

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## CLI-73-1.80/20.74, CLI-350-15.78

CHESTER AND GREEN TOWNSHIPS

CLINTON COUNTY

**FEDERAL PROJECT NUMBER**

E220361

**RAILROAD INVOLVEMENT**

NONE

**PROJECT DESCRIPTION**

REPLACE SMALL CULVERTS, CLI-73-0180 (1839775), CLI-73-2074 (1818786), AND CLI-350-1578 (1979057).

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: \*  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: \*  
NOTICE OF INTENT EARTH DISTURBED AREA: \*  
\* SEE INDIVIDUAL CULVERT PLAN AND PROFILE SHEETS

**2023 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET P.01

**FOR**  
**LOCATION MAP**  
**DESIGN DESIGNATION**  
**DESIGN EXCEPTIONS**  
**ADA DESIGN WAIVERS**  
**SEE TITLE SHEET 2**

**INDEX OF SHEETS:**

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RIGHT OF WAY	

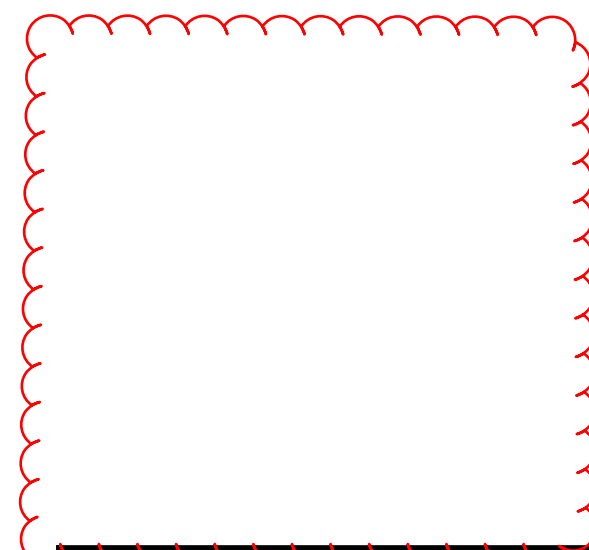
TITLE SHEET

**UNDERGROUND UTILITIES**  
Contact Two Working Days  
Before You Dig

  
**OHIO 811.org**  
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764  
(Non members must be called directly)

PLAN PREPARED BY:  
BURGESS & NIPLÉ  
525 VINE ST. STE. 1300  
CINCINNATI, OHIO 45202




ENGINEER'S SEAL:

SIGNED: \_\_\_\_\_  
DATE: \_\_\_\_\_

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	MT-96.11	7/21/23	TC-41.20	10/18/13	800-2023	7/21/23
		MT-96.20	7/21/23	TC-41.30	4/21/23	832	7/21/23
		MT-96.26	1/18/19	TC-42.20	10/18/13	878	1/21/22
		MT-97.10	4/19/19	TC-52.10	10/18/13	838	1/15/21
DM-1.1	7/17/20	MT-101.60	4/21/23	TC-52.20	1/15/21	851	1/21/22
DM-2.1	1/18/13	MT-101.70	4/21/23	TC-65.10	1/17/14		
DM-4.4	1/15/16	MT-101.75	7/21/23	TC-65.11	7/15/22		
		MT-101.90	7/17/20	TC-71.10	4/21/23		
		MT-105.10	1/17/20				
RM-1.1	1/20/23						
RM-4.2	4/17/20						
HW-1.1	7/20/18						
HW-2.1	7/15/22						
HW-2.2	7/20/18						


11/8/2023

  
Tammy K. Campbell, P.E.  
District 08 Deputy Director

  
Jack Marchbanks, PhD  
Director, Department of Transportation

CLI-73-1.80/20.74, CLI-350-15.78

MODEL: Sheet PAPER: 34x22 (in.) DATE: 12/8/2023 TIME: 11:41:50 AM USER: complon p:\vohodol-pw-bentley.com\ohiodo-pw-02\Documents\01 Active Projects\District 08\Clinton\115715\401-Engineering\_Burgess\Niple\Roadway\Sheets\115715\_GT001.dgn

DESIGN AGENCY	
 burgessniple.com	
DESIGNER	SDC
REVIEWER	SCS 10/03/22
PROJECT ID	115715
SHEET	TOTAL
P.01	30

**COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN**

COFFERDAMS AND EXCAVATION BRACING INSTALLED FOR THE PROJECT ARE FOR DEWATERING THE WORK AREA AND ARE CONSIDERED FILL. COFFERDAMS AND EXCAVATION BRACING DESIGN, CONSTRUCTION, AND REIMBURSEMENT FOR DAMAGE IS BASED ON CMS 503. THE CONTRACTOR MUST COMPLY WITH ANY IN-STREAM RESTRICTION IN THE SPECIAL PROVISIONS - WATERWAY PERMIT. ADDING FILL TO THE STREAM TO DEWATER THE WORK AREA REQUIRES A TEMPORARY ACCESS FILL (TAF) SUBMISSION PER THE SPECIAL PROVISIONS.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM DURING THE MONTHS OF APRIL THROUGH OCTOBER: ALL REQUIREMENTS OF CMS 503 APPLY, UNLESS STIPULATED ELSEWHERE IN THIS NOTE.

IF THE CONTRACTOR CHOOSES TO IMPACT THE STREAM AT ANY TIME IN THE MONTHS OF NOVEMBER THROUGH MARCH: EVEN IF THE ACTUAL WATER ELEVATION EXCEEDS 3 FEET ABOVE THE STATED ORDINARY HIGH WATER MARK, THE DEPARTMENT WILL NOT REIMBURSE THE CONTRACTOR FOR RESULTING DAMAGE TO THE WORK PROTECTED BY THE COFFERDAM. ALL OTHER REQUIREMENTS OF CMS 503 APPLY.

