

# Autodesk Construction Cloud (ACC) Guide-Change Order Process

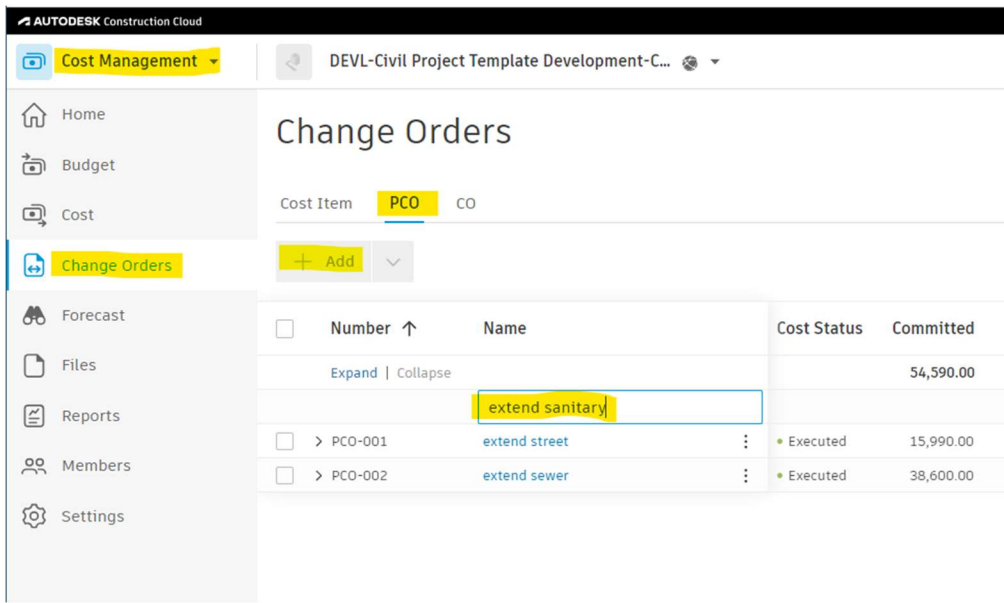
## Civil Infrastructure

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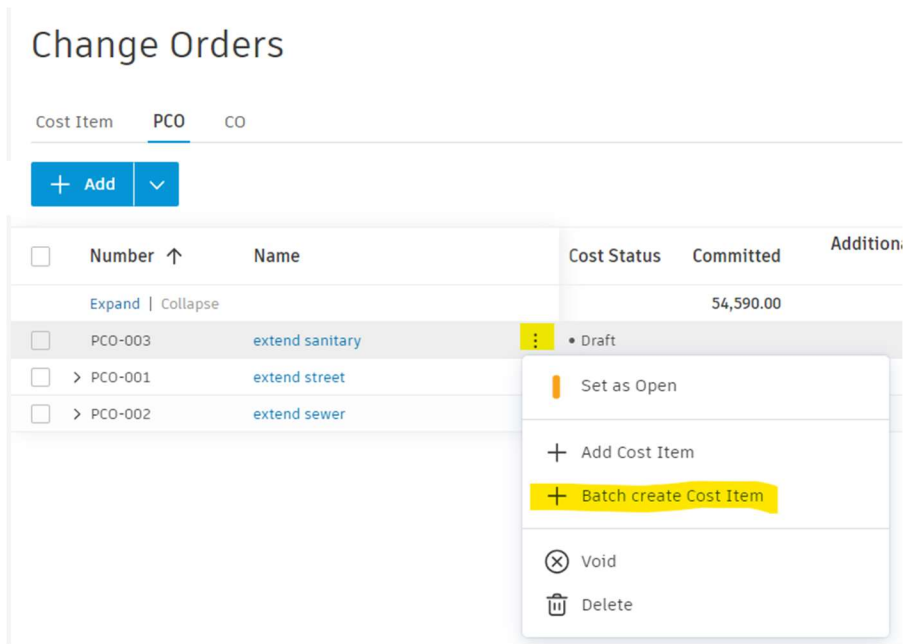
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### 1. Cost Management - Construction Inspector creates PCO

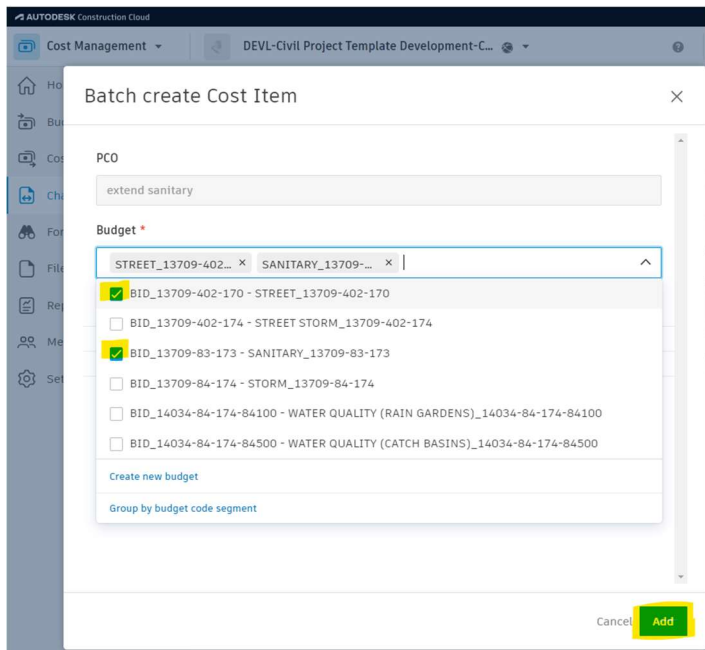
Navigate to Cost Management > Change Orders > PCO. Click Add. Type a concise, logical name



Click the 3 vertical dots next to the name. Select **Batch Create Cost Item**



Click check boxes next to Budgets, which are the account numbers, for the corresponding bid items. Click **Add** when done.



