

# ADDENDUM #2

**SUBJECT:** Copper River Watershed EVOS Habitat Enhancement Project  
 Sites COP 20, 22, 25  
 Pre-Bid Questions and Addendum #2

**DATE:** January 22, 2021

## Questions

Number	Asked by	Question	Answer
1	Kirsten Voorhees - Contech	<p>on review of plan set, we have noticed the corrugated aluminum pipe for COP 22, 25 and 20 – Item No. 602(2) on sheet C2, of C10 called out as aluminum structural plate with the following spans:</p> <p>COP 22 - 5'-4" span x 3'-5" rise</p> <p>COP 25 - 5'-10" span x 3'-11 rise</p> <p>COP 20 - 5'-10" span x 3'-11 rise</p> <p>All three of these overflow pipes are smaller than any ALSP Pipe Arch options available due to bending limitations of these types of materials. This size is typically a stick of pipe and not structural plate that is bolted together. Is the owner willing to either enlarge the culvert (our minimal ALSP pipe arch size is 6'-7" span x 5'-8" rise) or allow pipe and connector bands for this overflow pipe adjacent to the box culvert?</p>	<p>The pipe arch overflow culverts for all three sites (COP 22, COP 25, COP 20) should be rolled corrugated aluminum pipe arch culverts rather than aluminum structural plate. Pay items are being changed from 602(2) Structural Plate Aluminum Pipe Arch to 603(10) Corrugated Aluminum Pipe Arch with this addendum.</p>

Contract Provisions and Specifications

Page Numbers	Total Pages	Section	Action	Explanation of Correction
22-23-A	2	Section 602 Structural Plate Pipe	Deleted 602(2) Pay Items for structural plate aluminum pipe arches for overflow culverts	Question 1 – changing overflow culverts from structural plate aluminum to rolled corrugated aluminum pipe arch culverts
23-B	1	Section 603 Culverts and Storm Drains	Added 603(10) Pay Items for corrugated aluminum pipe arches for overflow culverts	Question 1
50-51	2	Materials Certification List	Removed structural plate aluminum pipe arches under Section 602 and added corrugated aluminum pipe arches under Section 603	Question 1
69	1	Bid Schedule A – COP 22	Added 603(10) Pay Item for Corrugated Aluminum Pipe Arch; deleted 602(2) Pay Item for Structural Plate Aluminum Pipe Arch	Question 1
70	1	Bid Schedule B – COP 25	Added 603(10) Pay Item for Corrugated Aluminum Pipe Arch; deleted 602(2) Pay Item for Structural Plate Aluminum Pipe Arch	Question 1
71	1	Bid Schedule C – COP 20	Added 603(10) Pay Item for Corrugated Aluminum Pipe Arch; deleted 602(2) Pay Item for Structural Plate Aluminum Pipe Arch	Question 1

Plan Sheets

Crossing	Page Numbers	Action	Explanation of Correction
COP 20	C2	<ul style="list-style-type: none"> <li>Deleted Pay Item 602(2) Structural Plate Aluminum Pipe Arch</li> <li>Added Pay Item 603(10) Corrugated Aluminum Pipe Arch</li> </ul>	Question 1
COP 22	C2	<ul style="list-style-type: none"> <li>Deleted Pay Item 602(2) Structural Plate Aluminum Pipe Arch</li> <li>Added Pay Item 603(10) Corrugated Aluminum Pipe Arch</li> </ul>	Question 1
COP 25	C2	<ul style="list-style-type: none"> <li>Deleted Pay Item 602(2) Structural Plate Aluminum Pipe Arch</li> <li>Added Pay Item 603(10) Corrugated Aluminum Pipe Arch</li> </ul>	Question 1

Specifications, the AASHTO Manual for Bridge Evaluation, and the Contract requirements”.

Revise and resubmit the CBDP to incorporate any comments received during review. Resubmit the IDC letter after comments have been incorporated.

The approval of the CBDP shall not be construed as complete review but will only indicate that the general method of construction and working drawings are acceptable to the Engineer, that the CBDP appears complete, and that an IDC letter was provided. The Contractor shall remain responsible for all structural calculations and load rating completed for the culvert bridge.

