USDA United States Department of Agriculture
Natural Resources Conservation Service

Kansas

Owner: Wilson County – Verdigris River

Practice: Emergency Watershed Protection Program

County: Wilson

Legal: SW 1/4 Sec 33, T-27S; R-15E

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8	End Key Details
9	Seeding Details

Before any investigation or construction activity, the excavator is responsible for calling Kansas One-Call at 800-344-7233 (800-DIG-SAFE) or 811

Shawn T. Sherraden — July 2020
Designed by — Date

I certify that the plans and detailed specifications for this project were developed in accordance with the policies and procedures of the Natural Resources Conservation Service.

KEVIN D. GUSTAFSON LICENSED 26495 08/21/2020 KANSAS PROFESSIONAL ENGINEER

Approved by — Date

Revisions		
PAGE NUMBERS	APPROVED	DATE

WATER RESOURCES RECEIVED
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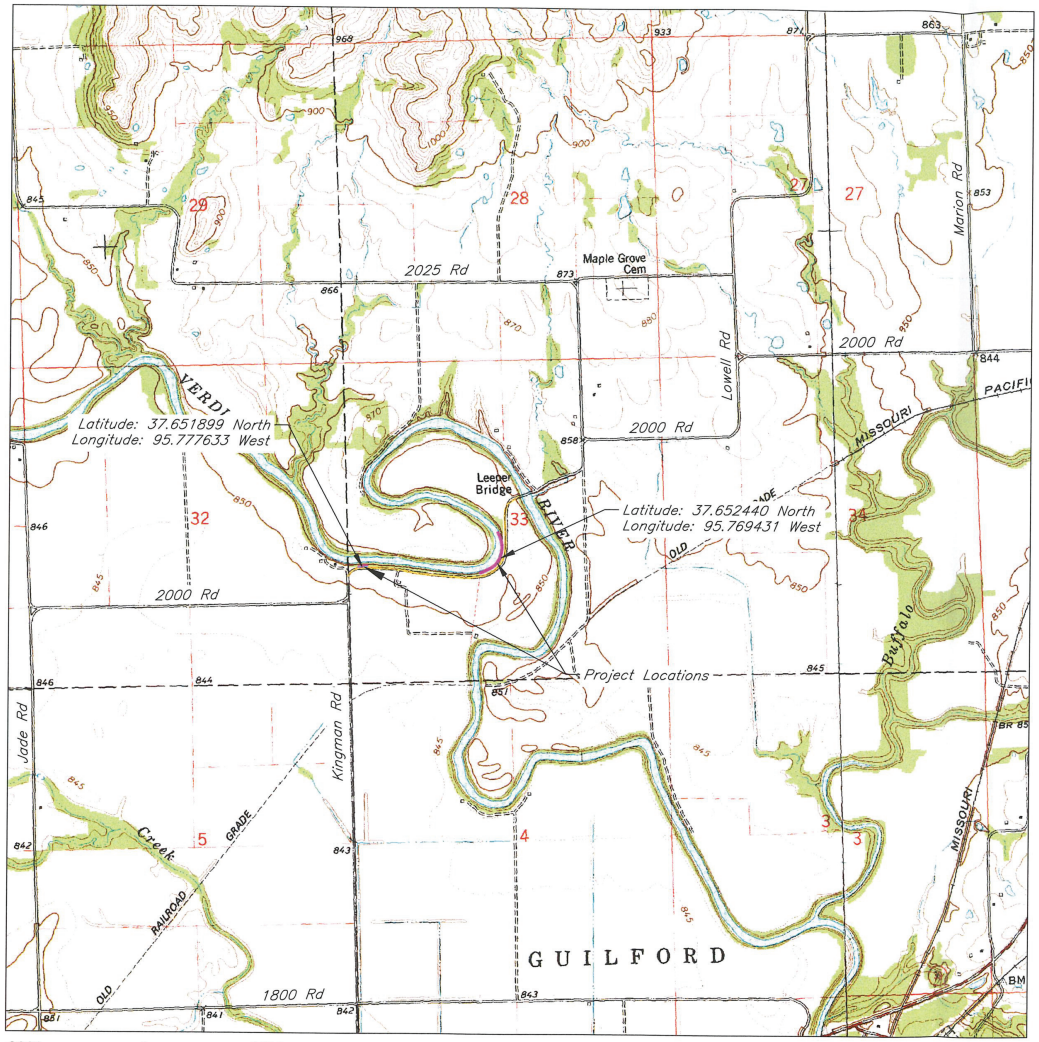

Approximate Project Location: 1.5 miles north and 1.0 mile west of Benedict, Kansas.
Image: U.S. Geological Survey (USGS) 7.5 minute quadrangle

General Notes

1. This project is being undertaken to provide long-term protection to 2000 Road. Nearby utilities shall be protected at all times. Coordinate with Wilson County and utility companies as needed to ensure facilities are protected.

