Milltown Reservoir/Clark Fork River NPL Site

Clark Fork River, Reach A,
Phases 5 and 6 Remedial Action Project

Montana Department of Environmental Quality

MONTANA
MINE WASTE CLEANUP BUREAU

TerraGraphics Environmental Engineering, Inc.

TETRA TECH

Geum Environmental Consulting, Inc.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AGENDA

Introductions

BP – ARCO Safety Briefing

MDT – Public Road Haul

Presentation

Mandatory Site Tour

Optional Opportunity Ponds Tour

Optional Beck Borrow Area Tour

Project Overview

CFROU, Superfund Site - Contaminated by heavy metals and arsenic

Owner, DEQ – Responsible for Implementing Remedy

NRDP – Responsible for Implementing Restoration

Phases 5 and 6 – From Galen Road to Gemback Road, along 4.5 miles of river and 130 acres of floodplain

Phase 5 and 6 Borrow Area – On-site vegetative and alluvial borrow sources

Opportunity Ponds – Waste disposal Area

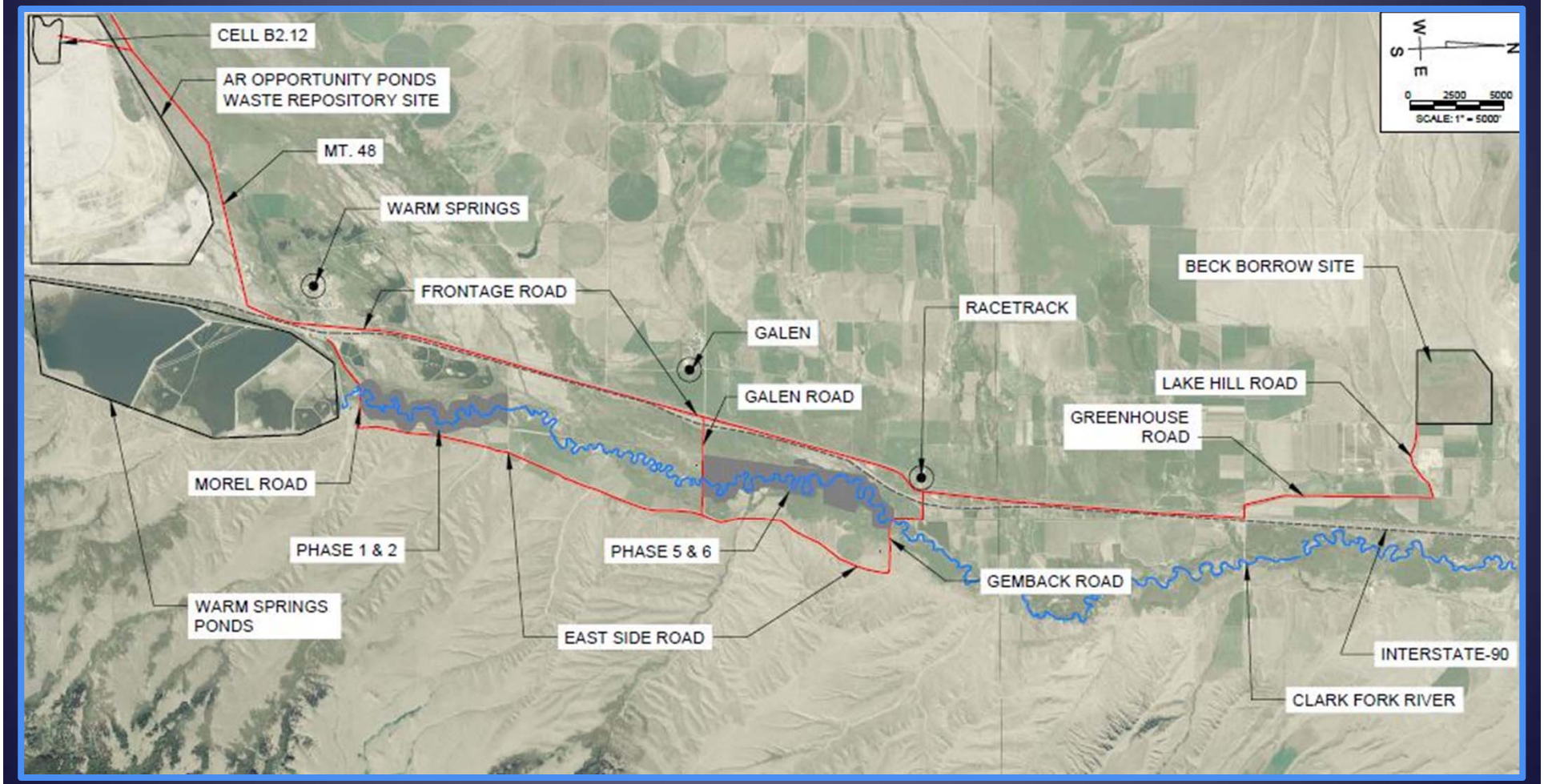
Beck Borrow – State-owned vegetative borrow source (Add Alt. 1)

Additional Alluvium – If required (Add Alt. 2)

Bull Trout – Work window and discovery of bull trout or redds

Undocumented and Undiscovered Properties – Stop construction

Project Location



Project Engineers

TerraGraphics – Remediation Engineer

Remediation – Bid Items, 1-33, Sheets 1 to 65

- Tailings removal, floodplain and streambank reconstruction, Phases 5 and 6 borrow areas, and all associated work

Tetra Tech – Restoration Engineer

Restoration – Bid Items 34 to 46, Sheets 66 to 76

- Galen Spring Creek Ditch Plugs, Modesty Creek Reconnection, and all associated work

Project Revegetation

Geum Environmental – Revegetation Consultant

Revegetation – by separate contact to start Fall 2015, except as follows:

- Contractor to plant live willow cuttings in streambanks from October 15th to July 15th
- Cuttings to be delivered to site by Revegetation Consultant
- Contractor must care for cuttings – See Section III, Paragraph 9.G.
- On-site sod harvest and placement

Health and Safety

Safety is of paramount concern to Owner

***and* to**

Atlantic Richfield, BNSF Railroads, County and State Roadway Departments, Other Site Contractors, Landowners, and the General Public

- Contractor is responsible for ensuring and enforcing safe working conditions and compliance with all safety-related rules and regulations for the benefit of its own employees, the employees of its subcontractor, and the public.

- Safety is of paramount concern to Owner within the terms of Contractor's approved Health and Safety Plan, federal and state health and safety statutes and regulations, AR's safety protocols at Opportunity Ponds, and the safety-related requirements of the Contract Documents.

- Failure to comply with any and all safety requirements is cause for immediate Work stoppage and/or grounds for termination of the Contract.

Special Contractor Qualifications

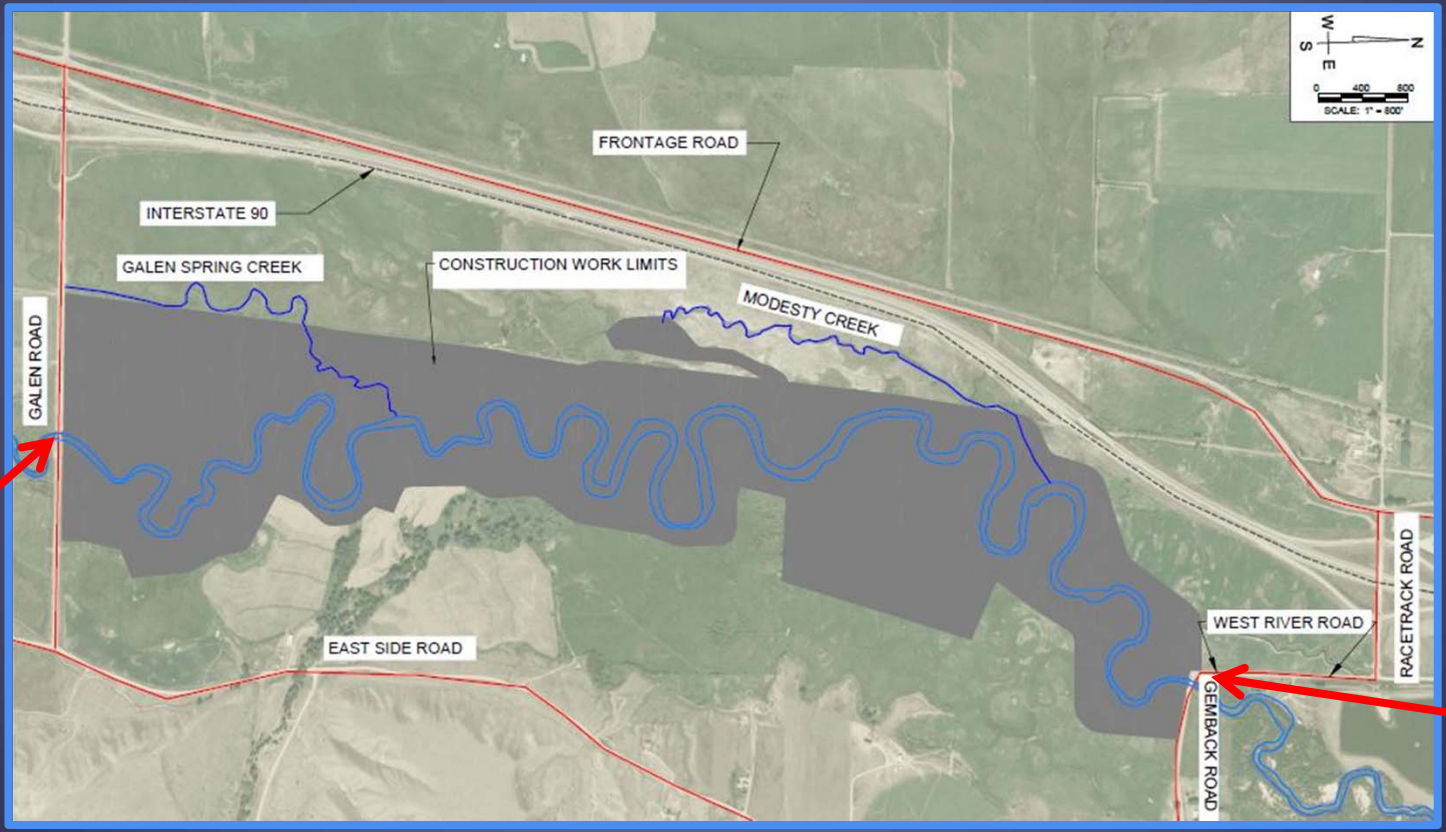
- At least 5 years experience working on river restoration projects.
- Completed 5 projects of similar size using similar design concepts, structures, and materials.
- At least one equipment operator tasked to construct streambank structures has completed two river restoration training classes.
- At least one excavator and one bulldozer configured to operate with GPS and digital terrain models.

