

## Implementing the New Revenue Standard for Construction Entities

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### Abstract

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The Financial Accounting Standards Board and the International Accounting Standards Board in 2014 jointly issued significantly revised standard on revenue recognition. The new standard became effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period with a one-year deferral for nonpublic entities. The new standard provides a single comprehensive principle-based revenue recognition model to be applied across industries and jurisdictions. It replaces the detailed and often disparate industry-specific guidance existed under U.S. accounting standards. The focus of this paper is to examine the implementation of the new revenue standard for construction entities. Issues related to the pattern of revenue recognition, combining contracts and contract modifications are examined. In general, the fundamental accounting for long-term construction contracts does not change significantly by the new standard.

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**Keywords:** revenue recognition, performance obligations, combining contracts, contract modifications.

### 1. Introduction

The Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) in 2014 jointly issued significantly revised standard on revenue recognition. The new standard became effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period with a one-year deferral for nonpublic entities.

The core principle of the new revenue standard [codified in FASB Accounting Standards Codification (ASC) 606, *Revenue from Contracts with Customers*] is that “an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services” (ASC 606-10-05-3). To recognize revenue in accordance with that core principle, the standard indicates that an entity should apply the following five-step process:

Step 1: Identify the contract with a customer.

Step 2: Identify the performance obligations in the contract.

Step 3: Determine the transaction price.

Step 4: Allocate the transaction price to the performance obligations in the contract.

Step 5: Recognize revenue when or as the entity satisfies a performance obligation.

The new standard provides a single comprehensive principle-based revenue recognition model to be applied across industries and jurisdictions. It replaces the detailed and often disparate industry-specific guidance existed under U.S. accounting standards. The focus of this paper is to examine the implementation of the new revenue standard for construction entities. Issues related to the pattern of revenue recognition, combining contracts and contract modifications are examined. In general, the fundamental accounting for long-term construction contracts does not change significantly by the new standard.

### 2. Construction Industry

Under the old revenue standard of accounting for construction contracts, revenue recognition is accounted for using two basic methods:

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(1) the percentage-of-completion method where revenue, costs, and profits are recognized each accounting period as the contract progresses to completion (using the input or output methods such as cost-to-cost to measure progress) or (2) under the completed-contract method where revenues, costs, and profits are deferred until the project is substantially complete. In addition, accounting standards developed over time to address industry specific aspects of long-term construction contracts can include guidance for change orders and other contract modifications, combining or segmenting construction contracts, and guidance for identifying the contract prices.

The new standard on revenue recognition supersedes and replaces the old accounting guidance for construction contracts including commonly applied methods such as the percentage-of-completion method.

### **2.1. Identify the Performance Obligations in a Contract**

Entities must identify separate performance obligations (which is the unit of accounting in applying the new revenue standard) in a contract. A performance obligation is a promise to transfer a distinct good or service (or a series of distinct goods or services that are substantially the same and have the same pattern of transfer) to a customer. To be distinct, a promised good or service must be both (1) capable of being distinct, i.e., the customer can benefit from the good or service on its own or with other resources that are readily available to the customer and (2) distinct within the context of the contract, i.e., the promise to transfer the good or service is separately identifiable from other promises in the contract. (ASC 606-10-25-14 and 606-10-25-19)

Factors that indicate a promise to transfer good or service is not separately identifiable include (1) the entity provides a significant service of integrating the good or service with other goods or services promised in the contract, (2) the good or service significantly modifies or customizes other goods or services promised in the contract and (3) the good or service is highly dependent on, or highly interrelated with, other goods or services promised in the contract (ASC 606-10-25-21). If a promised good or service is not distinct, it is combined with the other promised goods or services until the group of promised goods or services is considered distinct. It is possible that all of the promised goods or services in a contract may have to be accounted for as a single performance obligation. (ASC 606-10-25-22) For contracts that have multiple performance obligations, entities are to allocate the transaction price of the contract to the performance obligations based on their relative standalone selling prices. (ASC 606-10-32-31)

For a construction entity, when it promises to build a single structure for a customer, the entity in general integrates various materials, labor and project management services into a combined output, the structure contracted by the customer. In this case, the promise to build the structure will be a single performance obligation. This situation is illustrated by Example 10 of the standard in which a construction contractor enters into a contract to build a hospital for a customer. The contractor is responsible for the overall management of the project and identifies the various goods and services to be provided. As the contractor provides a significant service of integrating the various goods and services into a combined output, the hospital contracted by the customer, all of the goods and services in the contract will be accounted for as a single performance obligation. (ASC 606-10-55-137 to 55-140)

However, in other situations, construction entities may determine that there are more than one performance obligations. One example would be a contract to build a manufacturing facility and to provide maintenance services after the construction is complete. Another example would be a contract to construct an academic building and a recreation center on a separate school property.

