

ADDENDUM

CITY OF AMES

PROJECT: 2019-20 Storm Water Erosion Control Program (Ioway Creek at Brookside), Project No. 560-8636-489

ADDENDUM NUMBER: 1

DATE: November 18, 2024

Carefully read the following changes to the Plans and Specifications for this project. After reading the changes, sign below to acknowledge receipt of this document and return it to the City Clerk's Office (515 Clark Avenue). This receipt form must be submitted prior to the bid opening or with the bid form.



Meghan M. Funke, P.E.
WHKS & Co.

ADDENDUM:

PLANS:

1. **SHEET B.06**

REVISED DETAIL PLATE

Bidders shall use the attached Revised Plan Sheet B.06. The nature of the change is to define the term "bankfull depth".

2. **SHEET C.04**

REVISED ESTIMATE REFERENCE INFORMATION

Bidders shall use the attached Revised Plan Sheet C.04. The nature of the change is to clarify that all rocks shall be selected from IADOT approved quarries.

3. **SHEET C.06**

REVISED ESTIMATE REFERENCE INFORMATION

Bidders shall use the attached Revised Plan Sheet C.06. The nature of the change is to correct the Bid Item No. and add clarification for measurement and payment of ROCK RIFFLES & RANDOM BOULDER CLUSTERS (SY).

End of addendum items. Signatures on next page.

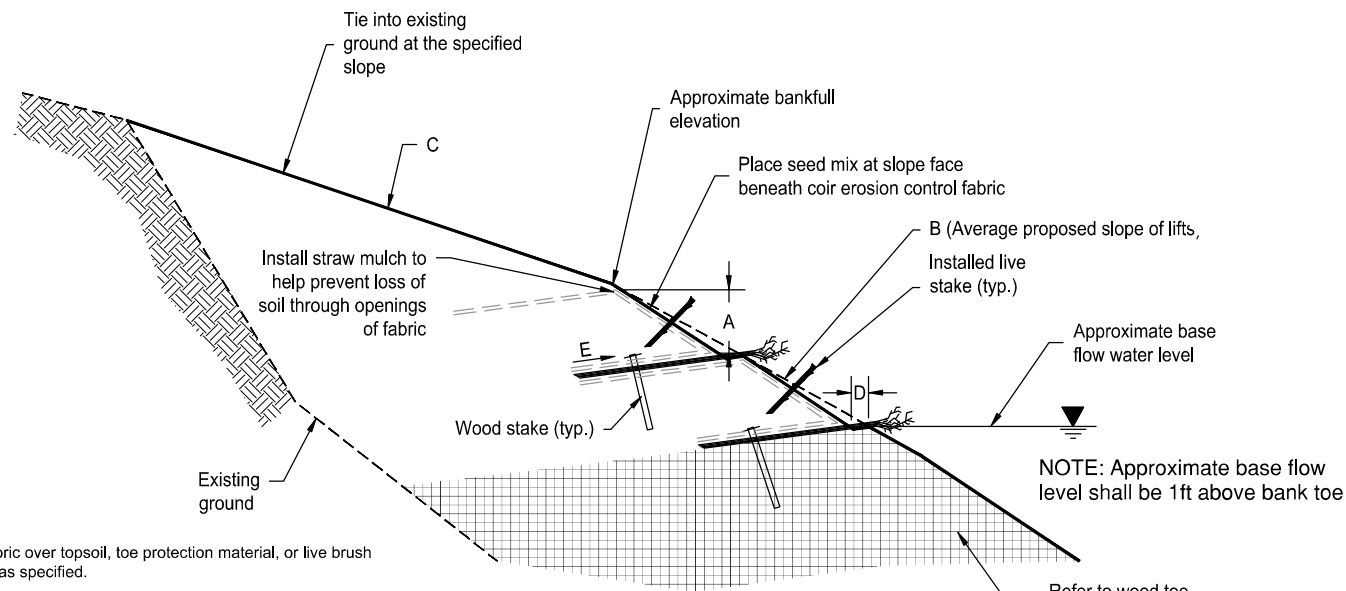
I hereby acknowledge receipt of this Addendum and recognize that my bid will not be opened unless this signed document is filed in the City Clerk's Office prior to the letting as specified in the notice of public hearing and to bidders, or other contract documents OR submitted with my bid.

