T56N, R26W, Section 5 Lat 39.6846611° N Long 93.8330250° W

WRP PERPETUAL CONTRACT
NUMBER: 66-6424-11-0143Y

MISSOURI





GENERAL TRACT LOCATION



The excavator is responsible for having all utilities located at the work site or on ingress road prior to beginning work. Call 1—800—DIG—RITE (344—7483) or 811 or click www.mo1call.com. Call 3 days before you dig!

The landowner shall insure that the excavator completes the locate request.

No activities may be taken by contractor that impedes drainage on or from adjacent property owners.

SKY VIEW FINANCIAL WETLAND COVER SHEET



File Name

Drawing Name

4/22/13 9:44 Sheet 1 of 1

ESTIMATED QUANTITIES					
DESCRIPTION	QUANTITY	UNIT			
Earthfill (Berms)	8460	CY			
Earthfill (Spoil areas)	10,570	CY			
Earthfill (Habitat Mounds)	4480	CY			
12' dla. SDR 35 pvc plpe	125	LF			
2' x 12" dia. water control structure	2	EA			
18" dla. SDR 35 pvc plpe	68	LF			
3^{\prime} x $18^{\prime\prime}$ dia. water control structure	1	EA			
Trash rack (Small)	2	EA			
Trash rack (Large)	1	EA			
Fence post	6	EA			
Animal guard (12" dia.)	2	EA			
Animal guard (18" dia.)	1	EA			
Seeding/cover crop	5.60	AC			
*Clearing light-WRP	20.50	AC			
⁺ Clearing medium-WRP	0.50	AC			

	TABLE OF CONTENTS
SHEET #	DESCRIPTION
1	Cover sheet
2	Table of contents/est. quantities
3	General plan map
4A - 4C	Design detail maps
5	Topography map
6	Berm detalls
7	Spillway details
8	Borrow areas details
9	Habitat mound & spoil area details
10A - 10C	Water control structure details
11A & 11B	Trash rack details



Date 02-01-2013

J.A. Gibson

02-01-2013

United States Department of Agriculture
Natural
Resources
Conservation
WETS 4
727 PCA Rd.

File Name

Drawing Name

4/22/13 9:44 Sheet 2 of 11

^{*} Clearing light-WRP: Includes the cost of all machinery and labor required to clear herbaceous vegetation and scattered seedling trees and shrubs on a per acre basis where a conservation practice will be built. Typically, will involve a small sized rubber tired tractor with a disk or mower. Disk or mower is capable of chopping and distributing the vegetation such that gathering and disposal is not necessary. This item is not applicable to tree planting or herbaceous establishment conservation practices.

^{*}Clearing medium-WRP: Includes the cost of all machinery and labor required to clear, grub, gather and dispose of woody encroachment comprising predominately of sapling trees and shrubs. Trees no larger than 4" dbh and scattered herbaceous growth on a per acre basis where a conservation practice will be built. Typically, will involve a medium sized rubber tired tractor or a medium sized tracked equipment with heavy duty disk, blade or shear blade.

TBM #1: EL. = 745.23 on top of aluminum disk easement marker #13 at the Northwest corner of I/E easement 60 ft. West of centerline Catawba Rd.

X = 1,406,017.4690 ft. Y = 14,415,372.7400 ft.

TBM #2: EL. = 742.65 on top of aluminum disk easement marker #15 940 ft. South of TBM #1. X = 1,406,016.3640 ft.

Y = 14,414,432.2400 ft.

TBM #3: EL. = 742.30 on top of aluminum disk easement marker #16 470 ft. South of TBM #3.

X = 1,406,015.8390 ft. Y = 14,413,961.8800 ft.

TBM #4: EL. = 743.49 on top of aluminum disk easement marker #18 at the Southeast corner of the easement.

X = 1,406,015.5500 ft.Y = 14,413,051.2700 ft.

TBM #5: EL. = 743.38 on top of aluminum disk easement marker #20 875 ft. West of TBM #4. X = 1,405,143.8050 ft.

Y = 14,413,076.9100 ft.

TBM #6: EL. = 745.89 on top of aluminum disk easement marker #2 in the West easement line 565 ft. Northeast of centerline of Ironwood Rd.

X = 1,403,719.7710 ft. Y = 14,413,617.4000 ft.

TBM #7: EL. = 753.40 on top of aluminum disk easement marker #4 875 ft. Northeast of TBM #6. X = 1,403,929.9130 ft.

Y = 14,414,470,9500 ft.

Pool Information:

Berms #1 - #3: 27.0 acres of saturation at EL. = 743.5 after excavation.

Berms #4 - #6: 13.5 acres of saturation at EL. = 743.5 after excavation.

Berm #7: 9.8 acres of saturation at EL. = 743.5 after excavation.



