

DUCKS UNLIMITED

# DUCKS UNLIMITED

PROJECT

## JAMESTOWN WA - LEE STANFORD RESTORATION

LOCATED IN THE S $\frac{1}{2}$  OF SECTION 16  
TOWNSHIP 5S, RANGE 5W, 6TH P.M.  
CLOUD COUNTY, KANSAS

IN COOPERATION WITH

KDWP

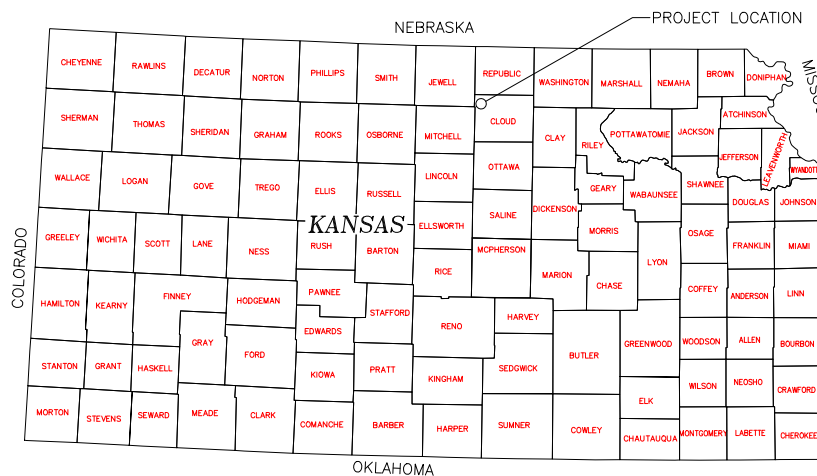
### SPECIFICATIONS

- 101 GENERAL CONDITIONS
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- 201 MOBILIZATION
- 202 SITE PREPARATION
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- 301 WATER CONTROL STRUCTURES
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- 304 CAST-IN-PLACE REINFORCED CONCRETE
- 305 RIPRAP, REVETMENT & AGGREGATE PLACEMENT
- 401 SOIL EROSION AND POLLUTION CONTROL

### ESTIMATED QUANTITIES

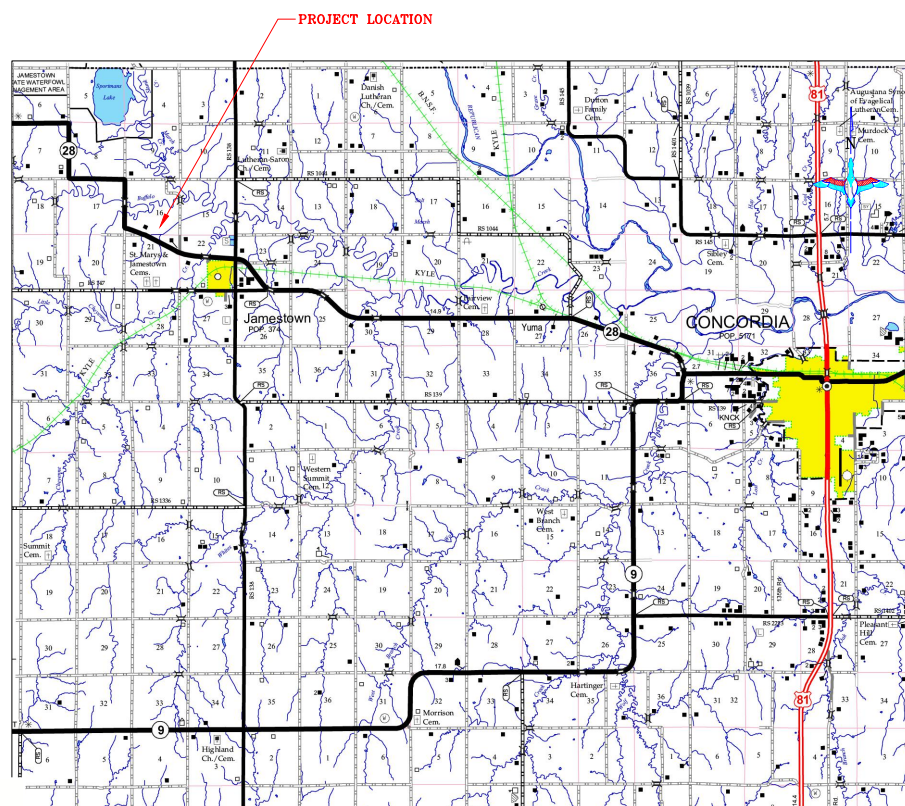
- MOBILIZATION 1 L.S.
- SITE PREPARATION 1 L.S.
- EXCAVATION (INCIDENTAL TO EMBANKMENT & FILL CONSTRUCTION)
- EMBANKMENT #1 333 C.Y.-P\*\*
- EMBANKMENT #2 6,341 C.Y.-P\*\*
- FILL #1 135 C.Y.-P\*\*
- FILL #2 123 C.Y.-P\*\*
- WATER CONTROL STRUCTURES (SUPPLY & INSTALL)
  - 36" IN-LINE STRUCTURE (4' TALL) 1 L.S.
  - 36" IN-LINE STRUCTURE (5' TALL) 1 L.S.
  - 36" IN-LINE STRUCTURE (6' TALL) 1 L.S.
- DU CLASS II RIP RAP (W/ FILTER FABRIC) 45 C.Y.-P\*\*
- 24" 14 GAUGE ALUMINUM PIPE 128 L.F.-A\*
- TEMPORARY ROCK CHECK DAM 1 L.S.
- TEMPORARY SILT FENCE 90 L.F.

\* PAYMENT WILL BE BASED ON ACTUAL QUANTITY USED OR INSTALLED.  
\*\* PAYMENT WILL BE BASED ON THE PLAN QUANTITY LISTED ABOVE.  
NOTE, FILL QUANTITY INCLUDES A 20% SHRINKAGE FACTOR

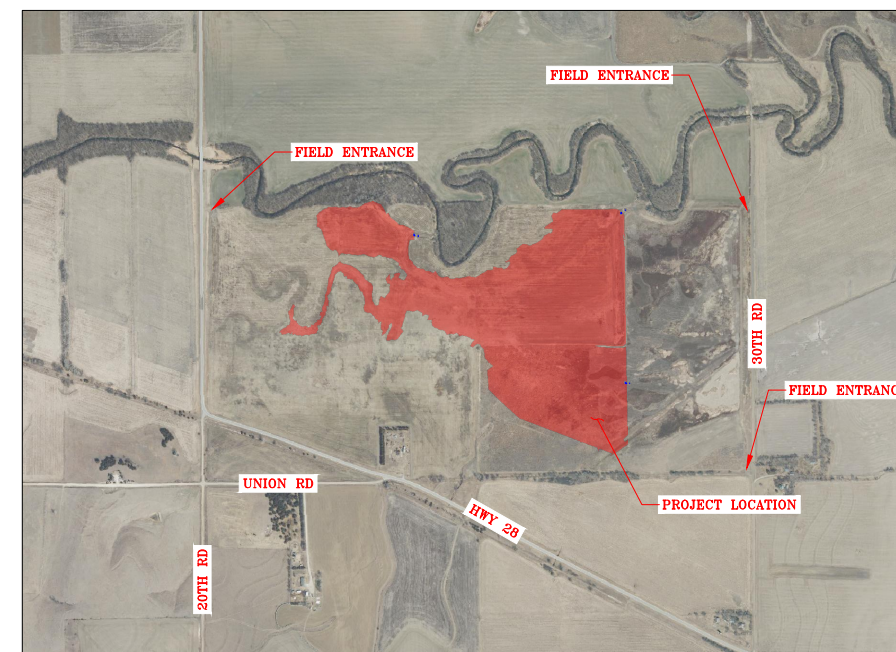


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VICINITY MAP  
NOT TO SCALE



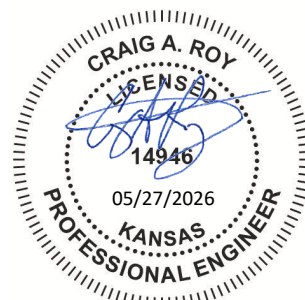
LOCATION MAP  
NOT TO SCALE

ALL WRITTEN SCALES ARE ACCURATE ON 24x36 INCH SHEETS.  
THE BELOW SCALE BAR CAN BE USED TO CHECK PLAN SET SCALE.



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 "KANSAS ONE CALL" AT 811 OR 1-800-DIG-SAFE (1-800-344-7233) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

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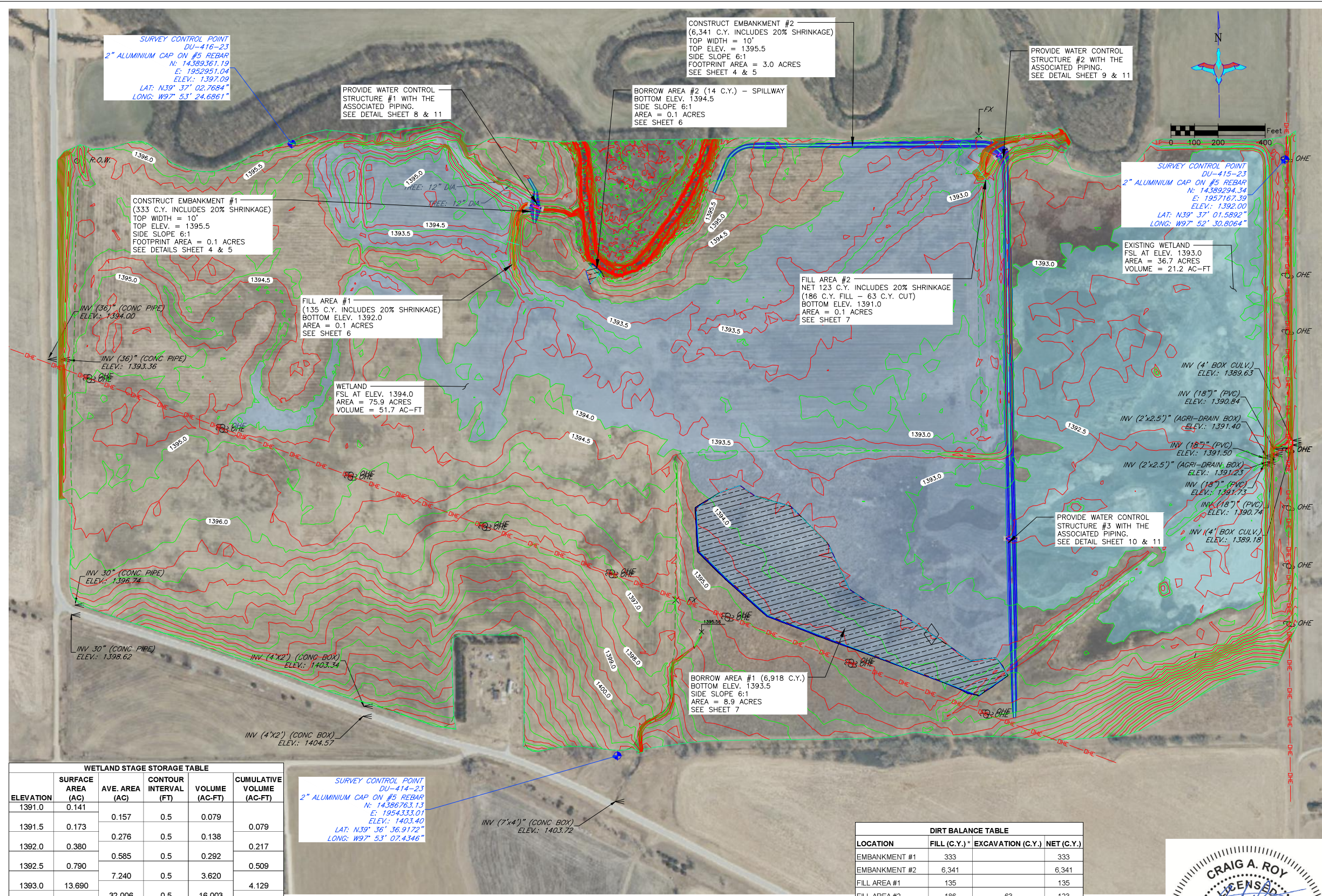


DU REGIONAL ENGINEER:  
CRAIG ROY, P.E.  
LOUISBURG, KS 66053  
(913) 991-2223

DU FIELD ENGINEER:  
CORBEN MONZON, EIT  
MANHATTAN, KS 66502  
(785) 614-2999

CONSTRUCTION ISSUE

	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
GREAT PLAINS REGIONAL OFFICE	LOCATION & VICINITY MAPS	SURVEYED BY: KPU
DATE: 5/27/2026	APPROVED BY: CAR	CHECKED BY: CAR
SHEET NO. 1 OF 15		



**BORROW AREAS NOTE:**  
SUITABLE MATERIAL FOR ALL EMBANKMENTS AND FILL AREAS SHALL BE OBTAINED FROM THE DESIGNATED BORROW AREAS SHOWN ON THIS SHEET 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 6:1 OR FLATTER, UNLESS OTHERWISE NOTED.

- CONSTRUCTION NOTES:**
- IF ANY CULTURAL OR ARCHEOLOGICAL REMAINS OR ARTIFACTS ARE DISCOVERED, IMMEDIATELY NOTIFY THE ENGINEER AND AVOID CONSTRUCTION ACTIVITIES THAT MAY AFFECT THE REMAINS AND ARTIFACTS.
  - UNLESS NOTED OTHERWISE, REMOVE ALL TOPSOIL FROM EMBANKMENTS, FILL #2, AND BORROW AREAS AND RESPREAD TOPSOIL OVER THE AREAS WHEN COMPLETE. 4" OF TOPSOIL SHALL BE RESPREAD OVER THE BORROW, FILL, AND EMBANKMENT AT FINISH GRADE. THE COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION."
  - 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. DRYING OR WETTING OF SOILS TO OBTAIN PROPER MOISTURE CONTENT SHALL BE INCIDENTAL TO THE WORK.
  - WORK REQUIRED TO DEWATER THE SITE IS INCIDENTAL TO "SITE PREPARATION".

- SEED BED NOTE:**
- 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. THE COST OF SEED BED PREPARATION IS INCIDENTAL TO "SITE PREPARATION."
  - SEEDING AND MULCHING WILL BE COMPLETED BY OTHERS.

