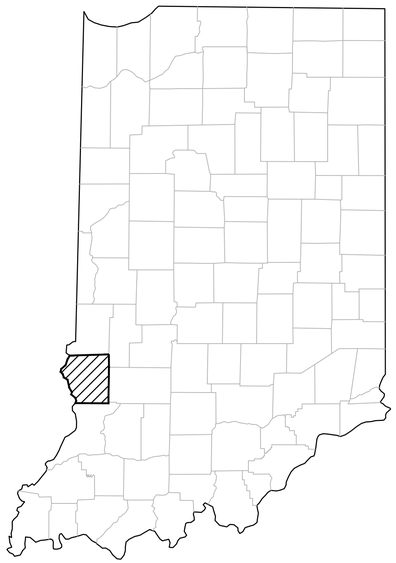
RESERVOIR NO. 29

PROJECT NUMBER

D23128

SULLIVAN COUNTY



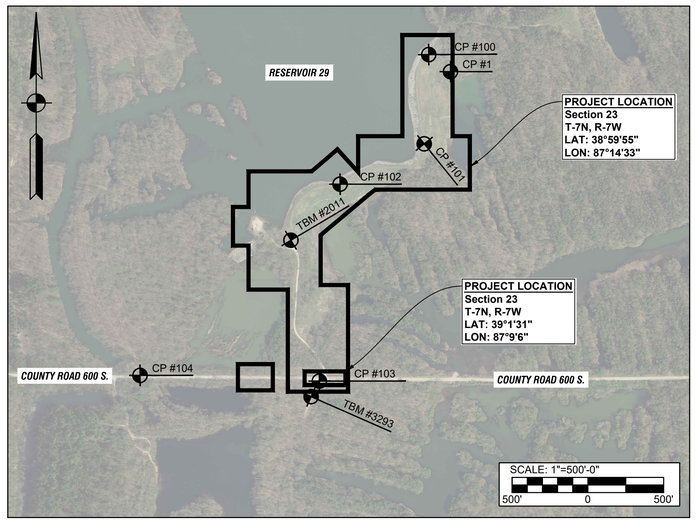
STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

RESERVOIR NO. 29
DAM REHABILITATION, ENTRANCE IMPROVEMENTS AND COUNTY ROAD 600 S ARMORING
PROJECT NO. DEL2515208032/E008-376

INSTALLATION OF CUTOFF WALL, REMOVAL AND REGRADE OF MID SLOPE SURFACE DRAIN, AND WOODY DEBRIS REMOVAL FROM RESERVOIR 29 DAM; REPLACEMENT OF EXISTING CULVERTS WITH REINFORCED CONCRETE BOX CULVERT, ADDITION OF TIED CONCRETE MAT NEAR RESERVOIR 29A OUTLET, AND REVEGETATION OF ALL DISTURBED AREAS.

CONTROL POINT INFORMATION			
IDENTIFIER	**NORTHING**	**EASTING**	**DESCRIPTION**
CP-1	2908043.16	1366515.68	CP /TEMP
CP-100	2907899.66	1366628.22	CP /CAPRBR
CP-101	2907869.98	1366039.24	CP /CAPRBR
CP-102	2907314.43	1365773.18	CP /CAPRBR
CP-103	2907177.59	1364473.76	CP /MAGSPK
CP-104	2905994.27	1364511.28	CP /MAGSPK

TEMPORARY BENCHMARK INFORMATION		
IDENTIFIER	**ELEVATION**	**DESCRIPTION**
TBM-2011	537.30	TBM /BOAT SPK SET EAST SIDE WOOD POST 1 FT ABOVE GRADE
TBM-3293	516.52	TBM /BOAT SPIKE SET NORTH SIDE WOOD POST 1 FT ABOVE GRADE



PROJECT LOCATION MAP

THE MOST-CURRENT ABANDONED MINE LANDS PROGRAM (AML) STANDARD SPECIFICATIONS SHALL BE USED WITH THIS PLAN SET.

INDEX

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10	PLAN VIEW - LINE "A"
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15	CULVERT PROFILE
16	CULVERT DETAILS
17	ROAD RESURFACE PLAN VIEW - LINE "B"
18	PROFILE VIEW - LINE "B"
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26	EROSION CONTROL DETAILS
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28 - 37	CROSS SECTIONS - LINE "A"
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42	EXISTING SITE MAP

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.

WATER:
PLEASANTVILLE WATER
P.O. BOX 426
LINTON, IN 47441
PHONE: (812) 847-1800

TELECOM:
SMITHVILLE COMMUNICATIONS
1600 W. TEMPERANCE ST.
ELLETTSVILLE, IN 47429
PHONE: (800) 742-4084

SULLIVAN CO. HWY. DEPT.:
1469 E. CO. ROAD 75 N
SULLIVAN, IN 47882
CONTACT: JERRY NETHERLAIN
PHONE: (812) 268-5457

Indiana 811 Know what's below. 811 before you dig.

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DALE A. GICK REGISTERED PE10100195 STATE OF INDIANA PROFESSIONAL ENGINEER

PLANS PREPARED BY: COMMONWEALTH ENGINEERS (317) 888-1177
PHONE NUMBER

CERTIFIED BY: Dale A. Gick 10/15/2025
DATE

APPROVED FOR LETTING: MM/DD/YYYY
DATE

SCALE: AS NOTED

SHEET: 01 OF 42

PROJECT NUMBER: DEL2515208032/E008-376

GENERAL ABBREVIATIONS

A	AIR
AB	ANCHOR BOLT
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
@	AT
APP.	APPARENT
ATT	AERATION TANK TRANSFER
AUTO	AUTOMATIC
AVG	AVERAGE
B	BAFFLE
BLDG	BUILDING
BM	BENCH MARK
BOT	BOTTOM
BRG	BEARING
CFM	CUBIC FEET PER MINUTE
CL	CENTERLINE
CO	CLEAN OUT
COL/C	COLUMN
CONC	CONCRETE
COP	COPPER
CJ	CONSTRUCTION JOINT
CW	COLD WATER
CY	CUBIC YARD
D	DRAIN
DEC	DECANT
DIA	DIAMETER
DIM	DIMENSION
DI	DUCTILE IRON PIPE
DL	DEAD LOAD
DSPT	DOWN SPOUT
DWG	DRAWING
E	ELECTRICAL CONDUIT
EA	EACH
EF	EACH FACE
EFFL	EFFLUENT
EL	ELEVATION
EW	EACH WAY
EX	EXISTING
EXF	EXHAUST FAN
EXP JP	EXPANSION JOINT
F	FILTER
FCAR	FLANGED COUPLING ADAPTER, RESTRAINED
FD	FLOOR DRAIN
FDN	FOUNDATION
FH	FIRE HYDRANT
FLD	FILTRATE DRAIN
FLG	FLANGE
FL	FLUSHING LINE
FLR	FLOOR
FM	FORCE MAIN
FRP	FIBER REINFORCED PLASTIC
FT	FEET OR FOOT
FTG	FOOTING
FW	FINISHED WATER
G	GAS
GALV	GALVANIZED
GEN	GENERAL
GRD	GROUND OR GRADE
HB	HOSE BIBB
HORIZ	HORIZONTAL
HP	HORSEPOWER
HW	HOT WATER
ID	INSIDE DIAMETER
IJ	ISOLATION JOINT
INV	INVERT
IP	IRON PIN
LAV	LAVATORY
LB	POUND
LL	LIVE LOAD
LLV	LONG LEG VERTICAL
LTG	LIGHTING
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MGD	MILLIONS GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM, MINUTE
MJ	MECHANICAL JOINT
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTACT
NO	NORMALLY OPEN
NO.	NUMBER
NPW	NON-POTABLE WATER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPP	OPPOSITE
PB	PULL BOX
PE	POLYETHYLENE EXP. JT.
	MATERIAL
P/L	PROPERTY LINE
POJ	PUSH ON JOINT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
R	RECIRULCATION
RAD	RADIUS
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REINF	REINFORCING
REQ'D	REQUIRED
R/W (ROW)	RIGHT-OF-WAY
SAN	SANITARY
SAS	SANITARY SEWER
SCH	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SL	SAMPLE LINE
SOS	STORM SEWER
SP	STOP PLATE
SQ	SQUARE
STD	STANDARD
S STL, SS	STAINLESS STEEL
STL	STEEL
SUP	SUPERNATANT
SY	SQUARE YARD
TOS	TOP OF SLAB
TOW	TOP OF WALL
TW	TERTIARY WATER
TYP	TYPICAL
V	VACUUM OR VALVE
VAR	VARIES
VERT	VERTICAL
W	WEIR
W/	WITH
W/O	WITHOUT
WAS	WASTE ACTIVATED SLUDGE
WC	WATER CLOSET
WH	WATER HEATER
WL	WATER LINE
WWF	WELDED WIRE FABRIC
YH	YARD HYDRANT

GENERAL NOTES

1. ALL PROPERTY AND RIGHT-OF-WAY LINE INFORMATION SHOWN IN DRAWING SET ARE APPARENT AND SHALL NOT BE DEEMED EXACT LOCATIONS, UNLESS OTHERWISE NOTED. INFORMATION WAS OBTAINED VIA "INDIANA ON-LINE" GIS SHAPE FILES.
2. EXISTING UTILITY INFORMATION SHOWN IN DRAWING SET, MEETS "ASCE 36-02" QUALITY LEVEL **"C"**, UNLESS OTHERWISE NOTED.

   UTILITY COORDINATION AND PROJECT DIRECTION OF EXISTING SUBSURFACE UTILITY DATA:

   UTILITY QUALITY LEVEL DESCRIPTIONS:

   UTILITY QUALITY LEVEL A - PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATIONS OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. ACCURACY OF LOCATION MATCHES PROJECT SURVEY TOLERANCE.

   UTILITY QUALITY LEVEL B - INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION SUBSURFACE UTILITIES. THE RELIABILITY OF THIS INFORMATION IS SURVEYED TO PROJECT CONTROL AND SUBJECT TO ACCURACY LEVELS OF THE GEOPHYSICAL TOLERANCE DEFINED BY THE PROJECT.

   UTILITY QUALITY LEVEL C - INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE GROUND UTILITY FEATURES AND CORRELATING QUALITY LEVEL "D" INFORMATION.

   UTILITY QUALITY LEVEL D - INFORMATION DERIVED FROM EXISTING RECORDS OR VERBAL RECOLLECTIONS.
3. NORTHING AND EASTING COORDINATES SHOWN ON ALL MANHOLE, INLETS, ETC. ARE SHOWN FROM CENTER OF STRUCTURE NOT CASTING, UNLESS OTHERWISE NOTED.

PROJECT NOTES

1. RIPRAP REMOVED FROM EMBANKMENT SLOPE THAT IS NOT TAKEN TO THE GREEN SULLIVAN STATE FOREST OFFICE SHALL BE PLACED ON THE LAKE SIDE OF NEW PATH ACROSS THE DAM CREST. RIPRAP SHALL BE PLACED WHERE THE EXISTING RIPRAP IS SPARSE AND IN LOCATIONS WHERE THE PATH MAY NOT EXTEND TO THE EXISTING RIPRAP.
2. TREE CLEARING AND CULVERT REMOVAL MUST BE COMPLETED ON OR BEFORE MARCH 31ST.
3. THE FOLLOWING SEED SPECIES AND RATES SHALL BE USED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT:

SEED SPECIES	RATES (LBS. PER ACRE)
ORCHARD GRASS	5
PERENNIAL RYEGRASS	8
REDTOP	3
SWITCHGRASS	5
TIMOTHY	4
ALFALFA	5
RED CLOVER	8

HATCHING SYMBOLS

- CLEAR AND GRUB ALL WOODY VEGETATION (CONTRACTOR SHALL REFER TO DETAILED SPECIFICATIONS)
- DEMOLITION OF RIPRAP (CONTRACTOR SHALL REFER TO DETAILED SPECIFICATIONS)
- GROUT
- CONCRETE
- STEEL
- COMPACTED GRANULAR BACKFILL OR COMPACTED FOUNDATION
- ABANDONED IN PLACE
- NEW CUTOFF WALL
- NEW FLEXAMAT
- EXISTING RIPRAP

DRAWING SET LEGEND

- EXOHT — EXISTING OVERHEAD TELEPHONE LINE
- EXG — EXISTING GAS LINE AND VALVE
- EXW — EXISTING WATER LINE AND VALVE
- EXF/O — EXISTING FIBER OPTIC LINE
- EXOHE — EXISTING OVERHEAD ELECTRIC LINE
- EXBE — EXISTING BURIED ELECTRIC
- NPW — EXISTING NON-POTABLE WATER LINE
- POT — EXISTING POTABLE WATER LINE
- EXBT — EXISTING BURIED TELEPHONE LINE
- X — EXISTING FENCE
- APP. R/W — APPARENT RIGHT-OF-WAY
- APP. P/L — APPARENT PROPERTY LINE
- EDGE OF ROAD
- EDGE OF ROAD WITH CURB
- 785 — EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- W — **NEW WATER LINE**
- 785 — **PROPOSED MAJOR CONTOUR LINE**
- 784 — **PROPOSED MINOR CONTOUR LINE**

- AC UNIT
- BOLLARD
- BOULDER / LARGE ROCK
- CL — CENTER LINE MONUMENT
- CONTROL POINT / BENCH MARK
- DRILL HOLE
- MB — MAIL BOX
- FLAG POLE
- POST
- STUMP
- BUSH / HEDGE
- DECIDUOUS TREE
- CONIFEROUS TREE
- SIGN
- UTILITY LOCATE FLAG
- GAS LINE MARKER
- GV — GAS VALVE
- GAS METER
- GUY POLE
- POWER POLE
- LIGHT POLE
- GUY WIRE
- EM — ELECTRIC METER
- ELECTRIC PANEL
- ET — ELECTRIC TRANSFORMER
- HAND HOLE BOX
- FIBER OPTIC MARKER
- TP — TEL/TV PEDESTAL

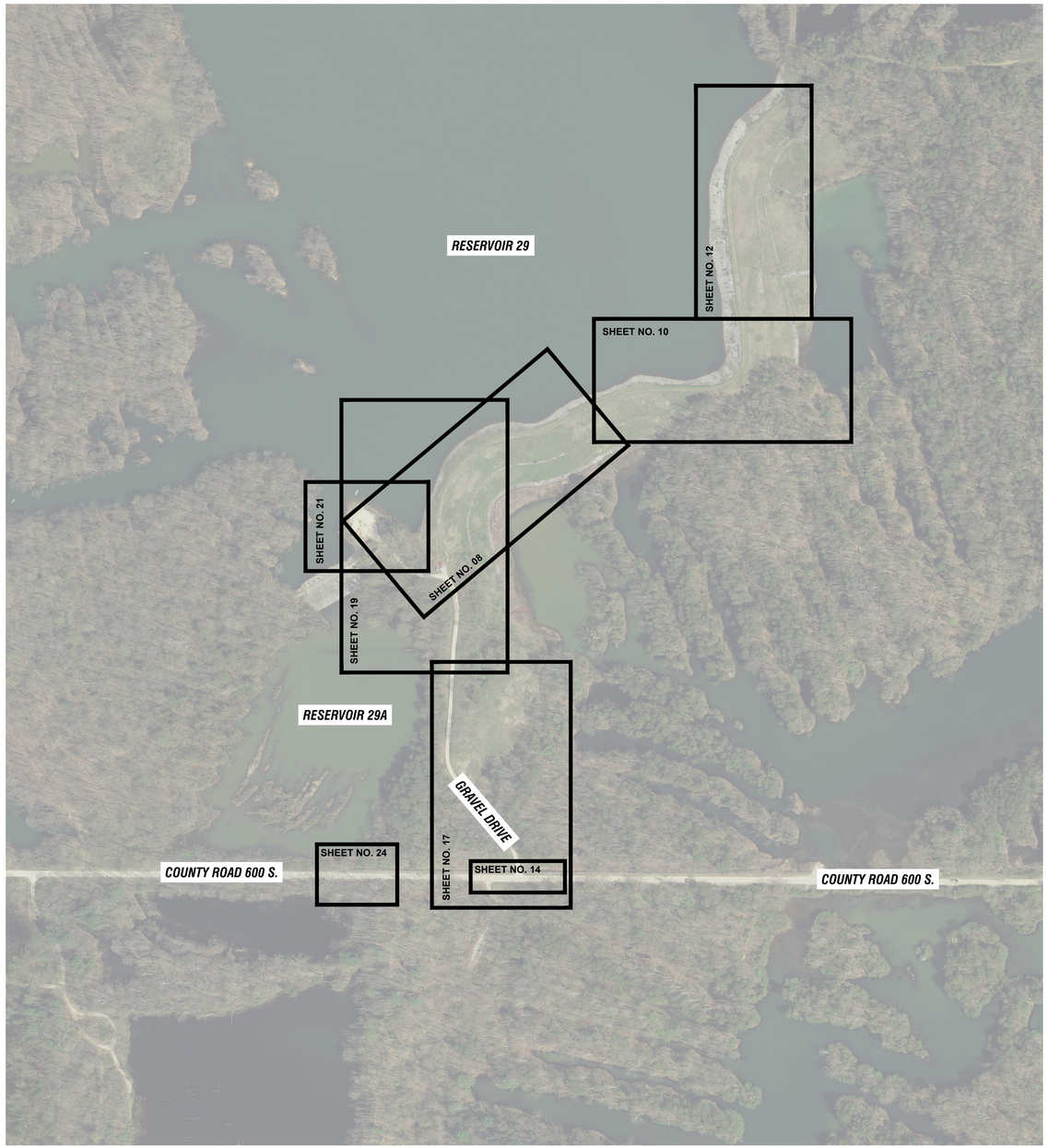
- T — TELEPHONE MANHOLE
- TELEPHONE LINE MARKER
- TR — TRAFFIC MANHOLE
- WATER LINE MARKER
- W — WATER METER
- WV — VALVE
- IV — IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- FLUSH HYDRANT
- YARD HYDRANT
- WALL SPIGOT
- EXISTING PIPE PLUG
- STORM CATCH BASIN (SQUARE)
- STORM CATCH BASIN (ROUND)
- STORM CURB INLET
- D — STORM MANHOLE
- S — SANITARY MANHOLE
- SV — SANITARY VALVE
- CLEANOUT
- VENT
- **NEW VALVE**
- **NEW FIRE HYDRANT**
- **NEW FLUSH HYDRANT**
- **NEW WET SADDLE AND VALVE BODY**
- **NEW PLUG**
- LS — **NEW LINE STOP**
- **NEW CUT AND CAP**
- **NEW SANITARY MH**

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RECOMMENDED FOR APPROVAL — Dale A. Gick — 10/15/2025 DATE

DATE MADE 07/30/2024	GENERAL ABBREVIATIONS, LEGENDS, SYMBOLS AND NOTES	SCALE N/A	SHEET 02 OF 42	
DESIGNED BY DAG	DRAWN BY RNM	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER DEL2515208032/E008-376



VICINITY MAP

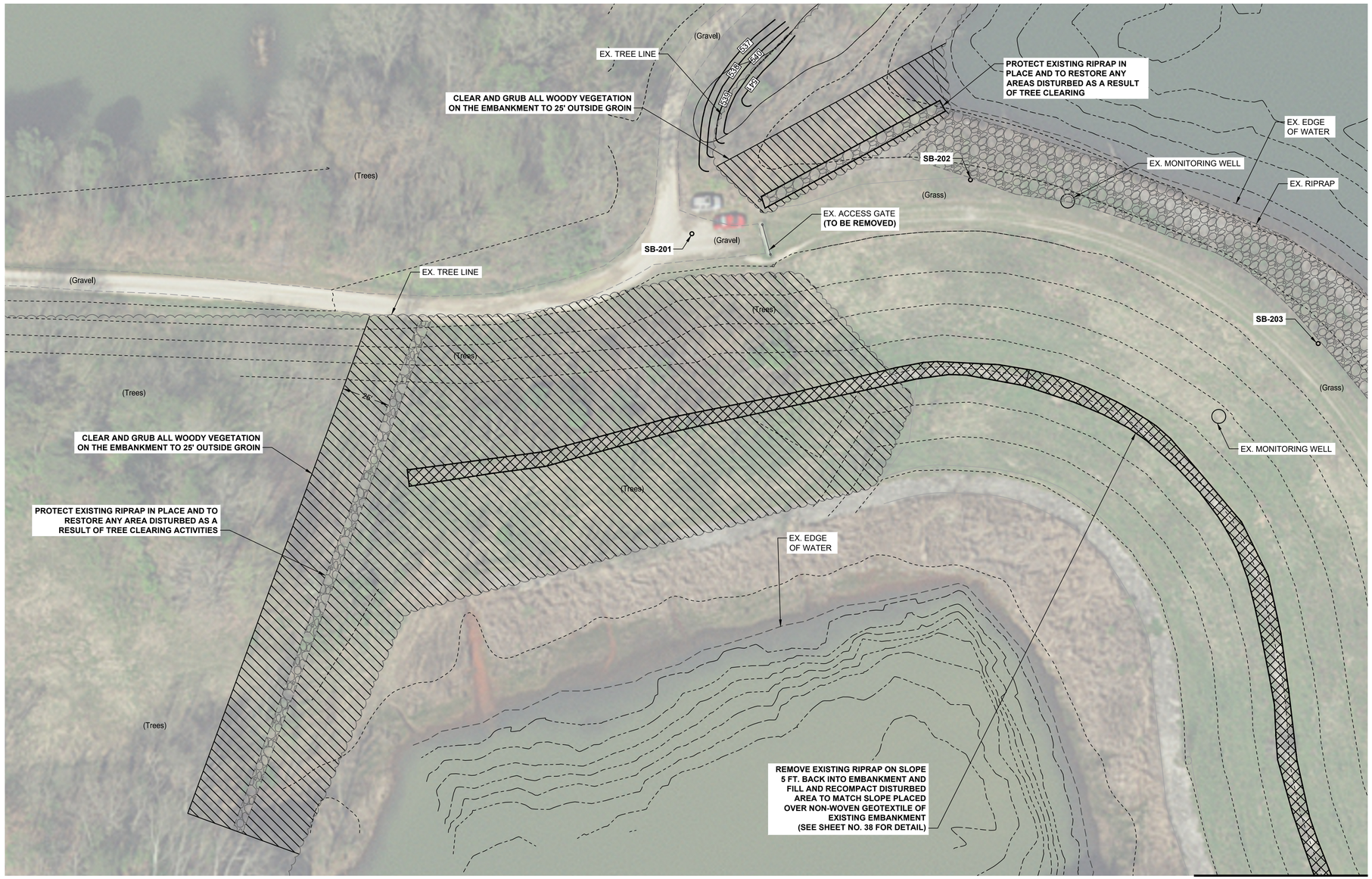
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DATE MADE	DRAWING INDEX MAP	SCALE	SHEET
07/30/2024		1" = 200'	03 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PLAN VIEW

NOTES

1. RESTORE ALL DISTURBED AREAS WITH SEED AND NET FREE EROSION CONTROL BLANKETS.

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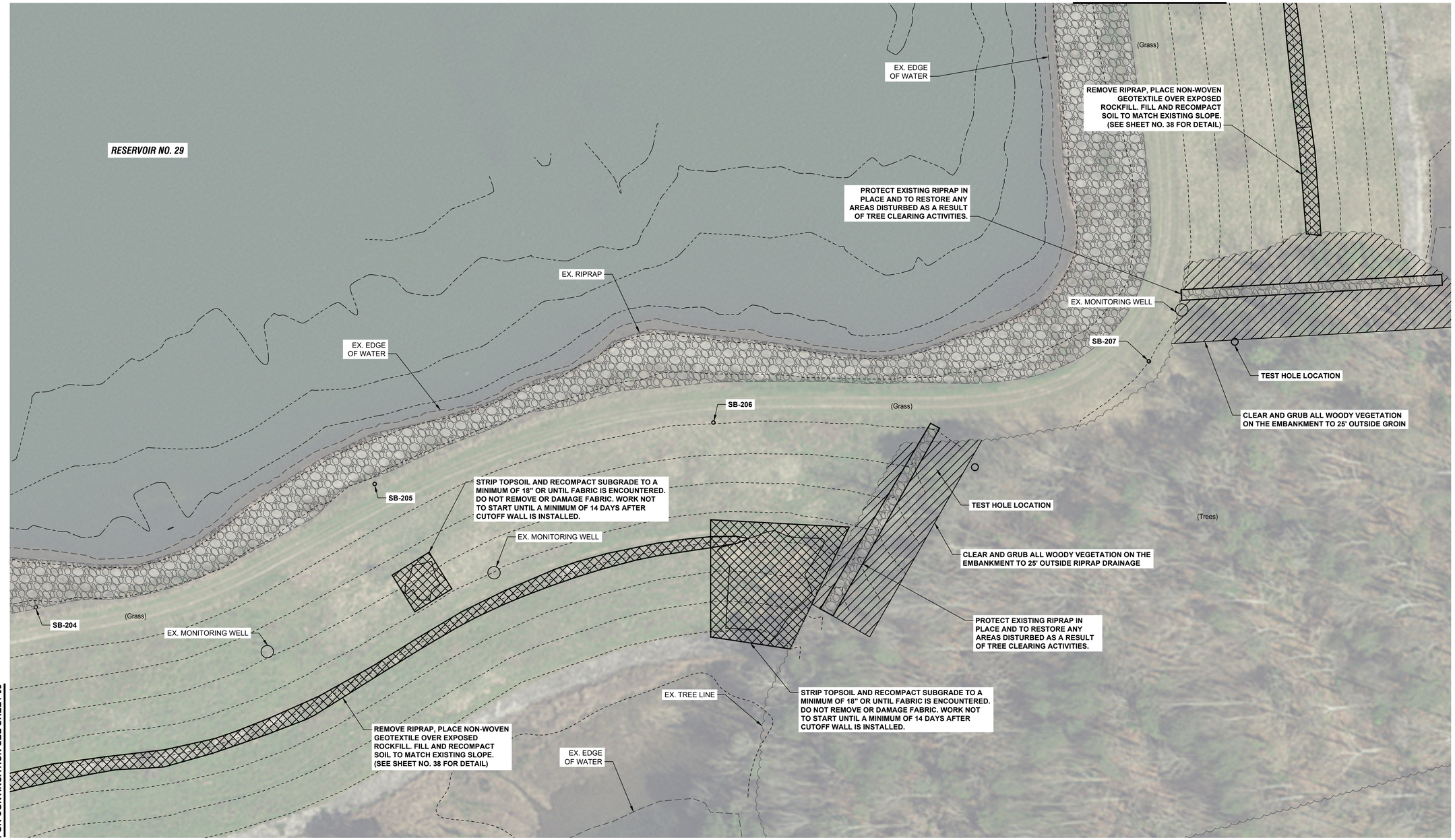
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RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	DEMOLITION PLAN VIEW	SCALE	SHEET
07/30/2024		1" = 30'	04 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376