SIGNED _____

TITLE _____

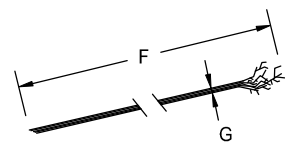
FIRM _____

DATE _____



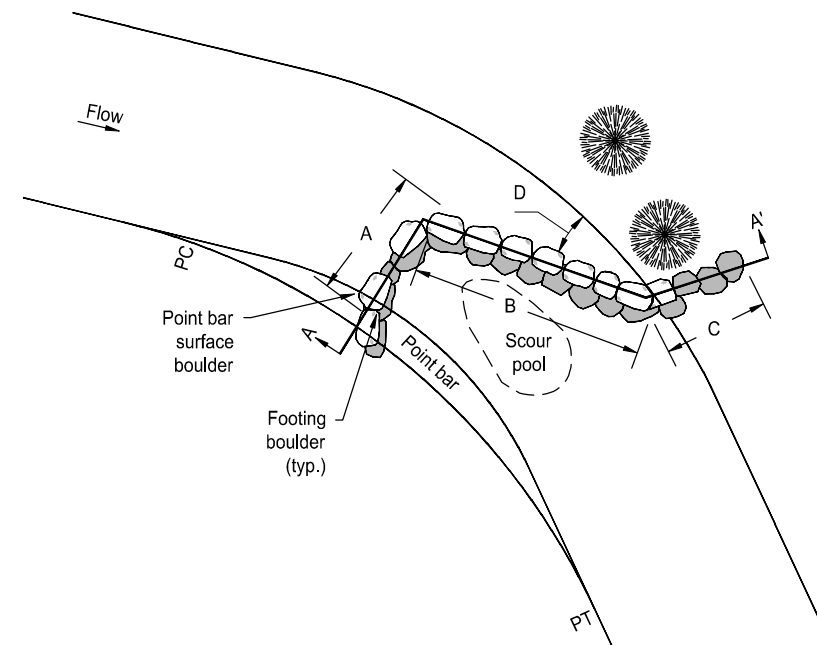
- Place fabric over topsoil, toe protection material, or live brush material as specified.
- Place and gently compact soil layer over the fabric, slightly back from the face of the slope, creating a small bench.
- Place topsoil, seed, mulch, and erosion control fabric on outer face of the soil lift, and wrap the erosion control fabric over the face of the slope, creating a new surface for the next layer of material.
- Place live brush on a layer on top of soil lift, as specified.
- Install live stakes at appropriate spacing specified in planting plan.
- Live stakes shall be Elderberry or Silky Dogwood

CROSS SECTION A-A'



LIVE BRANCH DETAIL

IOWA DEPARTMENT OF NATURAL RESOURCES
 River Restoration Toolbox
 Stream Bank Toe Protection/Stabilization
 Fabric Encapsulated Soil Lifts
 Page 2 of 2



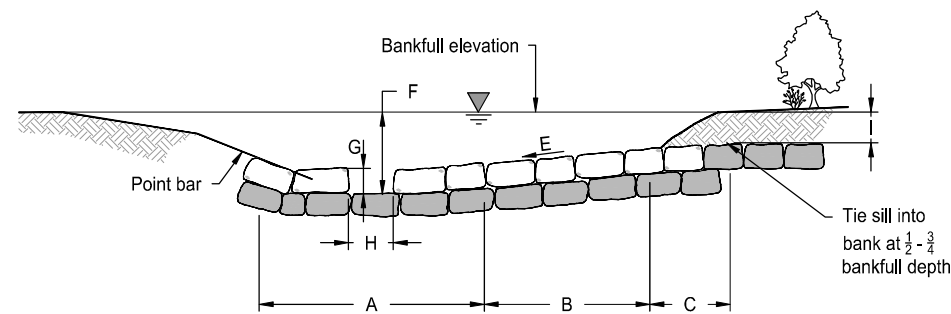
ADDENDUM 1:
PLAN VIEW

Bankfull depth is equal to the bankfull elevation minus the proposed channel bottom elevation.

