

PORT OF PORTLAND
DOCUMENTATION STANDARDS
PART TWO: GRAPHIC STANDARDS

VERSION: 2023

REQUIREMENTS FOR DOCUMENTATION GRAPHICS FOR THE PORT OF PORTLAND

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1. GENERAL

1.1 Objective

This manual is a guide for consultants performing, or desiring to perform, engineering and/or architectural design and/or drafting services for the Port of Portland. Guidelines presented in this manual will help consultants produce drawings that are consistent with the Port's format, appearance, and professional standard. These standards are to be met in accordance with the requirements of the contract. All drawings should be consistent, clear, concise, and complete.

These Graphic Standards are intended to provide consistent and familiar documentation for the Port of Portland throughout the life cycle of an asset. The following graphic and documentation standards apply to all Port projects regardless of discipline, scale, or budget. These standards form the baseline from which project deliverables should be developed. Not all conditions that may be encountered on a Port project are described, teams should utilize their Port Project Manager or Port Project Engineer to resolve any unique conditions that may arise over the course of the project. Any deviation from the standards outlined in this document need to be approved by the Port Project Manager, Project Engineer, or Project Analyst and documented in the project's Digital Delivery Plan.

1.2 Owner Provided Resources

Technical Reference Center (TRC)

Prior to starting a project with the Port, it is recommended that the consultant visits the Port's Technical Reference Center to view to view drawings from previous projects that may be relevant historical information. A Project Analyst can assist with TRC research.

Appendix: [Technical Reference Center \(TRC\) Search Guidelines](#)

2. POP PROJECT IDENTIFIERS

The Port's different identifier numbers used for documentation:

Identifier	Format	Notes
Facility Name	Appendix: Port of Portland, Facility Naming Standards	Name of the Port operating facility where the project is located.
Project Title	PROJECT TITLE	Coordinate with the Port's Technical Reference Center to obtain the official project name.
Design Number	YYYYD###	This is the engineering assignment number and will be provided by the Port's project engineer or project manager. This is also known as the EAN.
Project Number	#####	This is the Port's project number for the project and will be provided by the Port's project engineer. Sometimes more than one project number are assigned to the same project. All project numbers should be listed and separated by commas. The Project Number is also known as the PAN or Charge Number.
Drawing Number	(FACILITY CODE) YYYY-### *1-499 indicated a Port design project, 500 series indicates a consultant design project, 1000 series indicates tenant drawings, and 3000 series indicated a Port maintainable drawing number.	A four part project drawing number must appear on each drawing. The Project Analyst will provide the consultants with the appropriate project drawing number information.

3. POP DRAWING TYPE

The Port Drawing Type is a documentation code used by the Port for documentation filing. The Project's Project Analyst will assign the appropriate Drawing Type code.

4. POP DISCIPLINE ORDER AND NAMING

The Port of Portland's standard is to only have a single letter for discipline sheet numbers. A longer character designator is used for files names.

Order	Discipline	Sheet Designator Character	File Naming Abbreviation	Notes
00	GENERAL INFORMATION	GI	GEN	
	Fire Life Safety	GI	FLS	
01	CIVIL	C	CIVL	
02	ARCHITECTURE	A	ARCH	
	Envelope	A	ENLV	
	Interiors	A	INTD	
	Furniture, Fixtures, & Equipment	A	FFE	
	Details	*	(A)DET	*Can be applied to any discipline
	Existing	*	(A)EXT	*Can be applied to any discipline
03	STRUCTURAL	S	STRU	
	Substructure	S	SUBS	
	Foundation & Framing	S	SSM	
04	MECHANICAL	M	MECH	
	Heating & Ventilation	M	HVAC	
05	PLUMBING	P	PLUM	
	Piping	P	PIPE	
06	FIRE PROECTION	F	FIRE	
07	ELECTRICAL	E	ELEC	
	Power & Signal	E	PWRS	
	Lighting	E	LGHT	
08	EQUIPMENT	Q	EQUF	
	Baggage Handling System	Q	BHS	
	Vertical Transportation	Q	VTRN	
09	TECHNOLOGY	T	TECH	
10	GRAPHICS	G	SIGN	
11	LANDSCAPE	L	LAND	
12	INSTRUMENTATION	I	INST	
13	SURVEY	SU	SURV	

5. POP STANDARD SHEET ORDER

Plan sheets should be placed in the front of the drawing set and details and sections in the back. When laying out sheets details and sections should be on sheets separate from the plan views.

