

Snowfall Rec Path Crossing & Drainage



Vicinity Map

Removal of the existing wood deck Snowfall bridge along the Gothic Road pedestrian recreation path. The bridge is to be replaced with a 10' wide concrete path and 3' gravel shoulders on both sides of the path. The existing 4' x 6' inlet will be removed and replaced by installing a 60" HDPE extension culvert pipe, a flared-end section, and a trash guard. Existing utilities will need to be relocated as part of construction.



103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355
www.sgm-inc.com

Project Engineer

Gerald E. Burgess, P.E. 38250

Town of Mt. Crested Butte

911 Gothic Road
Mt Crested Butte, CO 81225
(970) 349-6632

Project Contacts

Jeffrey Smith	Capital Projects Manager	(970)349-6632
Bobby Block	Maintenance Supervisor	(970)349-6632
Mark Gayeski	Design Engineer, SGM	(970)707-8156
Jerry Burgess	Project Manager, SGM	(970)707-8152

BID SET

March 2025

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Town of Mt. Crested Butte Snowfall Rec Path Crossing & Drainage

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233.028 / 2023-113.014	
MG	
03.04.2025	
B	PE: JB
MtCB-PedBridge-Admin	

cover









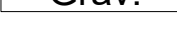





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Of: 9













Legend

EXISTING	PROPOSED	DESCRIPTION
		UNDERGROUND TELEPHONE LINE
		GAS LINE
		UNDERGROUND CABLE TELEVISION LINE
		UNDERGROUND ELECTRICAL LINE
		STORM DRAIN LINE
		WATER LINE
		SANITARY SEWER LINE
		DRAINAGE SWALE FLOWLINE
		SILT FENCE
		CULVERT, SIZE & FES
		EDGE OF ASPHALT
		EDGE OF WATER
		CENTERLINE
		CONTOURS
		RIGHT-OF-WAY
		LIMITS OF DISTURBED AREA
		EASEMENT

Hatching

EXISTING	PROPOSED	DESCRIPTION
		ASPHALT
		CONCRETE SURFACING (PLAN VIEW)
		GRAVEL SURFACING
		RIPRAP/RIVER ROCK
		WOOD DECK
		FLAGSTONE
		UNDISTURBED SOIL
		RECOMPACTED SOIL

SYMBOLS

<u>EXISTING</u>	<u>PROPOSED</u>	<u>DESCRIPTION</u>
		MONUMENT MARKER
		CONTROL POINT
		PEDESTALS (CATV, ELEC, FIBER)
		(TELE, TRAFFIC, UNKNOWN)
		MANHOLE (SANITARY)
		STREET LIGHT POLE
		SIGN
		BOLLARD
		MINIMUM 4" TOP SOIL OR SPECIFIED ALTERNATIVE

