

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 noted 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 $\frac{3}{4}$ " 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.
- 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?
- 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?
- 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.)
- 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?
- 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?
- 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 been 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.

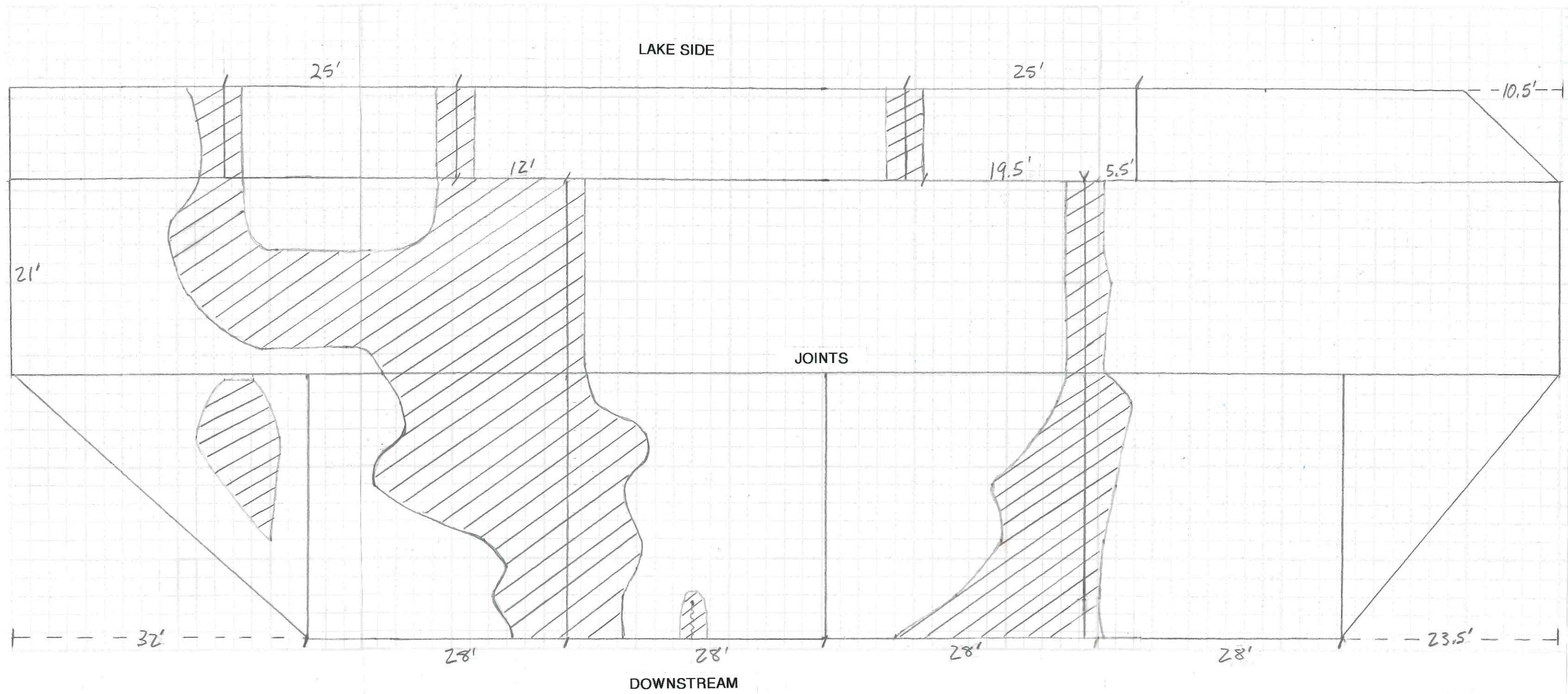
The last area is located in the northwest apron of the downstream face. At this location the GPR data appeared to indicate the anomalous area that is shown on Figure 1. Figure 8 is a photograph of this area. However, due to the shape and topography of this area it was difficult to completely survey with 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



Scale: 1" = 10'
Prepared: HCE
Checked:
Project No.: 2014.4496.01

Notes: 3/28/14

Client: Peachtree City
Site: Lake Peachtree Dam Project Site
Title: Anomalous Area Location Plan

FIG. 1

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.

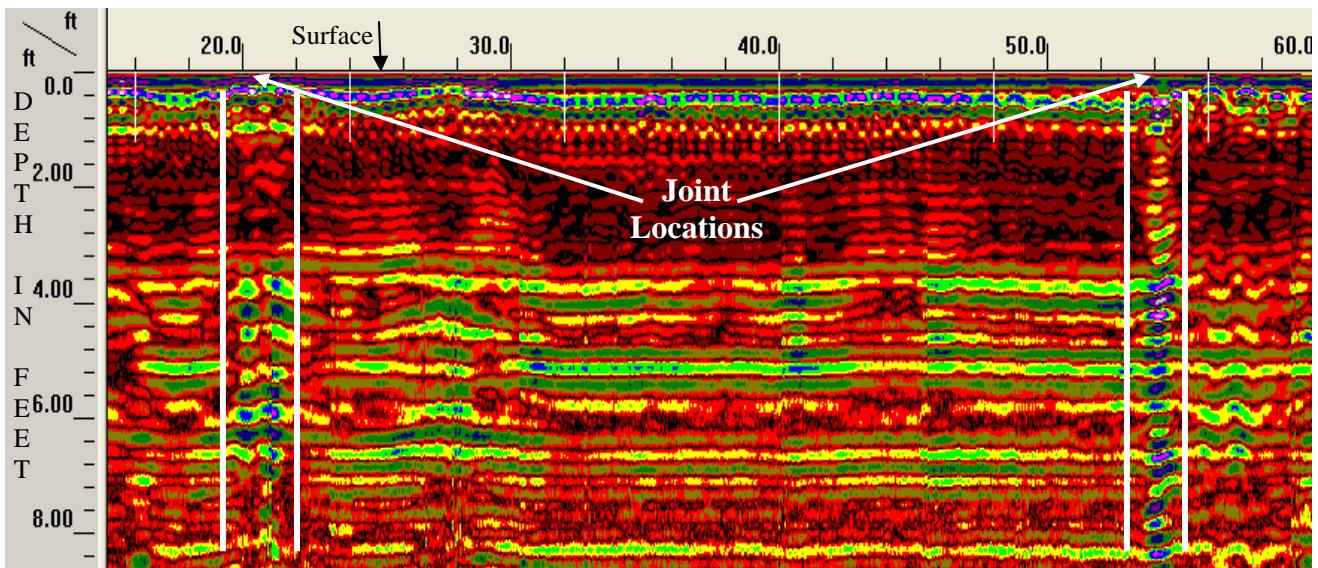


Figure 10: Sample GPR cross section of the anomalous areas located along the joints on the lakeside of the dam. Anomalous area is located between the white lines.

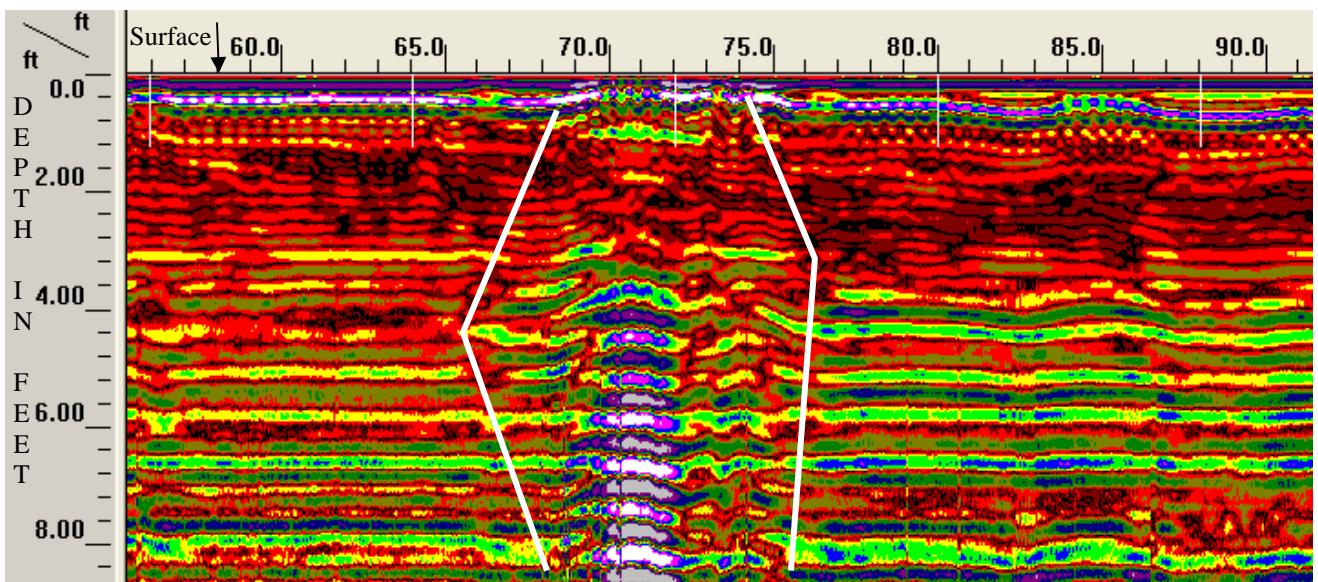


Figure 11: Sample GPR cross section of the conditions beneath the northeast anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

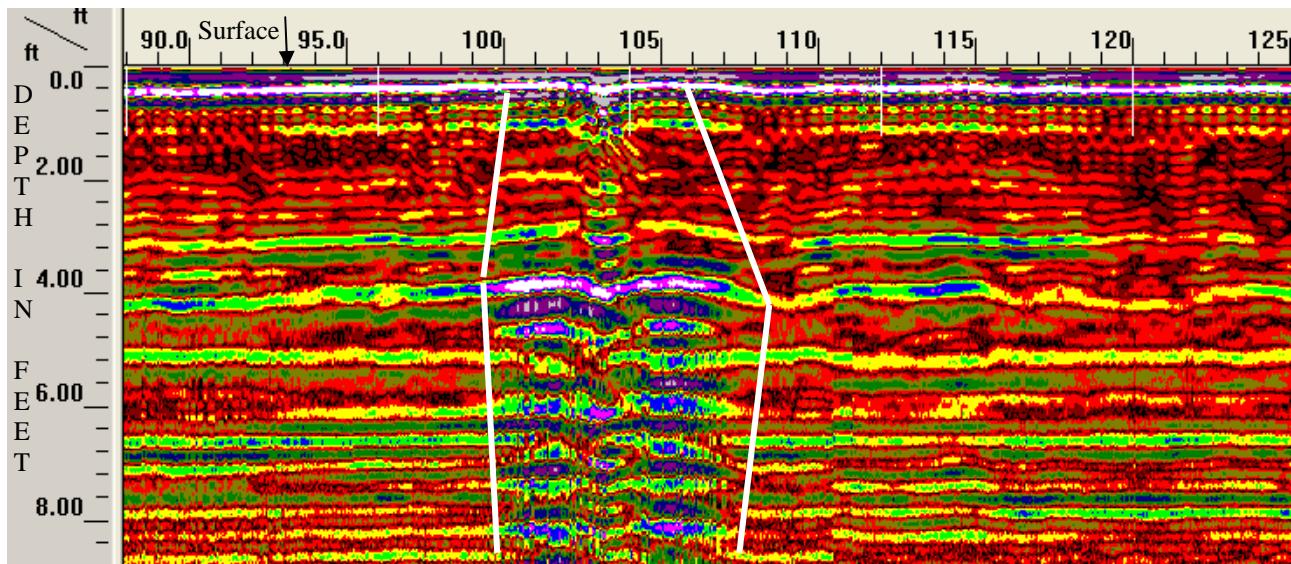


Figure 12: Sample GPR cross section of the conditions beneath the northeast anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

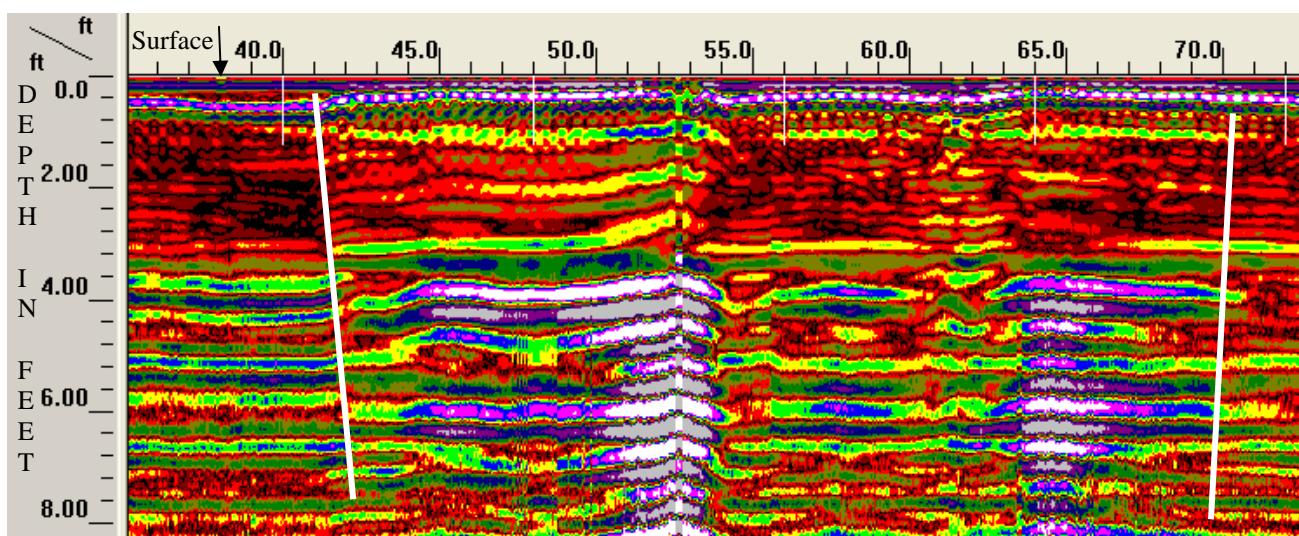


Figure 13: Sample GPR cross section of the conditions beneath the northwest anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

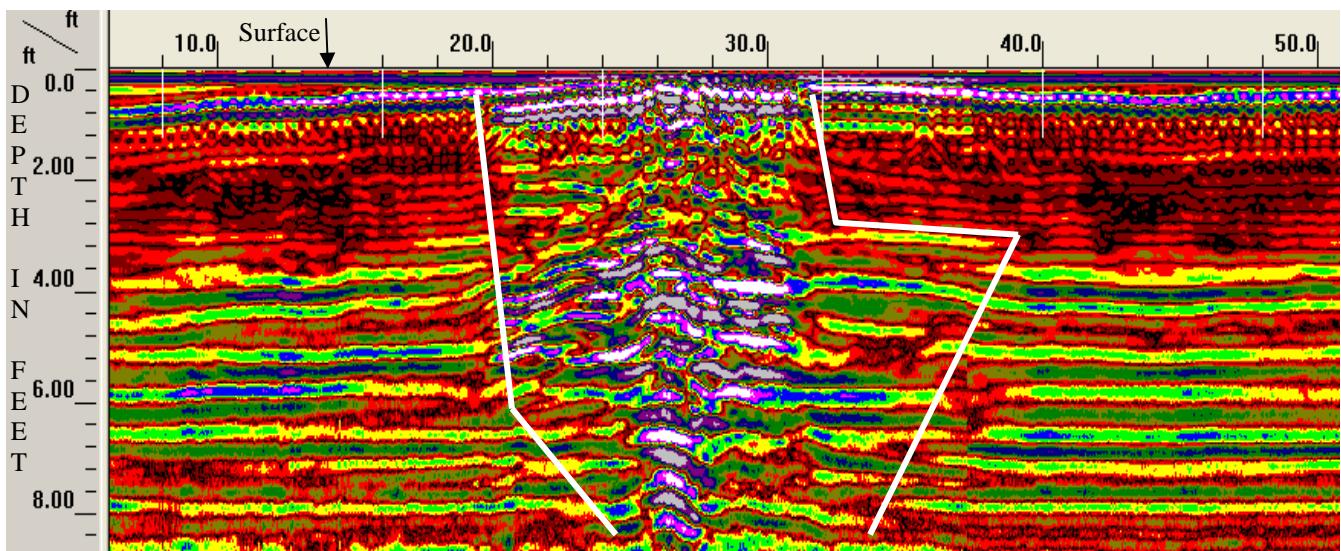


Figure 14: Sample GPR cross section of the conditions beneath the northwest anomalous area on the downstream face of the dam. Anomalous area is located between the white lines.

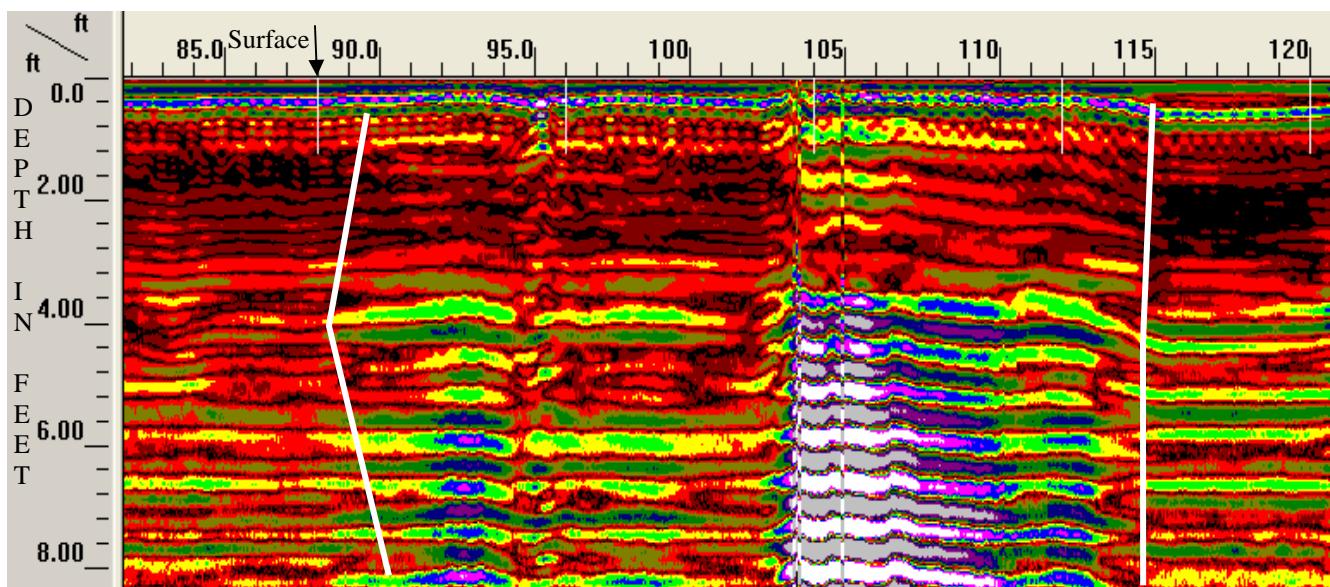
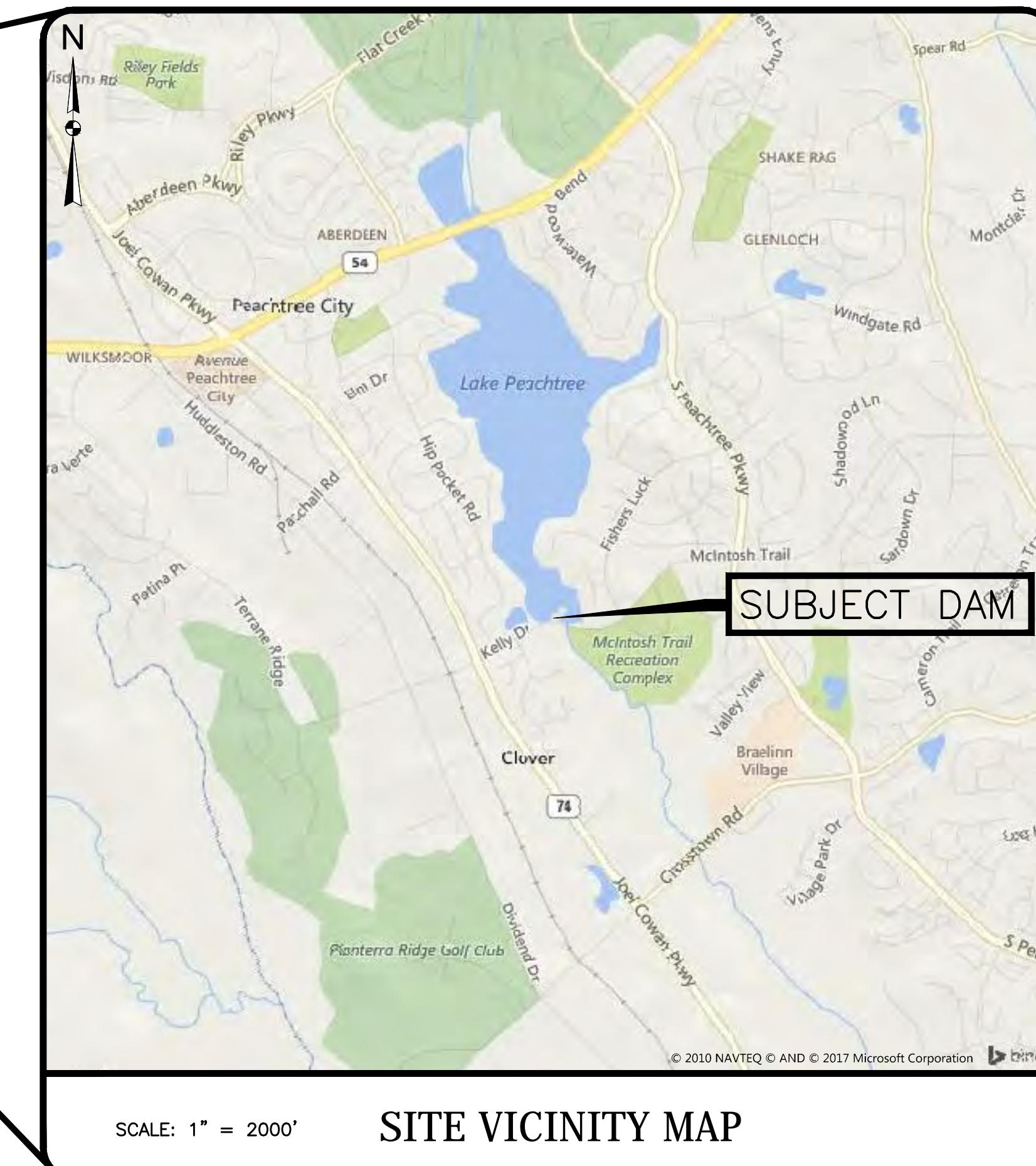
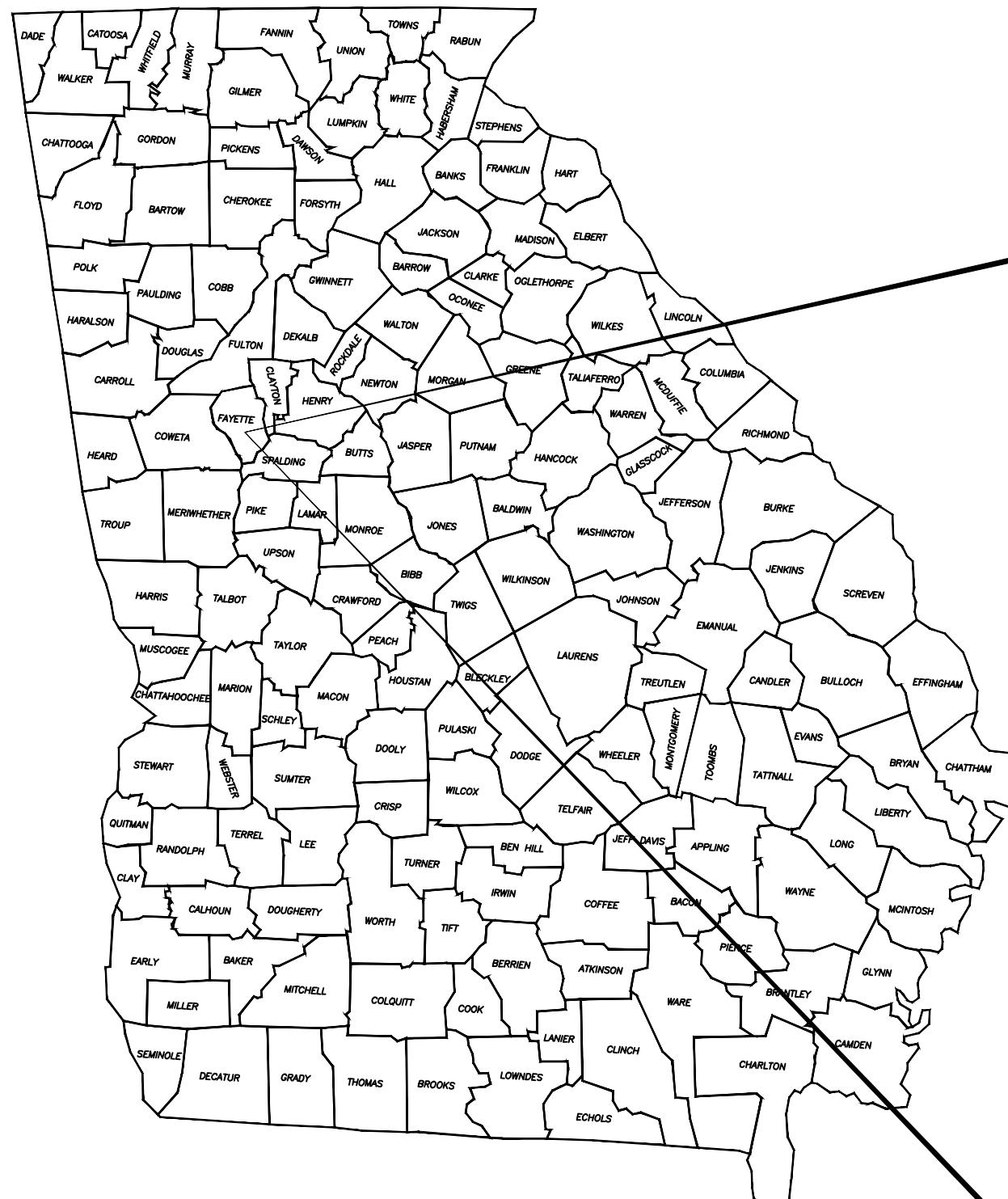


Figure 15: Sample GPR cross section of the conditions beneath the anomalous area along the top of the dam. Anomalous area is located between the white lines.

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

PROJECT: 16C17043.00	DATE: 07/10/2017	SHEET 1 OF 66
Schnabel Engineering 2017 All Rights Reserved		DESCRIPTION
REV. 07/10/17		DATE
GEORGIA PROFESSIONAL ENGINEER NO. 10885		DATE
Randall P. Bass		Signature
Randy P. Bass, P.E.		PRINT NAME
07/10/17		DATE
DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RFB, JRC
1 REVISED PER ADDENDUM NO. 03		E-2-17

GENERAL NOTES:

- SCHNABEL ENGINEERING, LLC IS SOLELY RESPONSIBLE FOR THE PREPARATION OF THE PLANS FOR THE SUBJECT DAM AND SPILLWAY. ADHERENCE TO THESE PLANS, AS WELL AS ADHERENCE TO GOVERNMENT, CITY AND COUNTY REGULATIONS, ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE DAILY ON-SITE PRESENCE OF SCHNABEL ENGINEERING, LLC REPRESENTATIVES WILL BE REQUIRED TO CONFIRM THAT SITE CONDITIONS ARE AS ANTICIPATED AND TO CONFIRM THAT CONTRACTORS MEANS AND METHODS DO NOT COMPROMISE DESIGN INTENT.
- CONTRACTOR TO VERIFY ALL CONDITIONS, ELEVATIONS AND DIMENSIONS BEFORE BEGINNING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER FOR JUSTIFICATION AND/OR CORRECTION BEFORE PROCEEDING WITH THE WORK. CONTRACTOR TO ASSUME RESPONSIBILITY FOR DISCREPANCIES WHICH ARE NOT REPORTED. ALL DIMENSIONS SHOULD BE READ OR CALCULATED.
- CONTRACTOR TO HAVE ALL UTILITIES FIELD LOCATED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS. PROPER SAFETY PROCEDURES ARE OF SPECIAL CONCERN ON THE PROJECT CONSIDERING THAT WORKERS MAY BE WORKING IN TRENCH EXCAVATIONS.
- ALL MATERIALS AND WORK PERFORMED SHALL COMPLY WITH THE TECHNICAL SPECIFICATIONS OF THE PROJECT.

WATER CONTROL NOTES:

- CONTRACTOR SHALL BUILD, MAINTAIN AND OPERATE ANY TEMPORARY DIKES, COFFERDAMS, CHANNELS, FLUMES, SUMPS AND OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT SURFACE WATER FROM THE CONSTRUCTION WORK WHILE CONSTRUCTION IS IN PROGRESS. DIVERSION OR RETENTION OF SURFACE WATERS WILL BE CONTINUED UNTIL SUCH TIME AS DETERMINED BY THE ENGINEER.
- FOUNDATIONS FOR CONCRETE, AND OTHER PARTS OF THE CONSTRUCTION SITE, SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER OR EXCESSIVELY MUDDY OR SOFT CONDITIONS AS NEEDED FOR PROPER EXECUTION OF THE CONSTRUCTION WORK.
- DEWATERING METHODS FOR FOUNDATION CONSTRUCTION OR SUBGRADE PREPARATION THAT CAUSE A LOSS OF FINES FROM FOUNDATION OR SUBGRADE AREAS WILL NOT BE PERMITTED.
- CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES INCURRED AS A RESULT OF THE LACK OF ADEQUATE SURFACE OR SUBSURFACE WATER CONTROL.
- CONTRACTOR IS TO PROVIDE THE ENGINEER WITH A WATER CONTROL PLAN FOR REVIEW AND ACCEPTANCE PRIOR TO THE START OF CONSTRUCTION.

SOIL COMPACTION NOTES:

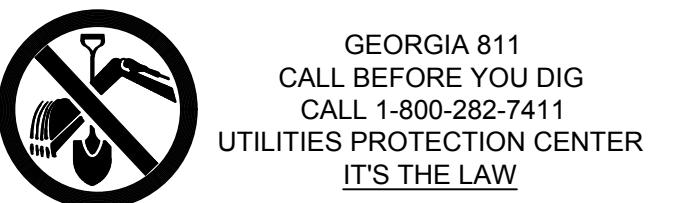
- ALL AREAS TO RECEIVE STRUCTURAL FILL TO BE CLEARED AND STRIPPED FREE OF TOPSOIL, ROOTS, STUMPS, ORGANICS AND ALL OTHER DELETERIOUS MATERIAL.
- SUBGRADE AREAS WHICH ARE EXCESSIVELY WET, SOFT, OR DEEMED OTHERWISE UNSUITABLE BY THE ENGINEER, SHALL BE UNDERCUT AND REPLACED WITH FILL MATERIALS AS RECOMMENDED BY THE ENGINEER AND COMPACTED IN ACCORDANCE WITH NOTE (4) OF THIS SECTION. SUBGRADE SHALL BE CAPABLE OF SUPPORTING 3,000 PSF WITH LESS THAN 1/2 INCHES OF TOTAL SETTLEMENT.
- AREAS TO RECEIVE STRUCTURAL FILL SHALL BE BENCHING INTO EXISTING SLOPES, DENSIFIED, AND SHALL BE AT SUCH MOISTURE CONTENT THAT THE FILL SOILS CAN BE COMPACTED AGAINST THE SLOPE TO EFFECT A GOOD BOND BETWEEN THE FILL SOILS AND THE EXISTING SOILS.
- STRUCTURAL FILL TO BE PLACED IN MAXIMUM 9-INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY AND BETWEEN OPTIMUM AND 4% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698).
- ALL FILL SOILS TO BE PLACED UNDER THE OBSERVATION OF THE ENGINEER OR HIS REPRESENTATIVE.
- CONTRACTOR SHALL OBTAIN BORROW FROM ONSITE EXCAVATIONS, IF THE MATERIAL MEETS PROJECT REQUIREMENTS. SHOULD THE ONSITE MATERIAL NOT MEET PROJECT REQUIREMENTS OR BE OF INSUFFICIENT QUANTITY, CONTRACTOR SHALL IDENTIFY AN OFFSITE BORROW SOURCE THAT MEETS PROJECT REQUIREMENTS.
- UTILIZE SHEEPSFOOT ROLLER TO COMPACT SOILS IN MASS GRADING/FILLING ACTIVITIES. MECHANICAL HAND TAMPERS WILL BE USED TO COMPACT SOIL AROUND, ABOVE OR ADJACENT TO STRUCTURES AND/OR CONDUITS WHERE THE USE OF LARGE SHEEPSFOOT ROLLERS MAY DAMAGE STRUCTURES. MECHANICAL HAND TAMPERS WILL BE USED WITHIN 3 FEET OF ALL STRUCTURES.

NOTES ON DRAIN CONSTRUCTION:

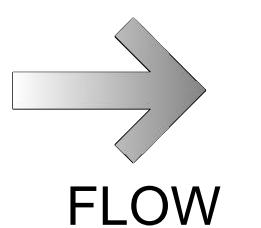
- DRAIN CONSTRUCTION WILL CONSIST OF INSTALLING THE FINE AND COARSE DRAIN AGGREGATE AND THE COLLECTOR/OUTLET PIPES FOR THE PROPOSED SERVICE SPILLWAY UNDERDRAIN.
- GEOTEXTILE MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION. ALL GEOTEXTILE MATERIALS MUST BE DELIVERED TO THE JOB SITE IN FACTORY-INSTALLED PROTECTIVE WRAPPINGS WITH ATTACHED DOCUMENTATION CERTIFYING THE QUALITY AND CONDITION OF GEOTEXTILE. USE OF AN UNAPPROVED GEOTEXTILE WILL RESULT IN REMOVAL OF MATERIAL AT CONTRACTOR'S EXPENSE.
- COARSE DRAIN AGGREGATE TO BE TOUGH, HARD, DURABLE PARTICLES AND SHALL BE REASONABLY FREE OF FLAT OR ELONGATED PIECES AND SHALL CONTAIN NO ORGANIC MATTER OR SOFT FRAGILE PARTICLES. CONTRACTOR TO FURNISH ENGINEER WITH THE GRADATION OF COARSE DRAIN FILL FROM SUPPLIER PRIOR TO USE. STONE SHALL MEET THE REQUIREMENTS FOR GEORGIA DOT NO. 89 COARSE AGGREGATE.
- UTILIZE ASTM C-33 SAND FOR FINE DRAINAGE AGGREGATE. CONTRACTOR TO FURNISH ENGINEER WITH THE GRADATION OF ASTM C-33 SAND FROM SUPPLIER PRIOR TO USE. SAND FOR FINE DRAINAGE AGGREGATE SHALL BE NATURAL / RIVER RUN MATERIAL. SAND CREATED FROM ROCK CRUSHING OPERATIONS WILL NOT BE PERMITTED. SAND DERIVED FROM LIMESTONE OR OTHER MATERIALS HAVING EITHER CEMENTITOUS OR SOLUTIONING PROPERTIES WILL NOT BE ACCEPTED. ENGINEER SHALL REVIEW AND APPROVE SOURCE OF SAND.
- COARSE DRAIN FILL SHALL BE SURROUNDED BY A MINIMUM OF 9-INCHES OF FINE DRAIN FILL.
- PERFORATED PIPE SHALL BE SURROUNDED BY A MINIMUM OF 6-INCHES OF COARSE DRAIN FILL.
- SOME MODIFICATIONS OF DRAIN LAYOUT AND INVERTS MAY BE REQUIRED IN THE FIELD TO ACCOMMODATE EXISTING SITE TOPOGRAPHY.
- Maintain a min. of 24-inches of fine drain fill between structures and coarse drain fill, unless detailed otherwise on the plans.
- PIPING SHALL BE PERFORATED AND NON-PERFORATED RIGID POLYVINYL CHLORIDE (PVC) PIPE. ALL PVC PIPE WILL BE AWWA C900, PRESSURE CLASS 150. ALL BENDS AND FITTINGS SHALL BE COMPATIBLE WITH THE PIPE UTILIZED AND SHOULD BE INSTALLED ACCORDING TO APPLICABLE MANUFACTURER'S RECOMMENDATIONS.
- INSTALLATION OF SUBSURFACE DRAINS WILL BE ACCOMPLISHED IN SUCH A MANNER THAT WORKER SAFETY IS NOT COMPROMISED IN ANY WAY. CONTRACTOR TO TAKE NECESSARY PRECAUTIONS TO PREVENT COLLAPSE OF TRENCH OR SLOPE INSTABILITY DURING INSTALLATION OF DRAINAGE SYSTEM.

GENERAL NOTES FOR CONCRETE STRUCTURES:

- EXCEPT AS OTHERWISE NOTED OR SPECIFIED, THESE GENERAL NOTES SHALL APPLY TO THE CONCRETE STRUCTURES.
- ALL CONCRETE SHALL CONFORM TO THE MOST RECENT EDITION OF "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES, ACI-350."
- STRUCTURAL DESIGN IS BASED UPON CONCRETE WITH A COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS AND REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI.
- CONCRETE TESTING WILL BE IN COMPLIANCE WITH THE FOLLOWING ASTM STANDARDS: C31, C39, C138, C143, C172, C173, AND C231.
- FOR REINFORCING STEEL
 - FOR DEVELOPMENT AND LAP SPLICE LENGTH, REFER TO ACI 318 AND ACI 350.
 - REINFORCEMENT SHALL HAVE A MINIMUM LENGTH OF 20'-0" BETWEEN SPLICES UNLESS OTHERWISE SHOWN.
 - SPLICES SHALL NOT CROSS CONTRACTION JOINTS.
 - SPLICE DIMENSIONS SHOWN ARE MINIMUM VALUES. CONTRACTOR MAY ELECT TO UTILIZE LONGER SPLICE LENGTHS TO ACCOUNT FOR POTENTIAL CONSTRUCTION VARIANCES AT NO ADDITIONAL COST TO THE OWNER.
- FOR DOWEL BARS:
 - DOWEL BARS SHALL MEET THE REQUIREMENTS OF ASTM A36 AND ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
 - GALVANIZED DOWEL BARS SHALL BE 2 FEET LONG AND 3/4" DIAMETER SMOOTH STEEL.
 - ONE-HALF OF EACH DOWEL BAR SHALL BE COATED WITH HEAVY GREASE TO PREVENT BOND WITH CONCRETE.
 - DOWELS SHALL BE KEPT IN STRAIGHT ALIGNMENT, AS SHOWN IN THE PLANS, DURING AND SUBSEQUENT TO CONCRETE PLACEMENT.
 - DOWELS SHALL BE SPACED 12 INCHES APART ALONG ALL CONTRACTION JOINTS UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS OTHERWISE SHOWN OR DESIGNATED.
- CUT OR BEND STEEL REINFORCING BARS AS NECESSARY TO INSTALL DRAIN PIPE OUTLETS.
- JOINTS
 - ADDITIONAL CONSTRUCTION JOINTS OR RELOCATION OF CONSTRUCTION JOINTS MAY BE USED IF APPROVED BY ENGINEER.
 - CONSTRUCTION JOINTS SHALL BE AS SHOWN ON THE PLANS. UNDER NO CIRCUMSTANCES MAY A SECTION OF WALL BE POURED HIGHER THAN TEN FEET DURING ANY ONE PLACEMENT (UNLESS OTHERWISE SHOWN).
- EMBEDDED MATERIALS
 - BEFORE PLACING CONCRETE, CARE SHALL BE TAKEN THAT ALL EMBEDDED ITEMS ARE IN POSITION AND SECURELY FASTENED IN PLACE.
 - ALL WATERSTOP SHALL BE SUPPORTED AND PROTECTED FROM DAMAGE AND EXPOSURE.
- CLEAR COVER TO REINFORCEMENT DISTANCE SHALL BE 2" FROM FORMED FACES/EDGES AND 3" FROM UNFORMED FACES/EDGES CAST AGAINST EARTH OR ROCK (UNLESS OTHERWISE SHOWN).
- CONCRETE WATERPROOFING SHALL BE APPLIED TO THE UPSTREAM SURFACE/SIDE OF THE PIANO KEY WALLS AND RAMPS. CONCRETE WATERPROOFING SHALL ALSO BE APPLIED TO THE SIDEWALLS AND SLABS ADJACENT TO THE PIANO KEY WALLS A MINIMUM OF 3 FEET IN THE UPSTREAM DIRECTION.

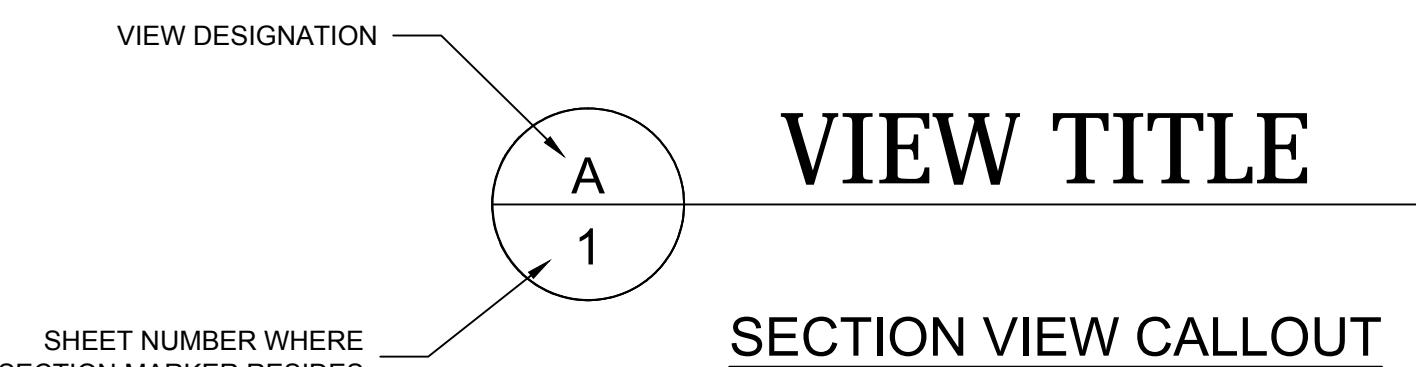
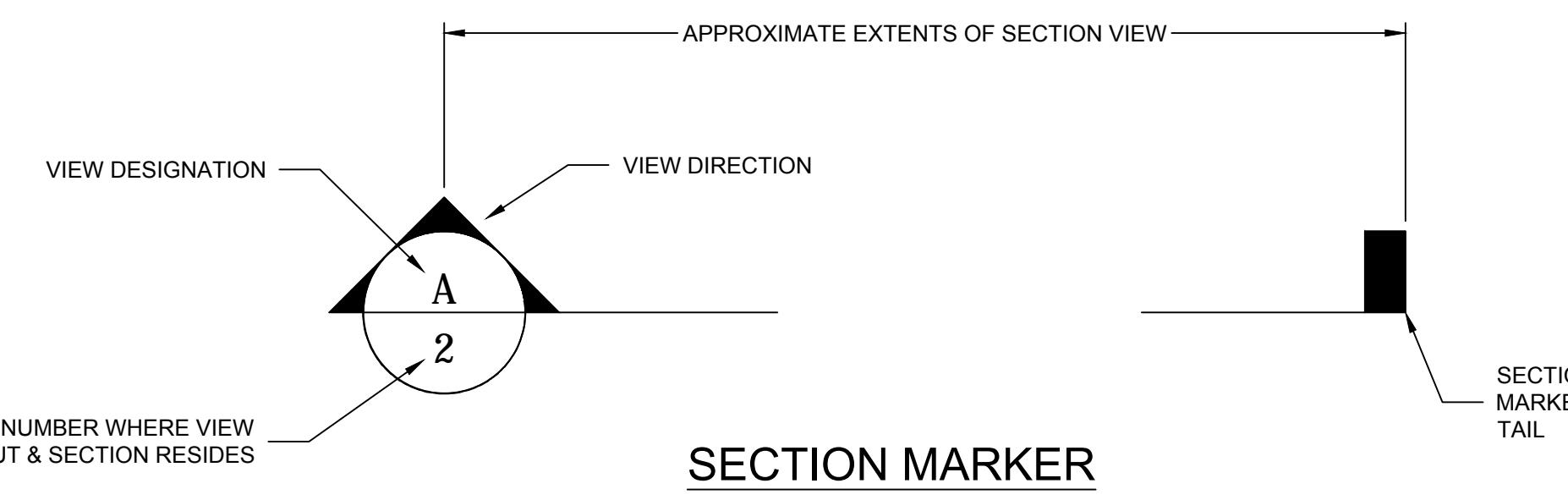


NOTE: CONTRACTOR MUST COORDINATE WORK WITH UTILITY PROVIDERS TO MAINTAIN UTILITY SERVICE AND A SAFE WORK SITE.



