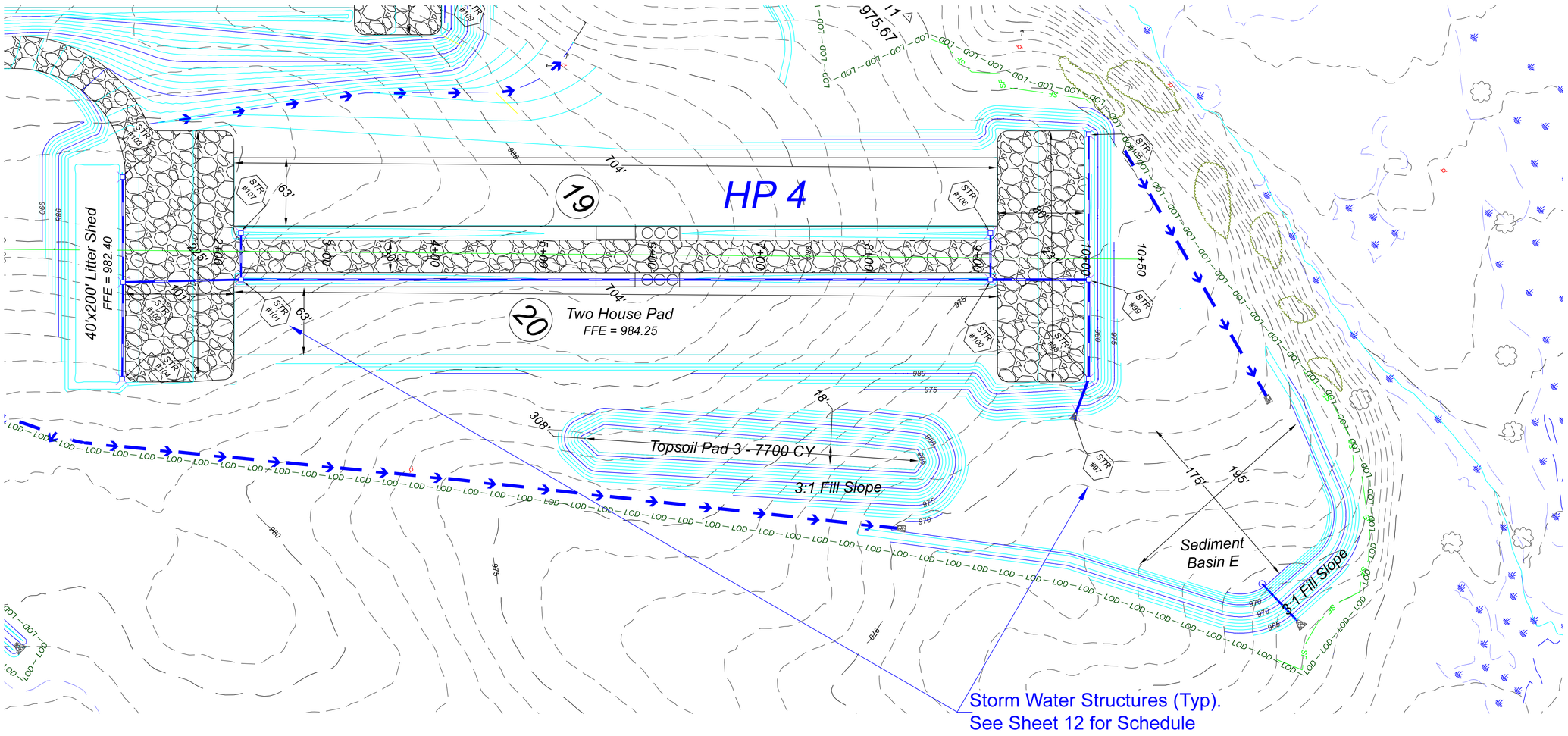
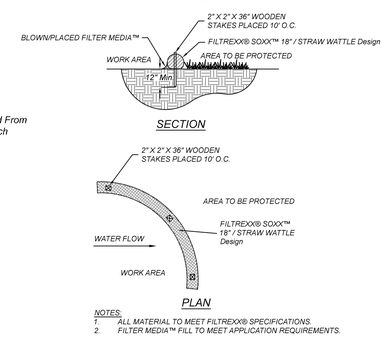
PAD 4 HOUSES 19 AND 20



FILTREXX "SOXX" 18" FILTER SOCK AND STRAW WATTLE DETAIL
NTS



NOTES:
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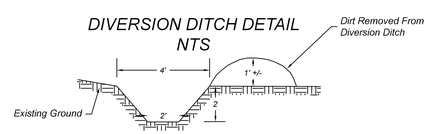
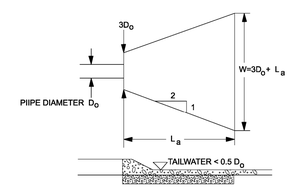
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.

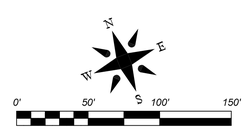
DIVERSION DITCH DETAIL
NTS



NOTE: Ditch to have 0.5 to 1% flow line grade.
Line with TRM and Install Check Dams



RIP RAP ARPRON OUTLET PROTECTION
MINIMUM TAILWATER CONDITION



Legend

- Existing 1' Contour
- 1330 Existing 5' Contour
- Existing Tree Line
- Existing Utility Line / Pole
- Surface Owner Property Line
- LOD Limits of Disturbance
- Proposed Diversion Ditch
- Proposed 1' Contour
- Proposed 5' Contour
- SF Proposed Super Silt Fence
- Proposed Storm Water Sewer
- Proposed Culvert W/ Inlet & Outlet Protection
- SW Proposed Straw Wattles
- SSXX Proposed Silt Soxx w/ Diameter
- Proposed 1' Road Contour
- Proposed 5' Road Contour
- Proposed Rip-Rap

* Silt Soxx Diameter in Inches
* 18" Silt Soxx Can be Substituted for Super Silt Fence in non-concentrated flow areas.

DATE	REVISIONS

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

L&W ENTERPRISES, INC.
PO BOX 826
190 SOUTH GROVE ST.
PETERSBURG, WV 26847
PH: 304-257-4818
FAX: 304-257-2224
EMAIL: KIRKWILSONLW@OUTLOOK.COM

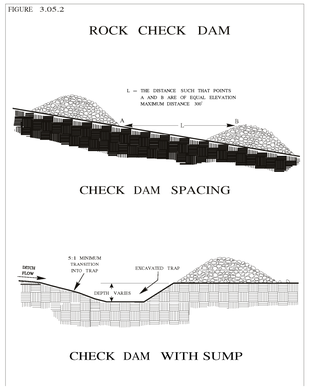
L & W Enterprises Incorporated

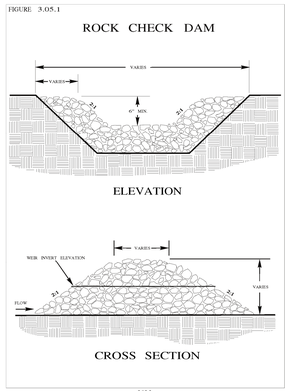
THIS DOCUMENT PREPARED FOR WV POULTRY PARTNERS 1, LLC.

PAD 4 HOUSES 19 AND 20
WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

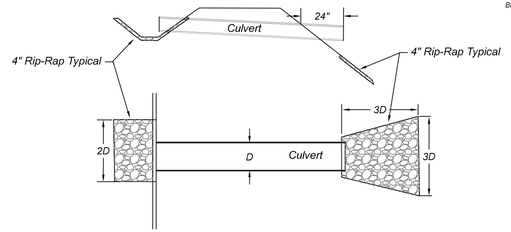
Date: 6/11/19
Scale: 1" = 50'
Designed By: CKW
File No. WVPP1 4-19

CONSTRUCTION DETAILS AND SOILS REPORT





TYPICAL CULVERT & CULVERT INLET AND OUTLET PROTECTION DETAIL
NTS



FILTREXX "SOXX" 18" FILTER SOCK AND STRAW WATTLE DETAIL
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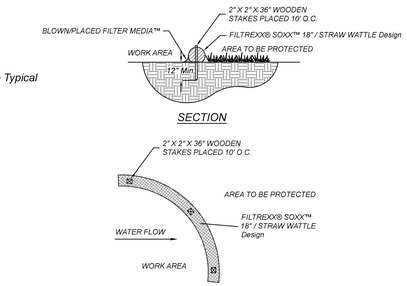

NOTES:
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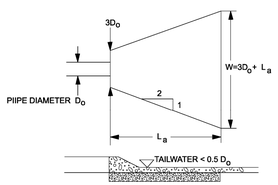


