

Addendum Number 3

For

Lake Peachtree Spillway Replacement Project

August 4, 2017

Modifications:

ADD: Section 00 73 00- Supplementary Conditions, SC-101.A.: "54. *Lump Sum Item* – One total, fixed price to complete all of the work within the specified schedule for the item."

ADD: Section 00 73 00- Supplementary Conditions, SC-11.03: "SC11.03D- Delete Paragraph 11.03D in its entirety."

ADD: The following underlined text to Section 01590- Field Offices and Sheds, 2.4 D: "Furnishings in Meeting Area: Conference table and chairs to seat at least ten persons; racks and files for Contract Documents, submittals, and project record documents. Should Contractor choose to hold the project meetings off-site from the construction area, the meetings shall be held within 3 miles of the construction site. All other requirements of this Section shall be available at the off-site location."

DELETE: Plan Sheets 1, 3, 11, 14, 15, 16, 29, 33, 34, 35, 36, 38, 39, 40, 43, 44, 45, 46, 47, 49, 50, 51, 52, 54, 65

ADD: Attached Plan Sheets 1, 3, 11, 14, 15, 16, 29, 33, 34, 35, 36, 38, 39, 40, 43, 44, 45, 46, 47, 49, 50, 51, 52, 54, 65
Note: Additional temperature and shrinkage reinforcing steel was added in the ramp/infill sections of the piano key weirs. Sheets with material changes were notated as Revised per Addendum No. 3. Sheets that were inadvertently affected by the changes are included, but do not contain revision clouds/call-outs. The additional reinforcing typically includes the addition of #5@12" spacing, #7@12" spacing, and #4@24" spacing depending on the specific locations of reinforcing.

DELETE: Plan Sheets 37, 48 and 53

ADD: Attached Plan Sheets 37, 48 and 53
Note: The upstream ramp support walls (Sheets 37, 48, 53) were revised to include a 12-inch radius to improve hydraulic efficiency on the upstream ends of those walls.

Questions:

1. Please provide an estimated average thickness of the existing concrete spillway. Does this concrete spillway contain reinforcing steel? If so, what is the spacing?
 - a. Test Borings B-07 through B-09 were advanced through the crest of the existing concrete spillway. Estimates of the concrete thickness in the areas where drilling was

performed is contained on the logs of the aforementioned borings locations. The existing concrete spillway should be considered to have reinforcing steel within it, though the spacing and sizing of the reinforcing steel is unknown. In addition, please see the attached report, "Ground Penetrating Radar Survey Lake Peachtree Dam Peachtree City, Fayette County Water System, GA", dated April 4, 2014 by United Consulting. The attached report is not part of the Contract Documents, and the "technical data" contained has not been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

2. Please provide an estimated volume of grout that has been placed beneath the concrete spillway to fill the voids discovered several years ago.
 - a. Please see the attached report, "Ground Penetrating Radar Survey Lake Peachtree Dam Peachtree City, Fayette County Water System, GA", dated April 4, 2014 by United Consulting. The attached report is not part of the Contract Documents, and the "technical data" contained has not been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.
3. Can a cad file be furnished to prospective bidders?
 - a. AutoCAD files may be provided to the awarded Contractor, if the requests are submitted in writing to and approved by the Engineer.
4. (Reference: Plan Sheet 29) The detail for the bridge pier elevation and section show different dimensions for the stem and the cap. Please confirm that the dimensions shown on the section details are correct.
 - a. The dimensions shown on the section view are correct. An updated sheet depicting the bridge dimensions is appended for your convenience.
5. (Reference: Plan Sheets 33, 40, 43, 44) Please provide depths for the upper cut-off walls for slab sections G1, G2, H1, H2 and I1. Also provide rebar configurations for these walls.
 - a. The depth of the upstream cutoff walls is 6 and one-half feet below the slab subgrade. The reinforcing steel is shown on the revised sheets.
6. Please confirm that Bid Item 16c, "Slab Concrete" includes construction of slabs A1 through I1, all inlet/outlet wing wall slabs and all cut-off walls beneath these slabs.
 - a. Slab concrete includes construction of all slabs associated with the new spillway and wingwalls. These items and the quantities associated are clarified in Addendum No. 02.
7. Please confirm the estimated quantities for Bid Items 16b "Structural Concrete" and 16c "Slab Concrete". Our takeoffs show a distinct difference between the bid form quantities and what is depicted on the bid drawings.
 - a. These items were updated as part of Addendum Number 2.

8. (Reference: Plan Sheet 66) Please provide dimensions for the swellstop shown on the joint surface detail.
 - a. The Contractor shall provide Swellstop hydrophilic waterstop by Sika. The Contractor shall follow all manufacturer recommendations for storage, handling, and placement of Swellstop. The specified product has a set width in a roll (3/4" wide). The locations are at the ramp joints shown on the drawings, so the Contractor will need to estimate the length.

9. (Reference: Plan Sheet 65) The elevation detail (1) shown on this page references section details C and D on sheet 65. There are no C and D sections shown on that sheet but there are three A sections. Please provide the appropriate designations for these section details.
 - a. A revised plan sheet 65 is included with this Addendum

10. (Reference Plan Sheet 41) Please provide details for the steel grating at the by-pass vault.
 - a. The steel grating shall meet all requirements of Specification Section 05500 – Miscellaneous Metals. The steel grating shall be hot-dipped galvanized steel. Provide a maximum open area of 78%. Bearing bars shall be spaced 1 - 3/16 inches center to center, and cross bars shall be spaced 4 inches center to center, maximum spacing. Steel grating provided shall be intended for the purpose of supporting pedestrian loads. Contractor shall submit intended product to the Engineer for review and approval.

11. (Reference Plan Sheet 11) Note 6 states “contractor shall anticipate the undercutting of alluvial, fill and soft residual soils.” Under what bid item/s will the contractor be compensated for removing, disposing and replacing of this unsuitable material?
 - a. The materials will be removed as either structure removal or common excavation, depending on where the materials are removed from. Refer to Section 01025 - Measurement and Payment, Line Item 6, Part 2 for excavation associated with structure removal. Disposal of excess or otherwise unsuitable materials shall be measured and paid for under Line Item 13, c – Haul Off Spoils. The replacement of the material below elevation 764.5 feet shall be measured and paid for in accordance with Line Item 14, structural earthfill, in accordance with the requirements defined by the drawings and specifications.

12. (Reference Plan Sheet 11) The parapet is shown to start at Sta. 0+69.86 and end at Sta. 5+90.00 creating a length of 520.14’. However, the scaled dimension does not match this. Should the parapet actually start at Sta. 1+69.86? It appears that Sta. 1+00 is past the proposed start arrow at Sta. 0+69.86. Please confirm.
 - a. The plan view of the parapet has been revised on Sheet 11. A revised Sheet 11 is included with Addendum No. 03.

13. (Reference Plan Sheet 3) Please confirm that all the dowels are galvanized, note #6, item (a) states: the bars are to be galvanized while item (b) plain bars are to be 2’ long and ¾” in diameter.
 - a. Plan Sheet 3 has been revised. All slick dowels are to be galvanized steel and shall conform with the requirements of the drawings and specifications.

14. (Reference Section 01025, Measurement & Payment) Section 1.4. Line item 1 states “Including but not limited to Builders Risk Insurance”. Is builders risk insurance required? Typically builder’s risk is associated with vertical construction not a project of this nature.
 - a. Builder’s Risk Insurance is required, per Section 00 72 00 and as amended by 00 73 00.

15. (Reference Section 01025, Measurement & Payment) Section 1.4. Can the owner/engineer provide additional details related to the coloring of the parapet wall in alternate bid item #22? Is this a stain or dye?
 - a. The parapet wall shall be dark bronze. Please refer to Section 03300, 2.3 G. regarding the color admixture and submittals. Contractor shall submit a mock-up sample of the colored concrete to the Owner for review and approval.

16. (Reference Section 01500, Construction Facilities & Temporary Controls and Section 01590 Field Office & Sheds) Please confirm that the contractor is responsible for providing a temporary field office including furnishings, utilities and sanitary facilities for the project engineer. Additionally does the owner have a proposed site for the location of this office?
 - a. The Contractor shall provide a field office for the project engineer. The location of the field office shall be within the limits of the work.

17. Can the owner provide any information regarding the existing gate control and low level intake structures? (i.e. elevations, outlet piping, operability, etc.)
 - a. Although this information may be available, the Contractor shall provide a Control of Water Plan which reflects the Fayette County Water System lowering the level initially and the Contractor’s coffer dam controlling water levels subsequently.

18. Upon completion of all structural concrete members, earth fill and appurtenant structures will the owner lower the lake level to +/- 776.00 to allow the contractor to remove the temporary earthen cofferdam? If no, will the contractor be allowed to use the existing facilities to lower the lake level?
 - a. Please refer to Section 02100, 3.2 F regarding the lowering and raising of the water in Lake Peachtree. The Contractor may coordinate with the Fayette County Water System to re-lower the lake level to remove the cofferdam. The Fayette County Water System is amenable to working with the City regarding the construction of this project.

19. (Reference Section 01025, Measurement & Payment) Section 1.4. In Line Item 6, Note 2 states “Excavation below the existing spillway footprint shall be performed to estimated elevation 764.5 feet. (approximately four feet below the existing spillway subgrade and channel interface.) Excavation within the existing spillway footprint to elevation 764.5 feet shall be incidental to structure removal.” Does the term “existing spillway footprint” mean just the area beneath the existing concrete spillway or does it also include the area beneath the existing riprap channel protection?
 - a. This area includes the area beneath the existing concrete spillway. Removal of the riprap areas downstream of the existing spillway shall be measured and paid for as excavation – common.

20. (Reference Section 02275 Riprap) Section 2.1.E refers to recycled riprap from the spillway excavation. Will the demolished concrete spillway qualify as recycled riprap?

- a. No. The demolished concrete spillway will need to be disposed of at a proper off-site facility.
21. (Reference Section 01025, Measurement & Payment) Section 1.4. Line item 15 states that “Contractor shall furnish to the Engineer a statement-of-delivery ticket showing the weight, to the nearest 0.1 ton of rock in the load.” There is a bid item (15c) for recycled riprap which is paid per ton of material. We assume this is for any salvaged riprap from the existing spillway excavation. Can this item be paid for by the cubic yard or square yard as measured in place?
- a. Bid Item 15c – Recycled Riprap shall be paid for per ton of material. Use the relationship 1.7 tons per cubic yard of riprap.
22. (Reference Section 01025, Measurement & Payment and Section 02935, Topsoil) Please confirm that all topsoil will be imported from an off-site source.
- a. The contractor may stockpile topsoil on site from stripping operations at the site. However, importation of topsoil from an off-site source will likely be required
23. Section 01590- Contractor Office and Facilities section, states the Contractor needs to provide space for project meetings to seat at least ten persons. Is it allowable for contractor to host such meetings off site, at a location less than two miles from the jobsite?
- a. See modification above.

REPORT

Ground Penetrating Radar Survey Lake Peachtree Dam Peachtree City, Fayette County, GA

Project Number
2014.4496.01

April 4, 2014



April 4, 2014

Mr. Dave Borkowski, P.E.
City of Peachtree
151 Willowbend Road
Peachtree City, Georgia 30269

Via Email: dborkowski@peachtree-city.org

PROJECT: Ground Penetrating Radar Survey
Lake Peachtree Dam
Peachtree City, Fayette County, Georgia
Project No. 2014.4496.01

Dear Mr. Borkowski:

United Consulting is pleased to submit this report of the Ground Penetrating Radar Survey at the **Lake Peachtree Dam** located in Peachtree City, Fayette County, Georgia. This report includes a review of the scope of work and a summary of the subsurface conditions encountered.

It has been a pleasure working with you on this project. If you have any questions, or if we can be of further assistance, please feel free to contact us at your convenience.

Sincerely,

UNITED CONSULTING



Henry C. Esterly, P.G.
Team Leader



Chris L. Roberds, P.G.
Senior Executive Vice President

HCE/CLR/slv

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Figures 10 and 15: Sample GPR Profiles of the Anomalous Areas

PURPOSE AND SCOPE

The purpose of this Ground Penetrating Radar (GPR) Survey was to attempt to determine if significant voids or disturbed soils exist beneath the concrete surface of the dam located at the Project Site.

The scope of this investigation included:

1. Mobilization to the site and performing a GPR survey along the top of the dam and both the lakeside and downstream faces of the dam;
2. Demobilization from the site and analyzing the stored GPR data to determine the subsurface conditions, and;
3. Preparing this report indicating the GPR testing methods and the subsurface conditions encountered.

GROUND PENETRATING RADAR

United Consulting utilized the Ground Penetrating Radar (GPR) method to evaluate the subsurface conditions present at the Project Site. Geophysical Survey Systems, Inc. (GSSI) Subsurface Interface Radar (SIR), SIR 3000 was used for data collection. Radan© for windows, version 6.1, software was utilized for data analysis. After a site reconnaissance, it was determined that the 400 megahertz (MHz) antenna would be used for the investigation. The 400 MHz antenna was utilized at a scanning rate of 60 ns providing a possible testing depth of approximately 10 feet.

The GSSI SIR 3000 unit is a self-contained radar system that uses a color LCD display for instant field interpretation and an internal hard drive for post field analysis. This system transmits electromagnetic energy (signals) which propagates throughout the subsurface at a frequency range of 16 to 2000 MHz. The type of antenna being used at a site controls this frequency. The usage of an antenna is dependent on the type of investigation, the dielectric permittivity (a value known as the dielectric constant) of the subsurface, and the type of constituents within the subsurface material and the depth of the investigation. The higher the frequency of an antenna, the shallower the depth of investigation. This is due to higher frequencies having shorter wavelengths in turn causing rapid attenuation of the radar signal.

Once electromagnetic signals encounter materials of dielectric contrast¹, a portion of the signal is caused to return to the antenna while attenuation and/or reflection of the remaining signal occurs at a greater depth. Therefore, objects of variable depths can be detected in one continuous scan. The signals, which return to the antenna, are then shown as graphic profiles on the color matrix LCD display and stored to the internal hard drive of the unit. This data can then be viewed to

¹ The dielectric values change with every variation of the subsurface medium (i.e. wet/dry sand, clay, rock, metal, water, etc.).

determine the prevailing subsurface conditions present at the site. Note that electromagnetic signals cannot penetrate through metal or salt water. Therefore, if a target of interest is located beneath one of these mediums it will not be detected.

FIELD EXPLORATION AND DISCUSSION

The Project Site is located off of Kelly Drive in Peachtree City, Fayette County, Georgia. The Project Site consisted of the dam located at the south end of Lake Peachtree. Field-testing was conducted on March 25, 2014. GPR was utilized at the Project Site in an attempt to determine if significant voids or disturbed soils exist beneath the concrete surface of the top of the dam and both the lakeside and downstream faces of the dam located at the Project Site. The lake level is currently below the toe of the lakeside of the dam but it was our understanding that it is normally at full pool and continuously spills over the width of the top of the dam.

United Consulting was provided background information that indicated that a visual survey found evidence of gaps in the control joints of the dam that led to concerns about the condition of the soils beneath the concrete cap of the dam. United Consulting was subsequently contracted to conduct a GPR survey across the top of the dam and both the lakeside and downstream faces of the dam to determine if voids or disturbed soils exist beneath the concrete surface. A plan of the existing dam was not available so the dimensions of the dam and joint locations along with the results of the survey, discussed below, can be seen in Figure 1. The field sketch of the dam used for Figure 1 was created from field measurements and depicts the general dimensions and configuration of the dam. The anomalous areas identified in the field during the GPR survey were marked on the concrete surface with orange marking paint and their approximate location is shown on Figure 1.

At the time of our arrival at the site we met with Mr. Dave Borkowski, the Peachtree City representative, to take a walk along and over the surface of the dam. At the time of our visual survey we looked at the condition of the joints and we identified several holes in the concrete surface on the downstream side. One was a hole along a crack near the toe of the dam and can be seen in Figure 2. Two other locations were found that appeared to formerly contain a vertically oriented piece of metal that was no longer present. At these locations a probe rod was inserted and a void was discovered that varied from two to four feet in depth. However, due to the narrowness of the holes the lateral extent of the voids could not be determined. At one of the latter locations the concrete slab was measured as being approximately six inches thick.

At the Project Site, GPR data was collected along both the lakeside and downstream faces and along the top of the dam. The GPR survey was conducted parallel to the longitudinal orientation, or southwest-northeast direction, of the dam with select areas surveyed in the opposite direction. Data was collected at about three foot spaced intervals with additional data collected in between in the anomalous areas. A total of 42 files were collected at the Project Site.

The GPR data appears to indicate significantly disturbed soils and or voids in all three sections, lakeside, top and downstream side, of the dam. Three small areas were identified on the lakeside face of the dam that were all located parallel to the control joints. These areas contained

anomalous GPR reflections consistent with soils that have been disturbed. These areas did not appear to contain major voids but it does appear that water has penetrated the joints and is affecting the soils below. Figure 3 is a photograph of one of these locations and Figure 10 is a sample GPR cross section from the lakeside face of the dam.

Four areas were identified on the downstream face of the dam. Two of the areas were located parallel to the control joints that cross both the top and downstream side of the dam. These areas contained anomalous GPR reflections consistent with voids and/or soils that have been disturbed. One of these areas was referenced above in the Figure 2 photograph. Two other locations have been described below as being located on the northeast and northwest sides of the downstream face.

The area located on the northeast side of the downstream face continued along the joint across the top of the dam and can be seen in the photographs labeled as Figures 4 and 5. Sample GPR cross sections of this area are below as Figures 11 and 12. In the area shown on Figure 1 the GPR data contained anomalous GPR reflections consistent with voids and/or soils that have been substantially disturbed. As can be seen in the two GPR cross sections, marked between the white lines, the soils in the dam appear to be affected from just below the concrete to the extent of the testing depth of ten feet.

The area located on the northwest side of the downstream face can be seen in the photograph labeled as Figure 6. As with the northeast anomaly it continued along the joint across the top of the dam. Sample GPR cross sections of this area are below as Figures 13 and 14. In the area shown on Figure 1 the GPR data contained anomalous GPR reflections consistent with voids and/or soils that have been substantially disturbed. As can be seen in the two GPR cross sections, marked between the white lines, the soils in the dam appear to be affected from just below the concrete to the extent of the testing depth of ten feet.

The area located at the northwest side of the top of the dam on Figure 1 was determined to contain anomalous GPR reflections consistent with voids and/or soils that have been substantially disturbed. Figure 7 is a photograph of this area and Figure 15 is a sample GPR cross section of the area. Similar to the northeast and northwest anomalous areas in the GPR cross section, marked between the white lines, the soils in the dam appear to be affected from just below the concrete to the extent of the testing depth of ten feet.

The depth and lateral extent of the above referenced anomalous areas vary within the GPR data. It is the opinion of United Consulting that these anomalous areas are significant enough to warrant further investigation/exploration. In our experience with similar projects the GPR reflections contained in the data, collected as part of this survey, are consistent with voids or disturbed soils. United Consulting would be pleased to offer our services in this capacity.

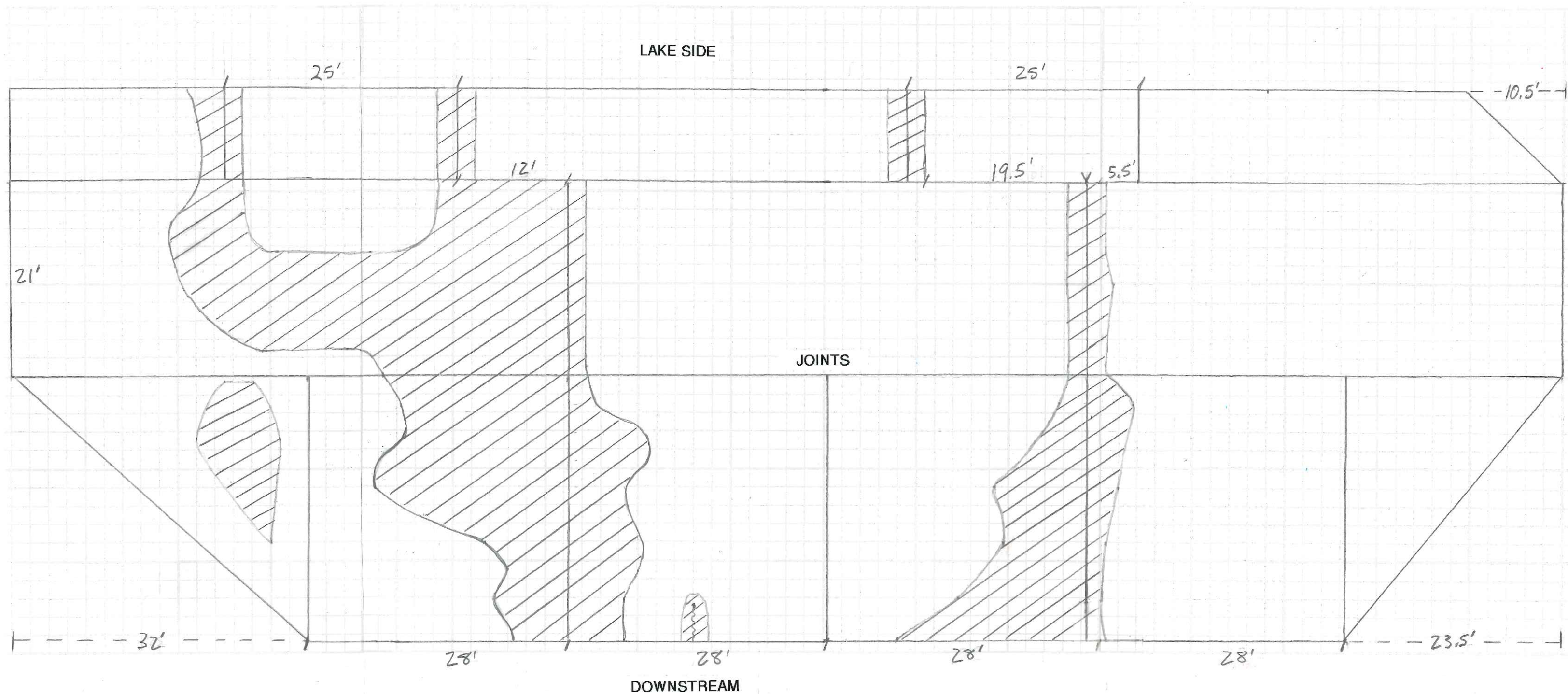
The last area is located in the northwest apron of the downstream face. At this location the GPR data appeared to indicate the anomalous area that is shown on Figure 1. Figure 8 is a photograph of this area. However, due to the shape and topography of this area it was difficult to completely survey with the GPR. We were also unable to visually determine where the fill soils met the original ground surface. It is possible that the anomalous reflections in this area could be caused



by the dielectric difference between the residual soils and the soils placed during construction of the dam. We would suggest that if further investigation and/or if remediation is planned for the noted anomalous areas of the dam that this area be included as part of that plan. Additionally, in Figure 9 the control joint at the intersection of the top and downstream face can be seen. Since this joint is in poor condition and contains at least two repair points it is likely a water infiltration point.

LIMITATIONS

This report is for the exclusive use of **Peachtree City** (Client), and the designers of the project described herein, and should only be applied to this specific project. The analysis and recommendations presented in this report are based on the preceding project information, as well as our experiences from similar projects. Ground Penetrating Radar signals cannot penetrate through metal or salt water. If either of these mediums is present at the site, deeper features will not be detected. In some cases, due to the nature of the GPR reflections, dense fields of utilities/structural steel can distort the radar signal thereby “masking” the reflections of additional utilities/structural steel beneath them. PVC and vitrified clay products have very similar electrical properties to the surrounding soils. Therefore, PVC and vitrified clay products can go undetected. If subsurface conditions encountered during excavation appear to differ from those discussed in this report, this office should be notified at once so that the effects can be determined, and any remedial measures necessary be prescribed. No other warranty is expressed or implied. Our firm is not responsible for conclusions, opinions, or recommendations of others. The right to rely upon this report and the data within may not be assigned without United Consulting’s written permission.

UNITED CONSULTING



 <i>We're here for you</i> UNITED CONSULTING		Scale: 1" = 10'	Notes: 3/28/14	Client: Peachtree City	FIG. 1
		Prepared: HCE		Site: Lake Peachtree Dam Project Site	
		Checked:		Title: Anomalous Area Location Plan	
		Project No.: 2014.4496.01			

ANOMOLOUS AREAS

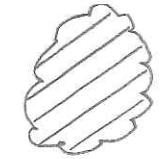




Figure 2: View of the hole found along a crack on the downstream face of the dam.



Figure 3: View of one of the anomalous areas on the lakeside of the dam.



Figure 4: View the northeast anomalous area on the downstream face of the dam.



Figure 5: View the anomalous area to the northeast along the top of the dam.



Figure 6: View the northwest anomalous area on the downstream face of the dam.



Figure 7: View the northwest anomalous area along the top of the dam.



Figure 8: View the possibly anomalous area in the northwest corner of the dam.



Figure 9: View the damaged control joint at the northwest end of the dam between the top and the downstream face of the dam.

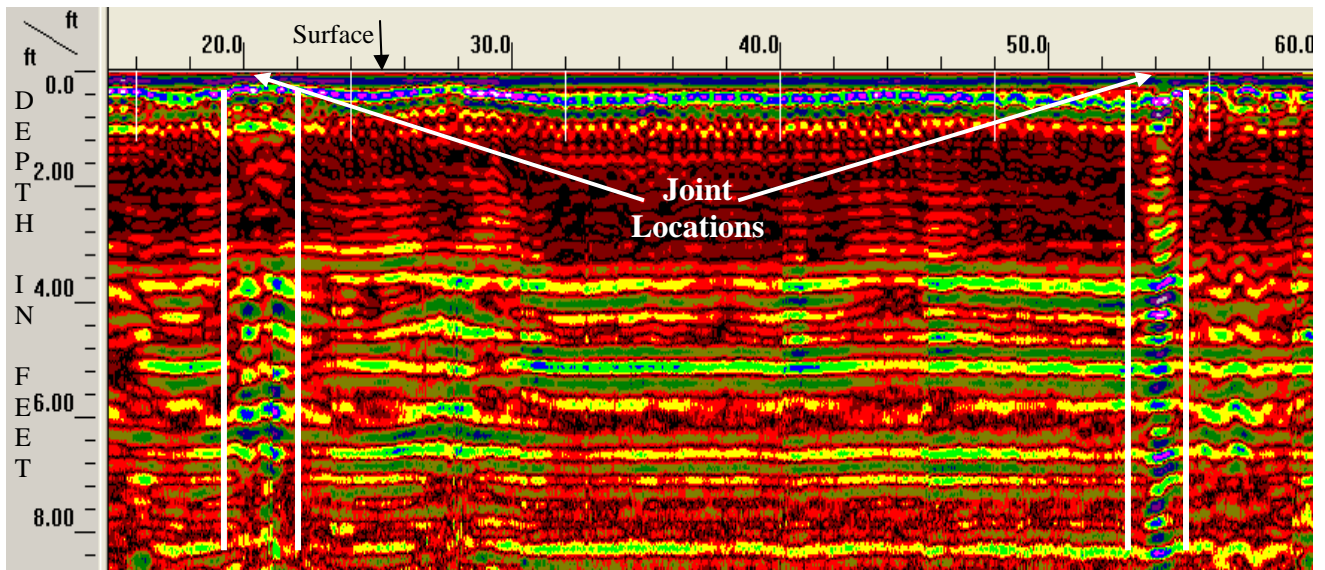


Figure 10: Sample GPR cross section of the anomalous areas located along the joints on the lakeside of the dam. Anomalous area is located between the white lines.