Abbreviations

AT	DEGREE	GPS	GLOBAL POSITIONING SYSTEM	RP	RADIUS POINT
Ø	DIAMETER	GRAV	GRAVEL	RW	RETAINING WALL
#	NUMBER	HDPE	HIGH DENSITY POLYETHYLENE	SA	SANITARY
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	HMA	HOT MIXED ASPHALT	SB	SOUTH BOUND
ABC	AGGREGATE BASE COURSE	HORIZ	HORIZONTAL	SCF	SEDIMENT CONTROL FENCE
ABUT	ABUTMENT	HP	HIGH POINT	SD	STORM DRAIN
ADA	AMERICANS W/ DISABILITIES ACT	HWY	HIGHWAY	SDR	STANDARD DIMENSION RATIO
ALT	ALTERNATE	HYD	HYDRANT	SE	SOUTHEAST
AP	ANGLE POINT	ID	INSIDE DIAMETER	SECT	SECTION
APWA	AMERICAN PUBLIC WORKS ASSOCIATION	INV	INVERT	SF	SQUARE FEET
AS	ASPHALT	IP	INLET PROTECTION	SHLDR	SHOULDER
ASPH	ASPHALT	JB	JUNCTION BOX	SHT	SHEET
BM	BENCHMARK	LGTH	LENGTH	SHTS	SHEETS
BMP	BEST MANAGEMENT PRACTICES	LF	LINEAR FOOT	SMH	SANITARY SEWER MANHOLE
BOW	BACK OF SIDEWALK	LP	LOW POINT	SOD	GRASS AREA
BP	BEGIN PROJECT, BEGINNING POINT	LS	LUMP SUM	STA	STATION
BT	BEGIN TRANSITION	LSA	LANDSCAPED AREA	STBK	SETBACK
CBC	CONCRETE BOX CULVERT	LT	LIGHT POLE	SW	SIDEWALK
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	MAT'L	MATERIAL	SY	SQUARE YARDS
CDPHE	COLORADO DEPARTMENT OF PUBLIC HEALTH	MAX	MAXIMUM	SYM	SYMMETRICAL
	AND ENVIRONMENT	MH	MANHOLE	TAN	TANGENT
CF	CUBIC FEET	MIN	MINIMUM	TCP	TRAFFIC CONTROL PLAN
CFS	CUBIC FEET PER SECOND	MISC	MISCELLANEOUS	TELE	TELEPHONE
CIP	CAST IN PLACE	N	NORTHING	TEMP	TEMPORARY
CL	CENTERLINE	N/A	NOT APPLICABLE	TP	TOP OF PIPE
CMP	CORRUGATED METAL PIPE	NAT	NATIVE GRASS AREA	TRANS	TRANSITION
CONC	CONCRETE	NAVĐ	NORTH AMERICAN VERTICAL DATUM	TYP	TYPICAL
CONST	CONSTRUCTION	NO	NUMBER	UE	UNDERGROUND ELECTRIC LINE
CONT	CONTINUOUS	NTP	NOTICE TO PROCEED	UG	UNDERGROUND GAS LINE
COR	CORNER	NTS	NOT TO SCALE	UT	UNDERGROUND TELEPHONE
CU	CUBIC	O/S	OFFSET	VP	VALLEY PAN
CY	CUBIC YARD	OD	OUTSIDE DIAMETER	W	WIDE
DEG	DEGREES	OP	OUTLET PROTECTION	W/	WITH
DIA	DIAMETER	PC	POINT OF CURVATURE	X-S	CROSS SLOPE
DR	DRAIN	PED	PEDESTRIAN	YD	YARD
DWG	DRAWING	PERM	PERMANENT		
E	EASTING	PG	PAGE		
EA	EACH	PGL	PROFILE GRADE LINE		
EG	EXISTING GRADE	PI	POINT OF INTERSECTION		
EL	ELEVATION	PL	PROPERTY LINE		
ELEV	ELEVATION	PM	PROJECT MANAGER		
EOA	EDGE OF ASPHALT	PNT	POINT		
EOC	EDGE OF CONCRETE	PROP	PROPOSED		
EOG	EDGE OF GRAVEL	PSF	POUNDS PER SQUARE FEET		
EOP	EDGE OF PAVEMENT	PSI	POUNDS PER SQUARE INCH		
EP	END PROJECT, END POINT	PT	POINT OF TANGENCY		
EPA	ENVIRONMENTAL PROTECTION AGENCY	PVC	POLYVINYL CHLORIDE		
ESMT	EASEMENT	PVMT	PAVEMENT		
EST	ESTIMATE	Q	PEAK DISCHARGE		
EX	EXISTING	QA/QC	QUALITY ASSURANCE/QUALITY CONTROL		
EXIST	EXISTING	QTY	QUANTITY		
FES	FLARED END SECTION	R	RIGHT		
FG	FINISHED GRADE	R-R	REMOVE AND REPLACE		
FH	FIRE HYDRANT	RAD	RADIUS		
FL	FLOWLINE	RCP	REINFORCED CONCRETE PIPE		
FOW	FACE OF WALL	REC	RECREATION		
FPS	FEET PER SECOND	REF	REFERENCE		
FT	FEET	REQ	REQUIRED		
G	GAS	REVEG	REVEGETATE		
GAL	GALLONS	ROW	RIGHT OF WAY		
GB	GRADE BREAK				
GIS	GEOGRAPHICAL INFORMATION SYSTEM				
GBM	GALLOWS PER MINUTE				

GENERAL PROJECT NOTES:

1. CONTRACTOR SHALL CALL FOR UTILITY LOCATES PRIOR TO ANY GROUND DISTURBANCE WORK.
2. TRAFFIC CONTROL REQUIREMENTS:
 - 2.1. MAINTAIN SHARED USE (RECREATION) PATH CLOSURE UNTIL PROJECT IS COMPLETE.
 - 2.2. PROVIDE SAFETY CONES, VERTICAL PANELS WITH BEACONS, SIGNAGE AND BARRICADES AS NECESSARY TO PROTECT PUBLIC AND WORK SITE.
3. THE PROJECT WORK IS WITHIN THE GOTHIC ROAD ROW AND THE WORK IS ADJACENT TO GOTHIC ROAD TRAVEL LANES. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION TRAFFIC CONTROL AND MUST ALLOW FOR A MINIMUM OF ONE LANE OPEN AT ALL TIMES.
4. THROUGHOUT ALL PHASES OF CONSTRUCTION, UNTIL THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS.
5. CONTRACTOR SHALL OBTAIN FROM THE PROJECT ENGINEER A PLAN SET MARKED "FOR CONSTRUCTION" PRIOR TO COMMENCING ANY WORK.
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING BYPASS PUMPING AND DETERMINING THE BYPASS FLOW RATES DURING THE WORK. BYPASS FLOW RATES CAN VARY DEPENDING UPON THE TIME OF YEAR AND STORM EVENTS. CONTRACTORS MEANS AND METHODS SHALL INCLUDE CONSIDERATIONS FOR REMOVING COFFERDAMS AND FLOW BYPASS EQUIPMENT TO ALLOW FOR STORM EVENTS TO PASS.

DEMOLITION AND REMOVALS

1. REMOVE TIMBER PLANKED STEEL FRAMED BRIDGE CONCRETE ABUTMENTS AND OTHER BRIDGE RELATED MATERIALS FROM THE SITE, DISPOSE OF LEGALLY OFF SITE.
2. REMOVE SANDS, GRAVEL, DIRT AND OTHER DELETERIOUS MATERIALS FROM THE FLOW CHANNEL TO OBTAIN FLOW LINE ELEVATIONS AS SHOWN ON THE DRAWINGS.
3. SAWCUT CONCRETE PATH TO BE REMOVED. FINAL LIMITS OF REQUIRED SAWCUTTING AND PATCHING MAY VARY FROM LIMITS SHOWN ON PLANS AND WILL BE BASED ON CONTRACTOR MEANS AND METHODS.
4. REMOVE EXISTING DROP INLET GRATE, SAWCUT CONCRETE DROP INLET BOX TO ELEVATION AS SHOWN AND REMOVE ALL ROCK, SAND, AND DEBRIS FROM DROP INLET.
5. ALL EXCESS MATERIALS GENERATED FROM THE SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY.

TEMPORARY EROSION CONTROLS MEASURES

1. THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL MEASURES (A.K.A. BEST MANAGEMENT PRACTICES OR BMPs), TO CONTROL EROSION AND SEDIMENTATION DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL TEMPORARY EROSION CONTROL MEASURES.
- 2.
3. CONCRETE TRUCKS SHALL WASH OUT OFF SITE. CONTRACTOR HAS THE OPTION OF STAGING A PREFABRICATED CONCRETE WASHOUT STRUCTURE AT A LOCATION WITHIN TOWN AS APPROVED BY THE TOWN. WASH OUT STRUCTURE AND DEWATERED CONCRETE SHALL BE REMOVED FROM TOWN AT THE END OF THE PROJECT.

SHALLOW UTILITY NOTES:

1. EXISTING UTILITY LOCATIONS ARE A COMBINATION OF SURVEYED FIELD LOCATIONS, OBSERVATIONS, AND EXISTING MAPPING. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO ANY GROUND DISTURBANCE.
2. ALL WORK TO BE DONE IN STRICT COMPLIANCE WITH RESPECTIVE UTILITY COMPANY REQUIREMENTS.
3. FIBER OPTIC AND OTHER COMMUNICATION CONDUITS ARE ATTACHED TO THE BRIDGE. DURING THE WORK THE CONTRACTOR SHALL MOVE AND WORK AROUND THE UTILITY. COORDINATION WITH THE UTILITY PROVIDER FOR THE RELOCATION OF ANY UTILITY OR LIGHT POLE.

