



Planning Division  
15151 E. Alameda Parkway, Ste. 2300  
Aurora, Colorado 80012  
phone 303.739.7217

*AuroraGov.org*

June 20, 2024

Tom Clark  
NL Parklands 4 Land Co, LLC  
9801 E Easter Ave  
Centennial, CO 80112

**Re: Initial Submission Review: Parklands Coal Creek Infrastructure Site Plan (ISP)**  
**Application Number: DA-2289-05**  
**Case Number: 2024-6023-00**

Dear Tom Clark:

Thank you for your initial submission, which we started to process on May 24, 2024. We have reviewed your plans and attached our comments along with this cover letter. The first section of our review highlights our major comments. The following sections contain more specific comments, including those received from other city departments and community members.

Since several important issues remain, you will need to make another submission. Please revise your previous work and send us a new submission on or before July 15, 2024.

Note that all our comments are numbered. When you resubmit, include a cover letter specifically responding to each item. The Planning Department reserves the right to reject any resubmissions that fail to address these items. If you have made any other changes to your documents other than those requested, be sure to also specifically list them in your letter.

The estimated Administrative Decision date is still set for August 21, 2024. Please remember that all abutter notices must be sent and the site notices must be posted at least 10 days prior to the decision date. These notifications are your responsibility and the lack of proper notification will cause the decision date to be postponed. It is important that you obtain an updated list of adjacent property owners from the county before the notices are sent out. Take all necessary steps to ensure an accurate list is obtained.

As always, if you have any comments or concerns, please let me know. I may be reached at 303-739-7112 or [swasinge@auroragov.org](mailto:swasinge@auroragov.org).

Sincerely,

Stacy Wasinger, Senior Planner  
City of Aurora Planning Department

cc: Anthony Files, Agent, Terracina Design 10200 E Girard Avenue, Bldg A Ste 314 Denver, CO 80231  
Brit Vigil, ODA  
Filed: K:\\$DA\2289-05rev1



## *Initial Submission Review*

### **SUMMARY OF KEY COMMENTS FROM ALL DEPARTMENTS**

- Provide an overall site plan showing the full boundary of property affected by the ISP, as well as the extent of proposed land dedication. Show any impacted adjacent development, including ponds, parks, and any S. Harvest Road and E. Jewell Avenue improvements. Please also include the phasing and timing of Harvest Road and E. Jewell Avenue improvements if not included within this ISP.  
**RESPONSE: OVERALL PLAN HAS BEEN ADDED TO THE SHEETS. THE TIMING OF HARVEST AND JEWELL AVE IMPROVEMENTS IS STILL TO BE DETERMINED.**
- A plat of the subject property is required; please include a plat with the next submittal.  
**RESPONSE: PLAT INCLUDED IN SUBMITTAL**
- Include a tree inventory and mitigation plan.  
**RESPONSE: TREE INVENTORY, REMOVAL PLAN AND MITIGATION CHARTS INCLUDED IN ISP**

### **PLANNING DEPARTMENT COMMENTS**

#### **1. Community Questions, Comments, and Concerns**

- 1A. No comments from neighbors were received. Therefore no neighborhood meeting will be required. Please see all comments from review agencies in this letter and on the redlines.  
**RESPONSE:NOTED**

#### **2. Completeness and Clarity of the Application**

- 2A. Application fees totaling \$42,644.20 are due before the second submission of this application.  
**RESPONSE: NOTED, FEES HAVE BEEN PAID.**
- 2B. Please provide an overall site plan showing proposed property/tract lines to clarify what property is to be dedicated. This should show all improvements, such as maintenance roads and utility locations/easements.  
**RESPONSE:OVERALL SITE PLAN HAS BEEN INCLUDED TO ISP**
- 2C. Please include legal descriptions of each area to be dedicated.  
**RESPONSE: LEGAL DESCRIPTION INCLUDED IN SUBMITTAL**
- 2D. Show adjacent development and filings, as applicable. Will the ponds or parks be impacted by these improvements? These areas should not be disturbed or they will need to be included in the plans.  
**RESPONSE: ADJACENT DEVELOPMENTS AND FILINGS SHOWN ON OVERALL SITE PLAN. NONE OF THE PARKS,PONDS, OR HISTORICAL SITES WILL BE IMPACTED BY THE ISP**
- 2E. A planting management plan is mentioned on page 5 of the narrative, but does not appear to have been provided. Please clarify.  
**RESPONSE: TREE MITIGATION PLAN AND RE-VEGETATION PLAN INCLUDED IN SUBMITTAL**
- 2F. Please provide a landscape sheet with the seed mix identified, landscape notes, etc. See PROS comments below.  
**RESPONSE:RE-VEGETATION PLAN INCLUDED WITH THE ISP AND PROVIDES LANDSCAPE NOTES AND SEED MIXES.**
- 2G. Please note that the historic homestead site mentioned in the master plan for the cultural park (NP-2) should not be disturbed until that park is developed. Please clarify that these improvements will not impact the historic site.

**RESPONSE: THE IMPROVEMENTS TO COAL CREEK WILL NOT IMPACT THE HISTORICAL HOMESTEAD**

#### **3. Zoning and Subdivision Use Comments**

- 3A. Development fees for Aurora Water are required and the full acreage and legal description will need to be



provided. Therefore, a plat is needed. Please submit a plat at the next submittal.

**RESPONSE:** Plat provided with this submittal with total acreage.

#### **4. Streets and Pedestrian Comments**

4A. Please clarify the E. Jewell Avenue crossing. Are any improvements planned at this time?

**RESPONSE:** E. JEWELL AVE IMPROVEMENTS WILL BE MADE IN A FUTUER ISP.

4B. Please clarify and identify the S. Harvest Road bridge crossing. This is not shown on the plans but would likely have impacts on the ISP. What is the anticipated timing and location of the bridge project shown in the master plan?

**RESPONSE:** Harvest Road will have its own ISP in the future which will capture all the impacts of that project.

#### **5. Landscaping Issues** (Kelly Bish / 303-739-7189 / [kbish@auroragov.org](mailto:kbish@auroragov.org) / Comments in bright teal)

5A. No comments at this time.

#### **6. Energy & Environment** (Maria Alvarez / 303-739-6824/ [malvarez@auroragov.org](mailto:malvarez@auroragov.org))

6A. We have reviewed the area of your development. There are no known plugged and abandoned (P&A) wells within your site and no existing or planned oil and gas surface facilities on your site at this time. There may be existing underground pipelines in rights-of-way. If you have questions or concerns about this, the Energy & Environment Division can assist by providing additional information.

**RESPONSE:NOTED.**

6B. Currently there is a horizontal well drilled underneath your site. The well is at a depth of greater than 7,000 feet below the surface. The operation of the well is not anticipated to impact your surface development.

**RESPONSE:NOTED.**

6C. The City of Aurora has no authority or control over subsurface well equipment or operations. Contact the Colorado Energy & Carbon Management Commission (ECMC) for more information. Should you have any questions about oil and gas development, please reach out to Jeffrey S. Moore, Manager of the Energy & Environment Division.

**RESPONSE:NOTED.**

### **REFERRAL COMMENTS FROM OTHER DEPARTMENTS AND AGENCIES**

#### **7. Civil Engineering** (Christopher Eravelly / 303-739-7457 / [ceravell@auroragov.org](mailto:ceravell@auroragov.org) / Comments in green)

7A. No comments at this time.

#### **8. Fire / Life Safety** (Erick Bumpass / 303-739-7627 / [ebumpass@auroragov.org](mailto:ebumpass@auroragov.org) / Comments in blue)

8A. No Fire Life Safety comments at this time.

#### **9. Aurora Water** (Iman Ghazali / 303-739-7490 / [ighazali@auroragov.org](mailto:ighazali@auroragov.org) / Comments in red)

9A. The site plan will not be approved by Aurora Water until the preliminary drainage letter/report is approved.

**RESPONSE:** Understood.

9B. Revise this site plan as applicable per comments on the Preliminary Drainage Report.

**RESPONSE:** The site plan has been revised to incorporate comments received on the Preliminary Drainage Report.

#### **10. Forestry** (Rebecca Lamphear / 303-739-7139 / [rlamphea@auroragov.org](mailto:rlamphea@auroragov.org) / Comments in purple)

10A. There will be many trees impacted by this development. Tree mitigation is always above and beyond the Landscape Code requirements. Any tree that is removed from this site will either require replacement within the landscape or be mitigated through payment to the Community Tree Fund. Due to the number of trees that may be impacted by the project you are required to hire a Consulting Arborist to conduct the tree inventory and appraisal. A list has been provided below.

**RESPONSE:** A TREE INVENTORY HAS BEEN CONDUCTED AND WILL BE INCLUDED IN THE ISP

When the site plan is submitted, please show and label all existing trees on a separate sheet called Tree Mitigation Plan and indicate which existing trees will be preserved or removed. Please include grading



on this sheet as well. Since you will be hiring a Consulting Arborist, please provide the inventory and appraisal with the first submittal. Below is the list of Consulting Arborists for your review. Forestry would require a meeting with the arborist selected to make sure that we agree on the appraisal.

**RESPONSE: A TREE REMOVAL PLAN IS INCLUDED IN THE ISP AND INDICATES WHICH TREES WILL BE REMOVED AND WHICH TREES WILL BE PRESERVED.**

Name	Company	Address	Phone
David Merriman	Arbor Scape	5044 S. Youngfield Court Morrison, CO 80465	303-795-2381
Keith Worley	Forestry Development, LLC	7377 Osage Rd, Larkspur, CO 80118	303-681-2492
Robert Brudenell	The Natural Way, Inc.	1952 W. Dartmouth Ave. Englewood, CO 80110	303/347-0988
Scott Grimes	Colorado Tree Consultants	<a href="mailto:coloradotreeconsultants@yahoo.com">coloradotreeconsultants@yahoo.com</a>	303-720-8170
Stefan Ringgenberg	Boulder Tree and Landscape Consulting	7289 Petursdale Court Boulder, CO 80301	303-530-0640
Steve Geist	SavATree	8585 E Warren Ave, Denver, CO 80231	303-306-3144

Once the tree assessment is complete, a spreadsheet will be provided by the Consulting Arborist showing the dollar value of the trees that will be removed as well as the number of inches required for replacement back onto the site – the Consulting Arborist should contact Forestry to make sure they provide the correct number of inches. In most cases, the mitigation inches can be replaced on the site through upgrades to the landscape plan. If there is no room to replace the number of inches that will be lost, payment can be made into the Community Tree Planting Fund based on the dollar value associated with tree loss.

**RESPONSE: TREE INVENTORY CHARTS ARE PROVIDED ON THE ISP WITH THE VALUE OF TREES AND THE REQUIRED MITIGATED INCHES TO BE PROVIDED IN FUTURE FILINGS ADJACENT TO COAL CREEK.**

Please show a tree mitigation chart on the landscape plan taken from the Landscape Manual on page 29. If payment will be made into the Tree Planting Fund, add another column to the chart indicating the payment amount that will be made. If trees are planted on the site, please show a symbol indicating trees that are specific to tree mitigation.

**RESPONSE: TREE INVENTORY CHARTS ARE PROVIDED ON THE ISP WITH THE VALUE OF TREES AND THE REQUIRED MITIGATED INCHES TO BE PROVIDED IN FUTURE FILINGS ADJACENT TO COAL CREEK.**

Any trees that are preserved on the site during construction activities shall follow the standard details for Tree Protection per the current Parks, Recreation & Open Space Dedication and Development Criteria manual. The Tree Protection notes shall be included in the plan. The link for the manual can be found at: <https://auroraver2.hosted.civiclive.com/cms/One.aspx?portalId=16242704&pageId=16529352>

**RESPONSE: TREE PROTECTION NOTES AND DETAILS ARE PROVIDED ON THE ISP**

**11. PROS** (Abigail Scheuermann / 303-739-7169 / [ahscheue@auroragov.org](mailto:ahscheue@auroragov.org) / Comments in mauve)

11A. Sheet 1 - For contextual purposes, it would be good if the geographic extent of the sheets were expanded. Including the entirety of the sanitary sewer easement, maintenance path/regional trail, as well as the boundaries of the proposed park and open space tracts west of the creek would provide PROS with a better understanding of how the ISP improvements will interface with future uses.

**RESPONSE: A OVERALL PLAN HAS BEEN ADDED TO THE SHEETS. THE LIMITS OF THE VIEWPORTS ARE EXPANDED AS MUCH AS POSSIBLE TO SHOW THE REGIONAL TRAIL AND SANITARY EASEMENT.**

11B. Sheet 3 - In support of the comment provided on the cover sheet, it would be useful to see the route of the maintenance path/regional trail as it approaches Mississippi Avenue and Harvest Road.

**RESPONSE: AN OVERALL SITE PLAN HAS BEEN ADDED TO THE ISP AND SHOWS THE REGIONAL TRAIL AS IT APPROACHES BOTH ROADS**



11C. Sheet 7 - Please identify boundaries that indicate where the future PROS properties will be located about the residential lots and other future developed uses.

**RESPONSE: AN OVERALL SITE PLAN HAS BEEN ADDED TO THE ISP AND SHOWS THE TRACT BOUNDARIES AND RESIDENTIAL LOTS**

11D. Sheet 9 - What infrastructure will be in place where the creek passes under Jewell Ave? If the Jewell Ave crossing improvements are to be undertaken as a separate project by others, showing those (if plans are available) and labeling them as such would be good for reference.

**RESPONSE: THIS WILL BE ADDRESSED IN THE JEWELL AVE ISP WHICH HAS NOT BEEN COMPLETED YET.**

11E. Sheet 10 - The addition of a landscape plan to this plan set is warranted. The plan should address tree mitigation, seed mix, and other site restoration requirements to conform to PROS' needs since the property will be dedicated to the city for ownership and maintenance. Disturbed areas should be re-vegetated with a PROS-approved seed mix specified in the plan. Other PROS-approved plant materials should also be presented in a plant schedule for restoration purposes.

**RESPONSE: MITIGATED TREES WILL BE PROVIDED IN FUTURE FILINGS ADJACENT TO COAL CREEK. A RE-VEGETATION PLAN HAS BEEN PROVIDED IN THE ISP.**

**12. Land Development Services** (Maurice Brooks / 303-739-7294 / [mbrooks@auroragov.org](mailto:mbrooks@auroragov.org) / Comments in magenta)

12A. No comments at this time.

**13. Easements** (Grace Gray / 303-739-7227 / [ggray@auroragov.org](mailto:ggray@auroragov.org))

13A. All new easements are to be dedicated by plat. Easement releases are to be submitted to [releaseeasements@auroragov.org](mailto:releaseeasements@auroragov.org)

**RESPONSE: No new easements are proposed and no existing easements will need to be released.**

**14. PSCO (Xcel Energy)** (Donna George / 303-571-3306 / [donna.l.george@xcelenergy.com](mailto:donna.l.george@xcelenergy.com))

14A. Please see the attached letter.

**RESPONSE: See response below**

**15. Arapahoe County Planning Division** (Terri Maulik / 720-874-6550 / [referrals@arapahoegov.com](mailto:referrals@arapahoegov.com))

15A. Thank you for the opportunity to review and comment on this project. The Arapahoe County Planning Division has no comments; however, other departments and/or divisions may submit comments.

**16. Mile High Flood District** (Teresa Patterson / 303.455.6277 / [submittals@mhfd.org](mailto:submittals@mhfd.org))

16A. No comments have been provided at this time. Staff will forward any comments upon receipt.

**Buckley Space Force Base** (Porter Ingrum / [robert.ingrum@spaceforce.mil](mailto:robert.ingrum@spaceforce.mil))

17A. No comments have been provided at this time. Staff will forward any comments upon receipt.



**Right of Way & Permits**

1123 West 3<sup>rd</sup> Avenue  
Denver, Colorado 80223  
Telephone: **303.571.3306**  
Facsimile: 303.571.3284  
Donna.L.George@xcelenergy.com

June 4, 2024

City of Aurora Planning and Development Services  
15151 E. Alameda Parkway, 2<sup>nd</sup> Floor  
Aurora, CO 80012

Attn: Stacy Wasinger

**Re: Parklands Coal Creek, Case # DA-2289-05**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a potential conflict** with the above captioned project. Public Service Company has existing electric transmission lines and associated land rights as shown within the far north end of the proposed project. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require Public Service Company approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a Public Service Company License Agreement to be executed with the property owner. PSCo is requesting that, prior to any final approval of the infrastructure site plan, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement (via either website [www.xcelenergy.com/rightofway](http://www.xcelenergy.com/rightofway) or email [coloradorightofway@xcelenergy.com](mailto:coloradorightofway@xcelenergy.com)).

**RESPONSE: No activity is planned in the existing electrical easement.**

PSCo also has existing overhead electric distribution facilities crossing the project as shown on Sheet PP05 between Stations 66+00-80+00. Bear in mind that per the National Electric Safety Code, a minimum 10-foot radial clearance must be maintained at all times from all overhead electric facilities including, but not limited to, *construction* activities and permanent structures.

**RESPONSE: Clearance will be maintained.**

Donna George  
Right of Way and Permits  
Public Service Company of Colorado dba Xcel Energy  
Office: 303-571-3306 – Email: [Donna.L.George@xcelenergy.com](mailto:Donna.L.George@xcelenergy.com)



# PARKLANDS COAL CREEK STRUCTURE SITE PLAN

There will be many trees impacted with this development. Tree mitigation is always above and beyond the Landscape Code requirements. Any tree that is removed from this site will either require replacement within the landscape or be mitigated through payment to the Community Tree Fund. Due to the number of trees that may be impacted by the project you are required to hire a Consulting Arborist to conduct the tree inventory and appraisal. A list has

When the site plan is submitted, please show and label all existing trees on a separate sheet called Tree Mitigation Plan and indicate which existing trees will be preserved or removed. Please include grading on this sheet as well. Since you will be hiring a Consulting Arborist, please provide the inventory and appraisal with the first submittal. Below is the list of Consulting Arborists for your review. Forestry would require a meeting with the arborist selected to make sure that we agree on the appraisal.

