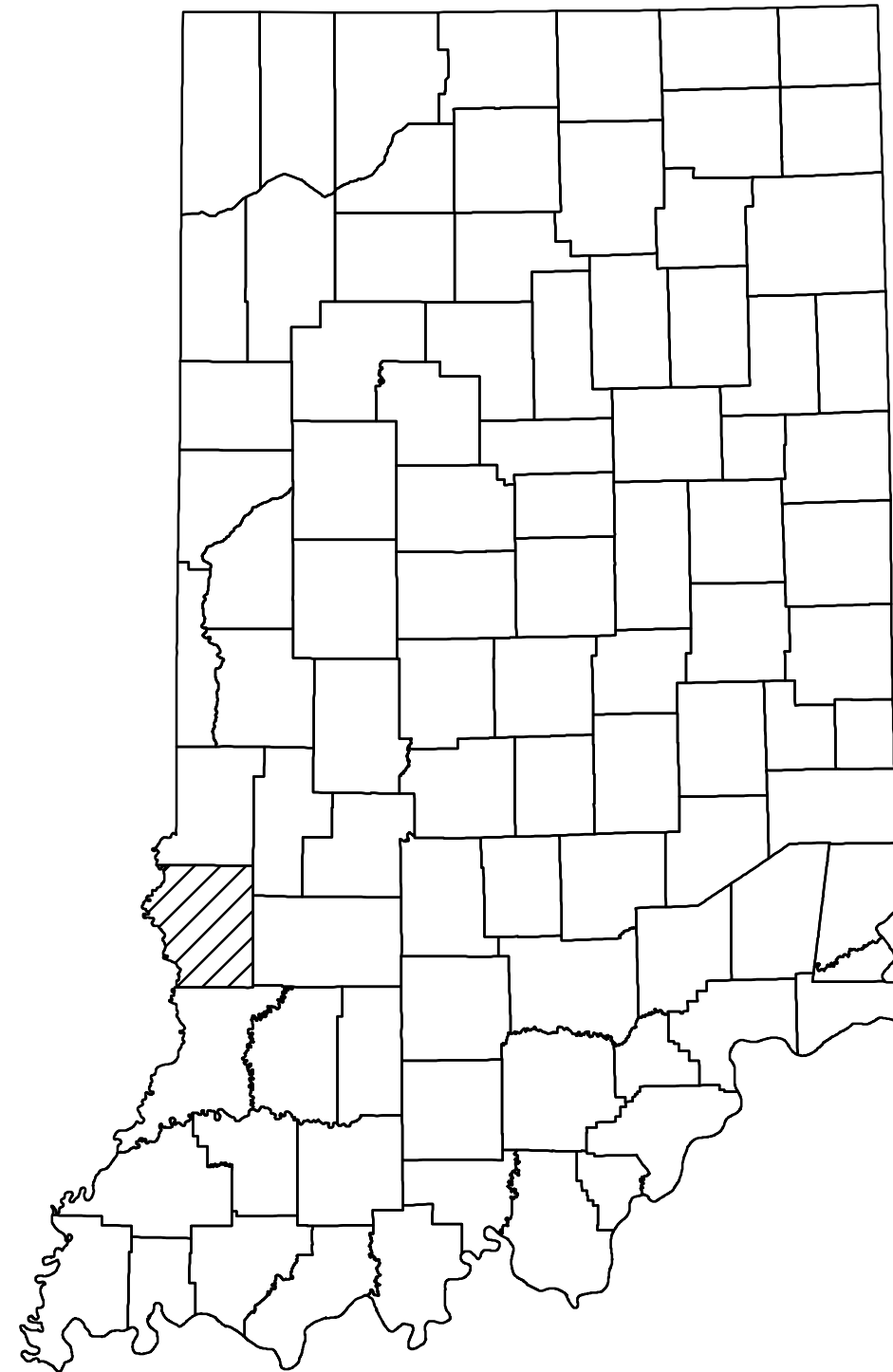


SOUTH LAKE HIGHWALLS

SITE NO.	CONTRACT NO.
1816	DEL2215208010/E008-309

SULLIVAN COUNTY



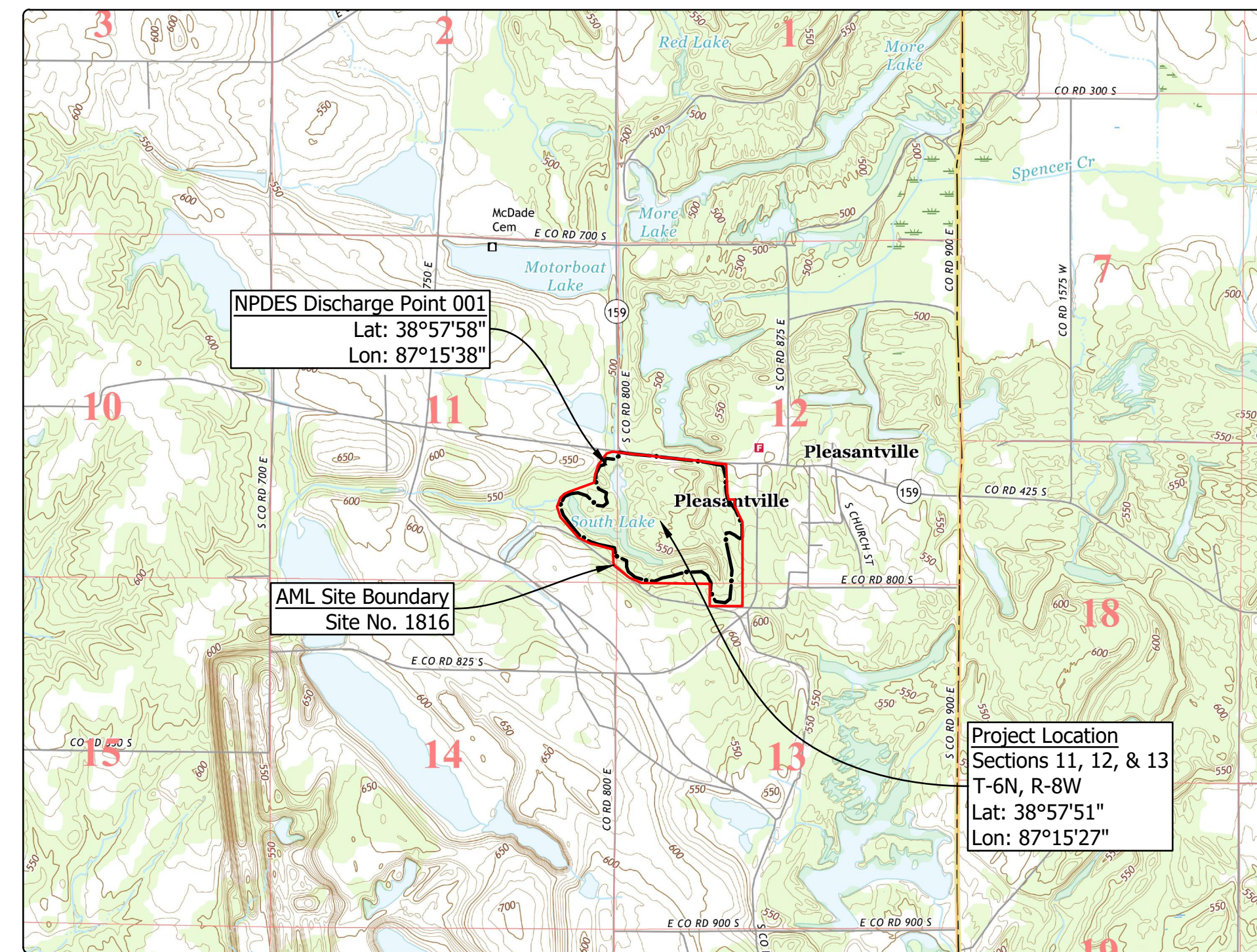
STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION



ABANDONED COAL MINE
RESTORATION

SOUTH LAKE HIGHWALLS
SITE 1816
CONTRACT DEL2215208010/E008-309
SULLIVAN COUNTY

Clear and grub, backfill highwalls, eliminate dangerous piles and embankments, improve drainage, and revegetate the site to enhance wildlife habitat and recreation opportunities.



Project Location Map
BUCKTOWN & SANDBORN US TOPO (USGS, 2016)

GENERAL NOTES

- 2022 AML Standard Specifications to be used with these plans.
- An NPDES discharge permit is required for this project.
- Plans developed from aerial topographic mapping survey from 2013 Statewide LIDAR collection in NAD 83, Indiana State Plane West, Feet.
- Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single 4 ft. lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.

INDEX

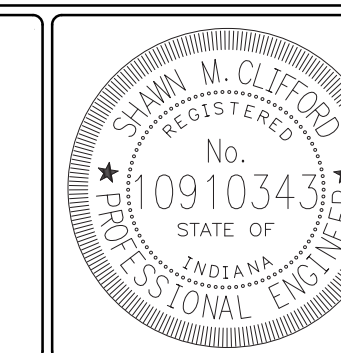
SHEET NO.	SHEET TITLE
1	TITLE, INDEX, & LOCATION MAP
2	SITE MAP
3-6	SITE PLANS
7	SECTIONS
8	REVEGETATION & DETAILS

UTILITIES

The facilities of the following utilities exist near the project site but are not expected to be affected by the proposed construction. If questions arise, the utility may be contacted using the information below.

