

## Historic Preservation Board Agenda Item

**DATE:** DECEMBER 18, 2024  
**TO:** DOUGLAS COUNTY HISTORIC PRESERVATION BOARD  
**FROM:** BRITTANY CASSELL, CURATOR  
LAUREN PULVER, PLANNING SUPERVISOR  
**SUBJECT: PTHROS FUNDING REQUEST – HIGH LINE CANAL CONSERVANCY  
ORIGIN TRAILHEAD**

### **SUMMARY**

Staff has attached the information for a funding request from the High Line Canal Conservancy.

## Parks and Trails, Open Space, and Historic Resources – Funding Application

**APPLICATION SUBMITTAL DEADLINE: FEBRUARY 29th**

**PRESUBMITTAL MEETING DATE: JANUARY 30th**

**APPLICATION ACCEPTANCE DATE: 10/21/24**

**PROJECT NAME: High Line Canal Origin Trailhead**

### Summary Information:

Applicant Name: High Line Canal Conservancy

Type of Entity: Non-Profit Organization

Authorized Representative: Josh Phillips

Contact Information: josh.p@highlinecanal.org, 303-503-6114

Project Summary (brief description of scope and function): The 71-mile High Line Canal is a regional Recreational asset and landmark of our agricultural heritage. As Denver Water reduces its reliance on the Canal for irrigation delivery, the High Line Canal Conservancy (Conservancy) is working with communities across the region to plan for the Canal's long-term future, enhance the recreational experience on the Canal and interpret the Canal's unique history. The small, informal parking lot at the High Line Canal and Waterton Road is being reimagined as the High Line Canal Origin Trailhead. The Conservancy has worked closely with Parks, Trails and Building Grounds and engaged the surrounding community to develop a site plan that improves access and accessibility at the start of the High Line Canal trail while providing interpretation and education about the Canal where the ditch emerges from Waterton Canyon. The trailhead has the potential to be a regional draw, beckoning recreation users and history buffs from across the region to the enhanced trailhead and interpretive area. The site plan includes:

- Resurfacing the parking lot
- A restroom in the parking lot (porta potty)
- Improved connection to the Canal trail
- Two pause places along the trail with interpretation about the Canal's history
- A series of interpretive signage educating users about the Canal and its contribution to the County

Project Type (property acquisition, cultural resource protection, park or trail design and construction):  
Trail design and construction

Property address or State Parcel #'s: 10401 Waterton Road, Littleton, CO 80125

State Parcel Number(s): N/A

Total acreage: The Canal includes 186 acres in Douglas County

Geographic area to be benefitted by the project (local, community, regional): Regional

Population to be benefitted by the project (including any special population groups): The project is regional and will benefit all of Douglas County. The accessibility improvements will benefit active adults and those with mobility challenges. Educational opportunities will benefit youth. Interpretation will serve the historic preservation community.

Environmental, cultural, scenic, landmark, or historic resource to be protected: The Canal, now over 140-years old, is an important environmental, cultural and historic resource that will be interpreted through the project.

Total project cost:

Requested Amount of County Funding: \$450,000

Applicant's financial contribution: \$150,000

Financial contributions from other grants or project partners: N/A

In-kind contributions from other project partners: N/A

## **Project Narrative**

### Overview

The High Line Canal (Canal) was built in the 1880s as a means of delivering irrigation water to serve the growing population of the region. Water was diverted from the South Platte in Waterton Canyon and followed the high point of the topography, dropping just two feet per mile as the Canal meandered 71 miles across the region. Originally a private venture, the Canal was acquired by Denver Water in 1924. In the 1970s, the old ditch rider's road was opened for recreation as Denver Water entered into lease agreements with the local jurisdictions along the Canal to maintain a regional trail for bikers, pedestrians and equestrians. Today, the Canal is in a time of transition as Denver Water reduces its reliance on the Canal for irrigation delivery. This corner of the County is also in a time of transition, as large-scale residential development changes the rural character that has been defined by the Canal for over 140 years. During this time of transition, the High Line Canal Origin Trailhead provides the opportunity to preserve this historic and natural resource while educating the community about the history of the Canal and its origins in Douglas County.

As use of the Canal changes, Douglas County has partnered with the High Line Canal Conservancy (Conservancy) and all of the jurisdictions along the Canal to plan for the Canal's long-term future. The Plan for the High Line Canal (The Plan), was completed in 2019 and it identified this small, informal parking lot on Waterton Road as regional opportunity to improve access to the Canal and share the Canal's origin story with the region. Design of the Origin Trailhead began in 2022 with funding from the Conservancy and Parks, Trails and Building Grounds. Through a series of public meetings, site walks and engagement of a community panel representing local neighborhoods, historic preservationists and recreation users, the Origin Trailhead site plan was completed in 2023. The Conservancy continues to manage design and engineering of these improvements and is requesting funding from the County to

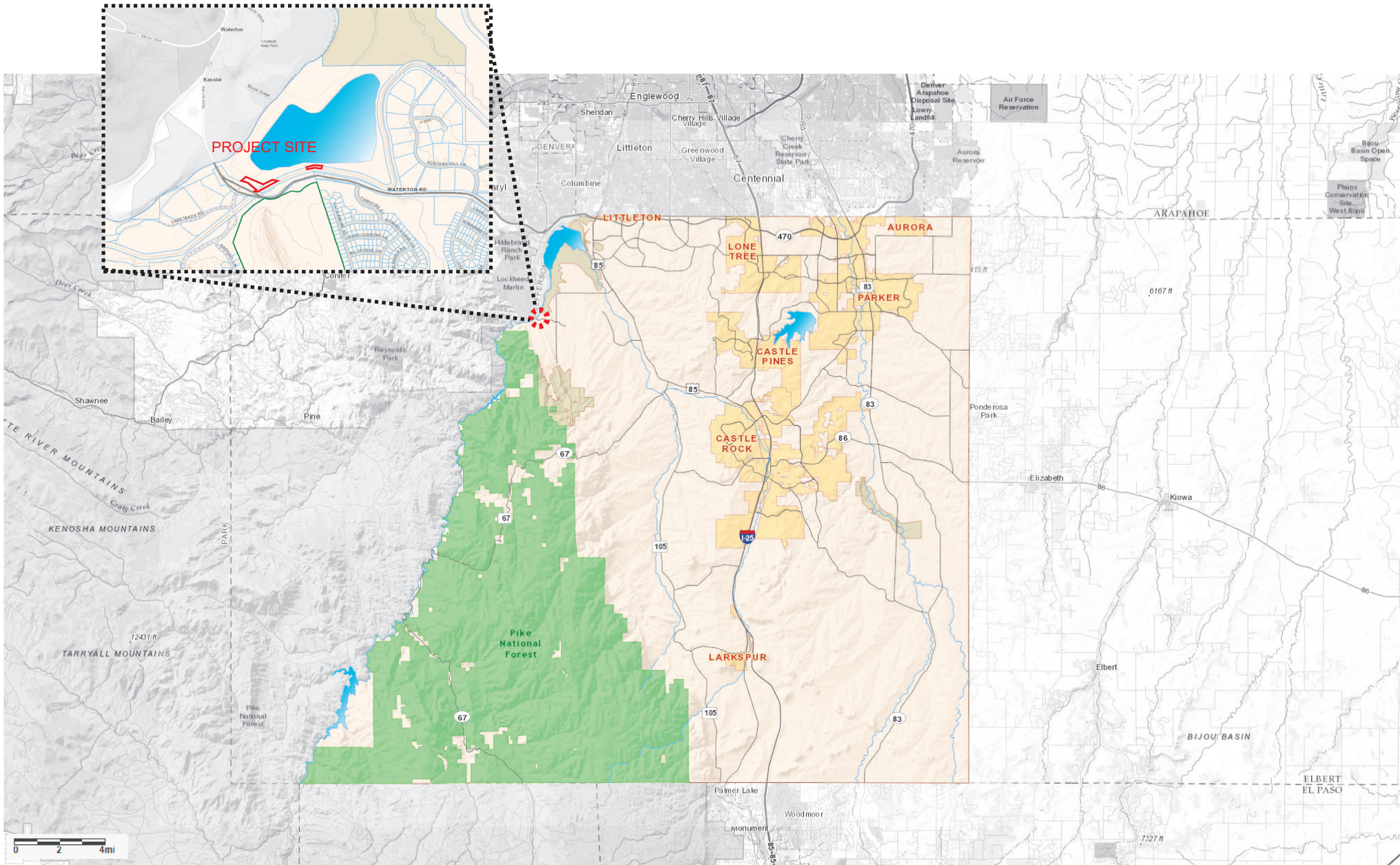
construct these improvements in 2025. The funding request to the County is \$450,000 with a match of \$150,000 from the Conservancy.

The project is strongly aligned with the Board's core priority of historic & natural resources. The Canal is a unique combination of historic asset and natural resource and the Origin Trailhead will celebrate the unique history of the Canal while connecting County residents to the regional trail. The project would support the goals of the Comprehensive Master Plan, cementing the Canal as a center for community, providing opportunities for engagement with the natural environment and building community awareness about the Canal as a regional recreation and historic resource.

If this funding request is successful, the project will be constructed in 2025. Once constructed, the Conservancy will be responsible for maintaining signage at the project site while Parks, Trails and Building Grounds will maintain the trailhead and structures. The project will require a Location and Extent (L+E) review with the County and a pre-submittal meeting was held in 2023 to understand that process. A license will also be required from Denver Water to build improvements on the Canal property and they have reviewed the site plan.

[An excerpt from The Plan for the High Line Canal is included in the application materials but the full plan can be viewed at this link.](#)





HIGH LINE CANAL ORIGIN TRAILHEAD  
VICINITY MAP



# PUBLIC ENGAGEMENT AND INPUT SUMMARY

*Survey open from February 20th, 2023 through May 15th, 2023*

## Feedback Reach

*205 Survey Respondents*

*80% of survey respondents have been to the Origin Trailhead*

*17 participants for in-person site walks, open house and meetings*

## Trail Use

**92.1% Recreational**

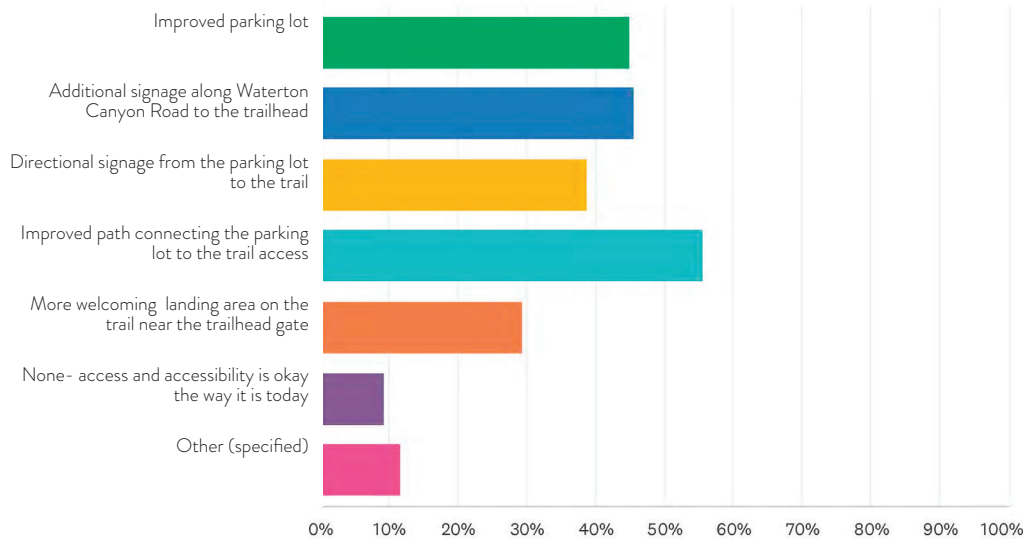
- 42% Walking
- 36% Biking
- 9% Running
- 9% Birding



## WHAT WE HEARD

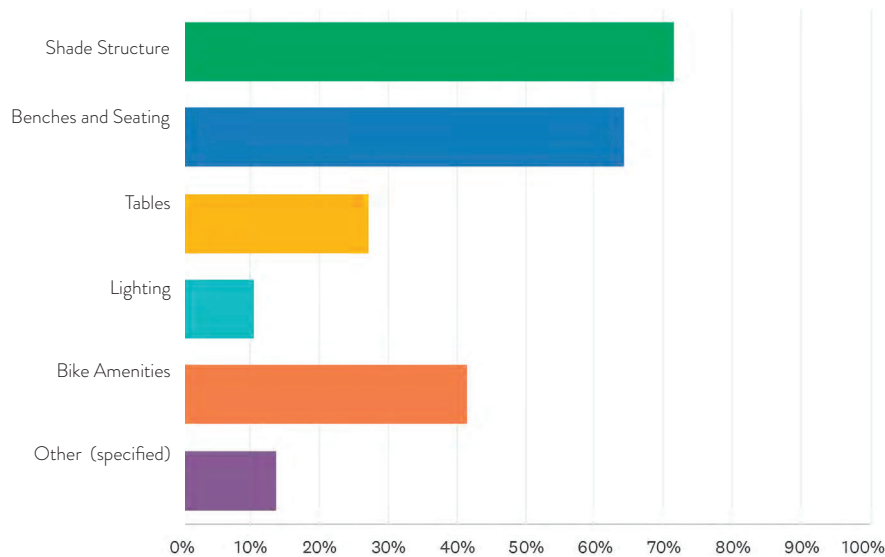
- A bathroom at the trailhead is important
- Accessibility of the trail for people with disabilities is a priority
- Respect the quiet, natural aesthetic of the trail in this location
- Trail surface improvements could help make trail more accessible
- Prioritize sun and rain shelters
- Safety and trail etiquette education are important
- Telling the story of the Canal, water and local history is a priority

