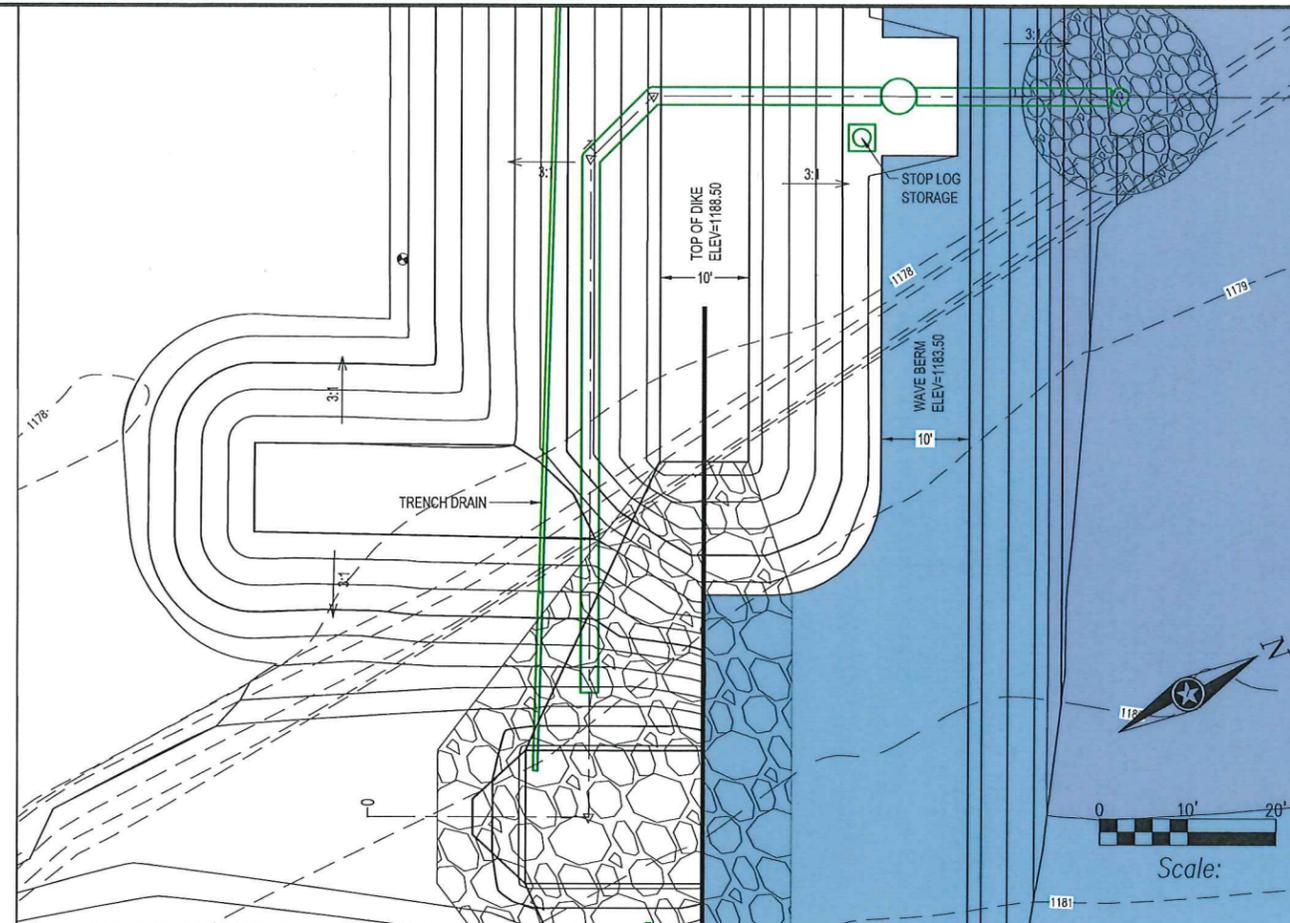
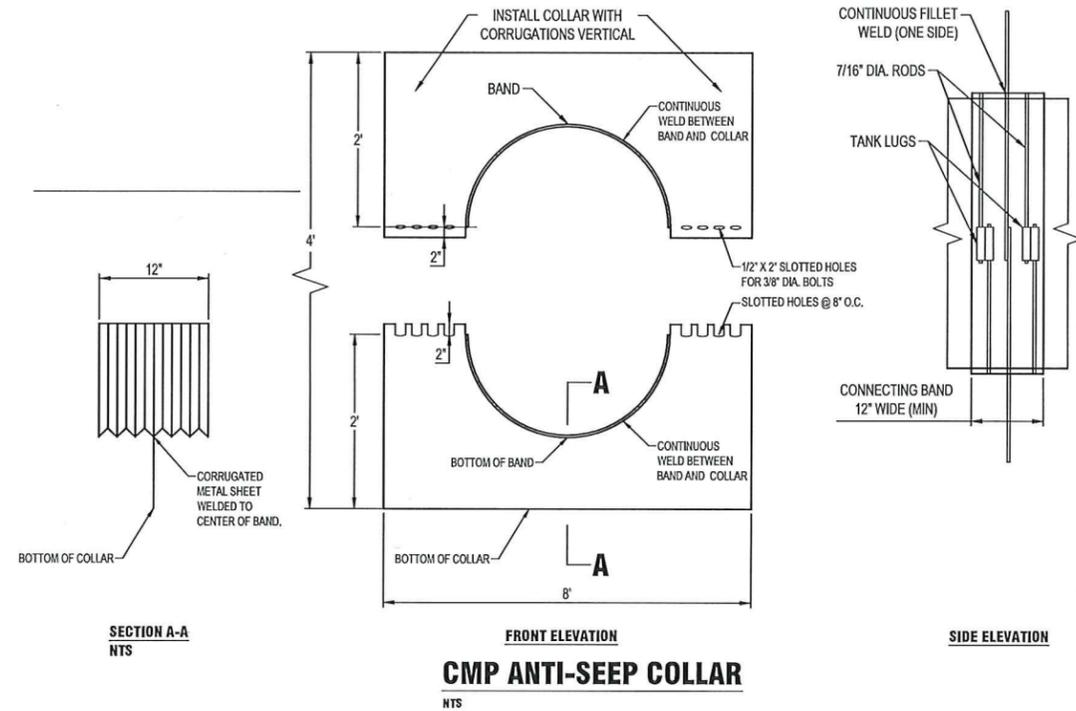


