City of Portland - BES

Survey Design/Topo Request (SVYDR)

A step by step guide

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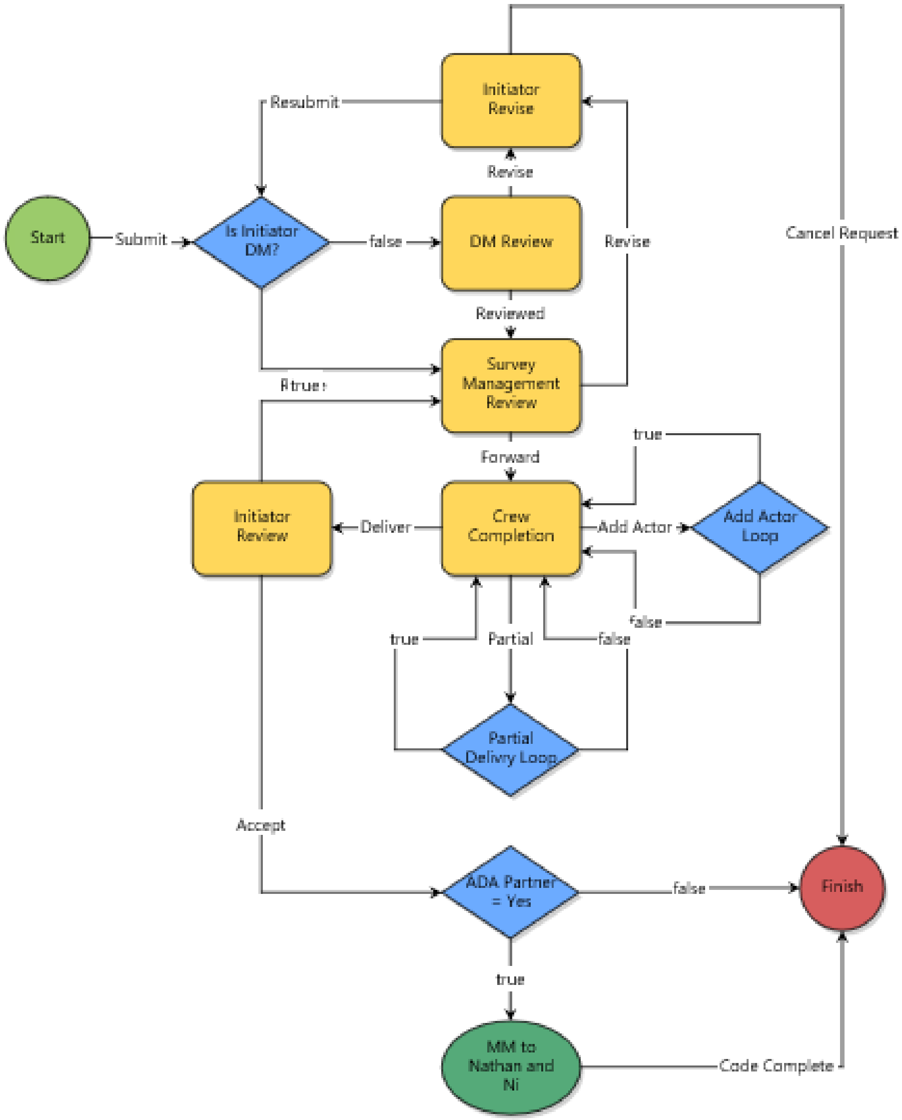
Version 1 (4/16/2020)

Workflow for Survey Design/Topo Request Process (SVYDR)



Getting Started

Before starting any survey request, there are two key items will be needed: An open and functioning billing number and a fully scoped project.

Billing Number

All projects need to have a valid TOW code associated with the current Phase. Survey will default to "D41" unless otherwise indicated in the request.

Survey will then set up an internal order with PBOT's survey section to bill time to. The project manager will receive an email when this is setup.

Note: All charges related to this project, including flagging, MH raises, or other work will be charged to this number.

Project Scope

Be sure to fully scope your project before requesting survey work.

Typically, add-on requests or later revisions to the scope take three to four times as long (thereby costing 3 -4 times as much) than if collected the first time. It is far better rounding up or adding a piece now than later.

Mostly Scoped? … but I want to get started anyway.

If the project needs to get started on but is not fully scoped, there are a few options available to allow Survey to get started on the work while the scoping is being finalized.

Pre-Survey Request

The easiest option is to request a pre-survey request. At some point the pre-survey request will be its own Heron process, but for the time being use the Design/Topo process.

For a pre-survey request, survey will complete the control network and may additionally look at MH details or ROW needs that are more general to the project. This will allow them to get started on the actual topography work as quick as possible once the project has been scoped.

Multiple Requests

The other option for large scattered projects (usually large-scale sewer or multi-site SSE's), is to scope portions of the project and submit multiple requests.

It is best to group sites geographically (e.g. the NW quadrant).

It is also better if each area is unconnected to other areas. Delivering connected areas in separate pieces makes for messy drawings. For this reason, this method is not recommended for long runs, inflow projects or other work encompassing large contiguous sections.

Scheduling & Due Dates

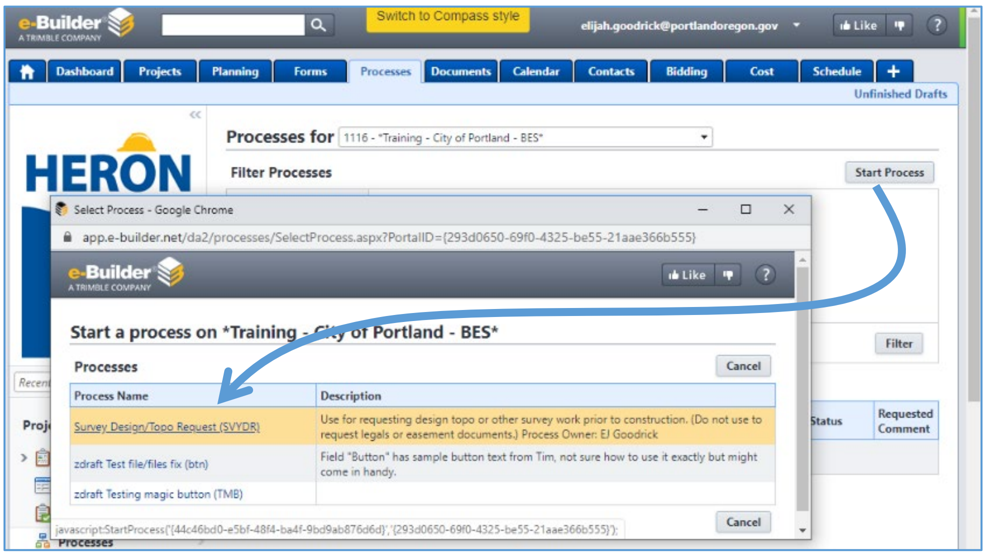
Be sure to have a clear idea of the design schedule and priorities when submitting the survey request. PBOT survey is servicing multiple Bureaus with a variety of different priorities and project sizes. Some considerations:

1. At a minimum it takes approximately two or three weeks from the receipt of a survey request to being able to get a crew on site to *begin* work.
2. For small, one or two block projects typically allow 6 to 8 weeks for completion.
3. Larger projects will just take longer. It is not uncommon to have some projects take up to 6 months from the initial request to final delivery. The usual solution is to deliver the project in pieces, but this is not always possible. Survey will work to set reasonable expectations and may request that you coordinate priorities within your work group. Survey also has options for consultant surveyors to handle an overload of work.
4. Be mindful of Construction season, usually between May to October Survey is extra busy with construction staking requests that *must* be prioritized over other work. Either allow extra time during this window, or – better – plan design/topo needs for winter when our workload is lower.

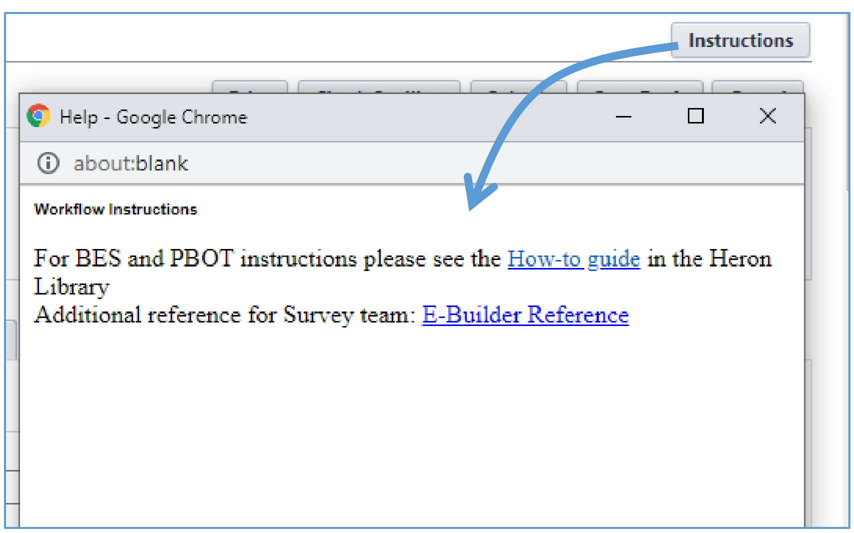
Starting the Process

The Survey Design/Topo Request process can be started by any member of the design team. Documents created during this process will automatically be filed in the Heron Folder Documents > 09.0 Survey.

1) Navigate to the project and select **Processes** on the left side menu.
2) Select the **Start Process** button at the top right (this process may not be in the Type of Process drop-down menu unless it has been used in the project before).
   Choose **Survey Design/Topo Request (SVYDR)** from the list of processes in the column Process Name.



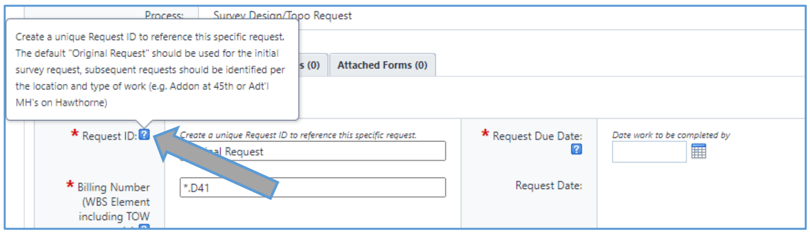
After you start the process, click the Instructions button in the upper right corner of each page, to see a popup that contains a link to these instructions in the Heron Library.



