**WATER RELATED IMPACTS SUMMARY**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **County** |  | | **Route No.** |  | **Item No.** |  |
| **Date** |  | | **Program #** |  |  | |
| **Federal Project No.** | |  | | | | |
| **State Project No.** | |  | | | | |
| **Location Engineer** | |  | | | | |

**Section 1: Impact Checklist**

Complete this section for each alternative considered at the conclusion of Phase 1 design.

|  |  |  |
| --- | --- | --- |
| **FLOODPLAIN IMPACTS** | | |
| **FEMA Study Type** | **Yes** | **Community No.** |
| Detailed FEMA Study with delineated floodway\* |  |  |
| Detailed FEMA Study without delineated floodway\*\* |  |  |
| Approximate FEMA Study |  |  |
| No FEMA Study |  |  |
| **\*** If proposed design impacts the floodway, then it may require initiation of map revision process (CLOMR/LOMR).  \*\* If proposed design impacts water surface elevations, then it may require initiation of map revision process (CLOMR/LOMR).  Potential impacts to floodplains and/or floodways shall be assessed early in the project. Refer to the Drainage Manual. | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SIGNIFICANT RESOURCE IMPACTS YES NO** | | | | |
| Are open sinkholes impacted?  If so, how many sinkholes are impacted? |  |  |  |  |
|  | | | | |
| Are wetlands impacted?  If so, how many total acres are estimated? \_\_\_\_\_\_ acres |  |  |  |  |
|  | | | | |
| Are any of the streams in the project area designated “Special Use Waters” (e.g. Wild Rivers, Exceptional Waters, Outstanding State Resource Water, etc.)? |  |  |  |  |
|  |  |  |  |
|  | | | |
| Where possible, alignments should be developed that avoid significant resources. When it becomes impossible to avoid a significant resource, the project should be designed to minimize these impacts. Significant resource impacts are discussed in DR 202 of the drainage manual. Wetland impacts and their costs are discussed in DR 500 of the Drainage Manual.  Projects that impact special use waters may require an individual KPDES Erosion Control Permit. Contact the Division of Environmental analysis for more information. | | | | |
| **STREAM CHANNEL IMPACTS YES NO** | | | | | |
| Will stream relocations (channel changes) be needed?  If so, check all that apply:   1. Will at least “1” relocation be over 100’ in length?      1. Will at least “1” relocation be over 300’ in length? 2. Will at least “1” relocation be over 500’ in length?   How many total linear feet are estimated? \_\_\_\_\_\_\_\_ LF |  |  |  |  | |
|  | | | | | |
| Will new culverts or culvert extensions be constructed?  If so, check all that apply:   1. Will at least “1” be over 300’ in length? 2. Will at least “1” be over 500’ in length?   How many total linear feet are estimated? \_\_\_\_\_\_\_\_ LF |  |  |  |  | |
|  | | | | | |
| Will temporary stream crossings be needed? |  |  |  |  | |
|  | | | | | |
| Will excess material sites that require permitting be needed? |  |  |  |  | |
|  | | | | | |
| Will bridges be constructed? |  |  |  |  | |
| On highway projects that involve stream crossings such as bridge and culverts, it is often not feasible to totally avoid stream channel impacts. In these cases, design the project to minimize the impacts. Stream relocations should be avoided if possible. If stream relocations are unavoidable design to project to minimize their impacts. Stream channel impacts are discussed in DR 506, 601-3, 608-2, and  802-3 of the drainage manual. | | | | | |

**Section 2 : Impact Discussion**

Complete this section for the chosen alternative. Discuss the selected alternate’s influence on each of the impacts listed above. Discuss any avoidance, minimization and/or mitigation measures included in the project.