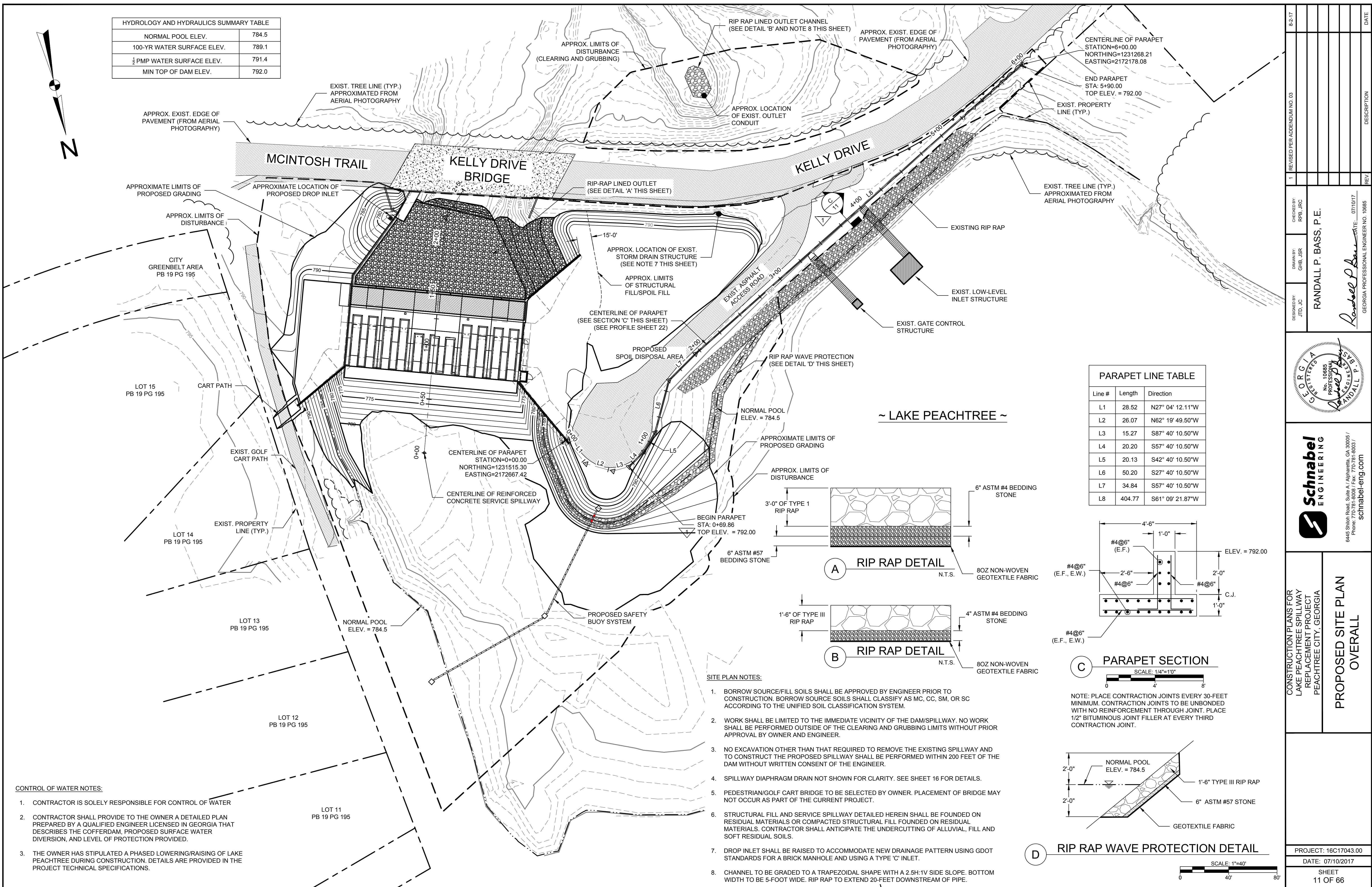
FLOW ARROW

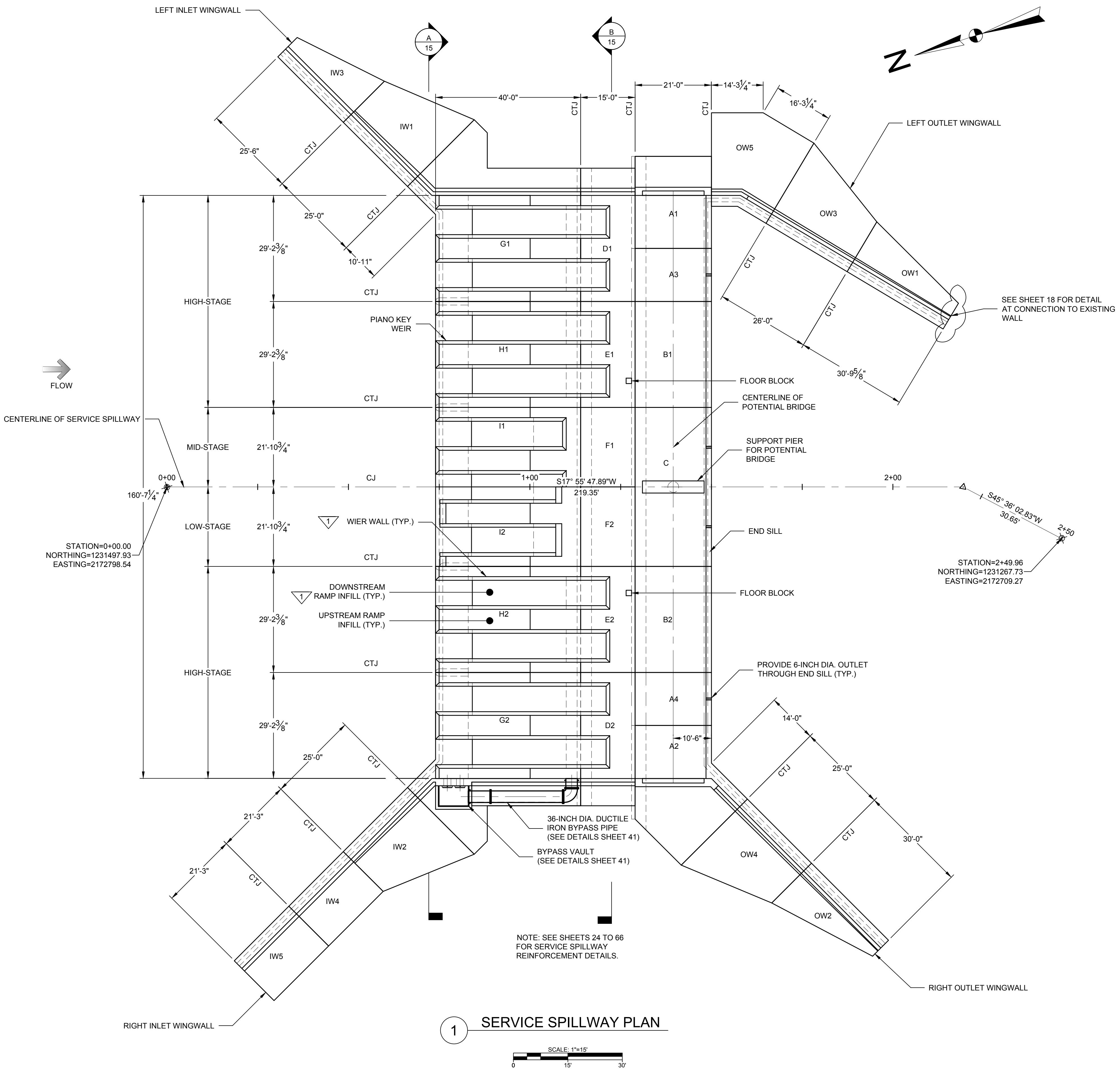
INDICATES DIRECTION OF FLOW



ABBREVIATIONS			
B.F.	BOTH FACES	O.D.	OUTSIDE DIAMETER
B.I.G.	BREAK-IN-GRADE	O.F.	OUTSIDE FACE (BACKFILL SIDE)
CJ	CONSTRUCTION JOINT	O/S	OFFSET FROM CENTERLINE
C/L, C, €	CENTER LINE	P.C.	POINT OF CURVATURE
C.M.P., CMP	CORRUGATED METAL PIPE	P.I., PI	POINT OF INTERSECTION
CTJ	CONTRACTION JOINT	RAD, R	RADIUS
D.F.	DOWNSTREAM FACE	R.C.P., RCP	REINFORCED CONCRETE PIPE
DIA.	DIAMETER	REF.	REFERENCE
D.I.P., DIP	DUCTILE IRON PIPE	STA.	STATION
D/S	DOWNSTREAM	U.F.	UPSTREAM FACE
E.F.	EACH FACE	U/S	UPSTREAM
ELEV., EL.	ELEVATION	VC	VERTICAL CURVE
E/P	EDGE OF PAVEMENT	W.E.	WATER ELEVATION
E.W., EW	EACH WAY	W/O	WITHOUT
EXIST.	EXISTING	BP, B.P.	BEGINNING POINT
FT	FEET	EP, E.P.	END POINT
I.D.	INSIDE DIAMETER	TP	TEST PIT
I.E., IE	INVERT ELEVATION	TYP.	TYPICAL DETAIL
I.F.	INSIDE FACE (FLOW SIDE)	DI, D.I.	DROP INLET
INV.	INVERT	HW, H.W.	HEADWALL
L.F., LF	LINEAR FOOT	PROP	PROPOSED
M.S.L.	MEAN SEA LEVEL	PVC	POLYVINYL CHLORIDE PIPE
NTS	NOT TO SCALE	P-1	PIEZOMETERS (TYP.)
N.P.	NORMAL POOL		

CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	GENERAL NOTES
PROJECT: 16C17043.00	
DATE: 07/10/2017	
SHEET 03 OF 66	
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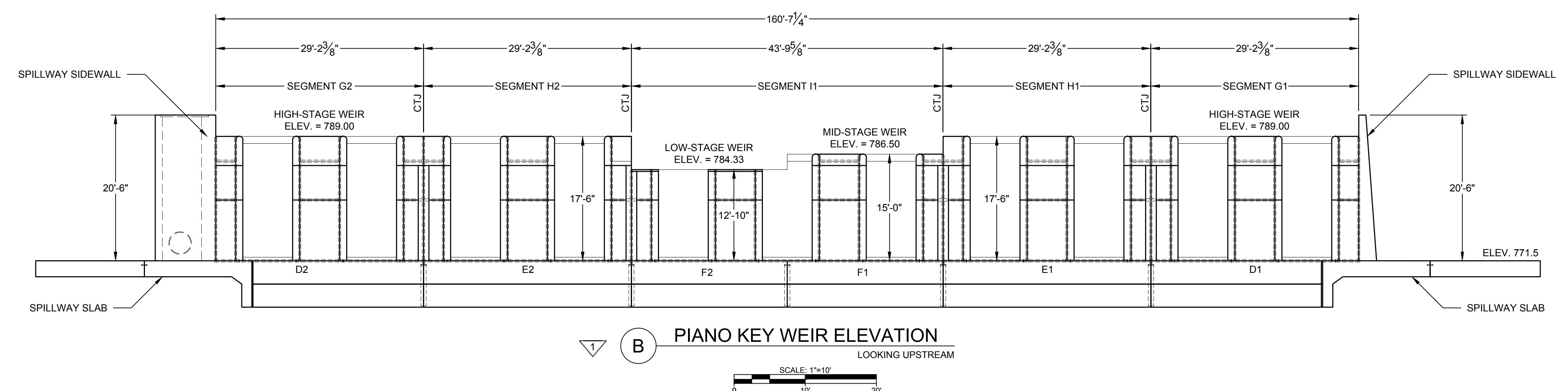
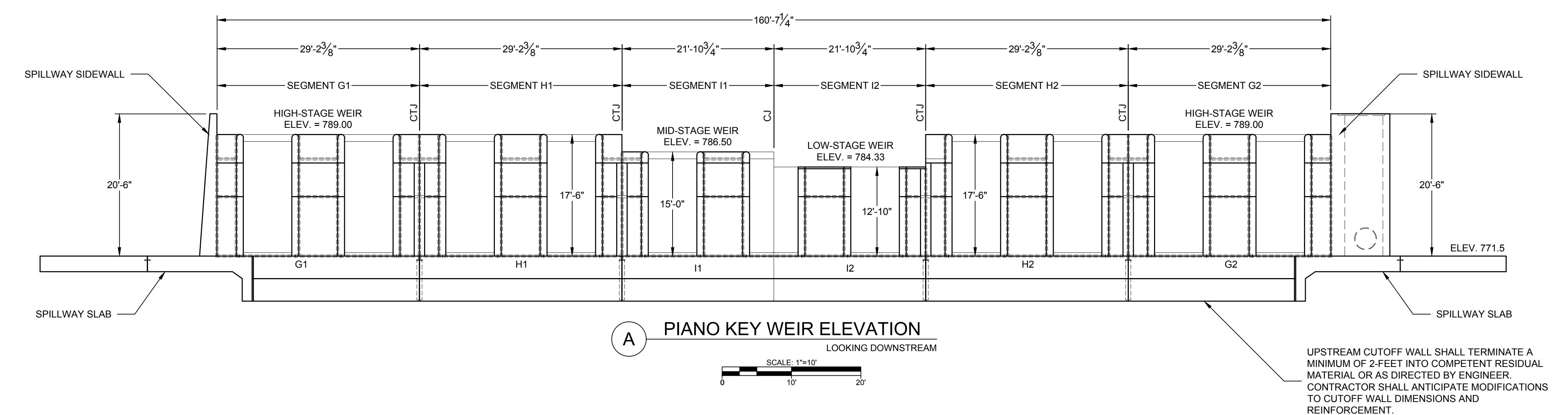
NOTES:

1. THIS PLAN SHOWS THE LAYOUT OF THE SERVICE SPILLWAY SLABS. THE SLABS SHALL BE CAST ALTERNATELY IN THE TRANSVERSE DIRECTION.
2. CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS OTHERWISE SHOWN.
3. CHAMFER ALL CONTRACTION JOINTS ON UPSTREAM SIDE OF PIANO KEY WALLS, INSIDE FACE OF SIDEWALL UPSTREAM OF PIANO KEY / SIDEWALL JUNCTION AND SLABS UPSTREAM OF PIANO KEY WALL 1-1/2", UNLESS OTHERWISE SHOWN.
4. NO CHAMFERS REQUIRED ON CONSTRUCTION JOINTS.
5. JOINT SEALANT REQUIRED ON UPSTREAM FACE OF ALL CONTRACTION JOINTS WITH 1-1/2" CHAMFER.
6. SEE SHEET 65 AND 66 FOR WATERSTOP DETAILS.
7. CONTRACTION JOINTS HAVE NO REINFORCING THROUGH THE JOINT AND THE CONCRETE SURFACES ARE UNBONDED.

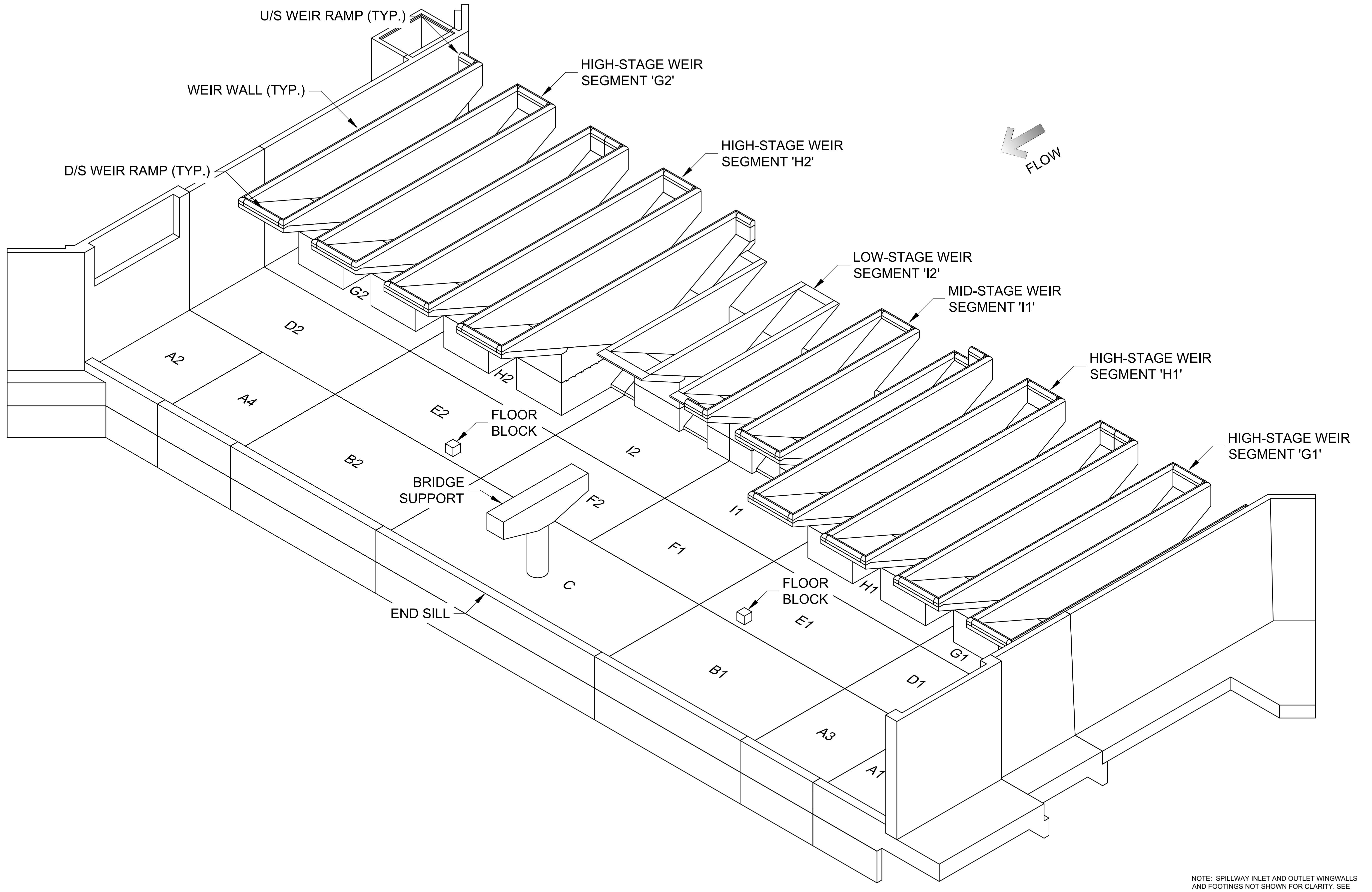
CONCRETE SECTIONS:

- PIANO KEY CONCRETE CONSISTS OF THE CONCRETE PLACED FOR THE CONSTRUCTION OF THE PIANO KEY WALLS AND INLET/OUTLET RAMP SECTIONS.
- SLAB CONCRETE CONSISTS OF THE CONCRETE PLACED FOR THE CONSTRUCTION OF SLABS A1 THROUGH H2 AND THE SLABS ASSOCIATED WITH THE INLET AND OUTLET WINGWALLS.
- STRUCTURAL CONCRETE CONSISTS OF THE CONCRETE PLACED FOR THE CONSTRUCTION OF THE SPILLWAY SIDEWALLS, INLET AND OUTLET WINGWALLS, AND THE BYPASS VAULT WALLS.
- BACKFILL CONCRETE CONSISTS OF THE CONCRETE PLACED FOR THE CONSTRUCTION OF THE BYPASS SPILLWAY PIPE ENCASEMENT.

DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RFB, JRC	REVISED PER ADDENDUM NO. 03 1	DATE
RANDALL P. BASS, P.E. <i>Randall P. Bass</i>	DATE: 07/10/17	GEORGIA PROFESSIONAL ENGINEER NO. 10865		
Schnabel Engineering <i>Schnabel</i>	6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 Fax: 770-781-8003 / Schnabeleng.com	No. 10865 PROFESSIONAL ENGINEER RANDALL P. <i>Randall P. Bass</i>		
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA				
SERVICE SPILLWAY LAYOUT PLAN				
PROJECT: 16C17043.00				
DATE: 07/10/2017				
SHEET 14 OF 66				

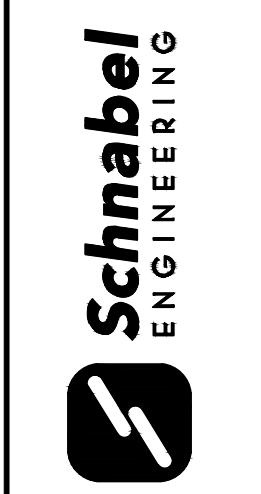


CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA		Schnabel ENGINEERING		PIANO KEY WEIR ELEVATION VIEWS	
				6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com	
PROJECT: 16C17043.00				DATE: 07/10/2017	
				SHEET 15 OF 66	
				REV. 1 GEORGIA PROFESSIONAL ENGINEER NO. 10685	
				DATE: 07/10/2017	
				DESCRIPTION	
				DATE	



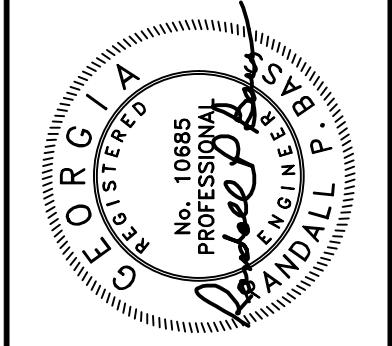
NOTE: SPILLWAY INLET AND OUTLET WINGWALLS
AND FOOTINGS NOT SHOWN FOR CLARITY. SEE
SERVICE SPILLWAY LAYOUT PLAN SHEET 14 FOR
ENTIRE SPILLWAY LAYOUT.

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



No. 10885
PROFESSIONAL
ENGINEER
RANDALL P. BASS, P.E.
GEORGIA PROFESSIONAL ENGINEER NO. 10885

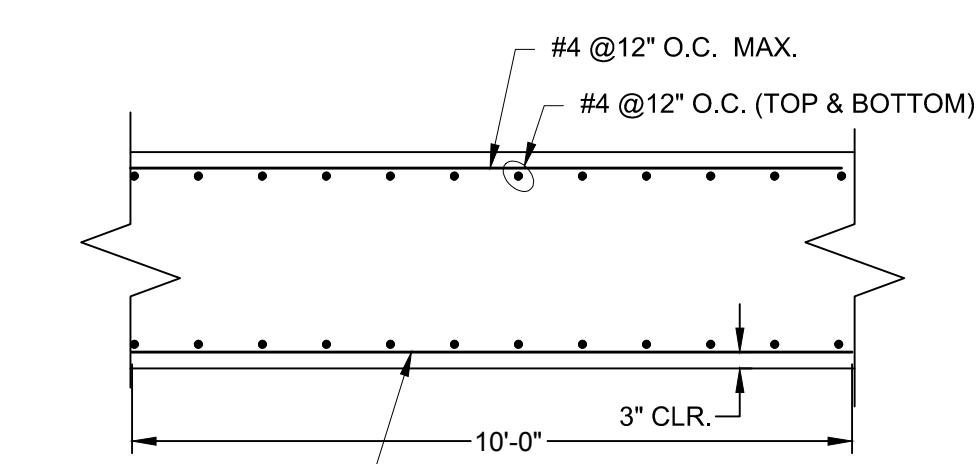
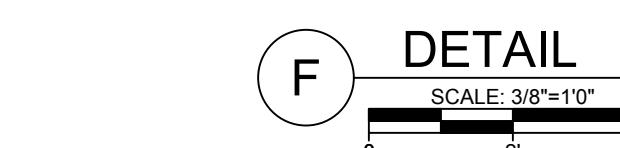
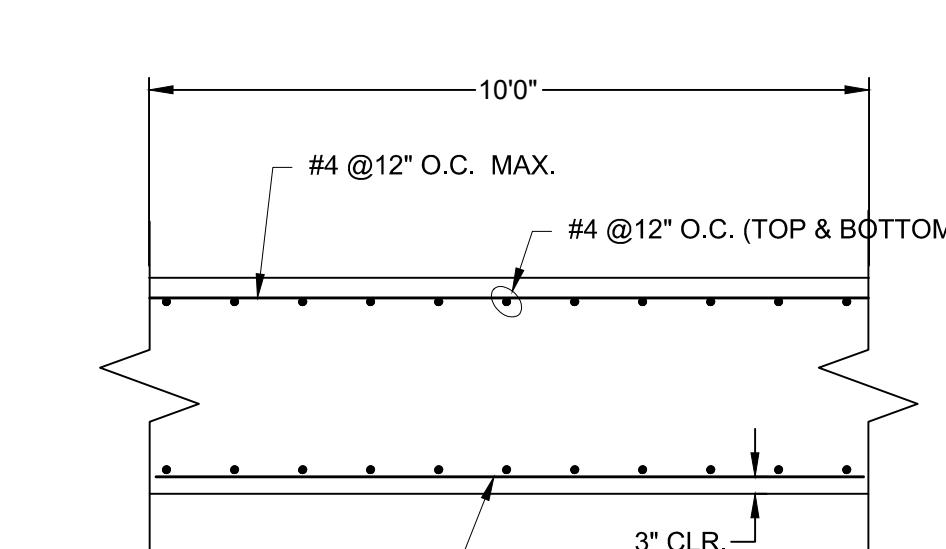
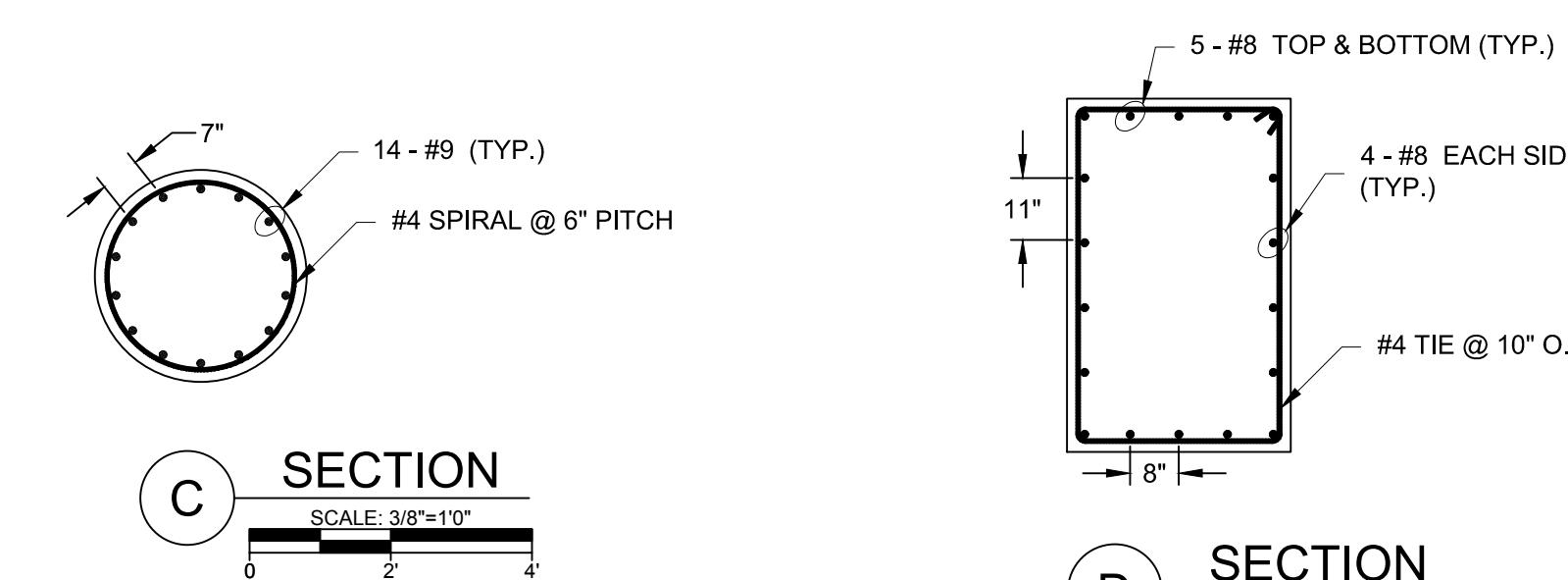
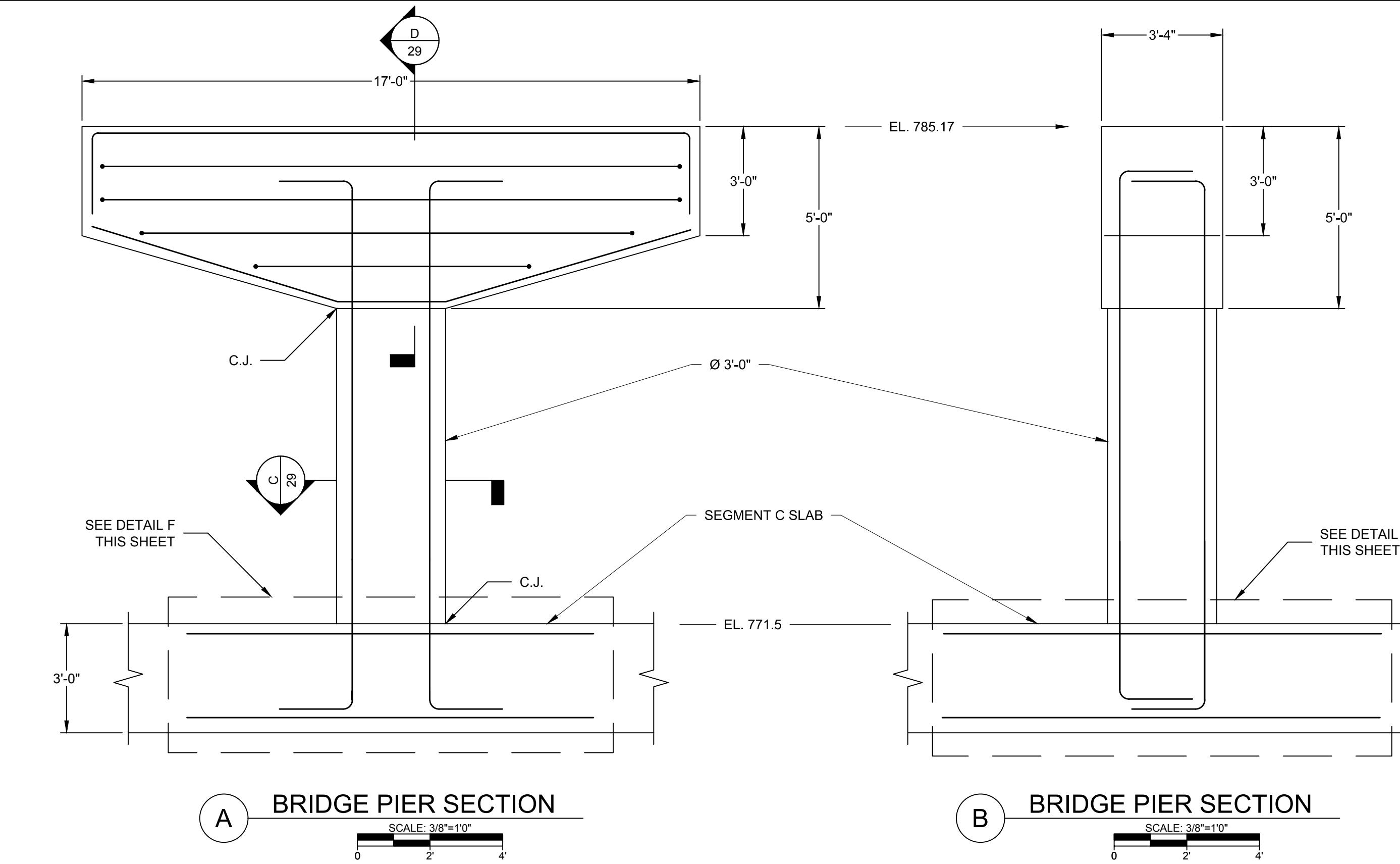
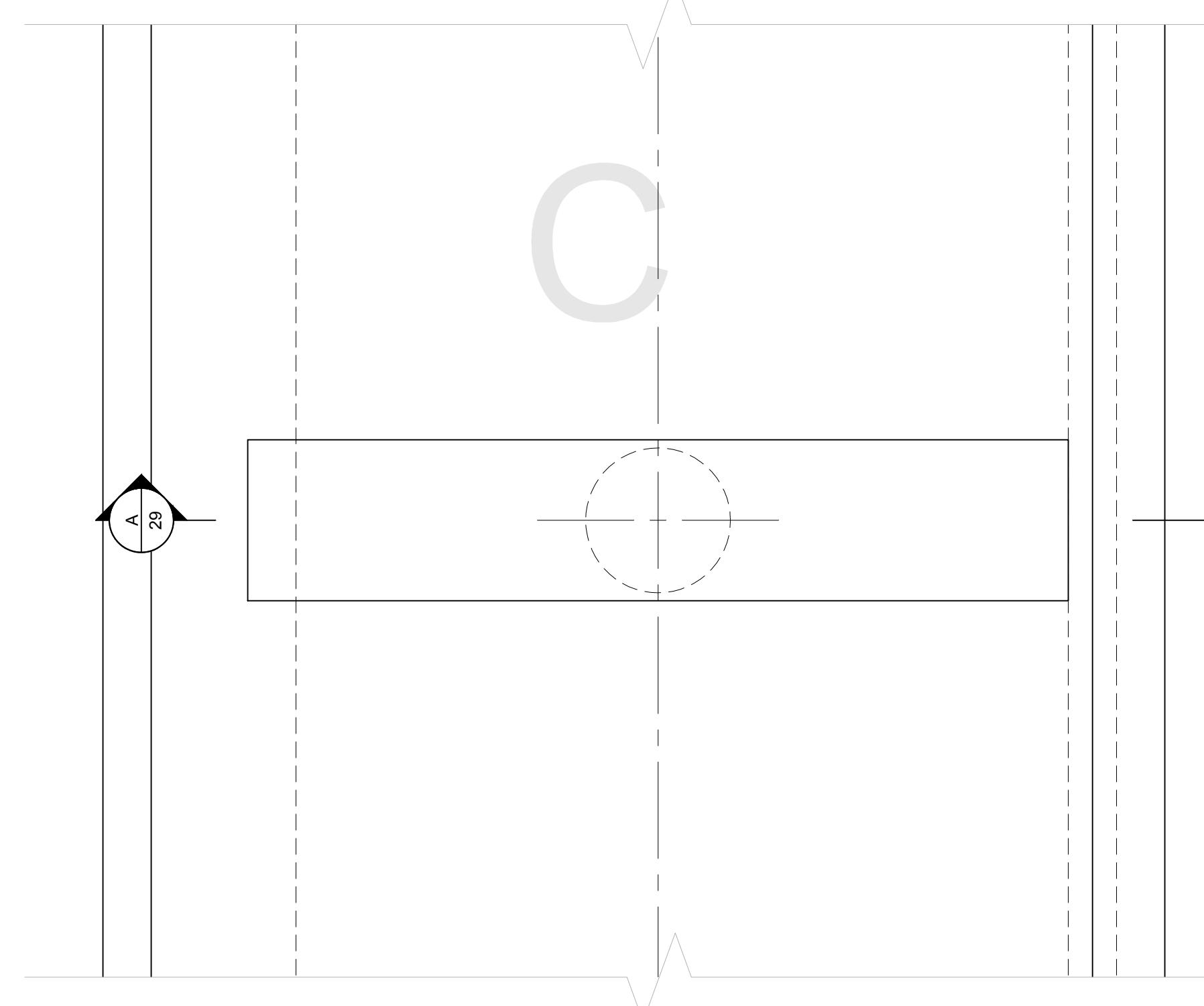
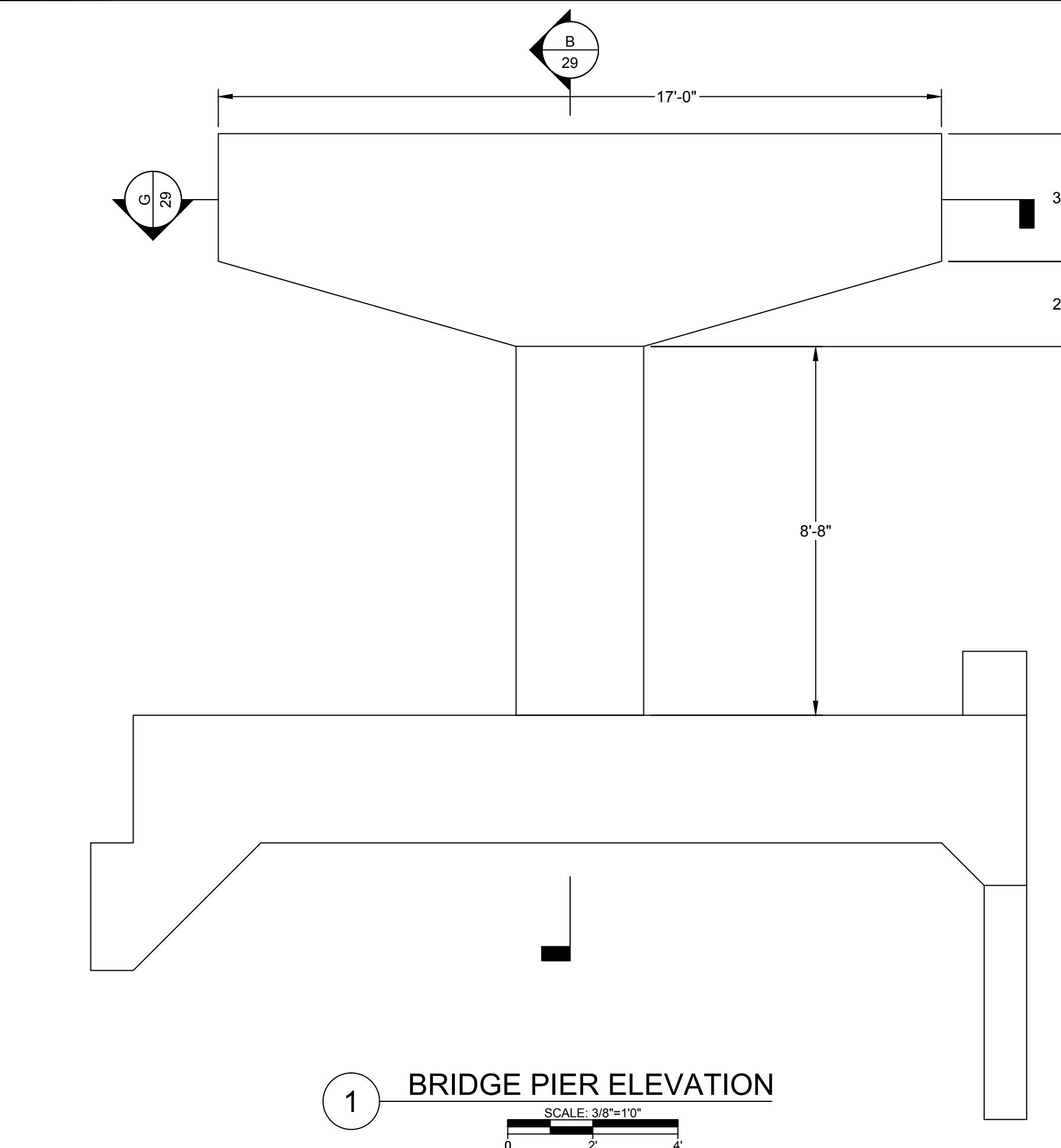
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	PIANO KEY WEIR ISOMETRIC VIEW
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Randall P. Bass
DATE: 07/10/17
REV
GEORGIA PROFESSIONAL ENGINEER NO. 10885

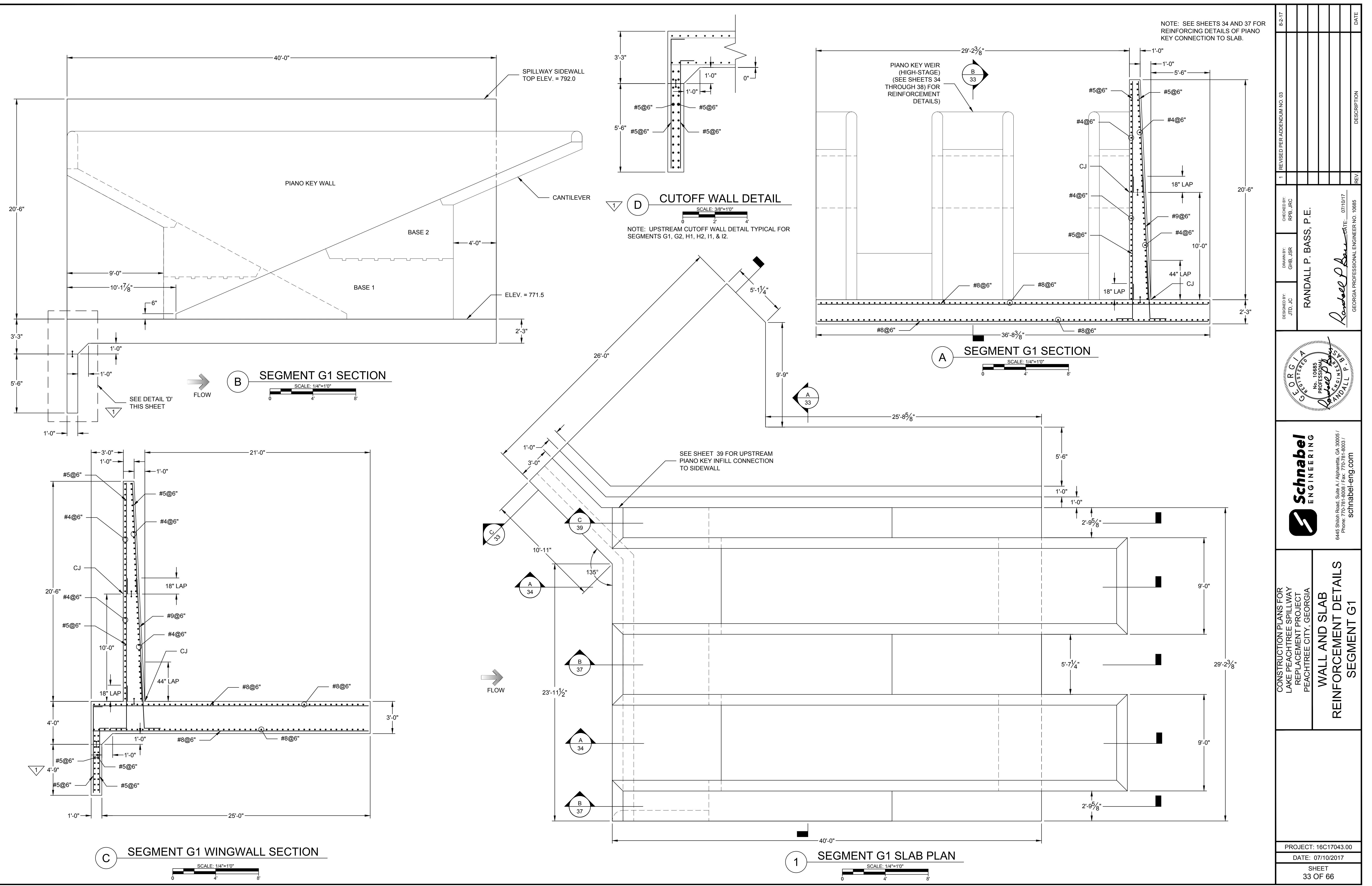
DESIGNED BY JTD, JC	DRAWN BY GHB, JSR	CHEKED BY RFB, JRC	REVISED PER ADDENDUM NO. 03
E-2-17			

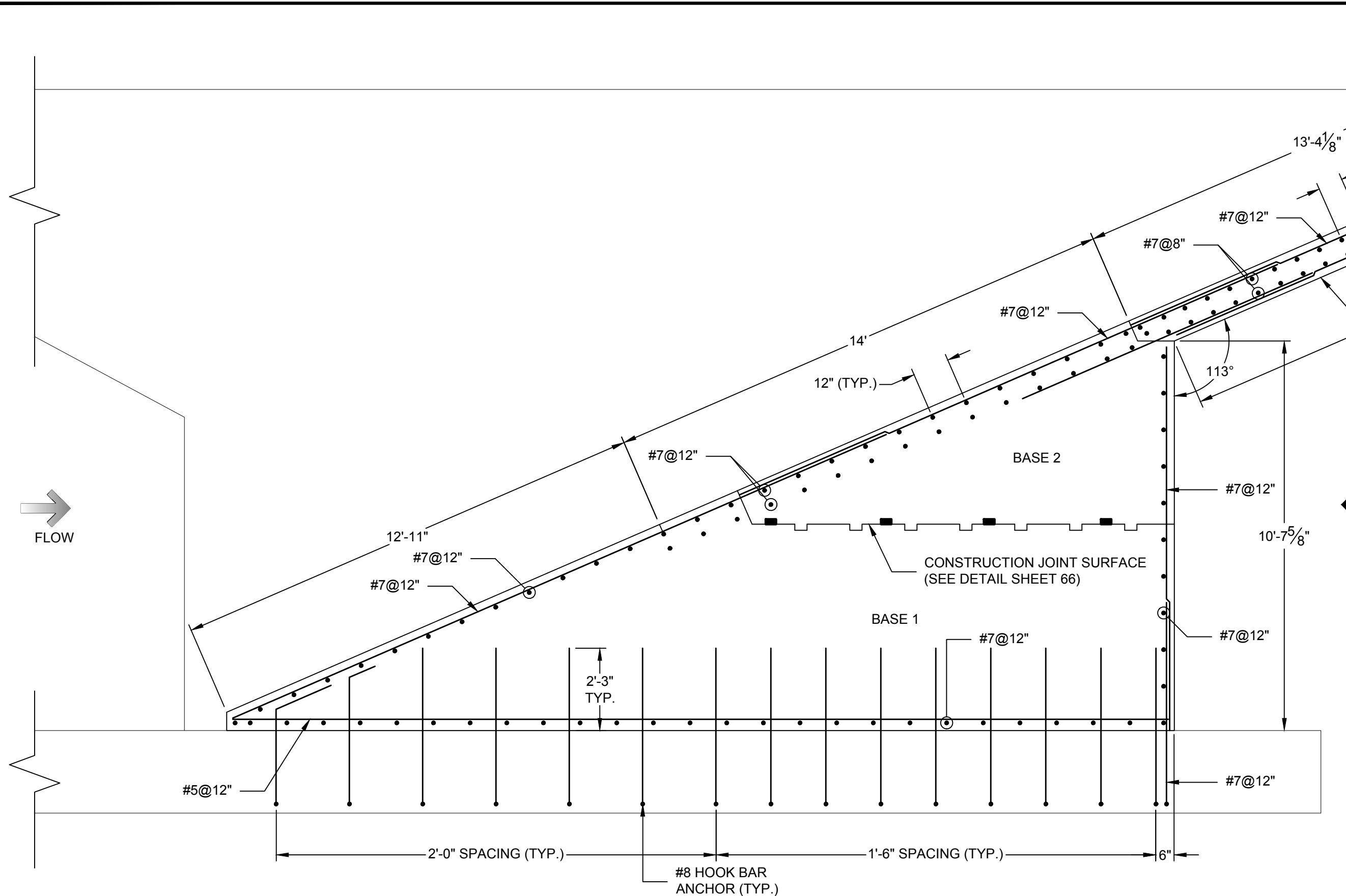
DESCRIPTION



NOTE: PROVIDE ADDITIONAL #4 @ 12" O.C. EACH FACE, EACH WAY IN A 10 FOOT BY 10 FOOT GRID CENTERED AROUND THE BRIDGE PIER.