Instructions

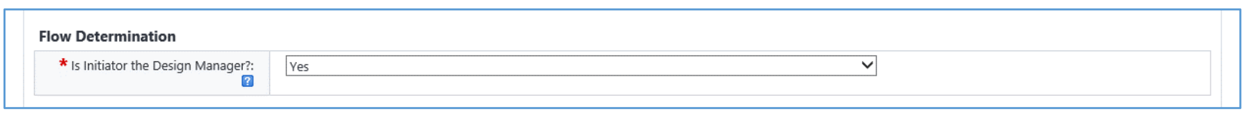
On some pages, you'll see a blue band across the page that contains instructions about the business process and the data that needs to be entered in that area of the workflow process.

In addition, there is a question mark inside a blue box beside some labels. This symbol indicates a tool tip that provides information about what should be entered at that location. Holding your mouse pointer over a tool tip will cause an information bubble to appear, such as:



Flow Determination

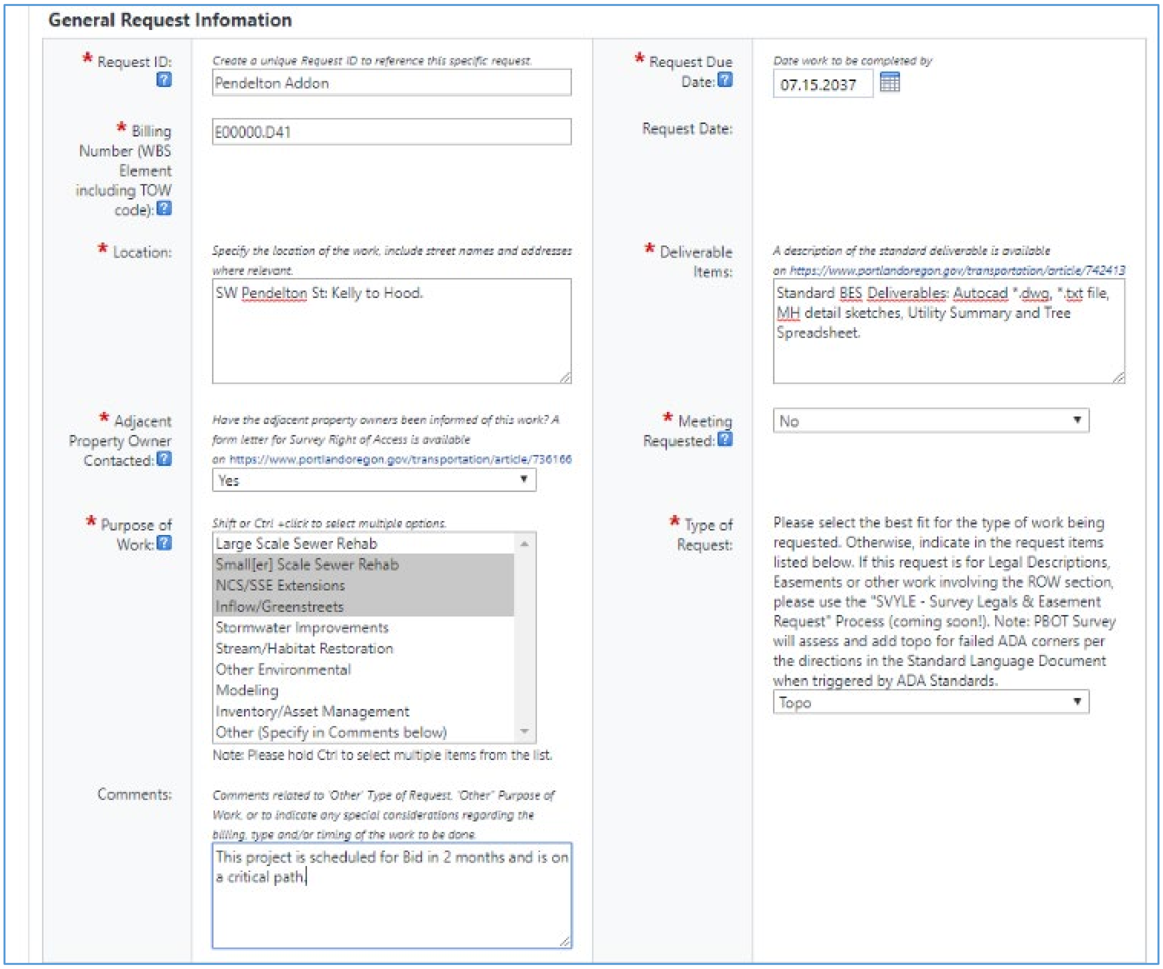
The first question that may or may not come up at the top of the screen depending on your role in the project.



All survey requests must be reviewed by a Design Manager. If you are not the Design Manager this field will not be visible, and the request will route to the design manager automatically. If you are the Design Manager this field will default to Yes and you should only change it to No if you wish to review your own submitted request.

General Request Information

Please complete the information at the top of the request. Remember that fields marked with a ★ are required.



General Request Infomation

* Request ID:	*Create a unique Request ID to reference this specific request.* Pendelton Addon	* Request Due Date:	*Date work to be completed by* 07.15.2037
* Billing Number (WBS Element including TOW code):	E00000.D41	Request Date:	
* Location:	*Specify the location of the work. include street names and addresses where relevant.* SW Pendelton St: Kelly to Hood.	* Deliverable Items:	*A description of the standard deliverable is available on https://www.portlandoregon.gov/transportation/article/742413* Standard BES Deliverables: Autocad *.dwg, *.txt file, MH detail sketches, Utility Summary and Tree Spreadsheet.
* Adjacent Property Owner Contacted:	*Have the adjacent property owners been informed of this work? A form letter for Survey Right of Access is available on https://www.portlandoregon.gov/transportation/article/736166* Yes	* Meeting Requested:	No
* Purpose of Work:	*Shift or Ctrl +click to select multiple options.* Large Scale Sewer Rehab; Small[er] Scale Sewer Rehab; NCS/SSE Extensions; Inflow/Greenstreets; Stormwater Improvements; Stream/Habitat Restoration; Other Environmental; Modeling; Inventory/Asset Management; Other (Specify in Comments below). Note: Please hold Ctrl to select multiple items from the list.	* Type of Request:	Please select the best fit for the type of work being requested. Otherwise, indicate in the request items listed below. If this request is for Legal Descriptions, Easements or other work involving the ROW section, please use the "SVYLE - Survey Legals & Easement Request" Process (coming soon!). Note: PBOT Survey will assess and add topo for failed ADA corners per the directions in the Standard Language Document when triggered by ADA Standards. Topo
Comments:	*Comments related to 'Other' Type of Request, 'Other' Purpose of Work, or to indicate any special considerations regarding the billing, type and/or timing of the work to be done.* This project is scheduled for Bid in 2 months and is on a critical path.		

- **Request ID:** Please create a concise, meaningful and unique id for this request. The 1st request should be the default "Original Request" and any subsequent requests should have some indication of what is being asked and where (e.g. "Add-on at 34th"). Numbering them "Request 1", "Request 2" is not advised. A few terms that mean a lot to survey:
    - "Pre-Survey" indicates that this is a presurvey request. See special notes in the Request Items on page 12 for special directions regarding pre-survey requests.
    - "Original Request" should be the 1st request sent to survey for actual design & topography work, unless we are doing an unusual task prior to the main design request
    - "Add-On" indicates a new area to be surveyed or a major extension of an existing area.
    - "Fill-In" indicates a small amount of topo to be added to an existing area.
    - "ADA" for "Oops, I guess we did trigger all those corners."

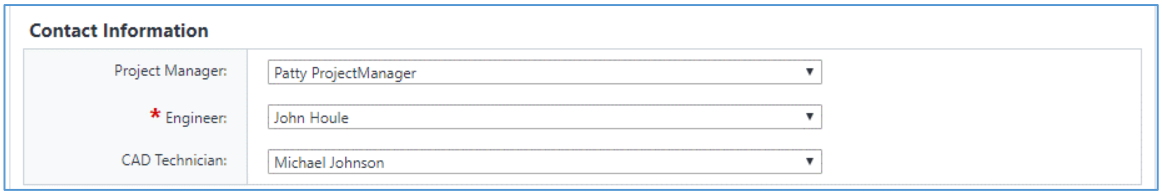
      Note: Survey will use this ID field in their file naming on deliverables for easy reference to the actual request. Survey may also take the liberty of editing this field.
- **Request Due Date:** This is the date the survey is to be completed by. Please see Scheduling & Due Dates on page 6 regarding due dates.

Note: This field is editable by survey since it is often modified based on emails or meetings. Survey will only change this with your permission.

- **Billing Number:** Please indicate the appropriate billing number for this request. Typically this is the E00000 number with the TOW code of ".P41" or ".D41". The number 41 indicates survey costs and should always be included as such. See section Billing Number on page 6 for additional directions.
  Note: If the billing changes part way through, use the request comment option to Survey Management to update this.
- **Request Date:** This field will automatically populate when the request is submitted.
- **Location:** Please describe the location of the work. We do not need a comprehensive list of sites for larger or scattered projects, a general area is sufficient.
- **Deliverable Items:** This is set to default to the usual deliverable items. If you will need something different, please indicate what files you would like returned upon completion of this task.
- **Adjacent Property Owner Contacted:** Survey may require that all adjacent property owners be contacted prior to the beginning of work. If this has already been completed, please indicate that in this field.
  It never hurts to let people know survey is going to be in the area. However, Surveyors have specific legal requirements set forth in the ORS before they are able to enter private property for any reason. The usual reasons for BES projects, besides actual work on private property, is FFE's, ADA Ramps and WQF facilities or sewer lines on or within 10' of private property.
  Note: A form letter for Survey's specific ORS requirements is available here: https://www.portlandoregon.gov/transportation/article/736166.
- **Meeting Requested:** If you would like to meet with Survey, or have something scheduled, please let them know.
- **Purpose of Work:** Please indicate the type of project to be completed. You can hold shift and select any number of items.
- **Type of Request:** Indicate they type of work being requested. Usually, this would be "Topo", but there are a couple other options as well. This helps survey coordinate and prioritize the work to be done.
- **Comments:** Please use this section to expand on any of the above items.
  The comments section is especially useful if you would like to have a phased delivery of a larger project. Use the final delivery date in the "Due Date" field and indicate here the specific timing of requests. Also indicate priorities for delivery. E.g. "Please phase delivery between 2/21/2008 and 7/15/2037" or "Please begin in the northwest quadrant"
  Note: Please do *not* use this field to describe the actual work to be done.

