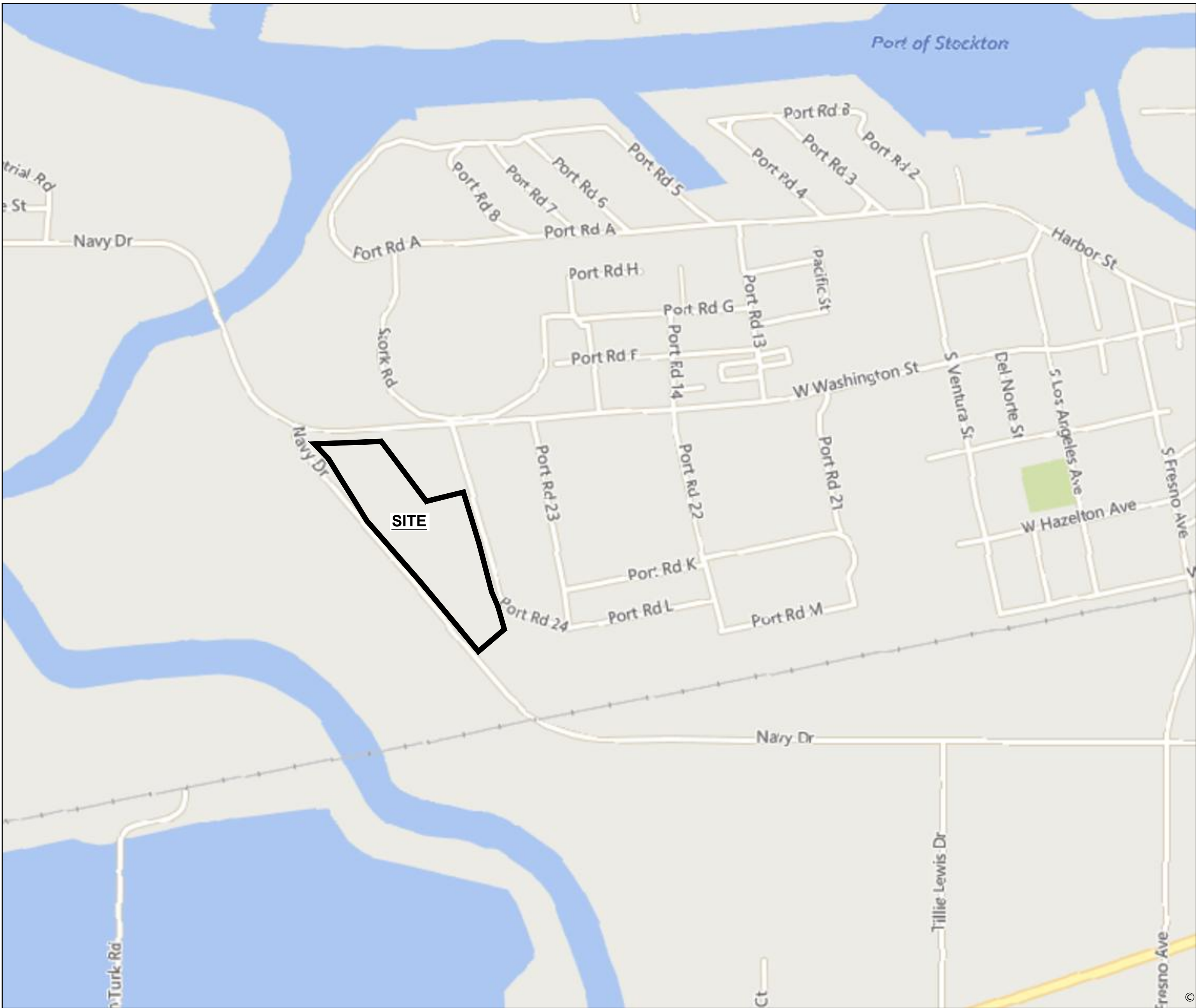
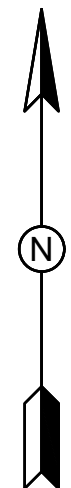


# NORTH ENERGY RENEWABLES TERMINAL EXPANSION



**APPLICABLE CODES**  
BELOW IS A LIST OF GENERAL APPLICABLE CODES. FOR SPECIFIC CODE REFERENCE, SEE DISCIPLINE SPECIFIC GENERAL NOTES.