**ITEM SPECIAL - FILL AND PLUG EXISTING CULVERT**

THIS ITEM CONSISTS OF THE CONSTRUCTION OF BULKHEADS IN THE EXISTING CULVERTS NOTED IN THE PLANS AND FILLING THE AREA SEALED OFF WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL.

LOCATE THE BULKHEADS AT THE LIMITS OF THE AREA TO BE FILLED, AS INDICATED ON THE PLANS. THE BULKHEADS CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PUMP THE FILL MATERIAL INTO PLACE OR BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH IS FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR IS THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED PER 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CULVERT.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

**FARM DRAINS**

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY)( CONSTRUCTION) LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- 611 8" CONDUIT, TYPE B 100 FT.
- 611 8" CONDUIT, TYPE E 100 FT.
- 611 8" CONDUIT, TYPE F 100 FT.
- 601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER 5 CU. YD.

**EXISTING SUBSURFACE DRAINAGE**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

- ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1 8 SQ. YD.
- ITEM 611, 6" CONDUIT, TYPE F 40 FT.
- ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 4 EACH

**STRUCTURE REMOVED (CLI-73-0180)**  
 ITEM 202 STRUCTURE REMOVED FOR EXISTING CULVERT CLI-73-0180 SHALL INCLUDE THE EXISTING CHANNEL PROTECTION ON THE INLET AND OUTLET OF THE EXISTING CULVERT.

DESIGN AGENCY



DESIGNER  
SDC

REVIEWER  
SCS 10/03/22

PROJECT ID  
115715

SHEET TOTAL  
P.04 | 30



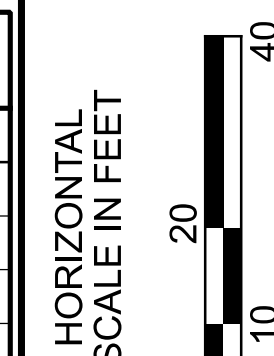
SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
13	20	21	26	01/NHS/04	02/STR/04												
<b>STRUCTURE 20 FOOT SPAN AND UNDER (CLI-73-0180)</b>																	
LS				LS	-	202	11000	LS				STRUCTURE REMOVED					
LS				LS	-	503	11101	LS				COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	4				
764				764	-	509	10000	764	LB			EPOXY COATED REINFORCING STEEL					
16				16	-	511	46210	16	CY			CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING					
134				134	-	601	11001	134	SY			RIPRAP, TYPE D, AS PER PLAN	17				
24				24	-	601	32104	24	CY			ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC					
40				40	-	611	00410	40	FT			4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET					
140				140	-	611	08100	140	FT			18" CONDUIT, TYPE E					
91				91	-	611	83000	91	FT			36" X 60" CONDUIT, TYPE A, 706.04					
2				2	-	838	20700	2	CY			GABIONS					
LS				LS	-	878	25000	LS				INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS					
<b>STRUCTURE 20 FOOT SPAN AND UNDER (CLI-73-2074)</b>																	
			LS	-	LS	503	11101	LS				COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	4				
			11	-	11	601	32004	11	CY			ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC					
			1.7	-	1.7	602	20000	1.7	CY			CONCRETE MASONRY					
			112	-	112	611	19200	112	FT			42" CONDUIT, TYPE A, 706.02					
	60			-	60	SPECIAL	69098100	60	FT			FILL AND PLUG EXISTING CULVERT	4				
			LS	-	LS	878	25000	LS				INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS					
<b>STRUCTURE 20 FOOT SPAN AND UNDER (CLI-73-2069)</b>																	
			LS	-	LS	202	11200	LS				PORTIONS OF STRUCTURE REMOVED					
			250	-	250	202	35200	250	FT			PIPE REMOVED, OVER 24"					
			LS	-	LS	503	11101	LS				COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	4				
			4	-	4	518	21200	4	CY			POROUS BACKFILL WITH GEOTEXTILE FABRIC					
			67	-	67	601	32004	67	CY			ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC					
			87	-	87	611	97400	87	FT			CONDUIT, MISC.:4'x3' CONDUIT, TYPE A, 706.05 (DESIGN EARTH COVER 4')	21				
			LS	-	LS	878	25000	LS				INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS					
<b>STRUCTURE 20 FOOT SPAN AND UNDER (CLI-73-2069) OPTIONS</b>																	
OPTION A: HEADWALLS & WINGWALLS																	
			LS	-	LS	503	21300	LS				UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)					
			2,336	-	2,336	509	10000	2,336	LB			EPOXY COATED REINFORCING STEEL					
			7	-	7	511	46010	7	CY			CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING					
			17	-	17	511	46510	17	CY			CLASS QC1 CONCRETE, FOOTING					
			26	-	26	512	10100	26	SY			SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
			140	-	140	512	33000	140	SY			TYPE 2 WATERPROOFING					
			22	-	22	516	13600	22	SF			1" PREFORMED EXPANSION JOINT FILLER					
			24	-	24	602	20000	24	CY			CONCRETE MASONRY					
OPTION B: HEADWALLS & WINGWALLS																	
			LS	-	LS	602	98000	LS				MASONRY, MISC.:PRECAST HEADWALLS & WINGWALLS	23				
<b>STRUCTURE 20 FOOT SPAN AND UNDER (CLI-350-1578)</b>																	
			LS	-	LS	202	11000	LS				STRUCTURE REMOVED					
			LS	-	LS	503	11101	LS				COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	4				
			6	-	6	601	32104	6	CY			ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC					
			6	-	6	601	40000	6	FT			PAVED GUTTER, MISC.: PAVED GUTTER	29				
			1.6	-	1.6	602	20000	1.6	CY			CONCRETE MASONRY					
			42	-	42	611	16200	42	FT			36" CONDUIT, TYPE A, 707.01, 707.04; 706.02; 707.33; 707.35					
			35	-	35	SPECIAL	69098100	35	FT			FILL AND PLUG EXISTING CULVERT	4				
			LS	-	LS	878	25000	LS				INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS					

