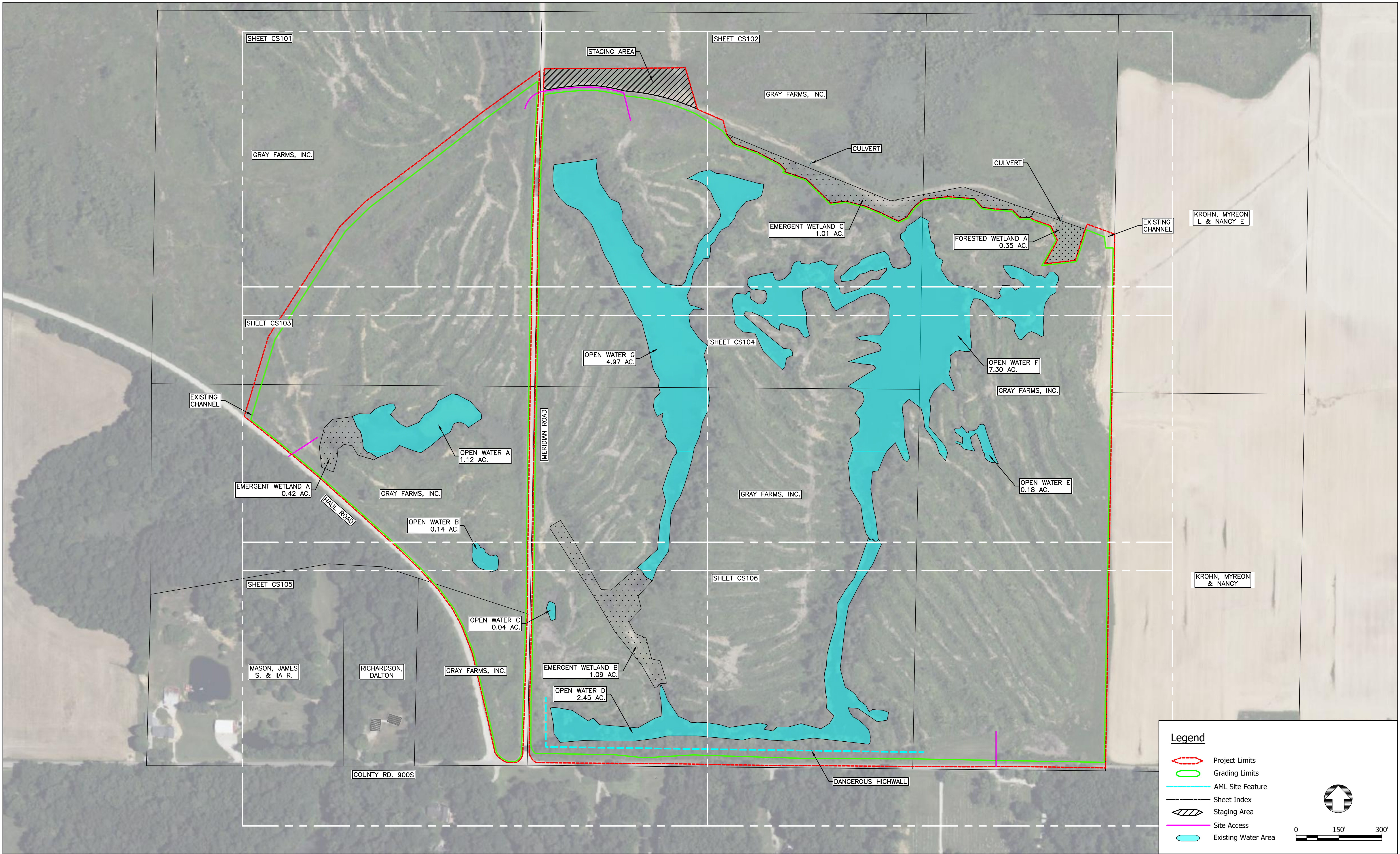
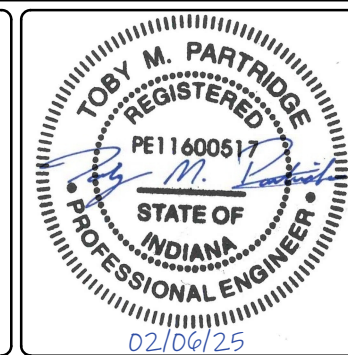




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MOON TOWNSHIP, PA 15108



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2/4/2025 12:36:03 PM

SITE MAP
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE
1" = 150'

PROJECT
E008-363

SHEET
2 OF 13

SITE
0147

Legend

- 
10'
2'

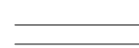

Existing Spot Elevation

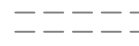

10'
2'


Exist. Bathymetric Contour


Existing Tree Line


Existing Open Water


Underground Mine (CMIS)

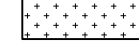

Existing Building/Structure


Existing Paved Road/Drive


Exist. Unpaved Road/Drive


Existing Fence

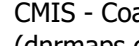

Existing Guardrail

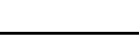

Utility Pole


Site Access


Property Boundary


Aquatic Shelf


Pool and Riffle


Temporary Silt Fence
- 
10'
2'


Non-interval Bottom Elev.


Project Limits

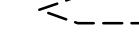

Grading Limits


Proposed Water


Ditch Centerline


Riprap Feature

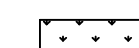

Aggregate Feature


Unpaved Feature


Cut/Fill Adjustment Area


Disposal (material as noted)


Staging Area


Access Gate - Project Sign


Emergent Wetland


Forested Wetland

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



GRADING LIMITS
CLEAR AND GRUB, CHIP TREES AND INCORPORATE
USING A SPREADER DURING REVEGETATION, PLACE
STUMPS IN DISPOSAL AREA AS DIRECTED BY THE
ENGINEER, BOULDERS SHALL BE USED IN POOLS
AND RIFFLES, REGRADE, AND REVEGETATE AS
NOTED ON THE REVEGETATION PLAN.

CHANNEL W3
(SEE DETAIL 5, SHEET 13)

POOL AND RIFFLE (TYP.)
(SEE DETAIL 6, SHEET 13)

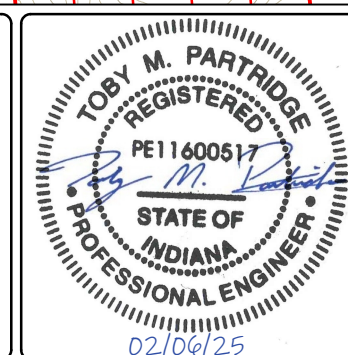
STAGING AREA
COARSE AGGREGATE, TYPE 2

AQUATIC SHELF (TYP.)

SILT FENCE (TYP.)
(SEE STD. DETAIL 205-01)

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SITE PLAN - CS101

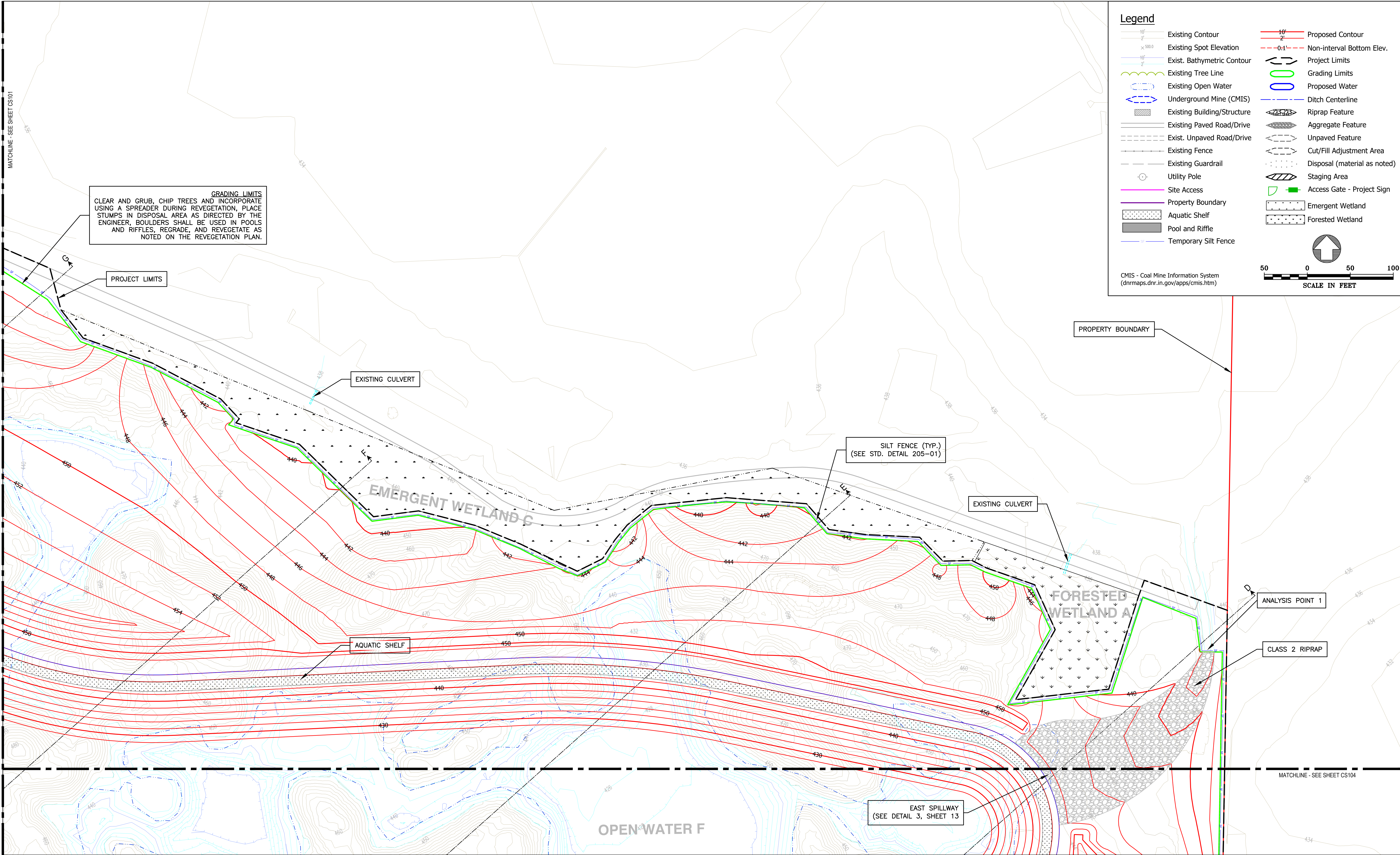
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE
1" = 50'

PROJECT
E008-363

SHEET
3 OF 13

SITE
0147



GRADING LIMITS
CLEAR AND GRUB, CHIP TREES AND INCORPORATE
USING A SPREADER DURING REVEGETATION. PLACE
STUMPS IN DISPOSAL AREA AS DIRECTED BY THE
ENGINEER. BOULDERS SHALL BE USED IN POOLS
AND RIFFLES, REGRADE, AND REVEGETATE AS
NOTED ON THE REVEGETATION PLAN.

