

GUARDRAIL SUBSUMMARY

				202	606	606	606	606		
REF NO.	SHEET NO.	SLM	BRIDGE CORNER	GUARDRAIL REMOVED	GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE E- 98	ANCHOR ASSEMBLY, TYPE T (8' R)	BRIDGE TERMINAL ASSEMBLY, TYPE TST		
				FT	SEE SET SEE	EACH	EACH	EACH		
			1915 1 1 1 1 1 1 1 1 1							
GR-1	1/9	4.30	SW	175	125	1		1		
GR-2	1/9	4.30	SE	106.5	100		1.	1		
GR-3	1/9	4.30	NW	262.5	212.5	1		1		
GR-4	1/9	4.30	NE	362.5	312.5	1		1		
			2011 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 1 		1917 1917 1917 1921 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917 1917					
			12 - 1 12 12 13 13 13 13 13							
TOTALS	CARRIED T	O ESTIMATED QUANTI	TIES	907	750	3	1	4		

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM

SPANS: 2 @ 72'-71/2"

ROADWAY: 44'-0" F/F GUARDRAIL

LOADING: CF 130

SKEW: 0°0'0"

APPROACH SLABS: 2AS-4-47 (15'-0" LONG)

ALIGNMENT: TANGENT

STRUCTURAL FILE NUMBER: 7604831

Projects\STA\25432\structures\sheets\STA_93_0430\25432GP01.dgn 28-DEC-2007

 \bigcirc

 \bigcirc

STA-93/2 0.00/0.0 PID No. 254

1/9

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

TST-1-99 DATED/REVISED 10-17-03

DS-1-92 DATED/REVISED 07-18-03

GR-1.1 DATED/REVISED 07-16-04

GR-2.1 DATED/REVISED 01-1604

GR-3.6 DATED/REVISED 01-16-04

GR-4.2 DATED/REVISED 01-19-07

GR-5.3 DATED/REVISED 01-16-04

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 04-19-02

 \bigcirc

 \bigcirc

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRAN-SPORTATION OFFICIALS, 17TH EDITION , INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

STRUCTURE: STA-93-0430 - HS20-44

DECK PROTECTION METHOD

NEW DECK EDGES W/EPOXY REBAR WATERPROOFING AND ASPHALT CONCRETE OVERLAY STEEL DRIP STRIP

PROPOSED WORK

- REMOVE AND REPLACE EXISTING DECK EDGES
- REMOVE AND REPLACE EXISTING RAILING
- REMOVED AND REPLACE EXISTING ASPHALT CONCRETE OVERLAY WITH WATERPROOFING
- PATCH ALL UNSOUND CONCRETE OF SUBSTRUCTURE
- PAINT STRUCTURE STEEL WITH OZEU SYSTEM - REMOVE AND REPLACE STEEL DRIP STRIP
- NEW STRUCTURE IDENTIFICATION SIGNS

EXISTING PLANS

NO EXISTING PLANS OF STRUCTURE STA-93-0430 COULD BE FOUND IN DISTRICT OFFICE. ALL MEASUREMENTS WERE FIELD MEASURED FOR ESTIMATED QUANTITIES.

DESIGN DATA

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPFRSTRUCTURF)

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60.000 PSI SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

CUT LINE CONSTRUCTION JOINT PREPARATION

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS I INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. IN-STALL 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

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.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT. THE USE OF EXPLOSIVES. HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER BRIDGE MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER BRIDGE MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.), PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. REPLACE OR REPAIR STRINGERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. SUBMIT PROPOSED REPAIRS, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, IN WRITING TO THE DIRECTOR AT LEAST 20 DAYS BEFORE PERFORMING REPAIR WORK.

EXTRANEOUS MEMBERS: REMOVE EXISTING EXTRANEOUS MEMBERS (I.E., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTION TO THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

LOADING LIMITATIONS: NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOW-ABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DE-MOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

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, AS PER PLAN.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL. AS PER PLAN

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN: REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERA-TIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

EXISTING STRUCTURE VERIFICATION

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. CONSE-QUENTLY, 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 EXAMINA-TION 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.