2. The Contractor and/or County shall follow all weight restrictions on bridges in the area. Weight restriction information is available from Wilson County

3. Multiple points of ingress/egress may be necessary, more than what is shown on drawings, and shall be coordinated as needed between the Contractor, Engineer, and County personnel.

4. The Contractor is responsible for providing all materials and all equipment and labor necessary for the construction of the works described in these drawings and specifications.

5. Remove woody debris from the site as needed to install slope protection measures and dispose of the debris at an appropriate site. See Construction Specification 250 for additional details.

6. Woody debris and downed trees shall be burned and buried at a nearby site designated by Wilson County. See Construction Specification 250.

7. This one project was originally planned as two separate projects at the different areas of interest. These separate projects were later combined into one for construction purposes at the request of the sponsor.

8. BEFORE ANY INVESTIGATION OR CONSTRUCTION ACTIVITY, THE EXCAVATOR IS RESPONSIBLE FOR CALLING KANSAS ONE-CALL AT 800-344-7233 (800-DIG-SAFE, OR 811). VERIFY THAT THE CITY HAS MARKED THE LOCATION OF THE FORCE MAIN TO THE LAGOONS.

Table of Quantities

Item	Unit	Estimated Quantity	As-Built Quantity
Excavation	Cu. Yds.	3,600	
Ditch Liner Riprap (Shoulder Repair)	Tons	470	
Rockfill	Tons	500	
Rock Riprap	Tons	6,450	
Geotextile Fabric	Sq. Yds.	4,455	
Seeding & Mulching	Acres	0.8	

Shoulder Repair Riprap Gradation

Rock Size	Percent Finer by Size
15"	100
8"	85
6"	50
3"	15

Streambank Stabilization Riprap Gradation

Rock Size	Percent Finer by Size
36"	100
28"	25-50
18"	0-25

Location Map and Table of Quantities

Designed STS Date 7/2020
Drawn STS Date 7/2020
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Wilson County - Verdigris River
Emergency Watershed Protection Program
SW 1/4 Sec 33, T-27S; R-15E
Wilson County, Kansas

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Drawing Name
Wilson Co_Verdigris_East
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Sheet 2 of 9

General Notes

1. Stationing of the channel increases from upstream (west/south) to downstream (east/north).

2. Protect buried utilities, associated works, and overhead power lines at all times. Coordinate with Wilson County, utility companies, and others as needed to ensure facilities are protected.