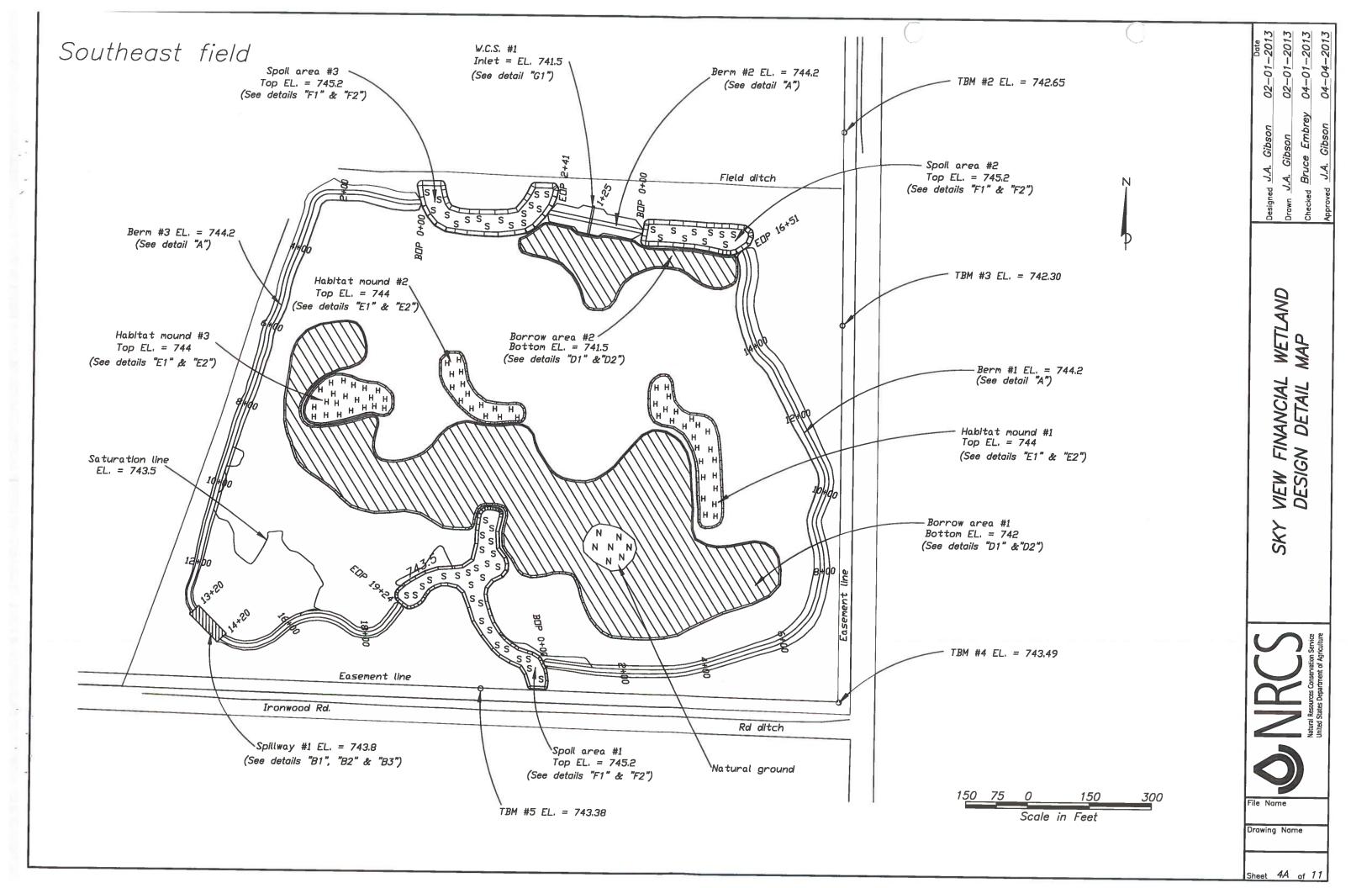
Date 02-01-2013 02-01-2013 Gibson

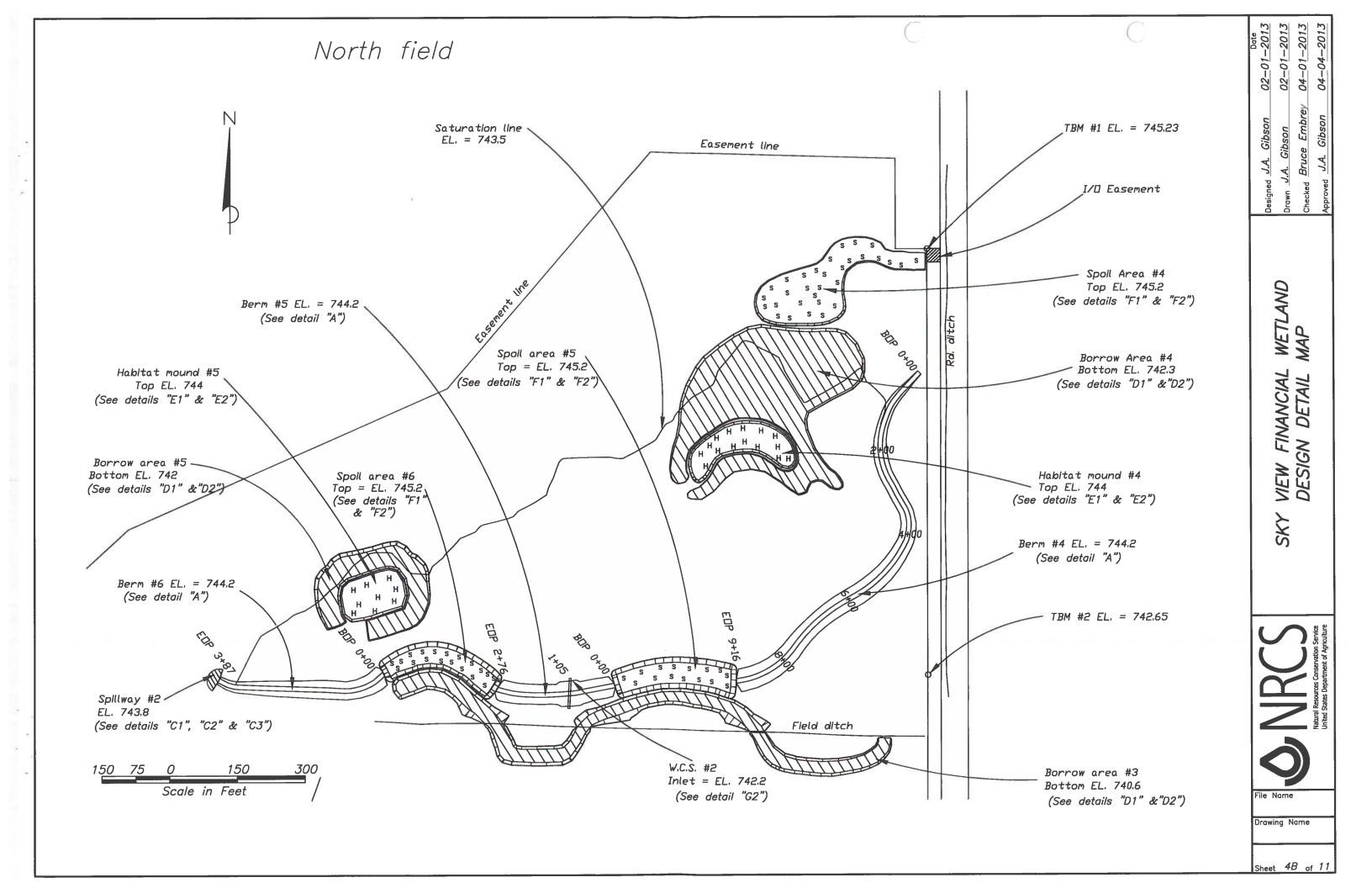
> WETLAND MAP FINANCIAL FAL PLAN VIEW FIN SKY

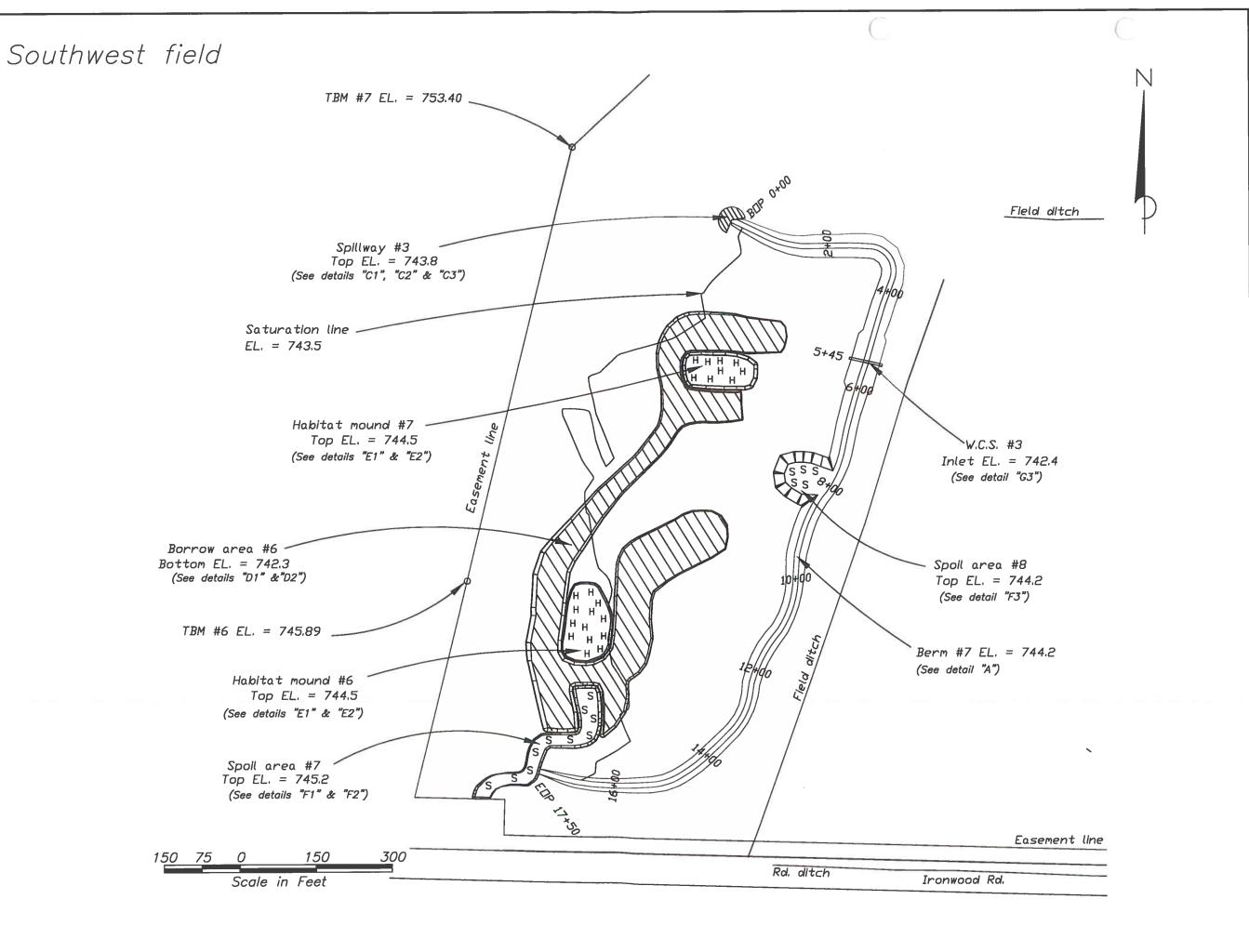
File Name

Drawing Name

Sheet 3 of 11







Date
Designed J.A. Gibson 02-01-2013

Drawn J.A. Gibson 02-01-2013

Checked Bruce Embrey 04-01-2013

Approved J.A. Gibson 04-04-2013

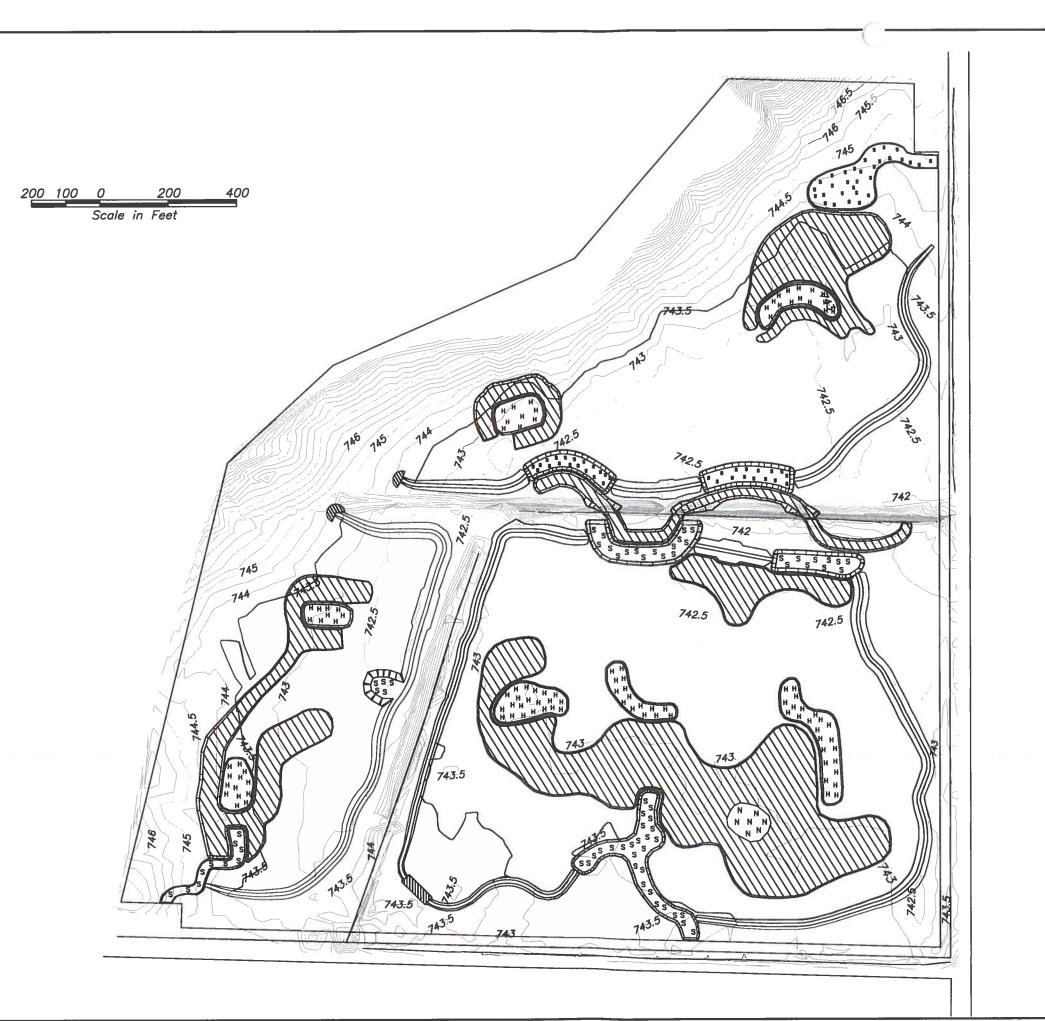
SKY VIEW FINANCIAL WETLAND DESIGN DETAIL MAP

Natural Resources Conservation Service United States Department of Agriculture

File Name

Drawing Name

Sheet 4C of 11



SKY VIEW FINANCIAL WETLAND TOPOGRAPHY MAP

Date 02-01-2013 02-01-2013 04-01-2013 04-04-2013

Bruce Embrey
od J.A. Gibson

PNR Resources Conservation Service

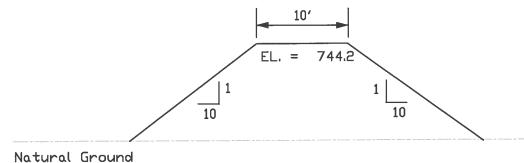
File Nam

Drawing Name

Sheet 5 of 11

- 1. The centerline of the berms will be flagged by NRCS. The contractor will be responsible for staking the toes of the slopes.
- 2. Strip all areas where the berms will be built before placing fill.
- 3. Fill material for the berms will only be taken from borrow areas as shown on sheets 4A - 4C of 11 and to designated depths.