- ABBREVIATIONS LIST**
- BLDC = BUILDING CORNER
  - BRK = BREAK
  - BTM = BOTTOM
  - CL = CENTER LINE
  - CMP = CORRUGATED METAL PIPE ROUND
  - CMPA = CORRUGATED METAL PIPE ARCH
  - CONC = CONCRETE
  - Ø = 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
  - GW = GUY WIRE
  - INV = INVERT
  - LAT = LATITUDE (WGS84)
  - LONG = LONGITUDE (WGS84)
  - LF = LINEAR FEET
  - MISC = MISCELLANEOUS
  - N = NORTHING COORDINATE OR NORTH
  - NFES = NON-FLARED END SECTION
  - OC = ON CENTER
  - OCEW = ON CENTER EACH WAY
  - OHE = OVERHEAD ELECTRIC
  - PC = POINT OF INTERSECTION
  - PI = POINT OF INTERSECTION
  - PT = POINT OF TANGENCY
  - RCP = REINFORCED CONCRETE PIPE
  - RD = ROAD
  - REM = REMOVE
  - REQ'D = REQUIRED
  - ROW = RIGHT OF WAY
  - S = SOUTH
  - SED = SEDIMENT
  - SHLD = SHOULDER
  - SLP = SLOPE
  - STPLG = STOPLOG
  - TBM = TEMPORARY BENCHMARK
  - TEL = TELEPHONE/COMMUNICATIONS
  - 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

**WETLAND STAGE STORAGE TABLE**

ELEVATION	SURFACE AREA (AC)	AVE. AREA (AC)	CONTOUR INTERVAL (FT)	VOLUME (AC-FT)	CUMULATIVE VOLUME (AC-FT)
1391.0	0.141				
1391.5	0.173	0.157	0.5	0.079	0.079
1392.0	0.380	0.276	0.5	0.138	0.217
1392.5	0.790	0.585	0.5	0.292	0.509
1393.0	13.690	7.240	0.5	3.620	4.129
1393.5	50.321	32.006	0.5	16.003	20.132
MAX FSL 1394.0	75.911	63.116	0.5	31.558	51.690
SPILLWAY 1394.5	102.092	89.002	0.5	44.501	96.191

SURVEY CONTROL POINT  
DU-414-23  
2" ALUMINIUM CAP ON #5 REBAR  
N: 14386763.13  
E: 19543333.01  
ELEV.: 1403.40  
LAT: N39° 36' 36.9172"  
LONG: W97° 53' 07.4346"

OVERALL PLAN VIEW  
SCALE 1" = 200'

**DIRT BALANCE TABLE**

LOCATION	FILL (C.Y.) *	EXCAVATION (C.Y.)	NET (C.Y.)
EMBANKMENT #1	333		333
EMBANKMENT #2	6,341		6,341
FILL AREA #1	135		135
FILL AREA #2	186	63	123
BORROW AREA #1		6,918	(6,918)
BORROW AREA #2		14	(14)
TOTAL	6,995	6,995	-

\* FILL INCLUDES A 20% SHRINKAGE FACTOR



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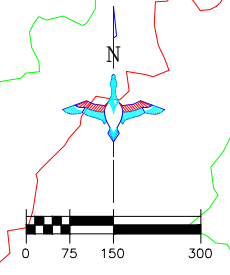
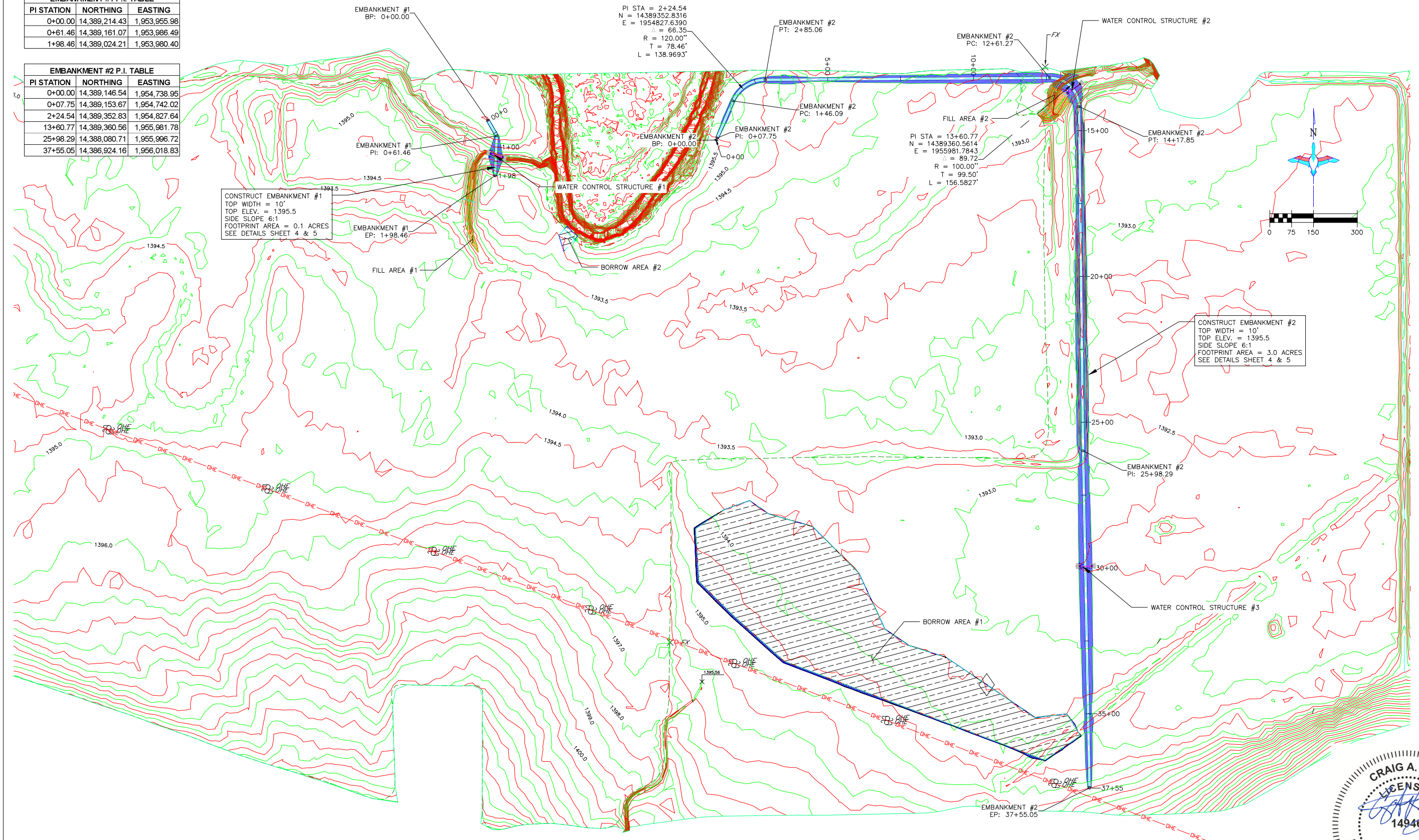
HORIZONTAL AND VERTICAL CONTROL OPUS SOLUTION— COORDINATES ARE UTM ZONE 14 GRID COORDINATES IN US FEET [NAD83]. THEY WERE ESTABLISHED FROM THE WGS84 ELLIPSOID WITH INFORMATION FROM A TRIMBLE R12I SURVEY GRADE GPS RECEIVER ON MAY 2ND, 2023 AT DUCKS UNLIMITED CONTROL POINT DU-414-23 AND CALIBRATED TO AN OPUS POSITION OCCUPIED FOR 4 HOURS AND 49 MINUTE(S) AND SENT TO NGS FOR SOLUTION. THE VERTICAL CONTROL CAME FROM THE SAME SOLUTION USING GEOID 18 CONUS IN THE NAVD83. THE FULL OPUS SOLUTION REPORT IS ON FILE AT THE DUCKS UNLIMITED ENGINEERING DEPARTMENT IN GRAND ISLAND, NEBRASKA.

CONSTRUCTION ISSUE

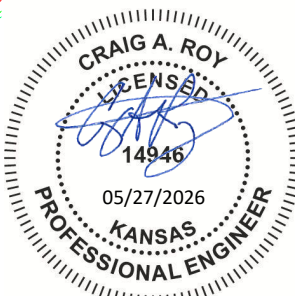
	PROJECT NO.	KS-18-102	DESIGNED BY:	CCM	
	JAMESTOWN WA - LEE STANFORD RESTORATION		DRAWN BY:	CCM	
GREAT PLAINS REGIONAL OFFICE		OVERALL PLAN		CHECKED BY:	CAR
DATE:	SHEET NO.	APPROVED BY:	APPROVED BY:		
5/27/2026	2 OF 15	CAR			

EMBANKMENT #1 P.I. TABLE		
PI STATION	NORTHING	EASTING
0+00.00	14,389,214.43	1,953,955.98
0+61.46	14,389,161.07	1,953,986.49
1+98.46	14,389,024.21	1,953,980.40

EMBANKMENT #2 P.I. TABLE		
PI STATION	NORTHING	EASTING
0+00.00	14,389,146.54	1,954,738.95
0+07.75	14,389,153.67	1,954,742.02
2+24.54	14,389,352.83	1,954,827.64
13+60.77	14,389,360.56	1,955,981.78
25+98.29	14,388,080.71	1,955,996.72
37+55.05	14,386,924.16	1,956,018.83



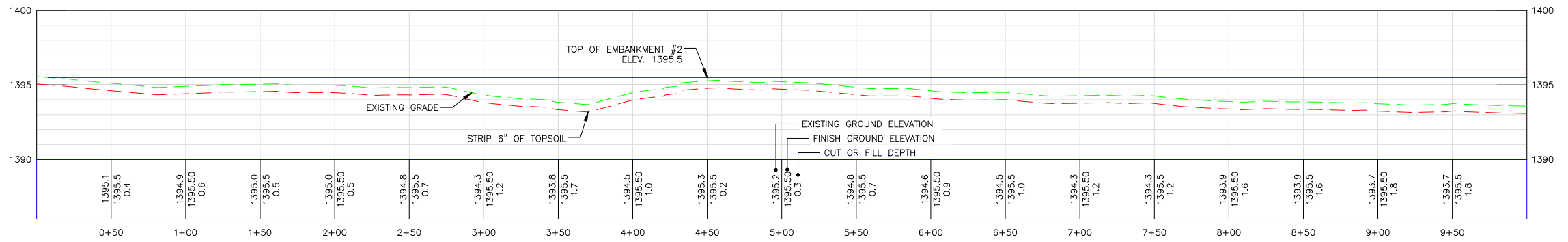
EMBANKMENT PLAN  
SCALE 1" = 150'



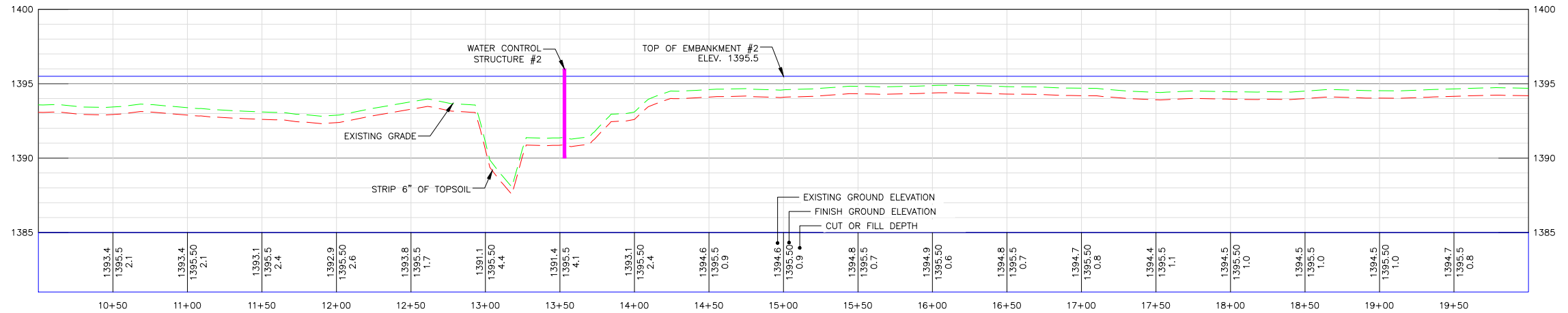
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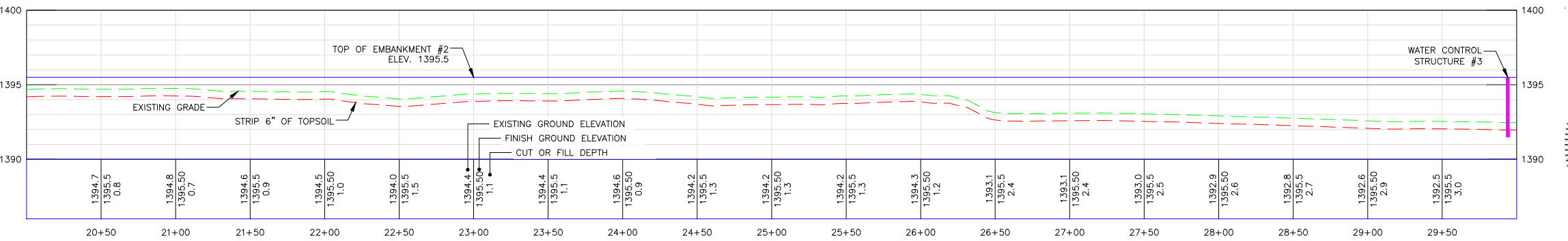
 GREAT PLAINS REGIONAL OFFICE	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
EMBANKMENT PLAN		SURVEYED BY: KPU
DATE: 5/27/2026	SHEET NO. 3 OF 15	CHECKED BY: CAR
APPROVED BY: CAR		APPROVED BY:



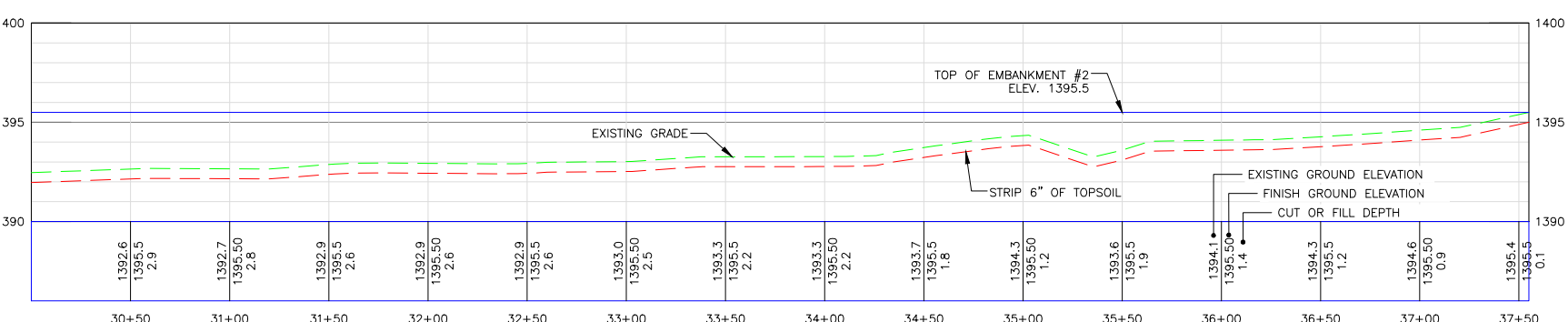
EMBANKMENT #2 PROFILE (STA: 0+00 TO STA: 10+00)  
 HORIZONTAL SCALE 1" = 40'  
 VERTICAL SCALE 1" = 4'



