Comment Report: All Comments
Project: Fort Worth, Central City
Review: Cost ICR
Displaying 92 comments for the criteria specified in this report.

1750 ms to run this page

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<th>Discipline</th>
<th>DocType</th>
<th>Spec</th>
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<th>Detail</th>
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</thead>
<tbody>
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<td>1827750</td>
<td>Cost Engineering</td>
<td>Other</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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</table>

Coordinating Discipline(s): Project Management

The Cost, Schedule, Risk review will use the following regulations and guidance in performing the review. The review will assume feasibility level: ER 1105-2-100, Planning Guidance Notebook ER 1110-2-1150, Engineering and Design for Civil Works Projects ER 1110-1-1300, Cost Engineering Policy and General Requirements ER 1110-2-1302, Civil Works Cost Engineering EI 01D010, Engineering Instructions, Constr Cost Estimates (or soon to be UFC 3-740-05) EC 1110-1-105, Independent Technical Review EC 1105-2-408, Peer Review of Decision Documents Engineering & Construction Bulletin, 11 June 06, MCACES CECW-CP Memorandum, Peer Review Process, 30 Mar 2007 Engineering & Construction Bulletin, 10 Sep 07, RISK ANALYSIS

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

1-0
Evaluation Concurred
No Reponse Required

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1
Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

Current Comment Status: Comment Closed

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<td>Cost Engineering</td>
<td>Other</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
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Coordinating Discipline(s): Project Management

It is our understanding that the project has already received congressional authorization including a funding cap of $220M. Of that value, the federal share is $110M. Because authorization and funding have been established, the following review is considered an Independent Cost Review (ICR) since no engineering technical products are under consideration. The following review is intended to serve as a baseline check of cost, schedule and risk as related to the funding cap. The majority of the comments will be based on the federal share; however, there may be comments that relate to total project and cost as deemed necessary or prudent.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

1-0
Evaluation Concurred
No response required

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1
Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

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Coordinating Discipline(s): Project Management

Trace-ability: Each electronic document, page or tab, should be archived, indicating the date, document source and name of the developer.
Document sources, development date, developer information and other pertinent information have been added to the document.

Risk analysis has been performed to the feature level. Risks specific to the Federal portion of the project have been identified and incorporated into the risk analysis.

Coordinating Discipline(s): Project Management

Risk Study: The study must assume that the estimate is based on the "most likely" cost, and distribution factors reflecting the most likely case. A considerable concern is to establish whether the cost estimate reflects the "most likely" case. With the known information, the estimate can be improved to better reflect the "most likely" case. Our review will consider the MII under the "most likely" estimate conditions. Any estimate revisions will require a restudy of the risk items.

As the MII estimate is refined and improved in the future, the risk analysis will need to be refined and improved accordingly.
Coordinating Discipline(s): Project Management

Risk Register: Improve the notes regarding assumptions and concerns. This is important in archiving the risks considered by the team. Also, the Risk team must include the estimator, because he has the best understanding of the estimate assumptions and how they relate to any risks.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

**1-0** Evaluation **Concurred**
Notes have been improved to include assumptions and concerns. Cost estimator was involved in previous risk analysis and will continue to be as the project advances. The involvement has and will be documented for improved clarity.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

**1-1** Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

<table>
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<th>Coordinating Discipline(s): Project Management</th>
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Risk Register – Risk Level: Explain how the risk levels were established as low – moderate-high. For example, what process was used to establish that fuel was a high risk? How was it determined that material is considered high risk? Normally, we would have used a more detailed MII estimate that demonstrates crews and productivity so that we can study labor, equipment, materials and productivity regarding specific parameters that represent high costs within the estimate.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

**1-0** Evaluation **Concurred**
A narrative has been included to describe the iterative process by which risk levels were established by the project team.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

**1-1** Backcheck Recommendation **Open Comment**
Include within the narrative that you included all risk events; low, medium and high, within the Crystall Ball study.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

**1-2** Backcheck Recommendation **Close Comment**
Issue explained and resolved via telephone

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 17-Apr-08

**2-0** Evaluation **Concurred**
The narrative will be revised to indicate that all risks identified on the risk register were included in the risk analysis. The description of various factors that influenced the selection of risk levels (i.e., high, moderate and low) will be expanded so that the iterative nature of the PDTs involvement is clarified.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 15-Apr-08

**Backcheck not conducted**

Current Comment Status: **Comment Closed**
### Coordinating Discipline(s): Project Management

Risk Register: I question whether all major risks have been adequately considered. Consider risk in contract acquisition strategy, escalation variances, construction productivity, haul and route access and speeds, subcontractor assignments, project management, contract cost growth (modifications) and technical complexity.

Submitted By: **Jim Neubauer** (509-527-7332). Submitted On: 12-Mar-08

<table>
<thead>
<tr>
<th></th>
<th>Evaluation</th>
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<tbody>
<tr>
<td>1-0</td>
<td>The suggested risk factors were evaluated against the current risk register and (1) new risk factors will be added or (2) existing risk factors will be modified to capture the suggested risks. At this time, escalation variances will continue to be analyzed explicitly on a factor-specific basis.</td>
<td></td>
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</tbody>
</table>

Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

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<th>Backcheck Recommendation</th>
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</table>

Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

1827773 | Cost Engineering | Other | n/a | n/a | n/a |

### Coordinating Discipline(s): Project Management

Risk Register – Material Prices: Consider breaking the material risk concern into subsets for major materials such as steel, concrete, aggregates. This may better capture specific material risks.

Submitted By: **Jim Neubauer** (509-527-7332). Submitted On: 12-Mar-08

<table>
<thead>
<tr>
<th></th>
<th>Evaluation</th>
<th>Concurred</th>
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<tr>
<td>1-0</td>
<td>Material price risk have been further assessed in subcategories that include steel and concrete. Aggregate prices have been studied to determine if a separate category is warranted and are not felt to require one at this time.</td>
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</tbody>
</table>

Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

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</table>

Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

1827775 | Cost Engineering | Other | n/a | n/a | n/a |

### Coordinating Discipline(s): Project Management

Risk Register – Productivity: Recommend that productivity risk be considered in high cost areas, such as earthen haul and placement, concrete wall construction.

Submitted By: **Jim Neubauer** (509-527-7332). Submitted On: 12-Mar-08

<table>
<thead>
<tr>
<th></th>
<th>Evaluation</th>
<th>Concurred</th>
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<tbody>
<tr>
<td>1-0</td>
<td>Productivity risk has been identified on the risk register and impacts quantified for high cost areas.</td>
<td></td>
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</table>

Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

<table>
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</table>

Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 07-Apr-08
## Coordinating Discipline(s): Project Management

Risk Register – Fuel Costs: I’m surprised to see the fuel rated as a high cost. I agree that it is a concern, the question is whether the studied risk is concerned with near term higher costs verses long term rises. Long term fuel increases belong in escalation.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

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<td>1-0</td>
<td>Non-concurred</td>
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<td></td>
<td>The bulk of the project is a major earthmoving project with significant hauling costs. A brief or moderate spike in fuel costs could have a significant short term adverse impact that would not be expected to be captured in escalation variances.</td>
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<td></td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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<td></td>
<td>Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08</td>
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Current Comment Status: Comment Closed

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## Coordinating Discipline(s): Project Management

Risk Register: Consider excluding the low risk items from the Crystal Ball study.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

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<td>Non-concurred</td>
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<td></td>
<td>Exclusion of risk register items identified as &quot;low risk&quot; results in an overall cost contingency reduction of approximately one full percentage point. That degree of contingency reduction may have an adverse impact on project budgeting, management and performance monitoring.</td>
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<td></td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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<td></td>
<td>The low risk items were included. The sensitivity chart indicates them as &quot;other.&quot;</td>
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<td></td>
<td>Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08</td>
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Current Comment Status: Comment Closed

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## Coordinating Discipline(s): Project Management

Risk Register – Equipment: The register indicates a moderate risk. I question this rating. The MII estimate uses a fairly conservative equipment cost. I would expect the risk to be more related to rental equipment or subcontracts. The MII estimate currently does not break out subcontracts. I envision subcontract potential for truck hauling, rebar tying, wall formwork.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

