

# Construction Stormwater General Permit (CSGP) Checklist - Section A: Construction Plan Elements A-1 Index Of The Location Of Required Plan Elements In The Construction Plan See The Next Sheet. Plan Elements A2-A31, B1-B15, & C1-C6 Have Also Been Addressed On This Sheet And Are As Follows: A-2 A Vicinity Map Depicting The Project Site Location In Relation To Recognizable Local Landmarks, 425 Locations And Approximate Boundaries Of All Disturbed Areas Towns And Major Roads Towns And Major Roads Towns, And Major Roads See Title Sheet. A-3 Narrative Of The Nature And Purpose Of The Project The Purpose Of The Project Is Making Improvements To US 20, Adding a Two-Way Left Turn Lane and Widening Shoulders. A-4 Latitude And Longitude To The Nearest Fifteen (15) Seconds (Approximate) Latitude: 41.6792, Longitude: -86.6833. A-5 Legal Description Of The Project Site A-6 11x17 Inch Plat With Building, Lots, Boundaries, Road Layout Names See Plat No. 1 Sheets. A-7 Boundaries Of The One Hundred (100) Year Floodplains, Floodway Fringes, And Floodways See The Attached Flood Insurance Rate Map. A-8 Land Use Of All Adjacent Properties The Land Use Within, And Adjacent To, The Project Limits Mostly Consists Of Residential Development, Farmland And Forested. A-9 Identification Of U.S. EPA Approved Or Established Total Maximum Daily Load (TMDL) A-10 Name(s) Of Receiving Water(s) Stormwater Will Ultimately Discharge To The Little Kankakee River. A-11 Identification Of Discharges To A Water On The Current 303(d) List Of Impaired Waters And The Pollutant(s) For Which It. Is Impaired Little Kankakee River - Biological Integrity A-12 Soils Map Of The Predominant Soil Types Soils Map Of The Predominant Soil Types See The Attached Soils Map. BaA Blourt Silt Loam, Lake Michigan Lobe, 0 to 2 Percent Slopes ChB Chelsea Fine Sand, 2 to 6 Percent Slopes ChC Chelsea Fine Sand, 6 to 12 Percent Slopes Hanna Sandy Loam, 0 to 3 Percent Slopes Homer Loam Riddles Loam, 0 to 2 Percent Slopes Riddles Loam, 0 to 6 Percent Slopes, Forded Riddles Loam, 5 to 6 Percent Slopes, Eroded Riddles Loam, 6 to 12 Percent Slopes, Eroded Riddles Loam, 6 to 12 Percent Slopes, Eroded Tracy Sandy Loam, 0 to 2 Percent Slopes Tracy Sandy Loam, 6 to 12 Percent Slopes Tracy Sandy Loam, 1 to 10 SP Percent Slopes Tracy Sandy Loam, 2 to 10 SP Percent Slopes Tracy Sandy Loam, 2 to 10 SP Percent Slopes Traces Sit Loam Washtenaw Silt Loam TcA TcB TcC2 TcD2 TcF A-13 Identification And Location Of All Known Wetlands, Lakes And Watercourses On Or Adjacent To The Project Site A-14 Identification And Status Of Any Other State Or Federal Water Quality Permits Or Authorizations That Are Required For Construction Activities And The Expected Timeline If The Permits Have Not Been Obtained IDEM Section 401 WQC Regional General Permit USACE Section 404 Regional General Permit A-15 Identification And Delineation Of Existing Cover, Including Natural Buffers The Project Is Located Mostly On Grassy Areas, Cultivated Crops And Wool A-16 Existing Topography At A Contour Interval Appropriate To Indicate Drainage Patterns See The Plan & Profile, Erosion Control, & Cross Section Sheets. A-17 Location(s) Of Where Run-Off Enters The Project Site See The Plan & Profile & Cross Section Sheet A-18 Location(s) Of Where Run-Off Discharges From The Project Site Prior To Land Disturbance See The Plan & Profile & Cross Section Sheets A-19 Location Of All Existing Structures On The Project Site See The Plan & Profile Sheets. <u>A-20</u> Location, Size, And Dimensions Of Features, Such As Existing Permanent Retention Or Detention Facilities, Including Manmade Wetlands, Designed For The Purpose Of Stormwater Management A-21 Locations Where Stormwater May Be Directly Discharged Into Ground Water, Such As Abandoned Wells, Sinkholes, Or Karst Features Potential Locations For Groundwater Infiltration Include Roadside Ditches. A-22 Size Of The Project Area Expressed In Acres 28.35 Acres.

CSGP Checklist - Section A: (Continued)

A-24 Proposed Final Topography
Refer To The Plan & Profile & Cross Section Sheets For Final Topography

A-26 Location, Size, And Dimension Of All Stormwater Drainage Systems, Such As Culverts, Storm Sewers, And Conveyance Channels

Dimensions 36" Diameter Culvert 36" Diameter Culvert 36" Diameter Culvert 10'x8' Three Sided Structure Location 22+58 "D"

al Description of The Project Site tions 7, 8 & 9; Township 37N; Range 2W; From 3.10 Miles East Of SR 39 To 4.85 Miles East 427 Locations Of Specific Points Where Stormwater And Non-Stormwater Discharges Will Leave The Project Site 50 The Plan & Profile And Cross Section Sheets.

A-28 Location Of All Proposed Site Improvements, Including Roads, Utilities, Lot Delineation And Identification, roposed Structures, And Common Areas
norovements Shall Be Contained Within The Construction Limits As Shown On The Plan & Profile Sheets.

A-29 Location of All On-Site And Off-Site Soil Sockgiles And Borrow Areas
Proposed Borrow Or Disposal Sites Shall Be Identified By The Contractor Before The Material Is Excavated
Or Disposed Of Within Or Outside The R/W in Accordance w/Section 203.08, 203.09, 8.212. The
Contractor Shall Comply Wisction 108.04 Off The Indiana Department Of Transportation (INDOT) Standard

A-30 Construction Support Activities That Are Expected To Be Part Of The Project Construction Support Activities Including, But Not Limited To, Staging Areas And Material Storage Area Are Expected To Be Part Of This Project. The Location Of Such Areas Are To Be Determined By The

A-31 Location Of Any In-Stream Activities That Are Planned For The Project Including, But Not Limited To Stream Crossings And Pump Arounds A Three Sided Structure At Sta, 99+88 "D" Will Be Extended On The North And South Side Of US 20. This Work Will Take Place In-Stream. A Pump Around Will Be Required During The Construction Of The Extensions. As Coordinated With The INDOT Environmental Services. A Construction In A Floodway Permit Will Not Be Required For This Project.

CSGP Checklist - Section B:

Stormwater Pollution Prevention Plan - Erosion And Sediment Control/Project Site Management

<u>B-1</u> Description Of Potential Pollutant Generating Sources And Pollutants Associated With Construction Activities See The Potential Storm Water Pollutants And Spill Prevention Handling Table Located On The Erosion

B-2 Stable Construction Entrance Locations And Specifications (At All Points Of Ingress And Egress)
The Contractor Shall Utilize Existing Streets And Drives As Much As Possible For Construction Ingress And Egress. The Contractor Shall Resp Public Roads And Private Drives Clear And Remove All Dust, Drit, And Debris As A Result Of Construction Activities. Temporary Construction Entrances Shall Meet The Requirements Of The Construction Gravel Entrance As Shown On The Ensign Control Debris

B-3 Specifications For Temporary And Permanent Stabilization specimizations for temporary and Permanent Stabilization
Seeding Of Disturbed Areas Shall Be Implemented For All Disturbed Land Left Inactive For A Period Of
Seven (7) Days. Permanent Seeding Shall Be Implemented For All Disturbed Land And Shall Occur Once
Final Grading Has Been Completed. See The Bran & Profile Sheets & Erosino Control Details See Item B-12
For Sequencing Information, And The Erosion Control Notes For Application Information For Seeding And
Mulchian Control Period Seeding And

Sediment Control Measures For Concentrated Flow Areas Sediment Control Will Be Handled Via Ditch Sodding, Erosion Control Blankets, And Riprap. See The Erosion Control Sheets And INDOT Standard Drawings E 205-TECD-11.

B-5 Sediment Control Measures For Sheet Flow Areas Sediment Control Will Be Handled Via Silt Fence And By Temporary & Permanent Seeding. See The Plan & Profile, Erosion Control Sheets And INDOT Standard Drawing E 205-TECD-11.

Be5 Run-off Control Measures (e.g., Diversions, Rock Check Dams, Sixeles, etc.)
Runoff Will Be Controlled by Rock Check Dams, Six Hence, Temporary Seeding, Interceptor Ditches and
Diversion Interceptors With Slope Drains. See The Erosion Control Sheets and INDOT Standard Drawings E
205-TECS.

B-7 Stormwater Outlet Protection Locations And Specifications Stormwater Outlet Protection Will Be Handled Via Riprap, Rock Filter Berms, Or Rock Check Dams. See The Erosion Control Sheets & Erosion Control Details.

B-8 Grade Stabilization Structure Locations And Specifications
A Grade Stabilization Will Be Required For The Project. See The Erosion Control Sheets & Erosion Control

B-9 Devotering Applications And Management Methods (Basin Outlet Measures, Flocculants, etc.) A Three Sided Structure A Sa. 99+88 D" Will Be Extended on The North And South Side Of US 20. This Work Will Take Place In-Stream. A Pump Around Will Be Required During The Construction Of The Extensions. As Coordinated Will The INDOT Environmental Services, A Construction in A Floodway Permit Will Not Be Required For This Project.

B-10 Measures Utilized For Work Within Waterbodies (Crossings, Coffer Dams, etc.) Temporary Coffer Dams Are Utilized For Pump Arounds. See The Erosion Control Sheets For Locations Of Pump Arounds And Corresponding Temporary Coffer Dams.

8.11 Maintenance Guidelines For Each Proposed Temporary Stormwater Quality Measure The Contractor Shall Mainten all Water Quality Measures During Construction To Prevent Any Blockages From Accumulated Sediment. Monitoring Of The Protective Measures Shall Be Done On A Weekly Basis And Again Within 24 Hours Of Every Half-Inch Rain Event.

CSGP Checklist - Section B: (Continued)

B-11 (Continued)
Maintenance Shall Include A Written Record Of Each Inspection That Is Made Within 24 Hours Of
A Rain Event And Weekly. The Written Record Shall Be Made Available Upon Request.

Temporary Construction Entrance:
Inspect Weekly, Within 24 Hours Of Every Half-Inch Rain Event, And After Heavy Use,

Reshape Pad As Needed. Top Dress Pad As Needed

Top Dress rau As Neceleur.