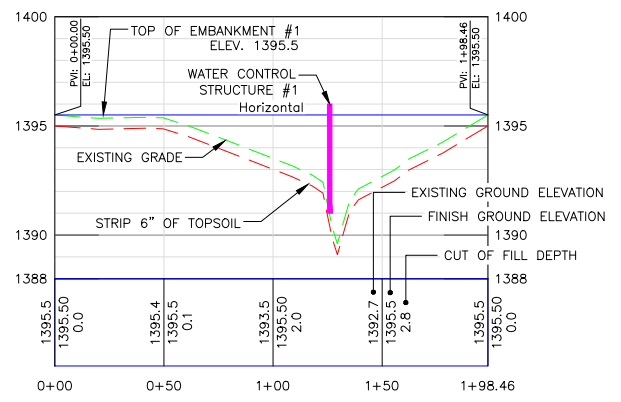
EMBANKMENT #2 PROFILE (STA: 10+00 TO STA: 20+00)  
 HORIZONTAL SCALE 1" = 40'  
 VERTICAL SCALE 1" = 4'



EMBANKMENT #2 PROFILE (STA: 20+00 TO STA: 30+00)  
 HORIZONTAL SCALE 1" = 40'  
 VERTICAL SCALE 1" = 4'



EMBANKMENT #2 PROFILE (STA: 30+00 TO STA: 37+55)  
 HORIZONTAL SCALE 1" = 40'  
 VERTICAL SCALE 1" = 4'



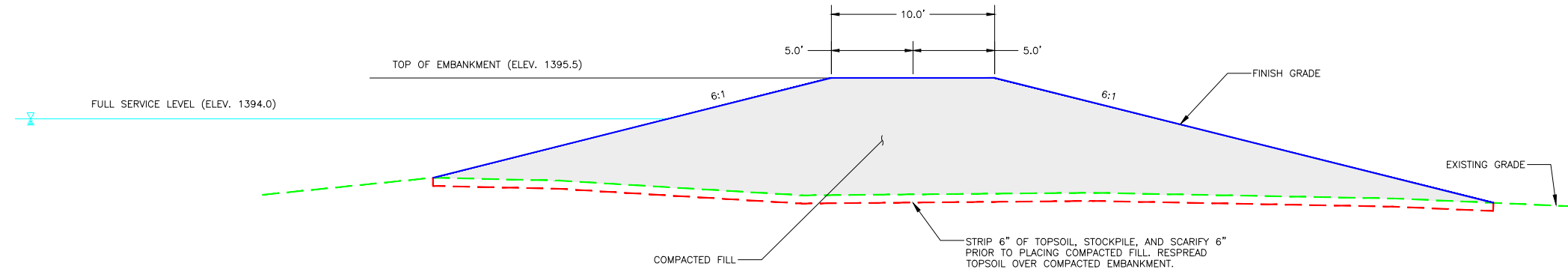
EMBANKMENT #1 PROFILE  
 HORIZONTAL SCALE 1" = 40'  
 VERTICAL SCALE 1" = 4'



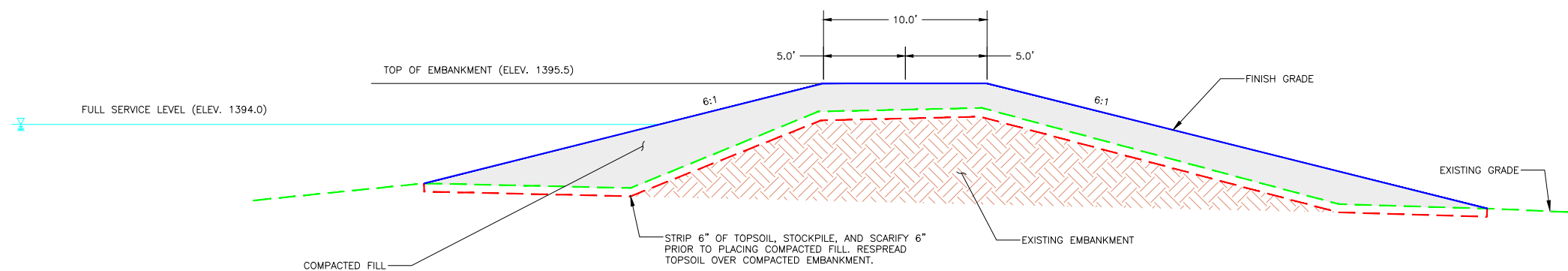
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**CONSTRUCTION ISSUE**

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	JAMESTOWN WA - LEE STANFORD RESTORATION		DRAWN BY:	CCM
GREAT PLAINS REGIONAL OFFICE	EMBANKMENT 1# - #2 PROFILES		SURVEYED BY:	KPU
DATE:	SHEET NO.	APPROVED BY:	CHECKED BY:	CAR
5/27/2026	4 OF 15	CAR	APPROVED BY:	



EMBANKMENT #1 & #2 TYPICAL SECTION  
NOT TO SCALE



EMBANKMENT #2 TYPICAL REGRADE OF EXISTING EMBANKMENT SECTION  
(STATIONS 14+35 TO 26+25)  
NOT TO SCALE

**EMBANKMENT CONSTRUCTION NOTES:**

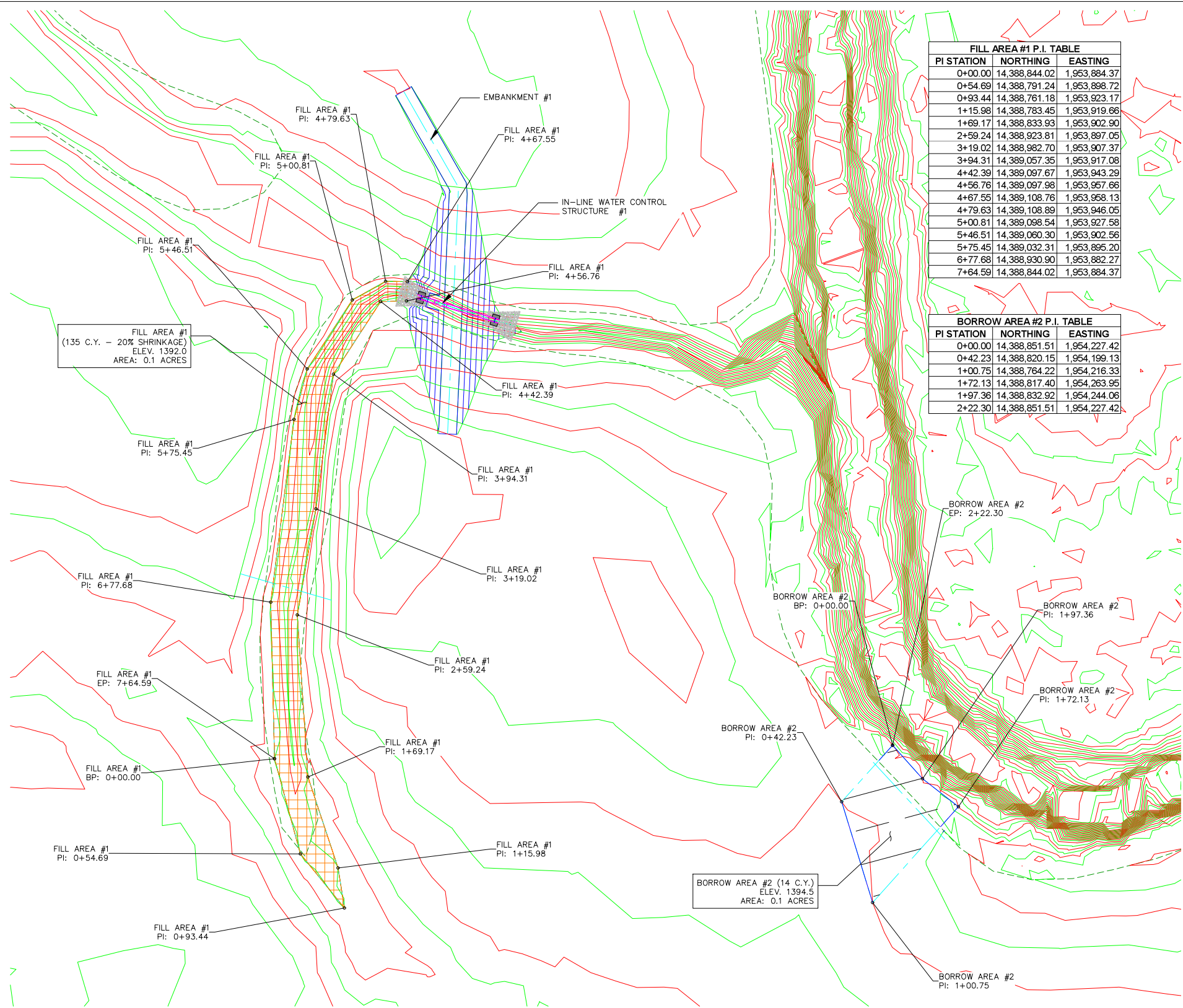
1. EMBANKMENT CONSTRUCTION SHALL BE FROM COMPACTED EARTHEN MATERIAL MOSTLY FREE OF VEGETATIVE MATTER AND SHALL COMPLY WITH SPECIFICATION SECTION 204 "EMBANKMENT CONSTRUCTION".
2. MATERIAL FOR EMBANKMENT CONSTRUCTION SHALL BE OBTAINED FROM THE BORROW AREA. ANY ADDITIONAL MATERIAL REQUIRED SHALL BE OBTAINED FROM A FIELD IDENTIFIED BORROW AREA BY A DUCKS UNLIMITED REPRESENTATIVE.
3. STRIP AND STOCKPILE 6" TOPSOIL FROM EMBANKMENTS #1 & #2 FOOTPRINT. RESPREAD 4" OF TOPSOIL OVER FINISHED EMBANKMENTS #1 & #2. COST OF TOPSOIL WORK SHALL BE CONSIDERED INCIDENTAL TO "SITE PREPARATION".
4. EMBANKMENT FILL TO BE PLACED IN LIFTS OF NO MORE THAT 8" AND COMPACTED PRIOR TO PLACING SUBSEQUENT LIFTS.



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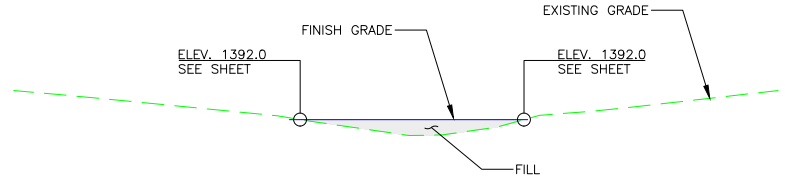
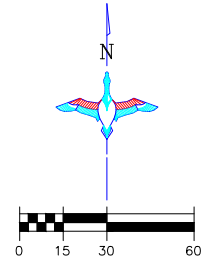
<b>DUCKS UNLIMITED INC.</b> GREAT PLAINS REGIONAL OFFICE	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
	EMBANKMENT DETAILS	SURVEYED BY: KPU
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		APPROVED BY:



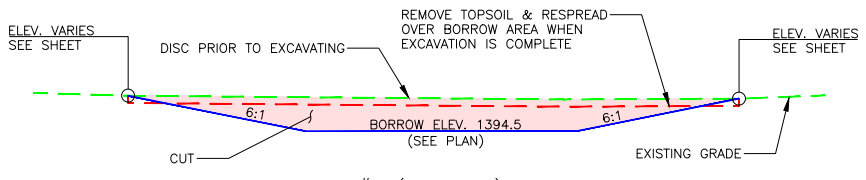
BORROW AREA #2 AND FILL AREA #1 PLAN VIEW  
SCALE 1" = 30'

FILL AREA #1 P.I. TABLE		
PI STATION	NORTHING	EASTING
0+00.00	14,388,844.02	1,953,884.37
0+54.69	14,388,791.24	1,953,898.72
0+93.44	14,388,761.18	1,953,923.17
1+15.98	14,388,783.45	1,953,919.66
1+69.17	14,388,833.93	1,953,902.90
2+59.24	14,388,923.81	1,953,897.05
3+19.02	14,388,982.70	1,953,907.37
3+94.31	14,389,057.35	1,953,917.08
4+42.39	14,389,097.67	1,953,943.29
4+56.76	14,389,097.98	1,953,957.66
4+67.55	14,389,108.76	1,953,958.13
4+79.63	14,389,108.89	1,953,946.05
5+00.81	14,389,098.54	1,953,927.58
5+46.51	14,389,060.30	1,953,902.56
5+75.45	14,389,032.31	1,953,895.20
6+77.68	14,388,930.90	1,953,882.27
7+64.59	14,388,844.02	1,953,884.37

BORROW AREA #2 P.I. TABLE		
PI STATION	NORTHING	EASTING
0+00.00	14,388,851.51	1,954,227.42
0+42.23	14,388,820.15	1,954,199.13
1+00.75	14,388,764.22	1,954,216.33
1+72.13	14,388,817.40	1,954,263.95
1+97.36	14,388,832.92	1,954,244.06
2+22.30	14,388,851.51	1,954,227.42