Name	Company	Address	Phone
David Merriman	Arbor Scape	5044 S. Youngfield Court Morrison, CO	80465 303-795-2381
Keith Worley	Forestree Development, LLC	7377 Osage Rd, Larkspur, CO	80118 303-681-2492
Robert Brudenell	The Natural Way, Inc.	1952 W. Dartmouth Ave. Englewood, CO	80110 303/347-0988
Scott Grimes	Colorado Tree Consultants	coloradotreeconsultants@yahoo.com	803-720-8170
Stefan Ringgenberg	Boulder Tree and Landscape Consulting	7289 Petrusdale Court Boulder, CO	80301 303-446-0646

## GENERAL NOTES

- THE DEVELOPER, SUCCESSORS OR ASSIGNS, INCLUDING THE HOMEOWNERS OR MERCHANTS ASSOCIATION, SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL FIRE LANE SIGNS AS REQUIRED BY THE CITY OF AURORA.
- THE DEVELOPER, SUCCESSORS OR ASSIGNS, SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLAN ON FILE IN THE PLANNING AND DEVELOPMENT SERVICES DEPARTMENT. ALL LANDSCAPING WILL BE INSTALLED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
- ALL CROSSINGS OR ENCROACHMENTS BY PRIVATE LANDSCAPE IRRIGATION LINES OR SYSTEMS AND/OR PRIVATE UTILITIES INTO EASEMENTS AND STREET RIGHTS-OF-WAY OWNED BY THE CITY OF AURORA ARE ACKNOWLEDGED BY THE UNDERSIGNED AS BEING SUBJECT TO CITY OF AURORA'S USE AND OCCUPANCY OF THE SAID EASEMENTS OR RIGHTS-OF-WAY. THE UNDERSIGNED, THEIR SUCCESSORS AND ASSIGNS, HEREBY AGREE TO INDEMNIFY THE CITY OF AURORA FOR ANY LOSS, DAMAGE OR REPAIR TO CITY FACILITIES THAT MAY RESULT FROM THE INSTALLATION, OPERATION OR MAINTENANCE OF SAID PRIVATE IRRIGATION LINES OR SYSTEMS AND/OR PRIVATE UTILITIES.
- THE APPROVAL OF THIS DOCUMENT DOES NOT CONSTITUTE FINAL APPROVAL OF GRADING, DRAINAGE, UTILITY, PUBLIC IMPROVEMENTS AND BUILDING PLANS. CONSTRUCTION PLANS MUST BE REVIEWED AND APPROVED BY THE APPROPRIATE AGENCY PRIOR TO THE ISSUANCE OF BUILDING PERMITS.
- NOTWITHSTANDING ANY SURFACE IMPROVEMENTS, LANDSCAPING, PLANTING OR CHANGES SHOWN IN THESE SITE OR CONSTRUCTION PLANS, OR ACTUALLY CONSTRUCTED OR PUT IN PLACE, ALL UTILITY EASEMENTS MUST REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH TO ALLOW FOR ADEQUATE MAINTENANCE EQUIPMENT. ADDITIONALLY, NO INSTALLATION, PLANTING, CHANGE IN THE SURFACE, ETC., SHALL INTERFERE WITH THE OPERATION OF THE UTILITY LINES PLACED WITHIN THE EASEMENT. BY SUBMITTING THESE SITE OR CONSTRUCTION PLANS FOR APPROVAL, THE LANDOWNER RECOGNIZES AND ACCEPTS THE TERMS, CONDITIONS AND REQUIREMENTS OF THIS NOTE.
- FINAL GRADE SHALL BE AT LEAST SIX (6) INCHES BELOW ANY EXTERIOR WOOD SIDING ON THE PREMISES.
- ALL INTERESTED PARTIES ARE HEREBY ALERTED THAT THIS SITE PLAN IS SUBJECT TO ADMINISTRATIVE CHANGES AND AS SHOWN ON THE ORIGINAL SITE PLAN ON FILE IN THE AURORA CITY PLANNING AND DEVELOPMENT SERVICES DEPARTMENT. A COPY OF THE OFFICIAL CURRENT PLAN MAY BE OBTAINED THERE. LIKEWISE, SITE PLANS ARE REQUIRED TO AGREE WITH THE APPROVED SUBDIVISION PLAT OF RECORD AT THE TIME OF A BUILDING PERMIT; AND IF NOT, MUST BE AMENDED TO AGREE WITH THE PLAT AS NEEDED, OR VICE VERSA.
- ERRORS IN APPROVED SITE PLANS RESULTING FROM COMPUTATIONS OR INCONSISTENCIES IN THE DRAWINGS MADE BY THE APPLICANT ARE THE RESPONSIBILITY OF THE PROPERTY OWNER OF RECORD. WHERE FOUND, THE CURRENT MINIMUM CODE REQUIREMENTS WILL APPLY AT THE TIME OF BUILDING PERMIT. PLEASE BE SURE THAT ALL PLAN COMPUTATIONS ARE CORRECT.
- ALL REPRESENTATIONS AND COMMITMENTS MADE BY APPLICANTS AND PROPERTY OWNERS AT PUBLIC HEARINGS REGARDING THIS PLAN ARE BINDING UPON THE APPLICANT, PROPERTY OWNER, AND ITS HEIRS, SUCCESSORS, AND ASSIGNS.
- THE DEVELOPER IS RESPONSIBLE FOR SIGNING AND STRIPING ALL PUBLIC STREETS. THE DEVELOPER IS REQUIRED TO PLACE TRAFFIC CONTROL, STREET NAME, AND GUIDE SIGNS ON ALL PUBLIC STREETS AND PRIVATE STREETS APPROACHING AN INTERSECTION WITH A PUBLIC STREET. SIGNS SHALL BE FURNISHED AND INSTALLED PER THE MOST CURRENT EDITIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND CITY STANDARDS, SHOWN ON THE SIGNING AND STRIPING PLAN FOR DEVELOPMENT.
- FIRE LANE AND HANDICAPPED PARKING SIGNS, SIGN DETAILS, HANDICAPPED PARKING STALL DETAILS, AND LOCATIONS SHALL BE APPROVED WITH THE CIVIL PLANS, "SIGNAGE AND STRIPING" PACKAGE.

## SITE PLAN NOTES

RESPONSE: NOTED

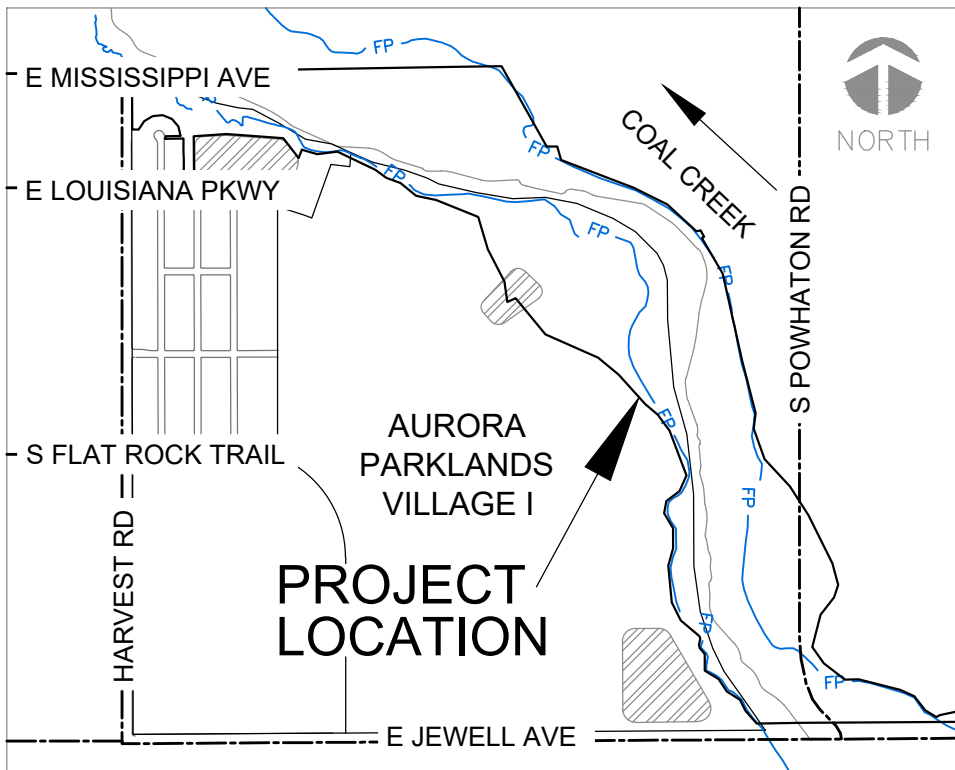
The site plan will not be approved by Aurora Water until the preliminary drainage letter/report is approved.

RESPONSE: NOTED

Revise this site plan as applicable per comments on the Preliminary Drainage Report

## CITY OF AURORA, COLORADO

## PROJECT LOCATION



### VICINITY MAP

SCALE: 1" = 1,500'

### SIGNATURE BLOCK

THIS SITE PLAN AND ANY AMENDMENTS HERETO, UPON APPROVAL BY THE CITY OF AURORA AND RECORDING, SHALL BE BINDING UPON THE APPLICANTS THEREFORE, THEIR SUCCESSORS AND ASSIGNS. THIS PLAN SHALL LIMIT AND CONTROL THE ISSUANCE AND VALIDITY OF ALL BUILDING PERMITS, AND SHALL RESTRICT AND LIMIT THE CONSTRUCTION, LOCATION, USE, OCCUPANCY AND OPERATION OF ALL LAND AND STRUCTURES WITHIN THIS PLAN TO ALL CONDITIONS, REQUIREMENTS, LOCATIONS AND LIMITATIONS SET FORTH HEREIN. ABANDONMENT, WITHDRAWAL OR AMENDMENT OF THIS PLAN MAY BE PERMITTED ONLY UPON APPROVAL OF THE CITY OF AURORA.

IN WITNESS THEREOF, \_\_\_\_\_ HAS CAUSED THESE

(CORPORATION, COMPANY, OR INDIVIDUAL)

PRESENTS TO BE EXECUTED THIS \_\_\_\_ DAY OF \_\_AD. \_\_

BY: \_\_\_\_\_  
(PRINCIPALS OR OWNERS)

STATE OF COLORADO )SS COUNTY OF \_\_\_\_)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_AD, \_\_\_\_ BY

(PRINCIPALS OR OWNERS)

WITNESS MY HAND AND OFFICIAL SEAL

(NOTARY PUBLIC)

SEAL

MY COMMISSION EXPIRES  
NOTARY BUSINESS ADDRESS: \_\_\_\_\_

### SIGNATURE BLOCK

THIS SITE PLAN AND ANY AMENDMENTS HERETO, UPON APPROVAL BY THE CITY OF AURORA AND RECORDING, SHALL BE BINDING UPON THE APPLICANTS THEREFORE, THEIR SUCCESSORS AND ASSIGNS. THIS PLAN SHALL LIMIT AND CONTROL THE ISSUANCE AND VALIDITY OF ALL BUILDING PERMITS, AND SHALL RESTRICT AND LIMIT THE CONSTRUCTION, LOCATION, USE, OCCUPANCY AND OPERATION OF ALL LAND AND STRUCTURES WITHIN THIS PLAN TO ALL CONDITIONS, REQUIREMENTS, LOCATIONS AND LIMITATIONS SET FORTH HEREIN. ABANDONMENT, WITHDRAWAL OR AMENDMENT OF THIS PLAN MAY BE PERMITTED ONLY UPON APPROVAL OF THE CITY OF AURORA.

IN WITNESS THEREOF, \_\_\_\_\_ HAS CAUSED THESE

(CORPORATION, COMPANY, OR INDIVIDUAL)

PRESENTS TO BE EXECUTED THIS \_\_\_\_ DAY OF \_\_AD. \_\_

BY: \_\_\_\_\_  
(PRINCIPALS OR OWNERS)

STATE OF COLORADO )SS COUNTY OF \_\_\_\_)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_AD, \_\_\_\_ BY

(PRINCIPALS OR OWNERS)

WITNESS MY HAND AND OFFICIAL SEAL

(NOTARY PUBLIC)

SEAL

MY COMMISSION EXPIRES  
NOTARY BUSINESS ADDRESS: \_\_\_\_\_

### CITY OF AURORA APPROVALS

CITY ATTORNEY: \_\_\_\_\_ DATE: \_\_\_\_\_

PLANNING DIRECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

PLANNING COMMISSION: \_\_\_\_\_ DATE: \_\_\_\_ (CHAIRPERSON)

CITY COUNCIL: \_\_\_\_\_ DATE: \_\_\_\_\_ (MAYOR)  
ATTEST: \_\_\_\_\_ DATE: \_\_\_\_\_ (CITY CLERK)

DATABASE APPROVAL DATE \_\_\_\_

RECORDER'S CERTIFICATE:  
ACCEPTED FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF  
COLORADO AT \_\_\_\_\_ O'CLOCK \_\_\_\_ M, THIS \_\_\_\_ DAY  
OF \_\_\_\_AD, \_\_\_\_.

CLERK AND RECORDER: \_\_\_\_\_

DEPUTY: \_\_\_\_\_

## SHEET INDEX

SHEET NUMBER	SHEET TITLE
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02	GENERAL NOTES
03	PLAN & PROFILE STA. 10+00 - 24+00
04	PLAN & PROFILE STA. 24+00 - 38+00
05	PLAN & PROFILE STA. 38+00 - 52+00
06	PLAN & PROFILE STA. 52+00 - 66+00
07	PLAN & PROFILE STA. 66+00 - 80+00
08	PLAN & PROFILE STA. 80+00 - 94+00
09	PLAN & PROFILE STA. 94+00 - 108+00
10	TYPICAL BURIED RIFFLE
11	TYPICAL AT-GRADE RIFFLE STRUCTURE
12	TYPICAL DETAILS

DRAFT

WORK IN PROGRESS

CALL COLORADO  
**811**  
OR CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
**1-800-922-1987**  
CALL 3-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

NO.	BY	DATE	DESCRIPTION	COMMENTS
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PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

JOB NO.  
231-021.000

SHEET

TS01

SHEET NO.

01

TITLE SHEET



Plot Date/Time: 05/16/2024, 02:46:30 PM; C:\WWE\231-021\000\CAD\01\_DWGSS\GNXX.DWG-02\_GENERAL NOTES

## GENERAL NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MILE HIGH FLOOD DISTRICT (MHFD) STANDARDS AND SPECIFICATIONS, PROJECT CONTRACT AND PROJECT TECHNICAL SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
- MHFD WILL CONDUCT SITE VISITS DURING THE PROJECT CONSTRUCTION WITHIN OR NEAR THE CHANNEL TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. PLEASE CONTACT MHFD (303-455-6277) TO SCHEDULE A PRECONSTRUCTION MEETING. ALL STRUCTURAL AND GROUTED BOULDER WORK REQUIRE 48-HOURS PRIOR NOTICE TO ANY CONSTRUCTION OR CONCRETE PLACEMENT. STANDARDS AND SPECIFICATIONS FOR ALL OUTFALL AND CHANNEL WORK CAN BE ACCESSED AT WWW.MHFD.ORG UNDER THE REFERENCES SECTION. FAILURE TO NOTIFY MAY RESULT IN PROJECT INELIGIBILITY.
- A FLOODPLAIN DEVELOPMENT PERMIT IS REQUIRED PRIOR TO ANY WORK WITHIN THE FLOODPLAIN. NO FILL, NO STOCKPILING OF MATERIAL, OR STORAGE OF EQUIPMENT WILL BE PERMITTED IN THE FLOODWAY.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH APPLICABLE STANDARDS AND REGULATIONS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.).
- NO FIELD CHANGES SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE ENGINEER AND OWNER.
- SUBMITTALS SHALL BE MADE FOR ALL MATERIALS TO BE INCORPORATED INTO THE PROJECT.
- THE PHYSICAL FEATURES WITHIN THE LIMITS OF THE PROJECT HAVE BEEN SHOWN BASED ON THE AVAILABLE INFORMATION AT THE TIME OF DESIGN. THE CONTRACTOR SHALL REVIEW AND VERIFY EXISTING PHYSICAL FEATURES AND ELEVATIONS.
- THE CONTRACTOR SHALL LIMIT ALL WORK AND STORAGE AREAS TO THE APPROVED PROJECT SITE, AND EASEMENTS.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AND/OR TOES OF SLOPE AS SHOWN ON THE PLANS. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.
- ALL CONSTRUCTION IS TO INCLUDE COMPACTION AND FINISHED GRADING IN THE RELATED WORK ITEM.
- ALL WORK SHALL BE DONE TO THE LINES, GRADES, SECTIONS, AND ELEVATIONS SHOWN ON THE PLANS UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER.
- THE ENGINEER SHALL BE NOTIFIED WITHIN 48 HOUR PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- THE CONTRACTOR SHALL PROTECT THE EXISTING DRAINAGE STRUCTURES AND REROUTE ANY RUNOFF AS NECESSARY DURING CONSTRUCTION ACTIVITIES TO PREVENT EROSION AND DAMAGE.
- THE CONTRACTOR SHALL CLOSELY MONITOR ACCESS FOR HEAVY CONSTRUCTION EQUIPMENT THROUGH THE PROJECT.
- THE PHYSICAL FEATURES REQUIRING REMOVAL OR DEMOLITION WITHIN THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF OFF-SITE UNLESS NOTED OTHERWISE IN THE PLANS AND/OR SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ANY MONUMENT, RANGE POINTS, TIES, BENCHMARKS AND/OR SURVEY CONTROL POINTS WHICH MAY BE DISTRIBUTED OR DESTROYED BY CONSTRUCTION. SUCH POINTS SHALL BE REFERENCED AND REPLACED WITH APPROPRIATE MONUMENT BY A REGISTERED PROFESSIONAL LAND SURVEYOR AUTHORIZED TO PRACTICE LAND SURVEYING IN THE STATE OF COLORADO.
- THE CONTRACTOR SHALL HAVE A COPY OF ALL APPLICABLE STANDARDS AND SPECIFICATIONS ON SITE FOR THE DURATION OF THE PROJECT.
- ANY DISCREPANCY WITHIN THESE PLANS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND WORK SHALL STOP UNTIL THE DISCREPANCY IS DISCUSSED AND DECISIONS/AGREEMENTS HAVE BEEN MADE.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS THAT ARE PERTINENT TO THIS WORK.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE OWNER. THE OWNER RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE APPROVED PLANS, ONE COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ANY PERMITS NEEDED AT THE JOB SITE AT ALL TIMES.
- PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES THE CONTRACTOR SHALL MEET WITH THE OWNER'S REPRESENTATIVE AND RECORD NOTES AND PICTURES OF EXISTING CONDITIONS OF THE SITE AND ADJACENT PROPERTY DURING PRE-CONSTRUCTION MEETING.
- UNAUTHORIZED CHANGES AND USES: THE ENGINEER WHO PREPARED THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS AND SPECIFICATIONS MUST BE IN WRITING AND MUST BE APPROVED BY THE OWNER AND THE PREPARER OF THESE PLANS.
- THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE IMMEDIATELY OF ANY FIELD CONDITION NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR SHALL PERFORM ALL WORK WITHIN THE CONSTRUCTION LIMITS AS SHOWN ON THE DRAWINGS AND IN THE CONTRACT DOCUMENTS. IF THE CONTRACTOR DAMAGES ANY EXISTING SITE OR PUBLIC/PRIVATE AMENITIES (PAVEMENTS, CURBS, CURB AND GUTTER, SOD, GRASS, LANDSCAPING, TREES, FENCES, ETC.) OUTSIDE OR WITHIN THE EASEMENTS OR CONSTRUCTION LIMITS, THEY SHALL REMOVE AND REPAIR SUCH TO THE SATISFACTION OF THE INDIVIDUAL PROPERTY OWNERS.
- ALL ITEMS NOT INCLUDED IN THE BID TAB AND NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL PROJECT OR NOTED AS 'INCIDENTAL' IN THE PLANS OR SPECIFICATIONS OR WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT ARE INCLUDED IN THE WORK.
- DIMENSIONS AND NOTATIONS SUPERSEDE SCALE OF THE DRAWINGS. GRADES SHOWN ARE FINISHED GRADES EXCEPT WHERE OTHERWISE NOTED ON THE DRAWINGS.

