

**Quality Control  
 Review Checklist**

- Scope of Work
- Space Program
- Building Code Checklist and Write-Up
- Cost Estimate
- Submission Checklists
- LEED Checklist
- Drawings
- Specifications

Project Name: Gilboa Dam CAT-212B  
 Project Number: 200621.50

QC Review By: RAH

QC Review Dates: 10/26-11/09

Project Manager: K. Troemner

Project Architect: \_\_\_\_\_

Submission (Circle One): Progress Set to JV

30% 60% **90%** 100% Final

Comments	Responses
General	
1. Inconsistent use of new and existing	Will make effort to be consistent and clear about notes regarding this.
2. Callouts don't fit long dwg names, when they overwrite each other it becomes somewhat to totally unreadable; at least one wrong ref, ck all; reverse callouts almost never filled in, especially on unique items it takes considerable time to find out where the detailed work is called out. A jr should ck all the above and sign off on, then the PM should spot ck	The callouts and reverse callout system is dictated by JV standards; we will work on making the labels more legible by cutting them. They don't seem to work on our system with masks the way they do for the engineers. Tags will be coordinated by Jr. and spot checked by PM.
3. Numbering systems for notes - many sheets have sets of notes with each sub drawing, part plan, detail etc on the sheet, this leads to up to 4 or 5 notes with the same no on the same sheet. This can be confusing when referencing the work, ie, on the phone, note 3 says blue, when another note 3 might say white. This might be addressed by having the first set of notes numbered 1.1, 1.2, 1.3, then the next set numbered 2.1, 2.2, 2.3, etc, etc. Also, if the same note(s) are used several times consider a master list of notes for the sheet numbered 1, 2, 3, etc.	This is also a detail noting strategy used by the JV and every effort will be made to consolidate the notes or place them to be clear about which notes belong to the specific detail.
4. Have all ADA requirements been met on all drawings.	Yes, ADA requirements are being followed, and the landscape architect is also grading the site to comply with ADA. The only outstanding item to be designed is the interpretive center signage and this will also be reviewed for ADA.
5. I didn't notice a ton of spot elevations or a plan with contours to show how	Spot elevations are in flux, and are a coordination item with the landscape architect. This will be fully

<p>the built environment meets the landscaped environment. Perhaps this is on documents I did not get to review. Perhaps other plans have been made to take care of this.</p>	<p>reviewed with finalized elevations once the grading plan is complete.</p>
<p>6. Poche pattern chosen for bluestone very close to that for concrete, just mentioning it, I know there are a limited number of patterns.</p>	<p>The pattern will be changed to a different pattern for clarity.</p>
<p>A102</p>	
<p>7. Elevations, it seems there aren't many, are elevations on the landscaping plans in sufficient number and location to define the architectural work, and are the heights coord with arch work. See suggested revisions to note 3 on this sheet.</p>	<p>Overall elevations tags are noted on A102, but detail elevations are coordinated on A106 Paving Plan in order to keep the clutter down on the main plans. Heights will be coordinated with final grading plans.</p>
<p>8. Drainage seems not be fully thought out, there are no splash blocks, area drains, trench drains, scuppers, or anything to diffuse runoff pouring off at choke points, pouring over sides of work staining it. There is no cross slope shown on walks, leading one to believe they will drain to the ends, with considerable flows building up that could erode terrain or provide significant user discomfort. If this work is accommodated on the landscape work, ignore on arch work.</p>	<p>Drainage is handled by landscape architect with the overall grading. See L-CW-102 for more information.</p>
<p>9. Confirm that sufficient dimensioning with plus / minus used only where it is truly not critical or where plus / minus is constrained by ranges.</p>	<p>Agreed – all dimensioning will be reviewed for constraints and non-critical locations.</p>
<p>10. Add detail callouts / wall section callouts</p>	<p>These will be tagged and coordinated as details are completed.</p>
<p>11. Conflict between removable wall element and fixed paving element, why removable if fixed wall prevents access in this area anyway. Paving and footing for walk, should they be sized and designed for anticipated crane loading including higher loads at stabilizer / outrigger pads. If the client anticipates replacing all paving anyway, never mind.</p>	<p>The removable walls are for a possible one –time event that a truck would need to pull up along side the pavement. The pavement will be reinforced to handle a heavier load. In the event the crane needs to be over the pavement (this was not the case according to the client) and it cracks, it will be removed and replaced.</p>
<p>12. Insufficient plan dimensions to ensure all elements are located as desired</p>	<p>Additional dimensions will be added to supplement.</p>
<p>13. Locate control points and dimensions from them sufficient to locate all elements of the project</p>	<p>Control points will be coordinated with JV requirements.</p>
<p>A103</p>	
<p>14. Add detail callouts / wall section</p>	<p>These will be added with further coordination.</p>