FILL AREA #1 TYPICAL SECTION  
NOT TO SCALE



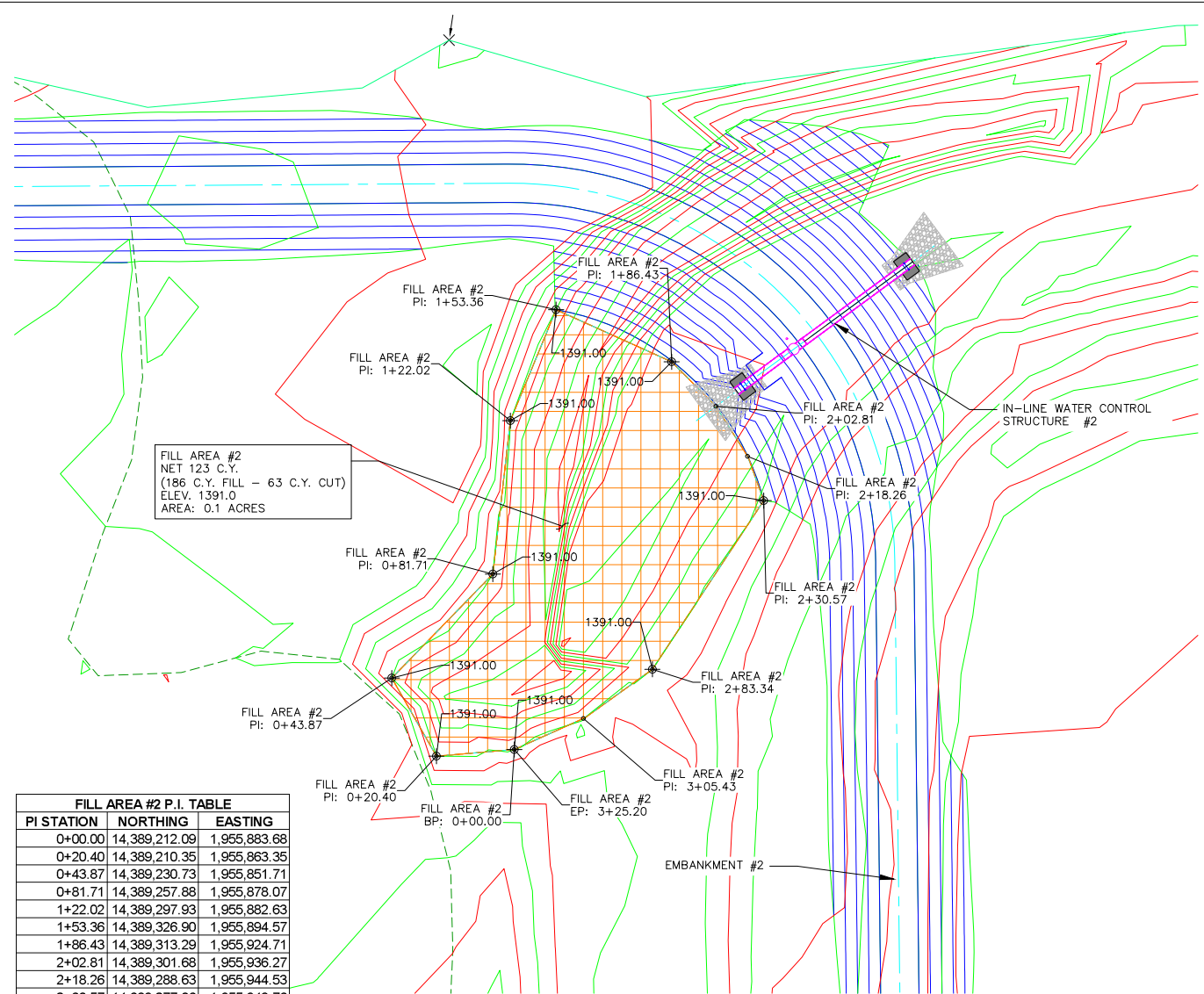
BORROW AREA #2 (SPILLWAY) TYPICAL SECTION  
NOT TO SCALE

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CONSTRUCTION ISSUE



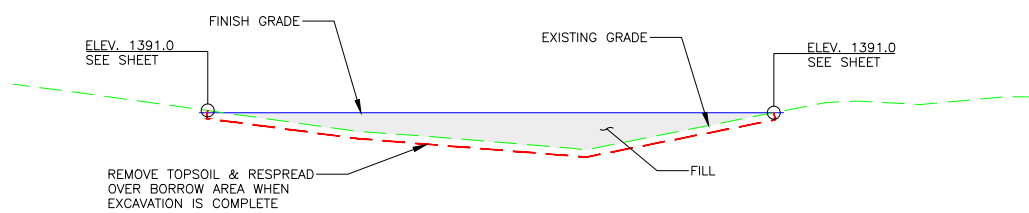
	PROJECT NO.	KS-18-102	DESIGNED BY:	CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION		DRAWN BY:	CCM
GREAT PLAINS REGIONAL OFFICE	BORROW AND FILL AREAS DETAILS		SURVEYED BY:	KPU
DATE: 5/27/2026	SHEET NO.: 6 OF 15	APPROVED BY: CAR	CHECKED BY:	CAR



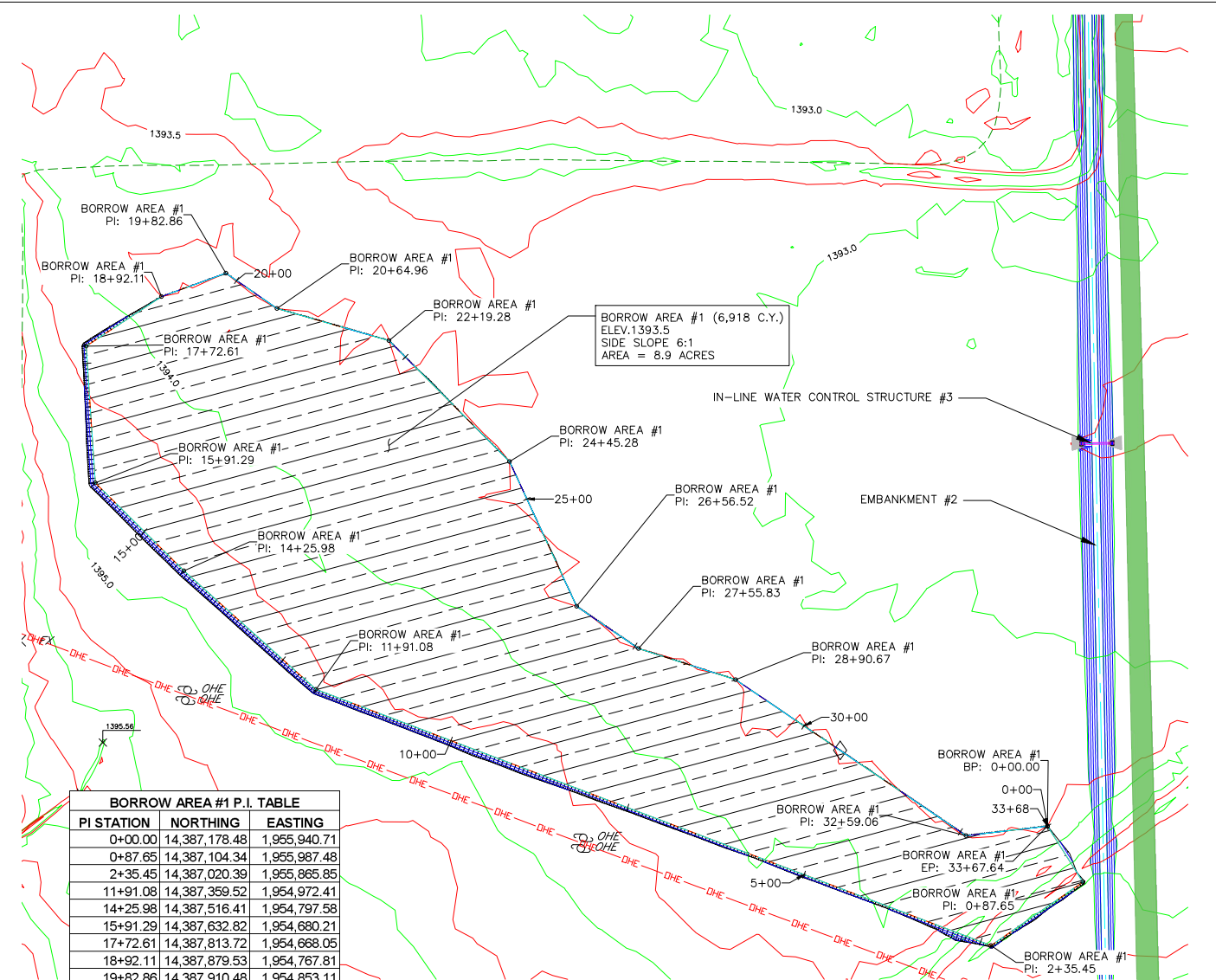
FILL AREA #2  
NET 123 C.Y.  
(186 C.Y. FILL - 63 C.Y. CUT)  
ELEV. 1391.0  
AREA = 0.1 ACRES

PI STATION	NORTHING	EASTING
0+00.00	14,389,212.09	1,955,883.68
0+20.40	14,389,210.35	1,955,863.35
0+43.87	14,389,230.73	1,955,851.71
0+81.71	14,389,257.88	1,955,878.07
1+22.02	14,389,297.93	1,955,882.63
1+53.36	14,389,326.90	1,955,894.57
1+86.43	14,389,313.29	1,955,924.71
2+02.81	14,389,301.68	1,955,936.27
2+18.26	14,389,288.63	1,955,944.53
2+30.57	14,389,277.06	1,955,948.76
2+83.34	14,389,233.03	1,955,919.69
3+05.43	14,389,220.19	1,955,901.71
3+25.20	14,389,212.09	1,955,883.68

FILL AREA #2 PLAN VIEW  
SCALE 1" = 20'



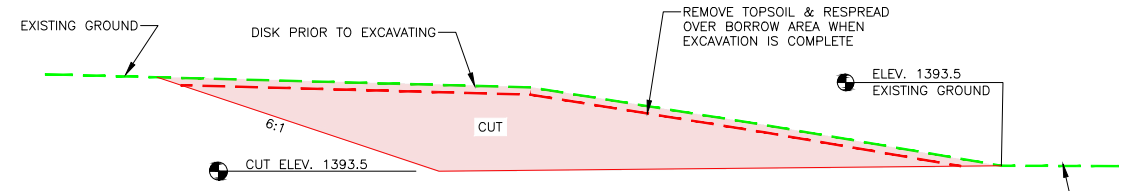
FILL AREA #2 TYPICAL SECTION  
NOT TO SCALE



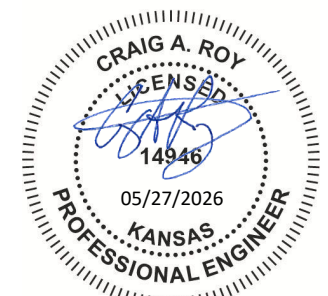
BORROW AREA #1 (6,918 C.Y.)  
ELEV. 1393.5  
SIDE SLOPE 6:1  
AREA = 8.9 ACRES

PI STATION	NORTHING	EASTING
0+00.00	14,387,178.48	1,955,940.71
0+87.65	14,387,104.34	1,955,987.48
2+35.45	14,387,020.39	1,955,865.85
11+91.08	14,387,359.52	1,954,972.41
14+25.98	14,387,516.41	1,954,797.58
15+91.29	14,387,632.82	1,954,680.21
17+72.61	14,387,813.72	1,954,668.05
18+92.11	14,387,879.53	1,954,767.81
19+82.86	14,387,910.48	1,954,853.11
20+64.96	14,387,863.74	1,954,920.61
22+19.28	14,387,821.18	1,955,068.94
24+45.28	14,387,661.08	1,955,228.46
26+56.52	14,387,469.43	1,955,317.29
27+55.83	14,387,413.54	1,955,399.37
28+90.67	14,387,372.30	1,955,527.76
32+59.06	14,387,165.86	1,955,832.87
33+67.64	14,387,178.48	1,955,940.71

BORROW AREA #1 PLAN VIEW  
SCALE 1" = 100'



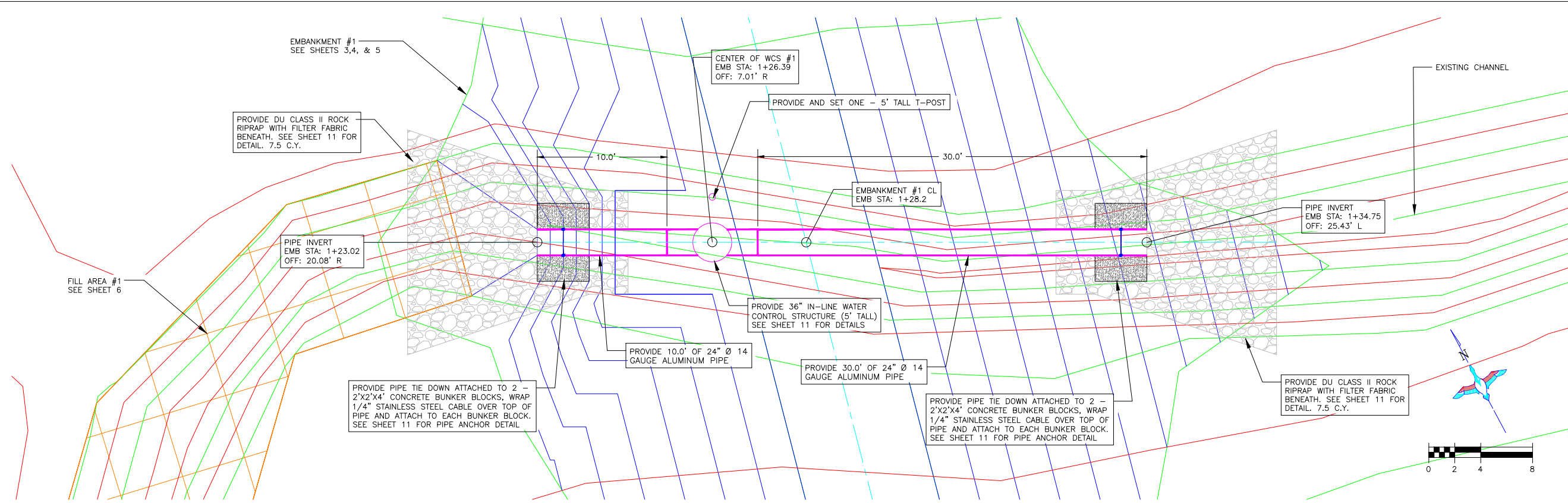
BORROW AREA #1 TYPICAL SECTION  
NOT TO SCALE



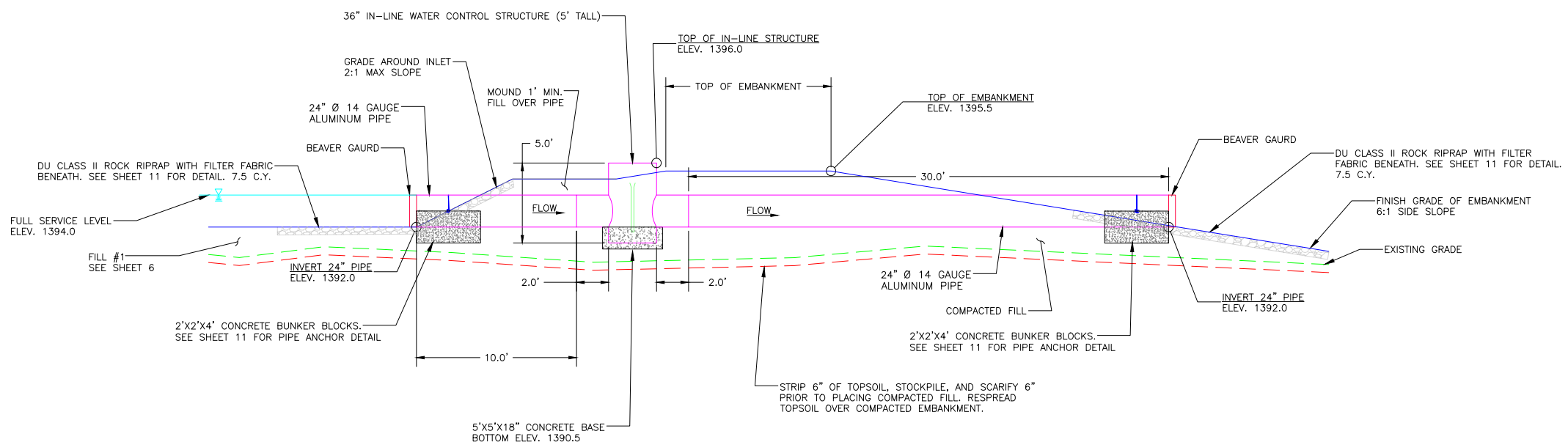
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 DUCKS UNLIMITED INC. GREAT PLAINS REGIONAL OFFICE	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
DATE: 5/27/2026	SHEET NO. 7 OF 15	SURVEYED BY: KPU
APPROVED BY: CAR	APPROVED BY:	CHECKED BY: CAR



