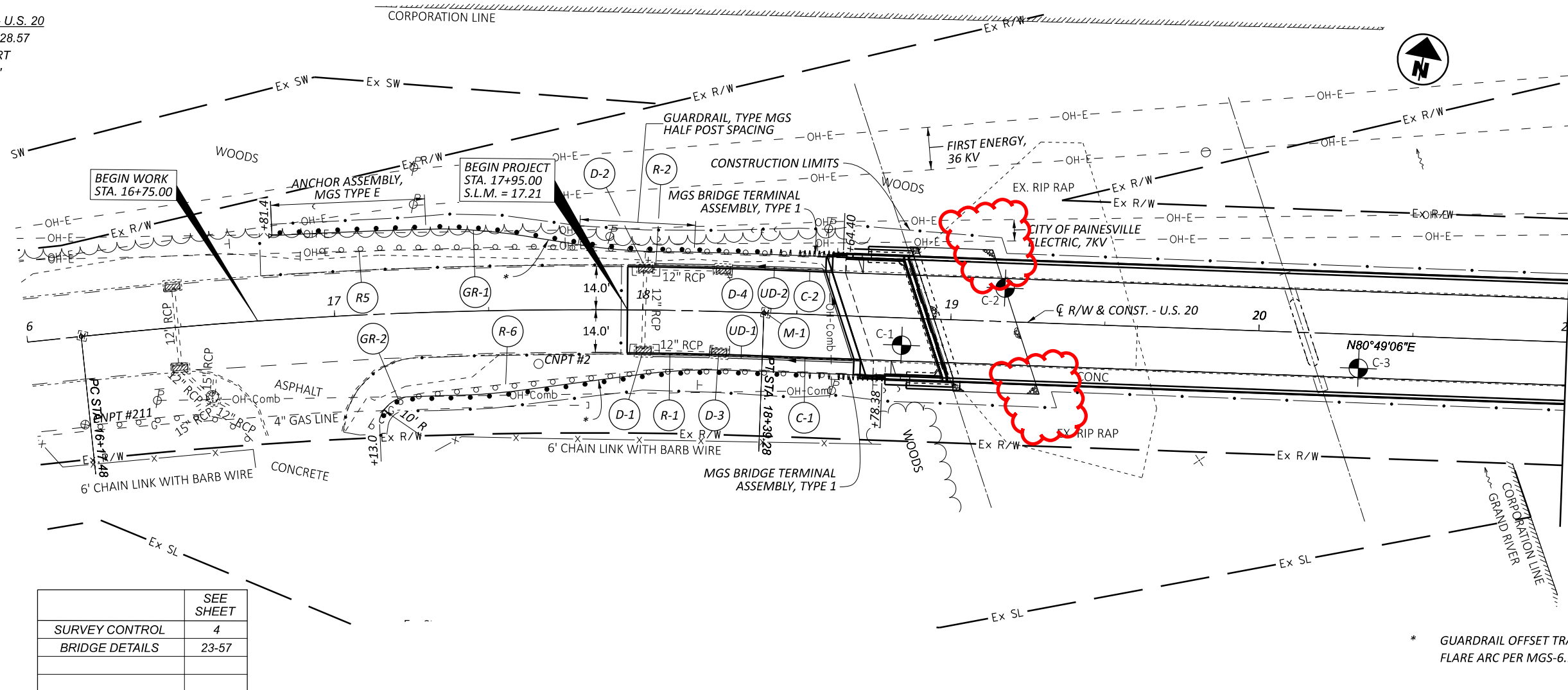
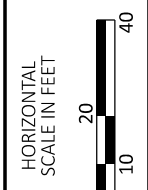
