State of Alaska
Department of Environmental Conservation
Village Safe Water Program
555 Cordova Street
Anchorage, AK 99501
evan.patterson@alaska.gov

October 26, 2023

To: Vendor List

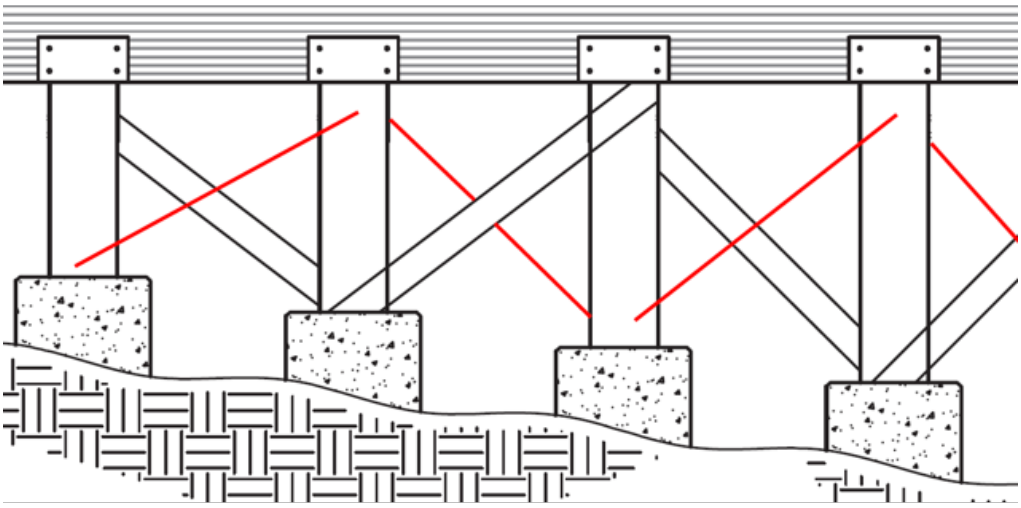
Re: Amendment 5
ITB 24-VSW-PTD-007
Port Alexander Water Tank and Foundation Replacement
ITB Due Date: November 7, 2023 @ 2:00 PM AST

The following are vendor questions and the department's response:

1. Vendor: Like to verify the stringer height of 18" scaled off 1.05B is correct. Believe the bracket leg should be 8" ILO 6".

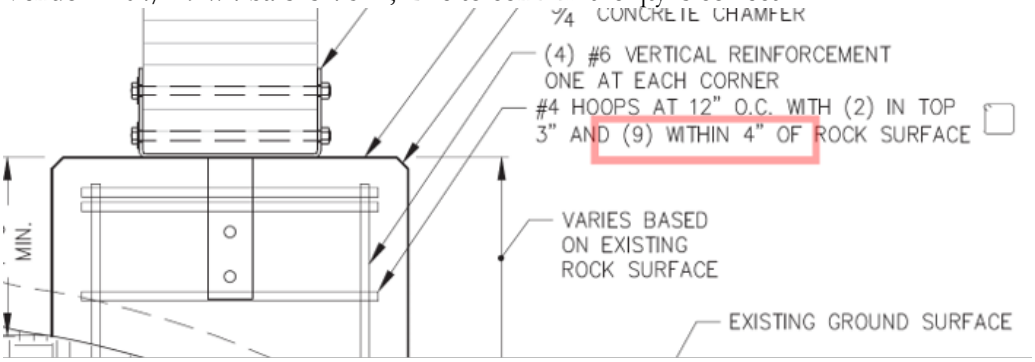
   Department: All GLB stringers are 12.25 x 15. Update leg height to be 8" instead of 6".See attached updated drawing sheet 1.05.

2. Vendor: 1.04 / 1 The plan view appears to show 2 diagonal braces between each adjacent pier (both ways) on each side of the post. 1.06/ A Elevation shows only 1 diagonal brace between each pair of piers. The elevation makes it appear the downward sloping ones are on the backside whereas the positive sloping ones are on the near face with the opposing face devoid of the additional bracing the plan view shows. Should the red be added?



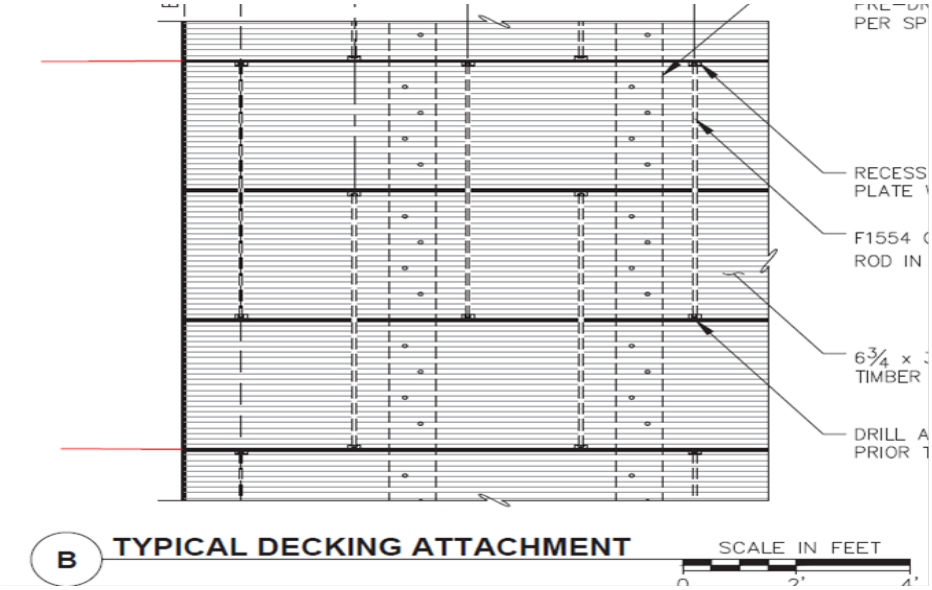
Department: Bracing is as shown in the plan. Elevation omits the second brace for clarity. See attached updated drawing sheet 1.04.