Order	Drawing Type	Acceptable/Preferred Scales
	Site Plan	1" = 1000' 1" = 800' 1" = 600' 1" = 500' 1" = 400' 1" = 300' 1" = 200' 1" = 100'
	Civil Plans, Topographic surveys of ground only	1" = 100'
	Geometry Plans, Plan and Profiles, Utility Maps	1" = 50'
	Topographic Surveys	1" = 50' 1" = 20' 3/16" = 1'-0"
	As-Built Surveys	1" = 50' 1" = 20' 3/16" = 1'-0"
	Paving Grids	1" = 20' 3/16" = 1'-0"
	Demolition Floor Plans	1" = 30' 3/32" = 1'-0" 1/16" = 1'-0"
	Floor Plans	1" = 30' 1" = 20' 1" = 10' 1" = 5' 3/16" = 1'-0" 3/32" = 1'-0" 1/16" = 1'-0" 1/8" = 1'-0" 1/4" = 1'-0"
	Reflected Ceiling Plans	1" = 30' 3/32" = 1'-0" 1/16" = 1'-0"
	Exterior Elevations	1" = 30' 1" = 20' 1" = 10' 1" = 5' 3/16" = 1'-0"

		$3/32" = 1'-0"$ $1/16" = 1'-0"$ $1/8" = 1'-0"$ $1/4" = 1'-0"$
	Wall Section	$1" = 2'$ $1" = 1'$ $1/2" = 1'-0"$ $3/4" = 1'-0"$ $1" = 1'-0"$
	Enlarged Floor Plans	$1" = 20'$ $1" = 2'$ $3/16" = 1'-0"$ $1/2" = 1'-0"$ $3/4" = 1'-0"$
	Enlarged Utility Plans	$1" = 20'$ $3/16" = 1'-0"$
	Interior Elevations	$3/8" = 1'-0"$
	Details	$1" = 30'$ $1" = 20'$ $1" = 10'$ $1" = 5'$ $1" = 2'$ $3/16" = 1'-0"$ $3/32" = 1'-0"$ $1/16" = 1'-0"$ $1/8" = 1'-0"$ $1/4" = 1'-0"$ $1/2" = 1'-0"$ $3/4" = 1'-0"$
	Foundations and Footing Details	$1" = 1'$ $1-1/2" = 1'-0"$
	Door & Window Details Cabinet Details	$3" = 1'-0"$ Half Size Full Size

Acceptable Scales

The list above are commonly acceptable scales for Port projects. The list is not exhaustive and other scales may be acceptable, please ask at the beginning of the project should you need a different scale. For drawings that are not drawn to scale use the term N.T.S. in the title. Views that are not clear because the scale is too large or too small will need to be corrected to an appropriate scale at the Port's discretion.

6. POP COVER SHEET AND GENERAL INFORMATION SHEETS

General information sheets include the site plan, sheet indexes, and survey control plans. Additionally, when a project does not have a Construction Safety and Phasing Plan (CSPP) phasing drawings, the work area drawings and details will also be general information sheets.

6.1 Cover Sheet

There will be a cover sheet for all drawing sets containing four or more sheets, see [Appendix: Graphic Example Sheets](#) for the Port standard cover sheet. For small drawing sets containing 15 sheets or less, the index can be on the cover sheet. This sheet will be provided by the Port.

6.2 Sheet Index (Drawing Index)

The index will consist of three columns. The first two columns will contain the sheet number and the discipline sheet number respectively and will be labeled with one title: "SHEET NUMBER" The third column will be labeled "DESCRIPTION" each discipline section of drawings will be separated and titled.