- 4. All fill material must be clean of vegetation and/or rooty material. NRCS will reject fill material that contains inordinate amounts of vegetation.
- 5. Earthfill shall be placed in horizontal layers not to exceed 8" in thickness. Each layer shall be compacted by two (2) complete passes of the loaded scrapper or sheep foot.
- 6. The berms will be seeded. See attached NRCS's seeding requirements.

BERM SUMMARY							
NAME	YARDAGE cu.yds.	SEEDED AREA	TOP ELEVATION	TOP WIDTH ft.	LENGTH ft.	SIDE	
Berm #1	1840	1.30	744.2	10	1651	10:1	
Berm #2	770	0.30	744.2	10	241	10:1	
Berm #3	1260	1.20	744.2	10	1924	10:1	
Berm #4	1070	0.70	744.2	10	916	10:1	
Berm #5	610	0.30	744.2	10	276	10:1	
Berm #6	450	0.30	744.2	10	387	10:1	
Berm #7	2460	1.50	744.2	10	1750	10:1	
Totalsı	8460	5.60					



DETAIL "A"

Sta. 0+00 - Sta. 1+00

Berm #3 x-sect.

Berm #7 x-sect.

Sta, 0+00 - Sta, 4+95

Sta. 5+95 - Sta. 17+50

Berms #1, #4, & #6 x-sect.

Berm #2 x-sect.

Sta. 1+50 - Sta. 2+41

Sta. 0+00 - Sta. 13+20

Sta. 14+20 - Sta. 19+24

Berm #5 x-sect.

Sta. 0+00 - Sta. 0+85

Sta. 1+25 - Sta. 2+76

Drawing Name

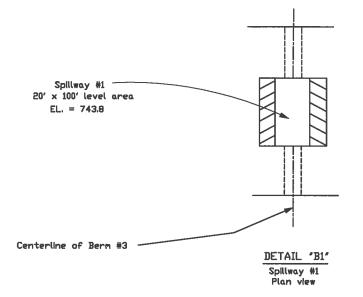
4/22/13 9:44 Sheet 6 of 11

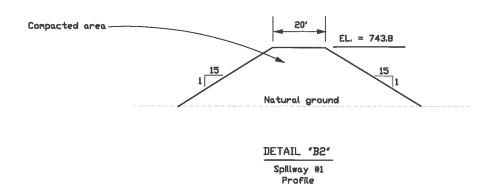
NOT TO SCALE