callouts	
15. Insufficient plan dimensions to ensure all elements are located as desired	Additional dimensions will be added to supplement.
16. Will all areas being planted be able to receive sufficient sun, water, and avoid too much wear from people or equipment?	Yes, this has been reviewed with landscape architect.
17. Is layout and construction of retaining wall GA work item, or is it someone else's work, if so, confirm all your desired dimensions and layout are accommodated by the other work. It is probably better to show layout arcs etc on drawing for contract or trade that will be doing it	Layout and detail of retaining wall form is GA work, but structural engineer in JV is responsible for structural design. We were requested by engineers to provide layout drawings.
CW104	
18. Graphic scales not usually used in construction drawings back in my days, maybe they are now, but if not remove maybe? Typical throughout.	Graphic scales are required by JV.
CW105	
19. Title block too small to read fine print	Title block by JV; GA has no control over this.
20. Callouts missing info, or info runs over callout becoming difficult to read	We will work on making the labels more legible by cutting them and coordinating tags.
21. Notes for different elements point to same element	Will clarify and coordinate.
22. Some notes for same elements better than other notes, use best note and copy and past, or callout standard notes for page. If defining work / wall sections using callouts, use more of them to make it clear the length of wall being worked on, note start point of work if not whole wall, if using notes to define above, use same notes or very generic notes such as line of parapet, and use one long note putting in all tech info and cross references. If you have rebuild wall, then another note that says rebuild wall from ground up 2 feet thick with full wall flashings, the gc can ding you for an extra.	Will consolidate and clarify.
23. Pick line and poche patterns that are visible at all likely scales / paper sizes drawings will likely be read / printed at. Of course we are LEGALLY and LIABILITY wise only responsible for full size reproductions, but some effort to adapt to reality is a good thing too. Typical throughout	Agreed; will try to adjust accordingly. Some hatches and standards are dictated by JV set and will not be flexible.
24. I believe general note on page, no 6.b is not repeated on all pages however, it would seem it should be on many if not	This applies to specific locations; other places have been discussed with JV to use stones salvaged from the dam face and spillway to allow

all pages as it's very important.	GC some flexibility.
CW106	
25. Callout or refer in note where building elements not in work can be located; detail for gravel area. Callout details for as many construction elements as possible. If it's not detailed it should be very obvious what to do and the only way to do it is the way you want it done. Otherwise, do more details and key them in with callouts.	Will add more references to details and callouts once coordinated with additional details.
26. Use same notes for same elements on different sheets	Will coordinate better and unify notes.
27. No expansion joints in long runs of concrete walks?	Expansion joints will be added.
28. R1, etc, define in legend or somewhere.	Will clarify further – relates to detail elevations on A-CW-303 and 304.
29. See also A-CW-101, the two drawings seem to cover the same work. In general, smaller scale plans get bubbled somehow and one is referred to where the larger scale representation is shown, and all notes, dimensions etc. are shown on the larger scale drawing.	Same scale but 'finish' type drawing for paving patter and layout. Will note on A-CW-101 to refer to this sheet for detailed callouts and paving patterns.
CW202	
30. No comments I assume it is NOT part of "arch" work	Only form liner pattern and proportions along with chamfer details are controlled by GA. All other information by JV.
CW203	
31. Continue line work under ground	Agreed.
32. Identify all lines, ie proposed line of new fill, etc and to perform work BEFORE placing fill	Note added & revised to clarify intent.
CW204	
33. I assume this is not our work, did not review	This is part of our work to identify the masonry restoration and repointing per specification section 04901.
CW205	
34. Detail numbering not sequential	Detail sequence and number is per JV standards.
35. Notes could be tighter, several seem to refer to the same work in different ways and one common text covering all the work in one note might be more appropriate. Some seem to all need the same note, as they seem to be the same work.	Notes will be reviewed and clarified to be more concise.
CW206	
36. Multiple lists of notes all with the same numbers, up to 4 note no. 1's. It is conceivable that when contractors refer to and use documents that if not	Notes will be separated and made more clear which notes apply to the individual detail. When possible they will be noted in the drawing instead of called out.

