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**STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

**SITE INFORMATION:**

1. SITE IS LOCATED IN THE SW 1/4, SW 1/4 SECTION 5, & NW 1/2, NW 1/4 SECTION 8 OF TOWNSHIP 70 NORTH RANGE 13 WEST, DAVIS COUNTY, IOWA.
2. THIS SWPPP COVERS THE RECLAMATION OF APPROXIMATELY 8 ACRES OF STRIP MINED LAND.
3. THE PREDOMINANT SOIL TYPES ARE: MINE SPOIL, PITS-DUMPS COMPLEX (5020); WELLER SILTY CLAY LOAM, 9-14% SLOPES (732D2); MUNTERVILLE SILT LOAM, 9-18% SLOPES (1313E2); CLINTON SILT LOAM, 9-14% SLOPES (80D2).
4. RUNOFF FROM THE CONSTRUCTION AREA WILL FLOW INTO SOAP CREEK, A TRIBUTARY TO THE DES MOINES RIVER.
5. THE AVERAGE NRCS RUNOFF CURVE NUMBER FOR THIS LAND AFTER PERMANENT VEGETATION IS ESTABLISHED IS ESTIMATED TO BE 74.

**GENERAL:**

1. THIS PROJECT WILL BE COVERED BY NPDES GENERAL PERMIT NO. 2 WHICH REGULATES RUNOFF FROM CONSTRUCTION SITES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM THE REQUIRED MONITORING, INSPECTION, AND MAINTENANCE OF ALL BEST MANAGEMENT PRACTICES (BMPs) AS REQUIRED BY THE PERMIT.
2. THE PRIME CONTRACTOR AND ALL ITS SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER WHICH MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND COMPLIANCE OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH ALL ITS SUBCONTRACTORS.
3. THE WORK SHALL BE DONE IN ACCORDANCE WITH THIS PLAN, THE CONTRACT DRAWINGS, AND SECTION 02120 OF THE CONSTRUCTION SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THESE REQUIREMENTS AND WATER POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF OTHER FEDERAL, STATE OR LOCAL AGENCIES, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
4. A COPY OF THE SWPPP SHALL BE KEPT IN A CONTRACTOR-SUPPLIED, WEATHER-PROTECTED ENCLOSURE SUCH AS A MAILBOX, SO THAT THE PLAN IS ACCESSIBLE AT THE SITE AT ALL TIMES. A SIGN OR NOTICE POSTED BY THE CONTRACTOR SHALL INDICATE THE PLAN'S LOCATION AND CONTRACTOR'S CONTACT INFORMATION.
5. THE CONTRACTOR SHALL NOTIFY THE IOWA DNR, THE DIVISION, AND THE LOCAL POLICE DEPARTMENT OF ANY HAZARDOUS CONDITIONS AS SOON AS POSSIBLE BUT NOT MORE THAN (6) HOURS AFTER ONSET OF HAZARDOUS CONDITIONS. HAZARDOUS CONDITIONS ARE DEFINED AS ANY SITUATION INVOLVING THE ACTUAL, IMMINENT, OR PROBABLE SPILLAGE, LEAKAGE, OR RELEASE OF A HAZARDOUS SUBSTANCE ONTO THE LAND, INTO WATERS OF THE STATE, OR INTO THE ATMOSPHERE, WHICH CREATES AN IMMEDIATE OR POTENTIAL DANGER TO THE PUBLIC HEALTH OR SAFETY OR THE ENVIRONMENT.
6. CONTRACTOR SHALL FOLLOW THE IOWA CONSTRUCTION SITE EROSION CONTROL MANUAL.

**EROSION CONTROLS:**

1. GRANULAR SURFACING SHALL BE INSTALLED AND MAINTAINED AT THE ENTRANCE INTO THE SITE AND OFFICE PARKING AREA TO CONTROL MUD FROM BEING TRACKED OFF SITE. ON AND OFF SITE TRACKING OF MUD SHALL BE REMOVED AS NECESSARY, IN ADDITION, WATER SHALL BE APPLIED TO HAUL ROADS AND OTHER DISTURBED EARTHEN SURFACES AS NECESSARY TO CONTROL DUST THROUGHOUT CONTRACT PERIOD.
2. WATER PUMPED DURING CONSTRUCTION OPERATIONS SHALL BE HANDLED IN A PROPER MANNER. EROSION AND SCOUR SHALL BE PREVENTED AT POINTS WHERE THE PUMP(S) DISCHARGE. LEVEL SPREADERS, RIP-RAP, AND/OR OTHER ENERGY ABSORBING DEVICES OR APPROPRIATE BMPs SHALL BE USED.
3. EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED.
4. WHERE PRACTICABLE, SILT FENCE SHALL BE INSTALLED AT THE DOWNSTREAM PERIMETER OF THE CONSTRUCTION AREA PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITY.
5. RISERS, INLETS, INTAKES, AND OTHER SUCH WATER-CONVEYING STRUCTURES SHALL BE PROTECTED WITH SILT FENCES AT THE TIME OF THEIR INITIAL INSTALLATION.
6. IN AREAS WHERE PRESENCE OF SILT FENCE WILL INTERFERE WITH CONSTRUCTION ACTIVITIES, DIVERSION DITCHES AND TEMPORARY SEDIMENT TRAPS SHALL BE UTILIZED UNTIL THE SILT FENCE OR OTHER PRACTICES CAN BE INSTALLED.
7. LOCATIONS AND QUANTITIES OF SILT FENCE OR OTHER BMPs SHOWN ON THE PLAN ARE APPROXIMATE. ACTUAL LOCATIONS OR QUANTITIES ARE TO BE DETERMINED IN THE FIELD WITH THE APPROVAL OF THE DIVISION OR THE ENGINEER.
8. INSTALL LONG RUNS OF SILT FENCE (GREATER THAN 200' WITH SEPARATE RUNS OFFSET BY 30' (MIN.) TO ALLOW THROUGH ACCESS.

**EROSION CONTROLS (CONTINUED):**

9. AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL MEASURES DEEMED NECESSARY, AS DETERMINED BY THE DIVISION OR ENGINEER AFTER INVESTIGATION, SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CONTRACTOR.
10. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST TWENTY-ONE (21) DAYS, THE AREA SHALL BE STABILIZED AS SOON AS PRACTICABLE AND WITHIN FOURTEEN (14) DAYS FOLLOWING THE LAST DISTURBANCE (UNLESS THE GROUND IS FROZEN OR SNOW-COVERED) BY SURFACE ROUGHENING, MULCHING, TEMPORARY SEEDING, OR OTHER APPROVED METHOD.
11. NO MORE THAN FIVE (5) TOTAL ACRES OF EXPOSED ERODIBLE AREA IS ALLOWED AT ANY ONE TIME WITHOUT PERMISSION OF THE DIVISION OR ENGINEER.
12. WHEN AREAS REACH FINAL GRADE, THEY SHALL BE TEMPORARILY STABILIZED. INTERIM SEEDING SHALL BE INITIATED AS SOON THEREAFTER WITHIN THE SEEDING SEASONS OUTLINED IN THE SPECIFICATIONS. EROSION CONTROL MEASURES BY THE CONTRACTOR SHALL CONTINUE UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND ACCEPTED BY THE DIVISION.
13. ALL AREAS DISTURBED BEYOND CONSTRUCTION LIMITS SHOWN ON THIS PLAN MUST BE SEEDED AND STABILIZED. THE SEED MIXTURE USED SHOULD INCLUDE SPECIES SIMILAR TO AND COMPATIBLE WITH THE SURROUNDING VEGETATION.