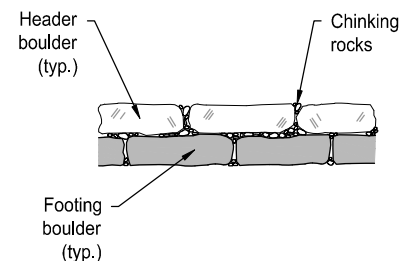
NOTE: Refer to nearest cross section in W.01-W.06 for bankfull elevations.

Channel Defining Structures (J-Hook)			
Dim.	Description	Unit	Value
A	Hook Width	Feet	27.0'
B	Vane Length	Feet	27.0'
C	Sill Width	Feet	27.0'
D	Vane Angle	Degrees	20' - 30'
E	Vane Slope	Slope	2%-7%
F	Riffle Max Depth	Feet	4.5'
G	Boulder Protusion Height	Feet	3.0'
H	Gap Width	Feet	1.0' - 2.0'
I	Depth Below Bankfull	Feet	1/2 Bankfull Elev.
J	Pool Vane Spacing	Feet	50.0'
K	Boulder Sizing	Feet	3-3.5 DIA.

IOWA DEPARTMENT OF NATURAL RESOURCES
 River Restoration Toolbox
 Channel Defining Structures
 J-Hook Vane/Straight Vane
 Page 1 of 2

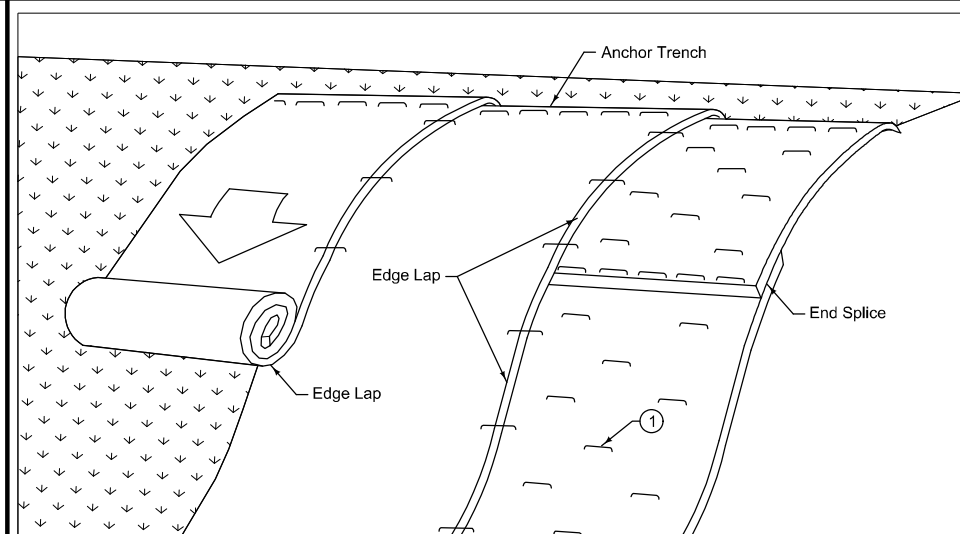


CROSS SECTION A-A'



CHINKING DETAIL

IOWA DEPARTMENT OF NATURAL RESOURCES
 River Restoration Toolbox
 Channel Defining Structures
 J-Hook Vane/Straight Vane
 Page 2 of 2



① Secure blanket to ground according to manufacturer's recommended anchoring pattern and minimum shown in Table 1.

