

SEWER INTERCEPTOR PROJECT

Public Meeting

September 25, 2018



MOLZENCORBIN
ENGINEERS | ARCHITECTS | PLANNERS



**D.T. Collins &
Associates, PC**

Project Background

- ▶ 2008 Flood Resulting in Damage to Sewer Interceptor
- ▶ Previous planning and 30% design effort focused on relocation of the existing interceptor
- ▶ Project budget greater than available funding
- ▶ Significant constructability concerns
- ▶ This Project Team hired to re-evaluate the project - find an alternative that accomplished primary goals:
 - ▶ Fix damaged pipeline (reducing I&I)
 - ▶ Provide infrastructure that is resistant to future flood damage
 - ▶ Bring the project within remainder of available funds



Sanitary Sewer Repair-Rehabilitation Project

Restoration of
Existing Sewer Lines
and Manholes

Trenchless Pipe
Rehabilitation

Insitu Manhole
Repair

Lift Stations and
Forcemains

Abandonment of
Damaged and
Vulnerable
Locations

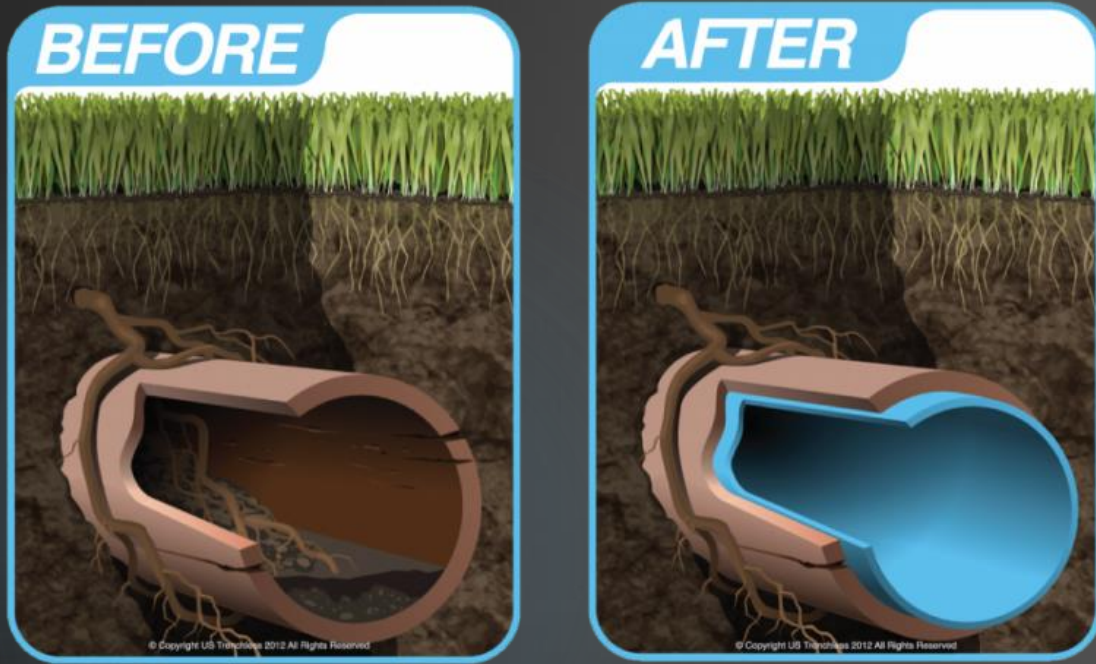
New Lift Stations
and Forcemains to
Convey Sewage

Hazard Mitigation
and Stabilization for
Sewer Lines

Protect River
Crossing Locations
of
Sewer Lines

Protect Sewer Lines
Parallel and
Proximate to the
River

Restoration of Existing Sewer Lines



- ▶ Trenchless Rehabilitation Methods:
 - ▶ Cured-In-Place Pipe
 - ▶ Thermoformed PVC
 - ▶ Spiral Wound PVC

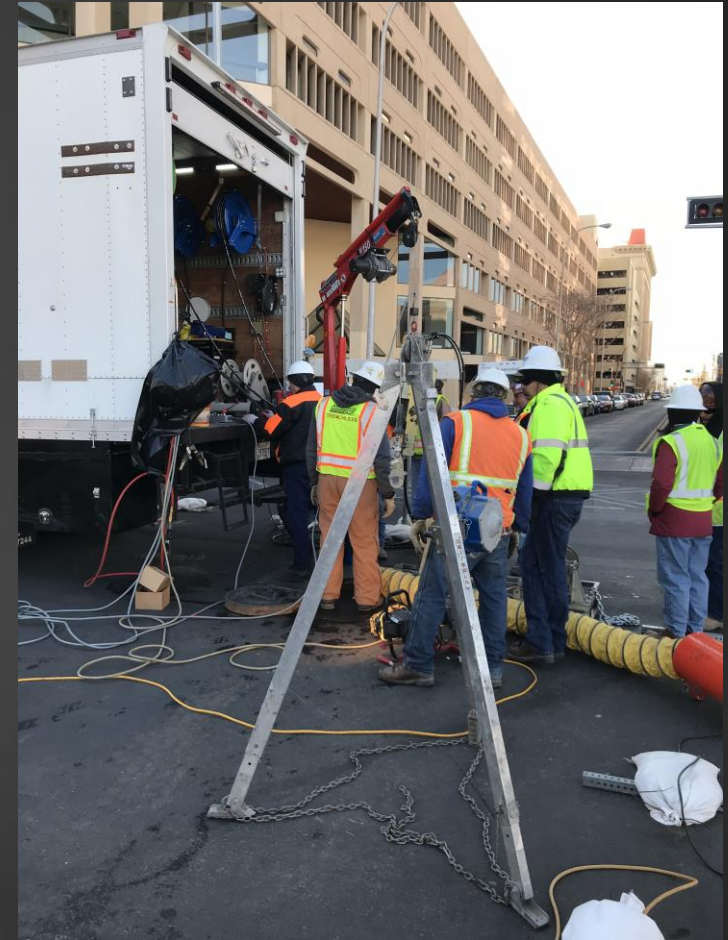
Cured-In-Place Pipe (CIPP)