6.3 City Information and Directives

Directly after the sheet index add a blank sheet with only the titleblock information filled in. This sheet will be included in the sheet index and submitted with Record Set. Only required for the City of Portland.

6.4 Project Site & Vicinity Map

Site plans are used to show the contract work area. Aerial images are not accepted for use as a site plan.

6.5 Work Area Plan & Phasing Plans

Work area plans show the project work areas, staging areas, haul routes, flagging requirements, signage requirements, barricade locations and types, and various other information required to work in the area under construction. Use of the Port's line types and symbology is required. This specific sheet is project dependent and might not be required, refer to the Port's Project Manager. This information can be combined with Project Site and Vicinity Map if needed.

6.6 Survey Control Plan

The survey control drawings show the location of the project, survey datum, monuments, and the control points that will be used for the project. This sheet will be provided by the Port, the consultant is required to account for this sheet in the project's sheet index. This specific sheet is project dependent and might not be required, refer to the Port's Project Manager. This information can be combined with Project Site and Vicinity Map if needed.

7. POP STANDARD TITLEBLOCK

Standardized titleblock information ensures the uniformity of Port drawings, and aids subsequent drawing storage and retrieval efforts. For design/construction documents, use the Port's standard 22" x 34" titleblock. Titles shall consist of the facility name and project title assigned by the Port. The project title of the drawings should also be exactly the same as the title on the accompanying specifications.

Appendix: POP Titleblock Guidelines

Titleblock Information for projects should be infilled as described below:

7.1 Sheet Name

Sheet naming should be descriptive of the sheet's contents. The sheet title in the titleblock is multi-line with a maximum of 3 lines. Sheet naming should be descriptive of what is on the sheets. Name format is:

LOCATION (Large to Small) - LEVEL - DRAWING TYPE - DISCIPLINE

EXAMPLE:

CONCOURSE C - SECTOR 10 - DEPLANING - FLOOR PLAN - ELECTRICAL

Each sheet required a unique title. It is acceptable to add numbers to the end of identical sheet names.

EXAMPLES:

DETAILS 1 - ELECTRICAL

DETAILS 2 - ELECTRICAL

7.2 Sheet Number

The drawing discipline sheet numbering system will be consistently used for all disciplines in a drawing set. There is some flexibility in the numbering system to allow for a wide range of project scopes, please consult the Port for approval of your proposed numbering system prior to starting a project. The format has three components:

- Discipline Designator - consists of one or two alphabetical characters.
- Sheet Type Designator - consisting of one numerical character
- Sheet Sequence Number - consisting of two numerical characters starting at 01

7.3 Submitted By

Provide the full name of the Port's project representative (Project Engineer, Project Surveyor, CAD Manager, etc) ie: ROBERT SMITH

7.4 Designed By

First initial and full last name of the designer. ie: D. DESIGNER

7.5 Drawn By

First initial and full last name of the drafter. ie: D. DRAFTER

7.6 Checked By

First initial and full last name of the checker. ie: C. CHECKER

7.7 Date

Provide the month and year the drawing set advertises for bid. The month should be either spelled out completely or use a 3 or 4 letter designation. Numbers are not allowed. The year needs to include all four numbers. The day of the month is not used, example: MARCH 2023. Every sheet in the set is required to have the same date format and the same month and year, including any added sheets.

7.8 Port Sheet Numbering

The Port sheet number shall be consecutively numbered starting with sheet 1. The cover sheet is not included in the sheet count. The sheet number will continue through each discipline. For example, if discipline sheet GI1.03 is sheet number 3, the next sheet Port Sheet Number will be 4 regardless of the discipline for that sheet (architectural, civil, electrical, etc.).

