2015 Municipal Streets Seminar Topics

• Standard Detail No 2200-050 Utility Installation Under Hard Surface Roadways Pipe Trench Work And Surface Restoration

• City of Cedar Rapids Public Works and Utilities Departments procedures for coordination with private utilities
Standard Detail No. 2200-050
Development Process and Timeline

- Late Fall 2014 – City hires Matrix Consulting Group to evaluate Public Works Department operations

- Winter 2014/2015 – Matrix recommendations include developing a standard detail for utility cuts that includes pavement patching

- January 2015 – Several Iowa cities contacted to find out what they do. Most reference PCC repair details from SUDAS Section 7040

Section 7040 details do not address trench work or restoration of other roadway surface types

Additional research required
January-February 2015: Additional research on trench work

- SUDAS Design Manual Chapter 9, Section 9D-1 Utility Cut Restoration
- Iowa Highway Research Board Project TR566 (2010) Utility Cut Repair Techniques, investigation of improved utility cut repair techniques to reduce settlement in repaired areas Phase II

Information obtained from above sources

- Allowing equipment to operate close to edge of excavation increases risk of trench wall sloughing
- Quality of backfill material and its compaction critical
- When possible, use PCC for surface restoration since can bridge an excavation. This is not always possible due to different pavement surface materials.
RECOMMENDED TRENCH SECTIONS FROM IHRB TR 566
OPTION NO. 1 – VERTICAL TRENCH WALLS WITH “T” SECTION (PIPE DIA. UP TO 24-INCH)
RECOMMENDED TRENCH SECTIONS FROM IHRB TR 566
OPTION NO. 2 – CUTBACK TRENCH (PIPE DIA. UP TO 24-INCH)
SURFACE RESTORATION REQUIREMENTS

Typical roadway surfaces found in Cedar Rapids, IA
- PCC with and without HMA overlay
- Full depth asphalt
- Sealcoat
- Brick with and without HMA overlay

Detail addresses all of the above
- Cedar Rapids standard details for PCC repair, including pavement joints
- General notes in detail address HMA overlay requirements
- Specific details included for other surface types
This detail also applies for sealcoat surfaces.
RESTORATION OF BRICK PAVEMENT WITH ASPHALTIC Overlay

NO SCALE
February – April 2015: Internal reviews and revisions by:

- Construction inspection staff
- Public Works and Utilities Departments engineers
- Streets, Sewer Maintenance and Water Distribution field supervisors
- Snyder & Associates Inc., courtesy of SUDAS
- Distribution at Joint Utility Coordination Meeting

June 3, 2015: Letter with detail sent to all contractors bonded to work in City right-of-way. Letter advised detail to take effect on July 1, 2015.

June 2015: Some contractors commented they had contracts in-hand for work scheduled after July 1. Their contract prices did not take detail into account.

June 22, 2015: In response to this concern, a letter was sent advising previous standards would apply until August 3, 2015, if contractor provides copy of their quote dated prior to July 1. Letter also said detail will apply after August 3, regardless.
Reactions

– Objections from some contractors due to additional cost and claims the detail “will not work” were expected.
– Generally, Option No. 1 (“T” Trench with Granular Backfill) most commonly used.
– Contractors tend to remove existing surface to final limits at start of work, rather than perform separate initial and final removals.
– Otherwise, general compliance.
– Construction inspector indicates contractors are making the detail work.
STANDARD DETAIL NO. 2200-050
GOING FORWARD

Going forward

- Incorporating a typical plan view into detail to address when an excavation crosses roadway centerline
- Adding requirements for temporary winter surfaces for when PCC and HMA surfaces cannot be placed
- Soliciting useful input from contractors, engineers, and city staff, for possible revisions
- Training as requested for city personnel and others
Capital Improvement Projects

- Monthly Joint Utility Coordination Meeting
- Designers required to contact Iowa One Call during survey
- In many cases, designers are required to have utilities exposed and located during design
- Designer works with utility representatives to have utilities relocated or adjusted to grade in advance
- Quality level of utility information in plans per CI/ASCE 38-02 (4 levels) must be noted for all utilities, including city-owned
UTILITY COORDINATION PROCEDURES

Utility Projects and Private Projects in City Right-of-Way

- All work within city right-of-way, including city projects, requires contractor to obtain permit to work in right-of-way
- Standard Detail 2200-050 applies by reference
- Full-time Right-of-Way Coordinator and inspector were created by internal reassignment to administer and inspect