July 27-29, 2021 | San Antonio, TX

Assessor Boot Camp Paul Schowalter

DIGON SYSTEMS

TETRA TECH

Cardno

wood.

Agenda

~~Sectioning~~

Direct Ratings

Data Quality

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Consistency

Eliminate different methodologies/biases/results

One site vs state vs country vs world

Standardized, objective, and repeatable inspection process

Without consistency, data can't be trusted

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Condition Index (CI)

0-100

100 = Out-of-the-box new

40 = End of Design Life (Condition Unreliable)

Inspections provide reality to the lifecycle curve

Can compare Section to Section, Building to Building, etc.

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Three Types of Ratings

Direct Ratings

Distress Surveys

Age-Based Ratings

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Direct Ratings

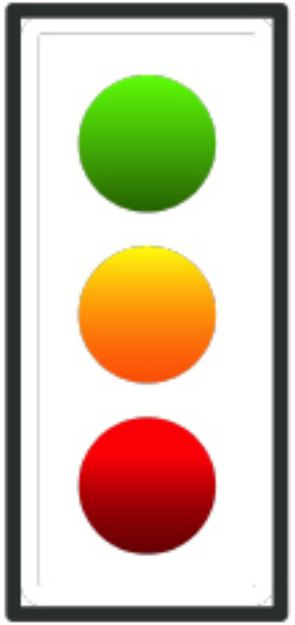
Most direct way to a CI

Pick a color – Green/Amber/Red

Pick a severity within the color – Plus/Mid/Minus

9 choices

Each corresponds to a specific CI



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Direct Rating Definitions

Ready for a contradiction?

Just be consistent

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Green

A Direct Rating of…	…using this criteria…	…will be recorded in BUILDER as a CSCI of:
Green (+)	Entire Section free of observable or known distress.	**100**
Green	No Section **serviceability or reliability** reduction. Some, but not all, minor subcomponents may suffer from slight degradation, or few major subcomponents may suffer from slight degradation.	**95**
Green (-)	Slight or no **serviceability or reliability** reduction overall to the Section. Some, but not all, minor subcomponents may suffer from minor degradation, or multiple major subcomponents may suffer from slight degradation.	**88**

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Amber

A Direct Rating of…	…using this criteria…	…will be recorded in BUILDER as a CSCI of:
Amber (+)	Section serviceability or reliability is degraded, but adequate. A very few major subcomponents may suffer from moderate deterioration with perhaps a few minor subcomponents suffering from severe deterioration.	**80**
Amber	Section serviceability or reliability is definitely impaired. Some, but not a majority of, major subcomponents may suffer from moderate deterioration with perhaps many minor subcomponents suffering from severe deterioration.	**71**
Amber (-)	Section has significant serviceability or reliability loss. Most subcomponents may suffer from moderate degradation or a few major subcomponents may suffer from severe degradation.	**61**

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Red

A Direct Rating of…	…using this criteria…	…will be recorded in BUILDER as a CSCI of:
Red (+)	Significant serviceability or reliability reduction in Section. A majority of subcomponents are severely degraded and others may have varying degrees of degradation.	50
Red	Severe serviceability or reliability reduction to the Section such that it is barely able to perform. Most subcomponents are severely degraded.	30
Red (-)	Overall Section degradation is total. Few, if any, subcomponents salvageable. Complete loss of Section or serviceability.	10

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BUILDER SUMMIT

Army Guide

FULLY OPERATIONAL	**GREEN**	Free of observable or known degradation.	**GREEN +**
		Normal wear requiring normal **preventative** maintenance.	**GREEN**
		Normal degradation requiring **corrective** maintenance.	**GREEN -**
IMPAIRED OPERATION	**AMBER**	**Minor** degradation requiring corrective **maintenance**.	**AMBER +**
		Moderate degradation requiring **corrective** repair.	**AMBER**
		Significant degradation requiring **moderate** repair.	**AMBER -**
INOPERABLE	**RED**	**Extensive** degradation requiring **major** repair.	**RED +**
		Severe degradation requiring **major** rehabilitation or partial replacement.	**RED**
		Complete degradation requiring **full replacement**.	**RED -**

