

REFER TO THE FOLLOWING STANDARD DRAWINGS:

BR-1-13	1/17/14	EXJ-4-87	7/21/23
GSD-1-19	1/15/21	PCB-91	7/17/20

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "LRFD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9th ED. , AND THE 2020 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

C.F. 2000 (57) => HAM-74-11.16 L/R, HAM-74-12.92 L/R, HAM-74-16.18 L/R & HAM-74-17.44 L/R

DESIGN STRESSES

CLASS QC1 CONCRETE - COMPRESSIVE STRENGTH 4.0 KSI (MEDIAN BARRIER)

CLASS QC2 CONCRETE, MISC.: FAST SET CONCRETE - COMPRESSIVE STRENGTH 4.5 KSI (DECK & ABUT. BACKWALL FOR EXPANSION JOINT REPLACEMENT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH = 50 KSI

PATCHING AND REPAIR OF BRIDGE PARAPETS

PATCHING OF BRIDGE PARAPETS SHALL ADHERE TO ALL REQUIREMENTS OF CMS 519.

FULL DEPTH REPAIR OF BRIDGE PARAPETS SHALL ADHERE TO ALL REQUIREMENTS OF CMS 511 FOR QC2 CONCRETE, SUPERSTRUCTURE.

PARAPET REPAIR DIMENSIONS PROVIDE LENGTH ALONG THE PARAPET BY HEIGHT MEASURED DOWN FROM THE TOP OF PARAPET UNLESS OTHERWISE NOTED.

FOR FULL DEPTH PARPET REPAIRS, ALL EXISTING PARAPET REINFORCING STEEL SHALL REMAIN IN PLACE FOR RE-USE.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

THIS ITEM INCLUDES SEALING THE CONCRETE SUPERSTRUCTURE AND SUBSTRUCTURE SURFACES OF SPECIFIED BRIDGES AS SHOWN ON THE PLANS. THE COLOR OF THE URETHANE COATING SHALL BE FEDERAL COLOR STANDARD NO. 17778 (LIGHT NEUTRAL) FOR THE BRIDGE PARAPETS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE PER SQUARE YARD.

PATCHING AND/OR RECONSTRUCTION OF TOP OF ABUTMENT BACK WALLS

PATCHING AND/OR RECONSTRUCTION OF TOP OF ABUTMENT BACK WALLS SHALL PROCEED IN ACCORDANCE WITH PROPOSAL NOTE 512. EXISTING REINFORCING STEEL SHALL REMAIN IN PLACE FOR RE-USE. ALL WORK, EQUIPMENT, MATERIALS, ETC. REQUIRED TO COMPLETE THE PROPOSED IMPROVEMENTS SHALL BE PAID FOR UNDER:

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B (SQUARE YARD).

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURES, ETC. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING SUPERSTRUCTURE AND SUBSTRUCTURE REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION AND DEMOLITION PLANS TO THE ENGINEER FOR APPROVAL.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ALL REMOVAL OPERATIONS. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY PORTION OF THE STRUCTURE THAT WILL REMAIN IN SERVICE. ANY PORTION OF THE REMAINING STRUCTURE DAMAGED AS A RESULT OF CONTRACTOR ACTIONS SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM SPECIAL : CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT	20%
PROGRESSIVE EQUIVALENT PAYMENTS	50%
UPON SUBMISSION OF FINAL REPORT	30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

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 FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 513 - STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT (UIT)

THIS ITEM CONSISTS OF PERFORMING ULTRASONIC IMPACT TREATMENT IN ACCORDANCE WITH THE SPECIAL PROVISION AT THE LOCATIONS SHOWN IN THE PLANS.

ITEM SPECIAL - STRUCTURE CLEANING

ONCE THE BIRD NESTS AND DROPPINGS ARE REMOVED, USE 1,500 PSI MAXIMUM PRESSURE WATER TO REMOVE ANY REMAINING DEBRIS FROM THE STRUCTURAL STEEL AND PROVIDE A CLEAN WORK SURFACE PRIOR TO THE START OF ULTRA SONIC TESTING AND INSPECTION (UTI), CONCRETE BARRIER REHABILITATION AND/OR PAINTING OF STRUCTURAL STEEL. AVOID SKIN CONTACT OR INHALING NEAR DISTURBED NESTS OR DROPPINGS.