<table>
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<tr>
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<td></td>
<td>Additional detail provided in the revised cost estimate, particularly regarding subcontract breakdown and direct equipment costs, has been incorporated into the risk analysis. The risk register has been revised accordingly.</td>
<td></td>
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</table>
Coordinating Discipline(s): Project Management

Risk Study – Customization Tab: Better clarification is needed. Suggest that a crosswalk be developed that indicates what items from the Impact Table tab are used in the Customization tab.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
A crosswalk and narrative description of the customization tab has been developed and provided in report format.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

Coordinating Discipline(s): Project Management

Risk Study: At the appropriate time, the study should include a report, discussing process, software, approach and methodology, risk items considered (risk register), major risk items found, cost and schedule impact to total project.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
Final study submittal includes a report.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Jim Neubauer (509-527-7332) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

Coordinating Discipline(s): Project Management

Risk Study Summation: The risk study requires further work and must be based on the revised estimate (most likely case), forthcoming after this review. The risk study should include the lead estimator to ensure that the risk concerns from the estimate are adequately captured and studied, based on his knowledge of the estimate.

Submitted By: Jim Neubauer (509-527-7332). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
The risk analysis has been updated based on the revised cost estimate. Cost estimator was involved in previous risk analysis and will continue to be as the project advances.

Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

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Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 07-Apr-08

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Coordinating Discipline(s): Project Management

Schedule Risk: It is my understanding that the schedule risk is still evolving. The schedule cannot be completed until a confident estimate has been established. At that time, a better value schedule and schedule risk study can be developed. Address critical path and near-critical path elements only within the schedule risk.

Submitted By: **Jim Neubauer** (509-527-7332). Submitted On: 12-Mar-08

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<tr>
<td>The schedule risk analysis has been updated based on the revised cost estimate. Only critical path and near critical path tasks have been considered uncertain in the revised schedule risk analysis.</td>
<td></td>
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Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

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<tr>
<td>The resulting schedule growth risk should be portrayed for those risk items that carry an added escalation risk. The escalation amount would fall into the contingency value, with an added percent.</td>
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Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 07-Apr-08

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<tbody>
<tr>
<td>Issue studied and resolved via telephone.</td>
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Submitted By: **Jim Neubauer** (509-527-7332) Submitted On: 17-Apr-08

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<td>The 80% confidence level schedule contingency of 154 work days will be incorporated into the cost risk analysis as a separate contingency. The contingency will be calculated as the escalation cost impact resulting from adding 154 work days to the most likely project duration. The cost impact will be shown as separate contingency costs for both the Federal 220 Project and Non-Federal Project. Further allocation of the schedule-related cost contingency to the task level or feature level will not be performed.</td>
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Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 15-Apr-08

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<th>Backcheck not conducted</th>
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Coordinating Discipline(s): Cost Engineering

The price level of the construction estimate is not clearly indicated in the MII project notes. The project properties screen shows a preparation date of 2/12/2008, escalation index date of 9/30/2007, and effective pricing date of 2/12/2008. The markups tab of Project Properties shows a list of many escalation end dates of 10/31/2007. What is the estimate price level??

Submitted By: **Gareth Clausen** (509 527-7587). Submitted On: 12-Mar-08

(Document Reference: MII Estimate)
Notes clarified in estimate. The estimate price level is 10/31/2007. The previous MCACES MFW estimates were prepared in 2005 dollars. The costs in the MII estimate are escalated to 10/31/2007 based on the Civil Works Construction Cost Index revised 09/30/2007.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

The response to this comment is "Notes clarified in estimate." A word search of the project notes did not find any occurrences of 'price level'. IT DOES NOT APPEAR THAT THE RESPONSE STATING THAT THE NOTES WERE CLARIFIED WAS DONE. The casual reader has no clue as to the price level of this estimate. The notes were not clarified.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

A Tele-Conference was held on April 14th. The comment was discussed and clarified.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

A Total Project Summary (Federal 220) is not provided. All costs appear to be included into the MII estimate as cost line items. A report of total project cost on an inflated dollar basis through the project schedule was not provided. Recommend a summary of Total project costs in constant dollars and inflated dollars be provided to the Project Manager.
The constant dollar estimate was provided for review per ICR meeting discussion on March 5, 2008. Both constant dollar and escalated to mid-point cost estimates have been prepared and are presented in the revised Total Project Summary table. MII Estimate has been divided into sub-projects/ folders indicating cost line items included in the Federal 200 vs. Non-Federal project components.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: Comment Closed

It appears that a 20% contingency is applied at the construction item sub-folder levels, a 10% contingency on lands and damages, a 20% contingency on cultural resource preservation, no contingency on feasibility studies, planning, engineering and design, and construction management. To answer the question; Are appropriate contingencies included? Probably. However the application of contingencies is buried in the MII estimate detail and not clearly visible for the review, or the sponsor. A Total Project Summary would clearly show these items.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: Comment Closed

Are two total project cost estimates displayed in the feasibility report; one based on constant dollars and one based on projected inflation rates? No – Example: TRWD gate, Schedule Activity ID 158, MII Folder Source Tag 15. EM 1110-2-1304 CWBS 15, Floodway Control & Diversion Structure; FY2008 to FY2015 782.93 to 679.59 = 15.2%. The following escalation values for all subfolders are: 7.07, 7.07, 7.07, 7.07, 12.87, 12.87, 12.87, 12.87, 7.07. Example: Ham Branch, Schedule Activity ID 225, MII Folder Source Tag 15. EM 1110-2-1304 CWBS 15, Composite Index; FY2008 to FY2009 687.63 to 702.76 = 2.2% and FY2008 to FY2012, 687.63 to 746.51 = 8.5%. The following escalation values for all subfolders are: 6.39, 6.39, 6.39, 6.39, 9.56. The MII Project Properties show the following escalation rates and dates. 7.07% 1/31/2006 to 10/31/2007 6.39% 1/31/2006 to 10/31/2007 12.87% 1/31/2005 to 10/31/2007 9.56% 1/31/2005 to 10/31/2007 It appears the estimate is at October 2007 price level. It appears there is no escalation for inflation according to the project schedule.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 12-Mar-08
Both constant dollar and escalated dollar estimates have been developed. Escalation for inflation according to the project schedule have been provided in the total project summary.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

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The first three columns in the Total Project Summary Table appears to bring all cost data to a "2007 $" price level on a constant dollar basis. So, the "Project Cost - 2007 $" is not a PROJECT cost because it doesn't include contingencies. -- The last column appears to represent the Project Cost inflated through the project schedule, sometimes referred to as the fully funded cost estimate.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

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Federal versus Non-Federal cost line items and obligations are identified in the MII estimate and Total Project Summary. This identifies the federal and non-federal cost components. In addition several tables are shown in the project report which identify both the responsibility and timing of local funding requirements, thus providing a clearer representation of requirements.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

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The MII project notes do not address significant volatile cost items in the project scope.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 12-Mar-08

---

The MII project notes have been updated with a discussion of the significant cost items in the project scope. In addition, the risk analysis has included specific cost items which may have volatile pricing.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

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None of this is found in the project notes.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

---
A Tele-Conference was held on April 14th. The comment was discussed and clarified. Identify in the volatile cost items is handled in the risk analysis.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: **Comment Closed**

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The MII project notes do not describe risk analysis for establishing contingencies.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
The MII project notes have been updated with a discussion of the risk analysis establishing contingencies.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

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Throughout the MII estimate descriptions include the word "borrow". Are borrow areas needed and identified? Borrow areas are not clearly identified.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

Revised 17-Mar-08.

