Management Letter 21-03

October 18, 2021

David Kim, Statewide Project Delivery Manager
Statewide Project Delivery Branch
4040 Fairview Industrial Drive SE
Salem, Oregon 97302

Dear Mr. Kim,

This letter communicates the results of our audit of ODOT's addenda process. The audit had two objectives. The first was to determine if the process for issuing addenda (also referred to as addendum) is documented and followed by staff, while the second was to categorize the changes made by addendum for contracts with bid let dates between January 1, 2019 and June 30, 2020. This is an informational report and does not include recommendations.

When construction projects go out for bid, it may become necessary to modify the content of the bid documents to address bidder questions or other adjustments needed to improve the quality of bids. Changes to project bid documents during the advertisement period are made through addenda. Addenda are issued in letter format using ODOT templates. Each addenda letter includes project information, signatures from the preparer and reviewer and a description of each modification.[1] Every addendum is published on the ODOT Electronic Bidding Information Distribution System (eBids).[2] Bidders can subscribe to an eBids service that notifies them when an addendum is released.

The addenda process is outlined in various agency publications. ODOT staff and consultants described their practices, which generally mirror published guidelines. Regions determine when addendum are needed and compile the letters. The Project Controls Office (PCO) reviews each addendum letter and sends it to the ODOT Procurement Office (OPO) for posting.

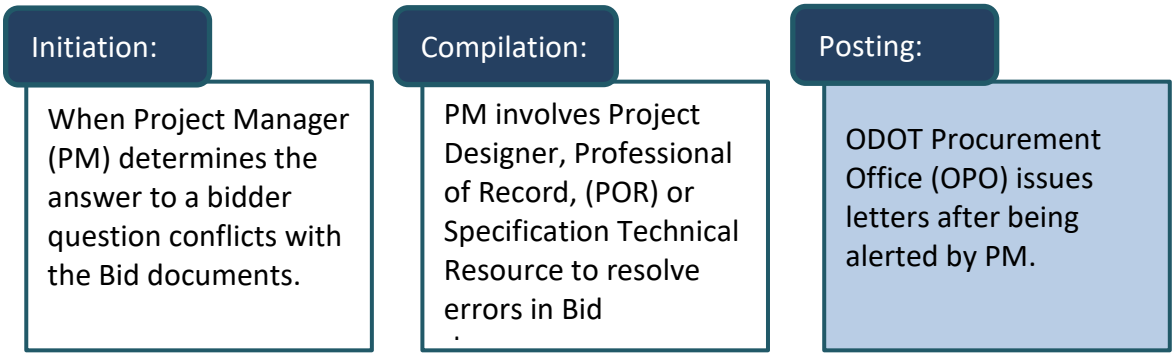
[1] There are three templates: General Addendum template, Addendum to Postpone template and an Addendum to Withdraw template.
[2] Information on project plans and specifications is available free of change on eBids.

The majority of addenda changed the specifications, bid schedule or plan sheet components of the bid documents. A smaller group made administrative adjustments or delayed the bid let date. No relationship between the number of addendum for a project and the number of CCOs was noted.

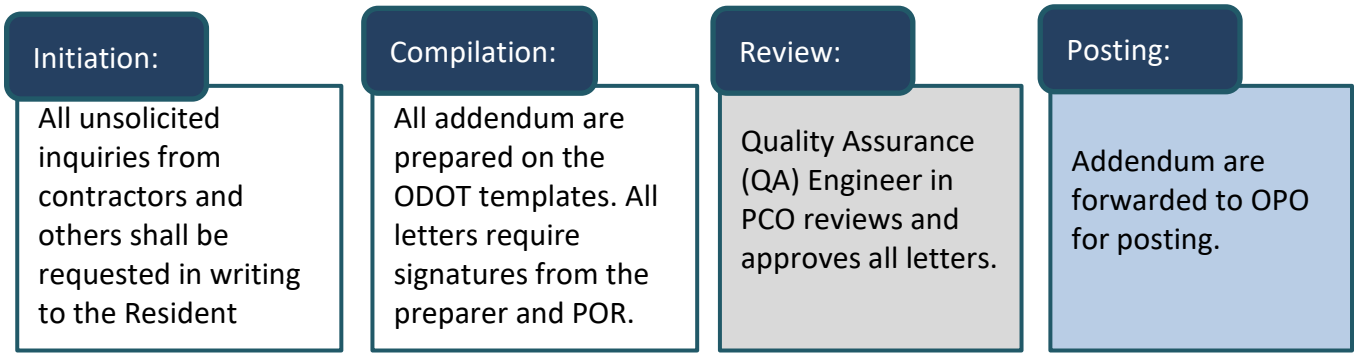
**Agency Guidelines and Practices are Similar**