EXISTING UTILITY NOTES (NON-SUE)

EXISTING UTILITY NOTES - NON "SUE-REQUIRED PROJECT"

1. THIS IS NOT A "SUBSURFACE UTILITY ENGINEERING-REQUIRED PROJECT," AS SET FORTH IN THE 8/8/2018 COLORADO STATE LAW. SEE CHECKLIST BELOW FOR ENGINEER'S BASIS FOR THIS DETERMINATION. (NOTE: A PROJECT MUST MEET ALL 4 CONDITIONS)

<div> <div>COLORADO REVISED STATUTES (CRS) 2018 TITLE 9-1.5-102 SUBSURFACE UTILITY ENGINEERING (SUE)</div> <div>REQUIRED PROJECT COMPLIANCE CHECKLIST</div> </div>						
1	9-1.5-1 02-6.8.A	PROJECT INVOLVES CONSTRUCTION CONTRACT WITH A PUBLIC ENTITY	X	YES		NO
2	9-1.5-1 02-6.8.B	PROJECT INVOLVES PRIMARILY HORIZONTAL CONSTRUCTION AND DOES NOT INVOLVE PRIMARILY THE CONSTRUCTION OF BUILDINGS	X	YES		NO
3A	9-1.5-1 02-6.8.C .1.A	EXCAVATION FOOTPRINT EXCEEDS 2- FEET DEPTH AND IS A CONTIGUOUS 1,000- SQUARE FEET; OR		YES	X	NO
3B	9-1.5-1 02-6.8.C .1.B	INVOLVES UTILITY BORING		YES	X	NO
4	9-1.5-1 02-6.8.D	PROJECT REQUIRES THE DESIGN SERVICES OF A LICENSED PROFESSIONAL ENGINEER (P.E.)	X	YES		NO
SUMMARY	9-1.5-1 03-2.4	REQUIRED TO MEET OR EXCEED THE ASCE 38 STANDARD AND CO SUE LAW?		YES	X	NO

2. EXISTING UTILITIES ARE DEPICTED ACCORDING TO THE BEST AVAILABLE INFORMATION THAT WAS PROVIDED BY THE UTILITY OWNERS AND SURFACE FEATURES AT THE TIME OF THE SURVEY. RELIANCE UPON THIS UTILITY DATA FOR RISK MANAGEMENT PURPOSES DOES NOT RELIEVE THE PROJECT OWNER, CONTRACTOR, OR UTILITY COMPANY FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 800-922-1987, TO VERIFY EXISTING UTILITIES AND HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES.
3. OTHER UTILITIES MAY BE PRESENT WHICH WERE NOT IDENTIFIED IN THIS PLAN SET OR PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE DUE-DILIGENCE AND ENACT GOOD PRACTICES WHEN EXCAVATING NEAR POTENTIAL CONFLICT AREAS AND REDUCE POTENTIAL DAMAGE TO UTILITIES AS MUCH AS POSSIBLE.
4. SHOULD THE CONTRACTOR ENCOUNTER UNKNOWN AND/OR ABANDONED UTILITIES THE CONTRACTOR SHALL VERIFY WITH THE RESPECTIVE UTILITY OWNER THAT THE UTILITY IS INACTIVE/ABANDONED BEFORE REMOVAL FROM THE WORK AREA
5. THE CONTRACTOR SHALL COMPLY WITH COLORADO REVISED STATUTES (CRS) 2018, TITLE 9, ARTICLE 1.5-103.10, "ALL NEW UNDERGROUND FACILITIES, INCLUDING LATERALS UP TO THE STRUCTURE OR BUILDING BEING SERVED, INSTALLED ON OR AFTER 8/8/2018, MUST BE ELECTRONICALLY LOCATABLE WHEN INSTALLED."



Town of Mt. Crested Butte
Snowfall Rec Path Crossing &
Drainage

#	Revision	Date	By:
1			
2			
3			

Project Milestone: DBE ELIMINATED NOT FOR CONSTRUCTION

Job No.	2012-233.028 / 2023-113.0	
Drawn by:	M	
Date:	03.04.202	
QC:	JB	PE:
File:	MICR RedBridge Adm	

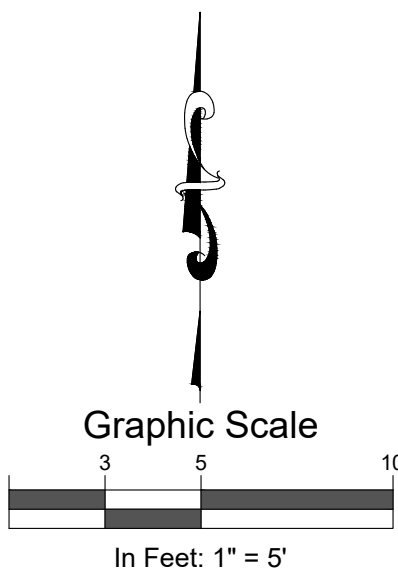
Title: General Notes,
Legend and
Abbreviations