Contact Information

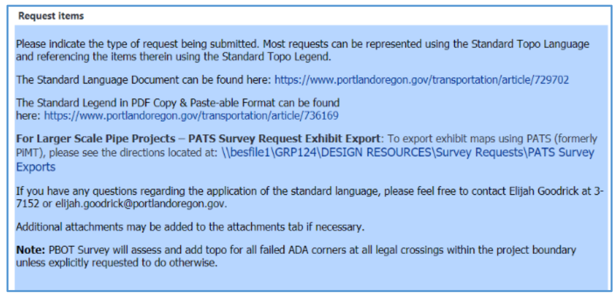
Please complete the Contact Information as completely as possible. If a meeting is requested and/or any questions come up during the process, this will allow Survey to direct their questions to the appropriate personnel.



Request Items

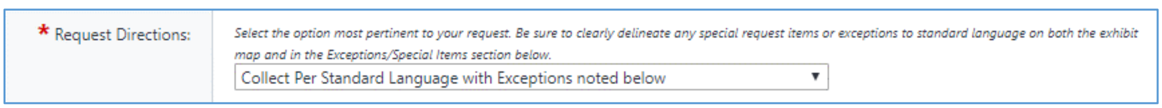
This section is where you will describe the specifics of your survey request.

Along the top there is a quick reference to several links to Standard Language documentation and other items that may be helpful when preparing your request and exhibits. Please do not hesitate to reach out to Survey at surveyrequests@portlandoregon.gov any time for assistance with describing and completing your request.



Request Directions

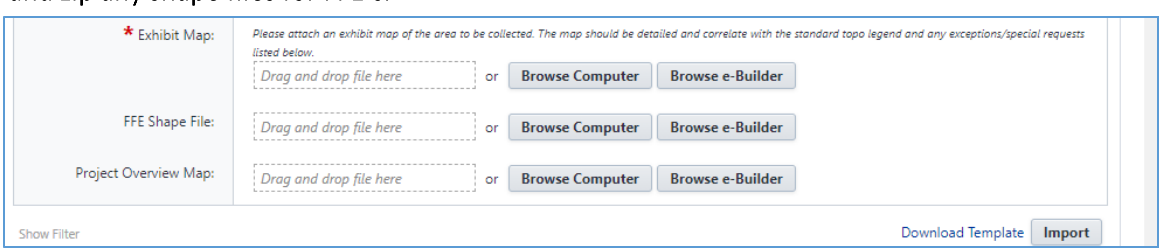
Please select the appropriate option from the drop down. If your request contains any exceptions to the standard items, please be sure to complete the Exceptions section.



Please note that for a Pre-Survey you should select “Non-Standard Request detailed below”.

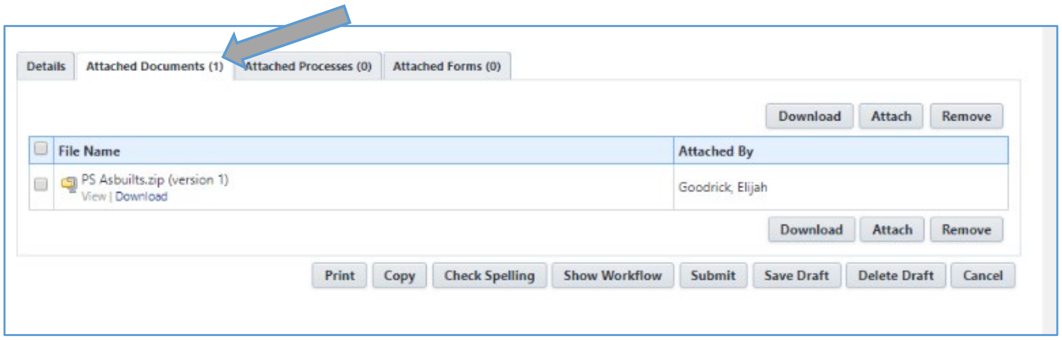
Exhibits

Attach all of your exhibits into the appropriate sections. Please merge all pdf exhibit maps into a single file, and zip any shape files for FFE’s.



Provide an exhibit map for all projects. FFE documentation and Overview maps should be provided as needed, but will not stop the process from moving forward.

If there are additional documents to provide, please attach them using the “Attached Documents” tab. Groups of files should be zipped together for easy downloading and to avoid cluttering Heron’s file management.

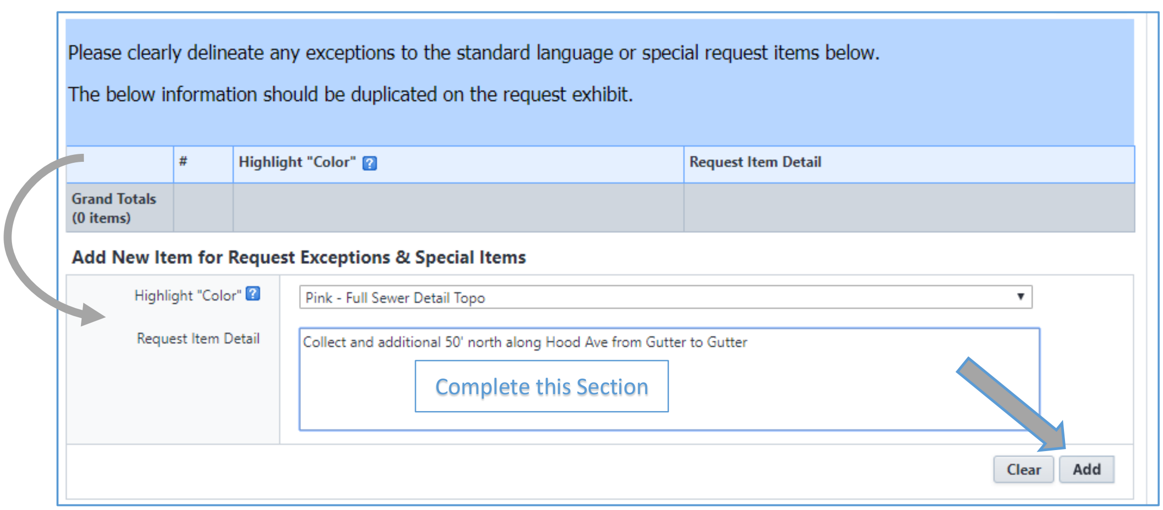


Exceptions

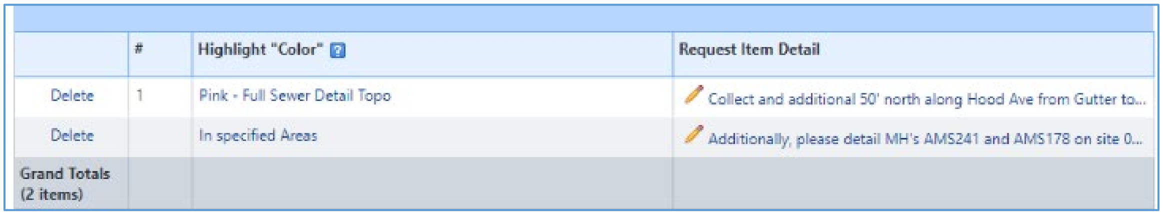
Each exception in your project should be listed in this section. Exceptions to the standard language require extra attention for survey crews. Duplicating this information ensures that it is carefully reviewed and done according to your directions. It also serves as a double check against typo’s or missed items. If your request does not contain any exceptions to the standard items/language, this section can be left blank.

The exceptions section uses the data grid feature. This feature is not used commonly in many processes and may not be familiar. Since this is a web-based program, there are certain limits to what it can and cannot do. Of particular note, you cannot start typing into the table and expect it to add a new row of data.

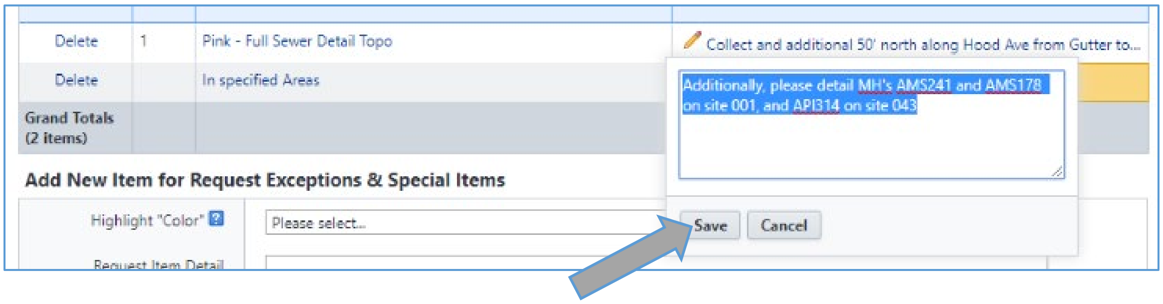
To add a new row, scroll below the data table to the Add New Item for “Request Exceptions & Special Items”. Use the Highlight “Color” drop down to indicate how the crew will identify this exception on the exhibit map. Then clearly describe the work to be done in the Request Item Detail section. When done, click “Add”.



Repeat this process for each exception. It is fine to group similar exceptions in a single line item. If you are grouping items, consider placing page/site references to the various items to reference the exhibit maps.



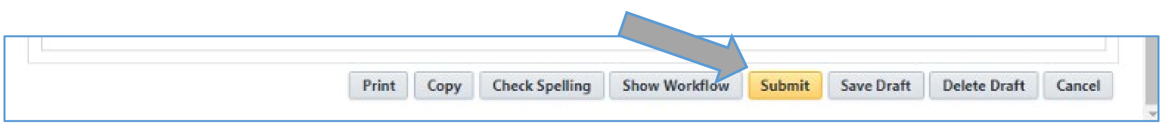
Once entered, you can edit or modify any line item simply by clicking on it. Be sure to click "Save" when you are done.



- For fully non-standard topography requests, please be sure to clearly describe the detail to be collected.
- For a Pre-Survey request, use the "All Areas" option and say "Pre-Survey" in the Detail.
- For ASM requests, please work with Survey to describe your work as this process is still evolving.
- For any other, non-topographical work be sure to be clear with your request. It may do well to work with Survey when developing this.

Submit Form

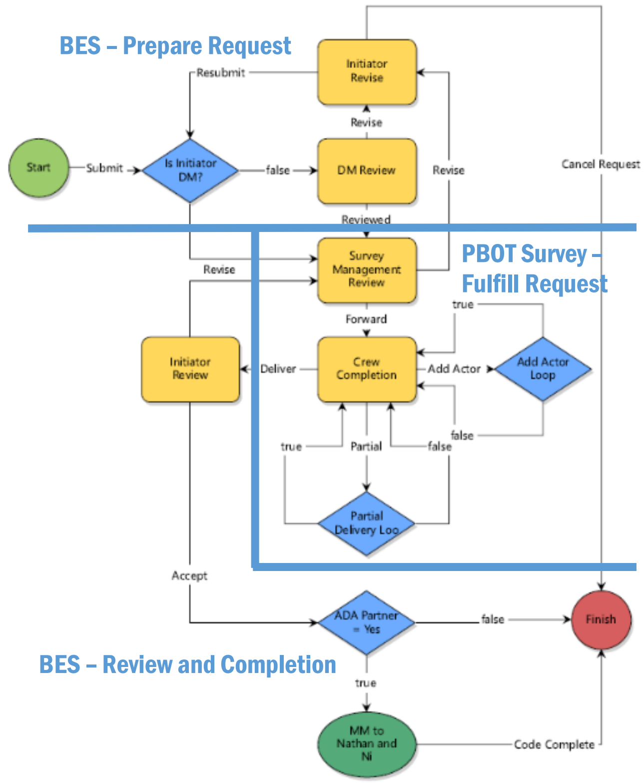
Once the form is completed, hit the submit button on the form to begin the Survey Design/Topo Request process.