The practices used to issue addenda are in-line with process descriptions found in various agency guidelines. The flow charts below shows how addenda are initiated, compiled, reviewed and posted according to different ODOT manuals.

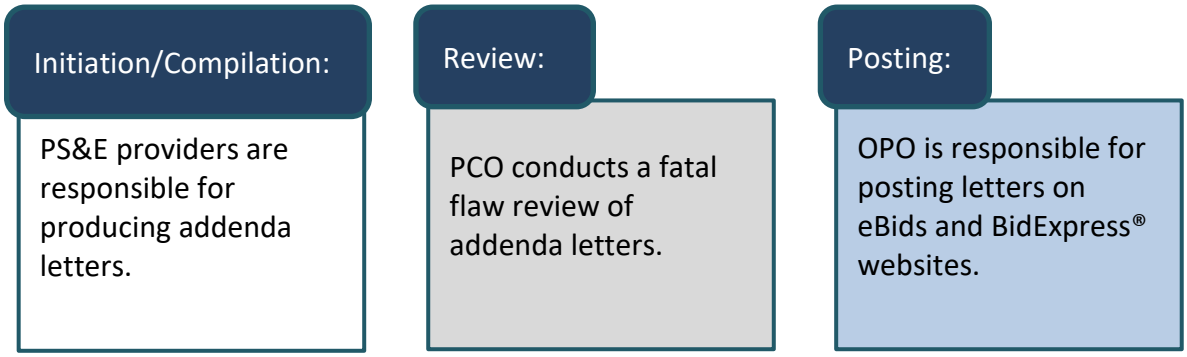
***Construction Manual***



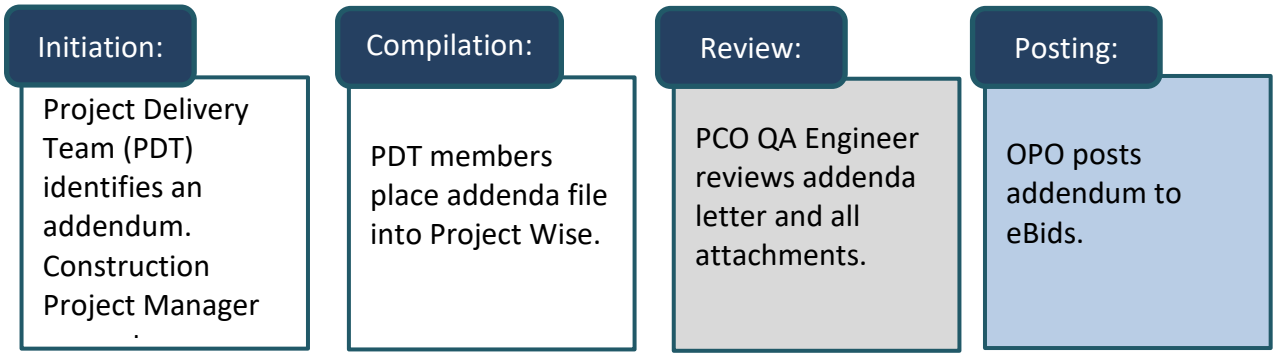

***Project Controls Office Phase Gate Delivery Manual***




***Delivery and Operations Division Operational Notice: Plans, Specifications & Estimates Submittal to Bid Opening***



***ODOT Project Wise: Life Cycle Milestone Project***




While the level of detail and terminology varies across documents, each publication establishes that the addenda process is initiated in the Region, letters are compiled by those responsible for the PS&E package (region staff or consultants), PCO reviews all addendum, and OPO posts them.

