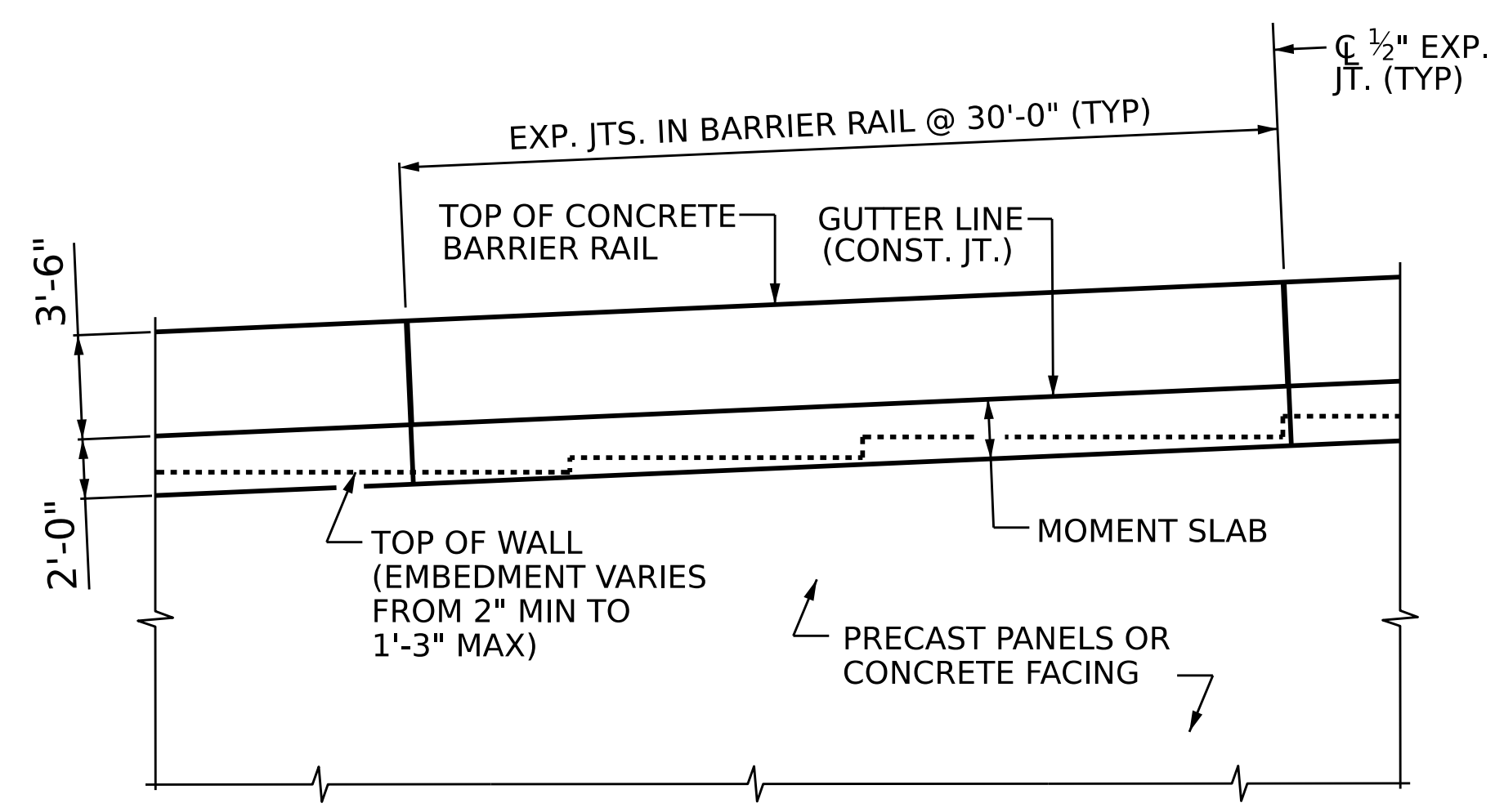