Thermoformed PVC



Spiral Wound PVC



Manhole Restoration



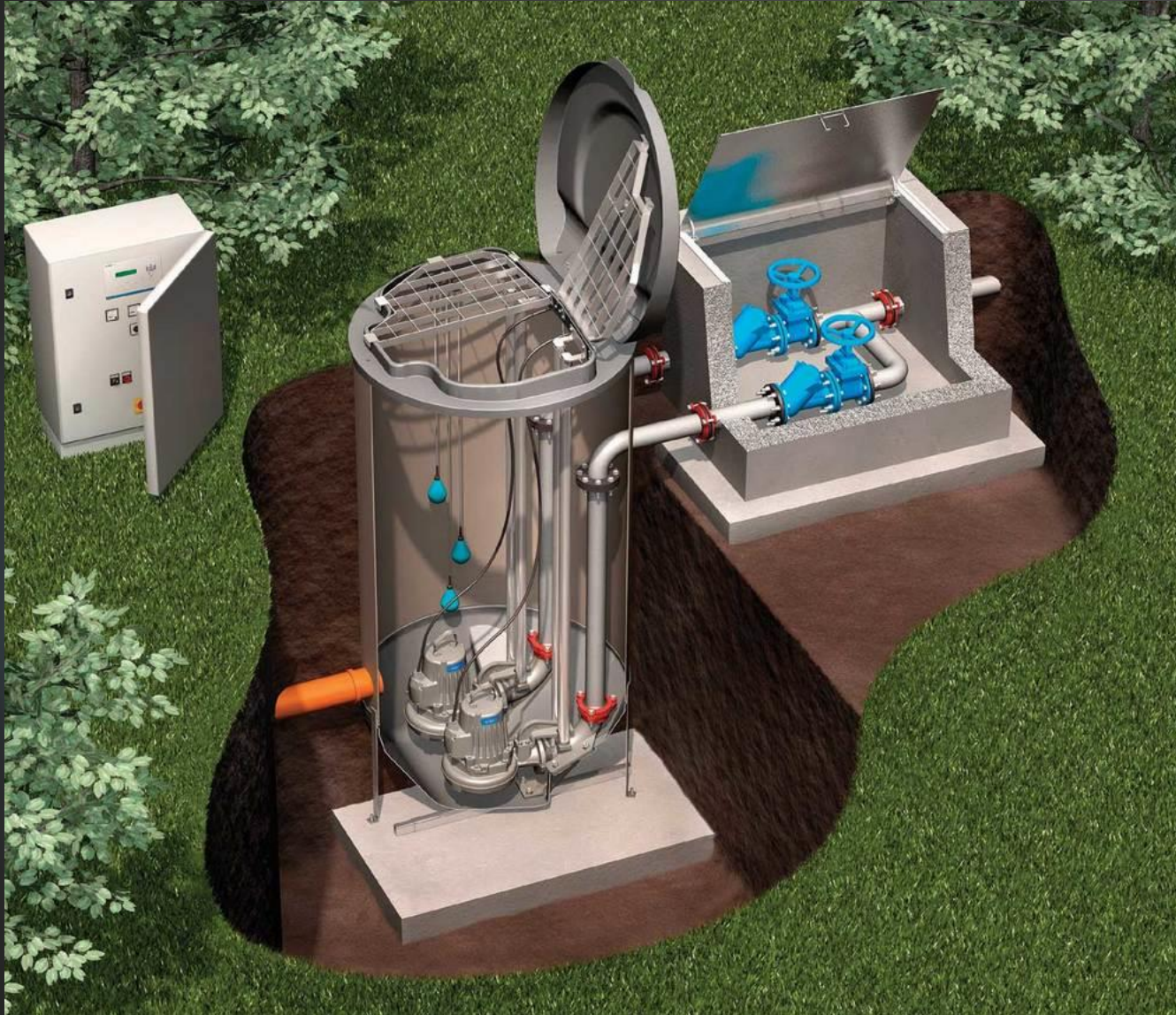
- ▶ Minimize replacement of manholes (less excavation)
- ▶ Improve accessibility for maintenance
- ▶ Reinforce structural integrity
- ▶ Prevent infiltration and inflow