**602-3.01 CONSTRUCTION REQUIREMENTS.** Add the following:

Contractor shall be responsible for shipping and transporting the structural plate aluminum box culverts and aluminum pipe arch overflow culverts to the project site. Contractor is responsible for assembling and installing the structural plate aluminum box culverts and aluminum pipe arch overflow culverts as shown in the Plans.

If requested by the Engineer, provide the Engineer access to manufacturer’s installation recommendations such as attendance at the pre-construction meeting or written literature.

The Engineer shall approve of the culvert foundation elevations and material prior to placement of the culverts in the final locations as shown on the Plans. Final elevations of the culvert inverts shall be within 1 inch, plus or minus, of the elevations shown in the Plans. Structural culvert invert elevations outside the 1-inch plus or minus tolerance shall be cause for resetting of the culverts at the Contractor’s expense. Notify the Engineer a minimum of 72 hours before scheduled placement of the culverts.

Obtain the Engineer’s approval before over-excavating in-situ materials.

**602-5.01 BASIS OF PAYMENT.** Delete the first sentence and replace with the following:

Excavation, borrow, and bedding are paid for under Sections 203 and 301, accordingly.

All work including labor, materials, and equipment necessary to complete design and load rating for culvert bridges and meet the submittal requirements stated in this Section is subsidiary to Section 602 pay items.

All work including labor, materials, and equipment associated with furnishing, transporting, assembling, inspecting, and installing culvert bridges **\*\*\*Deleted\*\*\*** is subsidiary to Section 602 pay items.

Add the following pay items:

Pay Item	Pay Unit
***Deleted***	
***Deleted***	
***Deleted***	
602(4) Structural Plate Aluminum Box Culvert, 15'-6" Span, 7'-3" Rise (COP 20)	Linear Foot
602(4) Structural Plate Aluminum Box Culvert, 19'-10" Span, 7'-8" Rise (COP 22)	Linear Foot
602(4) Structural Plate Aluminum Box Culvert, 29'-0" Span, 8'-3" Rise (COP 25)	Linear Foot

**SECTION 603**

**CULVERTS AND STORM DRAINS**

**Special Provision**

**603-5.01 BASIS OF PAYMENT. Add the following:**

Excavation, borrow, and bedding are paid for under Sections 203 and 301, accordingly.

All work including labor, materials, and equipment associated with furnishing, transporting, assembling, inspecting, and installing overflow pipe arch culverts is subsidiary to Section 603 pay items.

**Add the following pay items:**

Pay Item	Pay Unit
603(10) Corrugated Aluminum Pipe Arch, 57" Span, 38" Rise (COP 20)	Linear Foot
603(10) Corrugated Aluminum Pipe Arch, 64" Span, 43" Rise (COP 22)	Linear Foot
603(10) Corrugated Aluminum Pipe Arch, 71" Span, 47" Rise (COP 25)	Linear Foot

## Materials Certification List

MATERIALS CERTIFICATION LIST (2 pages)			
Project Name: Copper River Watershed Habitat Enhancement Project, Cordova EVOS Sites COP 20, 22, and 25 (Fish Passage Improvements at Mile 18)			
DESCRIPTION	CONSTRUCTION PROJECT ENGINEER	DESIGN ENGINEER OF RECORD	MANUFACTURER / REMARKS
104 SCOPE OF WORK			
Quality Control Manager Qualifications			
Daily Quality Control Reports			
108 PROSECUTION AND PROGRESS			
Preconstruction Conference Submittals			
202 REMOVAL OF STRUCTURE AND OBSTRUCTIONS			
Disposal plan, waiver of claims, permission and/or permits			
203 EXCAVATION AND EMBANKMENT			
Usable Excavation Materials Analysis			
602 STRUCTURAL PLATE PIPE			
Structural Plate Aluminum Box Culvert 15'-6" Span, 7'-3" Rise			
Culvert Bridge Design Package			
Independent Design Check			
Structural Plate Aluminum Box Culvert 19'-10" Span, 7'-8" Rise			
Culvert Bridge Design Package			
Independent Design Check			
Structural Plate Aluminum Box Culvert 29'-0" Span, 8'-3" Rise			
Culvert Bridge Design Package			
Independent Design Check			
<b>603 CULVERTS AND STORM DRAINS</b>			
<b>Corrugated</b> Aluminum Pipe Arch 57" Span, 38" Rise			
<b>Corrugated</b> Aluminum Pipe Arch 64" Span, 43" Rise			
<b>Corrugated</b> Aluminum Pipe Arch 71" Span, 47" Rise			
611 RIPRAP			
Riprap, Class I Materials Analysis			
Riprap, Class II Materials Analysis			