You will now see the account number(s) below the PCO. Click the 3 vertical dots and select **Define Hierarchy**. This will bring up the flyout.

## Change Orders

Cost Item **PCO** CO

+ Add ▾

Exp

Number ↑	Name	Cost Status	Committed	Addition
Expand   Collapse				54,590.00
PCO-003	extend sanitary	• Draft		
01	STREET_13709-402-170	• Draft		
02	SANITARY_13709-83-173			
> PCO-001	extend street			
> PCO-002	extend sewer			

- Define hierarchy
- Detach
- Delete

Click **Committed** tab. Estimated is not used at all in Cost Management. Select **Define hierarchy**. Select **Use hierarchy from Contract With GC**.

Change Orders

Cost Item **PCO** CO

+ Add ▾

Number ↑	Name	Cost Status	Committed
PCO-003	extend sanitary	• Draft	
01	STREET_13709-402-170	• Draft	
02	SANITARY_13709-83-173		
> PCO-001	extend street		
> PCO-002	extend sewer		

STREET\_13709-402-170  
Cost Item

Cost Summary

Estimated **Committed**

Number	Name	Qty	Unit
CI-011	STREET_13709-402-170	1	LUMP S...

- Define hierarchy
- Start a new hierarchy
- Use hierarchy from Budget
- Use hierarchy from Contract Wit...

Estimated Committed

Click check box next to applicable bid items. Click **Save**.

### Use hierarchy from Contract With GC SOV ✕

Contract With GC Name

Lake Mendota Drive ▼

<input type="checkbox"/>	Code	Name	Unit	Unit Cost
<input type="checkbox"/>	21301	REMOVE AND REPLACE MAILBOX	EACH	300.00
<input type="checkbox"/>	21302	CONSTRUCTION FENCE (PLASTIC) (UND...	L.F.	10.00
<input checked="" type="checkbox"/>	30201	TYPE 'A' CONCRETE CURB & GUTTER (M...	L.F.	22.00
<input type="checkbox"/>	30203	TYPE 'X' CONCRETE CURB & GUTTER	L.F.	30.00
<input type="checkbox"/>	30208	HAND FORMED CONCRETE CURB & GUT...	L.F.	50.00
<input checked="" type="checkbox"/>	30301	5" CONCRETE SIDEWALK	S.F.	7.50
<input type="checkbox"/>	30302	7" CONCRETE SIDEWALK AND DRIVE	S.F.	9.00
<input type="checkbox"/>	30340	CURB RAMP DETECTABLE WARNING FIE...	S.F.	30.00
<input type="checkbox"/>	30451	ROU... RFTAINING WAI...	S.F.	30.00

Cancel Save

You can expand the flyout by hovering on the left side to bring up resize arrow. Enter Qty for each bid item. The amount of each bid item and total for the account are calculated as you input data:

### Change Orders ✕

STREET\_13709-402-170  
Cost Item

Cost Item PCO CO

+ Add
▼

<input type="checkbox"/>	Number ↑	Name	Qty	Unit	Unit Cost	Amount	
<input type="checkbox"/>	01	STREET_13709-402-170	1	LUMP S...	1,790.00	1,790.00	⋮
<input type="checkbox"/>	20322	REMOVE CONCRETE CURB & GUT...	20	L.F.	10.00	200.00	⋮
<input type="checkbox"/>	20323	REMOVE CONCRETE SIDEWALK ...	100	S.F.	4.00	400.00	⋮
<input type="checkbox"/>	30201	TYPE 'A' CONCRETE CURB & GUTT...	20	L.F.	22.00	440.00	⋮
<input type="checkbox"/>	30301	5" CONCRETE SIDEWALK	100	S.F.	7.50	750.00	⋮

Cost Summary

Estimated	Committed
	1,790.00

Markups

Name	Estimated	Committed

Scroll down to **Custom Attributes** section or click section titles to collapse. Select **N** (for Negotiated) or **B** (for Bid).

The screenshot shows a software window titled "STREET\_13709-402-170" with a "Cost Item" label. Below the title is a "Cost Summary" section containing a table with columns for "Number", "Name", "Qty", "Unit", "Unit Cost", and "Amount". The table is split into "Estimated" and "Committed" sections. The "Committed" total is 1,790.00. Below the table are sections for "Markups", "Scope of Work", "Approval", "Dates", and "Custom Attributes". The "Custom Attributes" section is expanded, showing a dropdown menu with options "-", "N", and "B". The "B" option is highlighted in yellow. A "Clear" button is visible at the bottom right of the dropdown menu.

Estimated		Committed 1,790.00			
Number	Name	Qty	Unit	Unit Cost	Amount
CI-011	STREET_13709-402-170	1	LUMP S...	1,790.00	1,790.00
20322	REMOVE CONCRETE CURB & GUT...	20	L.F.	10.00	200.00
20323	REMOVE CONCRETE SIDEWALK ...	100	S.F.	4.00	400.00
30201	TYPE 'A' CONCRETE CURB & GUTT...	20	L.F.	22.00	440.00
30301	5" CONCRETE SIDEWALK	100	S.F.	7.50	750.00

Complete the same steps for the other account number-add bid items, input committed quantities and select N or B.

