OHIO ARMY NATIONAL GUARD

ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

CAMP RAVENNA JOINT MILITARY TRAINING CENTER - RAVENNA, OHIO

CONTRACT NUMBER: #W91364-12-D-0003

TASK ORDER: # 0004

PORTAGE COUNTY EROSION & SEDIMENT CONTROL PLANS

JUNE, 2017

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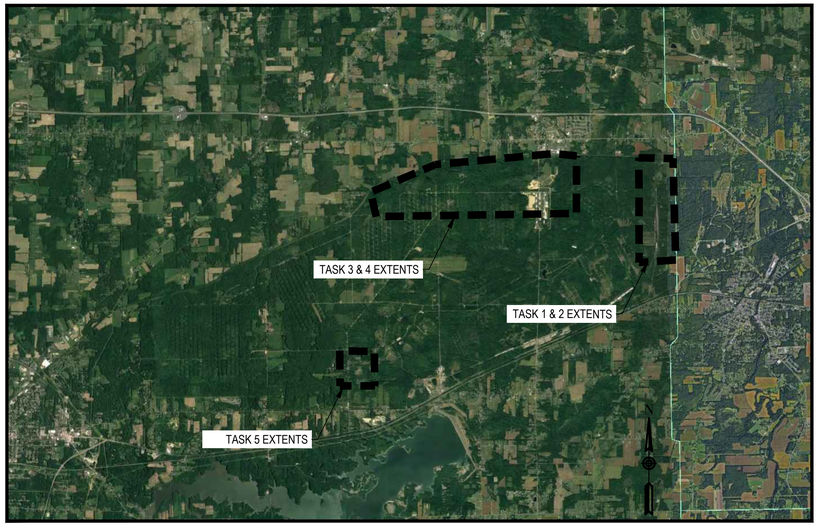
VICINITY MAP - PORTAGE COUNTY

SIGNATURE BLOCK

DEPARTMENT	NAME	SIGNATURE	DATE



PROJECT LOCATION

DATE	REVISION MADE	BY	AUTHORIZED

Michael Baker INTERNATIONAL

MICHAEL BAKER INTL.
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CAMP RAVENNA JOINT MILITARY TRAINING CENTER
RAVENNA, OHIO

OHIO NATIONAL GUARD SINCE 1788

PORTAGE COUNTY ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

E □ S COVER SHEET

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-001
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	1 OF 18

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SHEET NO.	SHEET TITLE
GENERAL	
CE-001	COVER SHEET
CE-002	SHEET INDEX
CE-101	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-102	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-103	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-104	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-105	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-106	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-107	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-108	TASK 3 & 4 EROSION AND SEDIMENT CONTROL PLAN
CE-109	TASK 1 & 2 EROSION AND SEDIMENT CONTROL PLAN
CE-110	TASK 1 & 2 EROSION AND SEDIMENT CONTROL PLAN
CE-111	TASK 5 EROSION AND SEDIMENT CONTROL PLAN
CE-501	EROSION AND SEDIMENT CONTROL STNDARD DETAILS
CE-502	EROSION AND SEDIMENT CONTROL STNDARD DETAILS
CE-503	EROSION AND SEDIMENT CONTROL STNDARD DETAILS
CE-504	EROSION AND SEDIMENT CONTROL GENERAL NOTES
CE-505	EROSION AND SEDIMENT CONTROL GENERAL NOTES

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PORTAGE COUNTY ITAM TRAINING AREA
IMPROVEMENT AND TRAIL CREATION

INDEX SHEET

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-002
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	2 OF 18

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LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING ROADWAY
- STREAM
- LOD — LIMIT OF DISTURBANCE
- WETLAND
- SF — SILT FENCE (SEE DETAIL ON SHEET CE-503)
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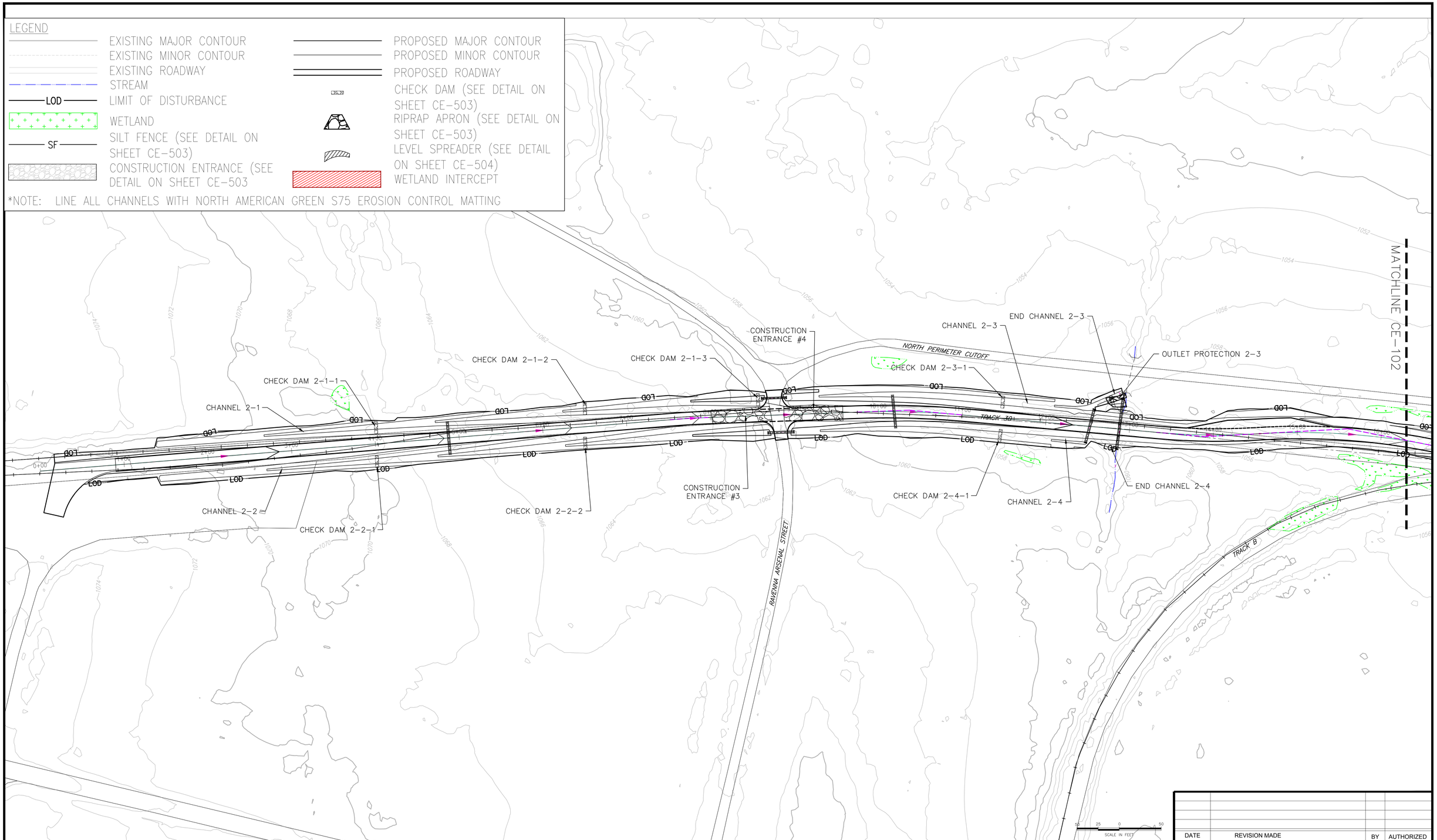
- LEVEL SPREADER (SEE DETAIL ON SHEET CE-504)
- WETLAND INTERCEPT

*NOTE: LINE ALL CHANNELS WITH NORTH AMERICAN GREEN S75 EROSION CONTROL MATTING



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IMPROVEMENT AND TRAIL CREATION

TASK 3 □ 4
EROSION AND SEDIMENT CONTROL PLANS

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-101
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	3 OF 18

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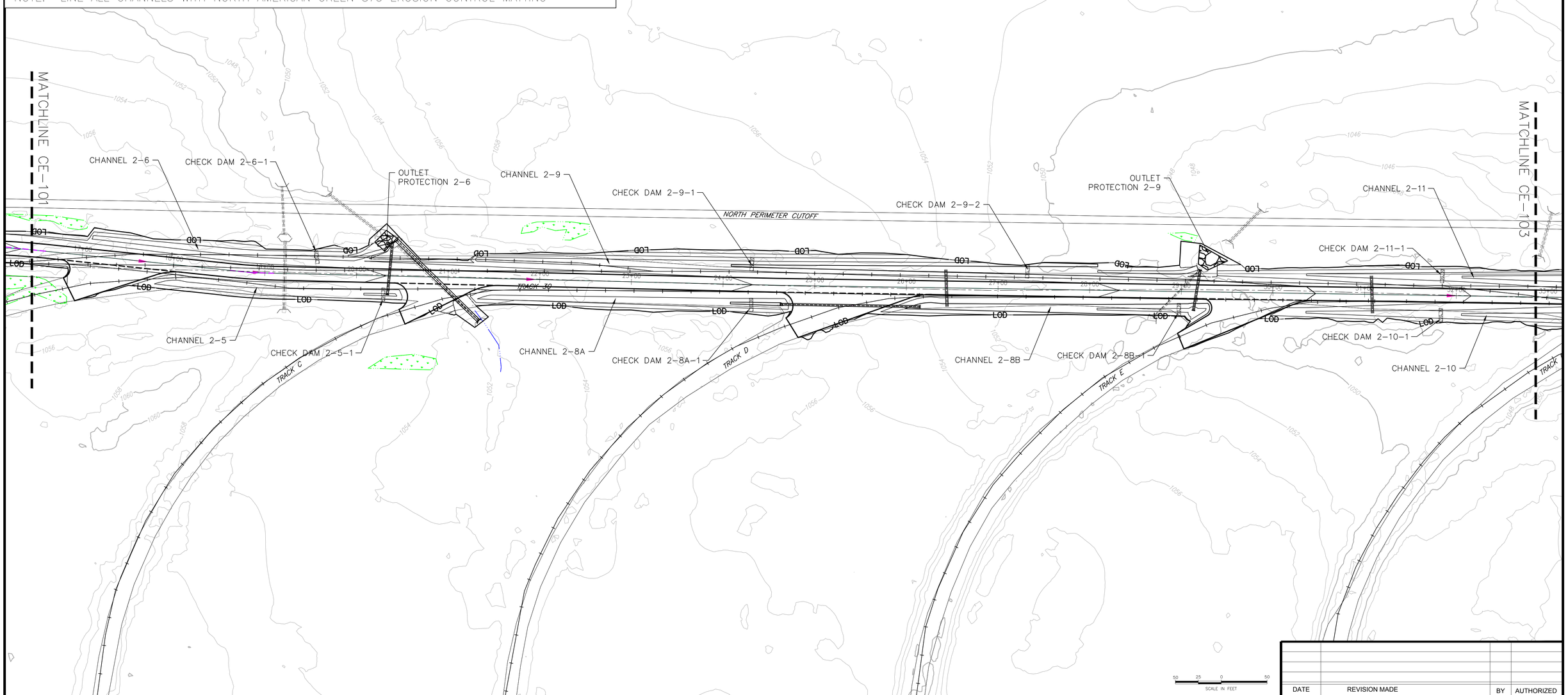

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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-102
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	4 OF 18

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LEGEND

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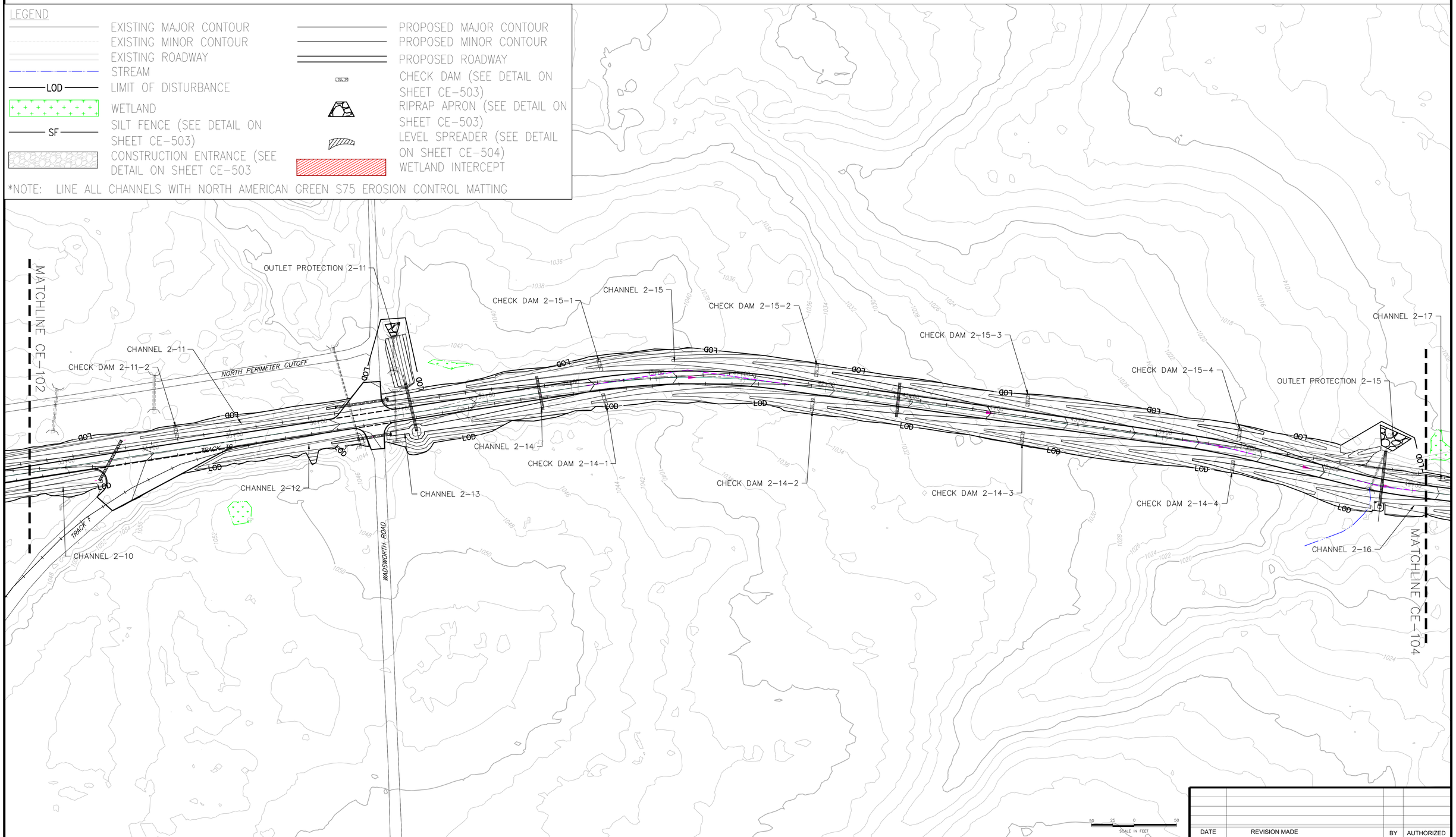