**OTHER POLLUTION CONTROLS:**

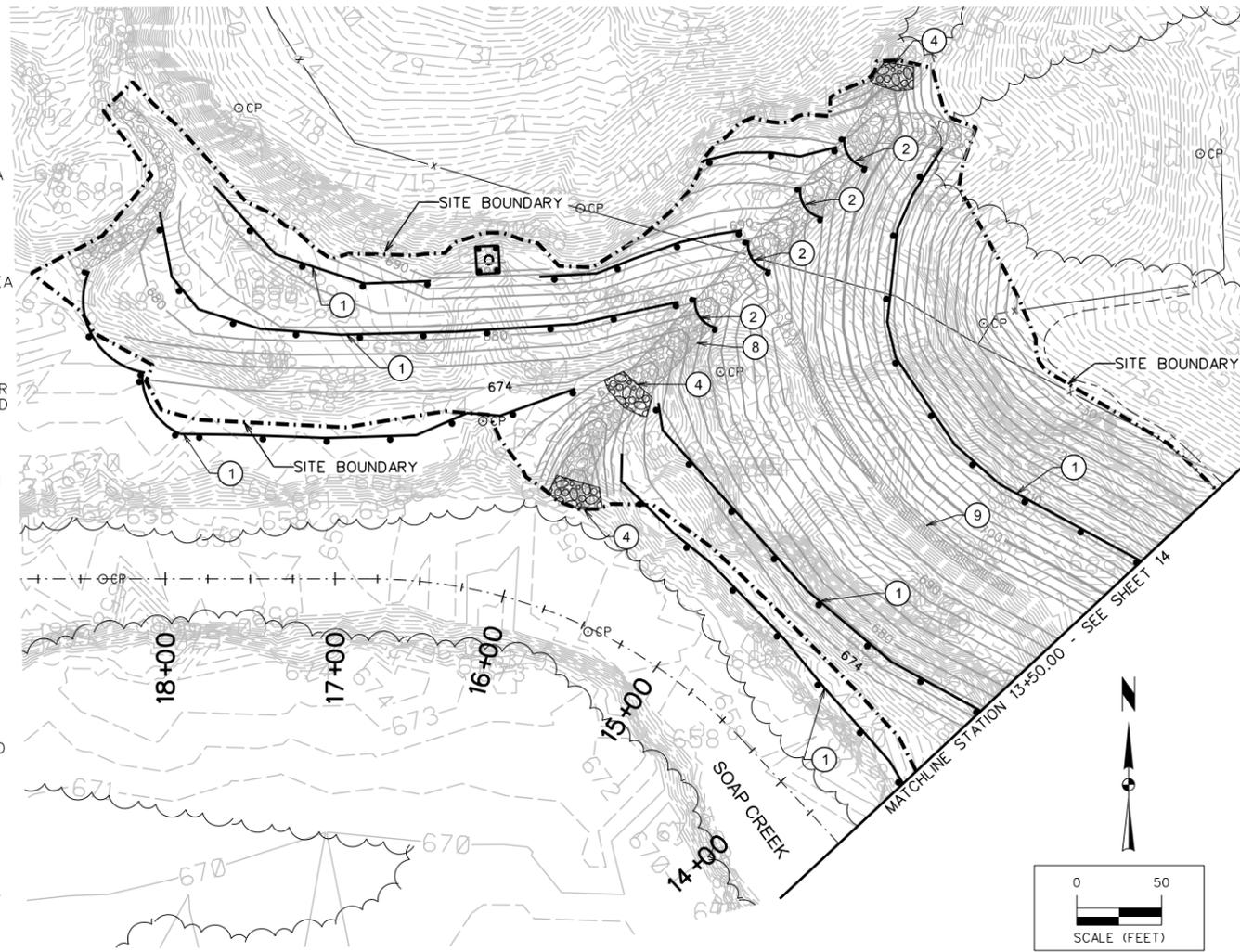
1. THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION SITE FREE OF ALL WASTES INCLUDING LITTER, USED PARTS, USED OIL AND CONTAINERS, TIRES, AND ANY OTHER WASTE GENERATED BY CONSTRUCTION ACTIVITIES. SANITARY WASTE GENERATED ON SITE SHALL BE TREATED AND DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS. CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND WASTES SHALL ALSO COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS.
2. CONCRETE WASHOUT RESIDUE SHOULD BE CONTAINED AND HAULED OFF SITE ONCE IT HARDENS. AREAS WHERE CONCRETE WASHOUT OCCURS SHALL BE FILLED AND STABILIZED.

**INSPECTIONS:**

1. SITE INSPECTION SHALL BE PERFORMED BY QUALIFIED PERSONNEL OF THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED ONCE EVERY SEVEN (7) DAYS.
2. INSPECTIONS SHALL INCLUDE: ALL SILT FENCES, HAY BALE DIKES, DITCHES, SEDIMENT TRAPS, AND ALL OTHER EROSION CONTROL DEVICES; AREAS DISTURBED BY CONSTRUCTION ACTIVITY OR USED FOR STORAGE OF MATERIALS WHICH ARE EXPOSED TO PRECIPITATION; POLLUTION CONTROL MEASURES TO ENSURE PROPER OPERATION; DRAINAGE LOCATIONS TO DETERMINE EFFECTIVENESS IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS; AND LOCATION WHERE VEHICLES AND EQUIPMENT ENTER AND EXIT THE SITE FOR EVIDENCE OF OFF-SITE TRACKING.
3. SITE INSPECTION REPORTS SHALL BE PROPERLY SIGNED BY THE PERSON CONDUCTING THE INSPECTION. THE REPORT SHALL INCLUDE: DATE, NAME AND TITLE / POSITION OF THE INSPECTOR; WEATHER INFORMATION; LOCATION OF SEDIMENT / POLLUTANT DISCHARGE; CONTROL MEASURES A) REQUIRING MAINTENANCE, B) THAT HAVE FAILED, AND C) THAT ARE NEEDED; AND CORRECTIVE ACTIONS REQUIRED INCLUDING CHANGES / UPDATES TO THE SWPPP.
4. THE FINDINGS OF EACH INSPECTION SHALL BE RECORDED AND KEPT AT THE SITE IN A PROJECT FILE. THE CONTRACTOR SHALL IMMEDIATELY BEGIN CORRECTIVE ACTION ON ALL DEFICIENCIES FOUND. ALL CORRECTIVE ACTIONS SHALL BE COMPLETED WITHIN THREE (3) WORKING DAYS OF THE INSPECTION.
5. THE SWPPP MAY BE REVISED BASED ON FINDINGS OF THE INSPECTIONS. SUCH REVISIONS SHALL BE MADE WITHIN SEVEN (7) DAYS OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS.
6. COPIES OF INSPECTION REPORTS WILL BE RETAINED WITH THE SWPPP FOR THREE (3) YEARS FROM THE DATE THE PERMIT COVERAGE TERMINATES.

**MAINTENANCE:**

1. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES IN PROPER WORKING ORDER FOR THE DURATION OF THE CONTRACT. IF A MEASURE IS NO LONGER NEEDED AS DETERMINED BY THE DIVISION OR ENGINEER, IT SHALL BE REMOVED. MAINTENANCE INCLUDES CLEANING, REPAIRING, OR REPLACING AS REQUIRED. IN GENERAL, MAINTENANCE SHALL BE PERFORMED PRIOR TO THE NEXT ANTICIPATED STORM EVENT.
2. REMOVE SEDIMENT FROM SEDIMENT TRAPS, DITCHES AND SILT FENCES WHEN THEIR INSTALLED CAPACITY IS REDUCED BY FIFTY (50) PERCENT OR MORE.
3. SEDIMENT WHICH ESCAPES THE SITE SHALL BE CLEANED UP BY THE CONTRACTOR AND RETURNED TO THE SITE FOR PROPER DISPOSAL.



**NOTES:**

- ① SILT FENCE.
- ② SILT FENCE DITCH CHECK.
- ③ SILT FENCE INLET PROTECTION. 40 L.F. SILT FENCE, TYP.
- ④ ROCK CHECK DAM. SEE SITE PLAN SHEETS 10, 11, & 12.
- ⑤ STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL 4, SHEET 16.
- ⑥ SURFACE ROUGHENING. ROUGHEN SURFACE W/ RIDGES/GROOVES THAT ARE PERPENDICULAR TO SLOPE ON ALL SLOPES 3H : 1V.
- ⑦ EROSION CONTROL MULCHING. MULCH THOSE PORTIONS OF THE SITE THAT HAVE REACHED FINAL GRADES BUT NOT PLANNED TO BE SEED FOR GREATER THAN 21 DAYS.
- ⑧ RIP RAP CHANNEL LINING. SEE SITE PLAN SHEETS 10, 11, & 12.
- ⑨ EROSION CONTROL MAT. SEE SITE PLAN SHEETS 10, 11, & 12.

DESIGN BY: WCF    DRAWN BY: DFM    CHKD. BY: WCF    ISSUED: 11-1-13    REVISED: 00-00-00    FILE: HARRINGTON    S & A PROJECT No. 112.0307