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Overall

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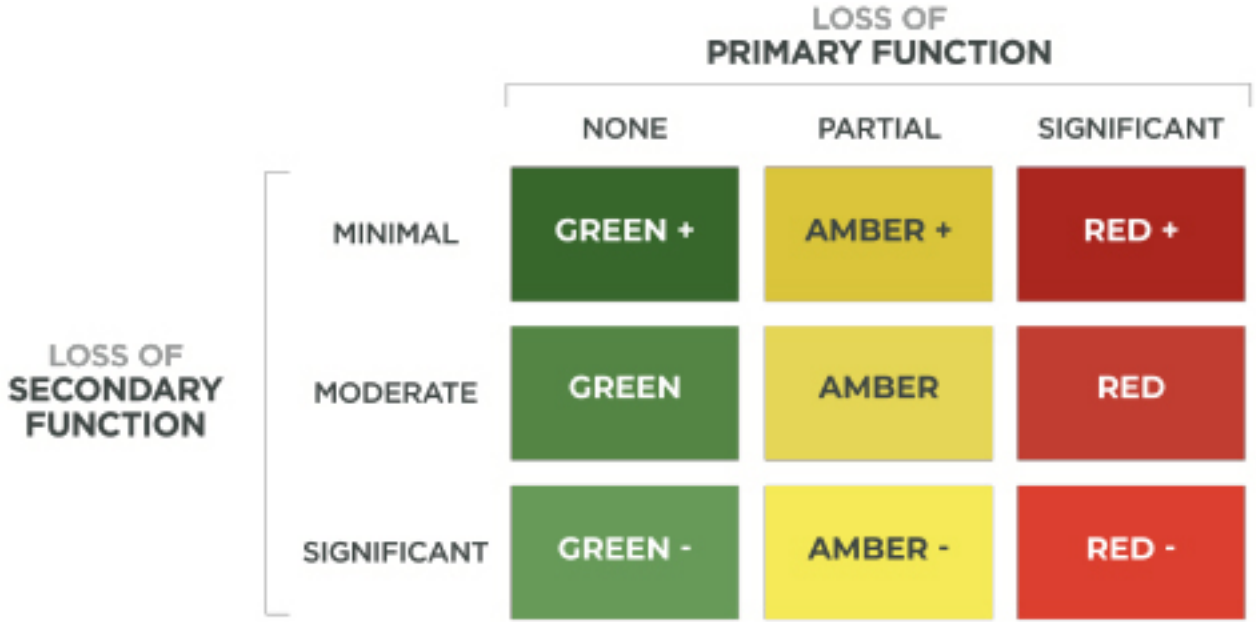
Primary and Secondary Functions



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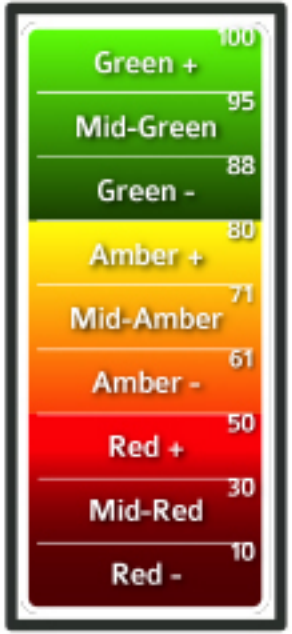
9 Ratings; 9 CIs