7.9 Revisions

Revisions made during the design process are not noted in the title block or treated in any special way. Revisions made after the project has been advertised for bid are specifically identified in the following ways:

- Addendum (changes prior to bid opening)
- As bid (with incorporation of addendum changes up to award of contract)
- Contract changes (changes during construction)
- Record drawings (incorporating all design changes)

All changes shall be made in AutoCAD or Revit; hand changes will not be accepted. Record the first revision number starting in the bottom row of the right hand side of the revision block. Subsequent revision numbers are placed above previous revision numbers. The number used for each revision reflects the sequential number of all revisions (beginning with 1) on each sheet.

7.10 Center Box

The center box has a variety of uses. The primary use for consultants will be to place their company logo here. Some projects may require signature lines here. When that is the case, the consultant shall place their logo close to the lower right corner of the drawing area as possible.

Include consultant with whom the Port has a contract on all sheets. If a sub is sign/stamping the sheet their information must appear on their sheets as well. If a sub has a sub, both subs info must appear.

7.11 Professional Stamp Box

Provide the professional stamp with renewal date in the box. Project sheets submitted prior to Bid and Construction are to show a "Preliminary - Drawing" stamp with the appropriate level of submission.

[Port of Portland, Documentation Deliverable Requirements, 3.1.3 Digital Signature Guidance](#)

7.12 City Permit Stamp

Space should be saved at the top right corner of each sheet for required city stamp.

8. TITLEBLOCK INFORMATION FOR PROJECT MILESTONES

8.1 Pre-Bid

Submitted drawings and the sample electronic file will typically be reviewed early in the design process to confirm that Port standards are being met. The Port may request additional specific reviews when judged appropriate. Temporary revision notes may be used in the review period to indicate drawing issue dates and intermediate review completion percentages. When temporary revision notes are used, use a letter in place of a number to indicate the revision is temporary.

Final in-house review of drawings and specifications will be at 100 percent of contract drawing completion (or as defined by the Project Engineer). Revision notes and deltas shall be removed for the final review process. Drawings shall be plotted full sized. Drawing signatures will not be required at this time unless otherwise requested by the Project Engineer. Place the "Preliminary – Not for Construction" stamp with the appropriate review percentage in the Professional Stamp Box in the title block.

8.2 Advertisement Bid-Set

The "bid set" is the set of drawings that will be issued for advertisement. The consultant will be responsible for preparing the bid set as follows:

- The drawings shall incorporate all corrections from the review process.
- The bid set will not include any revision notes or deltas when issued. Any drawings containing revision notes and deltas will not be accepted and the consultant will be required to resubmit the drawings.
- All drawings shall be plotted full size, as a pdf with an electronic or digital signature. All drawing stamps and signatures must comply with OAR and ORS requirements.

- The drawings shall meet the Port's Graphic Standards.

8.2.1 Addenda

Addendum changes affecting drawings occur during the advertising/bidding period and may be done by text, reissuing the drawing, issuing a sketch, or by adding new drawings as described below.

Once the necessary revisions have been incorporated or new drawings are complete, print the drawing sheets and send them to the Project Engineer. Submit drawing sheets in full size and with the professional stamp and.

Revised or Reissued Drawings

If the drawing change is described by text, the original design authoring files still needs to be corrected to reflect the change and the title block should reflect that it has been changed by addendum. Revisions to drawings are shown as addendum number changes. In the drawing, indicate revisions made by addendum with the revision number in delta and a drawing cloud around each change. Next to the revision number in the title block, indicate the date the revision is made to the drawing, the initials of the person making the change, and the statement, "REVISED BY ADDENDUM # ____." If drawing revisions are so extensive that clouding is not practical, replace the clouding with the revision block statement, "SHEET REISSUED BY ADDENDUM # ____." If subsequent addendum changes are made to a drawing, remove the previous clouding and revision delta within the drawing. Then make the changes, cloud and add revision delta, and add another delta in the title block. Do not remove the first revision delta and note from the title block.

