Invitation to Bid Number #83271

Pipeline Trainer Equipment

Sealed bids and electronically submitted bids for the above will be received by the SOWELA Technical Community College Business Office, Charleston Building, room 138, 3820 Sen. J. Bennett Johnston Ave, Lake Charles, LA, 70615, or bids@sowela.edu until **9:00 AM CST, 10/21/24**. Bids will be publicly opened and read aloud at **10:00 AM CST** , **10/21/24** in the Regional Training Center, Conference Room, 2nd floor, 3749 Sen. J. Bennett Johnston Ave, Lake Charles, LA, 70615.

A ***MANDATORY*** Pre-Bid Meeting will be held **at 10:00 AM CST, 10/7/24**. Meeting will begin in the Regional Training Center, Conference Room, 2nd floor, 3749 Sen. J. Bennett Johnston Ave, Lake Charles, LA 70615. All contractors must be present for the ***ENTIRE*** meeting for bid to be accepted.

Any inquiries must be submitted in writing to bids@sowela.edu and received by the **end of day 10/11/24.** Inquiries shall be clearly cross-referenced to the relevant solicitation/specification in question.

Attached bid documents are as follows. Please review and respond accordingly, complying with all specifications described in the Instructions to Bidders.

- Instructions to Bidders
- RTC Elevation Drawings and Subsurface Exploration Report; Boundary Survey
- SOWELA Pipeline Training Flow Loop Fabrication Drawings STCC-01-A Rev 4
- SOWELA Tower Foundation Drawings STCC-01-02 Rev 3
- 03-14-036-Regional Training Center Lake Charles LA – subsurface exploration report
- Louisiana Uniform Public Work Bid Form & Unit Price Form
- Bid Bond
- Attestations Affidavit
- Indemnification Agreement
- Title 38 Affidavit

Bid documents not attached but available per request to bids@sowela.edu:

- General Conditions of the Contract for Construction, AIA Document, A201 2017 ed.
- Supplementary Conditions for the Contract for Construction
- KEC Coating Specifications
- Geotechnical Report RTC

INSTRUCTIONS TO BIDDERS

COMPLETION TIME:

The Bidder shall agree to fully complete the contract within (120) consecutive calendar days, subject to such extensions as may be granted under Paragraph 8.3, in the General Conditions, AIA Document A201, and the Supplementary Conditions, and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

LIQUIDATED DAMAGES:

The Bidder shall agree to pay as Liquidated Damages the amount of (Five Hundred) Dollars ($500.00) for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the contract completion date stated on the "Notice to Proceed" or as amended by change order.

ARTICLE 1

DEFINITIONS

1.1 The Bid Documents include the following:

Advertisement for Bids
Instructions to Bidders
Bid Form
Bid Bond
General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition (publicly available for download)
Supplementary Conditions for the Contract for Construction (available upon request)
User Agency Documents (if applicable)
Other Documents (if applicable)
Specifications & Drawings

1.2 All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201 and the Supplementary Conditions are applicable to the Bid Documents.

1.3 Addenda are written and/or graphic instruments issued by the Engineer prior to the opening of bids, which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections, and prior approvals.

1.4 A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.

1.5 Base bid is the sum stated in the bid for which the Bidder offers to perform the work described as the base, to which work may be added, or deleted for sums stated in alternate bids.

1.6 An alternate bid (or alternate) is an amount stated in the bid to be added to the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.

1.7 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the Bid Documents.

1.8 A Sub-bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.

1.9 Where the word "Engineer" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.

ARTICLE 2

PRE-BID CONFERENCE

2.1 A Mandatory Pre-Bid Conference shall be held on **October 7, 2024 at 10:00AM CST**. The Engineer and Owner shall coordinate the setting of the date, time and place for the Pre-Bid Conference and notify all who have received sets of the Bid Documents to attend. The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and

information from interested Bidders. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Contractors who are not in attendance for the **ENTIRE** Pre-Bid Conference will be considered to have not attended.

2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

ARTICLE 3

BIDDER'S REPRESENTATION

3.1 Each Bidder by making his bid represents that:

3.1.1 He has read and understands the Bid Documents and his bid is made in accordance therewith.

3.1.2 He has visited the site and has familiarized himself with the local conditions under which the work is to be performed.

3.1.3 His bid is based solely upon the materials, systems and equipment described in the Bid Documents as advertised and as modified by addenda.

3.1.4 His bid is not based on any verbal instructions contrary to the Bid Documents and addenda.

3.1.5 He is familiar with Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into contracts; he is aware that the Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the State on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Designer or any principal within the Designer's firm (see La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any contract entered into in violation of this clause shall be null and void.

3.2 The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

ARTICLE 4

BID DOCUMENTS

4.1 Copies

4.1.1 Complete Bid Documents for this project are available without charge and without deposit by request via email at bids@sowela.edu. The Bid Documents will be in electronic PDF form. The request will need to include the project name (Pipeline Trainer).

4.1.1.2 . Printed copies are not available from the Designer, but arrangements can be made to obtain them through most reprographic firms

4.1.1.2.1 Plan holders are responsible for their own reproduction costs.

4.1.2 Complete sets of Bid Documents shall be used in preparing bids; neither the Owner nor the Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.

4.1.3 The Owner or Engineer in making copies of the Bid Documents available on the above terms, do so only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

4.2 Interpretation or Correction of Bid Documents

4.2.1 Bidders shall promptly notify the Engineer and or Owner of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site and local conditions.

4.2.2 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Owner, to reach him at least seven days prior to the date for receipt of bids.

4.2.3 Any interpretation, correction or change of the Bid Documents will be made by addendum. Interpretations, corrections or changes of the Bid Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections and changes.

4.3 Substitutions

4.3.1 The materials, products and equipment described in the Bid Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. No substitutions shall be allowed after bids are received.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Owner at least seven (7) working days prior to the opening of bids. (La. R.S. 38:2295(C)) Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval, if given, is contingent upon supplier being responsible for any costs which may be necessary to modify the Pipeline Trainer or facilities needed to accommodate the materials and equipment approved.

4.3.3 If the Engineer and Owner approves any proposed substitution, such approval shall be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 Addenda

4.4.1 Addenda will be transmitted to all who are known by the Owner to have received a complete set of Bid Documents.

4.4.2 Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose.

4.4.3 Any written inquiries must be received by the **end of day October 11, 2024** and shall be clearly cross-referenced to the relevant solicitation/specification in question.

4.4.4 Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended at least seven but no more than twenty-one (21) working days, without the requirement of re-advertising. The revised time and date for the opening of bids shall be stated in the addendum.

4.4.5 Each Bidder shall ascertain from the Owner prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.

4.4.6 The Owner shall have the right to extend the bid date by up to (30) thirty days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Owner.

ARTICLE 5

BID PROCEDURE

5.1 Form and Style of Bids

5.1.1 Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided by the Owner for this project.

5.1.2 The Bidder shall ensure that all applicable blanks on the bid form are completely and accurately filled in.

5.1.3 Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

5.1.4 Any interlineation, alteration or erasure must be initialed by the signer of the bid or his authorized representative.

5.1.5 Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non responsive and shall cause its rejection.

5.1.6 Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work. Unit prices are incorporated into the base bid or alternates, as indicated on the Unit Price Form, but are not the sole components thereof.

5.1.7 Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

5.1.8 Written evidence of the authority of the person signing the bid for the public work shall be submitted in accordance with La. R.S. 38:2212 (B)(5).

5.1.9 On any bid in excess of fifty thousand dollars ($50,000.00), the Contractor shall certify that he is licensed under La. R.S. 37: 2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 Bid Security

5.2.1 No bid shall be considered or accepted unless the bid is accompanied by bid security in an amount of five percent (5.0%) of the base bid and all alternates.

The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or a Bid Bond written by a surety company licensed to do business in Louisiana and signed by the surety's agent or attorney-in-fact. The Bid Bond shall be written on the Owner's Bid Bond Form, and the surety for the bond must meet the qualifications stated thereon. The Bid Bond shall include the legal name of the bidder be in favor of SOWELA Technical Community College and shall be accompanied by appropriate power of attorney. The Bid Bond must be signed by both the bidder/principal and the surety in the space provided on the Bid Bond Form. Failure by the bidder/principal or the surety to sign the bid bond shall result in the rejection of the bid.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within fifteen (15) days after written notice that the instrument is ready for his signature.

Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

5.2.2 The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 Submission of Bids

5.3.1 The Bid shall be sealed in an opaque envelope. The bid envelope shall be identified on the outside with the name of the project, and the name, address, and license number of the Bidder.
The envelope shall not contain multiple bid forms, and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to SOWELA Technical Community College Business Office at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by United States Mail, or express delivery, shall disqualify the bid.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Bid Enclosed" on the face thereof. Such bids shall be sent by Registered or Certified Mail, Return Receipt Requested, addressed to:

SOWELA Technical Community College Business Office Attention Susan Tucek,
3820 Senator J Bennett Johnston Ave.
Lake Charles, Louisiana, 70615.

Bids sent by express delivery shall be delivered to:

SOWELA Technical Community College Business Office Attention Susan Tucek,
3820 Senator J Bennett Johnston Ave.
Lake Charles, Louisiana, 70615.

5.3.2 Bids shall be deposited at the designated location prior to the time on the date for receipt of bids indicated in the Advertisement for Bids, or any extension thereof made by addendum. Bids received after the time and date for receipt of bids will be returned unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

5.3.4 Oral, telephonic or telegraphic bids are invalid and shall not receive consideration. Owner shall not consider notations written on outside of bid envelope which have the effect of amending the bid. Written modifications enclosed in the bid envelope, and signed or initialed by the Contractor or his representative, shall be accepted.

5.4 Modification or Withdrawal of Bid

5.4.1 A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with R.S. 38:2214 which states, in part, "Bids containing patently obvious, unintentional, and substantial mechanical, clerical, or mathematical errors, or errors of unintentional omission of a substantial quantity of work, labor, material, or services made directly in the compilation of the bid, may be withdrawn by the contractor if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty-eight hours of the bid opening excluding Saturdays, Sundays, and legal holidays".

5.4.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

5.4.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids provided that they are then fully in conformance with these Instructions to Bidders.

5.4.4 Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

5.5 Prohibition of Discriminatory Boycotts of Israel

By submitting a bid, the bidder certifies and agrees that the following information is correct:

In preparing its bid, the bidder has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israel-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The bidder has also not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. The state reserves the right to reject any bid if this certification is subsequently determined to be false and to terminate any contract awarded based on such a false response.

ARTICLE 6

CONSIDERATION OF BIDS

6.1 Opening of Bids

6.1.1 The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 Rejection of Bids

6.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.

6.3 Acceptance of Bid

6.3.1 It is the intent of the Owner, if he accepts any alternates, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order

which does not affect determination of the Low Bidder.

ARTICLE 7

POST-BID INFORMATION

7.1 Submissions

7.1.1 At the Pre-Construction Conference, the Contractor shall submit the following information to the Engineer and Owner.

7.1.1.1 A designation of the work to be performed by the Contractor with his own forces.

7.1.1.2 A breakdown of the Contract cost attributable to each item listed in the Schedule of Values Form (attached). No payments will be made to the Contractor until this is received.

7.1.1.3 The proprietary names and the suppliers of principal items or systems of material and equipment proposed for the work.

7.1.1.4 A list of names and business domiciles of all Subcontractors, manufacturers, suppliers or other persons or organizations (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the work. It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, suppliers and labor.

7.1.2 The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

7.1.3 The lowest responsive and responsible bidder shall submit to the Engineer and the Owner within ten days after the bid opening a letter/letters from the manufacturer stating that the manufacturer will issue the guarantee complying with the requirements of Owner based on the specified system and include the name of the applicator acceptable to the manufacturer at the highest level of certification for installing the specified system. This manufacturer shall be one that has received prior approval or is named in the specifications.

In accordance with La. R.S. 38:2227 [references La R.S. 38:2212(A)(3)(c)(ii), which has since been renumbered as La R.S. 38:2212(B)(3)], La. R.S. 38:2212.10 and La. R.S. 23:1726(B) the apparent low bidder on this project shall submit the completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package to SOWELA Technical Community College within 10 days after the opening of bids**.**

ARTICLE 8

PERFORMANCE AND PAYMENT BOND

8.1 Bond Required

8.1.1 The Contractor shall furnish and pay for a Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent or attorney-in-fact, in an amount equal to 100% of the Contract amount. Surety must be listed currently on the U. S. Department of Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the contract amount, or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of $500,000. However, a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A. M. Best's Key Rating Guide shall not be subject to the $500,000 limitation, provided that the contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements

filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-in-fact. The Bond shall be in favor of SOWELA Technical Community College.

8.2 Time of Delivery and Form of Bond

8.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.

8.2.2 Bond shall be in the form furnished by Owner, entitled CONTRACT BETWEEN OWNER AND CONTRACTOR AND PERFORMANCE AND PAYMENT BOND, a copy of which is included in the Bid Documents.

8.2.3 The Bidder shall require the Attorney-in-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of Attorney.

ARTICLE 9

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

9.1 Form to be Used

9.1.1 Form of the Contract to be used shall be furnished by SOWELA Technical Community College.

9.2 Award

9.2.1 After award of the Contract, the successful Bidder, if a corporation, shall furnish to the Owner the most current copy of a Disclosure of Ownership Affidavit on file with the Secretary of State.

9.2.2 In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents

9.2.3 When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract Between Owner and Contractor is duly executed.

09/04/2024

83271 - Pipeline Trainer Equipment Additional Bid Instructions

Base bidding requirements:

Successful Contractor shall be required to furnish Louisiana Licensed Engineer stamped drawing approving sizing, airflow, location, construction of Pipeline training equipment referred to in the SOWELA **Pipeline Training Flow Loop Fabrication Drawings STCC-01-A Rev 4, SOWELA Tower Foundation Drawings STCC-01-02 Rev 3, and KEC Coating Specification.**

Contractor agrees to provide a pipeline training site adhering to industry standards presented in the fabrication drawings, foundation drawings, and site layout.

SEE ATTACHED:

1. SOWELA Pipeline Training Flow Loop Fabrication Drawings STCC-01-A Rev 4

A. All dimensions and material of construction identified for each section are found in this manufacturing document.

B. SOWELA "Owner" will supply the Pipe Supports on pages 12 only. The Contractor will need to sandblast prep and coat per the specifications. The Contractor will provide and install the Pipe Supports on drawing page 13 of 26 per the Foundations drawings "SOWELA Tower Foundation Drawings STCC-01-02 Rev 3". The contractor will paint all piping and tank per the color selections from SOWELA.

2. SOWELA Tower Foundation Drawings STCC-01-02 Rev 3

A. Site specific location of the Pipeline Training Equipment work area.

B. Provides the training flow loop tower foundation dimensions supporting the launcher, receiver found on pages 3 – 7 and 14 – 24 in the document identified as **SOWELA Pipeline Training Flow Loop Fabrication Drawings STCC-01-A Rev 4.**

C. Top of concrete should match the Regional Training Center top of concrete elevation, reference the Regional Training Center Elevation drawings. (Regional Training Center TOC)

D. Provide 7 days and 28 days concrete break reports.

E. Include orientation location of ADA Access.

F. Provide pipe supports as needed per drawings.

G. **Must clear right of way with Entergy, Water Division and AT&T.**

3. 03-14-036-Regional Training Facility Lake Charles LA

A. Subsurface exploration report of the land relevant to the location of the Pipeline Training Equipment.

09/04/2024

The following documents are available upon request via bids@sowela.edu

4. KEC Coating Specification

A. Specification for surface preparation, preferred coating materials of equipment fabricated.

5. Geotechnical Report RTC

VALVES, PUMPS, MOTORS, TANK AND ELECTRICAL WORK:

The contractor shall furnish all appropriate sized valves, motor starters, start-stop switches, pumps, electrical wiring for each piece of motor driven equipment unless shown otherwise and any other items needed to properly operated the system.

The Contractor shall install all valves, motor starters, start-stop switches, pumps, electrical wiring as bid. The Contractor shall also provide and install all power wiring required for the installation of such mechanical equipment.

All electrical equipment shall have the U.L. Label and shall meet the standards of the National Electrical Code and Nema.

EQUIPMENT NOTES:

1. ELECTRIC WATER PUMP: 200 PSI, 700 GPM, TEFC 150 HP MOTOR, 460 VOLT, 3 PHASE, 60 Hz (460/3/60)

2. 3,000 GAL WATER TANK

3. ELECTRIC AIR PUMP W/ DRYER: MIN 325 CFM, TEFC 100 HP MOTOR, 460 VOLT, 3 PHASE, 60 Hz, (460/3/60) W/ MIN 50 GAL AIR TANK

09/04/2024

SCOPE OF WORK NOT INCLUDED IN THE DRAWINGS

“Must clear right of way with Entergy, City Water Division and AT&T.”

Power needs to be brought to the equipment slab.

Entergy to supply transformer specs, Contractor shall calculate total load and submit to Entergy for transformer recommendation.

SOWELA to install water meter at equipment slab location.

All foundation work to be performed by bid contractor

Civil Work "dirt work" to be performed by bid contractor

Require type of fill and compaction test to be discussed at the pre-bid meeting.

Contractor is to bid installing and connecting equipment to the system, Air Dryer, Air Compressor, Water Pumps, Water Tank Note: Materials used to connect all equipment is not included in the drawings.

Water supply must have manual fill up water treatment system “can be recommended in a submittal”.

Contractor to install wooden fence around transformer.

Concrete work for sidewalk from RTC to the pipeline platform location included in bid. "Include the culvert needed onsite"

Included paint scope for supports, pipe, and valves attached to the bid request.

Install safety signage around the site and piping.

SOWELA to provide pipe paint color, tank paint color and platform paint color.

Must provide weekly reports, punch list for substantial completion. Reports to be submitted to the Executive Director of Facilities and the Project Engineer.

Must provide Operating Manuals and Final As built Documents for equipment, buildout, “All field changes” and “All submittals”

Bid Alternate 1:

Spare conduit for future control panel option.

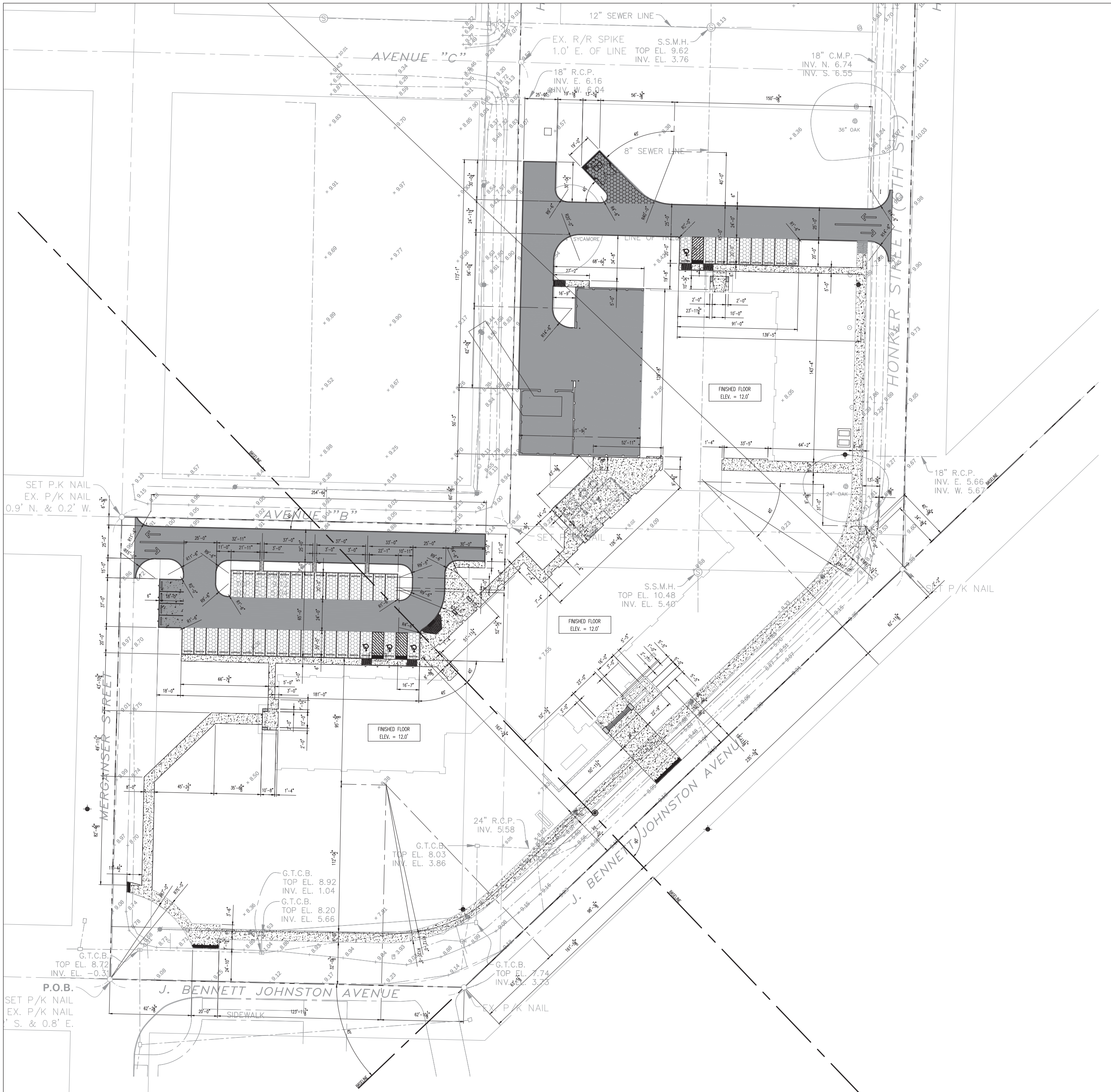
Bid Alternate 2:

SITE FINISH GRADE:

A 6” lift limestone foundation will be provided by the contractor consisting of 90’x50’ centered with the pipeline training equipment design layout**.**

Bid Alternate 3:

Provide additional lighting, perimeter and under platform.



1 SITE LAYOUT PLAN
SCALE: 1" = 30'-0"

NORTH

LEGEND

- 9" THICK CONCRETE
- 7" THICK CONCRETE
- 5" THICK CONCRETE
- 4" THICK CONCRETE
- PROJECT LIMITS AND SILT FENCE
- 20.60 EXISTING ELEVATIONS
- 20.60 B.O.C. FINISHED ELEVATIONS

GENERAL SITE INFORMATION:

PROJECT SITE RUNOFF WILL ENTER WATERWAYS ON THE SOUTHWEST CORNER ANDNORTHWESTCORNER OF THE PROPERTY.

THE PROJECT JOB SITE HAS AN APPROXIMATE AREA OF ±13.25 ACRES THAT HAS THE POSSIBILITY OF BEING DISTURBED DURING CONSTRUCTION.

GENERAL PROJECT NOTES:

WHERE PHYSICAL JOB SITE MEASUREMENTS ARE REQUIRED BEFORE FABRICATION, IT IS THE SOLE DUTY OF THE CONTRACTOR TO DETERMINE ACTUAL CONSTRUCTION DETAILS PRIOR TO FABRICATION.

ANY DISCREPANCIES OR CONFLICTS IN THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION BEGINS.

ANY MODIFICATIONS MADE IN THE CONSTRUCTION DOCUMENTS TO ACCOMPLISH THE REQUIRED WORK SHALL BE REPORTED TO THE ARCHITECT BEFORE WORK IS DONE.

CONTRACTOR IS RESPONSIBLE FOR NOTIFYING LA AUTHORITIES TO IDENTIFY ALL UTILITIES PRIOR TO BEGINNING ANY WORK AT THE SITE. (LA ONE CALL 811)

THE CONTRACTOR SHALL EMPLOY A LA. LICENSE SURVEYOR TO PROVIDE THE CONSTRUCTION LAYOUT BOUNDARIES AND/OR BASE LINES. SURVEYOR TO SET PROJECT T.B.M. FOR USE DURING CONSTRUCTION. T.B.M. SHALL BE SET TO M.S.L., AND THE EQUATION TO CONVERT TO NGVD 29 SHALL BE SUPPLIED TO THE ARCHITECT.

CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT DRAWINGS OF THE SITE AND UTILITIES INSTALLED AND UNCOVERED AT THE END OF THE PROJECT.

CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, EQUIPMENT, UTILITIES, PAVING, ETC. FROM DAMAGE DURING CONSTRUCTION OPERATIONS THAT ARE TO REMAIN. REPLACE DAMAGED ITEMS WITH NEW TO MATCH EXISTING AT NO ADDITIONAL COST TO OWNER.

CONTRACTOR SHALL DISPOSE OF ALL EXCESS CONSTRUCTION MATERIALS, DEBRIS, TREES, STUMPS, AND/OR SOIL FROM JOB SITE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

GENERAL CONSTRUCTION NOTES:

TYPICAL CONSTRUCTION ACTIVITY INCLUDES BUT IS NOT LIMITED TO SITE CLEARING, EXCAVATION, STOCKPILING, ROUGH GRADING, FINISH GRADING, TRENCHING, PIPE LAYING, PAVING, AND GRASS SEEDING.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH EPA STORMWATER RUNOFF RULES USING "BEST MANAGEMENT PRACTICES" AND/OR TEMPORARY EROSION CONTROL MEASURES DURING CONSTRUCTION.

TYPICAL EROSION CONTROLS CAN BE, BUT ARE NOT LIMITED TO, MULCHING, GRASS, STOCKPILE COVERS, ETC. TYPICAL SEDIMENT CONTROLS (SEE DETAIL 5, 7, & 8/C4.1) CAN BE, BUT ARE NOT LIMITED TO, SILT FENCING, INLET PROTECTION, SEDIMENT TRAPS, ETC.

CONTRACTOR SHALL INSPECT AND REPAIR EROSION AND SEDIMENT CONTROLS IMMEDIATELY AFTER MAJOR RAIN EVENTS.

AFTER INSTALLATION OF EACH NEW CATCH BASIN CONTRACTOR SHALL ADEQUATELY SUPPLY AND INSTALL HAY BALES AND/OR FILTER FABRIC OVER EACH DRAIN INLETS. CONTRACTOR SHALL REMOVE ALL HAY BALES, SILT FENCING, ETC.

CONTRACTOR SHALL MAINTAIN SILT FENCING SURROUNDING STOCK PILES THROUGHOUT DURATION OF WORK.

CONTRACTOR SHALL SEED OR HYDROSEED GRASS AREAS IMMEDIATELY AFTER FINISH GRADING WORK.

CAP OFF AND SEAL DISCONTINUED UTILITY SERVICES AND REMOVE PORTIONS OF LINES WITHIN EXCAVATED AREAS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL FITTINGS REQUIRED FOR PIPING, INLETS, ETC. TO COMPLETE PIPING SYSTEM.

CONTRACTOR MUST PATCH EXISTING CATCH BASINS WHERE EXISTING DRAINAGE LINES HAVE BEEN ABANDONED OR DEMOED AS PER CITY OF LAKE CHARLES STANDARDS.

MATERIAL SPECIFICATIONS:

CRUSHED STONE AGGREGATE:

CRUSHED LIMESTONE SHALL MEET THE LADOTD SPECIFICATION FOR 610 ROAD BASE MATERIAL. INSTALL CRUSHED LIMESTONE OVER GEOTEXTILE MATERIAL. LIMESTONE AGGREGATE SHALL BE ROLLED SMOOTH TO FORM A TIGHT SURFACE WITH A LOADED DRUM ROLLER. CONTRACTOR SHALL USE A VIBRATORY PLATE WHEN LOCATION RESTRICTS THE USE OF THE DRUM ROLLER.

STORM DRAINAGE PIPE:

UNDERGROUND STORM DRAINAGE PIPES ARE SHOWN ON PLAN WITH THE LENGTHS OF PIPE MEASURED TO THE CENTER OF THE CATCH BASINS PLUS OR MINUS ONE FOOT. THE CONTRACTOR SHALL DO A PIPING LAYOUT TO VERIFY LOCATIONS OF CATCH BASINS AND LENGTHS OF PIPE.

UNDERGROUND STORM DRAINAGE PIPES SHALL BE SDR OR SCHEDULE 40 PVC PIPE AS INDICATED ON DRAWINGS. PIPES SHALL BE LAYED ON A MINIMUM 3 INCH SAND BED AND BACKFILL WITH CRUSHED LIMESTONE TO AN ELEVATION LEVEL WITH THE TOP OF PIPE AND THEN BACKFILLED WITH STRUCTURAL FILL TO AN ELEVATION TO MATCH ADJACENT GRADE. CONTRACTOR SHALL ADEQUATELY ANCHOR PIPE AS RECOMMENDED BY PIPE MANUFACTURER TO PREVENT PIPE FLOATATION.

GEOTEXTILE MATERIAL:

GEOTEXTILE MATERIAL SHALL BE MIRAFI 600X OR ITS EQUIVALENT. ALL EQUIVALENT MATERIALS ARE TO BE SUBMITTED PRIOR TO BIDDING "FOR APPROVAL". GEOTEXTILE SHALL BE PINNED TO SUBGRADE AS INSTRUCTED BY MATERIAL MANUFACTURER. MATERIAL SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES AT JOINTS. ALL NON OVERLAPPING JOINTS SHALL BE BURIED A MINIMUM OF 8 INCHES BELOW THE SUBGRADE SURFACE.

SUBGRADE PREPARATION AND STRUCTURAL FILL WORK:

CONTRACTOR SHALL REMOVE ALL MATERIALS A MINIMUM OF 24 INCHES BELOW THE EXISTING GRADE UNDER ALL NEW PAVING SHOWN ON PLAN.

AFTER ALL MATERIALS HAVE BEEN REMOVED TO THE PROPER SUBGRADE ELEVATION, THE CONTRACTOR SHALL PROOF ROLL THE SUBGRADE WITH A LOADED DUMP TRUCK. ANY SUBGRADE FAILURES, "SOFT SPOTS", SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL.

REMOVE MATERIALS AS NEEDED & INSTALL STRUCTURAL FILL TO ELEVATIONS REQUIRED BELOW THE FINISH GRADE CONTOURS IN THE AREA OUTSIDE THE BUILDING PERIMETER AS SHOWN ON PLAN.

ALL STRUCTURAL FILL MATERIAL SHALL BE INSTALLED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. STRUCTURAL FILL SOIL SHALL BE A SANDY OR LOW PLASTICITY CLAY WITH A LIQUID LIMIT LESS THAN 40% AND A PLASTICITY INDEX (P.I.) BETWEEN 5 AND 20. PROPERTIES OF FILL MATERIAL ARE TO BE VERIFIED BY A TESTING LAB PRIOR TO INSTALLATION. FILL SHALL NOT BE PLACED IN LARGER THAN 8" LOOSE LIFTS AND THEN COMPACTED TO 95% STD. PROCTOR.

CONTRACTOR IS TO MAINTAIN DRAINAGE PATHS TO SHED RUNOFF AWAY FROM ALL STRUCTURAL FILL AREAS UNTIL THEY ARE COMPLETED.