1. CALIFORNIA BUILDING CODE (CBC - 2019)
2. AMERICAN CONCRETE INSTITUTE (ACI)
3. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
4. AMERICAN IRON AND STEEL INSTITUTE (AISI)
5. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
6. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
7. AMERICAN WELDING SOCIETY (AWS)
8. SOCIETY FOR PROTECTIVE COATINGS (SSPC)
9. CALIFORNIA ELECTRICAL CODE (CEC - 2019)
10. NATIONAL ELECTRICAL CODE (NEC)
11. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) B31.3 PROCESS PIPING

**SCOPE OF WORK**

1. NEW FOUNDATION FOR NEW POWER DISTRIBUTION CENTER (PDC).
2. NEW PIPING TO EXISTING TANKS TO DELIVER RENEWABLE DIESEL AT EXISTING TRUCK RACK.
3. NEW TRANSFER AND LOADING PUMPS.
4. NEW FOUNDATION AND STRUCTURAL SUPPORTS.
5. NEW POWER, GROUNDING, AND INSTRUMENTATION.

**DRAWING INDEX**

| DRAWING NO. | DRAWING DESCRIPTION                 | REV NO. |
|-------------|-------------------------------------|---------|
| STOT-02-103 | COVER SHEET                         | 1       |
| NSCE-CS-001 | CIVIL GENERAL NOTES                 | 5       |
| NSCE-CS-002 | STRUCTURAL GENERAL NOTES            | 0       |
| NSCE-CS-003 | ANCHOR BOLT DETAILS                 | 0       |
| STOT-04-104 | MECHANICAL/STRUCTURAL DRAWING INDEX | 0       |
| STOT-01-003 | ELECTRICAL DRAWING INDEX            | 0       |

**NOTES:**  
1)

**REFERENCE DRAWINGS:**  
STOT-04-104 - MECHANICAL / STRUCTURAL DRAWING INDEX  
STOT-01-003 - ELECTRICAL DRAWING INDEX

| NO. | REVISION                | BY  | DATE     | APR     |
|-----|-------------------------|-----|----------|---------|
| 1   | ISSUED FOR CONSTRUCTION | JAA | 10/07/20 | JAA RLM |
| 0   | ISSUED FOR CONSTRUCTION | RJV | 4/22/20  | JAA RLM |

**PROJECT LOCATION:** STOCKTON TERMINAL

|                      |                      |
|----------------------|----------------------|
| <b>DRAWN BY:</b> RJV | <b>DATE:</b> 9/23/19 |
| <b>CHECKED:</b> JAA  | <b>DATE:</b> 9/23/19 |
| <b>APPROVED:</b> JAA | <b>DATE:</b> 9/23/19 |
| <b>SCALE:</b> NONE   |                      |

**STOCKTON TERMINAL  
TERMINALS 1 & 3  
COVER SHEET**

**ORIGINAL PROJECT NO. WC\_00247**

|                                |               |
|--------------------------------|---------------|
| <b>DRAWING NO. STOT-02-103</b> | <b>REV. 1</b> |
|--------------------------------|---------------|

**BUILDING CODE SUMMARY 2019 CBC**

**PROJECT DESCRIPTION**  
SEE STRUCTURAL CALCULATIONS SUBMITTAL.

**OCCUPANCY**  
GROUP S-2/U FOR THE PIPE SUPPORT PROJECTS

**CONSTRUCTION TYPES**  
TYPE II-B (NOT FIRE RATED)

**DESIGN CRITERIA**

- DEAD LOAD: SEE PIPING.
- ROOF LIVE LOAD: 25 PSF MIN. OR AS NOTED
- SNOW LOAD: 0 PSF
- WIND DESIGN DATA:  
ULTIMATE DESIGN WIND SPEED = 93 MPH  
RISK CATEGORY II  
EXPOSURE C  
INTERNAL PRESSURE: NA  
COMPONENT AND CLADDING PRESSURE: NA
- EARTHQUAKE DESIGN DATA:  
RISK CATEGORY II  
SEISMIC IMPORTANCE FACTOR  $I_e = 1.0$   
MAPPED PARAMETERS:  $S_s = 0.776 g$   $S_1 = 0.297 g$   
SITE CLASS D (DEFAULT)  
DESIGN PARAMETERS:  $SDS = 0.621 g$   $SD1 = NA$   
SEISMIC DESIGN CATEGORY D
- FOUNDATION: FOR ALLOWABLE SOIL BEARING PRESSURE IS 2,500 PSF AT 3 FOOT NOMINAL DEPTH BELOW LOCAL GRADE. SEE STRUCTURAL CALCULATIONS AND FOUNDATION SHEETS FOR ALTERNATE FOUNDATIONS.
- FLOOD DATA: NA
- SPECIAL LOADS: PIPING IS A DEAD LOAD AND HAS BEEN CONSIDERED AS ALL PIPES SIMULTANEOUSLY FULL OF WATER FOR SHORT TERM LOADING AND SPECIFIC GRAVITY OF 0.88 FOR NORMAL CASES.