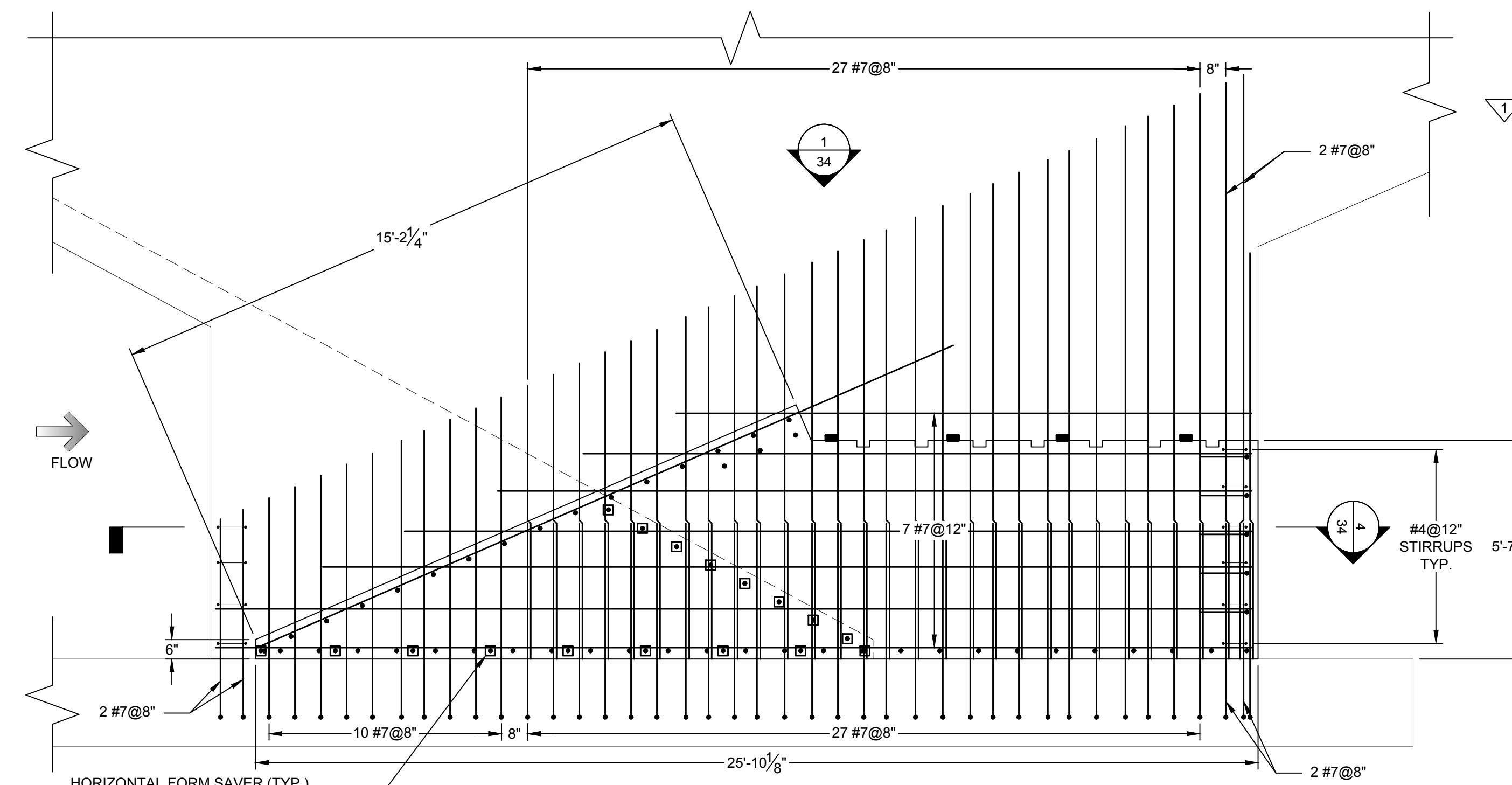
PROJECT: 16C17043.00	CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	BRIDGE PIER DETAILS SEGMENT C	DATE: 07/10/2017			
DESIGNED BY:	JTD, JC	DRAWN BY:	GHB, JSR	CHECKED BY:	RFB, JRC	REVISED PER ADDENDUM NO. 03
DATE:		DATE:		DATE:		DATE:
RANDALL P. BASS, P.E. GEORGIA PROFESSIONAL ENGINEER NO. 10865 Randall P. Bass, P.E. 07/10/17						





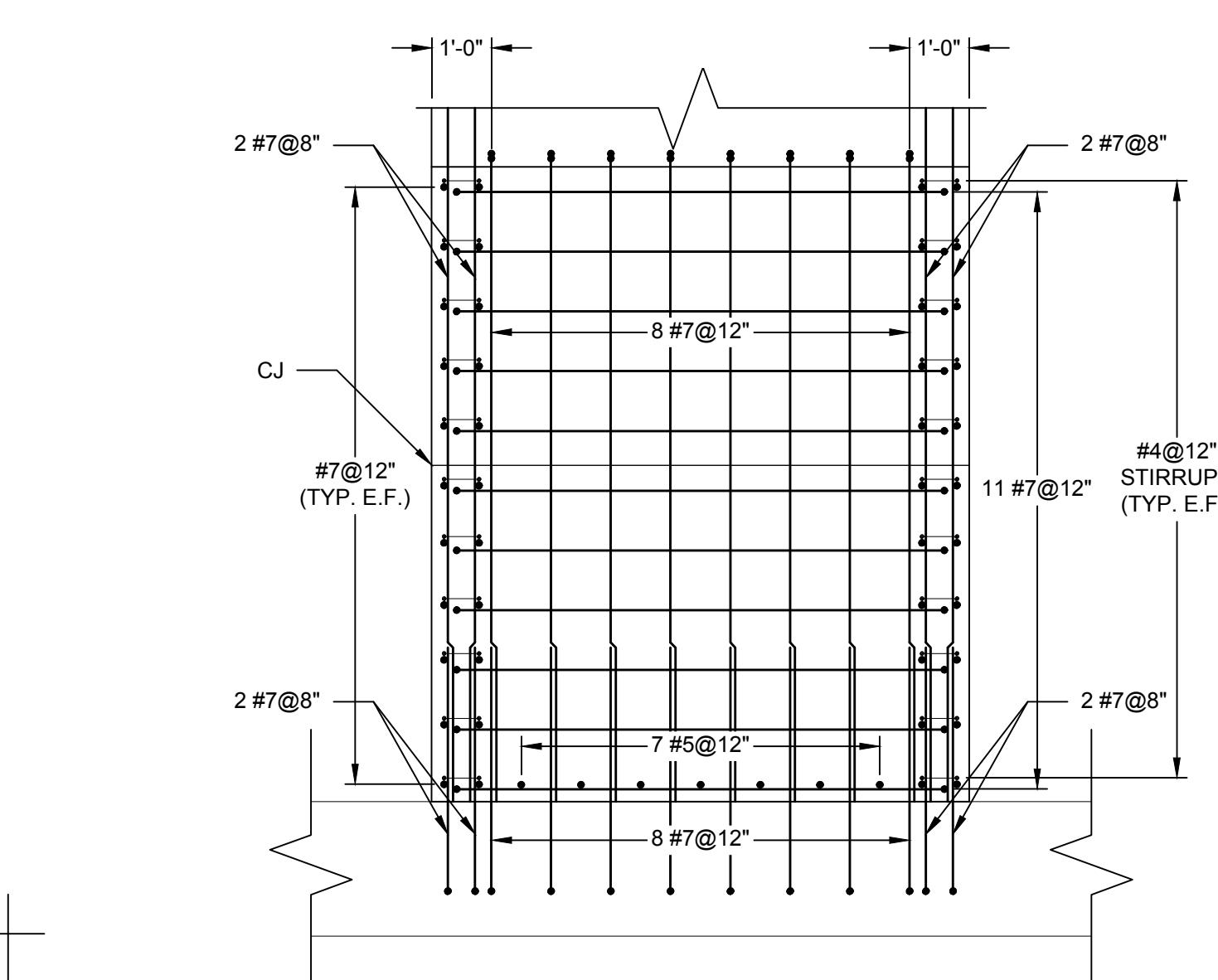
SEGMENT G1 DOWNSTREAM RAMP SECTION

SCALE: 3/8"=10'



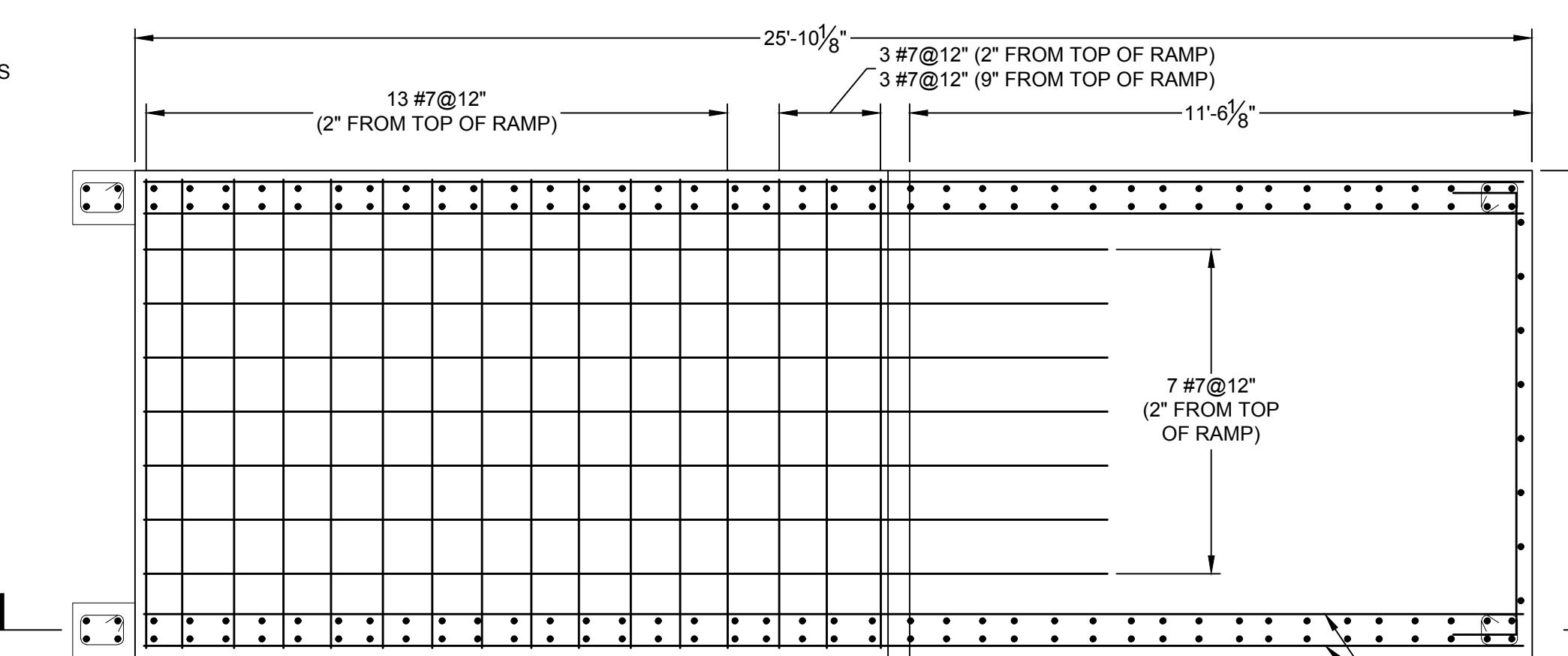
SEGMENT G1 DOWNSTREAM RAMP BASE 1 SECTION

SCALE: 3/8"=10'



SEGMENT G1 DOWNSTREAM RAMP ELEVATION

SCALE: 3/8"=10'

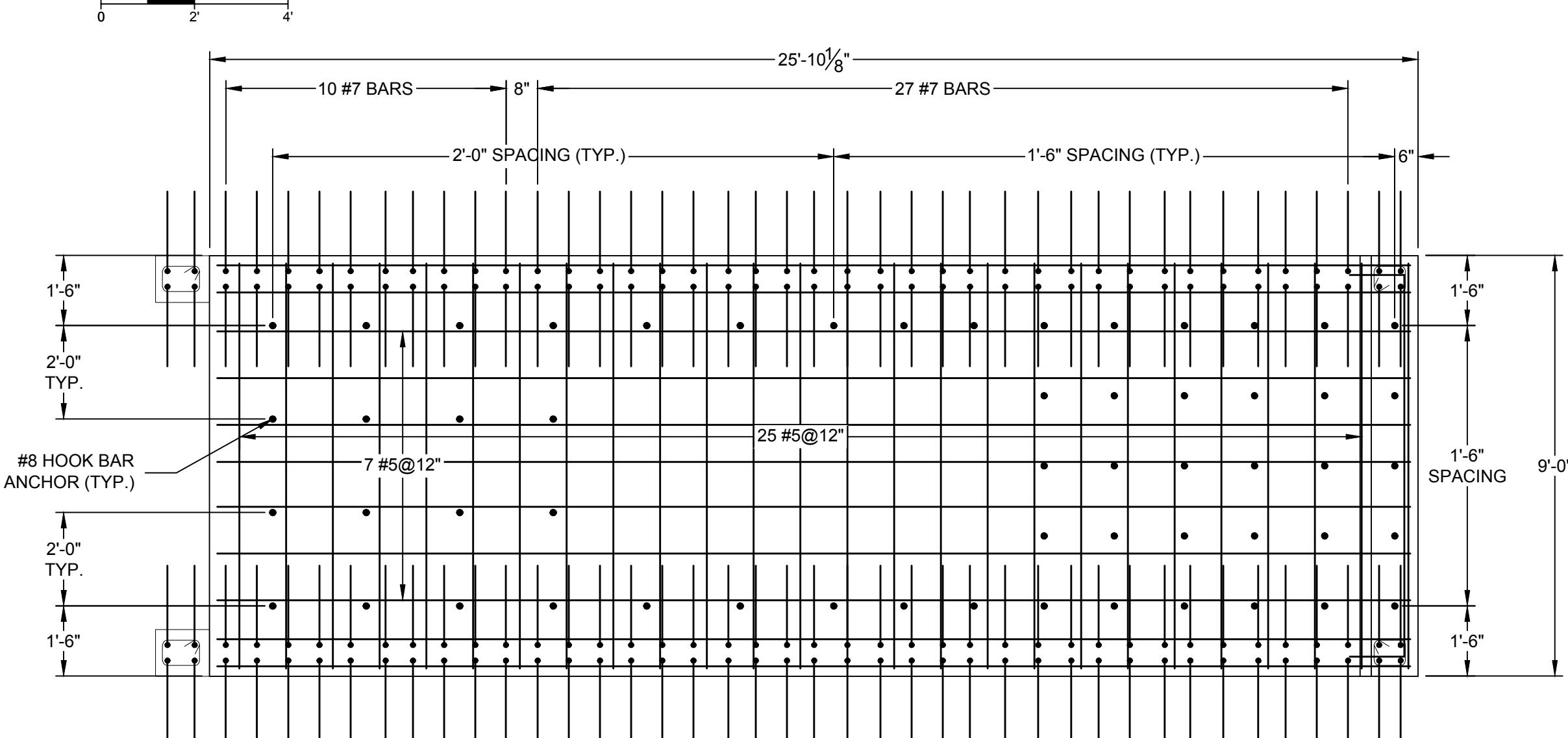


SEGMENT G1 DOWNSTREAM RAMP BASE 1 PLAN

SCALE: 3/8"=10'

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

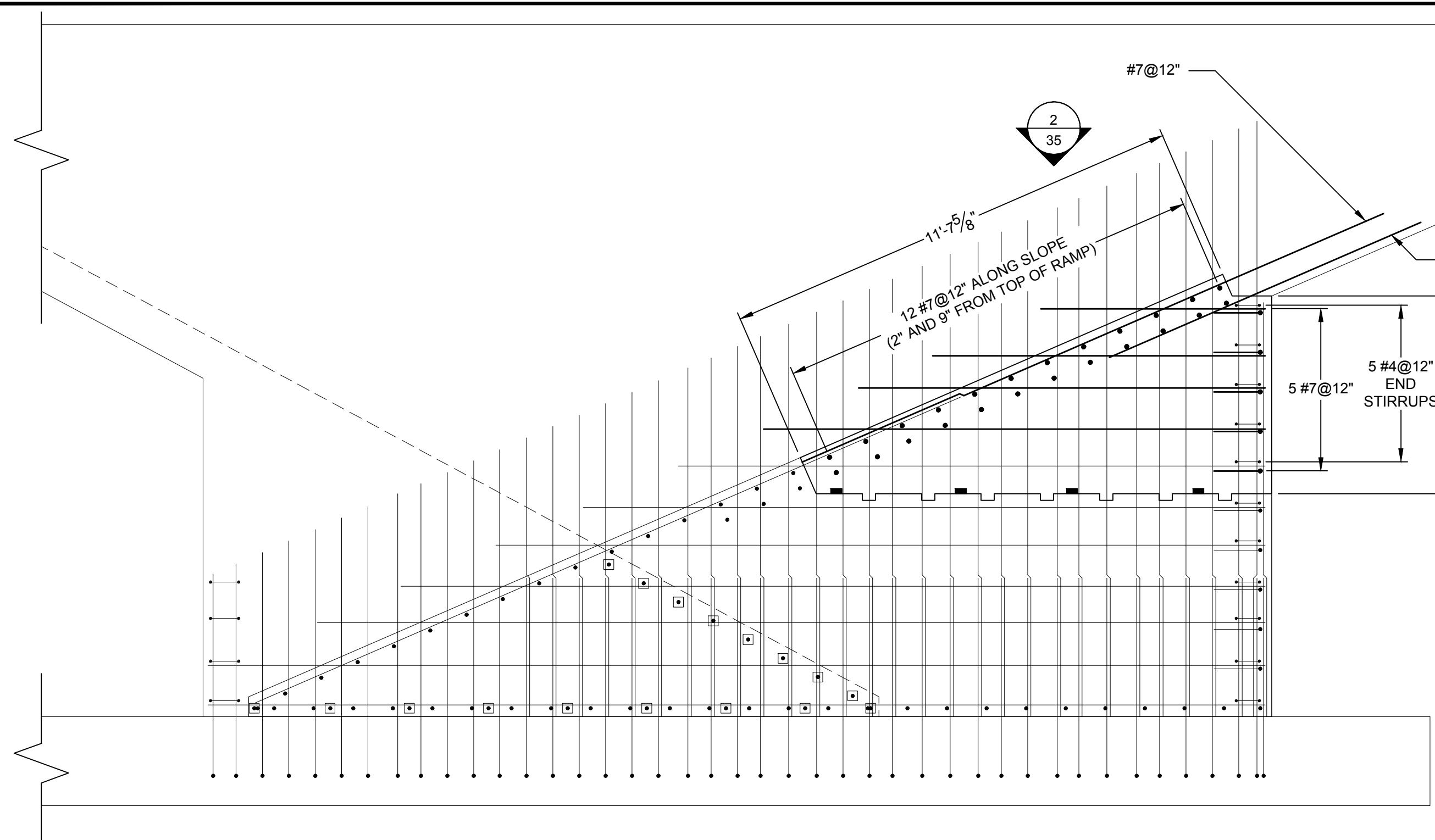
NOTE: SEGMENT G1 & G2 SIMILAR BUT OPPOSITE



SEGMENT G1 DOWNSTREAM RAMP BASE 1 SECTION

SCALE: 3/8"=10'

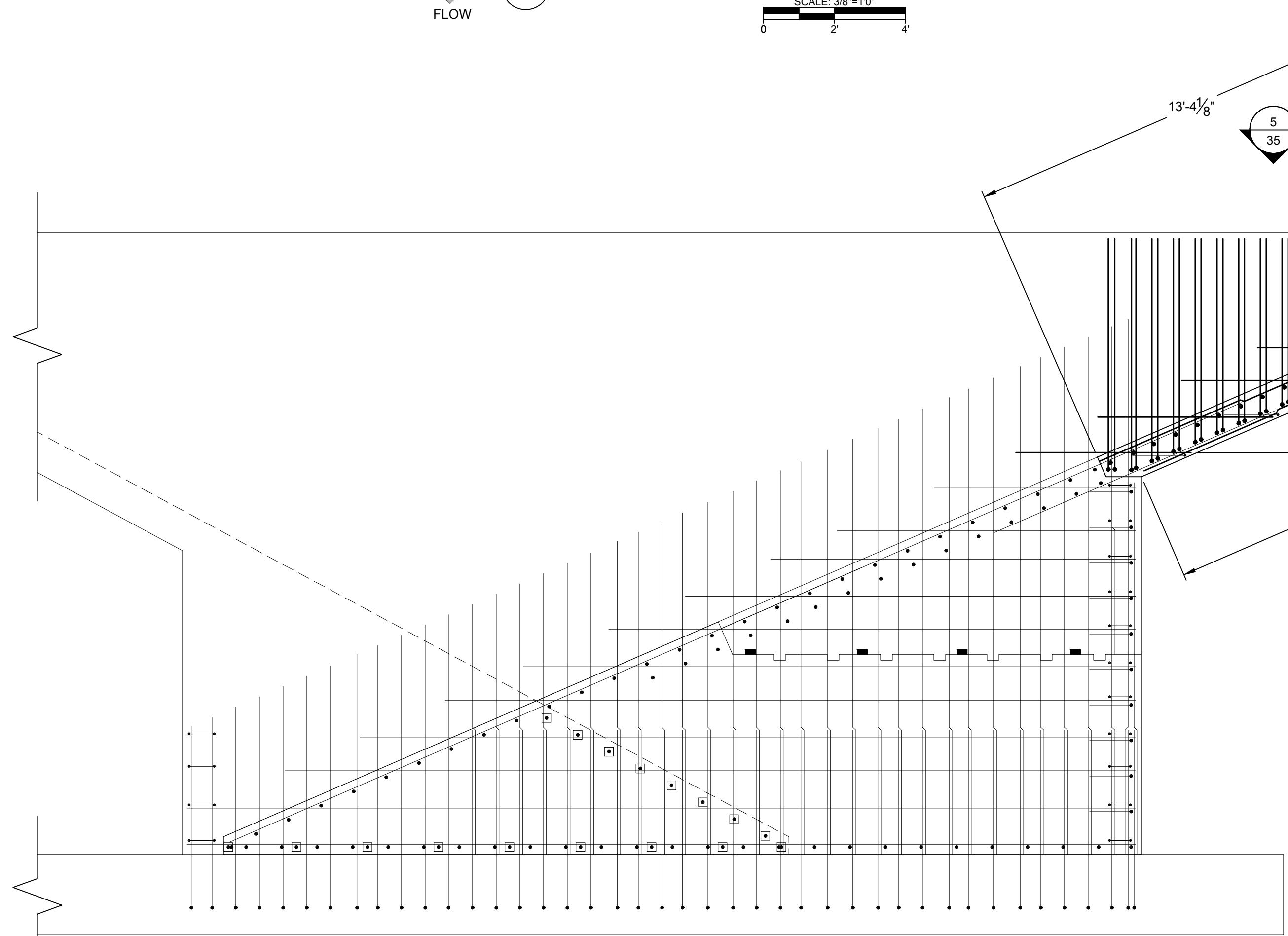
PROJECT: 16C17043.00	DATE: 07/10/2017	SHEET 34 OF 66
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	Schnabel ENGINEERING	REINFORCEMENT DETAILS SEGMENT G1
	6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-3003 / Schnabeleng.com	
	RANDALL P. BASS, P.E.	GEORGIA PROFESSIONAL ENGINEER NO. 10865 Randall P. Bass DATE: 07/10/17
	DESIGNED BY JTD, JC DRAWN BY GH, JSR CHECKED BY RPB, JRC	REV. 1 REVISED PER ADDENDUM NO. 03
		DATE



1 SEGMENT G1 DOWNSTREAM RAMP BASE 2

FLOW

SCALE: 3/8"=10'



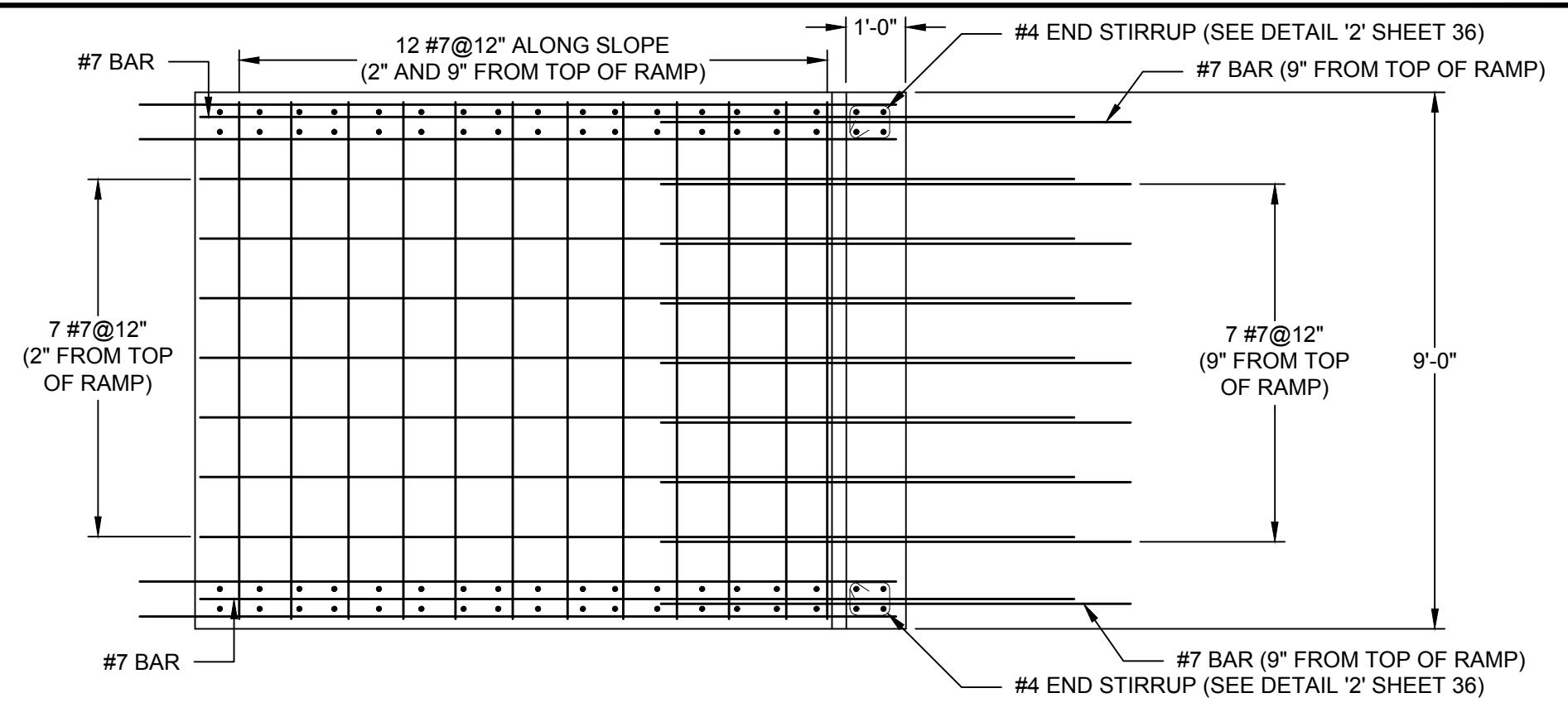
3 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER

FLOW

SCALE: 3/8"=10'

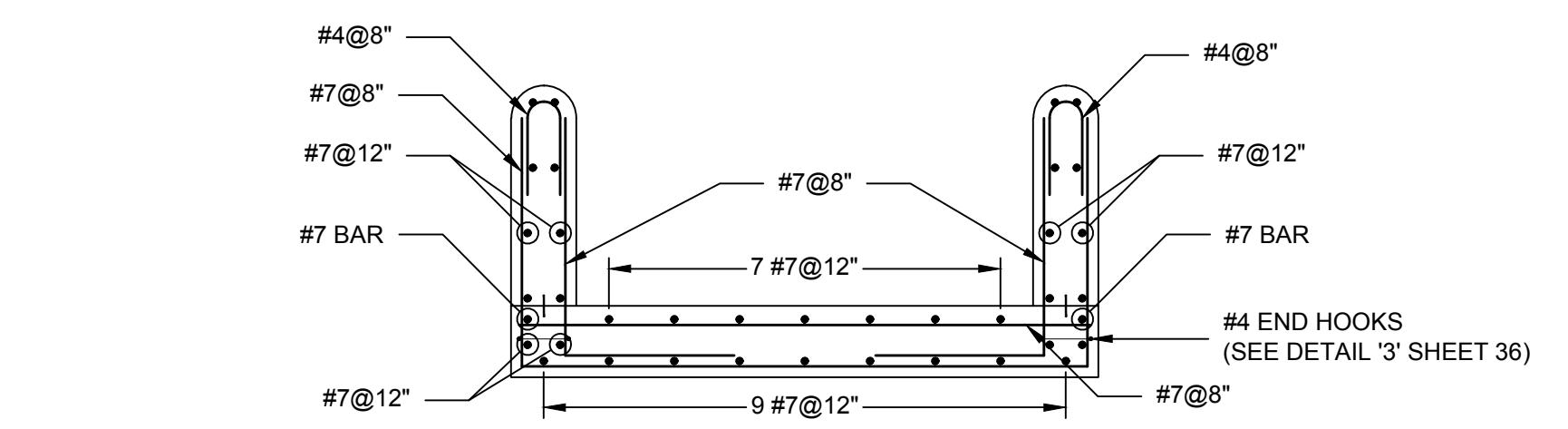
6\\2016\\PROJECTS\\16C17043.00\\LAKE PEACHTREE DAM FINAL DESIGN\\03-SE PROD\\03-CAD\\DRAWINGS\\05-FINAL DESIGN\\STRUCTURAL PIANO KEY\\W.E.DWG

NOTE: SEGMENT
G1 & G2 SIMILAR
BUT OPPOSITE



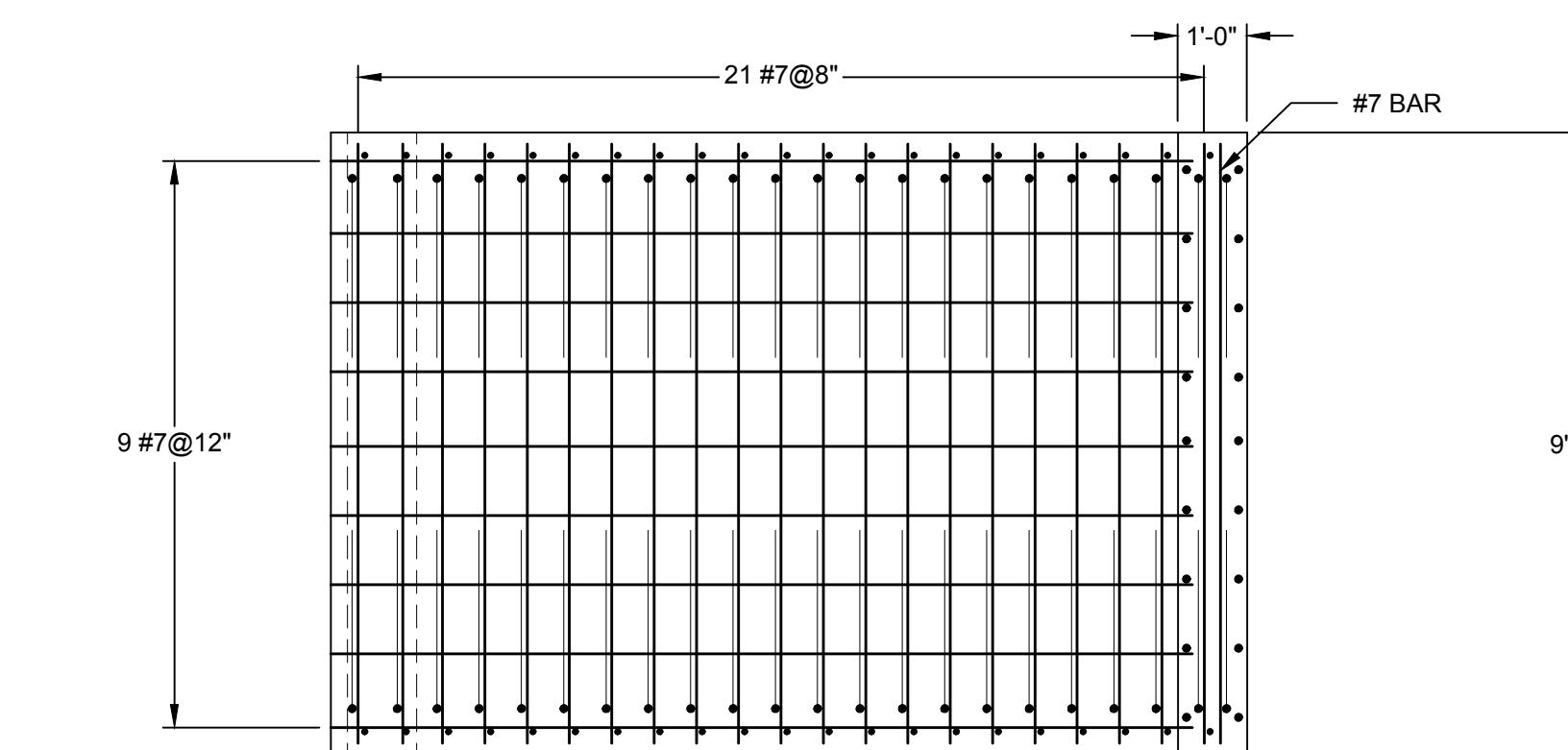
2 SEGMENT G1 DOWNSTREAM RAMP BASE 2 PLAN

SCALE: 3/8"=10'



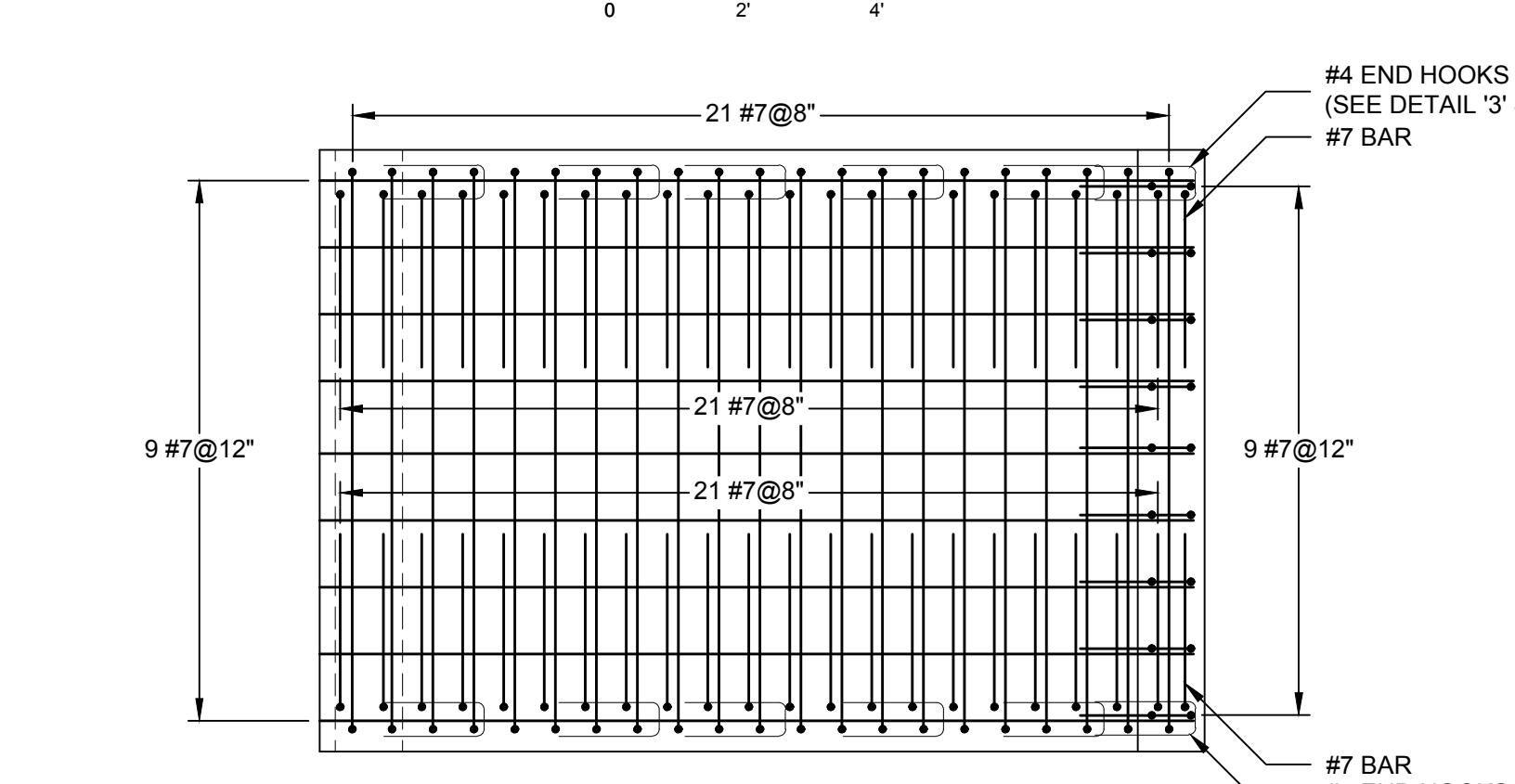
4 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER SECTION

SCALE: 3/8"=10'



5 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER PLAN

SCALE: 3/8"=10'

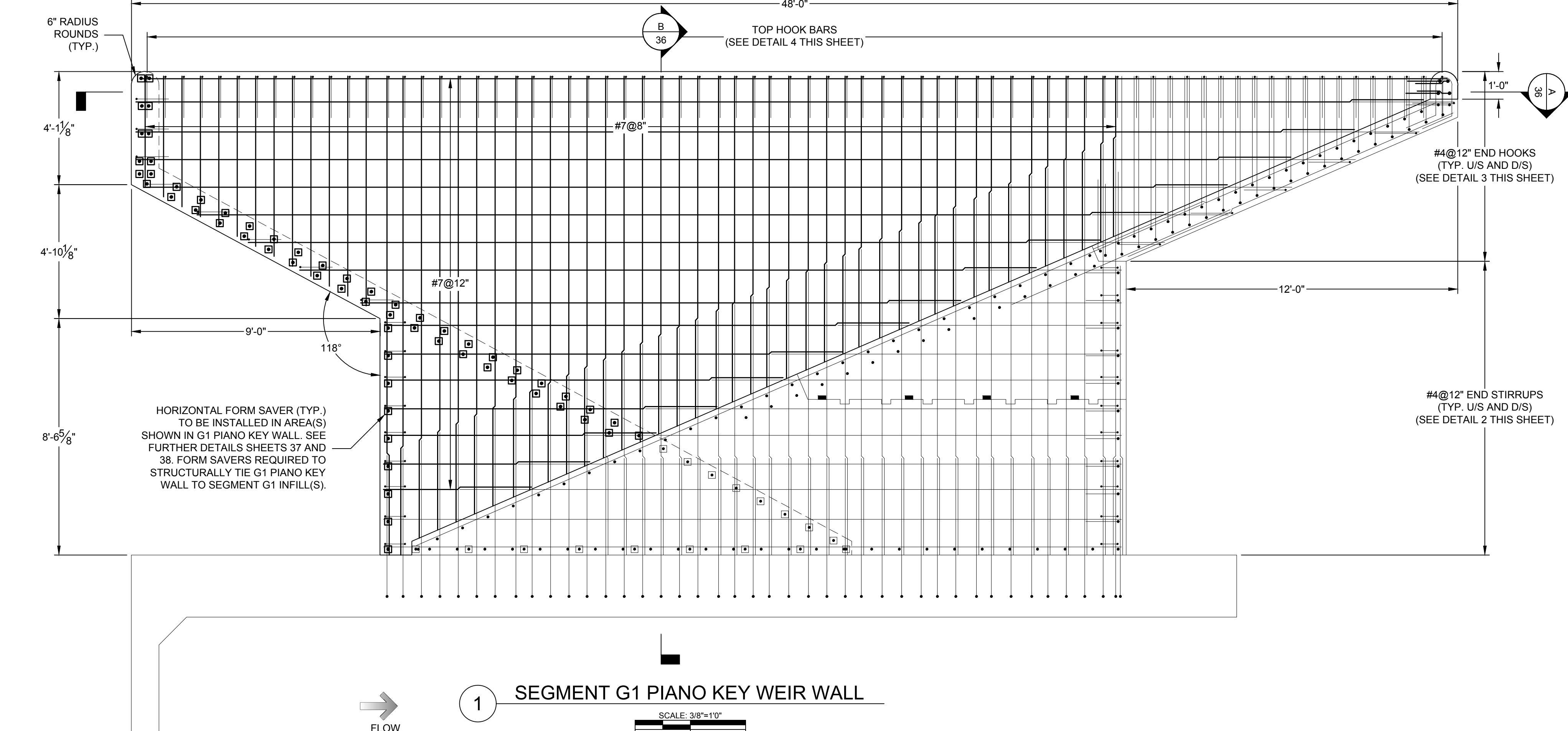


5 SEGMENT G1 DOWNSTREAM RAMP CANTILEVER PLAN

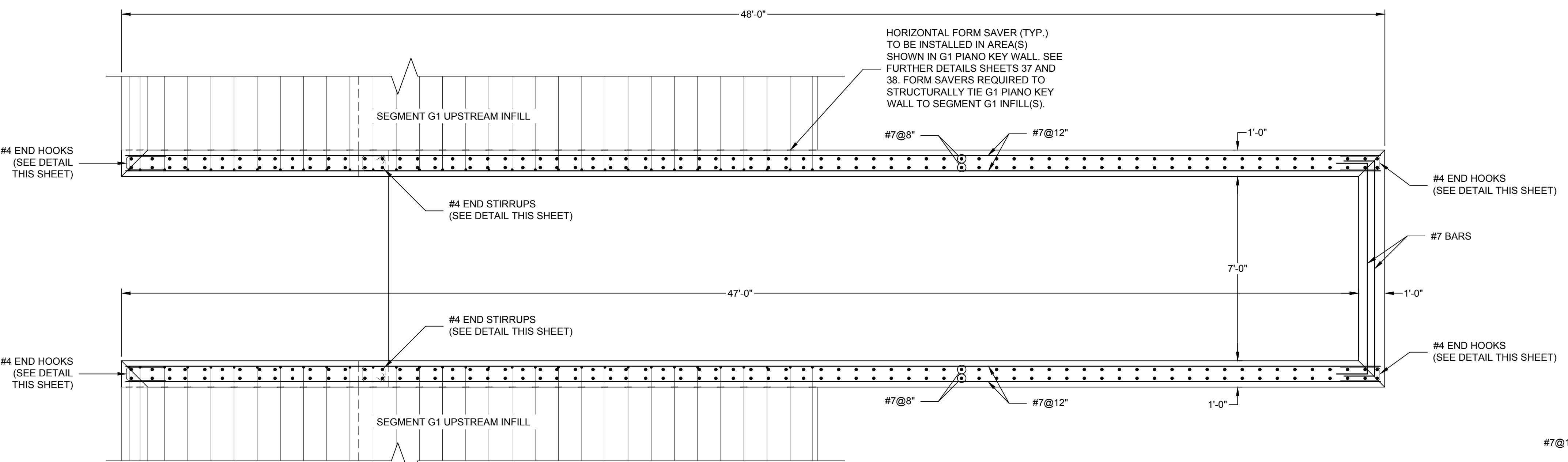
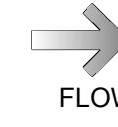
SCALE: 3/8"=10'

PROJECT:	16C17043.00	DRAWN BY:	GHB, JSR	CHECKED BY:	RFB, JRC	DATE:	07/10/17
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	Schnabel ENGINEERING	DESIGNED BY:	JTD, JC	DRAWN BY:	GHB, JSR	REVISION:	REV D
DOWNSTREAM RAMP REINFORCEMENT DETAILS		PROFESSIONAL ENGINEER NO.:	10885	PROFESSIONAL ENGINEER NO.:	10885	DATE:	07/10/17
SEGMENT G1		ORGANIZATION:	SCHNABEL	ORGANIZATION:	SCHNABEL	DATE:	07/10/17
		PHONE:	770-781-3003 /	PHONE:	770-781-3003 /		
		WEBSITE:	schnabeleng.com	WEBSITE:	schnabeleng.com		

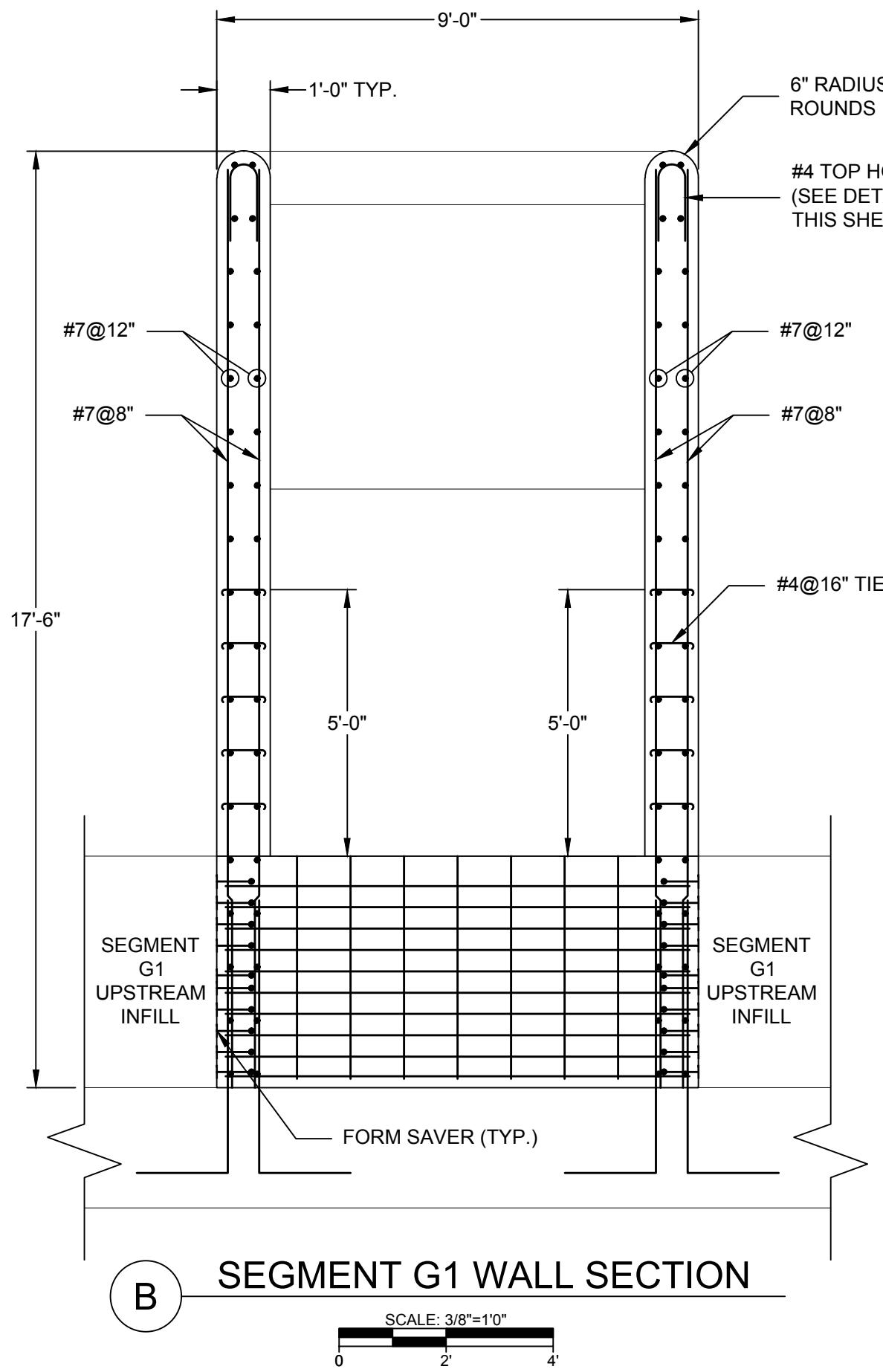
G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCTS\08-CADD\DRAWINGS\05-FINAL_DESIGN\PLT_STRUCTUREL PIANO KEY WEIR.DWG



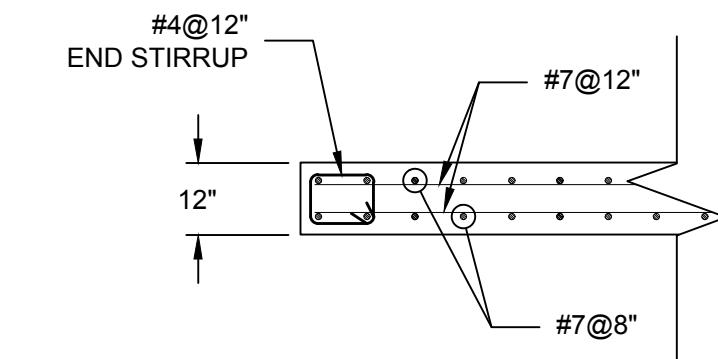
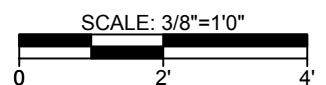
SEGMENT G1 PIANO KEY WEIR WALL



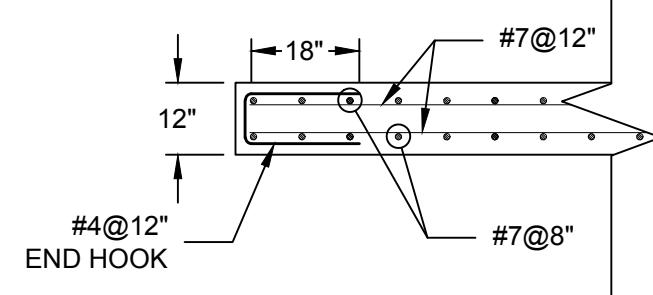
SEGMENT G1 PIANO KEY WEIR WALL SECTION



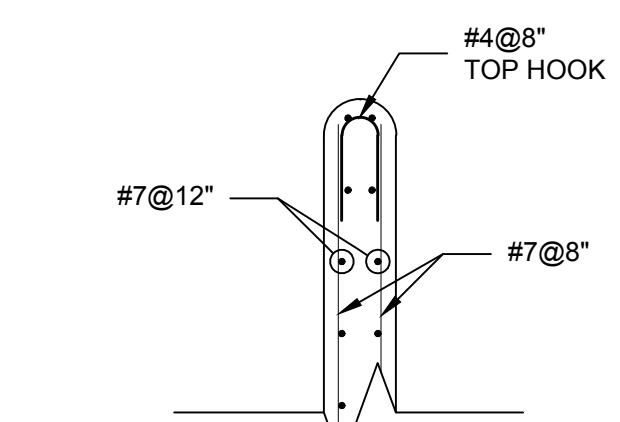
B SEGMENT G1 WALL SECTION



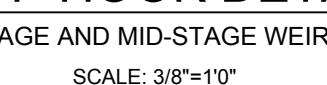
END STIRRUP DETAIL



END HOOK DETAIL

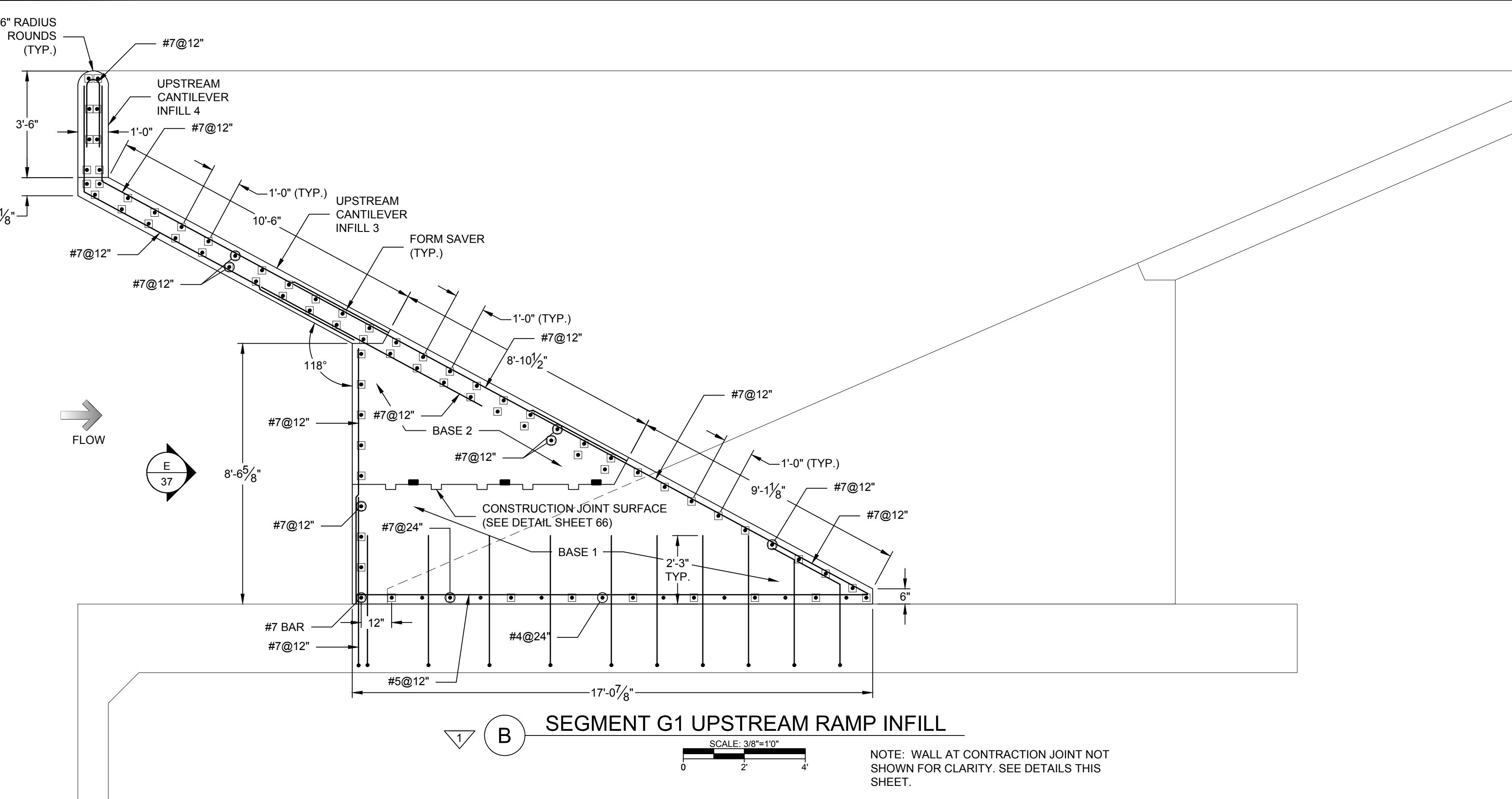


TOP HOOK DETAIL



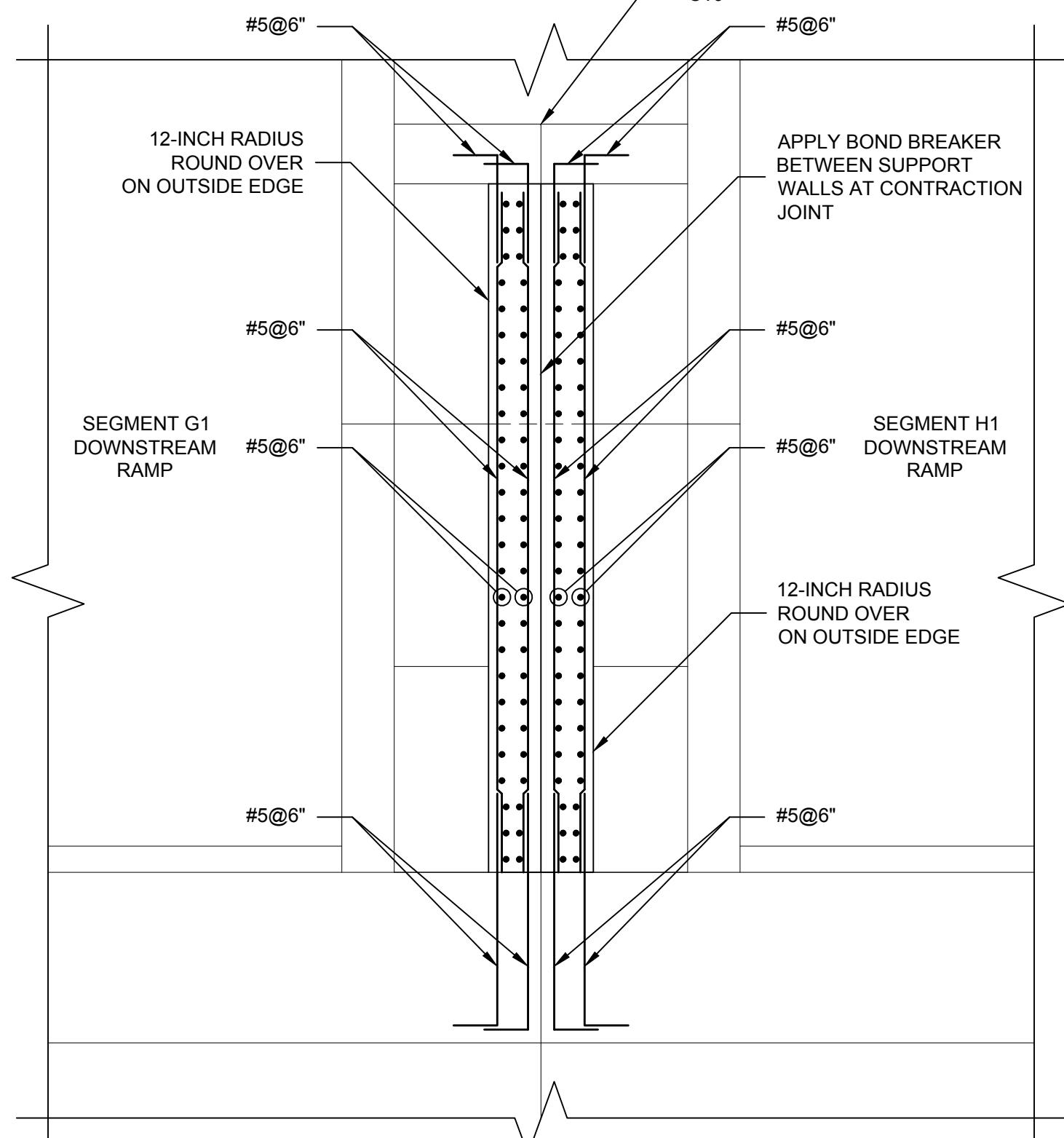
**NOTE: SEGMENT
G1 & G2 SIMILAR
BUT OPPOSITE**