ANTI-SEEP COLLAR NOTES:

- USE TWO PIECE CORRUGATED STEEL DIAPHRAGM (14 GAUGE) WITH 2-2/3" X 1/2" CORRUGATIONS. MASTIC SEALANT SHALL BE APPLIED TO THE CONNECTING BAND TO PROVIDE A LEAK-PROOF STRUCTURE. CONTRACTOR IS RESPONSIBLE FOR ENSURING ANTI-SEEP COLLAR IS COMPATIBLE WITH PIPE SUPPLIED.
- PLACE ANTI-SEEP COLLARS AS SHOWN ON THE PLANS AND A MINIMUM OF 2 FEET FROM PIPE JOINTS.



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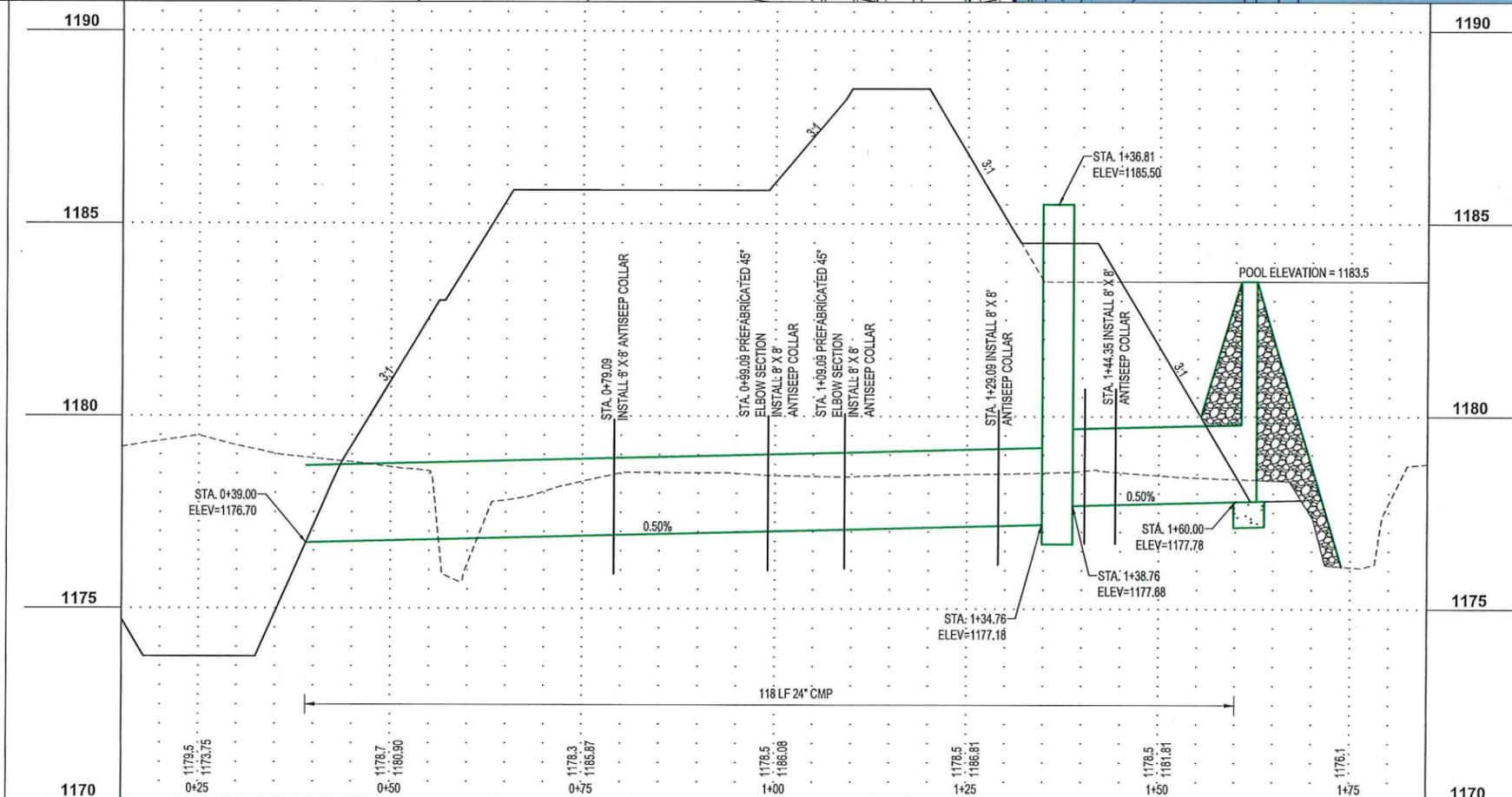
IOWA
DEPARTMENT OF
AGRICULTURE
AND LAND STEWARDSHIP

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WATER CONTROL STRUCTURE INSTALLATION NOTES:

- PIPE SHALL BE CORRUGATED METAL PIPE PER ASTM A 760.
- PIPE EMBEDMENT AND BACKFILL MATERIALS SHALL BE CONSISTENT WITH SPEC IA-23. A DEWATERED DRY TRENCH IS REQUIRED. PLACE AND COMPACT FILL AROUND PIPE AND STRUCTURE IN ACCORDANCE WITH SPEC IA-23, SECTION 6 AND AS TRENCH IS FILLED OR DIKE FILL IS RAISED. NO GRANULAR BEDDING ALONG PIPE IS ALLOWED. SUITABLE EARTH BACKFILL MUST BE USED.
- THE COMPACTION OF EACH BACKFILL LAYER MUST BE APPROVED BY ENGINEER'S REPRESENTATIVE PRIOR TO PLACEMENT OF THE NEXT LAYER. DENSITY TESTING NOT REQUIRED.
- FURNISH AND INSTALL 2" X 6" ALUMINUM STOP LOGS AND TWO REMOVAL TOOLS. WHEN INSTALLING STOP LOG CHANNEL AND CASTING BOTTOM LOG INTO THE INVERT VERIFY WITH THE ENGINEER THAT POOL ELEVATION CAN BE MET WITH 6" STOP LOGS.
- SURROUND 24" INTAKE RISER WITH CLASS E RIPRAP.



