			
SPEC	823	S.Y.	SILANE TREATMENT, APPLICATION 175 (SEE PROPOSAL NOTE)	164	444	130	85				
SPEC	LUMP		TEMPORARY BRACING AND SHORING							*Lump*	
SPEC	61	L.F.	PRESSURE RELIEF JOINT, TYPE C							61	
SPEC	61	L.F.	PRESSURE RELIEF JOINT, TYPE C W/RESURFACING							61	
SPEC	24	EACH	RESET BEARINGS	24							
824	*42,309*	LBS.	EPOXY COATED REINFORCING STEEL	42,309							
SPEC	350	HRS	LAW ENFORCEMENT OFFICER WITH *PATROL CAR*							350	
614	LUMP		MAINTAINING TRAFFIC								
623	LUMP		CONSTRUCTION LAYOUT STAKES								
624	LUMP		MOBILIZATION, AS PER PLAN								
614	0.57	MILES	TEMPORARY CENTER LINES, CLASS I (TAPE)							0.57	
614	380	L.F.	TEMPORARY CHANNELIZING LINES, CLASS I (TAPE)							380	
614	0.24	MILES	TEMPORARY EDGE LINES, CLASS I (TAPE)							0.24	
622	*535*	*L.F.*	*TEMPORARY PRECAST CONCRETE BARRIER*							*535*	
614	*0.04*	*MILES*	*TEMPORARY CENTER LINES, CLASS II (TAPE)*							*0.04*	
614	*0.08*	*MILES*	*TEMPORARY LANE LINES, CLASS II (TAPE)*							*0.08*	

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

SUMMARY

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

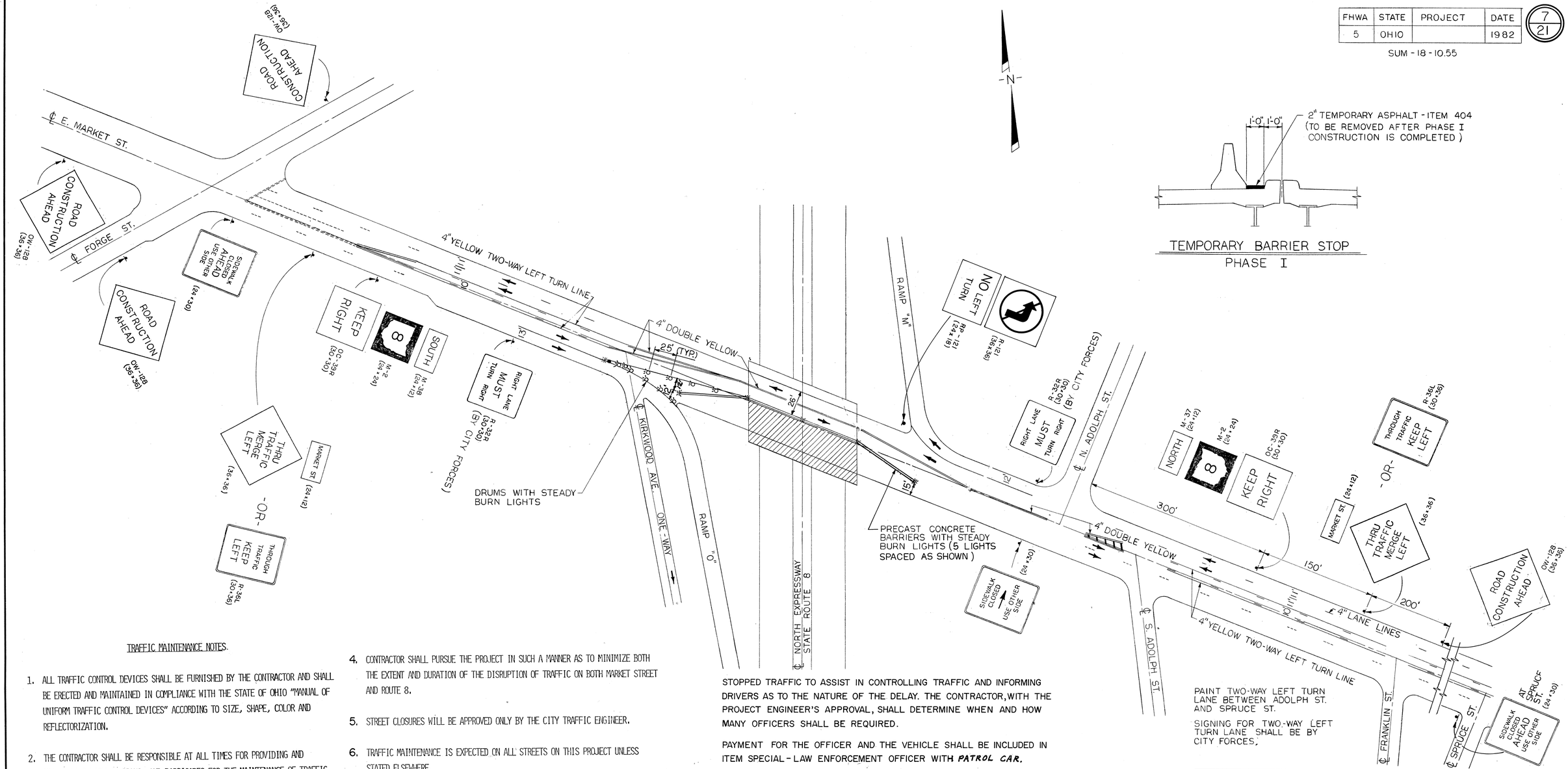
SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

SUM - 18 - 10.55

7/21



TEMPORARY BARRIER STOP
PHASE I

TRAFFIC MAINTENANCE NOTES.

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL BE ERECTED AND MAINTAINED IN COMPLIANCE WITH THE STATE OF OHIO "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" ACCORDING TO SIZE, SHAPE, COLOR AND REFLECTORIZATION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR PROVIDING AND MAINTAINING LIGHTS, SIGNS, AND BARRICADES FOR THE MAINTENANCE OF TRAFFIC AND SAFETY OF HIS WORK AT THE LOCATION SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER.

3. THE CONTRACTOR SHALL GIVE THE CITY OF AKRON, TRAFFIC ENGINEERING DIVISION, A MINIMUM OF 7 DAYS NOTICE PRIOR TO RESTRICTING TRAFFIC.

4. CONTRACTOR SHALL PURSUE THE PROJECT IN SUCH A MANNER AS TO MINIMIZE BOTH THE EXTENT AND DURATION OF THE DISRUPTION OF TRAFFIC ON BOTH MARKET STREET AND ROUTE 8.

5. STREET CLOSURES WILL BE APPROVED ONLY BY THE CITY TRAFFIC ENGINEER.

6. TRAFFIC MAINTENANCE IS EXPECTED ON ALL STREETS ON THIS PROJECT UNLESS STATED ELSEWHERE.

7. CITY OF AKRON WILL PROVIDE SIGNS NOTED THUS: BY CITY FORCES.

8. LANE CLOSURES - NORTH EXPRESSWAY (STATE ROUTE 8)

THE CONTRACTOR SHALL PROVIDE THE SERVICE OF ONE (1) SPECIAL DUTY LAW ENFORCEMENT OFFICER WITH PATROL CAR, FOR THE EXCLUSIVE PURPOSE OF CONTROLLING THROUGH TRAFFIC. THE LAW ENFORCEMENT OFFICER WITH A PATROL CAR SHALL BE UTILIZED DURING INSTALLATION AND REMOVAL OF TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS AND DURING HOURS OF PEAK TRAFFIC AS AUTHORIZED BY THE ENGINEER. THE OFFICER SHALL CONSTANTLY MOVE WITH THE BACK UP OF TRAFFIC SO THAT HE IS ALWAYS IN A POSITION ON THE SHOULDER NEAR THE END OF THE LINE OF STOPPED TRAFFIC TO ASSIST IN CONTROLLING TRAFFIC AND INFORMING DRIVERS AS TO THE NATURE OF THE DELAY. THE CONTRACTOR, WITH THE PROJECT ENGINEER'S APPROVAL, SHALL DETERMINE WHEN AND HOW MANY OFFICERS SHALL BE REQUIRED.

PAYMENT FOR THE OFFICER AND THE VEHICLE SHALL BE INCLUDED IN ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH *PATROL CAR.*

DURING THE HOURS OF 9:00 A.M. AND 4:00 P.M. THE CONTRACTOR WILL BE PERMITTED TO CLOSE ONLY ONE (1) LANE IN EACH DIRECTION. DURING THE HOURS OF 8:00 P.M. AND 6:00 A.M. THE CONTRACTOR WILL BE PERMITTED TO CLOSE TWO LANES TRAFFIC IN EACH DIRECTION.

THE LANE CLOSURES ON STATE ROUTE 8 SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND APPLICATION STANDARDS SHOWN ON PLAN SHEETS 8A, 8B AND 8C. DURING NIGHT OPERATIONS (8:00 P.M. AND 6:00 A.M.) THE CONTRACTOR WILL BE PERMITTED TO CLOSE THE PERKINS STREET SOUTHBOUND ENTRANCE RAMP (RAMP K) AND THE BUCHTEL AVE. NORTHBOUND ENTRANCE RAMP (RAMP Q). IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN THE BARRICADES FOR THESE RAMP CLOSINGS. DURING DAYTIME OPERATIONS (6:00 A.M - 8:00 P.M.) RAMP K AND RAMP Q SHALL REMAIN OPEN.

PAINT TWO-WAY LEFT TURN LANE BETWEEN ADOLPH ST. AND SPRUCE ST.

SIGNING FOR TWO-WAY LEFT TURN LANE SHALL BE BY CITY FORCES.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

TRAFFIC MAINTENANCE PHASE I

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE

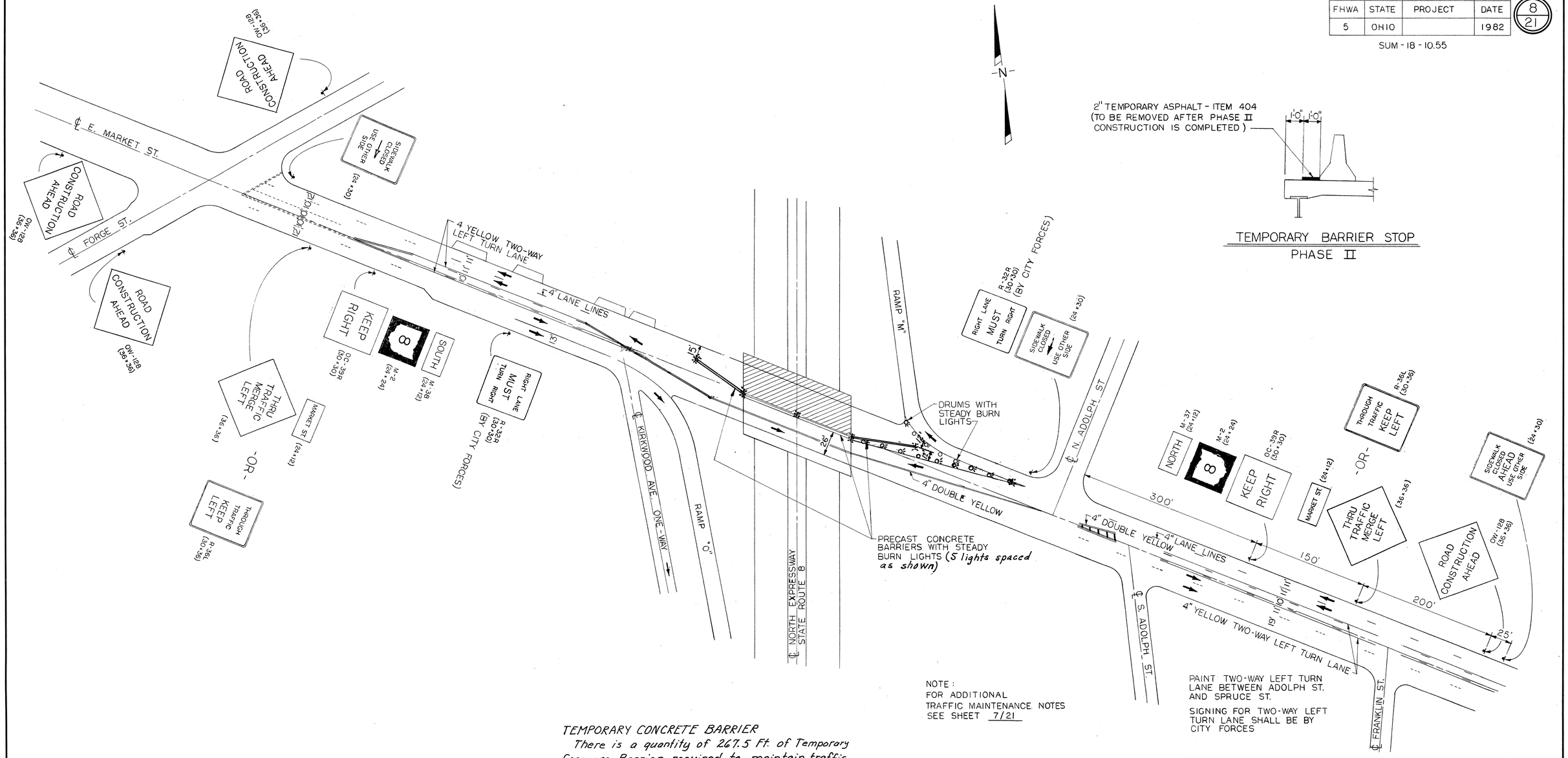
DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
DGF	WKS		NKS	

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

8/21

SUM - 18 - 10.55



2" TEMPORARY ASPHALT - ITEM 404
(TO BE REMOVED AFTER PHASE II CONSTRUCTION IS COMPLETED)

TEMPORARY BARRIER STOP
PHASE II

NOTE:
FOR ADDITIONAL TRAFFIC MAINTENANCE NOTES SEE SHEET 7/21

PAINT TWO-WAY LEFT TURN LANE BETWEEN ADOLPH ST. AND SPRUCE ST.

SIGNING FOR TWO-WAY LEFT TURN LANE SHALL BE BY CITY FORCES

TEMPORARY CONCRETE BARRIER

There is a quantity of 267.5 Ft. of Temporary Concrete Barrier required to maintain traffic under Phase I and a likewise number for Phase II. A total of 535 Ft. of Temporary Concrete Barrier has been carried to the general summary which includes the length of Temporary Concrete Barrier placed and removed for Phase I and Phase II.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

TRAFFIC MAINTENANCE PHASE II

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE

DATE

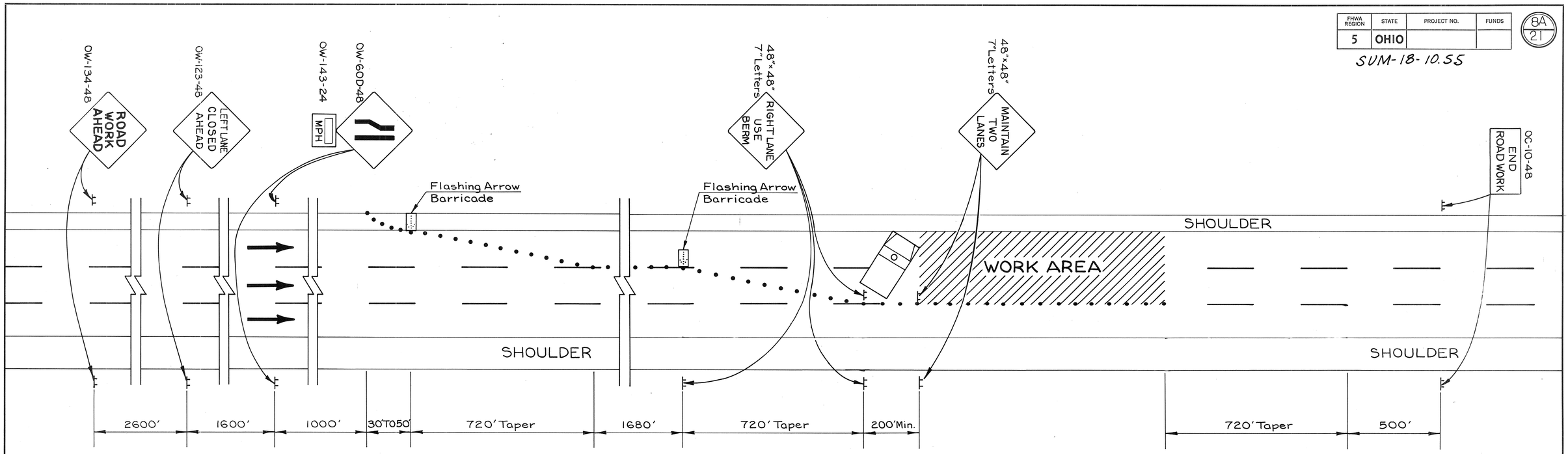
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
DGF	WKS		NKS	