**EARTHWORK**

- GANNET FLEMING HAS DONE MULTIPLE SUBSURFACE INVESTIGATIONS AND REVIEWED ADDITIONAL SUBSURFACE INVESTIGATIONS BY OTHER GEOTECHNICAL PROFESSIONALS AT THIS SITE AND HAS PROVIDED A GEOTECHNICAL DESIGN RECOMMENDATIONS AND SEISMIC HAZARDS EVALUATION, GANNET FLEMING PROJECT NO. 65485 DATED JUNE 26, 2019. BENJAMIN SERNA, PE, GE3000
- SEE GEOTECHNICAL REPORT FOR ADDITIONAL RECOMMENDATIONS RELATED TO FOUNDATION CONSTRUCTION, EXCAVATIONS, AND EARTHWORK.

PROJECT-SPECIFIC SPECIAL INSPECTION ELEMENTS WILL BE INCLUDED IN THE PERMIT SUBMITTAL.

| STRUCTURAL OBSERVATIONS & SPECIAL INSPECTIONS – CHAPTER 17, 2019 CBC   |            |          |  |
|--|------------|----------|--|
| STATEMENT OF SPECIAL INSPECTION, SEC. 1705 BY MUSTAR   |            |          |  |
| SOILS, TABLE 1704.7  | CONTINUOUS | PERIODIC |  |
| 1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.   | –          | X        |  |
| 2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.   | –          | X        |  |
| 3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.   | –          | X        |  |
| 4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.   | X          | –        |  |
| 5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.   | –          | X        |  |
| CAST-IN-PLACE DEEP FOUNDATION ELEMENTS, TABLE 1704.9   | CONTINUOUS | PERIODIC |  |
| 1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS OF EACH ELEMENT.   | X          | –        |  |
| 2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM ELEMENT DIAMETERS, BELL DIAMETERS(IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK(IF APPLICABLE AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CONCRETE OR GROUT VOLUMES. | X          | –        |  |
| 3. FOR CONCRETE ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1704.4.  | –          | –        |  |
| CONCRETE CONSTRUCTION, TABLE 1704.4  | CONTINUOUS | PERIODIC |  |
| 1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.   | –          | X        |  |
| 3. INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.   | X          | –        |  |
| 4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE  | X          | –        |  |
| 5. VERIFYING USE OF REQUIRED DESIGN MIX.   | –          | X        |  |
| 6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.  | X          | –        |  |
| 8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES,  | –          | X        |  |
| 12. INSPECT FORM WORK FOR SHAPE, LOCATION AND DIMENSION OF THE CONCRETE MEMBER BEING FORMED.   | –          | X        |  |
| STEEL CONSTRUCTION, TABLE 1704.3   | CONTINUOUS | PERIODIC |  |
| 1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS:   |            |          |  |
| a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.  | –          | X        |  |
| b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.  | –          | X        |  |
| 2. INSPECTION OF HIGH-STRENGTH BOLTING:  |            |          |  |
| a. SNUG-TIGHT JOINTS.  | –          | X        |  |
| b. PRETENSIONED JOINTS.  | X          | –        |  |
| 3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:   |            |          |  |
| a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.   | –          | X        |  |
| b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.   | –          | X        |  |
| c. MANUFACTURER'S CERTIFIED TEST REPORTS.  | –          | X        |  |
| 4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:   |            |          |  |
| a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.   | –          | X        |  |
| b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.  | –          | X        |  |
| 5. INSPECTION OF WELDING:  |            |          |  |
| a. STRUCTURAL STEEL AND COLD FORMED STEEL DECK:  |            |          |  |
| 1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.  | X          | –        |  |
| 5) SINGLE-PASS FILLET WELDS $\leq 5/16"$   | –          | X        |  |

