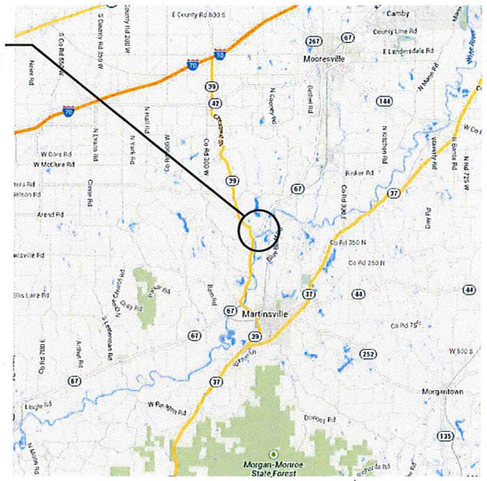
THREE RIVERS SR 67 PUBLIC ACCESS

SW 1/4, SEC. 9-T12N-R1E, CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

#E020090A

PLANS PREPARED FOR:
INDIANA DEPARTMENT OF NATURAL RESOURCES
FISH & WILDLIFE DIVISION
7970 SOUTH ROWE STREET
EDINBURGH, INDIANA 46124
PHONE: 812-526-2051
CONTACT: WILLIAM SEEGERS

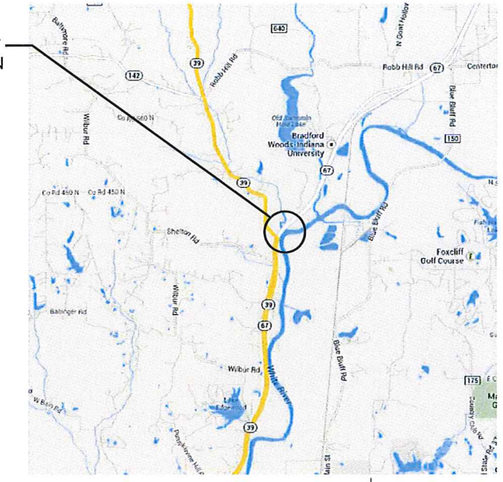
PROJECT LOCATION



VICINITY MAP
NO SCALE

SITE MAP
1" = 200'

PROJECT LOCATION



LOCATION MAP
NO SCALE

OPERATING AUTHORITIES

ELECTRIC
South Central Indiana R.E.M.C.
300 Morton Avenue
Martinsville, IN 46151

STORM
Morgan County Surveyor
180 S. Main Street, Suite 010
Martinsville, IN 46151
765-342-1064

WATER
Morgan County Rural Water Corp
PO Box 1575
Martinsville, IN 46151

ELECTRIC
Duke Energy
390 N. Main Street
Martinsville, IN 46151

PIPELINE
BP Pipeline Company
4502 E. 41st Street
Tulsa, OK 74135

TELEPHONE
AT&T
5858 N. College Avenue
Indianapolis, IN 46220
317-292-4007

FIRE DEPARTMENT
Martinsville Fire Department
160 W. Morgan Street
Martinsville, IN 46151
765-342-2343

SCHOOL DISTRICT
Metropolitan School District Martinsville Schools
460 S. Main Street
Martinsville, IN 46151
765-342-6641

PROJECT NARRATIVE:-

The Dept of Fish & Wildlife within the Indiana Department of Natural Resources intends to improve public access for anglers along the White River. The project incorporates a stone access drive off the state road which slopes down to the existing grade where a stone parking area shall be constructed for private vehicles.

REVISIONS		
NUMBER	DESCRIPTION	DATE
	REDUCED PARKING & WETLAND IMPACT	01-23-15
	SWPPP REVISIONS	02-06-15
	ISSUED FOR BID	04-03-15

SHEET INDEX

SHEET NO	DESCRIPTION
C100	TITLE SHEET
C110	GRADING PLAN
C400	EROSION CONTROL PLAN
C410	STORMWATER POLLUTION PREVENTION
C500	CONSTRUCTION DETAILS
~~C600~~	~~TREE CLEARING EXHIBIT~~
C700	TRAFFIC CONTROL PLAN
~~C900~~	~~FLOODWAY CROSS SECTIONS~~

PLANS PREPARED BY:
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853 COLUMBIA ROAD, SUITE #101
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E-MAIL: Banning@BanningEngineering.com
WEB: www.BanningEngineering.com
CONTACT: KEVIN STEELY, PE

CONSTRUCTION DOCUMENTS

PROJECT MANAGER:_____ DATE:_____

THESE PLANS ARE NOT TO BE CONSIDERED FINAL OR TO BE UTILIZED FOR CONSTRUCTION UNLESS SIGNED AND DATED BY THE APPROPRIATE BANNING ENGINEERING PROJECT MANAGER.

THESE PLANS ARE NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT.

KEVIN L. STEELY REGISTERED No. 10708026 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY: _____

Indiana811 Know what's below. Call before you dig.

04/03/2015
SCALE: 2400.0000 / ft.

BE #13233

Date: 01-21-15
Project No:
Sheet No: C100

THREE RIVERS SR 67 PUBLIC ACCESS / PROJECT NO. E020090A

BENCHMARK
DNR BM WHM TT A 19, 1973
In Morgan County, Martinsville, Quad., in the NW 1/4 of Sec. 9, T.12N., R.1E., 2nd PM; about 4.0 miles north of Martinsville; at the State Road 67 bridge over Sycamore Creek, set in the top of an eight inch diameter concrete post; a Indiana Flood Control and Water REsources Commission control station tablet, stamped "WHM TT A 19"
NGVD 29 (Published) 612.931
NAVD 88 (Calculated) 612.514

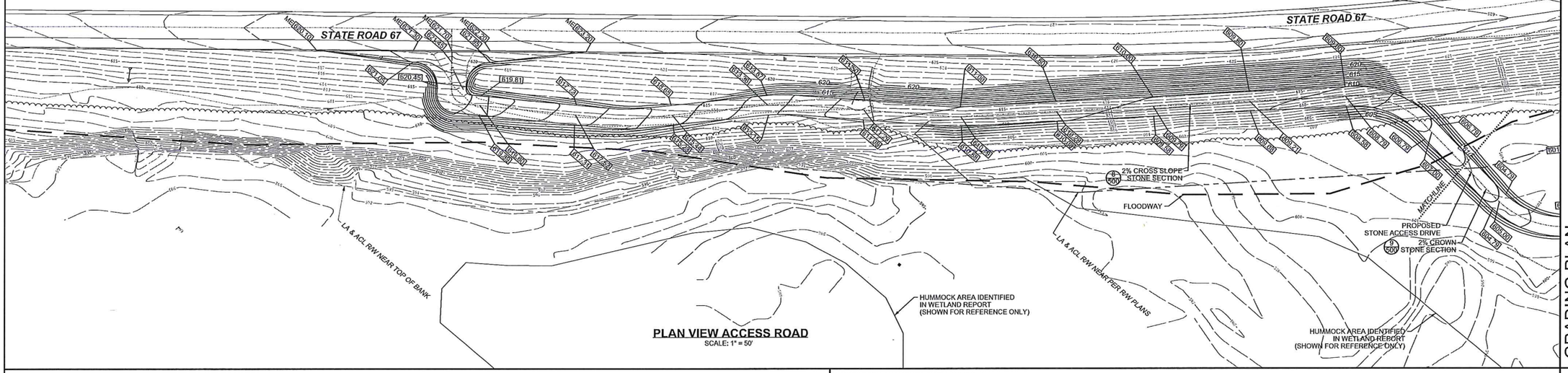
**NAVD 88 DATUM WAS USED FOR THIS PROJECT*

