ARCONIC LAFAYETTE OPERATIONS ELLIOTT DITCH

LEVEE SOIL REMEDIATION STORMWATER POLLUTION PREVENTION PLAN

PREPARED FOR: ARCONIC LAFAYETTE OPERATIONS 3131 EAST MAIN STREET LAFAYETTE, INDIANA 47905

PREPARED BY: CIVIL & ENVIRONMENTAL CONSULTANTS, INC. 2704 CHEROKEE FARM WAY, SUITE 101 KNOXVILLE, TENNESSEE 37920

PROJECT DESCRIPTION

<u>DATUM</u>

INDIANA STATE PLAN GRID - NORTH AMERICAN DATUM OF ELEVATION - NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)



DESCRIPTION

EROSION AND SEDIMENT CONTROL PLAN

SWPPP NARRATIVE (1 OF 2)

SWPPP NARRATIVE (2 OF 2)

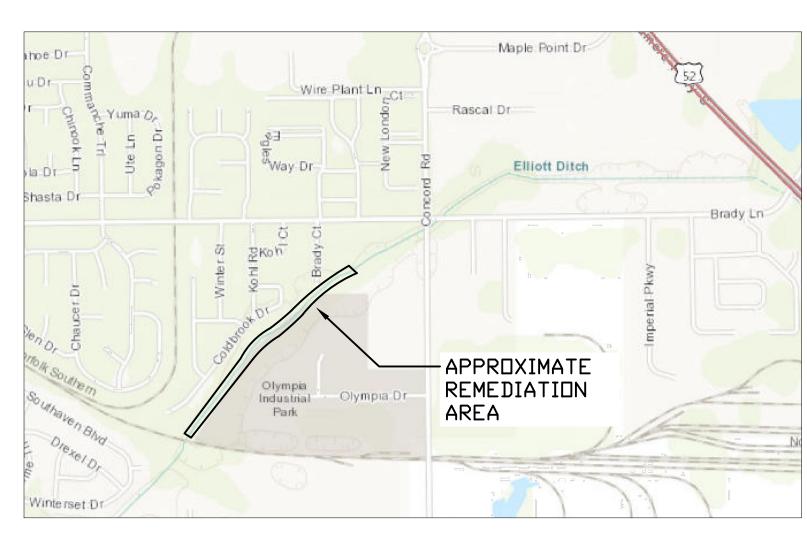
EROSION CONTROL DETAILS

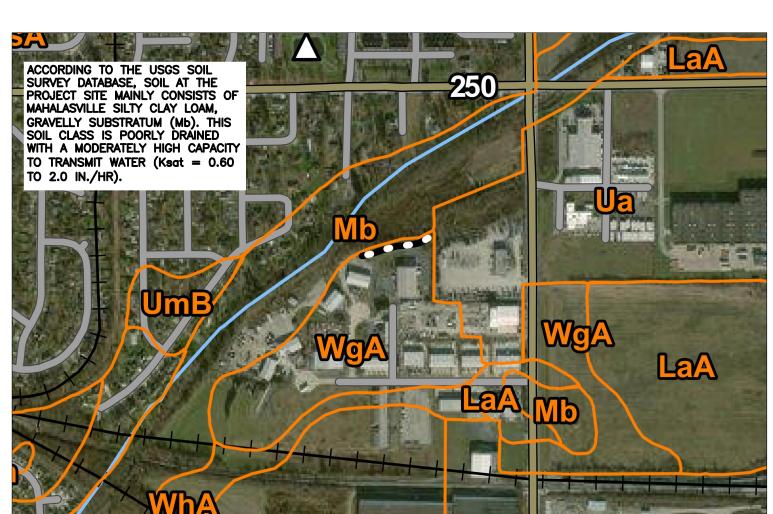
PROPERTY BOUNDARY MAP

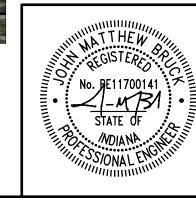
COVER SHEET

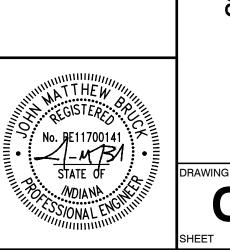
SHEET NUMBER

C902

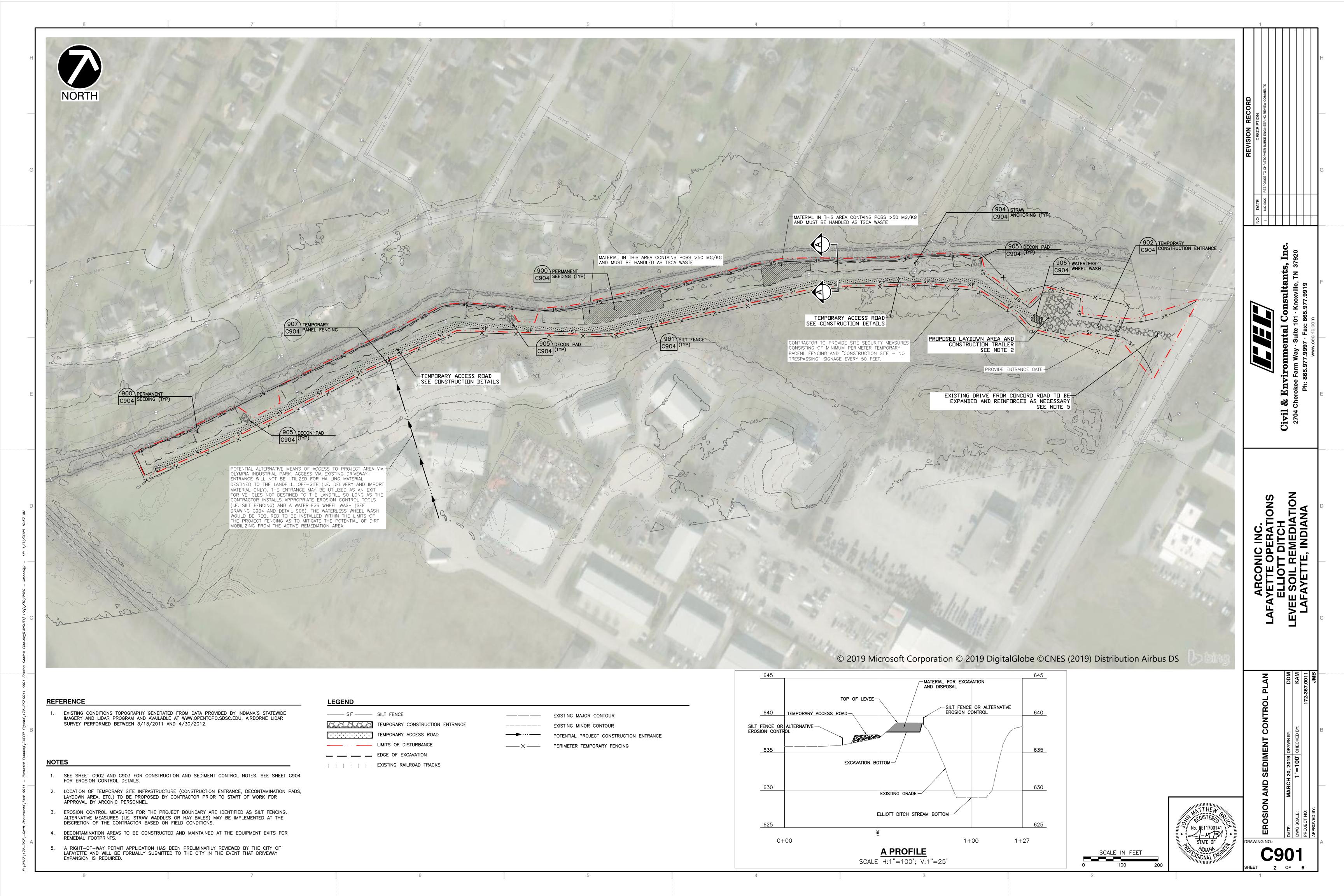








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1. INTRODUCTION

This Stormwater Pollution and Prevention Plan (SWPPP) describes measures to be taken by Arconic Inc. (Company) and its contractors (Contractor) to control and reduce soil erosion and resulting sedimentation during and after the excavation and restoration of impacted soil on the levee of Elliott Ditch. This plan includes, but is not limited to. using sound remediation planning and practices to reduce potential sources of sediment, encourage revegetation, restoration, and stabilization of disturbed soils on the project to reduce pathways for erosion, and remediation scheduling to quickly and efficiently excavate and restore the levee and to reduce the duration that bare soils are left exposed. Measures identified in this plan apply to work within the defined project site limits, access roads, all work and storage areas, and other areas used during remediation of the project. This plan was prepared as part of the Storm Water Pollution Prevention Plan as required under Title 40. Code of Federal Regulations (CFR). Parts 122-124. (National Pollution Discharge Elimination System Permit for Storm Water Discharges.)

1.1 OBJECTIVES

Short-term objectives of this plan are to control erosion and sedimentation, to protect water quality and aquatic resources, to encourage remediation/revegetation success, and to reduce impacts to adjacent land uses and ecological resources. Properly executed remediation practices, and ongoing evaluation by environmental and remediation inspectors, and Contractor personnel, will ensure the continued functioning of erosion and sediment control measures.