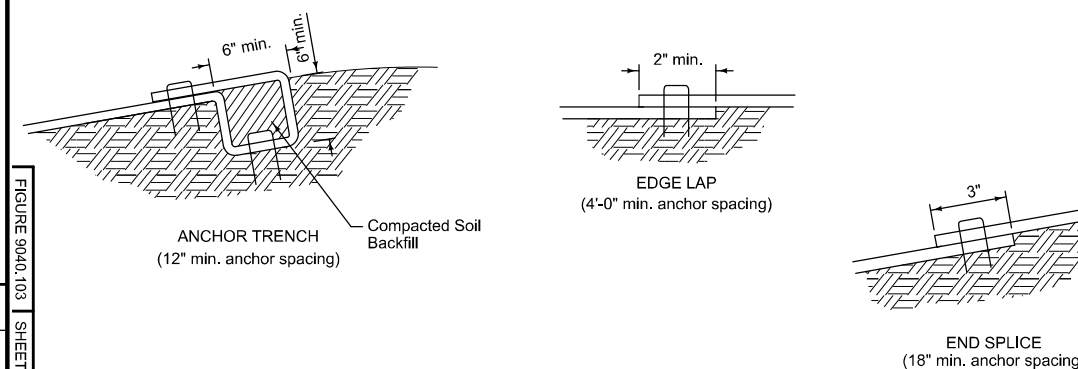


TABLE 1

Max. slope	Min. anchors
≤ 3:1	1.5/yd ²
2:1	2/yd ²
1:1	2.5/yd ²

SUDAS
 9040.103
 SHEET 1 OF 1

SUDAS Standard Specifications
 ROLLED EROSION CONTROL PRODUCT (RECP)
 INSTALLATION ON SLOPES

ESTIMATE REFERENCE INFORMATION FOR 2019-20 STORM WATER EROSION CONTROL PROGRAM

ADDENDUM 1:

- 9.11 CONVENTIONAL SEEDING, FERTILIZING & MULCHING, TURF MIX (ACRE).**
- 9.12 CONVENTIONAL SEEDING, FERTILIZING & MULCHING, WOODLAND SLOPE MIX (ACRE).**
- 9.13 CONVENTIONAL SEEDING, FERTILIZING & MULCHING, STREAM EDGE MIX (ACRE).**
- 9.14 CONVENTIONAL SEEDING, FERTILIZING & MULCHING, OXBOW WETLAND MIX (ACRE).**
- 9.15 CONVENTIONAL SEEDING, FERTILIZING & MULCHING, TYPE 5 (TEMP SEEDING) (ACRE).**

These bid items shall be defined by supplemental specification to SUDAS Section 9010, the City of Ames Supplemental Specifications, and the Plan SWPPP. Measurement and payment will be at the unit price per acre for each type of seed. Unit Price includes, but is not limited to, restoration of staging areas and access routes, removal of rock and other debris from the area; repairing rills and washes; preparing the seedbed; furnishing and placing seed, including any treatment required; furnishing and placing mulch; and furnishing water and other care during the care period, unless these items are bid separately. Fertilizer shall not be used for native seeding and only be used at turf lawn areas. Utilize hydraulic seeding and mulching methods. Hydraulic mulch shall only be used in locations where erosion control matting is not used. Use seed mixes and windows as defined on plan sheets and specifications. Seeding windows will be strictly enforced. Turf seed mixture shall be SUDAS 9010 Type 1 Permanent Lawn Mixture. Temp seeding shall be SUDAS 9010 Type 4 Urban Temporary Erosion Control Mixture. Refer to sheet L002 for details on Woodland slope, Stream edge, and Oxbow wetland seed mixtures.

ADDENDUM 1:

9.16 TREE PLANTINGS (EA). This bid item shall be defined by supplemental specification to SUDAS Section 9030, the City of Ames Supplemental Specifications, and the Plan SWPPP. Measurement and Payment at the unit price will be for each tree accepted in place. Payment will be made in increments according to the following schedule: 1) 70% of unit price at acceptance; 2) 30% of unit price at end of 1-year establishment period, upon installation of replacements. Unit price includes, but is not limited to, delivery; excavation; installation; watering; placing backfill material; mulching; wildlife protection fencing; staking or guying; pre-emergent herbicide, if specified; maintenance during the establishment and warranty periods; and replacements. Refer to sheet L002 for details.