Remove immediately Any Mud And Sediment Tracked Or Washed Onto The Street Using Brushing Or Sweeping. Flush Area Only If Rundf Will Be Flowing Through A Sediment Trap. Repair Arry Damaged Pavement Immediately.

Silt Fence: (Per INDOT Standard Specification 205 07(b))

A. Replace If Torn, Starts To Degrade, Or Becomes Ineffective In Anyway.

B. Remove Sediment When It Reaches Half Of The Fence Height Taking Care Not To

Rock Check Dam: (Per INDOT Standard Specification 205.07(e))

A. Inspect Check Dams And The Channel After Each Storm Event, And Repair Any Damage Immediately. If Significant Erosion Occurs Between Dams, Install A Riprap Liner In That Portion Of The Channel.

Portion of the Channel.

Remove Sediment Accumulated Behind Each Dam As Needed To Maintain Channel Capacity, To Allow Drainage Through The Dam, And To Prevent Large Flows From

Add Aggregate To The Dams As Needed To Maintain Design Height And Cross Section. When The Dams Are No Longer Needed, Remove The Aggregate And Stabilize Channel Using An Erosion Resistant Lining. If Necessary.

Check For And Repair Any Adjacent Erosion.

Check For And Repair A.,
 Repair Washed Out Areas

Erosion Control Blanket:

Repack And Reseed As Needed.
 Reattach And Anchor As Needed.

Temporary Seeding: A. Monitor Until It Reaches 70% Coverage.

Reseed As Needed.
 Install Additional Erosion Control To Help Establish Cover.

Rock Filter Berm: (Per INDOT Standard Specification 205.07(c))

A. Accumulated Sediment Shall Be Removed Once It Reaches 1/4 Height Of The Filter Berm.

B. The Filter Berm Shall Be Inspected To Ensure That It Is Holding Its Shape And Allowing

C. Eroded And Damaged Areas Shall Be Repaired.

Filter Sock: (Per INDOT Standard Specification 205.07(a))

A. Accumilated Sediment Shall Be Removed Once It Reaches 1/2 Of The Height Of The Filter Sock When Used For Perimeter Protection And 1/3 Height When Used For Inlet Protection.

B. The Filter Sock Shall Be Inspected To Ensure That It is Holding Its Shape And Allowing

Adequate Flow.
C. Eroded And Damaged Areas Shall Be Repaired

Check And Maintain Any Additional Erosion Control Measures As Needed In Accordance With

Planned Construction Sequence Describing Stormwater Quality Measure Implementation Relative To Land Disturbing Activities

Land Disturbing Museum.

Scortstudion:

Contraction:

Contract The Indiana Underground Plant Protection Systems, Inc. To Verify The Location Of Any And All Underground Utilities.

Linstall Temporary Construction Entrances At All Access Points.

Lethibit CSGP Information At The Job Site. Contractor Shall Designate A Person Responsible For On-Site Inspections And For Providing This Stormwater Pollution Prevention Plant (SWP3) On-Site.

Linstall Sit Ferice.

Construction: Erosion Control Plans Have Been Phased To Coincide With The Maintenance Of Traffic Plans.

Prosent Contractor Shall Construction Entrances.

B. Contractor Shall Construct Concrete Washouts. Contractor Shall Coordinate Location Of B. Contractor Shall Construct Construct For Discourage Contractor Shall Construct For Discourage Contractor Shall Construct For Discourage Contractor Shall Construct For Discourage Construction Shall Ferica, Rock Check Which May Include But Is Not Limited to Culture Tipe Protection, Shif Ferica, Rock Check Which May Include But Is Not Limited to Culture Tipe Protection, Shif Ferica, Rock Check Which May Include But Is Not Limited To Check Tipe Protection, Shif Ferica, Rock Check C

Consideration Areas, & Fueling Stations.

Complete Clearing Of Right Of Way For Utility Relocations And For Proposed Roadway

Improvements.
F. Temporary Seed Disturbed Areas If To Be Disturbed More Than Seven (7) Days.
G. Install Culverts Using Trenchless Installation Methods.
H. Grade Existing Ditches To Drain.
I. Install Sediment Control Measures Prior To Discharge Points.

CSGP Checklist - Section B: (Continued)

B-12 (Continued)

Install Erosion Control Measures As Each New Item Of The Project Is Installed A Install Erosion Control Measures As Each New Item Of The Project Is Installed As Required On The North Half Of US 20 Which May Indude But Is Not Limited To Culvert Pipe Protection, Sit Fence, Rock Check Dams, Erosion Control Blankets, and Riyray. The Contractor Shall Coordinate With The Engineer On The Location Of The Following Construction Areas Prior To Implementation: Staging Areas, Boring/Receiving Pits, Material Storage Areas, & Fuelling Stations. Temporary Seed Disturbed Areas IT on Ee Disturbed More Than Seven (7) Days. Extend Existing Disnings Disturbed Areas IT on Ee Disturbed More Than Seven (7) Days. Extend Existing Disnings Portuctures On The North Half Of US 20. Complete Pavement Wideling, Pavement Patching, Guardrall Installation And HMA Wedge And Level On The North Half Of US 20.

Finish Grading.
Install Permanent Erosion Control Measures And Remove Temporary Erosion Control Measures Only After The Minimum Vegetative Growth Has Occurred On The North Half Of

3: Install Erosion Control Measures As Each New Item Of The Project Is Installed As Required On The South Half Of US 20 Which May Include But Is Not Limited To Culverl Pipe Protection, SIIf Fence, Rock Check Dams, Erosion Control Blankets, and Riprap. Begin Earthwork Operations.

Begin Earthwork Operations. The Contractor Shall Coordinate With The Engineer On The Location Of The Following

The Contractor Shall Coordinate With The Engineer On The Location Of The Following Construction Areas Prior To Implementation: Slaging Areas, Boring/Receiving Pits, Material Storage Areas, & Fueling Stations.

Temporary Seed InSturbed Areas if To 6e Disturbed More Than Seven (7) Days. Extend Existing Drainage Structures On The South Half Of US 20. Raya Culvert Distriped Locations. Compilete Pavement Widening, Pavement Patching, Guardrail Installation And HMA Wedge And Level On The South Half Of US 20.

Finish Grading.

Install Permanent Erosion Control Measures And Remove Temporary Erosion Control sures Only After The Minimum Vegetative Growth Has Occurred On The South Half Of

<u>B-13</u> Provisions For Erosion And Sediment Control On Individual Building Lots Regulated Under This

B-14 Material Handling And Spill Response Plan Meeting The Requirements In 327 IAC 2-6.1

Vehicle And Equipment Maintenance: Onsite Vehicle And Equipment Maintenance Should Only Be Used Where It Is Impractical To Send Vehicles And Equipment Offsite For Maintenance And Repair. If Maintenance Must Occur Onsite, The Area Where Repairs Are To Be Made Must Be Located Away From Drainage Courses. Drip Pans And/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. Inspect Onsite Vehicles And Equipment Daily At Startup For Leaks, And Repair Immediately. 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.

Vehicle Fueling: Onsite Vehicle And Equipment Fueling Should Only Be Used Where It Is Impractical To Send Vehicles And Equipment Offsite For Fueling. Drip Pans And Absorbent Pads Should Be Used During Vehicle And Equipment Fueling, Unless The Fueling Is Performed Over An Impermeable Surface In A Dedicated Fueling Area. Nazzles Used In Vehicle And Equipment Fueling Should Be Equipped With A Automatic Shuffort To Control Disps. Fueling Operations Should Not Be Left Unattended. Federal, State, And Local Requirements Should Be Observed For Any Stationary Above Ground Storage Tanks.

Alert Procedure For Spills: In The Event Of A Material Spill (Fuel, Oil, Fluids, Lubricants, Etc.), Barricade The Area Allowing No Vehicles To Enter Or Leave The Spill Zone. Notify The Indiana Department Of Environmental Management (IDEM), Office Of Emergency Response, By Calling The Appropriate Phone Number: Office 317-233-7745 Or 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, Identify Material Spilled, Probable Time And Source Of Spill, Weather Conditions, Personnel At Scene And Action Initiated By Personnel. Notify The Local Fire Department And Police Department. Coordinate And Monitor Cleanup Until The Situation Has Been Stabilized And The Spill Has Been Fliminated.

B-15 Material Handling And Storage Procedures Associated With Construction Activity Describing The Management And Disposal Of Construction Products And Waste, Including Concrete And Cementitous Washout Areas And Management Measures

Cementitous Washout Areas And Management Measures Debris Collection: To Prevent Cogging of The Storm Drainage System, Litter And Debris Removal From Drainage Grates, Trash, Rocks, And Ditto Lines Should Be A Priority. Construction Debris And Waste Should Be Removed From The Site Biweekly Of More Frequently As Needed. Construction Material Visible To The Public Should Be Stored In An Orderly Manner. Stormwater Rundf Should Be Prevented From Contacting Stored Solid Williams.

Concrete Washout: Per INDOT Standard Specifications 205.03(e), Perform Washout Of Concret Concrete Washout, Pel Involvi Manabad updatinations Zougley, Perform Washout or Concrete Trucks Offiste or in Designated Washout Plans 1 May 1 M

For On Site Washout: Per INDOT Standard Specifications 205.03(e), Locate Washout Area At Least Fifty (50) Feet From Storm Drains, Open Ditches Or Bodies Of Water; Do Not Allow Runoff From This Area By Constructing A. Temporary Berm of Holding Area Large Enough For Liquid And Solid Waste; Wash Out Wastes Into The Designated Area Where The Concrete Can Set And Be Broken Up And Then Disposed Of Properly.

RECOMMENDED FOR APPROVAL:	DESIGN E	NGINEER DRAWN:	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	N/A VERTICAL SCALE N/A SURVEY BOOK	SIGNATIO 1900050 SHEET		6547
CHECKED:	JCS JCS	CHECKED:	JWG	EROSION CONTROL NOTES	CONTRACT R-42452	PROJECT 1900050	271	BPS NO.

## CSGP Checklist - Section C:

Stormwater Pollution Prevention Plan - Post-Construction

- C-1 Description Of Potential Pollutants And Their Sources Associated With The Proposed Land Use See The Potential Storm Water Pollutants And Spill Prevention Handling Table Located On The Erosin Control Details.
- C-2 Description Of Proposed Post Construction Stormwater Quality Measures.

  Permanent Erosion Control Measure Will Be Used As Shown On The Plan & Profile And Erosion Control Sheets for Post-Construction Stormwater Quality Measures. Geotextiles Will Be Uslized In All Disturbed Areas For Permanent Stormwater Quality Measures. Geotextiles Will Be Utilized Under Rippa PA All Locations In Accordance WINDO'S Tosaland's Specifications 16.1.1. Reprop Splesh Pads Shall Be Constructed At Pipe Oxides As Shown On The Plan & Profile And Erosion Control Sheets In Accordance WiNDO's Control Sheets In Accordance WiNDO's 16.5.