3. Vendor: 1.04/1 9 #4 bars is 4.5 " , Like to confirm the qty is correct.



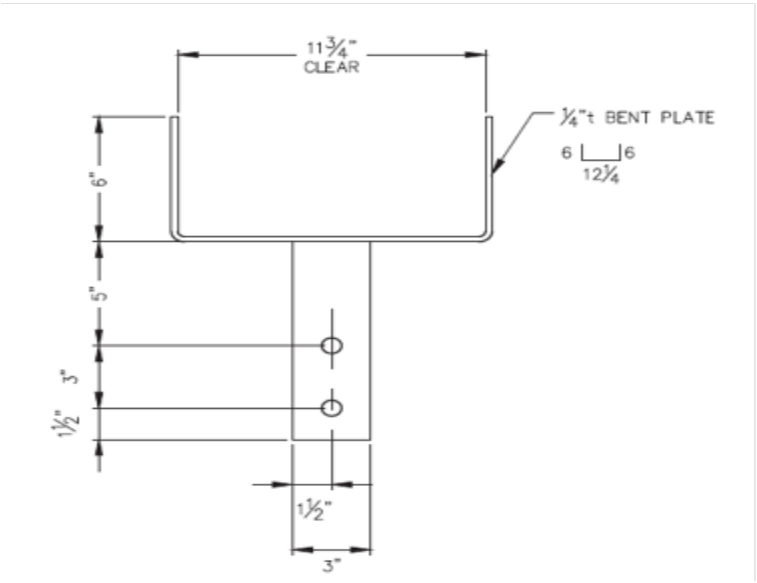
Department: Update quantity of hoops within 4" of rock surface from (9) to (2).

4. Vendor: Det 1.06 B Like to confirm the intention for the deck glulams is that three are bolted together and act independently of the adjacent three? Within the diagram no rods appear to pass through the red lines. If grouping in sets of 3 is correct, should the 2' unit outside of line I be added to the adjacent 3?

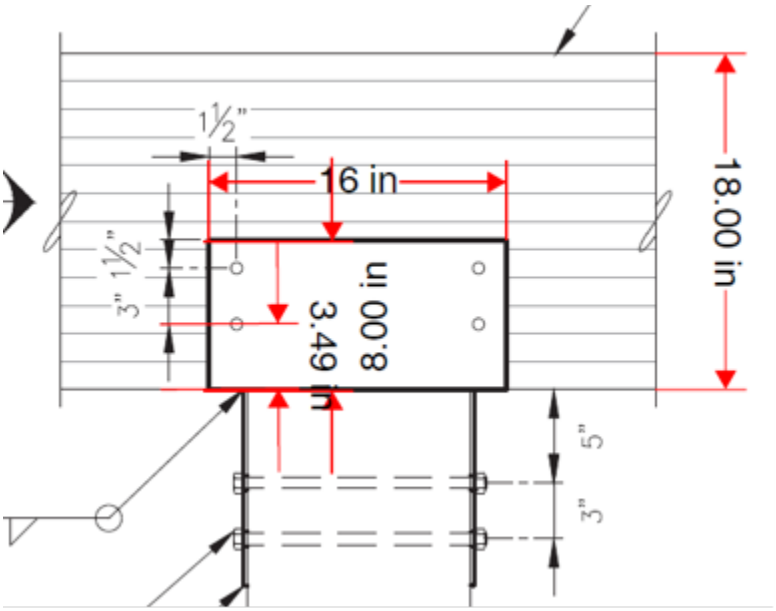


Department: Rods shall create a continuous connection. See attached updated sheet 1.06.

5. Vendor: I had been scaling the beam off the 6" bracket height shown in 1.05/F which resulted in the shorter height. Using 1.05/B's 8" (assume preferred design) the stringers scale at 18".



B 1.05 Which shows bolt spacing has the beam height as 18" and the bracket height at 8.



Department: Update bracket height to 8" and width to 16".

6. Vendor: 02726 2.2 B Glulam decking: The incising for the ACZA treatment on the decking would seem to defeat the added cost of the "premium" grade finish. Due to its remote location perhaps a substitution to a lower visual grade would be considered?

   Department: Architectural grade would be acceptable, provided all exposed voids are filled with structural epoxy.

7. Vendor: 02726 2.2 C Glulam Stringers No alternate treatment is called out so assume reverts back to creosote. Request an alternate such as ACZA like decking or copper napthnate to make easier on crews and the environment.

   Department: Update Section 02726 – Timber Foundations and Decking, Section 2.2 in its entirety with:

   2.2 TIMBER

   A. All sawn lumber shall be surfaced four sides (S4S), unless otherwise noted, and graded in accordance with the West Coast Lumber Inspection Bureau Standard No. 17, meeting Douglas Fir No. 1 and better for all members and all other miscellaneous lumber. No individual timber shall fall outside the specified grade. Each piece of lumber shall be stamped with a grade mark, which identifies the grading and certification, and shall be so marked as to be legible after pressure treatment. All sawn lumber shall be pressure treated with creosote per AWPA C-28 to a minimum retention of 12 pounds per cubic foot. Fabrication and drilling of timber shall be done as much as possible before pressure treatment. Field drilled holes, cuts and minor damaged areas shall be field treated per AWPA M-4, with an ENGINEER approved treatment product. Field drilled holes shall be field treated with copper napthenate then swabbed with asphaltic mastic, or approved equal. Bolts holes shall be 1/8 inch oversized.

   B. Glued-laminated timber decking shall be manufactured with Coast Region Douglas Fir that conforms to AITC Standard No. 117-87 specifications and shall be manufactured

combination No. 2. The glulam members shall have a premium finish, shall be for exterior use with ground contact and have design values equal to or exceeding the following when loaded perpendicular to the widest faces of the laminations.

Compression (Fc) = 1,950 p.s.i.
Horizontal Shear (Fv) = 265 p.s.i.
Modulus of Elasticity (E) = 1,600,000 p.s.i.

All glued-laminated timbers for decking shall meet the above structural qualities and shall have a premium finish. Glued-laminated timber for decking shall additionally be selected for appearance and quality. No loose knots, splits, warps, wane or other obvious visible defects will be permitted. Unless otherwise noted, all glued-laminated timbers shall be pressure treated with copper napthenate per AWPA UC4B to a minimum retention of 0.075 pounds per cubic foot.