Project Inspection

Bidders are encouraged to walk the site on their own

- The site is open to the public through the gates at Galen and Gemback Road.

Public Site Access from Galen Road



Public Site Access from Gemback Road

Bidders are also encouraged to look at the Phase 1 Project

- Public access is restricted. Please only view the site from the road and parking area on Morel Road.

Sequence of Work

Contract time is 400 Calendar Days

- Weekly Coordination Meetings with DEQ, NRD, Reveg Contractor, and Engineers.

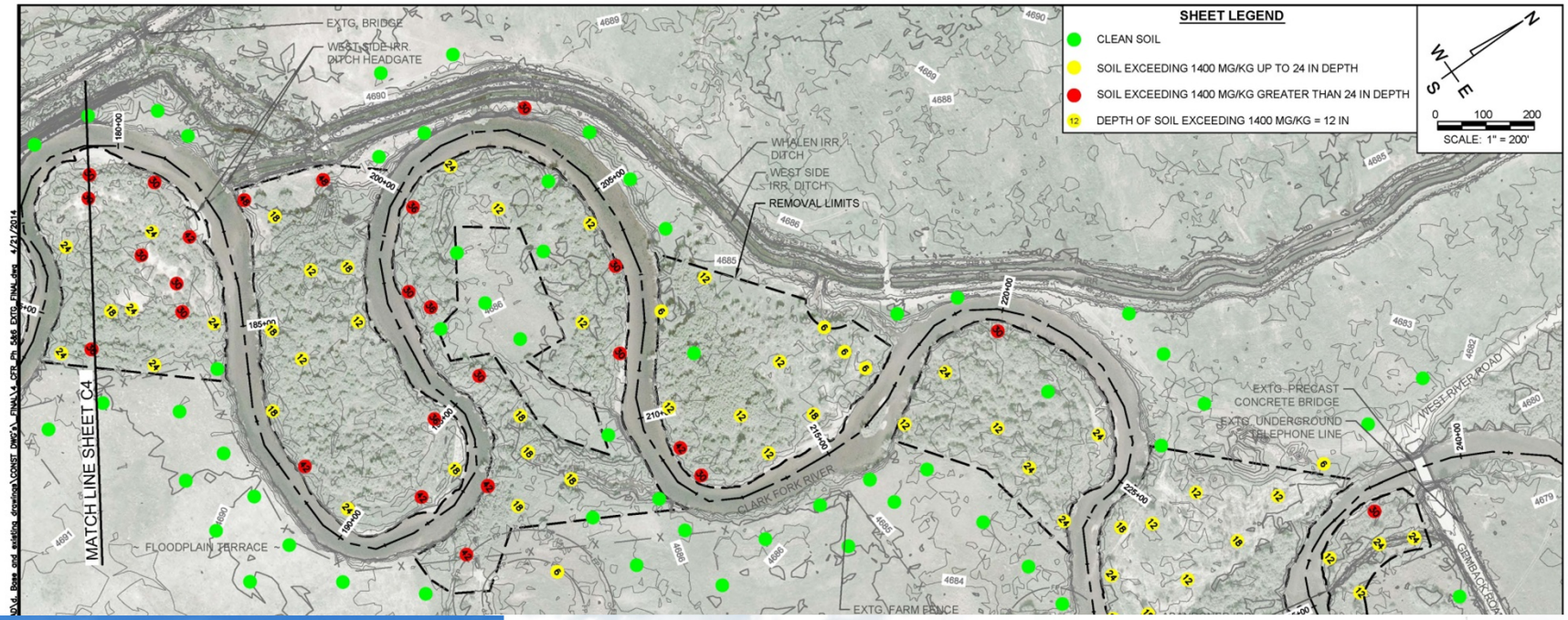
RWZ – Remedial Work Zone

- No more that one RMZ being excavated at any one time.
- Verification sampling by Engineer with immediate turnaround
- Completely backfill each RMZ to subgrade prior to beginning excavation in another RWZ.
- No more than three RMZ at subgrade at any one time before backfilling to finished grade

Streambank work requiring willow planting can only occur from October 15th to July 15th.

Irrigation ditch work can only occur from November 2nd to March 31st.

Existing Conditions

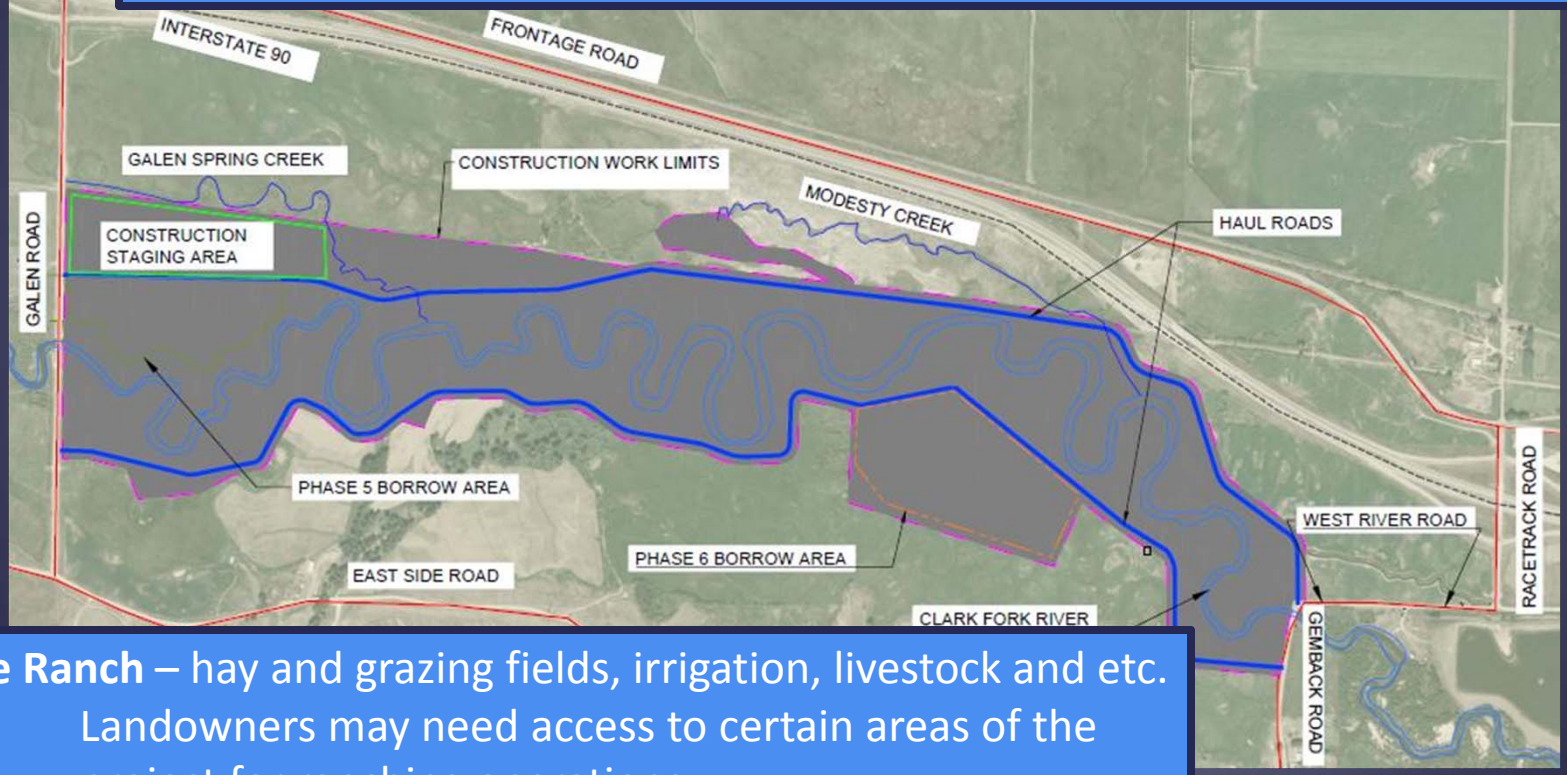


Construction Work Limits

No Disturbance outside the Construction Work Limits

- Any disturbance outside of these limits shall be reclaimed to pre-disturbed conditions and landowner shall be compensated by Contractor for damages occurring as a result of the disturbance.

No Work inside vegetation preservation area



Active Ranch – hay and grazing fields, irrigation, livestock and etc.