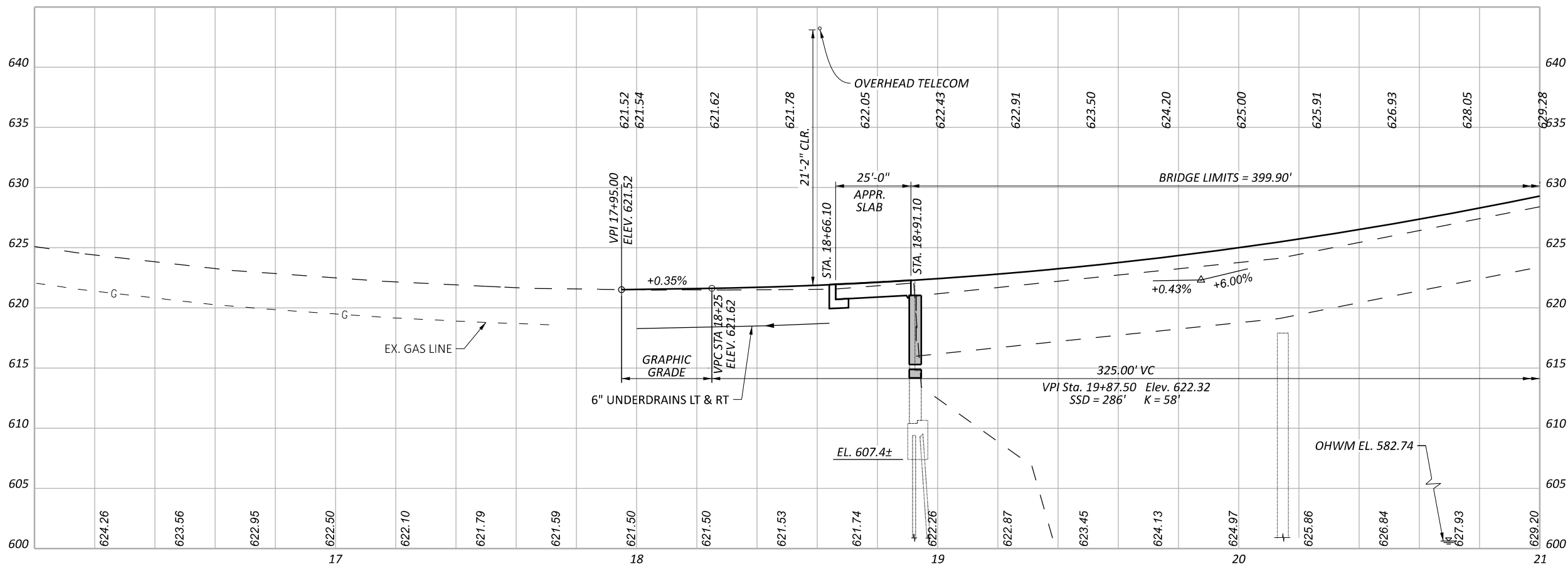