GENERAL NOTES

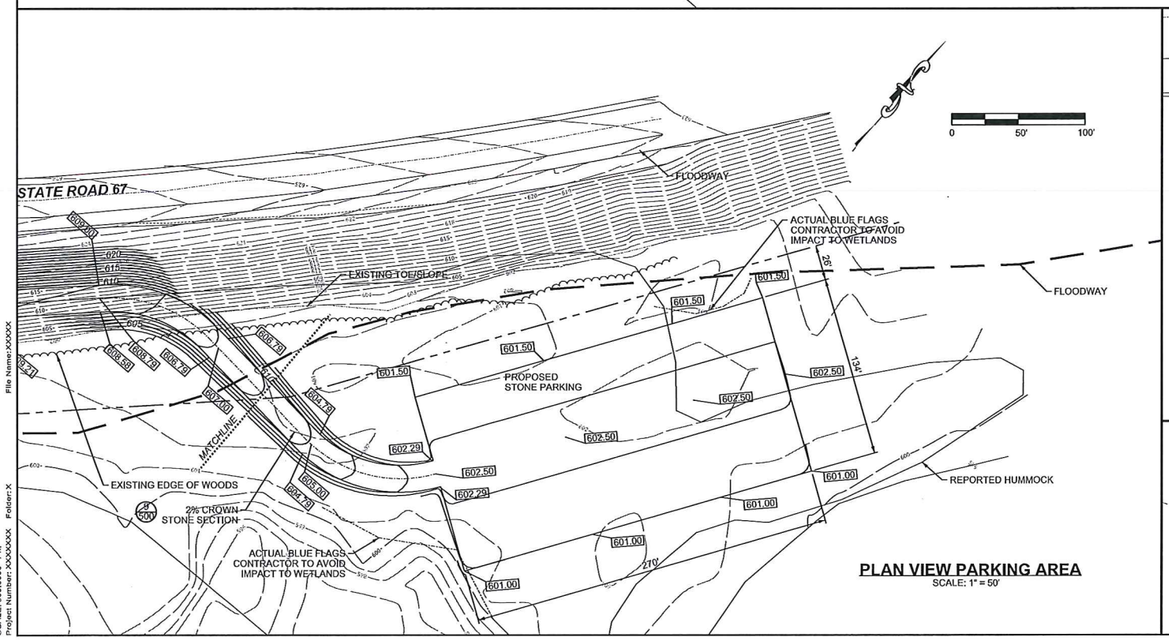
1. NO CHANGES IN OR DEPARTURE FROM THE PLANS OR SPECIFICATIONS SHALL BE MADE WITHOUT PRIOR APPROVAL, IN WRITING, BY THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL FEDERAL, STATE, AND COUNTY PERMITS THAT ARE NOT PROVIDED BY OWNER. OWNER HAS OBTAINED CONSTRUCTION IN FLOODWAY PERMIT (IDNR) AND FILED NOTICE OF INTENT WITH IDEM.
3. BEFORE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES SHOWN ON THE PLANS, AND CONTACT ALL UTILITY COMPANIES TO LOCATE ALL MAINS, CONDUITS, SERVICE LINES, ETC., IN THE CONSTRUCTION AREA, AND SHALL PROTECT ALL SUCH UTILITIES DURING CONSTRUCTION.
4. BEFORE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL NOTIFY THE OWNERS, AND/OR THE OWNER'S ENGINEER, SO THAT AN INSPECTOR MAY BE PRESENT.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN QUALITY CONTROL THROUGHOUT THE PROJECT; FAILURE TO DO SO MAY RESULT IN REMOVAL AND REPLACEMENT OF THE DEFECTIVE WORK. IT IS RECOMMENDED THAT THE OWNER HAVE A QUALIFIED INSPECTOR ON THE JOB SITE DURING CONSTRUCTION.

GENERAL NOTES CONTINUED

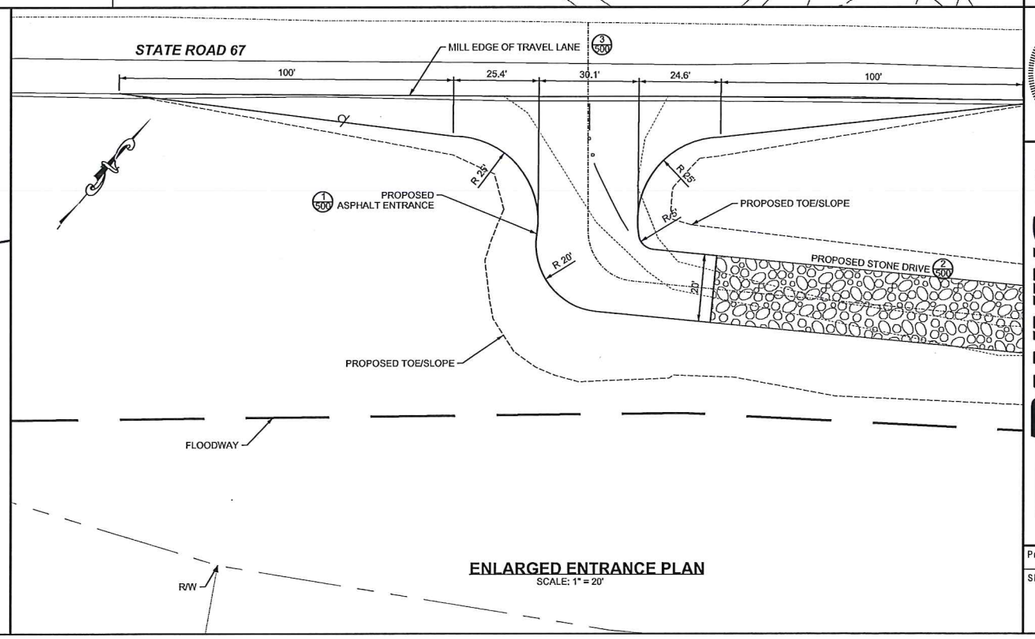
6. PLANS SHALL BE BID AS A WORKING SYSTEM. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION. IN THE EVENT OF THE CONTRACTOR'S FAILING TO GIVE SUCH NOTICE, HE SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS OR OMISSIONS, AND THE COST OF RECTIFYING THE SAME.
7. STRUCTURAL FILL SHALL BE COMPACTED IN MAXIMUM 6" LIFTS TO 95% STANDARD PROCTOR.
8. LIABILITY INSURANCE POLICY SHALL BE FURNISHED TO THE OWNER BEFORE ANY WORK IS STARTED.
9. A PRE-CONSTRUCTION MEETING SHALL BE SET UP WITH THE CLIENT, CONTRACTOR, ENGINEER & OWNER PRIOR TO ANY CONSTRUCTION.