Long-term objectives include control of erosion and sedimentation, as well as restoration of topography, water resources, soils, and vegetation to a condition similar to that, which existed prior to remediation. Monitoring activities during the remediation, operations, and maintenance phases will evaluate the success of the erosion control and revegetation efforts.

1.2 RESPONSIBILITIES

1.2.1 Company

Arconic will appoint a representative to provide Contractor oversight throughout the duration of the project. This representative will confirm that the Contractor is compliant with the standards for sediment and erosion control measures defined within this plan.

Arconic will be responsible for meeting the long—term restoration and soil stabilization standards after the project is completed. Oversight Personnel will observe for compliance by the Contractor during the installation and maintenance of erosion control measures. Installation of most erosion control measures will be performed prior to soil remediation actions. Erosion control measures implemented throughout the duration of the remediation field effort may include: silt fence sediment barriers, straw bale sediment barriers, straw waddles, interim mulching, tackifier application, construction entrance/exits, wheel wash, and a decontamination pad.

Work related to permanent erosion control measures implemented during restoration may include topsoil replacement, seedbed preparation, seeding, planting, permanent mulching, and erosion control matting.

1.2.2 Contractor

The Contractor will be responsible for conducting grading, excavation, fill placement, and stockpiling activities, installing and maintaining temporary and permanent erosion control measures, and establishing final contours on the Elliott Ditch levee site according to the standards detailed in this plan and related plans listed in Bullet 1.4. The Contractor is responsible for monitoring the effectiveness of the installed devices and correcting any conditions that do not meet the specifications of this plan.

1.3 COORDINATION

This plan has been prepared through consultation and coordination with Arconic, and in accordance with the standards of state and local regulatory agencies. Arconic will be responsible for distributing copies of this plan to all appropriate agencies and remediation personnel. It will be the responsibility of Arconic to maintain coordination and communication with the various recipients.

1.4 RELATED PLANS AND DRAWINGS

This plan is related to other project plans (Resource Conservation and Recovery Act [RCRA] Corrective Action Interim Measures Work Plan, Transportation Plan, Waste Analysis and Management Plan, etc.), and the plan and detail drawing set. The Contractor will be responsible for complying with the requirements of all associated project plans and drawings.

2. SOIL CONSERVATION MEASURES

2.1 GENERAL CONSIDERATIONS

2.1.1 Flagging

The Contractor will demarcate the boundaries of the work area prior to remediation. The Contractor will install demarcation tools, as determined by Oversight Personnel, to protect sensitive resources located near the Elliott Ditch levee excavation limits, as necessary.

2.1.2 Clearing

Current surface conditions at the Elliott Ditch levee consist of overgrown and unkempt vegetation including mature trees, plants, grasses, and shrubs. Cleared materials from the levee and within the construction area will be cut off at approximately 2 inches above ground surface and either chipped for onsite use or transported off the property for appropriate disposal. Stumps and roots at or below ground surface will be removed during excavation work. Any grubbed vegetation that is in contact with impacted material will be transported offsite for disposal along with the soil removed from the area.

2.2 RESTORATION

After completion of the interim measure project at the Elliott Ditch levee, disturbed areas will be restored with clean borrow soils in accordance with the construction drawings and receive a 3-inch lift of loose topsoil. The topsoil will be pH of 5.5 to 7.0 and contain at least 6-percent organic matter and no stones larger than 1-inch in any dimension. Phosphorus free fertilizer (12 - 0 - 12) will be applied at a rate of 23 pounds per 1,000 square feet to assist in germination and growth. The selected seed mixture and application rate will be determined based on the completion date of the project and soil conditions. Revegetation will be the primary method to stabilize soils and establish long term erosion control.

Final cleanup and installation of permanent erosion control measures must be completed within 15 days after final backfilling in accordance with 327 Indiana Administrative Code (IAC) 15-5-7-16. Mulch or fiber matting will be applied to disturbed surfaces as directed by Oversight Personnel. Should this be unattainable due to extenuating circumstances (i.e., extreme weather conditions), temporary erosion control measures will be installed in the interim.

3. EROSION AND SEDIMENTATION CONTROL

3.1 GENERAL CONSIDERATIONS

The following general environmental protection measures will be implemented to reduce environmental impacts during remediation and operation of the project

- Personnel, vehicles, and equipment will stay in the designated remediation area. Site—specific access roads outside of the remediation area will be established by the Contractor and Oversight Personnel. Staking, flagging and access road(s) will be respected.
- Temporary erosion/sediment control devices will be installed prior to initial soil disturbance and will be maintained throughout remediation and restoration, as necessary, until replaced by permanent erosion control measures.
- Erosion and sedimentation controls will not be removed until adequate vegetative coverage has been established and the Notice of Termination for the National Pollution Discharge Elimination System (NPDES) General Permit has been submitted.
- Oversight Personnel will be employed by Arconic in the field during remediation to verify compliance with the environmental protection measures.
- Disturbance during remediation will be limited and based upon what is required to safely and efficiently complete • Remediation, clean up, and restoration will be completed in an efficient manner such that the time period
- Erosion control materials including straw bales, silt fences, erosion control matting and geotextile fabric will be stored onsite during the entire period that remediation disturbances are taking place. Materials will be stored for planned use during remediation, and additional quantities will be maintained for maintenance and emergency use.

between grading, excavation, backfilling, and final restoration/remediation is kept to a minimum.

3.2 EROSION CONTROL METHODS

Temporary erosion control measures are designed to effectively reduce erosion and sedimentation located near sensitive resources during remediation. These temporary control measures will be installed prior to remediation

activities and will be maintained throughout the course of remediation. When necessary, these measures may be left in place along with permanent measures during the post remediation period until effective revegetation has been reestablished. Sediment barriers (as described below) will be the primary measures for temporary erosion control used on the project. Temporary erosion control measures will also assist with stabilizing portions of the disturbed remediation area located near sensitive resources if remediation is delayed for significant periods following disturbance.

Permanent erosion control measures are designed to reduce erosion and sedimentation after remediation until revegetation efforts have effectively stabilized the remediation area. Erosion and sedimentation controls will not be removed until adequate vegetative coverage has been established and the Notice of Termination for the NPDES General Permit has been submitted.

The following sections review materials, installation requirements, and performance criteria for temporary, interim and permanent erosion and sediment control measures.

3.2.1 Sediment Barriers

Straw bale sediment barriers and silt fence sediment barriers are temporary sediment barriers designed to slow down water flow and to intercept suspended sediment conveyed by sheet slow, while allowing runoff to continue down gradient. These installations are used to reduce sediment transport off of the remediation area as well as to divert water off the remediation area. Temporary sediment barriers will be installed at locations as indicated in the drawing C901 and at other locations as directed by Site personnel.

While typically used only during remediation, silt fences and straw bale sediment barriers may be left in place following seeding until adequate vegetative cover is developed.

3.2.1.1 General Requirements

Sediment barriers will be installed on contour wherever possible and curve up slope at ending points to trap any residual sediment. Sediment barriers will be placed so as not to hinder remediation activities.

If sediment barriers are placed across the remediation area where remediation traffic is allowed to cross, provisions will be made such that the sediment barrier remains effective within the traffic flow area.

If sediment loading is noted during regular inspections of temporary sediment barriers to be at least half the height of the barrier, the sediment will be managed with waste materials or a second barrier will be installed. Loose stakes, loosely abutted bales, damaged bales, or damaged or undermined sections of silt fence will be repaired or replaced as necessary.

3.2.1.2 Straw Bales

Straw bale sediment barriers consist of tightly abutted straw bales placed perpendicular to the runoff direction with the ends turned upslope. The barriers are typically one bale high, placed on the fiber—cut edge in a 4-inch trench (tie not in contact with the ground), and anchored securely with two wooden stakes driven through each bale. A small amount of soil is then piled across the upslope side of the straw bale barrier.

3.2.1.3 Silt Fences

Commercial filter fabrics, with sufficient strength to prevent failure will be provided by the Contractor. The height of a silt fence will not exceed 36 inches and the fabric will be cut from a continuous roll of fabric with splices only at support posts, with a minimum 6—inch overlap and both ends of fabric securely attached to the post. Support posts will be a maximum of 10 feet apart. The bottom edge of silt fences will be installed in a trench excavated approximately 4 inches wide by 8 inches deep and refilled with compacted soil, unless on—site constraints dictate otherwise (e.g., rock). Silt fences will be attached to supporting posts by staples or wire.

If additional support is needed to contain spoil, or to provide added protection near a sensitive resource (as determined by Oversight Personnel), either wire mesh or straw bales may be placed immediately behind the silt fence on the down—gradient side. If wire mesh is used, the wire will be attached to the support posts, prior to installation of the fabric, with heavy duty wire staples at least 1 inch long, wire ties, or hog rings. The wire will be keyed into the trench at least 2 inches, and extended up the posts to the top of the filter fabric.