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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-103
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	5 OF 18

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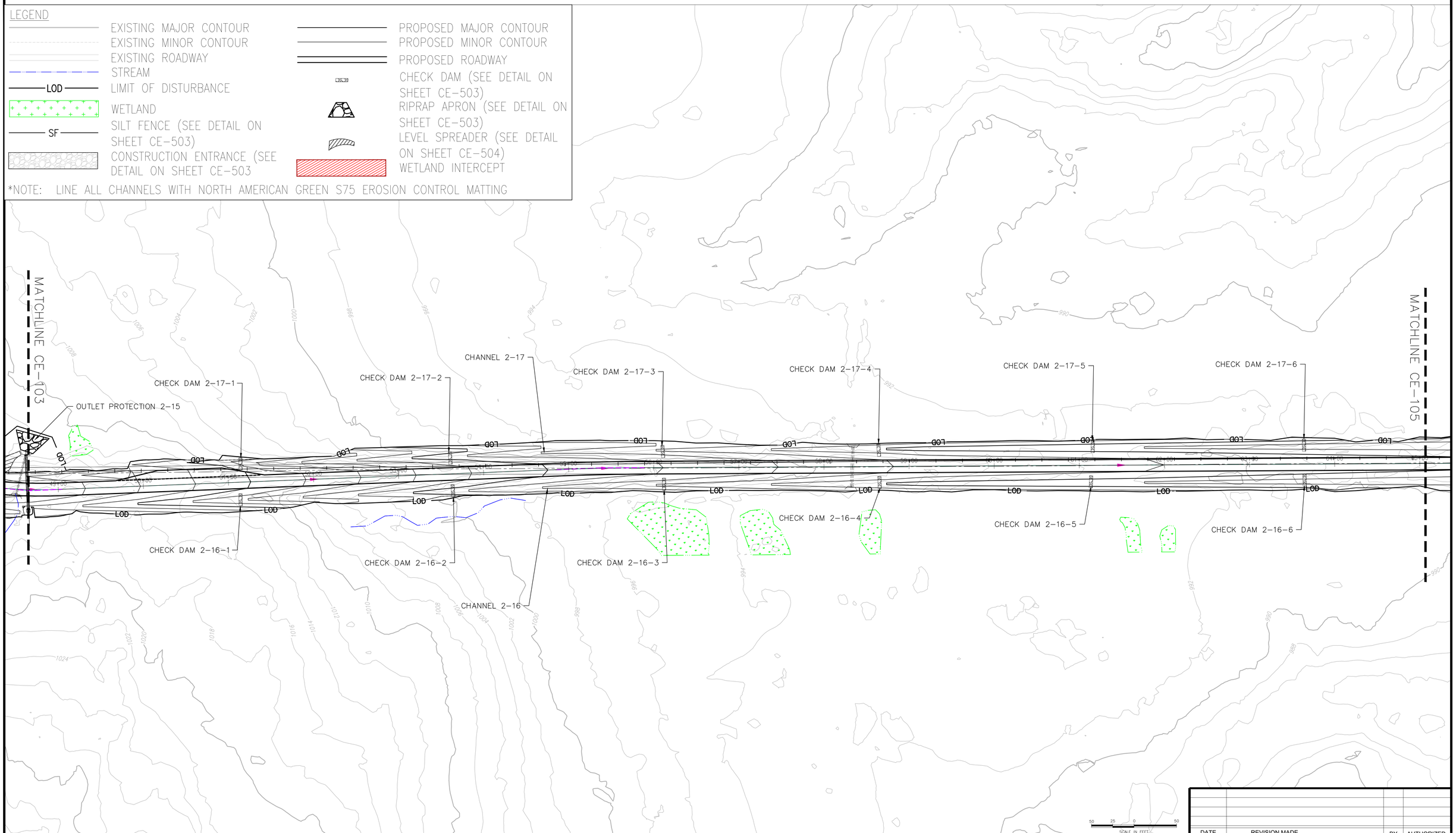

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TASK 3 □ 4
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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-104
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	6 OF 18

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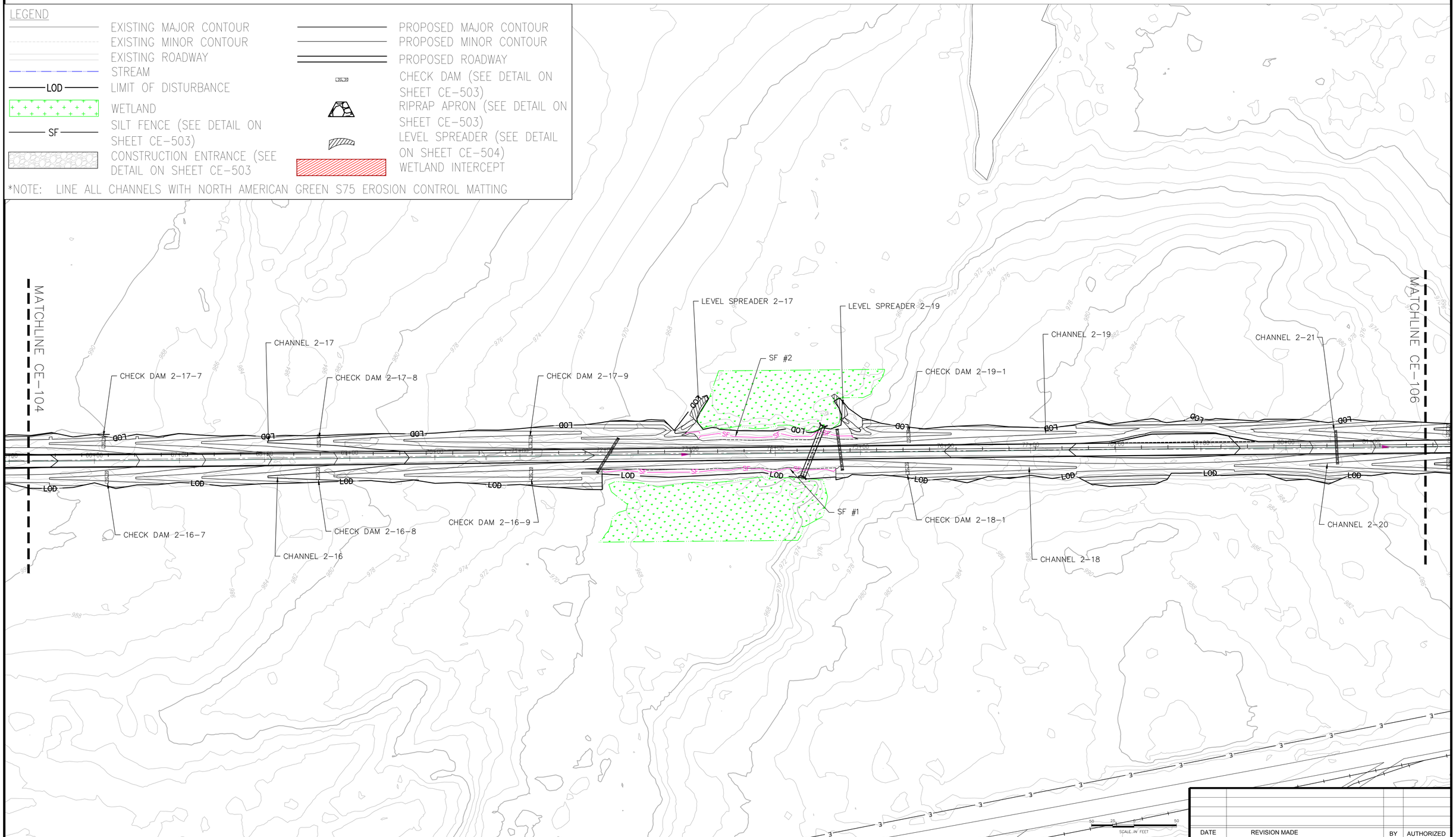

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TASK 3 □ 4
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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-105
SCALE: AS NOTED	DWN BY: MJL		
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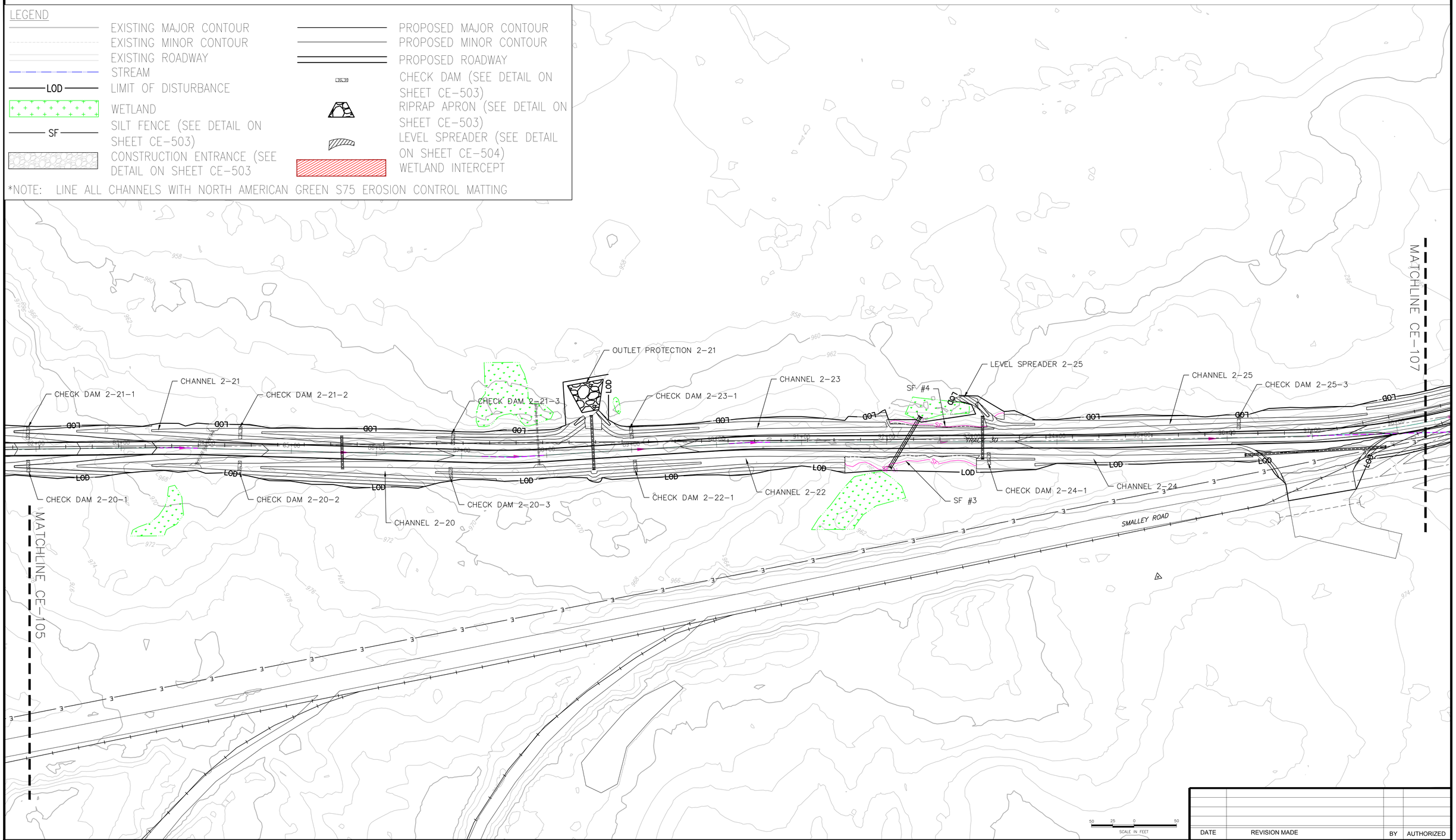

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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-106
SCALE: AS NOTED	DWN BY: MJL		
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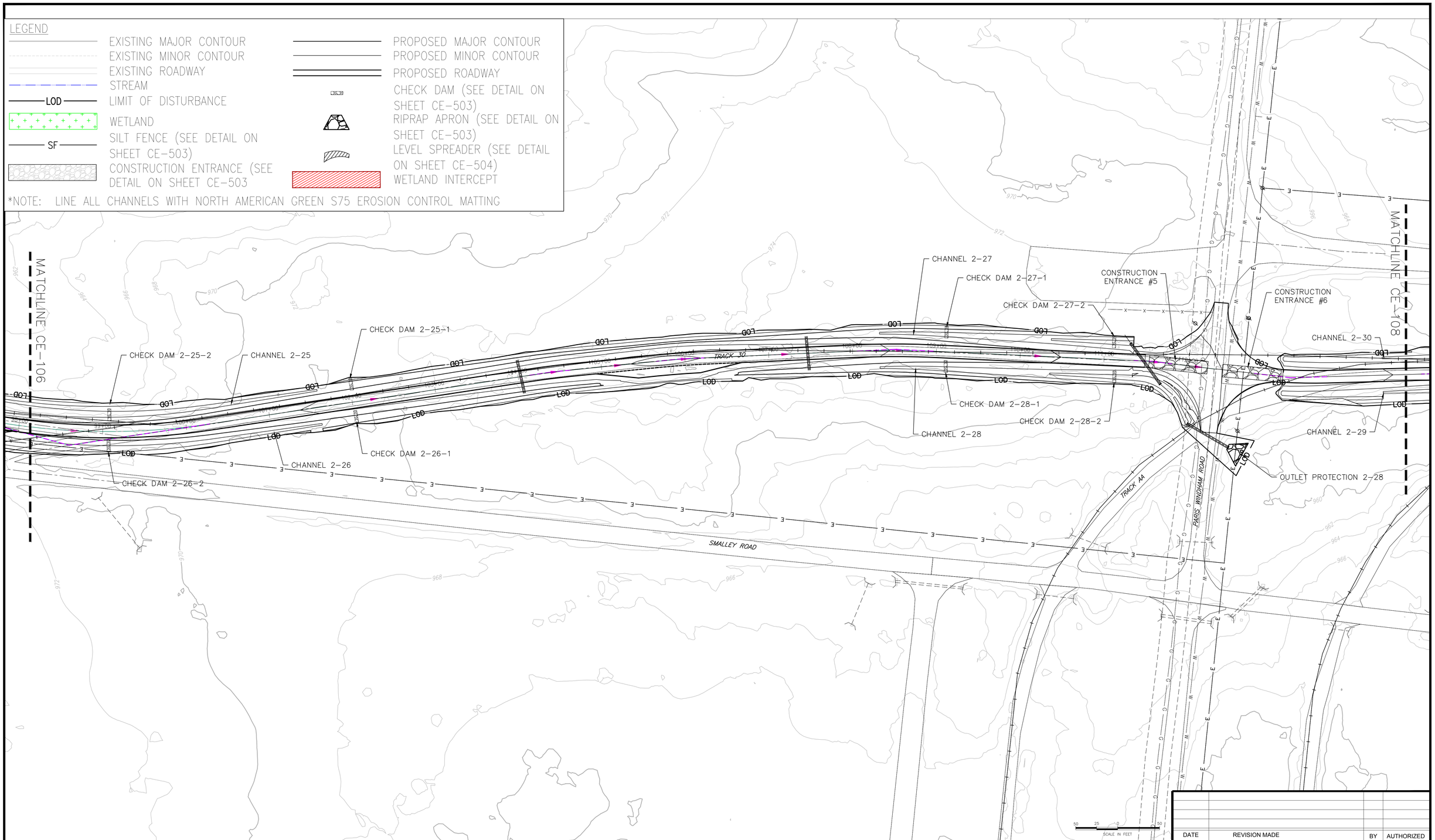