## PROJECT NOTES

- THE GOAL OF THE PROJECT IS TO MAINTAIN THE NATURALLY FUNCTIONING STREAM CORRIDOR WHILE PROVIDING MITIGATION STRUCTURES TO PROTECT AGAINST POTENTIAL FUTURE ADVERSE RESPONSES TO HYDROMODIFICATION AND OTHER CATCHMENT- AND REACH-SCALE DISTURBANCES RESULTANT OF ANTICIPATED DEVELOPMENT.
- ALL STORM INFRASTRUCTURE IS PUBLIC AND DESIGNED FOR THE 100-YEAR STORM EVENT.
- THE PROJECT IS INTENDED TO BE PUBLICLY MAINTAINED AND ELIGIBLE FOR THE MHFD'S MAINTENANCE ELIGIBILITY PROGRAM.
- ALL MATERIALS AND WORK SHALL MEET MHFD'S STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED. ALL VOID-FILLED RIPRAP AND BOULDER MATERIAL SHALL BE INSPECTED BY AND APPROVED BY THE ENGINEER ON-SITE, PRIOR TO PLACEMENT.
- CONSTRUCTION SHALL BE COMPLETED IN THE PRESENCE OF THE ENGINEER. WORK COMPLETED WITHOUT OVERSIGHT AND APPROVAL OF THE ENGINEER IS SUBJECT TO REMOVAL.
- REVEGETATION WORK SHALL BE COMPLETED PER THE REVEGETATION PLANS AND IN THE PRESENCE OF THE LANDSCAPE ARCHITECT. WORK COMPLETED WITHOUT OVERSIGHT AND APPROVAL OF THE LANDSCAPE ARCHITECT IS SUBJECT TO REMOVAL.
- ADEQUATE NOTICE SHALL BE GIVEN TO THE ENGINEER AND CONSTRUCTION OBSERVATION PERSONNEL AT THE ONSET OF THE PROJECT, DURING MAJOR CONSTRUCTION MILESTONES, SUBSTANTIAL COMPLETION, AND FINAL COMPLETION.
- DEPENDING ON THE TIME OF YEAR CONSTRUCTION IS PERFORMED, DEWATERING MIGHT BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A DEWATERING PLAN WHICH MUST BE APPROVED BY ENGINEER AND OWNER PRIOR TO COMMENCING WORK. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ACQUIRING ALL REQUIRED DEWATERING PERMITS PRIOR TO COMMENCING WORK.
- ALL TRANSITIONS IN GRADE SHALL BE SMOOTH AND PARABOLIC TO IMITATE A NATURAL STREAM CORRIDOR.
- SCHEDULING OF WORK SHOULD BE COORDINATED WITH ADJACENT CIVIL AND STORMWATER IMPROVEMENTS INTO THE COAL CREEK IMPROVEMENTS. CONTRACTOR SHALL COORDINATE WITH OWNER AND ENGINEER PRIOR TO CONSTRUCTION TO DISCUSS THE PHASING OF EACH ELEMENT.
- CAD FILES AVAILABLE UPON REQUEST.
- CITY OF AURORA PLAN REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH CITY OF AURORA DESIGN CRITERIA AND THE CITY CODE. THE CITY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, OF DIMENSIONS AND ELEVATIONS WHICH MUST BE CONFIRMED AND CORRELATED AT THE JOB SITE. THE CITY OF AURORA, THROUGH THE APPROVAL OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.
- APPROVAL OF THIS DOCUMENT BY CITY OF AURORA DOES NOT IMPLY APPROVAL FOR ANY OFF-SITE WORK ON ADJACENT PRIVATE PROPERTY. IN IS THE OWNER'S RESPONSIBILITY TO COORDINATE WITH ADJACENT PROPERTY OWNERS AND OBTAIN ALL NECESSARY APPROVALS AND EASEMENTS FOR SUCH WORK.
- APPLICANT UNDERSTANDS THAT WORK IN 100-YEAR FLOODPLAIN REQUIRES A FLOODPLAIN DEVELOPMENT PERMIT WHICH MUST BE OBTAINED PRIOR TO GRADING OR CONSTRUCTION WITHIN THE FLOODPLAIN.
- CITY OF AURORA BENCHMARK NUMBER 4S6529NW001 BEING A 3" BRASS CAP ATOP A 30" LONG STEEL PIPE IN CONCRETE LOCATED ON SOUTH SIDE OF EAST JEWELL AVENUE BEING 1' NORTH OF SOUTH RIGHT OF WAY FENCE LINE AND 4' EAST OF INTERSECTION OF SOUTH RIGHT OF WAY FENCE AND THE NORTH SOUTH SECTION LINE FENCE RUNNING SOUTH. IN VICINITY OF 1/4 CORNER TO SECTIONS 20/29, T4S, R65W. ELEVATION = 5643.37' (NAVD 88).

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MEMBER UTILITIES



WRIGHT WATER ENGINEERS, INC.  
2490 W. 26TH AVE. SUITE 100A  
DENVER, CO 80211  
(303) 480-1700 FAX: (303) 480-1020

## SITE CONDITIONS

- ANY CONSTRUCTION DEBRIS OR MUD TRACKING ONTO THE PUBLIC RIGHT-OF-WAY, RESULTING FROM THE PROJECT, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATION, OR PAVEMENT FAILURE CAUSED BY THE PROJECT, AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT, AND ADJACENT TO, THE JOB SITE, INCLUDING BUT NOT LIMITED TO TRENCH EXCAVATIONS AND SHORING, TRAFFIC CONTROL, SECURITY, AND SAFETY OF ALL PERSONS AND PROPERTY, DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE OWNERS TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL PROVIDE A SANITARY FACILITY AT THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCEPTANCE, CONVEYANCE, AND CONTROL OF ALL SURFACE AND SUBSURFACE WATER FLOWS IN AND ENTERING THE AREA AFFECTED BY THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OPERATIONS OR ANY OTHER ACCEPTABLE MEANS TO PREVENT POLLUTION OF THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NEEDED DEWATERING OPERATIONS INCLUDING ANY REQUIRED PERMITS FOR DEWATERING OPERATIONS. THE CONTRACTOR SHALL MAINTAIN AND PROVIDE DRAINAGE THROUGH THE SITE DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL THROUGHOUT THE CONSTRUCTION DURATION AND SHALL INSTALL EROSION CONTROL MEASURES AS NECESSARY.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT. THE CONTRACTOR SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR, ACCUMULATE IN, THE FLOW LINES AND PUBLIC RIGHTS OF WAYS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF A DRAINAGEWAY, ADDITIONAL SEDIMENT CONTROLS SUCH AS TEMPORARY DIKES OR SILT FENCE SHALL BE REQUIRED.
- UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION WILL NEED TO BE LOCATED BY THE CONTRACTOR. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ANY UTILITIES AFFECTED BY THE EXECUTION OF THIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND AGENCIES AND FOR THE COORDINATION OF ALL WORK IN THE PROXIMITY OF THE UTILITIES. THE CONTRACTOR SHALL NOTE THAT ALL UTILITIES MAY NOT APPEAR ON THESE PLANS. UTILITIES SHOWN ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY OTHERS.

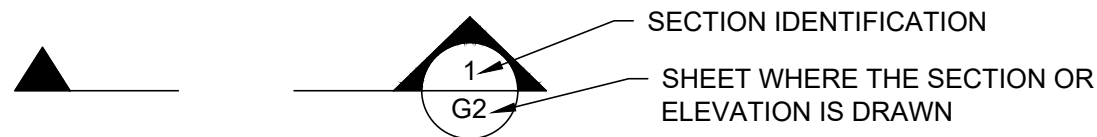
## ABBREVIATIONS

AC	ACRE	N	NORTH
APPROX	APPROXIMATE	NTS	NOT TO SCALE
CF	CUBIC FEET	O.C.	ON-CENTER
CFS	CUBIC FEET PER SECOND	PROP	PROPOSED
CL, C/L	CENTER LINE	Q	FLOW RATE
DEG	DEGREE	QTY	QUANTITY
DEMO	DEMOLITION	R, RAD	RADIUS
DIM	DIMENSION	RCBC	REINFORCED CONCRETE BOX CULVERT
E	EAST		RIGHT-OF-WAY
EL, ELEV	ELEVATION	ROW	SOUTH
ENGR	ENGINEER	S	SPECIFICATION
ESMT	EASEMENT	SQ FT, SF	SQUARE FOOT
EST	ESTIMATE	SQ YD	SQUARE YARD
EXST	EXISTING	STA	STATION
FG	FINISHED GRADE	STD	STANDARD
FL	FLOWLINE	TYP	TYPICAL
GB	GRADE BREAK	V, VERT	VERTICAL
H, HORIZ	HORIZONTAL	W	WEST
INV	INVERT	WSE	WATER SURFACE ELEVATION
INV EL	INVERT ELEVATION	WWE	WRIGHT WATER ENGINEERS
LB	POUND	XS	CROSS SECTION
LF	LINEAR FOOT	YR	YEAR
MAX	MAXIMUM		
MIN	MINIMUM		

## LEGEND

	FP	EFFECTIVE FLOODWAY LIMITS
	FP	EFFECTIVE 100-YEAR FLOODPLAIN LIMITS
	FP	EFFECTIVE 500-YEAR FLOODPLAIN LIMITS
		EFFECTIVE FLOODPLAIN SOURCES: FIRM 08005C0204K (REV. 12/10/2010) FIRM 08005C0208L (REV. 02/17/2017) FIRM 08005C0216M (REV. 09/04/2020)
		ESTIMATED 100-YEAR FLOODPLAIN (WWE)
		ESTIMATED FUTURE BANKFULL (WWE)
		APPROX. WETLAND EXTENTS
		APPROX. OHWM EXTENTS
		EASEMENT
		PROPERTY BOUNDARY
		EXISTING FENCE
		EXISTING WATER LINE
		EXISTING OVERHEAD UTILITY
		EXISTING FIBER OPTIC
		EXISTING UNDERGROUND ELECTRIC
		EXISTING STORM OUTFALL
		FUTURE STORM OUTFALL (BY OTHERS)
		EXISTING UNDERGROUND TELE.
		FUTURE SANITARY SEWER (BY OTHERS)
		EXISTING RIPRAP
		PROPOSED RIPRAP
		EXISTING TREE DRIP LINE
		EXISTING DIRT ROAD
	5100	MAJOR CONTOUR
	5100	MINOR CONTOUR
	5100	EXISTING MAJOR CONTOUR
	5100	EXISTING MINOR CONTOUR

### SECTION OR ELEVATION MARKER ARROW INDICATES VIEWING ORIENTATION



**DRAFT**  
WORK IN PROGRESS

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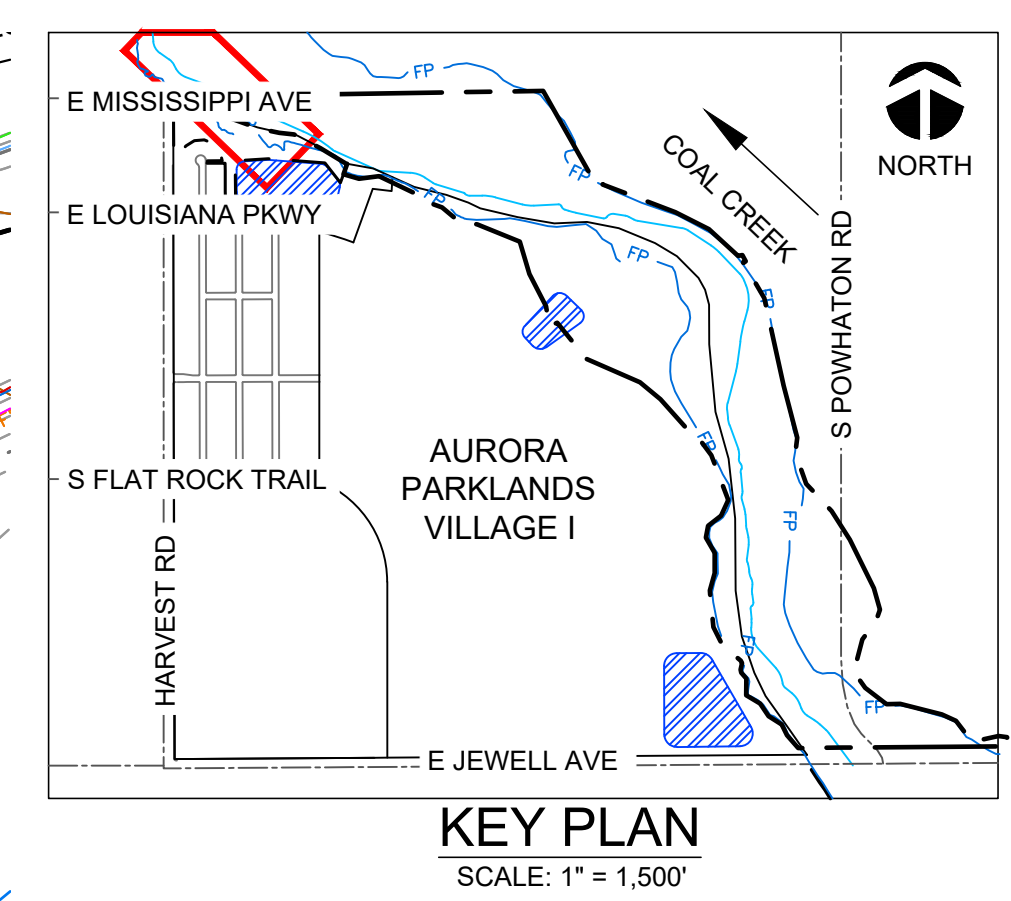
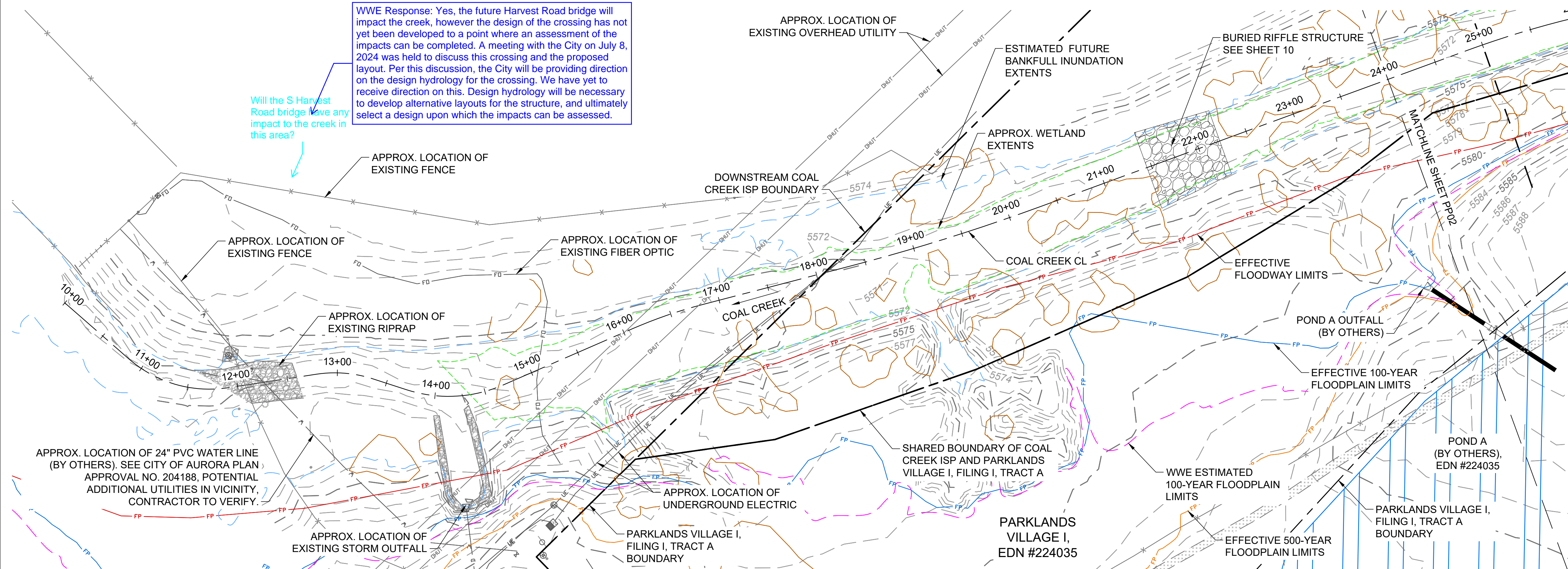
PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