SFN VARIES DESIGN AGENCY



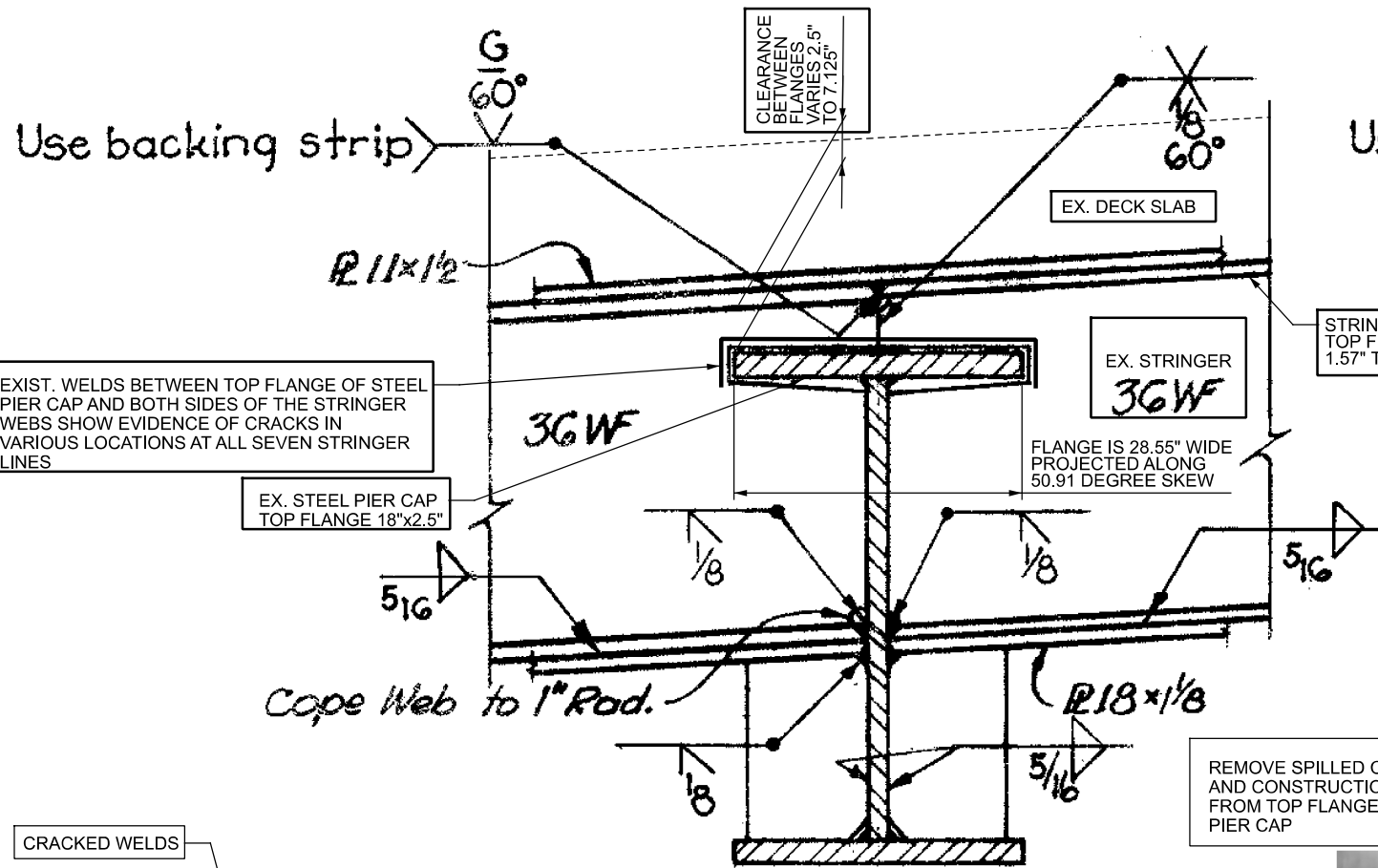
DESIGNER/CHECKER CAH GTF

REVIEWER AMS 9/20/23

PROJECT ID 88679

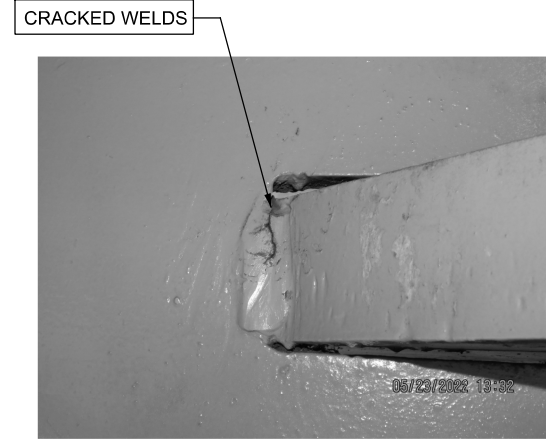