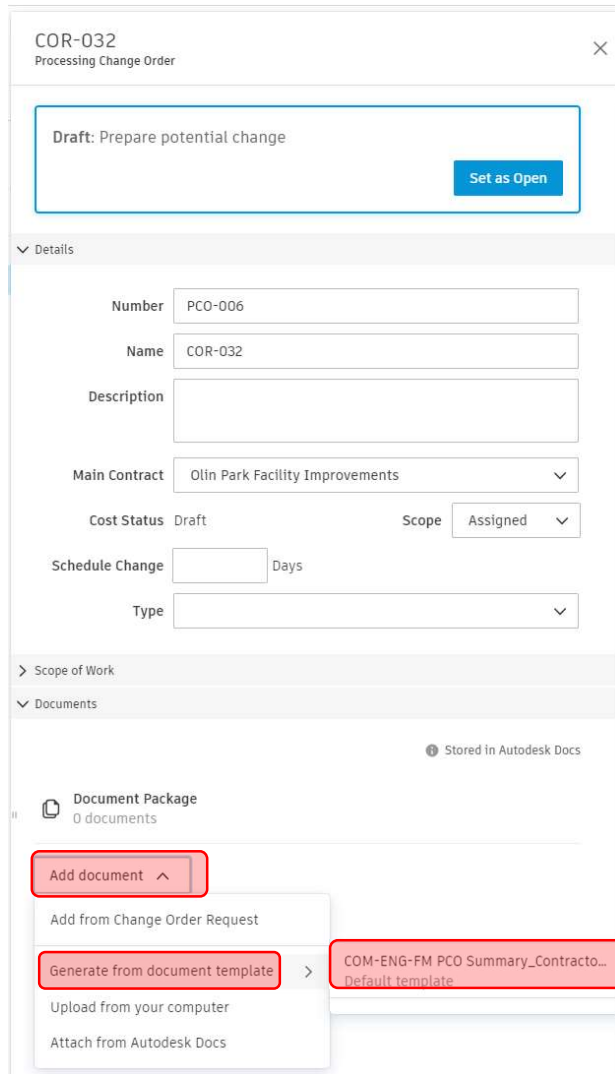
## 2. Cost Management - Construction Inspector prepares Change Order for Contractor Signoff

Clicking the PCO number in the column Creating a PCO switches tabs to *PCO*. Click arrow next to *PCO* to see COR(s). Input **New End Date by PCO** or **Additional days by PCO** depending on contract. This is the new contract end date or additional days as a result of this change order.

The screenshot shows the Autodesk Construction Cloud interface for managing Change Orders. The left sidebar contains navigation options: Home, Budget, Cost, Change Orders (selected), Forecast, Files, Reports, Members, and Settings. The main content area is titled 'Change Orders' and has three tabs: 'Change Order Request', 'Processing Change Order' (active), and 'Change Order'. Below the tabs is a '+ Add' button. A table lists change orders with the following columns: Number, Name, Cost Status, Committed, New End Date by PCO, and Budget Name. One row is highlighted, showing 'COR-032' with a committed amount of 926.52 and a status of 'Draft'. The 'New End Date by PCO' column for this row has a 'Select date' button. A calendar is open, showing the month of June 2023, with the 29th highlighted.

Number	Name	Cost Status	Committed	New End Date by PCO	Budget Name
Expand   Collapse			926.52		
> PCO-006	COR-032		926.52	Select date	

Click the name of the PCO to bring up the flyout. Under Documents, click *Add document* and then select *Generate from document template*. Select the only option.



Open the document package to open the file that the contractor will review:



Click the 3 vertical dots next to the PCO **Name**. Click **Set As Open**.

Number	Name	Cost Status	Committed	New End Date by PCO
> PCO-006	COR-032	Draft	926.52	Sep 20, 2023

**IMPORTANT:** The action of setting a PCO to open and having an up-to-date merged document package will trigger an automation that performs several steps. An up-to-date merged document package means that the document package has been opened since the latest change to one of the documents composing it was changed.

The automation will create a *CO Signoff by GC* form, reference it to the PCO, reference the document package to the form, add a link to the PCO in the form notes, and finally send an email with further instructions once complete. If the email fails to send, the document package was not merged after its documents composing it were changed. In that case, you will have to Revise the PCO, remerge the files and then set to Open again.

Changes to data in the system aren't immediately populated—you must regenerate document template if anything is changed. Changes to data without remerging document would be visible on the Activity Log at bottom of flyout.



### 3. Build-Construction Engineer reviews *CO Signoff by GC* Form and submits to Contractor

Check your email and follow one of the two sets of actions. This guide will proceed with 1<sup>st</sup> set of actions which assumes everything is correct. Follow link to Form.

Action Required: CO Signoff by GC Form ID #12 was successfully created on - 8182-Public Health Remodel v5.6 - 17047

Inbox x COM-ENG-CONST MGR x



Workato Notification <mailer@workato.com>  
to cadbimmgr+com.eng.const\_mgr

3:18 PM (0 minutes ago)