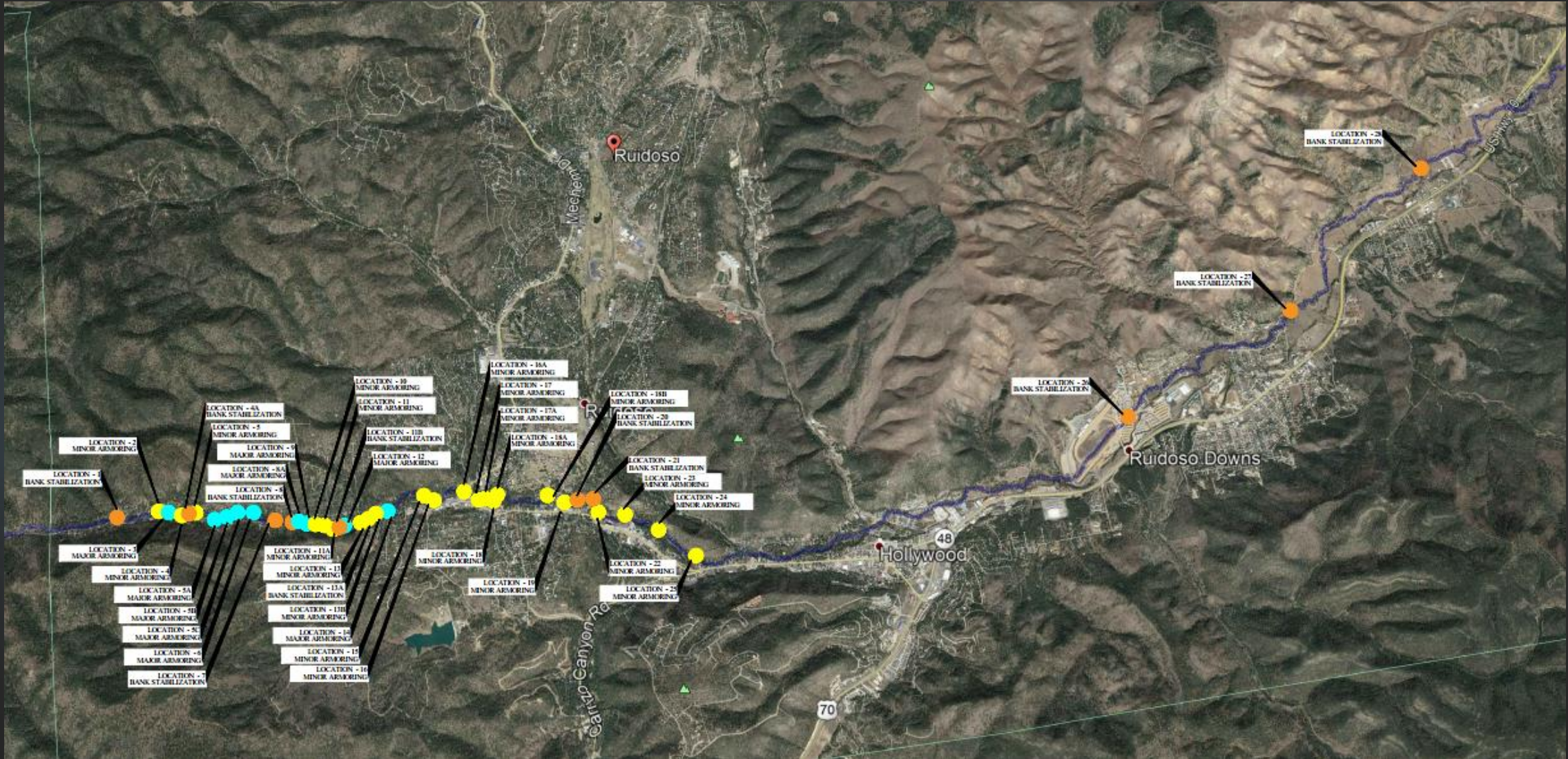
Sewer Line Relocations



Lift Stations and Forcemains



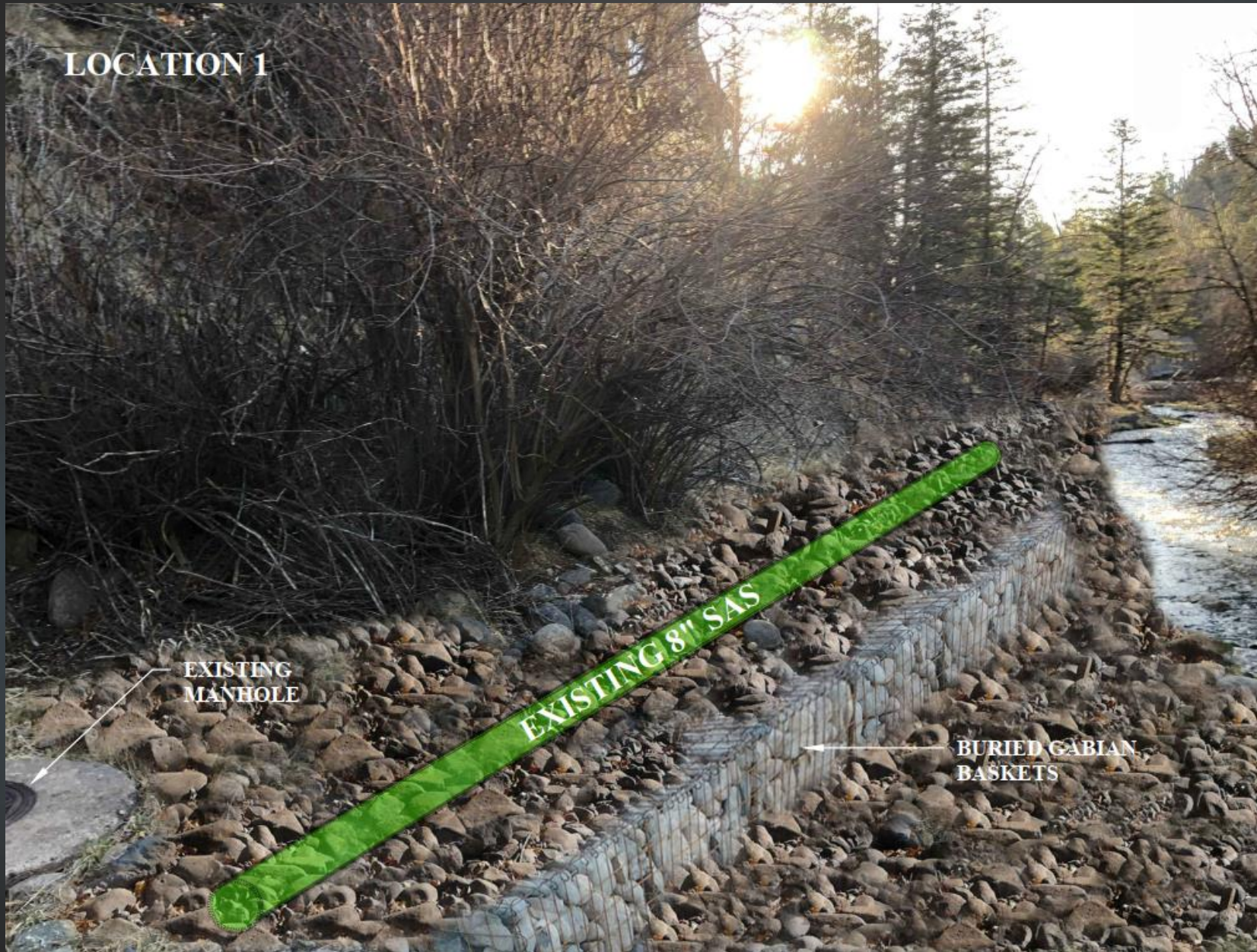
Hazard Mitigation and Stabilization for Sewer Lines



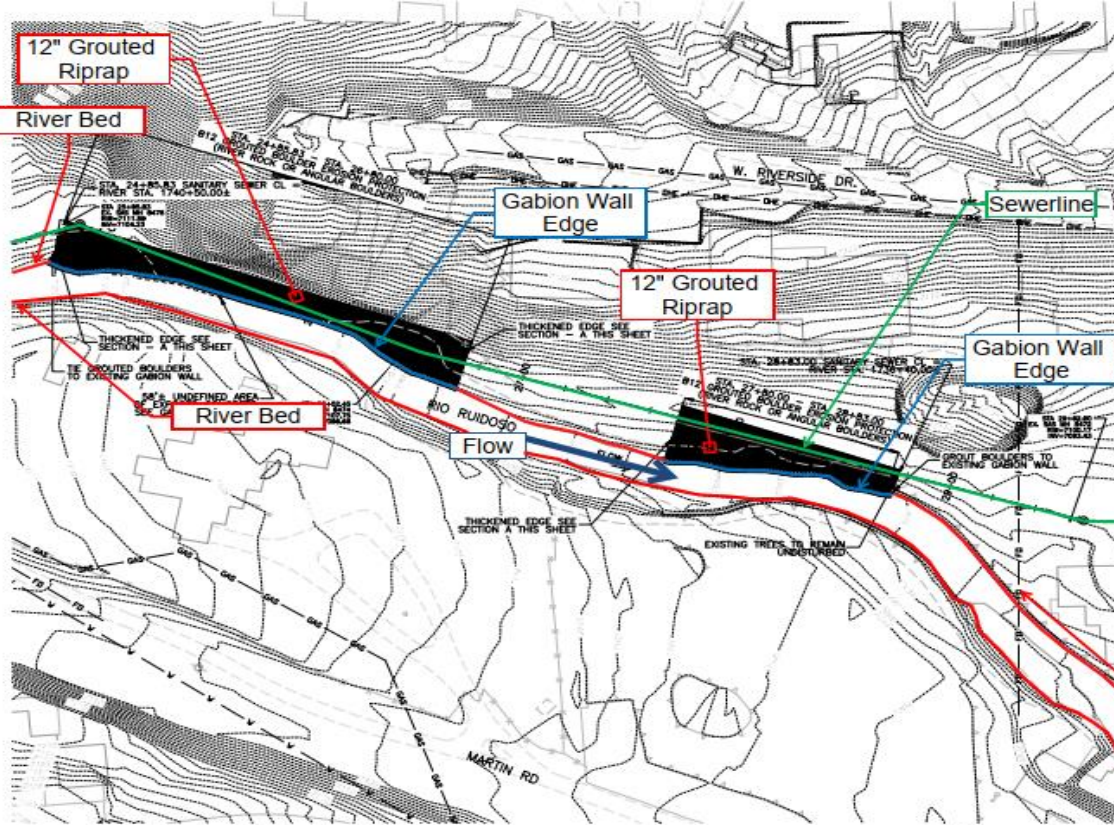
Location 1 - Before



Location 1 - After



Location 1 – Bank Stabilization



LOCATION 1 – PLAN

CONCEPTUAL
DRAWING
NOT FOR CONSTRUCTION

CAUTION NOTES:

1. ALL EXISTING UTILITIES MAY NOT BE SHOWN. EXISTING SERVICE CONNECTIONS ARE NOT SHOWN. ANY EXISTING UTILITIES THAT ARE SHOWN ARE SHOWN IN APPROXIMATE LOCATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL THE UTILITY OWNERS AND TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS.
2. VERIFY THE CONDITION OF THE EXISTING SYSTEM. THE CONTRACTOR MUST EXCAVATE AND EXPOSE THE EXISTING SEWER LINE AND/OR ENCASMENT AND VERIFY THE ELEVATION AND HORIZONTAL LOCATION AND ALIGNMENT OF THE SEWER AND THE OTHER APPURTENANCES SHOWN ON THE CONSTRUCTION DOCUMENTS. THE VERIFICATION MUST BE CONDUCTED WITH AN OWNER'S REPRESENTATIVE PRESENT. IN THE EVENT OF A DISCREPANCY, NO FURTHER CONSTRUCTION AT THE SITE CAN BE PERFORMED UNTIL THE DISCREPANCIES HAVE BEEN RESOLVED AND THE SITE RELEASED FOR CONSTRUCTION BY THE OWNER'S REPRESENTATIVE.

