

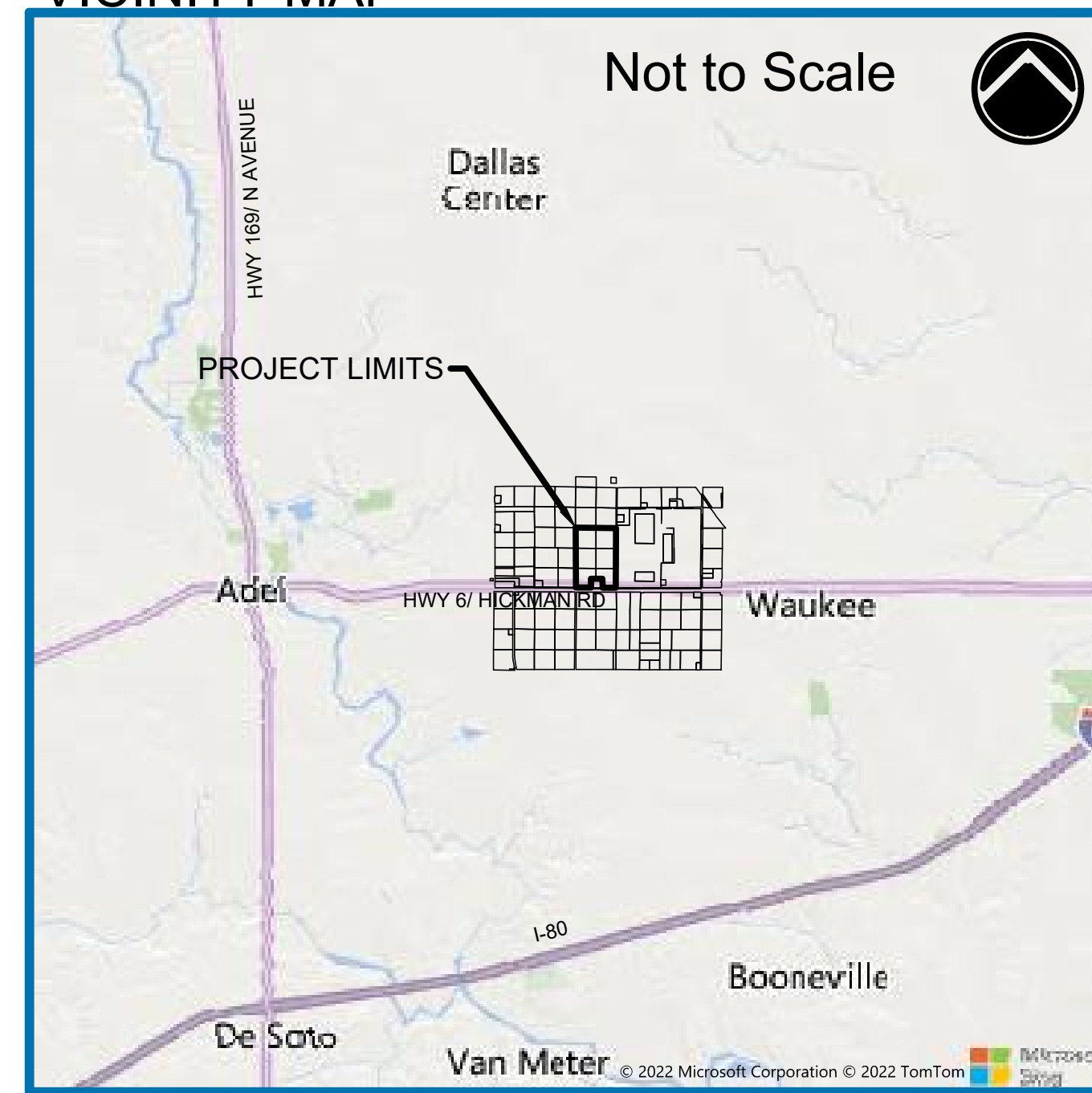
PROJECT MORGAN

PRAIRIE POTHOLE WETLAND RESTORATION

DALLAS COUNTY, IA

SUMMER, 2024

VICINITY MAP



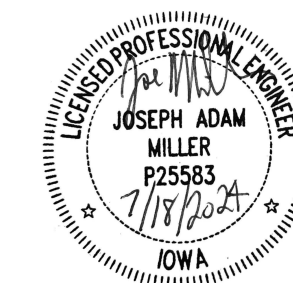
AERIAL OVERVIEW MAP



OWNER:
 NAME: APPLE, INC.
 ADDRESS: 1 APPLE PARK WAY
 CUPERTINO, CA 95014
 CONTACT: JARED POWERS
 EMAIL: jared_p@apple.com

PROJECT MANAGER:
 NAME: RES, LLC
 ADDRESS: 3700 SE BEISSER DRIVE, SUITE D & E
 GRIMES, IA 50111
 CONTACT: MATHEW STONE
 EMAIL: mstone@res.us

SITE DESCRIPTION
 NE SE/EX RD/Sec: 25 Twp: 79 Rng: 27
 NW SE Sec: 25 Twp: 79 Rng: 27
 SW SE/EX RR & PART OF PARCEL A/Sec: 25 Twp: 79 Rng: 27
 SE SE/EX RR & PART OF PARCEL A & EX RD/Sec: 25 Twp: 79 Rng: 27
 SE NE/EX RD/Sec: 25 Twp: 79 Rng: 27
 SW NE Sec: 25 Twp: 79 Rng: 27



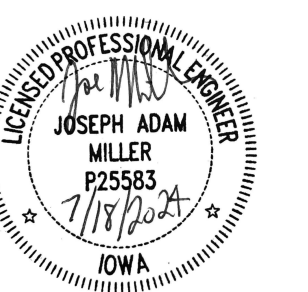
LICENSE RENEWAL DATE IS DECEMBER 31, 2024

REVISIONS	
PRELIMINARY DESIGN - 01/19/2023	
REVISED DESIGN - 02/28/2024	
REVISED PERMIT DESIGN - 06/11/2024	
FINAL DESIGN - 07/18/2024	

PROJECT MANAGER:	MS	JOB NUMBER:	107237
DESIGNED:	JM/DM/RR	DESIGN TYPE:	
DRAWN:	RR/JM	PLAN DATE:	07/08/2024



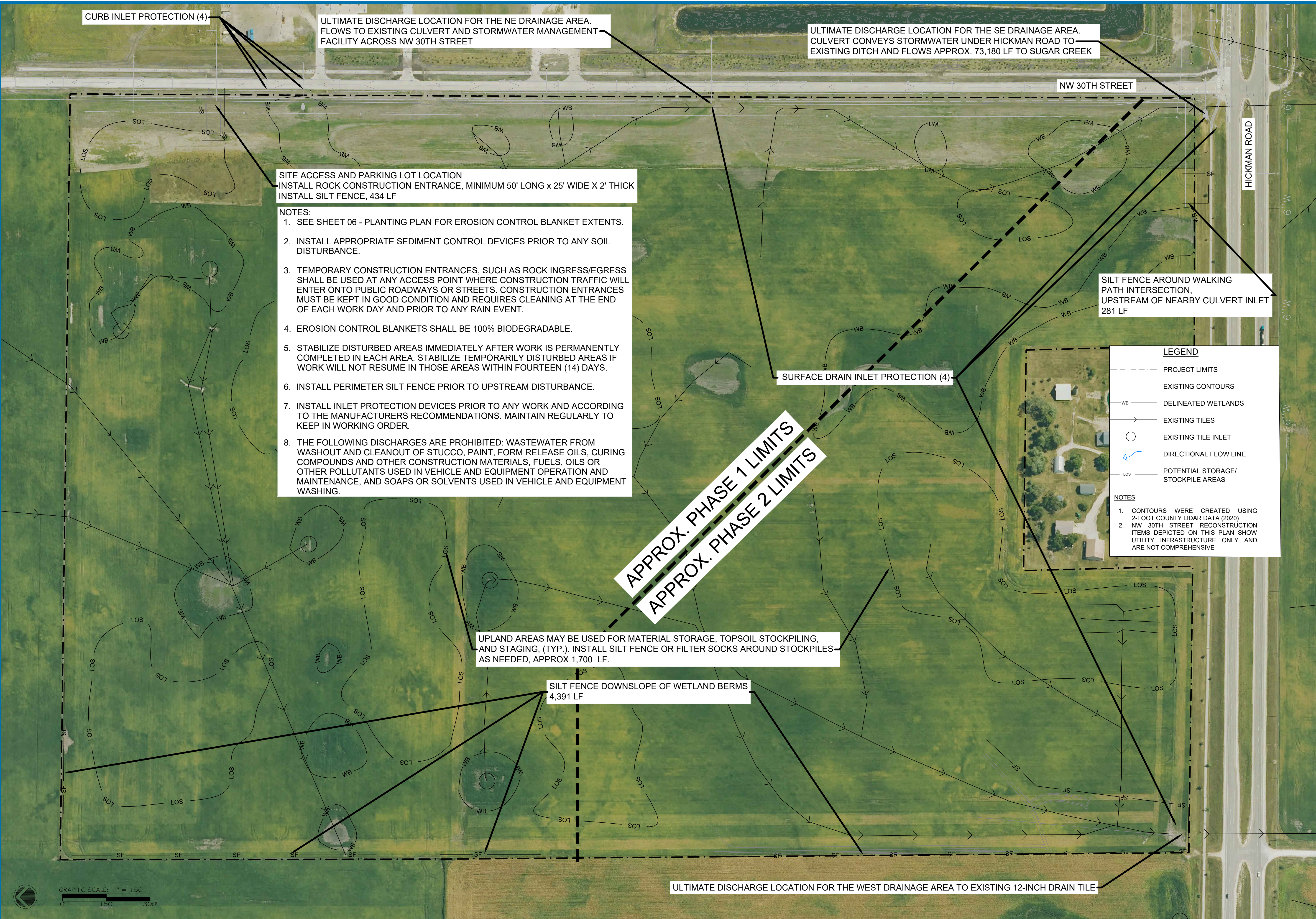
COVER SHEET



REVISIONS:
▲

PROJECT STATUS:

PROJECT MANAGER:	MS
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DATE:	07/08/2024
SHEET NO.:	02 of 10



ULTIMATE DISCHARGE LOCATION FOR THE NE DRAINAGE AREA. FLOWS TO EXISTING CULVERT AND STORMWATER MANAGEMENT FACILITY ACROSS NW 30TH STREET

ULTIMATE DISCHARGE LOCATION FOR THE SE DRAINAGE AREA. CULVERT CONVEYS STORMWATER UNDER HICKMAN ROAD TO EXISTING DITCH AND FLOWS APPROX. 73,180 LF TO SUGAR CREEK

NW 30TH STREET

HICKMAN ROAD

SILT FENCE AROUND WALKING PATH INTERSECTION, UPSTREAM OF NEARBY CULVERT INLET 281 LF

SURFACE DRAIN INLET PROTECTION (4)

APPROX. PHASE 1 LIMITS
APPROX. PHASE 2 LIMITS

UPLAND AREAS MAY BE USED FOR MATERIAL STORAGE, TOPSOIL STOCKPILING, AND STAGING. (TYP.). INSTALL SILT FENCE OR FILTER SOCKS AROUND STOCKPILES AS NEEDED, APPROX 1,700 LF.