FOR CONTINUATION SEE SHEET 07



FOR CONTINUATION SEE SHEET 05

PLAN VIEW

NOTES

1. RESTORE ALL DISTURBED AREAS WITH SEED AND NON-WOVEN EROSION CONTROL BLANKETS.

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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	DEMOLITION PLAN VIEW	SCALE	SHEET
07/30/2024		1" = 30'	05 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376



FOR CONTINUATION SEE SHEET 06

PLAN VIEW

NOTES

1. RESTORE ALL DISTURBED AREAS WITH SEED AND NON-WOVEN EROSION CONTROL BLANKETS.

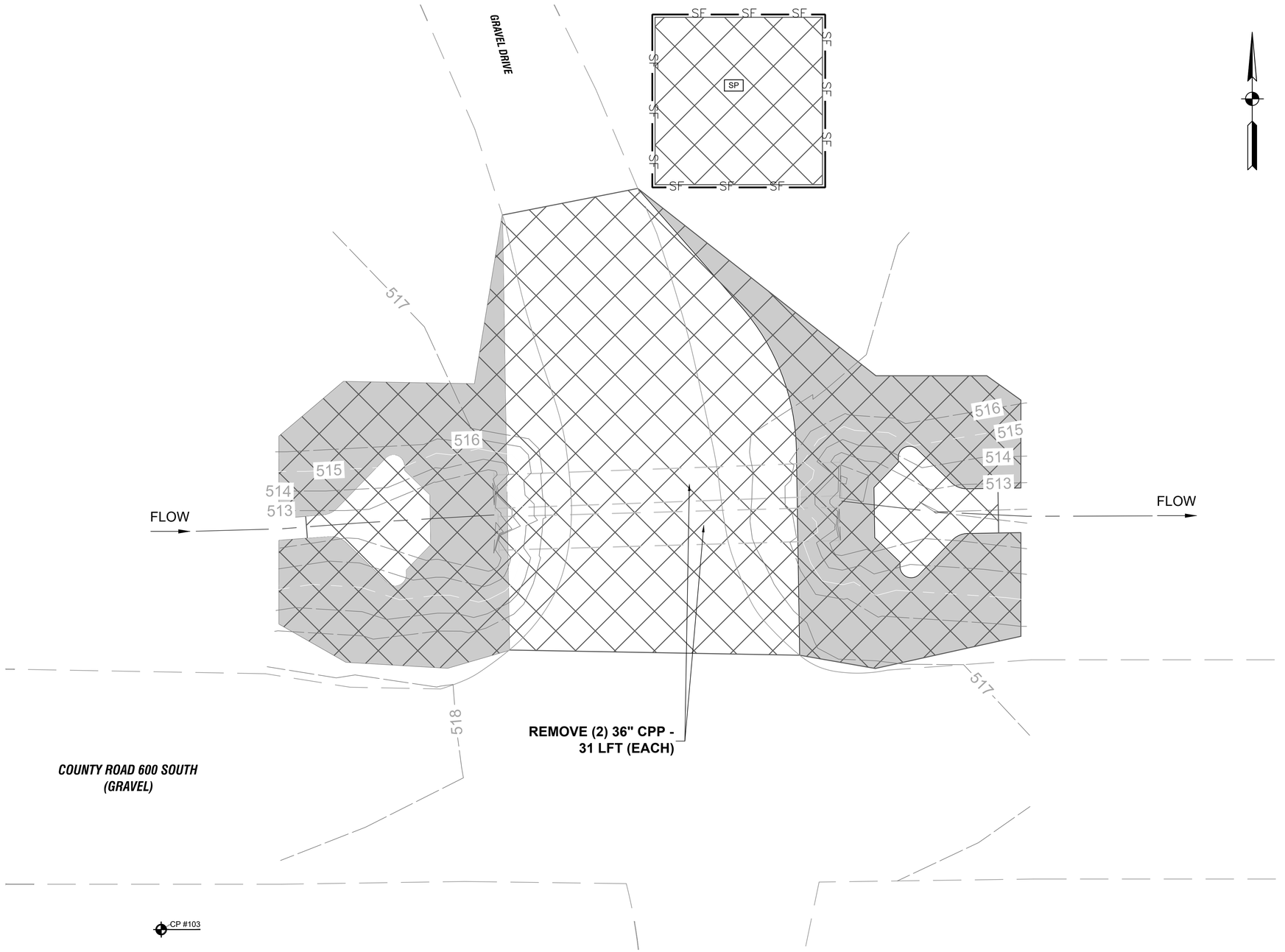
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	DEMOLITION PLAN VIEW	SCALE	SHEET
07/30/2024		1" = 30'	06 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



NOTES

1. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO DEMOLITION/SITE DISTURBANCE ACTIVITY.
2. CONTRACTOR SHALL INCORPORATE SEDIMENT CONTROL MEASURES AT ALL CONSTRUCTION AREA INGRESS/EGRESS LOCATIONS.
3. SEE EXISTING CONDITIONS FOR BENCHMARK AND CONTROL POINT INFORMATION.
4. DEWATERING PLAN SHALL BE SUBMITTED TO AND APPROVED BY OWNER PRIOR TO INITIATION OF WORK. DEWATERING SHALL BE INCIDENTAL TO COMMON EXCAVATION.
5. ALL SURFACE OBJECTS, GRASS, VEGETATION, TOPSOIL, AND ROOT SHALL BE REMOVED FROM WITHIN THE DISTURBED AREA INCLUDING RELATED DELETERIOUS MATERIAL.

EROSION CONTROL LEGEND

SF — SILT FENCE

SP — STOCK PILE

TEMPORARY EROSION CONTROL BLANKET & SEEDING

DEMOLITION LEGEND

EXCAVATION, COMMON (SOIL & AGGREGATE)

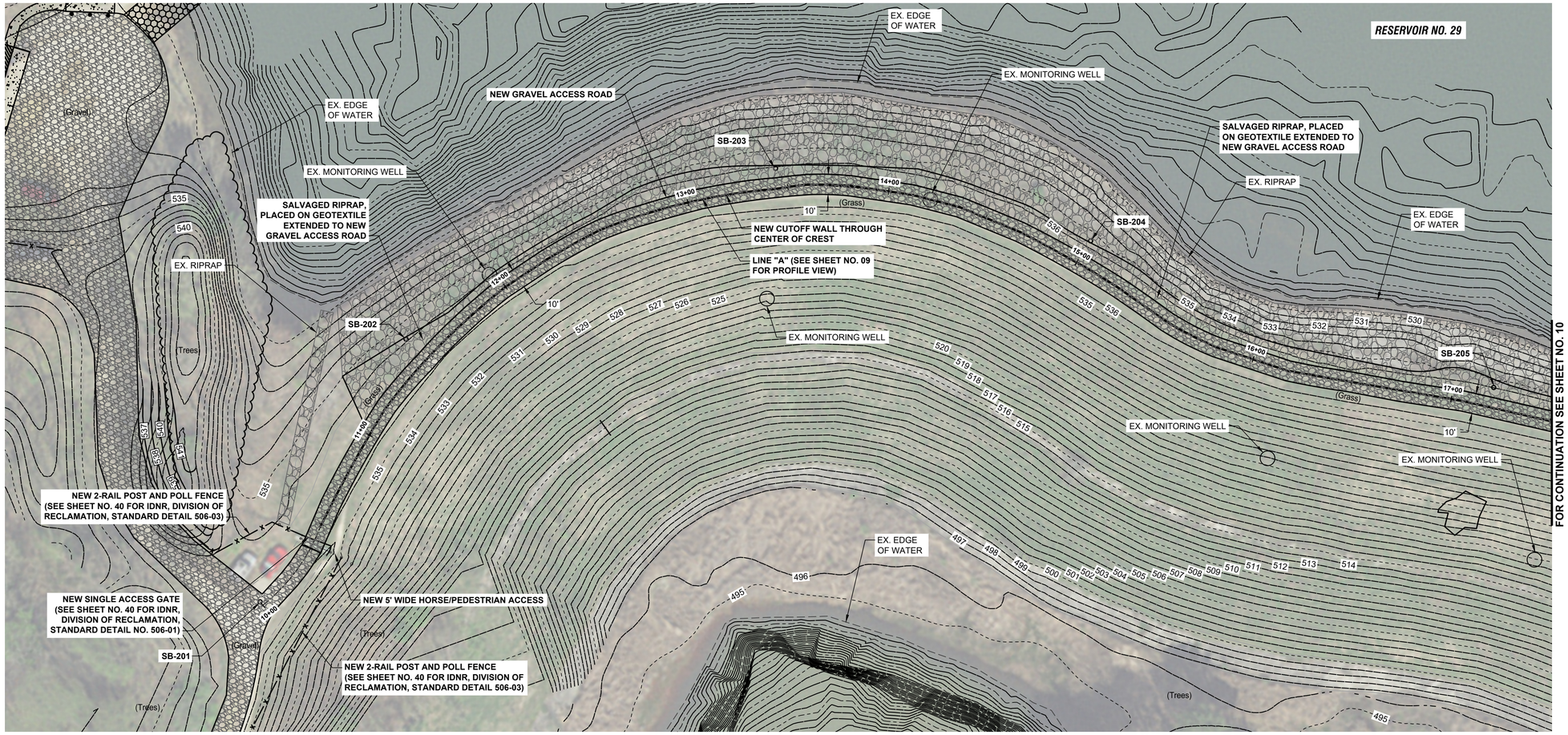
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RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	DEMOLITION & EROSION CONTROL PLAN	SCALE	SHEET
07/30/2024		1" = 5'	07 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PLAN VIEW

GENERAL NOTES:

1. REMOVED RIPRAP CAN BE REPLACED BETWEEN NEW GRAVEL DRIVE AND EXISTING RIPRAP ON UPSTREAM EMBANKMENT SLOPE.
2. RIPRAP PLACEMENT SHALL BE RELATIVELY FREE OF DELETERIOUS MATERIALS.

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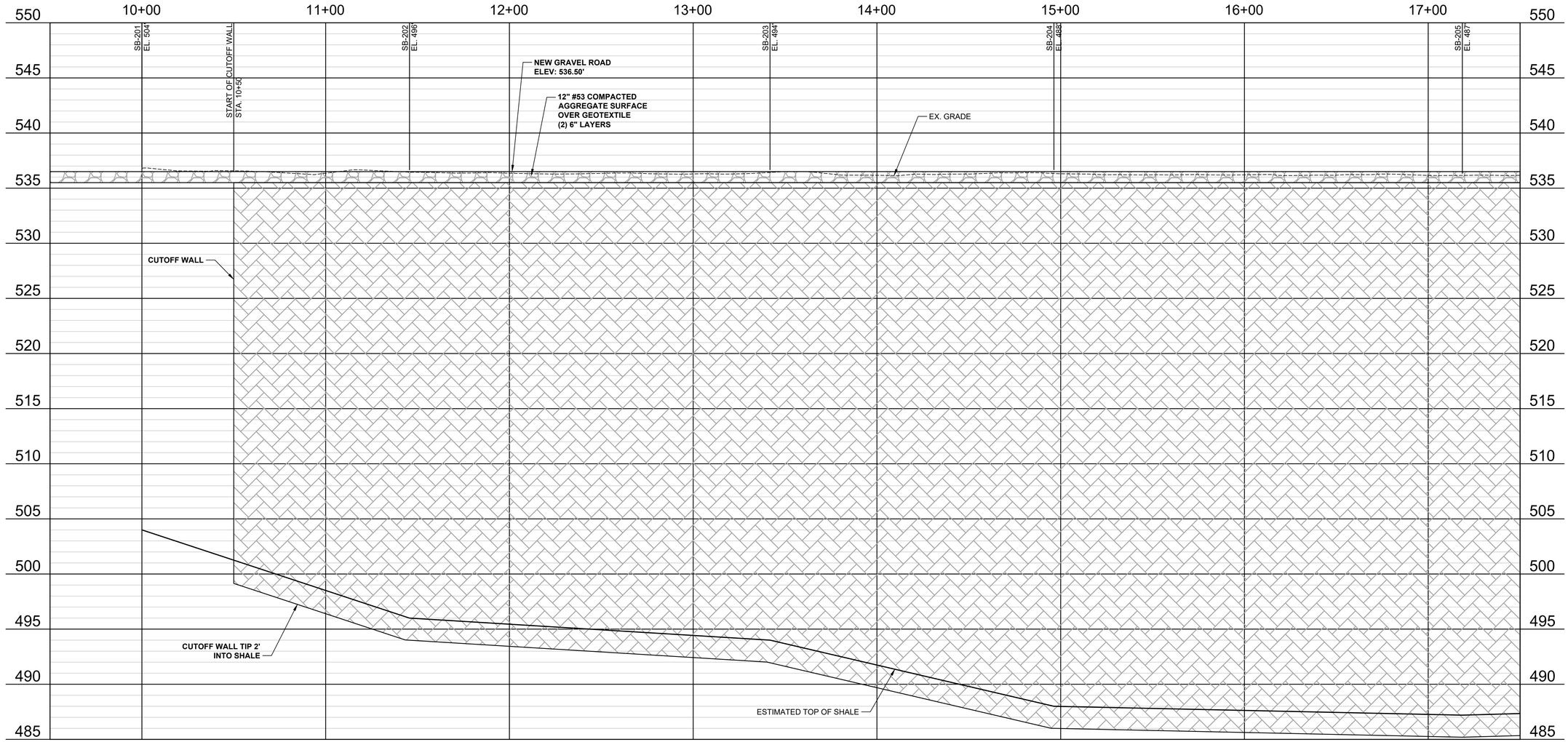
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	PLAN VIEW - LINE "A"	SCALE	SHEET
07/30/2024		1" = 30'	08 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	PROJECT NUMBER
DAG	RNM		DEL2515208032/E008-376

STATE OF INDIANA
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DIVISION OF RECLAMATION



PROFILE VIEW - LINE "A"

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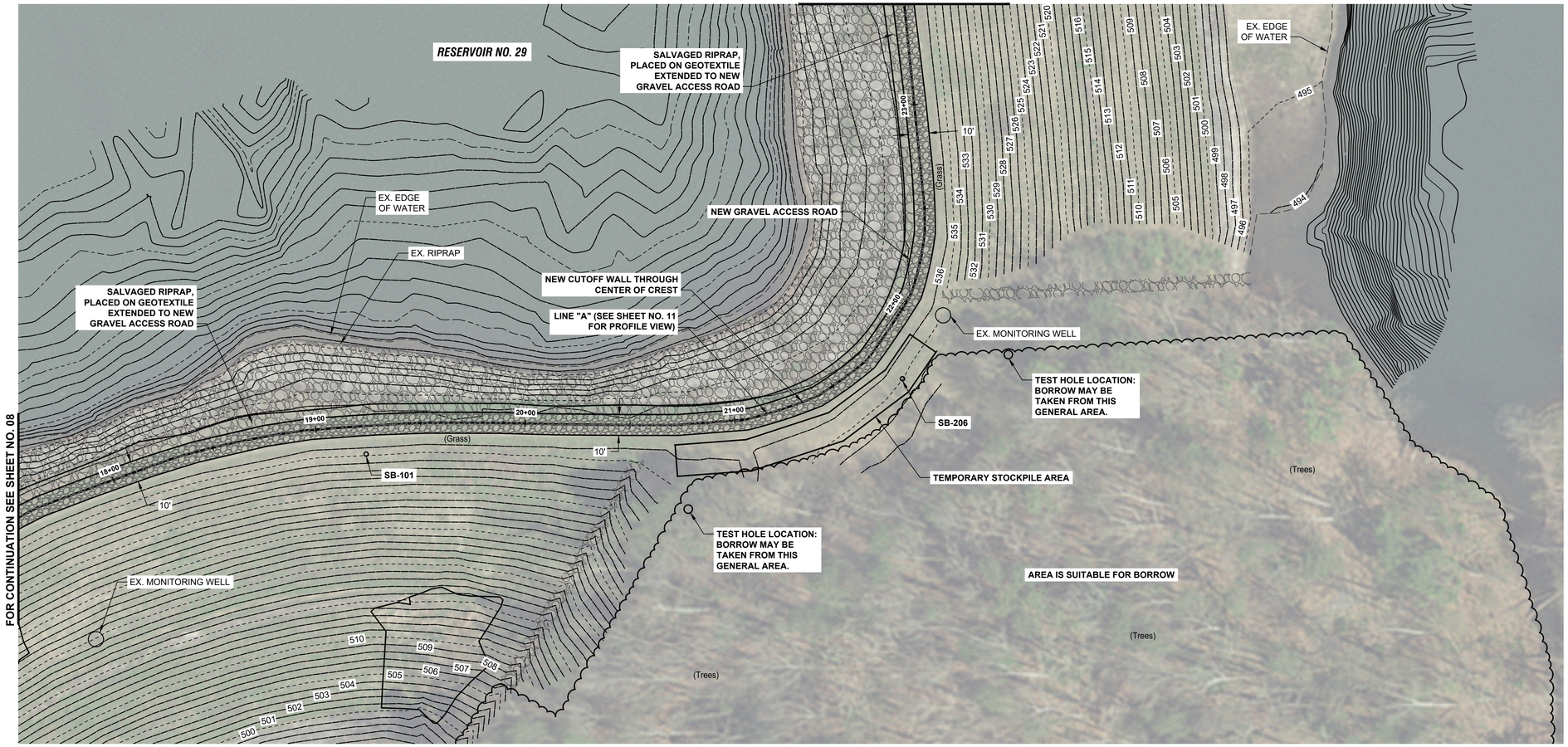
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RECOMMENDED FOR APPROVAL — Dale A. Gick — 10/15/2025 DATE

DATE MADE	PROFILE VIEW - LINE "A"	SCALE	SHEET
07/30/2024		HORIZ: 1" = 30' VERT: 1" = 5'	09 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376

FOR CONTINUATION SEE SHEET NO. 12



FOR CONTINUATION SEE SHEET NO. 08

PLAN VIEW

GENERAL NOTES:

1. REMOVED RIPRAP CAN BE REPLACED BETWEEN NEW GRAVEL DRIVE AND EXISTING RIPRAP ON UPSTREAM EMBANKMENT SLOPE.
2. RIPRAP PLACEMENT SHALL BE RELATIVELY FREE OF DELETERIOUS MATERIALS.

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DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

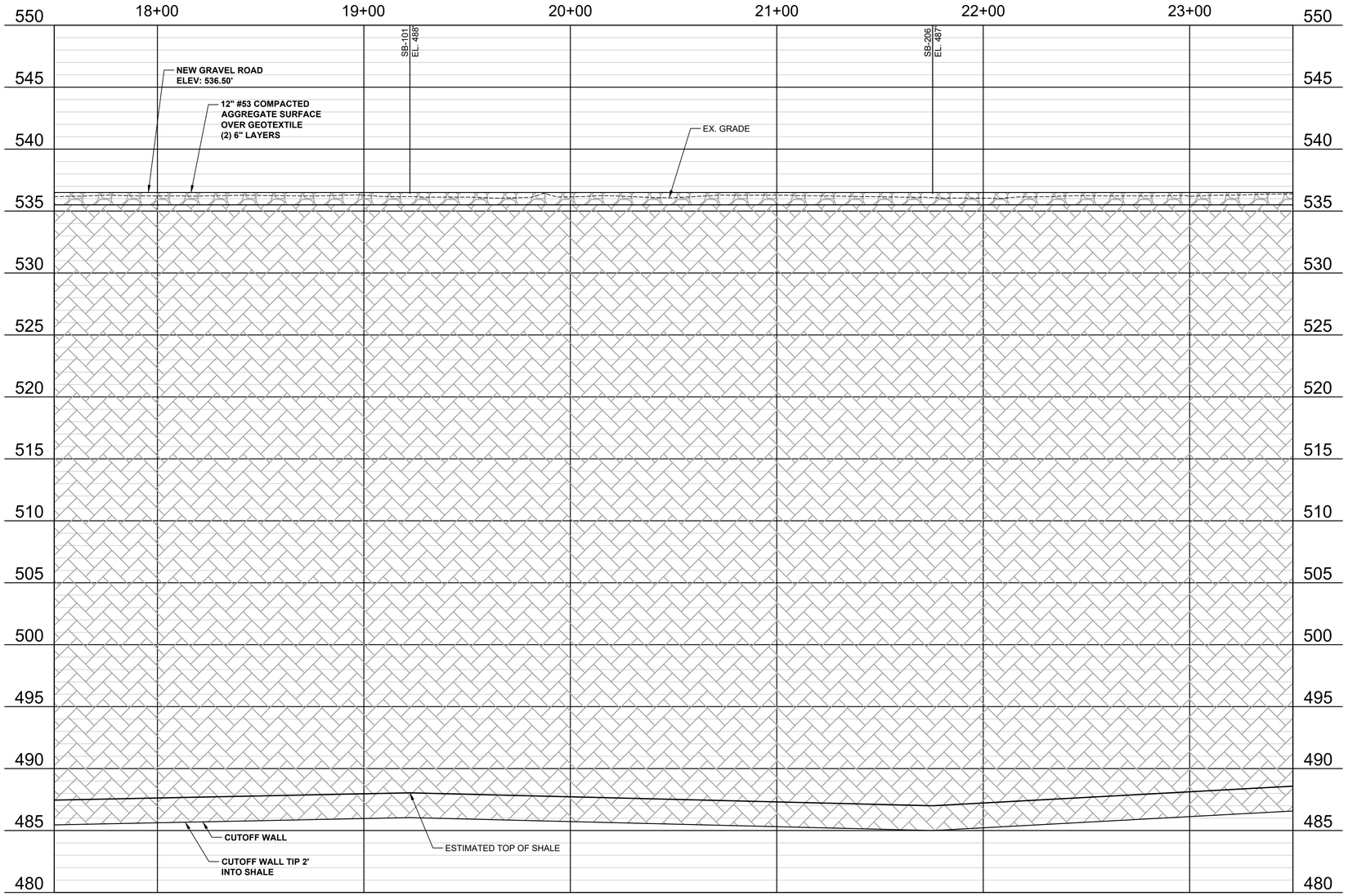
PLAN VIEW - LINE "A"

SCALE: 1" = 30'

SHEET: 10 OF 42

STATE OF INDIANA
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DIVISION OF RECLAMATION

PROJECT NUMBER: DEL2515208032/E008-376



PROFILE VIEW - LINE "A"

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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

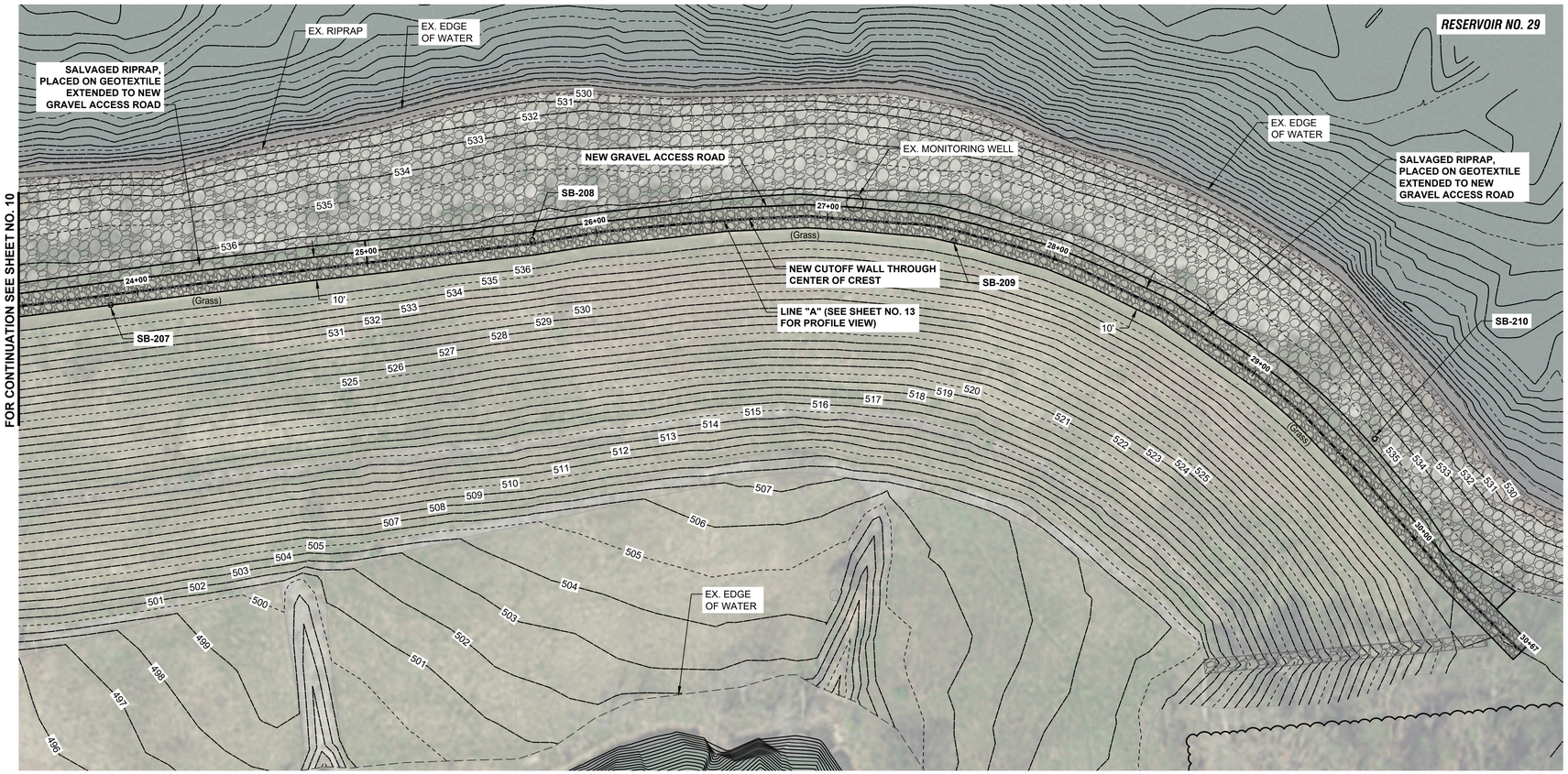
PROFILE VIEW - LINE "A"

SCALE
HORIZ: 1" = 30'
VERT: 1" = 5'

SHEET
11 OF 42

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

PROJECT NUMBER
DEL2515208032/E008-376



PLAN VIEW

GENERAL NOTES:

1. REMOVED RIPRAP CAN BE REPLACED BETWEEN NEW GRAVEL DRIVE AND EXISTING RIPRAP ON UPSTREAM EMBANKMENT SLOPE.
2. RIPRAP PLACEMENT SHALL BE RELATIVELY FREE OF DELETERIOUS MATERIALS.