### **2.2. Combining Contracts**

The new revenue standard requires entities to combine two or more contracts with the same customer into a single contract if the contracts are entered into at or near the same time and if they meet one or more of the following requirements: (1) the contracts are negotiated with a single commercial objective, (2) the amount of consideration to be paid in one contract depends on the price or performance of the other contract, (3) the goods or services promised in the contracts are a single performance obligation. (ASC 606-10-25-9)

The requirement to combine contracts is generally consistent with the underlying principles in the old accounting guidance. As a result, the assessment of combining contracts is not expected to change significantly. It is important to note that the new standard is silent regarding segmenting. However, while the new standard may not have specific guidance on segmenting contracts, entities segmenting contracts under the old guidance may not be impacted due to the new standard's requirement to account for separate performance obligations. As a result, entities may reach similar conclusions about segmenting contracts as they do under the old guidance.

### 2.3. Recognizing Revenue

Under the old revenue standard, construction entities recognize revenue using two basic methods: (1) the percentage-of-completion method where revenue is recognized as the entities progress toward the completion of a contract or (2) the completed-contract method where revenue is recognized when the contract is complete. If the entity can make reasonably dependable estimates of its progress, it would use the percentage-of-completion method. However, if the entity cannot make such estimates, it would generally use the completed-contract method.

Under the new revenue standard, an entity recognizes revenue when or as it satisfies a performance obligation by transferring control of the promised goods or services to a customer. The transfer of control occurs over time (i.e., the performance obligation is satisfied and revenue is recognized over time) if one of the following criteria is met: (1) the customer simultaneously receives and consumes the benefits as the entity performs, (2) the customer controls the asset as the asset is created or enhanced by the entity, (3) the asset created by the entity's performance has no alternative use to the entity and the entity has an enforceable right to payment for performance completed to date. If none of the above three criteria is met, the transfer of control occurs at a point in time so that the performance obligation is satisfied at a point in time and revenue is recognized at the time when the customer obtains control of the promised goods or services. (ASC 606-10-25-27 to 25-30)

For construction entities, maintenance services typically are provided as the customers simultaneously receive and consume the benefits from the services. The first of the three criteria is met and thus the performance obligation is satisfied and revenue is recognized over time in these situations. When a construction entity builds a structure on land owned by the customer, the second of the three criteria that the customer controls the asset as the asset is created or enhanced by the entity is generally met. Therefore, the performance obligation is also satisfied over time in these cases.

The third of the three criteria that the asset created has no alternative use and the entity has an enforceable right to payment warrants further discussion. If an entity is contractually restricted from or will incur significant costs in redirecting an asset for another use (e.g., selling the asset to another customer) then the asset has no alternative use for the entity. An asset built to a customer's specification often requires significant rework costs to meet another customer's specification. However, the entity must also have an enforceable right to payment before the performance obligation can be determined to be satisfied over time. The entity needs to conclude from contract terms and applicable laws that it entitles to compensation for its performance completed to date at all times during the contract. The amount of compensation should approximate the selling price of the work the entity has completed to date. (ASC 606-10-55-8 to 55-11)

When a performance obligation is satisfied over time, revenue will be recognized over time if the entity has a reasonable basis to measure its progress toward complete satisfaction of the performance obligation. Otherwise, until progress can be reasonably measured, revenue will not be recognized or will be recognized only to the extent of costs incurred if the entity can determine that it will recover those costs. An entity should select a single measure of progress (an input method or an output method) for each performance obligation that depicts the entity's performance in transferring control of promised goods and services. (ASC 606-10-25-31 to 25-37)

#### 2.3.1. Example: Performance Obligation Satisfied Over Time

Construction Company X enters into a contract with Customer Y to build a factory on Customer Y's land for \$100,000. The pertaining data are listed below:

	Year 1 (i=1)	Year 2 (i=2)	Year 3 (i=3)
Costs incurred (A <sub>i</sub> )	\$25,000	\$26,920	\$30,700
Costs of unexpected inefficiencies (B <sub>i</sub> )	1,000	700	0
Estimated additional costs to complete (C <sub>i</sub> )	56,000	30,780	0

Based on the facts and circumstances, Company X determines that the contract has a single performance obligation and that the performance obligation is satisfied over time. As Customer Y owns the land on which the factory is built, the control of the factory is transferred to Customer Y as it is being built by Company X. Therefore, the second criteria for the over-time satisfaction of performance obligations is met.