SILT FENCE DOWNSLOPE OF WETLAND BERMS 4,391 LF

ULTIMATE DISCHARGE LOCATION FOR THE WEST DRAINAGE AREA TO EXISTING 12-INCH DRAIN TILE

CURB INLET PROTECTION (4)

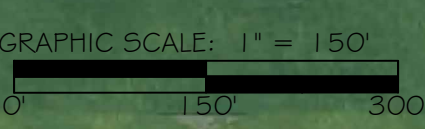
SITE ACCESS AND PARKING LOT LOCATION
INSTALL ROCK CONSTRUCTION ENTRANCE, MINIMUM 50' LONG x 25' WIDE X 2' THICK
INSTALL SILT FENCE, 434 LF

- NOTES:**
- SEE SHEET 06 - PLANTING PLAN FOR EROSION CONTROL BLANKET EXTENTS.
 - INSTALL APPROPRIATE SEDIMENT CONTROL DEVICES PRIOR TO ANY SOIL DISTURBANCE.
 - TEMPORARY CONSTRUCTION ENTRANCES, SUCH AS ROCK INGRESS/EGRESS SHALL BE USED AT ANY ACCESS POINT WHERE CONSTRUCTION TRAFFIC WILL ENTER ONTO PUBLIC ROADWAYS OR STREETS. CONSTRUCTION ENTRANCES MUST BE KEPT IN GOOD CONDITION AND REQUIRES CLEANING AT THE END OF EACH WORK DAY AND PRIOR TO ANY RAIN EVENT.
 - EROSION CONTROL BLANKETS SHALL BE 100% BIODEGRADABLE.
 - STABILIZE DISTURBED AREAS IMMEDIATELY AFTER WORK IS PERMANENTLY COMPLETED IN EACH AREA. STABILIZE TEMPORARILY DISTURBED AREAS IF WORK WILL NOT RESUME IN THOSE AREAS WITHIN FOURTEEN (14) DAYS.
 - INSTALL PERIMETER SILT FENCE PRIOR TO UPSTREAM DISTURBANCE.
 - INSTALL INLET PROTECTION DEVICES PRIOR TO ANY WORK AND ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. MAINTAIN REGULARLY TO KEEP IN WORKING ORDER.
 - THE FOLLOWING DISCHARGES ARE PROHIBITED: WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS, FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE, AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

LEGEND

- PROJECT LIMITS
- EXISTING CONTOURS
- WB- DELINEATED WETLANDS
- EXISTING TILES
- EXISTING TILE INLET
- DIRECTIONAL FLOW LINE
- LOS POTENTIAL STORAGE/ STOCKPILE AREAS

- NOTES**
- CONTOURS WERE CREATED USING 2-FOOT COUNTY LIDAR DATA (2020)
 - NW 30TH STREET RECONSTRUCTION ITEMS DEPICTED ON THIS PLAN SHOW UTILITY INFRASTRUCTURE ONLY AND ARE NOT COMPREHENSIVE





RECONSTRUCTION OF NW 30TH STREET COMPLETED BY OTHERS.
 STORM SEWER (TYP.)
 WATER MAIN
 SANITARY SEWER

NW 30TH STREET

HICKMAN ROAD

OBSERVATION WELL
 CONNECT TO EXISTING 7-INCH TILE

DEPTH TO TOP OF TILE (FEET)

8-INCH DUAL-WALL FLEXCORR PIPE
 449.0 LF @ 0.276%
 US INVERT ELEV. = 1036.06
 DS INVERT ELEV. = 1034.82
 MIN. SLOPE = 0.10%

OBSERVATION WELL
 CONNECT TO EXISTING 4-INCH TILE

APPROX. PHASE 1 LIMITS
 APPROX. PHASE 2 LIMITS

LEGEND

- PROJECT LIMITS
- - - EXISTING CONTOURS
- WB DELINEATED WETLANDS
- EXISTING TILES
- 5 EXISTING TILE DEPTH (FT)
- EXISTING TILE INLET
- ◇ BREAK EXISTING TILE & PLUG
- REMOVE EXISTING INLET AND PLUG
- ↖ DIRECTIONAL FLOW LINE

NOTES

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12-INCH DUAL-WALL FLEXCORR PIPE
 1503 LF @ 0.276%
 US INVERT ELEV. = 1034.82
 DS INVERT ELEV. = 1030.67
 MIN. SLOPE = 0.10%

6-INCH INTAKE (EAST OF BERM)
 SEE DETAIL 8, SHEET 7

CONSTRUCTED WETLAND PIPES, STRUCTURES, AND GRADING SHOWN ON SHEET 04 - GRADING PLAN

6-INCH INTAKE (EAST OF BERM)
 6-INCH OBSERVATION WELL (WEST OF BERM)
 CONNECT TO EXISTING 12-INCH TILE
 SEE DETAIL 8 AND 9, SHEET 7

6-INCH DUAL-WALL FLEXCORR PIPE
 509.7 LF @ 0.653%
 US INVERT ELEV. = 1034.00
 DS INVERT ELEV. = 1030.67
 MIN. SLOPE = 0.20%

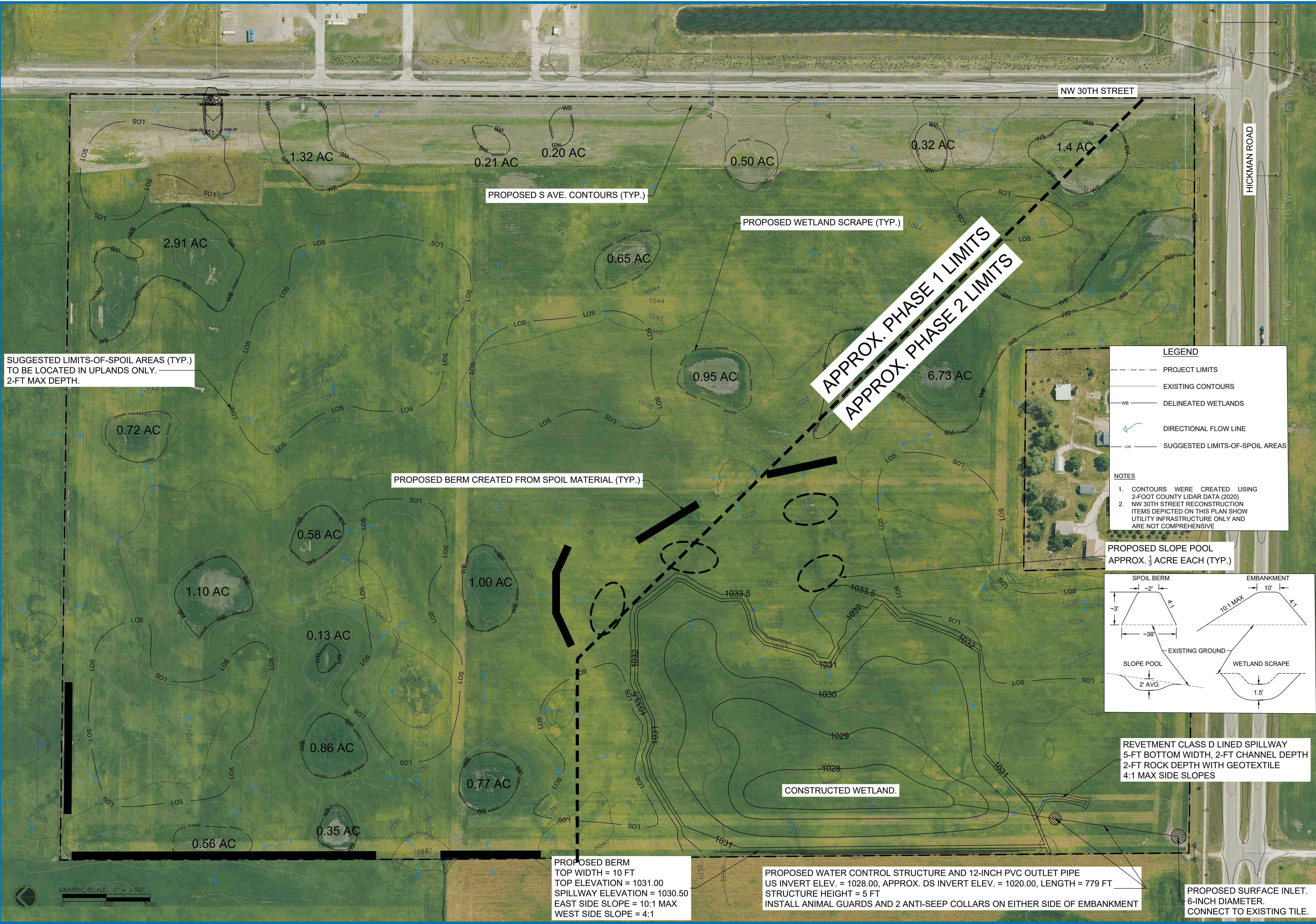


REVISIONS:

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DATE:	06/11/2024
SHEET NO.:	03 of 10



SUGGESTED LIMITS-OF-SPOIL AREAS (TYP.) TO BE LOCATED IN UPLANDS ONLY. 2-FT MAX DEPTH.

PROPOSED S AVE. CONTOURS (TYP.)

PROPOSED WETLAND SCRAPE (TYP.)

APPROX. PHASE 1 LIMITS
APPROX. PHASE 2 LIMITS

PROPOSED BERM CREATED FROM SPOIL MATERIAL (TYP.)

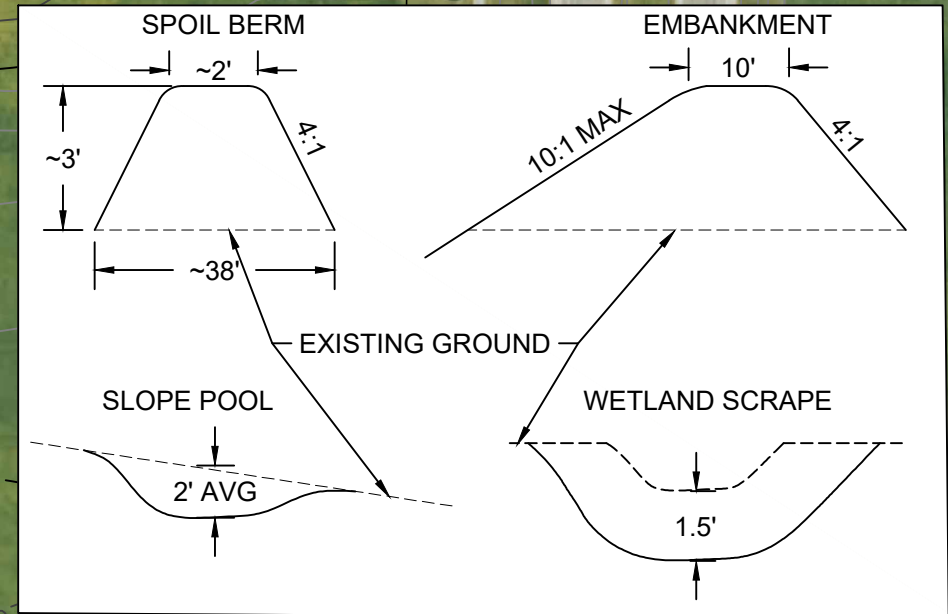
LEGEND

- PROJECT LIMITS
- EXISTING CONTOURS
- WB- DELINEATED WETLANDS
- ↗ DIRECTIONAL FLOW LINE
- LOS --- SUGGESTED LIMITS-OF-SPOIL AREAS

NOTES

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PROPOSED SLOPE POOL APPROX. 1/3 ACRE EACH (TYP.)