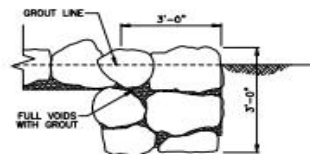
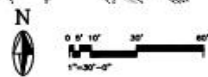
CONTROL POINTS (APPARENT EDGE OF LOW FLOW CHANNEL)			
STA.	OFFSET	ELEV.	NOTES
24+85.83	18' RT	7106.0	BEGIN WALL
25+47.00	3' RT	7103.9	
26+30.00	5' RT	7101.0	
26+80.00	12' RT	7099.2	END WALL
27+80.00	20' RT	7095.7	BEGIN WALL
28+41.00	10' RT	7093.6	
28+83.00	7' RT	7092.2	END WALL TIE TO EXISTING GABION / SHOTCRETE WALL

NOTE:

1. FIELD VERIFY APPARENT LOW FLOW CHANNEL CONTROL PRIOR TO CONSTRUCTION.

CONSTRUCTION NOTES:

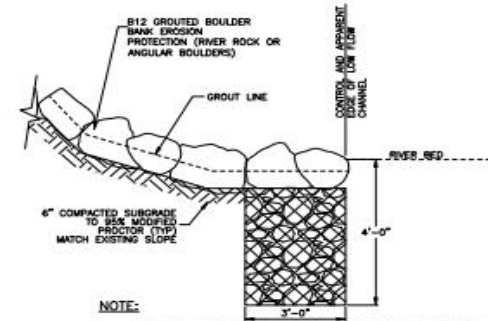
1. SEE SHEET L-XXX FOR LANDSCAPING PLAN



SECTION - A

GRADED BOULDER THICKENED EDGE DETAIL

SCALE: 1"=2'

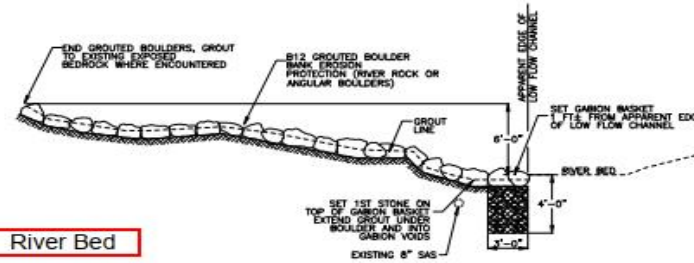


NOTE:

1. IF BEDROCK ENCOUNTERED, CLEAN TO SOLID ROCK AND CONFORM GABION BASKET OR GROUTED BOULDERS TO ROCK SURFACE.
2. FIELD VERIFY CONNECTION, IF ANY, BETWEEN SANITARY SEWER LINE ENCASMENT AND EXPOSED CONCRETE IN RIVER BED. IF NOT CONNECTED REMOVE CONCRETE. IF CONNECTED NOTIFY OWNERS REPRESENTATIVE FOR RESOLUTION.

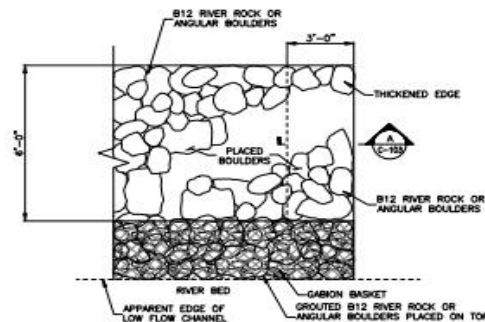
GABION WALL EDGE DETAIL

SCALE: 1"=2'



TYPICAL GROUTED BOULDER BANK EROSION PROTECTION SECTION

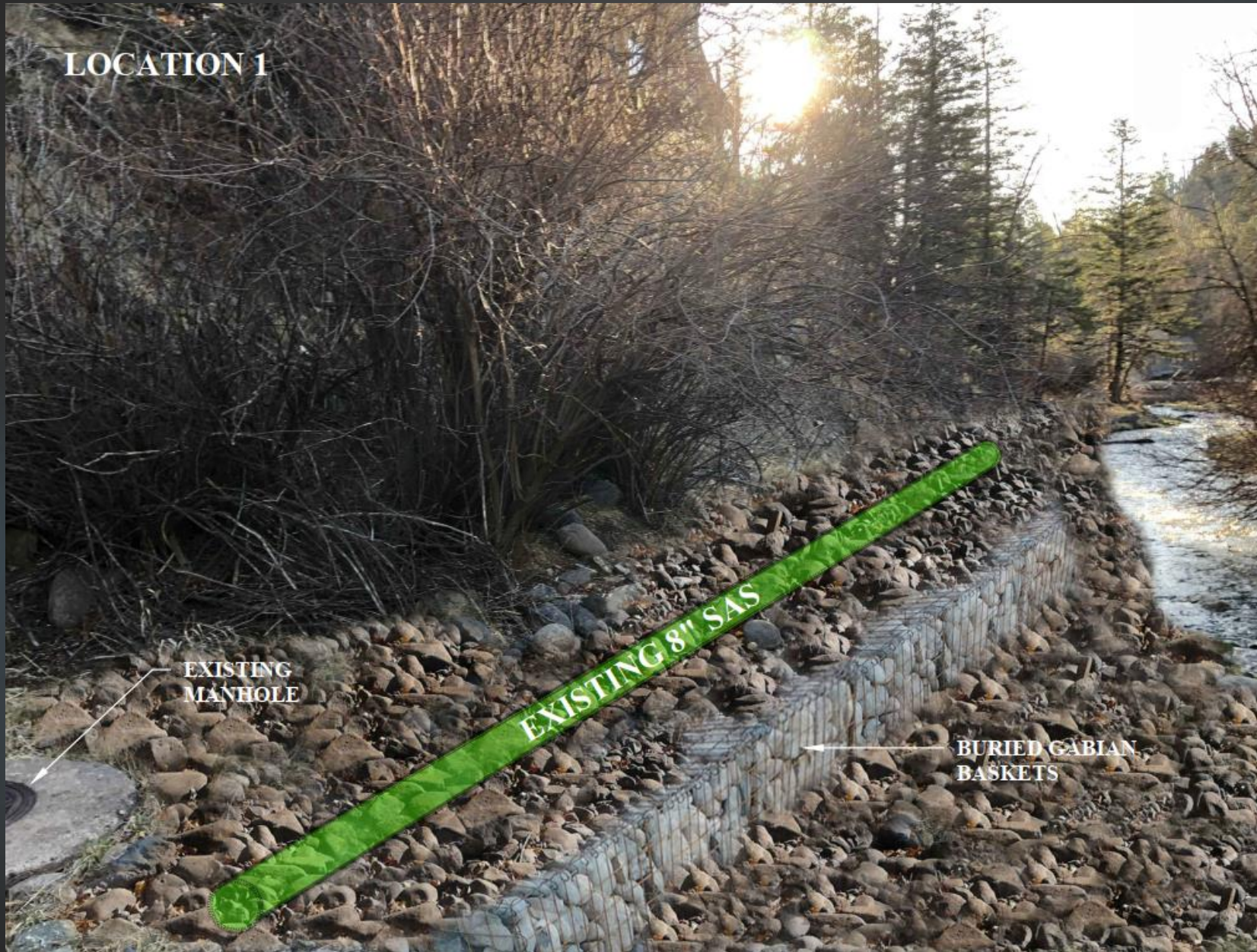
SCALE: HORIZ. 1"=5'
VERT. 1"=5'



BEGINNING AND ENDING GROUTED BOULDER

SCALE: N.T.S.