Step Directions

Once the request has been submitted there are three main phases to the work process:

1) **BES – Prepare Request:** The Survey Request is reviewed internally with BES, then again by PBOT Survey management to ensure that all requested items are budgeted, appropriate to the project, clear and doable within the timeframe given.
2) **PBOT Survey – Fulfill Request:** The request is sent to Survey Field and Office Staff for completion and delivery.
3) **BES – Review and Completion:** The final delivered data is reviewed for completion and it moves to the "Finish" step.



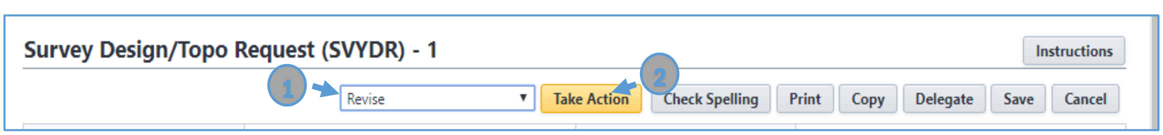
The best way to ensure that the survey request moves forward as quickly as possible is to ensure that all information is clearly provided, exceptions are kept to a minimum and that the BES design team is in agreement as to the nature and scope of work to be done *prior* to submitting the request.

BES – Prepare Request

Once the form has been completed and submitted. The Survey Request is ready to move forward.

Reminder – To Take an Action:

Select the appropriate action in the drop down located both at the top and bottom of the screen, then click "Take Action". E-Builder may prompt additional steps, like leave a comment or assign actors. In this case follow the prompts then click the button "Yes, [Action]". If there is only one action option, the "Take Action" button will be replaced with that action and the drop down will not appear.



Design Manager Review

All Survey Requests should be approved by the Design Manager. If the request is not being completed by the assigned Design Manager in BES, the survey request will route to them for review and approval. During this step, all fields are open and editable by the Design Manager similar to the start step.

If the request is approved, simply select the "Reviewed" action on the drop down and click "Take Action".

If the request needs to be changed, you have three options to move the request forward.

1) Make the changes yourself and select the “Reviewed” option.
2) Delegate the step to another individual to make the appropriate changes and *they* will take the “Reviewed” option.
3) Take the “Revise” action to return the form to the process initiator. You will be required to leave a comment describing the changes needed. This will loop the process until all parties agree on the content of the request.

Escalation: Design managers will be reminded in three days to review the request and forward it along.

Initiator Revise

Either the Design Manager or Survey may ask for revisions to the Survey Request.

At this point, you may either make the needed changes to the request and take the “Resubmit” action or cancel the request altogether. Note that if you “Resubmit” it will run through the Design Manager review step again before returning or moving forward to Survey.

Escalation: To ensure that a survey request does not get “lost” in the review process, weekly reminders will be given a weekly reminder to the original requestor to review and revise or cancel the Survey Request.

PBOT Survey – Fulfill Request

Once the request has been approved internally within BES, the process will move to PBOT survey for review and completion.

Survey Management Review

Survey Management will review any requests that come in. If the request is clear and doable, they will get it in the queue to be completed.

If there are any issues with the request, use the “Revise” action and send it to the “Initiator Revise” step. If the issues are substantial a meeting will likely be requested. Survey may alter the due date directly after consultation with the design team.

For larger projects, a package breakdown map will be added to the Attached Documents.

Escalation: Bi-Weekly reminders will be sent on any Survey Request still in the Management Review Step to the Survey Management team.

Crew Completion

Survey field and office personnel have been directed to leave comments in any open e-builder process whenever they have reached a major milestone in their work. Design teams will be able to check here to see progress.

Escalation: Reminders will be sent to the Survey Management Team and all current actors as the due date approaches and weekly thereafter.

Partial Delivery

Since the delivery of many BES topo projects will involve delivery in pieces, this loop will send an "FYI" email whenever a package has been completed and the files are uploaded. If there are any questions or comments on a partial delivery, please use the "Request Comment" feature sent to the Survey Supervisor.

Delivery

Once the work is completed in its entirety, Survey will "Deliver" the project. All files will be uploaded to Heron and it will move back to the Process Initiator's court for review and approval.

BES – Review and Completion:

When the final delivery is provided, please take some time to review the data provided.

A pre-survey request will unlikely have any deliverable items. If you receive a delivery of a pre-survey request, take the "Accept" action. (Any work done will be reflected in the final delivery once the Topo/Requests are in place.

Escalation: An reminder to close out the process will be sent after two weeks.

Revise

If the data is incomplete or any corrections are needed, use the revise action here (rather than initiate a new process). Be sure to leave a clear comment as to what data is missing or what corrections need to be made. This will return the process to the "Survey Management Review" step for appropriate action.

Please do not use this feature to request additional information not included in the initial survey request.

Accept

If the data meets your needs, please use the "Accept" action to close out the process.

If you need to re-download any data from a previous project, you can either search for the process by checking the "Finished" box in processes and hitting filter or find them in the Heron Folder Documents > 09.0 Survey.

You can also comment / request comment after the finish step (note: a "Comment" as opposed to a "Request Comment" will not send any notifications). However, if additional work is needed at this phase, you will need to submit a new request.

ADA Partnership Mail Merge

There is a check box in Survey's view of the Request Form, that is used to indicate if any ADA assessments were done that resulted in additional corners being collected in your project. The mail merge sends a notice to PBOT's ADA Corners Group, Utility Coordination & Inspection and Construction Management that there is an opportunity for an MOU or other means to build and upgrade ADA corners. If this occurs, PBOT will work with you to provide funding and design support for this.

Addons

If additional work is required for the project. Please repeat the steps above.

Make sure your Request ID is clear. You will not be able to re-use the default. (See the section beginning on page 10 for directions on Request ID's.)

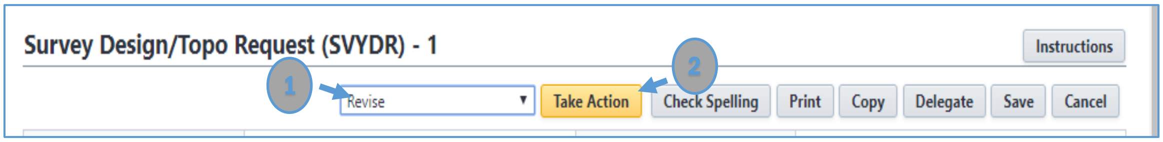
- If the new work is adjacent to previous work, please indicate the extent of the previous work on the exhibit map.
- Remember: It is usually about three to four times more expensive – in terms of Crew and Mapper time – for Survey to return to a site for additional data. Most of the standard language already accommodates the usual reasons, but it is better to ask for more if you think you will need it.

Directions for Survey

This section is relevant only to the Survey section.

Reminder – To Take an Action:

Select the appropriate action in the drop down located both at the top and bottom of the screen, then click “Tack Action”. There may be prompts to take additional steps, like leave a comment or assign actors. In this case follow the prompts then click the button “Yes, [Action]”. If there is only one action option, the “Take Action” button will be replaced with that action and the drop down will not appear.



Survey Management Review

Upon receiving a notice from Heron, please review the survey request. If there are any questions or clarifications needed, use the “Revise” step to return the request to the Process Initiator. Schedule a meeting if needed to discuss the request.

If there are no concerns, inform the Project Support Technician to prepare field packets. Once the packets are prepared, use the “Forward” Action to assign the appropriate field and office staff to the project. Be sure to enter the job number at the bottom of the form before taking an action.

PST Responsibilities

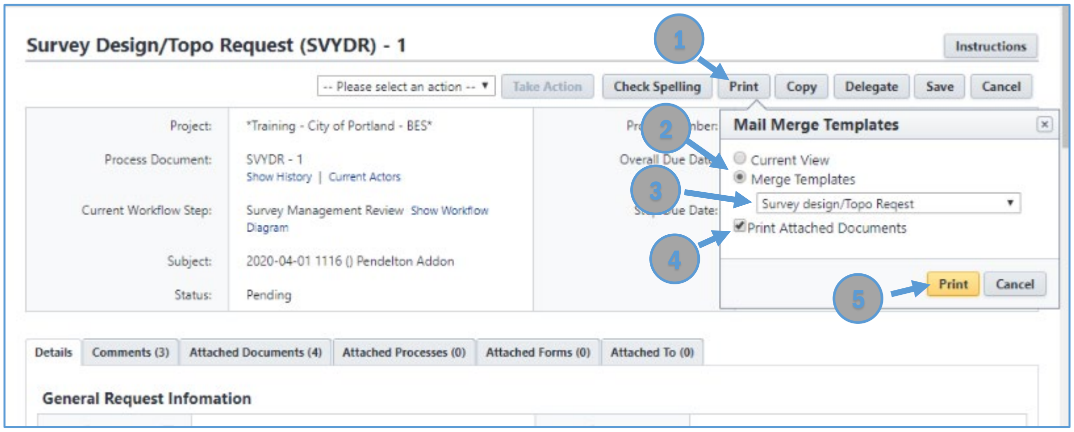
Whenever a request is received, immediately log the request in the “Job Setup Checklist” in SurveyManagement.

Once the request is finalized, complete the field packets. Once all packets are complete, leave a comment both in the database and in Heron: “Field Packages Ready”. For any multi-package project, add a project overview map with clear package delineation in the “Attached Documents” section.

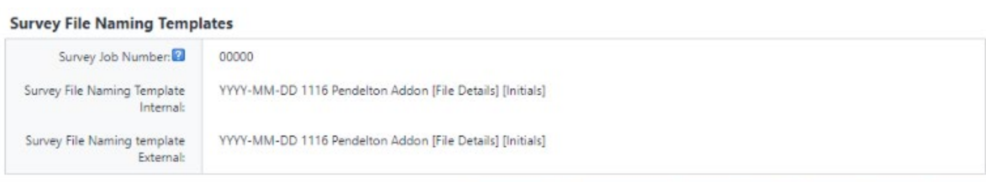
Additionally, when utilities are called, leave a comment in Heron providing the utility due date and Package ID (when necessary). While in Heron, double check that the most current survey request (with comments) is in the field packet.

