



DUCKS UNLIMITED
PROJECT
LOWERY MITIGATION ILF
LOCATED IN SECTION(S) NE1/4 OF SEC. 17
TOWNSHIP 144N, RANGE 69W, 5TH P.M.,
STUTSMAN COUNTY, NORTH DAKOTA

ESTIMATED QUANTITIES

MOBILIZATION	1 L.S.
SITE PREPARATION:	
TOPSOIL STRIPPING	5,730 C.Y.-P**

EXCAVATION:	
WETLAND 4-1 EXCAVATION	2,620 C.Y.-P**
WETLAND 4-2 EXCAVATION	1,825 C.Y.-P**
WETLAND 9 EXCAVATION	375 C.Y.-P**
WETLAND 15 EXCAVATION	185 C.Y.-P**
TOTAL = 5,005 C.Y.-P**	

EMBANKMENT CONSTRUCTION:	
EMBANKMENT 1	3,580 C.Y.-P**
EMBANKMENT 2	75 C.Y.-P**
EMBANKMENT 3	830 C.Y.-P**
EMBANKMENT 5	730 C.Y.-P**
EMBANKMENT 6	1,560 C.Y.-P**
EMBANKMENT 7	220 C.Y.-P**
EMBANKMENT 8	365 C.Y.-P**
EMBANKMENT 10	130 C.Y.-P**
EMBANKMENT 11	1,570 C.Y.-P**
EMBANKMENT 12	250 C.Y.-P**
EMBANKMENT 13	200 C.Y.-P**
EMBANKMENT 14	1,300 C.Y.-P**
EMBANKMENT 16	110 C.Y.-P**
TOTAL = 10,920 C.Y.-P**	

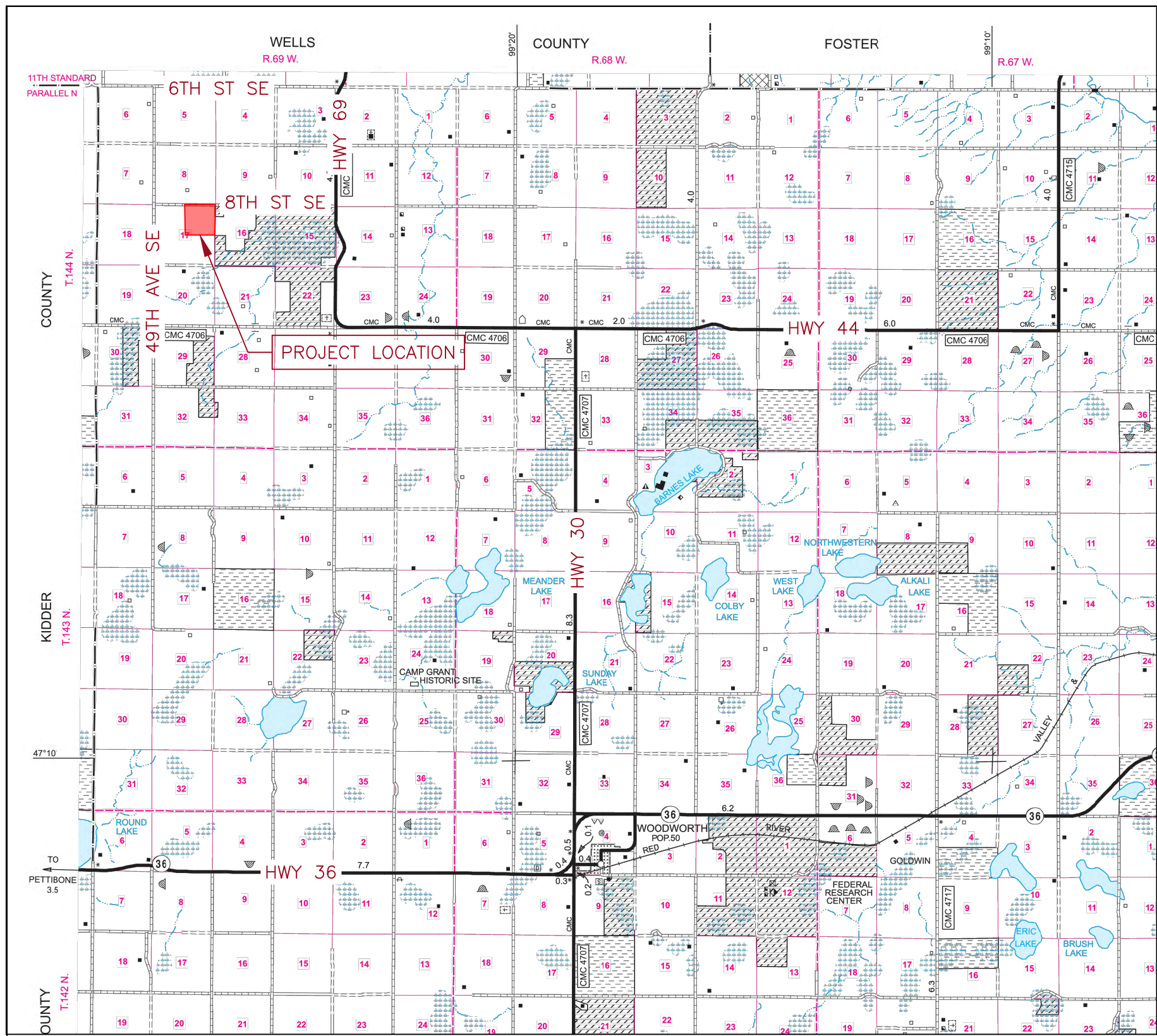
WATER	1 M.G.
DITCH FILL	380 L.F.-A*
PYRAMAT 25	7,000 S.F.-P**
FLEX-A-MAT	8,020 S.F.-P**
EROSION CONTROL BLANKET (STRAW)	7,080 S.F.-A*
SILT FENCE	335 L.F.-A*
8"Ø STRAW WATTLE	96 L.F.-A*
SEEDING AND MULCH	13.0 ACRES

*PAYMENT WILL BE BASED ON ACTUAL QUANTITY USED OR INSTALLED.

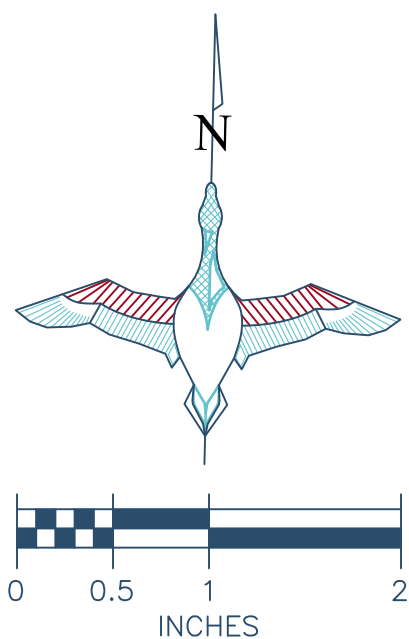
**THE UNIT (CY-P) CUBIC YARDS-PLAN MEANS PAYMENT WILL BE BASED ON THE PLAN QUANTITY LISTED ABOVE. A SHRINKAGE FACTOR OF 20% IS INCLUDED TO ALL EMBANKMENT VOLUMES

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DU REGIONAL ENGINEER:
DYLAN PETERSON, P.E.
2525 RIVER ROAD
BISMARCK, ND 58503
(701) 390-4993
DPETERSON@DUCKS.ORG



VICINITY MAP
NOT TO SCALE

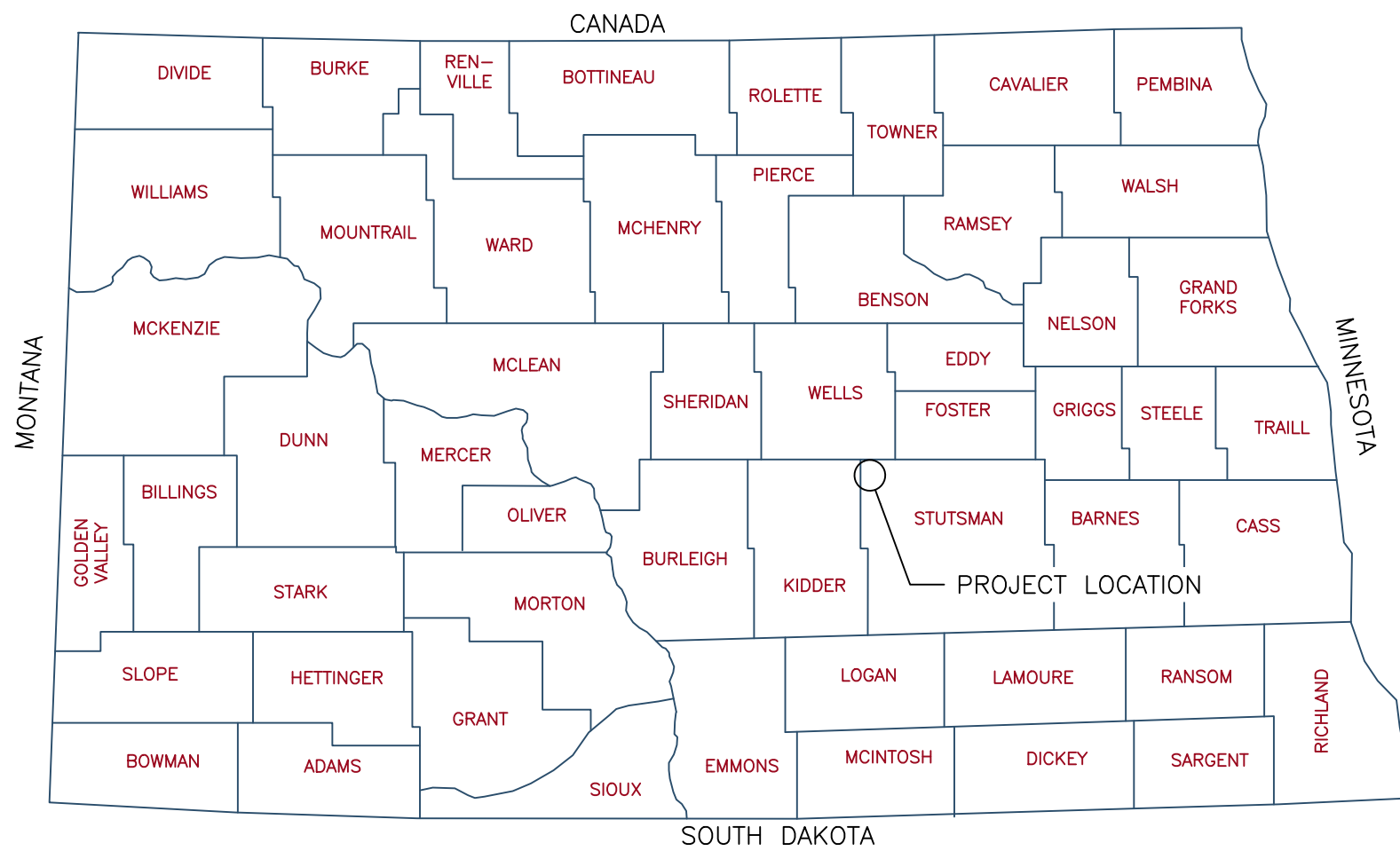


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BEFORE YOU DIG

NORTH DAKOTA UTILITIES NOTE: BEFORE THE START OF CONSTRUCTION, THE OWNER OF ANY UTILITIES INVOLVED MUST BE NOTIFIED. THE EXCAVATOR/CONTRACTOR IS RESPONSIBLE FOR GIVING THIS NOTICE BY CALLING "NORTH DAKOTA ONE CALL" AT 811 OR 1-800-795-0555 AT LEAST 2 FULL BUSINESS DAYS PRIOR TO ANY EXCAVATION.



CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	
BY:	
DATE:	
REVISION:	
1	
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LOWERY MITIGATION ILF

VICINITY & LOCATION MAPS

PROJECT:

SHEET TITLE:

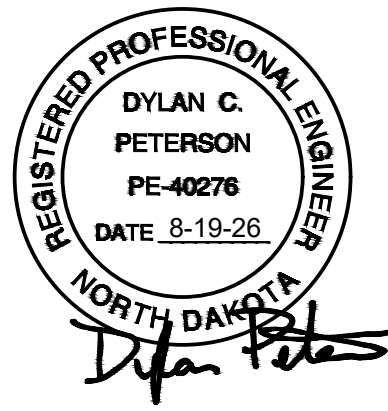
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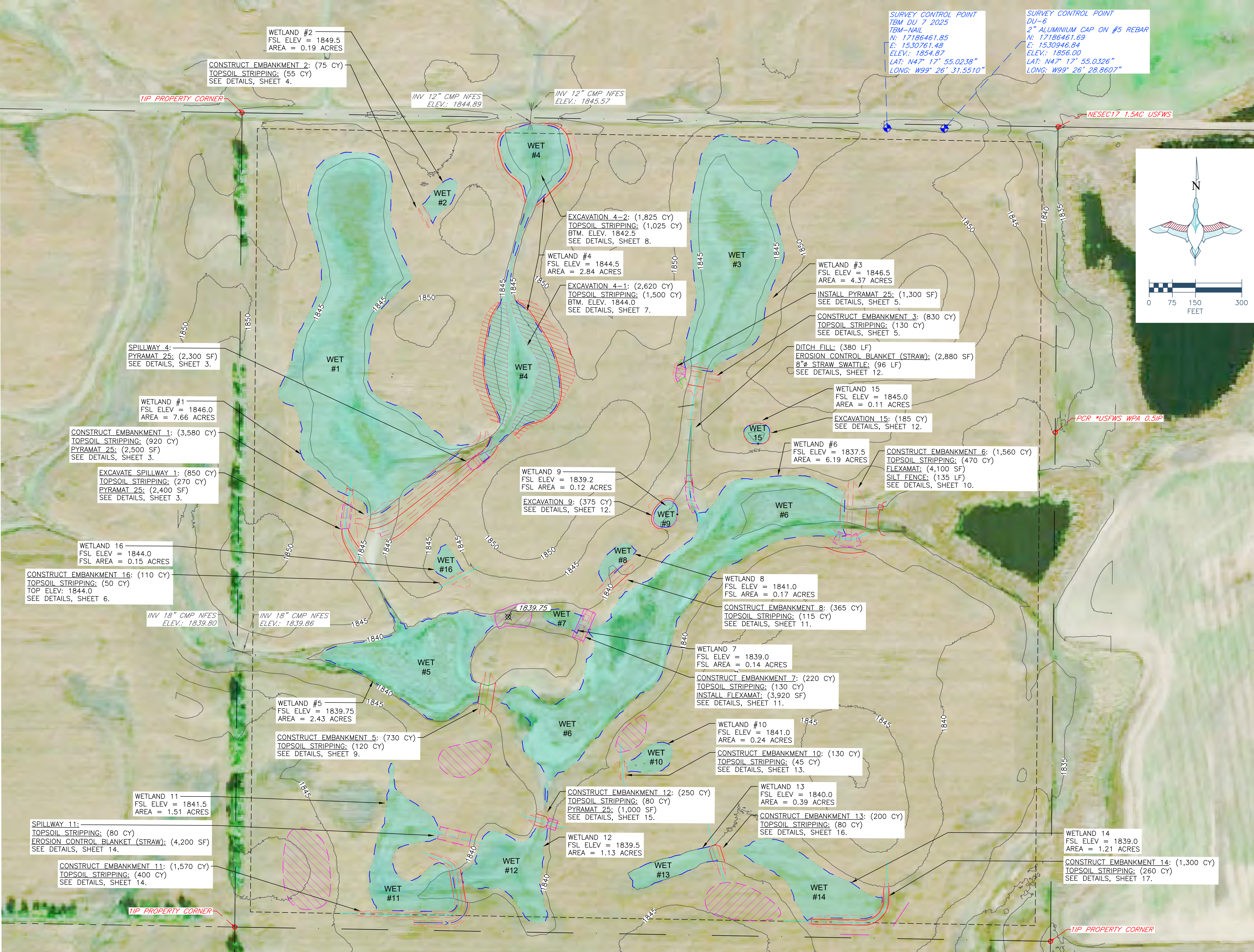
DATE:
8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
1 OF 17





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LOCATION MAP

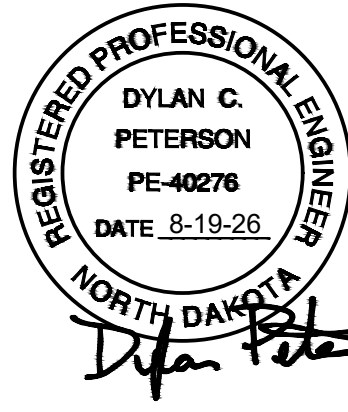
SCALE: 1" = 150'

- GENERAL NOTES
- ONE FOOT CONTOUR INTERVAL SHOWN.
 - 2025 1 METER RESOLUTION AERIAL IMAGERY IS SHOWN.
 - ITALICIZED TEXT DENOTES EXISTING FEATURE OR EXISTING ELEVATION.
 - SPOT ELEVATIONS INDICATED BY ϕ -XXXX.X ARE RANDOMLY LOCATED AND ARE BASED ON SURFACE MODEL ELEVATIONS.

HORIZONTAL AND VERTICAL CONTROL OPUS SOLUTION-- COORDINATES ARE UTM83-14F GRID COORDINATES. THEY WERE ESTABLISHED FROM THE WGS84 ELLIPSOID WITH INFORMATION FROM A TRIMBLE R10-1 SURVEY GRADE GPS RECEIVER ON MAY 12TH, 2025 AT DUCKS UNLIMITED CONTROL POINT DU-6 AND CALIBRATED TO AN OPUS POSITION OCCUPIED FOR 2 HOURS AND 58 MINUTE(S) AND SENT TO NGS FOR SOLUTION. THE VERTICAL CONTROL CAME FROM THE SAME SOLUTION USING GEOID 18 CONUS IN THE NAVD88. THE FULL OPUS SOLUTION REPORT IS ON FILE AT THE DUCKS UNLIMITED ENGINEERING DEPARTMENT IN BISMARCK, NORTH DAKOTA.



EXAMPLE OF DUCKS UNLIMITED CONTROL POINT SURVEY CAP



BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPAED OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

- SEEDING AND MULCHING NOTE:
- SEEDING AND MULCHING SHALL BE REQUIRED ON EMBANKMENT AND AREAS NOTED.
 - SEED MIX WILL BE PROVIDED BY DUCKS UNLIMITED.
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN ADEQUATE SEED BED TO ALLOW SEEDING WITH STANDARD SEEDING EQUIPMENT. THIS WILL INCLUDE USE OF A HARROW OR OTHER MEANS IN ORDER TO LEAVE A SMOOTH, TRACK-FREE FINISH. BACK DRAGGING WITH A DOZER IS NOT AN ACCEPTABLE FINISH.
 - BEFORE LAST SPRING FROST OR APRIL 15TH (WHICHEVER IS EARLIER).
 - MULCHING SHALL REQUIRE ANCHORING OF SOME TYPE SUCH AS TACKING, MATTING, HAND PUNCHING, ROLLER PUNCHING, CRUMPER PUNCHING, OR HYDRO-SEEDING TO PREVENT BLOWING OR WASHING AWAY.
 - MULCHING APPLICATION RATE SHALL BE TWO TONS PER ACRES OR ONE 74 POUND BALE PER 800 SQUARE FEET.

- CONSTRUCTION NOTES:
- REMOVE ALL TOPSOIL FROM EMBANKMENT AND BORROW AREAS AND RESPAED TOPSOIL OVER THE AREAS WHEN COMPLETE.
 - ALL FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS OF NOT MORE THAN 8 INCHES THICKNESS AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D698. MOISTURE CONTENT SHALL BE IN THE RANGE OF -1% TO +3% OF OPTIMUM MOISTURE CONTENT.
 - WORK REQUIRED TO DEWATER THE SITE IS INCIDENTAL TO "SITE PREPARATION".

ABBREVIATIONS LIST

BLC = BUILDING CORNER
BRK = BREAK
BTM. = BOTTOM
C.L. = CENTER LINE
CMP = CORRUGATED METAL PIPE ROUND
CMPA = CORRUGATED METAL PIPE ARCH
CONC. = CONCRETE
DIA. = DIAMETER
E = EASTING COORDINATE OR EAST
ELEV. = ELEVATION
EMB. = EMBANKMENT
EPAV = EDGE OF PAVEMENT
EX. = EXISTING
EXIST. = EXISTING
FES = FLARED END SECTION
FX = FENCE
GA. = GAUGE
G.W. = GUY WIRE
INV = INVERT
LAT = LATITUDE (WGS84)
LONG = LONGITUDE (WGS84)
L.F. = LINEAR FEET
MISC = MISCELLANEOUS
N = NORTHING COORDINATE OR NORTH
NFES = NON-FLARED END SECTION
O.C. = ON CENTER
O.C.E.W. = ON CENTER EACH WAY
OHE = OVERHEAD ELECTRIC
P.C. = POINT OF INTERSECTION
P.I. = POINT OF INTERSECTION
P.T. = POINT OF TANGENCY
RCP = REINFORCED CONCRETE PIPE
RD = ROAD
REM. = REMOVE
REQ'D = REQUIRED
R.O.W. = RIGHT OF WAY
S = SOUTH
SED. = SEDIMENT
SHLD = SHOULDER
SLP = SLOPE
STPLG = STOPLOG
TBM = TEMPORARY BENCHMARK
TEL = TELEPHONE/COMMUNICATOINS
UG = UNDERGROUND
VEG = VEGETATION
W = WEST OR WITH
WCS = WATER CONTROL STRUCTURE
WL = WATER LEVEL
WS = WATER SHOT

*NOTE: NOT ALL ABBREVIATIONS IN THIS LIST APPEAR ON THIS SHEET

GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

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292PE

DESIGNED BY:	DGP
DRAWN BY:	DGP
SURVEYED BY:	LM/DGP
CHECKED BY:	DGP
APPROVED BY:	
APPROVED BY:	

BY:									
DATE:									
REVISION:									
	1	2	3	4	5	6	7	8	

LOWERY MITIGATION ILF

OVERALL PLAN

PROJECT:

LEGAL:

DATE:

LISTED SCALES ACCURATE ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:

SHEET NUMBER:

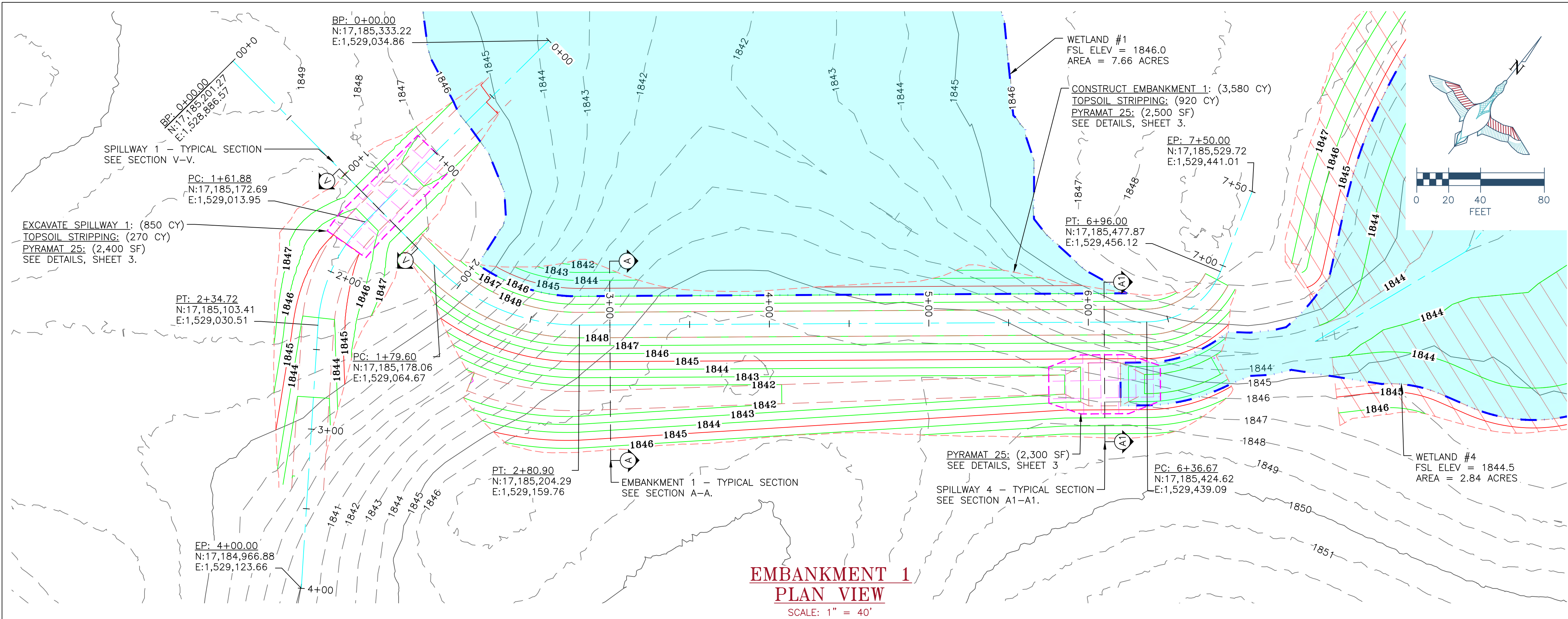
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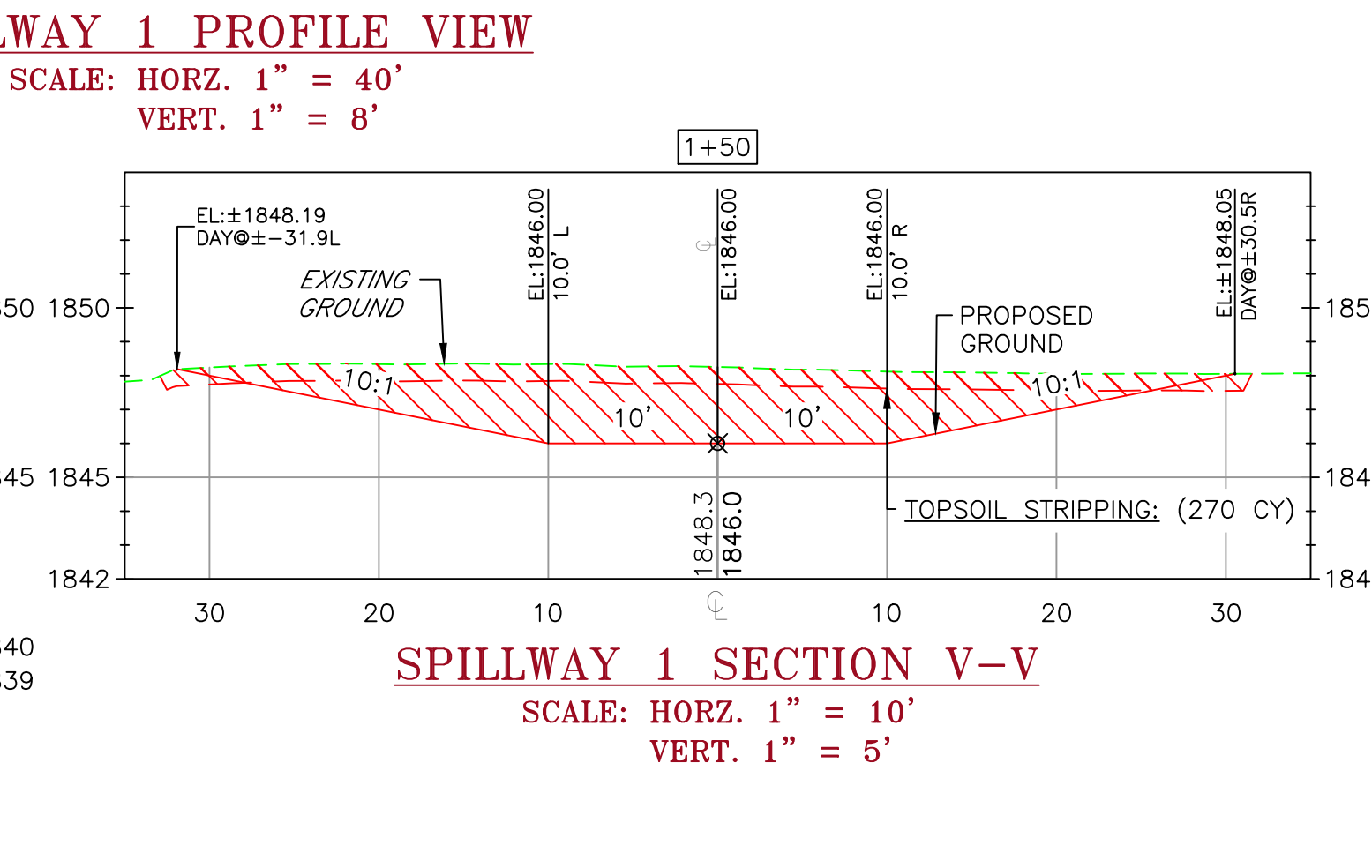
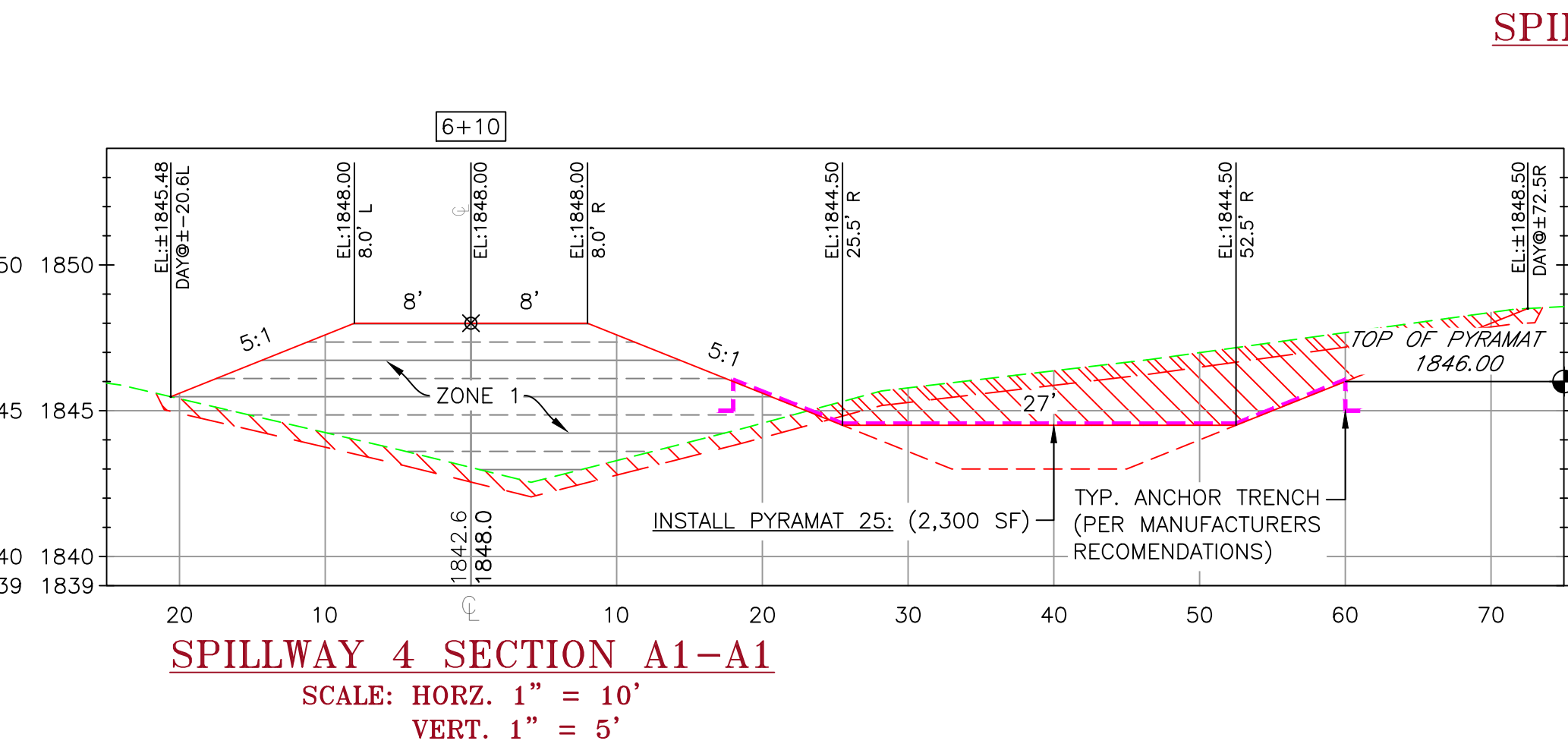
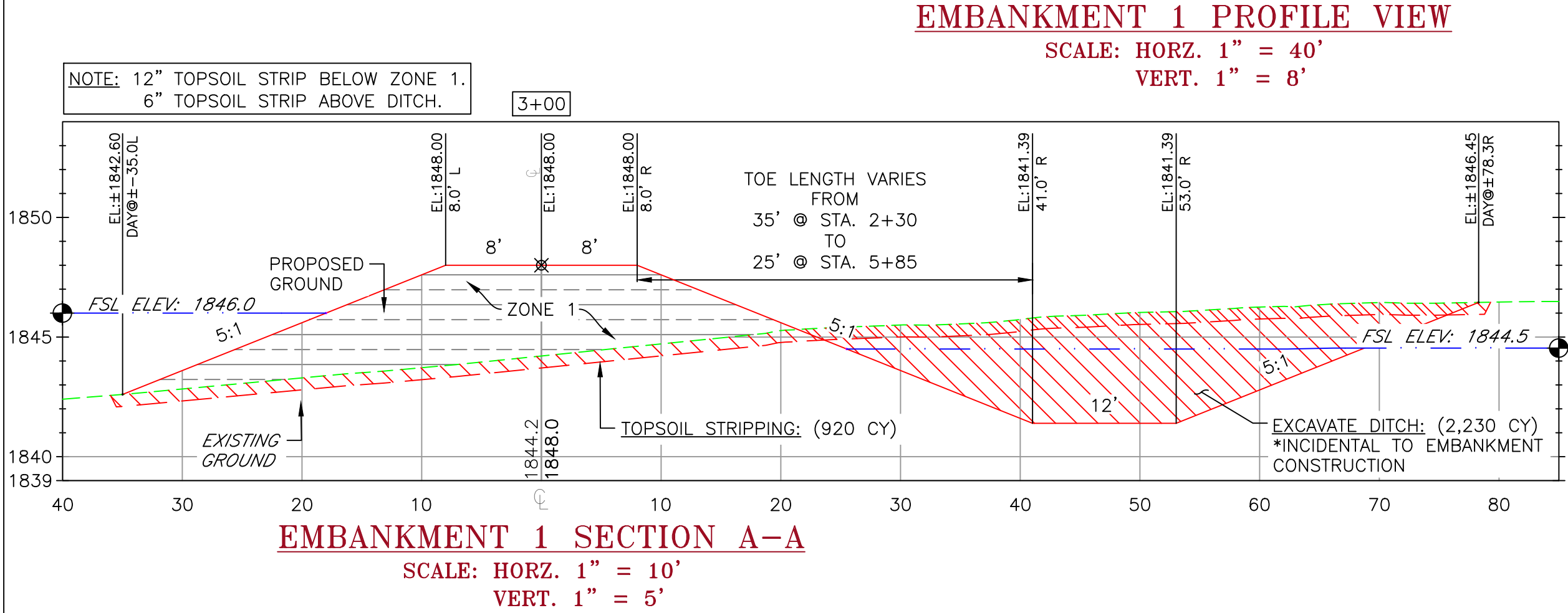
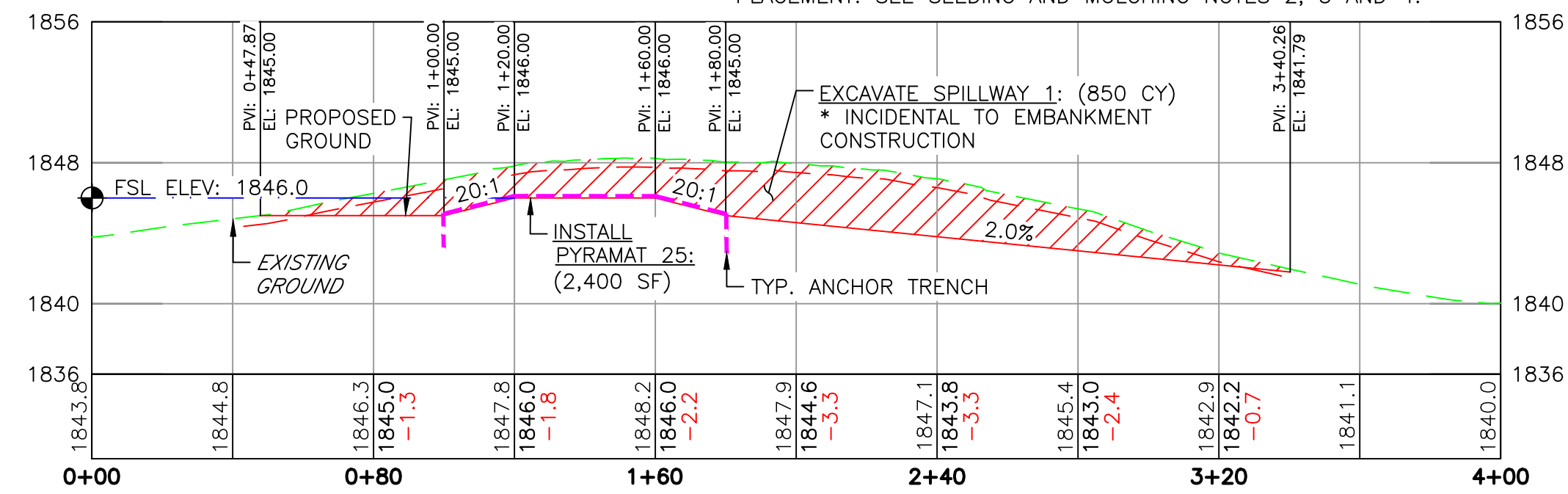
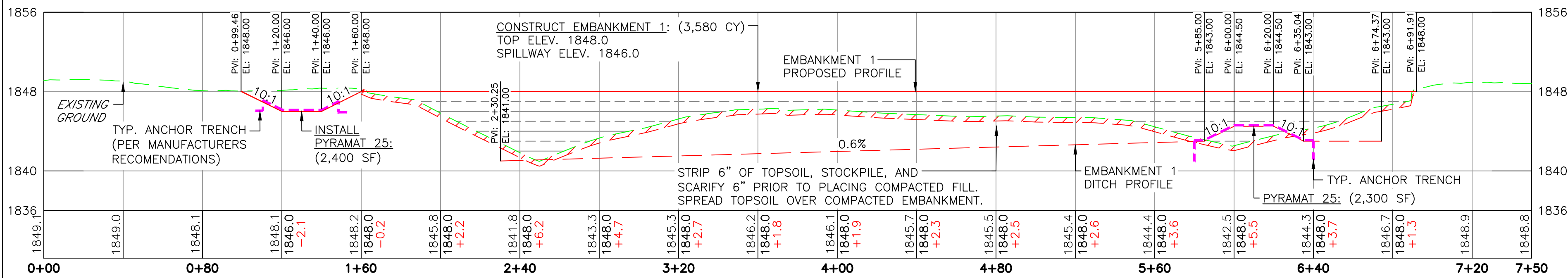
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ND-550-100

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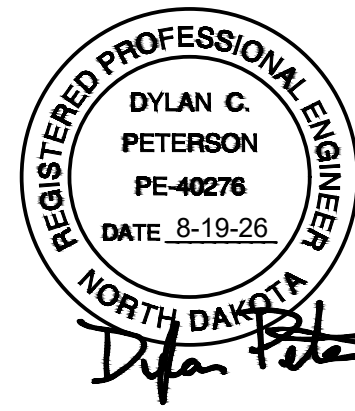


- BORROW AREA NOTE:** SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."
- SEEDING AND MULCHING NOTE:**
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 3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN ADEQUATE SEED BED TO ALLOW SEEDING WITH STANDARD SEEDING EQUIPMENT. THIS WILL INCLUDE USE OF A HARROW OR OTHER MEANS IN ORDER TO LEAVE A SMOOTH, TRACK-FREE FINISH. BACK DRAGGING WITH A DOZER IS NOT AN ACCEPTABLE FINISH.
 4. BEFORE LAST SPRING FROST OR APRIL 15TH (WHICHEVER IS EARLIER).
 5. MULCHING SHALL REQUIRE ANCHORING OF SOME TYPE SUCH AS TACKING, MATTING, HAND PUNCHING, ROLLER PUNCHING, CRIMPER PUNCHING, OR HYDRO-SEEDING TO PREVENT BLOWING OR WASHING AWAY.
 6. MULCHING APPLICATION RATE SHALL BE TWO TONS PER ACRES OR ONE 74 POUND BALE PER 800 SQUARE FEET.
- CONSTRUCTION NOTES:**
1. REMOVE ALL TOPSOIL FROM EMBANKMENT AND BORROW AREAS AND RESPREAD TOPSOIL OVER THE AREAS WHEN COMPLETE.
 2. ALL FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS OF NOT MORE THAN 8 INCHES THICKNESS AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D698. MOISTURE CONTENT SHALL BE IN THE RANGE OF -1% TO +3% OF OPTIMUM MOISTURE CONTENT.
 3. WORK REQUIRED TO DEWATER THE SITE IS INCIDENTAL TO "SITE PREPARATION."
- EMBANKMENT CONSTRUCTION NOTES:**
1. STRIP 12" OF TOPSOIL, STOCKPILE, AND SCARIFY 6" PRIOR TO PLACING COMPACTED FILL. SPREAD TOPSOIL OVER COMPACTED EMBANKMENT. COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "SITE PREPARATION"
 2. THE EMBANKMENT SUBGRADE MUST BE STABLE, UNIFORMLY GRADED, FREE OF ROCKS, ROOTS, AND OTHER DEBRIS, WITH NO ABRUPT GRADE CHANGES.
 3. EMBANKMENT CONSTRUCTION SHALL BE FROM COMPACTED EARTHEN MATERIAL CONTAINING MINIMAL ORGANIC MATERIAL AND SHALL COMPLY WITH DU SPECIFICATION SECTION 204 "EMBANKMENT CONSTRUCTION."
 4. BORROW AREA SHALL BE DEVELOPED TO UTILIZE CLAYEY FILL FOR ZONE 1 OF THE EMBANKMENT. ANY GRAVELLY OR HEAVY SAND MATERIAL SHALL BE USED FOR ZONE 2. SEE BORROW NOTES, SHEET 2.
 5. EMBANKMENT FILL SHALL BE OBTAINED FROM THE SPECIFIED BORROW AREA. FILL SHALL BE PLACED IN LIFTS OF NO MORE THAN 8" AND COMPACTED PRIOR TO PLACING SUBSEQUENT LIFTS.
 6. CONTRACTOR TO SEED FINISHED EMBANKMENT. SEE SEEDING NOTES.
- PYRAMAT 25 CONSTRUCTION NOTES:**
1. PYRAMAT 25 TO BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS. THIS INCLUDES STEEL PINS WITH 1.5" WASHER AT RECOMMENDED SPACING, TRENCH ANCHORING OUTSIDE EDGES OF PYRAMATS AND ALLOWING FOR PROPER OVERLAP DISTANCE.
 2. MEASUREMENT OF PYRAMAT 25 IS BASED ON FINISHED SQUARE FOOTAGE. THIS MEASUREMENT DOES NOT ACCOUNT FOR CORE TRENCH OR JOINT OVERLAPS.
 3. AREA SHALL BE BROADCAST SEEDED WITHOUT MULCH APPLICATION PRIOR TO MAT PLACEMENT. SEE SEEDING AND MULCHING NOTES 2, 3 AND 4.



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- GENERAL NOTES**
1. ONE FOOT CONTOUR INTERVAL SHOWN.
 2. 2025 1 METER RESOLUTION AERIAL IMAGERY IS SHOWN.
 3. ITALICIZED TEXT DENOTES EXISTING FEATURE OR EXISTING ELEVATION.
 4. SPOT ELEVATIONS INDICATED BY ④XXXX.X ARE RANDOMLY LOCATED AND ARE BASED ON SURFACE MODEL ELEVATIONS.



GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

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292PE

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SURVEYED BY:	LM
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APPROVED BY:	

BY:	
DATE:	
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PROJECT:

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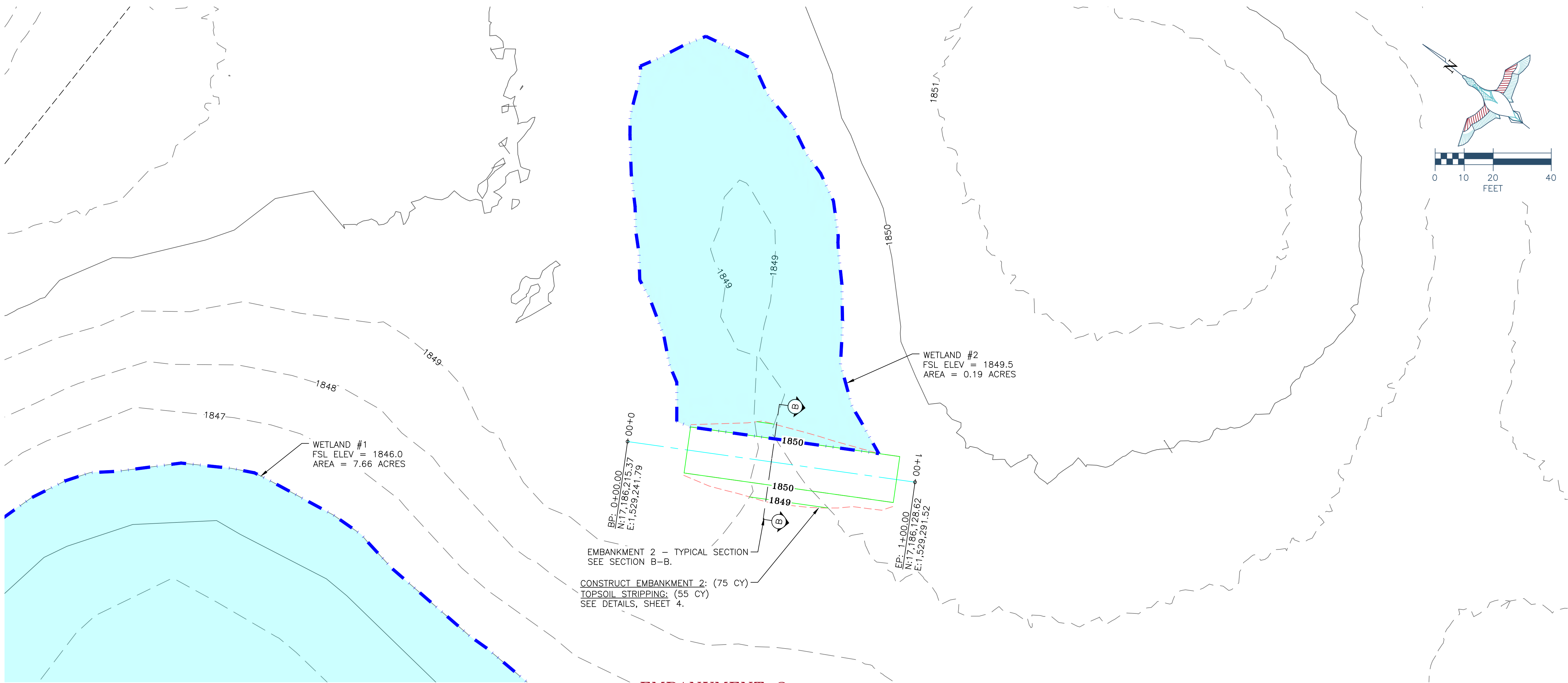
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3 OF 17

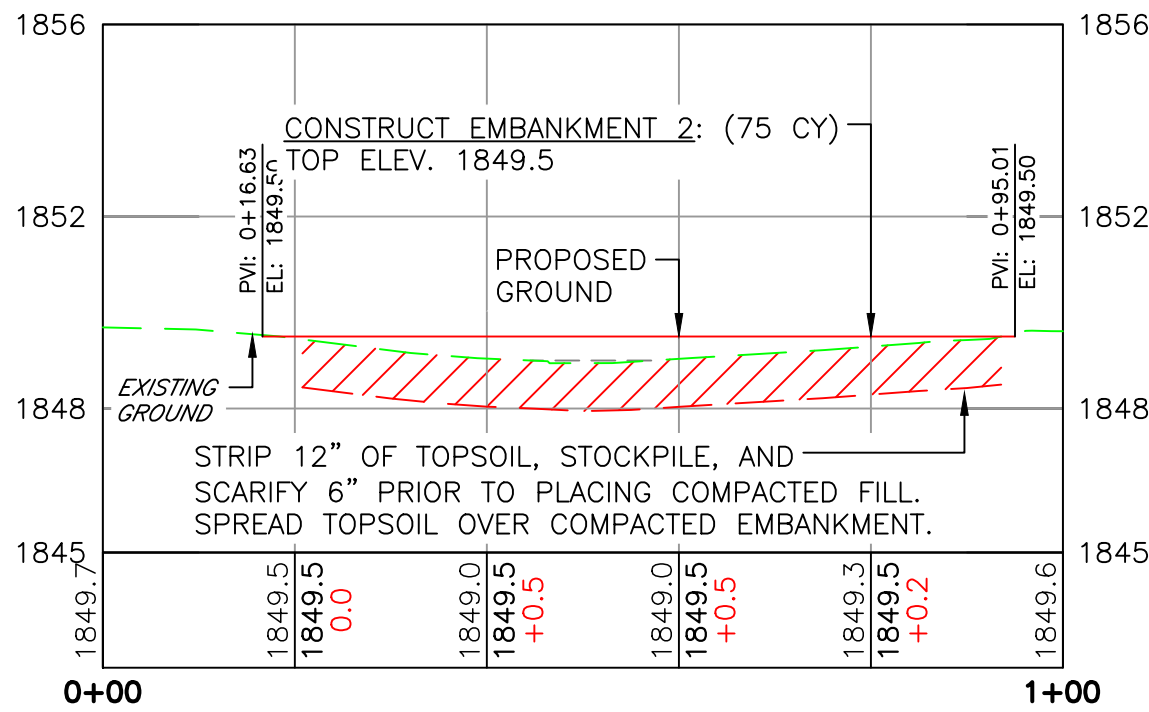
LOWERY MITIGATION ILF

WETLAND 1 DETAILS



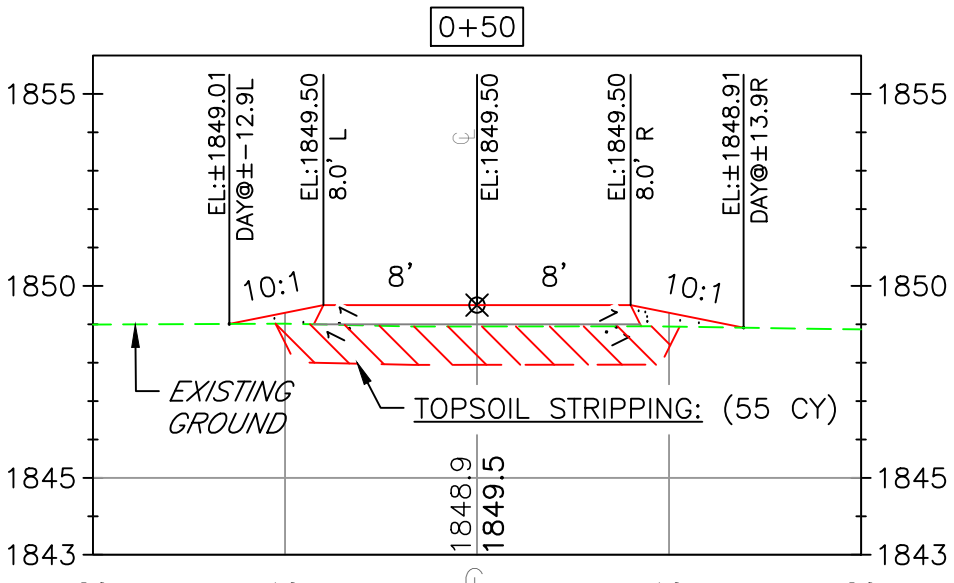
**EMBANKMENT 2
PLAN VIEW**

SCALE: 1" = 20'



**EMBANKMENT 2
PROFILE VIEW**

SCALE: HORZ. 1" = 20'
VERT. 1" = 4'



**EMBANKMENT 2
SECTION B-B**

SCALE: HORZ. 1" = 10'
VERT. 1" = 5'

EMBANKMENT CONSTRUCTION NOTES:

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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

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APPROVED BY:	
APPROVED BY:	

BY:	
DATE:	
REVISION:	
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LOWERY MITIGATION ILF

WETLAND 2 DETAILS

PROJECT:

LEGAL:

SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

REGISTERED PROFESSIONAL ENGINEER
NORTH DAKOTA
DYLAN C. PETERSON
PE-40278
DATE 8-19-2026

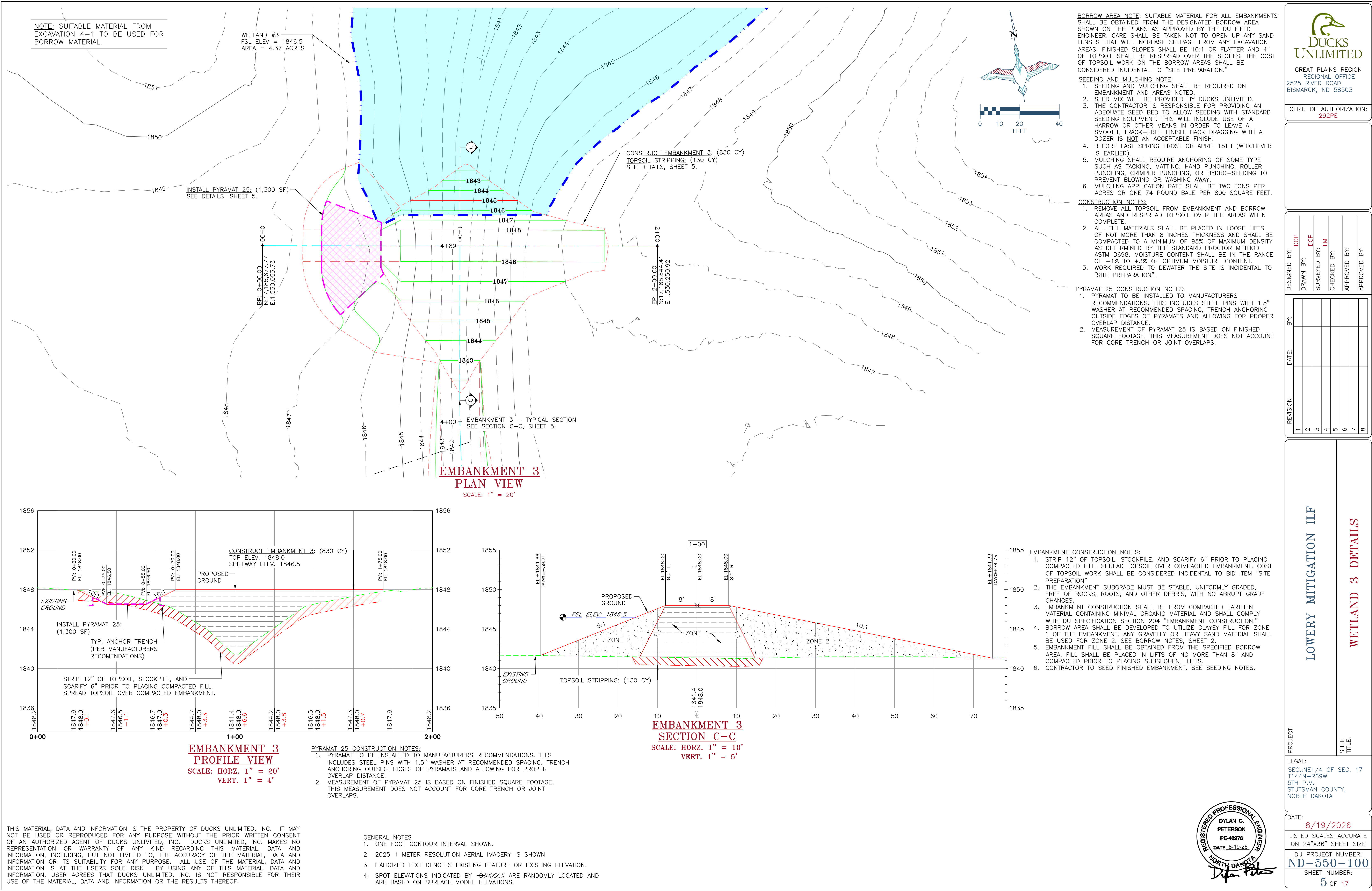
Dylan Peterson

DATE: 8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
4 OF 17





GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

BY:							
DATE:							
REVISION:							
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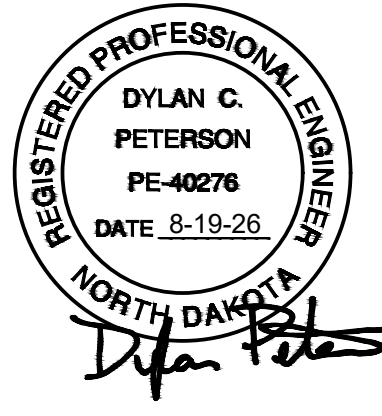
PROJECT:
SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE:
8/19/2026

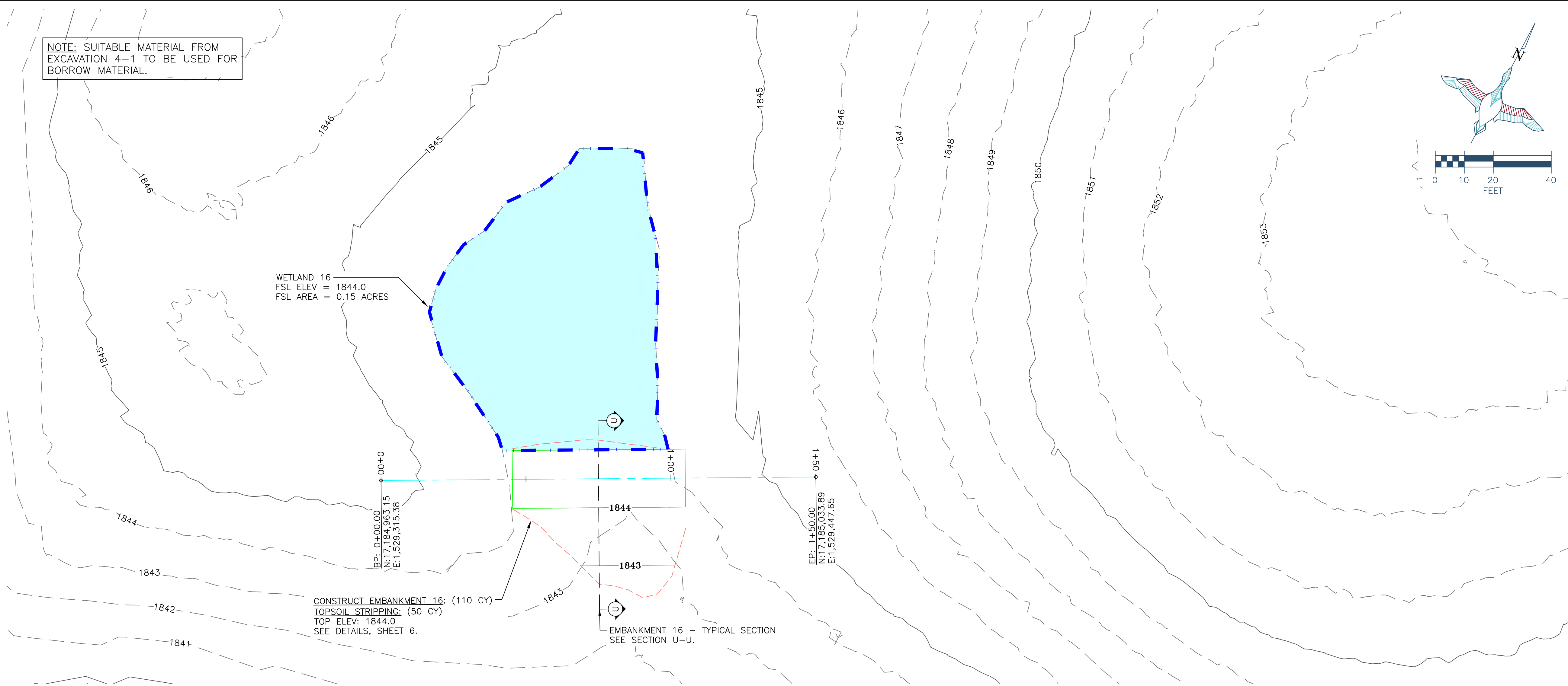
LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
5 OF 17



Dylan C. Peterson



BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

- SEEDING AND MULCHING NOTE:
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 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN ADEQUATE SEED BED TO ALLOW SEEDING WITH STANDARD SEEDING EQUIPMENT. THIS WILL INCLUDE USE OF A HARROW OR OTHER MEANS IN ORDER TO LEAVE A SMOOTH, TRACK-FREE FINISH. BACK DRAGGING WITH A DOZER IS **NOT** AN ACCEPTABLE FINISH.
 - BEFORE LAST SPRING FROST OR APRIL 15TH (WHICHEVER IS EARLIER).
 - MULCHING SHALL REQUIRE ANCHORING OF SOME TYPE SUCH AS TACKING, MATTING, HAND PUNCHING, ROLLER PUNCHING, CRIMPER PUNCHING, OR HYDRO-SEEDING TO PREVENT BLOWING OR WASHING AWAY.
 - MULCHING APPLICATION RATE SHALL BE TWO TONS PER ACRES OR ONE 74 POUND BALE PER 800 SQUARE FEET.

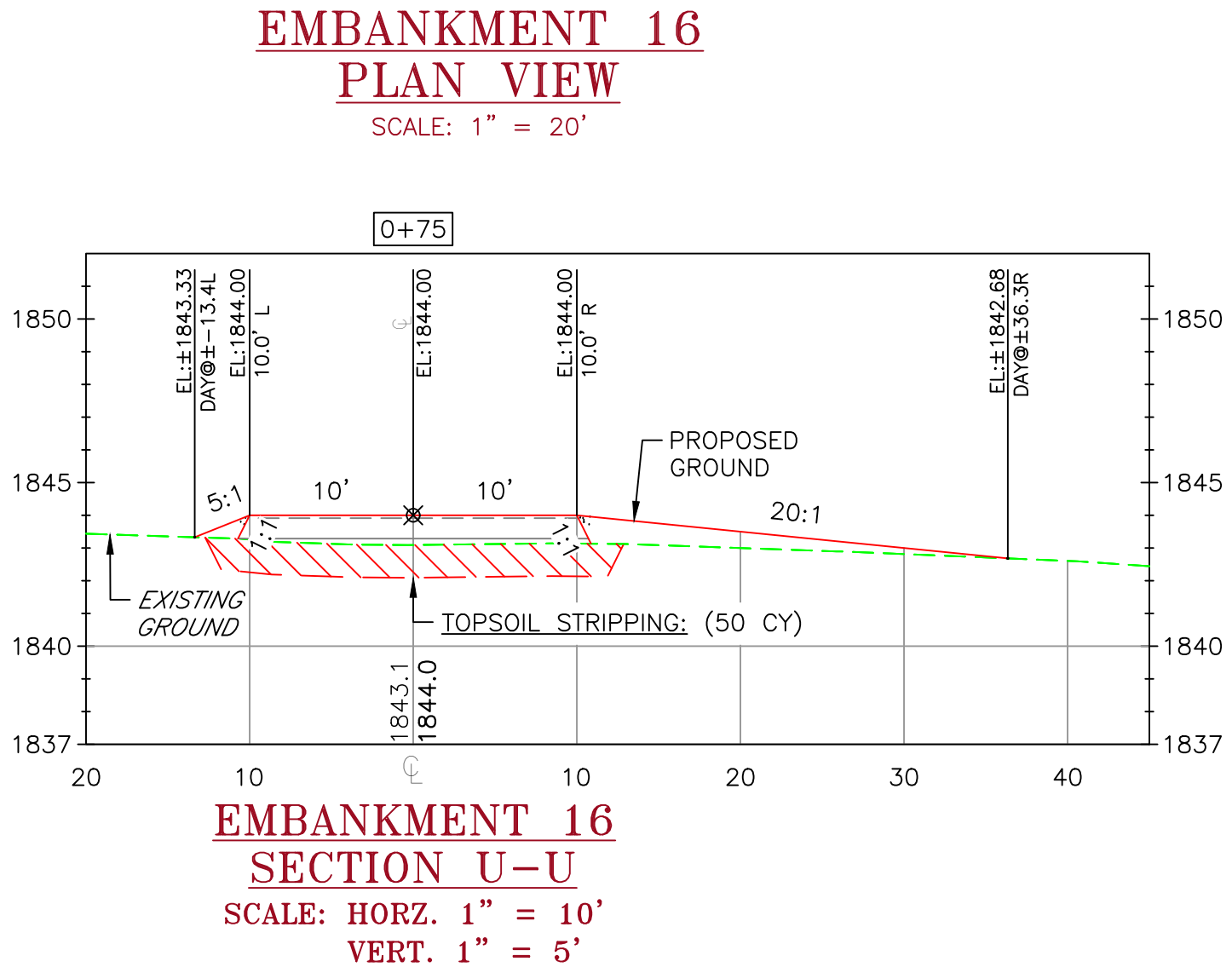
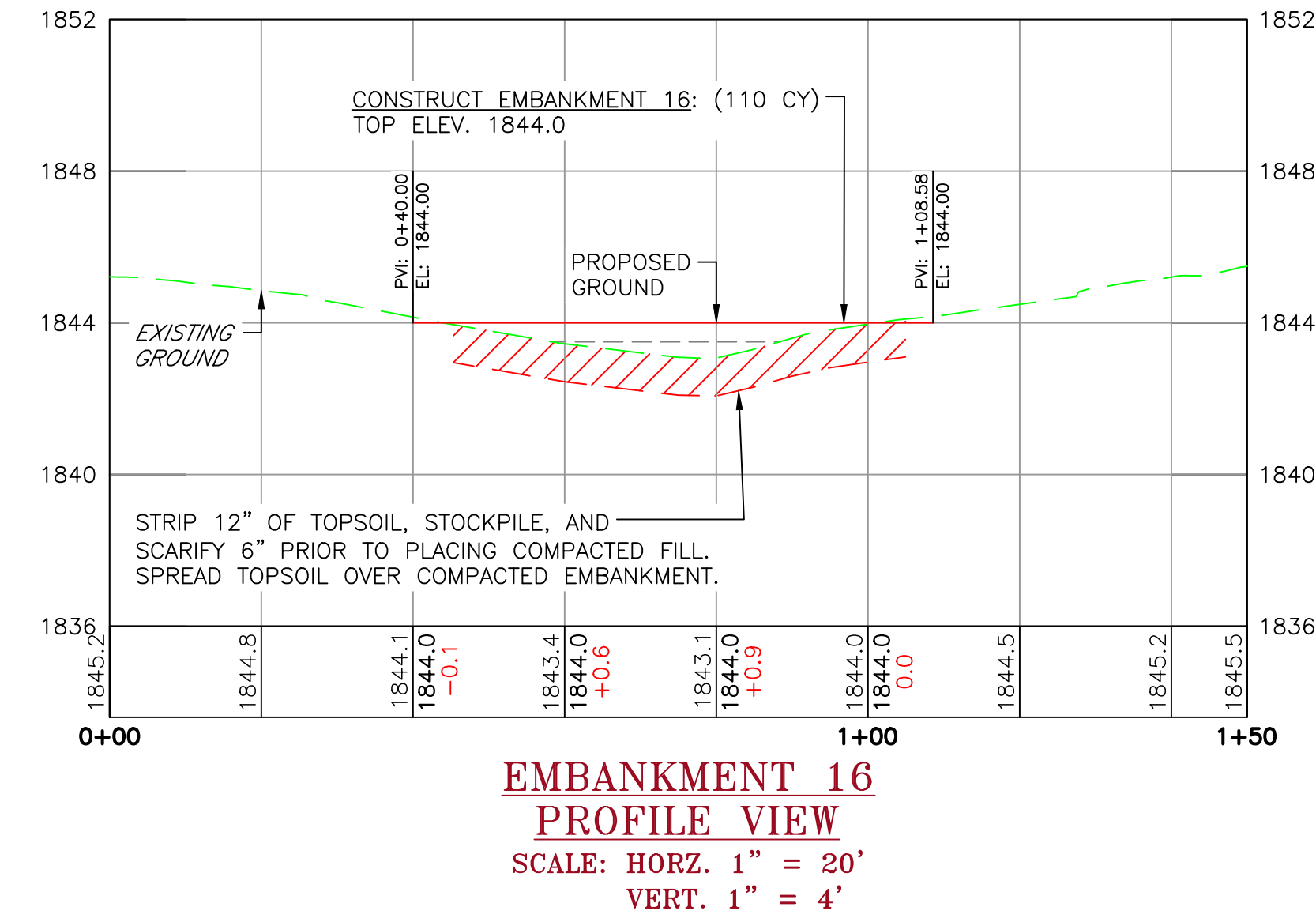
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 - WORK REQUIRED TO DEWATER THE SITE IS INCIDENTAL TO "SITE PREPARATION".

DUCKS UNLIMITED
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
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DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

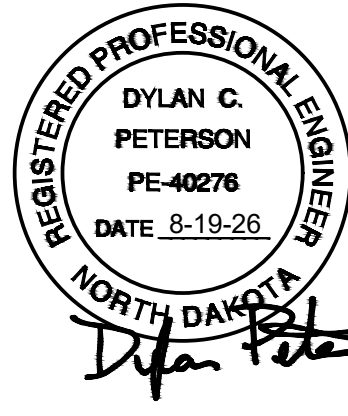
BY:	DATE:	REVISION:
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- EMBANKMENT CONSTRUCTION NOTES:
- STRIP 12" OF TOPSOIL, STOCKPILE, AND SCARIFY 6" PRIOR TO PLACING COMPACTED FILL. SPREAD TOPSOIL OVER COMPACTED EMBANKMENT. COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "SITE PREPARATION"
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 - EMBANKMENT FILL SHALL BE OBTAINED FROM THE SPECIFIED BORROW AREA. FILL SHALL BE PLACED IN LIFTS OF NO MORE THAN 8" AND COMPACTED PRIOR TO PLACING SUBSEQUENT LIFTS.
 - CONTRACTOR TO SEED FINISHED EMBANKMENT. SEE SEEDING NOTES.

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- GENERAL NOTES
- ONE FOOT CONTOUR INTERVAL SHOWN.
 - 2025 1 METER RESOLUTION AERIAL IMAGERY IS SHOWN.
 - ITALICIZED TEXT DENOTES EXISTING FEATURE OR EXISTING ELEVATION.
 - SPOT ELEVATIONS INDICATED BY ϕ -XXXX.X ARE RANDOMLY LOCATED AND ARE BASED ON SURFACE MODEL ELEVATIONS.



LOWERY MITIGATION ILF

WETLAND 16 DETAILS

PROJECT:

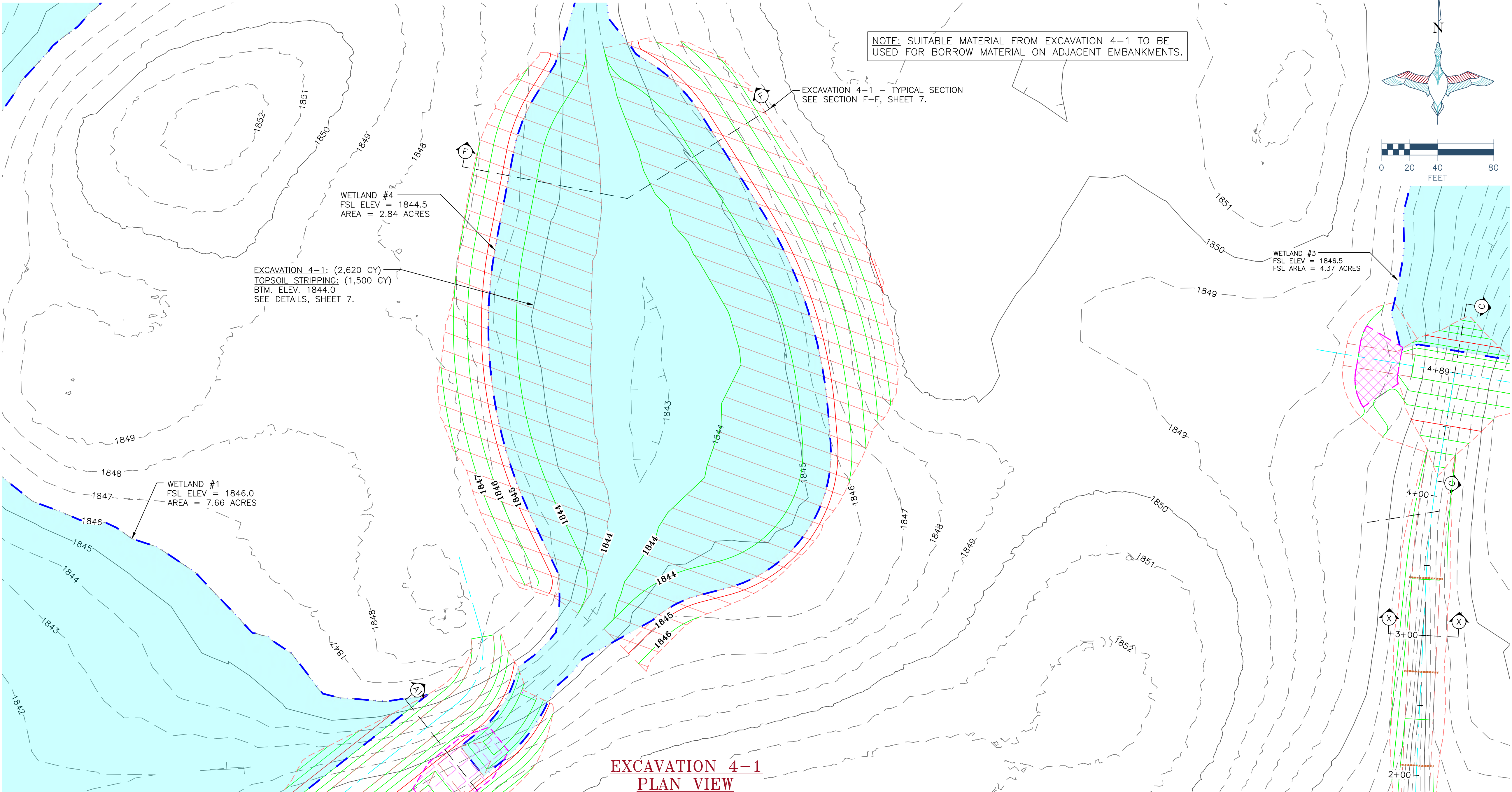
LEGAL:
SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE: **8/19/2026**

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
6 OF 17



BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

REVISION:	DATE:	BY:
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LOWERY MITIGATION ILF

EXCAVATION 4-1 DETAILS

PROJECT:

SHEET TITLE:

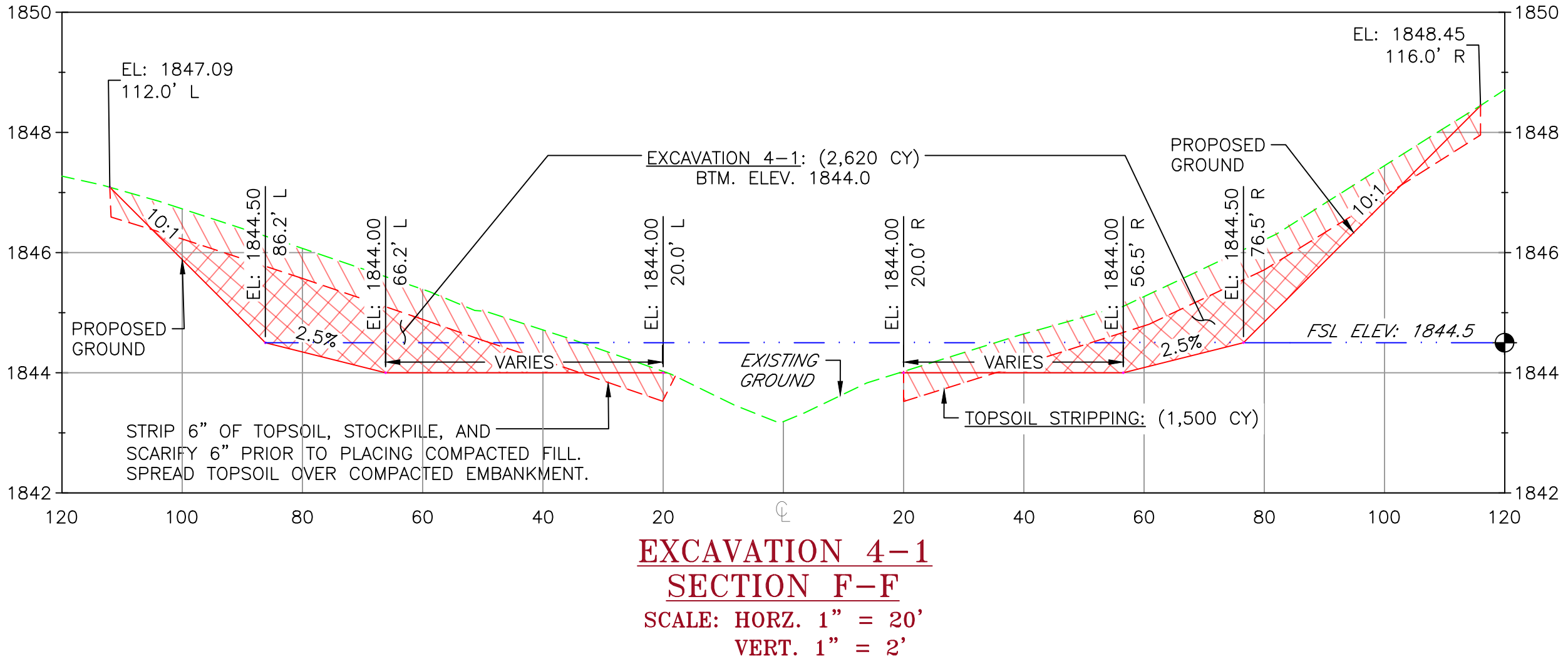
LEGAL:
SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE: 8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

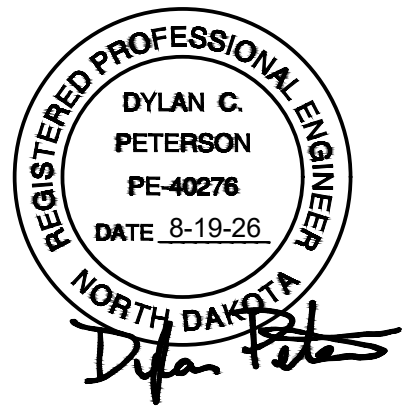
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ND-550-100

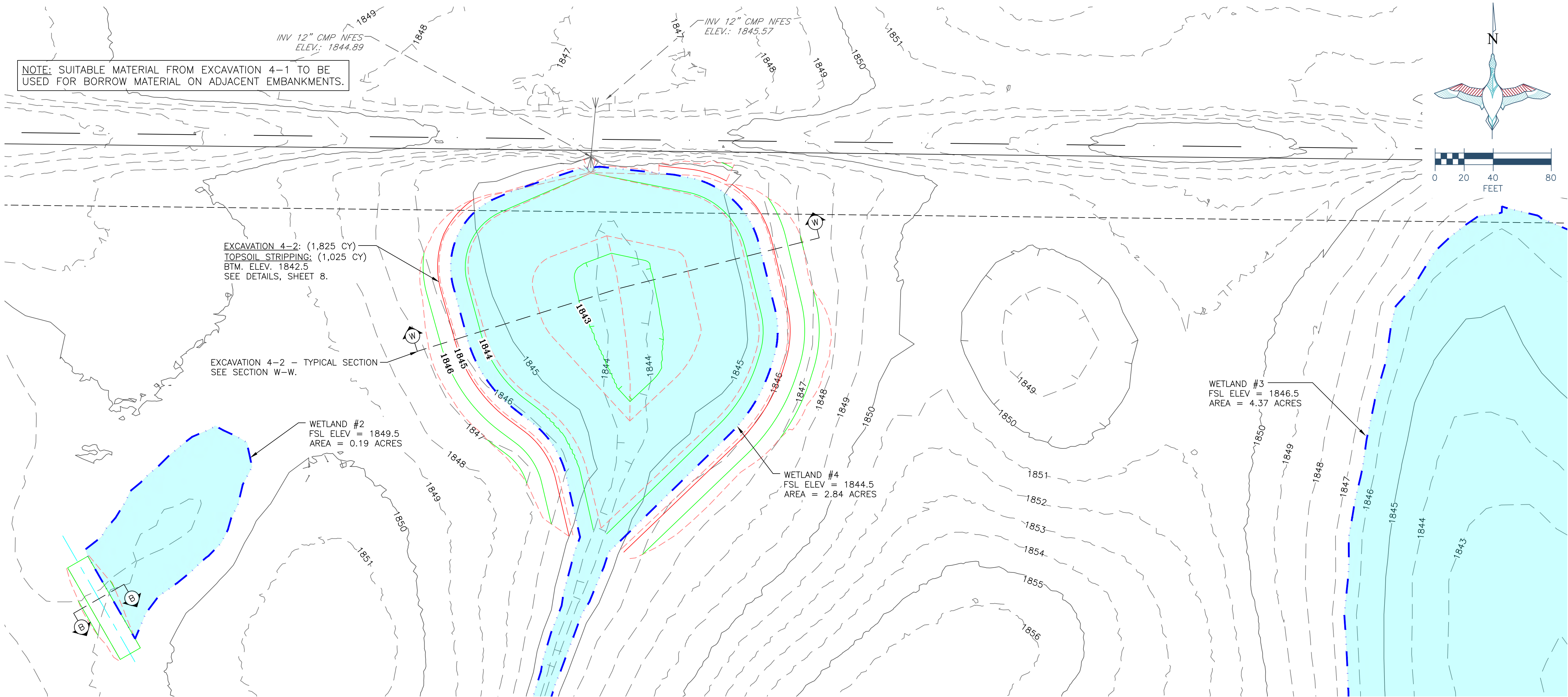
SHEET NUMBER:
7 OF 17



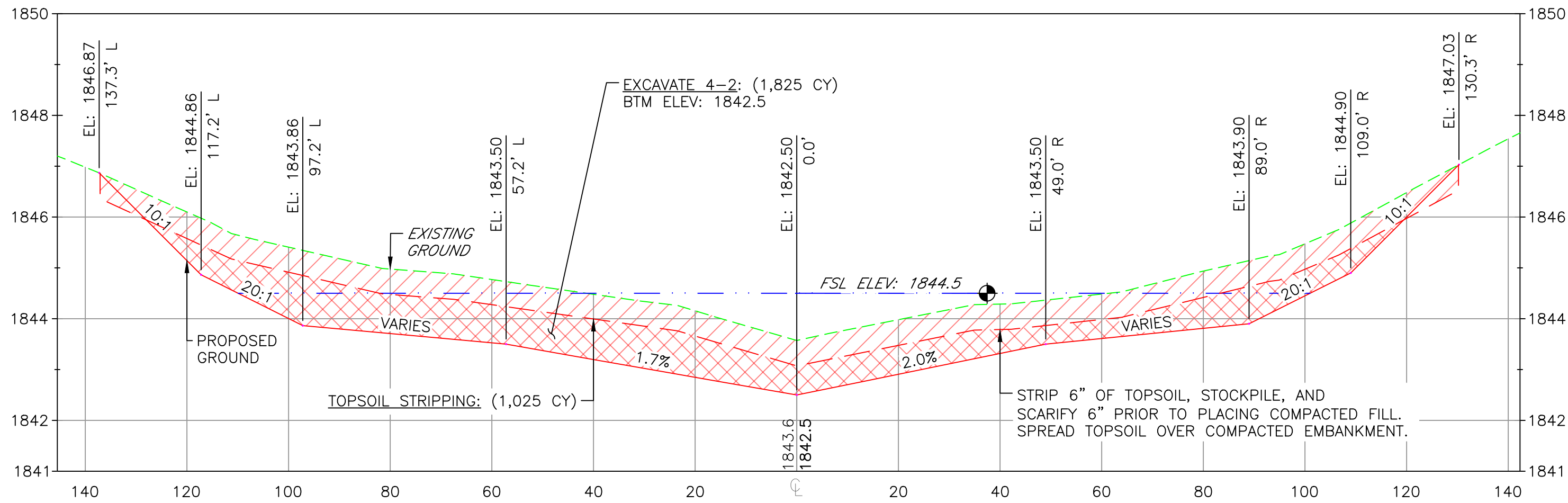
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EXCAVATION 4-2
PLAN VIEW
SCALE: 1" = 40'