Terminology and detail differences are related to both the publication date and audience. These differences did not impact actual practice. For example, each document uses a different term for region staff. The term project manager is used in the Construction Manual while the Phase Gate Manual uses resident engineer. Despite this discrepancy the title of resident engineer has been adopted in regions and those in the position receive written questions from bidders. The Construction Manual was updated in 2016, before the term resident engineer was adopted, while the Phase Gate Manual was published in 2020.

The actual initiation practices described by region staff are similar to agency guidance in that resident engineers receive written question and region staff identify the need for addenda. Each region uses a collaborative framework to determine if an addendum letter is warranted following an internal review or bidder question. For example, Region 1 created formal guidelines that call for an ad hoc committee to evaluate the merits of addenda. In other regions, resident engineers, specifications (spec) writers and members of the design team meet to decide on issuing letters. Employees shared that the current process works well.

Consultants provided additional input regarding the addenda process. Consultants who worked on ODOT projects shared that they work with agency staff while managing addendum. The level of involvement depends on how project responsibilities are allotted. For example, if consultants direct project geotechnical work they will coordinate any geotechnical reviews required for an addenda letter. They shared that they have an agency liaison or point of contact during the addenda process.

Once the decision has been made to release an addendum, it is often region specification writers who gather information and compile each letter. Their responsibilities include writing the letter itself, obtaining updated plan sheets and reaching out to the professional of record (POR)[3] for review. After the addenda is signed the spec writer sends it to PCO via ProjectWise.

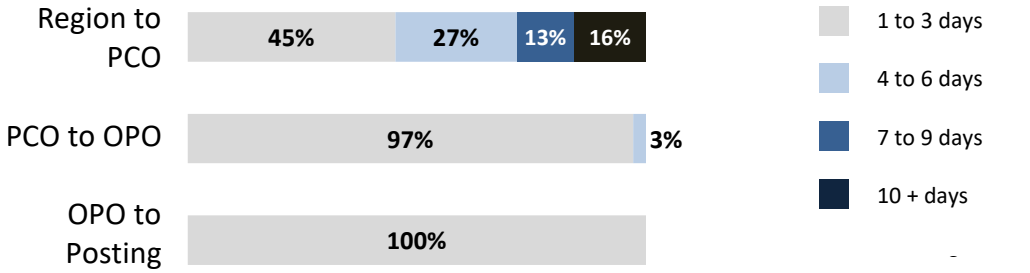
Agency manuals match the steps PCO and OPO staff described. A quality assurance engineer at PCO receives and reviews letters from regions. Next, the addenda is sent to OPO for a final review and posting. Both PCO and OPO use checklists to guide them while reviewing addendum.

**Processing Time Varied based on the Phase**

The amount of time it took to complete addenda issued between January 1, 2019 and June 30, 2020 varied based on how long each letter spent in each phase of the process. Addenda were issued for the majority (66%) of ODOT projects let during this period. In total 90 letters were released from 50 projects. The processing time for most was measured using project documentation. Multiple addenda did not have sufficient records to measure the complete timeline.[4] The process has three phases. A description of each is included below:

1. Region to PCO: The period between regions deciding to issue an addenda letter and transfer to PCO.
2. PCO to OPO: The period from PCO receiving the letter and forwarding it to OPO.
3. OPO to Posting: The period from receipt at OPO to posting on eBids.

**Almost Half (45%) of Addendum Went through Each Step in 1 to 3 Days**




[3] The professional of record is a licensed professional that, by the conditions of their professional license, are required to sign and seal their final professional work products. Their final work product may include, but is not limited to, final design plans, technical reports, and specifications.

[4] These addenda were missing either the date the region decided to start the addendum process (6) or the date the region sent the addendum letter to PCO (11). These dates were missing for a variety of reasons, such as projects being archived and staff leaving the agency. Additionally, Project Wise was implemented relatively recently. Regions are now required to store the letter in Project Wise and send it to PCO in Project Wise, which should improve the completeness of documentation.