Location	Pre-Construction (10 yr.)	Post-Construction (10 y
255+00 to 284+00 "PR-D"	27.93 cfs	29.92 cfs
284+00 to 290+00 "PR-D"	6.05 cfs	7.23 cfs
290+00 to 315+00 "PR-D"	25.13 cfs	27.53 cfs
315+00 to 359+00 "D"	38.12 cfs	41.87 cfs
359+00 to 367+00 "D"	11.29 cfs	12.10 cfs
367+00 to 411+00 "D"	34.66 cfs	37.53 cfs

- C-3 Location, Dimensions, Detail Specifications, And Construction Details Of All Post-Construction Stomwater Quality And Stormwater Management Measures Listed In C-2 Above See The Erosion Control Sheets & Erosion Control Details
- C-4 Sequence Describing Stormwater Quality Measure Implementation.

  All Disturbed Ground Will Be Seeded And Stabilized Immediately After Grading Or When The Project Is Substantially Complete. Ripray Spisha Pads And Geotextiles Shall Be Constructed As Soon As Outlet Structures Are Installed. See The Plan & Profile, Erosion Control Detail Sheets.
- C-5 Description Of Maintenance Guidelines For Post Construction Stormwater Quality Measures.
  The Contractor Shall Ensure That Revegetated Areas Become Fully Established And Shall Water,
  Re-Seed And Re-Stabilize As Necessary. The Owners Shall Clean Up Trash And Shall Perform
  Maintenance On The Storm Sewer System At Regularly Scheduled Intervals.
- C-6 Entity That Will Be Responsible For Operation And Maintenance Of The Post-Construction System (If Known) INDOT LaPorte District

# INDOT STANDARD DRAWING REFERENCES

SILT FENCE ----> TO----- TEMP. INTERCEPTOR DITCH — s — s — SLOPE DRAIN FSK — FILTER SOCK PUMP AROUND

— · · · → → PROPOSED DITCH

CULVERT PIPE PROTECTION ROCK CHECK DAM

DITCH SEDIMENT TRAP



DROP INLET PROTECTION



CURB INLET PROTECTION



PERMANENT RIPRAP



ITEM NO.	DESIGNATION	SHEET NO
A-1	STORMWATER POLLUTION PREVENTION PLAN INDEX	
A-2	VICINITY MAP	
A-3	PROJECT NARRATIVE	
A-4	PROJECT LATITUDE AND LONGITUDE	
A-5	LEGAL DESCRIPTION	
A-6	11x17 INCH PLAT SHEETS	
A-7	BOUNDARIES OF 100-YEAR FLOODPLAINS, FLOODWAY FRINGES, AND FLOODWAYS	
A-8	LAND USE OF ADJACENT PROPERTIES	
A-9	IDENTIFICATION OF U.S. EPA APPROVED OR ESTABLISHED TMDL	
A-10	NAME(S) OF RECEIVING WATER(S)	
A-11	IDENTIFICATION OF DISCHARGES TO WATER ON 303(d) LIST	
A-12	SOILS MAP	
A-13	IDENTIFICATION AND LOCATION OF ALL KNOW WETLANDS, LAKES AND WATERCOURSES	
A-14	IDENTIFICATION OF ANY OTHER STATE OR FEDERAL WATER QUALITY PERMITS	
A-15	IDENTIFICATION AND DELINEATION OF EXISTING COVER	
A-16	EXISTING SITE TOPOGRAPHY	
A-17	LOCATION(S) WHERE RUN-OFF ENTERS PROJECT SITE	
A-18	LOCATION(S) WHERE RUN-OFF DISCHARGES FROM PROJECT SITE PRIOR TO LAND DISTURBANCE	
A-19	LOCATION OF ALL EXISTING STRUCTURES ON THE PROJECT SITE	
A-20	EXISTING PERMANENT RETENTION OR DETENTION FACILITIES	
A-21	LOCATION(S) WHERE STORMWATER MAY BE DIRECTLY DISCHARGED INTO GROUND WATER	
A-22	SIZE OF THE PROJECT AREA	
A-23	TOTAL EXPECTED LAND DISTURBANCE	
A-24	PROPOSED FINAL TOPOGRAPHY	
A-25	LOCATIONS AND APPROXIMATE BOUNDARIES OF ALL DISTURBED AREAS	
A-26	LOCATIONS, SIZE, AND DIMENSIONS OF ALL STORMWATER DRAINAGE SYSTEMS	
A-27	LOCATIONS OF SPECIFIC POINTS WHERE DISCHARGE WILL LEAVE PROJECT SITE	
A-28	LOCATION OF ALL PROPOSED SITE IMPROVEMENTS	
A-29	LOCATION OF ALL ON-SITE AND OFF-SITE SOIL STOCKPILES AND BORROW AREAS	
A-30	CONSTRUCTION SUPPORT ACTIVITIES	
A-31	LOCATION OF ANY IN-STREAM ACTIVITIES	
B-1 - B-15	CONSTRUCTION COMPONENT	
C-1 - C-6	POST-CONSTRUCTION COMPONENT	

RECOMMENDED FOR APPROVAL: DESIGN EF	NGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE  N/A  VERTICAL SCALE  N/A	BRIDGE FILE  DESIGNATION 1900050	6547
DESIGNED: JWG	DRAWN: DRM	EDOCTON CONTROL NOTES	SURVEY BOOK	SHEET 150 OF 271	H
CHECKED: JCS	CHECKED: JWG	EROSION CONTROL NOTES	CONTRACT R-42452	PROJECT 1900050	BPS NC

## EROSION CONTROL NOTES

### GENERAL:

General Take Measures To Control Erosion And Sedimentation To Assure That Sediment Is Not Transported From The Site By Storm Events. Practices Such As Silt Traps Or Filters Shall Be Installed Prior To Land Disturbing Activities. New Drainage Swales Shall Be Seeded And/Or Sodded, Or Other Protective Practices Applied, Immediately Following Construction. All Practices Shall Be Maintained To Remove Sediment From Runoff Leaving The Site As Long As Unstabilized Soil Conditions Exist.

After Land Disturbing Activities Cease And The Soil Is Stabilized, Temporary Erosion Control Measures May Be Eliminated If Their Purpose Has Been Fulfilled. Any Disturbed Soil Resulting From Removal Of Such Practices Shall Be Stabilized By Approved Methods.

Dispose Properly All Waste And Unused Building Materials Including, But Not Limited To, Garbage, Debris, Cleaning Wastes, Water, Toxic Materials, And Hazardous Substances. Do Not Allow Substances To Be Carried By Runoff Into A Receiving Channel of Storm Sever System.

Clean Public Or Private Roadways Daily And After Major Storms Using Acceptable Methods To Remove Any Accumulated Seriment. The Developer's Contractors Are Responsible For Supervision Of The Construction Activity Within The Development And Shall Take All Necessary Actions To Remove Sediment From The

For Construction Sequence, Maintenance, And Other Soil Frosion Requirements, See Specifications For Site Clearing, Slope Protection, Erosion Control, Landscaping, And Seeding

Erosion And Sediment Control Practices Must Adhere To, Or Exceed Those Shown On The Erosion Control Plan, (And The Construction Stormwater General Permit) And Shall Be In Accordance With The <u>Indiana</u> Storm Water Quality Manual, Indiana Department Of Environmental Management.

SURFACE STABILIZATION:
Cut Slopes Which are To Be Topsoiled Should Be Scarified To A Minimum Depth Of 4 Inches Prior To Placement Of Topsoil. Install Erosion Control Blankets On All Slopes Of 3 (Horizontal) To 1 (Vertical) Or

Stabilize All Disturbed Ground Left Inactive For Seven (7) Or More Days By Seeding, Sodding, Mulching, Or

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT PAD:
Construct The Temporary Gravel Drive Using 12 Inches Minimum Of INDOT CA No. 2 Washed Stone Over
Geotextile. Grade For Positive Drainage.

Inspect The Entrance Pad Area Weekly And After Storm Events Or Heavy Use. Reshape The Pad As Needed For Drainage And Runoff Control. Top Dress Pad With Clean Ston

SODDING:

Do Not Install Sod On Hot, Dry Soil, Frozen Soil, Compacted Clay, Loose Sand Or Gravel, Or Pesticide

Treated Soil. Ideal Sodding Time Is May 1-June 1, Or September 1-October 20, Although It Can Be Installed As Early As March 15, If Available And Temperatures Are Above 32°F, Or June 1-September 1 If Irrigated.

Install Sod After Other Erosion Control Practices Have Been Completed. Break Up Compacted Soils Sufficiently To Create A Favorable Rooting Depth Of 6-8 Inches, Using A Chisel Plow, Disk, Harrow, Or Rake.

Apply Topsoil If The Site Is Otherwise Unsuitable For Establishing Vegetation, Shape, Smooth, And Firm

Have The Soil In The Sod Bed Tested To Determine Its pH And Nutrient Level. If The pH Is Too Acidic For The Grass Sod To Be Installed, Apply Lime According To Test Results Or At The Rate Recommended By The

Fertilize As Recommended By The Soil Test. If Testing Was Not Done, Consider Applying 400-600 Lbs./Acre Of 12-12-12 Analysis Fertilizer, Or Equivalent Fertilizer, As Recommended By The Soil Test. Consider The Use Of Reduced Phosphorus Application Where Soil Tests Indicate Adequate Phosphorus Levels in The Soil Profile. Work The Fertilizer Into The Soil To 2-4 Inches Deep

Rake Or Harrow The Area To Achieve A Smooth Final Grade And Then Roll Or Cultipack The Soil Surface To Create A Firm Surface On Which To Lay The Sod.

TREE CONSERVATION/PROTECTION:
Protect Trees From Construction Equipment By Fencing Off An Area Equivalent To The Tree's Crown With Temporary Construction Safety Fence. If A Fence Cannot Be Erected, Cushion The Rooting Area With 6 Inches Of Wood Chips, Or Wood Or Brick Paths.

Create Traffic Patterns Such As To Keep Soil Compaction To A Minimum. Store Supplies And Equipment

When Clearing Areas Adjacent To Protected Trees, Use Equipment Such As A Brush Cutter Or Rotary Ax, Or Cut By Hand. Where Root Areas Must Be Graded, Cut Large Roots Instead Of Tearing Them With

### EROSION CONTROL NOTES (Con't)

Minimize Changes In The Drainage Pattern. Avoid Putting Fill Over The Root System.

Prune Low Hanging Limbs That Could Otherwise Be Broken Off By Equipment.

Repair Wounds Simply By Removing Damaged Bark And Wood Tissue (Do Not Use Tree Paint).