1-0 Evaluation **Concurred**
The word "borrow" was part of the general description in the 2006 Cost Book. In general these line items are for cut and fill during earthwork. The term borrow has been removed from these items.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

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The MII project notes do not address equipment, labor, or material availability.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08
MII notes have been updated. The site is located in and near major metropolitan areas (Fort Worth, Texas and Dallas, Texas). Materials, equipment, and labor are expected to be available in sufficient quantities.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

The MII project notes have been updated to include a short discussion of how environmental concerns will be addressed during construction.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

The MII Project Notes do not address an Acquisition Plan (When and method of acquisition). It appears the estimate is structured as though all work is under one contract. This should be clearly indicated.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

The title structure and the descriptions for many of the items is not adequate to determine what was being estimated. Example: "Concrete" when the work under this title is retaining walls. Review and clarify all titles.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08
<table>
<thead>
<tr>
<th>Comment ID</th>
<th>Discipline(s)</th>
<th>Project Status</th>
<th>Comment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1828923</td>
<td>Cost Engineering</td>
<td>Cost Estimate</td>
<td>n/a'</td>
</tr>
<tr>
<td>1828935</td>
<td>Cost Engineering</td>
<td>Cost Estimate</td>
<td>n/a'</td>
</tr>
</tbody>
</table>

(**Document Reference: MII Estimate, General Estimate Layout - Title Structure**)  
**Coordinating Discipline(s):** Cost Engineering

Were good unit title task costs / assemblies developed to support the development of a reasonable construction schedule? **NO.** The construction schedules within the project schedule are extremely generic. Many of the cost items are based on a crew of 1 piece of equipment and 1 operator resulting in thousands of hours for the cost item making it impossible to develop a reasonable construction schedule. Recommend reasonable crew composition in the estimate.

Submitted By: **Gareth Clausen** (509 527-7587). Submitted On: 12-Mar-08

| 1-0 Evaluation | **Concurred**  
The title structure of the MII estimate have been modified to better describe the work being estimated.  
Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

| 1-1 Backcheck Recommendation | **Close Comment**  
Closed without comment.  
Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 07-Apr-08

| Current Comment Status: **Comment Closed** |

| 1-2 Backcheck Recommendation | **Close Comment**  
A Tele-Conference was held on April 14th. The comment was discussed and clarified. The potential numbers of operating equipment was analyzed separately from the estimate and there is no known impact to the estimate.  
Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08

| Current Comment Status: **Comment Closed** |

| 1828923 | Cost Engineering | Cost Estimate | n/a' | n/a |
| 1828935 | Cost Engineering | Cost Estimate | n/a' | n/a |

(**Document Reference: MII Estimate, Construction Estimate Details**)  
**Coordinating Discipline(s):** Cost Engineering

Does the estimate detail the assumptions made for development of the detailed cost items? **NO.** Many of the cost items are "Per Estimator. Cost based on professional judgement" The 20% contingency may or may not adequately reflect the cost risk. These items should be detailed and estimated as such. IF not this estimate is not feasibility, appears to be similar to ASTM class 4, reconnaissance level.

Submitted By: **Gareth Clausen** (509 527-7587). Submitted On: 12-Mar-08

| 1-0 Evaluation | **Concurred**  
Crew composition has been included in the estimate based on the proposed construction schedule and projected equipment that was calculated as part of the air quality analysis.  
Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

| 1-1 Backcheck Recommendation | **Open Comment**  
projected equipment that was calculated as part of the air quality analysis? The project notes don't address this. What significance does this have to the estimate. Since it is mentioned in the evaluation text the review would expect to see the cost of labor, equipment, materials to maintain air quality standards. Where is the cost?  
Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 07-Apr-08

| 1-2 Backcheck Recommendation | **Close Comment**  
A Tele-Conference was held on April 14th. The comment was discussed and clarified. The potential numbers of operating equipment was analyzed separately from the estimate and there is no known impact to the estimate.  
Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08

| Current Comment Status: **Comment Closed** |
Additional detail on basis of cost, references and the development of costs have been added were feasible. There are certain items such as electrical work where there is currently insufficient detail to provide detail for cost estimating. The estimating team determined that the design was of such a preliminary nature, that to use detailed pricing would have resulted in a less accurate estimate. Contingency amounts have been removed from the MII estimate and re-calculated based on current Risk Assessment guidelines by feature.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
Additional detail on basis of cost, references and the development of costs have been added were feasible. GOOD. - - - There are certain items such as electrical work where there is currently insufficient detail to provide detail for cost estimating. AGREE - - - The estimating team determined that the design was of such a preliminary nature, that to use detailed pricing would have resulted in a less accurate estimate. THE REVIEW TOTALLY DISAGREES WITH THIS STATEMENT! WHICH IS BETTER? TO BE 100% OFF ON ONE ITEM OR TO BE 100% OFF ON HALF OR A QUARTER OF THE ITEMS THAT MAKEUP THE WORK BEING ESTIMATED?? !! - - - Contingency amounts have been removed from the MII estimate and re-calculated based on current Risk Assessment guidelines by feature. GOOD

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. These items were re-evaluated in the risk analysis.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

1828949 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate, Construction Estimate Details)
Coordinating Discipline(s): Cost Engineering

4.104 Do quantities appear reasonable and consistent with the recommended plan? This cannot be determined by this review. Many cost items do not indicate where the quantity is being excavated from and where it it going. This should be clarified or broken down into smaller specific quantities.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation Concurred
The MII estimate has been updated to include better descriptions of the work.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: Comment Closed

1828951 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate, Construction Estimate Details)
Coordinating Discipline(s): Cost Engineering

4.105 Are note fields used to briefly explain the detail costs? NO

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation Concurred
The MII estimate has been updated to include better descriptions of the work.
1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08
Current Comment Status: **Comment Closed**

1828954 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

**Document Reference:** MII Estimate, Construction Estimate Details

**Coordinating Discipline(s):** Cost Engineering

4.106 Does the estimate organize and present a logical sequence of work? Generally it does.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
No response required.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08
Current Comment Status: **Comment Closed**

1828959 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

**Document Reference:** MII Estimate, Construction Estimate Details

**Coordinating Discipline(s):** Cost Engineering, Cost Engineering, Cost Engineering

4.108 Does the estimate contain specific detail to make judgment on whether costs are reasonable? NO it does not. There is a preponderance of lump sum, allowance, and professional judgment. 33% of the construction cost is based on "per estimator, judgement, allowance, similar scope. Not acceptable at the feasibility level.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

Revised 17-Mar-08.

1-0 Evaluation **Concurred**
Additional detail has been included in the estimate. Additional detail will be added as the project evolves which will provide great levels of detail reflective of the state of the design.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08
Current Comment Status: **Comment Closed**

1828975 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

**Document Reference:** MII Estimate, Labor and Equipment

**Coordinating Discipline(s):** Cost Engineering

4.205 Does crew makeup look reasonable? NO. The crews for major earth moving are 1 each and not nearly balanced based on equipment production i.e. one loader with a number of trucks hauling. Recommend re-visit all crew composition.
1-0 Evaluation **Concurred**
Crew composition has been included in the estimate based on the proposed construction schedule and projected equipment that was calculated as part of the air quality analysis.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Open Comment**
Here again is projected equipment that was calculated as part of the air quality analysis. What and where is the cost impact? Labor, equipment, material??