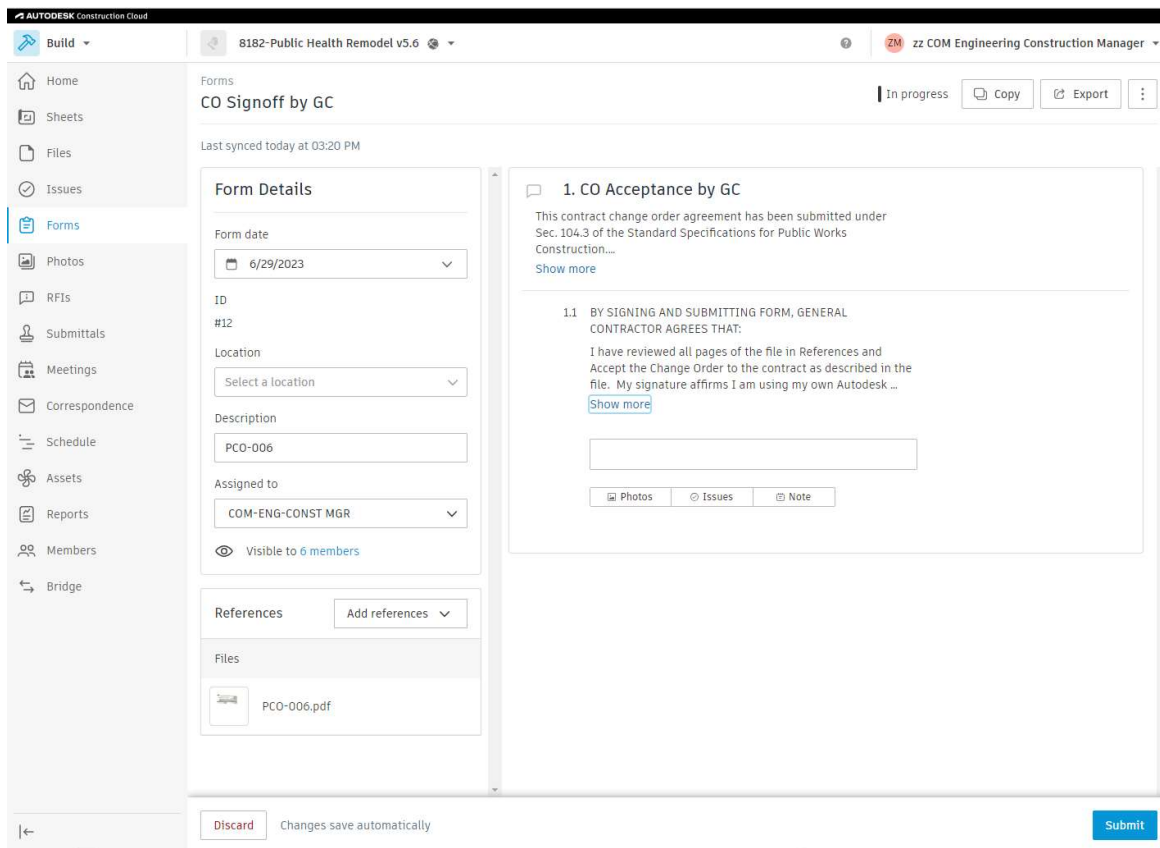
A CO Signoff by GC form was automatically generate and referenced to Processing Change Order PCO-006: COR-032.  
. The PCO's document package was also referenced to **Form #12**

Please follow the link to the form and verify the attached PCO document package. Then take one of two sets of actions

1. If correct, follow link to [Form #12](#) and submit form for the GC to review.
2. If incorrect,
  - 2A. Discard [Form #12](#).
  - 2B. Reject [PCO-006](#)
  - 2C. Delete document package.
  - 2D. Make changes in cost management, generate doc package, and set to open as you would normally.

-----  
This email was generated by Workato on behalf of City of Madison Engineering

Review the file referenced to the form. Submit to the Contractor for their review.



#### 4. Build-Contractor signs off *CO Signoff by GC Form*

Contractor will receive an *Action Required...* email with a link to a form *CO Signoff by GC*. Follow the link. View the file reference. Click *Show More* to read entirety of statements.

If you approve, add select *Sign and Submit*. If you have any questions or are not ready to sign, use the comments. The methodology to add comments by clicking the dialog bubble icon as shown is the same as it was for the *COR by GC form*.

If through comments it is determined that the document needs changes, select *Send back to editors*.

**Only Sign and Submit the form if you approve the Change Order and your signature looks good. The form cannot be edited after you submit.**

Forms  
CO Signoff by GC In review Export ⋮

Last synced today at 03:23 PM

#### Form Details

Form date  
Jun 29, 2023

ID  
#12

Location  
-

Description  
PCO-006

Created by  
zzz COM-ENG-ADSK Automation

Last updated  
Jun 29, 2023

Visible to 7 members

#### Form is in review

1 reviewer needs to sign

Send back to editors **Sign and submit**

#### 1. CO Acceptance by GC

This contract change order agreement has been submitted under Sec. 104.3 of the Standard Specifications for Public Works Construction...

Show more

1.1 BY SIGNING AND SUBMITTING FORM, GENERAL CONTRACTOR AGREES THAT:  
I have reviewed all pages of the file in References and Accept the Change Order to the contract as described in the file. My signature affirms I am using my own Autodesk ...