CURVE DATA - U.S. 20
 P.I. = STA. 17+28.57
 $\Delta = 08^{\circ}07'57''$ RT
 $D_c = 03^{\circ}40'00''$
 $R = 1,562.61'$
 $T = 111.08'$
 $L = 221.8'$
 $E = 3.94'$



	SEE SHEET
SURVEY CONTROL	4
BRIDGE DETAILS	23-57

* GUARDRAIL OFFSET TRANSITION AND FLARE ARC PER MGS-6.1



PLAN AND PROFILE - U.S. 20
STA. 16+00 TO STA. 21+00

LAK-20-17.21

MODEL: CLRW20 - Plan 1 [Sheet] PAPER SIZE: 11x17 (ft.) DATE: 1/6/2023 TIME: 8:16:06 AM USER: acb284
 M:\21092\114486\400-Engineering\Roadway\Sheets\114486_GPO01.dgn

DESIGN AGENCY

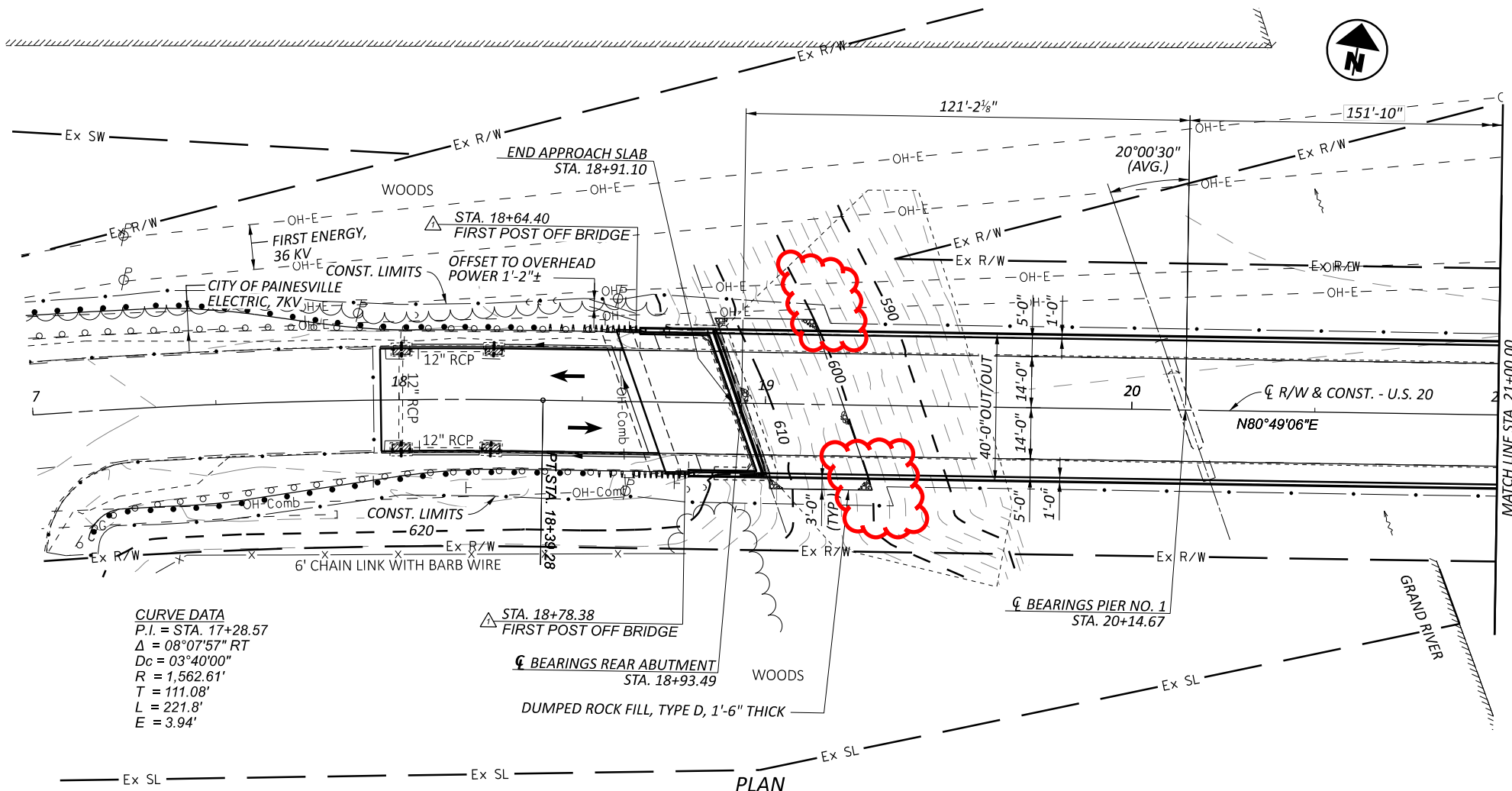
ENGINEERING ASSOCIATES
 INC.
 1935 EAGLE PASS
 WOODBURN, OHIO 44691
 PHONE: (330) 345-6556
 www.eaohio.com