3.2.2 Mulching

Mulching is the application of straw or wood fiber to disturbed soils to reduce impacts from wind or rain on exposed soils. During rainy conditions, mulch reduces the impact of rainfall and slows the flow of water down the slope. Mulch (as opposed to erosion control mats described in Section 3.2.3) would typically be used across large sections of the Elliott Ditch levee limits of disturbance to reduce wind erosion and raindrop

3.2.2.1 Mulch as Temporary Erosion Control

Application of mulch for temporary erosion control is based on slope surface type and condition (i.e., sand, clay, rock, etc.), slope steepness, and the amount of exposed surface area not covered by vegetation. Mulch will be applied to exposed soils within the project limits of disturbance if soils remain exposed and inactive for more than 15 days. Interim seeding may be performed as determined by Oversight Personnel. Seedbed preparation, including thinning or removal of the mulch, will be repeated as necessary prior to application of the final seed mix.

3.2.2.2 Mulch as Permanent Erosion Control

After final restoration and seeding, permanent mulch applications will be applied to control erosion and prevent the runoff of grass seed during heavy rainfall.

3.2.2.3 Straw Mulch

Straw will be anchored into the seedbed using a mechanical crimper specifically designed to crimp mulch to a depth of 2 to 3 inches. Acceptable straw mulch crimpers include:

Mechanical crimper,

Backhoe with crimper forks,

Tracked equipment tracking across slopes (restricted to areas where other methods will not work),

Hand-punching with round-pointed shovel, or

Equivalent approved by Oversight Personnel.

Organic liquid mulch binders may be used in accordance with manufacturer's recommendations. If a straw mulch blower is used, strands of the mulching material will be at least 8 inches long to allow anchoring.

3.2.2.4 Wood Fiber Mulch

Wood fiber mulches will be made of 100 percent wood fiber or equivalent approved by Oversight Personnel. These will be applied by a hydro seeder with non-toxic, organic tackifier such as a guar-based tackifier, or equivalent approved by Oversight Personnel.

3.2.3 Erosion Control Matting

Erosion control matting will be installed after final grade restoration to reduce rain impacts on soils, to control erosion, stabilize the remediation area, and where determined by Oversight Personnel. On all installations, mat will be furnished in continuous rolls of 30 feet or greater with a minimum width of 4 feet. Staples will be made of wire, 0.091 inch in diameter or greater, and have a "U" shape with legs 8 inches in length and a 2- inch width. Wire staples will be driven into the ground for the full length of the staple legs.

Alternately, wood pegs (1/2-inch diameter) may be used to secure the erosion control fabric. Installation and stapling of erosion control matting will follow procedures as approved by Oversight Personnel.

During regular erosion control monitoring, erosion control matting will be inspected to ensure proper function. Damaged or undermined matting will be repaired or replaced as necessary.

3.3 DUST CONTROL

Dust control will be implemented by the Contractor in areas of active remediation within 500 feet of highways and residences as necessary. Dust control will also be implemented on access roads or as required by the Contractor for the health and safety of employees. Dust control will be achieved primarily through application of water or an approved dust palliative. Application rates for the dust palliative will follow the manufacturer's recommendations. All dust palliatives used should be biodegradable unless the only way to achieve adequate dust control is by using a non—biodegradable palliative such as magnesium chloride (MC70).

4. MONITORING AND MAINTENANCE

The Contractor will be responsible for ensuring that erosion control measures are fully functional. The Contractor is also responsible for continually monitoring erosion control measures along the project limits and completing timely repairs of erosion control structures as needed. The Contractor must have staff onsite qualified to perform the required inspections.

4.1 REMEDIATION MONITORING

Throughout remediation, temporary erosion control structures will be inspected at minimum of one time per week. or by the end of the next business day following a measurable storm event (i.e., a precipitation event that results in a total measured precipitation accumulation equal to, or greater than, one—half inch of rainfall within a 24—hour time period). Inspections are the responsibility of the Contractor and will be made by qualified staff. In the event of impending heavy precipitation (e.g., the U.S. Weather Bureau issues a storm advisory for the work area), the Contractor will reinforce temporary erosion control devices where needed (e.g., areas considered to have greater potential for erosion, and areas of active remediation) to ensure that erosion control measures have not been damaged since the last inspection.

Temporary erosion control devices found needing repair or requiring new installation will be repaired within 24 hours after problem(s) have been identified, weather and soil conditions permitting.

Inspection will be documented in writing and will contain the name of the individual performing the evaluation, the date of the evaluation, problems/observations identified at the project site related to the inspection, and details of corrective actions recommended and completed. Evaluation reports for the project site will be made available to to the inspecting authority within 48 hours of a request.

4.2 POST-REMEDIATION MONITORING

Prior to the completion of remediation, the Contractor and Oversight Personnel will confirm that erosion control devices are in place and functioning as intended. The Contractor will be responsible for inspecting and making erosion control repairs until project termination. The inspections will be completed as described previously and to evaluate revegetation success and the presence of erosion indicators such as rills, gullies, etc. If erosion control structures fail or require maintenance, or if accelerated erosion is observed, the Contractor will conduct remedial actions as soon as possible, recognizing weather and soil conditions, and site accessibility. Remedial actions could include supplemental seeding, installation of additional erosion/sediment control materials, maintenance of existing erosion control measures, additional mulching or use of matting.

No. BE11700141

IATION TION ARCONIC AYETTE OF ELLIOTT I E SOIL RE NFAYETTE,

AWING NO.:

C902 HEET 3 OF 6

(A2) PLAN/PLAT SHOWING BOUNDARIES AND LOT NAMES

PLEASE REFER TO SHEET C901, WHICH SHOWS THE PROJECT BOUNDARIES.

(A3) PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF INTERIM MEASURES TO REMOVE POLYCHLORINATED BIPHENYL (PCB) IMPACTED SOIL ON THE LEVEE OF ELLIOTT DITCH. IMPACTS ARE BELIEVED TO BE IN ASSOCIATION WITH HISTORIC DISCHARGE FROM OUTFALL 001 OF THE ARCONIC LAFAYETTE OPERATIONS PLANT IN LAFAYETTE, INDIANA, LOCATED APPROXIMATELY 1.0 MILES NORTH OF THE IMPACTED DITCH. ELLIOTT DITCH IS A TRIBUTARY TO WEA CREEK, WHICH IS A TRIBUTARY TO THE WABASH RIVER, JUST DOWNSTREAM OF LAFAYETTE, INDIANA. THE DITCH IS IDENTIFIED AS A REGULATED DRAIN UNTIL THE 9TH/ STREET CROSSING, SLIGHTLY MORE THAN 1.60 MILES DOWNSTREAM OF FACILITY OUTFALL 001. THE TIPPECANOE COUNTY DRAINAGE BOARD MAINTAINS THE REGULATED DRAINS WITHIN THE COUNTY, SUBJECT TO INDIANA CODE (IC) 36-9-27. REGULATED DRAINS INCLUDE AN EASEMENT THAT TYPICALLY EXTENDS 75 FEET FROM THE TOP OF EACH BANK.

THE PROJECT CONSISTS OF THE EXCAVATION, REMOVAL, AND OFF-SITE DISPOSAL OF PCB IMPACTED SOILS FROM THE LEVEE PORTION OF REACH 1 OF ELLIOTT DITCH. THE HORIZONTAL EXTENT OF PROPOSED EXCAVATION PERPENDICULAR TO ELLIOTT DITCH WILL BE THE FULL WIDTH OF THE LEVEE AND PARALLEL TO ELLIOTT DITCH. OTHER ASSOCIATED WORK INCLUDES CLEARING AND GRUBBING, THE INSTALLATION OF SEDIMENT AND EROSION CONTROLS, CONSTRUCTION OF AN ACCESS ROAD AND DECONTAMINATION STATION(S), AND LOCALIZED GRADING.

THE VICINITY MAP SHOWING THE PROJECT LOCATION CAN BE SEEN ON COVER SHEET

(A5) LEGAL DESCRIPTION

TOWNSHIP: 22 RANGE: 4 SECTION: 3

LATITUDE: 86° 51' 34.2" W LONGITUDE: 40° 22' 50.1" N

(A6) LOT LOCATION AND SITE IMPROVEMENTS ELLIOTT DITCH IS IDENTIFIED AS A REGULATED DRAIN AND IS MAINTAINED BY THE TIPPECANOE COUNTY DRAINAGE BOARD. LAND USE WITHIN THE PROJECT LIMITS IS GENERALLY CLASSIFIED AS COMMERCIAL. FOR REFERENCE, THE PROPOSED CONSTRUCTION ENTRANCE IS LOCATED WEST

(A7) HYDROLOGIC UNIT CODE

05120106150060

DISPOSAL.

(A8) REQUIRED STATE OR FEDERAL WATER QUALITY PERMITS

OF CONCORD ROAD ONTO PARCEL ID: 79-11-03-326-001.000-033.

WORK WILL BE PERFORMED WITHIN THE 100-YEAR FLOOD PLAIN DURING THE COURSE OF THIS PROJECT. A CONSTRUCTION IN A FLOODWAY PERMIT IS REQUIRED UNDER INDIANA CODE (IC) 14-28-1 (CERTIFICATE OF APPROVAL FW-29895-0).