Rev. 3-7-83

FHWA REGION	STATE	PROJECT NO.	FUNDS
5	OHIO		

8A 21

SUM-18-10.55

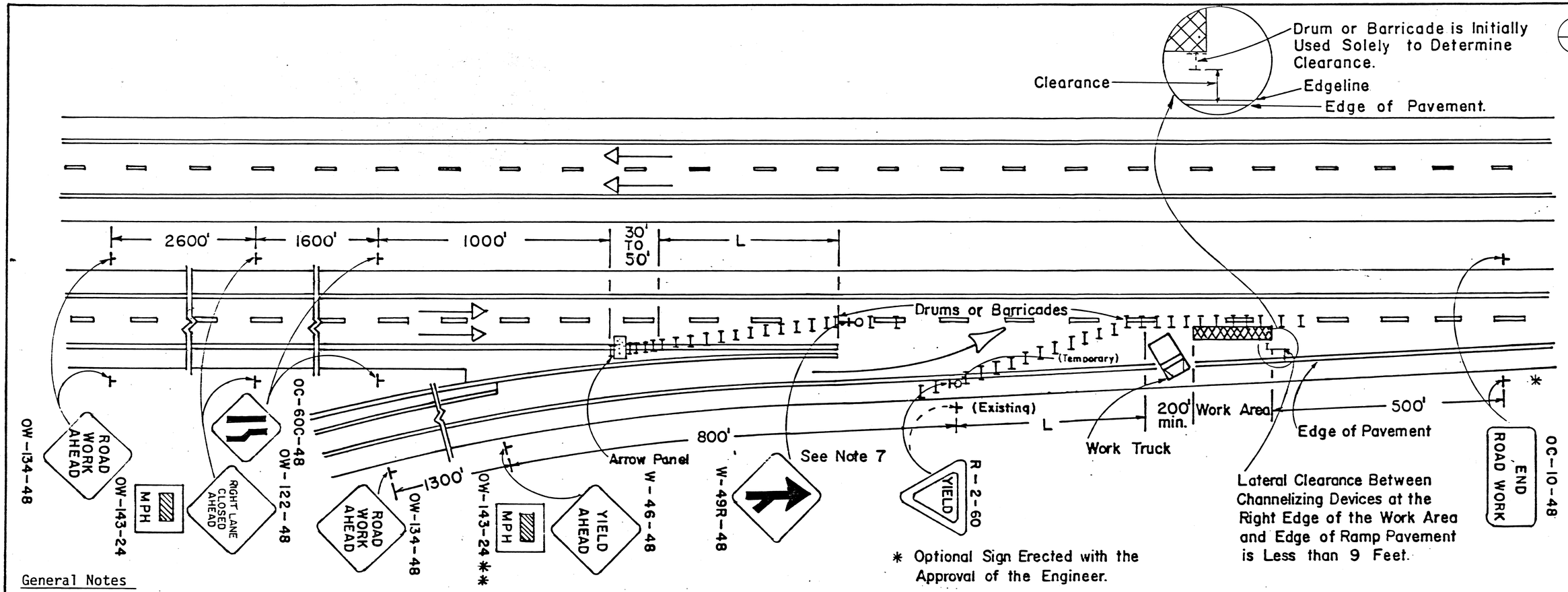


GENERAL NOTES

1. Thirteen(13) Drums Or Barricades Shall Be Used To Form Each Lane Transition Taper In Advance Of The Work Area. Five(5) Channelizing Devices Shall Be Used To Form The Taper On The Shoulder. Cones, Drums Or Barricades Shall Be Spaced At 50 Foot Centers For The First 1,000 Feet Of The Work Area. Cones May Be Substituted For The Barricades Or Steel Drums For The Lane Closures During Daylight Hours Only.
2. Two(2) Lanes Of Traffic Shall Be Maintained At All Times.
3. The Work Truck Shown At The Beginning Of The Work Area Shall Be In Place And Unoccupied Whenever Men Are Working Within The Work Area. This Truck Shall Be Moved From The Pavement Whenever Workmen Are Not In The Work Area. Other Protective Devices May Be Used In Lieu Of The Work Truck Shown When Approved By The Engineer.
4. Type C Steady Burning Barricade Warning Lights Shall Be Erected On Drums Or Barricades For Night Lane Closures. Maximum Spacing Shall Be 50 Foot Center To Center In Advance Of The Work Area On 200 Foot Center To Center Within The Limits Of The Work Area.
5. The Contractor Shall Provide The Services Of One(1) Special Duty State Highway Patrolman For The Exclusive Purpose Of Controlling Through Traffic For Each One Way Traffic Zone, Except That A Patrolman Will Not Be Required In The Area Of Pavement Removal And Replacement Areas, And Bridge Repair And Waterproofing Areas, When The Contractor Is Not Performing Work. Information Regarding Arrangements And Payments By The Contractor For Special Duty Patrol Services May Be Obtained By Contacting Ohio Highway Patrol, 660 East Main Street, Columbus, Ohio, Telephone 466-2660.
6. The Contractor Shall Make Any Necessary Shoulder Repairs As Directed By The Engineer To Maintain Traffic On Shoulder.
7. Length Of Work Area Shall Not Exceed One(1) Mile Unless Directed By The Engineer.

CLOSING TWO LANES OF A SIX LANE DIVIDED HIGHWAY

Acc. No. 17818
Drwg No. A-12367a



* Optional Sign Erected with the Approval of the Engineer.

General Notes

1. This work area traffic control application shall be employed when the lateral clearance between channelizing devices at the right edge of the work area and the edge of the ramp pavement is less than 9 feet. When the clearance is more than 9 feet, the traffic control on "Lane Closure at Entrance Ramp: Plan A" should be used, or the ramp should be closed. When the ramp is closed, appropriate detour signs shall be provided.

2. Thirteen (13) drums or barricades shall be used to form the lane transition taper in advance of the work area. Five (5) channelizing devices shall be used to form the taper on the shoulder. Cones, drums, or barricades shall be spaced at 50 foot centers. Cones may be substituted for barricades or drums for the lane closures during daylight hours only.

3. Ramp signs shall be dual mounted on multi-lane ramps. When the ramp is not long enough to allow placement as specified above, the signs may be spaced proportionately within the space available as determined by the Engineer (a 200' minimum spacing must be maintained).

4. The flashing or sequencing arrow panel shall be in accordance with TC-35.10.

5. The work truck shown at the beginning of the work area shall be in place and unoccupied whenever men are working within the work area. This truck shall be moved from the pavement whenever workmen are not in the work area. Other protective devices may be used in lieu of work truck shown when approved by the Engineer.

6. Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. Maximum spacing shall be 50' center to center in advance of the work area and 200' center to center within the limits of the work area.

7. It may be necessary to move the location of an existing Yield condition In these cases, the permanent R-2 sign installation shall be covered and the temporary installation shall be mounted upon a drive post which shall be banded to a drum with stainless steel strapping material or other techniques subject to the approval of the Engineer.

8. Taper Formulae:

   $L = S \times W$ for Speeds of 45 or more.
   $L = WS^2/60$ for Speeds 40 or less.

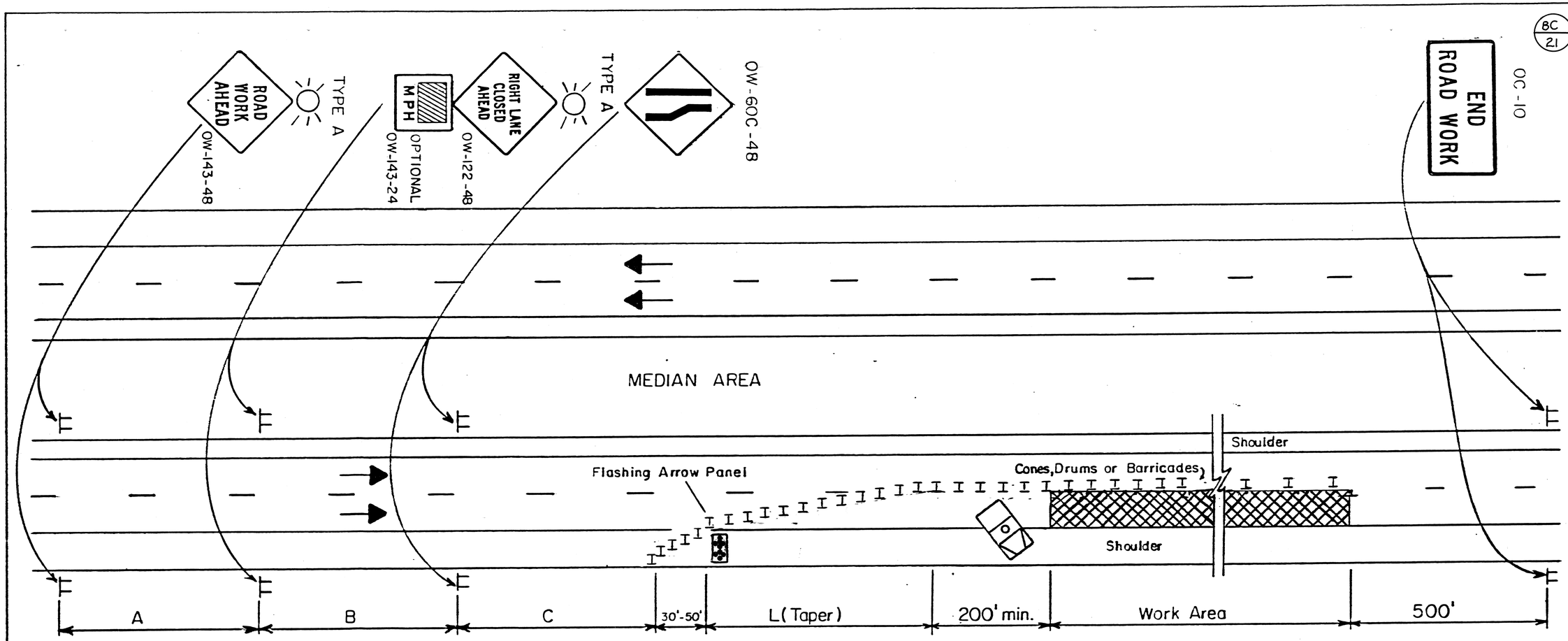
   Where:

   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed.
   W = Width of offset.

9. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE AT ENTRANCE RAMP PLAN B	DATE 8-3-79
	AS-7K-6



GENERAL NOTES:

1. The taper length (L) shall be in accordance with Section 7F-17 of the OMUTCD. The location of the transition taper and location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment. In order to determine the minimum number of channelizing devices for the transition taper see Table 7-5 OMUTCD. For a 55 MPH prevailing speed and a 12 ft. lane, not less than thirteen (13) cones, drums or barricades shall be used to form the lane transition taper in advance of the work area. Not less than five (5) cones, drums or barricades shall be used to form the taper on the shoulder. Cones, drums or barricades shall be spaced approximately 50' to 60' center to center for the first 1000 feet of the work area and at a maximum of 100 to 120 feet for the balance of the work area. Cones may be substituted for barricades or drums for short term lane closures. Cones shall be reflectorized, delineated or internally illuminated for short term night lane closures.

2. The major standard level warning sign sizes may be used on divided streets or highways that are not classified as freeways or expressways.

3. When work is being performed in the lane adjacent to the median on a divided highway an OW-123-48 sign(s) shall be substituted for the OW-122-48 sign(s) and an OW-60D-48 sign(s) shall be substituted for the OW-60C sign(s).

4. The work vehicle shown at the beginning of the work area shall be in place and unoccupied whenever workers are in the work area. This work vehicle shall be removed from the pavement whenever workers are not in the work area. Other protective devices may be used in lieu of the work vehicle shown when approved by the Engineer. The vehicle shall be equipped with a 360° rotating or flashing amber beacon clearly visible in all directions a minimum of a ½ mile.

5. The flashing arrow panel shall meet requirements of TC-35.10.

6. Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. The maximum spacing shall be identical to the channelizing device spacing requirements described in Note 1.

MINIMUM DISTANCE	A	B	C
MAJOR STANDARD	500'	500'	500'
URBAN FREEWAY & EXPRESSWAY	500' TO 1000'	500' TO 1000'	500' TO 1000'
RURAL FREEWAY & EXPRESSWAY	2600'	1600'	1000'

7. Type A flashing barricade warning lights shown on the "Road Work Ahead" and the "Right Lane Closed Ahead" signs are required whenever a night lane closure is necessary.

8. Some work area locations may require more than just static or conventional signs to enhance communication with the driver. At these locations Portable Changeable Message Signs (PCMS) units are recommended. These devices should be located approximately 3/4 mile in advance of a lane closure or other point of required action. See Section 7G-8.1, OMUTCD for further guidance on use of PCMS units.

OHIO DEPARTMENT OF TRANSPORTATION

CLOSING ONE LANE OF A FOUR LANE DIVIDED HIGHWAY

DATE 12/82

APPROVED

AS-71-1a

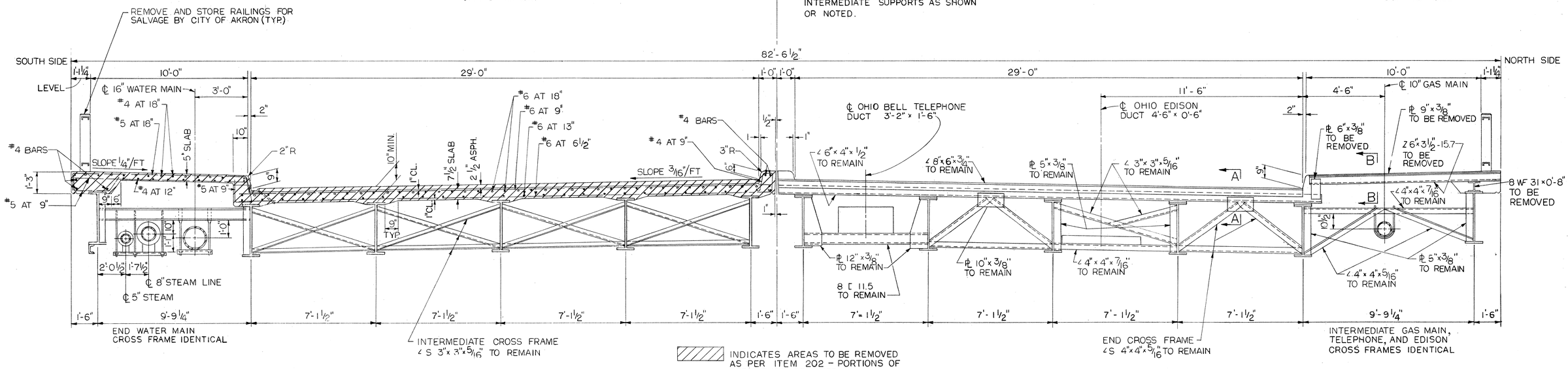
MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

9/21

SUM-18-10.55

NOTE:
REMOVE AND STORE EXISTING WOODEN WALKWAY AND RAILING ON NORTHWEST CORNER OF BRIDGE FOR SALVAGE BY CITY OF AKRON.