The region to PCO phase is the longest and most varied. This period covers discussions on the merits of addenda and POR reviews. Additionally, if a proposed change is minor, addenda can be delayed until other issues arise. For instance if the quantity of an item needs to be slightly altered regions may not issue an addenda for this alone. Instead they might wait a while to see if additional changes are needed and include all modifications in one letter. This practice may have contributed to the average processing time of 7 business days (also referred to as days) for regions to compile an addenda and transfer it to PCO.

PCO and OPO spent an average of 1.2 and 1.1 days (respectively) reviewing addenda. The average total processing time was 7 days. However, the majority of addenda were completed in less time. The graph below shows the distribution of total processing time.

**The Majority of Addenda Were Processed in Less than 9 Days**




**About Half of Addenda Address Issues Raised Externally**

About half of addenda address issues raised externally through questions sent in by bidders. Addenda letters often have multiple entries addressing both bidder questions and internal sources, such as comments made during a review conducted in the region or at PCO. Therefore, categorizing the reasons for addenda as singularly external or internal cannot always be done. That said, about half (52%) of addenda included answers to documented bidder questions.[5] The reasons behind the remaining 48% could not be tied specifically to a bidder question based on documentation provided by regions. These addenda letters may have been generated from internal questions posed by PCO and other ODOT staff.

Addenda go through the same process regardless of the source of the issue (internal or external) with one exception. The one exception is PCO initiated letters. [6] PCO addenda are not project specific and address things such as labor rate changes or changes in laws that impact general project conditions. Another example is altering payment retainage practices due to new laws on retainage payments. In total, 13% of addenda were written by PCO staff.

[5] Auditor was unable to make this determination for 15 addenda due to either missing documentation (see footnote 4) or lack of clarity in documentation.
[6] When PCO staff writes an addenda letter they have another colleague review it.

**Changes to the Project Specifications, Bid Schedule or Plans are Most Common**

Addenda are most commonly used to change one of the following bid documents: project specifications, bid schedule or plans. Neither the project specifications, bid schedule nor plans specific bid document drove the need for addenda letters, as each component was adjusted an equal number of times. A smaller number of addenda made administrative modifications or extended the bid letting (bid let) date. The table below shows the type of change made by addendum and the number of times that change occurred.

| Change Category | Number of Addendum |
|---|---|
| Project Specifications | 49 |
| Bid Schedule | 49 |
| Project Plans | 49 |
| Administrative | 13 |
| Bid Let Extension | 7 |

***Project Specifications***

Project specifications are made up of the Standard Specifications and Special Provisions. The Oregon Standard Specifications for Construction lists the general requirements contractors must follow to perform agency projects. It covers the solicitation process, contractual relationships, and construction technical specifications. For example, it states that bidders may submit paper or electronic bids and contractors must follow all applicable laws. Any project-specific modifications of or supplements to the Standard Specifications are outlined in the Special Provisions document. Together the Standard Specifications and Special Provisions dictate things such as access to the worksite during construction, type of work performed and how the contractor will be paid. Specifications are modified by adding or removing a provision or altering the language to fit project specific requirements. The chart below shows, among other information, the most common change to the project specifications and the number of letters that made that change.

**Overview and Frequency of Project Specification Adjustments**

| Number of Projects Impacted | Most Common Change | Number of Letters Adding Specification | Number of Letters Removing Specification |
|---|---|---|---|
| 39 | Adding or Removing Specification | 29 | 12 |

Adding or removing a project specification does not always signify additional work. Instead, new specifications can adjust project requirements. See below for an example of a special provision being added to extend restrictions to worksite access. Excerpt A shows the original road closures section in the Special Provisions document, while Excerpt B is an excerpt from an addenda letter that added necessities.