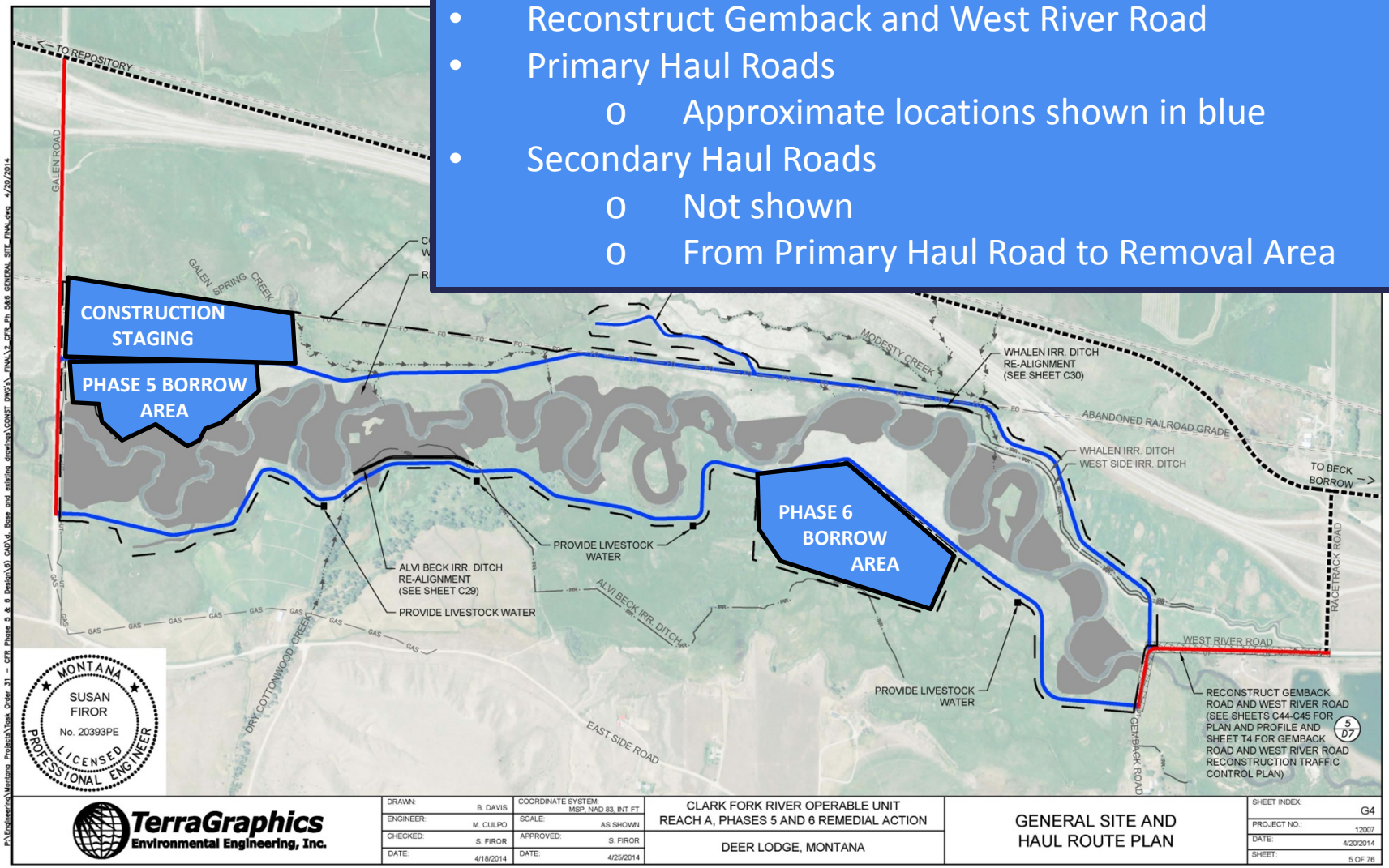
- Landowners may need access to certain areas of the project for ranching operations.

Project Area and River are closed to the public

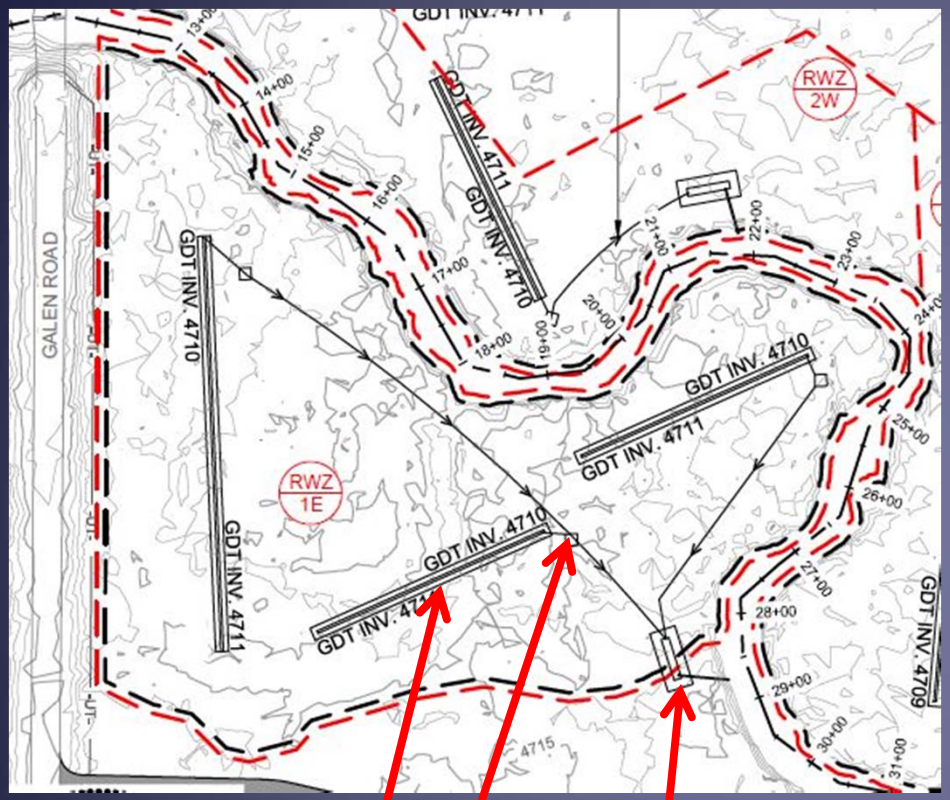
8ft Riparian Fencing constructed in stages as requested to prevent public, livestock and wildlife access.

General Site and Haul Route

- Reconstruct Gemback and West River Road
- Primary Haul Roads
  - Approximate locations shown in blue
- Secondary Haul Roads
  - Not shown
  - From Primary Haul Road to Removal Area



Dewatering



Dewatering Trench

Pump

Sediment Pond with Discharge to CFR

Tailings/Contaminated Soil must be dewatered.

Dewatering Discharges must go through trenches, pumps, and ponds prior to discharge.

Dewatering must commence 10 days prior to excavation and continue until backfilled to subgrade.

36 inches of Tailings/Contaminated Soil

Erosion and Sediment Control

Contractor shall prepare and submit to Engineer a Site Specific Erosion Control plan.

Minimum required BMPs are shown on C6 to C9 and consist of:

- Temporary Culverts
- Two Temporary Bridges
- Erosion Control Ditches
- Check Dams
- Straw Waddles

Tailings/Impacted Soil Excavation

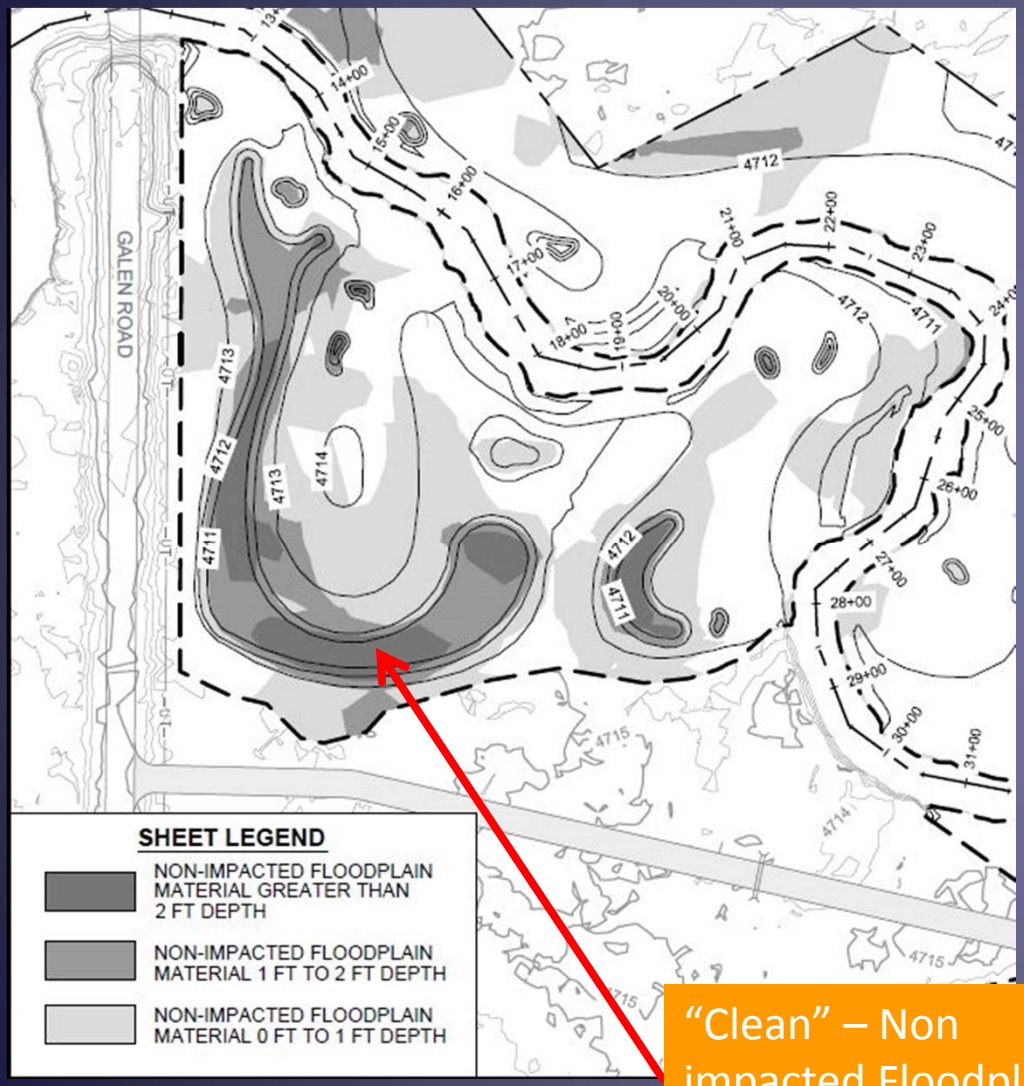
Slickens-Depth of Contamination 36 in.