(A9) STORMWATER DISCHARGE POINTS

STORMWATER GENERATED FOR THE SITE WILL BE ALLOWED TO COLLECT WITHIN SLOPED EXCAVATION PITS. STORMWATER THAT HAS NOT EVAPORATED OR INFILTRATED INTO THE SOIL WILL BE PUMPED INTO A TEMPORARY STORAGE CONTAINER FOR EVALUATION AND APPROPRIATE

(A10) SITE WETLANDS, LAKES AND WATER COURSES

THERE IS AN AREA OF MAPPED WETLANDS ON THE PROPERTY AT 3304 CONCORD ROAD, LOCATED ADJACENT TO THE SOUTH OF THE PROJECT

(A11) RECEIVING WATERS

THE SITE DRAINS INTO ELLIOTT DITCH.

(A12) POTENTIAL DISCHARGES TO GROUNDWATER

THERE ARE NO KNOWN SINKHOLES OR UNCAPPED ABANDONED WELLS LOCATED ON THE PROJECT SITE. THERE IS A POTENTIAL FOR STORM WATER TO DISCHARGE INTO ELLIOTT DITCH.

(A13) 100 YEAR FLOODPLAIN, FLOODWAYS AND FRINGES

THE PROJECT AREA LIES WITHIN THE 100-YEAR FLOODPLAIN.

(A14) ESTIMATED PEAK DISCHARGE

AFTER CONSTRUCTION AND RESTORATION, THE LEVEE OF ELLIOTT DITCH WILL BE RETURNED TO PRE-PROJECT CONDITIONS AND EXPECTATIONS ARE PEAK FLOWS FROM THE 10-YEAR AND 100-YEAR STORMS WILL BE RELATIVELY UNCHANGED.

(A15) ADJACENT LANDUSE

THE EXISTING LAND USES ADJACENT TO THE SITE ARE AS FOLLOWS:

RESIDENTIAL

RESIDENTIAL AND RAILROAD

SOUTH: COMMERCIAL/LIGHT INDUSTRIAL AND RAILROAD EAST: COMMERCIAL/LIGHT INDUSTRIAL AND STATE ROAD

(A16) CONSTRUCTION LIMITS

THE OVERALL DISTURBED AREA FOR THIS PROJECT IS ±4.5 ACRES. REFER TO SHEET C901.

(A17) EXISTING VEGETATIVE COVER

EXISTING VEGETATIVE COVER AT THE SITE CONSISTS OF OVERGROWN AND UNKEMPT VEGETATION INCLUDING MATURE TREES, PLANTS, GRASSES,

REFER TO SHEET C900. ACCORDING TO THE USGS SOIL SURVEY DATABASE, SOIL AT THE PROJECT SITE MAINLY CONSISTS OF MAHALASVILLE SILTY CLAY LOAM, GRAVELLY SUBSTRATUM (Mb). THIS SOIL CLASS IS POORLY DRAINED WITH A MODERATELY HIGH CAPACITY TO TRANSMIT WATER (Ksat = 0.60 TO 2.0 IN./HR).

(A19) LOCATION OF PROPOSED STORMWATER SYSTEMS

NO NEW STORMWATER SYSTEMS ARE PROPOSED FOR THIS PROJECT

(A20) OFF-SITE CONSTRUCTION PLAN

THERE IS NO OFF-SITE CONSTRUCTION PLANNED FOR THIS PROJECT.

(A21) SOIL STOCKPILES, BORROW AND/OR DISPOSAL

ON-SITE SOIL STOCKPILES ARE NOT ANTICIPATED DURING THE COURSE OF PROJECT IMPLEMENTATION. OFF-SITE BORROW SOURCES SHALL BE PROPOSED BY THE CONTRACTOR AND SUBJECT TO THE REQUIREMENTS OUTLINED IN THE INTERIM MEASURES WORK PLAN.

(A22 & A23) EXISTING & FINAL SITE TOPOGRAPHY

SITE TOPOGRAPHY WILL BE GRADED AND RESTORED TO BE CONSISTENT WITH EXISTING SITE CONDITIONS UPON PROJECT COMPLETION. SEE CONSTRUCTION DRAWINGS FOR EXISTING AND RESTORED TOPOGRAPHIC CONDITIONS FOR THE LEVEE PORTION OF ELLIOTT DITCH.

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN CONSTRUCTION COMPONENT (SECTION B)

(B1) POTENTIAL CONSTRUCTION POLLUTANTS

POTENTIAL POLLUTANT SOURCES RELATIVE TO THIS REMEDIAL CONSTRUCTION SITE MAY INCLUDE, BUT ARE NOT LIMITED TO MATERIAL AND FUEL STORAGE AREAS, FUELING LOCATIONS, EXPOSED SOILS AND LEAKING VEHICLE/EQUIPMENT, AND PCBs. POTENTIAL POLLUTANTS THAT MAY APPEAR AT THE SITE DUE TO CONSTRUCTION ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO DIESEL FUEL, GASOLINE, SOLID WASTE, SEDIMENT, EQUIPMENT REPAIR PRODUCTS, ANTI-FREEZE, AND FERTILIZER.

(B2) STORMWATER QUALITY SEQUENCE

PRE-CONSTRUCTION ACTIVITIES:

- 1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH CITY OF LAFAYETTE ENGINEER'S OFFICE.
- 2. DESIGNATE A PERSON TO BE RESPONSIBLE FOR THE SITE INSPECTIONS AFTER EACH RAIN EVENT WITH ACCUMULATION OF 1/2-INCH OR GREATER WITHIN A 24-HOUR PERIOD AND A MINIMUM OF ONCE EACH WEEK.
- 3. CALL THE INDIANA UNDERGROUND PLANT PROTECTION SYSTEMS, INC. (INDIANA811) AT 1-800-382-5544 TO CHECK LOCATIONS OF ANY
- EXISTING UTILITIES- MIN, 2 DAYS PRIOR TO BEGINNING CONSTRUCTION ACTIVITY. 4. ESTABLISH ONSITE LOCATION FOR OWNER/OPERATOR/CONTRACTOR PLACEMENT OF APPROVED PLANS AND RULE 5 NOI AND RULE 5
- 5. STAKEOUT IMPROVEMENT FEATURES INCLUDING: CONSTRUCTION ENTRANCE(S), ACCESS ROAD(S), VEGETATION SELECTED FOR REMOVAL,
- EROSION AND SEDIMENTATION CONTROLS, PROJECT SUPPORT AREA(S), AND EXCAVATION FOOTPRINTS.
- 6. INSTALL SILT FENCE AND OTHER EROSION CONTROL MEASURES AS INDICATED ON DRAWINGS. 7. INSTALL GRAVEL CONSTRUCTION ENTRANCE AND DECONTAMINATION PAD AS INDICATED ON DRAWINGS OR APPROVED ALTERNATIVE
- LOCATION- ADD ADDITIONAL STONE AS NEEDED.
- 8. ESTABLISH CONSTRUCTION STAGING AREA FOR EQUIPMENT AND VEHICLES.
- 9. APPROPRIATE SIGNAGE SHALL BE POSTED AT ALL SITE ENTRANCES IN ACCORDANCE WITH PROJECT COMMUNITY RELATIONS PLAN AS APPROVED BY IDEM AND EPA REGION 5. REGULATORY PERMIT APPROVALS WILL ALSO BE POSTED AS APPROPRIATE.

CONSTRUCTION ACTIVITY PHASING:

- 1. CLEAR, GRUB, AND DISPOSE OF VEGETATIVE WASTE. REMOVE ONLY THE TREES, SHRUBS, AND PLANTS MARKED FOR REMOVAL. VEGETATIVE WASTE IS TO BE CHIPPED ONSITE OR TRANSPORTED OFFSITE FOR DISPOSAL.
- 2. BEGIN EXCAVATION OF THE LEVEE AT ELLIOTT DITCH. LOAD EXCAVATED SOILS PER THE INTERIM MEASURES WORK PLAN AND WASTE MANAGEMENT PLAN.
- 3. BACKFILL EXCAVATED AREAS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS AFTER CONFIRMATION SAMPLING INDICATES AREA HAS
- 4. GRADE ALL DISTURBED AREAS SUCH THAT THE ELEVATIONS ARE CONSISTENT WITH EXISTING SITE CONDITIONS, AS SHOWN ON THE
- CONSTRUCTION DRAWINGS. 5. PLACE TOPSOIL OVER ALL DISTURBED AREAS.
- 6. PLACE PERMANENT SEEDING PER THE SPECIFICATIONS IDENTIFIED ON SHEET C904 OF THIS SWPPP.
- 7. STABILIZE ANY SURROUNDING DISTURBED AREAS PER THE DIRECTION OF ARCONIC CONTRACTED PERSONNEL AND THIS PLAN.
- 8. REMOVE CONSTRUCTION ENTRANCE.
- 9. REMOVE SEDIMENT CONTROL MEASURES ONCE THE SITE IS STABILIZED AND A NOTICE OF TERMINATION HAS BEEN FILED.

(B3) CONSTRUCTION ENTRANCE INFORMATION

THE LOCATION OF THE PROPOSED CONSTRUCTION ENTRANCE(S) IS ON SHEET C901. CONNECTION TO CONCORD ROAD WOULD REQUIRED A RIGHT-OF-WAY PERMIT TO BE ISSUED BY THE CITY OF LAFAYETTE. THIS LOCATION IS SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS AND LANDOWNER APPROVAL. PRIOR TO SELECTING A NEW LOCATION FOR THE CONSTRUCTION ENTRANCE MUST RECEIVE APPROVAL FROM ARCONIC AND CONSENT SHALL BE OBTAINED FROM THE LANDOWNER OF THE PROPERTY.

