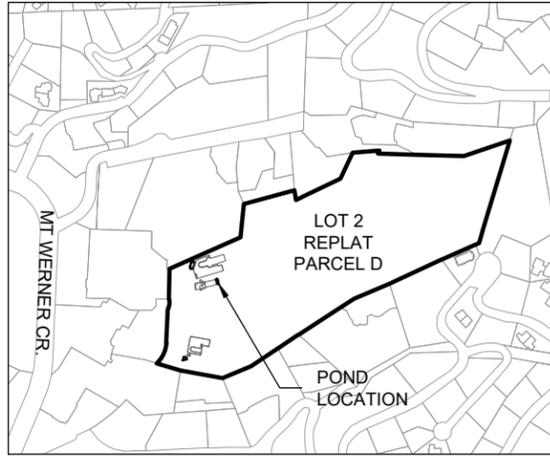


CHRISTIE PEAK EXPRESS RELOCATION SAND FILTER OWNERSHIP AND MAINTENANCE PLAN

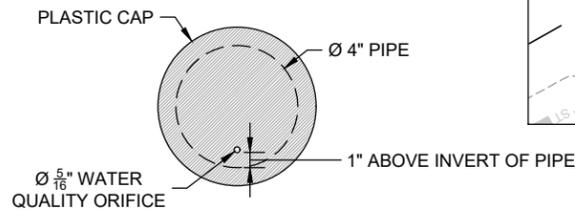
CONSTRUCTED IN AUGUST, 2023, MAINTENANCE TO BE PERFORMED BY SSRC



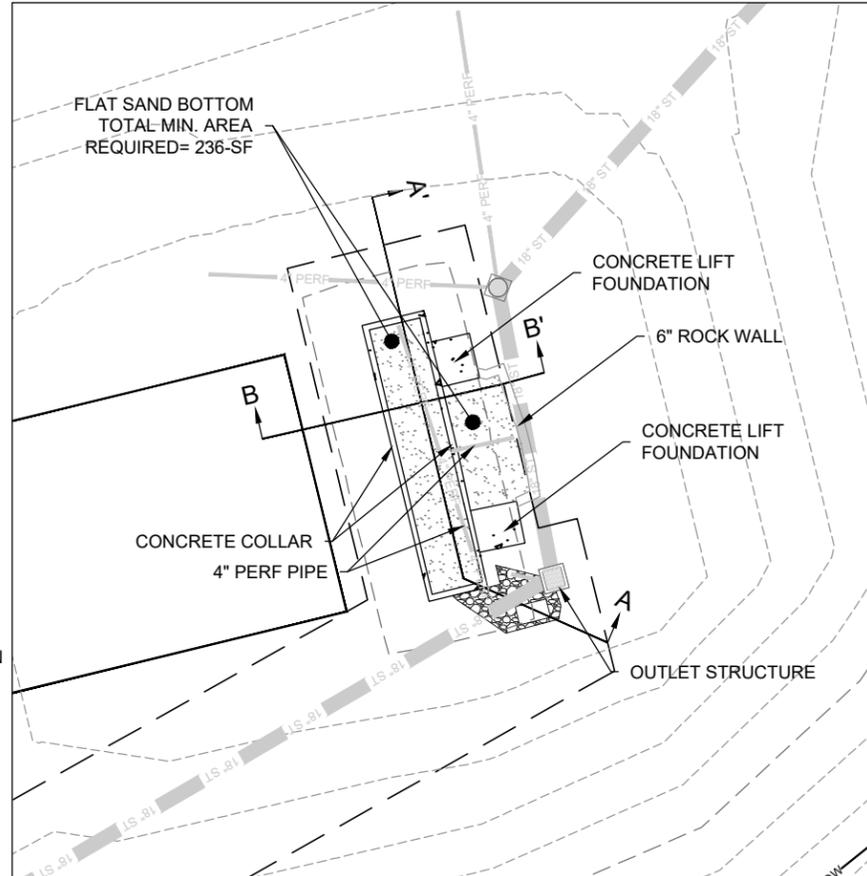
VICINITY MAP
SCALE: 1" = 1000'

NOTES:

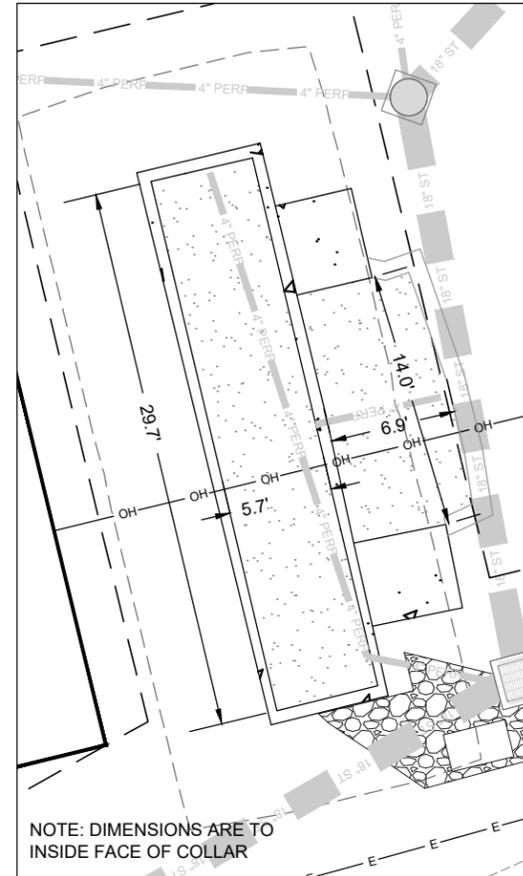
- FOR ADDITIONAL DESIGN INFORMATION REFER TO THE CONSTRUCTION DRAWINGS FOR THIS PROJECT.
- SEE DETAILED NOTES ON THE THIRD SHEET OF THIS PLAN FOR ALL MAINTENANCE REQUIREMENTS.



WATER QUALITY CAP DETAIL
NTS



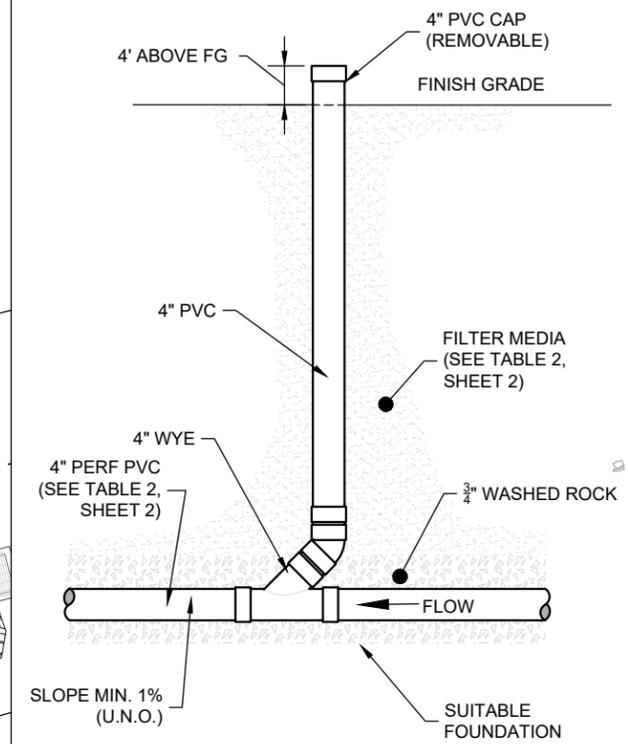
PLAN VIEW
SCALE: 1" = 20'



