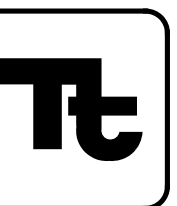


SCHEMATIC PLAN

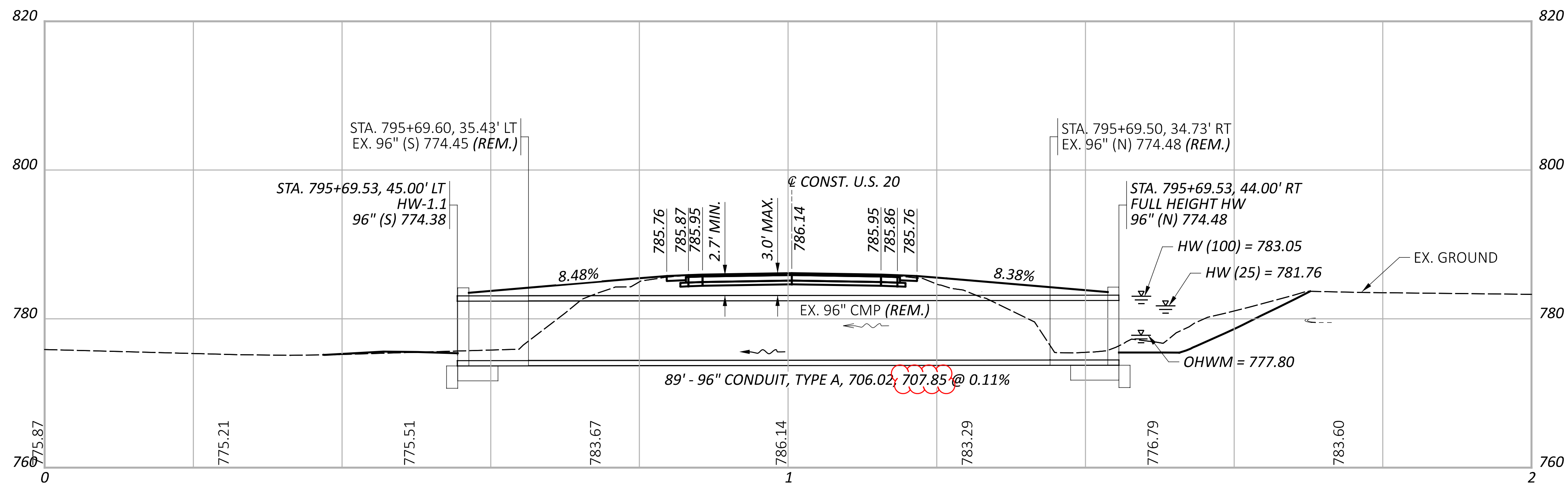
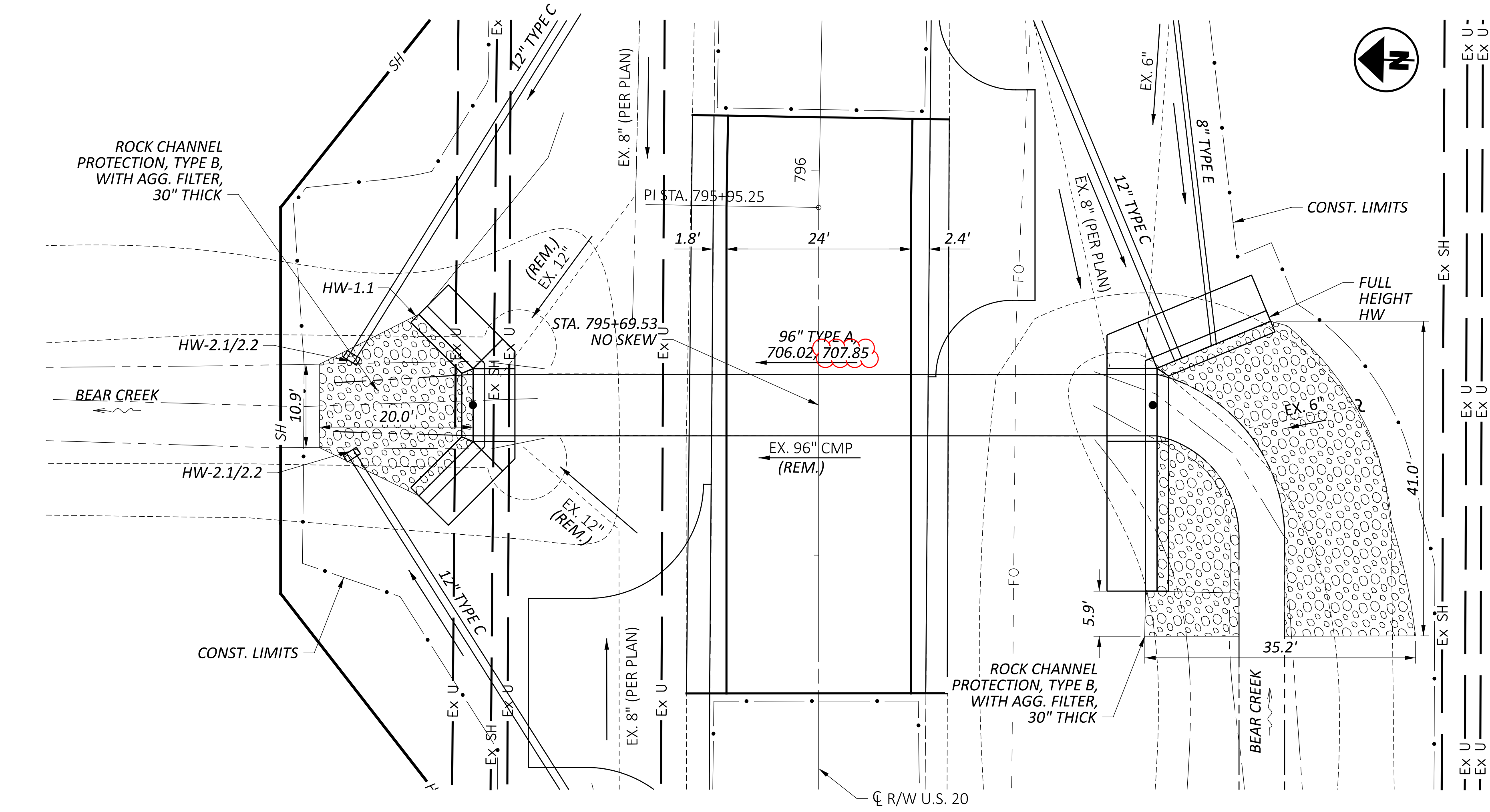
PROJECT CONTROL TABLE						
STATION/OFFSET		PROJECT COORDINATES (SEE SURVEY PARAMETERS)			MONUMENT DESCRIPTION	
STATION (C/L of R/W)	OFFSET (C/L of R/W)	NORTHING(ft) (FUL LDP)	EASTING(ft) (FUL LDP)	ELEV(ft) (NAVD88/18)	PT #	DESCRIPTION
Centerline of U.S. 20						
CENTERLINE OF R/W - U.S. 20						
PI STA. 778+84.25	CL	389784.636	168680.086	-	CLX1	CALCULATED POINT W/ TYPE D MONUMENT
PI STA. 795+95.25	CL	389826.792	170390.565	-	CLX2	CALCULATED POINT W/ TYPE D MONUMENT
PI STA. 800+95.25	CL	389830.676	170890.549	-	CLX3	CALCULATED POINT W/ TYPE D MONUMENT
HORIZONTAL CONTROL						
792+11.12	17.22' RT	389800.116	170006.979	784.875*	CP #100	IPINS W / ALUM CAP
795+76.36	59.76' RT	389766.582	170373.154	784.022*	CP #5000	IPINS W / ALUM CAP
795+52.86	211.33' LT	390037.010	170342.979	783.551*	CP #5001	IPINS W / ALUM CAP
798+53.86	18.49' LT	389847.288	170649.022	787.750*	CP #5002	IPINS W / ALUM CAP
VERTICAL CONTROL						
792+11.69	30.68' LT	389848.016	170006.364	784.312	BM #200	COTTON GIN SPIKE
799+97.75	37.13' LT	389867.050	170792.759	793.011	BM #201	COTTON GIN SPIKE