DESIGNER
MDG

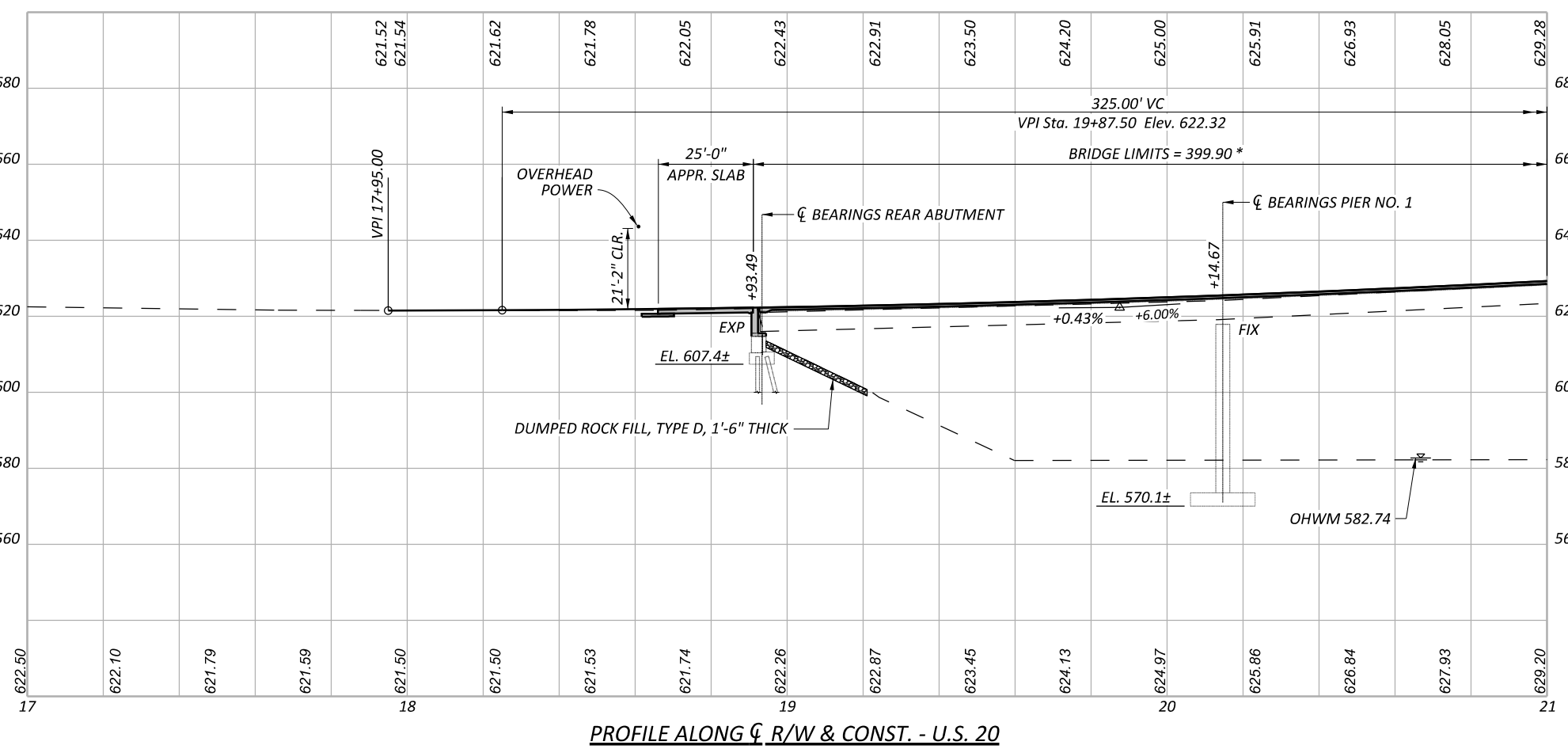
REVIEWER
JJM 08-01-22

PROJECT ID
114486

SHEET TOTAL
13 59



CURVE DATA
 P.I. = STA. 17+28.57
 $\Delta = 08^{\circ}07'57''$ RT
 $D_c = 03^{\circ}40'00''$
 $R = 1,562.61'$
 $T = 111.08'$
 $L = 221.8'$
 $E = 3.94'$



PROFILE ALONG ϕ R/W & CONST. - U.S. 20

BENCHMARK DATA			
BENCHMARK	STA. 16+15.76	OFFSET 28.61' RT.	ELEV. 625.13
	DRILL HOLE SET AT BASE OF WALL		
BENCHMARK	STA. 25+29.70	OFFSET 73.43' RT.	ELEV. 650.82
	FIRE HYDRANT FLANGE BOLT		

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 4 / 59

NOTES
 EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
 2021 ADT = 7051 2021 ADTT = 265
 2051 ADT = 7300 2051 ADTT = 271
 DIRECTIONAL DISTRIBUTION = 60%