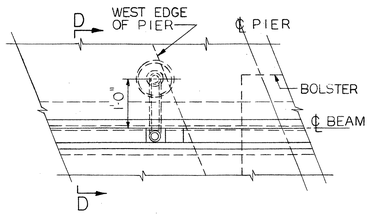


HALF SECTION AT INTERMEDIATE CROSS FRAMES

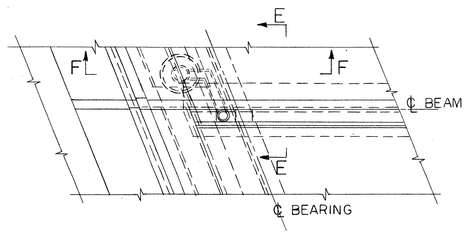
PHASE I - SHOWN
PHASE II - SIMILAR EXCEPT FOR UTILITIES

HALF SECTION THRU END FINISH

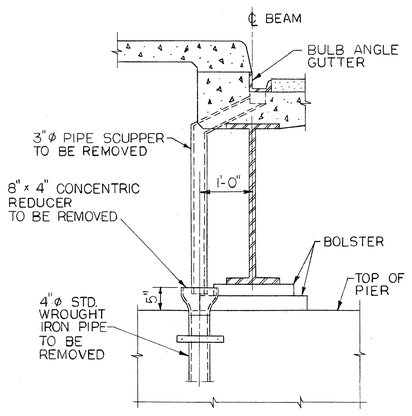
PHASE II - SHOWN
PHASE I - SIMILAR EXCEPT FOR UTILITIES



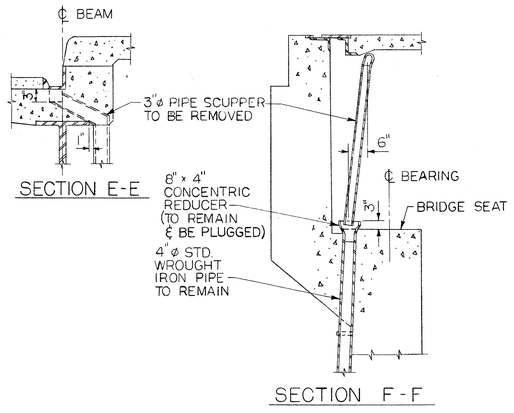
SCUPPER DETAIL AT PIER



SCUPPER DETAIL AT ABUTMENT

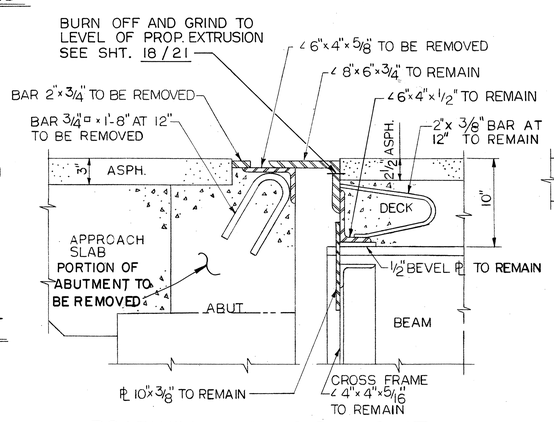


SECTION D-D



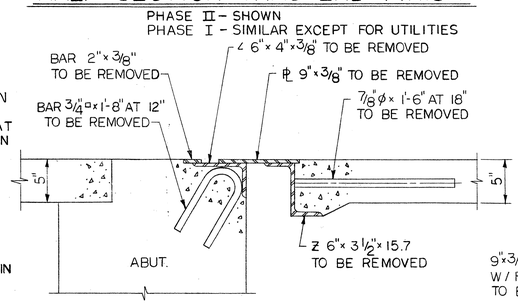
SECTION E-E

SECTION F-F



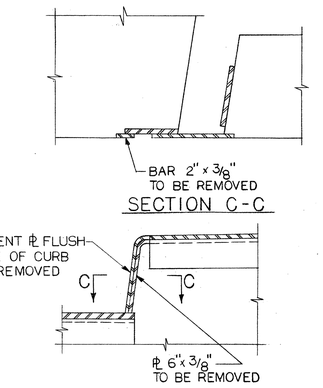
ROADWAY EXPANSION JOINT

SECTION A-A



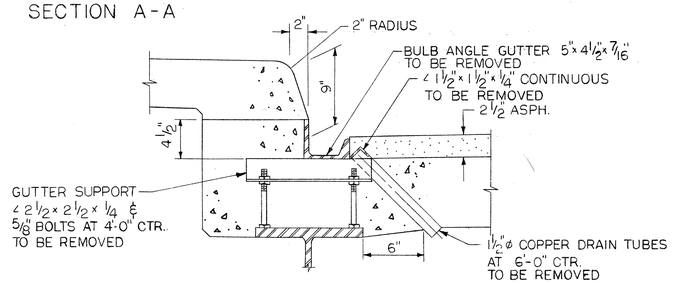
SIDEWALK EXPANSION JOINT

SECTION B-B



SECTION C-C

CURB EXPANSION DETAIL



CURB AND GUTTER DETAIL

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

DECK REMOVAL

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

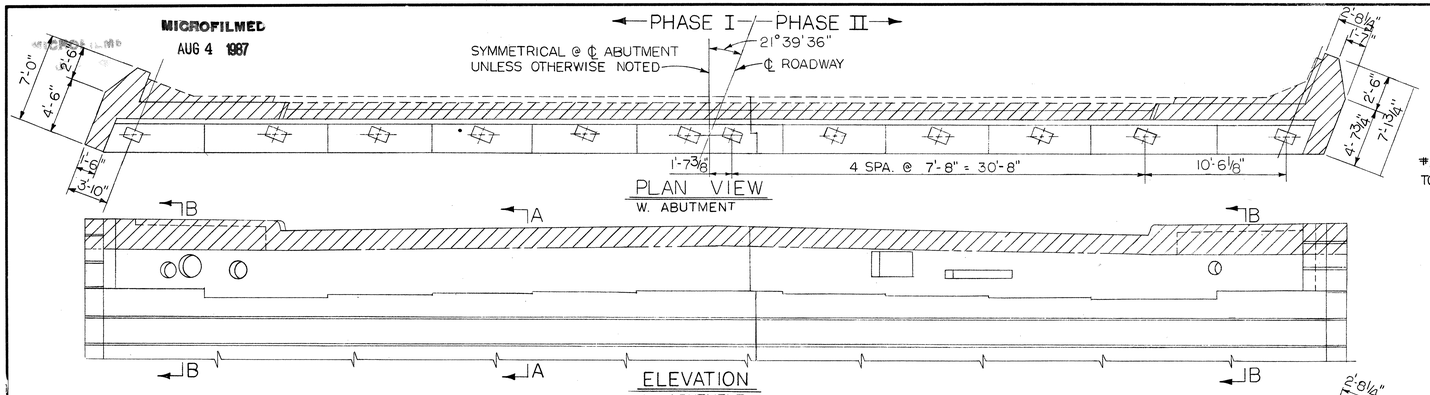
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
5	OHIO		1982

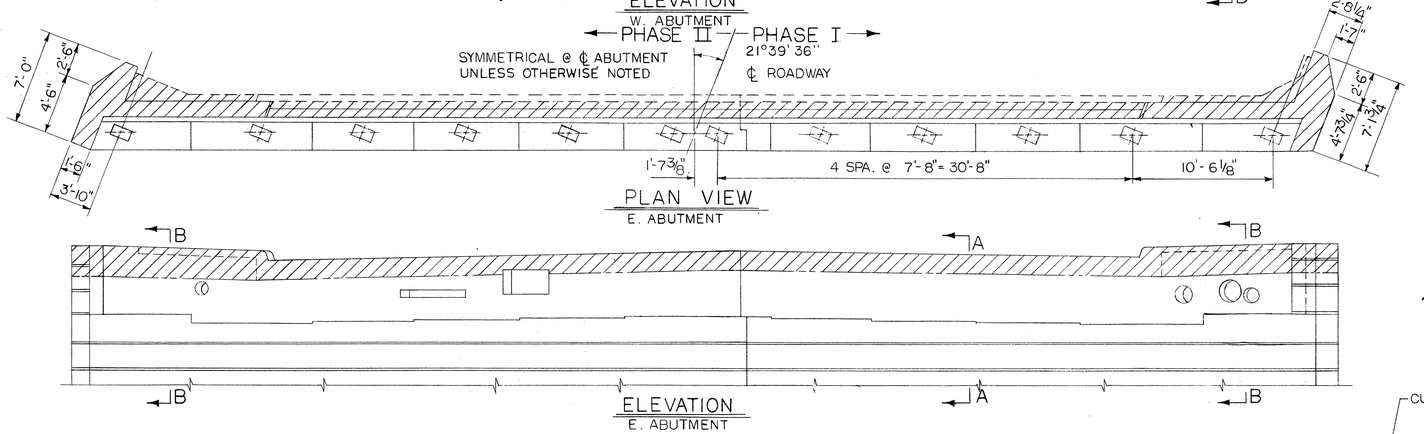
SUM - 18 - 10.55

10/21



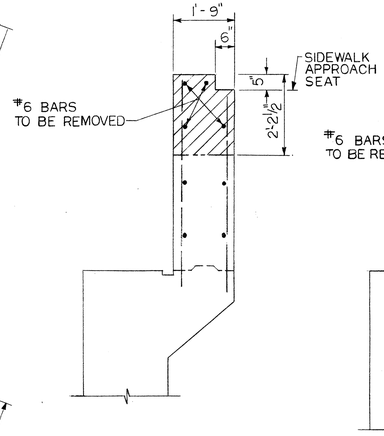
PLAN VIEW
W. ABUTMENT

ELEVATION
W. ABUTMENT

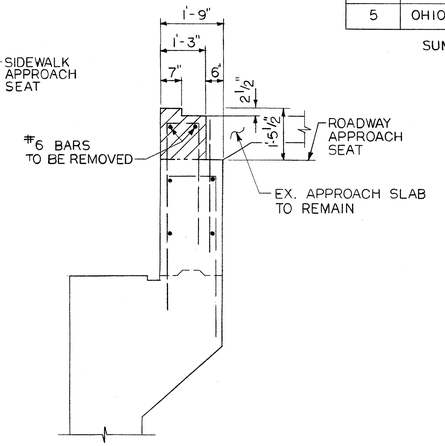


PLAN VIEW
E. ABUTMENT

ELEVATION
E. ABUTMENT



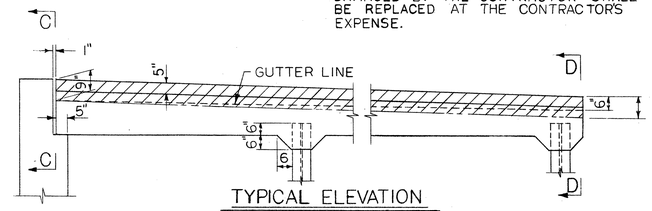
SECTION B-B
THRU SIDEWALK



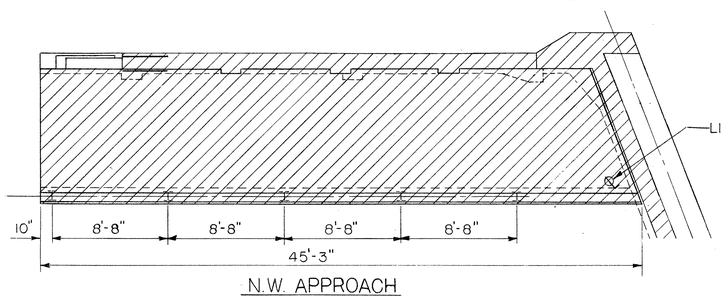
SECTION A-A
THRU ROADWAY

INDICATES AREAS TO BE REMOVED
PAYMENT TO BE MADE UNDER
ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

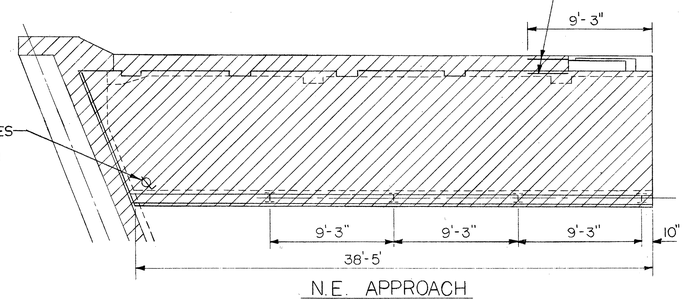
NOTE: ALL HORIZONTAL BARS SHALL BE REMOVED, EXCEPT AS NOTED, IN AREAS INDICATED FOR REMOVAL. ALL VERTICAL BARS TO REMAIN INTACT. ANY VERTICAL BARS THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.



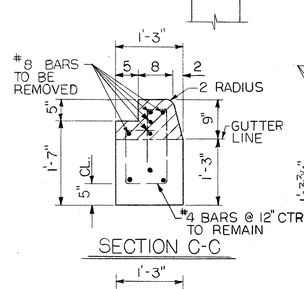
TYPICAL ELEVATION
APPROACH CURBS



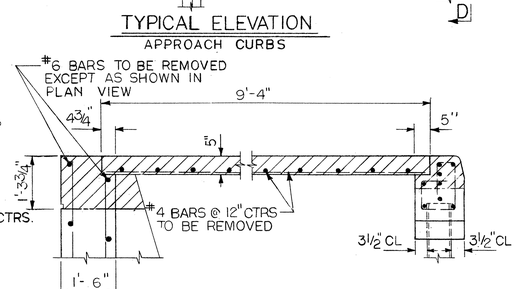
N.W. APPROACH
PLAN VIEW



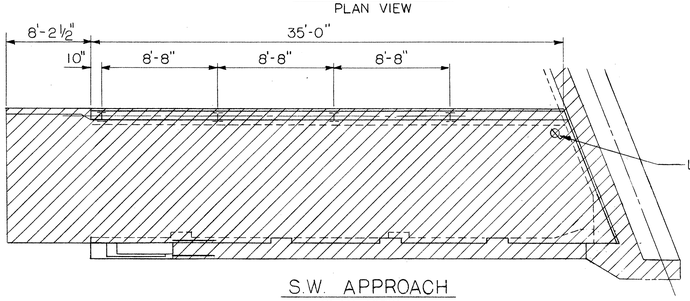
N.E. APPROACH
PLAN VIEW



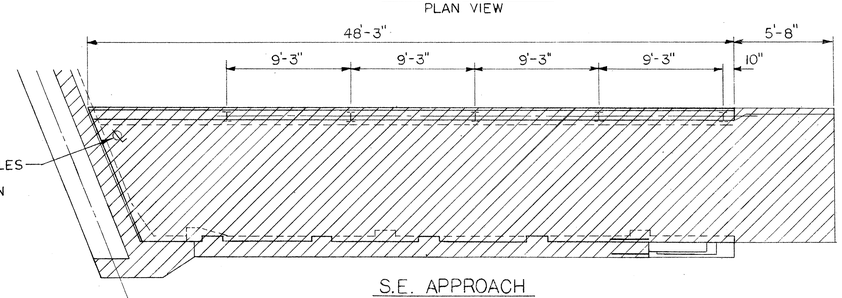
SECTION C-C



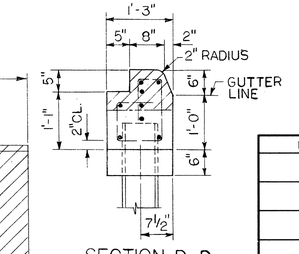
TYPICAL SECTION
THRU SIDEWALK APPROACHES



S.W. APPROACH
PLAN VIEW



S.E. APPROACH
PLAN VIEW



SECTION D-D

SIDEWALK APPROACHES

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

ABUTMENTS REMOVAL & SIDEWALK REMOVAL

BRIDGE NO SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE | DATE

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MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
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11/21

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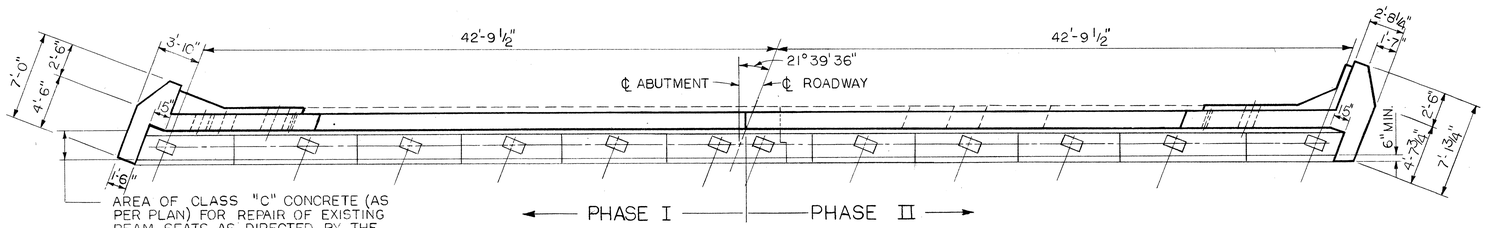
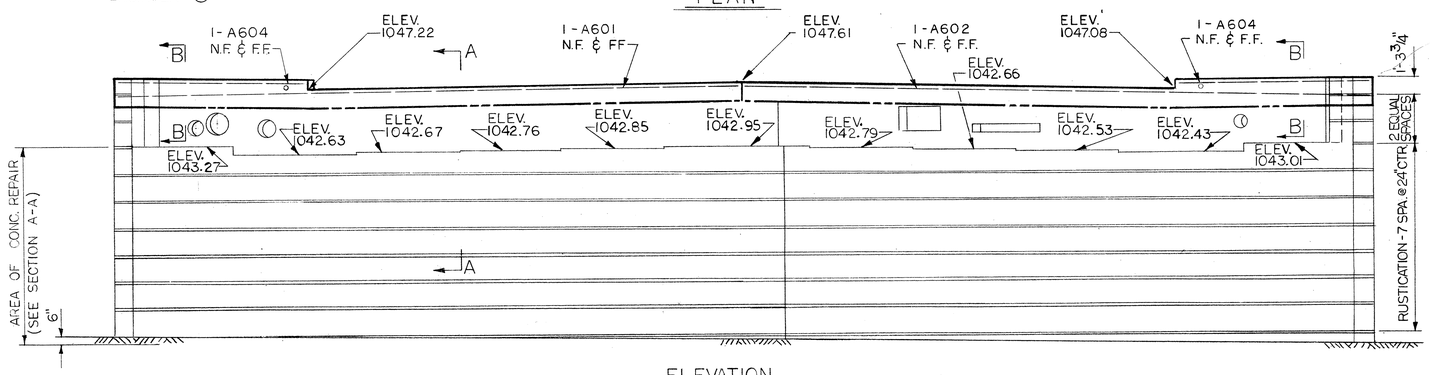
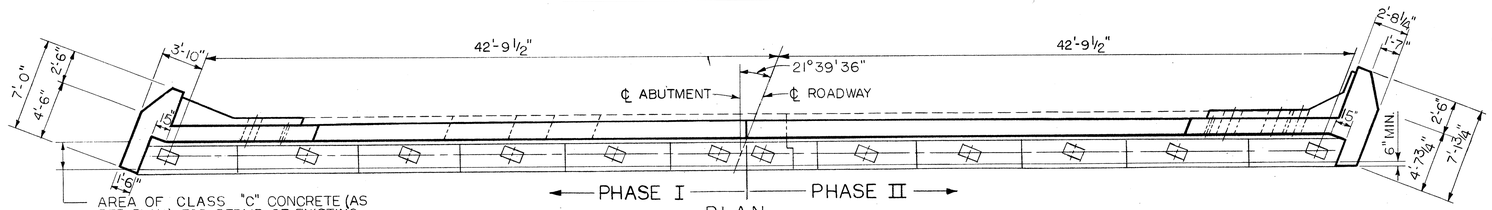


