

PRELIMINARY DESIGN CHECKLIST – PLAN SHEET FOR TEMPORARY DETOUR PIPES AT A STREAM CROSSING (CONNECT)

Date: 1-1-2024

County: _____ Check By: _____ Date: _____

Project Location: _____ Designer: _____

GENERAL

- ___ For requirements specific to temporary detour pipes, reference [BDM 4.4.12]
- ___ Abbreviations - Use as needed. Reference [BDM 13.1.4]
- ___ Survey Control Point – Use coordinates/description per plan set
- ___ Hydraulic Data table - include Drainage Area, Q₅ cfs, HW, stream slope, outlet velocity, low roadway Edge of Traveled Way (sta., Elev).
- ___ Location table
- ___ Title Block
 - o Reinforced Concrete Pipe(s)-Temporary Detour
 - o Diameter x Length
 - o For more than one pipe the station is the culvert group centerline crossing of the roadway centerline.
 - o Skew angle – whole degree, same as shown in plan view
- ___ Project (phase) number (include any leading zeros) and file number (Asset ID number is not required for temporary pipes)
- ___ Scale bar
- ___ North arrow
- ___ NOTES: use as needed
- ___ Use Class C bedding, connected joints (DR-121), wrap joints for sites within Loess hills areas
- ___ Include reinforced concrete pipe aprons at inlet and outlet ends to reduce potential for uplift
- ___ (This note is to be placed in the upper left corner of the bridge replacement first TS&L Situation Plan sheet) "The temporary run around shall be monitored for the duration that it is under traffic. When the construction of the run around is installed, the contractor shall notify the Preliminary Design Unit Leader at 515-233-7949 so a Flood Management Plan can be developed in advance of the temporary run around being put into service. Upon notification, the DOT will add the site to the Bridge Watch Management Plan for monitoring."
- ___ General Utility Symbols and Utilities Note Cell. Place a label on the plan view to identify areas that may be of potential conflict.

PLAN VIEW

- ___ Label "Plan View"
- ___ Culvert(s) oriented horizontally on the sheet
- ___ Ground elevations, contours, and topography. Label contour elevations
- ___ Existing utilities shown. Referenced line styles from survey file are at an appropriate scale for readability.

- ___ Existing structures: include general description
- ___ Proposed length: include dimensions as-needed from culvert typical, e.g., lengths left and right, total length
- ___ Proposed station on temporary detour centerline
- ___ Skew angle of culvert to temporary detour roadway. A whole degree skew is preferred.
- ___ Proposed detour roadway lane and shoulder widths
- ___ Show proposed detour roadway embankment and ditch grading. Verify with Road Design.
- ___ Label centerline culvert/detour/road construction
- ___ Label stationing on at least two "tic" marks in the plan view for both the mainline and temporary detour alignments.
- ___ Drainage: show direction of flow
- ___ Check that all text and dimensioning is legible and not placed on top of other text or features
- ___ Do not show revetment at pipe inlet/outlet unless justified. If revetment is proposed include a note with justification on the sheet.

LONGITUDINAL SECTION

- ___ Detour Roadway section drawn along pipe centerline. True length is shown
- ___ Existing ground line and proposed grade line shown and labeled
- ___ Show existing and proposed structure(s)
- ___ Proposed flow-lines at inlet and outlet
- ___ Label detour roadway fore-slope used (e.g., 3:1)
- ___ Profile grade elevation at intersection of culvert and detour road centerline
- ___ Q₅ 'Design' HW
- ___ Show maximum fill height and location.

CADD Checklist

- Refer to: [Preliminary Bridge - Connect Applications](#)
- ___ Verify Iowa Regional Coordinate System is correct for the project site.
- ___ CONNECT ProjectWise folder structure is being used.
- ___ Correct seed files are being used.
- ___ MicroStation File naming conventions are being followed.
- ___ Correct MicroStation Model naming conventions are being followed.
- ___ The correct levels, element templates, or features are being used. (to ensure the correct font style is applied).