G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCTS\08-CAD\DRAWINGS\05-FINAL_DESIGN\LPT_STRUCTURAL PIANO KEY WEIR.DWG



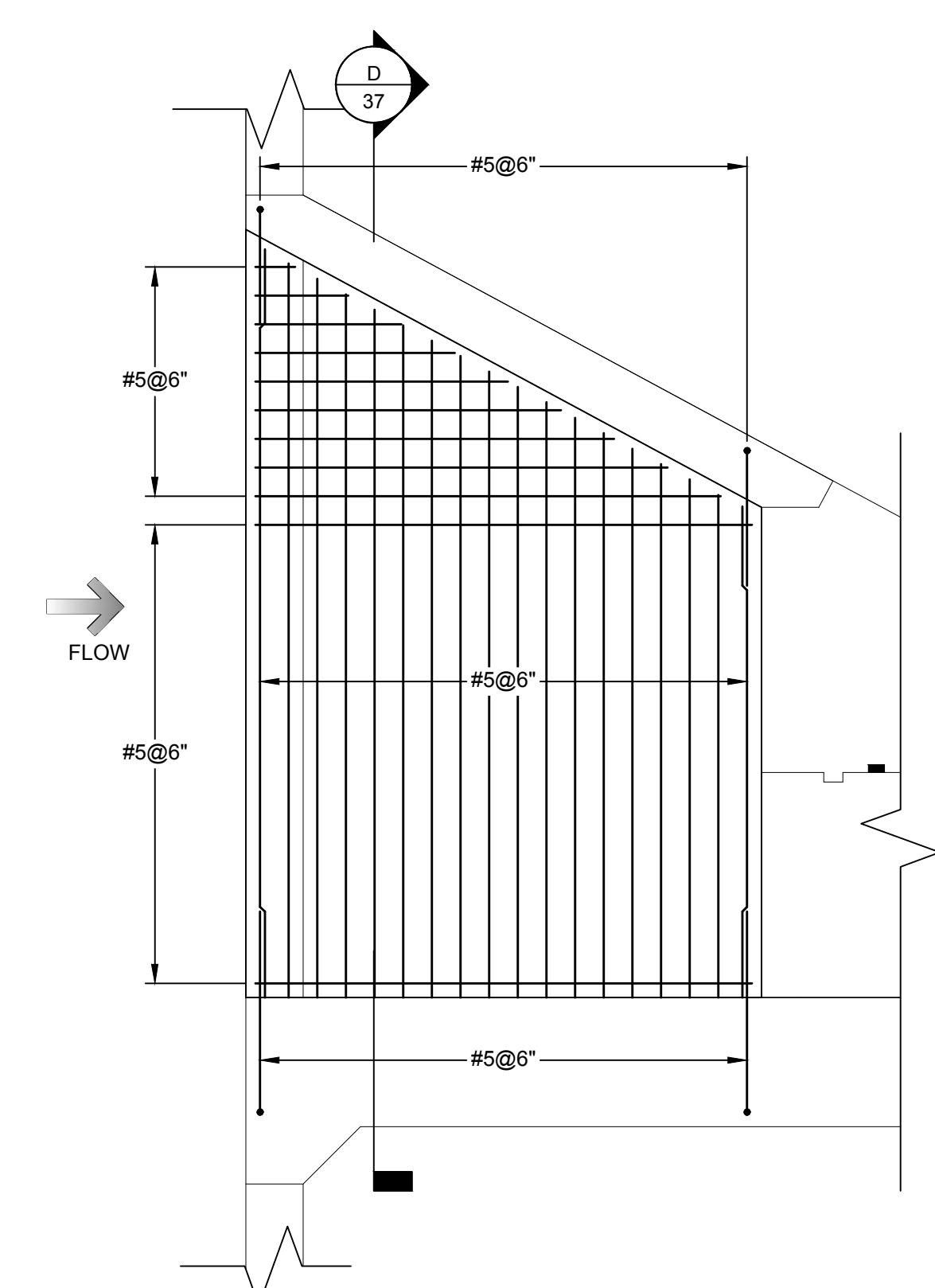
B SEGMENT G1 UPSTREAM RAMP INFIL
SCALE: 3/8"=1'0"

NOTE: WALL AT CONTRACTION JOINT NOT SHOWN FOR CLARITY. SEE DETAILS THIS SHEET.



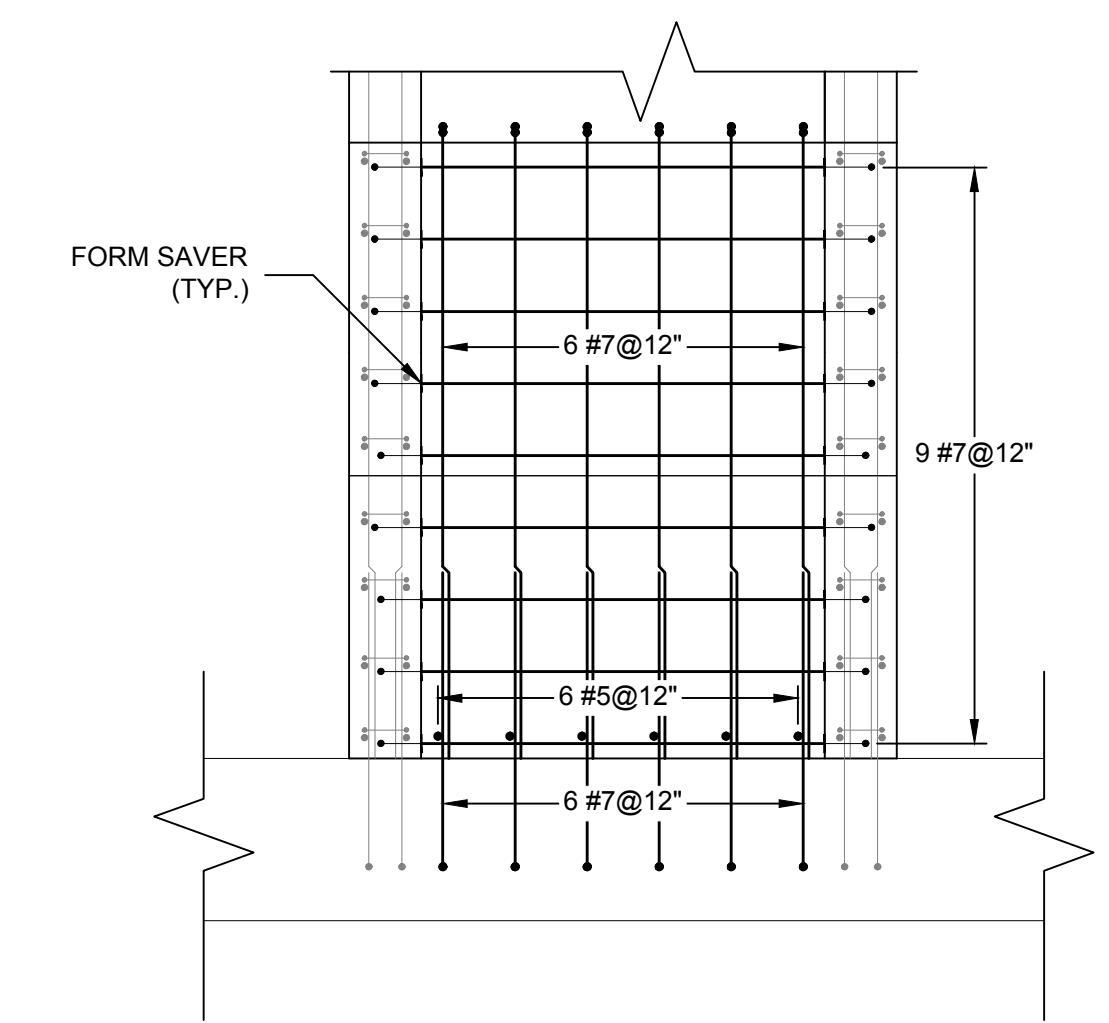
D SEGMENT G1 SUPPORT WALL SECTION

SEGMENT G1 SUPPORT WALL AT CONTRACTION JOINT

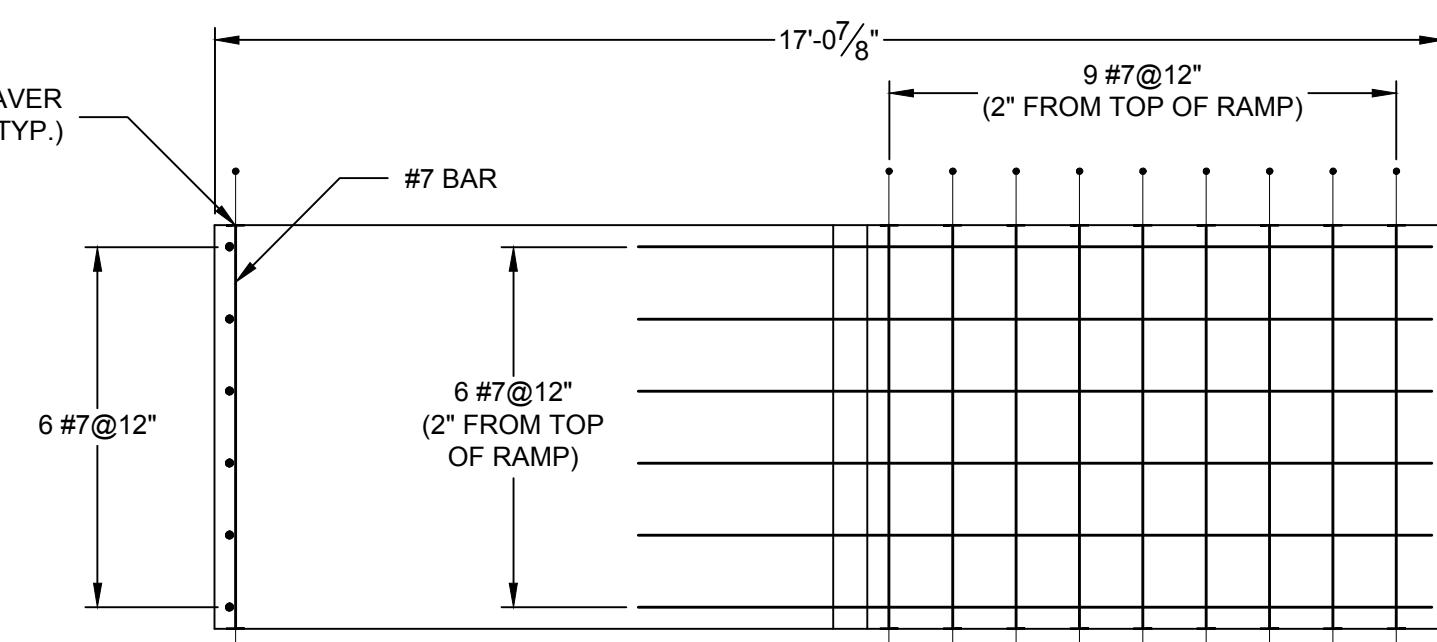


E SEGMENT G1 INFILL BASE ELEVATION
SCALE: 3/8"=1'0"

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)

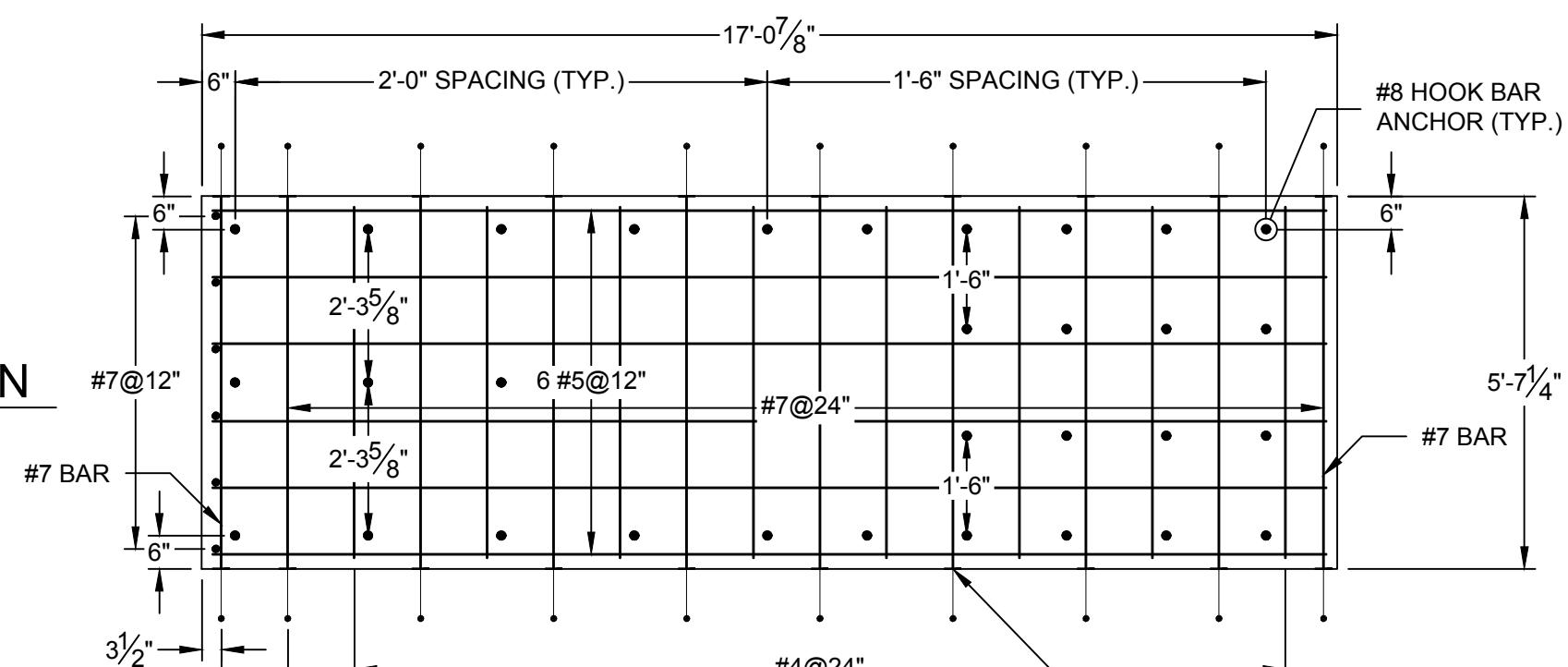


SEGMENT G1 INFILL BASE ELEVATION



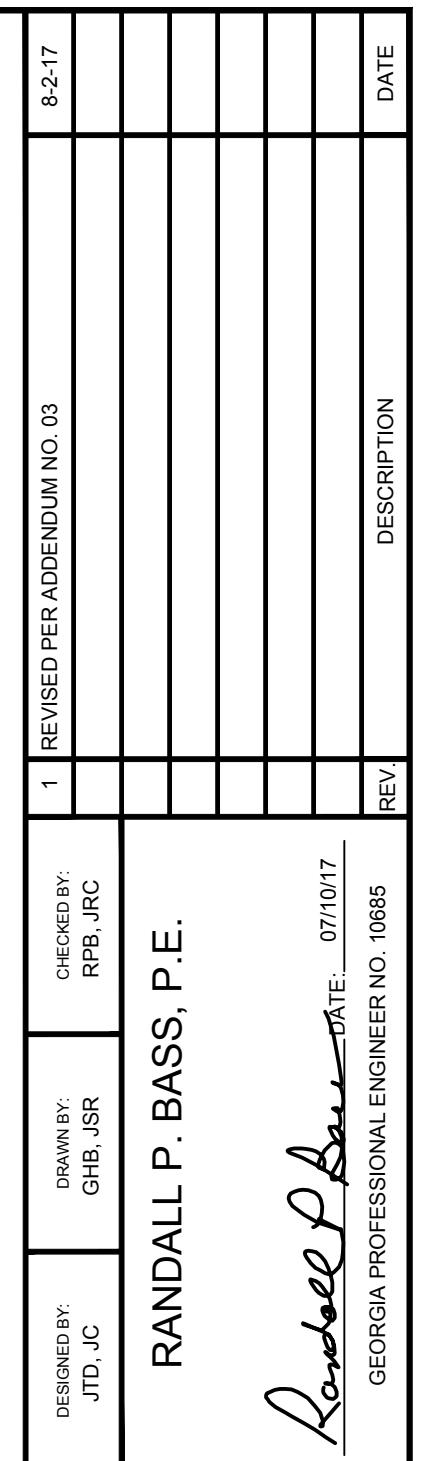
A SEGMENT G1 INFILL BASE 1 PLAN

A scale bar labeled 'A' at the top left. It features a horizontal line with tick marks at 0, 2', and 4'. Above the line, the text 'SCALE: 3/8"=1'0"' is displayed.



SEGMENT G1 INFILL BASE 1 SECTION

**OTE: SEGMENT
G1 & G2 SIMILAR
BUT OPPOSITE**



A circular registration stamp with a decorative border. The outer ring contains the text "ORG / REG / C & S" at the top and "ENGINEER" at the bottom. The inner circle contains "No. 10685" at the top, "PROFESSIONAL" in the center, and "DAN RANDALL P." at the bottom.

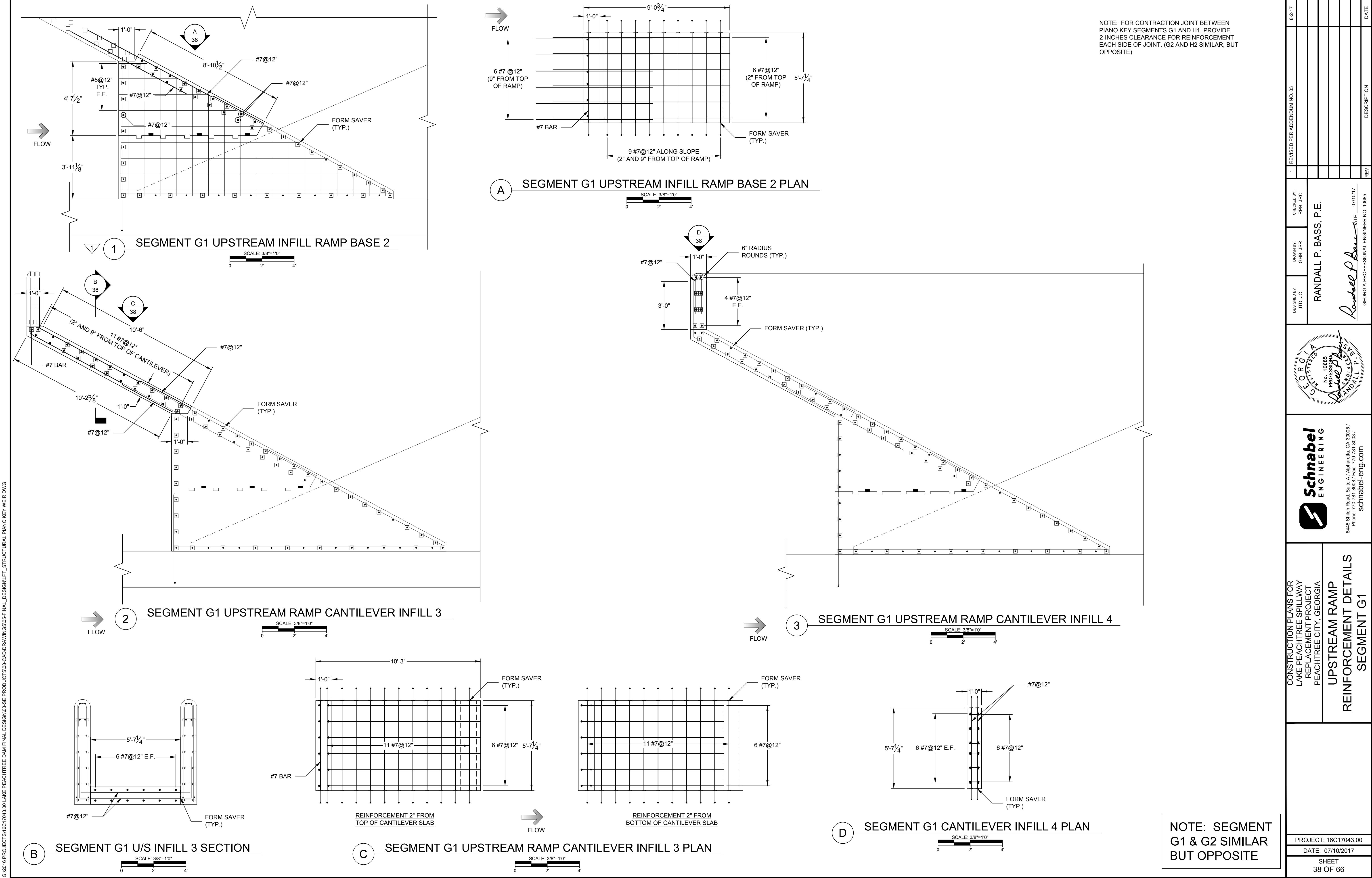


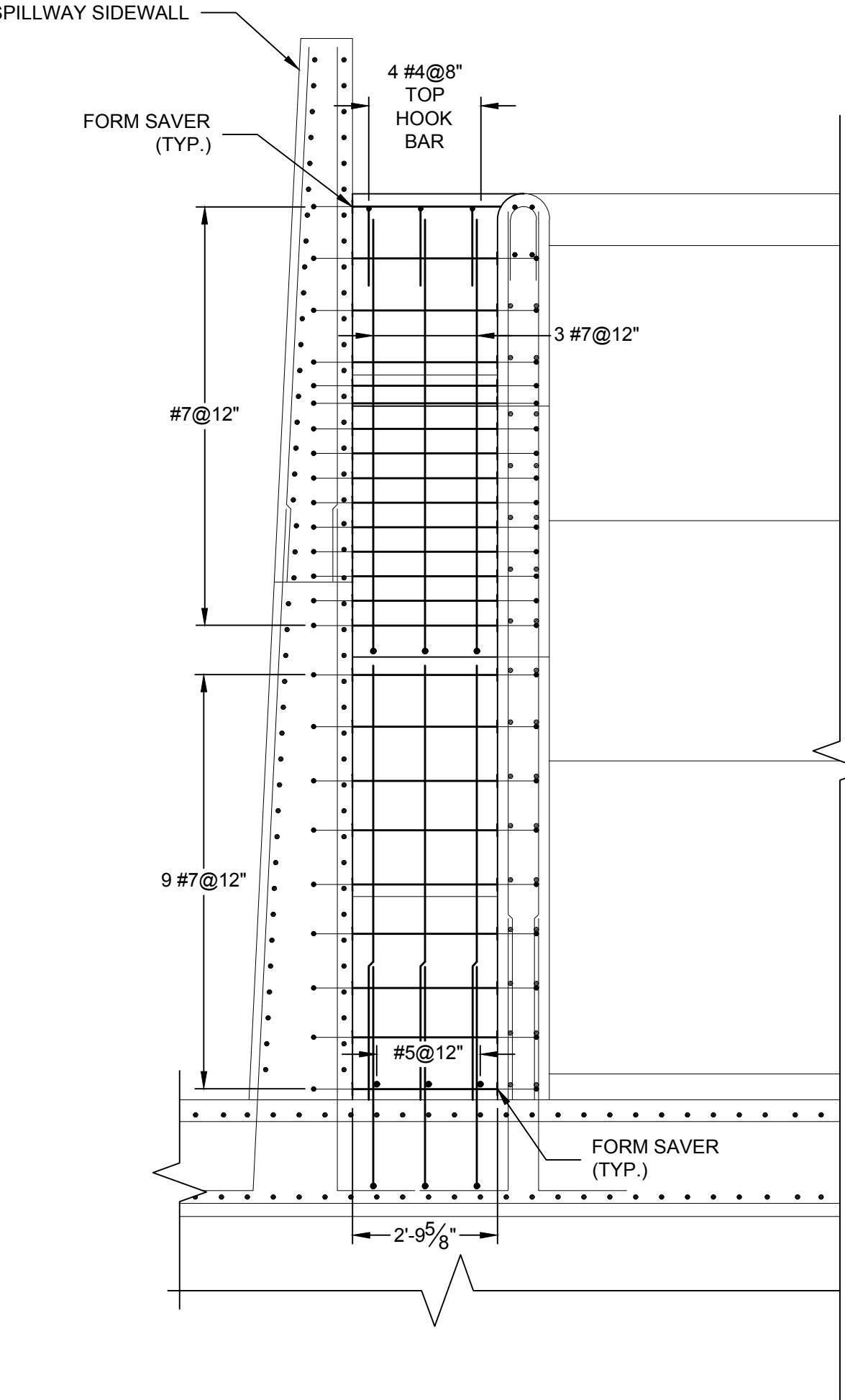
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 /
Phone: 770-781-8008 / Fax: 770-781-8003 /
schnabel-eng.com

REINFORCEMENT DETAILS

SEGMENT G1

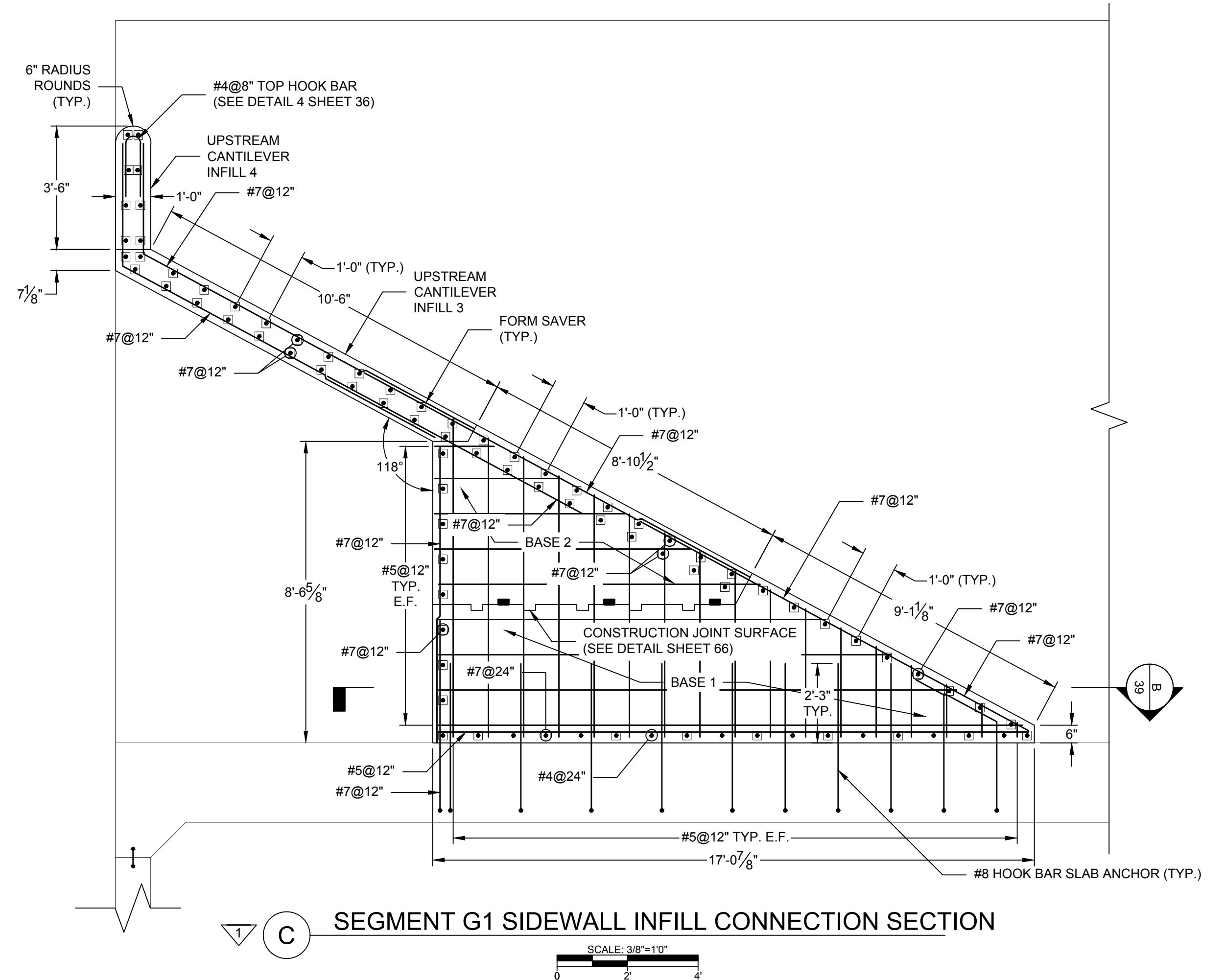
PROJECT: 16C17043.00
DATE: 07/10/2017
SHEET
37 OF 66





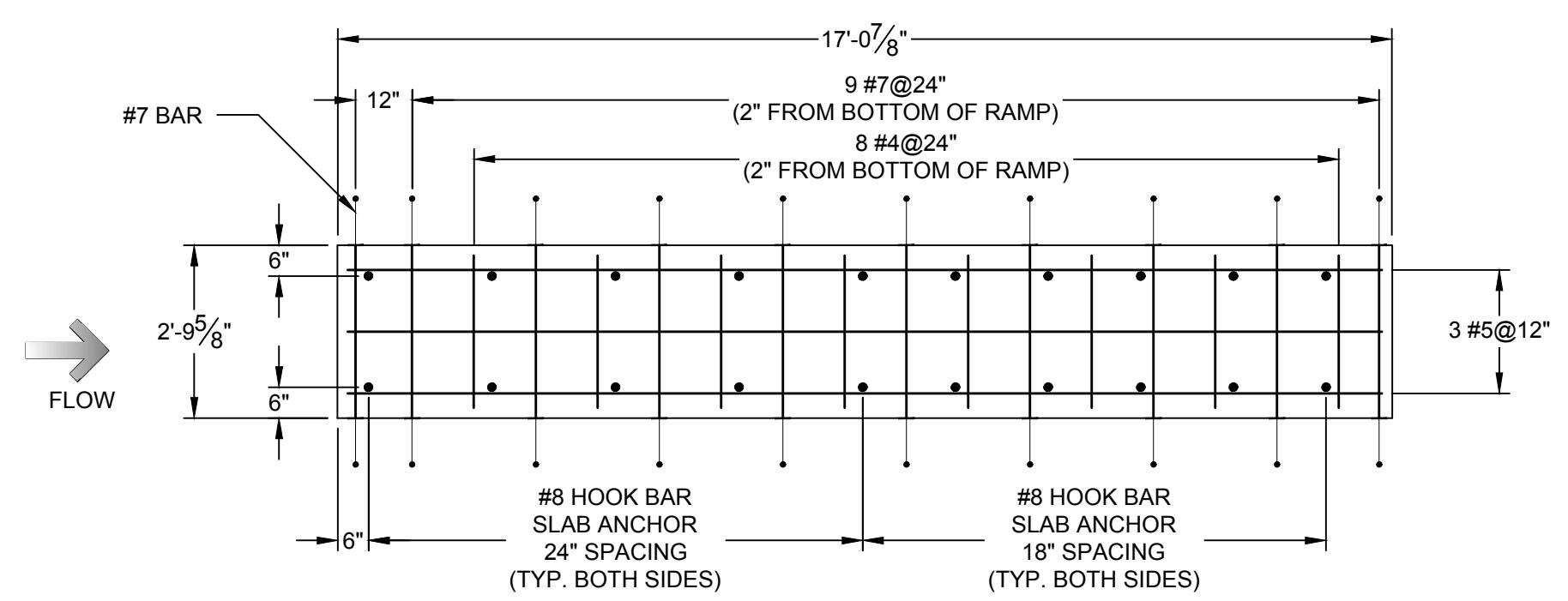
SEGMENT G1 SIDEWALL INFILL CONNECTION U/S ELEVATION

SCALE: 3'8" x 1'0"



SEGMENT G1 SIDEWALL INFILL CONNECTION SECTION

SCALE: 3'8"-10"



SEGMENT G1 SIDEWALL INFILL SLAB REINFORCEMENT

SCALE: 3'8"-10"

NOTE: SEGMENT
G1 & G2 SIMILAR
BUT OPPOSITE

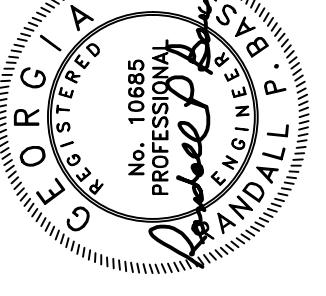
PROJECT: 16C17043.00	REVISION: 1
DATE: 07/10/2017	
SHEET 39 OF 66	

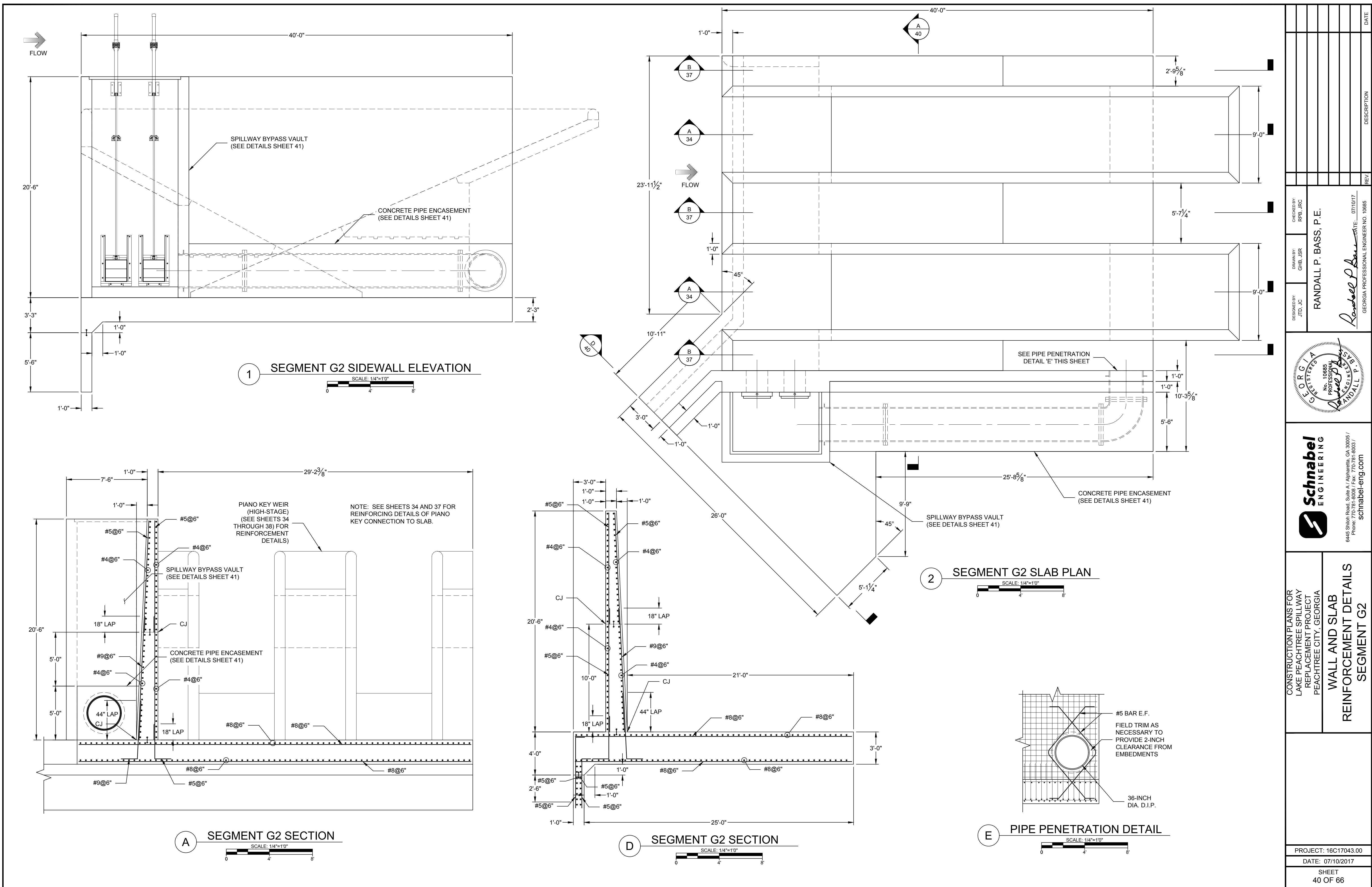


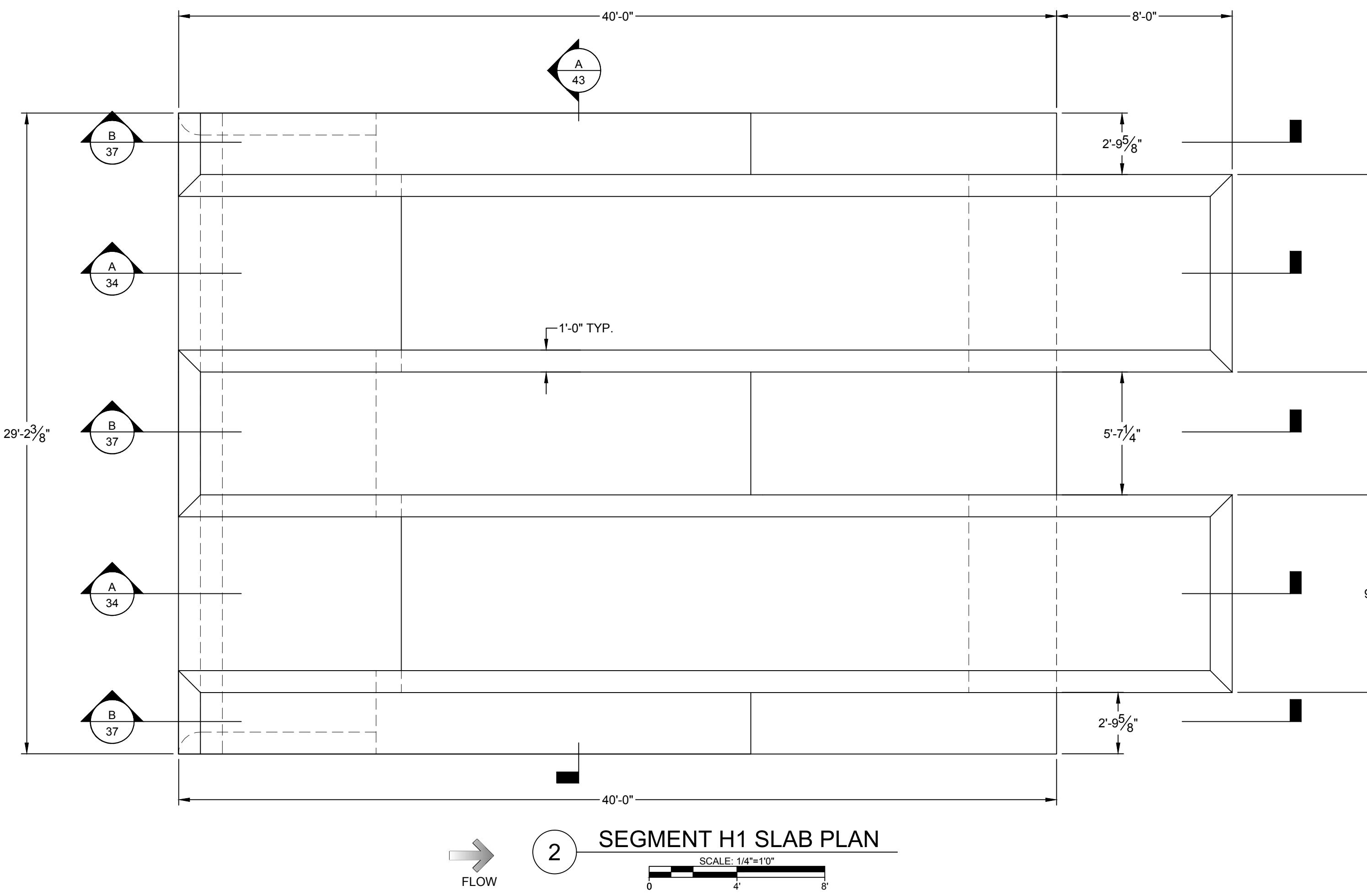
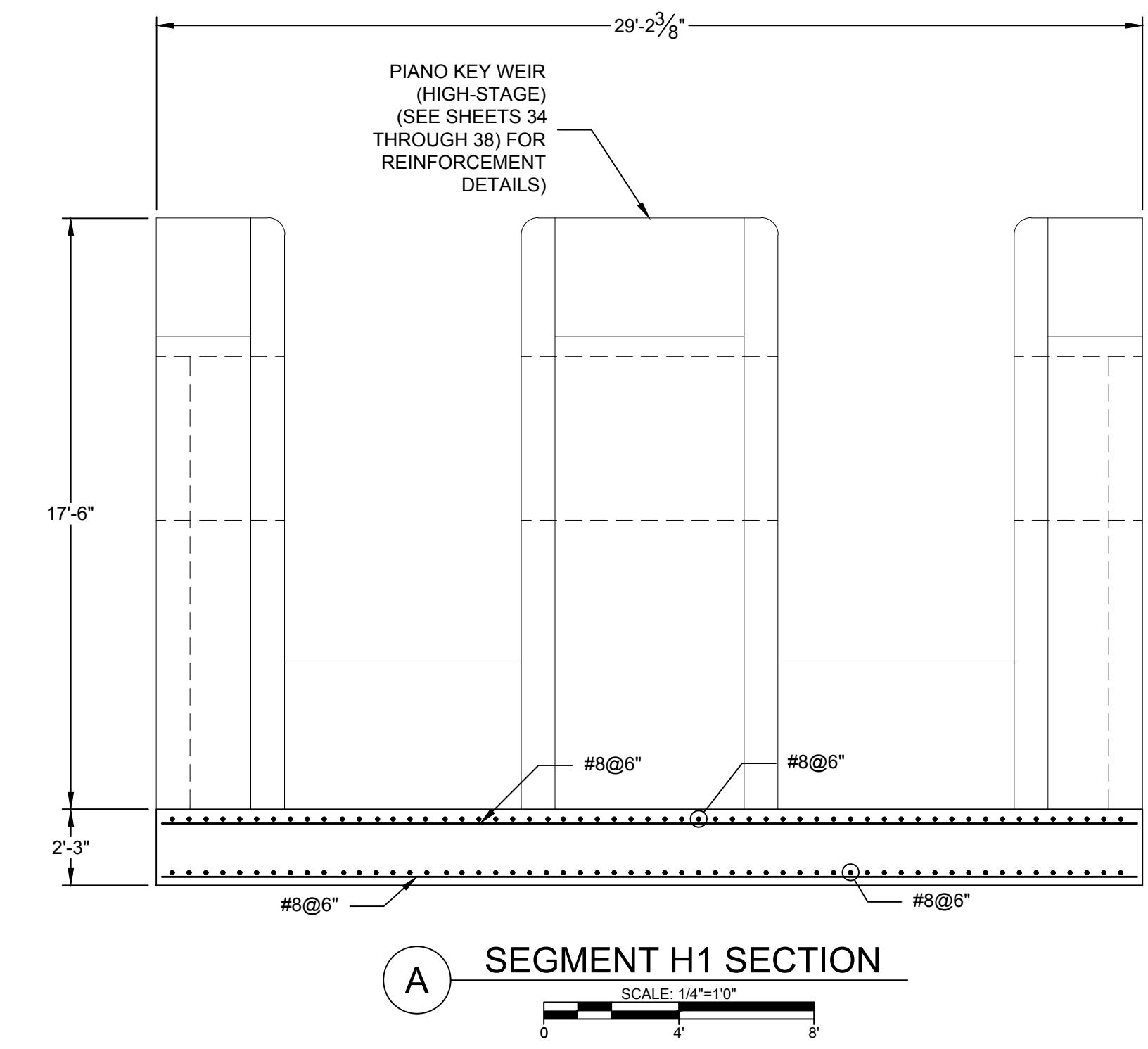
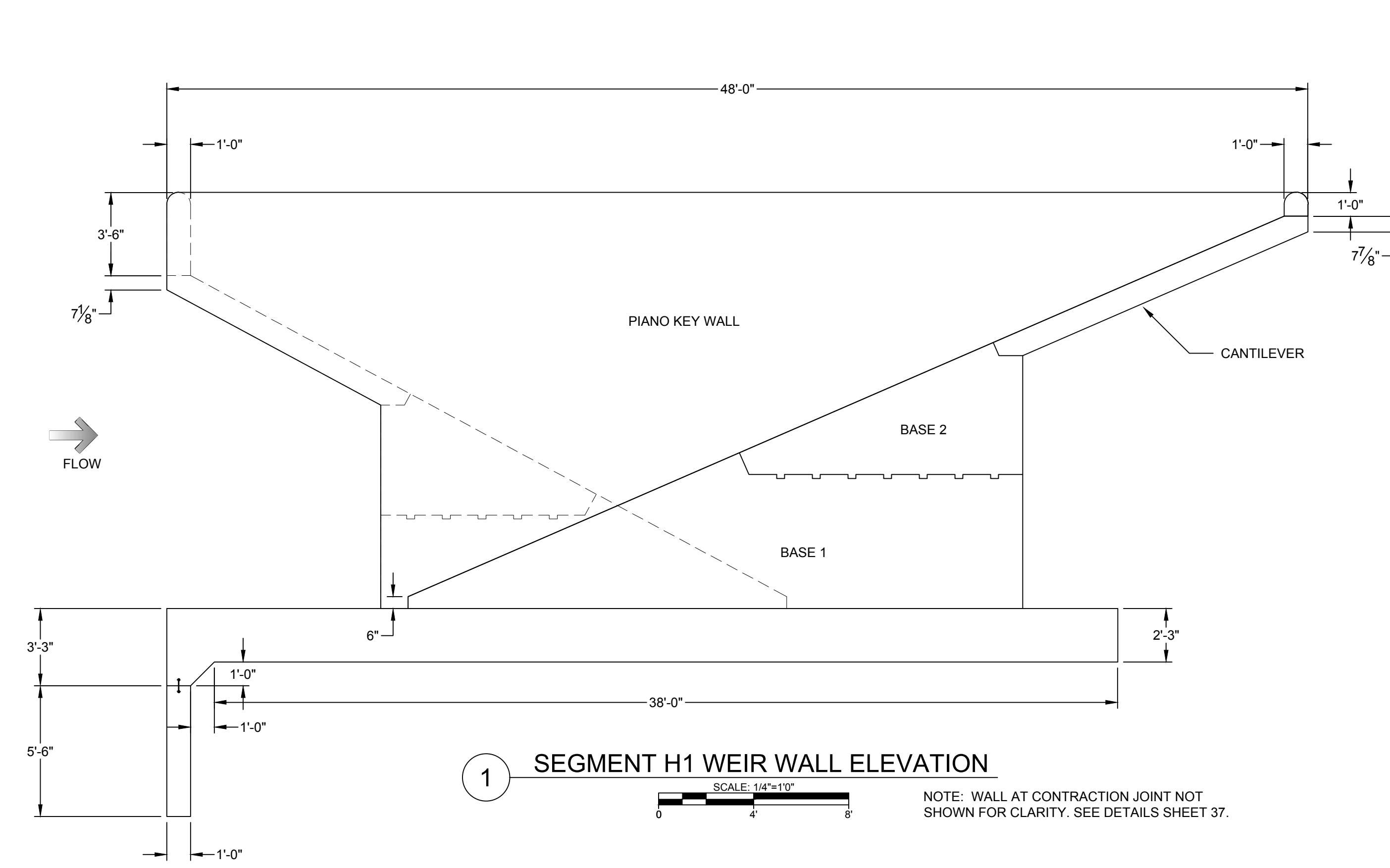
Schnabel
ENGINEERING