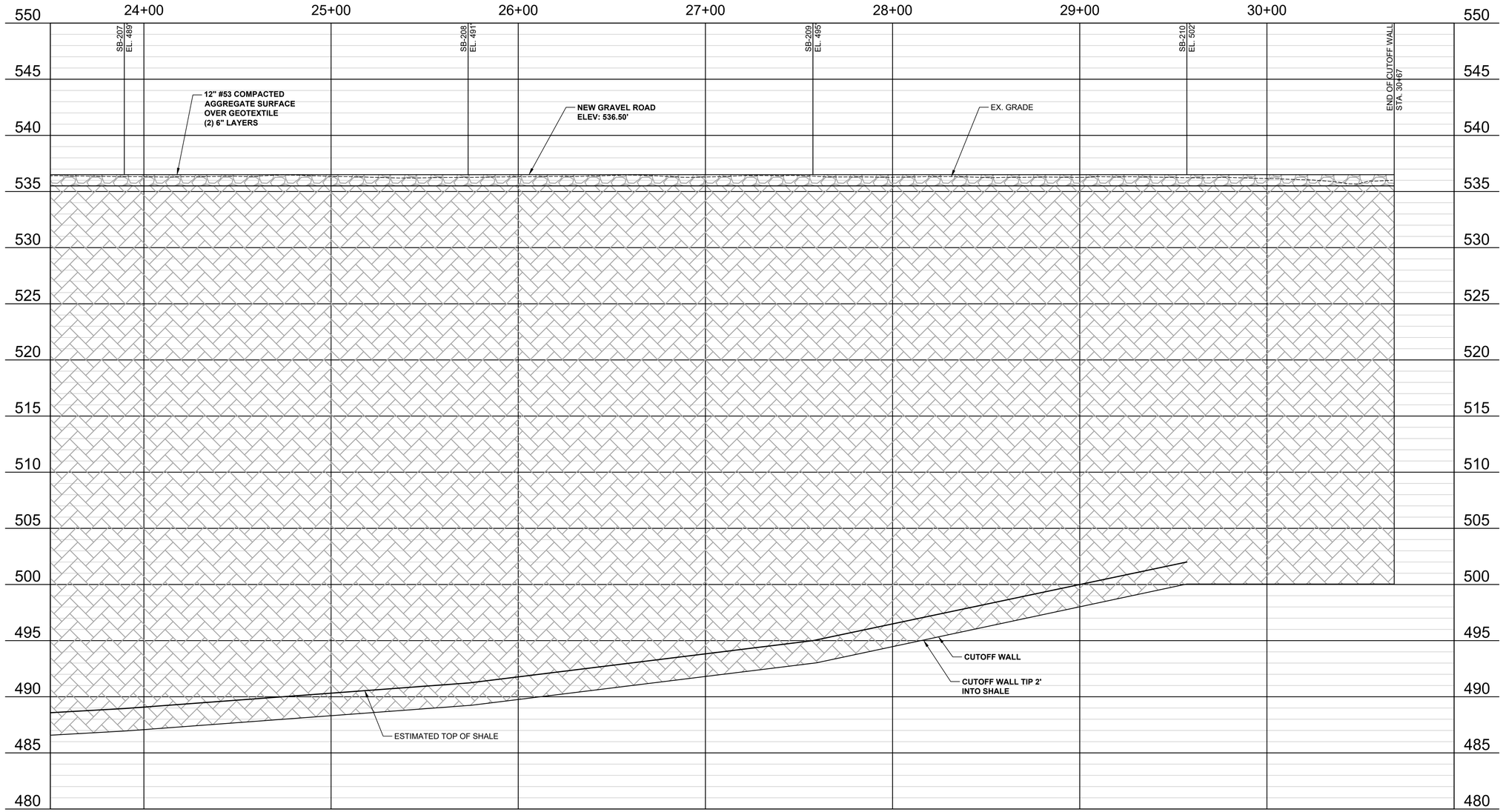
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	PLAN VIEW - LINE "A"	SCALE	SHEET
07/30/2024		1" = 30'	12 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PROFILE VIEW - LINE "A"

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DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

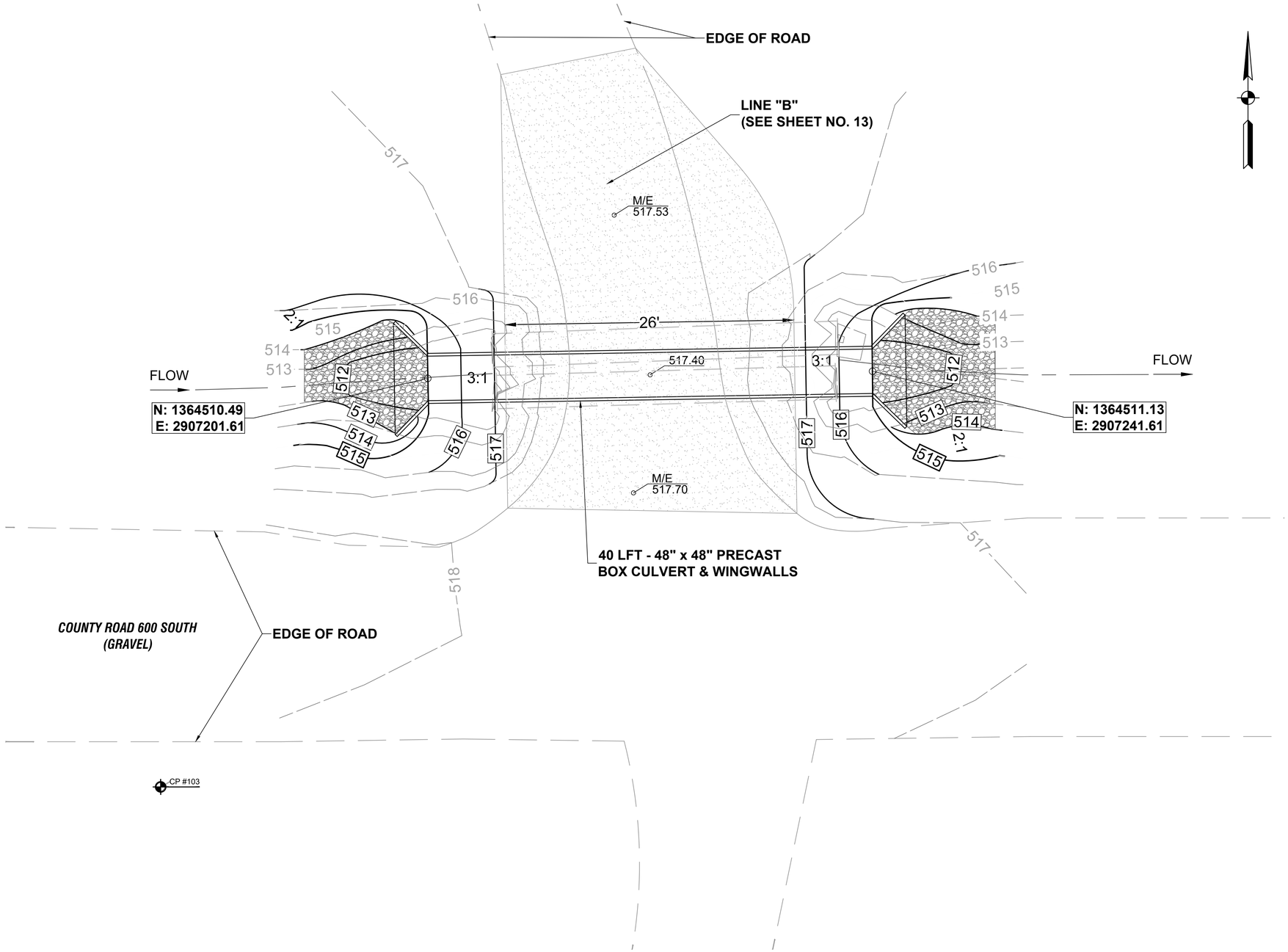
PROFILE VIEW - LINE "A"

SCALE
HORIZ: 1" = 30'
VERT: 1" = 5'

SHEET
13 OF 42

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

PROJECT NUMBER
DEL2515208032/E008-376



NOTES

1. SEE EXISTING CONDITIONS FOR BENCHMARK AND CONTROL POINT INFORMATION.
2. CONTRACTOR SHALL ESTABLISH EROSION CONTROL AND DEWATERING PRIOR TO INSTALLATION OF PROPOSED ELEMENTS.
3. SEE CONSTRUCTION DETAILS FOR FURTHER INFORMATION ON PRE-CAST BOX CULVERT AND WINGWALLS.
4. SEE DEMOLITION AND EROSION CONTROL PLAN FOR SEEDING LIMITS.

LEGEND

- RIP RAP, CLASS 1
- COMPACTED AGGREGATE, #53
- 516 — PROPOSED CONTOUR
- 517.40 — PROPOSED GRADE POINT

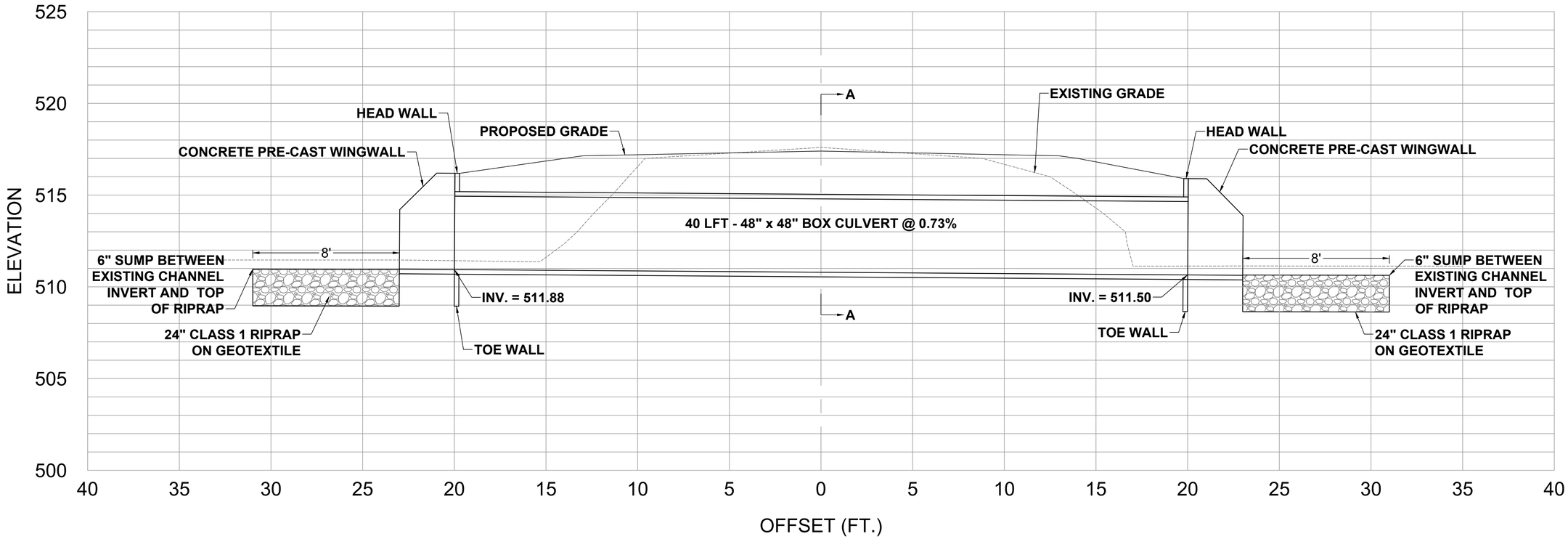
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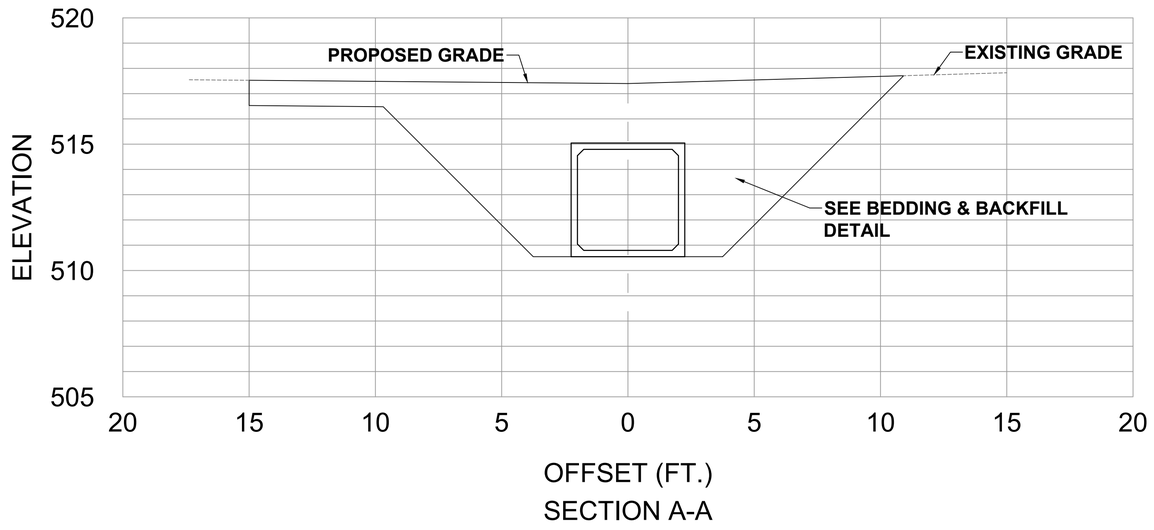
DALE A. GICK — REGISTERED — PE10100195 — STATE OF INDIANA — PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — Dale A. Gick — 10/15/2025 DATE

DATE MADE	ENTRANCE SITE IMPROVEMENTS PLAN	SCALE	SHEET
07/30/2024		1" = 5'	14 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376





SECTION A-A

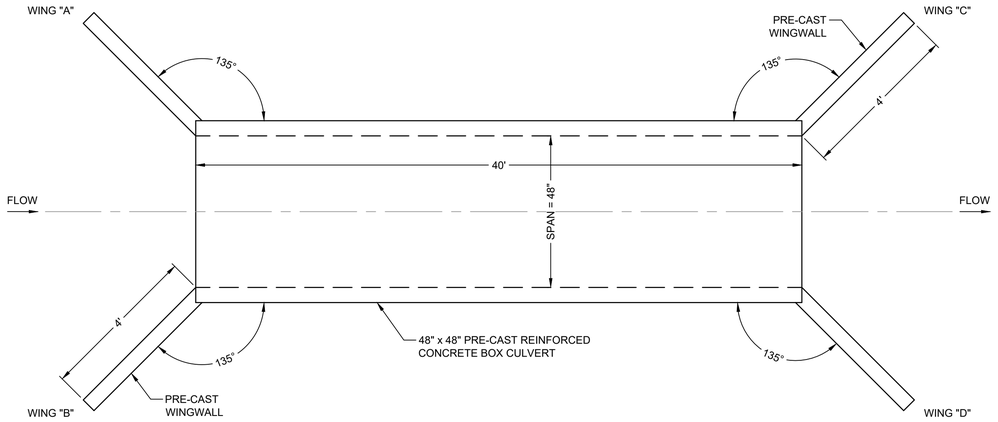
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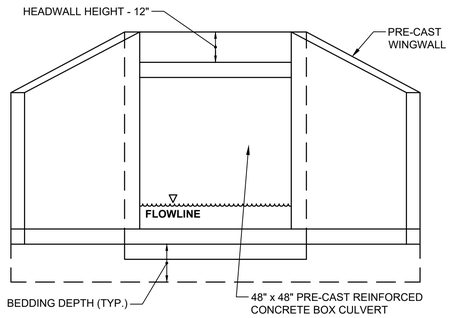
RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	CULVERT PROFILE	SCALE	SHEET
07/30/2024		H&V: 1" = 3'	15 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



TOP VIEW



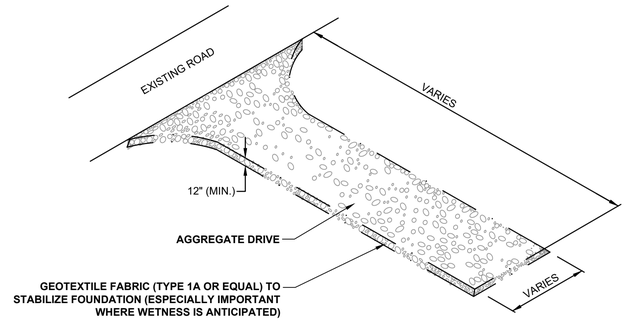
ELEVATION

NOTES:

1. WINGWALL AND FOUNDATION DESIGN SHALL BE THE RESPONSIBILITY OF THE PRE-CAST SUPPLIER.
2. MANUFACTURER(S) SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL BY ENGINEER.
3. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS IN GEOTECHNICAL REPORT.

PRE-CAST BOX CULVERT AND WINGWALL DETAIL

NOT TO SCALE

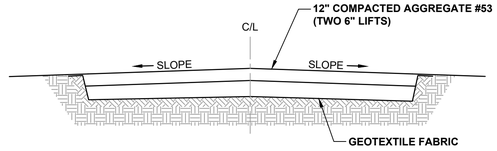


NOTES:

1. CONTRACTOR TO CUT DEPTH OF ACCESS DRIVE WITH CONTOURS SHOWN ON GRADING PLAN. SLOPE OF NEW ACCESS DRIVE SHALL MATCH GRADING PLAN.

AGGREGATE DRIVE DETAIL

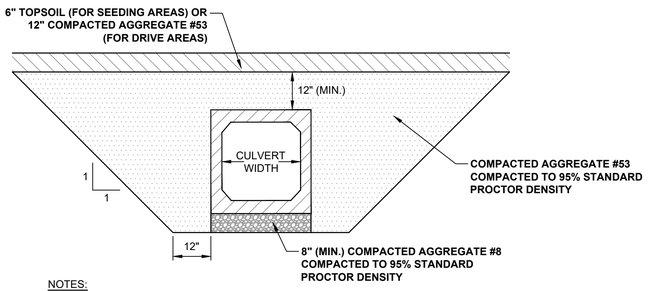
NOT TO SCALE



Foundation Bearing Soil Type	Sandy Lean Clay (assumed)
Friction Angle between Headwall and Backfill (deg) [1]	20
Estimated Unit Weight of Structure Backfill, $\gamma_{moist/saturated}$ (pcf) [1]	120
Angle of Friction between Footing and Foundation Soil (δ, deg) [2]	NA
Undrained Cohesion of Foundation Soil (C, ksf)	3,000
Adhesion of Foundation Soil (C_a, psf)	2,000
Internal Friction Angle of Foundation Soil (Ø, deg)	N/A
Factored Bearing Resistance (psf)[3]	6,000
Resistance Factor (φ)	0.45
Nominal Bearing Resistance (psf)	15,000

1. Assuming B borrow or a like material.
2. 4 in. of lean concrete (mud mat) placed below the headwall footing
3. Minimum footing width of 18 in. and assuming no more than 2 ft of scour during the design life of the structure

FOUNDATION DESIGN TABLE



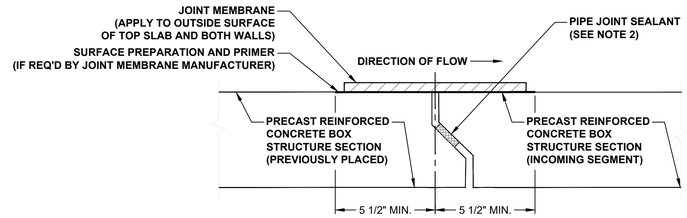
NOTES:

1. REINFORCED CONCRETE BOX SECTIONS IN CONFORMANCE WITH ASTM C789 AMD C850.
2. SOIL BEARING CAPACITY IN GEOTECHNICAL REPORT SHALL BE IN CONFORMANCE WITH MINIMUM MANUFACTURER'S RECOMMENDATIONS.
3. CONTRACTOR SHALL UNDERCUT SOFT SOILS ENCOUNTERED DURING EXCAVATION.

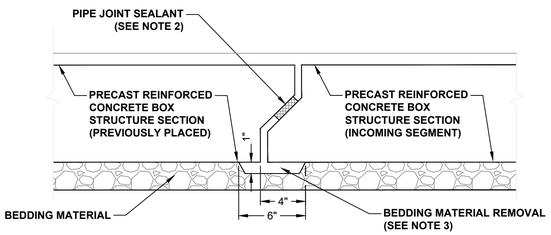
REINFORCED CONCRETE BOX SECTION BEDDING & BACKFILL DETAIL

NOT TO SCALE

SECTION THROUGH TOP OF BOX STRUCTURE



SECTION THROUGH BOTTOM OF BOX STRUCTURE



NOTES:

1. STRUCTURE SECTIONS SHALL BE BROUGHT INTO FIRM CONTACT DURING INSTALLATION.
2. APPLY TO TOP AND SIDE JOINTS OF PREVIOUSLY PLACED STRUCTURE SECTION AND BOTTOM JOINT OF INCOMING STRUCTURE SECTION. QUANTITY SHALL BE PER PRECAST MANUFACTURER RECOMMENDATIONS.
3. BEDDING MATERIAL IN FRONT OF THE PREVIOUSLY PLACED STRUCTURE SHALL BE REMOVED AS SHOWN TO PREVENT PLOWING THE BEDDING INTO THE STRUCTURE SECTION JOINT DURING INSTALLATION OF THE INCOMING STRUCTURE SECTION.