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TASK 3 ☐ 4
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DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-107
SCALE: AS NOTED	DWN BY: MJL	GOV. CONTRACT NUMBER #W91364-12-D-0003	9 OF 18
SIZE: ANSI D	CHK BY: SMS		

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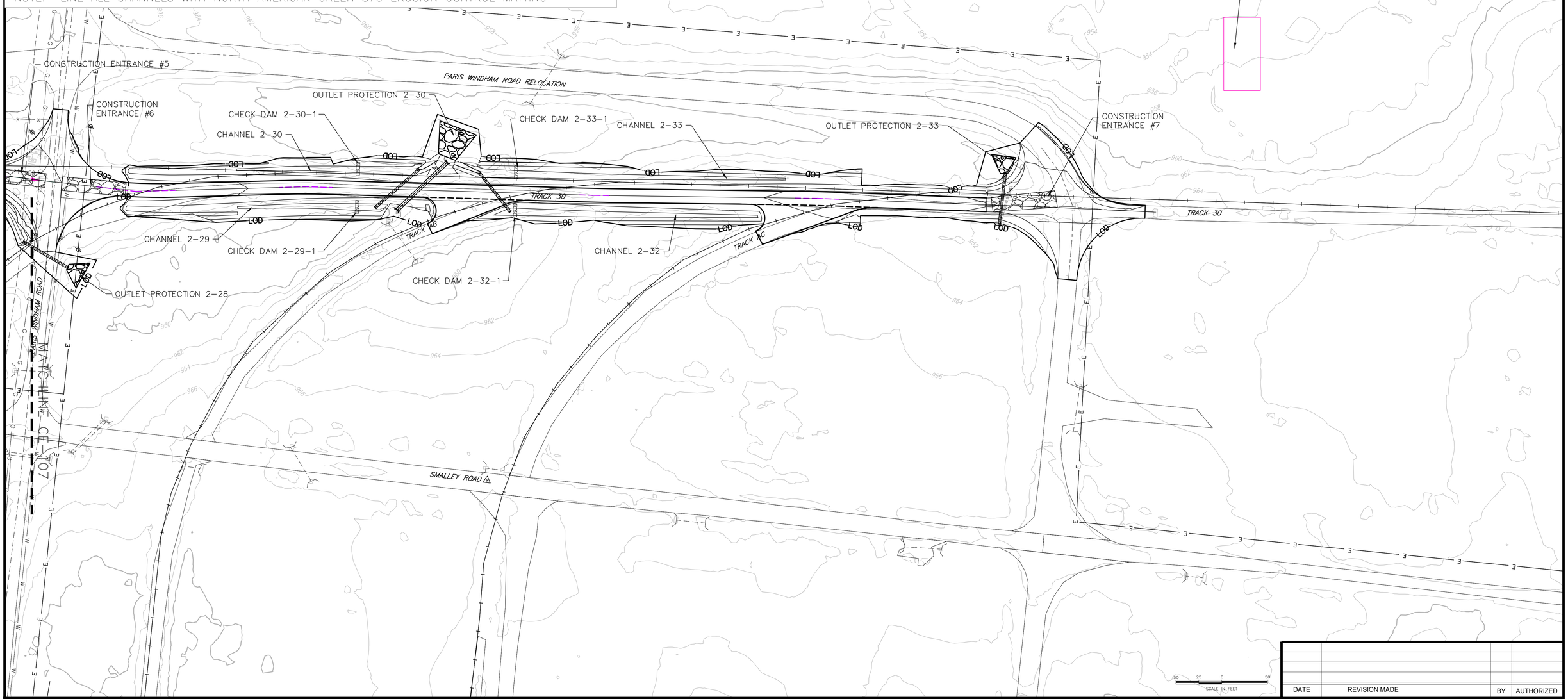

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TASK 3 □ 4
EROSION AND SEDIMENT CONTROL PLANS

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-108
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	10 OF 18

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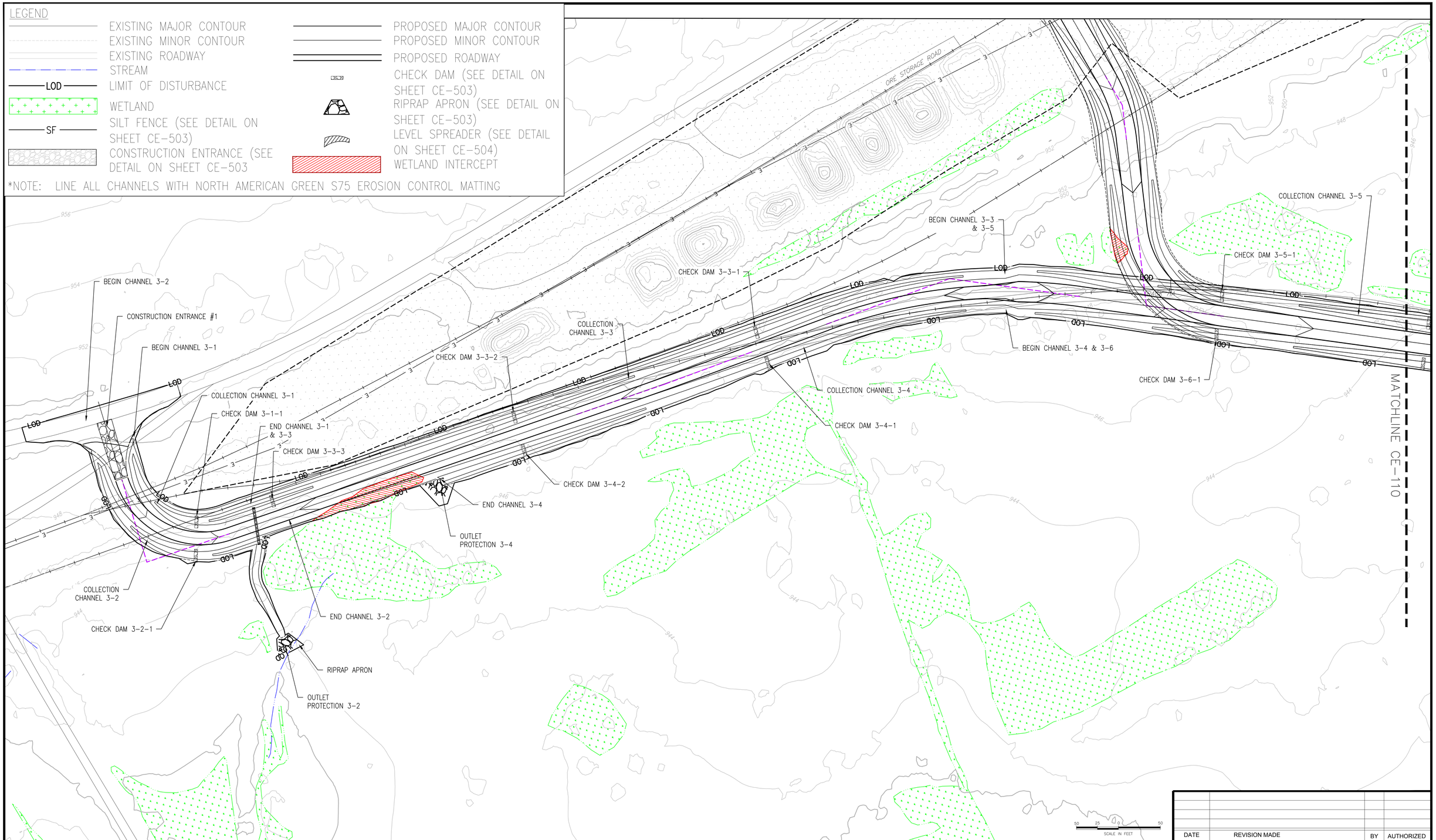

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TASK 1 □ 2
EROSION AND SEDIMENT CONTROL PLANS

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-109
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	11 OF 18

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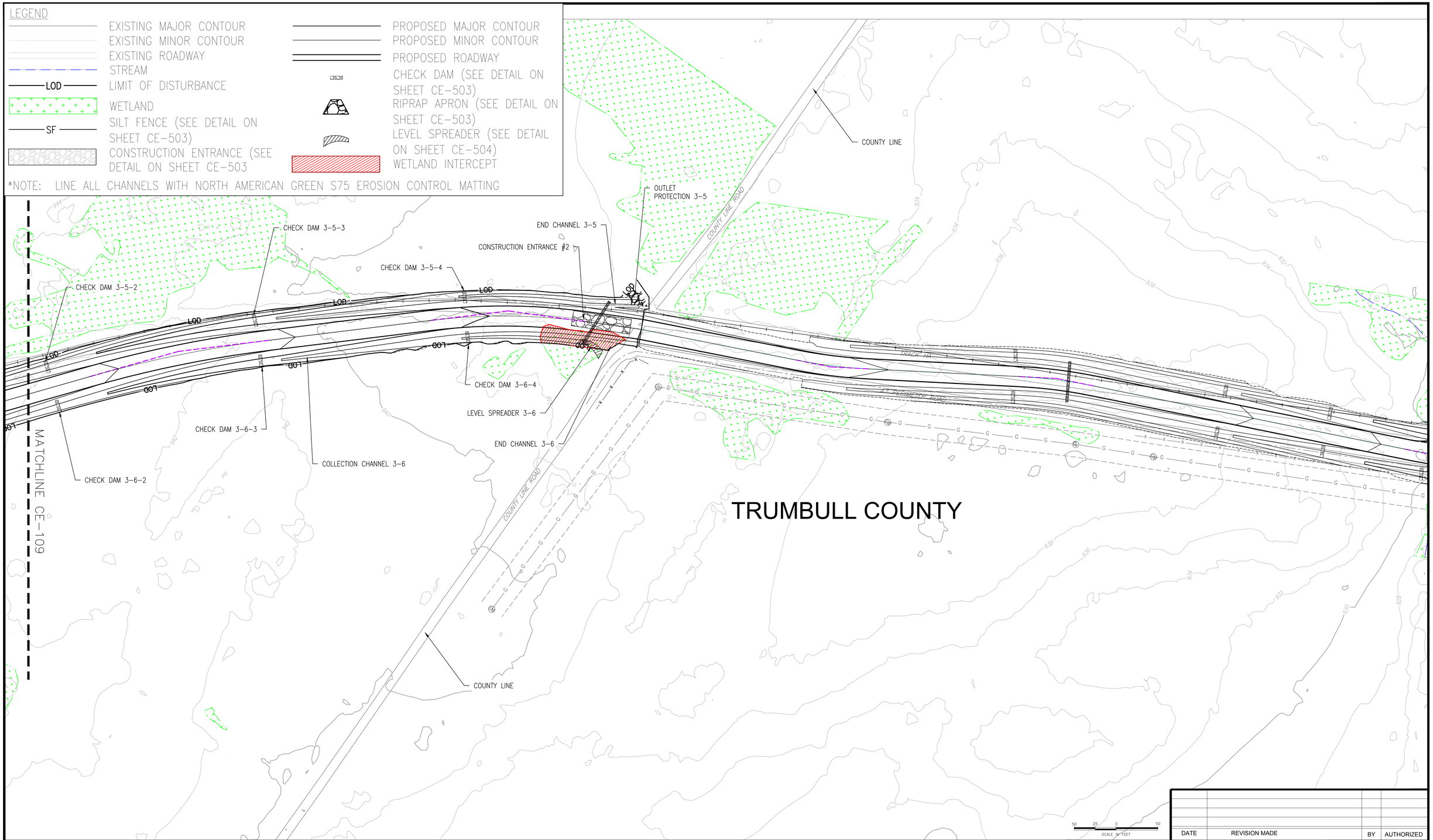

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SCALE: AS NOTED	DWN BY: MJL	GOV. CONTRACT NUMBER #W91364-12-D-0003	12 OF 18
SIZE: ANSI D	CHK BY: SMS		

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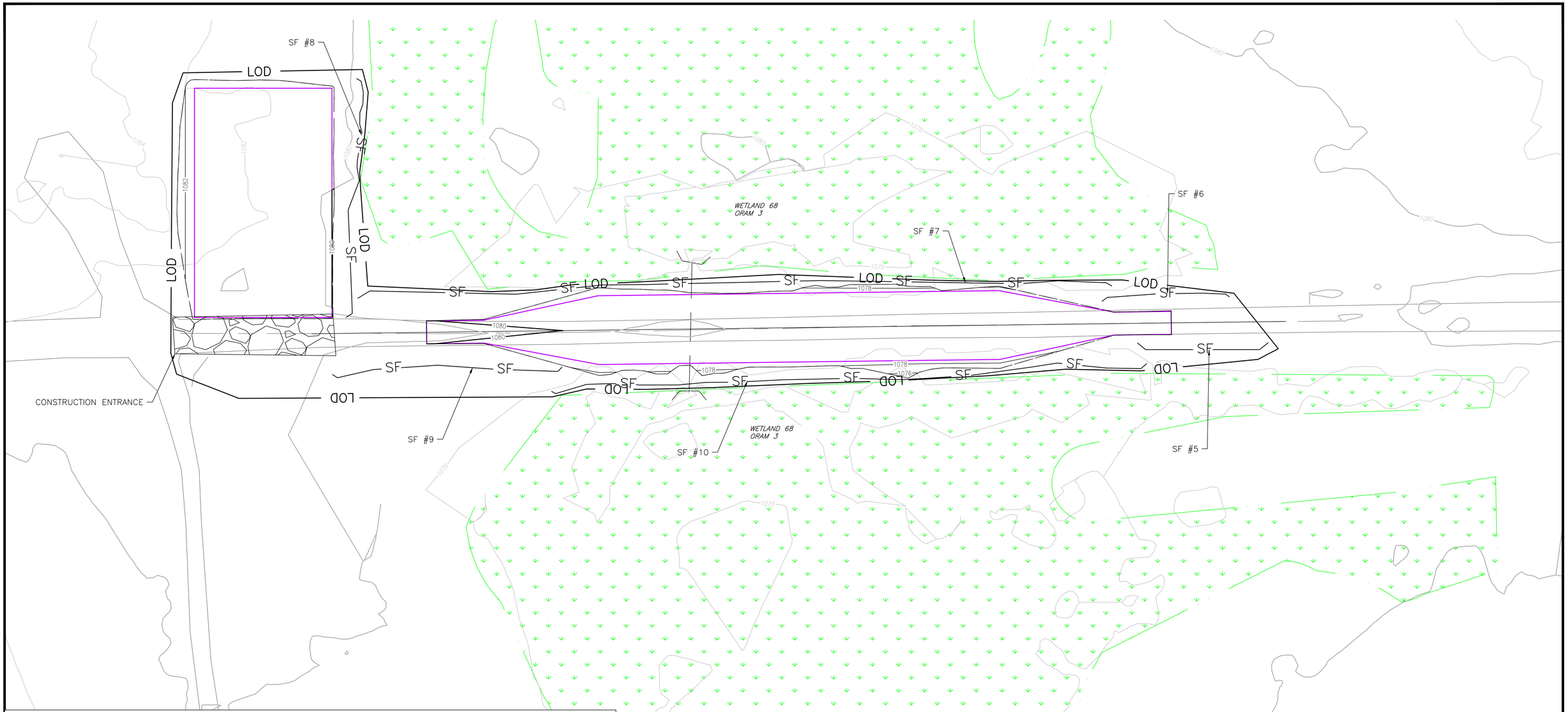