CHAMPEAUX
EVANS
HOTARD
ARCHITECTS
A.P.A.C
www.champeaux.biz
ph: 337.439.8871
fax: 337.439.8872
email:
bridget@champeaux.biz
steve@champeaux.biz
brad@champeaux.biz
702 Dr. Michael DeBakey Drive
Lake Charles, LA 70601

GENERAL CONTRACTOR
Alfred Palma L.L.C.
422 7th. Street
Lake Charles, Louisiana 70601
ph: 337-436-0830
fax: 337-435-2530

CONSULTANTS
CHARLES LADNER & ASSOCIATES
5393 Big Lake Road
Lake Charles, LA 70605
ph: 337-478-2222

ASSOCIATED DESIGN GROUP
3909 W. Congress St.
Suite 201
Lafayette, LA 70506
ph: 337-234-5710

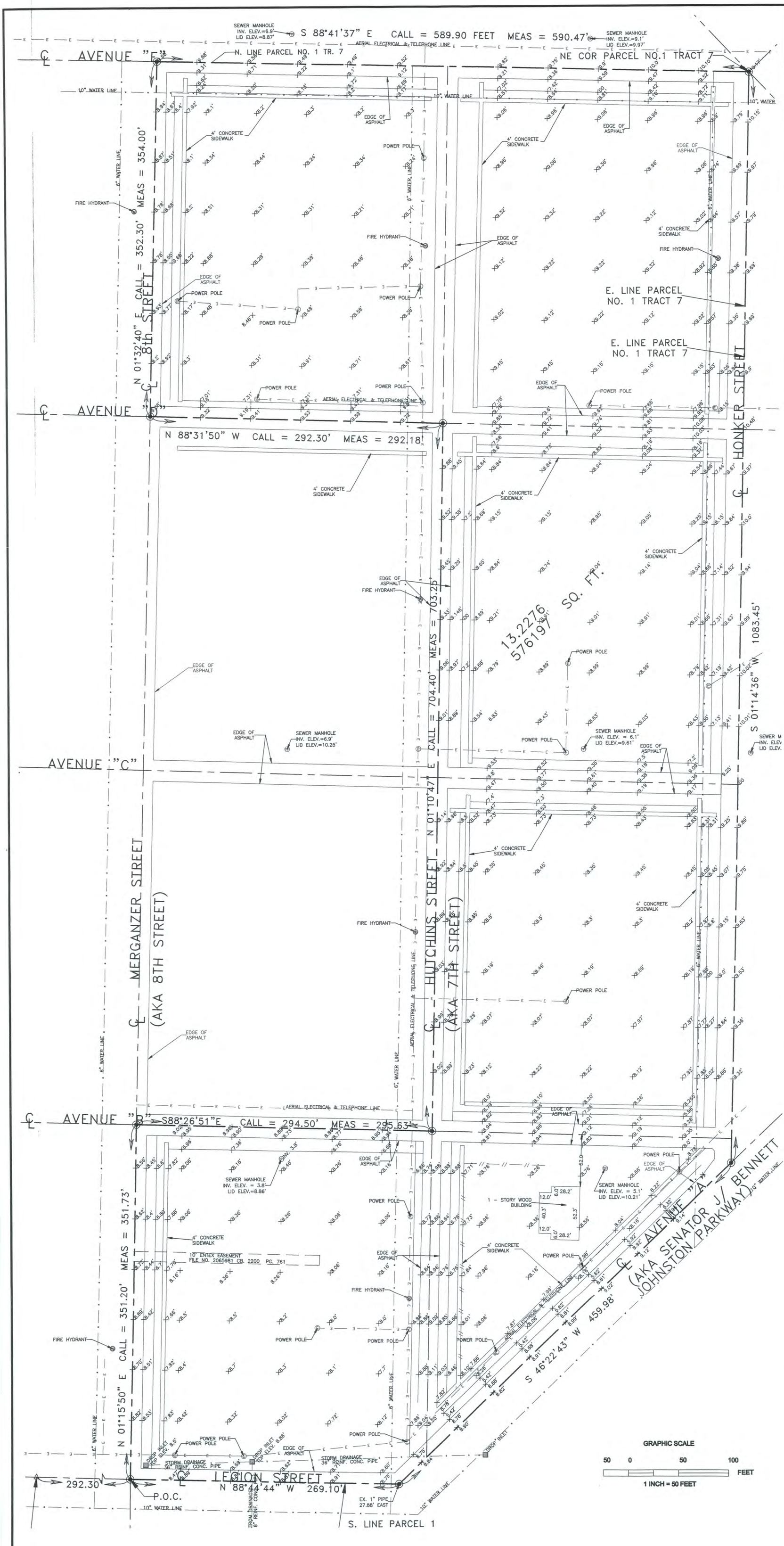
Sowela Technical Community College Regional Training Facility

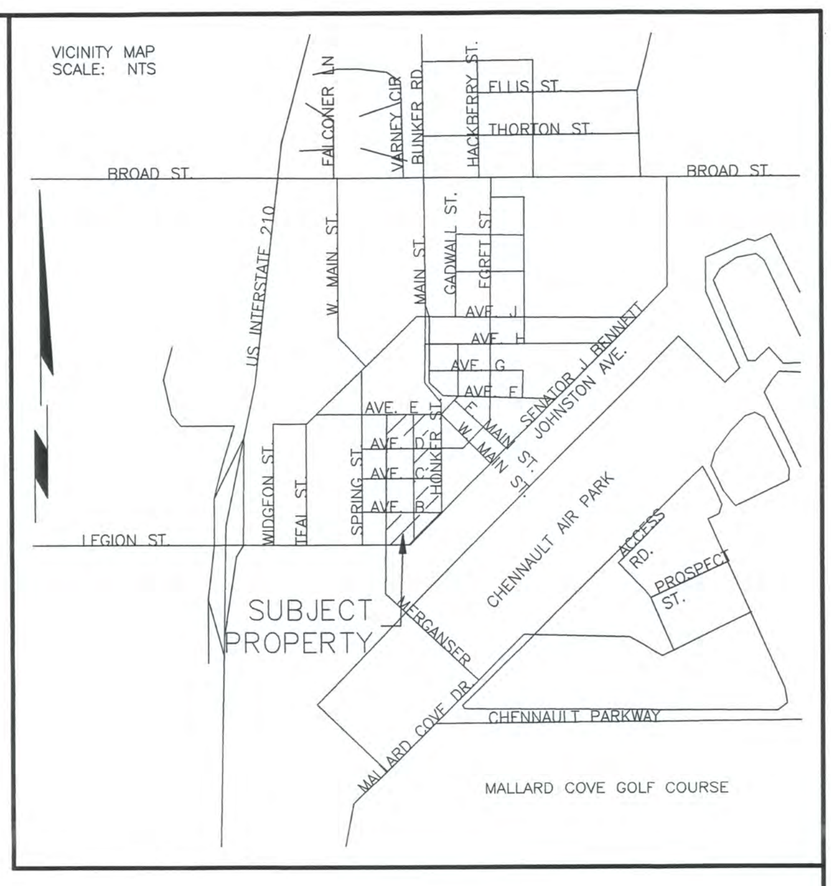
3749 Senator J. Bennett Johnston Ave.
Lake Charles, Louisiana

PROJECT NUMBER
1410

C1.1

PRINT DATE
5/29/15





GENERAL NOTES:

I CERTIFY THAT THIS SURVEY WAS SUPERVISED BY ME PER LAC TITLE 46:LXI, CHAPTER 25 PER CLASS A MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS.

I CERTIFY THAT THIS REPRESENTS AN ACTUAL GROUND SURVEY AND THAT NO VISIBLE ENCROACHMENTS EXIST EITHER WAY ACROSS ANY PROPERTY LINES EXCEPT AS SHOWN ABOVE AND NO ENVIRONMENTAL ISSUES OR SERVITUDES WERE ADDRESSED OTHER THAN THOSE SPECIFICALLY REQUESTED AND PROVIDED FOR REVIEW.

NORTH ORIENTATION IS PER MAGNETIC UNLESS OTHERWISE NOTED.

I CERTIFY THAT THE ABOVE PROPERTY IS LOCATED IN ZONE X (UNSHADED) OF THE H. U. D. (F. I. A.) FLOOD HAZARD BOUNDARY MAP

BASE FLOOD: 22019C 0485 F DATED FEBRUARY 18, 2011

THE BASE FLOOD ELEVATION IS SUBJECT TO CHANGE AND THE CURRENT BASE FLOOD ELEVATION SHOULD BE VERIFIED WITH THE PLANNING AND ZONING DEPARTMENT OF THE CITY OF WESTLAKE, LOUISIANA.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, AND SIZE OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND SHALL BE LIABLE FOR ANY DAMAGE CAUSED BY FAILURE TO DO SO.

NO ATTEMPT HAS BEEN MADE BY E. LEO REDDOCH, P.L.S. TO VERIFY THE CURRENT ENVIRONMENTAL CONDITIONS, PROPERTY TITLE, ACTUAL LEGAL OWNERSHIP, SERVITUDES, EASEMENTS, RIGHT-OF-WAYS, JURISDICTIONAL WETLANDS OR OTHER BURDENS ON THE PROPERTY OTHER THAN THAT FURNISHED BY THE CLIENT AND/ OR HIS REPRESENTATIVE.

THE FENCES SHOWN HEREON REPRESENT GENERAL LOCATIONS. THIS SURVEY DOES NOT WARRANT THE FENCES AS TITLE AND LEGAL BOUNDARIES BETWEEN CONTIGUOUS PARCELS OF LAND. REFER TO THE PROPERTY LINE METES AND BOUNDS DESCRIPTIONS FOR THE TRUE BOUNDARIES.

NOTE: ALL CENTERLINE POINTS MARKED BY CONCRETE NAILS.

ALL IMPROVEMENTS IN INDIVIDUAL BLOCKS ARE UNDER DEMOLITION

NOTES CORRESPONDING TO SCHEDULE B SECTION II ITEMS

4. SERVITUDE AGREEMENT IN FAVOR OF GULF STATES UTILITIES AT COB 2018, PAGE 285 RECORDS OF CALCASIEU PARISH, LOUISIANA.

5. RIGHT OF WAY AND EASEMENT IN FAVOR OF ENTEX AT COB 2200 PAGE 763, RECORDS OF CALCASIEU PARISH, LOUSIIANA.

PROPERTY DESCRIPTION:

A CERTAIN PIECE OF PORTION OF GROUND, TOGETHER WITH ALL THE BUILDINGS AND IMPROVEMENTS THEREON, AND ALL RIGHTS, WAYS, PRIVILEGES, SERVITUDES, ADVANTAGES, AND APPURTENANCES THEREUNTO BELONGING OR IN ANYWISE APPERTAINING, SITUATED IN SECTIONS 21 AND 31, TOWNSHIP 10 SOUTH, RANGE 8 WEST, CALCASIEU PARISH, LOUISIANA, CONSISTING OF 13.2276 ACRES FRONTING SENATOR J. BENNETT JOHNSON AVENUE, HONKER STREET AND AVENUE E, IN LAKE CHARLES, LOUISIANA, KNOWN AS "CHENNAULT MOBILE VILLAGE", AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF PARCEL NO. 1, OF TRACT NO. 7 OF THE FORMER CHENNAULT AIR FORCE BASE, THENCE EAST 292.30 FEET ALONG THE SOUTH LINEOF SAID PARCEL NO. 1 OF TRACT NO. 7 TO THE CENTERLINE OF 8TH STREET AND POINT OF COMMENCEMENT; THENCE NORTH 351.20 FEET ALONG THE CENTER LINE OF 8TH STREET; THENCE EAST 294.50 FEET PARALLEL TO AND 30 FEET NORTH OF THE SOUTH LINE OF AVENUE "B" TO THE CENTERLINE OF 7TH STREET; THENCE NORTH 704.40 FEET ALONG THE CENTERLINE OF 7TH STREET TO THE CENTERLINE OF AVENUE "D"; THENCE WEST 292.30 FEET ALONG THE CENTERLINE OF AVENUE "D" TO THE CENTERLINE OF 8TH STREET; THENCE NORTH 352.30 FEET ALONG THE CENTERLINE OF 8TH STRET TO THE NORTH LINE OF SAID PARCEL NO. 1 OF TRACT NO. 7; THENCE EAST 589.9 FEET ALONG THE NORTH LINE OF SAID PARCEL NO. 1 OF TRACT NO. 7 OF THE NORTHEAST CORNER OF SAID PARCEL NO. 1 OF TRACT NO. 7; THENCE SOUTH 1083.45 FEET ALONG THE EAST LINEOF SAID PARCEL NO. 1 TRACT NO. 7 TO THE CENTERLINE OF AVENUE "A"; THENCE SOUTHWESTERLY 459.98 FEET ALONG THE CENTERLINE OF AVENUE "A"; THENCE WEST 269.10 FEET ALONG THE SOUTH LINE OF SAID PARCEL NO. 1 OF TRACT NO. 7 TO THE POINT OF COMMENCEMENT; TOGETHER WITH ALL IMPROVEMENTS THEREON SITUATED.
BEING THE SAME PROPERTY CONVEYED BY ACT DATED APRIL 11, 1986, AND RECORDED ON APRIL 14, 1986, AT COB 1939, PAGE 480, INSTRUMENT No. 1890421, IN THE OFFICIAL RECORDS OF CALCASIEU PARISH, LOUISIANA.

THE UNDERSIGNED, BEING A REGISTERED LAND SURVEYOR OF THE STATE OF LOUISIANA CERTIFIES TO:
THE STATE OF LOUISIANA FOR THE USE AND BENEFIT OF THE LOUISIANA COMMUNITY AND TECHNICAL COLLEGE SYSTEM, SOWELA TECHNICAL COMMUNITY COLLEGE and OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

AS FOLLOWS:

THIS IS TO CERTIFY THAT THIS MAP AND PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1-6(B), 7(a) 7(b) (FOR COMPLETED STRUCTURES), 8, 9, 10(a), 11(b), 13, 15, 16-19, 20(a) and 21 OF TABLE A THEREOF THE FIELD WORK WAS COMPLETED ON APRIL 24, 2014

DATE OF PLAT OR MAP APRIL 24, 2014

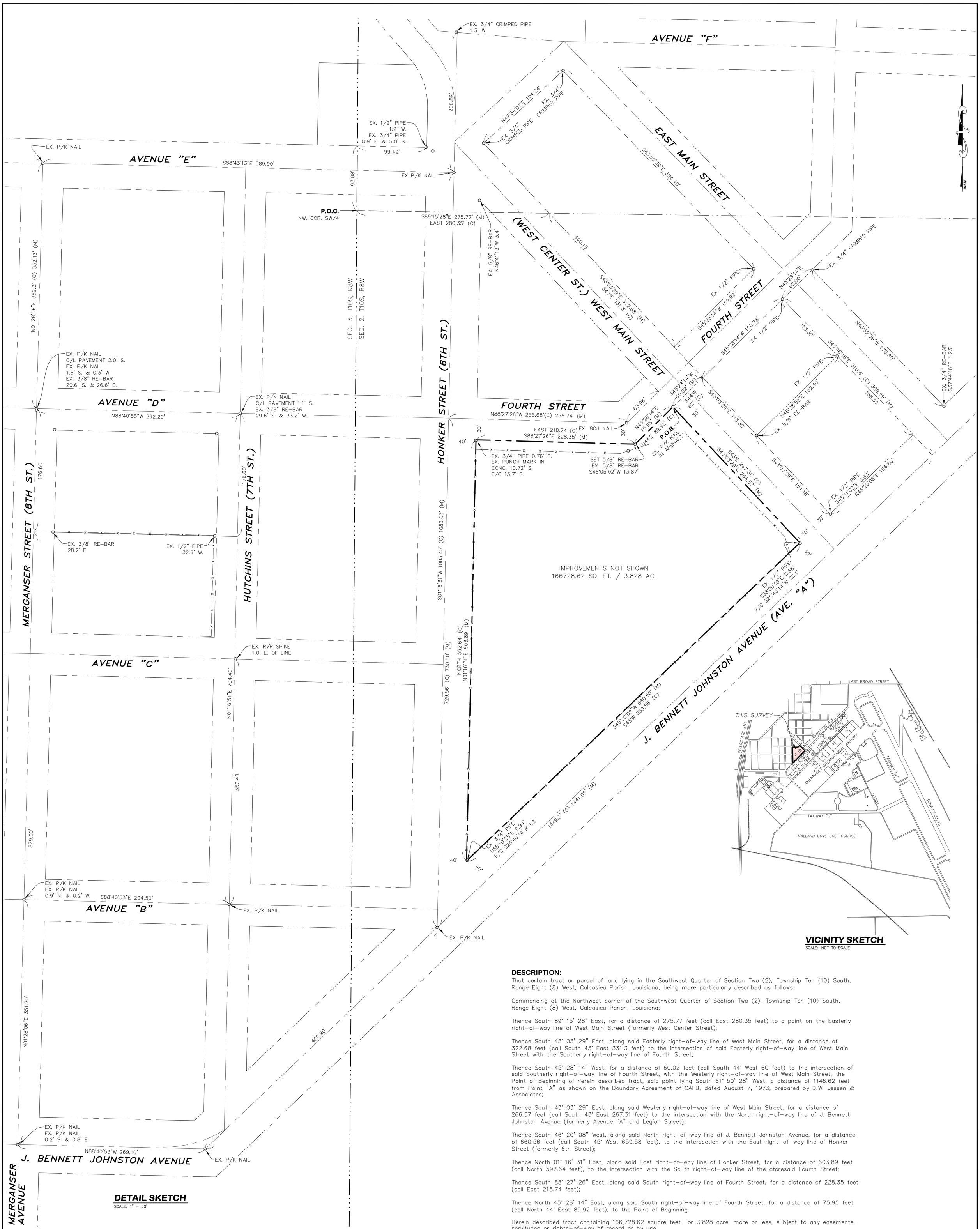
E. LEO REDDOCH, P.L.S.
LOUISIANA STATE REGISTRATION NO. 4446
REGISTERED LAND SURVEYOR
REDDOCH LAND SURVEYING
528 PUJO STREET
LAKE CHARLES, LA 70601
(337) 491-9520 FAX (337) 439-6859

E. LEO REDDOCH REG. NO. 4446 REGISTERED LAND SURVEYOR

ALTA/ACSM LAND TITLE SURVEY
OF
THE STATE OF LOUISIANA FOR THE USE AND BENEFIT OF THE LOUISIANA COMMUNITY AND TECHNICAL COLLEGE SYSTEM, SOWELA TECHNICAL COMMUNITY COLLEGE and OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY

LOCATED IN SECTION 21 AND 31, TOWNSHIP 10 SOUTH, RANGE 8 WEST, CALCASIEU PARISH, LOUISIANA.

LOCATION:		
DATE: JUNE 24, 2013	TOTAL AREA: 12.003 AC. 522839 SQ. FT.	
SCALE: 1" = 50'	DRAWN BY: JNR	CHECKED BY: ELR



DETAIL SKETCH

SCALE: 1" = 60'

VICINITY SKETCH

SCALE: NOT TO SCALE

DESCRIPTION:

That certain tract or parcel of land lying in the Southwest Quarter of Section Two (2), Township Ten (10) South, Range Eight (8) West, Calcasieu Parish, Louisiana, being more particularly described as follows:

Commencing at the Northwest corner of the Southwest Quarter of Section Two (2), Township Ten (10) South, Range Eight (8) West, Calcasieu Parish, Louisiana;

Thence South 89° 15' 28" East, for a distance of 275.77 feet (call East 280.35 feet) to a point on the Easterly right-of-way line of West Main Street (formerly West Center Street);

Thence South 43° 03' 29" East, along said Easterly right-of-way line of West Main Street, for a distance of 322.68 feet (call South 43° East 331.3 feet) to the intersection of said Easterly right-of-way line of West Main Street with the Southerly right-of-way line of Fourth Street;

Thence South 45° 28' 14" West, for a distance of 60.02 feet (call South 44° West 60 feet) to the intersection of said Southerly right-of-way line of Fourth Street, with the Westerly right-of-way line of West Main Street, the Point of Beginning of herein described tract, said point lying South 61° 50' 28" West, a distance of 1146.62 feet from Point "A" as shown on the Boundary Agreement of CAFB, dated August 7, 1973, prepared by D.W. Jessen & Associates;

Thence South 43° 03' 29" East, along said Westerly right-of-way line of West Main Street, for a distance of 266.57 feet (call South 43° East 267.31 feet) to the intersection with the North right-of-way line of J. Bennett Johnston Avenue (formerly Avenue "A" and Legion Street);

Thence South 46° 20' 08" West, along said North right-of-way line of J. Bennett Johnston Avenue, for a distance of 660.56 feet (call South 45° West 659.58 feet), to the intersection with the East right-of-way line of Honker Street (formerly 6th Street);

Thence North 01° 16' 31" East, along said East right-of-way line of Honker Street, for a distance of 603.89 feet (call North 592.64 feet), to the intersection with the South right-of-way line of the aforesaid Fourth Street;

Thence South 88° 27' 26" East, along said South right-of-way line of Fourth Street, for a distance of 228.35 feet (call East 218.74 feet);

Thence North 45° 28' 14" East, along said South right-of-way line of Fourth Street, for a distance of 75.95 feet (call North 44° East 89.92 feet), to the Point of Beginning.

Herein described tract containing 166,728.62 square feet or 3.828 acre, more or less, subject to any easements, servitudes or rights-of-way of record or by use.

NOTE:

1) *BEARINGS SHOWN HEREON ARE GRID BEARINGS ON THE LOUISIANA STATE PLANE COORDINATE SYSTEM AND ARE REFERENCED TO N.G.S. MONUMENT DESIGNATED "R 210", NAD83-2011*
2) *TITLE RESEARCH INFORMATION WAS NOT FURNISHED TO OR CONDUCTED BY THE SURVEYOR DURING THE PERFORMANCE OF THE SURVEY OR FOR PREPARATION OF THIS PLAT.*
3) *THE IMPROVEMENTS EXISTING ON THE SURVEYED PROPERTY WERE NOT SHOWN HEREON AT THE OWNERS REQUEST.*
4) *THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE "X" (OTHER AREAS), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN, AS PER FLOOD INSURANCE RATE MAP, COMMUNITY PANEL No. 22019C0485F, DATED FEBRUARY 18, 2011.*

STATE OF LOUISIANA
DARREN B. SARGENT
License No. 4936
PROFESSIONAL
LAND SURVEYOR

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAT REPRESENTS AN ACTUAL FIELD SURVEY PERFORMED UNDER MY SUPERVISION AND IS IN COMPLIANCE WITH THE APPLICABLE STANDARDS OF PRACTICE FOR A CLASS "C" SURVEY AS STIPULATED IN "THE MINIMUM STANDARDS FOR PROPERTY BOUNDARY SURVEYS", PUBLISHED BY THE LOUISIANA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

DARREN B. SARGENT
LA. REG. NO. 4936

DESIGNED:	
DRAWN:	EWW
CHECKED:	DWS
APPROVED:	DBS
F.B. No.:	

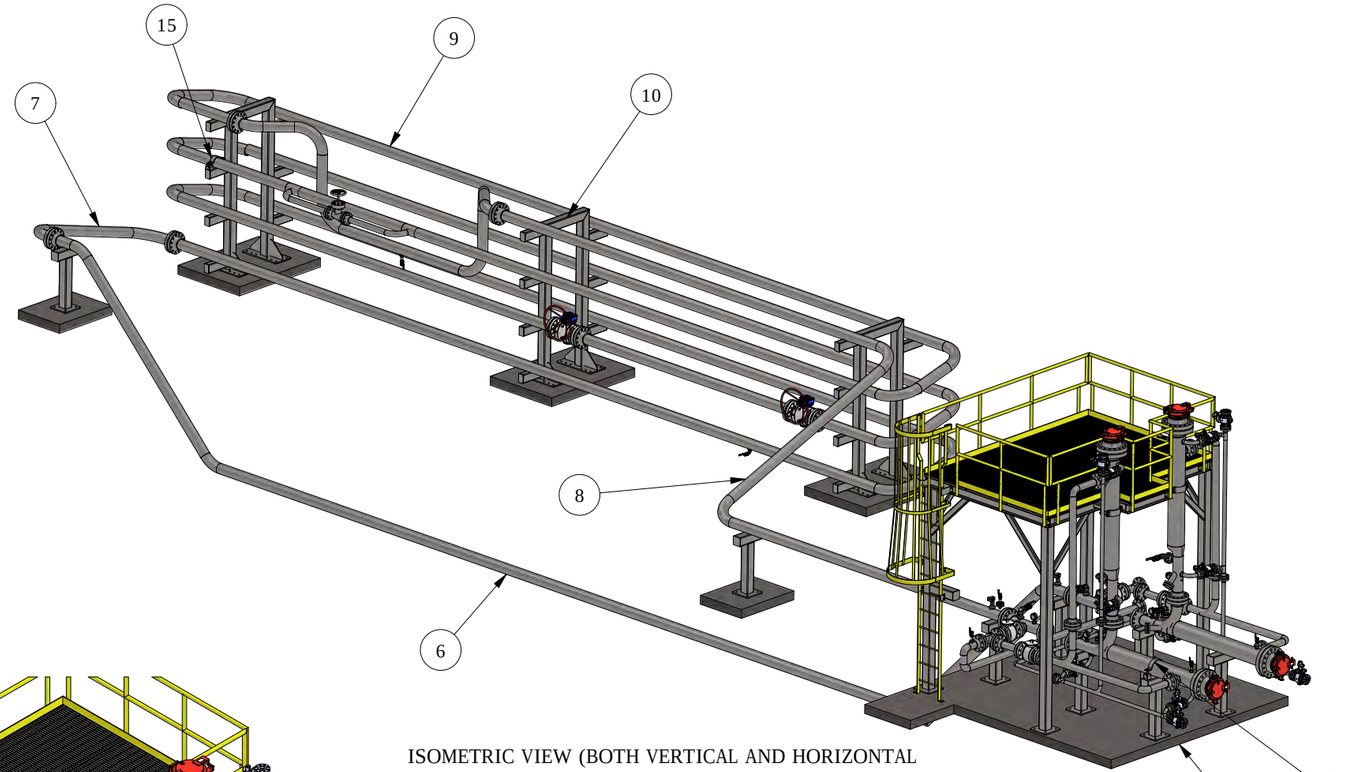
Pelican Land Surveying, L.L.C.
A Professional Land Surveying Firm
PO Box 1747
Sulphur, LA 70664-1747
Phone/Fax 337-533-8116

BOUNDARY SURVEY OF
A 3.828 ACRE TRACT FOR SOWELA TECHNICAL COMMUNITY COLLEGE AT THE FORMER CHENNAULT AIRFORCE BASE LAKE CHARLES, LOUISIANA

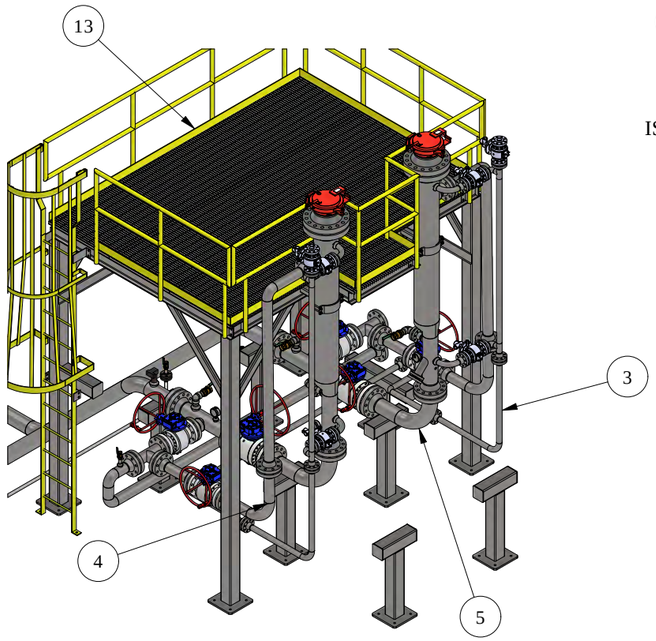
BY	REVISIONS	DATE

PROJECT NO.: 150402	DATE: APRIL 24, 2015
SCALE: 1" = 60'	SHEET: 1 OF 1

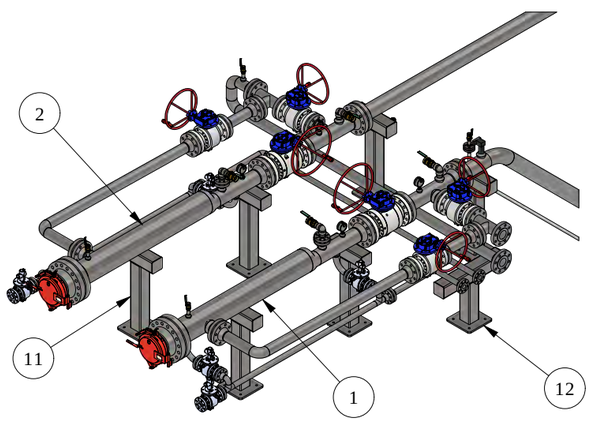
C:\Projects\150402 - SOWELA BOUNDARY SURVEY\dwg\150402 - SOWELA BOUNDARY SURVEY.dwg Jun 17, 2015 - 12:01pm



ISOMETRIC VIEW (BOTH VERTICAL AND HORIZONTAL SHOWN FOR ILLUSTRATION PURPOSES)



DETAIL VIEW (VERTICAL LAUNCHER/RECEIVER POSITION)



DETAIL VIEW (HORIZONTAL LAUNCHER/RECEIVER POSITION)

BILL OF MATERIALS			
ITEM	QTY	DESCRIPTION	SHEET DETAIL
1	1	LAUNCHER ASSEMBLY	SEE SHEET 3
2	1	RECEIVER ASSEMBLY	SEE SHEET 5
3	2	2" VERTICAL ELBOW SPOOL ASSEMBLY	SEE SHEET 7
4	2	4" VERTICAL ELBOW SPOOL ASSEMBLY	SEE SHEET 7
5	2	6" VERTICAL ELBOW SPOOL ASSEMBLY	SEE SHEET 7
6	1	LAUNCHER UNDERGROUND PIPE SPOOL	SEE SHEET 8
7	1	LAUNCHER CONNECTING SPOOL	SEE SHEET 9
8	1	RECEIVER CONNECTING SPOOL	SEE SHEET 9
9	1	PIPE LOOP ASSEMBLY	SEE SHEET 10
10	3	PIPE LOOP SUPPORT	SEE SHEET 12
11	8	PIPE SUPPORT	SEE SHEET 13
12	1	PIPE SUPPORT SHORT	SEE SHEET 13
13	1	TOWER ASSEMBLY (OPTIONAL)	SEE SHEET 14
14	1	FOUNDATION	SEE DWG STCC-01-B
15	27	6" PIPE CLAMP ASSEMBLY	SEE SHEET 25
16	2	10" PIPE CLAMP ASSEMBLY	SEE SHEET 26

NOTE: THE TOWER ASSEMBLY (ITEM 13) AND VERTICAL LAUNCHER/RECEIVER SHALL BE BID SEPARATELY AS AN OPTION

DATE	REV	DESCRIPTION	BY
6/17/2022	0	RELEASE FOR BID	HB
7/20/2022	1	ISSUE FOR CONSTRUCTION	HB
9/19/2022	2	CORRECTED IMAGE OVERLAPPING ON SHEET 14	HB
3/28/2023	3	ADDED FINISH ELEVATION NOTE	HB
8/29/2024	4	SHORTENED FLOW LOOP	HB

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP FABRICATION DRAWINGS

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	SHEET 1 OF 26

GENERAL NOTES:

1. ALL PIPING IS DESIGNED PER ASME B31.3-2016.
2. ALL STRUCTURAL STEEL IS DESIGNED PER AISC STEEL CONSTRUCTION MANUAL
3. ALL WELDING AND PIPE CONSTRUCTION SHALL CONFORM TO AWS D1.1 WELDING SPECIFICATION AND SHALL BE FULL PENETRATION WELDS UNLESS NOTED OTHERWISE. SEE 'BRANCH CONNECTION WELDS' TABLE FOR MIN WELD LEG HEIGHTS OF BRANCH CONNECTIONS
4. ALL COATING SHALL CONFORM TO KEC PAINT SPECIFICATION LATEST EDITION
5. MAXIMUM ALLOWABLE WORKING PRESSURE = 1,126 PSI; TEST PRESSURE = 1,689 PSI
6. ALL CONCRETE FOUNDATION SURFACES ARE ASSUMED TO BE AT ELEVATION 0'-0". ALL SUPPORTING STRUCTURES AND PLATFORM WERE DESIGNED ACCORDINGLY
7. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HARD PIPING FROM PUMPING EQUIPMENT AND WATER TANK TO FLOW LOOP
8. ALL PIPE TO SUPPORT CONTACT SHALL USE DYNAGARD OR FRP WEAR PADS INSTALLED TO MANUFACTURER'S RECOMMENDATION. CONTRACTOR MAY USE COATED U-BOLT/I-ROD SYSTEM AS A REPLACEMENT TO THE WELD ON BRACKETS SHOWN IN FABRICATION DRAWINGS
9. ONLY ONE LAUNCHER AND RECEIVER SHALL BE USED FOR BOTH HORIZONTAL AND VERTICAL (OPTIONAL) POSITIONS
10. THE TOWER ASSEMBLY (ITEM 13) AND VERTICAL LAUNCHER/RECEIVER SHALL BE BID SEPARATELY AS AN OPTION

