Model Object ID – Earth Retaining Systems

Purpose:

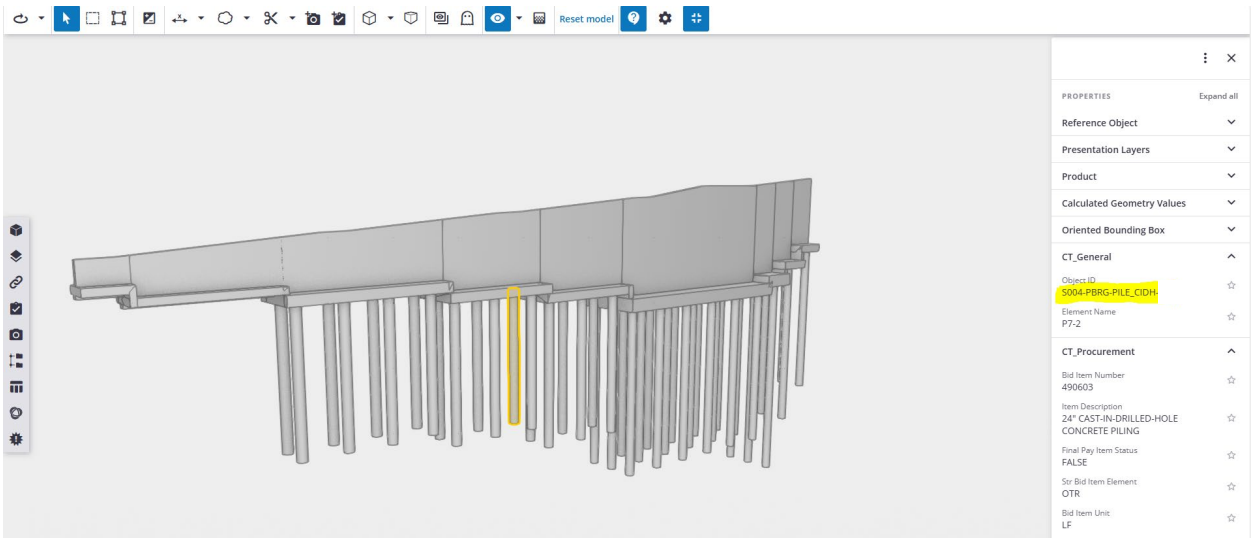
- "Object ID" is a clear, standardized attribute that Bridge Design implements on all model objects, so:
    - All objects in a model can be uniquely identified and isolated
    - Multiple objects in a model can be selected and isolated in a logical way
    - Structure Construction can target model objects to stake in the field

Example to Motivate Model Object ID:

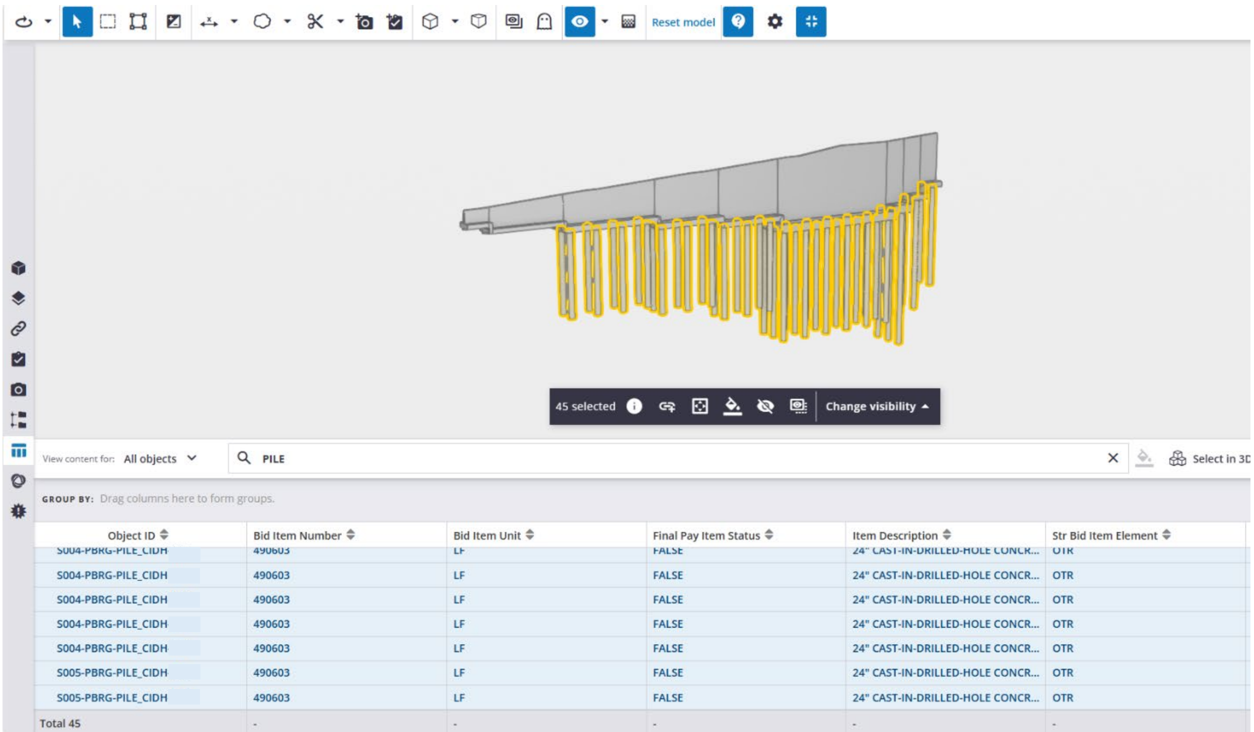
- A simple retaining wall is used as an example to demonstrate the purpose. The Object ID will add more value when applied to larger and more complex structures.