SUBSET	TOTAL
1	2

SHEET	TOTAL
16	53



SECTION A-A

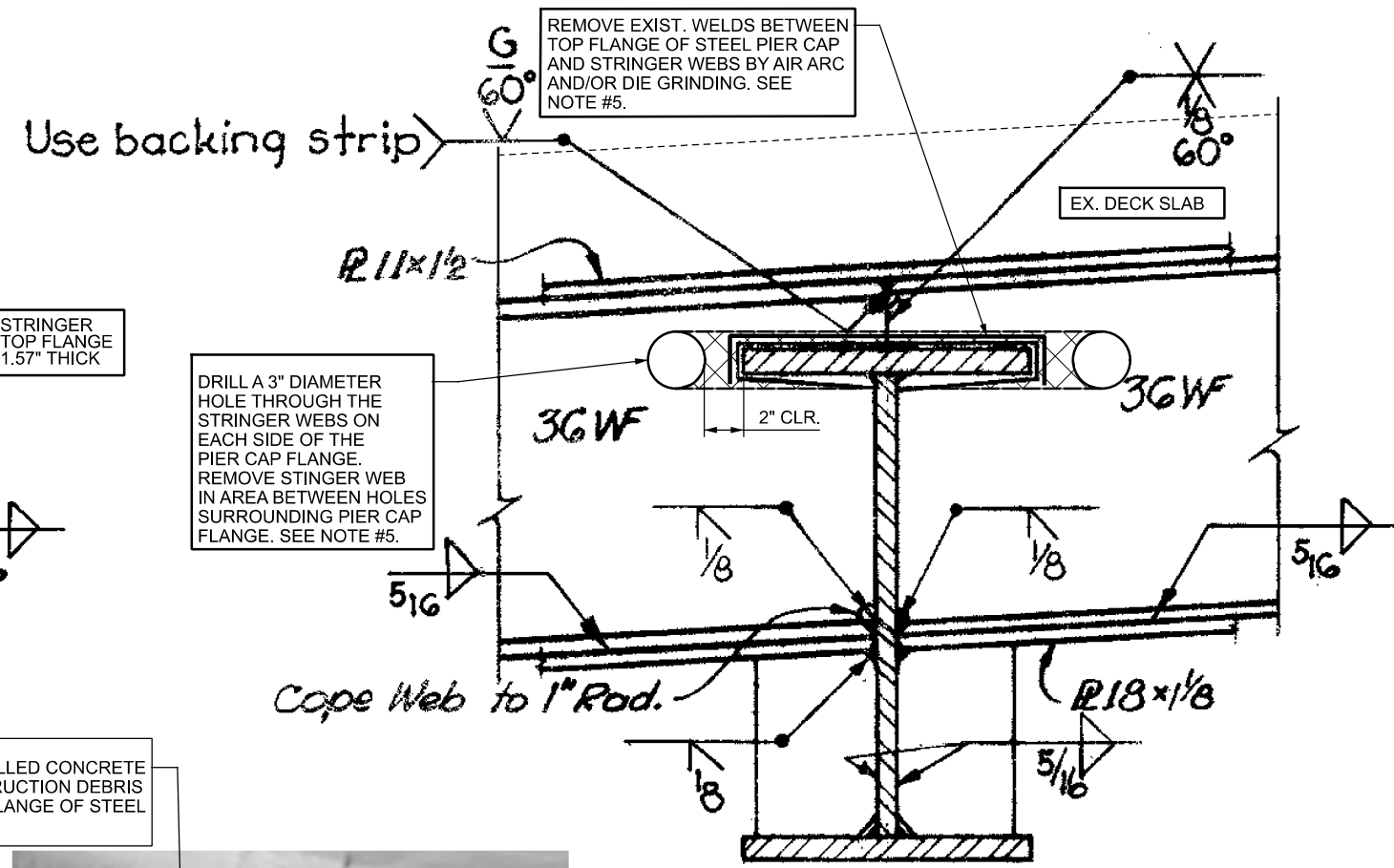
EXISTING CONDITION



CRACKED WELDS



NESTING BIRDS (SEE NOTE #4)