**PROJECT CONTROL POINTS**

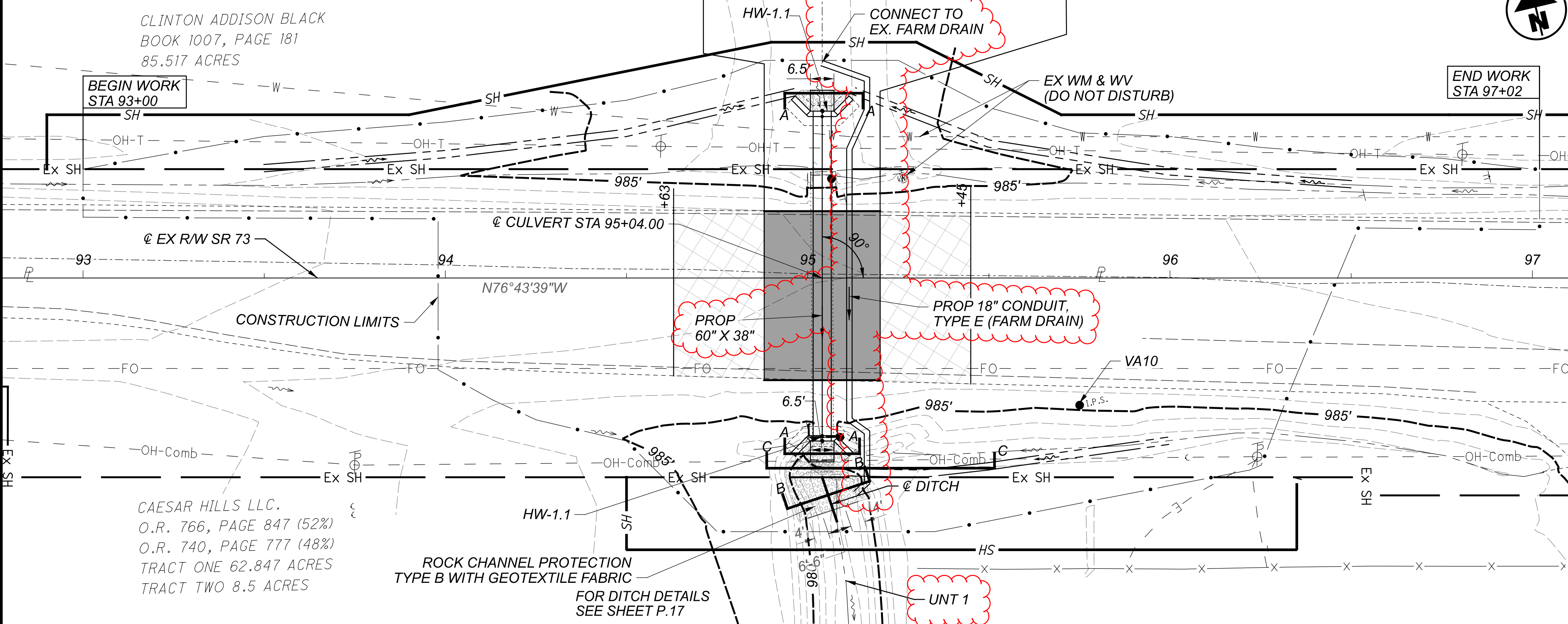
POINT	NORTHING	EASTING	ELEV	STATION	OFFSET	FEATURE
VA10	545085.887	1558655.375	985.547	95+75.06	35.12' RT	IP SET
VA11	545255.655	1558247.531	989.020	91+39.17	36.70' LT	IP SET

**ESTIMATED QUANTITIES**

ITEM	QUANTITY	UNIT	DESCRIPTION
202	LS		STRUCTURE REMOVED
202	110	FT	PIPE REMOVED, 24" AND UNDER
503	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
509	764	LB	EPOXY COATED REINFORCING STEEL
511	16	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING
601	134	SY	RIPRAP, TYPE D, AS PER PLAN
601	24	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
611	91	FT	38" X 60" CONDUIT, TYPE A, 706.04
611	40	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
611	140	FT	18" CONDUIT, TYPE E
838	2	CY	GABIONS
878	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS



**PLAN AND PROFILE**  
CLI-73-0180



NOTE: CONTRACTOR TO REPLACE ALL DAMAGED EX UNDERDRAIN AT HEADWALLS. RECONNECT UNDERDRAINS AND OUTLET THE UNDERDRAINS THROUGH THE SLOPES

FOR CULVERT DETAILS, SEE SHEET P.19

**LEGEND**

- ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
- LIMITS OF FULL DEPTH PAVEMENT REPLACEMENT STA 94+88 TO STA 95+20, (46.5' W X 32' L)
- LIMITS OF PAVEMENT RESURFACING STA 94+63 TO STA 94+88 AND STA 95+20 TO STA 95+45 (46.5' X 50')
- FOR PAVEMENT CALCULATIONS SEE SHEET P.12

**HYDRAULIC DATA**

DRAINAGE AREA = 115 ACRES  
 Q (25) = 83 CFS      V (25) = 13.4 FT/S      HW (25) = 985.01 FT  
 Q (100) = 101 CFS    V (100) = 14.2 FT/S      HW (100) = 985.62 FT  
 ORDINARY HIGH WATER MARK: 982.05 FT  
 DESIGN SERVICE LIFE: 75 YEARS  
 ABRASION LEVEL: 1  
 pH: 7.3

**PROPOSED STRUCTURE**

TYPE: ELLIPTICAL CULVERT  
 60" X 38" X 91' LONG  
 SKEW: 0  
 ALIGNMENT: TANGENT  
 CFN:

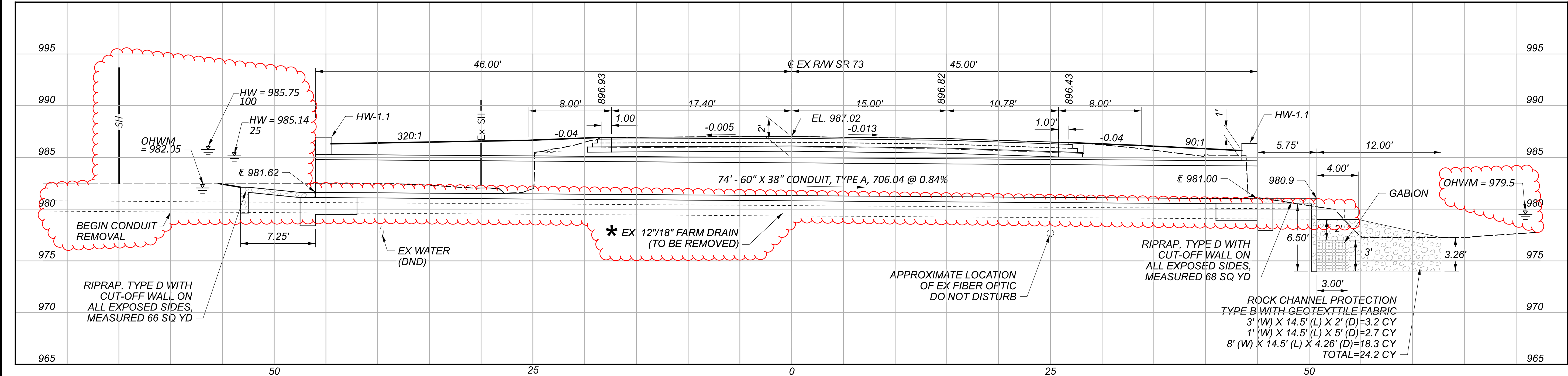
**EXISTING STRUCTURE**

TYPE: STONE BOX  
 SIZE: 36" X 72" X 72' LONG  
 SKEW: 0  
 ALIGNMENT: TANGENT  
 DATE BUILT: UNKNOWN  
 CONDITION: POOR  
 CFN: 1839775

\* EXISTING FARM DRAIN UNDER CULVERT SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL MAINTAIN FLOW OF THE EXISTING DRAIN UNTIL NEW FARM DRAIN IS CONSTRUCTED.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA: 0.68 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.13 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: NOT REQUIRED



CLI-73-1.80/20.74, CLI-350-15.78

MODEL: CLX.RW.1 - Plan [Snee] PAPER SIZE: 34x22 (in.) DATE: 12/12/2023 TIME: 12:25:34 PM USER: Compton  
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DESIGN AGENCY  
**B&N**  
 burgessniple.com

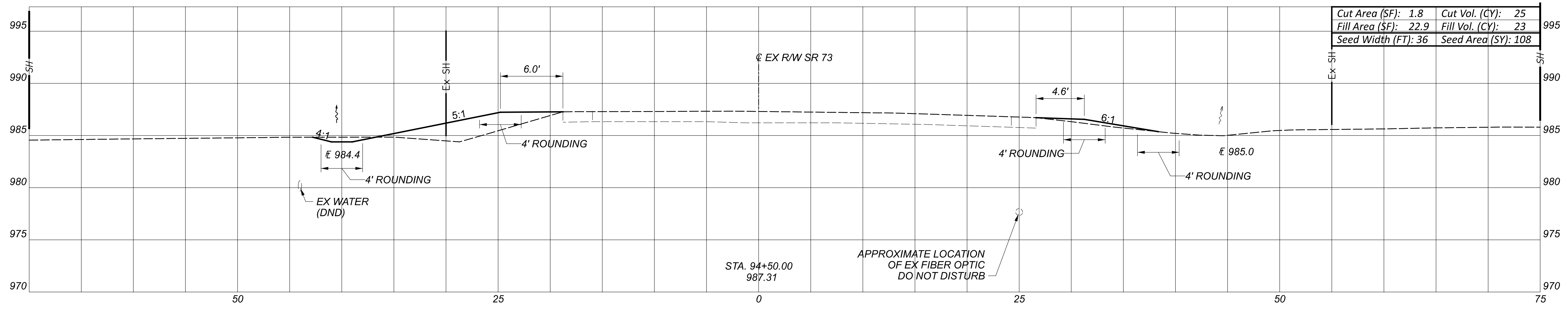
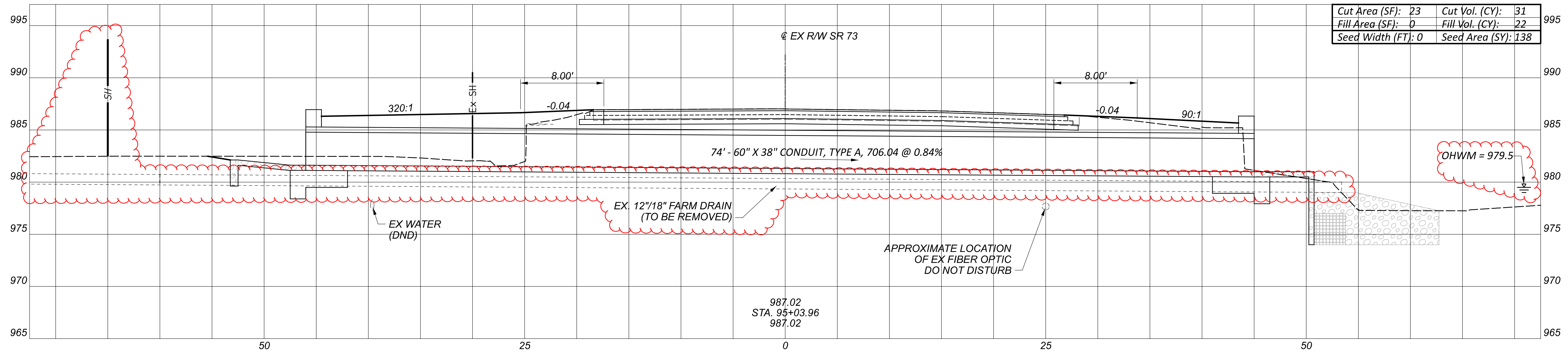
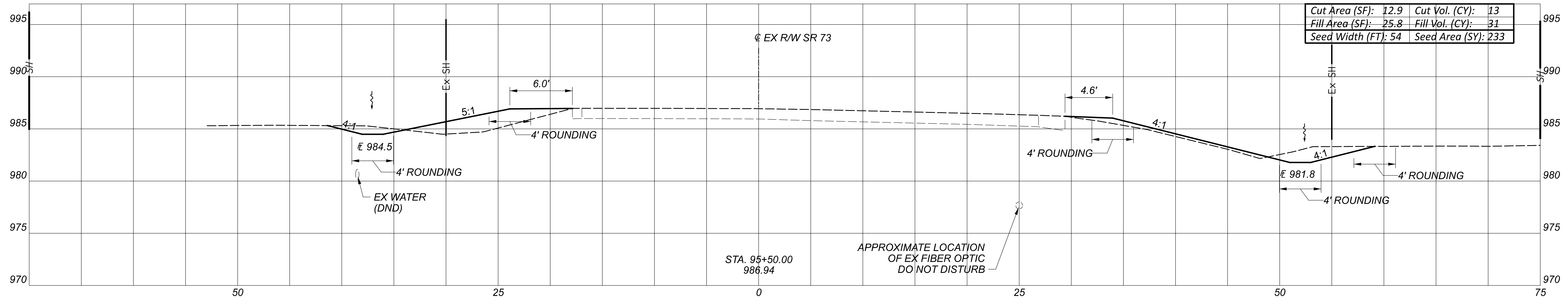
DESIGNER  
 SDC