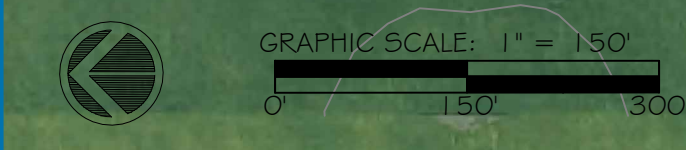
RETENEMENT CLASS D LINED SPILLWAY
5-FT BOTTOM WIDTH, 2-FT CHANNEL DEPTH
2-FT ROCK DEPTH WITH GEOTEXTILE
4:1 MAX SIDE SLOPES

CONSTRUCTED WETLAND.

PROPOSED BERM
TOP WIDTH = 10 FT
TOP ELEVATION = 1031.00
SPILLWAY ELEVATION = 1030.50
EAST SIDE SLOPE = 10:1 MAX
WEST SIDE SLOPE = 4:1

PROPOSED WATER CONTROL STRUCTURE AND 12-INCH PVC OUTLET PIPE
US INVERT ELEV. = 1028.00, APPROX. DS INVERT ELEV. = 1020.00, LENGTH = 779 FT
STRUCTURE HEIGHT = 5 FT
INSTALL ANIMAL GUARDS AND 2 ANTI-SEEP COLLARS ON EITHER SIDE OF EMBANKMENT

PROPOSED SURFACE INLET.
6-INCH DIAMETER.
CONNECT TO EXISTING TILE.



REVISIONS:

NO.	DATE	DESCRIPTION
1	06/11/2024	ISSUE FOR PERMIT

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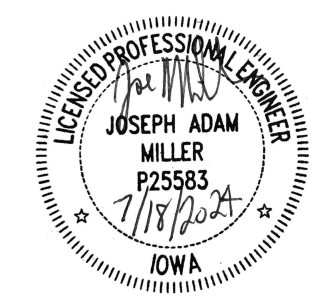


LEGEND

- PROJECT LIMITS
- EXISTING CONTOURS
- WB DELINEATED WETLANDS
- DIRECTIONAL FLOW LINE
- 8' GRAVEL WALKING PATH (11,434 L.F.)

NOTES

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2. NW 30TH STREET RECONSTRUCTION ITEMS DEPICTED ON THIS PLAN SHOW UTILITY INFRASTRUCTURE ONLY AND ARE NOT COMPREHENSIVE
3. SEE SHEET 10 FOR PLANT SCHEDULES/LISTS

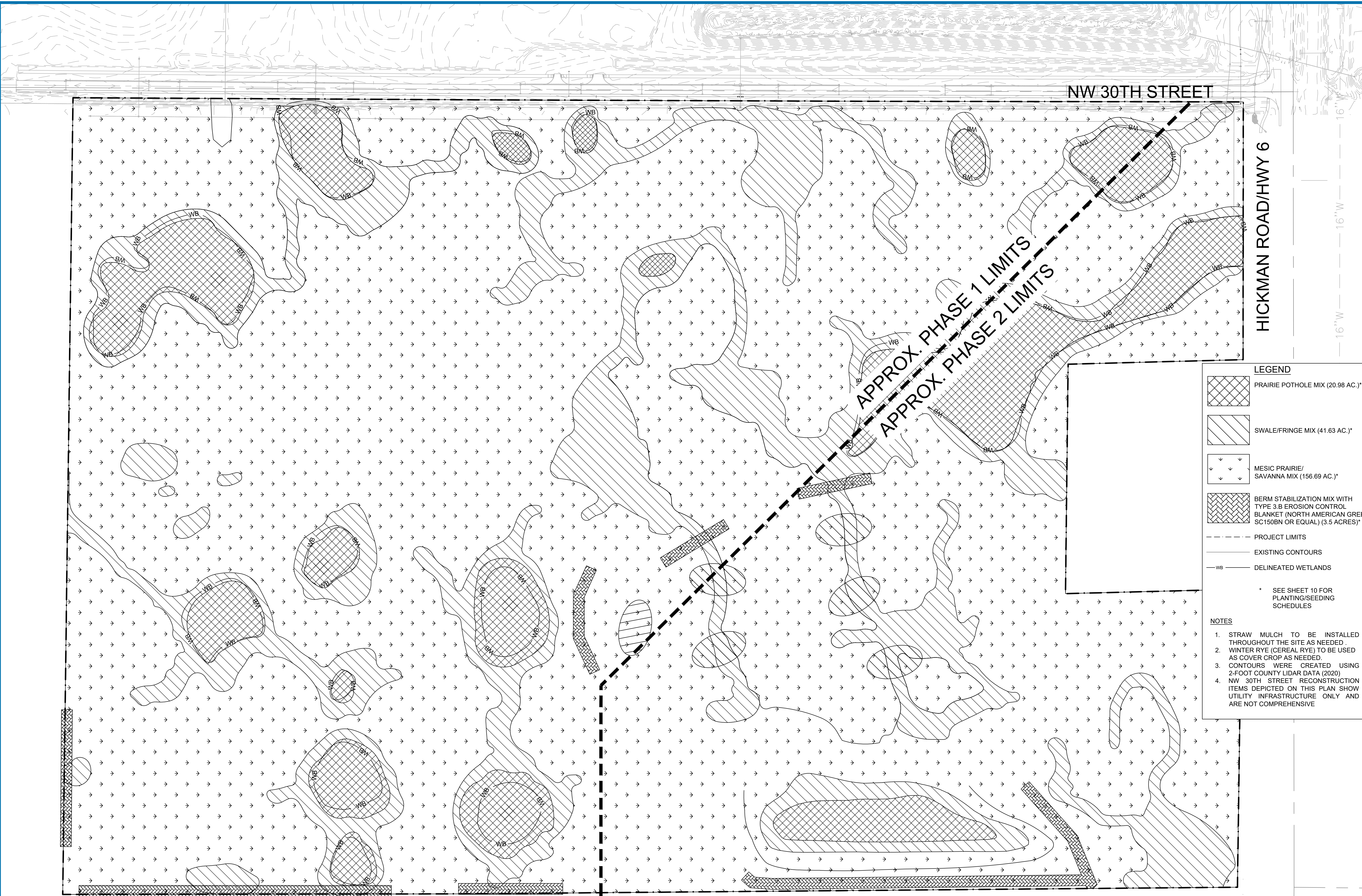


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NW 30TH STREET

HICKMAN ROAD/HWY 6

APPROX. PHASE 1 LIMITS
APPROX. PHASE 2 LIMITS

16" W 16" W

LEGEND

- PRAIRIE POTHOLE MIX (20.98 AC.)*
- SWALE/FRINGE MIX (41.63 AC.)*
- MESIC PRAIRIE/ SAVANNA MIX (156.69 AC.)*
- BERM STABILIZATION MIX WITH TYPE 3 B EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SC150BN OR EQUAL) (3.5 ACRES)*
- PROJECT LIMITS
- EXISTING CONTOURS
- DELINEATED WETLANDS

* SEE SHEET 10 FOR PLANTING/SEEDING SCHEDULES

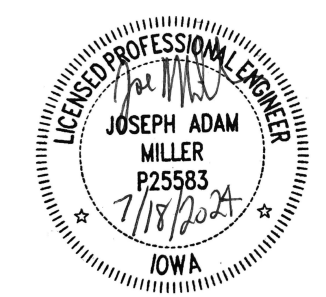
NOTES

- STRAW MULCH TO BE INSTALLED THROUGHOUT THE SITE AS NEEDED.
- WINTER RYE (CEREAL RYE) TO BE USED AS COVER CROP AS NEEDED.
- CONTOURS WERE CREATED USING 2-FOOT COUNTY LIDAR DATA (2020)
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PROJECT MORGAN PRAIRIE POTHOLE WETLAND RESTORATION

PLANTING PLAN

DALLAS COUNTY, IOWA

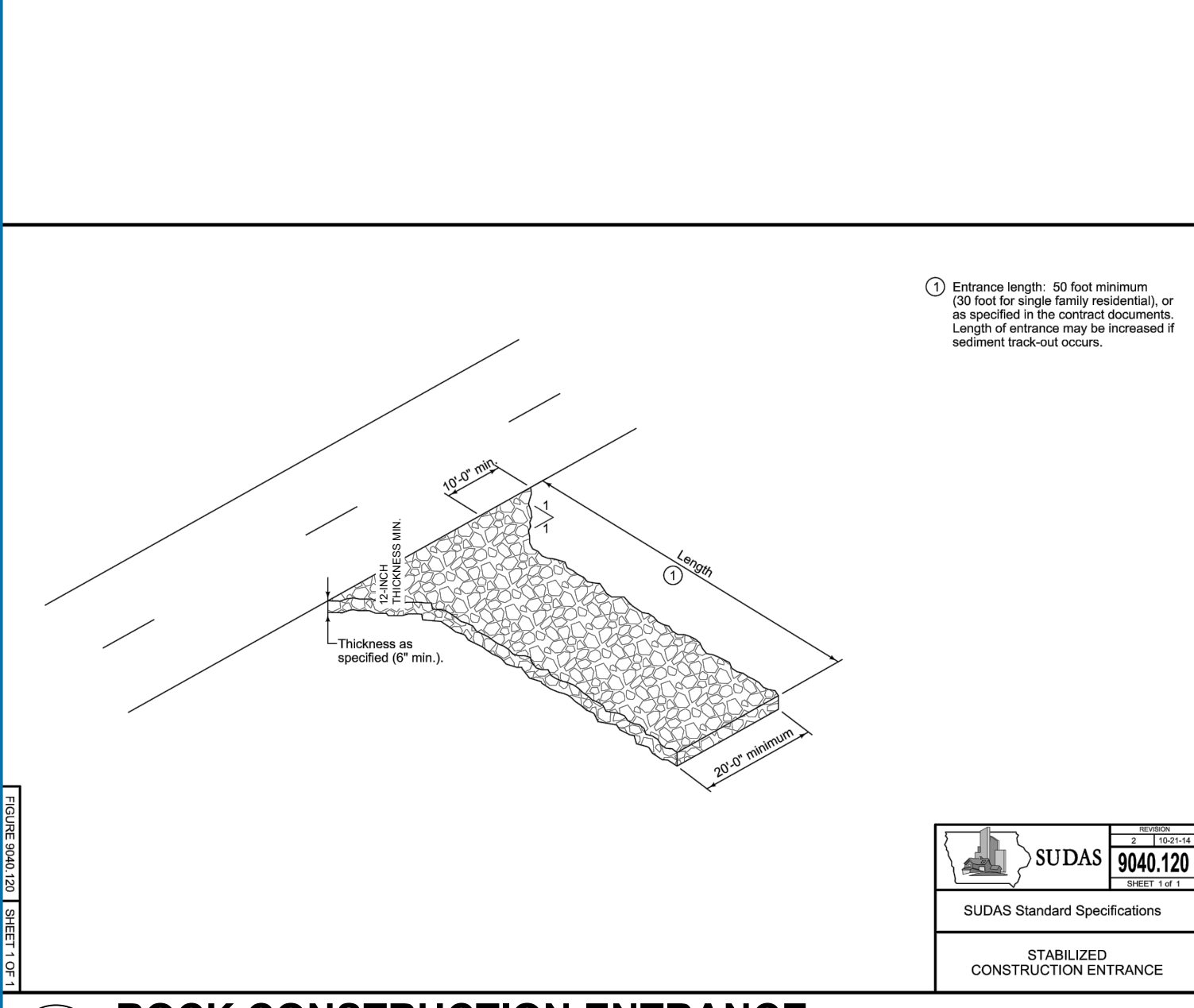


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PROJECT STATUS:

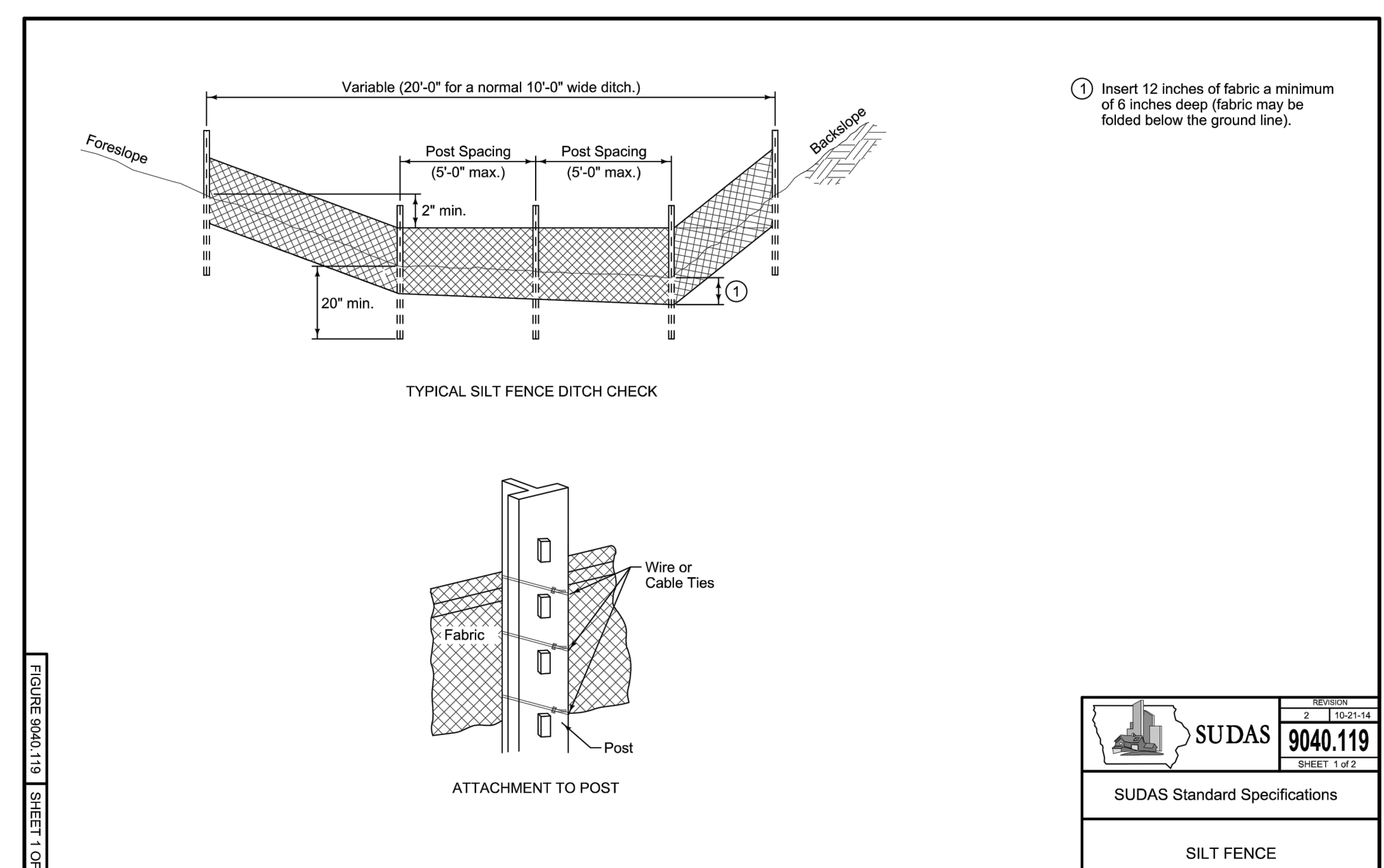
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SHEET NO.:	06 of 10





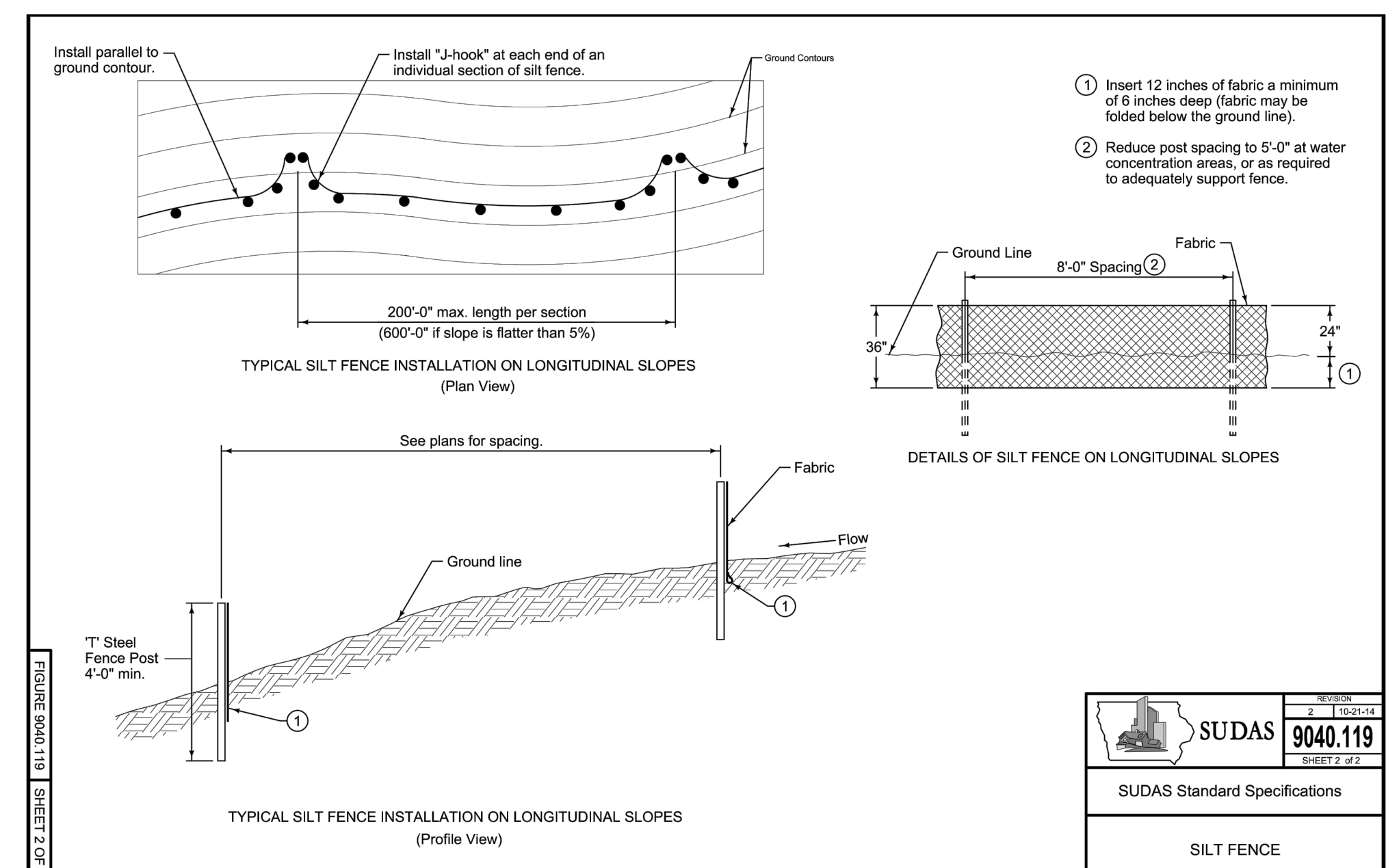
1 ROCK CONSTRUCTION ENTRANCE N.T.S.

SUDAS 9040.120
SUDAS Standard Specifications
STABILIZED CONSTRUCTION ENTRANCE



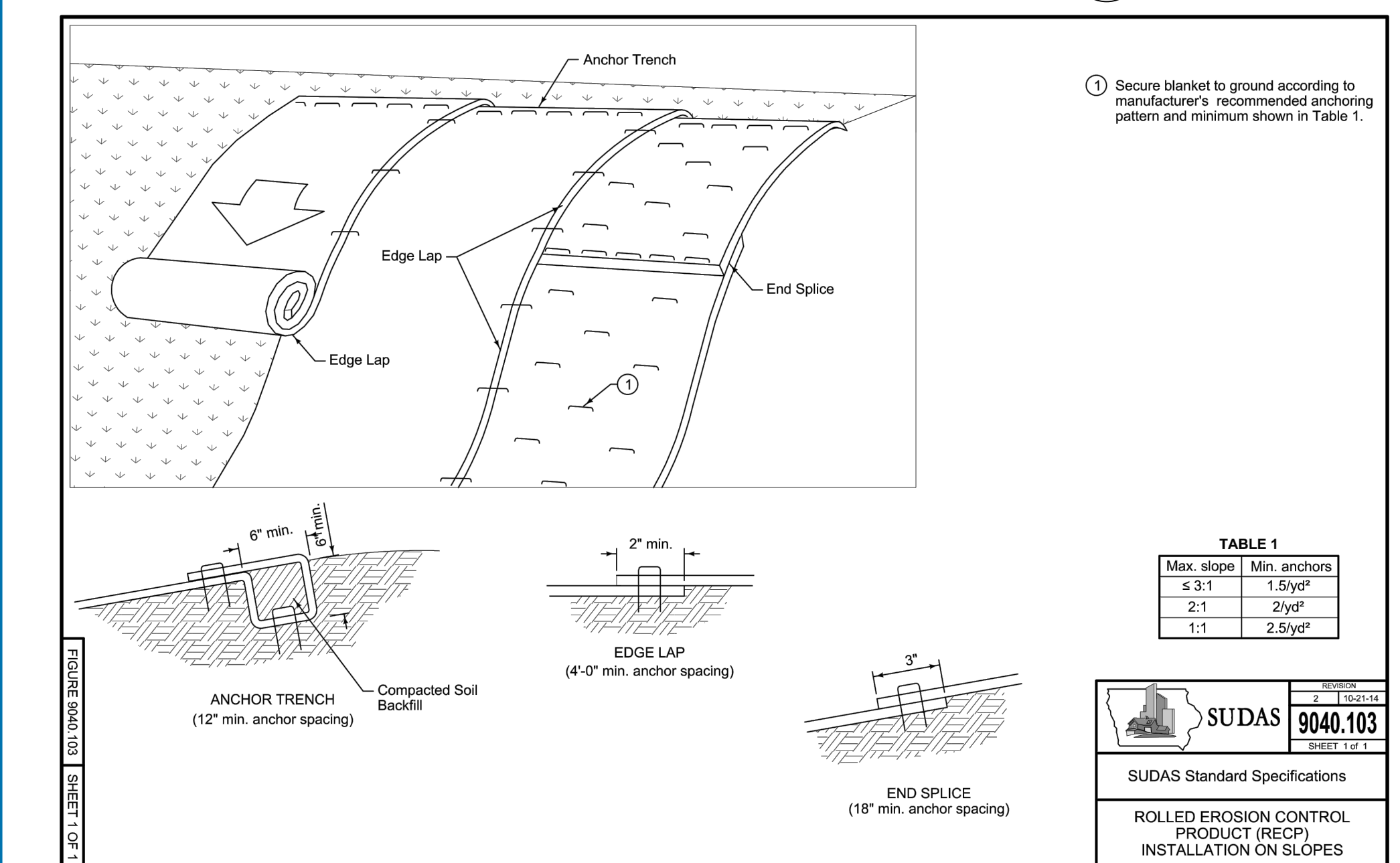
2A SILT FENCE N.T.S.