Depth of Contamination 36 in.

XRF Verification by Engineer with immediate response

Additional excavation in 6-inch increments

Subgrade Grading



"Clean" – Non impacted Floodplain Alluvium

Floodplain Alluvium

- Natural deposit of mixed cobbles and gravel with some sand

Excavate, Load, Haul and Place Non-impacted Floodplain Alluvium

- Local regrading of "clean" floodplain material

Excavate, Load, Haul and Place Floodplain Alluvium

- Excavated from Phase 5 or Phase 6 Borrow Areas

Final Grading

Vegetative Backfill

- A natural surficial deposit of mixed silt, sand, and clay

Load, Haul and Place Vegetative Backfill to Finished Grade

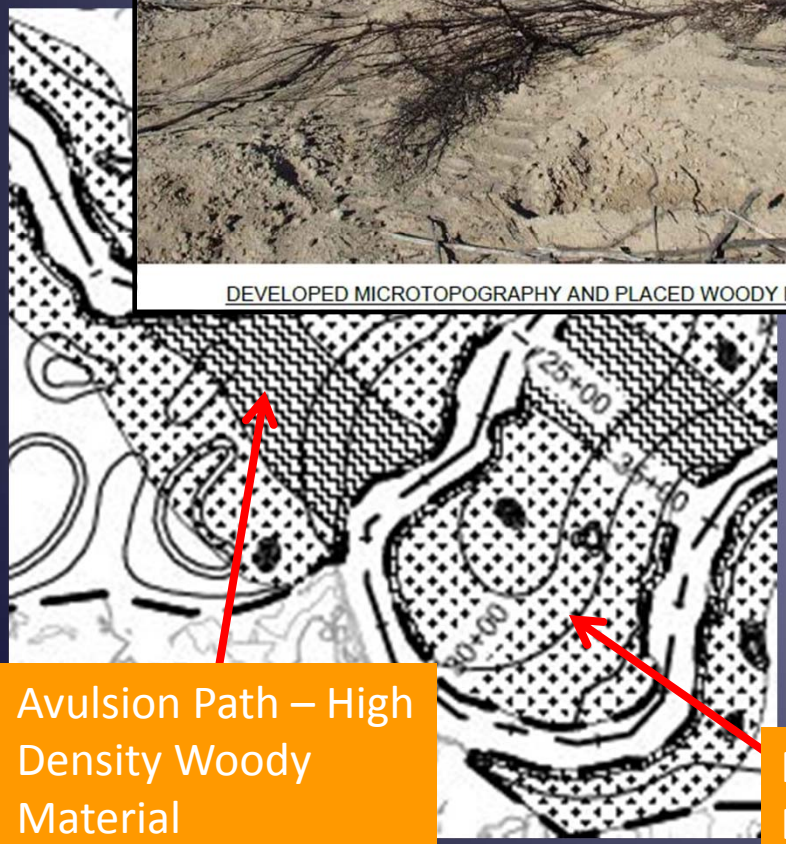
- Mostly 6-inch depth
- 1-foot depth in Wetland Areas

Some areas consist of Floodplain Alluvium to Finished Grade as part of Subgrade Grading

- Point Bars
- 10-feet width along all Streambank Treatments

Microtopography

DEVELOPED MICROTOPOGRAPHY AND PLACED WOODY MATERIAL



Avulsion Path – High Density Woody Material

Floodplain – Low Density Woody Material

After finished grade:

- Compost amendment and seedbed preparation
- Ridges and furrows
- Woody material placed

High Density woody material

- Along streambanks and in avulsion paths

Low Density woody material

- All other areas as shown on C36 and C37

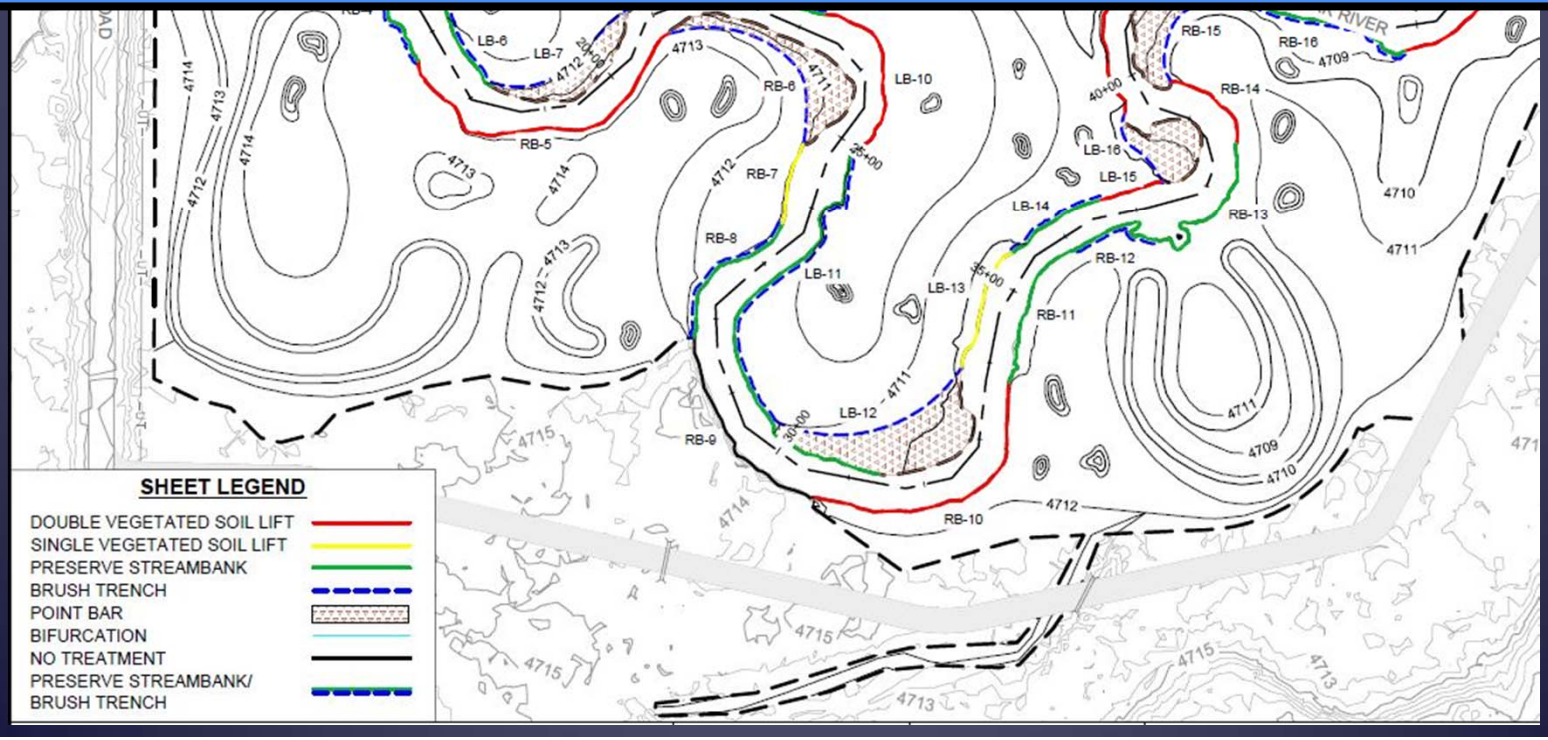
Streambank Treatments

DVSL, SVSL, Point Bar, Preserve Streambank, Brush Trench, Bifurcation, No Treatment per C31 to C34.

Streambank (Rock) Toe, Trim Woody Vegetation, Gap/Transition where requested.

DVSL, SVSL and Brush Trench Streambank Treatments require dormant willow cuttings.