623 BLOCK SODDING			
Vegetated Mat Salvage and Replanting, Work Plan			
640 MOBILIZATION AND DEMOBILIZATION			
Record As-Built Drawings			
641 EROSION SEDIMENT AND POLLUTION CONTROL			
Storm Water Pollution Prevention Plan (SWPPP)			
eNOI			
eNOT and Final SWPPP			
SWPPP Inspection Reports			
642 CONSTRUCTION SURVEYING AND MONUMENTS			
Survey Personnel Qualifications & Equipment List			
Grade Checker Personnel Qualifications and Equipment List			
Survey Field Notes			
643 TRAFFIC MAINTENANCE			
Traffic Control Plan			
Construction Phasing Plan			
Traffic Control Supervisor and Flagger Certifications			
646 CMP SCHEDULING			
Project Schedule			
672 STREAM DIVERSION AND DEWATERING			
Stream Diversion and Dewatering Plan			
690 WATERWAY			
Waterway Bed Fill Material Analysis			
<b>***Deleted***</b>			
703 AGGREGATES			
Select Material Type A Analysis			
Select Material Type E1 Analysis			
Subbase, Grading F Material Analysis			
724 SEED			
Seed Mix Certification			
726 TOPSOIL			
Topsoil Certification			
729 GEOSYNTHETICS			
Geotextile, Reinforcement - Type 2			
Geotextile, Erosion Control, Class 1			

NOTE: The above materials certification list is not all inclusive. In addition to the above, the Contractor is required to comply with all submittal requirements as required or identified in the plans, specifications, ADOT&PF Standard Specifications for Highway Construction (SSHC) 2020 Edition, or as directed by the Engineer.



BASE BID - SCHEDULE A: Cordova 18 Mile Fish Passage Project – COP 22					
Item No.	Work Description	Pay Unit	Unit price	Quantity	Amount
201(9)	CLEARING AND GRUBBING	LUMP SUM		ALL REQ'D	
202(4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT		61	
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD		1463	
203(5A)	BORROW, SELECTED MATERIAL, TYPE A	CUBIC YARD		1287	
203(5B)	SUBBASE, GRADING F	CUBIC YARD		528	
301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD		55	
602(4)	STRUCTURAL PLATE ALUMINUM BOX CULVERT, 19'-10" SPAN, 7'-8" RISE	LINEAR FOOT		90	
<b>603(10)</b>	<b>CORRUGATED ALUMINUM PIPE ARCH, 64" SPAN, 43" RISE</b>	LINEAR FOOT		83	
611(1A)	RIPRAP, CLASS I	CUBIC YARD		121	
611(1B)	RIPRAP, CLASS II	CUBIC YARD		<b>110</b>	
613(2)	CULVERT MARKER POST	EACH		4	
618(2)	SEEDING	POUND		3	
620(1)	TOPSOIL (4")	SQUARE YARD		240	
630(3B)	GEOTEXTILE, REINFORCEMENT, TYPE 2	SQUARE YARD		977	
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD		84	
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM		ALL REQ'D	
641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM		ALL REQ'D	
642(1)	CONSTRUCTION SURVEYING	LUMP SUM		ALL REQ'D	
642(14)	AS-BUILT PLANS	LUMP SUM		ALL REQ'D	
643(2)	TRAFFIC MAINTENANCE	LUMP SUM		ALL REQ'D	
644(15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	LUMP SUM		ALL REQ'D	
672(1)	STREAM DIVERSION & DEWATERING	LUMP SUM		ALL REQ'D	
690(10)	WATERWAY BED FILL	LINEAR FOOT		189	
690(12)	WATERWAY BANK REVEGETATION AND PROTECTION	LUMP SUM		ALL REQ'D	
	<b>***DELETED***</b>				