PROJECT LIMITS

EXISTING CULVERT

SILT FENCE (TYP.)
(SEE STD. DETAIL 205-01)

EXISTING CULVERT

AQUATIC SHELF

FORESTED
WETLAND A

ANALYSIS POINT 1

CLASS 2 RIPRAP

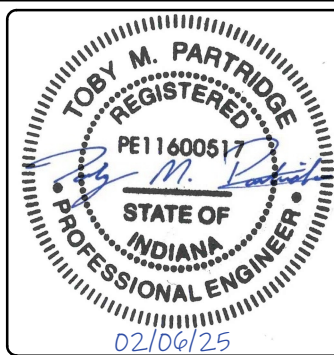
EAST SPILLWAY
(SEE DETAIL 3, SHEET 13)

OPEN WATER F

MATCHLINE - SEE SHEET CS104

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SITE PLAN - CS102

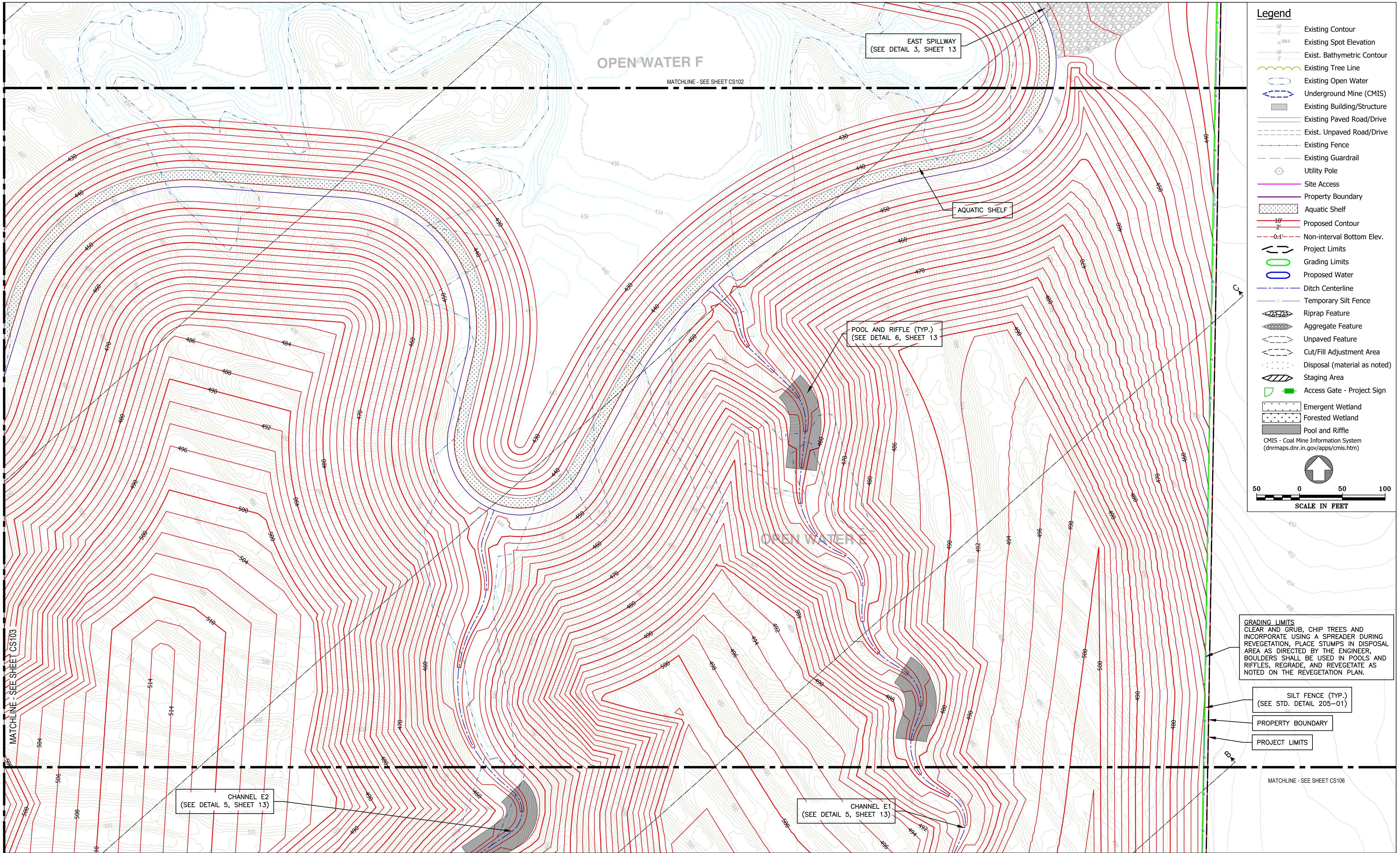
STATE OF INDIANA
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SCALE
1" = 50'

PROJECT
E008-363

SHEET
4 OF 13

SITE
0147



Legend

- Existing Contour
- Existing Spot Elevation
- Exist. Bathymetric Contour
- Existing Tree Line
- Existing Open Water
- Underground Mine (CMIS)
- Existing Building/Structure
- Existing Paved Road/Drive
- Exist. Unpaved Road/Drive
- Existing Fence
- Existing Guardrail
- Utility Pole
- Site Access
- Property Boundary
- Aquatic Shelf
- Proposed Contour
- Non-Interval Bottom Elev.
- Project Limits
- Grading Limits
- Proposed Water
- Ditch Centerline
- Temporary Silt Fence
- Riprap Feature
- Aggregate Feature
- Unpaved Feature
- Cut/Fill Adjustment Area
- Disposal (material as noted)
- Staging Area
- Access Gate - Project Sign
- Emergent Wetland
- Forested Wetland
- Pool and Riffle
- CMIS - Coal Mine Information System (dnrm.dnr.in.gov/apps/cmris.htm)

50 0 50 100
SCALE IN FEET

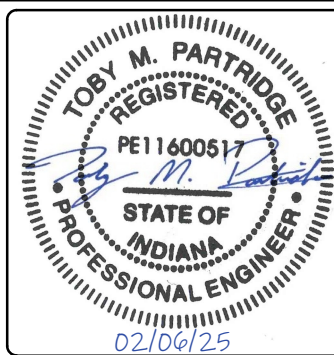
GRADING LIMITS
CLEAR AND GRUB, CHIP TREES AND INCORPORATE USING A SPREADER DURING REVEGETATION, PLACE STUMPS IN DISPOSAL AREA AS DIRECTED BY THE ENGINEER. BOULDERS SHALL BE USED IN POOLS AND RIFFLES, REGRADE, AND REVEGETATE AS NOTED ON THE REVEGETATION PLAN.

SILT FENCE (TYP.)
(SEE STD. DETAIL 205-01)

PROPERTY BOUNDARY

PROJECT LIMITS

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SITE PLAN - CS104

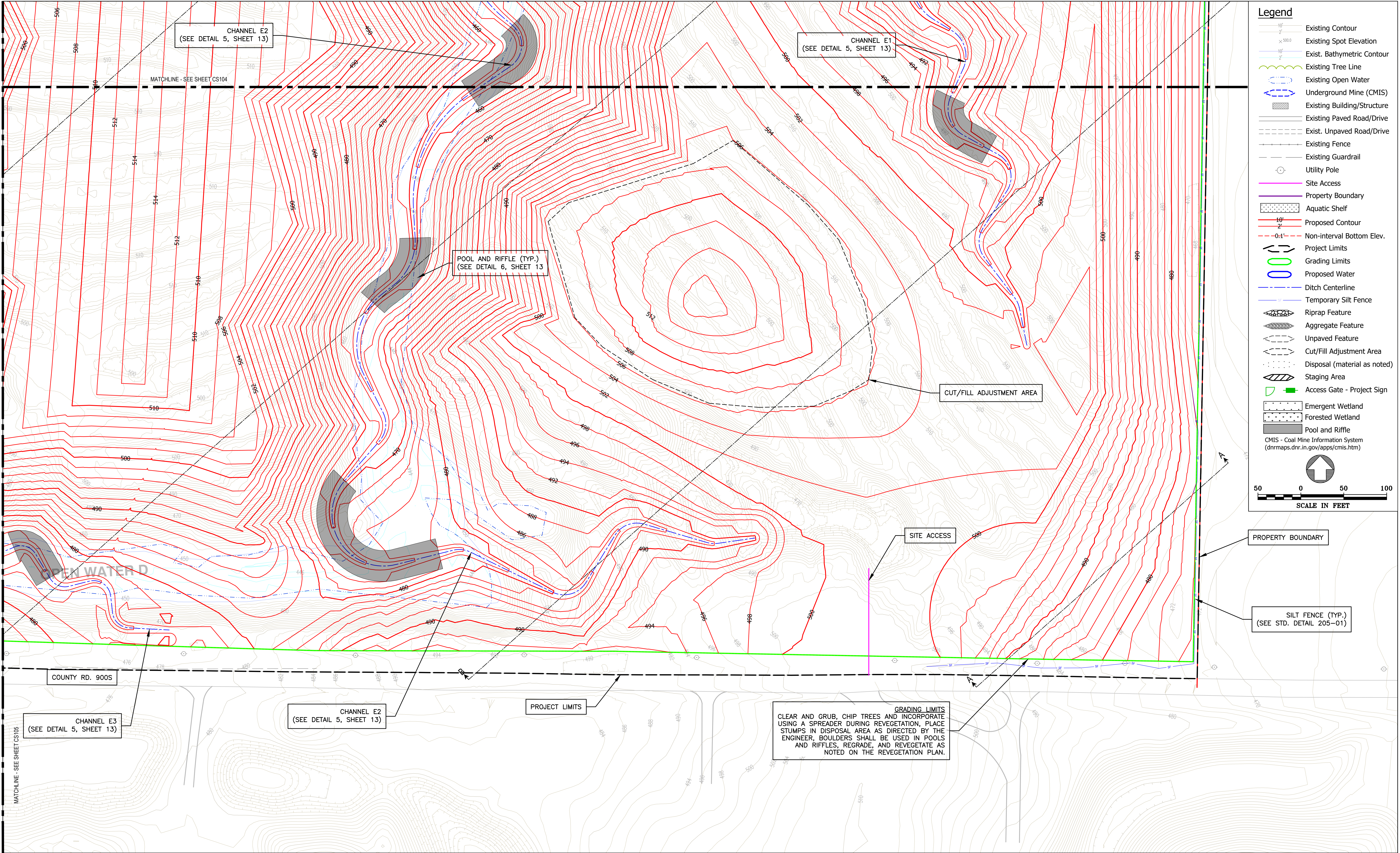
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE
1" = 50'

PROJECT
E008-363

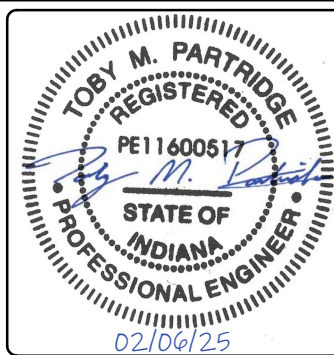
SHEET
6 OF 13

SITE
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SITE PLAN - CS106
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SCALE
1" = 50'