ELECTRIC: Duke Energy 390 N. Main Street Martinsville, IN 46151 (765) 349-4012	WATER/SANITARY: Pleasantville Water Co. Inc. 6416 East CR 750 S. Carlisle, IN 47838 (812) 659-2060
TELECOM: Smithville Telephone Co., Inc. 1600 W. Temperance Street Celestial, IN 47429 (812) 876-9103	Linton Municipal Utilities 86 South Main Street Linton, IN 47441 (812) 847-4971

Call Before You Dig. Indiana Underground Plant Protection Service (IUPPS) 1-800-382-5544 or 811 from your mobile phone.



PLANS PREPARED BY: INDIANA DEPARTMENT OF NATURAL RESOURCES (812) 665-2207
DIVISION OF RECLAMATION
CERTIFIED BY: *Shawn Clifford* PHONE NUMBER
DATE 08/17/2022
APPROVED FOR LETTING: *Kit Tappin* DATE 08/17/2022
DIVISION OF RECLAMATION

SCALE AS NOTED	SHEET 1 OF 8
PROJECT E008-309	SITE 1816



Legend

- AML Site Boundary
- AML Site Feature
- Project Limits
- Grading Limits
- Site Access
- Staging Area
- Sheet Index
- Underground Mine (CMIS)

CMIS - Coal Mine Information System
(dnrmaps.dnr.in.gov/cmisis.htm)

0' 200' 400'

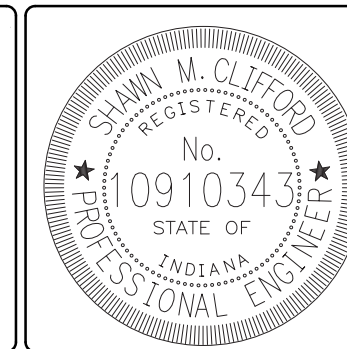
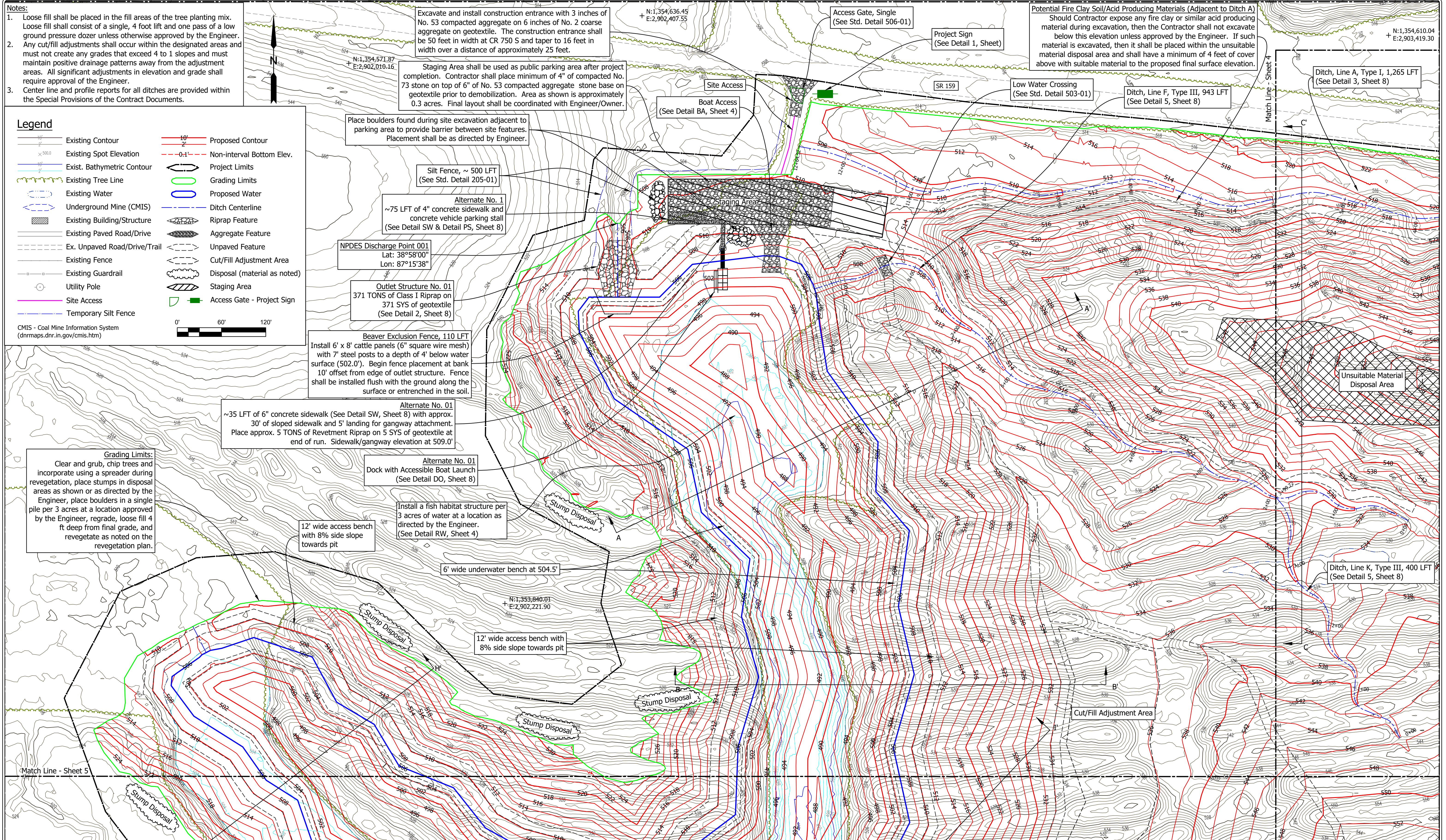
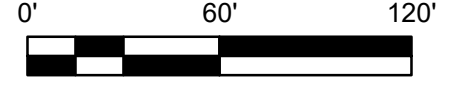
	RECOMMENDED FOR APPROVAL: <i>Sh M Clifford</i> 08/17/2022 DATE	DATE MADE 02/01/2021	SITE MAP STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	SCALE 1" = 200'	SHEET 2 OF 8
	DESIGNED BY S.M.C.	DRAWN BY S.M.C.		DATE REVISED 8/17/2022 10:53:54 AM	PROJECT E008-309

- Notes:**
- Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single, 4 foot lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.
 - Any cut/fill adjustments shall occur within the designated areas and must not create any grades that exceed 4 to 1 slopes and must maintain positive drainage patterns away from the adjustment areas. All significant adjustments in elevation and grade shall require approval of the Engineer.
 - Center line and profile reports for all ditches are provided within the Special Provisions of the Contract Documents.

Legend

- | | | | |
|--|------------------------------|--|------------------------------|
| | Existing Contour | | Proposed Contour |
| | Existing Spot Elevation | | Non-interval Bottom Elev. |
| | Exist. Bathymetric Contour | | Project Limits |
| | Existing Tree Line | | Grading Limits |
| | Existing Water | | Proposed Water |
| | Underground Mine (CMIS) | | Ditch Centerline |
| | Existing Building/Structure | | Riprap Feature |
| | Existing Paved Road/Drive | | Aggregate Feature |
| | Ex. Unpaved Road/Drive/Trail | | Unpaved Feature |
| | Existing Fence | | Cut/Fill Adjustment Area |
| | Existing Guardrail | | Disposal (material as noted) |
| | Utility Pole | | Staging Area |
| | Site Access | | Access Gate - Project Sign |
| | Temporary Silt Fence | | |

CMIS - Coal Mine Information System
 (dnrmaps.dnr.in.gov/cmisis.htm)