EXCAVATION 4-2
SECTION W-W
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY: DCP
DRAWN BY: DCP
SURVEYED BY: LM
CHECKED BY:
APPROVED BY:
APPROVED BY:

REVISION:	DATE:	BY:
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LOWERY MITIGATION ILF

EXCAVATION 4-2 DETAILS

PROJECT:

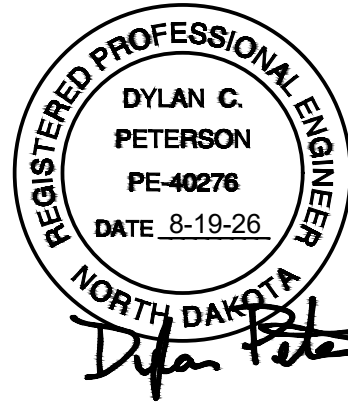
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SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

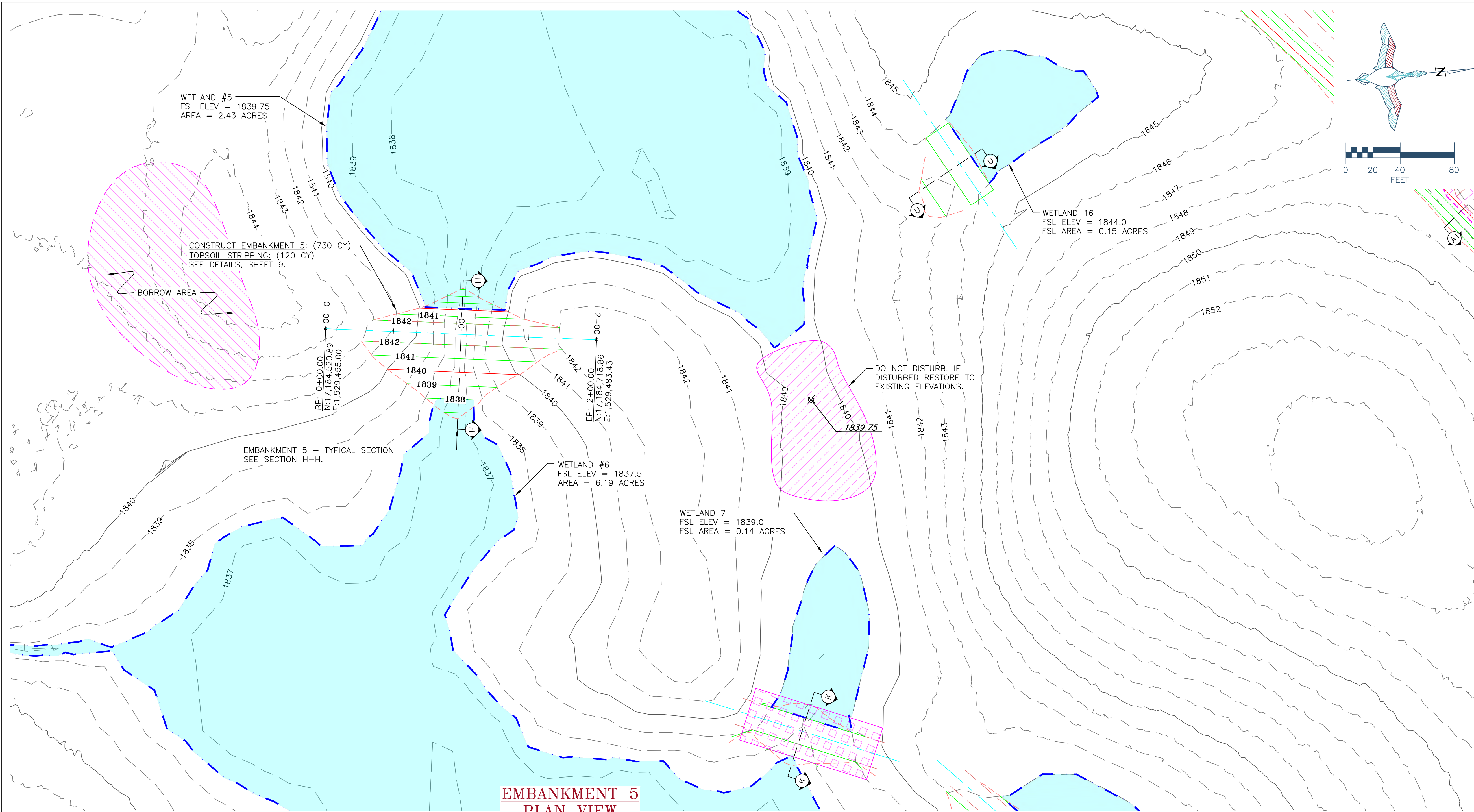
DATE:
8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
8 OF 17





BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

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REGIONAL OFFICE
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BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

BY:	DATE:

REVISION:	1	2	3	4	5	6	7	8

PROJECT: LOWERY MITIGATION ILF

SHEET TITLE: WETLAND 5 DETAILS

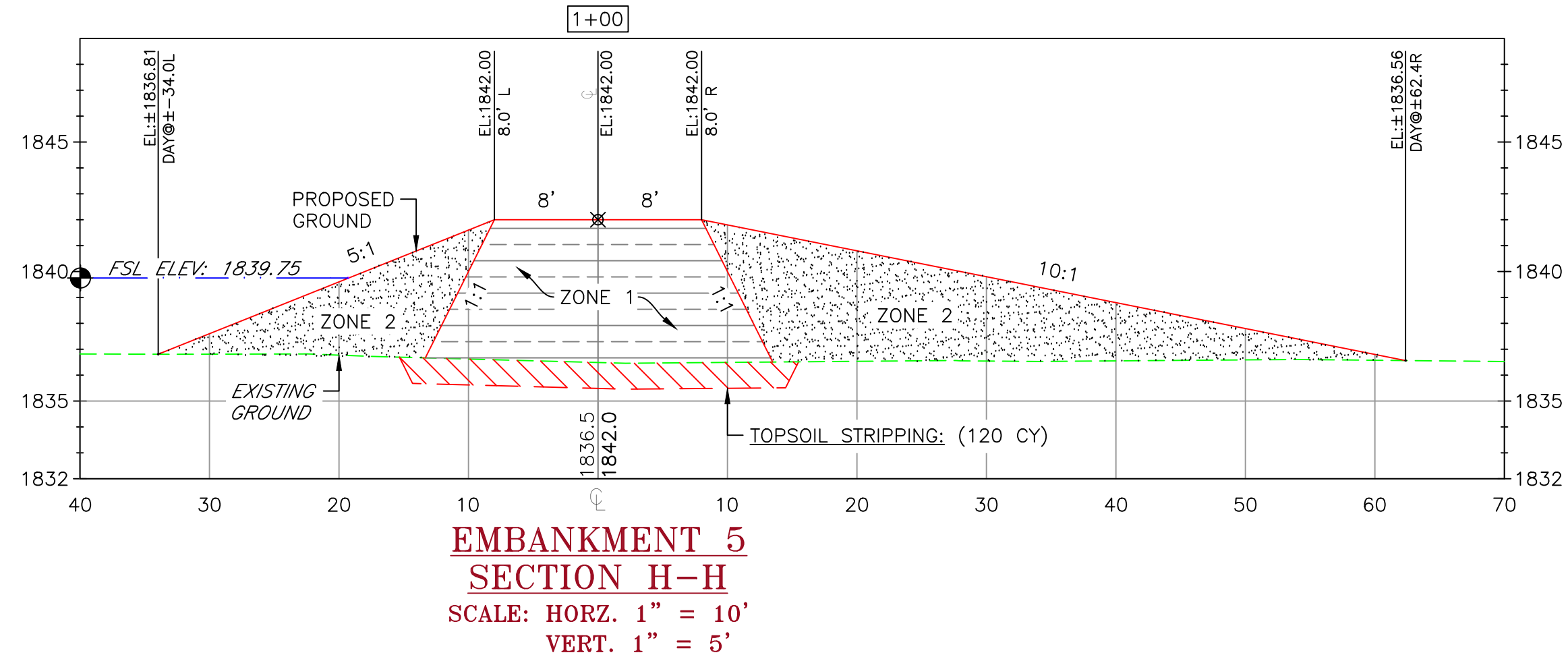
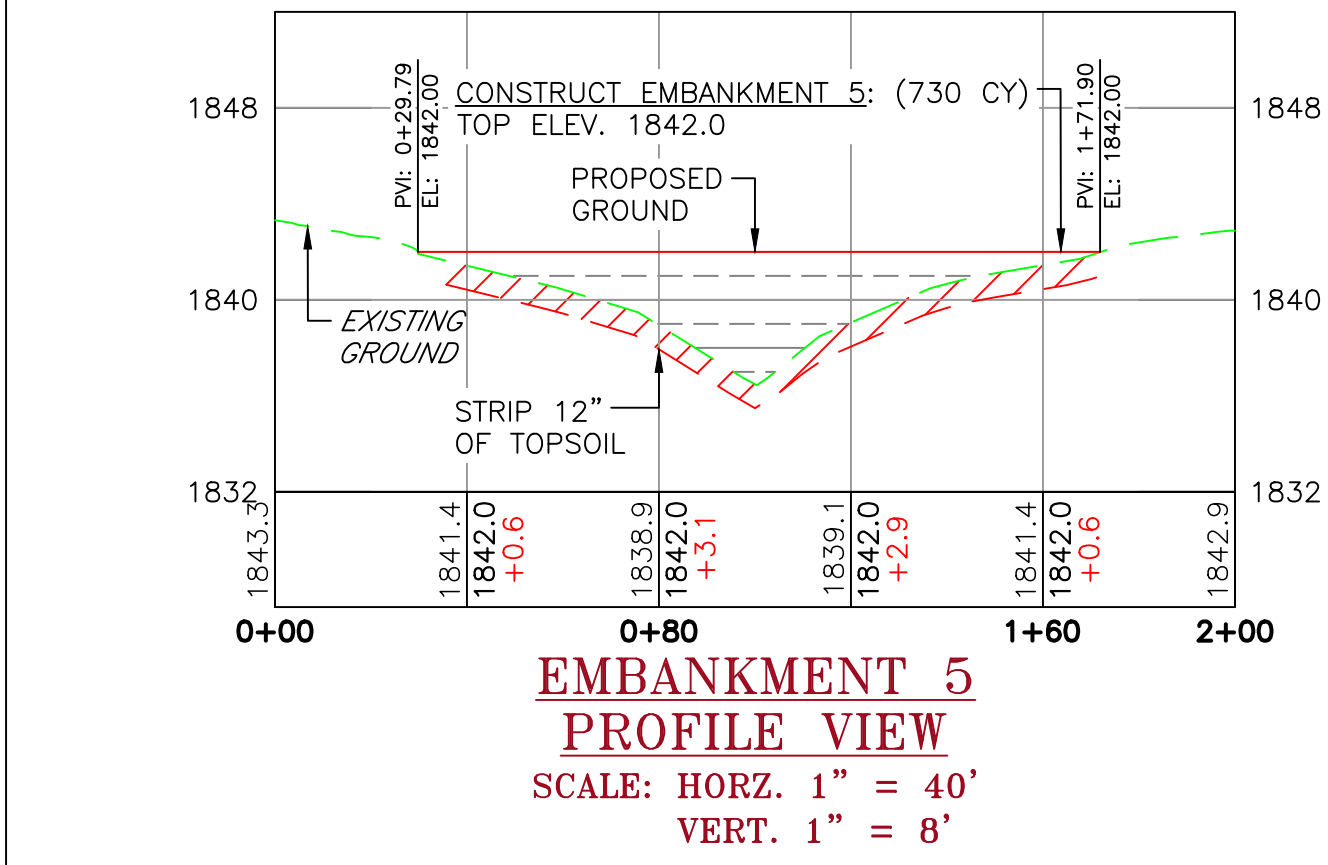
LEGAL: SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE: 8/19/2026

LISTED SCALES ACCURATE ON 24"x36" SHEET SIZE

DU PROJECT NUMBER: ND-550-100

SHEET NUMBER: 9 OF 17

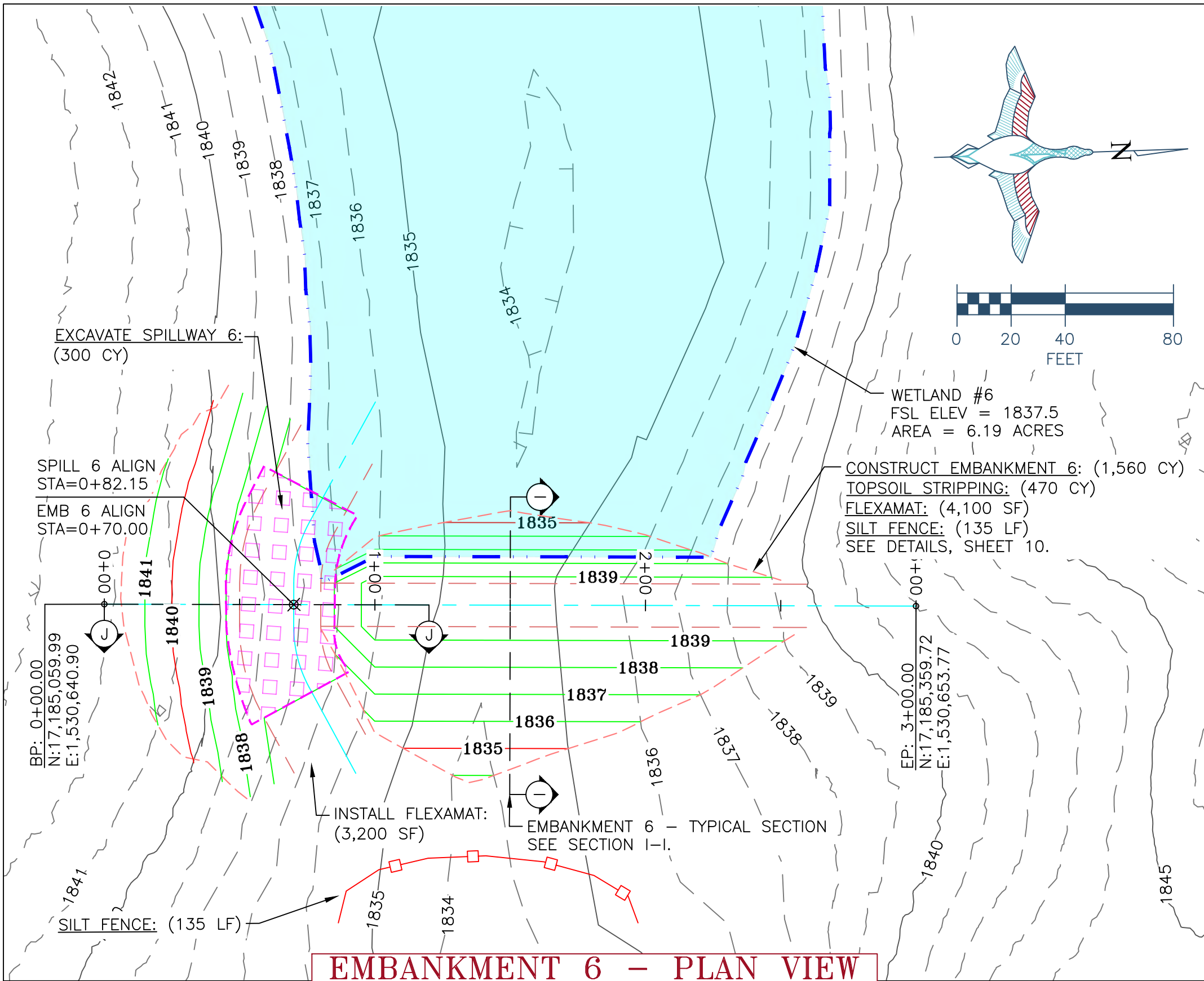


- EMBANKMENT CONSTRUCTION NOTES:
1. STRIP 12" OF TOPSOIL, STOCKPILE, AND SCARIFY 6" PRIOR TO PLACING COMPACTED FILL. SPREAD TOPSOIL OVER COMPACTED EMBANKMENT. COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "SITE PREPARATION"
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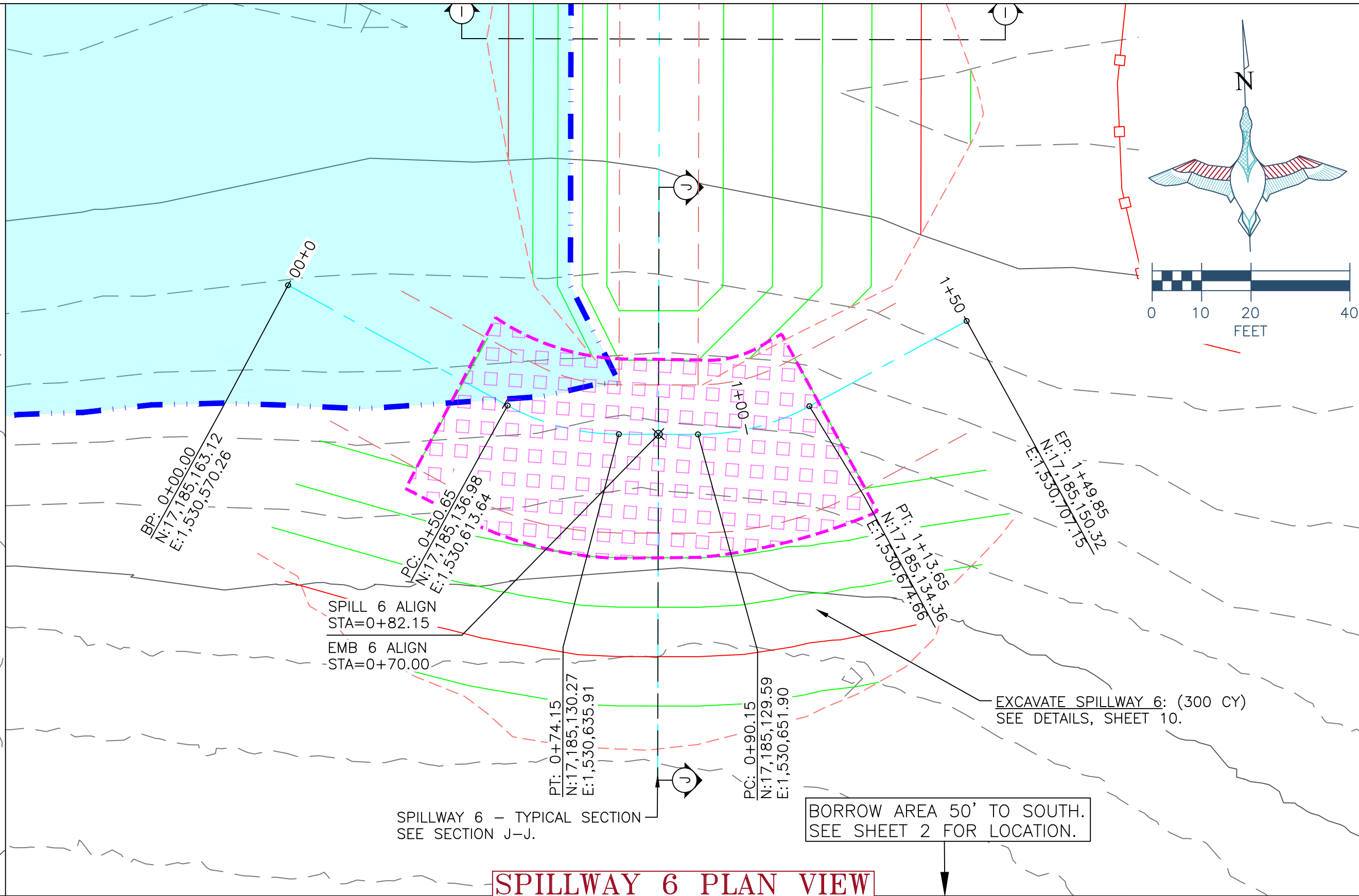
- GENERAL NOTES
1. ONE FOOT CONTOUR INTERVAL SHOWN.
 2. 2025 1 METER RESOLUTION AERIAL IMAGERY IS SHOWN.
 3. ITALICIZED TEXT DENOTES EXISTING FEATURE OR EXISTING ELEVATION.
 4. SPOT ELEVATIONS INDICATED BY 4-XXXX.X ARE RANDOMLY LOCATED AND ARE BASED ON SURFACE MODEL ELEVATIONS.

REGISTERED PROFESSIONAL ENGINEER
NORTH DAKOTA
DYLAN C. PETERSON
PE-40278
DATE 8-19-2026

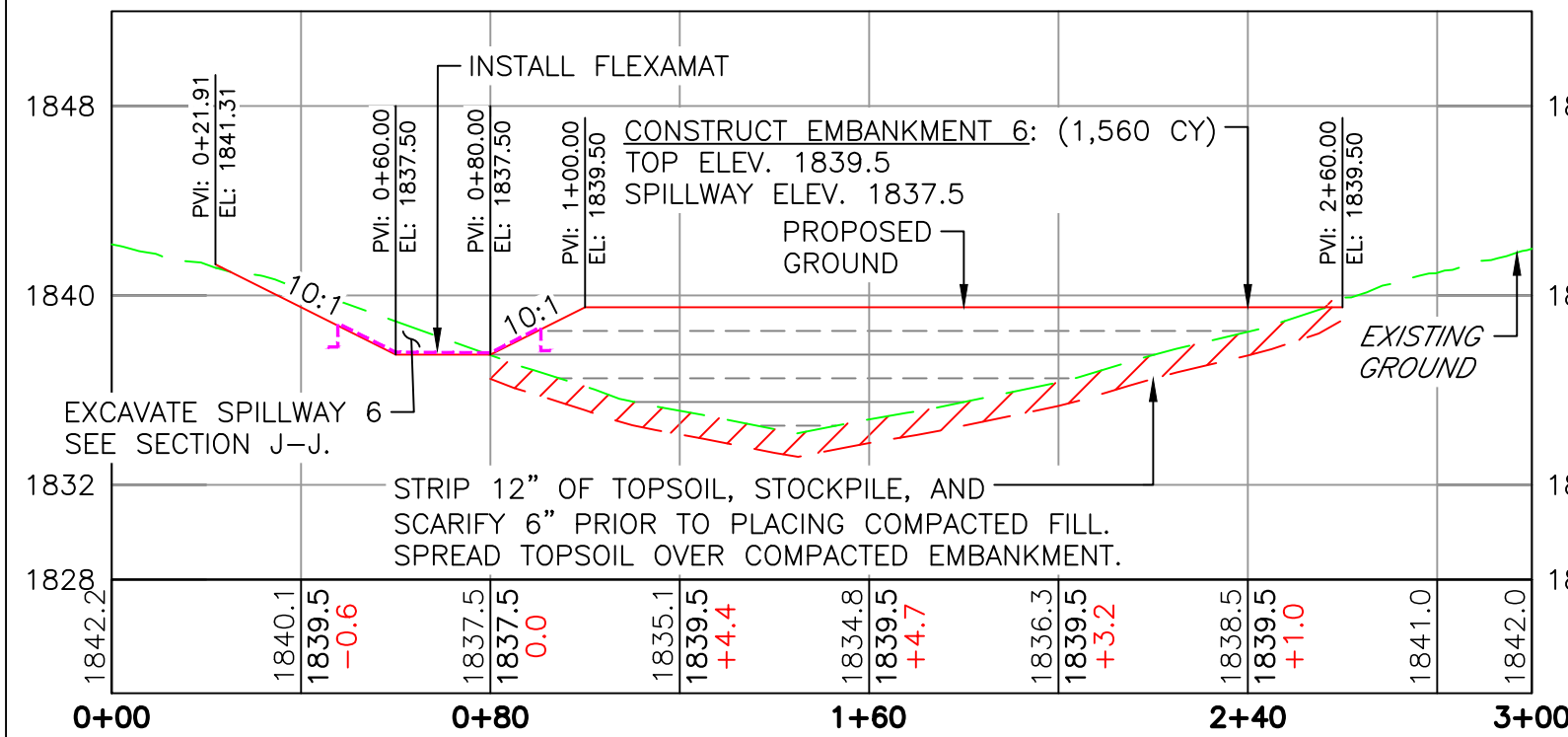




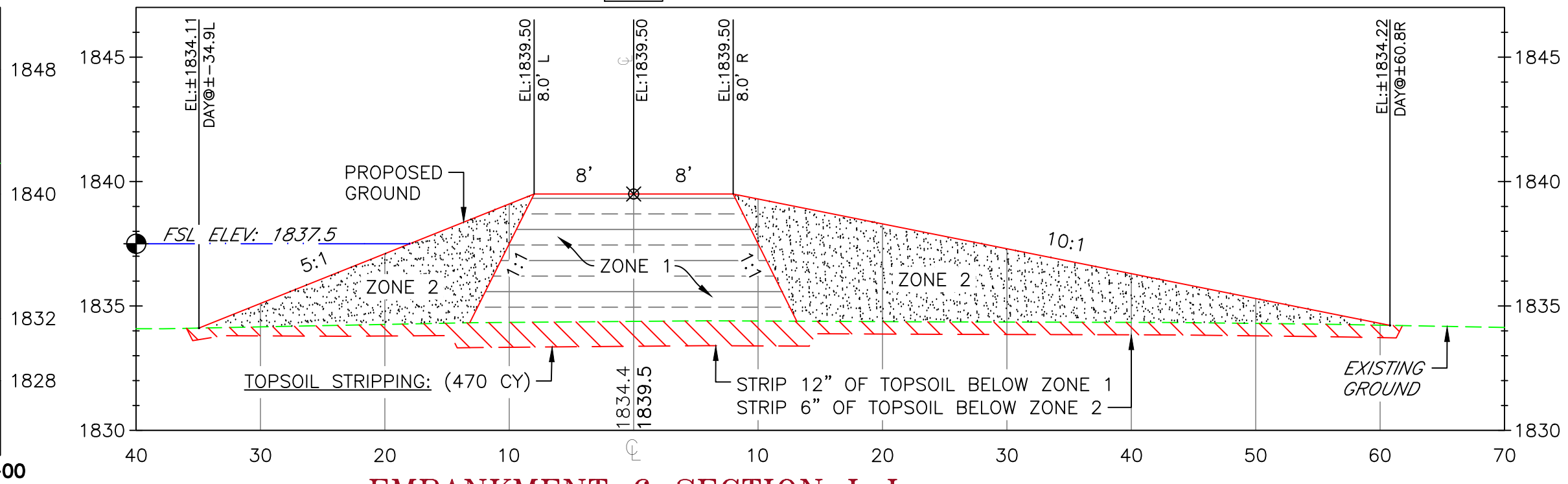
EMBankment 6 - PLAN VIEW
SCALE: 1" = 40'