**Total Base Bid - Schedule A:** \_\_\_\_\_

Date: \_\_\_\_\_

Contractor Name: \_\_\_\_\_

<b>BASE BID - SCHEDULE B: Cordova 18 Mile Fish Passage Project – COP 25</b>					
<b>Item No.</b>	<b>Work Description</b>	<b>Pay Unit</b>	<b>Unit price</b>	<b>Quantity</b>	<b>Amount</b>
201(9)	CLEARING AND GRUBBING	LUMP SUM		ALL REQ'D	
202(4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT		121	
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD		1254	
203(5A)	BORROW, SELECTED MATERIAL, TYPE A	CUBIC YARD		1331	
203(5B)	SUBBASE, GRADING F	CUBIC YARD		583	
301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD		55	
602(4)	STRUCTURAL PLATE ALUMINUM BOX CULVERT, 29'-0" SPAN, 8'-3" RISE	LINEAR FOOT		76	
<b>603(10)</b>	<b>CORRUGATED</b> PLATE ALUMINUM PIPE ARCH, 71" SPAN, 47" RISE	LINEAR FOOT		70	
611(1A)	RIPRAP, CLASS I	CUBIC YARD		143	
611(1B)	RIPRAP, CLASS II	CUBIC YARD		<b>154</b>	
613(2)	CULVERT MARKER POST	EACH		4	
618(2)	SEEDING	POUND		2	
620(1)	TOPSOIL (4")	SQUARE YARD		220	
630(3B)	GEOTEXTILE, REINFORCEMENT, TYPE 2	SQUARE YARD		1080	
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD		117	
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM		ALL REQ'D	
641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM		ALL REQ'D	
642(1)	CONSTRUCTION SURVEYING	LUMP SUM		ALL REQ'D	
642(14)	AS-BUILT PLANS	LUMP SUM		ALL REQ'D	
643(2)	TRAFFIC MAINTENANCE	LUMP SUM		ALL REQ'D	
644(15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	LUMP SUM		ALL REQ'D	
672(1)	STREAM DIVERSION & DEWATERING	LUMP SUM		ALL REQ'D	
690(10)	WATERWAY BED FILL	LINEAR FOOT		125	
690(12)	WATERWAY BANK REVEGETATION AND PROTECTION	LUMP SUM		ALL REQ'D	
	<b>***DELETED***</b>				

**Total Base Bid - Schedule B:** \_\_\_\_\_

Date:

Contractor Name: \_\_\_\_\_

ADDITIVE ALTERNATE - SCHEDULE C: Cordova 18 Mile Fish Passage Project – COP 20					
Item No.	Work Description	Pay Unit	Unit price	Quantity	Amount
201(9)	CLEARING AND GRUBBING	LUMP SUM		ALL REQ'D	
202(4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT		57	
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD		1100	
203(5A)	BORROW, SELECTED MATERIAL, TYPE A	CUBIC YARD		869	
203(5B)	SUBBASE, GRADING F	CUBIC YARD		374	
301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD		44	
602(4)	STRUCTURAL PLATE ALUMINUM BOX CULVERT, 15'-6" SPAN, 7'-3" RISE	LINEAR FOOT		75	
<b>603(10)</b>	<b>CORRUGATED</b> PLATE ALUMINUM PIPE ARCH, 57" SPAN, 38" RISE	LINEAR FOOT		66	
611(1A)	RIPRAP, CLASS I	CUBIC YARD		<b>198</b>	
613(2)	CULVERT MARKER POST	EACH		4	
618(2)	SEEDING	POUND		2	
620(1)	TOPSOIL (4")	SQUARE YARD		180	
630(3B)	GEOTEXTILE, REINFORCEMENT, TYPE 2	SQUARE YARD		681	
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD		70	
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM		ALL REQ'D	
641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM		ALL REQ'D	
642(1)	CONSTRUCTION SURVEYING	LUMP SUM		ALL REQ'D	
642(14)	AS-BUILT PLANS	LUMP SUM		ALL REQ'D	
643(2)	TRAFFIC MAINTENANCE	LUMP SUM		ALL REQ'D	
644(15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	LUMP SUM		ALL REQ'D	
672(1)	STREAM DIVERSION & DEWATERING	LUMP SUM		ALL REQ'D	
690(10)	WATERWAY BED FILL	LINEAR FOOT		117	
690(12)	WATERWAY BANK REVEGETATION AND PROTECTION	LUMP SUM		ALL REQ'D	
	<b>***DELETED***</b>				