<p>careful in their discussions and thought process that they might confuse note one from one detail with note one from another detail, and when asked to correct whatever issue develops ask for an extra from the client with the defense that the dwgs were not 100% clear.</p>	
<p>37. Note could perhaps be tighter. Notes starred seem similar and could be rewritten to a standard note and copied to each place it is appropriate / where different versions are being used, or put in a standard list of notes for the page and keyed in by number. For example "1. Remove stones as whole units minimum 4 inches thick (deep) and to maximum depth possible for reuse." and "2. Reuse existing bluestone facing. Whenever possible use stone from same area for replacement."</p>	<p>Notes will be reviewed and clarified to be more concise. The scope of the work is different for each different sheet, and to combine all notes to put on every sheet will take up too much space. Effort will be made to clarify everything better per page.</p>
<p>38. Details not in sequential order, it might help clarify the drawings and speed up referencing the drawings for all involved.</p>	<p>Details are numbered per JV standard and are determined by the sheet that they are originally called out from.</p>
<p>39. A door is shown in detail 4, are we responsible for the door or how it ties in to the stone being replaced around it? If so perhaps we need jamb, head, sill details?</p>	<p>No, that is a structural water-tight door that is being handled by the JV.</p>
<p>40. Run details by someone to confirm some specifics are correct, like the .04 inch expansion jt, not tying the coping stone in with pins, graphic representations of anchors are appropriate, jointing dimensions, min. stone depths, maximum mortar depths / thicknesses</p>	<p>Reviewed with JV engineers and will revisit masonry details with Rob Dove.</p>
<p>41. Detail referenced that I did not have, it referred to the anchors, which I believe are not in our scope of work, but just in case thought I'd mention it</p>	<p>Anchor reference is back to JV set which details the actual installation. GA scope is only for restoration after installation is complete.</p>
<p>CW207</p>	
<p>42. Detail referenced that I did not have, it referred to the anchors, which I believe are not in our scope of work, but just in case thought I'd mention it</p>	<p>Same answer as #41.</p>
<p>43. The rock anchor vs tension anchor that Rob said the client finally figured out and told him what to say</p>	<p>All notes clarified with JV to be called "post-tension anchors"</p>
<p>44. Add to symbol list rock anchor line work &amp; border area legend note the</p>	<p>Symbols list clarified and consolidated.</p>