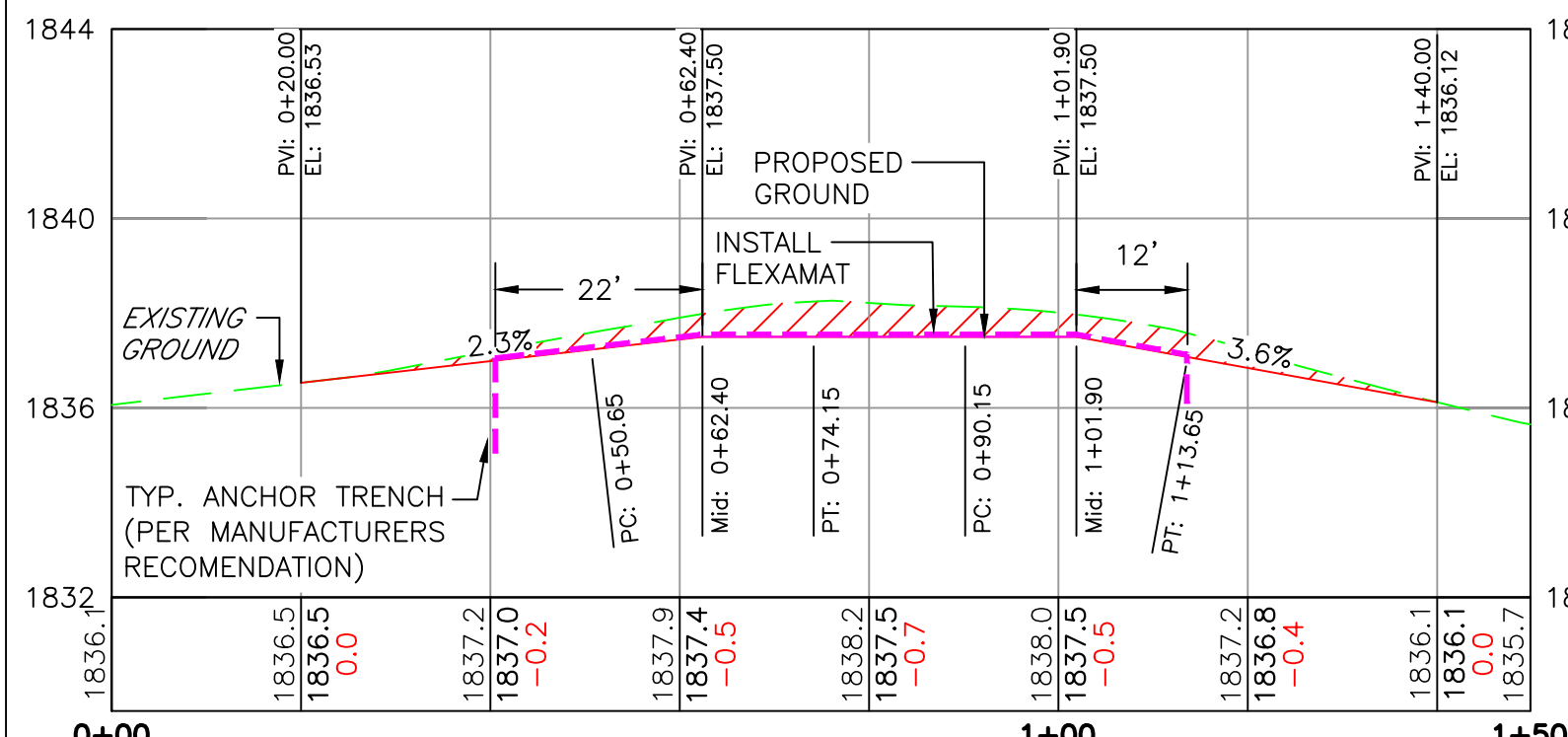
SPILLWAY 6 PLAN VIEW
SCALE: 1" = 20'



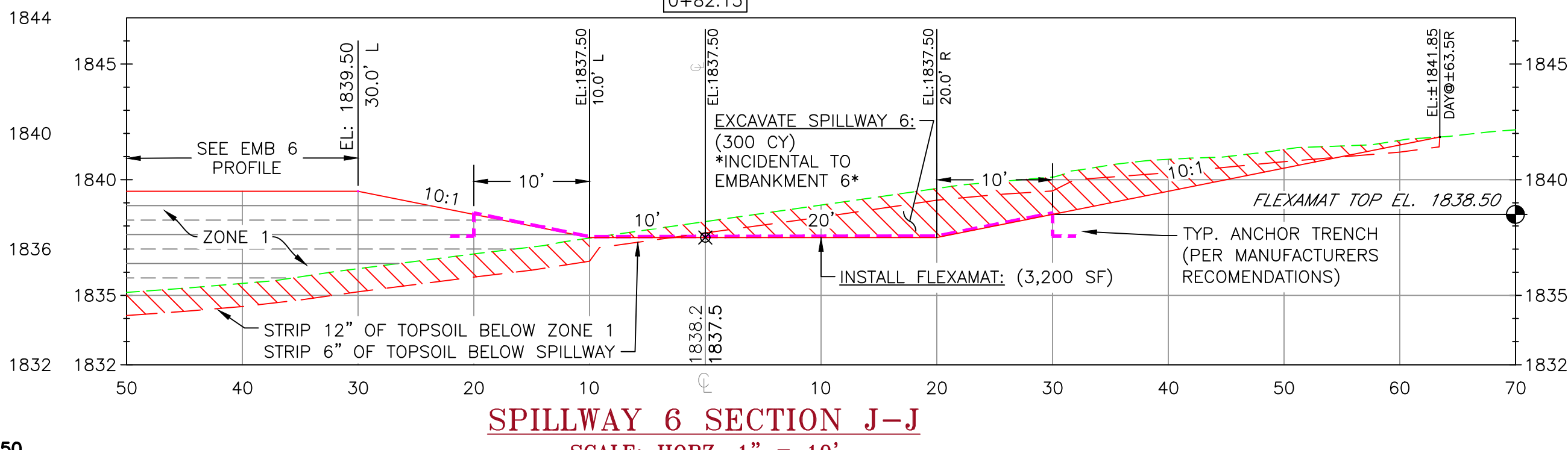
EMBankment 6 PROFILE VIEW
SCALE: HORIZ. 1" = 40'
VERT. 1" = 8'



EMBankment 6 SECTION I-I
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'



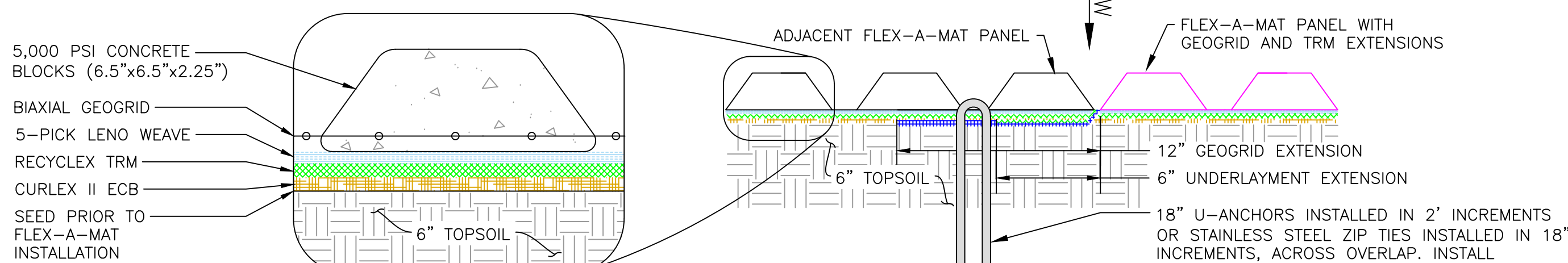
SPILLWAY 6 PROFILE VIEW
SCALE: HORIZ. 1" = 20'
VERT. 1" = 4'



SPILLWAY 6 SECTION J-J
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

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FLEX-A-MAT
TYPICAL SECTION

OVERLAP SEAM DETAIL
PARALLEL TO FLOW

BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

SEEDING AND MULCHING NOTE:

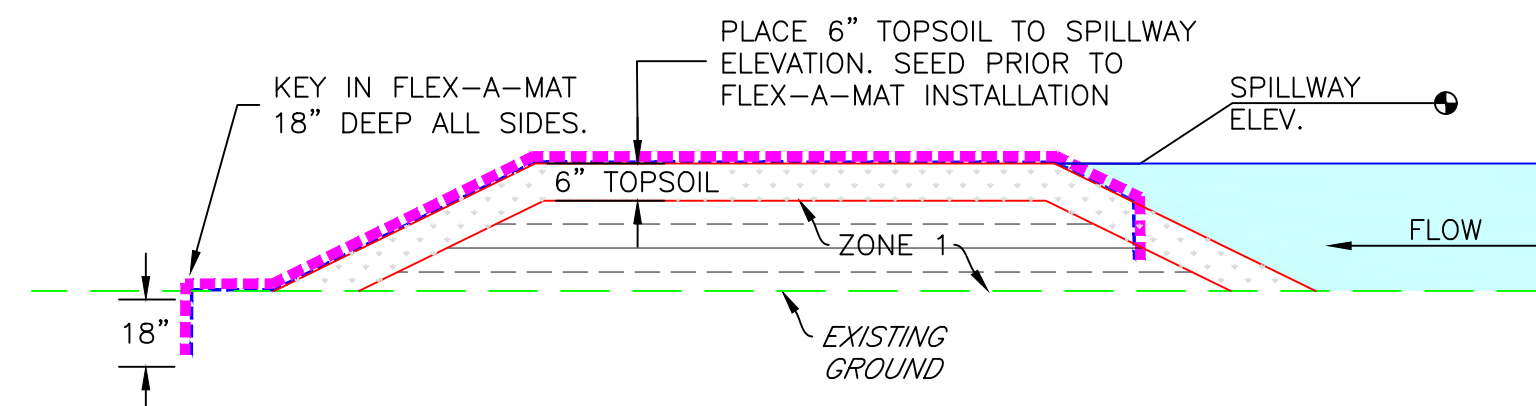
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- BEFORE LAST SPRING FROST OR APRIL 15TH (WHICHEVER IS EARLIER).
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CONSTRUCTION NOTES:

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- ALL FILL MATERIALS SHALL BE PLACED IN LOOSE LIFTS OF NOT MORE THAN 8 INCHES THICKNESS AND SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR METHOD ASTM D698. MOISTURE CONTENT SHALL BE IN THE RANGE OF -1% TO +3% OF OPTIMUM MOISTURE CONTENT.
- WORK REQUIRED TO DEWATER THE SITE IS INCIDENTAL TO "SITE PREPARATION".

EMBANKMENT CONSTRUCTION NOTES:

- STRIP 12" OF TOPSOIL, STOCKPILE, AND SCARIFY 6" PRIOR TO PLACING COMPACTED FILL. SPREAD TOPSOIL OVER COMPACTED EMBANKMENT. COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "SITE PREPARATION"
- THE EMBANKMENT SUBGRADE MUST BE STABLE, UNIFORMLY GRADED, FREE OF ROCKS, ROOTS, AND OTHER DEBRIS, WITH NO ABRUPT GRADE CHANGES.
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- EMBANKMENT FILL SHALL BE OBTAINED FROM THE SPECIFIED BORROW AREA. FILL SHALL BE PLACED IN LIFTS OF NO MORE THAN 8" AND COMPACTED PRIOR TO PLACING SUBSEQUENT LIFTS.
- CONTRACTOR TO SEED FINISHED EMBANKMENT. SEE SEEDING NOTES.



SPILLWAY & FLEX-A-MAT
TYPICAL SECTION
NOT TO SCALE

FLEX-A-MAT CONSTRUCTION NOTES:

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- UPHILL EDGES OF FLEX-A-MAT EXPOSED SHALL BE EMBEDDED 18" VERTICALLY. THE ANCHOR TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL.
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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY: DCP
DRAWN BY: DCP
SURVEYED BY: LM
CHECKED BY:
APPROVED BY:
APPROVED BY:

REVISION:	DATE:	BY:
1		
2		
3		
4		
5		
6		
7		
8		

LOWERY MITIGATION ILF

WETLAND 6 DETAILS

PROJECT:
SHEET TITLE:

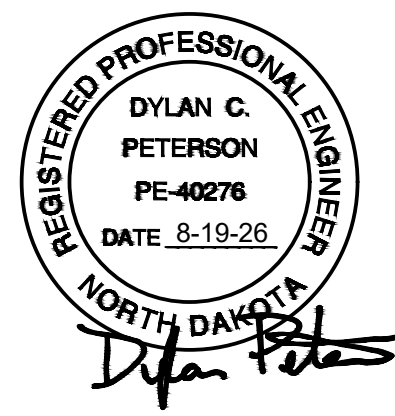
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SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

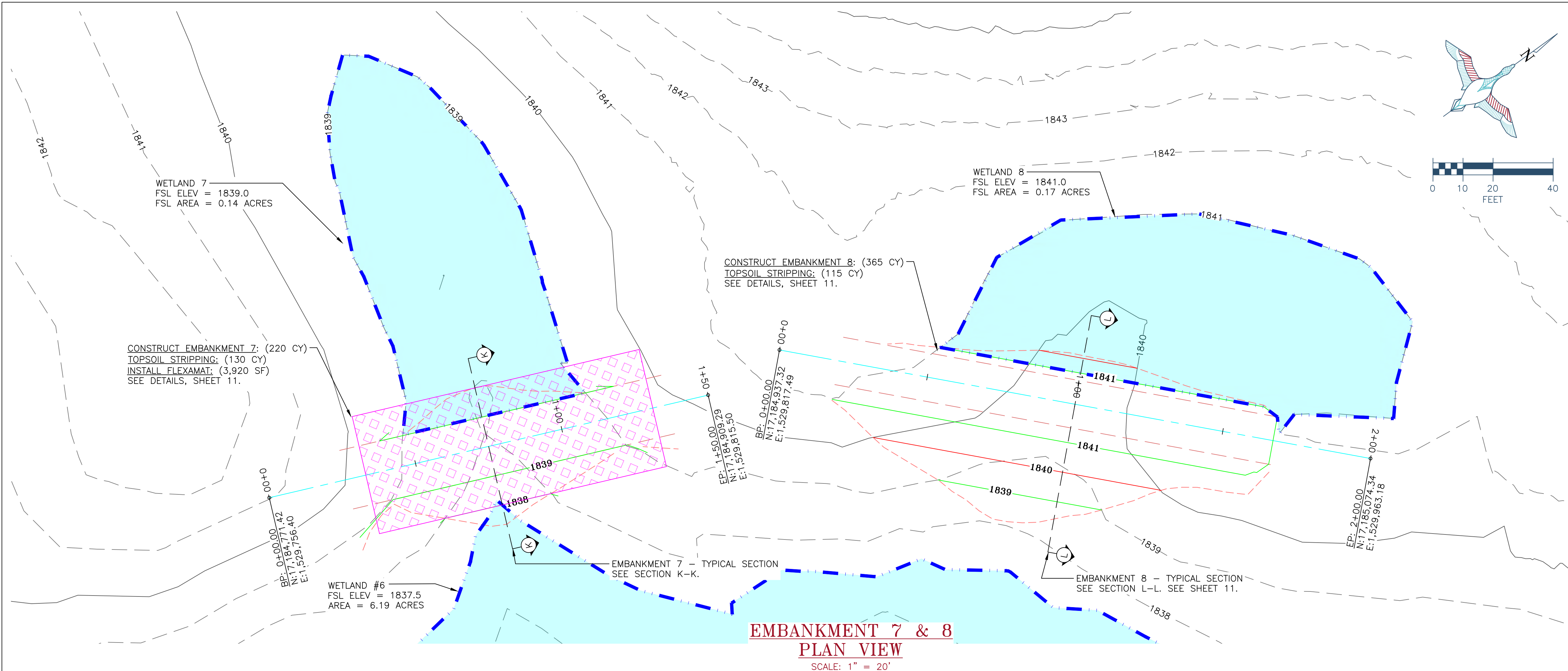
DATE:
8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
10 OF 17



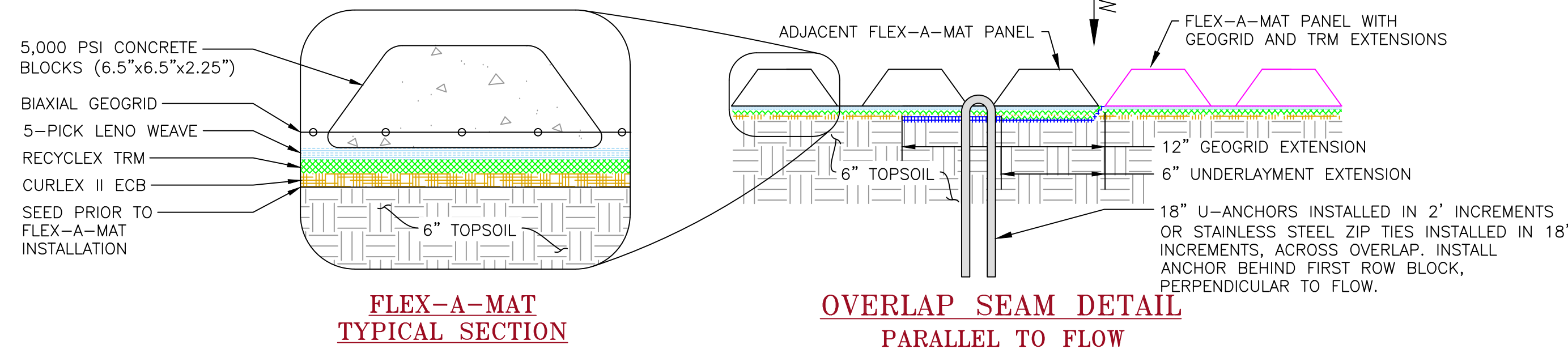
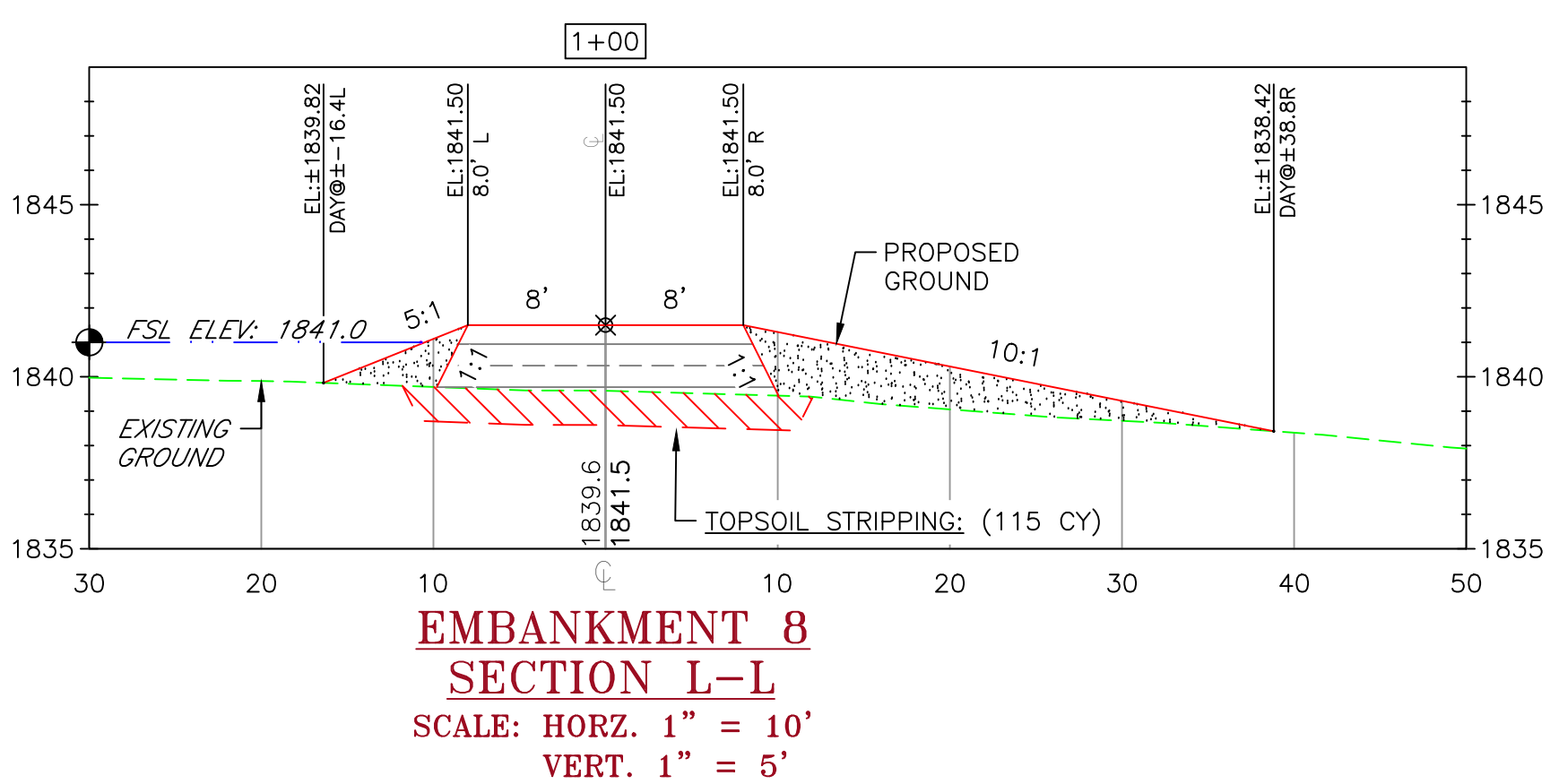
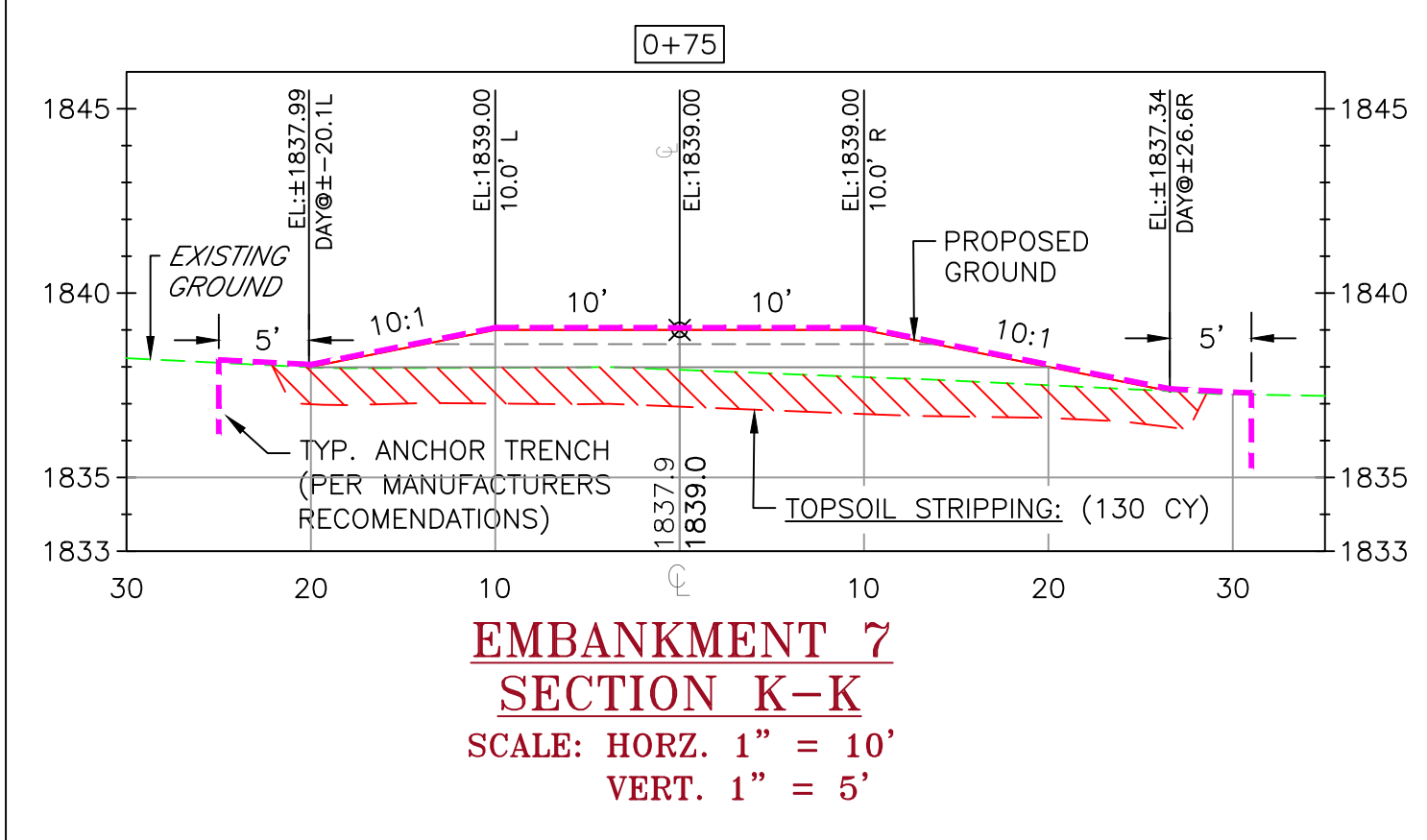
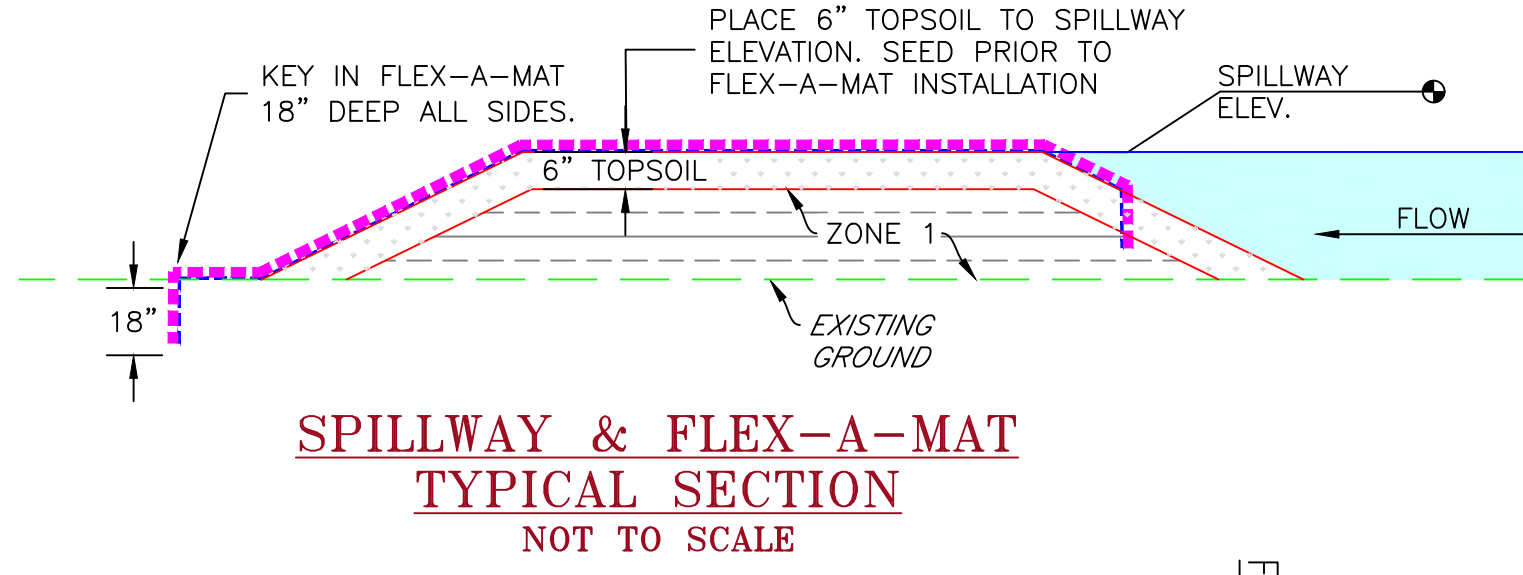
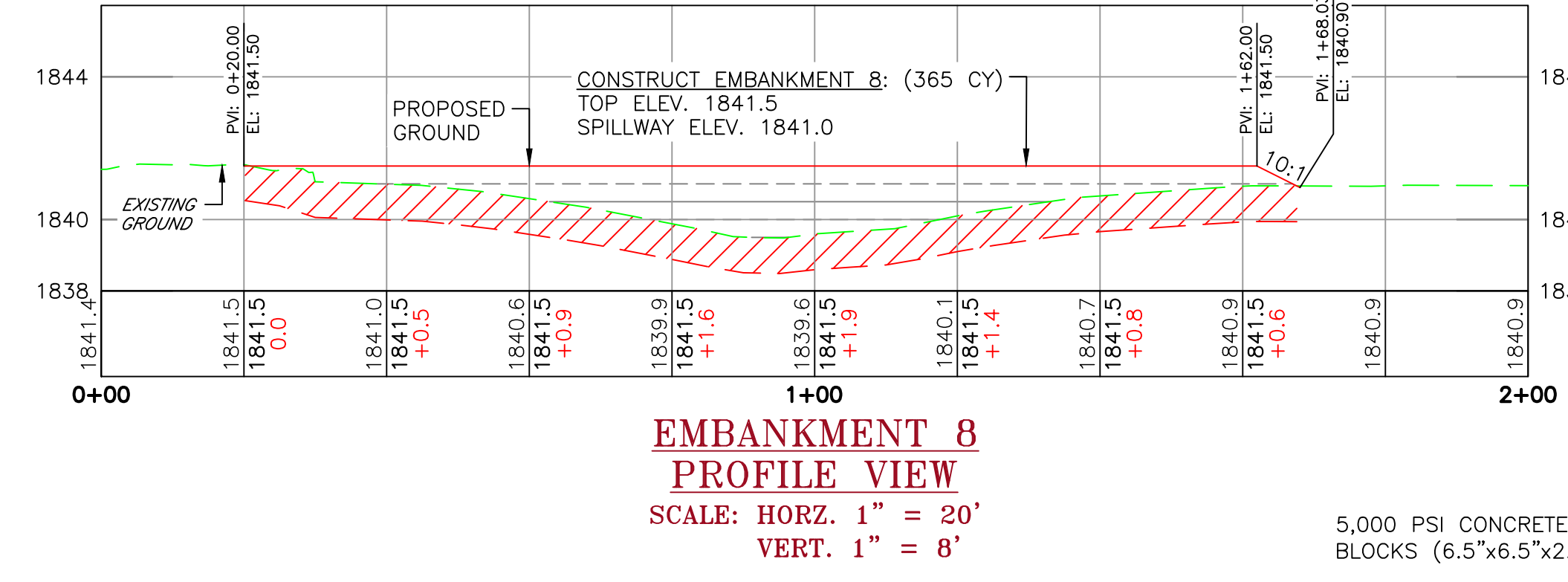
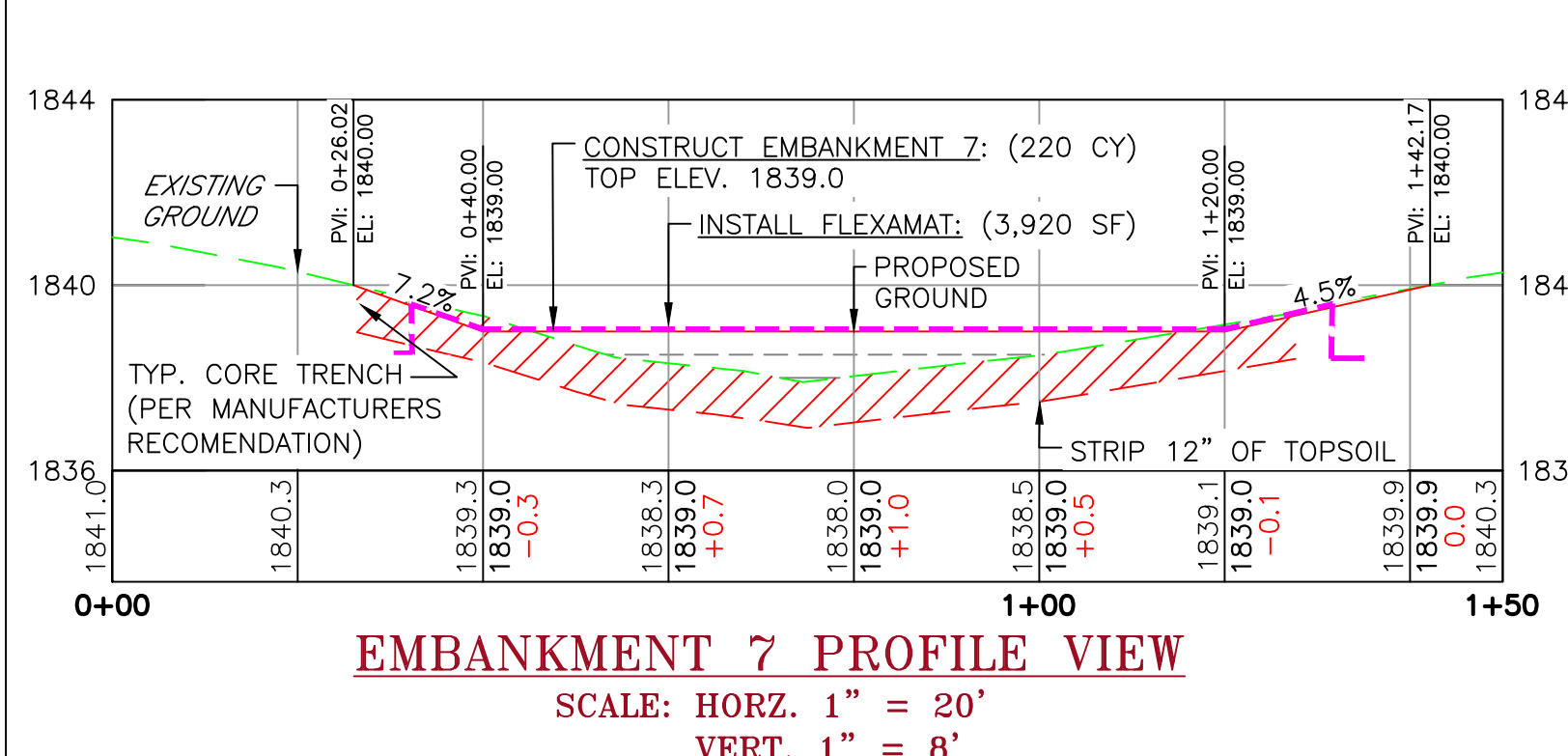