PROJECT

IDALS

WETLAND DEVELOPMENT

KOSSUTH COUNTY IOWA

REVISION SCHEDULE	
NO	DESCRIPTION

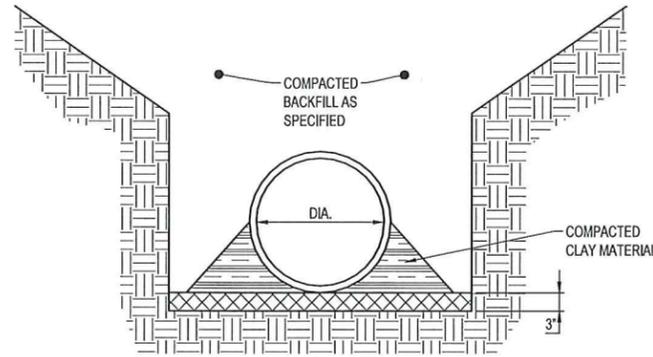
PROJECT NO. 15-18017
FILE NAME 18017 WATER CONTROL STRUCTURE
DRAWN BY JKJ
DESIGNED BY NRF/
REVIEWED BY NRF/
ISSUE DATE 05/19/2016
CLIENT PROJECT NO. KOS952718C

TITLE

WATER CONTROL STRUCTURE

SHEET

8

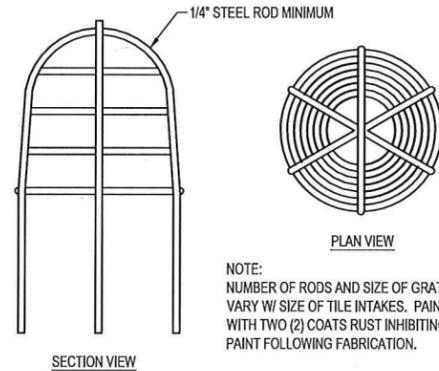


NOTES:

- BEGIN BACKFILL IMMEDIATELY AFTER PIPE HAS BEEN PLACED.
- EXCAVATE 3" BELOW PIPE GRADE THEN BACKFILL WITH DAMP FRIABLE SOIL FREE FROM LUMPS AND RAKED OR GRADED TO A TRUE PLANE BEFORE PLACING CMP. NO COMPACTION OF BEDDING IS REQUIRED.
- USE COMPACTED CLAY MATERIAL FOR PIPE BEDDING UPSTREAM OF PIPE DIAPHRAGM.
- PIPE BEDDING MATERIAL SHALL BE HAND TAMPED ONLY. POWER TAMPING IS NOT ALLOWED.

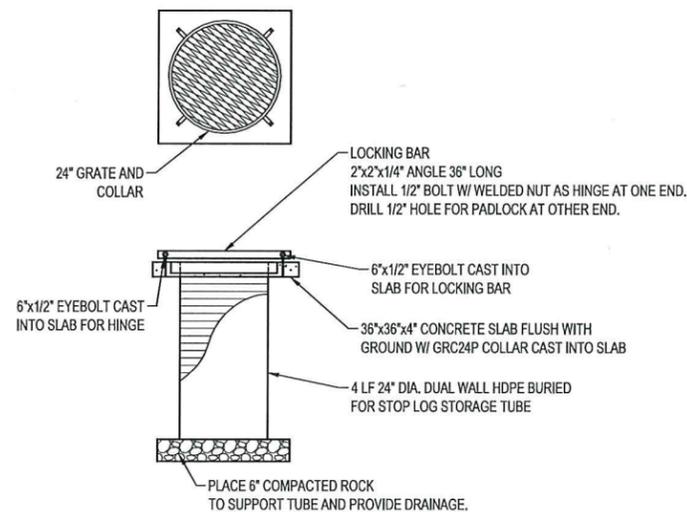
CMP PIPE BEDDING FOR WATER CONTROL STRUCTURE

NTS



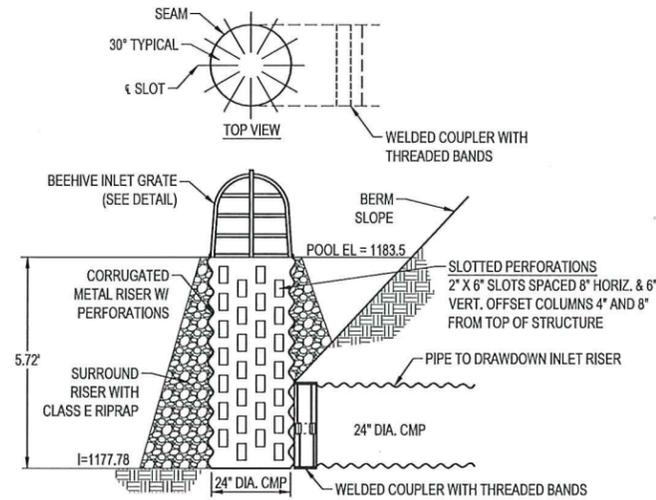
BEEHIVE INLET GRATE (STEEL BARS)