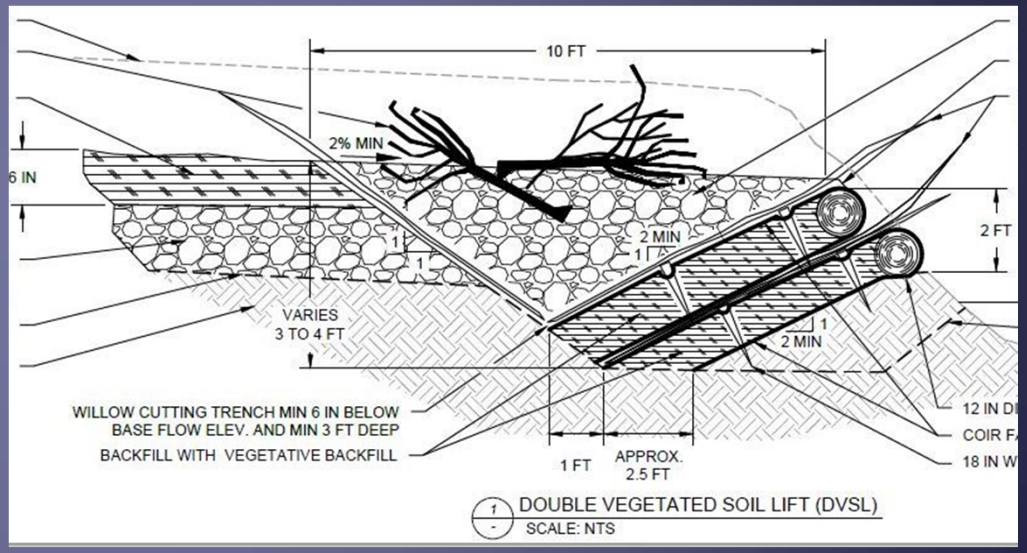
- Dormant willow cuttings are provided by Owner.
- Dormant willow cuttings available from October 15 to July 15.
- Contractor is responsible for meeting all on-site storage requirements.
- Dormant willows cuttings must be installed 3 to 7 days from delivery.



