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ENGINEERING DIRECTIVE

Patricia Leavenworth (signature on original)

CHIEF ENGINEER

Utility Plan Submissions and Reviews

This Directive supersedes Engineering Directive E-11-003, "Electronic Utility Plan Submissions", dated August 4, 2011. Effective January 1, 2020, Utility Plan submissions and reviews required during the project design phase shall be completed in accordance with the following procedures:

Utility Plan Submission Requirements

- For the purpose of this Directive, "Utility Plan Submissions" are electronic documents in both AutoCAD format (current version used by MassDOT) and Portable Document Format (PDF) saved on compact disks (CDs) or thumb-drives.
    - PDF files shall include all sheets/drawings included in the design review submission, which may include the title sheet, typical sections, bridge plans (if applicable), cross-sections, etc.
    - AutoCAD files do not have to contain every sheet/drawing included in the design review submission. However, they should contain all sheets/drawings involving utilities, such as utility relocation plans, utility section drawings and bridge plans that show utility relocations or fittings.

- AutoCAD drawing files shall contain existing and/or proposed utilities, with each utility having its own layer name by the type of utility (for example: ExistElect).

- Designers shall use the following color guide for representation of utilities in AutoCAD drawing files and in PDF files. The color guide is consistent with DIG SAFE's color code for marking underground utility lines. This information shall be included on the drawings as part of a legend.

Utility	Line Color
Electric	Red
Gas-Oil-Steam	Brown
Communication/CATV	Orange
Potable Water	Blue
Sewer	Green
Drainage	Traditional Grayscale

- Utility/Railroad Companies shall use the guidelines above when returning or providing AutoCAD drawings with updated/modified existing utility information or recommendations for proposed utility alignments. Proposed utility alignments shall be shown using a **heavier line weight (or thickness)** than existing.

Utility Plan Submission and Review Procedures

- The Designer shall provide Utility Plan Submissions for review at all normal design review submission stages to the MassDOT Project Manager, as follows:
    - One full set of paper plans (24" x 36") complete with ALL sheets including cross-sections, bridge plans and COLOR Utility sheets. Refer to the previous section of this Directive for information regarding colors and styles.
        - The Designer shall submit two full sets of paper plans instead of one if a submission to the MWRA is required.
    - One CD or thumb-drive with both AutoCAD files and PDF files with sheets as described above. Refer to the previous section of this Directive for information regarding colors and styles.
    - All Utility Plan Submissions shall include a list of the names of the actual Utility/Railroad Companies to which the plans are to be provided. For a current list of Utility and Railroad Company contacts, refer to https://www.mass.gov/.

- The Project Manager shall transmit the Utility Plan Submissions to the State Utilities Engineer.

- The State Utilities Engineer shall distribute plans electronically to the potentially affected Utility/Railroad Companies.

- The Utility/Railroad Companies shall review the plans and submit their comments/edits directly to the State Utilities Engineer via email or paper document, who shall then forward these comments/edits to the Project Manager by memo and/or email.

- The State Utilities Engineer shall transmit one full set of paper plans and the CD or thumb-drive to the District Utility/Constructability Engineer (DUCE) for their reference and use. The DUCE shall review and comment on the plans as part of the normal Bluebeam design submission review sessions established and managed by the Project Manager for each project.

- If a Utility or Railroad Company needs printed plan sheets, they may request the sheets through the State Utilities Engineer, who shall then notify the MassDOT Project Manager, who shall then notify the Designer. The Designer shall provide the requested paper sheets directly to the Utility/Railroad Company.

- If AutoCAD drawing files are provided to the Utility/Railroad Companies, the Utility/Railroad Companies shall not make any alterations to the Designer's files as part of their review of the plans. Utility/Railroad Companies shall create new drawing layers using the respective utility colors to show proposed facilities and/or make changes to existing facilities. If existing utility/railroad information is to be edited, the Utility/Railroad Company should copy the existing information in the Designer's respective layer to a new

layer and make all edits in this new layer. Names of new layers should include the utility name. (For example: the current "ExistElect" layer should be duplicated and renamed "NGRID-ExistElect").

- Drawing files returned to the State Utilities Engineer should be accompanied by an outline of all changes and new layers created.