# PUBLIC ENGAGEMENT AND INPUT SUMMARY



## Access and Accessibility Feedback

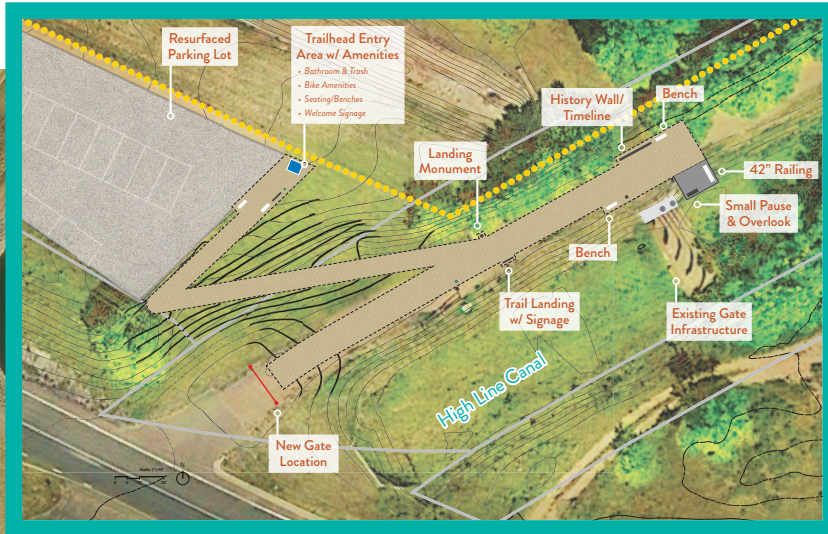
- 56%** Improved path connecting the parking lot to the trail access
- 46%** Additional signage along Waterton Canyon Road to the trailhead
- 45%** Improved parking lot



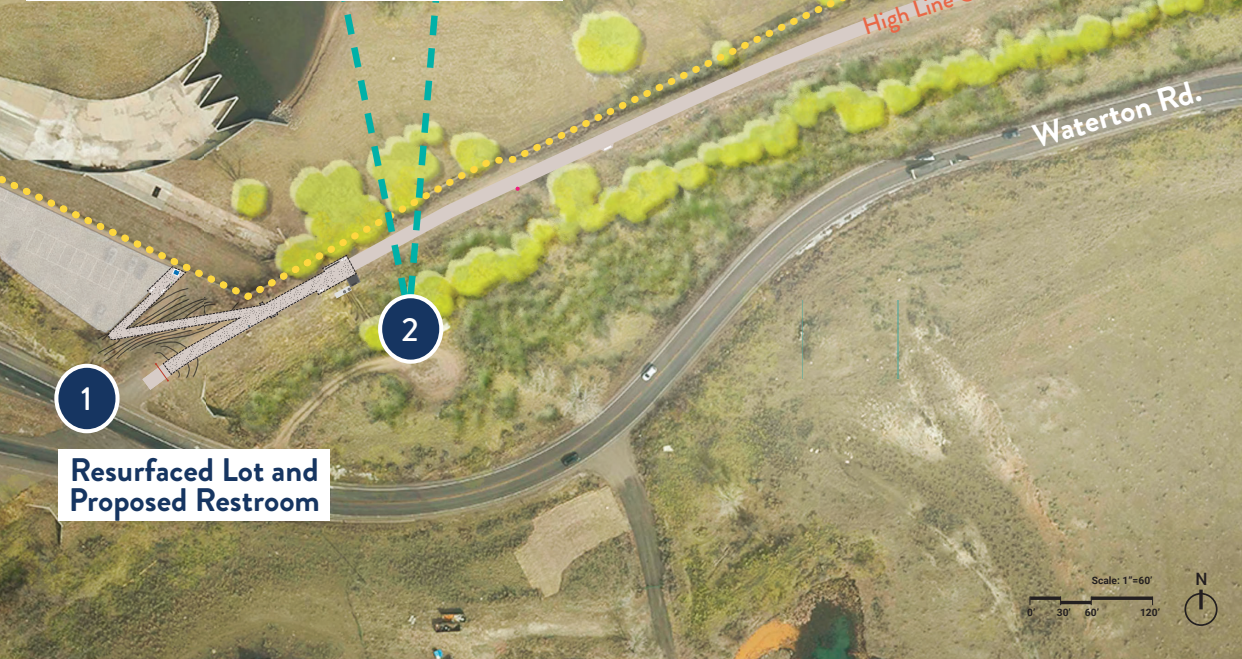
## Site Elements

- 72%** Shade Structure
- 64%** Benches/ Seating
- 42%** Bike Amentities



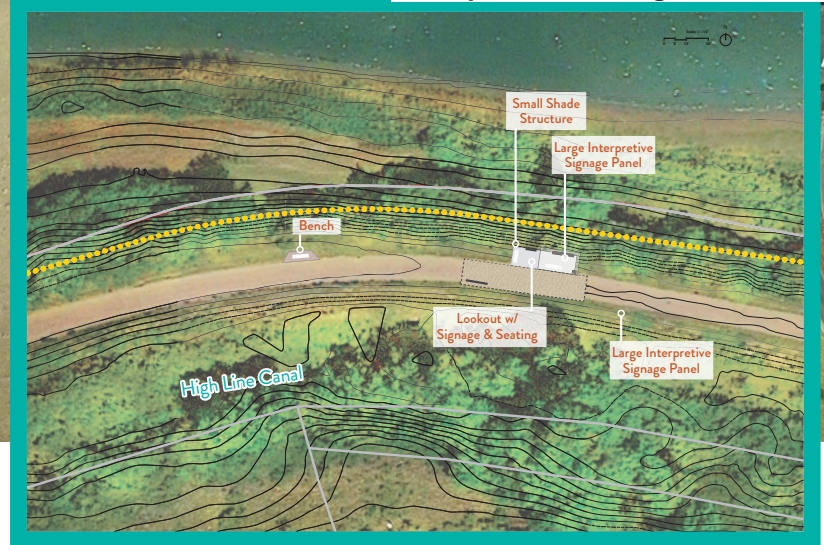


Trailhead Landing and North Overlook



Resurfaced Lot and Proposed Restroom

Interpretive Landing and Lookout



#### 4 Continued Interpretation

Additional historical canal signage to continue through mile marker 3

Included interpretation areas to include:

- Platte Canyon Gate
- Measurement Station
- Little Willow Creek Intersection

Continued to Mile 3



# Trailhead

## Trailhead Landing and North Overlook



Landing monuments at nodes that orient users and define pause moments



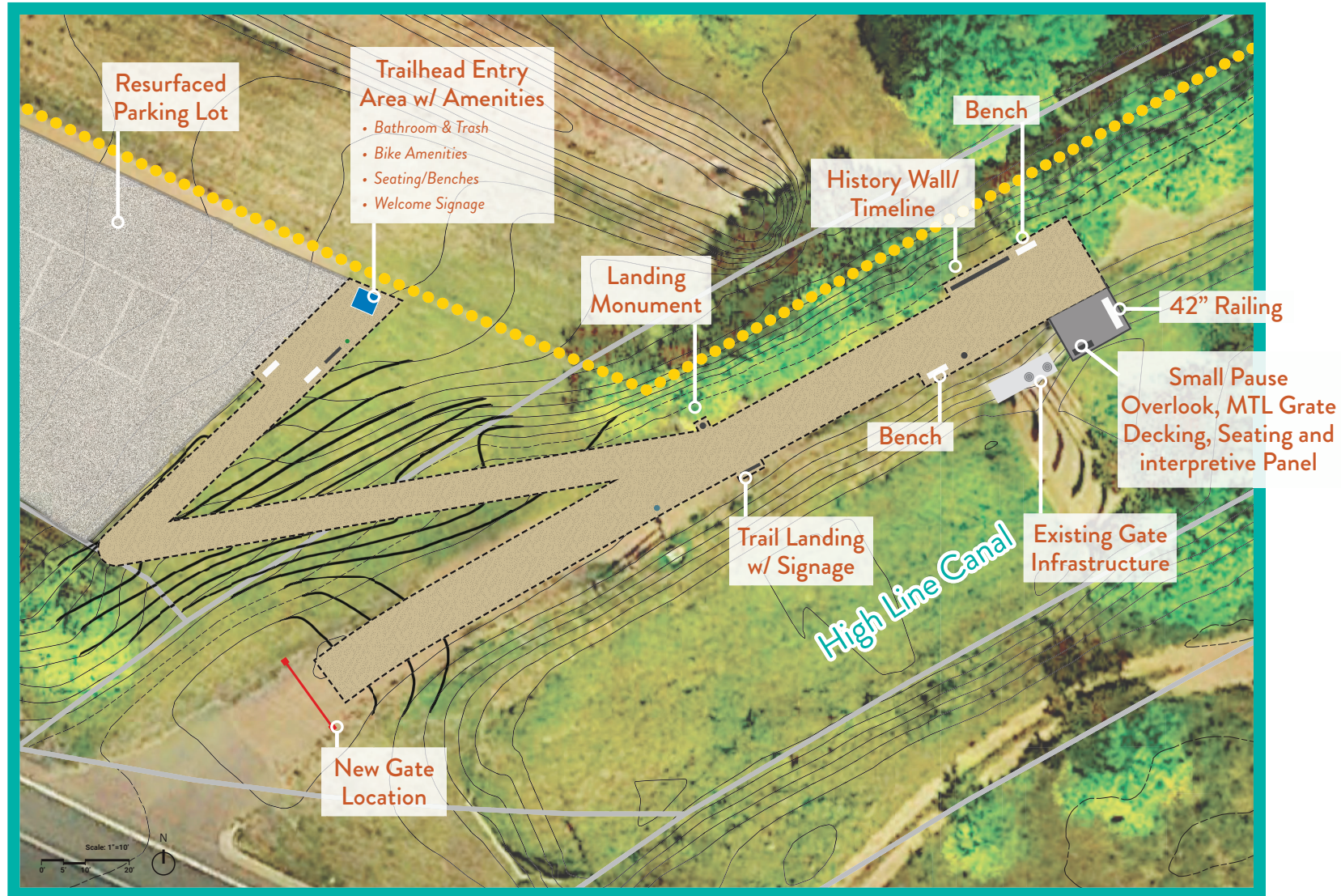
Small pause moments set off of path and framed by landscape



Historic Timeline



Port-o-let Enclosure





*Trailhead Landing and North Overlook*





# Interpretive Landing and Lookout



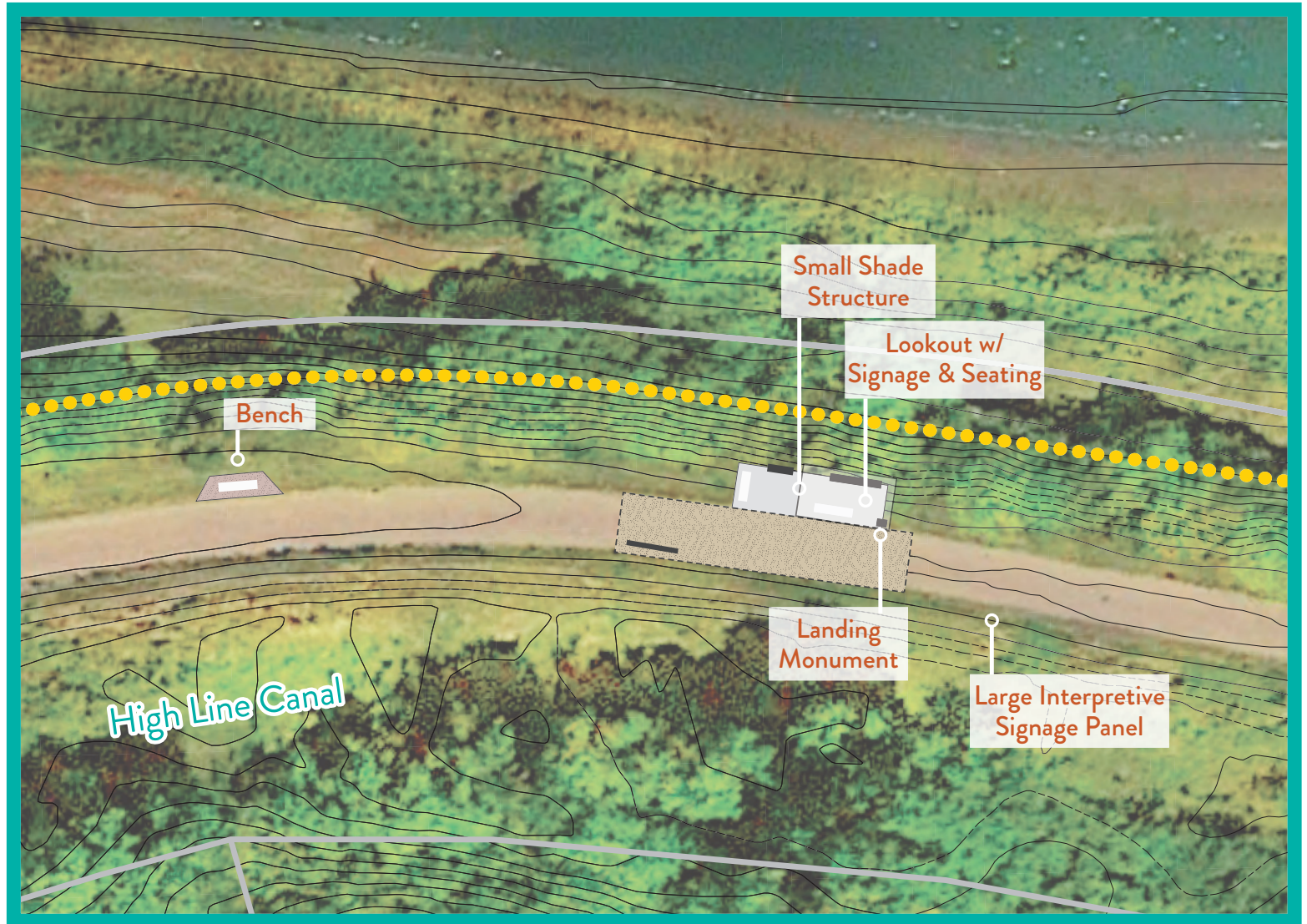
Small structure as destination for pause and rest



Metal, concrete and stone tie to Waterton Canyon Diversion Dam



Large scale mapping/visual interpretation





## Interpretive Landing and Lookout





# High Line Canal Origin Trailhead Improvements

JANUARY 12TH 2024

PARCEL 1: HIGHLINE CANAL WITHIN 35-6-69 & 26-6-69 30.445 AM/L  
PARCEL 2: TR IN SE1 / 4NE1 / 4 34-6-69 AND NW1 / 35-6-69 AKA PLATTE CANYON RESERVOIR 94.56 AM/L  
PARCEL 3: WATERTON ROAD ROW WITHIN RIVER CANYON 2 6.35 AM/L

30% PROGRESS SET - ORIGIN TRAILHEAD IMPROVEMENTS

## PROJECT LOCATION



DRAWING SHEET INDEX	
Sheet Number	Sheet Title
....	COVER SHEET
G002	GENERAL INFORMATION
L102	EXISTING CONDITIONS & TREE CONSERVATION PLAN
L103	DEMO PLAN - PHASE ONE
L104	DEMO PLAN - PHASE 2
L105	GRADING PLAN - PHASE ONE TRAILHEAD
L201	REFERENCE SITE PLAN
L202	MATERIAL PLAN - PHASE ONE - TRAILHEAD
L203	MATERIAL PLAN - PHASE TWO - OVERLOOK AT BEND
L401	LANDSCAPE DETAILS
L402	LANDSCAPE DETAILS
L403	LANDSCAPE DETAILS
L404	LANDSCAPE DETAILS

## CONTACT INFORMATION

### CLIENTS



**High Line Canal Conservancy**  
Josh Phillips/josh.p@highlinecanal.org  
4010 E. Orchard Road,  
Centennial CO 80121



**Douglas County Colorado**  
Nick Glaueque  
nglaueque@douglas.co.us  
9651 S Quebec Street  
Highlands Ranch, CO 80130  
(303) 663-7707

### LANDSCAPE ARCHITECT PROJECT ENGINEER



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SUBCONSULTANT NAME  
Consultant Name  
Address Line 1  
Address Line 2  
City, State, Zip  
Phone Number

REVISIONS / SUBMISSIONS			
NO.	DATE	DESCRIPTION	BY
1	1/12/2024	30% PROGRESS DOCUMENTS	WV

STAMP



Know what's below.  
Call before you dig.