work approximate	
<p>45. Confirm that client is requiring flashings, I have a concern that without weeps, that water could sit and collect, freeze and break up the joint or push the rock out of place, also concerned that weeps will need to be several feet deep to reach the flashings. Also i would be concerned if the weeps or flashings were below typical / yearly water heights in freezing weather, as water could then flow into the wall and freeze. Given the high mass of the dam, I would think that the massive concrete and masonry will act as natural land formations react to cold weather in this area, freeze to a maximum depth of 2 1/2 to 3 feet, therefore any water "trapped" or seeped into the dam deeper than that would continue to move through the dam structure as it would through a natural landscape formation, percolating further and further down.</p>	<p>Client is looking to GA for masonry wall restoration and detailing. Currently there are no flashings, and will discuss with Rob Dove regarding appropriateness.</p>
<p>46. SS bolt heads at historic plaques, will this be acceptable to arts commission, seems to be a jarring contrast to signage.</p>	<p>The bolts will be bronze to match the historic plaques.</p>
<p>47. You call for an expansion bolt. You might want to use an epoxy bolt setting to avoid creating fracture lines in the stone work that will collect water and freeze and in time let the bolt fail.</p>	<p>Detailed will be revised as epoxy.</p>
<p>48. Note to align plaques, you don't say it, you may not get it. You might want to give a min to coping so bolts are at least 6 inches inside concrete core of parapet. Note re CL, the note CL of wall, seems a bit vague, but if it can only be one thing, cool.</p>	<p>Will be revised to clarify intent.</p>
CW301	
<p>49. Reference to concrete retaining wall, if it is coordinated with our paving for jointing, finish, etc. It doesn't have to be, just saying it might be an idea to coord in some way to the paving.</p>	<p>Concrete retaining walls are coordinated with the paving; the structural engineer is designing the reinforcing and sizing. Will add notes to refer to their drawings for coordination.</p>
<p>50. Reference to cut sheet for metal security fence. It is not a standard in the industry to indicate construction of an element such as a fence in this manner. Requests for cut sheets are usually made in the specs, usually as manufacturer's information. It may not</p>	<p>Railing information will be removed from this location and noted in specifications.</p>

<p>be important how this fence is assembled as long as it has this material in it. Also, if this material is the only one acceptable, is that allowable by the client or the agency that hired them. Many clients and agencies want to or must by law allow "equals". If it must be a proprietary item like this consult with client and ensure spec. text correctly indicates this.</p>	
<p>51. Is trash receptacles in our contract, if not perhaps note NIC. If in contract, and it's attached to something, we need a detail.</p>	<p>Yes, they are in our contract and in specifications per landscape designer.</p>
<p>52. Alignment of walk, earth, lawn, raised elements. It would appear that at one walkway on detail 6, if the soil washes away over the years, it will expose the walkway paving and eventually erode out under it (walk slopes in the direction of this lip so water will accumulate along it's length and deposit here).</p>	<p>Reviewed details with landscape architect and they are confident these issues have been reviewed and handled with their grading plans and planting.</p>
<p>53. Show bottom line of grid</p>	<p>Not sure what this comment is referring to.</p>
<p>54. Poche in all of something unless absolutely necessary to show something else.</p>	<p>There is no poche on this drawing; the JV convention does not support poches.</p>
<p>55. Show bottom line of steel walkway depth, show piers, etc.</p>	<p>This detailed information is handled on the details, grading plan, and structural drawings because it is too small on this elevation.</p>
<p>CW302</p>	
<p>56. Run spell checker on drawings.</p>	<p>This will be done on all sheets.</p>
<p>CW303</p>	
<p>57. Have all dimensions been triple checked, especially dimensions derived from block sizes, have joint dimensions been specified as exactly something, not a range, or that if a range, the overall must remain the same. If you want this stuff to align you really need to wave red flags at the GC.</p>	<p>Dimensions need to be re-coordinated with grading plans which were adjusted by landscape. This will be done.</p>
<p>58. I didn't notice a ton of spot elevations or a plan with contours to show how the built environment meets the landscaped environment. Perhaps this is on documents I did not get to review. Perhaps other plans have been made to take care of this.</p>	<p>Spot elevations will be added as landscape plans are finalized; this was left to the end because the landscape grading was in flux.</p>
<p>59. Use more callouts to details</p>	<p>Agreed; more details will be called out.</p>
<p>60. Poche pattern of coping and bench the same, maybe they should be different</p>	<p>This will be changed for clarity.</p>