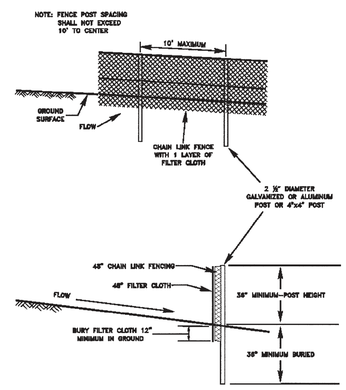
RIP RAP ARPRON OUTLET PROTECTION
MINIMUM TAILWATER CONDITION

TABLE 6.7
COMPARISON OF VARIOUS GRADATIONS OF COARSE AGGREGATES
TOTAL PERCENT PASSING

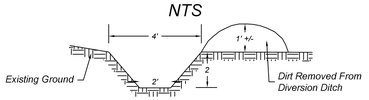
AASHTO NUMBER	6 ½"	4"	3 ½"	2 ½"	2"	1 ½"	3/4"	1/2"	3/8"	#4	#8	#16	#30	#100
1		100	90-100	25-60				0-5						
3				100	90-100	0-15		0-5						
5						90-100	20-55	0-10	0-5					
57						90-100		25-60		0-10	0-5			
67						100	90-100		20-55	0-10	0-5			
7							100	90-100	40-70	0-15	0-5			
8								100	85-100	10-30	0-10	0-5		
10									100	75-100				10-30

PennDOT Publication 408, Section 703.2(c), Table C

SUPER SILT FENCE



DIVERSION DITCH DETAIL
NTS



NOTE: Ditch to have 0.5 to 1% flow line grade.
Line with TRM and Install Check Dams

Diversion Ditch Design (Non-Erodible)

Channel Type: Trapezoidal, Equal Side Slopes
Dimensions: Left Side Slope 1.00:1
Right Side Slope 1.00:1
Base Dimension: 2.00

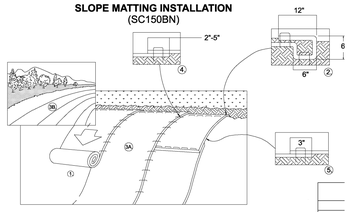
Wetted Perimeter: 7.66
Area of Wetted Cross Section: 8.00

Channel Slope: 1.0000
Manning's n of Channel: 0.0356

Discharge: 34.38 cfs
Depth of Flow: 2.00 feet
Velocity: 4.30 fps

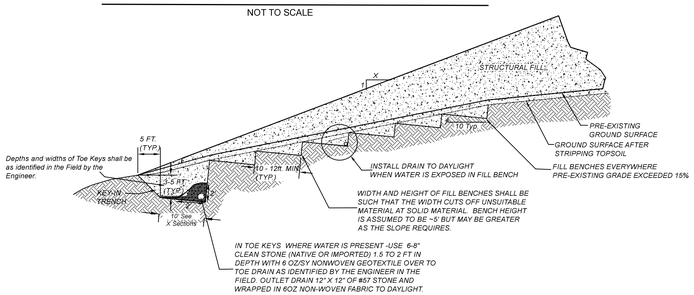
Channel Lining: 6 inch Rock Rip-Rap
Freeboard: 1.00 feet

SLOPE MATTING INSTALLATION
(SC150BN)

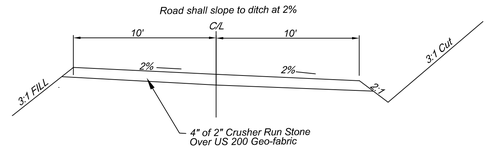


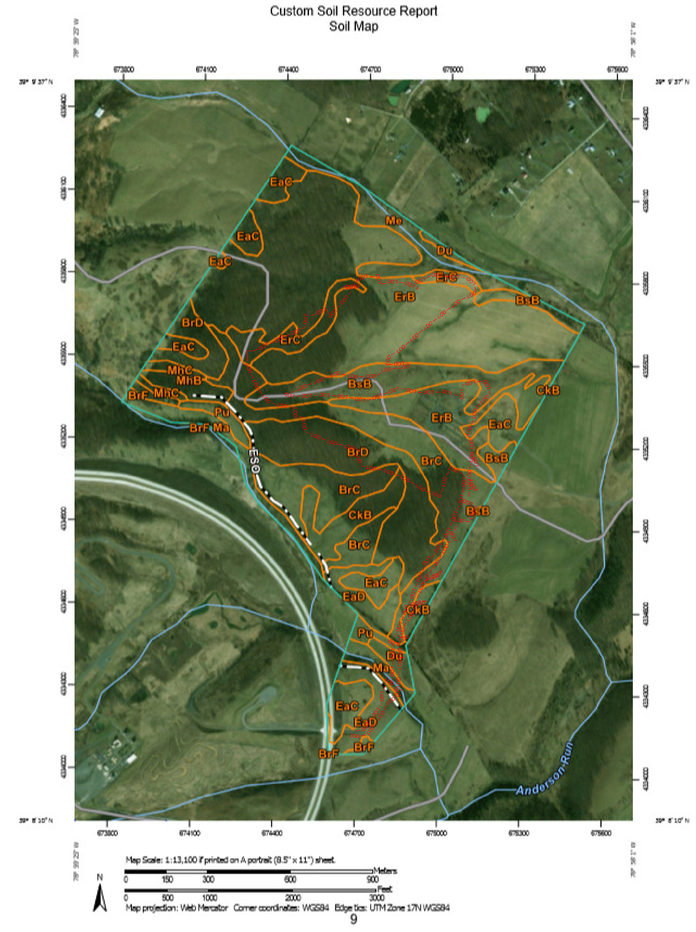
1. SPREAD A MINIMUM OF 6" OF TOPSOIL ONTO SLOPES BEFORE INSTALLATION OF SLOPE MATTING.
2. PREP SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER, LIME, AND SEED, WHEN NECESSARY.
3. BEGIN AT THE TOP OF THE SLOPE BY SECURING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
4. ROLL THE BLANKETS
(A) DOWNHILL
(B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE.
5. ALL BLANKETS MUST BE FASTENED TO SOIL SURFACE IN A SECURE MANNER BY PLACING STAPLES/STAKES IN LOCATIONS AS SHOWN IN THE PATTERN GUIDE.
6. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLIE DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM POSITION, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET. FOLLOW MANUFACTURERS RECOMMENDATIONS.
7. SUCCESSIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH.
8. IF SOIL CONDITIONS ARE LOOSE, STAKED OR STAPLED LENGTHS GREATER THAN 6" MAY BE NECESSARY TO SECURE THE BLANKETS PROPERLY.

TYPICAL TOE KEY AND FILL BENCH DETAIL
NOT TO SCALE



Typical Access Road Cross Section





Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrC	Berks-Weikert channery silt loams, 8 to 15 percent slopes	61.4	15.1%
BrD	Berks-Weikert channery silt loams, 15 to 25 percent slopes	43.4	10.7%
BrF	Berks-Weikert channery silt loams, 25 to 70 percent slopes	2.1	0.5%
BsB	Brinkerton variant silt loam, 3 to 8 percent slopes	31.4	7.7%
CkB	Clarksburg channery silt loam, 3 to 8 percent slopes	13.9	3.4%
Du	Dunning silty clay loam	4.3	1.1%
EaC	Edom silt loam, 8 to 15 percent slopes	25.8	6.4%
EaD	Edom silt loam, 15 to 25 percent slopes	17.5	4.3%
ErB	Ernest silt loam, 3 to 8 percent slopes	152.0	37.5%
ErC	Ernest silt loam, 8 to 15 percent slopes	10.7	2.6%
Ma	Massanetta loam	14.0	3.5%
Me	Melvin silt loam	15.6	3.8%
MhB	Monongahela silt loam, 3 to 8 percent slopes	5.1	1.3%
MhC	Monongahela silt loam, 8 to 15 percent slopes	3.1	0.8%
Pu	Purdy silt loam	5.4	1.3%
Totals for Area of Interest		**405.8**	**100.0%**

REVISIONS	
DATE	

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF VIRGINIA PROFESSIONAL ENGINEER

L&W ENTERPRISES, INC.
PO BOX 826
190 SOUTH GROVE ST.
PETERSBURG, WV 26847
EMAIL: KIRKWILSONL@OUTLOOK.COM
PH: 304-257-4818
FAX: 304-257-2224

L & W Enterprises Incorporated

THIS DOCUMENT PREPARED FOR WV POULTRY PARTNERS 1, LLC.

CONSTRUCTION DETAILS AND SOILS REPORT
WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

Date: 6/11/19
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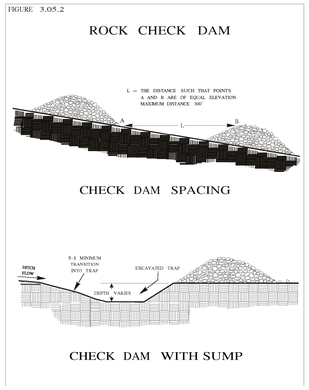

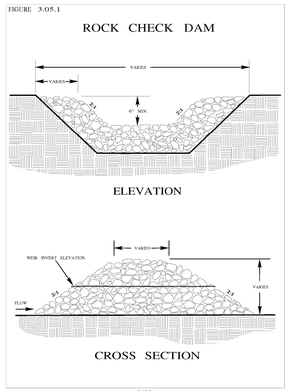

TYPICAL CULVERT & CULVERT INLET AND OUTLET PROTECTION DETAIL
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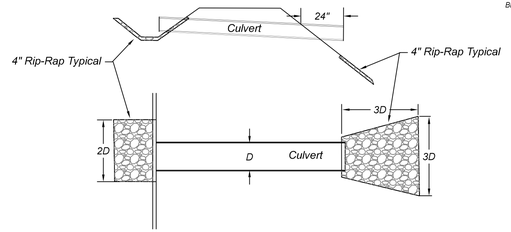