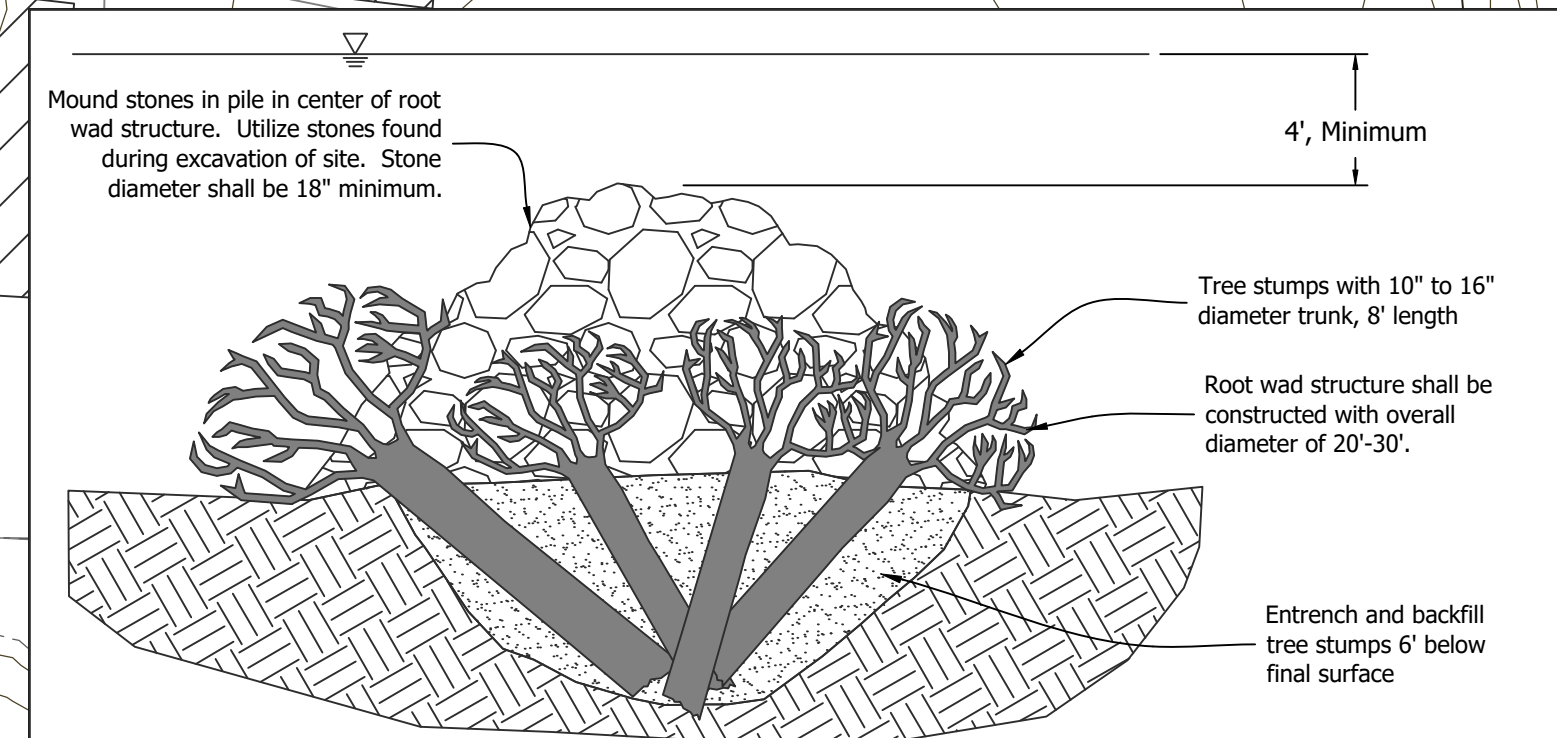
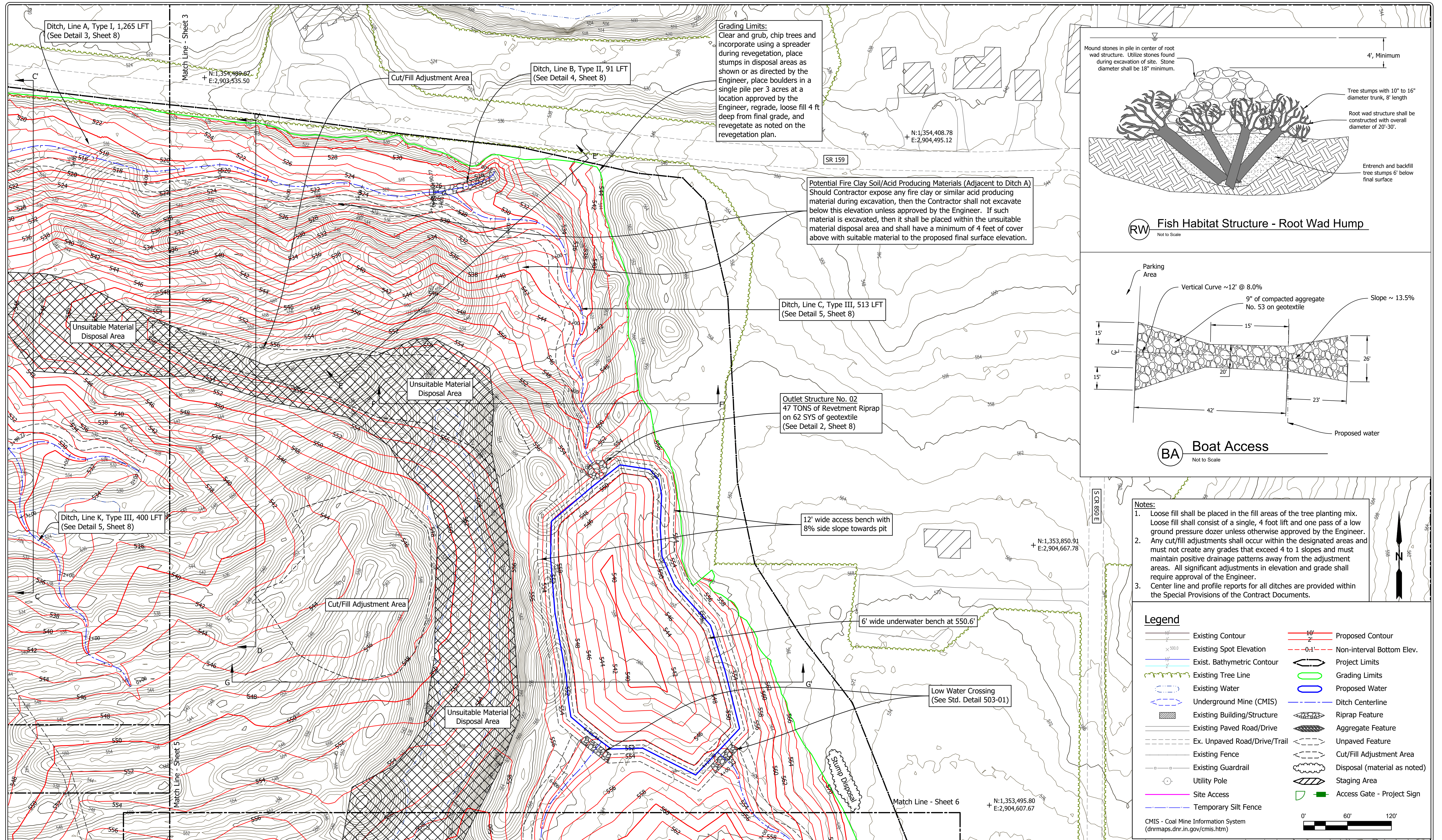
RECOMMENDED FOR APPROVAL: *Shawn Clifford* 08/17/2022 DATE
 DESIGNED BY: S.M.C.
 DRAWN BY: S.M.C.

DATE MADE: 02/01/2021
 DATE REVISED: 8/17/2022 10:53:54 AM

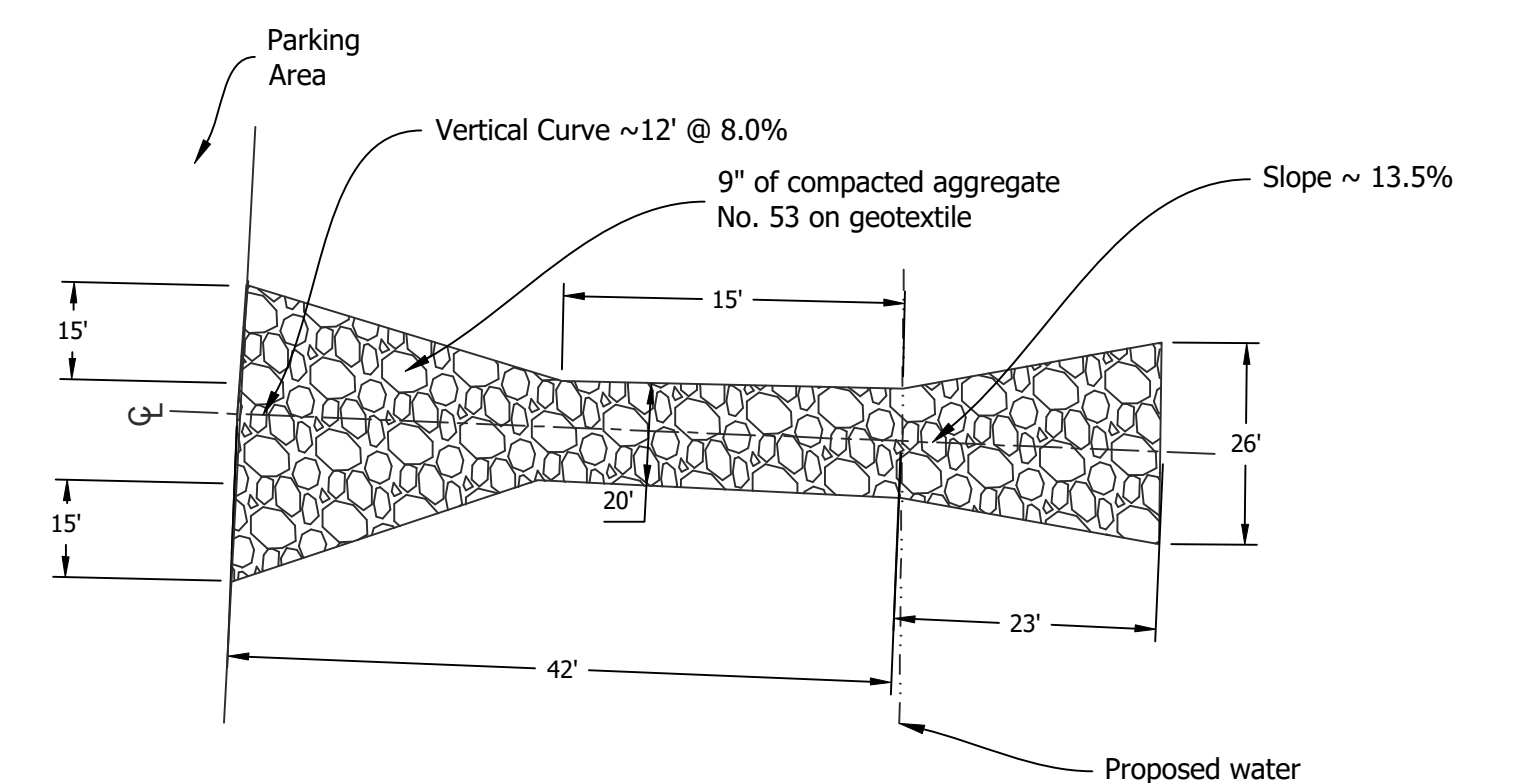
SITE PLAN - NW
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF RECLAMATION