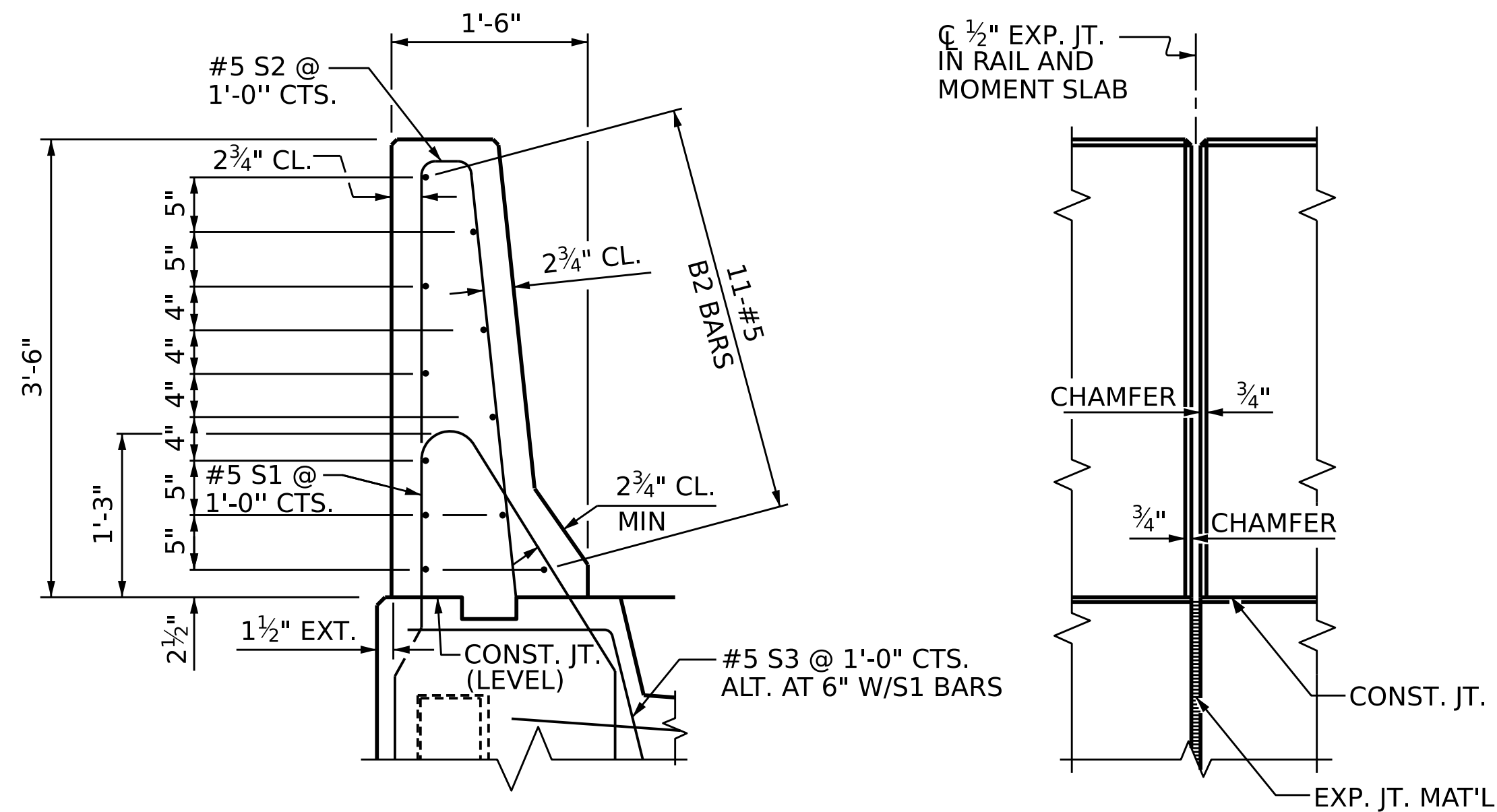