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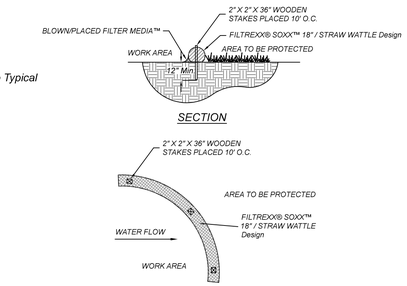

NOTES:
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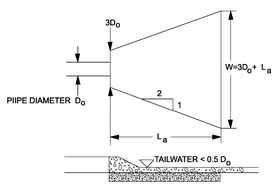

RIP RAP ARPRON OUTLET PROTECTION
MINIMUM TAILWATER CONDITION

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TOTAL PERCENT PASSING

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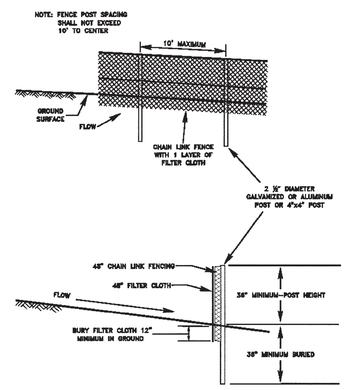
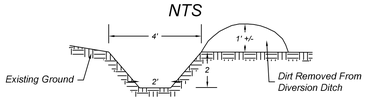
PennDOT Publication 408, Section 703.2(c), Table C

SUPER SILT FENCE



DIVERSION DITCH DETAIL
NTS



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Diversion Ditch Design (Non-Erodible)

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Dimensions: Left Side Slope 1.00:1
Right Side Slope 1.00:1
Base Dimension: 2.00

Wetted Perimeter: 7.66
Area of Wetted Cross Section: 8.00

Channel Slope: 1.0000
Manning's n of Channel: 0.0356

Discharge: 34.38 cfs
Depth of Flow: 2.00 feet
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SLOPE MATTING INSTALLATION
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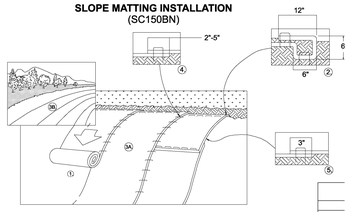

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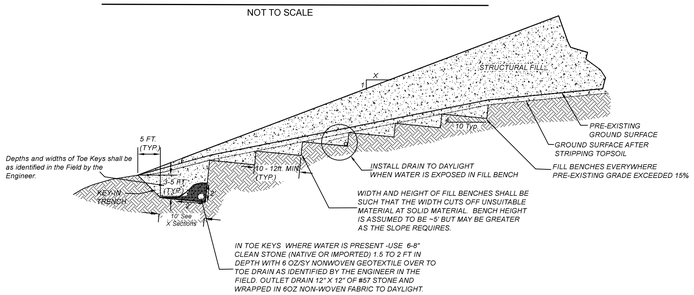
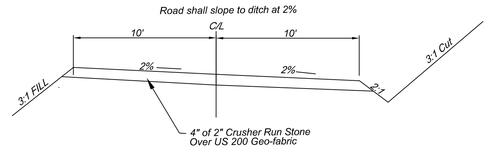
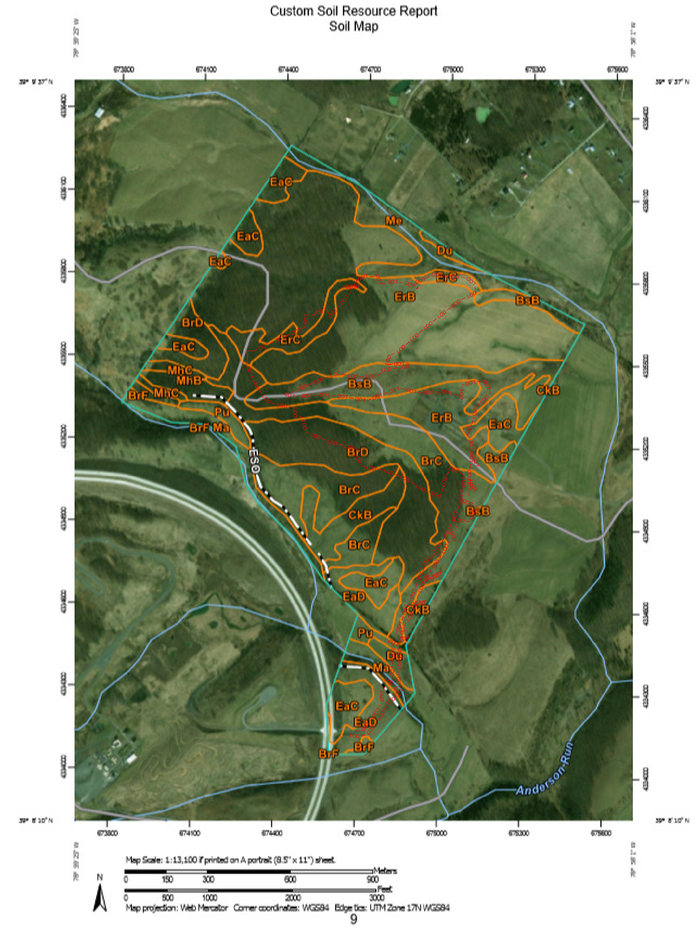


Typical Access Road Cross Section





Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BrC	Berks-Weikert channery silt loams, 8 to 15 percent slopes	61.4	15.1%
BrD	Berks-Weikert channery silt loams, 15 to 25 percent slopes	43.4	10.7%
BrF	Berks-Weikert channery silt loams, 25 to 70 percent slopes	2.1	0.5%
BsB	Brinkerton variant silt loam, 3 to 8 percent slopes	31.4	7.7%
CkB	Clarksburg channery silt loam, 3 to 8 percent slopes	13.9	3.4%
Du	Dunning silty clay loam	4.3	1.1%
EaC	Edom silt loam, 8 to 15 percent slopes	25.8	6.4%
EaD	Edom silt loam, 15 to 25 percent slopes	17.5	4.3%
ErB	Ernest silt loam, 3 to 8 percent slopes	152.0	37.5%
ErC	Ernest silt loam, 8 to 15 percent slopes	10.7	2.6%
Ma	Massanetta loam	14.0	3.5%
Me	Melvin silt loam	15.6	3.8%
MhB	Monongahela silt loam, 3 to 8 percent slopes	5.1	1.3%
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Pu	Purdy silt loam	5.4	1.3%
Totals for Area of Interest		**405.8**	**100.0%**

REVISIONS	
DATE	

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF VIRGINIA PROFESSIONAL ENGINEER

L&W ENTERPRISES, INC.
PO BOX 826
190 SOUTH GROVE ST.
PETERSBURG, WV 26847
EMAIL: KIRKWILSONL@OUTLOOK.COM
PH: 304-257-4818
FAX: 304-257-2224

L & W Enterprises Incorporated

THIS DOCUMENT PREPARED FOR WV POULTRY PARTNERS 1, LLC.

CONSTRUCTION DETAILS AND SOILS REPORT
WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

Date: 6/11/19
Scale:NTS
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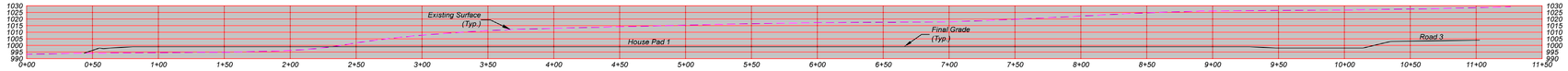
File No. WVPP1 4-19

