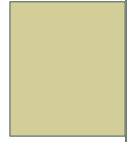


## ANIMAS CONSOLIDATED DITCH COMPANY

PO Box 3777 ~ Durango, CO 81302

(970) 749-7983 / email: [meme@animasconsolidatedditch.com](mailto:meme@animasconsolidatedditch.com)



July 31, 2017

State of Colorado  
Colorado Water Conservation Board  
Department of Natural Resources  
Attn.: Dori Vigil, Program Assistant II  
1313 Sherman Street, Room 718  
Denver, CO 80203

RE: Final Deliverable Report: POGG1 2017-491 – 48 Inch Culvert Replacement Project

Dear Ms. Vigil,

Thank you for your continuing help to small ditch companies like ours. We certainly appreciate your patience with us old irrigators who would rather be out irrigating rather than doing paperwork.

The Animas Consolidated Ditch Company has completed the replacement of an 84 foot long 4 foot diameter culvert referenced in WSRF Grant POGG1 2017-491.

From a logistical point of view, the project went well, and was finished early enough in 2017 as to not adversely impact the opening of the ditch for the 2017 irrigation season.

### TASK 1: Surveying and Site Assessment

- Initial condition of the failing culvert was done by Animas Consolidated Ditch Co. – attached
- Survey of the ditch topography was completed by Goff Engineering and Surveying

### TASK 2: Culvert Design

- Design of culvert completed by Goff Engineering and Surveying – attached
- Due to the close proximity of this culvert to the 1893 residential house, additional design and installation oversight was completed by Trautner Geotech, LLC
- A 48 inch round Coated CMP from Contech with a projected life of over 100 years was selected and purchased and installed

### TASK 3: Construction

- AJ Construction, an experienced local contractor was selected. They smoothly interfaced with:
  - Animas Consolidated Ditch Company to provide a good and timely installation. The culvert was installed per the technical specifications of the culvert manufacturer, on time. There was no interruption of irrigation water to the agricultural lands that depend upon this ditch.
  - Woodchuck Tree Service LLC, who removed the large trees that needed to be taken out to allow installation of the new culvert.
  - La Plata County Road and Bridge Department, since the project was so close to County Road 203 a permit and traffic control was required. The project met all conditions of that permit and the permit has been closed out.
  - Atmos Energy Corporation as a new natural gas service was installed under the new culvert per their specifications.
  - Animas Water Company as a new domestic water service was installed under the new culvert per their specifications.
  - Animas River Topsoil who accepted the spoils from old landscaping, trees, walls, and steps, and provided replacement topsoil so new landscaping could be installed upon completion of construction.
  - Bruckbauer's to provide a finished grade of imported top soil in preparation for the landowners to complete their restored landscaping, which has been completed.
  - The three adjacent ditch members who paid to have a new lateral head gate installed in the up-stream concrete headwall as part of the culvert installation process.

The Animas Consolidated Ditch Company is pleased with the process, both the support from the Southwestern Roundtable, and the CWCB as well as the team members who worked together to complete the project. Water will continue to flow to thousands of acres of ag land and over 200 semi-urban residences that line the Animas Valley north of Durango.

Thank you,  
Ed Zink  
Secretary/Treasurer to the Animas Consolidated Ditch Company  
(970) 749-4621  
edzink@waterfallranch.com

# Bruckbauer - 2015



Distance from up-stream end in feet	height in inches	width in inches	observations about condition of pipe in December of 2015 after water was turned off for the winter, Ed and Jud
0	37	57	Near normal profile for a "squash" pipe, overburden comes right to end of pipe, no wing walls
5	23	60	pipe top being pushed down by 8 or 10 feet of overburden, center of bottom heaving upward, bottom rusted through
10	22	60	same
15	22	62	same
20	18	62	same
23			a failing joint where two sections of pipe meet, space between joints 3 to 6 inches and somewhat out of alignment
25	22	62	pipe top being pushed down by 8 or 10 feet of overburden, center of bottom heaving upward, bottom rusted through
30	23	62	same
35	25	62	same
40	27	64	same
45			a failing joint where two sections of pipe meet
45	28	62	pipe top being pushed down by 8 or 10 feet of overburden, center of bottom heaving upward, bottom rusted through
50	28	62	same
55	28	62	same
60	31	60	same
64			a failing joint where two sections of pipe meet, changes direction toward the west, about 8 or 10 degrees
65	33	60	not much overburden and pipe near normal profile, still rusted out on the bottom
70	34	58	not much overburden, but a large spruce tree is on top of the pipe, pipe near normal profile, rusted out on the bottom
75	36	58	not much overburden and pipe near normal profile, still rusted out on the bottom
80	37	57	same
84	39	57	no overburden, pipe near normal profile for a squash pipe, no wing walls
			Notes: the pipe is essentially level from one end to the other, except for the rising of the bottom via heaving
			The pipe is quite rusted, and in most of the length the bottom of the pipe is cracking and breaking as it heaves upward. In some places there is no longer any metal along the bottom
			The rough and jagged bottom easily catches trash, so in some places the clearance between the trash and the top of pipe was as little as 12 or 15 inches
			I have no knowledge of when the pipe was installed, but in checking around the community the old timers agree that it was already in place in the 1950's when Kenneth Logan was living there