**Total Additive Alternate - Schedule C:** \_\_\_\_\_

Date: \_\_\_\_\_ Contractor Name: \_\_\_\_\_

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### ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	QUANTITY
201(9)	CLEARING AND GRUBBING	LUMP SUM	ALL REQUIRED
202(4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT	57
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	1100
203(5A)	BORROW, SELECTED MATERIAL, TYPE A	CUBIC YARD	869
203(5B)	SUBBASE, GRADING F	CUBIC YARD	374
301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD	44
603(10)	CORRUGATED ALUMINUM PIPE ARCH, 57" SPAN, 38" RISE	LINEAR FOOT	66
602(4)	STRUCTURAL PLATE ALUMINUM BOX CULVERT, 15'-6" SPAN, 7'-3" RISE	LINEAR FOOT	75
611(1A)	RIPRAP, CLASS 1	CUBIC YARD	198
613(2)	CULVERT MARKER POST	EACH	4
618(2)	SEEDING	POUND	2
620(1)	TOPSOIL (4")	SQUARE YARD	180
630(3B)	GEOTEXTILE, REINFORCEMENT, TYPE 2	SQUARE YARD	681
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	70
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642(14)	AS-BUILT PLANS	LUMP SUM	ALL REQUIRED
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
644(15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	LUMP SUM	ALL REQUIRED
672(1)	STREAM DIVERSION & DEWATERING	LUMP SUM	ALL REQUIRED
690(10)	WATERWAY BED FILL	LINEAR FOOT	117
690(12)	WATERWAY BANK REVEGETATION AND PROTECTION	LUMP SUM	ALL REQUIRED
690(13)	ROUNDED RIVER ROCK	CUBIC YARD	66

2

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### LEGEND

SYMBOL	DESCRIPTION
---	APPROXIMATE RIGHT-OF-WAY
⊙	CONTROL POINT
---	ORDINARY HIGH WATER
---	EXISTING CULVERT
---	EDGE OF PAVEMENT
---	EDGE OF GRAVEL/SHOULDER
---	EDGE OF VEGETATION
---	EXISTING THALWEG
---	TOP OF BANK
---	TOE OF SLOPE
---	PROPOSED CULVERT
---	WATERWAY BED FILL
---	WATERWAY BANK REVEGETATION AND PROTECTION
---	RIPRAP
---	ROUNDED RIVER ROCK
---	AGGREGATE SURFACE COURSE, E-1
---	SELECTED MATERIAL, TYPE A
---	SUBBASE, GRADING F
---	SEED
---	BULK BAG COFFERDAM

### ABBREVIATIONS

ALCAP	ALUMINUM CAP
AVASP	AS VERTICAL AS SAFELY POSSIBLE
BFW	BANKFULL WIDTH
BOF	BOTTOM OF FOOTING
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CRH	COPPER RIVER HIGHWAY
ELEV	ELEVATION
ESCP	EROSION AND SEDIMENT CONTROL PLAN
HW/D	HEADWATER TO DEPTH RATIO
INV	INVERT ELEVATION
MIN	MINIMUM
MP	MILEPOST
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
Q	FLOW
ROW	RIGHT-OF-WAY
STA	STATION
TYP	TYPICAL
VAP	VERTICAL ADJUSTMENT POTENTIAL