ഗ

STRUCTURE IDENTIFICATION SIGNS

 \bigcirc

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A OUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL BE HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES: STA-93-0430 (2 APPROACHES)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:

ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH DEMOLITION ACTIVITIES AND/OR THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL AREA. THIS PERTAINS TO ALL DEMOLITION ACTIVITIES AND ANY EXCAVATION OPERATION SUCH AS, BENCHING ADJACENT TO THE STREAM CHANNEL FOR EQUIPMENT ACCESS, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNEL

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK
AUTHORIZED HEREIN SHALL BE OPERATED IN SUCH A WAY AS TO
MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND
ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY WETLANDS OR STREAMS UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, STREAMS OR OTHER WATERS OF THE UNITED STATES.

PAINTING AND SEALING OPERATIONS:

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT, OR OTHER MATERIALS USED TO REPAIR, CLEAN, SEAL, OR TREAT ANY BRIDGE AND CULVERT STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS, OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

CONSTRUCTION AND DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM.

ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

INSTREAM WORK

INSTREAM WORK WILL BE LIMITED WERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR EQUIPMENT ACCESS PADS. THIS TEMPORARILY PLACED MATERIAL SHALL BE REMOVED AND THE STREAM BANKS AND CHANNEL BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED. WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL.

ALL MATERIALS REMOVED FROM DITCHES AND/OR STREAMS MUST BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. IMMEDIATE REMOVAL IS DEFINED BY THE UNITED STATES ARMY CORPS OF ENGINEERS AS DEPOSITING THE REMOVED MATERIALS DIRECTLY INTO A TRUCK AND REMOVING THE MATERIAL FROM THE SITE; PLACEMENT OF REMOVED MATERIALS INTO A WETLAND OR ON THE BANKS OF A STREAM EVEN TEMPORARILY IS CONSIDERED A FILL AND REQUIRES A PERMIT ACTION. ANY AREAS DISTURBED BY EQUIPMENT ACTIVITIES MUST BE SEEDED TO PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE SR 93 BRIDGE STRUCTURE OVER SUGAR CREEK (STRUCTURE NO. STA-93-0430, SFN 7604831) SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

DIVISION OF AIR POLLUTION CONTROL 420 MARKET AVENUE N. CANTON, OH 44702 ATTN: MR. BRUCE BLANKENSHIP, ADMIN. (330) 489-3395 FAX: (330) 489-3335

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE:1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306

BASIS FOR PAYMENT-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. DESIGN AGENCY
ODOT --- DISTRICT 4
PRODUCTION



Ś

CALC:

LMS

DATE:

11/5/2007

4	/	9
	_	

						CHECKED:	TJP	DATE:	11/7/20
				ESTIMATED QUANTITIES					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT	PIERS	SUPER.	GEN.	SEE SHEET
)				1982 1981 1982 1981 1982 1983 1983 1983 1983				
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					2/9
202	23500	726	SQYD	WEARING COURSE REMOVED			605	121	
202	38000	907	FT	GUARDRAIL REMOVED				907	
407	10000	19	GALLON	TACK COAT	19.			19	
407	14000	30	GALLON	TACK COAT FOR INTERMEDIATE COURSE			25	5	
446	47020	32	CUYD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	<u> </u>		26	6	
448	46050	32	CUYD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22			26	6	
509	10000	4309	POUND	EPOXY COATED REINFORCING STEEL	190		4119		
509	20001	50	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			50		2/9
511	32200	32	CUYD	CLASS S CONCRETE, SUPERSTRUCTURE	1985년 - 1985년 1985년 - 1985년 - 1985년 1985년 - 1985년 1985년 - 198	11	32		
511	45700	3	CUYD	CLASS C CONCRETE, ABUTMENT	3				
<u> </u>	10100	0.40	00.7/2	DEALING OF CONCRETE OURS OF CARROW (URST LANS)					
512	10100	249	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	61	128	60		
512	33010	605	SQ YD	TYPE 3 WATERPROOFING	<u> </u>	<u> 14 14 15 16 17 17 17 17 17 17 17</u>	605		
514	00050	8524	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			8524		
514	00056	8524	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			8524		
514	00060	8524	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			8524		
514	00066	8524	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			8524		
514	00504	13	The second secon	R GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			13		
514	10000	7	EACH	FINAL INSPECTION REPAIR			7		
516	13600	14	SQ FT	PREFORMED EXPANSION JOINT FILLER	14				
010	10000		Julia	T THE CHINEB EXTRINGISTS CONTINUED TO	<u> </u>				
517	70000	315	FT	RAILING (TWIN STEEL TUBE)			315		
SPEC	51822300	373	FT	STEEL DRIP STRIP			373		
519	11101	20	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN				20	3/9
606	13000	750	FT	GUARDRAIL, TYPE 5	40 12 13 13 13 13 13 13 13 13 13 13 13 13 13			750	
606	22010	3	EACH	ANCHOR ASSEMBLY, TYPE E-98				3	
606	26500	1	EACH	ANCHOR ASSEMBLY, TYPE T				1	
606	32160	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST				4	
630	02100	15	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	<u> </u>			15	
630	80100	2	SQ FT	SIGN, FLAT SHEET, 730.20				2	
843	50000	50	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6	<u> </u>		50	
7.0				The state of the s					
				네. 그는 지도 안 돼. 그는 하고 한다. 그는 하고 한다. 그는 하고 한다. 그는 하고 한다. 하는 하고 한다. 하는 하고 한다. 하는 하고 한다.					