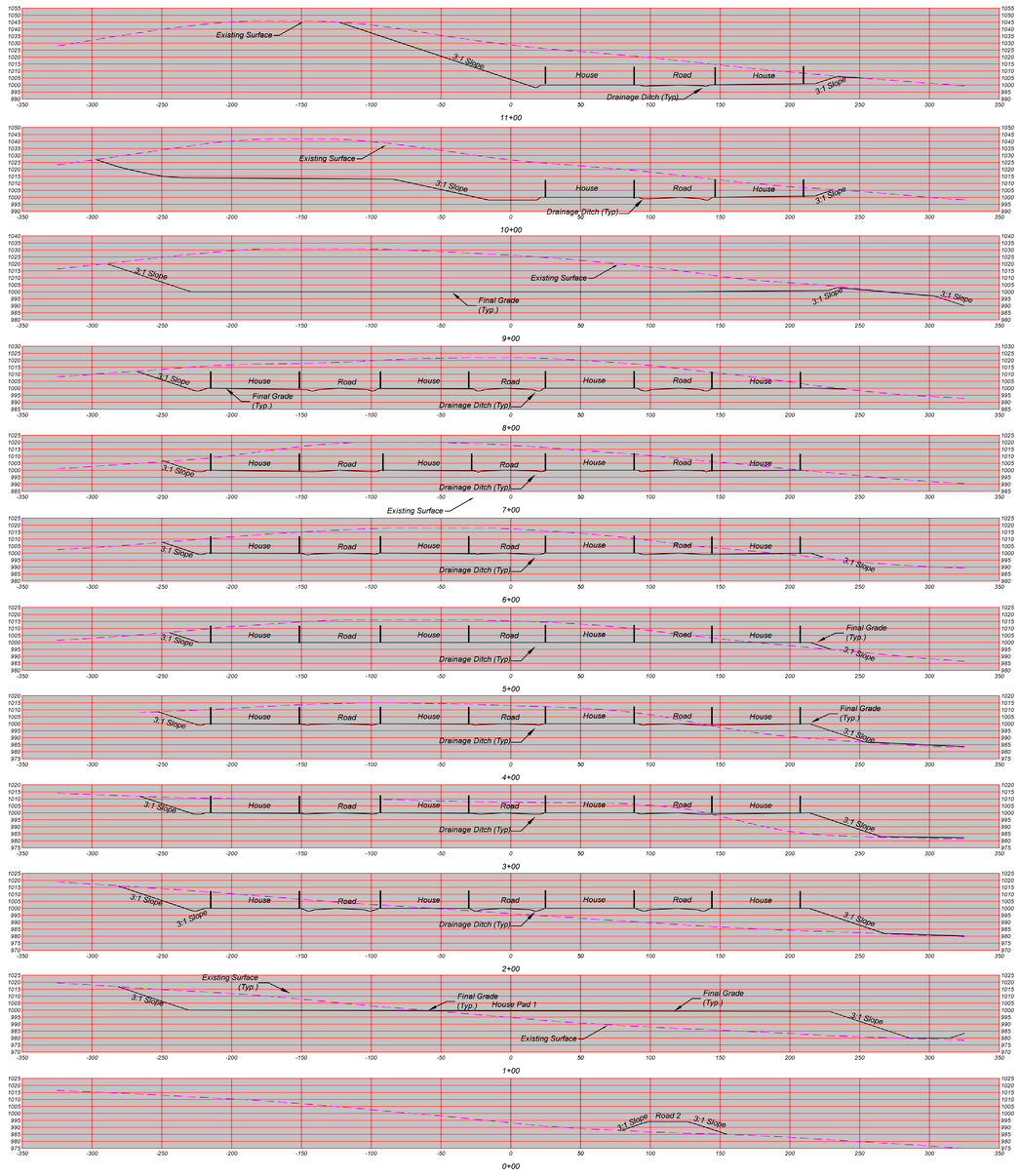
HOUSE PAD 1 PROFILE AND CROSS SECTIONS



Pad Profile

SCALE: 1" = 50'

0' 50' 100' 150'



Pad Cross Sections

SCALE: 1" = 50'

0' 50' 100' 150'

REVISIONS

DATE	

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF VIRGINIA PROFESSIONAL ENGINEER

L&W ENTERPRISES, INC.

PO BOX 826
190 SOUTH GROVE ST.
PETERSBURG, WV 26847
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PH: 304-257-4818
FAX: 304-257-2224

L & W Enterprises Incorporated

THIS DOCUMENT PREPARED FOR WV POULTRY PARTNERS 1, LLC.

HOUSE PAD 1 PROFILE AND CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN

MOOREFIELD DISTRICT
HARDY COUNTY, WV

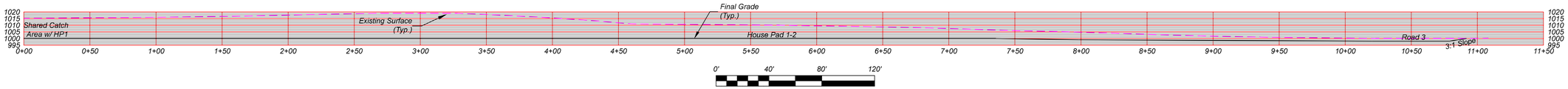
Date: 6/11/19

Scale: 1" = 50'

Designed By: CKW

File No. WVPP1 4-19

HOUSE PAD 1-2 PROFILE AND CROSS SECTIONS



Pad Profile

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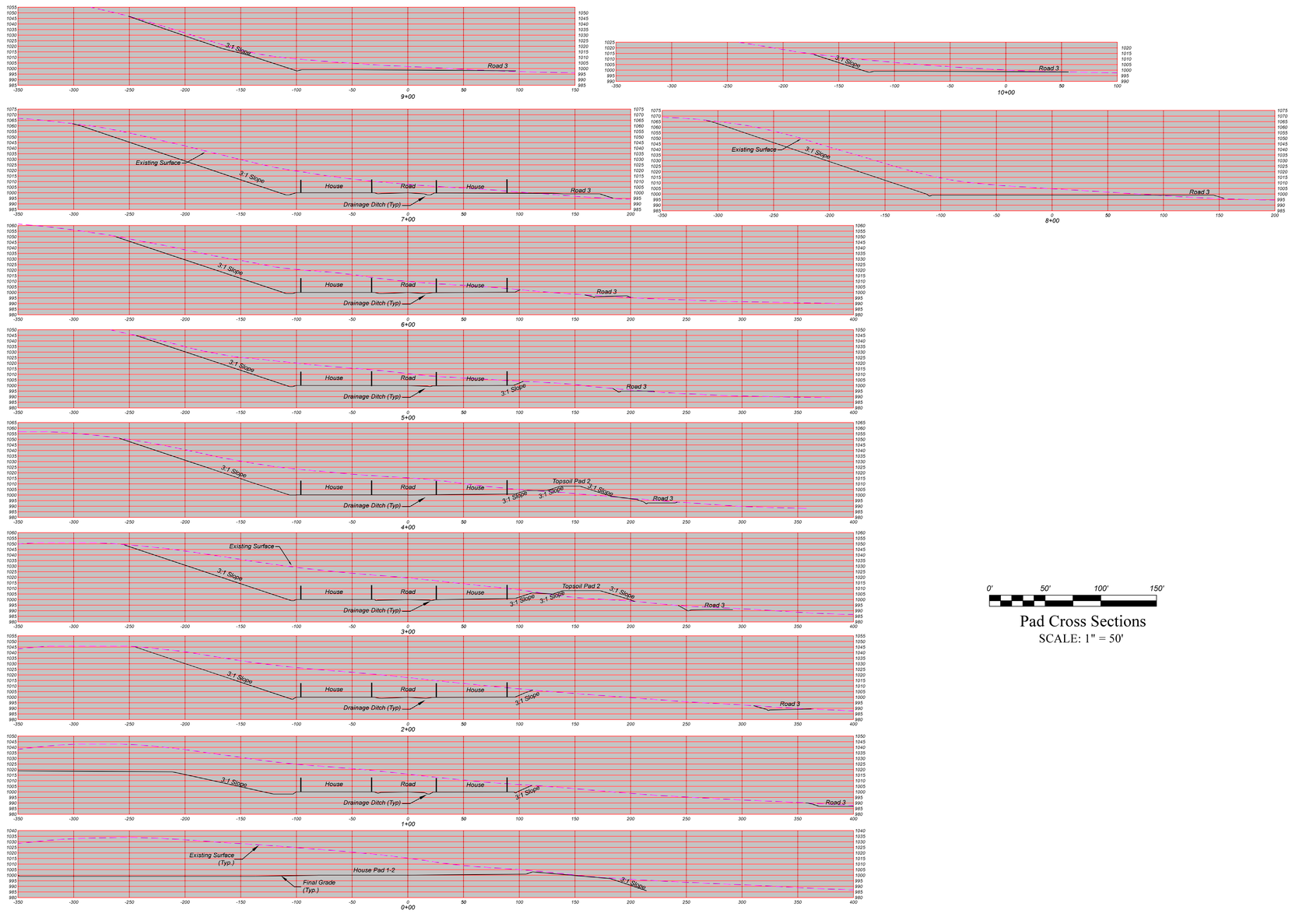

0' 50' 100' 150'

Pad Cross Sections

SCALE: 1" = 50'

REVISIONS

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WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

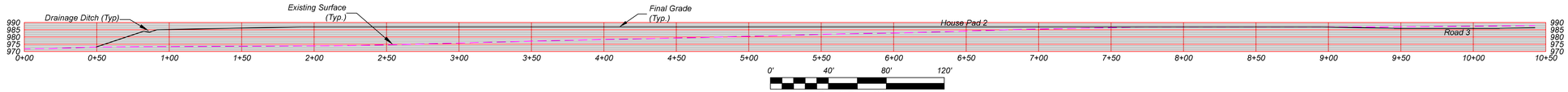
Date: 6/11/19

Scale: 1" = 40',50'