LEGEND
 * - MEASURED ALONG REFERENCE LINE
 Δ MSG BRIDGE TERMINAL ASSEMBLY, TYPE 1 (SEE ROADWAY PLAN FOR PAYMENT)

HYDRAULIC DATA (FROM EXISTING PLANS)
 DRAINAGE AREA = 730 SQ. MILES \pm
 $Q(100) = 27,500$ CFS \pm $V(100) = 7.2$ FT/S \pm

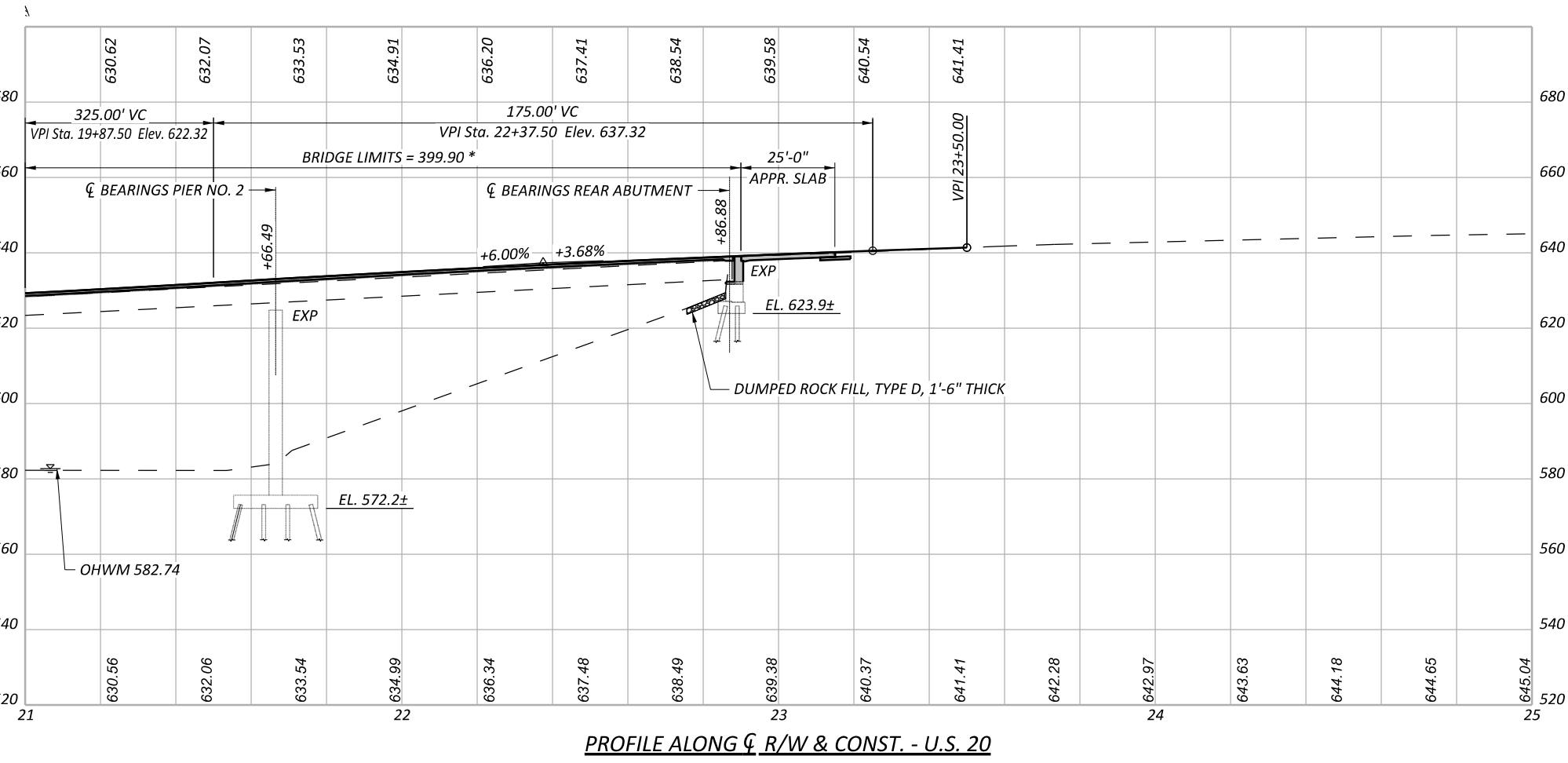
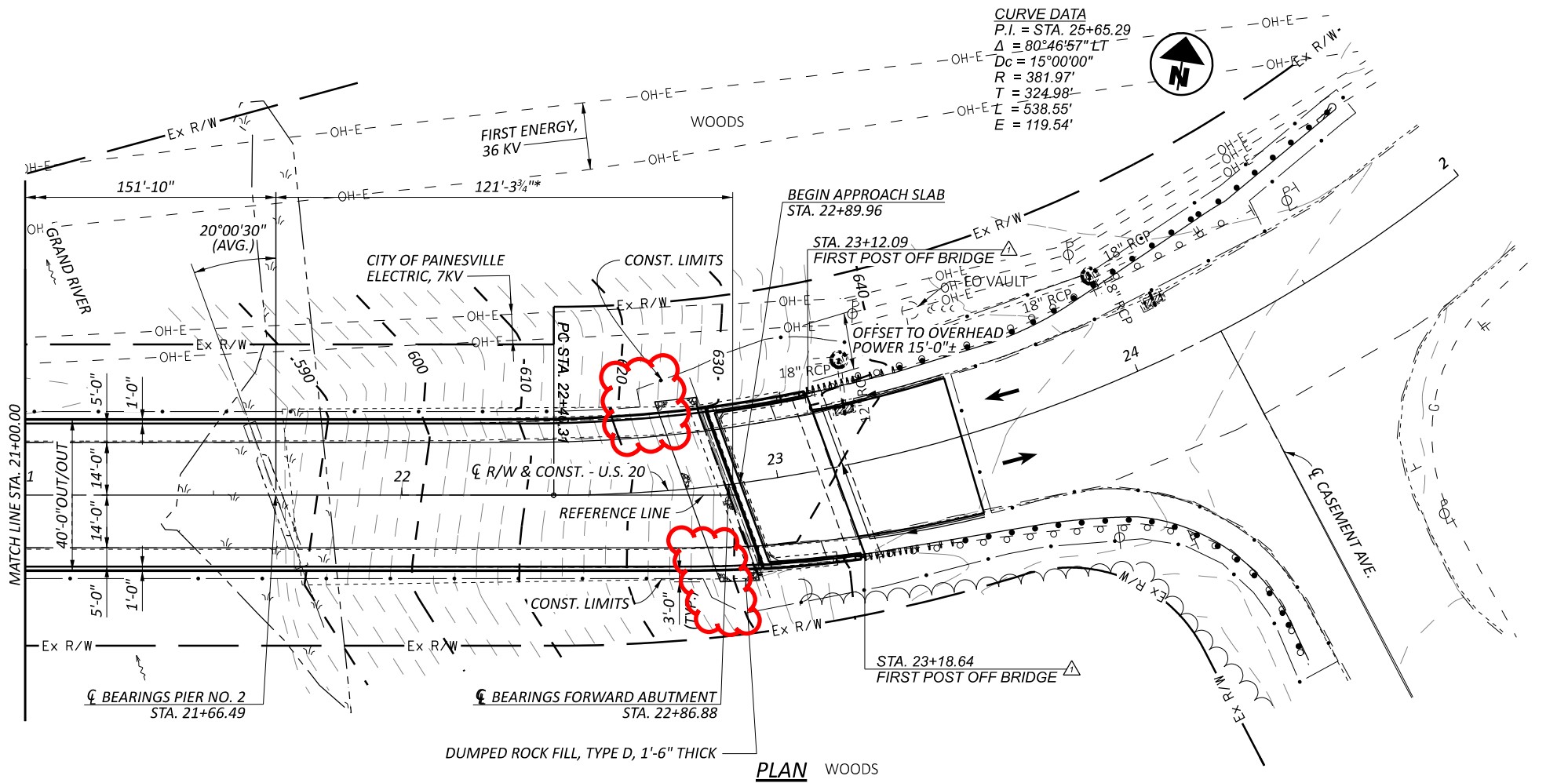
EXISTING STRUCTURE	
TYPE:	CONTINUOUS COMPOSITE WELDED STEEL GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES.
SPANS:	121'-0" \pm , 152'-0" \pm , 121'-0" \pm
ROADWAY:	VARIES 28.00' \pm TO 31.87' \pm F/F CURBS W/5'-0" WALK W/CONCRETE PARAPETS
LOADING:	HS 20-44(CASE II) AND ALTERNATE MILITARY LOADING
SKEW:	20 $^{\circ}$ 00' \pm
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	25'-0" \pm (AS-1-81)
ALIGNMENT:	TANGENT AND 15 $^{\circ}$ 00'00" \pm CURVE LEFT
CROWN:	SUPERELEVATION VARIES
STRUCTURE FILE NUMBER:	4302206
DATE BUILT:	1988
DISPOSITION:	NEW DECK AND MODIFIED ABUTMENTS