Crew Completion

Field crews should carefully review the request prior to beginning work. A printed copy will be provided, however there may be additional comments added to the request and should be reviewed as well and considered part of the request The request can be reprinted by clicking on print and selecting the “Survey design/Topo Request” Merge Template. E-Builder will then prompt you to save the request as a pdf.

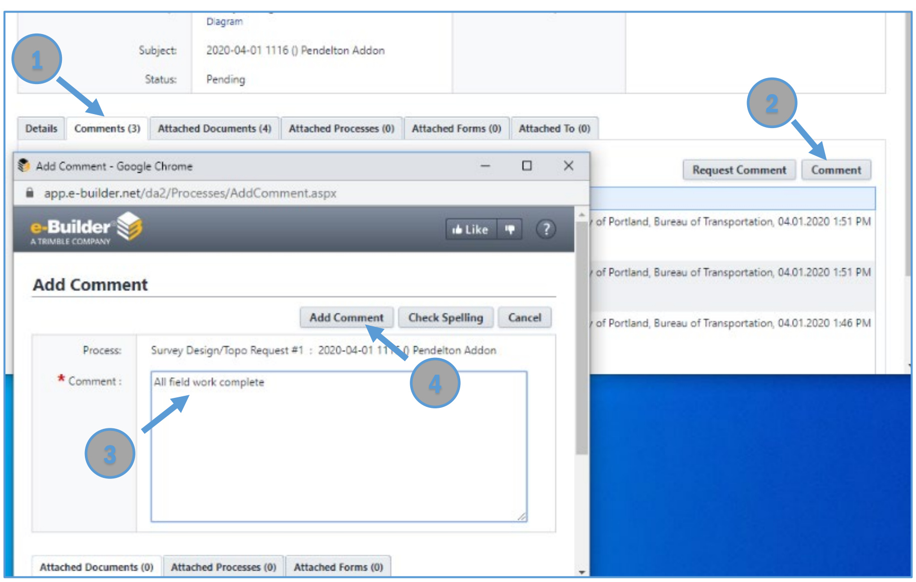


Job number and file naming conventions are located at the bottom of the form.



Major Milestones – Field Crews

Upon completion of any major milestone within a project please leave a comment.

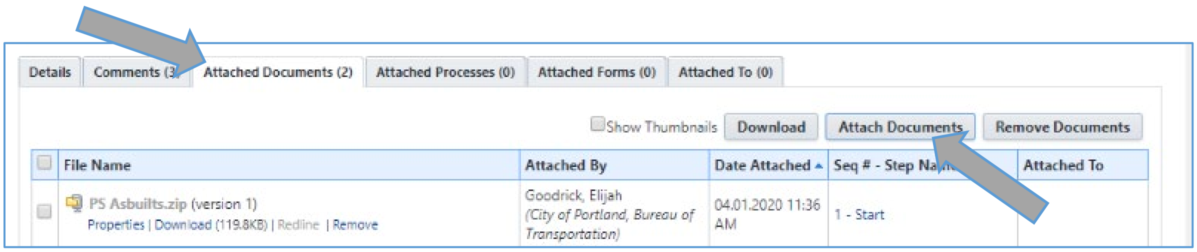


- For small projects, leave a comment when the field work is complete.
- For Multi-Package projects, leave a comment when you start work and when you are finished.

- For Large Single-Package Projects, leave a comment on a regular basis to update BES on your progress.
- If you are done with the field work but waiting on a small thing (like a single utility locate or MH raise), leave your comment anyway and indicate the delay.

Deliver/Partial Deliver - Mappers

Whenever completing any delivery, zip all delivery files into a single zip folder named appropriately with the Request ID from the actual Heron Process and Package ID if necessary (see naming conventions at the bottom of the form). Place those files in the Attached Documents Section.



Select either "Deliver" if this is the only or final delivery on a project. Select "Partial Deliver" if this is only a portion of the work to be turned in. When you select this action, you will be prompted to leave a comment. Place the standard deliverable text in the field provided.

If you are unable to take an action. Upload your deliverables and use "Request Comment" to ask they Surveying Supervisor to add you as an actor to the process. When this is complete, take the appropriate action.

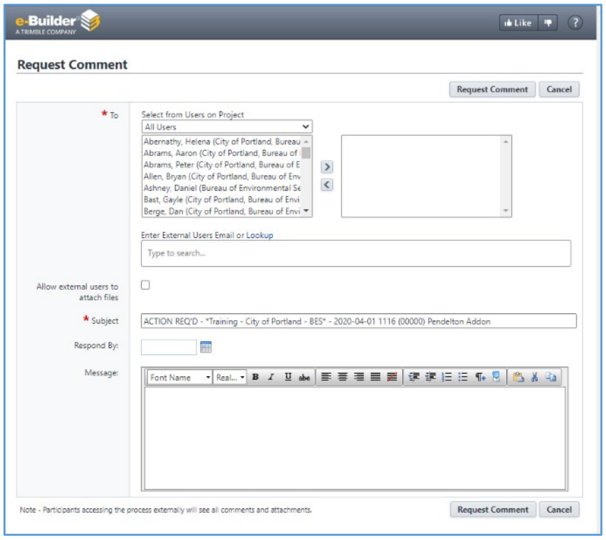
Add Actor – Supervisors

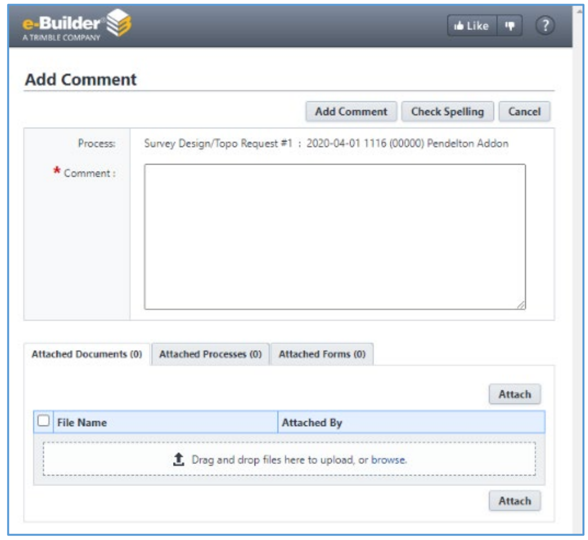
Supervisors, be aware that whenever a partial delivery is made, the Heron process will re-set the actors. You will receive an "ACTION REQ'D" email when this occurs. Use the "Add Actor" step to re-add any crew or office staff who are still working on the process.

Add Comment and Request Comment Functions

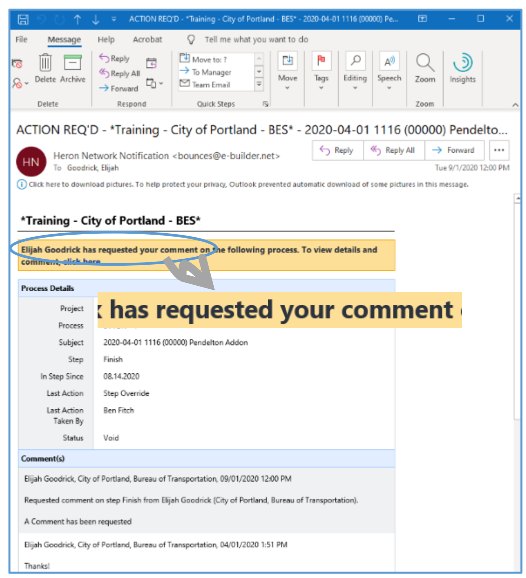
At any point in the process, any reviewer can request a comment from others or add a comment to the project file. Click on the <u>Comments</u> tab to access the **Request Comment** and **Comment** options.

Whenever the Comments tab is available, you can click on the **Request Comment** button and fill out the form that pops up to request comments, or you can click on the **Comment** button and fill out the form that pops up to add a comment and/or file that will be retained as information on the process. When finished, click the **Request Comment** or **Add Comment** button, as applicable.





When a comment is requested, an email notification is sent to the recipient; and when a comment is added, an email notification is sent to actors on previous steps. The email the recipient gets contains the comment but not any attachments. The email includes the project number, the name of the person who made the comment, and a link (**click here**) message that does open the process so the recipient can click on the Comments tab to see the comment and any attachments.



When a comment is requested, in addition to an email notification, each addressee who has a Heron account will also see an item in the Workflow in your court section of their Heron home page that will also have a checkmark in the Requested Comment column.

Click on the **Comments** tab to access the **Request Comment** and **Comment** options.

Workflow in your court — Show: First fifty

Project	Name	Subject	Step	Date Due	Requested Comment
**AGW TEST PROJECT	SRMDL - 3	E12345 SR Model 2017-08-18	Modeler Response	08.17.2017 05:00pm	✔

Survey Standard Language Document

Over the last few years, Survey has been working with the various design groups in both BES and PBOT to standardize the language for Survey request. This was done with the following goals in mind:

- Clarify and simplify survey requests for designers by focusing on what you are building.
- Define the level of detail needed based on the intended project.
- Control Survey Costs by limiting detail where unnecessary.
- Prevent addon requests by getting enough data the first time.
- Empower field personnel to add or subtract detail when site conditions dictate.

The resulting document titled "PBOT ESD Survey – Standard Topo Language" (STL) is found on Survey's web page at: https://www.portlandoregon.gov/transportation/article/729702.

Try to use the standard language items in each survey request. This will avoid confusion and keep things simple and consistent throughout the design/topo process. Some guidance has been provided for some other common projects beginning on page 24 above.

The STL is continually evolving. The most current version is *always* posted on the site linked above. If there are any recommendations for changes or questions regarding the request standard language, please contact Elijah Goodrick at elijah.goodrick@portlandoregon.gov.

Detail Levels

Detail levels for topography have been broken down into three categories based on the type of work to be done. The specifics of these detail levels are listed out on page 1 of the STL. It is also advisable to use these detail levels for other types of work not specified below (e.g. use the green highlight for environmental work).

Green Street/Sidewalk Detail

Street and sidewalk work require a higher level of detail than sewer only work. This level of detail will provide a tighter surface and additional data that is usually not relevant to sewer work. For BES projects, this will typically only be necessary for Water Quality Facilities, ADA corners and environmental work.

Pink Sewer Detail

For sewer work, Survey will loosen up the detail level for the data collection. They will still provide sufficient data for the project, but this will allow them to cover more ground for less time/money.