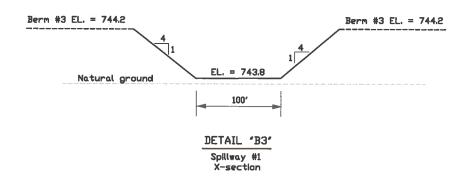
SKY VIEW FINANCIAL WETLAND BERM DETAILS

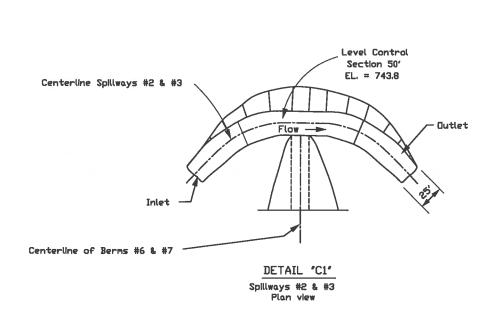
Date 02-01-2013 02-01-2013

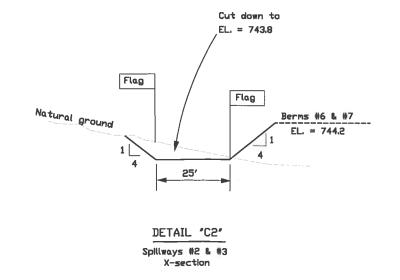
- The centerline of spillway #1 will be flagged by NRCS. The contractor will be responsible for staking the top width and toes of the slopes.
- 2. Strip the area where spillway #1 will be built before placing fill.
- 3. Construct spillway #1 exactly as shown below.
- All fill material must be clean of vegetation and/or rooty material. NRCS will reject fill material that contains inordinate amounts of vegetation.
- 5. Fill material for spillway #1 will only be taken from borrow areas as shown on sheet 4A of 11 and to designated depths.
- 6. Earthfill shall be placed in horizontal layers not to exceed 6' in thickness. Each layer shall be compacted by two (2) complete passes of the loaded scrapper or sheep foot.
- 7. The perimeter of spillways #2 & #3 will be flagged by NRCS. The contractor will be responsible for staking the toes of the slopes.
- 8. Cut spillways #2 & #3 down to the exact elevation and dimensions shown.
- The spillways will be seeded. See attached NRCS's seeding requirements.