**1. GENERAL**

- UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE DESIGN, FABRICATION, TESTING, AND CONSTRUCTION OF ALL FOUNDATIONS AND STRUCTURES SHALL BE IN ACCORDANCE WITH THE FOLLOWING NOTES. SHOULD CODES OR STANDARDS DISAGREE, THE MORE STRINGENT REQUIREMENT AS DETERMINED BY THE OWNER'S REPRESENTATIVE SHALL GOVERN.
- ONLY THE LATEST EDITION OF REFERENCED CODES OR STANDARDS IS APPLICABLE.
- ALL SPECIFIED MATERIALS INCLUDING GROUTS, SEALANTS, ANCHORAGE DEVICES, MECHANICAL DEVICES, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

**2. CONCRETE**

- APPLICABLE CODES OR STANDARDS
  - ALL CONCRETE DESIGN, TESTING, AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
    - ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
    - ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
    - ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE".
    - ACI 336 "SUGGESTED DESIGN AND CONSTRUCTION PROCEDURES FOR PIER FOUNDATIONS".
    - ACI 305R, "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING"
    - ACI 306R, "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING"
    - ACI 308, "RECOMMENDED PRACTICE FOR CURING CONCRETE"
    - ACI 315 & 315R, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
    - ACI 316 "RECOMMENDATION FOR CONSTRUCTION OF CONCRETE PAVEMENTS AND CONCRETE BASES"
    - ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
    - ASTM STANDARDS FOR THE MATERIALS LISTED.
    - AISI STANDARDS FOR THE MATERIALS LISTED.
    - OSHA STANDARDS.

**3. MATERIALS AND CONCRETE STRENGTH**

- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI FOR FOUNDATIONS, 2500 PSI FOR AREA PAVING AND ELECTRICAL CONDUIT ENCASEMENT AND 4000 PSI FOR SUPERSTRUCTURES, UNLESS OTHERWISE NOTED.
- ALL CEMENT SHALL MEET ASTM C150 TYPE 1 SPECIFICATIONS UNLESS OTHERWISE NOTED.
- ALL AGGREGATE SHALL BE OF NORMAL WEIGHT AND IN COMPLIANCE WITH ASTM C33. THE MAXIMUM SIZE SHALL BE IN ACCORDANCE WITH ACI 318-89 SECTION 3.3.2.
- ALL REINFORCING STEEL SHALL MEET ASTM A615 GRADE 60 SPECIFICATIONS AND WILL BE FREE FROM LOOSE RUST, SCALE, MUD, OIL OR OTHER COATINGS THAT WILL PREVENT OR REDUCE BONDING.
- WELDED WIRE FABRIC SHALL MEET ASTM A185 SPECIFICATIONS.
- ALL EXPOSED EDGES OF CONCRETE ABOVE GRADE SHALL HAVE A 3/4" 45 DEGREE CHAMFER UNLESS OTHERWISE NOTED.
- WHERE THE BONDING OF NEW CONCRETE TO OLD IS REQUIRED, "ARMOR PLATE" 901 AS MANUFACTURED BY WIL-COR, INC., OF PASADENA, TEXAS, SHALL BE USED OR AN APPROVED EQUAL. WHERE BONDING OF HORIZONTAL DOWELS IS REQUIRED IN OLD CONCRETE, THE AGENT USED SHALL BE "ARMOR PLATE" 990 AS MANUFACTURED BY WIL-COR, INC., OF PASADENA, TEXAS OR AN APPROVED EQUAL.

**6. CONCRETE PROTECTION FOR REINFORCEMENT**

- PROVIDE THE FOLLOWING CONCRETE PROTECTIVE COVER FOR MAIN REINFORCEMENT, UNLESS OTHERWISE NOTED.
  - 3" FOR ALL CONCRETE DEPOSITED DIRECTLY AGAINST THE GROUND.
  - 2" FOR ALL FORMED CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND.
  - 3/4" FOR CONCRETE SLABS AND WALLS AND 1 1/2" FOR BEAMS AND GIRDS FOR FORMED CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND.
  - 2" FOR COLUMNS IN ALL CASES (PROTECTIVE COVER FOR SPIRALS OR TIES SHALL NOT BE LESS THAN 1 1/2" NOR LESS THAN 1 1/2 TIMES THE MAX. SIZE OF COARSE AGGREGATE).
  - ALL SPLICES FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS OTHERWISE NOTED. ALL WELDED WIRE FABRIC SHALL BE LAPPED AT LEAST 12" AND SECURELY TIED.