CLIENT



**HIGH LINE CANAL CONSERVANCY**  
HIGH LINE CANAL CONSERVANCY  
4010 E ORCHARD ROAD  
CENTENNIAL, CO 80121



**DOUGLAS COUNTY COLORADO**  
DOUGLAS COUNTY COLORADO  
8651 S QUEBEC STREET  
HIGHLANDS RANCH, CO 80130

PROJECT

**HIGH LINE CANAL - ORIGIN TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

SHEET TITLE  
COVER SHEET

SHEET NO.  
1 of 14

**G001**

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BIDDING.
2. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THE SURVEY INFORMATION AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF WORK.
3. THE LOCATIONS OF UTILITIES ARE FOR GRAPHIC REPRESENTATION ONLY AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY LOCATION, DEPTH, AND SIZE OF ALL UTILITIES ON SITE PRIOR TO CONSTRUCTION. EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. ALL DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
4. THE CONTRACTOR SHALL OBTAIN, AT THEIR EXPENSE, ALL REQUIRED PERMITS FROM THE APPROPRIATE AGENCIES AND JURISDICTIONS.
5. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND ORDINANCES.
6. THE CONTRACTOR SHALL PLAN TO WORK AROUND ANY SCHEDULED STREET OR PARK EVENTS OR CLOSURES, OR OTHER SPECIAL EVENTS IN THE AREA.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY EXISTING PAVEMENT MARKINGS, SIGNS, TRAFFIC SIGNALS, CONDUIT, OR ANY OTHER TRAFFIC CONTROL DEVICES THAT ARE AFFECTED OR DAMAGED DURING CONSTRUCTION.
8. THE CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPE, TREES, HARDCAPE, SITE FURNISHINGS, OR ANY OTHER AMENITIES TO REMAIN ON-SITE AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IF DAMAGE OCCURS.
9. NOTES AND DETAILS ON SPECIFIC DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
10. THE CONTRACTOR SHALL KEEP A CURRENT SET OF CONSTRUCTION RECORD DRAWINGS (AS-BUILTS) ON SITE AT ALL TIMES. MARK ALL INFORMATION WITH A CONTRASTING COLOR. BE PREPARED TO REVIEW DOCUMENTS WITH THE PROJECT MANAGER. MAINTAIN RECORD DOCUMENTS IN A CLEAN, DRY, LEGIBLE CONDITION, APART FROM DOCUMENTS USED FOR CONSTRUCTION.
11. THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARITY WITH ALL CONSTRUCTION DOCUMENTS.
12. ANY FILL MATERIAL OR SOILS TO BE MOVED TO AND PLACED ON ADJACENT CITY OWNED PROPERTY MUST BE FREE OF KNOWN CONTAMINATION (OBSERVED OR PREVIOUSLY DOCUMENTED) AND BE ACCEPTABLE FOR UNRESTRICTED RESIDENTIAL USE. CONTACT DENVER DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT IF CLARIFICATION IS NEEDED REGARDING THIS REQUIREMENT.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING IRRIGATION, LANDSCAPE, HARDCAPE, AND SITE AMENITIES THAT MAY OCCUR DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE CITY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL INCLUDING TURFGRASS IN A HEALTHY STATE DURING CONSTRUCTION AND UNTIL FINAL ACCEPTANCE. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLIGENCE BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

SITE PROTECTION:

1. AT ALL TIMES THE CONTRACTOR SHALL TAKE PRECAUTIONS FOR PROTECTION OF EXISTING PUBLIC AND PRIVATE INSTALLATIONS. THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. ANY DAMAGED INSTALLATIONS, PUBLIC OR PRIVATE, SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
2. EXISTING PARKING LOT PAVING, SIDEWALK, OR CURB AND GUTTER DAMAGED BY CONSTRUCTION ACTIVITIES WITHIN THE CONSTRUCTION STAGING AREA WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCIDENTAL TO THE WORK.

TREE PROTECTION NOTES:

1. THE TREE RETENTION AND PROTECTION SPECIFICATIONS SHALL BE FOLLOWED THROUGHOUT THE DURATION OF THE PROJECT.
2. DAMAGE TO TREES DURING CONSTRUCTION SHALL BE SUBJECT TO PENALTY PER CITY ORDINANCE.
3. TREE PROTECTION SHALL BE INSTALLED AND APPROVED BY THE CITY FORESTER PRIOR TO COMMENCEMENT OF DEMOLITION/CONSTRUCTION ACTIVITIES. TREE PROTECTION SHALL REMAIN IN PLACE UNTIL SUBSTANTIAL COMPLETION IS ISSUED BY THE PROJECT MANAGER.
4. ONCE TREE PROTECTION IS APPROVED BY THE CITY FORESTER, THE TREE PROTECTION ZONE SHALL NOT BE RESIZED, MODIFIED, REMOVED, OR ALTERED IN ANY MANNER WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY FORESTER.
5. NO MATERIALS, DEBRIS, EQUIPMENT, OR SITE AMENITIES SHALL BE STORED WITHIN THE TREE PROTECTION ZONE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTENANCE OF ALL TREES IMPACTED DURING CONSTRUCTION UNTIL SUBSTANTIAL COMPLETION. THIS INCLUDES TREES WITHIN THE LIMIT OF WORK AND OUTSIDE THE PROJECT LIMITS.
7. LOCATE AND SUITABLY IDENTIFY TREES AND IMPROVEMENTS INDICATED TO REMAIN.

8. CLEAR AND GRUB AREAS WITHIN CONTRACT LIMITS AS REQUIRED FOR SITE ACCESS AND EXECUTION OF THE WORK.
9. REMOVE TREES, PLANTS, UNDERGROWTH, OTHER VEGETATION, AND DEBRIS EXCEPT ITEMS INDICATED TO REMAIN. STRIP WEEDS AND GRASS.
10. FELL TREES IN A MANNER TO PREVENT INJURY TO ADJACENT FACILITIES AND TO TREES SCHEDULED TO REMAIN.
11. USE HAND METHODS FOR GRUBBING INSIDE THE DRIP LINE OF TREES TO REMAIN. STRIP GRASS MATERIALS TO A MAXIMUM DEPTH OF 1" UNDER TREE CANOPIES. CAREFULLY TILL OR SCARIFY EXISTING GRADE TO A DEPTH OF 1".
12. REMOVE STUMPS AND ROOTS TO A CLEAR DEPTH OF 36" BELOW SUBGRADES. REMOVE STUMPS AND ROOTS TO THEIR FULL DEPTH WITHIN 5' OF UNDERGROUND STRUCTURES, UTILITY LINES, FOOTINGS AND PAVED AREAS.
13. PROTECT EXISTING TREES SCHEDULED TO REMAIN AGAINST INJURY OR DAMAGE, INCLUDING CUTTING, BREAKING, OR SKINNING OF ROOTS, TRUNKS OR BRANCHES; SMOTHERING BY STOCKPILED CONSTRUCTION MATERIALS, EXCAVATED MATERIALS OR VEHICULAR TRAFFIC WITHIN BRANCH SPREAD.
- 13.1. ERECT TEMPORARY FENCING BEFORE COMMENCING SITE PREPARATION WORK. MAINTAIN FENCING DURING FULL CONSTRUCTION PERIOD. REMOVE TEMPORARY FENCING ONLY AFTER WRITTEN APPROVAL IS GIVEN BY OWNER REPRESENTATIVE.
- 13.2. REPAIR TREES SCHEDULED TO REMAIN AND DAMAGED BY CONSTRUCTION OPERATIONS IN A MANNER ACCEPTABLE TO THE OWNER REPRESENTATIVE. REPAIR DAMAGED TREES PROMPTLY TO PREVENT PROGRESSIVE DETERIORATION CAUSED BY DAMAGE.
- 13.3. REPLACE TREES SCHEDULED TO REMAIN AND DAMAGED BEYOND REPAIR BY CONSTRUCTION OPERATIONS, AS DETERMINED BY THE OWNER REPRESENTATIVE, WITH TREES OF SIMILAR SIZE AND SPECIES. COST FOR TREE REPLACEMENT SHALL BE DETERMINED IN ACCORDANCE WITH THE TREE EVALUATION FORMULA AS DESCRIBED IN A GUIDE TO THE PROFESSIONAL EVALUATION OF LANDSCAPE TREES, SPECIMEN SHRUBS AND EVERGREENS, PUBLISHED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE.
- 13.4. REPAIR AND REPLACEMENT OF TREES SCHEDULED TO REMAIN AND DAMAGED BY CONSTRUCTION OPERATIONS OR LACK OF ADEQUATE PROTECTION DURING CONSTRUCTION OPERATIONS SHALL BE AT CONTRACTOR'S EXPENSE.

PLANTING AND REVEGETATION NOTES:

1. EXISTING CONTOUR INTERVAL IS 1 FOOT/FEET. PROPOSED CONTOUR INTERVAL IS 1 FOOT/FEET.
2. PROPOSED CONTOURS AND SPOT ELEVATIONS AS SHOWN ON THE PLANS ARE DEFINED AS FINISHED ELEVATION AFTER PAVING, LANDSCAPING, ETC. THE CONTRACTOR SHALL COORDINATE THE SUBGRADE ELEVATIONS TO PROPERLY ACCOMMODATE PAVEMENT THICKNESS AND THICKNESS OF TOPSOIL AND SOD.
3. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER CONTOURS.
4. ALL TOPSOIL WHERE PHYSICALLY PRACTICABLE SHALL BE SALVAGED. NO TOPSOIL SHALL BE REMOVED FROM THE SITE EXCEPT AS SET FORTH IN THE APPROVED PLANS. TOPSOIL AND S. SUBGRADE SHALL BE SEGREGATED AND STOCKPILED SEPARATELY. ALL STOCKPILES SHALL REMAIN WEED FREE. TOPSOIL AND SUBGRADE SHALL BE REDISTRIBUTED WITHIN THE GRADED AREA AFTER ROUGH GRADING TO PROVIDE A SUITABLE BASE FOR AREAS THAT WILL BE SEEDED AND PLANTED. RUNOFF FROM THE STOCKPILED AREA SHALL BE CONTROLLED TO PREVENT EROSION AND RESULTING SEDIMENTATION OF RUNOFF WATER.]
6. MATCH GRADE OF EXISTING PAVEMENT OR EARTHWORK WHERE NEW CONSTRUCTION MEETS EXISTING FEATURES.
6. TRAILS AND WALKWAYS SHALL FOLLOW EXISTING GRADES UNLESS OTHERWISE NOTED. LONGITUDINAL GRADES OF ALL TRAILS SHALL NOT EXCEED 4.9% AND CROSS SLOPES SHALL NOT EXCEED 2.0%.
7. MAINTAIN A 1.5% MINIMUM, 2.0% MAXIMUM CROSS SLOPE FOR THE SIDEWALK TO ALLOW FOR PROPER DRAINAGE.
8. ALL UTILITY COVERS, GRATES, ETC, EXISTING AND PROPOSED SHALL BE FLUSH WITH FINISHED GRADE UNLESS OTHERWISE NOTED.
9. THE CONTRACTOR SHALL PROVIDE A SMOOTH, CONTINUOUS FINISHED GRADE FREE OF RUTS, DEPRESSIONS, AND IRREGULARITIES. LANDSCAPE AREAS SHALL HAVE A MINIMUM SLOPE OF 2.0% AND BE PITCHED TO DRAIN UNLESS OTHERWISE NOTED.
10. DISCREPANCIES IN THE GRADING INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
11. MAXIMUM SLOPES IN LANDSCAPE AREAS SHALL NOT EXCEED 4:1 AND MINIMUM SLOPES IN LANDSCAPE AREAS SHALL BE 2% UNLESS OTHERWISE NOTED.
12. FINAL GRADING TO BE REVIEWED AND APPROVED BY THE PROJECT MANAGER PRIOR TO LANDSCAPING.
13. THE CONTRACTOR TO GRADE AND REPAIR ALL DISTURBED AREAS IN ORDER TO CREATE A SMOOTH TRANSITION FROM NEW GRADE TO EXISTING GRADE, INCLUDING HARDCAPE AND SOFTSCAPE AREAS. NOTIFY THE PROJECT MANAGER OF ANY CONFLICTS.

LAYOUT NOTES:

1. VERIFY EXISTING SITE INFORMATION INCLUDING, BUT NOT LIMITED TO, STREET GRADES, UTILITIES, PROPERTY LINES, LIMITS OF ROADWAYS, CURBS, AND GUTTERS TAKEN FROM THE CIVIL ENGINEERING DRAWINGS.