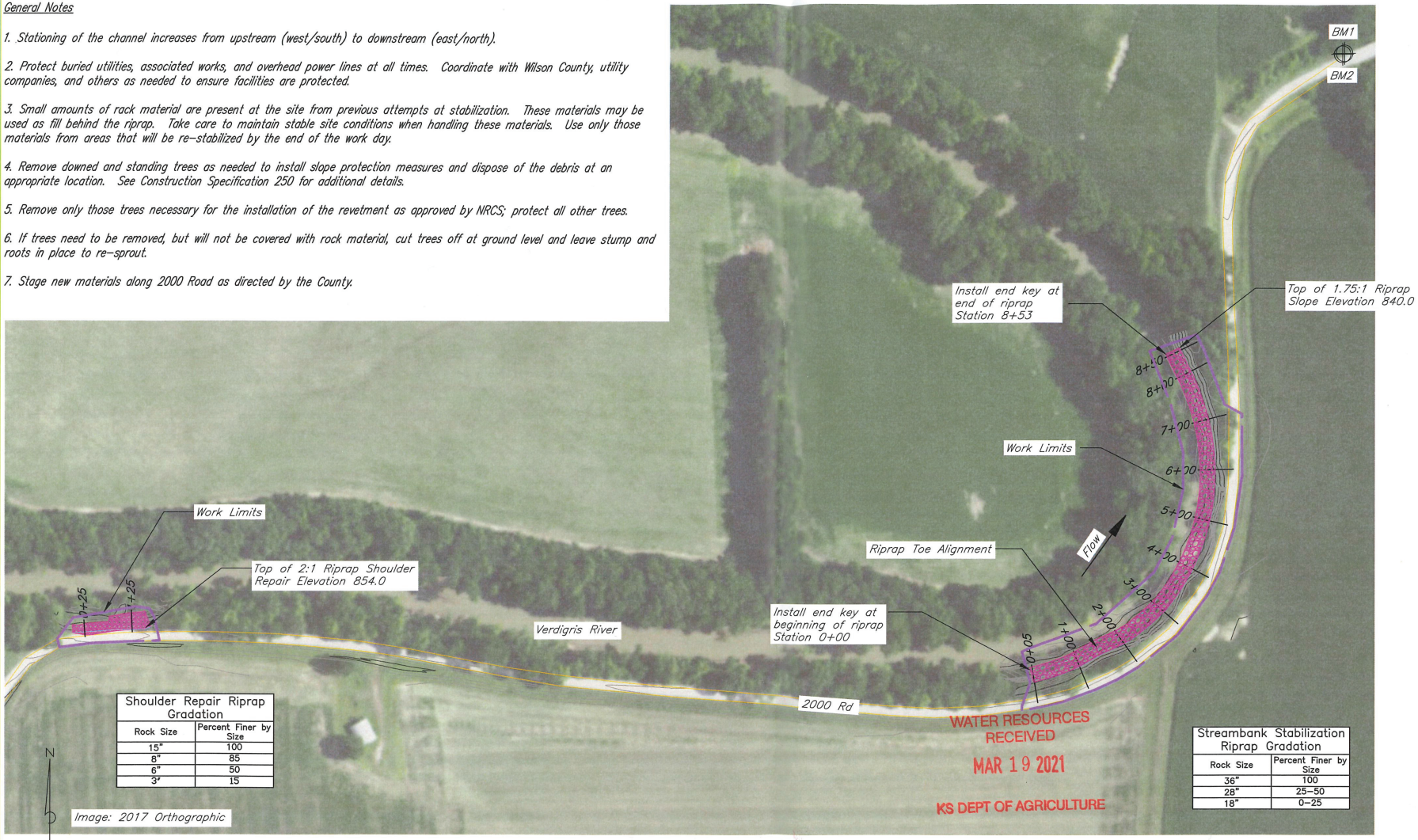
3. Small amounts of rock material are present at the site from previous attempts at stabilization. These materials may be used as fill behind the riprap. Take care to maintain stable site conditions when handling these materials. Use only those materials from areas that will be re-stabilized by the end of the work day.

4. Remove downed and standing trees as needed to install slope protection measures and dispose of the debris at an appropriate location. See Construction Specification 250 for additional details.

5. Remove only those trees necessary for the installation of the revetment as approved by NRCS; protect all other trees.

6. If trees need to be removed, but will not be covered with rock material, cut trees off at ground level and leave stump and roots in place to re-sprout.

7. Stage new materials along 2000 Road as directed by the County.



Shoulder Repair Riprap Gradation	
Rock Size	Percent Finer by Size
15"	100
8"	85
6"	50
3"	15

Streambank Stabilization Riprap Gradation	
Rock Size	Percent Finer by Size
36"	100
28"	25–50
18"	0–25

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200 0 200 400
Scale in Feet

Benchmark Table				
Benchmark	Northing	Easting	Elevation	Description
BM 1	1683798.86	2102997.95	857.25	Blue paint mark, bridge NW wing wall
BM 2	1683797.07	2102994.05	855.68	Top of rebar near bridge NW wing wall

Survey Area:
Kansas State Plane
Zone South (1502) US Survey Feet
NAVD88 Vertical Datum, 2018 Geoid