Purpose #1: Objects can be Identified and isolated

I can click on an object in the model space and find information via the Object ID attribute

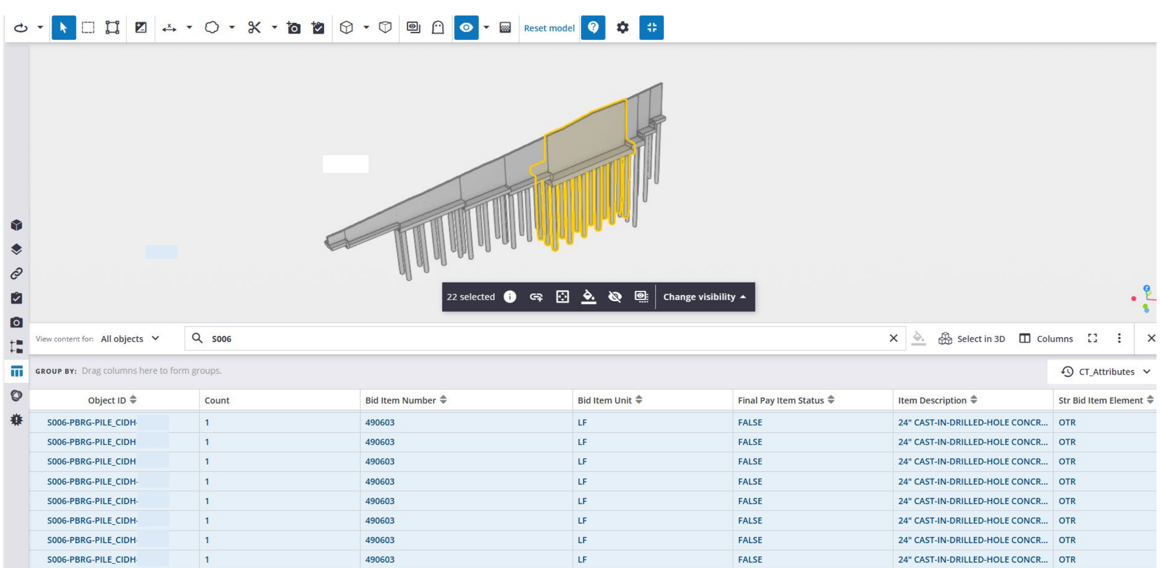


In the search-bar of the Trimble Connect Data Table, I have typed the (partial) third part of the Object ID. The full third part of Object ID is "PILE_CIDH." I'm searching for all objects that contain the word "**PILE**" in their Object ID.



Purpose #2: Multiple objects in a model can be selected and isolated in a logical way

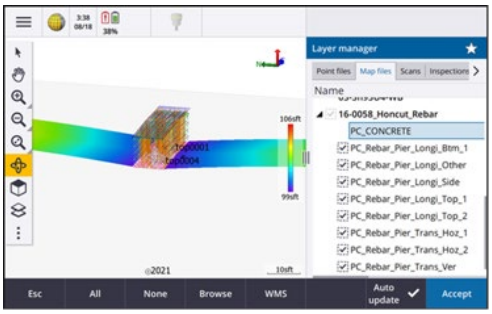
In the search-bar of the Trimble Connect Data Table, I have typed the first part of the Object ID. I'm searching for all objects that are within Wall Segment 6. As the Object ID defines this is "**S006**."