REVIEWER  
 SCS 10/03/22

PROJECT ID  
 115715

SUBSET TOTAL  
 1 7

SHEET TOTAL  
 P.13 30



CROSS SECTIONS - CLI-73-0180  
 STA 94+50 TO STA 95+50

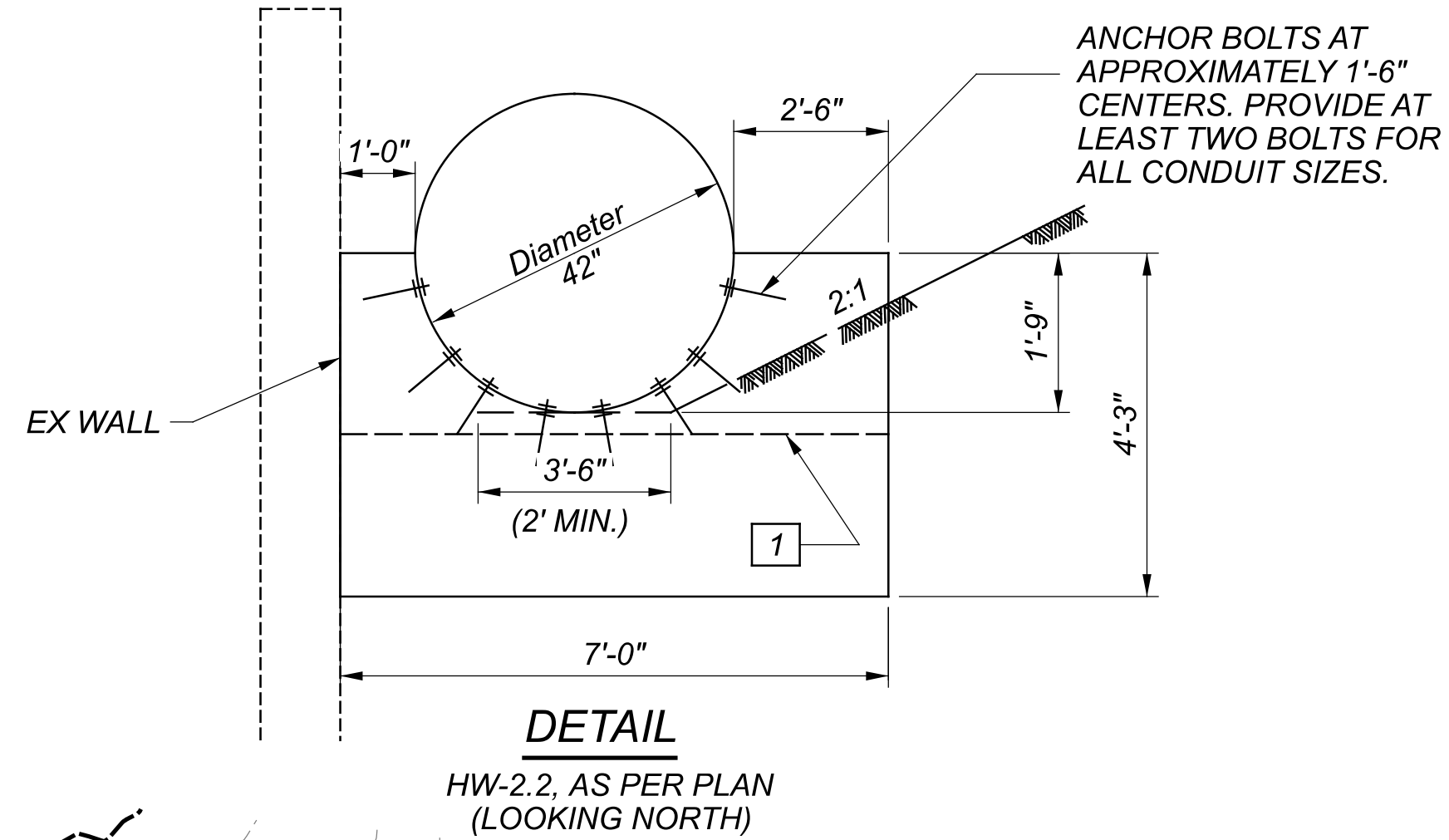
DESIGN AGENCY  
**B&N**  
 burgessniple.com