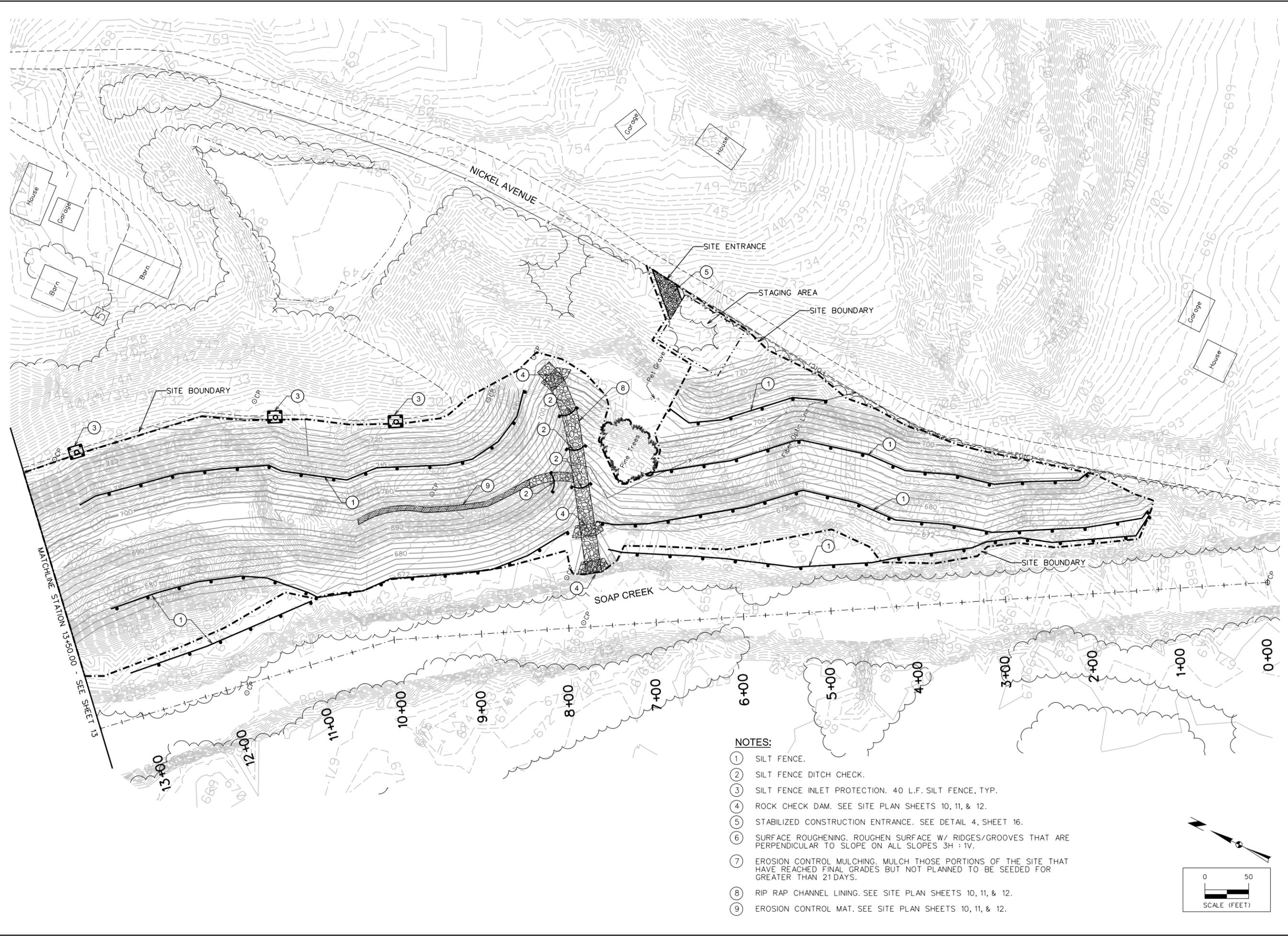
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IOWA DEPARTMENT OF AGRICULTURE  
AND LAND STEWARDSHIP**  
HENRY A. WALLACE BUILDING  
502 E. 9th STREET, DES MOINES, IOWA 50319  
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