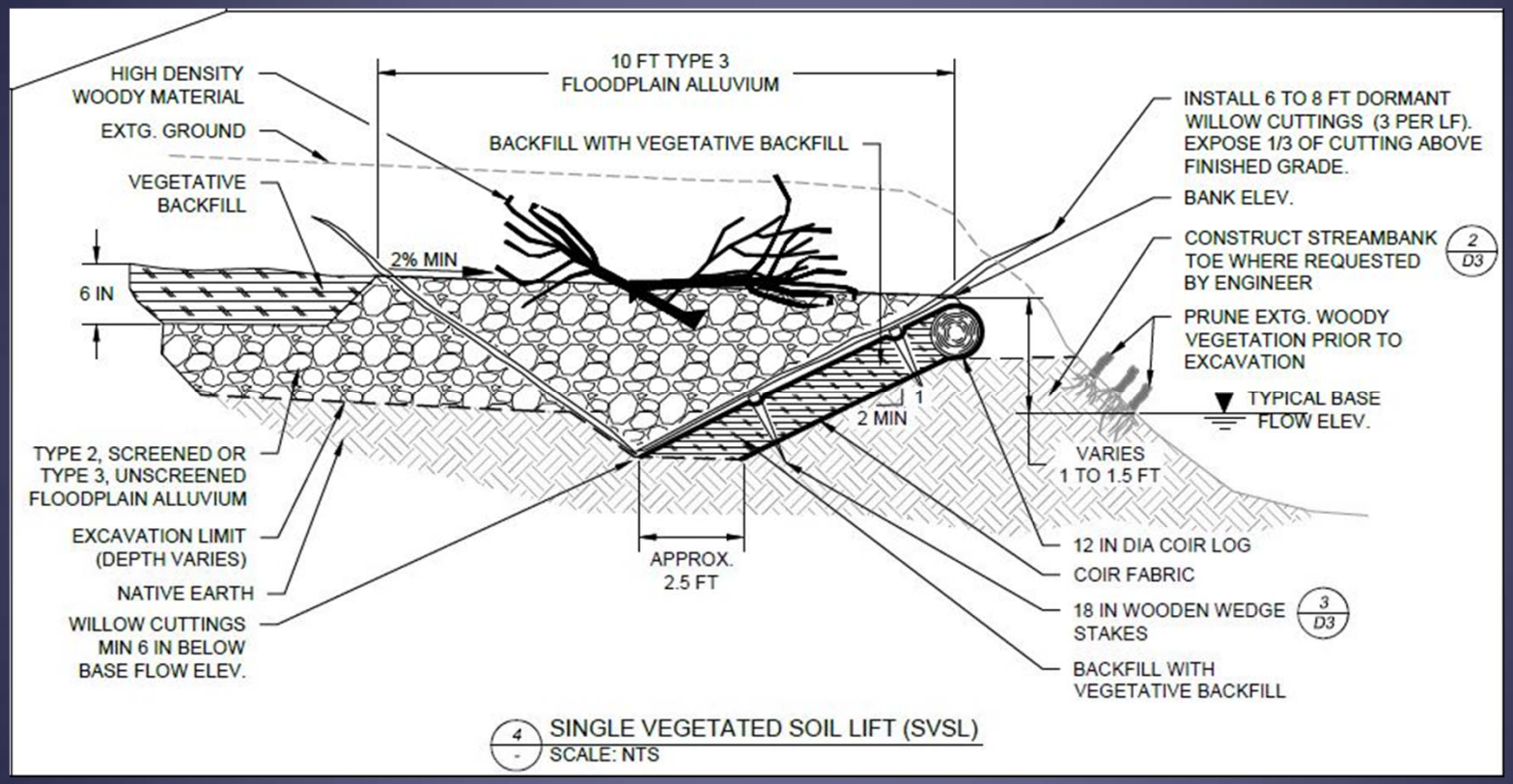
DVSL - Double Vegetated Soil Lift

Existing Streambank to be Reconstructed as a DVSL

Constructed DVSL

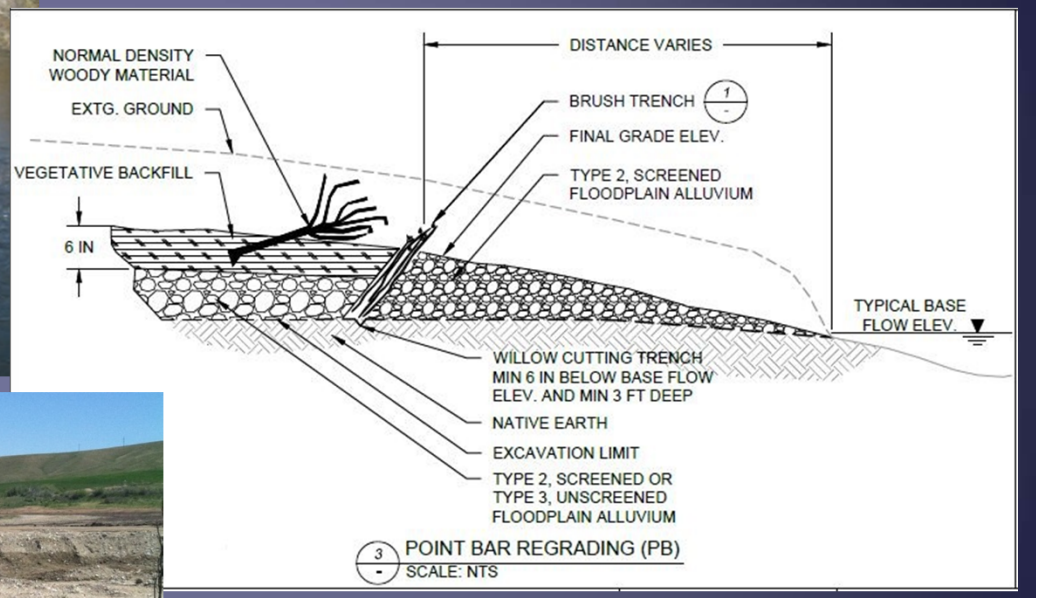


SVSL – Single Vegetated Soil Lift



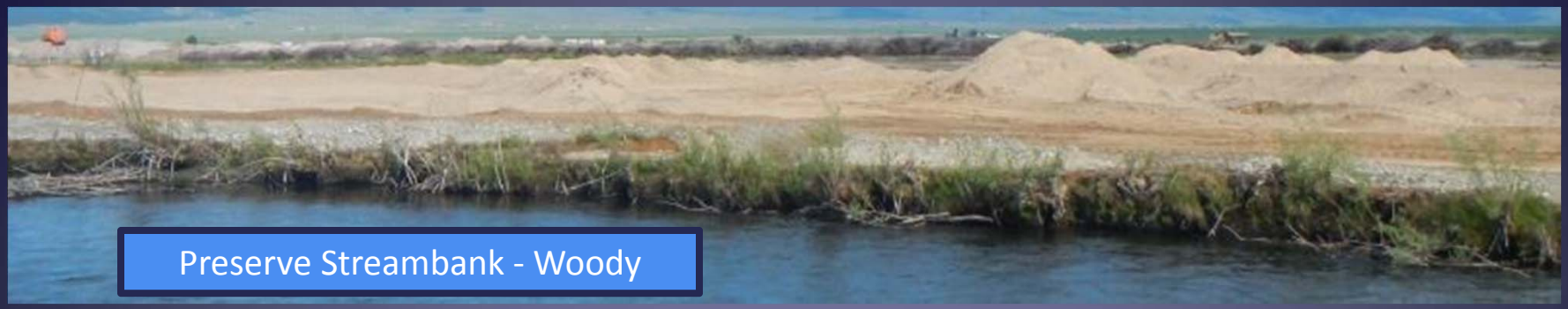
Point Bar

Existing Point Bar

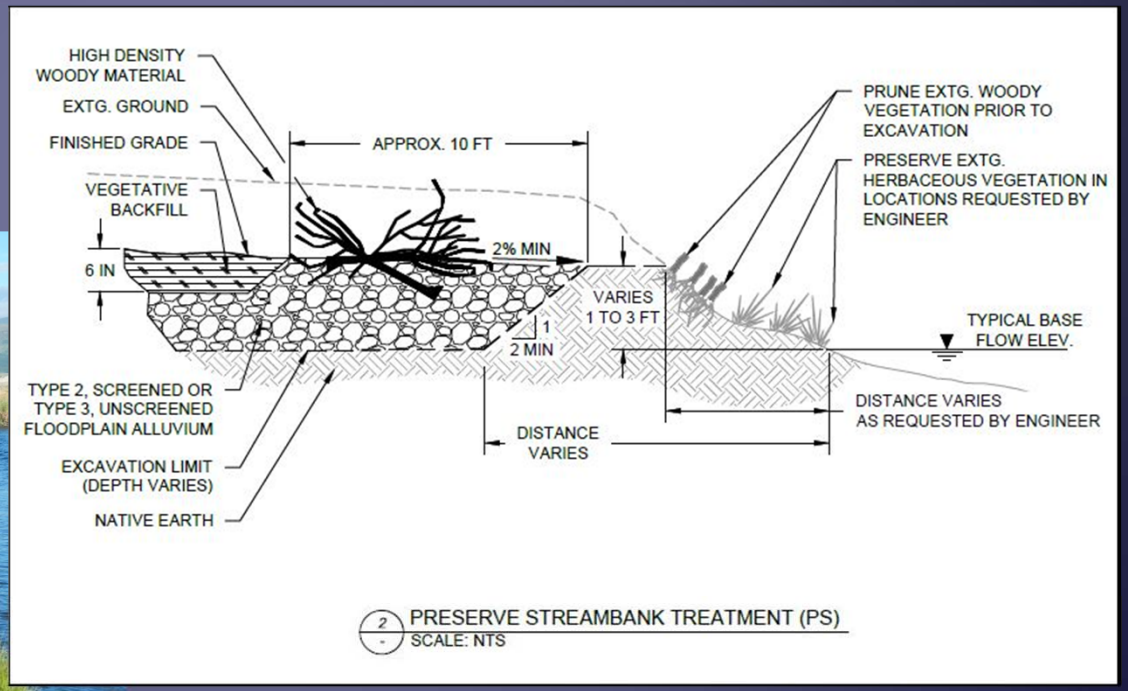

DISTANCE VARIES
NORMAL DENSITY WOODY MATERIAL
EXTG. GROUND
VEGETATIVE BACKFILL
6 IN
BRUSH TRENCH 1
FINAL GRADE ELEV.
TYPE 2, SCREENED FLOODPLAIN ALLUVIUM
TYPICAL BASE FLOW ELEV.
WILLOW CUTTING TRENCH MIN 6 IN BELOW BASE FLOW ELEV. AND MIN 3 FT DEEP
NATIVE EARTH
EXCAVATION LIMIT
TYPE 2, SCREENED OR TYPE 3, UNSCREENED FLOODPLAIN ALLUVIUM
3
POINT BAR REGRADING (PB)
SCALE: NTS