BRANCH CONNECTION WELDS	
CONNECTION SIZE	MIN WELD LEG HEIGHT
Ø6 x Ø1 WELDOLET	3/8"
Ø6 x Ø2 WELDOLET	1/2"
Ø6 x Ø4 WELDOLET	3/4"
Ø10 x Ø1 WELDOLET	3/8"
Ø10 x Ø2 WELDOLET	3/8"
Ø10 x Ø4 WELDOLET	5/8"
Ø6 x Ø2 LWN @ 45°	1/2"
Ø6 x Ø2 LATROLET @ 45°	1/4"

FOUNDATION NOTES:

1. ALL CONCRETE IS DESIGNED PER ACI 318-11
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI
3. ALL CONCRETE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 DEFORMED TYPE Fy = 60,000 PSI
4. UNLESS NOTED OTHERWISE, CONCRETE COVER OF REINFORCING BARS SHALL CONFORM TO MINIMUM REQUIREMENTS OF ACI 318-11
5. PROVIDE ¾ X 45 DEG CHAMFER ON ALL EXPOSED CORNERS
6. FOUNDATIONS HAVE BEEN DESIGNED TO REST ON COMPACTED SOIL PER GEOTECHNICAL REPORT WITH A MINIMUM ALLOWABLE NET VERTICAL BEARING CAPACITY OF 1,500 PSI. IF UNDERSIREABLE SOIL CONDITIONS ARE ENCOUNTERED, THE ENGINEERS WILL BE NOTIFIED.
7. SET FINISH ELEVATION TO 10' AND SLOPE TO DRAIN
8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC IF USED
9. INSTALLATION OF CONCRETE ANCHORS SHALL BE ONE OF THE FOLLOWING OPTIONS AND BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS:

   -DRILL AND EPOXY HILTI HIT-HY 200 V3 + HAS-V-36 (ASTM F1554 GRADE 36) Ø¾" x 8" OR EQUIVALENT

   -CAST IN PLACE HEX HEAD ASTM F 1554 GRADE 36 Ø¾" OR EQUIVALENT

ANCHOR BOLT SCHEDULE		
LOCATION	ANCHOR DIA	MIN EMB DEPTH
PIPE SUPPORT	3/4"	6"
BASE PLATE OVER FOOTING	3/4"	6"
BASE PLATE OVER 6" SLAB	3/4"	3"

EQUIPMENT NOTES:

1. ELECTRIC WATER PUMP: 200 PSI, 700 GPM, TEFC 150 HP MOTOR, 460 VOLT, 3 PHASE, 60 Hz (460/3/60)
2. 3,000 GAL WATER TANK
3. ELECTRIC AIR PUMP W/ DRYER: MIN 325 CFM, TEFC 100 HP MOTOR, 460 VOLT, 3 PHASE, 60 Hz, (460/3/60) W/ MIN 50 GAL AIR TANK

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

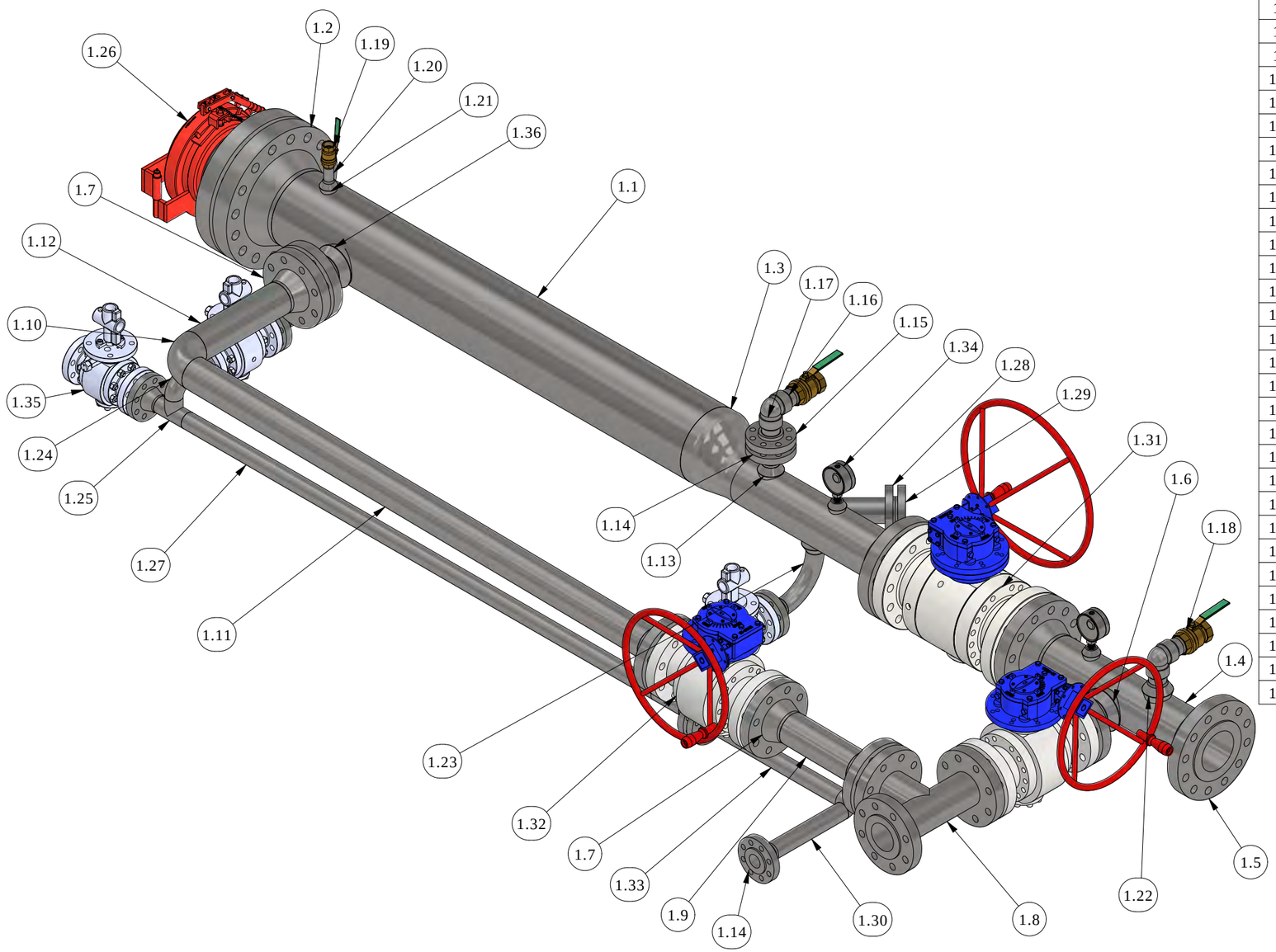
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

PIPELINE TRAINING FLOW LOOP CONSTRUCTION NOTES

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	SHEET 2 OF 26



ITEM 1: LAUNCHER (HORIZONTAL)

ITEM 1 BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
1.1	1	PIPE	Ø10 SCH 60 (74)	ASTM A106 GRADE B
1.2	2	WELD NECK FLANGE	Ø10 CL 600 RF	ASTM A105
1.3	1	ECCENTRIC REDUCER	Ø10 SCH 60 X Ø6 SCH 40	ASTM A234
1.4	2	PIPE	Ø6 SCH 40 (24)	API 5L X42
1.5	3	WELD NECK FLANGE	Ø6 CL 600 RF	ASTM A105
1.6	1	WELDOLET	Ø4 SCH 40 X Ø10	ASTM A105
1.7	6	WELD NECK FLANGE	Ø4 CL 600 RF	ASTM A105
1.8	1	FLANGED TEE	Ø4 CL 600 RF	ASTM A105
1.9	1	PIPE	Ø4 SCH 40 (12)	ASTM A106 GRADE B
1.10	1	ELBOW	Ø4 SCH 40 90 DEG SR	ASTM A106 GRADE B
1.11	1	PIPE	Ø4 SCH 40 (82-3/8)	ASTM A106 GRADE B
1.12	1	PIPE	Ø4 SCH 40 (15-5/16)	ASTM A106 GRADE B
1.13	3	WELDOLET	Ø2 SCH 40 X Ø6 - Ø3-1/2	ASTM A105
1.14	9	WELD NECK FLANGE	Ø2 CL 600 RF	ASTM A105
1.15	1	THREADED FLANGE	Ø2 CL 600 RF	ASTM A105
1.16	4	NIPPLE	Ø2 SCH 40 NPT (4)	ASTM A106 GRADE B
1.17	2	THREADED ELBOW	Ø2 CL 2000 90 DEG W/ NPT	ASTM A105
1.18	2	BALL VALVE	Ø2 CL 3000 NPT	BRASS
1.19	1	BALL VALVE	Ø1 CL 3000 NPT	BRASS
1.20	1	NIPPLE	Ø1 SCH 40 NPT (4)	ASTM A106 GRADE B
1.21	3	THREADOLET	Ø1 CL 3000 X Ø10 - Ø6	ASTM A105
1.22	1	THREADOLET	Ø2 CL 3000 X Ø6	ASTM A105
1.23	2	ELBOW	Ø2 SCH 40 90 DEG 3D	ASTM A106 GRADE B
1.24	3	ELBOW	Ø2 SCH 40 90 DEG SR	ASTM A106 GRADE B
1.25	2	TEE	Ø2 SCH 40	ASTM A105
1.26	1	CLOSURE	Ø10 CL 600 RF S-2000 RH (CCR-103)	STEEL
1.27	1	PIPE	Ø2 SCH 40 (85)	ASTM A106 GRADE B
1.28	1	LWN FLANGE	Ø2 CL 600 LWN RF	ASTM A105
1.29	1	BLIND FLANGE	Ø2 CL 600 RF	ASTM A105
1.30	1	PIPE	Ø2 SCH 40 (12-11/16)	ASTM A106 GRADE B
1.31	1	GEAR OPERATED BALL VALVE	Ø6 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
1.32	2	GEAR OPERATED BALL VALVE	Ø4 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
1.33	1	PIPE	Ø2 SCH 40 (22)	ASTM A106 GRADE B
1.34	2	GAUGE	2,000 PSI MIN	STEEL
1.35	3	LEVER OPERATED BALL VALVE	Ø2 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
1.36	1	WELDOLET	Ø4 SCH 40 X Ø10	ASTM A105

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

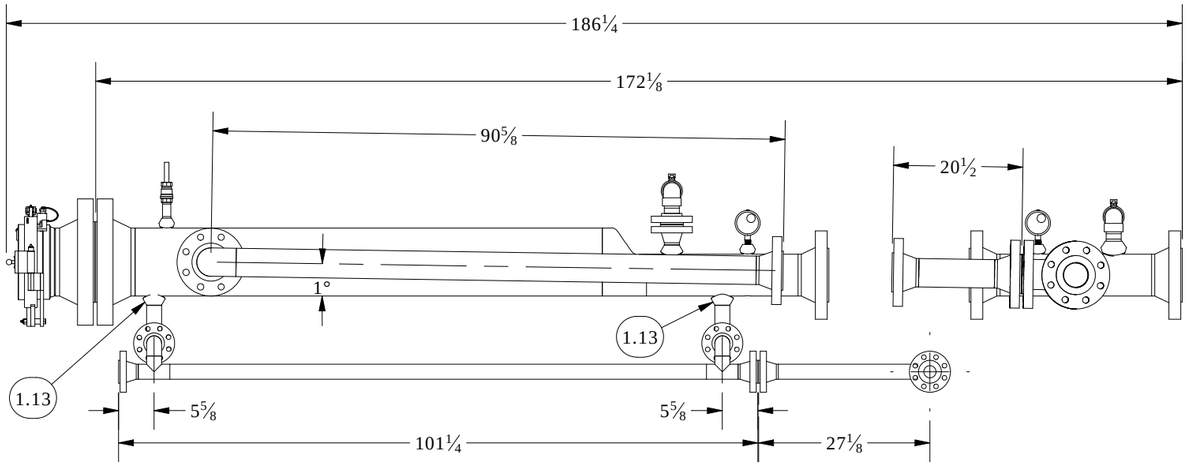
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

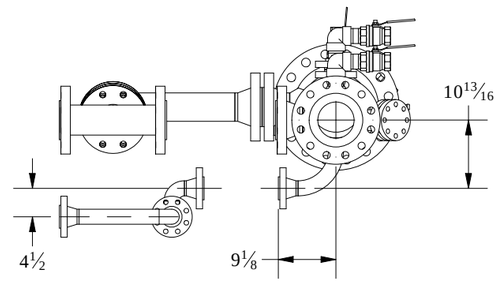
PIPELINE TRAINING FLOW LOOP
LAUNCHER ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	3 OF 26

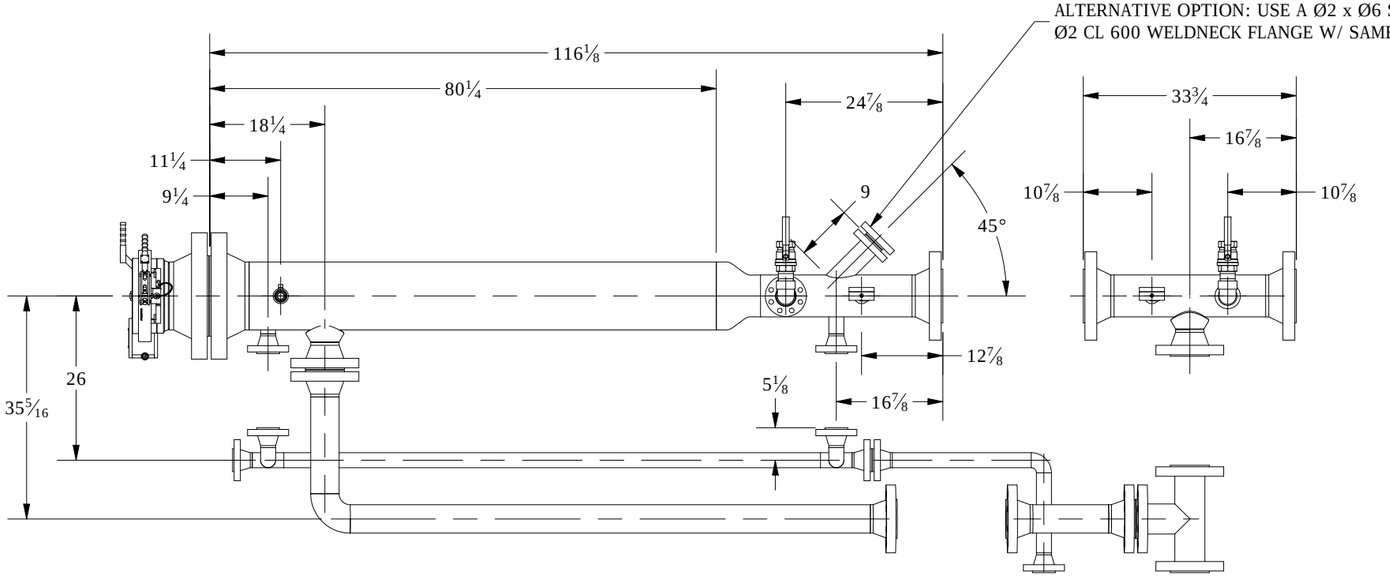


ITEM 1 FRONT VIEW (VALVES REMOVED)
SCALE 1/2" = 1'-0"



ITEM1 SIDE VIEW (VALVES REMOVED)
SCALE 1/2" = 1'-0"

ALTERNATIVE OPTION: USE A Ø2 x Ø6 SCH 40 REDUCING LATROLET, Ø2 SCH 40 PIPE, AND Ø2 CL 600 WELDNECK FLANGE W/ SAME OVERALL DIMENSIONS AS THE SHOWN LWN FLANGE



ITEM 1 TOP VIEW (VALVES REMOVED)
SCALE 1/2" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

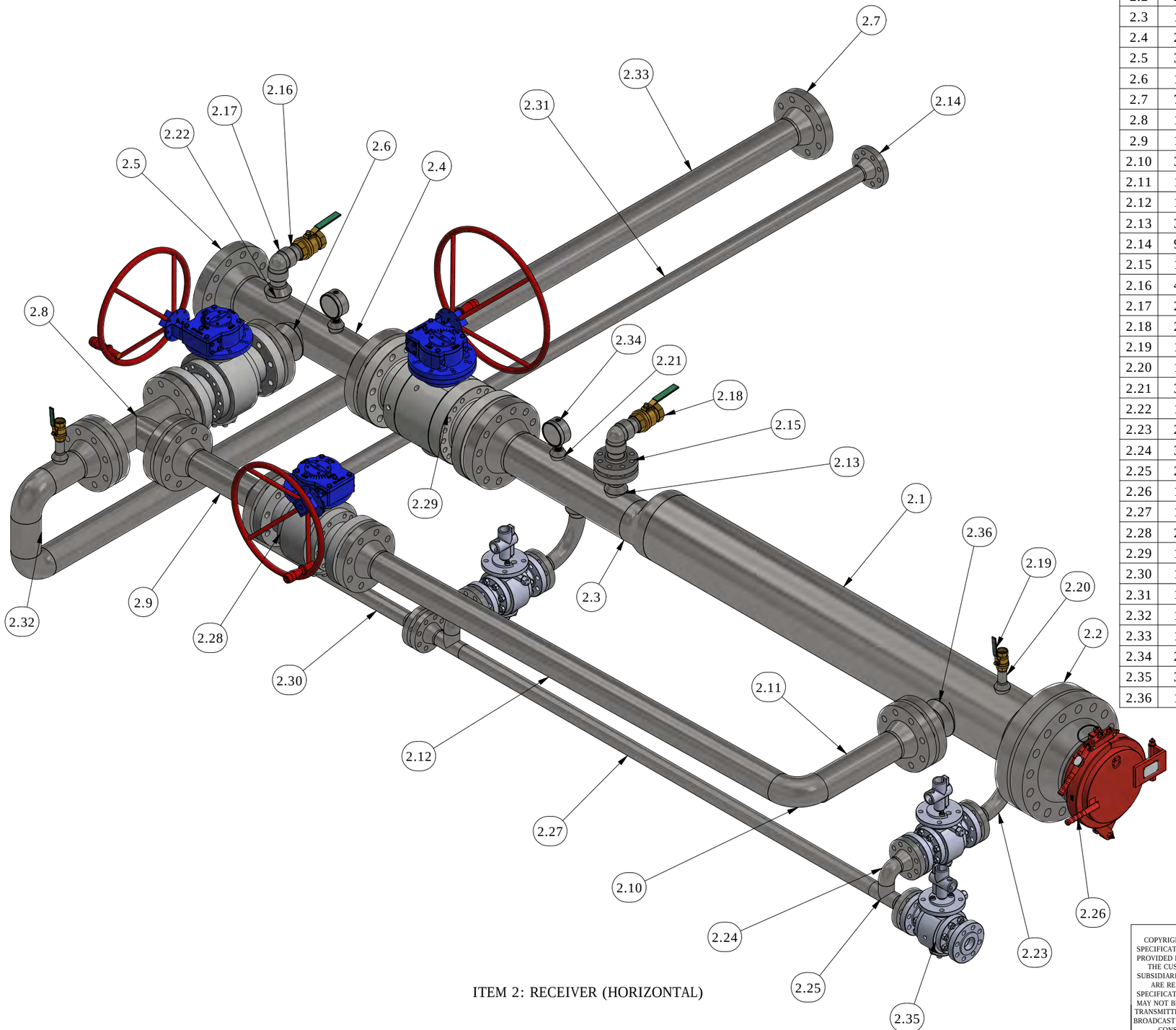
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP
LAUNCHER ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	SHEET 4 OF 26



ITEM 2: RECEIVER (HORIZONTAL)

ITEM 2 BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
2.1	1	PIPE	Ø10 SCH 60 (74)	ASTM A106 GRADE B
2.2	2	FLANGE	Ø10 CL 600 RF	ASTM A105
2.3	1	ECCENTRIC REDUCER	Ø10 SCH 60 X Ø6 SCH 40	ASTM A234
2.4	2	PIPE	Ø6 SCH 40 (24)	API 5L X42
2.5	3	WELD NECK FLANGE	Ø6 CL 600 RF	ASTM A105
2.6	1	WELDOLET	Ø4 SCH 40 X Ø6	ASTM A105
2.7	7	WELD NECK FLANGE	Ø4 CL 600 RF	ASTM A105
2.8	1	FLANGED TEE	Ø4 CL 600 RF	ASTM A105
2.9	1	PIPE	Ø4 SCH 40 (12)	ASTM A106 GRADE B
2.10	3	ELBOW	Ø4 SCH 40 90 DEG SR	ASTM A106 GRADE B
2.11	1	PIPE	Ø4 SCH 40 (15-5/16)	ASTM A106 GRADE B
2.12	1	PIPE	Ø4 SCH 40 (82-3/8)	ASTM A106 GRADE B
2.13	3	WELDOLET	Ø2 SCH 40 X Ø6 - Ø3-1/2	ASTM A105
2.14	9	WELD NECK FLANGE	Ø2 CL 600 RF	ASTM A105
2.15	1	THREADED FLANGE	Ø2 CL 600 RF	ASTM A105
2.16	4	NIPPLE	Ø2 SCH 40 NPT (4)	ASTM A106 GRADE B
2.17	2	THREADED ELBOW	Ø2 CL 2000 90 DEG W/ NPT	ASTM A105
2.18	2	BALL VALVE	Ø2 CL 3000 NPT	BRASS
2.19	1	BALL VALVE	Ø1 CL 3000 NPT	BRASS
2.20	1	NIPPLE	Ø1 SCH 40 NPT (4)	ASTM A106 GRADE B
2.21	3	THREADOLET	Ø1 CL 3000 X Ø10 - Ø6	ASTM A105
2.22	1	THREADOLET	Ø2 CL 3000 X Ø6	ASTM A105
2.23	2	ELBOW	Ø2 SCH 40 90 DEG 3D	ASTM A234
2.24	3	ELBOW	Ø2 SCH 40 90 DEG SR	ASTM A234
2.25	2	TEE	Ø2 SCH 40	ASTM A234
2.26	1	CLOSURE	Ø10 CL 600 RF S-2000 RH (CCR-103)	STEEL
2.27	1	PIPE	Ø2 SCH 40 (85)	ASTM A106 GRADE B
2.28	2	GEAR OPERATED BALL VALVE	Ø6 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
2.29	1	GEAR OPERATED BALL VALVE	Ø4 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
2.30	1	PIPE	Ø2 SCH 40 (31-1/2)	ASTM A106 GRADE B
2.31	1	PIPE	Ø2 SCH 40 (124-11/16)	ASTM A106 GRADE B
2.32	1	PIPE	Ø4 SCH 40 (4)	ASTM A106 GRADE B
2.33	1	PIPE	Ø4 SCH 40 (153-3/4)	ASTM A106 GRADE B
2.34	2	GAUGE	2,000 PSI MIN	STEEL
2.35	3	LEVER OPERATED BALL VALVE	Ø2 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
2.36	1	WELDOLET	Ø4 SCH 40 X Ø10	ASTM A105

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

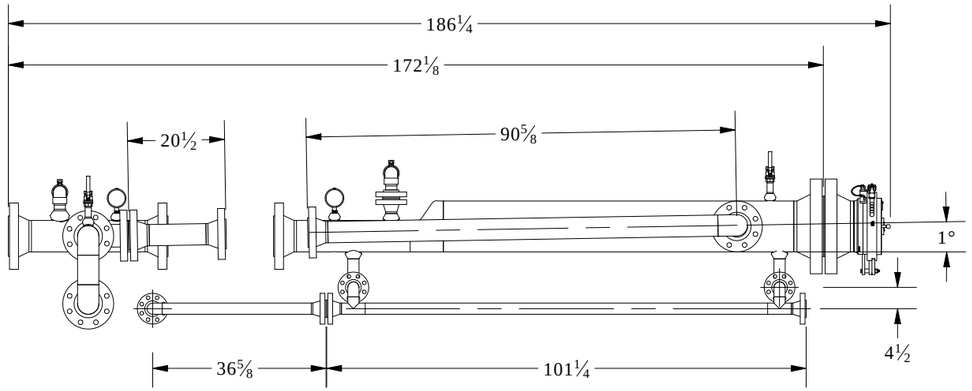
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

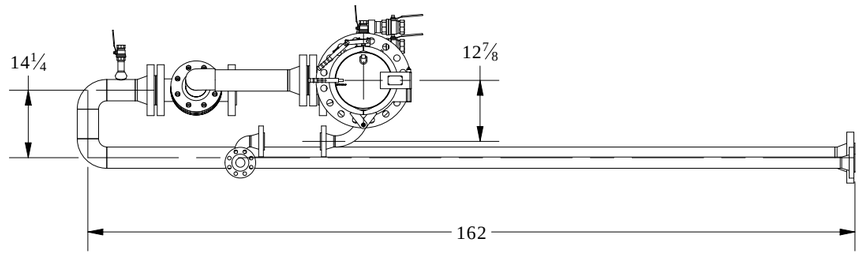
PIPELINE TRAINING FLOW LOOP
RECEIVER ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

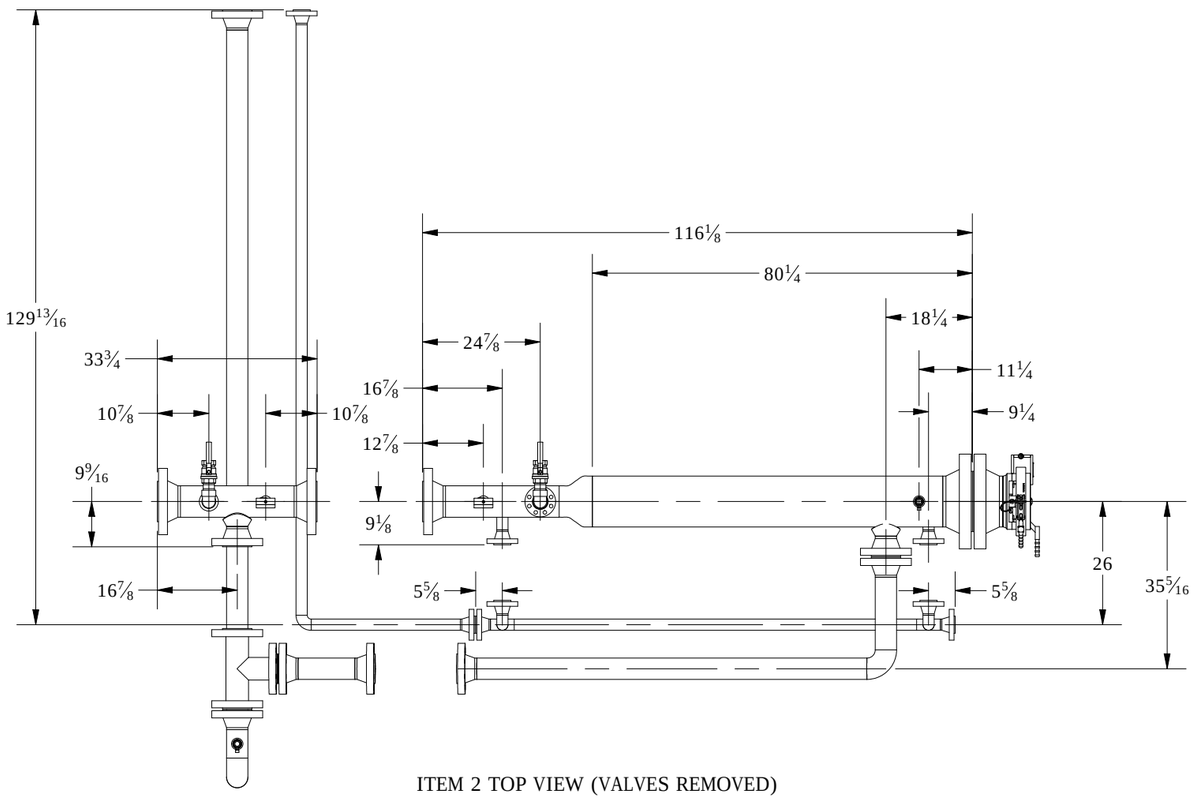
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	5 OF 26



ITEM 2 FRONT VIEW (VALVES REMOVED)
SCALE 3/8" = 1'-0"



ITEM 2 SIDE VIEW (VALVES REMOVED)
SCALE 3/8" = 1'-0"



ITEM 2 TOP VIEW (VALVES REMOVED)
SCALE 3/8" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

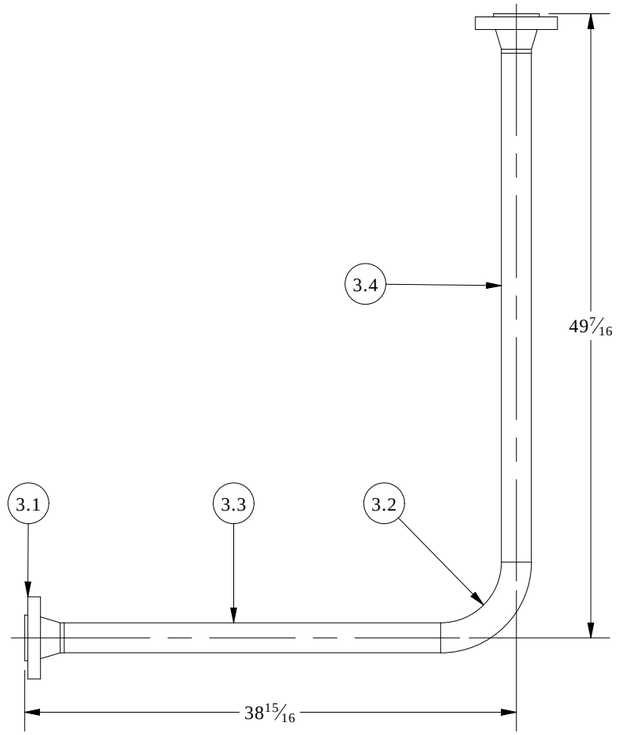
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP
RECEIVER ASSEMBLY

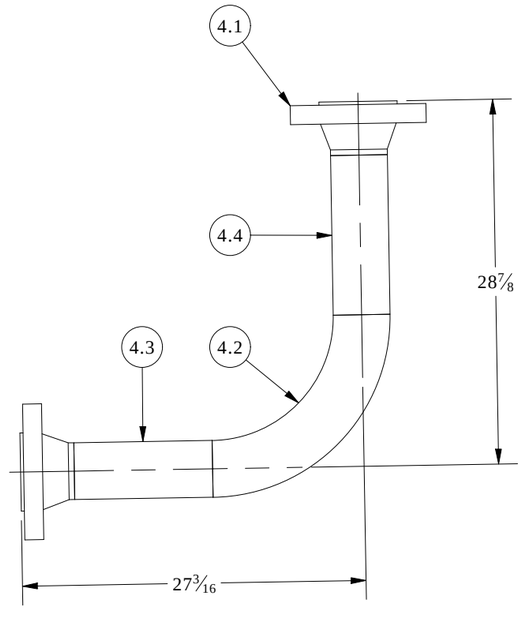
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 6 OF 26	
N/A	DNS	STCC-01-A	4		



ITEM 3 SIDE VIEW
SCALE 1" = 1'-0"

ITEM 3 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
3.1	2	FLANGE	Ø2 CL 600 RF	ASTM A105
3.2	1	ELBOW	Ø2 SCH 40 90 DEG SR	ASTM A106 GRADE B
3.3	1	PIPE	Ø2 SCH 40 - 29.685	ASTM A106 GRADE B
3.4	1	PIPE	Ø2 SCH 40 - 40.290	ASTM A106 GRADE B