IN-LINE WATER CONTROL STRUCTURE #1 PLAN  
SCALE 1" = 4'

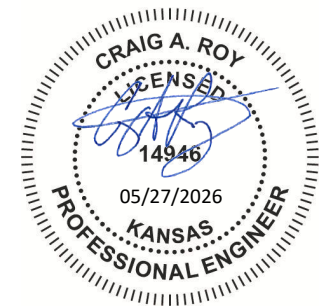


IN-LINE WATER CONTROL STRUCTURE #1 PROFILE  
SCALE 1" = 4'

STRUCTURE INSTALLATION NOTES

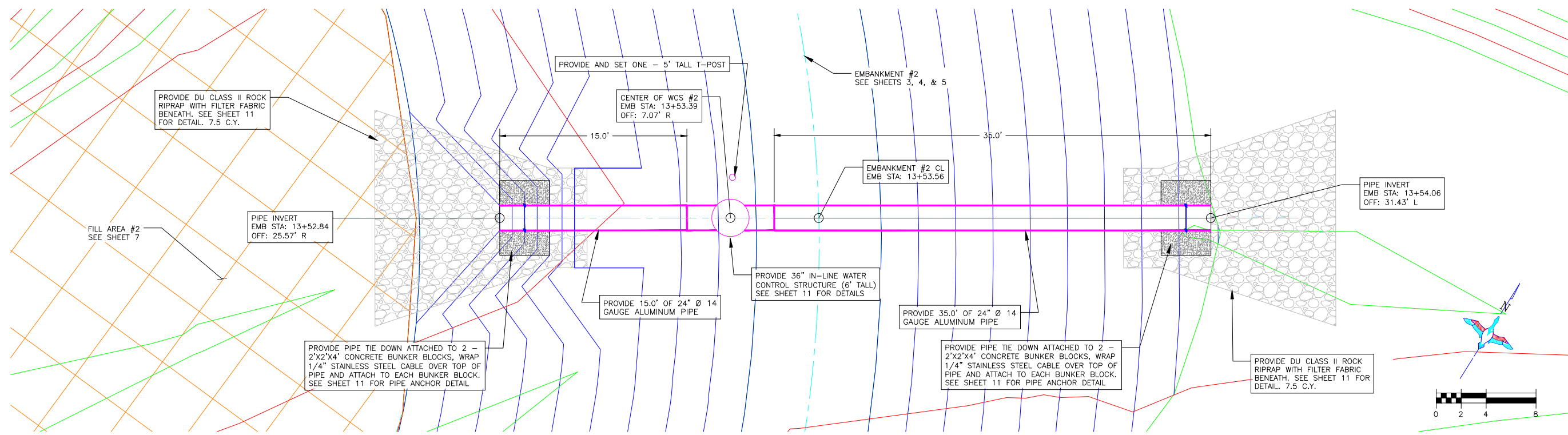
1. STRUCTURE, INLET AND OUTLET PIPE SHALL BE PLACED ON A LEVEL SURFACE OF COMPACTED SOIL
2. LEVEL STRUCTURE VERTICALLY PRIOR TO PLACING BACKFILL. BACKFILL AROUND STRUCTURE BY HAND IN 6" LIFTS. HAND TAMP ONLY.
3. COST OF STRUCTURE INSTALLATION AND CONCRETE BASE SHALL BE PAID AS BID ITEM "36" IN-LINE WATER CONTROL STRUCTURE (5' TALL)".
4. PROVIDE ALUMINUM BEAVER GUARDS AND BUNKER BLOCK ANCHORS. THESE SHALL BE CONSIDERED INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (5' TALL)" BID ITEM.
5. ALUMINUM STOP LOGS SHALL BE WATERTIGHT AND PROVIDED BY SUPPLIER.
6. ALUMINUM WATER CONTROLS STRUCTURE WILL BE MANUFACTURED BY WISCONSIN FLOW GATE & CULVERT CO. (715)-325-3302 OR SEABREEZE CULVERT, INC. (409) 296-4098 OR APPROVED EQUIVALENT. DU ENGINEER WILL NEED TO APPROVED OTHER MANUFACTURER.
7. BENTONITE CLAY SHALL BE MIXED WITH BACKFILL MATERIAL AROUND WCS AND PIPE TO PROVIDE A WATER TIGHT SEAL. TEN - FIFTY POUND BAGS ARE REQUIRED. COST FOR BENTONITE CLAY AND INSTALLATION SHALL BE INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (5' TALL)".
8. PROVIDE AND SET ONE - 5 FOOT LONG STEEL FENCE T-POSTS TO SERVE AS MARKERS. DRIVE INTO GROUND TO TOP OF POST FLAT PLATE. COST FOR POSTS SHALL BE INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (5' TALL)".

CONSTRUCTION ISSUE

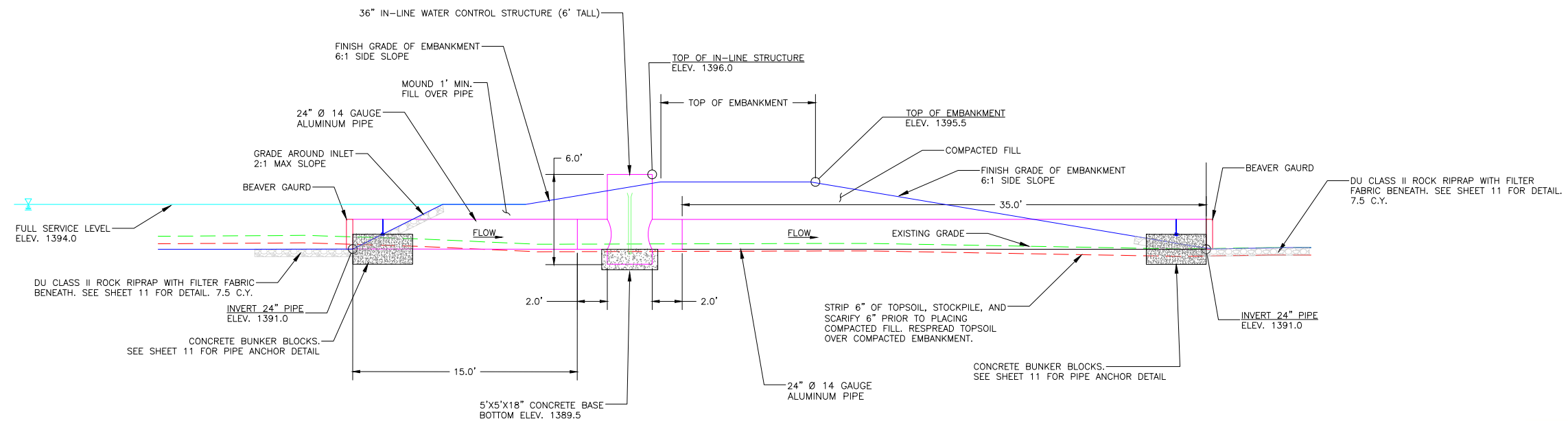


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	PROJECT NO.	KS-18-102	DESIGNED BY:	CCM	
	JAMESTOWN WA - LEE STANFORD RESTORATION		DRAWN BY:	CCM	
GREAT PLAINS REGIONAL OFFICE		WATER CONTROL STRUCTURE #1		SURVEYED BY:	KPU
DATE:	SHEET NO.	APPROVED BY:	PLAN & PROFILE	CHECKED BY:	CAR
5/27/2026	8 OF 15	CAR			



IN-LINE WATER CONTROL STRUCTURE #2 PLAN  
SCALE 1" = 4'

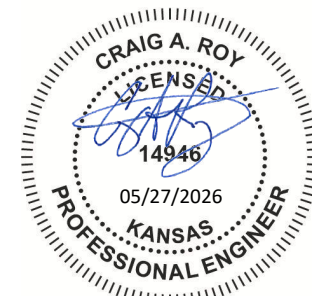


IN-LINE WATER CONTROL STRUCTURE #2 PROFILE  
SCALE 1" = 4'

**STRUCTURE INSTALLATION NOTES**

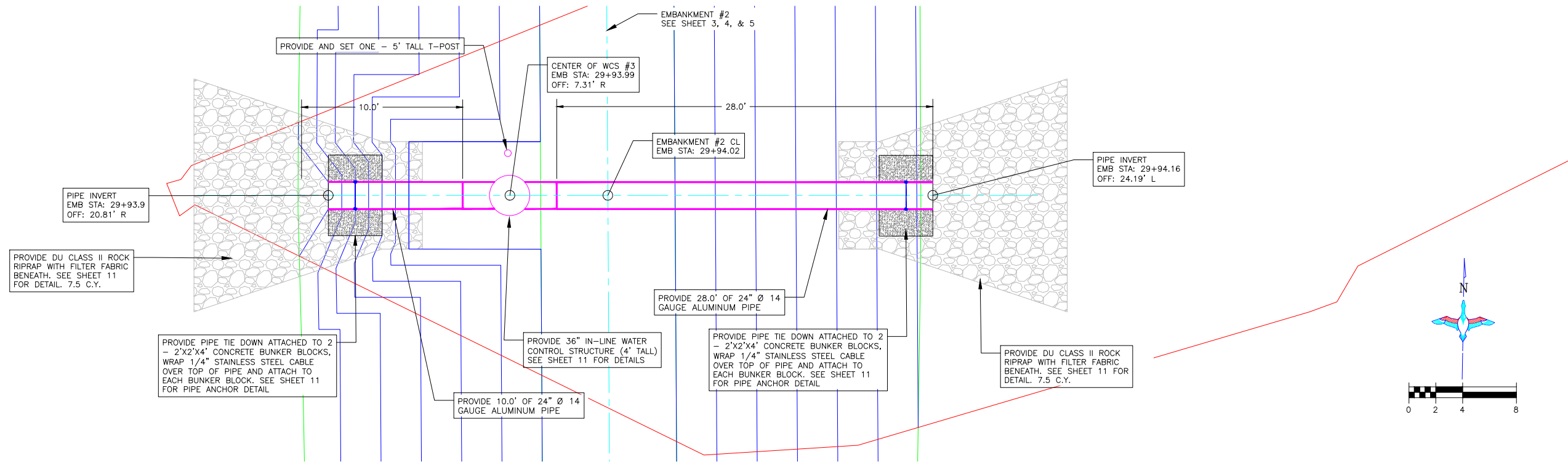
1. STRUCTURE, INLET AND OUTLET PIPE SHALL BE PLACED ON A LEVEL SURFACE OF COMPACTED SOIL.
2. LEVEL STRUCTURE VERTICALLY PRIOR TO PLACING BACKFILL. BACKFILL AROUND STRUCTURE BY HAND IN 6" LIFTS. HAND TAMP ONLY.
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5. ALUMINUM STOP LOGS SHALL BE WATERTIGHT AND PROVIDED BY SUPPLIER.
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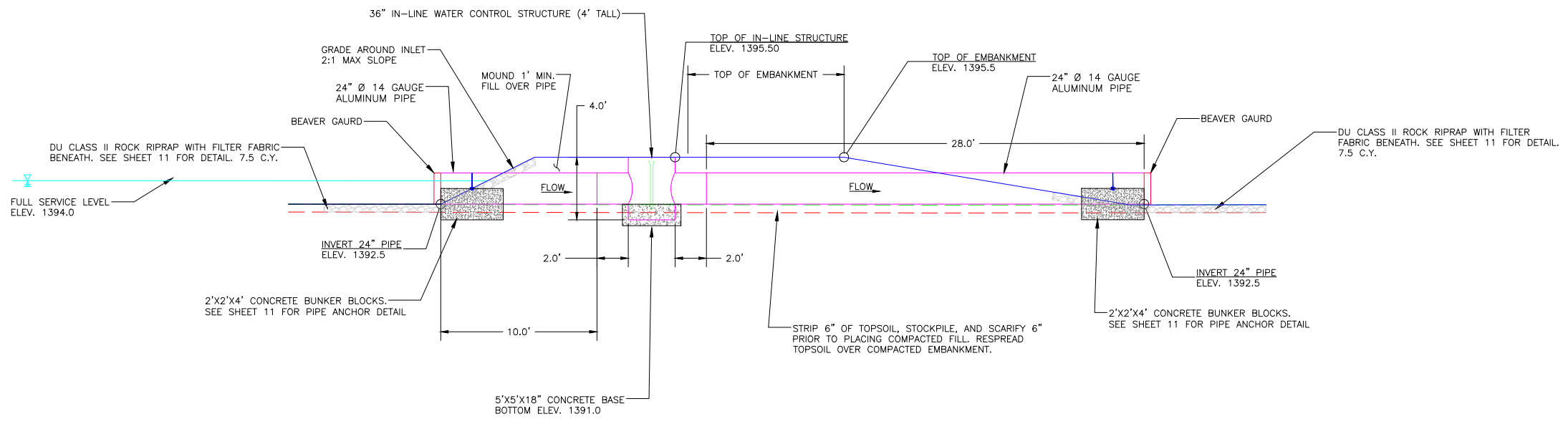


