CONCLUSION

- Both literature review and survey results indicated that the majority of transportation agencies use field-cured cylinders followed by the maturity method for deciding when to open pavement to traffic or remove form/falsework. Only 33% agencies use beams for determining field-cure strength.
- According to Illinois Modified AASHTO T 23 Section 4.3 (IDOT, 2019), strength specimens should be field-cured with the concrete item when contractor desires to open the pavement prior to 14 days and recommended to core test specimens in the field in the same manner as the pavement or structure which may include thing as insulation, if used.
- Illinois Tolloway was found to implement temperature monitoring and maturity method for determining field-cure strength in future.
- Several agencies reported curing cylinders (63.9%) or beams (22.2%) near the casted concrete in the same manner as concrete item and under burlap or insulation near the concrete item (25%) followed by curing inside thermastically controlled curing box (16.9%).
- For beams, damp sandpit near the concrete item (27.8%) was found to be most popular curing method followed by curing under burlap or insulation near the concrete item (13.9%).

FUTURE WORK

- Concrete slabs and cylinders will be casted, and cured. Also, the sensors will be installed in the slabs, beams and cylinders in order to acquire the temperature and humidity data.

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