Constructed Point Bar

Preserve Streambank - Woody and Herbaceous Vegetation



Preserve Streambank - Woody

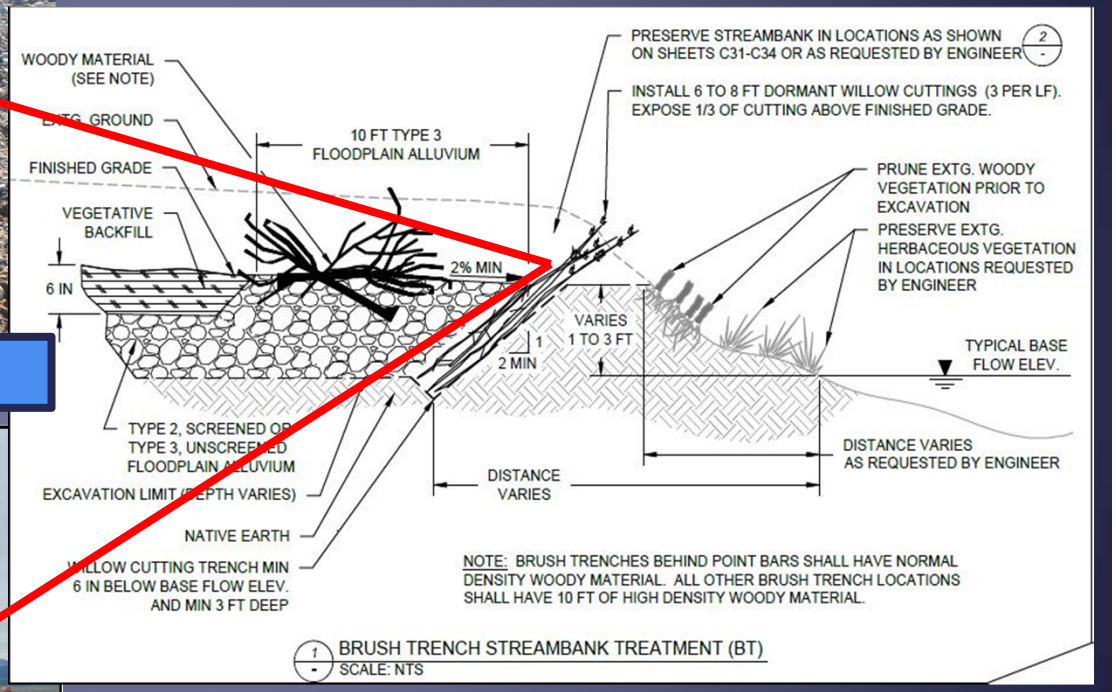


Preserve Streambank - Herbaceous

Brush Trench

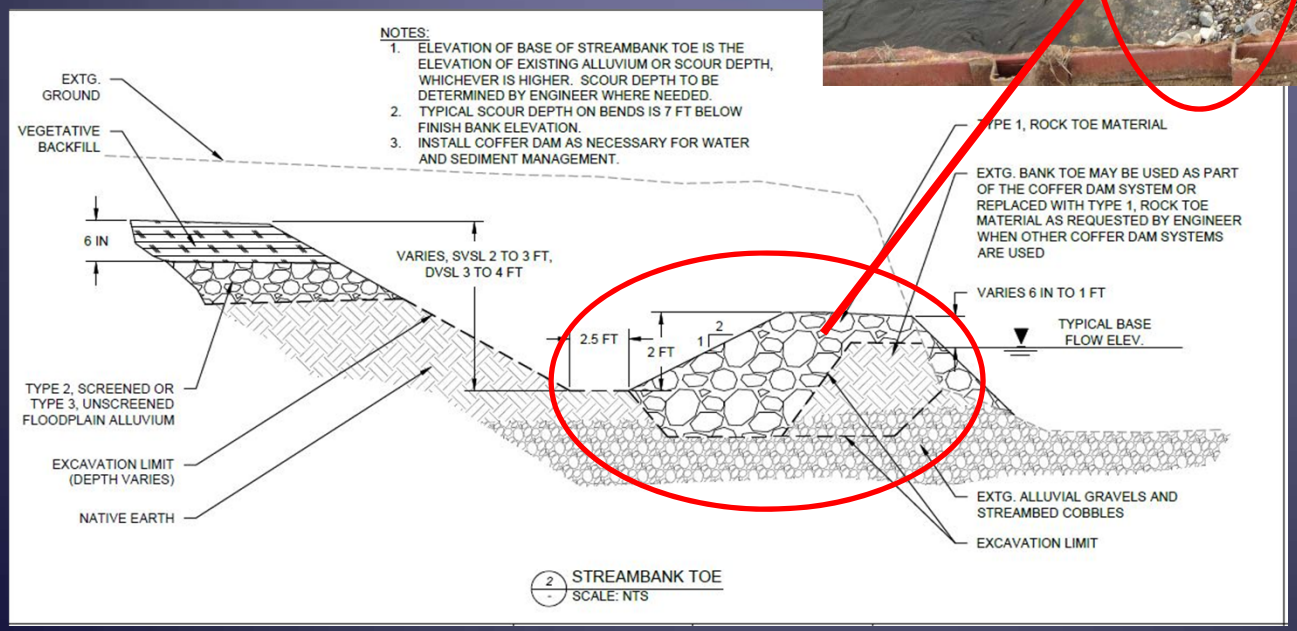
Brush Trench behind Point Bar

Brush Trench behind Preserve Streambank



Streambank Toe

Rock Toe Material is Type 1 Floodplain Alluvium



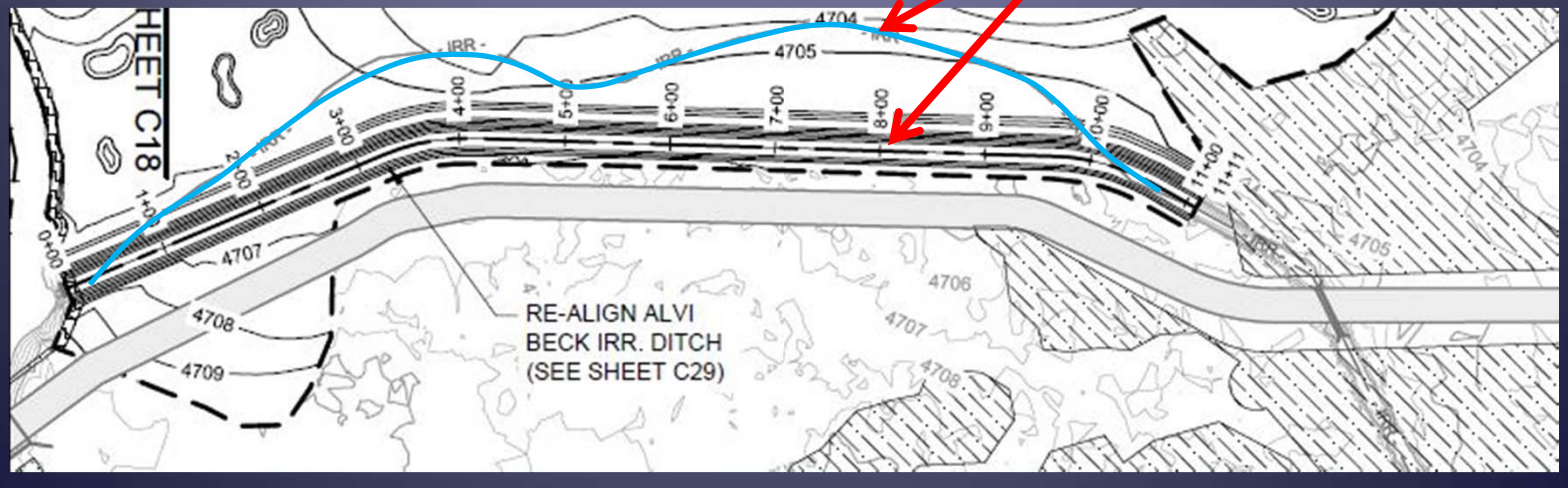
Alvi Beck Ditch

Surface Water Management is Incidental

Work between November 2nd and March 31st

Tailings/Contaminated Soil in Both Banks

Ditch Relocated



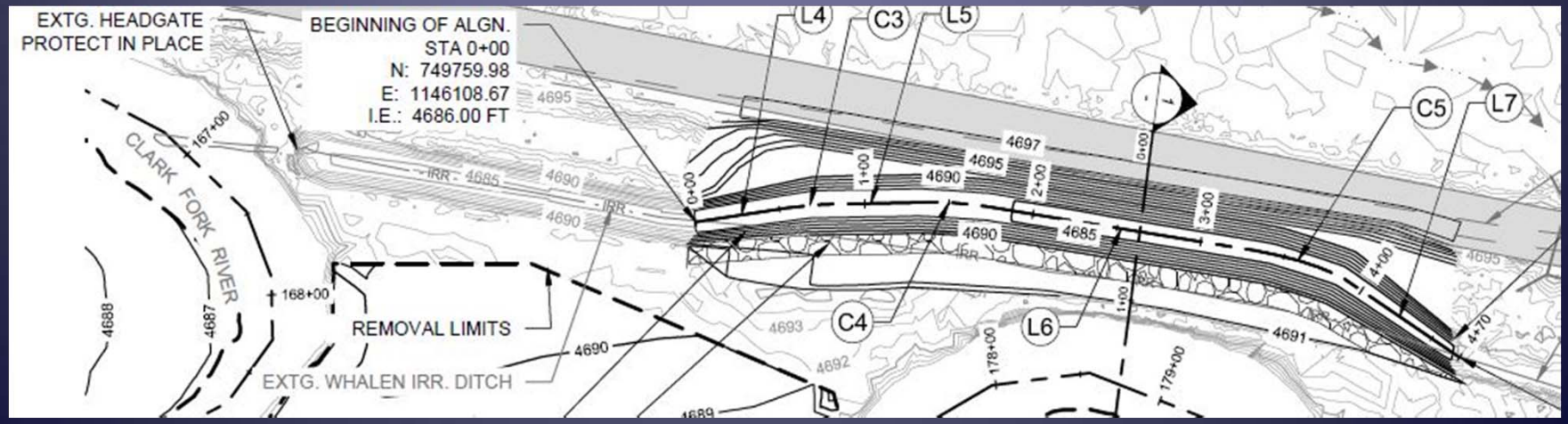
Whalen Ditch

All water management and dewatering is incidental

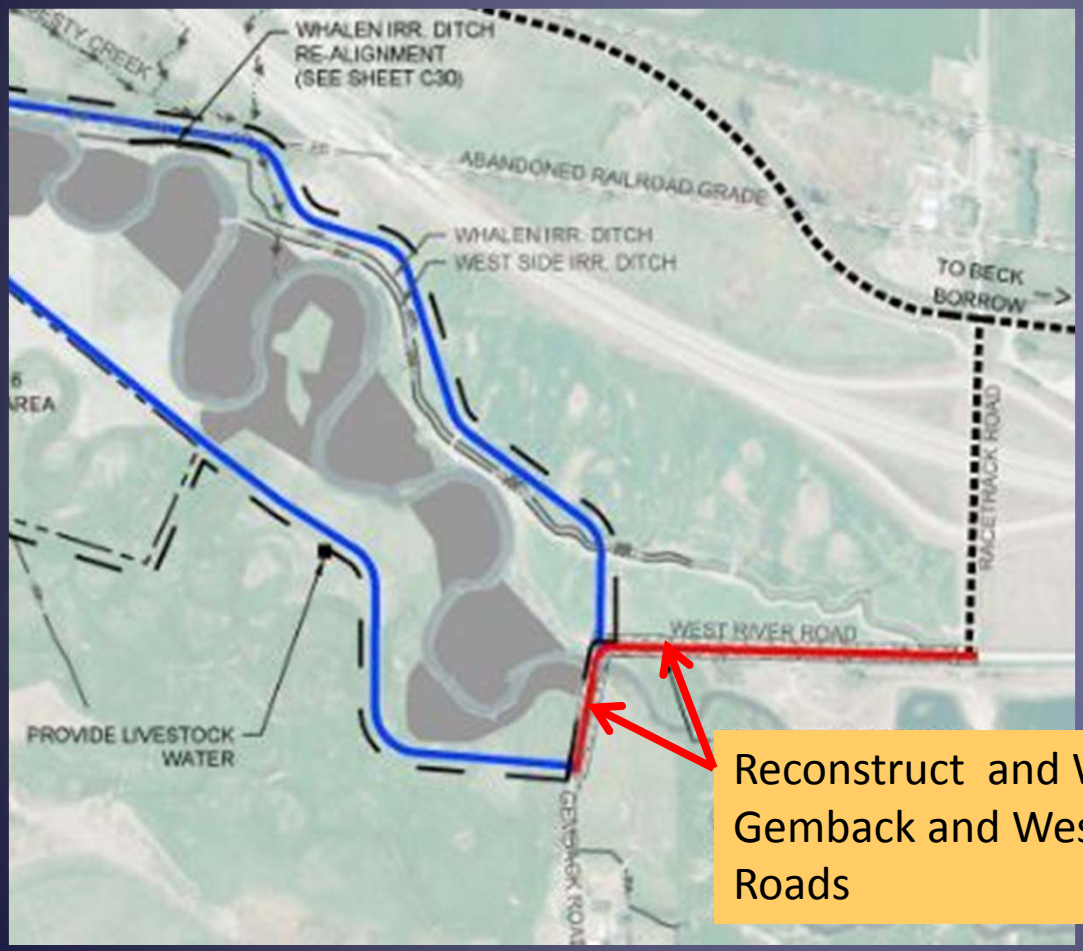
Ditch relocated behind existing streambank to be preserved

No observed contamination

Work between November 2nd and March 31st



West River and Gemback Road



Reconstruct and Widen Gemback and West River Roads

Widen to 28 ft and raise 1 ft with transitions to tie into existing CFR bridge and Racetrack Road pavement

Import and install floodplain alluvium subgrade, geogrid, aggregate base course, and surface course.

Dewatering Incidental

Borrow Material

Vegetative Backfill: A natural surficial deposit of mixed silt, sand, and clay.

Floodplain Alluvium: A natural deposit of mixed cobbles and gravel with some sand.

Both Available from the on-site Phase 5 and Phase 6 Borrow Areas

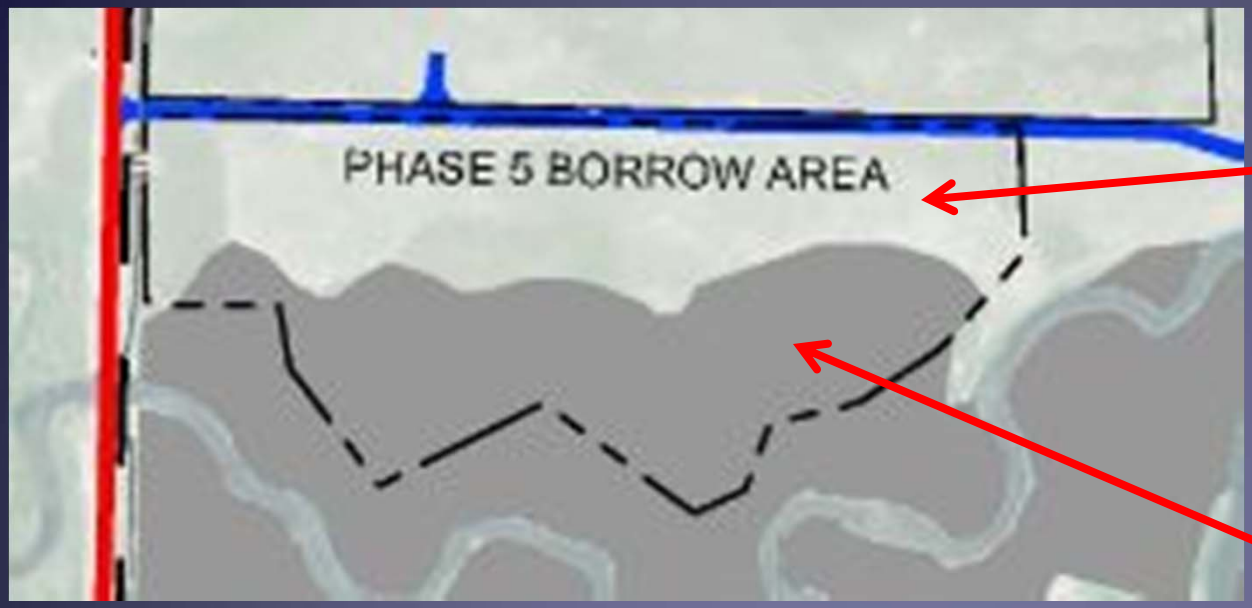
Three types of Floodplain Alluvium gradations

