

# MDOT Federal Aid Local Agency Plan Review

## *Common Plan Review Issues*

Note: These are not the only items that a reviewer should be looking for but these are current, common items that are causing recurring issues during construction. Remember by spending slightly more time reviewing the plans it is much easier and less expensive for the tax payer to correct in design than in construction.

### **Bridge Plan Review:**

Note review plans and proposal for the items in this [link Plan Review - Bridge](#)

### **Road Plan Review:**

Note review plans and proposal for the items in this [link Plan Review - Road](#)

### *Geotechnical*

1. H Pile Splice Detail – [LINK to Bridge Design Guide](#)
  - a. Many Consultant and Local Agency plans are not utilizing the most current Bridge Design Guide for H-Pile Splice details.
  - b. They are using the old splice plate detail and instead of the splice sleeve detail.
  - c. They should be using this one 8.21.02 dated 01/23/2012.
2. Insufficient Geotechnical Exploration – [LINK to GEOTECHNICAL INVESTIGATION AND ANALYSIS REQUIREMENTS FOR STRUCTURES](#)
  - a. Extent of soil boring does not exceed estimated pile tip elevation.
  - b. Geotechnical Exploration Manual for Foundations states that the soil boring should extend for at least 10 feet beyond the estimated pile tip elevation shown on the plans.
  - c. This is to account for situations where the pile needs to be driven deeper to obtain bearing so that the Contractor/Owner can be assured that the pile will be driven into material with known properties.
3. Profiles of subsurface bedrock
  - a. When bedrock is encountered during the soil borings and the foundation may be resting on virgin bedrock a rock profile should be performed to determine if any additional sub footing concrete will be necessary and to what extent the rock excavation may be needed.
4. Scour Counter Measures
  - a. Review and verify that the proposed scour countermeasures and installation details are consistent with the requirements in the DEQ permit.
5. Soil Borings
  - a. Make sure they're included in the plans and they note the water level if applicable
  - b. Ask for the Geotechnical report to verify if artesian conditions exist.
  - c. If artesian conditions are noted ask how they are addressed in the foundation plans.

### *Utilities*

1. Verify that utilities have been contacted.
  - a. Verify that a meeting and/or field review with affected utilities has occurred or is being planned.
  - b. Request the minutes of said meeting to verify any issues.
2. Review the Utility Coordination Clause.
  - a. Some Designers have been placing putting the responsibilities for any delays caused by the relocating utilities onto the Contractor.

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- b. Did not appear that any utility coordination took place in advance except for providing a listing of the utility companies.

### *Maintenance of Traffic Special Provision*

1. Projects in the vicinity of MDOT Routes or ROW.
  - a. Verify that any staging plans or work within the ROW is coordinated with.
    - i. Permit Agent and/or Engineer for any necessary permits
    - ii. Traffic Signals so that any changes in staging does not affect the operation of MDOT signals.
      1. If the work will affect the signals contact the appropriate MDOT Region of Central Office Resource for coordination.
      2. Assure that the County understands that they will be responsible for any charges related to construction staging that affects signal operations.

### *Proposal – Special Provision's*

1. HMA Application Rate Special Provision
  - a. Verify there is no discrepancies between the SP, the application table in the plans, and the SP for Acceptance of HMA Mixture on LAP Projects Using the Roller Method.
2. Verify that the correct HMA mixture and RAP Special Provisions are included (i.e. Marshall Mix and Marshall RAP SP, etc.)
3. Verify there is not multiple acceptance Special Provisions for the same mixture type (i.e. two different Marshall HMA Acceptance Special Provisions, etc.).
  - a. If the job uses Marshall and Superpave then there should be two Acceptance SP's one for Marshall and one for Superpave.
4. Read Unique Special Provisions
  - a. Read from a Contractors perspective, as if you've never seen it before and try to understand it so you can bid on it.

### *Plans*

1. Insufficient ROW to Construct Project.
  - a. Look through the plans for areas where there is insufficient ROW to construct the built portion of the project.
    - i. May need to acquire permanent ROW.
    - ii. May need temporary ROW (Consent to Grade)
2. Compare typicals to plans
  - a. Look for physical obstructions to construction that would not allow the proposed cross section to be built without some further plan clarification.

### *Constructability*

1. For construction of plan features not typical of road or bridge construction put some thought into how it may be laid out in the field for construction staking.
  - a. Superelevations, horizontal curves, vertical curves with the proposed plan information.
  - b. Pile layout Make sure key points for staking are clear on the plans.