Plan View

Designed STS Date 7/2020
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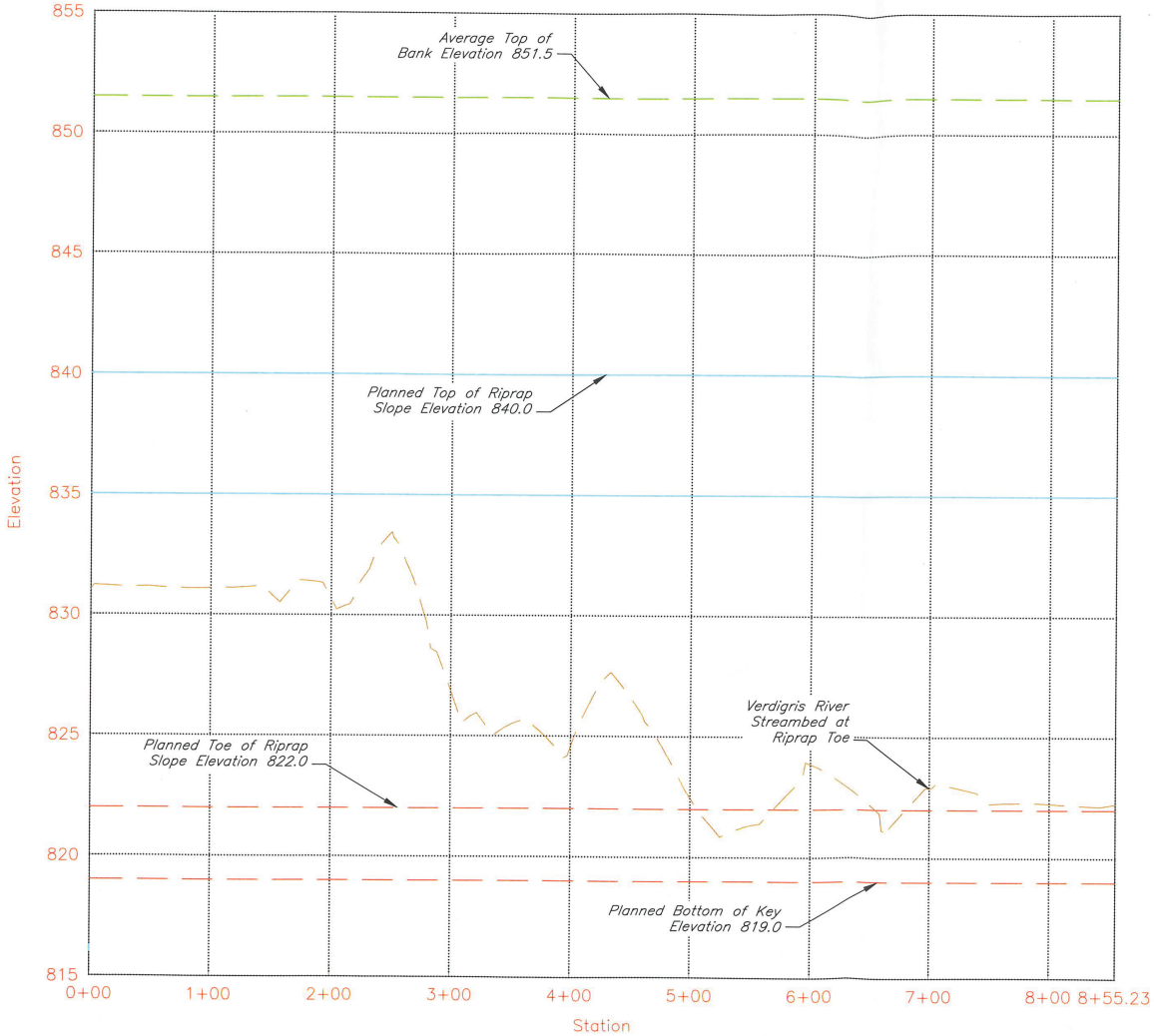
STREAMBANK STABILIZATION
TOE PROFILE



Profile View of Riprap Toe

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Profile View

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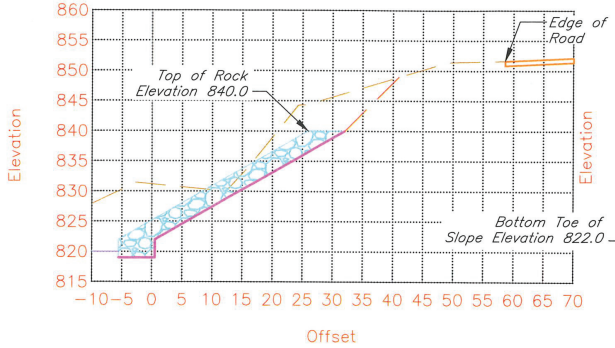
STREAMBANK STABILIZATION
CROSS SECTIONS