NTS



COVER AND STOP LOG STORAGE DETAILS

NTS

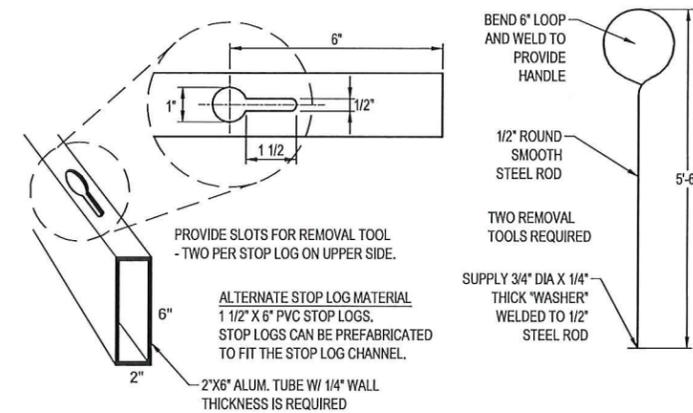


CMP SLOTTED INTAKE RISER

NTS

WATER CONTROL STRUCTURE NOTES:

- STRUCTURE SHOP DRAWINGS ARE REQUIRED FOR ENGINEER'S REVIEW AND APPROVAL BEFORE FABRICATION OF WATER CONTROL STRUCTURE.
- STOP LOG CHANNEL IS TO BE ANCHORED TO THE WALLS AND FLOOR PRIOR TO PLACING CONCRETE INVERT.
- A CONCRETE INVERT IS TO BE INSTALLED AFTER STOP LOG CHANNEL IS INSTALLED. THE BOTTOM STOP LOG IS TO BE CAST INTO THE INVERT WITH THREE HALF INCH Ø "J BOLTS" FASTENED TO THE BOTTOM STOP LOG. NO LIFTING HOLES ARE REQUIRED FOR THIS BOTTOM LOG.
- PLACE BASE OF STRUCTURE ON FIRM UNDISTURBED EARTH FOUNDATION APPROVED BY ENGINEER.
- A-LOK (OR EQUIVALENT) WATERTIGHT SEALS ARE REQUIRED FOR PIPE CONNECTIONS TO THE DRAWDOWN CONTROL STRUCTURE.
- MANHOLE STEPS ARE TO BE INSTALLED FOR MAINTENANCE ACCESS TO THE STOP LOGS. STEPS ARE TO BE PER IDOT 4149.04L.
- STOP LOG ASSEMBLY SHALL BE WATER TIGHT AND CONFORM TO WHIPPS, INC. OR AN APPROVED EQUAL. ALL STRUCTURE JOINTS TO BE WATER TIGHT TO LIMIT ANY WATER MIGRATING THROUGH JOINTS AND AROUND THE STOP LOG CHANNEL.



STOP LOG & REMOVAL TOOL DETAILS

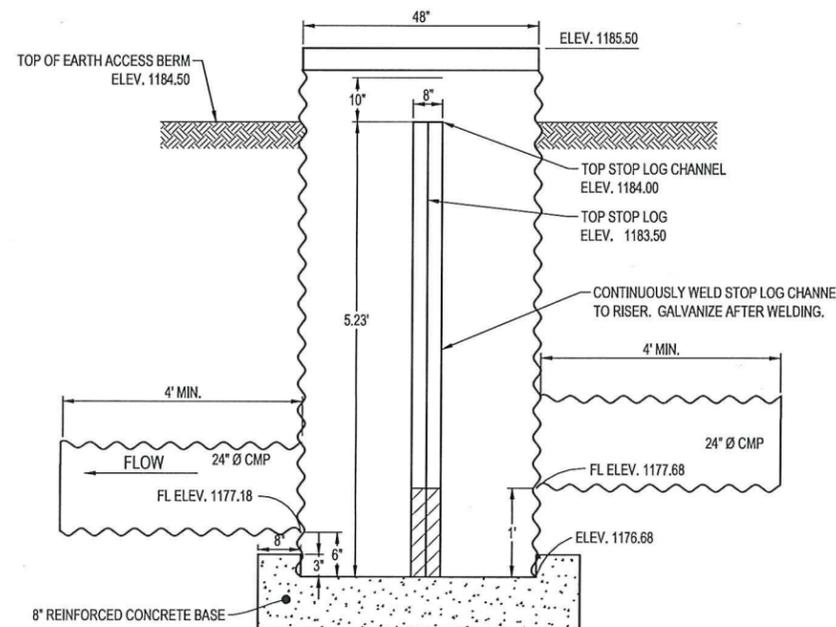
NTS

STOP LOG CHANNEL NOTES:

- ALL STEEL SHALL BE FY=36 KSI.
- STOP LOG CHANNEL SHALL BE FURNISHED AS ONE CONTINUOUS PIECE W/ CONTINUOUS WELDS
- ALL STEEL STOP LOG CHANNEL COMPONENTS ARE TO BE GALVANIZED AFTER WELDING AND DRILLING IS COMPLETE
- CONTRACTOR IS TO APPLY SEALANT VERY GENEROUSLY TO BACKSIDE OF STOP LOG CHANNEL TO ENSURE WATERTIGHT SEAL. SEALANT SHALL BE SIKKA 30 YEAR INDUSTRIAL CAULK IN LIMESTONE GREY OR APPROVED EQUIVALENT.

COVER/STOP LOG STORAGE NOTES:

- PROVIDE (HALLIDAY PRODUCTS MODEL S1R3648 OR APPROVED EQUAL) 36"x48" ALUMINUM ACCESS DOOR WITH LOCKING MECHANISM AND LIFTING HANDLE.
- BOTH PADLOCKS FOR ACCESS DOOR AND STOPLOG STORAGE TUBE SHALL BE KEYPED ALIKE. FOUR OF KEYS ARE TO BE SUPPLIED UPON PROJECT COMPLETION.
- TOP OF STRUCTURE SHALL BE AN 8" THICK REINFORCED PRECAST TOP WITH ALUMINUM ACCESS DOOR CAST INTO TOP.
- PROVIDE 24" GRATE AND COLLAR (AGRI DRAIN GR24P GRATE AND GRC24P COLLAR OR APPROVED EQUAL) FOR STOP LOG STORAGE
- STOP LOG STORAGE IS TO BE PLACED ADJACENT TO WCS AND AT AN ELEVATION EQUAL TO OR HIGHER THAN THE WCS.
- STOP LOGS NOT USED ARE TO BE PLACED IN THE STOP LOG STORAGE.