### EROSION CONTROL BLANKETS:

Use Machine Produced Mat Of Straw Fiber Matrix Or Curled Wood Excelsior Of 80 Percent, 6 Inch Or Longer Fiber Length.

Evenly Distribute Fibers Over Entire Area Of Blanket To Provide Consistent Thickness.

Provide Blanket With Top Side Covered With Biodegradable Extruded Plastic Mesh

Treat Blankets To Impart Smolder Resistance Without Use Of Chemical Additive

Provide "Curlex Blankets" By American Excelsior Company, Or "S150" By North American Green, Or

EROSION CONTROL BLANKET STAPLES:
Use Minimum 0.091 Inch Diameter Steel Wire "U" Shape With Legs 6 Inches In Length With 1 Inch Crown

SEEDING:
The Following Table Is For General Seeding Information Only. Consult The Indiana Storm Water Quality Manual For Recommendations Relating To Steep Banks And Cuts, High Maintenance Areas, And Channels And Areas Of Concentrated Flow.

FERTILIZER: 40 Percent Kentucky Bluegrass Commercial Fertilizer (12-12-12)\*

40 Percent Creeping Red Fescue 20 Percent Annual Rve Grass STRAW:

Clean And Free Of Weed Seeds

\*Consider The Use Of Reduced Phosphorus Application Where Soil Tests Indicate Adequate Phosphorus

Spread Fertilizer Uniformly Over Finish Graded Surfaces At A Rate Of 20 Pounds Per 1,000 Square Feet. Thoroughly Disk, Harrow, Or Rake Fertilizer Into Soil To Depth Not Less Than 2 Inches

Distribute Seed Mix Same Day As Fertilizer Is Applied. Spread Evenly At A Rate Of 3 Pounds Per 1,000 Square Feet. Rake Lightly And Compact Areas With 100 Pound Roller. Cover Areas With Straw Evenly Spread At A Rate Of 2 Tons Per Acre Immediately After Seeding. Water

Areas With Fine Snray Do Not Flood Or Create Washes Protect Seeded Areas From Fro Continue Watering Of These Areas On A Daily Basis For The Remainder Of The Construction Period.

Hold Sloped Areas Steener Than 2 (Horizontal) To 1 (Vertical) With Wire Mesh Or Stakes And Wire



### Irrigation Required

- Seeding Dates May Be Extended 5 Days If Mulch Applied And Planted Late Summer
- Increase Seeding Rate By 50%

# NOTES:

If Construction Activities Take Place During The Months Of November Through February, Use Dormant Seeding Practices In Place Of Temporary And Permanent Seeding Practices.

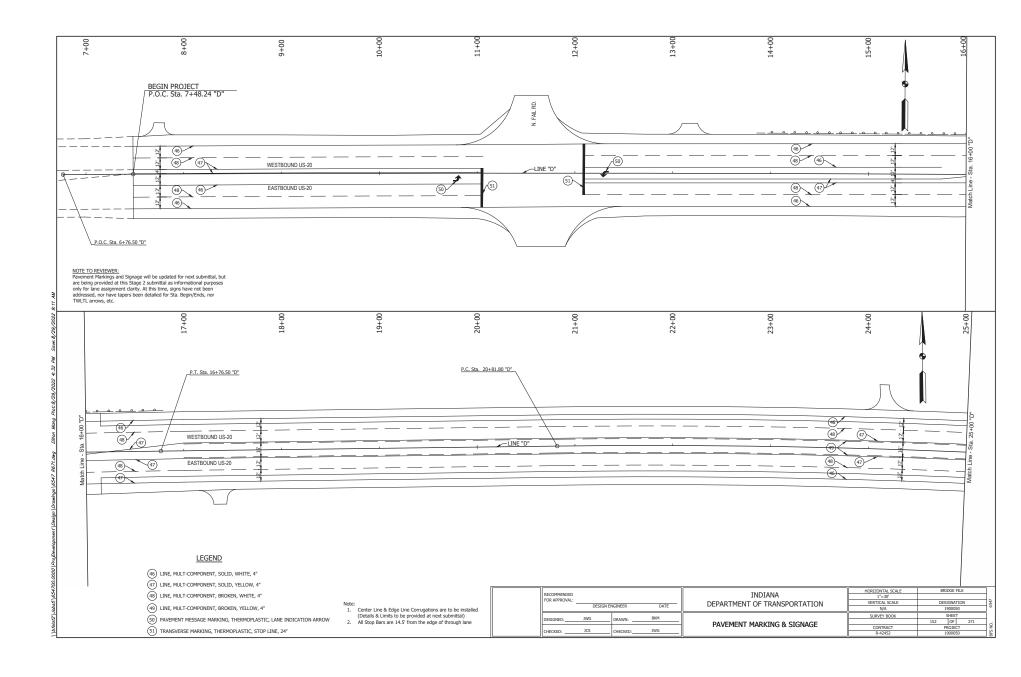
See Chapter 7 Of The <u>Indiana Storm Water Quality Manual</u>, For Additional Seeding Recommendations.

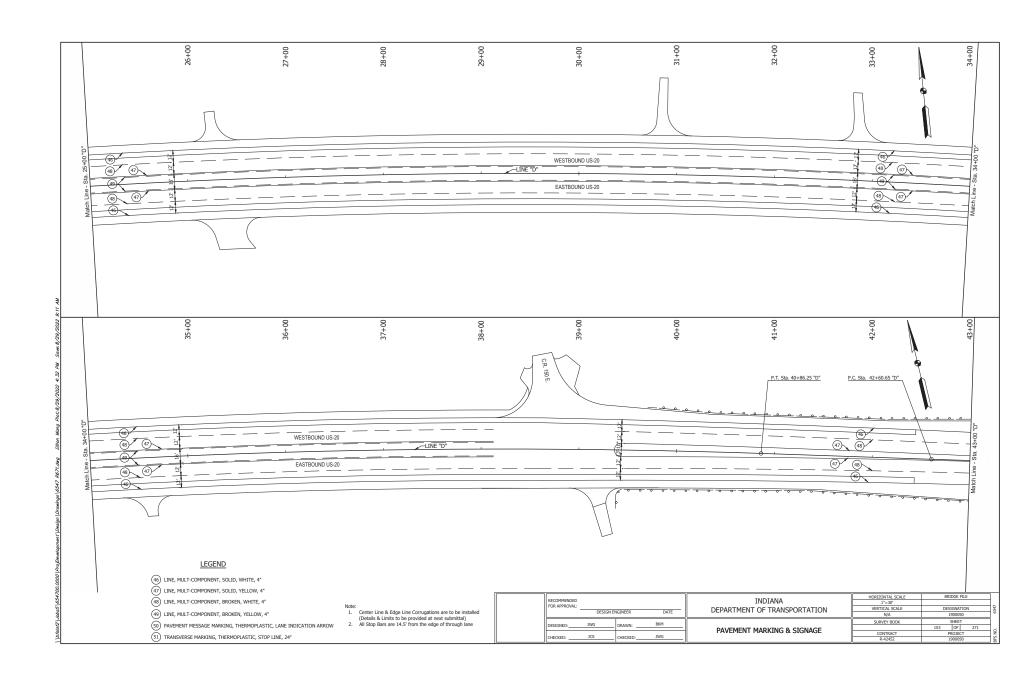
	Potential Storm	Water Pollutants Materia	al Handling and Spill Pre	evention
Trade Name /Material	Source	Chemical/Physical Description	Storm Water Pollutants	Remedial Action
Fertilizer	Landscaping Activities	Liquid or Solid Grains	Nitrogen, Phosphorus	(1), (2), (3)
Cleaning Solvents	Normal Business Operation	Colorless, Blue Or Yellow-Green Liquid	Percholoroethylene, Methylene Chloride, Trichloroethylene, Petroleum Distillates	Seal Drains & Inlets w/Plastic And Or Tape And Collect Excess, (1), (2), (3), (4)
Asphalt	Site Construction	Black Solid	Oil, Petroleum Distillates	(1), (2) Due To Contamination Of Runo Before Curing Is Complete
Concrete	Bridge Construction	White Solid	Limestone, Sand	Concrete Washout Areas Shall Be Utilized & Concrete Disposed Of Proper Once Hardened (2)
Paints	Roadway Striping	Various Colored Liquids	Metal Oxides, Stoddard Solvent, Talc, Calcium Carbonate, Arsenic	Care Should Be Taken To Minimize Overspray (1), (2), (3), (4)
Curing Compounds	Site Construction	Creamy White Liquid	Naphtha	(1), (2), (3), (4)
Wastewater From Constr. Equipment Washing	Construction Equipment	Water	Soil, Oil, Grease, Solids	Equipment Washing Shall Be Executed In A Location Which Does Not Cause Wastewater To Drain Directly To Storn Sewers Or Ditches (i.e. Flat Vegetated Area) (2)
Hydraulic Oil/Fluids	Construction Equipment, Cars	Brown Oily Petroleum Hydrocarbon	Mineral Oil	Storm Structures Incorporate A Hoode Outlet Preventing Floatables From Exiting Site, (3), (4)
Gasoline	On Site Storage Tanks, Cars, Construction Equipment, Fueling Operations	Colorless, Pale Brown Or Pink Petroleum Hydrocarbon	Benzene, Ethyl Benzene, Toluene, Xylene, MTBE	Storage Tanks Shall Have Emergency Storage Capacity Below Tank In Case C Rupture, 3'x3'x6" Spill Pans Shall Be Used During Fueling. (3), (4)
Diesel Fuel	On Site Storage Tanks, Cars, Construction Equipment, Fueling Operations	Clear, Blue-Green To Yellow Liquid	Bpetroleum Distillate, Oil And Grease, Naphthalene, Xylenes	Storage tanks shall have emergency storage capacity below tank in case of rupture, 3'x3'x6" spill pans shall be use during fueling. (3), (4)
Kerosene	Cleaning Operations, Heaters	Pale Yellow Liquid Petroleum Hydrocarbon	Coal Oil, Petroleum Distillates, Arsenic, Copper	3'x3'x6" Spill Pans Shall Be Used Durin Fueling Operations And Cleaning Of Equip. To Catch Excess, (1), (2), (3), (4)
Antifreeze Coolant	Construction Equipment, Cars	Clear Green/Yellow Liquid	Ethylene Glycol, Propylene Glycol, Heavy Metals (Copper, Lead, Zinc)	(1), (2), (3), (4)
Soil Erosion	Exposed Soil	Solid Particles	Soil Sediment	Erosion Control Measures (This Sht.)
Solid Waste Trash	Normal Business Operation	Trash, Debris, Refuse	Trash, Debris, Refuse	Trash Cans Shall Be Utilized On Site During And After Construction