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- PROPOSED ROADWAY
- CHECK DAM (SEE DETAIL ON SHEET CE-503)
- RIPRAP APRON (SEE DETAIL ON SHEET CE-503)
- LEVEL SPREADER (SEE DETAIL ON SHEET CE-504)
- WETLAND INTERCEPT

*NOTE: LINE ALL CHANNELS WITH NORTH AMERICAN GREEN S75 EROSION CONTROL MATTING

20 10 0 20
SCALE IN FEET

DATE	REVISION MADE	BY	AUTHORIZED

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CAMP RAVENNA JOINT MILITARY TRAINING CENTER
RAVENNA, OHIO

OHIO NATIONAL GUARD SINCE 1788

PORTAGE COUNTY ITAM TRAINING AREA
IMPROVEMENT AND TRAIL CREATION

TASK 5 EROSION □ SEDIMENT CONTROL

DATE: 06-09-17	DES BY: BJR	BAKER PROJECT NUMBER 156220	SHEET NO: CE-111
SCALE: AS NOTED	DWN BY: BJR	GOV. CONTRACT NUMBER #W91364-12-D-0003	13 OF 18
SIZE: ANSI D	CHK BY: SMS		

I:\Ohio NG IDIQ\156220 Tank Trails Camp Ravenna\05_Deliverables\Drawings\05 C_Civil\Sheet Files\E S\Portage County\CE-111 PORTAGE_T5_E S PLAN.dwg Jul12,2017 - 2:16pm Plotted By: Joe Plebic ki

EROSION CONTROL NOTES:

GENERAL

1. THE OHIO ARMY NATIONAL GUARD (OHARNG) IS COMMITTED TO ENVIRONMENTAL STEWARDSHIP AT ALL OF OUR FACILITIES AND WITHIN OUR COMMUNITIES AS A WHOLE. THE ADJUTANT GENERAL'S DEPARTMENT MAINTAINS AN ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) IN ACCORDANCE WITH (IAW) ISO 14000 STANDARDS. CONTRACTORS PERFORMING WORK ON BEHALF OF THE DEPARTMENT, WITH THE EXCEPTION OF CONTRACTORS PROVIDING GOODS AND SERVICES THROUGH STATE TERM SCHEDULES OR PURCHASE ORDERS, ARE REQUIRED TO BE FAMILIAR WITH THE ADJUTANT GENERAL'S EMS POLICY AND TO COMPLY WITH THIS POLICY WHERE APPLICABLE AND PRACTICABLE. IF IMPLEMENTED ACCORDINGLY, FOLLOWING THE GUIDELINES OUTLINED IN THE FOLLOWING SUPPLEMENTAL CONDITIONS WILL ENSURE CONTRACTOR COMPLIANCE WITH THE EMS POLICY.

2. ALL CONTRACTORS MUST COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REQUIREMENTS TO INCLUDE APPLICABLE ARMY AND OHARNG REGULATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE PROPER CHARACTERIZATION, MANAGEMENT AND DISPOSAL OF WASTES; PROPER STORAGE, USE AND TRANSPORTATION OF HAZARDOUS MATERIALS; SPILL PREVENTION AND CLEAN UP; OBTAINING PROPER PERMITS AND SUBMITTING PROPER NOTIFICATIONS AS APPLICABLE TO THE WORK BEING CONDUCTED; AND PROTECTION OF SURFACE WATER AND NATURAL RESOURCES.

3. NO CONTRACTOR WILL CORRESPOND WITH ANY REGULATORY AGENCY ON BEHALF OF THE OHARNG WITHOUT APPROVAL OF THE OHARNG. THIS INCLUDES MEETINGS, PHONE CALLS, EMAILS, OR OTHER WRITTEN OR VERBAL COMMUNICATIONS. THE OHARNG WILL REVIEW AND APPROVE ALL CORRESPONDENCE, TO INCLUDE PERMIT APPLICATIONS, BEFORE IT IS SENT TO A REGULATORY AGENCY TO INCLUDE BUT NOT LIMITED TO THE FEDERAL OR OHIO ENVIRONMENTAL PROTECTION AGENCY (EPA), THE US FISH AND WILDLIFE SERVICE, THE OHIO HISTORIC PRESERVATION OFFICE, AND THE US ARMY CORPS OF ENGINEERS.

4. ALL CONTRACTOR ARE RESPONSIBLE FOR PAYING ALL FEES AND ACQUIRING ALL APPLICABLE PERMITS OR REGULATORY APPROVALS ASSOCIATED WITH THE WORK THEY ARE PERFORMING. DEPENDING UPON THE PERMIT/NOTIFICATION, IT MAY NEED TO BE ISSUED IN THE OHARNG'S NAME. COORDINATION WILL BE DONE WITH THE OHARNG TO DETERMINE THIS AND THE CONTRACTOR WILL COMPLETE THE APPLICATION/NOTIFICATION FOR OHARNG SIGNATURE AND SUBMIT THE APPLICATION AND ASSOCIATED FEES. ALL PERMIT SUBMITTALS WILL BE COORDINATED, REVIEWED AND APPROVED BY THE OHARNG REGARDLESS WHO SIGNS THE APPLICATION.

5. GENERAL CONTRACTORS (OR THE CONTRACTOR) WILL DEVELOP AN ENVIRONMENTAL WORK PLAN THAT PROVIDES DETAILS ON THE WORK TO BE PERFORMED AND HOW IT WILL BE PERFORMED TO ENSURE COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REQUIREMENTS (WETLAND PERMITS, ENDANGERED SPECIES RESTRICTIONS, EROSION CONTROL, HAZARDOUS WASTE GENERATION, ETC.). TOPICS ADDRESSED WITHIN THE ENVIRONMENTAL WORK PLAN WILL INCLUDE AS APPLICABLE: HAZARDOUS MATERIALS TO BE USED; THE QUALIFIED PERSONNEL RESPONSIBLE FOR WASTE MANAGEMENT; WASTE TO BE GENERATED (HAZARDOUS AND NON–HAZARDOUS WASTE); MATERIALS TO BE RECYCLED; METHODS TO BE USED TO MINIMIZE HAZARDOUS WASTE GENERATION; METHODS AND LABORATORIES TO BE USED TO CHARACTERIZE THE WASTE; DRMO APPROVED WASTE HAULERS AND TSDF'S TO BE USED; PROPOSED ON SITE WASTE STORAGE LOCATIONS; ON SITE WASTE MANAGEMENT AND INSPECTION PROCEDURES TO BE IMPLEMENTED TO INCLUDE MAXIMUM STORAGE TIME/PROPOSED WASTE PICKUP/TRANSPORT DATE; EMERGENCY PLAN AND EMERGENCY CONTACT INFORMATION; DISCHARGES FROM SECONDARY CONTAINMENT AND DE–WATERING ACTIVITIES; AND ANY OTHER INFORMATION PERTINENT TO ENVIRONMENTAL COMPLIANCE AND THE GENERATION AND MANAGEMENT OF WASTE DURING PROJECT IMPLEMENTATION. THE ENVIRONMENTAL WORK PLAN WILL BE REVIEWED BY THE ENVIRONMENTAL OFFICE AND EDITED BY THE CONTRACTOR AS NECESSARY TO CORRECT DEFICIENCIES. WORK MAY NOT BEGIN UNTIL THIS WORK PLAN HAS BEEN APPROVED BY THE ENVIRONMENTAL OFFICE. A COPY OF THE FINAL WORK PLAN WILL BE PROVIDED TO THE CONTRACTING OFFICE, THE APPROPRIATE OHARNG ENVIRONMENTAL OFFICE, THE OHARNG TECHNICAL REPRESENTATIVE AND ONE WILL BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.

6. BURNING OF WASTE, BRUSH, RUBBISH, AND/OR ANY OTHER DEBRIS IS NOT PERMITTED. IF BRUSH OR VEGETATION BURNING IS DESIRED, A REQUEST TO DO SO MUST BE SUBMITTED TO THE OHARNG FOR REVIEW. IF THE OHARNG CONCURS THAT BURNING IS NEEDED, THE CONTRACTOR IS REQUIRED TO SUBMIT A BURN PERMIT TO THE OHIO EPA ALONG WITH ANY ASSOCIATED FEE. IF THE OHIO EPA APPROVES THE APPLICATION AND ISSUES A PERMIT, THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL CONDITIONS OF THE PERMIT. UPON RECEIPT OF THE OHIO EPA BURN PERMIT THE CONTRACTOR WILL OBTAIN ANY ADDITIONAL PERMITS REQUIRED BY THE OHARNG AND/OR LOCAL FIRE DEPARTMENTS/DISTRICTS, IF ANY.

EROSION CONTROL, STORM WATER AND OTHER SURFACE WATER MANAGEMENT

7. FOR ALL PROJECTS, REGARDLESS OF THE DISTURBANCE ACREAGE, THE GENERAL CONTRACTOR SHALL USE ALL METHODS APPROPRIATE AND REQUIRED TO PREVENT SOIL FROM LEAVING THE PROJECT SITE EITHER BY WIND, WATER, OR ON VEHICLES AND EQUIPMENT. SILT FENCE AND OTHER TEMPORARY RUN OFF SOIL DETENTION METHODS WILL BE USED AS NEEDED. SPOIL PILES AND DISTURBED AREAS WILL BE MANAGED IN ACCORDANCE WITH THE STIPULATIONS IN THE OHIO EPA STORM WATER CONSTRUCTION PERMIT AND THE MOST CURRENT VERSION OF THE OHIO DEPARTMENT OF NATURAL RESOURCES' RAINWATER AND LAND DEVELOPMENT MANUAL; OHIO'S STANDARDS FOR STORMWATER MANAGEMENT, LAND DEVELOPMENT, AND URBAN STREAM PROTECTION. THE SITE MUST BE SEEDED WITH A TEMPORARY SEED MIX IF LEFT IDLE FOR OVER 14 DAYS. THE PROJECT SITE WILL BE CLOSED OUT BY PREPARING THE SOIL AS A SEED BED AND SEEDING AND MULCHING WITH THE APPROPRIATE SEED MIX. TEMPORARY EROSION CONTROL MEASURES (SILT FENCE) WILL BE REMOVED BY THE CONTRACTOR ONCE VEGETATION HAS BEEN ESTABLISHED AND SOIL ON THE PROJECT AREA IS STABILIZED.

8. THE GENERAL CONTRACTOR WILL IMPLEMENT THE SWP3 AND CONDUCT ALL INSPECTIONS AND MAINTAIN STORM WATER/EROSION CONTROLS IN ACCORDANCE WITH THE SWP3. THE CONTRACTOR WILL USE THE INSPECTION CHECKLIST FOR STORM WATER CONTROLS IN THE SWP3 AND SHALL COMPLETE AND MAINTAIN SIGNED INSPECTIONS ON SITE IN THE SWP3 BINDER. COPIES OF WEEKLY/POST STORM EVENT INSPECTIONS WILL BE PROVIDED TO THE LOCAL OHARNG ENVIRONMENTAL OFFICE MONTHLY. THE CONTRACTOR WILL NOTIFY THE LOCAL OHARNG ENVIRONMENTAL OFFICE IMMEDIATELY IF THERE IS A STORM WATER CONTROL FAILURE AND OFF SITE DISCHARGE FROM THE PROJECT AREA. ANY PROPOSED CHANGES TO THE SWPPP DEVELOPED BY THE A&E AND APPROVED BY THE OHARNG MUST BE SUBMITTED IN WRITING BY THE CONTRACTOR FOR REVIEW AND APPROVAL.

9. THE GENERAL CONTRACTOR WILL NOTIFY THE LOCAL OHARNG ENVIRONMENTAL OFFICE WITHIN 45 DAYS OF FINAL SITE STABILIZATION. THE LOCAL OHARNG ENVIRONMENTAL OFFICE WILL INSPECT THE SITE AND WILL SUBMIT A NOTICE OF TERMINATION (NOT) IF THE SITE STABILIZATION IS APPROVED. IF REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE NOT(S) FOR TERMINATION OF THEIR CO–PERMITTEE COVERAGE AFTER THE OHARNG HAS TERMINATED THE PERMIT. THE SITE IS CONSIDERED TO HAVE REACHED FINAL STABILIZATION WHEN THE TERMS IDENTIFIED IN THE OHIO EPA PERMIT ARE MET.

EROSION CONTROL NOTES (CONTINUED) :

EROSION CONTROL, STORM WATER AND OTHER SURFACE WATER MANAGEMENT

10. THE GENERAL CONTRACTOR WILL USE BEST MANAGEMENT PRACTICES OR WHATEVER MEANS NECESSARY TO PREVENT CONTAMINATION OF STORM WATER DUE TO RUNOFF FROM WASTES, DEBRIS PILES, FUEL TANKS, MATERIALS AND EQUIPMENT, AND OTHER STORAGE/MATERIALS ON THE PROJECT SITE.

11. THE GENERAL CONTRACTOR IS NOT PERMITTED TO DISTURB OR FILL ANY WETLANDS, STREAMS, OR OTHER SURFACE WATERS WHILE PERFORMING TASKS WITHIN THIS SCOPE OF WORK UNLESS SUCH DISTURBANCE OR FILL IS SPECIFICALLY IDENTIFIED AS A TASK IN THE SCOPE AND APPLICABLE PERMITS AND AUTHORIZATIONS HAVE BEEN OBTAINED. THE CONTRACTOR WILL MAINTAIN A 30 FOOT UNDISTURBED BUFFER AROUND WETLANDS AND DEPRESSIONAL AREAS THAT HOLD WATER AND KEEP ALL EQUIPMENT, MATERIALS, VEHICLES, DEBRIS, WASTE, AND PERSONNEL OUT OF THIS BUFFER AND PREVENT DISCHARGES OF ANY TYPE (CHEMICAL OR SOIL) FROM ENTERING SUCH AREAS.