# Bruckbauer 2017



# ANIMAS CONSOLIDATED DITCH COMPANY CULVERT REPLACEMENT PROJECT (CONCEPTUAL LAYOUT)

Sheet List Table	
Sheet Number	Sheet Title
C1.0	EXISTING CONDITIONS
C2.0	CULVERT PLAN & PROFILE
C2.1	PROJECT CROSS SECTIONS



GOFF ENGINEERING  
& SURVEYING, INC.  
126 ROCK POINT  
DRIVE SUITE A  
P.O. BOX 97  
DURANGO,  
COLORADO 81302  
(970) 247-1705  
www.GoffEngineering.com



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Revised:  
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ANIMAS CONSOLIDATED DITCH CO.  
CULVERT REPLACEMENT PROJECT  
LA PLATA COUNTY, COLORADO

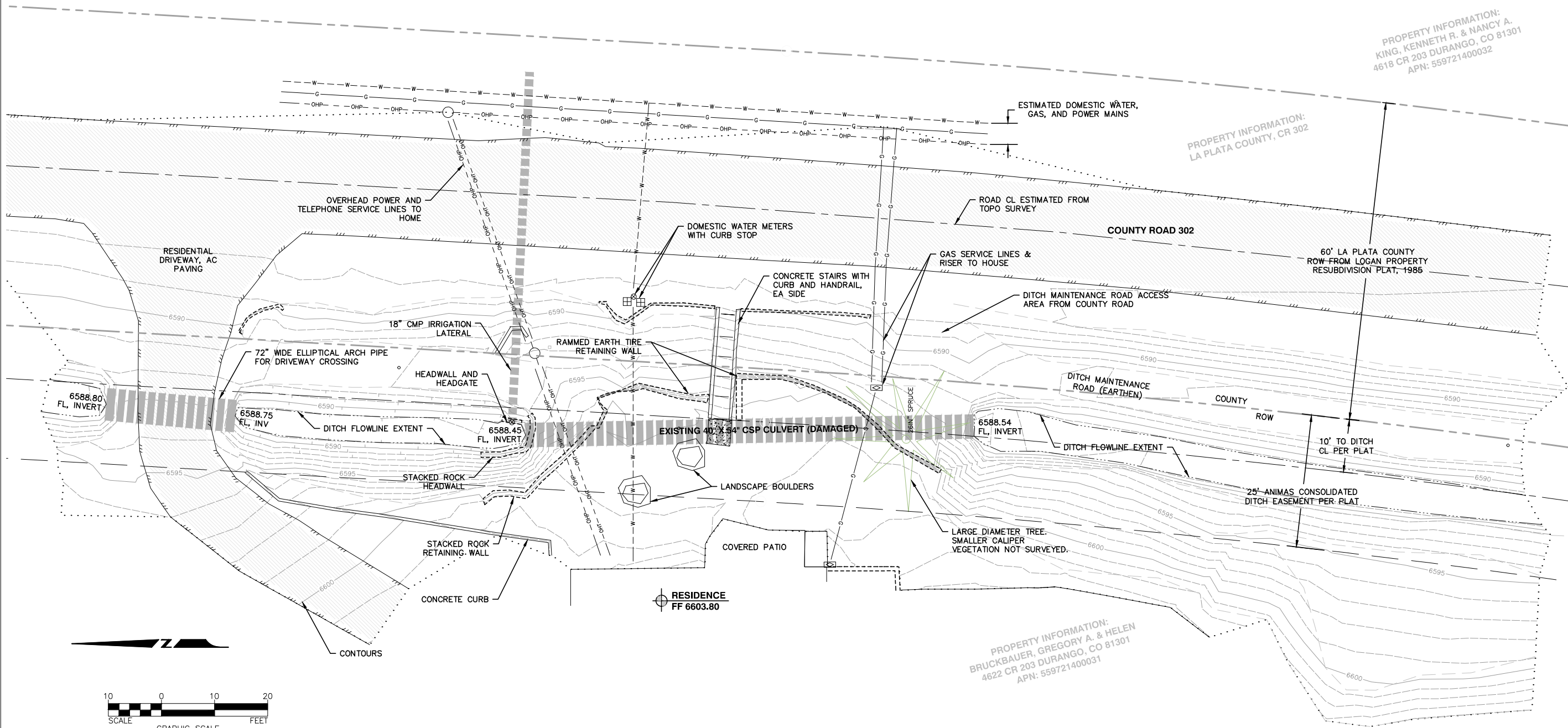
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CONCEPTUAL 20160908