Dwg No

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Of: 9

- 1) EXISTING CONDITIONS SURVEY EXTENTS DOES NOT INCLUDE TOPOGRAPHY TO THE SOUTHWEST WHERE THE SIDEWALK IS TO TIE-IN.
- 2) UTILITY STRUCTURES SHOWN ON MAP WERE SURVEYED. UTILITY LINES WERE NOT SURVEYED AND ARE SHOWN AS ESTIMATES BASED ON UTILITY LOCATES AFTER THE SURVEY AND ARE NOT ACCURATE. CONTRACTOR TO CALL IN LOCATES AND TO RELOCATE UTILITIES WHICH ARE IN CONFLICT WITH THE NEW CULVERT.



SGM
103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355
www.sgm-inc.com

Town of Mt. Crested Butte Snowfall Rec Path Crossing & Drainage

[illegible]

Job No.	2012-233.028 / 2023-113.01		
Drawn by:	M		
Date:	03.04.2022		
QC:	JB	PE:	J
File:	MTCB-PedBridge-Ex Corr		

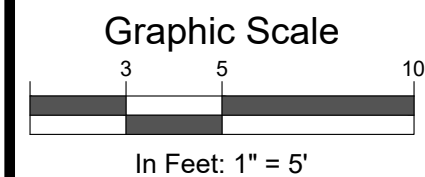
Existing Conditions & Removals

Dwg No

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CONTRACTOR TO COORDINATE RELOCATIONS OR ADJUSTMENTS OF FIBER OPTIC AND OTHER UTILITIES WITH UTILITY PROVIDER.



SGM
103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355
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Town of Mt. Crested Butte Snowfall Rec Path Crossing & Drainage

[illegible]

Job No.	2012-233.028 / 2023-113.014	
Drawn by:	MC	
Date:	03.04.2023	
QC:	JB	PE: JB
File:	MtCB-PedBridge-SitePlan	

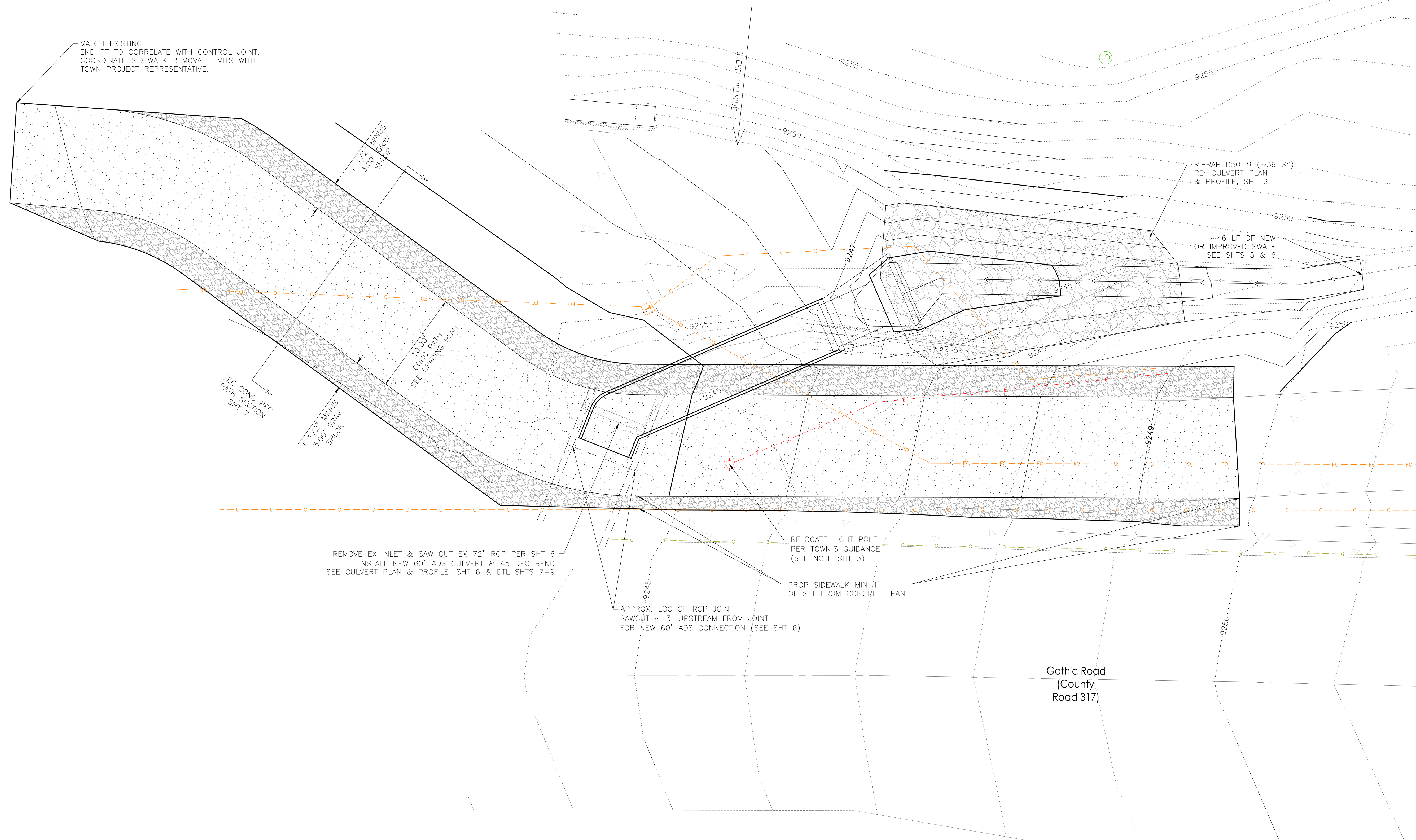
Title:

Site Plan

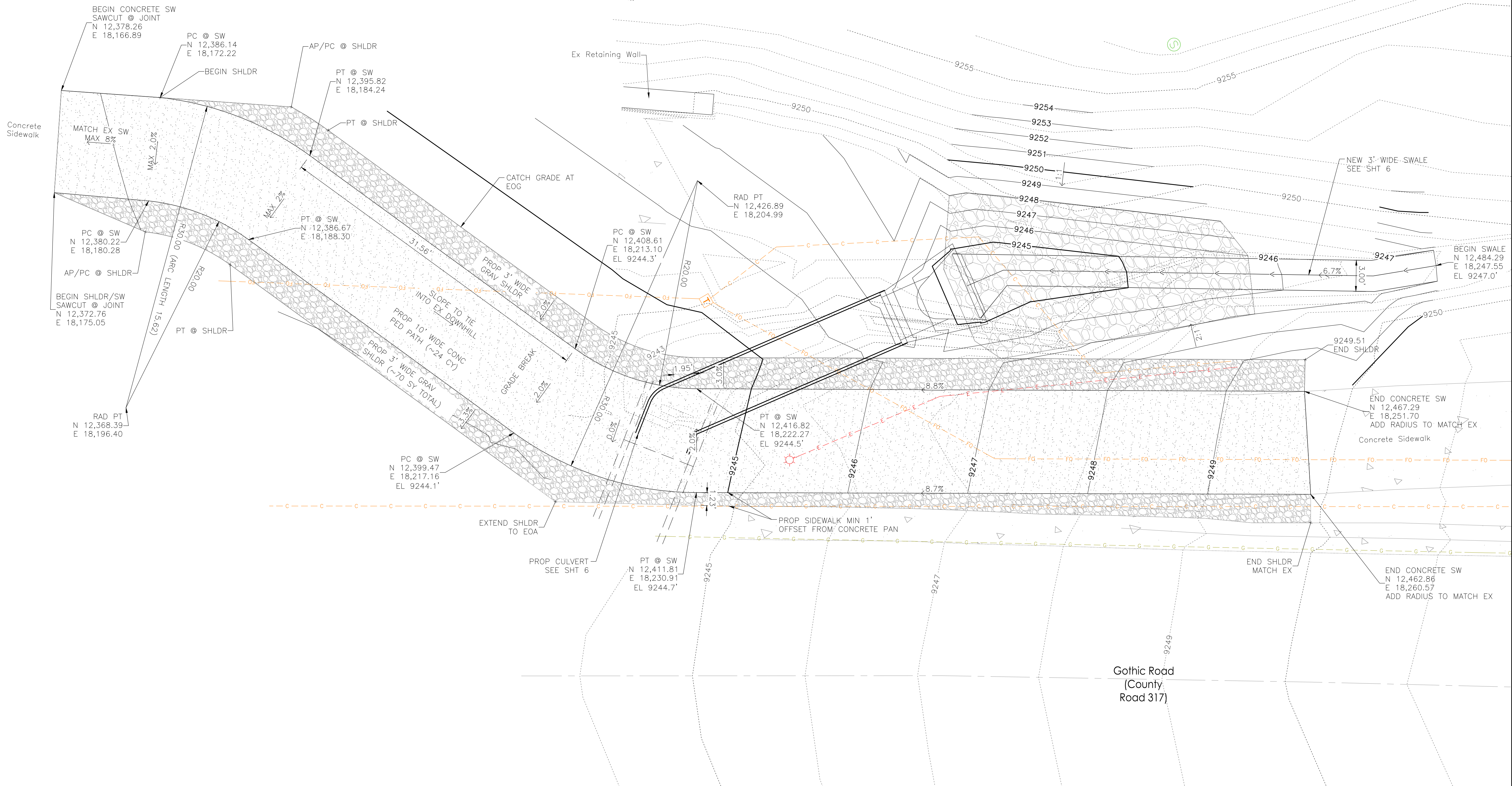
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I:\Gunnison\2012\2012-233.001 Mt. Crested Butte Eng & Sur\028-Treasury\Drawings\PS-SheetSet\2024-Gothic Bridge Replacement\MCB-PedBridge-Grading.dwg Plotter: 3/12/2025 12:51 PM By: Mark Goyeski