PLAN VIEW ACCESS ROAD
SCALE: 1" = 50'



PLAN VIEW PARKING AREA
SCALE: 1" = 50'



ENLARGED ENTRANCE PLAN
SCALE: 1" = 20'

Revisions		Date
	REDUCED PARKING & WETLAND IMPACT	01-23-15
	SWPPP REVISIONS	02-06-15
	ISSUED FOR BID	04-03-15

Designed: KS
Drawn: KS
Checked:
Scale: VARIES
Date: 01-21-15

GRADING PLAN
THREE RIVERS SR 67 PUBLIC ACCESS
JEFFERSON AND CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

KEVIN L. STEELY
REGISTERED
No. 10708026
STATE OF INDIANA
PROFESSIONAL ENGINEER

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Project No:
Sheet No: C110

01/23/2015
SCALE: 600.0000 / ft.
Project Number: XXXXXXX Folder:X
File Name:XXXXXX

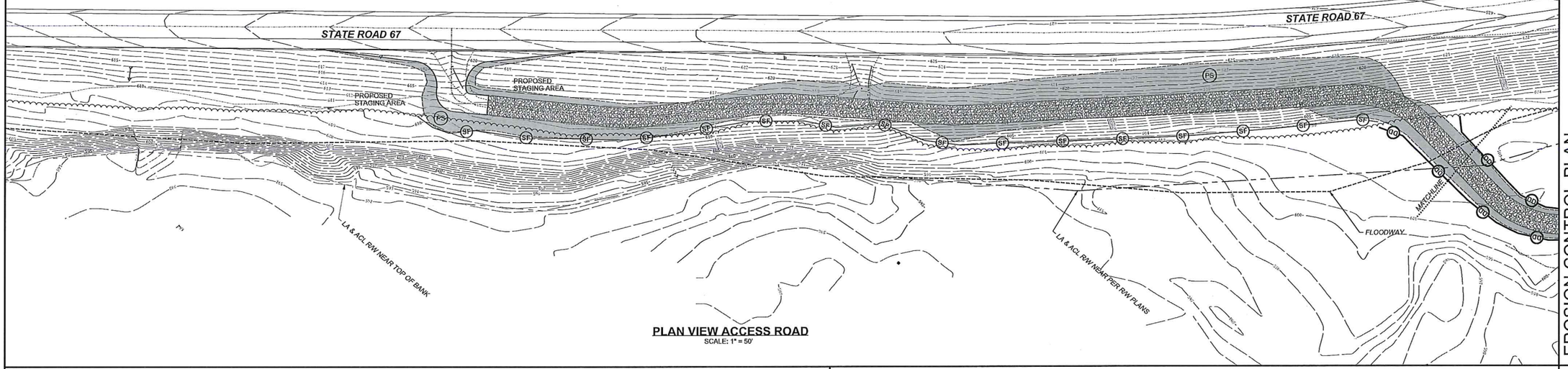
SOILS DESCRIPTIONS

GENESEE SERIES
Gn Genesee silt loam (0-2% slopes)
Gs Genesee sandy loam, sandy variant (0-2% slopes)
Genesee Series – (B) This is a well drained nearly level soil on bottom lands. Permeability is moderate. The pH of the surface layer in non-limed areas is 7.3 to 7.8. This soil has a high available water capacity. This soil is subject to frequent flooding. Moderate potential frost action is also a construction concern.

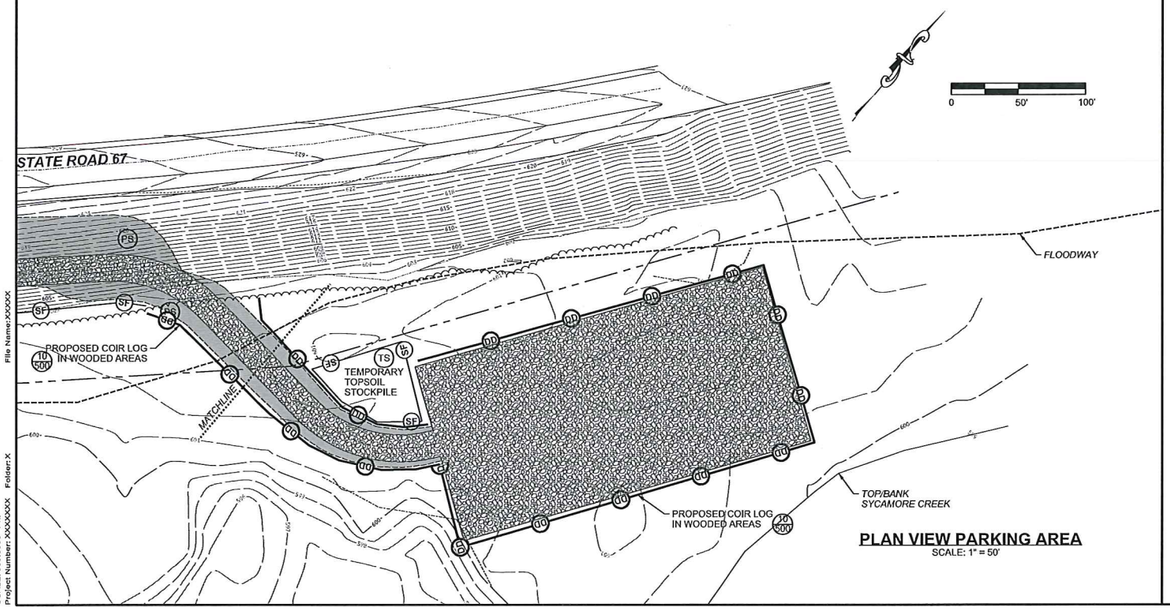
EROSION CONTROL PLAN LEGEND

- EB — EROSION CONTROL BLANKET W/PERMANENT SEEDING (NORTH AMERICAN GREEN S-150) 5/500
- PS — PERMANENT SEEDING & MULCHING
- TS — TEMPORARY SEEDING
- CONSTRUCTION LIMITS
- SF — SILT FENCE 4/500
- DD — COIR LOG 10/500

0 50' 100'



PLAN VIEW ACCESS ROAD
SCALE: 1" = 50'



PLAN VIEW PARKING AREA
SCALE: 1" = 50'

EROSION CONTROL GENERAL NOTES

1. Only those areas within the designated construction limits are to be disturbed during construction.
2. Contractor to provide temporary surface stabilization of any areas scheduled or likely to remain inactive for a period of 15 days or more.
3. Contractor to provide temporary signage near the entrance of the project identifying the responsible parties and other information about the project. Contractor is responsible for obtaining any necessary sign permits for this.
4. Contractor shall implement design concepts and storm water quality measures, which are shown on this plan, to reduce post construction pollutants discharging from the site.
5. All erosion control measures shall meet the Phase 2 IDEM Rule 327 IAC 15-5 requirements.
6. Refer to the "Indiana Storm Water Quality Manual", "The Urban Development Planning Guide", and Manufactures Recommendations for Installation for all required measures.
7. Inspection and repair of erosion control measures shall be done weekly and after each ½" rainfall event.