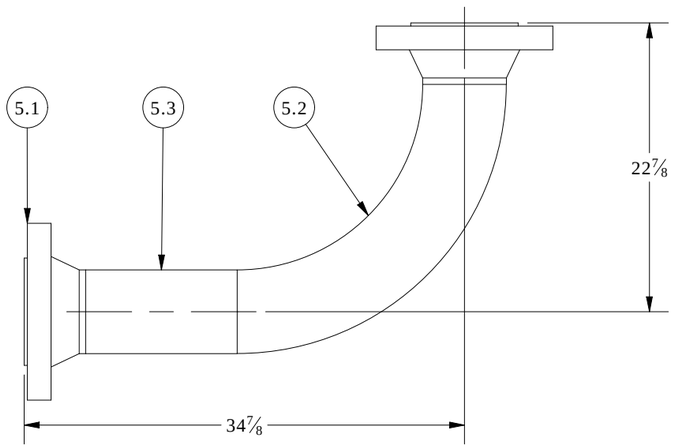
*QTY'S ARE PER ASSEMBLY



ITEM 4 SIDE VIEW
SCALE 1" = 1'-0"

ITEM 4 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
4.1	2	FLANGE	Ø4 CL 600 RF	ASTM A105
4.2	1	ELBOW	Ø4 SCH 40 90 DEG SR	ASTM A106 GRADE B
4.3	1	PIPE	Ø4 SCH 40 - 10.542	ASTM A106 GRADE B
4.4	1	PIPE	Ø4 SCH 40 - 12.644	ASTM A106 GRADE B

*QTY'S ARE PER ASSEMBLY



ITEM 5 SIDE VIEW
SCALE 1" = 1'-0"

ITEM 5 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
5.1	2	FLANGE	Ø6 CL 600 RF	ASTM A105
5.2	1	ELBOW	Ø6 SCH 40 90 DEG SR	ASTM A106 GRADE B
5.3	1	PIPE	Ø6 SCH 40 - 12	API 5L GRADE X42

*QTY'S ARE PER ASSEMBLY

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

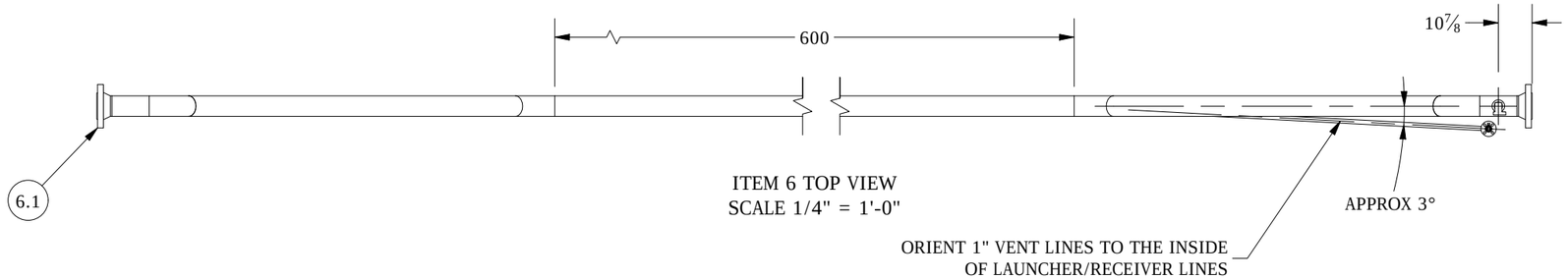
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE
PIPELINE TRAINING FLOW LOOP
VERTICAL ELBOW SPOOL ASSEMBLIES

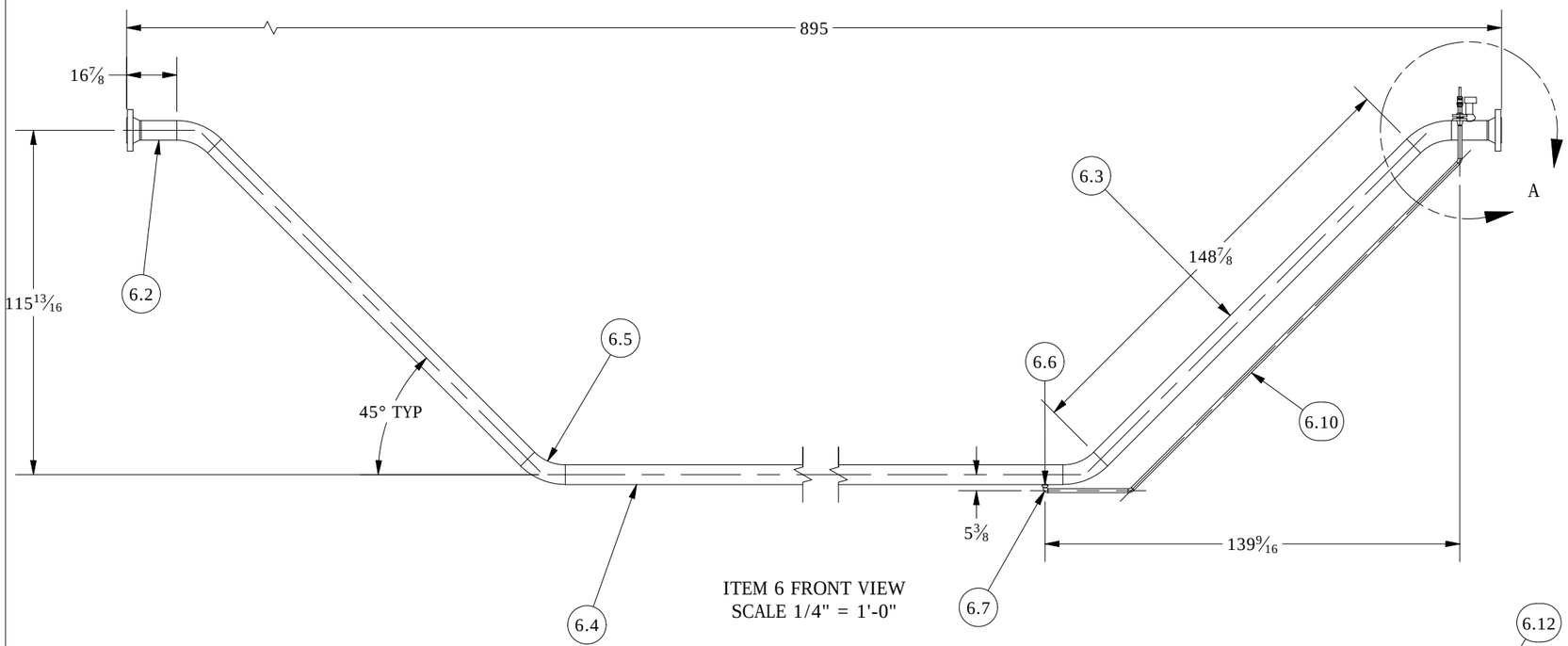
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	7 OF 26

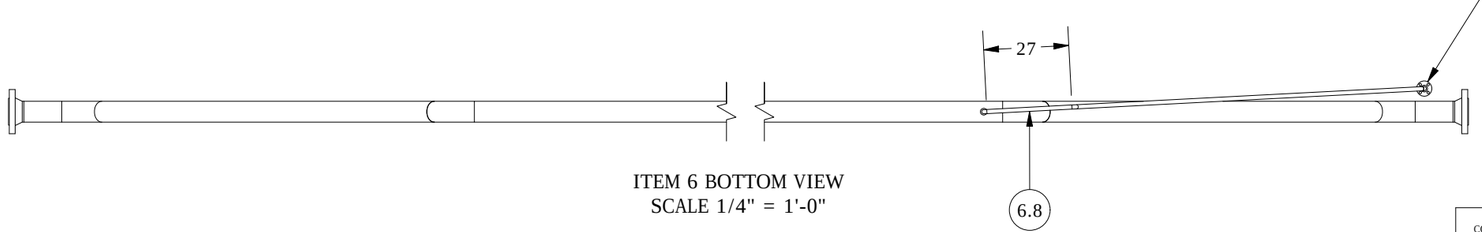


ITEM 6 TOP VIEW
SCALE 1/4" = 1'-0"

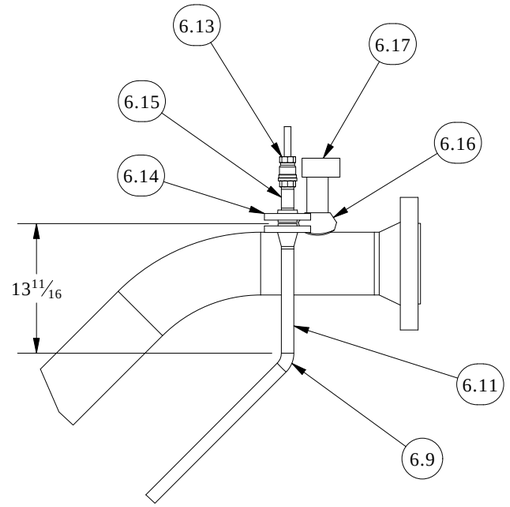
ITEM 6 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
6.1	2	WELD NECK FLANGE	Ø6 CL 600 RF	ASTM A105
6.2	2	PIPE	Ø6 SCH 40 (12)	API 5L X42
6.3	2	PIPE	Ø6 SCH 40 (148-7/8)	API 5L X42
6.4	1	PIPE	Ø6 SCH 40 (600)	API 5L X42
6.5	4	ELBOW	Ø6 SCH 40 45 DEG 3D	ASTM A234
6.6	1	WELDOLET	1 x 10 - 6 SCH 40	ASTM A105
6.7	1	ELBOW	Ø1 SCH 40 90 DEG SR	ASTM A234
6.8	1	PIPE	Ø1 SCH 40 (27)	ASTM A106 GRADE B
6.9	2	ELBOW	Ø1 SCH 40 45 DEG LR	ASTM A234
6.10	1	PIPE	Ø1 SCH 40 (155)	ASTM A106 GRADE B
6.11	1	PIPE	Ø1 SCH 40 (11)	ASTM A106 GRADE B
6.12	1	WELD NECK FLANGE	Ø1 CL 600 RF	ASTM A105
6.13	1	BALL VALVE	Ø1 CL 2000 MIN	BRASS
6.14	1	THREADED FLANGE	Ø1 CL 600 RF	ASTM A105
6.15	1	NIPPLE	Ø1 SCH 40 NPT (3)	ASTM A106 GRADE B
6.16	1	THREADOLET	Ø1 SCH 40 1 x 6	ASTM A105
6.17	1	PIG DETECTOR	PIG DETECTOR	STEEL



ITEM 6 FRONT VIEW
SCALE 1/4" = 1'-0"



ITEM 6 BOTTOM VIEW
SCALE 1/4" = 1'-0"



DETAIL A
SCALE 3/4" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

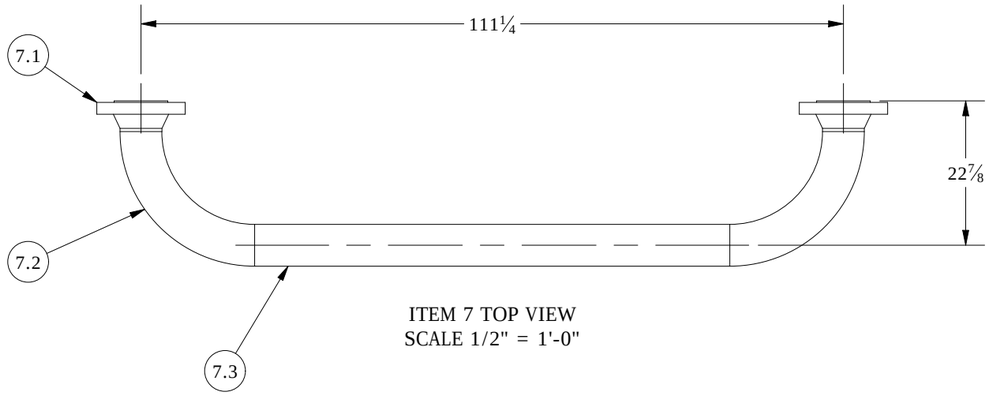
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP
UNDERGROUND PIPE SPOOL ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 8 OF 26	
N/A	DNS	STCC-01-A	4		

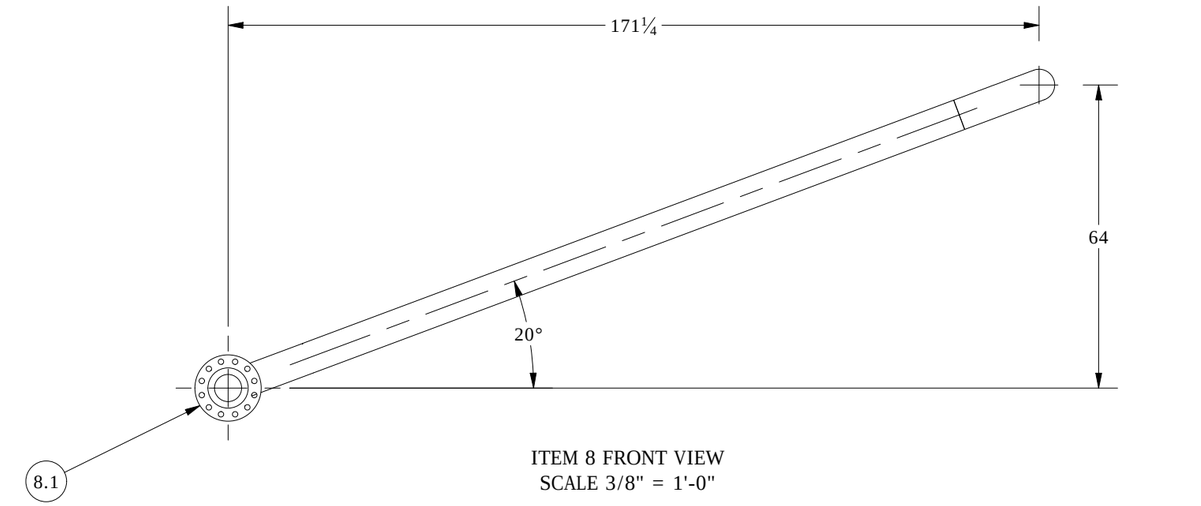


ITEM 7 TOP VIEW
SCALE 1/2" = 1'-0"

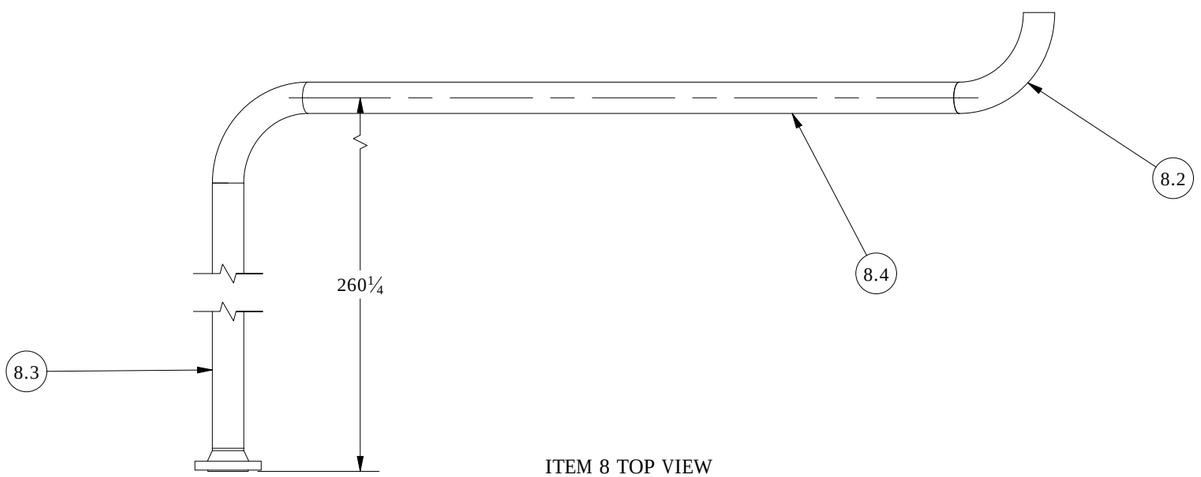
ITEM 7 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
7.1	2	WELD NECK FLANGE	Ø6 CL 600 RF	ASTM A105
7.2	2	ELBOW	Ø6 SCH 40 90 DEG 3D	ASTM A106 GRADE B
7.3	1	PIPE	Ø6 SCH 40 (75-1/4)	API 5L GRADE X42

ITEM 8 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
8.1	2	WELD NECK FLANGE	Ø6 CL 600 RF	ASTM A105
8.2	2	ELBOW	Ø6 SCH 40 90 DEG 3D	ASTM A106 GRADE B
8.3	1	PIIPE	Ø6 SCH 40 (237-3/8)	API 5L GRADE X42
8.4	1	PIPE	Ø6 SCH 40 (146-13/16)	API 5L GRADE X42

NOTE: DIMENSIONS FOR CONNECTING LAUNCHER/RECEIVER TO PIPE LOOP ARE APPROXIMATE. FIELD FIT TO ENSURE PROPER ALIGNMENT.



ITEM 8 FRONT VIEW
SCALE 3/8" = 1'-0"



ITEM 8 TOP VIEW
SCALE 3/8" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

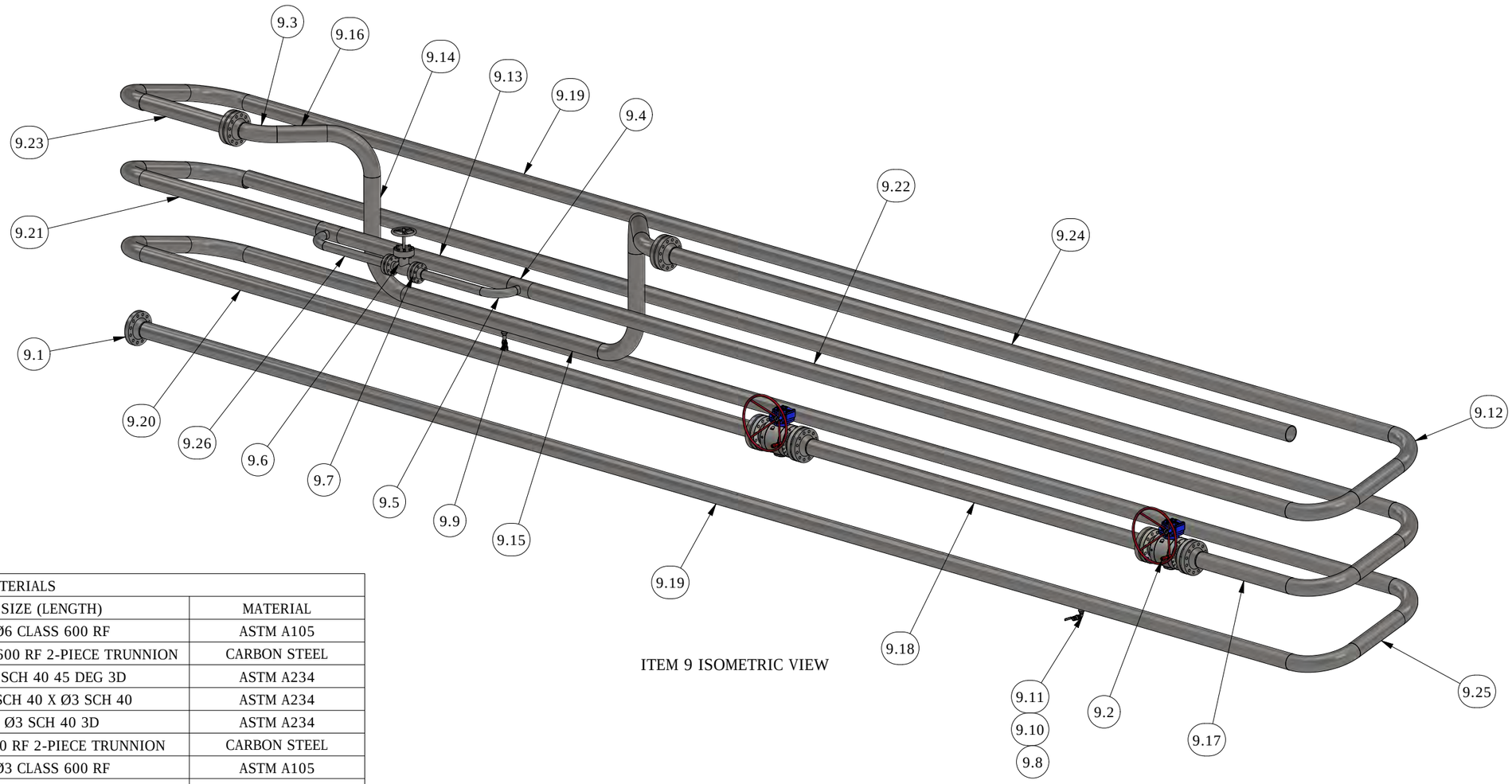
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP CONNECTING SPOOL ASSEMBLIES

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	9 OF 26



ITEM 9 ISOMETRIC VIEW

BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
9.1	9	WELD NECK FLANGE	Ø6 CLASS 600 RF	ASTM A105
9.2	2	GEAR OPERATED BALL VALVE	Ø6 CLASS 600 RF 2-PIECE TRUNNION	CARBON STEEL
9.3	2	ELBOW	Ø6 SCH 40 45 DEG 3D	ASTM A234
9.4	2	REDUCING TEE	Ø6 SCH 40 X Ø3 SCH 40	ASTM A234
9.5	2	ELBOW	Ø3 SCH 40 3D	ASTM A234
9.6	1	BALL VALVE	Ø3 CL 600 RF 2-PIECE TRUNNION	CARBON STEEL
9.7	2	WELD NECK FLANGE	Ø3 CLASS 600 RF	ASTM A105
9.8	2	BALL VALVE	Ø1 NPT	BRASS
9.9	1	THREADED NIPPLE	Ø1 SCH 40 W/ 1 NPT (3)	ASTM A106 GRADE B
9.10	2	THREADOLET	Ø1 X Ø6 SCH 40	ASTM A105
9.11	1	THREADED ELBOW	Ø1 SCH 40 W/ 1 NPT	ASTM A105
9.12	16	ELBOW	Ø6 SCH 40 90 DEG 3D	ASTM A106 GRADE B
9.13	1	PIPE	Ø6 SCH 40 (90-3/4)	API 5L X42
9.14	2	PIPE	Ø6 SCH 40 (28)	API 5L X42
9.15	1	PIPE	Ø6 SCH 40 (105-1/8)	API 5L X42
9.16	2	PIPE	Ø6 SCH 40 (20)	API 5L X42
9.17	1	PIPE	Ø6 SCH 40 (48)	API 5L X42
9.18	1	PIPE	Ø6 SCH 40 (176)	API 5L X42
9.19	4	PIPE	Ø6 SCH 40 (612)	API 5L X42
9.20	1	PIPE	Ø6 SCH 40 (324)	API 5L X42
9.21	1	PIPE	Ø6 SCH 40 (94-5/16)	API 5L X42
9.22	1	PIPE	Ø6 SCH 40 (404-7/16)	API 5L X42
9.23	1	PIPE	Ø6 SCH 40 (43-1/8)	API 5L X42
9.24	1	PIPE	Ø6 SCH 40 (328-7/8)	API 5L X42
9.25	6	PIPE	Ø6 SCH 40 (27.534	API 5L X42
9.26	2	PIPE	Ø3 SCH 40 (31-3/8)	ASTM A106 GRADE B

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

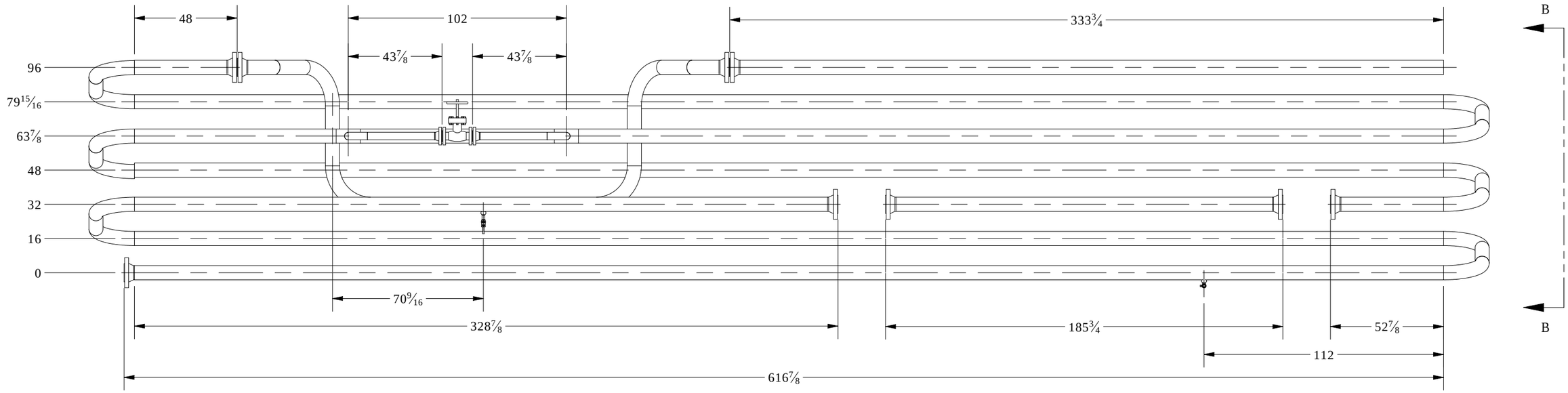
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

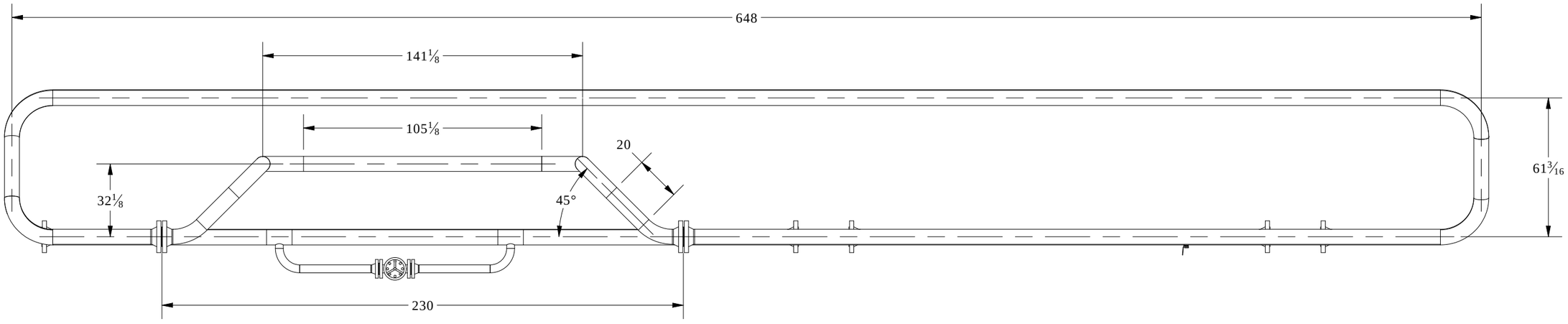
TITLE

PIPELINE TRAINING FLOW LOOP
PIPE LOOP ASSEMBLY

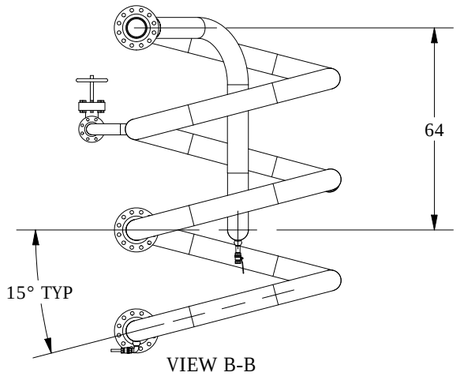
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 10 OF 26	



PIPE LOOP FRONT VIEW
SCALE 1/4" = 1'-0"



PIPE LOOP TO VIEW
SCALE 1/4" = 1'-0"



VIEW B-B
SCALE 1/4" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

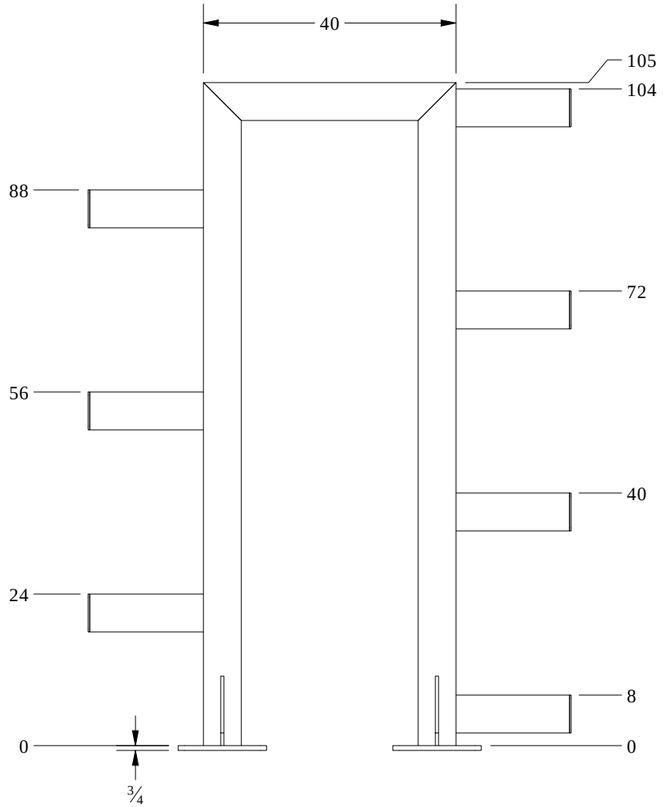
PIPELINE TRAINING FLOW LOOP
PIPE LOOP ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

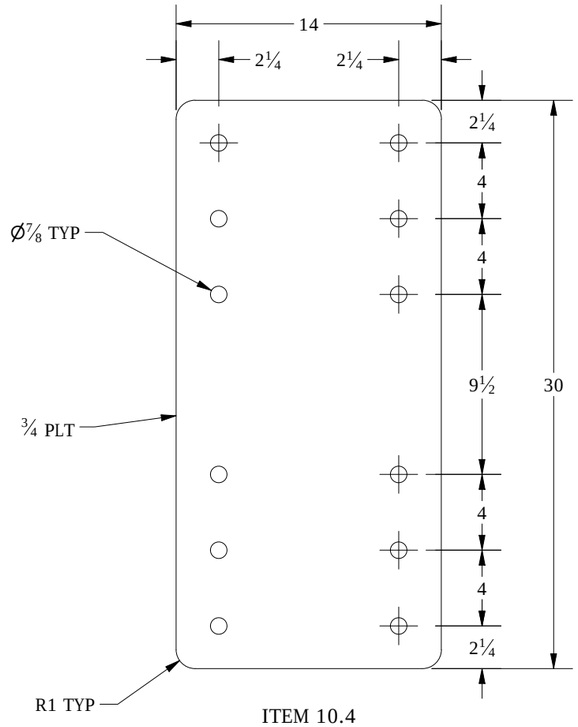
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	11 OF 26

ITEM 10 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
10.1	2	VERTICAL FRAME TUBE	6 x 6 x 1/4 (153)	ASTM A500 GRADE B
10.2	1	HORIZONTAL FRAME TUBE	6 x 6 x 1/4 (40)	ASTM A500 GRADE B
10.3	7	PIPE SUPPORT TUBE	6 x 4 x 1/4 (18)	ASTM A500 GRADE B
10.4	2	BASE PLATE	3/4 PLT (30 x 14)	ASTM A36
10.5	4	GUSSET	1/2 PLT (11 x 11)	ASTM A36
10.6	7	END CAP	1/4 PLT (6 x 4)	ASTM A36

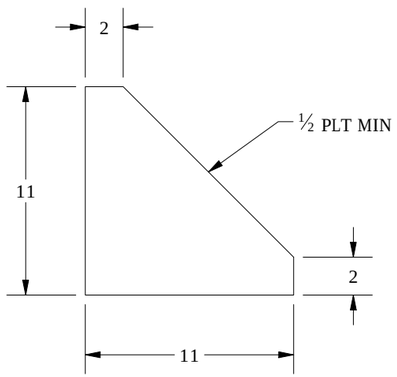
*QTY'S ARE PER ASSEMBLY



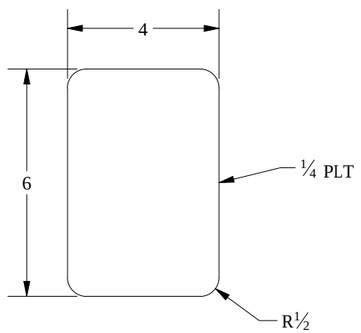
PIPE LOOP SUPPORT FRONT VIEW
SCALE 1/2" = 1'-0"