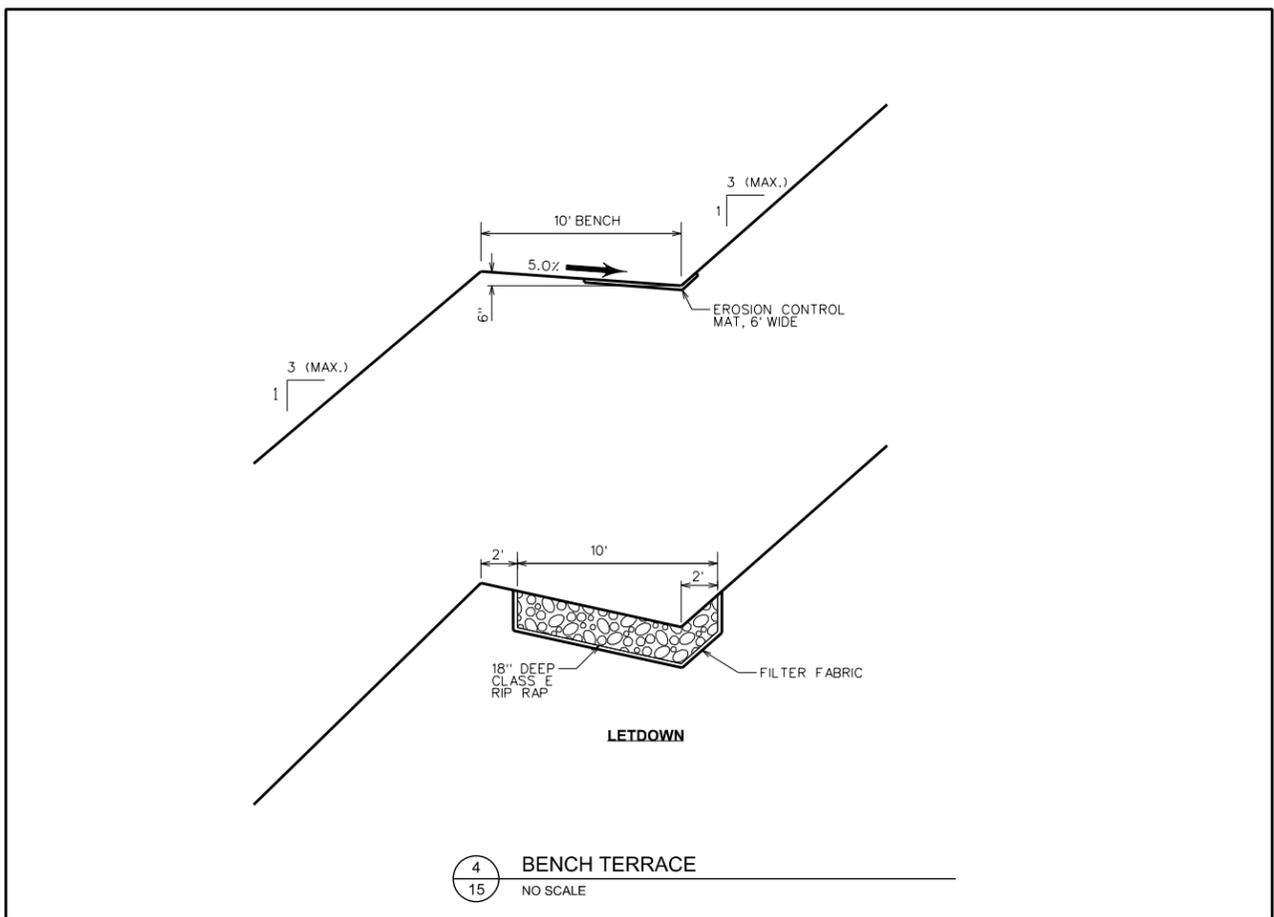
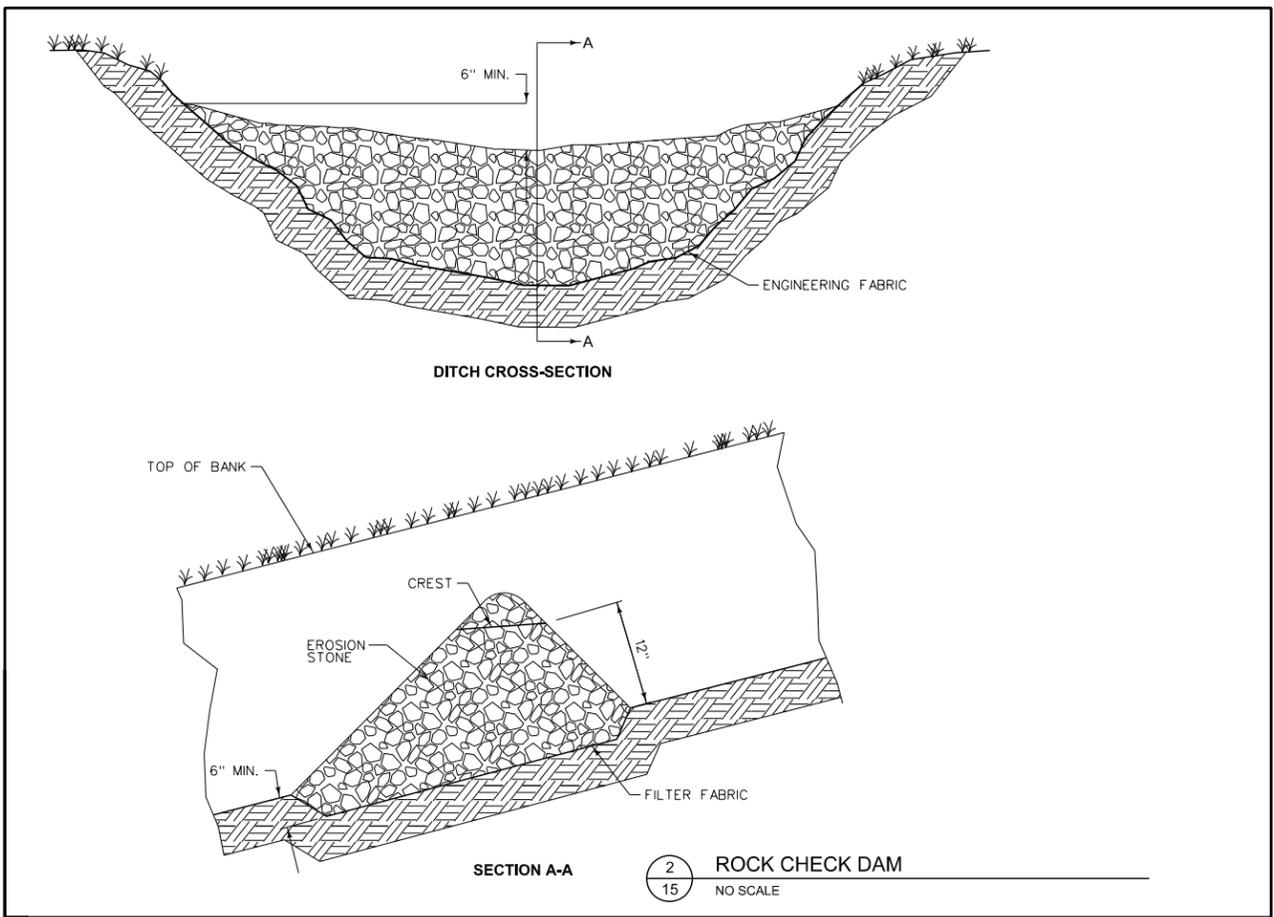
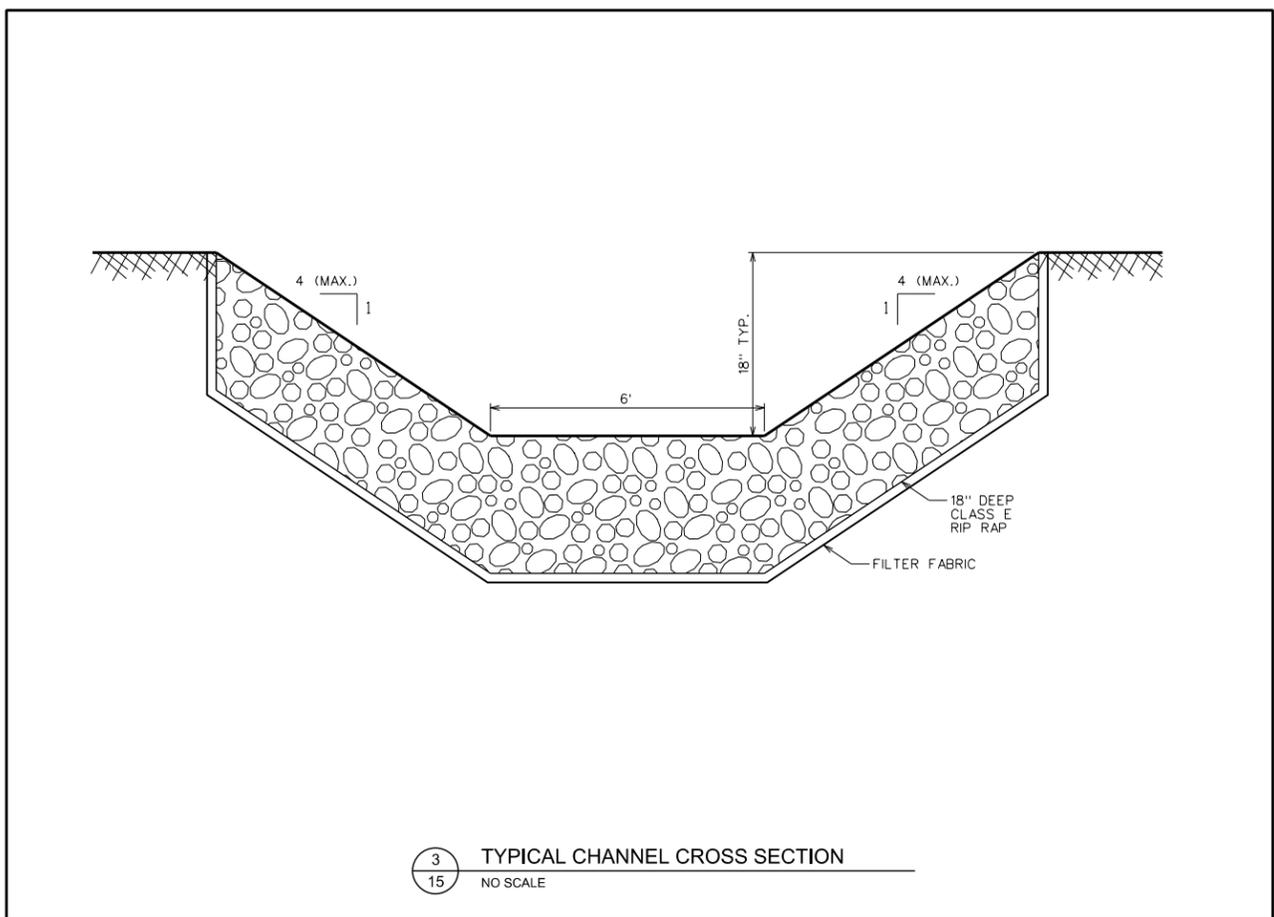
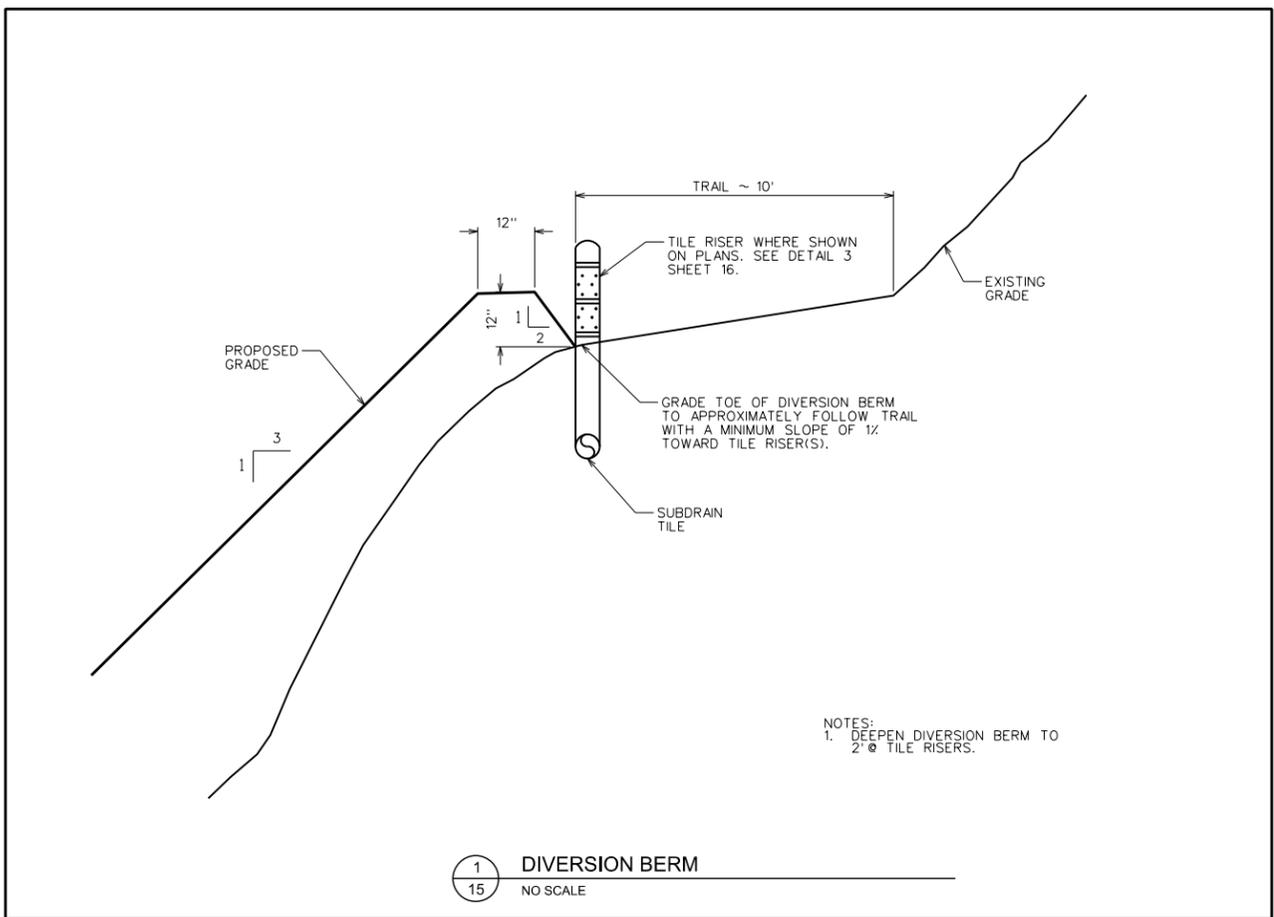
**HARRINGTON  
AML RECLAMATION PROJECT**  
**STORM WATER POLLUTION  
PREVENTION PLAN**