PRECAST CONCRETE BOX STRUCTURE JOINTS (PER INDOT STANDARD DRAWING E 714-BCJT-01)

NOT TO SCALE

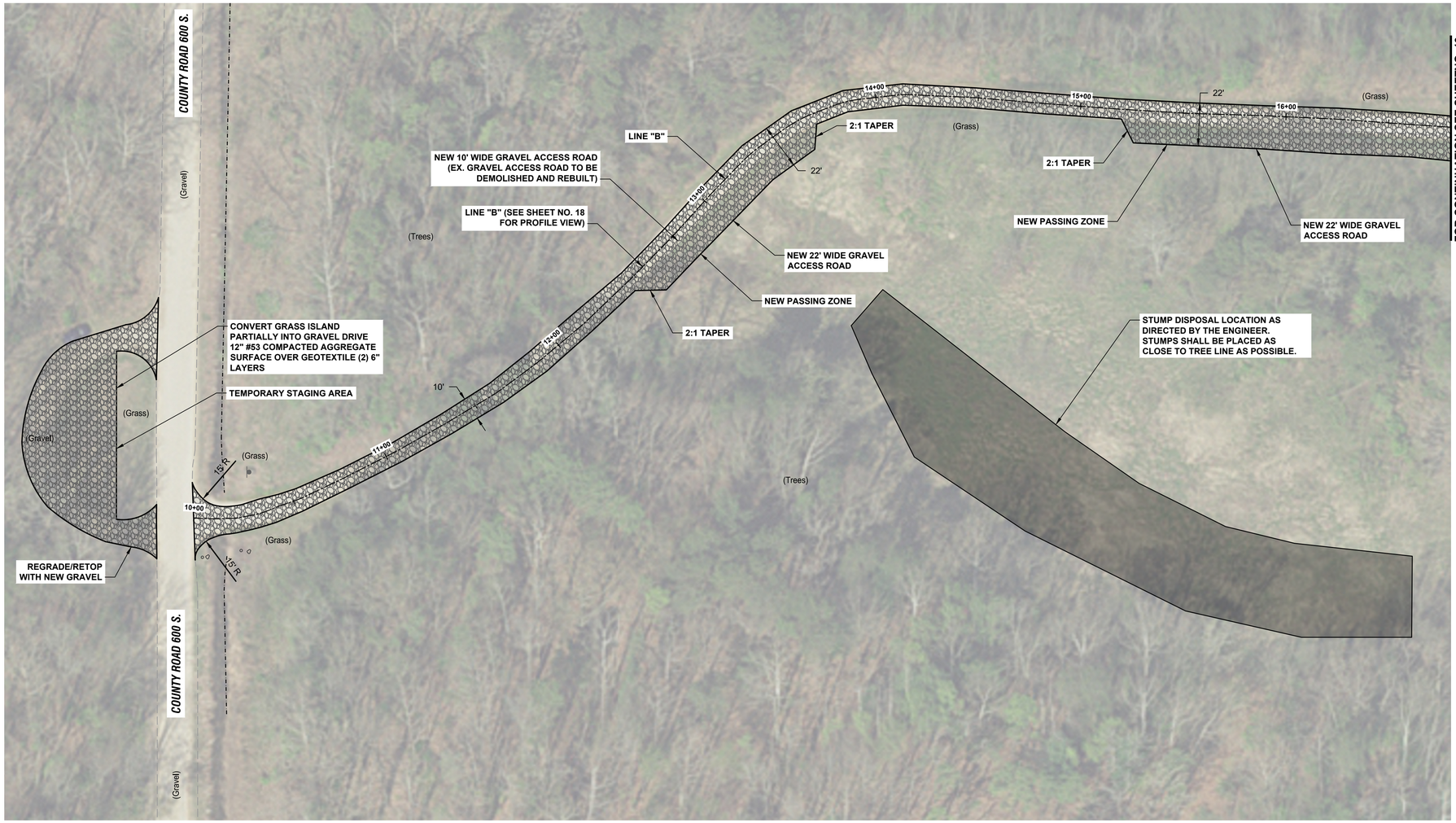
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RECOMMENDED FOR APPROVAL — Dale A. Gick — 10/15/2025 DATE

DATE MADE	CULVERT DETAILS	SCALE	SHEET
07/30/2024		N/A	16 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PLAN VIEW

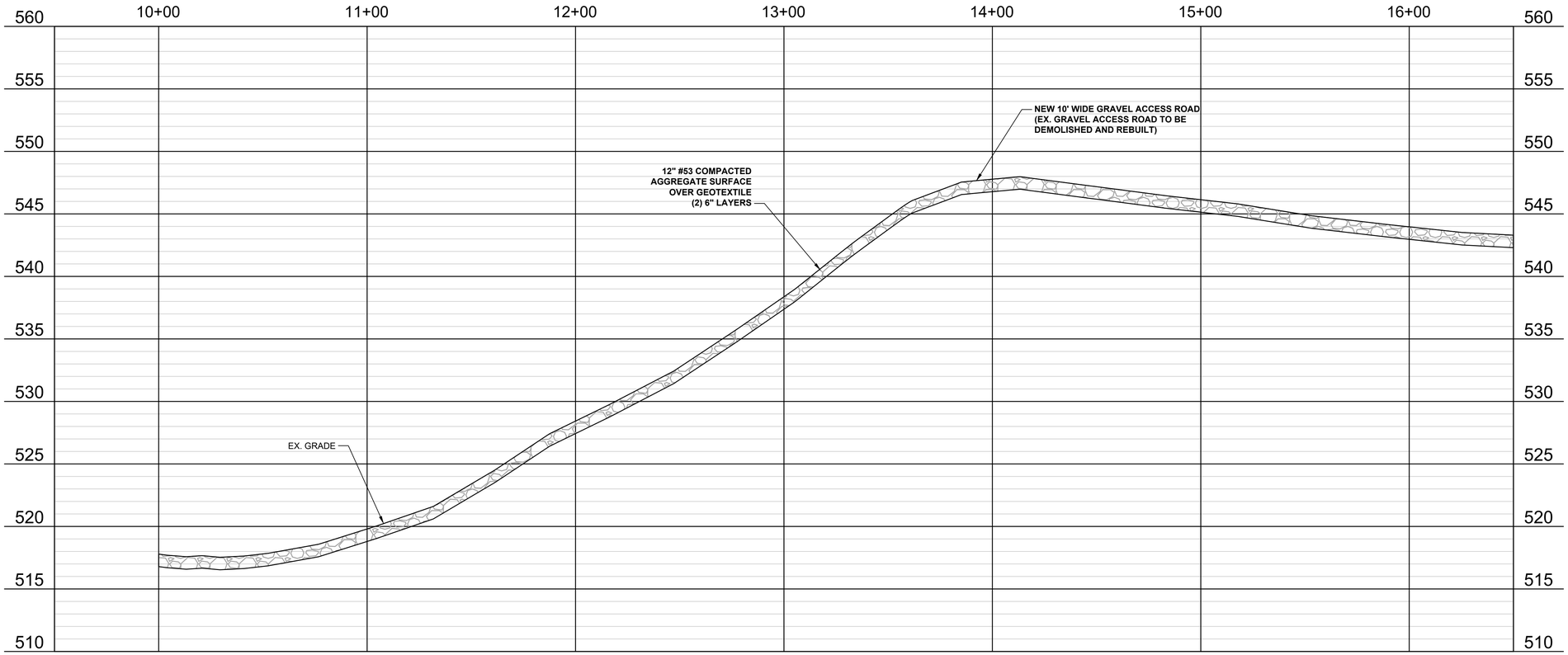
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	ROAD RESURFACE PLAN VIEW - LINE "B"	SCALE	SHEET
07/30/2024		1" = 30'	17 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PROFILE VIEW - LINE "B"

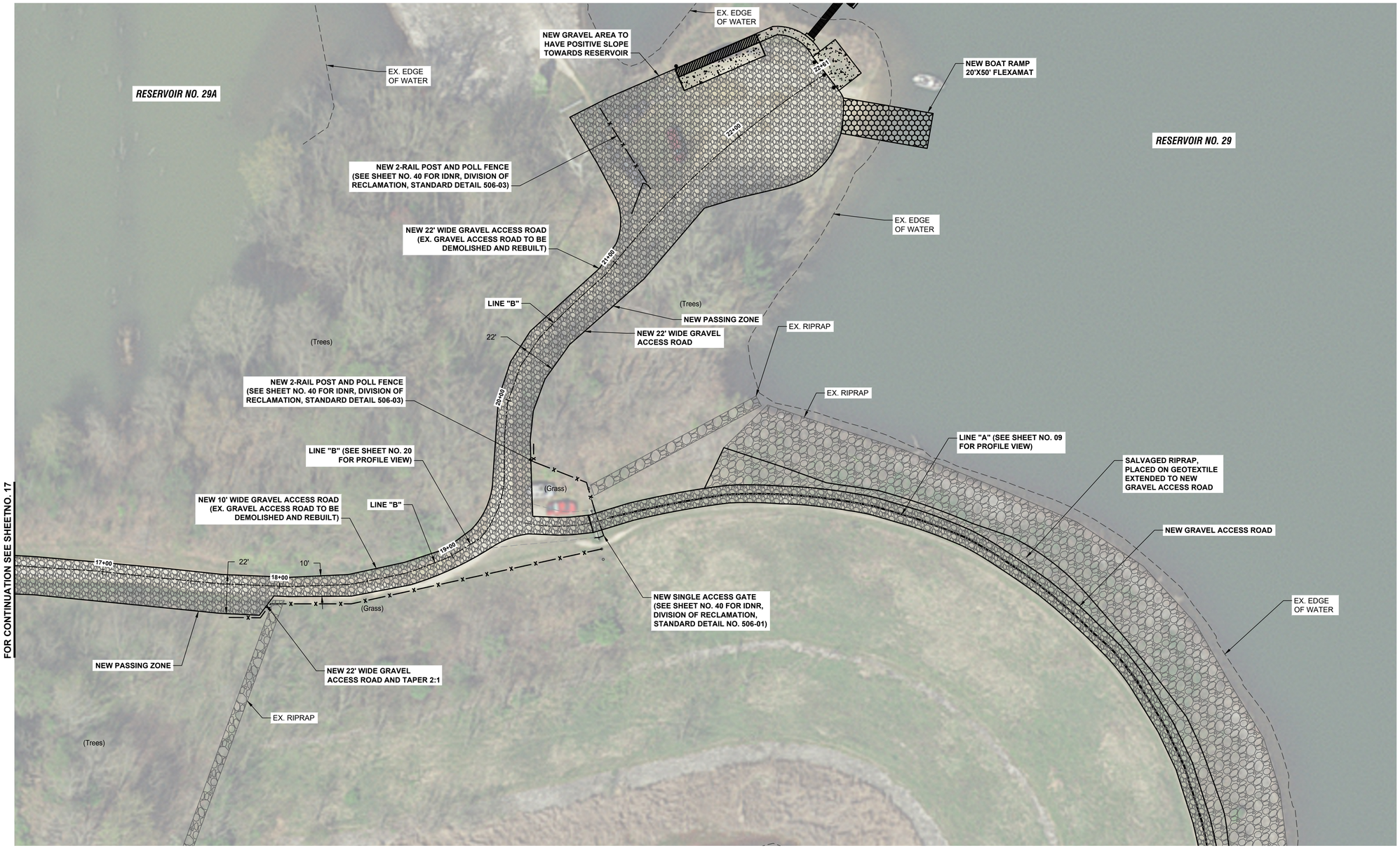
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	PROFILE VIEW - LINE "B"	SCALE	SHEET
07/30/2024		HORIZ: 1" = 30' VERT: 1" = 5'	18 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PLAN VIEW

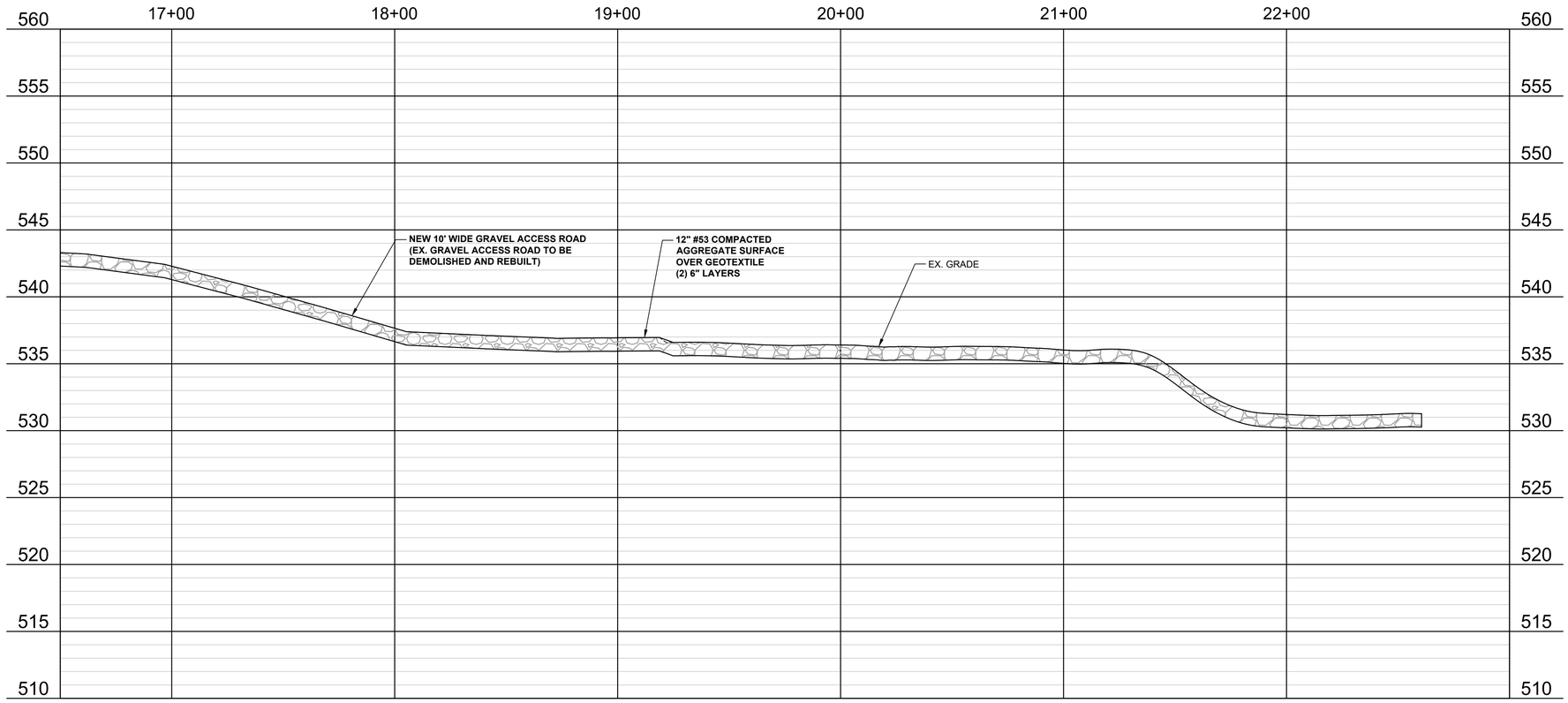
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DATE MADE	ROAD RESURFACE PLAN VIEW - LINE "B"	SCALE	SHEET
07/30/2024		1" = 30'	19 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



PROFILE VIEW - LINE "B"

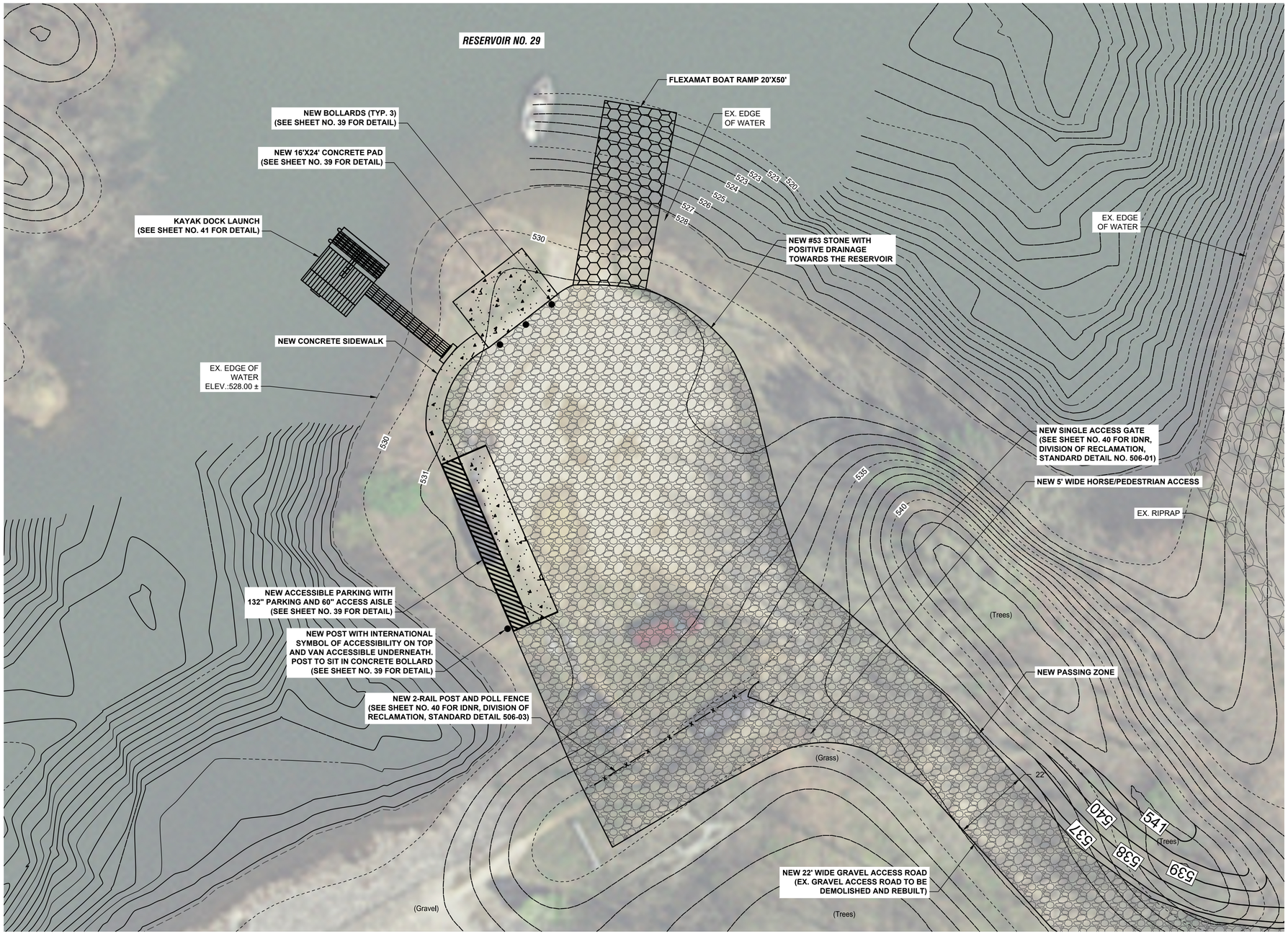
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RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	PROFILE VIEW - LINE "B"	SCALE	SHEET
07/30/2024		HORIZ: 1" = 30' VERT: 1" = 5'	20 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376



PLAN VIEW

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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

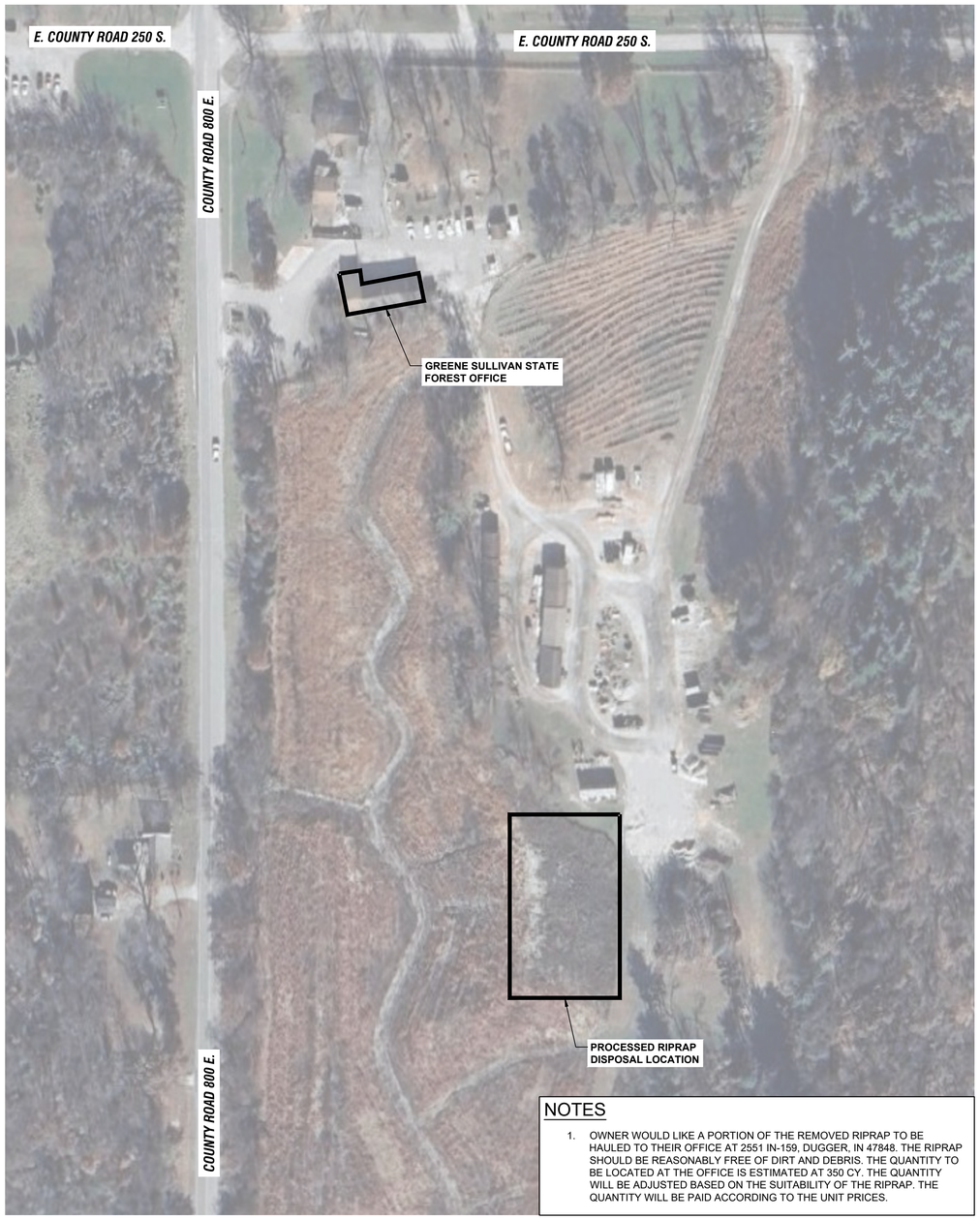
PARKING AREA SITE PLAN

SCALE: 1" = 15'

SHEET: 21 OF 42

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

PROJECT NUMBER: DEL2515208032/E008-376



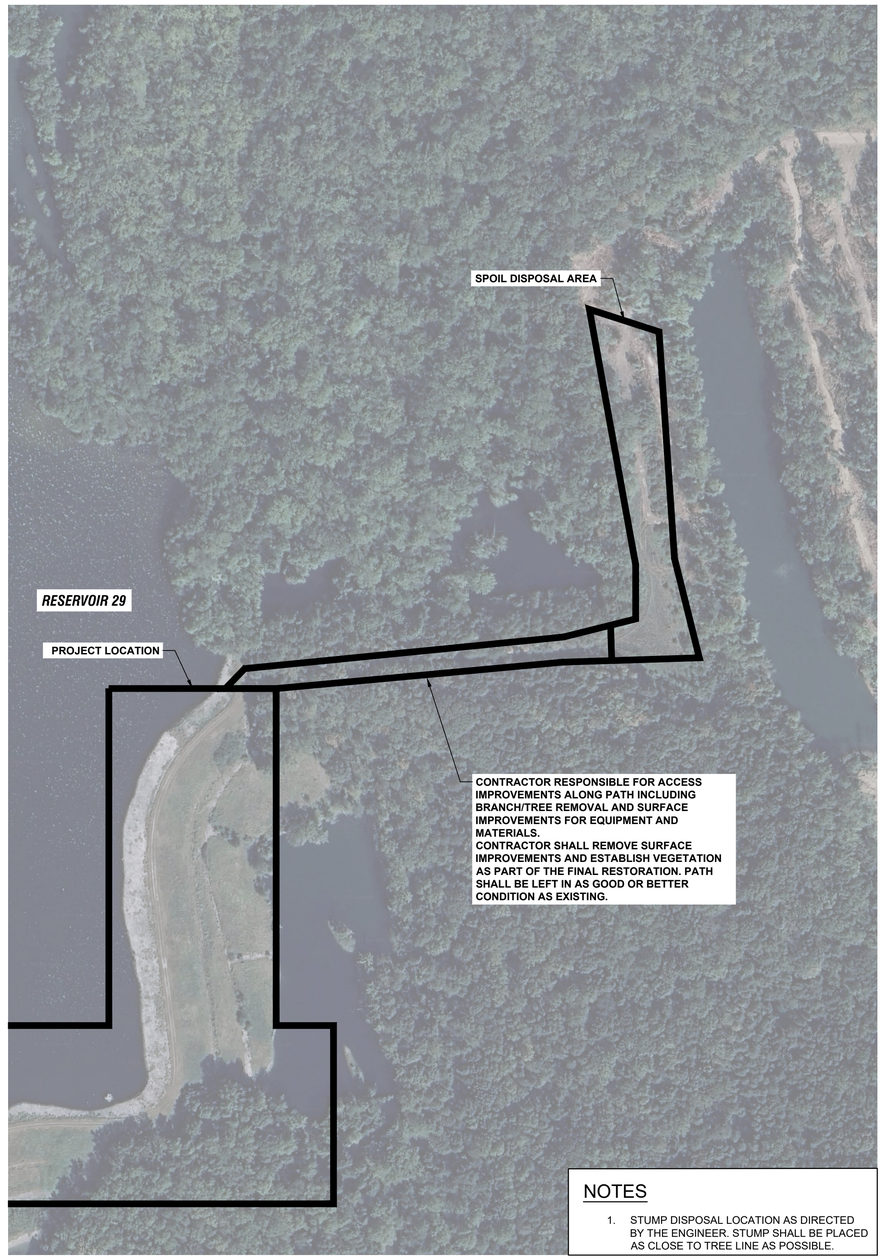
NOTES

1. OWNER WOULD LIKE A PORTION OF THE REMOVED RIPRAP TO BE HAULED TO THEIR OFFICE AT 2551 IN-159, DUGGER, IN 47848. THE RIPRAP SHOULD BE REASONABLY FREE OF DIRT AND DEBRIS. THE QUANTITY TO BE LOCATED AT THE OFFICE IS ESTIMATED AT 350 CY. THE QUANTITY WILL BE ADJUSTED BASED ON THE SUITABILITY OF THE RIPRAP. THE QUANTITY WILL BE PAID ACCORDING TO THE UNIT PRICES.