***Excerpt A: Subsection in the Special Provisions Document***

**00220.40(f) Limited Duration Directional Road Closure** - The Contractor will be permitted to close one direction of "A" Street within the segments shown below for periods not to exceed 30 consecutive Calendar Days for each segment during sidewalk, curb, gutter, and roadway reconstruction work:

- Westbound "A" Street:
  - Segment between the eastern Project Limits and 3rd Street.
  - Segment between 3rd Street and 1st Street.
  - Segment between 1st Street and the western Project Limits.
- Eastbound "A" Street:
  - Segment between the eastern Project Limits and 3rd Street.
  - Segment between 3rd Street and 1st Street.
  - Segment between 1st Street and the western Project Limits.

Succeeding roadway closures will not be allowed until traffic clears from a preceding closure.

***Excerpt B: Additional Provision Added in Addenda Letter***

1. Subsection 00220.40(g) Weekend Road Closures - This subsection is added after subsection 00220.40(f):

   **00220.40(g) Weekend Road Closures** – The Contractor will be permitted to close A Street to install pipe crossings under the Railroad tracks as shown in the Plans on Sheets EA01 during the following periods of time and locations:

   - Two Day weekend closures: Saturday 8:00 am – Sunday 5:00 pm as follows:
     - August 3-4, 2019 East of W 2nd Street
     - August 10-11, 2019 East of W 2nd Street
     - August 17-18, 2019 West of W 2nd Street

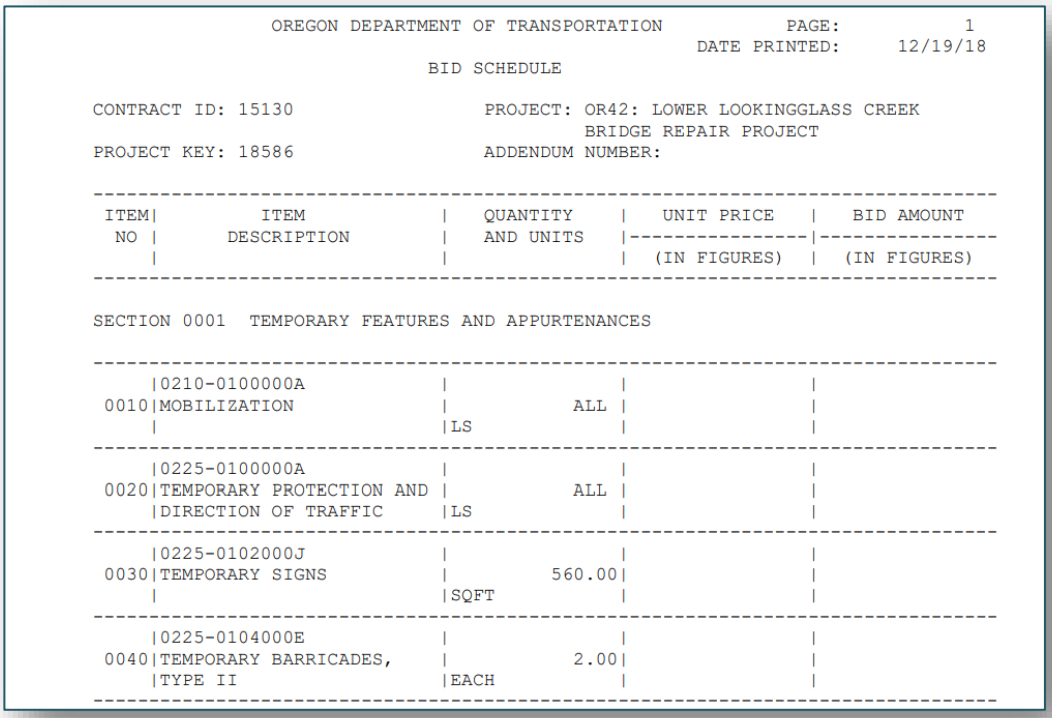
Make copies of the new attached Bid Schedule to replace the Bid Schedule in the Project Special Provisions.

These changes will be included in the Contract for this Project. It is understood that your Bid will be submitted accordingly.

***Project Bid Schedule***

The project Bid Schedule component is a list of pay items, their units of measurement and estimated quantities for the project. It also includes a unique number for each item. See below for an example of an excerpt from a bid schedule.