**7. EXPANSION JOINTS AND JOINT SEALERS**

- EXPANSION JOINT MATERIAL, 1/2" THICK "ELASTITE" OR EQUAL, SHALL SEPARATE ANY PAVING FROM EQUIPMENT AND PIPE SUPPORT FOUNDATIONS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.
- WHERE JOINT SEALANT IS REQUIRED, "ARMOR PLATE" 963 AS MANUFACTURED BY WIL-COR, INC., OF PASADENA, TEXAS OR AN APPROVED EQUAL SHALL BE USED.

**8. ANCHOR BOLTS**

- ANCHOR BOLT MATERIAL SHALL BE ASTM F1553 GR. A36, UNLESS OTHERWISE NOTED.
- THREADS SHALL CONFORM TO ANSI B1.1, COARSE THREAD SERIES, CLASS 2.
- ALL ANCHOR BOLTS SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A153. THREADS SHALL BE CHASED AFTER GALVANIZING.
- NUTS SHALL BE HEAVY HEXAGON CONFORMING TO ANSI B18.2.2, ASTM A194, GRADE 1, ASTM A563, GRADE A OR EQUAL.
- WASHERS MAY BE SQUARE OR ROUND. MATERIAL SHALL BE ASTM A283. ROUND WASHERS SHALL CONFORM TO ANSI B18.22.1, TYPE A.
- ALL ANCHOR BOLT SLEEVES SHALL BE "WILSON ANCHOR BOLT SLEEVES" AS MANUFACTURED BY WILSON ANCHOR SLEEVE INC. OR AN APPROVED EQUAL.
- SLEEVES SHALL BE FILLED WITH A NON-CORROSIVE, NON-SHRINK GROUT AFTER ALIGNMENT OF ANCHOR BOLTS UNLESS SPECIFIED OTHERWISE BY THE EQUIPMENT MANUFACTURER.
- CONCRETE EXPANSION ANCHOR BOLTS SHALL BE "HILTI KWIK-BOLT II" AS MANUFACTURED BY HILTI INC., HOUSTON, TEXAS OR AN APPROVED EQUAL.

**9. SITE PREPARATION**

- STRIPPING
  - ALL TOP SOIL CONTAINING ORGANIC MATTER, DEBRIS OR OTHER LOOSE MATERIAL MUST BE STRIPPED TO A MINIMUM DEPTH OF 6 INCHES AND PROOF-ROLLED TO DETECT ANY SOFT SPOTS.
- SUBGRADE PREPARATION
  - AFTER THE SITE HAS BEEN PROPERLY CLEARED, STRIPPED, AND NECESSARY EXCAVATIONS HAVE BEEN MADE, EXPOSED SURFACE SOILS IN AREAS TO RECEIVE FILL SHOULD BE SCARIFIED TO A DEPTH OF 6 INCHES, MOISTURE CONDITIONED, AND COMPACTED IN ACCORDANCE WITH SECTION 11.

**10. EXCAVATION**

- CARE SHALL BE TAKEN TO NOT OVER EXCAVATE FOR CONCRETE FOUNDATIONS. ANY OVER EXCAVATION BELOW BOTTOM OF FOUNDATION ELEVATION MUST BE BACKFILLED IN ACCORDANCE WITH SECTION 11 BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- ALL EXCAVATIONS MORE THAN 4 FEET IN DEPTH SHALL BE BRACED BY EITHER SHEET PILING OR SHORING UNLESS SIDES ARE SLOPED AT AN ANGLE OF 1 1/2 HORIZONTAL TO 1 VERTICAL.
- ALL SHALLOW FOUNDATION EXCAVATIONS SHALL BE INSPECTED AND PROBED TO DETERMINE THAT ALL EXCESSIVELY LOOSE, SOFT, OR OTHERWISE UNDESIRABLE MATERIALS ARE REMOVED. IF AN AREA OF UNDESIRABLE MATERIAL IS DISCOVERED BELOW BOTTOM OF FOOTING IT SHALL BE REMOVED AND BACKFILLED IN ACCORDANCE WITH SECTION 11.
- WHERE SOIL CONDITIONS PERMIT, FOUNDATIONS BELOW GRADE SHALL BE EARTH FORMED.
- FOUNDATION AND EARTHWORK EXCAVATIONS MAY ENCOUNTER GROUNDWATER AND MANAGEMENT OF GROUNDWATER USING SUMPS, PUMPS, AND OTHER MEASURES SHOULD BE ANTICIPATED.