PROJECT
E008-363

SHEET
8 OF 13

SITE
0147

Legend

Existing Grade

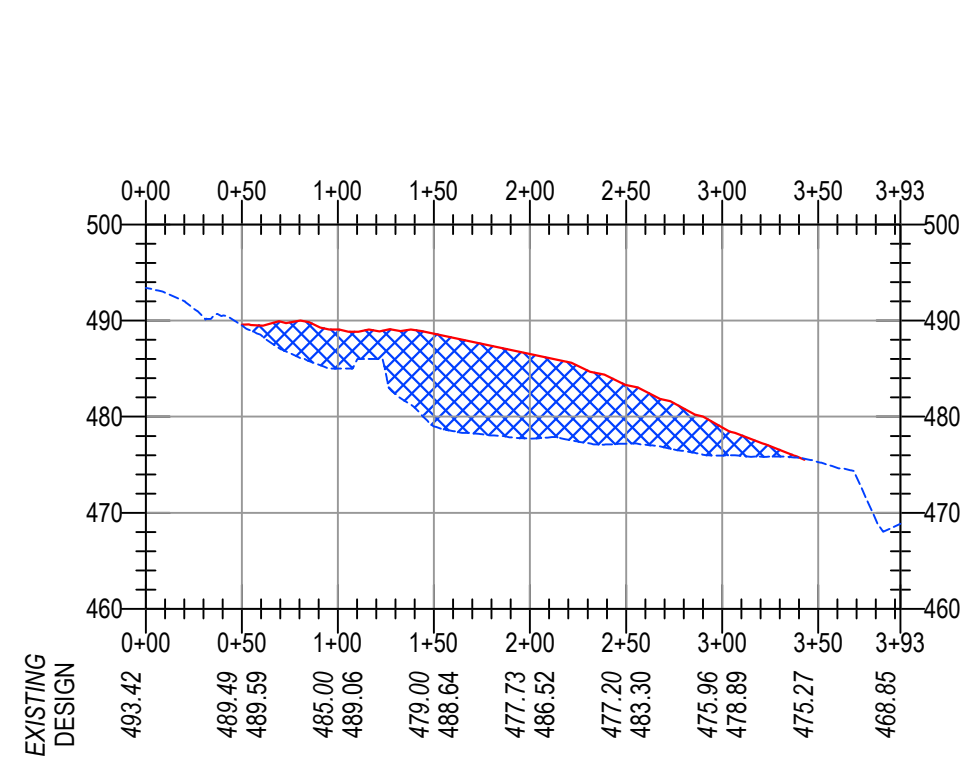
Design Grade

Existing Water

Proposed Water

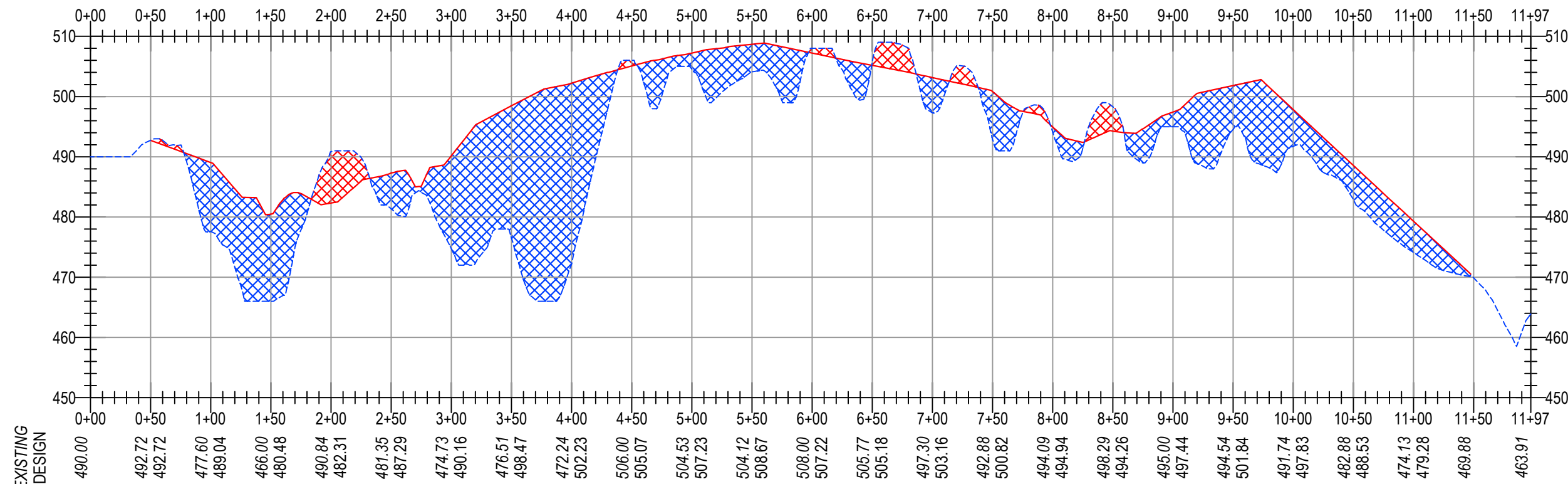
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Fill



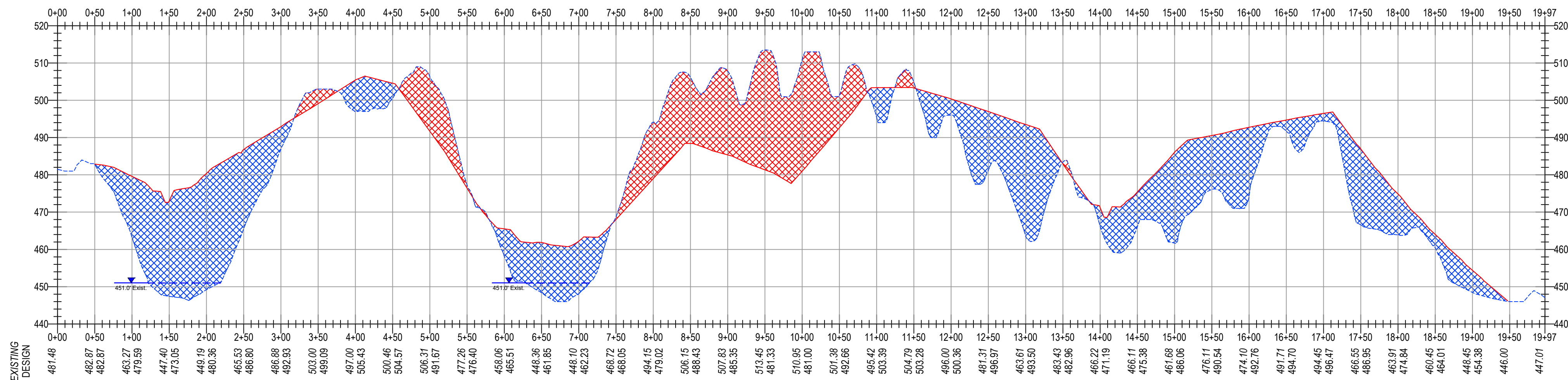
SECTION A-A'

SCALE: 1" = 100' H, 1" = 20' V



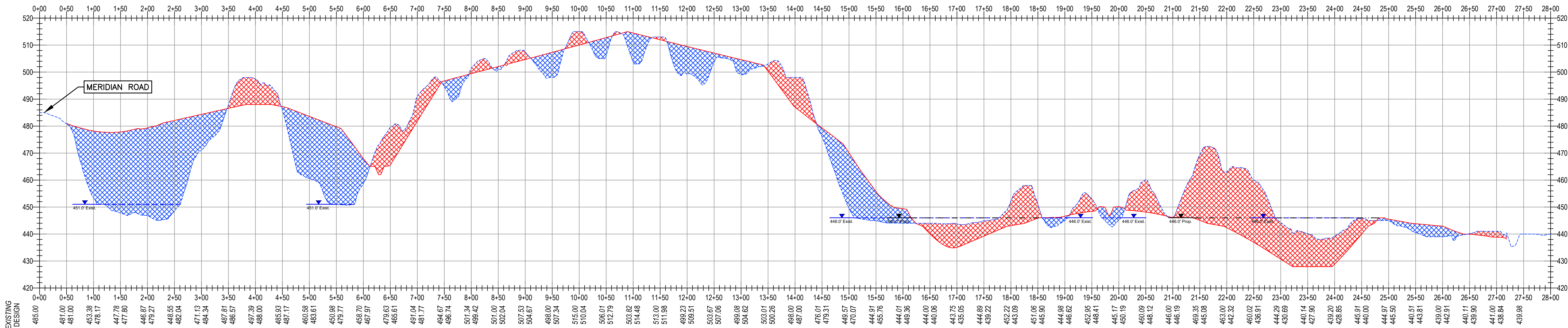
SECTION B-B'

SCALE: 1" = 100' H, 1" = 20' V



SECTION C-C'

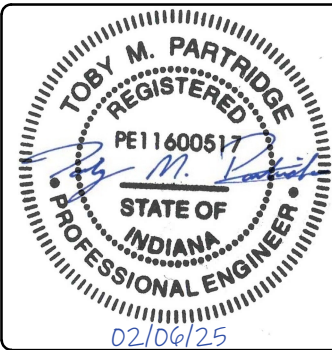
SCALE: 1" = 100' H, 1" = 20' V



SECTION D-D'

SCALE: 1" = 100' H, 1" = 20' V

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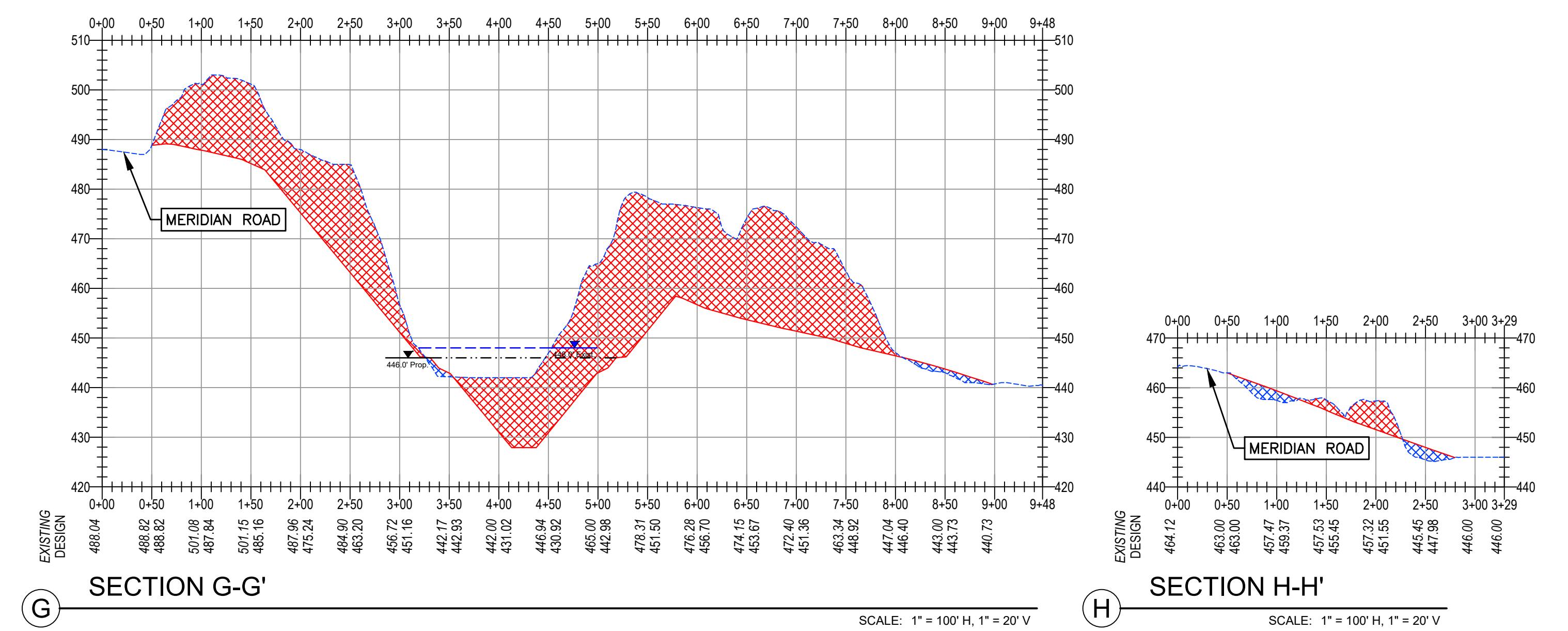
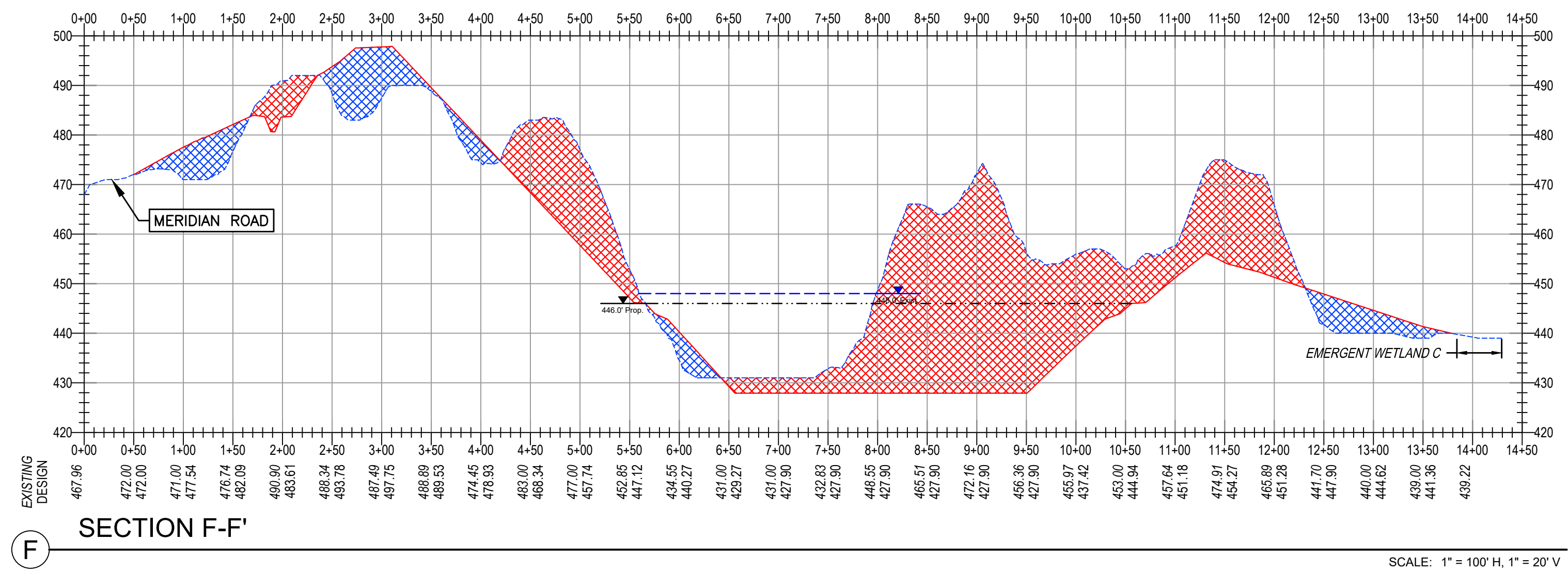
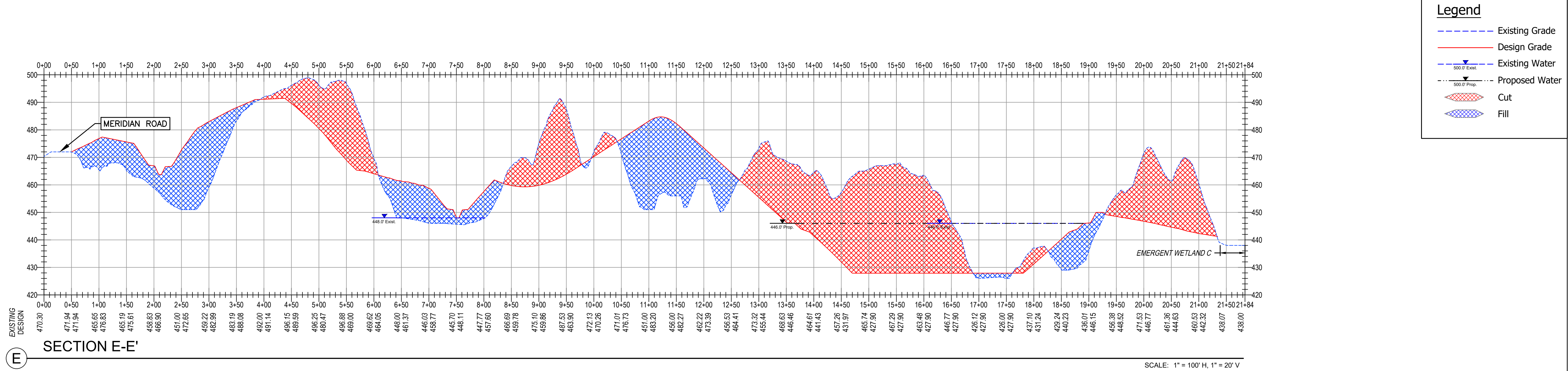
SECTIONS
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE
AS NOTED