Location 1 - After



Location 1 – Post Construction



Location 12 - Before

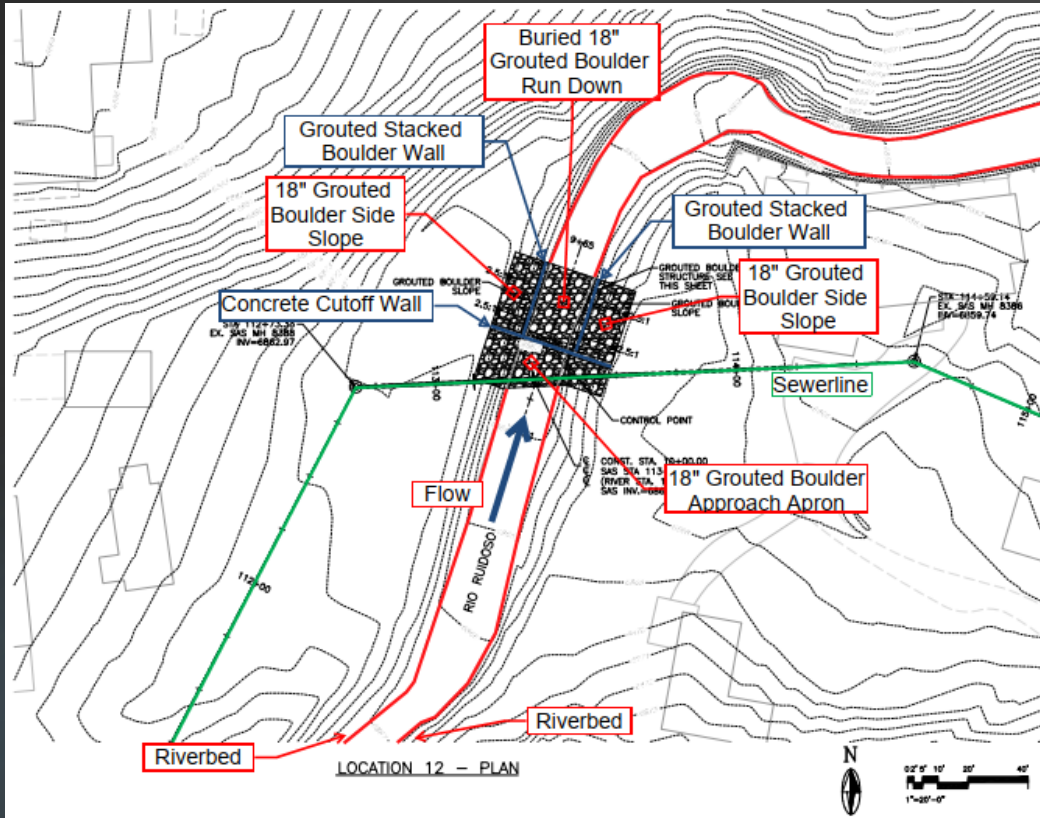


LOCATION 12

Location 12 - After



Location 12 – Minor Armoring



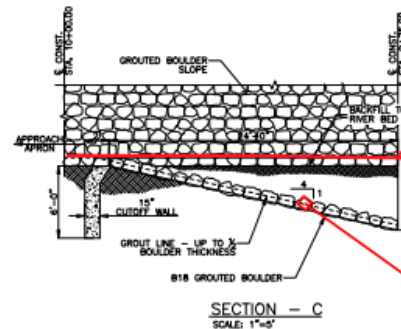
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CONCEPTUAL
DRAWING
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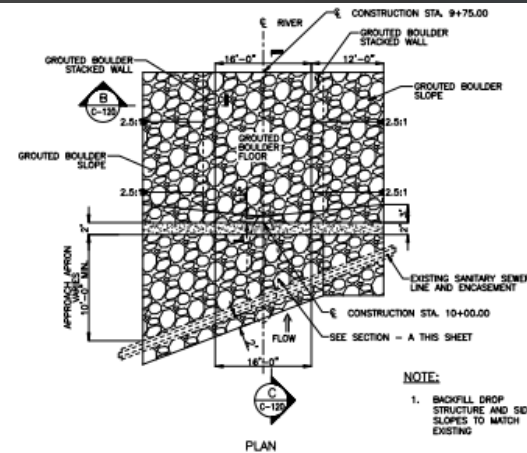
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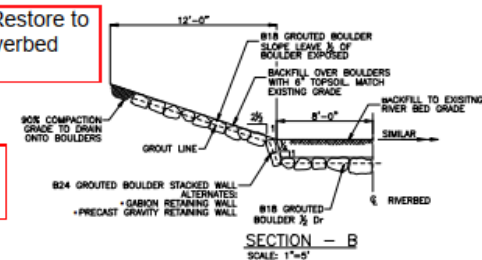
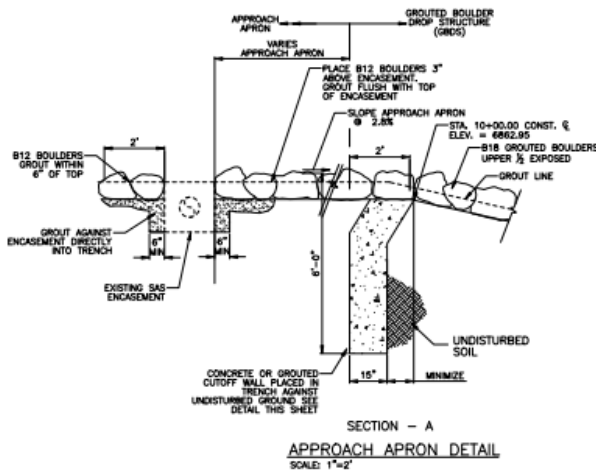
Backfill to Restore to
Existing Riverbed
Elevation

18" Grouted
Boulder Run
Down



GRouted BOULDER DROP STRUCTURE (GBDS)

SCALE: 1"=10'