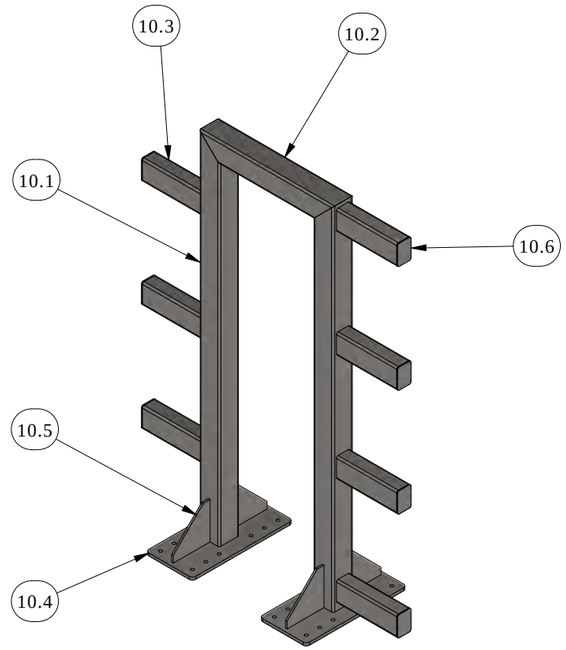
ITEM 10.4
SCALE 1 1/2" = 1'-0"



ITEM 10.5
SCALE 1 1/2" = 1'-0"



ITEM 10.6
SCALE 3" = 1'-0"



ITEM 10 ISOMETRIC VIEW

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

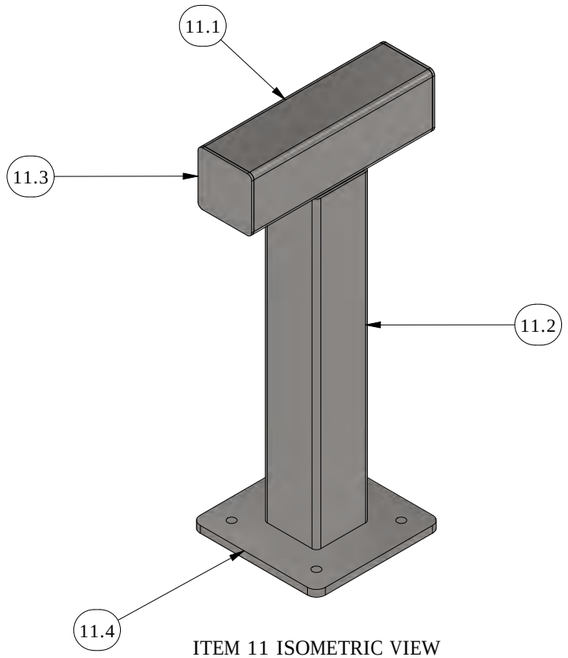
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

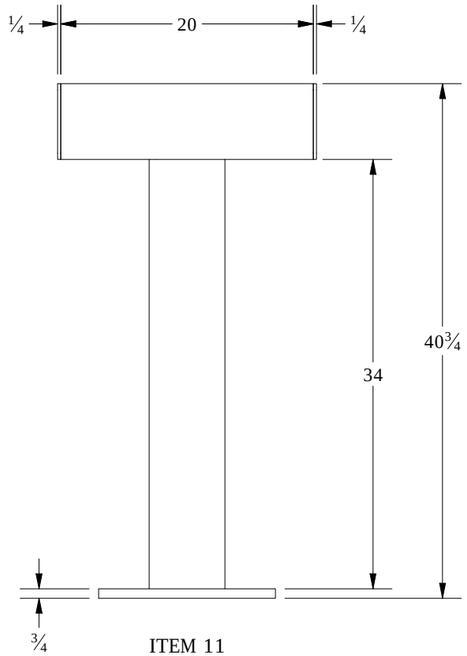
PIPELINE TRAINING FLOW LOOP
PIPE LOOP SUPPORT ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	12 OF 26



ITEM 11 ISOMETRIC VIEW

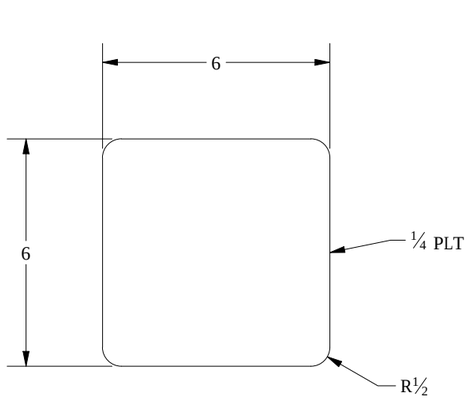


ITEM 11
SCALE 1" = 1'-0"

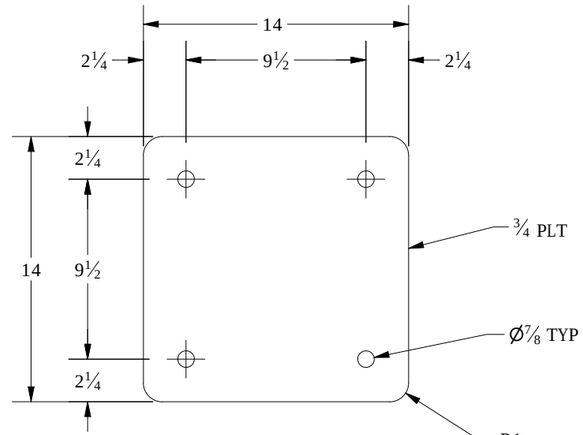
ITEM 11 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
11.1	1	HORIZONTAL TUBE	6 x 6 x 1/4 (20)	ASTM A500 GRADE B
11.2	1	VERTICAL TUBE	6 x 6 x 1/4 (34)	ASTM A500 GRADE B
11.3	2	TUBE CAP	1/4 PLT (6 x 6)	ASTM A36
11.4	1	BASE PLATE	3/4 PLT (14 x 14)	ASTM A36

*QTY'S ARE PER ASSEMBLY

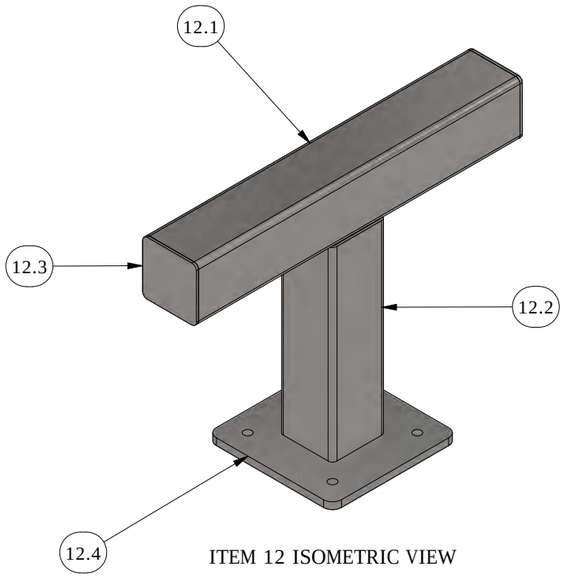
ITEM 12 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
12.1	1	HORIZONTAL TUBE	6 x 6 x 1/4 (36)	ASTM A500 GRADE B
12.2	1	VERTICAL TUBE	6 x 6 x 1/4 (20-13/16)	ASTM A500 GRADE B
12.3	2	TUBE CAP	1/4 PLT (6 x 6)	ASTM A36
12.4	1	BASE PLATE	3/4 PLT (14 x 14)	ASTM A36



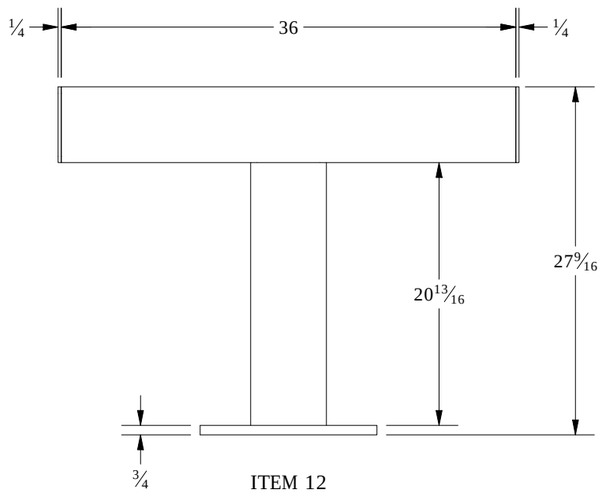
ITEM 11.3 & 12.3
SCALE 3" = 1'-0"



ITME 11.4 & 12.4
SCALE 1 1/2" = 1'-0"



ITEM 12 ISOMETRIC VIEW



ITEM 12
SCALE 1" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
ANGLES ± 3°	.XXX ± .005
	.XXXX ± .0010
	ANGLES ±0.50°

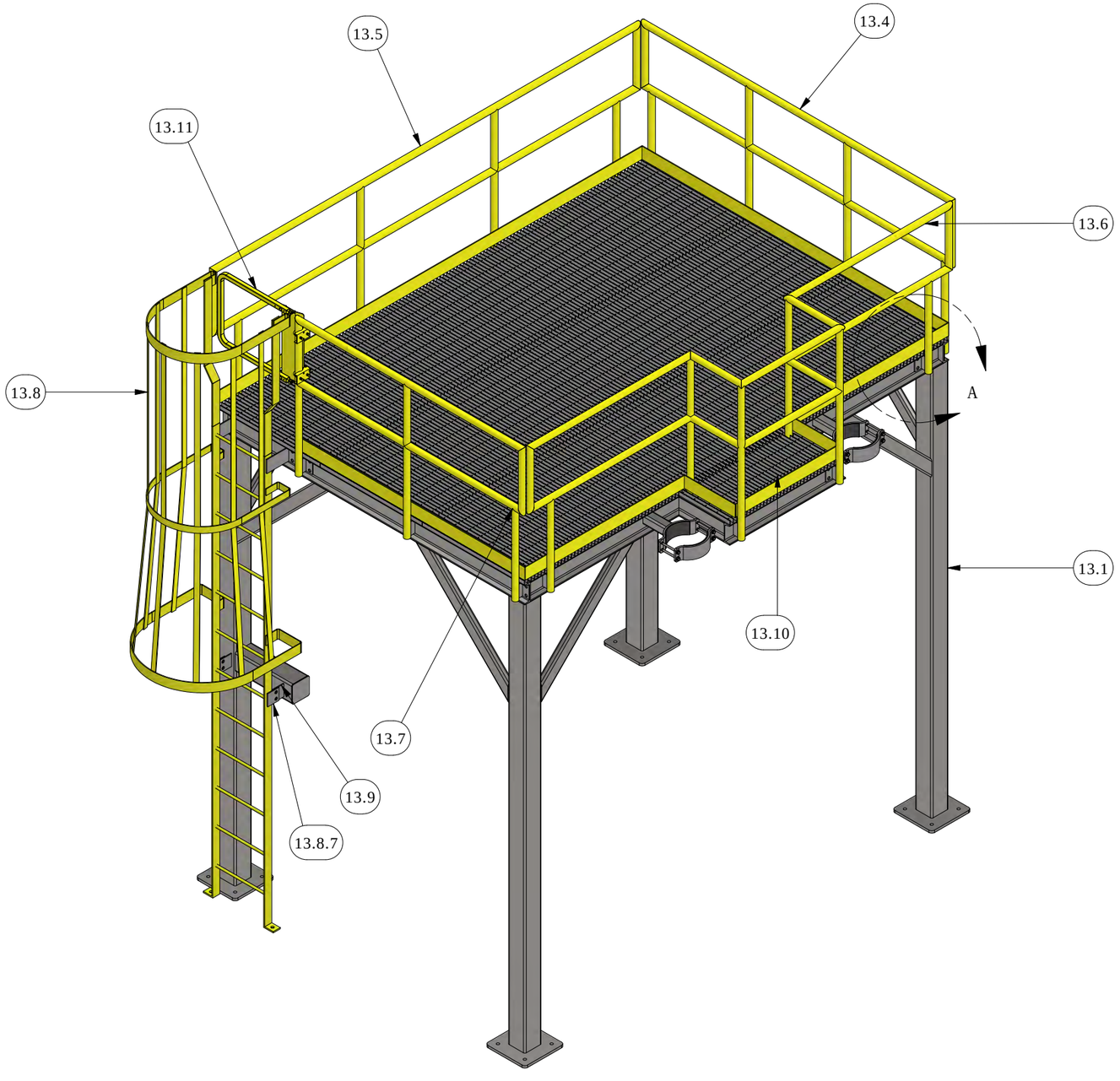
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

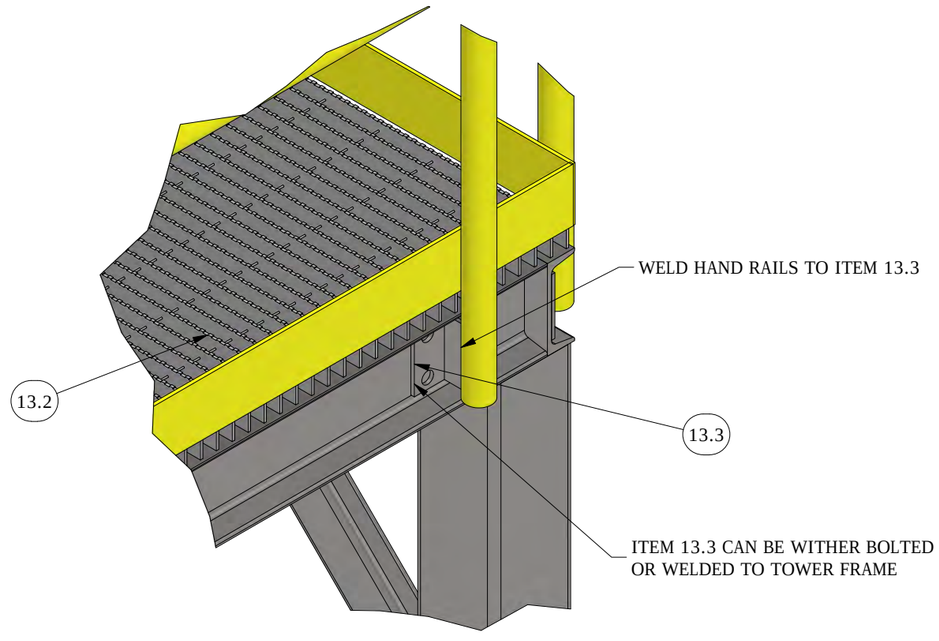
PIPELINE TRAINING FLOW LOOP
PIPE SUPPORT ASSEMBLIES

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 13 OF 26	



ITEM 13 ISOMETRIC VIEW

ITEM 13 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.1	1	TOWER FRAME	SEE SHEET 15	SEE SHEET 15
13.2	3	GRATING LARGE	19-W-4 1-1/4 x 1/8 (150 X 36)	GALVANIZED STEEL
13.3	17	HAND RAIL CONNECTOR PLT	1/4 PLT	ASTM A36
13.4	1	HAND RAIL MEDIUM	SEE SHEET 18	SEE SHEET 18
13.5	1	HAND RAIL LONG	SEE SHEET 19	SEE SHEET 19
13.6	1	HAND RAIL LAUNCHER/RECEIVER	SEE SHEET 20	SEE SHEET 20
13.7	1	HAND RAIL LADDER SHORT	SEE SHEET 21	SEE SHEET 21
13.8	1	SAFETY LADDER	SEE SHEET 22	SEE SHEET 22
13.9	2	LADDER CONNECTING PLATE	1/4 PLT	ASTM A36
13.10	1	GRATING SMALL	19-W-4 1-1/4 x 1/8 (40-1/2 X 19-1/2)	GALVANIZED STEEL
13.11	1	LADDER SAFETY GATE	FOR 28-1/2" OPENING	STEEL



DETAIL A
SCALE 1 1/2" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

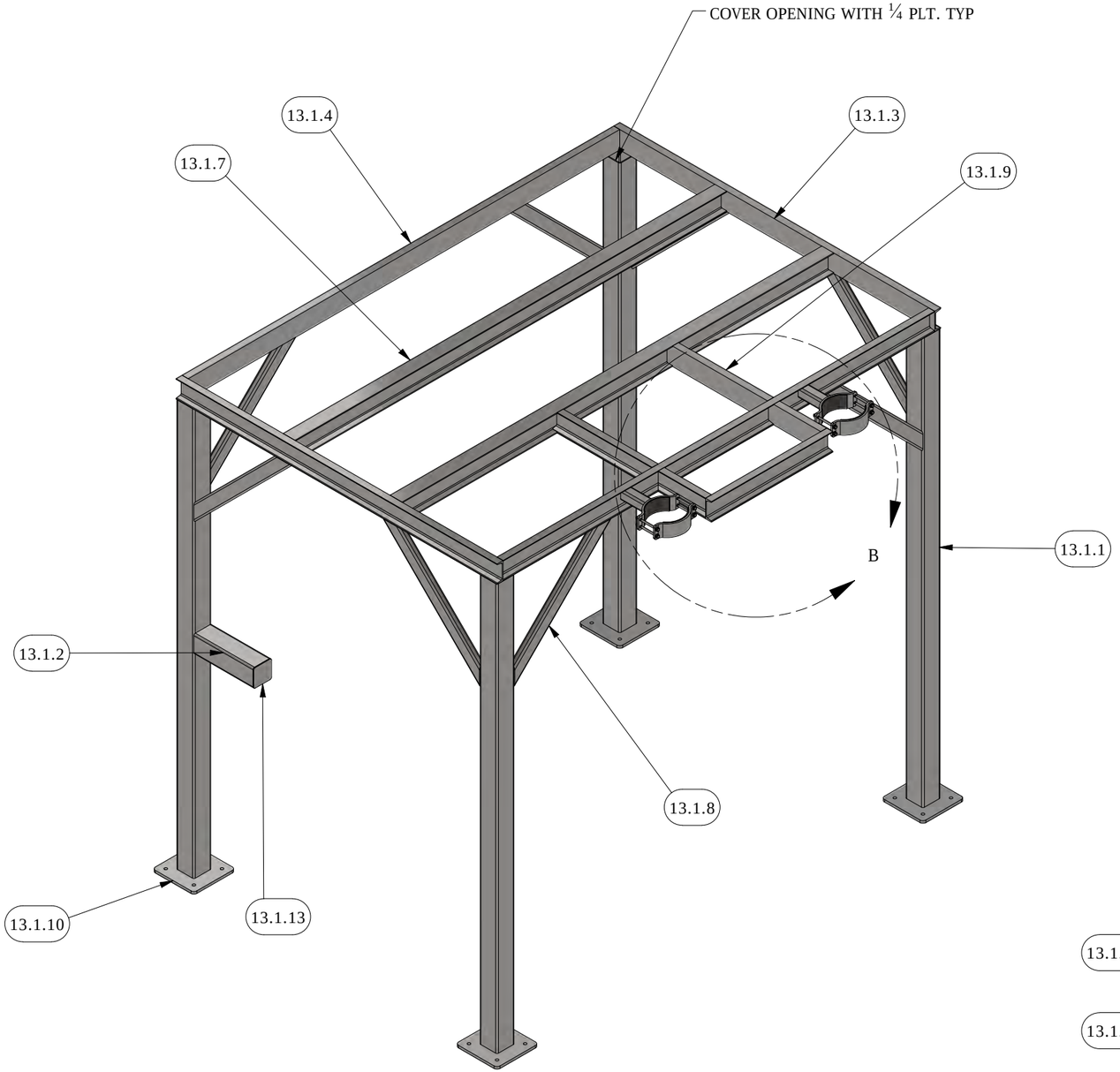
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

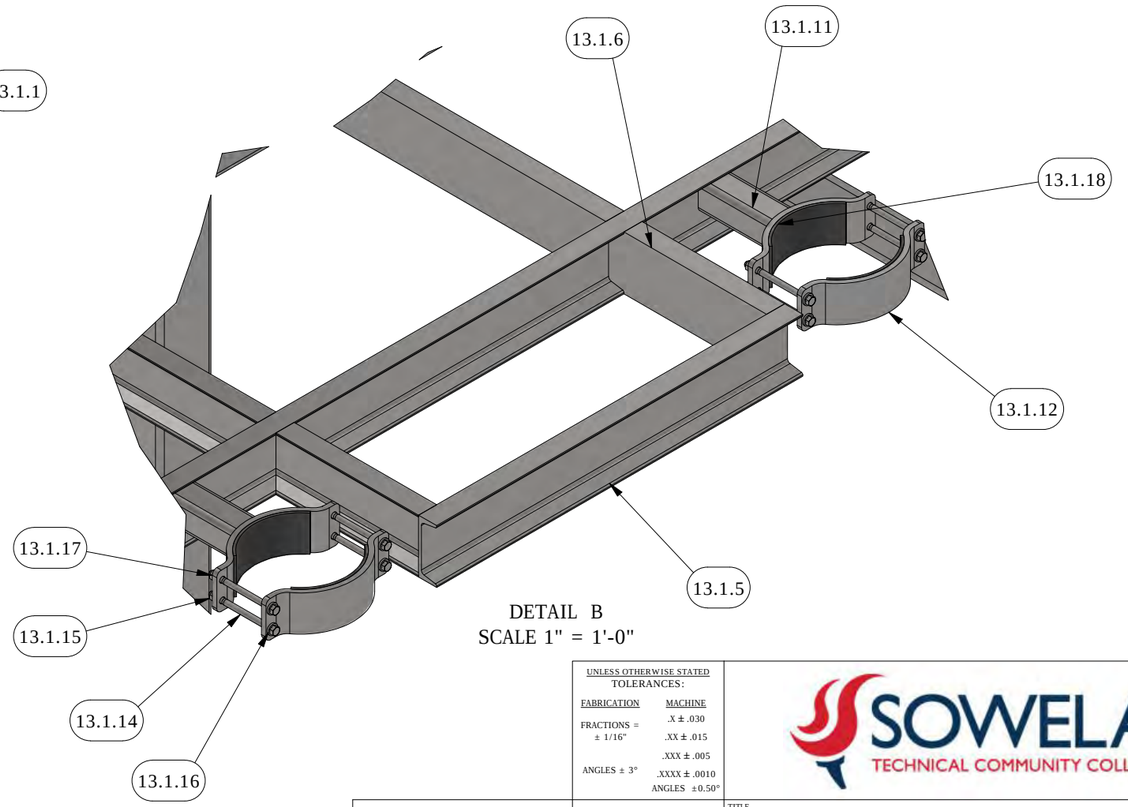
TITLE
PIPELINE TRAINING FLOW LOOP
TOWER ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 14 OF 26	



ITEM 13.1 ISOMETRIC VIEW

ITEM 13.1 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.1.1	4	CORNER POST	6 x 6 x 1/4 (137-1/2)	ASTM A500 GRADE B
13.1.2	1	LADDER SUPPORT	6 x 6 x 1/4 (20)	ASTM A500 GRADE B
13.1.3	2	SIDE RAIL SHORT	C 6x10.5 (108-1/2)	ASTM A36
13.1.4	2	SIDE RAIL LONG	C 6x10.5 (145-15/16)	ASTM A36
13.1.5	1	CHANNEL	C 6x10.5 (41)	ASTM A36
13.1.6	2	CHANNEL	C 6x10.5 (17-11/16)	ASTM A36
13.1.7	2	GRATING SUPPORT	W 6x12 (145-15/16)	ASTM A992
13.1.8	8	CORNER BRACE	4 x 2 x 1/4 (46-11/16)	ASTM A500 GRADE B
13.1.9	2	CHANNEL	C 6x10.5 (34)	ASTM A36
13.1.10	4	BASE PLATE	3/4 PLT (14 x 14)	ASTM A36
13.1.11	2	SADDLE SUPPORT TUBE	3 x 3 x 1/4 (8-5/16)	ASTM A500 GRADE B
13.1.12	4	SADDLE	1/4 PLT	ASTM A36
13.1.13	1	TUBING CAP	1/4 PLT (6 x 6)	ASTM A36
13.1.14	8	HEX BOLT	Ø1/2-13 UNC (7)	GRADE 8 ZINC PLATED
13.1.15	8	HEX NUT	Ø1/2-13 UNC	GRADE 8 ZINC PLATED
13.1.16	8	FLAT WASHER	Ø1/2	ZINC PLATED STEEL
13.1.17	8	LOCK WASHER	Ø1/2	ZINC PLATED STEEL
13.1.18	4	FRP WEAR PADS	12 x 4 x 1/4	FRP



DETAIL B
SCALE 1" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ± 0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

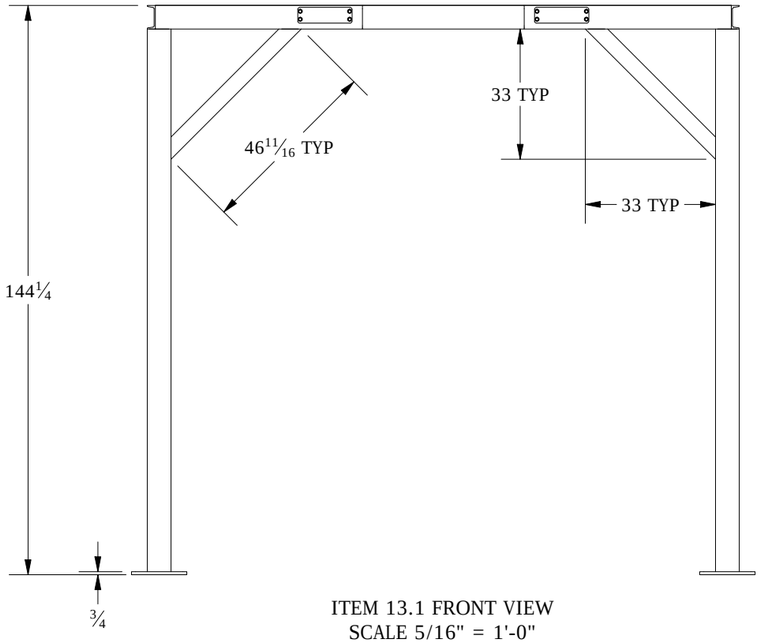
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

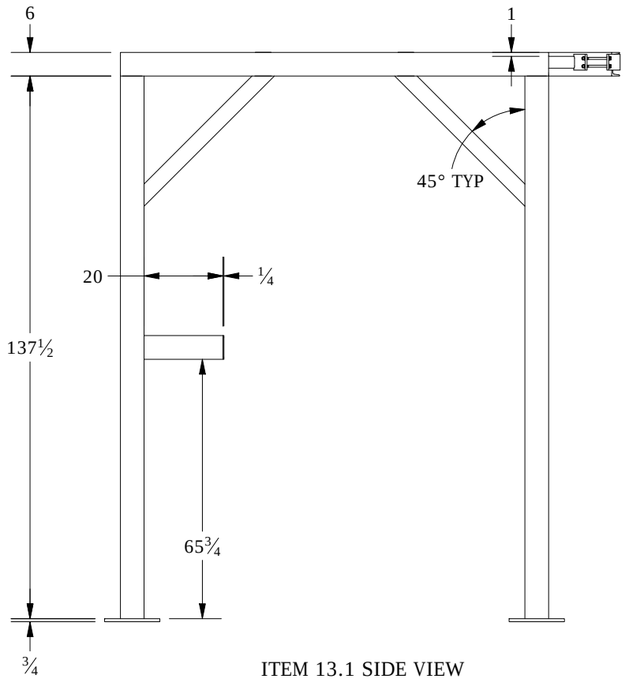
PIPELINE TRAINING FLOW LOOP
TOWER FRAME

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

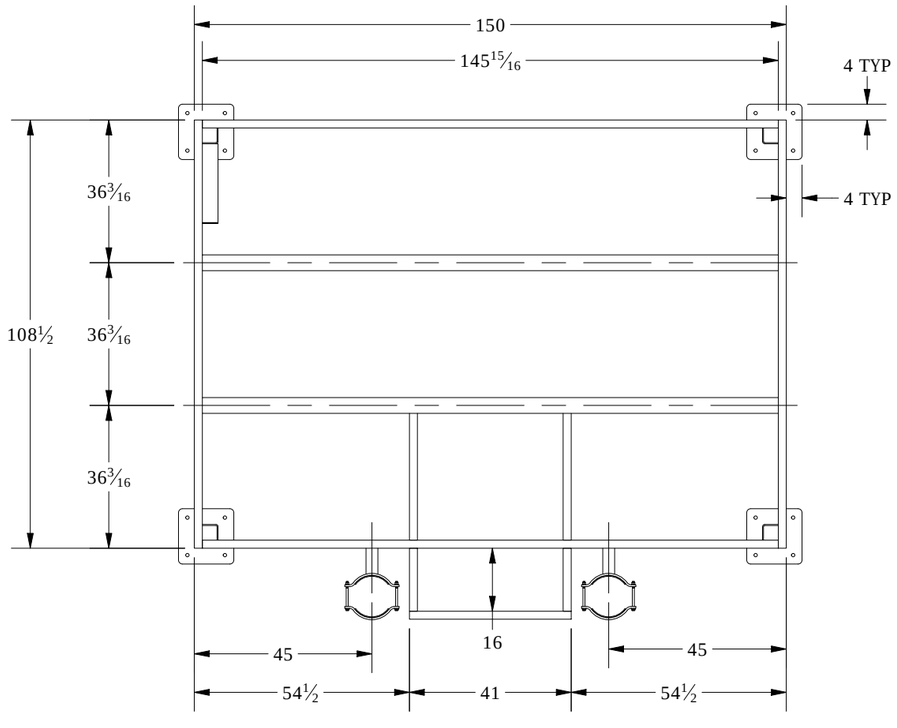
HEAT TREATMENT	SCALE	DWG NO.	REV.	
N/A	DNS	STCC-01-A	4	SHEET 15 OF 26



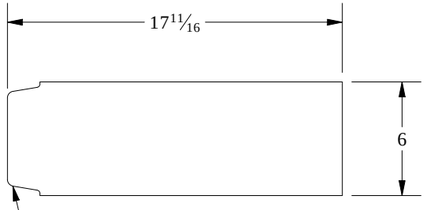
ITEM 13.1 FRONT VIEW
SCALE 5/16" = 1'-0"



ITEM 13.1 SIDE VIEW
SCALE 5/16" = 1'-0"

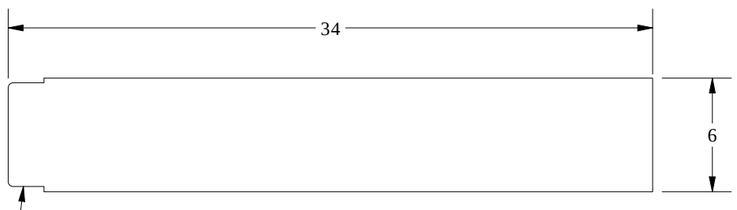


ITEM 13.1 TOP VIEW
SCALE 5/16" = 1'-0"



ITEM 13.6
SCALE 1 1/2" = 1'-0"

NOTCH TO FIT INSIDE ITEM 13.4



ITEM 13.9
SCALE 1 1/2" = 1'-0"

NOTCH TO FIT INSIDE ITEM 13.7

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

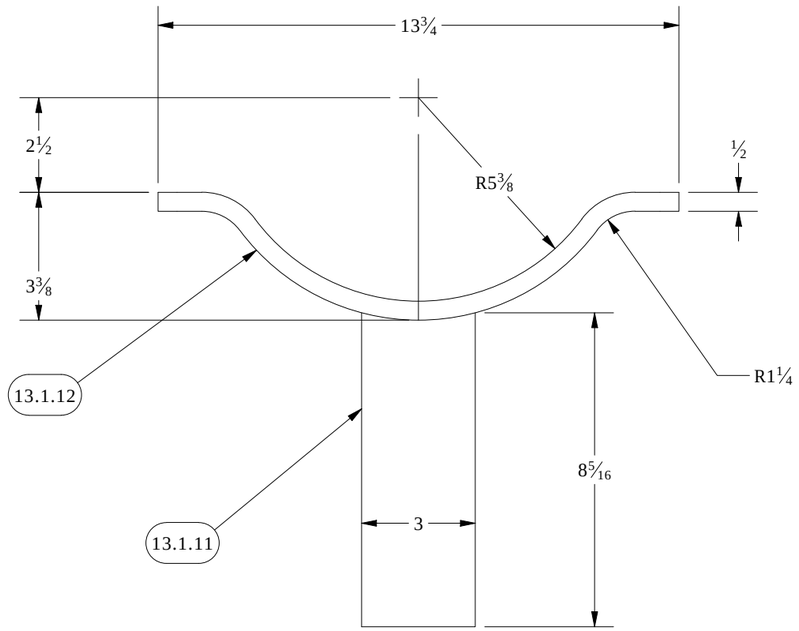
SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