**CONSTRUCTION ISSUE**

	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
GREAT PLAINS REGIONAL OFFICE	WATER CONTROL STRUCTURE #2	SURVEYED BY: KPU
DATE: 5/27/2026	PLAN & PROFILE	CHECKED BY: CAR
SHEET NO. 9 OF 15	APPROVED BY: CAR	APPROVED BY:



IN-LINE WATER CONTROL STRUCTURE #3 PLAN  
SCALE 1" = 4'

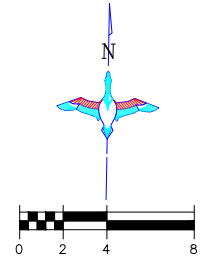


IN-LINE WATER CONTROL STRUCTURE #3 PROFILE  
SCALE 1" = 4'

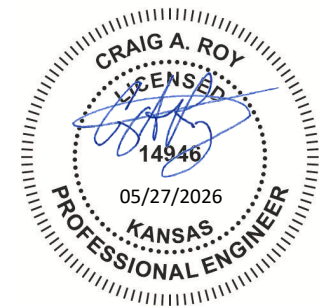
STRUCTURE INSTALLATION NOTES

- STRUCTURE, INLET AND OUTLET PIPE SHALL BE PLACED ON A LEVEL SURFACE OF COMPACTED SOIL.
- LEVEL STRUCTURE VERTICALLY PRIOR TO PLACING BACKFILL. BACKFILL AROUND STRUCTURE BY HAND IN 6" LIFTS. HAND TAMP ONLY.
- COST OF STRUCTURE INSTALLATION AND CONCRETE BASE SHALL BE PAID AS BID ITEM "36" IN-LINE WATER CONTROL STRUCTURE (4' TALL)".
- PROVIDE ALUMINUM BEAVER GUARDS AND BUNKER BLOCK ANCHORS. THESE SHALL BE CONSIDERED INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (4' TALL)" BID ITEM.
- ALUMINUM STOP LOGS SHALL BE WATERTIGHT AND PROVIDED BY SUPPLIER.
- ALUMINUM WATER CONTROLS STRUCTURE WILL BE MANUFACTURED BY WISCONSIN FLOW GATE & CULVERT CO. (715)-325-3302 OR SEABREEZE CULVERT, INC. (409) 296-4098 OR APPROVED EQUIVALENT. DU ENGINEER WILL NEED TO APPROVED OTHER MANUFACTURER.
- BENTONITE CLAY SHALL BE MIXED WITH BACKFILL MATERIAL AROUND WCS AND PIPE TO PROVIDE A WATER TIGHT SEAL. TEN - FIFTY POUND BAGS ARE REQUIRED. COST FOR BENTONITE CLAY AND INSTALLATION SHALL BE INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (4' TALL)".
- PROVIDE AND SET ONE - 5 FOOT LONG STEEL FENCE T-POSTS TO SERVE AS MARKERS. DRIVE INTO GROUND TO TOP OF POST FLAT PLATE. COST FOR POSTS SHALL BE INCIDENTAL TO "36" IN-LINE WATER CONTROL STRUCTURE (4' TALL)".

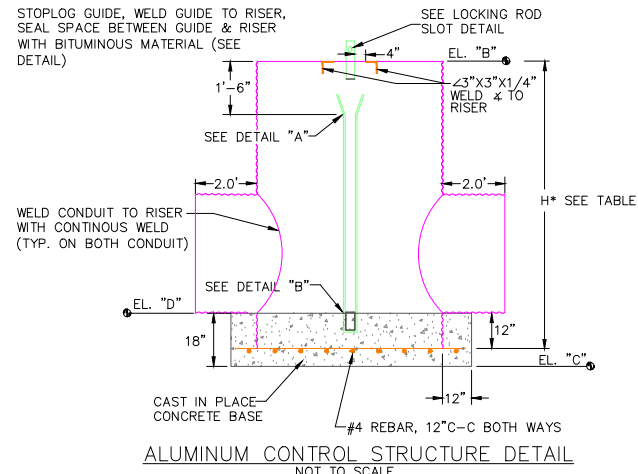
CONSTRUCTION ISSUE



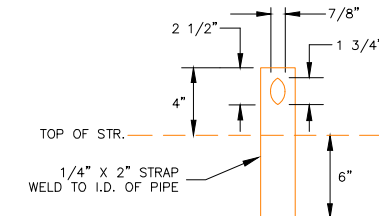
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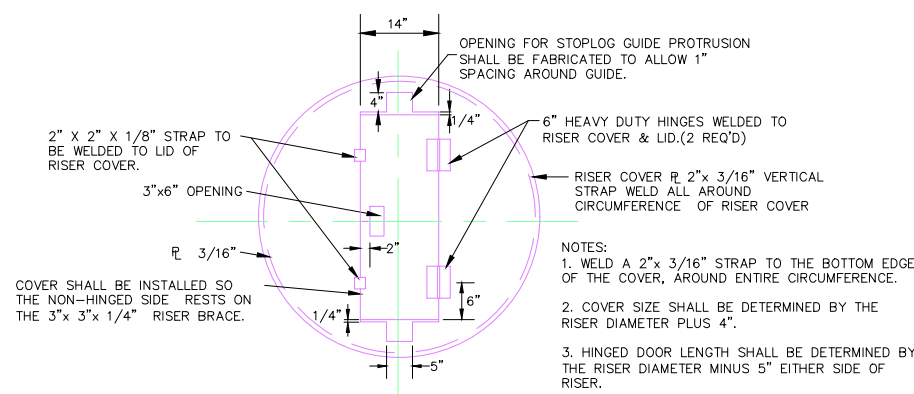
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	JAMESTOWN WA - LEE STANFORD RESTORATION WATER CONTROL STRUCTURE #3	DRAWN BY: CCM
GREAT PLAINS REGIONAL OFFICE	PLAN & PROFILE	SURVEYED BY: KPU
DATE: 5/27/2026	SHEET NO. 10 OF 15	CHECKED BY: CAR
	APPROVED BY: CAR	APPROVED BY:



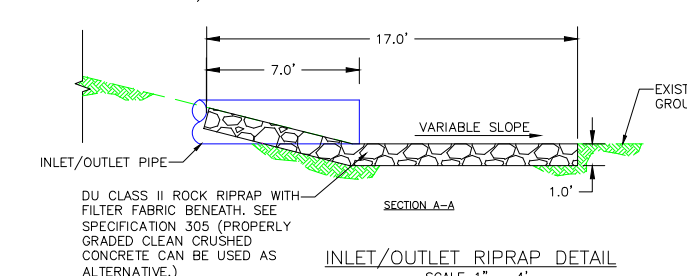
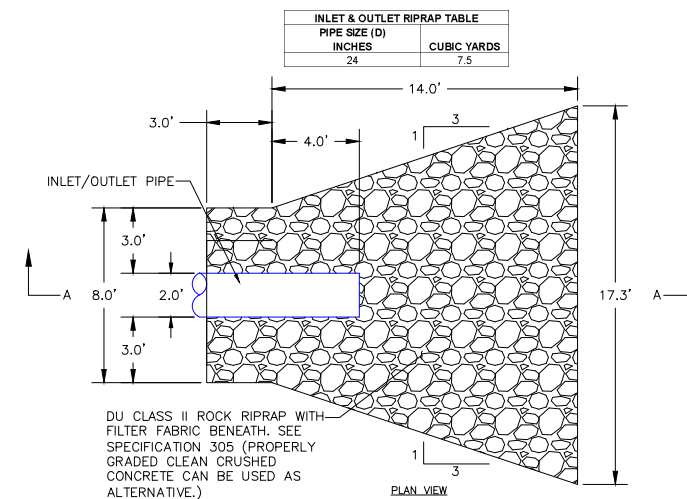
ALUMINUM CONTROL STRUCTURE DETAIL  
NOT TO SCALE



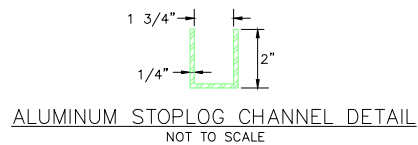
ALUMINUM LOCKING ROD SLOT DETAIL  
NOT TO SCALE



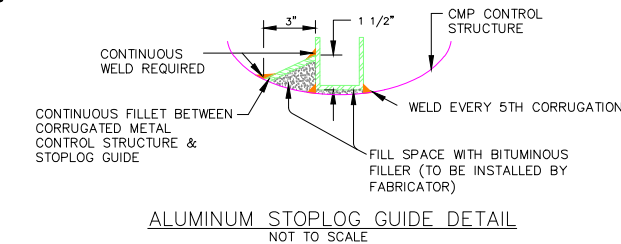
ALUMINUM RISER COVER DETAIL  
NOT TO SCALE



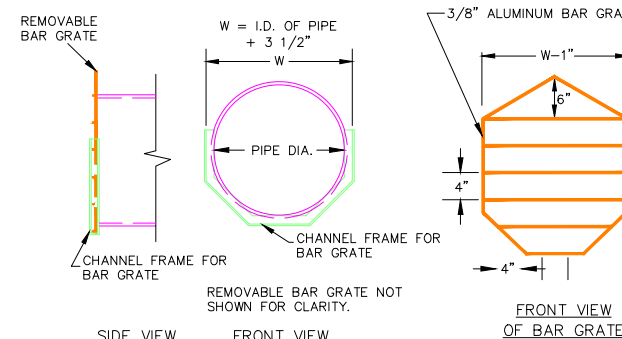
INLET/OUTLET RIPRAP DETAIL  
SCALE 1" = 4'