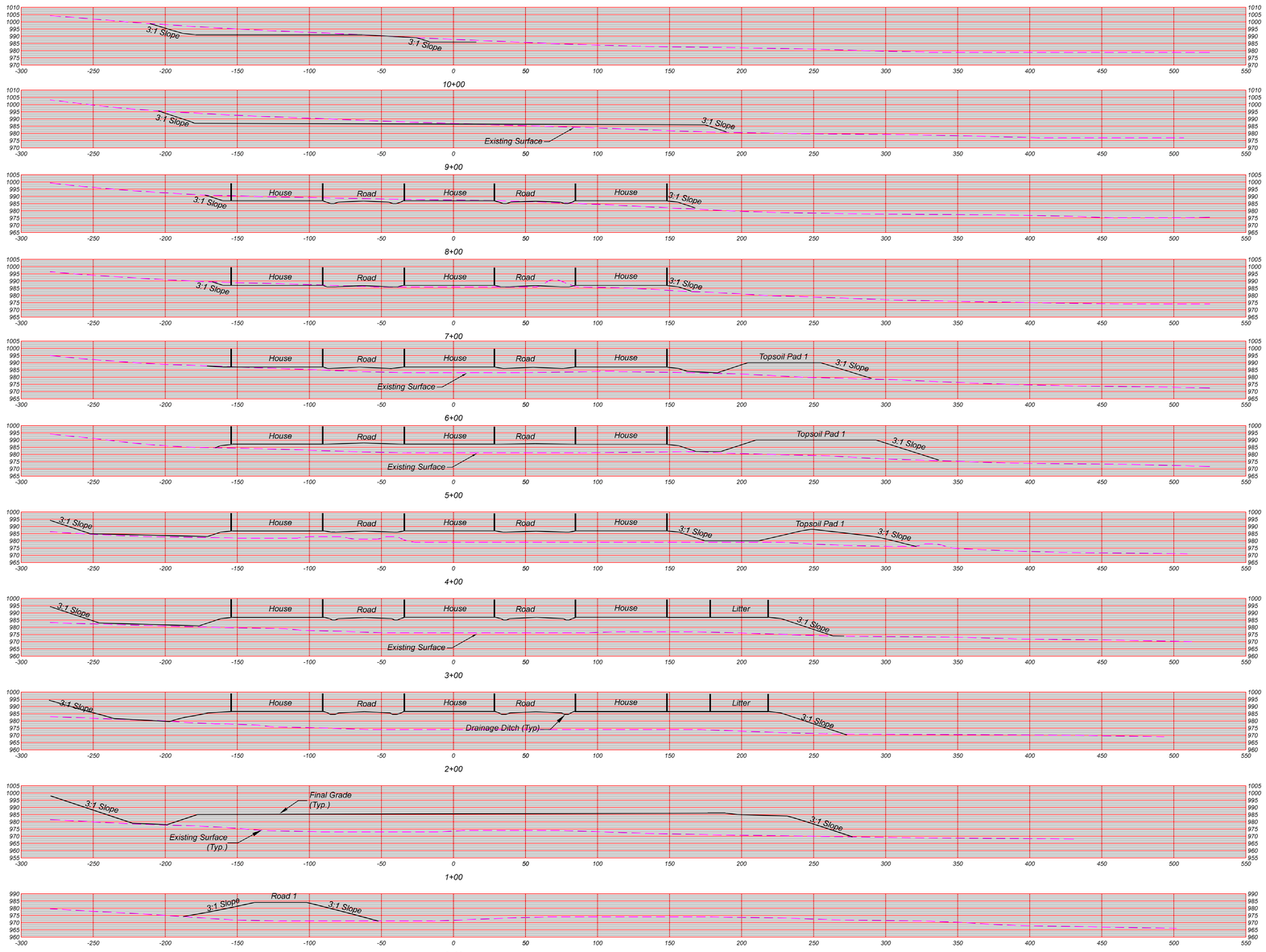
Designed By: CKW

File No. WVPP1 4-19

HOUSE PAD 2 PROFILE AND CROSS SECTIONS



Pad Profile
SCALE: 1" = 40'



0' 40' 80' 120'

Pad Cross Sections
SCALE: 1" = 40'

REVISIONS

DATE

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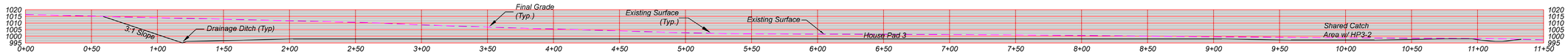
HOUSE PAD 2 PROFILE AND CROSS SECTIONS
WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

Date: 6/11/19
Scale: 1" = 40'
Designed By: CKW
File No. WVPP1 4-19
Page 25 of 31

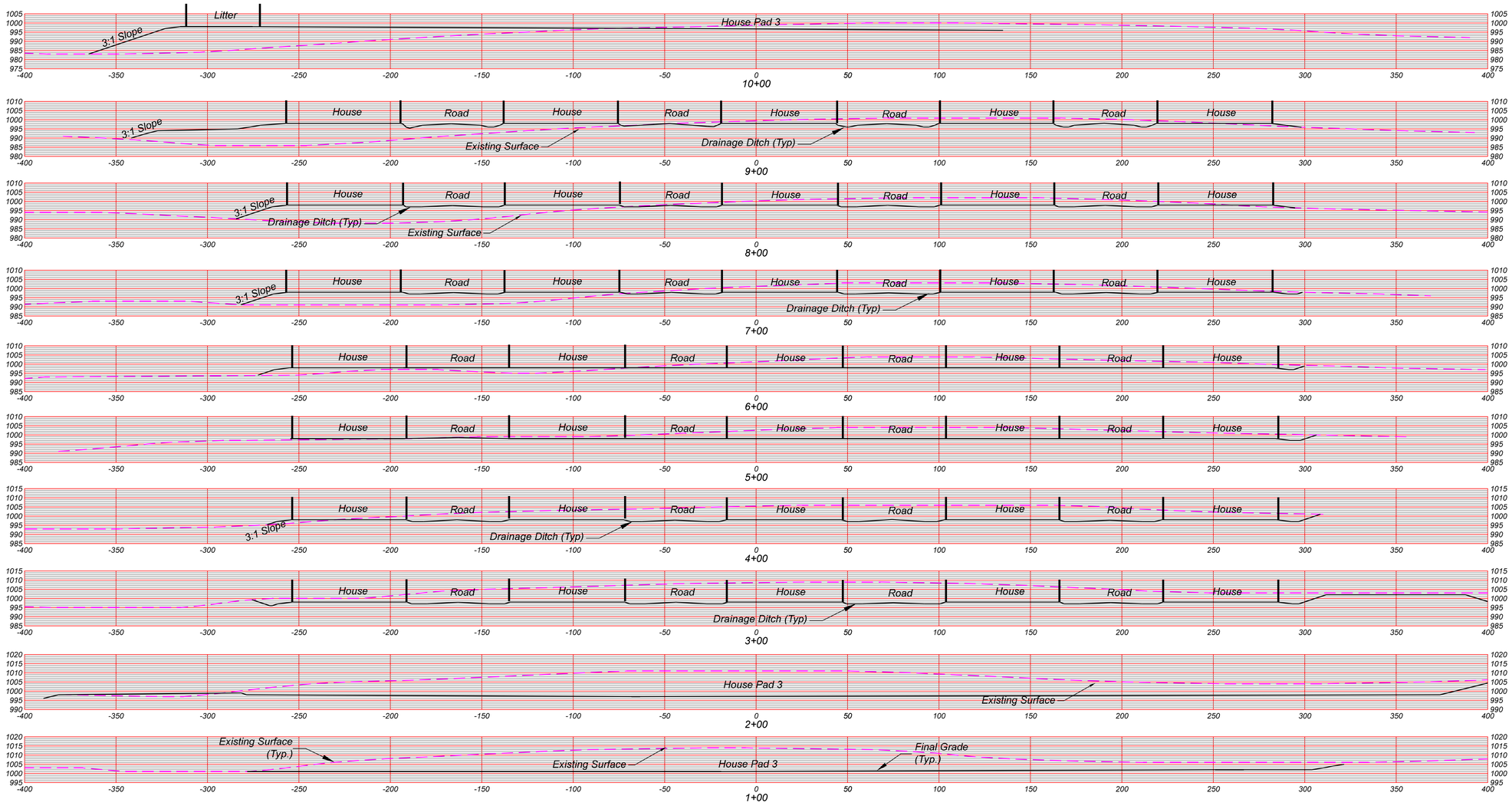
HOUSE PAD 3 PROFILE AND CROSS SECTIONS



0' 40' 80' 120'

Pad Profile

SCALE: 1" = 40'



0' 30' 60' 90'

Pad Cross Sections

SCALE: 1" = 30'

REVISIONS

DATE

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HOUSE PAD 3 PROFILE AND CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

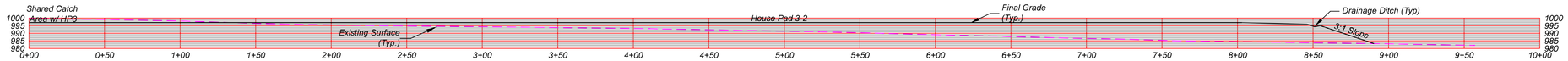
Date: 6/11/19

Scale: 1" = 30'/40'