Show more

#### References

Files

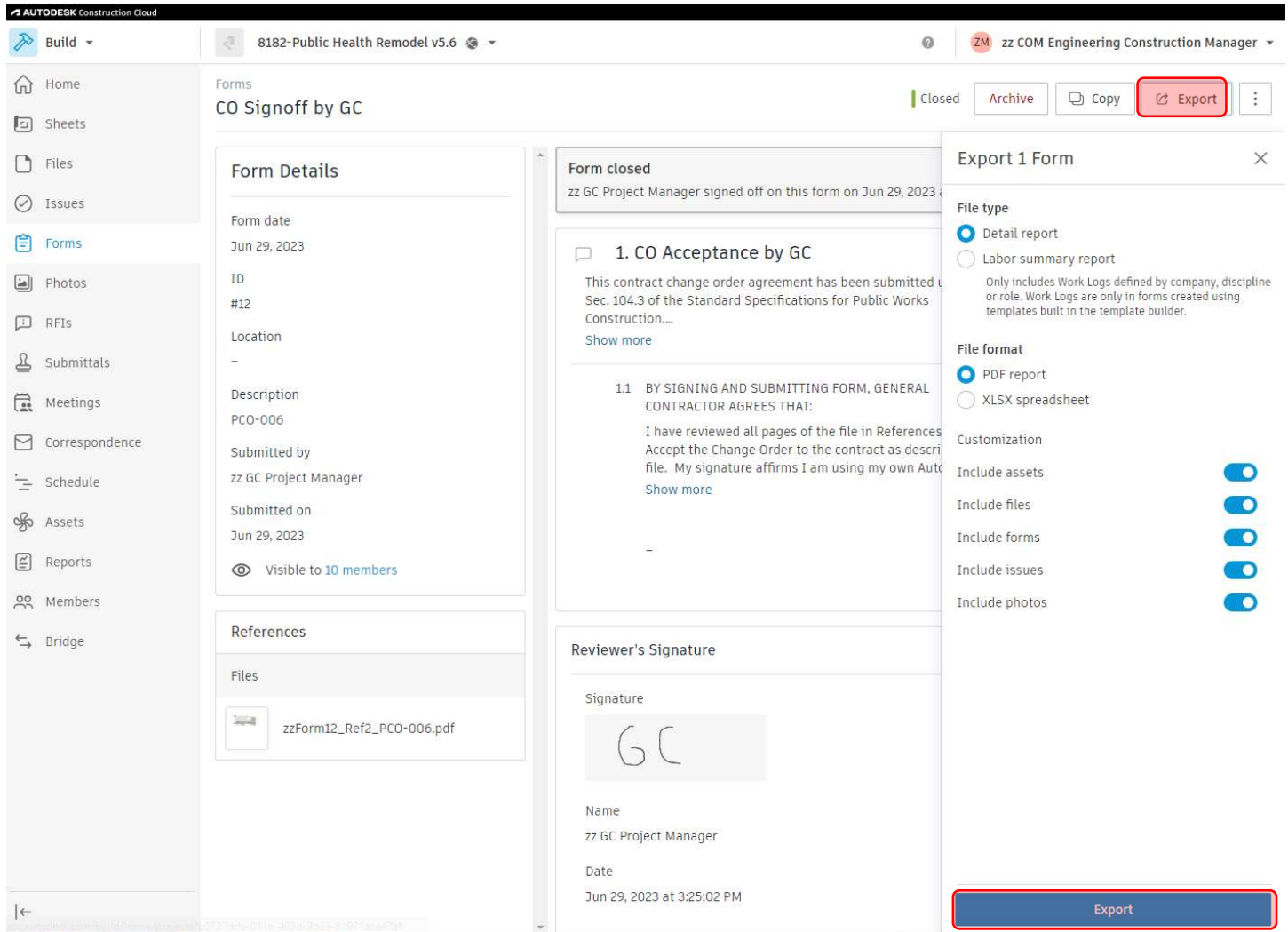
PCO-006.pdf

### 5. Cost Management-Construction Inspector prepares Change Order for staff review

After the contractor has signed the *CO Signoff by GC form*, the Construction Inspector and Construction Engineer will receive an Autodesk email immediately. It contains a link to the Form. You will also receive a Workato email within 5 minutes that contains a link to the corresponding PCO and Form. Follow the Form link in the Workato email

You will see that the form is closed and the GC has signed off.

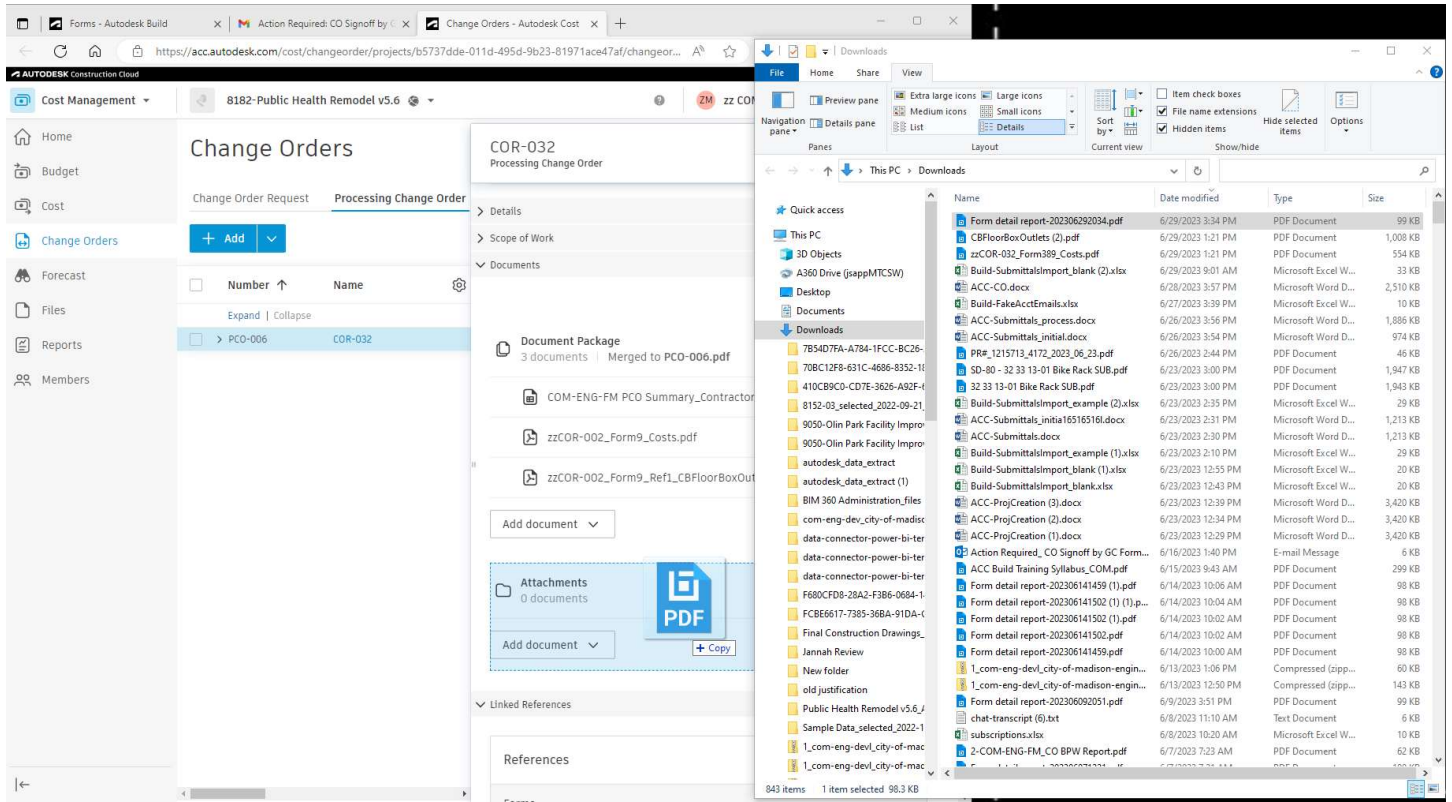
First, open link to the Form. Export to PDF as shown. Leave default settings with everything toggled on.