Not a range

What you pick is what you get

BUILDER then starts the degradation process



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Exceptions

Consider cost to fix

- Story time

Consider age

Consider outside factors

- Story time

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Pros and Cons

Advantages

- Relatively easy to do
- Relatively fast
- Relatively cheap

Disadvantages

- Very general
- No record of what exactly is wrong

Work Plan sample

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Work Plan Sample

Building Name	Section Category	Section Subtype	Section Name	Section Year	Work Type	Actual Cost
00001 - WAREHOUSE	D102002 OVERHEAD CRANES	Cranes, Bridge girder, 3 ton, 40' span	N/A	2000	Replace	$115,000
00001 - WAREHOUSE	D201001 WATERCLOSETS	General	N/A	2000	Repair	$6,200
00001 - WAREHOUSE	D201002 URINALS	General	N/A	2000	Repair	$5,600
00001 - WAREHOUSE	D201003 LAVATORIES	General	N/A	2000	Repair	$3,550
00001 - WAREHOUSE	D305003 FAN COIL UNITS	General	RADIANT HEAT PANEL (EA)	1995	Repair	$47,500
00001 - WAREHOUSE	B301004 FLASHINGS & TRIM	Flashings - Embedded Edge Metal	N/A	1992	Replace	$23,000
00001 - WAREHOUSE	D502002 LIGHTING EQUIPMENT	Interior Lighting, FL - 2 Lamp T8	N/A	1995	Repair	$31,500
00001 - WAREHOUSE	D502002 LIGHTING EQUIPMENT	Interior Lighting, FL - 1 Lamp T8	N/A	1995	Repair	$2,000
00001 - WAREHOUSE	D305004 FIN TUBE RADIATION	General	RADIATOR (EA)	1995	Replace	$2,000
00001 - WAREHOUSE	D502002 LIGHTING EQUIPMENT	Exterior Lighting	FLUORESCENT	2000	Replace	$3,150

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Distress Surveys

Identify all visible distresses on the subcomponents

Provides a record of exactly what is wrong

- Animal/Insect Damaged
- Blistered
- Broken
- Capability/Capacity Deficient
- Clogged
- Corroded
- Cracked
- Damaged
- Deteriorated
- Displaced
- Efflorescence
- Electrical Ground Inadequate
- Holes
- Leaks
- Loose
- Missing
- Moisture/Debris/Mold
- Noise/Vibration
- Operationally Impaired
- Overheated
- Patched
- Rotten
- Stained/Dirty

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Pros and Cons

Advantages

- Super detailed

Disadvantages

- Hard to do accurately
- Takes longer
- More expensive

Most agencies use a hybrid method

Anyone using Distress Surveys?

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Age-Based Ratings

BUILDER uses the lifecycle curve

How easy are they to do?

Where should you use them?

What about equipment you can't see inside?