**11. STRUCTURAL FILL**

- THE MOISTURE CONTENT OF FILL MATERIALS AT THE TIME OF PLACING SHOULD BE AT LEAST 1 PERCENTAGE POINT OVER OPTIMUM MOISTURE CONTENT, EXCEPT FOR THE NATIVE EXPANSIVE CLAYS, WHICH SHALL BE AT LEAST 3 PERCENTAGE POINTS OVER OPTIMUM.
- ON-SITE SOILS BELOW THE STRIPPED LAYER WITH AN ORGANIC CONTENT OF LESS THAN 3 PERCENT BY WEIGHT ARE SUITABLE FOR USE AS FILL, UNLESS OTHERWISE NOTED AND AS EVALUATED DURING EARTHWORK BY THE GEOTECHNICAL ENGINEER.
- IN GENERAL, FILL MATERIAL SHOULD NOT CONTAIN ROCKS OR LUMPS LARGER THAN 6 INCHES IN GREATEST DIMENSION, WITH 15 PERCENT OR LESS LARGER THAN 2 1/2 INCHES IN GREATEST DIMENSION.
- IMPORT/NON-EXPANSIVE SHALL CONFORM TO CLASS 2 AGGREGATE BASE IN ACCORDANCE WITH 2018 CALTRANS STANDARD SPECIFICATIONS SECTION 26. SAMPLES OF PROPOSED IMPORT FILL SHOULD BE SUBMITTED TO THE GEOTECHNICAL ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO DELIVERY TO SITE TO ALLOW FOR VISUAL REVIEW AND LABORATORY TESTING. SUITABLE DOCUMENTATION SHOULD BE PROVIDED FOR IMPORT MATERIAL CONSIDERING ENVIRONMENTAL AND CORROSION CHARACTERISTICS.
- FILL USED AS SUPPORT FOR EQUIPMENT, STORAGE TANKS, STRUCTURAL SLABS, BUILDING FOUNDATIONS, FLOORS, ROAD PAVEMENTS, PARKING AREAS, TRUCK TURNAROUNDS, AND OTHER PAVED AREAS SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 8" LOOSE THICKNESS. EACH LAYER SHALL BE COMPACTED TO A DRY DENSITY EQUAL TO 95% OF THE MAXIMUM DRY DENSITY (EXCEPT FOR NATIVE EXPANSIVE CLAYS, WHICH SHOULD BE COMPACTED TO BETWEEN 87 TO 92% OF THE MAXIMUM DRY DENSITY) OBTAINED BY COMPACTION USING ASTM D1557 (MODIFIED PROCTOR TEST).
- FILL USED AS BACKFILL AROUND FOUNDATIONS, AND FOR CONSTRUCTION OF DIKES, PARAPETS, BARRIERS, AND EMBANKMENTS SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 8" LOOSE THICKNESS. EACH LAYER SHALL BE COMPACTED TO A DRY DENSITY EQUAL TO 90% OF THE MAXIMUM DRY DENSITY (EXCEPT FOR NATIVE EXPANSIVE CLAYS, WHICH SHOULD BE COMPACTED TO BETWEEN 87 TO 92% OF THE MAXIMUM DRY DENSITY) OBTAINED BY COMPACTION USING ASTM D1557 (MODIFIED PROCTOR TEST).
- FILL USED IN AREAS WHERE INSTALLATION OF STRUCTURES OR EQUIPMENT IS NOT PLANNED AND IN OPEN AREAS WHERE GRADING IS ONLY REQUIRED TO REACH ELEVATIONS NOTED ON THE DRAWINGS SHALL BE PLACED IN UNIFORM LAYERS NOT EXCEEDING 14" LOOSE THICKNESS. EACH LAYER SHALL BE UNIFORMLY COMPACTED BY EARTH MOVING AND SPREADING EQUIPMENT.

**12. GROUTING**

- ALL FOUNDATIONS FOR STRUCTURAL STEEL SHALL HAVE A NON-SHRINK INORGANIC GROUT UNLESS OTHERWISE NOTED.
- PRESSURE VESSELS, STORAGE TANKS, EXCHANGERS, AND ELECTRICAL GEAR SHALL HAVE A NON-SHRINK INORGANIC GROUT UNLESS OTHERWISE NOTED.
- ORGANIC EPOXY GROUT SHALL BE USED FOR MACHINERY UNLESS OTHERWISE NOTED.