(B4) SHEET FLOW SEDIMENT CONTROL

SILT FENCE, EROSION CONTROL MATTING, AND HAY BALES WILL BE USED AS EROSION CONTROL MEASURES FOR SHEET FLOWS DURING CONSTRUCTION ACTIVITIES. THE LOCATION, DETAILS, AND SPECIFICATIONS FOR EACH STATED SEDIMENT CONTROL MEASURE ARE ON SHEETS C901 AND C904.

(B5) CONCENTRATED FLOW SEDIMENT CONTROL

NO CONCENTRATED FLOWS ARE EXPECTED DURING CONSTRUCTION. (B6) INLET PROTECTION AND (B8) OUTLET PROTECTION LOCATION SPECS

NO INLETS OR OUTLETS HAVE BEEN IDENTIFIED WITHIN CLOSE PROXIMITY TO THE PROPOSED LIMITS OF DISTURBANCE. NO INLET PROTECTION AND NO OUTLET PROTECTION WILL BE NEEDED FOR THIS PROJECT.

(B7) RUNOFF CONTROL MEASURES

SILT FENCE, EROSION CONTROL MATTING, AND HAY BALES WILL BE USED TO CONTROL RUN OFF. THE LOCATION, DETAILS, AND SPECIFICATIONS FOR EACH STATED SEDIMENT CONTROL MEASURE ARE ON SHEETS C901 AND C904.

NO STEEP GRADES ARE LOCATED AND/OR PLANNED AT THIS PROJECT.

(B10) STORMWATER QUALITY DETAILS

(B9) GRADE STABILIZATION MEASURES

REFER TO CONSTRUCTION PLANS FOR LOCATION, DIMENSIONS, SPECIFICATIONS AND CONSTRUCTION DETAILS FOR EACH STORMWATER QUALITY

(B11) TEMPORARY SURFACE STABILIZATION

EROSION CONTROL MATTING WILL BE USED AS TEMPORARY SURFACE STABILIZATION MEASURES. DUE TO THE SMALL CONSTRUCTION AREA AND TIMELINE OF THIS PROJECT TEMPORARY SEEDING IS NOT ANTICIPATED.

(B12) PERMANENT SURFACE STABILIZATION

PERMANENT SEEDING WILL BE USED AS THE PERMANENT SURFACE STABILIZATION MEASURES. ALL DISTURBED AREAS SHOWN ON SHEET C901 ARE TO RECEIVE SEED. REFER TO SEEDING TABLES ON SHEET C904.

- 1. SELECT APPROPRIATE SEED MIXTURE AND APPLICATION RATE FROM TABLE ON SHEET C904. APPLY SEED UNIFORMLY.
- 2. INSPECT 24 HOURS AFTER EACH MEASURABLE STORM EVENT, OR AT LEAST ONCE EVERY SEVEN CALENDAR DAYS IN ACCORDANCE WITH SHEET C902, SECTION 401, REMEDIATION MONITORING.
- 3. FINAL STABILIZATION IS ACHIEVED WHEN ALL LAND DISTURBING ACTIVITIES HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER WITH DENSITY OF 70% HAS BEEN ESTABLISHED ON SEEDED AREAS WITHIN THE PROJECT FOOTPRINT.
- 4. REMEDIATION MONITORING WILL CONTINUE UNTIL FINAL STABILIZATION CRITERIA HAS BEEN ACHIEVED.
- 5. USE PHOSPHOROUS FREE FERTILIZER (12-0-12) UNLESS SOIL TESTING SHOWS A NEED

(B13) MATERIAL HANDLING AND SPILL PREVENTION

SPILL PREVENTION, CLEANUP, AND REPORTING SHALL CONFORM TO IDEM FORM 327 IAC 2-6 AND THE CITY OF LAFAYETTE FIRE DEPARTMENT SHALL BE CONTACTED IN THE CASE OF A MATERIAL SPILL OCCURRING.

- CITY OF LAFAYETTE FIRE DEPARTMENT: (765) 775-5175
- CITY OF LAFAYETTE POLICE DEPARTMENT: (765) 807-1000
- TIPPECANOE COUNTY SOIL & WATER DISTRICT: (765) 474-9992
- IDEM EMERGENCY SPILL REPORTING: (317) 233-7745 OR (888) 233-7745

ALL ONSITE PERSONNEL SHALL ADHERE TO THE MATERIAL HANDLING AND SPILL PREVENTION PROCEDURES IDENTIFIED BELOW.

EXPECTED MATERIALS THAT MAY APPEAR AT THE SITE DUE TO CONSTRUCTION ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO PETROLEUM PRODUCTS, FERTILIZERS, PAINT (FOR MARKING) AND SOLVENTS, AND IMPACTED SOIL. MATERIALS SHALL BE STORED IN THE DESIGNATED

VEHICLE AND EQUIPMENT FUELING

SPILL PREVENTION FOR VEHICLE AND EQUIPMENT FUELING SHALL CONFORM TO THE FOLLOWING PRACTICES: VEHICLE EQUIPMENT FUELING PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT FUEL SPILLS AND LEAKS, AND REDUCE OR ELIMINATE CONTAMINATION OF STORMWATER. THIS CAN BE ACCOMPLISHED BY USING OFFSITE FACILITIES, FUELING IN DESIGNATED AREAS ONLY, ENCLOSING OR COVERING STORED FUEL, IMPLEMENTING SPILL CONTROLS, AND TRAINING EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING PROCEDURES.

LIMITATIONS: ONSITE VEHICLE AND EQUIPMENT FUELING SHOULD ONLY BE USED WHERE IT IS IMPRACTICAL TO SEND VEHICLES AND EQUIPMENT OFFSITE FOR FUELING. SENDING VEHICLES AND EQUIPMENT OFFSITE SHOULD BE DONE IN CONJUNCTION WITH A STABILIZED CONSTRUCTION

IMPLEMENTATION: USE OFFSITE FUELING STATIONS AS MUCH AS POSSIBLE. DISCOURAGE "TOPPING-OFF" OF FUEL TANKS. ABSORBENT SPILL CLEANUP MATERIALS AND SPILL KITS SHOULD BE AVAILABLE IN FUELING AREAS, AND ON FUELING TRUCKS, AND SHOULD BE DISPOSED OF PROPERLY AFTER USE. DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT FUELING, UNLESS THE FUELING IS PERFORMED OVER AN IMPERMEABLE SURFACE IN A DEDICATED FUELING AREA. USE ABSORBENT MATERIALS ON SMALL SPILLS. DO NOT HOSE DOWN OR BURY THE SPILL. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY. AVOID MOBILE FUELING OF MOBILE CONSTRUCTION EQUIPMENT AROUND THE SITE; RATHER, TRANSPORT THE EQUIPMENT TO DESIGNATED FUELING AREAS. TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER FUELING AND CLEANUP PROCEDURES. DEDICATED FUELING AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF, AND SHOULD BE LOCATED AT LEAST 50 FT AWAY FROM DOWNSTREAM DRAINAGE FACILITIES AND WATERCOURSES. FUELING MUST BE PERFORMED ON LEVEL—GRADE AREA. NOZZLES USED IN VEHICLE AND EQUIPMENT FUELING SHOULD BE EQUIPPED WITH AN AUTOMATIC SHUTOFF TO CONTROL DRIPS. FUELING OPERATIONS SHOULD NOT BE LEFT UNATTENDED. FEDERAL, STATE, AND LOCAL REQUIREMENTS SHOULD BE OBSERVED FOR ANY STATIONARY ABOVE GROUND STORAGE TANKS.

VEHICLES AND EQUIPMENT SHOULD BE INSPECTED EACH DAY OF USE FOR LEAKS. LEAKS SHOULD BE REPAIRED IMMEDIATELY OR PROBLEM VEHICLES OR EQUIPMENT SHOULD BE REMOVED FROM THE PROJECT SITE. KEEP AMPLE SUPPLIES OF SPILL CLEANUP MATERIALS ONSITE. IMMEDIATELY CLEAN UP SPILLS AND PROPERLY DISPOSE OF CONTAMINATED SOILS.