GENERAL NOTES

JOB NO.	231-021.000
SHEET	GN01
SHEET NO.	02



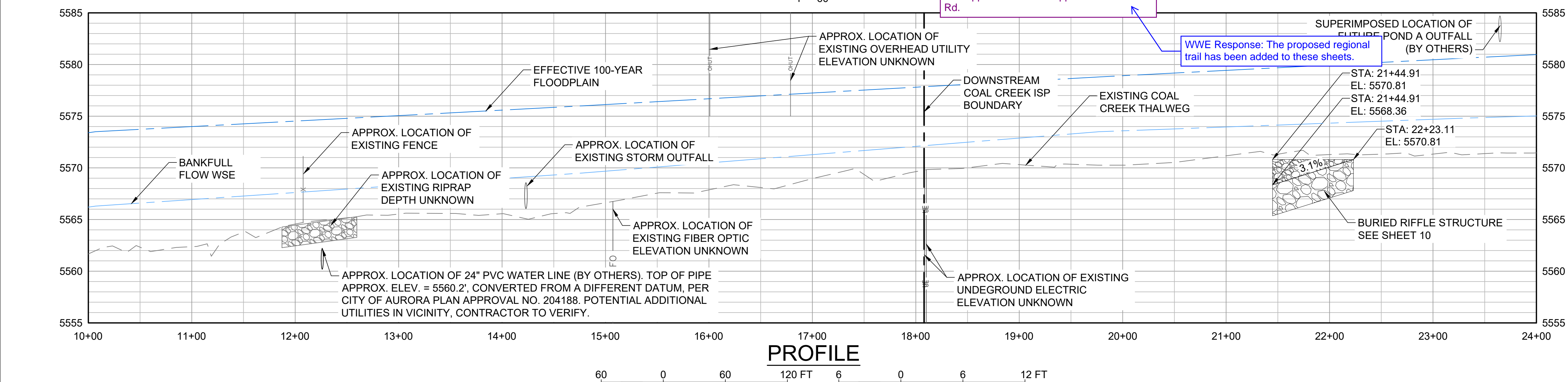
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- LEGEND**
- FP EFFECTIVE FLOODWAY LIMITS
  - FP EFFECTIVE 100-YEAR FLOODPLAIN LIMITS
  - FP EFFECTIVE 500-YEAR FLOODPLAIN LIMITS
  - EFFECTIVE FLOODPLAIN SOURCES:
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  - APPROX. WETLAND EXTENTS
  - APPROX. OHWM EXTENTS
  - EASEMENT
  - PROPERTY BOUNDARY
  - EXISTING FENCE
  - W EXISTING WATER LINE
  - OHUT EXISTING OVERHEAD UTILITY
  - FO EXISTING FIBER OPTIC
  - UE EXISTING UNDERGROUND ELECTRIC
  - O EXISTING STORM OUTFALL
  - FOUT FUTURE STORM OUTFALL (BY OTHERS)
  - UT EXISTING UNDERGROUND TELE.
  - SS FUTURE SANITARY SEWER (BY OTHERS)
  - EXISTING RIPRAP
  - PROPOSED RIPRAP
  - EXISTING TREE DRIP LINE
  - EXISTING DIRT ROAD
  - 5100 MAJOR CONTOUR
  - 5100 MINOR CONTOUR
  - 5100 EXISTING MAJOR CONTOUR
  - 5100 EXISTING MINOR CONTOUR

- NOTES**
- CONTRACTOR TO MINIMIZE SITE DISTURBANCE AND PRESERVE EXISTING VEGETATION TO THE EXTENT PRACTICAL.
  - WHERE BURIED STRUCTURES ARE PROPOSED, EXISTING GRADE AND VEGETATION SHALL BE RESTORED.
  - NO STOCKPILING OF MATERIAL, OR STORAGE OF EQUIPMENT WILL BE PERMITTED IN THE FLOODWAY.

**DRAFT**  
**WORK IN PROGRESS**



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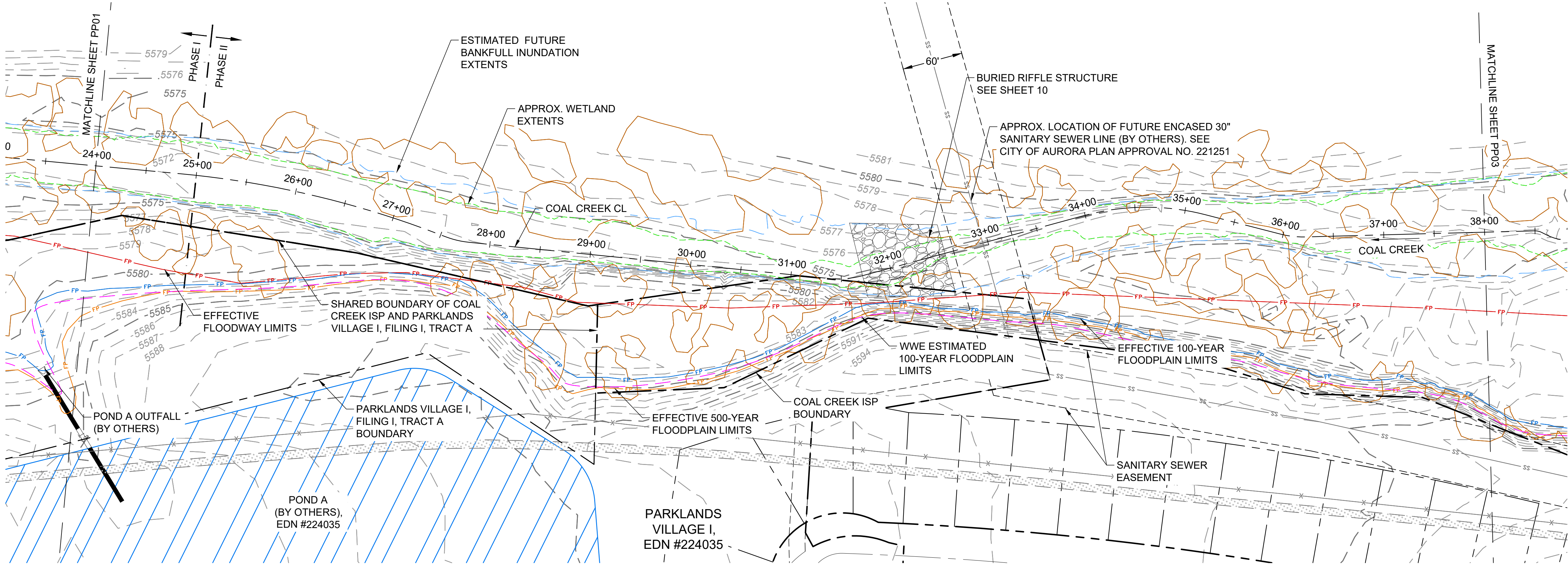
**PARKLANDS COAL CREEK INFRASTRUCTURE PLAN**

**PLAN & PROFILE STA. 10+00 - 24+00**

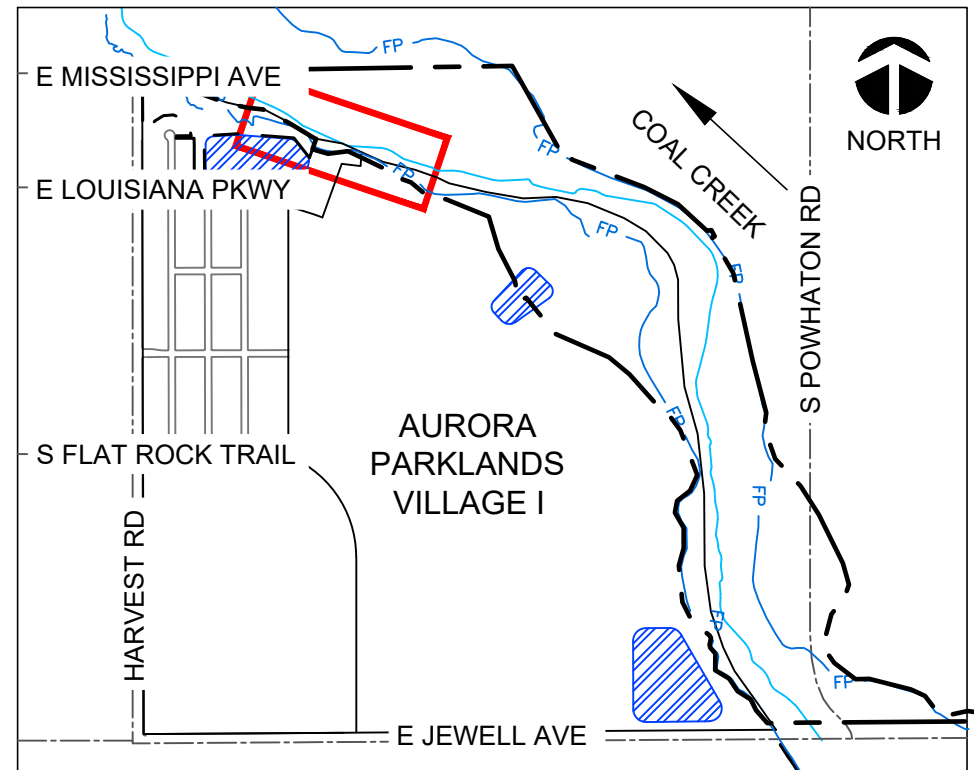
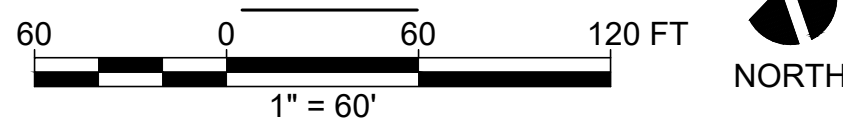
JOB NO.	231-021.000
SHEET	PP01
SHEET NO.	03



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PLAN



KEY PLAN  
SCALE: 1" = 1,500'

LEGEND

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- 5100 — MINOR CONTOUR
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NOTES

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BENCHMARK:

CITY OF AURORA BENCHMARK NUMBER 4S6529NW001 BEING A 3" BRASS CAP ATOP A 30" LONG STEEL PIPE IN CONCRETE LOCATED ON SOUTH SIDE OF EAST JEWELL AVENUE BEING 1' NORTH OF SOUTH RIGHT OF WAY FENCE LINE AND 4' EAST OF INTERSECTION OF SOUTH RIGHT OF WAY FENCE AND THE NORTH SOUTH SECTION LINE FENCE RUNNING SOUTH. IN VICINITY OF 1/4 CORNER TO SECTIONS 20/29, T4S, R65W.

ELEVATION = 5643.37' (NAVD 88).



**WRIGHT WATER ENGINEERS, INC.**  
2490 W. 26TH AVE. SUITE 100A  
DENVER, CO 80211  
(303) 480-1700 FAX: (303) 480-1020

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**DRAFT**  
NOT FOR  
CONSTRUCTION

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DETAIL	MYG	05/16/2024
CHECK	SDS	05/16/2024
SCALE	SHOWN	

PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

PLAN & PROFILE STA. 24+00 - 38+00

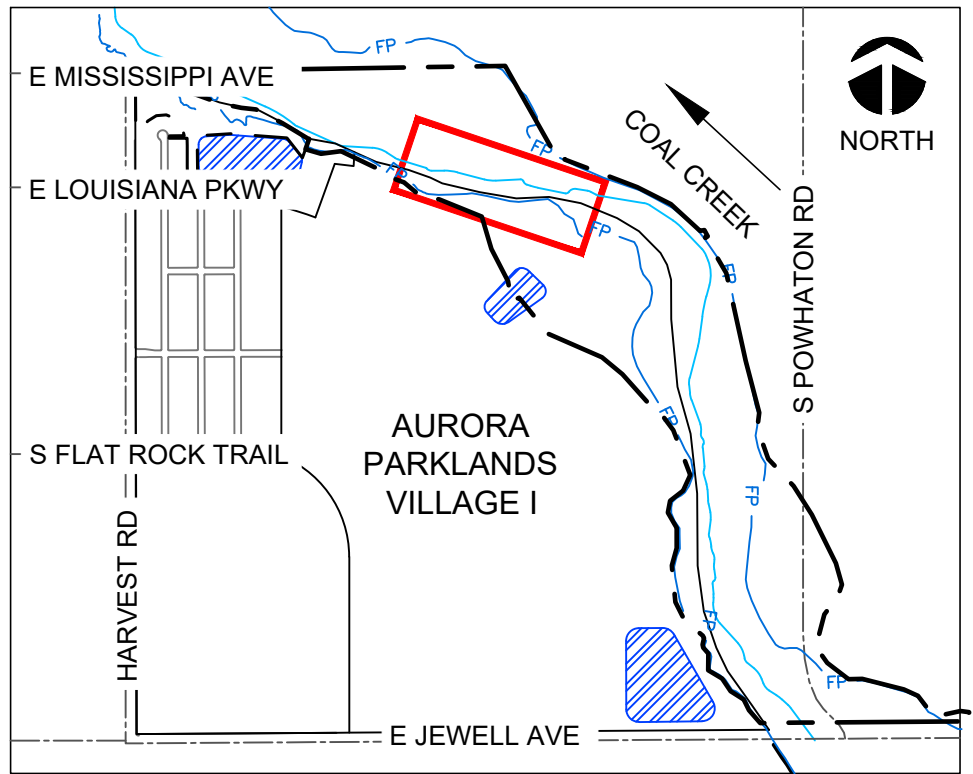
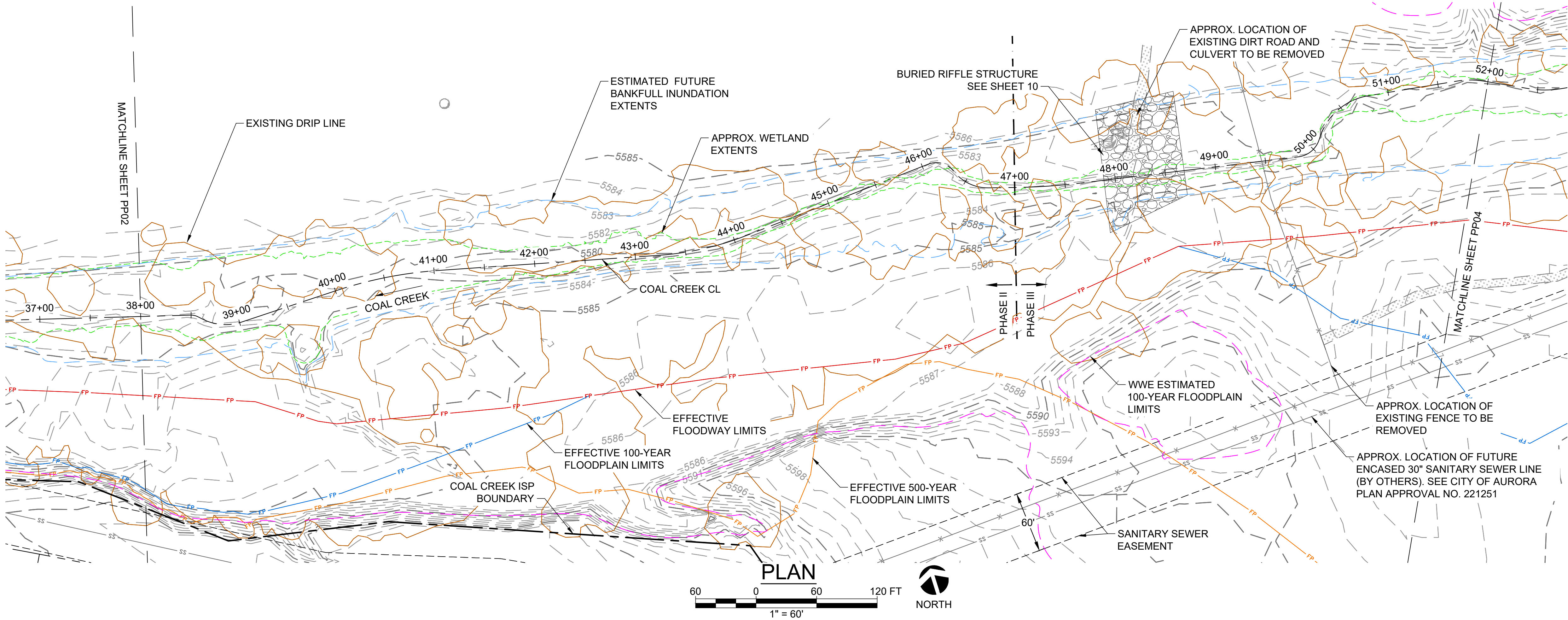
JOB NO.  
231-021.000