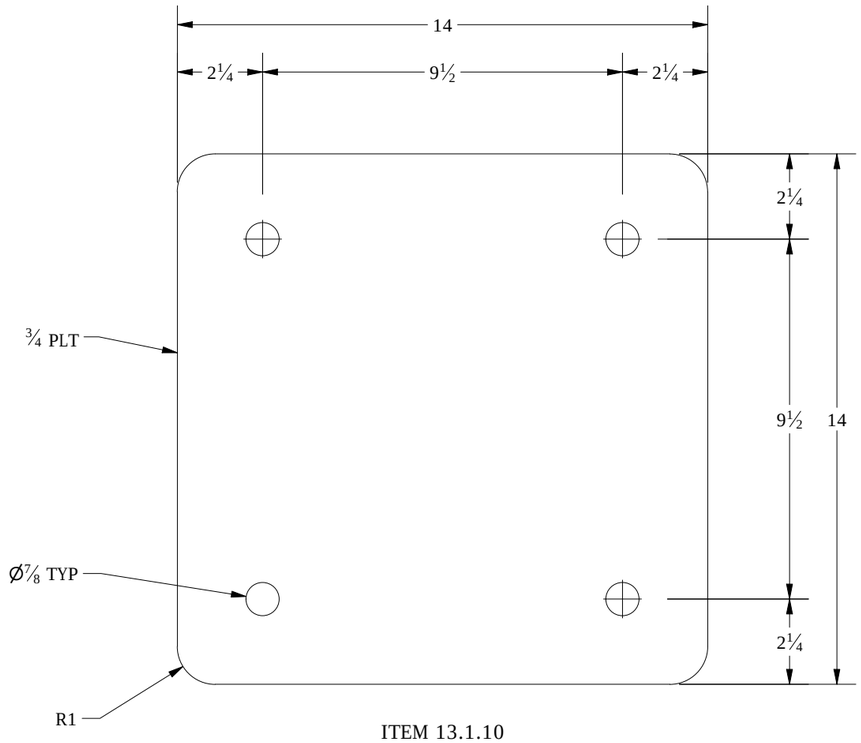
TITLE

PIPELINE TRAINING FLOW LOOP
TOWERL FRAME

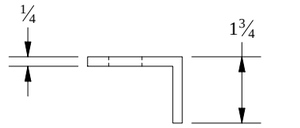
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 16 OF 26	
N/A	DNS	STCC-01-A	4		



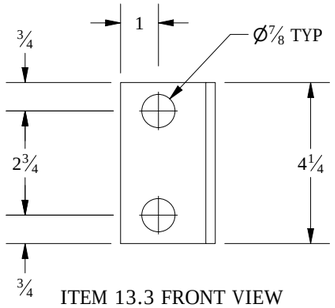
ITEM 13.1.11 & 13.1.12
SCALE 3" = 1'-0"



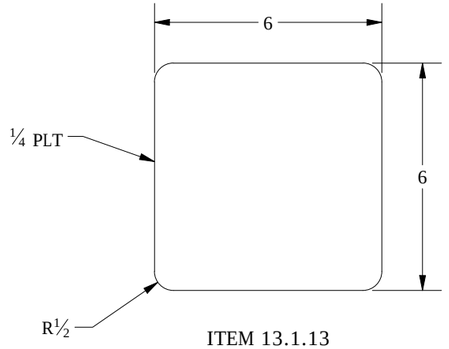
ITEM 13.1.10
SCALE 3" = 1'-0"



ITEM 13.3 TOP VIEW
SCALE 3" = 1'-0"



ITEM 13.3 FRONT VIEW
SCALE 3" = 1'-0"



ITEM 13.1.13
SCALE 3" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ± 0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

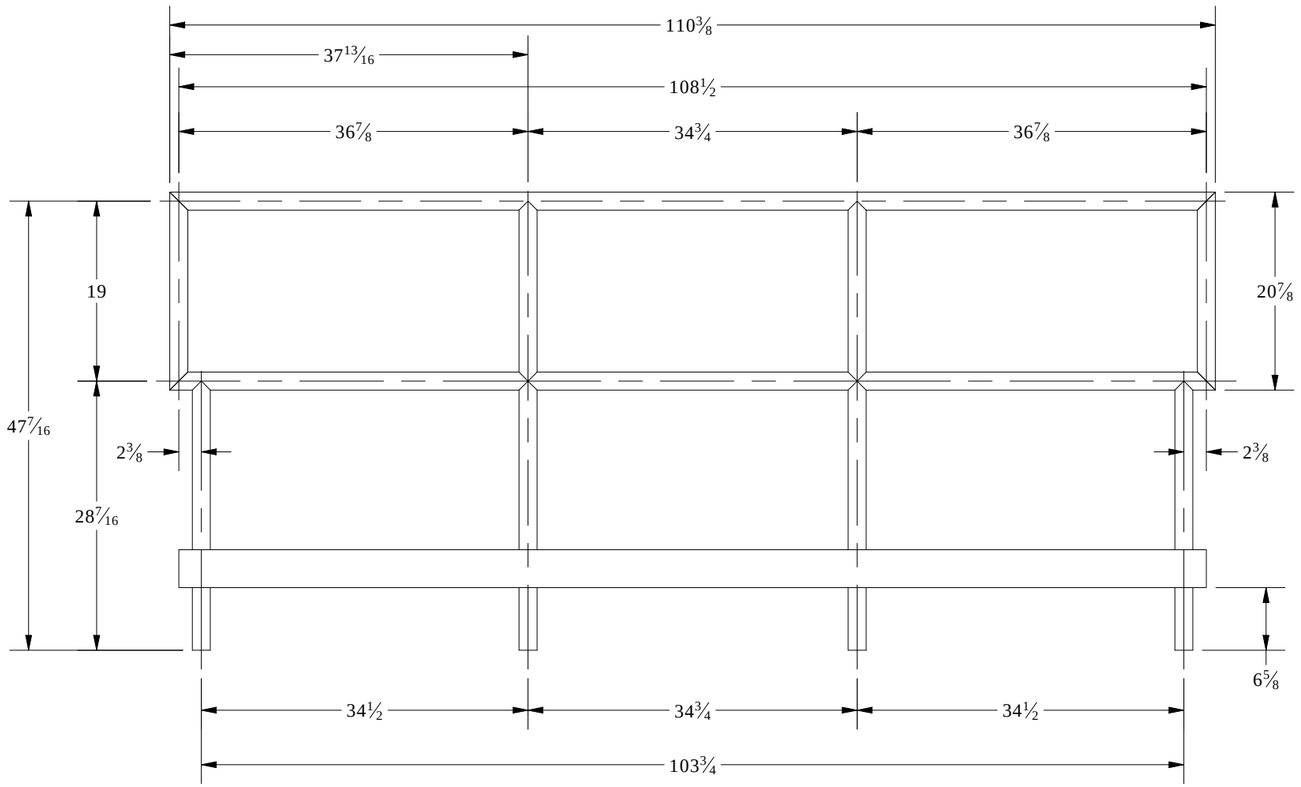
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

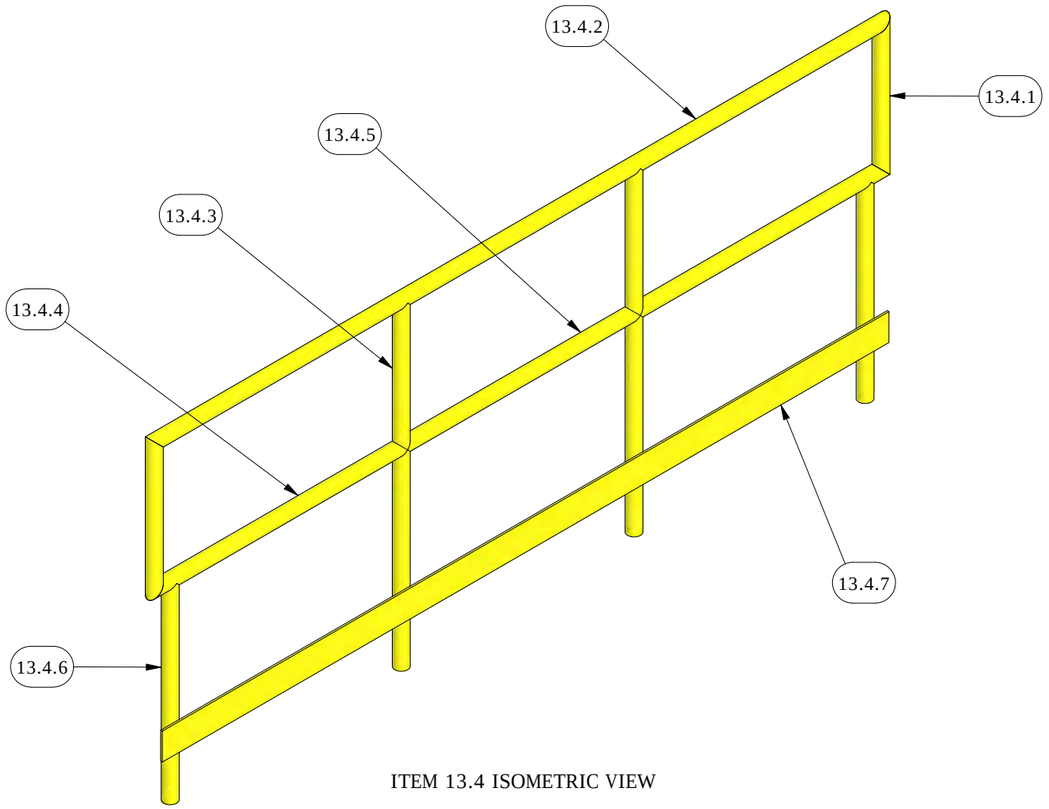
PIPELINE TRAINING FLOW LOOP TOWER ASSEMBLY DETAILS

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 17 OF 26	

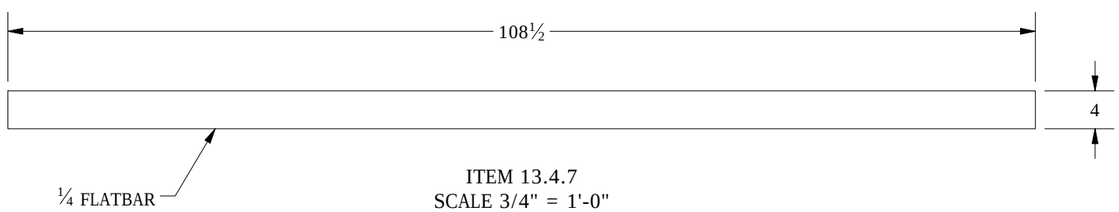
ITEM 13.4 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.4.1	2	PIPE	Ø1-1/2 SCH 40 (20-7/8)	ASTM A53 GRADE B
13.4.2	1	PIPE	Ø1-1/2 SCH 40 (110-3/8)	ASTM A53 GRADE B
13.4.3	2	PIPE	Ø1-1/2 SCH 40 (47-7/16)	ASTM A53 GRADE B
13.4.4	2	PIPE	Ø1-1/2 SCH 40 (37-13/16)	ASTM A53 GRADE B
13.4.5	1	PIPE	Ø1-1/2 SCH 40 (34-3/4)	ASTM A53 GRADE B
13.4.6	2	PIPE	Ø1-1/2 SCH 40 (28-7/16)	ASTM A53 GRADE B
13.4.7	1	KICK PLATE	4 x 1/4 (108-1/2)	ASTM A36



ITEM 13.4 FRONT VIEW
SCALE 3/4" = 1'-0"



ITEM 13.4 ISOMETRIC VIEW



ITEM 13.4.7
SCALE 3/4" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ± 0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

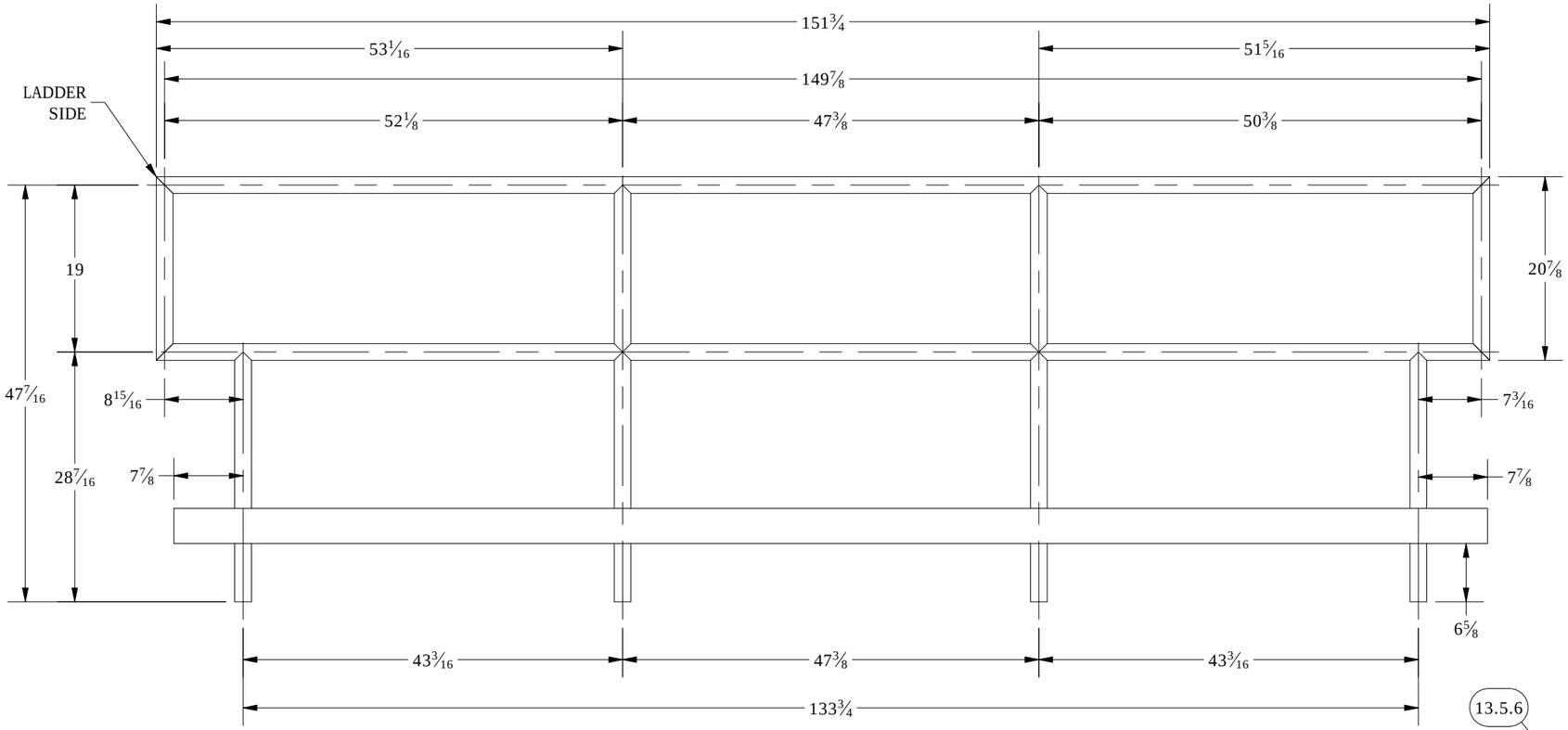
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

PIPELINE TRAINING FLOW LOOP
HAND RAIL MEDIUM

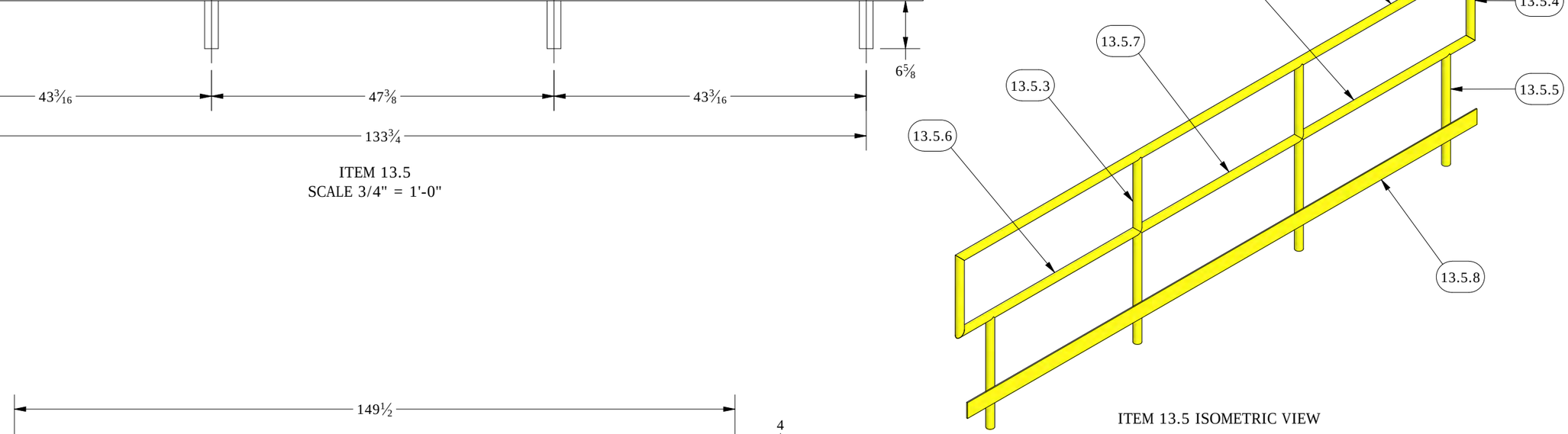
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	18 OF 26

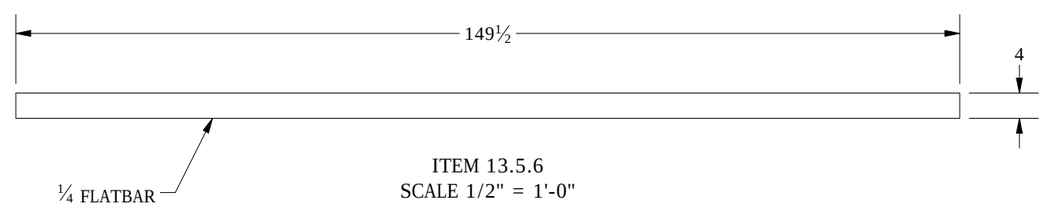


ITEM 13.5
SCALE 3/4" = 1'-0"

ITEM 13.5 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.5.1	1	PIPE	Ø1-1/2 SCH 40 (151-3/4)	ASTM A53 GRADE B
13.5.2	2	PIPE	Ø1-1/2 SCH 40 (51-5/16)	ASTM A53 GRADE B
13.5.3	2	PIPE	Ø1-1/2 SCH 40 (47-3/8)	ASTM A53 GRADE B
13.5.4	2	PIPE	Ø1-1/2 SCH 40 (20-7/8)	ASTM A53 GRADE B
13.5.5	2	PIPE	Ø1-1/2 SCH 40 (28-7/16)	ASTM A53 GRADE B
13.5.6	1	PIPE	Ø1-1/2 SCH 40 (53-1/16)	ASTM A53 GRADE B
13.5.7	1	PIPE	Ø1-1/2 SCH 40 (47-3/8)	ASTM A53 GRADE B
13.5.8	1	KICK PLATE	4 x 1/4 (149-1/2)	ASTM A36



ITEM 13.5 ISOMETRIC VIEW



ITEM 13.5.6
SCALE 1/2" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ± 0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

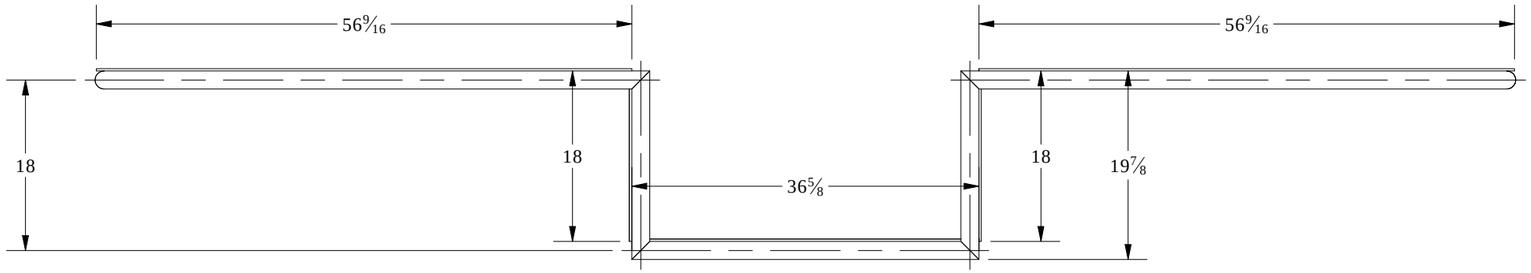
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

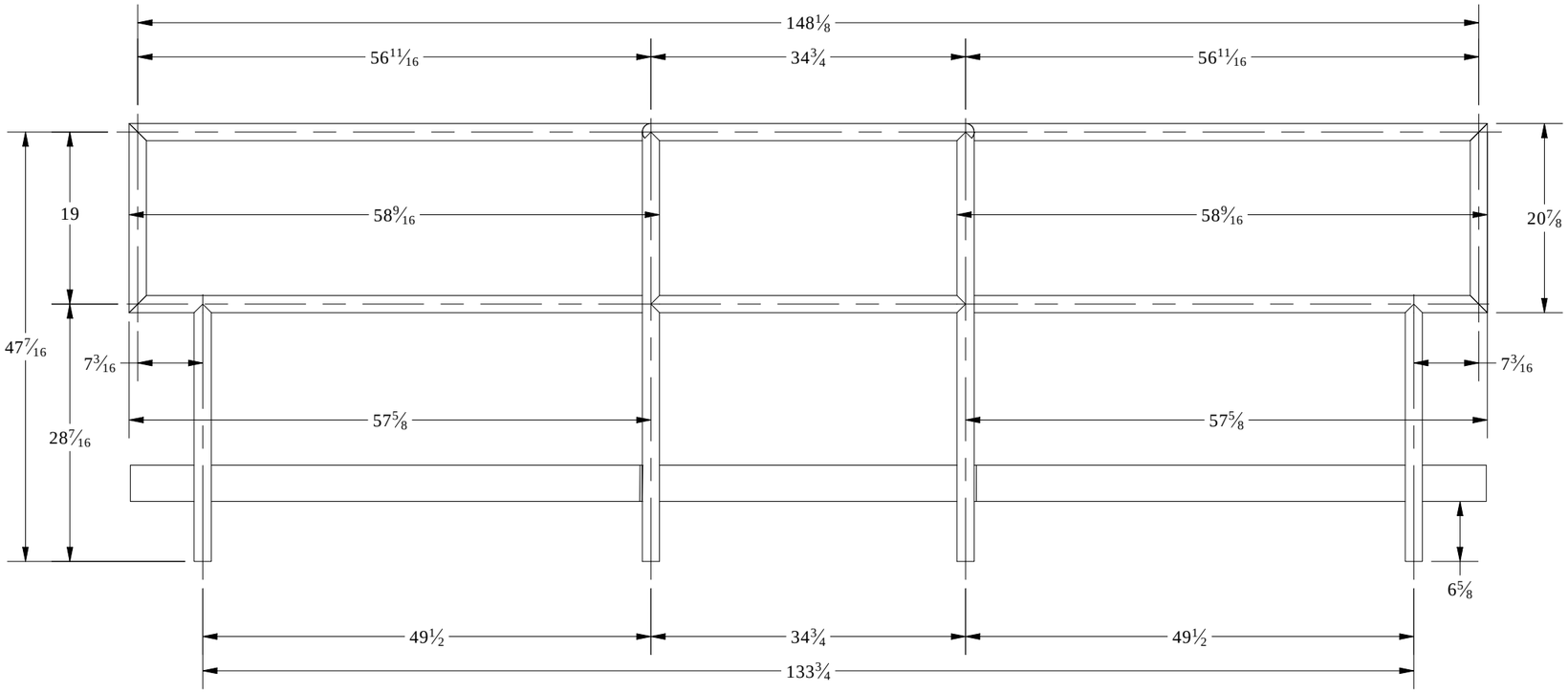
PIPELINE TRAINING FLOW LOOP
HAND RAIL LONG

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	19 OF 26

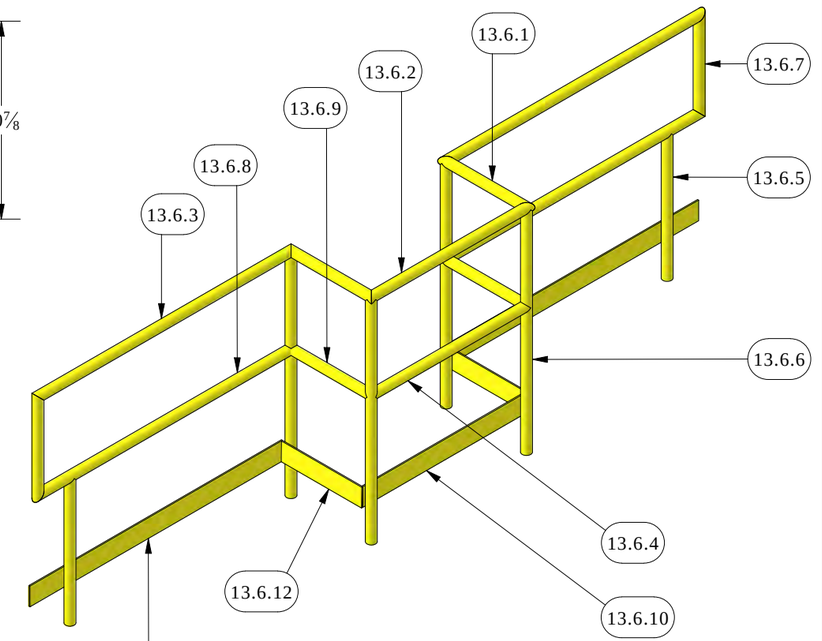


ITEM 13.6 TOP VIEW
SCALE 3/4" = 1'-0"

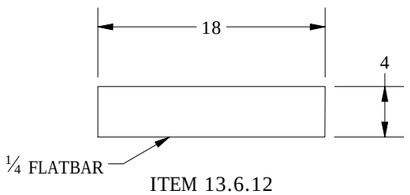


ITEM 13.6 FRONT VIEW
SCALE 3/4" = 1'-0"

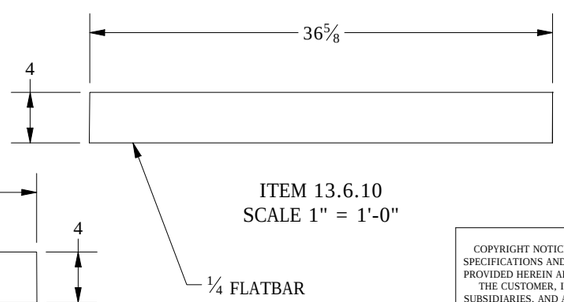
ITEM 13.6 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.6.1	2	PIPE	Ø1-1/2 SCH 40 (19-7/8)	ASTM A53 GRADE B
13.6.2	1	PIPE	Ø1-1/2 SCH 40 (36-5/8)	ASTM A53 GRADE B
13.6.3	3	PIPE	Ø1-1/2 SCH 40 (58-9/16)	ASTM A53 GRADE B
13.6.4	1	PIPE	Ø1-1/2 SCH 40 (34-3/4)	ASTM A53 GRADE B
13.6.5	2	PIPE	Ø1-1/2 SCH 40 (28-7/16)	ASTM A53 GRADE B
13.6.6	4	PIPE	Ø1-1/2 SCH 40 (47-7/16)	ASTM A53 GRADE B
13.6.7	2	PIPE	Ø1-1/2 SCH 40 (20-7/8)	ASTM A53 GRADE B
13.6.8	2	PIPE	Ø1-1/2 SCH 40 (57-5/8)	ASTM A53 GRADE B
13.6.9	2	PIPE	Ø1-1/2 SCH 40 (18)	ASTM A53 GRADE B
13.6.10	1	TOE PLATE	4 x 1/4 (36-5/8)	ASTM A36
13.6.11	2	TOE PLATE	4x1/4 (56-9/16)	ASTM A36
13.6.12	2	TOE PLATE	4 x 1/4 (18)	ASTM A36



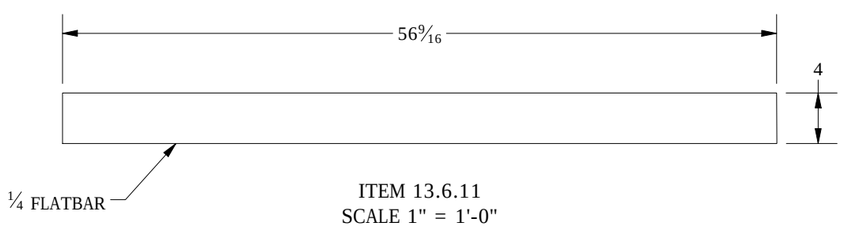
ITEM 13.6 ISOMETRIC VIEW



ITEM 13.6.12
SCALE 1" = 1'-0"



ITEM 13.6.10
SCALE 1" = 1'-0"



ITEM 13.6.11
SCALE 1" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

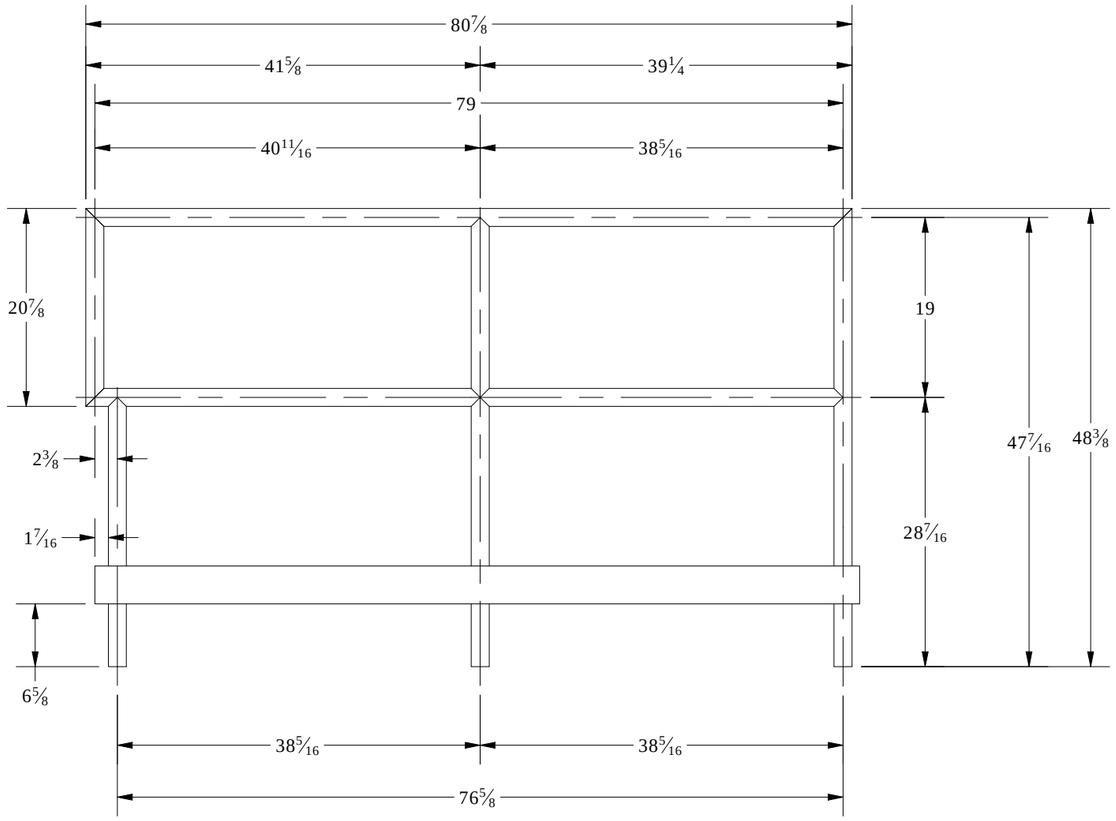
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