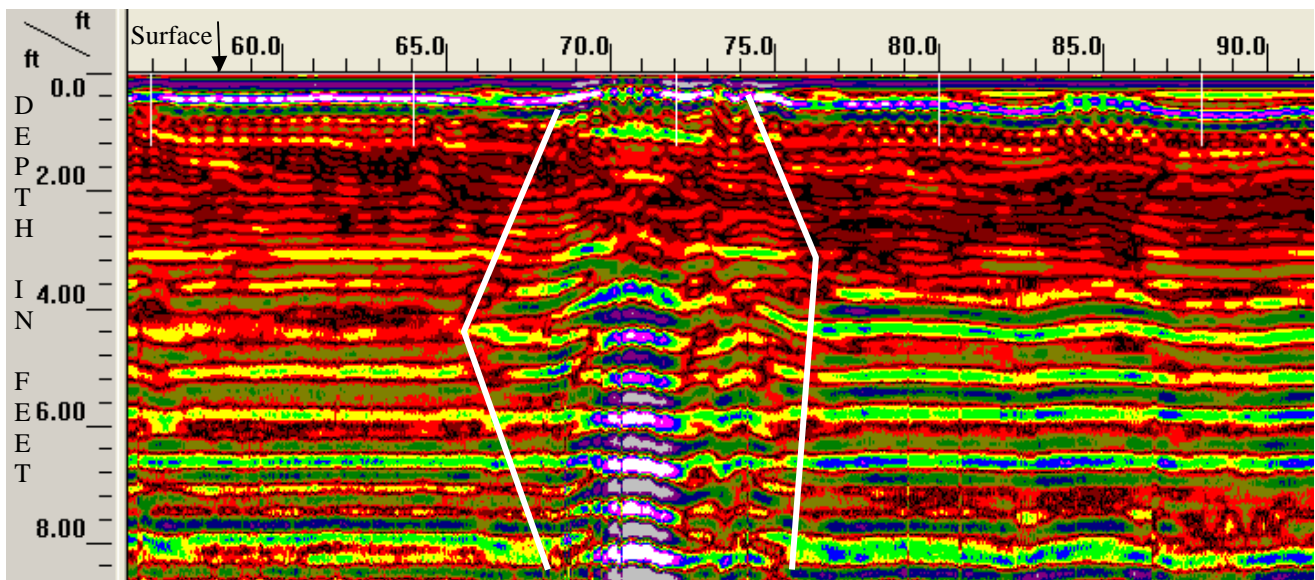


Figure 11: Sample GPR cross section of the conditions beneath the northeast anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

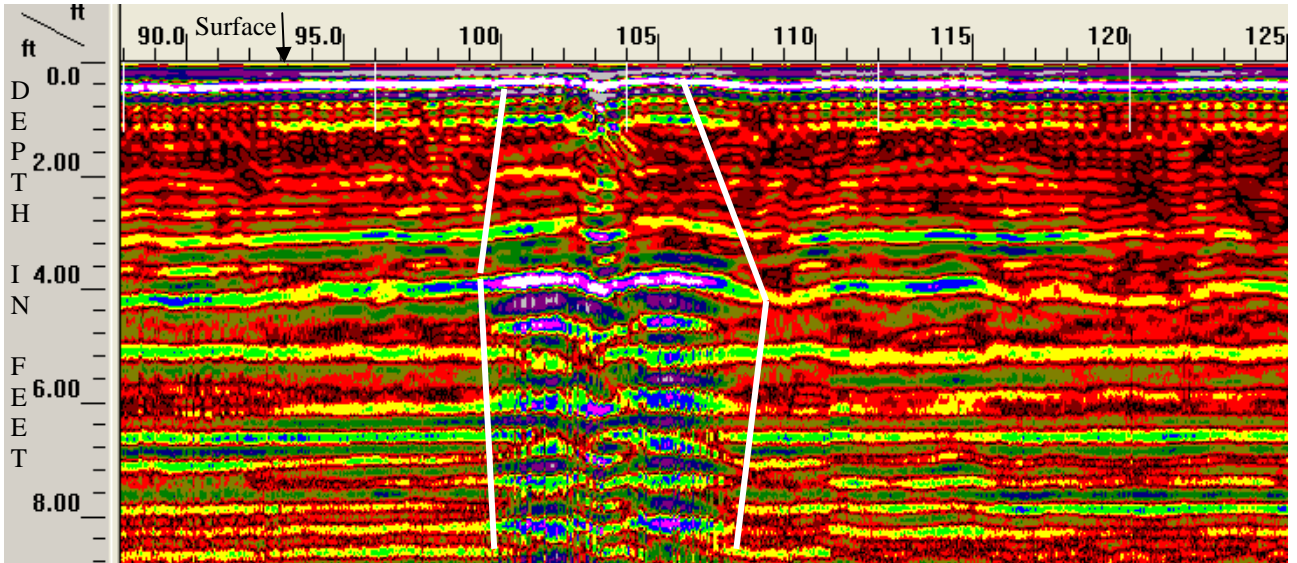


Figure 12: Sample GPR cross section of the conditions beneath the northeast anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

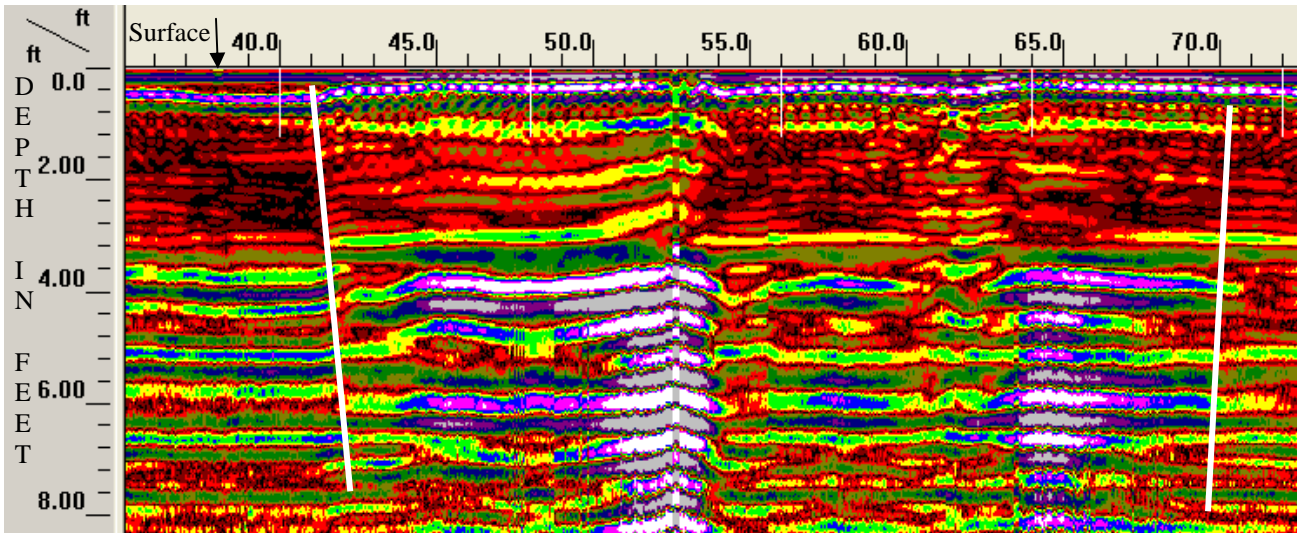


Figure 13: Sample GPR cross section of the conditions beneath the northwest anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

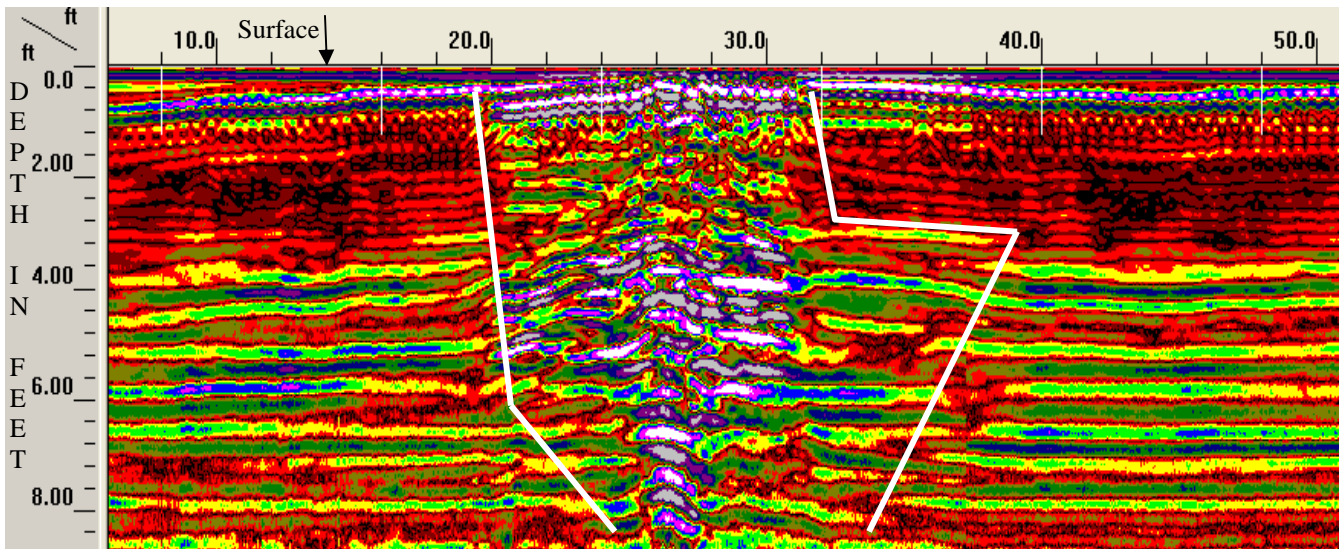


Figure 14: Sample GPR cross section of the conditions beneath the northwest anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

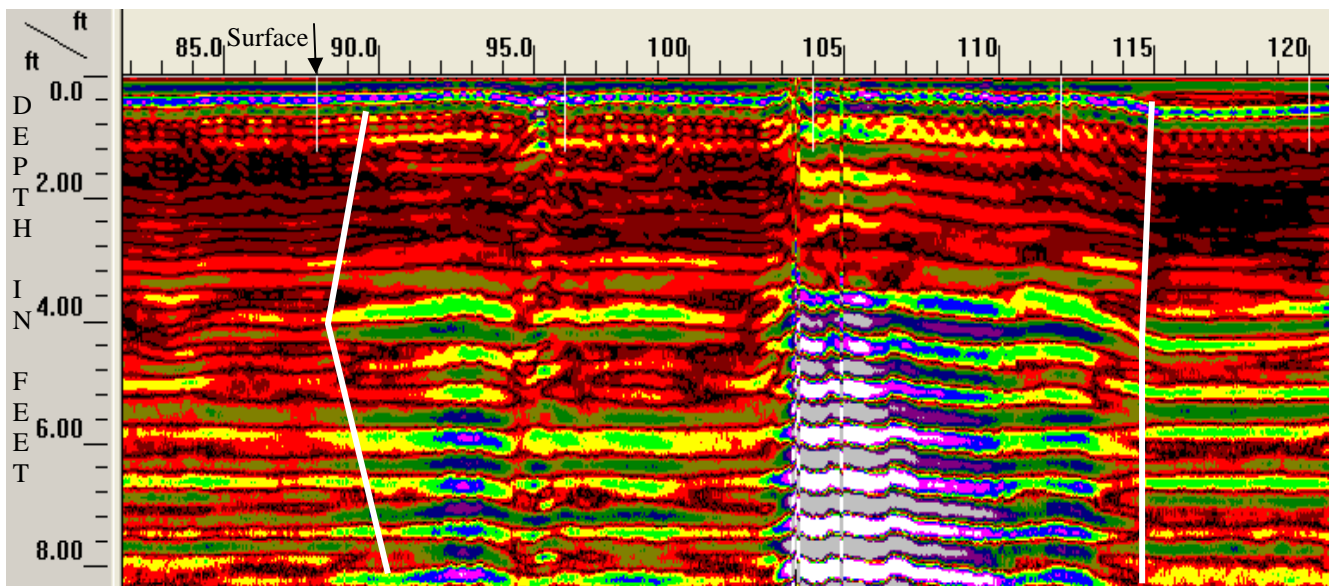
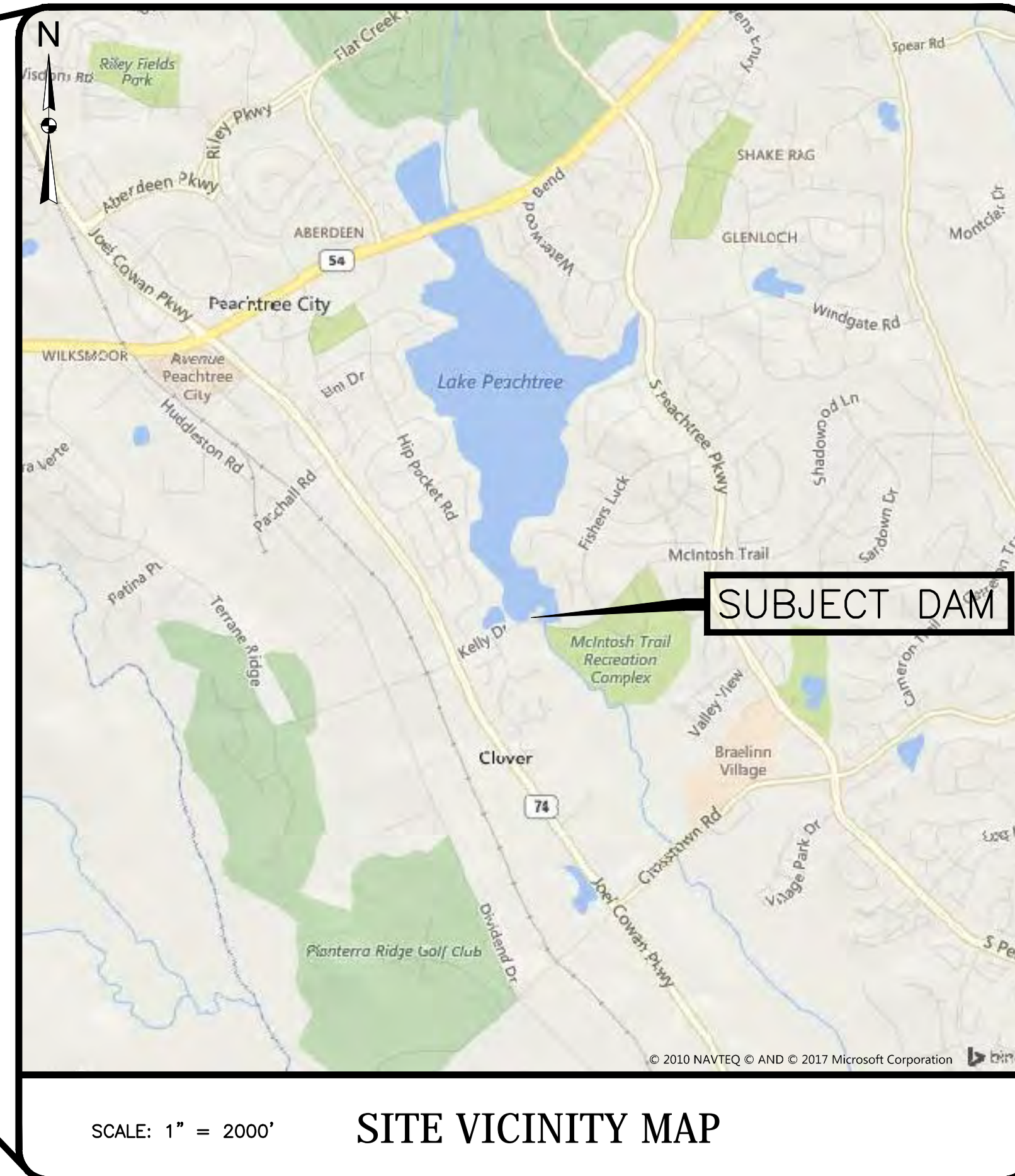
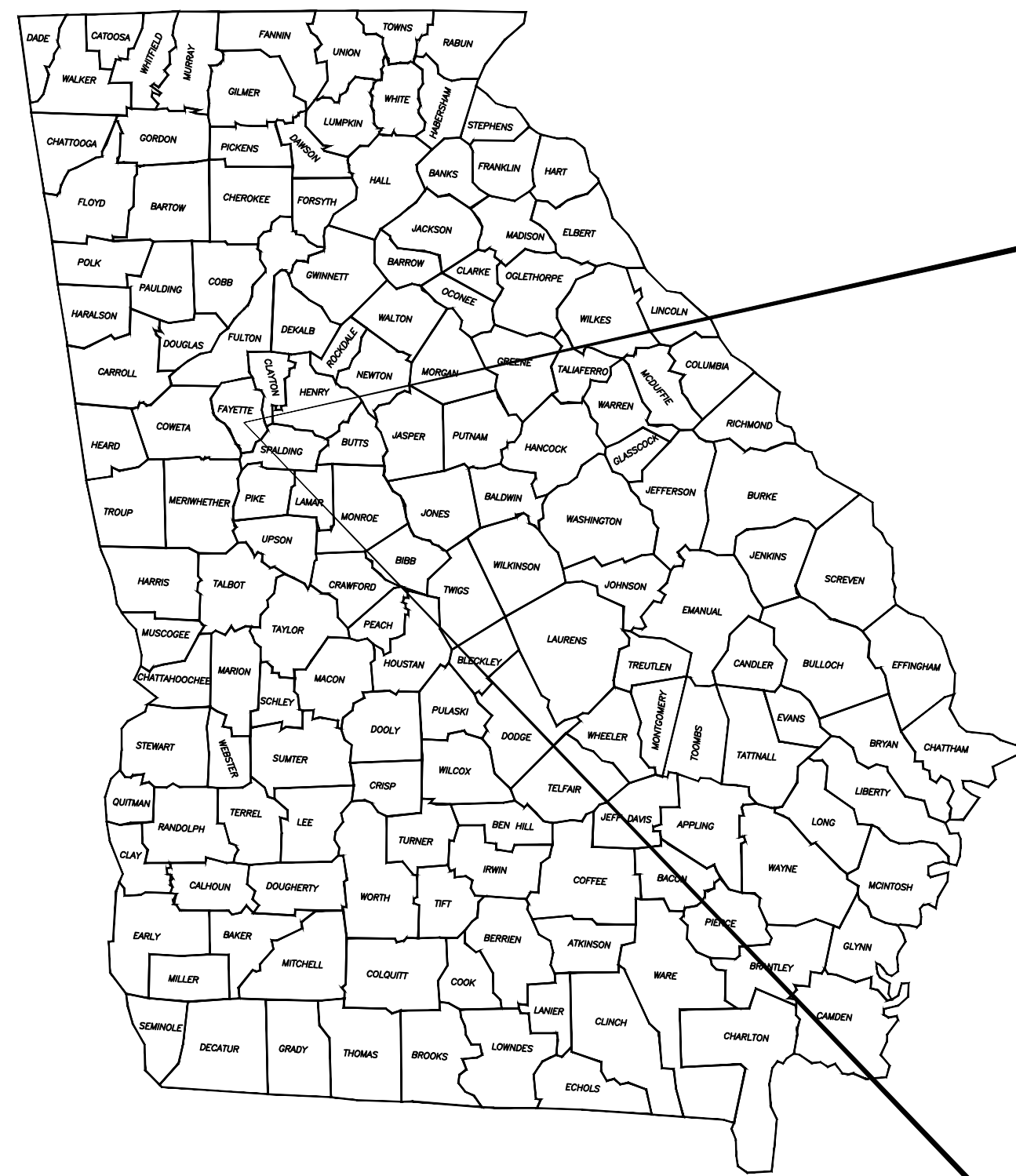


Figure 15: Sample GPR cross section of the conditions beneath the anomalous area along the top of the dam. Anomalous area is located between the white lines.

CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT

FAYETTE COUNTY, GEORGIA
JULY 10TH, 2017



THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

PLANS PREPARED FOR:
DAVE BORKOWSKI; CITY ENGINEER

CITY COUNCIL MEMBERS:
VANESSA FLEISCH
PHIL PREBOR
MIKE KING
KIM LEARNARD
TERRY ERNST

CITY OF PEACHTREE CITY
153 WILLOWBEND ROAD
PEACHTREE CITY, GEORGIA 300269

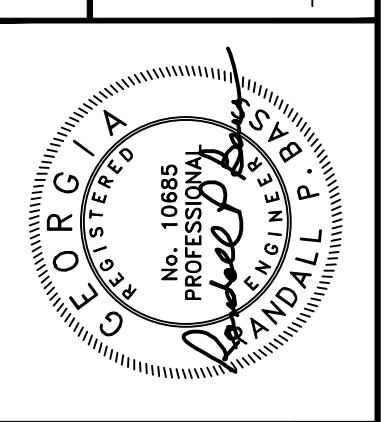
PEACHTREE CITY CONTRACT NUMBER:
17-123BPW

PLANS PREPARED BY:
SCHNABEL ENGINEERING, LLC
6445 SHILOH ROAD, SUITE A
ALPHARETTA, GEORGIA 30115

ENGINEER CONTACT:
RANDALL P. BASS, P.E.
PHONE: (770) 781-8008
FAX: (770) 781-8003
EMAIL: RBASS@schnabel-eng.com

REV	DESCRIPTION	DATE
1	REVISED PER ADDENDUM NO. 03	8-2-17

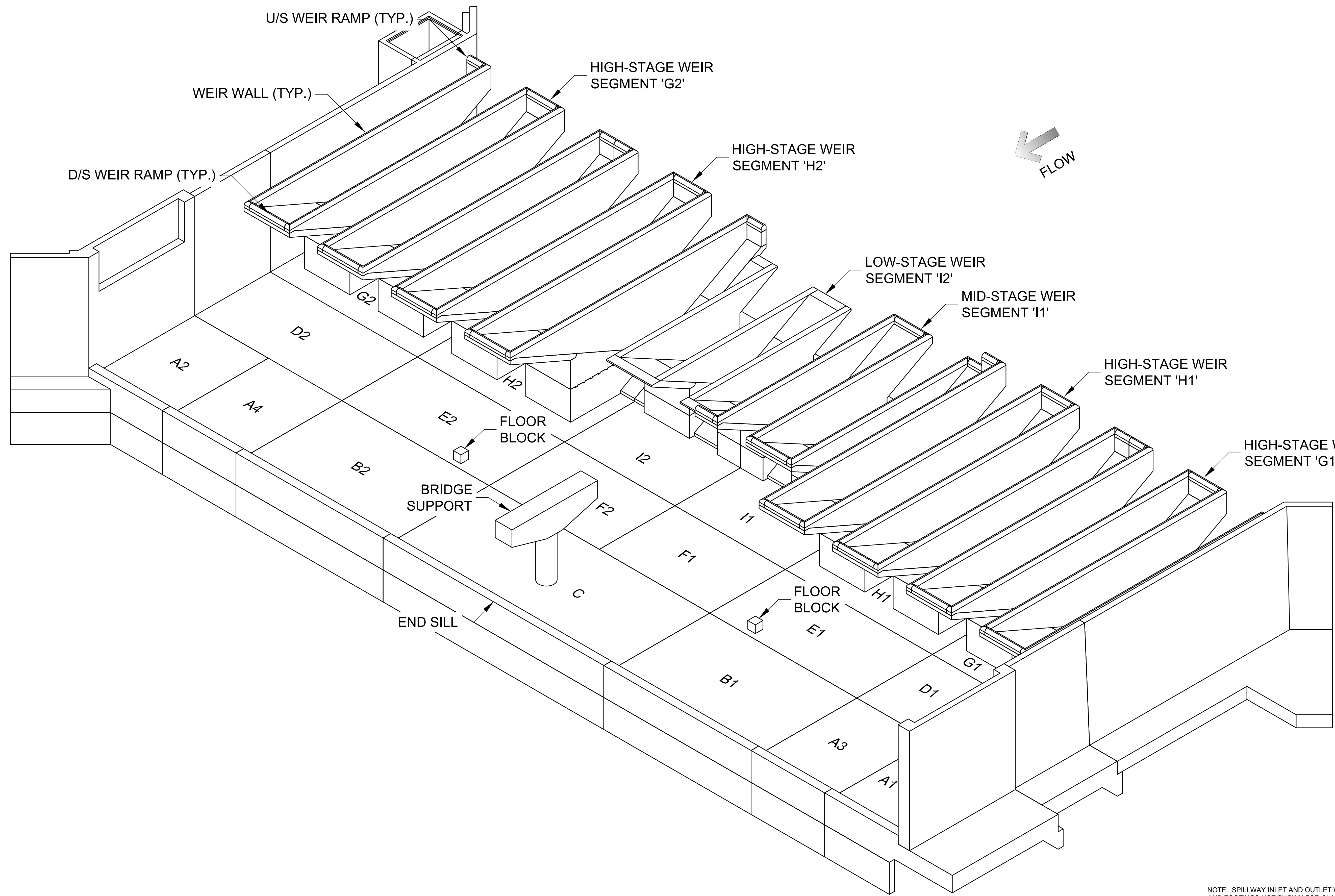
DESIGNED BY: JTD_JC
DRAWN BY: GHB_JSJR
CHECKED BY: RPL_JRC
RANDALL P. BASS, P.E.
DATE: 07/10/17
GEORGIA PROFESSIONAL ENGINEER NO. 10685



CONSTRUCTION PLANS FOR
LAKE PEACHTREE SPILLWAY
REPLACEMENT PROJECT
PEACHTREE CITY, GEORGIA

COVER SHEET

PROJECT: 16C17043.00
DATE: 07/10/2017
SHEET
1 OF 66



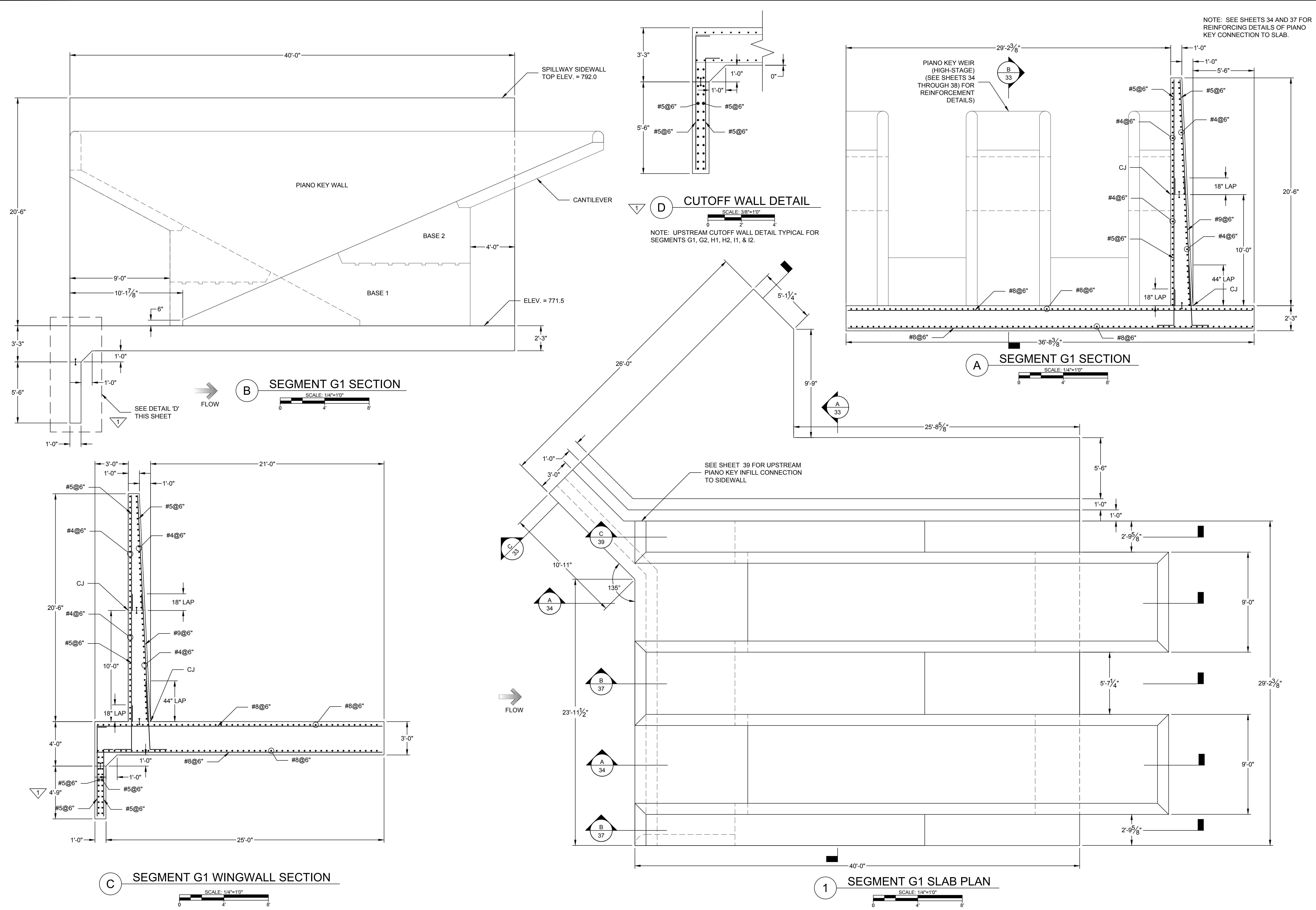
1 ISOMETRIC VIEW OF PIANO KEY WEIR
N.T.S.

NOTE: SPILLWAY INLET AND OUTLET WINGWALLS AND FOOTINGS NOT SHOWN FOR CLARITY. SEE SERVICE SPILLWAY LAYOUT PLAN SHEET 14 FOR ENTIRE SPILLWAY LAYOUT.

G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\17_SPILLWAY PLAN AND PROFILE.DWG

PROJECT: 16C17043.00	DATE: 07/10/2017
SHEET: 16 OF 66	
<p>CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA</p>	
<p>Piano Key Weir Isometric View</p>	
<p>Schnabel ENGINEERING 6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com</p>	
<p>REGISTERED PROFESSIONAL ENGINEER No. 10885 RANDALL P. BASS, P.E.</p>	
DESIGNED BY: JTD, JC	CHECKED BY: RPL, JRC
DRAWN BY: GHB, JSR	DATE: 07/10/17
1 REVISED PER ADDENDUM NO. 03	DESCRIPTION
8-2-17	DATE

G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\1PT_STRUCTURAL_PIANO_KEY_WEIR.DWG



D CUTOFF WALL DETAIL
 SCALE: 3/8"=1'-0"
 NOTE: UPSTREAM CUTOFF WALL DETAIL TYPICAL FOR SEGMENTS G1, G2, H1, H2, I1, & I2.