12. THE OHARNG ENVIRONMENTAL OFFICE MUST APPROVE ALL DEWATERING ACTIVITIES. DEWATERING WILL BE ADDRESSED IN THE ENVIRONMENTAL WORK PLAN IF APPLICABLE TO THE PROJECT. STANDING WATER MUST BE CHARACTERIZED TO DETERMINE IF IT IS REGULATED BEFORE DEWATERING PROCEDURES ARE IMPLEMENTED. CHARACTERIZATION MAY BE POSSIBLE BY GENERATOR KNOWLEDGE OR MAY REQUIRE SAMPLING AND ANALYSIS. FOR DEMOLITION PROJECTS THE WATER MAY CONTAIN ASBESTOS, LEAD, PCBS OR OTHER CONTAMINANTS AND WILL HAVE TO BE SAMPLED. CONSTRUCTION DEWATER WOULD MOST LIKELY ONLY CONTAIN SUSPENDED SOLIDS BUT COULD CONTAIN CONTAMINATED GROUNDWATER DEPENDING UPON WHERE THE PROJECT IS LOCATED. AT MINIMUM, DISCHARGES MUST MEET WATER QUALITY STANDARDS IDENTIFIED IN OHIO ADMINISTRATIVE CODE 3745–1. AT LOCATIONS WITH KNOWN CONTAMINATED GROUNDWATER THE OHARNG ENVIRONMENTAL OFFICE WILL PROVIDE SPECIFIC GUIDANCE ON CONTAINERIZATION, SAMPLING, AND DISPOSAL/DISCHARGE REQUIREMENTS. AT MINIMUM, WATER MUST BE DISCHARGED THROUGH AN OIL ABSORPTION AND/OR AN ACTIVATED CHARCOAL, AND/OR A SEDIMENT FILTER BAG AS APPROPRIATE, FOR THE WATER BEING DISCHARGED. DISCHARGE WILL BE DONE IN A VEGETATED UPLAND AREA THAT DRAINS AWAY FROM THE WORK SITE UNLESS OTHERWISE SPECIFIED IN THE SCOPE OF WORK OR AUTHORIZED BY THE OHARNG ENVIRONMENTAL OFFICE. DISCHARGE WILL BE DONE SO AS TO ALLOW THE DISCHARGE TO FILTER THROUGH DENSE GROUNDCOVER VEGETATION. THE DISCHARGE HOSE WILL BE SET ON A PIECE OF PLYWOOD OR RUBBER MAT TO DISPERSE THE WATER AND PREVENT A CONCENTRATED DISCHARGE THAT CAN CUT AND ERODE SOIL. DIRECT DISCHARGE TO A STREAM, POND, WETLAND, DITCH OR OTHER BODY OF WATER OR CONVEYANCE IS NOT PERMITTED.

NATURAL RESOURCES – VEGETATION

13. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THE ESTABLISHMENT OF VEGETATIVE COVER AND SOIL STABILIZATION OF THE PROJECT AREA AND MUST USE ALL MEANS AVAILABLE AND NECESSARY TO ACCOMPLISH THIS. STRAW EROSION MATS, RIP RAP, GEO–CELL, OR OTHER APPLICABLE SOIL STABILIZATION METHODS, WHEN NEEDED, WILL BE PROPOSED TO THE OHARNG AND APPROVED BEFORE IMPLEMENTATION. THE CONTRACTOR WILL UTILIZE NATIVE VEGETATION UNLESS NATIVE VEGETATION IS NOT APPROPRIATE FOR THE REQUIRED APPLICATION AND THE OHARNG ENVIRONMENTAL OFFICE HAS REVIEWED AND APPROVED THE USE OF NON–NATIVE SPECIES. VEGETATION TO BE USED ON A PROJECT WILL BE IDENTIFIED IN THE ENVIRONMENTAL WORK PLAN.

14. THE GENERAL CONTRACTOR IS REQUIRED TO PREPARE AN ADEQUATE SEED BED PRIOR TO SEEDING. THE SEED BED MUST CONSIST OF CLEAN, WEED FREE TOP SOIL MUST BE BROKEN UP AND LOOSE AND SUITABLE FOR SEED GERMINATION. FERTILIZATION WILL BE REQUIRED IF THE SOIL IS POOR AND/OR NUTRIENT LEVELS ARE LOW. LIME WILL BE APPLIED AS NECESSARY TO ADJUST THE SOIL PH TO THE RECOMMENDED LEVEL FOR THE SEED BEING SOWN.

15. AN APPROPRIATE TURF GRASS MIX WILL BE USED FOR HIGH TRAFFIC AND HIGH MAINTENANCE AREAS. NATIVE SEED MIXES WILL BE UTILIZED FOR AREAS THAT DO NOT REQUIRE REGULAR MOWING OR DO NOT RECEIVE FREQUENT FOOT TRAFFIC. ANNUAL RYEGRASS MAY BE ADDED TO MIXES TO PROVIDE QUICK COVER. FOR LATE SEASON SEEDING, WINTER WHEAT/RYE MAY BE ADDED TO PROVIDE A QUICK COVER. CONTRACTORS MAY USE APPROVED GRASS SEED MIXES PROVIDED BY THE OHARNG OR MAY PROPOSE ALTERNATIVE SEED MIXES. THE OHARNG ENVIRONMENTAL OFFICE MUST APPROVE ALL SEED MIXES. SEEDING MUST BE MULCHED WITH AT LEAST 2 INCHES OF STRAW MULCH IF BROADCAST SEEDED, AN APPROPRIATE FIBER MATTING, OR AN APPROPRIATE COVER IF HYDRO–SEEDED. SEED DRILLING USUALLY DOES NOT REQUIRE MULCH.

MATERIALS:

MATERIALS AND EROSION CONTROL DEVICES NECESSARY FOR THE CONTROL OF EROSION AND SEDIMENTATION DURING CONSTRUCTION WILL CONFORM TO THE APPLICABLE REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS.

SPECIFICATIONS:

INCORPORATE EROSION CONTROL FEATURES INDICATED ON THE APPROVED PLAN INTO THE PROJECT AT THE EARLIEST PRACTICAL TIME.

INSPECT EROSION AND SEDIMENTATION CONTROL DEVICES ON A WEEKLY BASIS OR AS STIPULATED BY THE APPLICABLE PERMITS AND AFTER EVERY HALF INCH OF RAINFALL, UNTIL ALL EXPOSED SOILS HAVE BEEN PERMANENTLY STABILIZED. MAKE NECESSARY REPAIRS TO ENSURE THE EROSION AND SEDIMENT CONTROLS ARE IN GOOD WORKING ORDER.

CONSTRUCT, STABILIZE, AND ACTIVATE EROSION AND SEDIMENTATION CONTROLS BEFORE SITE DISTURBANCE WITHIN TRIBUTARY AREAS OF THOSE CONTROLS.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
- A MINIMUM OF 70 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED.
- A MINIMUM OF 3 INCHES OF NON–EROSIVE MATERIAL SUCH AS STONE, MULCH, OR RIPRAP HAS BEEN INSTALLED.
- OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING IS A GENERALIZED SEQUENCE OF BMP INSTALLATION FOR THIS PROJECT. THE CONTRACTOR SHALL INSTALL ALL E&S CONTROL MEASURES IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS AND/OR STANDARDS DETAILS PROVIDED IN THE E&S PLAN AND, WHERE APPLICABLE, IN ACCORDANCE WITH PRODUCT MANUFACTURER SPECIFICATIONS. CONSTRUCTION OF ALL SITE FEATURES (I.E. STRUCTURES, ROADWAYS, UTILITIES, ETC.) SHALL BE IN ACCORDANCE WITH THE APPROVED PROJECT SITE PLAN. EACH CONSTRUCTION STAGE IS INTENDED TO PROVIDE A GENERAL COURSE OF ACTION IN ORDER TO CONFORM TO THE APPLICABLE REGULATORY AGENCY REQUIREMENTS FOR TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT POLLUTION CONTROL. ALL NECESSARY PARTS FOR PROPER AND COMPLETE EXECUTION OF WORK PERTAINING TO THIS PLAN, WHETHER SPECIFICALLY MENTIONED OR NOT, ARE TO BE PERFORMED BY THE CONTRACTOR. IT IS NOT INTENDED THAT THE PLAN DRAWINGS OR NARRATIVE SHOW EVERY DETAILED PIECE OF MATERIAL OR EQUIPMENT. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS LISTED IN THIS SECTION, BUT MAY BE REQUIRED TO ALTER CONTROLS BASED ON EFFECTIVENESS OR DIFFERING CONDITIONS ENCOUNTERED AND/OR INSTALL ADDITIONAL CONTROLS BASED ON UNFORESEEABLE CONDITIONS.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THE SEQUENCE MUST BE APPROVED IN WRITING FROM THE PORTAGE COUNTY CONSERVATION DISTRICT OR OHIO EPA NORTHEAST DISTRICT OFFICE PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP EXCEPT WHERE NOTED.

CONSTRUCTION STAGE 1

1. AT LEAST TEN (10) DAYS PRIOR TO COMMENCING EARTHMOVING ACTIVITIES, THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY ALL PROJECT ASSOCIATES, INCLUDING THE PORTAGE COUNTY CONSERVATION DISTRICT'S AND OHIO EPA.
2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE OHIO UTILITIES PROTECTION SERVICE SHALL BE NOTIFIED AT 1–800–362–2764 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
3. LAYOUT THE PROJECT NPDES PERMIT BOUNDARY AND LIMITS OF DISTURBANCE AS IDENTIFIED ON THE PLAN DRAWINGS.
4. CLEARLY MARK ALL WETLAND AREAS ADJACENT TO PROJECT AREA AS IDENTIFIED ON THE PLAN DRAWINGS.
5. PROCEED WITH MOBILIZATION OF CONSTRUCTION TRAILERS AND EQUIPMENT IN THE AREA IDENTIFIED ON THE PLAN DRAWINGS. LOCATION OF MOBILIZATION AREA MAY BE MODIFIED AS DEEMED NECESSARY BY THE CONTRACTOR WITH PRIOR APPROVAL FROM THE PORTAGE COUNTY CONSERVATION DISTRICT.
6. INSTALL COMPOST FILTER SOCKS WHERE IDENTIFIED ON THE PLAN DRAWINGS. AS NECESSARY FOR THE DURATION OF CONSTRUCTION, INSTALL A ROCK FILTER OUTLET AT ANY LOCATION WHERE A COMPOST FILTER SOCK SECTION HAS BECOME COMPROMISED BY CONCENTRATED FLOW.
7. INSTALL RIPRAP APRONS AND LEVEL SPREADERS WHERE SHOWN ON THE PLAN DRAWINGS
8. EXISTING PAVED ROADWAYS SHALL BE USED FOR ACCESS INTO THE PROJECT SITE; ACCESS INTO CONSTRUCTION AREAS WITHIN THE PROJECT SITE WHERE EARTHMOVING WILL TAKE PLACE SHALL BE VIA A ROCK CONSTRUCTION ENTRANCE. INSTALL ROCK CONSTRUCTION ENTRANCES WHERE IDENTIFIED ON THE PLAN DRAWINGS. FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR WILL MAINTAIN THE ROCK CONSTRUCTION ENTRANCES TO THE SPECIFIED DIMENSION AND THICKNESS AND IMMEDIATELY REMOVE ALL PROJECT RELATED SEDIMENT AND DEBRIS THAT BECOMES DEPOSITED ON PUBLIC ROADWAYS.
9. PROCEED WITH REMOVAL OF VEGETATION AS NECESSARY TO COMPLETE CONSTRUCTION
10. REMOVE CULVERT PIPES AS NOTED ON PLAN DRAWINGS

CONSTRUCTION STAGE 2

1. BEGIN EARTHWORK OPERATIONS IN THE AREAS IDENTIFIED ON THE PLAN DRAWINGS. TOPSOIL SHALL BE STOCKPILED IN THE LOCATION IDENTIFIED ON THE PLAN DRAWINGS. AS NECESSARY FOR THE DURATION OF CONSTRUCTION, UPON COMPLETION OR TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITY OR ANY STAGE THEREOF, ASSOCIATED DISTURBED AREA SHALL IMMEDIATELY BE STABILIZED.
16. RELOCATE CONSTRUCTION TRAILERS AND EQUIPMENT AS NECESSARY TO FACILITATE CONSTRUCTION OF THE REMAINING IMPROVEMENTS. ESTABLISHED E&S CONTROLS SHALL REMAIN IN PLACE AND ADDITIONAL ON–SITE E&S CONTROLS SHALL BE IMPLEMENTED BY THE CONTRACTOR, AS NECESSARY, DURING CONSTRUCTION OF EACH CHANNEL. ADDITIONAL E&S MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED WITHIN THE E&S PLAN AND NOTES. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING FINAL GRADING AND FOR MAINTENANCE OF THE ASSOCIATED ON–SITE E&S CONTROLS.
17. INSTALL TEMPORARY EROSION CONTROL MATTING ON ALL SLOPES 3:1 (H:V) AND STEEPER NOT PREVIOUSLY STABILIZED, AND APPLY SOIL SUPPLEMENTS AND PERMANENT SEED AND MULCH TO DISTURBED AREAS THAT WILL NOT BE PAVED AND WILL NO LONGER BE SUBJECTED TO CONSTRUCTION TRAFFIC.
18. REMOVE TEMPORARY E&S MEASURES ONCE ALL PREVIOUSLY DISTURBED SURFACES HAVE ESTABLISHED A UNIFORM 70% PERENNIAL COVER OF EROSION RESISTANT VEGETATION OR HAVE BEEN OTHERWISE STABILIZED WITH CONCRETE PAVING.
22. NOTIFY THE PORTAGE COUNTY CONSERVATION DISTRICT UPON COMPLETION OF CONSTRUCTION.