WATER CONTROL STRUCTURE ELEVATION

NTS



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PROJECT

IDALS

WETLAND DEVELOPMENT

KOSSUTH COUNTY IOWA

REVISION SCHEDULE

NO	DATE	DESCRIPTION

PROJECT NO. 15-18017

FILE NAME 18017 TITLE AND NOTES

DRAWN BY JK/FTAC

DESIGNED BY KLR/NRF/TAC/JW

REVIEWED BY KLR/NRF

ISSUE DATE 05/19/2016

CLIENT PROJECT NO. KOS952719C

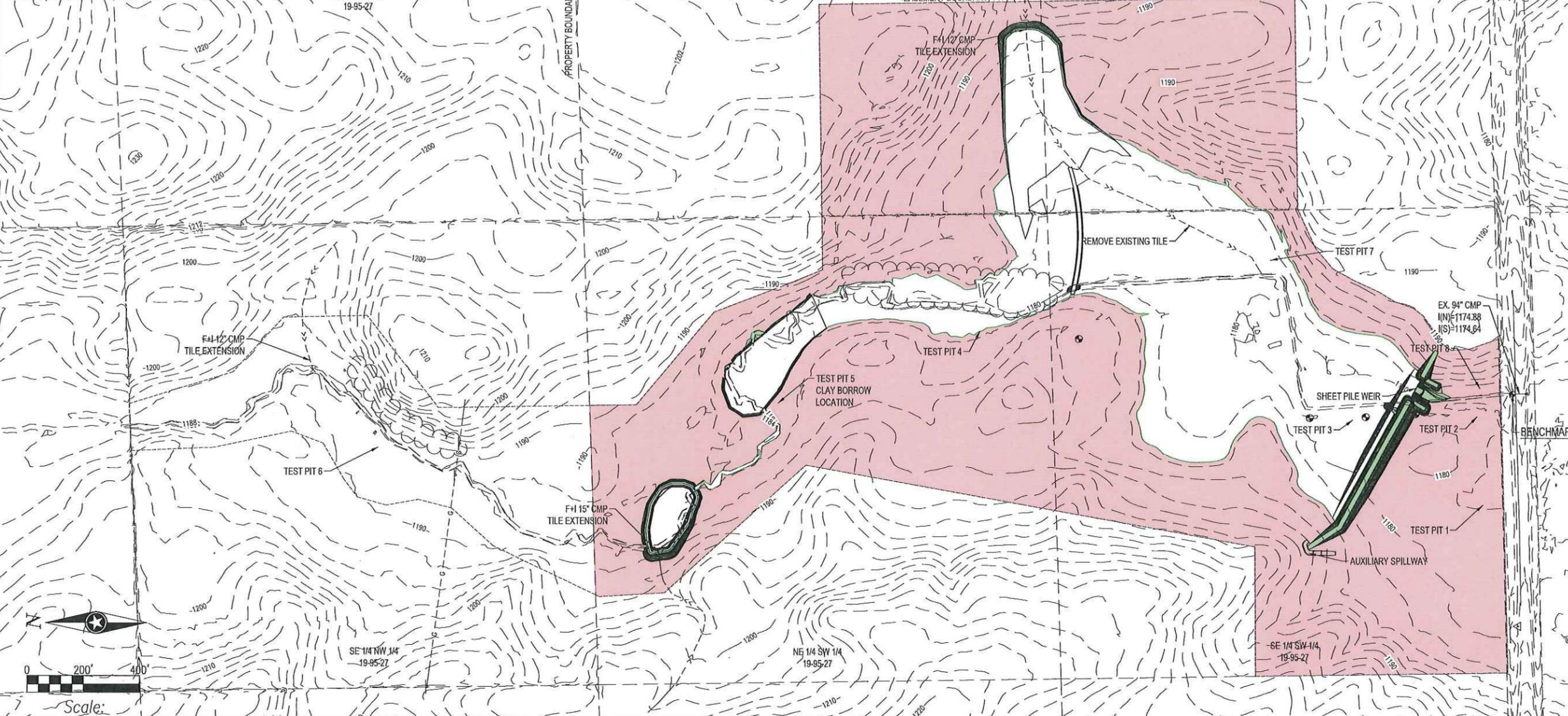
TITLE

WATER CONTROL STRUCTURE DETAILS

SHEET

B.M. ELEVATION=1182.60

MAG NAIL IN TOP N. END-CMP



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PROJECT

**IDALS
WETLAND
DEVELOPMENT**

KOSSUTH COUNTY IOWA

REVISION SCHEDULE	
NO	DESCRIPTION

PROJECT NO. 15-18017
 FILE NAME 18017 SEEDING
 DRAWN BY JKF
 DESIGNED BY NRF/
 REVIEWED BY NRF/
 ISSUE DATE 05/19/2016
 CLIENT PROJECT NO. KOS952719C

TITLE

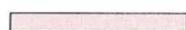
SEEDING

SHEET

SEEDING NOTES:

1. ALL SEED BEDS SHALL BE PREPARED AS SPECIFIED IN SECTION IA-6.