SCALE: 1" = 60'
 PROJECT: E008-309

SHEET: 3 OF 8
 SITE: 1816



RW Fish Habitat Structure - Root Wad Hump
Not to Scale



BA Boat Access
Not to Scale

- Notes:**
- Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single, 4 foot lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.
 - Any cut/fill adjustments shall occur within the designated areas and must not create any grades that exceed 4 to 1 slopes and must maintain positive drainage patterns away from the adjustment areas. All significant adjustments in elevation and grade shall require approval of the Engineer.
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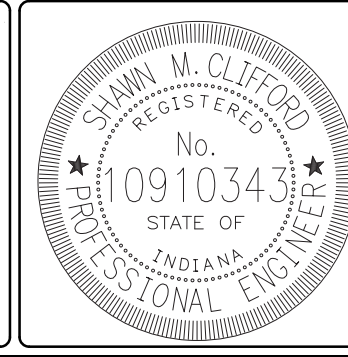
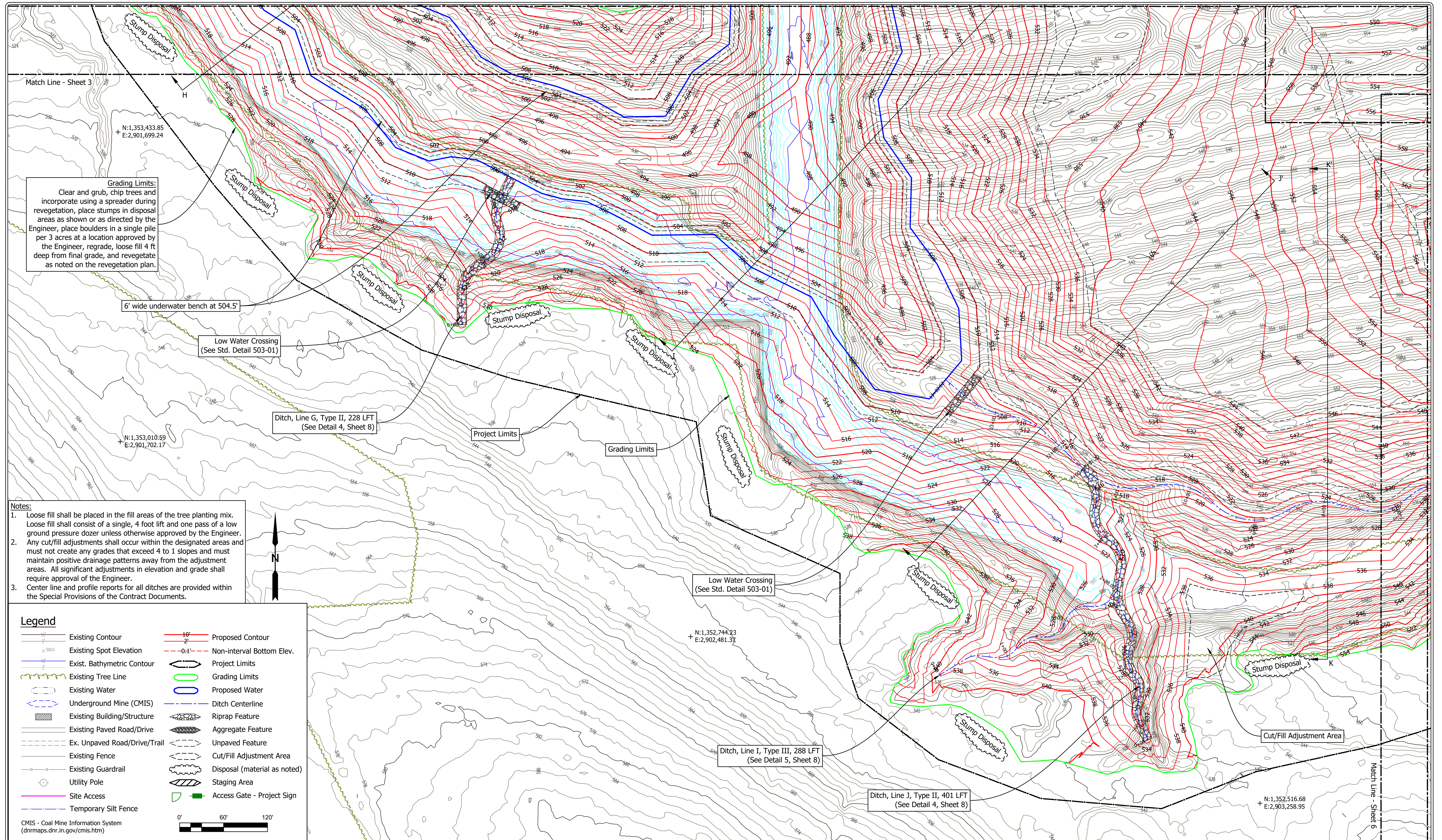
Legend

	Existing Contour		Proposed Contour
	Existing Spot Elevation		Non-Interval Bottom Elev.
	Exist. Bathymetric Contour		Project Limits
	Existing Water Line		Grading Limits
	Existing Water		Proposed Water
	Underground Mine (CMIS)		Ditch Centerline
	Existing Building/Structure		Riprap Feature
	Existing Paved Road/Drive		Aggregate Feature
	Ex. Unpaved Road/Drive/Trail		Unpaved Feature
	Existing Fence		Cut/Fill Adjustment Area
	Existing Guardrail		Disposal (material as noted)
	Utility Pole		Staging Area
	Site Access		Access Gate - Project Sign
	Temporary Silt Fence		

CMIS - Coal Mine Information System (dnrmaps.dnr.in.gov/cmisis.htm)

0' 60' 120'

	RECOMMENDED FOR APPROVAL: <i>Shawn Clifford</i> 08/17/2022 DATE	DATE MADE 02/01/2021	SITE PLAN - NE DEPARTMENT OF NATURAL RESOURCES <small>STATE OF INDIANA DIVISION OF RECLAMATION</small>	SCALE 1" = 60'	SHEET 4 OF 8
	DESIGNED BY S.M.C.	DRAWN BY S.M.C.		DATE REVISED 8/17/2022 10:53:54 AM	PROJECT E008-309



RECOMMENDED FOR APPROVAL: *Shawn M. Clifford* 08/17/2022 DATE

DESIGNED BY S.M.C. DRAWN BY S.M.C.