PLAN

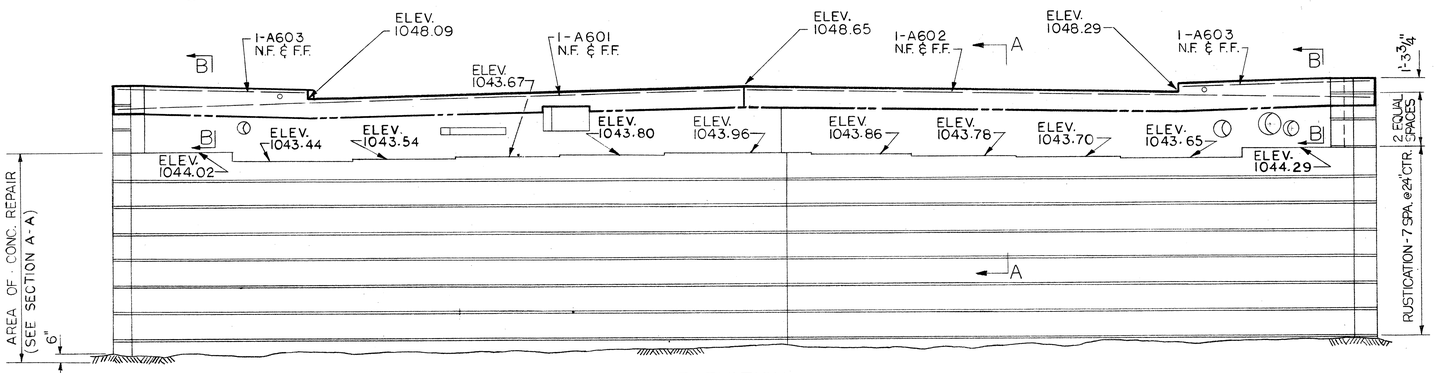


ELEVATION

WEST ABUTMENT



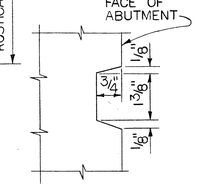
PLAN



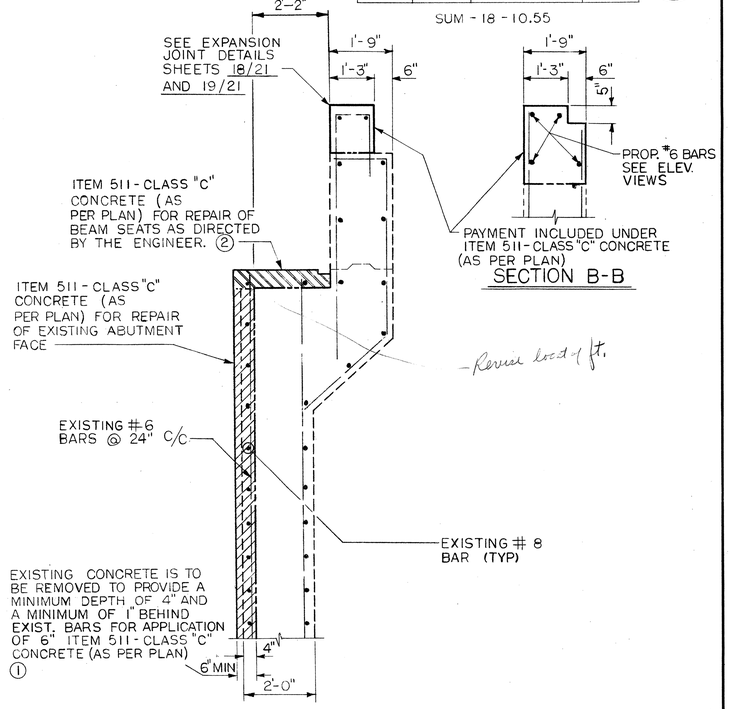
ELEVATION

EAST ABUTMENT

N.F.—NEAR FACE
F.F.—FAR FACE



RUSTICATION DETAIL



SECTION B-B

Revise bend of ft.

SECTION A-A

NOTES:

① CARE SHALL BE TAKEN IN REMOVING EXISTING CONCRETE TO AVOID DAMAGING EXISTING REINFORCMENT. WHERE EXISTING BARS ARE DETERIORATED OR DAMAGED, NEW DOWELS OF THE SAME SIZE AND 60 DIA. LONGER THAN THE SECTION BEING REPLACED SHALL BE PROVIDED. EMBED DOWELS 30 DIA. INTO EXISTING CONCRETE WITH NON-SHRINK GROUT. PAYMENT FOR REPLACING DETERIORATED BARS SHALL BE INCLUDED WITH ITEM 509 - REINFORCING STEEL AND ITEM 510 - DOWEL HOLES. REPLACING OF DAMAGED BARS SHALL BE AT CONTRACTOR'S EXPENSE. *

② EXTREME CARE SHALL BE EXERCISED WHEN REMOVING DETERIORATED CONCRETE FROM AROUND BEARINGS WITHIN THE BEAM SEAT AREAS.

③ REMOVAL OF EXISTING CONCRETE FROM FACE OF ABUTMENTS AND BEAM SEATS TO BE INCLUDED UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

* *Where the 30 dia. embedment cannot be attained, due to a limited depth of concrete, embedment shall be as directed by the Engineer.*

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

EAST AND WEST ABUTMENTS

BRIDGE NO. SUM - 18 - 10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE

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MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
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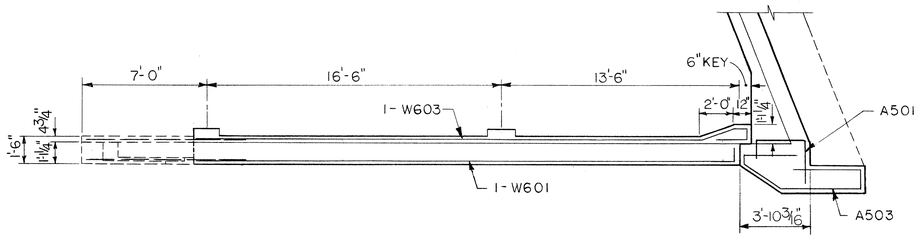
12/21

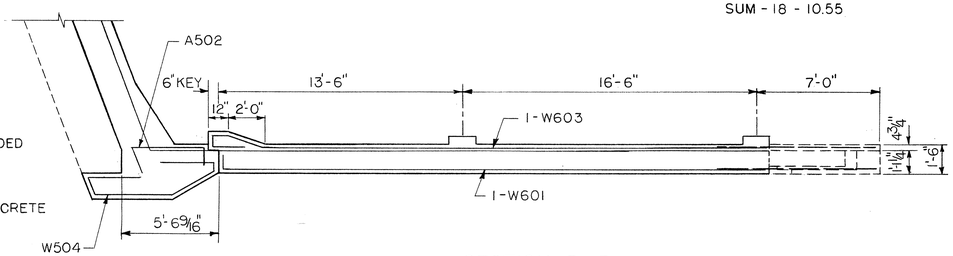
SUM - 18 - 10.55



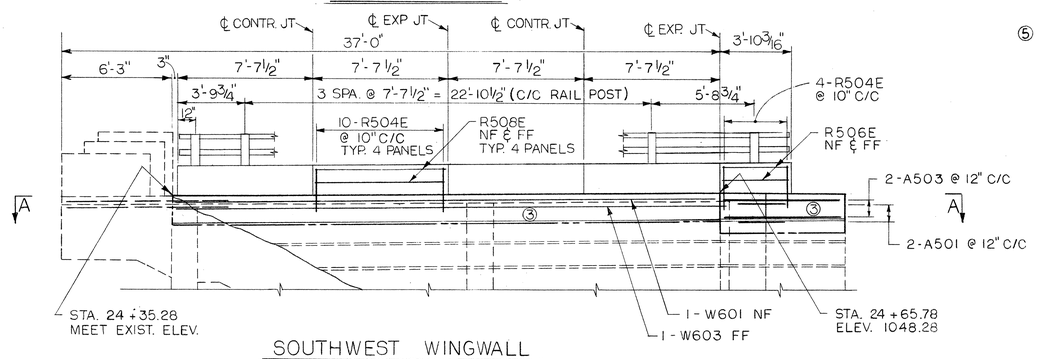
SECTION A-A

NOTES:

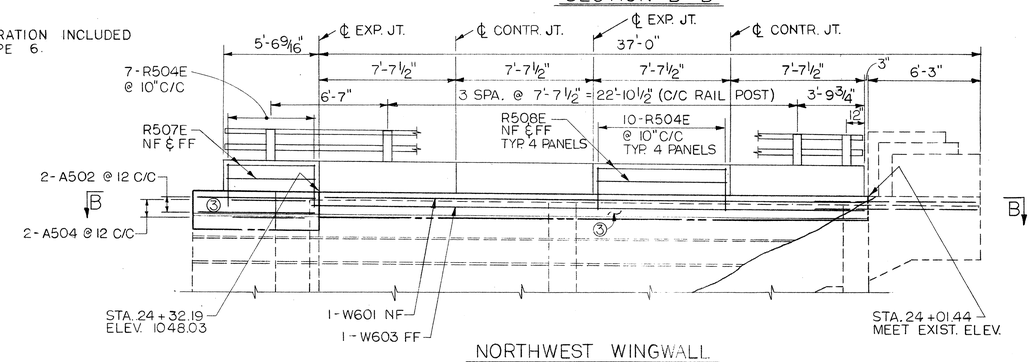
1. REMOVAL OF EXIST. CURB TO BE INCLUDED UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED.
2. REMOVAL OF EXIST SIDEWALK TO BE INCLUDED UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED
3. PAYMENT INCLUDED UNDER ITEM 511 - CONCRETE CLASS "C" (AS PER PLAN)
4. N. F. = NEAR FACE
   F. F. = FAR FACE
5. COST OF PAVEMENT RESTORATION INCLUDED IN ITEM 609 — CURB, TYPE 6.



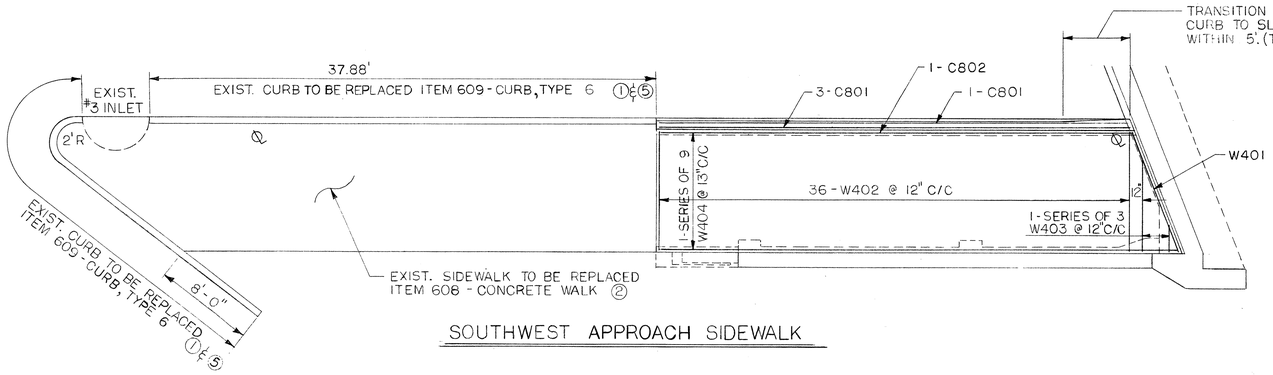
SECTION B-B



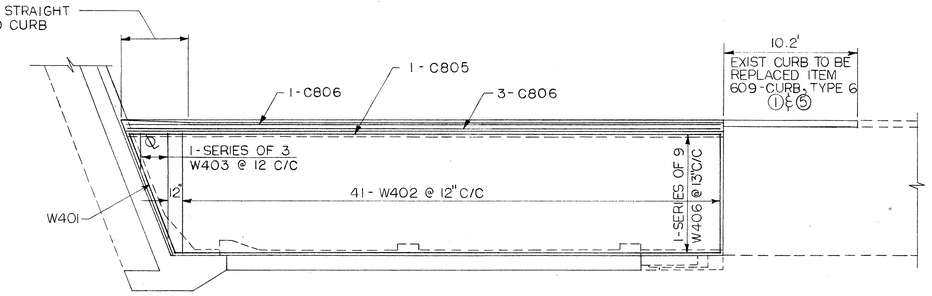
SOUTHWEST WINGWALL



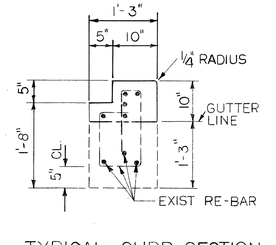
NORTHWEST WINGWALL



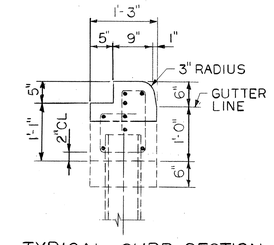
SOUTHWEST APPROACH SIDEWALK



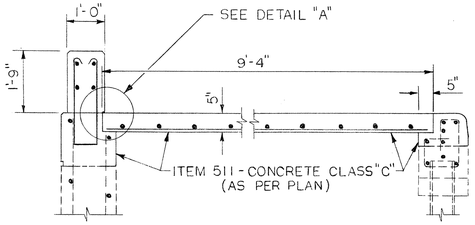
NORTHWEST APPROACH SIDEWALK



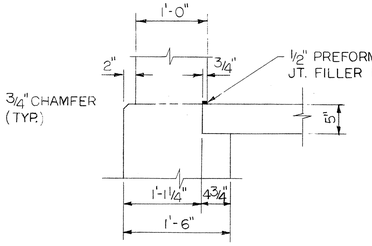
TYPICAL CURB SECTION
@ ABUTMENT



TYPICAL CURB SECTION
@ APPROACH SIDEWALK



TYPICAL SECTION
THRU APPROACH SIDEWALK



DETAIL "A"