Sketches

Whenever possible, use an 8.5" x 11" sketch with clouds to illustrate revisions to a specific drawing detail rather than reissuing the entire sheet. Label each sketch sequentially (e.g., Sketch A, Sketch B, etc.) and show the number of the detail being revised as well as the addendum number. Do not use sketches for addenda changes if more than one is needed for a particular detail or if a verbal description is needed in addition to the sketch to indicate all the changes. In those cases, the entire drawing should be reissued. Submit sketches in PDF format.

New Drawings

A new sheet can be added to the drawing set by addendum. In these instances, the added sheet should have an alpha character after the page number & discipline number so that subsequent sheets do not need to be renumbered. For example, if a new civil sheet needs to be inserted between Sheet C1.06 and Sheet C1.07, the new sheet would be numbered C.106A.

An exception to this is if the new drawing is the last sheet in the discipline, in which case the alpha character does not need to be added to the discipline number. The revision block in the new sheet should have a statement that reads, "SHEET ADDED BY ADDENDUM # ____."

8.3 Pre-Construction

Addenda changes issued during the solicitation period will be incorporated into the construction drawing set. The date shown on the construction documents for all sheets will remain as it was on the bid or proposal set.

As-bid, as-proposed, or as-negotiated drawings are circulated, along with the specifications, after a contractor has been selected. Immediately after bid opening, or after completion of negotiations if the solicitation is an RFP, the consultant will be responsible for preparing the as-bid (or as-proposed or as-negotiated) drawings as follows:

- Remove all references on the drawing to previous revisions made by addendum (except in the revision title block). This includes clouds and deltas in the body of the drawing.
- Existing revision block information is to remain. This includes any addendum notations made during the solicitation process, including changes that had been issued by sketches. Add the note "AS BID" (or "AS PROPOSED" or "AS NEGOTIATED" if the solicitation was an RFP) and corresponding deltas numbers to all drawings.
- All drawings shall be re-plotted as a pdf and digitally or electronically signed per OAR and ORS requirements. See Reprographics for further requirements.
- A CAD and/or BIM submission is required at this milestone. Design authoring files will reflect the as-bid (or as-proposed or as-negotiated) conditions.

8.4 Construction

Contract Changes

Revisions to contract drawings required by contract changes (CCs) occurring during the construction period should be performed as follows:

- Show drawing revisions by placing a cloud around the revision and adding a revision delta with a number matching the current revision next to the clouded area. In the revision block, add a delta sequence number and the words, "REVISED BY CC # ____", or "REISSUED BY CC#____" as applicable.
- Follow the same procedure for each additional CC issued. When a new revision is added, erase the clouding around previous revisions before noting the new. Existing title block revision information is to remain.
- If a new drawing is created by a CC, the first delta in the title block should read, "SHEET ADDED BY CC#____." Leave the Port Sheet Number blank, and assign it the next discipline number (e.g., if C1.04 was the last civil

number, it would be assigned C1.05). The only exception to this is if the drawing is an expansion of an existing sheet (e.g., if a detail needed to be added to C1.07 but there is no more room on the sheet, then it may be given an “A” number and called C1.07A).

- RFIs that change a drawing are indicated in the same manner as described above except “CC” should be replaced with “RFI.”
- If a drawing is reissued, revised or added during construction, that drawing will need to be re-plotted full size, appropriately stamped and signed, and submitted to the Project Engineer.

New project/drawing number

Occasionally, a fully defined project effort will be moved forward through a CC to another project. The guidelines below are in accordance with our existing standards.