2. TAKE ALL DIMENSIONS FROM BACK OF CURB, FACE OF WALL OR BUILDING, AND CENTERLINE OF TREES UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS CALLED OUT AS 'EQUAL' ARE EQUIDISTANT MEASUREMENTS.
4. WRITTEN DIMENSIONS SUPERCEDE SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. CONTACT THE PROJECT MANAGER IF THERE IS A DISCREPANCY.
5. ALL ANGLES TO MATCH THOSE NOTED ON THE DRAWING AND ALL LINES OF PAVING TO BE PARALLEL UNLESS OTHERWISE NOTED. MAINTAIN HORIZONTAL ALIGNMENT OF ADJACENT ELEMENTS AS NOTED ON DRAWINGS.
6. COORDINATE AND FIELD VERIFY ALL SLEEVING LOCATIONS FOR ALL UTILITY, ELECTRICAL, AND IRRIGATION PRIOR TO CONSTRUCTION.
7. COORDINATE PROPOSED WALKS AND RAMPS WITH EXISTING CONDITIONS. LAYOUT OF ARCS TO BE SMOOTH AND CONTINUOUS. STAKE PROPOSED WALKS IN FIELD FOR REVIEW WITH THE PROJECT MANAGER PRIOR TO FORMING. FORMWORK MUST BE APPROVED BY THE PROJECT MANAGER PRIOR TO POURING. RAMPS AND WALKS ARE TO COMPLY WITH CURRENT ADA STANDARDS - NO EXCEPTIONS OR TOLERANCES.
8. ALL SITE IMPROVEMENTS SHALL BE FIELD SURVEYED AND STAKED BY THE CONTRACTOR AND APPROVED BY THE PROJECT MANAGER PRIOR TO CONSTRUCTION. FINAL STAKING OF ALL CONCRETE PLATWORK AND FORMWORK SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO POURING CONCRETE.
9. THE CONTRACTOR SHALL SUBMIT A JOINT PLAN FOR REVIEW AND APPROVAL BY THE PROJECT MANAGER PRIOR TO POURING CONCRETE. ALL CONTROL JOINTS SHALL BE SAWCUT AND SPACED AS INDICATED ON THE DRAWINGS AND DETAILS. EXPANSION JOINTS SHALL BE SPACED EVERY 120' UNLESS OTHERWISE SHOWN ON THE PLAN.
10. MATCH LINE OF EXISTING PAVEMENT OR EARTHWORK WHERE PROPOSED WORK MEETS EXISTING TO ALLOW CLEAN TRANSITION.

PLANTING AND REVEGETATION NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK.
2. IF THERE IS A DISCREPANCY BETWEEN PLANT QUANTITIES ON THE PLAN AND THE PLANT SCHEDULE, PLANT QUANTITIES SHALL PRESIDE.
3. ANY PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE PROJECT MANAGER PRIOR TO DELIVERY.
4. THE SUMMARY QUANTITIES OF SOFTSCAPE MATERIALS ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENT IN QUANTITY AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS OWN CONSTRUCTION QUANTITY ESTIMATES.
5. THE EXTENTS OF SEEDING AND SODDING AREAS SHOWN ON THE PLANS ARE APPROXIMATE. ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE PREPARED AND RESTORED BY THE CONTRACTOR PER THE SPECIFICATIONS. PLANTS SHALL NOT BE INSTALLED PRIOR TO ACCEPTANCE OF ROUGH GRADING BY THE PROJECT MANAGER.
6. REMOVE ALL ROCKS, LUMPS, ROOTS, STICKS, AND OTHER FOREIGN MATERIAL FROM TOPSOIL AND GRADE TO AN EVEN SURFACE. RESTORE AND RE-ESTABLISH GRADES IN SETTLED, ERODED, AND RUTTED AREAS TO THE SPECIFIED GRADE AND TOLERANCES.
7. ALL PLANT MATERIAL SHALL BE STAKED OR PLACED BY THE CONTRACTOR AND APPROVED BY THE PROJECT MANAGER PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL NOT BE ADJUSTED FROM THE LOCATION STAKED IN THE FIELD OR SHOWN ON THE PLANS WITHOUT THE WRITTEN APPROVAL OF THE PROJECT MANAGER.
8. PLANTINGS IN OVERHEAD ELECTRIC RIGHTS-OF-WAY HAVE THE FOLLOWING RESTRICTIONS: 1) ALL PLANTING IN THE FIRST 25' FROM THE CENTERLINE OF POLES MUST HAVE A MATURE HEIGHT OF LESS THAN 15'; 2) ALL PLANTINGS 25'-50' FROM THE CENTERLINE OF POLES MUST HAVE A MATURE HEIGHT OF LESS THAN 40'.
9. THE CONTRACTOR SHALL HAND DIG ALL PLANTING PITS ADJACENT TO UTILITIES. IF UTILITIES ARE DAMAGED, REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
10. INSTALL SPECIFIED MULCH IN ALL PLANTING BEDS AND PLACE AROUND ALL NEW TREES AND SHRUBS IN TURF AREAS. MULCH LAYER SHALL NOT BE PLACED AGAINST TRUNKS AND STEMS OF INSTALLED PLANT MATERIAL.
11. PRIOR TO SEEDING, PROVIDE OWNER WITH STATE OR FEDERAL SEED TAGS OR OTHER INSPECTION CERTIFICATES AND INVOICE SHOWING SOURCE OR ORIGIN AND COMPLIANCE WITH SPECIFIED SEED MIX.
12. PRIOR TO STRAW MULCHING, SUBMIT STATE CERTIFICATION OF WEED FREE MULCH TO OWNER FOR APPROVAL.
13. REFER TO SPECIFICATION SECTION # FOR CONTRACTOR'S RESPONSIBILITIES REGARDING WEED CONTROL.
14. PLANT MATERIAL IS TO BE MAINTAINED BY THE LANDSCAPE CONTRACTOR WHILE THE PROJECT IS UNDER CONSTRUCTION. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.

**LIVABLE  
CITIESTUDIO**

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SHEET INFO

SHEET TITLE

GENERAL INFORMATION

SHEET NO.  
2 of 14

**G002**

## ABBREVIATIONS LIST

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## SITE DETAIL KEYNOTES

0.0	EISTING CONDITIONS	SEE EXISTING CONDITIONS
0.1	EXISTING GRAVEL TRAIL	SEE EXISTING CONDITIONS
0.2	EXISTING GRAVEL PARKING LOT	SEE EXISTING CONDITIONS
0.3	TREE PROTECTION	DTL 5 / SHT. L401
0.4	EXISTING SIGN	FIELD VERIFY TO BE RELOCATED
0.5	EXISTING GATE	FIELD VERIFY TO BE RELOCATED
1.0	SURFACES	DTL 1 / SHT. L401
1.1	CRUSHER FINES	SEE SPECS
2.0	EXTERIOR IMPROVEMENTS	
2.1	LANDSCAPE BENCH	DTL 4 / SHT. L401
2.2	POST WITH DOG BAG DISPENSER	DTL 8 / SHT. L401
2.3	BIKE PUMP STATION	DTL 7 / SHT. L401
2.4	PORTA-POTTY	BY OWNER
2.5	METAL RAILING	DTL 2 / SHT. L404
2.6	INTERPRETIVE SIGN - ENTRY	DTL 4 / SHT. L402
2.7	INTERPRETIVE SIGN - TIMELINE	DTL 2 / SHT. L402
2.8	INTERPRETIVE SIGN - LOW	DTL 1 / SHT. L402
2.10	INTERPRETIVE SIGN - RAILING	DTL 6 / SHT. L401
2.11	MONUMENT SIGN - SINGLE	DTL 3 / SHT. L404
2.12	MONUMENT SIGN - DOUBLE	DTL 3 / SHT. L402
2.13	SHADE STRUCTURE	DTL 1 / SHT. L403
2.14	SIGN TYPE B - WAYFINDING MAP KIOSK	DTL 4 / SHT. L404
2.15	TRASH	FIELD VERIFY TO BE RELOCATED
2.16	RELOCATED GATE	FIELD VERIFY TO BE RELOCATED
2.17	OVERLOOK	DTL 1 / SHT. L404

3.0	PLANTING	SEE SPECS
3.1	TREE	SEE SPECS
3.2	NATIVE SEEDING	SEE SPECS

## LEGEND

--- 5510 ---	EXISTING MAJOR CONTOUR	CRUSHER FINES GRAVEL
---	EXISTING MINOR CONTOUR	NATIVE SEE AREA
---	PROPOSED CONTOUR	METAL GRATING
---	TREE PROTECTION ZONE	LANDSCAPE BOULDER
---	EXISTING FENCE	
---	EXISTING SHRUB/TREE STAND	

## REFERENCE NOTES

- FIELD VERIFY TREE PROTECTION LIMITS ON SITE WITH OWNER AND PROJECT MANAGER. ALL LANDSCAPING WITHIN TREE PROTECTION TO BE PRESERVED. ANY WORK CONDUCTED IN THE TREE PROTECTION ZONE TO BE DONE BY HAND.
- CONTRACTOR TO LIMIT DISTURBANCE/REMOVAL OF EXISTING VEGETATION AS MUCH AS POSSIBLE. VEGETATION / DEBRIS CLEARING TO BE CONFIRMED WITH PM PRIOR TO REMOVAL.
- APPROXIMATE EXTENTS OF CRUSHER FINE TRAIL WORK. EXACT EXTENTS DEPENDENT ON CONSTRUCTION IMPACT / DISTURBANCE.

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**HIGH LINE CANAL - ORIGIN**  
**TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

SHEET TITLE

GENERAL INFORMATION

SHEET NO.

3 of 14

**G003**





#### LEGEND

- LIMIT OF WORK
- EXISTING FENCE
- EXISTING DECIDUOUS TREE
- TREE PROTECTION FENCE
- TREE PROTECTION ZONE
- ▨ EXISTING PAVING
- ▨ EXISTING VEGETATION
- ▨ EXISTING SHRUB/TREE STAND

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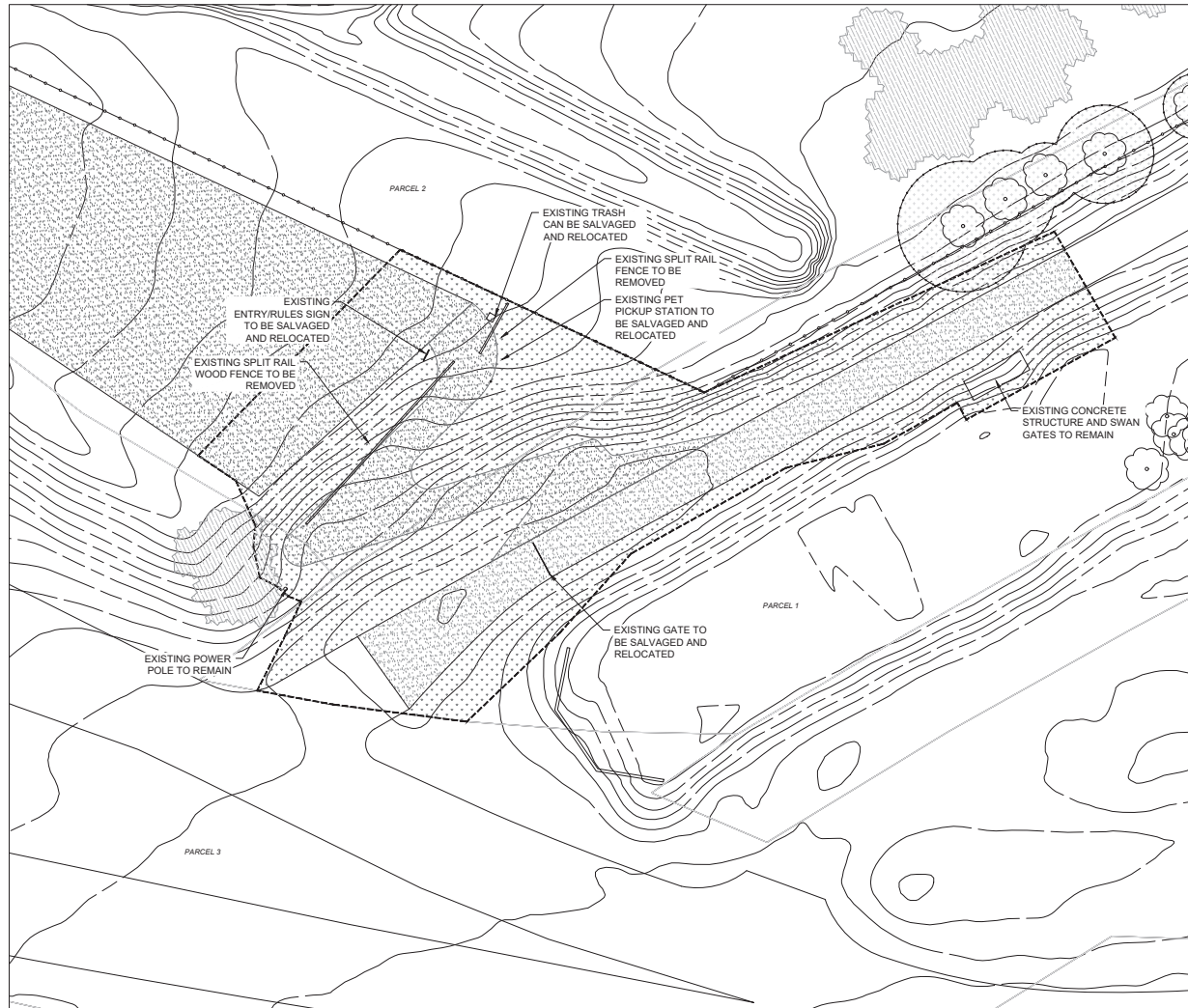
SHEET TITLE

**EXISTING CONDITIONS & TREE  
CONSERVATION PLAN**

SHEET NO.

4 of 14

**L102**



# LEGEND

--- LIMIT OF WORK	0-01 TREE PROTECTION ZONE
● EXISTING DECIDUOUS TREE	0-02 REMOVE CRUSHER FINES
--- EXISTING FENCE	0-03 REMOVE EXISTING VEGETATION

NOTE: PRIOR TO ANY DEMOLITION AND/OR REMOVALS CONTRACTOR TO WALK SITE WITH DOUGLAS COUNTY PM AND LANDSCAPE ARCHITECT AND REVIEW CLEARING AND GRUBBING EXTENTS.

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SHEET INFO

SHEET TITLE

DEMO PLAN - PHASE ONE

SHEET NO.

5 of 14

**L103**





NORTH  
ORIGINAL SCALE 1/8"=1'

#### LEGEND

- LIMIT OF WORK
- EXISTING DECIDUOUS TREE
- EXISTING FENCE
- 0-01 TREE PROTECTION ZONE
- 0-02 REMOVE CRUSHER FINES
- 0-03 REMOVE EXISTING VEGETATION

NOTE: PRIOR TO ANY DEMOLITION AND/OR REMOVALS CONTRACTOR TO WALK SITE WITH DOUGLAS COUNTY PM AND LANDSCAPE ARCHITECT AND REVIEW CLEARING AND GRUBBING EXTENTS.

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COLORADO**

DOUGLAS COUNTY COLORADO  
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HIGHLANDS RANCH, CO 80130

PROJECT

**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

ISSUE

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SHEET INFO

SHEET TITLE

**DEMO PLAN - PHASE 2**

SHEET NO.