Company X determines that the cost-to-cost method (an input method) is a reasonable method to measure its progress toward the completion of the factory. In the cost-to-cost method, the progress of completion is calculated as the costs incurred to date divided by the most recent estimate of total costs. The new revenue standard requires entities, when using cost-based input method, to exclude costs related to unexpected inefficiencies (such as wasted materials or rework that are not budgeted in the pricing of the contract) in measuring progress as these costs do not contribute to the progress in satisfying the performance obligation.

	Year 1 (i=1)	Year 2 (i=2)	Year 3 (i=3)
Costs incurred to date used in measuring progress $D_i = \sum_{1 \text{ to } i} A_i - \sum_{1 \text{ to } i} B_i$	\$24,000	\$50,220	\$ 80,920
Most recent estimate of total costs used in measuring progress $E_i = \sum_{1 \text{ to } i} A_i - \sum_{1 \text{ to } i} B_i + C_i$	\$80,000	\$81,000	\$ 80,920
Measure of Progress $F_i = D_i \div E_i$	30%	62%	100%
Revenue to be recognized to date $G_i = \text{transaction price } \$100,000 \times F_i$	\$30,000	\$62,000	\$100,000
Current period revenue recognized $H_i = G_i - \text{revenue recognized in prior periods}$	\$30,000	\$32,000	\$ 38,000

Revenue recognized in a period equals transaction price multiplies measure of progress and then minuses revenue recognized in prior periods. Revenue recognized in year 1 equals \$30,000 ( $\$100,000 \times \{[\$25,000 - \$1,000] \div [\$25,000 - \$1,000 + \$56,000]\}$ ) as no revenue is recognized prior to year 1. Revenue recognized in year 2 equals \$32,000 ( $\$100,000 \times \{[\$25,000 + \$26,920 - \$1,000 - \$700] \div [\$25,000 + \$26,920 - \$1,000 - \$700 + \$30,780]\} - \$30,000$ ). It should be noted that the most recent estimate of the total costs is used in the calculation to reflect the change in circumstances since last reporting period. Revenue recognized in year 3 equals \$38,000 ( $\$100,000 \times \{[\$25,000 + \$26,920 + \$30,700 - \$1,000 - \$700] \div [\$25,000 + \$26,920 + \$30,700 - \$1,000 - \$700]\} - \$30,000 - \$32,000$ ), which is also the remaining of the transaction price not previously recognized as revenue since the factory is completed in year 3.

Another issue in applying a cost-based input method is uninstalled materials. The conditions required to be met include all of the following: (1) "The good is not distinct"; (2) "The customer is expected to obtain control of the good significantly before receiving services related to the good"; (3) "The cost of the transferred good is significant relative to the total expected costs to the completely satisfy the performance obligation"; (4) "The entity procures the good from a third party and is not significantly involved in designing and manufacturing the good (but the entity is acting as a principal)" (ASC 606-10-55-21). If all of the above conditions are met, revenue at an amount equal to the cost of the uninstalled materials is recognized when control of materials transfers to the customer. The cost of uninstalled materials is excluded from the cost-based input method in measuring progress. (ASC 606-10-55-21)

#### 2.4. Contract Modifications

Contract modifications, which are common in the construction industry, occur when the construction entity and its customer agree to change enforceable rights and obligations in the contract. Contract modifications could be accounted for as (a) a separate contract, (b) the termination of the existing contract and creation of a new contract (prospective treatment) or (c) an adjustment to the existing contract (resulting in a cumulative catch-up adjustment). (ASC 606-10-25-12 to 25-13)

A contract modification is accounted for as a separate contract if the additional goods and services included in the modification are distinct from the goods and services in the existing contract and the consideration for the added goods and services reflects the standalone selling price (any appropriate adjustments to reflect the circumstances of the contract) of those goods or services. (ASC 606-10-25-12)

When a contract modification is not accounted for as a separate contract and the remaining goods and services after the contract modification are distinct from the goods or services already transferred, the modification will be accounted for as if it were the termination of the existing contract and the creation of a new contract. For these modifications, the revenue recognized to date on the existing contract is not adjusted. Instead, the remaining portion of the existing contract and the modification are accounted for together on a prospective basis by allocating the remaining consideration (i.e., the unrecognized consideration from the existing contract plus the additional consideration from the modification) to the remaining performance obligations, including those added in the modification. (ASC 606-10-25-13)