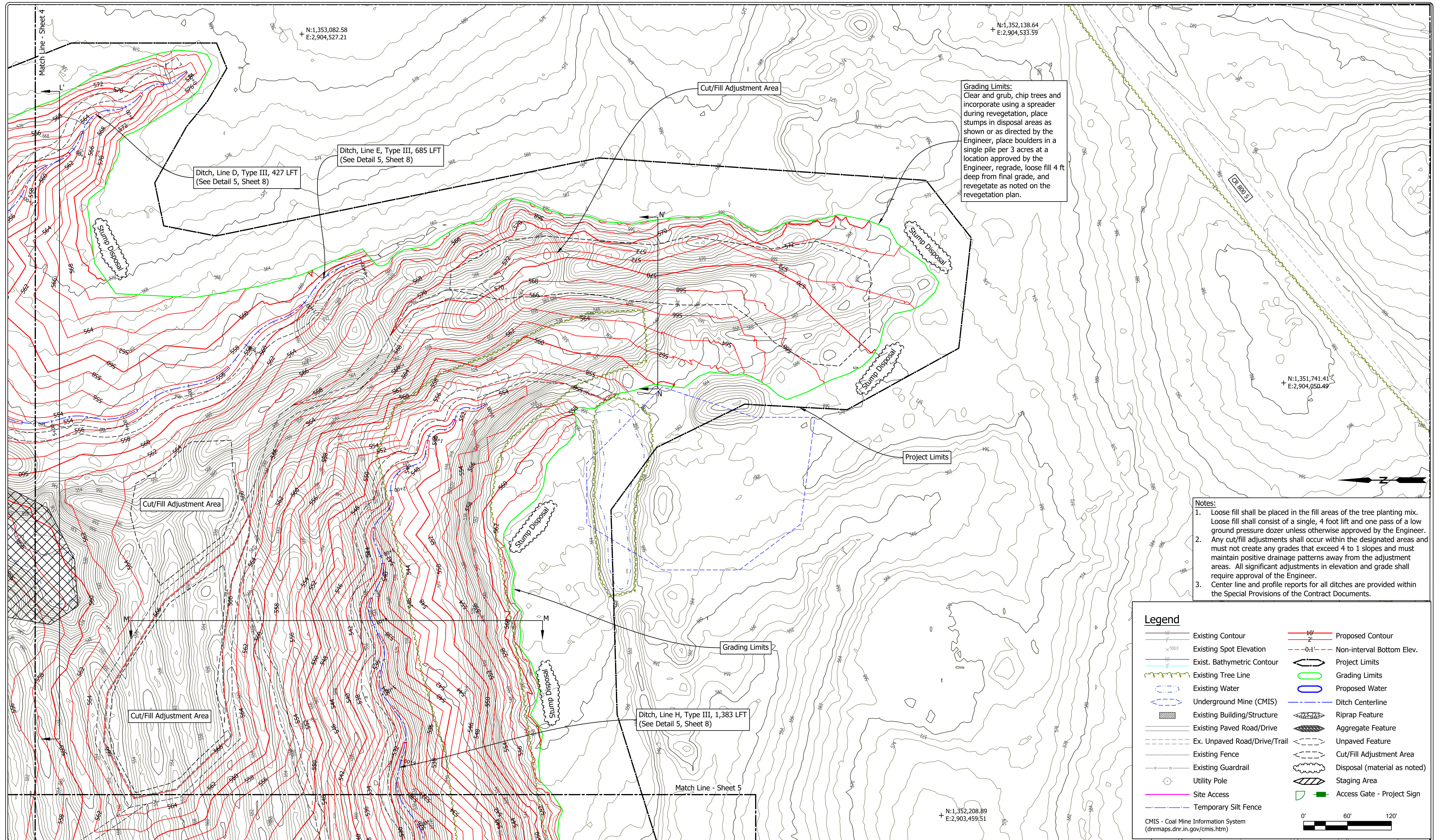
DATE MADE 02/01/2021

DATE REVISED 8/17/2022 10:53:54 AM

SITE PLAN - SW
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE 1" = 60'
PROJECT E008-309

SHEET 5 OF 8
SITE 1816



Grading Limits:
 Clear and grub, chip trees and incorporate using a spreader during revegetation, place stumps in disposal areas as shown or as directed by the Engineer, place boulders in a single pile per 3 acres at a location approved by the Engineer, regrade, loose fill 4 ft deep from final grade, and revegetate as noted on the revegetation plan.

- Notes:**
- Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single, 4 foot lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.
 - Any cut/fill adjustments shall occur within the designated areas and must not create any grades that exceed 4 to 1 slopes and must maintain positive drainage patterns away from the adjustment areas. All significant adjustments in elevation and grade shall require approval of the Engineer.
 - Center line and profile reports for all ditches are provided within the Special Provisions of the Contract Documents.

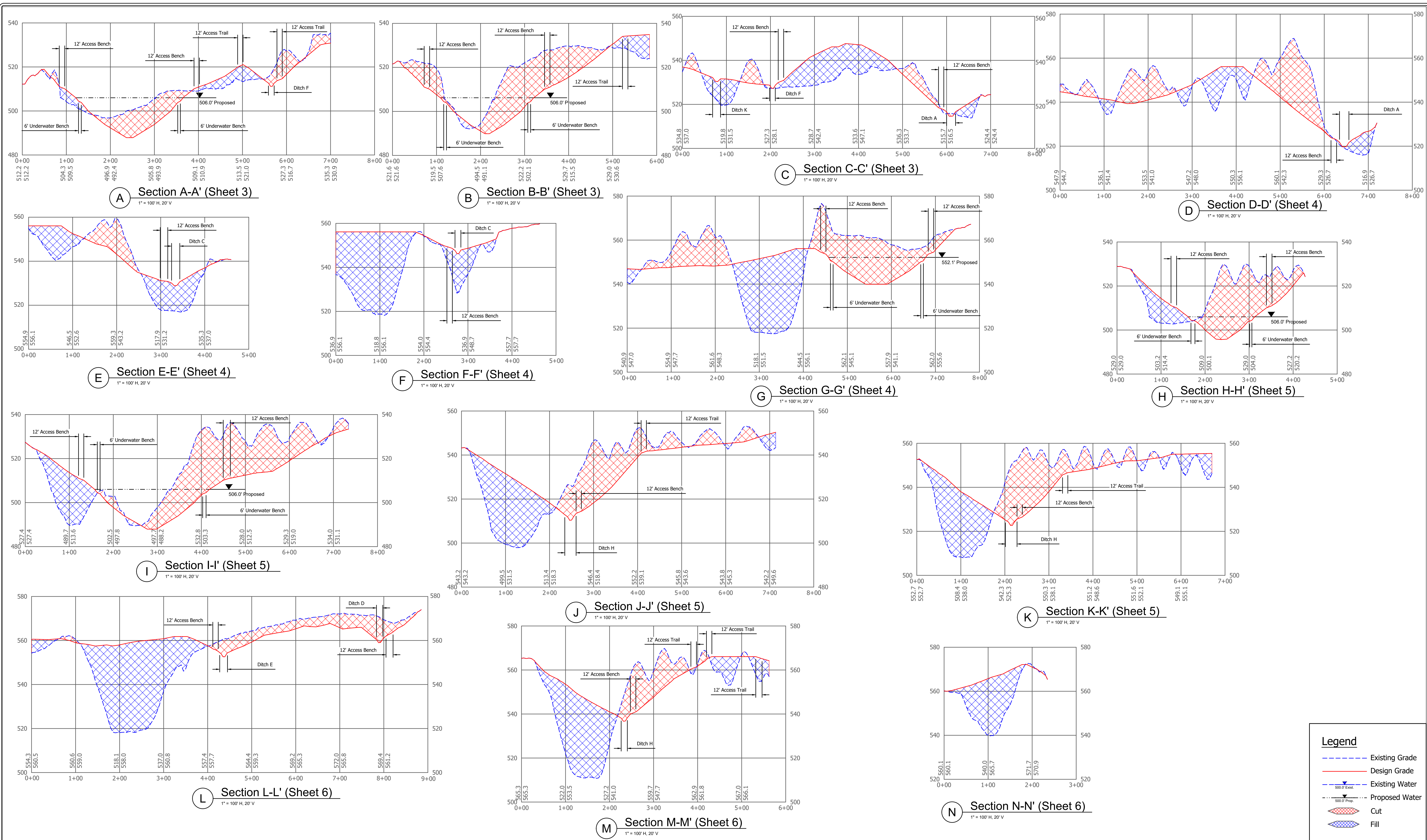
Legend	
Existing Contour	Proposed Contour
Existing Spot Elevation	Non-Interval Bottom Elev.
Exist. Bathymetric Contour	Project Limits
Existing Tree Line	Grading Limits
Existing Water	Proposed Water
Underground Mine (CMIS)	Ditch Centerline
Existing Building/Structure	Riprap Feature
Existing Paved Road/Drive	Aggregate Feature
Ex. Unpaved Road/Drive/Trail	Unpaved Feature
Existing Fence	Cut/Fill Adjustment Area
Existing Guardrail	Disposal (material as noted)
Utility Pole	Staging Area
Site Access	Access Gate - Project Sign
Temporary Silt Fence	

CMIS - Coal Mine Information System
 (dnmaps.dnr.in.gov/cmisis.htm)

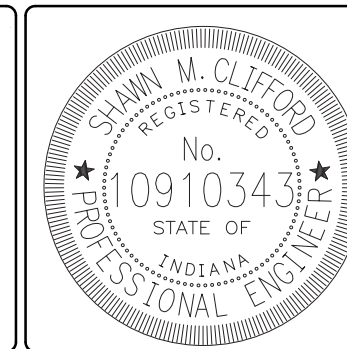
0' 60' 120'

	RECOMMENDED FOR APPROVAL: <i>Shawn Clifford</i> 08/17/2022 DATE	DATE MADE 02/01/2021	SITE PLAN - SE	SCALE 1" = 60'	SHEET 6 OF 8
	DESIGNED BY S.M.C.	DRAWN BY S.M.C.		DATE REVISED 8/17/2022 10:53:54 AM	PROJECT E008-309

STATE OF INDIANA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF RECLAMATION



Legend	
	Existing Grade
	Design Grade
	Existing Water
	Proposed Water
	Cut
	Fill



RECOMMENDED FOR APPROVAL: *Shawn M. Clifford* 08/17/2022 DATE

DESIGNED BY: S.M.C. DRAWN BY: S.M.C.