PLAN VIEW

SCALE: 1"=80'-0"

0 80' 160'



NOTES

1. STUMP DISPOSAL LOCATION AS DIRECTED BY THE ENGINEER. STUMP SHALL BE PLACED AS CLOSE TO TREE LINE AS POSSIBLE.

PLAN VIEW

SCALE: 1"=150'-0"

0 150' 300'

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DATE MADE	RIPRAP AND SPOIL DISPOSAL LOCATION MAPS	SCALE	SHEET
07/30/2024		N/A	22 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



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DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

EXISTING CONDITIONS

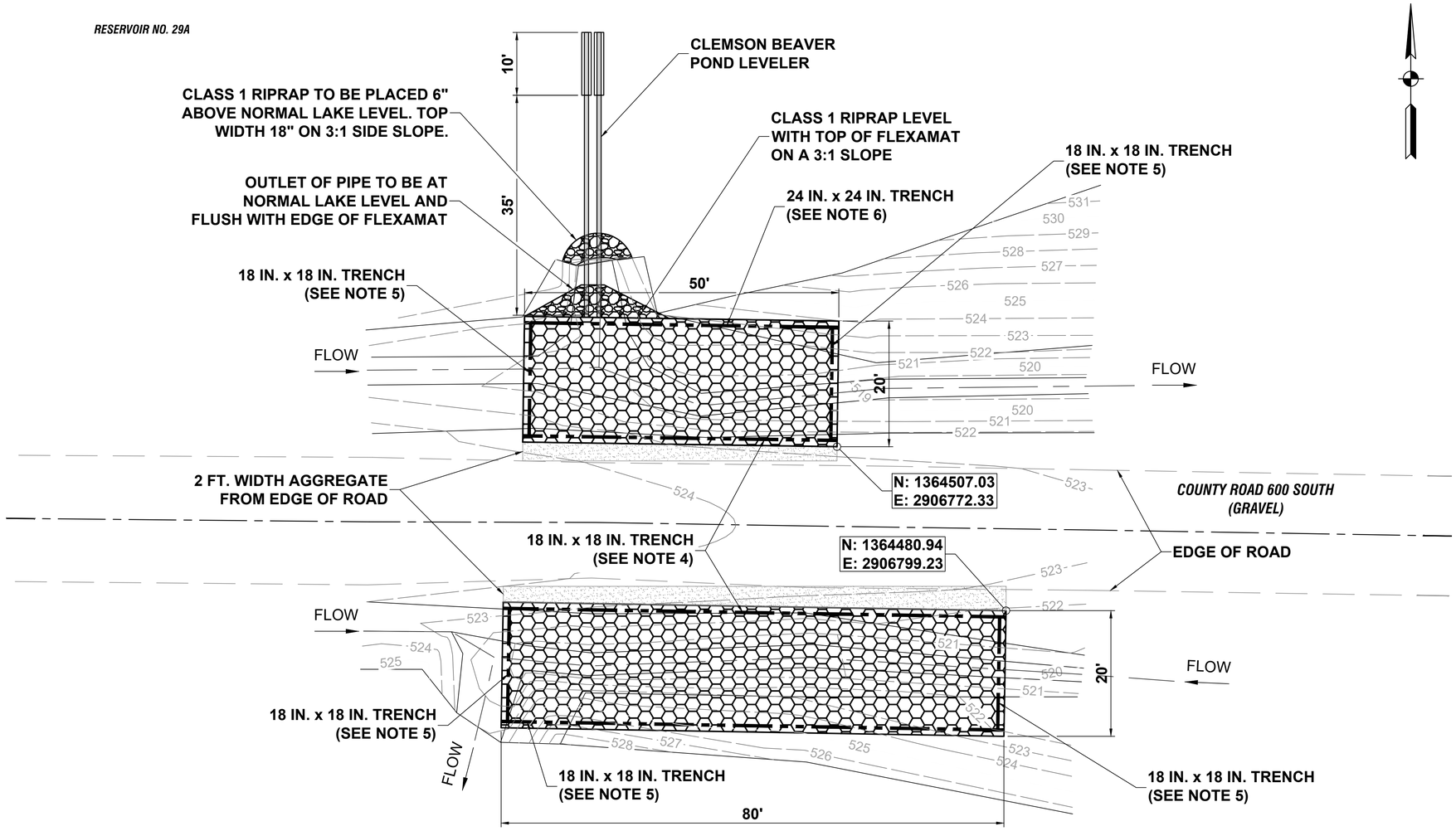
SCALE: 1" = 20'

SHEET: 23 OF 42

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

PROJECT NUMBER: DEL2515208032/E008-376

RESERVOIR NO. 29A



NOTES

1. CONTRACTOR SHALL USE FLEXAMAT PLUS UV-T FOR TIED CONCRETE MAT. SEE CONSTRUCTION DETAILS.
2. INSTALL EDGE OF FLEXAMAT 2 FEET FROM EDGE OF ROAD.
3. ADD 12 INCHES OF CONCRETE TO THE BOTTOM OF 18-INCH TRENCHES.
4. FILL 18-INCH TRENCH WITH 6" COMPACTED AGGREGATE #53 OVER 12" CONCRETE.
5. FILL TRENCH WITH NATIVE MATERIAL.
6. FILL 24-INCH TRENCH (NORTH EDGE OF NORTH MAT) TO TOP OF TRENCH WITH CONCRETE.
7. FLEXAMAT HORIZONTAL DIMENSIONS DO NOT ACCOUNT FOR TURNDOWNS OVERLAPS, AND ELEVATION CHANGES.
8. SEE CONSTRUCTION DETAILS FOR FURTHER GUIDANCE ON FLEXAMAT INSTALLATION.
9. CONTRACTOR SHALL ADHERE TO THE MOST-CURRENT AML STANDARD SPECIFICATIONS FOR GUIDANCE ON EROSION CONTROL MEASURES AND IMPLEMENTATION.

LEGEND

- TIED CONCRETE MAT (FLEXAMAT)
- COMPACTED AGGREGATE, #53
- ANCHOR TRENCH CENTERLINE

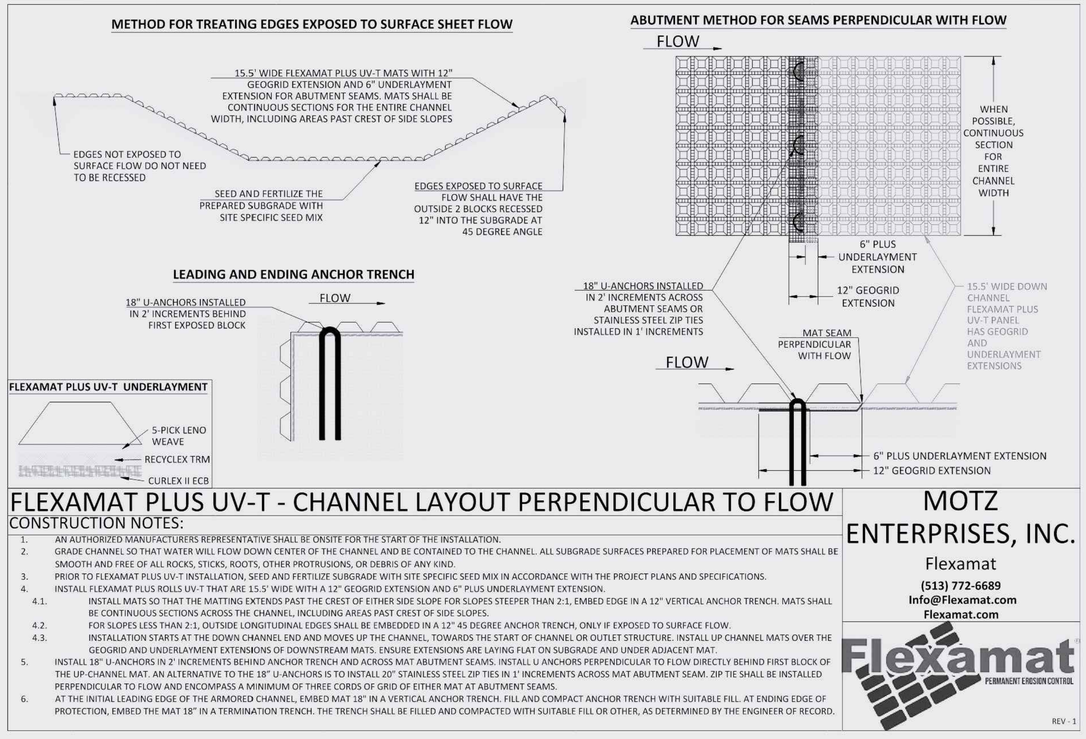
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	BEAVER DAM SITE IMPROVEMENTS PLAN	SCALE	SHEET
07/30/2024		1" = 10'	24 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



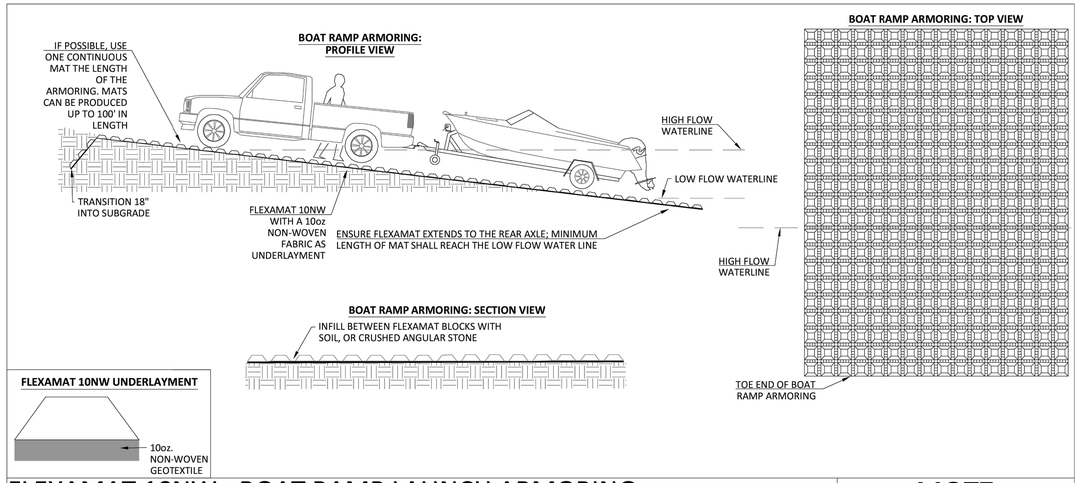
FLEXAMAT PLUS UV-T - CHANNEL LAYOUT PERPENDICULAR TO FLOW

CONSTRUCTION NOTES:

1. AN AUTHORIZED MANUFACTURERS REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. PRIOR TO FLEXAMAT PLUS UV-T INSTALLATION, SEED AND FERTILIZE SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
4. INSTALL FLEXAMAT PLUS ROLLS UV-T THAT ARE 15.5' WIDE WITH A 12" GEOGRID EXTENSION AND 6" PLUS UNDERLAYMENT EXTENSION.
   - 4.1. INSTALL MATS SO THAT THE MATTING EXTENDS PAST THE CREST OF EITHER SIDE SLOPE FOR SLOPES STEEPER THAN 2:1, EMBED EDGE IN A 12" VERTICAL ANCHOR TRENCH. MATS SHALL BE CONTINUOUS SECTIONS ACROSS THE CHANNEL, INCLUDING AREAS PAST CREST OF SIDE SLOPES.
   - 4.2. FOR SLOPES LESS THAN 2:1, OUTSIDE LONGITUDINAL EDGES SHALL BE EMBEDDED IN A 12" 45 DEGREE ANCHOR TRENCH, ONLY IF EXPOSED TO SURFACE FLOW.
   - 4.3. INSTALLATION STARTS AT THE DOWN CHANNEL END AND MOVES UP THE CHANNEL, TOWARDS THE START OF CHANNEL OR OUTLET STRUCTURE. INSTALL UP CHANNEL MATS OVER THE GEOGRID AND UNDERLAYMENT EXTENSIONS OF DOWNSTREAM MATS. ENSURE EXTENSIONS ARE LAYING FLAT ON SUBGRADE AND UNDER ADJACENT MAT.
5. INSTALL 18" U-ANCHORS IN 2' INCREMENTS BEHIND ANCHOR TRENCH AND ACROSS MAT ABUTMENT SEAMS. INSTALL U ANCHORS PERPENDICULAR TO FLOW DIRECTLY BEHIND FIRST BLOCK OF THE UP-CHANNEL MAT. AN ALTERNATIVE TO THE 18" U-ANCHORS IS TO INSTALL 20" STAINLESS STEEL ZIP TIES IN 1' INCREMENTS ACROSS MAT ABUTMENT SEAM. ZIP TIE SHALL BE INSTALLED PERPENDICULAR TO FLOW AND ENCOMPASS A MINIMUM OF THREE CORDS OF GRID OF EITHER MAT AT ABUTMENT SEAMS.
6. AT THE INITIAL LEADING EDGE OF THE ARMORED CHANNEL, EMBED MAT 18" IN A VERTICAL ANCHOR TRENCH. FILL AND COMPACT ANCHOR TRENCH WITH SUITABLE FILL. AT ENDING EDGE OF PROTECTION, EMBED THE MAT 18" IN A TERMINATION TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER, AS DETERMINED BY THE ENGINEER OF RECORD.

MOTZ ENTERPRISES, INC.
Flexamat
(513) 772-6689
Info@Flexamat.com
Flexamat.com

REV - 1



FLEXAMAT 10NW - BOAT RAMP LAUNCH ARMORING

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURES REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. FLEXAMAT ROLLS ARE AVAILABLE IN WIDTHS OF 4', 5.5', 8', 10', 12', & 16'. IT IS THE MANUFACTURERS RECOMMENDATION TO UTILIZE THE WIDEST MATS POSSIBLE TO REDUCE AN ABUNDANCE OF SEAMS OR OVERLAPS.
4. AT THE BEGINNING OF THE FLEXAMAT, TRANSITION THE INITIAL LEADING 18" INTO THE SUBGRADE TO SERVE AS AN ANCHOR TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER (AS SPECIFIED BY EOR).
5. INFILL BETWEEN FLEXAMAT BLOCKS WITH SOIL OR CRUSHED ANGULAR STONE.
   - 5.1. IF INFILLING WITH SOIL, SEED AND LAY STRAW OVER THE FLEXAMAT TO PROMOTE VEGETATION.

MOTZ ENTERPRISES, INC.
Flexamat
(513)772-6689
Info@Flexamat.com
Flexamat.com

REV - 1

DISCLAIMER NOTE:

1. THIS DETAIL WAS PROVIDED BY FLEXAMAT TO BE USED AS REFERENCE ONLY. CONTRACTOR TO REFERENCE SPECIFICATIONS.

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DALE A. GICK REGISTERED PE10100195 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

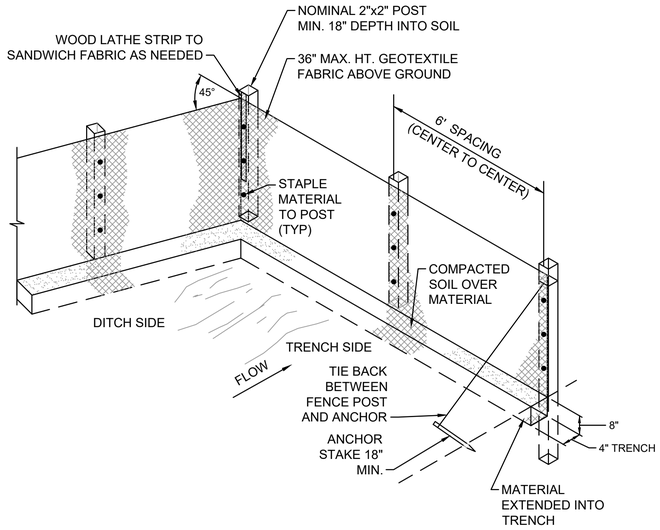
DATE MADE	FLEXAMAT DETAILS	SCALE	SHEET
07/30/2024		N/A	25 OF 42

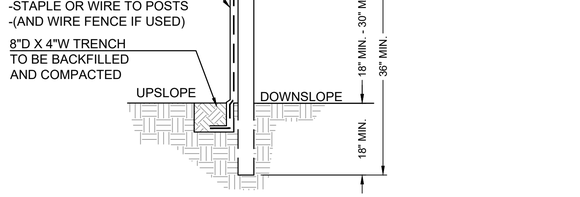
DESIGNED BY	DRAWN BY	DATE REVISED	PROJECT NUMBER
DAG	RNM		DEL2515208032/E008-376

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

NOTES:

1. SILT FENCES SHOULD BE INSTALLED PRIOR TO MAJOR SOIL DISTURBANCE.
2. FENCES SHALL BE INSTALLED BETWEEN THE TRENCH AND ANY DRAINAGE DITCHES OR SWALES.
3. FENCES SHALL ALSO BE INSTALLED AROUND THE STOCKPILED SOILS.
4. THE GEOTEXTILE SHALL BE FREE FROM DEFECTS, TEARS, PUNCTURES, FLAWS, DETERIORATION OR DAMAGE INCURRED DURING MANUFACTURE, TRANSPORTATION, STORAGE, OR INSTALLATION.
5. TIE BACKS SHALL BE PLACED AS REQUIRED.





INSTALLATION:

1. THE BOTTOM 1' OF THE FENCE SHALL BE BURIED IN THE TRENCH ON THE UPSLOPE SIDE.
2. FENCE SHALL BE INSTALLED ALONG LEVEL GRADES, NOT ACROSS FLOW CHANNELS.
3. IF OPTIONAL SUPPORT WIRE FENCE IS USED, POST SPACING MAY BE EXTENDED TO 8' O.C.

MAINTENANCE:

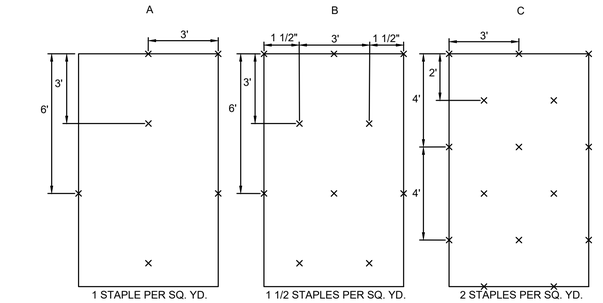
1. INSPECT SILT FENCE PERIODICALLY (WEEKLY) AND AFTER EACH STORM EVENT.
2. IF FABRIC IS TORN OR DAMAGED OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE, OR IT IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE NOT TO UNDERMINE THE FENCE DURING SEDIMENT REMOVAL.
5. AFTER THE CONTRIBUTING AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND REMAINING SEDIMENT, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

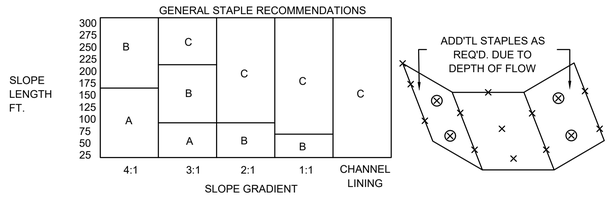
NOTE:

1. SILT FENCE NOT TO BE UTILIZED ON THE EMBANKMENT BELOW THE NORMAL LAKE LEVEL.

SILT FENCE

NOT TO SCALE





SPECIFICATIONS:

EFFECTIVE LIFE

1. THE FUNCTIONAL LIFE OF AN EROSION CONTROL BLANKET IS DEPENDENT ON THE MATERIALS USED.

ANCHORING

1. STAPLES, PINS OR STAKES USED TO PREVENT MOVEMENT OR DISPLACEMENT OF BLANKET. (FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC APPLICATIONS.)

MATERIALS

1. ORGANIC (STRAW, EXCELSIOR, WOVEN PAPER, COCONUT FIBER, ETC.) OR SYNTHETIC MULCH
2. EROSION CONTROL BLANKET SHALL BE NET-FREE.

NOTE: SOME EROSION CONTROL BLANKET NETTINGS MAY POSE A THREAT TO CERTAIN SPECIES OF WILDLIFE IF THEY BECOME ENTANGLED IN THE NETTING MATRIX.

3. SIX TO 12-INCH STAPLES, PINS, OR STAKES.

INSTALLATION:

1. SELECT EROSION CONTROL MAT "NAG SC150" OR APPROVED EQUAL.
2. PREPARE THE SEEDBED, ADD SOIL AMENDMENTS, AND PERMANENTLY SEED THE AREA IMMEDIATELY FOLLOWING SEEDBED PREPARATION.
3. LAY EROSION CONTROL BLANKETS ON THE SEEDED AREA SO THAT THEY ARE IN CONTINUOUS CONTACT WITH THE SOIL WITH EACH UP-SLOPE OR UP-STREAM BLANKET OVERLAPPING THE DOWN-SLOPE OR DOWN-STREAM BLANKET BY AT LEAST EIGHT INCHES, OR FOLLOW MANUFACTURER'S RECOMMENDATIONS.
4. TUCK THE UPPERMOST EDGE OF THE UPPER BLANKETS INTO A CHECK SLOT (SLIT TRENCH), BACKFILL WITH SOIL AND TAMP DOWN. IN CERTAIN APPLICATIONS, THE MANUFACTURER MAY REQUIRE ADDITION CHECK SLOTS AT SPECIFIC LOCATIONS DOWN SLOPE FROM THE UPPERMOST EDGE OF THE UPPER BLANKETS.
5. ANCHOR THE BLANKETS IN PLACE BY DRIVING STAPLES, PINS, OR STAKES THROUGH THE BLANKET AND INTO THE UNDERLYING SOIL. FOLLOW AN ANCHORING PATTERN APPROPRIATE FOR THE SITE CONDITIONS AND AS RECOMMENDED BY THE MANUFACTURER.

MAINTENANCE:

1. INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
2. CHECK FOR EROSION OR DISPLACEMENT OF THE BLANKET.
3. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING THE ERODED AREA, ADD SOIL AND TAMP, RESEED THE AREA, REPLACE AND STAPLE THE BLANKET.

NOTES:

1. CHANNEL LININGS UTILIZE STAPLE PATTERN "C" WITH ADDITIONAL STAPLES ON SIDE SLOPES AT PROJECTED WATER LINE.
2. STAPLE PATTERNS APPLY TO ALL NORTH AMERICAN GREEN EROSION CONTROL BLANKETS. STAPLE PATTERNS MAY VARY DEPENDING UPON SOIL TYPE AND AVERAGE RAINFALL.
3. AT SLOPE LENGTHS GREATER THAN 300 FEET OR WHERE DRAINAGE OVER LARGE AREAS IS DIRECTED ONTO THE BLANKETS, STAPLE PATTERN "C" SHOULD BE UTILIZED.