2. ALL ROCKS 3" OR LARGER IN DIAMETER SHALL BE REMOVED FROM THE SEED BED.
3. CONTRACTOR SHALL SUBMIT A SEEDING PLAN ON FORM IA-CRP-4 FOR EACH TYPE OF SEED TO BE PROVIDED AT LEAST 3 WEEKS PRIOR TO BEGINNING SEEDING OPERATIONS.
4. NO SEED TO BE PLACED BELOW THE NORMAL WATER ELEVATION.
5. MULCH SHALL BE APPLIED TO ALL STRUCTURE AND CHANNEL SEEDING AREAS; NO MULCH TO BE APPLIED TO THE BUFFER SEEDING.
6. SEEDING AREAS WHERE MULCH IS REQUIRED SHALL BE MULCHED WITHIN 24 HOURS.
7. ALL MULCH SHALL BE ANCHORED.
8. SEED TYPES SHALL AS SPECIFIED IN SECTION IA-6 OF THE PROJECT MANUAL.
9. EXISTING VEGETATION SHALL BE REMOVED OR KILLED BY APPLICATION OF HERBICIDE PRIOR TO PREPARATION FOR SEEDING.
10. ANY EXISTING VEGETATION AREAS THAT ARE TO REMAIN UNDISTURBED WILL BE DETERMINED IN THE FIELD BY THE ENGINEER, NO CHANGE IN CONTRACT PRICE WILL BE ALLOWED DUE TO CHANGE IN SEEDING AREAS.

LEGEND

	STRUCTURE SEEDING
	BUFFER SEEDING