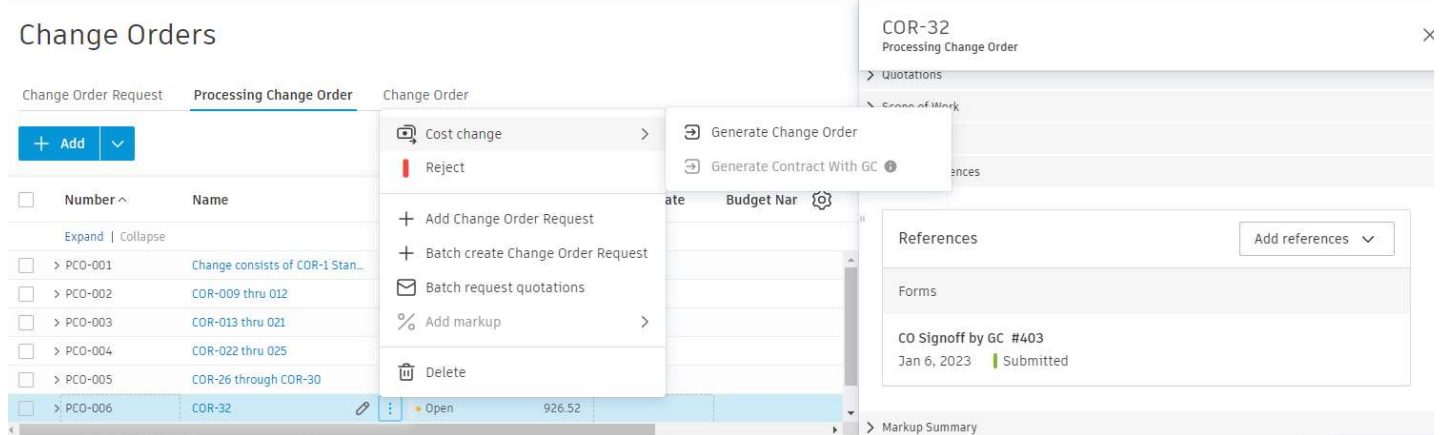
Click Download. Open folder containing downloaded PDF.

The screenshot displays the Autodesk Construction Cloud interface for a project named "8182-Public Health Remodel v5.6". The main content area shows a "CO Signoff by GC" form. The "Form Details" section includes the form date (Jun 29, 2023), ID (#12), and description (PCO-006). The "References" section lists a file named "zzForm12\_Ref2\_PCO-006.pdf". The "Form closed" section indicates that the GC Project Manager signed off on the form. The "1. CO Acceptance by GC" section contains the text: "This contract change order agreement has been submitted u Sec. 104.3 of the Standard Specifications for Public Works Construction..." and "1.1 BY SIGNING AND SUBMITTING FORM, GENERAL CONTRACTOR AGREES THAT: I have reviewed all pages of the file in References Accept the Change Order to the contract as descri file. My signature affirms I am using my own Auto Show more". The "Reviewer's Signature" section shows a signature that reads "GC". On the right side, a "Your export is complete" message is displayed, providing a shareable link (https://developer.api.autodesk.com/repor) and a "Copy link" button. Below this, there is an "Email to (optional)" field and a "Send emails" button. A prominent blue "Download" button is highlighted with a red border at the bottom right of the interface. A "Downloads" window is open in the top right corner, showing a list of PDF files, with the first file "Form detail report-202306292034.pdf" selected and its folder icon highlighted in red.

Going back to original email, open link to PCO. Sort by date modified so that it is the top result. Drag and drop the downloaded file to the attachments section of the PCO.



**Important: wait for blue wheel next to filename to finish spinning before proceeding. It indicates successful upload of the attachment.** Click the 3 vertical dots, select Cost change, and then Generate Change Order.



Failure to correctly attach the 1 exported file and only the 1 exported file will result in an error message. The error message is communicated by the name of the generated Change Order. Any erroneous Change Orders must be deleted and recreated, the next time following the instructions.