SUDAS 9040.119
SUDAS Standard Specifications
SILT FENCE



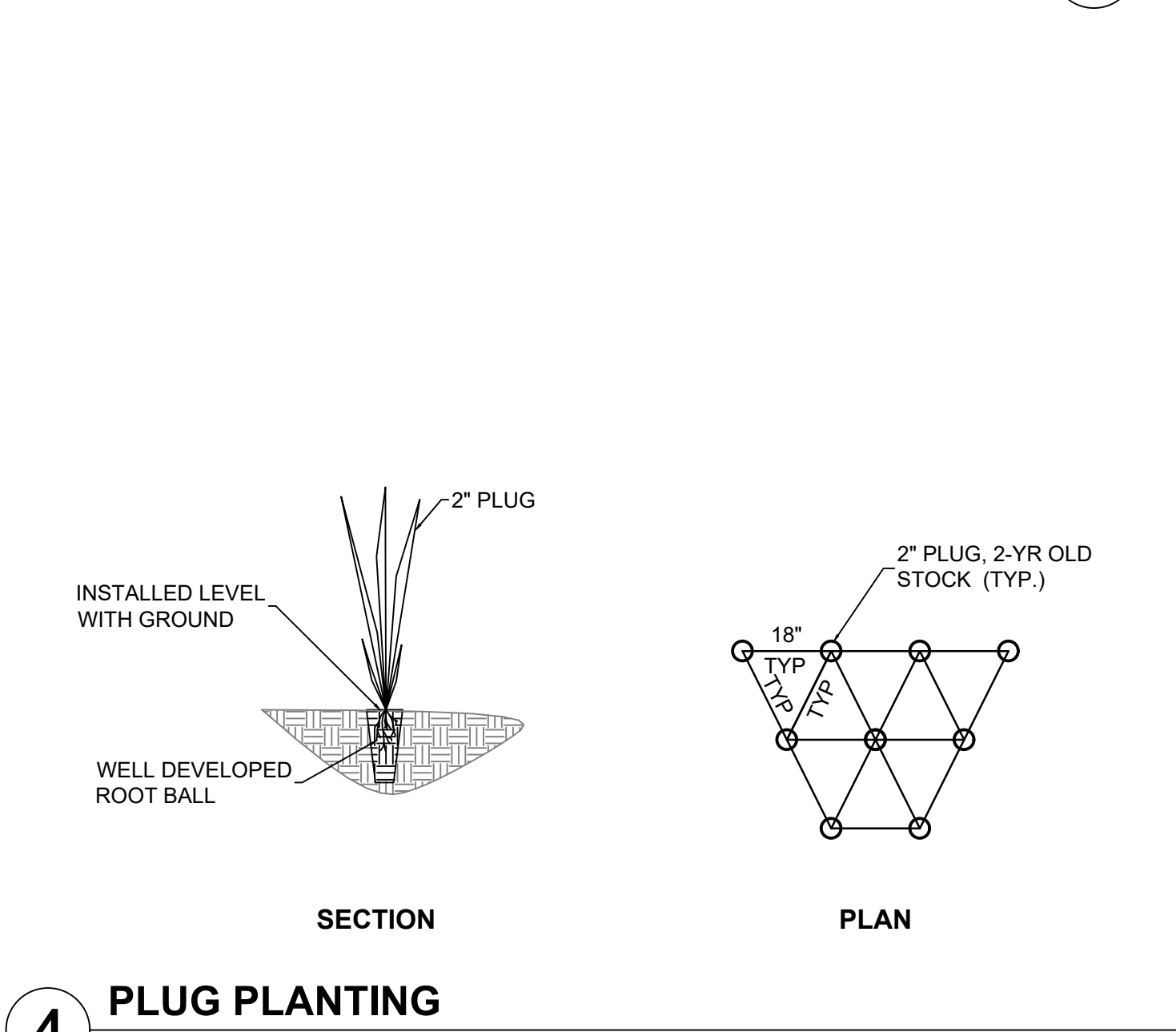
2B SILT FENCE N.T.S.