DESIGNER  
 SDC

REVIEWER  
 SCS 10/03/22

PROJECT ID  
 115715

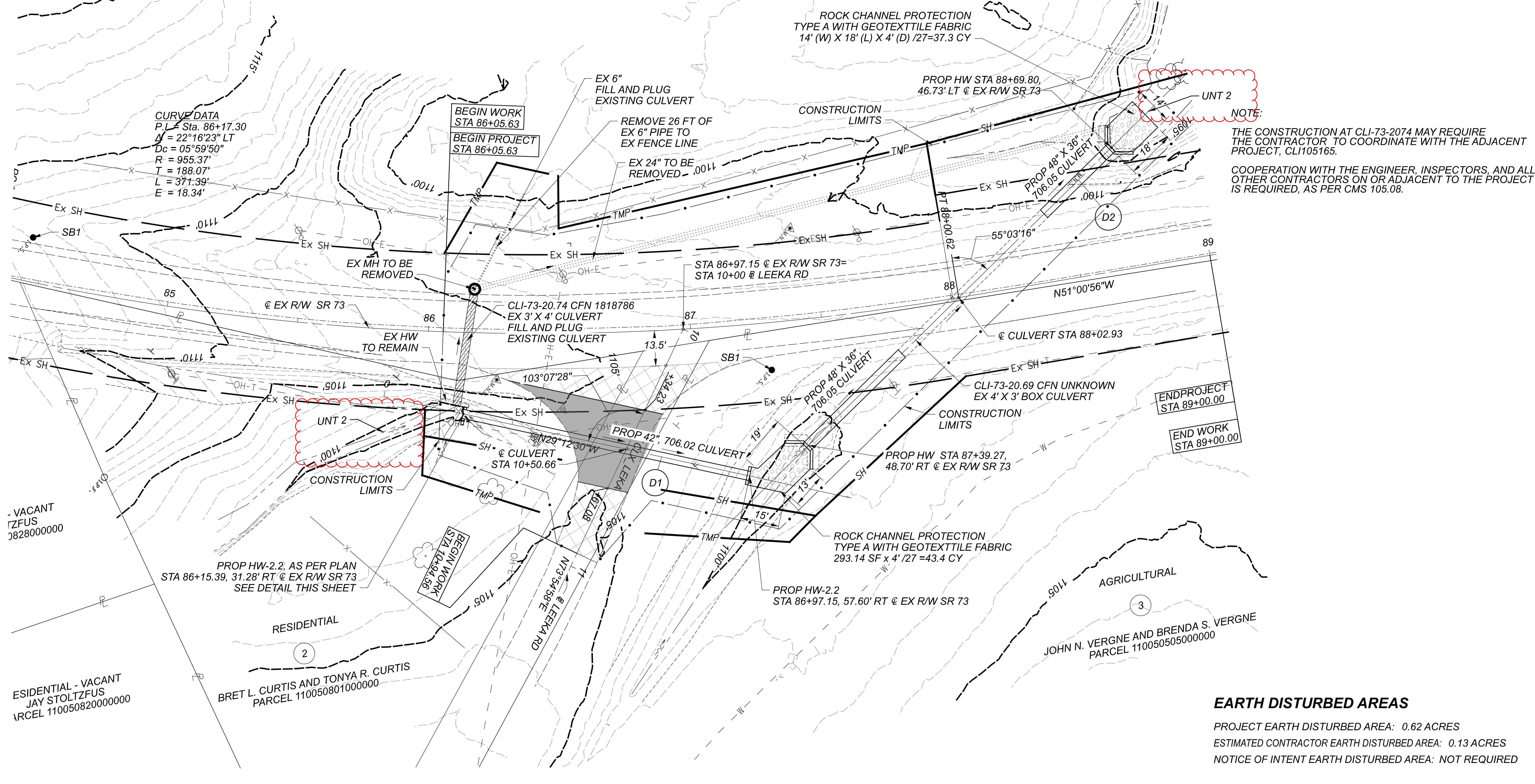
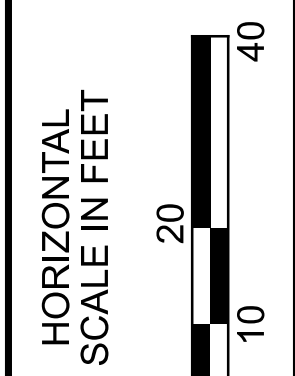
Sheet Totals			3	7
Seeding	Cut	Fill	479	70
SHEET			P.15	30



ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	60	FT	FILL AND PLUG EXISTING CULVERT
202	1	EACH	MANHOLE REMOVED
202	276	FT	PIPE REMOVED, 24" AND UNDER

LEGEND	
	4'-0" THICK ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC AND 2'-6" THICK ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
	LIMITS OF FULL DEPTH PAVEMENT REPLACEMENT STA 10+34.23 TO STA 10+67.08 @ LEEKA RD FULL DEPTH FOR THIS PROJECT WILL BE 304 AND 301 TO SURFACE SEE WINDOW CONTRACT NOTE SHEET P.03
	LIMITS OF PAVEMENT RESURFACING STA 10+15.36 TO STA 10+34.23 AND STA 10+67.08 TO STA 10+94.56 @ LEEKA RD FOR PAVEMENT CALCULATIONS SEE SHEET P.12

PROJECT CONTROL POINTS						
POINT	NORTHING	EASTING	ELEV	STATION	OFFSET	FEATURE
SB1	491901.578	1626309.8993	1104.448	87+29.34	18.05' RT	IP SET
SB2	491657.111	1626458.3932	1113.071	84+44.52	16.82' LT	IP SET



DESIGN AGENCY	<b>B&amp;N</b> burgessniple.com	
DESIGNER	SDC	
REVIEWER	SCS 10/03/22	
PROJECT ID	115715	
SUBSET	TOTAL	
1	6	
SHEET	TOTAL	
P.20	30	