PROPOSED STRUCTURE	
PROPOSED WORK:	REPLACE CONCRETE DECK SLAB, APPROACH SLABS, EXPANSION JOINTS, ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS AND SEAL ALL CONCRETE SURFACES.
TYPE:	CONTINUOUS SPAN COMPOSITE WELDED STEEL GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE (EXISTING GIRDERS AND SUBSTRUCTURE SALVAGED).
SPANS:	121'-2" $\frac{1}{2}$ ", 151'-10", 121'-3" $\frac{3}{4}$ " (ALONG REFERENCE LINE)
ROADWAY:	40'-0" OUT/OUT PARAPET
LOADING:	HL93 AND 0 FUTURE WEARING SURFACE (SUPERSTRUCTURE) HS 20-44(CASE II) AND ALTERNATE MILITARY LOADING (SUBSTRUCTURE)
SKEW:	20 $^{\circ}$ 00'30" (AVG.)
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	25'-0" LONG (AS-1-15, TYPE A AS-2-15)
ALIGNMENT:	TANGENT AND 15 $^{\circ}$ 00'00" CURVE LEFT
CROWN:	SUPERELEVATION VARIES
DECK AREA:	16181 SF
COORDINATES:	LATITUDE 41 $^{\circ}$ 44'14.43" N LONGITUDE 81 $^{\circ}$ 13'47.06" E



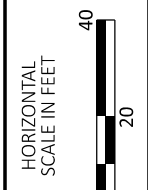
SITE PLAN
BRIDGE NO. LAK-20-1723
OVER THE GRAND RIVER

SFN	4302206
DESIGN AGENCY	
DESIGNER	ACB
CHECKER	HK
REVIEWER	
SDS	08-02-22
PROJECT ID	114486
SUBSET	1
TOTAL	37
SHEET	23
TOTAL	59