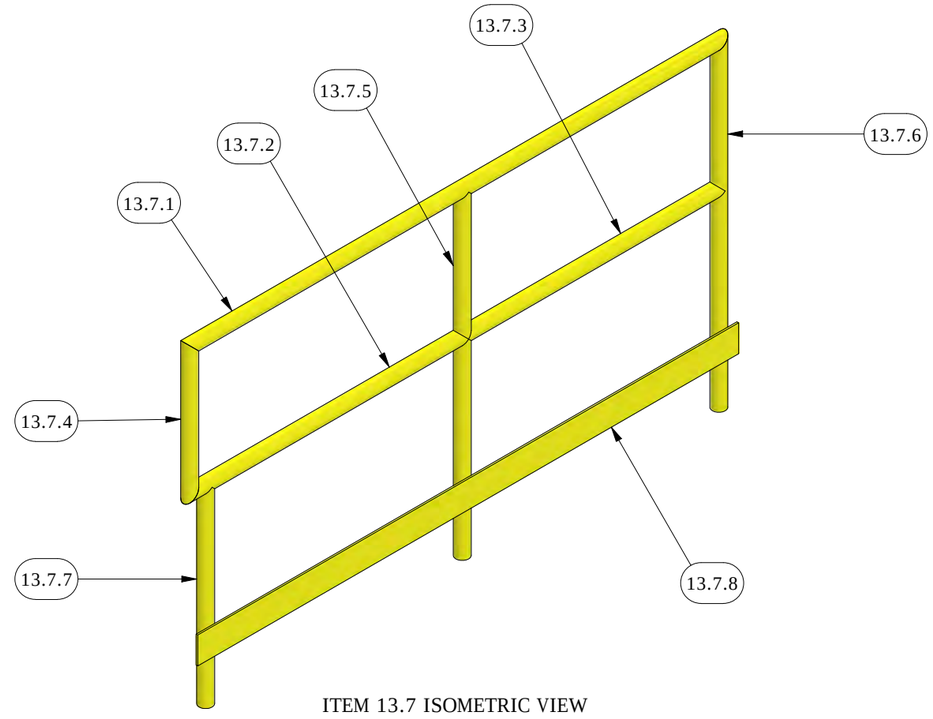
TITLE
PIPELINE TRAINING FLOW LOOP
HAND RAIL LAUNCHER/RECEIVER

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 20 OF 26	

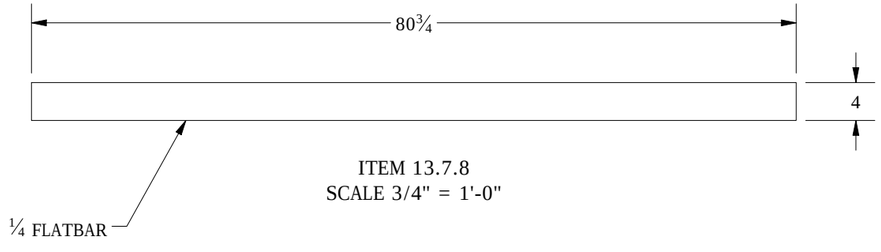


ITEM 13.7
SCALE 3/4" = 1'-0"

ITEM 13.7 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.7.1	1	PIPE	Ø1-1/2 SCH 40 (80-7/8)	ASTM A53 GRADE B
13.7.2	1	PIPE	Ø1-1/2 SCH 40 (41-5/8)	ASTM A53 GRADE B
13.7.3	1	PIPE	Ø1-1/2 SCH 40 (39-1/4)	ASTM A53 GRADE B
13.7.4	1	PIPE	Ø1-1/2 SCH 40 (20-7/8)	ASTM A53 GRADE B
13.7.5	1	PIPE	Ø1-1/2 SCH 40 (47-7/16)	ASTM A53 GRADE B
13.7.6	1	PIPE	Ø1-1/2 SCH 40 (48-3/8)	ASTM A53 GRADE B
13.7.7	1	PIPE	Ø1-1/2 SCH 40 (28-7/16)	ASTM A53 GRADE B
13.7.8	1	TOE PLATE	4 x 1/4 (80-3/4)	ASTM A36



ITEM 13.7 ISOMETRIC VIEW



ITEM 13.7.8
SCALE 3/4" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

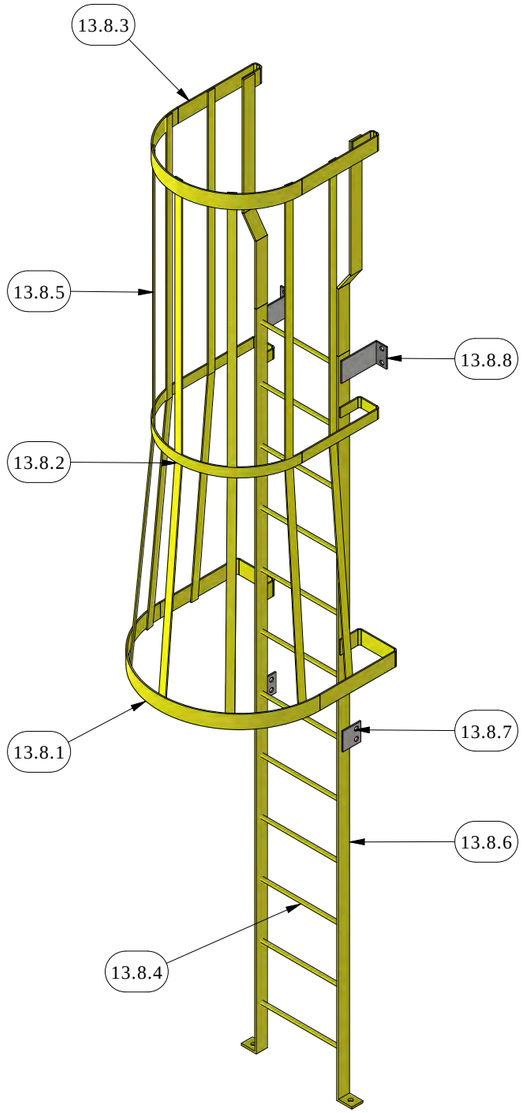
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

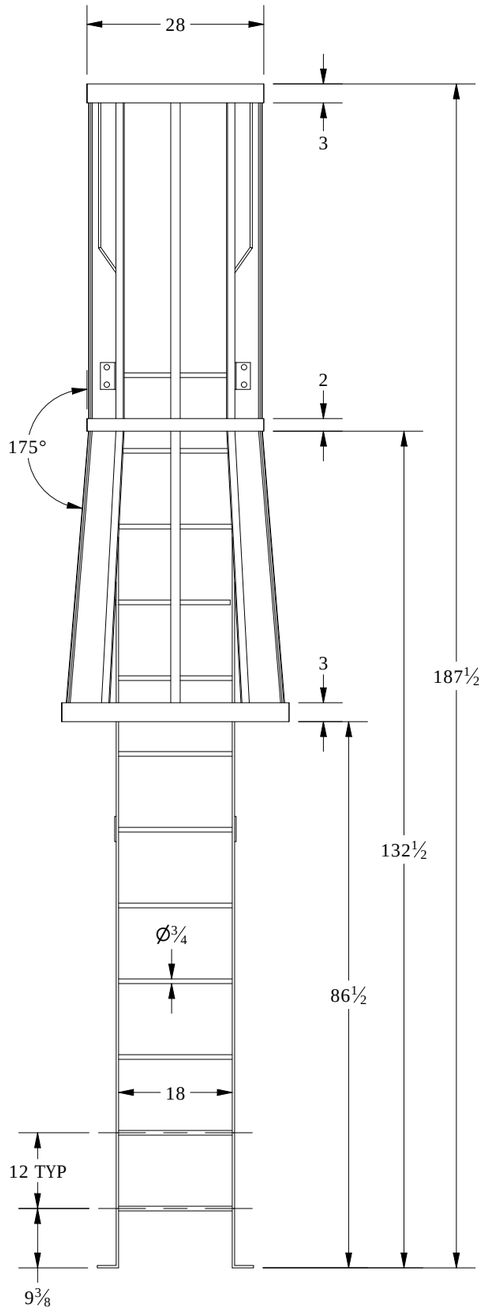
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE
PIPELINE TRAINING FLOW LOOP
HAND RAIL SHORT

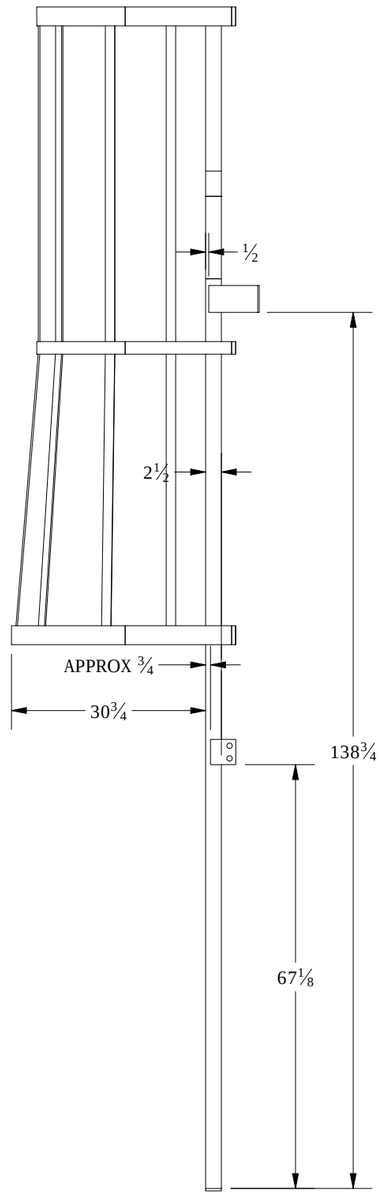
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 21 OF 26	



ITEM 13.8 ISOMETRIC VIEW



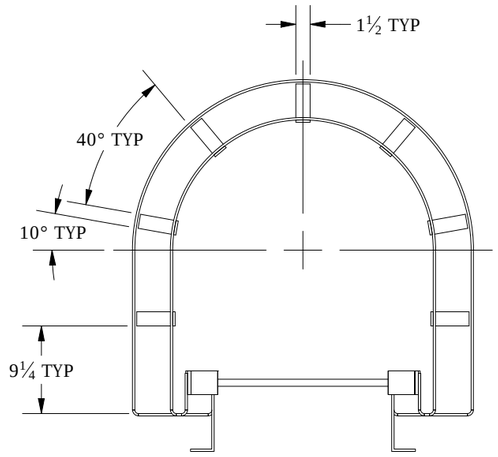
ITEM 13.8 FRONT VIEW
SCALE 1/2" = 1'-0"



ITEM 13.8 SIDE VIEW
SCALE 1/2" = 1'-0"

ITEM 13.8 BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
13.8.1	1	CAGE RING LOWER	1/4 x 3 (115-1/4)	ASTM A36
13.8.2	1	CAGE RING MIDDLE	1/4 x 2 (94-3/4)	ASTM A36
13.8.3	1	CAGE RING UPPER	1/4 x 3 (89-1/8)	ASTM A36
13.8.4	12	LADDER WRUNG	Ø3/4 BAR (18)	ASTM A36
13.8.5	7	VERTICAL CAGE MEMBER	1/4 x 1-1/2 (101-1/8)	ASTM A36
13.8.6	2	SIDE RAIL	3/8 x 2-1/2 (191-1/4)	ASTM A36
13.8.7	2	LADDER CONNECTING PLATE LOWER	1/4 PLT	ASTM A36
13.8.8	2	LADDER CONNECTING PLATE UPPER	1/4 PLT	ASTM A36

NOTE: SAFETY LADDER GATE TO BE PROVIDED BY CONTRACTOR



ITEM 13.8 TOP VIEW
SCALE 3/4" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

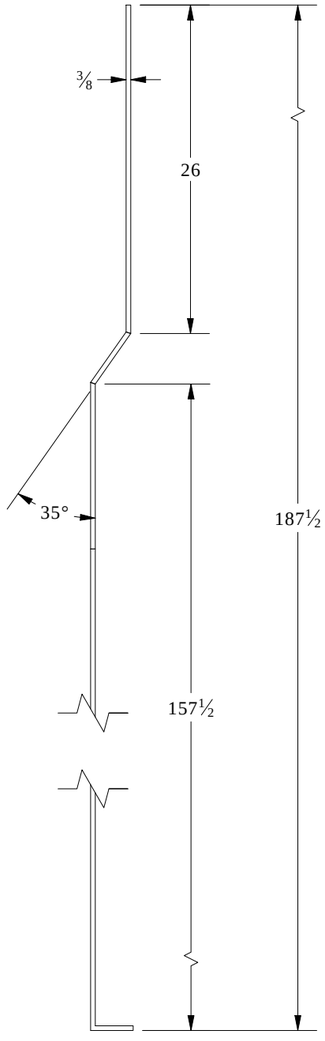
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

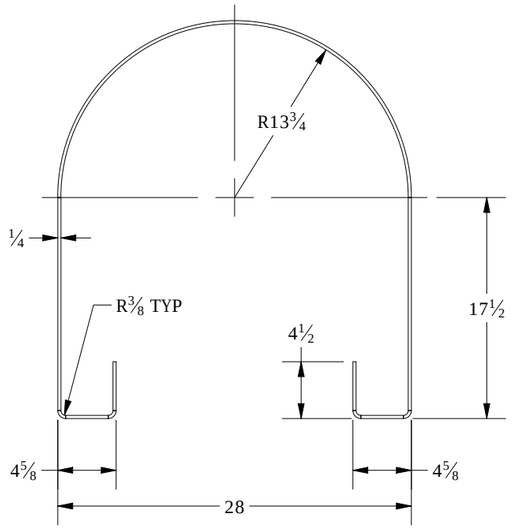
TITLE
PIPELINE TRAINING FLOW LOOP
SAFETY LADDER

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 22 OF 26	
N/A	DNS	STCC-01-A	4		

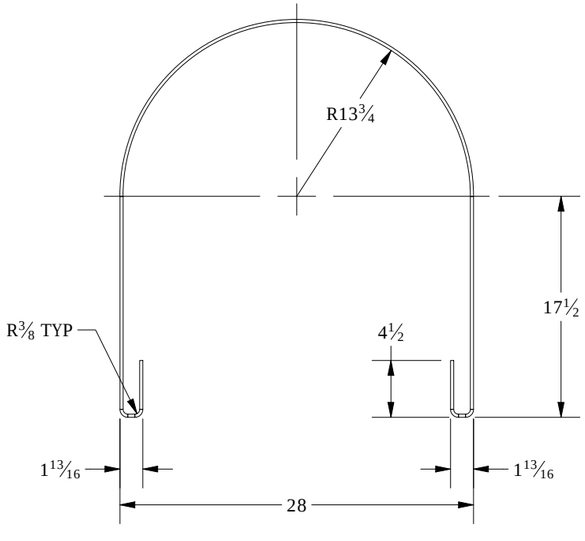


ITEM 13.8.6 FRONT VIEW
SCALE 1" = 1'-0"

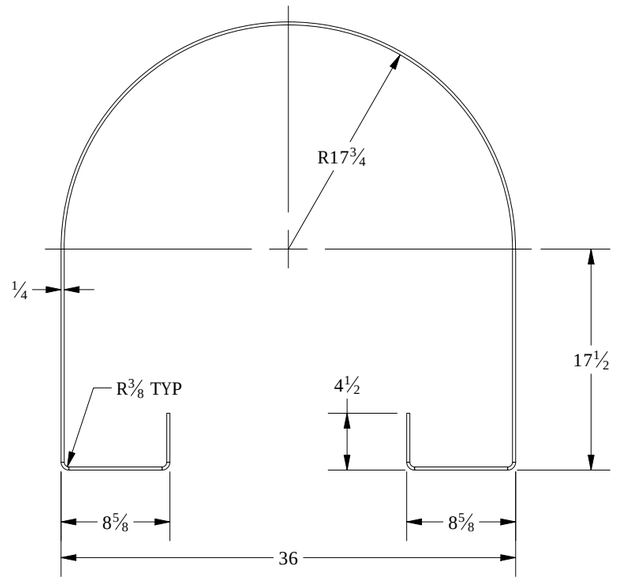
ITEM 13.8.6 BOTTOM VIEW
SCALE 1" = 1'-0"



ITEM 13.8.2
SCALE 1" = 1'-0"



ITEM 13.8.3
SCALE 1" = 1'-0"



ITEM 13.8.1
SCALE 1" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

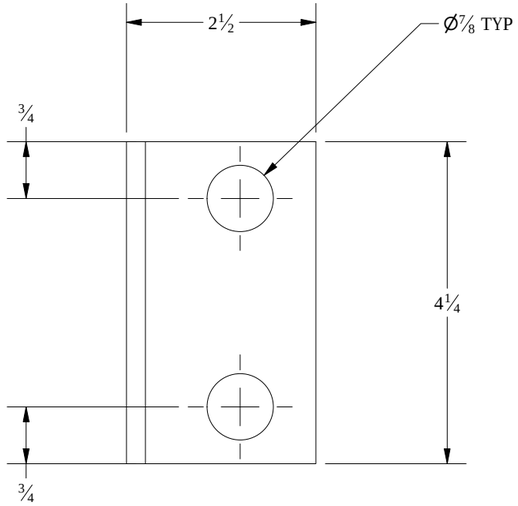
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

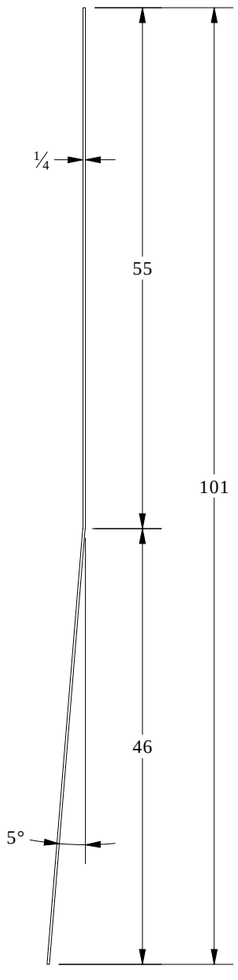
TITLE
PIPELINE TRAINING FLOW LOOP
SAFETY LADDER

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 23 OF 26	
N/A	DNS	STCC-01-A	4		

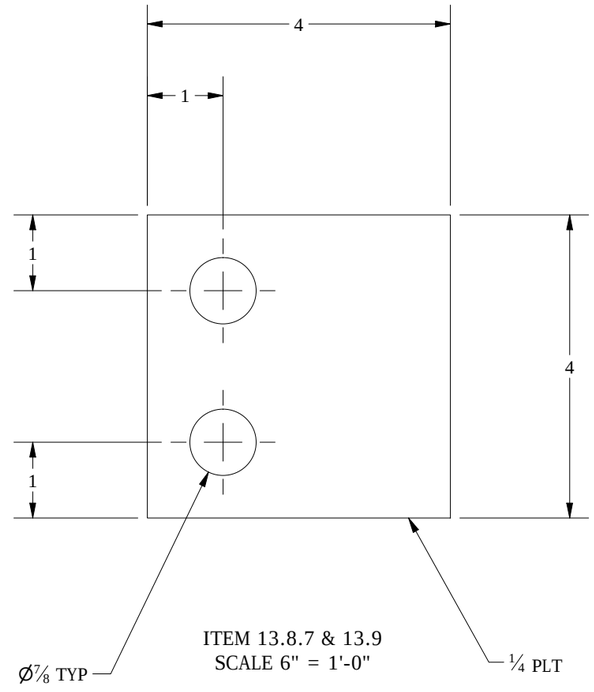


ITEM 13.8.8 TOP VIEW
SCALE 6" = 1'-0"

ITEM 13.8.8 SIDE VIEW
SCALE 6" = 1'-0"



ITEM 13.8.5
SCALE 3/4" = 1'-0"



ITEM 13.8.7 & 13.9
SCALE 6" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

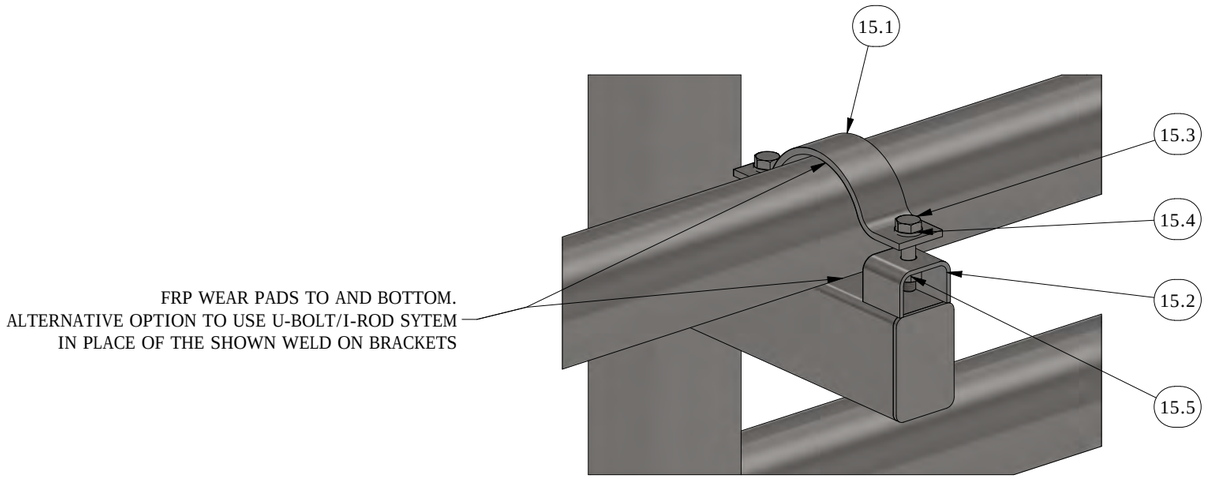
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

PIPELINE TRAINING FLOW LOOP
SAFETY LADDER

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

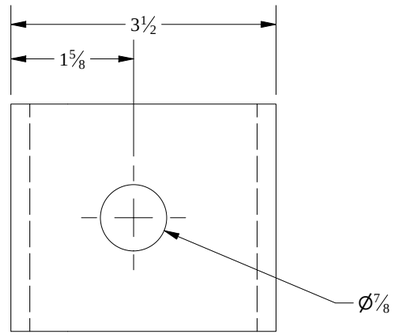
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	24 OF 26



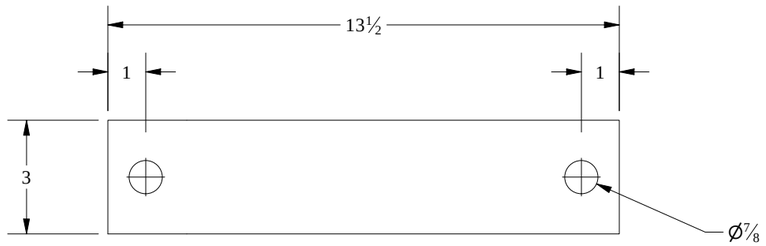
ITEM 15
SCALE 1 1/2" = 1'-0"

BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
15.1	1	6" PIPE CLAMP	3/8 PLT	ASTM A36
15.2	2	PIPE CLAM TIE DOWN	1/4 PLT	ASTM A36
15.3	2	HEX BOLT	Ø3/4-10 UNC (3-1/2)	GRADE 8 ZINC PLATED
15.4	2	FLAT WASHER	Ø3/4	ZINC PLATED STEEL
15.5	2	HEX NUT	Ø3/4-10 UNC	GRADE 8 ZINC PLATED
15.6	2	LOCK WASHER	Ø3/4	ZINC PLATED STEEL
15.7	1	FRP WEAR PAD LOWER	6 x 3 x 1/4	FRP
15.8	1	FRP WEAR PAD UPPER	9 x 3 x 1/4	FRP

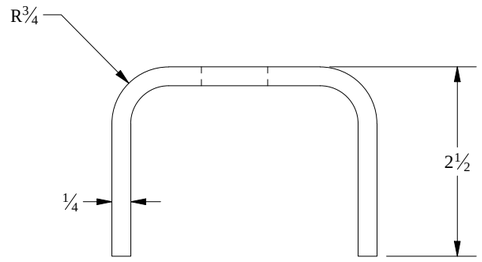
*QTY'S ARE PER ASSEMBLY



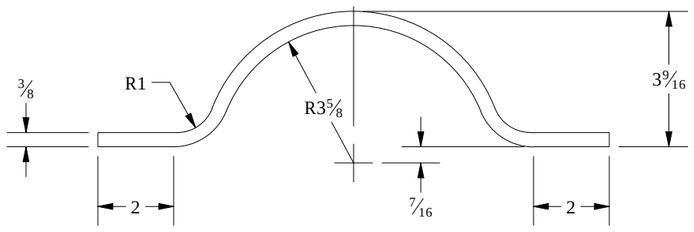
ITEM 15.2 TOP VIEW
SCALE 6" = 1'-0"



ITEM 15.1 TOP VIEW
SCALE 3" = 1'-0"



ITEM 15.2 SIDE VIEW
SCALE 6" = 1'-0"



ITEM 15.1 SIDE VIEW
SCALE 3" = 1'-0"

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

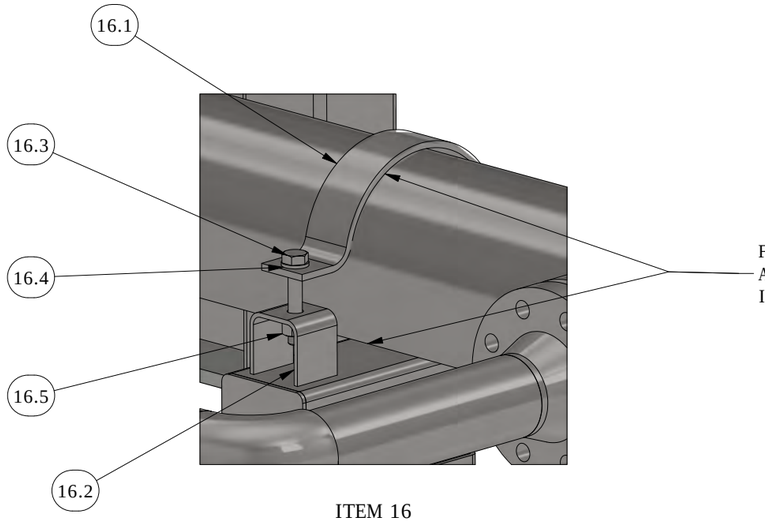
1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP
6" PIPE CLAMP ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.		
N/A	DNS	STCC-01-A	4	SHEET 25 OF 26	

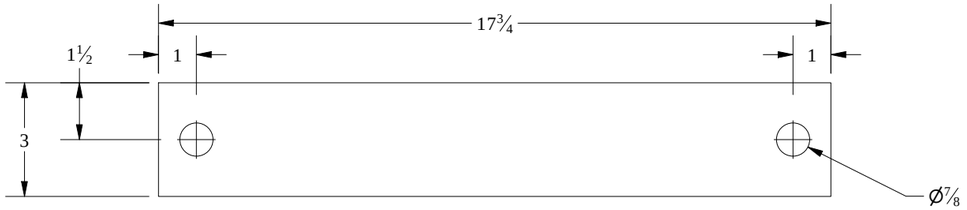


FRP WEAR PADS TOP AND BOTTOM.
ALTERNATIVE OPTION TO USE U-BOLT/I-ROD SYSTEM
IN PLACE OF THE SHOWN WELD ON BRACKETS

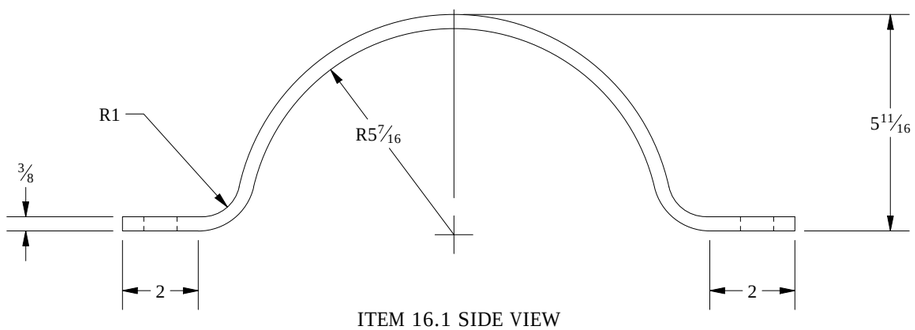
ITEM 16
SCALE 1 1/2" = 1'-0"

BILL OF MATERIALS				
ITEM	QTY	DESCRIPTION	SIZE (LENGTH)	MATERIAL
16.1	1	10" PIPE CLAMP	3/8 PLT	ASTM A36
16.2	2	PIPE CLAM TIE DOWN	1/4 PLT	ASTM A36
16.3	2	HEX BOLT	Ø3/4-10 UNC (4-1/2)	GRADE 8 ZINC PLATED
16.4	2	FLAT WASHER	Ø3/4	ZINC PLATED STEEL
16.5	2	HEX NUT	Ø3/4-10 UNC	GRADE 8 ZINC PLATED
16.6	2	LOCK WASHER	Ø3/4	ZINC PLATED STEEL
16.7	1	FRP WEAR PAD LOWER	10 x 3 x 1/4	FRP
16.8	1	FRP WEAR PAD UPPER	16 x 3 x 1/4	FRP

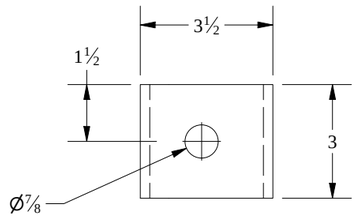
*QTY'S ARE PER ASSEMBLY



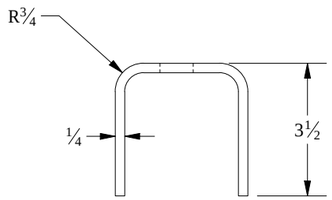
ITEM 16.1 TOP VIEW
SCALE 3" = 1'-0"



ITEM 16.1 SIDE VIEW
SCALE 3" = 1'-0"



ITEM 16.2 TOP VIEW
SCALE 3" = 1'-0"



ITEM 16.2 SIDE VIEW
SCALE 3" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