**EARTH DISTURBED AREAS**  
 PROJECT EARTH DISTURBED AREA: 0.62 ACRES  
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.13 ACRES  
 NOTICE OF INTENT EARTH DISTURBED AREA: NOT REQUIRED

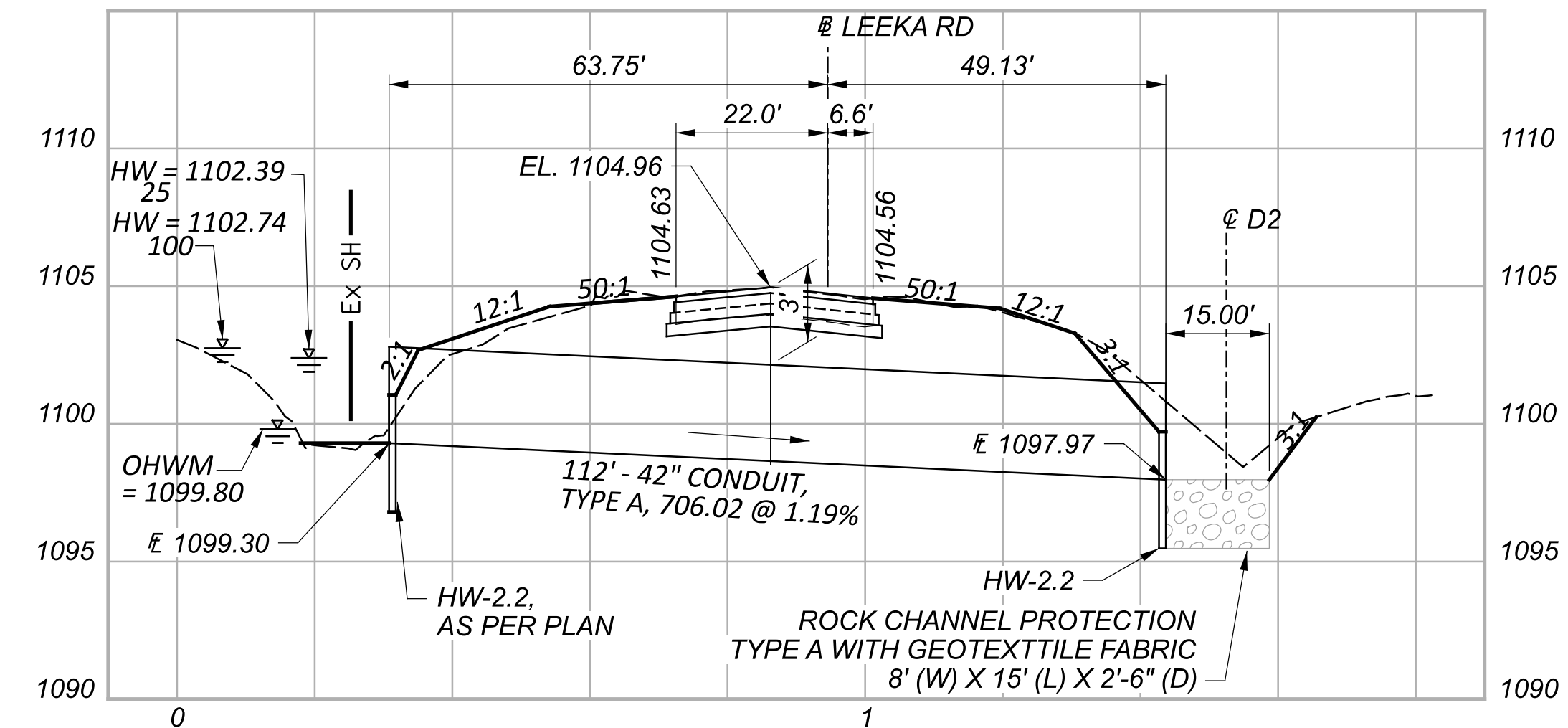
CLI-73-1.80/20.74, CLI-350-15.78

MODEL: CLX.D1 - Profile [Sheet] PAPER SIZE: 34x22 (in.) DATE: 11/1/2023 TIME: 13:57 PM USER: Compton  
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**PROPOSED STRUCTURE**  
 TYPE: 42" CIRCULAR CULVERT  
 SKEW: -16°06'57"  
 ALIGNMENT: TANGENT  
 CFN: 1991584

**EXISTING STRUCTURE**  
 TYPE: STONE BOX  
 SIZE: 36" X 48" X 37' LONG  
 SKEW: 09°55'34"  
 ALIGNMENT: TANGENT  
 DATE BUILT: UNKNOWN  
 CONDITION: POOR  
 CFN: 1818786 (TO BE ABANDONED)

**HYDRAULIC DATA**  
 DRAINAGE AREA = 43 ACRES  
 Q (25) = 46 CFS V (25) = 11.58 FT/S HW (25) = 1102.39 FT  
 Q (100) = 55 CFS V (100) = 12.13 FT/S HW (100) = 1102.74 FT  
 ORDINARY HIGH WATER MARK: 1099.80 FT  
 DESIGN SERVICE LIFE: 75 YEARS  
 ABRASION LEVEL: 1  
 pH: 7.3