SUDAS 9040.119
SUDAS Standard Specifications
SILT FENCE

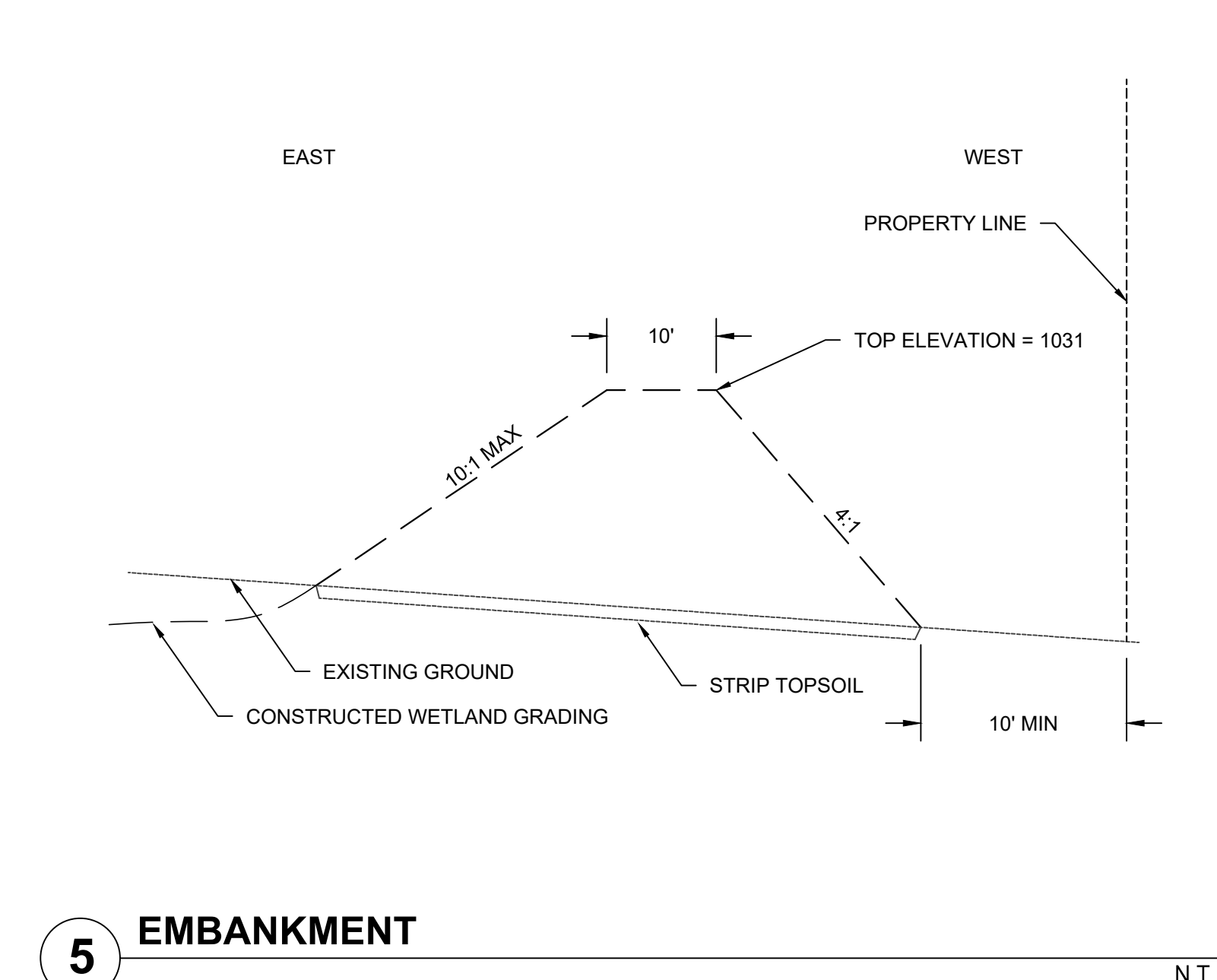


3 EROSION BLANKET N.T.S.

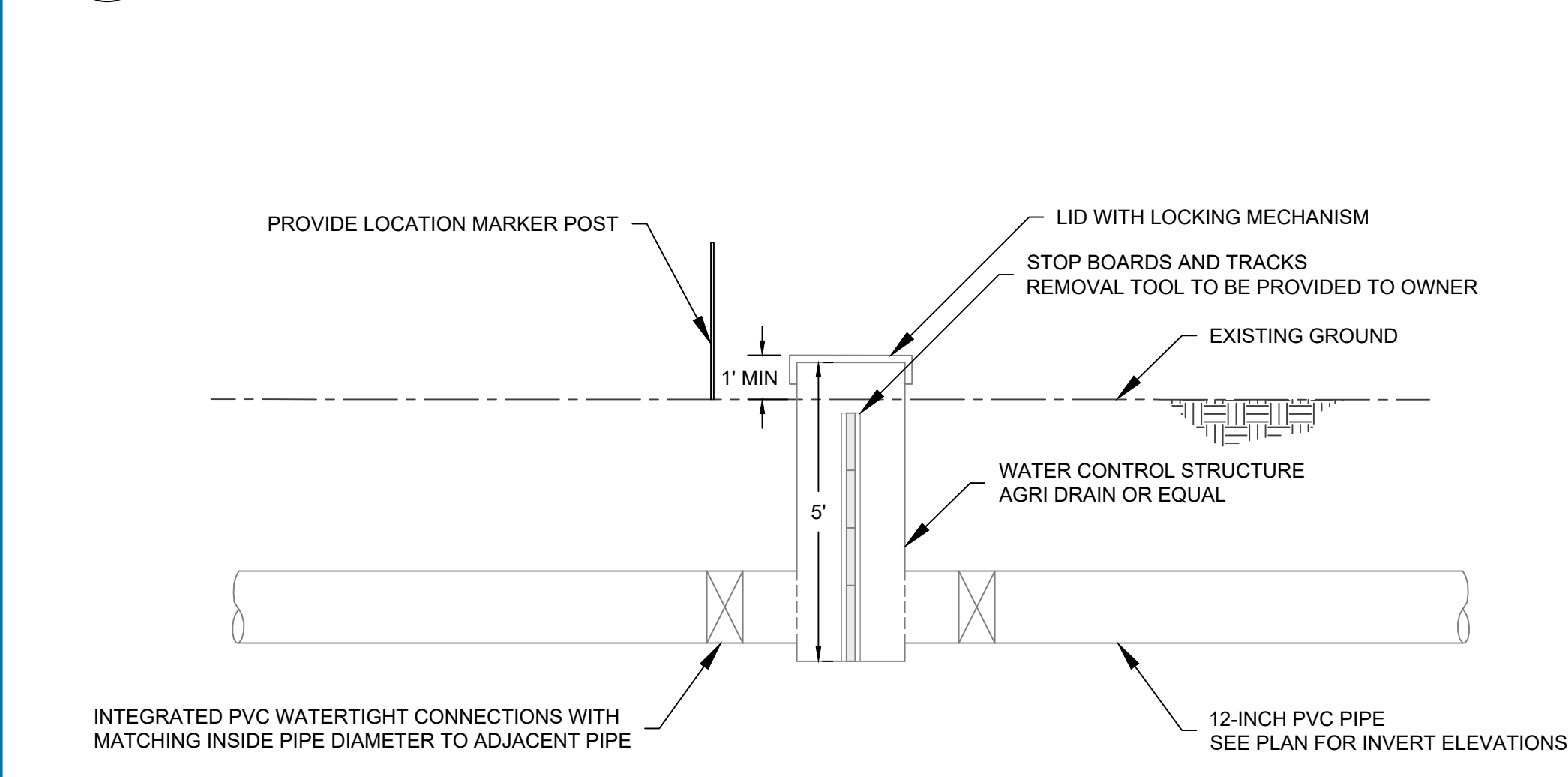
SUDAS 9040.103
SUDAS Standard Specifications
ROLLED EROSION CONTROL PRODUCT (RECP) INSTALLATION ON SLOPES



4 PLUG PLANTING N.T.S.



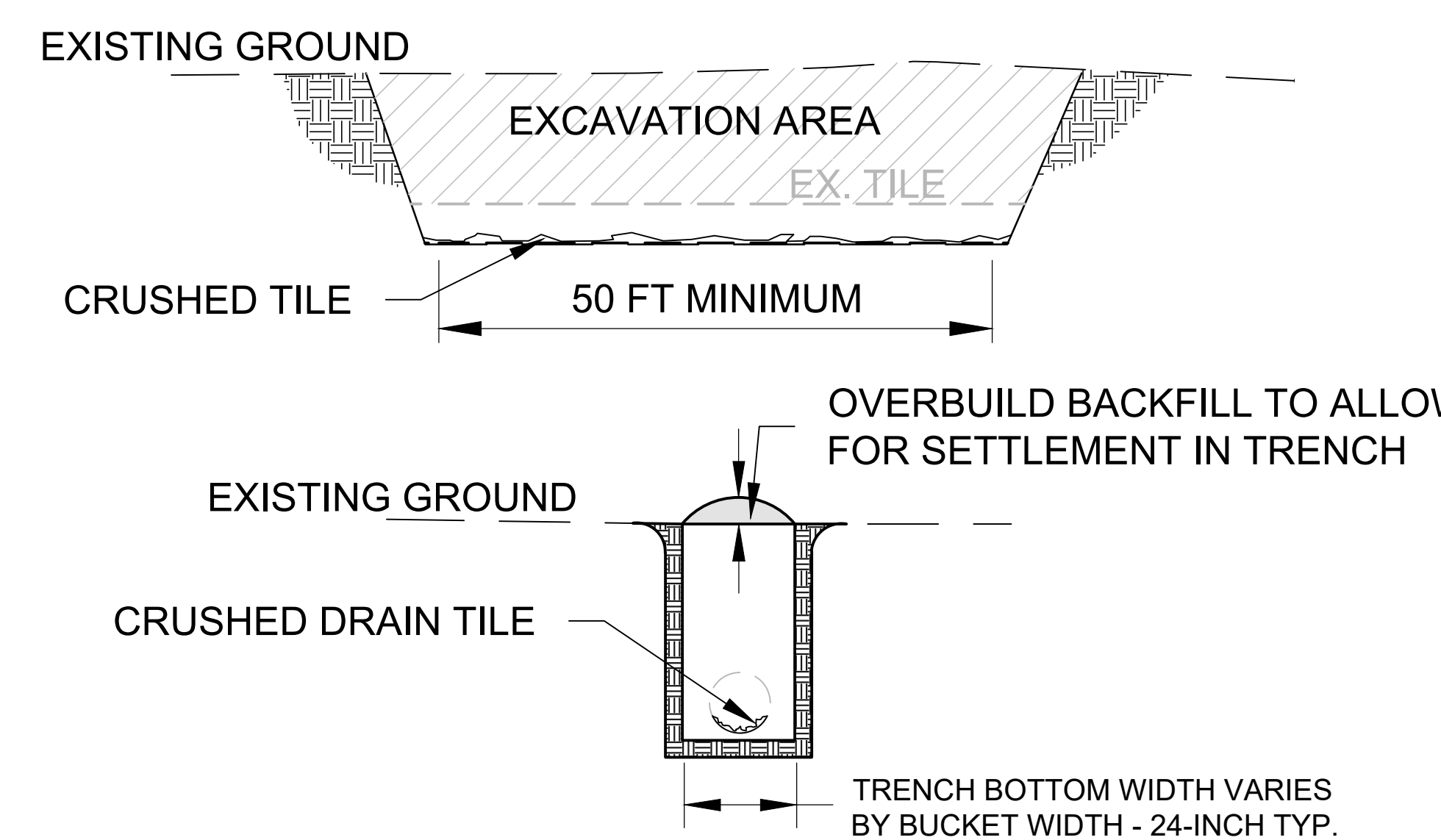
5 EMBANKMENT N.T.S.



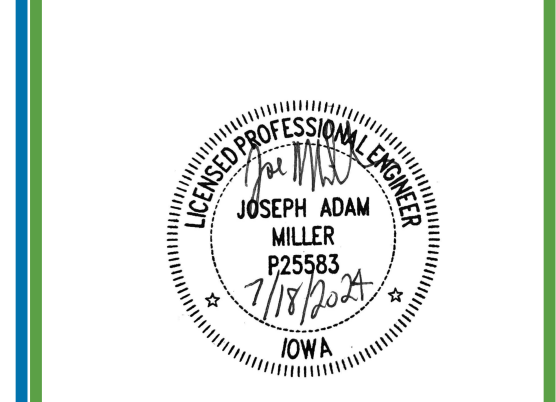
6 WATER CONTROL STRUCTURE N.T.S.

TILE DISABLING NOTES:

- SHOULD UNEXPECTED DRAIN TILE BE DISCOVERED DURING CONSTRUCTION, THE PROJECT ENGINEER SHALL BE CONTACTED FOR APPROPRIATE COURSE OF ACTION FOR THE TILE DISABLING.
- BACKFILL TRENCHES WITH EXCAVATED SOIL AND COMPACT TO A LEVEL EQUAL TO OR GREATER THAN THE ADJACENT, UNDISTURBED SOIL.
- TILE ENDS SHALL BE PLUGGED WITH CONCRETE (MIN. 2' IN LENGTH). PLUGS SHALL BE WATER TIGHT. BACKFILL AND TAMP BY HAND A MINIMUM DISTANCE OF TWO FEET AROUND EACH SEALED TILE END WITH SUITABLE SOIL MATERIAL. BACKFILL THE REMAINING TRENCH WITH THE MOST SUITABLE MATERIAL AVAILABLE AND COMPACT TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE SURROUNDING UNDISTURBED SOIL.



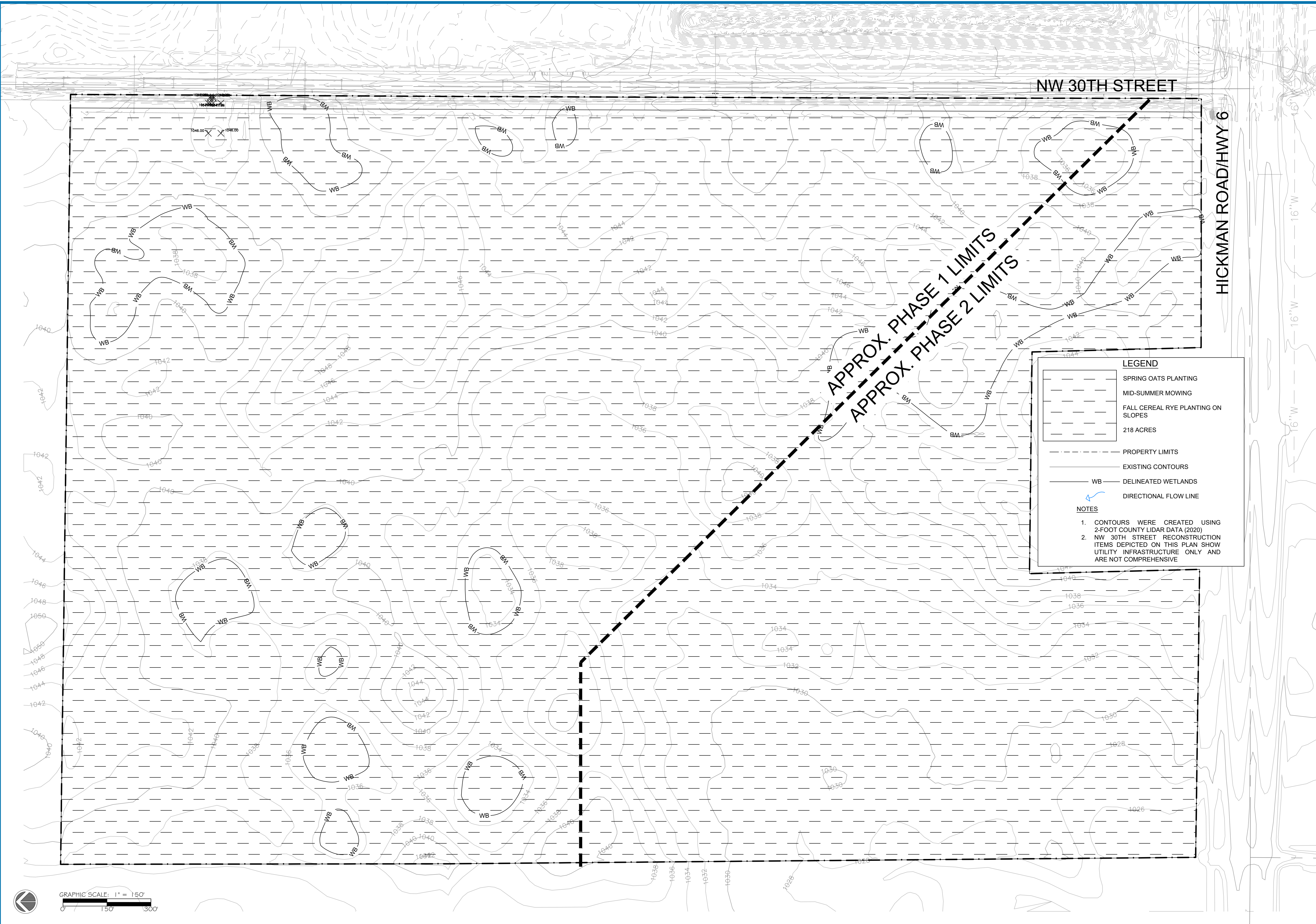
7 TILE DISABLING N.T.S.



