



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
[www.transportation.ky.gov/](http://www.transportation.ky.gov/)

Andy Beshear  
GOVERNOR

Jim Gray  
SECRETARY

January 25, 2021

CALL NO. 301  
CONTRACT ID NO. 211303  
ADDENDUM # 1

Subject: CLAY COUNTY, FD04 SPP 026 0421 013-017  
Letting January 29, 2021

(1)Added - Plan Sheets - Pages 12(a)-12(b) of 169

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

If you have any questions, please contact us at 502-564-3500.

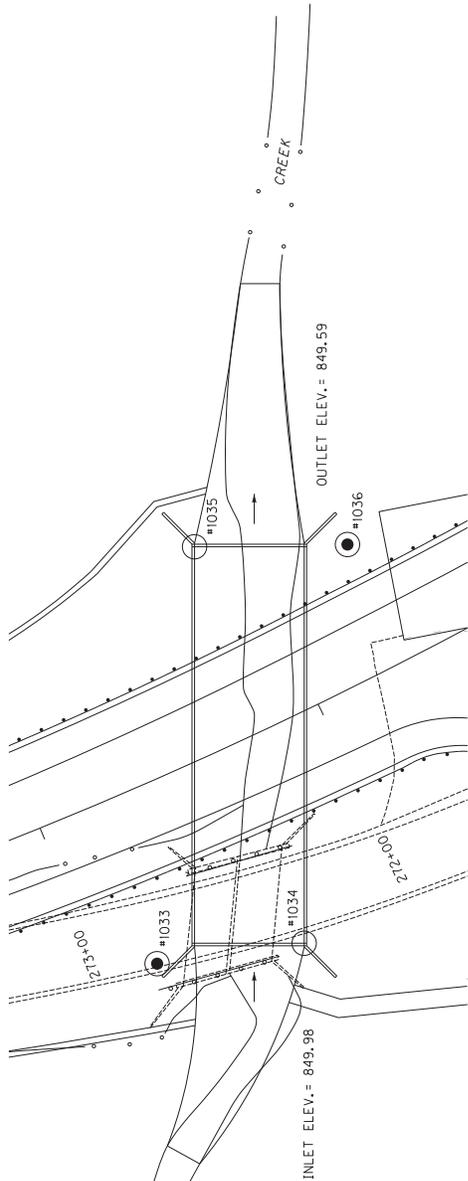
Sincerely,

A handwritten signature in cursive script that reads "Rachel Mills".

Rachel Mills, P.E.  
Director  
Division of Construction Procurement

RM:mr  
Enclosures

SUBSURFACE DATA



Hole No. 1033  
 Station 272+81.83  
 Offset 55.90 ft., Lt.  
 Elev. 862.30  
 (NAVD 88 datum)

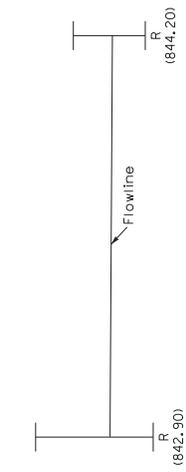
1034  
 272+36.70  
 69.10 ft., Lt.  
 862.20

1035  
 272+14.14  
 64.20 ft., Rt.  
 856.00

1036  
 271+67.39  
 42.60 ft., Rt.  
 860.00

Q <sub>u</sub> (psf)	D <sub>50</sub> (mm)	w%	LI
849	0.021	23	0.22
	0.082	16	-0.20
	0.147	13	-0.65

N=14, A-6(1), CL, S+C=66(45+21)  
 A-6(2), SC, S+C=49(31+18)  
 N=2, A-6(2), SC, S+C=45(29+16)  
 N=50/0/1  
 Cored Overburden  
 \*97(15) Shale: dark gray, sandstone  
 (SOLUS) laminations, few calcareous  
 \*37(15) marine fossils  
 Top of rock elev. = 844.00  
 No weathered rock



D <sub>50</sub> (mm)	w%	LI
0.140	18	
0.012	30	0.63

KYROD REC N=50/0/1  
 32 90 Cored Overburden  
 32 99 (SOLUS) Shale: dark gray, silty, sandstone  
 laminations, few calcareous marine fossils  
 Top of rock elev. = 842.60  
 Base of weathered rock elev. = 842.50