***Example Bid Schedule Excerpt:***



OREGON DEPARTMENT OF TRANSPORTATION PAGE: 1
DATE PRINTED: 12/19/18

BID SCHEDULE

CONTRACT ID: 15130 PROJECT: OR42: LOWER LOOKINGGLASS CREEK BRIDGE REPAIR PROJECT
PROJECT KEY: 18586 ADDENDUM NUMBER:

| ITEM NO | ITEM DESCRIPTION | QUANTITY AND UNITS | UNIT PRICE (IN FIGURES) | BID AMOUNT (IN FIGURES) |
|---|---|---|---|---|
| | SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES | | | |
| 0010 | 0210-0100000A MOBILIZATION | ALL LS | | |
| 0020 | 0225-0100000A TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC | ALL LS | | |
| 0030 | 0225-0102000J TEMPORARY SIGNS | 560.00 SQFT | | |
| 0040 | 0225-0104000E TEMPORARY BARRICADES, TYPE II | 2.00 EACH | | |

Adjusting the quantity of a pay item was the most common alteration to the Bid Schedule. These addenda list the original quantity estimate as well as the updated number. The table below shows the number of addenda letters with quantity modifications, the number of projects impacted and a breakdown of quantity changes.

**Overview of Frequency and Type of Quantity Adjustment**

| Number of Addenda Letters Adjusting Quantity Estimates | Number of Projects Impacted | Total Quantity Changes | Quantity Increases | Quantity Decreases |
|---|---|---|---|---|
| 33 | 27 | 91 | 58 | 33 |

Of the 33 addenda with bid item quantity changes, 96% made multiple quantity adjustments. The remaining 4% only had one quantity modification.

***Project Plans***

The next component, the Project Plans, are the engineered drawings that show the project design. Each plan sheet is stamped by the POR. Examples include plans for road work, bridge construction and fencing. Each modified plan sheet has a table that lists revisions.

Addendum that altered plan sheets most commonly used to replace existing plan sheets with modified ones. The table below shows information about the type and frequency of all plan sheet changes.

**Overview of Frequency and Type of Plan Sheet Modifications**

| Projects Impacted | Most Common Change | Letters Replacing Plan Sheets | Letters Adding Plan Sheet | Letters Deleting Plan Sheet |
|---|---|---|---|---|
| 35 | Revised Plan Sheet | 48 | 4 | 2 |

It is common to alter either the specifications, bid schedule and plans component for the same reason. For example, if quantities are increased in the bid schedule, a plan sheet may also be adjusted to reflect that. Additionally, if a specification is added, a corresponding pay item may be included in the bid schedule. This can explain why addenda included multiple changes to different bid documents.

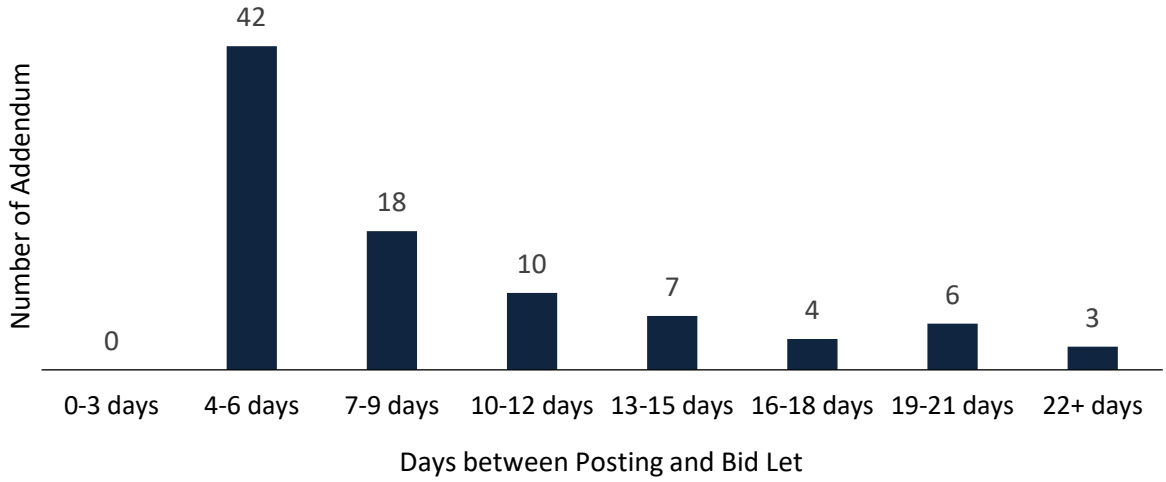
A smaller group, 13 out of 90, of addenda letters made administrative adjustments outside of the specifications, bid schedule or plan sheets. The modifications in these letters were often not necessarily tied to specifications, plan sheets or bid schedules. For example, four addenda were used to replace damaged electronic file bid documents in eBids. The remainder addressed clerical errors such as incorrect bid item numbers or misspelled email addresses.