61. Make sure concrete block dims make it into spec, I found it here and there on drawings	Agreed; and will be confirmed.
62. Note on coping says 48 inch, probably long, but what about other dimensions	This is defined more in the construction details/sections.
63. Detail and dimensioning of joint between lift panels. What keeps debris out of this joint, this joint must be wide enough to allow play in the lift panels so they can come out and go in easily with relatively little finesse. The structural engineer should be able to tell what kind of play is necessary.	There is no open joint between the panels; they are grouted in order to appear monolithic. The removable detail may never be used as it is for emergency situations which may never happen. Any removal would require some patching and masonry work to restore the walls.
64. Detail 4 do you need a section detail of the plaque installation to show how you want it to exist in reference with the face of the concrete block. Note that vertical CL Plaque is three CMU courses down seems incorrect as it starts at the top of the coping, and the CL is nowhere near the CL of the plaque. CL horizontally isn't obvious where on wall it should go, also CL of whole wall?	Yes – this detail will be added to the set.
65. Has someone verified plaque size will fit within masonry sizes.	We have approximate dimensions; and require shop drawings from the contractor prior to any work on the walls which will be reviewed. Will include actual plaque sizes.
66. You don't say how to anchor plaques, do you care?? If you need a certain fastening system and don't say it, you may not get it, or may get an extra.	This information will be included in added detail.
67. Wall dimensions noted to elevations, someone should really ck these as it's a real fixed height and if the land isn't just what you thought it was, the wall can be high or low. You might want to avoid using this convention.	This will be further coordinated with landscape grading, elevations, and heights.
CW304	
68. Railing appears too close to edge to ensure little chance of concrete cracking in cold weather from water penetration at post and differential expansion and contraction	Checked with structural engineer; only 3" of cover required and this is achieved in the detailing.
69. What keeps metal bridge level with concrete walkways at it heaves up and down in the winter, what buffers joint / concrete walk from damage due to expansion in summer, what prevents too large a gap from opening up in winter from contraction due to cold. Detail maybe?	Details at these locations on A-SD-104 will be refined further.
SD101	



70. I get the idea much of the work of our work is done under landscape drawings, in which case, say see it more or on each dwg and then why note 6 inch compacted sandy gravel, which should be in landscape and if not there, then there should be more landscaping note here.	There is a large effort to coordinate with landscape; however the hardscape is in GA scope and softscape is in landscape scope.
71. Impermeable liner points to what looks like vertical line, these liners are usually horizontal.	Detailing based on grass pave manufacturer's recommended installation, which shows the liner turned up the adjacent vertical hardscape.
72. Again some confusion over what is going on landscape drawings and what goes on ours. If it goes on landscape, then don't say it here and if our drawings are supposed to show all construction info, put more on.	Details will be coordinated with landscape and structural, but GA has responsibility for hardscape elements, with structural input from JV engineer.
73. Slab thickness inconsistent, pick one and ck all dwgs	Agreed; will be coordinated throughout.
74. Suggest sloping benches to drain and maybe a kerf to prevent water being carried all the way back to wall.	Great, will incorporate into details.
75. Double ck with structural that their solution for removable wall panels.	Structural is reviewing and will be adding structural input.
76. Pocket for lifting could fill with water and freeze causing problems	Pocket will be sealed and grouted around.
77. Dimension min dims pins for copings to edge to protect masonry from cracking both coping and filled concrete block.	Weep will be added to handle water infiltration.
78. Coping dim listed as nominal, I always give the actual when in doubt, anything but let the exact will get you something close.	Agreed; will be clarified.
79. Nothing but agent orange will keep weeds from growing in the grid plantable area	Natural grasses and seed mixes are specified by landscape architect.
SD102	
80. Detail 7 how does this wrap down or get cut back from exposed jt on side of structure. Dimensions needed. Show texture so it grabs into jointing material, look for sample in submissions	This detail will be developed further to incorporate cutback.
81. Same stone anchor issues as prev. nothing to review, referenced to drawing don't have	Structural shows stone anchor detail in JV set, which is referenced for the stainless steel anchor sizing, etc.
82. Forming concrete on site difficult to get good finish especially in odd shapes.	Formwork drawings are requested in specifications; will be reviewed and if needed exposed-to-view portion of concrete work will be revised to precast for higher finish quality.
SD103	
83. Various issues regarding ornamental fence at overlook.	Comments will be addressed in details and drawings.
84. Perforated metal, excellent home for	Possible some insects will reside in metal, but it is