EROSION CONTROL BLANKET

NOT TO SCALE

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DATE MADE: 07/30/2024

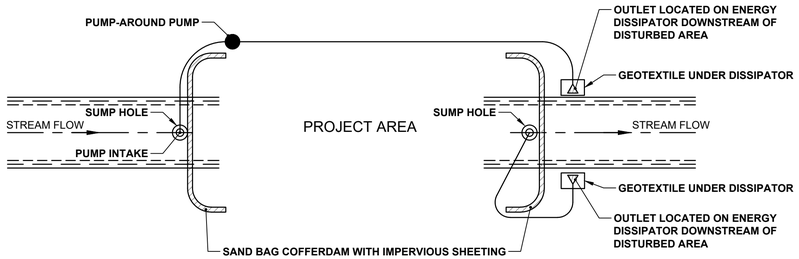
EROSION CONTROL DETAILS

SCALE: N/A

SHEET: 26 OF 42

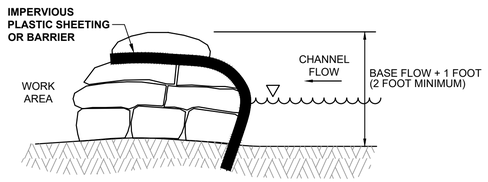
STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

PROJECT NUMBER: DEL2515208032/E008-376



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NOT TO SCALE



SAND BAG COFFER DAM

NOT TO SCALE

MATERIAL HANDLING AND STORAGE:

1. FUELS, OILS, GREASE, OR OTHER PETROLEUM PRODUCTS MUST BE STORED IN APPROPRIATE AND APPROVED AREAS. PREVENTATIVE MAINTENANCE WILL BE REQUIRED FOR ON-SITE EQUIPMENT. HAZARDOUS MATERIALS WILL BE REQUIRED TO BE STORED IN A FIELD TRAILER TO AVOID ANY OUTSIDE STORAGE.

2. ALL FUEL IS TO BE CONTAINED IN A MOBILE SERVICE TRUCK OR IN THE CONSTRUCTION EQUIPMENT OPERATING ON-SITE. SMALL CONTAINERS OF OILS, GREASE, AND RELATED PRODUCTS MAY BE STORED IN THE CONTRACTOR'S CONSTRUCTION TRAILER. THESE ITEMS WILL BE REQUIRED TO BE INSPECTED REGULARLY TO ENSURE PROPER STORAGE AND HANDLING, AND TO GUARD AGAINST LEAKAGE. DEFECTIVE CONTAINERS WILL BE REMOVED FROM THE PROJECT SITE IMMEDIATELY.

PERMANENT SEEDING:

1. PERMANENT SEEDING SHALL BE PLACED IMMEDIATELY AFTER FINISH GRADING. ONCE THE SEED IS ESTABLISHED AND THE GROUND IS STABILIZED, ALL SWPPP MEASURES SHOULD BE REMOVED.

2. PREPARATION OF SEEDBED(S) REQUIRES THAT IT BE FREE OF OBJECTIONABLE MATERIALS AND BE LEFT IN A SMOOTH AND UNIFORM APPEARANCE, THAT IS AESTHETICALLY SATISFACTORY TO THE OWNER.

3. PRIOR TO START OF PREPARATION OF SEEDING, THE CONTRACTOR SHALL REMOVE ALL DEBRIS, SHEDS, TOOLS, EQUIPMENT, AND OTHER OBJECTS LARGER THAN 3/4 INCHES (19 mm) IN GREATEST DIAMETER FROM THE AREA TO BE SEEDED. THE AREAS TO BE SEEDED SHALL BE LOOSENED AND REWORKED BY MEANS OF DISKING, HARROWING, AND ROLLING; OR REWORKED BY MEANS OF A POWERED ROTARY TILLER; SO THAT THE GROUND WILL BE LEFT IN A SATISFACTORY MANNER READY FOR SEEDING. THE SURFACE OF THE AREA TO BE SEEDED SHALL BE LEFT SMOOTH AND UNIFORM WHICH CONFORMS TO THE FINISHED GRADES AND CROSS SECTIONS AS SHOWN ON THE PLANS AND WITHOUT DEPRESSIONS OR IRREGULARITIES; OR AS OTHERWISE SPECIFIED.

4. AFTER THE SEED HAS BEEN SOWN AND PRIOR TO COMPACTING, THE LAWN AREA SHALL BE CLEARED OF ALL CONSTRUCTION MATERIALS AND DEBRIS, STONES, OR OTHER OBJECTS LARGER THAN 3/4 INCHES (19 mm) IN GREATEST DIAMETER, AND ALL WIRE, ROOTS BRUSH, STUMPS, OR OTHER OBJECTS THAT MAY INTERFERE WITH SUBSEQUENT MOWING OPERATIONS.

5. SPRING SEEDING SHALL BE PERFORMED BETWEEN MARCH 1 AND MAY 15. FALL SEEDING SHALL BE PERFORMED BETWEEN AUGUST 15 AND OCTOBER 15. DURING THESE PERIODS, THE TIME OF SEEDING SHALL BE DETERMINED BY THE ENGINEER OR RESIDENT PROJECT REPRESENTATIVE WHOSE DECISION SHALL BE BASED ON THE MOISTURE CONTENT OF THE SOIL AND WEATHER CONDITIONS. THE ENGINEER OR RESIDENT PROJECT REPRESENTATIVE MAY, AT THEIR OPTION, EXTEND THE SEEDING SEASON. MULCHED SEEDING MAY BE PERFORMED BETWEEN MARCH 1 AND OCTOBER 15 WITH THE POSSIBILITY TO EXTEND PERIOD LATER INTO FALL (AFTER OCTOBER 15).

6. UNLESS OTHERWISE SPECIFIED, T HE FOLLOWING PURE LIVE SEEDS SHALL BE MIXED AND APPLIED AT THE RATE OF ONE HUNDRED-TWENTY (120) POUNDS PER ACRE (2.8 POUNDS PER 1,000 SQUARE FEET):

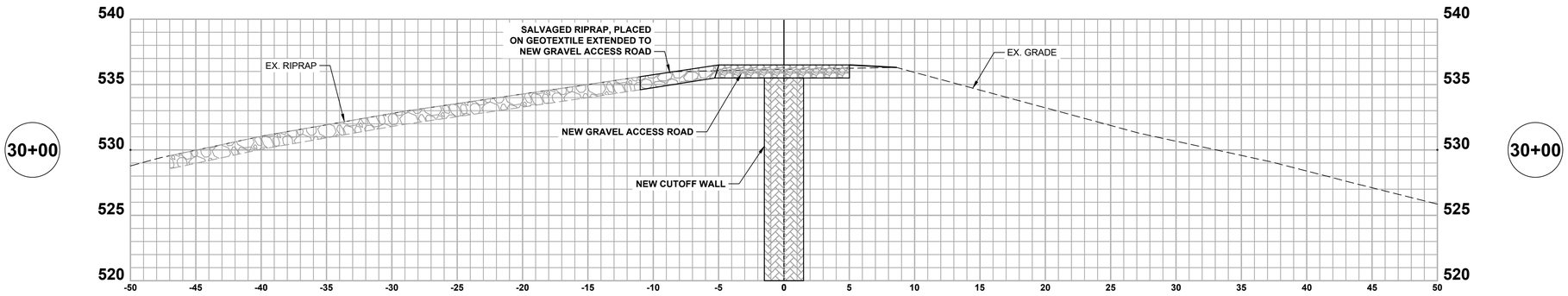
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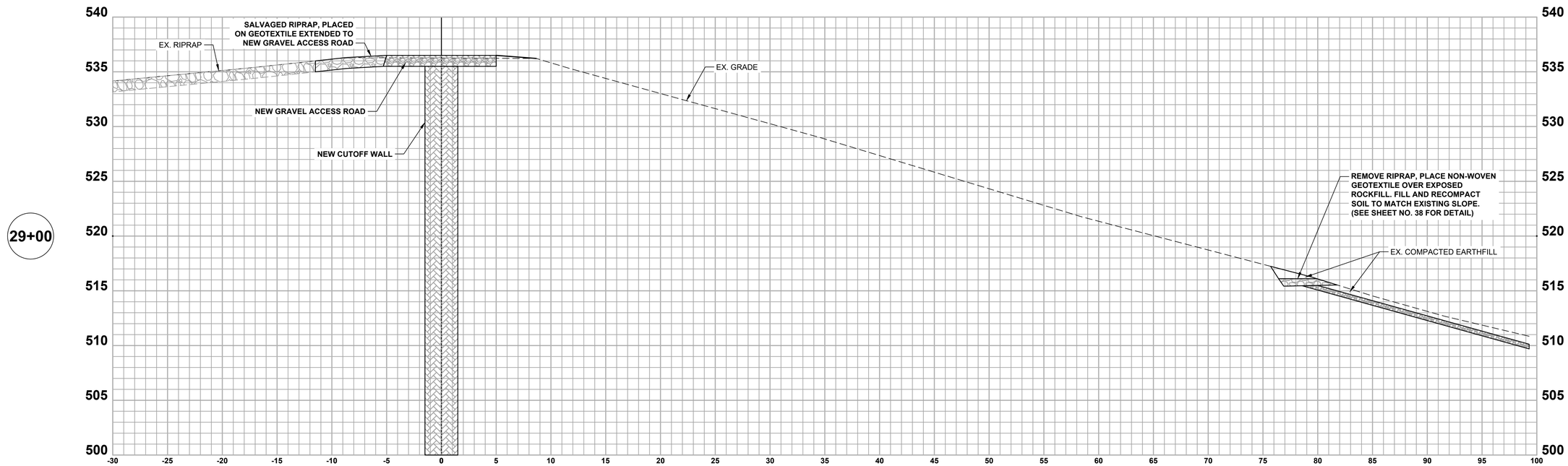
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DATE MADE	EROSION CONTROL AND MISCELLANEOUS DETAILS	SCALE	SHEET
07/30/2024		N/A	27 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376





GENERAL NOTES:

1. FULL DEPTH OF CROSS SECTION TRENCH NOT SHOWN ON CROSS SECTION FOR CLARITY

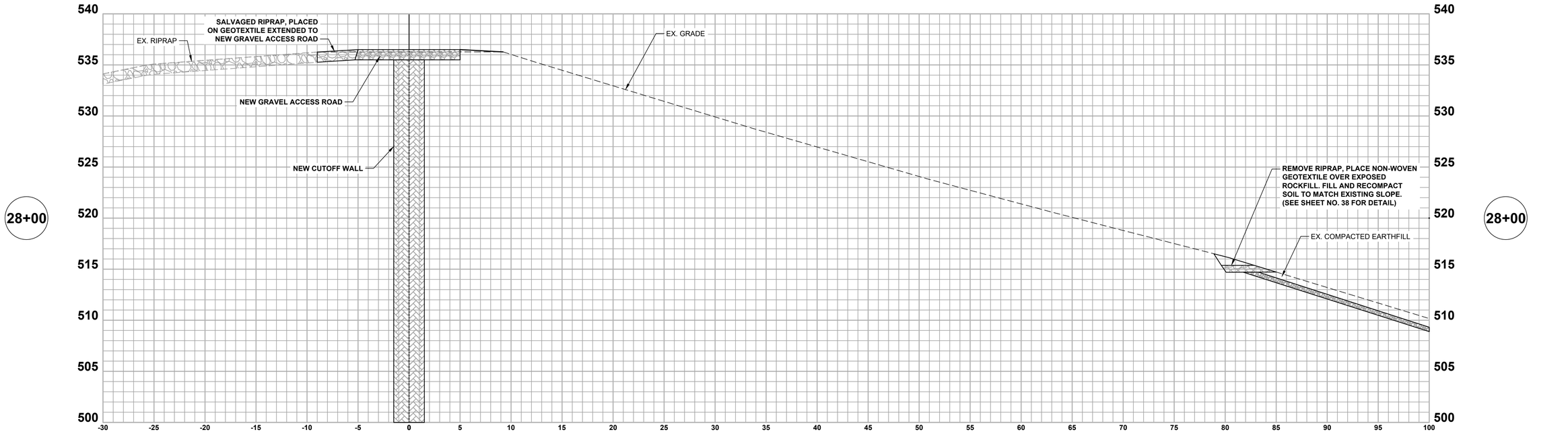
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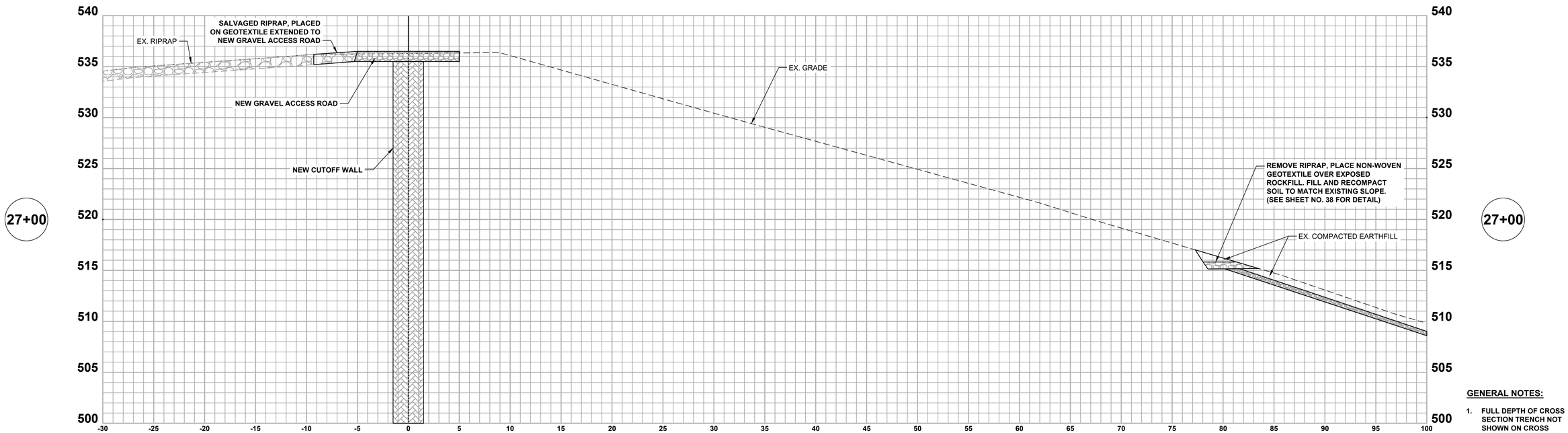
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DATE MADE	CROSS SECTIONS - LINE "A"	SCALE	SHEET
07/30/2024		H&V: 1" = 5'	28 OF 42

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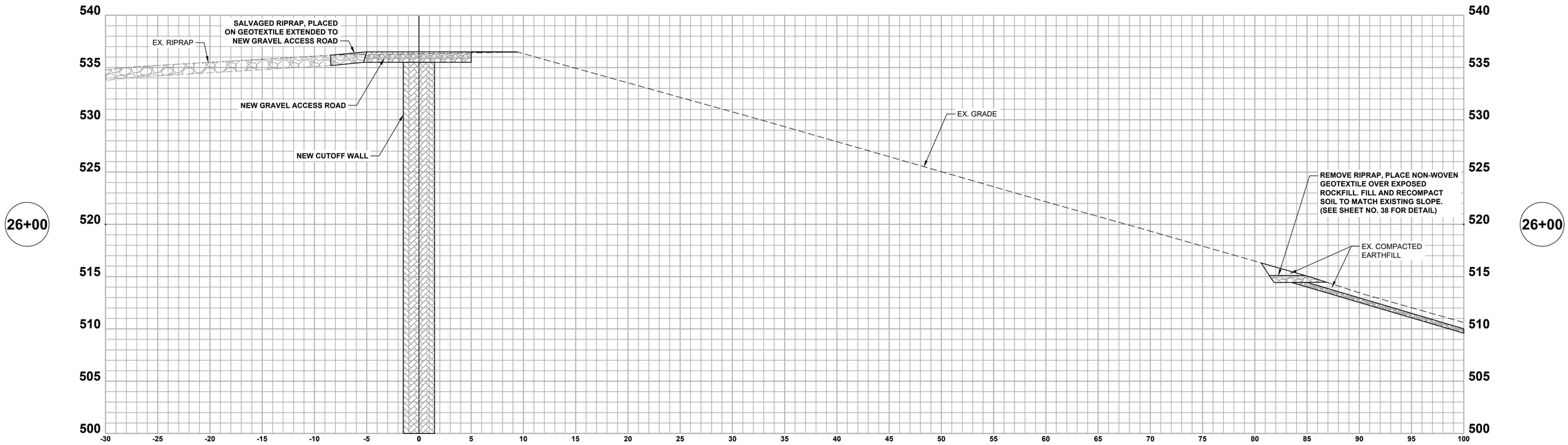
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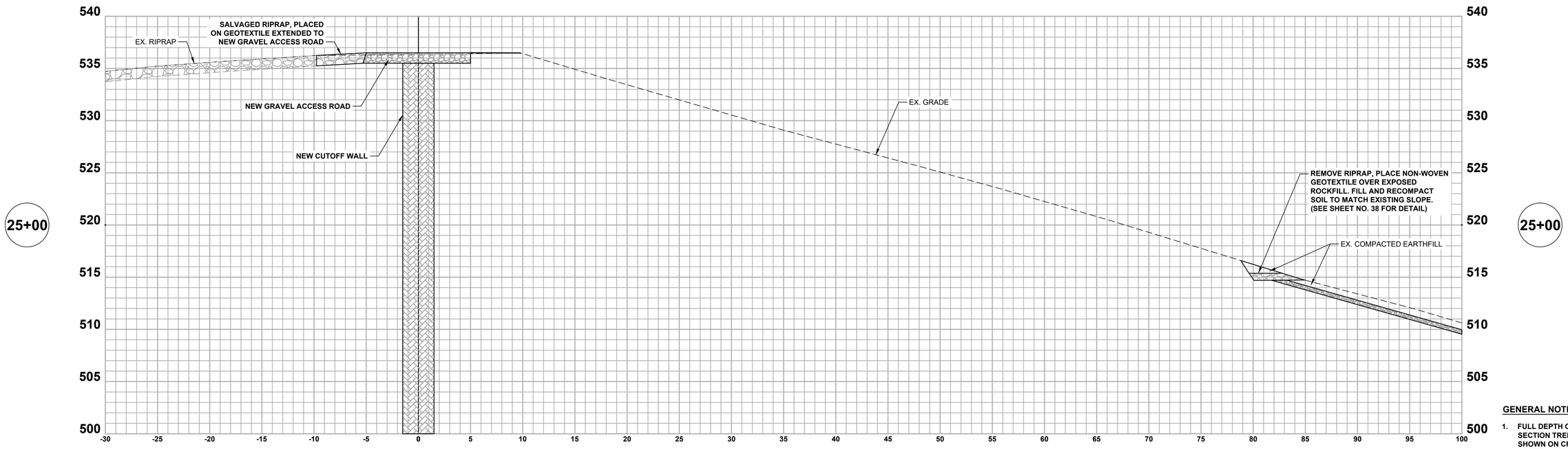
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07/30/2024		H&V: 1" = 5'	29 OF 42

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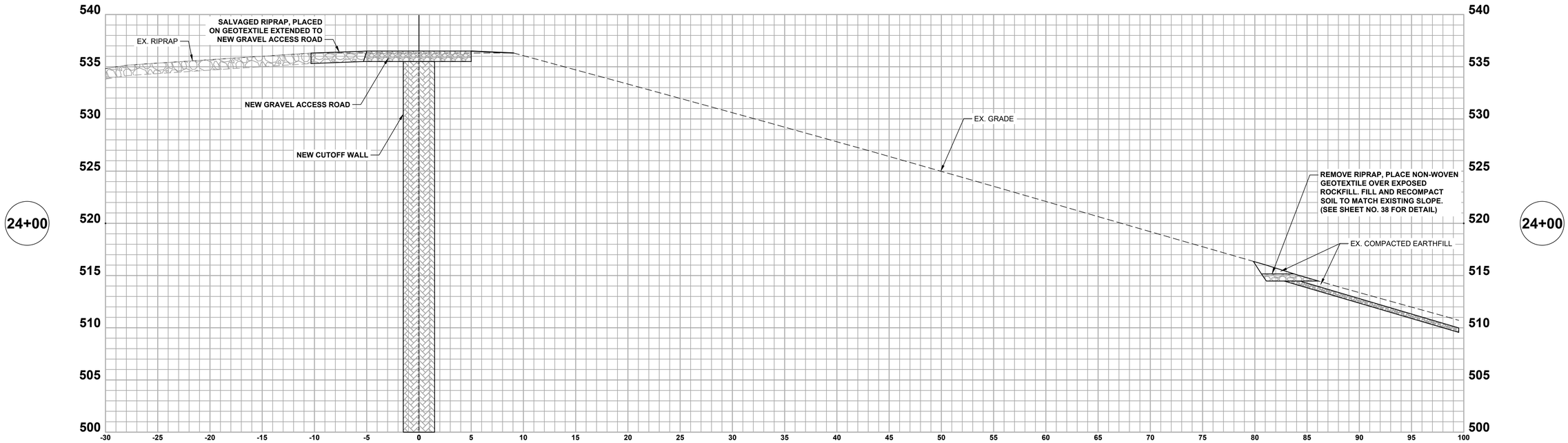
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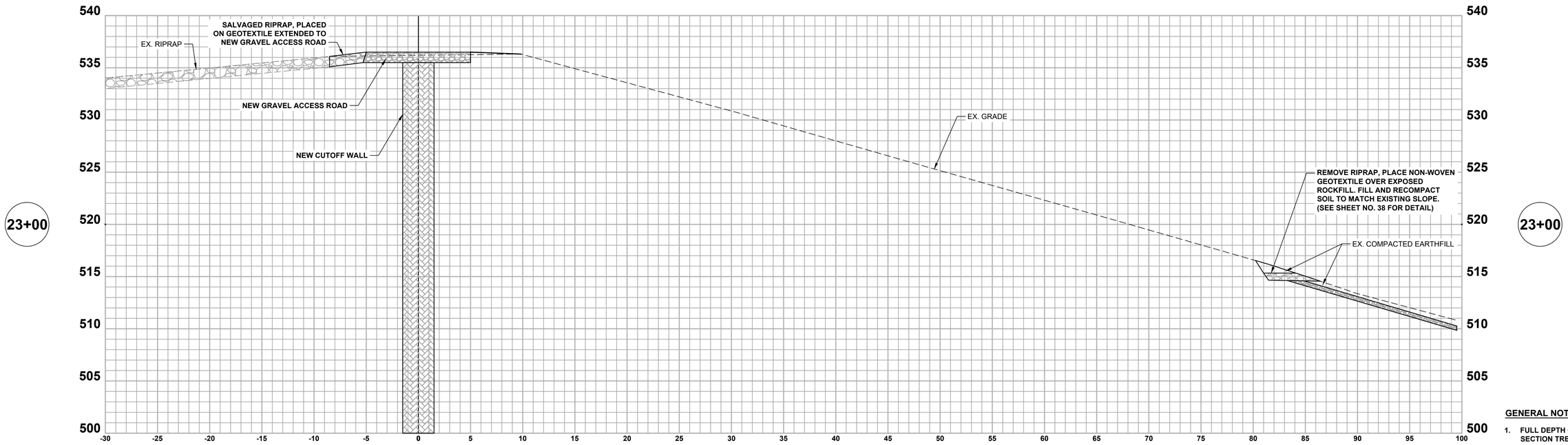
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07/30/2024		H&V: 1" = 5'	30 OF 42

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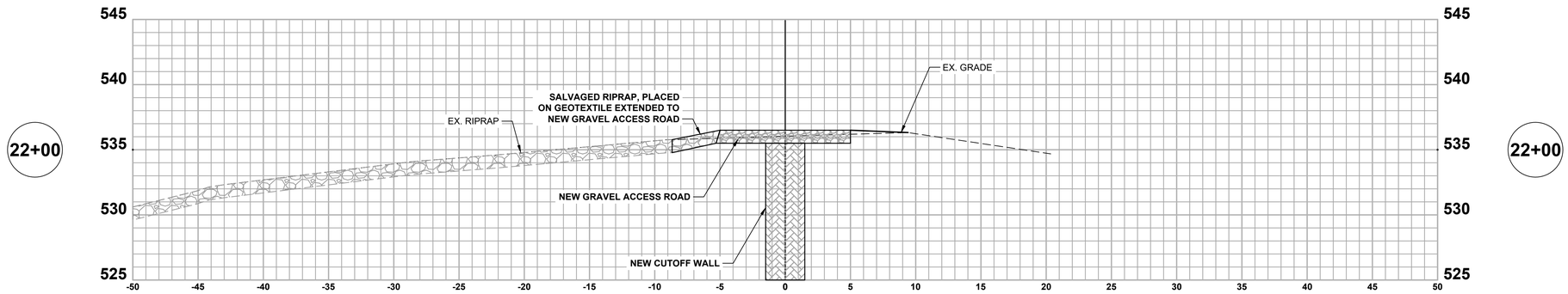
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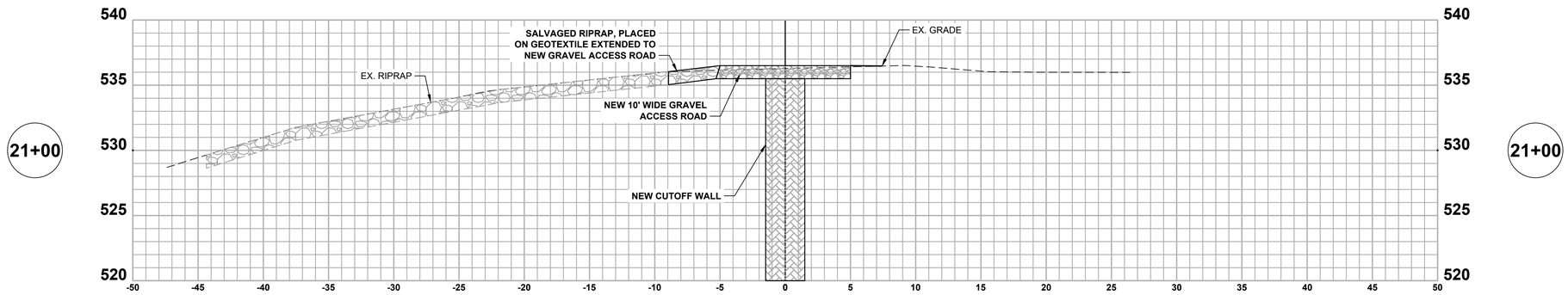
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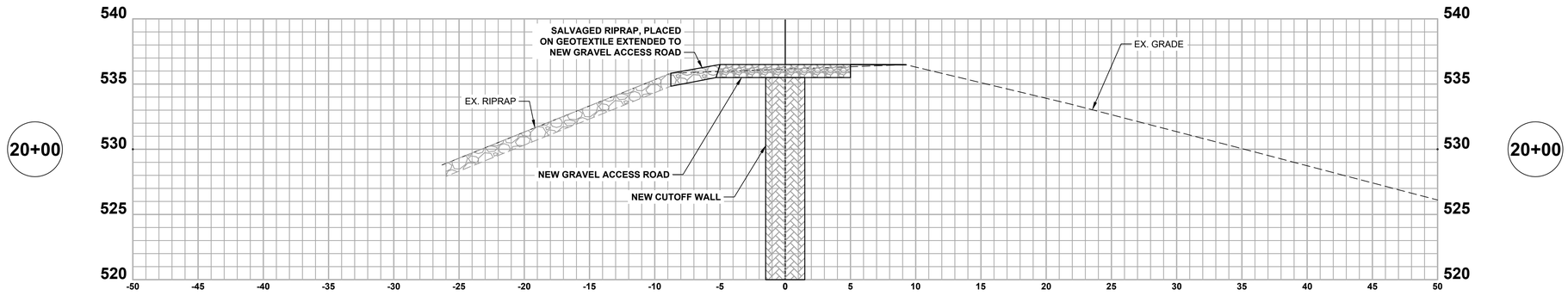
RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	CROSS SECTIONS - LINE "A"	SCALE	SHEET
07/30/2024		H&V: 1" = 5'	31 OF 42