EROSION CONTROL SEQUENCING

1. Setup a pre-construction meeting (at least 72 hours prior to construction) with Contractor, Morgan County Surveyor, Engineer, and IDNR representative to discuss scheduling and sequencing of project.
2. Contractor shall prepare a self-monitoring plan and procedure, including documentation of weekly self monitoring operations. These documents must be kept on file and made available upon request.
3. Start construction log. This log will document the performance of each pollution prevention measure. A thorough site inspection should be completed weekly, and within 24 hours of every ½" rain event.
4. Post the approved permit issued by the IDNR. Notify IDEM at (317-233-1684) within forty-eight hours of the beginning of construction activities.
5. Install perimeter silt fence, coir log and protection barriers.
6. Remove trees and rubbish only as needed for construction.
7. Begin mass earth work with the stripping of the topsoil for the access road and parking area. Stockpile topsoil in those areas designated on this plan. Temporary seed and mulch all stockpiles immediately upon completion.
8. Finish grade site and replace topsoil.
9. Install erosion control blankets with permanent seeding, and other erosion control measures as shown.
10. Temporarily seed and mulch all areas scheduled or likely to remain inactive for 15 days or more.
11. Permanent seed and mulch all disturbed areas not covered by erosion control blankets or temporary seedings measures.
12. After construction is completed, vegetation established and permission received from Morgan County representative, remove temporary erosion control measures.

Revisions		Date
S/rm.	REDUCED PARKING & WETLAND IMPACT	01-23-15
	SWPPP REVISIONS	02-06-15
	ISSUED FOR BID	04-03-15

Designed: KS
Drawn: KS
Checked:
Scale: 1" = 50'
Date: 01-21-15

EROSION CONTROL PLAN
THREE RIVERS SR 67 PUBLIC ACCESS
JEFFERSON AND CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

KEVIN L. STEELY — REGISTERED No. 10708026 — STATE OF INDIANA — PROFESSIONAL ENGINEER

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Project No:

Sheet No:
C400

File Name:XXXXXX
04/03/2015
SCALE: 1:60.0000 ' / in.
Project Number: XXXXXXX Folder:X

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (SECTION A)

A1 Index showing locations of required Plan Elements:
See This Sheet

A2 11 x 17 Plat denoting building lot numbers, boundaries, road layout / names:
Provide separately with submittal package

A3 Narrative describing the nature and purpose of the project:
The Dept of Fish & Wildlife within the Indiana Department of Natural Resources intends to improve public access for anglers along the White River. The project incorporates a stone access drive off the state road which slopes down to the existing grade where a stone parking area shall be constructed for private vehicles.

A4 Vicinity map showing Project Location:
See Plan Set : Title Sheet ,C100

A5 Legal Description of the Project Site:
See Plan Set : C110
Project Latitude : 39°29'16"N
Project Longitude : 86°25'54"

A6 Location of all lots and proposed site improvements:
See Plan Set : C120

A7 Hydrologic unit code
14 digit - 05120 2011 60030

A8 State or Federal Water Quality Permits Required:
401 Water quality Certification (IDEM) : None Required
Section 404 Permit (USACE) : None Required
Construction in a Floodway (InDNR) : YES Required

A9 Specific Points where Stormwater discharge will leave the site:
Discharge will leave the site at Sycamore Creek.

A10 Location and names of all wetlands, lakes and water courses on and adjacent to the site:
See Plan Set : C110
Sycamore Creek and White River traverse the site.

A11 Identification of receiving waters:
Sycamore Creek & White River

A12 Identification of potential discharges to ground water:
None known.

A13 100 Year floodplains, floodways and flood fringes:
See Plan Set : Grading and Drainage Plan Sheet x of y for locations (none)

A14 Pre-construction & Post construction estimates of Peak Discharges:
10 year Pre-Construction Peak Discharge = 5 CFS
10 year Post Construction Peak Discharge = 5 CFS

A15 Adjacent land use, including upstream watershed:
See Plan Set : C110
North : Existing Residential
South : Existing Residential
East : Existing residential
West : Existing Residential

A16 Locations and approximate boundaries of all disturbed areas:
See Plan Set : C110

A17 Identification of existing vegetative cover:
See Plan Set : C110

A18 Soils map including soil descriptions and limitations:
See Plan Set : C400

A19 Location, size and dimensions of proposed stormwater systems:
See Plan Set : C110

A20 Plans for any off-site construction activities:
None.

A21 Location of Proposed soil Stockpiles and /or Borrow areas:
See Plan Set : C400

A22 Existing site Topography :
See Plan Set : C110

A23 Proposed final topography:
See Plan Set : C110

ASSESSMENT OF STORMWATER POLLUTION PREVENTION PLAN (SECTION B)

B1 Description of potential pollutants sources associated with the construction activities:
Silt and sediment from exposed soils, leaves, mulch, vehicular sources such as leaking fuel or oil, brake fluid, brake dust, antifreeze,trash, debris, biological agents found in trash, fertilizers, herbicides, pesticides, lime dust and concrete washout.

B2 Sequence of stormwater quality implementation relative to land disturbance activities:
See Plan Set : C400

B3 Stable construction entrance location(s) and specifications:
For Locations see C400
For detail See Plan Set : C500

B4 Sediment control measures for sheet flow areas:
Silt fence will be Installed along the southern edge of the project to collect sediment runoff. Inside the wooded area, coir log is proposed because trenching of silt fence is impractical.
For Locations see Plan Set : C400
For details See Plan Set : C500

B5 Sediment control measures for concentrated flow areas:
Erosion control Blankets will be installed to reduce sediment movement.
For Locations see Plan Set : C400
For details See Plan Set : C500

B6 Storm sewer inlet protection measures, locations and specifications:
There is no storm sewer on the site.

B7 Runoff control measures:
The erosion control blanket impedes the velocity of runoff.
For Locations see Plan Set : C400
For details See Plan Set : C500

B8 Stormwater outlet protection specifications:
There is no defined stormwater outlet or piping system on this site.

B9 Grade stabilization structures and specifications:
None required

B10 Location, dimensions, specifications and construction details of each stormwater quality measure:
For Locations see Plan Set : C400
For details See Plan Set : C500

B11 Temporary surface stabilization methods appropriate for each season:
Temporary seeding is required for any area left for 15 days or longer within this project, such as soil stockpiles. Temporary seeding is also required in areas that will be disturbed in future projects. This seeding will be placed after finish grading and topsoil replacement.
For Locations see Plan Set : C400
For details See Plan Set : C500

B12 Permanent surface stabilization specifications:
Permenent seeding will be applied with the installation of the erosion control blankets and after replacement of topsoil as described in the construction sequencing.
For Locations see Plan Set : C400
For details See Plan Set : C500

B13 Material handling and spill prevention plan:
MATERIAL HANDLING:

1. The proper management and disposal of waste should be practiced on site at all times to reduce pollution of storm water runoff. Hazardous waste should always be disposed of through a designated hazardous waste management or recycling facility.
2. Designate a waste collection area on-site that does not receive a substantial amount of runoff from upland areas and does not drain directly into a water body.
3. Keep products in original containers with original labels and material safety data information attached. Make sure products are properly sealed to prevent leaks and spills and stored in a weather proof self contained area away from heat, sparks and flames.
4. A program for recycling or disposal of materials associated with or from the project site shall be established by the contractor. All recycling containers shall be clearly labeled.
5. All construction activities are to be monitored and maintained by the contractor. As each new subcontractor comes on-site, the contractor will conduct and document a meeting to ensure awareness of the pollutant prevention program. Guidelines for proper handling, storage and disposal of construction site wastes shall be posted in the storage and use areas, and workers shall be trained in these practices.
6. Containers and equipment must be inspected regularly for leaks, corrosion, support or foundation failure, or any other signs of deterioration and must be tested for soundness. Any found to be defective should be repaired or replaced immediately.