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

WINGWALLS & SIDEWALKS

BRIDGE NO. SUM - 18 - 10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE

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MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
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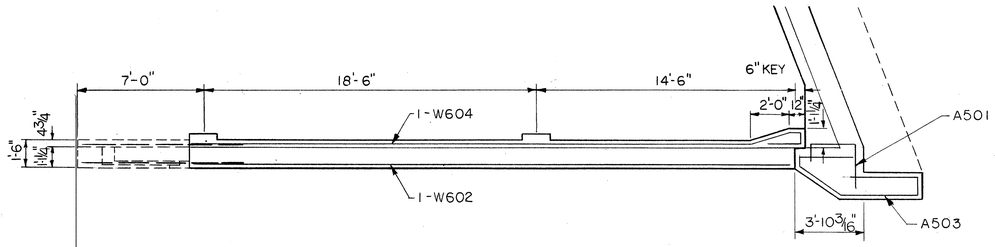
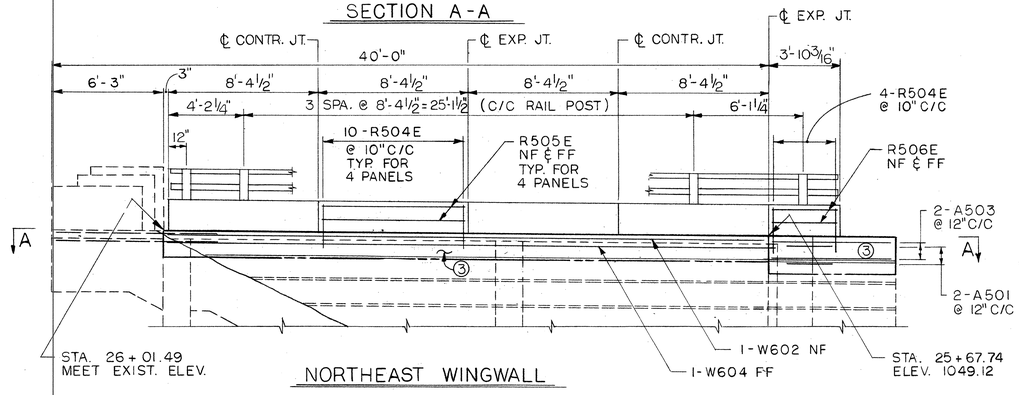
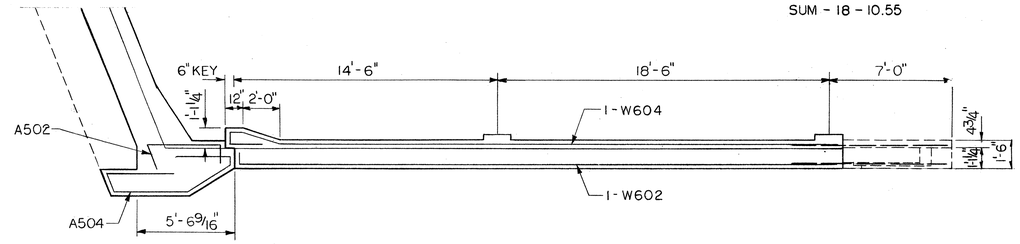


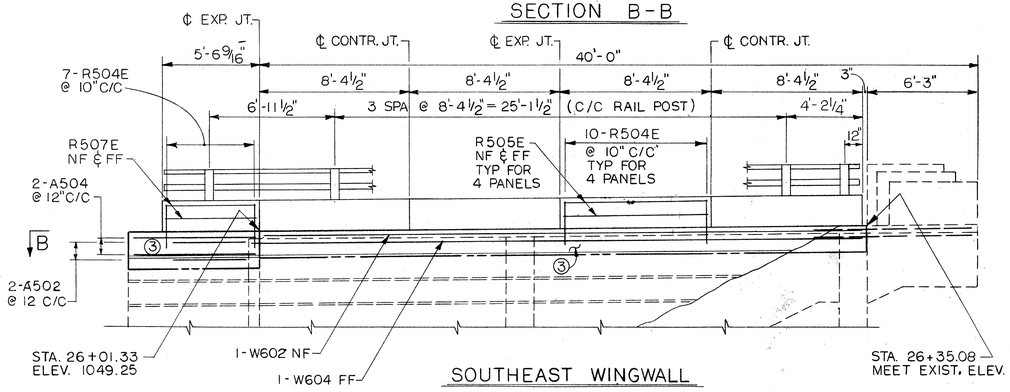
SECTION A-A



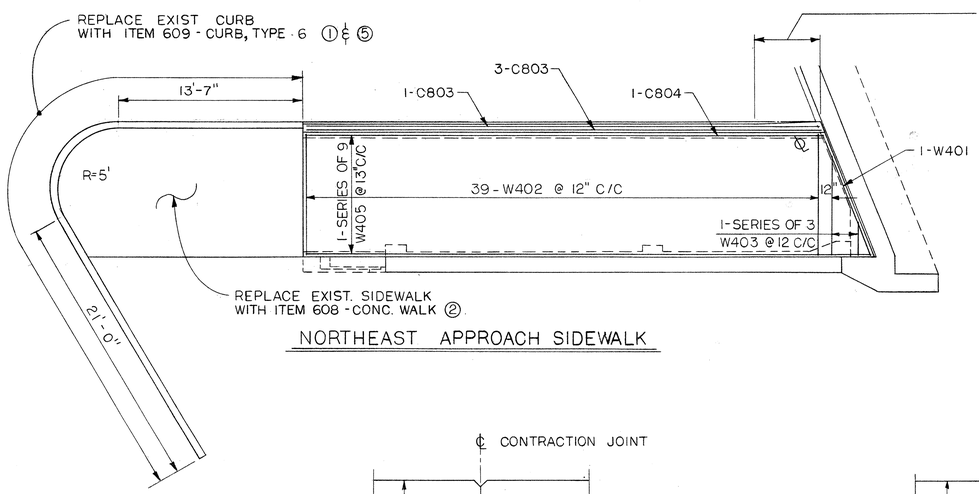
NORTHEAST WINGWALL



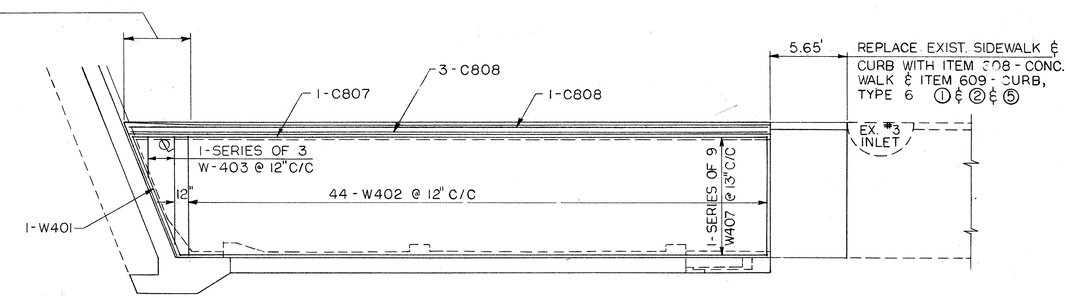
SECTION B-B



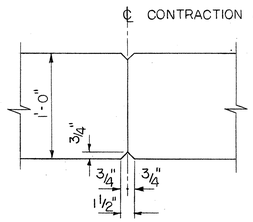
SOUTHEAST WINGWALL



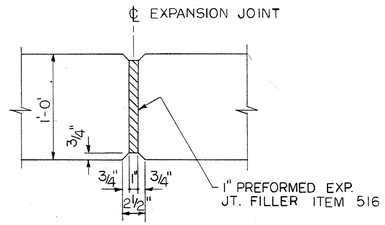
NORTHEAST APPROACH SIDEWALK



SOUTHEAST APPROACH SIDEWALK



PARAPET PLAN VIEW
CONTRACTION JOINT (TYP.)



PARAPET PLAN VIEW
EXPANSION JOINT (TYP.)

NOTE:
FOR ADDITIONAL WINGWALL AND SIDEWALK NOTES AND DETAILS SEE SHEET 12/21.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

WINGWALLS & SIDEWALKS

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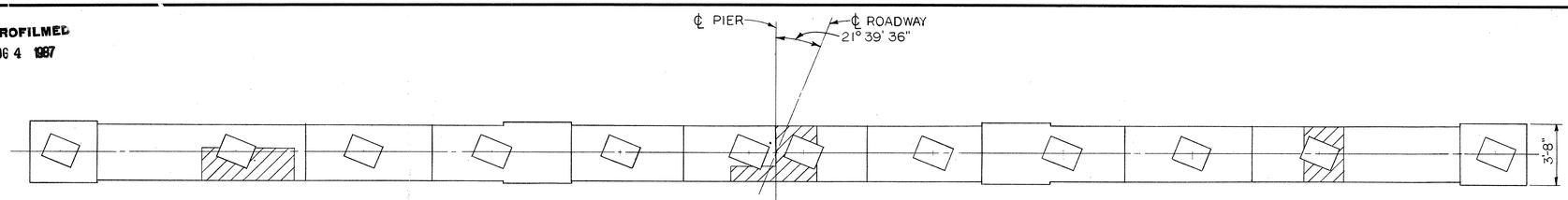
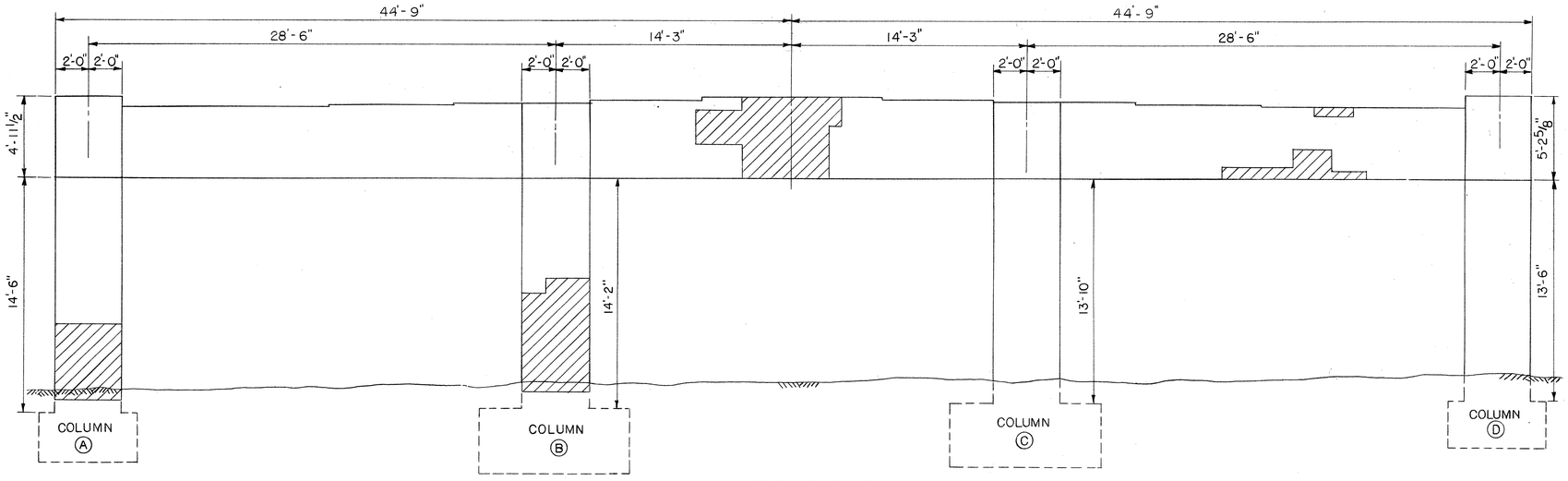
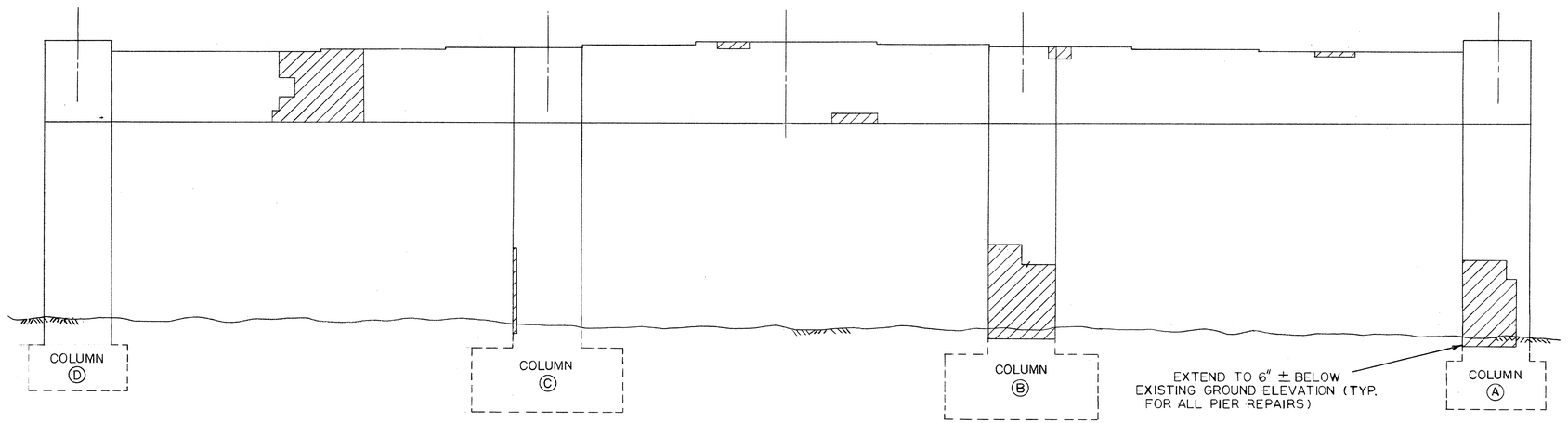


TOP PLAN VIEW

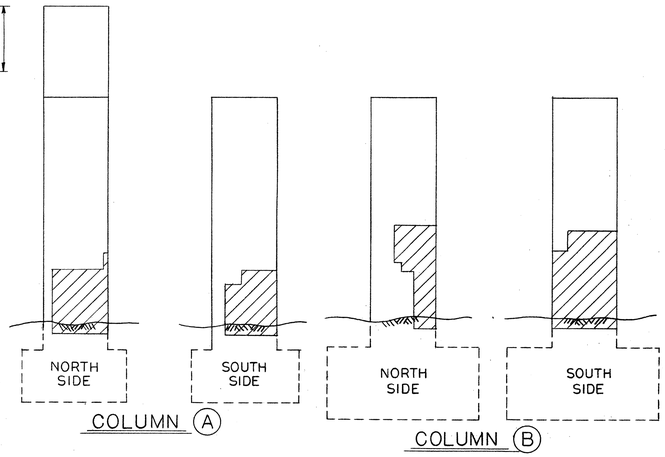
BOTTOM PLAN VIEW



WEST ELEVATION



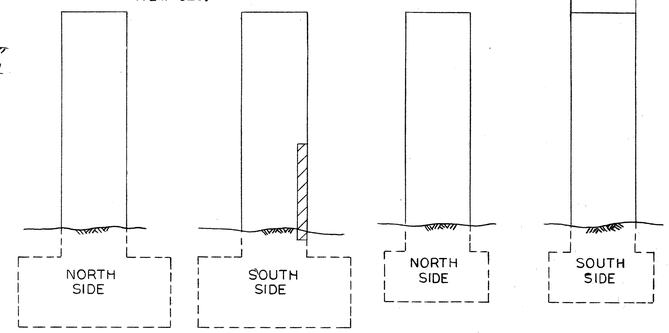
EAST ELEVATION



COLUMN (A)

COLUMN (B)

▨ INDICATES APPROXIMATE AREAS OF STRUCTURAL REPAIR AS PER ITEM 520 - PNEUMATICALLY PLACED MORTAR. ONLY STRUCTURAL PATCHES (EXPOSING PRIMARY REINFORCING STEEL AFTER REMOVAL OF UNSOUND CONCRETE) SHALL BE MADE AS DIRECTED BY THE ENGINEER. SURFACE PREPARATION SHALL INCLUDE SANDBLASTING OF ALL REINFORCING STEEL AND CONCRETE TO BE PATCHED (STEEL CLEANED TO TO SA-1 QUALITY.) PAYMENT SHALL INCLUDE ALL WORK, INCLUDING SANDBLASTING, NECESSARY TO COMPLY WITH ITEM 520.