Location 12 - After



Location 12 – Post Construction



Location 14 - Before

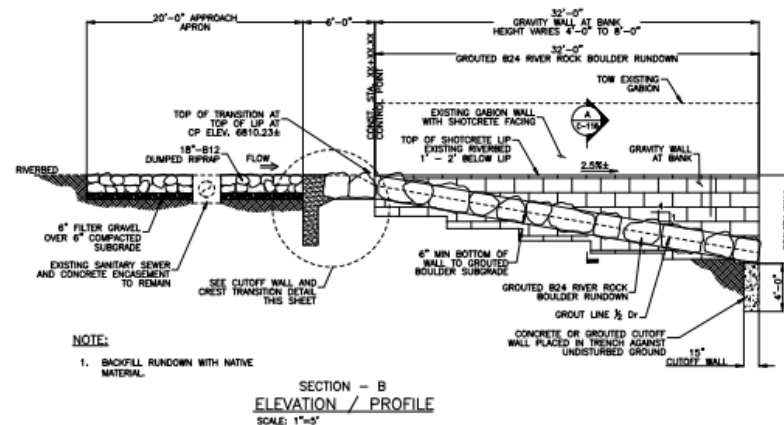


LOCATION 14

Location 14 - After



1049



Location 14 - After

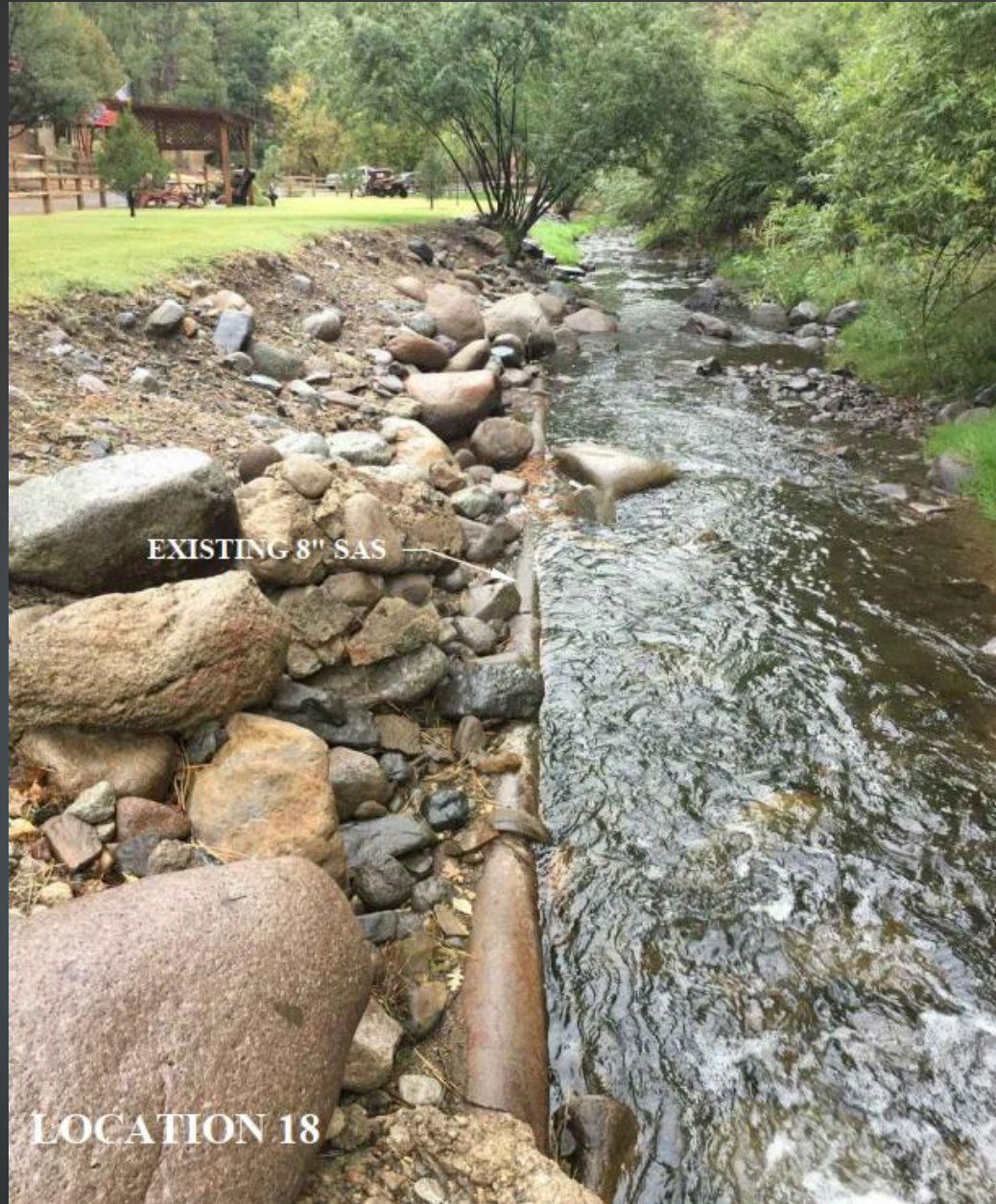


Location 14 – Post Construction



LOCATION 14