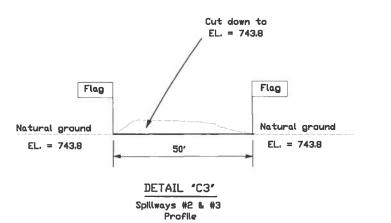












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SKY VIEW FINANCIAL WETLAND SPILLWAY DETAILS

Date 02-01-2013

Gibson

02-01-2013

Bruce Embrey

04-04-2013

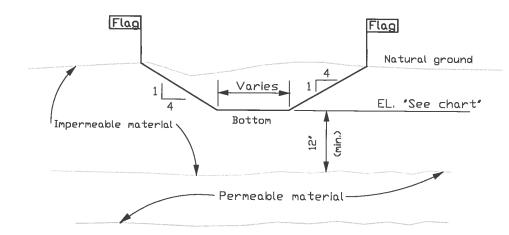
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Resurres
AETS 4
727 P.CA. Rd.

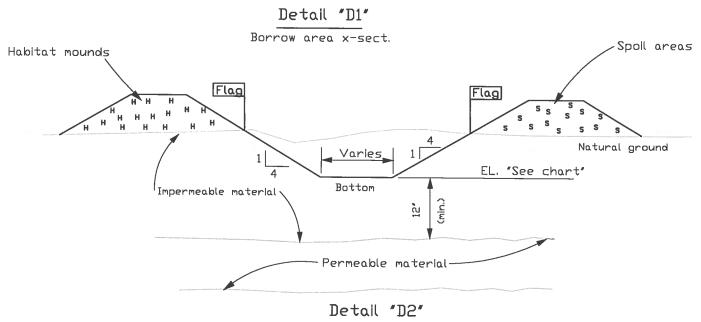
File Name

Drawing Name

4/22/13 9:44 Sheet 7 of 11

- 1. The borrow areas shown on sheets 4A 4C of 11 are the only allowable areas for excavation.
- 2. Perimeter of borrow areas will be flagged in the field by NRCS. The contractor will be responsible for staking the toes of the slopes.
- 3. Strip borrow areas before removing fill.
- 4. All fill material for berms must be clean of vegetation and/or rooty material. NRCS will reject fill material that contains inordinate amounts of vegetation.
- 5. Stripped material can be placed in spoil areas and habitat mounds.
- 6. No borrow shall be taken within 30' of either toe of the berms unless shown on sheets 4A 4C of 11.





Borrow area x-sect. adjacent to spoil areas or habitat mounds

- 7. If a permeable area is encountered, the contractor will stop excavation immediately. A minimum of 12" compacted impermeable material will be replaced over this area. The contractor will contact NRCS for instructions for moving to a new area to continue borrowing for fill.
- 8. Excavated materials from the borrow areas will go to the location designated in the chart below.
- 9. If the borrow areas have been excavated as laid out and to the design requirements and additional construction material is still needed to complete the project, contact NRCS WETS team for instructions.
- 10. As soon as all the berms, spoil areas & habitat mounds have been completed as laid out and to design requirements, immediately stop excavating material from the borrow areas.

			BORROW	AREA SU	MMARY
NAME	APPROX. YARDAGE cu.yds.	BOTTOM ELEVATION	CLEARING AC.	SIDE SLOPES	*LOCATION FOR EXCAVATED MATERIAL
Borrow area #1	12,240	742	7.50	4:1	Berms #1 & #3 Spoll areas #1 - #3 & Hab. md. #1 - #3
Borrow area #2	1640	741.5	1.10	4:1	Berm #2 Spoil areas #2, #3 & #5
Borrow area #3	3150	740.6	1.20	4:1	Berms #5 & #6 Spoll areas #5 & #6
Borrow area #4	3310	742.3	2,20	4:1	Berm #4 Spoll area #4 & Hab. md, #4
Borrow area #5	1170	742	0.70	4:1	Berm #6 Hab, md, #5
Borrow area #6	4400	742.3	2.70	4:1	Berm #7 Spoil area #7 & Hab. mds. #6 & #7
TOTALS	25,910		15.40		

*NOTE: Contractor may rearrange locations for excavated material if in his opinion it would save him time and/or expenses.

SKY VIEW FINANCIAL WETLAND BORROW AREA DETAILS

02-01-2013 04-01-2013 04-04-2013

Embrey

Gibson

02-01-2013

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Resources
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WETS 4
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File Name

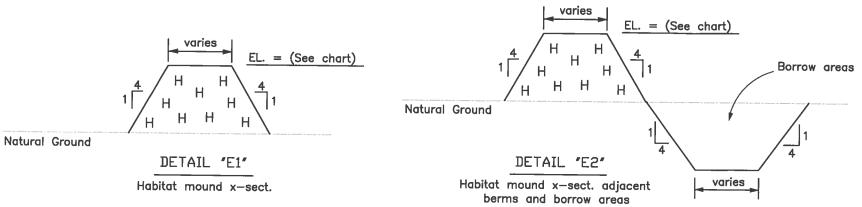
Drawing Name

4/22/13 9:44 Sheet 8 of 11

NOT TO SCALE

NOTES

- 1. The perimeter of the habitat mounds will be flagged by NRCS. The contractor will be responsible for staking the toes of the slopes.
- 2. Do not strip the areas where the habitat mounds will be built before placing fill.
- 3. Fill material for the habitat mounds will only be taken from borrow areas as shown on sheets 4A - 4C of 11 and to designated depths.
- 4. Habitat mounds must be smooth enough to allow owner to bush hog with standard equipment.
- 5. Do not seed the habitat mounds.



YARDAGE cu.yds.	SEEDED AREA	TOP	TOP VIDTH	1 CNCT	
		ELEVATION	ft.	LENGTH ft.	SLOPES
1090	N/A	744	varies	varies	4:1
610	N/A	744	varles	varies	(4:1
730	N/A	744	varles	varies	4:1
690	N/A	744	varies	varles	4:1
510	N/A	744	varies	varies	4:1
350	N/A	744.5	varies	varles	4:1
500	N/A	744.5	varles	varies	4:1
4480					
_	610 730 690 510 350 500	610 N/A 730 N/A 690 N/A 510 N/A 350 N/A 500 N/A	610 N/A 744 730 N/A 744 690 N/A 744 510 N/A 744 350 N/A 744.5 500 N/A 744.5	610 N/A 744 varies 730 N/A 744 varies 690 N/A 744 varies 510 N/A 744 varies 350 N/A 744.5 varies 500 N/A 744.5 varies	610 N/A 744 varies varies 730 N/A 744 varies varies 690 N/A 744 varies varies 510 N/A 744 varies varies 350 N/A 744.5 varies varies 500 N/A 744.5 varies varies

(Not to Scale)

TOP WIDTH LENGTH SIDE

SLOPES

SPOIL AREA SUMMARY

TOP

ELEVATION

YARDAGE SEEDED AREA

NAME

NOTES

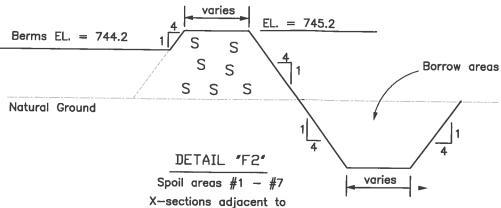
- 1. The perimeter of the spoil areas will be flagged by NRCS. The contractor will be responsible for staking the toes of the slopes.
- 2. Do not strip the areas where the spoil areas will be built before placing fill.