DATE MADE: 04/11/2021 DATE REVISD: 8/17/2022 10:53:54 AM

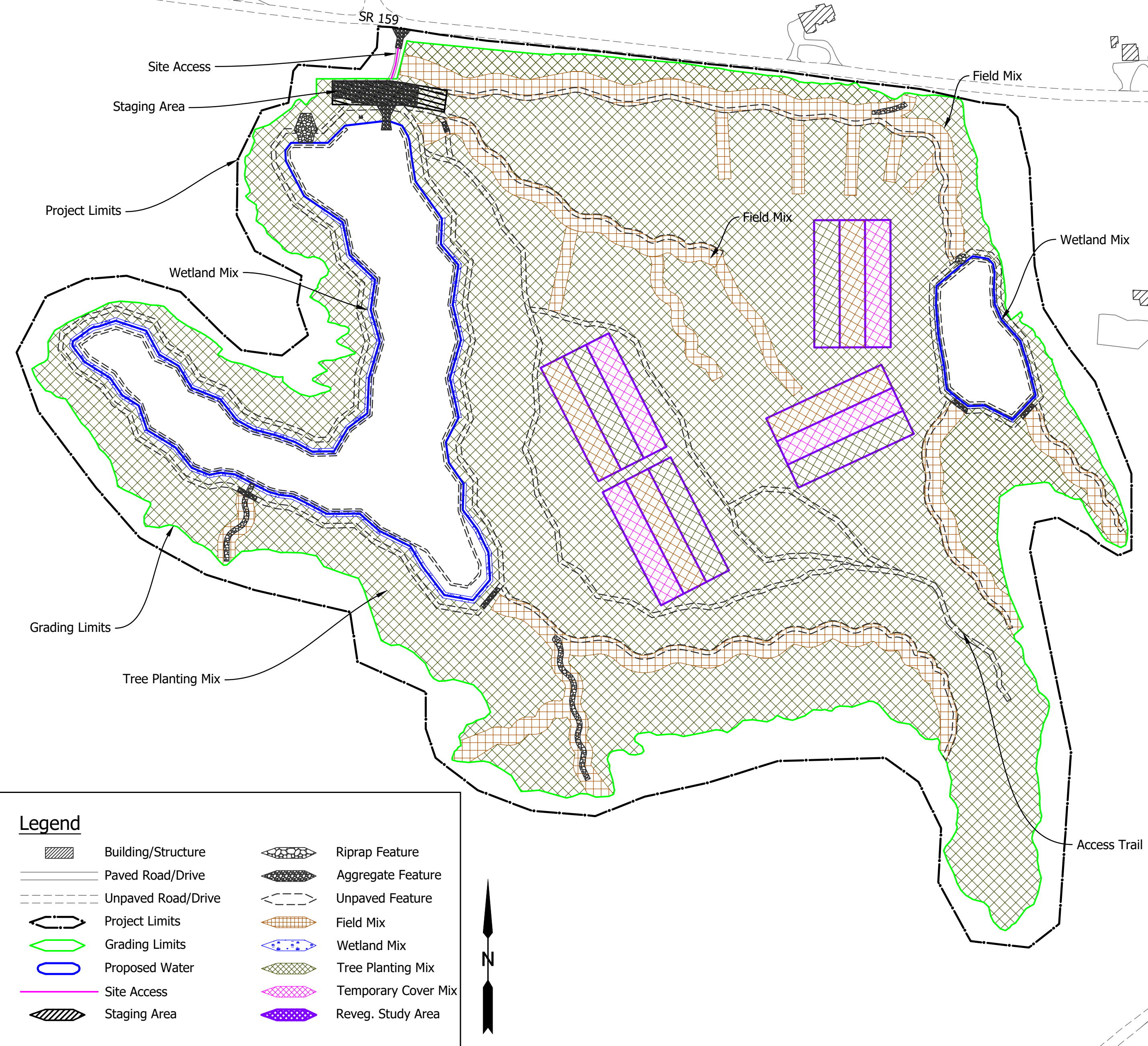
SECTIONS: DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION

SCALE: AS NOTED PROJECT: E008-309

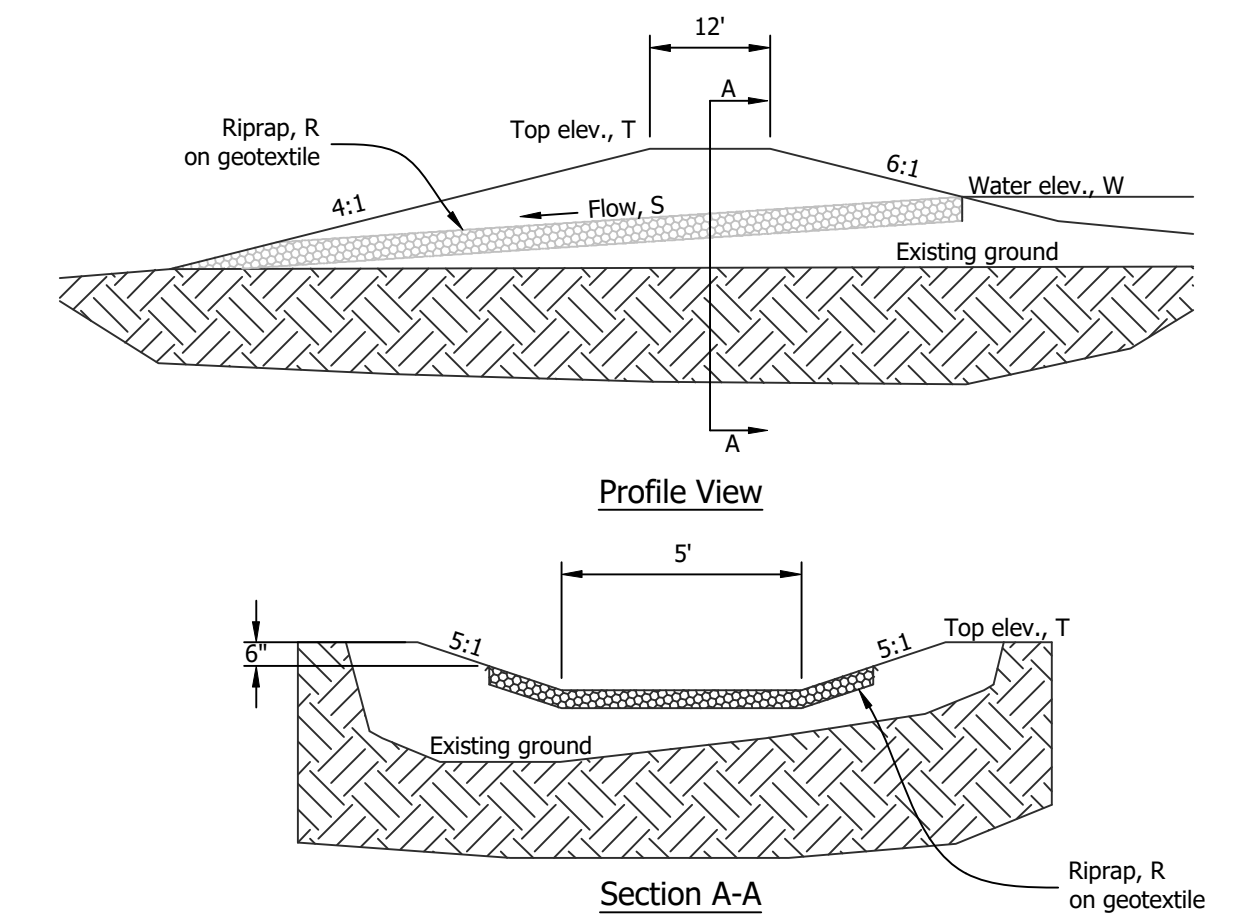
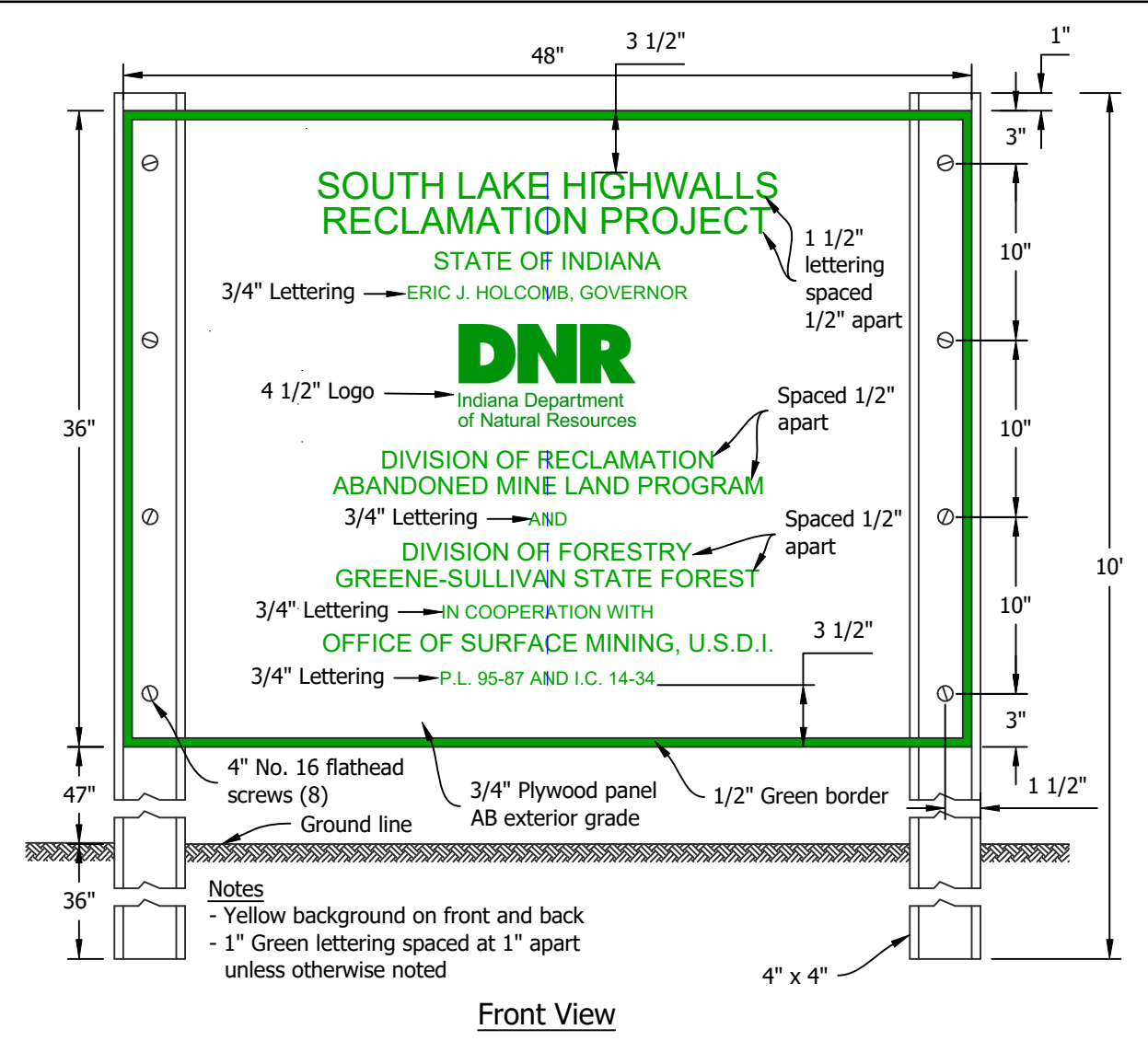
SHEET: 7 OF 8 SITE: 1816