**6 OF 14**

**L104**



# LEGEND

- LIMIT OF WORK
- 5510 - EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- - - PROPOSED CONTOUR
- - - EXISTING FENCE
- - - EXISTING SHRUB/TREE STAND
- - - LANDSCAPE BOULDER
- +5550.00 SPOT ELEVATION

NOTE: TOB NOTED ON PLANS IS TOP OF BOULDER ELEVATION

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**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

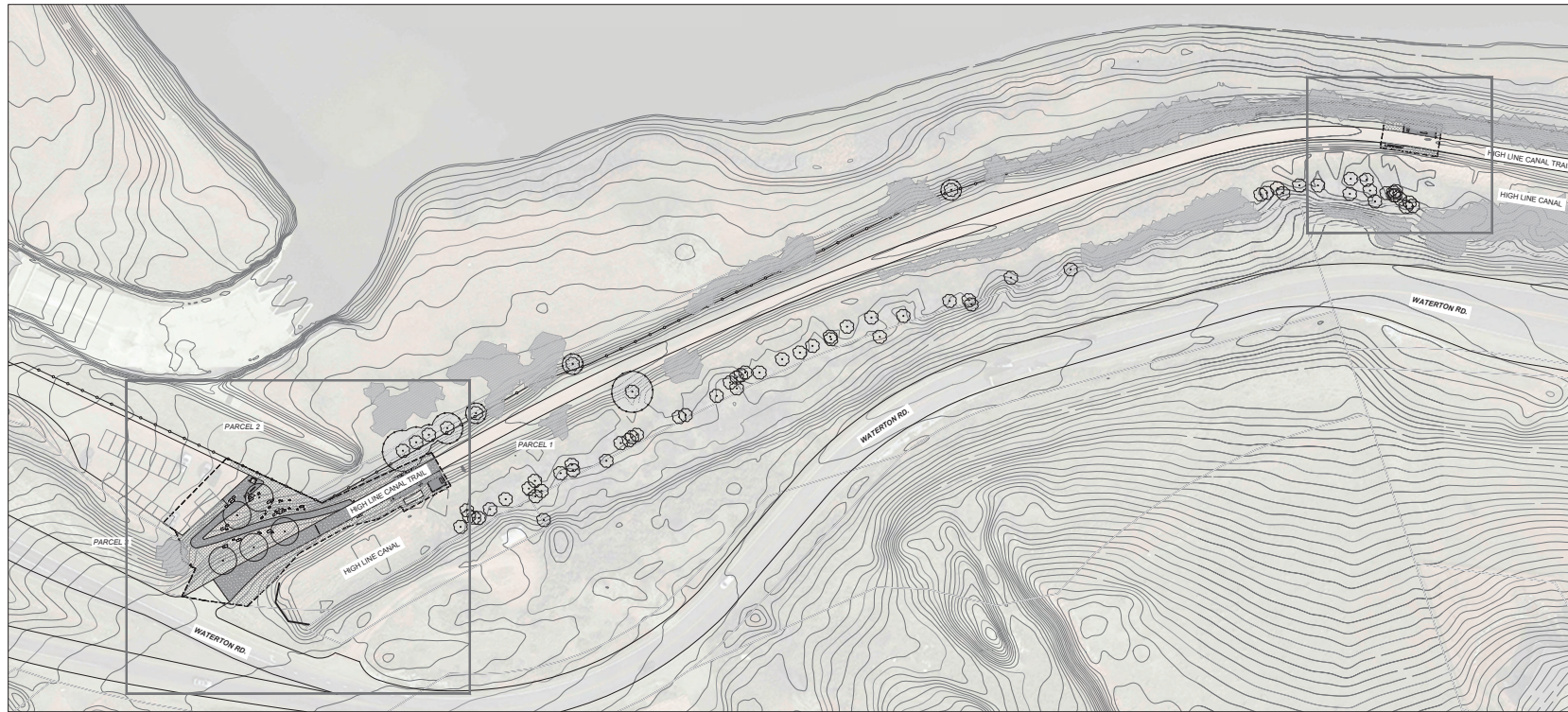
SHEET TITLE

**GRADING PLAN - PHASE ONE TRAILHEAD**

SHEET NO.

**7 of 14**

**L105**



#### LEGEND

--- 5510 ---	LIMIT OF WORK	[Pattern]	CRUSHER FINES GRAVEL
- - - - -	EXISTING MAJOR CONTOUR	[Pattern]	NATIVE SEE AREA
- - - - -	EXISTING MINOR CONTOUR	[Pattern]	METAL GRATING
---	PROPOSED CONTOUR	[Pattern]	LANDSCAPE BOULDER
[Pattern]	TREE PROTECTION ZONE		
---	EXISTING FENCE		
[Pattern]	EXISTING SHRUB/TREE STAND		

#### REFERENCE NOTES

- 1 FIELD VERIFY TREE PROTECTION LIMITS ON SITE WITH OWNER AND PROJECT MANAGER. ALL LANDSCAPING WITHIN TREE PROTECTION TO BE PRESERVED. ANY WORK CONDUCTED IN THE TREE PROTECTION ZONE TO BE DONE BY HAND.
- 2 CONTRACTOR TO LIMIT DISTURBANCE/REMOVAL OF EXISTING VEGETATION AS MUCH AS POSSIBLE. VEGETATION / DEBRIS CLEARING TO BE CONFIRMED WITH PM PRIOR TO REMOVAL.
- 3 APPROXIMATE EXTENTS OF CRUSHER FINE TRAIL WORK. EXACT EXTENTS DEPENDENT ON CONSTRUCTION IMPACT / DISTURBANCE.

#### SITE DETAIL KEYNOTES

0.0	EXISTING CONDITIONS	
0.1	EXISTING GRAVEL TRAIL	SEE EXISTING CONDITIONS
0.2	EXISTING GRAVEL PARKING LOT	SEE EXISTING CONDITIONS
0.3	TREE PROTECTION	DTL. 5 / SHT. L401
0.4	EXISTING SIGN	FIELD VERIFY- TO BE RELOCATED
0.5	EXISTING GATE	FIELD VERIFY- TO BE RELOCATED
1.0	SURFACES	
1.0	CRUSHER FINES	DTL. 1 / SHT. L401
1.1	MESH GRATING	SEE SPECS
2.0	EXTERIOR IMPROVEMENTS	
2.0	LANDSCAPE BOULDER	DTL. 4 / SHT. L401
2.1	LANDSCAPE BENCH	DTL. 8 / SHT. L401
2.2	POST WITH DOG BAG DISPENSER	DTL. 3 / SHT. L401
2.3	BIKE PUMP STATION	DTL. 7 / SHT. L401
2.4	PORTA-POTTY	BY OWNER
2.5	METAL RAILING	DTL. 2 / SHT. L404
2.6	INTERPRETIVE SIGN - ENTRY	DTL. 4 / SHT. L402
2.7	INTERPRETIVE SIGN - TIMELINE	DTL. 2 / SHT. L402
2.8	INTERPRETIVE SIGN - LOW	DTL. 1 / SHT. L402
2.10	INTERPRETIVE SIGN - RAILING	DTL. 6 / SHT. L401
2.11	MONUMENT SIGN - SINGLE	DTL. 3 / SHT. L404
2.12	MONUMENT SIGN - DOUBLE	DTL. 3 / SHT. L402
2.13	SHADE STRUCTURE	DTL. 1 / SHT. L403
2.14	SIGN TYPE B - WAYFINDING MAP KIOSK	DTL. 4 / SHT. L404
2.15	TRASH	FIELD VERIFY- TO BE RELOCATED
2.16	RELOCATED GATE	FIELD VERIFY- TO BE RELOCATED
2.17	OVERLOOK	DTL. 1 / SHT. L404
3.0	PLANTING	
3.0	TREE	SEE SPECS
3.1	NATIVE SEEDING	SEE SPECS

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PROJECT

**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

SHEET TITLE

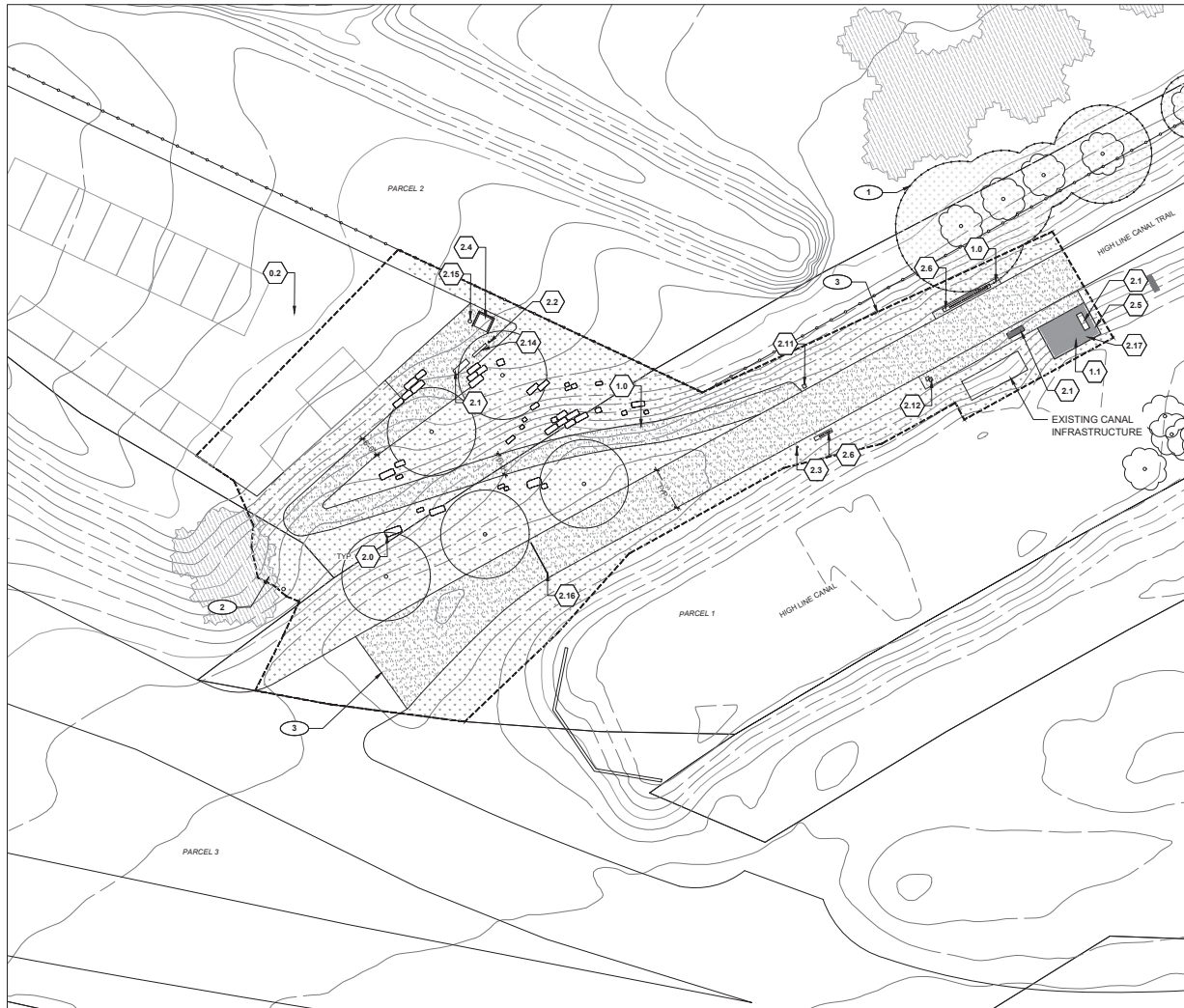
REFERENCE SITE PLAN

SHEET NO.

8 of 14

**L201**





## SITE DETAIL KEYNOTES

<b>0.0</b>	<b>EXISTING CONDITIONS</b>	
0.1	EXISTING GRAVEL TRAIL	SEE EXISTING CONDITIONS
0.2	EXISTING GRAVEL PARKING LOT	SEE EXISTING CONDITIONS
0.3	TREE PROTECTION	DTL. 5 / SHT. L401
0.4	EXISTING SIGN	FIELD VERIFY- TO BE RELOCATED
0.5	EXISTING GATE	FIELD VERIFY- TO BE RELOCATED
<b>1.0</b>	<b>SURFACES</b>	
1.0	CRUSHER FINES	DTL. 1 / SHT. L401
1.1	MESH GRATING	SEE SPECS
<b>2.0</b>	<b>EXTERIOR IMPROVEMENTS</b>	
2.0	LANDSCAPE BOULDER	DTL. 4 / SHT. L401
2.1	LANDSCAPE BENCH	DTL. 8 / SHT. L401
2.2	POST WITH DOG BAG DISPENSER	DTL. 3 / SHT. L401
2.3	BIKE PUMP STATION	DTL. 7 / SHT. L401
2.4	PORTA-POTTY	BY OWNER
2.5	METAL RAILING	DTL. 2 / SHT. L404
2.6	INTERPRETIVE SIGN - ENTRY	DTL. 4 / SHT. L402
2.7	INTERPRETIVE SIGN - TIMELINE	DTL. 2 / SHT. L402
2.8	INTERPRETIVE SIGN - LOW	DTL. 1 / SHT. L402
2.10	INTERPRETIVE SIGN - RAILING	DTL. 6 / SHT. L401
2.11	MONUMENT SIGN - SINGLE	DTL. 3 / SHT. L404
2.12	MONUMENT SIGN - DOUBLE	DTL. 3 / SHT. L402
2.13	SHADE STRUCTURE	DTL. 1 / SHT. L403
2.14	SIGN TYPE B - WAYFINDING MAP KIOSK	DTL. 4 / SHT. L404
2.15	TRASH	FIELD VERIFY- TO BE RELOCATED
2.16	RELOCATED GATE	FIELD VERIFY- TO BE RELOCATED
2.17	OVERLOOK	DTL. 1 / SHT. L404
<b>3.0</b>	<b>PLANTING</b>	
3.0	TREE	SEE SPECS
3.1	NATIVE SEEDING	SEE SPECS

## LEGEND

--- LIMIT OF WORK	CRUSHER FINES GRAVEL
- - - - - EXISTING MAJOR CONTOUR	NATIVE SEE AREA
- - - - - EXISTING MINOR CONTOUR	METAL GRATING
- - - - - PROPOSED CONTOUR	LANDSCAPE BOULDER
--- TREE PROTECTION ZONE	
--- EXISTING FENCE	
--- EXISTING SHRUB/TREE STAND	

## REFERENCE NOTES

- FIELD VERIFY TREE PROTECTION LIMITS ON SITE WITH OWNER AND PROJECT MANAGER. ALL LANDSCAPING WITHIN TREE PROTECTION TO BE PRESERVED. ANY WORK CONDUCTED IN THE TREE PROTECTION ZONE TO BE DONE BY HAND.
- CONTRACTOR TO LIMIT DISTURBANCE/REMOVAL OF EXISTING VEGETATION AS MUCH AS POSSIBLE. VEGETATION / DEBRIS CLEARING TO BE CONFIRMED WITH PM PRIOR TO REMOVAL.
- APPROXIMATE EXTENTS OF CRUSHER FINE TRAIL WORK. EXACT EXTENTS DEPENDENT ON CONSTRUCTION IMPACT / DISTURBANCE.