A SEGMENT G1 SECTION
 SCALE: 1/4"=1'-0"

B SEGMENT G1 SECTION
 SCALE: 1/4"=1'-0"

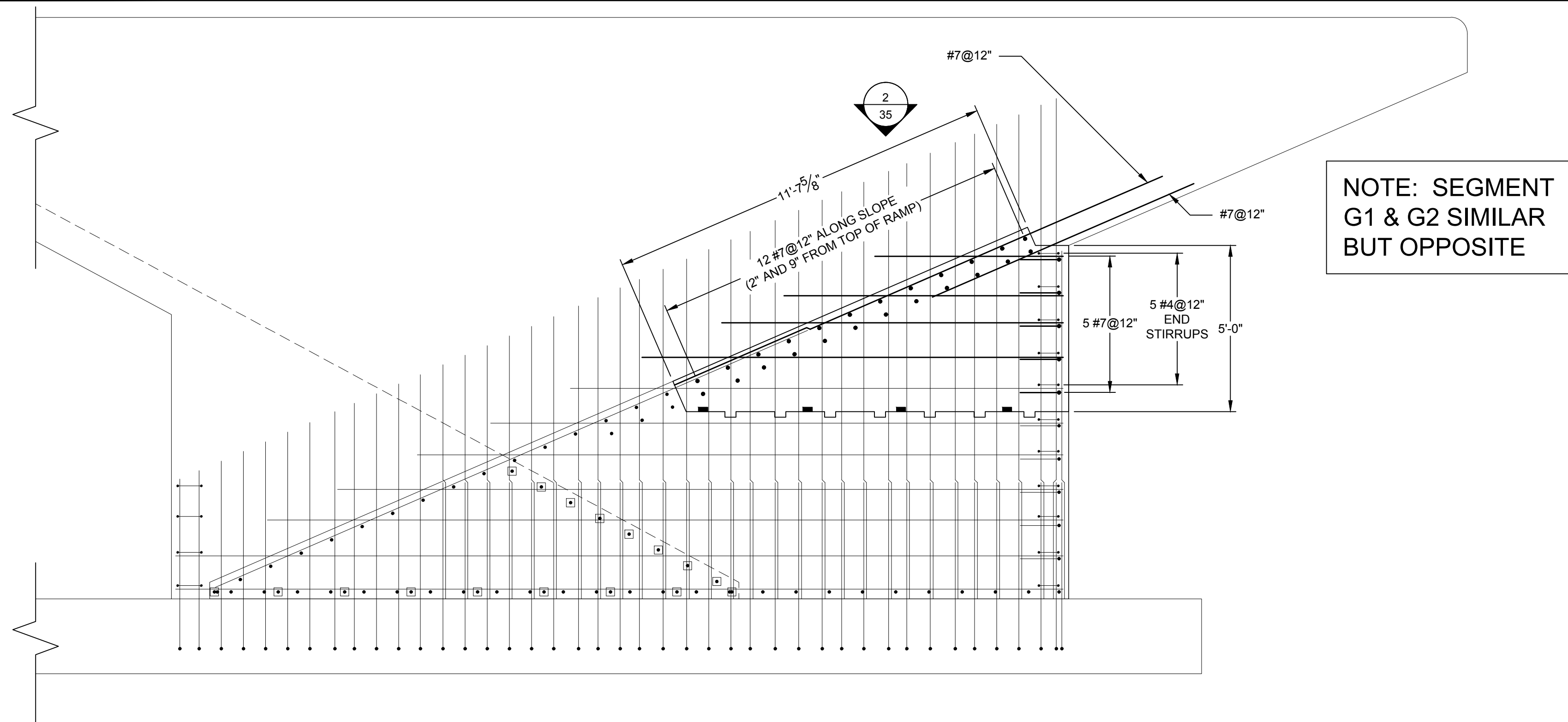
C SEGMENT G1 WINGWALL SECTION
 SCALE: 1/4"=1'-0"

1 SEGMENT G1 SLAB PLAN
 SCALE: 1/4"=1'-0"

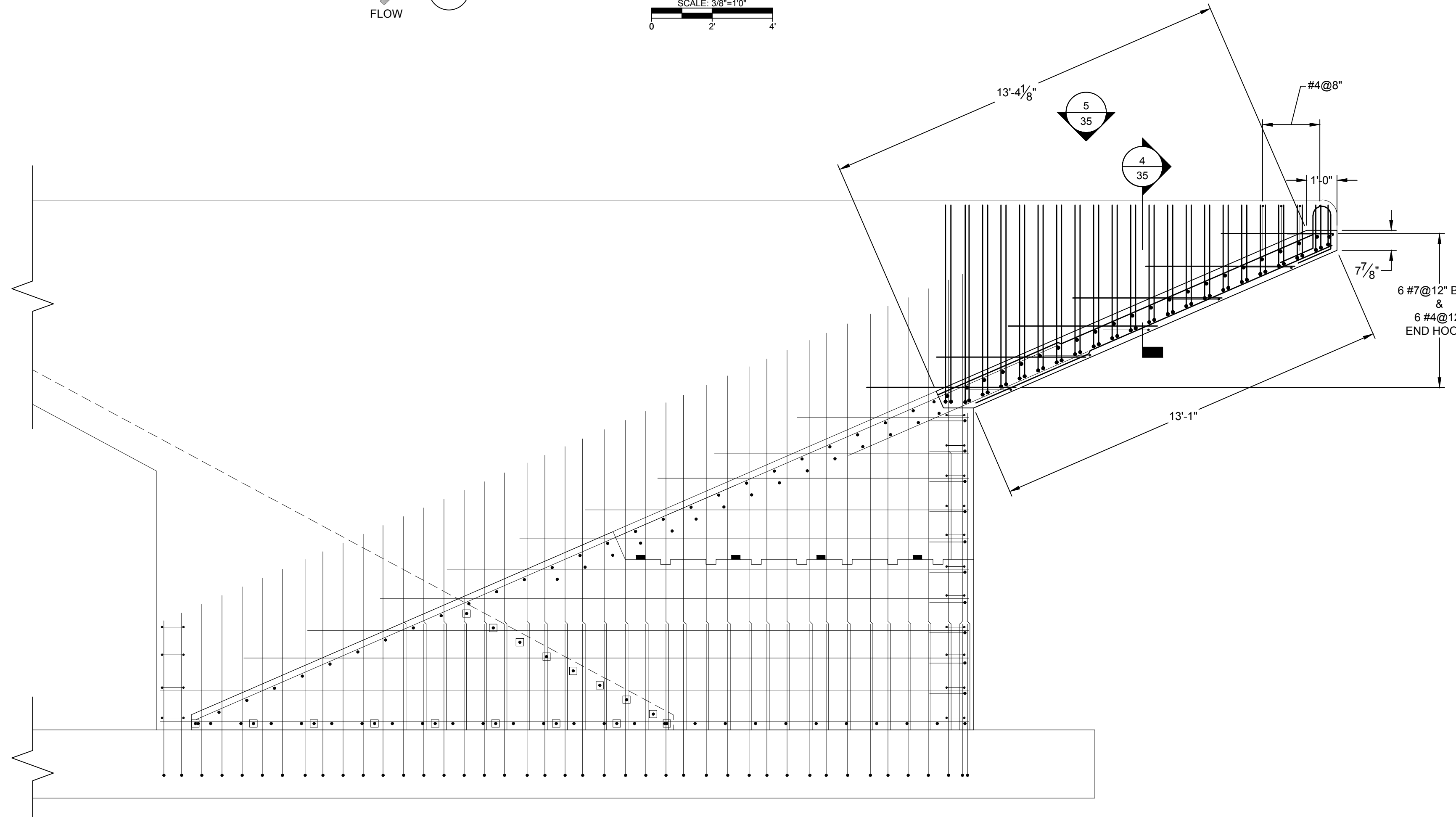
NOTE: SEE SHEETS 34 AND 37 FOR REINFORCING DETAILS OF PIANO KEY CONNECTION TO SLAB.

8-2-17					
1	REVISED PER ADDENDUM NO. 03				
	CHECKED BY: RPL, JRC				
	DRAWN BY: GHB, JSR				
	DESIGNED BY: JTD, JJC				
	RANDALL P. BASS, P.E.				
	<i>Randall P. Bass</i>				
	GEORGIA PROFESSIONAL ENGINEER NO. 10685				
	6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com				
	CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA				
	WALL AND SLAB REINFORCEMENT DETAILS				
	SEGMENT G1				
	PROJECT: 16C17043.00				
	DATE: 07/10/2017				
	SHEET 33 OF 66				

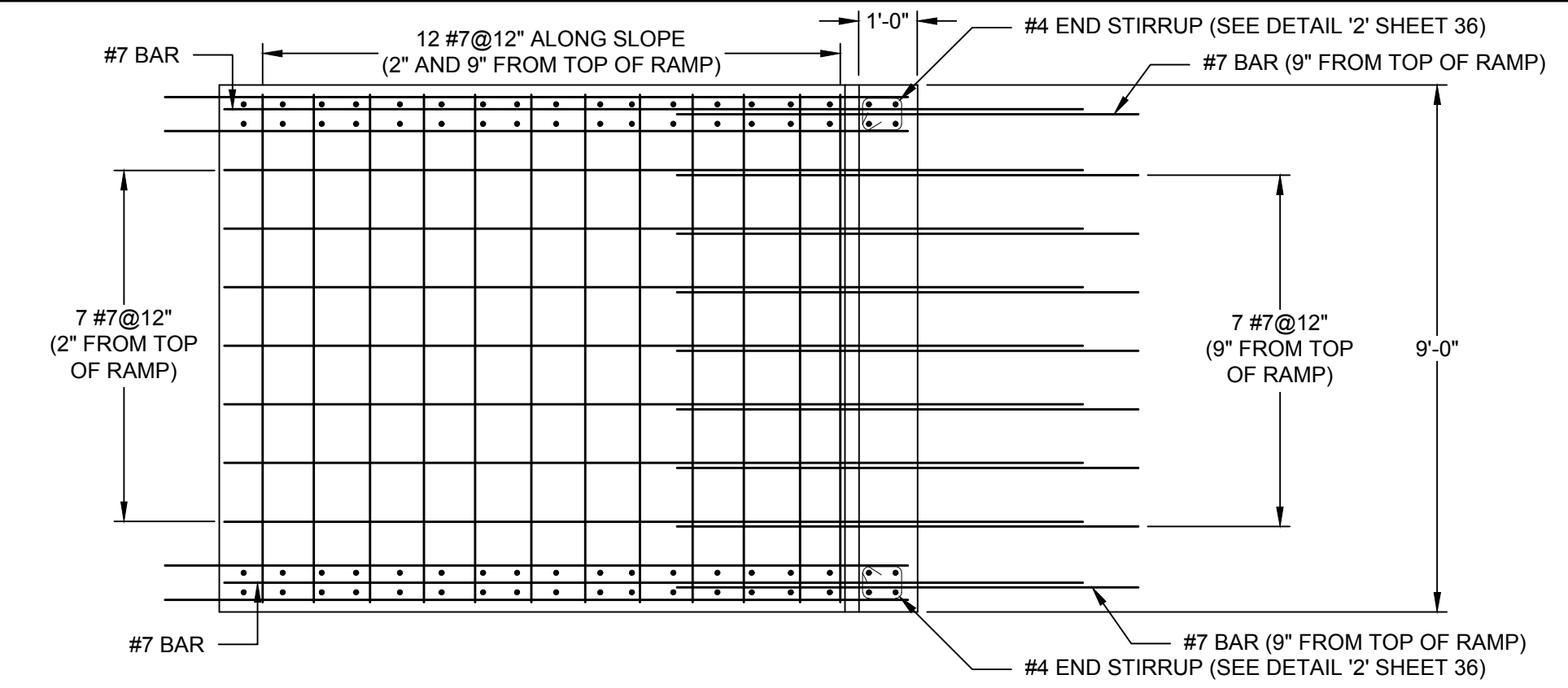
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\08-CADDRAWINGS\05-FINAL_DESIGN\1PT_STRUCTUREAL_PIANO_KEY_WEIRD.WMG



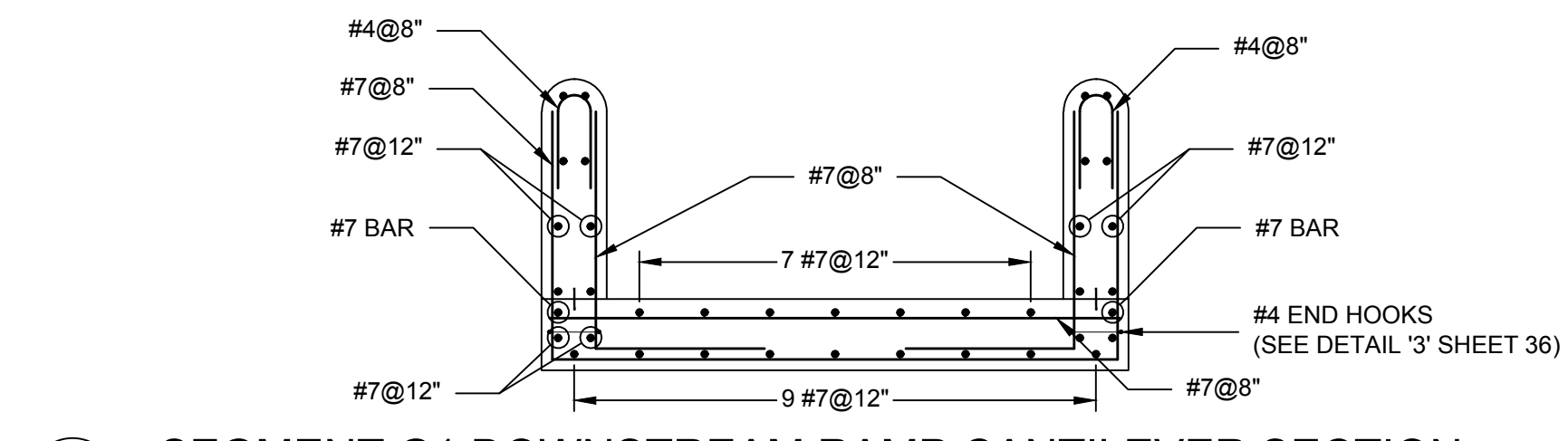
1 SEGMENT G1 DOWNSTREAM RAMP BASE 2
SCALE: 3/8"=1'0"
FLOW



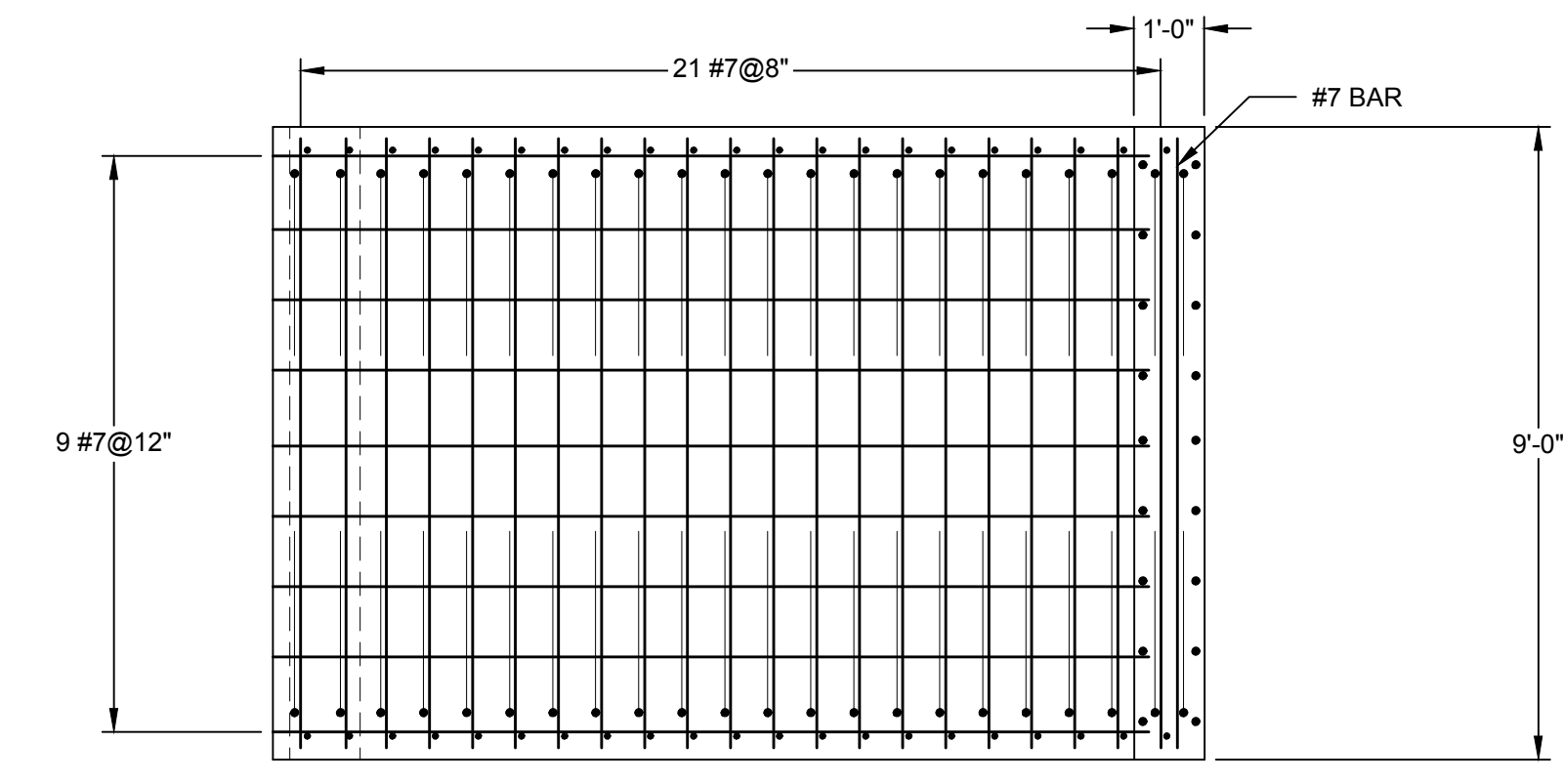
3 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER
SCALE: 3/8"=1'0"
FLOW



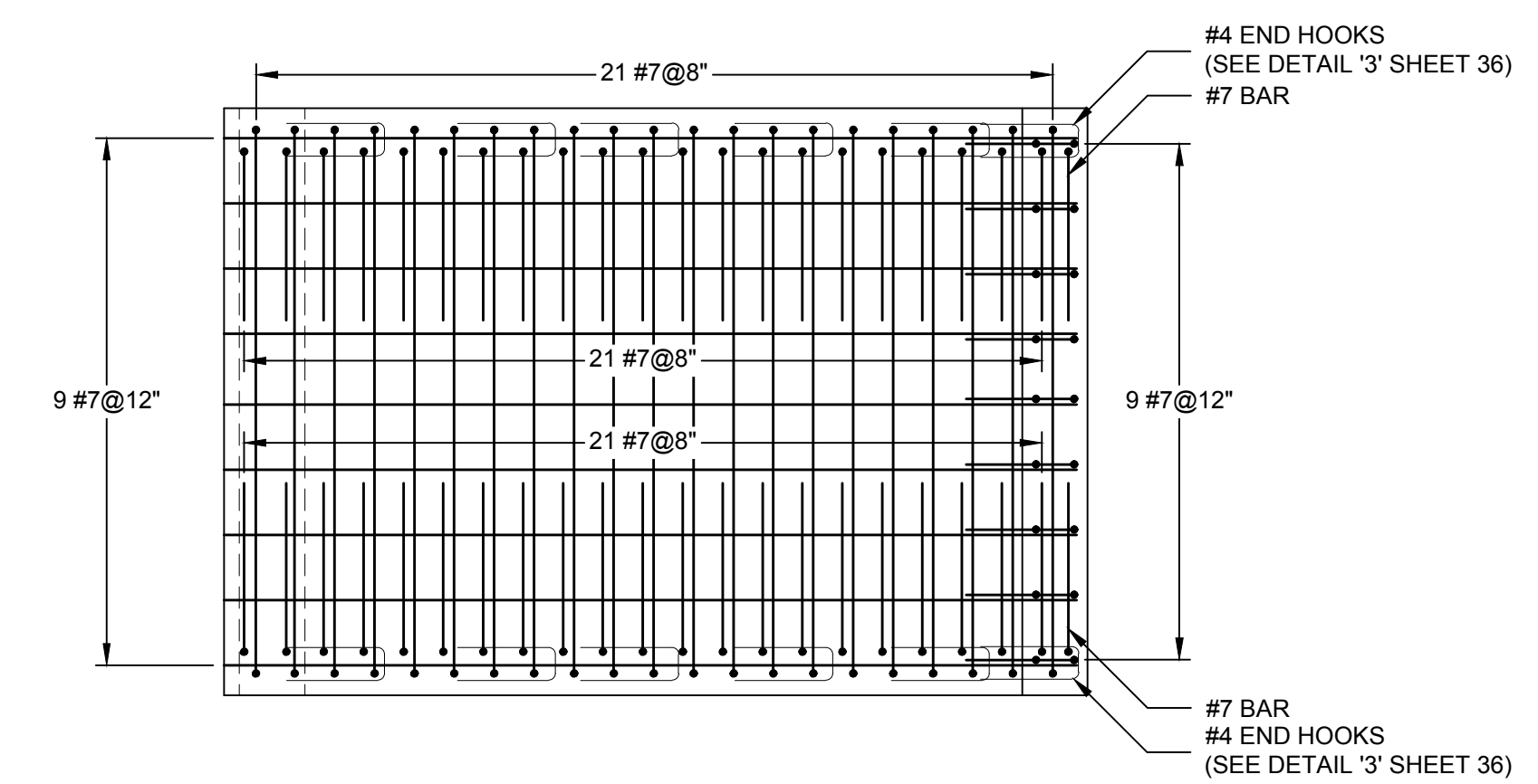
2 SEGMENT G1 DOWNSTREAM RAMP BASE 2 PLAN
SCALE: 3/8"=1'0"



4 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER SECTION
SCALE: 3/8"=1'0"



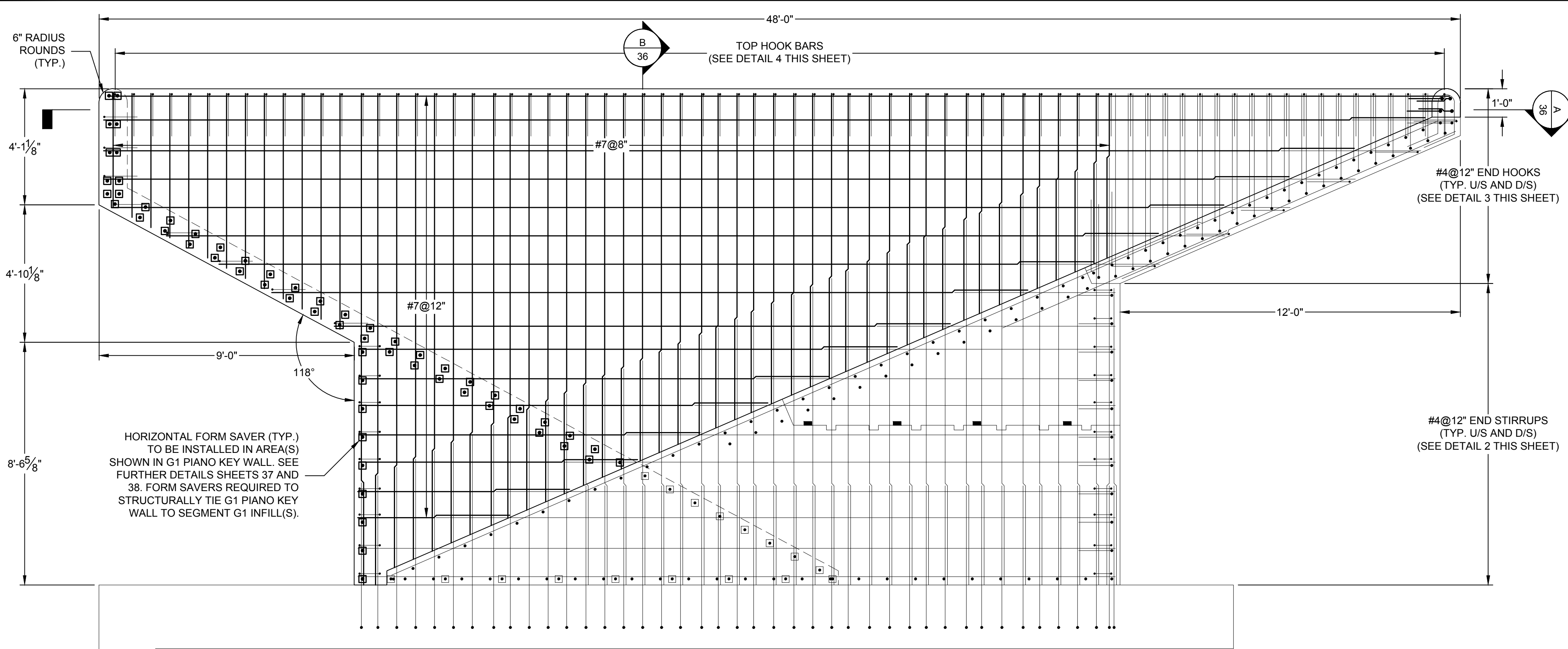
5 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER PLAN
REINFORCEMENT 2" FROM TOP OF CANTILEVER SLAB
SCALE: 3/8"=1'0"



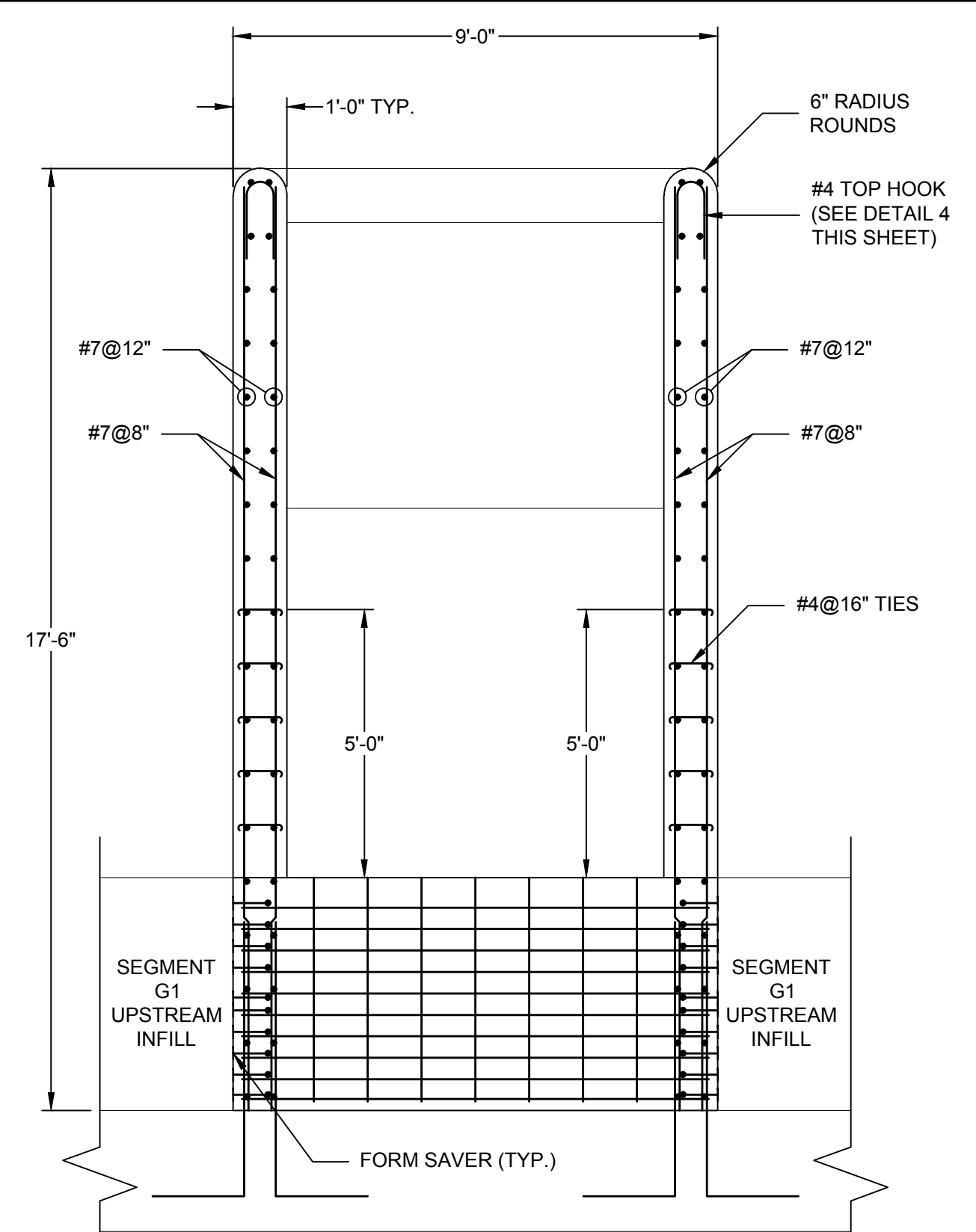
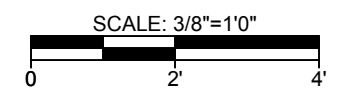
5 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER PLAN
REINFORCEMENT 2" FROM BOTTOM OF CANTILEVER SLAB
SCALE: 3/8"=1'0"

PROJECT: 16C17043.00	DATE: 07/10/2017
SHEET 35 OF 66	
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	
DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT G1	
DESIGNED BY: JTD, JIC	CHECKED BY: RPL, JRC
DRAWN BY: GHB, JSR	DATE: 07/10/17
RANDALL P. BASS, P.E. GEORGIA PROFESSIONAL ENGINEER NO. 10685	
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com	

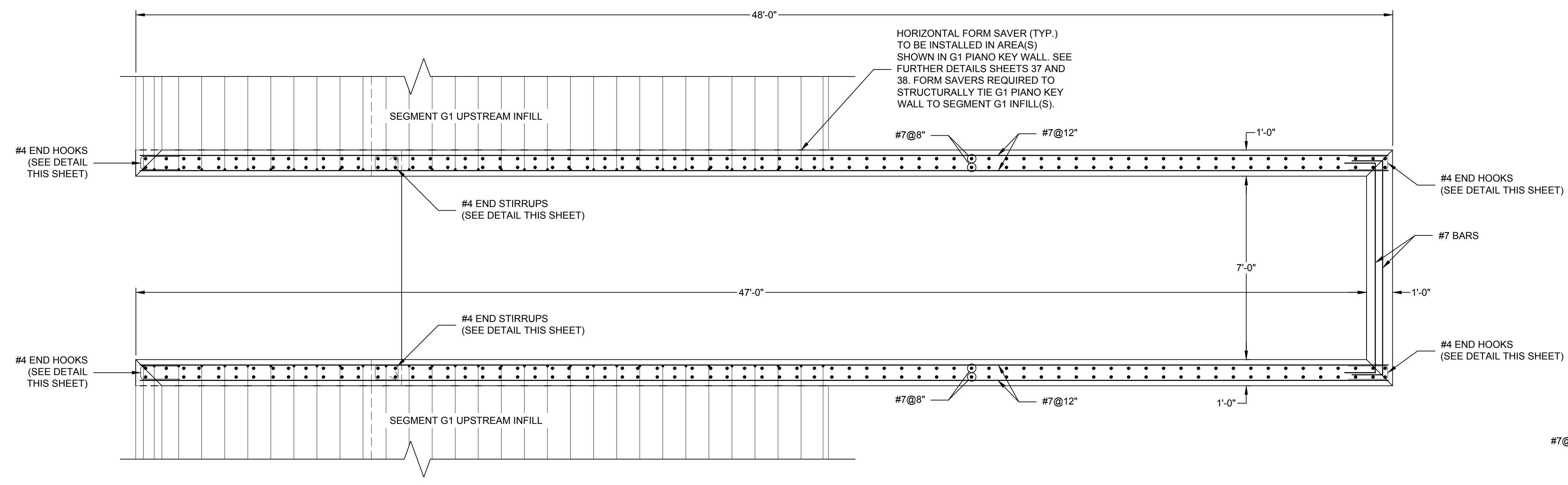
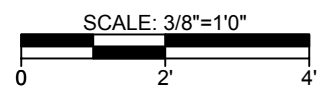
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\08-CADDRAWINGS\05-FINAL_DESIGN\1PT_STRUCTURAL_PIANO_KEY_WEIR.DWG