MAINTENANCE ACTIVITIES

MAINTENANCE ACTIVITIES THAT CAN CONTAMINATE STORMWATER INCLUDE ENGINE REPAIR AND SERVICE, CHANGING OR REPLACING FLUIDS, AND OUTDOOR EQUIPMENT STORAGE AND PARKING (ENGINE FLUID LEAKS). IF MAINTENANCE MUST OCCUR ONSITE, USE DESIGNATED AREAS, LOCATED AWAY FROM DRAINAGE COURSES. DEDICATED MAINTENANCE AREAS SHOULD BE PROTECTED FROM STORMWATER RUNON AND RUNOFF, AND SHOULD BE LOCATED AT LEAST 50 FT FROM DOWNSTREAM DRAINAGE FACILITIES AND WATER COURSES. DRIP PANS OR ABSORBENT PADS SHOULD BE USED DURING VEHICLE AND EQUIPMENT MAINTENANCE WORK THAT INVOLVES FLUIDS, UNLESS THE MAINTENANCE WORK IS PERFORMED OVER AND IMPERMEABLE SURFACE IN A DEDICATED MAINTENANCE AREA. PLACE A STOCKPILE OF SPILL CLEANUP MATERIALS WHERE READILY ACCESSIBLE. FUELING TRUCKS AND FUELING AREAS ARE REQUIRED TO HAVE SPILL KITS AND/OR USE OTHER SPILL PROTECTION DEVICES. USE ABSORBENT MATERIALS ON SMALL SPILLS. REMOVE THE ABSORBENT MATERIALS PROMPTLY AND DISPOSE OF PROPERLY. INSPECT ONSITE VEHICLES AND EQUIPMENT DAILY AT STARTUP FOR LEAKS, AND REPAIR IMMEDIATELY. KEEP VEHICLES AND EQUIPMENT CLEAN; DO NOT ALLOW EXCESSIVE BUILDUP OF OIL AND GREASE. SEGREGATE AND RECYCLE WASTES, SUCH AS GREASES, USED OIL OR OIL FILTERS, ANTIFREEZE, CLEANING SOLUTIONS, AUTOMOTIVE BATTERIES, HYDRAULIC AND TRANSMISSION FLUIDS. PROVIDE SECONDARY CONTAINMENT AND COVERS FOR THESE MATERIALS IF STORED ONSITE. PROPERLY DISPOSE OF USED OILS, FLUIDS, LUBRICANTS, AND SPILL CLEANUP MATERIALS. PROPERLY DISPOSE OF OR RECYCLE USED BATTERIES. DO NOT PLACE USED OIL IN A DUMPSTER OR POUR INTO A STORM DRAIN OR WATER COURSE. DO NOT BURY TIRES. REPAIR LEAKS OF FLUIDS AND OIL IMMEDIATELY. TRAIN EMPLOYEES AND SUBCONTRACTORS IN PROPER MAINTENANCE AND SPILL CLEANUP PROCEDURES.

MANAGEMENT OF GENERATED SOLID WASTE

SOLID WASTE MANAGEMENT PROCEDURES AND PRACTICES ARE DESIGNED TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM SOLID OR CONSTRUCTION WASTE BY PROVIDING DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS, ARRANGING FOR REGULAR DISPOSAL, AND TRAINING EMPLOYEES AND SUBCONTRACTORS. SOLID WASTE STREAMS MAY INCLUDE:

- SOLID WASTE GENERATED FROM TREES AND SHRUBS REMOVED DURING LAND CLEARING.
- PACKAGING MATERIALS INCLUDING WOOD, PAPER, AND PLASTIC.
- DOMESTIC WASTES INCLUDING FOOD CONTAINERS SUCH AS BEVERAGE CANS, COFFEE CUPS, PAPER BAGS, PLASTIC WRAPPERS, AND CIGARETTES
- REMEDIATION-RELATED WASTE INCLUDING SPENT OR USED, DISPOSABLE PERSONAL PROTECTION EQUIPMENT.

SELECT DESIGNATED WASTE COLLECTION AREAS ONSITE. INFORM TRASH-HAULING CONTRACTORS THAT YOU WILL ACCEPT ONLY WATERTIGHT DUMPSTERS FOR ONSITE USE. INSPECT DUMPSTERS FOR LEAKS AND REPAIR ANY DUMPSTER THAT IS NOT WATERTIGHT. PROVIDE AN

ADEQUATE NUMBER OF CONTAINERS WITH LIDS OR COVERS THAT CAN BE PLACED OVER THE CONTAINER TO KEEP RAIN OUT OR TO PREVENT LOSS OF WASTES WHEN IT IS WINDY. COLLECT SITE TRASH DAILY, ESPECIALLY DURING RAINY AND WINDY CONDITIONS. REMOVE THIS SOLID WASTE PROMPTLY SINCE EROSION AND SEDIMENT CONTROL DEVICES TEND TO COLLECT LITTER. MAKE SURE THAT TOXIC LIQUID WASTES (USED OILS, SOLVENTS AND PAINTS) ARE NOT DISPOSED OF IN DUMPSTERS DESIGNED FOR CONSTRUCTION DEBRIS. DO NOT HOSE OUT DUMPSTERS ON THE CONSTRUCTION SITE. LEAVE DUMPSTER CLEANING TO THE TRASH HAULING CONTRACTOR. ARRANGE FOR REGULAR WASTE COLLECTION BEFORE CONTAINERS OVERFLOW. CLEAN UP IMMEDIATELY IF A CONTAINER DOES SPILL. MAKE SURE THAT CONSTRUCTION WASTE IS COLLECTED, REMOVED, AND DISPOSED OF ONLY AT AUTHORIZED DISPOSAL AREAS. SOLID WASTE STORAGE AREAS SHOULD BE LOCATED AT LEAST 50 FT FROM DRAINAGE FACILITIES AND WATERCOURSES AND SHOULD NOT BE LOCATED IN AREAS PRONE TO FLOODING OR PONDING. INSPECT CONSTRUCTION WASTE AREA REGULARLY. ARRANGE FOR REGULAR WASTE COLLECTION.

FERTILIZERS USED ONSITE WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, THE FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED INTO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINT AND SOLVENTS

CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE GROUND AND WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE OR LOCAL REGULATIONS.

IAC 327 2-6 AND ALL APPLICABLE STATE AND FEDERAL REGULATIONS. A SPILL KIT SHALL BE STORED ONSITE IN AN EASILY ACCESSIBLE LOCATION(S) AND MAY INCLUDE ITEMS SUCH AS ABSORBENT MATERIALS, SPILL CONTAINMENT MATERIALS, TEMPORARY DISPOSABLE BAGS, AND AN APPROPRIATE CONTAINER FOR STORING SPENT MATERIALS ASSOCIATED

THE CONTRACTOR SHALL HAVE A WORKING KNOWLEDGE OF, AND SHALL IMPLEMENT SPILL CLEANUP PROCEDURES IN ACCORDANCE WITH

ADDITIONAL DECONTAMINATION AND SPILL PREVENTION REQUIREMENTS

IN ADDITION TO TRADITIONAL MATERIAL HANDLING AND SPILL PREVENTION FOR CONSTRUCTION SITES THIS PROJECT ALSO REQUIRES ADDITIONAL SPILL PREVENTION DUE TO IMPACTED SOIL REMOVAL. SEE SHEET C901 FOR LOCATIONS OF THE REQUIREMENTS LISTED BELOW.

- 1. INSTALLATION INSTALL AN EQUIPMENT DECONTAMINATION PAD(S) AS DESCRIBED ON SHEET C904. EXCAVATION WILL PROGRESS BY AREA, AS SHOWN ON THE CONSTRUCTION DRAWINGS. PRIOR TO MOVING EARTH FROM ANY AREA, INSTALL A DECONTAMINATION PAD AT THE
- AREA'S ENTRANCE. 2. COLLECTION SWALE/BERM - IN CONJUNCTION WITH INSTALLATION OF EQUIPMENT DECON PAD(S), INSTALL A COLLECTION SWALE AND BERM AS DETAILED ON SHEET C904. THE EQUIPMENT DECON PAD MUST BE GRADED TO DRAIN TOWARDS THE COLLECTION SWALE, AND
- THE COLLECTION SWALE SHALL BE GRADED TO PROMOTE POSITIVE DRAINAGE TOWARDS THE COLLECTION SUMP DISCUSSED BELOW. 3. COLLECTION SUMP - AT THE DOWNGRADIENT END OF THE COLLECTION SWALE DISCUSSED ABOVE, INSTALL A COLLECTION SUMP AS SHOWN ON SHEET C904. COLLECTED RUNOFF WITHIN THE SUMP MUST BE APPROPRIATELY CHARACTERIZED AND CONTAINERIZED FOR PROPER DISPOSAL. THE CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING THE CONTAINERIZED WATER IN ACCORDANCE WITH ALL
- 4. DRY WASH WHEEL INSTALL A WATERLESS WHEEL WASH (RUMBLE GRID) AT THE CONSTRUCTION EXITS AS DESCRIBED ON SHEET C904, SUCH THAT VEHICLES LEAVING THE SITE WILL PASS OVER IT AND REDUCE THE POTENTIAL FOR TRACKING MUD AND SEDIMENT ONTO
- 5. GENERAL MANAGEMENT THE EQUIPMENT DECONTAMINATION AREA(S) AND ASSOCIATED COLLECTION METHODS AND DRY WASH WHEEL ARE TO REMAIN IN PLACE FOR THE DURATION OF THE PROJECT. AT THE CONCLUSION OF THE PROJECT, ALL MATERIALS ASSOCIATED WITH THE DECONTAMINATION PRACTICES (SOIL, SEDIMENT, STONE, LINER, ETC.) WILL BE MANAGED IN ACCORDANCE WITH THE APPROVED WASTE

(B14) MONITORING AND MAINTENANCE GUIDELINES

APPLICABLE FEDERAL AND STATE REGULATIONS.