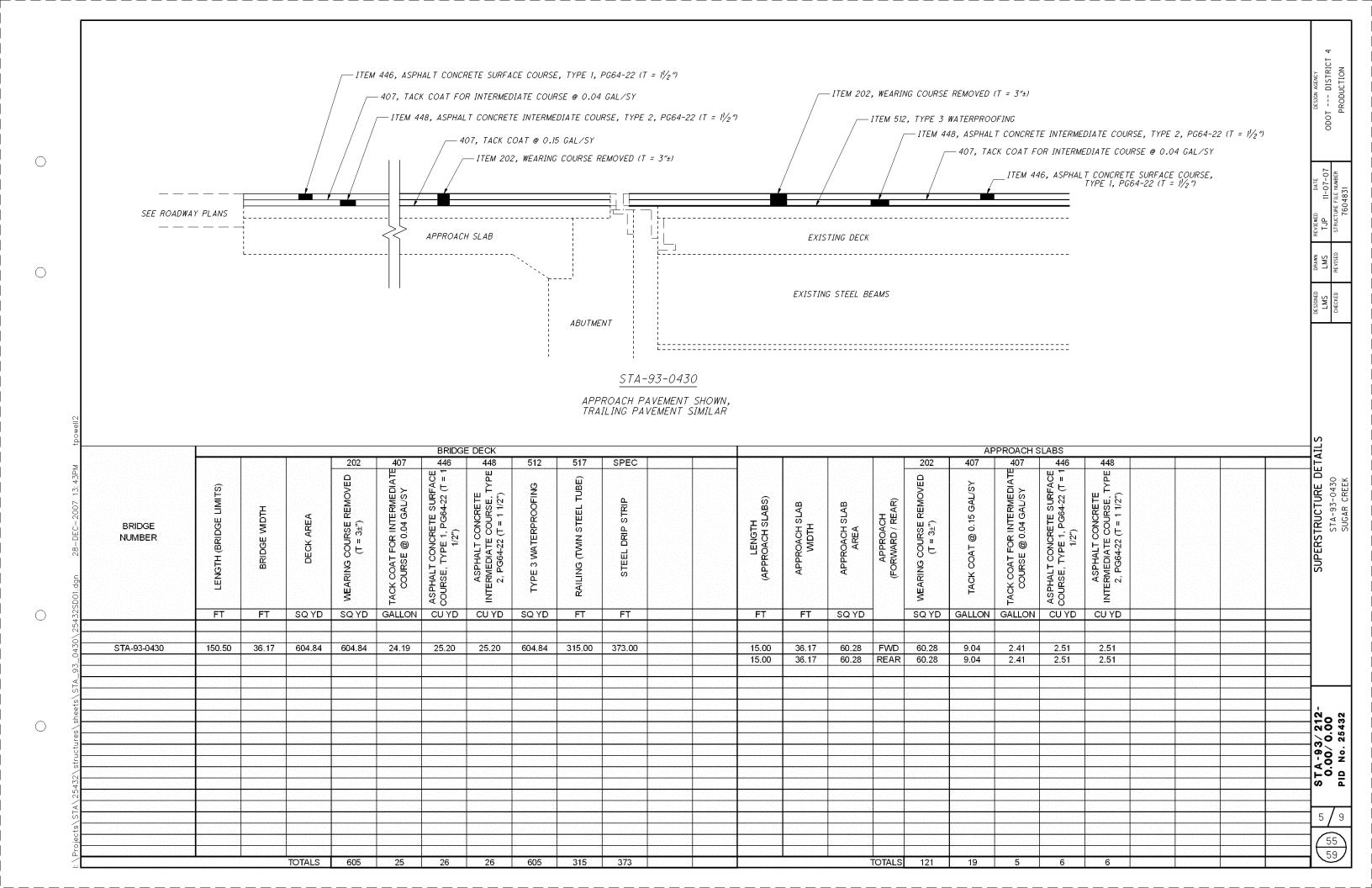
 \bigcirc

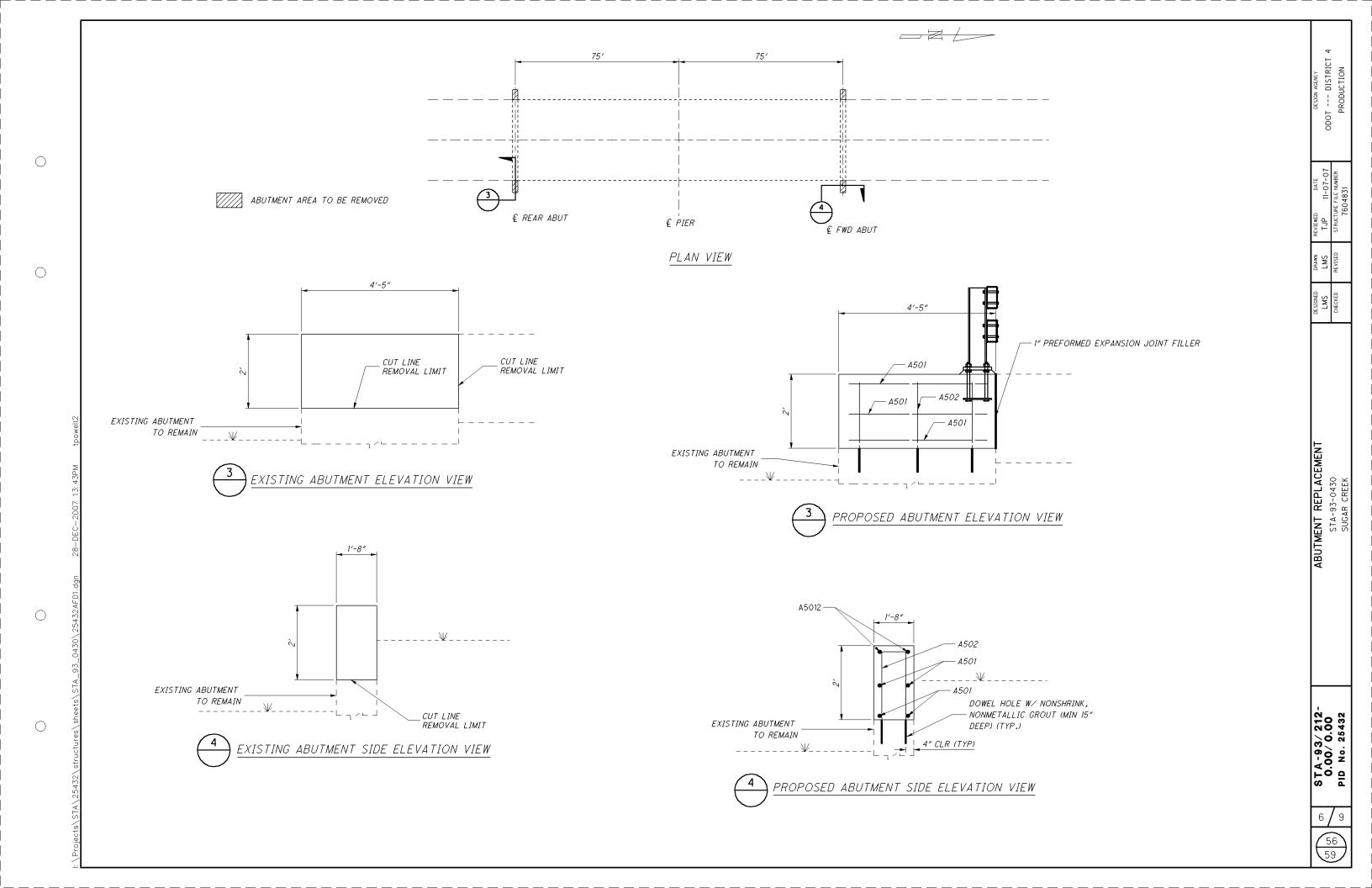
 \bigcirc

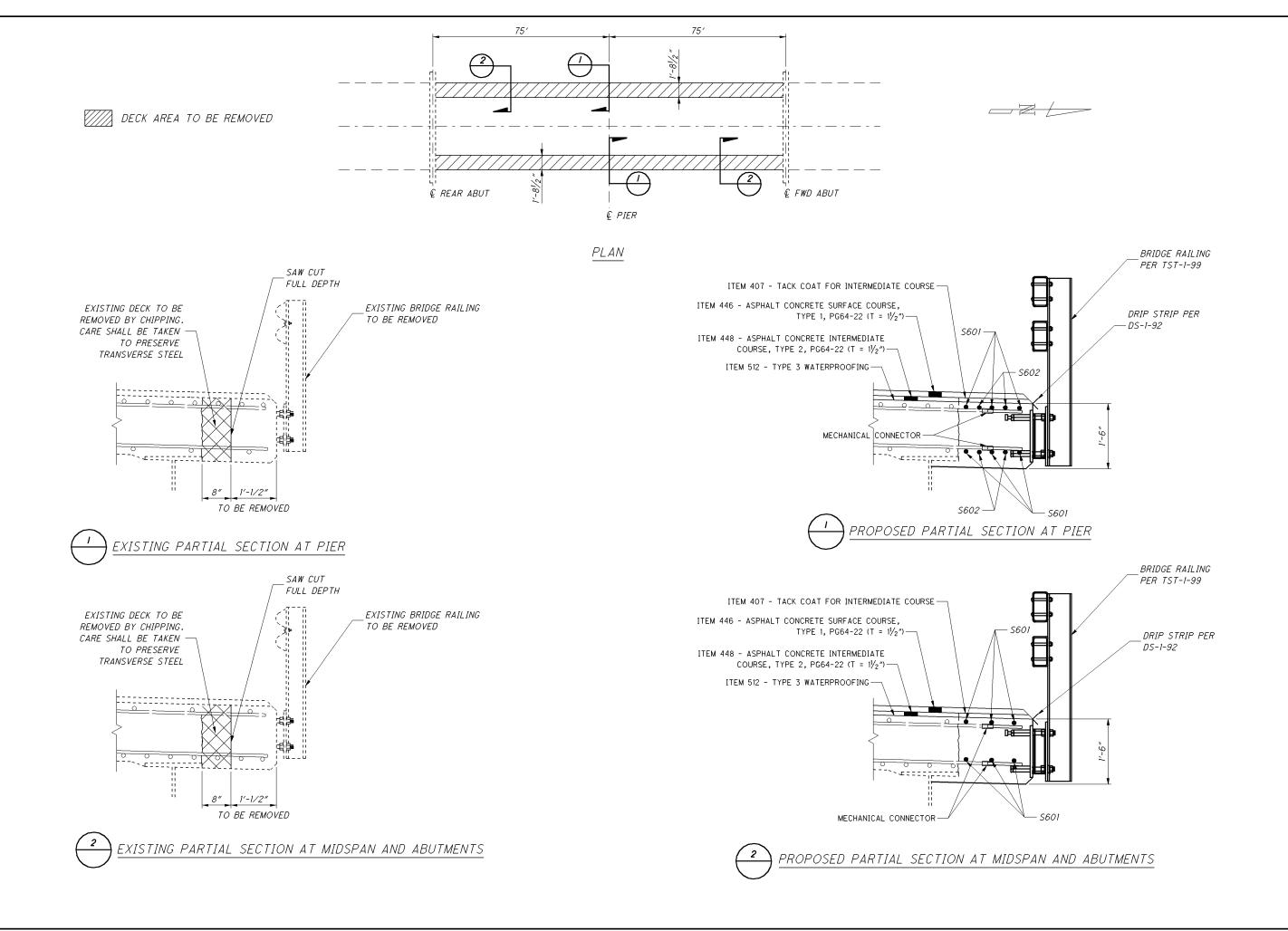
 \bigcirc

 \bigcirc

54 59







 \bigcirc

 \bigcirc

 \bigcirc

STA-93/212-0.00/0.00 PID No. 25432

K EDGE REPLACEMENT STA-93-0430 SUGAR CREEK

N AGENCY
DISTRICT
DUCTION

57 59

DESIGN AGENCY
--- DISTRICT
PRODUCTION

WEIGHT

(LBS)

TYPE

LENGTH

DIMENSIONS

С

D

Ε

В

THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P601 IS A NO. 6 BAR. BAR DIMENSIONS SHOWN ARE OUT TOOUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