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

1-2 Backcheck Recommendation **Close Comment**
A Tele-Conference was held on April 14th. The comment was discussed and clarified. See previous backcheck comments.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: **Comment Closed**

| 1828976 | Cost Engineering | Cost Estimate | n/a' | n/a | n/a |

(Document Reference: MII Estimate, Materials)
**Coordinating Discipline(s):** Cost Engineering

4.302 Does earthwork consider BCY, LCY and ECY? NO recommend checking all units of measure and clearly identify swell and shrink.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
Earthwork quantities have been reviewed and reflect bank cubic yard (BY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 07-Apr-08

Current Comment Status: **Comment Closed**

| 1828978 | Cost Engineering | Cost Estimate | n/a' | n/a | n/a |

(Document Reference: MII Estimate, Materials)
**Coordinating Discipline(s):** Cost Engineering

4.305 Does the estimate clarify/include transport costs? NO, this comment is applicable to the gates and equipment for the Clear Fork and TRWD gates. The estimate is based on an old quote and doesn't indicate FOB, delivered to storage, or delivered to site.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 12-Mar-08

1-0 Evaluation **Concurred**
The vendor quote for the gate structures includes design, contingency, delivery to the site, and installation. The MII estimate has been updated to reflect this.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
<table>
<thead>
<tr>
<th>Submission Date</th>
<th>Author</th>
<th>Comment Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-Apr-08</td>
<td>Gareth Clausen</td>
<td>Are mobilization and demobilization costs detailed? NO Recommend some detail estimating for mob &amp; demob.</td>
</tr>
<tr>
<td>13-Mar-08</td>
<td>Michael Oleson</td>
<td>Mob/ Demob costs have been detailed in the estimate.</td>
</tr>
<tr>
<td>08-Apr-08</td>
<td>Gareth Clausen</td>
<td>Does the total mobilization and demobilization cost appear reasonable? The review did not find any mobilization costs.</td>
</tr>
<tr>
<td>13-Mar-08</td>
<td>Michael Oleson</td>
<td>Mob/ Demob costs have been detailed in the estimate.</td>
</tr>
<tr>
<td>08-Apr-08</td>
<td>Gareth Clausen</td>
<td>The review found the following average mobilization and demobilization; Valley Storage - 0.6%, Levee &amp; Floodwalls - 0.1%, Diversion Structures - 0.2%. The costs are assigned to a hauling subcontractor. The amounts appear low. This review is accustomed to a general rule of thumb of 3% to 5% mobilization, preparatory work, and demobilization. Mob/Prep/Demob for large earthwork would be less. Under 1% may not be sufficient cost. What is reasonable? Valley Storage? 1%, Levee &amp; Floodwalls - because of the concrete work? 3%, Diversion Structures - because of the multiple crafts, concrete, mechanical, electrical, etc. the review would expect upto 5%. Recommend a review of the estimated Mob &amp; Demob costs.</td>
</tr>
<tr>
<td>14-Apr-08</td>
<td>Gareth Clausen</td>
<td>A Tele-Conference was held on April 14th. The comment was discussed and clarified. Job office overhead was discussed, also, some of the construction site preparatory type work is included in the &quot;construction management&quot;. Typically Corps estimating procedures is to include all these costs in job office overhead or mobilization not management.</td>
</tr>
</tbody>
</table>
Coordinating Discipline(s): Cost Engineering

4.503 Do major unit prices appear reasonable for the locale? (concrete, steel, earthwork, etc.) All major concrete work is based on estimator's judgement. This should be corrected.


**Evaluation Concurred**

Where feasible additional detail was added to the estimate. In some places the estimating team determined that the design was of such a preliminary nature, that to use detailed pricing would have resulted in a less accurate estimate. In places where design lacked sufficient detail estimator judgment or gross estimates were developed using approximate quantities.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

**Backcheck Recommendation Close Comment**

The review disagrees

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

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Organizing Discipline(s): Cost Engineering

7.107 Does the construction schedule consider crew sizes, numbers of crews, related productivity? NO. The review cannot determine the reasonableness of the construction schedules because the crew composition and size is not provided in the estimate. There does not appear to be any correlation between the estimate and schedules.


**Evaluation Concurred**

Crew composition has been included in the estimate.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

**Backcheck Recommendation Open Comment**

The evaluation text does not address the comment. There is no correlation between the estimate and construction schedules.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

**Backcheck Recommendation Close Comment**

A Tele-Conference was held on April 14th. The comment was discussed and clarified.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

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7.110 Do construction schedules depict critical or time-sensitive orders or procurements? NO The Clear Fork and TRWD gates may require lead time for the operating gates and equipment. This is not addressed in the schedule or the estimate.


**Evaluation Concurred**
The construction schedule includes a critical path and separate contractors have been defined for large work components. Given the preliminary nature of the project separate items for the acquisition of gate and equipment have not been added at this time. Additional detail will be provided in subsequent estimates as the design and schedule advance.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
"The construction schedule includes a critical path and separate contractors have been defined for large work components." THE REVIEW WAS NOT PROVIDED A SCHEDULE OR ANY INFORMATION THAT CORRESPONDS WITH THIS STATEMENT.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

1830602 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate Total Project Cost Summary in Current Dollars)

Coordinating Discipline(s): Cost Engineering

8.01 Is there a proper Total Project Cost Worksheet? No, one was not provided.

Submitted By: Gareth Clausen (509 527-7587), Submitted On: 13-Mar-08

1-0 Evaluation Concurred
A Total Project Cost Worksheet has been provided with the revised MII estimate.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830613 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate Total Project Cost Summary in Current Dollars)

Coordinating Discipline(s): Cost Engineering

8.02 Is the price level date shown and is it consistent with the estimate preparation date? The price level date in the estimate must be reconciled with the escalation dates buried in the markups.

Submitted By: Gareth Clausen (509 527-7587), Submitted On: 13-Mar-08

1-0 Evaluation Concurred
Notes clarified in estimate. The estimate price level is 10/31/2007. The previous MCACES MFW estimates were prepared in 2005 dollars. The costs in the MII estimate are escalated to 10/31/2007 based on the Civil Works Construction Cost Index revised 09/30/2007.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
The Total Project Summary Table shows what appears to be the price level; "2007 $" the reader can only assume this is consistent with the estimate price level of October 31, 2007.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed
### Coordinating Discipline(s): Cost Engineering

8.11 Does the E&D clearly include costs for Project Management, Planning & Environmental, Engineering & Design, ITR & VE, Contracting, reprographics, EDC, Planning during construction, project operation? The basis for the assumed percent markup appears to include some but not all of the above items.


<table>
<thead>
<tr>
<th>1-0</th>
<th>Evaluation</th>
<th>Concurred</th>
</tr>
</thead>
<tbody>
<tr>
<td>The costs assumed for project management, planning and environmental, engineering and design, ITR and value engineering, contracting, reprographics, planning during construction and project operation are included in Planning, Engineering and Design. Project management is included as part of the non-Federal incurred costs. The MII notes have been updated to clarify these items.</td>
<td></td>
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</tbody>
</table>

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

<table>
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<tr>
<th>1-1</th>
<th>Backcheck Recommendation</th>
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<tbody>
<tr>
<td>Closed without comment.</td>
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</table>

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

| Current Comment Status: Comment Closed |

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### Coordinating Discipline(s): Cost Engineering

9.00 A Total Project Cost inflated to the project schedule was not provided. During the site visit the review was told that costs were escalated to the "mid-point" of construction. This review is concerned that all costs will or may be inflated to a single mid-point date. This is not desirable or reasonable. The design costs for the channel occur 3-4 years prior to construction. Design costs for the isolation gates occurs 3 years prior to construction. The schedule appears detailed sufficiently so that the cost for each major component can be inflated separately i.e. channel costs inflated to 2013 and Samuels Sites inflated to 2016.


<table>
<thead>
<tr>
<th>1-0</th>
<th>Evaluation</th>
<th>Concurred</th>
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</thead>
<tbody>
<tr>
<td>The constant dollar estimate was provide for review per ICR meeting discussion on March 5, 2008. Both constant dollar and escalated to mid-point cost estimates have been prepared and are presented in the revised Total Project Summary table. MII Estimate has been divided into to sub-projects/ folders indicating cost line items included in the Federal 200 vs. Non-Federal project components.</td>
<td></td>
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</tbody>
</table>

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

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</table>

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

| Current Comment Status: Comment Closed |

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### Coordinating Discipline(s): Cost Engineering

Samuels Avenue Sites Site Preparation There are two distinct cut areas and three distinct fill areas. All separated. There are 79,700 cy moved, 79,700 cy screened, 15,300 cy hauled, [79,700 cy − 15,300 cy = 64,400 cy. The estimate doesn't explain why the material is being hauled, or what will be the disposition of the 64,400 cy piled?