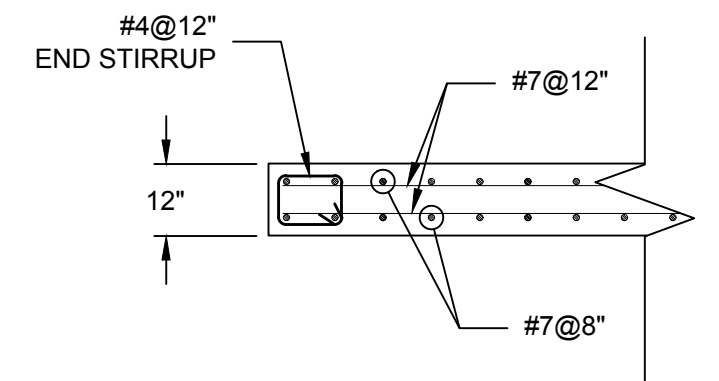
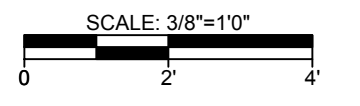
1 SEGMENT G1 PIANO KEY WEIR WALL



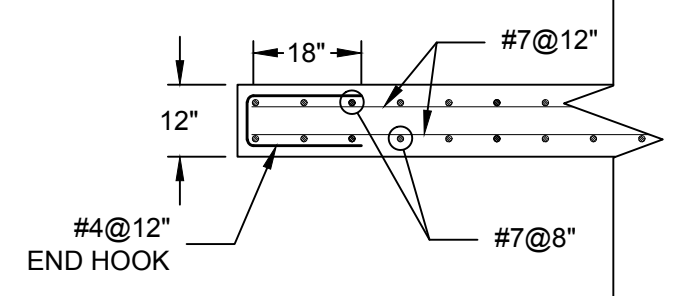
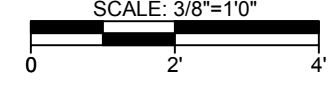
B SEGMENT G1 WALL SECTION



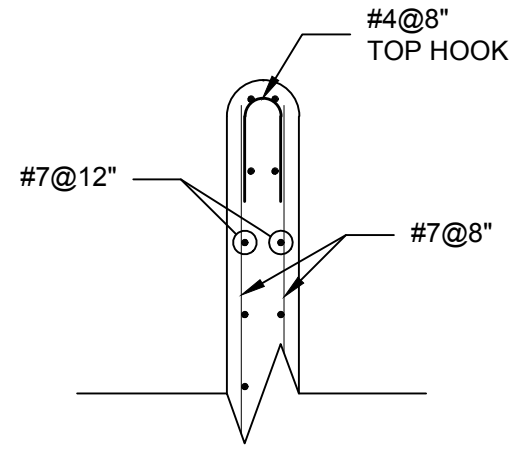
A SEGMENT G1 PIANO KEY WEIR WALL SECTION



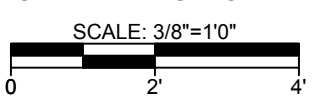
2 END STIRRUP DETAIL



3 END HOOK DETAIL

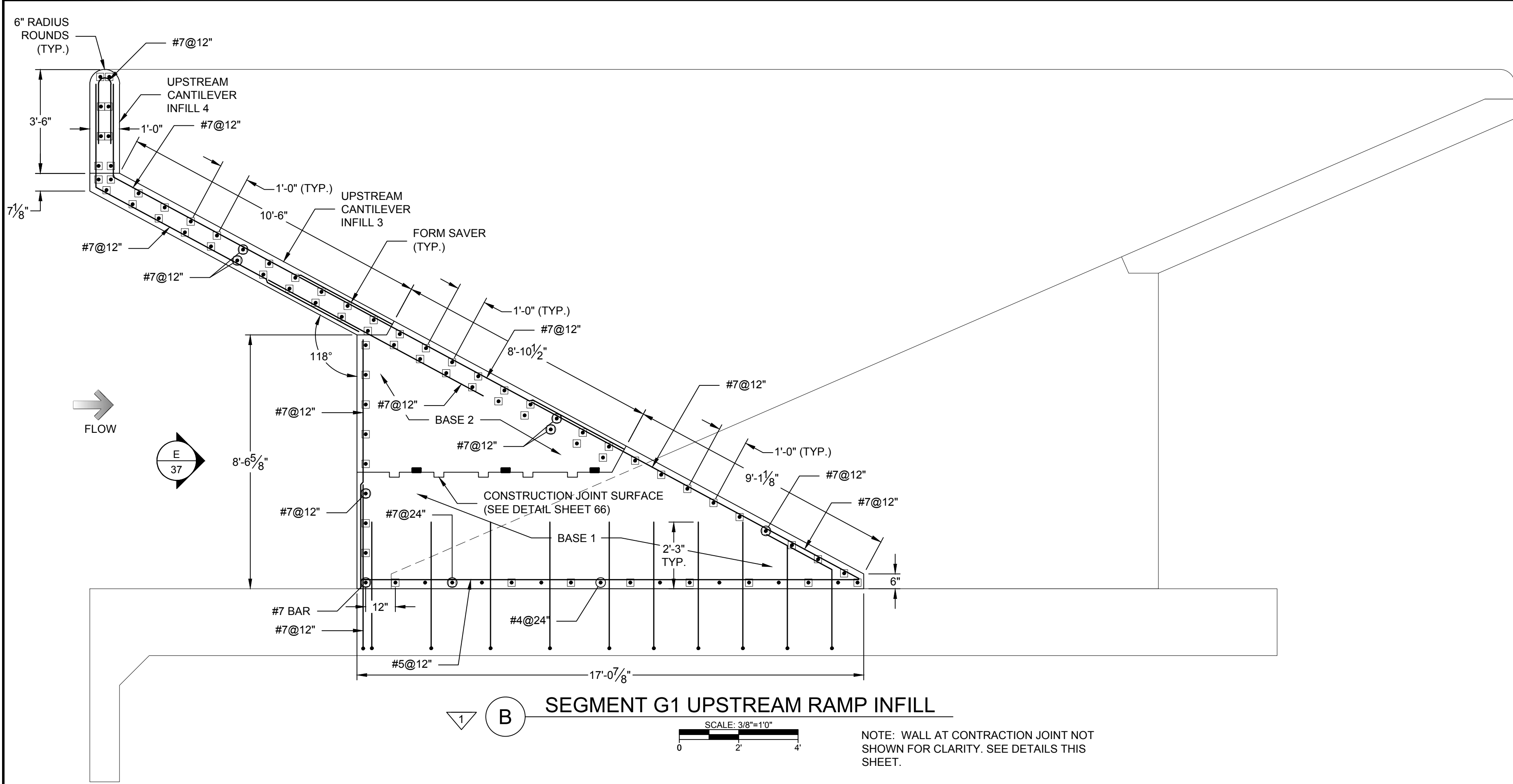


4 TOP HOOK DETAIL
HIGH-STAGE AND MID-STAGE WEIR WALLS

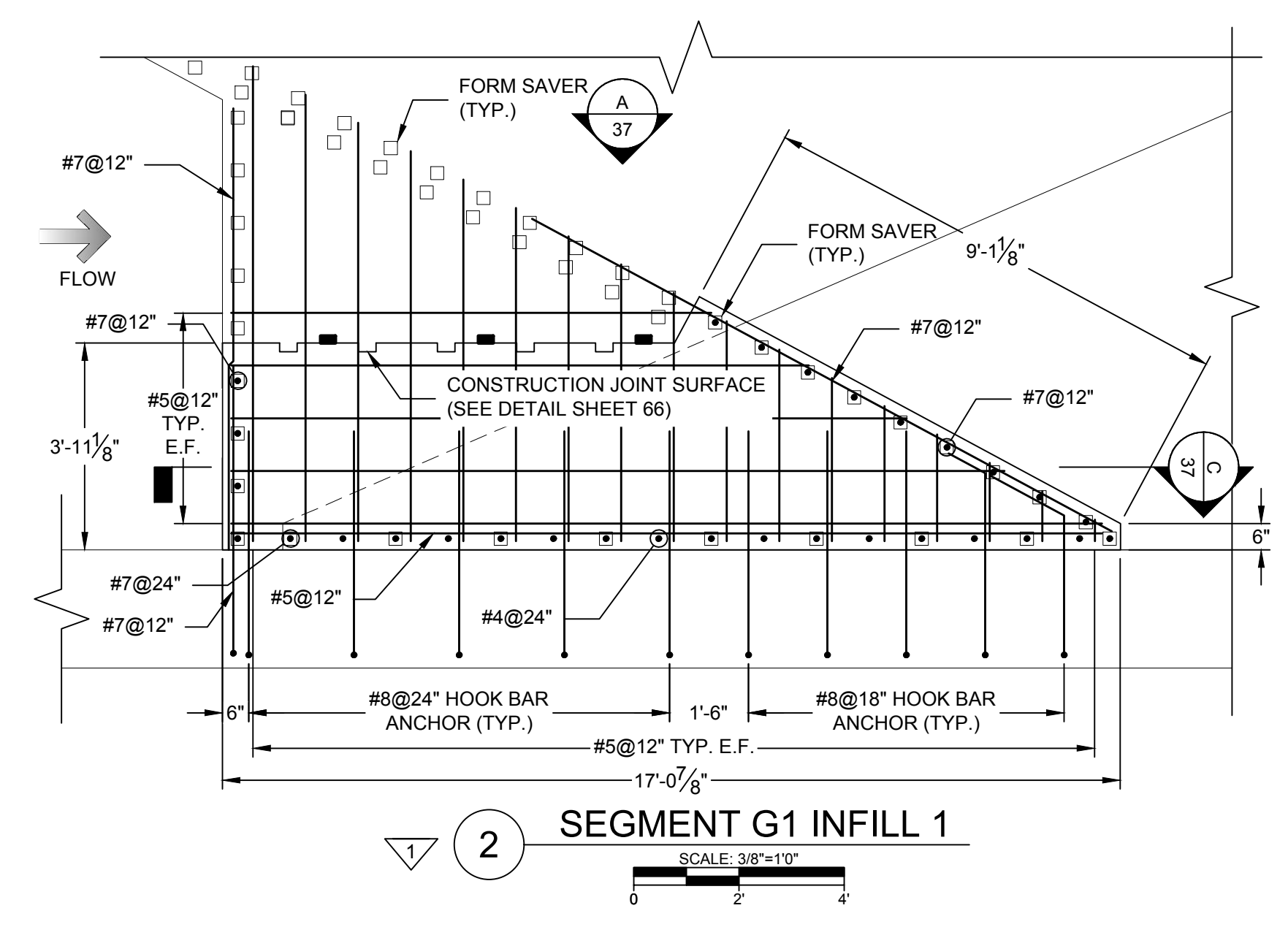


NOTE: SEGMENT G1 & G2 SIMILAR BUT OPPOSITE

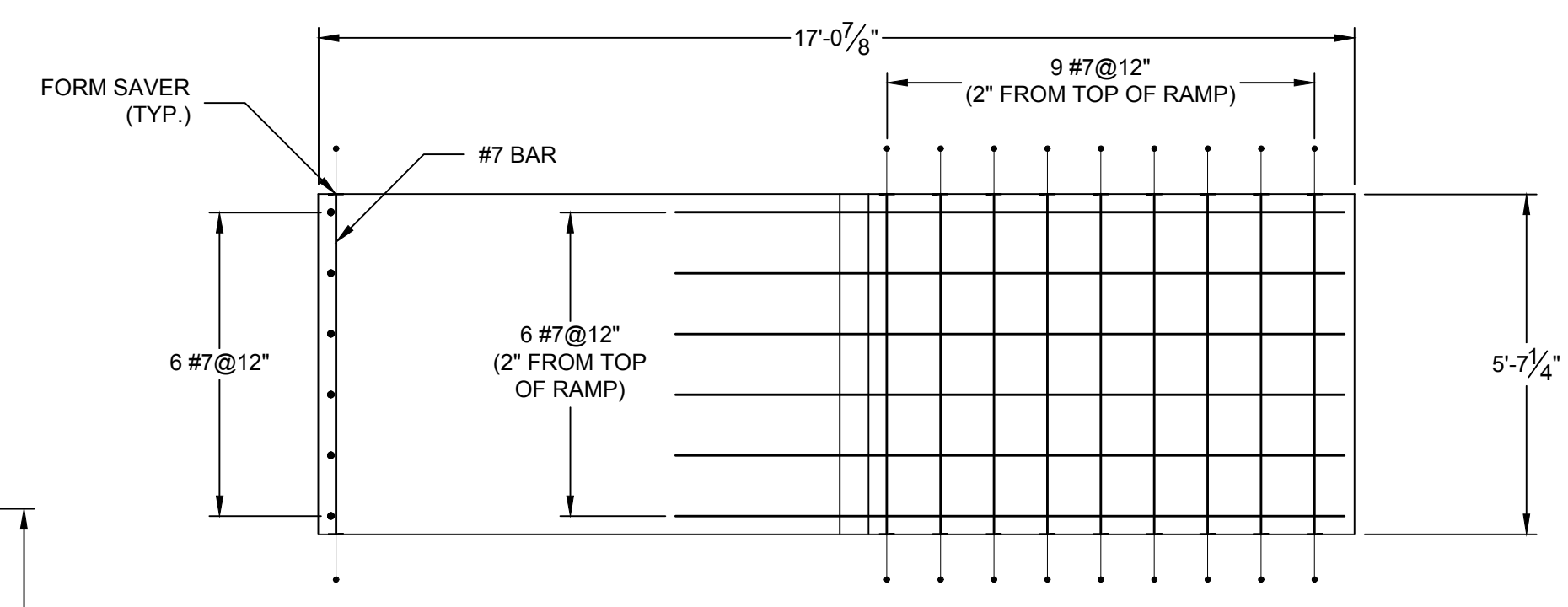
PROJECT: 16C17043.00		DATE: 07/10/2017	SHEET: 36 OF 66
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA		DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT G1	
CHECKED BY: RPL_JRC	DESIGNED BY: JTD_JC	DRAWN BY: GHB_JSJ	DATE: 07/10/17
RANDALL P. BASS, P.E.			GEORGIA PROFESSIONAL ENGINEER NO. 10685
		6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com	
DESCRIPTION	REV	DATE	



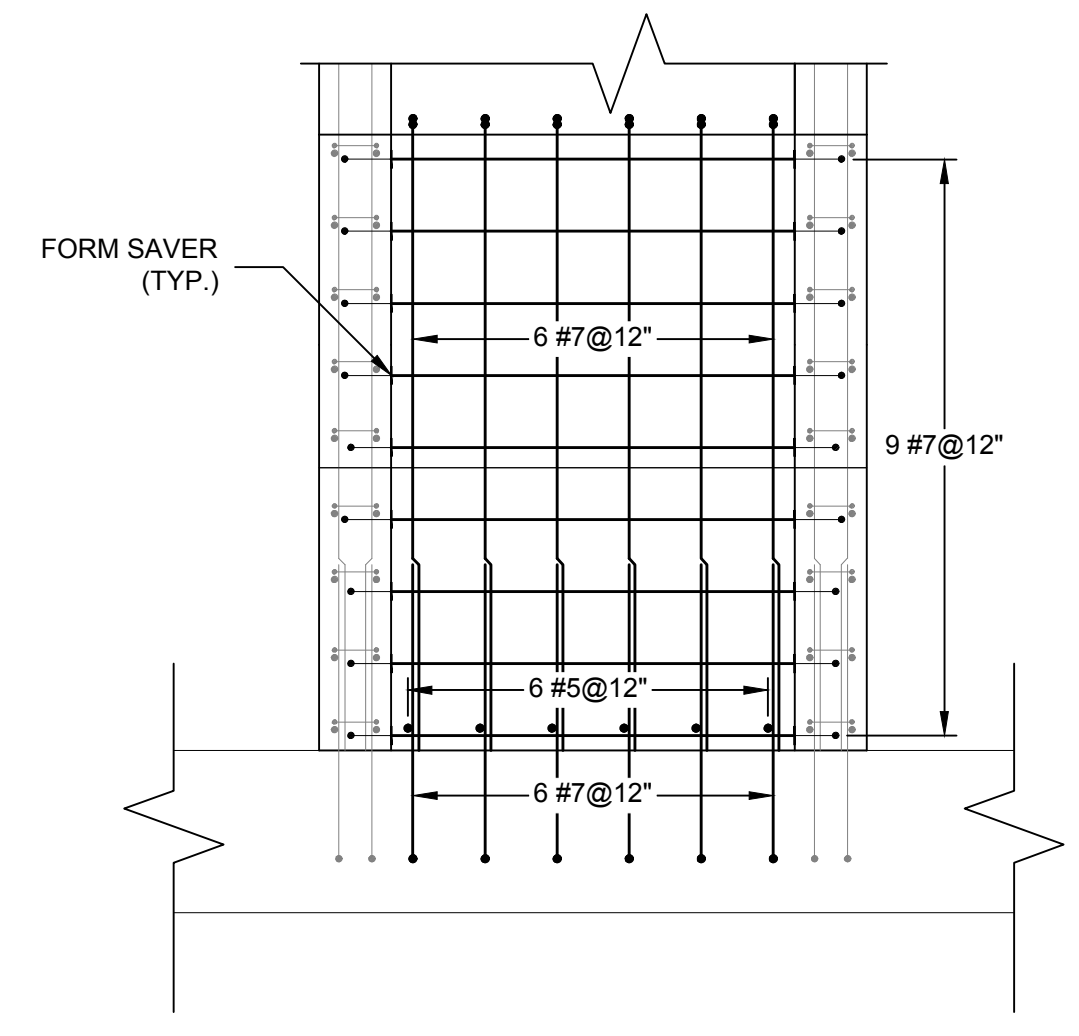
B SEGMENT G1 UPSTREAM RAMP INFILL
SCALE: 3/8"=1'0"
NOTE: WALL AT CONTRACTION JOINT NOT SHOWN FOR CLARITY. SEE DETAILS THIS SHEET.



2 SEGMENT G1 INFILL 1
SCALE: 3/8"=1'0"
0 2 4

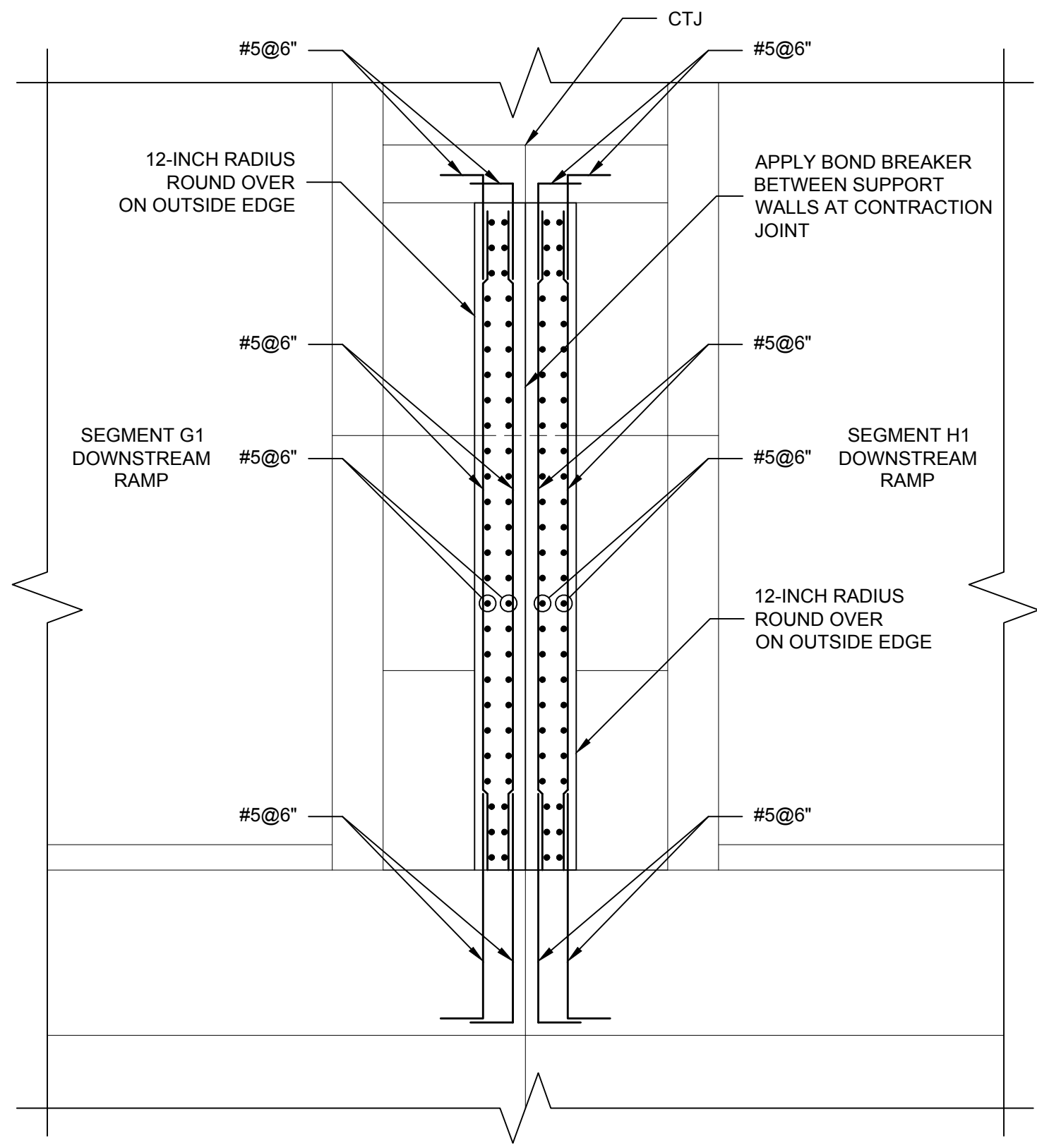


A SEGMENT G1 INFILL BASE 1 PLAN
SCALE: 3/8"=1'0"
0 2 4

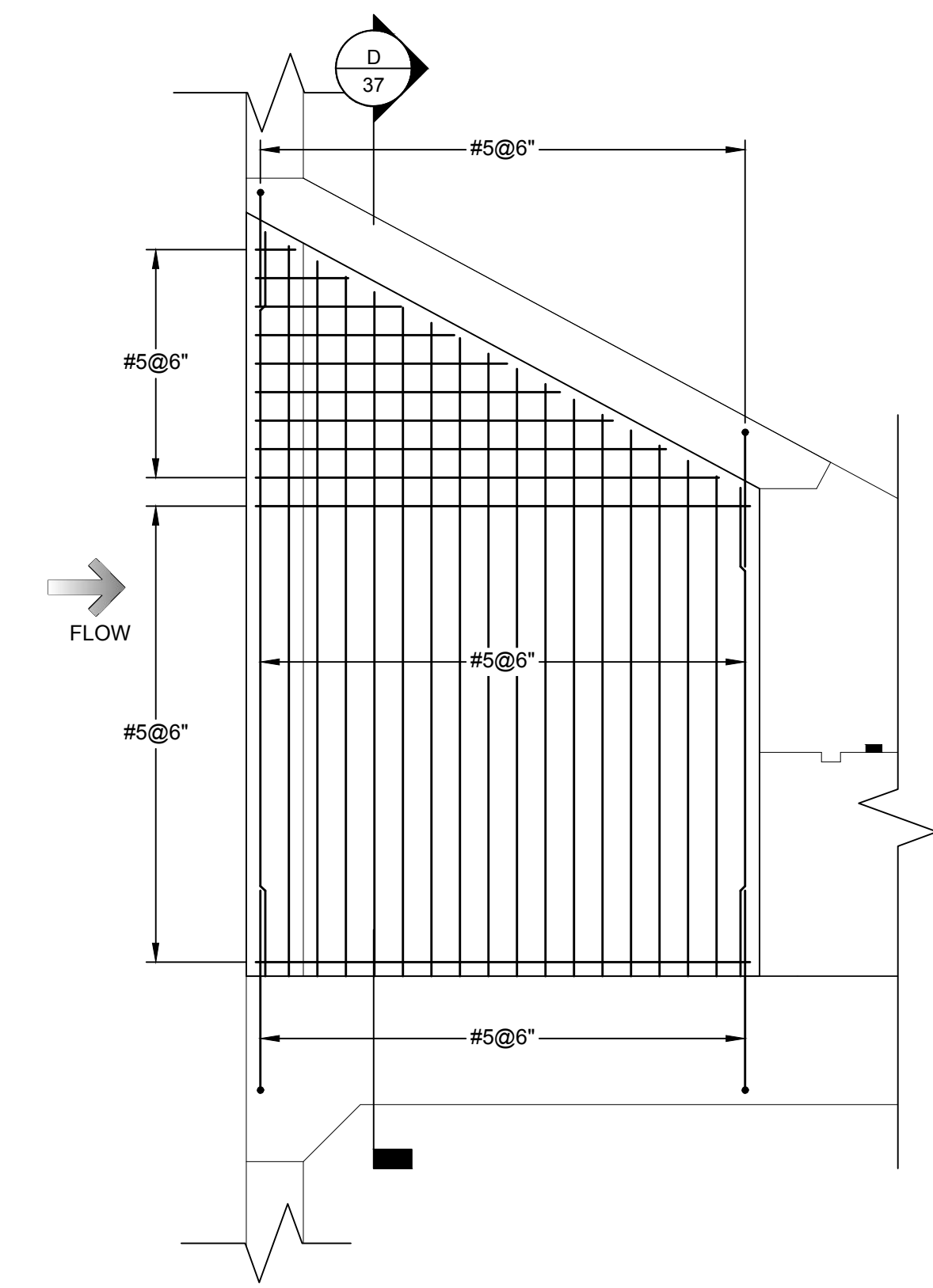


E SEGMENT G1 INFILL BASE ELEVATION
SCALE: 3/8"=1'0"
0 2 4

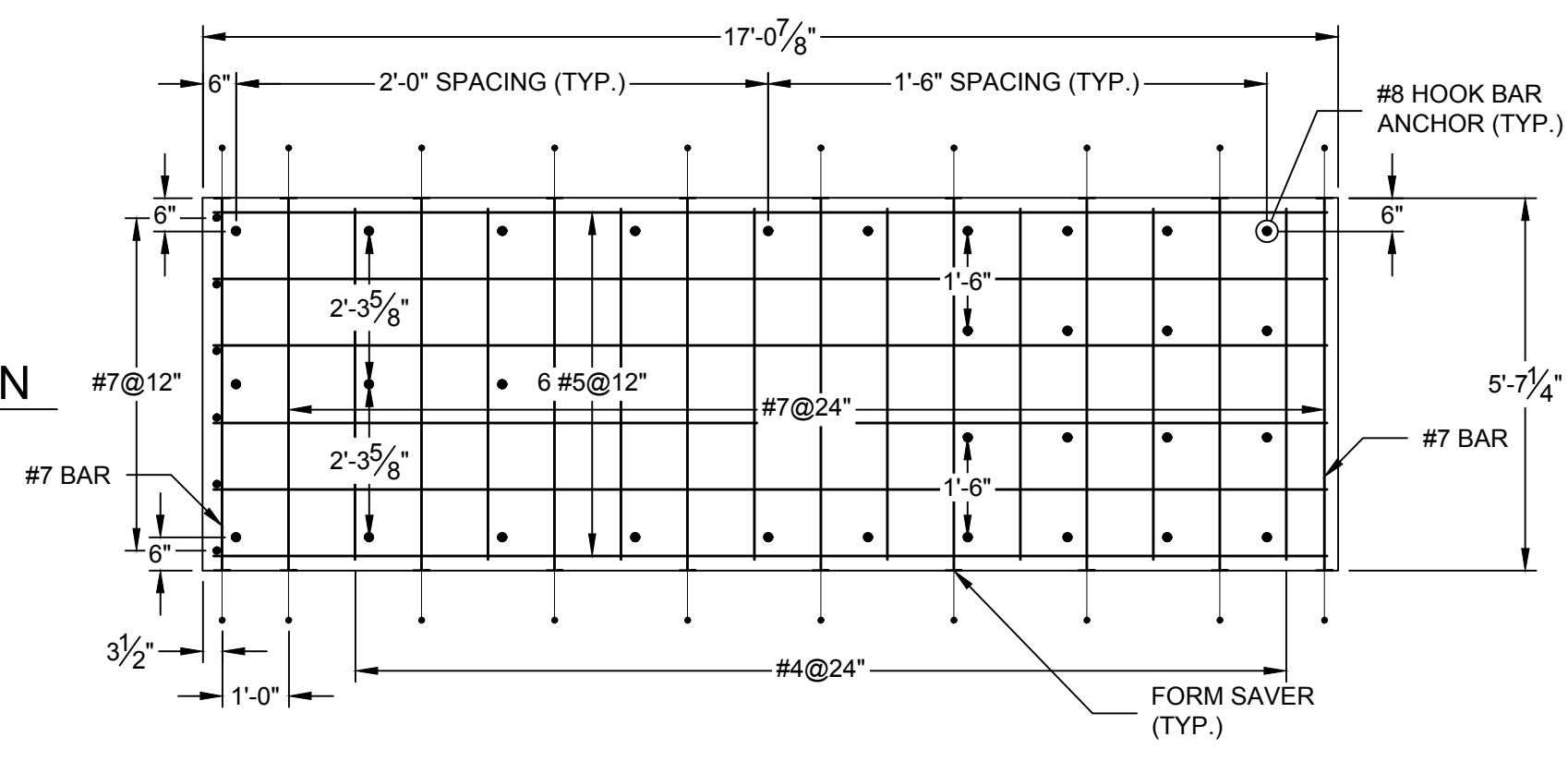
NOTE: FOR CONTRACTION JOINT BETWEEN PIANO KEY SEGMENTS G1 AND H1, PROVIDE 2-INCHES CLEARANCE FOR REINFORCEMENT EACH SIDE OF JOINT. (G2 AND H2 SIMILAR, BUT OPPOSITE)