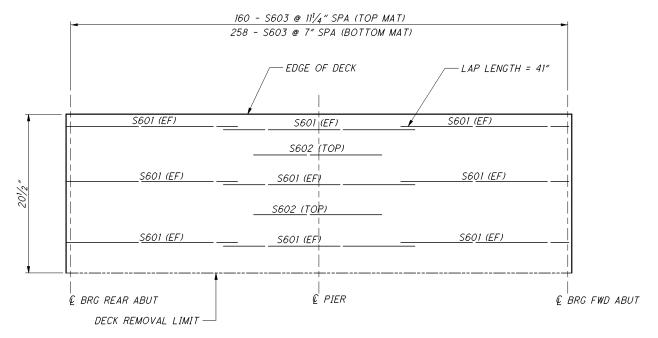
ALL REINFORNCING STEEL TO BE EPOXY COATED

NUMBER

SUPER | TOTAL

MARK

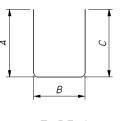
REAR



REINFORCING LAYOUT

REINFORCING STEEL IS TYPICAL FOR BOTH SIDES OF DECK. ALL REINFORCING CLEARANCES ARE A MINIMUM OF 2".

* BARS ARE TO BE DOWEL WITH NONSHRINK NONMETALLIC GROUT ** MECHANICAL CONNECTORS REQUIRED



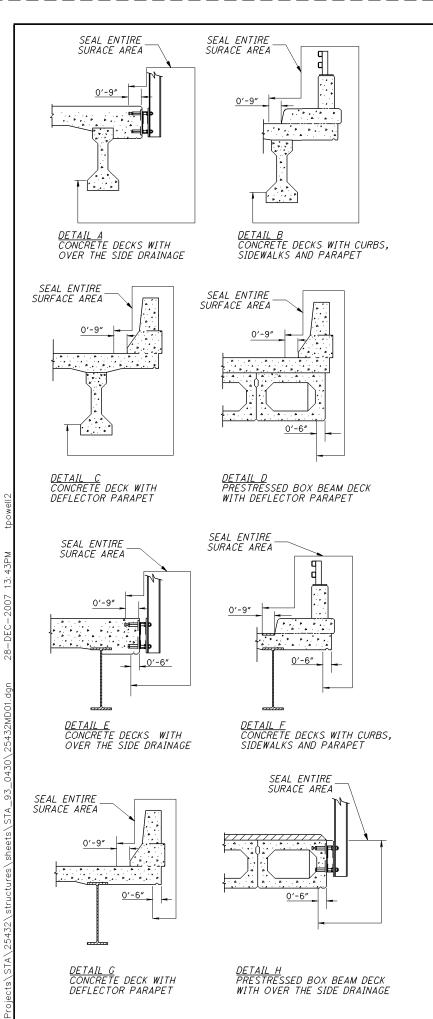
TYPE-2

REINFORCING LAYOUT & STEEL
STA-93-0430
OVER SUGAR CREEK

 \bigcirc

 \bigcirc

 \bigcirc



 \bigcirc

 \bigcirc

 \bigcirc

 \bigcirc

### STRUCTURE PROPOSED SEALURG FIRST TYPE SUPER CRN TOTAL COLON MUNICE SO TO SO				ESTIMATED QUANTITIES							
2 SPAN SEAL DECK EDGES PER DETAIL E STA-93-0430 CONTINUOUS SEAL ALL EXPOSED CONCRETE AT ABUTMENTS PER CMS 61 128 60 249	BRIDGE NO.	STRUCTURE	PROPOSED SEALING	FEDERAL		PIER SO YD		GEN SOLYD	TOTAL		
	STA-93-0430	2 SPAN						30 10			
	37A-93-0430			FER UMS	01	120	00		249		
			1								

OTES:

- EPOXY-URETHANE SEALER SHALL BE USED UNLESS SHOWN OTHERWISE
- DETAILS E, F, G AND H ALSO APPLY TO CONCRETE SLAB BRIDGES

SEALING OF BEAM SEATS

SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

ESTIMATED QUANTITIES

DESIGN AGENCY
T --- DISTRICT 4
PRODUCTION

CONCRETE SEALING DETAILS
STA-93-0430
SUGAR CREEK

E BEAMS SEATS ARE SEALED
SEALER PRIOR TO SETTING THE
R TO THE CONCRETE SURFACES
OCATIONS. IF THESE LOCATIONS
R TO THE SATISFACTION OF THE
E BEARINGS. THE DEPARTMENT
L.