



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 17-04 **Technical Advisory**

March 16, 2017

November 13, 2017

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/Elizabeth W. Phillips
Elizabeth W. Phillips
Manager, Office of Standards and Policy
Bridges Division

SUBJECT: Culvert Asset ID Number

EFFECTIVE: With Stage 3 on or after May 2017

This memo has been revised to update and clarify the Culvert Asset ID information to be shown on the title sheet.

The Department maintains an inventory of State-owned culverts. A culvert is any structure (pipe, box structure, three-sided structure, etc.) with a span measured along the roadway centerline ≥ 4 ft and ≤ 20 ft. This includes, but is not limited to, culverts under a mainline, s-line, or driveway, and culverts within storm water systems or used for detention.

Various systems are used to store data related to the condition of a culvert as well as proposed and historic work performed on the culvert. Each culvert is assigned a number (culvert asset ID) which allows data to be accessed and compiled effectively and efficiently from the various systems.

The culvert asset ID numbering system and guidance on properly including the culvert asset ID in SPMS, ERMS, and on the plans are included as attachments to this memo and summarized below.

Culvert Asset ID Number

The culvert asset ID number, includes the culvert prefix “CV”, route, county, and reference post number (RP).

PREFIX	ROUTE	COUNTY	REFERENCE POST
			
CV 067-055-078.65			

SPMS

New Culverts. A culvert asset ID number must be assigned to each new culvert. A new culvert is a culvert placed where one currently does not exist or where a structure with a span less than 4 ft (a pipe) or greater than 20 ft (a bridge) is replaced by a culvert. If the culvert asset ID number has not been provided in preliminary documents, the designer should contact the project manager or review the Bridge Inspection Application System (BIAS) to see if a number has been created.

The culvert asset ID number is not auto-generated within SPMS. If a culvert asset ID number is required and has not been created, a request should be sent to INBridgesHelp@indot.in.gov. This request may come from either the designer or the project manager. The following should be included.

- Email subject line: New culvert asset ID number request
- Body of the email:
 - Route number
 - Latitude and longitude of the culvert location
 - Reference post (RP) number of the culvert location. RP should have two decimal places. The “Main Map” in BIAS can be used to approximate the RP number. Do not use station numbers.

Replacement and Rehabilitated Culverts. A culvert that is replaced by a culvert or pipe or is rehabilitated will retain its existing culvert asset ID number. If the number has not been provided in preliminary documents, the designer should contact the project manager or review BIAS to obtain the number.

Designation (Des.) Numbers. Once a culvert asset ID number is established, the project manager can create a des. number for the culvert. The need to create a des. number for a

culvert is a function of the lead project work type and the classification of the resulting structure, i.e. pipe, culvert, or bridge. New culverts can be consolidated under a single des. number for a new culvert work type, but the project description must be revised to include the total number of new culverts and the RP numbers they are located between. Replacement and rehabilitated culverts must have their own des. numbers. The table on the following page summarizes the culvert asset ID requirements and the need for a des. number. For completeness, information for pipes and bridges is also included.

Lead and Sub Project Des. Numbers. To generate a lead project des. number for a work type affiliated with a new, replacement, or rehabilitated culvert, a culvert asset ID number will be required. The culvert asset ID number is not auto-generated within SPMS. Where a culvert asset ID number has not previously been created, it is the project manager's responsibility to ensure a new culvert asset ID number is requested from INBridgesHelp@indot.in.gov.

Additional sub project des. numbers for new, replacement, or rehabilitated culverts may need to be created during the development of a project. It is the project manager's responsibility to have the new sub project des. numbers created and to enter the culvert asset ID number(s) associated with each new sub des. number in SPMS as needed.

ERMS

A new Culvert Asset ID Number field has been added in ERMS. The Culvert Asset ID Number field should be completed for all documents uploaded to ERMS as described below.