3.	Fill material for the spoil areas will only be taken from borrow areas as shown on	Spoil area. #1	2330	N/A	745.2	N/A	N/A	4/1
	sheets 4A - 4C of 11 and to designated depths.	Spoil area, #2	1450	N/A	745.2	N/A	N/A	10:1
4.	Spoil areas must be smooth enough to allow owner to bush hog with standard equipment.	Spoll area, #3	2060	N/A	745.2	N/A	N/A	10:1
	Do not seed the spoil greas.	Spoil area. #4	950	N/A	745.2	N/A	N/A	4:1
		Spoll area. #5	1660	N/A	745.2	N/A	N/A	4:1
		Spoil area. #6	1400	N/A	745.2	N/A	N/A	4:1
		Spoil area. #7	410	N/A	745.2	N/A	N/A	4:1
		Spoil area. #8	310	N/A	744.2	N/A	N/A	4:1
EL. = 745.2	varies							
<u> </u>		Totalı	10,570					
4	$S S \times 4$							
1 /	S S S S S							

/ S S S S \

Natural Ground

DETAIL "F1" Spoil areas #1 - #7 x-sections



berms and/or borrow areas

Berm #7 EL. = 744.2 EL. = 744.2S S S S S S S S Natural Ground DETAIL "F3"

> Spoil area #8 x-sect. adjacent to berm #7

(Not to Scale)

02-01-2013 02-01-2013 Bruce Embrey ed J.A. Gibson J.A. Gibson

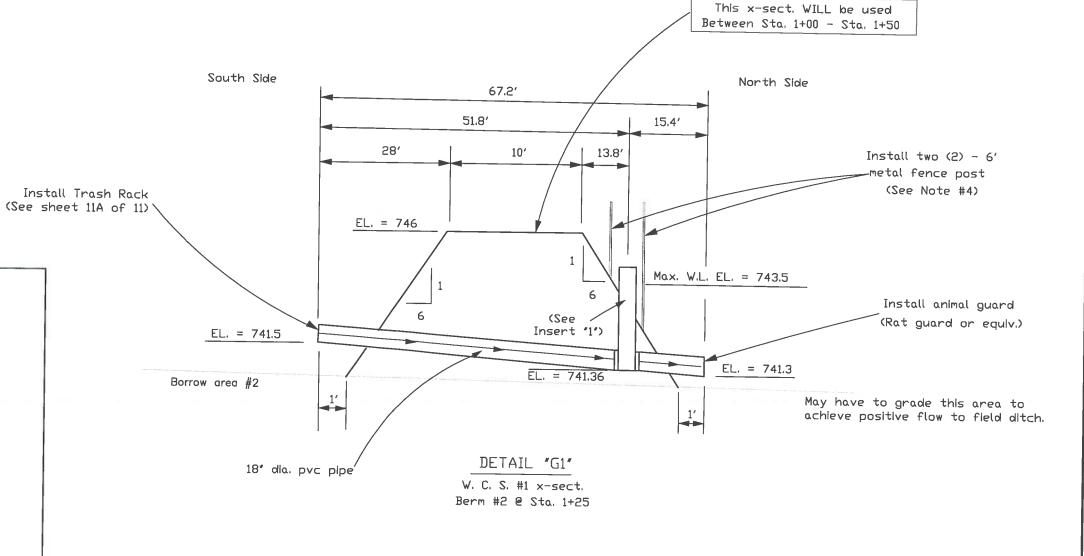
WETLAND AREA DETAILS FINANCIAL & SPOIL MOUND VIEW SKY HABITAT M

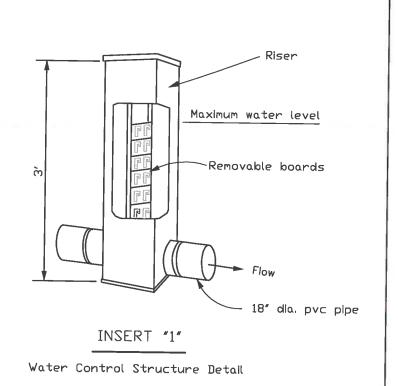
Drawing Name

4/22/13 9:44 Sheet 9 of 11

- 1. Water control structure #1 will be a 3' tall (min. 22.5" weir length) Agri-Drain, ADS or equivalent inline water level control structure and 68' of 18" dia. SDR 35 pvc pipe conforming to ASTM D3034 or PS46 pvc pipe conforming to ASTM F679.
- 2. ALL pipe joints and structure connections must be water tight. The contractor shall be fully responsible for any and all work required to correct leakage.
- 3. Locate any short sections of pipe immediately adjacent to the structure.
- 4. Fence posts are needed to both identify the location and protect the water control structure's riser.
- 5. Fill around water control structure's riser WILL be approximately 0.5' below the top of the riser.

- 6. Rubber tire, hand or manually directed power tamper will be used on backfill around all pipes and structures. Water packing will be allowed.
- 7. Construct a smooth and maintainable transition from this reach to adjacent reaches.
- 8. Inspection by NRCS of water control structure and pipes is required. Contractor must give 24 hours notice before work on water control structure begins.
- 9. Contractor will spray with red paint a line at EL. = 743.5 on inside of WCS to show the maximum water level.
- 10. May have to trim the top board to achieve the correct water line elevation in the water control structure





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02-01-2013 02-01-2013 04-01-2013 04-04-2013 Gibson

S DETAIL STRUCTURE FINANCIAL CONTROL WATER

Drawing Name

4/22/13 9:44 Sheet 10A of 11

- 1. Water control structure #2 will be a 2' tall (min. 14" weir length) Agri-Drain, ADS or equivalent inline water level control structure and 62' of 12" dia. SDR 35 pvc pipe conforming to ASTM D3034.
- 2. ALL pipe joints and structure connections must be water tight. The contractor shall be fully responsible for any and all work required to correct leakage.
- 3. Locate any short sections of pipe immediately adjacent to the structure.
- 4. Fence posts are needed to both identify the location and protect the water control structure's riser.
- 5. Fill around water control structure's riser WILL be approximately 0.5' below the top of the riser.