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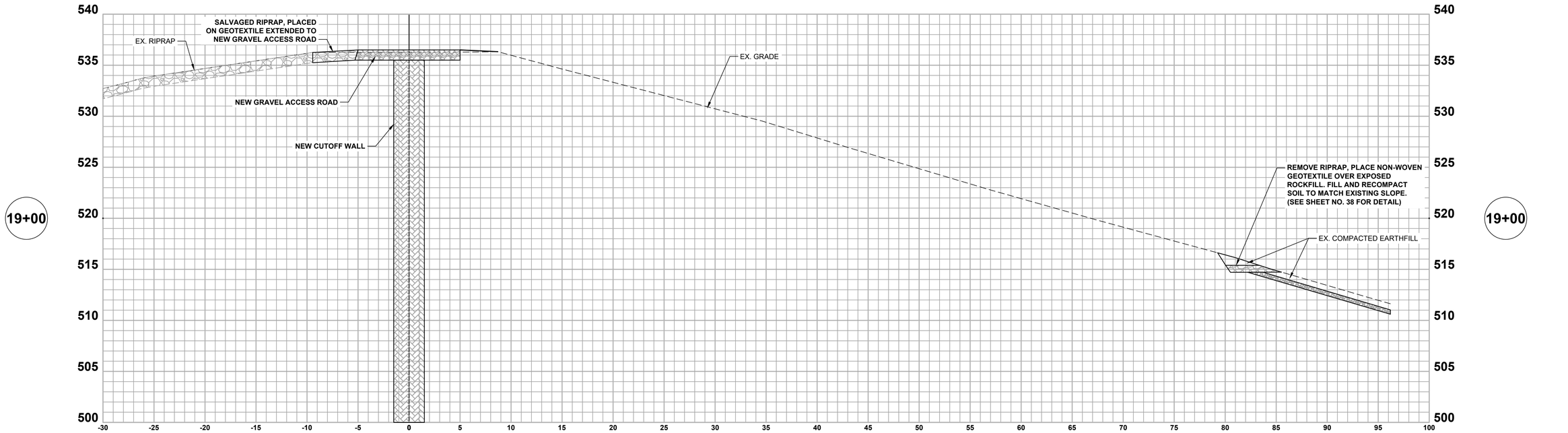
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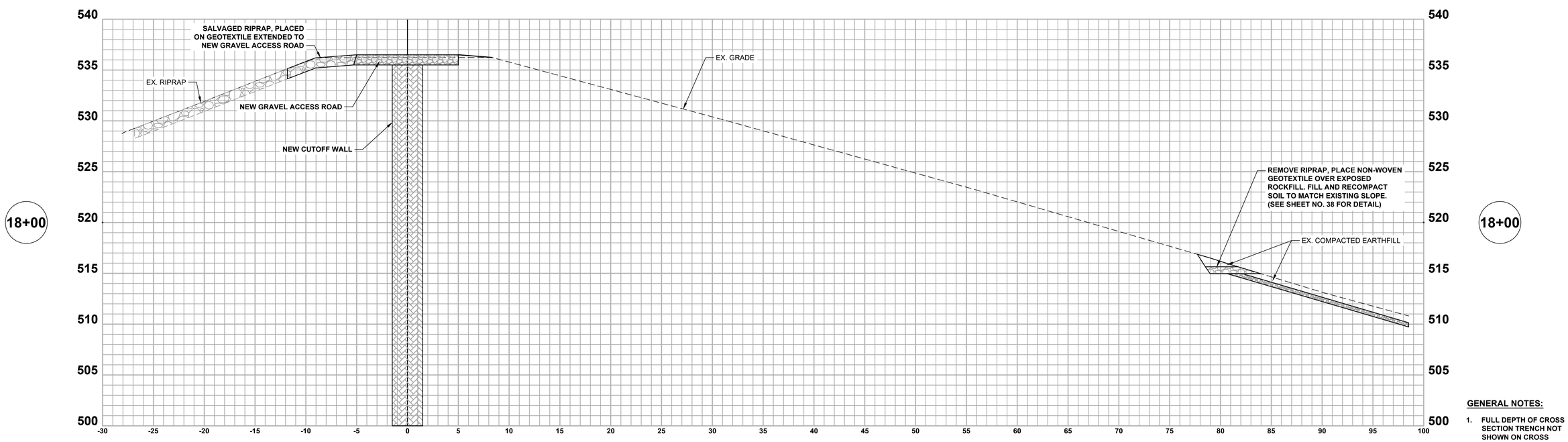
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DATE MADE	CROSS SECTIONS	SCALE	SHEET
07/30/2024	- LINE "A"	H&V: 1" = 5'	32 OF 42

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CROSS SECTIONS - LINE "A"

SCALE H&V: 1" = 5'

SHEET 33 OF 42

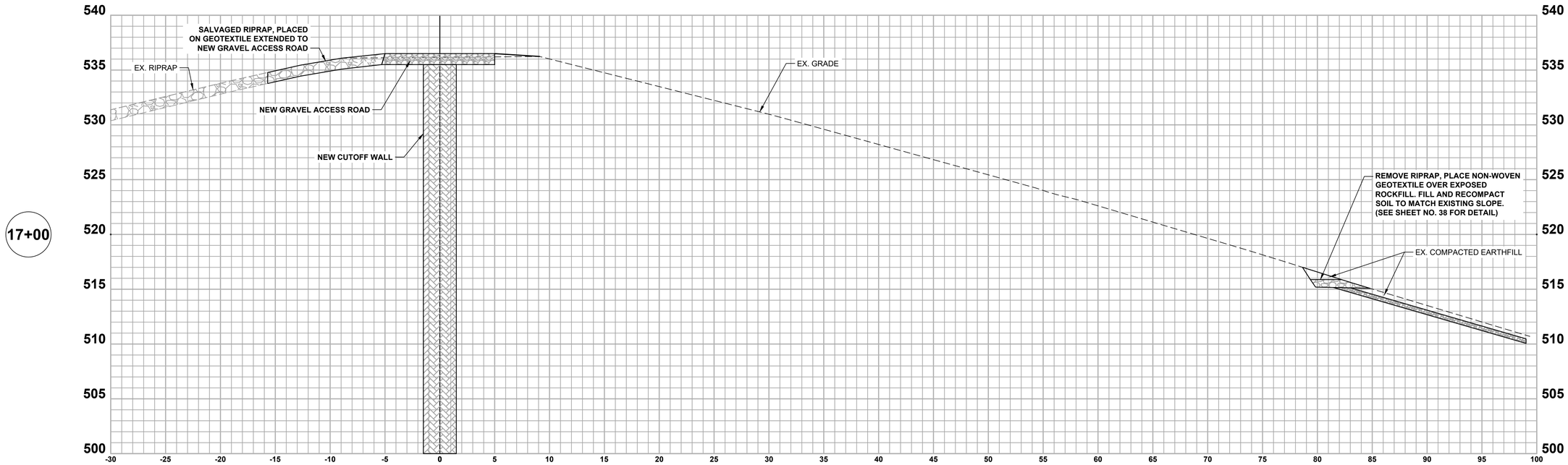
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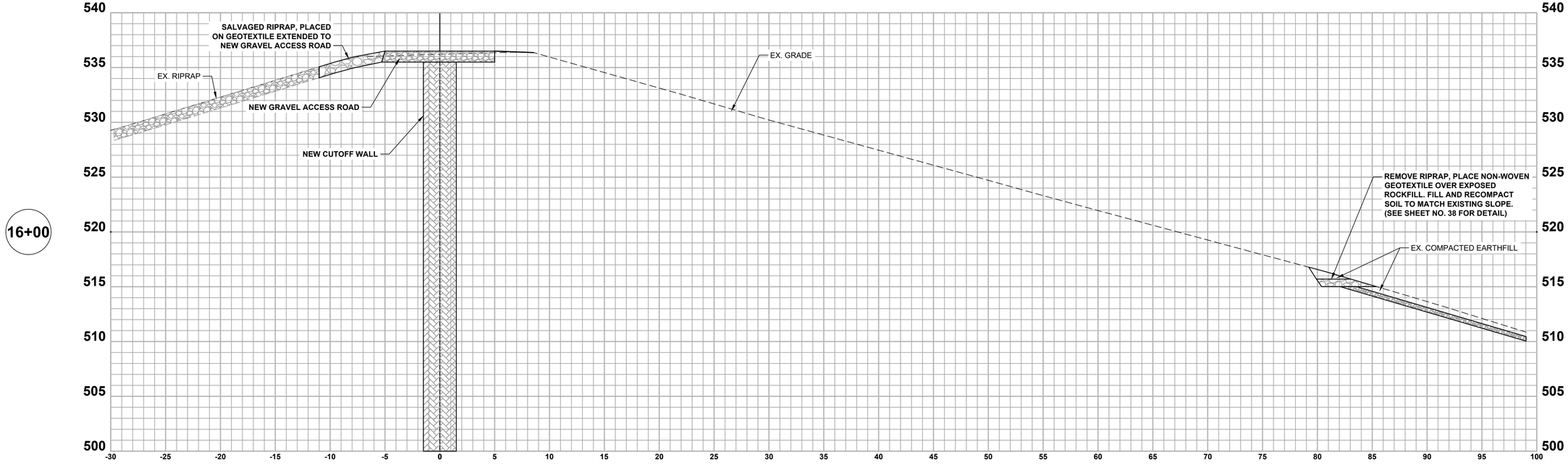
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SHEET 34 OF 42

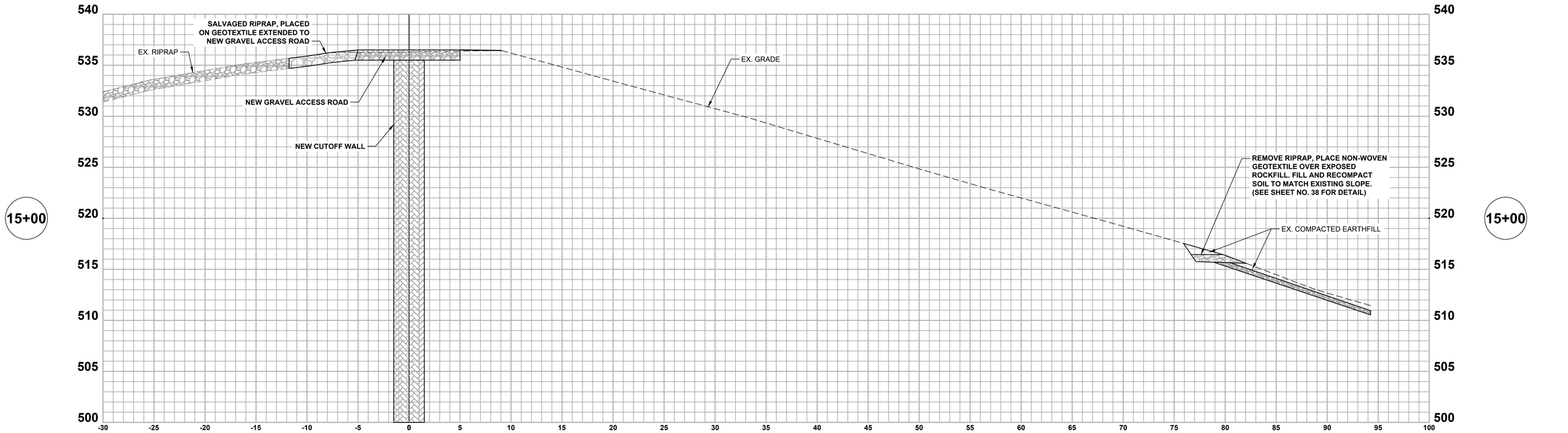
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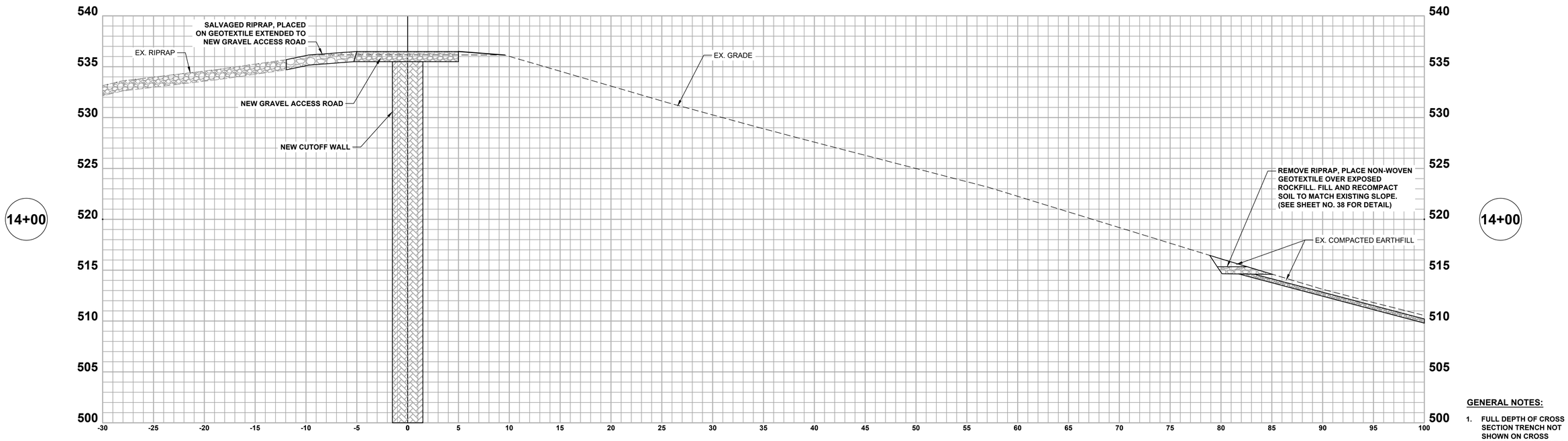
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SHEET 35 OF 42

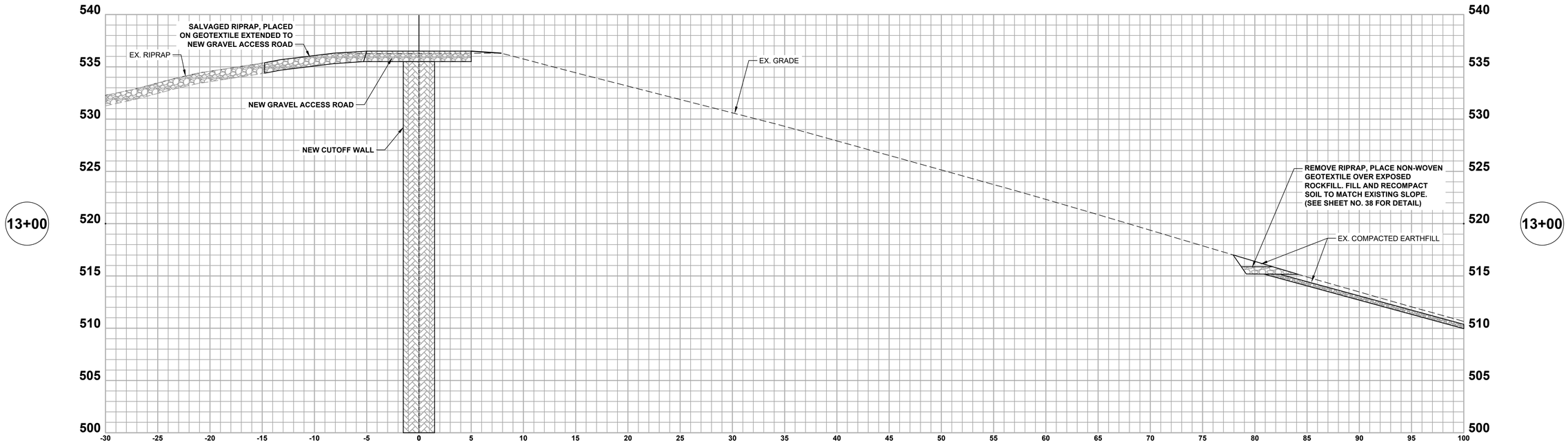
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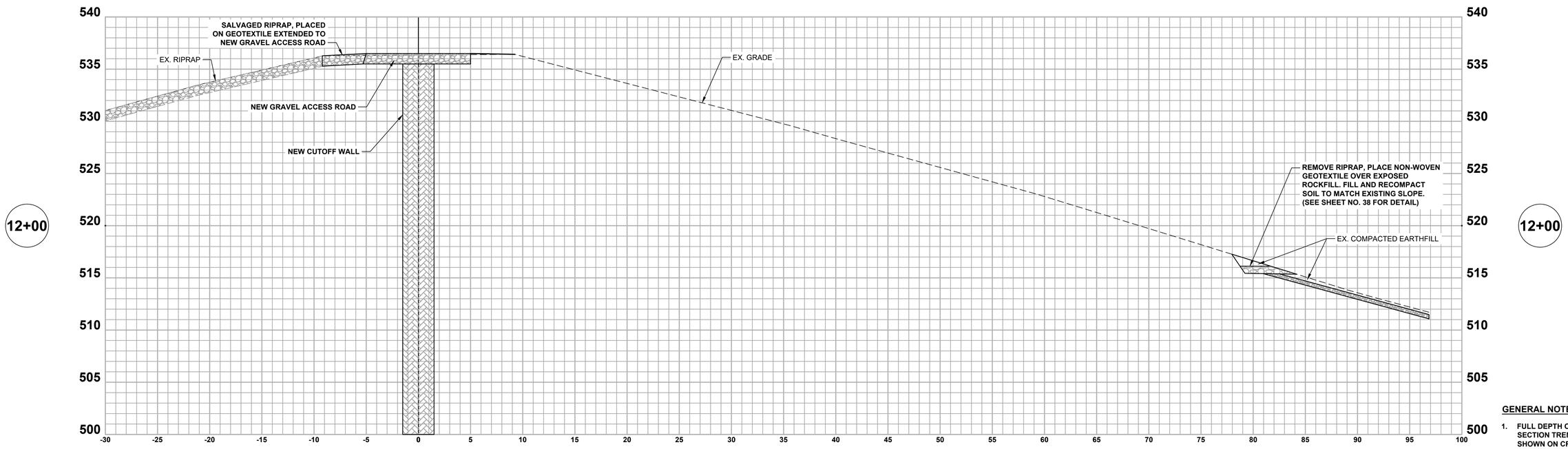
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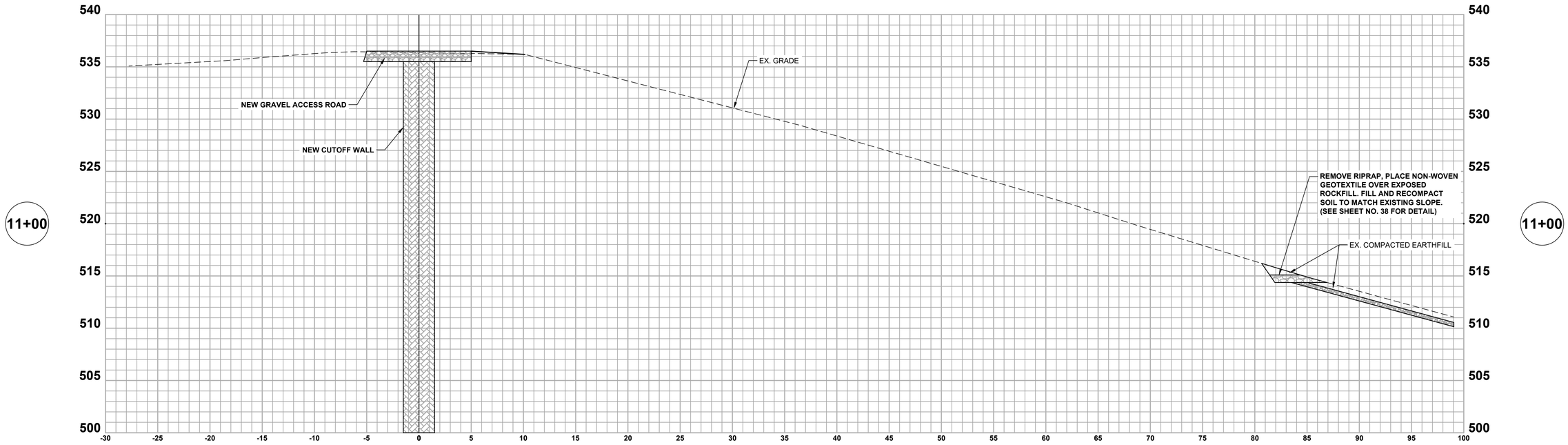
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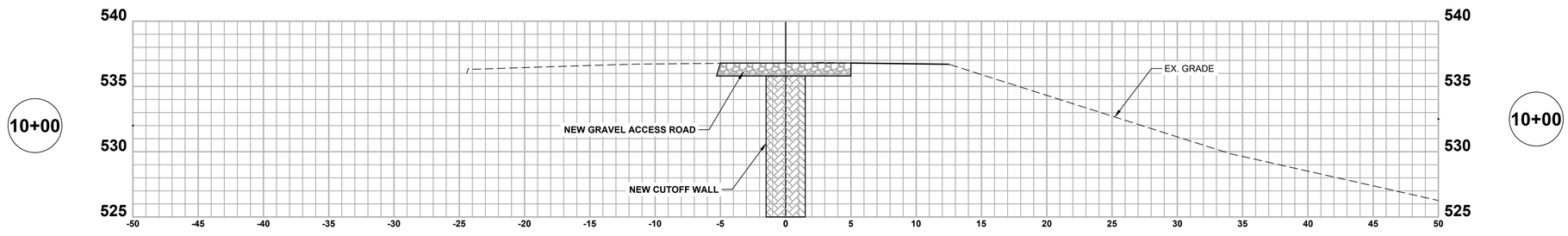
DALE A. GICK REGISTERED PE10100195 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	CROSS SECTIONS - LINE "A"	SCALE	SHEET
07/30/2024		H&V: 1" = 5'	36 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376





GENERAL NOTES:

1. FULL DEPTH OF CROSS SECTION TRENCH NOT SHOWN ON CROSS SECTION FOR CLARITY

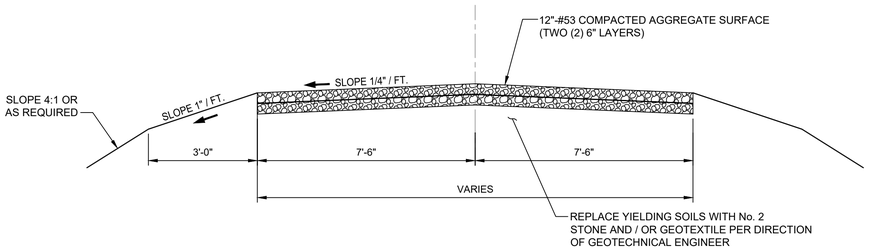
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DALE A. GICK REGISTERED PE10100195 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