Project	Culvert Asset ID No. Entry in ERMS*
Road or Bridge Plans, no culverts	"N/A"
Road or Bridge Plans, new, replacement, or rehabilitated culverts included in plan set	Enter entire culvert asset ID number(s), e.g. CV 067-055-078.65
*Where multiple culverts are included in a contract or on a set of plans, the culvert asset ID numbers should be entered for each culvert, separated by commas.	

The existing culvert asset ID number in SPMS will be auto populated within ERMS. However, if a project contains multiple culvert asset ID numbers the Culvert Asset ID Number field should be modified to include all numbers. The Culvert Asset ID Number field should be completed regardless of the ERMS repository, e.g. Design Documents, Construction Change, Large Plans, etc.

Des. Number and Culvert Asset ID/Bridge Structure Number Requirements									
Work Type	Replacement			Rehabilitation			New (no existing pipe, culvert, or bridge)		Removal ⁽²⁾
Proposed Structure →	with Pipe	with Culvert	with Bridge	results in structure being classified as			Culvert	Bridge	Bridge Only
Existing Structure ↓	span < 4ft	4ft ≤ span ≤ 20ft	span > 20ft	Pipe span < 4ft	Culvert 4ft ≤ span ≤ 20ft	Bridge span > 20ft	4ft ≤ span ≤ 20ft	span > 20ft	
Pipe (span < 4ft)	ID and Des. No. not req'd	Create new culvert asset ID. Des. No. req'd ⁽¹⁾	Create new bridge structure number. ⁽³⁾ Des. No. req'd	ID and Des. No. not req'd	N/A	N/A	N/A	N/A	N/A
Culvert (4ft ≤ span ≤ 20ft)	Keep existing culvert asset ID. Des. No. req'd	Keep existing culvert asset ID. Des. No. req'd	Create new bridge structure number. ⁽³⁾ Des. No. req'd	Keep existing culvert asset ID. Des. No. req'd	Keep existing culvert asset ID. Des. No. req'd	N/A	N/A	N/A	N/A
Bridge (span > 20ft)	ID and Des. No. not req'd ⁽²⁾	Create new culvert asset ID. Des. No. req'd ⁽²⁾	Create new bridge structure number. ⁽³⁾ Des. No. req'd	N/A	N/A	Revise designation letter of existing bridge str. number. ⁽³⁾ Des. No. req'd	N/A	N/A	Des. No. req'd ⁽²⁾
No Existing Pipe, Culvert, or Bridge	N/A	N/A	N/A	N/A	N/A	N/A	Create new culvert asset ID. Des. No. req'd ⁽¹⁾	Create new bridge structure number. ⁽³⁾ Des. No. req'd	N/A

⁽¹⁾ For projects with two or more new culverts, one des. number can be created for all new culverts. Only one culvert asset ID can be entered into the Small Structure Detail field in SPMS. If a single des. number is used, the project description must include the total number of new culverts, and the range of RP numbers where they are located. For example, “six new culverts are included with 1006210 from RP 106+38 to RP 107+00”.

⁽²⁾ Where a bridge is taken out of service, it should be programmed in SPMS as Bridge Removal. A separate cost estimate is not required for a des. number created for bridge removal.

⁽³⁾ Refer to [Design Memo 16-01](#) for information on bridge structure numbers.

Plans for INDOT and Local Public Agency (LPA) Projects:

All new, replacement, and rehabilitated culverts should be assigned culvert asset ID numbers and des. numbers as described in the previous table. Separate cost estimates are not required where separate des. numbers are created for culverts.

For INDOT projects, new, replacement, and rehabilitated culverts may be incorporated into the road plans. The des. number and culvert asset ID number for all culverts should be tabulated on the title sheet. In addition, the culvert asset ID number for all culverts should be included in the structure data table, as shown below. Culverts should continue to be identified with a sequential structure number in the structure data table per current practice, e.g. Str. No. 1. For LPA projects, the designer should coordinate with the LPA to determine if a culvert asset ID number is needed on the plans

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Questions regarding culvert asset ID numbers should be sent to INBridgesHelp@indot.in.gov