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- NOTES:**
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<b>HARRINGTON AML RECLAMATION PROJECT</b>						
<b>STORM WATER POLLUTION PREVENTION PLAN</b>			DIVISION OF SOIL CONSERVATION IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP HENRY A. WALLACE BUILDING 502 E. 9th STREET, DES MOINES, IOWA 50319 (515) 281-4246			
<b>SHEET 14 OF 21</b>						 <b>SNYDER &amp; ASSOCIATES</b> Engineers and Planners SNYDER & ASSOCIATES, INC. 2727 S.W. SNYDER BLVD. ANKENY, IOWA 50023 515-964-2020 www.snyder-associates.com



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**HARRINGTON AML RECLAMATION PROJECT**

**DETAILS**

**SHEET 15 OF 21**

**AGRICULTURE**  
IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

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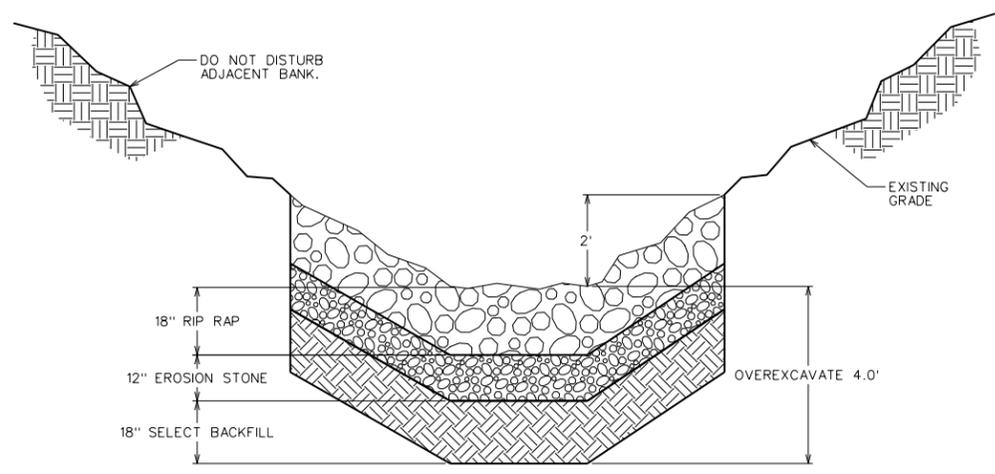
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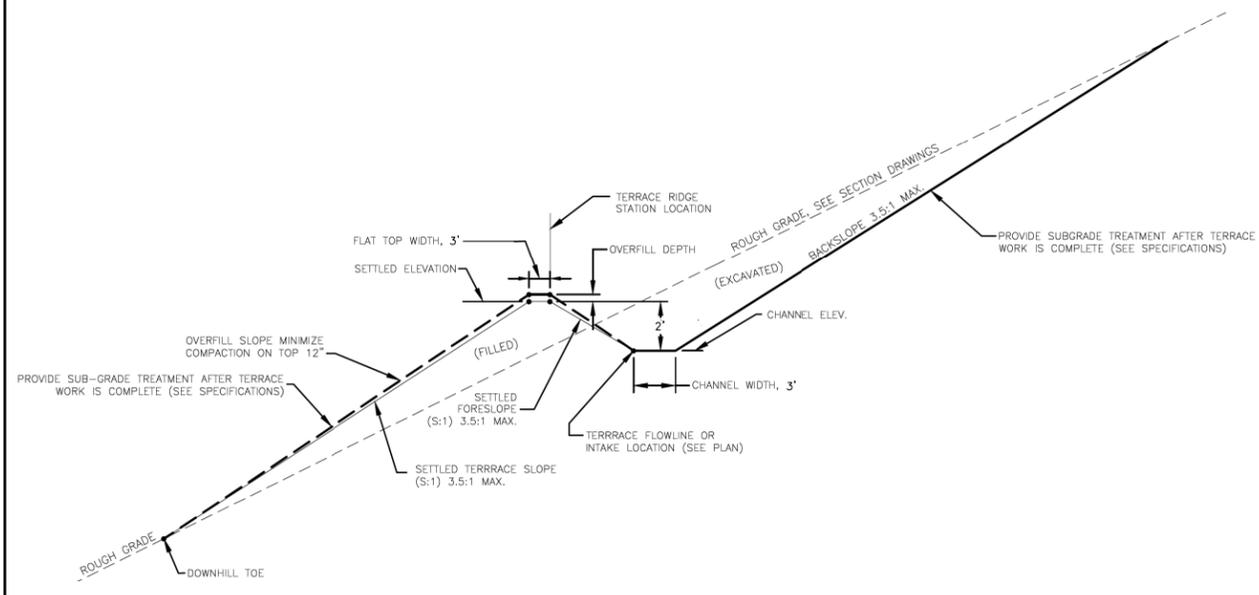
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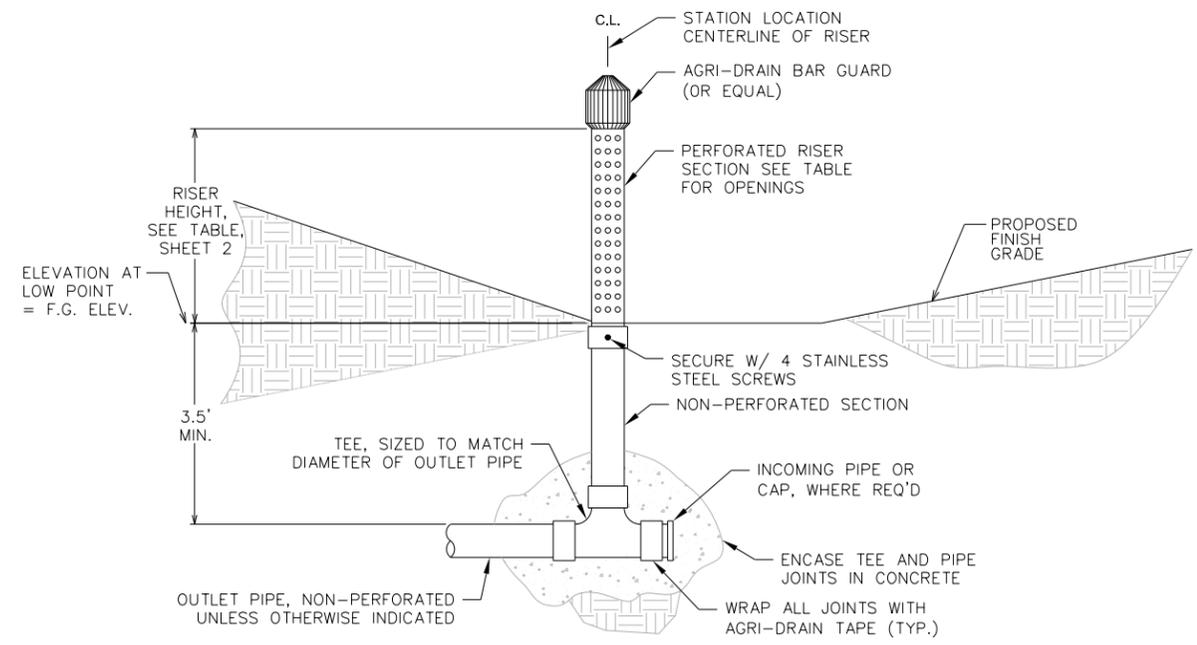
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1  
16  
SELECTED CHANNEL IMPROVEMENTS  
NO SCALE

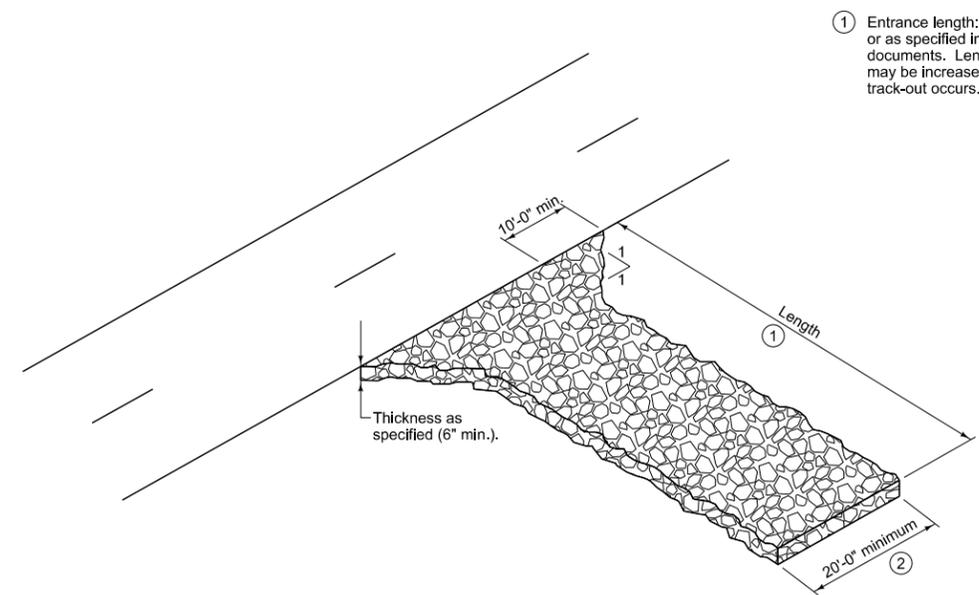


2  
16  
EXCAVATED TERRACE DETAIL  
NO SCALE



NOTE: TWO (2) STEEL FENCE POSTS REQUIRED TO SUPPORT RISER UP TO 8" DIAMETER, THREE (3) POSTS REQ'D FOR 10" & LARGER RISERS, FENCE POSTS NOT SHOWN