Addendum are also used to extend the bid let date. The bid let date is the date on which submitted bids for a project are opened and read aloud; it signifies the closing of the advertisement period. Agency staff tries to avoid moving the date. It is only done when a significant modifications to the contract plans, specifications or bid item schedule are needed and there is not enough time in the advertisement period for bidders to alter their bids. In total only 7 (8%), addenda letters extended the bid let date.

## ODOT Met Deadlines Set Internally and by OAR

ODOT published every addenda letter before the deadlines established internally and by Oregon Administrative Rule (OAR). Per OAR, addendum must be published no later than 48 hours before the bid let date.[7] The agency's deadline is the Friday before the week of bid let. This gives bidders a minimum of 4 business days to incorporate changes. The agency met this target by not issuing any addendum within 3 days of letting. [8] The chart below shows the distribution of timing between posting addenda and bid let.

**Addenda Letters were Most Commonly Issued between 4 and 6 Days from Bid Let**




ODOT staff shared that they do not have much time to process addenda when bidders ask questions close to bid let. Some bidders shared that they do not look closely at plans and specifications early in the advertisement period and do not consider the timing in the advertisement period when deciding whether to submit a question. One acknowledged that if they ask a question shortly before bid let they may not receive an answer and that they do not mind when addendum are released the week before bid let.

## Analysis Did Not Show a Strong Relationship between the Number of Addenda and the Number of CCOs

Analyses comparing the use of addenda letters and contract change orders (CCOs) did not show a numerical relationship between the two methods of making project changes. Once a project has gone to bid and a contract has been executed, addenda cannot be used. At this point changes are made by CCO.

[7] OAR 731-005-0580. OAR 731-005-0580 allows addendum to be posted within less than 48 hours if it is extending the closing.

[8] Report 20-01 *Bid Communications Met Federal and State Requirements, but Timeliness and Consistency Could Be Improved* also reviewed addendum deadlines and found that dates were met.

Per agency staff, it is possible to use CCOs, rather than addendum, to address issues that arise during the advertisement period. Staff could not recall instances where it occurred. That said, releasing CCOs shortly after bid let may suggest that ODOT used a CCO in place of an addenda letter. There were 377 CCOs executed for projects with bid let dates between 1/1/2019 and 6/30/2020. We reviewed these to see how many CCOs were issued within 100 days of the bid let date.[9] The majority (92%) of these CCOs were issued more than 100 days from bid let. Change orders were issued within 100 days to address contractor requests, COVID-19 related changes and clerical adjustments.

In addition to the timing of addenda, we compared the number of addenda to the number of CCOs for a project. A majority (84%) of projects had more CCOs than addenda letters. Additionally, 33% of projects had executed CCOs but no addenda. We used a statistical analysis to measure the correlation between the two methods of making project changes. The results showed that the number of CCOs is generally not linked to the number of addendum.

## Conclusion

The ODOT manuals that describe the addenda process are similar to agency practices, but may not use the exact terminology. Additionally, regions are able to customize the process in ways that work for them. As is, the process can be initiated and completed quickly when needed. We did not find a specific bid document component or practice to be driving the issuance of addendum. Lastly, the number of contract addenda was not strongly correlated with the number of project CCOs. This report is informational and no recommendations are issued.