Designed By: CKW

File No. WVPP1 4-19

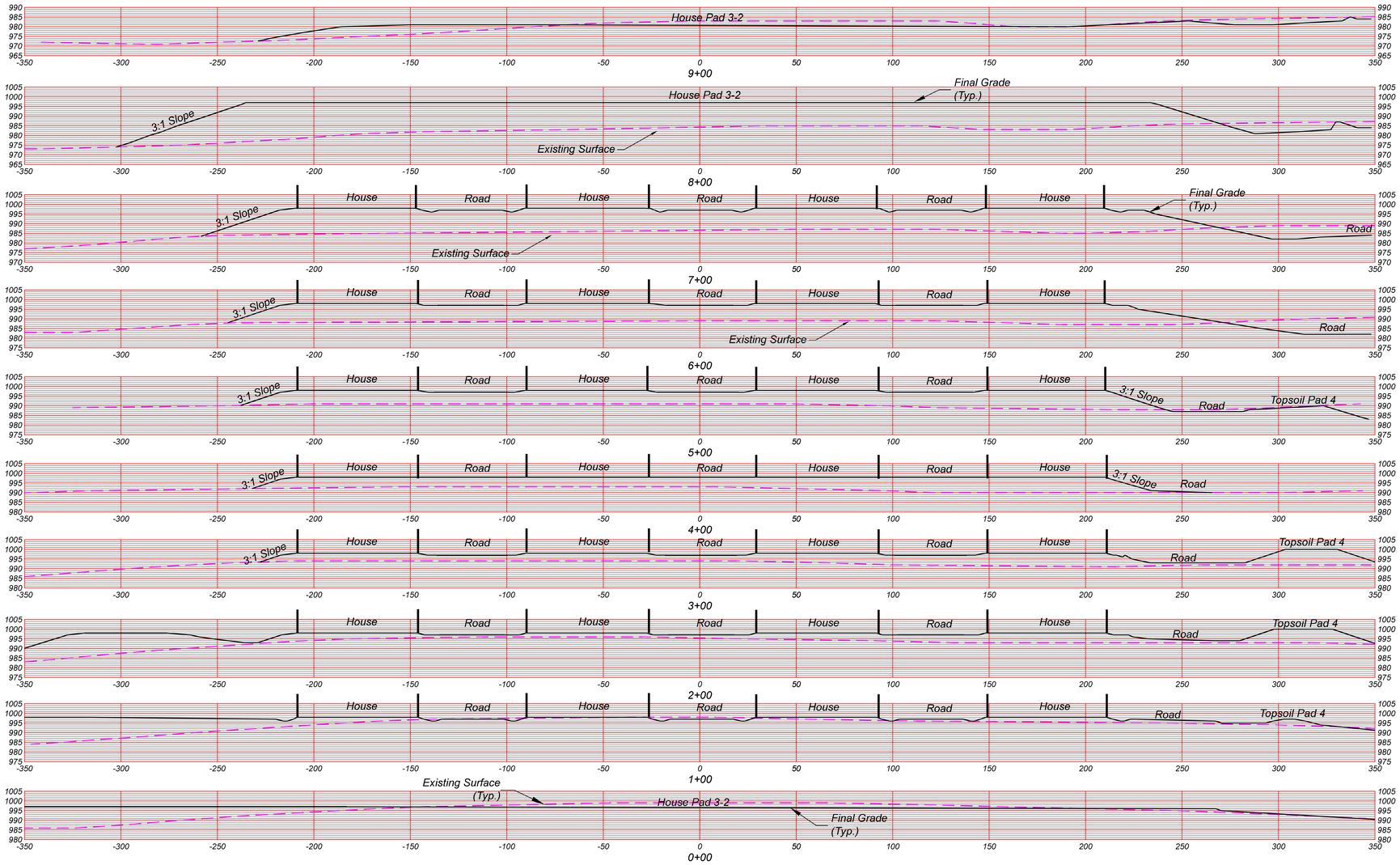
HOUSE PAD 3-2 PROFILE AND CROSS SECTIONS



0' 40' 80' 120'

Pad Profile

SCALE: 1" = 40'



0' 30' 60' 90'

Pad Cross Sections

SCALE: 1" = 30'

REVISIONS

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HOUSE PAD 3-2 PROFILE AND CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

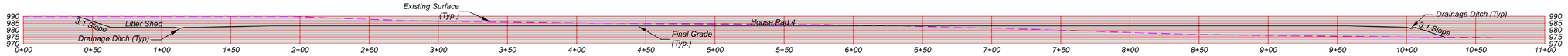
Date: 6/11/19

Scale: 1" = 30'/40'

Designed By: CKW

File No. WVPP1 4-19

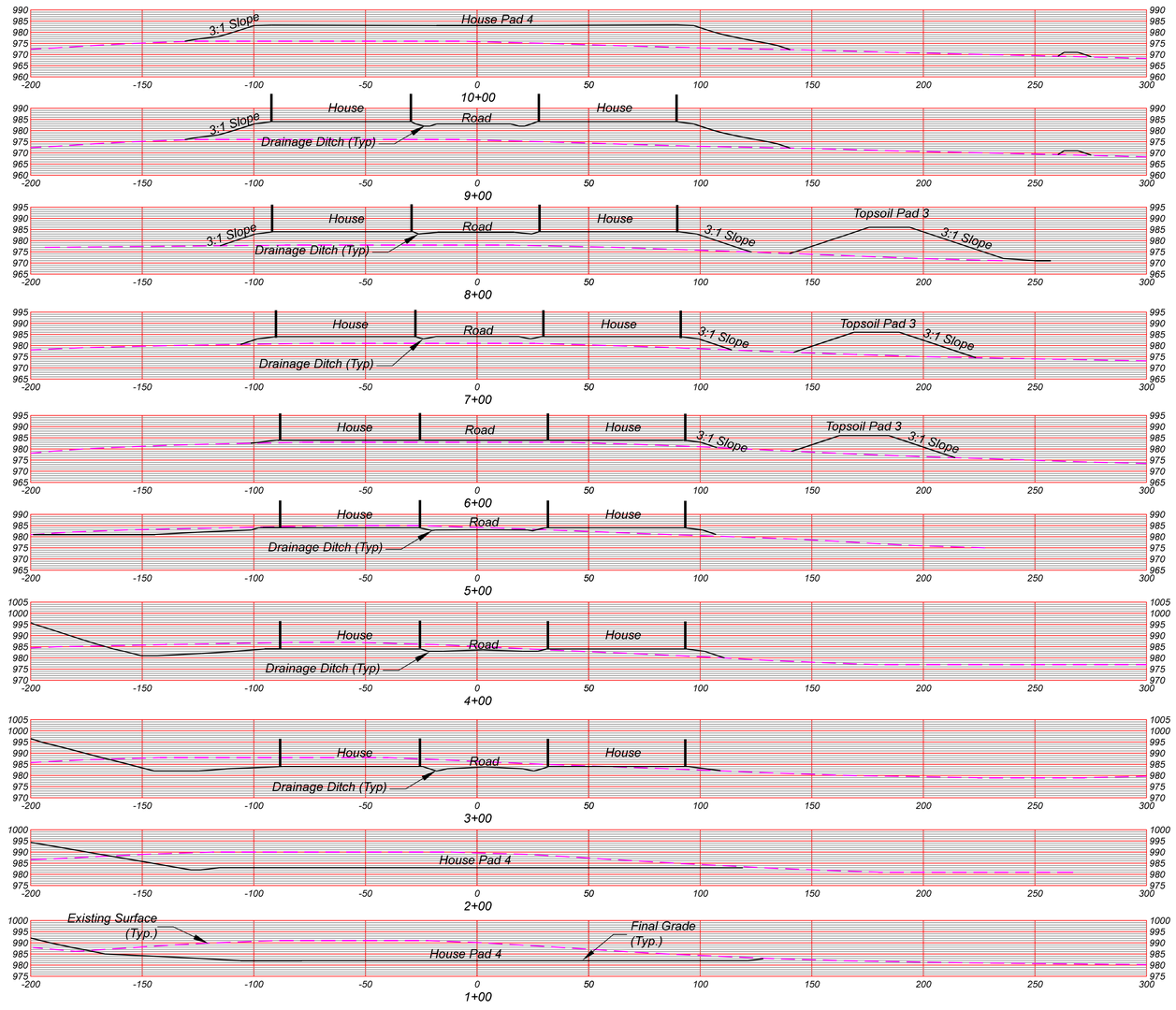
HOUSE PAD 4 PROFILE AND CROSS SECTIONS



0' 40' 80' 120'

Pad Profile

SCALE: 1" = 40'



0' 30' 60' 90'

Pad Cross Sections

SCALE: 1" = 30'

REVISIONS

DATE

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HOUSE PAD 4 PROFILE AND CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN

MOOREFIELD DISTRICT
HARDY COUNTY, WV

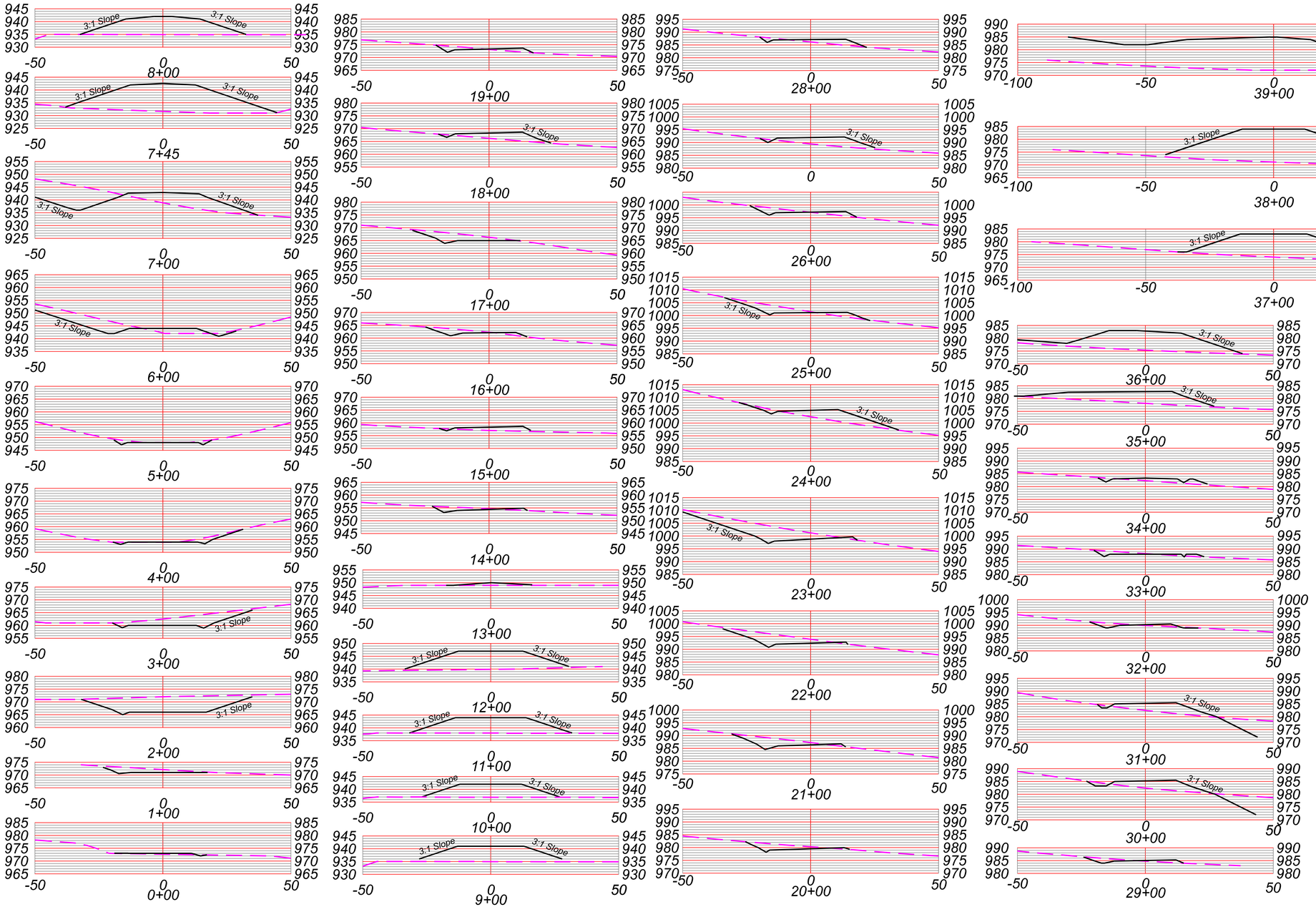
Date: 6/11/19

Scale: 1" = 30'/40'

Designed By: CKW

File No. WVPP1 4-19

ROAD 1 CROSS SECTIONS



Road 1 Cross Sections

SCALE: 1" = 20'

0' 20' 40' 60'

REVISIONS

DATE

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF VIRGINIA PROFESSIONAL ENGINEER

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ROAD 1 CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

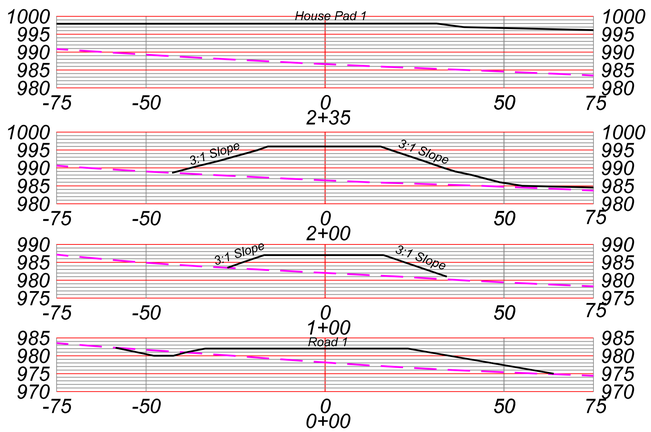
Date: 6/11/19

Scale: 1" = 20'

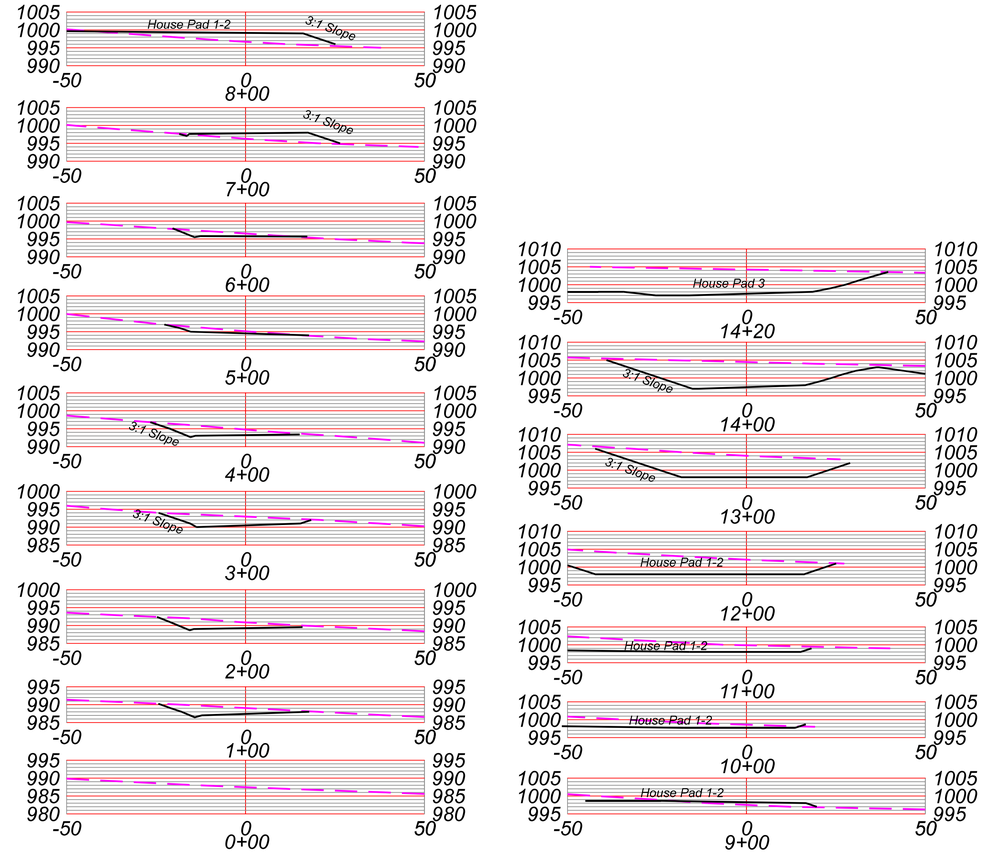
Designed By: CKW

File No. WVPP1 4-19

ROAD 2 AND 3 CROSS SECTIONS



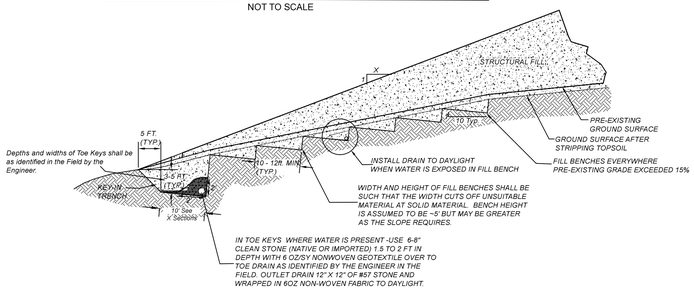
Road 2 Cross Sections
SCALE: 1" = 20'



Road 3 Cross Sections
SCALE: 1" = 20'

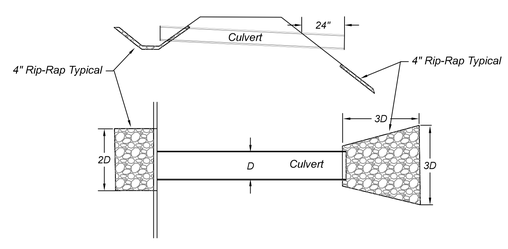
TYPICAL TOE KEY AND FILL BENCH DETAIL

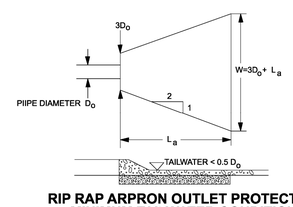
NOT TO SCALE



TYPICAL CULVERT & CULVERT INLET AND OUTLET PROTECTION DETAIL

NTS





RIP RAP ARPRON OUTLET PROTECTION
MINIMUM TAILWATER CONDITION

REVISIONS

DATE

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF VIRGINIA PROFESSIONAL ENGINEER

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FAX: 304-257-2224

L & W Enterprises Incorporated

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ROAD 2 AND 3 CROSS SECTIONS

WV POULTRY PARTNERS 1, LLC.
- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