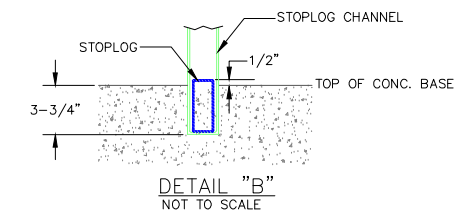
ALUMINUM STOPLOG CHANNEL DETAIL  
NOT TO SCALE



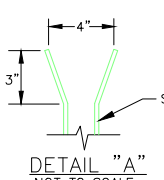
ALUMINUM STOPLOG GUIDE DETAIL  
NOT TO SCALE



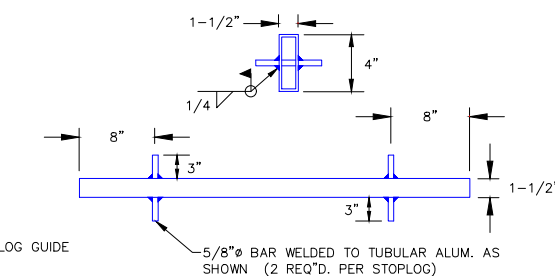
ALUMINUM BEAVER GUARD DETAILS  
NOT TO SCALE



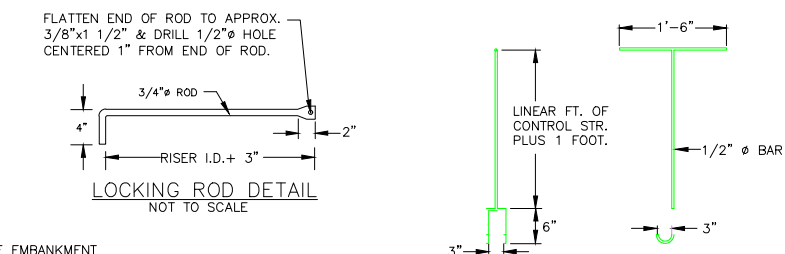
DETAIL "B"  
NOT TO SCALE



DETAIL "A"  
NOT TO SCALE

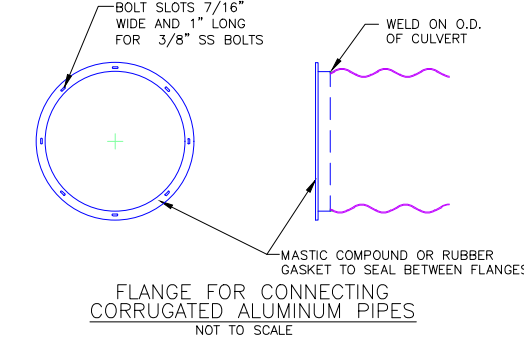


ALUMINUM STOPLOG DETAIL  
NOT TO SCALE

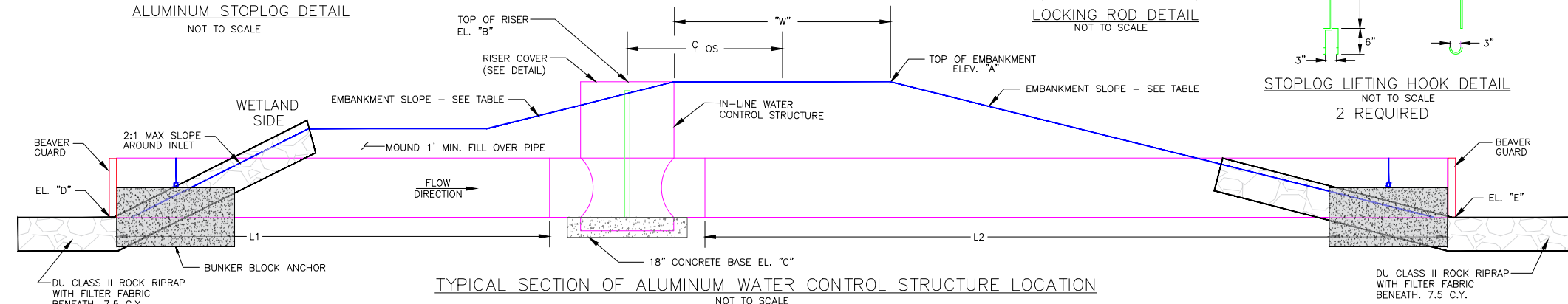


LOCKING ROD DETAIL  
NOT TO SCALE

STOPLOG LIFTING HOOK DETAIL  
NOT TO SCALE  
2 REQUIRED



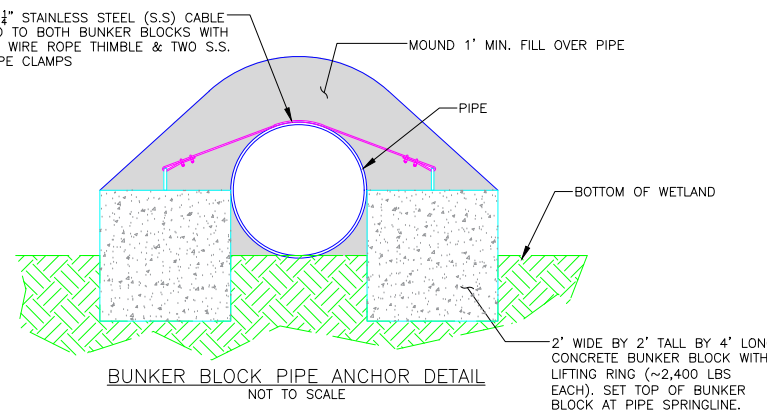
FLANGE FOR CONNECTING CORRUGATED ALUMINUM PIPES  
NOT TO SCALE



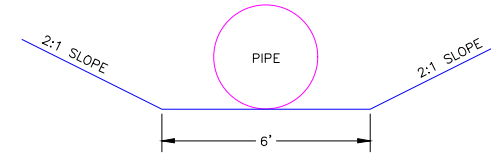
TYPICAL SECTION OF ALUMINUM WATER CONTROL STRUCTURE LOCATION  
NOT TO SCALE

STRUCTURE	PIPE		RISER		FSL	EL. "A"	EL. "B"	EL. "C"	EL. "D"	EL. "E"	"W"	L1	L2	∅ OS	"H"	NO. OF STOPLOGS **	EMBANKMENT SLOPES
	SIZE	GAUGE	SIZE	GAUGE													
WCS STRUCTURE #1	24"	14	36"	10	1394.0	1395.5	1396.0	1390.5	1392.0	1392.0	10.3'	10'	30'	7.2'	5.0'	6	6:1
WCS STRUCTURE #2	24"	14	36"	10	1394.0	1395.5	1396.0	1389.5	1391.0	1391.0	10.0'	15'	35'	7.1'	6.0'	9	6:1
WCS STRUCTURE #3	24"	14	36"	10	1394.0	1395.5	1395.5	1391.0	1392.5	1392.5	10.0'	10'	28'	7.3'	4.0'	5*	6:1

H = (EL. "B" - EL. "D") + 12"  
 \* INCLUDES 1 - 2" STOPLOG  
 \*\* DOES NOT INCLUDE STOPLOG INSTALLED IN BOTTOM OF STRUCTURE WITHOUT LIFTING LUGS.



BUNKER BLOCK PIPE ANCHOR DETAIL  
NOT TO SCALE



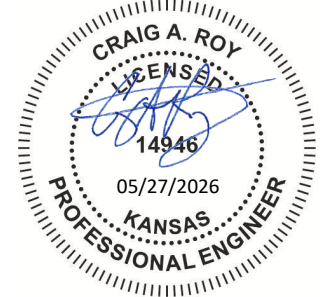
PIPE INSTALLATION DETAIL  
NOT TO SCALE

PROVIDE 1/4" STAINLESS STEEL (S.S) CABLE ATTACHED TO BOTH BUNKER BLOCKS WITH ONE S.S. WIRE ROPE THIMBLE & TWO S.S. WIRE ROPE CLAMPS

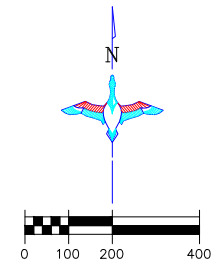
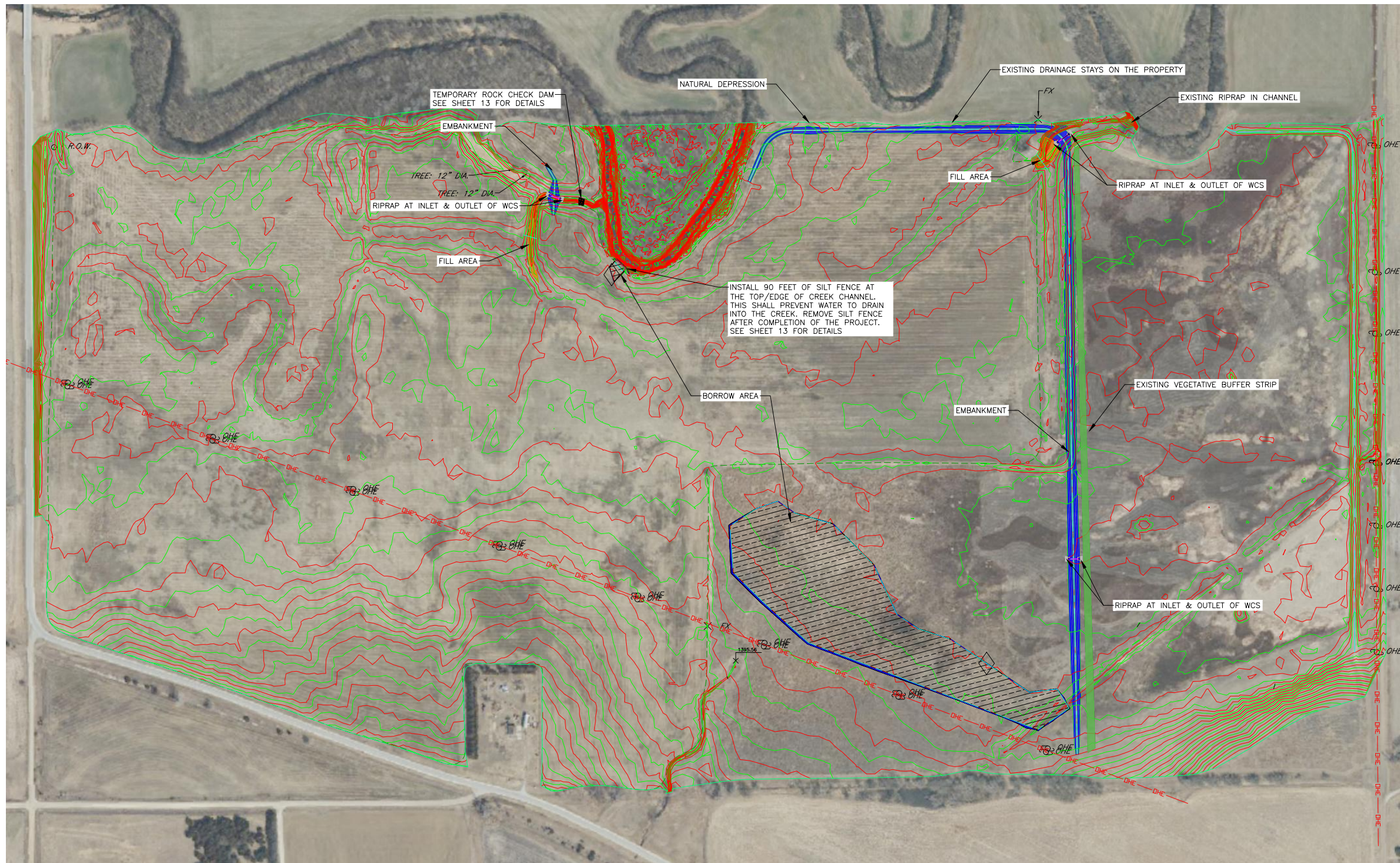
2' WIDE BY 2' TALL BY 4' LONG CONCRETE BUNKER BLOCK WITH LIFTING RING (~2,400 LBS EACH). SET TOP OF BUNKER BLOCK AT PIPE SPRINGLINE.

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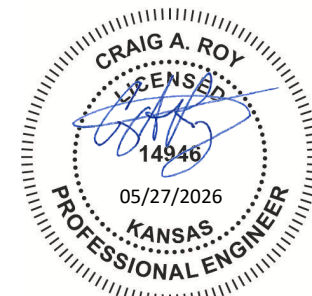
CONSTRUCTION ISSUE



	PROJECT NO.	KS-18-102	DESIGNED BY:	CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION WATER CONTROL STRUCTURE DETAILS		DRAWN BY:	CCM
DATE:	SHEET NO.	APPROVED BY:	CHECKED BY:	CAR
5/27/2026	11 OF 15	CAR	APPROVED BY:	..



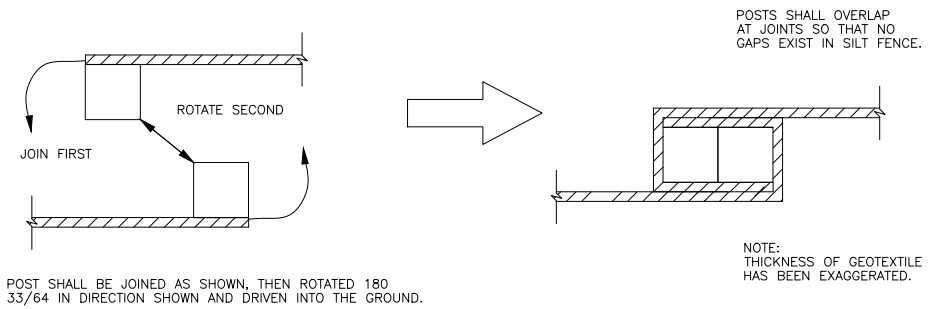
SWPP PLAN VIEW  
SCALE 1" = 200'



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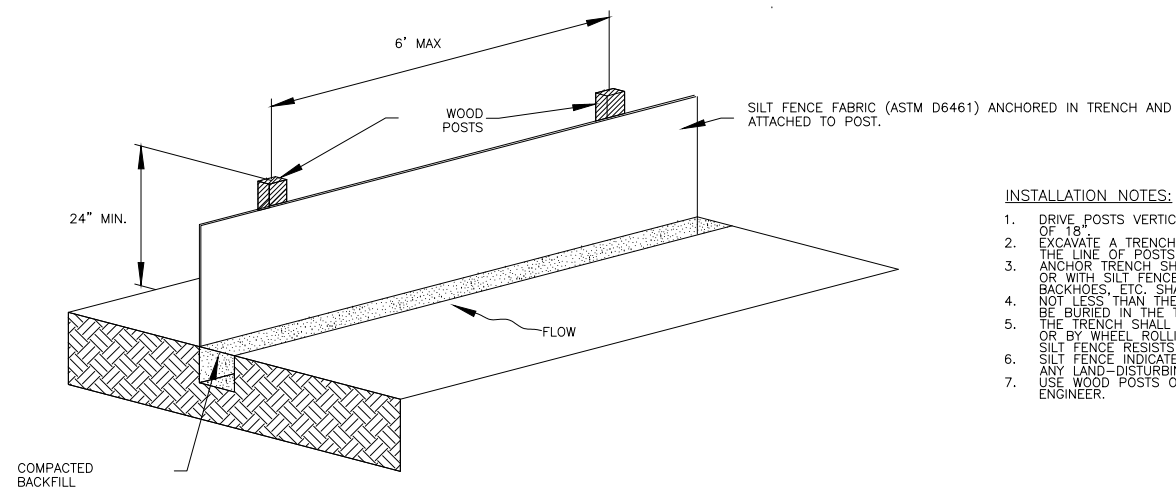
**CONSTRUCTION ISSUE**

<b>DUCKS UNLIMITED INC.</b> GREAT PLAINS REGIONAL OFFICE	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
	SWPPP	SURVEYED BY: KPU
		CHECKED BY: CAR
DATE: 5/27/2026	SHEET NO. 12 OF 15	APPROVED BY: CAR
		APPROVED BY:



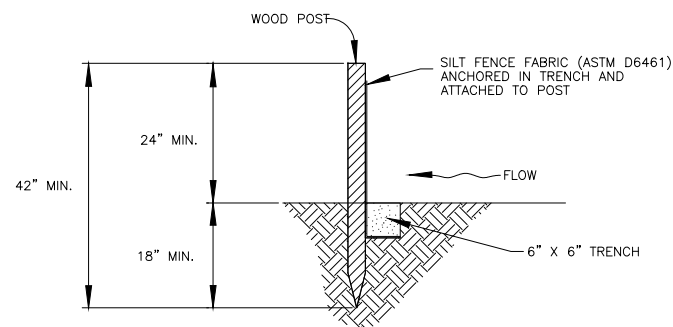
POST SHALL BE JOINED AS SHOWN, THEN ROTATED 180 33/64 IN DIRECTION SHOWN AND DRIVEN INTO THE GROUND.

**SILT FENCE JOINTS**



**INSTALLATION NOTES:**

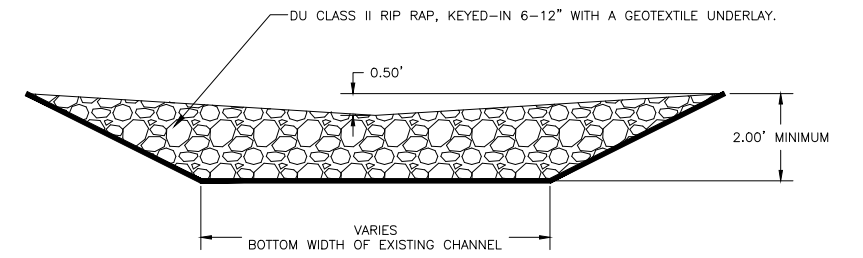
1. DRIVE POSTS VERTICALLY INTO THE GROUND TO A MINIMUM DEPTH OF 18"
2. EXCAVATE A TRENCH APPROXIMATELY 6" WIDE AND 6" DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
3. ANCHOR TRENCH SHALL BE EXCAVATED BY HAND, WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE. NO ROADGRADERS, BACKHOES, ETC. SHALL BE USED.
4. NOT LESS THAN THE BOTTOM 1' OF THE SILT FENCE FABRIC SHALL BE BURIED IN THE TRENCH.
5. THE TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT THE SILT FENCE RESISTS BEING PULLED OUT EQUAL.
6. SILT FENCE INDICATED IN THE PLANS SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
7. USE WOOD POSTS OR OTHER MATERIAL AS ACCEPTED BY THE DU ENGINEER.



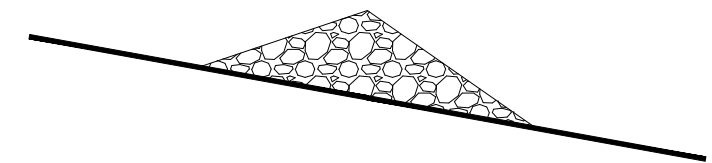
**SILT FENCE DETAIL**  
N.T.S.

**MAINTENANCE NOTES:**

1. THE CONTRACTOR SHALL INSPECT SILT FENCE EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6"
3. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED.