Location 18 – Relocation



Construction



Construction



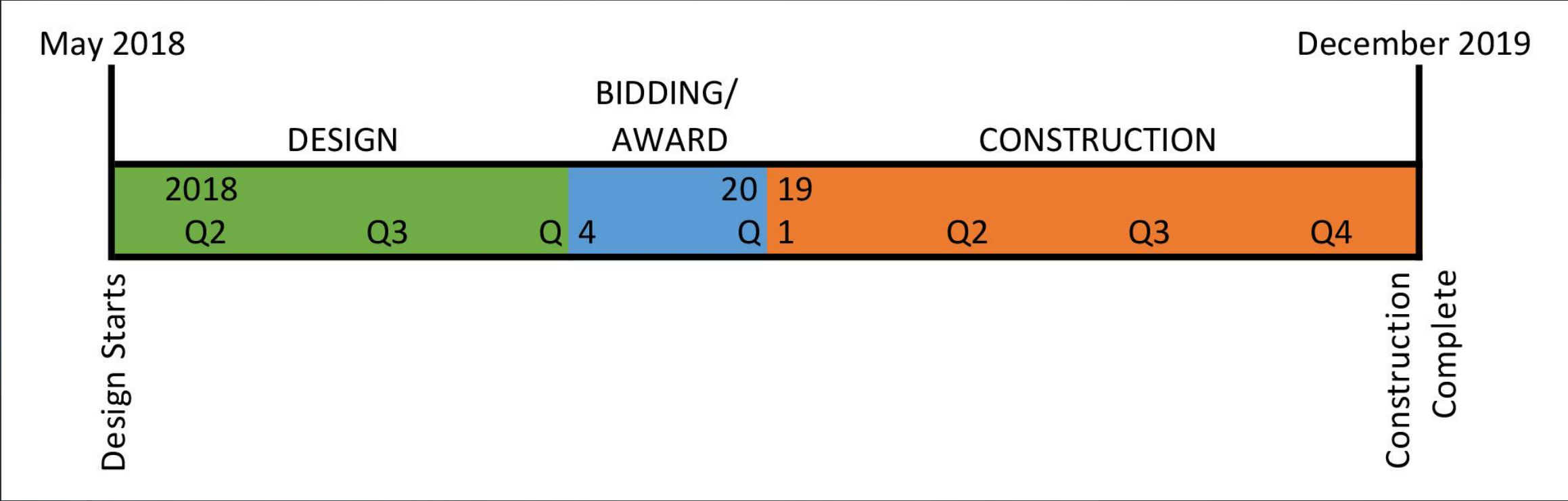
Construction



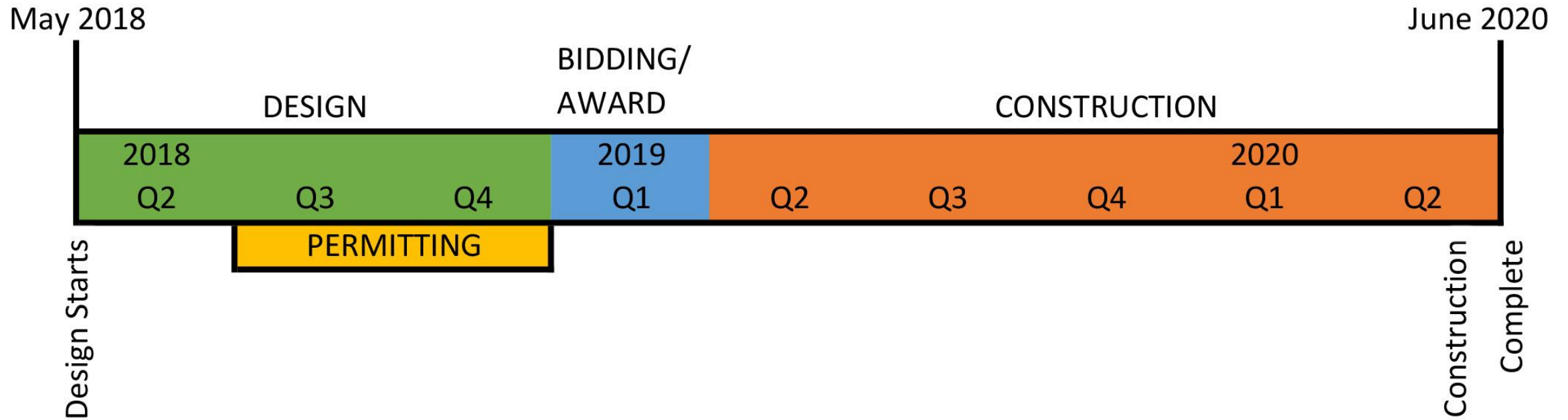
Post-Construction



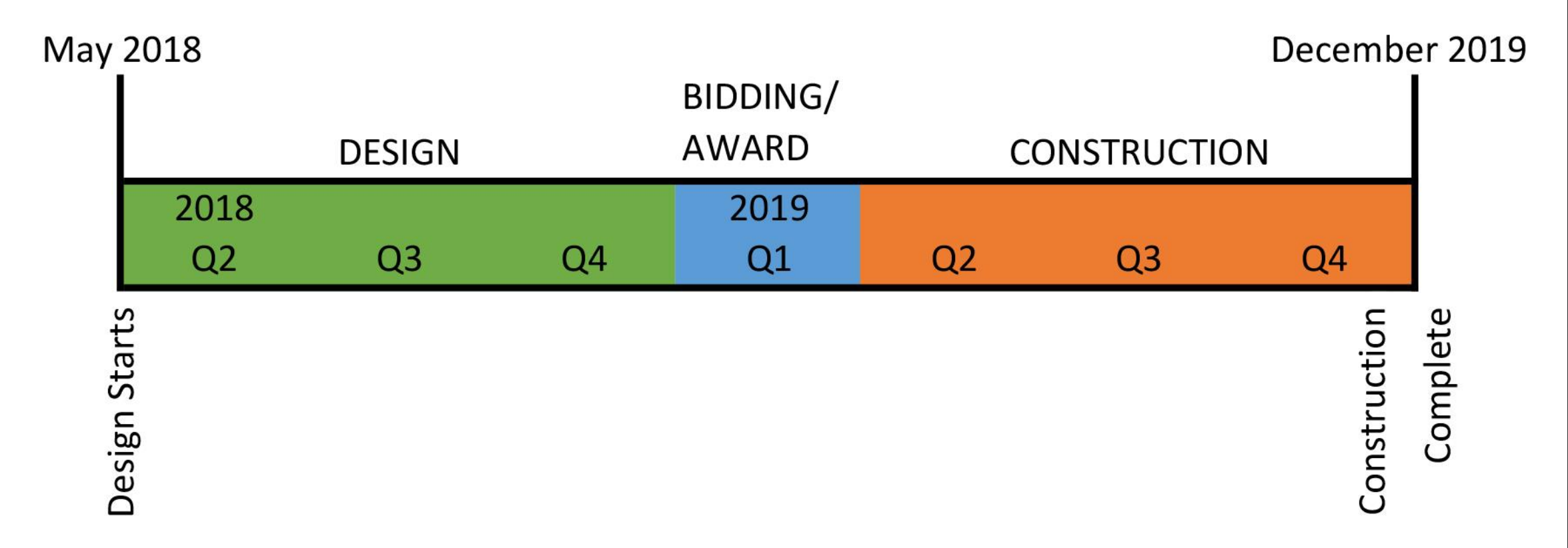
Restoration of Existing Sewer Lines and Manholes