C. All Glued-laminated timber stringers shall be manufactured with Coast Region Douglas Fir that conforms to AITC Standard No. 117-87 specifications and shall be manufactured combination 24F-V8 in balanced combinations having equal design values for both the positive and negative bending. The glulam members shall have an industrial finish, shall be for exterior use and have design values equal to or exceeding the following when loaded perpendicular to the widest faces of the laminations.

Bending (Fb) = 2,400 p.s.i.
Horizontal Shear (Fv) = 265 p.s.i.
Modulus of Elasticity (E) = 1,800,000 p.s.i.

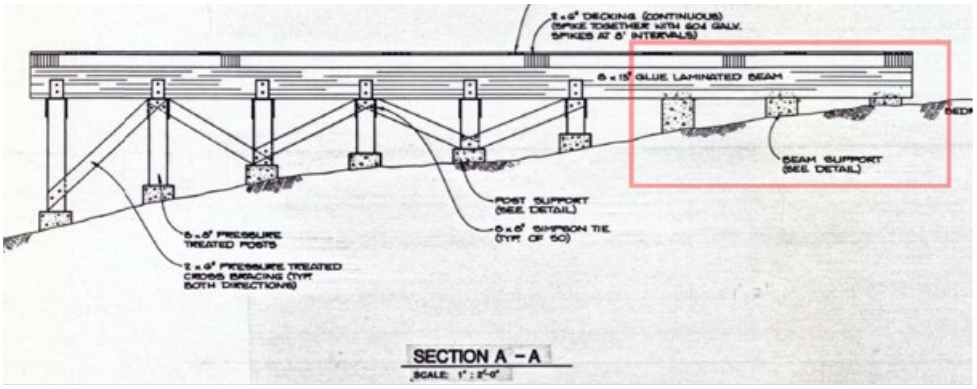
Unless otherwise noted, all glued-laminated timbers shall be pressure treated with copper napthenate per AWPA UC4B to a minimum retention of 0.075 pounds per cubic foot. Fabrication and drilling of glulams shall be completed as much as possible before pressure treatment. Field drilled holes, cuts and minor damaged areas shall be field treated per AWPA M-4, with an ENGINEER approved treatment product. Glued-laminated timber ends that have been field cut after treatment, and will have exposed ends shall be coated with a thin layer of asphaltic mastic and then covered with "Grace Vycor Plus Self Adhered Window Flashing". Secure flashing with copper or galvanized nails as required. Bolt holes shall be 1/8 inch oversized. All glue-laminated timber stringers shall be cambered to the radius 3500 ft. unless otherwise noted on the plans.

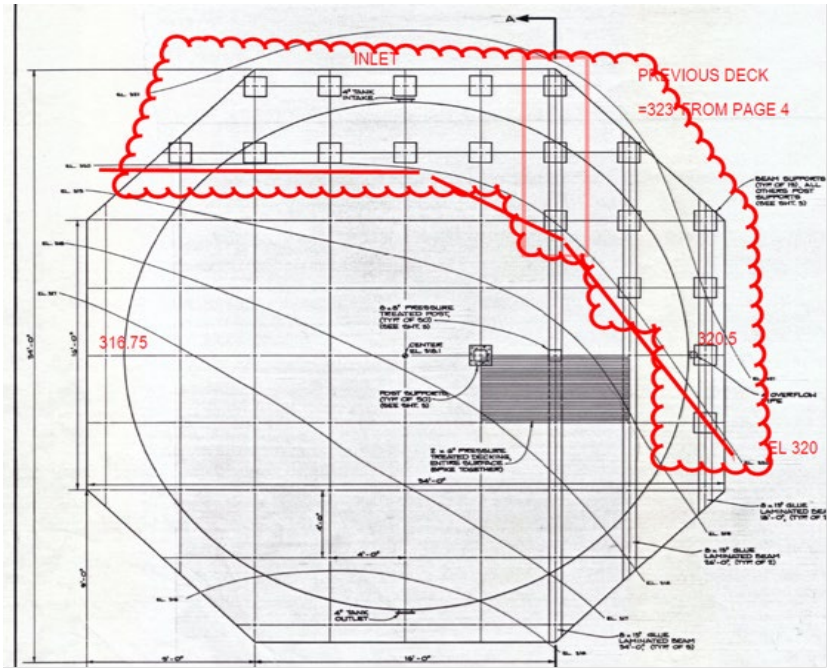
8. Vendor: 02726 2.4 C Spikegrids Cleveland Steel shut down 3 years ago and specs for their plates are not available. Portland Bolt has spike plates, can they be used as a baseline?

   Department: Portland Bolt spike plates are an acceptable substitution.

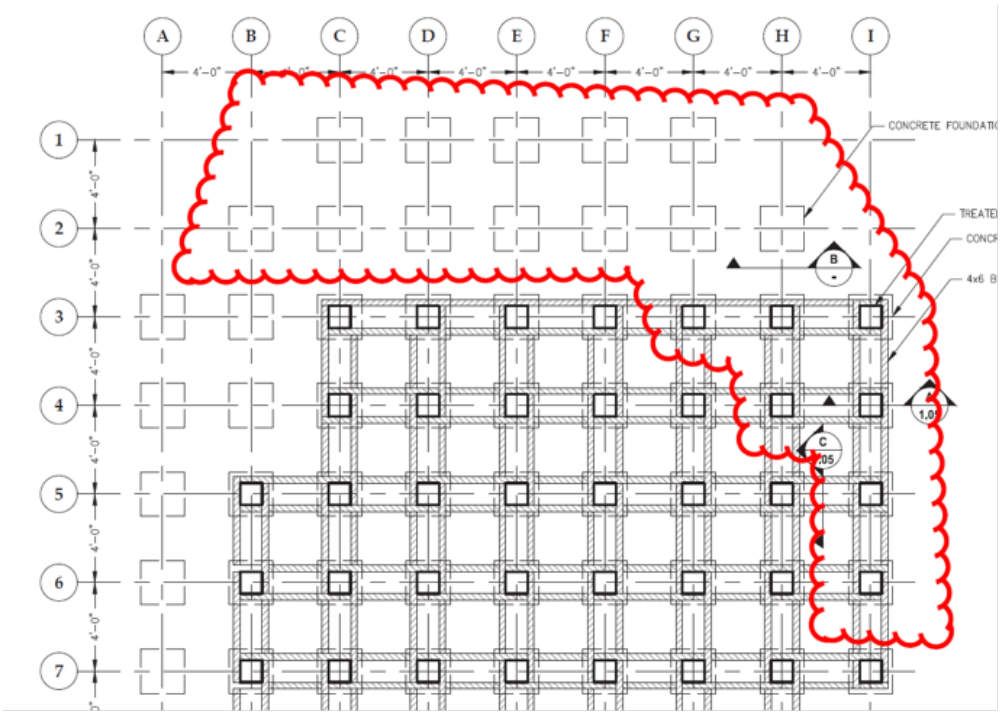
9. Vendor: It appears that on the tank's west side there are some tall concrete piers not X braced and on the east side the posts may be so short that the 4way X bracing would be difficult to install. Certainly there will be variations in the bedrock elevations but it seems odd that the piers are almost a mirror image about GL E between the two projects. The orientation of the two projects seem to be the same with the tank inlet being at the top of the page.