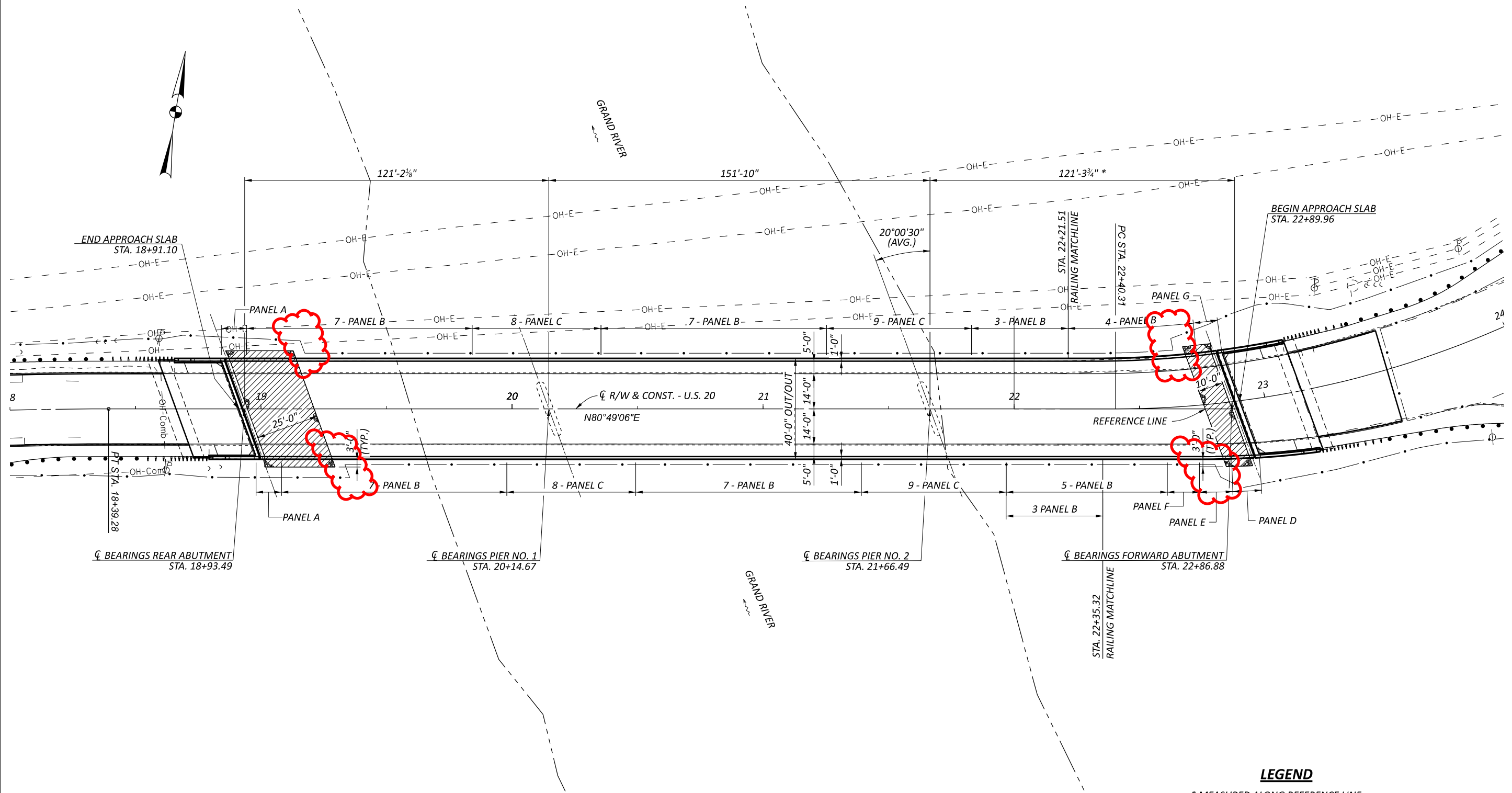
LEGEND

- * - MEASURED ALONG REFERENCE LINE
- \triangle MSG BRIDGE TERMINAL ASSEMBLY, TYPE 1 (SEE ROADWAY PLAN FOR PAYMENT)



SITE PLAN
BRIDGE NO. LAK-20-1723
OVER THE GRAND RIVER

SFN 4302206	
DESIGN AGENCY	
1935 EAGLE PASS WOODSTER, OHIO 44691 PHONE: (330) 345-5555 WWW.EA-INC.COM	
DESIGNER	CHECKER
ACB	HK
REVIEWER	
SDS 08-02-22	
PROJECT ID	
114486	
SUBSET	TOTAL
2	37
SHEET	TOTAL
24	59



LEGEND

- * MEASURED ALONG REFERENCE LINE
- DUMPED ROCK FILL, TYPE D, 1'-6" THICK TO BE REWORKED

NOTES

1. FOR ABBREVIATIONS SEE SHEET 4 / 37.
2. FOR PANEL DETAILS SEE SHEET 25 / 37.

GENERAL PLAN
BRIDGE NO. LAK-20-1723
OVER THE GRAND RIVER

SFN		4302206
DESIGN AGENCY		
ENGINEERING ASSOCIATES INC.		
1935 EAGLE PASS WOOSTER, OHIO 44691 PHONE: (330) 345-5556 WWW.EA-INC.COM		
DESIGNER	CHECKER	REVIEWER
ACB	HK	
SDS 08-02-22		
PROJECT ID		
114486		
SUBSET	TOTAL	
3	37	
SHEET	TOTAL	
25	59	