<p>insects</p>	<p>also very hot/cold because it is metal. It is outside and some natural infiltration is inevitable.</p>
<p>85. No drainage from bottom of metal panels will aid in buildup of dirt and ice in winter, ice could bulge out metal over time.</p>	<p>Metal panel is perforated; holes will allow drainage.</p>
<p>86. Perforated metal will accumulate dirt, seeds, and plants will start growing out holes.</p>	<p>Outdoor installations will have some infiltration; Will review strategies to minimize build-up.</p>
<p>87. How is handrail attached? is the small leg going to the post assembly have a threaded end allowing it to be bolted on or is it welded in the field, or is the whole fence assembly pre assembled in a shop and brought in in sections, if so, how many in a gang do you think / want (the more ganged the fewer splices, the heavier and costlier installation becomes, the more likely post holes won't match, etc) Where is handrail spliced, how, mechanical connection, field weld? If you don't pick it the GC gets to and get an extra to do it your way later.</p>	<p>Handrail is field welded on site once posts are installed. Will clarify further in detail drawings.</p>
<p>88. Many dimensions needed. The trickiest will be the staggered tabs connecting the metal panels to the post assemblies, as due to the slope, and holding the panels level, the tab spacing may not be determinable until the walls and walk are poured and the entire fence can be mocked up in the field and the exact difference in height between one post assembly and the next determined. This is easily possible, but will add several months to the construction time as it is probably necessary to weld the tabs to the panel frames prior to attaching (probably by welding?) the panels to the frames. This will minimize the chance of marring the panel faces when welding the tabs. Some of the trickiest of the tab spacing might be dispensed with a two piece tab and by enlarging the tabs and using a long vertical slot on the post side portion of the tab to allow the panel to be adjusted up and down a couple of inches.</p>	<p>Dimensions will be added; some flexibility is meant to be built in – will study suggestions and will incorporate for constructability.</p>
<p>89. How are panels attached to frame, if welded, it seems the welds will be very visible unless you try to bend the metal over the frame and do all the welding</p>	<p>Panels are fastened; will be clarified further in details. All stainless steel is a satin finish; not polished.</p>

<p>on the frame sides. The scarring to the metal panel finish will still be there, and the welds will be clearly visible, but you'll have to be paying some attention as you walk along to pick it up. Note that welding is hot, if metal has a shiny or matte finish that cannot be remachined welding will often heat discolor the finished metal and grinding down welds will inevitably end up also hitting the panel surface and scarring that, requiring repolishing. Just want to make sure the panels can take that at least in the shop.</p>	
<p>90. Plus / Minus dimensions are very dangerous, what is close to 3 inches, 1/8 inch, anything, I don't know. Ranges are better, but picking a number is always best.</p>	<p>Will review and try to solidify all dimensions possible.</p>
<p>91. What is a compressible spacer, wouldn't something compressible infer that over time it will compress more, or shrink, or sag, or somehow change and this is a site with a lifetime measured in centuries really, many decades at least. Also, compressible will result in varying widths, heights, spaces, as its impossible to get every compressible item tightened to exactly the same distances, well, really hard. How thick is this material to be, what color, will it be visible, will it need touch up to match metal???</p>	<p>Will substitute with s.s. spacers.</p>
<p>92. Confirm and state post assembly sleeve metal, that the metal shape is a standarly available shape or does it have to be custom fabricated from flats. Call a grouting company and tell them what you are grouting into these sleeves and find out what min thickness of grout is necessary to keep it in and fully fill pocket so water can't penetrate / accumulate and that will take the expansion and contraction and if caulking will also be necessary, also, indicate how deep into slab or wall, how far from edge of wall or walkway slab such that it won't cause cracks out to the edge and provide sufficient structural strength to keep people safe.</p>	<p>Detail will be added to drawings regarding post sleeve and shape.</p>
<p>93. Does the fence need to meet any ADA provisions, if so, does it.</p>	<p>The guardrail meets necessary ADA guidelines.</p>
<p>94. Conflict between connection of wall to</p>	<p>Details will be coordinated and standardized.</p>