COLUMN (C)

COLUMN (D)

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

PIER REPAIR

BRIDGE NO. SUM-18-10.55
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AUG 4 1987

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SUM - 18 - 10.55

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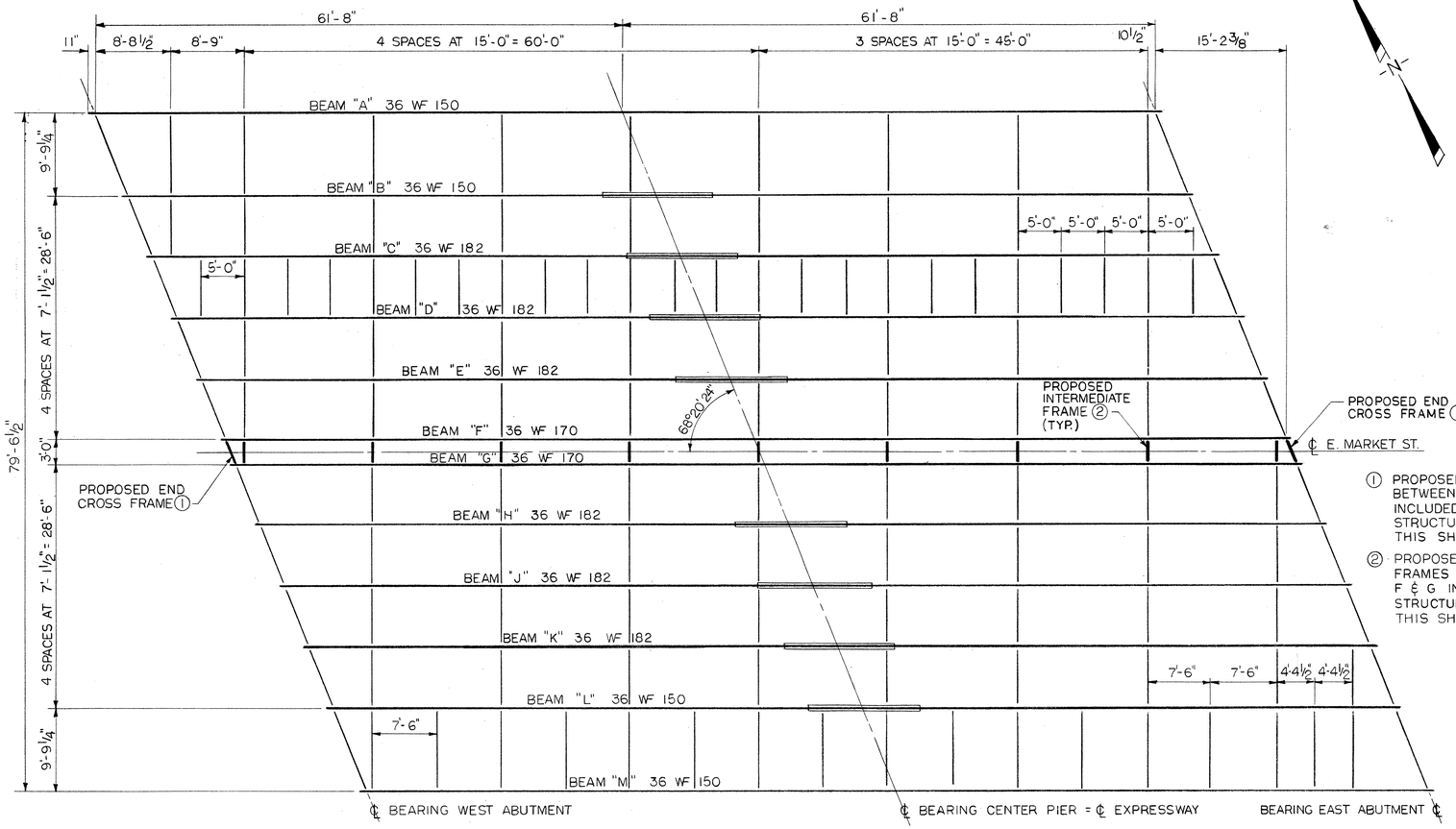
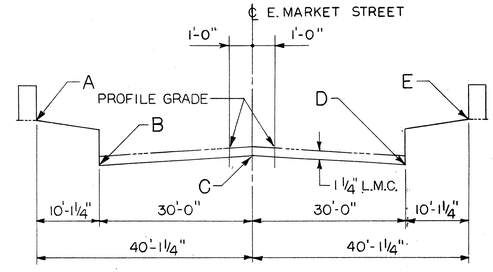


FRAMING PLAN

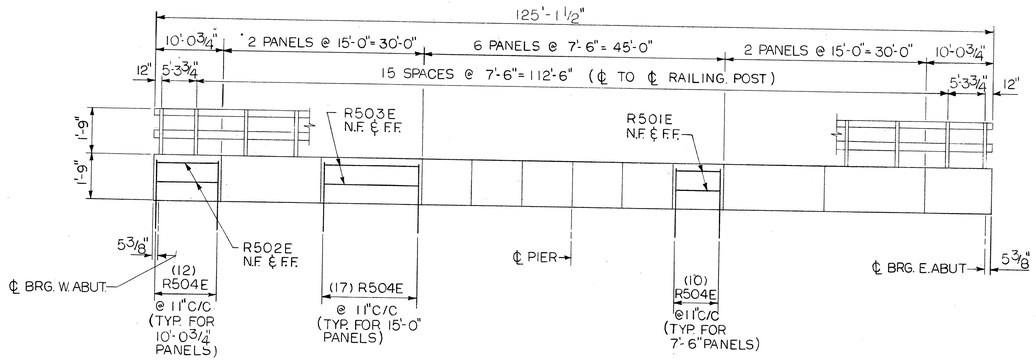
TABLE OF SCREED ELEVATIONS					
LOCATION	ELEVATION				
	A	B	C	D	E
℄ BRG. W. ABUT.	1048.12	1046.98	1047.51	1047.14	1048.32
1/4 PT.	1048.22	1047.11	1047.67	1047.30	1048.48
1/2 PT.	1048.35	1047.23	1047.80	1047.43	1048.61
3/4 PT.	1048.46	1047.35	1047.91	1047.54	1048.72
℄ BRG. PIER	1048.57	1047.45	1048.02	1047.65	1048.83
1/4 PT.	1048.72	1047.60	1048.17	1047.80	1048.98
1/2 PT.	1048.85	1047.74	1048.30	1047.93	1049.11
3/4 PT.	1048.98	1047.86	1048.43	1048.06	1049.24
℄ BRG. E. ABUT.	1049.07	1047.96	1048.53	1048.19	1049.39

① PROPOSED END CROSS FRAME BETWEEN EXIST. BEAMS F & G INCLUDED UNDER ITEM 513 - STRUCTURAL STEEL. SEE DETAIL THIS SHEET.

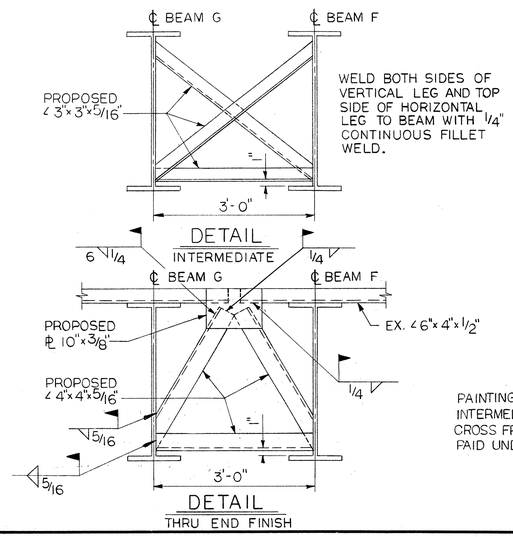
② PROPOSED INTERMEDIATE CROSS FRAMES BETWEEN EXIST. BEAMS F & G INCLUDED UNDER ITEM 513 - STRUCTURAL STEEL. SEE DETAIL THIS SHEET.



KEY SECTION



NORTH & SOUTH BRIDGE PARAPET



NOTE: THE ELEVATIONS SHOWN ARE TO THE TOP OF THE PORTLAND CEMENT CONCRETE DECK AND ARE THOSE WHICH ARE REQUIRED BEFORE THE CONCRETE IS PLACED. PROPER ALLOWANCE HAS BEEN MADE FOR THE DEAD LOAD DEFLECTIONS CAUSED BY THE WEIGHT OF THE CONCRETE AND THE 1-1/4" LATEX MODIFIED CONCRETE WEARING SURFACE WHERE APPLICABLE.

PAINTING OF PROPOSED INTERMEDIATE AND END CROSS FRAMES TO BE PAID UNDER ITEM 514.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

FRAMING PLAN & SUPERSTRUCTURE DETAILS

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MICROFILMED
AUG 4 1987
MICROFILM

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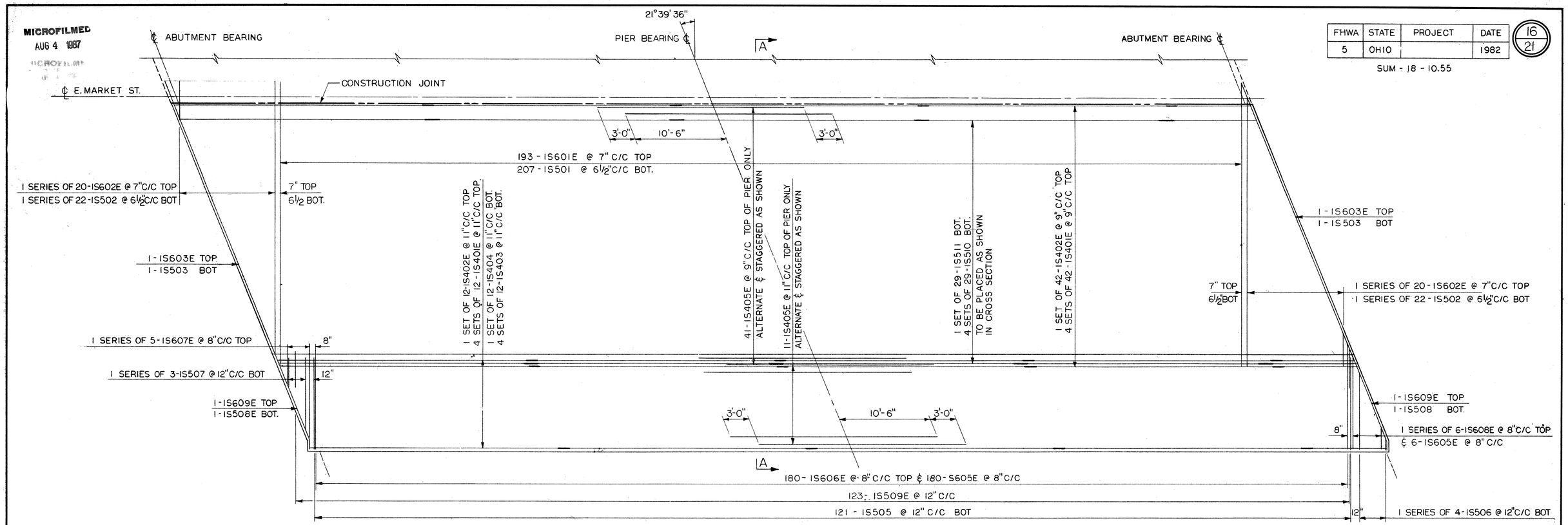
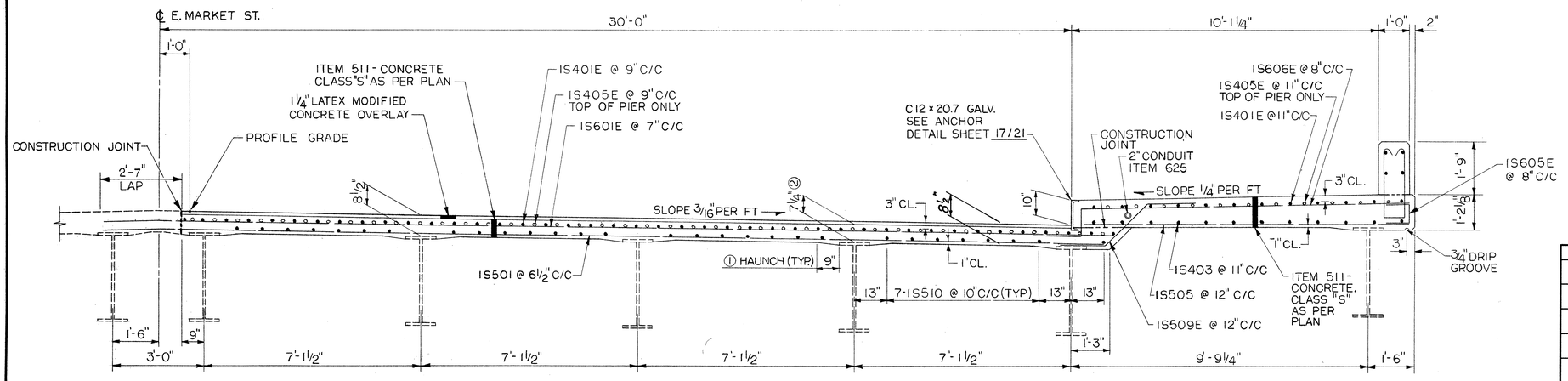
21

SUM - 18 - 10.55



SLAB PLAN



SECTION A-A

NOTE: SEE SHEET 17/21 FOR CONSTRUCTION DETAILS AND NOTES.

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

SLAB PLAN
(PHASE I)
BRIDGE NO SUM - 18 - 10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE

DATE

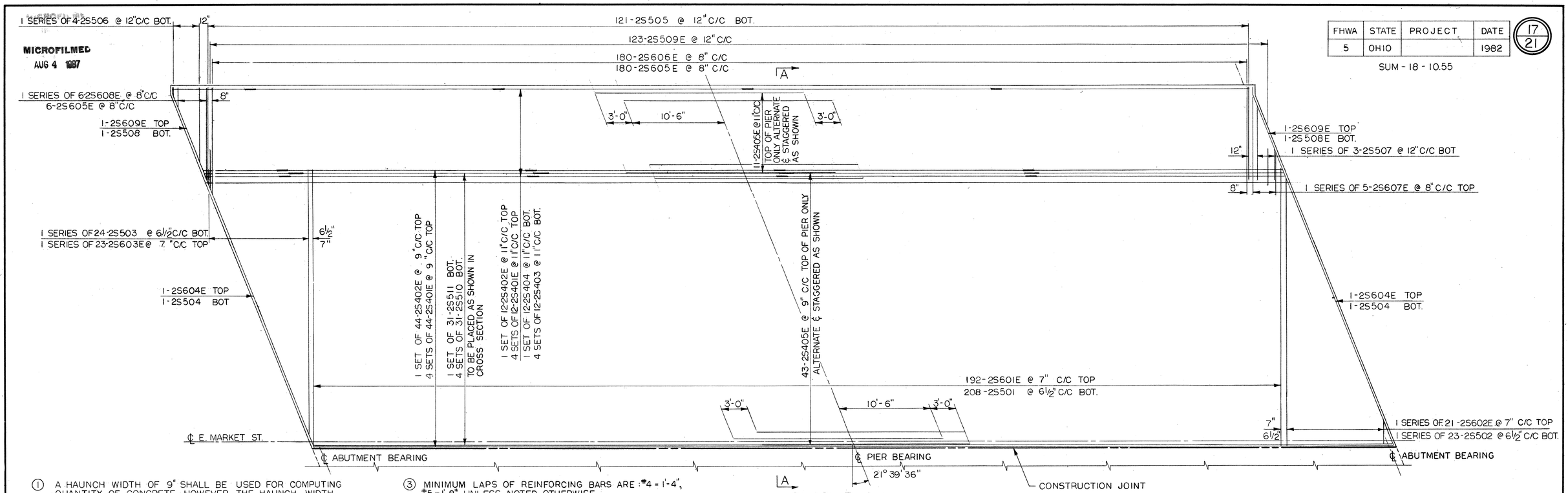
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
NKS	WKS		PKK	

MICROFILMED
AUG 4 1987

FHWA	STATE	PROJECT	DATE
5	OH10		1982

SUM - 18 - 10.55

17/21



SLAB PLAN

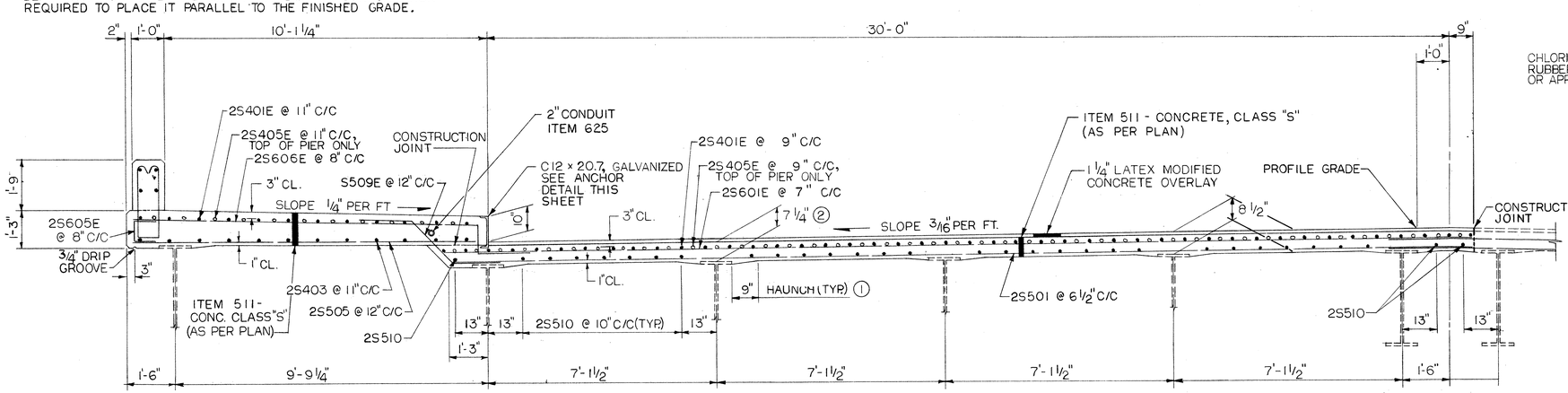
① A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

② DECK SLAB DEPTH: THE DISTANCE SHOWN FROM THE BOTTOM OF THE LATEX MODIFIED CONCRETE OVERLAY TO TOP OF STEEL BEAM IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.