REVISIONS:

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PROJECT MANAGER:	MS
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SHEET NO.:	07 of 10



NW 30TH STREET

HICKMAN ROAD/HWY 6

APPROX. PHASE 1 LIMITS
 APPROX. PHASE 2 LIMITS


LEGEND

- SPRING OATS PLANTING
- MID-SUMMER MOWING
- FALL CEREAL RYE PLANTING ON SLOPES
- 218 ACRES
- PROPERTY LIMITS
- EXISTING CONTOURS
- DELINEATED WETLANDS
- DIRECTIONAL FLOW LINE

NOTES

1. CONTOURS WERE CREATED USING 2-FOOT COUNTY LIDAR DATA (2020)
2. NW 30TH STREET RECONSTRUCTION ITEMS DEPICTED ON THIS PLAN SHOW UTILITY INFRASTRUCTURE ONLY AND ARE NOT COMPREHENSIVE



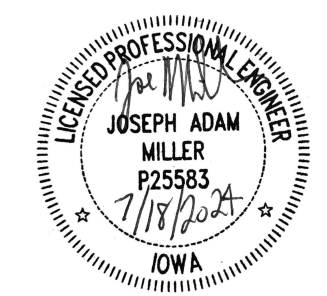


33 North Dearborn Street, Ste. 320
 Chicago, IL 60602
 WWW.RES.US

PRECONSTRUCTION STABILIZATION PLAN

DALLAS COUNTY, IOWA

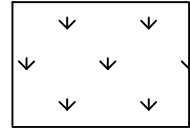
PROJECT MORGAN PRAIRIE POTHOLE WETLAND RESTORATION



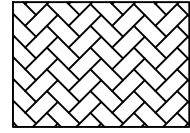
REVISIONS:

PROJECT STATUS:

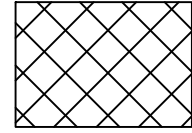
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SHEET NO.:	09 of 10

**Mesic Prairie/Savanna Mix**

IA NRCS Common name	IA NRCS Botanical	oz/ac	lbs/ac	seeds/sq ft
Western Yarrow	<i>Achillea millefolium</i>	0.24	0.02	1.00
Meadow Garlic	<i>Allium canadense</i>	0.78	0.05	0.01
Canadian Anemone	<i>Anemone canadensis</i>	0.27	0.02	0.05
Candle Anemone	<i>Anemone cylindrica</i>	0.16	0.01	0.10
Big Bluestem	<i>Andropogon gerardii</i>	8.71	0.54	2.00
Common Milkweed	<i>Asclepias syriaca</i>	2.03	0.13	0.20
Butterfly Milkweed	<i>Asclepias tuberosa</i>	0.51	0.03	0.05
Canadian Milkvetch	<i>Astragalus canadensis</i>	0.64	0.04	0.25
White Wild Indigo	<i>Baptisia alba</i>	0.77	0.05	0.03
Sideoats Grama	<i>Bouteloua curtipendula</i>	29.04	1.82	4.00
Bicknell's Sedge	<i>Carex bicknellii</i>	0.64	0.04	0.25
Shortbeak Sedge	<i>Carex brevior</i>	1.13	0.07	0.75
Heavy Sedge	<i>Carex gravida</i>	0.18	0.01	0.05
Greater Straw Sedge	<i>Carex normalis</i>	0.87	0.05	0.50
Partridge Pea	<i>Chamaecrista fasciculata</i>	8.07	0.50	0.50
Prairie Coreopsis	<i>Coreopsis palmata</i>	0.44	0.03	0.10
White Prairie Clover	<i>Dalea candida</i>	1.15	0.07	0.50
Purple Prairie Clover	<i>Dalea purpurea</i>	2.42	0.15	1.00
Prairie Mimosa	<i>Desmanthus illinoensis</i>	5.19	0.32	0.50
Showy Ticktrefoil	<i>Desmodium canadense</i>	0.79	0.05	0.10
Illinois Ticktrefoil	<i>Desmodium illinoense</i>	1.01	0.06	0.10
Pale Coneflower	<i>Echinacea pallida</i>	4.19	0.26	0.50
Canada Wildrye	<i>Elymus canadensis</i>	25.13	1.57	3.00
Rattlesnake Master	<i>Eryngium yuccifolium</i>	0.58	0.04	0.10
Tall Thoroughwort	<i>Eupatorium altissimum</i>	0.44	0.03	0.50
Flowering Spurge	<i>Euphorbia corollata</i>	0.16	0.01	0.03
Ox-eye	<i>Heliopsis helianthoides</i>	3.46	0.22	0.50
Alumroot	<i>Heuchera richardsonii</i>	0.06	0.00	1.00
Round-headed Bush Clover	<i>Lespedeza capitata</i>	1.36	0.09	0.25
Prairie Blazing Star	<i>Liatis pycnostachya</i>	0.99	0.06	0.25
Wild Bergamot	<i>Monarda fistulosa</i>	1.24	0.08	2.00
Common Evening Primrose	<i>Oenothera biennis</i>	1.94	0.12	4.00
Stiff Goldenrod	<i>Oligoneuron rigidum</i>	1.06	0.07	1.00
Switchgrass	<i>Panicum virgatum</i>	12.45	0.78	4.00
Prairie Cinquefoil	<i>Potentilla arguta</i>	0.19	0.01	1.00
Slender Mountain Mint	<i>Pycnanthemum tenuifolium</i>	0.06	0.00	0.50
Common Mountain Mint	<i>Pycnanthemum virginianum</i>	0.20	0.01	1.00
Gray-headed Coneflower	<i>Ratibida pinnata</i>	2.90	0.18	2.00
Black-eyed Susan	<i>Rudbeckia hirta</i>	3.79	0.24	8.00
Little Bluestem	<i>Schizachyrium scoparium</i>	23.23	1.45	8.00
Rosinweed	<i>Silphium integrifolium</i>	1.09	0.07	0.03
Compass Plant	<i>Silphium laciniatum</i>	0.66	0.04	0.01
Cup Plant	<i>Silphium perfoliatum</i>	1.56	0.10	0.05
Showy Goldenrod	<i>Solidago speciosa</i>	0.92	0.06	2.00
Indiangrass	<i>Sorghastrum nutans</i>	14.52	0.91	4.00
Prairie Dropseed	<i>Sporobolus heterolepis</i>	1.36	0.09	0.50
Smooth Blue Aster	<i>Symphotrichum laeve</i>	0.79	0.05	1.00
New England Aster	<i>Symphotrichum novae-angliae</i>	0.50	0.03	0.75
Skyblue Aster	<i>Symphotrichum oolentangiense</i>	0.14	0.01	0.25
Ohio Spiderwort	<i>Tradescantia ohioensis</i>	1.09	0.07	0.20
Hoary Vervain	<i>Verbena stricta</i>	1.56	0.10	1.00
Culver's Root	<i>Veronicastrum virginicum</i>	0.05	0.00	1.00
Golden Alexander's	<i>Zizia aurea</i>	1.98	0.12	0.50
Totals		174.66	10.92	60.95

**Berm Stabilization Mix**

IA NRCS Common name	IA NRCS Botanical	oz/ac	lbs/ac	seeds/sq ft
Western Yarrow	<i>Achillea millefolium</i>	0.49	0.03	2.00
Big Bluestem	<i>Andropogon gerardii</i>	8.71	0.54	2.00
Candle Anemone	<i>Anemone cylindrica</i>	0.16	0.01	0.10
Field Sagewort	<i>Artemisia campestris</i>	0.04	0.00	0.25
White Sagebrush	<i>Artemisia ludoviciana</i>	0.04	0.00	0.25
Common Milkweed	<i>Asclepias syriaca</i>	2.03	0.13	0.20
Butterfly Milkweed	<i>Carex tuberosa</i>	0.51	0.03	0.05
Whorled Milkweed	<i>Asclepias verticillata</i>	0.40	0.02	0.10
Canadian Milkvetch	<i>Astragalus canadensis</i>	1.28	0.08	0.50
Sideoats Grama	<i>Bouteloua curtipendula</i>	29.04	1.82	4.00
Bicknell's Sedge	<i>Carex bicknellii</i>	0.64	0.04	0.25
Shortbeak Sedge	<i>Carex brevior</i>	1.13	0.07	0.75
Heavy Sedge	<i>Carex gravida</i>	0.18	0.01	0.05
Greater Straw Sedge	<i>Carex normalis</i>	0.87	0.05	0.50
Partridge Pea	<i>Chamaecrista fasciculata</i>	8.07	0.50	0.50
Prairie Coreopsis	<i>Coreopsis palmata</i>	0.44	0.03	0.10
White Prairie Clover	<i>Dalea candida</i>	1.15	0.07	0.50
Purple Prairie Clover	<i>Dalea purpurea</i>	2.42	0.15	1.00
Prairie Mimosa	<i>Desmanthus illinoensis</i>	5.19	0.32	0.50
Showy Ticktrefoil	<i>Desmodium canadense</i>	1.58	0.10	0.20
Illinois Ticktrefoil	<i>Desmodium illinoense</i>	2.03	0.13	0.20
Pale Coneflower	<i>Echinacea pallida</i>	4.19	0.26	0.50
Canada Wildrye	<i>Elymus canadensis</i>	33.51	2.09	4.00
Tall Thoroughwort	<i>Eupatorium altissimum</i>	0.44	0.03	0.50
Flowering Spurge	<i>Euphorbia corollata</i>	0.16	0.01	0.03
Prairie Sunflower	<i>Helianthus rigidum</i>	0.33	0.02	0.03
Ox-eye	<i>Heliopsis helianthoides</i>	3.46	0.22	0.50
Alumroot	<i>Heuchera richardsonii</i>	0.19	0.01	3.00
Prairie Junegrass	<i>Koeleria macrantha</i>	0.87	0.05	4.00
Round-headed Bush Clover	<i>Lespedeza capitata</i>	1.36	0.09	0.25
Tall Blazing Star	<i>Liatis aspera</i>	0.16	0.01	0.06
Prairie Blazing Star	<i>Liatis pycnostachya</i>	0.99	0.06	0.25
Wild Bergamot	<i>Monarda fistulosa</i>	0.62	0.04	1.00
Common Evening Primrose	<i>Oenothera biennis</i>	0.48	0.03	1.00
Stiff Goldenrod	<i>Oligoneuron rigidum</i>	0.53	0.03	0.50
Switchgrass	<i>Panicum virgatum</i>	18.67	1.17	6.00
Western Wheatgrass	<i>Pascopyrum smithii</i>	24.24	1.52	4.00
Prairie Cinquefoil	<i>Potentilla arguta</i>	0.19	0.01	1.00
Gray-headed Coneflower	<i>Ratibida pinnata</i>	2.90	0.18	2.00
Black-eyed Susan	<i>Rudbeckia hirta</i>	2.84	0.18	6.00
Little Bluestem	<i>Schizachyrium scoparium</i>	23.23	1.45	8.00
Rosinweed	<i>Silphium integrifolium</i>	1.09	0.07	0.03
Compass Plant	<i>Silphium laciniatum</i>	0.66	0.04	0.01
Cup Plant	<i>Silphium perfoliatum</i>	0.62	0.04	0.02
Field Goldenrod	<i>Solidago nemoralis</i>	0.58	0.04	4.00
Showy Goldenrod	<i>Solidago speciosa</i>	0.46	0.03	1.00
Indiangrass	<i>Sorghastrum nutans</i>	14.52	0.91	4.00
Prairie Dropseed	<i>Sporobolus heterolepis</i>	1.36	0.09	0.50
Smooth Blue Aster	<i>Symphotrichum laeve</i>	0.79	0.05	1.00
Ohio Spiderwort	<i>Tradescantia ohioensis</i>	1.36	0.09	0.25
Hoary Vervain	<i>Verbena stricta</i>	1.56	0.10	1.00
Golden Alexander's	<i>Zizia aurea</i>	0.79	0.05	0.20
Totals		209.54	13.10	68.62