Upon Creation of the Change Order, ACC will switch to the Change Order Tab. Click *Set as Open*. A Workato Recipe will automatically analyze and then set all Open COs as BPW or non-BPW. **Never manually input data into the Type column, New End Date by CO or Additional dates by CO columns.**

Before setting to Open						After setting to open and Workato setting the type																																																																	
<p>Change Orders</p> <p>Change Order Request Processing Change Order <u>Change Order</u></p> <table border="1"> <thead> <tr> <th><input type="checkbox"/></th> <th>Number ^</th> <th>Name</th> <th>Status</th> <th>Committed</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td colspan="4">Expand   Collapse</td> <td>89,778.17</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>&gt; CO-004</td> <td>COR-022 thru 025</td> <td>Executed</td> <td>25,001.29</td> <td>BPW</td> </tr> <tr> <td><input type="checkbox"/></td> <td>&gt; CO-005</td> <td>COR-26 through COR-30</td> <td>Executed</td> <td>4,223.09</td> <td>Non-BPW</td> </tr> <tr> <td><input type="checkbox"/></td> <td>&gt; CO-006</td> <td>COR-32</td> <td>Draft</td> <td>926.52</td> <td></td> </tr> </tbody> </table>						<input type="checkbox"/>	Number ^	Name	Status	Committed	Type	Expand   Collapse				89,778.17		<input type="checkbox"/>	> CO-004	COR-022 thru 025	Executed	25,001.29	BPW	<input type="checkbox"/>	> CO-005	COR-26 through COR-30	Executed	4,223.09	Non-BPW	<input type="checkbox"/>	> CO-006	COR-32	Draft	926.52		<p>Change Orders</p> <p>Change Order Request Processing Change Order <u>Change Order</u></p> <table border="1"> <thead> <tr> <th><input type="checkbox"/></th> <th>Number ^</th> <th>Name</th> <th>Status</th> <th>Committed</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td colspan="4">Expand   Collapse</td> <td>89,778.17</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>&gt; CO-004</td> <td>COR-022 thru 025</td> <td>Executed</td> <td>25,001.29</td> <td>BPW</td> </tr> <tr> <td><input type="checkbox"/></td> <td>&gt; CO-005</td> <td>COR-26 through COR-30</td> <td>Executed</td> <td>4,223.09</td> <td>Non-BPW</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>&gt; CO-006</td> <td>COR-32</td> <td>Open</td> <td>926.52</td> <td>Non-BPW</td> </tr> </tbody> </table>						<input type="checkbox"/>	Number ^	Name	Status	Committed	Type	Expand   Collapse				89,778.17		<input type="checkbox"/>	> CO-004	COR-022 thru 025	Executed	25,001.29	BPW	<input type="checkbox"/>	> CO-005	COR-26 through COR-30	Executed	4,223.09	Non-BPW	<input checked="" type="checkbox"/>	> CO-006	COR-32	Open	926.52	Non-BPW
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<input checked="" type="checkbox"/>	> CO-006	COR-32	Open	926.52	Non-BPW																																																																		

Click blue text for name of CO to bring up flyout. Scroll down in flyout to add data to Custom Attributes. Always select types. For BPW Change Orders, select BPW Meeting date: <https://www.cityofmadison.com/employeenet/engineering/board-of-public-works-common-council-calendar>. Provide a Schedule Change Explanation as needed.

Open extend sanitary CO ✕

> Dates

✓ Custom Attributes

BPW Meeting 📅 Select date

TY\_Street

TY\_Sewer-Sanitary

TY\_Sewer-Storm

TY\_Water

TY\_TE-Electrical

TY\_Parks

TY\_Facilities

Schedule Change Explanation:

Justification Comment-Inspector

Actual vs Estimated Quantities differ

Missing Bid Item or Additional Bid Item needed

Field Decision (Expanded Scope)

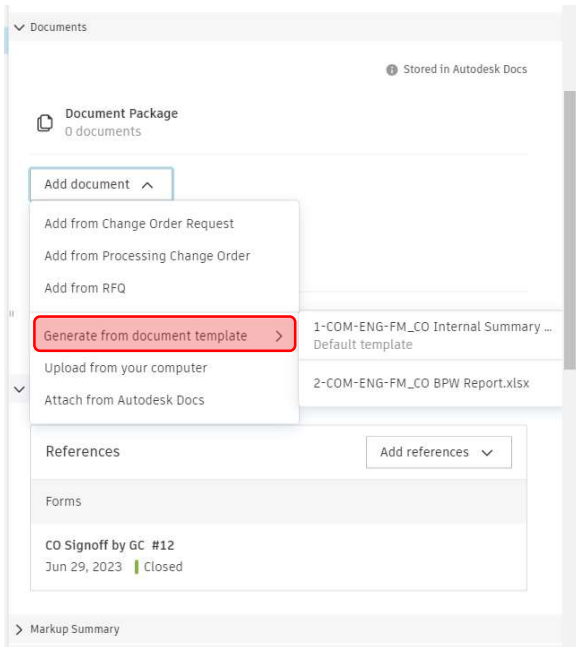
Differing site conditions

Design did not adequately anticipate field conditions

Underground conflicts (utility revision)

Design Changes

After entering in Custom Attributes Data, scroll back up to Documents Package. Create Document package as shown below. Very similar to the process for the PCO. Note that the document package will not reflect any data modifications after its creation. Always create 1-COM-ENG-FM\_CO Internal.xlsx template. For BPW type COs, also create 2-COM-ENG-FM\_CO BPW.xlsx. **Do not edit these files, change custom attributes and then regenerate to update XLSX files.**



**TIP:** If you need to change custom attributes or COR justification data or anything else, need to also update the Document Package. Click the triple vertical dot icon next to the Justification file and select Regenerate. You will also need to reopen the Document Package for the changes to be reflected on the document reviewed by staff. A new version will also be created.