SECTION A-A

RETROFIT DETAIL



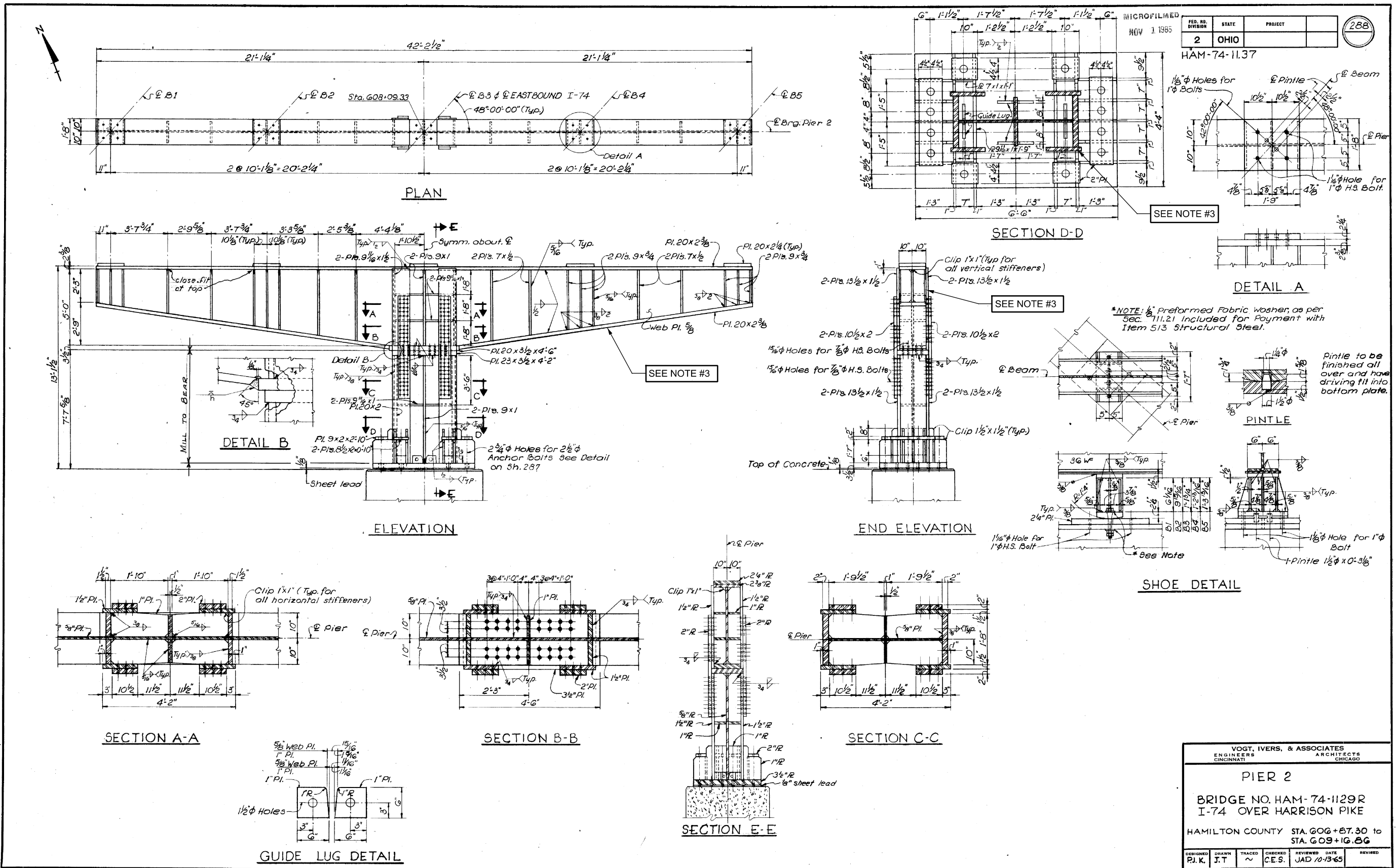
DEBRIS REMOVAL

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK INDICATED IN THE FRAMED TEXT AND/OR DESCRIBED IN THE GENERAL NOTES.
3. PERFORM ULTRASONIC IMPACT TREATMENT (UIT) ON ALL STEEL PIER CAP WELDS INCLUDING STIFFENERS, BEARINGS, MOMENT PLATES, BEAM TO PIER CAP CONNECTIONS, ETC.
4. THE CONTRACTOR SHALL BE AWARE OF BIRDS NESTS AND DROPPINGS LOCATED IN CONFINED SPACES OF THE PIER CAP. THE CONTRACTOR SHALL REMOVE INACTIVE BIRDS NESTS AND DROPPINGS AND CLEAN AFFECTED STEEL SURFACES WITH WATER (1,500 PSI MINIMUM WATER PRESSURE) PRIOR TO PERFORMING UTI AND STRUCTURE PAINTING.
5. FOR STEEL RETROFIT, CUT STRINGER WEBS WITH GRINDING WHEEL OR AIR ARC CUTTER. DO NOT USE A TORCH OR PLASMA CUTTER. PROVIDE CUTTING METHOD AND TOOLS TO BE USED TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK. TOP FLANGE OF THE PIER CAP AND CUT SURFACES OF THE STRINGER WEBS SHALL BE GROUND SMOOTH. REMOVAL OF EXISTING STRINGER WEB STEEL SHALL BE INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN FOR PAYMENT.
 THE FOLLOWING PAY ITEMS ARE ALSO PROVIDED FOR THE STEEL RETROFIT WORK:
 ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING 3" DIAM HOLES (14 LOCATIONS - EACH)
 ITEM 513 - STRUCTURAL STEEL, MISC.: CUTTING STEEL BEAMS (6 FT. PER STRINGER WEB * 7 STRINGERS = 42 FT)
 ITEM 513 - STRUCTURAL STEEL, MISC.: GRINDING OLD WELDS, FINS, TEARS AND SLIVERS (8 FT. PER STRINGER * 7 STRINGERS * 2 SIDES= 112 FT)