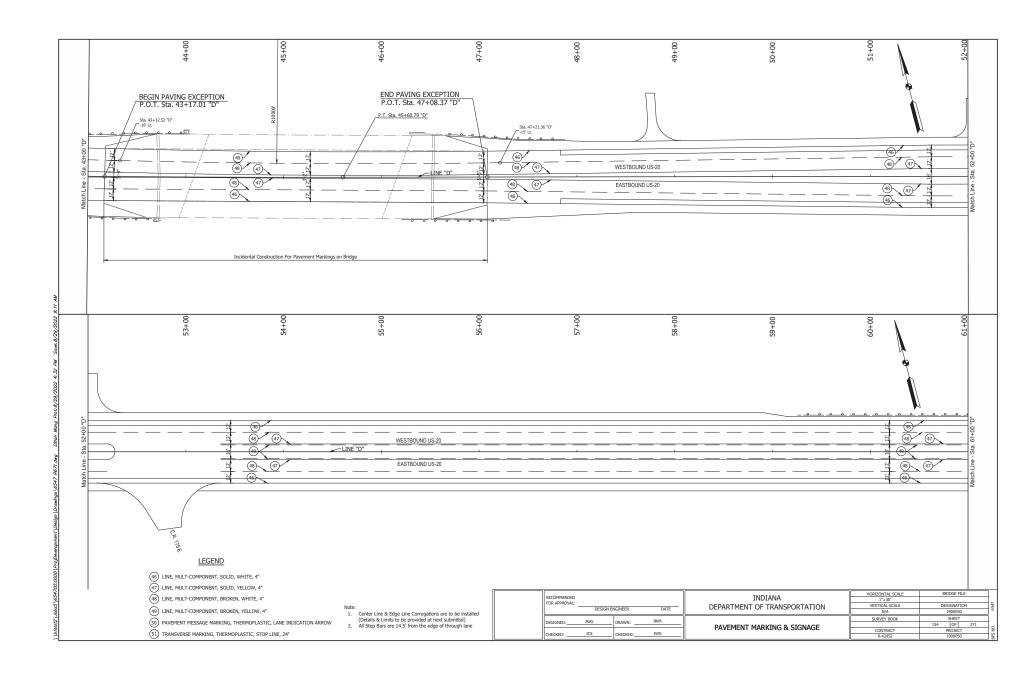
This Table Was Provided For General Information Only To Supplement Information Used In The Construction Stormwater General Permitting Process. The Contractor Is Responsible For Material Handling And Spill Mitigation Procedures.

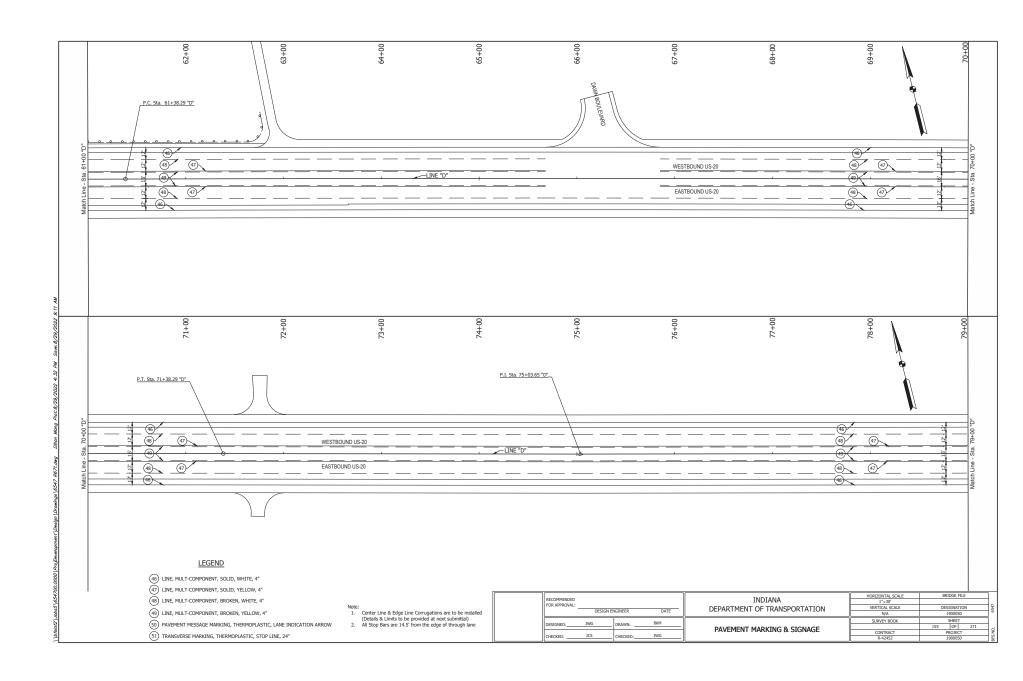
- . All Excess Materials Shall Be Collected And Disposed Of In Accordance With All Federal, State And Local Regulations
- . Material Shall Not Be Applied Immediately Preceding, During Or Following Rainfall (When Applicable). . Spillage Should Be Cleaned Immediately By A Trained Individual And Disposed Of Per Note (2). . Store In Sealed Containers Appropriate For Specific Use.

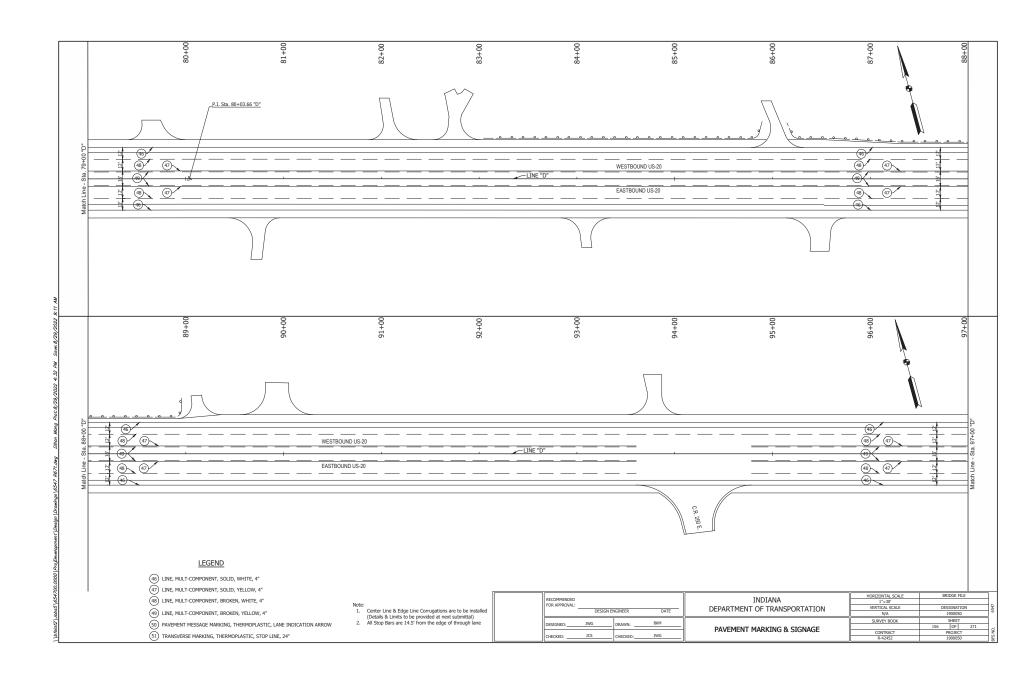
RECOMMENDED FOR APPROVAL:			INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE		IDGE FILE		-64
DESIGN ET	NGINEER	DATE	DEPARTMENT OF TRANSPORTATION	N/A		900050		180
DESIGNED: JWG	DRAWN:	ВКМ	EDOCTON CONTROL NOTES	SURVEY BOOK	151	SHEET	271	
CHECKED: JCS	CHECKED:	JWG	EROSION CONTROL NOTES	CONTRACT R-42452		ROJECT 900050		3FS NO

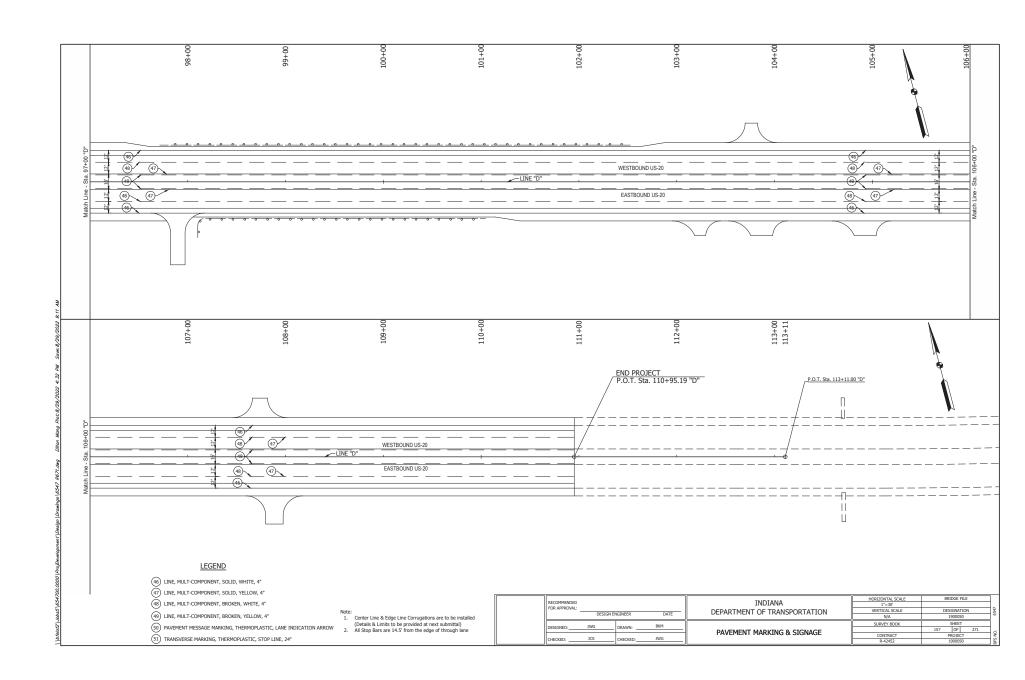












						PA	VEME	NT MAF	RKINGS	S						
FROM STATION	TO STATION	THERMOPLASTIC SOLID WHITE, 4"	THERMOPLASTIC SOLID YELLOW, 4*	THERMOPLASTIC BROKEN WHITE, 4"	THERMOPLASTIC BROKEN YELLOW, 4*	THERMOPLASTIC SOLID WHITE, 6*	THERMOPLASTIC SOLID YELLOW, 8"	THERMOPLASTIC SOLID WHITE, 8"	THERMOPLASTIC SKIP WHITE, 4" (3' Line, 5' Spa.)	THERMOPLASTIC DOTTED WHITE, 12" (3' Line, 5' Spa.)	TRANSVERSE MARKINGS, YIELD TRIANGLE, WHITE	TRANSVERSE MARKINGS CROSSHATCH LINE, 12"	TRANSVERSE MARKINGS STOP BAR, 24"	TRANSVERSE MARKINGS CROSSWALK, 6°	PVMNT. MESSAGE THERMOPLASTIC LANE INDICATION ARROW	PVMNT. MESSAGE THERMOPLASTIC FISH HOOK ARROW
		LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT	LFT
			1													
				-												
	-			-	-											
-		-	-	-												
		<del> </del>	-	+												
			-													