Riser

Maximum water level

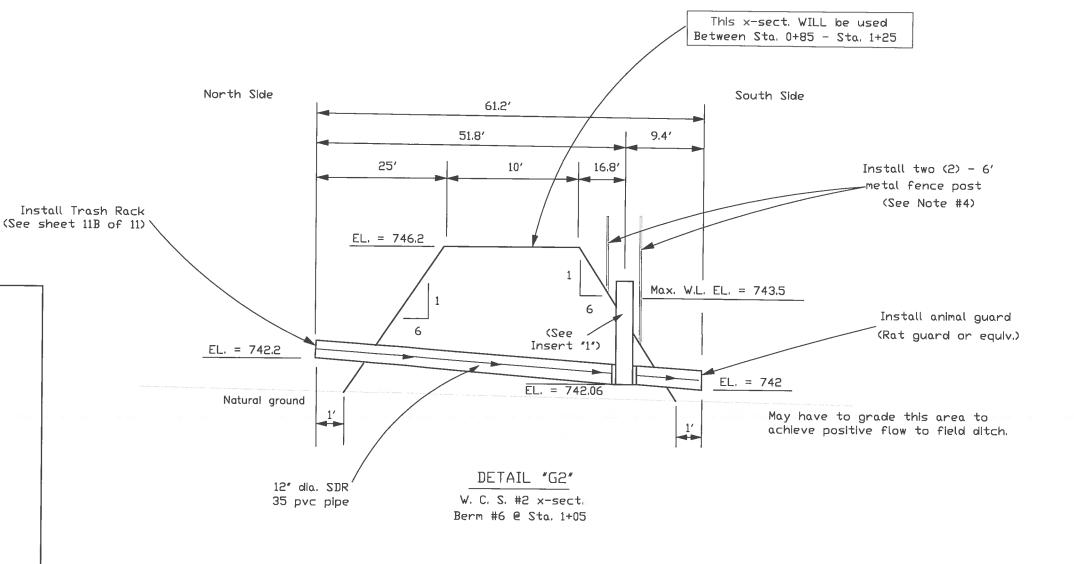
INSERT "1"

Water Control Structure Detail

Removable boards

12" dla. pvc plpe

- 6. Rubber tire, hand or manually directed power tamper will be used on backfill around all pipes and structures. Water packing will be allowed.
- 7. Construct a smooth and maintainable transition from this reach to adjacent reaches.
- 8. Inspection by NRCS of water control structure and pipes is required. Contractor must give 24 hours notice before work on water control structure begins.
- 9. Contractor will spray with red paint a line at EL. = 743.5 on inside of WCS to show the maximum water level.
- 10. May have to trim the top board to achieve the correct water line elevation in the water control structure.



NOT TO SCALE:

Date
Designed J.A. Gibson 02-01-2013

Drawn J.A. Gibson 02-01-2013

Checked Bruce Embrey 04-01-2013

Approved J.A. Gibson 04-04-2013

SKY VIEW FINANCIAL WETLAND WATER CONTROL STRUCTURE DETAILS

United States Department of Agriculture
Natural
Resource
Corservation
Service
WETS 4
727 P.CA. Rd.
Warransburg, MO 64093

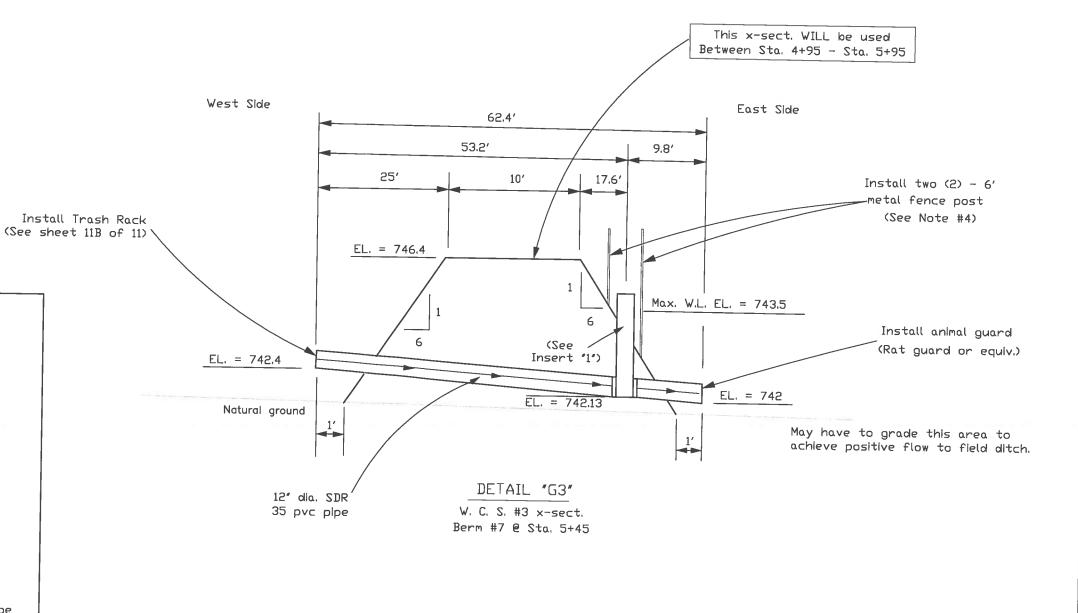
File Name

Drawing Name

4/22/13 9:44 Sheet 10B of 11

- 1. Water control structure #3 will be a 2' tall (min. 14" weir length) Agri-Drain, ADS or equivalent inline water level control structure and 63' of 12" dia. SDR 35 pvc pipe conforming to ASTM D3034.
- 2. ALL pipe joints and structure connections must be water tight. The contractor shall be fully responsible for any and all work required to correct leakage.
- 3. Locate any short sections of pipe immediately adjacent to the structure.
- 4. Fence posts are needed to both identify the location and protect the water control structure's riser.
- 5. Fill around water control structure's riser WILL be approximately 0.5^{\prime} below the top of the riser.

- 6. Rubber tire, hand or manually directed power tamper will be used on backfill around all pipes and structures. Water packing will be allowed.
- 7. Construct a smooth and maintainable transition from this reach to adjacent reaches.
- 8. Inspection by NRCS of water control structure and pipes is required. Contractor must give 24 hours notice before work on water control structure begins.
- 9. Contractor will spray with red paint a line at EL. = 743.5 on inside of WCS to show the maximum water level.
- 10. May have to trim the top board to achieve the correct water line elevation in the water control structure.