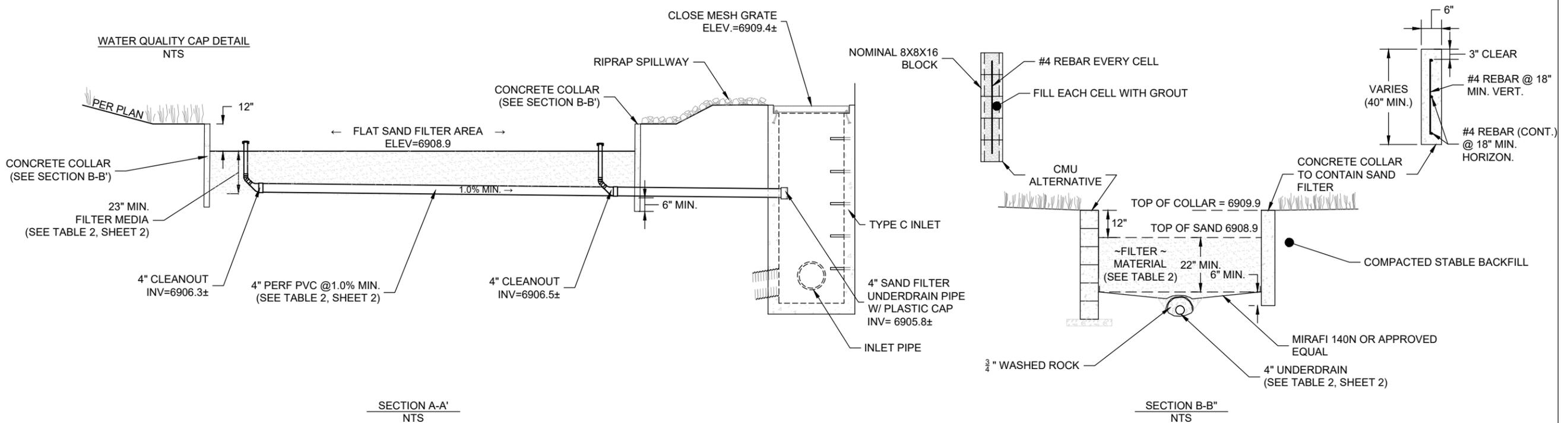
NOTE: DIMENSIONS ARE TO INSIDE FACE OF COLLAR

SAND FILTER DIMENSIONS
SCALE: 1" = 10'

- NOTES:**
- ALL PVC PIPE SHALL BE SDR 35 WITH GASKETED JOINTS, U.N.O.
 - THIS DETAIL SHALL NOT BE USED FOR SANITARY SEWER APPLICATIONS.



SAND FILTER CLEANOUT
NTS



SECTION A-A'
NTS

SECTION B-B'
NTS

CIVIL ENGINEERS | SURVEYORS

141 9th Street ~ P.O. Box 774943
Steamboat Springs, Colorado 80477
(970) 871-9494 www.LANDMARK-CO.com



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Christie Peak Express Relocation
OWNERSHIP AND MAINTENANCE PLAN

PROJECT: 1012-052
DATE: 9/19/2023
DRAWN BY: DCS
CHECKED BY: LCI

SHEET
1
Of 2 Sheets

CHRISTIE PEAK EXPRESS RELOCATION SAND FILTER OWNERSHIP AND MAINTENANCE PLAN CONSTRUCTED IN AUGUST, 2023 MAINTENANCE TO BE PERFORMED BY SSRC

1. GENERAL PROJECT INFORMATION

A. ADDRESS: 2305 MT WERNER CIRCLE, STEAMBOAT SPRINGS, CO
LEGAL DESCRIPTION: LOT D OF THE SKI HILL SUBDIVISION

B. RECEIVING WATER: BURGESS CREEK

C. PROPERTY OWNER: STEAMBOAT SKI AND RESORT COMPANY (SSRC)
CONTACT NAME: JIM SCHNEIDER
ADDRESS: 2305 MT. WERNER CIRCLE, STEAMBOAT SPRINGS, CO 80487
PHONE NUMBER: 970-871-5381
EMAIL: jschneider@steamboat.com

D. AGENCY RESPONSIBLE

FOR MAINTENANCE: STEAMBOAT SKI AND RESORT COMPANY (SSRC)
CONTACT NAME: JIM SCHNEIDER
ADDRESS: 2305 MT. WERNER CIRCLE, STEAMBOAT SPRINGS, CO 80487
PHONE NUMBER: 970-871-5381
EMAIL: jschneider@steamboat.com

E. DESIGN ENGINEER: LANDMARK CONSULTANTS, INC.

CONTACT NAME: DEBORAH SPAUSTAT, P.E.
ADDRESS: 141 9TH STREET, STEAMBOAT SPRINGS, CO
PHONE NUMBER: 970-871-9494
EMAIL: debs@landmark-co.com
PE LICENCE NUMBER: 41286

