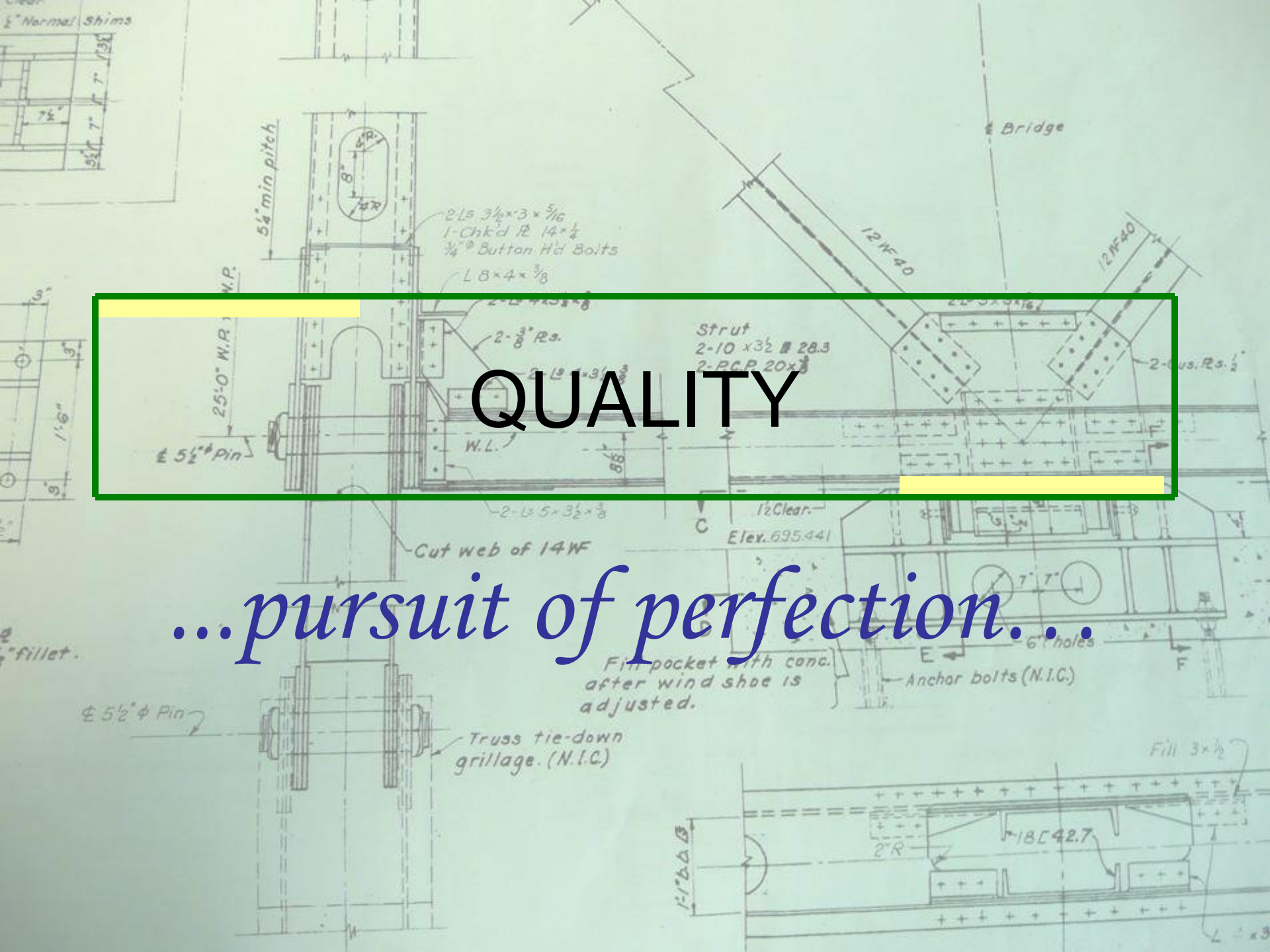




Bridge Inspection Quality Control & Quality Assurance

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QUALITY

...pursuit of perfection...

Why do it?

- All human endeavor is intrinsically not perfect.
- Required by the regulations
- Aging network, compounded by a lack of maintenance, means more structures with less of a safety factor.
- “Continuous Improvement” for safety
- Program consistency and uniformity.

QA/QC vs Audit

- Not intended to duplicate the FHWA oversight role.
- Intended to provide validation of good work and provide advice where improvement is possible.
- Review process is known to all... no surprises.
- Reviewers assume a desire for professional improvement and mutual respect

Definition of Quality Control

- QC from 23-CFR-650...
“Procedures that are intended to maintain the quality of the bridge inspection unit and load rating at or above a specific level.”

Definition of Quality Assurance

- QA from 23-CFR-650

“The use of sampling and other measures to assure the adequacy of the quality control procedures in order to verify or measure the quality level of the entire bridge inspection and load rating program.”

Fundamental Parameters

- The QA/QC program cannot take so much time and effort that it detracts from the inspection work
 - The program must be clear and transparent to the outside observer, evaluations must be:
 - Unbiased and not hiding deficiencies
 - QA/QC efforts must be effective in ensuring the program is keeping the bridges from becoming unsafe
- AND
- serious efforts are made to correct deficiencies

Quality Assurance by MDOT

- Done under contract by MDOT
- Majority of QA's done in a day or less.
- Very structured process.
 - Standardized meeting agendas
 - Standardized evaluation forms / checklists
- Review will cover reports and field check.
- Feedback Form
- Cycle through all agencies (MDOT & LA's) once every 10 years.

Quality Control

- Done at the inspection unit level by independent QTL.
 - Keep a copy of the credentials in the file.
- Review 10% of the network of the completed inspections in a given season.
- File review (all documents).
 - Review network data files (MBRS)
- Field verify ratings.
- Communication of findings.

Good QC practices

- Chose a variety of structure types, materials, and condition.
- QC reviewer to sign / initial and date reports that have been reviewed. File in bridge file.
- Maintain a QC file with list of structures reviewed and communication of findings.
- Check ratings vs. comments and if they are in alignment with the guidelines.
- Check the condition vs the inspection frequency.

File review

- Review at least 10% of the network.
- MBRS can assist with overall reviews.
- Review all documents.
 - Insp. Reports
 - Load Rating
 - Scour Evals
 - Pictures
 - Plans

Field review

- Check ratings with condition of bridge.
- Check comments with rating and condition.
- Frequency of inspection.
- General compliance with FC, scour, UW, and other inspection factors.
- Be aware of “Compliancy due to Familiarity”.
- Look for consistent errors which show up from bridge to bridge.

QC by Your Consultant

- If you do inspection under contract with a consultant, they need to do QC.
- The requirements are the same.
- Now a condition of pre-qualification.
- Contract template has the QC requirements.
- Request MBRS outputs for QC.

Summary

- QA reviews by MDOT are not audits and we attempt to take the stress out of the reviews and use the review for technical exchange.
- Keep the process tight and efficient.
- Feedback.

QUESTIONS?

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