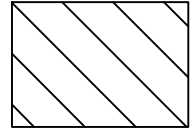
**Prairie Pothole Mix**

IA NRCS Common name	IA NRCS Botanical	oz/ac	lbs/ac	seeds/sq ft
Water Plantain	<i>Alisma subcordatum</i>	4.36	0.27	6.00
Swamp Milkweed	<i>Asclepias incarnata</i>	1.82	0.11	0.20
Nodding Beggartick	<i>Bidens cernua</i>	1.04	0.06	0.50
Purplestem Beggarticks	<i>Bidens connata</i>	1.09	0.07	0.25
Bluejoint	<i>Calamagrostis canadensis</i>	0.31	0.02	2.00
Bebb's Sedge	<i>Carex bebbii</i>	1.28	0.08	1.00
Bottlebrush Sedge	<i>Carex hystericina</i>	2.90	0.18	2.00
Hop Sedge	<i>Carex lupulina</i>	1.32	0.08	0.10
Muskingum Sedge	<i>Carex muskingumensis</i>	0.58	0.04	0.10
Woolly Sedge	<i>Carex pellita</i>	0.16	0.01	0.10
Sartwell's Sedge	<i>Carex sartwellii</i>	0.11	0.01	0.10
Owlfruit Sedge	<i>Carex stipata</i>	0.96	0.06	0.75
Upright Sedge	<i>Carex stricta</i>	0.21	0.01	0.25
Water Hemlock	<i>Cicuta maculata</i>	0.91	0.06	0.25
Needle Spikerush	<i>Eleocharis acicularis</i>	0.31	0.02	0.50
Bald Spikerush	<i>Eleocharis erythropoda</i>	0.28	0.02	0.50
Blunt Spikerush	<i>Eleocharis obtusa</i>	0.22	0.01	0.50
Fowl Mannagrass	<i>Glyceria striata</i>	1.09	0.07	4.00
Blue Flag	<i>Iris shrevei</i>	2.18	0.14	0.05
Torrey's Rush	<i>Juncus torreyi</i>	0.16	0.01	6.00
Rice Cutgrass	<i>Leersia oryzoides</i>	1.28	0.08	1.00
False Dragonhead	<i>Physostegia virginiana</i>	0.99	0.06	0.25
Pennsylvania Smartweed	<i>Polygonum pensylvanicum</i>	13.40	0.84	4.00
Water Smartweed	<i>Polygonum punctatum</i>	0.28	0.02	0.05
Great Water Dock	<i>Rumex orbiculatus</i>	1.83	0.11	0.50
Common Arrowhead	<i>Sagittaria latifolia</i>	1.43	0.09	2.00
Hardstem Bulrush	<i>Schoenoplectus acutus</i>	0.34	0.02	0.10
River Bulrush	<i>Schoenoplectus fluviatilis</i>	2.03	0.13	0.20
Softstem Bulrush	<i>Schoenoplectus tabernaemontani</i>	2.11	0.13	1.50
Green Bulrush	<i>Scirpus atrovirens</i>	0.95	0.06	10.00
Hemlock Water Parsnip	<i>Sium suave</i>	0.22	0.01	0.25
Common Bur Reed	<i>Sparganium eurycarpum</i>	2.61	0.16	0.03
Totals		48.73	3.05	45.03

Prairie Pothole - Emergent Plugs/Bare-root (pods in 0"-9" water)

20.98 acres

Scientific Name	Common Name	Qty
<i>Acorus americanus</i>	Sweet flag	1500
<i>Bolboschoenus/Schoenoplectus fluviatilis</i>	River bulrush	1500
<i>Carex lacustris</i>	Lake sedge	1500
<i>Glyceria striata</i>	Fowl manna grass	1500
<i>Iris virginica/shrevei</i>	Virginia iris/S. blue fla	1500
<i>Pontederia cordata</i>	Pickereel-weed	1500
<i>Sagittaria latifolia</i>	Broadleaf arrowhead	1500
<i>Schoenoplectus acutus</i>	Hardstem bulrush	1500
<i>Schoenoplectus pungens</i>	Three-square bulrush	1500
<i>Schoenoplectus tabernaemontani</i>	Softstem bulrush	1500
<i>Sparganium eurycarpum</i>	Giant bur-reed	1500
Total		16500

**Swale/Fringe Mix**

IA NRCS Common name	IA NRCS Botanical	oz/ac	lbs/ac	seeds/sq ft
Slenderleaf False Foxglove	<i>Agalinis tenuifolia</i>	0.05	0.00	1.00
Big Bluestem	<i>Andropogon gerardii</i>	8.71	0.54	2.00
Canadian Anemone	<i>Anemone canadensis</i>	0.54	0.03	0.10
Groovestem Indian Plantain	<i>Arnoglossum plantagineum</i>	0.19	0.01	0.02
Swamp Milkweed	<i>Asclepias incarnata</i>	1.36	0.09	0.15
Nodding Beggartick	<i>Bidens cernua</i>	1.04	0.06	0.50
Purplestem Beggarticks	<i>Bidens connata</i>	1.09	0.07	0.25
Bluejoint	<i>Calamagrostis canadensis</i>	0.31	0.02	2.00
Broom Sedge	<i>Carex scoparia</i>	1.56	0.10	3.00
Owlfruit Sedge	<i>Carex stipata</i>	0.64	0.04	0.50
Upright Sedge	<i>Carex stricta</i>	0.08	0.01	0.10
Northwest Territory Sedge	<i>Carex utriculata</i>	0.44	0.03	0.10
Fox Sedge	<i>Carex vulpinoidea</i>	1.74	0.11	4.00
Water Hemlock	<i>Cicuta maculata</i>	0.91	0.06	0.25
Showy Ticktrefoil	<i>Desmodium canadense</i>	0.79	0.05	0.10
Flat-Topped Aster, White Aster	<i>Doellingeria umbellata</i>	0.33	0.02	0.50
Virginia Wildrye	<i>Elymus virginicus</i>	41.49	2.59	4.00
Purpleleaf Willowherb	<i>Epilobium coloratum</i>	0.04	0.00	0.25
Boneset	<i>Eupatorium perfoliatum</i>	0.54	0.03	2.00
Grass-leaved Goldenrod	<i>Euthamia graminifolia</i>	0.12	0.01	1.00
Fowl Mannagrass	<i>Glyceria striata</i>	1.09	0.07	4.00
Sneezeweed	<i>Helenium autumnale</i>	0.67	0.04	2.00
Saw-tooth Sunflower	<i>Helianthus grosseserratus</i>	0.29	0.02	0.10
Giant St. Johnswort	<i>Hypericum ascyron</i>	0.46	0.03	2.00
Blue Flag	<i>Iris shrevei</i>	1.31	0.08	0.03
Dudley's Rush	<i>Juncus dudleyi</i>	0.08	0.01	6.00
Rice Cutgrass	<i>Leersia oryzoides</i>	0.64	0.04	0.50
Prairie Blazing Star	<i>Liatis pycnostachya</i>	1.98	0.12	0.50
Cardinal Flower	<i>Lobelia cardinalis</i>	0.22	0.01	2.00
Great Lobelia	<i>Lobelia siphilitica</i>	0.26	0.02	3.00
Water Horehound	<i>Lycopus americanus</i>	0.34	0.02	1.00
Winged Loosestrife	<i>Lythrum alatum</i>	0.06	0.00	4.00
Wild Mint	<i>Mentha arvensis</i>	0.15	0.01	1.00
Monkey Flower	<i>Mimulus ringens</i>	0.06	0.00	3.00
Switchgrass	<i>Panicum virgatum</i>	18.67	1.17	6.00
False Dragonhead	<i>Physostegia virginiana</i>	0.99	0.06	0.25
Fowl Bluegrass	<i>Poa palustris</i>	1.34	0.08	4.00
Common Mountain Mint	<i>Pycnanthemum virginianum</i>	0.20	0.01	1.00
Pale Dock	<i>Rumex altissimus</i>	0.84	0.05	0.10
Great Water Dock	<i>Rumex orbiculatus</i>	0.92	0.06	0.25
Green Bulrush	<i>Scirpus atrovirens</i>	0.38	0.02	4.00
Cup Plant	<i>Silphium perfoliatum</i>	1.56	0.10	0.05
Hemlock Water Parsnip	<i>Sium suave</i>	0.22	0.01	0.25
Prairie Cordgrass	<i>Spartina pectinata</i>	0.66	0.04	0.10
White Panic Aster	<i>Symphotrichum lanceolatum</i>	0.50	0.03	0.50
New England Aster	<i>Symphotrichum novae-angliae</i>	0.50	0.03	0.75
American Germander	<i>Teucrium canadense</i>	0.22	0.01	0.10
Purple Meadow-roe	<i>Thalictrum dasycarpum</i>	0.99	0.06	0.25
Blue Vervain	<i>Verbena hastata</i>	0.94	0.06	2.00
Ironweed	<i>Veronica fasciculata</i>	0.11	0.01	0.50
Culver's Root	<i>Veronicastrum virginicum</i>	0.11	0.01	2.00
Golden Alexander's	<i>Zizia aurea</i>	0.99	0.06	0.25
Totals		100.47	6.28	73.30

Swale/Fringe - Plugs (accent pods)

41.63 acres

Scientific Name	Common Name	Qty
<i>Asclepias incarnata</i>	Swamp Milkweed	900
<i>Calamagrostis canadensis</i>	Bluejoint	900
<i>Carex stricta</i>	Upright Sedge	900
<i>C</i>		