TABLE 1

COARSE MATERIAL: RIPRAP, CLASS I		
APPROX. SIZE	MASS (LBS)	% PASSING
10"	50	100
8"	25	50

TABLE 2

FINE MATERIAL: POROUS BACKFILL	
SIZE/SIEVE	% PASSING
3"	100
1"	65
0.75"	50
#4	25
#10	15

### GENERAL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL SITE FEATURES. IF THE CONTRACTOR DISCOVERS CONDITIONS OTHER THAN THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE.
- COORDINATE CONSTRUCTION STAGING AND MOBILIZATION AREAS AND ACTIVITIES WITH OWNER'S REPRESENTATIVE.
- COORDINATE WITH OTHER CONTRACTORS WHO MAY BE PRESENT.
- EXERCISE CAUTION AND COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS FOR WORKING IN CONFINED AREAS.
- STATIONING IS ALONG CENTERLINE OF STREAM OR ROADWAY.
- VERIFY ELEVATIONS OF ALL PROPOSED STRUCTURES PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES FROM PLANS IMMEDIATELY TO OWNER'S REPRESENTATIVE.
- CULVERT DESIGN LOAD: AASHTO LOADING HL-93, MINIMUM SOIL BEARING CAPACITY: 3,900 PSF.
- EXCAVATION AND COMPACTION:
  - REMOVE AND DISPOSE OF ALL ORGANIC OR OVER SATURATED SOFT MATERIAL, WHICH CANNOT BE COMPACTED.
  - BACKFILL SHALL BE PLACED AND COMPACTED WITH CARE AND SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY ON BOTH SIDES OF PIPE. MATERIAL TO BE COMPACTED TO 95% MAXIMUM DENSITY.
- CULVERT INSTALLATION:
  - CULVERT JOINTS SHALL NOT LEAK.
  - CULVERT INFILL MATERIAL SHALL BE INSTALLED IN PIPE ACCORDING TO PLANS. MANUAL INSTALLATION IS REQUIRED.
- ALL VEGETATION IN THE AREAS NOT AFFECTED BY WORK SHALL BE PRESERVED AND PROTECTED BY THE CONTRACTOR. RESEED ALL DISTURBED AREAS.
- TWO CULVERT MARKERS WILL BE INSTALLED AT EACH CULVERT PER STD D-09.00.

TABLE 3

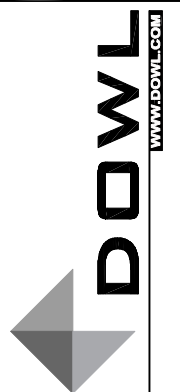
WATERWAY BED FILL	
SIZE/SIEVE	% PASSING
12"	100
10"	95
8"	73
5"	56
3"	51
1"	29
0.75"	23
#4	11
#10	7

TABLE 4

ROUNDED RIVER ROCK	
SIZE/SIEVE	% PASSING
12"	100
9"	75
6"	30
3"	15
1"	10
0.75"	5
#4	0
#10	0

THE FOLLOWING DOT&PF STANDARD DRAWING APPLIES TO THIS PROJECT:  
D-09.00 CULVERT MARKER POST

REV	DATE	DESCRIPTION
1	1/21/21	ADDENDUM #1
2	1/22/21	ADDENDUM #2



CORDOVA FISH PASSAGE IMPROVEMENTS  
WEST FORK 18 MILE CREEK - COP 20  
GENERAL NOTES AND QUANTITIES  
CORDOVA, ALASKA

PROJECT 1136.63087.01  
DATE DECEMBER 2020  
© DOWL 2020  
SHEET  
C2 OF C10

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690(13)	ROUNDED RIVER ROCK	CUBIC YARD	66

2

1

1

### LEGEND

DESCRIPTION	
APPROXIMATE RIGHT-OF-WAY	---
CONTROL POINT	⊕
ORDINARY HIGH WATER	—
EXISTING CULVERT	—
EDGE OF PAVEMENT	///
EDGE OF GRAVEL/SHOULDER	---
EDGE OF VEGETATION	~
EXISTING THALWEG	—
TOP OF BANK	—
TOE OF SLOPE	—
PROPOSED CULVERT	—
WATERWAY BED FILL	▨
WATERWAY BANK REVEGETATION AND PROTECTION	▨
RIPRAP	▨
ROUNDED RIVER ROCK	▨
AGGREGATE SURFACE COURSE, E-1	▨
SELECTED MATERIAL, TYPE A	▨
SUBBASE, GRADING F	▨
SEED	•
BULK BAG COFFERDAM	○