MONUME	NT TABLE
LOCATION	TYPE
1	I

LOCATION	SINGLE	DOUBLE	FEE	
Line "PR-1"				
10+74.36	- /			
25+19.86	-			Г
25+20.00	-		1	
26+36.82	-			
37+07.95	- /			
27+68.65	-			
28+24.01	-			

RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE N/A	DESIG	GNATION 100050	6547
DESIGNED:	JWG DRAWN:	ВКМ	MICCELL ANEQUIC TARLES	SURVEY BOOK		HEET 271	Η,
CHECKED:	JCS CHECKED:	JWG	MISCELLANEOUS TABLES	CONTRACT R-42452		OJECT 00050	BPS NC

PA	VED SI	DI	E I	ΟI	TCI	H, R	IPF	RAP	DI	TCH	ł, A	ND	SO	DD1	ING	SUMMARY TABLE						
	LOCATION								DE DITC				RIP	RAP DIT	CH			SOD				S <sub>G</sub>
M NO	NO	Ŀ	AN	F	ACTUAL LENGTH	CUT OFF WALLS (8' EQUIVAL. LENGTH EACH)	JGS UIVAL. H EACH)	TOTA	L EQUIV	TYPE	PAY LEN	GTHS	REVETMENT RIPRAP	UNIFORM	GEOTEXTILES	FOR PAVED SIDE DITCHES	FOR DITCHES	FOR MEDIAN	FOR SHOULDER BREAK	SODDING AT BRIDGE CONE	TOTAL SODDING	NURSERY SODDING FOR LAWNS
FROM	TO	LEFT	MEDIAN	RIGHT											_							
		-	-		LFT	EACH	EACH	LFT	LFT	LFT	LFT	LFT	TONS	TONS	SYS	SYS	SYS	SYS	SYS	SYS	SYS	SYS
2756+50		$\vdash$	-			-																
		+	-			_																
		+	+	-		_																
		$\vdash$	+	$\vdash$		_																
		+		_		_																
		+																				
		+																				
		П																				
		_	_	_																		
		_	_	_																		
		-	-	_																		
		-	1	_																		
		-	1	_																		
		-	-	-		_																
		-	-	-		_																
		-	-	_																		
			1																			

	PAVED SIDE DITCH, RIPRAP DITCH, AN													SO	DD:	NG	SU	MM	IAR	ΥT	TABLE				
1		LOCATION						P/	AVED SI	DE DITC	Н			RIF	RAP DIT	CH			SODI	DING			Ş		
ı							F: E	; <del>T</del>	TOTA	L EQUIV	/ALENT	PAY LEN	GTHS			S	- 83	S	-	E.	μШ		I S S		
	MO NO	ONO	l.	IAN	노	ACTUAL LENGTH	F WAL DUIVAL H EAC	JGS UIVAL H EAC			TYPE			REVETMENT	UNIFORM	GEOTEXTILES	PAVED	FOR DITCHES	FOR MEDIAN	HOULD	ING A	TOTAL SODDING	RY SOE		
	FROM	TO STATION	LEFT	MEDIAN	RIGHT	AC LEI	CUT OFF WALLS (8' EQUIVAL. LENGTH EACH)	LUGS (8' EQUIVAL. LENGTH EACH)						REVE	IN IN	GEOTI	FOR PAVED SIDE DITCHES	FOR	POR	FOR SHOULDER BREAK	SODDING AT BRIDGE CONE	D SO	NURSERY SODDING FOR LAWNS		
						LFT	EACH	EACH	LFT	LFT	LFT	LFT	LFT	TONS	TONS	SYS	SYS	SYS	SYS	SYS	SYS	SYS	SYS		
4			_																						
+			-																						
1																									
1																									
1																									
1																									
+																									
1																									
1																									
4			_																						
+			$\vdash$	$\vdash$																					
1																									
1																									
]																									
1			_																				_		
+			$\vdash$	$\vdash$				-																	
+																									
1																									
]																									
1			_							_													_		
+			$\vdash$	$\vdash$																					
+			$\vdash$																				_		

	FEN	CE	TA	BLE			
FROM STATION	TO STATION	LEFT	RIGHT	LENGTH	TYPE	TYPE	GATE
LINE "D"				LFT			EACH
			_				
TOTAL				0			

RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE N/A	DE	SIGNATIO		1 59
DESIGNED:	JWG DRAWN:	BKM JWG	MISCELLANEOUS TABLES	SURVEY BOOK  CONTRACT R-42452	159	SHEET OF PROJECT 1900050	271	- N

FROM STATION	TO STATION	L	OCATIO	ON	PERIMETER PROTECTION	DRAINAGE BARRIER AT SWALE	STRAW BALE DITCH CHECK	RIPRAP DITCH CHECK	CULVERT PIPE PROTECTION	SEDIMENT TRAP	DROP INLET PROTECTION	CURB INLET PROTECTION	REMARKS
		Ħ	MEDIAN	RIGHT		TH		_					
					LFT	LFT	LFT	LFT	LFT	CYS	EA.	EA.	
			1										
		-	-				-						
		-											
		_											
		-	-				-						
		-	-										
	-	-	-										
	-	-	-	-			-						
			1				1						

TEN	<u> 1PORAR</u>	ŁΥ	ER	O	510		CC	N.	ΓR	<u>OL</u>	TA	<b>\BL</b>	E-PHASE 3
FROM STATION	TO STATION	, Lea	MEDIAN	RIGHT	PERIMETER PROTECTION	DRAINAGE BARRIER AT SWALE	STRAW BALE DITCH CHECK	RIPRAP DITCH CHECK	CULVERT PIPE PROTECTION	SEDIMENT TRAP	DROP INLET PROTECTION	CURB INLET PROTECTION	REMARKS
		9	월	RIG	LFT	LFT	LFT	LFT	LFT	CYS	EA.	EA.	
		+-	_	_	LFI	LPI	LFI	LFI	LFI	CTS	EA.	EA.	
	+	-	-										
		-			-								
		+											
		+	-	_	-								
					_								
	+	-	-										
	+	+	+										
		_											
		+	-										
	+	_											
		+	-										
		_	_										
			-										
	+	_											
			-		-								
		+	_										
			-										
			-		-								
		+	_										
			_	_									
		+-	<u> </u>	_	_								
	+	+-	-	-	+							-	
		_											
		_	$\vdash$		1								
		+	-	-	-	-							
	<u> </u>												

DESIGNED:         JWG         DRAWN:         BKM           CHECKED:         JCS         CHECKED:         JWG	TEMPORARY EROSION CONTROL TABLES	SURVEY BOOK  CONTRACT R-42452	SHEET  160   OF   271  PROJECT  1900050	BFS NO.
RECOMMENDED FOR APPROVAL:  DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	N/A VERTICAL SCALE N/A	DESIGNATION 1900050	6547
		HORIZONTAL SCALE	BRIDGE FILE	7

										S	SUM	M/	<u>ar</u>	<u> </u>	Fζ	շՄ	<u>AN</u>	ΤI	ΓIΕ	S A	N	) <u>A</u>	PP	RO	AC	H ]	TAB	BLE											
						SURFAC	re .				HMA	FOR APP	ROACHE:	/PATH	-	QC/QA	HMA MA	TERIAL F	FOR MAIN	LINE	HMA	FOR TEM	IP. PAVEI	MENT		=		SPHALT			,,			CURB	URB	C &			
LOCATION (STATION)	DESCRIPTION (APPROACH TYPE OR	WIDTH	LENGTH	RADII		OND R/\	WLINE	GRA	.DE	EXCAVATION	HMA TYPE "A" FOR APPROACH		SURFACE HMA TYPE "A"	INTERMEDIATE HMA FOR ISLANDS	TYPE "A" 2, 70, SURFACE	12.5mm 70, INTERMEDIATE	3, 76, BASE	3, 76, BASE	25.Umm 76, INTERMEDIATE C19.0mm		HMA TYPE "B"	HMA TYPE "B"	HMA TYPE "A"	HMA TYPE "A"	ADE TREATME TYPE IB	TREATMENT TYPE	TYPE III	FOR LYO	AGGF FOR	PACTED REGATE BASE 0. 53	CONTRACTION JOINTS	PCCP, 7.5 IN	FOR APPROACHES 9 IN.	COMBINED CONCRETE CL & GUTTER	2'-0" COMBINED CONCRETE CUF & GUTTER	2'-0" INVERTED COMBINED CONCRETE CURB & GUTTER	2'-0" CONCRETE ROLL CURB & GUTTER	CONCRETE CURB	REMARKS
	CLASS)	CECT	FEET	FEET	COMPACTED AGGREGATE BASE	HMA	CONCRE	1.00		CUT FILL CYS. CYS.	110	LBS. I	ER SYD.	75 11	0 22	0 27	LBS.		L/i D. 220	110	440	LBS. PE	R SYD.	220		SUB		NOT TACK COAT	6 IN.	PTH SYS.	된 D-1 CON	SYS	SYS.	크 2'-7" COMBI	크 2'-0" COMBI	T 2'-0" INV	2-0-1C	Į.	
LINE "D"		TEET	TEET	TEET				70	70	C13. C13.	10143	ONS I	ONS TO	101	45 101	15 10	101	13   101	15 1014.	10143	10143	10143	10113	10143	313.	313. 3	13. 10	NS TON	3 313.	313.	01	313	313.		01	Lit	- 271	LI I	
7+70 Lt.	Mod. Cl. V	12	13.9	15,15	5			-0.25																															Modified Width, Rad
11+55 Lt.	M.P.R.A.	34	50	60,60	)			2.25																															
11+65 Rt.	M.P.R.A.	49.5	40.5	60,60	)			-4.38																															
13+16 Lt.	Mod. Cl. II	15		15.15				0.65																															Modified Radius
17+36 Rt.	Mod. Cl. V	15		20,20				-6.04																															Modified Width
									2.20																														
24+16 Lt.	Mod. Cl. II	10		25,15				5.20																															Modified Width
26+26 Lt.	Mod. Cl. II	10	30.2	25,15	5			-4.00	7.69																														Modified Width
26+44 Rt.	Mod. Cl. II	34	31.3	25,15	5 X			-4.00	-9.69																														Modified Width
30+90 Lt.	Mod. Cl. II	9	58.8	25,15	5 X			-4.00	-9.75																														Modified Width
32+85 Lt.	Mod. Cl. II	9	50.7	25,15	5			-4.00	-9.93																														Modified Width
34+62 Lt.	Mod.Cl. II	11	20.2	25,15	5			-3.06																															Modified Width
38+03 Rt.	Mod. Cl. II	8	17.5	25,5				-8.59																															Modified Width, Rad
38+42 Lt.	Mod. Cl. II	12	13	10,5				-2.00																															Modified Radius
38+78 Lt.	M.P.R.A.	20	67	60,60	)			-4.00																															
38+88 Rt.	Mod. Cl. II	21	35	5,0		X		-4.00	-10.00																														Modified Radius
38+93 Lt.	Mod. Cl. IV		21		0			-2.00																															Modified Radius
39+20 Rt.	Mod. Cl. II		47.6					-4.00	10.00																														Modified Width, Rad
48+77 Lt.	Mod. Cl. II	9		25,15				-4.00																															Modified Width
52+05 Lt.	Mod. Cl. II	11.5	39.8	25,15	5 X			1.61	10.00																														Modified Width
52+79 Rt.	M.P.R.A.	24	46	60,40	)			0.50																															
62+90 Lt.	Mod. Cl. II	10	130	25,15	5 X			-4.00	10.00																														Modified Width
66+30 Lt.	M.P.R.A.	26	53.8	50,40	)			2.88																															
71+74 Rt.	Mod. Cl. V	14	24	25,25	5			-0.89																															Modified Width
71+76 Lt.	Mod. Cl. V	14	51.8	25,25	5 X			2.25	8.12																														
79+65 Lt.	Cl. II	19	20	25,15	5			-3.53																															
80+75 Rt.	Mod. Cl. II	11	42.8	25,15	5 X			-4.00	10.00																														Modified Width
82+08 Lt.	Mod. Cl. II		43					1.57																															Modified Width
82+76 Lt.	Mod. Cl. II	12	4/	20,20	) X	_		-1.05	9.10																														Modified Width