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HIGHLANDS RANCH, CO 80130

PROJECT

**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

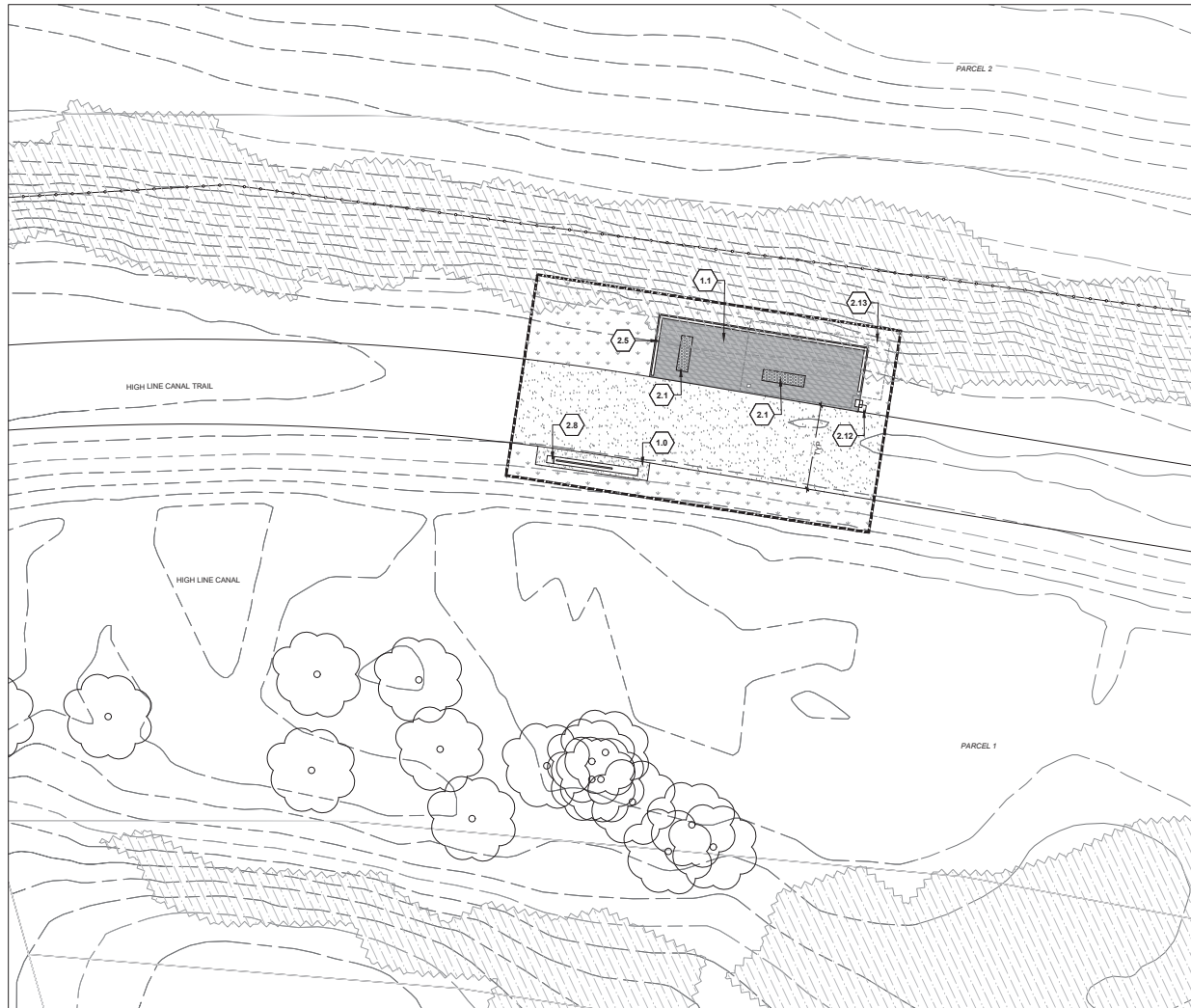
SHEET TITLE

**MATERIAL PLAN - PHASE ONE -  
TRAILHEAD**

SHEET NO.

9 of 14

**L202**



## SITE DETAIL KEYNOTES

<b>0.0</b>	<b>EXISTING CONDITIONS</b>	
0.1	EXISTING GRAVEL TRAIL	SEE EXISTING CONDITIONS
0.2	EXISTING GRAVEL PARKING LOT	SEE EXISTING CONDITIONS
0.3	TREE PROTECTION	DTL. 5 / SHT. L401
0.4	EXISTING SIGN	FIELD VERIFY- TO BE RELOCATED
0.5	EXISTING GATE	FIELD VERIFY- TO BE RELOCATED
<b>1.0</b>	<b>SURFACES</b>	
1.0	CRUSHER FINES	DTL. 1 / SHT. L401
1.1	MESH GRATING	SEE SPECS
<b>2.0</b>	<b>EXTERIOR IMPROVEMENTS</b>	
2.0	LANDSCAPE BOULDER	DTL. 4 / SHT. L401
2.1	LANDSCAPE BENCH	DTL. 8 / SHT. L401
2.2	POST WITH DOG BAG DISPENSER	DTL. 3 / SHT. L401
2.3	BIKE PUMP STATION	DTL. 7 / SHT. L401
2.4	PORTA-POTTY	BY OWNER
2.5	METAL RAILING	DTL. 2 / SHT. L404
2.6	INTERPRETIVE SIGN - ENTRY	DTL. 4 / SHT. L402
2.7	INTERPRETIVE SIGN - TIMELINE	DTL. 2 / SHT. L402
2.8	INTERPRETIVE SIGN - LOW	DTL. 1 / SHT. L402
2.10	INTERPRETIVE SIGN - RAILING	DTL. 6 / SHT. L401
2.11	MONUMENT SIGN - SINGLE	DTL. 3 / SHT. L404
2.12	MONUMENT SIGN - DOUBLE	DTL. 3 / SHT. L402
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2.16	RELOCATED GATE	FIELD VERIFY- TO BE RELOCATED
2.17	OVERLOOK	DTL. 1 / SHT. L404
<b>3.0</b>	<b>PLANTING</b>	
3.0	TREE	SEE SPECS
3.1	NATIVE SEEDING	SEE SPECS

## LEGEND

--- 5510 ---	EXISTING MAJOR CONTOUR	[Pattern]	CRUSHER FINES GRAVEL
---	EXISTING MINOR CONTOUR	[Pattern]	NATIVE SEE AREA
---	PROPOSED CONTOUR	[Pattern]	METAL GRATING
[Pattern]	TREE PROTECTION ZONE	[Pattern]	LANDSCAPE BOULDER
---	EXISTING FENCE		
[Pattern]	EXISTING SHRUB/TREE STAND		

## REFERENCE NOTES

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## PROJECT

**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

## ISSUE

**30% PROGRESS SET**

## SHEET INFO

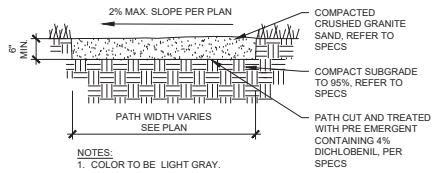
## SHEET TITLE

**MATERIAL PLAN - PHASE TWO -  
STRUCTURE AT BEND**

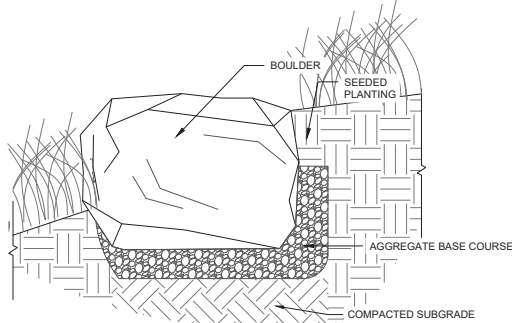
## SHEET NO.

**10 of 14**

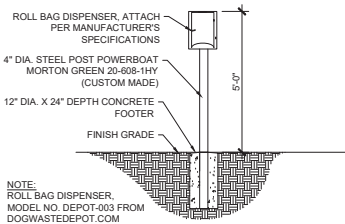
**L203**



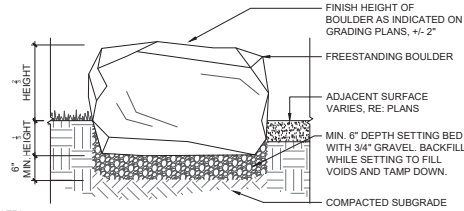
1 CRUSHED GRAVEL  
SCALE: 1" = 1'-0"



2 RETAINING BOULDER  
SCALE: 3/4" = 1'-0"

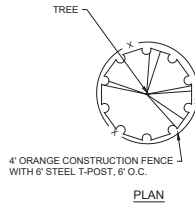


3 DOG POOP BAG DISPENSER  
SCALE: 1/2" = 1'-0"

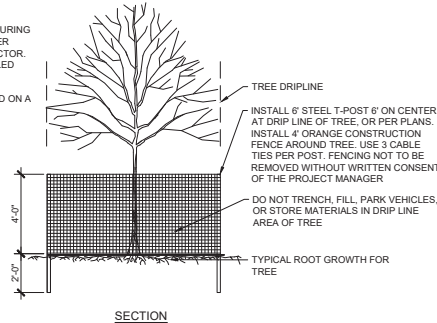


4 LANDSCAPE BOULDER  
SCALE: 1" = 1'-0"

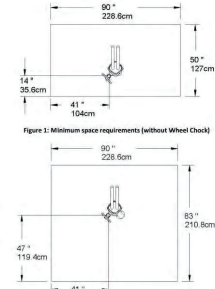
- NOTES:  
1. REMOVAL OF TREE PROTECTION FENCE DURING CONSTRUCTION WILL RESULT IN A \$500 PER INCIDENT, PER DAY FINE TO THE CONTRACTOR.  
2. CONSTRUCTION FENCE SHALL BE INSTALLED PRIOR TO OTHER BMP'S AND ANY LAND DISTURBING ACTIVITIES.  
3. ANY DAMAGED FENCE SHALL BE REPAIRED ON A DAILY BASIS.



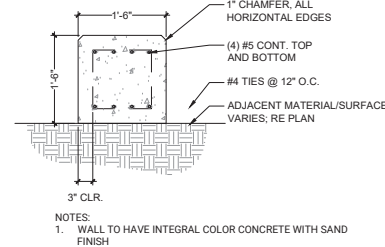
5 TREE PROTECTION  
N.T.S.



6 INFORMATIONAL SIGNAGE - RAILING  
SCALE: 1/2" = 1'-0"



7 BIKE REPAIR STATION  
N.T.S.



8 LANDSCAPE BENCH  
SCALE: 1" = 1'-0"

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PROJECT  
**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

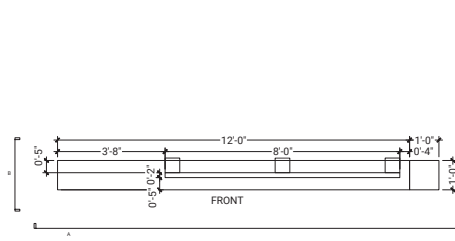
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SHEET TITLE  
**LANDSCAPE DETAILS**

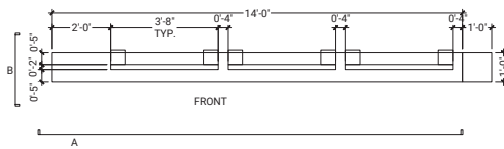
SHEET NO.  
**11 of 14**

**L401**



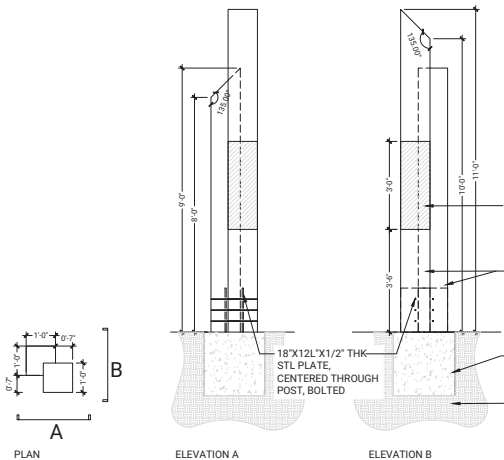
PLAN

**1 INFORMATIONAL SIGNAGE - LOW**  
SCALE: 1/2" = 1'-0"



PLAN

**2 INFORMATIONAL SIGNAGE - HISTORICAL TIMELINE**  
SCALE: 1/2" = 1'-0"

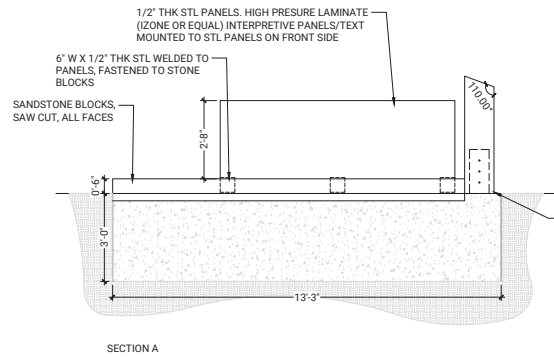


PLAN

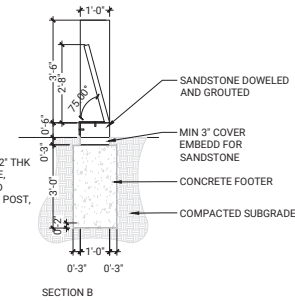
ELEVATION A

ELEVATION B

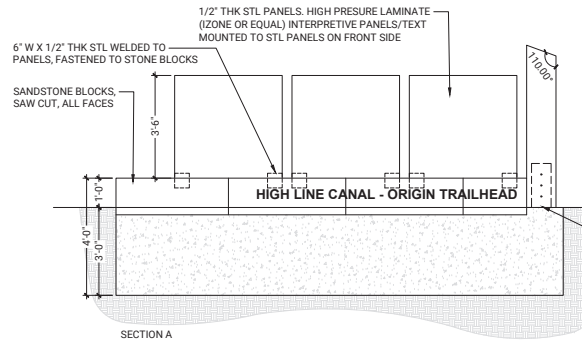
**3 MONUMENT TOTEM - DOUBLE**  
SCALE: 1/2" = 1'-0"