6445 Shiloh Road, Suite A / Alpharetta, GA 30005 /
Phone: 770-781-3003 / Fax: 770-781-3003 /
schnabeleng.com

DESIGNED BY: JTD, JC	DRAWN BY: GHIB, JSR	CHECKED BY: RPB, JRC	REVISED PER ADDENDUM NO. 03
RANDALL P. BASS, P.E.			E-2-17
<i>Randall P. Bass</i> GEORGIA PROFESSIONAL ENGINEER NO. 10865 DATE: 07/10/17			







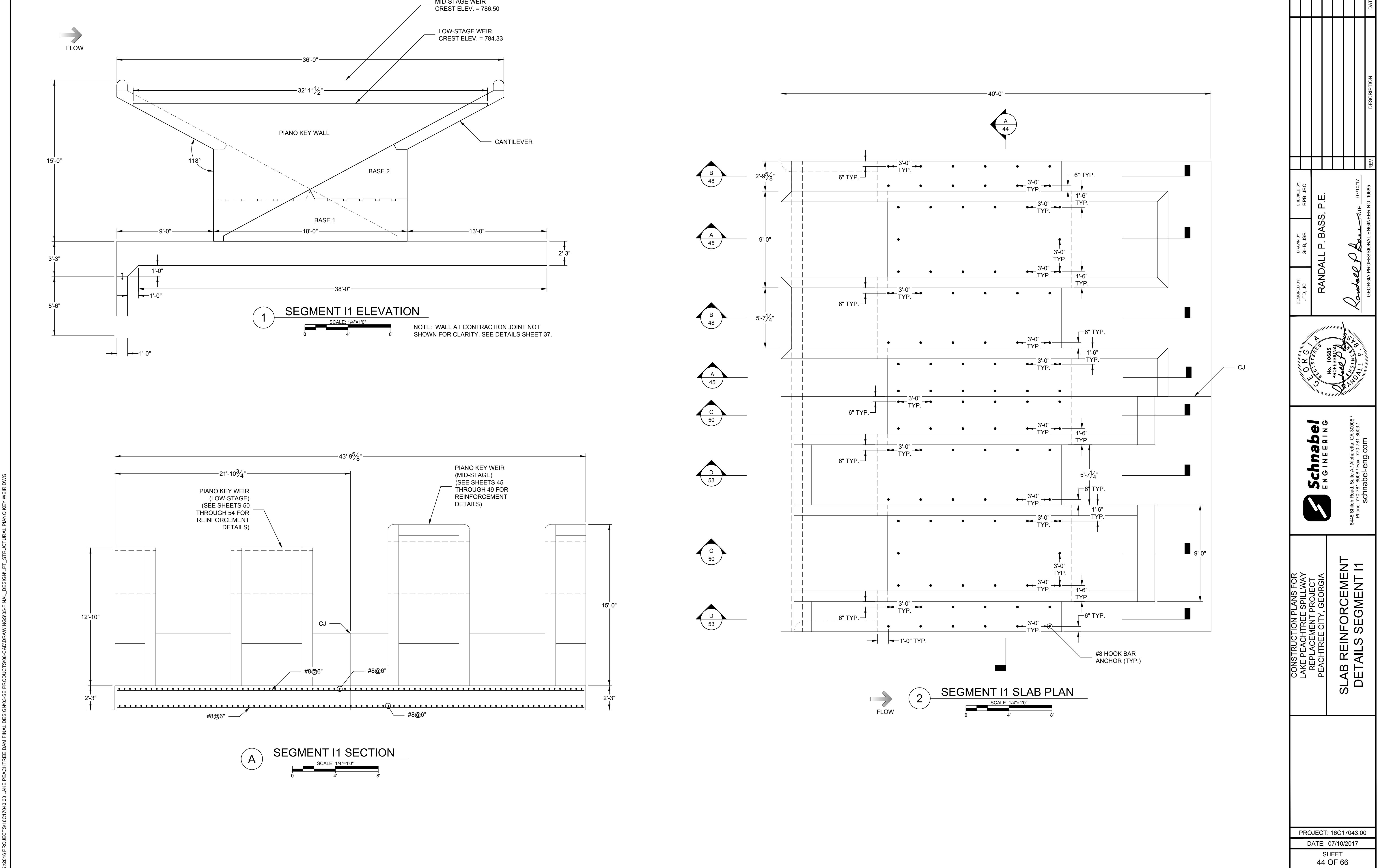
**NOTE: SEGMENT
H1 & H2 SIMILAR**

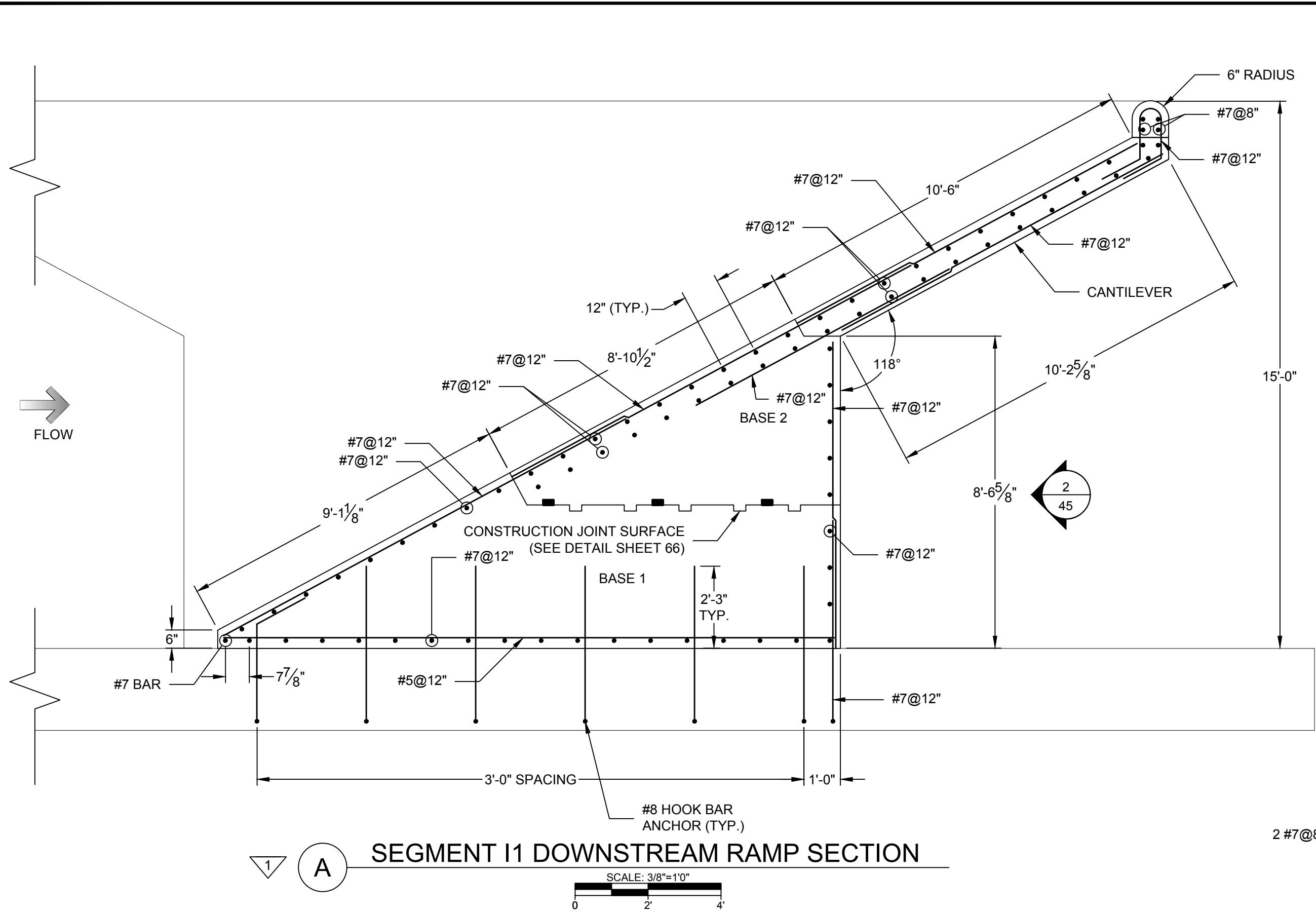
DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RPB, JRC	DATE:
<i>Randall P. Bass</i>			
GEORGIA PROFESSIONAL ENGINEER NO. 10885 DATE: 07/10/17 REV: 00			



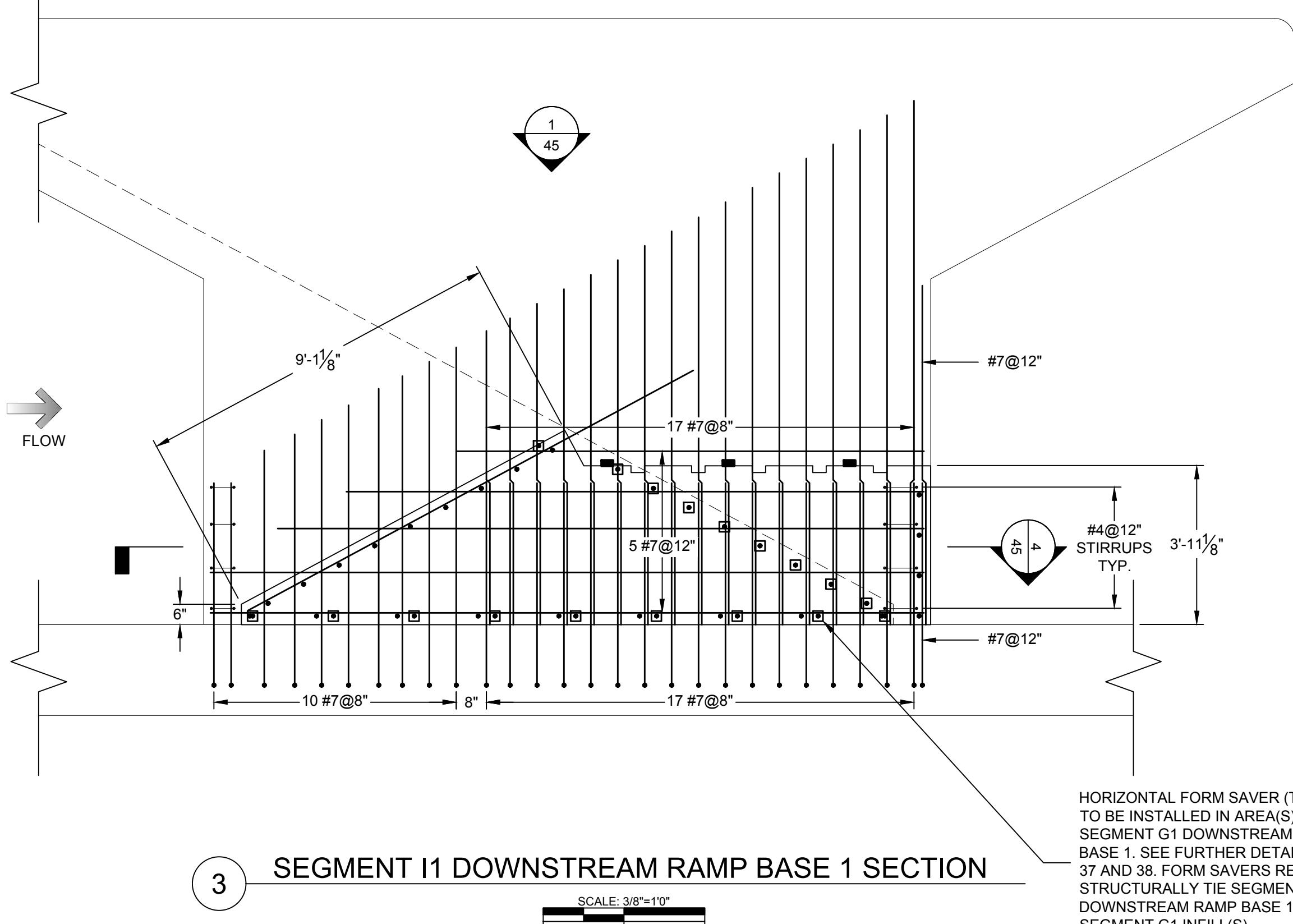
CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	SLAB REINFORCEMENT DETAILS SEGMENT H1
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PROJECT: 16C17043.00
DATE: 07/10/2017
SHEET 43 OF 66

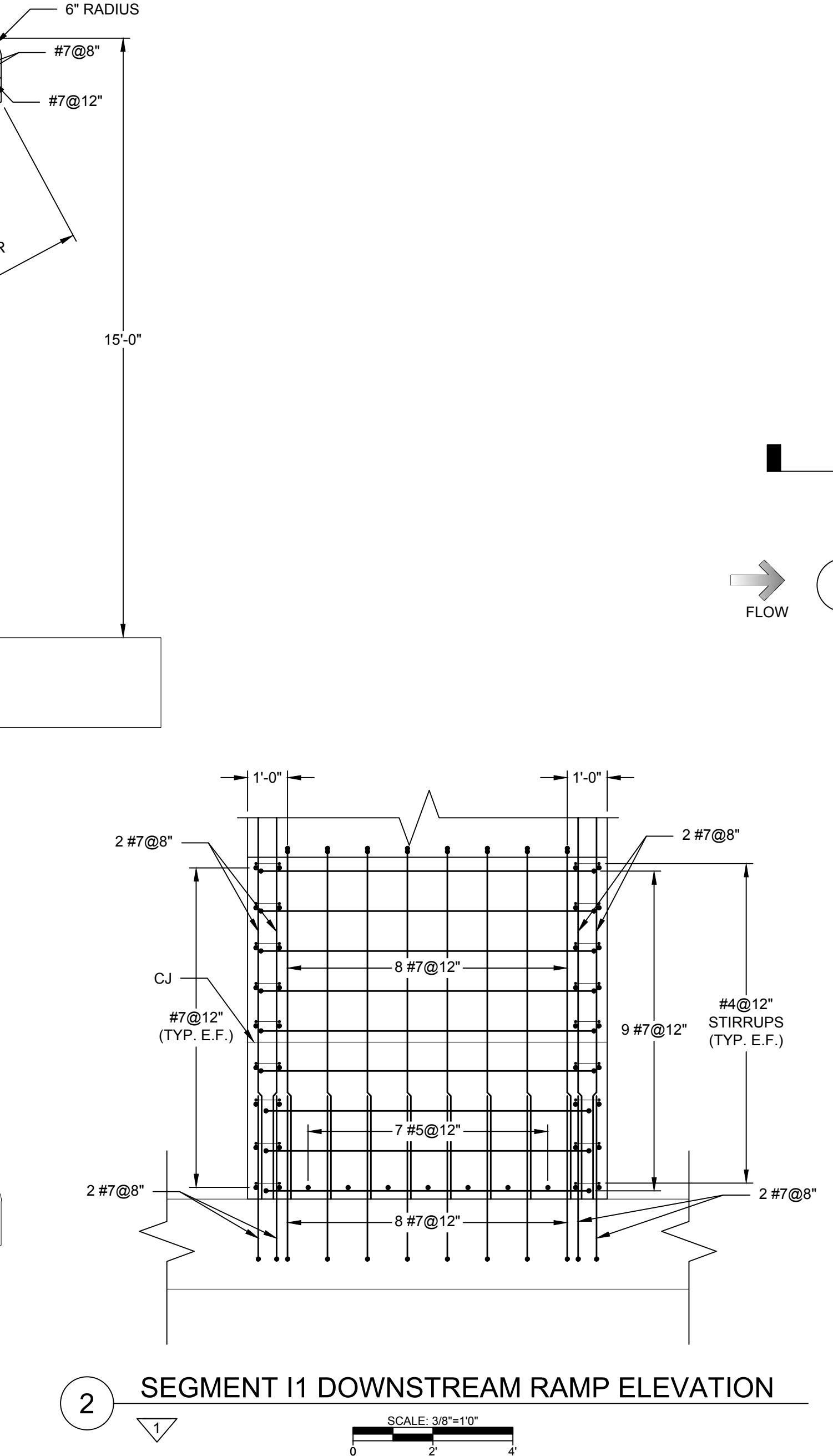




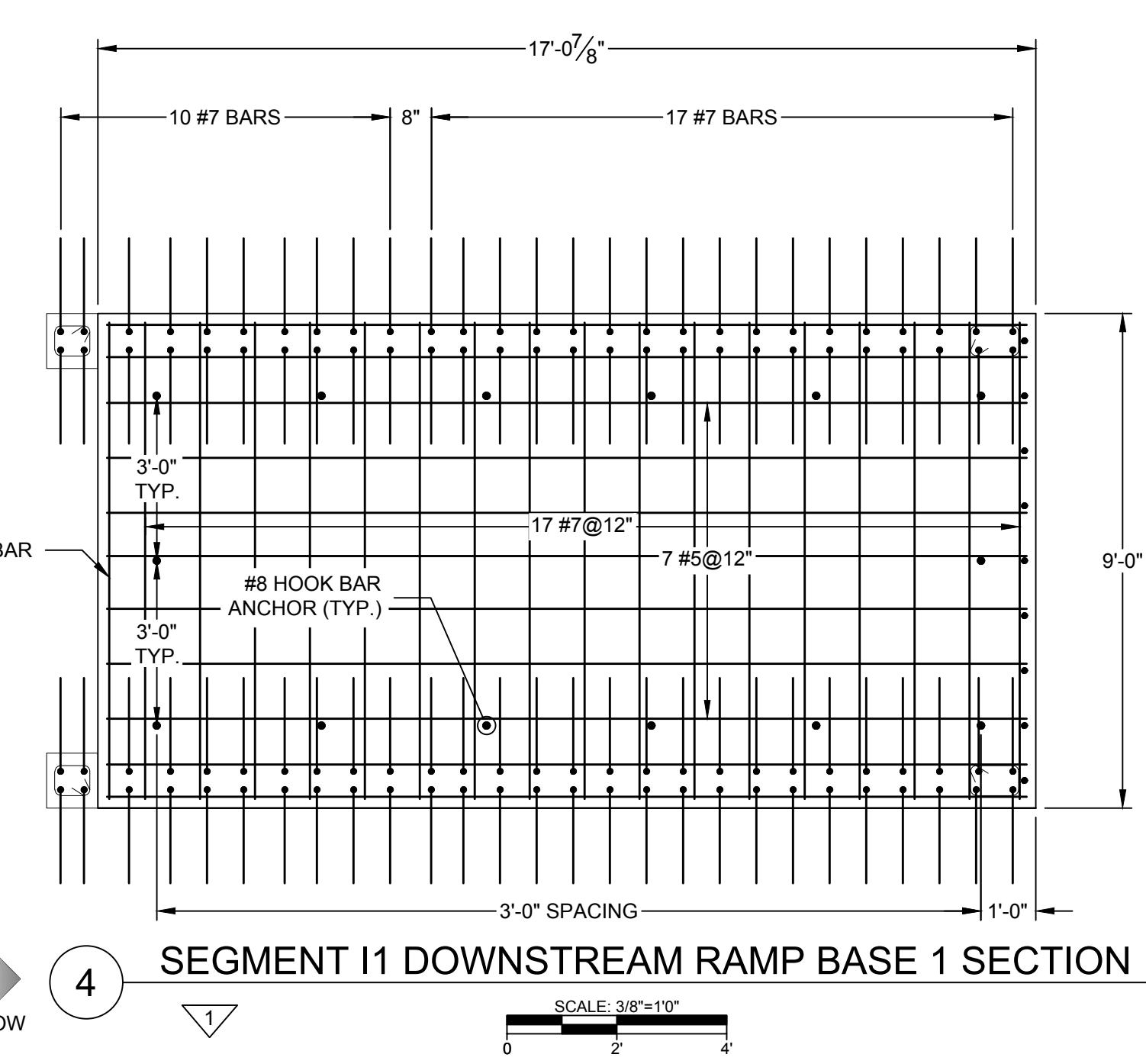
A SEGMENT I1 DOWNSTREAM RAMP SECTION
SCALE: 3/8"=10'



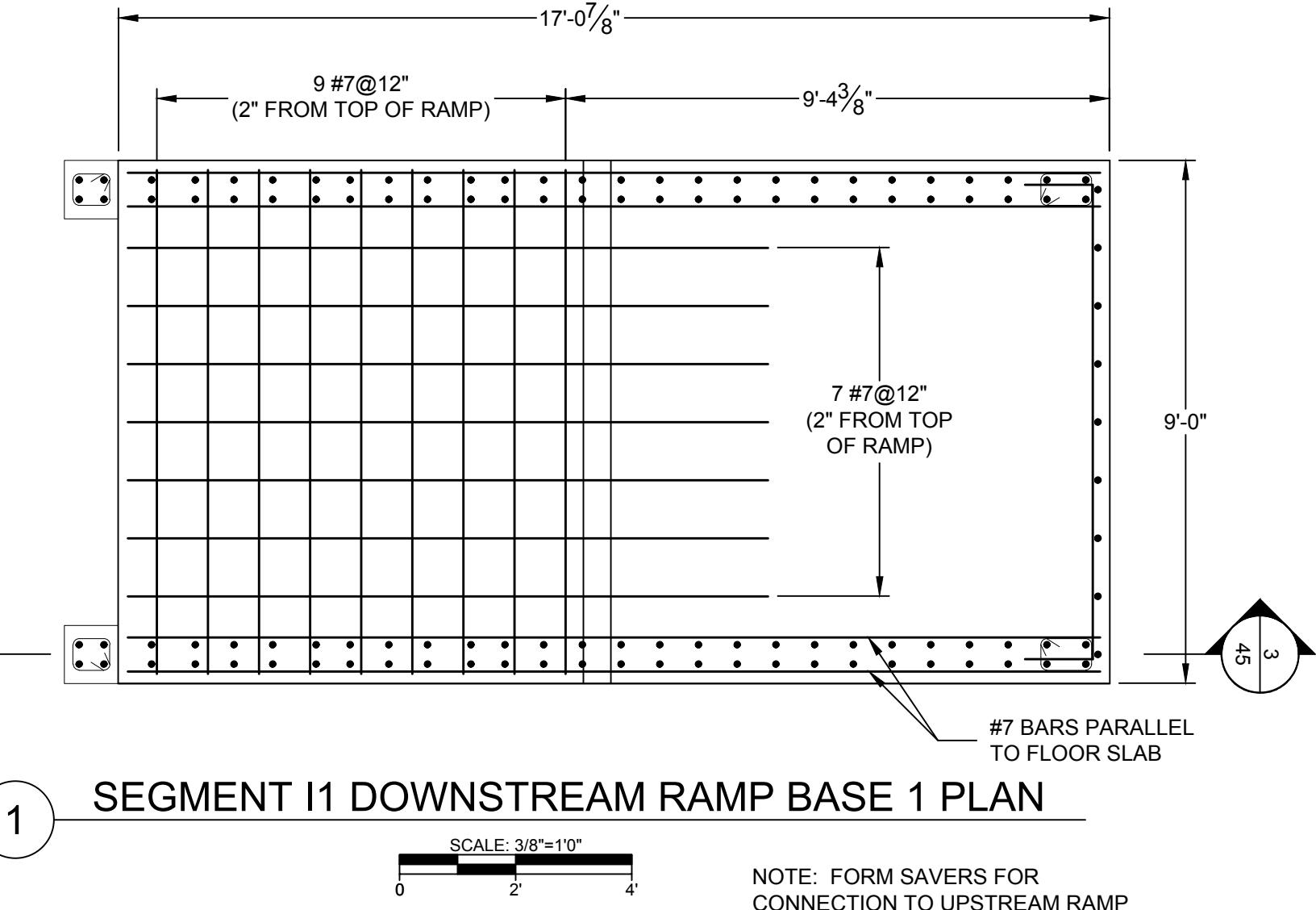
3 SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION
SCALE: 3/8"=10"



2 SEGMENT I1 DOWNSTREAM RAMP ELEVATION
SCALE: 3/8"=10"

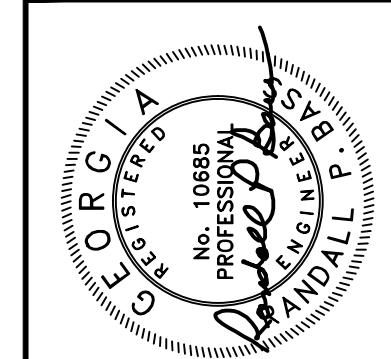


4 SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION
SCALE: 3/8"=10"

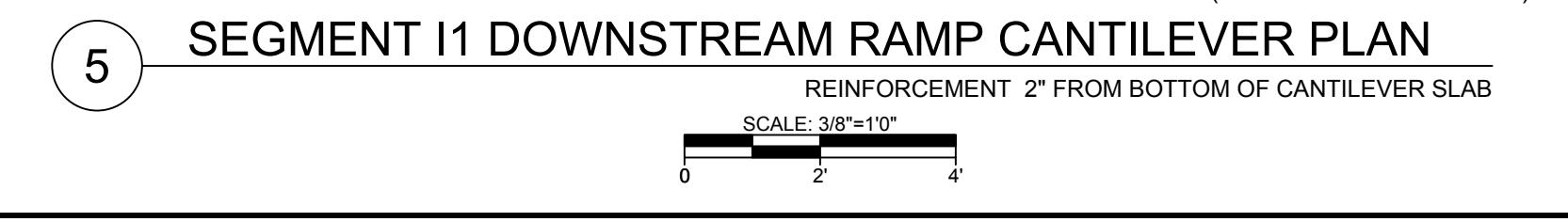
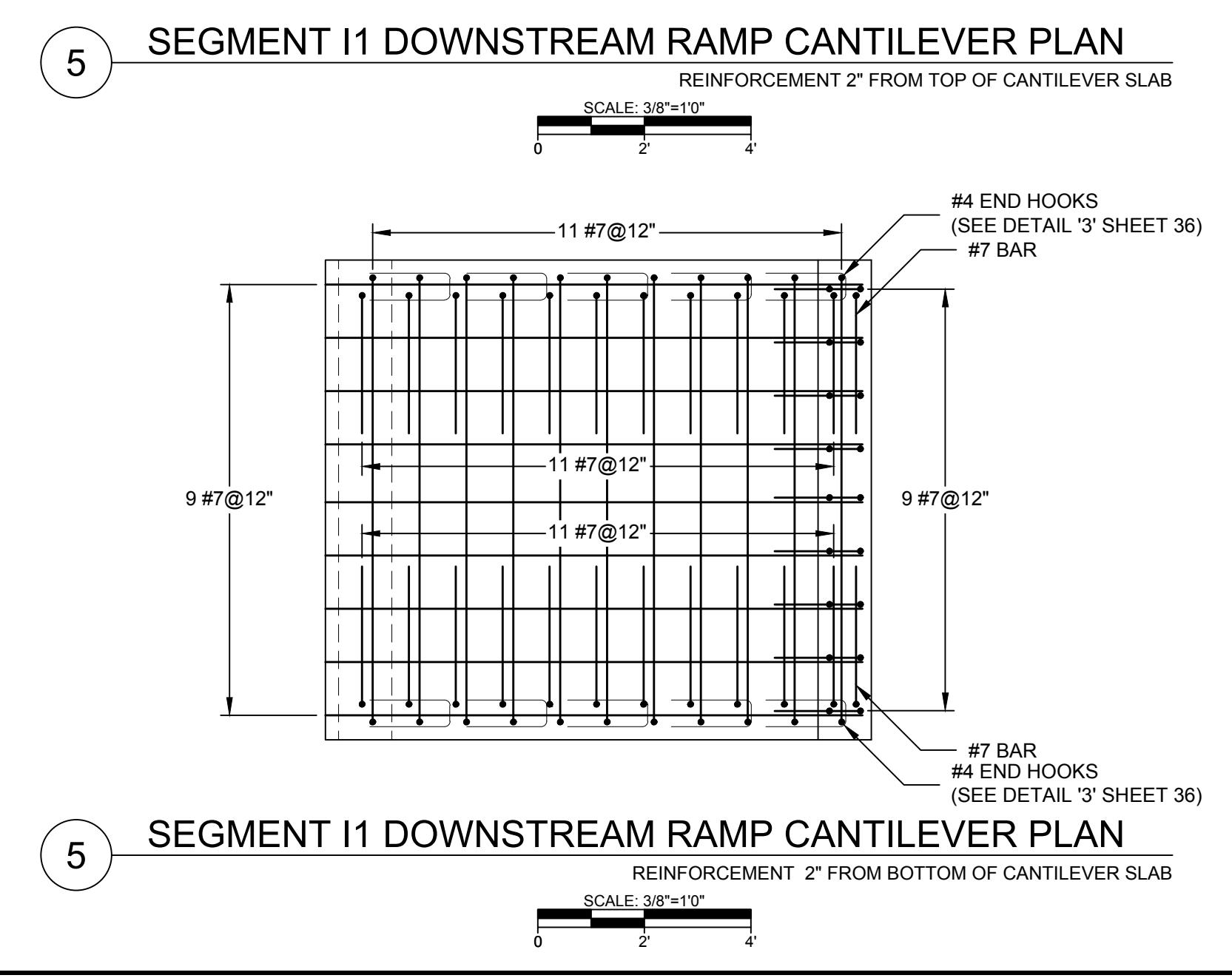
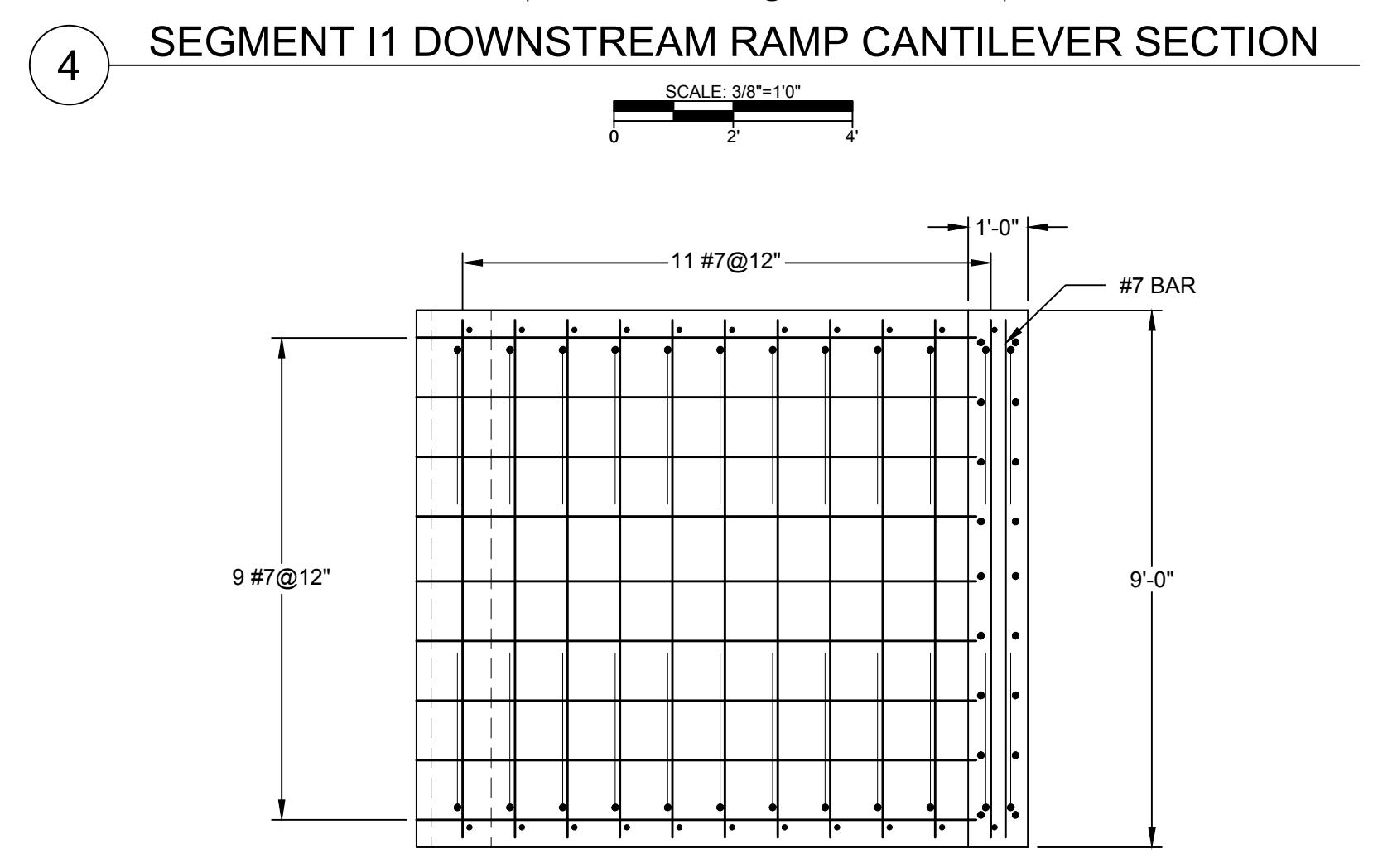
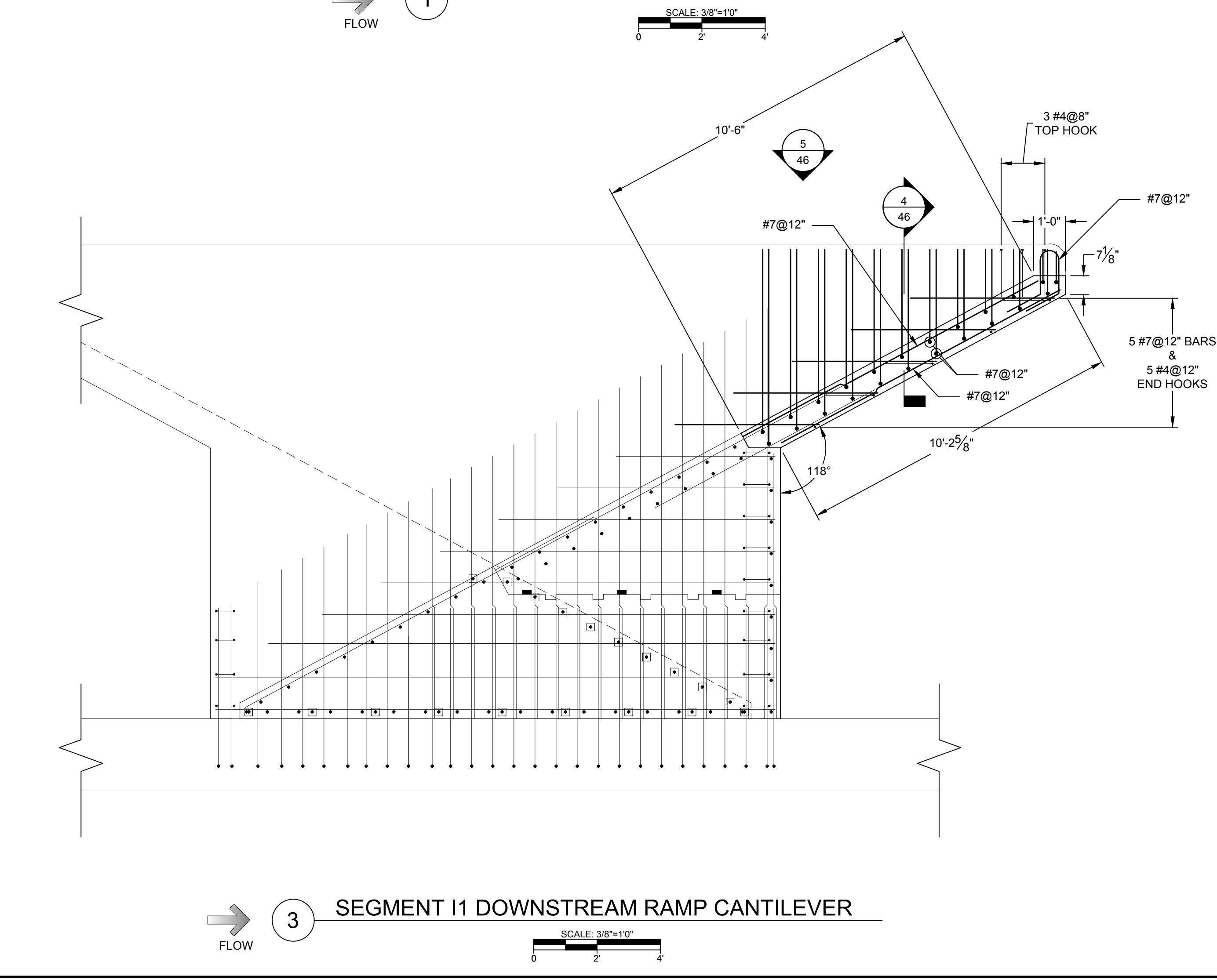
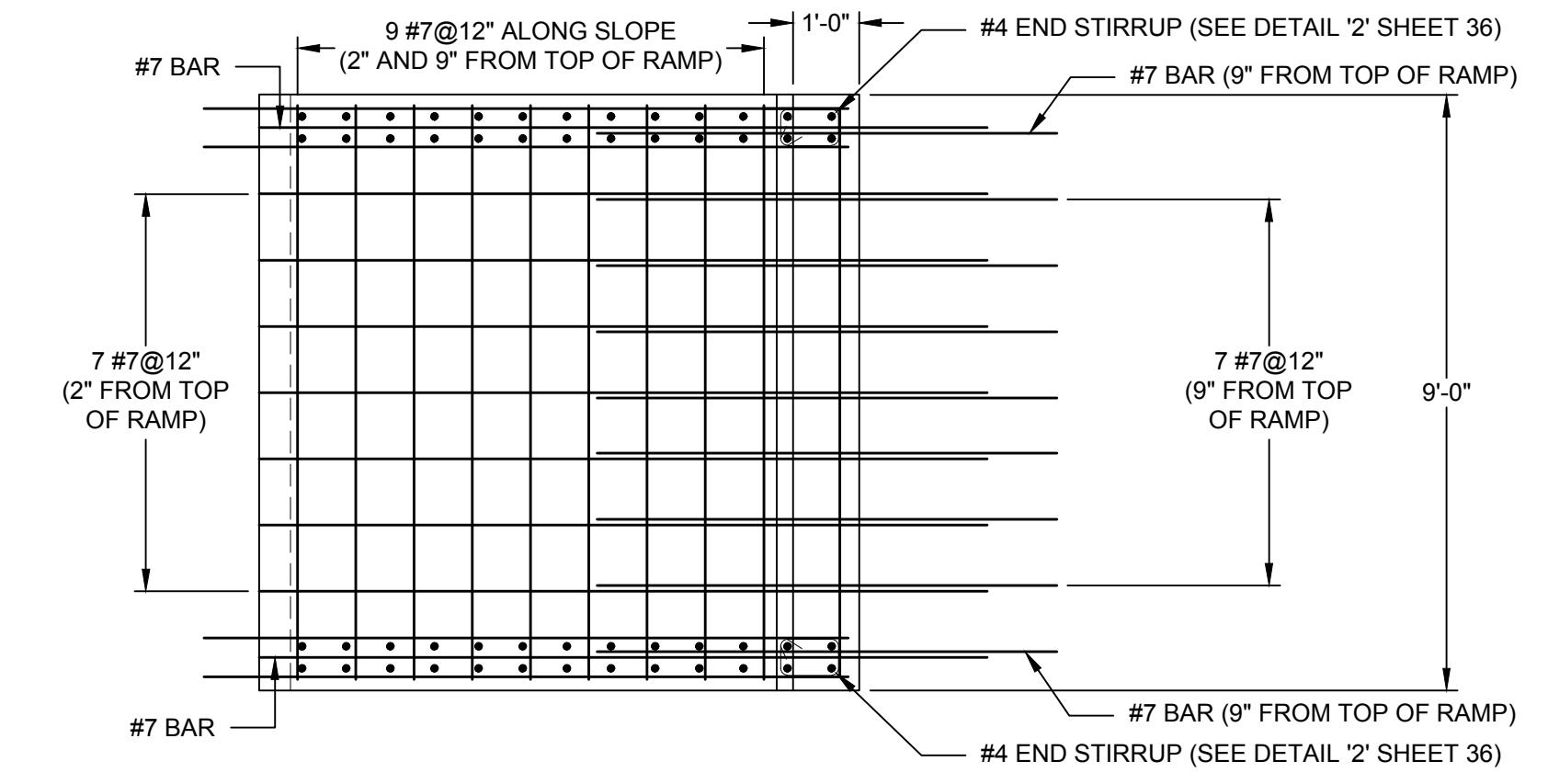
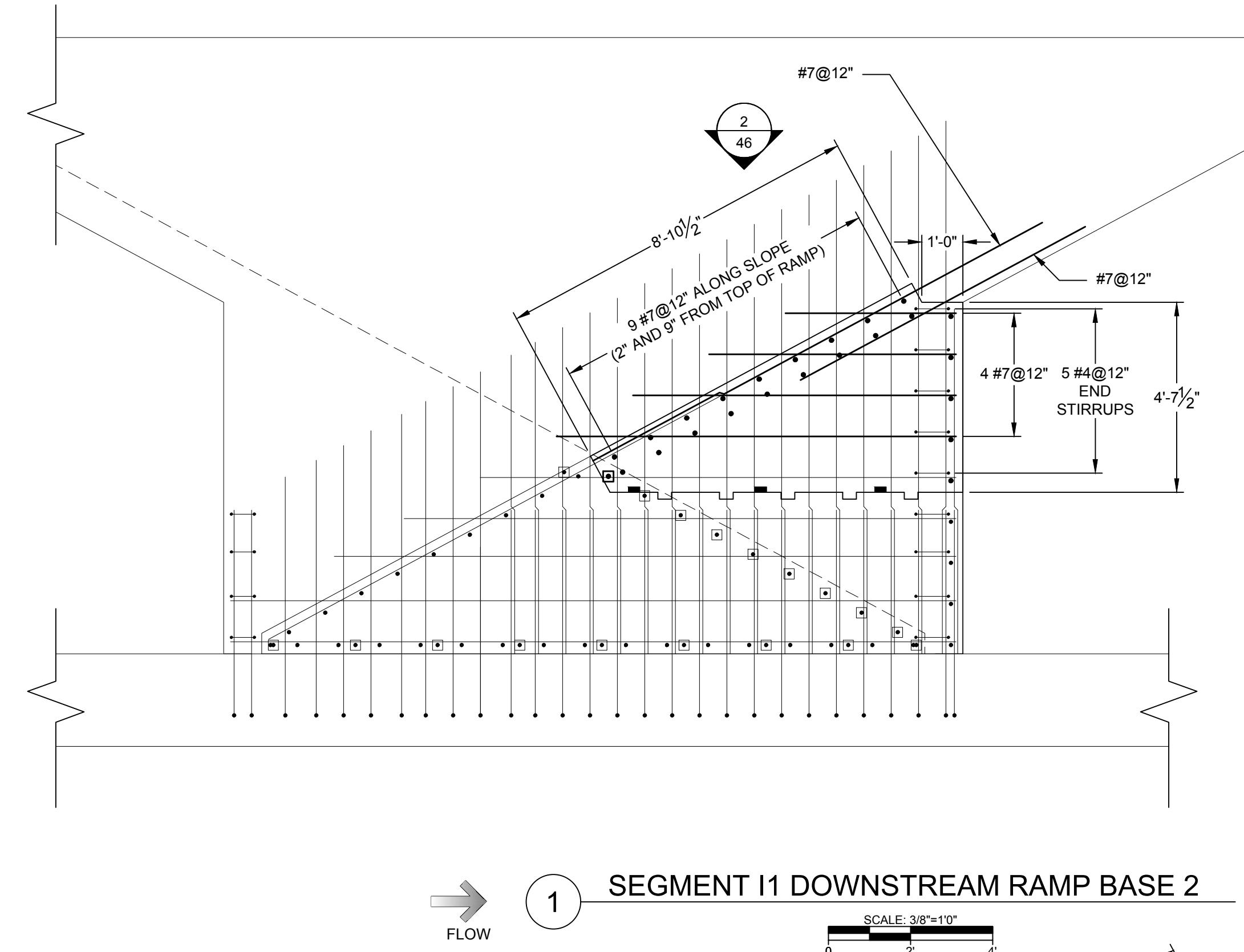