   Pages 2/3 (PDF 15,16) of the asbuilts
   The 3 concrete piers (red box) in elevation A-A seem to tie back to the plan view on as built page 2 (PDF 15). Virtually all the concrete piers are either on lines 1 and 2 or H and I above the 320' contour. The revision cloud is what I believe were the '86 concrete piers above EL >320

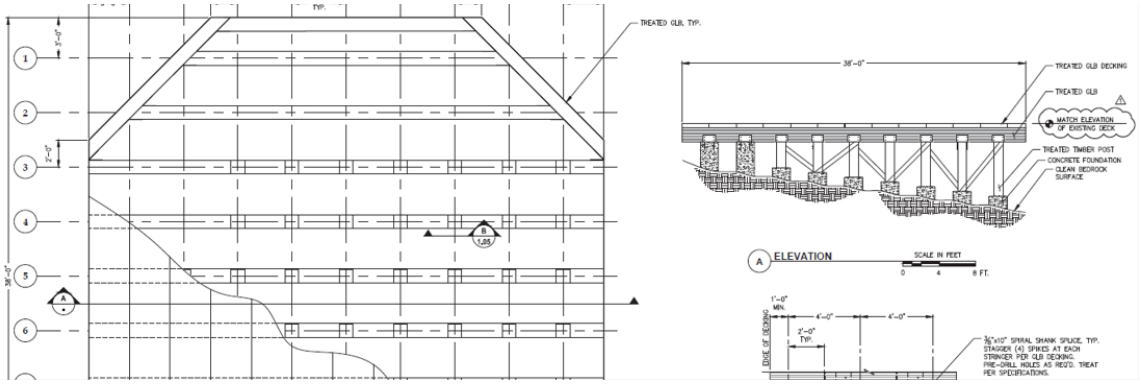




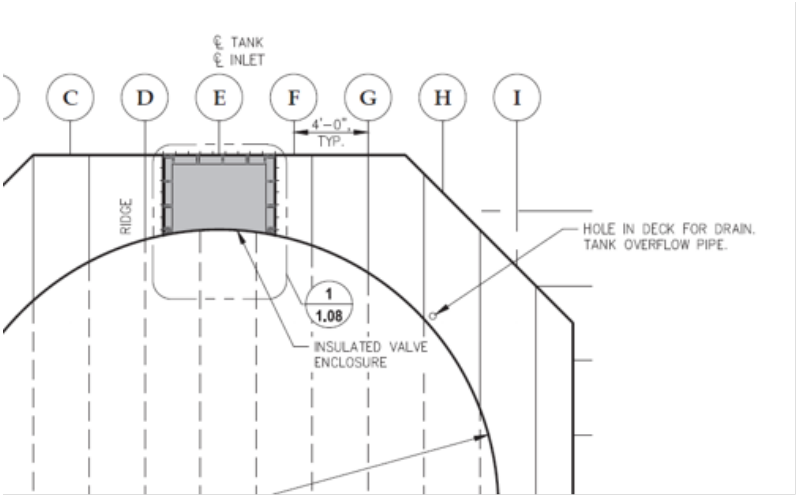
Page 1.04 which details today's pier type by gridline matches up with the original drawing with GL rows 1 and 2 being concrete. I have copied the rev cloud to the new drawing to show the difference between lines A&B and H&I.



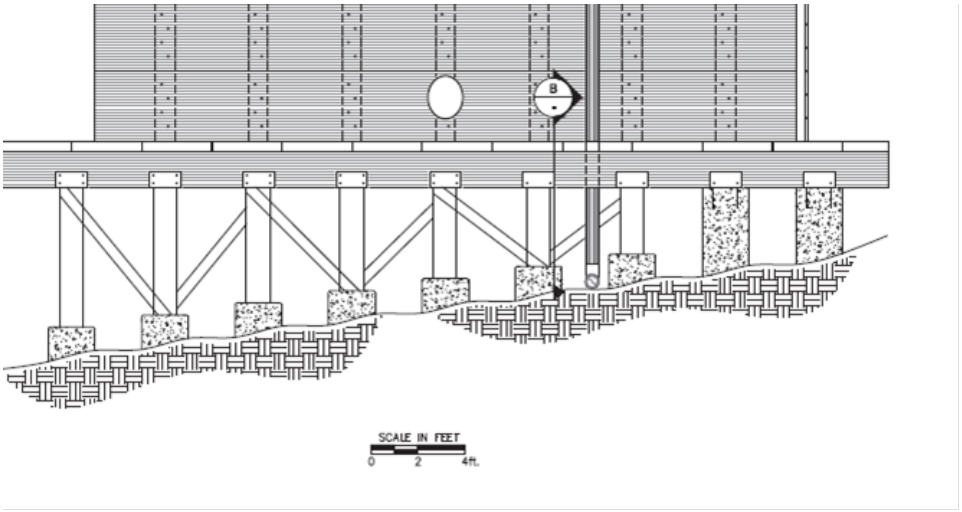
1.06 Cross section A looking north has the concrete piers on the left side (actually GL 5 should only have 1 concrete pier and the rest should be posts) with the ground sloping down as you progress from GLs A - I. The asbuilts from above seem to show that the ground actually slopes upwards (from 316.75 to 320.5) the further as you progress A-I.