3  
16  
TILE RISER DETAIL  
NO SCALE



4  
16  
STABILIZED CONSTRUCTION ENTRANCE  
NO SCALE

S & A PROJECT No. 112.0307

FILE:HARRINGTON

REVISED: 00-00-00

ISSUED: 11-1-13

CHKD. BY: WCF

DRAWN BY: DFM

DESIGN BY: WCF

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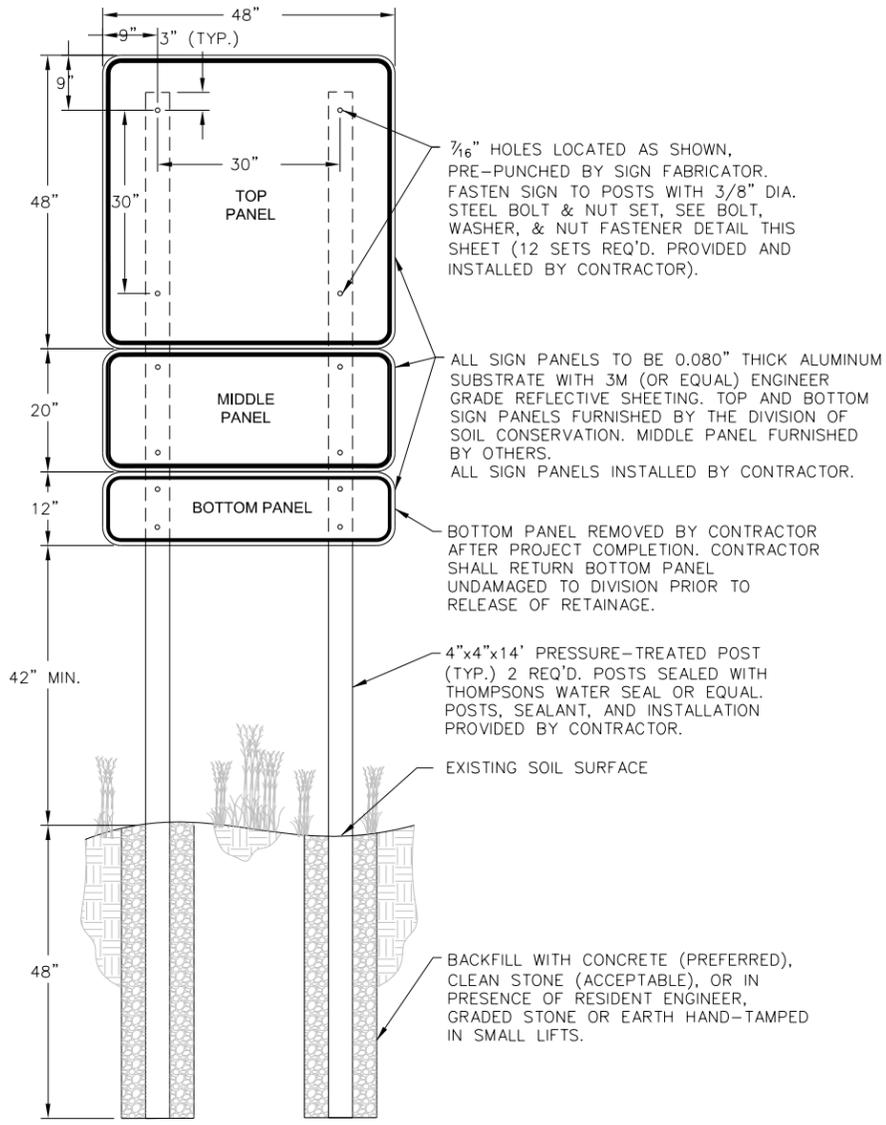
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(515) 281-4246



**HARRINGTON**  
**AML RECLAMATION PROJECT**  
**DETAILS**

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7/16" HOLES LOCATED AS SHOWN. PRE-PUNCHED BY SIGN FABRICATOR. FASTEN SIGN TO POSTS WITH 3/8" DIA. STEEL BOLT & NUT SET, SEE BOLT, WASHER, & NUT FASTENER DETAIL THIS SHEET (12 SETS REQ'D. PROVIDED AND INSTALLED BY CONTRACTOR).

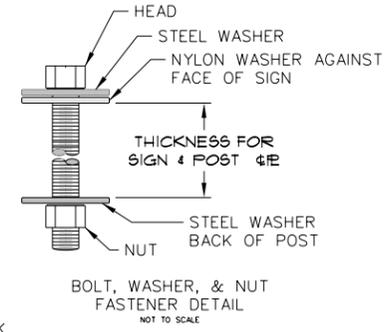
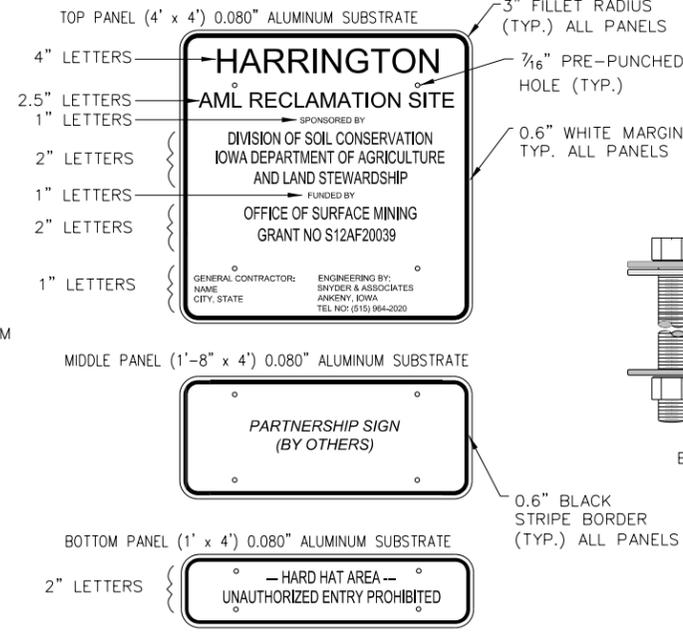
ALL SIGN PANELS TO BE 0.080" THICK ALUMINUM SUBSTRATE WITH 3M (OR EQUAL) ENGINEER GRADE REFLECTIVE SHEETING. TOP AND BOTTOM SIGN PANELS FURNISHED BY THE DIVISION OF SOIL CONSERVATION. MIDDLE PANEL FURNISHED BY OTHERS. ALL SIGN PANELS INSTALLED BY CONTRACTOR.

BOTTOM PANEL REMOVED BY CONTRACTOR AFTER PROJECT COMPLETION. CONTRACTOR SHALL RETURN BOTTOM PANEL UNDAMAGED TO DIVISION PRIOR TO RELEASE OF RETAINAGE.

4"x4"x14' PRESSURE-TREATED POST (TYP.) 2 REQ'D. POSTS SEALED WITH THOMPSONS WATER SEAL OR EQUAL. POSTS, SEALANT, AND INSTALLATION PROVIDED BY CONTRACTOR.

EXISTING SOIL SURFACE

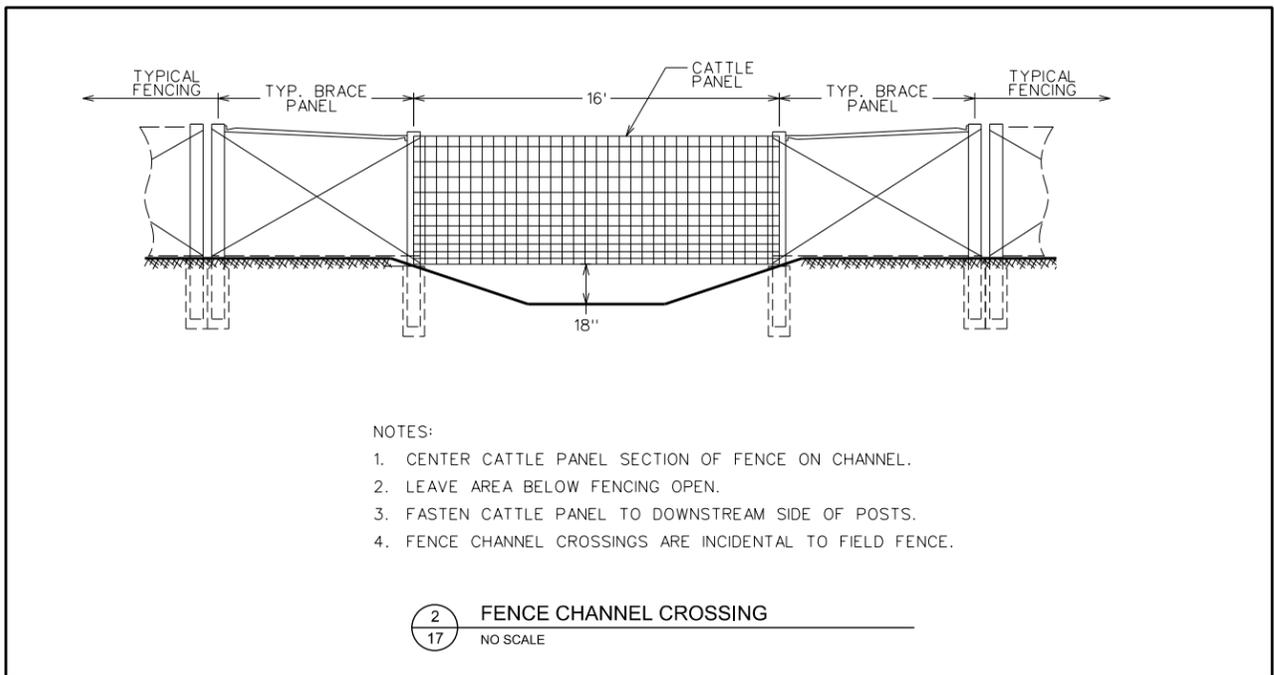
BACKFILL WITH CONCRETE (PREFERRED), CLEAN STONE (ACCEPTABLE), OR IN PRESENCE OF RESIDENT ENGINEER, GRADED STONE OR EARTH HAND-TAMPED IN SMALL LIFTS.