When a contract modification is not accounted for as a separate contract and the remaining goods and services after the contract modification are not distinct from those already transferred, the modification will be accounted for as if it were part of the existing contract. For these modification, the previously recognized revenue will be adjusted, on a cumulative catch-up basis to reflect the effect that the contract modification has on the transaction price and updated measure of progress.(ASC 606-10-25-13)

#### 2.4.1. Example: Contract Modifications

Contractor Company A agrees to construct an academic building on a customer's land for \$20 million with expected costs of \$15 million. Company A determines that the construction of the academic building is a single performance obligation satisfied over time and the cost-to-cost method is an appropriate measure of progress. At the end of the first year, based on the cumulative costs of \$6 million incurred, Company A determines 40% ( $\$6 \text{ million} \div \$15 \text{ million}$ ) of the construction of the building is satisfied and revenue of \$8 million (40% of \$20 million) is recognized. During the second year of construction, the parties agree to modify the contract to include the construction of a separate recreation center on the same land for an additional \$5 million with expected costs of \$3 million. Company A determines that the construction of the recreation center is distinct from the construction of the academic building. If the additional \$5 million reflects the standalone selling price of the recreation center, the contract modification for the additional recreation center will be accounted for as a separate contract and the accounting for the existing contract (the construction of the academic building) will not be affected.

If the additional \$5 million does not reflect the standalone selling price, the contract modification for the additional recreation center is not accounted for as a separate contract. As the remaining goods and services include some that are not distinct from those already transferred (these are the goods and services to finish the academic building construction) and some that are distinct from those already transferred (these are the goods and services for the recreation center construction). This contract modification is first accounted for by allocating the \$25 million ( $\$20 \text{ million} + \$5 \text{ million}$ ) updated transaction price to the two performance obligations (academic building construction and recreation center construction) based on their relative standalone selling prices at the time of contract modification. Assume that Company A determines that the standalone selling prices of the academic building construction and the recreation center construction are \$20 million and \$6 million respectively, then the allocated transaction prices of the academic building construction and the recreation center construction are \$19.23 million ( $\$25 \text{ million} \times \{\$20 \text{ million} \div [\$20 \text{ million} + \$6 \text{ million}]\}$ ) and \$5.77 million ( $\$25 \text{ million} \times \{\$6 \text{ million} \div [\$20 \text{ million} + \$6 \text{ million}]\}$ ) respectively.

For the performance obligation of the academic building construction, as the remaining goods and services after the contract modification are not distinct from those already transferred, the modification will be accounted for as if it were part of the existing contract. Company A updates its measure of progress. Assume that at the time of contract modification, cumulative costs of \$9 million have incurred (that is \$3 million of cost incurred since the end of the first year) and total expected costs continue to be \$15 million, Company A determines that it has satisfied 60% ( $\$9 \text{ million} \div \$15 \text{ million}$ ) of the academic building construction at the time of contract modification. As a cumulative catch-up adjustment, revenue recognized has to be adjusted upward by \$3.54 million ( $60\% \times \$19.23 \text{ million modified transaction price} - \$8 \text{ million revenue recognized previously}$ ).

For the performance obligation of the recreation center construction, as the remaining goods and services after the contract modification are distinct from those already transferred, the modification will be accounted for as if it were the termination of the existing contract and the creation of a new contract. As the termination of the existing contract, the revenue recognized to date on the existing contract is not adjusted. In this example, the performance obligation of the recreation center construction does not exist prior to the contract modification and thus no revenue has been recognized. As the creation of a new contract, the remaining portion of the existing contract and the modification are accounted for together on a prospective basis. In this example, the performance obligation of the recreation center construction is created by the contract modification and thus there is no remaining portion of the existing contract that is related to this performance obligation. The allocated transaction price of \$5.77 million of the recreation center construction will be recognized as revenue probably over time since the construction of the recreation center takes place on the customer's land.

### **3. Conclusion**

In May 2014, the FASB and the IASB jointly issued significantly revised standard on revenue recognition. The new standard becomes effective for annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period with a one-year deferral for nonpublic entities. This paper examines issues related to the pattern of revenue recognition, combining contracts and contract modifications in the implementation of the new revenue standard for construction entities.