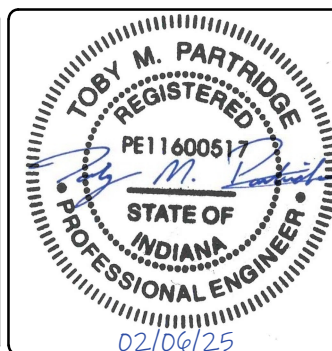
PROJECT
E008-363

SHEET
9 OF 13

SITE
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SCALE
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PROJECT
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SHEET
10 OF 13

SITE
0147

Legend

Existing Grade

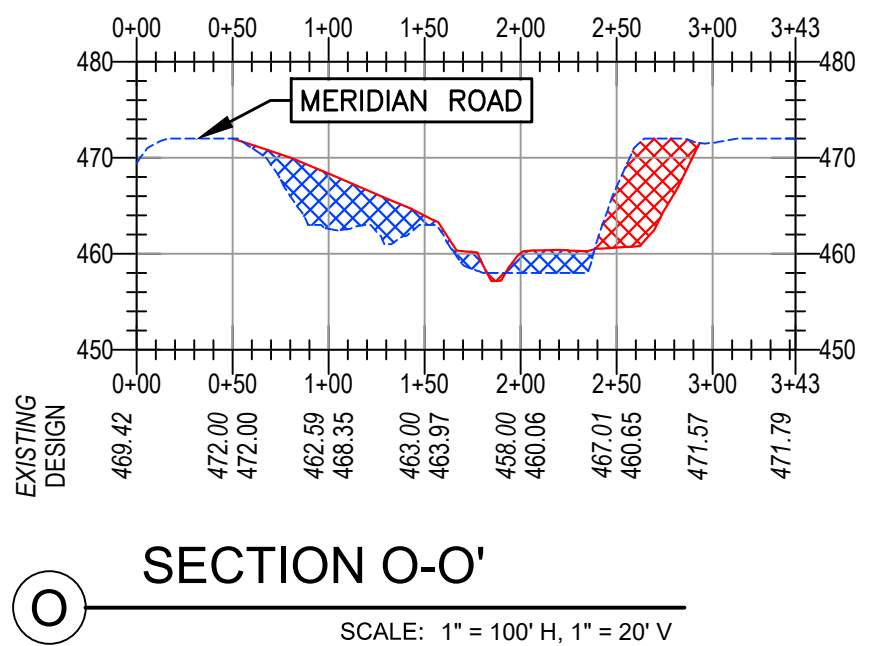
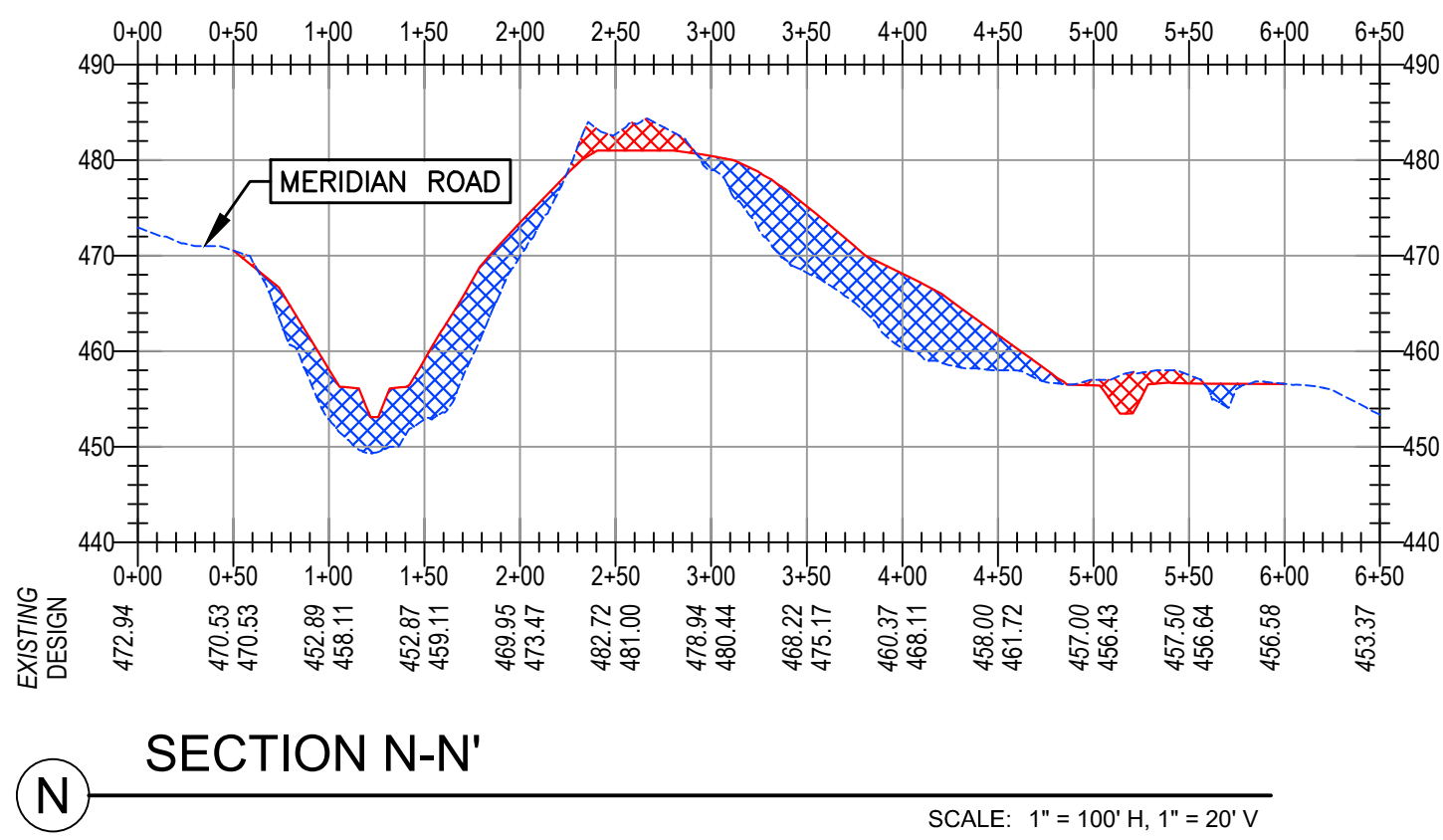
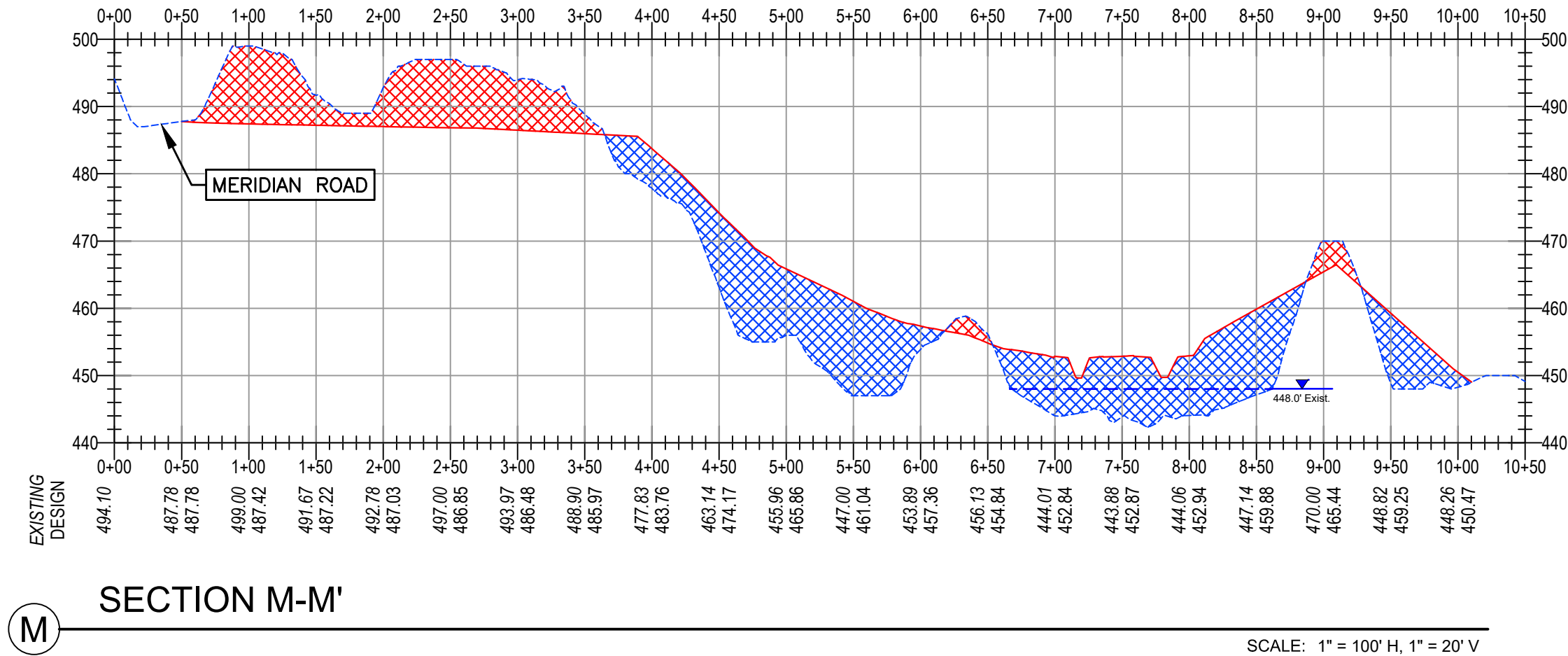
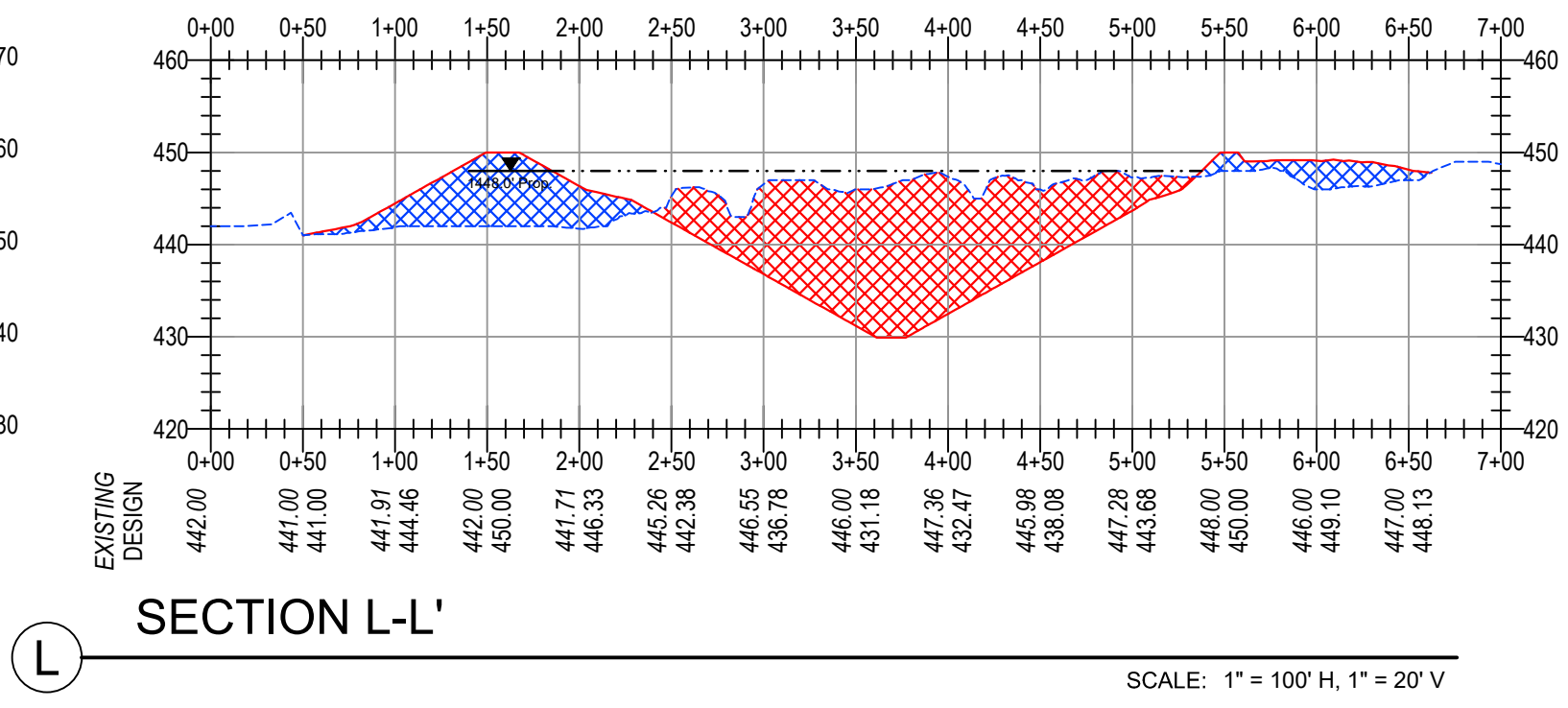
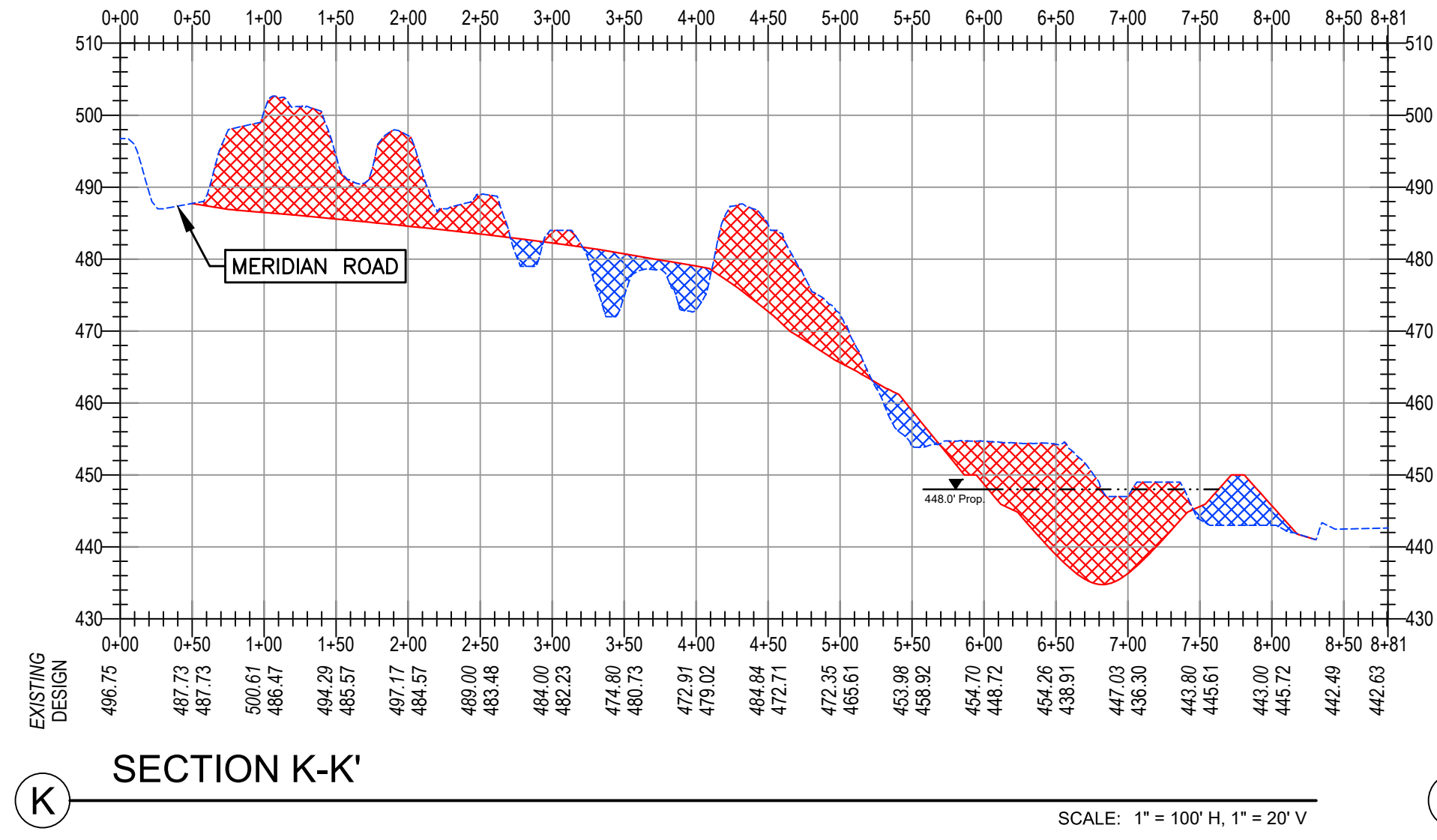
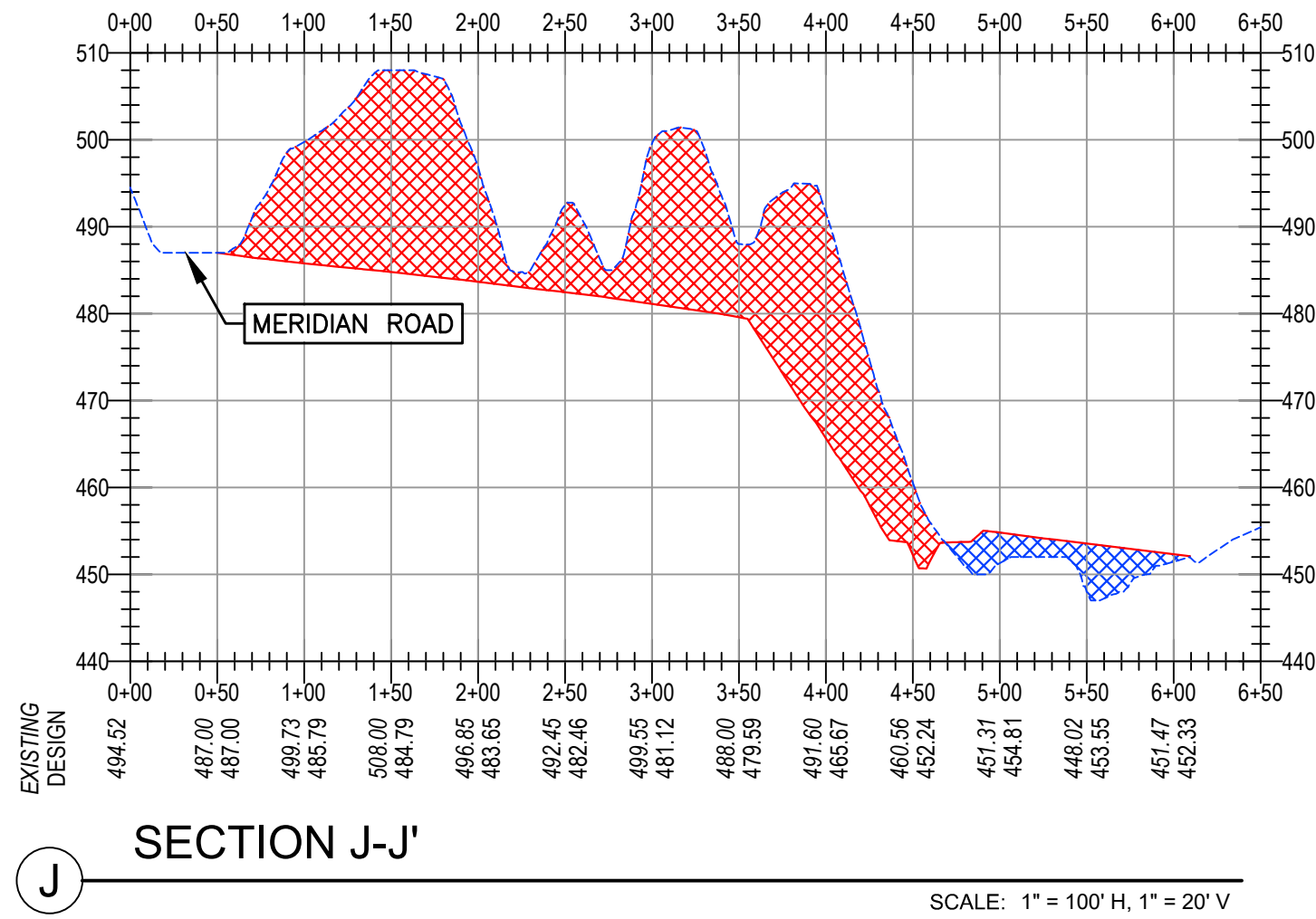
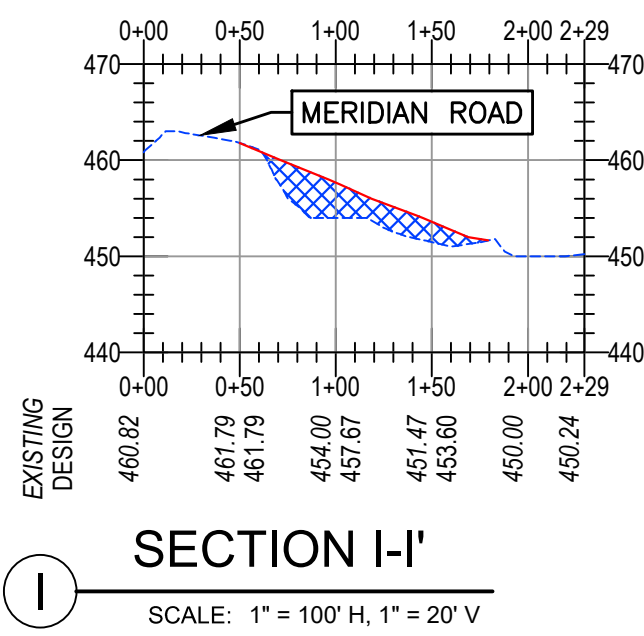
Design Grade