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PORTAGE COUNTY ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

EROSION AND SEDIMENT CONTROL GENERAL NOTES

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-501
SCALE: AS NOTED	DWN BY: MJL	GOV. CONTRACT NUMBER #W91364-12-D-0003	14 OF 18
SIZE: ANSI D	CHK BY: SMS		

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SITE SOILS INFORMATION:

MAP UNIT: MgB – MAHONING SILT LOAM, 2 TO 6 PERCENT SLOPES

COMPONENT: MAHONING (85%)
SLOPE: 2 TO 6 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC BEDROCK
DRAINAGE CLASS: SOMEWHAT POORLY DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER
(KSAT): VERY LOW TO MODERATELY LOW (0.00 TO 0.14 IN/HR)
DEPTH TO WATER TABLE: ABOUT 6 TO 12 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: MODERATE (ABOUT 6.6 INCHES)

MINOR COMPONENTS (15%):
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR COMPONENTS ONLY. BELOW IS A LIST OF THE MINOR COMPONENTS.
ELLSWORTH (10%)
TRUMBULL (5%)

MAP UNIT: BgB – BOGART SILT LOAM, 2 TO 6 PERCENT SLOPES

COMPONENT: BOGART AND SIMILAR SOILS (100%)
SLOPE: 2 TO 6 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC BEDROCK
DRAINAGE CLASS: MODERATELY WELL DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT):
MODERATELY HIGH TO HIGH (0.60
TO 6.00 IN/HR)
DEPTH TO WATER TABLE: ABOUT 18 TO 36 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: LOW (ABOUT 5.8 INCHES)

MAP UNIT: CpB – CHILI SILT LOAM, 2 TO 6 PERCENT SLOPES

COMPONENT: CHILI AND SIMILAR SOILS (100%)
SLOPE: 2 TO 6 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC BEDROCK
DRAINAGE CLASS: WELL DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT):
MODERATELY HIGH TO HIGH (0.60
TO 6.00 IN/HR)
DEPTH TO WATER TABLE: MORE THAN 80 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: LOW (ABOUT 5.3 INCHES)

MAP UNIT: Da – DAMASCUS LOAM, 0 TO 2 PERCENT SLOPES

COMPONENT: DAMASCUS AND SIMILAR SOILS (100%)
SLOPE: 0 TO 2 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC BEDROCK
DRAINAGE CLASS: POORLY DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT):
MODERATELY HIGH TO HIGH (0.60
TO 6.00 IN/HR)
DEPTH TO WATER TABLE: 0 TO 6 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: MODERATE (ABOUT 6.3 INCHES)

SITE SOILS INFORMATION (CONTINUTED):

MAP UNIT: Ho – HOLLY SILT LOAM

COMPONENT: CHILI AND SIMILAR SOILS (100%)
SLOPE: 0 TO 2 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC
BEDROCK
DRAINAGE CLASS: POORLY DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT):
MODERATELY HIGH TO HIGH (0.20
TO 2.00 IN/HR)
DEPTH TO WATER TABLE: ABOUT 0 TO 6 INCHES
FREQUENCY OF FLOODING: FREQUENT
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: HIGH (ABOUT 9.4 INCHES)

MINOR COMPONENTS (5%):
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR COMPONENTS ONLY. BELOW IS A LIST OF THE MINOR COMPONENTS.
ORRVILLE (5%)

MAP UNIT: MnB – MAHONING–URBAN LAND COMPLEX, 2 TO 6 PERCENT SLOPES

COMPONENT: MAHONING AND SIMILAR SOILS (45%)
SLOPE: 2 TO 6 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC
BEDROCK
DRAINAGE CLASS: SOMEWHAT POORLY DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT): VERY
LOW TO MODERATELY LOW (0.00 TO 0.14 IN/HR)
DEPTH TO WATER TABLE: ABOUT 6 TO 12 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: MODERATE (ABOUT 6.6 INCHES)

URBAN LAND (30%)

MINOR COMPONENTS (25%):
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR COMPONENTS ONLY. BELOW IS A LIST OF THE MINOR COMPONENTS.
UDORTHENTS (10%)
ELLSWORTH (10%)
TRUMBULL (5%)

MAP UNIT: TrA – TRUMBULL SILT LOAM, 0 TO 2 PERCENT SLOPES

COMPONENT: TRUMBULL AND SIMILAR SOILS (90%)
SLOPE: 0 TO 2 PERCENT
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC
BEDROCK
DRAINAGE CLASS: POORLY DRAINED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT): VERY
LOW TO MODERATELY LOW (0.00 TO 0.14 IN/HR)
DEPTH TO WATER TABLE: ABOUT 0 TO 6 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: FREQUENT
AVAILABLE WATER CAPACITY: MODERATE (ABOUT 6.5 INCHES)

MINOR COMPONENTS (5%):
GENERATED BRIEF SOIL DESCRIPTIONS ARE CREATED FOR MAJOR COMPONENTS ONLY. BELOW IS A LIST OF THE MINOR COMPONENTS.
MAHONING (5%)
MINER (5%)

MAP UNIT: Ug – HOLLY SILT LOAM

COMPONENT: UDORTHENTS AND SIMILAR SOILS (100%)
SLOPE: NOT PROVIDED
DEPTH TO RESTRICTIVE FEATURE: MORE THAN 80 INCHES TO LITHIC
BEDROCK
DRAINAGE CLASS: NOT PROVIDED
CAPACITY OF THE MOST LIMITING LAYER TO TRANSMIT WATER (KSAT): NOT
PROVIDED
DEPTH TO WATER TABLE: MORE THAN 80 INCHES
FREQUENCY OF FLOODING: NONE
FREQUENCY OF PONDING: NONE
AVAILABLE WATER CAPACITY: NOT PROVIDED

DATE	REVISION MADE	BY	AUTHORIZED

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CAMP RAVENNA JOINT MILITARY TRAINING CENTER
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OHIO NATIONAL GUARD SINCE 1788

PORTAGE COUNTY ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

EROSION AND SEDIMENT CONTROL GENERAL NOTES

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-502
SCALE: AS NOTED	DWN BY: MJL	GOV. CONTRACT NUMBER #W91364-12-D-0003	15 OF 18
SIZE: ANSI D	CHK BY: SMS		

I:\Ohio ND ID\Q\156220 Tank Trails Camp Ravenna\05_Deliverables\Drawings\05 C_Civil\Sheet Files\E- S\Portage County\CE-501 Portage E- S Notes.dwg Jul12,2017 - 4:47pm Plotted By: Joe Hebbe; ki

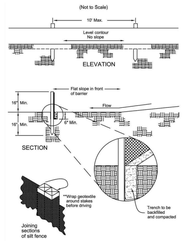
SILT FENCE (SF)

DESCRIPTION

A SILT FENCE IS A SEDIMENT–TRAPPING PRACTICE UTILIZING A GEOTEXTILE FENCE, TOPOGRAPHY AND SOMETIMES VEGETATION TO CAUSE SEDIMENT DEPOSITION. SILT FENCE REDUCES RUNOFF'S ABILITY TO TRANSPORT SEDIMENT BY PONDING RUNOFF AND DISSIPATING SMALL RILLS OF CONCENTRATED FLOW INTO UNIFORM SHEET FLOW. SILT FENCE IS USED TO PREVENT SEDIMENT–LADEN SHEET RUNOFF FROM ENTERING INTO DOWNSTREAM CREEKS AND SEWER SYSTEMS.

SPECIFICATIONS FOR SILT FENCE

(Not to Scale)



1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.

2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS WHICH MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.

3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WIL BE PREVENTED FROM FLOWING AROUND THE ENDS.

4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.

5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.

6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.

8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE AND SO THAT 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6 INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.

9. SEAMS BETWEEN SECTION OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6 INCHES OVERLAP PRIOR TO DRIVING INTO THE GROUND. (SEE DETAILS)

10. MAINTENANCE – SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

Criteria for Silt Fence Materials:

1. FENCE POSTS––THE LENGTH SHALL BE A MINIMUM OF 32 INCHES LONG. WOOD POSTS WILL BE 2–BY–2 INCH NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.

2. SILT FENCE FABRIC (SEE CHART BELOW):

Fabric Properties	Values	Test Method
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	< or = 0.84 mm	ASTM D4751
Minimum Permittivity	1x10–2 sec. –1	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

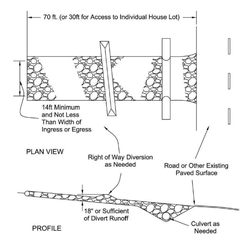
CONSTRUCTION ENTRANCE (CE)

DESCRIPTION

A CONSTRUCTION ENTRANCE IS A STABILIZED PAD OF STONE UNDERLAIN WITH GEOTEXTILE AND IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF–SITE WITH CONSTRUCTION TRAFFIC. LOCATED AT POINTS OF INGRESS/EGRESS, THE PRACTICE IS USED TO REDUCE THE AMOUNT OF MUD TRACKED OFF–SITE WITH CONSTRUCTION TRAFFIC.

SPECIFICATIONS FOR CONSTRUCTION ENTRANCE

(Not To Scale)



1. STONE SIZE – ODOT #2 (1.5–2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS).
3. THICKNESS – THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH – THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE – A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA, PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT–PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

FIGURE 7.4.1

GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1x10–3 cm/sec.

6. TIMING – THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT – A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR – A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.

OPERATION & MAINTENANCE

1. TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
2. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF–SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION–SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

REMOVAL

1. THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

DEWATERING MEASURES (DM)

DESCRIPTION

DEWATERING MEASURES PROVIDE A STABLE AREA FOR RECEIVING AND TREATING WATER PUMPED FROM EXCAVATION OR WORK AREAS PRIOR TO BEING RELEASED OFF THE SITE. THESE PRACTICES REDUCE SEDIMENT IMPACTS TO DOWNSTREAM WATER RESOURCES.

SPECIFICATIONS FOR DE–WATERING

1. A DE–WATERING PLAN SHALL BE DEVELOPED PRIOR TO THE COMMENCEMENT OF ANY PUMPING ACTIVITIES. THE OHARNG ENVIRONMENTAL OFFICE MUST APPROVE ALL DEWATERING ACTIVITIES.
2. STANDING WATER MUST BE CHARACTERIZED TO DETERMINE IF IT REGULATED BEFORE DEWATERING PROCEDURES ARE IMPLEMENTED. CHARACTERIZATION MAY BE POSSIBLE BY GENERATOR KNOWLEDGE OR MAY REQUIRE SAMPLING AND ANALYSIS.
3. AT MINIMUM, DISCHARGES MUST MEET WATER QUALITY STANDARDS IDENTIFIED IN OHIO ADMINISTRATIVE CODE 3745–1. AT LOCATIONS WITH KNOWN CONTAMINATED GROUNDWATER THE OHARNG ENVIRONMENTAL OFFICE WILL PROVIDE GUIDANCE ON CONTAINERIZATION, SAMPLING, AND DISPOSAL/DISCHARGE REQUIREMENTS.
4. AT MINIMUM, WATER MUST BE DISCHARGED THROUGH AN OIL ABSORPTION AND/OR AN ACTIVATED CHARCOAL, AND/OR A SEDIMENT FILTER BAG AS APPROPRIATE FOR THE WATER BEING DISCHARGED.
5. DISCHARGE WILL BE DONE IN A VEGETATED UPLAND AREA THAT DRAINS AWAY FROM THE WORK SITE UNLESS OTHERWISE SPECIFIED IN THE SCOPE OF WORK OR AUTHORIZED BY THE OHARNG ENVIRONMENTAL OFFICE.
6. DISCHARGE WILL BE DONE SO AS TO ALLOW THE DISCHARGE TO FILTER THROUGH DENSE GROUNDCOVER VEGETATION.
7. THE DISCHARGE HOSE WILL BE SET ON A PIECE OF PLYWOOD OR RUBBER MAT TO DISPERSE THE WATER AND PREVENT A CONCENTRATED DISCHARGE THAT CAN CUT AND ERODE SOIL.
8. DIRECT DISCHARGE TO A STREAM, POND, WETLAND, DITCH, OR OTHER BOYD OF WATER OR CONVEYANCE IS NOT PERMITTED.

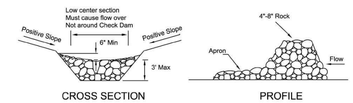
CHECK DAMS (CD)

DESCRIPTION

CHECK DAMS ARE SMALL ROCK DAMS CONSTRUCTED IN SWALES, GRASSED WATERWAYS OR DIVERSIONS. THEY REDUCE THE VELOCITY OF CONCENTRATED FLOWS, THEREBY REDUCING EROSION WITHIN THE SWALE OR WATERWAY. WHILE THIS PRACTICE OFTEN TRAPS SOME SEDIMENT, ITS TRAPPING EFFICIENCY IS EXTREMELY POOR, THUS, IT SHOULD NOT BE USED AS A PRIMARY SEDIMENT–TRAPPING PRACTICE.

SPECIFICATIONS FOR GRASS LINED CHANNEL

(Not to Scale)



INSTALLATION

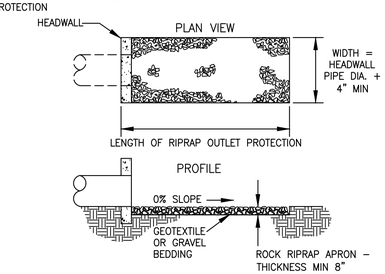
1. THE CHECK DAM SHALL BE CONSTRUCTED OF 4–8 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL. ODOT TYPE D STONE IS ACCEPTABLE, BUT SHOULD BE UNDERLAIN WITH A GRAVEL FILTER CONSISTING OF ODOT NO. 3 OR 4 OR SUITABLE FILTER FABRIC.
2. MAXIMUM HEIGHT OF CHECK DAM SHALL NOT EXCEED 3.0 FEET.
3. THE MIDPOINT OF THE ROCK CHECK DAM SHALL BE A MINIMUM OF 6 INCHES LOWER THAN THE SIDES IN ORDER TO DIRECT ACROSS THE CENTER AND AWAY FROM THE CHANNEL SIDES.
4. THE BASE OF THE CHECK DAM SHALL BE ENTRENCHED APPROXIMATELY 6 INCHES.
5. SPACING OF CHECK DAMS SHALL BE IN A MANNER SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSTREAM DAM.
6. A SPLASH APRON SHALL BE CONSTRUCTED WHERE CHECK DAMS ARE EXPECTED TO BE IN USE FOR AN EXTENDED PERIOD OF TIME, A STONE APRON SHALL BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CHECK DAM TO PREVENT FLOWS FROM UNDERCUTTING THE STRUCTURE. THE APRON SHOULD BE 6 INCHES THICK AND ITS LENGTH TWO TIMES THE HEIGHT OF THE DAM.
7. STONE PLACEMENT SHALL BE PERFORMED EITHER BY HAND OR MECHANICALLY AS LONG AS THE CENTER OF CHECK DAM IS LOWER THAN THE SIDES AND EXTENDS ACROSS ENTIRE CHANNEL.
8. SIDE SLOPES SHALL BE A MINIMUM OF 2:1

OUTLET PROTECTION (OP)

DESCRIPTION

A ROCK OR RIPRAP APRON TYPICALLY NEEDED AT THE OUTLET OF STORM DRAINS, CULVERTS, OR OPEN CHANNELS. ROCK OUTLET PROTECTION PROVIDES AN EROSION RESISTANT TRANSITION AREA WHERE CONCENTRATED OR HIGH VELOCITY FLOWS ENTERS LESS MODIFIED CHANNELS OR NATURAL STREAMS.