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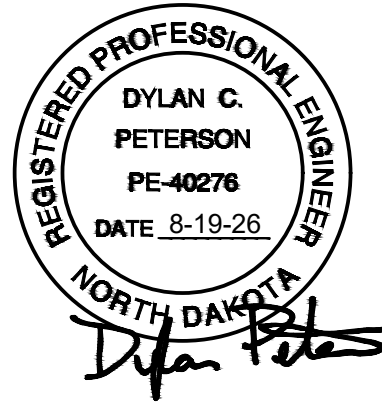
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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

BY:							
DATE:							
REVISION:							
1	2	3	4	5	6	7	8

PROJECT:

LEGAL:

DATE:

LISTED SCALES ACCURATE ON 24"x36" SHEET SIZE

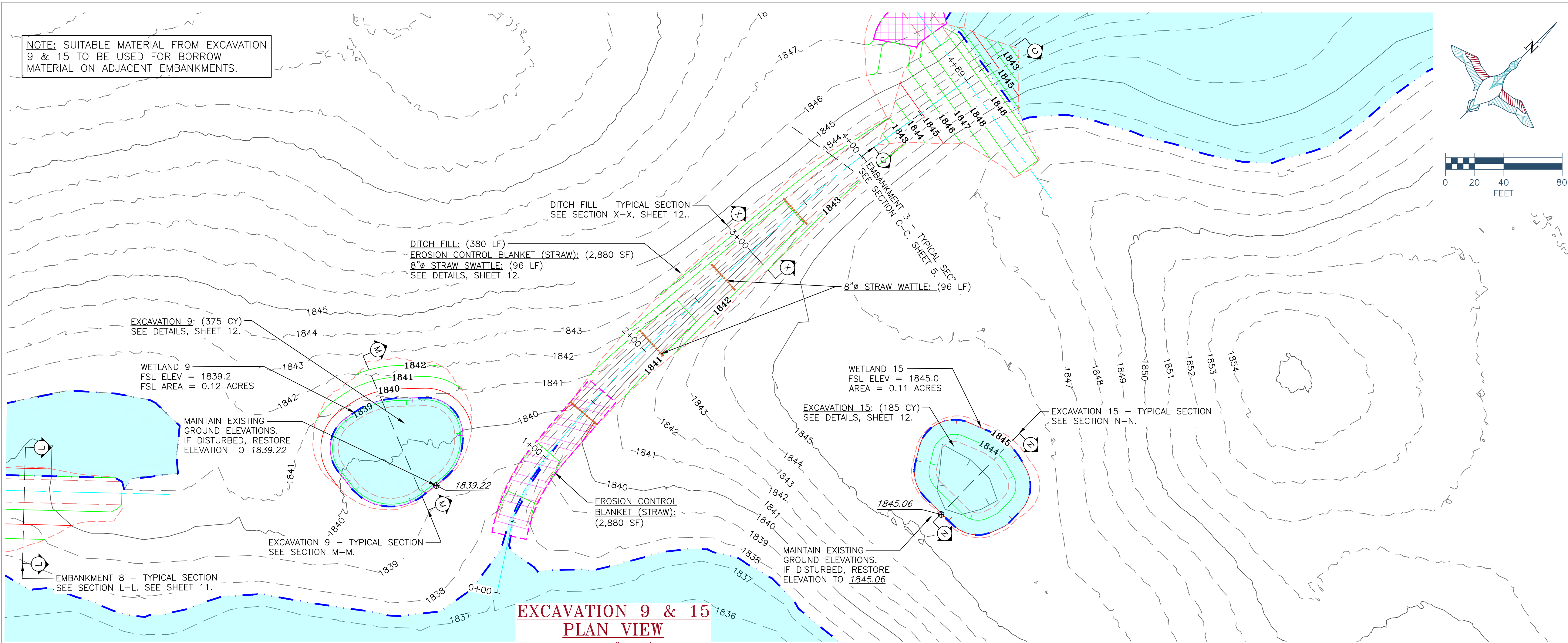
DU PROJECT NUMBER:

SHEET NUMBER:

LOWERY MITIGATION ILF

WETLAND 7 & 8 DETAILS

11 OF 17



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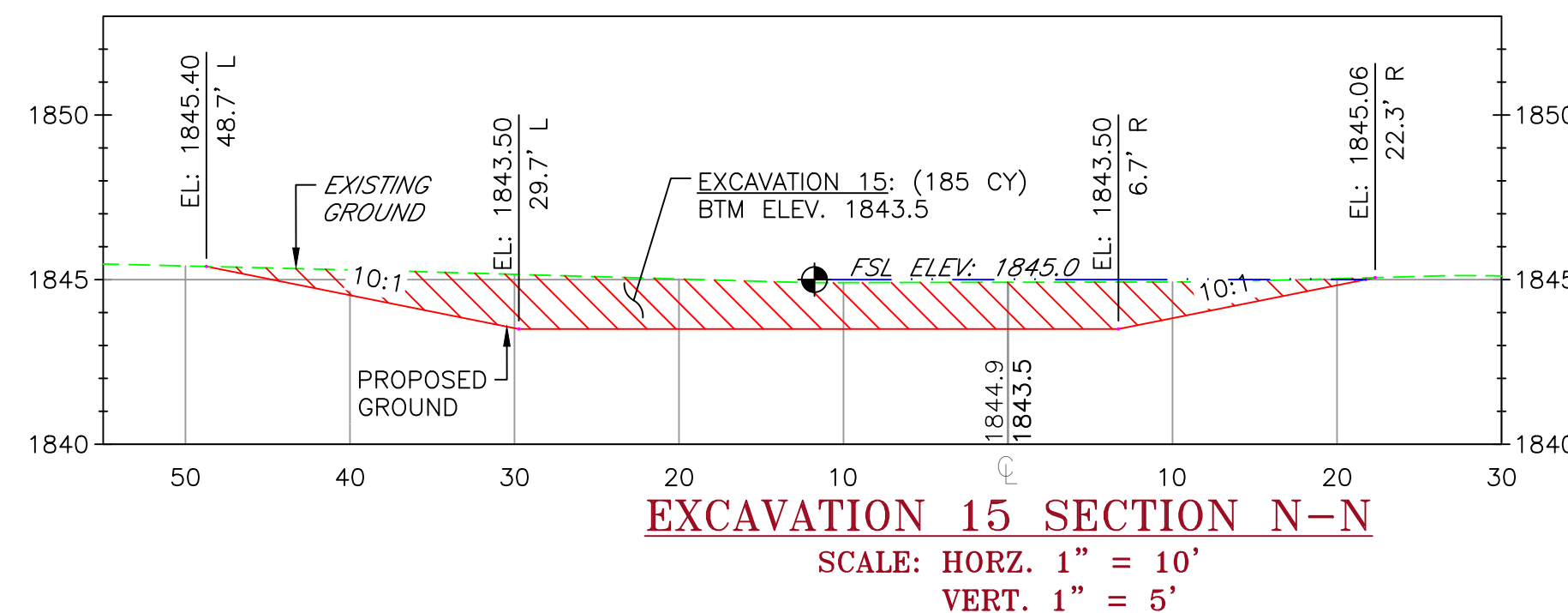
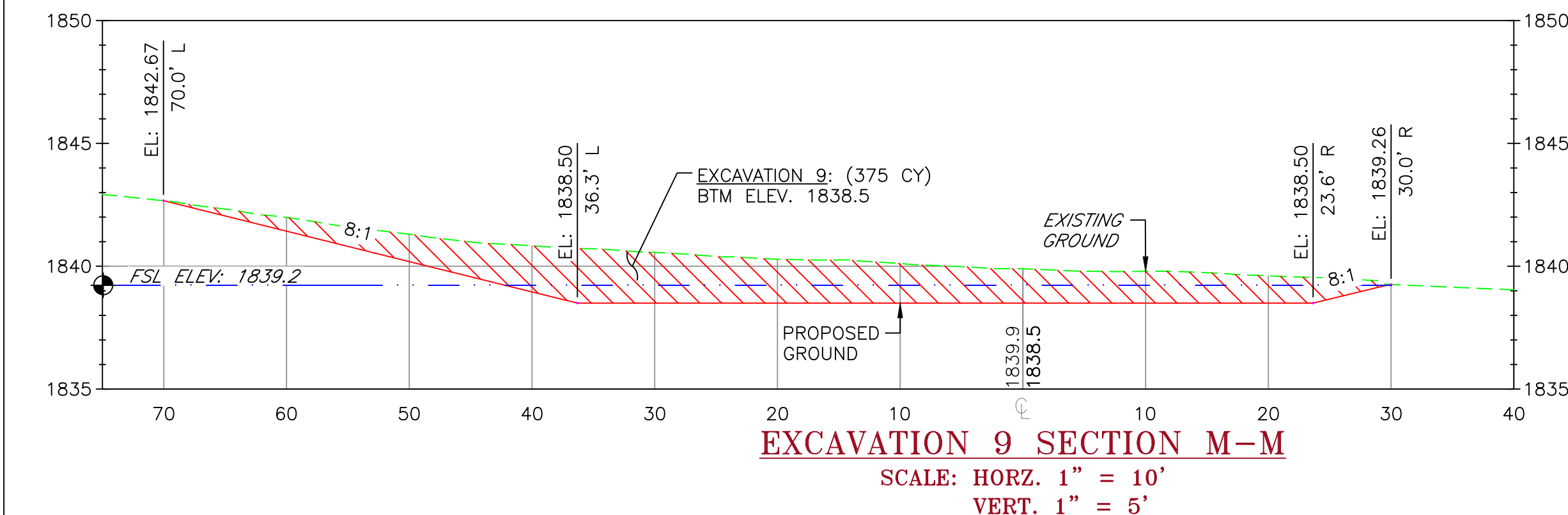
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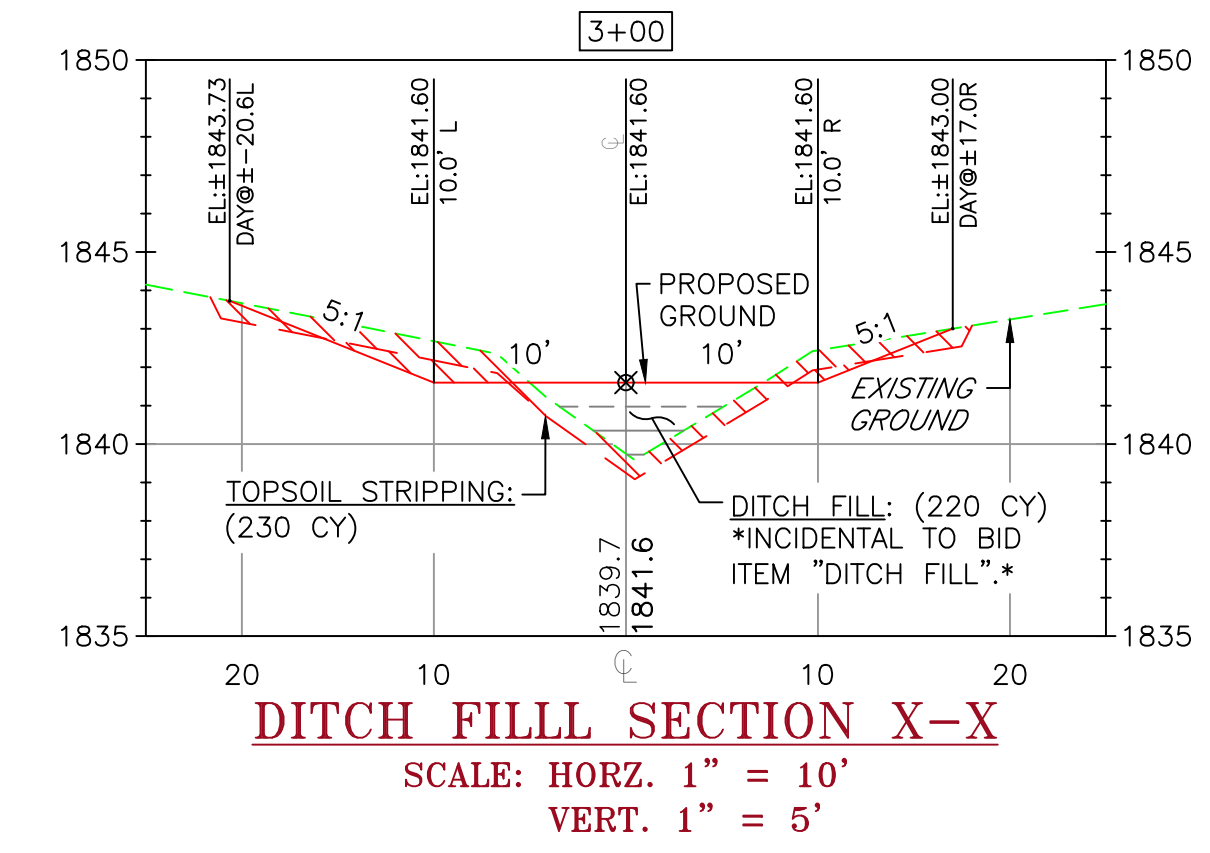
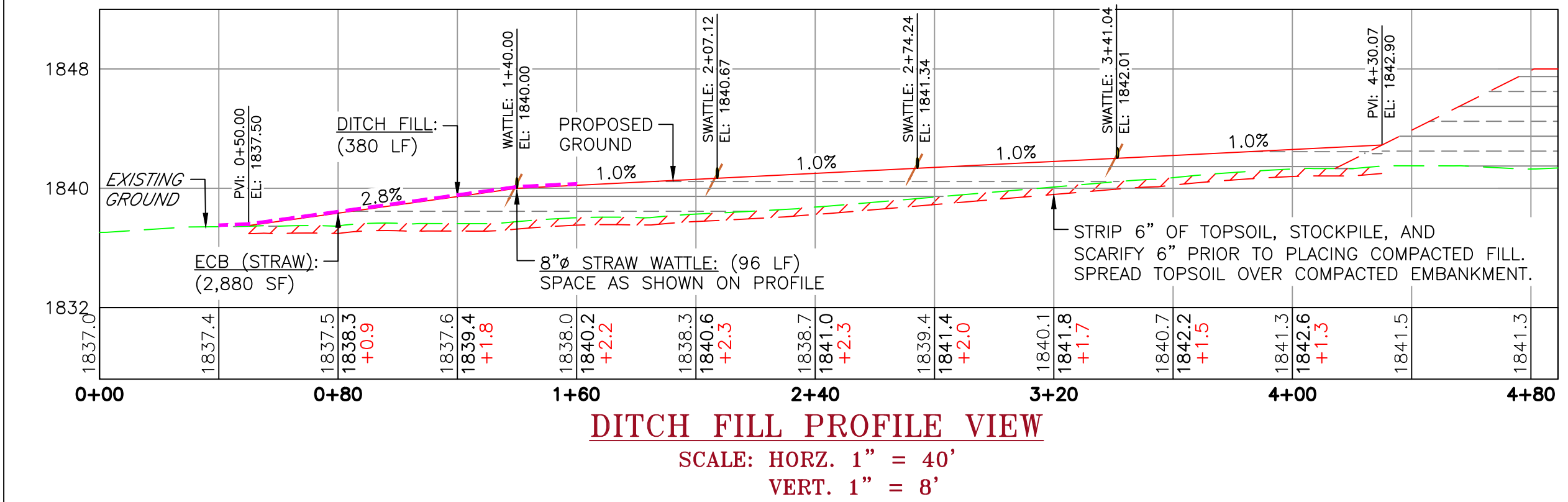
DUCKS UNLIMITED
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	
BY:	
DATE:	
REVISION:	
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REGISTERED PROFESSIONAL ENGINEER
DYLAN C. PETERSON
PE-40278
DATE 8-19-26
NORTH DAKOTA
Dylan Peterson

PROJECT: LOWERY MITIGATION ILF

SHEET TITLE: WETLAND 9 & 15 DETAILS

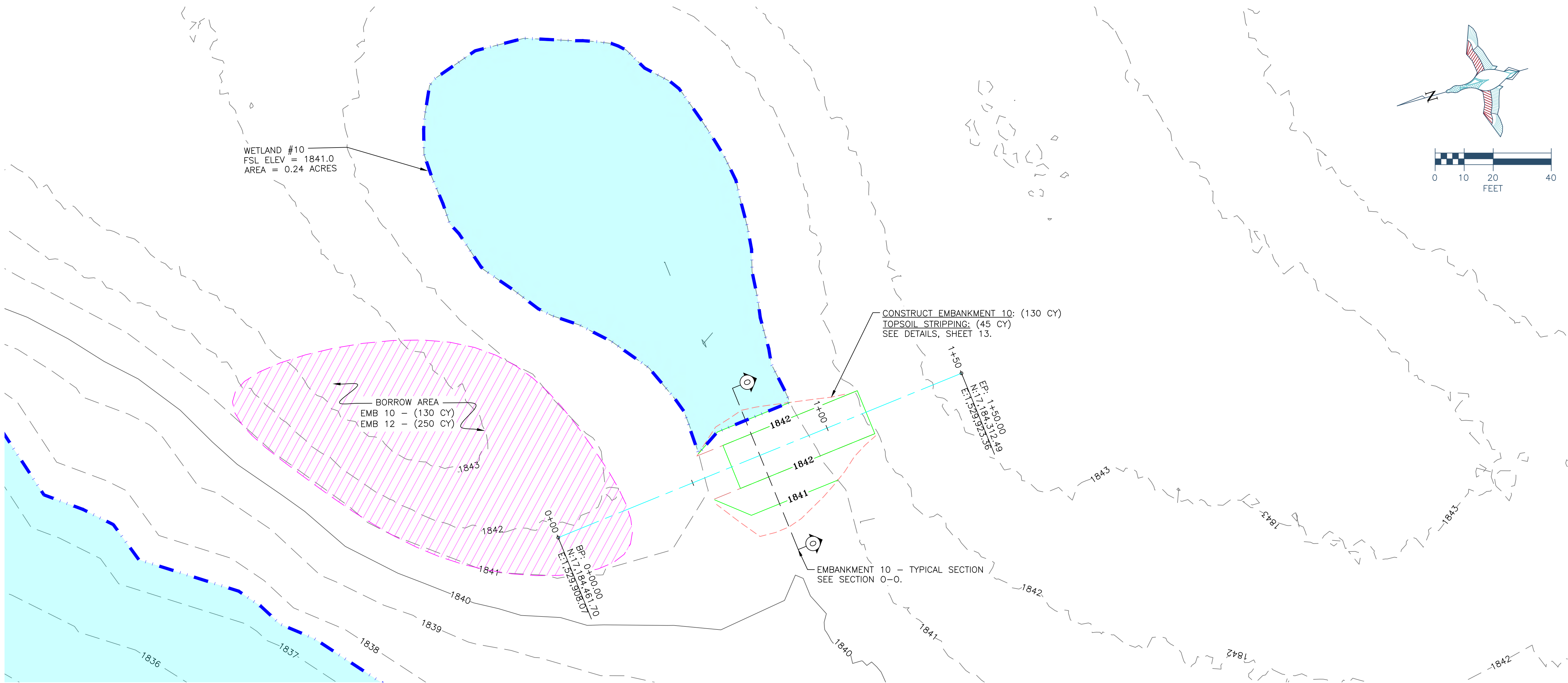
LEGAL: SEC.1E1/4 OF SEC. 17 T144N-R69W 5TH P.M. STUTSMAN COUNTY, NORTH DAKOTA

DATE: 8/19/2026

LISTED SCALES ACCURATE ON 24"x36" SHEET SIZE

DU PROJECT NUMBER: ND-550-100

SHEET NUMBER: 12 OF 17



BORROW AREA NOTE: SUITABLE MATERIAL FOR ALL EMBANKMENTS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREA SHOWN ON THE PLANS AS APPROVED BY THE DU FIELD ENGINEER. CARE SHALL BE TAKEN NOT TO OPEN UP ANY SAND LENSES THAT WILL INCREASE SEEPAGE FROM ANY EXCAVATION AREAS. FINISHED SLOPES SHALL BE 10:1 OR FLATTER AND 4" OF TOPSOIL SHALL BE RESPREAD OVER THE SLOPES. THE COST OF TOPSOIL WORK ON THE BORROW AREAS SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."