- The PM/PE assigned to new project effort will maintain responsibility.
- A project schedule will be developed by the PM/PE for the CC.
- Drawings: A new drawing number is issued. All current Port drawing standards apply with the following clarifications:
 - The CC will use the initial project’s EAN.
 - The CC will use a new project number.
 - The CC’s drawing date will be the date the “Pricing Set” was issued.
 - A “Pricing Set” will be used to get a quote for the work. At this stage, the design drawings will not require the professional stamp and signatures. When the drawing set does not use a PE stamp, and is unsigned, use a “Not for Construction” stamp.
 - Project Analyst will create “Pricing Set” and “Construction” cover sheets.
 - The first line on the revision block will say “Set Added by CC#___”
 - When the CC is approved, a final construction version of the drawings set (full size PDF, stamped and signed) is required.
 - The Project Analyst will provide any reprographics required.
- Specification changes may be required:
 - With CC: Update Spec Drawing Index (Document 000115) w/Additional Drawing Number.
 - Additional Spec Sections will be issued.
- Construction will route documents to the initial project PE. The initial project PE will forward the documents to the PE assigned to the CC’d project for review/approval.
- All documents (MT, OM, SD, and CA) will be filed under the initial project’s EAN Number.

8.5 Record

The consultant will be responsible for developing the record drawings. The Port expects the drawings to include all changes made during the construction process.

The drawings, along with the shop drawings and as-construct surveys (if applicable), shall stand alone as a complete record of the “as built” condition.

- The Port will provide the consultant redlines with any additional information as necessary to the consultant for the creation of the record drawings. These shall be returned to the Port with the record drawings.
- New sheets may need to be added to the original set to include additional plans or details. They will be added to the end of the record drawing set repeating the same discipline order as the original drawings. The sequential number will begin one number higher than the last number in the record drawing.
- “A” sheets may only be added if they are an expansion of an existing sheet. For example, an additional detail that would not fit on page 5 (C1.04) may be added on an additional page as 5A (C1.04A).
- Verify that all CC’s, RFI’s, etc., have been incorporated and the CC# (and date) are listed in the title block on the affected sheets.
- Remove all deltas and clouds from the body of the drawings, but leave all references in the revision block. The last delta in the revision block should read, “Record Drawing.”
- When a view or an entire sheet has been removed from the project, See Section 11.1 “Removing a View”
- All drawings shall be reprinted as full size PDFs
- Do not stamp or sign the record drawings. The consultant will be required to initial the first “Approved by” box in the title block next to “Record Drawing,” indicating that the consultant has reviewed that sheet. The remaining two boxes are reserved for Port use.

9. POP STANDARD SYMBOLS

Symbology shall conform to the national standards set by the AIA or the National CAD or National BIM Standards. Any deviation from the Port standards or the national standards shall be submitted to the Port for prior approval. Please direct any questions to the BIM manager, CAD manager or Project Engineer.

[Appendix: Port of Portland, Standard Symbols Guideline](#)

9.1 North Arrow

The north arrow should be in the upper left of the view it is used on. If there is more than one plan view in a drawing, use a separate north arrow for each view only if the orientation of drawings is different. As much as possible, north is to be towards the top of the sheet. Avoid pointing north towards the bottom of the page.

9.2 Bar Scales

The proper placement of the bar scale is directly beneath the north arrow. The bar scale should only appear once per relevance on a sheet.

9.3 Key Plan

When key plans are required, place them in the lower right corner of the drawing area.

9.4 Reprographic Scale

The reprographic scale appears in the lower left corner of the Port's standard titleblock.

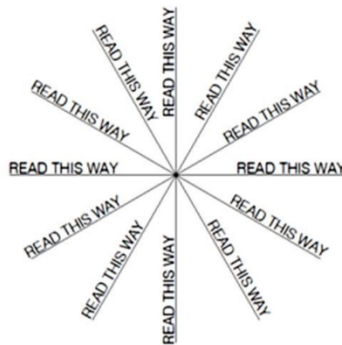
10. TEXT AND LEGENDS

Drawing note text should be kept to a minimum. Detailed written information should be reserved for the specifications. Drawings and specifications are complementary parts of the same set of contract documents and including references from one to another is not recommended. However, it is acceptable to refer to a specific specification section. Example: "Provide fire stopping at wall penetration – see specification Section 078400."

10.1 Text

The Port requires all drawings use Windows True Type font Arial for normal text and Arial Black for bold text.