*This elevation may be subject to seasonal changes. Confirm elevation against other primary vertical control and benchmarks just prior to the start of construction activities.

DESIGN AGENCY



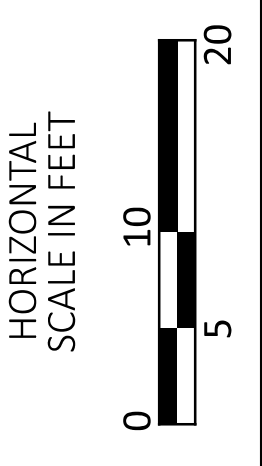
DESIGNER
GCB
 REVIEWER
DTC 02/18/26
 PROJECT ID
122911
 SHEET TOTAL
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HYDRAULIC DATA			
DRAINAGE AREA =	2.14 SQ. MILES		
Q (25) =	261 CFS	V (25) =	9.69 FT/S
Q (100) =	348 CFS	V (100) =	10.97 FT/S
ORDINARY HIGH WATER MARK:	777.80 FT	HW (25) =	781.76 FT
DESIGN SERVICE LIFE:	75 YEARS	HW (100) =	783.05 FT
ABRASION LEVEL:	1		
pH:	7.7		

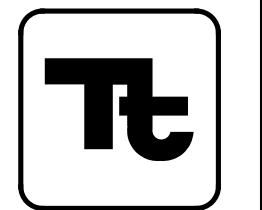
EXISTING STRUCTURE	
TYPE:	96" CORRUGATED METAL PIPE
SKEW:	NO SKEW
ALIGNMENT:	TANGENT
DATE BUILT:	UNKNOWN
CONDITION:	FAIR
CFN:	1828559

PROPOSED STRUCTURE	
TYPE:	96" TYPE A, 706.02, 707.85 (circled in red)
SKEW:	NO SKEW
ALIGNMENT:	TANGENT
CFN:	1999121



CULVERT DETAILS
 U.S. 20

DESIGN AGENCY



DESIGNER
 GCB

REVIEWER
 DTC 02/18/26

PROJECT ID
 122911

SHEET TOTAL
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DESIGN SPECIFICATIONS

THIS STANDARD DRAWING CONFORMS TO "LRFD BRIDGE DESIGN SPECIFICATION" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND THE BRIDGE DESIGN MANUAL.

DESIGN DATA

THE FOLLOWING DESIGN DATA IS ASSUMED:

INTERNAL ANGLE OF FRICTION OF BACKFILL SOIL, $\phi_{bf} = 30^\circ$
 TOTAL UNIT WEIGHT OF BACKFILL SOIL = 120 PCF
 INTERNAL ANGLE OF FRICTION (DRAINED), FOUNDATION SOIL, $\phi_f = 28^\circ$
 UNDRAINED SHEAR STRENGTH (COHESIVE), FOUNDATION SOIL, $S_u = 1500$ PSF
 UNIT WEIGHT OF CONCRETE = 150 PCF
 SLOPE OF BACKFILL = 2:1 (TYPE A & B HEADWALLS)
 HEIGHT OF LIVE LOAD SURCHARGE = 2 FT (TYPE C HEADWALLS)

CONCRETE - COMPRESSIVE STRENGTH 4000 PSI
 (FOOTING, WINGWALL AND FORESLOPE WALL)

REINFORCING STEEL - ASTM A615, A616, OR A617
 GRADE 60 MINIMUM YIELD STRENGTH
 60,000 PSI (ALL REINFORCING SHALL BE
 EPOXY COATED)

BASED ON THE ASSUMED DESIGN DATA, THE WINGWALLS ACHIEVE FACTORED BEARING RESISTANCES THAT ARE GREATER THAN THEIR RESPECTIVE BEARING PRESSURES. IF A BACKFILL MATERIAL WITH A HIGHER INTERNAL ANGLE OF FRICTION OR A LIGHTER TOTAL UNIT WEIGHT IS USED; OR IF A FOUNDATION SOIL WITH A HIGHER DRAINED INTERNAL ANGLE OF FRICTION OR A HIGHER UNDRAINED SHEAR STRENGTH IS ENCOUNTERED; THEN THE STABILITY OF THE WINGWALLS IS SATISFACTORY.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH ITEM 503 EXCEPT THAT THE BACKFILL MATERIAL PLACED BEHIND THE HEADWALLS SHALL USE MATERIALS CONFORMING TO ITEM 203 GRANULAR MATERIAL TYPE B. PROVIDE EXCAVATION AND BACKFILL FOR A 1.5H:1V ZONE BEHIND THE PROPOSED POROUS BACKFILL.