****SEE SECTION 401.08 OF THE 2022 AML STANDARD SPECIFICATIONS FOR SEED MIXES**

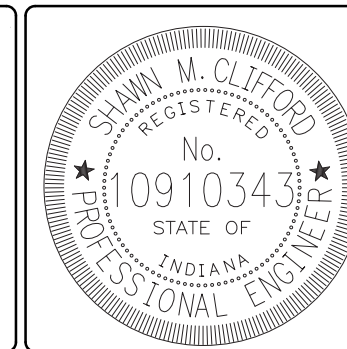
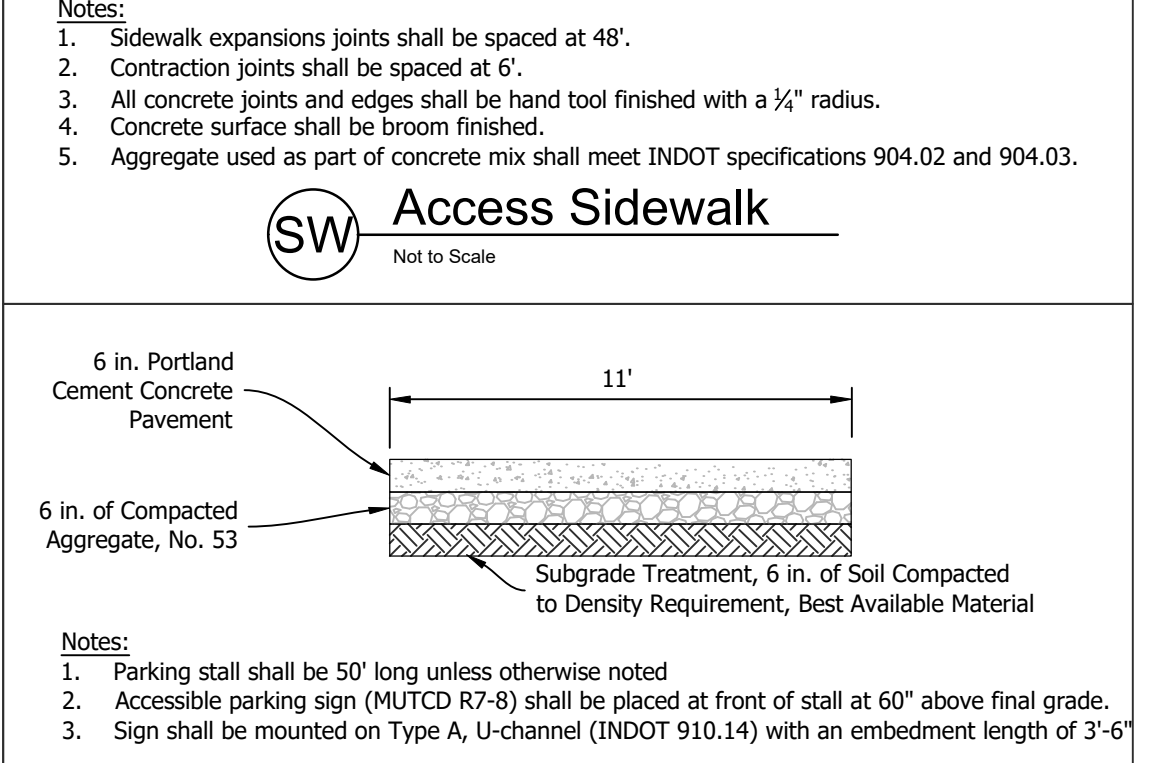
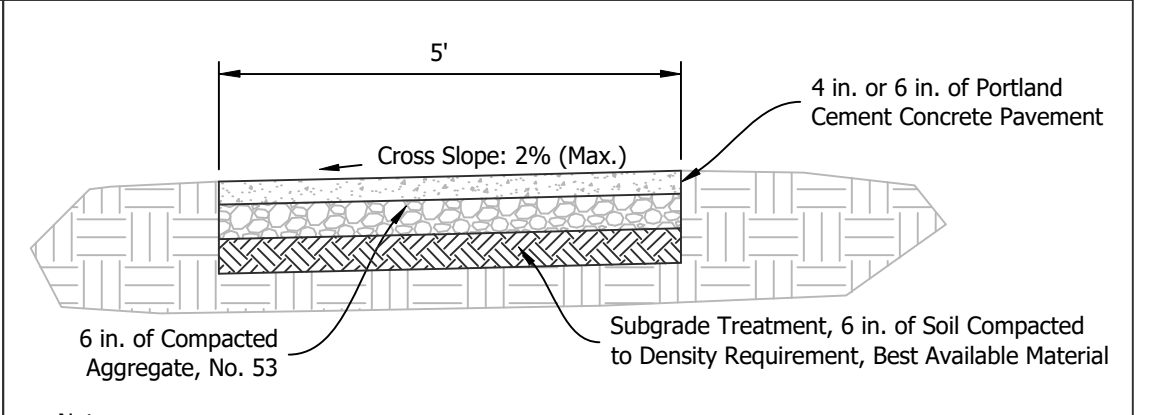
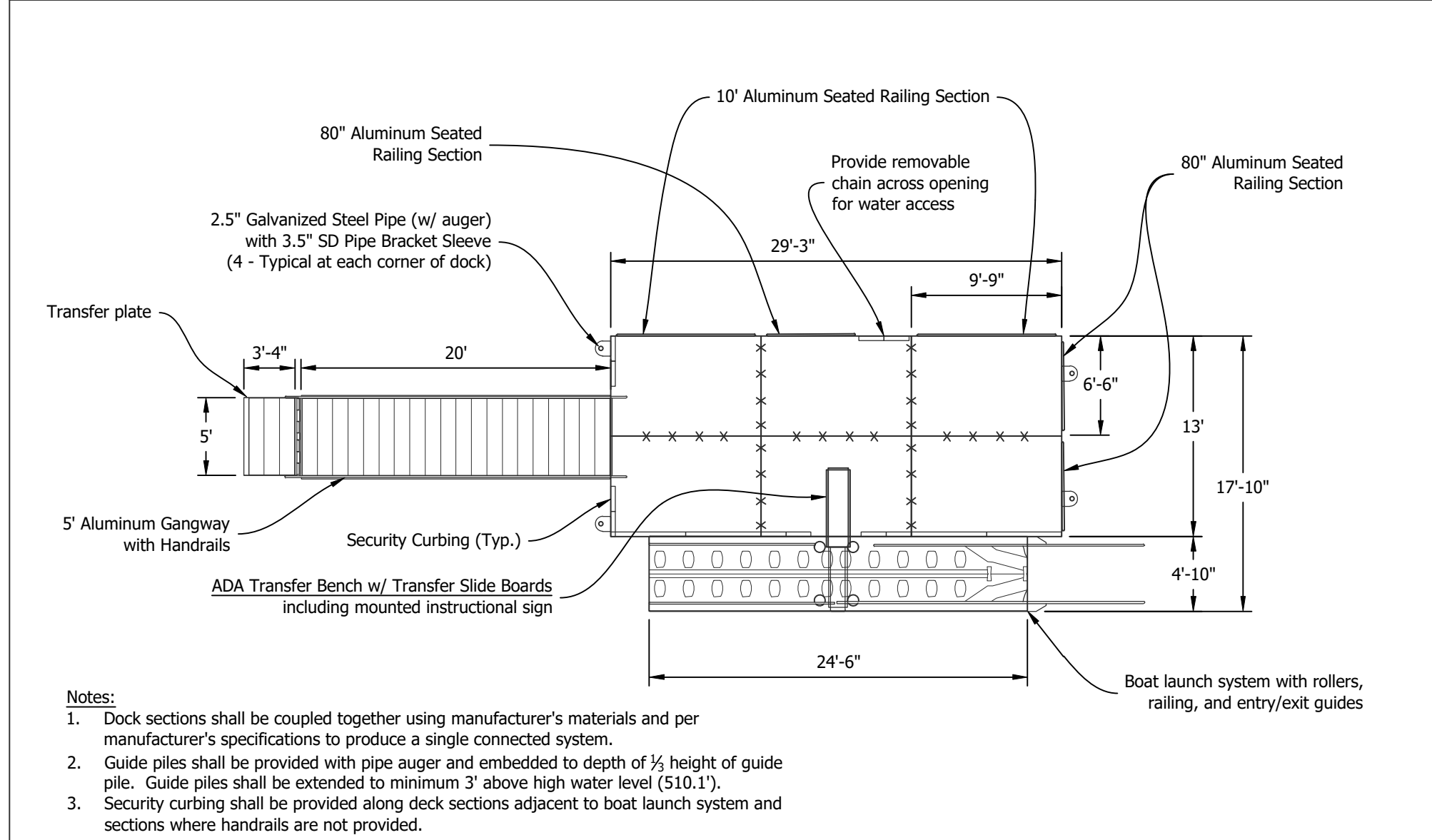
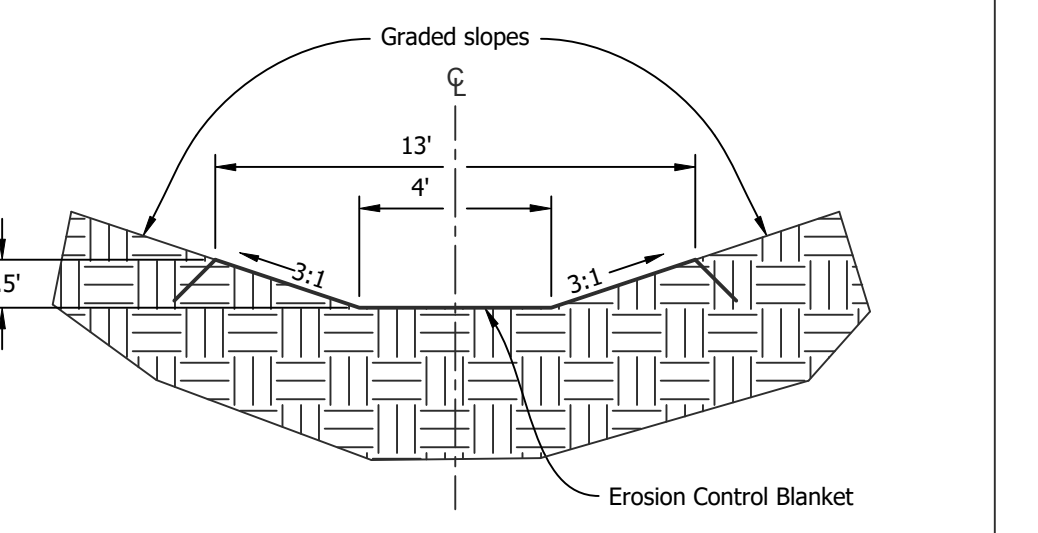
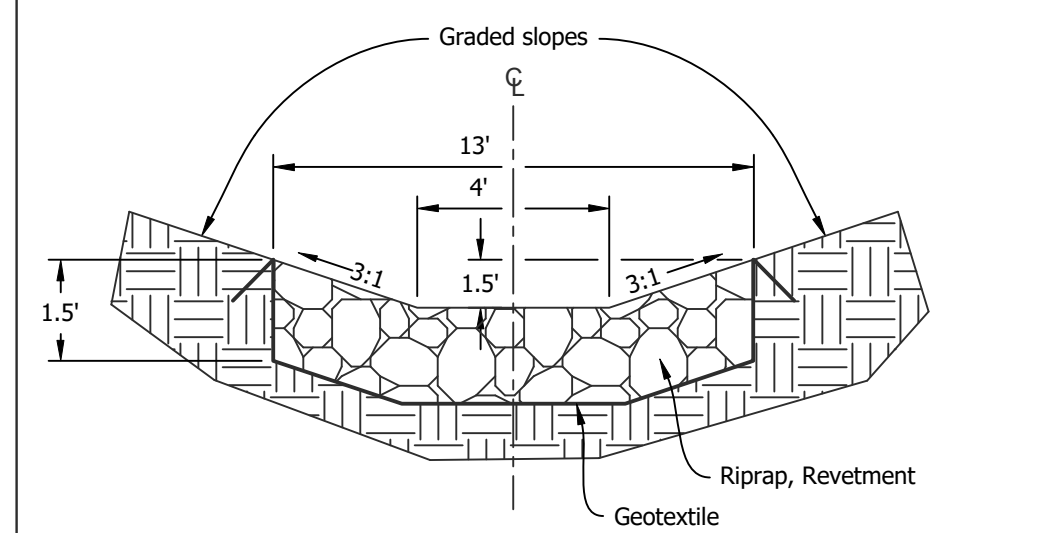
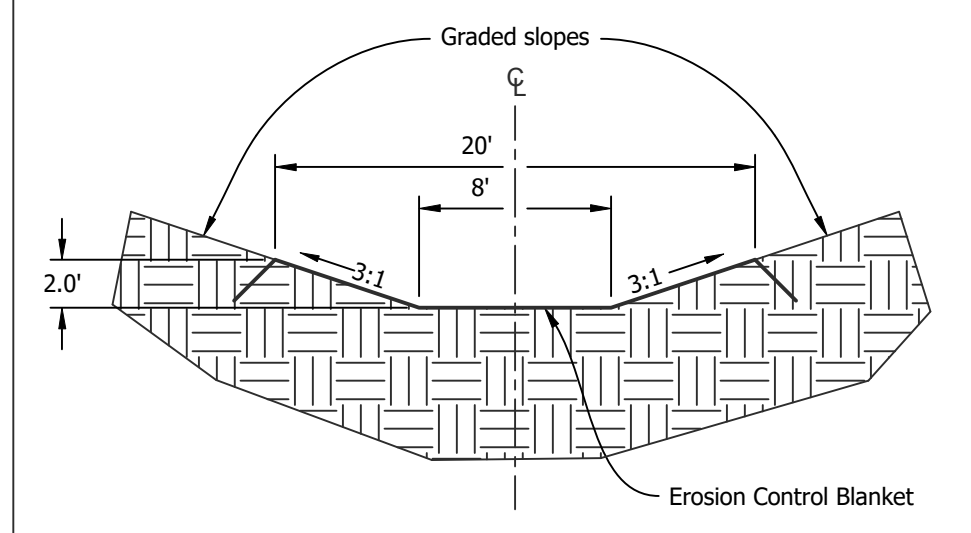
- Notes:**
- Loose fill shall be placed in the fill areas of the tree planting mix. Loose fill shall consist of a single 4 ft. lift and one pass of a low ground pressure dozer unless otherwise approved by the Engineer.
 - Field mix shall be placed on access routes, staging areas, grass-lined channels, and all other disturbed areas not otherwise specified on revegetation map, except in riprap, coarse aggregate, and final water areas.
 - Field mix shall be placed along channels to a minimum distance of 16 ft each side of its banks as well as 16' each side of the center of all significant drainage ways and conveyances.
 - Wetland mix shall be spread 1 ft. each side of proposed water edge or at elevations within the proposed detention areas that is ≤ 1 ft. below the final proposed water surface elevation, whichever is greater.
 - Four 1.5 acre tree planting study area plots shall be seeded as shown in the revegetation plan. Final configuration and placement shall be as directed by the Engineer.
 - Raptor poles shall be placed at one per 3 acres. Poles shall be selected from trees to be removed on site and shall be 12" diameter or larger. The poles shall be securely buried a minimum of 6' below final grade and extend vertically 16' to 22' above final grade. Raptor poles shall not be placed in or within 10' of the tree planting study areas.



RP Revegetation Plan
1" = 200'



Outlet No.	Top Elev., T (ft)	Water Elev., W (ft)	Slope, S (%)	Riprap Type, R
01	510.1	506.0	2.0	24" of Class I
02	553.6	552.1	3.0	18" of Revetment



RECOMMENDED FOR APPROVAL: *Shawn M. Clifford* 08/17/2022 DATE
 DESIGNED BY: S.M.C.
 DRAWN BY: S.M.C.
 DATE MADE: 04/11/2021
 DATE REVISED: 8/17/2022 10:53:54 AM

REVEGETATION PLAN & DETAILS
 STATE OF INDIANA
 DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF RECLAMATION

SCALE: AS NOTED
 PROJECT: E008-309
 SHEET: 8 OF 8
 SITE: 1816