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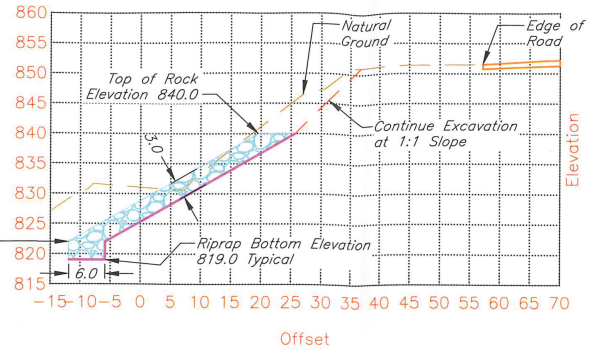

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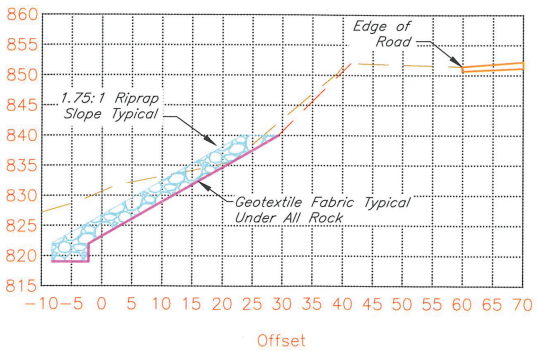

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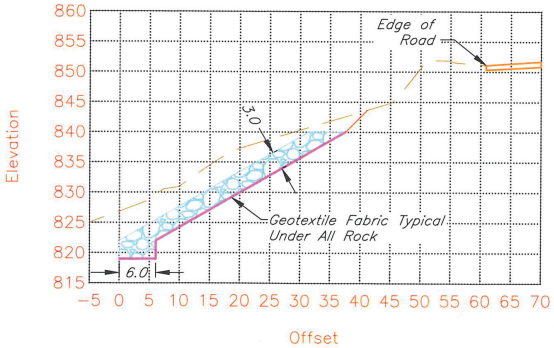

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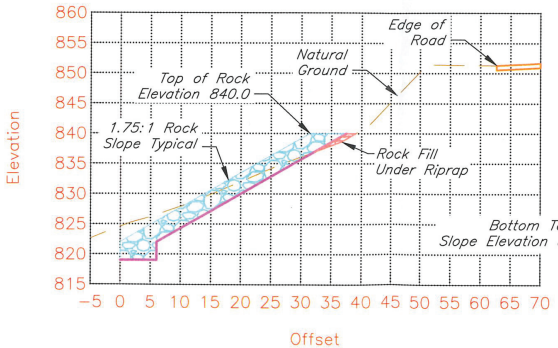

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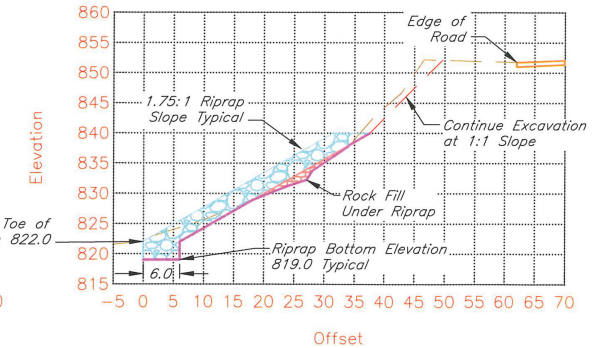

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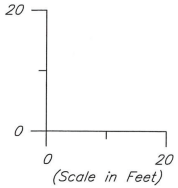

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Cross Section Views

		Date
Designed	STS	7/2020
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SW 1/4 Sec 33, T-27S; R-15E
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Natural Resources Conservation Service

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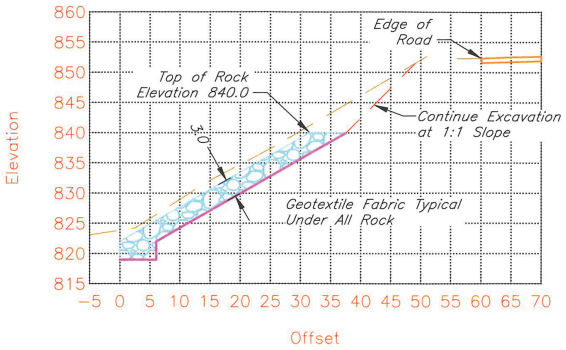
STREAMBANK STABILIZATION
CROSS SECTIONS