SPILL PREVENTION PLAN:
Purpose:
The intention of this Spill Prevention, Control and Countermeasures (SPCC) is to establish the procedures and equipment required to prevent the discharge of oil and hazardous substances in quantities that violate applicable water quality standards, cause a sheen upon or discoloration of the surface of navigable waters or adjoining shorelines, or cause sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines. The Plan also establishes the activities required to mitigate such discharges (i.e., countermeasures) should they occur.

Definitions:
Pollutant: means pollutant of any kind or in any form, including but not limited to sediment, paint, cleaning agent, concrete washout, pesticides, nutrients, trash, hydraulic fluids, fuel, oil, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged soil.

Discharge:
Includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Navigable Waters:
Means all waters of the United States that are connected with a navigable stream, lake, or sea.
[Note: This definition is usually interpreted to mean any wastewater (even normally dry wash or storm sewer) that eventually drains into a navigable stream].
Plan Review and Amendments:
This Plan shall be reviewed and/or amended, if necessary, whenever there is a change in the design of the site, construction, operation, or maintenance which materially affects the site's potential for the discharge of regulated material.

Prediction of Potential Spills:
1. Nearest Navigable Water: White River
2. Drainage System: Sheet flow to Sycamore Creek and the White River
3. Possible Spill Sources (During and post construction): Vehicular sources such as leaking fuel or oil, brake fluid, grease, antifreeze; trash and debris, biological agents found in trash and debris, fertilizers, household items including but not limited to cleaning agents, chemicals, paint, herbicides and pesticides.
4. Groundwater Contamination:
The facility maintains NO above ground or under ground storage tanks at this site. Therefore, it is felt that there is little or no possibility of post construction groundwater contamination. The facility does have public sanitary sewer and public water.

Alert Procedures for Spills:
1. Any personnel observing a spill will immediately instigate the following procedure:
   a. Dialing "911" from any telephone.
   b. Notify the appropriate emergency personnel.
2. The Emergency Coordinator will then take the following actions:
   a. Barricade the area allowing no vehicles to enter or leave the spill zone.
   b. Notify the Indiana Department of Environmental Management, Office of Emergency Response by calling the appropriate telephone number:
   Office 317-233-7745
   Toll Free 800-233-7745
   Also the National Response Center at 800-424-8802 and provide the following information:
   - Time of observation of the spill
   - Location of the spill
   - Identity of material spilled
   - Probable source of the spill
   - Probable time of the spill
   - Volume of the spill and duration
   - Present and anticipated movement of the spill
   - Weather conditions
   - Personnel at the scene
   - Action initiated by personnel
   c. Notify the Martinsville Fire Department Phone: 9-1-1
   d. Notify the Martinsville Police department Phone: 9-1-1
   e. Notify waste recovery contractor, maintenance personnel or other contractual personnel as necessary for cleanup.
   f. Coordinate and monitor cleanup until the situation has been stabilize and all spills have been eliminated.
   g. Cooperate with the IDEM-OER on procedures and reports involved with the event.

Cleanup Parameters:
1. The Developer shall be continually kept informed, maintain lists of qualified contractors and available Vac-trucks, tank pumpers and other equipment readily accessible for clean-up operations. In addition, a continually updated list of available absorbent materials and clean-up supplies should be kept on site.
2. All maintenance personnel will be made aware of techniques for prevention and containment of spills. They will be informed of the requirements and procedures outlined in this plan. They will be kept abreast of current developments or new information on the prevention of spills and / or necessary alterations to this plan.
3. If spills occur which could endanger human life, this becomes the primary concern. The discharge of the life saving protection function will be carried out by the local police and fire departments.
4. Absorbent materials, which are used in cleaning up spilled materials, will be disposed of in a manner subject to the approval of the Indiana Department of Environmental Management.
5. Flushing of spilled material with water will not be permitted unless so authorized by the Indiana Department of Environmental Management.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES VEHICLE & EQUIPMENT MAINTENANCE
Description and Purpose:
Prevent or reduce the contamination of stormwater resulting from vehicle and equipment maintenance by running a "dry and clean site". The best option would be to perform maintenance activities at an offsite facility. If this option is not available then work should be performed in designated areas only, while providing cover for materials stored outside, checking for leaks and spills, and containing and cleaning up spills immediately.
Suitable Applications:
These procedures are suitable on all construction projects where an onsite yard area is necessary for storage and maintenance of heavy equipment and vehicles.
Limitations:
Onsite vehicle and equipment maintenance should only be used where it is impractical to send vehicles and equipment offsite for maintenance and repair. Sending vehicles/ equipment offsite should be done in conjunction with a stabilized Construction Entrance/ Exit. Outdoor vehicle or equipment maintenance is a potentially significant source of stormwater pollution. Activities that can contaminate stormwater include engine repair and service, changing or replacement of fluids, and outdoor equipment storage and parking (engine fluid leaks).
Implementation:
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 watercourses.

Drip pans or absorbent pads should be used during vehicle and equipment maintenance work that involves fluids, unless the maintenance work is performed over an impermeable surface in a dedicated maintenance area.

Place a stockpile of spill cleanup materials where it will be readily accessible.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES (CONTINUED):

All 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, or remove from site.

Keep vehicles and equipment clean; do not allow excessive build-up 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.

Train employees and subcontractors in proper maintenance and spill cleanup procedures. Properly dispose of used oils, fluids, lubricants, and spill cleanup materials.

Do not place used oil in a dumpster or pour into a storm drain or watercourse.

Properly dispose of or recycle used batteries.

Do not bury used tires.

Repair leaks of fluids and oil immediately.

Keep ample supplies of spill cleanup materials onsite.

Maintain waste fluid containers in leak proof condition.

VEHICLE AND EQUIPMENT FUELING
Description and Purpose
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 Entrance/Exit.
Implementation
Use offsite fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly. Performing this work offsite can also be economical by eliminating the need for a separate fueling area at a site.

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 areas.

Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.

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 soil and cleanup materials.

SOLID WASTE MANAGEMENT
Description and Purpose
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.

Suitable Applications
This BMP is suitable for construction sites where the following wastes are generated or stored:
Solid waste generated from trees and shrubs removed during land clearing, demolition of existing structures (rubble), and building construction.

Packaging materials including wood, paper, and plastic.