6. REMOVAL OF CONSTRUCTION DEBRIS, BIRD NESTS AND DROPPINGS SHALL BE INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN FOR PAYMENT.



DESIGNER	CHECKER
CAH	GTF
REVIEWER	
AMS	9/20/23
PROJECT ID	88679
SUBSET	TOTAL
7	11
SHEET	TOTAL
26	53



FED. NO. DIVISION	STATE	PROJECT	288
2	OHIO	HAM-74-11.37	

*NOTE: 1/2" Preformed Fabric washer as per Sec. 111.21 included for Payment with Item 513 Structural Steel.

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
PIER 2					
BRIDGE NO. HAM-74-1129R I-74 OVER HARRISON PIKE					
HAMILTON COUNTY STA. 608+57.30 to STA. 609+16.86					
DESIGNED P.J.K.	DRAWN J.T.	TRACED ✓	CHECKED C.E.S.	REVIEWED DATE JAD 10/13/65	REVISION

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
 2. PERFORM ONLY THE WORK INDICATED IN THE FRAMED TEXT AND/OR DESCRIBED IN THE GENERAL NOTES.
 3. PERFORM ULTRASONIC IMPACT TREATMENT (UIT) ON ALL STEEL PIER CAP AND COLUMN WELDS INCLUDING STIFFENERS, BEARINGS, PLATES, ETC.
 4. THE CONTRACTOR SHALL BE AWARE OF BIRDS NESTS AND DROPPINGS LOCATED IN CONFINED SPACES OF THE PIER CAP. THE CONTRACTOR SHALL REMOVE INACTIVE BIRDS NESTS AND DROPPINGS AND CLEAN AFFECTED STEEL SURFACES WITH WATER (1,500 PSI MINIMUM WATER PRESSURE) PRIOR TO PERFORMING UIT AND STRUCTURE PAINTING.

PIER REHAB DETAILS - 3
BRIDGE NO.: HAM-74-11.16R
IR 74 OVER HARRISON AVE.

SFN	3108465
DESIGN AGENCY	
DESIGNER/CHECKER	CAH GTF
REVIEWER	AMS 9/20/23
PROJECT ID	88679
SUBSET	TOTAL
8	11
SHEET	TOTAL
27	53