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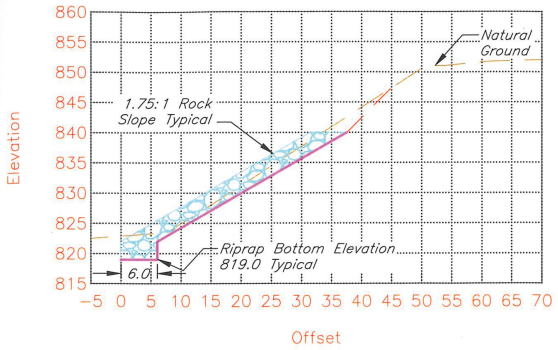

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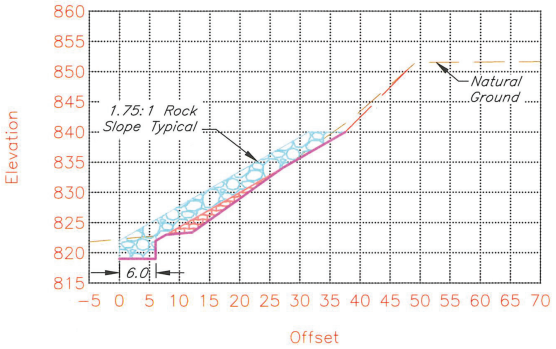

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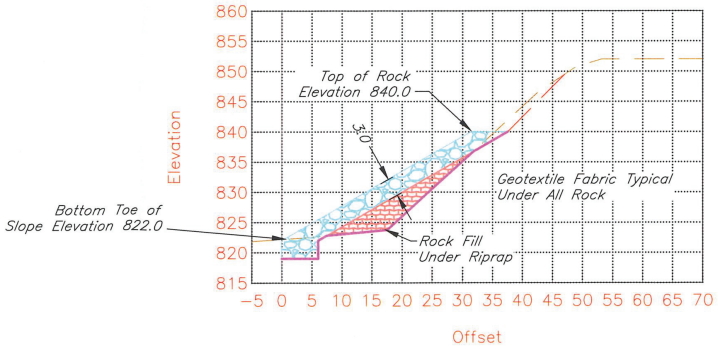

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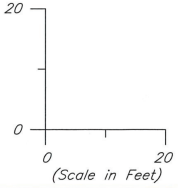

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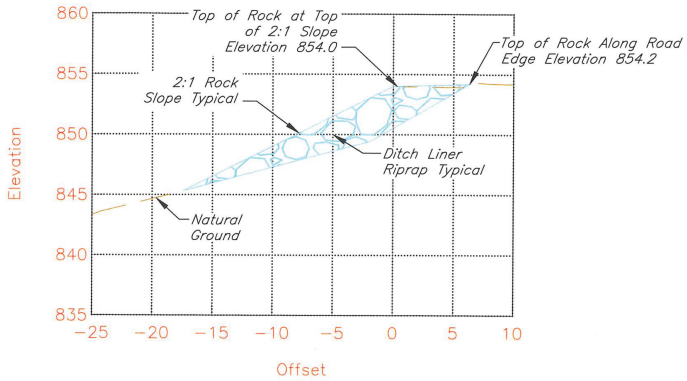
SHOULDER REPAIR CROSS SECTIONS



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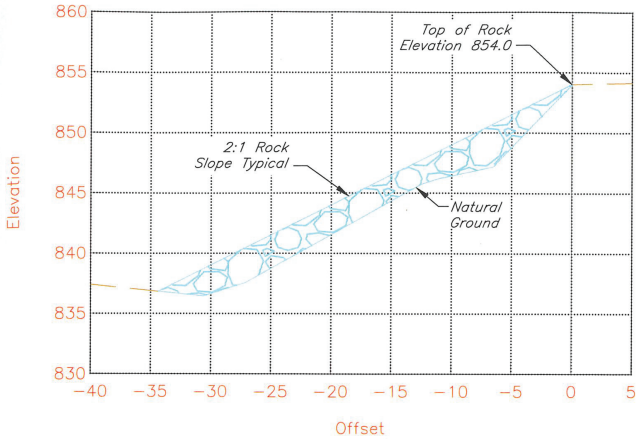