·		
EROSION CONTROL MEASURE	*MAINTENANCE	INSTALLATION SEQUENCE
STONE ENTRANCE	AS NEEDED	PRIOR TO GROUND DISTURBANCE
SILT FENCE	WEEKLY, AFTER STORM EVENTS, AS NEEDED	PRIOR TO GROUND DISTURBANCE
PERMANENT SEEDING	WATER AS NEEDED	AFTER FINISH GRADING
DUST CONTROL	AS NEEDED	ALONG WITH ALL EARTHWORK ACTIVITIES
REMOVAL OF SILT FENCE	N/A	AFTER ALL AREAS DRAINING TO THESE AREAS ARE STABILIZED AND NOTICE OF TERMINATION FILED

- SEE CHART FOR MAINTENANCE REQUIREMENTS

EROSION CONTROL MEASURES MAINTENANCE REQUIREMENTS

- SILT FENCE MAINTENANCE REQUIREMENTS:
- 1. INSPECT THE SILT FENCE IN ACCORDANCE WITH (B14). 2. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
- 3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO
- 4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
- 5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED

- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE MAINTENANCE REQUIREMENTS:
- 1. INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS
- 2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.

AREA TO GRADE, AND STABILIZE.

TOPDRESS WITH CLEAN STONE, AS NEEDED. 4. INSTALL AND MAINTAIN A WATERLESS WHEEL WASH AS DESCRIBED IN SHEET C904.

PERMANENT MEASURES, WATER QUALITY PLANTINGS AND VEGETATION HAS BEEN ESTABLISHED.

POST CONSTRUCTION STORMWATER QUALITY MEASURES TO AID IN REDUCING THE AMOUNT OF POLLUTANTS:

(C3) POST CONSTRUCTION STORMWATER QUALITY DESCRIPTION MEASURES:

5. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING.

(B15) EROSION CONTROL SPECIFICATIONS FOR INDIVIDUAL LOTS

NO ADDITIONAL EROSION CONTROL SPECIFICATIONS ARE NEEDED FOR THIS PROJECT.

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN COMPONENT (SECTION C) (C1) POTENTIAL LANDUSE POLLUTANTS POTENTIAL POLLUTANT SOURCES THAT MAY APPEAR AT THE SITE DUE TO PROPOSED LAND USE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, VEHICLES, EQUIPMENT, EXPOSED SOIL AND TRASH. POTENTIAL POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO OIL, GREASE, DIESEL FUEL, GASOLINE, ANTI-FREEZE, AND FERTILIZER. ADDITIONALLY, PCB CONTAMINATED SOILS WILL BE EXCAVATED AND PREPARED FOR OFFSITE

(C2) STORMWATER QUALITY IMPLEMENTATION THE STORMWATER QUALITY MEASURE IMPLEMENTATION SHALL BEGIN AFTER SUBSTANTIAL COMPLETION OF THE CONSTRUCTION ACTIVITIES FOR THE PROPOSED PROJECT. ADDITIONAL STORMWATER QUALITY MEASURES WILL BE IMPLEMENTED AT THE DEVELOPMENT OF SUBSEQUENT CONSTRUCTION PHASES. FOLLOWING CONSTRUCTION, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED UNTIL ALL

TO STABILIZE THE DISTURBED AREAS AND TO SERVE AS A SEDIMENT TRAP FOR FINER PARTICLES WITHIN THE ELLIOTT DITCH WATERSHED.

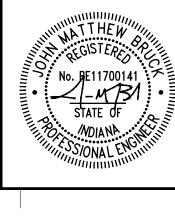
INSPECTION AND MAINTENANCE OF DISTURBED AREAS ARE THE RESPONSIBILITY OF ARCONIC AND/OR LOCAL AGENCIES TAKING JURISDICTION OVER THE LEVEE.

1. POST CONSTRUCTION STORMWATER QUALITY MEASURES WILL CONSIST OF VEGETATIVE COVER ON THE PERMANENT GRASS AREAS INTENDED

EROSION CONTROL RESPONSIBLE PERSON

THE PERSON RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE EROSION CONTROL IS LISTED BELOW ARCONIC INC. ROBERT PREZBINDOWSKI 2300 NORTH WRIGHT ROAD ALCOA, TENNESSEE

PHONE: 865-977-3811 CONTRACTOR: ENVIRONMENTAL FIELD SERVICES ERIC LIKENS 1302 NORTH MERIDIAN STREET, SUITE 310 INDIANAPOLIS, INDIANA PHONE: 317-409-3242



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SEEDBED PREPARATION

- 1. APPLY LIME TO RAISE THE pH TO THE LEVEL AS NEEDED FOR SPECIES BEING SEEDED.
- 2. APPLY 23 POUNDS OF PHOSPHOROUS FREE FERTILIZER: 12-0-12 ANALYSIS (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST. APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.
- 3. WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-4 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

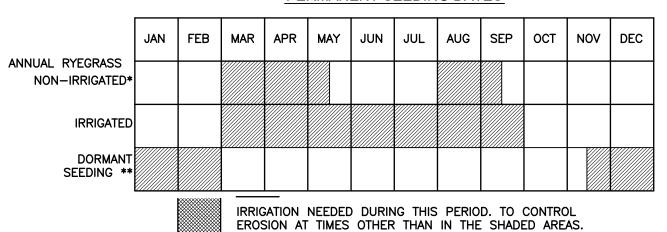
SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART). WHILE CONSIDERING BEST SEEDING DATES. IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE SEED TOLERANCE CHART.

	WET	SOIL CONDITI NORM		SHADE TOLERANCE	CLOSE MOWING TO 2-3 1/2 INCHES	TRAMPING TOLERANCE	FERTILITY NEEDS	WINTER HARDINESS	FLOODING TOLERANCE (DAYS)	MATURE HEIGHT (INCHES)	EMERGENCE TIME (DAYS)	TO GEN.	SOIL DLERANO SOIL	CE SPRAY
CREEPING RED FESCUE FESTUCA RUBRA	2	1	2	1	1	1	MED.	1	20-25	12-18	7–21			S
KENTUCKY BLUEGRASS POA PROTINSIS	2	1	2	1	1	1	MED.	1	20-35	12-18	10-20			МТ
TALL FESCUE FESTUCA L. ARUNDINACEA	2	1	1	1	1	1	LOW	1	24-35	24-36	5-14		Т	
PERENNIAL RYEGRASS LOLLUM PERENNE	2	1	2	-	1	2	MED. HIGH	2	15-20	12-18	5-10		MT	
CROWNVETCH CORONILLA VARLA	-	1	1	2	-	1	LOW	1	5-10	24	14-21	T		
RED CLOVER TRIFOLIUM PROTENSE	-	1	-	2	-	-	MED.	1	7-10	18	5-10	S	S	

RANKING: 1 GOOD 2 MEDIUM NOT TOLERANT

SALT TOLERANCE (TO BOTH SOIL SALTS & SPRAY) T TOLERANCE MT MEDIUM TOLERANCE S SLIGHT TOLERANCE

PERMANENT SEEDING DATES

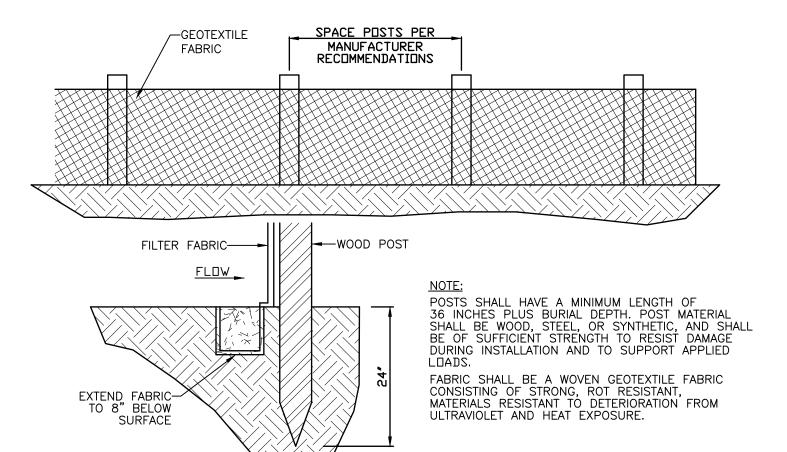


* LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.

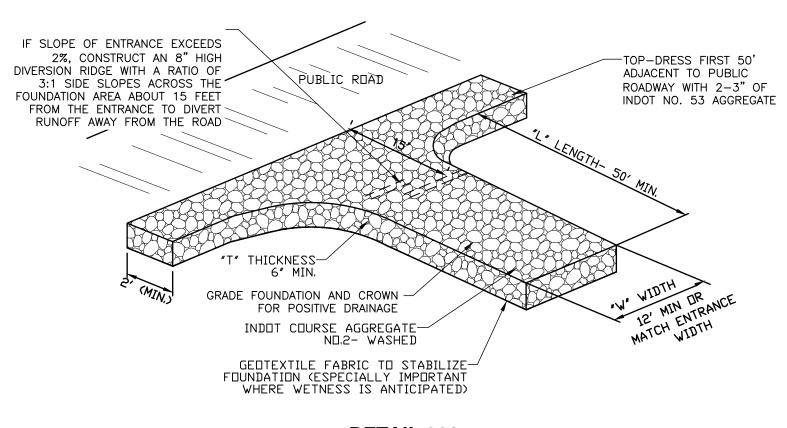
** INCREASE SEEDING APPLICATION BY 50%.