П	RECOMMENDED				TAIDTANIA	HORIZONTAL SCALE	BR	IDGE FIL	.E
	FOR APPROVAL:				INDIANA	N/A			
	PUK APPROVAL:	DESIGN ET	CHIEFO	DATE	DEPARTMENT OF TRANSPORTATION	VERTICAL SCALE	DES	SIGNATIO	ON
		DESIGN EI	VGINEER	DATE	DEFFICE OF THURST OF THE	N/A		1900050	
	[	JWG		ВКМ		SURVEY BOOK		SHEET	
	DESIGNED:	JWG	DRAWN:	5001	APPROACH TABLE		161	OF	271
		JCS		JWG	APPROACH TABLE	CONTRACT	F	ROJECT	
	CHECKED:	JUS	CHECKED:	JWG		R-42452		1900050	

												S	<u>UM</u>	IM	AR	<u>Y</u> (	OF	Q	UA	/N	ΤI	TIE	S	AN	D	ΑP	PF	RO	AC	H	TA	BL	E											
						SURI	FACE	T				Ŧ	HMA	FOR AP	PROACH	ES/PAT	Ή	Q	C/QA H	MA MAT	TERIAL	FOR MAI	NLINE	ИН	A FOR	TEMP. P	PAVEME	NT		п		A SPH	ALT			ys.			CURB	CURB	9.8			
LOCATION (STATION)	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII		BASE	R/W LI	CONCRETE	GRA	ADE	EXCAVAT	TION	HMA TYPE "A" FOR APPROACH		HMA TYPE "A" SURFACE	HMA LYPE "A" INTERMEDIATE	HMA FOR ISLANDS TYPE "A"	2, 70, SURFACE 12.5mm	2, 70, INTERMEDIATE	3, 76, BASE	25.Umm 3, 76, BASE	25.0mm 5, 76, INTERMEDIATE	CT9:0mm	HMA TYPE "B"	"A" HWA TYPF "R"	DITTER D	HMA TYPE "A"	HMA TYPE "A"	Subgrade treatment Type IB	SUBGRADE TREATMENT TYPE	SUBGRADE TREATMENT TYPE III	PRIME COAT	TACK COAT	COMPA AGGRE FOR E NO.	GATE BASE 53	D-1 CONTRACTION JOINTS	PCCP, 7.5 IN	PCCP FOR APPROACHES 9 IN.	2'-7" COMBINED CONCRETE CURB & GUTTER	2'-0" COMBINED CONCRETE CURB & GUTTER	2'-0" INVERTED COMBINED CONCRETE CURB & GUTTER	2'-0" CONCRETE ROLL	CONCRETE CURB	REMARKS
					l°	AGG			1.00	2.00	CUT	ETIL	110		PER SYD		110	220	275		PER S		1 11	10 44		S. PER S			"	SUBG	o,	~		DEP 6 IN.	тн	۵		-	2:-7" (	5,-0.	5.0			
		FEET	FEET	FEE	_				%	%	CYS.	CYS.	TONS 1	TONS -	ONS 1	ONS	TONS	TONS	TONS	S TON	IS TO	NS TOP	IS TO	NS TON	S TO	NS TO	ONS T	ONS	SYS.	SYS.	SYS.	TONS	TONS	SYS.	SYS.	LFT	SYS	SYS.			LFT	LFT	LFT	
LINE "D"																																												
86+03 Lt.	Mod. Cl. II	10	50.5	20,2	20	- 3	X		2.36	10.55																																		Modified Width, Radius
86+49 Rt.	Cl. II	19	34	25,1	15				0.78																																			
89+12 Lt.	Mod. Cl. V	11	24	25,2	25		_		3.24							_					_				_																			Modfied Width, Radius
89+93 Lt.	CI. V					v			-4.00	-0 EC																																		
				25,2																																								
93+79 Lt.	Mod. Cl. V	15	41	20,2	20	X			-4.00	-10.00																																		Modified Width
94+24 Rt.	M.P.R.A.	27	48	50,4	10				1.56																																			
97+90 Rt.	Mod. Cl. V	15	52.9	20,2	20	х			-4.00	10.00																																		Modified Width
103+22 Rt.	Mod. Cl. II	11	15	25,1	15				1.04							-																												Modified Width
103+77 Lt.	Mod. Cl. V			20,2					2.31																																			Modified Width
																																												Ploutiled Widut
103+87 Rt.	Cl. II	22	15	25,1	15				2.00																																			
104+94 Rt.	Cl. II	23	15	25,1	15				-3.43																																			
107+74 Lt.	Mod. Cl. V	15	20	20,2	20				4.03																																			
107+89 Rt.	Mod. Cl. V	18	28.8	20,2	20	х			-4.00	-10.00																																		
							_																																					
					+											_									_																			

RECOMMENDED FOR APPROVAL:	DESIGN EF	NGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE N/A	DES	IDGE FIL		6547
DESIGNED:	JWG	DRAWN:	ВКМ	ADDDOACH TADLE	SURVEY BOOK	162	SHEET	271	1.
CHECKED:	JCS	CHECKED:	JWG	APPROACH TABLE	CONTRACT R-42452		ROJECT 1900050		FIS NO

												<u>JR</u> E	D/	<b>ATA</b>														
Ä –	LOCATION	_		$\blacksquare$						FLOWLINE		ш	Z.		0	#	E 2			RIPRAP		NOI	4					
STRUCTURE NUMB	STATION	LEFT	RIGHT	CROSS	SIZE	PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE	LENGTH		UP STREAM		SERVICE LIF	SITE DESIGNATION	Н	BACKFILL METHOD	STRUCUTRE BACKFILL, TYPE:	STRUCUTRE BACKFILL, TYPE	FLOWABLE	REVETMENT	CLASS 1	CLASS 2	PIPE END SECTION	GEOTEXTILE, "	SEC	BOX END TION	SAFETY METAL END SECTION	CONNECT TO STRUCTURE	REMARK
us		+	-	$\vdash$	IN.			FEET	FEET	ELEV.	ELEV.	YEAR				CYS.	CYS.	CYS.	TONS	TONS	TONS	EA.	SYS.	TYPE	EA.	SLOPE EA.		
11	22+58			Х	18	1		108	2.4	814.21	813.43	75	NA	6.5	1	46.4				4		2	9					CLV 020-04
12	24+16	×			15	3		30	1.3	817.70	817.25	50	NA	6.5	2	2.8						2						
13	40+30		X		24	1		8	6.4	820.02	820.00	75	NA.	6.5	1	9.8					9	1	14					CLV 020 04
																					9		14					CLV 020-04
14	40+30	X			24	1		6	6.1	821.56	821.44	75	NA	6.5	1	7.0						1						CLV 020-04
15	52+05	Х			15	3		24	1.6	829.27	828.67	50	NA	6.5	2	2.3						2						
16	57+16			Х	30	1		116	3.5	820.36	819.94	75	A	6.5	1	98.5			12			2	25					CLV 020-0
17	62+90	X			18	3		30	1.1	839.52	838.74	50	NA	6.5	2	3.5						2						
																3.3												
18	71+74		Х		15	3		36	0.7	839.41	838.87	50	NA	6.5	2			6.3				2						
19	71+76	Х			15	3		30	1.1	839.93	839.90	50	NA	6.5	2	2.8						2						
20	79+65	Х			18	3		36	0.1	832.71	832.43	50	NA	6.5	2			4.5				2						
21	80+75		X		18	3		40	1.6	830.41	830.06	50	NA.	6.5	2	4.6						2						
22	82+08	X			18	3		26	0.3	830.35	830.05	50	NA	6.5	2			4.0				2						
23	82+76	X			18	3		28	0.2	829.56	829.23	50	NA	6.5	2			4.0				2						
24	84+09		Х		18	3		38	1.6	826.30	825.82	50	NA	6.5	2	4.4						2						
25	86+03	×			24	3		28	0.4	825.68	825.36	50	NA.	6.5	2			6.1				2						
26	86+49		X		15	3		52						6.5	2	4.9						2						
									2.3	823.34	822.70	50	NA		2													
27	89+12	X			15	3		29	1.5	822.01	821.55	50	NA	6.5	2	2.7						2						
28	93+79	Х			24	3		32	1.1	813.34	812.6	50	NA	6.5	2	5.2						2						
29	94+26		X		24	1		70	1.4	813.67	813.24	75	NA	6.5	2	11.5						2						
30	97+90		X		15	3		34	0.8	808.07	807.52	50	NA	6.5	2			6.1				2						
																		0.2										
31	99+88	X			10'X6'		3 Sided Structure	20	2.8	801.36	801.31	75	A	6.5	1		71.9											CV 020-04
32	99+88		Х		10'X6'		3 Sided Structure	20	2.8	801.14	801.09	75	A	6.5	1		71.9											CV 020-04