The Presumptive Factored Bearing Resistance at the Service Limit State is  
 20 ksf for Spread Footings on Competent Unweathered Bedrock

DATE: 21-OCTOBER-2014 CHECKED BY:  
 DESIGNED BY: E. BAILEY W. BROYLES  
 DETAILED BY:  
 Commonwealth of Kentucky  
 DEPARTMENT OF HIGHWAYS  
 COUNTY: CLAY  
 ROUTE: US 421 CROSSING: Sta. 272+25.14  
 PROJECT: 3-Sided Culvert

ITEM NUMBER	DESCRIPTION
S-094-14	SUBSURFACE DATA
11-8003.00	Division of Structural Design GEOTECHNICAL BRANCH

SHEET 1 OF 1

# ARCH STRUCTURE DETAIL

Clay County - US 421 - 3-Sided Arch Culvert @ Sta. 272+25

**Spread Footings on Rock:** The spread footings shall be founded on competent, unweathered bedrock. Size the footings at the service limit state using a presumptive factored bearing resistance of 20 ksf. Contact the geotechnical Branch for a more detailed analysis of the normal bearing resistance if the strength or extreme limit states control the footing design.

Embed the footings a minimum of one foot into unweathered bedrock. All footing excavations in rock shall be cut neatly so that the backfilling is necessary in the construction portions of the footings located in rock. Concrete shall be placed directly against the cut rock faces. Mass concrete shall be placed in the excavation from the top of the footing to the bedrock surface where the footing does not extend to the bedrock surface.

If competent unweathered bedrock is encountered at higher elevations, the spread footings may be raised at the discretion of the Engineer unless otherwise noted by the Designer; however, one foot of embedment into unweathered bedrock must be maintained.

The footing steel and concrete should be placed as soon as practical after the footing excavation is made. If the bedrock becomes softened at bearing elevation, the softened material should be undercut to unweathered material prior to placing the concrete. Seasonal groundwater fluctuations may cause groundwater infiltration into the footing excavation, and a dewatering method may be necessary.

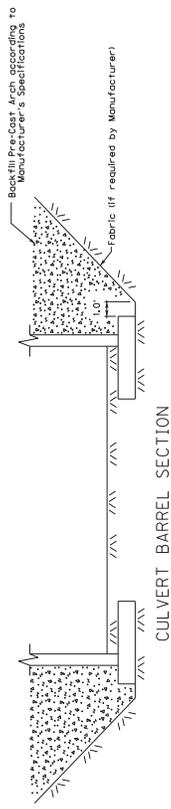
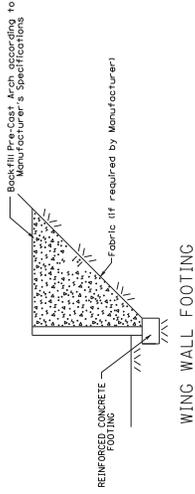
Backfill the pre-cast arch structure and the accompanying wingwalls in accordance with manufacturer's specifications.

The wingwalls should be designed using Soil Type 3 of Exhibit 413 in the Division of Structural Design Guidance Manual unless the manufacturer can show that the backfill material utilized meets the requirements of a different Soil Type. It should be noted that the backfill slope being referred to is that perpendicular to the wingwall.

Temporary sheeting, shoring, cofferdams, and/or a dewatering method may be required for the installation of the structure and foundations.

A paved flowline is not required for this structure.

Solid rock excavation will be required for the installation of this structure's spread footings.



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DESIGNED BY:	E. BAILEY	W. BROYLES	
<b>Commonwealth of Kentucky</b> <b>DEPARTMENT OF HIGHWAYS</b>			
CLAY COUNTY			
ROUTE	US 421	CROSSING	3-Sided Culvert Sta. 272+25.00
<b>SUBSURFACE DATA</b>			
PREPARED BY			
Division of Structural Design			
<b>GEOTECHNICAL BRANCH</b>			

S-094-14

ITEM NUMBER	11-8003.00
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SHEET 1 OF 1