- At a minimum titles and headers should be no smaller than .165. Notes, schedule text, and other notes should not be smaller than .125"
- The font shall be 100% width. Reduced widths are not allowed.
- Capital letters are required for all text.
- Text and notes should be left justified
- For legibility when reproducing drawings, stacked fractions are not allowed.
- Background masks are allowed and may be required to maintain text legibility.
- All text should be plan readable. See the figure below for properly oriented text:



10.2 Notes

If there is only one note on a sheet, a number is not required. Notes, tables, and legends are typically located along the right side of the drawing area, and above the key plan

The Port uses several different types of notes.

- General discipline notes - apply to all sheets within a discipline and are located on the first sheet in the discipline. A legend, index or other items may also appear on this page.
- Sheet notes - apply to the entire sheet and shall be generally located along the right-hand side of that page
- Detail notes - apply to only that detail and shall have the same formatting as sheet notes, except they shall be located above the detail title.

10.3 Keynotes

The Port's preferred keynote identifier is a circle with a number centered in it and typically has a leader with an arrow pointing to the item described in the keynotes. It is acceptable to place only the circle with number adjacent to the item described in the keynotes when space is limited. Some drawings may require the use of more than one symbol for keynotes. When cases like this occur, use the circle first, hexagon second, and if required, a square third. If more symbols are still needed, check with the Project Engineer for acceptable symbols. Note that triangles may not be used, triangles are strictly reserved for revisions.

When more than one keynote applies to an object, it is preferred to link the keynote identifiers in sequence and share one leader.

When keynotes apply to specific details on the same sheet, the keynotes should be located near the detail title. When multiple details on the same sheet have keynotes.

10.4 Text Notes & Leaders

Leaders from callouts are typically placed by the very beginning word to the left, or by the final word to the right. If it is not practical to place the leader hook at the beginning word to the left or at the final word to the right, it is acceptable to place the leader in the most convenient place available. The leader end is an arrow head, size = 0.125", with an aspect ratio of 1:3.

10.5 Abbreviations

With few exceptions the Port does not approve the use of symbols to replace text. Abbreviations shall only be used to reduce time and space, or where appropriate to improve clarity. When possible, use the following approved abbreviations and symbols. If an abbreviation you want to use is not on the list, the use of an abbreviation that is universally recognized in the construction industry may be allowed. If there is a possibility of ambiguity or confusion, the Port may, at its discretion, require the word or term to be spelled completely.

Please note that common English language terms have not been included. Examples are “afternoon” (PM) and “Pacific Standard Time” (PST).

Abbreviation Guidelines

- Do not abbreviate words in titles.
- Periods, as shown, shall not be omitted so that the reader can be certain that the abbreviation is intentional and not a misspelled word.
- Do not abbreviate words of five letters or fewer unless they are contained in the abbreviations list, see [Appendix: POP Graphic Example Sheets](#)
- Avoid use of abbreviations with more than one meaning

10.6 Dimensions

Horizontal, vertical and aligned dimensions should be above the dimension line.

11. VIEW REFERENCE AND TITLES

11.1 View Titles (Detail Titles)

Detail titles are required on all views, including sheets with only one view. Number views on each sheet starting with sequence number “1”. Then follow a left-to-right, top-to-bottom numbering convention throughout the sheet. For details not drawn to scale, use “N.T.S.”

Removing a View

When removing a detail or a plan view from the documents scope, leave the drawing in place and draw a diagonal line through the view, and type “N.I.C.” or the words “NOT USED” along the top side of the line

11.2 Detail Callouts

To reference another detail, either on the same sheet or another sheet, draw a circle or rectangle around the area to be detailed with a medium weight dashed line. The upper half of the bubble shall contain the detail number. The lower half shall contain the sheet number where the detail resides.

11.3 Section Callouts

The text shall always be read horizontally, regardless of the orientation of the section marker. The upper half of the bubble shall contain the section number The lower half shall contain the sheet number where the section resides.

11.4 Matchlines

Bold line weight that does not conflict with other line styles within the view. Annotation should reference both view sheet and view number.