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PP02

SHEET NO.  
04

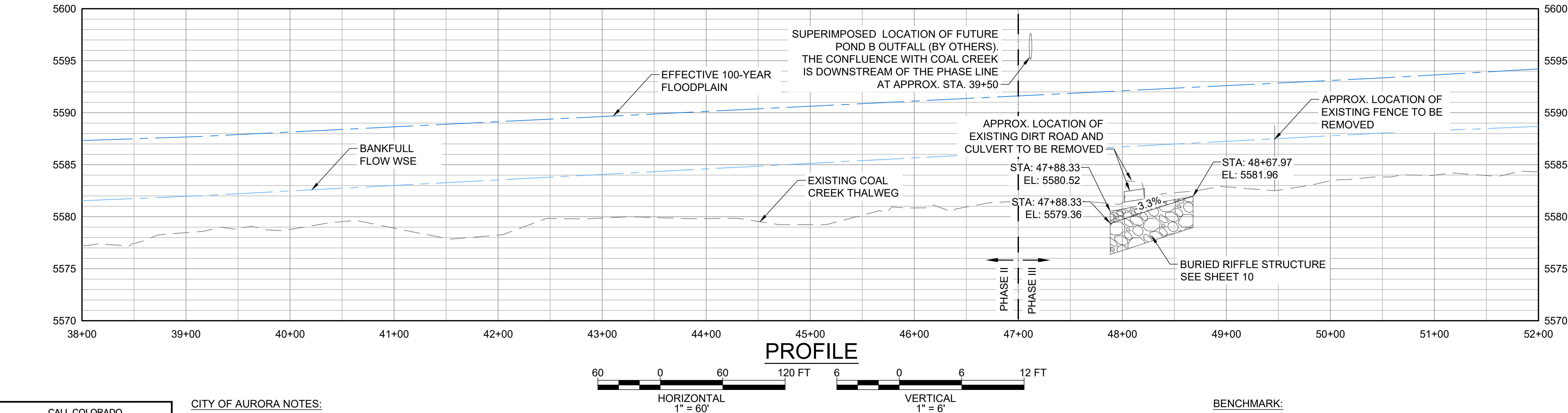


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- LEGEND**
- FP — EFFECTIVE FLOODWAY LIMITS
  - FP — EFFECTIVE 100-YEAR FLOODPLAIN LIMITS
  - FP — EFFECTIVE 500-YEAR FLOODPLAIN LIMITS
  - EFFECTIVE FLOODPLAIN SOURCES:
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    - FIRM 08005C0208L (REV. 02/17/2017)
    - FIRM 08005C0216M (REV. 09/04/2020)
  - - - - - ESTIMATED 100-YEAR FLOODPLAIN (WWE)
  - - - - - ESTIMATED FUTURE BANKFULL (WWE)
  - - - - - APPROX. WETLAND EXTENTS
  - - - - - APPROX. OHWM EXTENTS
  - - - - - EASEMENT
  - - - - - PROPERTY BOUNDARY
  - - - - - EXISTING FENCE
  - - - - - EXISTING WATER LINE
  - - - - - EXISTING OVERHEAD UTILITY
  - - - - - EXISTING FIBER OPTIC
  - - - - - EXISTING UNDERGROUND ELECTRIC
  - - - - - EXISTING STORM OUTFALL
  - - - - - FUTURE STORM OUTFALL (BY OTHERS)
  - - - - - EXISTING UNDERGROUND TELE.
  - - - - - FUTURE SANITARY SEWER (BY OTHERS)
  - [Symbol] EXISTING RIPRAP
  - [Symbol] PROPOSED RIPRAP
  - [Symbol] EXISTING TREE DRIP LINE
  - [Symbol] EXISTING DIRT ROAD
  - 5100 — MAJOR CONTOUR
  - 5100 — MINOR CONTOUR
  - - - 5100 - - - EXISTING MAJOR CONTOUR
  - - - 5100 - - - EXISTING MINOR CONTOUR

- NOTES**
- CONTRACTOR TO MINIMIZE SITE DISTURBANCE AND PRESERVE EXISTING VEGETATION TO THE EXTENT PRACTICAL.
  - WHERE BURIED STRUCTURES ARE PROPOSED, EXISTING GRADE AND VEGETATION SHALL BE RESTORED.
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CHECK	SDS 05/16/2024
SCALE	SHOWN

**PARKLANDS COAL CREEK INFRASTRUCTURE PLAN**

**PLAN & PROFILE STA. 38+00 - 52+00**

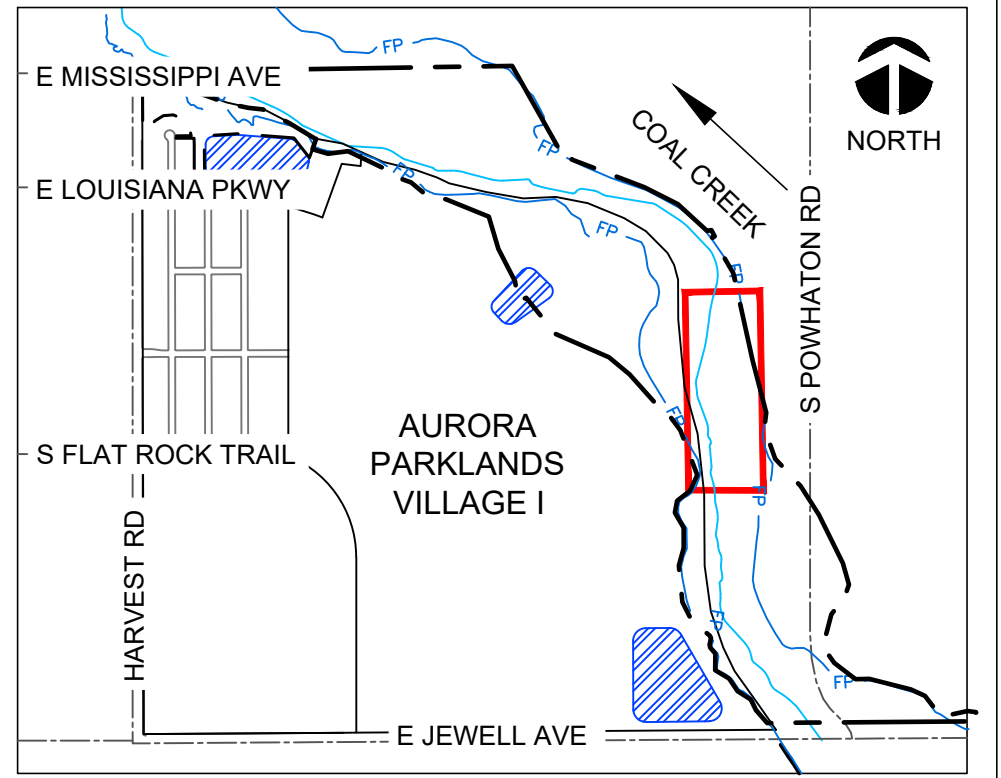
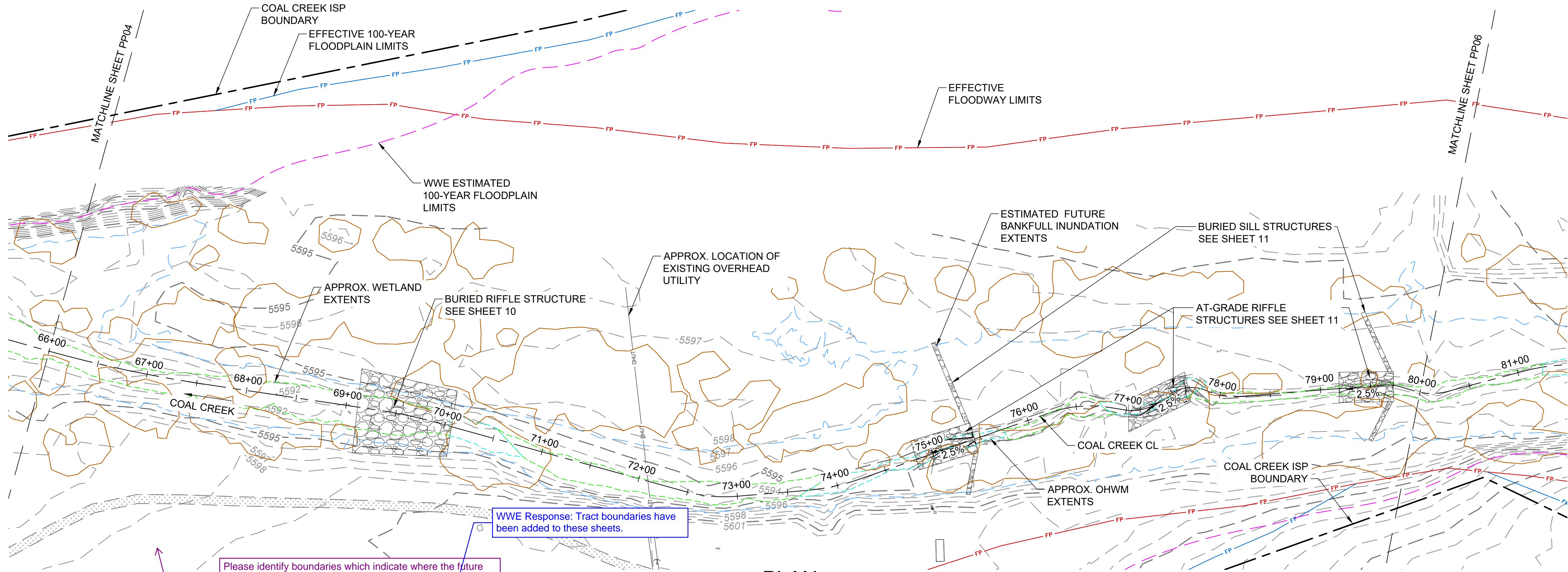
JOB NO.	231-021.000
SHEET	PP03
SHEET NO.	05







PLOT DATE/TIME: 05/16/2024, 02:49:21 PM; G:\WVE\231-021\000\CAD\01\_DWG\PPXX.DWG-10 PLAN & PROFILE STA. 66+00 - 80+00



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  - OHUT EXISTING OVERHEAD UTILITY
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PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

PLAN & PROFILE STA. 66+00 - 80+00

JOB NO.  
231-021.000

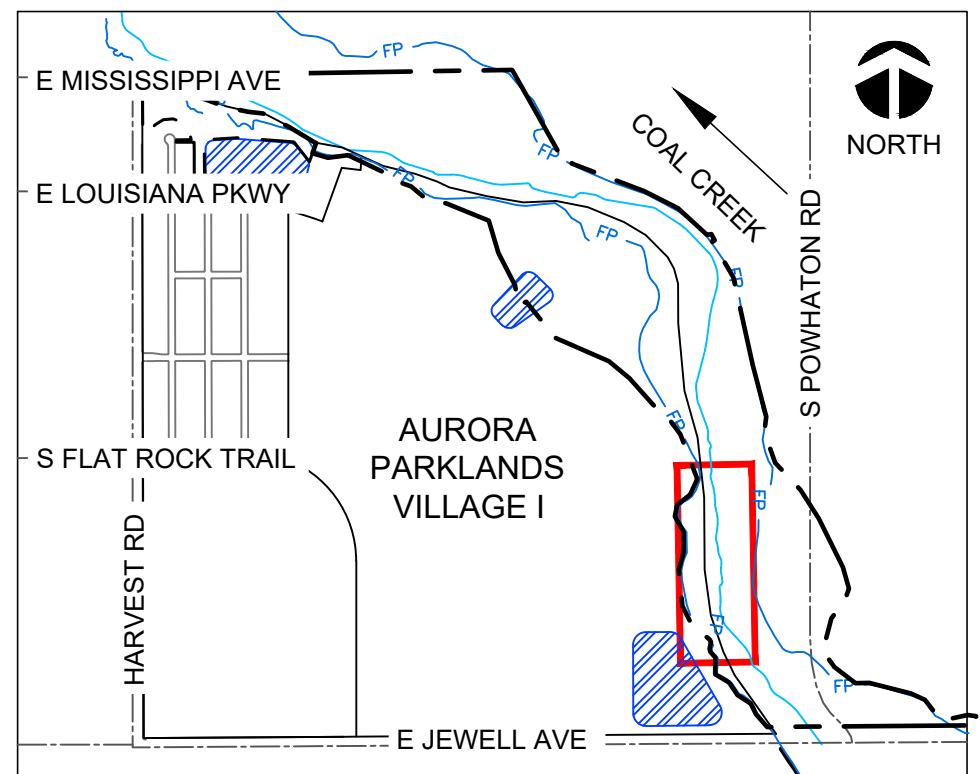
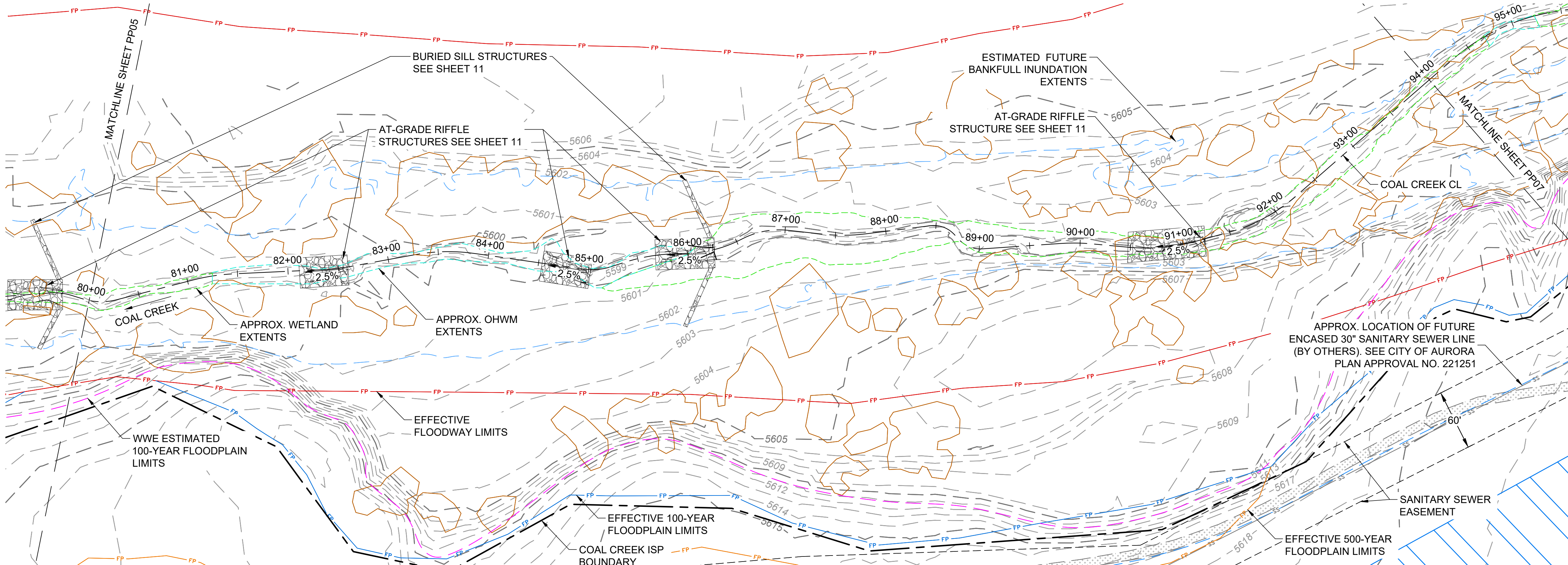
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PP05

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07



Plot Date/Time: 05/16/2024, 02:49:50 PM; G:\WVE\231-021\000\CAD\01\_DWG\PPXX.DWG-11 PLAN & PROFILE STA. 80+00 - 94+00

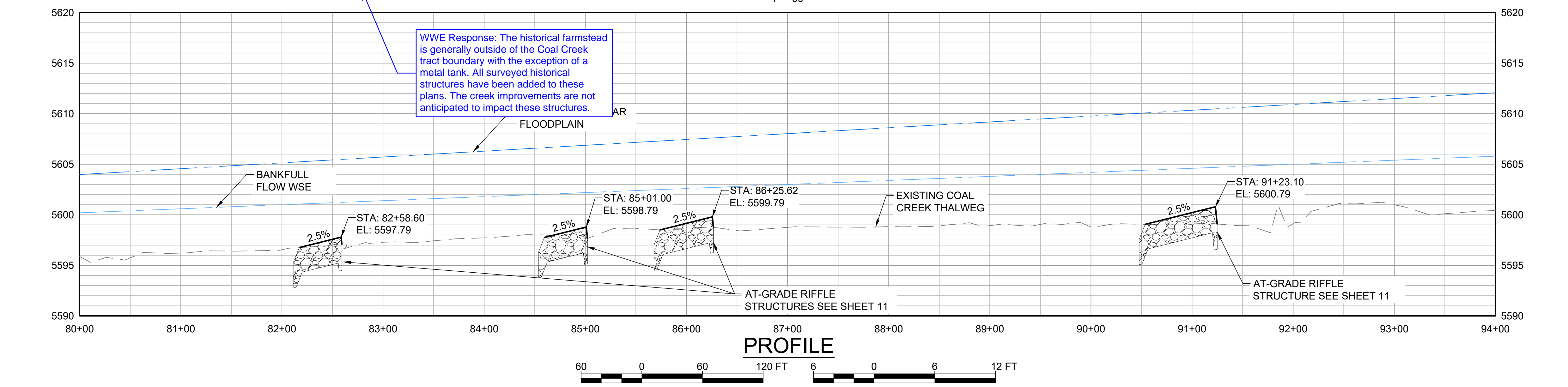


KEY PLAN  
SCALE: 1" = 1,500'