Click blue *Send* button in the upper right of the flyout. A pop up to *Send email to reviewers* will appear. Hit Send to start the review process.

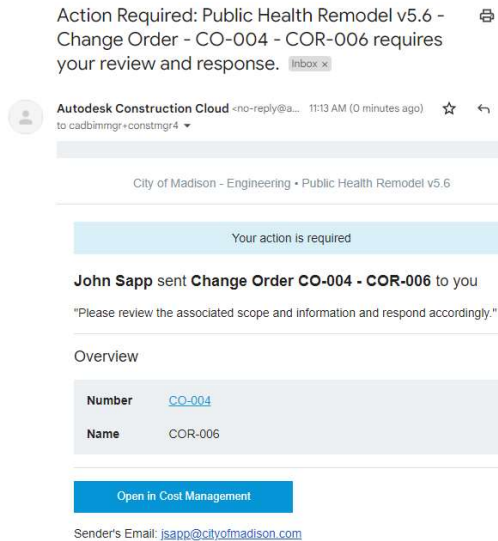
The screenshot displays a software interface for managing Change Orders. A modal window titled "Send email to reviewers" is overlaid on a "COR-006 Change Order" flyout. The modal includes a "Subject" field with the text "Change Order - CO-004 - COR-006 requires your review and response.", a "Remind reviewers" dropdown menu containing "zConstMgr zConstMgr\_Last" and "zProjMgr ProjMgr\_Last", an "Email message" field with the text "Please review the associated scope and information and respond accordingly.", and a "Due date" field set to "Aug 8, 2022". A blue "Send" button is located at the bottom right of the modal. The background flyout shows a progress bar with a blue circle at the current step, "Await internal review: Project Manager Approval", a list of reviewers, and a "Due date: Aug 8, 2022". Below this, a "Details" section lists: Number CO-004, Name COR-006, Description, Main Contract Main Contract, Budget ADDLCOs12345-11-112 - Signage, Status In Review, and Schedule Change 0 Days.

## 6. Cost Management-Project Manager provides comments and City Staff review

Now the Change order will work through the Change Order Approval Workflow. It is a series of 5 (Non-BPW COs) or 7 (BPW COs) steps, some of which have multiple reviewers able to complete the review on a first come first serve basis. The Change Order will be listed as *Await Internal review: **Step name*** where **Step name** is the custom name given on the Change order approval workflow. The next reviewer in line is also listed.

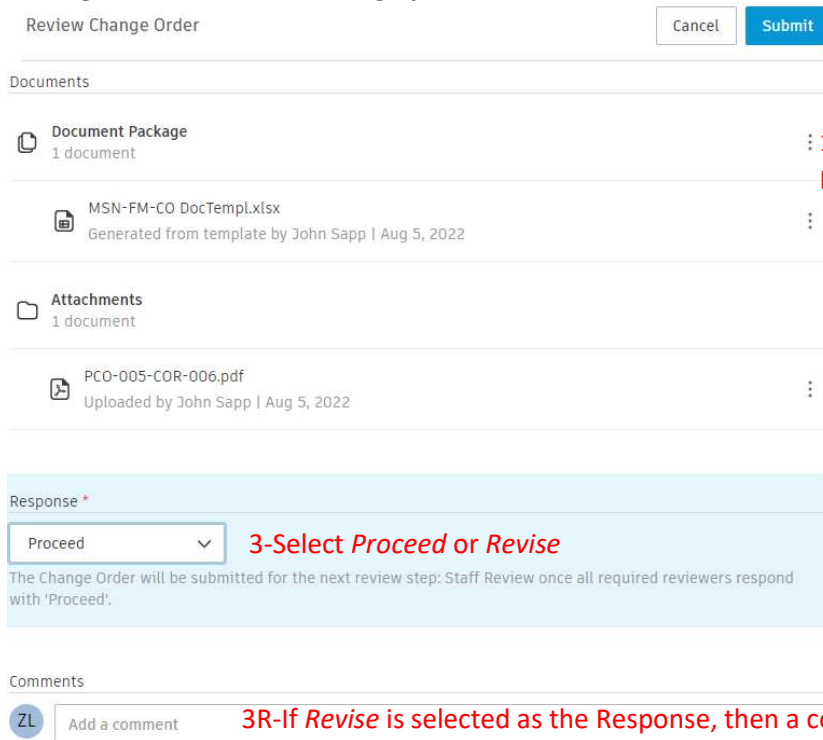
The process is nearly identical for each step, so just one Approval step is shown in this guide. **The first step is always the Project Manager. The Project Manager must always provide a comment for Change Order Justification.**





<Sample of Email. Review staff would follow link via blue *Open in Cost Management* button

**Clicking review in ACC will bring up this window**



4- Submit after selecting *Response*

1- Select *Open* to view Document Package PDF in the system

2- Select *Open* to view Attachments PDF in the system

3-Select *Proceed or Revise*

3R-If *Revise* is selected as the Response, then a comment must be provided prior to *Submit*. **Note that this will reset entire review process.** It is best to first use @functionality to resolve any issues. **The Project Manager must always provide a comment here.**

After completion of staff review, an email is generated and sent to contractor with a link to the document package and the change order in ACC.

**The final step is for Accountant to set the Change Order as Executed. It will be recorded as such throughout the system. NOTE: only users with Project Admin status can undo a CO once Executed and the process is involved.**