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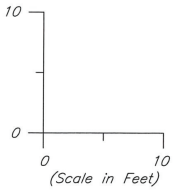

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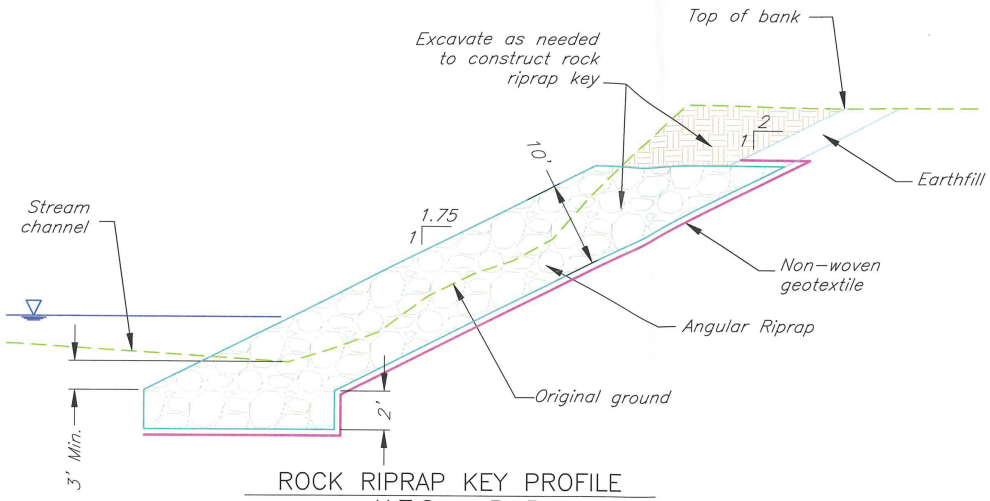
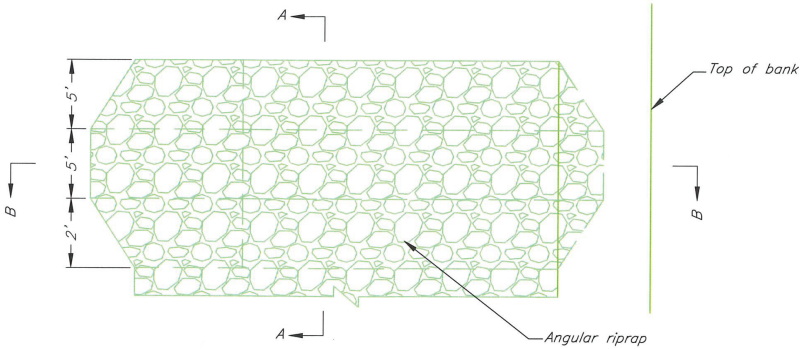
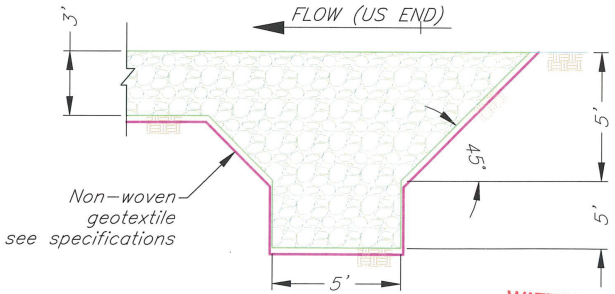


ROCK RIPRAP KEY PROFILE
N.T.S. B–B



ROCK RIPRAP KEY PLAN
N.T.S.



SECTION A–A
N.T.S.

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End Key Details

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General Notes

1. Seed and mulch all areas disturbed by construction activities between 2000 Road and the Verdigris River.

2. Use Brome grass seed and prairie hay mulch per Construction Specification 6 Seeding and Mulching.

3. Approximate seeding area is 0.8 Acres.

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200 0 200 400
Scale in Feet

Survey Area:
Kansas State Plane
Zone South (1502) US Survey Feet
NAVD88 Vertical Datum, 2018 Geoid

Seeding Details

		Date
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Drawn	STS	7/2020
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