### ABBREVIATIONS

ALCAP	ALUMINUM CAP
AVASP	AS VERTICAL AS SAFELY POSSIBLE
BFW	BANKFULL WIDTH
BOF	BOTTOM OF FOOTING
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CRH	COPPER RIVER HIGHWAY
ELEV	ELEVATION
ESCP	EROSION AND SEDIMENT CONTROL PLAN
HW/D	HEADWATER TO DEPTH RATIO
INV	INVERT ELEVATION
MIN	MINIMUM
MP	MILEPOST
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
Q	FLOW
ROW	RIGHT-OF-WAY
STA	STATION
TYP	TYPICAL
VAP	VERTICAL ADJUSTMENT POTENTIAL

TABLE 1

COARSE MATERIAL: RIPRAP, CLASS I		
APPROX. SIZE	MASS (LBS)	% PASSING
10"	50	100
8"	25	50

TABLE 2

FINE MATERIAL: POROUS BACKFILL	
SIZE/SIEVE	% PASSING
3"	100
1"	65
0.75"	50
#4	25
#10	15

### GENERAL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL SITE FEATURES. IF THE CONTRACTOR DISCOVERS CONDITIONS OTHER THAN THOSE SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE.
- COORDINATE CONSTRUCTION STAGING AND MOBILIZATION AREAS AND ACTIVITIES WITH OWNER'S REPRESENTATIVE.
- COORDINATE WITH OTHER CONTRACTORS WHO MAY BE PRESENT.
- EXERCISE CAUTION AND COMPLY WITH ALL APPLICABLE OSHA REQUIREMENTS FOR WORKING IN CONFINED AREAS.
- STATIONING IS ALONG CENTERLINE OF STREAM OR ROADWAY.
- VERIFY ELEVATIONS OF ALL PROPOSED STRUCTURES PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES FROM PLANS IMMEDIATELY TO OWNER'S REPRESENTATIVE.
- CULVERT DESIGN LOAD: AASHTO LOADING HL-93, MINIMUM SOIL BEARING CAPACITY: 3,900 PSF.
- EXCAVATION AND COMPACTION:
  - REMOVE AND DISPOSE OF ALL ORGANIC OR OVER SATURATED SOFT MATERIAL, WHICH CANNOT BE COMPACTED.
  - BACKFILL SHALL BE PLACED AND COMPACTED WITH CARE AND SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY ON BOTH SIDES OF PIPE. MATERIAL TO BE COMPACTED TO 95% MAXIMUM DENSITY.
- CULVERT INSTALLATION:
  - CULVERT JOINTS SHALL NOT LEAK.
  - CULVERT INFILL MATERIAL SHALL BE INSTALLED IN PIPE ACCORDING TO PLANS. MANUAL INSTALLATION IS REQUIRED.
- ALL VEGETATION IN THE AREAS NOT AFFECTED BY WORK SHALL BE PRESERVED AND PROTECTED BY THE CONTRACTOR. RESEED ALL DISTURBED AREAS.
- TWO CULVERT MARKERS WILL BE INSTALLED AT EACH CULVERT PER STD D-09.00.

TABLE 3

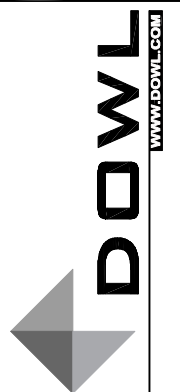
WATERWAY BED FILL	
SIZE/SIEVE	% PASSING
12"	100
10"	95
8"	73
5"	56
3"	51
1"	29
0.75"	23
#4	11
#10	7

THE FOLLOWING DOT&PF STANDARD DRAWING APPLIES TO THIS PROJECT:  
D-09.00 CULVERT MARKER POST

TABLE 4

ROUNDED RIVER ROCK	
SIZE/SIEVE	% PASSING
12"	100
9"	75
6"	30
3"	15
1"	10
0.75"	5
#4	0
#10	0

REV	DATE	DESCRIPTION
1	1/21/21	ADDENDUM #1
2	1/22/21	ADDENDUM #2



CORDOVA FISH PASSAGE IMPROVEMENTS  
MIDDLE FORK 18 MILE CREEK - COP 22  
GENERAL NOTES AND QUANTITIES  
CORDOVA, ALASKA