GENERAL NOTES

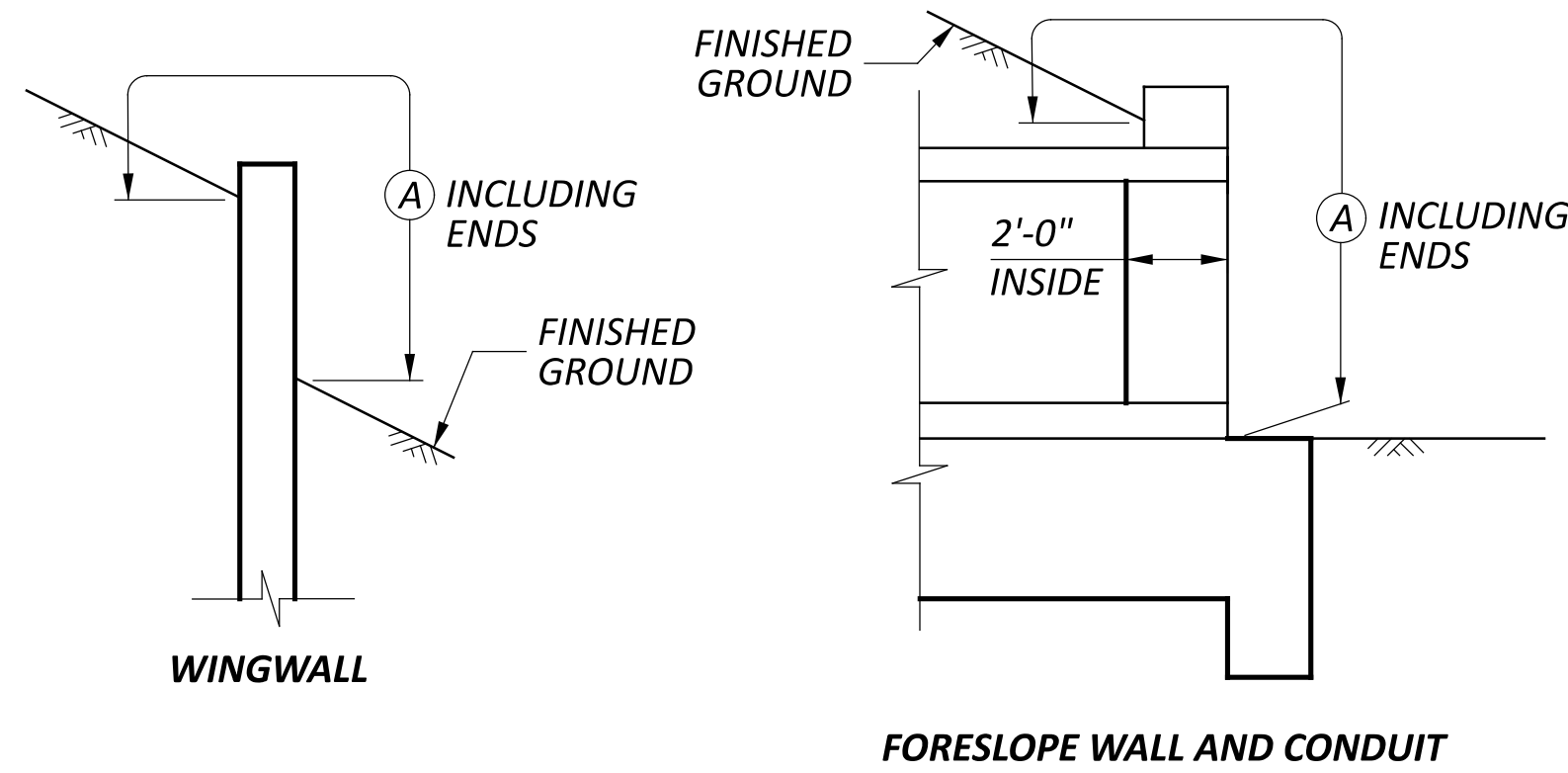
POROUS BACKFILL WITH FILTER FABRIC

POROUS BACKFILL WITH FILTER FABRIC 1'-6" THICK SHALL BE PLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE.

WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

SEALING OF FORESLOPE WALL AND WINGWALLS

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH NON-EPOXY SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE NON-EPOXY SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.



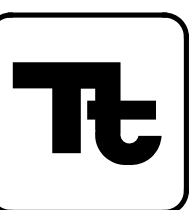
(A) - SEAL ENTIRE CONCRETE SURFACE AREA

LIMITS OF ITEM 512-SEALING CONCRETE SURFACES DETAILS

ESTIMATED QUANTITIES (01/NHS)				
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION
202	35200	70	FT	PIPE REMOVED, OVER 24"
503	11100	LS	LS	COFFERDAMS AND EXCAVATION BRACING
503	21301	LS	LS	UNCLASSIFIED EXCAVATION, AS PER PLAN
509	10000	3973	LB	EPOXY COATED STEEL REINFORCEMENT
511	46010	20	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	46510	32	CY	CLASS QC1 CONCRETE, FOOTING
512	10050	74	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)
518	21200	26	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	32110	114	CY	ROCK CHANNEL PROTECTION, TYPE B WITH AGGREGATE FILTER
602	20000	29.8	CY	CONCRETE MASONRY
611	30000	89	FT	96" CONDUIT, TYPE A, 706.02, 707.85

QUANTITIES CARRIED TO GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

GCB

REVIEWER

DTC 02/18/26

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