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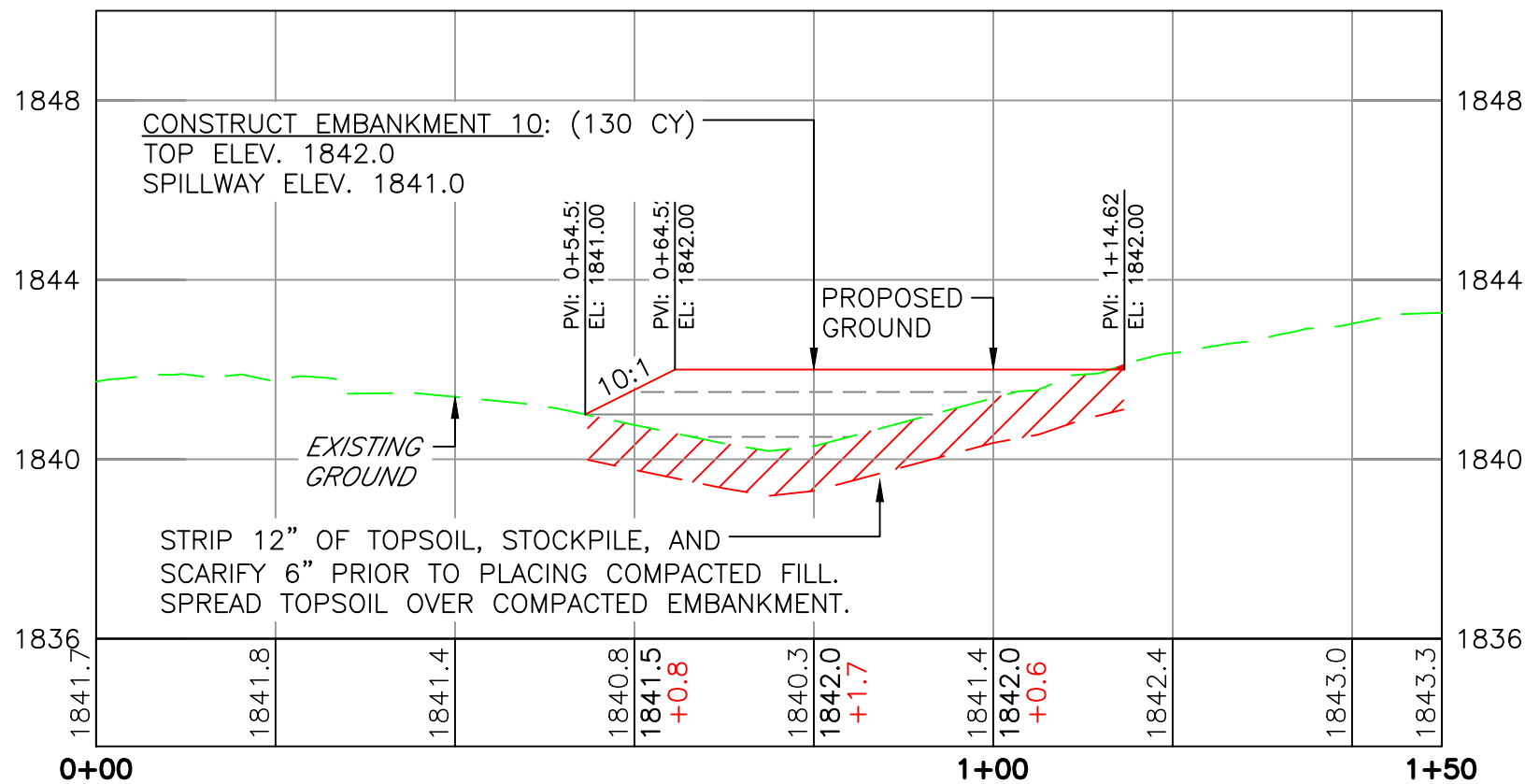
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

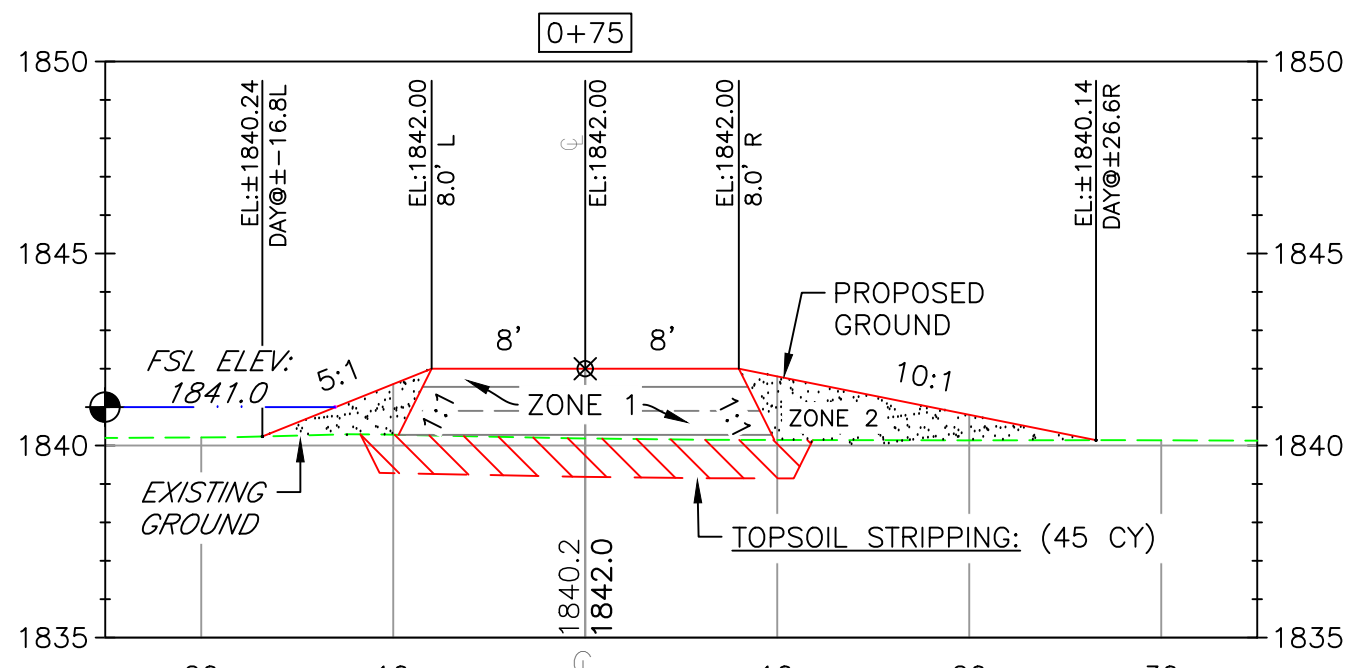
DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

BY:							
DATE:							
REVISION:							
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EMBANKMENT 10
PLAN VIEW
SCALE: 1" = 20'



EMBANKMENT 10
PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

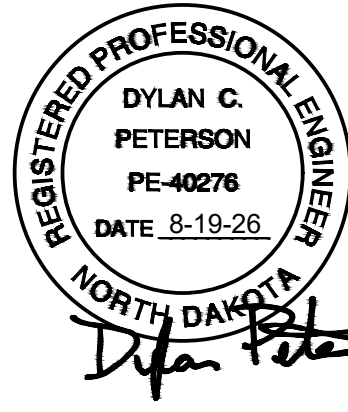


EMBANKMENT 10
SECTION O-O
SCALE: HORZ. 1" = 10'
VERT. 1" = 5'

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- GENERAL NOTES
1. ONE FOOT CONTOUR INTERVAL SHOWN.
 2. 2025 1 METER RESOLUTION AERIAL IMAGERY IS SHOWN.
 3. ITALICIZED TEXT DENOTES EXISTING FEATURE OR EXISTING ELEVATION.
 4. SPOT ELEVATIONS INDICATED BY 4-XXXX.X ARE RANDOMLY LOCATED AND ARE BASED ON SURFACE MODEL ELEVATIONS.



LOWERY MITIGATION ILF

WETLAND 10 DETAILS

PROJECT:

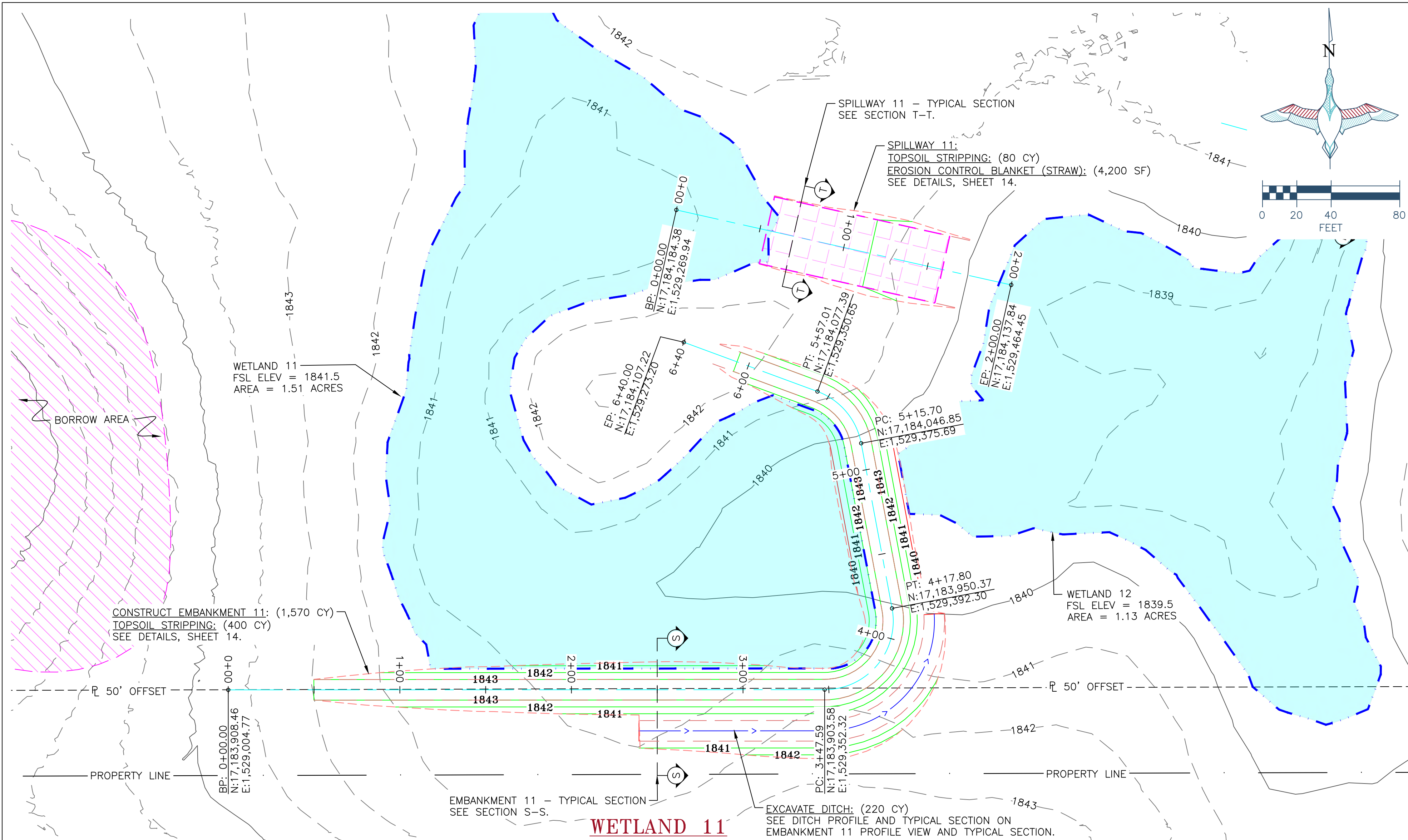
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T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE:
8/19/2026

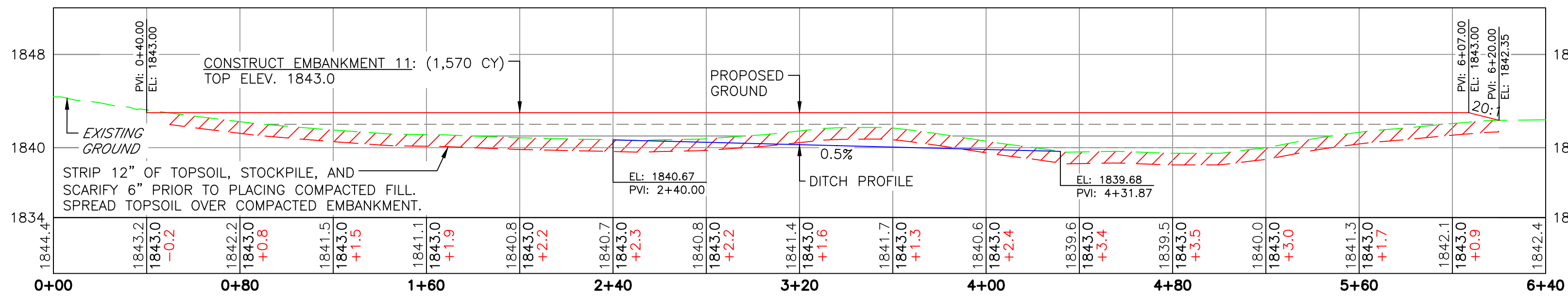
LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

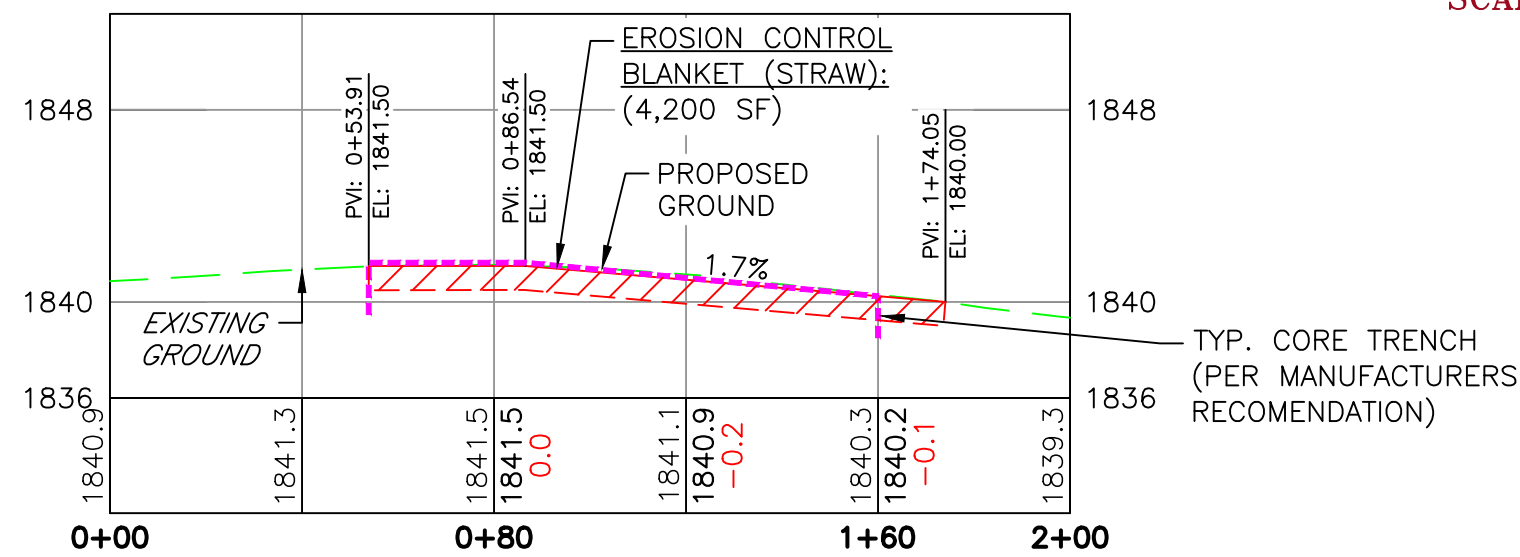
SHEET NUMBER:
13 OF 17



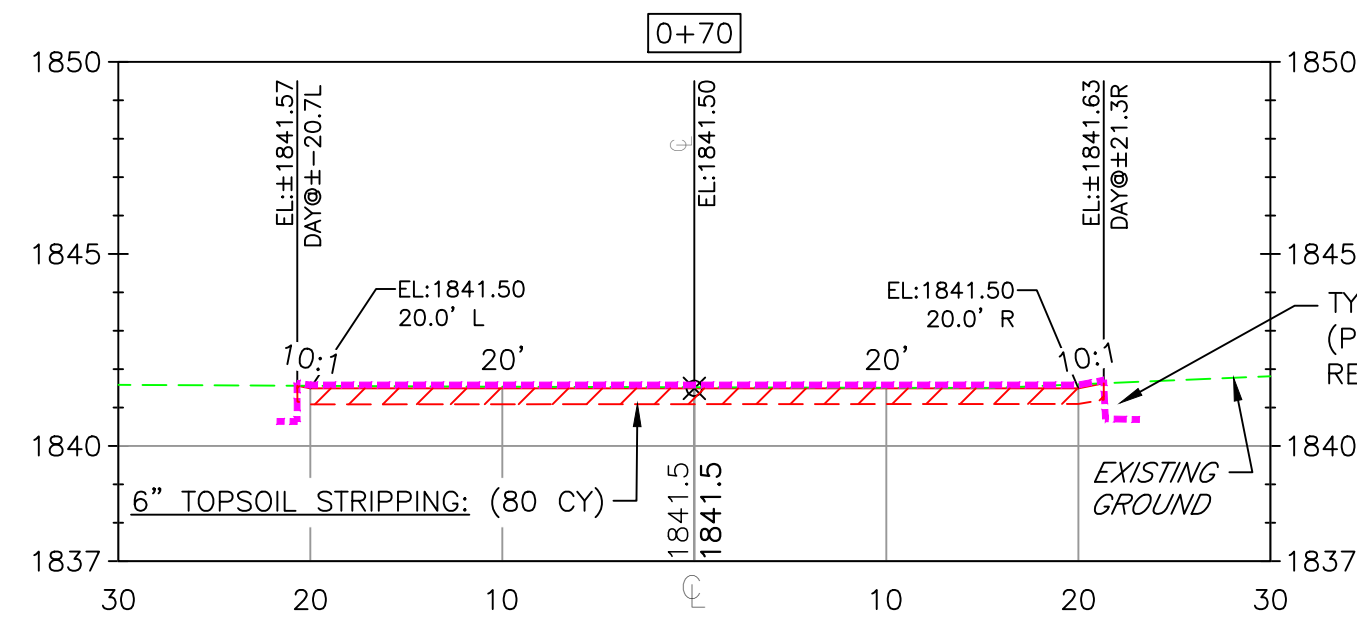
WETLAND 11
PLAN VIEW
SCALE: 1" = 40'



EMBANKMENT 11
PROFILE VIEW
SCALE: HORZ. 1" = 40'
VERT. 1" = 8'



SPILLWAY 11
PROFILE VIEW
SCALE: HORZ. 1" = 40'
VERT. 1" = 8'



SPILLWAY 11
SECTION T-T
SCALE: HORZ. 1" = 10'
VERT. 1" = 5'

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DUCKS UNLIMITED
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

REVISION:	DATE:	BY:
1		
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LOWERY MITIGATION ILF

WETLAND 11 DETAILS

PROJECT:

SHEET TITLE:

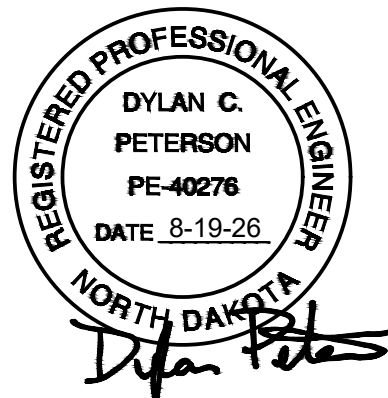
LEGAL:
SEC. NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

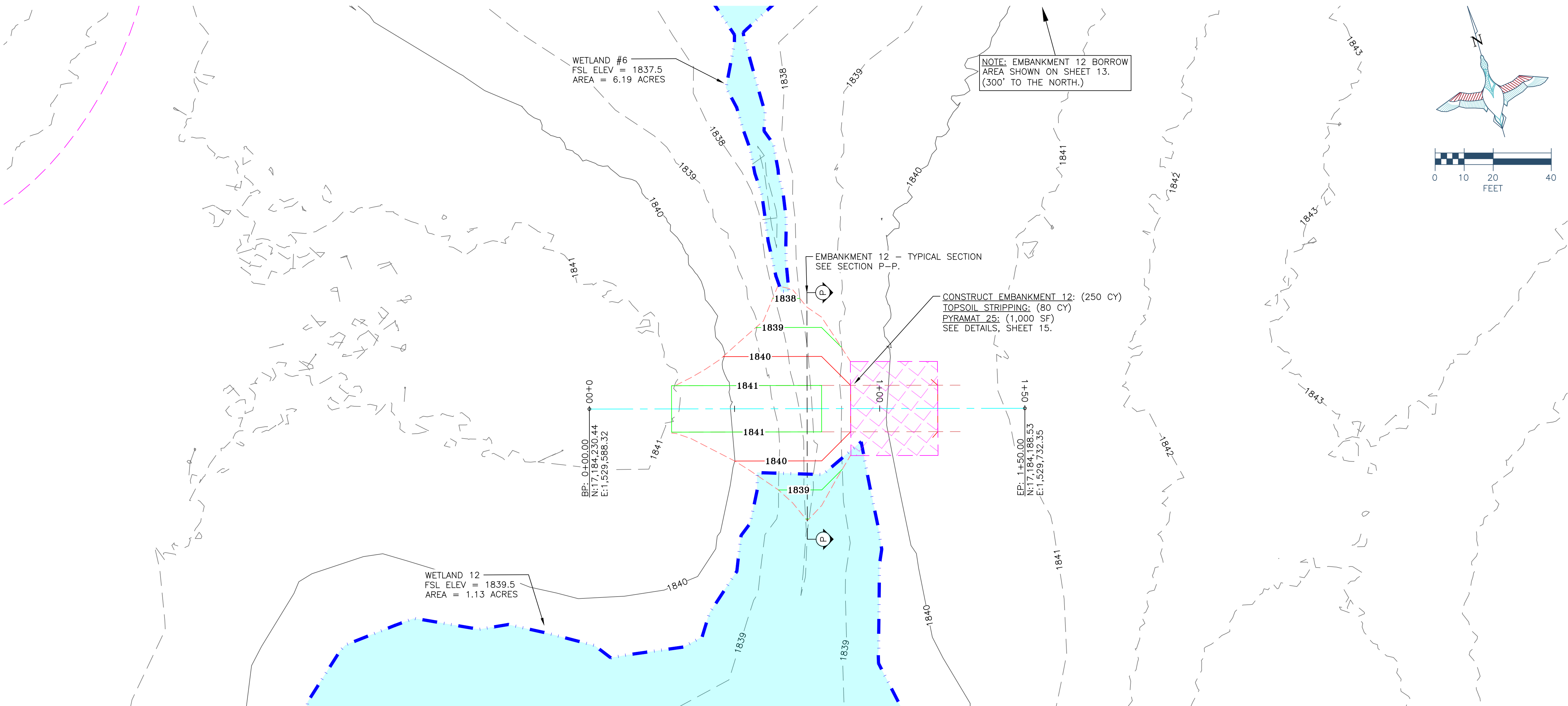
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8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

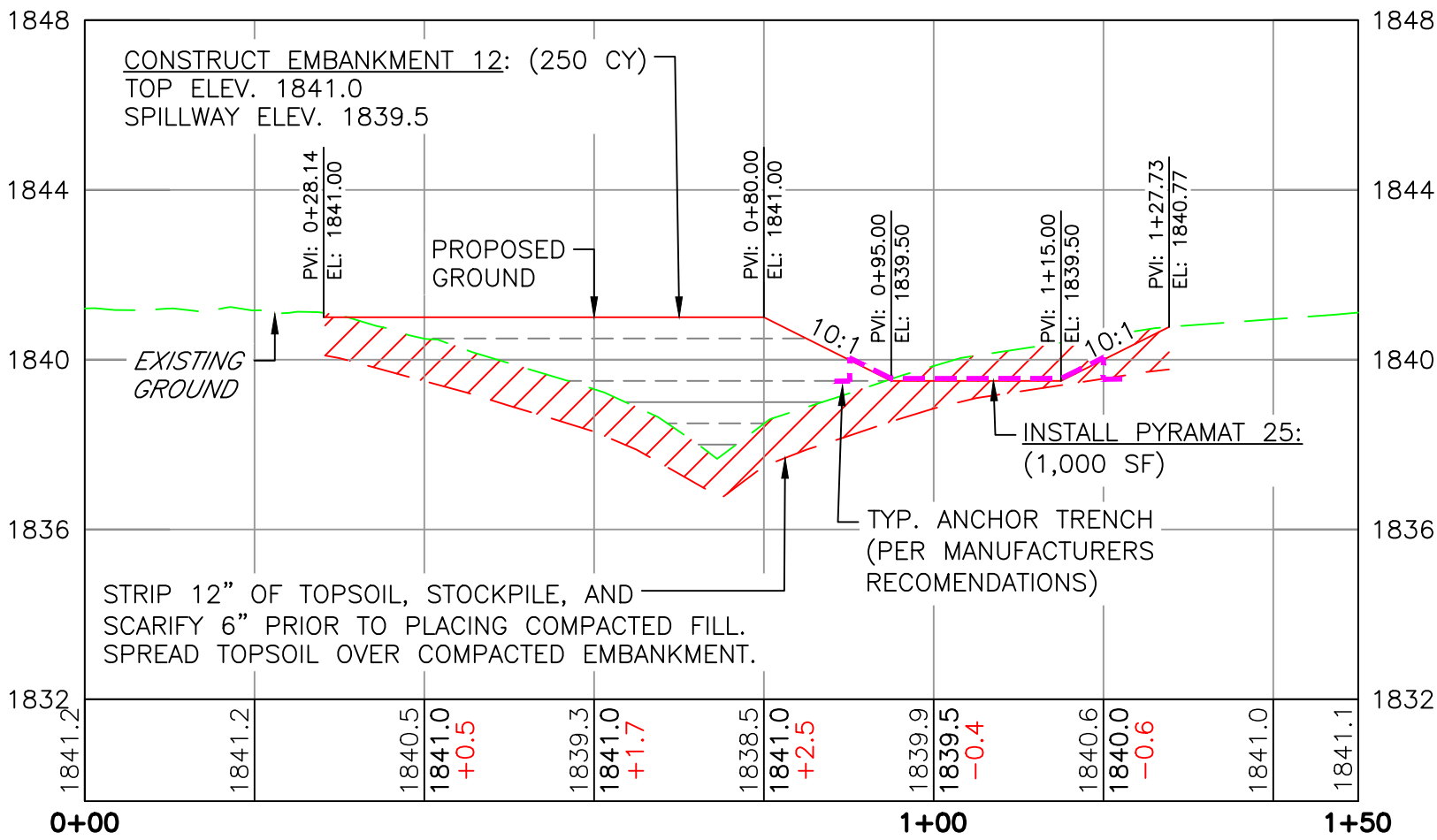
DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
14 OF 17