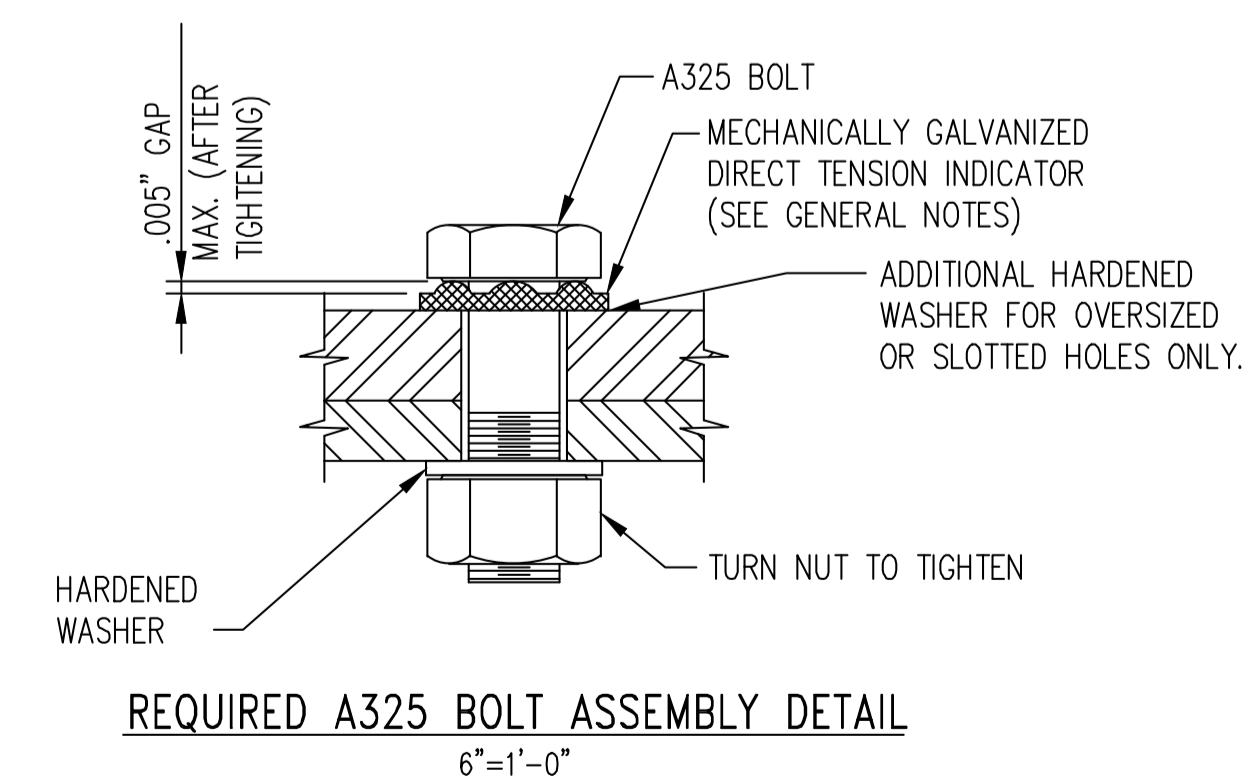
**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**

| NO. | REVISION                | BY  | DATE     | APR |
|-----|-------------------------|-----|----------|-----|
| 4   | ISSUED FOR CONSTRUCTION | JAR | 4-8-20   | JAA |
| 3   | ISSUED FOR CONSTRUCTION | TKB | 8-2-19   | JAA |
| 2   | ISSUED FOR CONSTRUCTION | TKB | 7-9-19   | JAA |
| 1   | ISSUED FOR CONSTRUCTION | TKB | 4-4-19   | JAA |
| 5   | ISSUED USE CONSTRUCTION | JAR | 10-05-20 | JAA |

|                               |                      |
|-------------------------------|----------------------|
| <b>PROJECT LOCATION:</b> NSHQ |                      |
| <b>DRAWN BY:</b> 5            | <b>DATE:</b> 6-22-10 |
| <b>CHECKED:</b> JAV           | <b>DATE:</b> 6-22-10 |
| <b>APPROVED:</b> JAV          | <b>DATE:</b> 6-22-10 |
| <b>SCALE:</b> NONE            |                      |