With HDPE Pipe

can cause premature deterioration of some types of pipe. In lieu of a total replacement with a durable material may be an economical method to significantly extend the life of its resistance to aggressive environments, is often the product of choice to which the technical bulletin describes the site and installation considerations that must be evaluated and followed.

ends, as in a culvert application, or it may be opening, as in a storm sewer application. Openings for HDPE pipe products, provided they do not allow water to enter the host pipe. If access can only be made through the pipe, the products may not be acceptable because they

ter of the HDPE pipe or coupler should be host pipe. This may be accomplished by (et in length) through the host pipe as a trial e from sediment and debris so as to not r pipe. Slipping installations may be subject to per 100 feet of pipe per change in degree F. ranges during installation. To allow for proper ine pipes should have a maximum outside side diameter of the host pipe. The maximum : shown in Table 1.



Table 1
HDPE Pipe Dimensions

Max Outside Diam. in (mm)	Nominal Inside Diam. in (mm)	Max Outside Diam. in (mm)
4.8 (122)	24 (600)	28.4 (721)
7.0 (178)	30 (750)	35.6 (904)
9.5 (241)	36 (900)	41.4 (1052)
12.0 (305)	42 (1050)	48.0 (1219)
14.5 (367)	48 (1200)	55.0 (1397)
17.8 (452)	54 (1350)	61.0 (1549)
21.5 (546)	60 (1500)	67.3 (1709)

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Length of Installation

HDPE pipe joints are not designed to withstand large pulling forces. Furthermore, pushing the liner pipe in through the host pipe may damage the corrugations at the pipe ends as they butt up against each other. The method of installation will affect, in large part, the maximum length that can be slip lined without damaging the pipe. Using skids, especially in a corrugated host pipe, will help minimize resistance between the two surfaces. Skids could be as simple as a pair of 2x4s placed near the invert. A push-and-pull technique keeps stress on the joints to a minimum. Projects in excess of 100 ft (30 m) between access points are addressed in Technical Note 5.11: *Sliplining Extended Lengths with HDPE Pipe*.

Hydraulic Considerations

Original design calculations may be referenced, however careful attention should be given to changes in land use which would change the calculated runoff tributary to the culvert. Once a discharge has been determined, the required size of the HDPE pipe may be established. If original design calculations are not available, the project engineer should complete a thorough drainage study. A culvert size can be selected based on watershed attributes, design storm, allowable headwater, culvert entrance conditions and any other related design factors.

In many cases, where culverts are too deep to make replacement practical, slightly reduced hydraulics may be an acceptable tradeoff to an expensive replacement. Typically, gravity flow systems are designed using Manning's Equation with a conservative 'n' value of 0.012 for HDPE. It should be noted that culverts in need of relining do not have Manning's 'n' values typical of original design values. Relining with smooth interior HDPE pipe may actually increase the capacity of the deteriorated culvert.