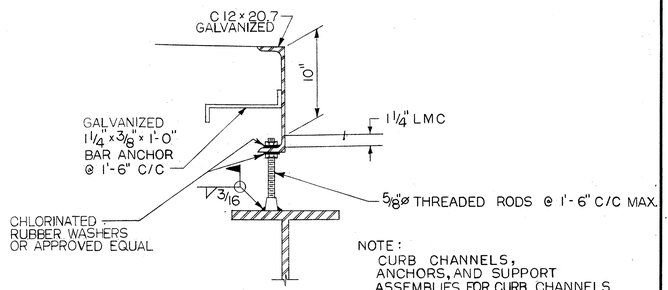
③ MINIMUM LAPS OF REINFORCING BARS ARE: #4 = 1'-4", #5 = 1'-8" UNLESS NOTED OTHERWISE.

④ FOR PARAPET REINFORCING SEE SHEET 15/21.

⑤ 3" CLEARANCE INCLUDES 1¾" CLEARANCE TO TOP OF CLASS "S" CONCRETE AND 1¼" LMC OVERLAY.



SECTION A-A



NOTE:
CURB CHANNELS, ANCHORS, AND SUPPORT ASSEMBLIES FOR CURB CHANNELS SHALL BE PAID FOR UNDER ITEM 513 - STRUCTURAL STEEL, GALVANIZED.

CURB CHANNEL ANCHOR DETAIL

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

SLAB PLAN
(PHASE II)
BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

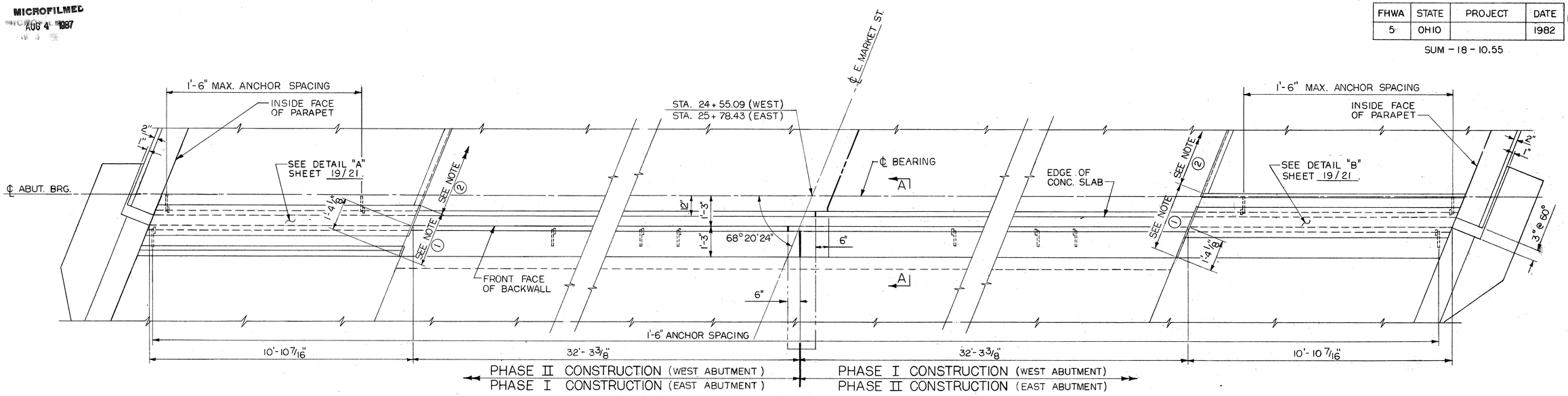
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
NKS	WKS		PKK	

MICROFILMED
AUG 4 1987

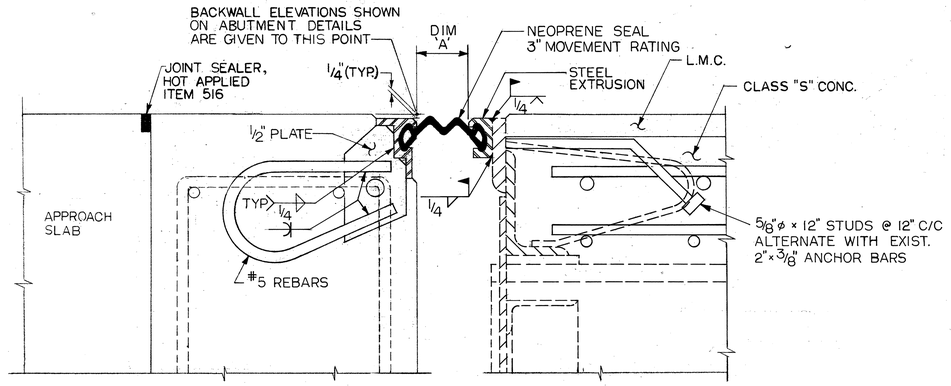
FHWA	STATE	PROJECT	DATE
5	OHIO		1982

SUM - 18 - 10.55

18/21



EXPANSION JOINT PLAN VIEW



SECTION A - A

NOTES:

① INDICATES LIMITS OF CURB PLATES TO BE INCLUDED WITH ITEM 516 -ELASTOMERIC STRIP SEALS (AS PER PLAN) FOR PAYMENT.

② INDICATES LIMITS OF CURB CHANNEL TO BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, GALVANIZED FOR PAYMENT.

③ FOR MATERIAL SPECIFICATIONS AND OTHER INCIDENTALS OF ITEM 516 -ELASTOMERIC STRIP SEALS (AS PER PLAN), SEE STRUCTURAL GENERAL NOTES.

④ FOR ADDITIONAL DETAILS AND SECTIONS, SEE SHEET 19/21.

TEMPERATURE, °F	40°	50°	60°	70°	80°
DIM. "A" E.℄ W. ABUTMENTS	3.098"	3.049"	3"	2.951"	2.903"

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

EXPANSION JOINT DETAILS

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

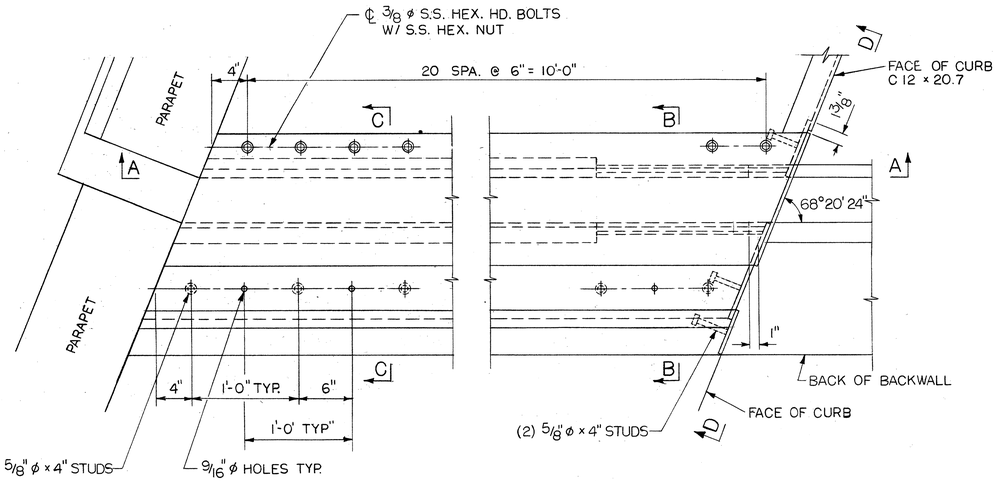
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1987

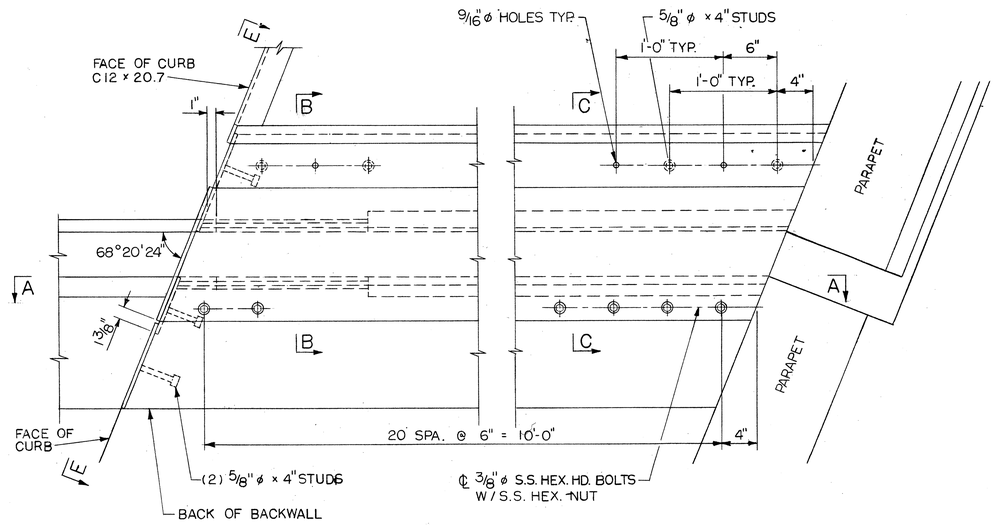
FHWA	STATE	PROJECT	DATE
5	OHIO		1982

19/21

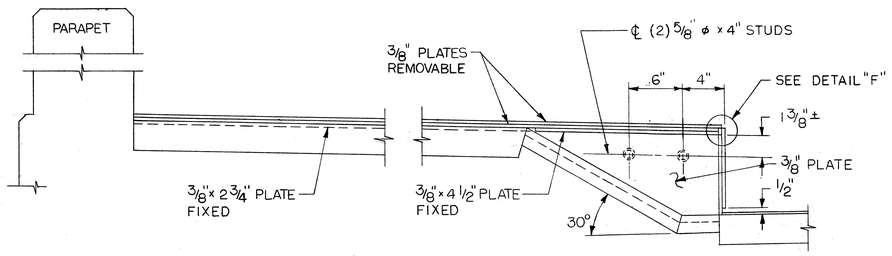
SUM - 18 - 10.55



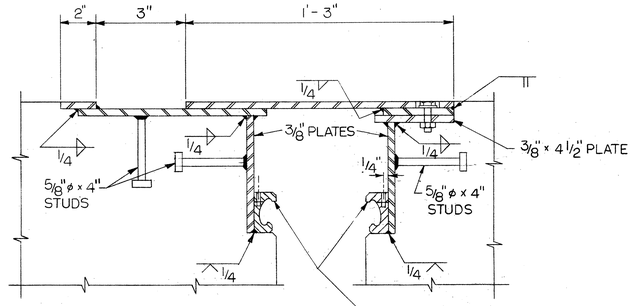
DETAIL "A"



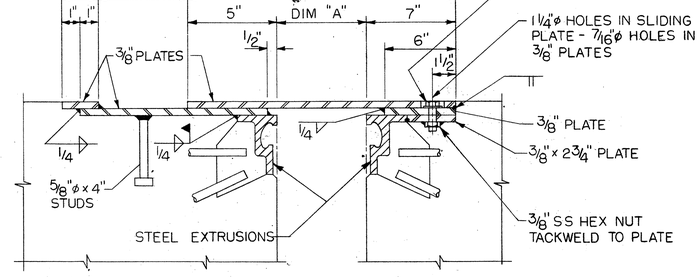
DETAIL "B"



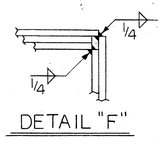
SECTION A-A



SECTION B-B



SECTION C-C



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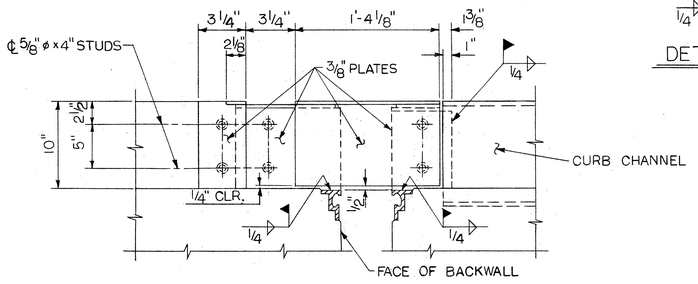
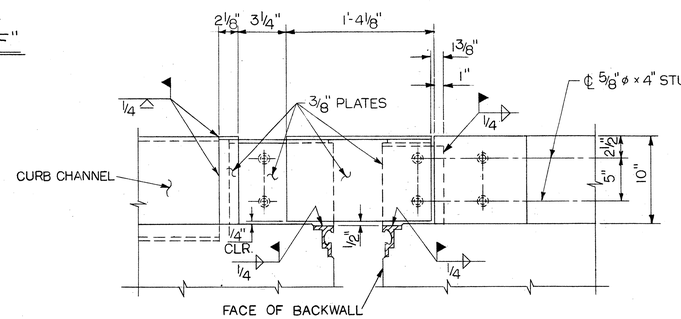


SECTION D-D



SECTION E-E

NOTE:
FOR ADDITIONAL DETAILS SEE SHEET 18/21.
ALL SIDEWALK JOINT PLATES AND ANCHORS ARE INCLUDED IN THE PRICE BID FOR ITEM 516 - ELASTOMERIC STRIP SEALS (AS PER PLAN).