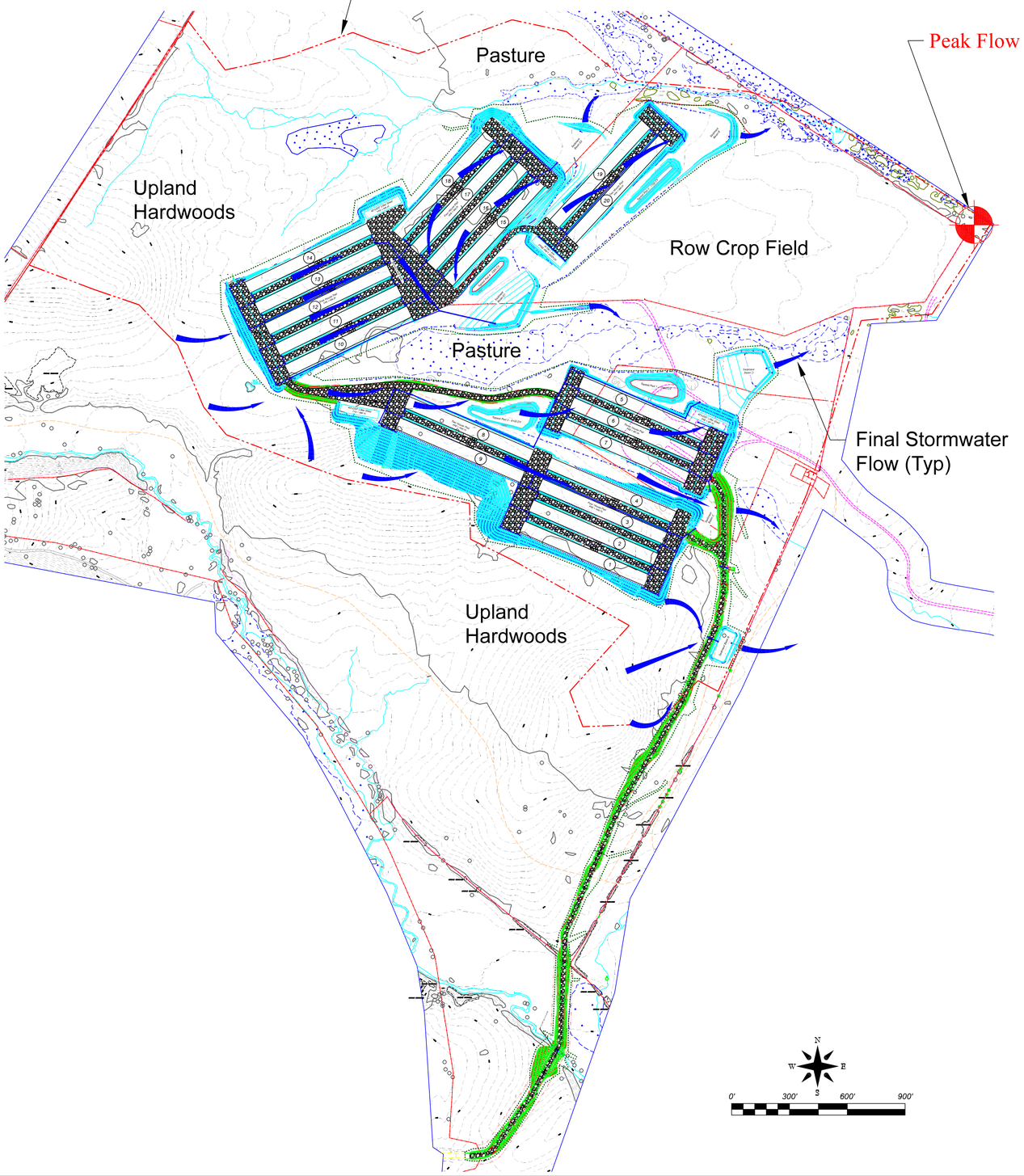
Date: 6/11/19

Scale: 1" = 20'

Designed By: CKW

File No. WVPP1 4-19

FINAL CONDITIONS



Pre-Post Calculations

Pre-Construction Peak Flow

Runoff Curve Number and Runoff — Thu Jun 27 16:04:16 2019

Project: WV Poultry Partners By: Date: 06/27/19
Location: Checked: Date:
Present

1. Runoff Curve Number (CN)

Cover description	CN	Soil Group	Area(Acre)
Woods (Good)	70	C	82.270
Gravel Streets, Pads and Buildings	89	C	0.000
Pasture Grassland Range (Fair)	79	C	85.050
Row Crops - C (Good)	82	C	51.680

CN (weighted): 76.3
Total Area: 219.000 Acre

2. Runoff
Return Period: 1 YEAR
Rainfall, P: 2.48 in
Runoff, Q: 0.6971 in
Runoff Volume: 12.7221 Acre-Ft

Time of Concentration (SCS) — Thu Jun 27 16:06:39 2019

Project: WV Poultry Partners By: Date: 06/27/19
Location: Checked: Date: 06/27/19
Present

Curve Number : 76
Length of Flow : 4865.00 ft
Average Land Slope : 1.54 %

Time of Concentration : 1.707 hrs, 102.4 mins

Graphical Peak Discharge — Thu Jun 27 16:49:15 2019

Project: WV Poultry Partners By: Date: 06/27/19

Location: Checked: Date:

Present Conditions

1. Data:

Drainage area:.....A = 219.0000Acres

Runoff Curve Number:.....CN = 76

Time of Concentration:.....Tc = 102.40 min

Storm Type:..... = II

Pond and swamp areas spread throughout watershed..... = 2.83 percent of A =>6.1977 Acres

2. Frequency.....yr = 1

3. Rainfall,P(24-hour).....in = 2.48

4. Initial abstraction, Ia..... = 0.6316

5. Compute Ia/P..... = 0.2547

6. Unit peak discharge, qu.....csm/in = 222.630

7. Runoff,Q.....in = 0.6825

8. Pond & swap adjustment factor,...Fp = 0.75

9. Peak Discharge,qp.....cfs = 38.994

Post-Construction Peak Flow

Runoff Curve Number and Runoff — Thu Jun 27 17:40:48 2019

Project: WV Poultry Partners By: Date: 06/27/19
Location: Checked: Date:
Developed - Less Detained Drainage Area

1. Runoff Curve Number (CN)

Cover description	CN	Soil Group	Area(Acre)
Woods (Good)	70	C	61.370
Gravel Streets, Pads and Buildings	89	C	6.5600 Includes Road A and part of Pad 4
Pasture Grassland Range (Fair)	79	C	15.440
Row Crops - C (Good)	82	C	40.430

CN (weighted): 75.8
Total Area: 123.800 Acre

2. Runoff
Return Period: 1 YEAR
Rainfall, P: 2.48 in
Runoff, Q: 0.6682 in
Runoff Volume: 6.8937 Acre-Ft

Time of Concentration (SCS) — Thu Jun 27 16:06:39 2019

Project: WV Poultry Partners By: Date: 06/27/19
Location: Checked: Date: 06/27/19
Present

Curve Number : 76
Length of Flow : 4865.00 ft
Average Land Slope : 1.54 %

Time of Concentration : 1.707 hrs, 102.4 mins

Graphical Peak Discharge — Thu Jun 27 17:42:10 2019

Project: WV Poultry Partners By: Date: 06/27/19

Location: Checked: Date:

Developed

1. Data:

Drainage area:.....A = 123.8000Acres

Runoff Curve Number:.....CN = 76

Time of Concentration:.....Tc = 102.40 min

Storm Type:..... = II

Pond and swamp areas spread throughout watershed..... = 2.83 percent of A => 3.5035 Acres

2. Frequency.....yr = 1

3. Rainfall,P(24-hour).....in = 2.48

4. Initial abstraction, Ia..... = 0.6316

5. Compute Ia/P..... = 0.2547

6. Unit peak discharge, qu.....csm/in = 222.630

7. Runoff,Q.....in = 0.6825

8. Pond & swap adjustment factor,...Fp = 0.75

9. Peak Discharge,qp.....cfs = 22.043

The increase in Runoff from the new Impervious areas is 110,991 CF.
Total Basin Retention of 72 hours is 445,680 CF.
Therefore, overall Peak Discharge for the 1-yr event is significantly decreased (to 22.043 cfs) as
result of the Sediment Basin/SWM Controls.

Legend

- 1330 — Existing 5' Contour
- Existing Tree Line
- Existing Utility Line / Pole
- Surface Owner Property Line
- LOD — Limits of Disturbance
- Proposed Diversion Ditch
- Proposed 1' Contour
- Proposed 5' Contour
- SF — Proposed Super Silt Fence
- Proposed Rock Check Dam
- Proposed Culvert W/ Inlet & Outlet Protection
- SW — Proposed Straw Wattles
- SSXX — Proposed Silt Soxx w/ Diameter
- Proposed 1' Road Contour
- Proposed 5' Road Contour
- Proposed Rip-Rap

* Silt Soxx Diameter in Inches
* 18" Silt Soxx Can be Substituted for Super Silt Fence in non-concentrated flow areas.

DATE	REVISIONS
9-11-19	REVISED PER WVDEP COMMENTS

CHARLES K. WILSON REGISTERED NO. 12483 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

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FINAL CONDITIONS
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- POULTRY OPERATION
SITE DESIGN, EROSION & SEDIMENT CONTROL PLAN
MOOREFIELD DISTRICT
HARDY COUNTY, WV

Date: 6/11/19
Scale:1" = 300'
Designed By: CKW
File No. WVPP1 4-19