D SEGMENT G1 SUPPORT WALL SECTION
SCALE: 3/8"=1'0"
0 2 4



1 SEGMENT G1 SUPPORT WALL AT CONTRACTION JOINT BETWEEN SEGMENTS G1 AND H1
SCALE: 3/8"=1'0"
0 2 4

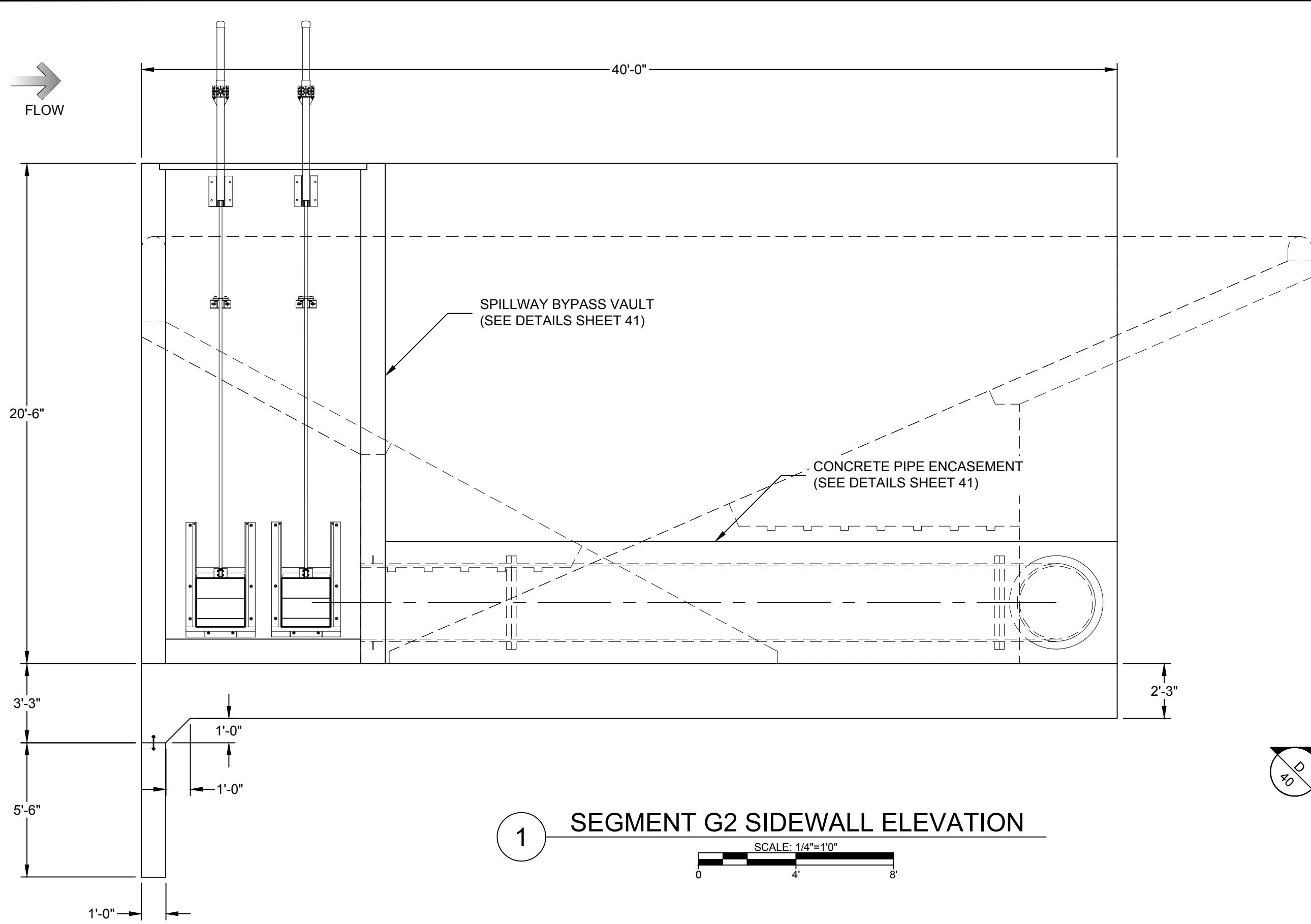


C SEGMENT G1 INFILL BASE 1 SECTION
SCALE: 3/8"=1'0"
0 2 4

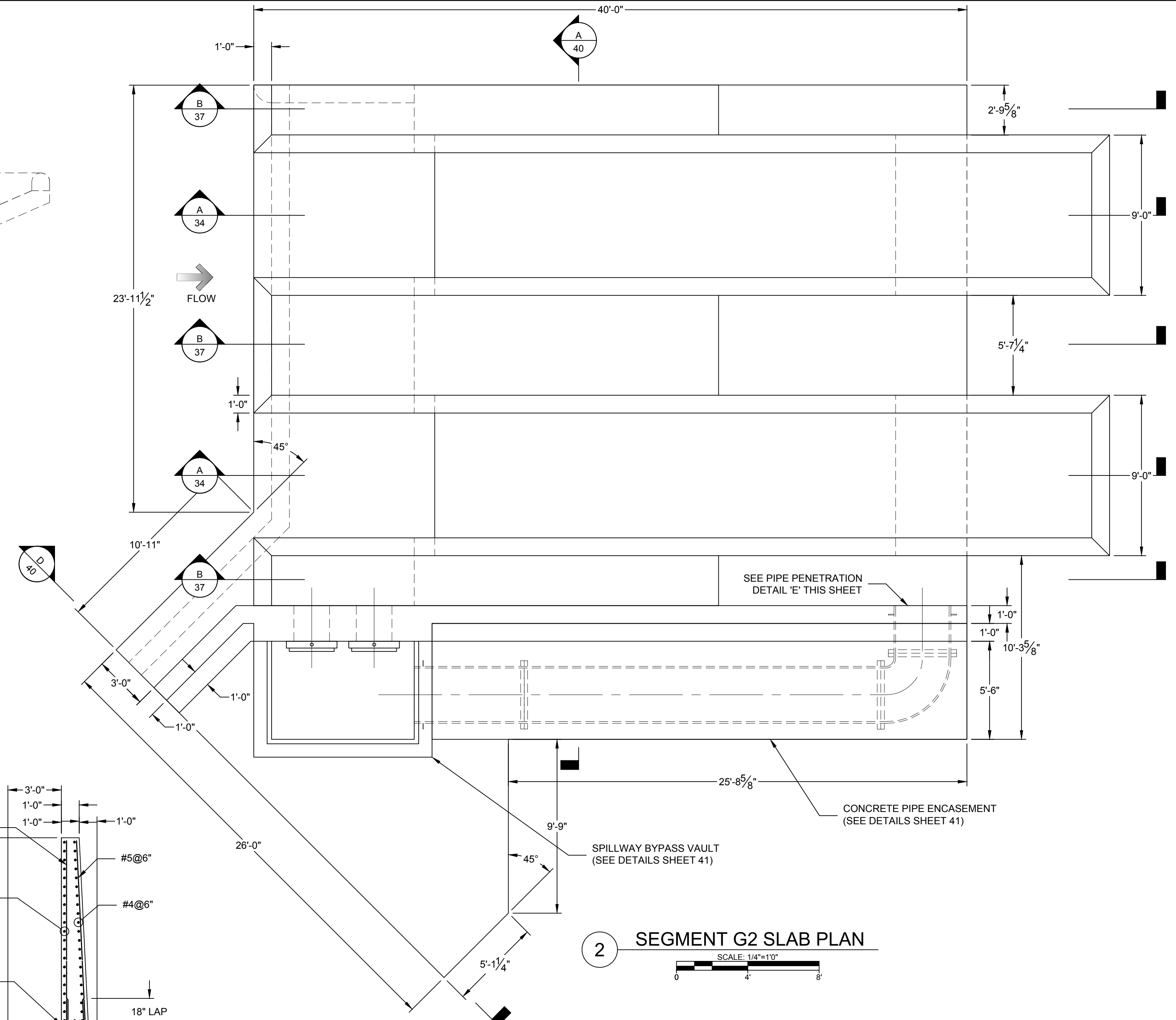
NOTE: SEGMENT G1 & G2 SIMILAR BUT OPPOSITE

G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CAD\DRAWINGS\05-FINAL_DESIGN\PLT_STRUCTURAL_PIANO KEY WEIRD.DWG

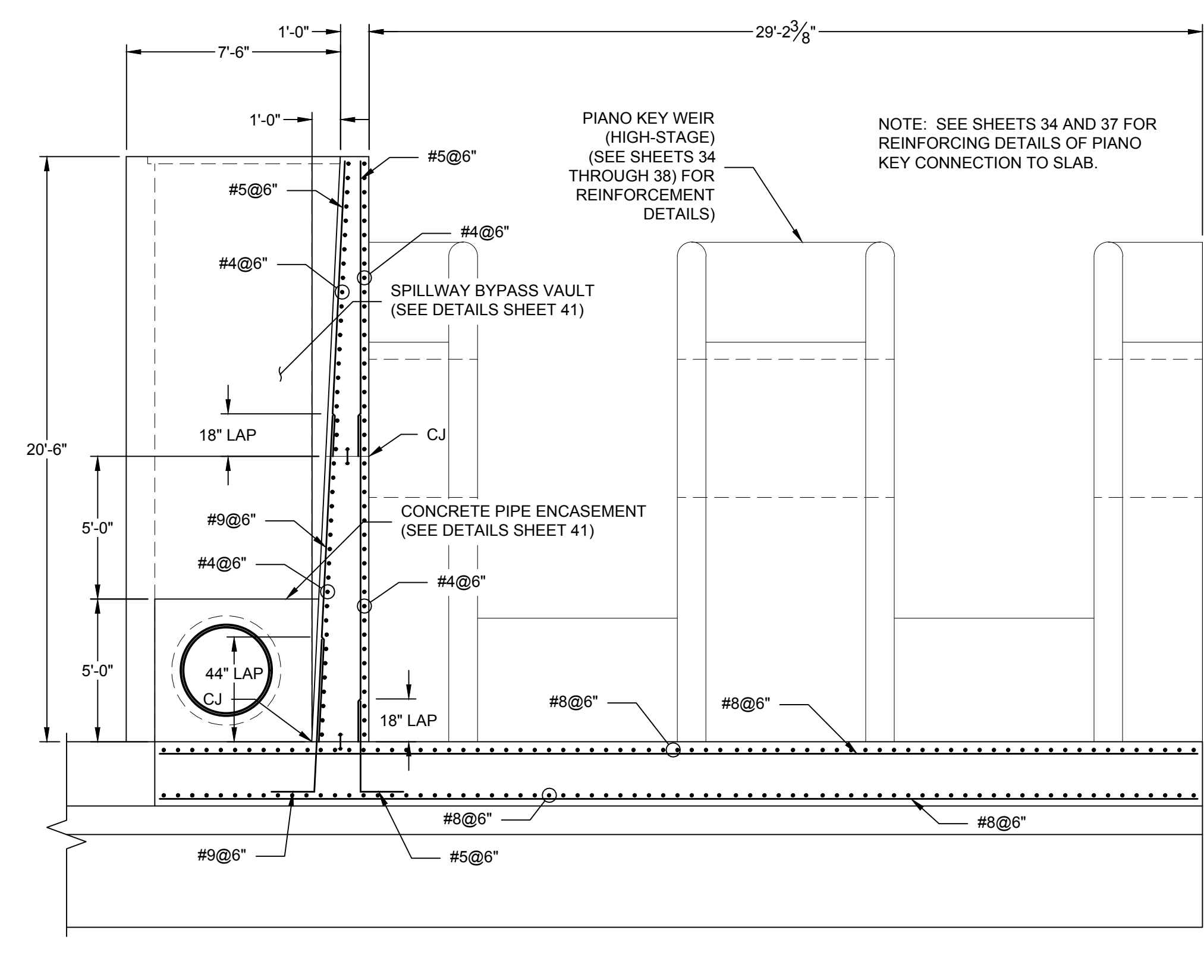
8-2-17									
1	REVISED PER ADDENDUM NO. 03								
	CHECKED BY: RPL, JRC								
	DRAWN BY: GHB, JSR								
	DESIGNED BY: JTD, JC								
	RANDALL P. BASS, P.E.								
	<i>Randall P. Bass</i>								
	GEORGIA PROFESSIONAL ENGINEER NO. 00695								
	DATE: 07/10/17								
	DESCRIPTION								
	CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA								
	UPSTREAM RAMP REINFORCEMENT DETAILS								
	SEGMENT G1								
	PROJECT: 16C17043.00								
	DATE: 07/10/2017								
	SHEET 37 OF 66								
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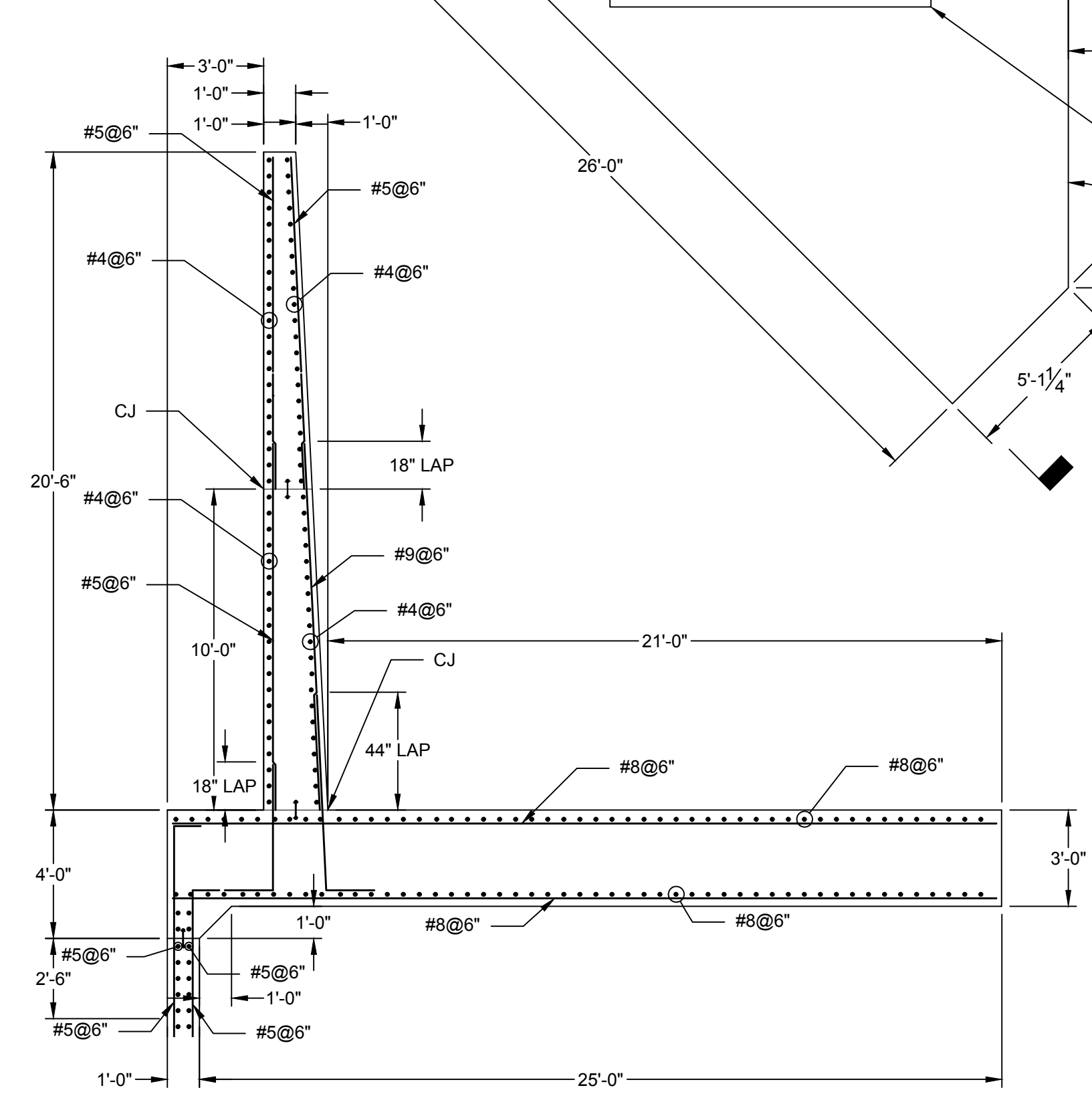
1 SEGMENT G2 SIDEWALL ELEVATION



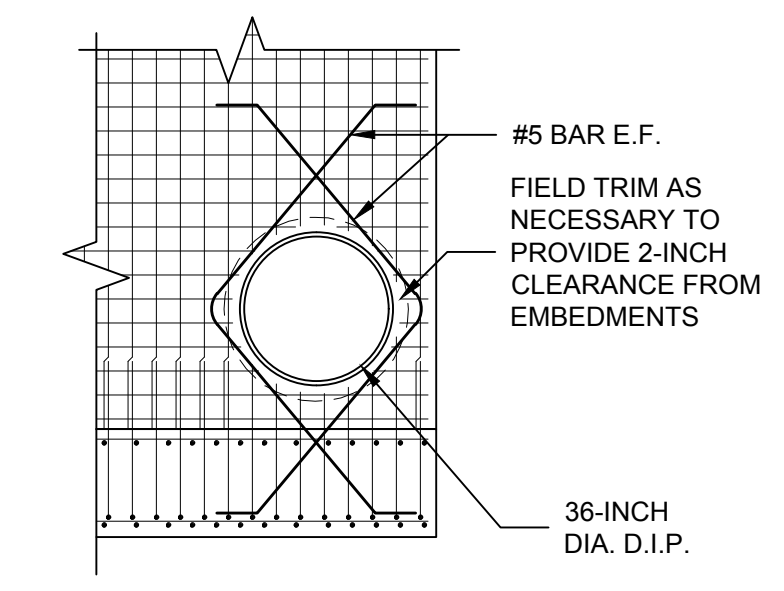
2 SEGMENT G2 SLAB PLAN



A SEGMENT G2 SECTION



D SEGMENT G2 SECTION

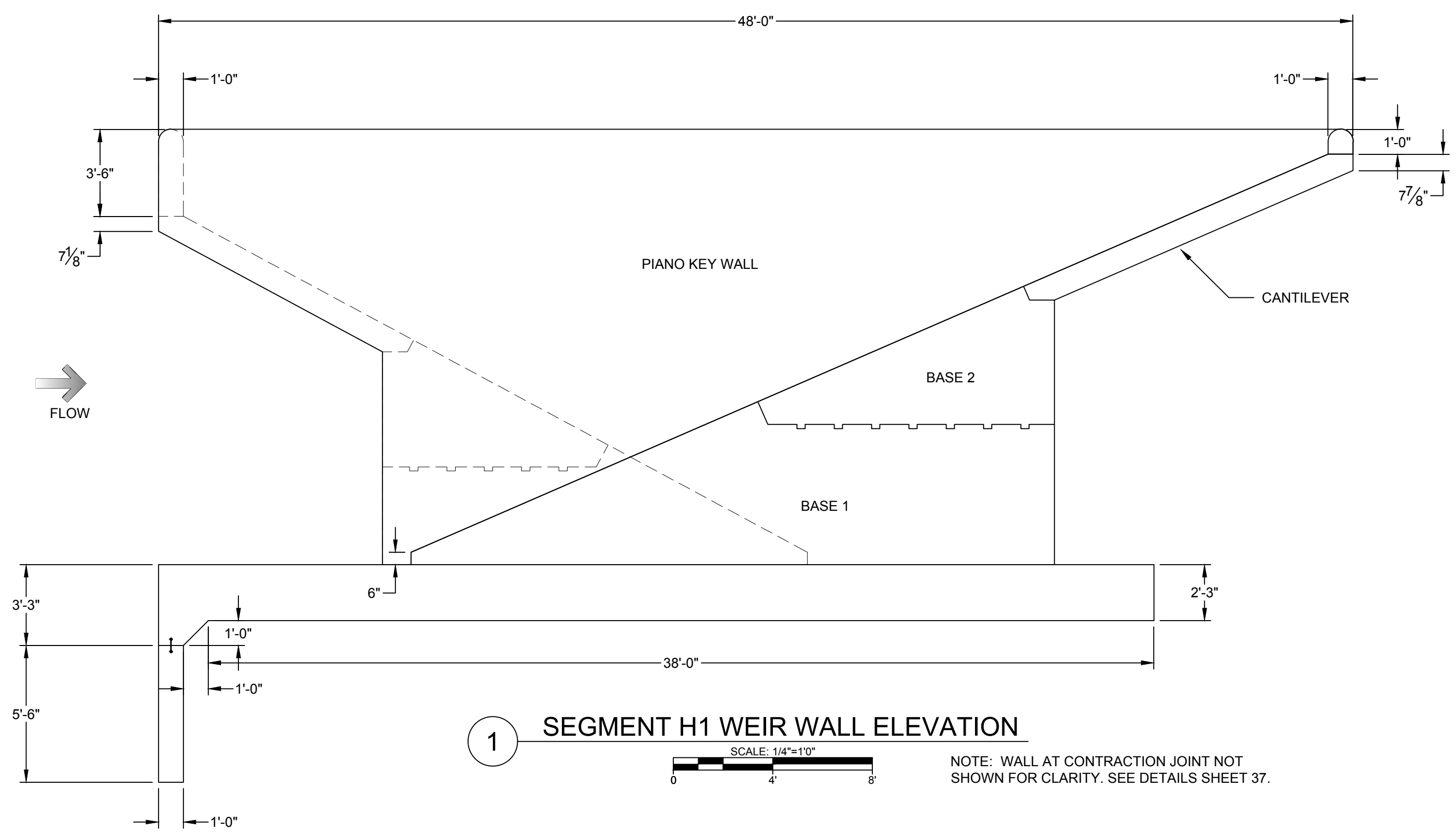


E PIPE PENETRATION DETAIL

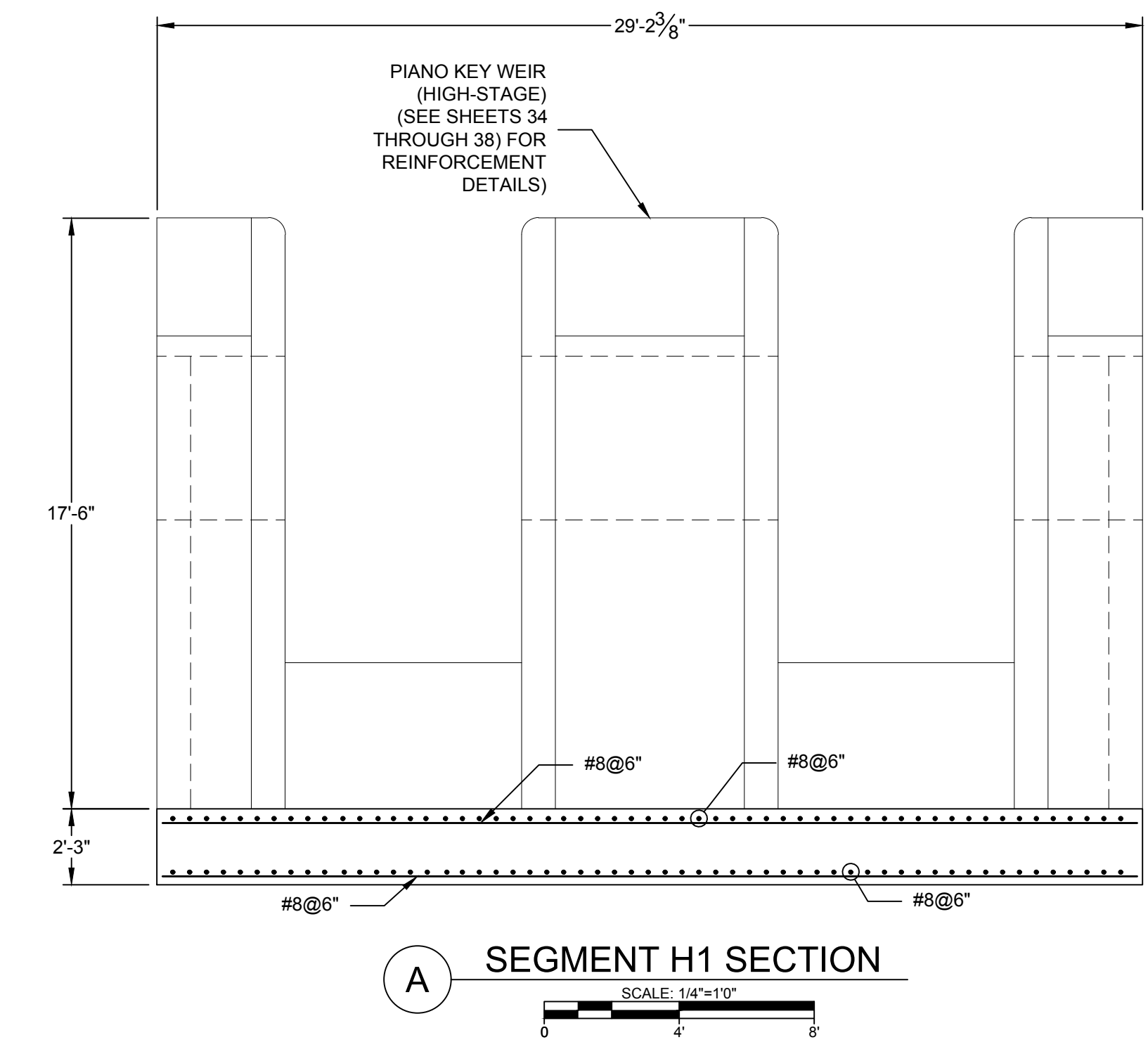
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\PLT_STRUCTURAL\PIANO KEY WEIR.DWG

PROJECT: 16C17043.00	DATE: 07/10/2017
SHEET 40 OF 66	
<p>CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA</p> <p>WALL AND SLAB REINFORCEMENT DETAILS SEGMENT G2</p>	
<p>CHECKED BY: RPL_JRC</p> <p>DRAWN BY: GHB_JSJ</p> <p>DESIGNED BY: JTD_JC</p>	<p>CHECKED BY: RPL_JRC</p> <p>DRAWN BY: GHB_JSJ</p> <p>DESIGNED BY: JTD_JC</p>
<p>RANDALL P. BASS, P.E.</p> <p><i>Randall P. Bass</i></p> <p>GEORGIA PROFESSIONAL ENGINEER NO. 00685</p>	
<p>NO. 10885</p> <p>PROFESSIONAL ENGINEER</p> <p>GEORGIA</p>	
<p>6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schmabel-eng.com</p>	
<p>DATE</p> <p>DESCRIPTION</p> <p>REV</p>	<p>DATE</p> <p>DESCRIPTION</p> <p>REV</p>

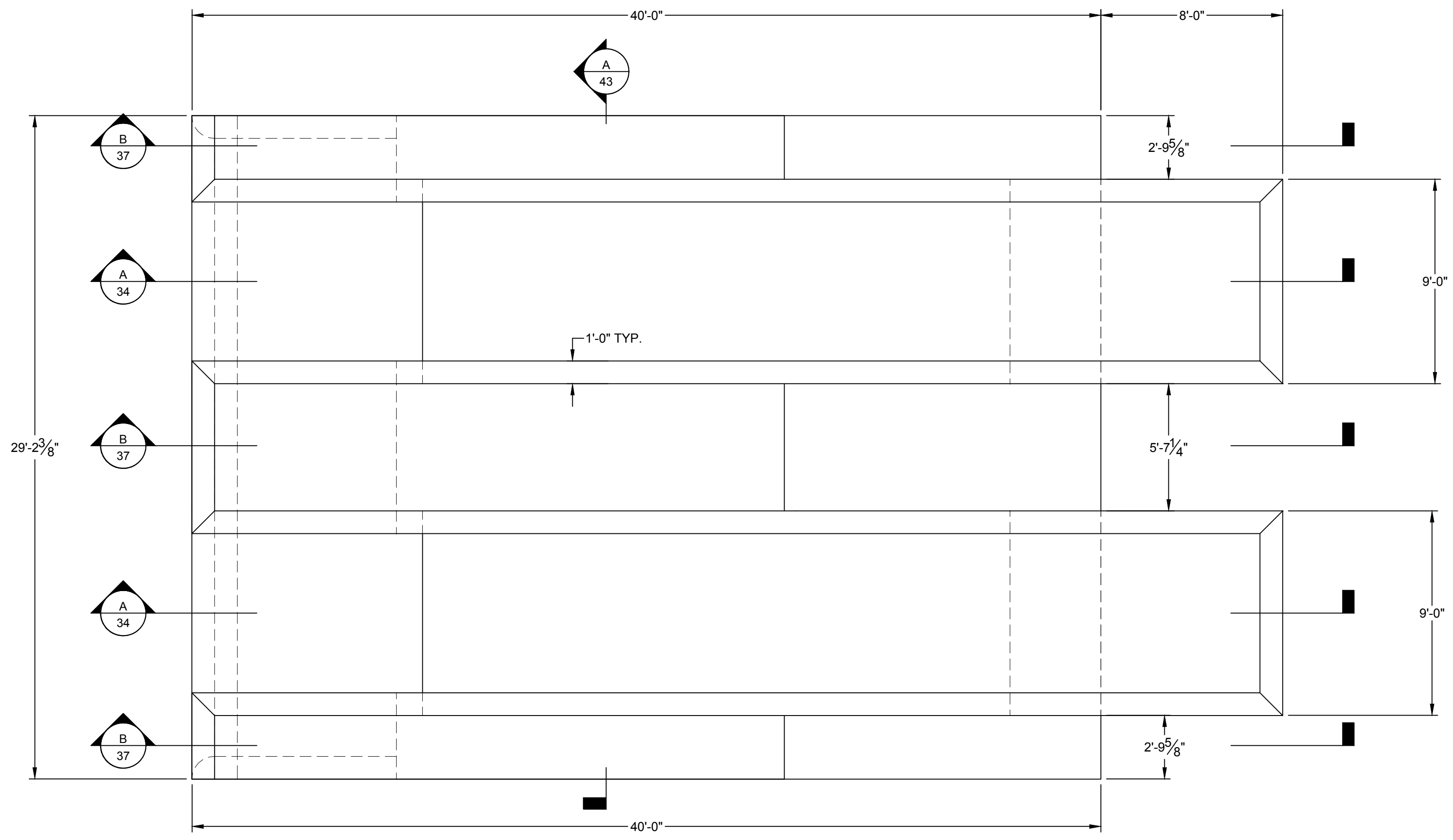
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\1PT_STRUCTURAL_PIANO KEY WEIR.DWG



1 SEGMENT H1 WEIR WALL ELEVATION
 SCALE: 1/4"=1'-0"
 NOTE: WALL AT CONTRACTION JOINT NOT SHOWN FOR CLARITY. SEE DETAILS SHEET 37.