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

EXPANSION JOINT DETAILS

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

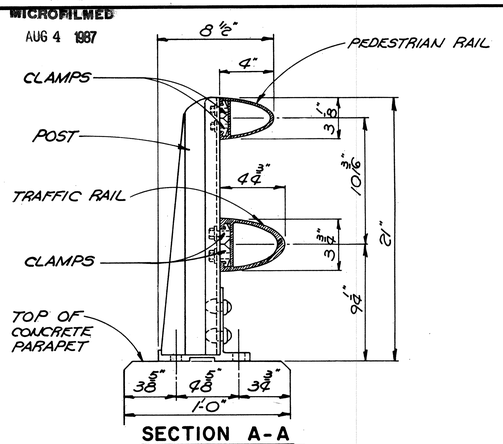
DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

MICROFILMED
AUG 4 1987

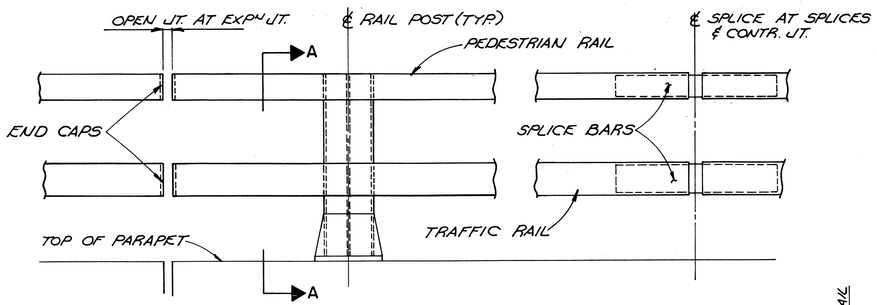
FHWA	STATE	PROJECT	DATE
5	OHIO		1982

SUM - 18 - 10.55

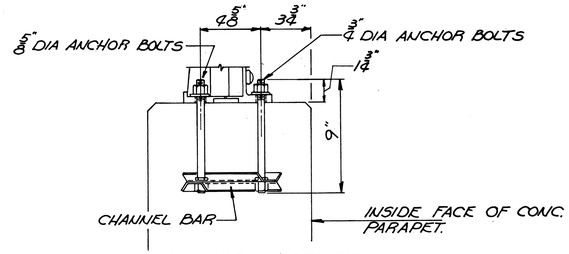
20/21



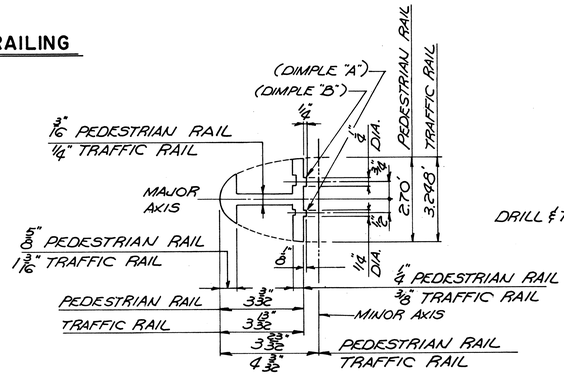
SECTION A-A



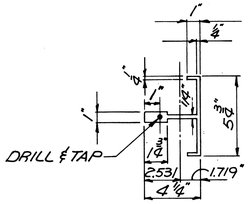
PARTIAL ELEVATION OF RAILING



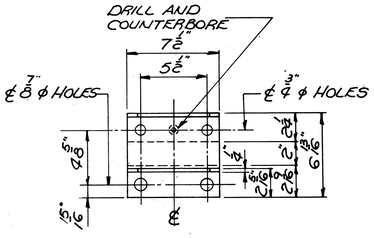
ANCHOR ASSEMBLY



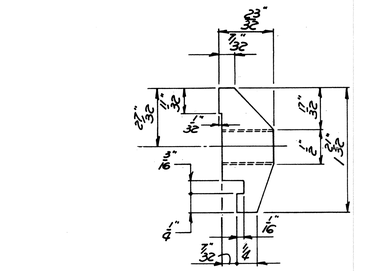
SECTION D-D



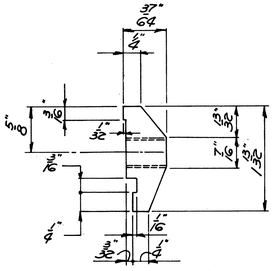
PLAN - POST



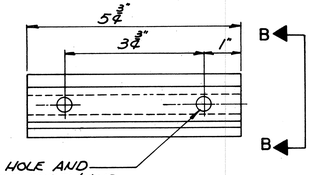
PLAN - BASE



SECTION B-B

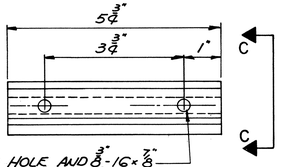


SECTION C-C



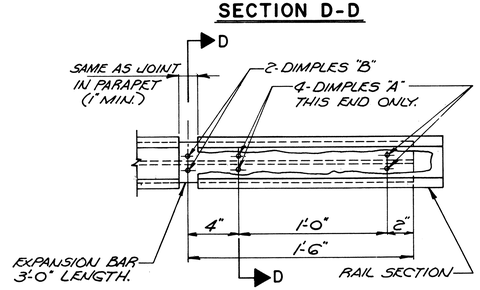
⅜"-13 ϕ THREADED HOLE AND ⅝"-13 × 1" HEX. CAP SCREW AND 1 1/16 O.D., 17/32 I.D. 3/32 THK. ALUMINUM TYPE A PLAIN WASHER (TYP.)

CLAMP BAR DETAILS
TRAFFIC RAIL

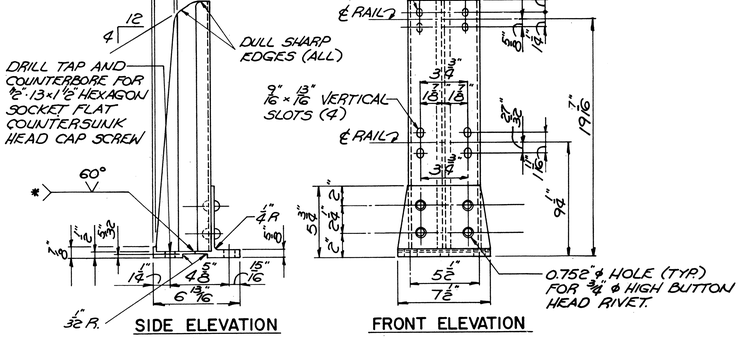


⅜"-16 ϕ THREADED HOLE, AND ⅜"-16 × 7⅞" HEX CAP SCREW AND 1⅝" O.D., 19/32 I.D. 1/16 THK. ALUMINUM TYPE A PLAIN WASHER (TYP.)

CLAMP BAR DETAILS
PEDESTRIAN RAIL



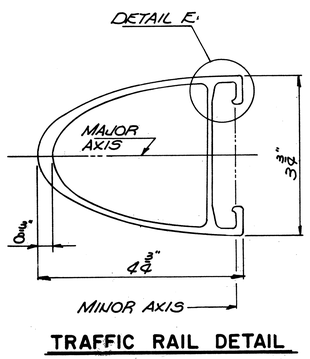
SPLICE JOINT DETAILS



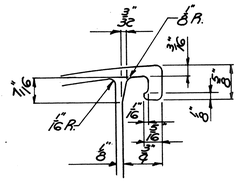
RAIL POST DETAILS

* WELD IN BASE NOT REQUIRED IF BASE IS EXTRUDED IN ONE PIECE.

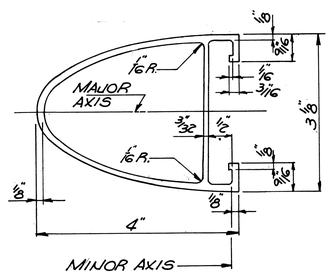
NOTE:
FOR ADDITIONAL RAILING DETAILS SEE SHEETS 12/21, 13/21, & 15/21.



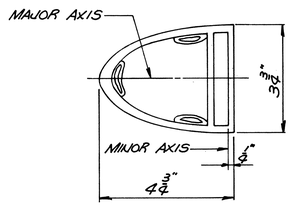
TRAFFIC RAIL DETAIL



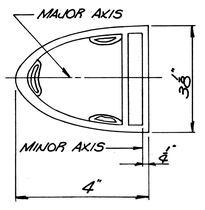
DETAIL E



PEDESTRIAN RAIL DETAIL

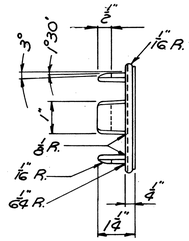


TRAFFIC RAIL



PEDESTRIAN RAIL

END CAP DETAILS



SIDE VIEW

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

ALUMINUM RAILING DETAILS

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
		WKS	NKS	

MICROFILMED
AUG 4 1987

MARK	NO. REQD.	LENGTH	TYPE	DIMENSIONS A	B	C	INCR.	WEIGHT
SUPERSTRUCTURE PHASE 1								
1S401E	216	30'-0"	STR					4,329
1S402E	54	10'-2"	STR					367
1S403	48	30'-0"	STR					962
1S404	12	10'-2"	STR					82
1S405E	52	24'-0"	STR					834
1S501	207	33'-3"	STR					7,179
SERIES OF 1S502	2 SETS OF 22	3'-7-7/8" TO 31'-10-1/2"	STR				1'-3-3/8"	815
1S503	2	35'-9"	STR					75
1S505	121	10'-9"	STR					1,357
SERIES OF 1S506	1 SET OF 4	1'-2" TO 8'-5-3/4"	STR				2'-5-1/4"	20
SERIES OF 1S507	1 SET OF 3	3'-0" TO 8'-0"	STR				2'-6"	17
1S508	2	11'-6-3/4"	4					24
1S509E	123	4'-9"	1	1'-6"	1'-3"	1'-9"		609
1S510	116	30'-0"	STR					3,630
1S511	29	10'-2"	STR					308
1S601E	193	33'-3"	STR					9,639
SERIES OF 1S602E	2 SETS OF 20	3'-10" TO 31'-9"	STR				1'-4-3/4"	1,069
1S603E	2	35'-9"	STR					107
1S605E	186	1'-11"	2	0'-8"	0'-9"			536
1S606E	180	13'-3"	3	10'-9"	1'-8"			3,582
SERIES OF 1S607E	1 SET OF 5	5'-6" TO 11'-10"	3	3'-0" TO 9'-4"	1'-8"		1'-7"	65
SERIES OF 1S 608E	1 SET OF 6	2'-3-3/4" TO 10'-9"	STR				1'-8-1/4"	59
1S609E	2	11'-6-3/4"	4					35

NON-EPOXY COATED = 14,469
EPOXY COATED = 21,231
(E) SUFFIX DENOTES BARS TO BE EPOXY COATED
TOTAL SUPERSTRUCTURE - PHASE 1 = 35,700

MARK	NO. REQD	LENGTH	TYPE	DIMENSIONS A	B	C	INCR	WEIGHT
SUPERSTRUCTURE PHASE II								
2S401E	224	30'-0"	STR					4,489
2S402E	56	10'-2"	STR					380
2S403	48	30'-0"	STR					962
2S404	12	10'-2"	STR					82
2S405E	54	24'-0"	STR					866
2S501	208	32'-1-1/2"	STR					6,969
SERIES OF 2S502	1 SET OF 23	2'-1'-1/4" TO 30'-9"	STR				1'-3-5/8"	394
SERIES OF 2S503	1 SET OF 24	1'-7-7/8" TO 31'10-1/2"	STR				1'-3-3/8"	420
2S504	2	34'-6-3/4"	STR					72
2S505	121	10-9"	STR					1,357
SERIES OF 2S506	1 SET OF 4	1'-2" TO 8'-5-3/4"	STR				2'-5-1/4"	20
SERIES OF 2S507	1 SET OF 3	3'-0" TO 8'-0"	STR				2'-6"	17
2S508	2	11'-6-3/4"	4					24
2S509E	123	4'-9"	1	1'-6"	1'-3"	1'-9"		609
2S510	124	30'-0"	STR					3,880
2S511	31	10'-2"	STR					329
2S601E	192	32'-1-1/2"	STR					9,264
SERIES OF 2S602E	1 SET OF 21	2'-2" TO 31'-4"	STR				1'-5'1/2"	528
SERIES OF 2S603E	1 SET OF 23	1'-4" TO 31'-1-1/2"	STR				1'-4'1/4"	561
2S604E	2	34'-6-3/4"	STR					104
2S605E	186	1'-11"	2	0'-8"	0'-9"			536
2S606E	180	13'-3"	3	10'-9"	1'-8"			3,582
SERIES OF 2S607E	1 SET OF 5	5'-6" TO 11'-10"	3	3'-0" TO 9'-4"	1'-8"		1'-7"	65
SERIES OF 2S608E	1 SET OF 6	2'-3-3/4" TO 10'-9"	STR				1'-8-1/4"	59
2S609E	2	11'-6-3/4"	4					35

NON-EPOXY COATED = 14,526
EPOXY COATED = 21,078
(E) SUFFIX DENOTES BARS TO BE EPOXY COATED
TOTAL SUPERSTRUCTURE PHASE II = 35,604

MARK	NO. REQD	LENGTH	TYPE	DIMENSIONS A	B	C	INCR	WEIGHT
CURBS (PHASE I & II)								
C801	4	35'-0"	STR					374
C802	1	35'-3"	STR					94
C803	4	38'-0"	STR					406
C804	1	38'-3"	STR					102
C805	1	44'-0"	STR					117
C806	4	44'-3"	STR					473
C807	1	47'-3"	STR					126
C808	4	47'-6"	STR					507

NON-EPOXY COATED = 2,199
EPOXY COATED = 0
(E) SUFFIX DENOTES BARS TO BE EPOXY COATED
TOTAL CURBS = 2,199

MARK	NO. REQD	LENGTH	TYPE	DIMENSIONS A	B	C	INCR	WEIGHT
RAILINGS* (PHASE I & II)								
R501E	48	7'-0-3/4"	STR					
R502E	16	9'-7½"	STR					
R503E	32	14'-6-3/4"	STR					
R504E	486	6'-4"	9	2'-5½"	0'-7"			
R505E	32	8'-0"	STR					
R506E	8	3'-5-3/4"	STR					
R507E	8	5'-2"	STR					
R508E	32	7'-3"	STR					

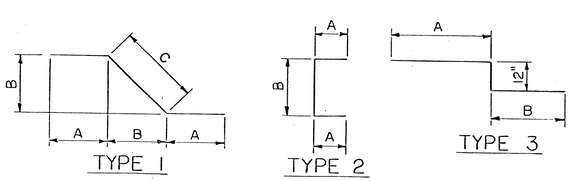
*RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

MARK	NO. REQD	LENGTH	TYPE	DIMENSIONS A	B	C	INCR.	WEIGHT
ABUTMENTS (PHASE I & II)								
A501	4	6'-0"	7	2'-6"	2'-6"	90°		25
A502	4	6'-6"	7	4'-0"	1'-6"	68°		27
A503	4	14'-7½"	8	90°				61
A504	4	14'-10½"	8	112°				62
A601	4	43'-10"	5	43'-0"	1'-0"			263
A602	4	45'-10"	5	45'-0"	1'-0"			275
A603	4	13'-0"	STR					78
A604	4	12'-10"	5	12'-0"				77

NON-EPOXY COATED = 868
EPOXY COATED = 0
(E) SUFFIX DENOTES BARS TO BE EPOXY COATED
TOTAL ABUTMENTS = 868

MARK	NO. REQD	LENGTH	TYPE	DIMENSIONS A	B	C	INCR	WEIGHT
WALKS AND WINGWALLS (PHASE I & II)								
W401	4	9'-6"	STR					25
W402	160	8'-6"	STR					908
SERIES OF W403	4 SETS OF 3	2'-0" TO 7'-8"	STR				4'-10½"	39
SERIES OF W404	1 SET OF 9	35'-6" TO 38'-6"	STR				0'-4½"	222
SERIES OF W405	1 SET OF 9	38'-6" TO 41'-6"	STR				0'-4½"	240
SERIES OF W406	1 SET OF 9	40'-9" TO 43'-9"	STR				0'-4½"	254
SERIES W407	1 SET OF 9	43'-6" TO 47'-0"	STR				0'-5¼"	272
W601	2	30'-10"	5	30'-0"	1'-0"			93
W602	2	33'-10"	5	33'-0"	1'-0"			102
W603	2	33'-1"	6	28'-0"	0'-8"	0'-7"		99
W604	2	35'-10"	6	30'-9"	0'-8"	0'-7"		108

NON-EPOXY COATED = 2,362
EPOXY COATED = 0
(E) SUFFIX DENOTES BARS TO BE EPOXY COATED
TOTAL WALKS AND WINGWALLS = 2,362



FHWA	STATE	PROJECT	DATE
5	OHIO		1982

21/21

SUM-18-10.55

SUMMARY

PHASE I - SUPERSTRUCTURE
NON-EPOXY COATED = 14,469 LBS.
EPOXY COATED = 21,231 LBS.
PHASE I - SUPERSTRUCTURE TOTAL = 35,700 LBS.

PHASE II - SUPERSTRUCTURE
NON-EPOXY COATED = 14,526 LBS.
EPOXY COATED = 21,078 LBS.
PHASE II - SUPERSTRUCTURE TOTAL = 35,604 LBS.

ABUTMENTS
NON-EPOXY COATED = 868 LBS.
EPOXY COATED = 0 LBS.
ABUTMENTS TOTAL = 868 LBS.

WALKS AND WINGWALLS
NON-EPOXY COATED = 2,362 LBS.
EPOXY COATED = 0 LBS.
WALKS AND WINGWALLS TOTAL = 2,362 LBS.

CURBS
NON-EPOXY COATED = 2,199 LBS.
EPOXY COATED = 0 LBS.
CURBS TOTAL = 2,199 LBS.

TOTAL NON-EPOXY COATED = 34,424 LBS.
TOTAL EPOXY COATED = 42,309 LBS.
GRAND TOTAL = 76,733 LBS.

REINFORCING STEEL SAMPLES :
REFER TO CMS SECTIONS 106.03, 700, 709.01 THROUGH 709.05 AND 709.08. SUFFICIENT ADDITIONAL REINFORCING STEEL SHALL BE PROVIDED FOR SAMPLING. RANDOM SAMPLES SHALL BE REPLACED IN THE STRUCTURE BY THE ADDITIONAL STEEL, SPLICED IN ACCORDANCE WITH 509.08

REVISED	BY	DATE

CITY OF AKRON, OHIO
DEPARTMENT OF PUBLIC SERVICE
BUREAU OF ENGINEERING

REINFORCING SCHEDULE

BRIDGE NO. SUM-18-10.55
EAST MARKET STREET
OVER ROUTE 8

SCALE DATE

DESIGNED	DRAWN	TRACED	REVIEWED	FLD. BK. NO.
MLM	WKS		NKS	

USI-SUM-18-10.55