Structural Requirements

Failing culverts in need of relining may eventually deteriorate into a conduit with no structural integrity at all. For this reason, it is important to reline with a culvert capable of handling the loads based on its installation assuming no load reduction from the host pipe. Loading for Highway and pavement tunnels shall be based upon a continuous load carrying structure for the height of cover under HS-25 loading. Voids between the surrounding soil and the host pipe shall be pressure grouted to ensure structural integrity and resistance to thermal effects. For more information for determining the structural capacity of HDPE, refer to the Structures section of the *Drainage Handbook*.

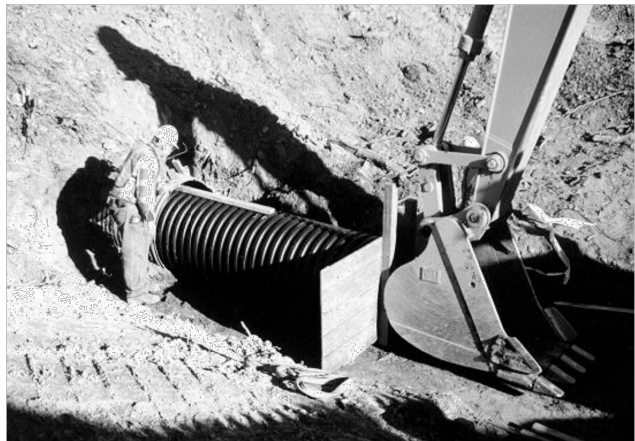
Installation of HDPE in Host Pipe

Before the HDPE pipe is inserted into an existing culvert for relining, it is critical to inspect the existing culvert for any objects or obstructions, which may be extending into the barrel of the existing culvert to be relined. Failure to do this may result in a damaged reline.

Insertion Forces

Once the culvert is clear, the new material may be pushed through. It is important to determine the maximum insertion force that can be applied to the culvert. This will prevent the pipe wall profile from buckling in the axial direction under excessive insertion loading.

In cases where the new culvert will be two or more sizes smaller than the existing culvert, it is possible to construct mechanisms to transport the new material along the existing culvert without sliding across the invert. Although ideal for construction, many times there is insufficient room to allow this technique.



Grouting Procedures

When relining a culvert with HDPE pipe, it is recommended to fill the void space between the existing culvert and the new material with a grout material. The grout material is often a controlled low strength material – controlled density fill (CLSM-CDF). A CLSM or flowable fill material will help provide uniform support on the sides of the pipe, maintain a consistent soil density, provide lateral support for the pipe, and eliminate point loads. For more information on flowable fill mix, refer to Technical Note: *Flowable Fill Backfill for Thermoplastic Pipe*.

It is common for aging metal culverts to have deteriorated or completely destroyed inverts. This allows the fluid carried through the culvert to create void space under the pipe, creating an undesired design consideration. The grout material will help plug and fill any fractures or holes in the existing culvert along with structurally stabilizing the system from thermal, hydrostatic pressure, point loads, and function as a water barrier.



To ensure proper alignment and prevent joint separation, the pipe should be anchored against flotation when placing the grout material. Grouting in layers thin enough such that they don't float the pipe helps tremendously. Each layer should be allowed to set up between pours. Contractors may have other techniques that will also prevent flotation such as the use of deadweight inside the pipe. Regardless of the method used, it is also important to avoid applying point loads to the pipe. For more information on flotation and anchoring methods, refer to Technical Note: *Pipe Flotation*.

When HDPE pipe, or any flexible pipe, is used as a liner, it is very important not to use excessive grout pressure. In most circumstances, the joint, not the wall strength, will be the limiting factor for maximum allowable grouting pressure. Including a factor of safety, the recommended maximum

value may vary based on specific site conditions and specific products used. Due to the application method of grout, water tight pipe is recommended for sliplining applications. During the grouting operation, gauges should be used to monitor the grout pressure exerted on the pipe system. For some applications, hydrostatic head pressure may increase the expected pressure on the pipe from the grouting. Additional pressure may be a result of the slope and/or diameter of the pipe, elevation changes between the pipe and the gauge, and other conditions that should be considered during the design. The sum of all pressures that will be exerted on the pipe should not exceed the recommended maximum pressure for the application.



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