Page 1.07 Inlet orientation looks the same from the north, the new drain is in the NE corner which matches P 1.14 below.



Page 1.14 looking West (uphill to the north is right)



Department: Bidders shall use layout from PND drawings. The department cannot speak to the previous project, but it appears the contour lines are consistent with the grade prior to excavation to bedrock and the piers were modified during the previous project to match the bedrock contour, which is different than the contours shown in the original design drawings. The contractor shall field verify column and pedestal heights prior to construction. Below is an image of the side of the existing tank foundation which shows the existing conditions use a timber post instead of the concrete beam support as shown in original drawings. Note the location of the overflow piping is located per the original drawings.

The contours in the original drawings are believed to show ground surface before excavation to bedrock. The bedrock generally slopes from the inlet to the outlet of the tank with some cross slope across the site, with the high end being to the west. Perspective bidders are strongly encouraged to visit the site prior to bidding.

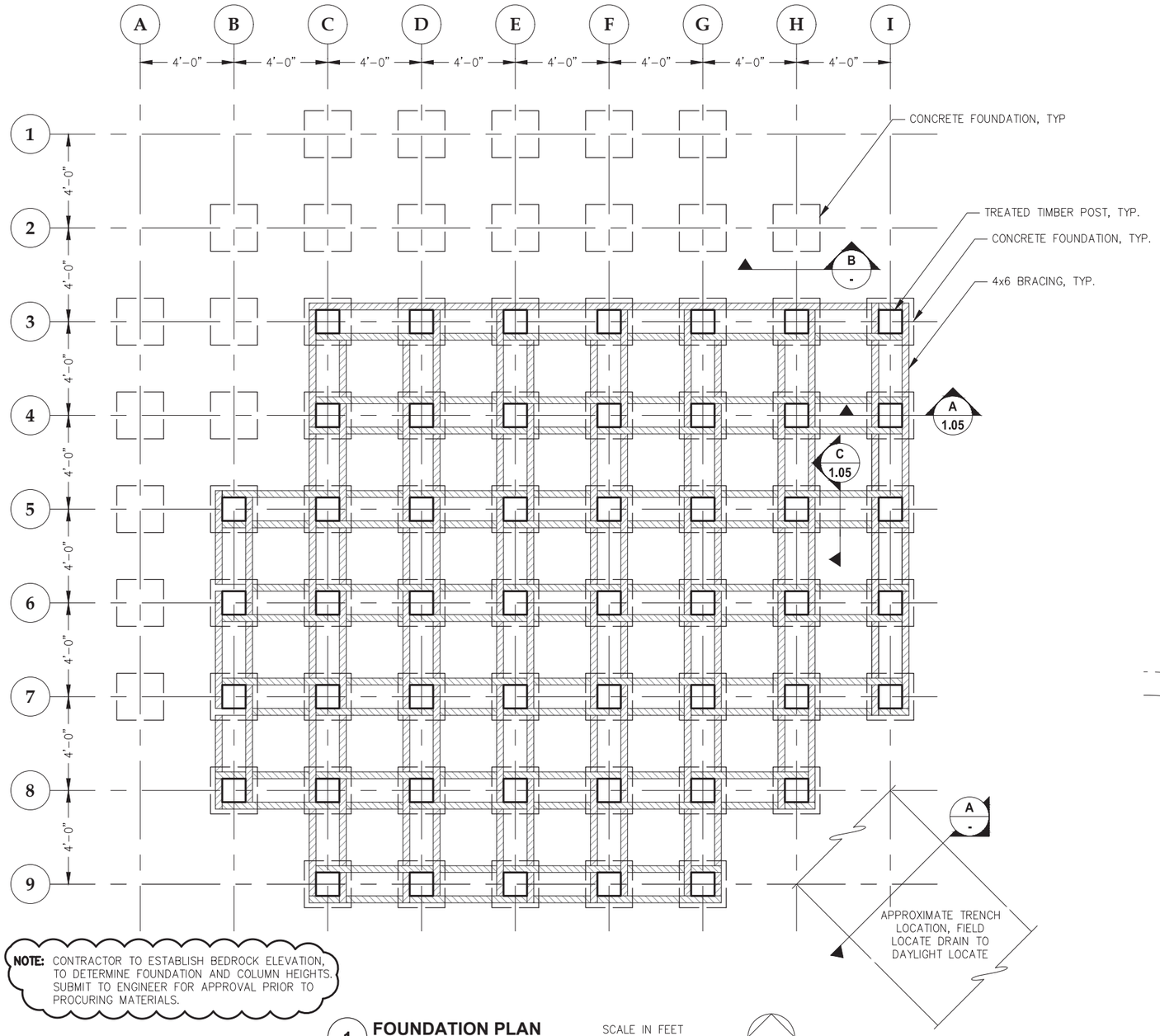
10. Vendor: Like to confirm the pier locations with 12x12 posts. The asbuilts from 86 show the concrete piers to stringer connections typically occurred on gridlines 1&2 and H&I whereas the current design has them 1&2 and A&B. The orientation of the new tank to the original topo seems unchanged. This would seem to make some of the new concrete piers tall and the posts on H&I short vs the balance of the design.

    Department: See above responses.

Evan Patterson

Evan Patterson

Procurement Specialist

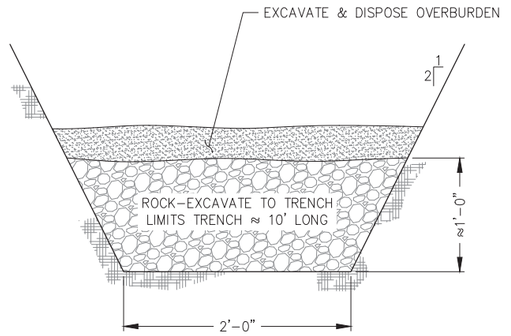


⚠2 **NOTE:** CONTRACTOR TO ESTABLISH BEDROCK ELEVATION, TO DETERMINE FOUNDATION AND COLUMN HEIGHTS. SUBMIT TO ENGINEER FOR APPROVAL PRIOR TO PROCURING MATERIALS.