1 SEGMENT I1 DOWNSTREAM RAMP BASE 1 PLAN
SCALE: 3/8"=10'

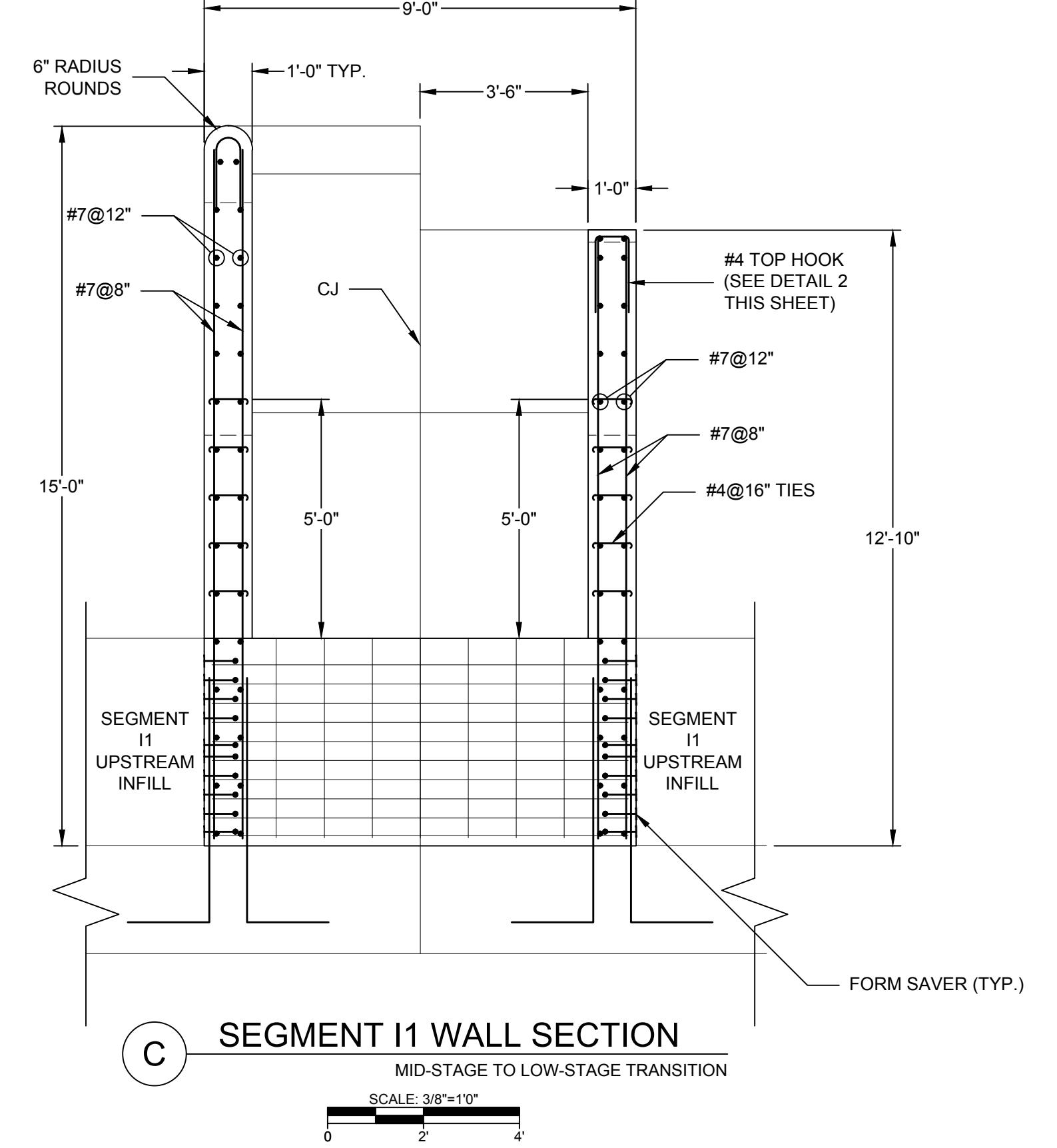
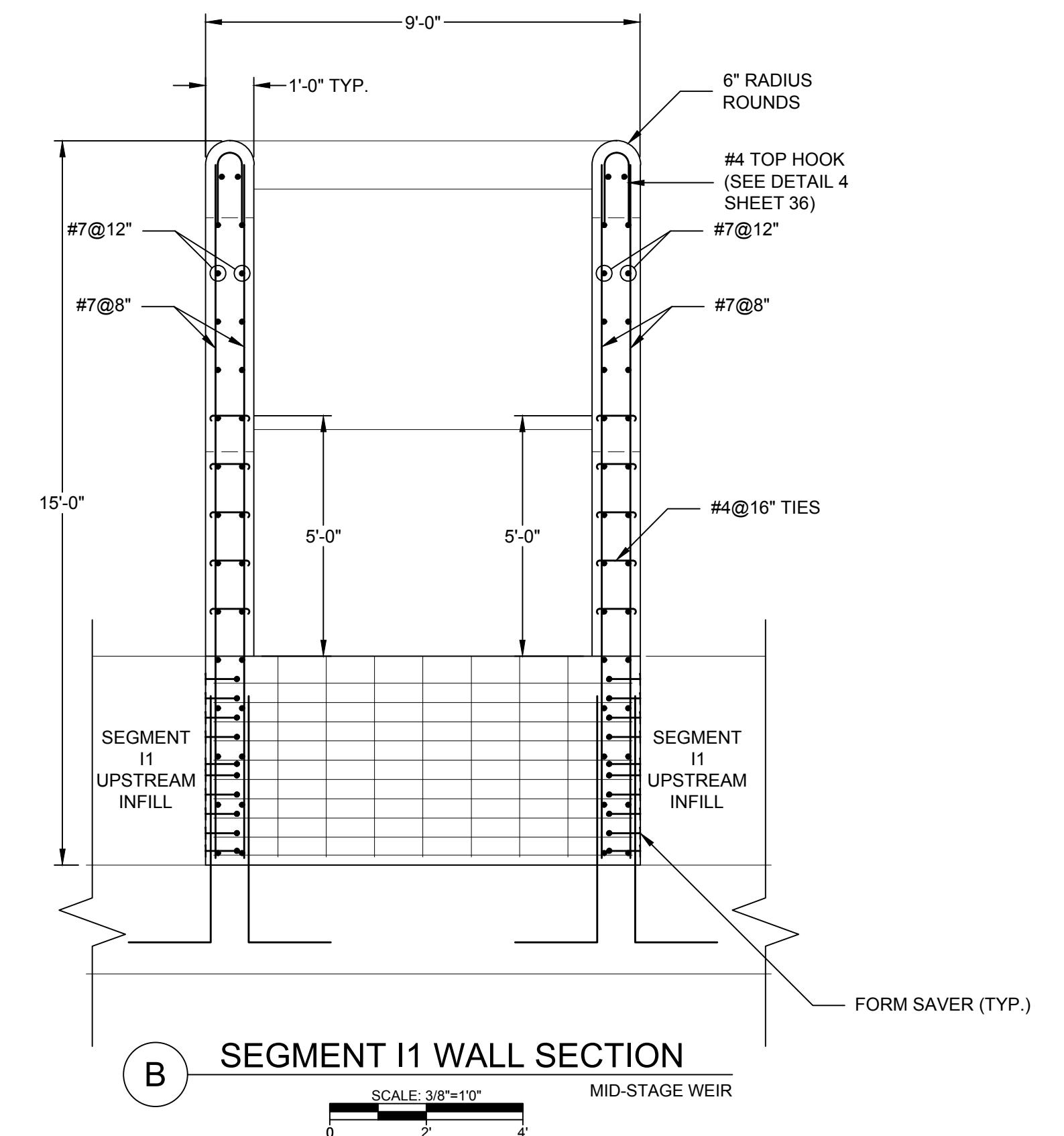
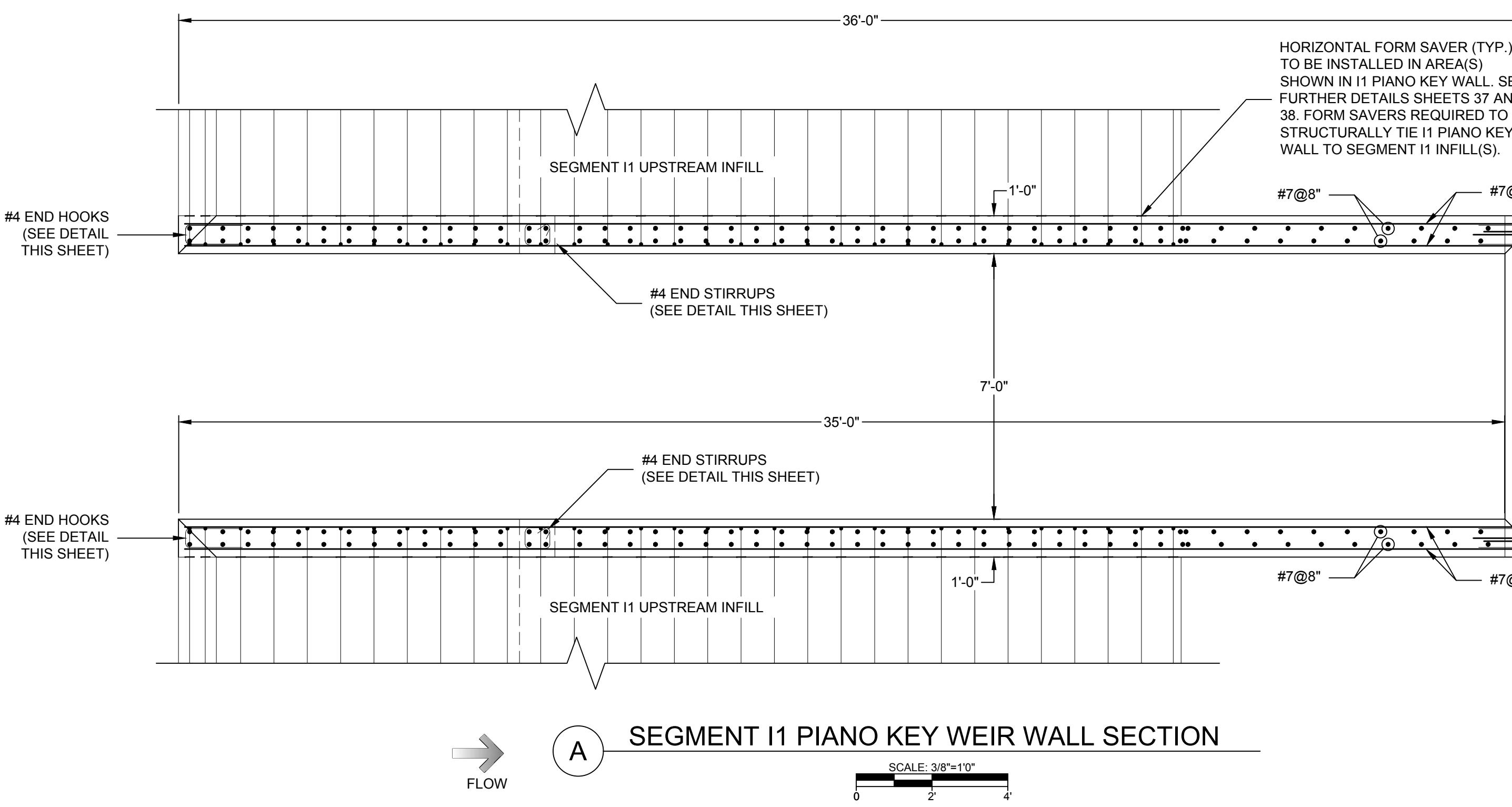
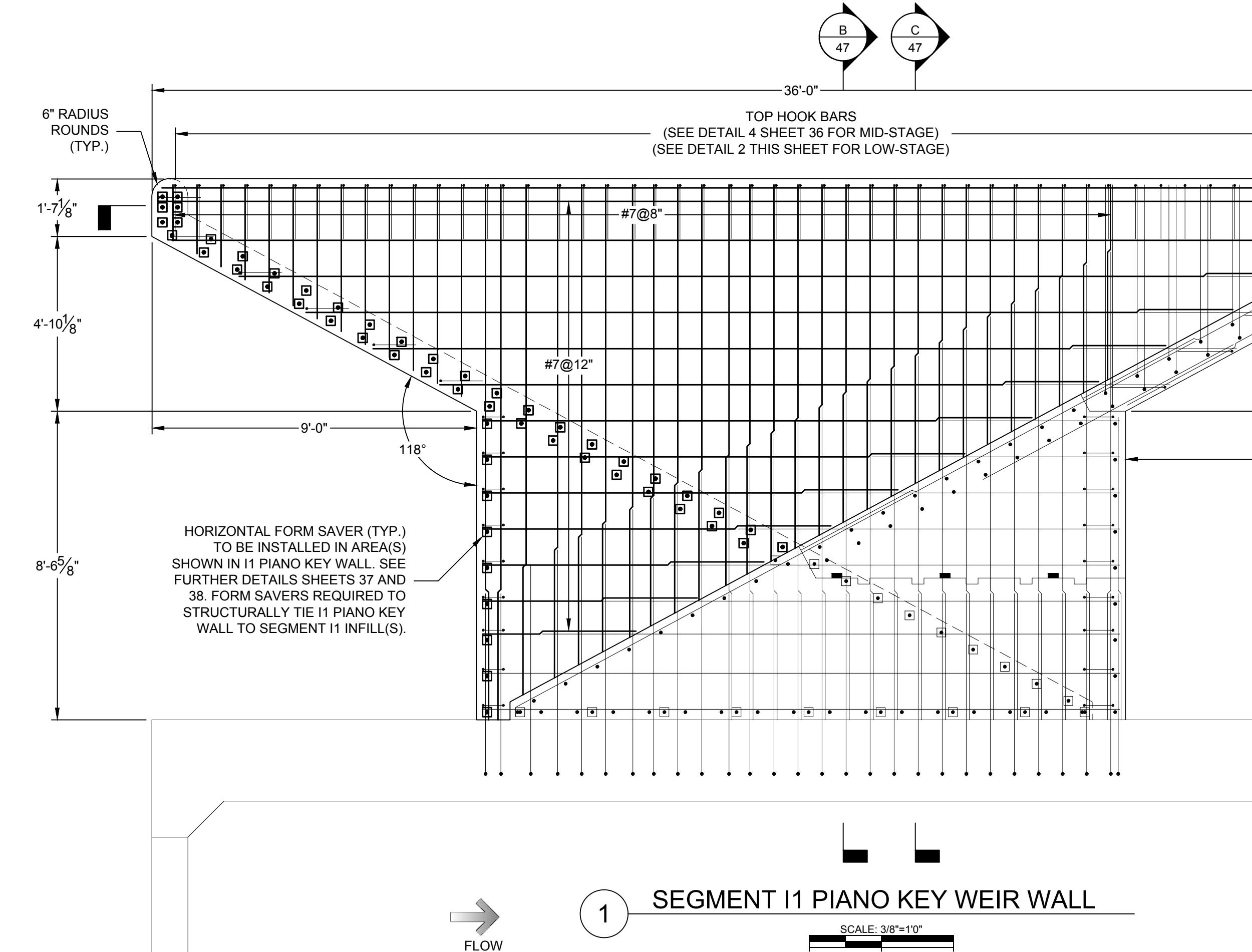
PROJECT: 16C17043.00	CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	MID STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT I1	DATE: 07/10/2017	45 OF 66
DESIGNED BY: JTD, JC	DRAWN BY: GHB, JSR	CHECKED BY: RPB, JRC	REVISED PER ADDENDUM NO. 03 1	E-2-17
RANDALL P. BASS, P.E. <i>Randall P. Bass</i> GEORGIA PROFESSIONAL ENGINEER NO. 10865				DATE: 07/10/17
Schnabel ENGINEERING 6445 Shiloh Road, Suite A / Alpharetta, GA 30009 / Phone: 770-781-3003 / Fax: 770-781-3003 / schnabeleng.com				



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Phone: 770-781-3003 / Fax: 770-781-3003 /
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PROJECT: 16C17043.00	CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA	Schnabel ENGINEERING	DESIGNED BY JTD, JC	DRAWN BY GHIB, JSR	CHEKED BY RPB, JRC	DATE: 07/10/2017
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-3008 Fax: 770-781-3003 / SchnabelEng.com	MID STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT I1		RANDALL P. BASS, P.E.	Randall P. Bass	DATE: 07/10/17 GEORGIA PROFESSIONAL ENGINEER NO. 10865	



PROJECT:	16C17043.00
DATE:	07/10/2017
SHEET	47 OF 66
DESCRIPTION	RANDALL P. BASS, P.E.
DESIGNED BY:	JTD, JC
DRAWN BY:	GHB, JSR
CHECKED BY:	RPB, JRC
REV:	07/10/17
DATE:	07/10/17
GEORGIA PROFESSIONAL ENGINEER NO. 10885	Randall P. Bass
ORG	PROFESSIONAL ENGINEER RANDALL P. BASS
PE	PE No. 10885
STATE	GA
NAME	RANDALL P. BASS
PHONE	770-781-3003 / Fax: 770-781-3003 / schnabeleng.com

Schnabel
ENGINEERING



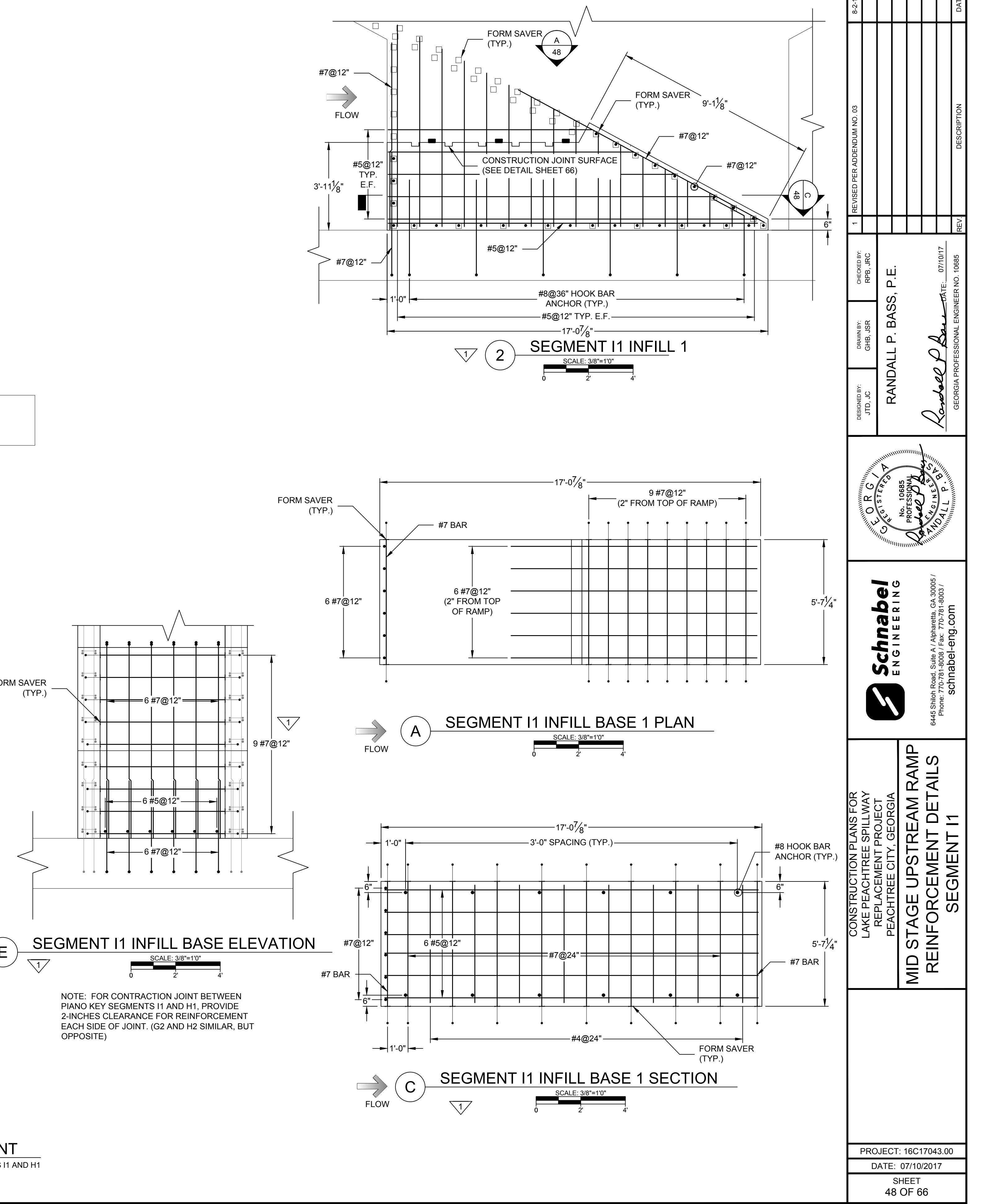
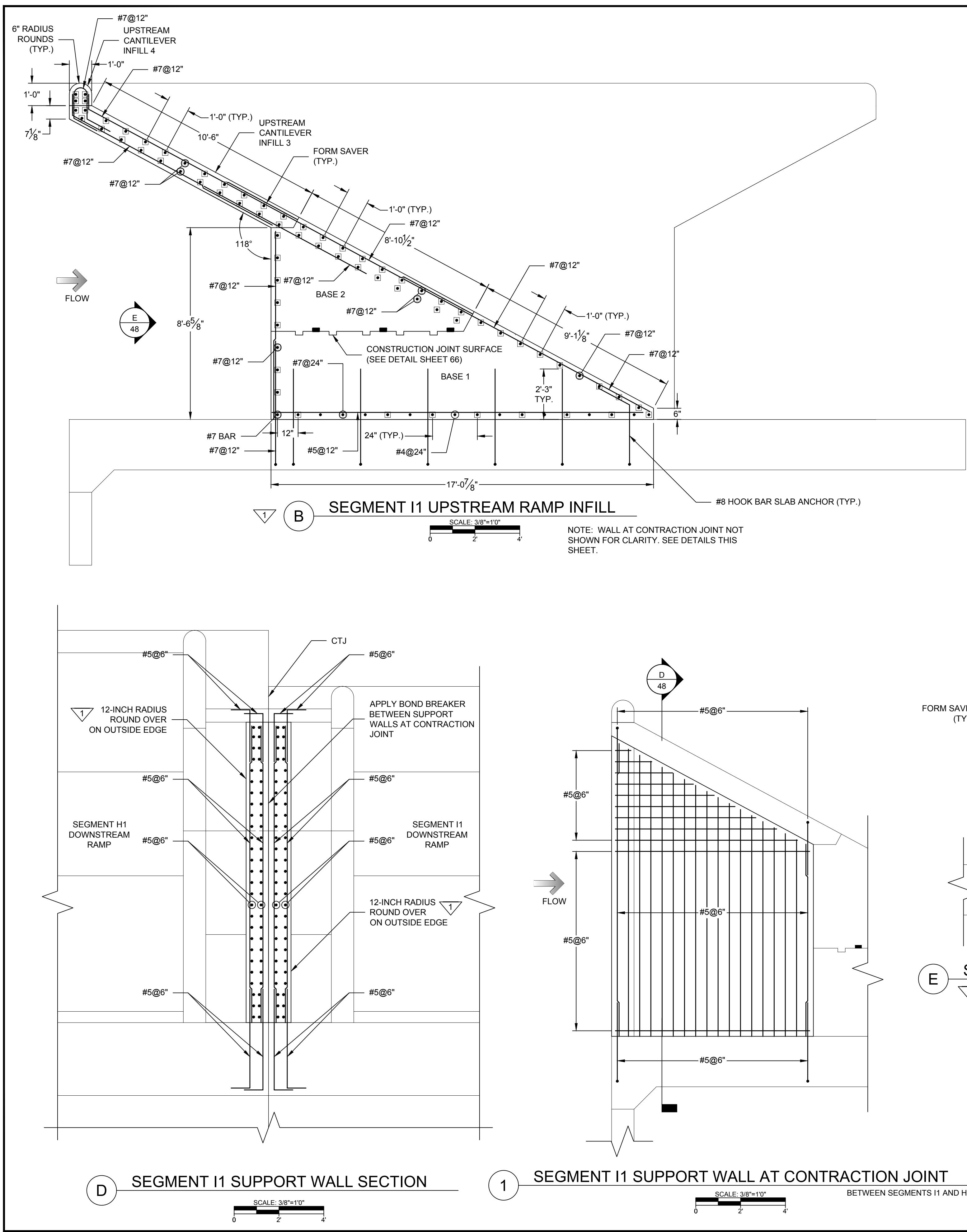
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 /

Phone: 770-781-3003 / Fax: 770-781-3003 /

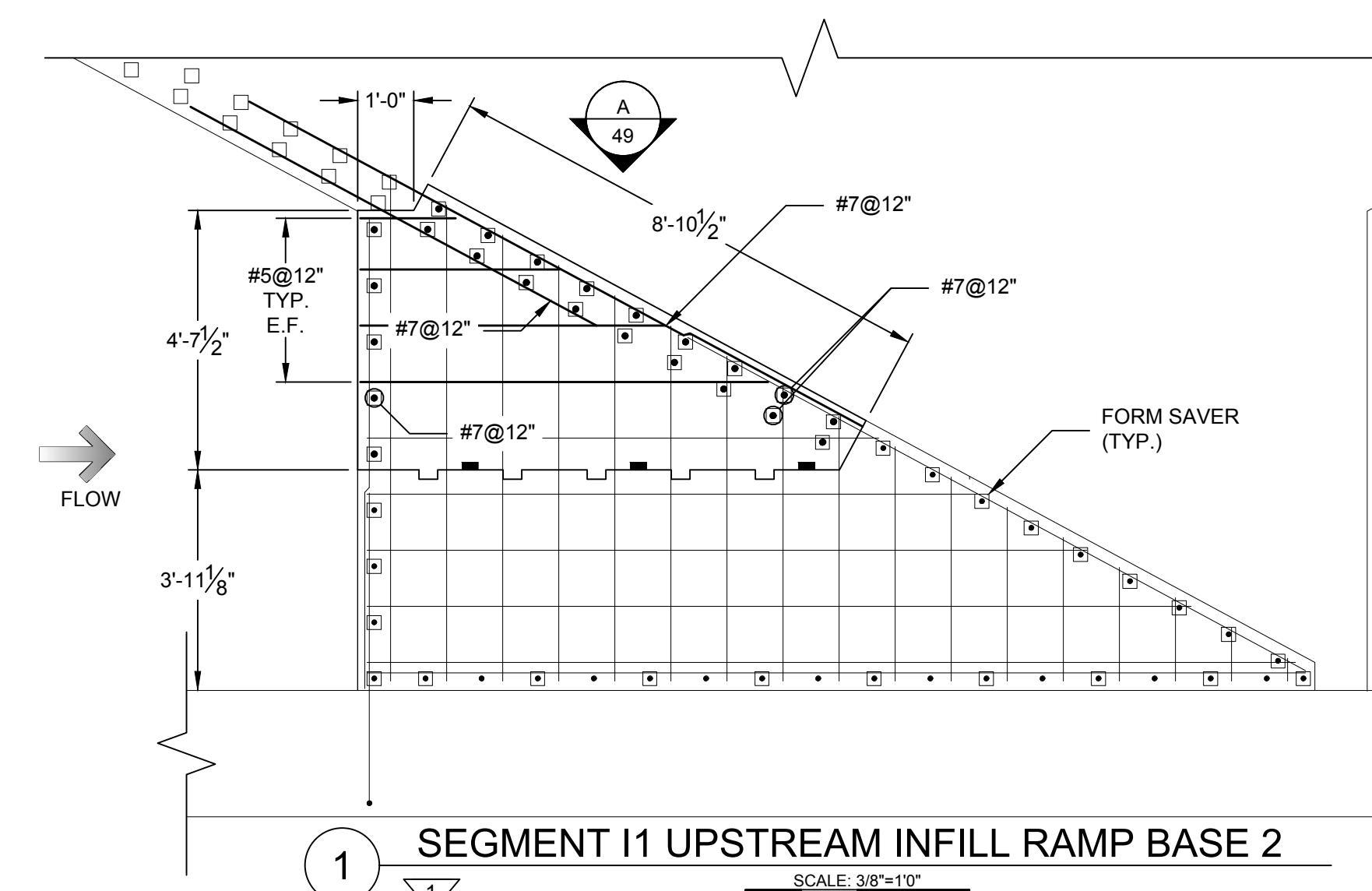
schnabeleng.com

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

MID-STAGE DOWNSTREAM
RAMP REINFORCEMENT
DETAILS SEGMENT I1



G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCTS\08-CAD\DRAWINGS\05-FINAL_DESIGN\LPT_STRUCTURAL PIANO KEY WEIR.DWG



SEGMENT I1 UPSTREAM INFILL RAMP BASE

SEGMENT I1 UPSTREAM INFILL RAMP BASE 2

CROSS SECTION A: Shows a vertical height of 4'-7 1/2" and a horizontal width of 1'-0". Reinforcement includes #5@12" TYP. E.F. and #7@12" bars. A circular callout A-49 indicates a 2" thick concrete base.

CROSS SECTION B: Shows a vertical height of 3'-11 1/8" and a horizontal width of 1'-0". Reinforcement includes #7@12" bars. A circular callout B-49 indicates a 2" thick concrete base. A note specifies 11 #7@12" bars from the top of the cantilever.

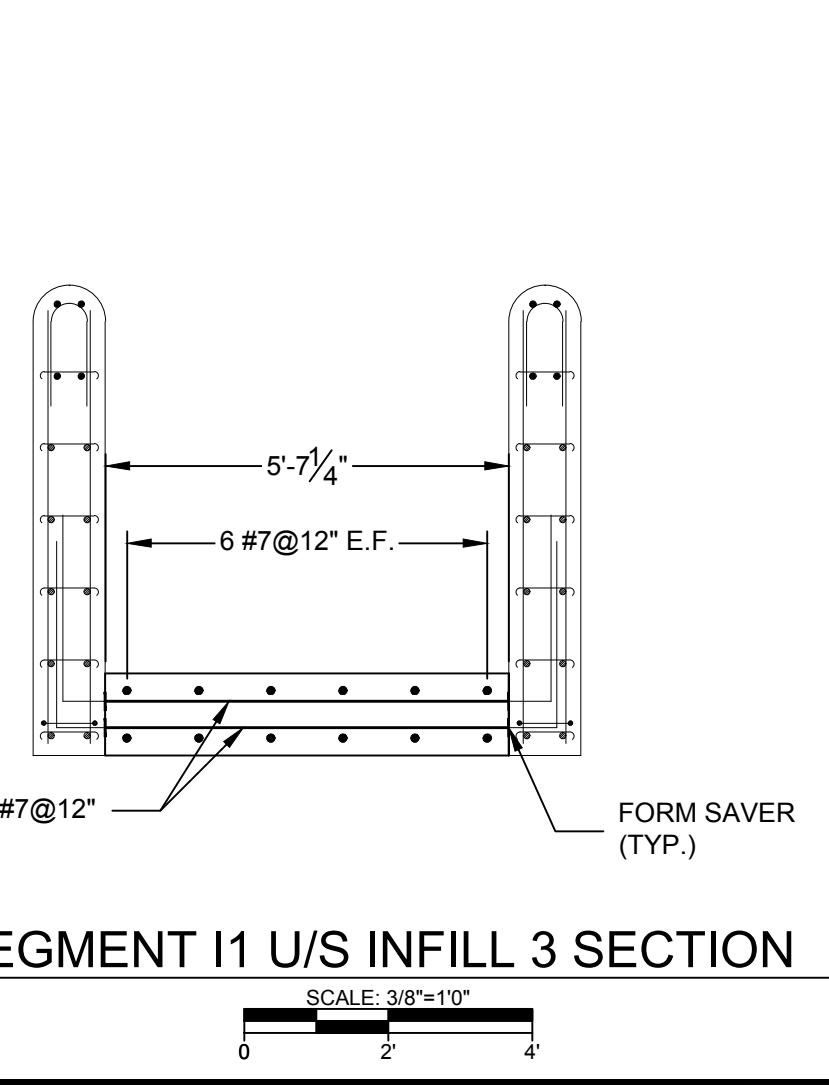
CROSS SECTION C: Shows a vertical height of 10'-6" and a horizontal width of 1'-0". Reinforcement includes #7@12" bars. A circular callout C-49 indicates a 2" thick concrete base. A note specifies (2" AND 9" FROM TOP OF CANTILEVER) #7@12" bars.

FORM SAVER (TYP.): Labels indicate the use of form savers along the ramp sections.

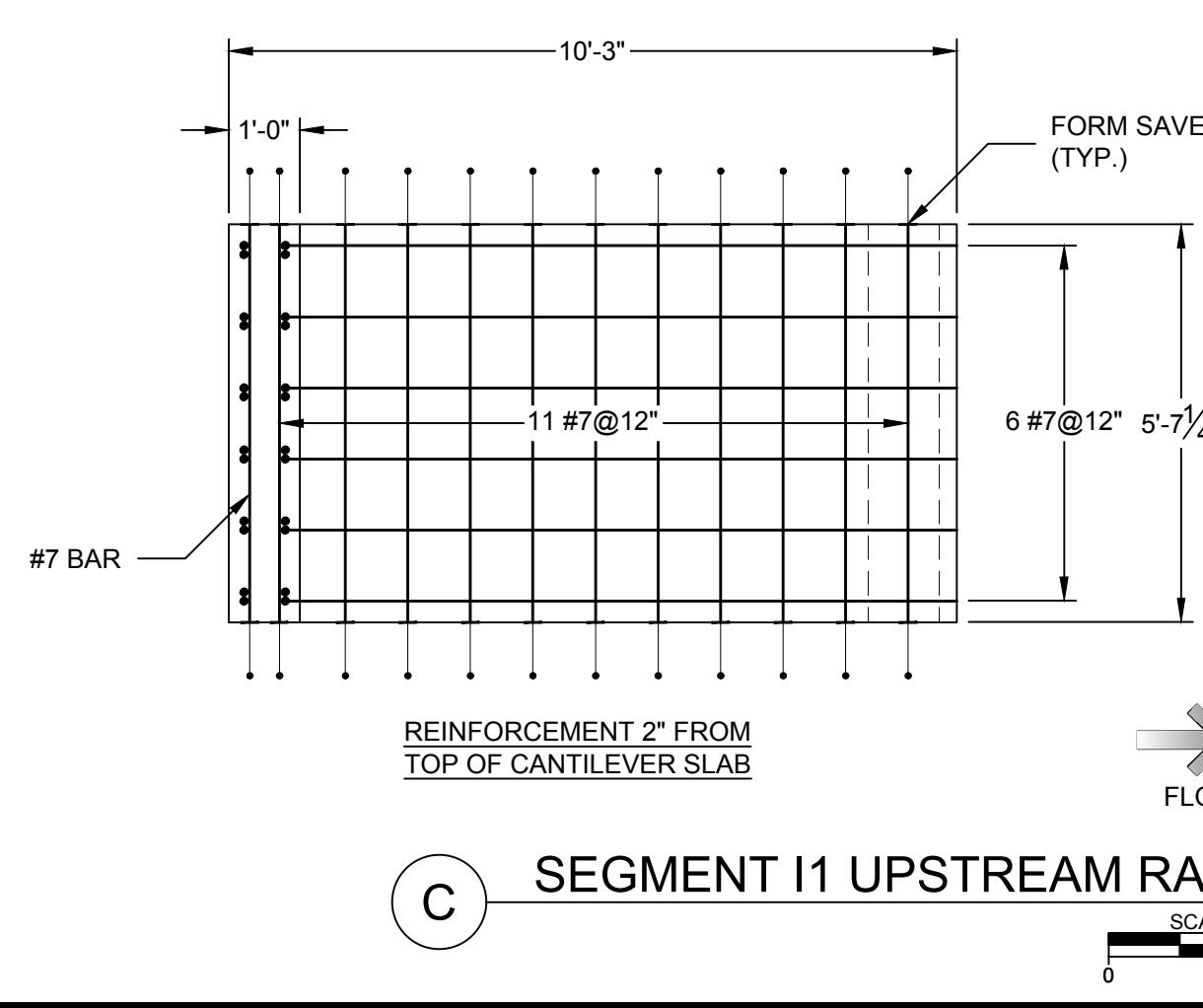
SCALE: 3/8"=1'0": A scale bar representing 0, 2', and 4'.

DESIGNNLT STRUCTURAL PIANO KEY WEIR.DWG

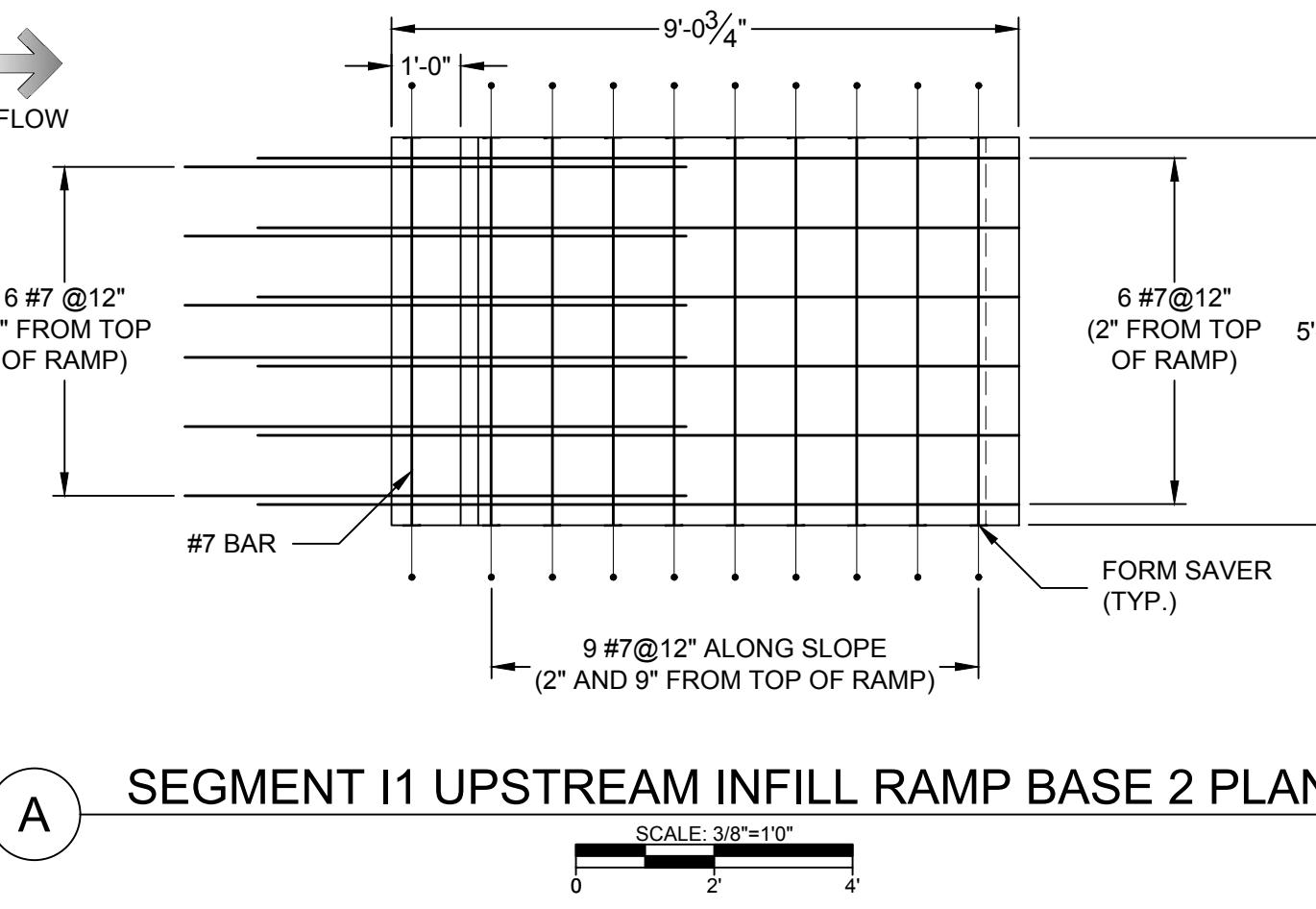
2 SEGMENT I1 UPSTREAM RAMP CANTILEVER INFILL 3
SCALE: 3/8" = 1'-0"



SEGMENT I1 U/S INFILL 3 SECTION

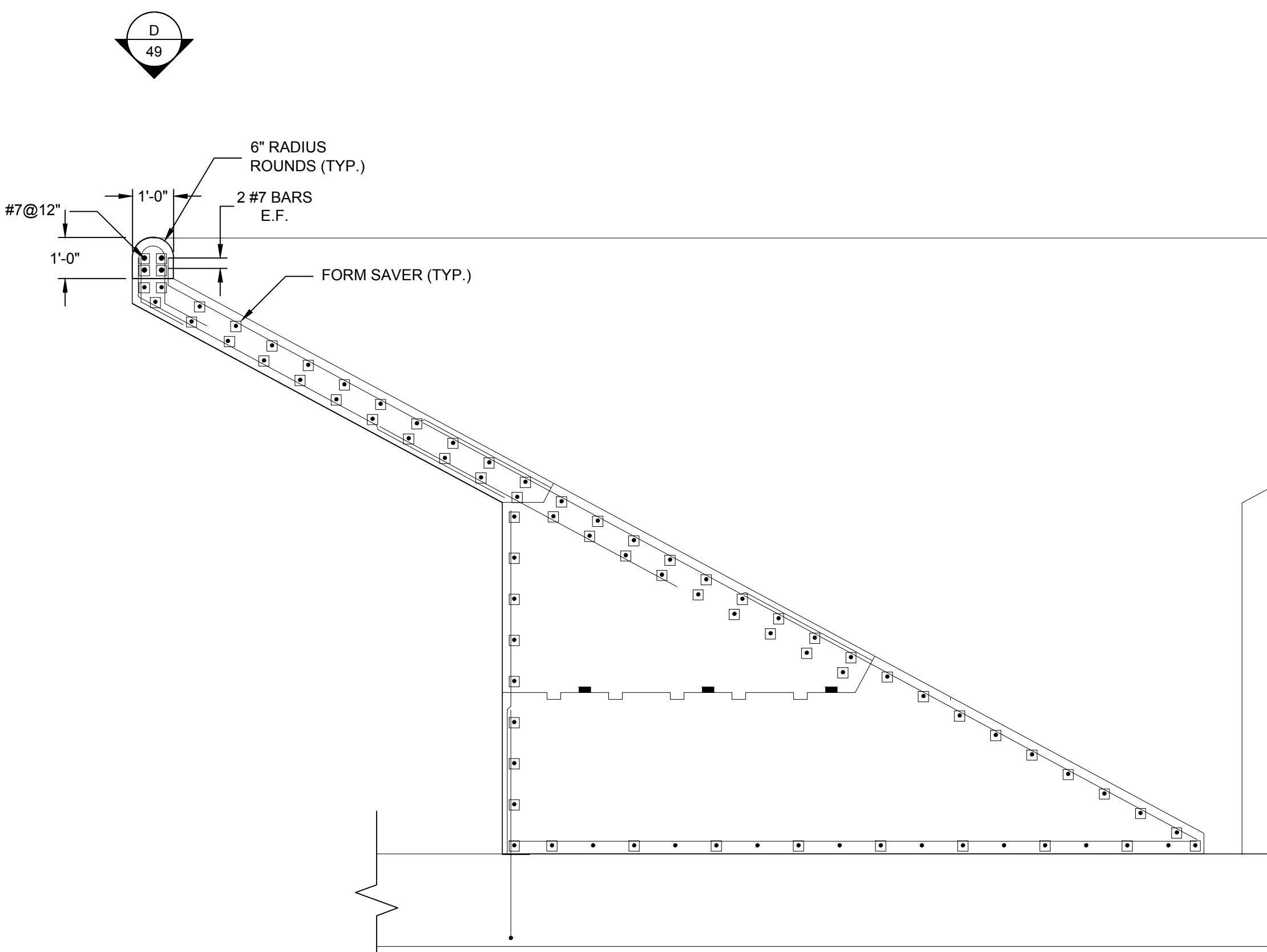


C SEGMENT I1 UPSTREAM RAMP CANTILEVER INFILL 3 PLAN

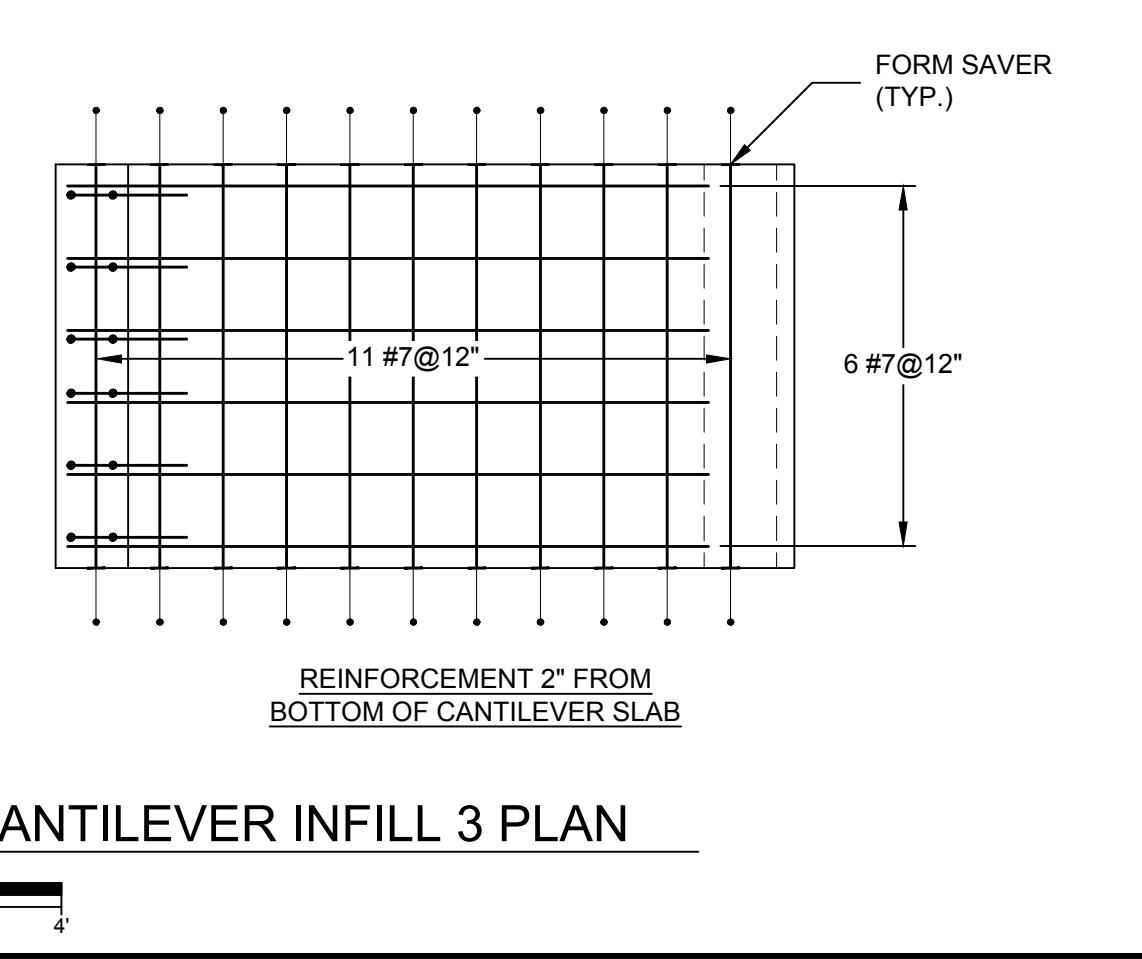


SEGMENT I1 UPSTREAM INFILL RAMP BASE 2 PLAN
SCALE: 3/8"=1'0"

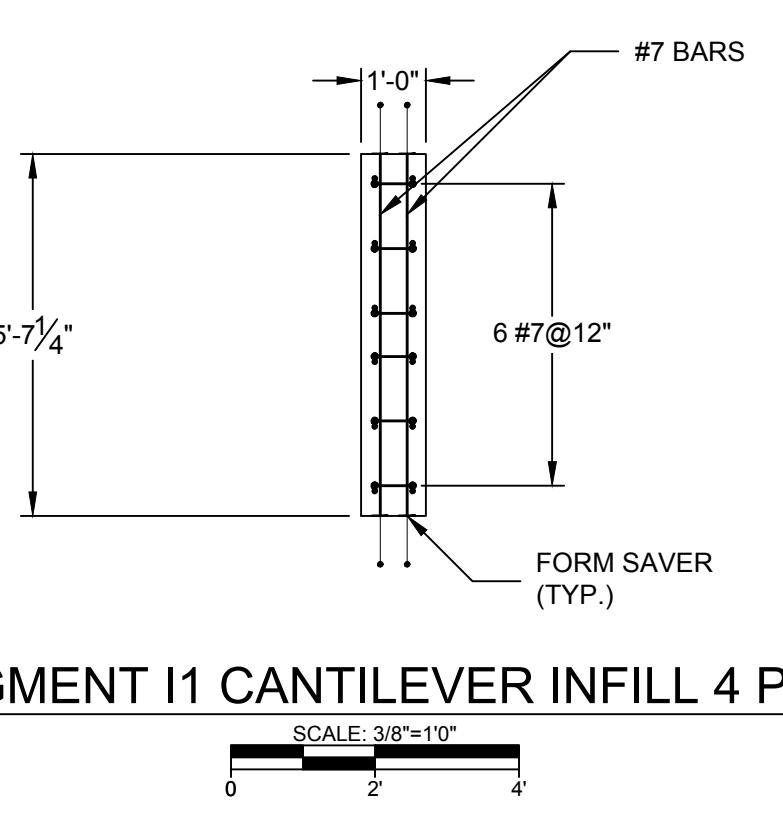
OTE: FOR CONTRACTION JOINT BETWEEN
HANO KEY SEGMENTS I1 AND H1, PROVIDE
.INCHES CLEARANCE FOR REINFORCEMENT
ACH SIDE OF JOINT.