Scrap or surplus building materials including scrap metals, rubber, plastic, glass pieces and masonry products.

Domestic wastes including food containers such as beverage cans, coffee cups, paper bags, plastic wrappers, and cigarettes.

Construction wastes including brick, mortar, timber, steel and metal scraps, pipe and electrical cuttings, nonhazardous equipment parts, styrofoam and other materials from transport and package construction materials

Implementation
Select designated waste collection areas onsite.

Inform contractors that you will accept only watertight dumpsters for onsite use.

Inspect dumpsters for leaks and repair any dumpster that is not watertight.

ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES (CONTINUED):

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.

Plan for additional containers and more frequent pickup during the demolition phase of construction.

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) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated 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.

Incorporate requirements for solid waste management into builder and subcontractor agreements.

Littering on the project site should be prohibited.

To prevent clogging of the storm drainage system, litter and debris removal from drainage grates, trash racks, and ditch lines should be a priority.

Trash receptacles should be provided in the contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.

Litter from work areas within the construction limits of the project site should be collected and placed in watertight dumpsters at least weekly, regardless of whether the litter was generated by the contractor, the public, or others. Collected litter and debris should not be placed in or next to drain inlets, stormwater drainage systems, or watercourses.

Dumpsters of sufficient size and number should be provided to contain the solid waste generated by the project.

Full dumpsters should be removed from the project site and the contents should be disposed of by the trash hauling contractor.

Construction debris and waste should be removed from the site biweekly or more frequently as needed.

Construction material visible to the public should be stored or stacked in an orderly manner.

Stormwater runon should be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measure to elevate waste from site surfaces.

Solid waste storage areas should be located at least 50 ft. from drainage facilities and watercourses and should not be located in area prone to flooding or ponding.

Inspection and Maintenance
Inspect construction waste area weekly.

Arrange for regular waste collection.

DEWATERING AND PUMPING OPERATIONS (Not Anticipated)
Description and Purpose
Dewatering operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation must be removed from a work location so that construction work may be accomplished.
Suitable Applications
These practices are implemented for discharges of non-stormwater from construction sites. Non-stormwaters include, but are not limited to, groundwater,water from cofferdams, water diversions, and waters used during construction activities that must be removed from a work area. Practices identified in this section are also appropriate for implementation when managing the removal of accumulated precipitation (stormwater) from depressed areas at a construction site.
Limitations
Site conditions will dictate design and use of dewatering operations. The controls discussed in this best management practice (BMP) address sediment only. The controls detailed in this BMP only allow for minimal settling time for sediment particles. Use only when site conditions restrict the use of the other control methods. Dewatering operations will require, and must comply with, applicable local permits.
Implementation
Dewatering discharges must not cause erosion at the discharge point. A variety of methods can be used to treat water during dewatering operations. Several devices are presented below and provide options to achieve sediment removal. The size of particles present in the sediment and permit or receiving water limitations on sediment are key considerations for selecting sediment treatment option(s); in some cases, the use of multiple devices may be appropriate.

SEDIMENT BASIN (Not Anticipated)
Description
A sediment basin is a temporary basin with a controlled release structure that is formed by excavation or construction of an embankment to detain sediment-laden runoff and allow sediment to settle out before discharging. Sediment basins are generally larger than Sediment Traps.
Appropriate Applications
Effective for the removal of gravel, sand, silt, some metals that settle out with the sediment, and trash.
Implementation
Excavation and construction of related facilities is required. Temporary sediment basins must be fenced if safety is a concern. Outlet protection is required to prevent erosion at the outfall location.
Maintenance
Maintenance is required for safety fencing, vegetation, embankment, inlet and outfall structures, as well as other features. Removal of sediment is required when the storage volume is reduced by one half.

SEDIMENT TRAP (Not Anticipated)
Description
A sediment trap is a temporary basin formed by excavation and/or construction of an earthen embankment across a waterway or low drainage area to detain runoff and allow sediment to settle out before discharging. Sediment Traps are generally smaller than Sediment Basins.
Appropriate Applications
Effective for the removal of large and medium sized particles (sand and gravel) and some metals that settle out with the sediment.
Implementation
Excavation and construction of related facilities is required. Trap inlets should be located to maximize the travel distance to the trap outlet. Use rock or vegetation to protect the trap outlets against erosion.
Maintenance
Maintenance is required for vegetation, embankment, inlet and outfall structures, as well as other features. Removal of sediment is required when the storage volume is reduced by one third.

GRAVITY BAG FILTER (DEWATERING BAG) (Not Anticipated)
Description
A gravity bag filter, also referred to as a dewatering bag, is a square or rectangular bag made of non-woven geotextile fabric that collects sand, silt, and fines.
Appropriate Applications
Effective for the removal of sediments (gravel, sand, and silt). Some metals are removed with the sediment.
Implementation
Water is pumped into one side of the bag and seeps through the bottom and sides of the bag. A secondary barrier, such as a rock filter bed or straw/hay bale barrier, is placed beneath and beyond the edges of the bag to capture sediments that escape the bag.
Maintenance
Inspection of the flow conditions, bag condition, bag capacity, and the secondary barrier is required. Replace the bag when it no longer filters sediment or passes water at a reasonable rate. The bag is disposed of offsite.

B14 Monitoring and maintenance guidelines for each proposed stormwater quality measure:
Each Measure shall be inspected weekly and after each 1/2" rainfall event.
Follow maintenance guidelines for each measure as specified in each relevant construction detail.
See Plan Set : C500

B15 Erosion & sediment control specifications for individual building lots:
Not applicable.

STORMWATER POLLUTION PREVENTION PLAN POST CONSTRUCTION (SECTION C)

C1 Description of pollutants and their sources associated with the proposed land use:
Leaves, mulch, vehicular sources such as leaking fuel or oil, brake fluid, brake dust, grease, antifreeze, metals, rubber fragments, road grit, salts and sands, trash and debris, fertilizers, cleaning agents chemicals, paint, animal waste, elevated storm runoff temperatures, pesticides and pathogens.

C2 Sequence describing stormwater quality measure Implementation:
Reference Erosion Control Sequencing
See Plan Set : C400

Permanent Seeding
Permanent seeding will be place within 15 days after final grading is completed.

C3 Description of proposed post construction stormwater quality measures:

Permanent Seeding
Permanent seeding will be placed to act as a filter and to prevent erosion.

Stone Parking Area
Division of Fish & Wildlife staff from IDNR shall monitor and replace stone in the drive and parking areas following high water events. This shall generally consist of removing sediment and debris on the parking area and placing compacted Coarse Aggregate #53.

C4 Location, dimensions, specifications and construction details of stormwater quality measures:
For Locations see Plan Set : C400
For details See Plan Set : C500

C5 Description of maintenance guidelines for post construction stormwater quality measures:

Permanent Seeding
Permanent seeding areas should be checked annually for issues related to performance. During this time plant seed if necessary and any erosion problems addressed. Trash should be removed on an as need basis. The grass should be kept to a 3" - 4" height.
Maintenance is the responsibility of the INDIANA DEPT OF NATURAL RESOURCES.