1 FOUNDATION PLAN

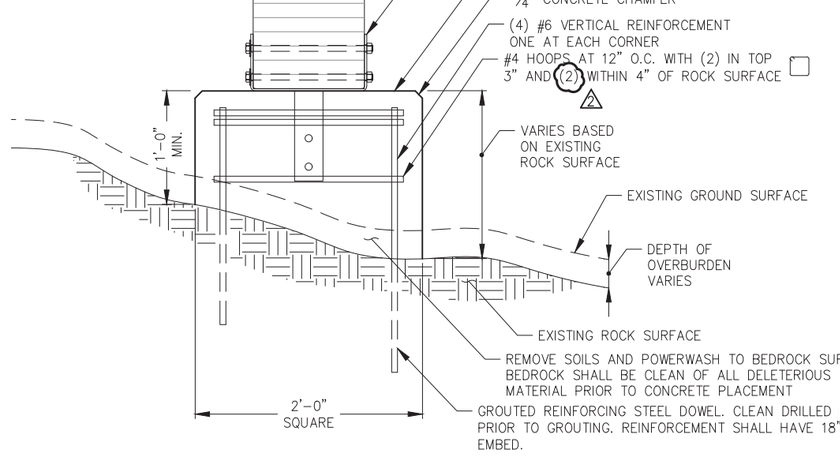
NOTE: GLB STRINGERS NOT SHOWN FOR CLARITY

SCALE IN FEET 0 2 4ft.



A TYPICAL TRENCH DETAIL

SCALE IN INCHES 0 6 12 IN



B FOUNDATION DETAIL

ROCK REMOVAL TO ACHIEVE 1'-0" MIN. HEIGHT INCIDENTAL TO WORK

SCALE IN INCHES 0 6 12 IN

⚠1 **NOTE:** FOUNDATION TO BE CENTERED BENEATH TANK. NEW TANK LOCATION TO MATCH EXISTING TANK

VILLAGE SAFE WATER

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
⚠1	1/3/22	AK DEC PLAN REVIEW	DRD	MBH	CRS
⚠2	10/25/23	ADDENDUM 4	DRD	MBH	MBH

PND ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

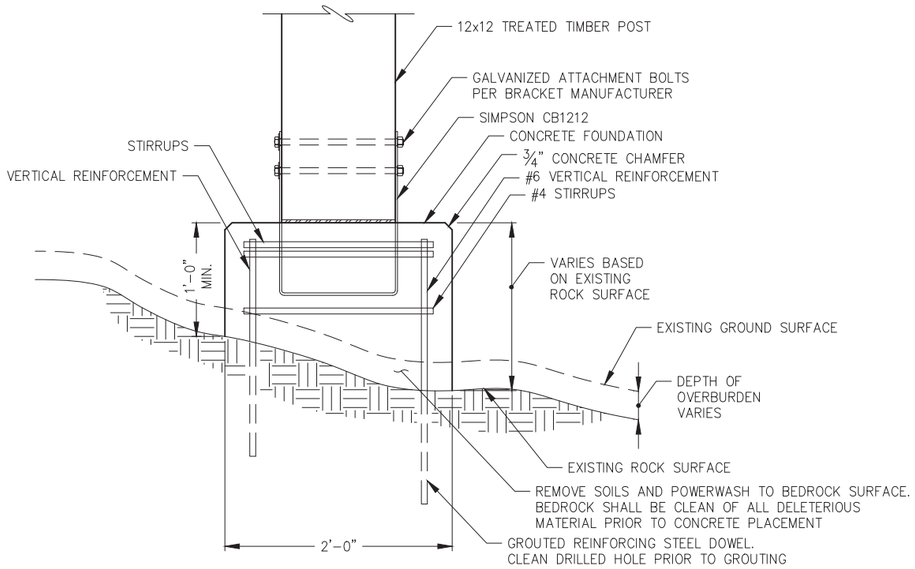
DESIGN: MBH CHECKED: CRS
DRAWN: DRD APPROVED: CRS
SCALE: AS SHOWN
DATE: 2/2/22

CITY OF PORT ALEXANDER WATER TANK & FOUNDATION

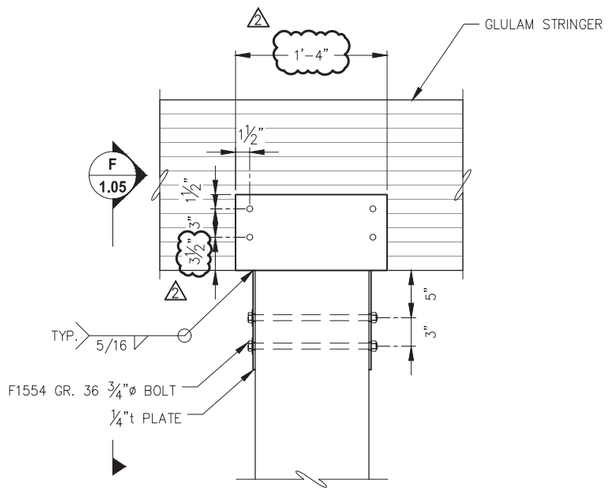
SHEET TITLE: FOUNDATION PLAN AND SECTIONS

1.04

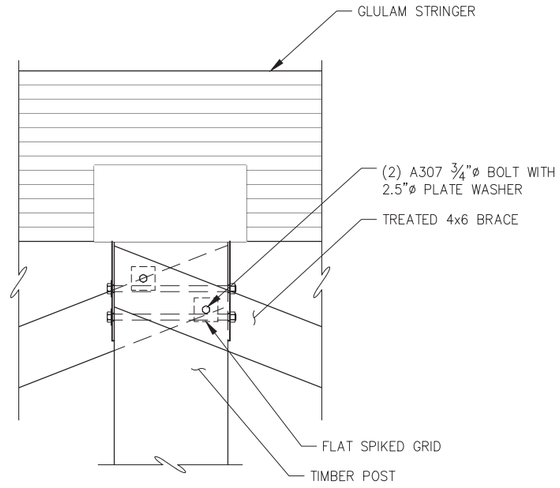
PND PROJECT NO.: 192060 C.A.N. NO.: AECC250