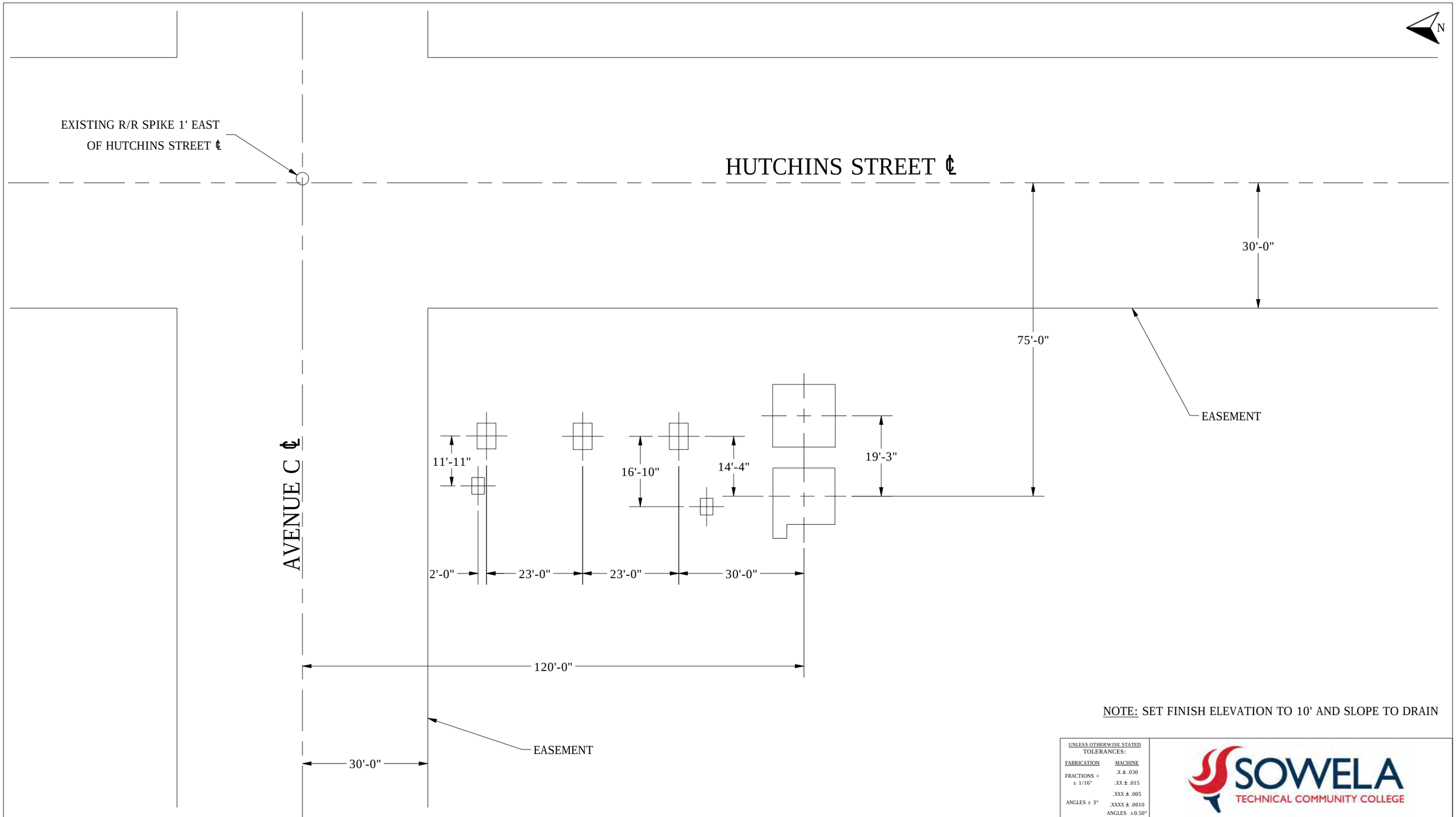
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP
10" PIPE CLAMP ASSEMBLY

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
SEE BOM	HB	8/29/2024	DCK	DCK	B

HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET
N/A	DNS	STCC-01-A	4	26 OF 26



NOTE: SET FINISH ELEVATION TO 10' AND SLOPE TO DRAIN

DATE	REV	DESCRIPTION	BY
6/24/2022	0	INTIAL RELEASE	HB
7/20/2022	1	CHANGED TEST LOOP ORIENTATION	HB
3/28/2023	2	ADDED FINISH ELEVATION NOTE	HB
8/29/2023	3	SHORTENED FLOW LOOP	HB

UNLESS OTHERWISE STATED TOLERANCES:

FABRICATION	MACHINE
FRACTIONS ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE

PIPELINE TRAINING FLOW LOOP SITE LAYOUT

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 1 OF 7	
		STCC-01-B	3		

N

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

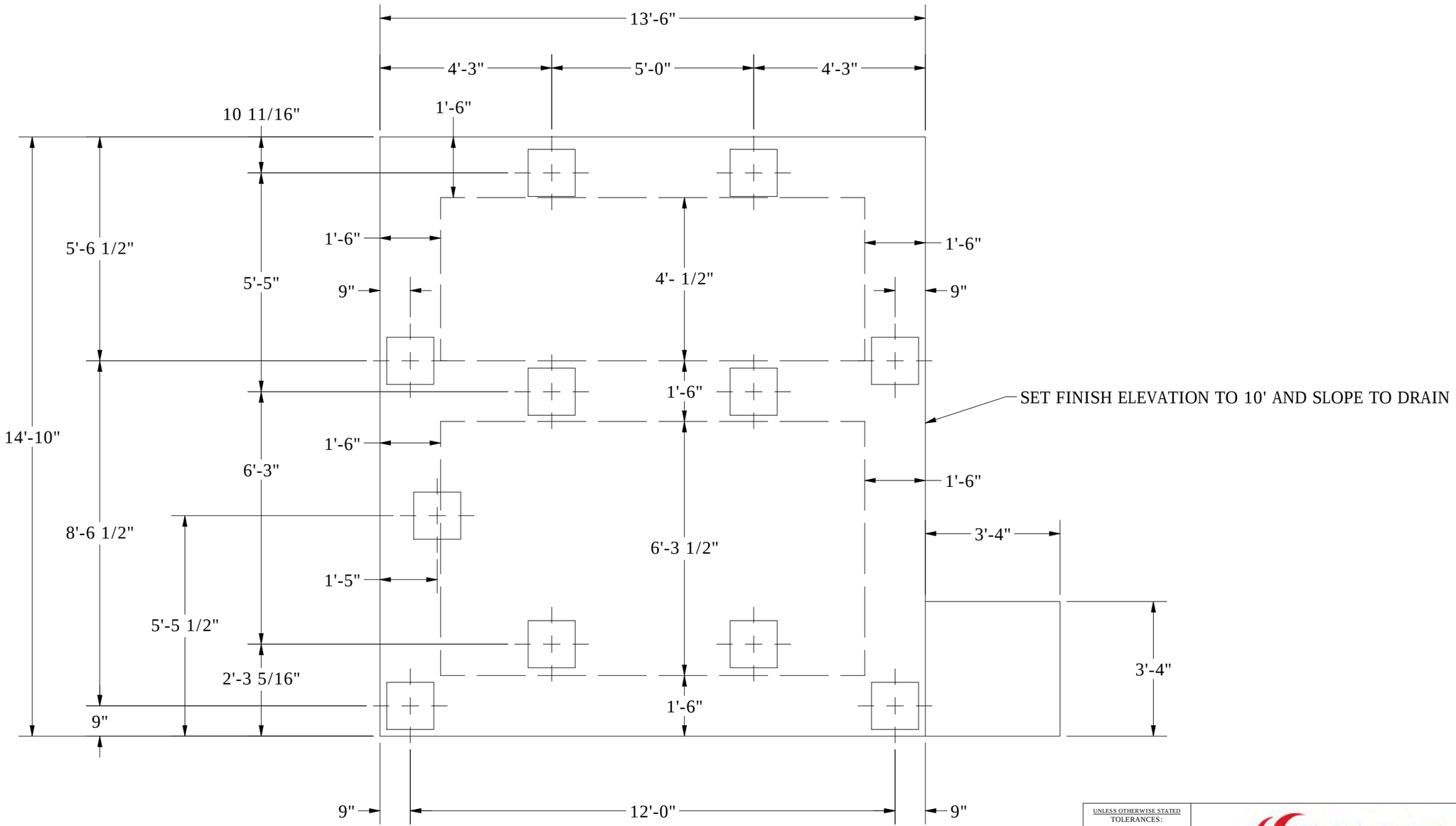
SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

PIPELINE TRAINING FLOW LOOP
SITE LAYOUT - SATELLITE VIEW

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 2 OF 7	
		STCC-01-B	3		



TOP VIEW (FOOTING & BASE PLATE LAYOUT)
SCALE 3/8" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

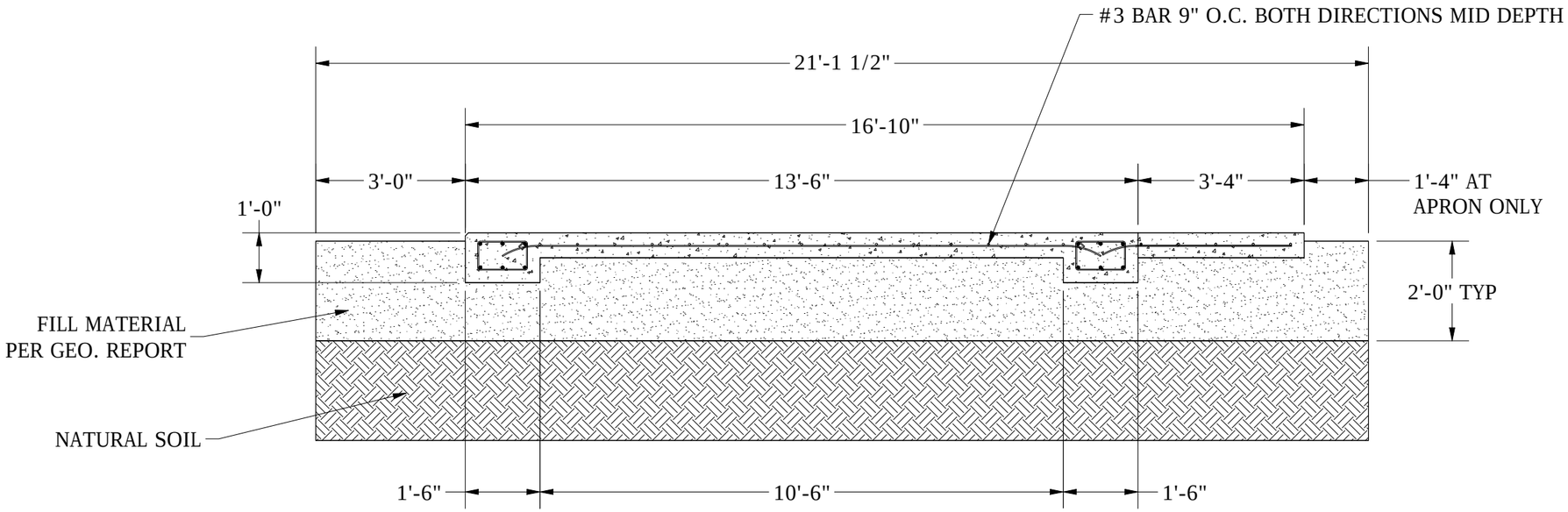
SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

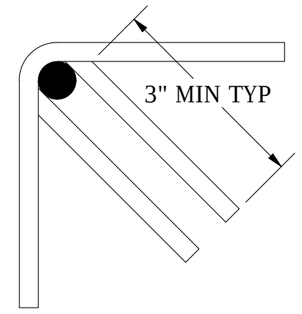
TITLE

PIPELINE TRAINING FLOW LOOP
TOWER FOUNDATION

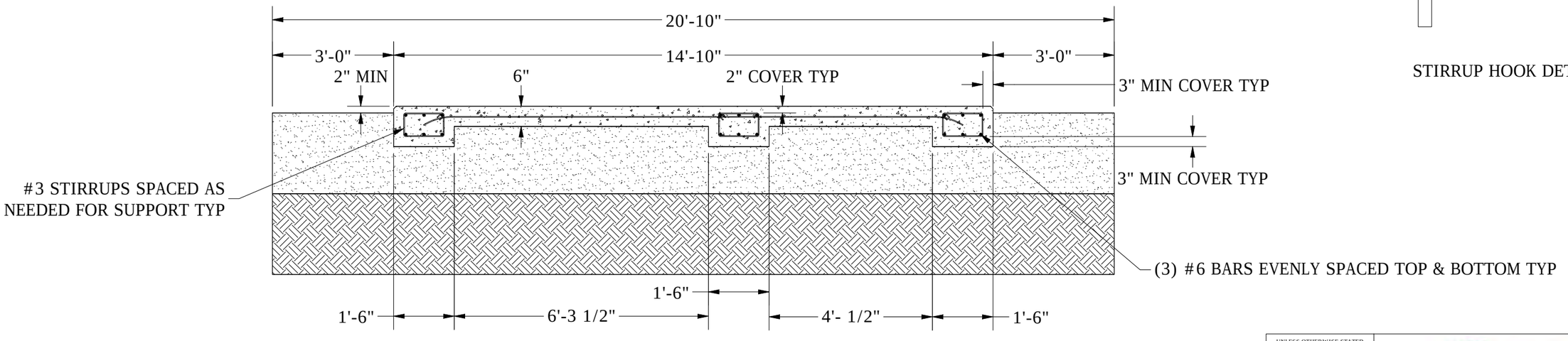
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 3 OF 7	
		STCC-01-B	3		



SIDE VIEW
SCALE 3/8" = 1'-0"



STIRRUP HOOK DETAIL



FRONT VIEW
SCALE 3/8" = 1'-0"

NOTE: 42" MIN LAP SPLICE ON #6 BAR

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

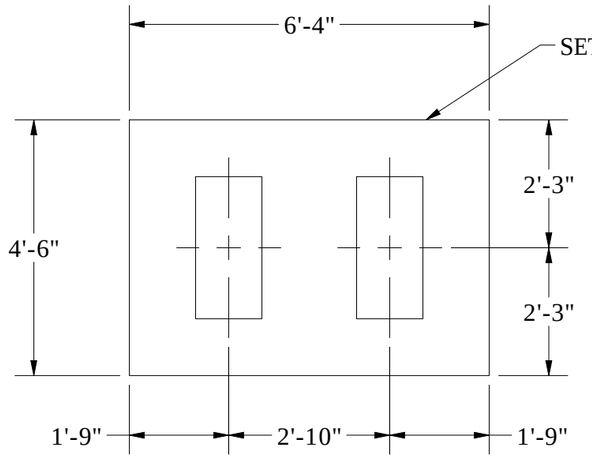
SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

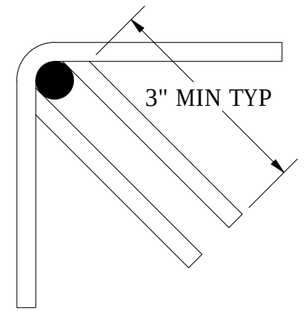
TITLE

PIPELINE TRAINING FLOW LOOP TOWER FOUNDATION

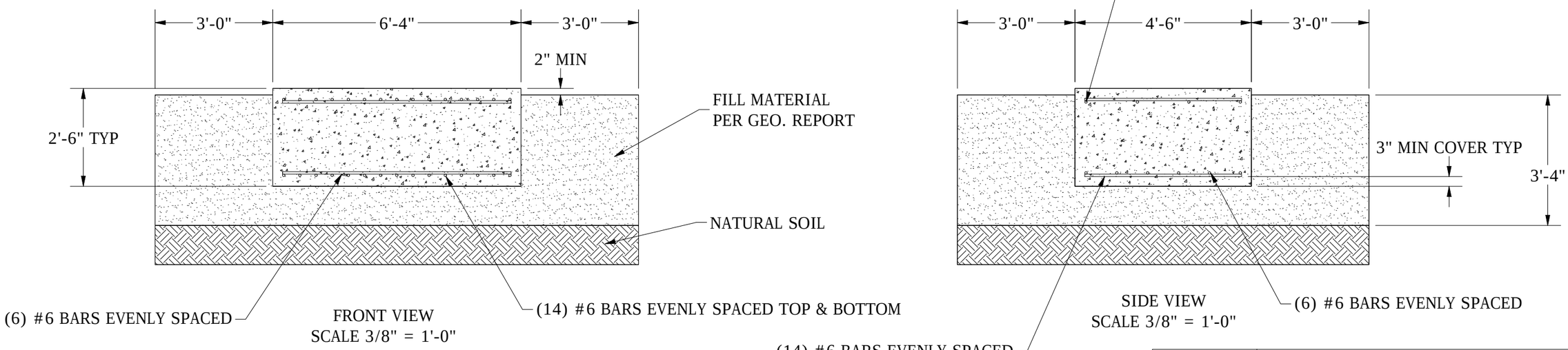
MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 4 OF 7	
		STCC-01-B	3		



TOP VIEW (BASE PLATE LAYOUT)
SCALE 3/8" = 1'-0"



STIRRUP HOOK DETAIL



FRONT VIEW
SCALE 3/8" = 1'-0"

SIDE VIEW
SCALE 3/8" = 1'-0"

NOTE: USE #3 BAR FOR STIRRUPS SPACED AS NEEDED FOR SUPPORT. TYP

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

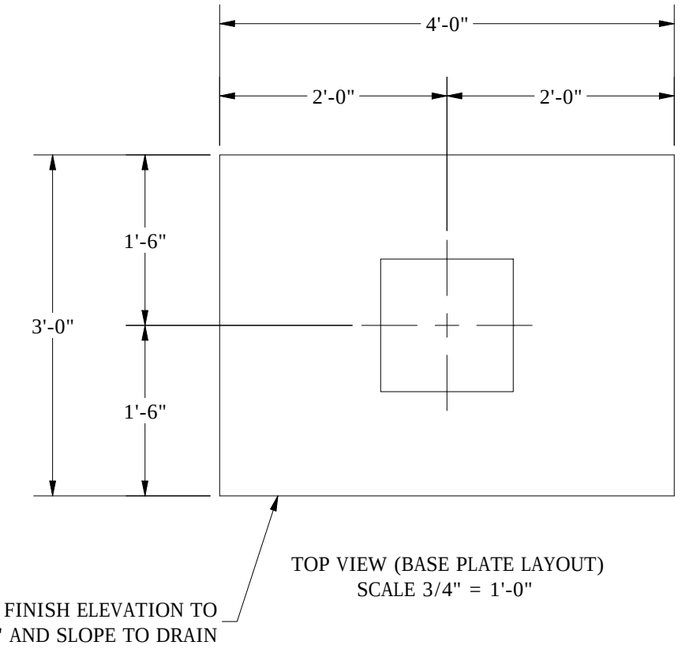
SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

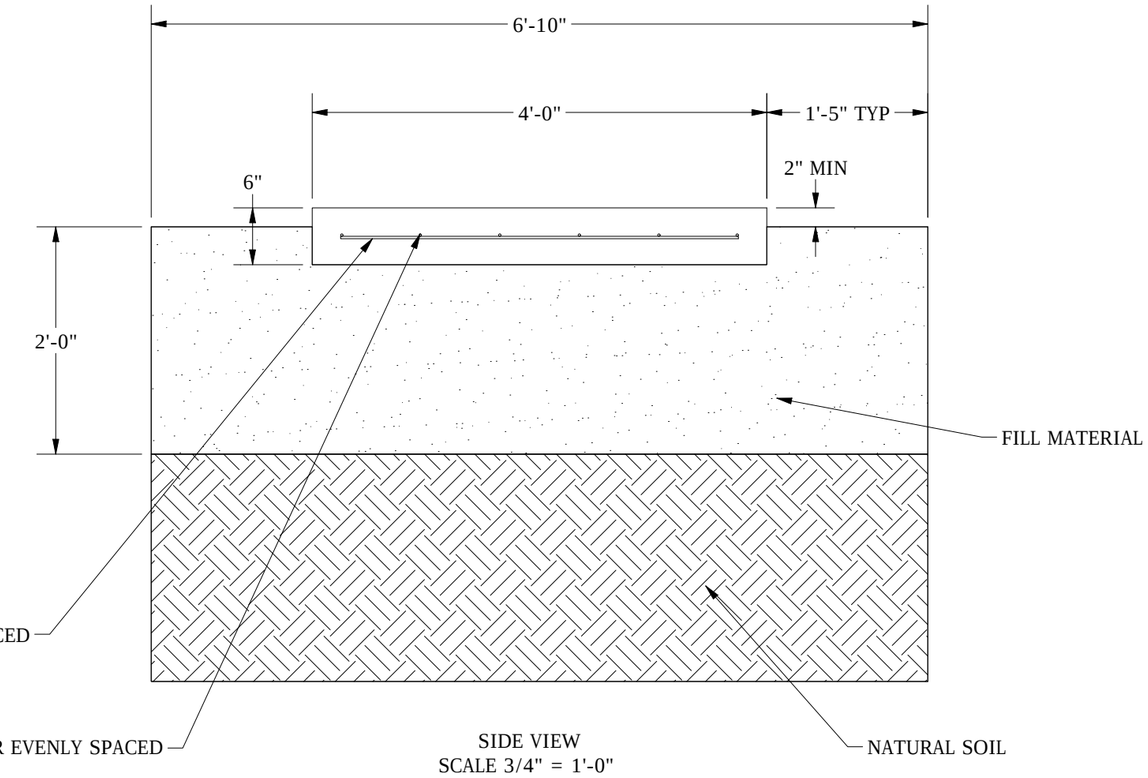
PIPELINE TRAINING FLOW LOOP
PIPE LOOP SUPPORT FOUNDATION

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 5 OF 7	
		STCC-01-B	3		



TOP VIEW (BASE PLATE LAYOUT)
SCALE 3/4" = 1'-0"

SET FINISH ELEVATION TO
10' AND SLOPE TO DRAIN



SIDE VIEW
SCALE 3/4" = 1'-0"

UNLESS OTHERWISE STATED
TOLERANCES:

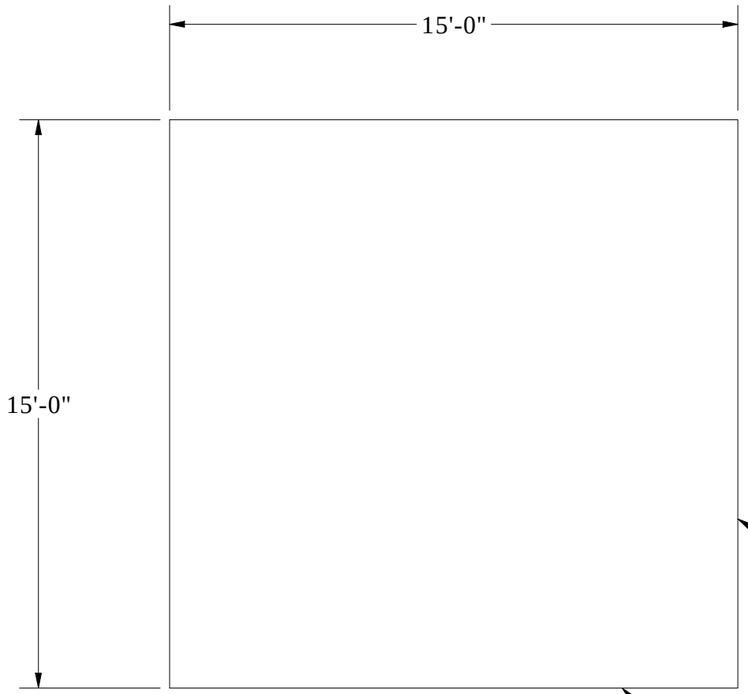
FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ±0.50°

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M-1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

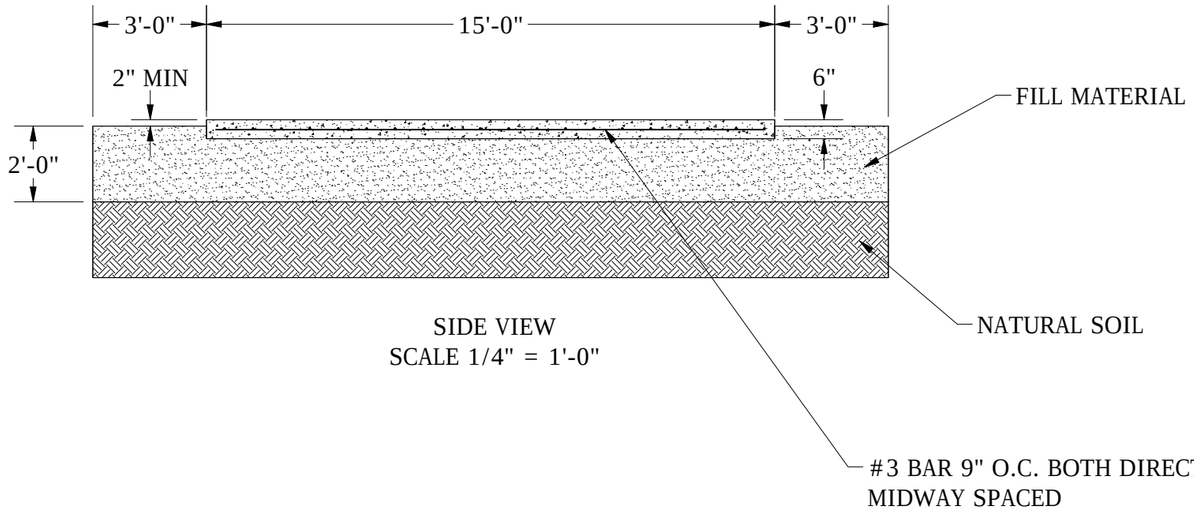
SOWELA TECHNICAL COMMUNITY COLLEGE

TITLE
PIPELINE TRAINING FLOW LOOP
SINGLE PIPE SUPPORT FOUNDATION

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 6 OF 7	
		STCC-01-B	3		



TOP VIEW
SCALE 1/4" = 1'-0"



SIDE VIEW
SCALE 1/4" = 1'-0"

DIMENSIONS (L X W) MAY NEED TO BE ADJUSTED
ONCE THE ACTUAL EQUIPMENT HAS BEEN DETERMINED.

SET FINISH ELEVATION TO 10' AND SLOPE TO DRAIN

UNLESS OTHERWISE STATED
TOLERANCES:

FABRICATION	MACHINE
FRACTIONS = ± 1/16"	.X ± .030
	.XX ± .015
	.XXX ± .005
ANGLES ± 3°	.XXXX ± .0010
	ANGLES ± 0.50°

SOWELA TECHNICAL COMMUNITY COLLEGE

1. DIMENSIONS ARE IN INCHES.
2. INTERPRET DIM. TOL. PER ASME Y14.5M=1994
3. REMOVE ALL BURRS AND SHARP CORNERS.
4. INSIDE CORNERS R.032 OUTSIDE CORNERS .015 X 45°
5. MACHINE FINISH.

TITLE

PIPELINE TRAINING FLOW LOOP EQUIPMENT SLAB FOUNDATION

MATERIAL	DRAWN BY	DATE	CHECKED BY	APPROVED BY	SIZE
	HB	8/29/2024	DCK	DCK	B
HEAT TREATMENT	SCALE	DWG NO.	REV.	SHEET 7 OF 7	
		STCC-01-B	3		

LOUISIANA UNIFORM PUBLIC WORK BID FORM

TO: _____ **BID FOR:** _____

_____ _____

_____ _____

_____ _____

(Owner to provide name and address of owner) (*Owner to provide name of project and other identifying information)*

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by: _____ _____ and dated: _____

(Owner to provide name of entity preparing bidding documents.)

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA:** (Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____ .

TOTAL BASE BID: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____Dollars ($ _____)

ALTERNATES: For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

Alternate No. 1 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____Dollars ($ _____)

Alternate No. 2 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____Dollars ($ _____)

Alternate No. 3 *(Owner to provide description of alternate and state whether add or deduct)* for the lump sum of:

_____Dollars ($_____)

NAME OF BIDDER: _____

ADDRESS OF BIDDER: _____

_____

LOUISIANA CONTRACTOR'S LICENSE NUMBER: _____

NAME OF AUTHORIZED SIGNATORY OF BIDDER: _____

TITLE OF AUTHORIZED SIGNATORY OF BIDDER: _____

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **: _____

DATE: _____

THE FOLLOWING ITEMS ARE TO BE INCLUDED WITH THE SUBMISSION OF THIS LOUISIANA UNIFORM PUBLIC WORK BID FORM:

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.

**** A CORPORATE RESOLUTION OR WRITTEN EVIDENCE** of the authority of the person signing the bid for the public work as prescribed by LA R.S. 38:2212(B)(5).

BID SECURITY in the form of a bid bond, certified check or cashier's check as prescribed by LA R.S. 38:2218(A) attached to and made a part of this bid.

LOUISIANA UNIFORM PUBLIC WORK BID FORM

UNIT PRICE FORM

TO: ______________________________
____
____
____
(Owner to provide name and address of owner)

BID FOR: ______________________________
____
____
____
(Owner to provide name of project and other identifying information)

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

DESCRIPTION:	❑ Base Bid or ❑ Alt.# ___			
REF. NO.	QUANTITY:	UNIT OF MEASURE:	UNIT PRICE	UNIT PRICE EXTENSION *(Quantity times Unit Price)*

Wording for "DESCRIPTION" is to be provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner

BID BOND

FOR

Pipeline Training Equipment

Date:_____

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____, as Principal, and _____, as Surety, are held and firmly bound unto SOWELA Technical Community College (Obligee), in the full and just sum of five (5%) percent of the total amount of this proposal, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U.S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater than the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A.M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A.M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Oblige on a Contract for:

_____

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

_____ _____

PRINCIPAL (BIDDER) SURETY

BY: _____ BY: _____

AUTHORIZED OFFICER-OWNER-PARTNER AGENT OR ATTORNEY-IN-FACT

(SEAL)

Pipeline Training
Equipment

BID NO:
83271

STATE OF LOUISIANA

PARISH OF CALCASIEU

ATTESTATIONS AFFIDAVIT

Before me, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

LA. R.S. 38;2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

(a) Public bribery (R.S. 14:118)
(b) Corrupt influencing (R.S. 14:120)
(c) Extortion (R.S. 14:66)
(d) Money laundering (R.S. 14:23)

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

(a) Theft (R.S. 14:67)
(b) Identity Theft (R.S. 14:67.16)
(c) Theft of a business record (R.S.14:67.20)
(d) False accounting (R.S. 14:70)
(e) Issuing worthless checks (R.S. 14:71)
(f) Bank fraud (R.S. 14:71.1)
(g) Forgery (R.S. 14:72)
(h) Contractors; misapplication of payments (R.S. 14:202) (i) Malfeasance in office (R.S. 14:134)

LA. R.S. 38;2212.10 Verification of Employees

A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.

B. If awarded the contract, Appearer shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

C. If awarded the contract, Appearer shall require all subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance

A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.

B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the **bidding** / **proposing** entity.

NAME OF BIDDER	**NAME OF AUTHORIZED SIGNATORY OF BIDDER**
DATE	**TITLE OF AUTHORIZED SIGNATORY OF BIDDER**

SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER AFFIANT

Sworn to and subscribed before me by Affiant on the _____ day of _____, 20___

INDEMNIFICATION AGREEMENT

The_____(Contractor) agrees to protect, defend, indemnify, save, and hold harmless the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants and employees, including volunteers, from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur or in any way grow out of any act or omission of_____(Contractor), its agents, servants, and employees, or any and all costs, expense and/or attorney fees incurred by_____(Contractor) as a result of any claim, demands, and/or causes of action except those claims, demands, and/or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its agents, representatives, and/or employees. _____(Contractor) agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent.

Accepted by _____

Company Name

_____

Signature

_____

Title

Date Accepted _____

Is Certificate of Insurance Attached? _____ Yes _____ No

Contract No _____ For Sowela Technical Community College

Purpose of Contract: Pipeline Training Equipment

STATE OF LOUISIANA NAME _____

SOWELA TECHNICAL COMMUNITY COLLEGE LOCATION _____

TITLE 38 AFFIDAVIT

Before me, the undersigned authority, duly commissioned and qualified within and for the state and parish aforesaid, personally came and appeared _____ representing _____ who, being by me first duly sworn deposed and said that he has read this affidavit and does hereby agree under oath to comply with all provisions herein as follows:

PART I

Section 2220 of Part II of Chapter 10 to Title 38 of the Louisiana Revised Statutes of 1950 as amended.

(1) That affiant employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the affiant whose services in connection with the construction of the public building or project or in securing the public contract were in the regular course of their duties for affiant; and

(2) That no part of the contract price received by affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the affiant whose services in connection with the construction of the public building or project were in the regular course of their duties for affiant.

PART II

Section 2190 of Part I of Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 as amended.

The affiant, if he be an architect or engineer, or representative thereof, does not own a substantial financial interest, either directly or indirectly, in any corporation, firm, partnership, or other organization which supplied materials for the construction of a public building or project when the architect or engineer has performed architectural or engineering services, either directly or indirectly, in connection with the public building or project for which the materials are being supplied.

For the purpose of this Section, a "substantial financial interest" shall exclude any interest in stock being traded on the American Stock Exchange or the New York Stock Exchange.

That affiant, if subject to the provisions of this section, does hereby agree to be subject to the penalties involved for the violation of this section.

PART III

That affiant does hereby state that he has read and agrees to comply with and be subject to the provisions of Part V of Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950, being Sections 2290 through 2296 of Title 38 as amended.

Signature of Affiant: _____

SWORN TO AND SUBSCRIBED BEFORE ME THIS_____ DAY OF_____, 201____.

Signature of Notary: _____