- Story time

Paul likes age-based ratings

- Summit topic later

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Pros and Cons

Advantages

- BUILDER could be right
- Even faster
- Even cheaper

Disadvantages

- BUILDER could be wrong
- Can rely on it too much

Only viable if there is no visible damage

- BUILDER assumes natural degradation

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BUILDER
SUMMIT

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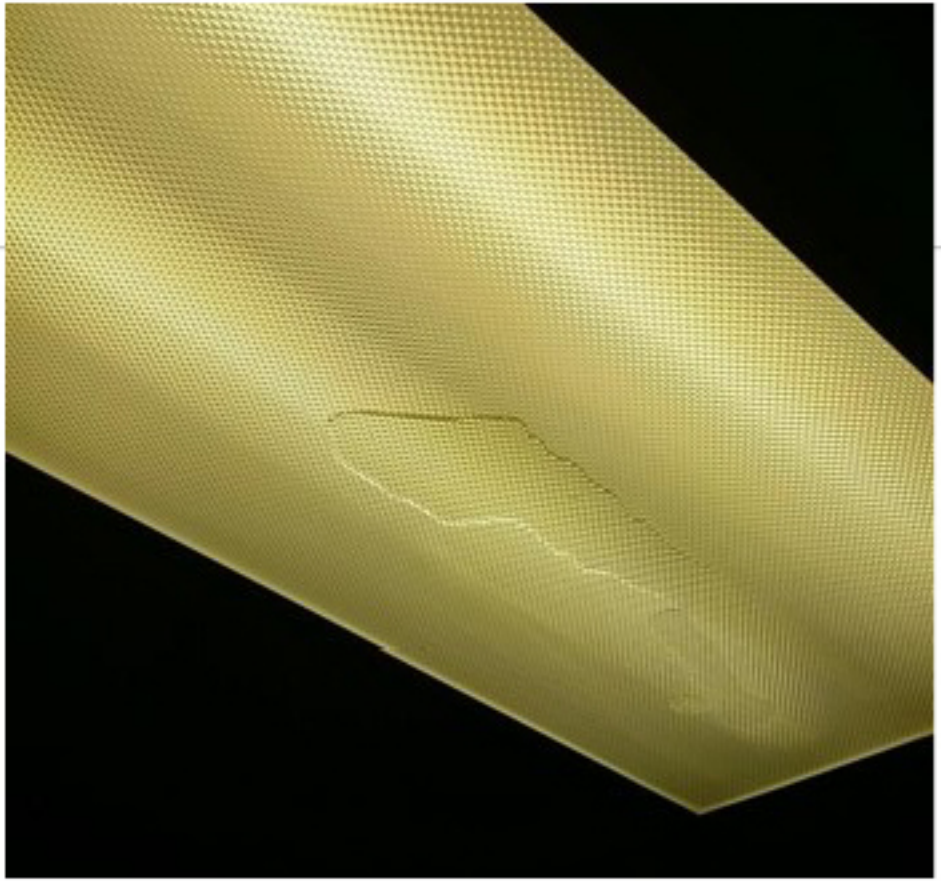

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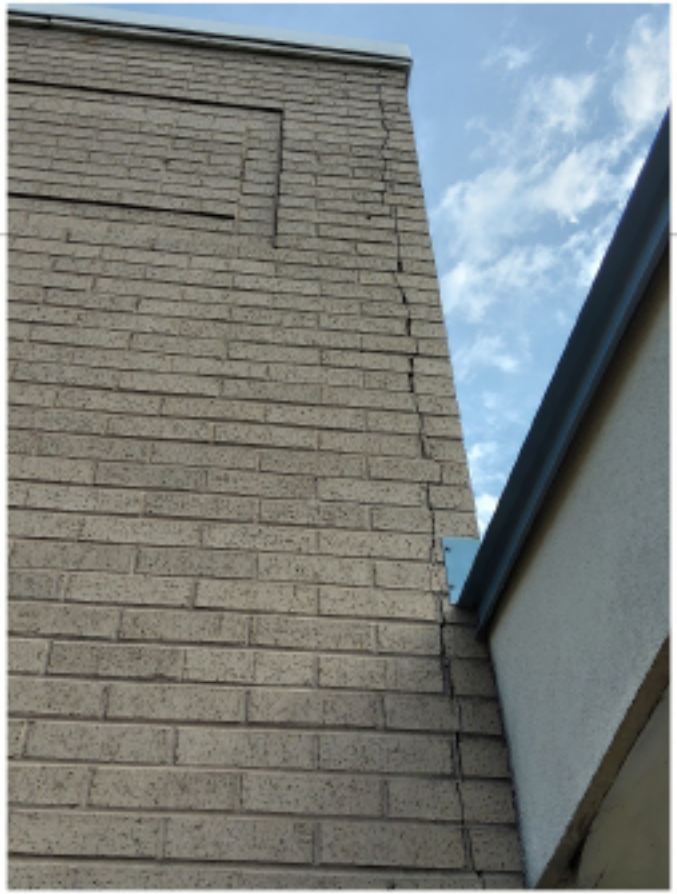

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Bottom Line

Training, training, training
Think of BUILDER's mission
Consistency = credibility

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