Hazard Mitigation and Stabilization for Sewer Lines



Lift Stations and Forcemains



Update on Stakeholder Agency Coordination and Reporting for the Project



Detailed Project Timeline

Start Date	Task Name	Start Date	Task Name	Start Date	Task Name
07/01/08	Start of Disaster 1783	12/01/14	CH2M FEMA Project Estimates	11/20/17	Field Visit with USACE, Molzen Corbin, the Village of Ruidoso and High Water Mark.
08/01/08	End of Disaster 1783	12/01/14	Another FEMA review of Project Begins	11/30/17	Ruidoso Business After Hours - Public Outreach
08/01/08	Disaster 1783 Declared	01/01/15	Concern from FEMA on Scope of Work (SOW) in CH2M submittals	02/16/18	Molzen Corbin submits Draft 30% Design Evaluation to the Village of Ruidoso, NMED, USACE and High Water Mark
08/01/08	VOR begins emergency work on sewer line and project planning	01/01/15	VOR works to Address FEMA concerns	02/28/18	Meeting with Molzen Corbin and High Water Mark to discuss comments and provide clarifications regarding the Draft 30% Design Evaluation
01/01/09	Zia Engineering begins environmental consultation process.	01/01/16	High Water Mark joins Village of Ruidoso (VOR) on Project Team	03/14/18	Meeting with the Village, Molzen Corbin, High Water Mark and NMED
02/01/09	VOR submits initial application into FEMA	01/01/16	Resolution of FEMA's SOW concern	03/27/18	Site Visit to review potential areas for armoring and bank stabilizations.
03/01/09	Initial Grant Awarded	01/01/16	Project Letter of Understanding (LOU) is signed	04/04/18	Task Order #2 with the Village of Ruidoso and Molzen Corbin has been signed and initiated.
04/01/09	VOR continues with environmental and engineering	03/01/16	FEMA Request for Information for Environmental, Historic Preservation Review	04/18/18	Molzen Corbin responds to comments to High Water Mark, NMED, USACE and the Village regarding the draft 30% Design Evaluation.
10/01/09	Wilson Engineering Preliminary Engineering Report Finalized	06/01/16	FEMA concern on footprint of project	04/19/18	High Water Mark's Site Visit regarding permitting.
10/01/09	Zia completed a Biological Survey of Project Area	10/01/16	Resolve FEMA concern on area of disturbance and EA	04/24/18	Meeting with NMDHSEM regarding funding with the Village and High Water Mark
11/01/09	Zia completed a Cultural Survey	02/01/17	FEMA reviews final Project SOW	05/01/18	Meeting regarding the permitting for armoring and bank stabilizations with Molzen Corbin, High Water Mark and USACE.
11/01/09	Zia and VOR submit additional environmental paperwork to FEMA, USACE, EPA	04/01/17	Molzen Corbin joins the Project Team to develop 100% Design	05/02/18	Version #2 of Draft 30% Design Evaluation is submitted to review by Molzen Corbin to the Village and High Water Mark
09/01/10	Environmental Assessment (EA) Finalized for Project	04/21/17	Task Order #1 with Molzen Corbin and the Village of Ruidoso is Signed and Initiated	05/07/18	High Water Mark and the Village sent back comments regarding the recent Draft 30% Design Evaluation
11/01/10	Finding of No Significant Impact (FONSI) for the Project Approved	05/01/17	FEMA finalizes Project Review	05/10/18	Progress meeting to discuss design and procurement with the Village, Molzen Corbin, High Water Mark, USACE, NMED. Molzen Corbin also submit final 30% Design to Village
04/01/11	Amendment Documentation submitted to FEMA to increase funding	05/31/17	DHS Embargo ends on New Project Obligations	05/24/18	Meeting regarding permitting with USACE, High Water Mark and Molzen Corbin
04/01/11	VOR and Zia submit additional information to FEMA and NMDHSEM	06/01/17	FEMA Amendment is approved for the Project	05/31/18	Progress Meeting with the Village, Molzen Corbin and High Water Mark. Public Meeting with the community of Ruidoso.
04/01/12	Amendment Disapproved due to error	07/01/17	Project Funding Obligated	May 2018: Public meeting with the community of Ruidoso	
04/01/12	VOR addresses FEMA issues	10/01/17	Reviewing EA Constraints and Permitting as they meet with Technical constraints	June 2018: HWM prepares for site visit at the end of the month to begin the permitting process.	
09/01/13	CH2M begins and continues working on sewer line project	11/08/17	Field Visit with NMED, Molzen Corbin, the Village of Ruidoso and High Water Mark.		
07/01/14	30 Percent CH2M Drawings				

Agency Stakeholder Coordination



NMED

- ▶ Primarily concerned about future flood damage and sewer overflows into river
- ▶ Agreeable to rehabilitation for this FEMA funded project
- ▶ Responsible for Section 401 Water Quality Permitting



USACE

- ▶ Require LEDPA
- ▶ Recognize constructability issues and environmental impact of relocation
- ▶ Agreeable to rehabilitation for this FEMA funded project
- ▶ Will administer the Section 404 Permit for the Project



FEMA



FEMA/NMDHSEM

- ▶ HWM has coordinated keeping these agencies abreast of project progress
- ▶ Rehabilitation more closely reflects restoring "form and function" of the damaged infrastructure

High Water Mark will be performing the necessary steps to obtain all permitting requirements with the help of Molzen Corbin and D.T. Collins

Keeping up with the project

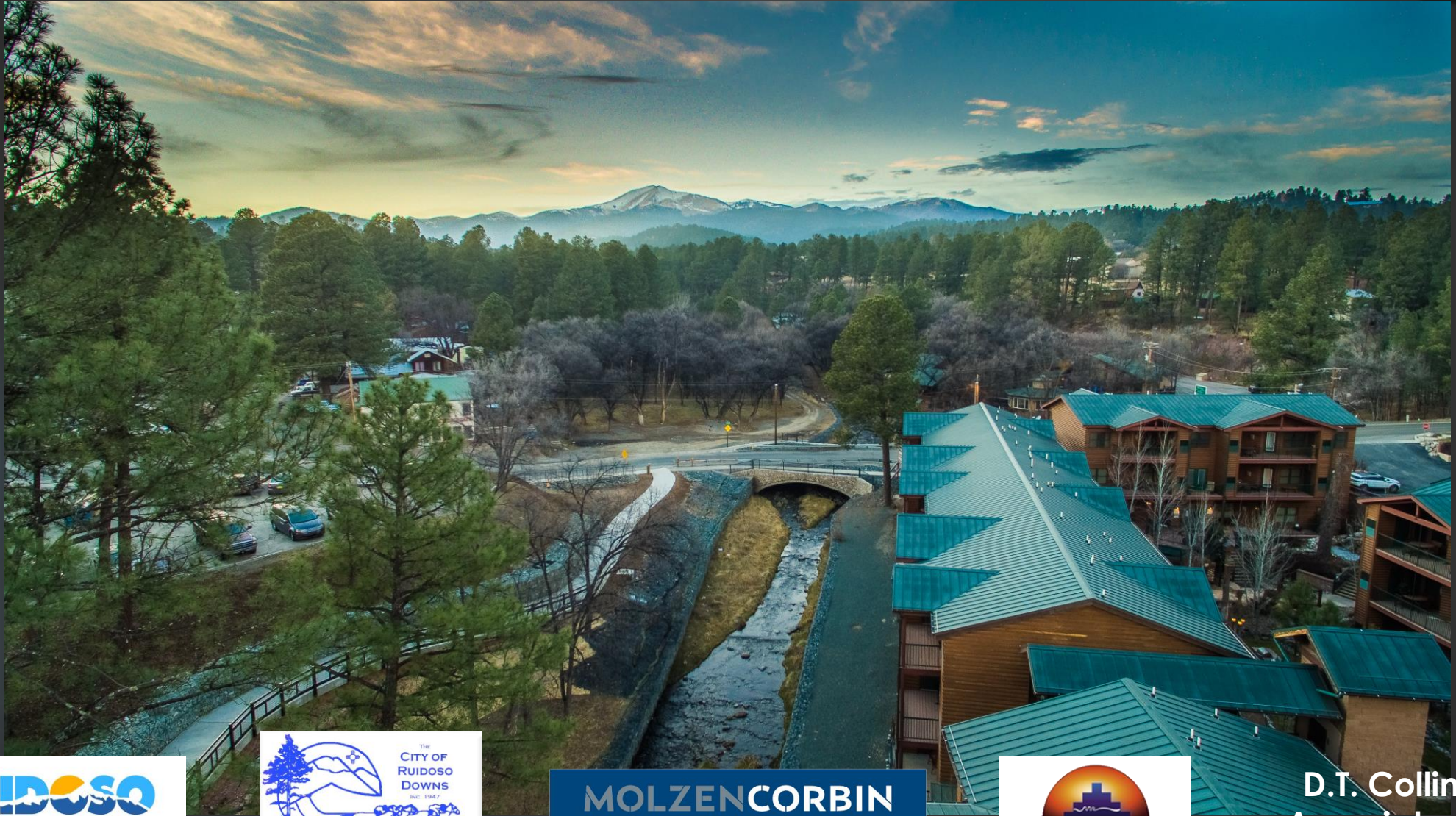
Website Address:

- ▶ <http://ruidoso sewerproject.com>

Contact Information:

- ▶ Email
info@RuidosoSewerProject.com
- ▶ Project hotline phone number:
(844) 543-5729

Questions?



D.T. Collins &
Associates, PC