**ROCK CHECK DAM -- TYPICAL SECTION**  
NOT TO SCALE



**ROCK CHECK DAM -- PROFILE**  
NOT TO SCALE



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**CONSTRUCTION ISSUE**

<b>DUCKS UNLIMITED INC.</b> GREAT PLAINS REGIONAL OFFICE	PROJECT NO. KS-18-102	DESIGNED BY: CCM
	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
DATE: 5/27/2026	SHEET NO. 13 OF 15	SURVEYED BY: KPU
APPROVED BY: CAR	APPROVED BY:	CHECKED BY: CAR

**STORM WATER POLLUTION PREVENTION PLAN**

The Kansas General Permit Authorization to Discharge Stormwater Associated with Construction Activity shall apply for this project.

**ABBREVIATIONS**

KDHE: Kansas Department of Health and Environment  
KDEM: Kansas Division of Emergency Management  
USFWS: United States Fish and Wildlife Service

**NARRATIVE**

Project Limits: See Sheets 2-12 of this plan for the project limits and details. These sheets cover embankment construction, regrading, and installations of three water control structures with the associated piping.

**SITE DESCRIPTION**

Project Description: The purpose of the project is to create a shallow water impoundment and installation of an associated water control structure.

Site Map(s): See map on cover sheet of plans.

Major Soil Disturbing Activities (check all that apply):

- Clearing & Grubbing
- Grading & Shaping
- Cutting & Filling
- Other (describe):

Total Project Area: 20 Acres  
Total Area to Be Disturbed: 12.2 Acres  
Existing Impervious Area: 0.0 Acres  
Proposed Impervious Area: 0.0 Acres

Name of Receiving Water Body/Bodies: BUFFALO CREEK

Historic Places or Archeological Sites: Historical places or archeological sites have been addressed by the USFWS.

Quantities Tabulation for All BMPs: See estimated quantities and construction notes in plans.

**ORDER OF CONSTRUCTION ACTIVITIES**

(Stabilization measures shall be completed as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.)

- Install erosion and sediment control measures.
- Proceed with site grading and construction activities.
- Stabilize areas disturbed by construction activities with temporary erosion and sediment control measures.
- Complete final grading.
- Complete permanent erosion and sediment control measures.

**LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN**

See the SWPPP details and notes on plan sheets 12,13, & 14.

**EROSION AND SEDIMENT CONTROLS**

(Check all that apply)

Stabilization Practices (See Erosion and Sediment Control Details in Plan Sheets)

- Temporary or Permanent Seeding
- Sod Placement
- Planting
- Mulching (Straw or Cellulose Fiber)
- Erosion Control Blankets or Mats
- Vegetation Buffer Strips
- Roughened Surface (e.g. tracking)
- Gabions-Gabion Mattress
- Other: Riprap, Geoweb

Structural Temporary Erosion and Sediment Controls

- Silt Fence
- Temporary Berm
- Temporary Slope Drain
- Straw Wattles or Rolls
- Diversion Channels/Swales
- Channel Liners (TRM)
- Stone Rip Rap Sheet
- Rock Check Dams
- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- Surface Inlet Protection
- Curb Inlet Protection
- Stabilized Construction Entrances
- Other

Wetland Avoidance:

Will construction and/or erosion and sediment controls impinge on regulated wetlands?  Yes  No  
If yes, the project and erosion and sediment control impacts have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

Storm Water Management: Storm water management will be handled by temporary controls outlined in "EROSION AND SEDIMENT CONTROLS" above, and any permanent controls needed to meet permanent storm water management needs in the post construction period.

Pollution Prevention Management Measures:

- Solid Wastes  
Collected sediment, asphalt, and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with the KDHE disposal requirements.
- Hazardous Materials  
Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with KDHE regulations.
- Vehicle Washing  
External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.
- Concrete Washout Onsite  
All liquid and solid wastes generated by concrete washout operation must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operation or areas. Liquid and solid wastes must be disposed of properly and in compliance with KDHE regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.

**MAINTENANCE AND INSPECTION**

Maintenance and Inspection Practices

- Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report or as soon as field conditions allow access.
- Inspections of areas that are temporarily stabilized due to ice, frozen soil conditions, or consistent snow cover are to be performed at the same frequency as during normal conditions; however, such areas are exempt from performing observations of disturbed soils, sediment and erosion BMPs, drainage areas, and locations where stormwater can flow from the construction site.
- Disturbed project areas that are temporarily stabilized due to ice, frozen soil conditions or consistent snow cover extending across 70 percent or more of the area shall be noted on the inspection report. The thawing of these areas shall be noted during the first subsequent inspection when iced, frozen or snow covered conditions are not longer present.
- Where parts of the construction site have undergone final stabilization, but work remains on other parts of the site, inspections of the stabilized areas may be reduced to once per month.
- Silt fence will be inspected for depth of sediment and for tears in order to ensure the fabric is securely anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence. All silt fences must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the fence.
- Sediment basins and traps will be checked. Sediment will be removed and cleaned when the capacity of the sediment basin reaches 20 percent or more. The basin will be maintained until less than 10 acres of area needing final stabilization within the drainage basin remains.
- Check dams will be inspected for stability. Sediment will be removed when the depth reaches 1/2 the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of sediment being deposited by erosion.
- Construction site vehicle entrance and exit locations will be designated prior to mobilizing equipment. If a designated entrance and exit locating cannot be determined, the use of a wheel washing facility will be utilized. If applicable, wash waters will be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge. Off-site track out shall be cleaned up at the end of each work day. If contaminated soils are encountered, a wheel washing station with tanks for holding of the fresh water will be utilized.
- Disturbed areas will be checked for stabilization. Stabilization measures shall be initiated as soon as construction activity in that portion of the site has temporarily or permanently ceased.
- The normal wetted perimeter of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge into any surface water. Stabilization of the last 200 lineal feet must be completed within 24 hours after connection to a surface water.
- Stabilization of the remaining portions of any temporary or permanent ditches or swales must be completed within 14 days after connecting to a surface water and construction in that portion of the ditch has temporarily or permanently ceased.
- Temporary or permanent ditches or swales that are being used as a sediment containment system (with properly designed rock ditch checks, bio rolls, silt dikes, etc.) do not need to be stabilized. These areas must be stabilized within 24 hours after no longer being used as a sediment containment system.
- Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours after connection to a surface water.

- Discharge procedures for water control and dewatering operations will be inspected. If the water cannot be discharged to a sedimentation basin prior to entering the surface water, it must be treated with the appropriate BMPs, such that the discharge does not adversely affect the receiving water or downstream landowners.
- Inspection and maintenance reports will be completed for each site inspection, this form will also be used to document changes to the SWPPP. The report shall include the date and amount of precipitation or snowmelt events that cause surface erosion. A copy of the completed inspection form will be filed with the SWPPP documents.
- The Contractor's site superintendent is responsible for inspection. Maintenance and repair activities are the responsibility of the Contractor.
- In areas of concentrated flows such as channelized drainage, the use of velocity dissipation devices (e.g. check dams, riprap and wattles), installation of channel liners (e.g. riprap, geotextiles, and erosion control blankets) will be utilized.

**SITE PROTECTION**

- Fertilizer application and riparian areas: Fertilizer application for temporary erosion control on the construction site shall be done in a manner that does not allow it to leave the treated area.
- Erosion and sediment control: Maintain practices to minimize or avoid soil loss and sedimentation.
- Solid Waste: All waste materials by the construction project shall be disposed of in accordance with the provisions of the Kansas solid waste management statutes and regulations (K.S.A. 65-3401 and K.A.R. 28-29-1 et. seq.) or applicable local rules. Good housekeeping including personal refuse such as food containers, snacks, etc. shall also be addressed.
- Construction shall be done in a manner that avoids downstream bank instability.
- Floating Debris: The applicant shall take appropriate measures to capture any floating debris released to surface waters as a result of this project.
- Fuels, Chemicals and Maintenance Areas: All fuels and chemicals necessary to complete the project shall be stored in such a manner that accidental spillage is minimized or can be temporarily contained before reaching the water body. Equipment maintenance areas shall also be located in this manner.
- Spills: The Kansas Department of Health and Environment (KDHE) and the Kansas Division of Emergency Management (KDEM) are two of several state agencies that address spills. Should a spill of fuel or discharge of pollutants occur the local emergency staff should be contacted first by dialing 911. The Kansas Department of Health and Environment shall then be notified immediately: (785) 291-3333-Option 2. (24 hours a day.) These incidences should also be reported to the National Spill Response Center at 1-800-424-8802. A Spill Prevention and Response Plan should be prepared.

**CONSTRUCTION CHANGES**

The SWPP plan shall be modified or amended as appropriate during the term of the construction activity until the site is stabilized. The contractor is responsible for the installation, operation, and maintenance of erosion controls and shall keep a current copy of the SWPP plan on the project site.

Modifications to the SWPP plan shall be made to better control the site erosion and sediment discharges based on field conditions or site phasing that was not considered during SWPP plan development. The permittee shall indicate the changes on the erosion and sediment control plan sheets, maintain a log showing dates of all SWP2 plan modifications, and the name and title of the person authorizing the modifications. Changes to the SWP2 plan that are not an amendment (See Section 7.3.2 of the Kansas Department of Health and Environment-Kansas Pollution Control) are considered modifications and do not need to be submitted to KDHE. Modification of site erosion and sediment controls based on field conditions or site phasing do not require preparation or approval by a professional however, modifications that involve the relocation or reconfiguration of any sedimentation basin or corresponding outlet structure required under Section 7.2.7 of the Kansas Department of Health and Environment-Kansas Pollution Control shall be prepared under the supervision of a licensed or certified professional.

**PROJECT CONTACTS**

The Contractor is responsible for implementation of the SWP2 plan and installation, inspection and maintenance of the erosion prevention and sediment control BMP's before and during construction.

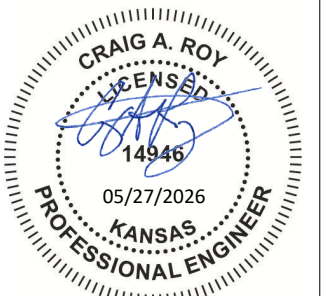
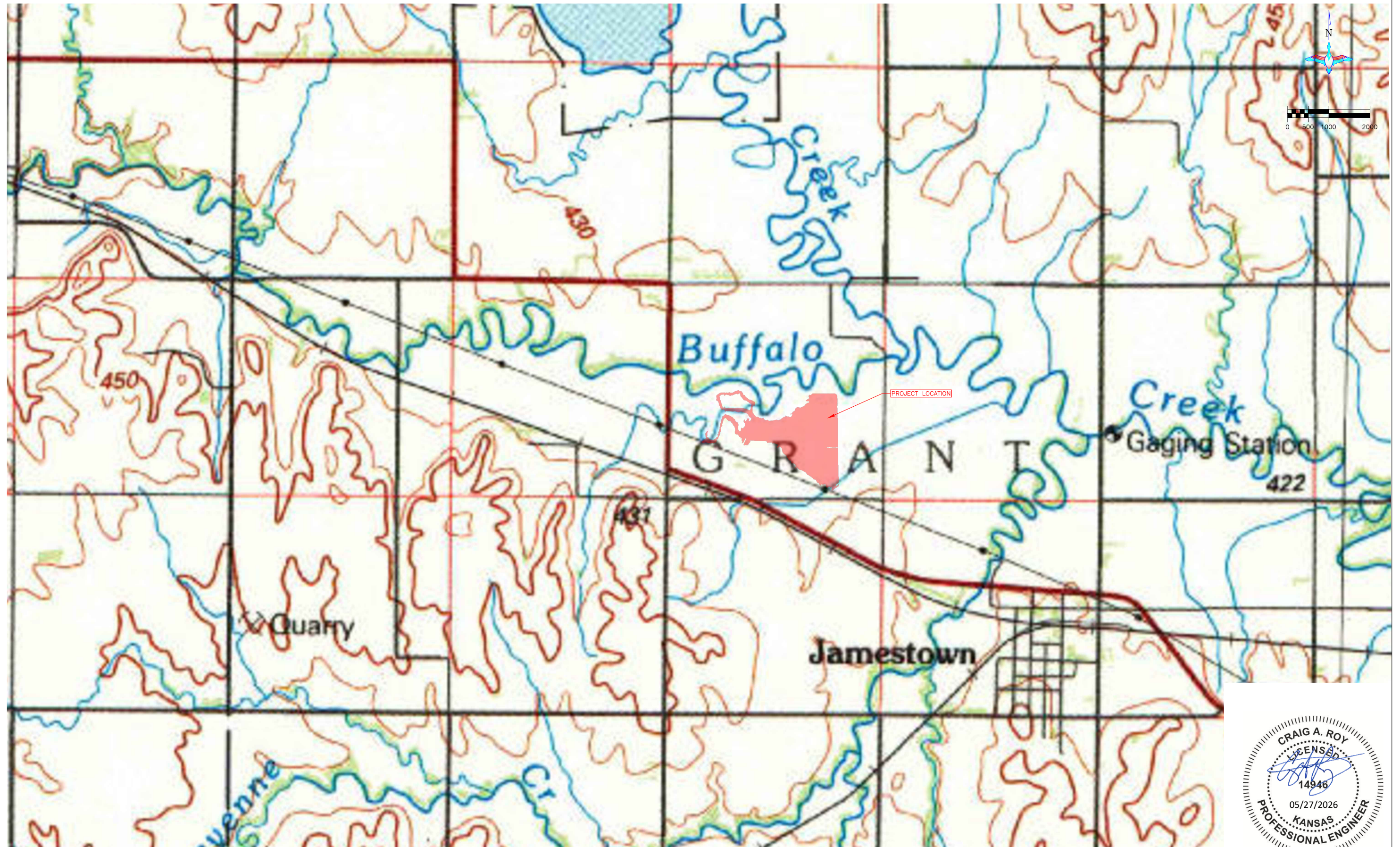
Contractor and KDHE contact information is provided in the contract documents and project plans.



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GREAT PLAINS REGIONAL OFFICE		SWPPP NOTES		SURVEYED BY:	KPU
DATE:	SHEET NO.	APPROVED BY:	APPROVED BY:	CHECKED BY:	CAR
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OVERALL PLAN VIEW  
SCALE 1" = 1000'

**CONSTRUCTION ISSUE**

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	JAMESTOWN WA - LEE STANFORD RESTORATION	DRAWN BY: CCM
USGS TOPOGRAPHIC MAP	SURVEYED BY: KPU	CHECKED BY: CAR
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