**SIGNAGE NOTES:**

- DIVISION WILL FURNISH TOP AND BOTTOM SIGN PANELS. MIDDLE PANEL PROVIDED BY OTHERS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSTS, HARDWARE, AND INSTALLATION FOR ALL PANELS.
- ALL EXPOSED WOOD SHALL BE SEALED WITH THOMPSONS WATER SEAL OR EQUAL MEETING ASTM D-4446-08.
- ALL STEEL HARDWARE PIECES SHALL BE GALVANIZED OR RUST RESISTANT.
- NYLON AND STEEL WASHERS SHALL BE USED AS SHOWN ON THE BOLT, WASHER, NUT FASTENER DETAIL ABOVE.
- CLEAR UTILITIES WITH IOWA ONE-CALL (800) 292-8989 BEFORE EXCAVATING FOR POSTS.
- SECURE ENGINEERS APPROVAL FOR SIGN LOCATION BEFORE INSTALLATION.
- COSTS FOR POSTS, HARDWARE, WOOD SEALANT AND SIGN INSTALLATION SHALL BE INCIDENTAL TO MOBILIZATION.
- CONTRACTOR SHALL INSTALL SIGN POSTS USING A PLYWOOD OR OTHER SUITABLE TEMPLATE TO MAINTAIN ACCURATE POST SPACING AND ALIGNMENT DURING BACKFILLING OF THE POST HOLES. TO AVOID BENDING OF THE SIGN PANELS, POSTS SHALL NOT BE INSTALLED OR BACKFILLED WITH SIGN PANELS ATTACHED.
- ONE (1) PROJECT SIGN IS REQUIRED, LOCATED AS SHOWN ON PLANS.

1 PROJECT SIGN (1 REQ'D)  
17 NO SCALE



**NOTES:**

- CENTER CATTLE PANEL SECTION OF FENCE ON CHANNEL.
- LEAVE AREA BELOW FENCING OPEN.
- FASTEN CATTLE PANEL TO DOWNSTREAM SIDE OF POSTS.
- FENCE CHANNEL CROSSINGS ARE INCIDENTAL TO FIELD FENCE.