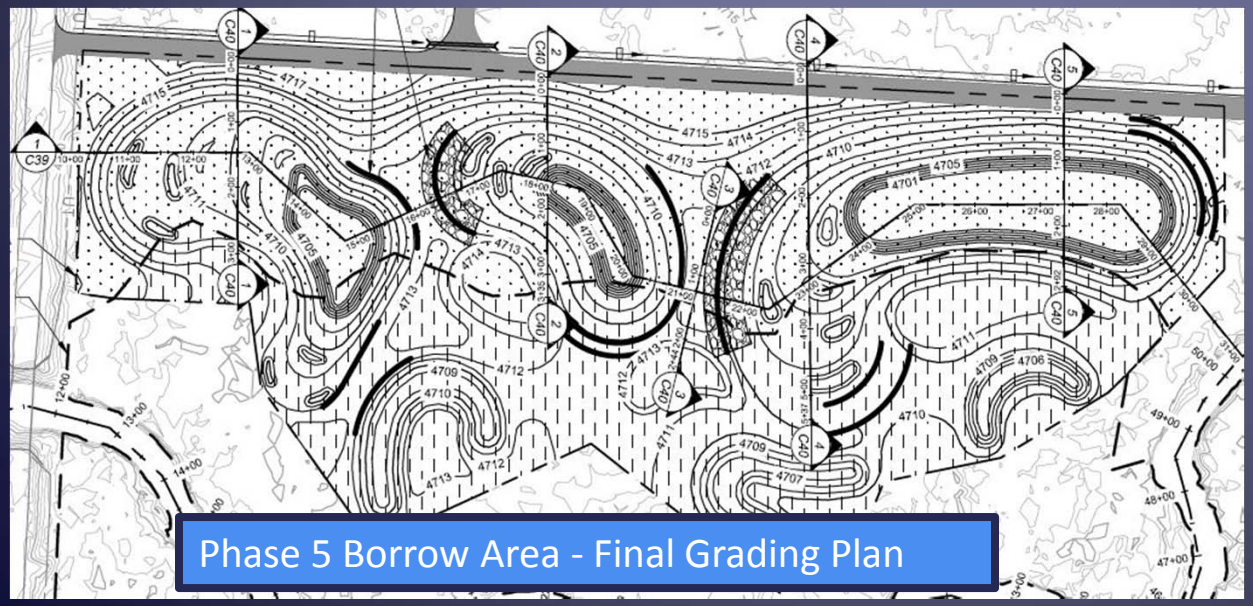
- Type 1 Rock Toe Material (Cobbles screened from floodplain alluvium)
- Type 2 Screened (Remaining floodplain alluvium after screening)
- Type 3 Unscreened (Bank run floodplain alluvium)

Add Alternative A1: Beck Borrow Vegetative backfill

Add Alternative A2: Offsite Floodplain Alluvium

Phase 5 Borrow Area





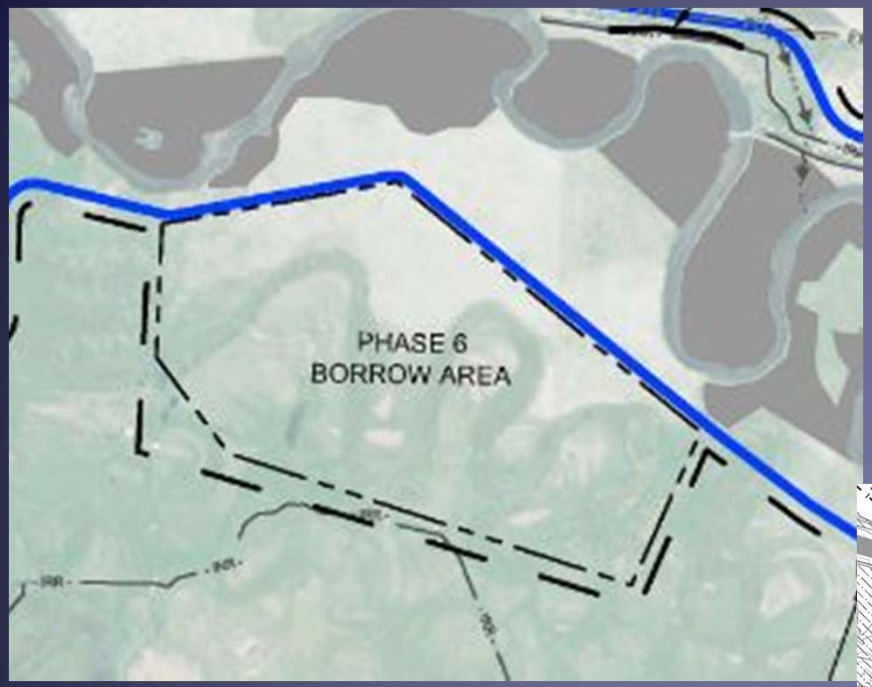
Remove 1 ft of Topsoil outside removal area. Use to reclaim borrow area

Overlaps with Contaminated Area

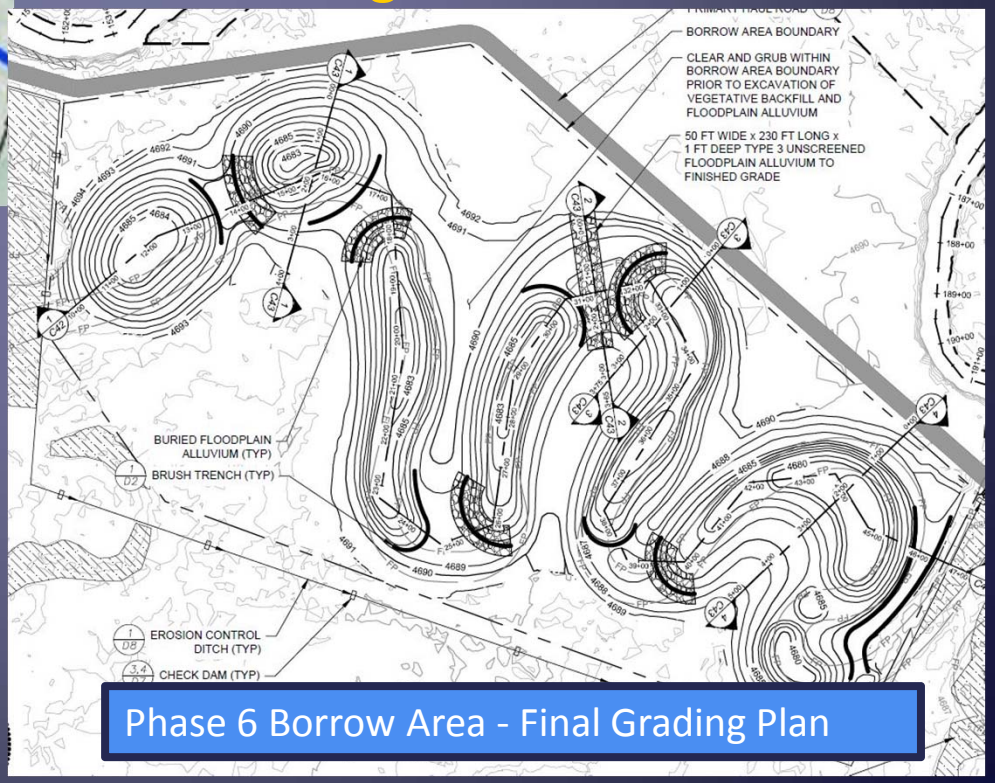
Contractor to submit Borrow Development Plan

Dewatering Incidental

Phase 6 Borrow Area



- No Observed Contamination
- Some Clearing and Grubbing
- Contractor to submit Borrow Development Plan
- Dewatering Incidental



Phase 6 Borrow Area - Final Grading Plan

Submittals

Construction Schedule, List of Subcontractors, and Schedule of Values. Submit within five (5) days after Notice to Proceed.

List of Employees, Job Classifications, and current OSHA 29 CFR 1910.120 certificates for all Site workers, and resumes as required in the Special Provisions. Submit at Pre-construction Conference.

Health and Safety Plan. Submit at least three (3) days prior to the start of construction.

Transportation Plan. Submit at least ten (10) days prior to the start of construction.

Erosion Control Plan. Submit at least ten (10) days prior to the start of construction.

Surface Water Management Plan. Submit at least ten (10) days prior to the start of construction.

Spill Prevention, Control, and Countermeasures Plan, as required for fuel and oil storage.

Contractor Quality Control Plan. Submit within ten (10) days after the Notice to Proceed.

Weed Control Plan. Submit at least ten (10) days prior to the start of construction.

Borrow Development Plan. Submit at least fourteen (14) days before starting any work that requires development or use of the Onsite Borrow Areas

Other Submittals. See Subsection 23 and individual Special Provisions

Bid Schedule

Questions – May 23, 2014 by 5 pm – mailed or emailed to *BBartkowiak@mt.gov*

Answers – posted by May 28, 2014 by 5 pm

Bids Due – 2pm on June 6th

Bid Opening – 2pm on June 6th at Room 111, Lee Metcalf Building, 1520 E. 6th Avenue, Helena, Montana

Make sure you sign the sign-in sheet!