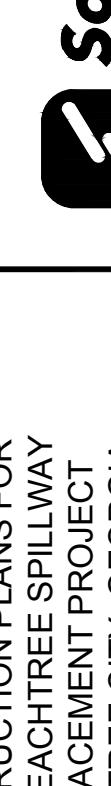
SEGMENT I1 UPSTREAM RAMP CANTILEVER INFILL 4



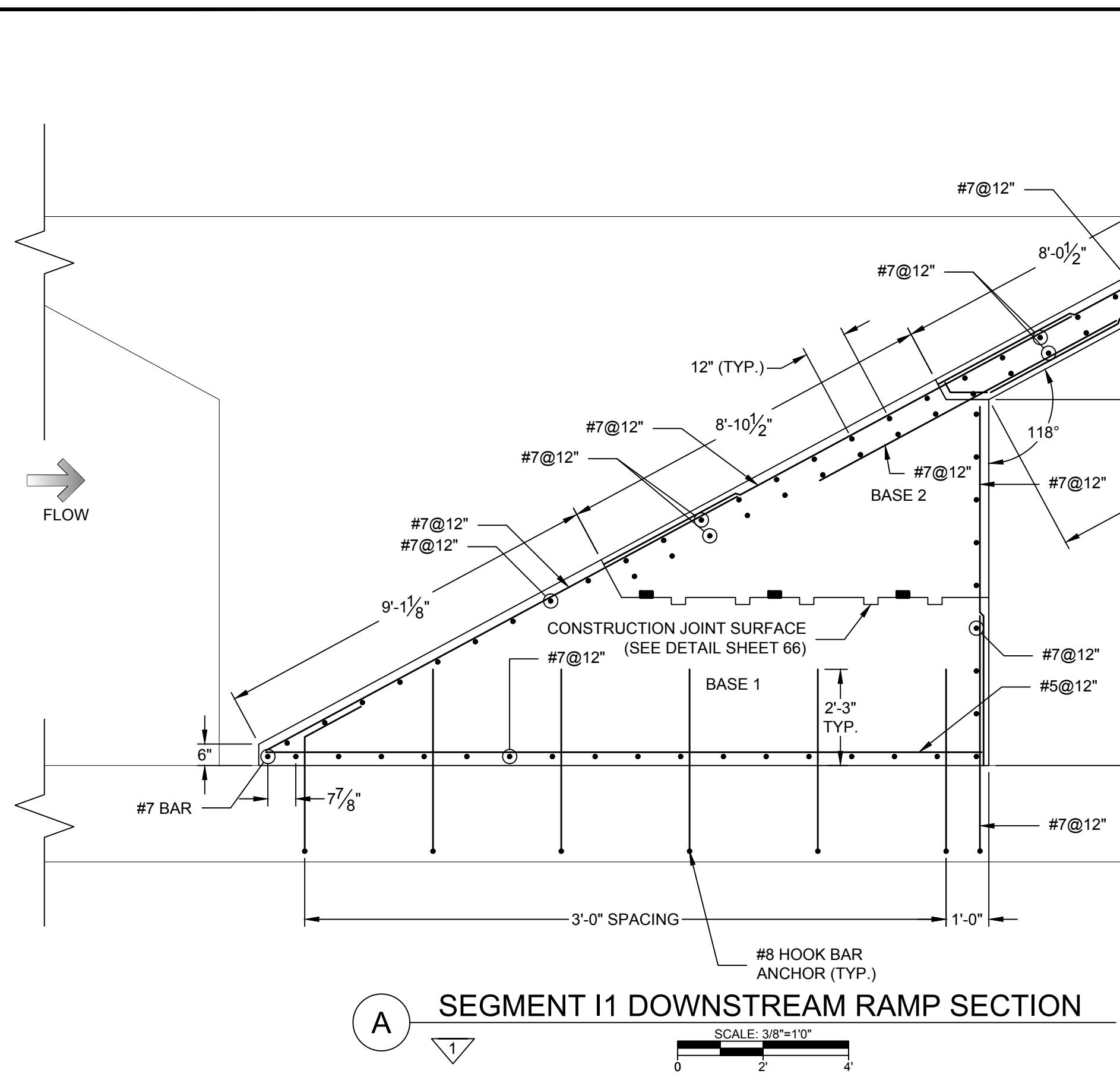
REINFORCEMENT 2" FROM
BOTTOM OF CANTILEVER SLAB



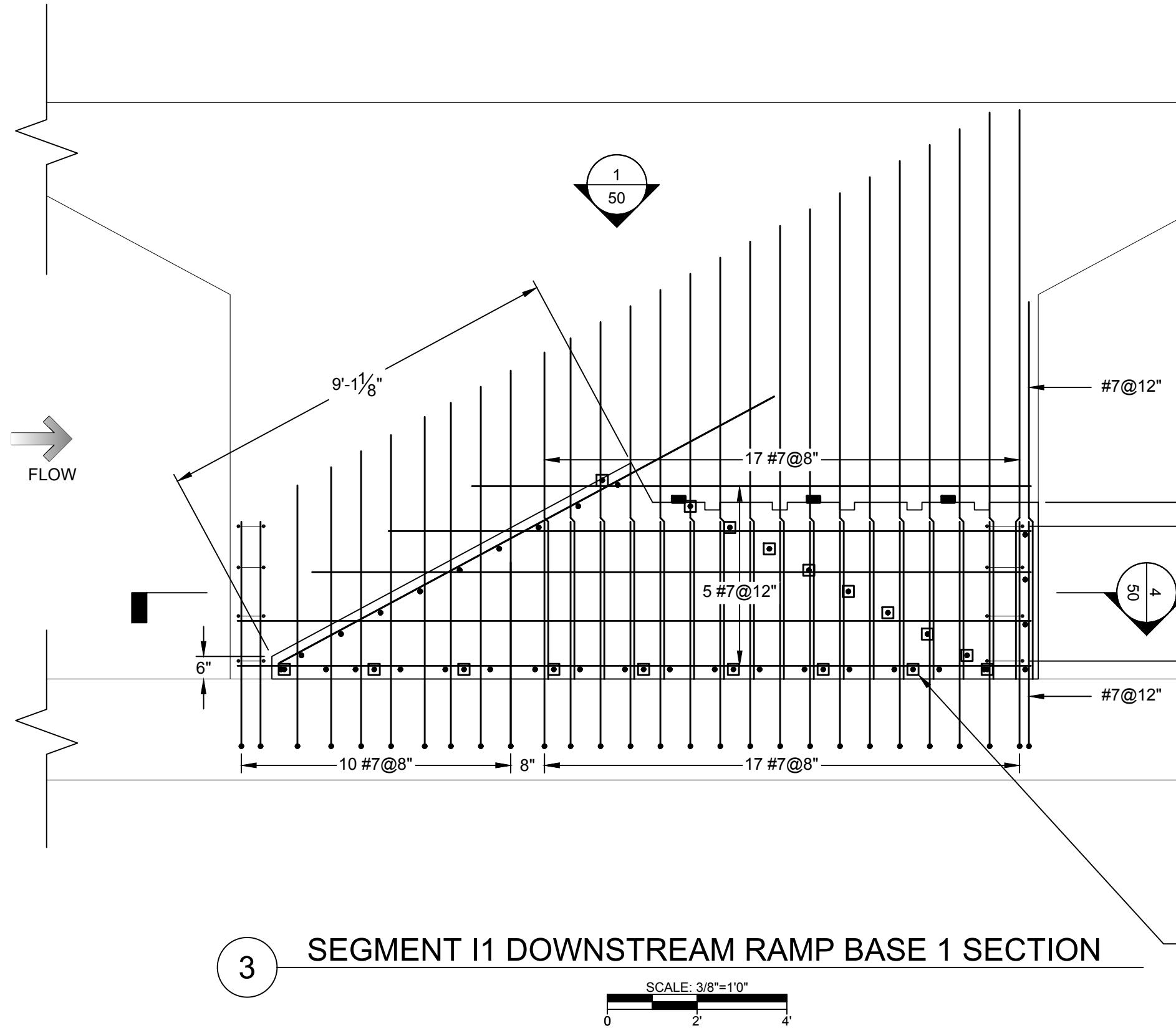
SEGMENT I1 CANTILEVER INFILL 4 PLAN

CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA		MID STAGE UPSTREAM RAMP REINFORCEMENT DETAILS SEGMENT 1		PROJECT: 16C17043.00	DATE: 07/10/2017
 <p>Schnabel ENGINEERING</p>				<p>6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com</p>	
				<p>Randall P. Bass, P.E. DATE: 07/10/17</p>	
				<p>GEORGIA PROFESSIONAL ENGINEER NO. 10685 REV. 1</p>	
				<p>DESIGNED BY: JTD, JJC</p> <p>DRAWN BY: GHB, JSR</p> <p>CHECKED BY: RPB, JRC</p> <p>1 REVISED PER ADDENDUM NO. 03</p> <p>8-2-17</p>	
				<p>RANDALL P. BASS, P.E.</p>	
				<p>Randall P. Bass, P.E. DATE: 07/10/17</p>	
				<p>DESCRIPTION</p>	
				<p>DATE</p>	

G:\2016 PROJECTS\1AC170M3_001AKE PEACHTREE DAM EINAI DESIGN\03_SE PRODUCTIONS\08_CANDID DRAWINGS\05_EINAI DESIGN\01_BT STUDIO\CTURAI PIANO KEY WEIR DWG

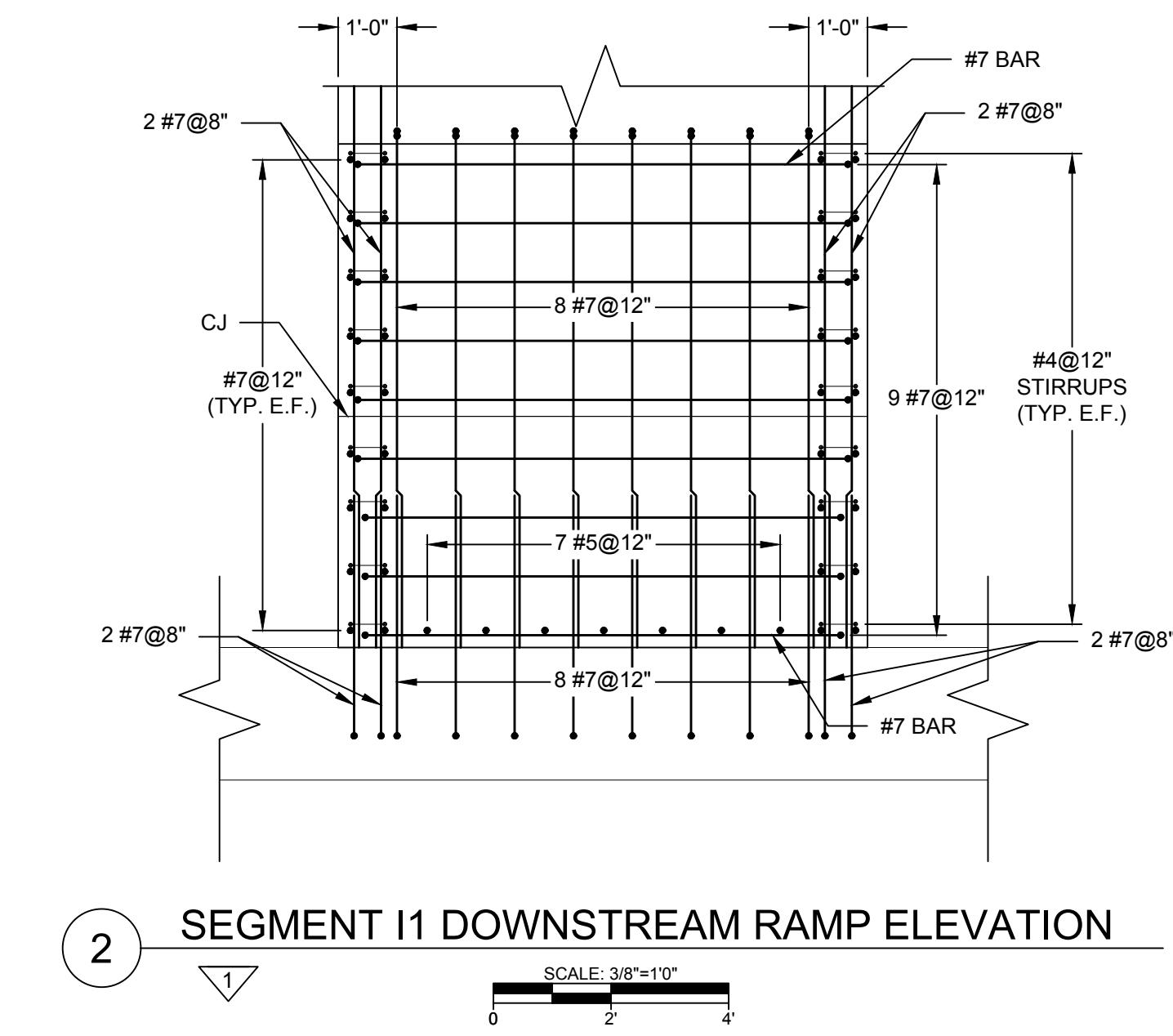


SEGMENT I1 DOWNSTREAM RAMP SECTION

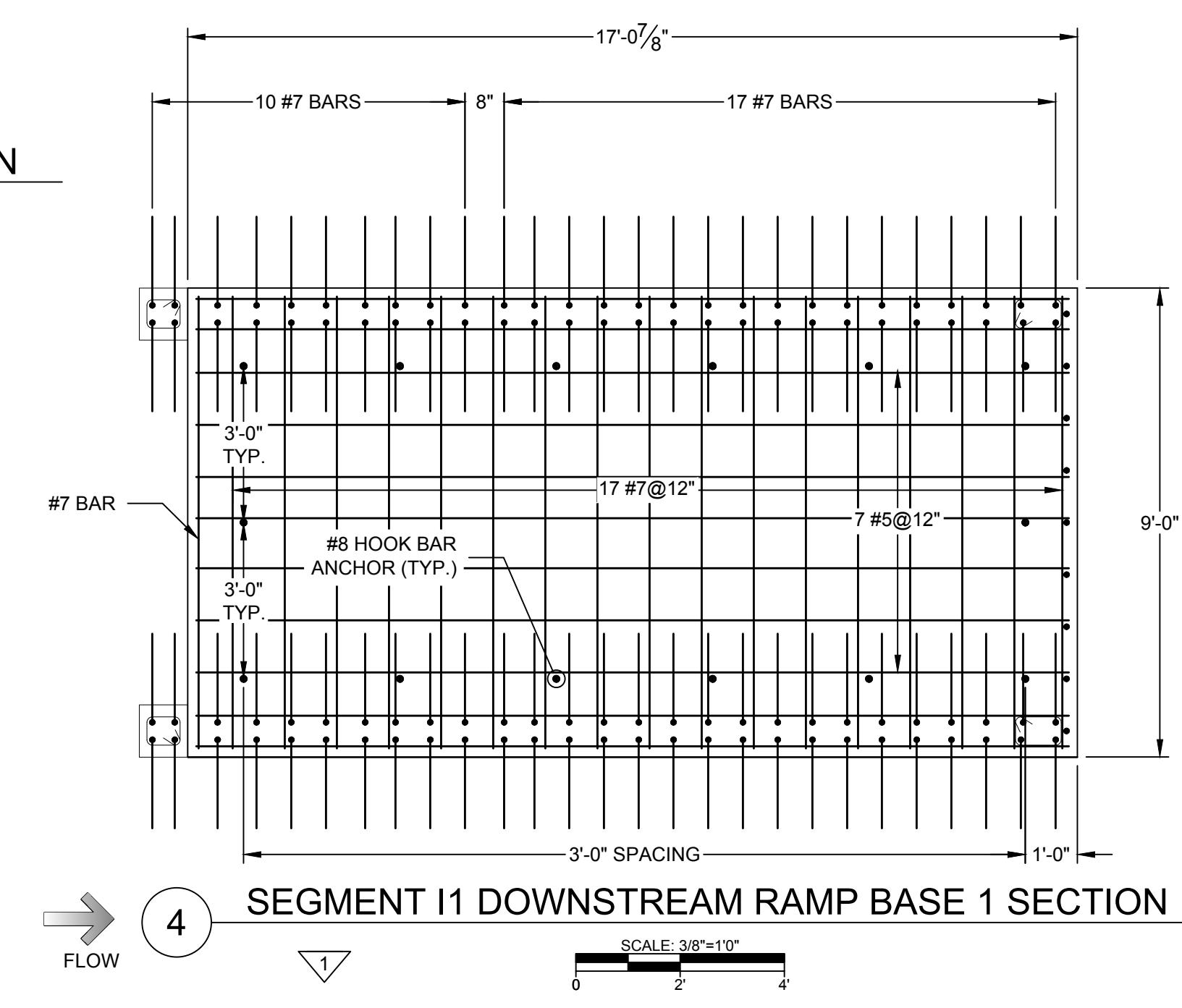


SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION

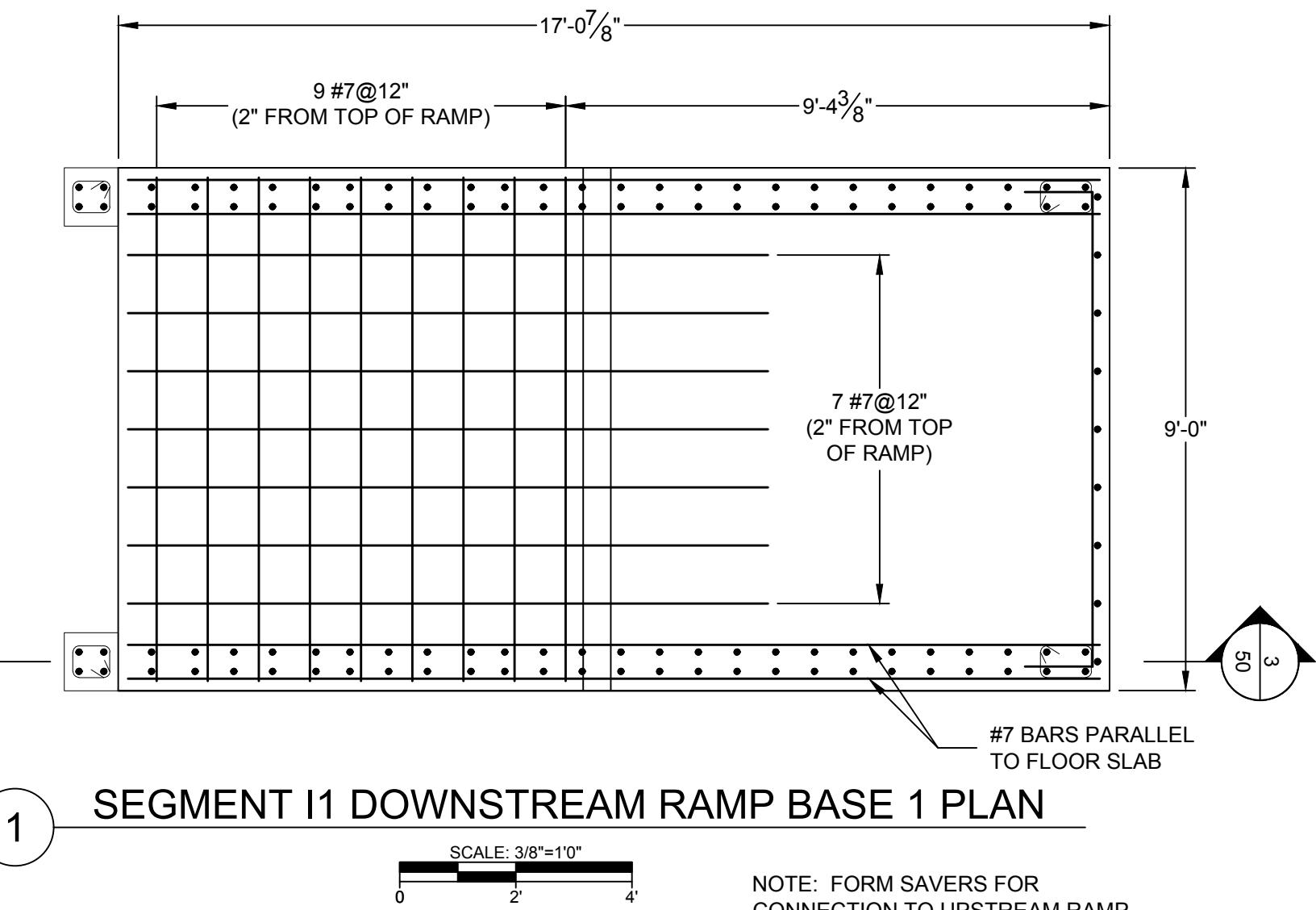
HORIZONTAL FORM SAVER (TYP.)
TO BE INSTALLED IN AREA(S) SHOWN IN
SEGMENT G1 DOWNSTREAM RAMP
BASE 1. SEE FURTHER DETAILS SHEETS
37 AND 38. FORM SAVERS REQUIRED TO
STRUCTURALLY TIE SEGMENT G1
DOWNSTREAM RAMP BASE 1 TO
SEGMENT G1 INFILL(S).



2 SEGMENT I1 DOWNSTREAM RAMP ELEVATION

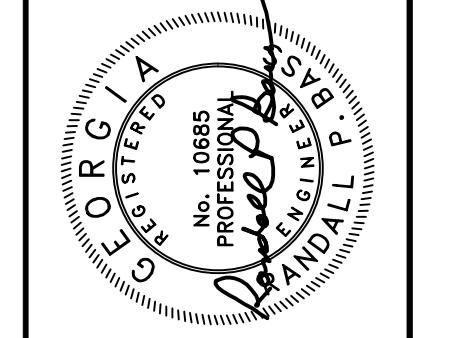


SEGMENT I1 DOWNSTREAM RAMP BASE 1 SECTION



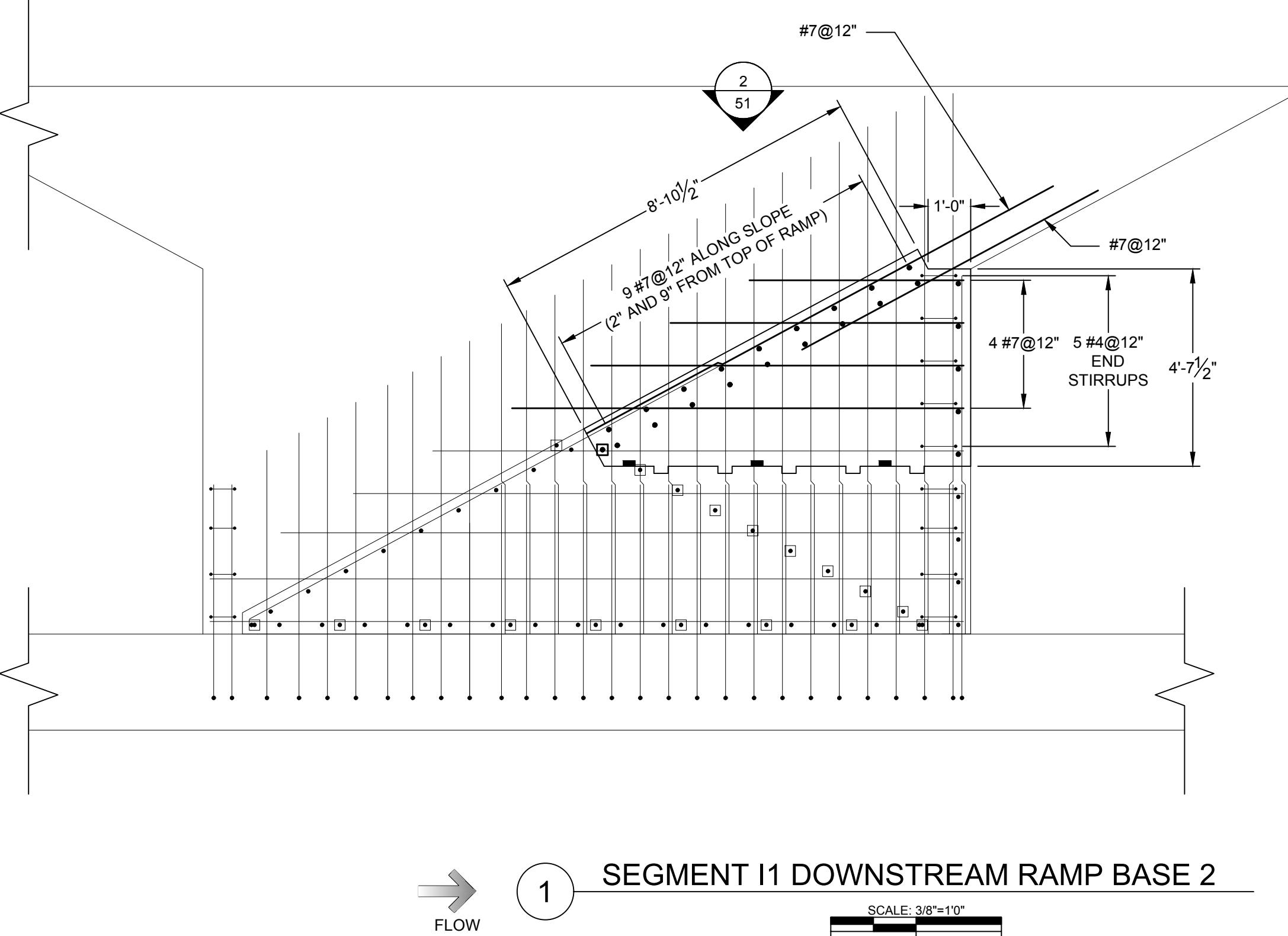
SEGMENT I1 DOWNSTREAM RAMP BASE 1 PLAN

TERM SAVERS FOR
ON TO UPSTREAM RAMP
N FOR CLARITY.

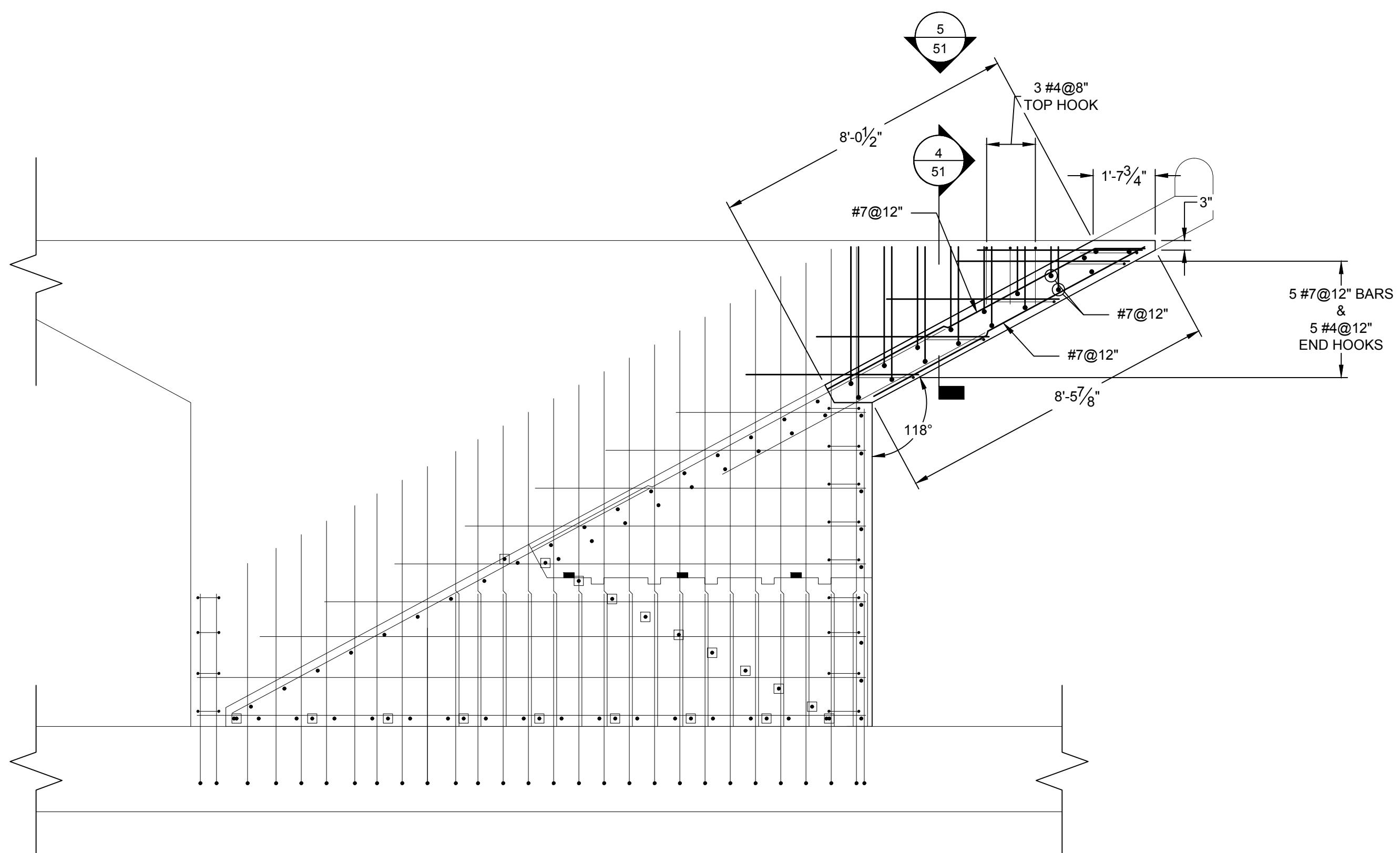


Schnabel
ENGINEERING

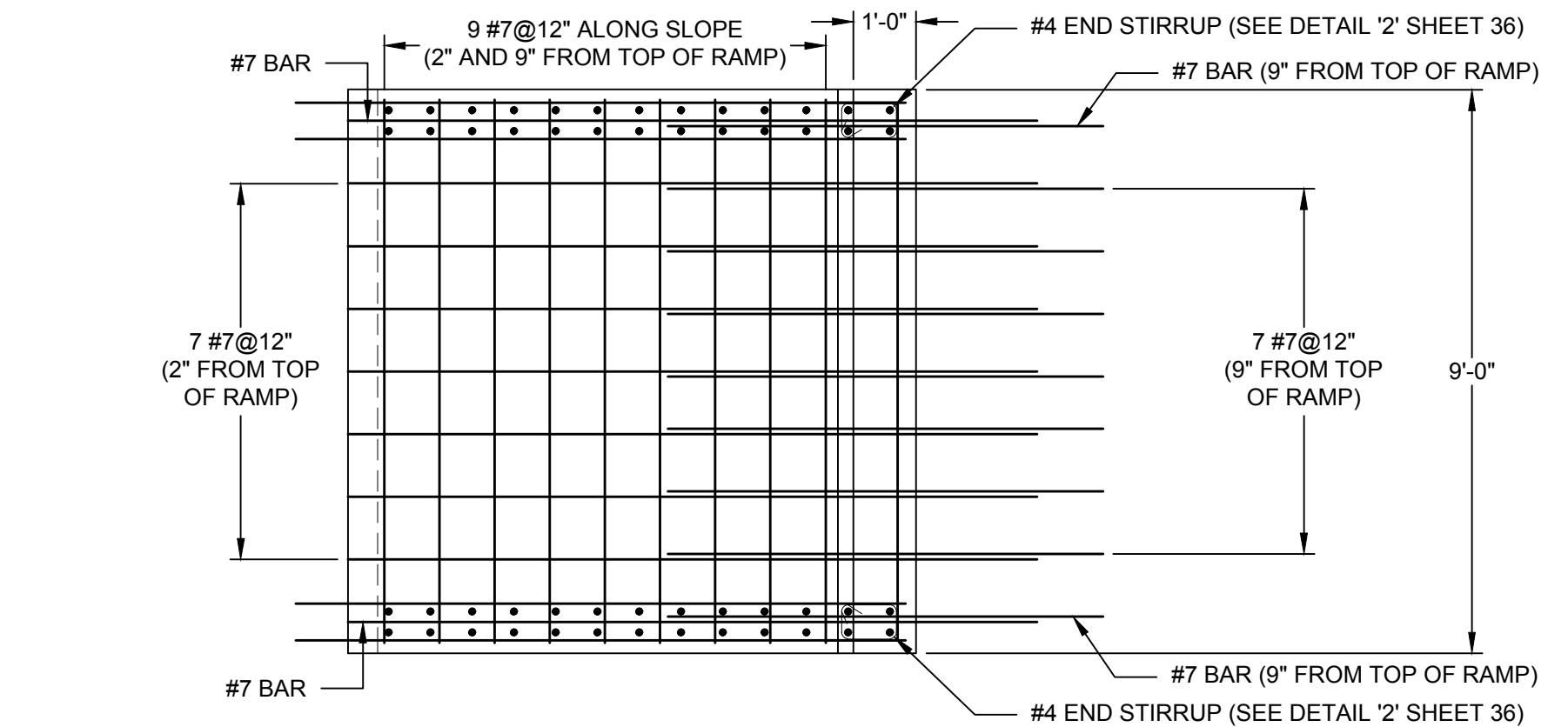
445 Shiloh Road, Suite A / Alpharetta, GA 30005 /
Phone: 770-781-8008 / Fax: 770-781-8003 /
schnabel-eng.com



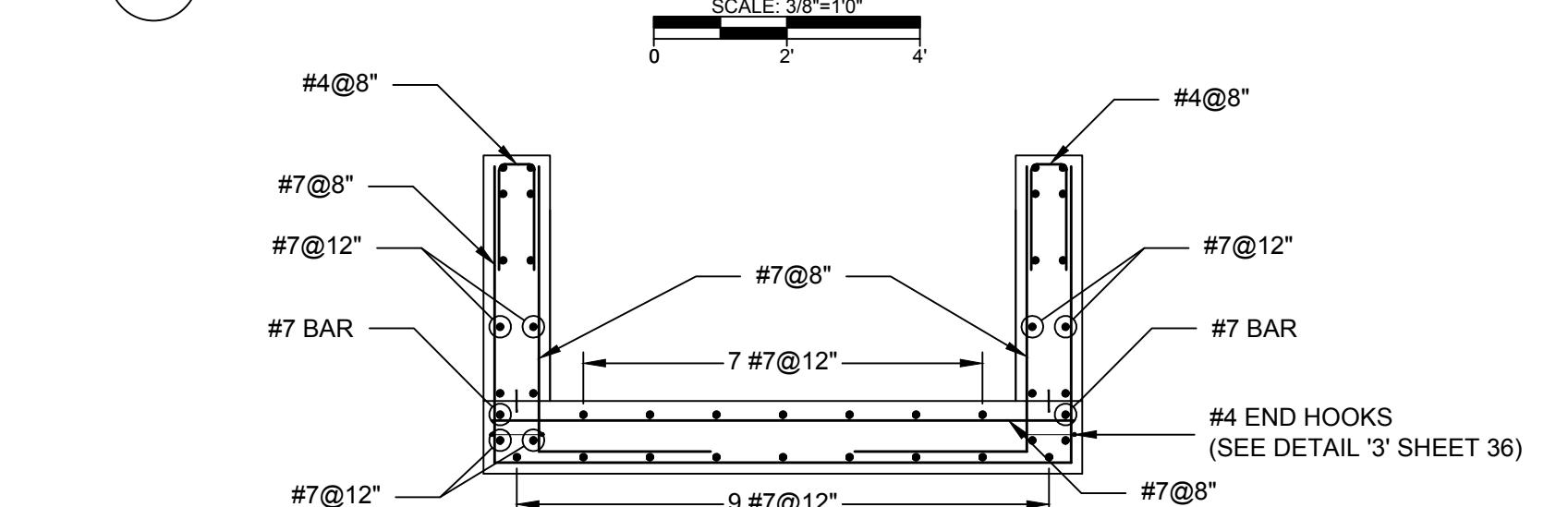
1 SEGMENT I1 DOWNSTREAM RAMP BASE 2



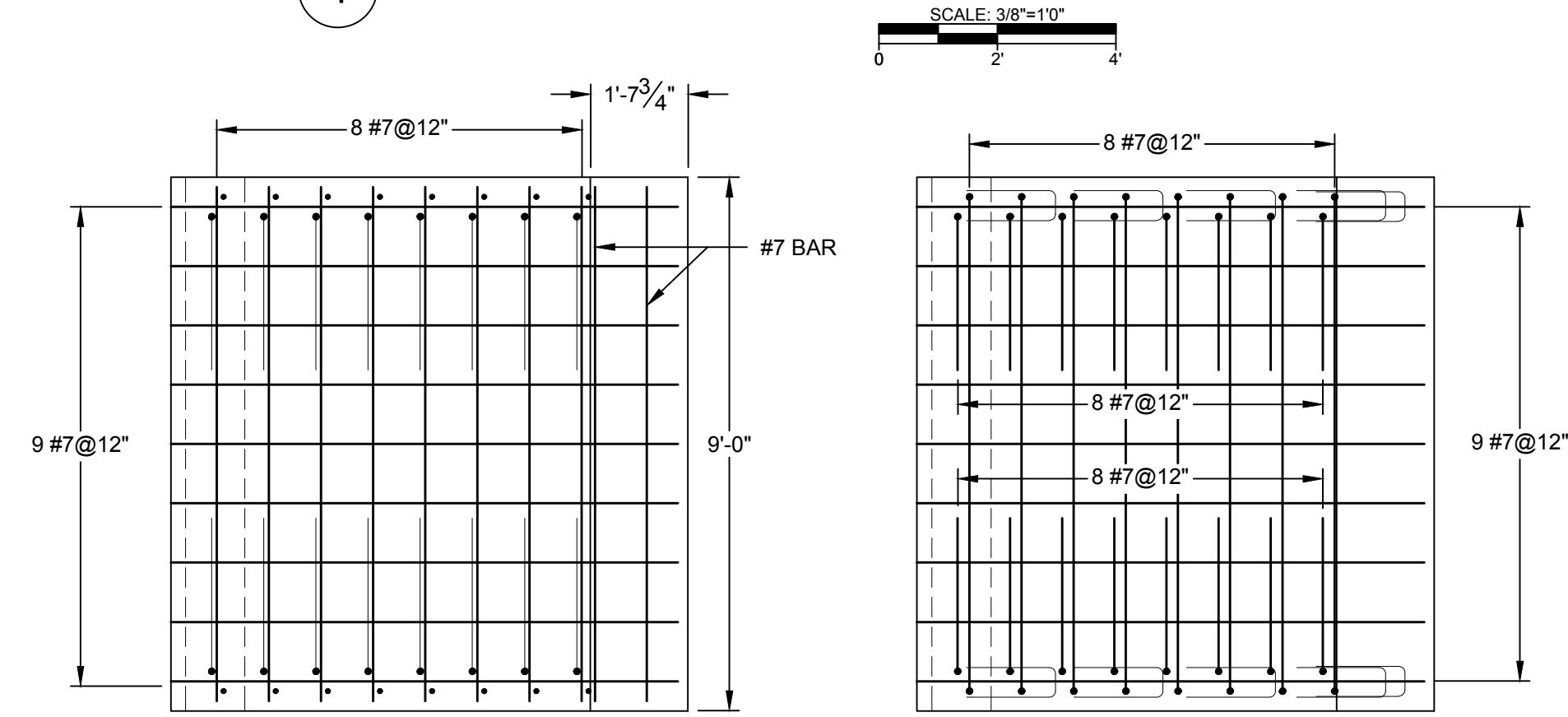
SEGMENT I1 DOWNSTREAM RAMP CANTILEVER



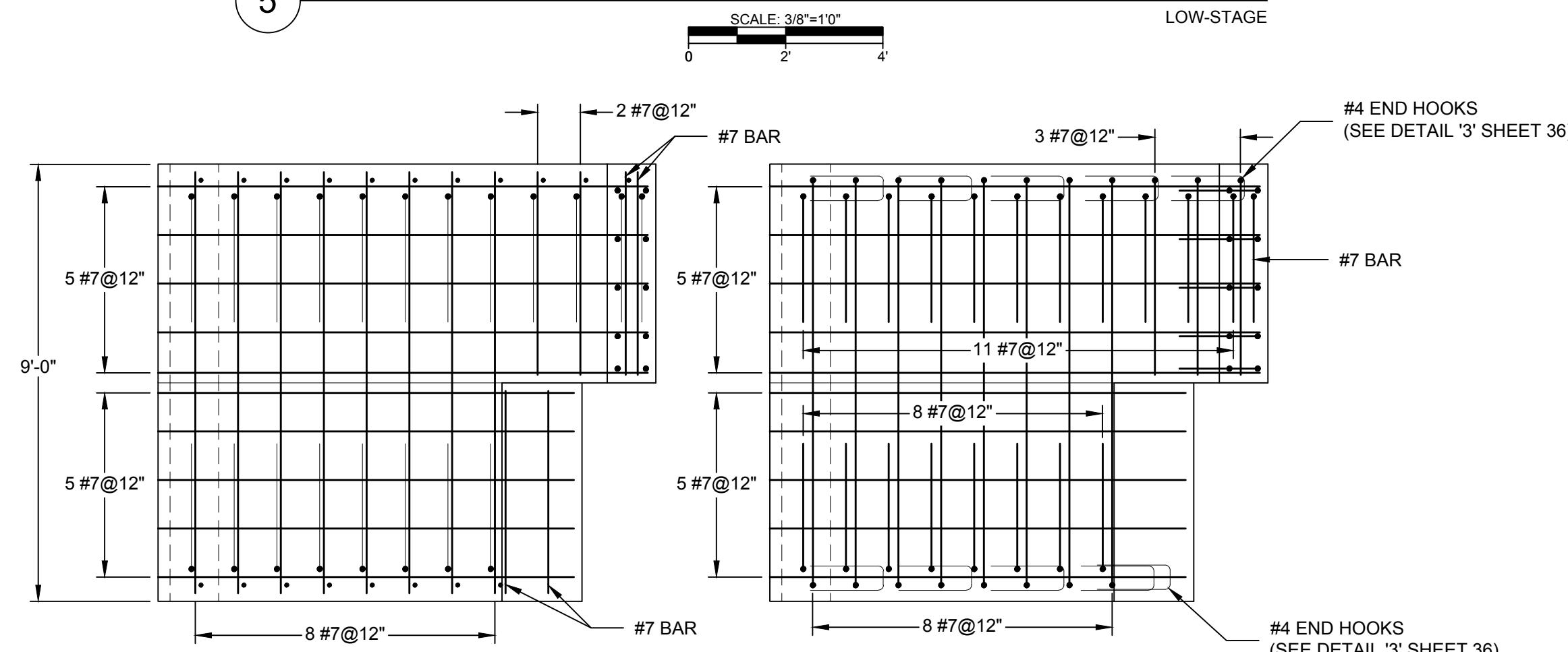
2 SEGMENT I1 DOWNSTREAM RAMP BASE 2 PLAN