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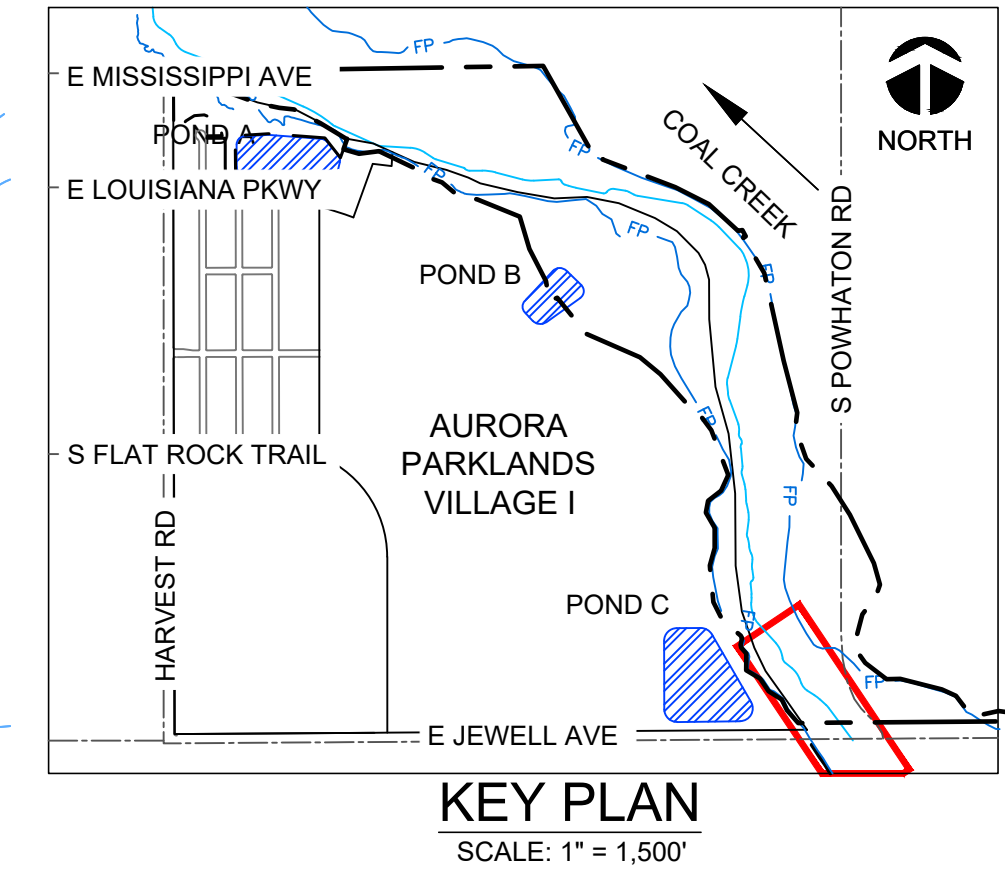
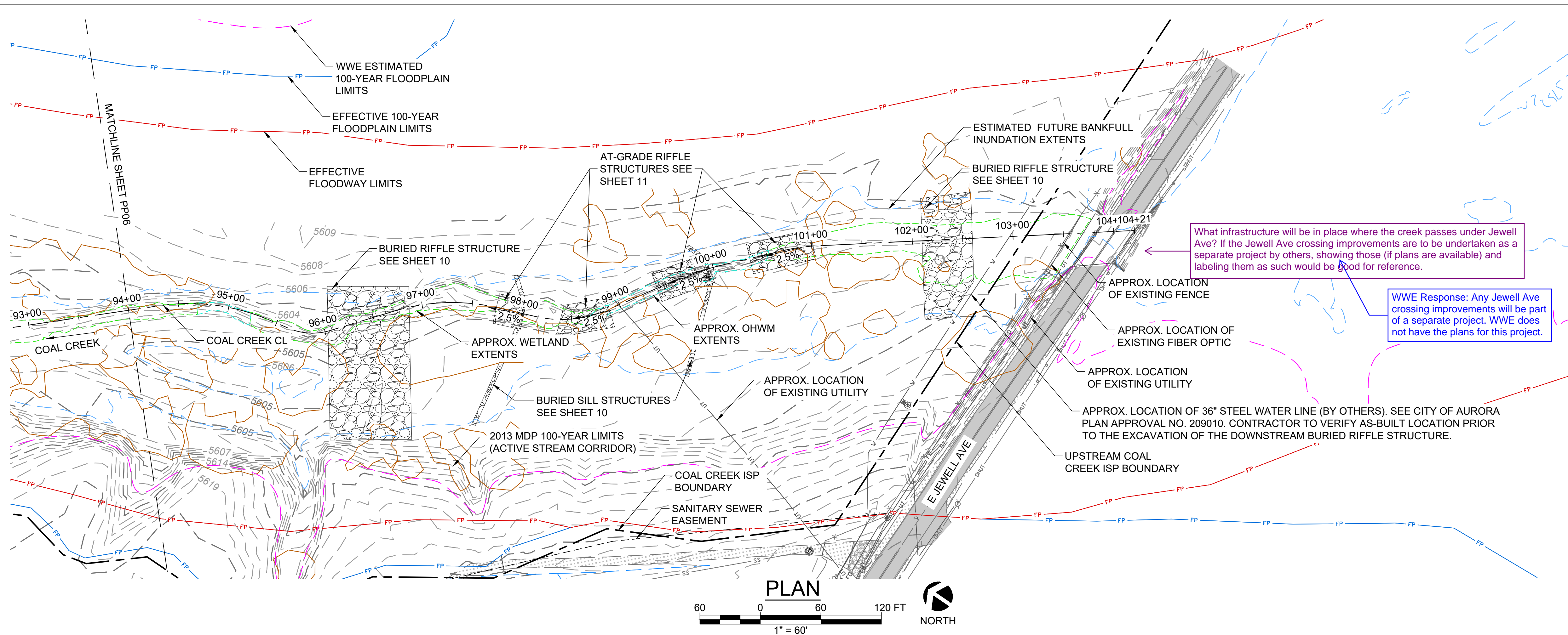
**PARKLANDS COAL CREEK INFRASTRUCTURE PLAN**

PLAN & PROFILE STA. 80+00 - 94+00

JOB NO.	231-021.000
SHEET	PP06
SHEET NO.	08

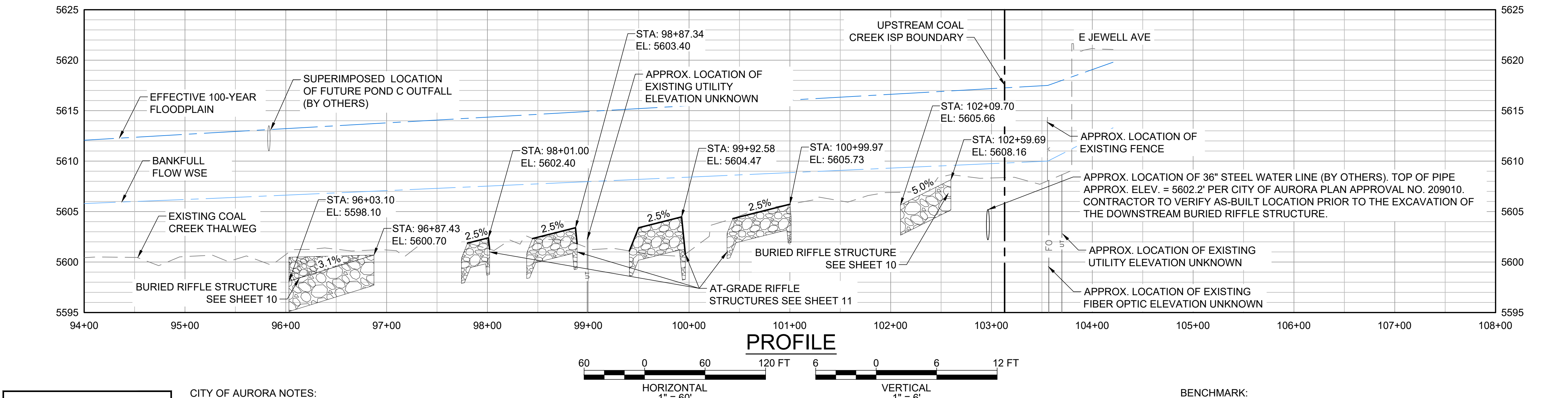


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- LEGEND**
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**DRAFT**  
**WORK IN PROGRESS**

**WWE**

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PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

PLAN & PROFILE STA. 94+00 - 108+00

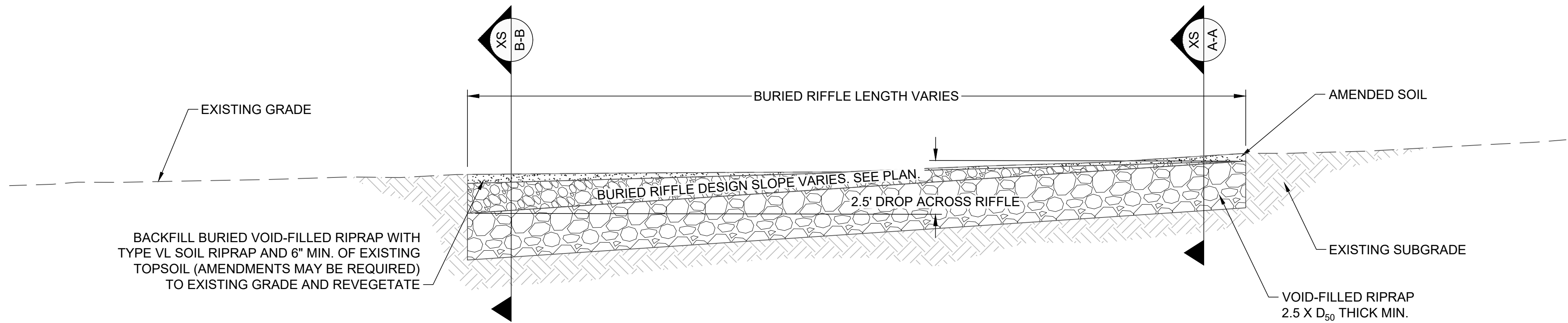
JOB NO.	231-021.000
SHEET	PP07
SHEET NO.	09



The addition of a landscape plan to this plan set is warranted. The plan should address tree mitigation, seed mix, and other site restoration requirements to conform to PROS' needs since the property will be dedicated to the city for ownership and maintenance.

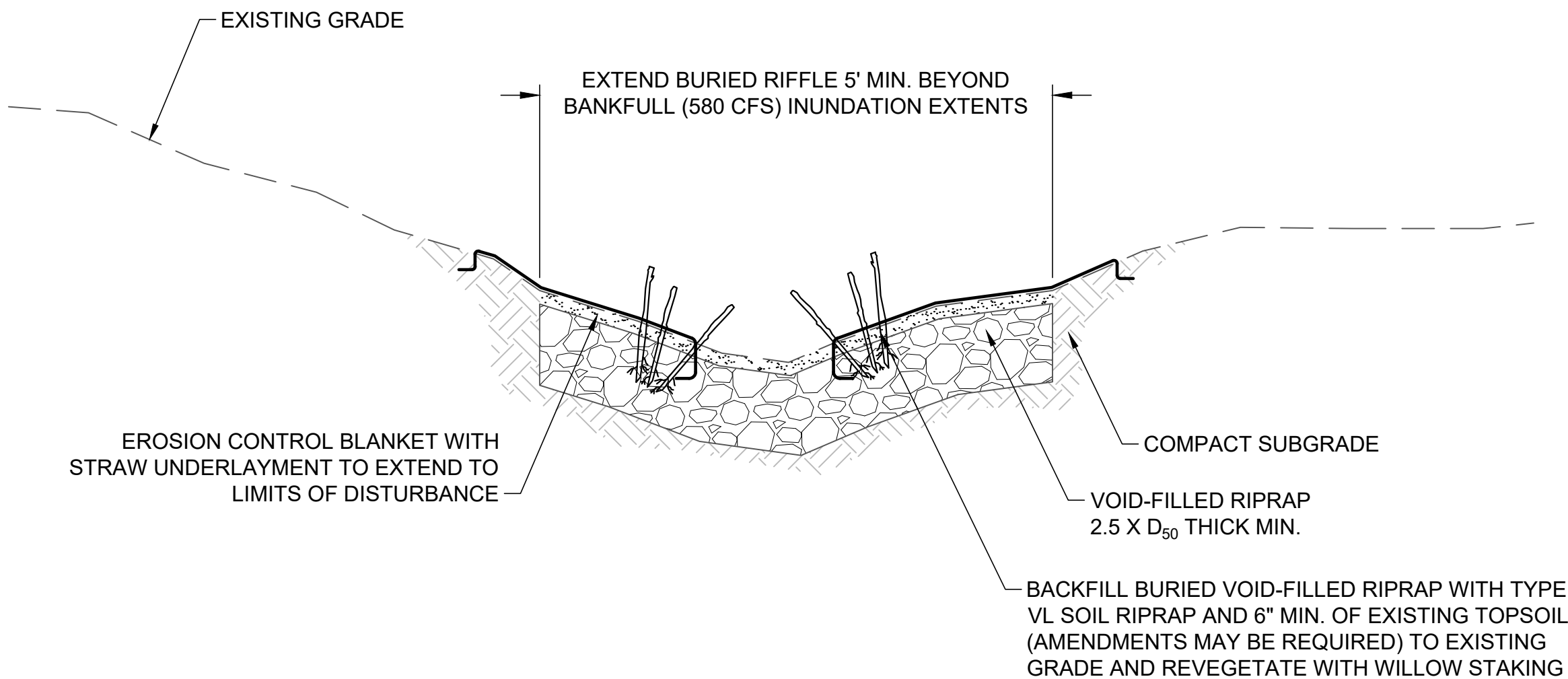
Disturbed areas should be re-vegetated with a PROS approved seed mix specified in the plan. Other PROS approved plant material should also be presented in a plant schedule for restoration purposes.

RESPONSE: A TREE MITIGATION PLAN WITH A TREE INVENTORY AND RE-VEGETATION PLAN HAVE BEEN ADDED TO THE ISP SHEETS

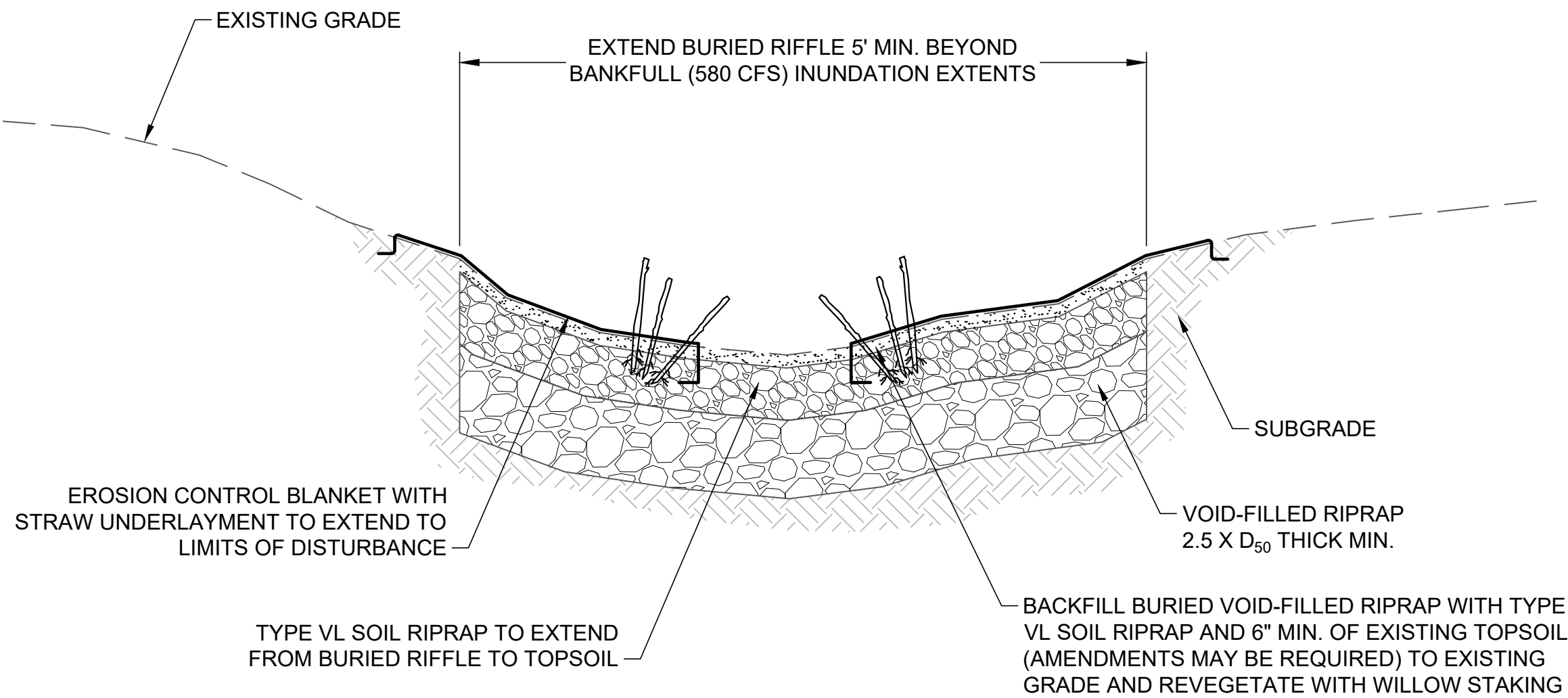


1  
DT1  
BURIED RIFFLE PROFILE  
N.T.S.

- NOTES:
1. EXISTING GRADE AND VEGETATION SHOULD BE RESTORED AFTER PLACEMENT OF BURIED RIFFLE STRUCTURES.
  2. BURIED RIFFLE STRUCTURES ARE INTENDED TO PROVIDE ADDITIONAL STRUCTURE TO THE CHANNEL TO HELP MITIGATE POTENTIAL FUTURE EROSION FROM MOVING UPSTREAM THROUGH THE CHANNEL CORRIDOR.
  3. VOID-FILLED RIPRAP RIFFLE STRUCTURES FOR THE BURIED RIFFLE STRUCTURES SHALL BE PLACED AT A MAXIMUM SLOPE OF 5% UNLESS OTHERWISE SPECIFIED.
  4. VOID-FILLED RIPRAP SHALL BE BURIED A MINIMUM OF 6" WITH AMENDED SOIL. AMENDED SOIL SHALL BE PLACED TO MATCH EXISTING GRADE.
  5. ALL DISTURBED AREAS SHALL BE REVEGETATED TO EXISTING CONDITIONS AND COVERED WITH A BIODEGRADABLE COIR EROSION CONTROL BLANKET WITH STRAW UNDERLAYMENT.
  6. AT THE DIRECTION OF THE ENGINEER, EXISTING TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FOR FILL ABOVE THE BURIED RIPRAP. SOIL AMENDMENTS MAY BE REQUIRED PENDING RESULTS OF SOIL TESTING.
  7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE THE VOID-FILLED RIPRAP HAS BEEN PLACED FOR INSPECTION. PLACEMENT OF AMENDED SOIL ATOP THE BURIED RIFFLE STRUCTURE PRIOR TO INSPECTION COULD RESULT IN STRUCTURE REPLACEMENT.
  8. THE MILE HIGH FLOOD DISTRICT'S STANDARDS AND SPECIFICATIONS FOR RIPRAP, TOPSOIL, REVEGETATION, AND EROSION CONTROL BLANKET SHALL BE ADHERED TO.



A-A  
DT1  
BURIED RIFFLE SECTION  
N.T.S.



B-B  
DT1  
BURIED RIFFLE SECTION  
N.T.S.

CALL COLORADO  
811  
OR CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 3-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

DRAFT  
WORK IN PROGRESS



WRIGHT WATER ENGINEERS, INC.  
2490 W. 26TH AVE. SUITE 100A  
DENVER, CO 80211  
(303) 480-1700 FAX: (303) 480-1020

NO.	BY	DATE	DESCRIPTION	COMMENTS
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DRAFT  
NOT FOR  
CONSTRUCTION

		DATE
DESIGN	DTL	06/16/2024
DETAIL	MYG	05/16/2024
CHECK	SDS	05/16/2024
SCALE		N.T.S.