SPECIFICATIONS FOR OUTLET PROTECTION



INSTALLATION

1. SUBGRADE FOR THE FILTER OR BEDDING AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE PLAN. THE SUBGRADE SHALL BE CLEARED OF ALL TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER MATERIAL.
2. RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE SECURELY ANCHORED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
4. GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID LOOSELY BUT WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A 12 INCHES MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP.
5. GRAVEL BEDDING SHALL BE ODOT NO. 67'S OR 57'S UNLESS SHOWN DIFFERENTLY ON THE DRAWINGS.
6. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT SLIPPAGE OR DAMAGE TO THE GEOTEXTILE.
7. RIPRAP SHALL BE PLACED BY A METHOD THAT DOES NOT CAUSE SEGREGATION OF SIZES. EXTENSIVE PUSHING WITH A DOZER CAUSES SEGREGATION AND SHALL BE AVOIDED BY DELIVERING RIPRAP NEAR ITS FINAL LOCATION WITHIN THE CHANNEL.
8. CONSTRUCTION SHALL BE SEQUENCED SO THAT OUTLET PROTECTION IS PLACED AND FUNCTIONAL WHEN THE STORM DRAIN, CULVERT, OR OPEN CHANNEL ABOVE IT BECOMES OPERATIONAL.
9. ALL DISTURBED AREAS WILL BE VEGETATED AS SOON AS PRACTICAL.

TYPE OF ROCK OR RIPRAP (ODOT)	"N" VALUE	SIZE OF ROCK	
		50% by weight	85% by weight
TYPE D	.036	> 6 in.	3 – 12 in.
TYPE C	.04	> 12 in.	6 – 18 in.
TYPE B	.043	> 18 in.	12 – 24 in.
TYPE A	.045	> 24 in.	18 – 30 in.

DUST CONTROL (DC)

DESCRIPTION

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

SPECIFICATIONS FOR DUST CONTROL

1. VEGETATIVE COVER AND/MULCH – APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMIAN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES.
2. WATERING – SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
3. SPRAY–ON ADHESIVES – APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURERS' INSTRUCTIONS.

FIGURE 7.5.1

ADHESIVE	Water Dilution (Adhesive: Water)	NOZZLE TYPE	Application Rate Gal./Ac.
Latex Emulsion	12.5:1	Fine	235
Resin in Water Acrylic Emulsion (No–traffic)	4:1	Fine	300
Acrylic Emulsion (No–traffic)	7:1	Coarse	450
Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

4. STONE – GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.
5. BARRIERS – EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL.
6. CALCIUM CHLORIDE – THIS CHEMICAL MAY BE APPLIED BY MECHANICAL SPREADER AS LOOSE, DRY GRANULES OR FLAKES AT A RATE THAT KEEPS THE SURFACE MOIST BUT NOT SO HIGHAS TO CAUSE WATER POLLUTION OR PLANT DAMAGE. APPLICATION RATES SHOULD BE STRICTLY IN ACCORDANCE WITH SUPPLIERS' SPECIFIED RATES.

OPERATION AND MAINTENANCE

1. WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

2. STREET CLEANING – PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET – TYPE ENDLOADER OR SCRAPER.

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OHIO NATIONAL GUARD SINCE 1788

PORTAGE COUNTY ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-503
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	16 OF 18

I:\Ohio NG ID\C156220 Tank Trails Camp Ravenna\05_Deliverables\Drawings\05 C_Civil\Sheet Files\E. S\Portage County\CE-503-505 PORTAGE E. S DETAILS.dwg Jul12,2017 - 4:47pm Plotted By: Joe Hlebic Ni

TEMPORARY SEEDING (TS) PERMANENT SEEDING (PS)

DESCRIPTION

TEMPORARY SEEDINGS ESTABLISH TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRAINS. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS. GRASSES WHICH ARE QUICK GROWING ARE SEEDED AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

SEEDING

NATIVE SEED MIXES WILL BE USED WHERE SUITABLE AND COMPATIBLE WITH MAINTENANCE REQUIREMENTS. AN APPROPRIATE TURF GRASS MIX WILL BE USED FOR HIGH TRAFFIC AND HIGH MAINTENANCE AREAS. ANNUAL RYEGRASS MAY BE ADDED TO MIXES TO PROVIDE QUICK COVER. FOR LATE SEASON SEEDING, WINTER WHEAT/RYE MAY BE ADDED TO PROVIDE A QUICK COVER. GENERAL CONTRACTORS MAY USE THE BELOW LISTED APPROVED GRASS SEED MIXES PROVIDED BY THE OHARNG OR MAY PROPOSE ALTERNATIVE SEED MIXES. THE OHARNG ENVIRONMENTAL OFFICE MUST APPROVE ALL SEED MIXES. THE SEED MIXES THAT WILL BE USED WILL BE IDENTIFIED IN THE ENVIRONMENTAL WORK PLAN.

THE FOLLOWING SEED IS APPROVED FOR ESTABLISHMENT OF TEMPORARY COVER. SPECIES MAY BE MIXED IF/AS NECESSARY FOR SPECIFIC APPLICATION.

- ANNUAL RYE GRASS (LOLIUM MULTIFLORUM), BROADCAST @ 40 LBS/ACRE, DRILLED AT 30 LBS/ACRE, MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. USE MULCH NETTING OR FIBER MAT ON SLOPES GREATER THAN 6%. GROWS QUICKLY BUT OF SHORT DURATION. GOOD GROWTH DURING HOT SUMMER PERIOD.
- WINTER RYE (SECALE CEREAL) BROADCAST @ 112 LBS/ACRE, DRILLED AT 80 LBS/ACRE, MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. USE MULCH NETTING OR FIBER MAT ON SLOPES GREATER THAN 6%. GOOD FOR FALL SEEDING. SELECT A HARDY VARIETY.
- OATS (AVENA SATIVA) BROADCAST @ 80 LBS/ACRE, DRILLED AT 65 LBS/ACRE, MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. USE MULCH NETTING OR FIBER MAT ON SLOPES GREATER THAN 6%. BEST FOR SPRING SEEDING. FALL SEEDING WILL DIE WHEN WINTER SETS IN.
- 40% NODDING WILD RYE (ELYMUS CANADENSIS), 40% VIRGINIA WILD RYE (ELYMUS VIRGINICUS), 15% PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), AND 5% BLACK-EYED SUSAN (RUDBECKIA HIRTA), BROADCAST @ 35 LBS/ACRE, DRILLED AT 25 LBS/ACRE, MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. ADD 20 LBS/ACRE OF ANNUAL RYE GRASS (LOLIUM MULTIFLORUM) TO THE BROADCAST MIX AND 15 LBS/ACRE TO THE DRILLED MIX. GOOD FOR AREAS THAT WILL REMAIN UNFINISHED INDEFINITELY.
- 23.5% NODDING WILD RYE (ELYMUS CANADENSIS), 25% VIRGINIA WILD RYE (ELYMUS VIRGINICUS), 18.75% PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), 1.5% BLACK-EYED SUSAN (RUDBECKIA HIRTA), AND 31.25% LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), BROADCAST @ 25 LBS/ACRE, DRILLED AT 18 LBS/ACRE), MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. ADD 20 LBS/ACRE OF ANNUAL RYE GRASS (LOLIUM MULTIFLORUM) TO THE BROADCAST MIX AND 15 LBS/ACRE TO THE DRILLED MIX. GOOD FOR LATE SEASON (AFTER 15 SEPTEMBER) QUICK TEMPORARY COVER.

THE FOLLOWING SEED IS APPROVED AND WILL BE USED FOR ESTABLISHMENT OF PERMANENT COVER IN AREAS THAT ARE NOT MAINTAINED AS TURF GRASS OR HIGH FOOT TRAFFIC AREAS SUCH AS RANGE IMPACT AREAS THAT ARE NOT REGULARLY MOWED, ROADSIDES OUTSIDE OF CANTONMENT AREAS, FENCE LINES OUTSIDE OF CANTONMENT AREAS, ETC. SUBSTITUTION WITH SIMILAR SPECIES IS PERMITTED BUT MUST BE APPROVED BY THE OHARNG ENVIRONMENTAL OFFICE.

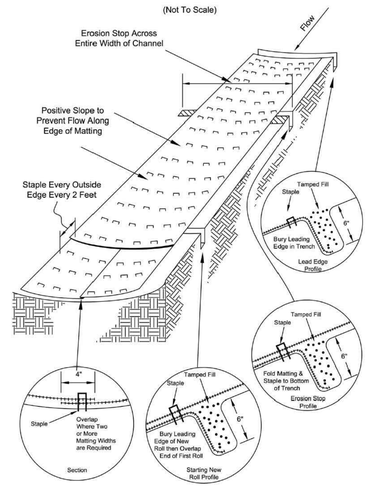
- 23.5% NODDING WILD RYE (ELYMUS CANADENSIS), 25% VIRGINIA WILD RYE (ELYMUS VIRGINICUS), 22% LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM), 18.75% PARTRIDGE PEA (CHAMAECRISTA FASCICULATA), 7.75% THIN-LEAVED CONEFLOWER (RUDBECKIA TRILOBA), 1.5% BROWN FOX SEDGE (CAREX VULPINOIDEA), 1.5% BLACK-EYED SUSAN (RUDBECKIA HIRTA), BROADCAST @ 18 LBS/ACRE, DRILLED AT 12 LBS/ACRE, MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. ADD 20 LBS/ACRE OF ANNUAL RYE GRASS (LOLIUM MULTIFLORUM) TO THE BROADCAST MIX AND 15 LBS/ACRE TO THE DRILLED MIX. THIS MIX IS FOR USE IN OPEN AREAS THAT RECEIVE GOOD SUNLIGHT.
- 31% DEERTONGUE (DICHANTHELIUM CLANDESTINUM), 25% VIRGINIA WILD RYE (ELYMUS VIRGINICUS), 25% NODDING WILD RYE (ELYMUS CANADENSIS), 10% BIG BLUESTEM (ANDROPOGON GERARDII), AND 9% SIDE-OATS GRAMA (BOUTELOUA CURTIPENDULA), BROADCAST @ 30 LBS/ACRE, DRILLED AT 20 LBS/ACRE), MULCH WITH A MINIMUM OF 3 BALES OF STRAW PER 1000 SQUARE FEET. ADD 20 LBS/ACRE OF ANNUAL RYE GRASS (LOLIUM MULTIFLORUM) TO THE BROADCAST MIX AND 15 LBS/ACRE TO THE DRILLED MIX. THIS MIX IS FOR USE IN SHADED AREAS, PARTIAL SUN, AND OPENINGS IN THE FOREST CANOPY.

AREAS THAT ARE MAINTAINED WITH REGULAR MOWING DURING THE GROWING SEASON AND RECEIVE HEAVY FOOT TRAFFIC WILL BE SEEDED WITH AN APPROPRIATE TURF GRASS MIX. SUCH AREAS INCLUDE LAWNS IN CANTONMENT AREAS, PARADE FIELDS, AND RANGE ROCA AREAS. TURF GRASS MIXES OF KENTUCKY BLUE GRASS, FINE FESCUE AND PERENNIAL RYEGRASS USING VARIETIES APPROPRIATE FOR THE SPECIFIC APPLICATION WILL BE IDENTIFIED BY THE CONTRACTOR AND REVIEWED AND APPROVED BY THE OHARNG PRIOR TO APPLICATION. A POTENTIAL MIX AND VARIETIES ARE AS FOLLOWS.

- 50% KENTUCKY BLUEGRASS (BLUERIDGE, ARGYL, BLUESTAR, KEN BLUE, LIMOUSINE OR BARON VARIETIES), 40% PERENNIAL RYEGRASSES (PEAK, SONATA, WIND DANCE, INTEGRA, MORNING STAR OR SHINING STAR VARIETIES), AND 10% CREEPING RED FESCUE (LUSTROUS OR BOREAL VARIETIES)

SPECIFICATIONS FOR TEMPORARY ROLLED EROSION CONTROL PRODUCT

(Not To Scale)



1. CHANNEL/SLOPE SOIL PREPARATION GRADE AND COMPACT AREA OF INSTALLATION, PREPARING SEEDBED BY LOOSENING 2"-3" OF TOPSOIL ABOVE FINAL GRADE. INCORPORATE AMENDMENTS SUCH AS LIME AND FERTILIZER INTO SOIL. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER DEBRIS SO THAT INSTALLED RECP WILL HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
2. CHANNEL/SLOPE SEEDING APPLY SEED TO SOIL SURFACE PRIOR TO INSTALLATION. ALL CHECK SLOTS, ANCHOR TRENCHES, AND OTHER DISTURBED AREAS MUSH BE RE-SEEDED. REFER TO THE PERMANENT SEEDING (PS) SPECIFICATION FOR SEEDING RECOMMENDATIONS.

SLOPE INSTALLATION

3. EXCAVATE TOP AND BOTTOM TRENCHES (12"X6"). INTERMITTENT EROSION CHECK SLOTS (6"X6") MAY BE REQUIRED BASED ON SLOPE LENGTH. EXCAVATE TOP ANCHOR TRENCH 2' X 3' OVER CREST OF THE SLOPE.
4. IF INTERMITTENT EROSION CHECK SLOTS ARE REQUIRED INSTALL RECP IN 6"X6" SLOT AT A MAXIMUM OF 30' CENTERS OR THE MID POINT OF THE SLOPE. RECP SHOULD BE STAPLED INTO TRENCH ON 12" CENTERS.
5. INSTALL RECP IN TOP ANCHOR TRENCH, ANCHOR ON 12" SPACINGS, BACKFILL AND COMPACT SOIL.
6. UNROLL RECP DOWN SLOPE WITH ADJACENT ROLLS OVERLAPPED A MINIMUM OF 3". ANCHOR THE SEAM EVERY 18". LAY THE RECP LOOSE TO MAINTAIN DIRECT SOIL CONTACT, DON NOT PULL TAUGHT.
7. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSLOPE RECP ON TOP FOR A SHINGLE EFFECT. BEGIN ALL NEW ROLLS IN AN EROSION CHECK SLOT IF REQUIRED, DOUBLE ANCHOR ACROSS ROLL EVERY 12".
8. INSTALL RECP IN BOTTOM ANCHOR TRENCH (12"X6"). ANCHOR EVERY 12". PLACE ALL OTHER STAPLES THROUGHOUT SLOPE AT 1 TO 2.5 SQUARE YARDS DEPENDENT ON SLOPE. REFER TO MANUFACTURER'S ANCHOR GUIDE.