9.17 SHRUB PLANTINGS (EA). This bid item shall be defined by supplemental specification to SUDAS Section 9030, the City of Ames Supplemental Specifications, and the Plan SWPPP. Measurement and Payment at the unit price will be for each shrub accepted in place. Payment will be made in increments according to the following schedule: 1) 70% of unit price at acceptance; 2) 30% of unit price at end of 1-year establishment period, upon installation of replacements. Unit price includes, but is not limited to, delivery; excavation; installation; watering; placing backfill material; mulching; wildlife protection fencing; staking or guying; pre-emergent. Refer to sheet L002 for details.

9.18 LIVE STAKES (EA). This bid item shall be defined by the Plan SWPPP. Refer to the B-sheets for details. Measurement and Payment at the unit price will be each live stake installed and maintained. Unit price includes, but is not limited to, furnishing live stakes; excavation; installation; watering; placing backfill material; mulching; wrapping; staking or guying; herbicide; maintenance during the establishment and warranty periods; and replacement. Cutting should be clean cut and have no obvious insect or disease problems. Plant cuttings within 2 days of collection or arrival. Keep cuttings cool and moist until planting. Cuttings shall be dormant planted in late fall to early spring (**October 30th to March 30th**).

9.19 J-HOOK (EA). Item is for the construction of J-Hooks as defined in the plans and specifications. Refer to the B-sheets for details. Top and footer boulders shall be constructed with stone. For this project, stone is defined as slabs of rock with two opposing sides that are relatively flat. All stone utilized must measure between 3 to 3.5 feet in diameter. Any additional boulders needed to construct the J-Hooks shall be incidental to the bid unit price. Top and footer boulders along the length of the vane shall be touching with no gaps in-between. If irregularly shaped boulders are used and gaps are present between them, the gaps must be chinked or filled with smaller stones that cannot slip through the gaps on the upstream side of the structure. Fill voids with a

combination of 3/8" to 6" crush stone and/or erosion stone. The chinking material shall be incidental to the J-Hooks unit price. Top and footer boulders along the hook shall have gaps that are 1/4 to 1/3 boulder diameter. Sill rocks shall be selected from IADOT approved quarries and must meet the grading criteria specified in the plans. Sill rocks shall be incidental to J-Hooks bid unit price. All rock utilized shall be durable limestone or dolostone that is free from shale, cracks, and other defects. Fills shall be constructed in accordance with SUDAS Specification 2010.304. Measurement and payment at the unit price will be for each J-hook installed.

9.20 W-WEIR (EA). Item is for the construction of W-Weir as defined in the plans and specifications. Refer to the B-sheets for details. Top and footer boulders shall be constructed with stone. For this project, stone is defined as slabs of rock with two opposing sides that are relatively flat. All stone utilized must measure between 3 to 3.5 feet in diameter. Any additional boulders needed to construct the W-Weir shall be incidental to the bid unit price. Top and footer boulders along the length of the vane shall be touching with no gaps in-between. If irregularly shaped boulders are used and gaps are present between them, the gaps must be chinked or filled with smaller stones that cannot slip through the gaps on the upstream side of the structure. Fill voids with a combination of 3/8" to 6" crush stone and/or erosion stone. The chinking material and special backfill shall be incidental to the W-Weir unit price. Top and footer boulders along the hook shall have gaps that are 1/4 to 1/3 boulder diameter. Sill rocks shall be selected from IADOT approved quarries and must meet the grading criteria specified in the plans. Sill rocks shall be incidental to the W-Weir bid unit price. All rock utilized shall be durable limestone or dolostone that is free from shale, cracks, and other defects. Fills shall be constructed in accordance with SUDAS Specification 2010.304. Measurement and payment at the unit price will be for each W-weir installed.