A SEGMENT H1 SECTION
 SCALE: 1/4"=1'-0"

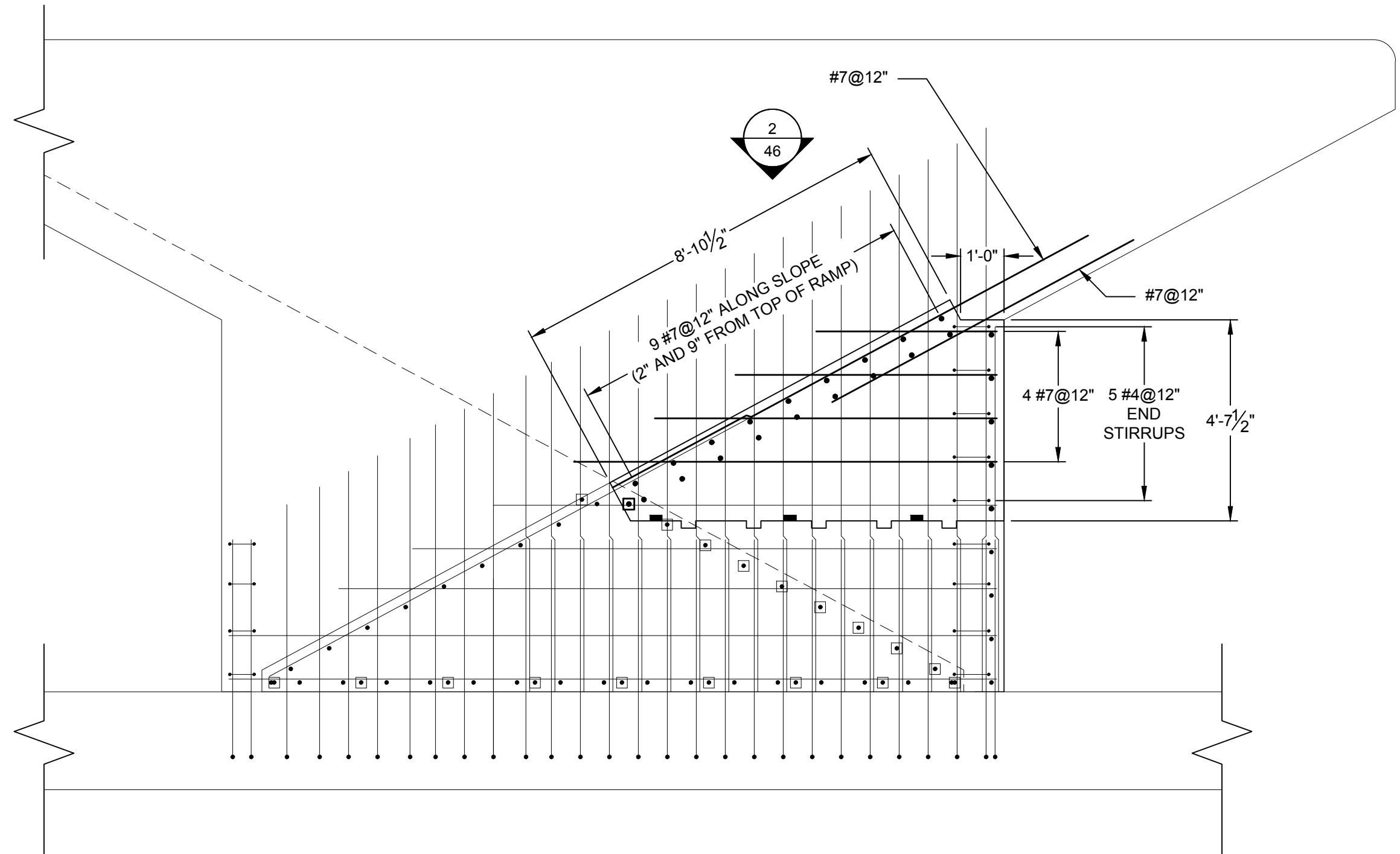


2 SEGMENT H1 SLAB PLAN
 SCALE: 1/4"=1'-0"

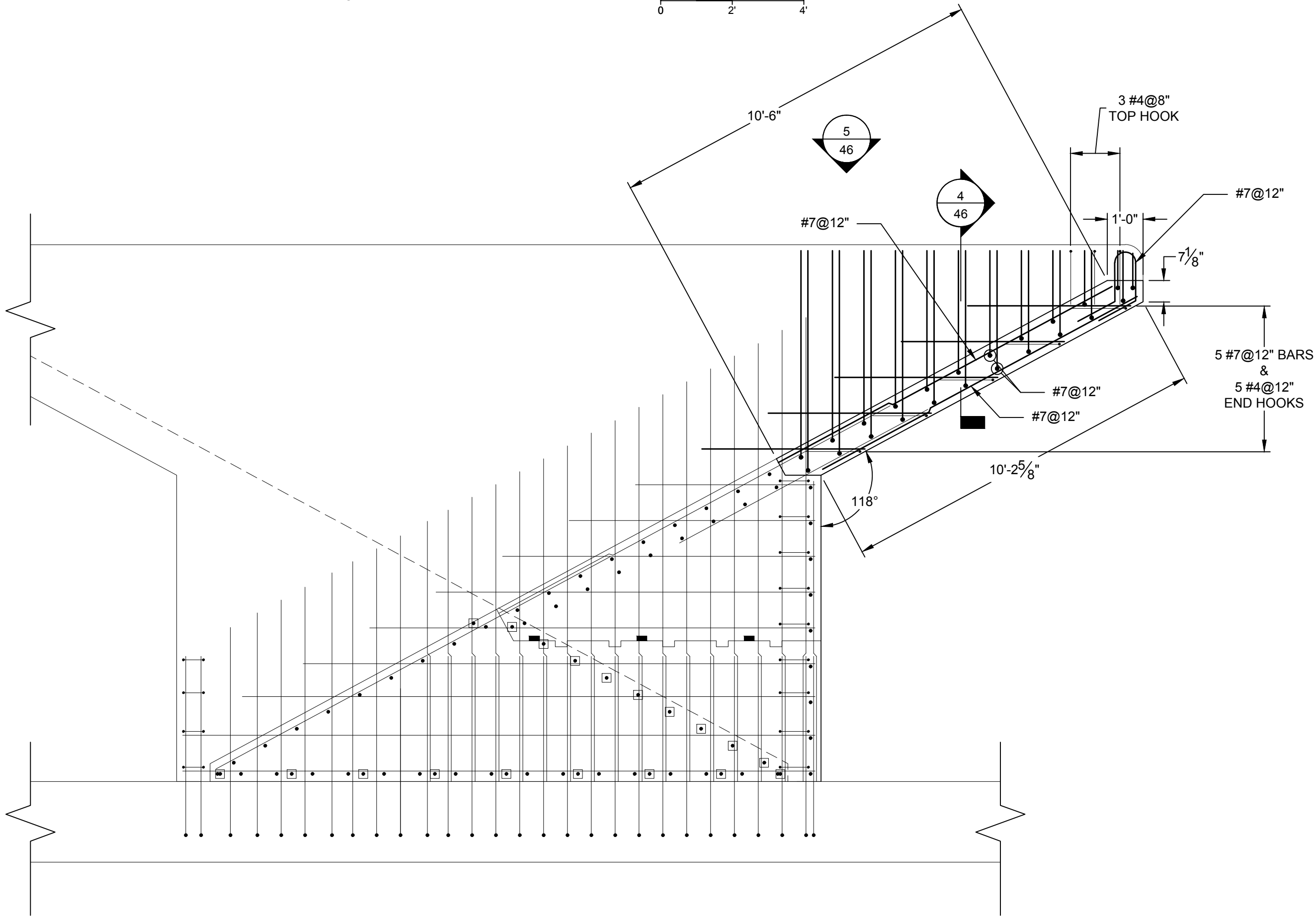
NOTE: SEGMENT H1 & H2 SIMILAR

PROJECT: 16C17043.00	DATE: 07/10/2017
SHEET 43 OF 66	
<p>CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA</p> <p>SLAB REINFORCEMENT DETAILS SEGMENT H1</p>	
<p>DESIGNED BY: JTD, JJC DRAWN BY: GHB, JSR CHECKED BY: RPL, JRC</p>	<p> RANDALL P. BASS, P.E. No. 10885 PROFESSIONAL ENGINEER GEORGIA RANDALL P. BASS No. 071017 GEORGIA PROFESSIONAL ENGINEER NO. 10885 </p>
<p>Schnabel ENGINEERING 6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com</p>	
<p>PROJECT: 16C17043.00 DATE: 07/10/2017 SHEET 43 OF 66</p>	

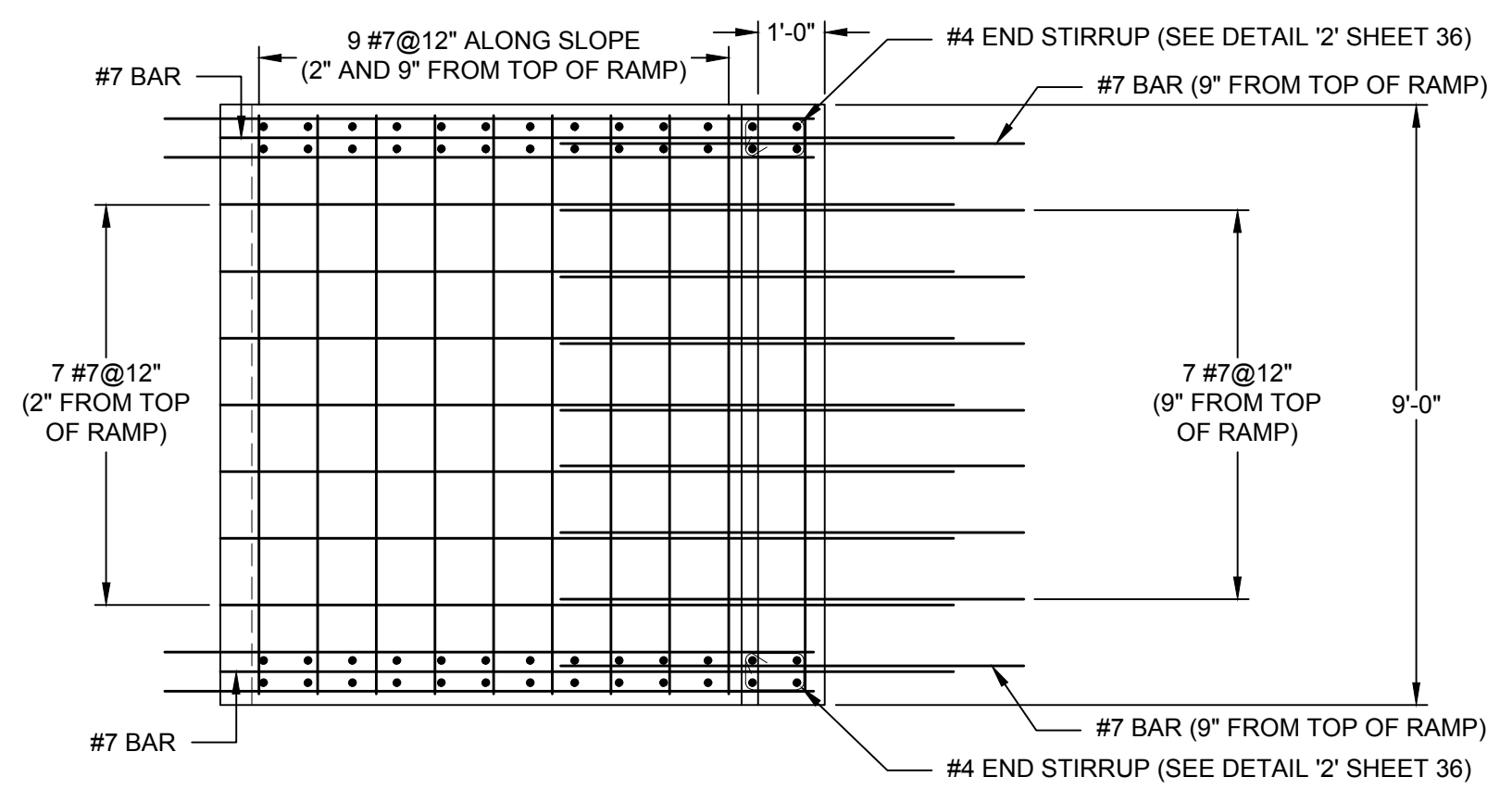
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\1PT_STRUCTUREAL_PIANO_KEY_WEIR.DWG



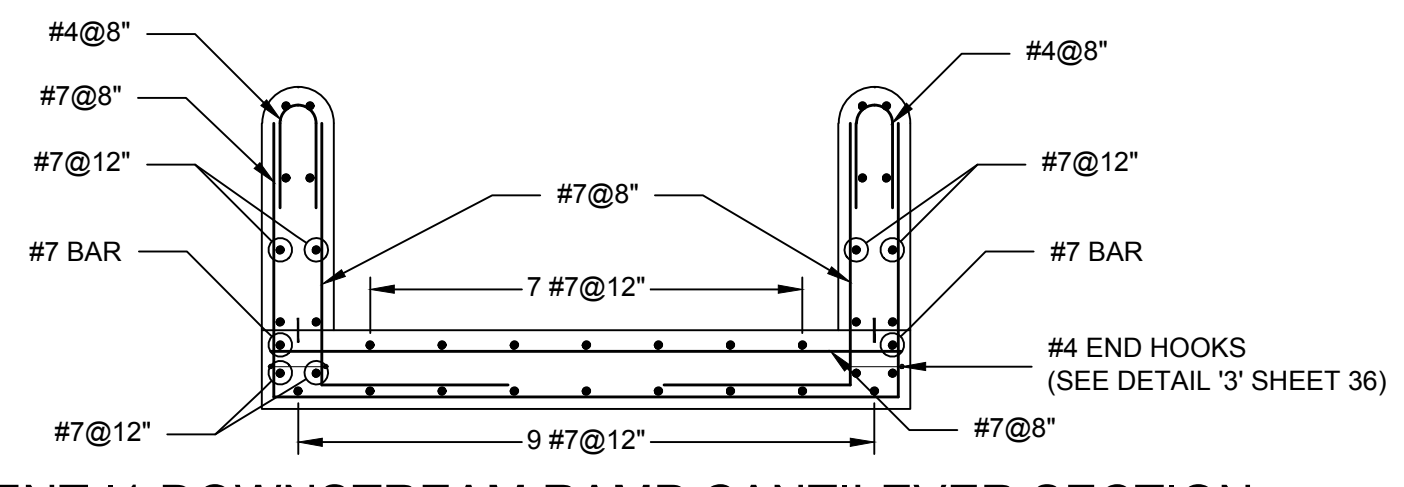
1 SEGMENT I1 DOWNSTREAM RAMP BASE 2
SCALE: 3/8"=1'0"
FLOW



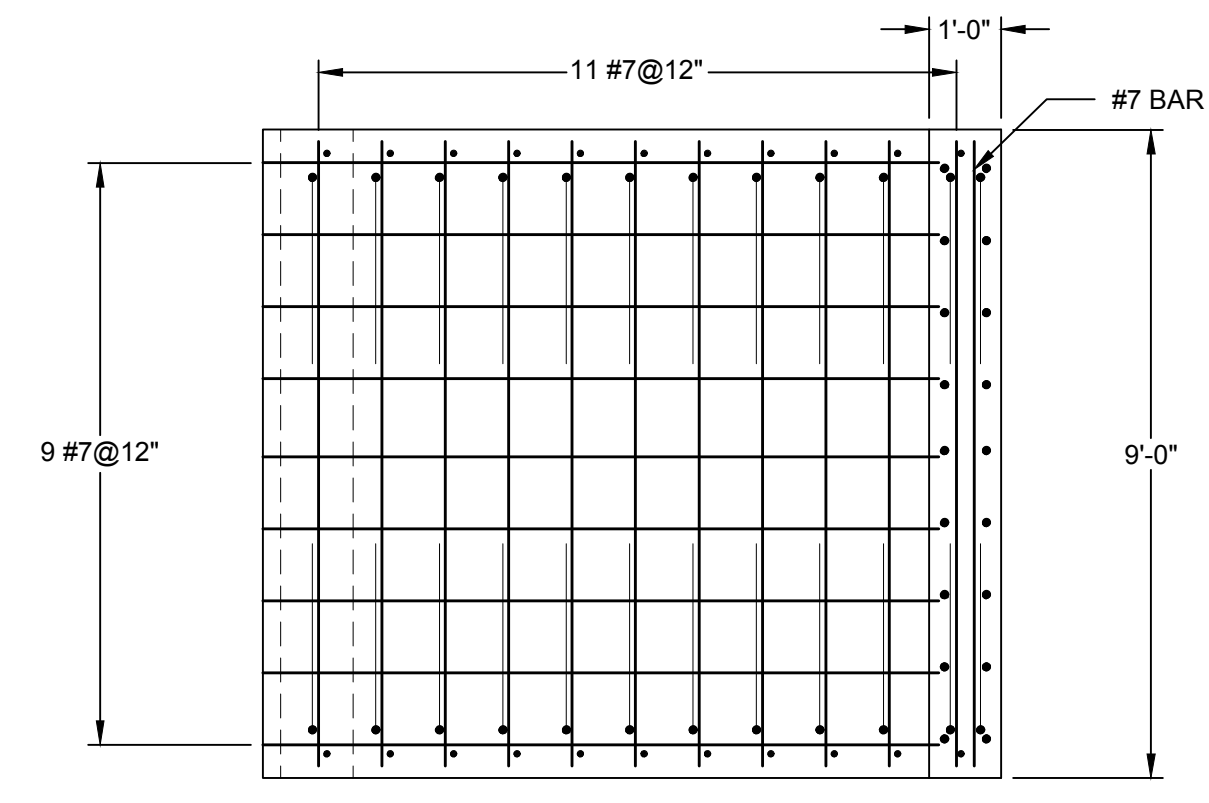
3 SEGMENT I1 DOWNSTREAM RAMP CANTILEVER
SCALE: 3/8"=1'0"
FLOW



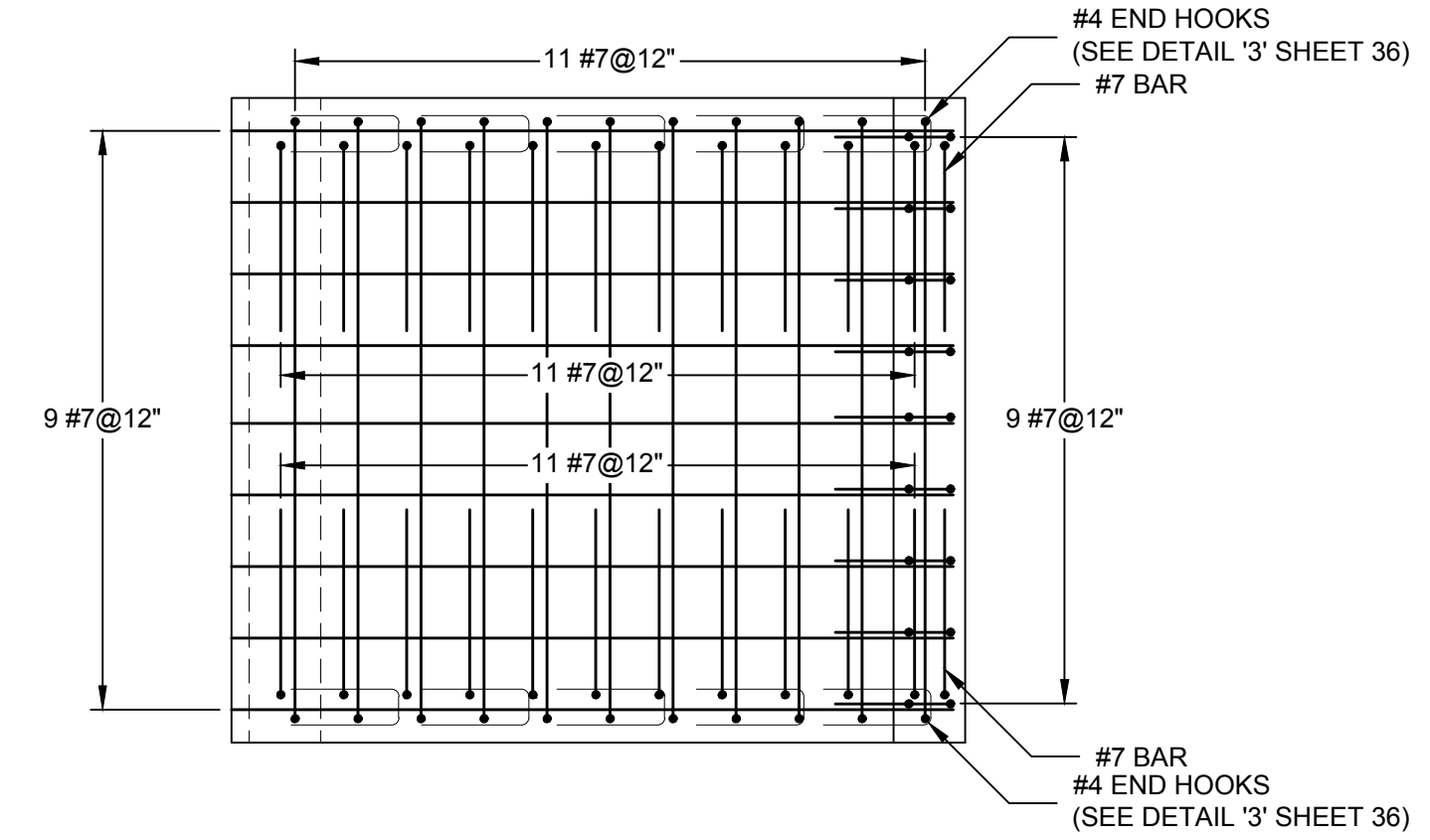
2 SEGMENT I1 DOWNSTREAM RAMP BASE 2 PLAN
SCALE: 3/8"=1'0"



4 SEGMENT I1 DOWNSTREAM RAMP CANTILEVER SECTION
SCALE: 3/8"=1'0"



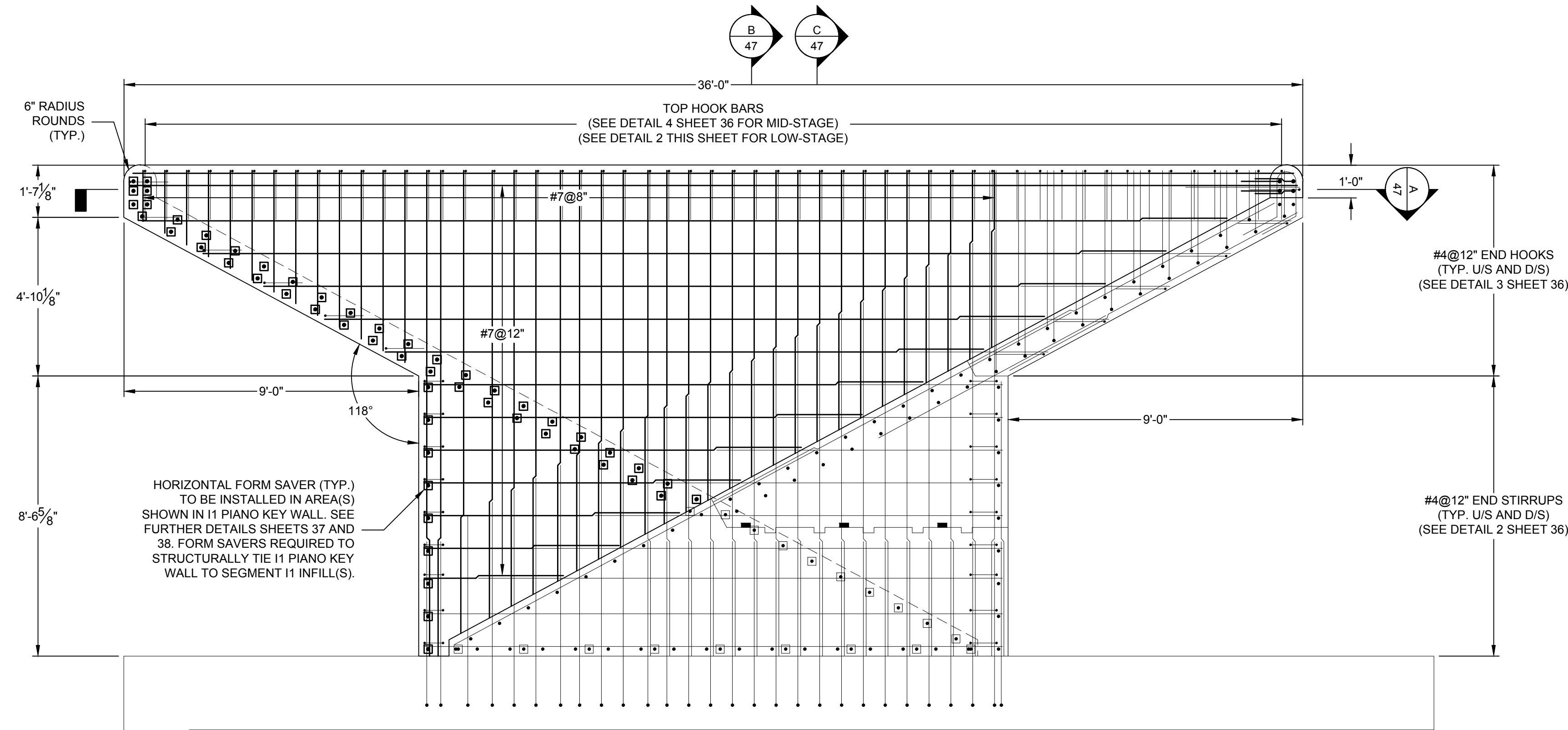
5 SEGMENT I1 DOWNSTREAM RAMP CANTILEVER PLAN
REINFORCEMENT 2\"/>



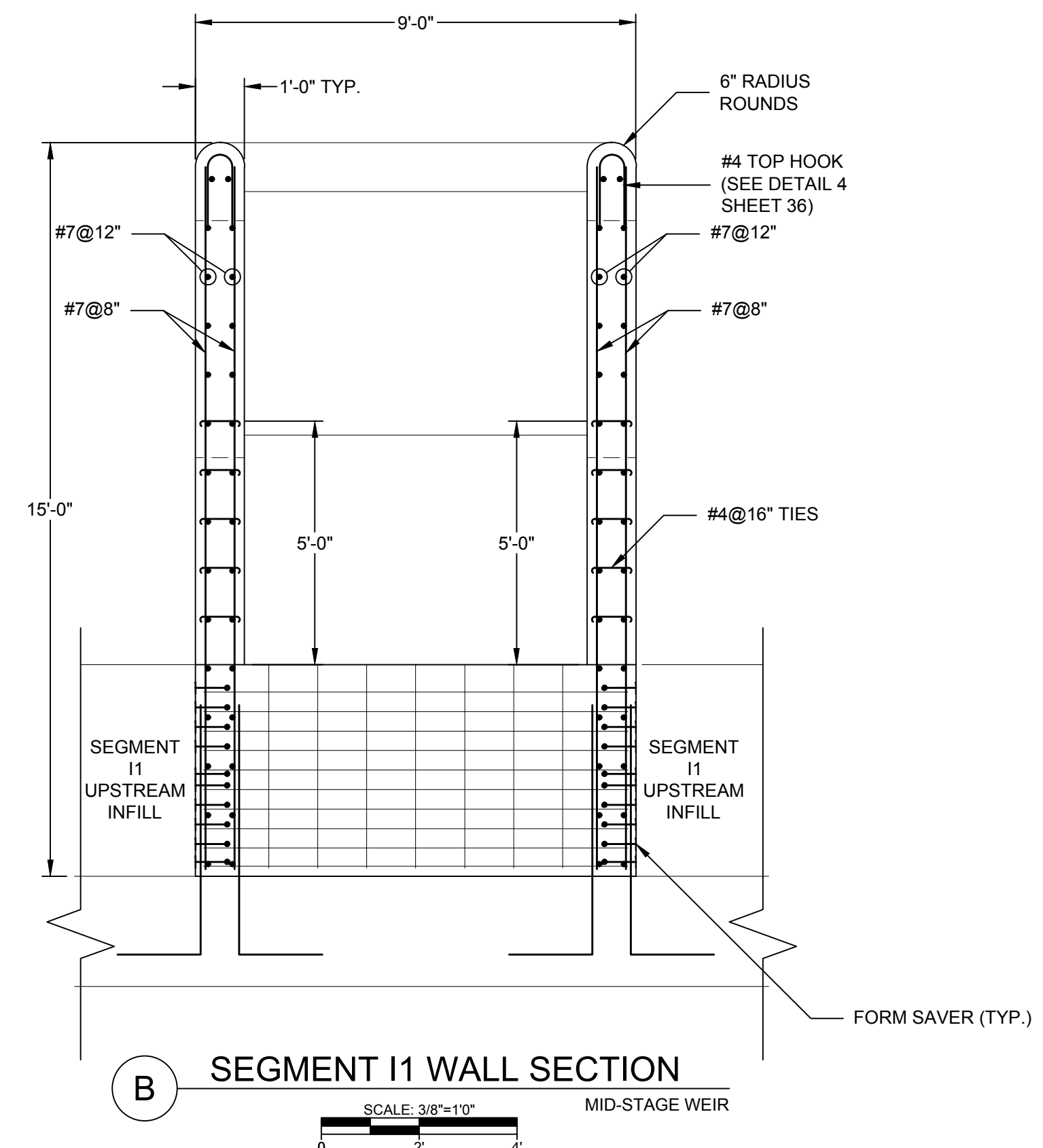
5 SEGMENT I1 DOWNSTREAM RAMP CANTILEVER PLAN
REINFORCEMENT 2\"/>

PROJECT: 16C17043.00	DATE: 07/10/2017	SHEET: 46 OF 66
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA		
MID STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT I1		
DESIGNED BY: JTD_JC	DRAWN BY: GHB_JSJR	CHECKED BY: RPL_JRC
RANDALL P. BASS, P.E.		
		DATE: 07/10/17
		REVISIONS
		DESCRIPTION
		DATE