Revisions:

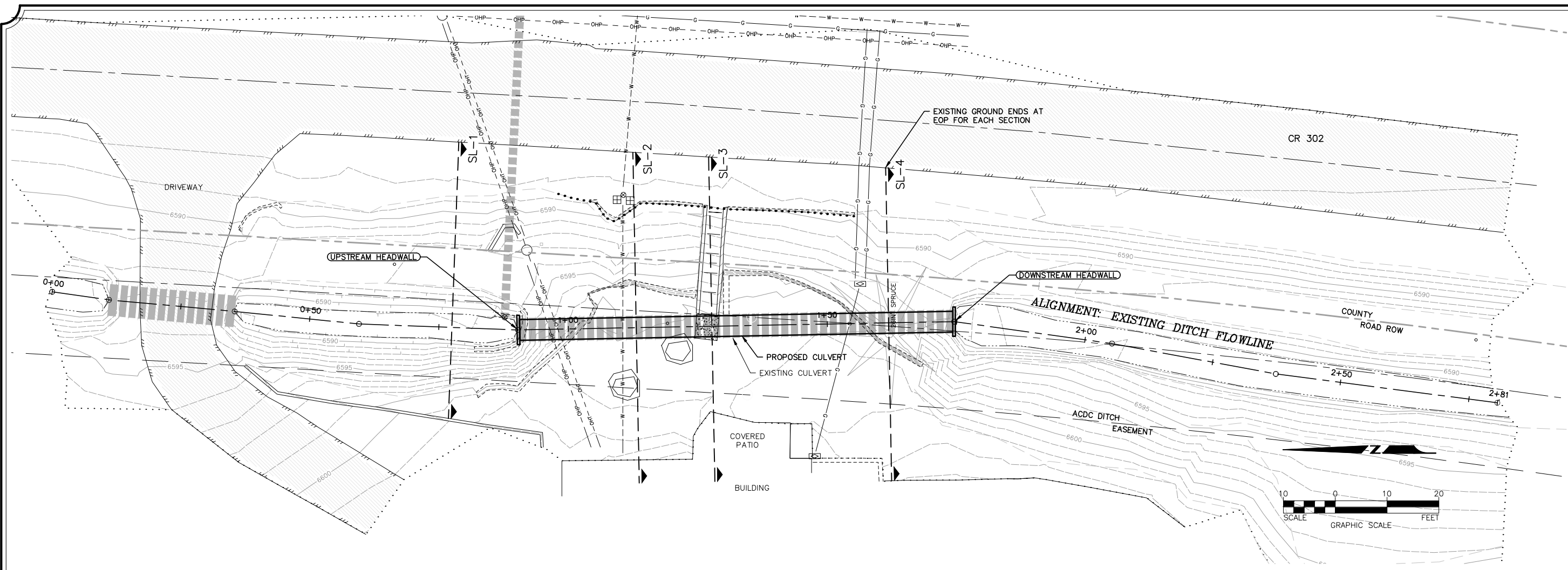
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Drawn By: TWE  
Checked By: BAH