A 1.04 TYPICAL FOUNDATION DETAIL SCALE IN INCHES 0 6 12 IN

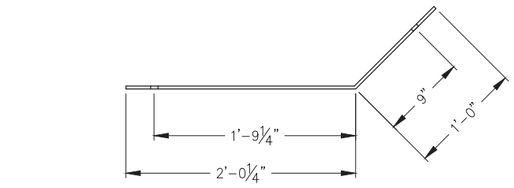


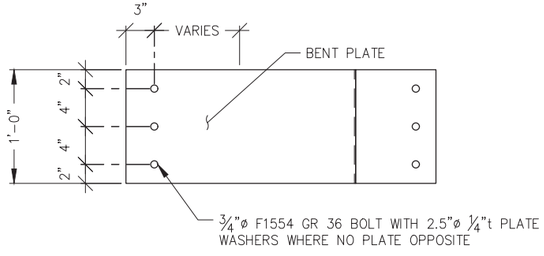
B 1.06 TYPICAL COLUMN TO GLULAM STRINGER SCALE IN INCHES 0 6 12 IN



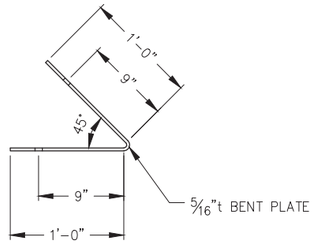
C 1.04 TYPICAL BRACE DETAIL SCALE IN INCHES 0 6 12 IN

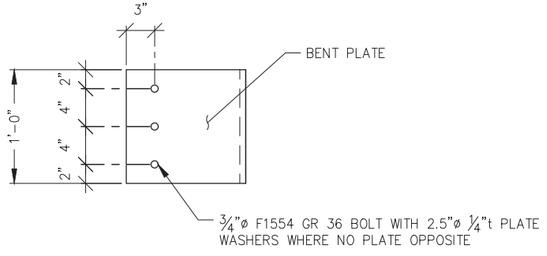
NOTE: BOTTOM BRACE CONNECTION DETAIL SIMILAR



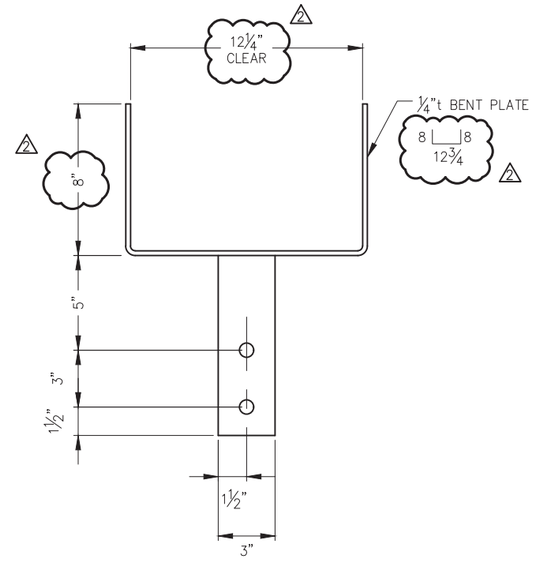


D 1.06 TYPICAL 135° BENT PLATE SCALE IN INCHES 0 6 12 IN





E 1.06 TYPICAL 45° BENT PLATE SCALE IN INCHES 0 6 12 IN



F 1.05 TYPICAL COLUMN TO STRINGER BRACKET SCALE IN INCHES 0 3 6 IN

VILLAGE SAFE WATER

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
1	1/3/22	AK DEC PLAN REVIEW	DRD	MBH	CRS
2	10/25/23	ADDENDUM 4	DRD	MBH	MBH

P N D ENGINEERS, INC.
9360 Glacier Highway Ste 100
Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

