

NBE Elements

New tab for NBE Elements

The screenshot shows the NBE Elements interface. At the top, there are tabs: General Info, 3, Span Group, 62/61/36, Element Info, NBE, General Cmnts, Images, and Review Cmnts. Below the tabs, there are buttons: CoRE, Add Defect, Add Protective System, and Add Element. A table with columns: El. No., Env, Description, Units, Tot Q, Q/%, State 1, State 2, State 3, and State 4. The table contains several rows of data, including 'Other Deck', 'Delamination/Spall/Patched A', 'Steel Culvert', 'Steel Protective Coating', and 'Metal Bridge Railing'. At the bottom, there is a 'Verify Quantities' button.

El. No.	Env	Description	Units	Tot Q	Q/%	State 1	State 2	State 3	State 4
60	2	Other Deck	sq feet	123.0	Q	23.0	100.0		
> 1080	2	Delamination/Spall/Patched A	sq feet	100.0	Q		100.0		
240	2	Steel Culvert	feet	126.0	Q		126.0		
> 515	2	Steel Protective Coating	sq feet	999.0	Q	999.0			
330	2	Metal Bridge Railing	feet	20.0	Q	20.0			
> 515	2	Steel Protective Coating	sq feet	999.0	Q	999.0			

1 : Color coding description :

- Yellow : NBE Elements
- White : Defects associated with the element above.
- Blue : Protective systems

2 : The Add Element button adds new NBE elements. The "Add Protective System" and "Add Defect" buttons allow the user to add elements from these categories for the selected element in the list. Defects can be added to NBE elements or Protective systems. Protective systems can be added to NBE Elements.

3 : The CoRE button will display the CoRE elements from which these NBE elements were migrated.

4 : The Verify Quantities button will run a check on the quantities of the defects and the respective NBE elements.

Element Input screen

All Bridge Records for the State of Massachusetts [5176]

First Previous Next Last Delete Cancel Save & Exit Help

ELEMENT No : 60 60 : Other Deck

ENVIRONMENT : 2 2 : Low

STRUCTURE UNIT : 1

SCALE FACTOR : 0

TOTAL QUANTITY sq feet ☐ Quantity ☐ Percentage

STATE 1 STATE 2 STATE 3 STATE 4

DEFECTS 123.00 123.00 .00 .00 .00

No	Env	Desc	Units	Total Q	Q/%	State 1	State 2	State 3	State 4

DEFECTS associated with the current element

PROTECTIVE SYSTEMS

No	Env	Desc	Units	Total Q	Q/%	State 1	State 2	State 3	State 4

PROTECTIVE SYSTEMS associated with the current element

ELEMENT COMMENTS :

New bit. conc. sidewalk added.

1. Help Button will bring up a help screen for the current element.
2. Element selector.
3. Environment selector.
4. Quantity or Percentage toggle. Allows display and entry of States in either a quantity, or a percentage.
5. Element Tool.

Help Screen

Condition States				
Defect	1 GOOD	2 FAIR	3 POOR	4 SEVERE
Corrosion (1000)	None	Freckled Rust. Corrosion of the steel has initiated.	Section loss is evident or pack rust is present but does not warrant structural review.	The condition warrants a structural review to determine the effect on strength or serviceability of the element or bridge; OR a structural review has been completed and the defects impact strength or serviceability of the element or bridge.
Cracking (1010)	None	Crack that has self arrested or has been arrested with effective arrest holes, doubling plates, or similar.	Identified crack exists that is not arrested but does not warrant structural review	The condition warrants a structural review to determine the effect on strength or serviceability of the element or bridge; OR a structural review has been completed and the defects impact strength or serviceability of the element or bridge.
Connection (1020)	Connection is in place and functioning as intended.	Loose fasteners or pack rust without distortion is present but the connection	Missing bolts, rivets, or fasteners; broken welds; or pack rust; with	The condition warrants a structural review to determine the effect

Sample Defect input screen

First Previous Next Last Delete Cancel Save & Exit Info Help

ELEMENT No : 0
 ENVIROMENT : 2
 STRUCTURE UNIT : 1
 SCALE FACTOR : 1

☒ 1000 : Corrosion
☐ 1010 : Cracking
☐ 1020 : Connection
☐ 1080 : Delamination/Spall/Patched Area 60 Other Deck
☐ 1130 : Cracking (RC and Other)
☐ 1220 : Deterioration (Other)
☐ 7000 : Damage

☒ Quantity ☐ Percentage

TOTAL QUANTITY	STATE 1	STATE 2	STATE 3	STATE 4
sq feet				
.00	.00	.00	.00	.00

ELEMENT COMMENTS :

Defects and Protective systems inherit the environment of the parent element.
 The list of allowed Defects and Protective systems depends on the parent element based on the coding guide.

Entering Defect quantities.

The screenshot shows the 'Entering Defect quantities' window in the massDOT software. The interface includes a toolbar at the top with icons for 'First', 'Previous', 'Next', 'Last', 'Delete', 'Cancel', and 'Save & Exit', along with 'Info' and 'Help' buttons. The main form contains the following fields and controls:

- ELEMENT No :** 1080
- ENVIRONMENT :** 2
- STRUCTURE UNIT :** 1
- SCALE FACTOR :** 1
- PARENT ELEMENT No :** 60
- Other Deck** (checkbox)
- Defect Description:** 1080 : Delamination/Spall/Patched Area
- Severity:** 2 : Low
- Quantity/Percentage Selection:** ☒ Quantity, ☐ Percentage
- TOTAL QUANTITY sq feet:** 300.00
- State Quantities:**

STATE 1	STATE 2	STATE 3	STATE 4
.00	300.00	0	.00

If, based on the coding guide, the Defect does not have a definition for State 1, the total quantity defaults to State 2.

Element Tool

First Previous Next Last Delete Cancel Save & Exit Info Help

ELEMENT No : 60 60 : Other Deck
 ENVIROMENT : 2 2 : Low
 STRUCTURE UNIT : 1
 SCALE FACTOR : 0

TOTAL QUANTITY sq feet ☒ Quantity ☐ Percentage

				STATE 1	STATE 2	STATE 3	STATE 4	
DEFECTS				133.00	133.00	.00	.00	.00
No	Env	Desc	Units	State 1	State 2	State 3	State 4	
1080	2	Delamination/Spall/Patched A	sq feet	100.00	0.0	100.0	0.0	

PROTECTIVE SYSTEMS

No	Env	Desc	Units	Total Q	Q/%	State 1	State 2	State 3	State 4

ELEMENT COMMENTS :
 New bit. conc. sidewalk added.

1. Element tool. Clicking the Tool button brings up a popup menu with two options.
 - Check Quantities : will verify that the sum of the total quantities of all associated defects is less than or equal to the total element quantity; and ; if the sum of the defect quantities in each state is less than or equal to the element quantity in each state.
 - Roll up Defect States : will sum up the quantities of the defects in each state and assign it to corresponding element state.

[illegible]