Streets
Street cleaning and trash collection will be part of the State's normal right-of-way upkeep and will be done on an as needed basis. Streets should be monitored monthly and swept as needed to remove as much sediment as possible before it reaches the grass waterway. This shall be done by the STATE OF INDIANA.

Parking Lots
Parking lot cleaning and trash collection will be done on an as needed basis. Parking lots should be monitored by the INDIANA DEPT OF NATURAL RESOURCES following high water events. This shall generally consist of removing sediment and debris on the parking area and placing compacted Coarse Aggregate #53.

EXAMPLE EVALUATION LOG SHEET

EVALUATION FOR CONSTRUCTION PROJECTS
A trained individual shall perform a written evaluation of the project site.
a. By the end of the next business day following each rainfall that exceeds 0.5".
b. A minimum of one (1) time per week

Project Name: _____
Name of Trained Individual: _____ Date of Inspection: _____
Is Evaluation following a rainfall? Oyes Ono If yes, date the rain stopped: _____ Inches: _____

No.	PROBLEM OR CONCERN	YES	NO	N/A
1.	Is the site information posted at the entrance?			
2.	Are all necessary permits obtained and special provisions being implemented?			
3.	Is a construction entrance installed? Is it effective? Is it enough?			
4.	Are public and private streets clean?			
5.	Are appropriate practices installed where stormwater leaves the site?			
6.	Is silt fence entrenched into the ground?			
7.	Is silt fence upright? Do fabric and stakes meet specifications? Is fabric is not too torn? Is silt fence terminated to higher ground? Is it properly joined at ends?			
8.	Are sediment basins and traps installed according to the plan? Are the pipes or rock spillway still functional?			
9.	Is the earthwork for erosion and sediment control practices properly graded, seeded and/or mulched?			
10.	Are diversions, swales, and/or waterbars installed to plan and protected?			
11.	Do perimeter practices have adequate capacity and do not need to be cleaned out?			
12.	Is inlet protection installed on all functional inlets? (not filter fabric under grate)			
13.	Are inlet protection measures installed so water does not flow under it?			
14.	Are the frame, cross-bracing and/or stakes adequate and meet specifications?			
15.	Is the fabric, straw, mulch and/or stone intact without holes or tears?			
16.	Are catch basin insert protection installed where required?			
17.	Has sediment been removed from the catch basin insert protection?			
18.	Has swales and ditches been stabilized or protected?			
19.	Are stormwater outlets adequately stabilized?			
20.	Has temporary stabilization of distributed ground been addressed?			
21.	Has all disturbed areas that will lie dormant for 15 days protected?			
22.	Has all protected dormant areas met a minimum 70% coverage?			
23.	Does growing vegetation have sufficient water and/or nutrients to grow?			
24.	Is permanent stabilization of disturbed ground progressing through the project?			
25.	Is final grading and stabilization progressing on completed areas?			
26.	Has the soil been properly prepared for seeding?			
27.	Has hard or soft armoring been installed where natural vegetation will erode?			
28.	Does water pumping operations have a protected outlet and is discharge water clear?			
29.	Has a designated washout been established for concrete trucks?			
30.	Is a dumpster located onsite for trash disposal?			
31.	Are onsite fuel tanks and other toxic materials safely stored and protected?			
32.	Are smaller construction sites not required to file a separate NOI complying with the overall plan?			

ALL PROBLEMS OR CONCERNS NEED TO BE ADDRESSED WITH A CORRECTIVE ACTION
Identify the problem by number and/or provide additional explanation as needed.

Developer Rep. contacted, name and date: _____ Date: _____
Contractor Rep. contacted, name and date: _____ Date: _____
Report submitted by: _____ Date: _____

BE#13233

Revisions	S'ym.	Date
REDUCED PARKING & WETLAND IMPACT		01-23-15
SWPPP REVISIONS		02-06-15
ISSUED FOR BID		04-03-15

Designed: KS
Drawn: XXX
Checked:
Scale: 1" = 000'
Date: 01-21-15

STORMWATER POLLUTION PREVENTION
THREE RIVERS SR 67 PUBLIC ACCESS
JEFFERSON AND CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

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Project No:

Sheet No:

C410

04/03/2015
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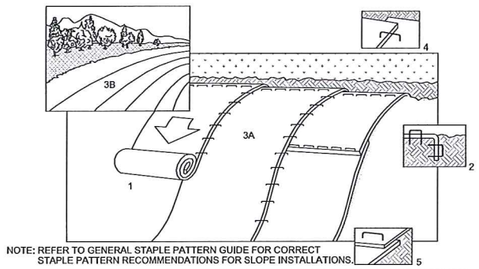
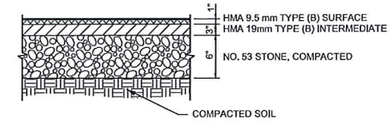


NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROXIMATELY 12" APART.

MAINTENANCE
*During vegetative establishment, inspect weekly & after each 1/2" rainfall event for any erosion below the blanket.
*If any area shows erosion, pull back that portion of the blanket covering it, add soil, re-seed the area, and re-lay and staple the blanket.
*After vegetative establishment, check the treated area periodically.

SLOPE INSTALLATION (5/C500)
NO SCALE



LIGHT DUTY PAVEMENT (1/C500)
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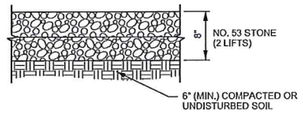

BASE BID STONE SECTION (2/C500)
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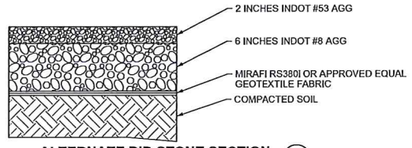

ALTERNATE BID STONE SECTION (2/C500)
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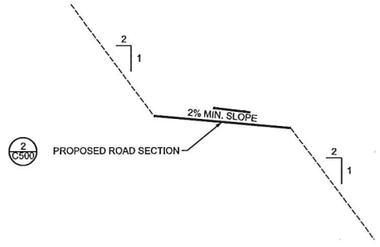

CROSS SLOPE SECTION STA 1+00 TO 10+50 (8/C500)
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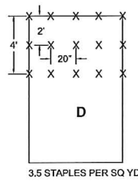
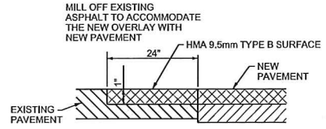


STAPLE PATTERN GUIDE (6/C500)
NO SCALE



MILLING DETAIL (3/C500)
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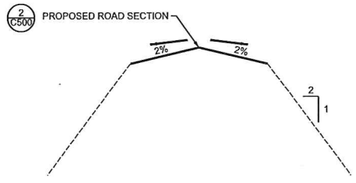

CROWN SECTION STA 10+50 TO 13+00 (9/C500)
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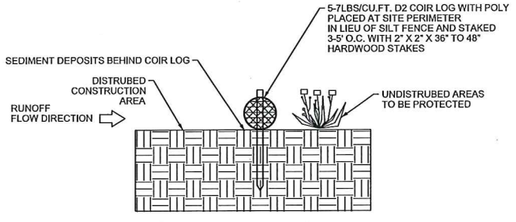