	PERMA	NENT SE	EDING				
SPECIES	SEEDIN	G RATE	SUITABLE pH	SITE SUITABILITY *			
	LBS/ACRE	LBS/1000 SQ. FT.		DROUGHTY	WELL DRAINED	WET	
LEVEL AND SLOPING, OPEN ARE	EAS						
1. TALL FESCUE	35	.8	5.5-8.3	2	1	2	
2. TALL FESCUE	25	.6	5.5-8.3		1		
RED CLOVER	5	.12					
3. KENTUCKY BLUEGRASS	15	.4	5.8-7.5	2	1	_	
CREEPING RED FESCUE	15	.4					
STEEP BANKS AND CUTS							
4. TALL FESCUE	15	.4	5.8-7.5	2	1	2	
KENTUCKY BLUEGRASS	25	.6					
5. TALL FESCUE	35	.8	5.5-8.3	2	1		
EMERALD CROWNVETCH**	10	.25					
LAWNS AND HIGH MAINTENANC	E AREAS						
6. KENTUCKY BLUEGRASS	40	.9	5.8-7.5	2	1		
CREEPING RED FESCUE	40	.9					
7. PERENNIAL RYEGRASS	170	4.0	5.0-7.5		1		
(TURF TYPE)							
8. TALL FESCUE	170	4.0	5.5-8.3	2	1	T 2	

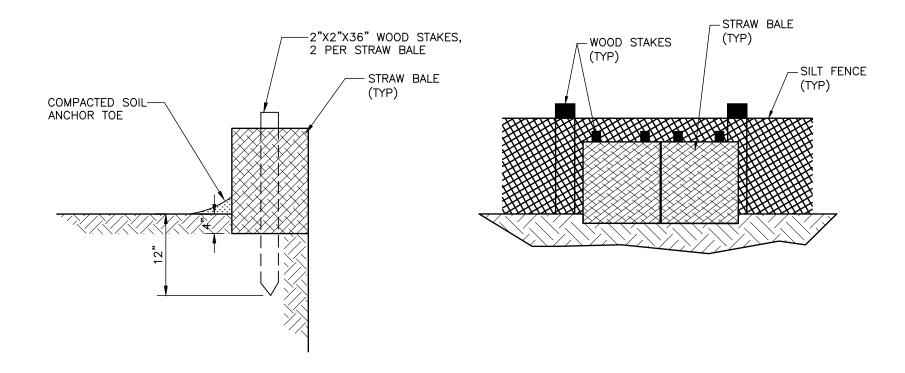
DETAIL 900 PERMANENT SEEDING



DETAIL 901 SILT FENCE N.T.S.

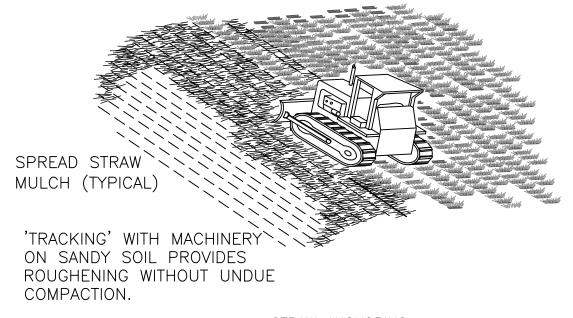


DETAIL 902 TEMPORARY CONSTRUCTION ENTRANCE



- 1. FOR ANY AREA WHERE SILT FENCE IS PLACED ON SLOPES GREATER THAN 5% AND LIKELY TO ACCUMULATE SHEET FLOW, PLACE STRAW BALES IN FRONT OF SILT FENCE. WEDGE LOOSE STRAW BETWEEN BALES AND PACK TIGHTLY.
- 2. THE STRAW BALES SHALL BE ANCHORED WITH MINIMUM 36—INCH LONG WOOD OR STEEL STAKES THAT EXTEND 12 INCHES BELOW THE GROUND SURFACE. WHERE STAKING IS NOT PRACTICAL, THE CONTRACTOR SHALL TIE THE BALES TOGETHER TO PREVENT MOVEMENT OR OPENINGS IN THE BARRIER.
- 3. THE CONTRACTOR SHALL REPLACE THE STRAW BALES IMMEDIATELY IF THE BALES APPEAR TO HAVE DETERIORATED OR BECOME INEFFECTIVE.
- 4. THE CONTRACTOR SHALL INSPECT THE STRAW BALES AFTER QUALIFYING RAIN EVENTS OR AT LEAST ONCE PER WEEK. DISLODGED STRAW BALES SHALL BE RESET, STAKED AND BACKFILLED AS REQUIRED. THE CONTRACTOR SHALL REPLACE ALL CLOGGED OR INOPERATIVE STRAW BALES.
- 5. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENTS AS REQUIRED TO KEEP THE BARRIER FUNCTIONAL. IN ALL CASES, THE CONTRACTOR SHALL REMOVE DEPOSITS WHERE ACCUMULATIONS REACH ONE—THIRD THE ABOVE GROUND HEIGHT OF THE
- 6. THE CONTRACTOR SHALL REPAIR ALL UNDERCUTTING AND EROSION OF THE ANCHOR TOE IMMEDIATELY WITH COMPACTED BACKFILL MATERIAL.

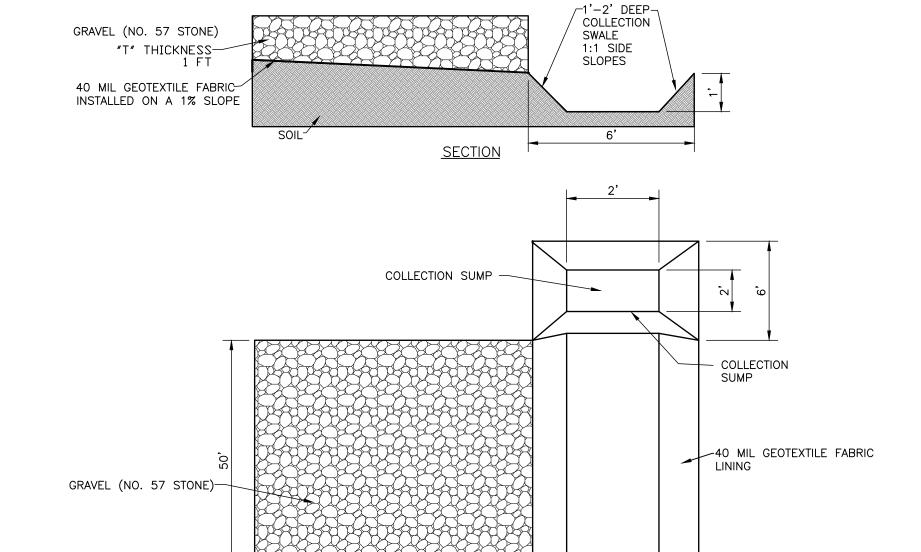
DETAIL 903 STRAW BALE ACCUMULATED SHEET FLOW PROTECTION



STRAW ANCHORING

- 1. ROUGHEN SLOPE WITH BULLDOZER
- 2. BROADCAST SEED AND FERTILIZER.
- 3. SPREAD STRAW MULCH 3" THICK. (2 1/2 TONS PER ACRE)
- 4. PUNCH STRAW MULCH INTO SLOPE BY RUNNING BULLDOZER UP AND AND DOWN SLOPE.

DETAIL 904 STRAW ANCHORING N.T.S.



1. THE PAD SHOULD BE CONSTRUCTED IN AN AREA KNOWN OR BELIEVED TO BE FREE OF SURFACE CONTAMINATION

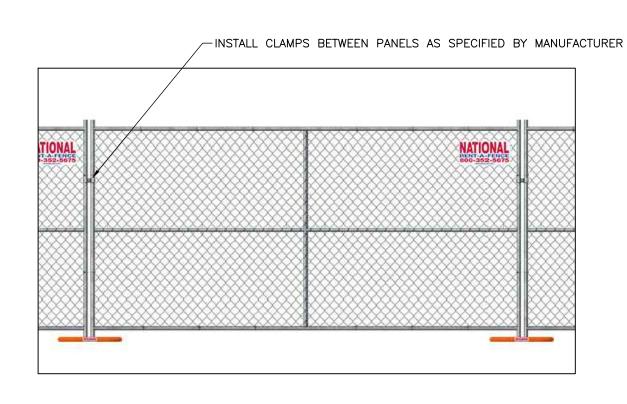
DETAIL 905 EQUIPMENT DECONTAMINATION PAD

<u>PLAN</u>



TRACINATOR DRY WHEEL WASH SYSTEM BY INNOVATIVE EQUIPMENT SOLUTIONS (PICTURED) OR APPROVED ALTERNATIVE TO BE IMPLEMENTED AT SITE EXIT

DETAIL 906 WATERLESS WHEEL WASH





- ANCHOR PANEL FOOTING WITH SAND BAGS

DETAIL 907 TEMPORARY PANEL FENCING



MARCH 20, 2019 DRAWN BY NOT TO SCALE CHECKED