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https://www.projnet.org/projnet/binKornHome/index-reports2.cfm?strKornCob=DrCkCo... 4/22/2008
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</thead>
<tbody>
<tr>
<td><strong>1-0</strong> Evaluation <strong>Concurred</strong></td>
<td>Screened material will be removed from the site. Remaining soil will be stockpiled on-site and used during site restoration. The MII estimate have been updated to correct units and clarify the actions estimated in this section.</td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
<td></td>
</tr>
<tr>
<td><strong>1-1</strong> Backcheck Recommendation <strong>Close Comment</strong></td>
<td>Closed without comment.</td>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08</td>
<td></td>
</tr>
</tbody>
</table>

**Cost Engineering**

Samuels Avenue Sites Site Preparation This work is accomplished with 1 dozer, 1 loader, 1 truck, there doesn't appear to be any equipment standby. This comment is applicable throughout the entire estimate. Throughout the estimate crew composition is questioned. The required equipment numbers is not included.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

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<td>Crew composition has been included in the estimate.</td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
<td></td>
</tr>
<tr>
<td><strong>1-1</strong> Backcheck Recommendation <strong>Close Comment</strong></td>
<td>Closed without comment.</td>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08</td>
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</tr>
</tbody>
</table>

**Cost Engineering**

Samuels Avenue Sites Earthwork Unit of measure is not consistent from bank yards, yards, loose yards, embankment yards. Quantities must be reconciled. A swell of 20% is buried in the bowels of the estimate as a math calculation on the quantity for hauling only.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 13-Mar-08

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<tbody>
<tr>
<td><strong>1-0</strong> Evaluation <strong>Concurred</strong></td>
<td>Earthwork quantities will be reviewed and reflect bank cubic yard (BCY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.</td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
<td></td>
</tr>
<tr>
<td><strong>1-1</strong> Backcheck Recommendation <strong>Close Comment</strong></td>
<td>Closed without comment.</td>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08</td>
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</tr>
</tbody>
</table>

Current Comment Status: Comment Closed
Riverside Oxbow Site Preparation DEMO-08 disposal of bituminous driveays DEMO-02 disposal of building debris DEMO-04 Demolition, handling, and disposal of mesh reinforced concrete to 6" thick DEMO-01 Demolition, handling, and disposal of reinforced concrete, 7" to 24" thick – Bridge DEMO-01 Demolition, handling, and disposal of reinforced concrete, 7" to 24" thick - Beach Street Based on the site visit, question these items as being in the scope of the Federal 220 project.


1-0 Evaluation Concluded
Costs have been redistributed to Roadway preparatory site work and recreational preliminary site work. The majority of demolition activities are conducted under the non-federal portion of project; however, there may be some typical minor site demolition associated with construction activities at each site.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Bypass Channel – North Earthwork Excavate and load, bank measure, 550,912 BCY, the next item: Hauling, excavated or borrow material, loose cubic yards. 550,912 LCY. The Quantities cannot be the same. The volumes are too great to ignore swell when previously in the estimate swell was computed at 20%.


1-0 Evaluation Concluded
Earthwork quantities have been reviewed and reflect bank cubic yard (BCY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Same for this item; Ripping sedimentary rock, 55,952 BCY Excavate and load, bank measure, 55,952 BCY Hauling, excavated or borrow material, loose cubic yards, 55,952 BCY After ripping it appears that excavation and hauling cannot be the same volume. The volumes are too great to ignore swell when previously in the estimate swell was computed at 20%.

1-0 Evaluation Concluded
Earthwork quantities have been reviewed and reflect bank cubic yard (BCY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
Question; “Earthwork quantities have been reviewed - - " It appears the quantities have changed, in this case from 55,952 to 130,000. Is there an explanation?
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

1830839 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

Concrete, 1 LS This is typical throughout the estimate. It is not right – It is not wrong. However, "concrete" doesn't clearly describe the scope of work. It appears this folder is for retaining walls. What is the length? What is the height of the wall(s)? The scope of work is not clearly described.


1-0 Evaluation Concluded
The notes within the MII estimate have been updated to provide more specifics regarding the retaining walls. The folder title was changed from "Concrete" to "Retaining Walls".
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830843 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

Lower Wall, Middle Wall, Upper Wall; 1 LS, 1 LS, 1 LS; This is typical throughout the estimate. It is not right – It is not wrong. However, "concrete" doesn't clearly describe the scope of work. It appears this folder is for retaining walls. What is the length? What is the height of the wall(s)? The scope of work is not clearly described.


1-0 Evaluation Concluded
The notes within the MII estimate have been updated to provide more specifics regarding the retaining walls. The folder title was changed from "Concrete" to "Retaining Walls".
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08
Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830847 Cost Engineering Cost Estimate n/a' n/a n/a

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

Site Restoration The scope of this work is not provided. Where is the Bermuda grass going? Where is the sod going? Where are the trees going? Is there irrigation for the sod?


Evaluation Concurred
Bermuda grass seed is proposed for overbank and levee disturbed areas which consists primarily the south side of the area.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

Backcheck Recommendation Open Comment
Where is the 93,710 sqft of sod going? Where are the 1,000 trees going? Is there irrigation for the sod and trees? - or - Is there watering for a period of time to establish growth? It appears there is some cost missing here.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

1830850 Cost Engineering Cost Estimate n/a' n/a n/a

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

Site Preparation The item unit of measure is the same for grubbing, screening, and hauling. It would be simple to account for quantity swell on the screening and hauling. Where is the cost to load the 2420 CY or the 2904 LCY?


Evaluation Concurred
Earthwork quantities have been reviewed and reflect bank cubic yard (BCY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830856 Cost Engineering Cost Estimate n/a' n/a n/a

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering,Cost Engineering

Concrete, 1 LS; This is typical throughout the estimate. It is not right – It is not wrong. However, "concrete" doesn't
clearly describe the scope of work. The scope of work is not clearly described. The direct cost of this work is $2,063,138 based on: Per Estimator. Cost based on previous work of similar scope. Assumes concrete pumping. This maybe acceptable for a reconnaissance level estimate, unit pricing is not acceptable for a feasibility level where the construction pieces and parts can be estimated individually. In this case excavation, foundation prep, formwork, placement, finishing, curing, etc.


Revised 17-Mar-08.

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<td></td>
<td>For concrete pricing, the ready mix price was obtained from a local supplier ($75.00 per cubic yard). A cost of $20 per cubic yard for a concrete pump was used based on local pricing. The crew mix for the concrete work was assumed to be 1 foreman, 2 carpenters, 3 laborers. The productivities assumed were 7 man-hours per cubic yard for the slab on grade, 10 man-hours per cubic yard for the retaining walls, and 13 man-hours per cubic yard for the elevated decks. A standard price per pound for reinforcing steel, installed, in the Dallas area was provided by a local subcontractor. Where feasible the MII estimate was updated to provide more detail. Due to current level of design some items were not further detailed and are covered in the gross cost of the wall. These items will be detailed in greater detail in future iterations of the MII estimate.</td>
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<td></td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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</table>

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830862 Cost Engineering Cost Estimate n/a n/a n/a
(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

(Lands and Damages; This $31million is not reviewable by Cost Engineering.


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<td></td>
<td>Cost risks associated with electrical, controls and instrumentation have been added to the risk register and incorporated into the risk analysis.</td>
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<td></td>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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</table>

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1830865 Cost Engineering Cost Estimate n/a n/a n/a
(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

(Lands and Damages; This $31million is not reviewable by Cost Engineering.

1-0 Evaluation **Concurred**
Cost are based on land appraisals developed for project and reviewed by Fort Worth District Real Estate Staff.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

**Current Comment Status:** Comment Closed

| 1830873 | Cost Engineering | Cost Estimate | n/a’ | n/a | n/a |

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

Feasability Studies; The basis for $2,228,508 is unknown and not presented in the estimate. From the Corps of Engineer's perspective; the activities in the note are Engineering and Design activities, not feasibility. The basis, logic, or the rationale for including legal fees in this estimate is beyond this review.