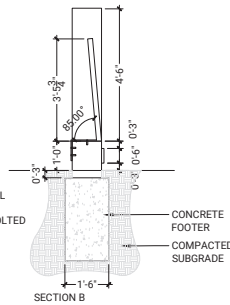
SECTION A



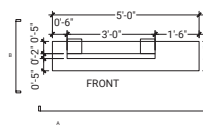
SECTION B



SECTION A

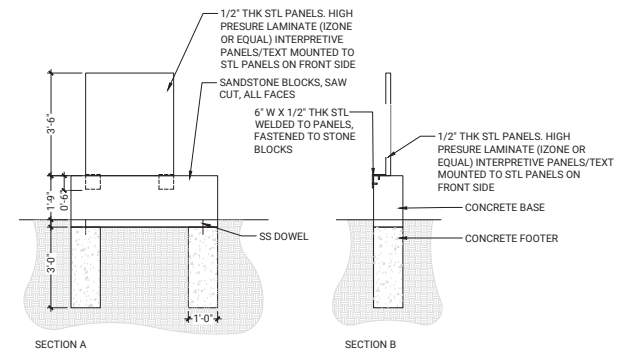


SECTION B



PLAN

**4 INFORMATIONAL SIGNAGE - ENTRY**  
SCALE: 1/2" = 1'-0"



SECTION A

SECTION B

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PROJECT  
**HIGH LINE CANAL - ORIGIN TRAILHEAD IMPROVEMENTS**

ISSUE  
**30% PROGRESS SET**

SHEET INFO

SHEET TITLE  
**LANDSCAPE DETAILS**

SHEET NO.  
**12 OF 14**

**L402**

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PROJECT

**HIGH LINE CANAL - ORIGIN  
TRAILHEAD IMPROVEMENTS**

ISSUE

**30% PROGRESS SET**

SHEET INFO

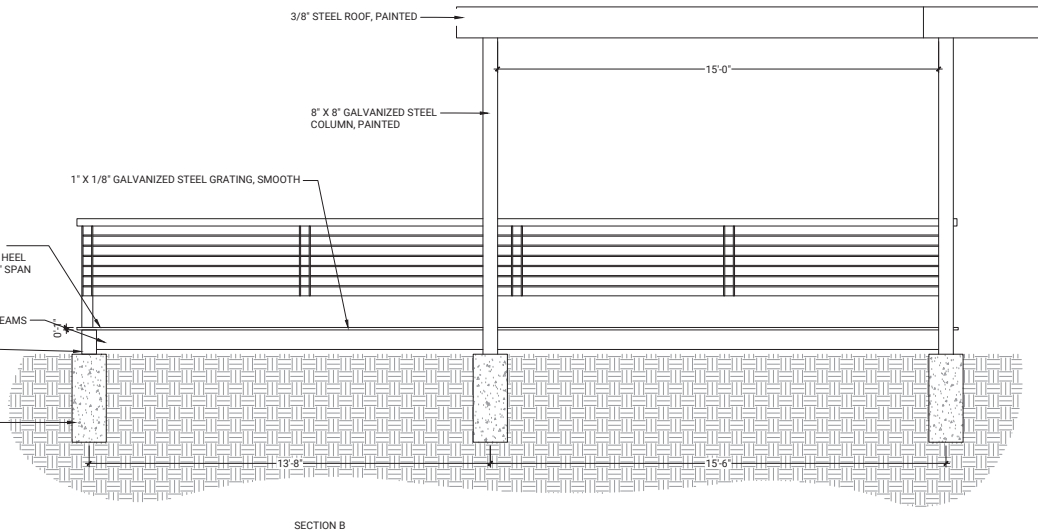
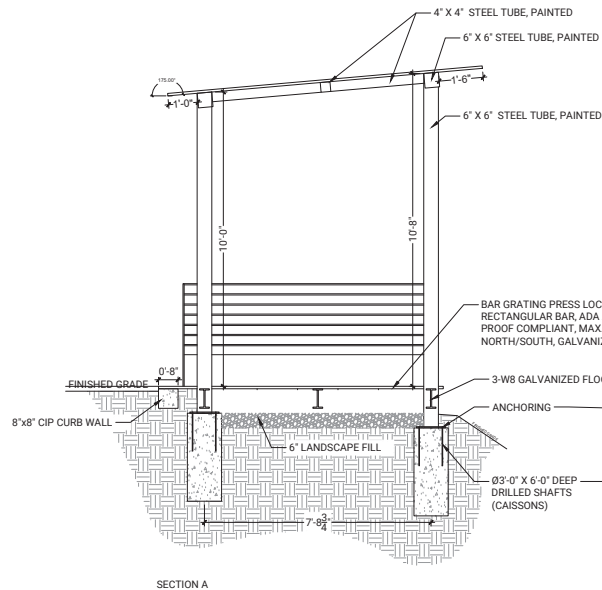
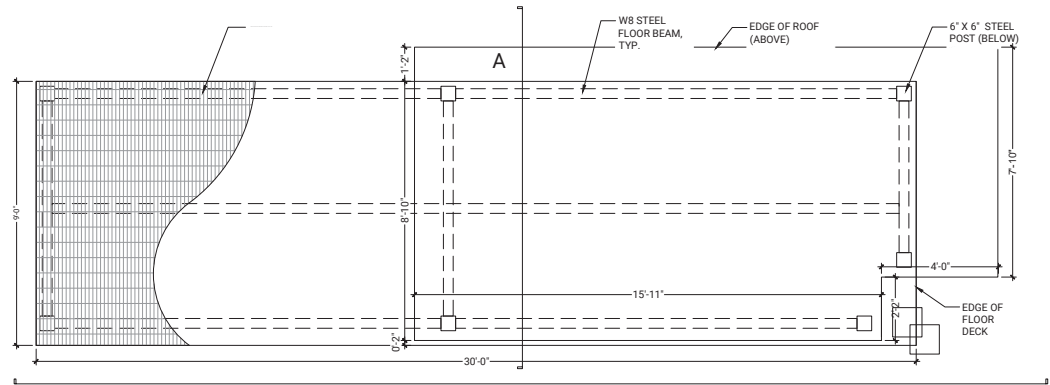
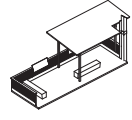
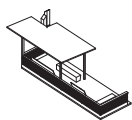
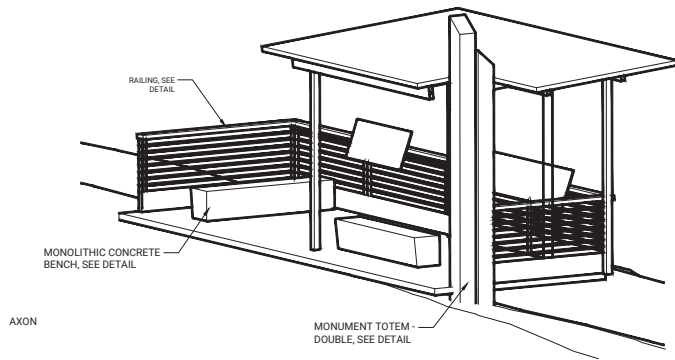
SHEET TITLE

LANDSCAPE DETAILS

SHEET NO.

13 OF 14

**L403**



1 LANDING SHADE STRUCTURE  
SCALE: 1/2" = 1'-0"







## High Line Canal Origin Trailhead Budget and Cost Estimates Overview

### Revenue Budget

Design and Engineering	Cost	Notes
Douglas County Parks, Trails and Building Grounds	\$36,000	Funding provided in November 2021
High Line Canal Conservancy	\$98,000	Includes spending to date and planned spending in 2024
<b>Total</b>	<b>\$134,000</b>	

### Construction Drawings and Construction Costs

		Notes
Funding Request	\$450,000	Funding requested February 2024
High Line Canal Conservancy Match	\$150,000	Funding secured
<b>Total</b>	<b>\$600,000</b>	

### Construction Cost Estimates

		Notes
Final Design and Construction Drawings	\$22,000	
Phase 1 - Trailhead Improvements and Landing	\$334,000	See budget detail
Phase 2 - Interpretive Area and Lookout	\$244,000	
<b>Total</b>	<b>\$600,000</b>	

High Line Canal Origin Trailhead Construction Costs						
Phase 1: Trailhead Improvements and Landing						
Item No.	Description	Unit	Unit Price	Quantity	Cost	Notes
<b>GENERAL REQUIREMENTS</b>						
	Tree Retention and Protection Fencing	EA	\$2,500.00	1	\$2,500.00	Allowance
NHPP0703-442	Tree Pruning	LS	\$2,500.00	1	\$2,500.00	Allowance
<b>SITE WORK</b>						
202-00xxx	Removal of Crusher Fines	SF	\$ 2.00	623	\$ 1,246.00	
207-00205	Topsoil	CY	\$ 50.00	4	\$ 200.00	2" tilled in to native
208-00035	Aggregate Bag	EA	\$ 1,500.00	1	\$ 1,500.00	Allowance
208-00045	Concrete Washout Structure	EA	\$ 2,000.00	1	\$ 2,000.00	
208-00070	Vehicle Tracking Pad	EA	\$ 3,000.00	1	\$ 3,000.00	
304-06000	Aggregate Base Course (Class 6)	Ton	\$ 35.00	13	\$ 455.00	Sign Wall (13x2x.5)
607-11525	Fence (Plastic)	LF	\$ 4.00	161	\$ 644.00	
625-00000	Construction Surveying	LS	\$ 3,500.00	1	\$ 3,500.00	
<b>EARTHWORK</b>						
201-00000	Clearing and Grubbing	LS	\$ 2,000.00	1	\$ 2,000.00	
	Earthwork Grading	CY	\$ 40.00	14	\$ 553.20	Approx 3" over site
<b>EXTERIOR IMPROVEMENTS</b>						
	Crushed Stone Paving	SF	\$3.50	623	\$2,180.50	Per Drawings
	Finish Grading, Soil Preparation and Soil Ammendments	SF	\$0.60	556	\$333.60	
208	Mulching (Weed Free Straw)	Acre	\$ 3,000.00	0.05	\$ 150.00	
212-00006	Seeding (Native)	Acre	\$ 4,000.00	0.05	\$ 400.00	
212-00006	Temporary Watering	Acre	\$ 8,000.00	0.05	\$ 400.00	
	Interpretive Signage Wall	LF	\$ 1,100.00	13.00	\$ 14,300.00	Concrete base rough formed, stone curb, angled metal sign, high pressure laminate sign panels mounted
	Stone Bench in Structure	EA	\$3,000.00	2	\$6,000.00	12CF EA, 2 Total
	Monument at Structure	EA	\$6,000.00	1	\$6,000.00	Allowance
<b>OVERHEAD SHADE STRUCTURE</b>						
206-00000	Structure Excavation	CY	\$ 30.00	15	\$ 450.00	
304-06000	Aggregate Base Course (Class 6)	Ton	\$ 35.00	10	\$ 350.00	for 6" gravel material under floor grating
503-00024	Drilled Caisson (24 Inch)	LF	\$ 400.00	12	\$ 4,800.00	
503-00036	Drilled Caisson (36 Inch)	LF	\$ 600.00	18	\$ 10,800.00	at posts for overhead shade support
509-00000	Structural Steel	LB	\$ 10.00	4,900	\$ 49,000.00	either galvanized or painted steel
509-xxxxx	Steel Bar Grating	SF	\$ 40.00	245	\$ 9,800.00	galvanized ADA compliant
509-xxxxx	Metal Panel Roof	SF	\$ 45.00	204	\$ 9,180.00	
514-00200	Pedestrian Railing (Steel)	LF	\$ 450.00	50	\$ 22,500.00	
601-03XXX	Concrete Class D	CY	\$ 1,800.00	1.7	\$ 3,060.00	
602-00000	Reinforcing Steel	LB	\$ 2.00	300	\$ 600.00	
<b>SUBTOTAL</b>					<b>\$160,402.30</b>	
<b>GENERAL COSTS</b>						
	Mobilization and Demobilization (includes construction survey)			11%	\$17,644.25	
	General Contractor			5%	\$8,020.12	
	Erosion Control			3%	\$4,812.07	Includes F/A Minor Obtain Permits and Erosion Control Pay Items
	Materials Testing			2%	\$3,208.05	
	Hard Cost Contingency (15%)			15%	\$24,060.35	Includes Estimate Gaps
<b>SUBTOTAL</b>				36%	<b>\$57,744.83</b>	
<b>SUBTOTAL BEFORE ADDITIONAL OWNER COSTS</b>					<b>\$218,147.13</b>	
	Permitting and Enviro Oversight (DADS)			3%	\$4,812.07	
	Owner Contingency (10%)			10%	\$16,040.23	
<b>SUBTOTAL</b>				13%	<b>\$20,852.30</b>	
	Interpretive Panels on Railing	LS	\$ 2,500.00	2.00	\$ 5,000.00	2 Panels total (roughly 15 LF of panels)
<b>TOTAL</b>					<b>\$243,999.43</b>	



High Line Canal Origin Trailhead Construction Costs						
Phase 2: Interpretive Area and Lookout						
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514-00200	Pedestrian Railing (Steel)	LF	\$ 450.00	50	\$ 22,500.00	
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602-00000	Reinforcing Steel	LB	\$ 2.00	300	\$ 600.00	
<b>SUBTOTAL</b>						
					<b>\$160,402.30</b>	
<b>GENERAL COSTS</b>						
	Mobilization and Demobilization (includes construction survey)			11%	\$17,644.25	
	General Contractor			5%	\$8,020.12	
	Erosion Control			3%	\$4,812.07	Includes F/A Minor Obtain Permits and Erosion Control Pay Items
	Materials Testing			2%	\$3,208.05	
	Hard Cost Contingency (15%)			15%	\$24,060.35	Includes Estimate Gaps
	<b>SUBTOTAL</b>			36%	<b>\$57,744.83</b>	
<b>SUBTOTAL BEFORE ADDITIONAL OWNER COSTS</b>						
					<b>\$218,147.13</b>	
	Permitting and Enviro Oversight (DADS)			3%	\$4,812.07	
	Owner Contingency (10%)			10%	\$16,040.23	
	<b>SUBTOTAL</b>			13%	<b>\$20,852.30</b>	
	Interpretive Panels on Railing	LS	\$ 2,500.00	2.00	\$ 5,000.00	2 Panels total (roughly 15 LF of panels)
	<b>TOTAL</b>				<b>\$243,999.43</b>	

# High Line Canal Conservancy

Capital Campaign Cash Flow Projection (Approved January 2024)