INSERT "1"

Water Control Structure Detail

Maximum water level

Removable boards

12" dla. pvc pipe

NOT TO SCALE:

Date
Designed J.A. Gibson 02-01-2013

Drawn J.A. Gibson 02-01-2013

Checked Bruce Embrey 04-01-2013

Approved J.A. Gibson 04-04-2013

SKY VIEW FINANCIAL WETLAND VATER CONTROL STRUCTURE DETAILS

United States Department of Agriculture

Resources

METS 4

727 P.C., Rd.

Morrensburg, MO 64093

Drawing Name

4/22/13 9:44

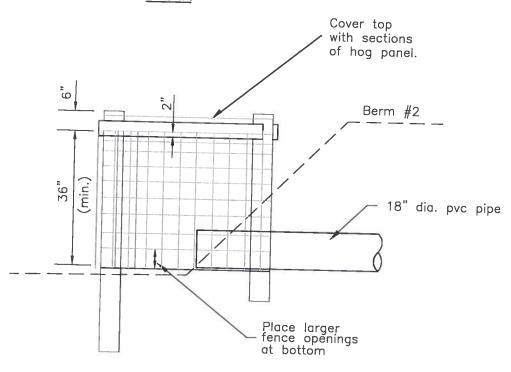
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Drawing Name

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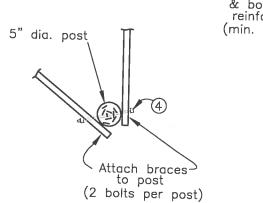
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3 6	
Trimmed 2	
(See Post Detail "H1")	

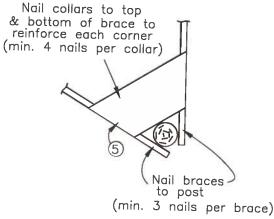
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SIDE ELEVATION

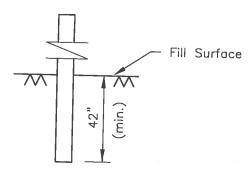
		BILL OF MATERIALS	
MARK	QUAN	DESCRIPTION	T
1	2	5" Dia. Wood Post — Pressure Treated	LENGTH
2	1	5" Dia. Wood Post — Pressure Treated	7'-0"
3	4	2"x 6" Wood Brace - Pressure Treated	8-0"
4	6	3/8" Bolt w/nut & washers (Galv or paint w/asphaltic materials)	8'-0"
5	6	2"x6" Collar - Pressure Treated (optional for 3/8" bolts)	
		16d common Nails — Hot Dipped Galvanized or Stainless steel	
		Wire Staples - Hot Dipped Galvanized or Stainless steel	1 2 2 1
6	4	Feedlot Panels - Min. 36" High	1 1/4"
		oo riigii	8'-0"





<u>STANDARD</u>

OPTIONAL DETAIL



POST ANCHORAGE

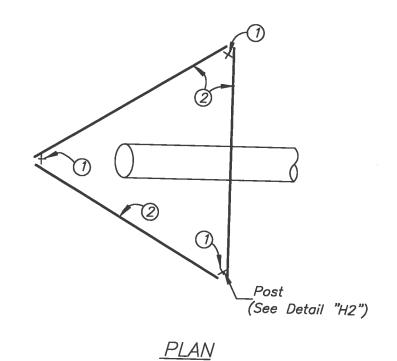
NOTES:

- 1. Minimum height of hog panel to be 34" or 52" for cattle panel. The minimum length of Mark 1 posts to be 7' for hog panel and 8 1/2' for cattle panel.
- 2. The feedlot panels shall be fastened to each post and brace with 2 strands per loop of 10 gage insulated copper wire securely twisted. Insulation can be THHN or THWN. Spacing of wire loops shall not exceed 2 feet with minimum 2 loops per post and 5 loops per brace.
- 3. Panels shall be 1/4" galvanized steel rods welded together to form a panel. Maximum spacing of rods shall be 6 inches vertical and 8 inches horizontal.
- 4. Panels placed across top shall be securely fastened together as shown in Note 2. Trim panels to fit.
- 5. This detail shall only be used on low head, low velocity wetland pipes. 6. Trim Mark 3 top brace as needed. Nail to top of other Mark 3 braces.
- 7. Bronzed 3" long deck screws may be used in lieu of galvanized 16d common nails.

Revised 9/07

NOT TO SCALE:

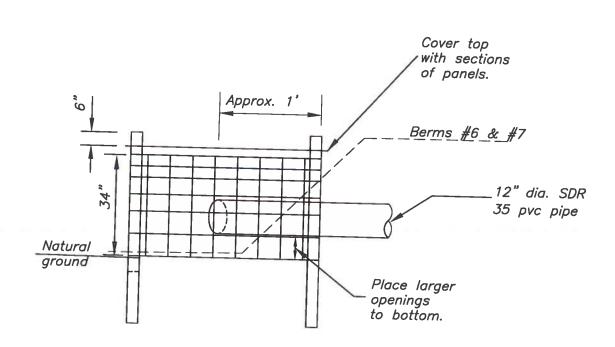
(LARGE)



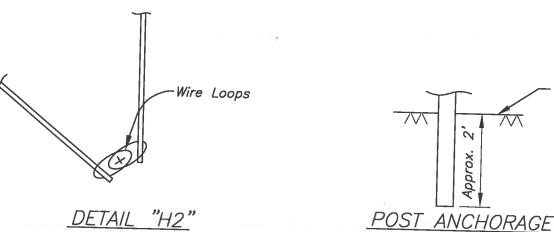
		BILL OF MATERIALS (EACH)	
MARK	QUAN	DESCRIPTION	
1	3	Metal T-Post	LENGTH
_2	4	Panels – Min. 34" high	min 5 1/2
3		Wire Loops (as needed)	4'-0"

NOTES:

- 1. Minimum height of hog panel to be 34" or 52" for cattle panel. The minimum length of Mark 1 posts to be 5 1/2' for hog panel and 7' for cattle panel.
- 2. The feedlot panels shall be fastened to each post with 2 strands per loop of 10 gage insulated copper wire securely twisted. Insulation can be THHN or THWN. Spacing of wire loops shall not exceed 2' with minimum 2 loops per post.
- 3. Panels shall be 1/4" galvanized steel rods welded together to form a panel. Maximum spacing of rods shall be 6" vertical and 8" horizontal.
- 4. Panels placed across top shall be securely fastened together as described in Note 2 and trimmed to fit.
- 5. This trash rack detail shall only be used on low head, low velocity wetland pipes.



SIDE ELEVATION



Fill Surface

(SMALL)

02-01-2013

VIEW FINANCIAL WETLAND TRASH RACK DETAILS SKY

Drawing Name

4/22/13 9:44 Sheet 11B of 11

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