1-0 Evaluation **Concurred**
These fees are now included as part of PED activities. Clarification on basis, logic and rationale has been added to the General Notes.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

**Current Comment Status:** Comment Closed

| 1830881 | Cost Engineering | Cost Estimate | n/a’ | Item Detail Comments | n/a |

(Document Reference: MII Estimate)
Coordinating Discipline(s): Cost Engineering

DEMO-02; Samuels Avenue Sites Demolition, handling, and disposal of building debris - single level building, 20' high, 1,583,575 square feet. On Drawings CG-04 through CG-08 it appears that there is only one building with a note indicating "to be removed by others". It appears to be less than 100’ x 100’ feet. There doesn't appear to be any basis for the 1.5 million square feet.


1-0 Evaluation **Concurred**
Building demolition has been removed from the estimate at the Samuels Avenue Valley Storage site.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

**Current Comment Status:** Comment Closed

| 1830883 | Cost Engineering | Cost Estimate | n/a’ | Item Detail Comments | n/a |
### DEMO-03: Samuels Avenue Sites Demolition, handling, and disposal of chainlink fence, 8' to 10' high, 3 strand barbed wire 2,550 ft

This item and quantity cannot be verified from the drawings.


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<td>Clarifications will be added to the plans</td>
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<td>Submitted By: <strong>Michael Oleson</strong> (817-332-8727) Submitted On: 31-Mar-08</td>
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Current Comment Status: **Comment Closed**

### DEMO-04: Samuels Avenue Sites Demolition, handling, and disposal of mesh reinforced concrete to 6" thick - Concrete Trail; 16,500 sf

This item and quantity cannot be verified from the drawings.


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<td>Trail to be removed is shown on sheet CG-05 which serves as the basis of quantity. Notation added to estimate and additional labeling and notations will be added to the plans for clarity.</td>
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<td>Submitted By: <strong>Michael Oleson</strong> (817-332-8727) Submitted On: 31-Mar-08</td>
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Current Comment Status: **Comment Closed**

### HAUL-03 Samuels Avenue Sites Hauling, 12 CY truck, 5 mile haul, soil

Based on crew CTDHB34C. 15,300 LCY The UOM is in Loose Cubic Yards, the description is 12CY trucks but the crew shows a 17CY trailer dump truck. Reconcile differences.


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<td></td>
<td>The crew composition was reviewed corrected to reflect a 17 CY trailer dump truck.</td>
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<td></td>
<td>Submitted By: <strong>Michael Oleson</strong> (817-332-8727) Submitted On: 31-Mar-08</td>
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</table>
|    | The crew composition was reviewed corrected to reflect a 17 CY trailer dump truck. OK, WHY DID
**THE QUANTITY CHANGE FROM 15,300 TO 47,820???????? ITS DIFFICULT TO BACK CHECK WHEN EVERYTHING SEEMS TO BE CHANGING.**

Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 08-Apr-08

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<td>A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.</td>
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Current Comment Status: **Comment Closed**

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<th>Item Detail Comments</th>
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(Document Reference: MII Estimate)

**Coordinating Discipline(s):** Cost Engineering

EARTH-23 Excavate, load, haul onsite, medium material, 5 CY hydraulic excavator, 65 CY off hwy hauler Based on 023154260180 and USR-EARTH-02. The excavator is 80 BCY/HR The off-hwy truck is 240 LCY/HR The equipment mix is not logical. The production rates would indicate 1/3 of a truck to match production rates. Where is the standby time?


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<tr>
<td></td>
<td>The crew composition was reviewed and updated. Standby time was evaluated and added to the estimate as necessary.</td>
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<td></td>
<td>Submitted By: <strong>Michael Oleson</strong> (817-332-8727) Submitted On: 31-Mar-08</td>
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<td></td>
<td>EARTH-23 appears to be replaced with other items, the quantities associated with the previously reviewed EARTH-23 appear to have been changed. The review cannot back check this comment without explanation. Found a few standby times of .03hrs, .08hrs, .04hrs - without any explanation or rationale for the minimal time. - - - the evaluation statement &quot;The crew composition was reviewed and updated&quot; doesn't seem appropriate when it appears the estimate was re-structured and quantities changed significantly.</td>
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Current Comment Status: **Comment Closed**

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(Document Reference: MII Estimate)

**Coordinating Discipline(s):** Cost Engineering

023151205520 Backfill, structural, 6" lifts, backfill around foundation, with dozer Must reconcile the quantity which appears to be the addition of 130k (BCY? CY? LCY?) and 737k BCY


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<td>Earthwork quantities have been reviewed and reflect bank cubic yard (BCY), loose cubic yard (LCY), and embankment cubic yard (ECY) units of measure.</td>
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<td></td>
<td>The evaluation text does not appear reasonable or applicable to the comment. It would be beneficial if the evaluation text described the changes made and not just rhetoric. The estimate reviewed was one line item; Samuels Avenue Sites - Earthwork - 023151205520 Backfill, structural, 6&quot; lifts, backfill around foundation, with dozer - 867,000 LCY. - - - The estimate provided for backcheck shows fill placement and compaction in two items of 506,400 and 378,000 LCY for a total of 884,400 LCY. - - - The backcheck estimate is still not clear because the estimate descriptions cannot be found on drawings CG06 &amp; CG07. On the north side of the West Fork are two spoils disposal areas and one spoils disposal area south of the West Fork. Is the City Landfill on the north side of the West Fork? Is the City Impound Lot on the south side of the West Fork? - - - If 506K and 156K LCY is going to the City Landfill the quantity of backfill at the City Landfill of 506K LCY is short 156K LCY. - - - THE RE-BUILD / RE-ORGANIZATION OF THE BACKCHECK ESTIMATE IS MUCH BETTER AND MORE DESCRIPTIVE - - GOOD - - - The evaluation text does not describe the improvements to the estimate.</td>
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Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 08-Apr-08

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Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08

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<td>The Cofferdam line item was updated with RS Means 2008 Costworks data.</td>
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Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

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<td>Good, installation and removal of sheetpiling is now traceable and can be updated, etc. HOWEVER, WHERE IS THE WORK AND COST FOR PLACING AND REMOVING BACKUP SPOILS?? - - - This item is under the folder titled: Excavation, Hauling, and Placement, the note explains most of the work in the folder (not all), Recommend that separable work be included in its own folder e.g. Cofferdam, Dewatering, Imported Material (what's it for??), Retaining Wall Drainage Material, Retaining Wall Top Soil, Slope Protection (where??). When the elements are separated work associated with that element is more clearly identified.</td>
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Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 08-Apr-08

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Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08
CARE-01 CARE-02 CARE-03 CARE-04 Bypass Channel – North Earthwork Care of Water Allowance per Estimator.
Cost based on professional judgment. Total Direct Cost for these items is $177,600 based on judgement. "Care of Water" implies that these pumps are to by-pass and maintain river flow. Settling basin implies the pumps maybe sump pumps or dewatering. Where is the operating cost of these? What is the basis for the cost?


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<td>The Care of Water in this portion of the estimate is for dewatering inside of the cofferdam at this location. It is not for bypassing the river. The pumps will only operate during construction hours, therefore, separate operation is not required. CARE-01, CARE-02, CARE-03, and CARE-04 were updated to reflect a crew and pumps on a daily cost basis. Number of days was be based on estimated length of site earthwork.</td>
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<tr>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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<td>The evaluation text sounds good, SO why not organize the estimate, separate this element of work and include your evaluation text in the notes of the estimate. Don't keep the reader guessing.</td>
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<tr>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08</td>
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Current Comment Status: Comment Closed

( Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

EARTH-13 Bypass Channel – North Earthwork Backfill, spread and compact dumped gravel/fill, 6" layers - Valley fill Backfill, spread dumped gravel/fill, 6" layers. Compaction w/ riding vibrating roller, 6" lifts. Based on 023151102360 and USR-COMP-01. "Valley Fill" What is the purpose for this fill? Where is it going? What is the basis for 75,535 CY? The quantity is then mathematically adjusted by 20% for swell. If it is dumped why isn’t the unit of measure in loose cubic yards? Where is the material cost?