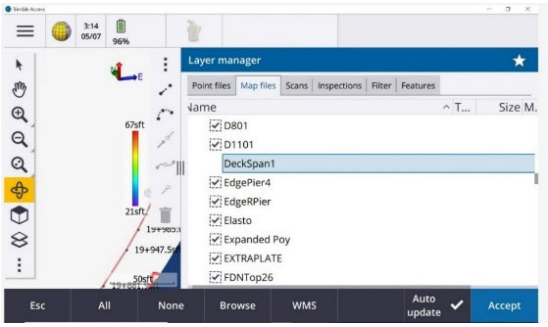


Purpose #3: Structure Construction can target Objects to stake in the field

Object ID can be used to prepare / isolate the parts of the model Structure Construction will be staking that day.

Object ID should be abbreviated so it can be easily read on the Trimble Access Screen. Examples of the interface in the field devices are shown below.





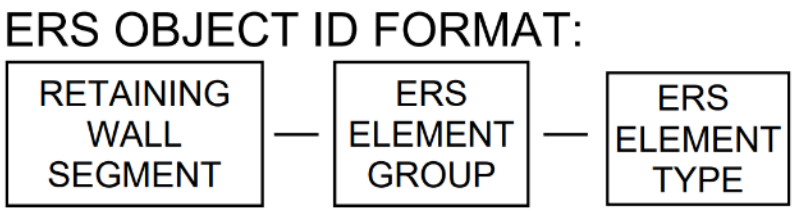
“OBJECT ID” Conventions for Earth Retaining Structures

STRUCTURE AND FORMAT OF THE OBJECT ID ATTRIBUTE:

The “Object ID” consists of 3 parts.

Parts of the “Object ID” are separated by a “Hyphen” character.

The abbreviations for each part of the “Object ID” are explained below.



PART 1: WALL SEGMENT

LOCATION	ABBREVIATION
Entire Wall	**S000**
Segment 1	**S001**
Segment 2	**S002**
Segment 3	**S003**

…and so on

PART 2: ERS ELEMENT GROUP

ERS ELEMENT GROUP	ABBREVIATION
RC Elements	**RC**
Piling - lateral loading	**PLAT**
Piling - Bearing	**PBRG**
Anchors	**ANCHR**
MSE	**MSE**
Architectural Treatment	**ARCH**
Drainage	**DRAIN**
Earthwork	**EARTH**
Misc. Accessories	**MISC**

PART 3: ERS MODEL ELEMENT

ERS ELEMENT GROUP (SEE PART 2)	ERS ELEMENT TYPE	ABBREVIATION USED IN OBJECT ID
Reinforced Concrete Elements	Facing- shoring layer (initial layer)	FCG_STR_INITIAL
	Facing- structural layer (final layer)	FCG_STR_FINAL
	Facing- Architectural layer	FCG_ARCH
	Precast panel facing	FCG_PRECAST
	Conventional wall stem	STEM
	Footing	FTG
	Waler	WALER
	Barrier Slab	BARSLAB
	Coping	COPING
	Cap Beam	CAPBEAM
	Concrete Joint	JT_CONC
	Return Wall	RTRNWALL
	Reinforcement	_R
Piling - lateral loading	Piling Steel Shape (Laterally Loaded)	PILE_STEEL
	Drilled Hole	DRLD_HOLE
	Backfill - Concrete (hole)	BKFILL_CONC
	Backfill - Lean Concrete (hole)	BKFILL_LCONC
	Pile - sheet	PILE_SHEET
	Lagging	LAGGING
Piling - Bearing	Piling Steel Shape (Deep Foundation)	PILE_STEEL
	CIDH Pile (Deep Foundation)	PILE_CIDH
	Concrete Pile Driven (Deep Fndn)	PILE_CONC
Anchors	Ground Anchor	GRANCHR
	Test Soil Nail[L]	TEST_SN
	Production Soil Nail	PROD_SN
MSE	MSE Soil Reinforcement	SOIL_R
	MSE Inspection Wires	INSPEC_WIRES
	MSE modular facing	FCG_MODLR
	Leveling Pad	LVLG_PAD
Drainage	Surface - Gutter, crest	GTR_CREST
	Surface - Gutter, downdrain	GTR_DWND

ERS ELEMENT GROUP (SEE PART 2)	ERS ELEMENT TYPE	ABBREVIATION USED IN OBJECT ID
	Subsurface- geocomposite	SUBS_GEO
	Subsurface- perm (permeable material)	SUBS_PERM
	Subsurface- pipe underdrain	SUBS_PUNDR
	Subsurface - drain pipe weephole	SUBS_DPW
Earthwork	Excavation - Structure	EXCAV_STR
	Backfill - Structure	BKFILL_STR
	Backfill - Pervious	BKFILL_PERV
Misc. Accessories	Fence	FENCE
	Barrier	BARR
	Architectural Treatment	ARCH
	Concrete Surface Texture	CS
	Tubular Railing	TUBRLG
	Safety Cable Rail	SAFCR
	Soundwall	SNDWL

EXAMPLES