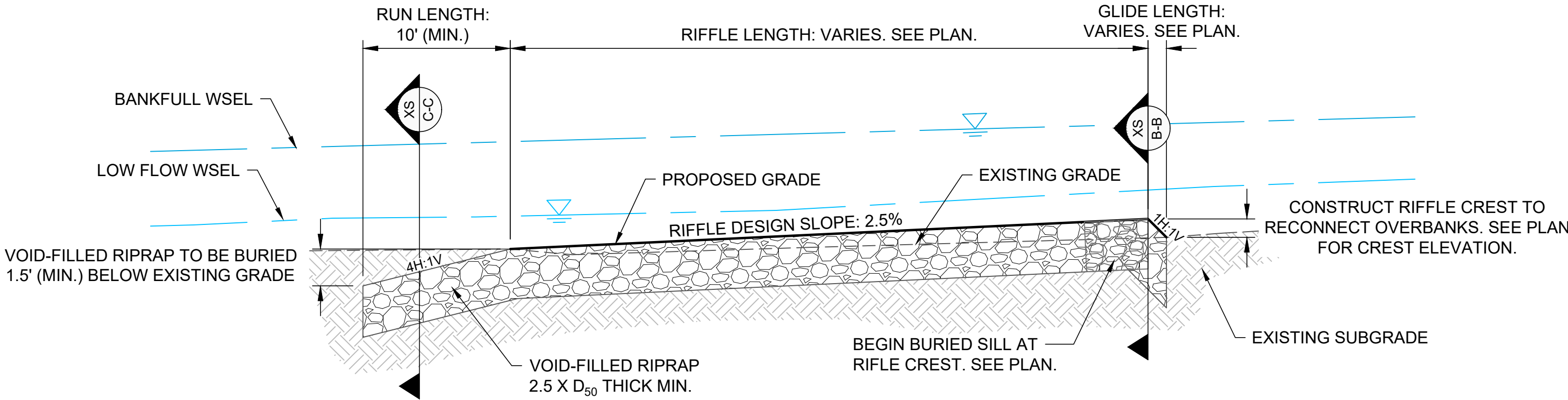
PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

TYPICAL BURIED RIFFLE

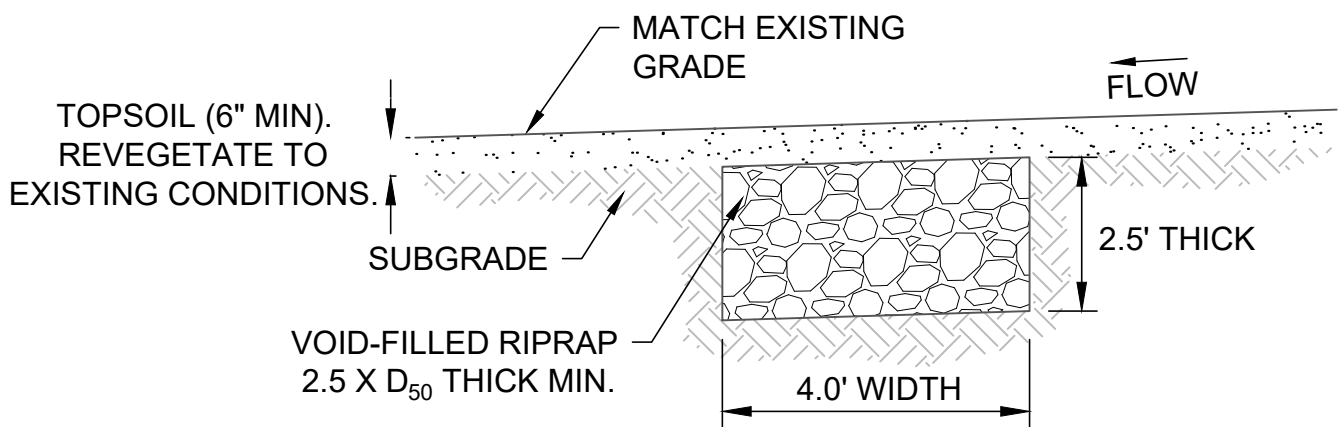
JOB NO.	231-021.000
SHEET	DT01
SHEET NO.	10



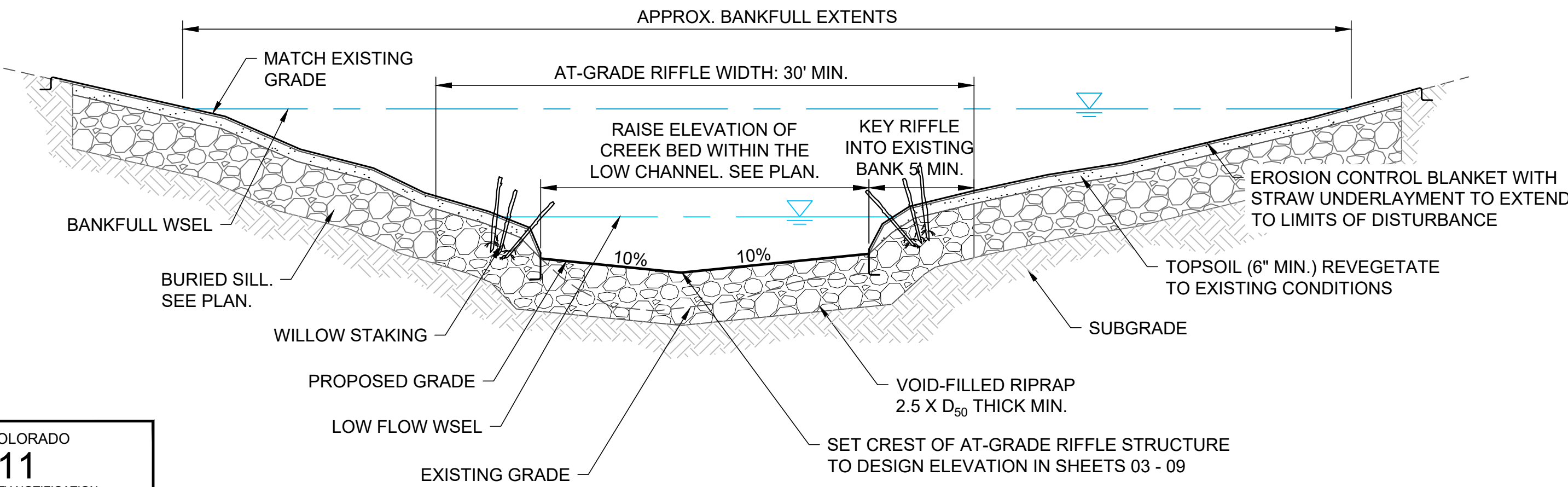
- NOTES:
- EXISTING GRADE AND VEGETATION SHOULD BE RESTORED AFTER PLACEMENT OF AT-GRADE RIFFLE STRUCTURES.
  - AT-GRADE RIFFLE STRUCTURES ARE INTENDED TO RECONNECT THE OVERBANKS OF COAL CREEK WITH THE MAIN CHANNEL IN LOCATIONS WHERE THE CREEK IS EVIDENTLY ENTRENCHED IN ITS EXISTING CONDITION. TO REDUCE THE DISTURBANCE TO THE EXISTING CORRIDOR, RECONNECTION OF THE CREEK BANKS IS ACHIEVED THROUGH THE PLACEMENT OF VOID-FILLED RIPRAP WITHIN THE LOW FLOW CHANNEL, RATHER THAN OVERBANK GRADING.
  - AT-GRADE VOID-FILLED RIPRAP RIFFLE STRUCTURES SHALL BE PLACED AT A SLOPE OF 2.5% UNLESS OTHERWISE SPECIFIED.
  - WHERE THE AT-GRADE VOID-FILLED RIPRAP IS KEYED INTO THE EXISTING BANKS, THE IMPORTED MATERIAL SHALL BE BURIED A MINIMUM OF 6" WITH AMENDED SOIL. AMENDED SOIL SHALL BE PLACED TO MATCH EXISTING GRADE.
  - ALL DISTURBED OVERBANK AREAS SHALL BE REVEGETATED TO EXISTING CONDITIONS AND COVERED WITH A BIODEGRADABLE COIR EROSION CONTROL BLANKET WITH STRAW UNDERLAYMENT.
  - AT THE DIRECTION OF THE ENGINEER, EXISTING TOPSOIL SHALL BE STRIPPED AND STOCKPILED SEPARATELY FOR FILL ABOVE THE BURIED RIPRAP.
  - THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE THE VOID-FILLED RIPRAP HAS BEEN PLACED FOR INSPECTION. PLACEMENT OF AMENDED SOIL ATOP THE BURIED RIFFLE STRUCTURE PRIOR TO INSPECTION COULD RESULT IN STRUCTURE REPLACEMENT.
  - THE MILE HIGH FLOOD DISTRICT'S STANDARDS AND SPECIFICATIONS FOR RIPRAP, TOPSOIL, REVEGETATION, AND EROSION CONTROL BLANKET SHALL BE ADHERED TO.



1 AT-GRADE RIFFLE STRUCTURE PROFILE  
DT2 N.T.S.

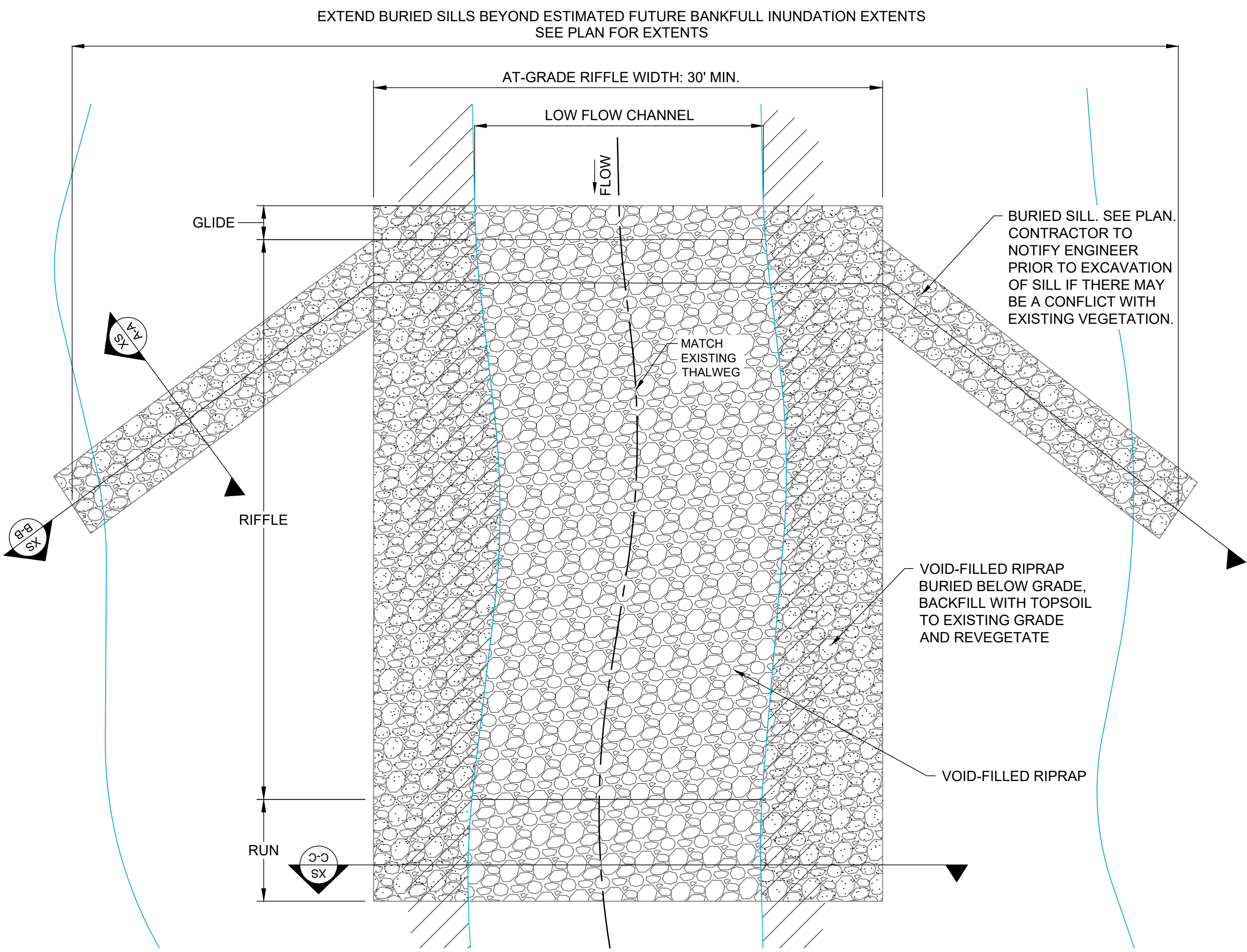


A-A BURIED SILL STRUCTURE PROFILE  
DT2 N.T.S.

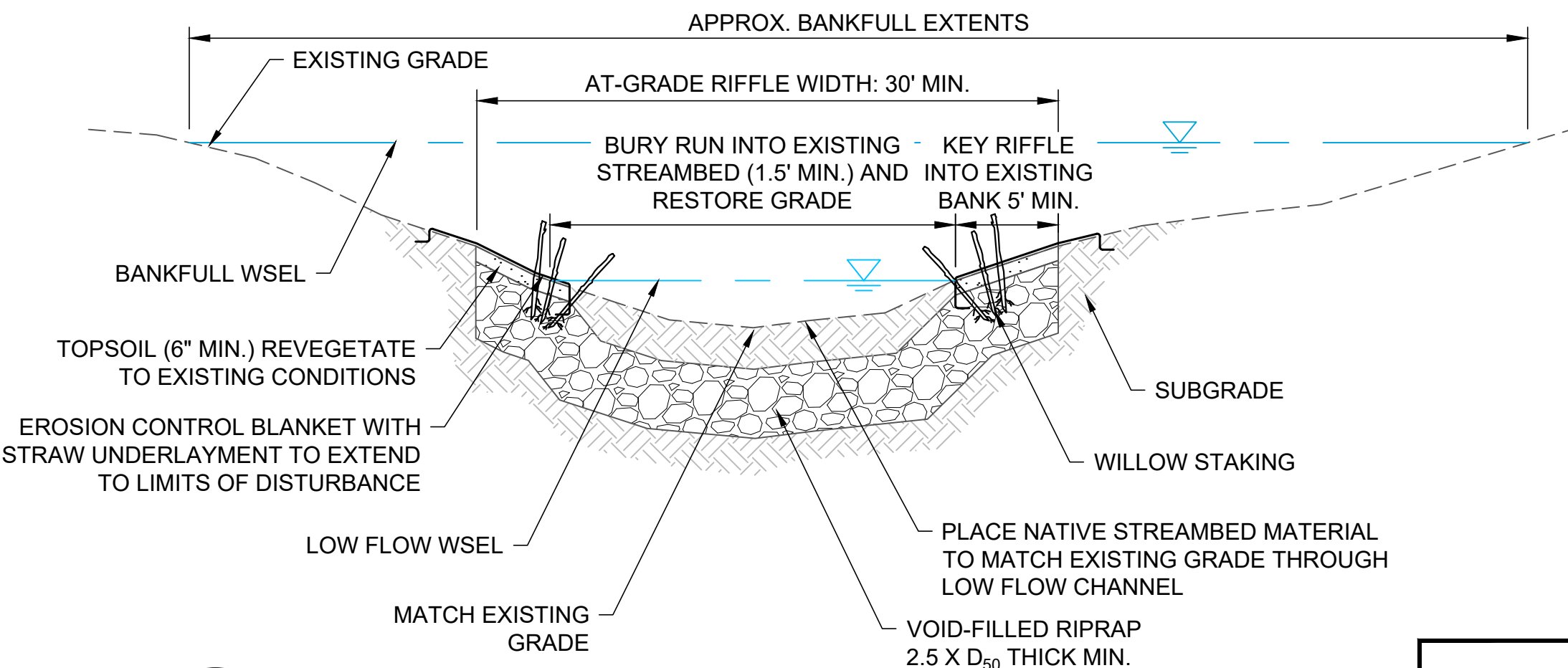


B-B AT-GRADE RIFFLE STRUCTURE RIFFLE SECTION  
DT2 N.T.S.

CALL COLORADO  
811  
OR CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 1-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES



2 AT-GRADE RIFFLE STRUCTURE PLAN  
DT2 N.T.S.



C-C AT-GRADE RIFFLE STRUCTURE RUN SECTION  
DT2 N.T.S.

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WRIGHT WATER ENGINEERS, INC.  
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SCALE		N.T.S.

PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

TYPICAL AT-GRADE RIFFLE STRUCTURE

JOB NO.	231-021.000
SHEET	DT02
SHEET NO.	11



RIPRAP GRADATION TABLE				
SOIL RIPRAP SEE PLAN	Riprap Designation	% Smaller Than Given Size By Weight	Intermediate Rock Dimension (inches)	d <sub>50</sub> * (inches)
	Type VL	70 - 100	12	6**
		50 - 70	9	
		35 - 50	6	
		2 - 10	2	
VOID-FILLED RIPRAP SEE PLAN	Type L	70 - 100	15	9**
		50 - 70	12	
		35 - 50	9	
		2 - 10	3	
	Type M	70 - 100	21	12**
50 - 70		18		
35 - 50		12		
2 - 10		4		
Type H	70 - 100	30	18	
	50 - 70	24		
	35 - 50	18		
	2 - 10	6		
Type VH	70 - 100	41	24	
	50 - 70	33		
	35 - 50	24		
	2 - 10	9		
*d <sub>50</sub> = Mean Particle Size				
**Mix VL, L and M riprap with 35% topsoil (by volume) and bury it with 4 to 6 inches of topsoil, all vibration compacted, and revegetate.				