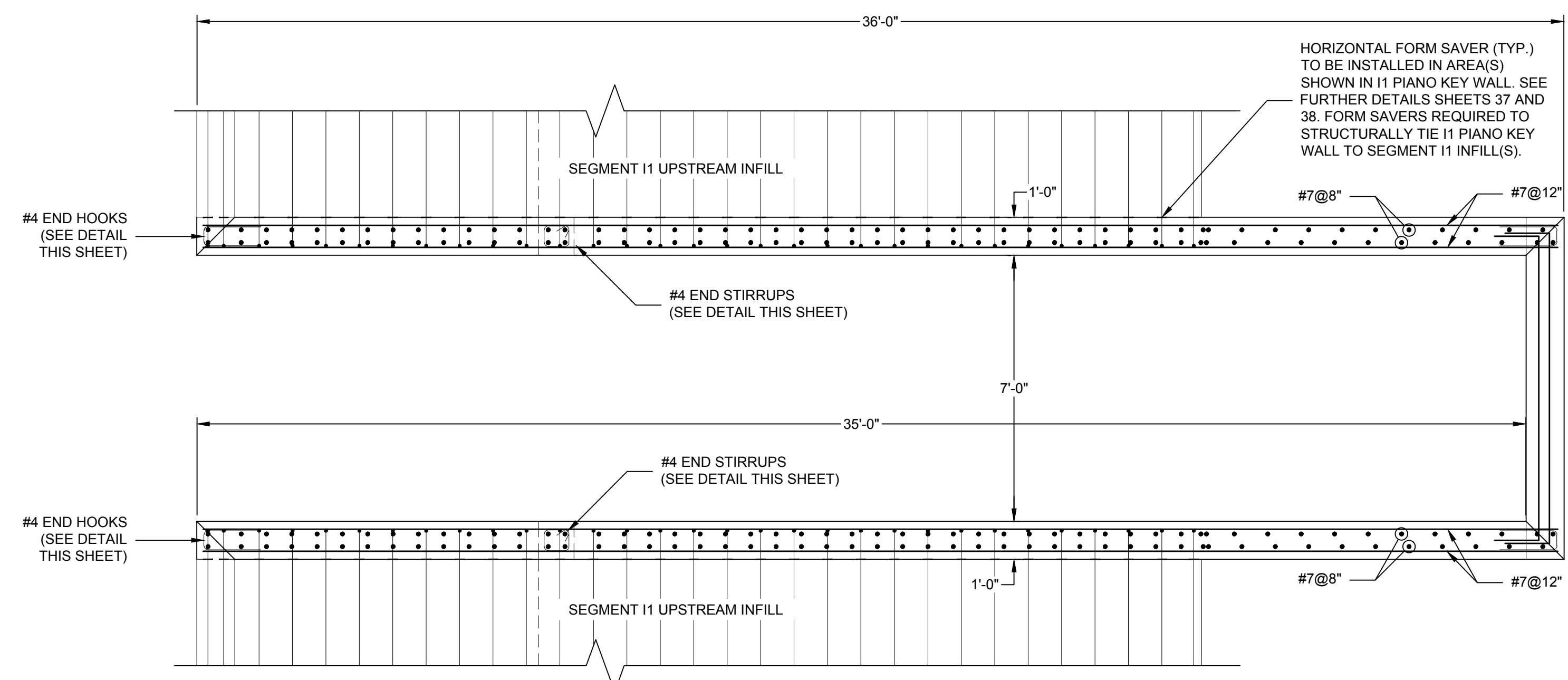
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\S08-CADDRAWINGS\05-FINAL_DESIGN\PLT_STRUCTURAL_PIANO_KEY_WEIR.DWG



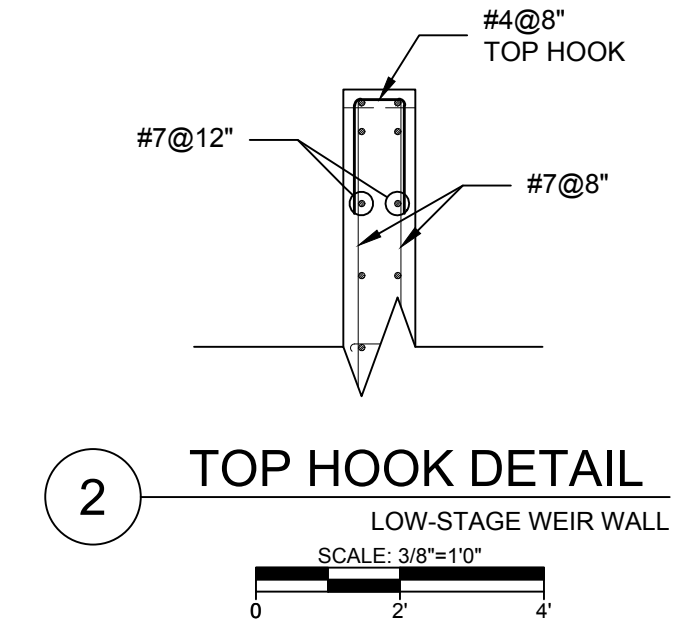
1 SEGMENT I1 PIANO KEY WEIR WALL
SCALE: 3/8"=1'0"
FLOW →



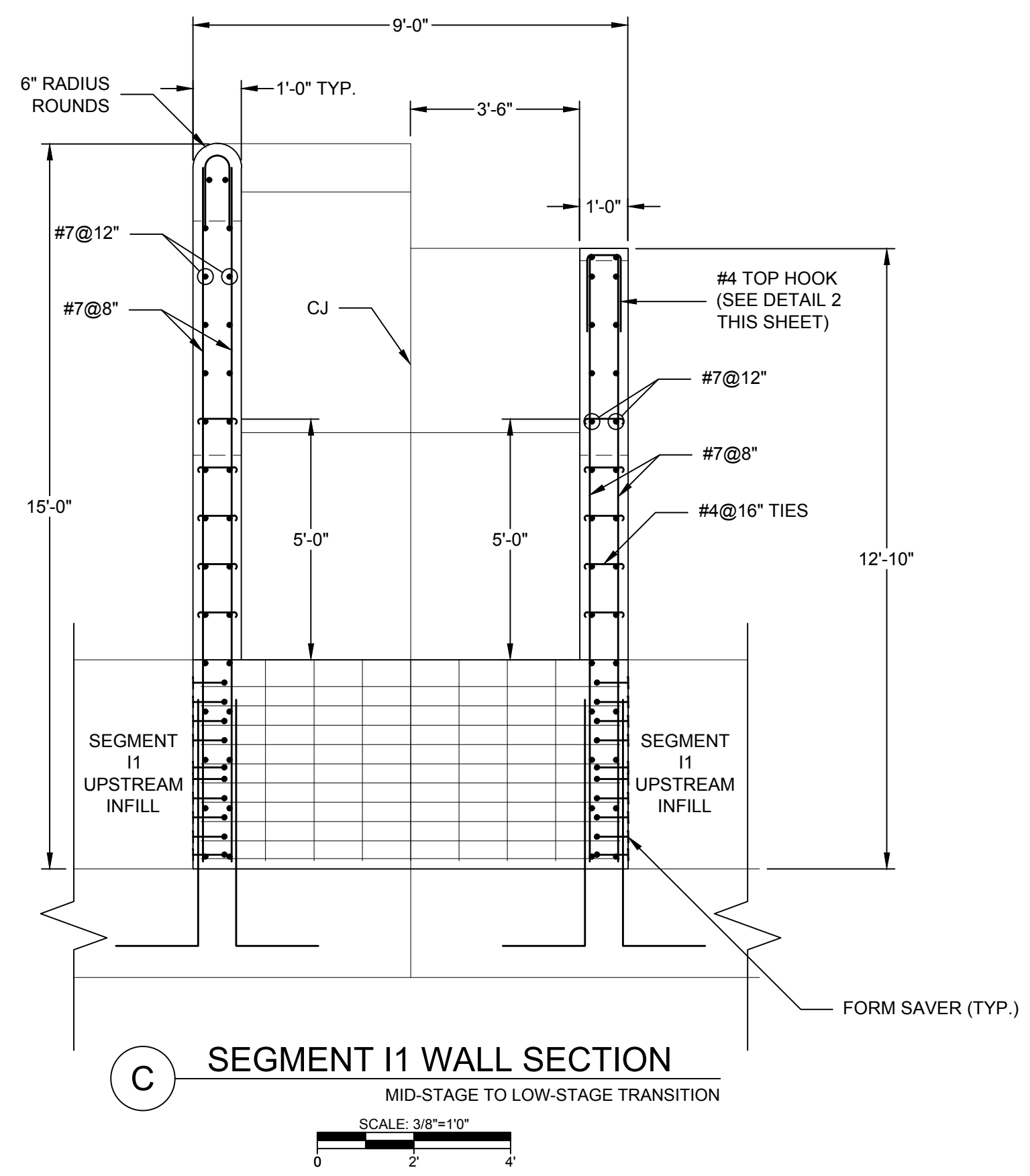
B SEGMENT I1 WALL SECTION
MID-STAGE WEIR
SCALE: 3/8"=1'0"
FORM SAVER (TYP.)



A SEGMENT I1 PIANO KEY WEIR WALL SECTION
SCALE: 3/8"=1'0"
FLOW →

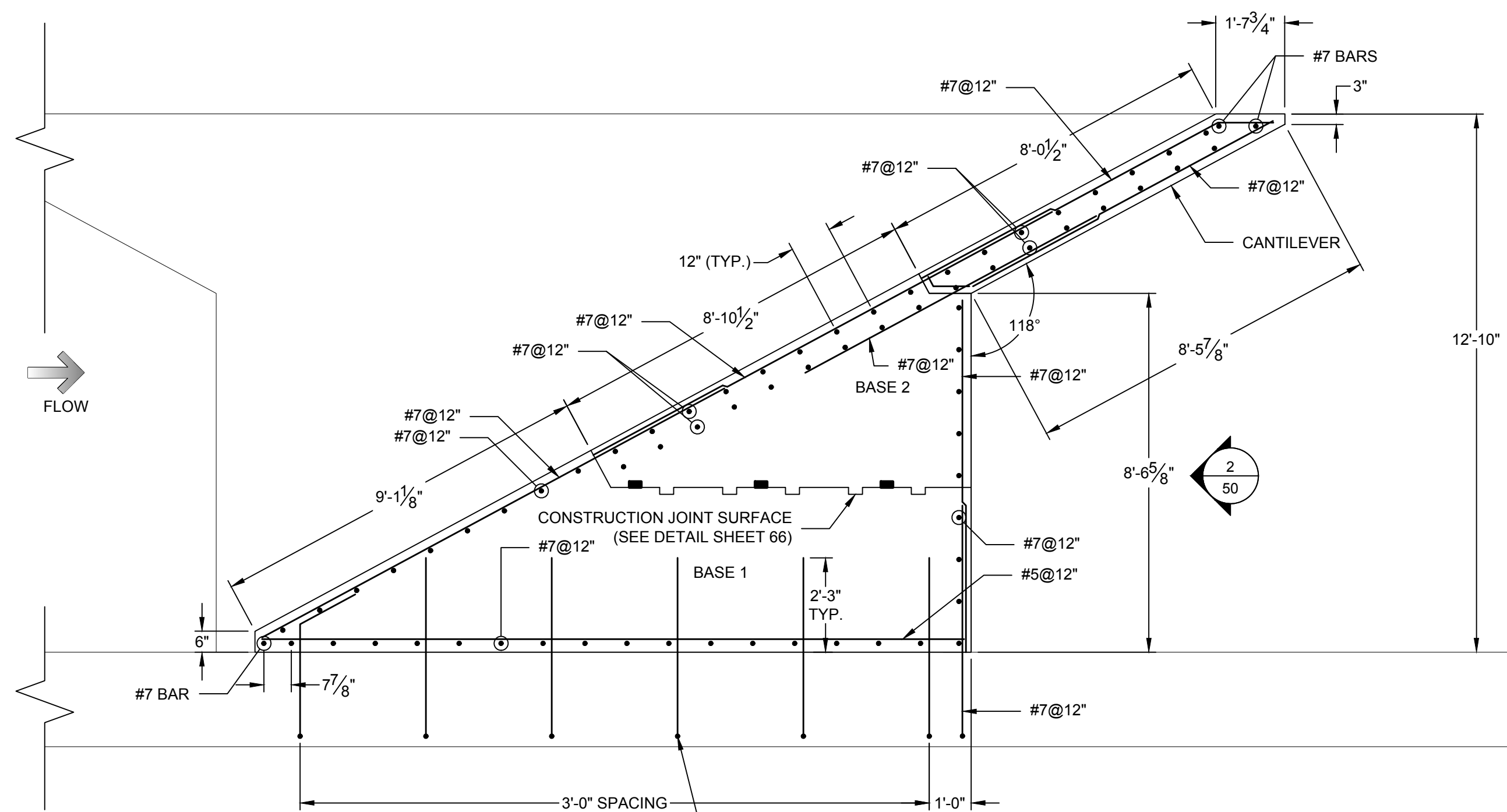


2 TOP HOOK DETAIL
LOW-STAGE WEIR WALL
SCALE: 3/8"=1'0"

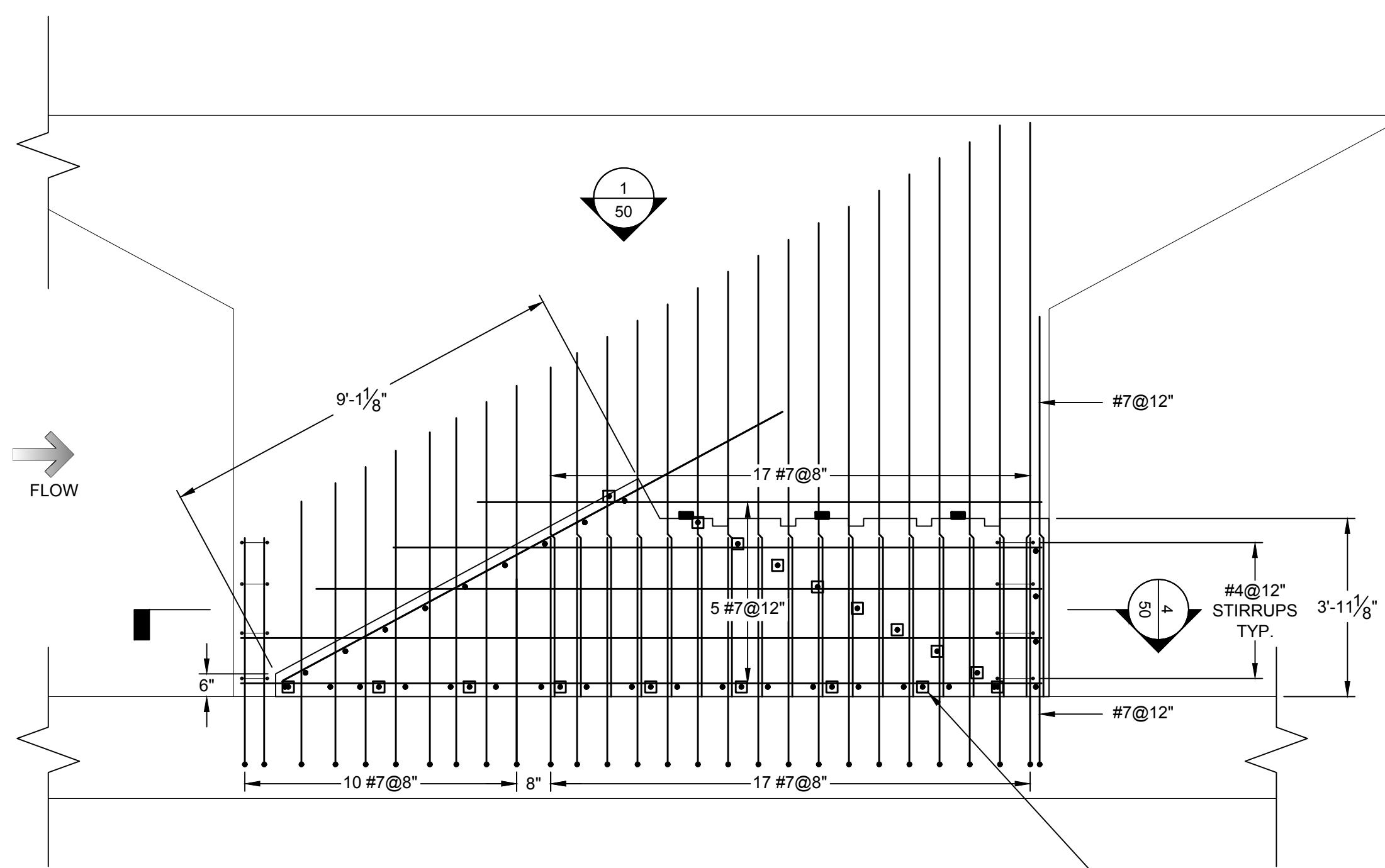


C SEGMENT I1 WALL SECTION
MID-STAGE TO LOW-STAGE TRANSITION
SCALE: 3/8"=1'0"
FORM SAVER (TYP.)

PROJECT: 16C17043.00	DATE: 07/10/2017	SHEET: 47 OF 66
<p>CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA</p> <p>MID STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT I1</p>		
DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RPL, JRC
<p>DESIGNED BY: JTD, JC DRAWN BY: GHB, JSR CHECKED BY: RPL, JRC</p> <p>RANDALL P. BASS, P.E. Professional Engineer No. 10885 Georgia Professional Engineer No. 10885</p>		
<p>DATE: 07/10/17 GEORGIA PROFESSIONAL ENGINEER NO. 10885</p>		
<p>DESCRIPTION</p>		
<p>REV</p>		

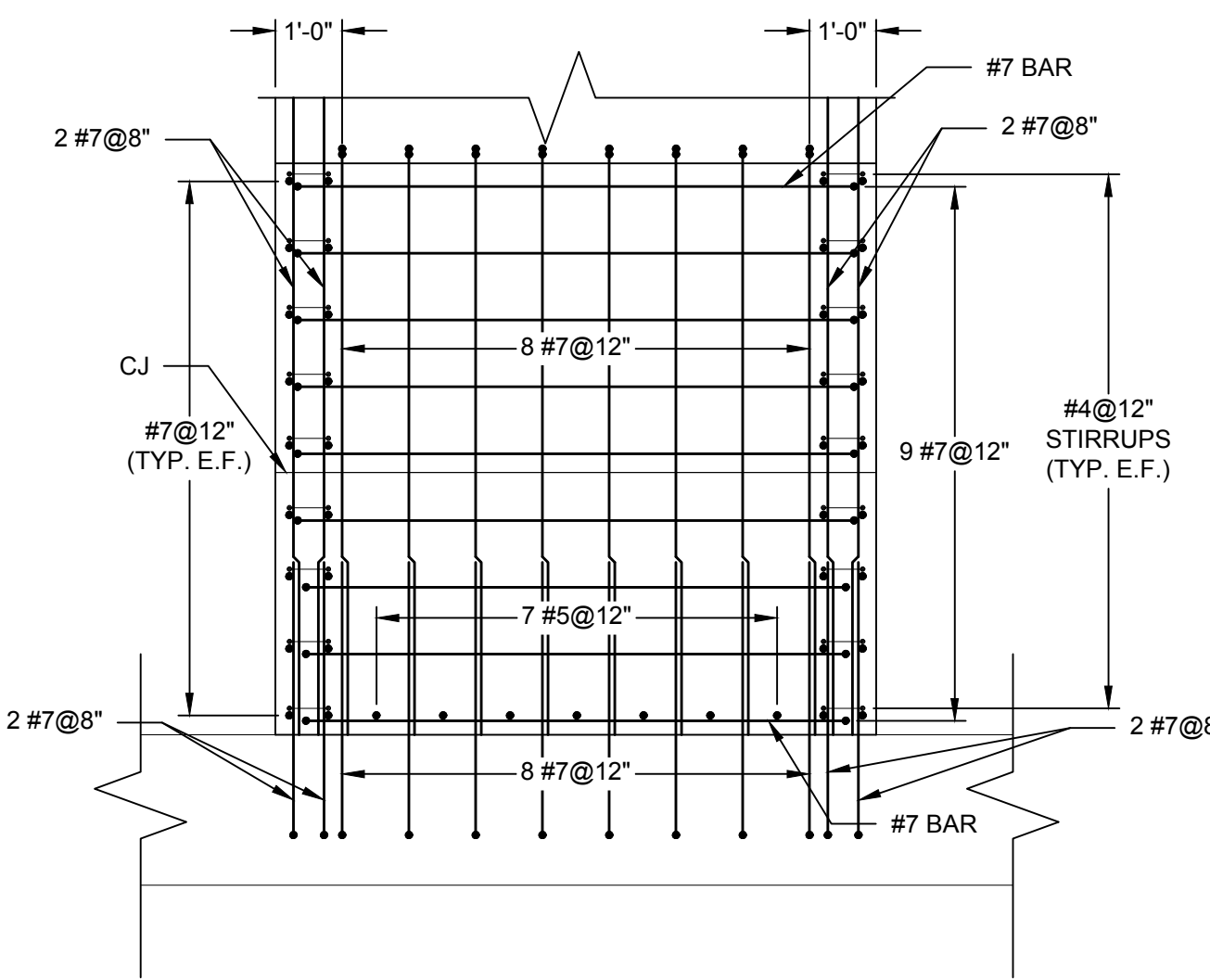


A SEGMENT I1 DOWNSTREAM RAMP SECTION
SCALE: 3/8"=1'0"
0 2 4

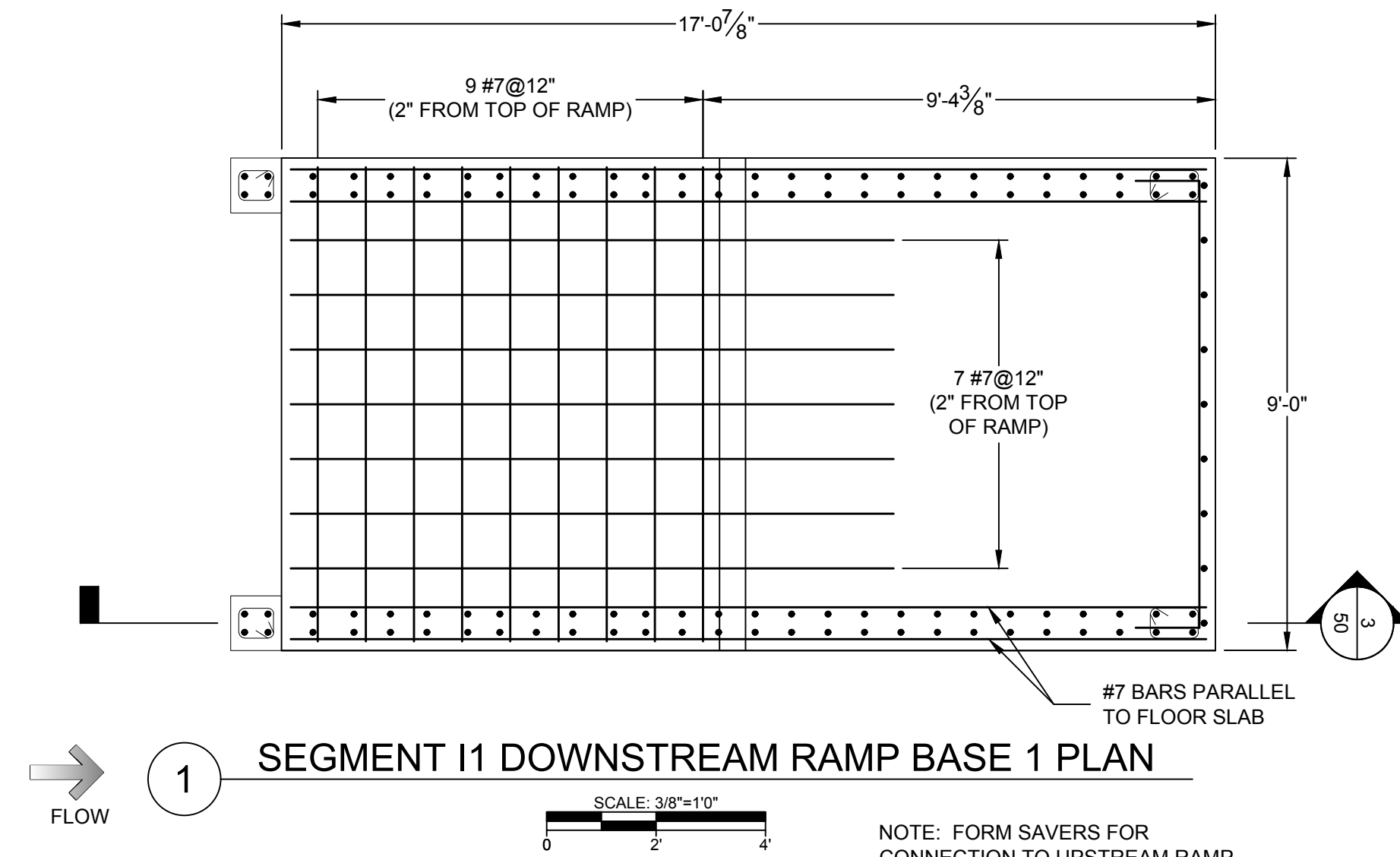


3 SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION
SCALE: 3/8"=1'0"
0 2 4

HORIZONTAL FORM SAVER (TYP.) TO BE INSTALLED IN AREA(S) SHOWN IN SEGMENT G1 DOWNSTREAM RAMP BASE 1. SEE FURTHER DETAILS SHEETS 37 AND 38. FORM SAVERS REQUIRED TO STRUCTURALLY TIE SEGMENT G1 DOWNSTREAM RAMP BASE 1 TO SEGMENT G1 INFILL(S).

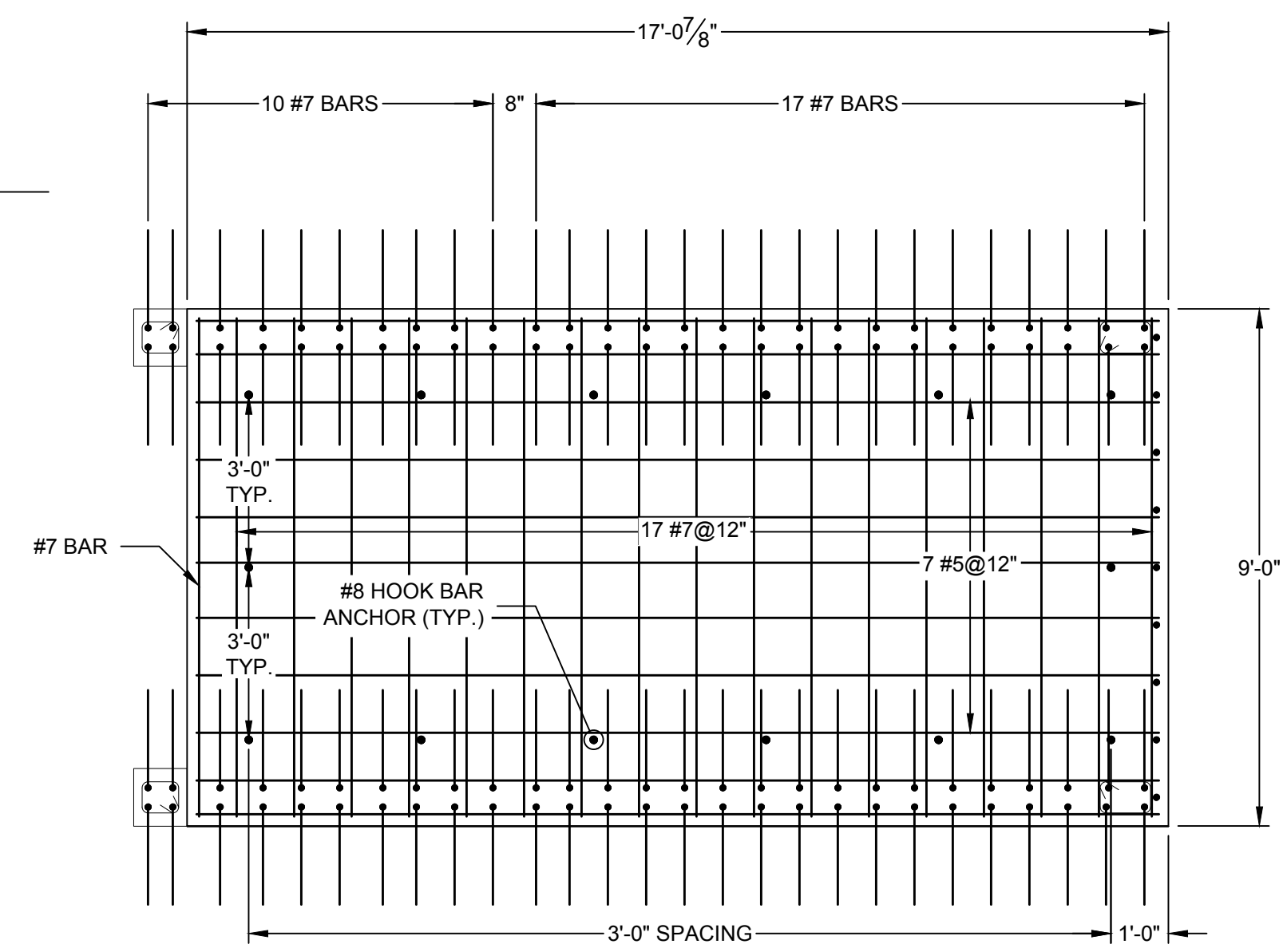


2 SEGMENT I1 DOWNSTREAM RAMP ELEVATION
SCALE: 3/8"=1'0"
0 2 4



1 SEGMENT I1 DOWNSTREAM RAMP BASE 1 PLAN
SCALE: 3/8"=1'0"
0 2 4

NOTE: FORM SAVERS FOR CONNECTION TO UPSTREAM RAMP NOT SHOWN FOR CLARITY.