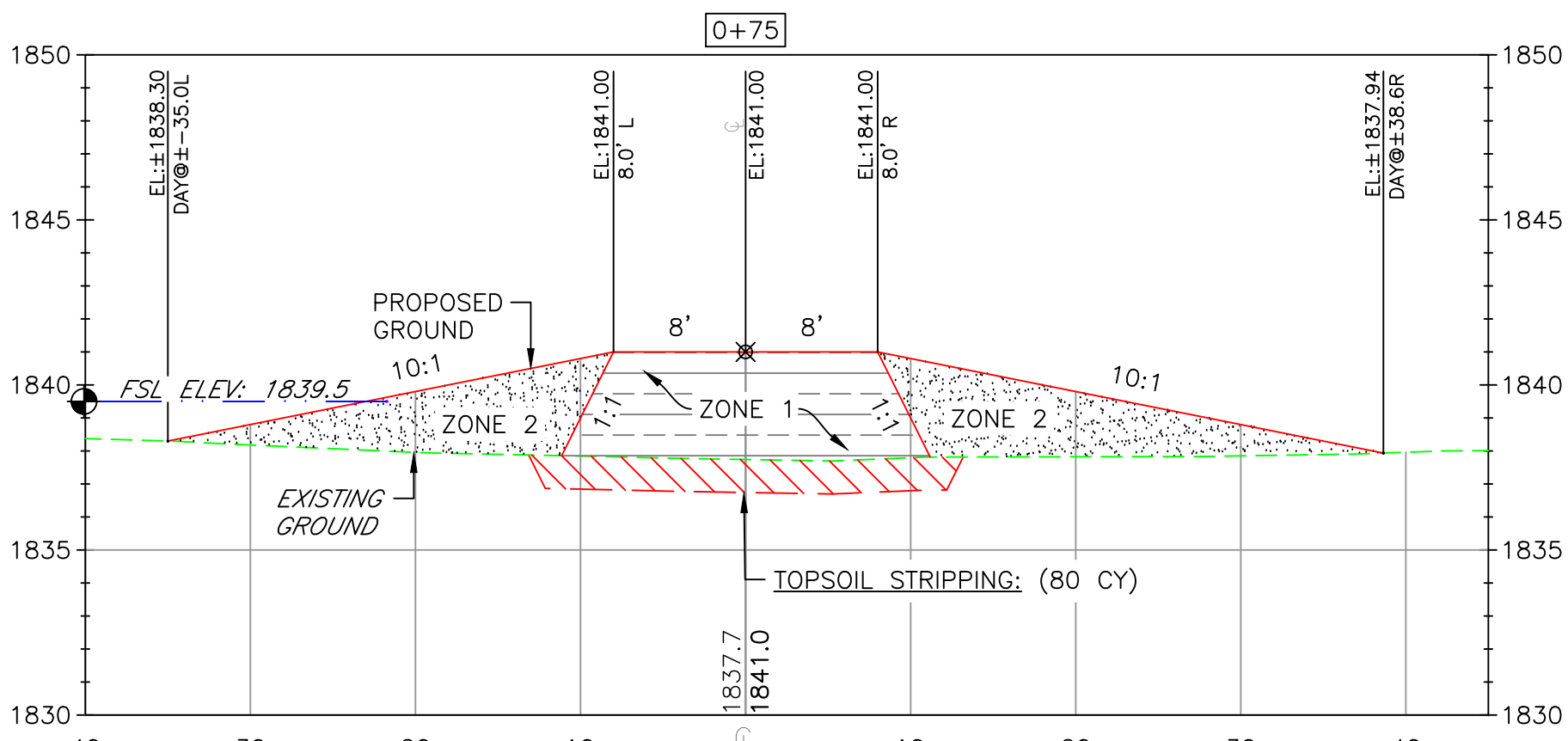




WETLAND 12
PLAN VIEW
SCALE: 1" = 20'



EMBANKMENT 12
PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'



EMBANKMENT 12
SECTION P-P
SCALE: HORZ. 1" = 10'
VERT. 1" = 5'

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GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

REVISION:	DATE:	BY:
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LOWERY MITIGATION ILF

WETLAND 12 DETAILS

PROJECT:

LEGAL:

SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE:

8/19/2026

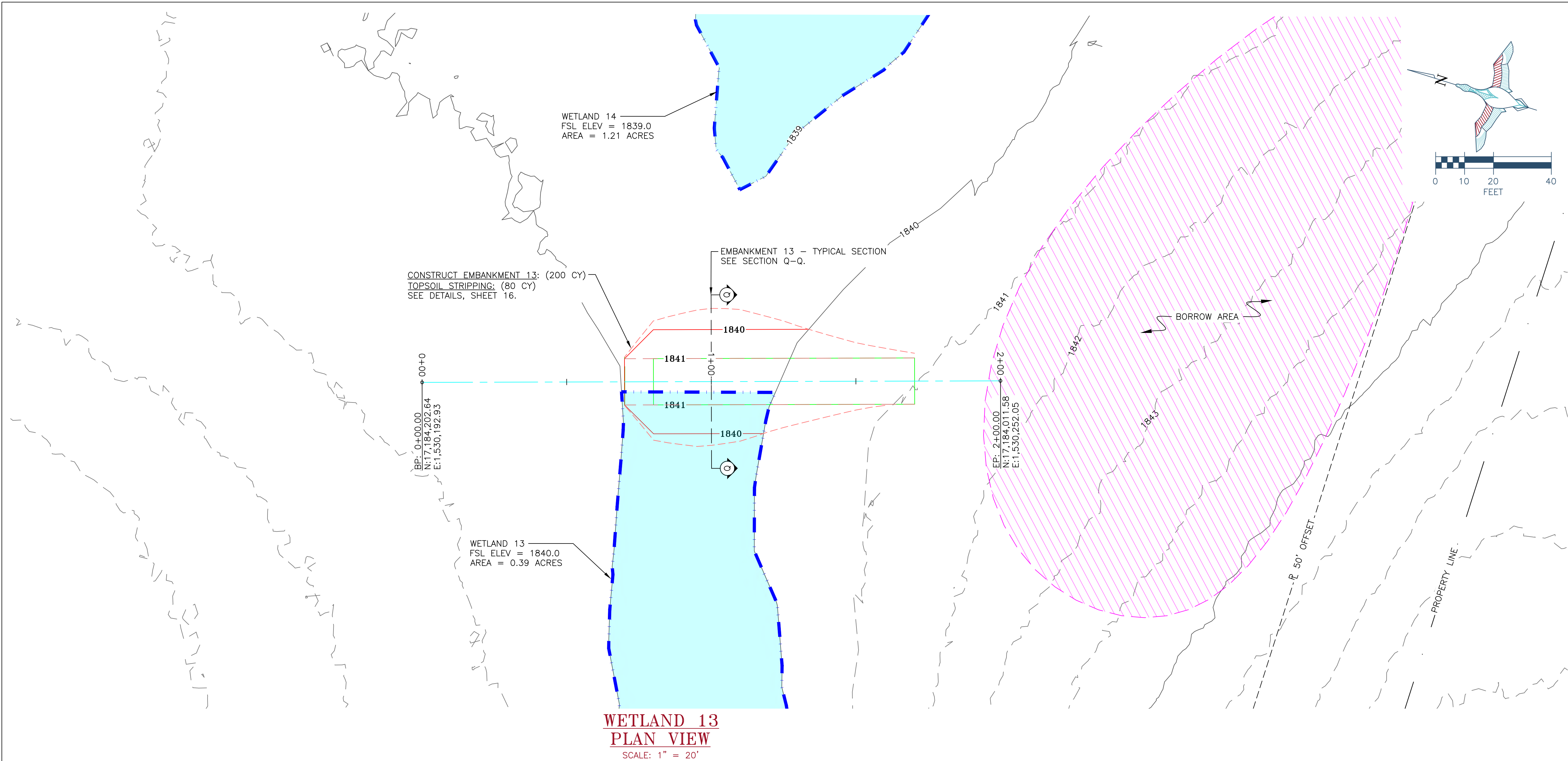
LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
15 OF 17

REGISTERED PROFESSIONAL ENGINEER
NORTH DAKOTA
DYLAN C. PETERSON
PE-40278
DATE 8-19-26

Dylan Peterson



DUCKS UNLIMITED
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

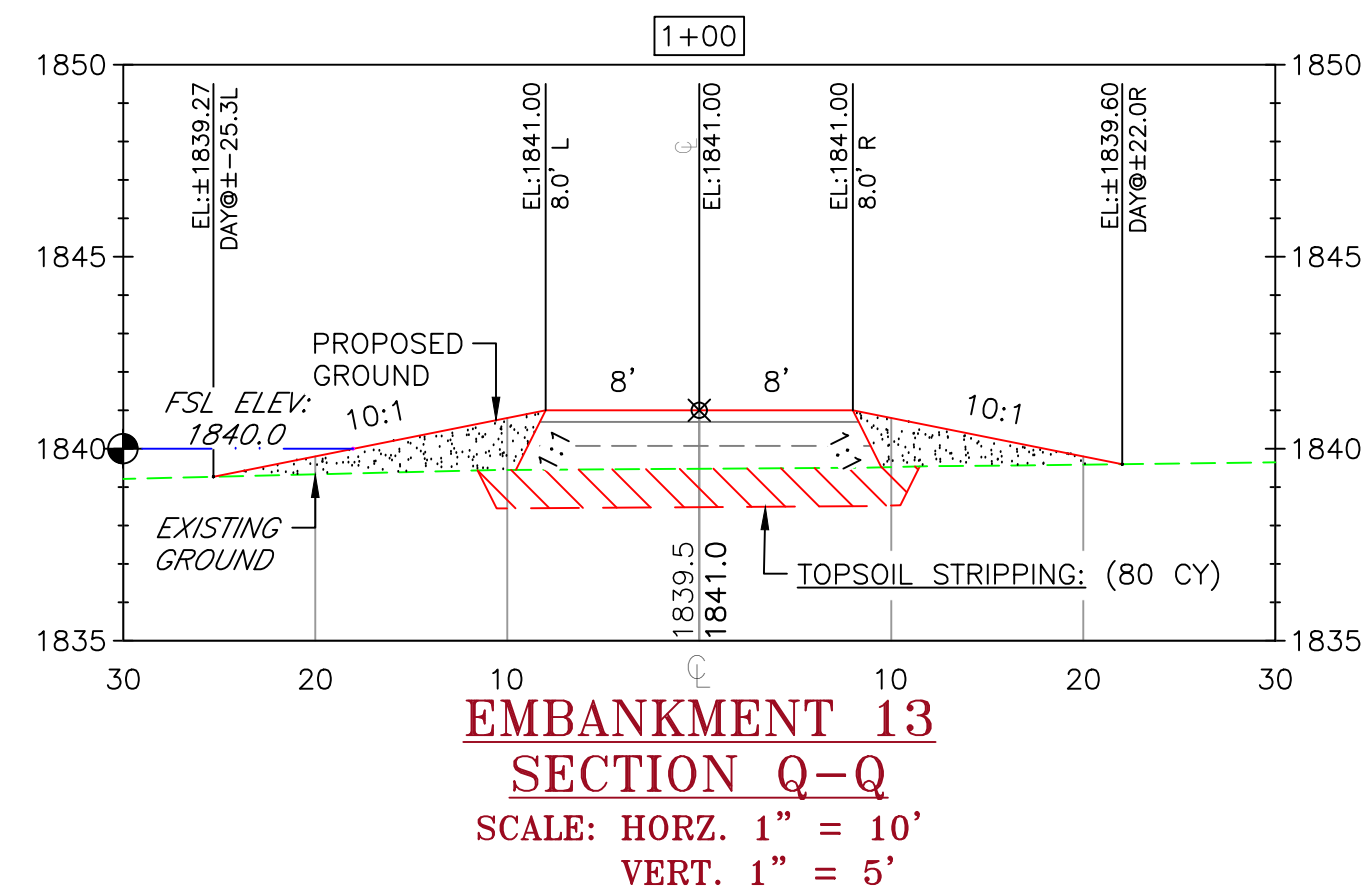
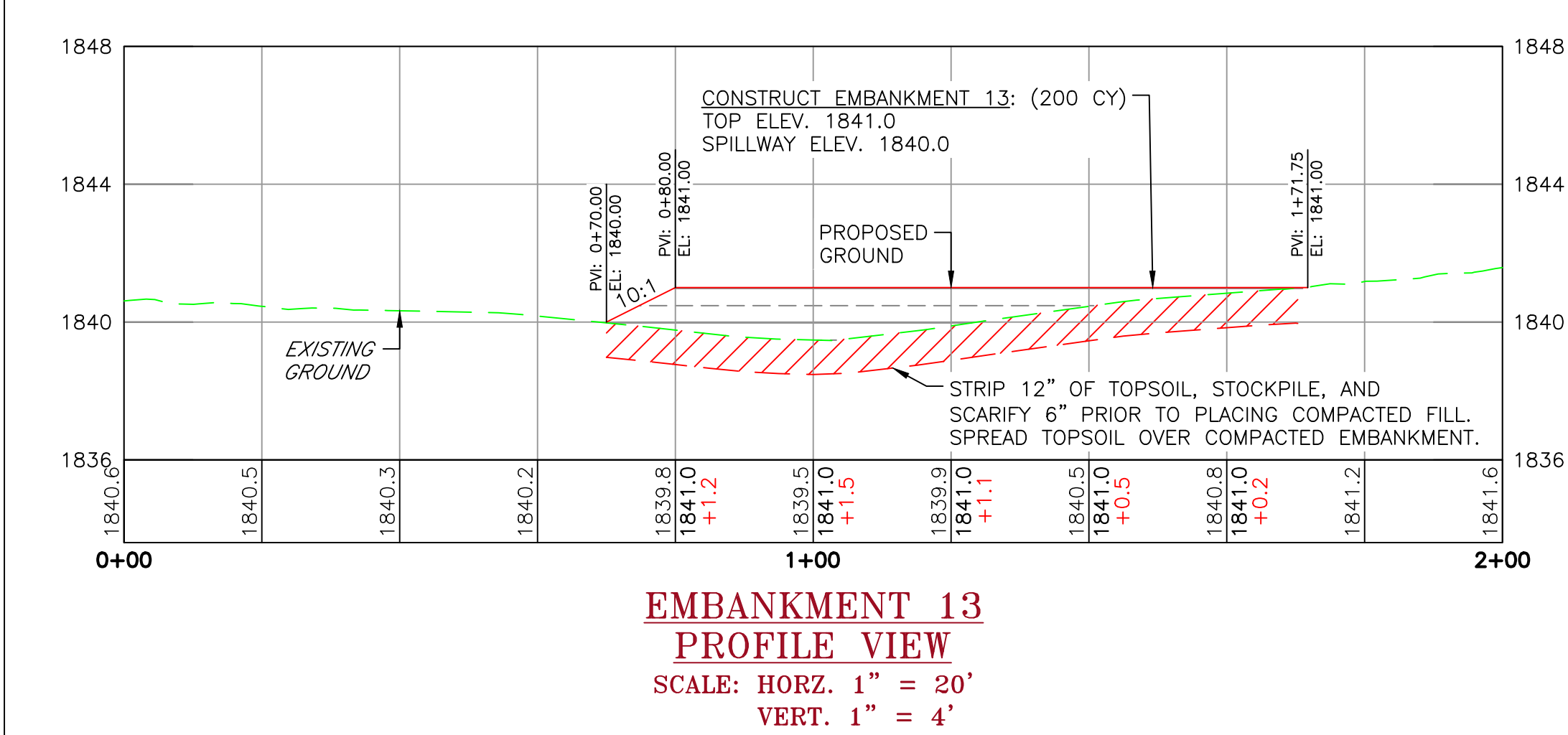
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CONSTRUCTION NOTES:

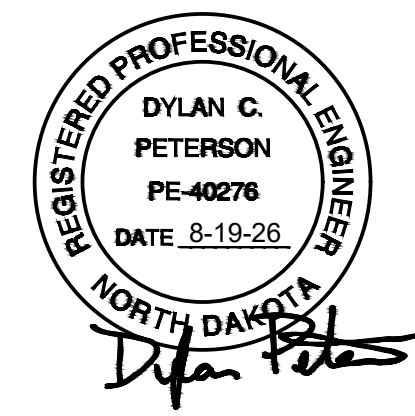
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LOWERY MITIGATION ILF

WETLAND 13 DETAILS

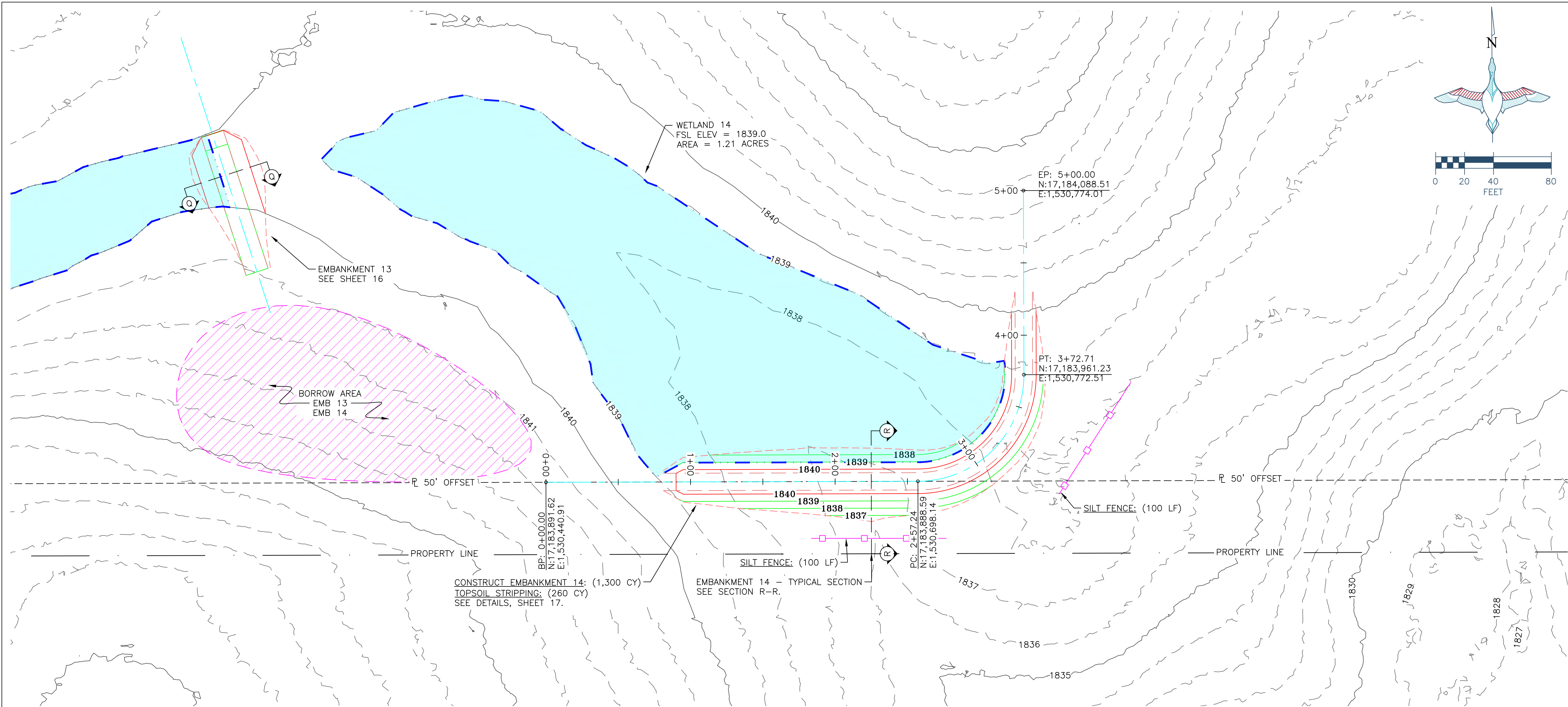
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T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE: 8/19/2026

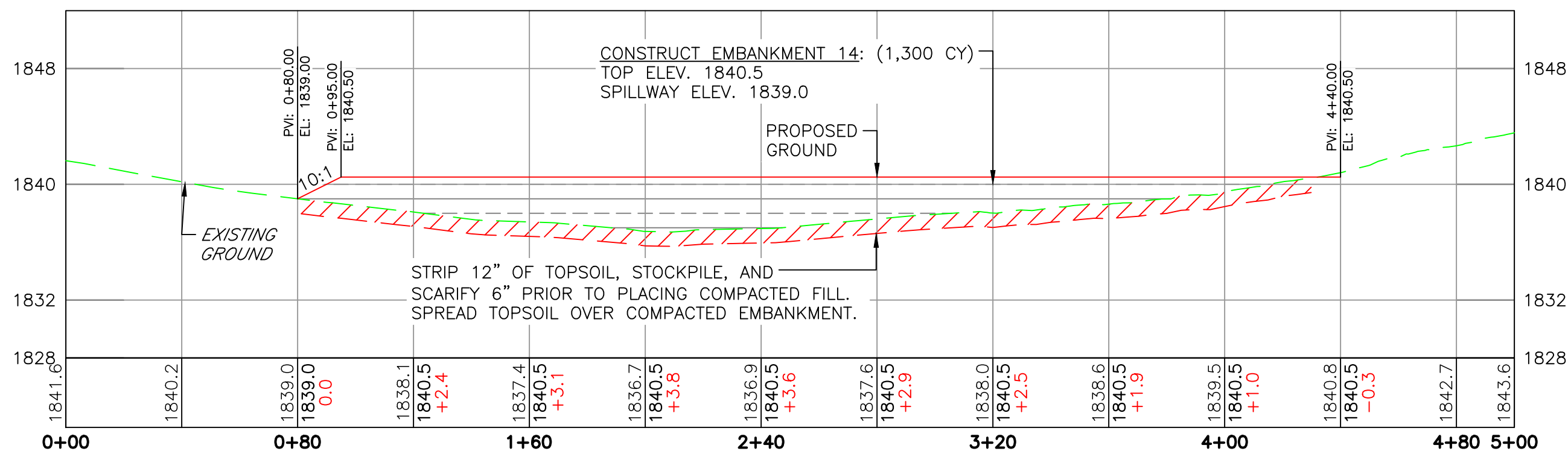
LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

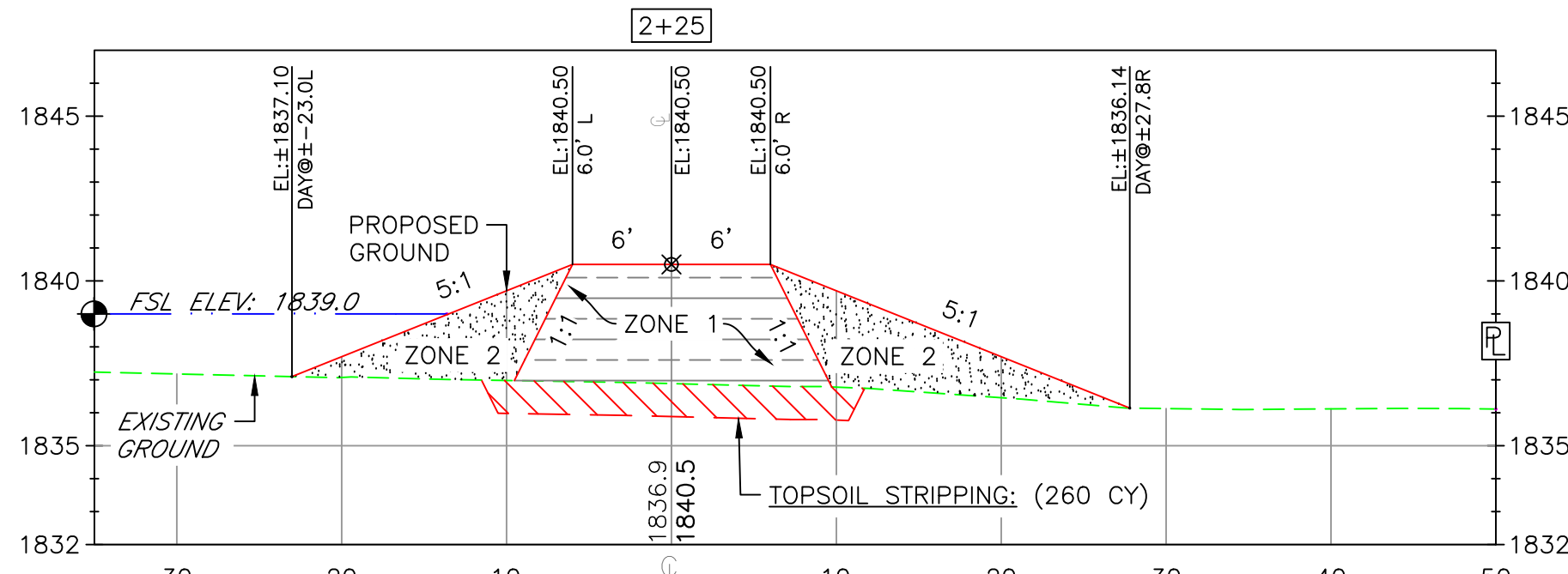
SHEET NUMBER:
16 OF 17



WETLAND 14
PLAN VIEW
SCALE: 1" = 40'



EMBANKMENT 14
PROFILE VIEW
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'



EMBANKMENT 13
SECTION R-R
SCALE: HORZ. 1" = 10'
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DUCKS UNLIMITED
GREAT PLAINS REGION
REGIONAL OFFICE
2525 RIVER ROAD
BISMARCK, ND 58503

CERT. OF AUTHORIZATION:
292PE

DESIGNED BY:	DCP
DRAWN BY:	DCP
SURVEYED BY:	LM
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

BY:							
DATE:							
REVISION:							
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LOWERY MITIGATION ILF

WETLAND 14 DETAILS

PROJECT:

SHEET TITLE:

LEGAL:
SEC.:NE1/4 OF SEC. 17
T144N-R69W
5TH P.M.
STUTSMAN COUNTY,
NORTH DAKOTA

DATE:
8/19/2026

LISTED SCALES ACCURATE
ON 24"x36" SHEET SIZE

DU PROJECT NUMBER:
ND-550-100

SHEET NUMBER:
17 OF 17

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