9.21 ROOT WADS (EA). This work consists of collecting or furnishing, storage, preparation and installation of all materials required for proper installation of Root Wads. Refer to the B-sheets for details. Root Wads shall be constructed from hardwood tree species with a minimum trunk diameter of 12"-18" and should have 24-30 ft. (min) of the trunk length remaining. Smaller lengths and diameters of trunks may be used with prior approval from the engineer. The Contractor shall install all Root Wads as shown on the plans or as directed by the Engineer. Hardwood trees left over from prior clearing shall be stockpiled on-site for use as Root Wads. The Contractor, upon removal of the trunk and root, shall remove soil to the extent acceptable by the Engineer. Care shall be taken to preserve the root structure on the harvested trees to be used as Root Wads. Root Wad sections shall be constructed by trenching or as directed by the Engineer. Place the Root Wad on top of the boulders and, pin the Root Wad down using boulders, and place fill material over the structure. Rock quality for the Root Wad Structures shall meet the same criteria as that of class B Revetment. Fills shall be constructed in accordance with SUDAS Specification 2010.304. Payment shall include all excavation, grading, compacting, and placing of wood and revetment materials. Measurement and payment at the unit price will be for each Root Wad installed.

9.22 TOE WOOD (LF). This work consists of collecting or furnishing, storage, preparation and installation of all materials required for proper installation of toe wood. Refer to the B-sheets for details. The Contractor shall install all Toe Wood as shown on the plans or as directed by the Engineer. Backfill material should be topsoil suitable for vegetation and harvested on-site. If native topsoil material is predominantly sand, more cohesive material may be recommended, according to design. Payment for off-site cohesive material shall be from item 2.03. The finished surface of the banks should be in accordance with the grades, cross sections, and elevations of the design. Fills shall be constructed in accordance with SUDAS Specification 2010.304. Measurement and payment shall be by linear foot of Toe Wood installed.

9.23 SOIL LIFTS (LF). This bid item shall be for the installation of soil lifts as shown in the plans. Refer to the B-sheets for soil lift details. Unit price includes but is not limited to furnishing, installing, and minor grading. Live stakes required for soil lifts shall be paid under separate item. Fills shall be constructed in accordance with SUDAS Specification 2010.304. Measurement and payment shall be by linear foot of soil lift installed.



NORTH BID ALTERNATE

The intent of the alternate bid (north) is to construct the project along the stream channel as shown from approx. STA. 0+00 to 9+25. The alternate bid for the northern portion shall include the construction of J-hooks, root wads.

9.30 J-HOOK (EA). This bid item shall be for the construction of J-hooks at the northern portion of the project between STA 0+00 & 9+25 as shown on sheet D.01. Refer to bid item 9.20 for description.

9.31 ROOT WADS (EA). This bid item shall be for the construction of root wads at the northern portion of the project between STA 0+00 & 9+25 as shown on sheet D.01. Refer to bid item 9.22 for description.

SOUTH BID ALTERNATE

The intent of the alternate bid (south) is to construct the project along the stream channel as shown from approx. STA. 26+50 to 32+36. The alternate bid for the southern portion shall include the construction of J-hooks, root wads, and the rock riffle.

ADDENDUM 1:

9.29 **9.19 ROCK RIFFLES & RANDOM BOULDER CLUSTERS (SY).** Item is for the construction of the Rock Riffle and Random Boulder Clusters as shown on sheet D.04. Rock Riffles ~~and Random Boulder Clusters~~ shall be constructed ~~by hand~~ with IADOT Class E Revetment from an IADOT approved quarry. Unit price includes but is not limited to all revetment, excavation, work, labor, materials required to construct each rock riffle as shown on the B-sheets. Unit price assumes the construction of 10 boulder clusters as shown on the detail's sheets. Measurement and payment shall be by square yard. ←

Boulders used to construct random boulder clusters shall measure 3 to 3.5 feet in diameter, be angular in shape, and be selected from an IADOT approved quarry. All boulders utilized shall be durable limestone or dolostone that is free from shale, cracks, and other defects. Boulders shall be incidental to the Rock Riffles & Random Boulder Clusters bid unit price.

9.30 J-HOOK (EA). This bid item shall be for the construction of J-hooks at the southern portion of the project between STA 26+50+00 & 32+36 as shown on sheet D.04. Refer to bid item 9.20 for description.

9.31 ROOT WADS (EA). This bid item shall be for the construction of root wads at the southern portion of the project between STA 26+50 & 32+36 as shown on sheet D.04. Refer to bid item 9.22 for description.