Yellow Limited Detail

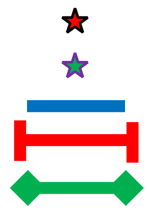
For paving work and CIPP type projects, the data required for design is extremely limited. No surface information will be provided (however all topo points will still have elevations) and the data is presented for horizontal location/geometry only. Survey will also provide this level of data for "adjacent" areas to ensure a complete inventory of utilities and trees in *and* near your work area(s).

Types of Work

Rather than require extensive highlighting and dimensioning, the work on the STL document includes many of the typical types of projects that do. These projects can be indicated on the exhibit map by simply including the appropriate symbol and Survey will collect the data accordingly. Each of these project types are detailed in text on page 2 of the STL, with a sketch of the typical layout on the following pages.

Most BES projects are limited to the five following items:

- ADA Corner Improvements
- WQF Instillation
- New Sewer & Extensions
- Full Sewer Topo
- Limited Sewer Topo



Special Considerations

In addition to the work requested, Survey may need to provide additional information that is not specifically asked for. The following items are specifically outlined in the decision trees on page 8 of the STL.

ROW Resolution

Survey will look at ROW resolution usually under two circumstances when working on BES projects:

1. Sewer line to be rehabilitated or installed is on or within 10’ of private property. (Exceptions may be made for parks property or other publicly owned properties.)
2. ADA upgrades and WQF instillation when there is no existing sidewalk, or the existing sidewalk is less than 2’ from the right of way line.

Note: Survey will make this determination on their own to resolve or *not* resolve ROW unless explicitly identified in the exceptions section

ADA Partnership Corners

PBOT survey crews will also look for opportunities for partnerships with PBOT to install additional ADA corners. If BES’ work will impact any one corner in an intersection, Survey crews will assess all remaining corners and add the required topo data to your project. We have been allowed to spend PBOT funds for this additional data collection, your project will only be billed for the work related to your project.

Note: Again, Survey will assume that BES will work with PBOT to complete Partnership Corners unless explicitly identified in the exceptions section.

Common Non-Standard Projects

Asset Management, Modeling or Inventory Projects

At this time, the standard language for Asset Management projects is being developed. If you are working on an asset management or inventory type project, please work with Survey to develop your request and exhibits. Once this has been developed, these directions will be updated.

Control Only

Prepare your Survey Request similar to a Pre-Survey request. Clearly indicate in the request exceptions that topographic work will be done by an outside consultant and survey is expected to complete the control only for this project.

Pump Stations, Treatment Plants & Force Mains

Use the “Green” detail level for any work on pump stations. Be sure to include clear dimensioning of the work to be done around the pump station. You can additionally use:

- A Red-Dashed line for Sidewalk work to indicate Frontage Improvements,
- Red-Line on any sewer runs to be re-built – including force mains,
- Blue Line at proposed location of new lines – including force mains,
- And use yellow highlights where you need trees and/or utilities only.

Be sure to clearly indicate in the exceptions section if you will or will not need property lines resolved.

Environmental Work

Again, use Green highlights and clear dimensioning. Also, be sure to clearly indicate in the exceptions section if you will or will not need property lines resolved.

Realignments

Often when sewer lines are going to be realigned, it is impossible to determine its precise location ahead of time. You can place an exception on the exhibit and exceptions data grid to expand the “Red Line” topo areas to include a full back-of-walk to back-of-walk “Pink” detail.

Pavement Restoration

Sewer topography is more than sufficient for pavement restoration. However, survey will need to know that this will occur so we can assess for ADA partnerships. Please indicate the areas where pavement restoration is expected in the exceptions map.

MOU or Other Multi-Bureau Projects

Schedule a meeting with Survey and the design teams from the other bureau(s) to develop your request if BES is taking on a Multi-Bureau Project.

Legals & Easement Requests

A separate Heron process will be created for Legal Descriptions for easements soon. Please work with PBOT ROW to draft and submit your request via e-mail.

Preparing your Exhibits

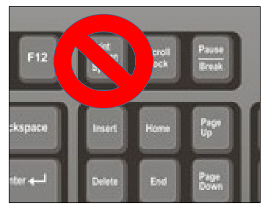
With the STL document and the accompanying standard legend, preparing exhibit maps for most of the work to be done has been greatly simplified. For all standard items (see page 2 of the STL), you can simply place the correct symbol on your map and be done, there is no need for additional text or explanation. Non-standard items and exceptions should be clearly identified on *both* the exhibit maps and the exceptions section in Heron (see Exceptions on page 13).

If you are working on a large scale project, please skip ahead to *PATS for Large Scale Sewer Projects*.

Creating the Basemap for your Exhibits

The best program for developing exhibit maps is ArcGIS. However, PortlandMaps, CAD or plan sets will work as well. Google does not have the sewer layer so it's best to avoid it.

Regardless of the format used, the map should be kept relatively simple, free of extraneous data and saved into a single merged pdf file.



Export or Print to pdf

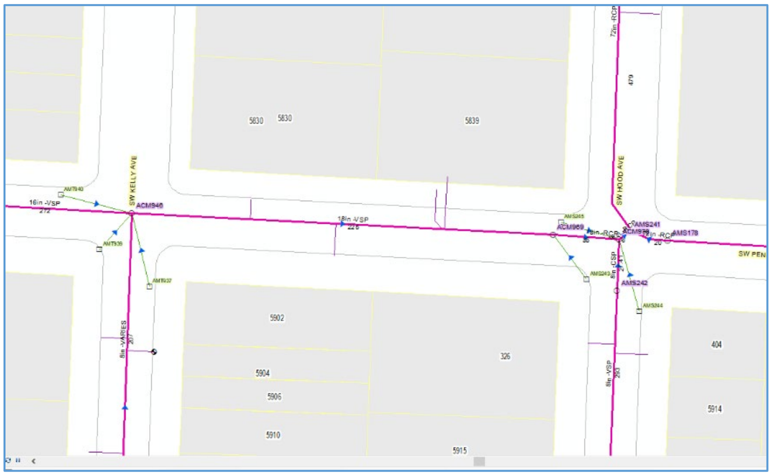
Whenever you are making your maps, please export or print your map to pdf. Print screen, Snag-it, or any other screen shot programs make for messy files.

Visible Layers

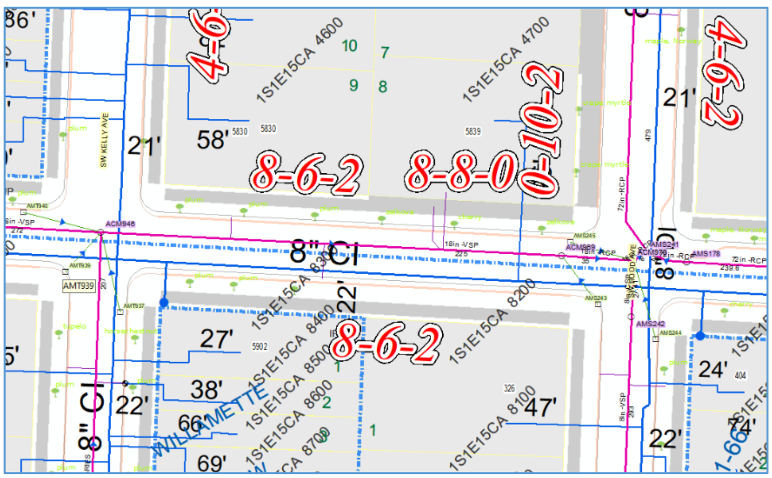
When creating maps, please turn most of the layers off! Cluttered busy maps are very difficult to interpret. Here are some guidelines for what should be in the exhibits:

- Street Names: If at all possible, zoom out far enough to see at least two cross streets. If necessary, include a vicinity map or project overview map.
- Aerials, Block face, or Curb/Sidewalk: Include only what is needed to clearly identify the project area and extents. Please turn off the labels and other meta-data.
- Taxlots & Addresses: This is usually unnecessary if the work is oriented around sewer pipes, corners or whole blocks. The only time it is absolutely necessary is for new sewer line projects and work outside the right of way.
- Sewer Layer: It is probably a sewer project after all… Make sure the node numbers are clearly visible, especially on any targeted sewer runs. Meta-data on the sewer is generally unneeded.
- Anything else to get oriented: Just enough to clearly convey where and what the work entails. For example, trails and creeks are good for work away from the street.
- Title Block & North Arrow: Always include a north arrow. If numbering sites, please show the site number in the title block.
- Add-ons: If possible, it is good to show the area already collected in the exhibit. The best option is to load the actual mapping, or simply box it out.

Here is a nice clean map:



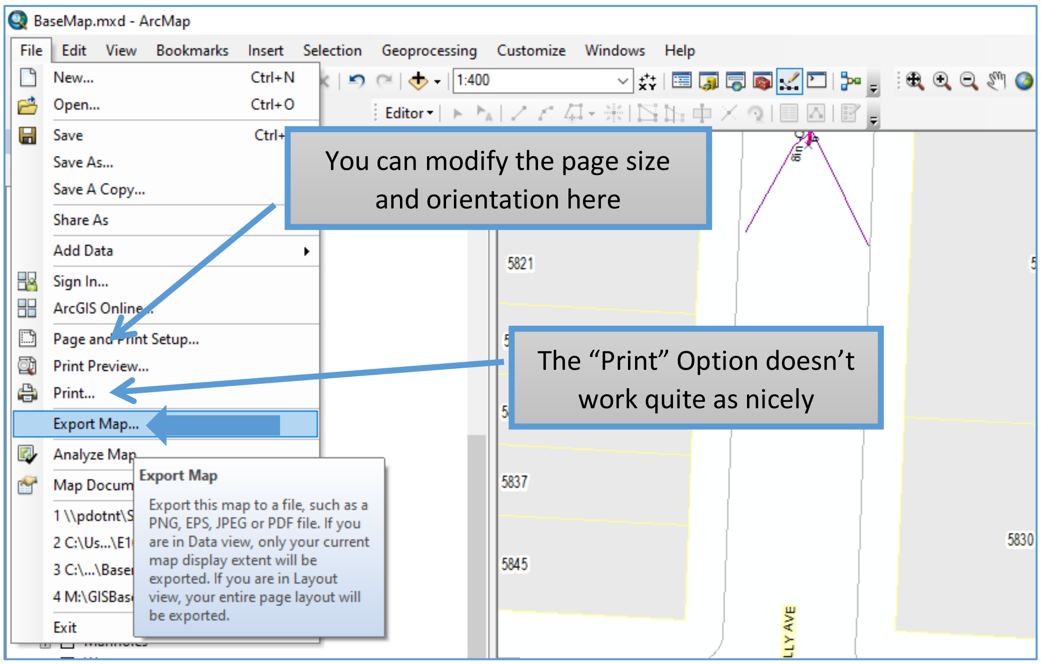
Here is a cluttered mess:



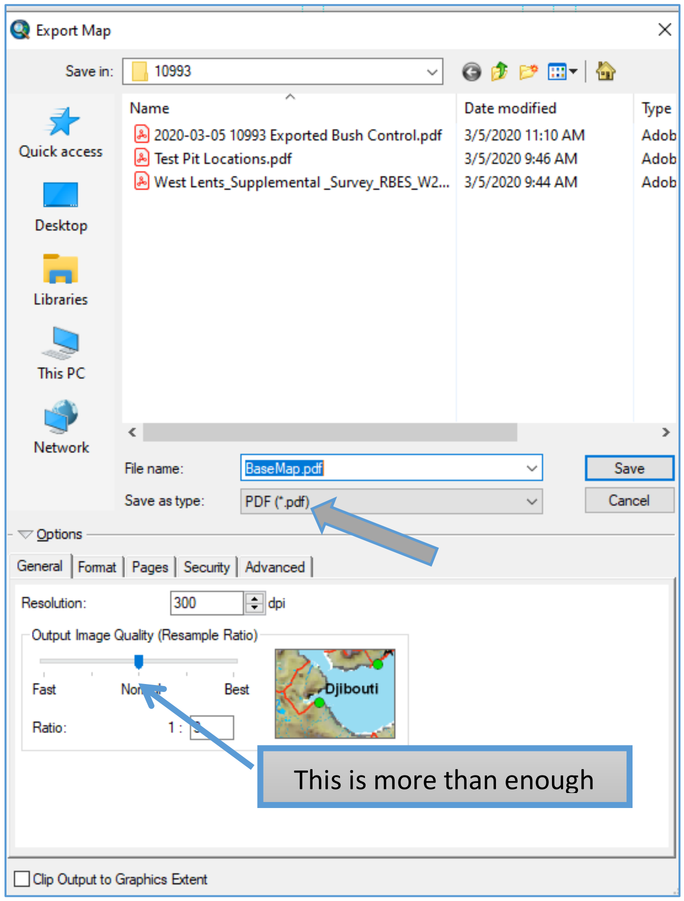
In GIS:

If making maps in GIS, toggle to your *Layout View* at the bottom left of your data frame:

Then set up the map, title block and layering. When happy with it, export the page by selecting File → Export Map:

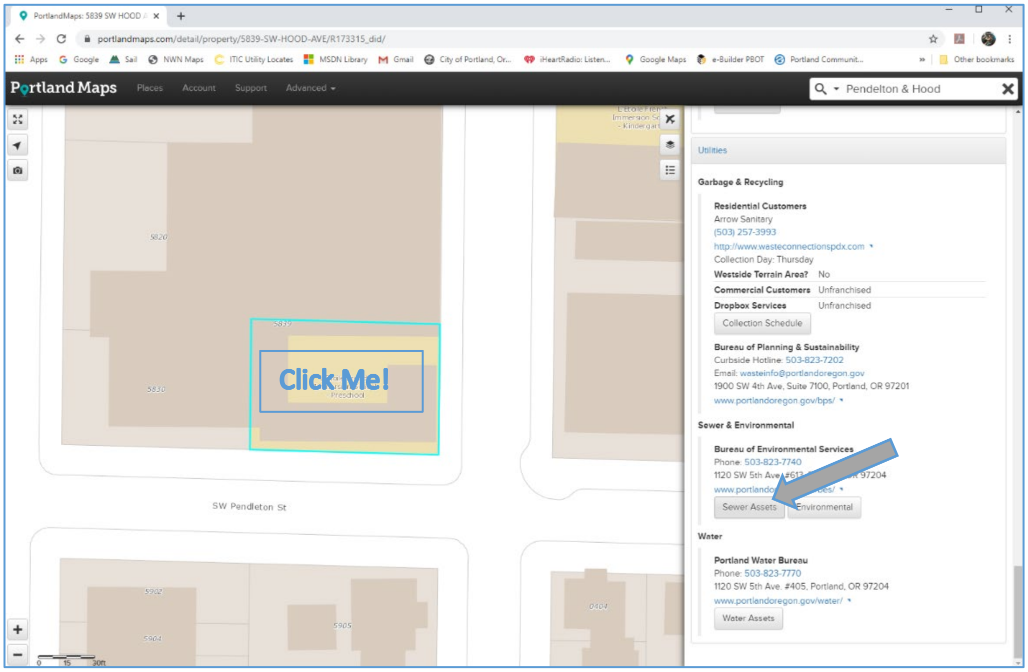


A dialog will open to select the format, quality and file name/location. Choose pdf, and feel free to keep the quality minimal to keep file sizes more manageable.

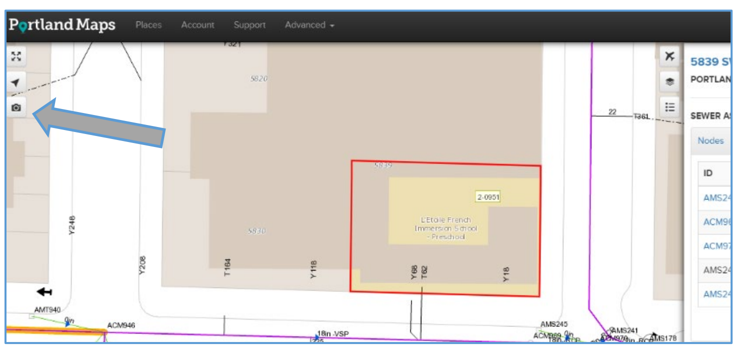


In PortlandMaps:

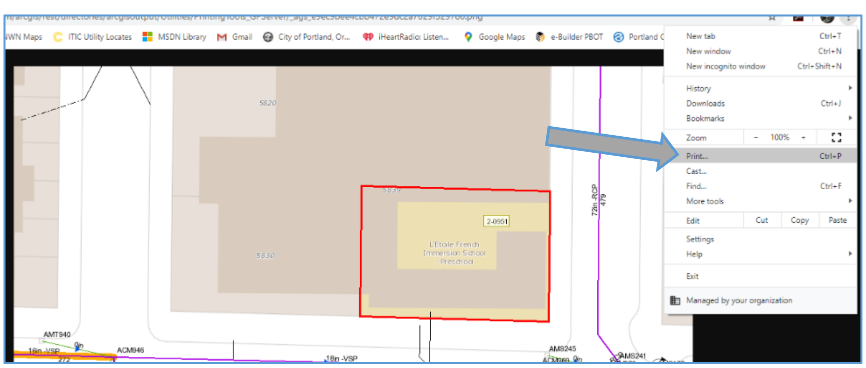
Zoom and Scroll or Search for your work area. Click on any nearby taxlot and select the Sewer Assets button on the right-hand panel:



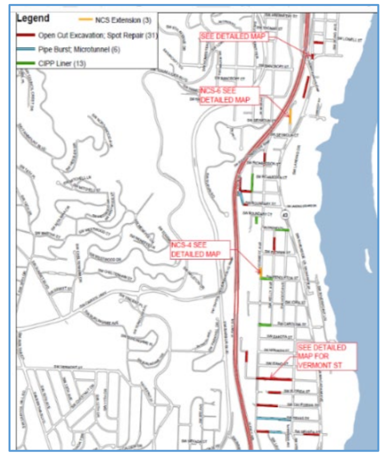
Center up your project area, zoom in and out as needed. Then click the little camera icon on the right to bring up a snapshot:



When the snapshot opens, click on it to "Open in New Window", from there use the browser's print feature to print the image to pdf:



Overview Map



For any large project, it is helpful for us to have an overview of the entire project area. This map does not need to detail out what we are collecting, just where. If feeling extra kind, a sheet numbering guide is nice too.

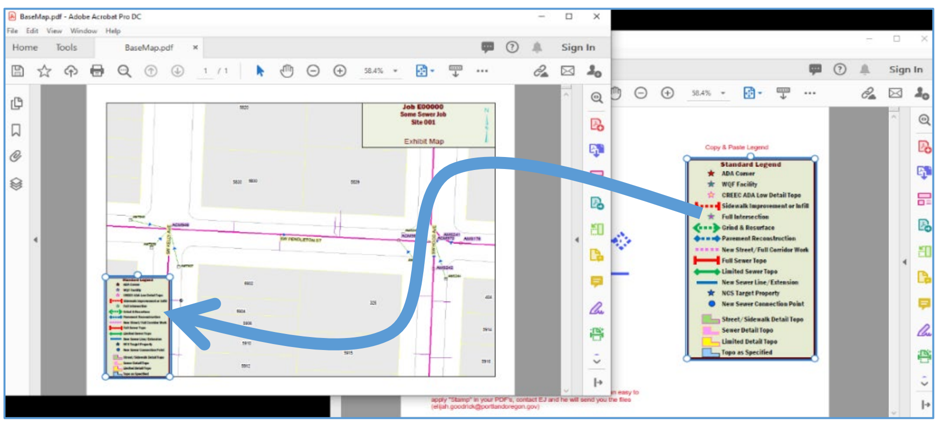
For pre-survey or control only request, a project overview map is the only exhibit necessary.

Standard Legend Items

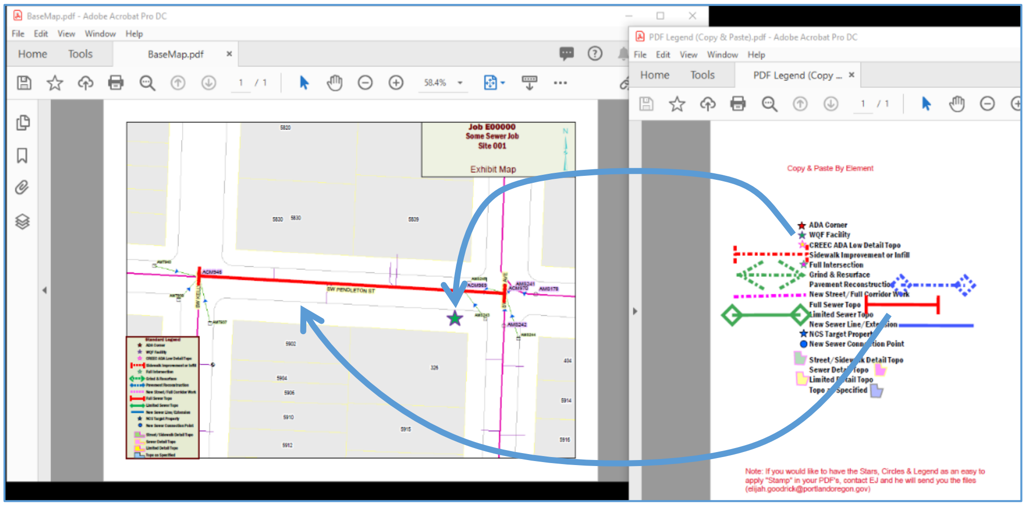
Along with the Standard Language, all the usual types of projects have a specific symbol attached to it. If your project fits within the standards, it is only necessary to place the appropriate symbol on the exhibit map and Survey will collect the appropriate data according to the standards laid out in the STL.