COIR LOG (10/C500)
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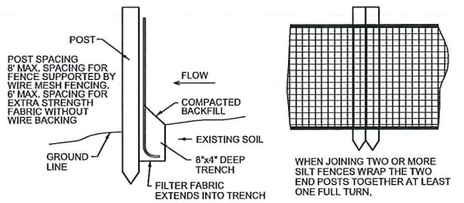

SLOPE CHECK | JOINING FENCES

MAINTENANCE
*Inspect the silt fence weekly and after each 1/2" rainfall event.
*If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately.
*Remove deposited sediment when it reaches half the height of the fence at its lowest point or is causing the fabric to bulge.
*Take care to avoid undermining the fence during clean out.
*After the contributing drainage area has been stabilized, remove the fence and sediment deposits, bring the disturbed area to grade, stabilize,

SILT FENCE DETAIL (4/C500)
NO SCALE

Revisions		Date
	REDUCED PARKING & WETLAND IMPACT	01-23-15
	SWPPP REVISIONS	02-06-15
	ISSUED FOR BID	04-03-15

Designed: KS
Drawn: TMF
Checked:
Scale: NONE
Date: 01-21-15

CONSTRUCTION DETAILS
THREE RIVERS SR 67 PUBLIC ACCESS
JEFFERSON AND CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

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Project No:
Sheet No: C500

04/09/2015
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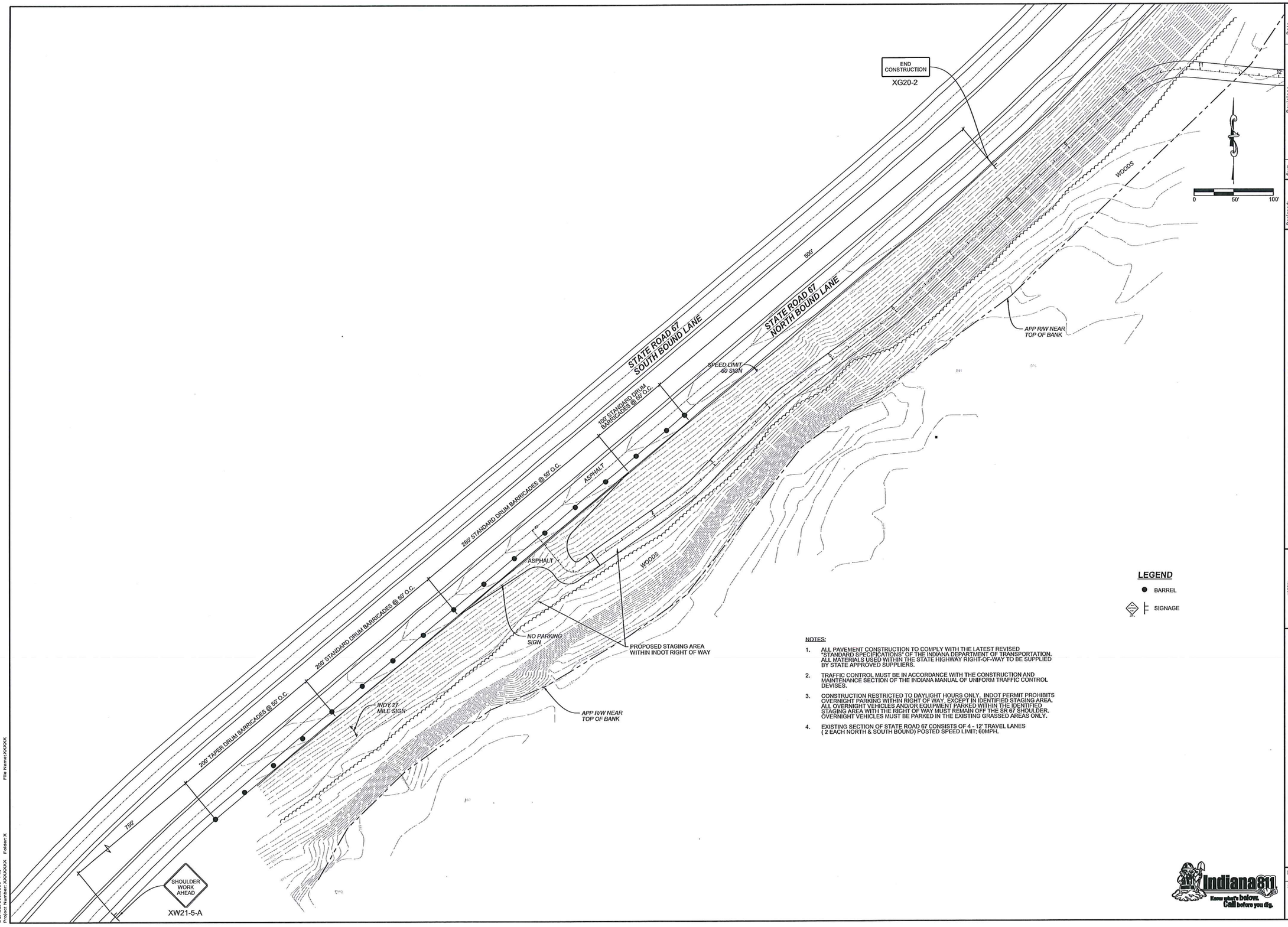

LEGEND

- BARREL
- SIGNAGE

NOTES:

1. ALL PAVEMENT CONSTRUCTION TO COMPLY WITH THE LATEST REVISED "STANDARD SPECIFICATIONS" OF THE INDIANA DEPARTMENT OF TRANSPORTATION. ALL MATERIALS USED WITHIN THE STATE HIGHWAY RIGHT-OF-WAY TO BE SUPPLIED BY STATE APPROVED SUPPLIERS.
2. TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE CONSTRUCTION AND MAINTENANCE SECTION OF THE INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVISES.
3. CONSTRUCTION RESTRICTED TO DAYLIGHT HOURS ONLY. INDOT PERMIT PROHIBITS OVERNIGHT PARKING WITHIN RIGHT OF WAY, EXCEPT IN IDENTIFIED STAGING AREA. ALL OVERNIGHT VEHICLES AND/OR EQUIPMENT PARKED WITHIN THE IDENTIFIED STAGING AREA WITH THE RIGHT OF WAY MUST REMAIN OFF THE SR 67 SHOULDER. OVERNIGHT VEHICLES MUST BE PARKED IN THE EXISTING GRASSED AREAS ONLY.
4. EXISTING SECTION OF STATE ROAD 67 CONSISTS OF 4 - 12' TRAVEL LANES (2 EACH NORTH & SOUTH BOUND) POSTED SPEED LIMIT: 60MPH.

Indiana 811 Know what's below. Call before you dig.

Revisions		
Sym.		Date
	REDUCED PARKING & WETLAND IMPACT	01-23-15
	SWPPP REVISIONS	02-06-15
	ISSUED FOR BID	04-03-15

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TRAFFIC CONTROL PLAN
THREE RIVERS SR 67 PUBLIC ACCESS
JEFFERSON AND CLAY TOWNSHIP
MORGAN COUNTY, INDIANA

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Sheet No:

C700

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