<p>slab between details on different sheets, some show wall extends to walk surface, others walk extends over wall.</p>	
<p>95. Note re saw cuts and aligning post assemblies to them. Do you show on the drawings somewhere where all the saw cut lines are, ie, you've evenly split up all the walkways so you don't end up with (12) four foot sections of fence and a 13 inch piece on the end, or (11) 4 and (1) 7' 1" piece, or you may not be concerned about this, just asking. By relying on concrete scoring to dimension post to post you give up your artistic judgment, unless that concrete scoring is detailed and called out with red flags that it must be maintained to allow fence to be properly installed.</p>	<p>Coordination between pavement, railing, sawcut lines will be consistent to achieve alignments.</p>
<p>96. Note re saw cuts these will damage the slab surface and make it more permeable to water than a tooled joint. Why not do the joints tooled when wet??</p>	<p>Aesthetic issues to select sawcut joint; both joints will encourage cracks and perform similarly.</p>
<p>97. Regarding benches made from blocks of rock, no ties between pieces, only dowels, in the fullness of time settling and water build up between pieces and mis-align the blocks.</p>	<p>Will incorporate into drawings.</p>
<p>98. Suggest geotextiles between all differing layers of materials to prevent migration with frost heaving,</p>	<p>Will review with landscape architect.</p>
<p>99. Filter fabric note points to earth</p>	<p>Will revise.</p>
<p>100. Detail 4 there is a fair amount of construction info yet I get the idea construction of walls is someone else's work to show, and if so this info might be used in lieu of that and next thing you know, a change order. Don't repeat info from detail to detail trade to trade etc unless it's needed for the construction of the detail. If all construction is noted and detailed somewhere else, just say see //////////////// for construction info, and that is one HUGE footing, can't be right. Chamfer?? dim needed.</p>	<p>Needed to draw to have JV structural engineer coordinate. Idea is to show all parameters except structural reinforcing, which will be shown on structural drawings to match GA.</p>
<p>101. Tamper proof screws on post assemblies?? Is 2 inches between bottom post screws enough to structurally keep railing sound, what is height of strap being set into concrete,</p>	<p>Great idea; will incorporate into notes on details. Tamper-proof flush screws with a barrel nut will be specified; will review structural stability with engineer.</p>

<p>suggest bottom tab / rods / something on tongue being set in place to aid in bond to concrete and prevent pullout. What size screws. This design calls for tapping one part of the post assembly with threads to allow screwing directly into flat metal shape, can you thread / tap SS flats, is it doable but really hard and costly? what happens at far side, cut off screw??? by the way, you mean bolt not screw right, you need something with a fixed dia the whole way through, not a screw that comes to a point.</p>	
<p>SD104</p>	
<p>102. See SD 103 for range of typical info that is probably missing from this, or isn't on this, maybe you don't need all that info, you folks know your project best, your call.</p>	<p>Similar issues from SD-103 will be reviewed on SD-104.</p>
<p>103. You might want to rethink the joint between the steel bridge and concrete walkway, preformed fill will probably need to be detailed to stay in the joint and look neat, yet not retain water and freeze and expand. Ck with engineer on expansion / contraction length you might need to accommodate, 1/2 inch, 1 inch???? you might detail something where the last gridded high heel proof grille extends over the top of the wall and slips under a textured SS plate if the joint is really big, or just caulked in right against the slab where it's easier to maintain or something, maybe the joint only needs to be 1/4 inch. Ck it out.</p>	<p>Will review detailing with engineer and revisit based on comments.</p>
<p>104. What keeps retaining wall, slab and metal bridge in alignment vertically, ie their top surfaces flush, to prevent a tripping hazard. Over time I suspect that slab will settle, tilt, and pop up or dive down, ditto the bridge as it's piers are affected by freezing and selling, etc. Pin together???</p>	<p>Will review with structural engineer as to best option for solving this issue.</p>

End of Comments