Category	Actuals	Projected 2024	Projected 2025	Projected 2026	Projected 2027 and beyond	Total
	2019 - Dec 2023					
Northeast Projects						
Total Cash Inflow from Confirmed Pledges	2,968,910	36,486	-	-		3,005,396
- Total Pending Grants/Donations	-	4,637,667	631,167	631,167	-	5,900,000
Total Cash Outflow	(1,905,469)	(6,963,876)	(974,807)	(496,843)	-	(10,340,995)
Southwest Projects						
Total Cash Inflow from Confirmed Pledges	777,162	242,197	-	-		1,019,359
- Total Pending Grants/Donations						
Expenses SW						
Tree Planting (Outside Northeast)	(146,895)	(335,500)	(300,000)	(270,000)		(1,052,395)
LDC Prelim Planning	(938)	(61,250)				(62,188)
Dry Creek Court Trailhead (Littleton YMCA)	(38,885)					(38,885)
Horseshoe Park Amenities	(50,227)	(142,905)				(193,132)
Elati Street Pedestrian Bridge	(46,964)	(89,000)				(135,964)
HRMD Shared Trail	-		(22,750)			(22,750)
Little Willow Creek Gathering Area	-		(10,000)	(30,625)		(40,625)
HLC Origin Trailhead	(29,130)	(78,444)	(142,799)			(250,373)
Admin and Development	(168,701)	(40,317)	(26,180)	(17,453)		(252,652)
Total Cash Outflow	(481,739)	(747,416)	(501,729)	(318,078)	-	(2,048,963)
General Canal Wide (Capital)						
Total Cash Inflow from Confirmed Pledges	354,319	210,000	110,000	-	-	674,319
- Total Pending Grants/Donations	-	190,681	-	-	-	190,681
Total Cash Outflow	(105,648)	(192,293)	(134,930)	(360,940)	-	(793,811)
Other Revenue/Pledges						
Total Cash Inflow from Grant Overhead	148,876	140,000	-	-		288,876
Total Cash Inflow from Confirmed Pledges	1,378,961	674,041	486,541	311,668		2,851,211
- Total Pending Grants/Donations	-	-	-	-	-	-
Total Confirmed Project Revenue	5,628,228	1,302,724	596,541	311,668	-	7,839,161
- Total Pending Grants/Donations	-	4,828,348	631,167	631,167	-	6,090,681
Total Project Revenue	5,628,228	6,131,072	1,227,708	942,835	-	13,929,842
Total Expenses	(2,492,856)	(7,903,585)	(1,611,466)	(1,175,862)	-	(13,183,769)
Surplus/Deficit	3,135,372	(1,772,513)	(383,759)	(233,028)	-	746,073
Ending Cash Balance for Campaign Projects	3,135,372	1,362,859	979,101	746,073	746,073	
Stewardship Fund						
Total Cash Inflow Long-term Confirmed Pledges	3,777,442	2,540,000	1,615,000	1,175,000	125,000	9,232,442
- Total Pending Grants/Donations (Long-term)	-	1,200,000	-	-	-	1,200,000
Total Cash Inflow Short-term Confirmed Pledges	525,000	-	-	-	-	525,000
- Total Pending Grants/Donations (Short-term)	-	1,100,000	-	-	-	1,100,000
Total Stewardship Fund Balance	4,302,442	4,840,000	1,615,000	1,175,000	125,000	12,057,442
In-kind Property		5,000,000				5,000,000
Total Campaign Revenue (Cash Basis)	9,930,670	15,971,072	2,842,708	2,117,835	125,000	30,987,284





PLACEMAKING AT THE JOURNEYS BEGINNING

## The Origin Story

Waterton Canyon offers dramatic views and important heritage for the Canal; yet, it is disconnected and difficult to navigate.

In the future, small but impactful improvements, such as re-organized parking, signage, and improved connections, will help to unlock the potential of this area to better tell the Canal's origin story at the High Line Canal trailhead at Platte Canyon Reservoir.



## Existing Condition

This reach of the High Line Canal offers dramatic views and important histories; yet it is difficult for visitors to navigate and disconnected.







## ASSETS

- ◇ Beginning of trail and existing trailhead
- ◇ Wildlife
- ◇ Kassler Center and other historic resources
- ◇ South Platte River
- ◇ Foothills landscape
- ◇ Scenic views

## CHALLENGES

- ◇ Visitor experience and orientation to the Canal
- ◇ Pedestrian connection from High Line Canal Trail to the Waterton Canyon Trailhead
- ◇ Balancing visitor use with wildlife
- ◇ Waterton road crossings



\* The Canal will not be open to public access upstream of the trailhead at Platte Canyon Reservoir and Waterton Road.



Platte Canyon  
Reservoir

## DESIGN STRATEGIES

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1

### Interpretive Moment

Create a scenic overlook with seating, shade and interpretive signage.

2

### Improve Entrance

Create vehicular scale signage that alerts visitors of parking / Canal trail entrance. Shift the locked gate closer to Waterton Road to clarify entrance.

3

### Make Waterton Road Safer

Improvements could include enhancing sidewalks, narrowing roadway widths and providing better pedestrian access at the bridge and allowing for future enhanced connections to local, regional and state wide trail systems.

## CAPITAL COSTS

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**Overall Project Cost—\$2,445,000-\$3,250,000**

### Potential Phases

Improving the Entrance—\$225,000-\$290,000

Placemaking at the Origin—\$770,000-\$960,000

Connecting to Waterton Canyon—\$1,450,000-\$2,000,000



# PROPOSED ENHANCEMENTS

## Access and Connectivity

Ensure the trail allows for a variety of different user types.

## Human Health and Comfort

Provide shaded places to sit, gather and enjoy the view.



Existing  
Condition



**Innovative and Adaptive Reuse**  
Preserve, celebrate and interpret  
heritage assets along the Canal.

**Environmental Health**  
Introduce more shade and  
tree canopy.



### Approach to Transformation

In the future, small but impactful improvements (reorganized parking, a shaded viewing terrace, and interpretive and wayfinding signage) will help to unlock the potential of this area to better tell the Canal's origin story.

Brian D. O'Malley  
10561 E. Arrowhead Lane  
Parker, CO 80138-6803

Douglas County Parks Advisory Board  
Douglas County Parks, Trails, & Building Grounds  
9651 S. Quebec Street  
Highlands Ranch, CO 80130

To the Douglas County Parks Advisory Board:

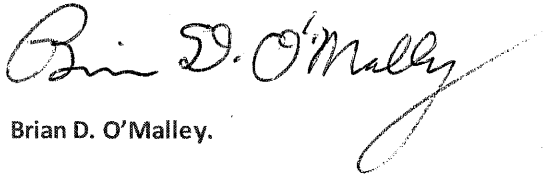
My name is Brian O'Malley and I am a 10-year Douglas County volunteer. I am writing to you regarding an exciting project pertaining to the Highline Canal and the Waterton Road Trailhead. The Highline Canal offers a rich history with Douglas County, starting with the canal's inception as an agriculture ditch in the 1880s to today's use as a 8.6-mile-long recreational amenity through our County. I have been a 6-year volunteer with the Highline Canal Conservancy, presently serving as a Conservation Corp Leader, as well as a citizen volunteer on the Highline Canal Origin Trailhead Committee.

The Origin Trailhead concept involves improvements of the Waterton Canyon Trailhead and connecting trail including handicap accessibility as well as highlighting the rich history of the canal. Both accessibility and historic preservation have been priorities of our Douglas County Commissioners and our citizen led advisory boards and committees.

The Origin concept will involve parking lot improvements, accessibility to the canal trail, historical interpretive signs, and destination features. Douglas County has been generous in matching funds to advance the design process. Now the time is upon us to proceed with the implementation and construction of the Origin Trailhead. With the accessibility and historical aspects of the Origin Trailhead, the trailhead will become a destination for Douglas County citizens as well as visitors from the Greater Denver Metro area and beyond. This destination will enhance the economic development of Roxborough commercial district and provide more incentive to live and work in the Sterling Ranch community.

Thank you for your past support and your time and consideration of this exciting development and enhancement of the Highline Canal in Douglas County.

Sincerely,

A handwritten signature in cursive script that reads "Brian D. O'Malley". The signature is written in dark ink and is positioned above the printed name.

Brian D. O'Malley.



Evan D. Ela  
10500 Wildlife Way  
Littleton, Colorado 80125

February 20, 2024

Dear Members of the Douglas County Parks Advisory Board,

I am writing to express my support for the Origin Trailhead project as proposed by the High Line Canal Conservancy. As a Board Member of the Conservancy, a member of the project community panel, a Douglas County resident, and a long-time user of the High Line Canal, I am excited to see this project moving forward. The Origin Trailhead will be the “front door” of the 71-mile High Line Canal corridor. There are plans for the improvements all along the 71-mile corridor and the Origin Trailhead presents a unique opportunity to tell the story of the historical operations of the Canal and its importance to farmers and ranchers in Douglas County. The Origin Trailhead will also present an opportunity to explain the importance of irrigated agriculture was for the economic growth and development of the Front Range and the western United States. Several interpretive exhibits are planned to tell these stories to all ages of visitors.

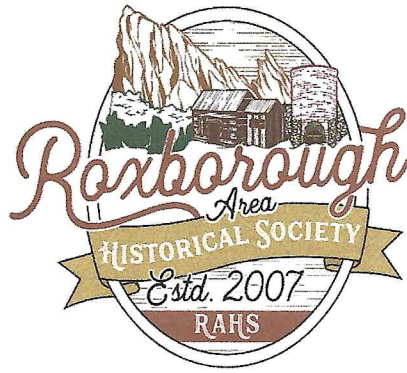
In addition to the interpretive information, the Origin Trailhead project will include modifications to the parking lot, a restroom, and improved access to the canal trail that will accommodate users of all abilities—by foot, bike, horse, and all other forms of mobility. The Conservancy and the design team have incorporated the comments received through local Douglas County community feedback to include the restroom, and to style shade structures and interpretive signage.

The High Line Canal is a place for all who value healthy living and enjoyment of Colorado’s beautiful outdoors. I support the on-going efforts of the Conservancy and their partners to preserve, protect, and enhance the historical, environmental, and ongoing recreational benefits the Canal corridor can provide—linking several counties and communities through a significant portion of the greater metropolitan region. I ask that you support the High Line Canal Conservancy’s application for funding through Douglas County.

Thank you,



Evan D. Ela  
303-915-0227



February 22, 2024

Dear Members of the Douglas County Parks Advisory Board,

The Roxborough Area Historical Society (RAHS) urges your support of the High Line Canal Conservancy's application for the Origin Trailhead project. This area was identified as a critical location for improvements for many years in the ongoing planning efforts completed by the Conservancy, its partners, and the community. Given the proximity of the existing trailhead to Waterton Canyon, Platte Canyon Reservoir, Roxborough State Park, and Chatfield State Park and the views to the plains and Denver skyline and given the continued growth of the area near the trailhead, this is the perfect location to tell the story of the Canal's role in Colorado and Roxborough-area history.

Members of the RAHS have participated in a number of community meetings and fully support the improvements proposed for this project. We know that our membership and the members of our board look forward to the parking lot improvements, access to the trail, and new restroom at the trailhead. The addition of shade and educational signage will be very welcome by regular trail users and will also surely bring new trail users and improve the experience for Douglas County residents.

Thank you for considering funding for this important community project.

Sincerely,

Mike Thomas  
President, Roxborough Area Historical Society

**RAHS Board**

Mike Thomas,  
President

Ken Maus,  
Vice President

Rebecca Holm,  
Secretary & Publicity  
Chair

Pat Wilkerson,  
Treasurer & Website

Char Nauman,  
Historian

Susie Trumble,  
Director

Cindy Livingston,  
Membership

Ken Maas,  
Kiln Pathways

John Maus,  
Director

Suzanne Hattery,  
Director

Dear Members of the Douglas County Parks Advisory Board,

I am writing this letter as a retired employee with 35 years working for the Denver Water Board. I spent my entire career working on the Highline Canal. When I started there was no recreation on the canal. The first recreation started at Havana St., by Denver Parks. Since then other recreation districts have made improvements such as surfacing the trail, adding park benches, and picnic tables etc. Improvements have also included planting 1000 trees in one day. The canal is the largest park in the metro area, providing recreation opportunities for local residents throughout the 71 miles.

Please support the HLC conservancy for the Origin Trailhead project and maintain its history. I support this effort to preserve and enhance the canal for futures generations.

Thank you,

Tom Mulligan

A handwritten signature in black ink, appearing to be 'Tom Mulligan', written in a cursive style.

2024 - External Historic Resources Funding Requests			Project Name: Highline Canal Conservancy	
Criteria and Scoring			Project Origin: BOCC, Advisory Board, Public, Other Municipalities	
			Requested Amount:	
Total Points	Criteria	Points	Score	Comments
10	Historic Significance	0 = No discernible historic significance 5 = Potential landmark site with role in County historic narrative 9 = Landmarked or in historic register, major role in County historic narrative 10 = Landmarked and in historic register, major role in County historic narrative sites or contributing value to Conservation Easement		
9	Disrepair/Urgency	0 = No urgent need to act to preserve 5 = Risk of degradation but urgent needs have been addressed 9 = Virtually certain to experience major damage/collapse within next 12 months		
8	Outside Funding Opportunities	0 = No opportunities 5 = One outside funding opportunity identified 8 = Multiple outside funding opportunities identified		
7	Public Access Benefits	0 = No opportunities 5 = Opportunities for regular guided public access 7 = Opportunities for daily public access		
6	Partnership with Historical Societies or External Organizations	0 = No partnerships 2 = Working closely with 1 external organization 6 = Working closely with 3+ external organizations		
5	Collaboration with other Department	0 = No collaboration opportunities 4 = Synergy with Open Space or Parks for joint project 5 = Synergy with Open Space and Parks for joint project, BCC level PR		
4	Shovel/Trowel Ready	0 = 9+ months of up front work needed to get started 2 = 6-9 months of up front work needed to get started 3 = 1-6 months of up front work needed to get started 4 = Project can start immediately		
3	Can it wait?	0 = Opportunity can wait 12 months 2 = Opportunity to act/obtain partnership funds will lessen within next 12 months 3 = Opportunity to act/obtain partnership funds will close within next 12 months		
2	District Balance	0 = District has larger than average share of HP projects/dollars 1 = District has average quantity of HP projects/dollars 2 = District is underrepresented with HP projects/dollars		
				Total Score

2024 - Historic Resources Requests External Criteria and Scoring	Project Name: Highline Canal Conservancy Project Origin: BOCC, Advisory Board, Public, Other Municipalities Requested Amount:
Page 2	
Project Score	Comments