2 FENCE CHANNEL CROSSING  
17 NO SCALE

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AML RECLAMATION PROJECT

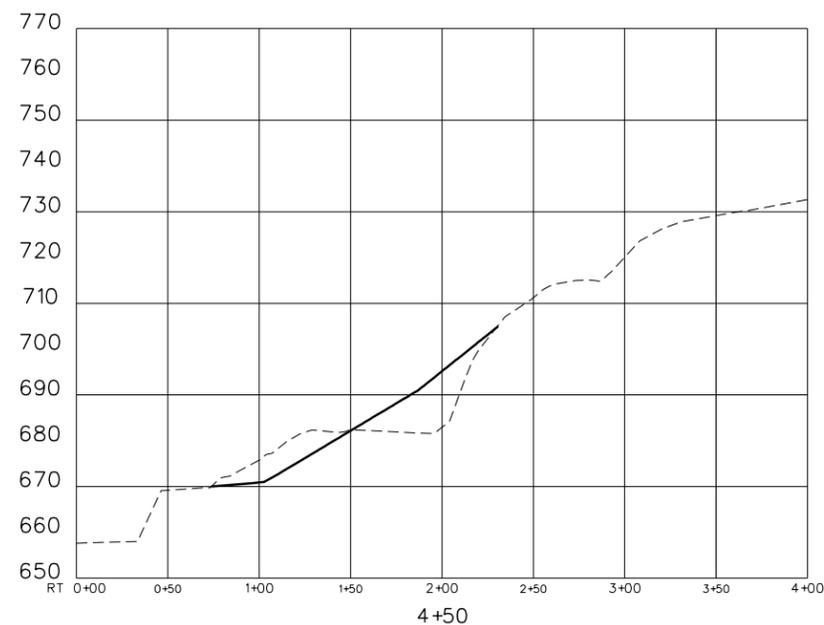
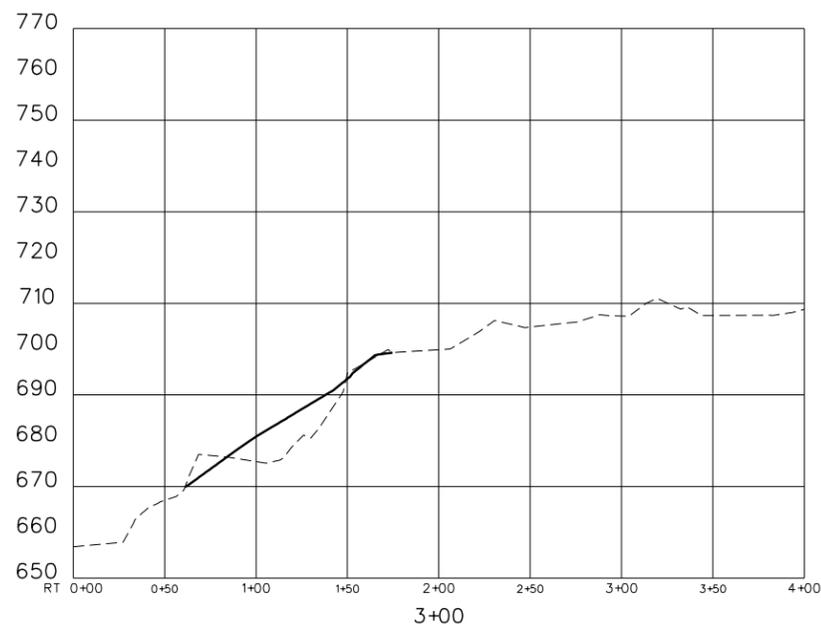
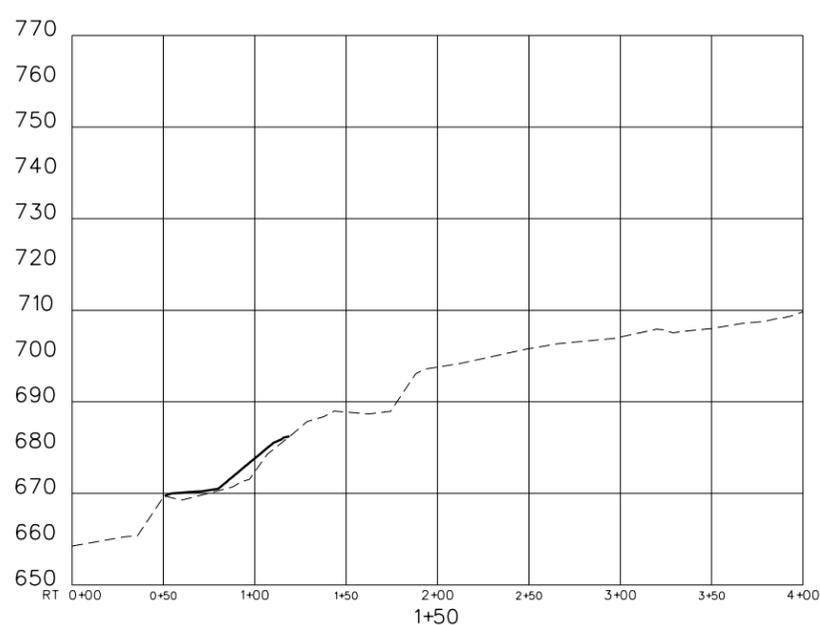
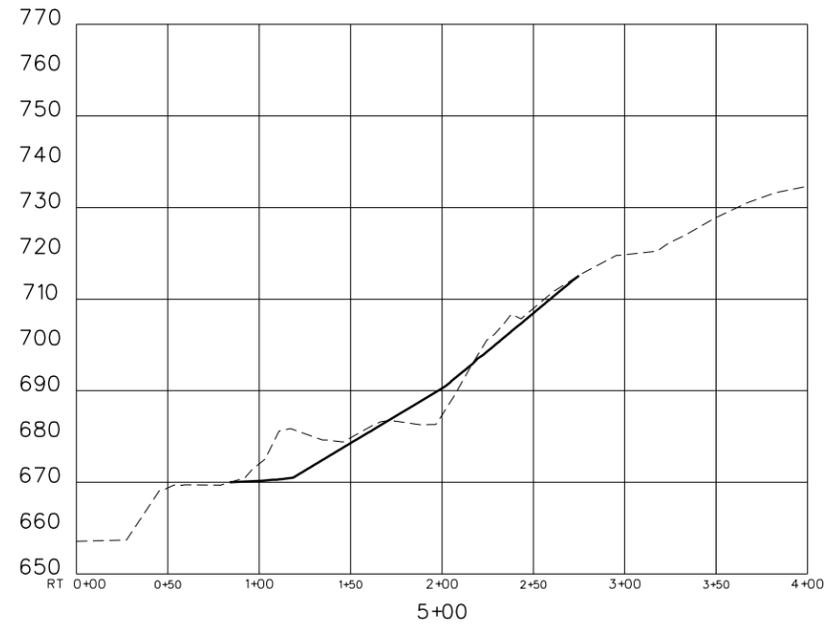
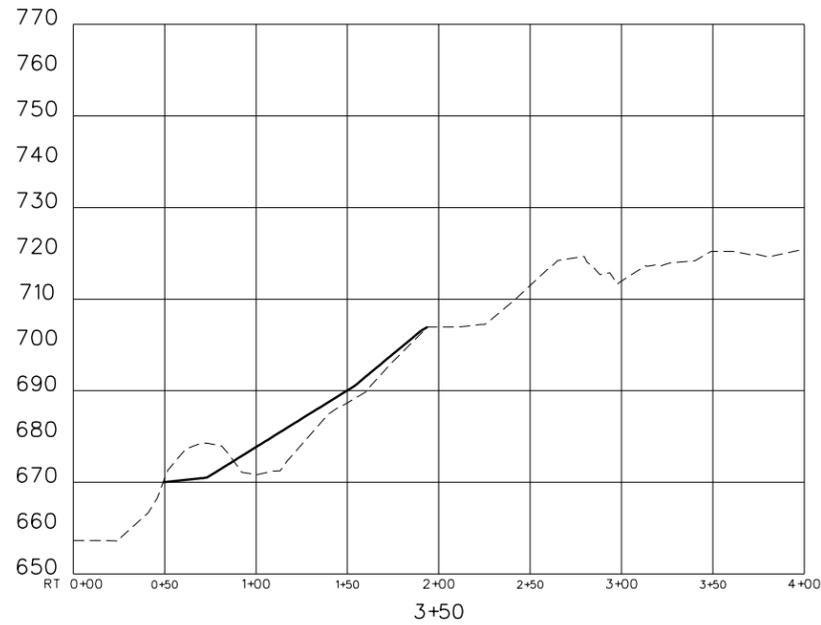
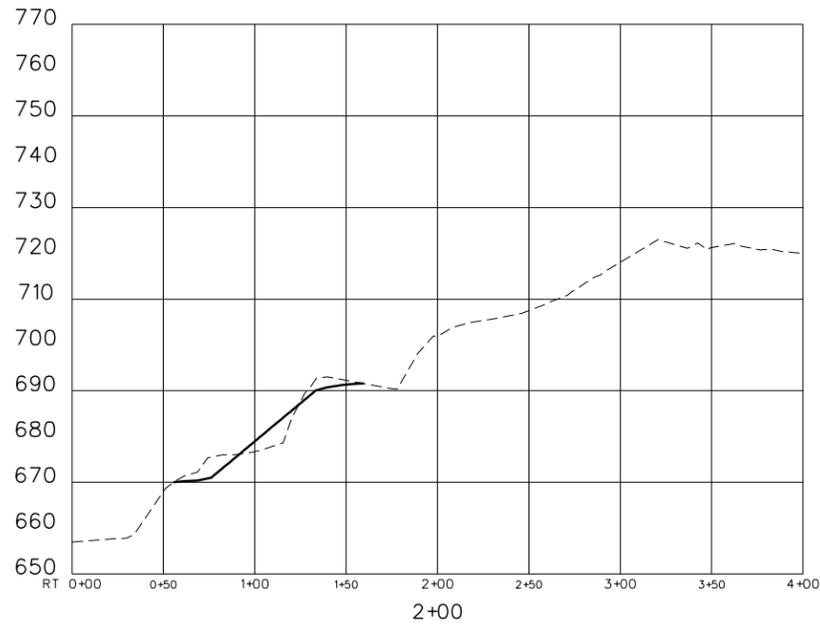
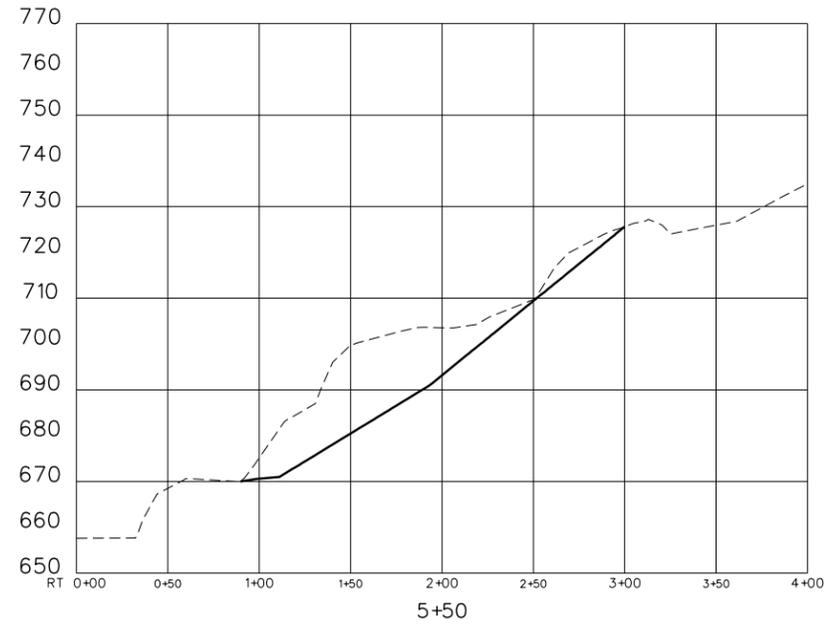
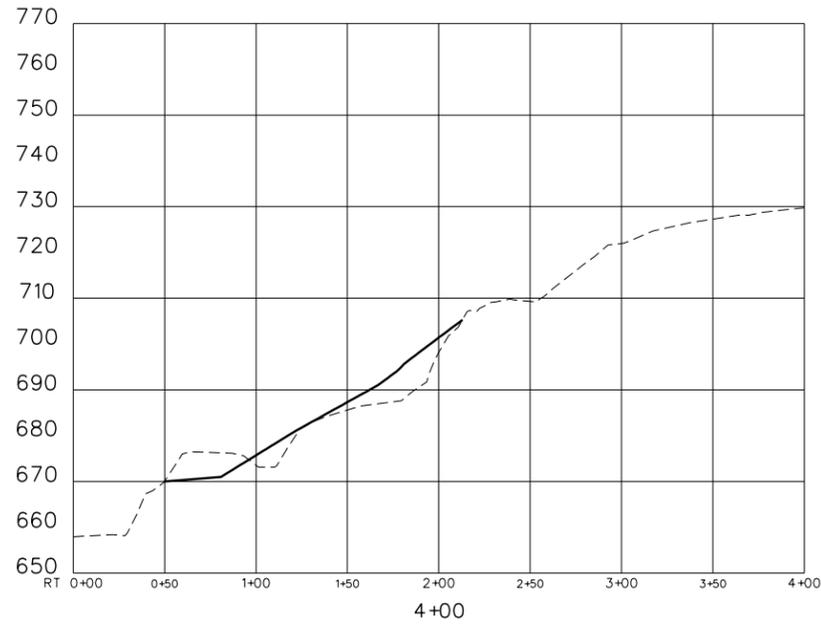
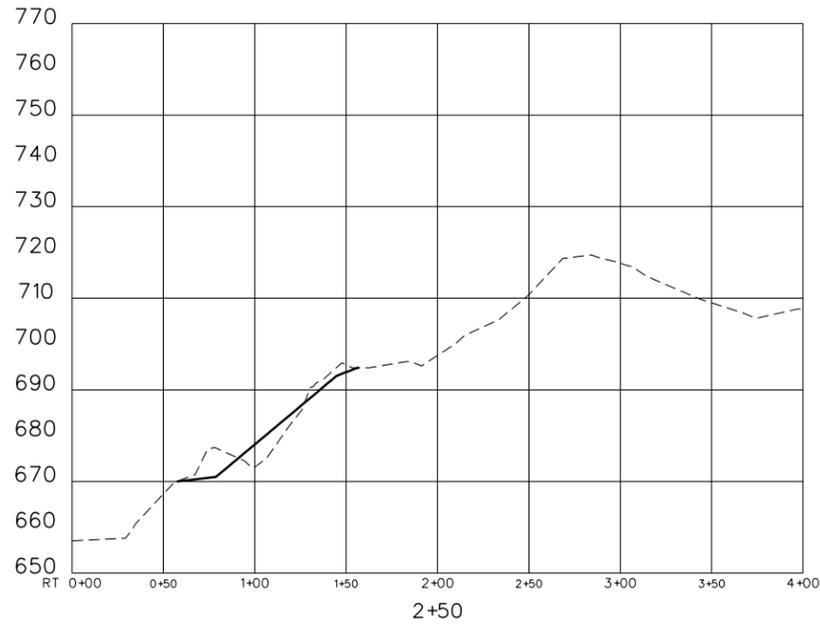
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**IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP**

DIVISION OF SOIL CONSERVATION  
IOWA DEPARTMENT OF AGRICULTURE  
AND LAND STEWARDSHIP  
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**HARRINGTON  
AML RECLAMATION PROJECT**

**CROSS SECTIONS**