CHANNEL INSTALLATION

9. EXCAVATE INITIAL ANCHOR TRENCH (12"X6") ACROSS THE LOWER END OF THE PROJECT AREA.
10. EXCAVATE INTERMITTENT CHECK SLOTS (6"X6") ACROSS THE CHANNEL AT 30' INTERVALS ALONG THE CHANNEL.
11. EXCAVATE LONGITUDINAL CHANNEL ANCHOR SLOTS (4"X4") ALONG BOTH SIDES OF THE CHANNEL TO BURY THE EDGES. WHENEVER POSSIBLE EXTEND THE RECP 2'-3' ABOVE THE CREST OF CHANNEL SIDE SLOPES.
12. INSTALL RECP IN INITIAL ANCHOR TRENCH (DOWNSTREAM) ANCHOR EVERY 12", BACKFILL AND COMPACT SOIL.
13. ROLL OUT RECP BEGINNING IN THE CENTER OF THE CHANNEL TOWARD THE INTERMITTENT CHECK SLOT. DO NOT PULL TAUGHT. UNROLL ADJACENT ROLLS UPSTREAM WITH A 3" MINIMUM OVERLAP (ANCHOR EVERY 18") AND UP EACH CHANNEL SIDE SLOPE.
14. AT TOP OF CHANNEL SIDE SLOPES INSTALL RECP IN THE LONGITUDINAL ANCHOR SLOTS, ANCHOR EVERY 18".
15. INSTALL RECP IN INTERMITTENT CHECK SLOTS. LAY INTO TRENCH AND SECURE WITH ANCHORS EVERY 12", BACKFILL WITH SOIL AND COMPACT.
16. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSTREAM RECP ON TOP FOR A SHINGLING EFFECT. BEGIN ALL NEW ROLLS IN AN INTERMITTENT CHECK SLOT, DOUBLE ANCHORED EVERY 12".
17. INSTALL UPSTREAM END IN A TERMINAL ANCHOR TRENCH (12"X6"); ANCHOR EVERY 12", BACKFILL AND COMPACT.
18. COMPLETE ANCHORING THROUGHOUT CHANNEL AT 2.5 PER SQUARE YARD USING SUITABLE GROUND ANCHORING DEVICES (U SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, PLASTIC STAKES, AND TRIANGULAR WOODEN STAKES). ANCHORS SHOULD BE OF SUFFICIENT LENGTH TO RESIST PULLOUT. LONGER ANCHORS MAY BE REQUIRED IN LOOSE SANDY OR GRAVELY SOILS.

INSPECTIONS & MAINTENANCE

ALL RECPS SHOULD BE INSPECTED REGULARLY AFTER INSTALLATION, ESPECIALLY AFTER STORMS TO CHECK FOR EROSION OR UNDERMINING OF THE PRODUCT. MAKE NEEDED REPAIRS IMMEDIATELY, ADDRESSING RILLS OR GULLIES THAT HAVE DEVELOPED PRIOR TO REPLACING THE RECP. IN THE CASE EROSION REPAIRS, ASSURE THAT SUBSEQUENT RUNOFF ACROSS THE AREA IS DISPERSED OR ADEQUATELY SPREAD.

GRADE TREATMENT (SURFACE ROUGHENING) (GT)

DESCRIPTION

GRADE TREATMENT OR SURFACE ROUGHENING CREATES HORIZONTAL DEPRESSIONS IN THE SOIL SURFACE THAT HELP TO REDUCE EROSION BY REDUCING RUNOFF VELOCITY AND INCREASING INFILTRATION. THESE DEPRESSIONS AID IN THE ESTABLISHMENT OF VEGETATIVE COVER AND PROVIDE LOCALIZED TRAPPING OF SEDIMENTS. GRADE TREATMENT IS TYPICALLY CREATED BY OPERATING TILLAGE IMPLEMENTS ON THE CONTOUR OR BY RUNNING TRACKED EQUIPMENT UP AND DOWN A SLOPE WITHOUT FINE GRADING THE SURFACE.

SPECIFICATIONS FOR GRADE TREATMENT

CUT SLOPES-GREATER THAN 3:1 SLOPES

1. STAIR-STEP GRADING MAY BE CARRIED OUT ON ANY MATERIAL SOFT ENOUGH TO BE RIPPED WITH A BULLDOZER. THE RATION OF THE HORIZONTAL DISTANCE TO THE VERTICAL CUT DISTANCE SHALL BE FLATTER THAN 1:1 AND THE HORIZONTAL PORTION OF THE "STEIP" SHALL SLOPE TOWARD THE VERTICAL WALL. INDIVIDUAL VERTICAL CUTS SHALL NOT BE MORE THAN 24 INCHES ON SOFT SOIL MATERIALS AND NOT MORE THAN 36 INCHES IN ROCKY MATERIALS.
2. GROOVING MAY BE MADE WITH ANY APPROPRIATE IMPLEMENT WHICH CAN BE SAFELY OPERATED ON THE SLOPE AND WHICH WILL NOT CAUSE UNDUE COMPACTION. SUGGESTED IMPLEMENTS INCLUDE DISCS, TILLERS, SPRING HARROWS, AND THE TEETH ON A FRONT-END LOADER BUCKET. SUCH GROOVES SHALL NOT BE LESS THAN 3 INCHES DEEP NOR FURTHER THAN 15 INCHES APART.

FILL SLOPES-GREATER THAN 3:1 SLOPES

FILL SLOPES STEEPER THAN 3:1 SHALL BE GROOVED OR ALLOWED TO REMAIN ROUGH AS THEY ARE CONSTRUCTED UTILIZING METHOD (1) OR (2) BELOW.

1. GROOVING MAY BE MADE WITH ANY APPROPRIATE IMPLEMENT WHICH CAN BE SAFELY OPERATED ON THE SLOPE AND WHICH WILL NOT CAUSE UNDUE COMPACTION SUCH AS DISCS, TILLERS, SPRING HARROWS, AND THE TEETH ON A FRONT-END LOADER BUCKET. GROOVES LEFT SHALL NOT BE LESS THAN 3 INCHES DEEP NORE FURTHER THAN 15 INCHES APART.
2. AS LIFTS OF THE FILL ARE CONSTRUCTED, SOIL AND ROCK MATERIALS MAY BE ALLOWED TO FALL NATURALLY ONTO THE SLOPE SURFACE. AT NO TIME SHALL SLOPES BE BLADED OR SCRAPED TO PRODUCE A SMOOTH, HARD SURFACE.

CUTS, FILLS, AND GRADED AREAS WHICH WILL BE MOWED

1. MOWED SLOPES SHOULD NOT BE STEEPER THAN 3:1 AND SHALL AVOID EXCESSIVE ROUGHNESS. THESE AREAS MAY BE ROUGHENED WITH SHALLOW GROOVES SUCH AS THOSE, WHICH REMAIN AFTER TILLING, DISCING, HARROWING, RAKING, OR USE OF A CULTIPACKER-SEEDER. THE FINAL PASS OF ANY SUCH TILLAGE IMPLEMENT SHALL BE ON THE CONTOUR (PERPENDICULAR TO THE SLOPE).
2. GROOVE FORMED BY IMPLEMENTS SHALL BE NOT LESS THAN 1 INCH DEEP AND NOT FURTHER THAN 12 INCHES APART. FILL SLOPES THAT ARE LEFT ROUGH DURING CONSTRUCTION MAY BE SMOOTHED WITH A CHAIN HARROW OR SIMILAR IMPLEMENT TO FACILITATE MOWING.

ROUGHENING WITH TRACKED MACHINERY

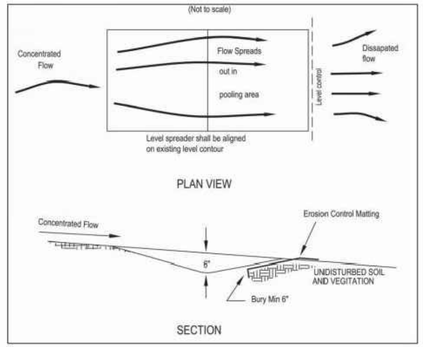
1. AVOID TRACKING CLAYED SOILS IF POSSIBLE, DUE TO THEIR POTENTIAL FOR COMPACTION. CONVERSELY SANDY SOILS WILL HAVE LOW POTENTIAL FOR COMPACTION.
2. OPERATE TRACKED MACHINERY UP AND DOWN THE SLOPE TO LEAVE HORIZONTAL DEPRESSIONS IN THE SOIL. AS FEW PASSES OF THE MACHINERY SHOULD BE MADE AS POSSIBLE TO MINIMIZE COMPACTION.

TEMPORARY ROLLED EROSION CONTROL PRODUCTS (EROSION CONTROL MATTING)

DESCRIPTION

A TEMPORARY ROLLED EROSION CONTROL PRODUCT (TRECP) IS A DEGRADABLE MANUFACTURED MATERIAL USED TO STABILIZE EASILY ERODED AREAS WHILE VEGETATION BECOMES ESTABLISHED. TEMPORARY ROLLED EROSION CONTROL PRODUCTS ARE DEGRADABLE PRODUCTS COMPOSED OF BIOLOGICALLY, PHOTO CHEMICALLY OR OTHERWISE DEGRADABLE MATERIAL. TEMPORARY RECPS CONSIST OF EROSION CONTROL NETTING, OPEN WEAVE TEXTILES, AND EROSION CONTROL BLANKETS AND MATTINGS. THESE PRODUCTS REDUCE SOIL EROSION AND ASSIST VEGETATIVE GROWTH BY PROVIDING TEMPORARY COVER FROM THE EROSIVE ACTION OF RAINFALL AND RUNOFF WHILE PROVIDING SOIL-SEED CONTACT.

LEVEL SPREADER:



SPECIFICATIONS

1. CONSTRUCT LEVEL SPREADER ON A LEVEL GRADE TO ENSURE UNIFORM SPREADING OF STORM RUNOFF.
2. LEVEL SPREADERS MUST BE CONSTRUCTED ON UNDISTURBED SOIL, NOT ON FILL.
3. THE LEVEL SPREADER MUST OUTLET TO EROSION-RESISTANT AREAS WITH ESTABLISHED EXISTING VEGETATION.
4. VEGETATED LIP SPREADERS SHALL BE PROTECTED USING AN EROSION CONTROL BLANKET INSTALLED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS. THE BLANKET SHALL START A MINIMUM OF 4 FEET ABOVE THE LIP AND EXTEND AT LEAST 1 FOOT DOWNSTREAM OVER THE SPREADER LIP, SECURED WITH HEAVY-DUTY STAPLES AND THE DOWNSTREAM AND UPSTREAM ENDS BURIED AT LEAST 6 INCHES IN A VERTICAL TRENCH.
5. FERTILIZING, SEEDING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPLICABLE VEGETATIVE SPECIFICATION.

DIMENSIONS:

Flow Rate (cfs)	Minimum Depth – D (ft)	Minimum Width – W (ft)
0 – 10	0.5	10
10 – 20	0.6	20
20 – 30	0.7	30

- MINIMUM WIDTH (W) IS IN THE DIRECTION THAT IS PERPENDICULAR TO THE FLOW.
- THE MINIMUM DEPTH (D) OF THE LEVEL SPREADER SHALL BE AT LEAST 0.5 FEET MEASURED DOWN FROM THE LEVEL LIP. DEPTH MAY BE GREATER TO INCREASE TEMPORARY STORAGE CAPACITY, IMPROVE TRAPPING OF DEBRIS, AND ENHANCE SETTLING OF ANY SUSPENDED SOLIDS BASED ON EROSION POTENTIAL OR OTHER SITE CONDITIONS.
- THE LEVEL LIP OF THE SPREADER MUST BE CONSTRUCTED COMPLETELY LEVEL (0% GRADE) TO INSURE UNIFORM SPREADING OF THE RUNOFF OVER THE ENTIRE LENGTH OF THE SPREADER.
- FLOWS RELEASED FROM LEVEL SPREADERS MUST OUTLET ONTO UNDISTURBED STABLE AREAS WITH A SLOPE NOT EXCEEDING 10%, WHERE SHEET FLOW ARE MAINTAINED AND CONCENTRATED FLOW PREVENTED.
- WHEN CONSTRUCTING A LEVEL SPREADER AS AN OUTLET FOR A DIVERSION, THE LAST 20 FEET OF THE DIVERSION SHOULD BE USED TO SMOOTHLY TRANSITION THE WIDTH OF THE DIVERSION TO THE DITH OF THE SPREADER TO ENSURE UNIFORM OUTFLOW. THE GRADE OF THE CHANNEL FOR THE LAST 20 FEET OF THE DIVERSION ENTERING THE LEVEL SPREADER SHALL BE 1.0% OR LESS.

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OHIO NATIONAL GUARD SINCE 1788

PORTAGE COUNTY ITAM TRAINING AREA IMPROVEMENT AND TRAIL CREATION

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

DATE: 06-09-17	DES BY: WDN	BAKER PROJECT NUMBER 156220	SHEET NO: CE-504
SCALE: AS NOTED	DWN BY: MJL		
SIZE: ANSI D	CHK BY: SMS	GOV. CONTRACT NUMBER #W91364-12-D-0003	17 OF 18

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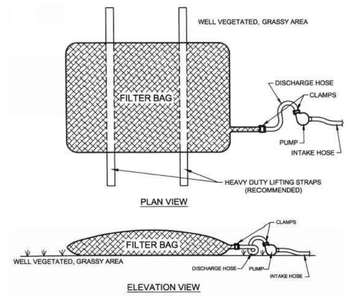
PUMPED WATER FILTER BAG (FB)

DESCRIPTION

A PUMPED WATER FILTER BAG MAY BE USED TO FILTER WATER FROM DISTURBED AREAS PRIOR TO DISCHARGING TO THE WATERS OF OHIO.

SPECIFICATIONS FOR FILTER BAG



1. FILTER BAGS SHOULD BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STICKED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.

2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHAL BE REPLACED WHEN THEY BECOME $\frac{1}{2}$ FULL. SPARE BAGS SHALL BE KEPT ON-SITE

3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED.

4. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.

5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER. PUMPING RATES SHALL BE NO GREATER THAN 750 GPM OR $\frac{1}{2}$ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

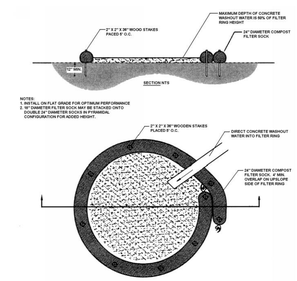
6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE AND NOT RESUME UNTIL THE PROBLEM IS FIXED.

CONCRETE WASH OUT (WO)

DESCRIPTION

A DESIGNATED CONCRETE WASH OUT AREA MUST BE UTILIZED TO CONTROL THE CLEANING OF CHUTES, MIXERS, AND HOPPERS OF CONCRETE DELIVERY VEHICLES.

SPECIFICATIONS FOR CONCRETE WASH OUT



A suitable impervious geomembrane shall be placed at the location of the washout prior to installing the socks.
Adapted from Filtreixx

1. WASHOUT AREA TO BE A MINIMUM OF 50 FEET FROM ANY OPEN WATER OR CHANNEL.

2. CONCRETE WASH WATER SHALL NOT BE ALLOWED TO FLOW INTO STREAMS, DITCHES, STORM DRAINS, OR ANY OTHER WATER CONVEYANCE.

3. A SUMP OR PIT WITH NO POTENTIAL FOR DISCHARGE SHALL BE CONSTRUCTED IF NEEDED TO CONTAIN CONCRETE WASH WATER.

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