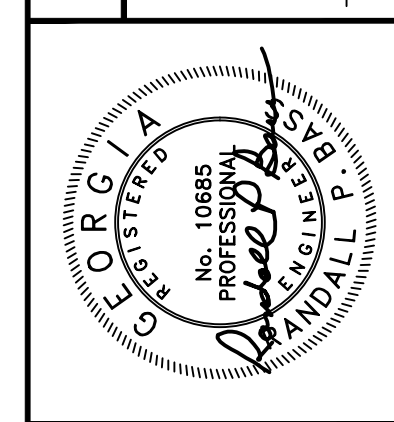


4 SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION
SCALE: 3/8"=1'0"
0 2 4

G:\2016 PROJECTS\16C17043.01 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCT\08-CAD DRAWINGS\05-FINAL DESIGN\PLT_STRUCTURAL_PIANO_KEY_WDR.DWG

8-2-17					
1	REVISED PER ADDENDUM NO. 03				

CHECKED BY: RPL_JRC
DRAWN BY: GHB_JSR
DESIGNED BY: JTD_JC
RANDALL P. BASS, P.E.
DATE: 07/10/17
GEORGIA PROFESSIONAL ENGINEER NO. 10685

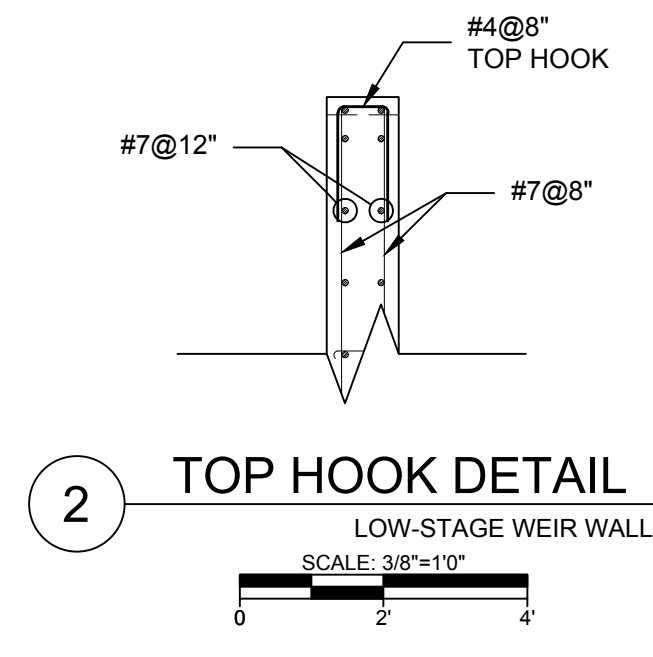
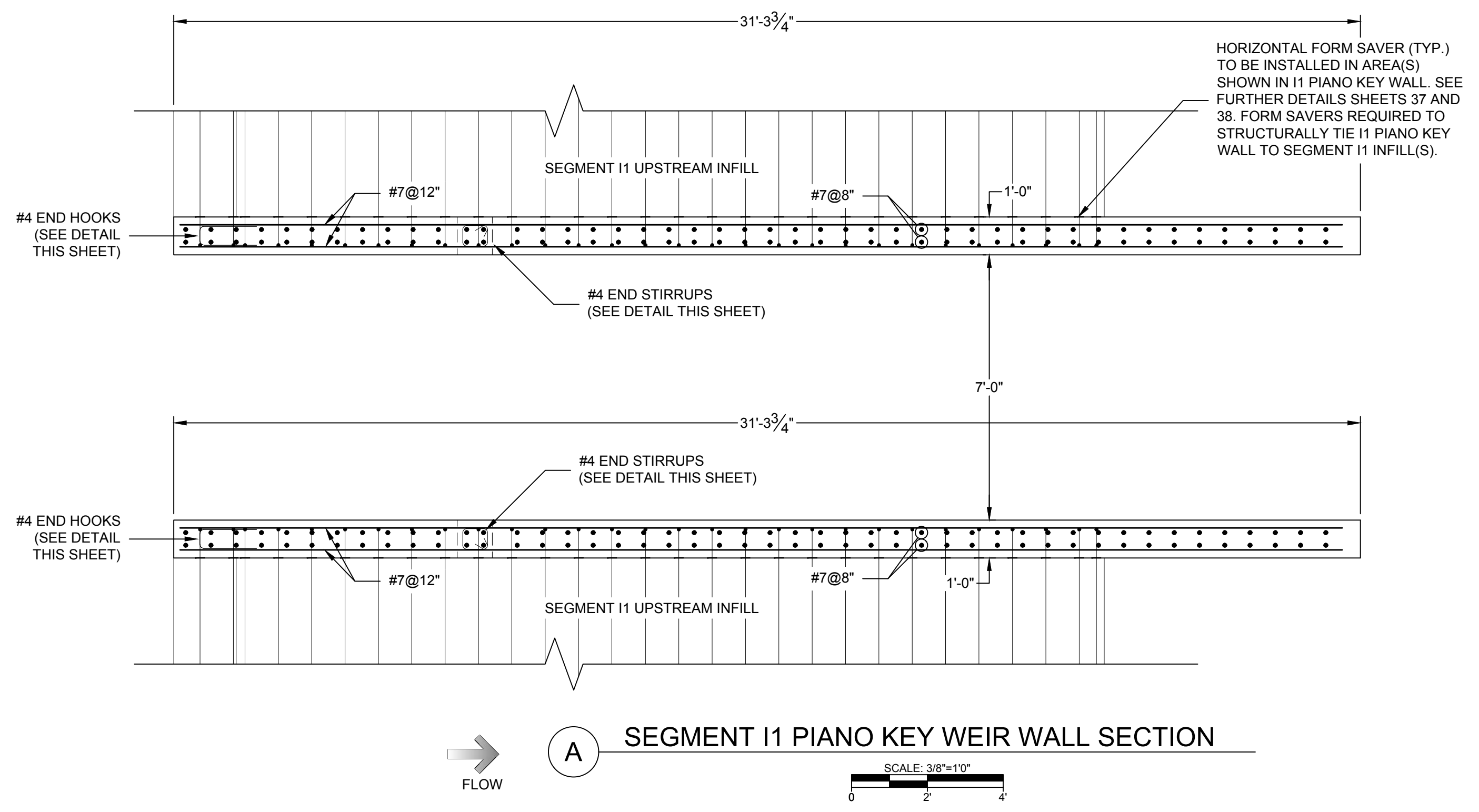
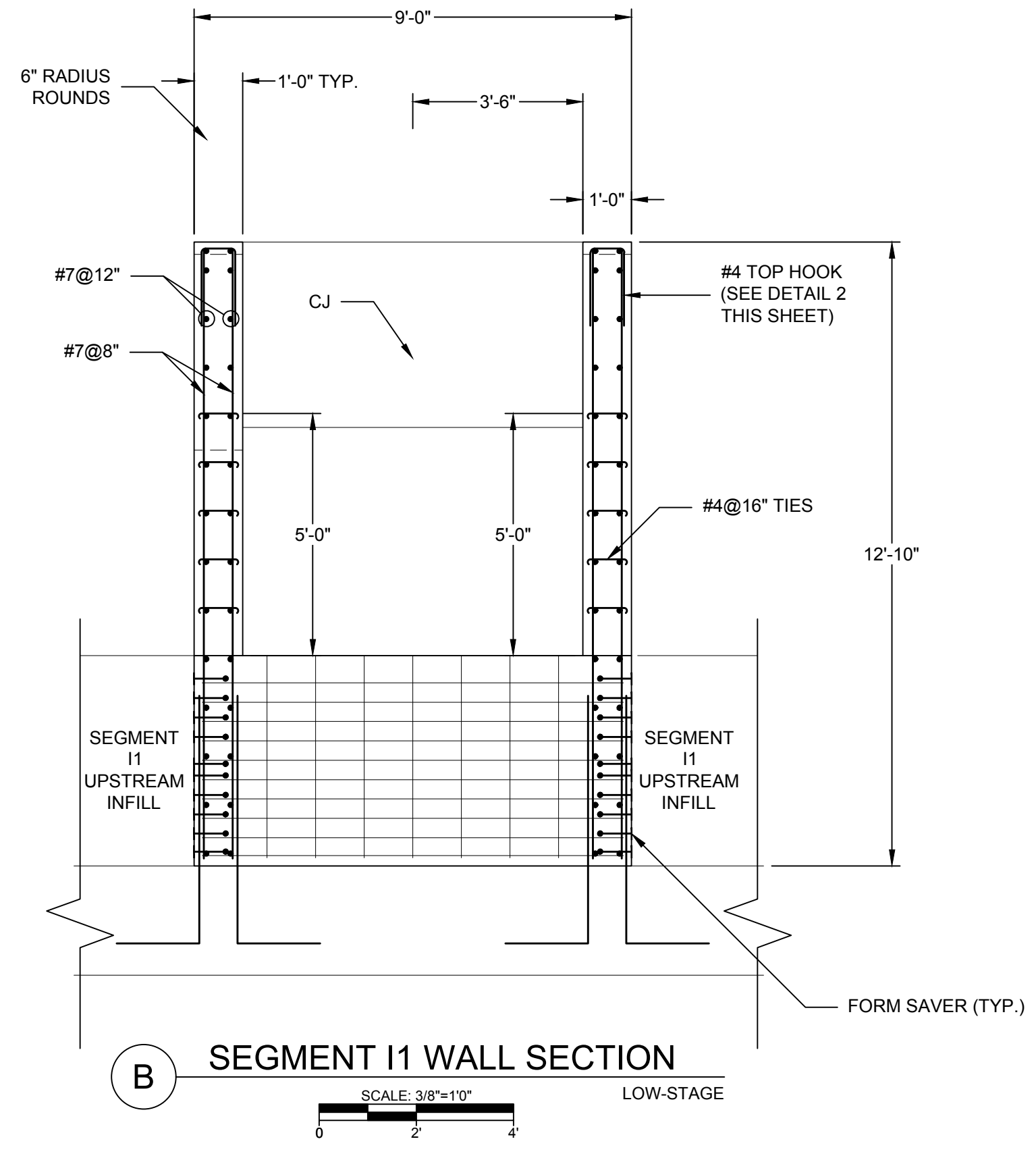
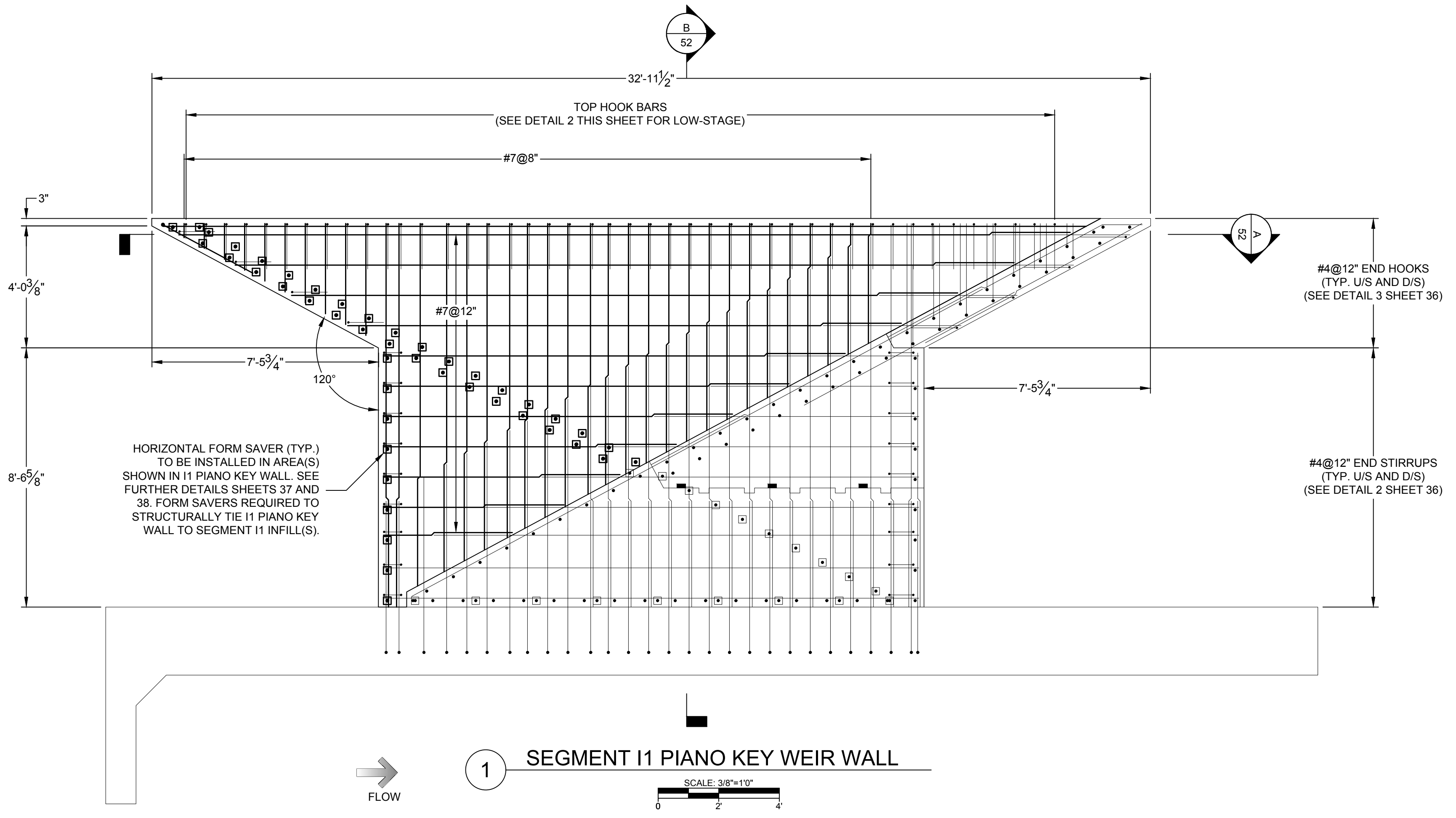


Schnabel ENGINEERING
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 /
Phone: 770-781-8006 / Fax: 770-781-8003 /
schnabel-eng.com

CONSTRUCTION PLANS FOR
LAKE PEACHTREE SPILLWAY
REPLACEMENT PROJECT
PEACHTREE CITY, GEORGIA
**LOW STAGE DOWNSTREAM
RAMP REINFORCEMENT
DETAILS SEGMENT I1**

PROJECT: 16C17043.00
DATE: 07/10/2017
SHEET
50 OF 66

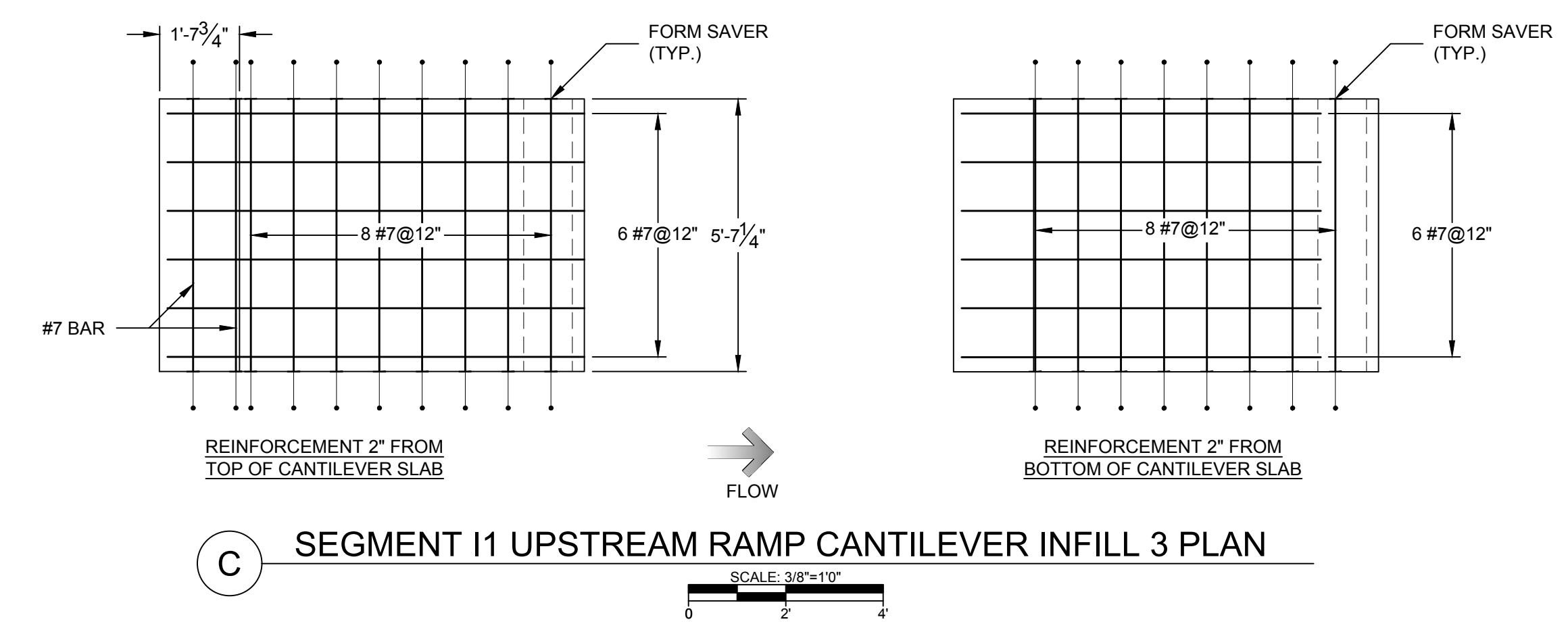
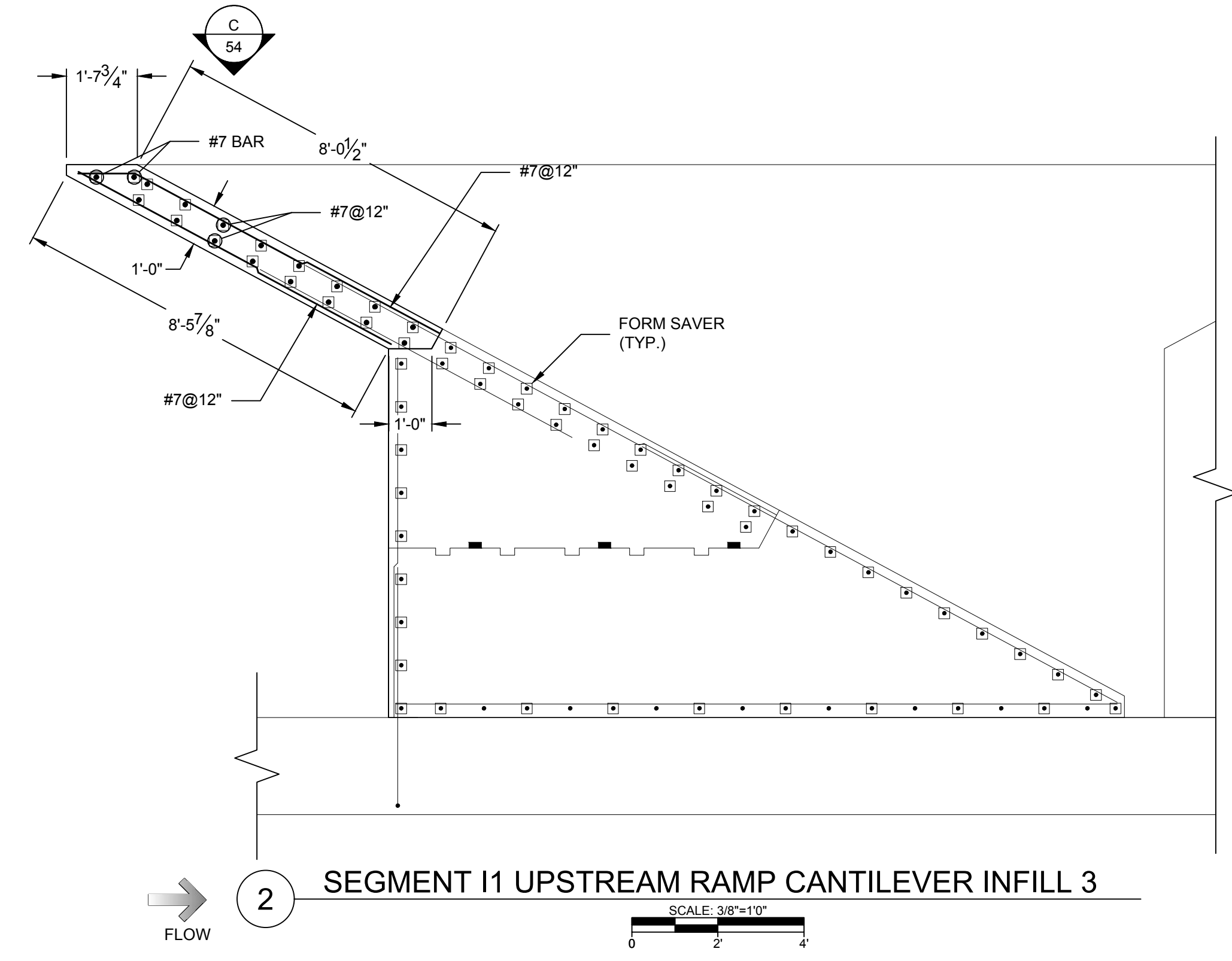
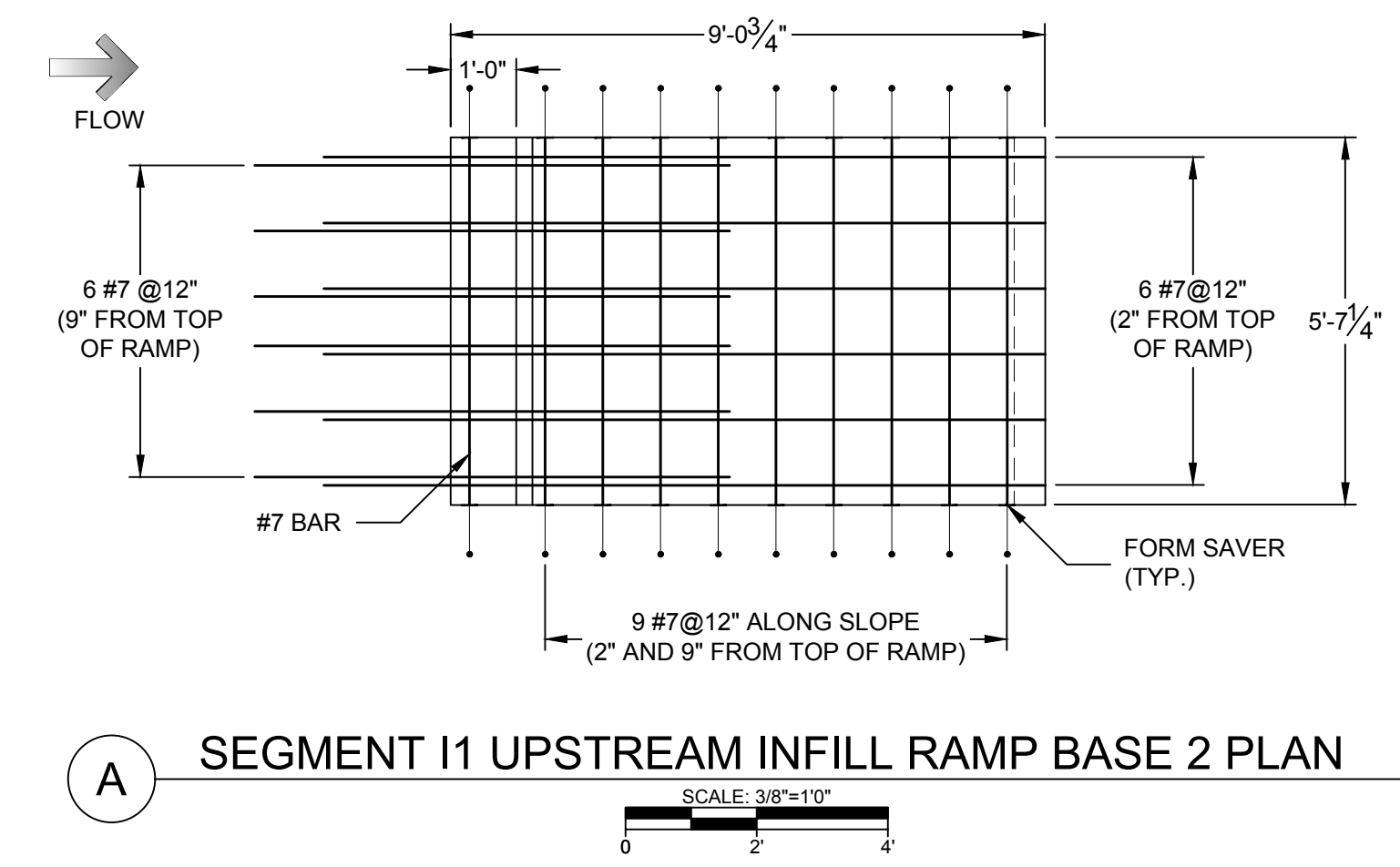
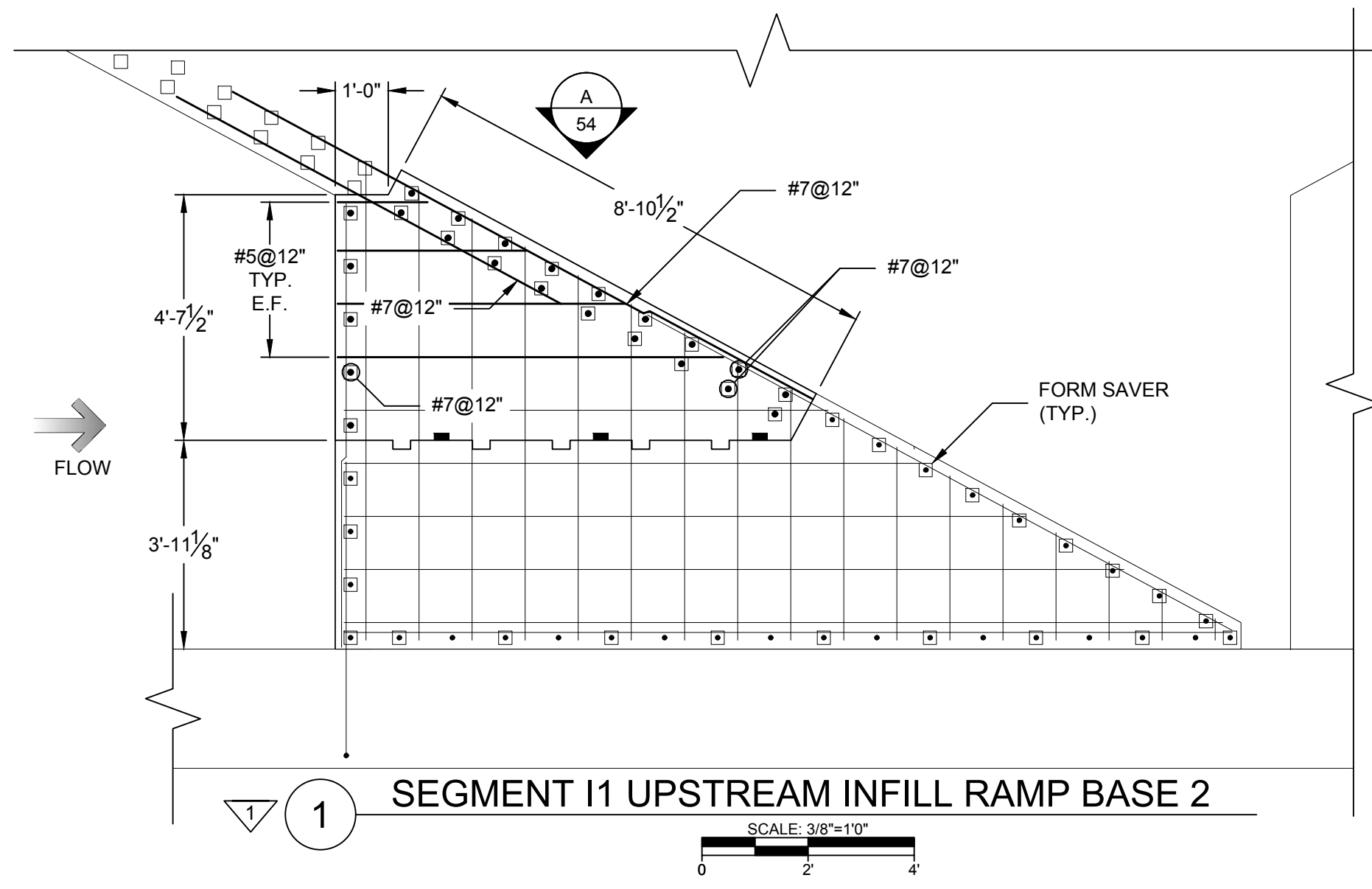
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PROJECT: 16C17043.00	DATE: 07/10/2017	SHEET: 52 OF 66
<p>CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA</p> <p>LOW STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT I1</p>		
DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RPL, JRC
<p>RANDALL P. BASS, P.E.</p> <p><i>Randall P. Bass</i></p> <p>GEORGIA PROFESSIONAL ENGINEER NO. 10685</p>		
<p>DATE: 07/10/17</p>		
REV	DESCRIPTION	DATE

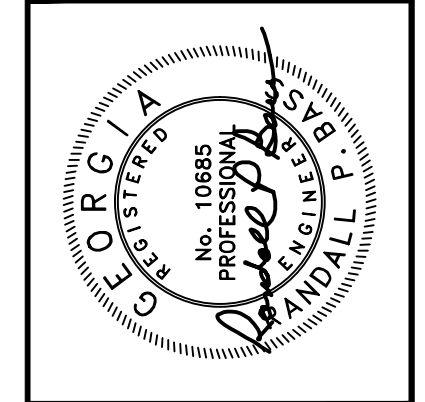
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NOTE: FOR CONTRACTION JOINT BETWEEN PIANO KEY SEGMENTS I1 AND H2, PROVIDE 2-INCHES CLEARANCE FOR REINFORCEMENT EACH SIDE OF JOINT.



REV	DESCRIPTION	DATE
1	REVISED PER ADDENDUM NO. 03	8-2-17

CHECKED BY: RPL, JRC
 DRAWN BY: GHB, JSR
 DESIGNED BY: JTD, JC
RANDALL P. BASS, P.E.
Randall P. Bass
 GEORGIA PROFESSIONAL ENGINEER NO. 10685
 DATE: 07/10/17



CONSTRUCTION PLANS FOR
 LAKE PEACHTREE SPILLWAY
 REPLACEMENT PROJECT
 PEACHTREE CITY, GEORGIA
**LOW STAGE UPSTREAM RAMP
 REINFORCEMENT DETAILS
 SEGMENT I1**

PROJECT: 16C17043.00
 DATE: 07/10/2017
 SHEET
 54 OF 66