2. GENERAL FACILITY DESCRIPTION

THIS FACILITY IS A SAND FILTER POND THAT WILL PROVIDE WATER QUALITY TREATMENT FOR THE WATER QUALITY CAPTURE VOLUME (WQCV). THE FACILITY HAS BEEN ADOPTED AND APPROVED BY SSRC AS PART OF THE CHRISTIE PEAK EXPRESS PROJECT. IT WILL RECEIVE RUNOFF FROM 0.83 ACRES AND WILL OCCUPY A PARCEL OF 0.01 ACRES THAT WILL BE USED TO PROVIDE VOLUME BASED WATER QUALITY TREATMENT, MAINTENANCE, & ACCESS OPERATIONAL ACTIVITIES.

3. INSPECTION & MAINTENANCE FREQUENCY & PROCEDURE

A. THE FOLLOWING ITEMS SHOULD BE INSPECTED:

TABLE 1: MAINTENANCE ACTIVITY/FREQUENCY	
ACTIVITY	REQUIRED FREQUENCY
INSPECTION TO CONFIRM INFILTRATION RATE AFTER RAINFALL; MAINTAIN AS NECESSARY. DEBRIS AND LITTER REMOVAL	TWICE ANNUALLY. ONE TIME TO OCCUR IN SPRING AFTER SNOWMELT FROM CONTRIBUTING BASIN IS COMPLETE.
MOWING, IRRIGATION	NA
INSPECTION OF UNDERDRAIN VIA CLEAN-OUT; REMOVE SEDIMENT/DEBRIS IF PRESENT	WHEN PONDING LASTS LONGER THAN 24 HOURS
SCARIFY TOP 2" OF SAND WITH RAKE	WHEN PONDING LASTS LONGER THAN 24 HOURS AND UNDERDRAIN IS NOT CLOGGED
REPLENISH TOP 3" OF FILTER MEDIA WITH CLEAN COARSE SAND (AASHTO C-33 OR CDOT CLASS C FILTER MEDIA) TO THE ORIGINAL ELEVATION	AFTER SCARIFICATION 3 TIMES
SEDIMENT REMOVAL AND REPLACEMENT OF MEDIA. SEE TABLE 2 FOR MEDIA SPECIFICATIONS.	WHEN PONDING LASTS 24 HOURS, UNDERDRAIN IS NOT CLOGGED AND SCARIFICATION DOES NOT RESTORE INFILTRATION

B. REVISIONS TO MAINTENANCE FREQUENCY:

C. TRAFFIC CONTROL: NONE

D. THE FACILITY DOES REQUIRE CONFINED SPACE ENTRY PROCEDURES FOR ORIFICE CAP INSPECTION AND MAINTENANCE

E. DEWATERING AND WATER CONTROL: NA

F. SEDIMENT, DEBRIS, & TRASH REMOVAL & DISPOSAL: REMOVAL SHALL BE CONDUCTED IF THERE IS PRESENCE OF TRASH OR DEBRIS AT INSPECTION. SEDIMENT AND DEBRIS SHALL BE REMOVED MANUALLY USING A SHOVEL OR RAKE AND DISPOSED OF AT A LICENSED FACILITY. THE LONGEST DISTANCE BETWEEN THE EDGE OF AN ACCESS ROAD AND THE FAR CORNER OF A STRUCTURE REQUIRING SEDIMENT REMOVAL IS [X] FEET.

G. VEGETATION MANAGEMENT

SEE SECTION 4 OF THE NOTES ON THIS SHEET.

H. WETLAND AREAS ARE NOT ANTICIPATED.

SEE SECTION 8.0 OF THE NOTES ON THIS SHEET.

I. DESCRIBE ADDITIONAL REQUIRED MAINTENANCE PROCEDURES AND FREQUENCIES.-NA
SEE TABLE 1

J. MATERIALS TESTING OF SEDIMENT REMOVED FROM SITE IS NOT REQUIRED.

4. EQUIPMENT, STAFFING, AND VEGETATION MANAGEMENT

A. EQUIPMENT REQUIRED: MAY INCLUDE BUT IS NOT LIMITED TO MOWERS, PUMPS, HOSES, SHOVELS, BUCKETS, RAKES, EXCAVATORS [NOTE REACH REQ'D], WEED KILLERS, GENERATORS, SPRAYERS, DATA LOG/INSPECTION REPORTS.