## Objectives, Scope and Methodology

The audit had two objectives:

- For both internally and externally generated addenda, determine whether the processes related to issuing addenda outlined in various manuals are coherent (i.e., no gaps between steps and no conflicts between processes described in different manuals) and whether actual practice follows the processes as outlined.
- Categorize the changes being made by addenda for contracts with bid let dates between January 1, 2019 and June 30, 2020. Depending on the results, consider exploring the possibility of a quantitative or qualitative relationship between addenda and contract change orders (CCO).

[9] Staff said this is a rough measure of the relationship between CCOs and addenda. They did not have enough concrete examples of CCOs being used instead of addenda to provide precise measurements.

We reviewed the following ODOT publications for information on the addenda process:

- Construction Manual
- Phase Gate Manual
- Highway Division Project Delivery Leadership Team Operational Notice PD-07
- ODOT ProjectWise Guidelines
- Oregon Standard Specifications for Construction

We met with ODOT staff that have a role in the addenda process. This included REs and specifications writers from all five ODOT regions, quality assurance engineers and management in PCO and OPO staff involved with posting letters to eBids.
Other tasks we completed include:

- Interviewed consultants who worked on addenda
- Interviewed bidders with experience bidding on ODOT projects
- Reviewed 90 addenda letters issued between 1/1/2019 and 6/30/2020
- Reviewed 377 CCOs from projects with bid let dates between 1/1/2019 and 6/30/2020

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Sincerely,



Marlene V. Hartinger, MBA, CPA, CIA
Chief Auditor

cc:
Executive Strategy Team Members

Oregon
Kate Brown, Governor

**Department of Transportation**
**Statewide Project Delivery Branch**
**Project Development Section**
Project Controls Office
4040 Fairview Industrial Dr. MS #1
Salem, OR 97302
Phone: (503) 986-3754

October 12, 2021

Marlene Hartinger
ODOT Chief of Audit Services
355 Capitol Street NE
Salem, OR 97301

RE: Internal Audit Response – ODOT's addenda process

Dear Ms. Hartinger,

Thank you for your thorough and independent review of ODOT's addenda process. We appreciate and welcome the audit team's effort to identify process improvements. Although the audit did not contain recommendations, the audit provided great information specific to existing guidance documents and processes that are currently employed by ODOT regions personnel, bidders/contractors, the ODOT Procurement Office (OPO) and the Project Controls Office (PCO). The audit provides the Project Controls Office an opportunity to assess opportunities for continuous improvement.

ODOT manuals were identified as not having the exact terminology, specifically the term "project manager" used in the construction manual as compared to the same term used in the Phase Gate Manual as "Resident Engineer." The PCO will be working closely with the construction section to ensure consistency in the terminology between the following guidance documents;

- Construction Manual
- Phase Gate Manual
- Highway Division Project Delivery Leadership Team Operational Notice PD-07
- ODOT ProjectWise Guidelines
- Oregon Standard Specifications for Construction

In January 2020, the Programs Development Office hired ODOT's first Project Delivery QA/QC Program Manager. The QA/QC Program Manager will lead the quality control/assurance program in developing consistent quality expectations for both consultant and ODOT project delivery work. The program will also establish standards of practice by developing guidelines and templates to improve quality control by consultants and ODOT Technical Design Disciplines. A summary of the audit report will be shared with the QA/QC Program Manager as well as other key project delivery partners that are involved with the addenda process.

Thank you for your review of ODOT's addenda process. The addenda work the Project Controls Office coordinates is a critical process to ensure bidders have accurate project plans and specifications. The report represents the critical nature of the PCO's work as reflected in the 97% of addenda that were processed in less than 3 days. We appreciate the opportunity to respond and look forward to correcting the inconsistencies identified in the audit in our efforts for continued process improvement.

Sincerely,

Jaimé Viramontes, P.E.
Project Controls Office Manager