4 SEGMENT I1 DOWNSTREAM RAMP CANTILEVER SECTION

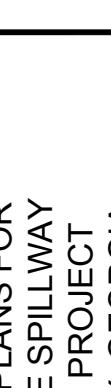


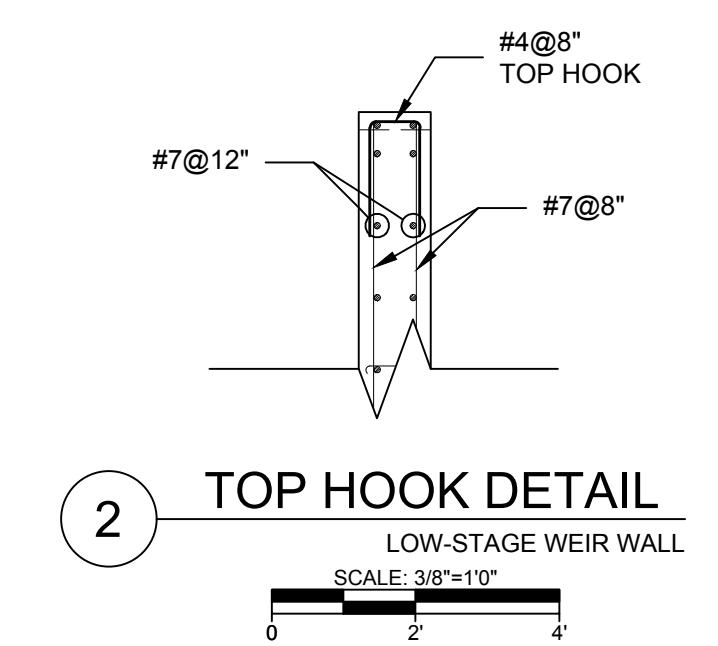
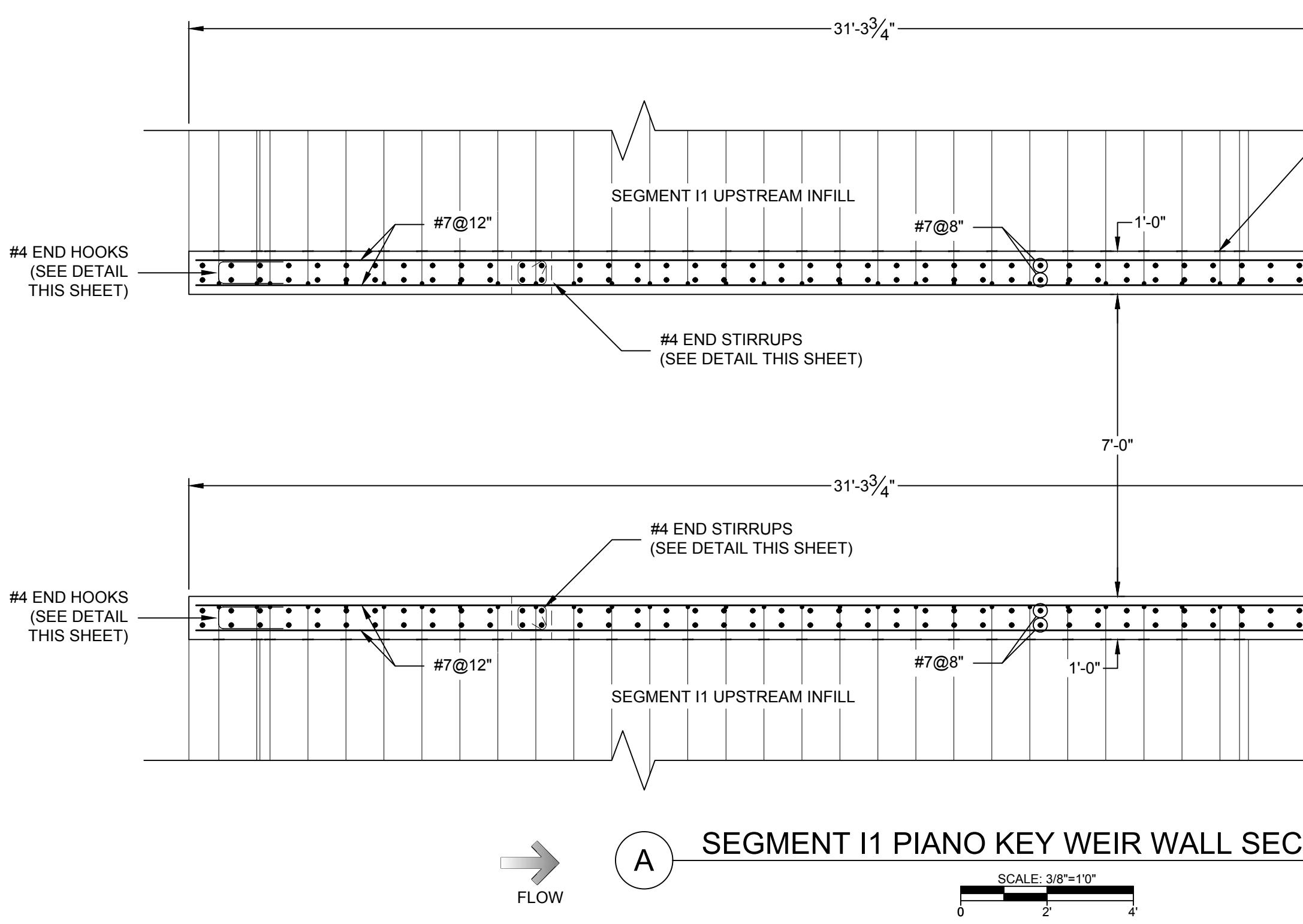
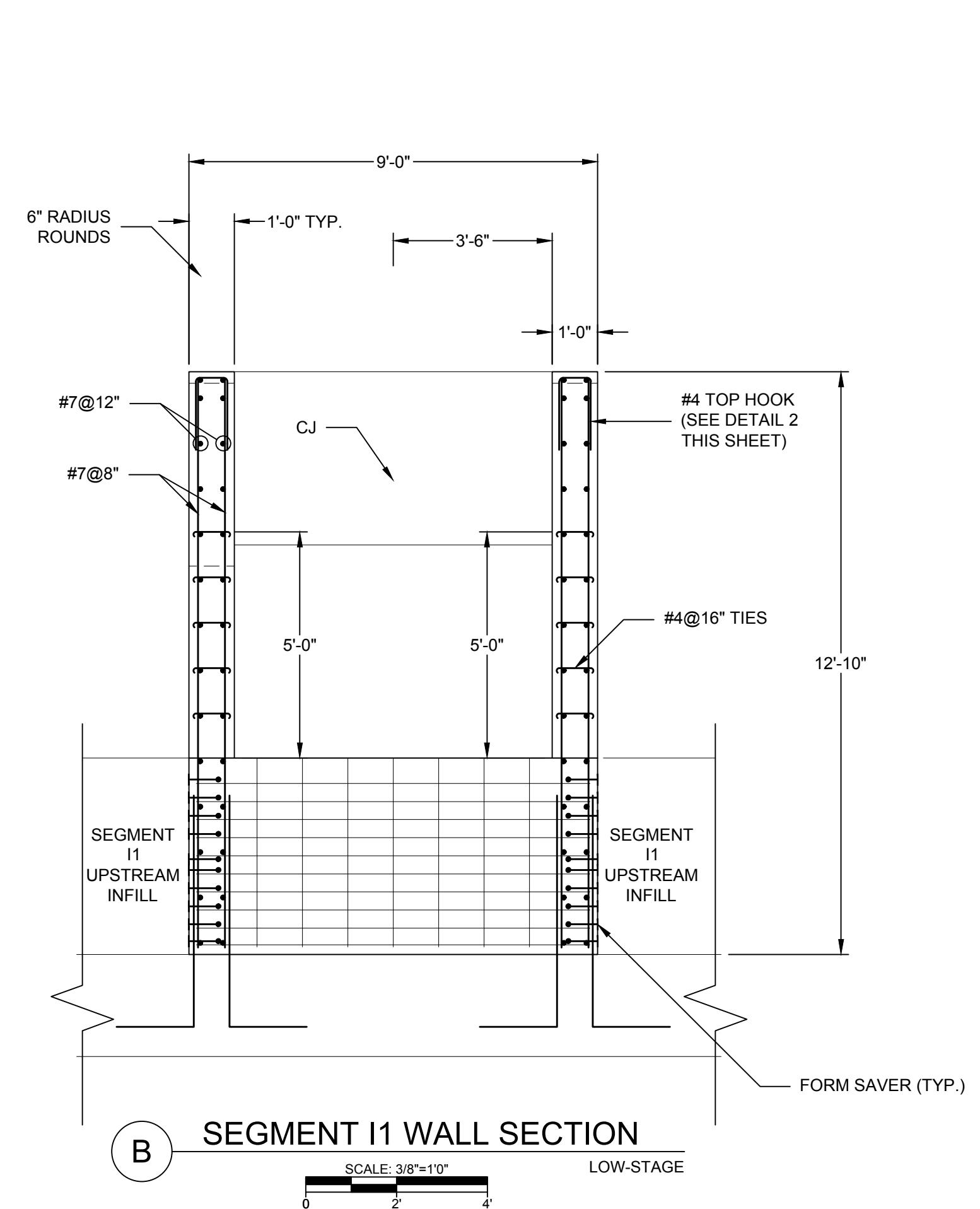
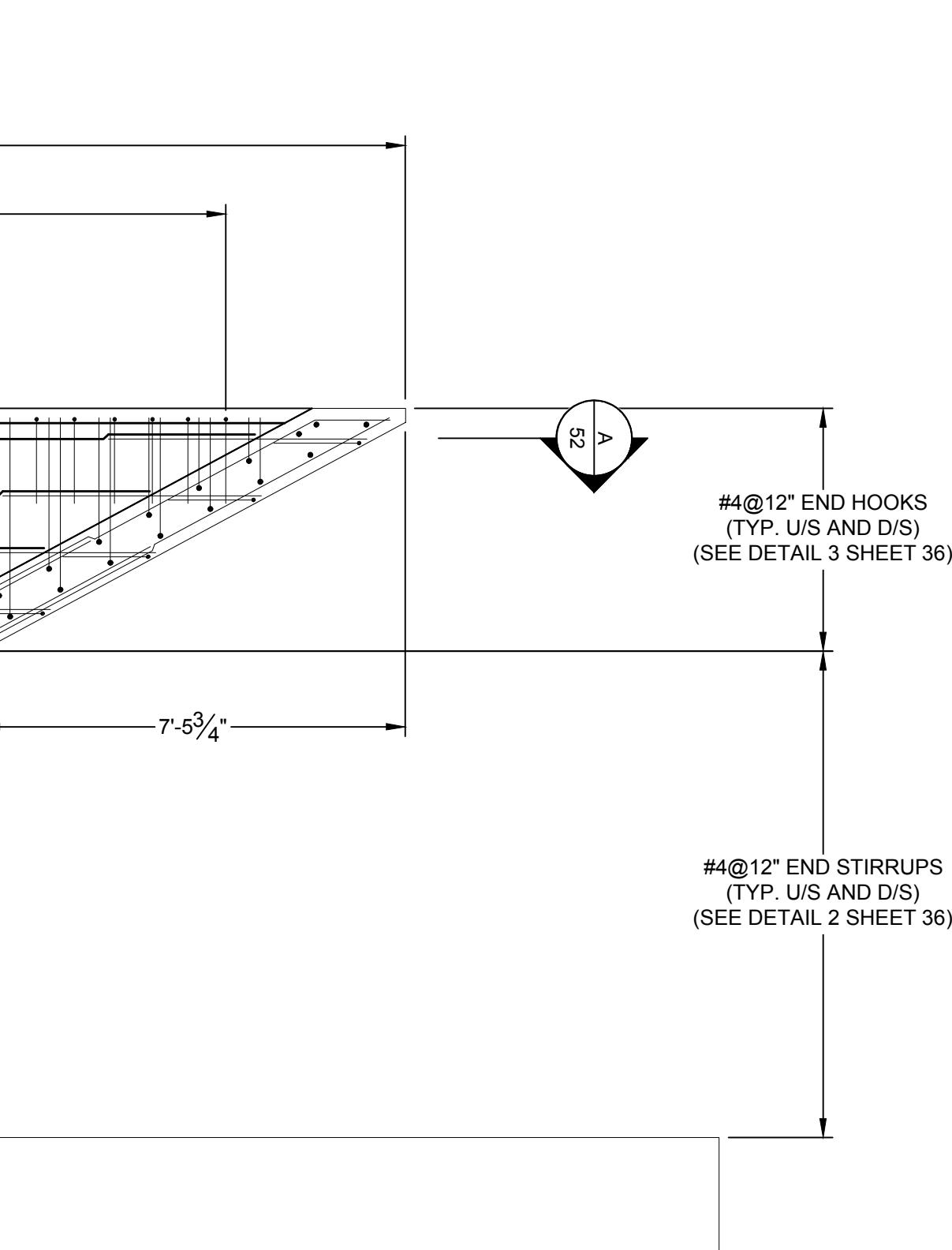
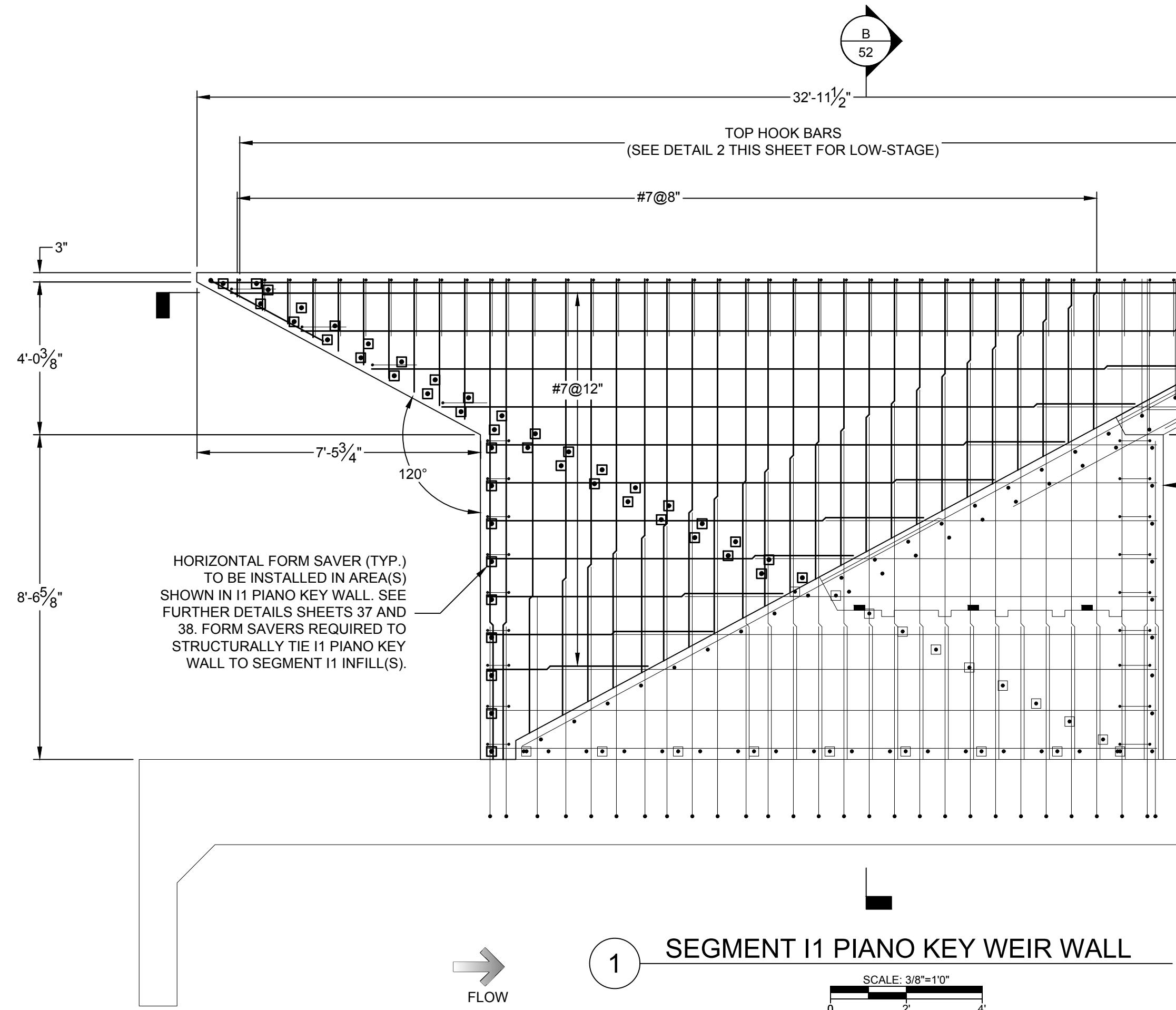
SEGMENT I1 DOWNSTREAM RAMP CANTII EVER PI AN

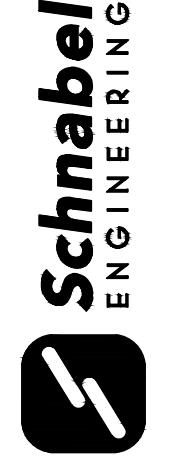


REINFORCEMENT FROM TOP OF CANTILEVER SLAB REINFORCEMENT FROM BOTTOM OF CANTILEVER SLAB

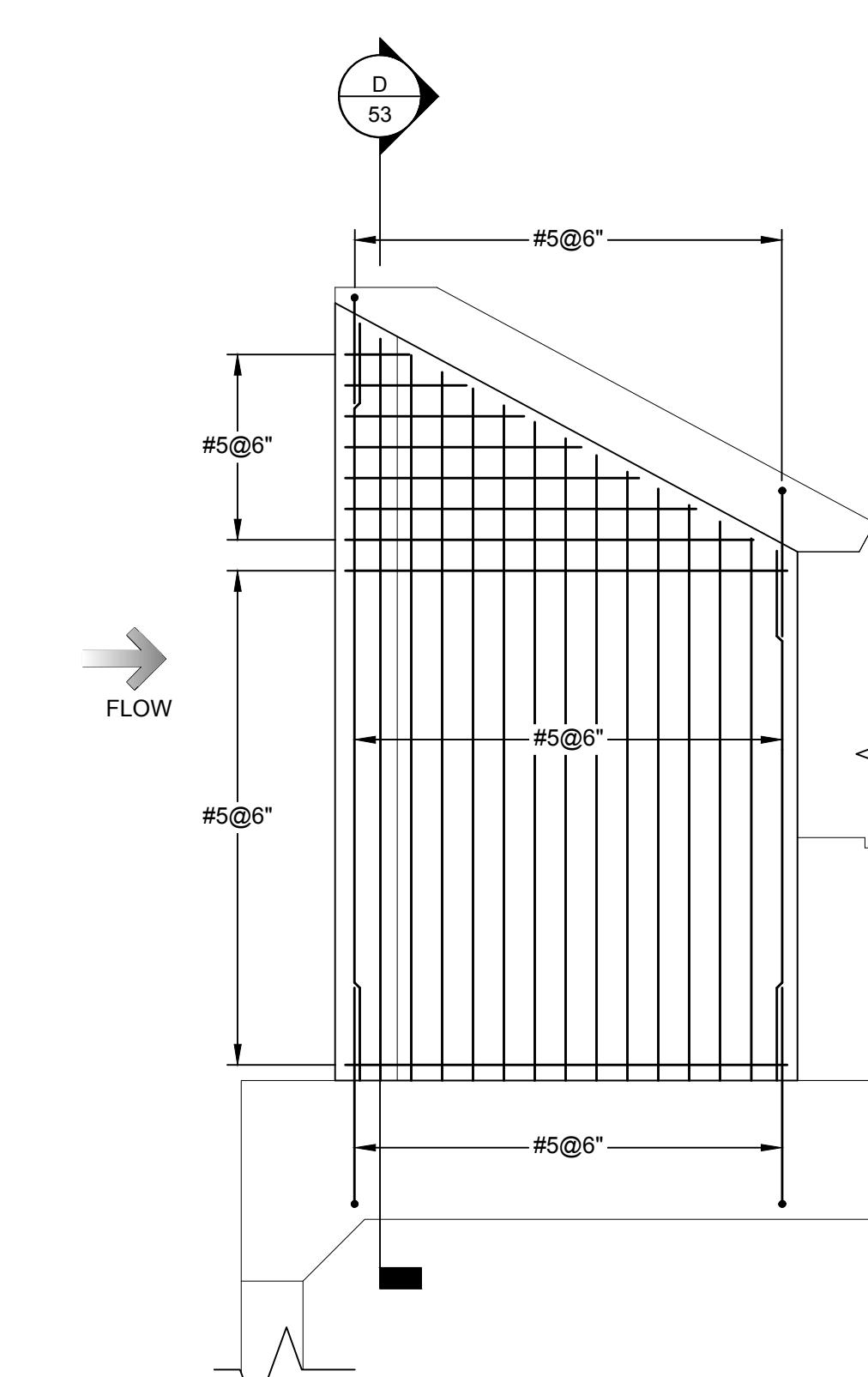
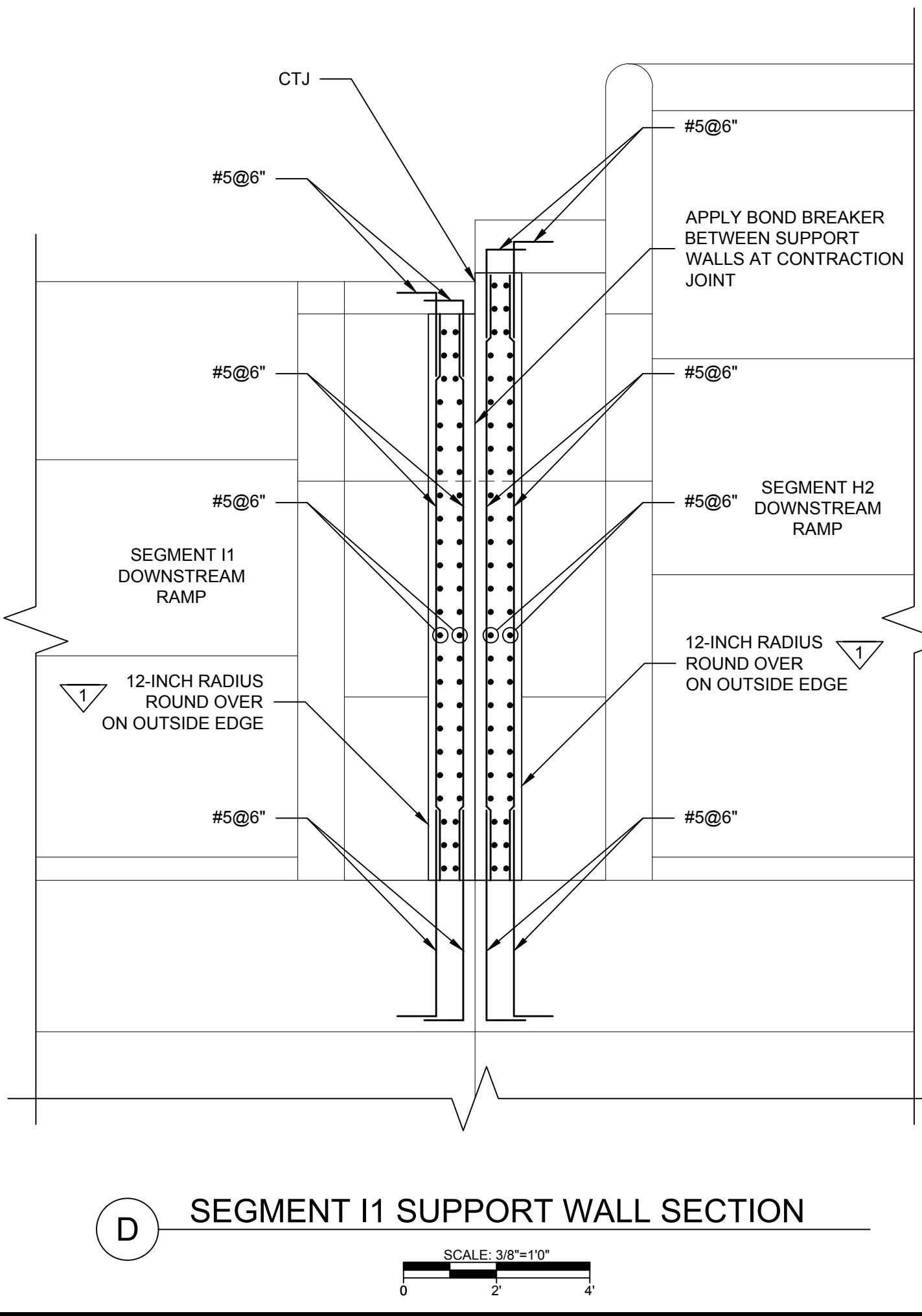


CONSTRUCTION PLANS FOR LAKE PEACHTREE SPILLWAY REPLACEMENT PROJECT PEACHTREE CITY, GEORGIA		LOW STAGE DOWNSTREAM RAMP REINFORCEMENT DETAILS SEGMENT 1	
		 <p>Schnabel ENGINEERING</p>	
		<p>PROJECT: 16C17043.00 DATE: 07/10/2017</p> <p>SHEET 51 OF 66</p>	
		<p>6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-8008 / Fax: 770-781-8003 / schnabel-eng.com</p>	
		 <p>No. 10685 PROFESSIONAL ENGINEER RANDALL P. BASS, P.E.</p>	
		<p>Randall P. Bass, P.E. DATE: 07/10/17</p>	
		<p>GEORGIA PROFESSIONAL ENGINEER NO. 10685 REV. 1</p>	
		<p>DESIGNED BY: JTD, JC</p> <p>DRAWN BY: GHB, JSR</p> <p>CHECKED BY: RPB, JRC</p>	
		<p>RANDALL P. BASS, P.E.</p>	
		<p>DESCRIPTION DATE</p>	

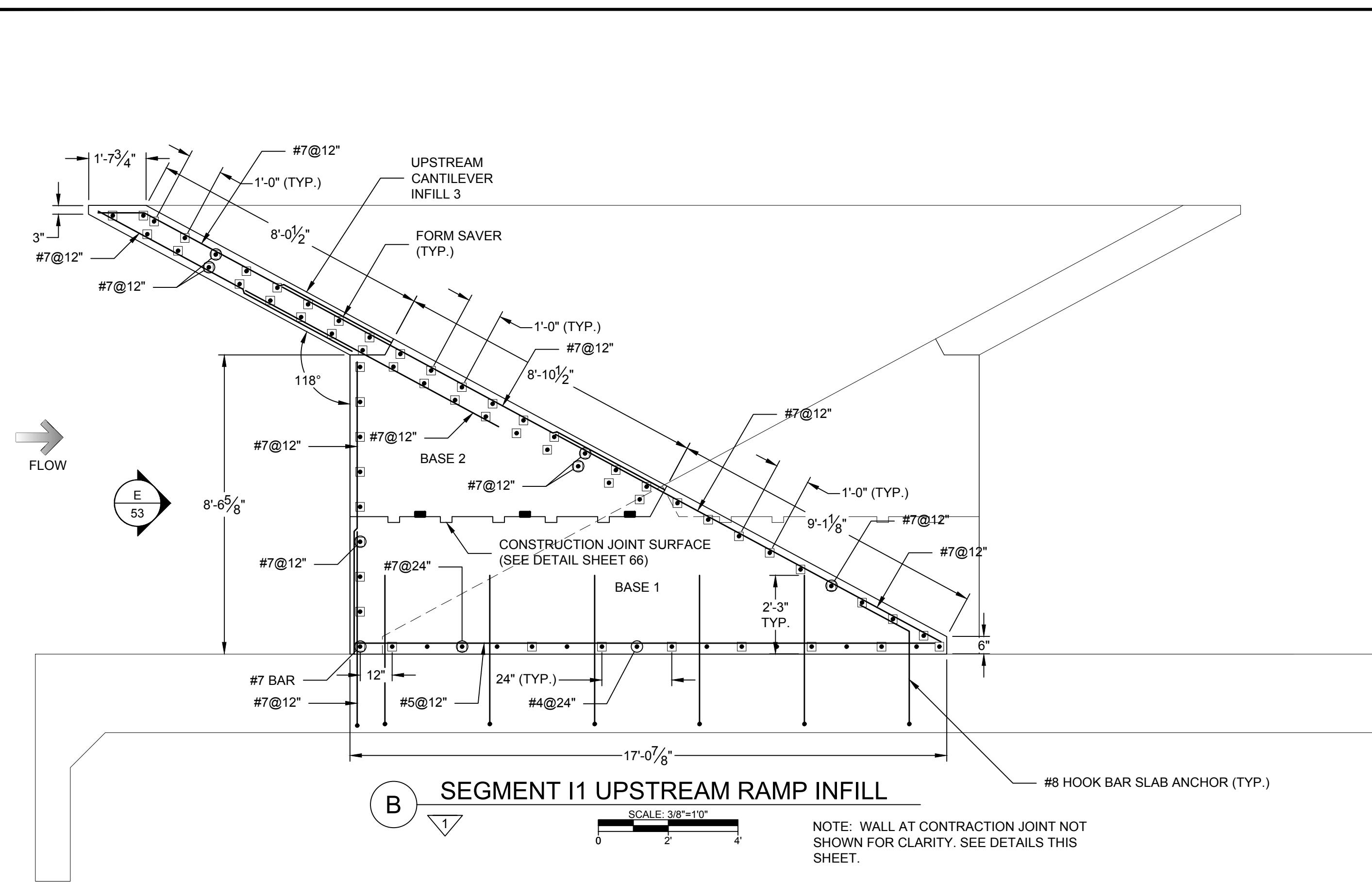


PROJECT:	16C17043.00
DATE:	07/10/2017
SHEET	52 OF 66
DATE	
<i>Randall P. Bass</i> GEORGIA PROFESSIONAL ENGINEER NO. 10885 REV. 07/10/17	
 Schnabel ENGINEERING 6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-3003 / Fax: 770-781-3003 / Schnabeleng.com	
DESCRIPTION	

G:\2016 PROJECTS\16C17043.00 LAKE PEACHTREE DAM FINAL DESIGN\03-SE PRODUCTS\08-CAD\DRAWINGS\05-FINAL_DESIGN\LPT_STRUCTURAL PIANO KEY WEIR.DWG

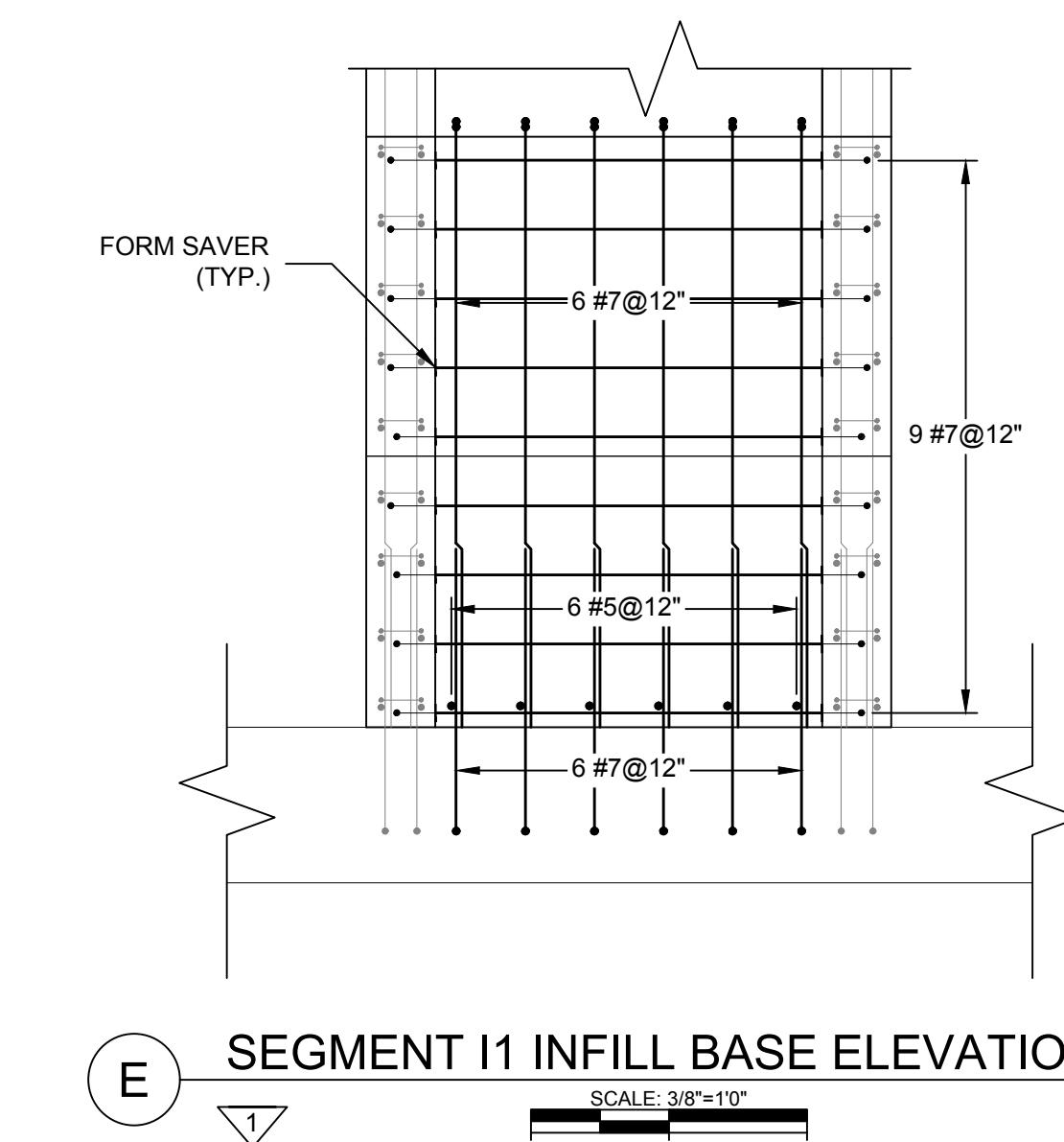


SEGMENT I1 SUPPORT WALL AT CONTRACTION JOINT



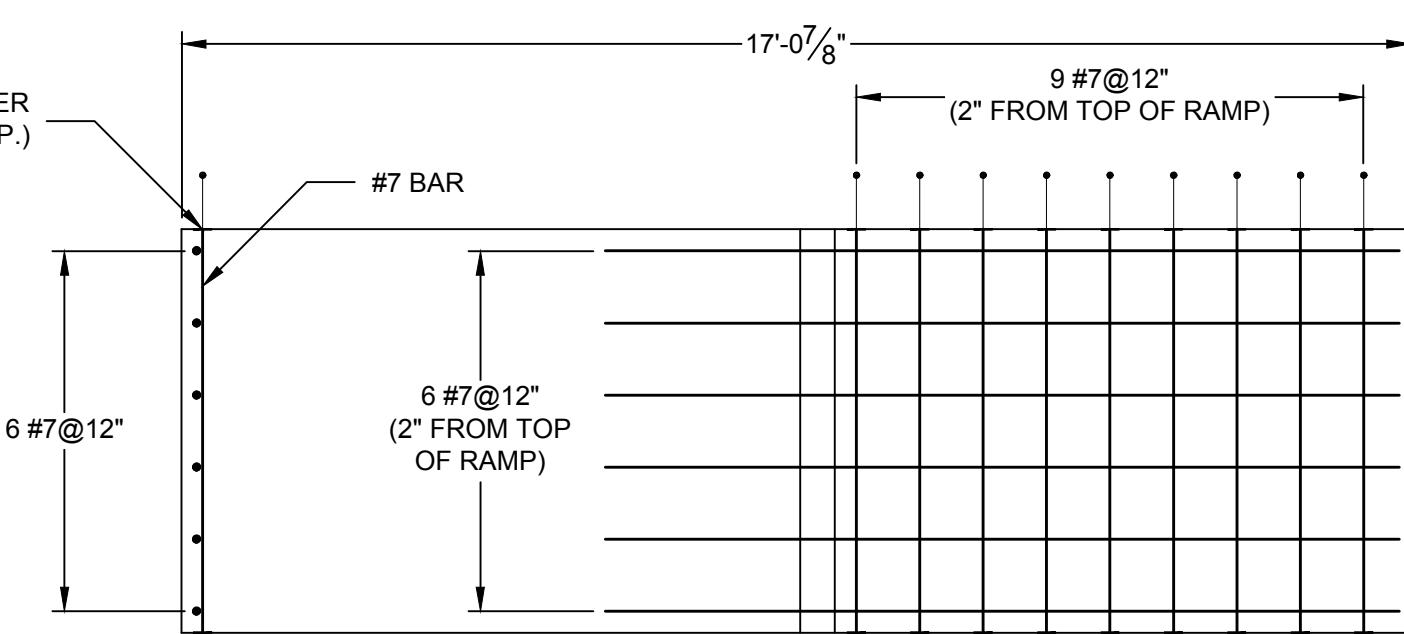
B SEGMENT I1 UPSTREAM RAMP INFIL
SCALE: 3/8"=1'0"

NOTE: WALL AT CONTRACTION JOINT NOT SHOWN FOR CLARITY. SEE DETAILS THIS SHEET.

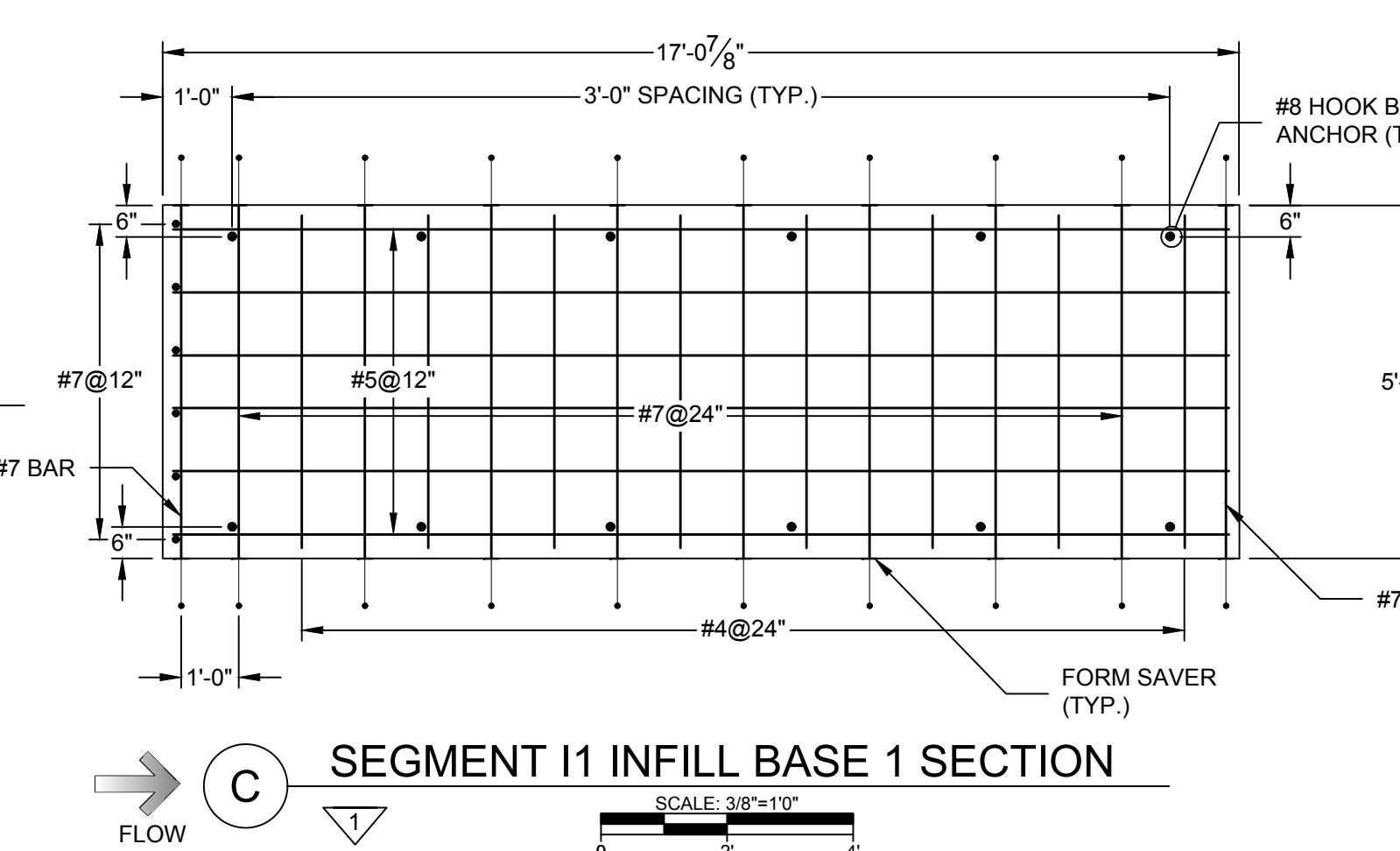


SEGMENT I1 INFILL BASE ELEVATION

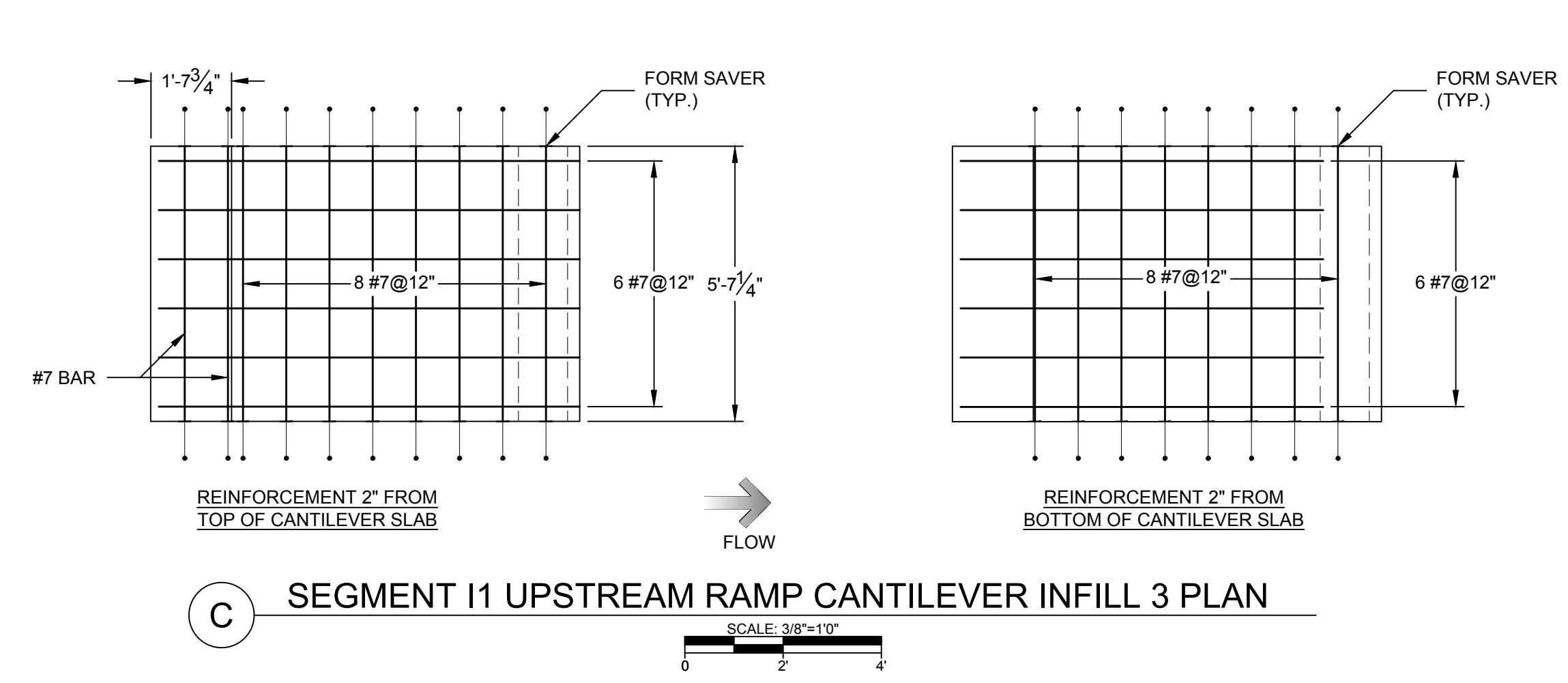
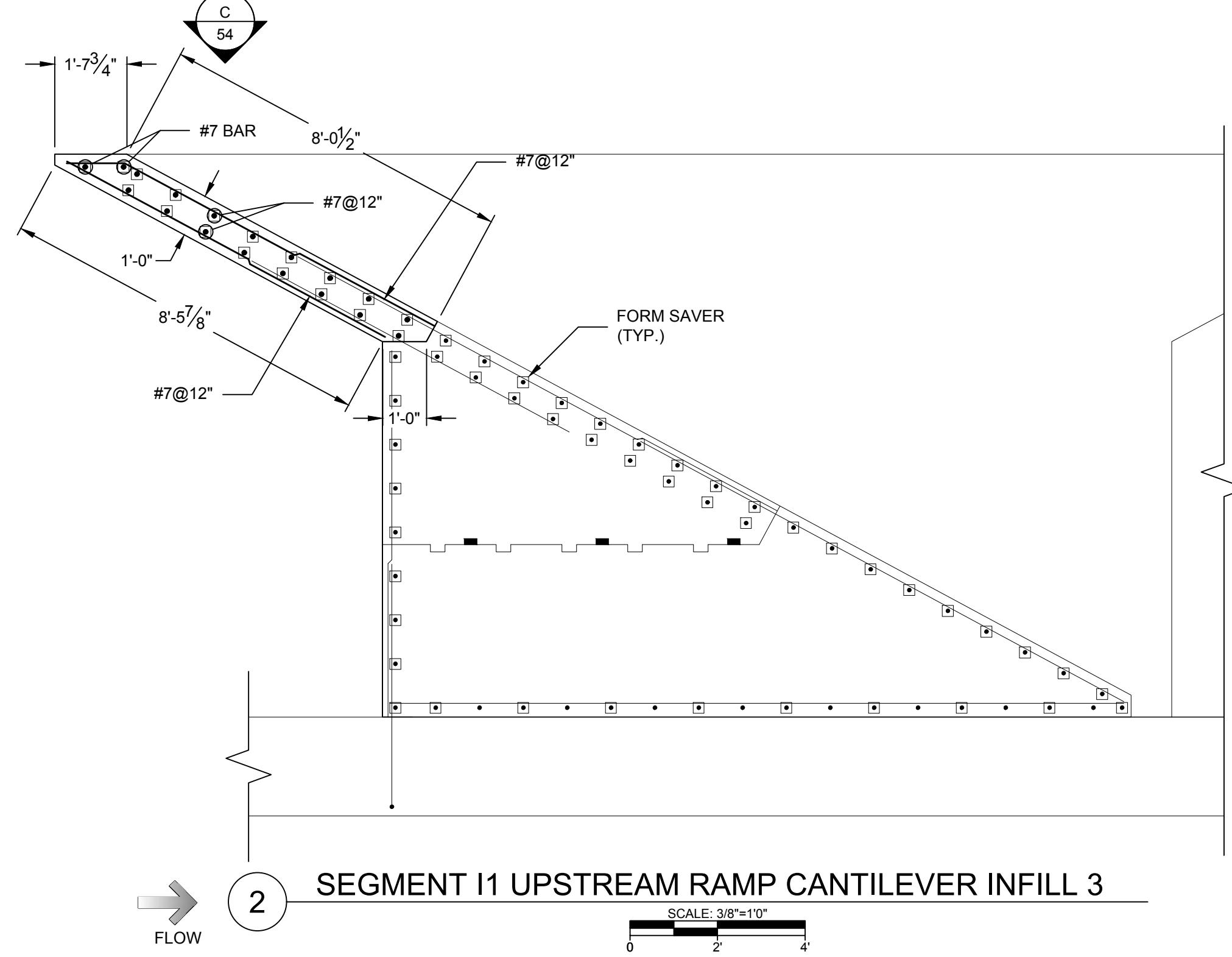
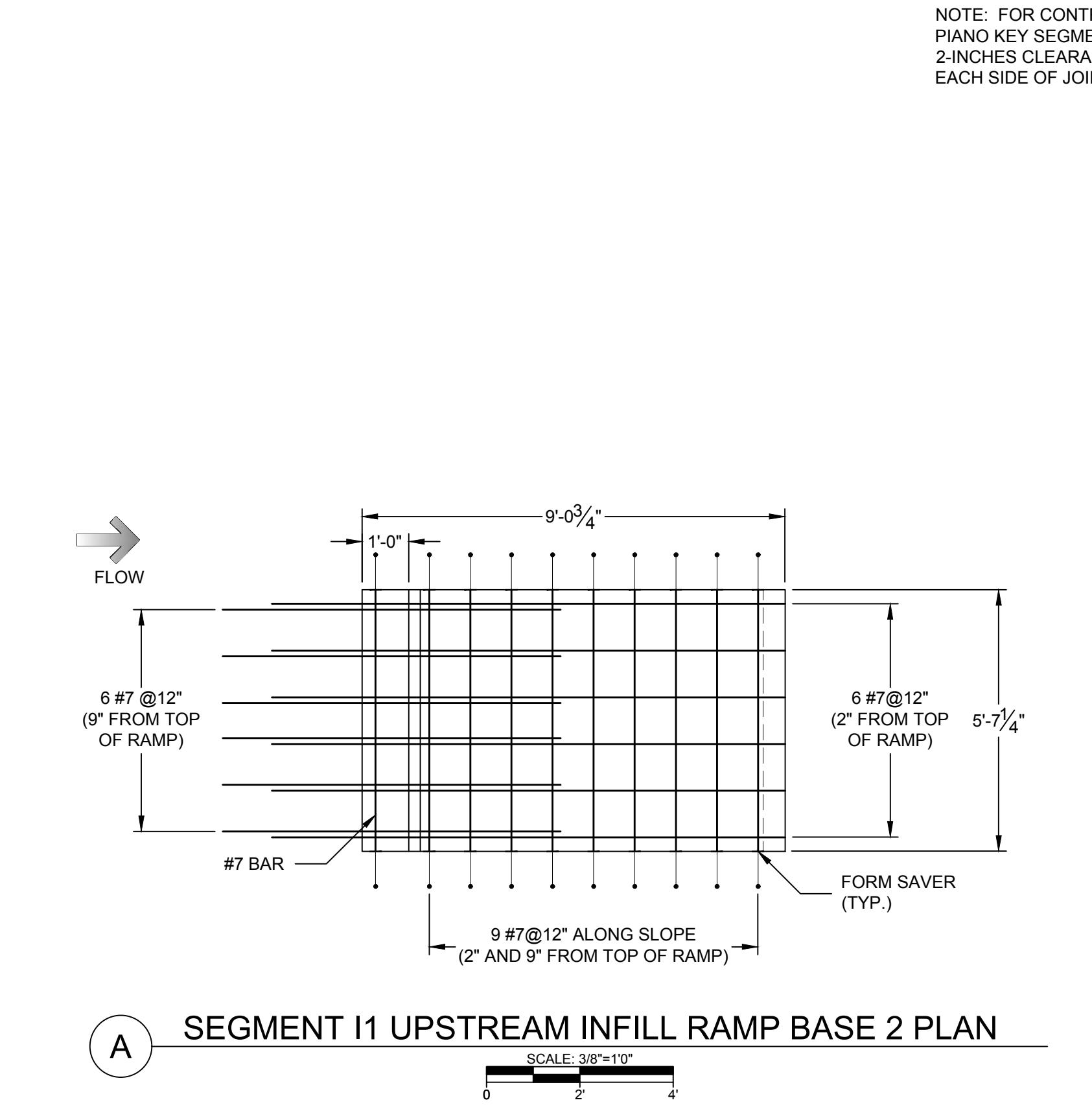
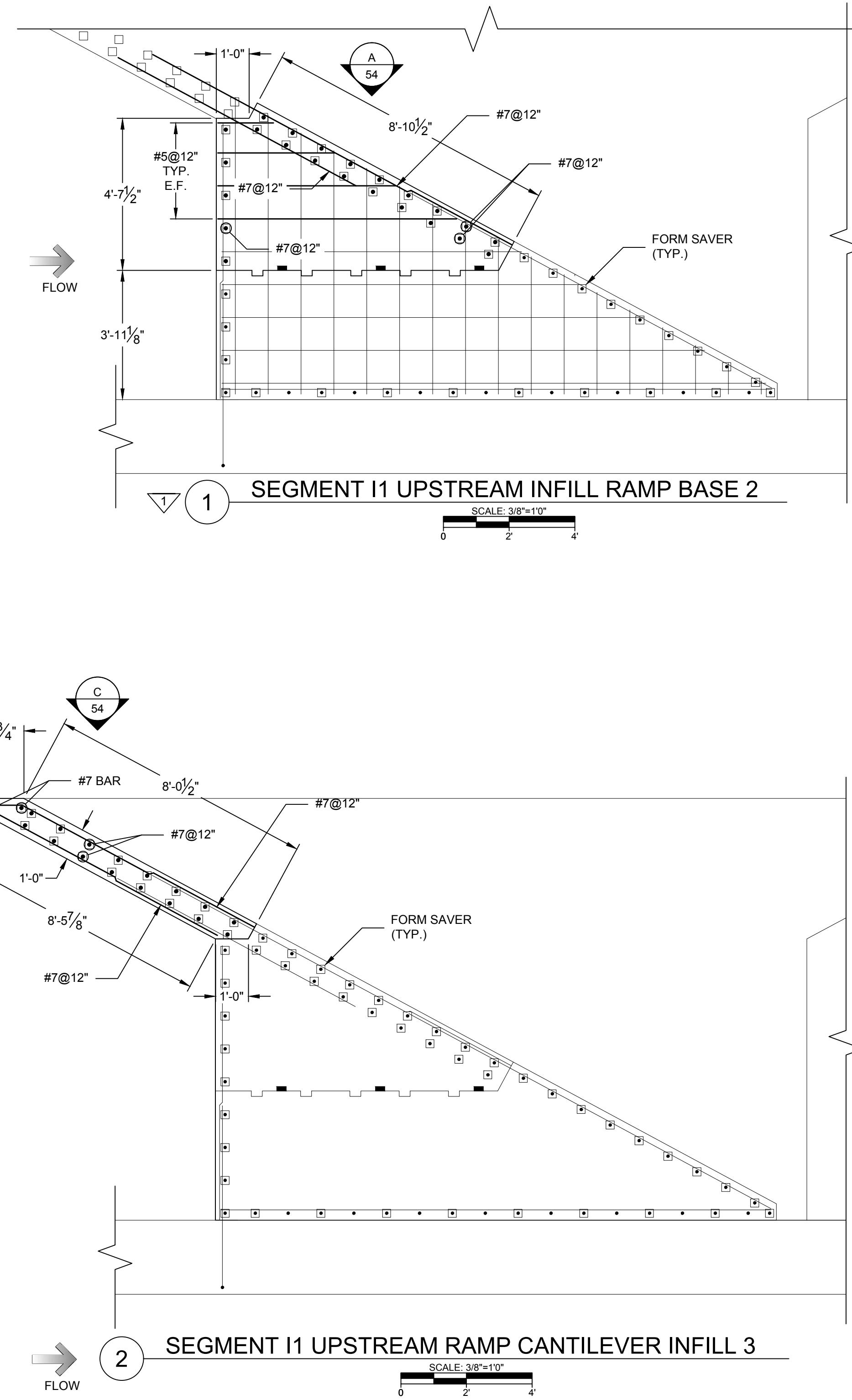
NOTE: FOR CONTRACTION JOINT BETWEEN PIANO KEY SEGMENTS I1 AND H2, PROVIDE 2-INCHES CLEARANCE FOR REINFORCEMENT EACH SIDE OF JOINT. (G2 AND H2 SIMILAR, BUT OPPOSITE)



A SEGMENT I1 INFILL BASE 1 PLAN



C SEGMENT I1 INFILL BASE 1 SECTION



NOTE: FOR CONTRACTION JOINT BETWEEN PIANO KEY SEGMENTS I1 AND H2, PROVIDE 2-INCHES CLEARANCE FOR REINFORCEMENT EACH SIDE OF JOINT.	E-2-17
1 REVISED PER ADDENDUM NO. 03	
REVIEWED BY: RPB, JRC	
DRAWN BY: GHB, JSR	
DATE: 07/10/17	
RANDALL P. BASS, P.E.	
GEORGIA PROFESSIONAL ENGINEER NO. 10885	
Randall P. Bass DATE: 07/10/17	
SCHNABEL ENGINEERING	
No. 10885 PROFESSIONAL ENGINEER Randall P. Bass	
6445 Shiloh Road, Suite A / Alpharetta, GA 30005 / Phone: 770-781-3008 Fax: 770-781-3003 / Schnabeleng.com	
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	