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<td>The &quot;Valley Fill&quot; is the area to the east which is behind the retaining wall and retaining wall fill areas. The yardage quantity was provided by the civil designer based on MicroStation Inroad volume calculations. Earthwork quantities will be reviewed and updated to reflect BCY, LCY, and ECY units of measure.</td>
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<tr>
<td>Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08</td>
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<table>
<thead>
<tr>
<th>1-1 Backcheck Recommendation</th>
<th>Open Comment</th>
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<tbody>
<tr>
<td>Sorry the evaluation text doesnot provide any beneficial isite to what or where this is in the re-structured estimate. CANNOT BACKCHECK THIS COMMENT.</td>
<td></td>
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<tr>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08</td>
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<td>A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.</td>
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<tr>
<td>Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08</td>
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</table>

Current Comment Status: Comment Closed
EARTH-13 Backfill, spread and compact dumped gravel/fill, 6" layers - Levee fill. Backfill, spread dumped gravel/fill, 6" layers. Compaction with riding vibrating roller, 6" lifts. Based on 023151102360 and USR-COMP-01. "Levee Fill" What is the purpose for this fill? Where is it going? What is the basis for 176,249 cy?


1-0 Evaluation Concurred
The "Levee Fill" is located on the western extents of the bypass channel as shown on the typical sections. The yardage quantity was provided by the civil designer based on MicroStation Inroad volume calculations. Earthwork quantities will be reviewed and updated to reflect BCY, LCY, and ECY units of measure.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
EARTH-13 is not found in the estimate, Cannot reconcile the 176,249 cy. Evaluation Text? doesn't tell the review what changes were made.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

EARTH-13 Backfill, spread and compact dumped gravel/fill, 6" layers - Retaining wall fill. Backfill, spread dumped gravel/fill, 6" layers. Compaction with riding vibrating roller, 6" lifts. Based on 023151102360 and USR-COMP-01. "Retaining wall fill" Why isn't this work item with construction of the retaining wall? The quantity is then mathematically adjusted by 20% for swell. If it is dumped why isn't the unit of measure in loose cubic yards? 135,576 CY, The review cannot verify the quantities. "gravel fill" Where is the material cost?


1-0 Evaluation Concurred
The "Retaining Wall fill" is estimated in the earthwork portion, because of the nature of the work requires placement of fill prior to the construction of the retaining walls. The retaining, itself, is estimated with concrete, as is it's nature. The yardage quantity was provided by the civil designer based on MicroStation Inroad volume calculations. Earthwork quantities will be reviewed and updated to reflect BCY, LCY, and ECY units of measure.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
Same as the previous comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done. Additional folders was discussed to help distinguish items of associated work in the estimate.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08
### Coordinating Discipline(s): Cost Engineering

#### EARTH-09 Excavate, load, and haul, medium material, wheeled loader, hwy hauler (1.6 cyc/hr) Based on 023154260265 and 023154901100. The review cannot determine where this 146,336 cy of material is coming from or going to. Why is this uniquely different?


- **Evaluation Concurred**
  - The quantities for the Bypass Channel have been reviewed. Descriptions of the work were included in the MII estimate for these types of line items.
  - Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

- **Backcheck Recommendation Open Comment**
  - EARTH-09 or 146,336 cy cannot be found in the re-built / re-organized estimate. Evaluation text doesn't provide any clarity or changes made to the estimate.
  - Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 08-Apr-08

- **Backcheck Recommendation Close Comment**
  - A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.
  - Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08

### Coordinating Discipline(s): Cost Engineering

#### 023155100020 Fill, borrow, for embankments, 1 mile haul, spread, by dozer - structural fill The review cannot determine where this 68,864 lcy of material is coming from or going to. Where is the loading of these trucks?


- **Evaluation Concurred**
  - The quantities for the Bypass Channel have been reviewed. Descriptions of the work were included in the MII estimate for these types of line items.
  - Submitted By: **Michael Oleson** (817-332-8727) Submitted On: 31-Mar-08

- **Backcheck Recommendation Open Comment**
  - See the previous comments
  - Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 08-Apr-08

- **Backcheck Recommendation Close Comment**
  - A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done. Additional folders were discussed to help distinguish items of associated work in the estimate.
  - Submitted By: **Gareth Clausen** (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: **Comment Closed**
Coordinating Discipline(s): Cost Engineering

023155100020 Fill, borrow, for embankments, 1 mile haul, spread, by dozer - gravel drainage behind retaining walls
Material cost per Estimator. Cost based on previous work of similar scope. The description is totally misleading; fill, borrow, haul, gravel. The crew is a truck and dozer. A 1 mile haul doesn't appear reasonable.


1-0 Evaluation Concurred
The crew composition and the haul distance were reviewed and updated to reflect a reasonable import distance for gravel drainage material.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Open Comment
????
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done. Additional folders were discussed to help distinguish items of associated work in the estimate.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

1831022 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

(Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

023704501200 Rip-rap, sand-cement rip rap *Sand-cement rip rap* What are these 5 labors doing? No equipment?


1-0 Evaluation Concurred
After a review of this cost line item it was determined that it should be deleted.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

1831023 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

(Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

023704501200 Rip-rap, sand-cement rip rap *Sand-cement rip rap* What are these 5 labors doing? No equipment?


1-0 Evaluation Concurred
The rip-rap line item was updated with RS Means 2008 Costworks data.

1831023 | Cost Engineering | Cost Estimate | n/a | n/a | n/a

(Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

023704500110 Rip-rap, random, broken stone, 3/8 to 1/4 C.Y. pieces, machine placed for slope protection, grouted
This estimate is at an October 2007 price level, using a 2006 cost book. A quick check of RSMeans 22nd ed. 2008 the total direct cost for this specific work is $98.35 / SY the estimate shows a direct cost of $72.83 / SY. Approximately $108,000 increase 35% in direct cost.


1-0 Evaluation Concurred
The rip-rap line item was updated with RS Means 2008 Costworks data.
1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: **Comment Closed**

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Coordinating Discipline(s): Cost Engineering

027752750350 Sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 5" thick, excludes base. This estimate is at an October 2007 price level, using a 2006 cost book. A quick check of RSMeans 22nd ed. 2008 the total direct cost for this specific work is $3.77 / Sf the estimate shows a direct cost of $2.62 / Sf. Approximately $47,300 increase 43% in direct cost.


1-0 Evaluation **Concurred**
The 5" thick concrete sidewalk line item was updated with RS Means 2008 Costworks data.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: **Comment Closed**

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Coordinating Discipline(s): Cost Engineering

027752750400 Sidewalk, concrete, cast-in-place with 6 x 6 - W1.4 x W1.4 mesh, broomed finish, 3000 psi, 6" thick, excludes base. This estimate is at an October 2007 price level, using a 2006 cost book. A quick check of RSMeans 22nd ed. 2008 the total direct cost for this specific work is $4.24 / Sf the estimate shows a direct cost of $2.99 / Sf. Approximately $85,800 increase 42% in direct cost.


1-0 Evaluation **Concurred**
The 6" thick concrete sidewalk line item was updated with RS Means 2008 Costworks data.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: **Comment Closed**

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Coordinating Discipline(s): Cost Engineering

15-01 Coffer dam - sheet pile 300 LF long by 30 LF, backed up with local spoils, removed at completion Per Estimator. Cost based on professional judgment. There is no reason to present this item as "Per Estimator. Cost based on professional judgement" when this work can be found in RSMeans 31 41 16.10 Sheet Piling Systems. Per estimator
and judgement is not traceable. The review cannot determine if the cost to place "local spoils" is included in the estimate. Also, the removal of local spoils after construction.


1-0 Evaluation **Concurred**
The Coffer Dam line item was updated with RS Means 2008 Costworks data. The cost for removal of local spoils is not included in the cost. This statement has been removed from the cost item.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Close Comment**
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: **Comment Closed**

| 1831033 | Cost Engineering | Cost Estimate | n/a | n/a | n/a |

(Document Reference: MII Estimate ITEM DETAIL Comments)

**Coordinating Discipline(s):** Cost Engineering

EARTH-10 Earthwork 264,550 CY Fill, borrow, for embankments, load, 1 mile haul, spread w/dozer, compact w/vibrating roller Based on 023155100020 and COMP-01. How are the trucks loaded? There is no equipment or operator to load 264,550 CY.