Existing Water

Proposed Water

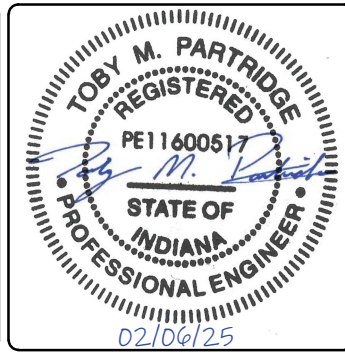
Cut

Fill



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SECTIONS

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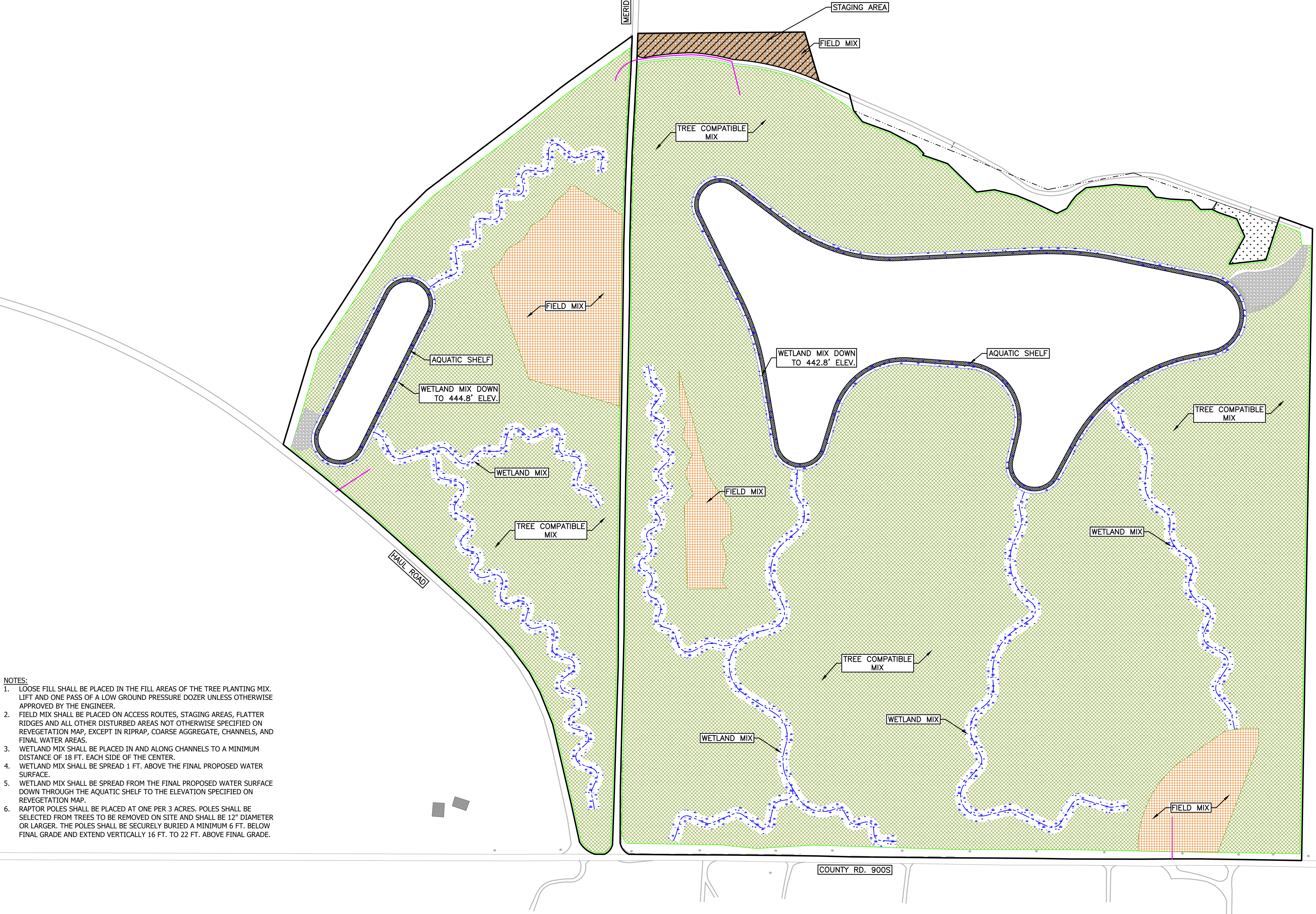
SCALE
AS NOTED

PROJECT
E008-363

SHEET
11 OF 13

SITE
0147

**SEE SECTION 401.08 OF THE 2024 AML
STANDARD SPECIFICATIONS FOR SEED MIXES



- NOTES:
1. LOOSE FILL SHALL BE PLACED IN THE FILL AREAS OF THE TREE PLANTING MIX. LIFT AND ONE PASS OF A LOW GROUND PRESSURE DOZER UNLESS OTHERWISE APPROVED BY THE ENGINEER.
 2. FIELD MIX SHALL BE PLACED ON ACCESS ROUTES, STAGING AREAS, FLATTER RIDGES AND ALL OTHER DISTURBED AREAS NOT OTHERWISE SPECIFIED ON REVEGETATION MAP, EXCEPT IN RIPRAP, COARSE AGGREGATE, CHANNELS, AND FINAL WATER AREAS.
 3. WETLAND MIX SHALL BE PLACED IN AND ALONG CHANNELS TO A MINIMUM DISTANCE OF 18 FT. EACH SIDE OF THE CENTER.
 4. WETLAND MIX SHALL BE SPREAD 1 FT. ABOVE THE FINAL PROPOSED WATER SURFACE.
 5. WETLAND MIX SHALL BE SPREAD FROM THE FINAL PROPOSED WATER SURFACE DOWN THROUGH THE AQUATIC SHELF TO THE ELEVATION SPECIFIED ON REVEGETATION MAP.
 6. 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 6 FT. BELOW FINAL GRADE AND EXTEND VERTICALLY 16 FT. TO 22 FT. ABOVE FINAL GRADE.

LEGEND

Building/Structure

Paved Road/Drive

Unpaved Road/Drive

Project Limits

Grading Limits

Proposed Water

Site Access

Staging Area

Riprap Feature

Aggregate Feature

Unpaved Feature

Field Mix

Wetland Mix

Tree Compatible Mix

Prairie Mix

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

SCALE IN FEET

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MOON TOWNSHIP, PA 15108

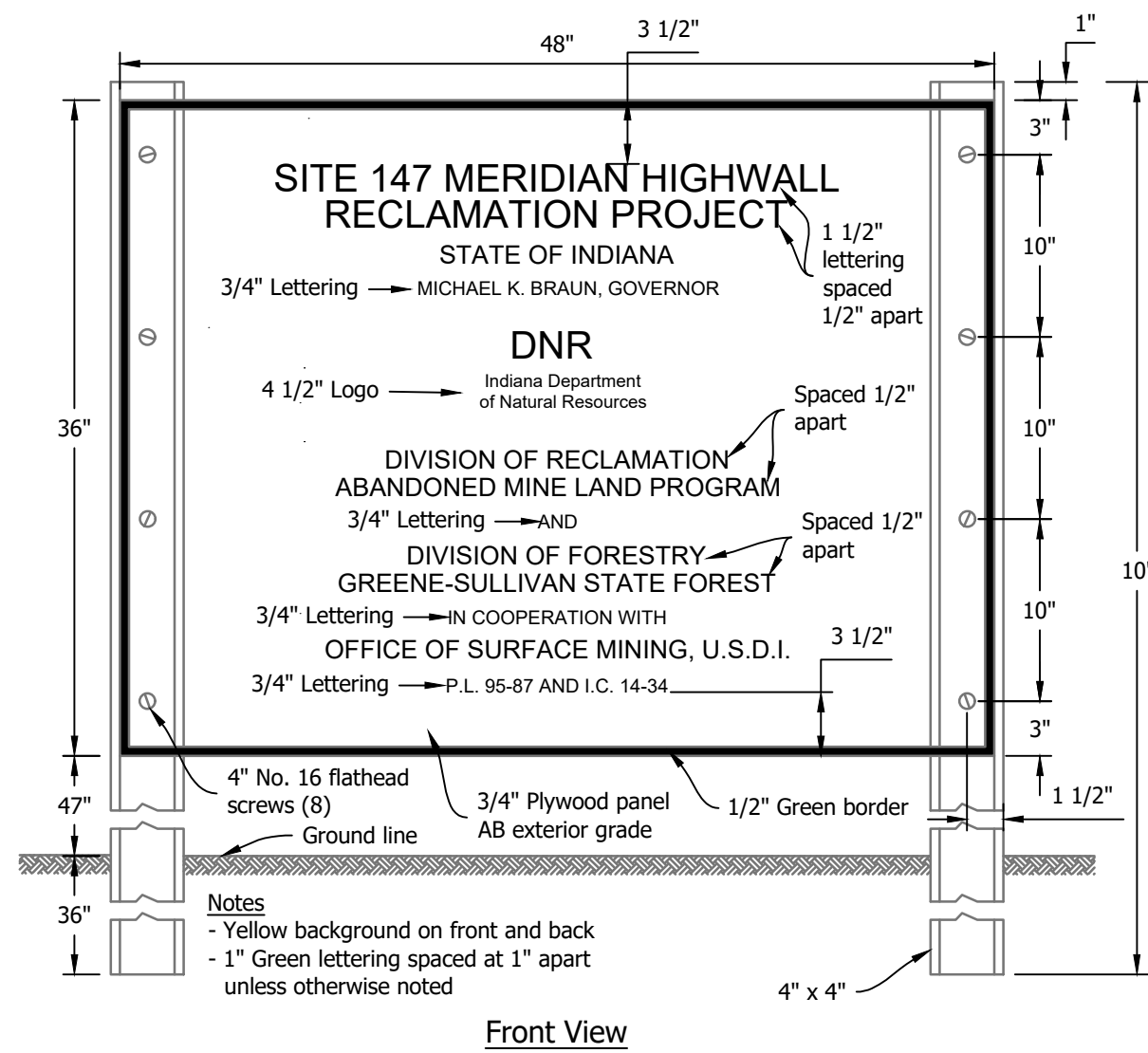
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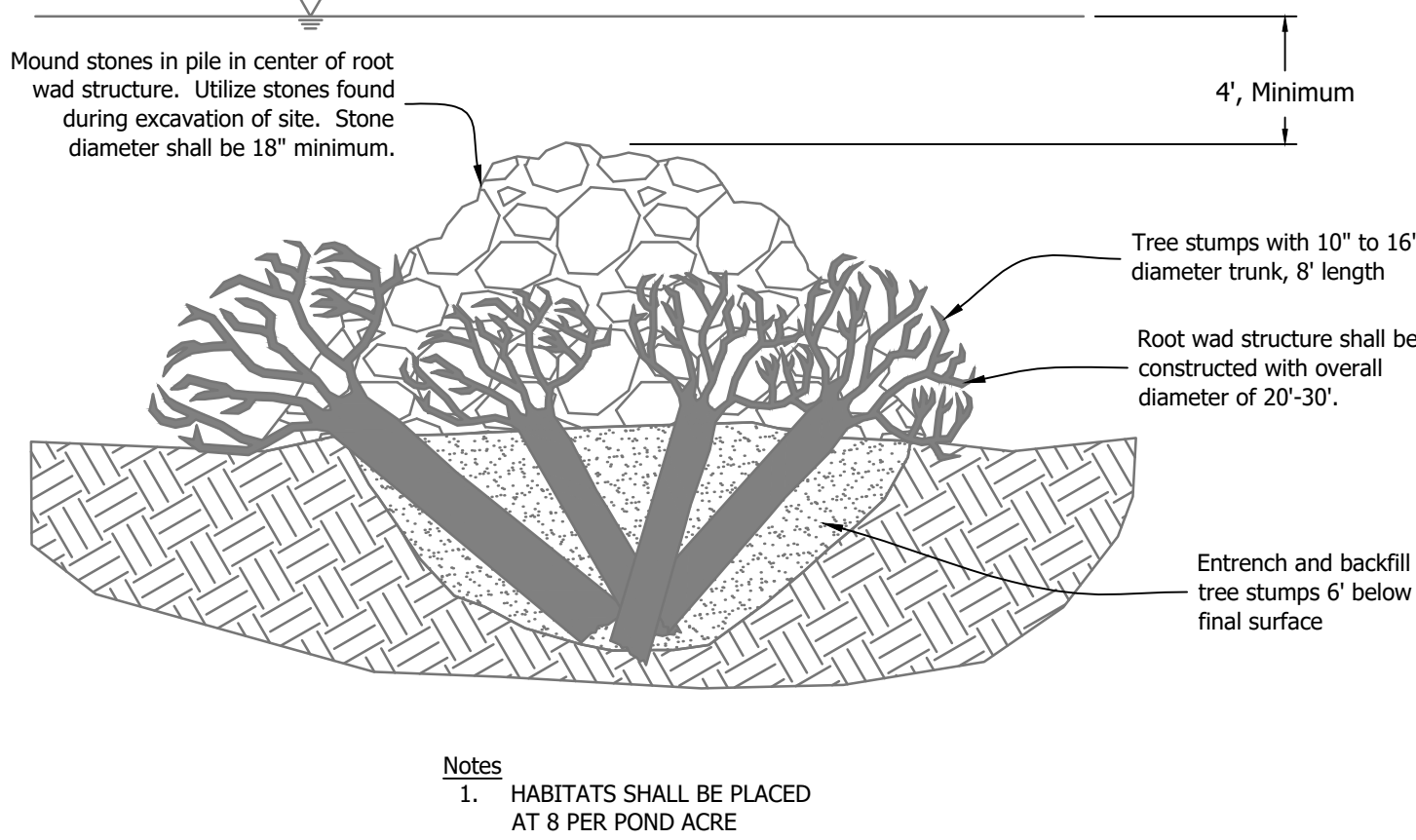
REVEGETATION PLAN
STATE OF INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION

SCALE 1" = 150'
PROJECT E008-363

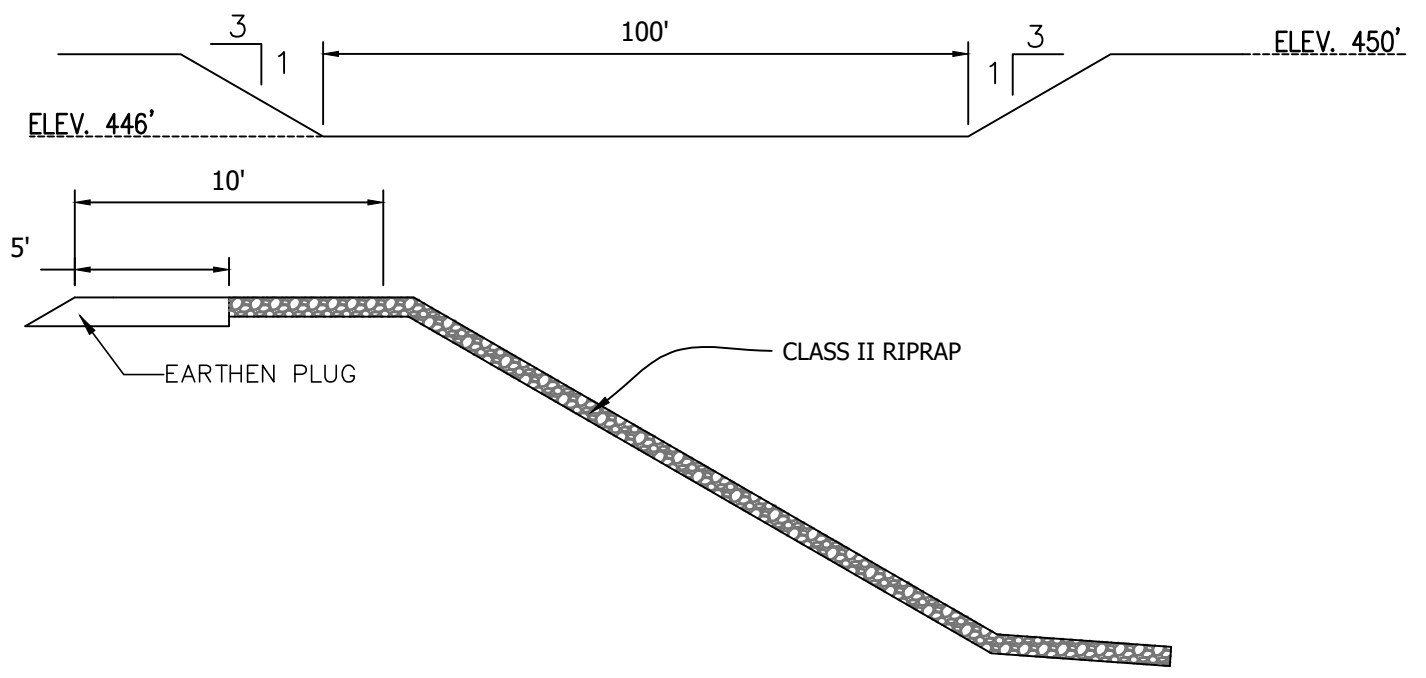
SHEET 12 OF 13
SITE 0147



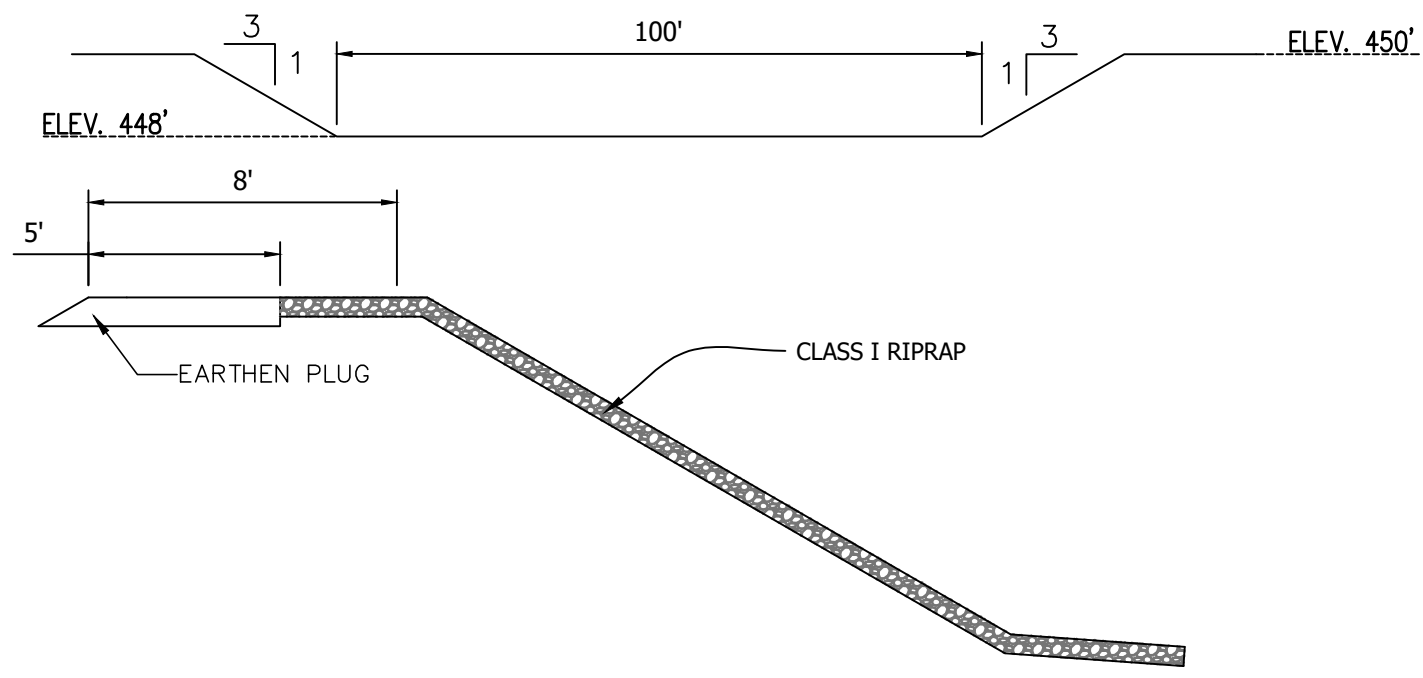
1 Project Sign
Not to Scale



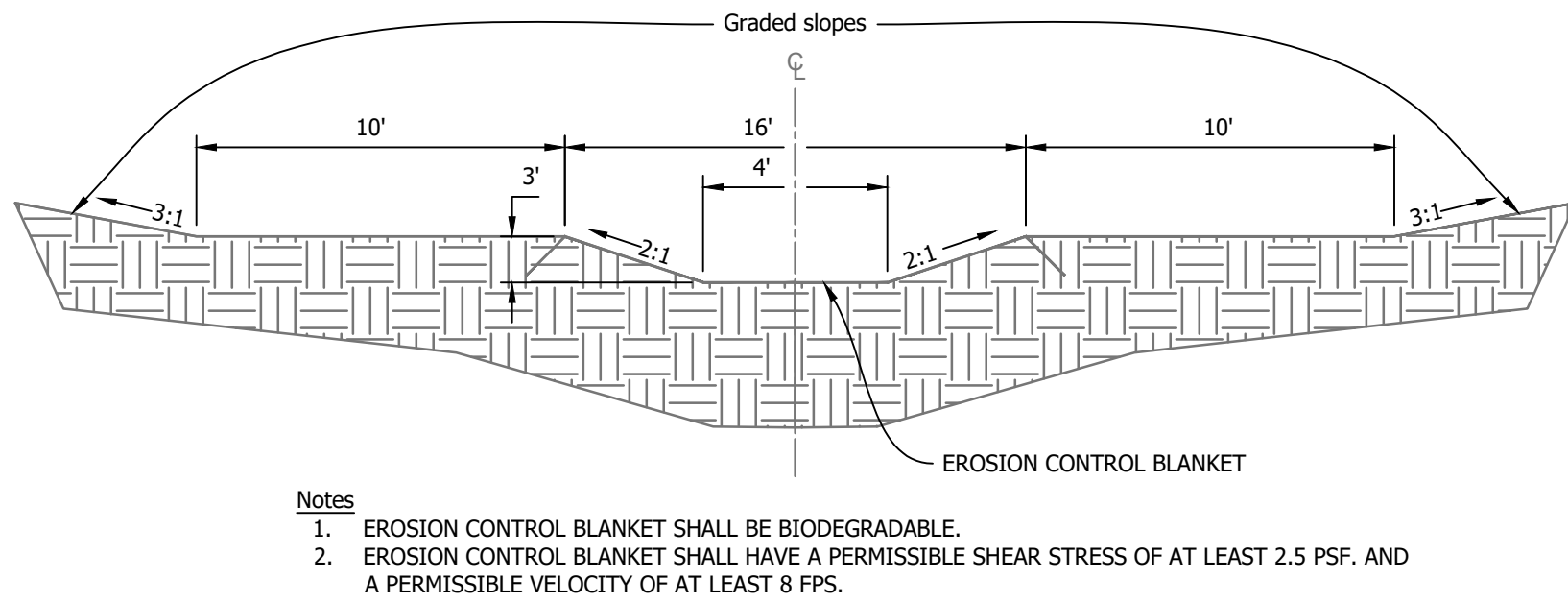
2 Fish Habitat Structure - Root Wad Hump
Not to Scale