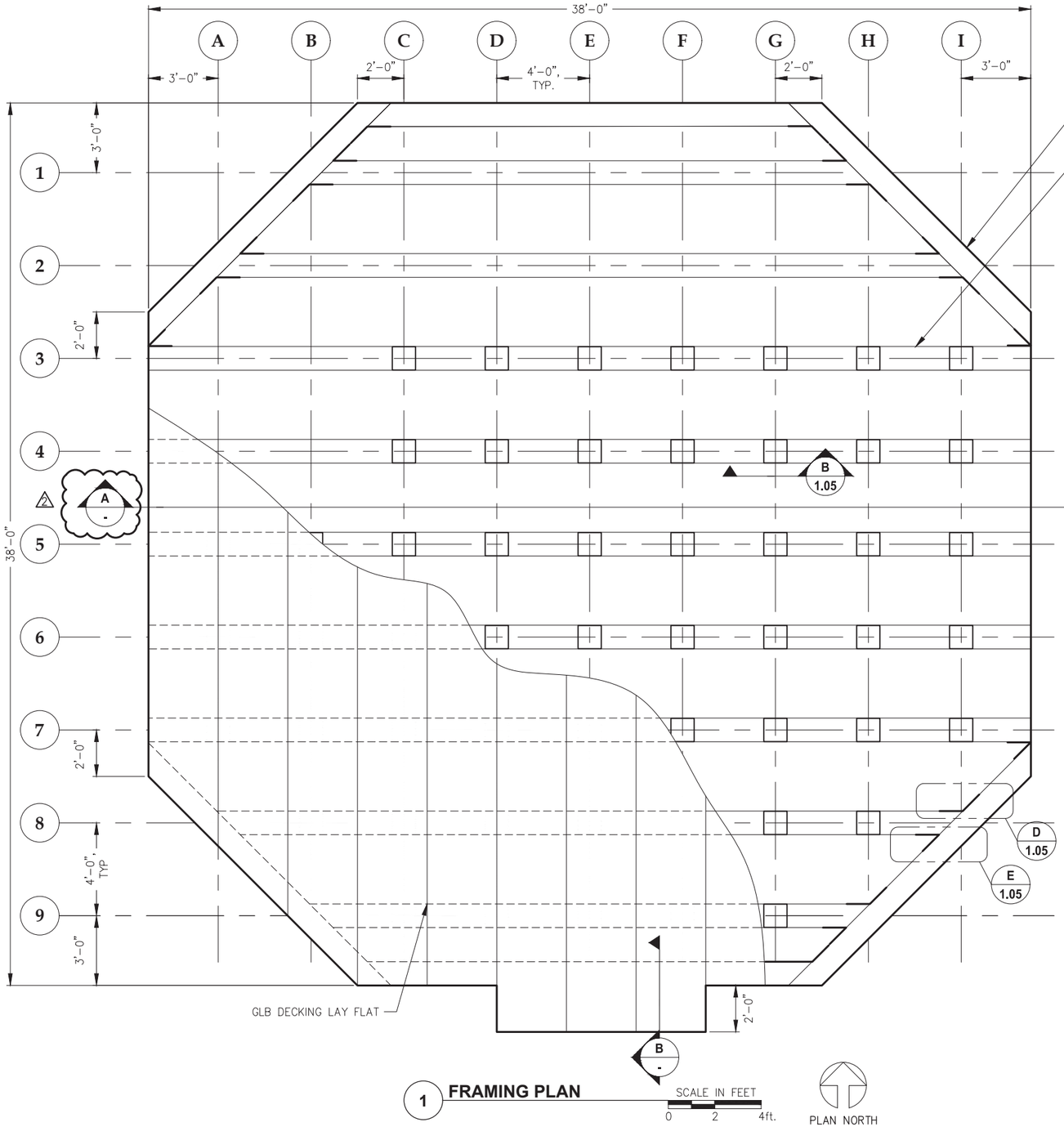
DESIGN: MBH CHECKED: CRS
DRAWN: DRD APPROVED: CRS
SCALE: AS SHOWN
DATE: 2/2/22

CITY OF PORT ALEXANDER
WATER TANK & FOUNDATION

SHEET TITLE: **FOUNDATION DETAILS**

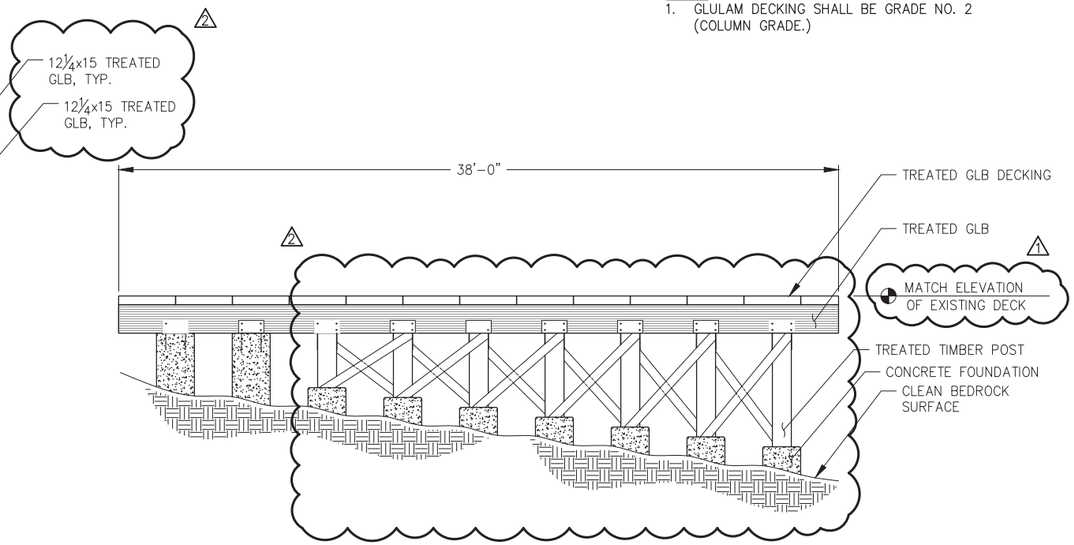
PND PROJECT NO.: 192060 C.A.N. NO.: AECC250

1.05



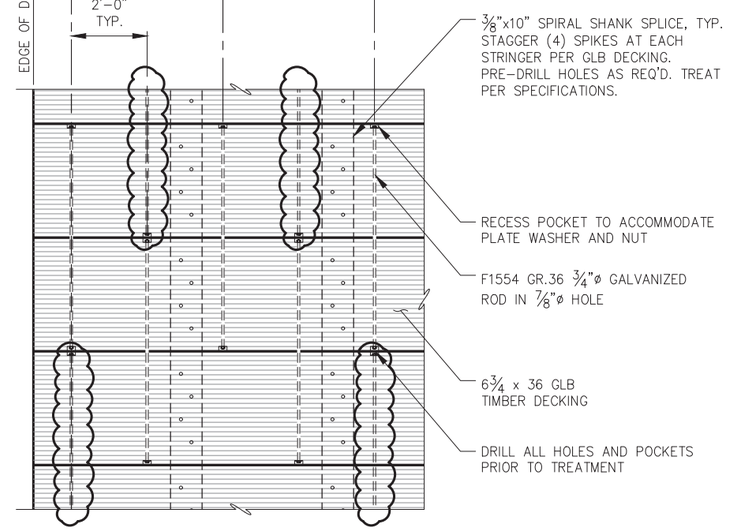
1 **FRAMING PLAN** SCALE IN FEET 0 2 4ft.

PLAN NORTH



A **ELEVATION** SCALE IN FEET 0 4 8 FT.

NOTES:
1. GLULAM DECKING SHALL BE GRADE NO. 2 (COLUMN GRADE.)



B **TYPICAL DECKING ATTACHMENT** SCALE IN FEET 0 2' 4'

VILLAGE SAFE WATER

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.
1	1/3/22	AK DEC PLAN REVIEW	DRD	MBH	CRS
2	10/25/23	ADDENDUM 4	DRD	MBH	MBH

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DESIGN: MBH CHECKED: CRS
DRAWN: DRD APPROVED: CRS
SCALE: AS SHOWN
DATE: 2/2/22

CITY OF PORT ALEXANDER
WATER TANK & FOUNDATION

SHEET TITLE:
TIMBER DECK FRAMING PLAN

1.06

PND PROJECT NO.: 192060 C.A.N. NO.: AECC250