B. STAFFING: A MINIMUM OF 1 STAFF MEMBER IS REQUIRED TO MAINTAIN TREATMENT FACILITY.

C. SEED: NA

D. MOWING: NA.

E. WEEDS & UNDESIRABLE VEGETATION: NOXIOUS WEEDS AND OTHER UNDESIRABLE VEGETATION SHALL BE REMOVED BY RAKING SAND FILTER.

5. SNOW AND ICE CONTROL

A. FACILITY IS NOT LOCATED WITHIN A SNOW STORAGE AREA AS DEFINED IN THE COMMUNITY DEVELOPMENT CODE.

6. RIGHT-OF-WAY, ADJACENT OWNERSHIP, & ACCESS

A. RIGHT-OF-WAY DESCRIPTION: N/A

B. ADJACENT OWNERSHIP: N/A

C. ACCESS INFORMATION AND DETAILS: THE FACILITY IS ACCESSED VIA SKI AREA ACCESS ROADS.

D. MAINTENANCE OPERATIONS WILL NOT IMPACT OR OBSTRUCT RIGHT-OF-WAY AND A RIGHT-OF-WAY PERMIT IS NOT REQUIRED.

7. HYDRAULIC DESIGN

A. FLOW RATES (CFS):

	INFLOW	OUTFLOW
BASE FLOW:	NA	NA
WQ EVENT:	NA	NA
2-YEAR:	NA	NA
100-YEAR:	NA	NA

B. VOLUMES, DEPTHS, & WSELS:

ITEM	VOLUME	WSEL	DEPTH	ELEVATION
SAND FILTER TOP	NA	NA	NA	6908.9
4" PERF PIPE OUTLET INV.	NA	NA	NA	6905.8
SPILLWAY	NA	NA	0.5-FT	6910.2
WQCV	236-CF	6909.9	1.0-FT	NA

C. WQCV DRAIN TIME = 12 HOURS

EURV DRAIN TIME = NA

8. SENSITIVE AREAS, WETLANDS, & PERMITS

THE SITE HAS NO KNOWN WETLANDS.

9. MISCELLANEOUS INFORMATION

A. PROJECT SURVEY:

EXISTING CONDITIONS AND TOPOGRAPHIC INFORMATION PER CITY GIS DATA AND SUPPLEMENTED WITH LANDMARK CONSULTANTS, INC. ARCHIVED SURVEY FIELD DATA .
PROJECT BENCHMARK: "X" ON CONCRETE COLLAR OF INLET STRUCTURE, ELEV=6910.60', NAVD 88.

B. COORDINATE SYSTEM: THE COORDINATE SYSTEM IS COLORADO COORDINATE SYSTEM, NORTH ZONE, NAD83 (2011), NAVD88, COMBINE SCALE FACTOR: (N)1415866.11(E)2636677.13, 1.000368966.

C. POND MATERIALS: SEE TABLE 2

TABLE 2: POND MATERIALS

FILTER MATERIAL	CDOT FILTER MATERIAL (CLASS B OR C)	MASS PERCENT PASSING SQUARE MESH SIEVE		
		SIEVE SIZE	CLASS B	CLASS C
		37.7mm (1.5")	100	
		19.0 mm (0.75")		100
		4.75 mm (No. 4)	20-60	60-100
		1.18 µm (No. 16)	10-30	
		300 µm (No. 50)	0-10	10-30
		150 µm (No. 100)		0-10
		75 µm (No. 200)	0-3	0-3
UNDERDRAIN PIPE	PIPE Ø AND TYPE	MAX. SLOT WIDTH (in.)	MIN. OPEN AREA (PER ft.)	
	4" SLOTTED PVC	0.032	1.90 in ²	

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Christie Peak Express Relocation OWNERSHIP AND MAINTENANCE PLAN NOTES

PROJECT: 1012-052
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2

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