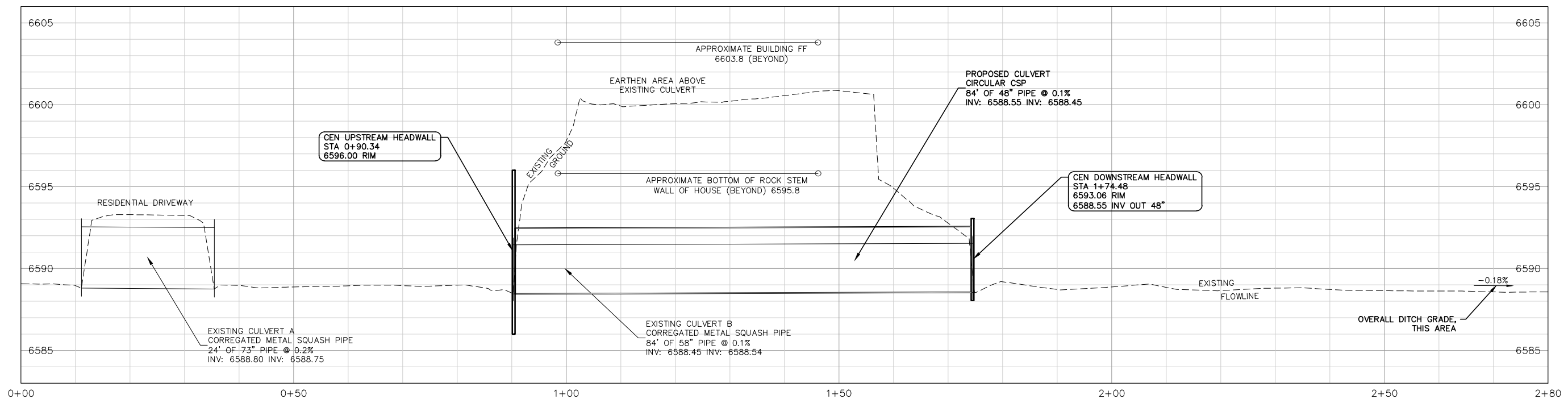
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**C1.0**  
EXISTING CONDITIONS







- EXISTING DITCH FLOWLINE PROFILE (0+00 TO 2+80) -



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ANIMAS CONSOLIDATED DITCH CO.  
CULVERT REPLACEMENT PROJECT

LA PLATA COUNTY, COLORADO

Issue Record:

CONCEPTUAL 20160908

Revisions:

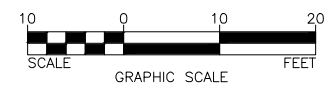
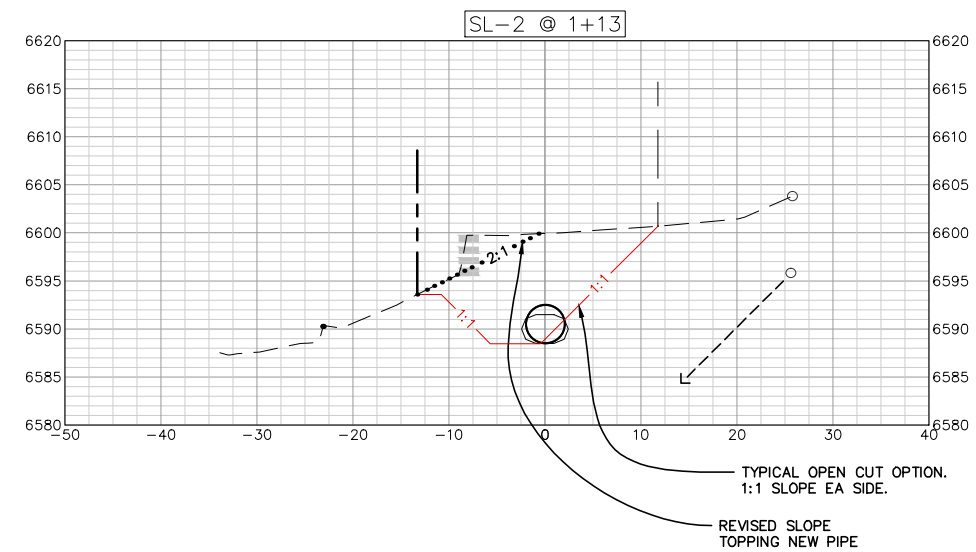
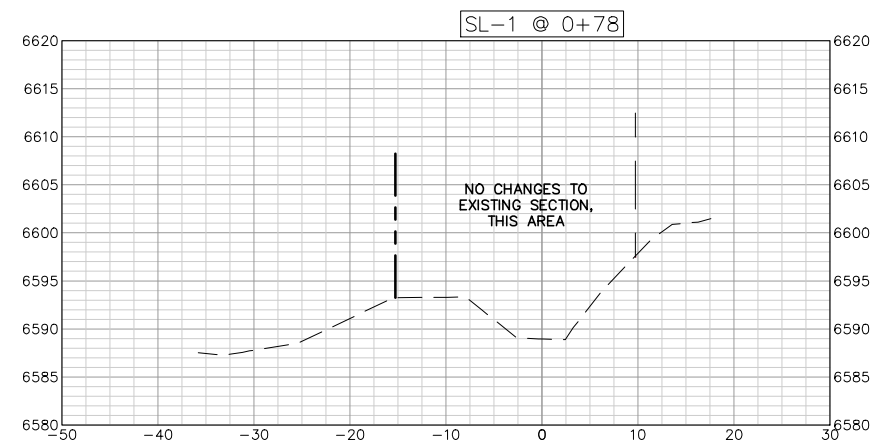
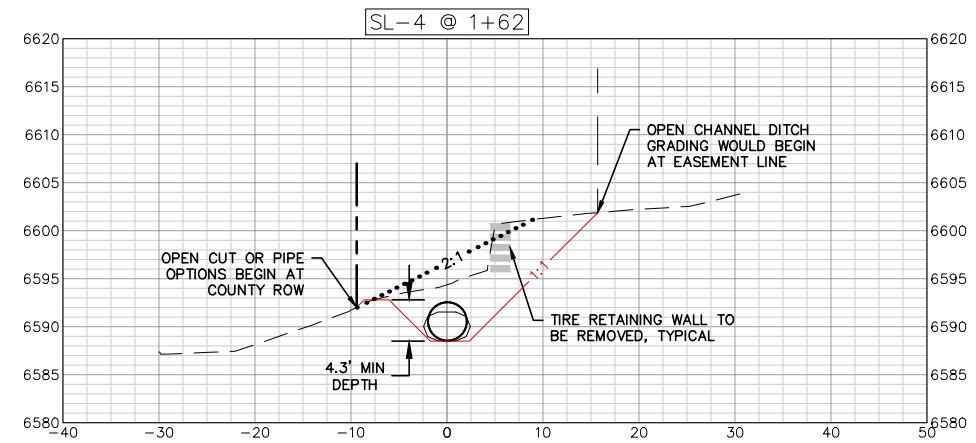
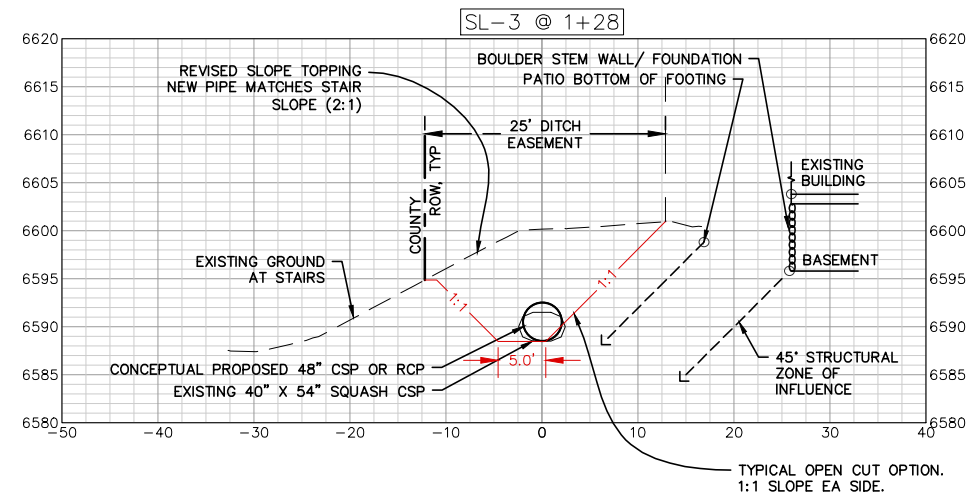
Project Number: 16-063

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Checked By: BAH

Sheet

**C2.0**

CULVERT PLAN & PROFILE



### CONSTRUCTED

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ANIMAS CONSOLIDATED DITCH CO.  
CULVERT REPLACEMENT PROJECT

LA PLATA COUNTY, COLORADO

**THE UNIVERSITY OF CHICAGO**

Issue Record:

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visions:

Project Number: 16-063

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## C2.1

## OBJECT CROSS SECTIONS