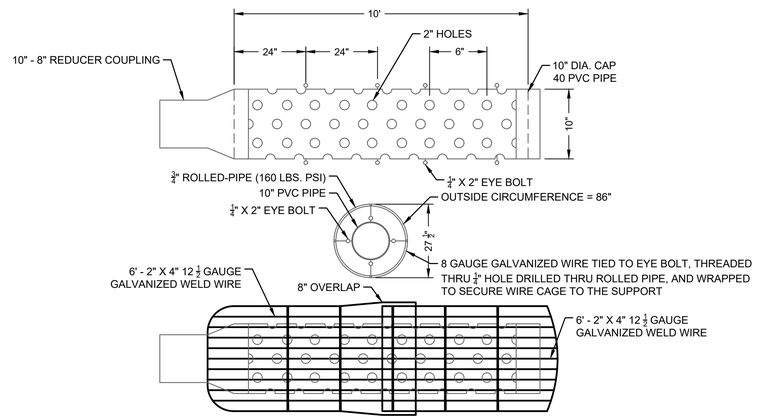
DATE MADE	CROSS SECTIONS	SCALE	SHEET
07/30/2024	- LINE "A"	H&V: 1" = 5'	37 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED		PROJECT NUMBER
DAG	RNM		STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	DEL2515208032/E008-376



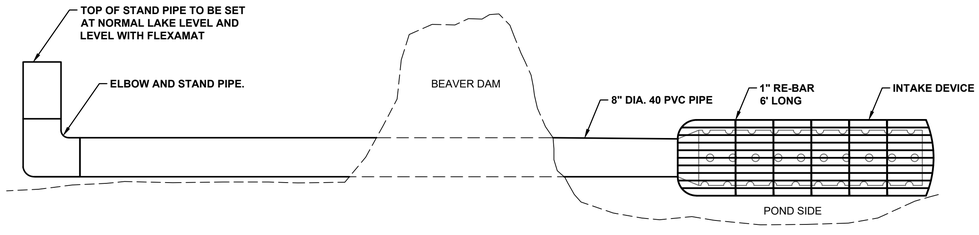
NEW GRAVEL ACCESS ROAD DETAIL - LINE "B"

NOT TO SCALE



CLEMSON BEAVER POND LEVELER INTAKE DEVICE DETAIL

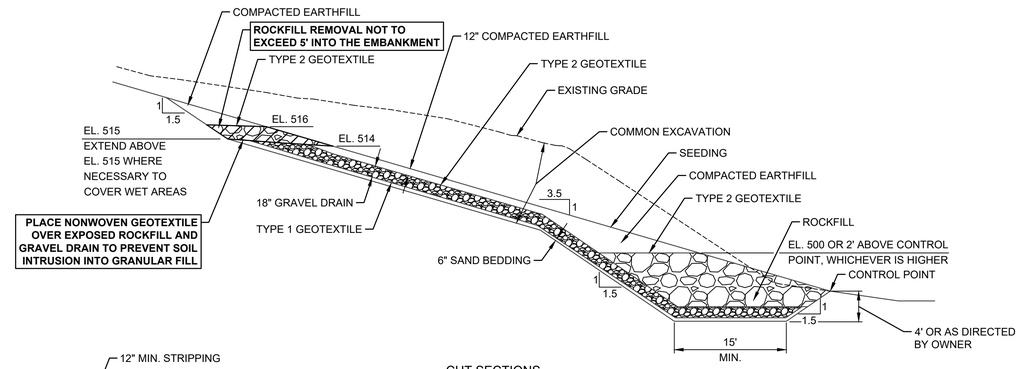
NOT TO SCALE



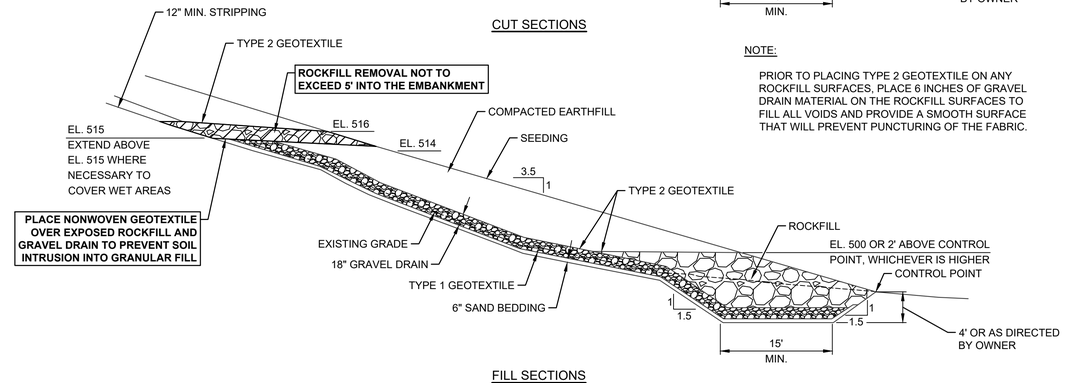
CLEMSON BEAVER POND LEVELER DETAIL

NOT TO SCALE

WEBSITE LOCATION
https://www.dnr.sc.gov/wildlife/publications/pdf/ClemsonBeaverPondLeveler.pdf



CUT SECTIONS



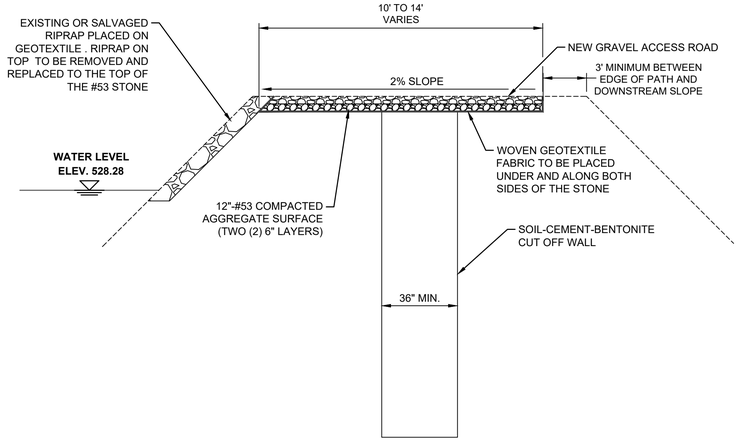
FILL SECTIONS

NOTE:

PRIOR TO PLACING TYPE 2 GEOTEXTILE ON ANY ROCKFILL SURFACES, PLACE 6 INCHES OF GRAVEL DRAIN MATERIAL ON THE ROCKFILL SURFACES TO FILL ALL VOIDS AND PROVIDE A SMOOTH SURFACE THAT WILL PREVENT PUNCTURING OF THE FABRIC.

TYPICAL DRAIN DETAILS

NOT TO SCALE



CUTOFF WALL DETAIL - LINE "A"

NOT TO SCALE

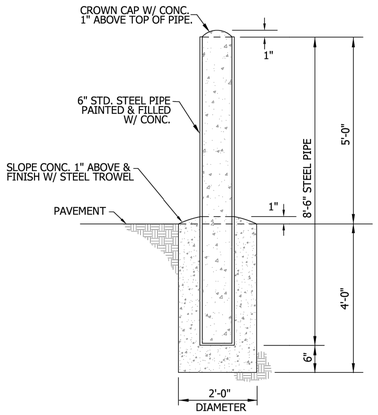
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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

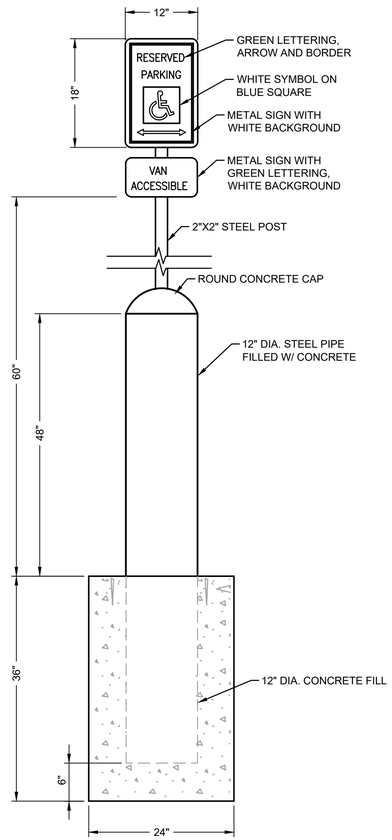
DATE MADE	MISCELLANEOUS DETAILS	SCALE	SHEET
07/30/2024		N/A	38 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376



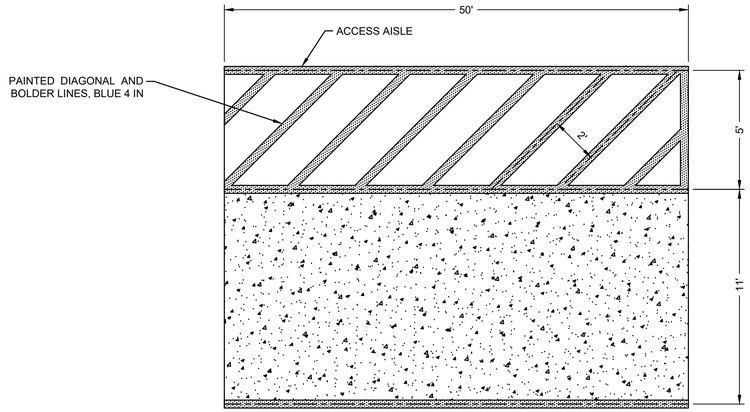
BOLLARD DETAIL

NOT TO SCALE



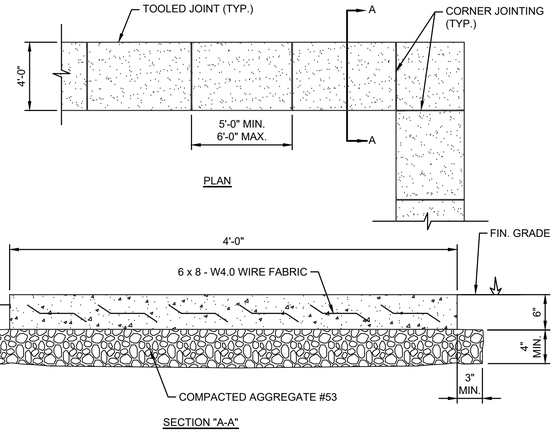
ADA SIGN WITH BOLLARD DETAIL

NOT TO SCALE



ADA PARKING DETAIL

NOT TO SCALE

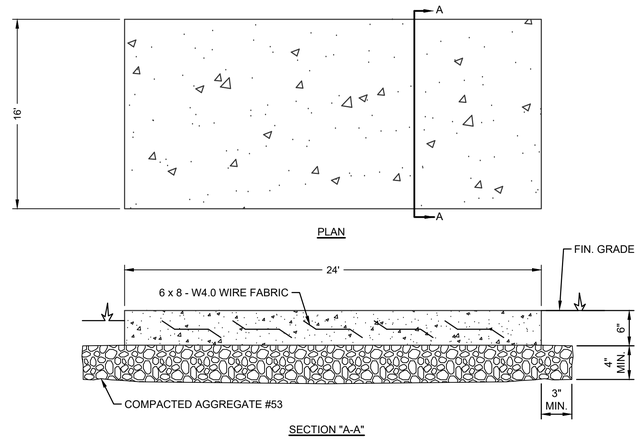


GENERAL NOTES:

1. TRANSVERSE JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/4" AT SPACING AT A MAXIMUM OF 6'-0"
2. SIDEWALK SHALL BE 6" THICK WITH 8" OF COMPACTED AGGREGATE No. 53 AT ALL DRIVEWAY CROSSINGS
3. SIDE SLOPE SHALL NOT EXCEED 2%

CONCRETE SIDEWALK DETAIL

NOT TO SCALE



GENERAL NOTES:

1. TRANSVERSE JOINTS SHALL BE CUT WITH A JOINTER HAVING A RADIUS OF 1/4" AT SPACING AT A MAXIMUM OF 6'-0"
2. SIDEWALK SHALL BE 6" THICK WITH 8" OF COMPACTED AGGREGATE No. 53
3. SIDE SLOPE SHALL NOT EXCEED 2%

CONCRETE PAD AND ADA PARKING DETAIL

NOT TO SCALE

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RECOMMENDED FOR APPROVAL — Dale A. Gick — 10/15/2025 DATE

DESIGNED BY	DRAWN BY	DATE REVISED
DAG	RNM	

DATE MADE: 07/30/2024

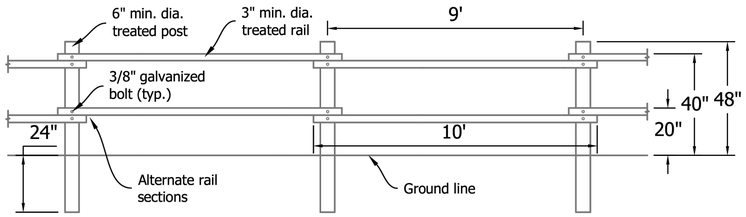
MISCELLANEOUS DETAILS

SCALE: N/A

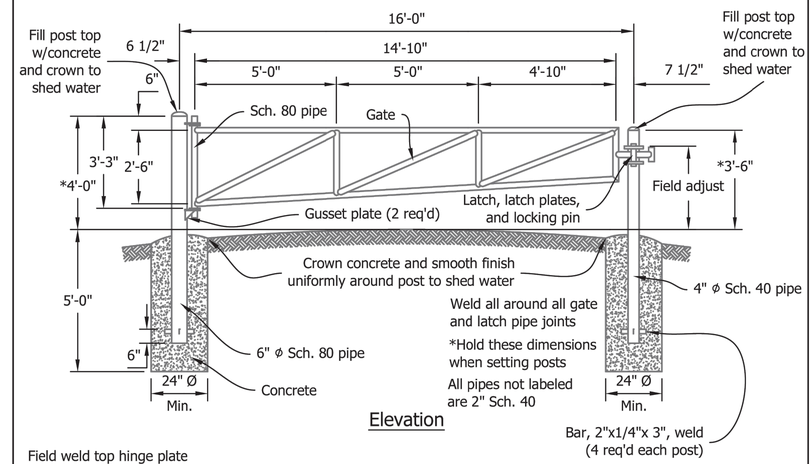
SHEET: 39 OF 42

STATE OF INDIANA
INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

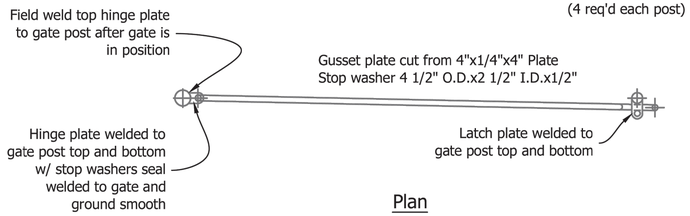
PROJECT NUMBER: DEL2515208032/E008-376



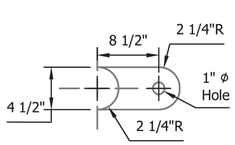
STATE OF INDIANA	
DEPARTMENT OF NATURAL RESOURCES	
DIVISION OF RECLAMATION	
2-RAIL POST & POLE FENCE	
STANDARD DETAIL NO. 506-03	
NOT TO SCALE	02/01/2022



Elevation

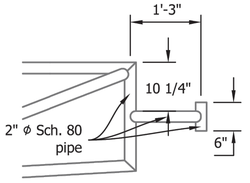


Plan

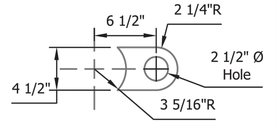


Latch plate cut from
4 1/2"x1/2"x10" plate

Latch Plate Detail



Latch Detail



Hinge plate cut from 4 1/2"x1/2"x7" plate

Hinge Plate Detail

Notes:
1. Paint all swing gate items and gate posts yellow.

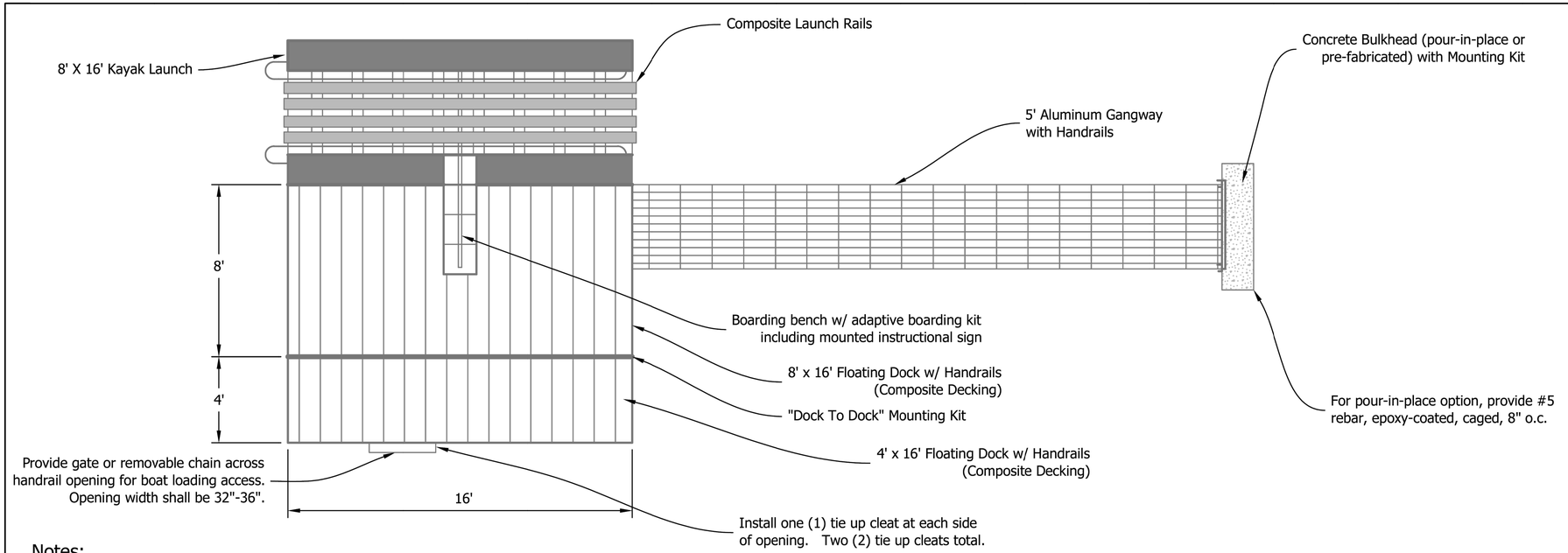
STATE OF INDIANA	
DEPARTMENT OF NATURAL RESOURCES	
DIVISION OF RECLAMATION	
ACCESS GATE, SINGLE	
STANDARD DETAIL NO. 506-01	
NOT TO SCALE	02/01/2022

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RECOMMENDED FOR APPROVAL — 10/15/2025 DATE

DESIGNED BY: DAG	DRAWN BY: RNM	DATE REVISED:	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER: DEL2515208032/E008-376	
			DATE MADE: 07/30/2024	MISCELLANEOUS DETAILS	SCALE: N/A / SHEET: 40 OF 42



Notes:

1. Dock to be comprised of floating dock sections with 16" freeboard and 2.5" draft depth with no live load present.
2. Dock sections shall be coupled together using manufacturer's materials and per manufacturer's specifications to produce a single connected system.
3. All dock framing components shall be comprised of Marine Grade 6061 or 6063 aluminum.
4. Variable height accessible handrail and toe rail shall be provided along perimeter of floating dock sections.
5. Security curbing shall be provided along deck sections adjacent to boat launch system and sections where handrails are not provided.
6. Decking to be gray composite with a span rating of 24" on center and shall be attached using the TimberStrong fastening system.
7. Flotation will be provided for dock components (gangway, kayak chute, floating dock, etc.) with encapsulated foam.
8. Adaptive boarding kit shall include: One (1) kayak roll cage, one (1) overhead grab bar, one (1) informational instruction sign, one (1) 4-tiered boarding bench with retractable seat, and four (4) hand straps suspended from roll cage.
9. Gangway shall have structural truss railing on both sides of the gangway.
10. Site conditions may require modifications or deviations to this dock system, including addition of stabilization and/or anchorage components. Any changes from this dock system as shown shall be provided to the Owner by the contractor or consultant for approval prior to purchase and installation.
11. The dock system shall be warranted for a period of one (1) year from the project construction completion date. The warranty shall cover all labor and materials. The warranty does not need to cover damage caused by acts of God (storms, wind, flooding, ice or any other adverse weather conditions), modification by client or damage by vessel.
12. Install per manufacturer's guidelines.

SITE NAME		SCALE	TITLE	
N/A		NTS	ACCESSIBLE DOCK	DNR Indiana Department of Natural Resources Reclamation
SITE NO.	CONTRACT NO.	DATE	DRAWN BY	
N/A	N/A	06/25/2025	S.M.C.	

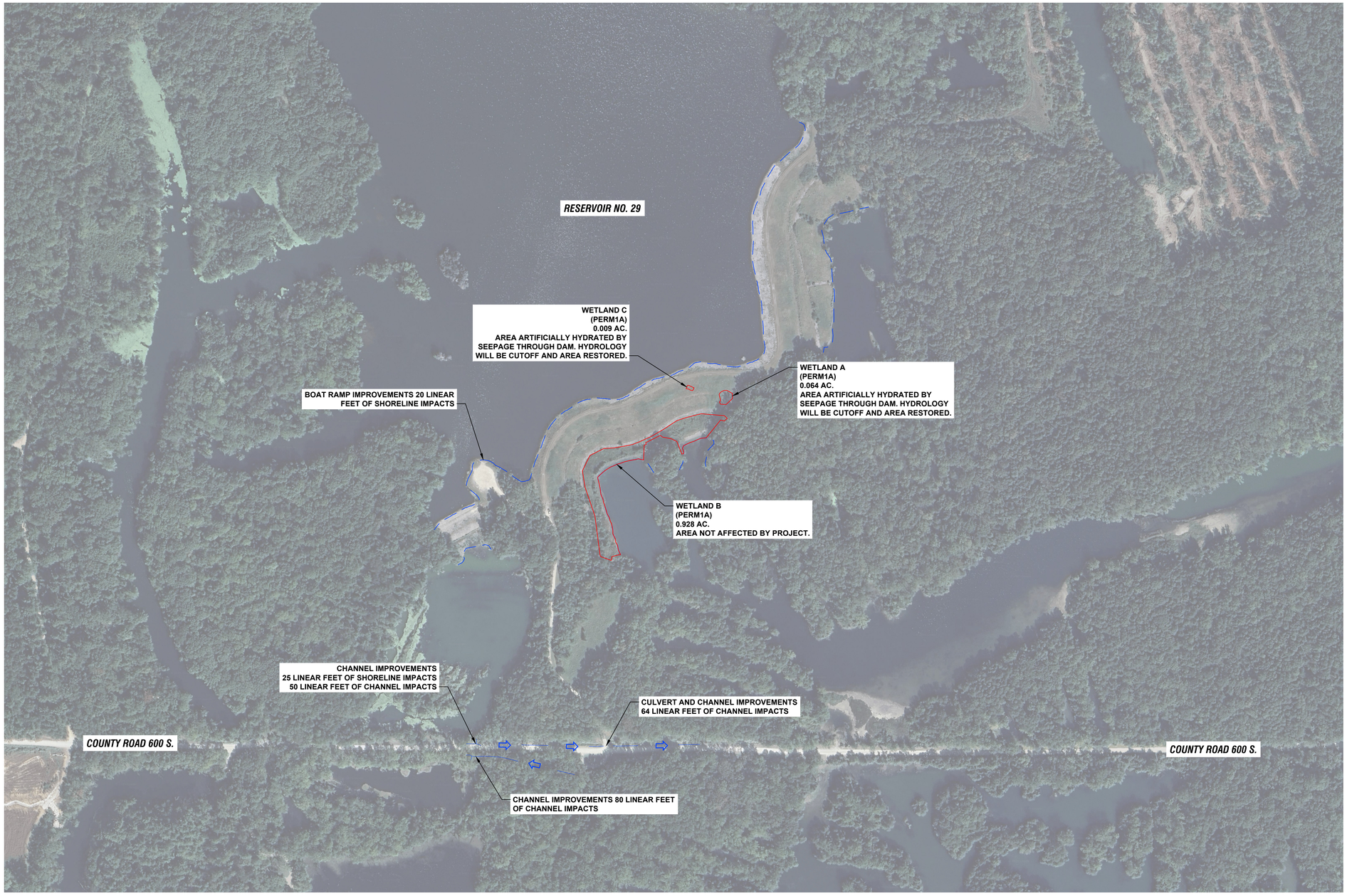
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RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	MISCELLANEOUS DETAILS	SCALE	SHEET
07/30/2024		N/A	41 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376



LEGEND

- EXISTING WATER
- EXISTING FLOW LINES
- EXISTING WETLANDS

PLAN VIEW

SCALE: 1"=200'-0"

0 200' 400'

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RECOMMENDED FOR APPROVAL Dale A. Gick 10/15/2025 DATE

DATE MADE	EXISTING SITE MAP	SCALE	SHEET
07/30/2024		N/A	42 OF 42

DESIGNED BY	DRAWN BY	DATE REVISED	STATE OF INDIANA INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF RECLAMATION	PROJECT NUMBER
DAG	RNM			DEL2515208032/E008-376