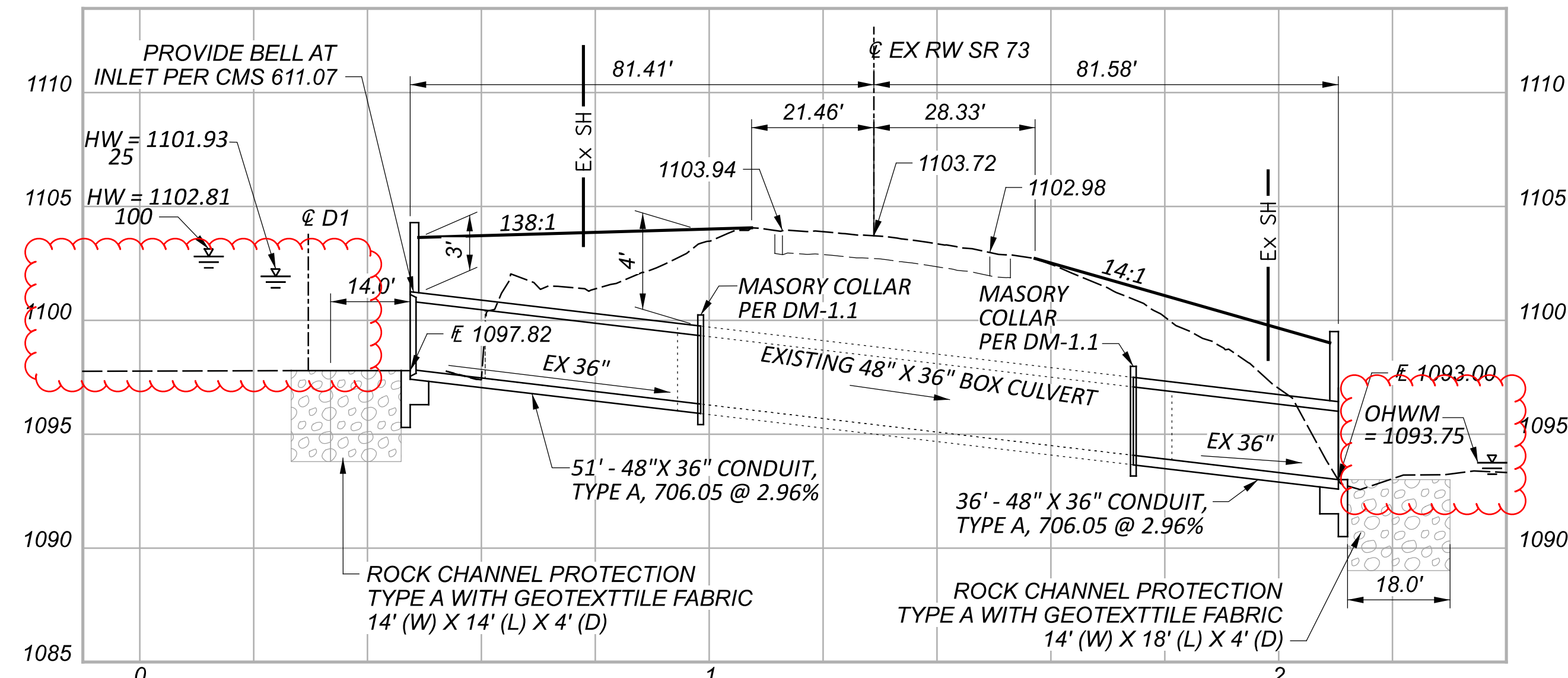
PROPOSED CULVERT PROFILE D1

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
<b>STRUCTURE OVER 20 FOOT SPAN (CLI-73-2074)</b>			
503	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
601	11	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC
602	1.7	CY	CONCRETE MASONRY
611	112	FT	42" CONDUIT, TYPE A, 706.02
878	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS

**PROPOSED STRUCTURE**  
 TYPE: 48" X 36" CONCRETE BOX  
 SKEW: 55°03'17"  
 ALIGNMENT: TANGENT  
 CFN: 1804910

**EXISTING STRUCTURE**  
 TYPE: CONCRETE BOX  
 SIZE: 48" X 36" X 120.8' LONG  
 SKEW: 55°03'17"  
 ALIGNMENT: CURVE  
 DATE BUILT: UNKNOWN  
 CONDITION: GOOD  
 CFN: 1804910

**HYDRAULIC DATA**  
 DRAINAGE AREA = 86 ACRES  
 Q (25) = 87 CFS V (25) = 17.73 FT/S HW (25) = 1101.93 FT  
 Q (100) = 104 CFS V (100) = 18.65 FT/S HW (100) = 1102.81 FT  
 ORDINARY HIGH WATER MARK: 1098.32 FT  
 DESIGN SERVICE LIFE: 75 YEARS  
 ABRASION LEVEL: 1  
 pH: 7.3



EX CULVERT CLI-73-2069 PROFILE D2

ESTIMATED QUANTITIES			
ITEM	QUANTITY	UNIT	DESCRIPTION
<b>STRUCTURE OVER 20 FOOT SPAN (CLI-73-2069)</b>			
202	LS		PORTIONS OF STRUCTURE REMOVED
202	250	FT	PIPE REMOVED, OVER 24"
503	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN
518	4	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601	67	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC
611	87	FT	CONDUIT, MISC.: 4' x 3' CONDUIT, TYPE A, 706.05 (DESIGN EARTH COVER 4')
878	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS
<b>OPTIONS A: HEADWALLS AND WINGWALLS</b>			
503	LS		UNCLASSIFIED EXCAVATION (WINGWALL FOOTING)
509	2336	LB	EPOXY COATED REINFORCING STEEL
511	7	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL, NOT INCLUDING FOOTING
511	17	CY	CLASS QC1 CONCRETE, FOOTING
512	140	SY	TYPE 2 WATERPROOFING
512	26	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
516	22	SF	1" PREFORMED EXPANSION JOINT FILLER
602	24	CY	CONCRETE MASONRY
<b>OPTIONS B: HEADWALLS AND WINGWALLS</b>			
602	LS		MASONRY, MISC.: (PRECAST HEADWALLS AND WINGWALLS)

FOR CULVERT DETAILS SEE SHEETS P.23 - P.25

PROFILE SHEET - CLI-73-2074  
 SR 73 & LEEKA RD

DESIGN AGENCY  
**B&N**  
 burgessniple.com  
 DESIGNER  
 SDC  
 REVIEWER  
 SCS 10/03/22  
 PROJECT ID  
 115715  
 SUBSET TOTAL  
 2 6  
 SHEET TOTAL  
 P.21 30