**CONCRETE BARRIER RAIL WITH MOMENT SLAB**  
 PAY LENGTH = 443 LIN FT

**CONCRETE BARRIER RAIL WITH MOMENT SLAB**



**CONCRETE BARRIER RAIL WITH MOMENT SLAB - PARTIAL ELEVATION**



**BARRIER RAIL DETAILS**

**NOTES:**

FOR CONCRETE BARRIER RAIL WITH MOMENT SLAB, SEE SECTION 460 OF THE STANDARD SPECIFICATIONS.

CONCRETE BARRIER RAIL WITH MOMENT SLAB SHALL BE A MINIMUM OF 15' IN LENGTH.

EXPANSION JOINTS SHALL BE PLACED IN THE BARRIER RAIL AND MOMENT SLAB AT A MAXIMUM SPACING OF 30'.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED SURFACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MID-POINT OF BARRIER RAIL SEGMENTS LESS THAN 20' IN LENGTH.


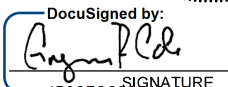
EXPANSION OR CONTRACTION JOINTS IN THE BARRIER RAIL AND MOMENT SLAB SHALL BE ALIGNED WITH JOINTS IN WALL FACING BELOW.

THE BARRIER RAIL SHALL NOT BE CAST UNTIL THE MOMENT SLAB HAS ATTAINED AN AGE OF THREE CURING DAYS OR A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI. IN ADDITION, NO FILL MATERIAL, ASPHALT, OR CONSTRUCTION EQUIPMENT IS ALLOWED ON THE MOMENT SLAB PRIOR TO SATISFYING THE MINIMUM CONCRETE CURING AND STRENGTH REQUIREMENTS.

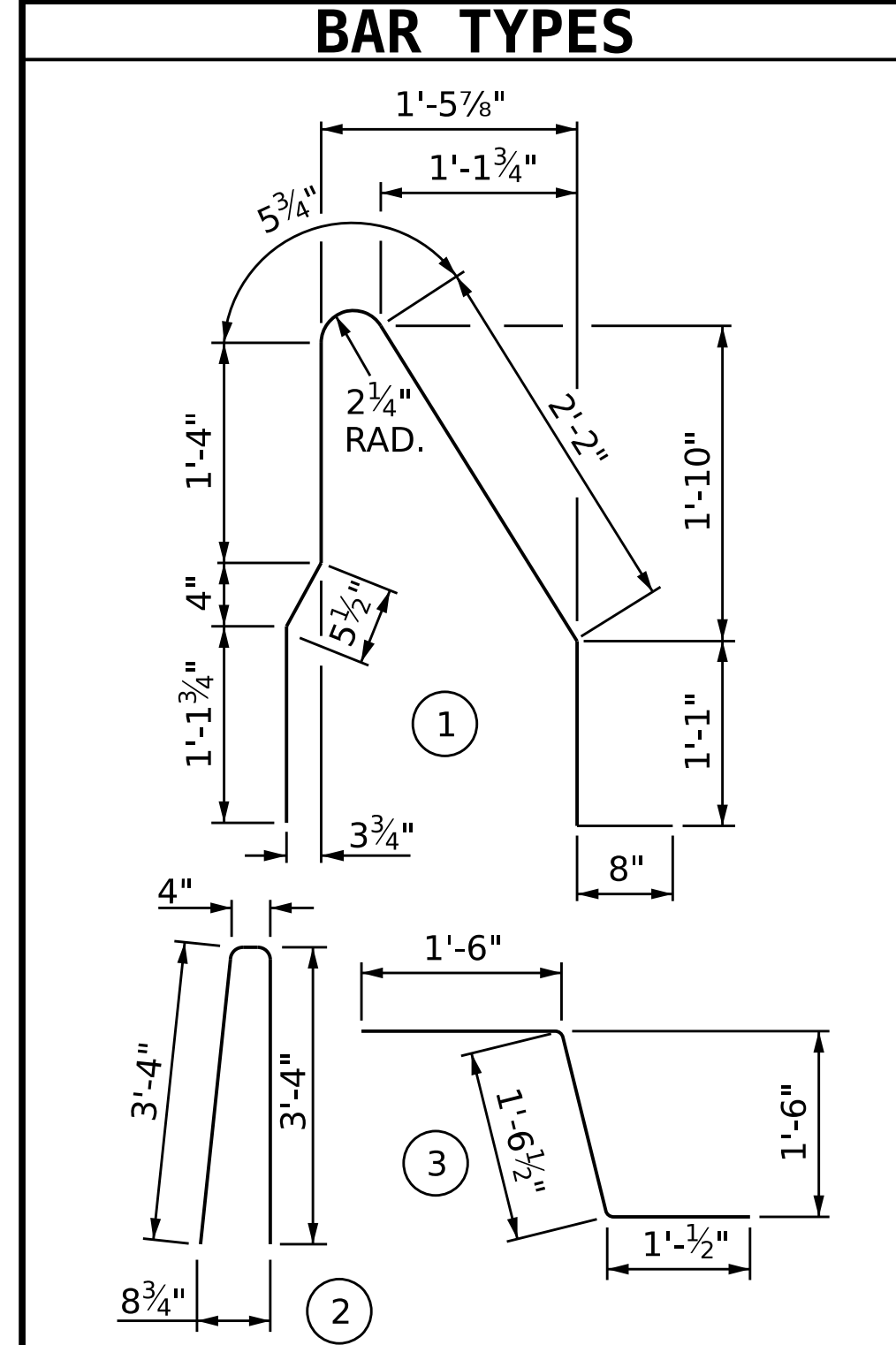
ALL REINFORCING STEEL IN THE BARRIER RAIL SHALL BE EPOXY COATED.