VOID-FILLED RIPRAP MIX TABLE		
Approximate Proportions (loader buckets)	Material Type	Material Description
6	Riprap	Type M or H
2	Void-fill material	7-inch minus crushed rock surge (100% passing 7-inch sieve, 80-100% passing 6-inch sieve, 35-50% passing 3-inch sieve, 10-20% passing 1.5-inch sieve)
1	Void-fill material	2 to 4-inch cobble (round washed river rock that is well-graded, 100% passing 6-inch sieve, 35-50% passing 3-inch sieve, 5-20% passing 2-inch sieve)
1	Void-fill material	4-inch minus pit run surge (round river rock and sand, well graded, 90-100% passing 4-inch sieve, 70-80% passing 1.5-inch sieve, 40-60% passing 3/8-inch sieve, 10-30% passing #16 sieve).
1	Void-fill material	Type II bedding
½ to 1	Void-fill material	Native topsoil
Top layer	Top dressing	Additional 4 to 12-inch cobbles (round washed river rock that is well graded, 80-100% passing 12-inch sieve, 35-50% passing 6-inch sieve, 5-20% passing 4-inch sieve) shall be mixed in on the surface of exposed sections of void-filled riprap (covering approximately 15% of the surface) prior to compaction of the void-filled riprap. Cobbles shall be fully embedded into the mass of the void-filled riprap.

Note: Mix proportions and material gradations are approximate and are subject to adjustment by the ENGINEER.

#### VOID-FILLED RIPRAP PLACEMENT AND GRADATION NOTES:

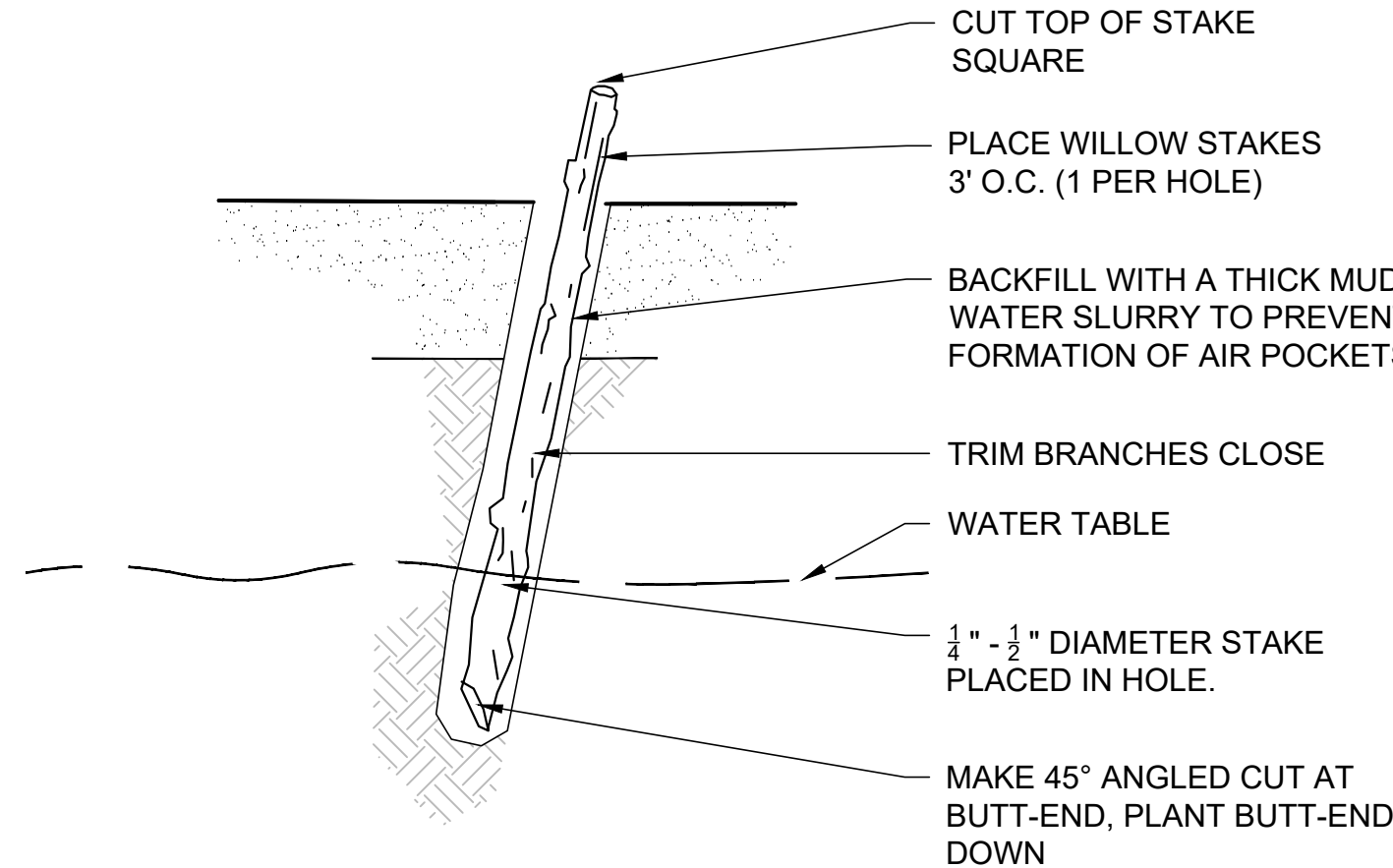
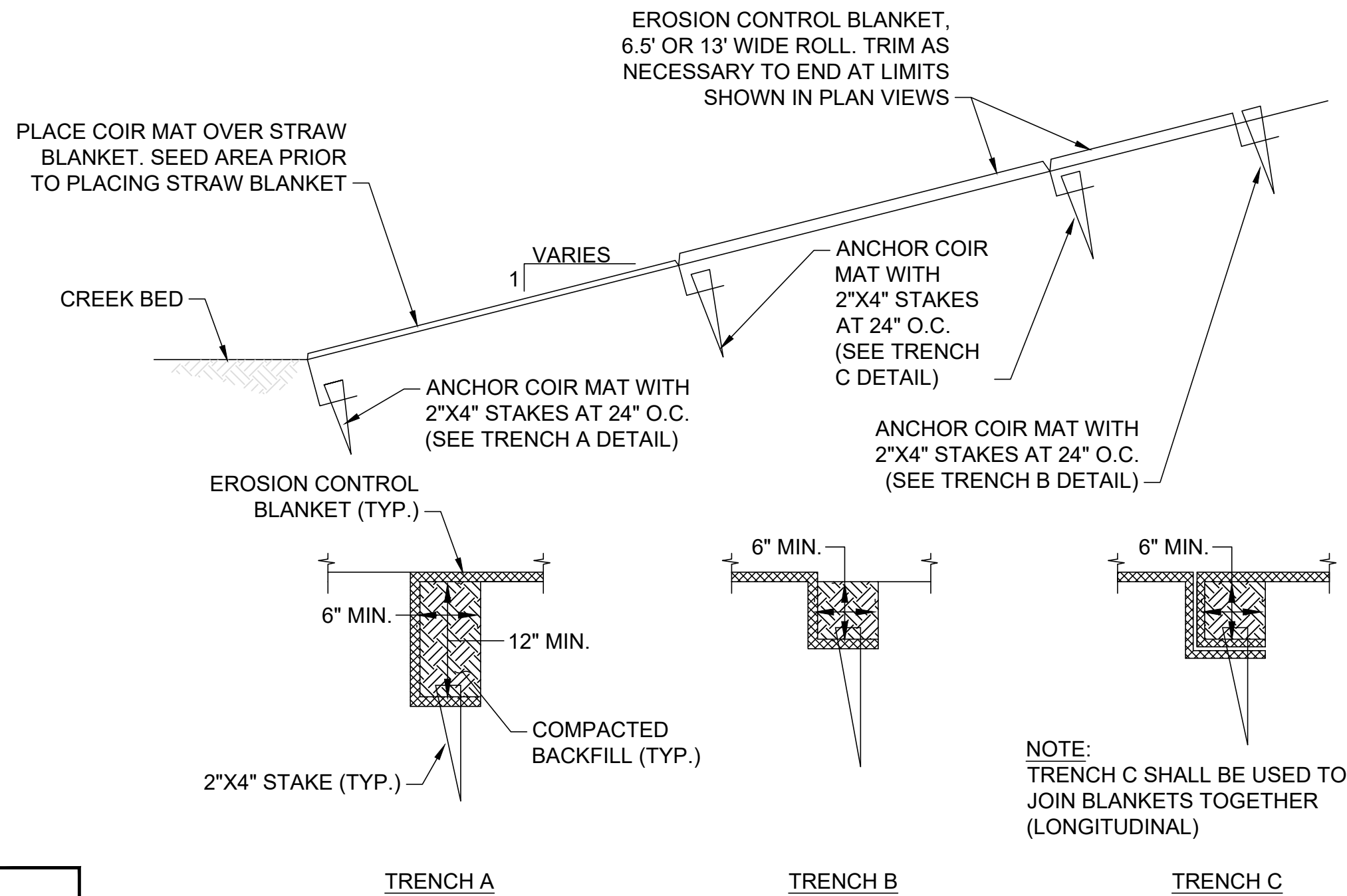
- WHERE "VOID-FILLED RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP SHALL BE MIXED WITH THE MATERIALS AND ASSOCIATED PROPORTIONS LISTED IN THE MIX TABLE TO FILL THE VOIDS OF THE RIPRAP. COBBLE TOP-DRESSING SHALL BE MIXED INTO THE VOID-FILLED RIPRAP THROUGH THE LOW FLOW CHANNEL AT A MINIMUM.
- THE MIX PROPORTIONS PROVIDED IN THE TABLE ARE APPROXIMATE AND ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER.
- THE RIPRAP AND VOID-FILLED MATERIALS SHALL BE STOCKPILED SEPERATELY AND THOROUGHLY MIXED PRIOR TO PLACEMENT AND SHALL BE INSTALLED AND COMPACTED SO THAT A DENSE, INTERLOCKED LAYER OF RIPRAP AND VOID-FILL MATERIAL IS PROVIDED WITH RIPRAP VOIDS COMPLETELY FILLED. THE LOOSE MATERIAL SHALL BE PLACED IN A SINGLE LIFT OF SUFFICIENT HEIGHT SUCH THAT FINAL GRADE WILL BE ACHIEVED UPON COMPACTION. IF THE COMPACTED MATERIAL IS BELOW FINAL GRADE, PLACEMENT OF ONLY THE SMALLER VOID-FILL MATERIALS TO ACHIEVE FINAL GRADE IS NOT PERMITTED. IN SUCH CASES IT IS NECESSARY TO ADD MORE STANDARD SIZED VOID-FILLED RIPRAP AND REMIX THE ENTIRE THICKNESS OF ROCK TO ACHIEVE THE DESIGN SECTION. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF THE VOID-FILL MATERIALS. THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT FILLING THE VOIDS.
- COMPACTION OF THE VOID-FILLED RIPRAP SHALL BE PERFORMED BY WHEEL ROLLING WITH HEAVY RUBBER-TIRED EQUIPMENT (E.G. FRONT END LOADER). THE MOISTURE CONTENT OF THE MIXTURE SHALL BE AT OPTIMUM CONDITIONS PRIOR TO COMPACTION AND WATER SHALL BE ADDED, AS NECESSARY, AT THE DIRECTION OF THE ENGINEER.
- WHERE INDICATED ON THE DRAWINGS, A SURFACE LAYER OF MOIST TOPSOIL SHALL BE PLACED OVER THE VOID-FILLED RIPRAP. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL VOID-FILLED RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

#### SOIL RIPRAP NOTES:

- ELEVATION TOLERANCES FOR THE SOIL RIPRAP SHALL BE 0.10 FEET. THICKNESS OF SOIL RIPRAP SHALL BE NO LESS THAN THICKNESS SHOWN AND NO MORE THAN 2-INCHES GREATER THAN THE THICKNESS SHOWN.
- WHERE "SOIL RIPRAP" IS DESIGNATED ON THE CONTRACT DRAWINGS, RIPRAP VOIDS ARE TO BE FILLED WITH NATIVE SOIL. THE RIPRAP SHALL BE PRE-MIXED WITH THE NATIVE SOIL AT THE FOLLOWING PROPORTIONS BY VOLUME: 65 PERCENT RIPRAP AND 35 PERCENT SOIL. THE SOIL USED FOR MIXING SHALL BE NATIVE TOPSOIL AND SHALL HAVE A MINIMUM FINES CONTENT OF 15 PERCENT. THE SOIL RIPRAP SHALL BE INSTALLED IN A MANNER THAT RESULTS IN A DENSE, INTERLOCKED LAYER OF RIPRAP WITH RIPRAP VOIDS FILLED COMPLETELY WITH SOIL. SEGREGATION OF MATERIALS SHALL BE AVOIDED AND IN NO CASE SHALL THE COMBINED MATERIAL CONSIST PRIMARILY OF SOIL; THE DENSITY AND INTERLOCKING NATURE OF RIPRAP IN THE MIXED MATERIAL SHALL ESSENTIALLY BE THE SAME AS IF THE RIPRAP WAS PLACED WITHOUT SOIL.
- WHERE SPECIFIED (TYPICALLY AS "BURIED SOIL RIPRAP"), A SURFACE LAYER OF TOPSOIL SHALL BE PLACED OVER THE SOIL RIPRAP ACCORDING TO THE THICKNESS SPECIFIED ON THE CONTRACT DRAWINGS. THE TOPSOIL SURFACE LAYER SHALL BE COMPACTED TO APPROXIMATELY 85% OF MAXIMUM DENSITY AND WITHIN TWO PERCENTAGE POINTS OF OPTIMUM MOISTURE IN ACCORDANCE WITH ASTM D698. TOPSOIL SHALL BE ADDED TO ANY AREAS THAT SETTLE.
- ALL SOIL RIPRAP THAT IS BURIED WITH TOPSOIL SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY TOPSOIL PLACEMENT.

## 1 RIPRAP PLACEMENT

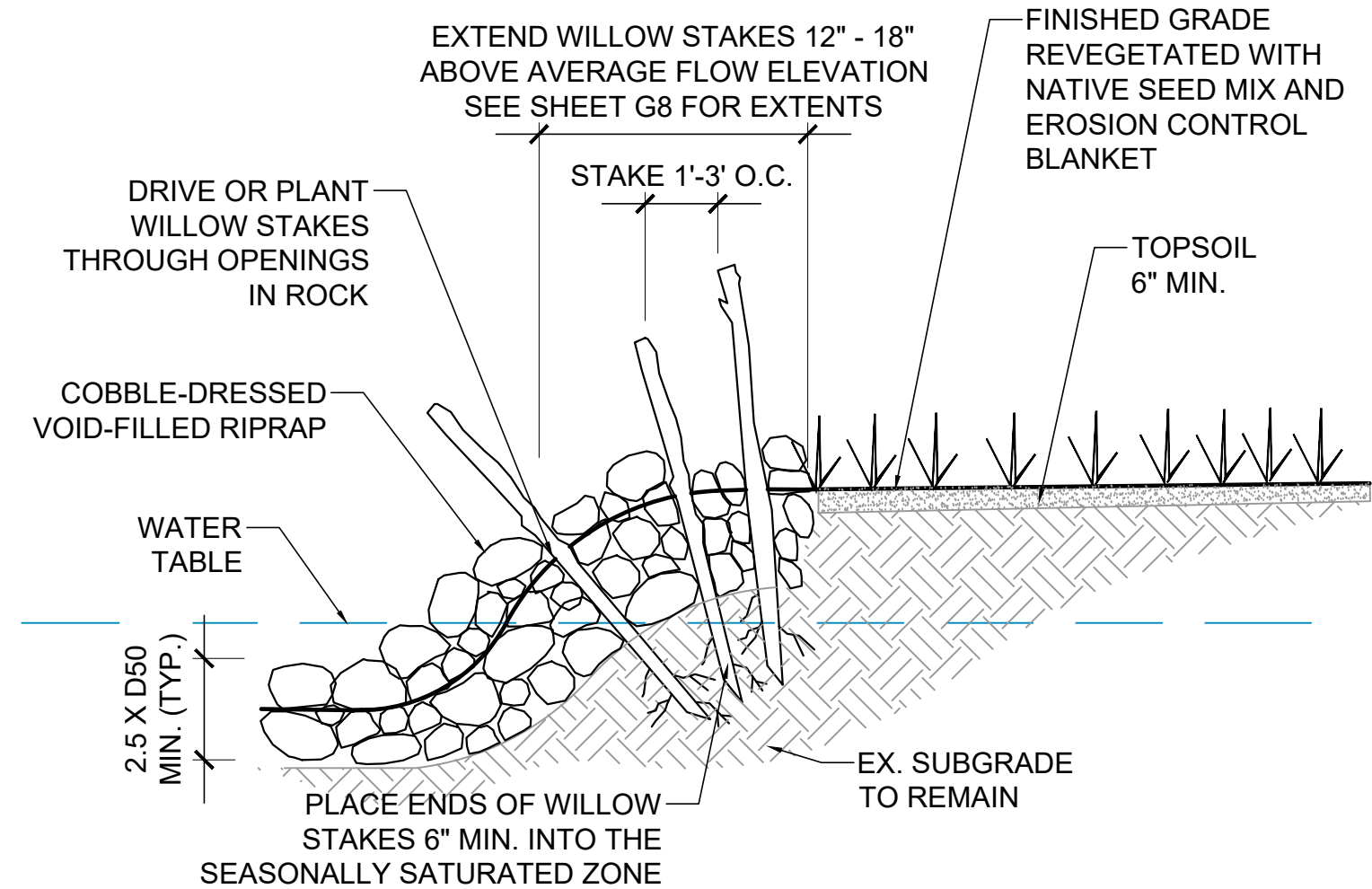
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TYPICAL STAKE DETAIL  
NTS

#### WILLOW NOTES:

- INTEGRATE STAKE PLANTING TECHNIQUES DURING ROCK PLACEMENT TO ENSURE CONTACT WITH NATIVE GROUND.
- PLACE SOIL FILL AROUND CUTTINGS AND "WATER IN"
- 2 STAKES PER LINEAR FOOT OF COBBLE TOE
- CONTRACTOR SHALL WATER IN INITIALLY DURING IMPLEMENTATION.



WILLOW PLANTING BANK PLACEMENT  
NTS

## 2 EROSION CONTROL BLANKET

N.T.S.

## 3 WILLOW PLANTING DETAIL

N.T.S.

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PARKLANDS COAL CREEK INFRASTRUCTURE PLAN

TYPICAL DETAILS

JOB NO.	231-021.000
SHEET	DT03
SHEET NO.	12