RECOMMENDED FOR APPROVAL:  DESIGN EI	NGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE N/A	BRIDGE FIL DESIGNATIO 1900050		6547
DESIGNED: JWG	DRAWN: BKM	CTRUCTURE DATA	SURVEY BOOK	SHEET 163 OF	271	١
CHECKED: JCS	CHECKED: JWG	STRUCTURE DATA	CONTRACT R-42452	PROJECT 1900050		RPS MO

								PII	PE M	ATER	IAL	SELE	CTIC	N										
												ST	RUCTURE NUM	IBFR										
		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	27A	28	29	30	31	32
PIPE TYPE/SHAPE			3/Circular			3/Circular		3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	3/Circular	1/Circular	3/Circular	10'x6' 3 Sided	10'x6' 3 Sideo
SMOOTH PIPE SIZE		18"	15"	24"	24"	15"	30"	18"	15"	15"	18"	18"	18"	18"	18"	24"	15"	15"	15"	24"	24"	24"	Structure	Structure
CORRUGATED PIPE SIZE																								
RCP/RCHEP (S) CLASS			II			II		II	II	II	II	II	II	II	II	II	II	II	II	II	II	II		
D 0.01 RATING			1000			1000		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
NON-REINFORCED CONCRETE PIPE, CLASS	3 (S)					Ok						Ok			Ok		Ok	Ok						
CORRUGATED PE PIPE, TYPE S (S)																	Ok							
CORRUGATED POLYPROPYLENE PIPE																	Ok							
SMOOTH WALL PE PIPE (S)/ MAXIMUM DR																	Ok/26.00							
PROFILE WALL PVC PIPE (S)					_												Ok						4	
SMOOTH WALL PVC PIPE (S)	13		_		_	0.1			_			01			01		Ok	0.1			- 01			
VITRIFIED CLAY PIPE, EXTRA STRENGTH (						Ok						Ok			Ok		Ok	Ok			Ok			
FULLY BIT. PAVED AND LINES (S) (LS)	CORR. PROFILE THICKNESS		_		_		_		_						_									
	CORR. PROFILE		_		_				_				_											
ZINC COATED (C)	THICKNESS																							
	CORR. PROFILE																							
ZINC COATED W/ BPI (C)	THICKNESS																							
	CORR. PROFILE																							
ALUM COATED TYPE 2 (C)	THICKNESS																							
ALUM. COATED TYPE 2 W/ BPI (C) (S) IA,	CORR. PROFILE																							
OR IIA	THICKNESS																							
POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																							
POLYMER PRECOATED GALVANIZED (C)	THICKNESS																							
POLYMER PRECOATED GALVANIZED (S) IA																								
OR IIA	THICKNESS																							
CORRUGATED ALUM ALLOW PIPE (C)	CORR. PROFILE																							
	THICKNESS																							
CORRUGATED ALUM ALLOWY PIPE W/ BPI																							4	
(C)	THICKNESS																							
STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																							
	THICKNESS																						4	
STR. PLATE ALUMINUM ALLOY PIPE W/	CORR. PROFILE																						4	
BPI (C)	THICKNESS																							
STR. PLATE STEEL PIPE (C)	CORR. PROFILE				_																			
	THICKNESS**				_																			
STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE				_																			
	THICKNESS**				-		-						-				-				-			
									_														_	

RECOMMENDED FOR APPROVAL:	DESIGN	I ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE  N/A  VERTICAL SCALE  1"=10'	DE DE		6547	
DESIGNED:	JWG	DRAWN:	ВКМ	DVDE MATERIAL CELECTION TARLE	SURVEY BOOK	164	SHEET	271	١.
CHECKED:	JCS CHECKED:		JWG	PIPE MATERIAL SELECTION TABLE	CONTRACT R-42452	PROJECT 1900050			BPS NO

GUARDRAIL SUMMARY TABLE																											
	LOCATION			T			MGS		UARDRAII											CURVED V	V-BEAM GI	UARDRAI	L SYSTEM				
FROM STATION	TO STATION	LEFT	MEDIAN LEFT		STANDARD POST AT 3 FT 1.5 IN. SPA.	DOUBLE FACED AT 6 FT 3 IN. SPA.	DOUBLE FACED AT 3 FT 1.5 IN. SPA.	HEIGHT		>			SHOP CURVED ATFT. SPA.	LONG-SPAN GUARDRAIL	> 12	GUARDRAIL END TREATMENT TYPE OS		GUARDRAIL TRANSITION TYPE TGB	HAND DIG GUARDRAIL POST HOLE	TERM SYS	ГЕМ	SY	IECTOR STEM	GUARDRAIL REMOVE		IMPACT ATTENUATOR TYPE	REMARKS
		+	+	LFT	LFT	LFT	LFT	EACH	EACH	EACH	EACH	EACH	LFT	EACH	EACH	EACH	EACH	EACH	EACH	TYPE	EACH	TYPE	EACH	LFT	LFT	EACH	
LINE "D"		+	$\perp$	_	_																						
		+	+	+	_	_								_	-	-		_		_		_	-				
		+	+	_	+															1		1	1				
		+	+	_	1																	1	1				
		$\top$	+																								
		+	+																								
		+	+	_	_	_								_				_		-	_		_				
		+	+	_	-	_																-					
		+	+	_	_	_												_		-	_	_					
		+	+		+	+														-	_						
		+	+																								
		$\perp$	$\perp$																								
		+	+	_	-										-	-				-	-	-	-				
		+	+	+	_	_								_	-			_		-	_	+	-				
		+	+	+	+	_	_							_	-	-		_		_	_	+	+				
		+	+	+	+	_									1			_		_		+	+				
		+	+	+-	_	_																_					
		+	+																			1					
				_																1							
			$\top$																								
		$\perp T$	$\perp$																								
		$\perp$	$\perp$		_																_		-				
		+	+	_	-	_										-				-	-	-	-				
		+	+	+	_	_								_	-	-		_		-	_	+	-				
	TOTALS			0.00	+	+	-	0			_			_	-	0	-	_	-	-	0	+	+	0.00	0.00	_	

<u> </u>	DESIGNED:	JWG JCS	DRAWN:	BKM JWG	GUARDRAIL SUMMARY TABLE	1"=10' SURVEY BOOK CONTRACT	165	SHEET OF PROJECT	271	9
	ECOMMENDED OR APPROVAL:	DECTON	ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE	DE	DN	- 28	

SHEET SIGN & POST SUMMARY																									
						SIGN							PO	OST											
ı	SIGN LOCATION	LEFT/RIGHT	SIGN CODE	SIGN	I SIZE (in.)	ENCAPSI THICKNESS	ULATED LEN S AND SIGN	IS METAL AREA (SFT)	ENCLOSED AND	LENS META SIGN AREA	L THCKNESS (SFT)		TYPE 1 POST: 2-1 TYPE 2 POST: TYPE 3 POST: 2-1	UARE /4" x 2-1/4" > : 2" x 2" x 12	: 12 Ga. Ga.	REMOVE AND RESET	REMARKS								
	STA.	'				THCKN	ESS OF MET	AL (TN.)	THCKN	ESS OF MET	AL (IN )	R	EINFORCED		NREINFORCED	-									
													LENGTH (FT.)		ST LENGTH (FT.)	-									
						0.080	0.100	0.125	0.080	0.100	0.125	1	2 3		2 3	EACH									
	LINE "D"																	1							
-																		-							
				+														-							
				-														_							
				+														-							
																		_							
_				+												-		4							
				+												+		1							
																		1							
-				+						-						-		4							
																		1							
																		1							
				+														-							
																		-							
																		7							
																_		-							
				-												_		-							
				+														-							
																		1							
																		-							
																		_							
																		-							
																		_							
				+														-							
																		Ī							
				+														-							
-		1		+												+		+							
																		1							
		1		+										1		1		+							
				+														4							
																		-							
																		7							
-		1		+											<del>                                     </del>	+		+							
-				+												_		-							
-		1		+														1							
																		7							
-		1		+														4							
																		1							
		SU	IBTOTAL			0.00	0.00	0.00				0.00	0.00 0.00		- Ir	0			=	ır .	II	W	T	1/	10 spince of
											RECOMME FOR APPR	NDED DVAL:	IGINEER	DATE	DEPAR	INDIANA TMENT OF TRANSPORTAT	ΓΙΟΝ			HORIZONTAL SCALE N/A VERTICAL SCALE N/A	VERTICAL SCALE	N/A VERTICAL SCALE	N/A VERTICAL SCALE  N/A	N/A VERTICAL SCALE DESIGNATIO N/A 1900050	
												DESIGNED: JWG DRAWN: BKM							T		SURVEY BOOK	SURVEY BOOK	SURVEY BOOK	SURVEY BOOK 166	SURVEY BOOK SHEET
														CHECKED:	JWG	SHE	EET SIGN SUMMARY TABL	Ŀ			CONTRACT R-42452	CONTRACT	CONTRACT P.47457	CONTRACT R-42452	CONTRACT PROJECT R-42452 1900050

							SH	EET	SIG	8 Ni	ι PO	ST S	SUM	IMA	RY				
						SIGN								PO	ST				
SIGN LOCATION STA.	LEFT/RIGHT	SIGN CODE	SIGN	N SIZE	: (in.)	THICKNESS	ULATED LEN 5 AND SIGN	AREA (SFT)	AND	SIGN AREA			TYPE :	SQU L POST: 2-1/ PE 2 POST: B POST: 2-1/	4" x 2-1/4" > 2" x 2" x 12 2" x 2-1/2" >	Ga. : 12 Ga.		REMOVE AND RESET	REMARKS
						THCKN	ESS OF META	AL (IN.)	THCKN	ESS OF MET.	AL (IN.)		REINFORCE			NREINFORCI ST LENGTH (		-	
						0.080	0.100	0.125	0.080	0.100	0.125	POST LENGTH (FT.)		3	1	2	3	EACH	
LINE "D"																			
				$\vdash$										-					
				$\vdash$										-					
				H											-				
	SUE	BTOTAL		_		0.00	0.00	0.00				0.00	0.00	0.00				0.00	
		PREVIOUS SH	EET			0.00	0.00	0.00				0.00	0.00	0.00		-		0.00	
	Т	OTAL				0.00	0.00	0.00				0.00	0.00	0.00				0.00	

RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE N/A VERTICAL SCALE 1"=10'	DES 1	ON	]	
DESIGNED:	GNED: JWG DRAWN:		CHEET CYCAL CHAMMADY TARKE	167	OF	271	-	
CHECKED:	JCSCHECKED:	JWG	SHEET SIGN SUMMARY TABLE	CONTRACT R-42452	PROJE 19000			1