IF EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, BARRIERS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH CONCRETE BARRIER RAIL WITH MOMENT SLAB OR CONCRETE FACING FOR RETAINING WALL WILL BE THICKER THAN 8", CONCRETE BARRIER RAIL WITH MOMENT SLAB DETAILS SHALL BE REVISED AND SUBMITTED FOR APPROVAL.

MOMENT SLAB AND RAIL SHALL NOT BE CONSTRUCTED UNTIL PHASE IV IN ACCORDANCE WITH THE TMP PLANS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR REMOVAL OF TEMPORARY FILL TO THE TOP OF THE MSE FILL.

STRUCTURE ENGINEER	ENGINEER
 SEAL 04543 ENGINEER GREGORY R. COLSON	
DocuSigned by:  DATE: 10/16/2023	SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



ALL BAR DIMENSIONS ARE OUT TO OUT

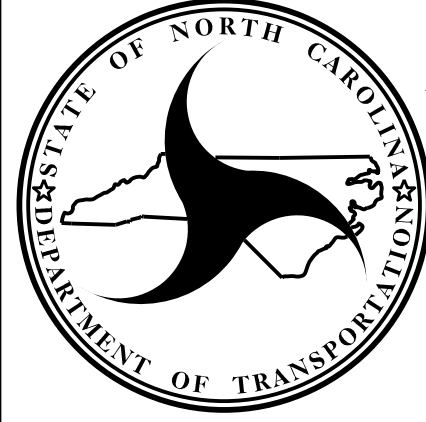
**BILL OF MATERIAL**

FOR ONE 30'-0" SECTION OF CONCRETE BARRIER RAIL WITH MOMENT SLAB

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#4	STR	29'-7"	277
*B2	11	#5	STR	29'-7"	339
G1	31	#5	STR	4'-4"	140
G2	31	#4	STR	4'-4"	90
*S1	31	#5	1	7'-4"	237
*S2	31	#5	2	7'-0"	226
S3	30	#5	3	4'-1"	128

REINFORCING STEEL	635 LB
* EPOXY COATED REINFORCING STEEL	802 LB
CLASS AA CONCRETE BARRIER RAIL	4.1 CY
CLASS A CONCRETE MOMENT SLAB	9.1 CY
CONCRETE BARRIER RAIL WITH MOMENT SLAB	30 LIN FT

PROJECT NO.: B-3186/B-5898  
HAYWOOD COUNTY  
 STATION: 68+82.30 -L\_ LT-  
 SHEET 3 OF 3 WALL ID RW-4-



**NORTH CAROLINA**  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**GEOTECHNICAL ENGINEERING UNIT**

REVISIONS						SHEET NO. W-4C
NO.	BY	DATE	NO.	BY	DATE	
1			3			-
2			4			

PREPARED BY: L. LEE DATE: 07/2023  
 REVIEWED BY: G. COLS DATE: 07/2023