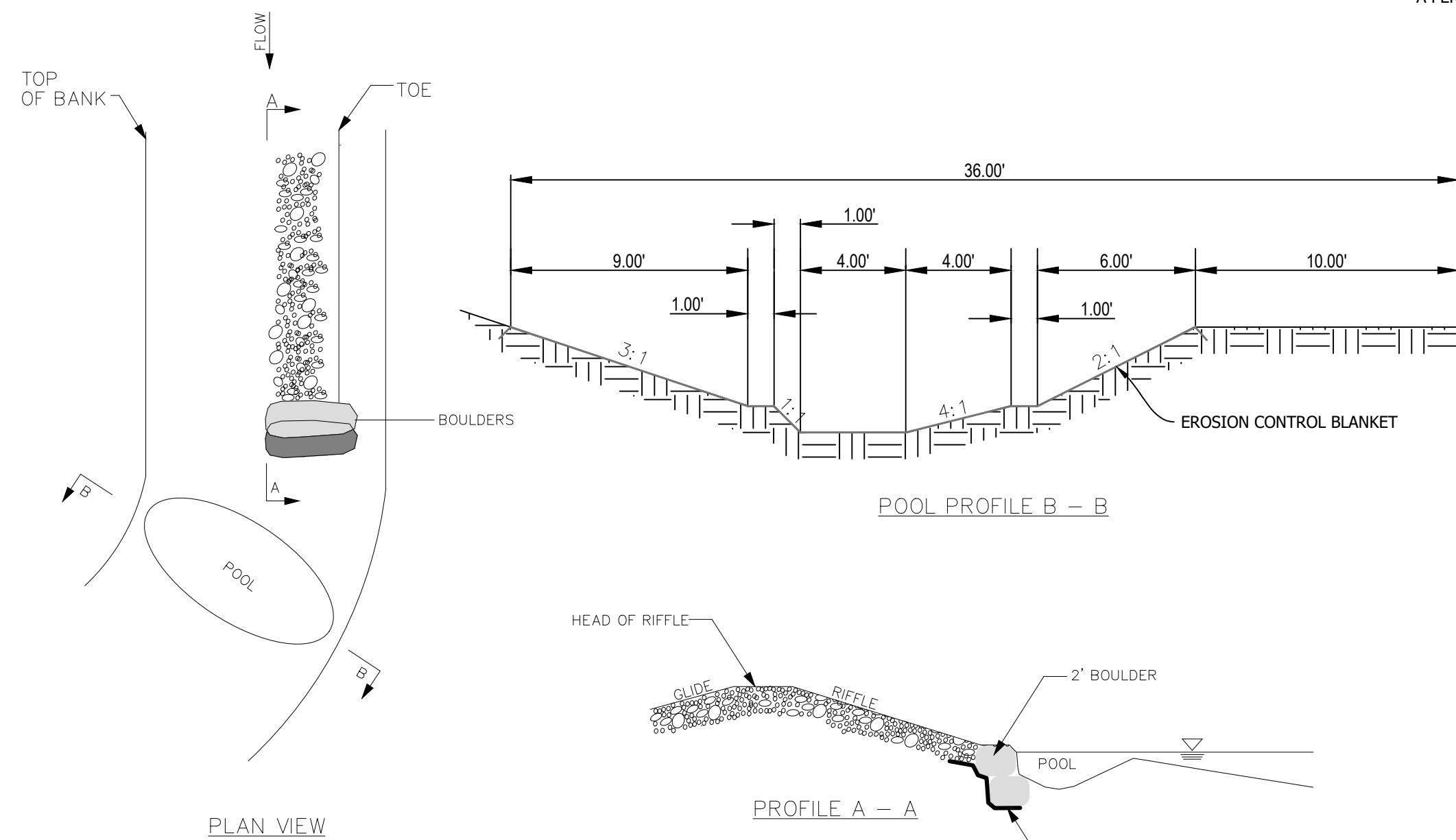
3 East Pond Spillway
Not to Scale



4 West Pond Spillway
Not to Scale

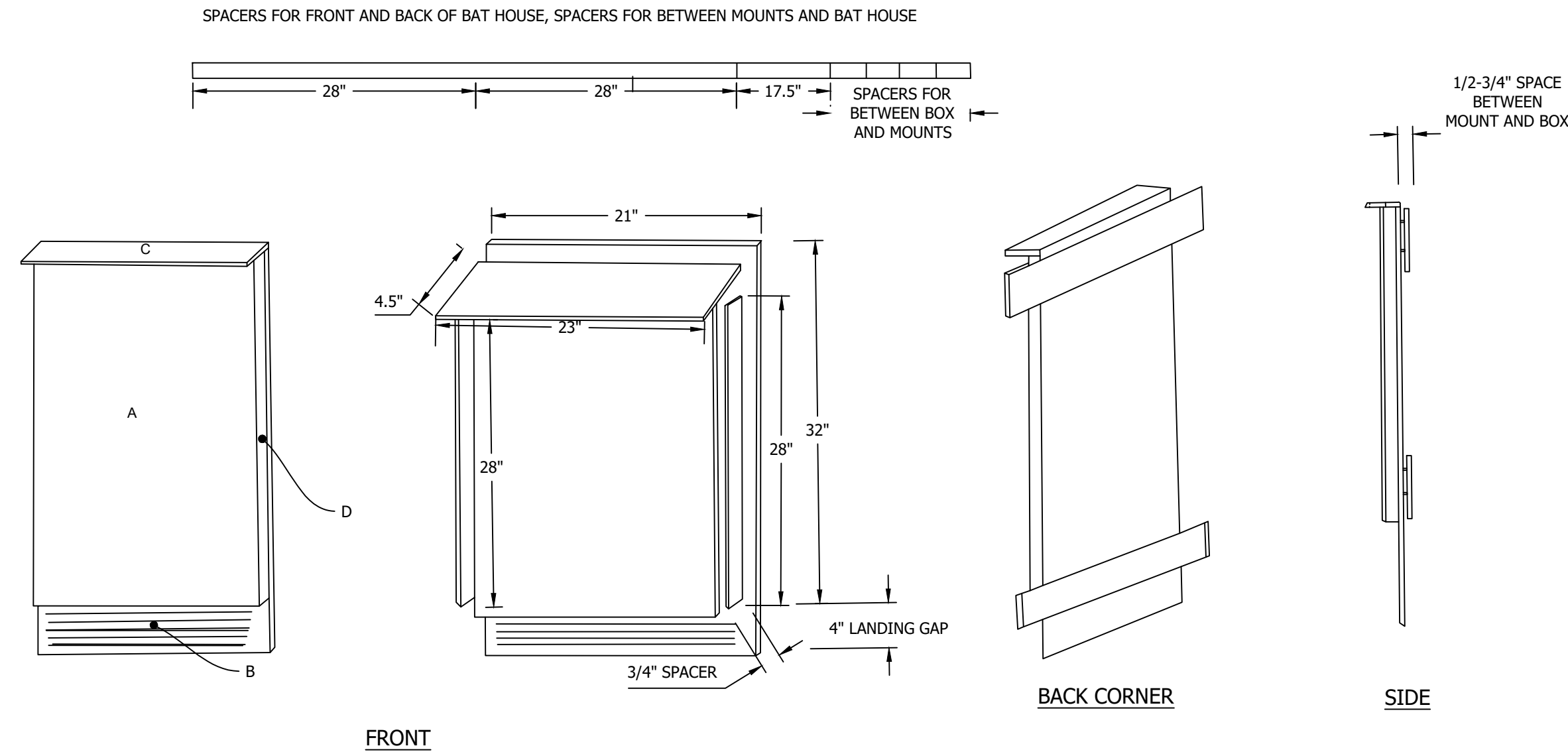


5 Ditch Lines E1-E7, W1-W3 Type 1
Not to Scale



- NOTES:
1. FOOTERS SHALL BE INSTALLED SUCH THAT 1/4 TO 1/3 OF THE LENGTH IS DOWNSTREAM OF THE HEADER.
 2. SOIL SHALL BE WELL COMPACTED AROUND BURIED PORTION OF FOOTERS WITH THE BUCKET OF EXCAVATOR.
 3. INSTALL NON-WOVEN FILTER FABRIC UNDERNEATH FOOTER BOULDERS.
 4. UNDERCUT THE RIFFLE ELEVATION 12 INCHES TO ALLOW FOR A LAYER OF STONE.
 5. FILL TRENCH WITH GRADED MIX OF CLASS A, CLASS B, AND #57 STONE TO THE BED ELEVATION OF THE CHANNEL.
 6. BOULDER STEPS MUST BE EXTENDED TO A MINIMUM OF 2' INTO THE BANK. USE SILL BOULDERS IF NECESSARY. BOULDERS SHALL BE RECOVERED FROM SITE.
 7. POOLS TO BE INSTALLED ON OUTSIDE CURVES ONLY.
 8. POOL SHOWN IS FOR LEFT POOLS ONLY. MIRROR DETAIL FOR RIGHT POOLS.
 9. FOR EVERY 1' OF ELEVATION CHANGE IN POOL AND RIFFLE AREAS, CUT OFF POOL WITH EARTH AND BEGIN ANOTHER POOL AND RIFFLE.
 10. EROSION CONTROL BLANKET SHALL BE BIODEGRADABLE.
 11. EROSION CONTROL BLANKET SHALL HAVE A PERMISSIBLE SHEAR STRESS OF AT LEAST 2.5 PSF. AND A PERMISSIBLE VELOCITY OF AT LEAST 8 FPS.

6 Pool and Riffle
Not to Scale

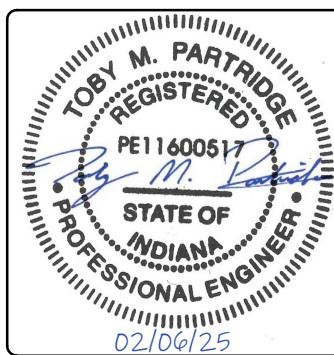


- Construction procedure:
1. Mark wood and cut out all parts as per diagram.
 2. Roughen interior and landing surfaces (B) with a utility knife, cutting horizontal lines 1/2" apart, 1 / 16" to 1 / 32" deep on the back wall.
 3. Apply 2 coats of black, water-based stain to interior surfaces. Do not use paint as it will fill the grooves.
 4. Drill pilot holes and screw back (B) to side and top spacers, caulking wherever wood meets wood.
 5. Drill pilot holes and screw front (A) to sides and top spacers. again, caulking all seams.
 6. Caulk, then drill pilot holes and screw roof (C) to front (A) back (B) and side and top spacers, sand if necessary to make sure angles match.
 7. Use a utility knife to cut a line on underside of roof to act as a drip edge.
 8. Attach mounts to back of box, making sure there is 1/2-3/4" between the box and the mounts using spacers.
 9. Prime the exterior of the house.
 10. Paint the exterior with 2 coats of medium brown paint. Stain the landing pad on back wall (B) to make sure no paint fills the grooves.

- NOTES
- Materials needed:
- See diagram for measurements
- One lb. 1 5/8" coated deck or exterior grade screws 20-25 1 1/4" coated deck or exterior grade screws
- One quart black, water-based stain, exterior grade
- One quart water-based primer, exterior grade
- One quart flat water based paint or stain, exterior grade
- One tube of paintable exterior grade caulk
- One 1" x 2" x 8' x 1 3/4" finished) cedar or pine furring strip for spacers
- Suggested wood:
- We suggest using rough-sawn black locust, white oak, cedar or old barn wood because the bat house will last longer using these naturally decay-resistant materials.
- Mounting:
- Bat boxes shall be placed two (2) per raptor pole. They should be secured 12' to 20' above the ground. These 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.

7 SINGLE CHAMBER BAT HOUSE
Not to Scale

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DETAILS
STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

SCALE
AS NOTED

PROJECT
E008-363

SHEET
13 OF 13

SITE
0147