1-0 Evaluation **Concurred**
The crew composition has been reviewed and updated.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation **Open Comment**
The crew composition has been reviewed and updated. OK, EARTH-10 is not used, WHAT TOOK ITS PLACE? WHAT HAPPENED TO THE 264,550 CY?

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation **Close Comment**
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: **Comment Closed**

| 1831035 | Cost Engineering | Cost Estimate | n/a | n/a | n/a |

(Document Reference: MII Estimate ITEM DETAIL Comments)

**Coordinating Discipline(s):** Cost Engineering

023154325460 8,278 BCY Excavating, bulk, open site, bank measure, medium material, 335 H.P. dozer, 150' push
What is done with the 8,278 BCY that is excavated? Is it spread and leveled? Will it go back as backfill?


1-0 Evaluation **Concurred**
The 8,278 BCY is part of the backfill for the gate structure. The fill will be spread and leveled. The crew composition and quantities have been reviewed and updated.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08
<table>
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<td>Gareth Clausen</td>
<td>08-Apr-08</td>
<td>Open Comment</td>
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<tr>
<td></td>
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<td>Evaluation Text; OK, where is it in the re-built estimate?</td>
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<td>Gareth Clausen</td>
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<td>1-0</td>
<td>Michael Oleson</td>
<td>31-Mar-08</td>
<td>Concurred</td>
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<td></td>
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<td></td>
<td>Detail has been added to estimate for embankment roads.</td>
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<td></td>
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<td>Sorry, can't find any of this in the revised estimate. The evaluation text has a good folder title; &quot;Embankment Roads&quot; Recommend using it.</td>
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<td></td>
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<td>Line item title has been changed to reflect appropriate title of Training Walls as shown on the plans (S-17). These items will be detailed in greater detail as the design is advanced in future iterations of the MII estimate.</td>
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<tr>
<td></td>
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<td></td>
<td>Line item title has been changed to reflect appropriate title of Training Walls as shown on the plans (S-17). I DON'T THINK SO, the re-build / revised estimate is identical to the estimate reviewed, NO</td>
</tr>
</tbody>
</table>
CHANGE! -- -- -- -- These items will be detailed in greater detail as the design is advanced in future iterations of the MII estimate. THIS SENTENCE IS IRRELEVANT TO THE REVIEW.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

1-2 Backcheck Recommendation Close Comment
A Tele-Conference was held on April 14th. The comment was discussed and clarified. A walk-thru of the changes was done. Additional folders were discussed to help distinguish items of associated work in the estimate.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 14-Apr-08

Current Comment Status: Comment Closed

(1831043) Cost Engineering | Cost Estimate | n/a | n/a | n/a

(Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

FINISHES-04 Architectural enhancement Allowance per Estimator. Cost based on professional judgment. There is absolutely no basis for the $1,000,000 in direct cost. This feature should be included in the risk analysis and contribute to contingencies.


1-0 Evaluation Non-concurred
This cost element is a local sponsor enhancement which can not be defined until the COE design of the structure is advanced. Not included in the Federal Project Costs. It is the opinion of the Engineer that in these situations the use of an allowance is acceptable and used in similar instances where the item is not fully defined.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Agree to dis-agree

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

(1831045) Cost Engineering | Cost Estimate | n/a | n/a | n/a

(Document Reference: MII Estimate ITEM DETAIL Comments)

Coordinating Discipline(s): Cost Engineering

EQUIP-08 Motor housing Allowance per Estimator. Cost based on professional judgment. There is no logical basis for 12.87% escalation on this "ALLOWANCE" or "judgment". Why not use the 160 SF estimated and use a building square foot cost adjusted for the physical size? Recommend estimating instead of guessing.


1-0 Evaluation Concurred
The crew composition was reviewed and the cost item has been estimated using available sources such as RS MEANS Costworks 2008.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

(1831047) Cost Engineering | Cost Estimate | n/a | n/a | n/a
RESTOR-03 Tree and shrub planting Assumes tree and shrub density of 25 trees per acre. Planting trees of 1-1/2” to 2” caliper. Species including ash, maple, oak, redbud, and walnut. Planting shrubs of 5 gallon caliper. Species including hibiscus, forsythia, burning bush, and hydrangea. 6 ACR Where is the 6 acres? Is this appropriately in the Federal 220 project?


1-0 Evaluation Concurred
Given the conceptual nature of the design the location of plantings has not been defined. For initial estimating purposes assumed locations include areas along the top of the middle wall, and adjacent to the trail away from the Levee on the soft side. This is consistent with current practices on the existing Floodway.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
GOOD, Recommend adding part of this text to the line item note to eliminate confusion and questions.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Cost Engineering Cost Estimate n/a n/a n/a

The level of detail and the number of items based on judgment in this estimate is reflective of a reconnaissance level estimate and not a feasibility level. Feasibility level estimates generally must have unit costs for the construction features computed by estimating the equipment, labor, material, and production rates suitable for the project being developed. This estimate for the Federal 220 project can be greatly improved by doing the aforementioned.


1-0 Evaluation Concurred
Suggestions have been incorporated in various costs items to improve the current estimate. This includes breakdowns of materials, labor, and production rates. As the project evolves it is acknowledged that it will be necessary for the cost estimate to be detailed in greater detail.

Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.

Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

The comments provided are representative. This review looked at one valley storage, the north channel section, one isolation gate to economize review time and preparation of repetitive comments. Please consider these comments throughout the entire estimate and revise / improve each folder and item detail throughout the estimate.

1-0 Evaluation Concurred
The additions and clarifications to the estimate based on the focused comments have been applied to appropriate items throughout the estimate.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08
Current Comment Status: Comment Closed

1831199 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate GENERAL COMMENT)
Coordinating Discipline(s): Cost Engineering

Experience has shown that preparing the construction cost estimate in MII without contingencies or inflation is the best. Presenting contingencies, escalation to a future price level, and inflation through the project schedule on a sheet of paper, "Total Project Cost Summary" is most effective and understandable. See the draft information attachment (if it works)

(Attachment: TPCS071101.doc)

1-0 Evaluation Concurred
The base estimate has been prepared without contingencies or escalation. These cost elements have been calculation and added the final project cost estimate and summarized on the Total Project Cost Summary These costs were determined following the guidance and procedures as outline in the USACE, Cost and Schedule Risk Analysis Process incorporating the ICR comments.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
Closed without comment.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08
Current Comment Status: Comment Closed

1835413 Cost Engineering Cost Estimate n/a n/a n/a

(Document Reference: MII Estimate) [This item is flagged as a critical issue.]
Coordinating Discipline(s): Cost Engineering

Of the $149 million, construction cost (Oct 07 price level), 33% is based on unit prices per the estimator and allowance or judgment. Cost items less than $10,000 are not included in these percentages. This clearly indicates to this review that 1/3 of the estimate may have a greater cost risk than the other 2/3.

Submitted By: Gareth Clausen (509 527-7587). Submitted On: 17-Mar-08

1-0 Evaluation Concurred
Additional detail was added to the estimate based upon quantity and cost data not itemized in the original estimate. However the judgment of the estimating team where the design was still of preliminary concept nature was that use of detailed pricing could result in a less accurate estimate. In these cases allowances or estimator judgments were used. Risk analysis and development of contingencies is reflective of confidence in current estimate.
Submitted By: Michael Oleson (817-332-8727) Submitted On: 31-Mar-08

1-1 Backcheck Recommendation Close Comment
However the judgment of the estimating team where the design was still of preliminary concept nature was that use of detailed pricing could result in a less accurate estimate. AGREE TO DISAGREE.
Submitted By: Gareth Clausen (509 527-7587) Submitted On: 08-Apr-08

Current Comment Status: Comment Closed

There are currently a total of 202 users online as of 04:50 PM 22-Apr-08.


Questions and comments to Call Center staff@rcesupport.com, 217-367-3273 or 800-428-HELP (4357)

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