The standard legend is available on https://www.portlandoregon.gov/transportation/article/736169, and is specifically designed to copy and paste the elements directly onto the base map created in the previous step. Save a copy someplace where you can easily find it.

1) First open the pdf file for your exhibit(s) *and* the Standard Legend document.
2) Then select the actual legend from the Standard Legend document and paste it onto your pdf exhibit. It will likely need to be resized.

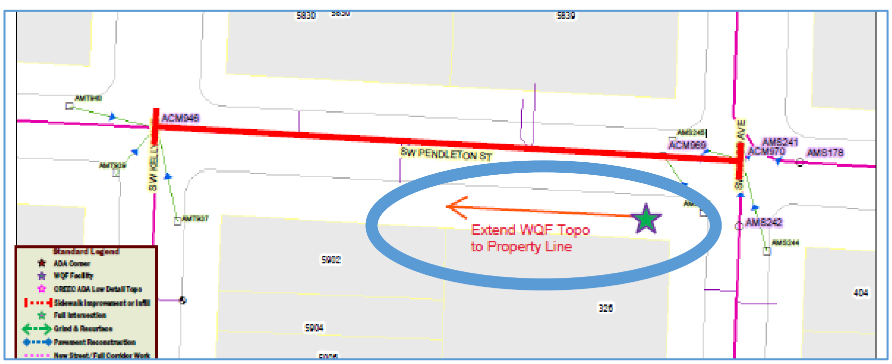


3) Next, copy and paste the appropriate symbols to indicate the work to be done: (Arrange and resize the symbols as needed.)

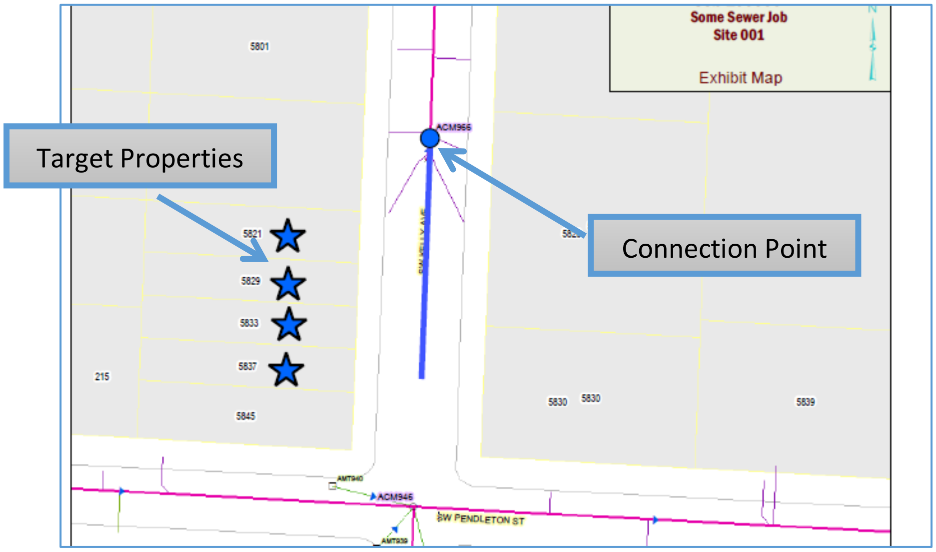


   a. For the Exhibit above a Full Sewer Topo and a Water Quality Facility has been included in the request. Add whatever is needed to complete your project.
   b. That's it. No highlighting or extra stuff required! (Mostly…)

4) A few special concerns:
   a. **Water Quality Facilities**: Survey will topo water quality facilities to 50' up and down stream of the nearest inlet. Never less than that, but if more is needed please specify with a little text and an arrow:



b. **NCS & New Sewer:** Be sure to clearly identify where the new sewer line will be, what it will connect to and which properties will be served by it.



If not sure where the new sewer will connect or be located in the street, show all options to ensure that you have the data needed to decide.

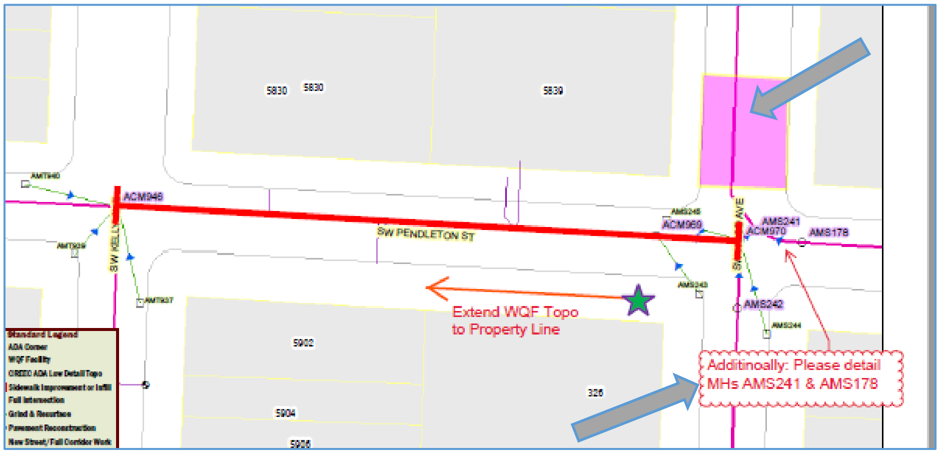
That is about all there is to creating a request with only standard items. There is no need to add complicated sketches or extents. Survey will provide you with the data you need with an exhibit this simple.

Non-Standard Items

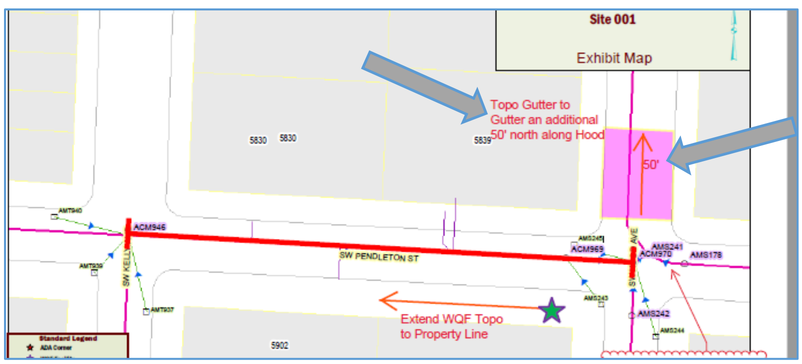
When information is needed or the project type does not fit the Standard Items indicate this both on the exhibit map *and* in the Data Table on Heron (see Exceptions on page 13).

1) First look at the existing highlight colors for detail levels. Most of the time one of the three described detail levels (green, pink or yellow) will fit your needs. If one of these is close enough, it is simpler for the survey crews to interpret your request if you choose one. If it does not, use blue.
   a. Note: If the project is close enough to a standard item, feel free to use the included symbols. Make a note what is really being done on the exhibit.

2) Highlight the area(s) with additional topo with the appropriate color.



3) Use call outs or text boxes to add specific items.
4) Add dimensioning on any highlighted areas. Survey crews are more likely to get the extent requested if explicitly indicated. Use text, arrows and dimensions, or both!



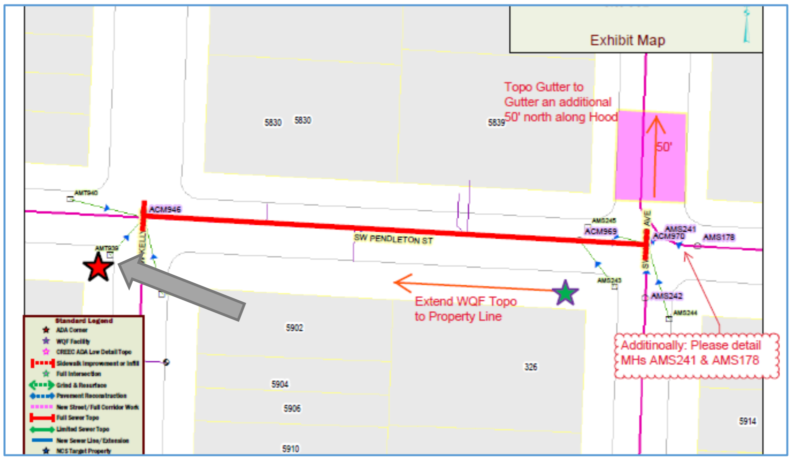
In general, keep exceptions simple and to the point. If the entire project is an exception, it may be good to meet with survey before submitting the request.

Adding ADA Corners

One final step before the exhibit is complete. Keep in mind the need for ADA corner improvements that may be triggered by the work to be done.

Survey will keep their eye out for sewer lines near or under sidewalks or any obvious ADA triggers based on what is in the exhibit. However, designers should be mindful of other triggers that may occur and add the red stars to the exhibit as necessary.

For the example above, the inlet at the SW corner on Kelly will need to be rebuilt and the work is likely to damage the ramp:



To be clear, it is *not* necessary to identify any ADA improvements except those triggered by the intended work. Receiving ramps will be assessed by Survey and billed to PBOT unless you have already placed a red star on that corner.

PATS for Large Scale Sewer Projects

For Large Scale Sewer projects, Daniel Boatman has created a routine in GIS to generate all necessary exhibit maps quickly with the appropriate symbology for all Full Sewer Topo and Limited Sewer Topo. The directions for this is available here: \\besfile1\GRP124\DESIGN RESOURCES\Survey Requests\PATS Survey Exports\READ ME - Instructions.docx

Once you have completed this routine, you will need to create separate exhibits for any NCS properties, as well as identify any potential ADA triggers and/or other items and exceptions on the prepared exhibits.

FFE Request Documentation

NOTE THIS IS A NEW PROCEDURE!

For projects requiring FFE's to be collected for the Modeling Group, please request from them a shape file of all taxlots to be modeled. Make sure the files are placed in a single zip file.

If provided with a map, please be sure to include this in your exhibits, but this is not strictly necessary. Survey does not need a spreadsheet and will make their own from the provided shape file.

If a) not provided with a map and b) are busy making a nice neat project overview map in GIS, it is helpful (but again not necessary) to add the provided shape file to the map.