1. **GENERAL**
  - 1.1. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THE DESIGN, FABRICATION, TESTING, AND CONSTRUCTION OF ALL FOUNDATIONS AND STRUCTURES SHALL BE IN ACCORDANCE WITH THE FOLLOWING NOTES. SHOULD CODES OR STANDARDS DISAGREE, THE MORE STRINGENT REQUIREMENT AS DETERMINED BY THE OWNER'S REPRESENTATIVE SHALL GOVERN.
  - 1.2. ONLY THE LATEST EDITION OF REFERENCED CODES OR STANDARDS IS APPLICABLE.
  - 1.3. ALL SPECIFIED MATERIALS INCLUDING GROUTS, SEALANTS, ANCHORAGE DEVICES, MECHANICAL DEVICES, ETC., SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
  - 1.4. PROVIDE WORK FREE OF BURRS, SURFACE FINISH AND OTHER HAZARDOUS CHARACTERISTICS WHICH MIGHT CAUSE INJURY TO PERSONNEL. BREAK EXPOSED FABRICATED EDGES TO NO LESS THAN  $\frac{1}{8}$ " RADIUS.
  - 1.5. WHERE PERSONNEL MIGHT BE SUBJECTED TO CONTACT HAZARD (7'-0" AND BELOW), ROUND EXPOSED CORNERS OF FLANGES, ANGLE LEGS AND PLATES WITH  $\frac{1}{2}$ " RADIUS MINIMUM.
2. **STEEL**
  - 2.1. APPLICABLE CODES OR STANDARDS
    - 2.1.1. ALL DESIGN, FABRICATION, TESTING AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS:
      - 2.1.1.1. AISC, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
      - 2.1.1.2. AISC, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
      - 2.1.1.3. AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
      - 2.1.1.4. AISC, "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN" LATEST EDITION.
      - 2.1.1.5. ASTM STANDARDS FOR THE MATERIALS LISTED.
      - 2.1.1.6. AISI STANDARDS FOR THE MATERIALS LISTED.
      - 2.1.1.7. AWS STRUCTURAL WELDING CODE, AWS D1-1.
      - 2.1.1.8. SSPC MANUALS OF (1) GOOD PAINTING PRACTICE AND (2) SYSTEMS AND SPECIFICATIONS.
      - 2.1.1.9. OSHA STANDARDS.
3. **MATERIALS**
  - 3.1. STRUCTURAL STEEL SHALL MEET ASTM A36 SPECIFICATIONS. UNLESS OTHERWISE NOTED.
  - 3.2. MACHINE BOLTS, NUTS AND WASHERS SHALL MEET ASTM A307 SPECIFICATIONS.
  - 3.3. HIGH STRENGTH BOLTS SHALL MEET ASTM A325 SPECIFICATIONS.
  - 3.4. STRUCTURAL PIPE SHALL MEET ASTM A53 GR.B, SPECIFICATIONS.
  - 3.5. MECHANICALLY GALVANIZED DIRECT TENSION INDICATORS SHALL MEET ASTM F959 SPECIFICATIONS.
  - 3.6. WELDING ELECTRODES SHALL MEET AWS A5.1 E-7018 SPECIFICATIONS.
4. **CONNECTIONS**
  - 4.1. ALL BOLTS SHALL BE 3/4" DIAMETER UNLESS OTHERWISE NOTED.
  - 4.2. SHOP CONNECTIONS SHALL BE WELDED OR BOLTED.
  - 4.3. FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS WITH THE EXCEPTION OF PURLINS, GIRTS, STAIRS, LADDERS AND HANDRAILS FOR WHICH ASTM A307 MACHINE BOLTS SHALL BE USED.
  - 4.4. BOLTED CONNECTIONS FOR SECONDARY STEEL, I.E., STAIR TREADS, HANDRAIL POSTS, LADDERS, PURLINS AND GIRTS, SHALL BE MADE WITH 3/4" DIAMETER BOLTS WHICH SHALL CONFORM TO ASTM 307, GRADE A OR B.
  - 4.5. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325. ONE HIGH STRENGTH BOLT ASSEMBLY SHALL CONSIST OF A HEAVY HEX HEAD STRUCTURAL BOLT, A HEAVY HEX NUT, ONE OR TWO HARDENED WASHERS AND A MECHANICALLY GALVANIZED DIRECT TENSION INDICATOR. (SEE DETAIL)
  - 4.6. BOLTED CONNECTIONS SHALL BE MADE WITH A MINIMUM OF TWO (2) BOLTS UNLESS OTHERWISE NOTED.
  - 4.7. ALL HOLES FOR BOLTS SHALL BE 1/16" LARGER THAN BOLT DIAMETER, UNLESS OTHERWISE NOTED.
  - 4.8. ANY CONNECTION OR WELDMENT TO BE HOT-DIP GALVANIZED AFTER FABRICATION, MUST BE COMPLETELY SEAL WELDED BEFORE GALVANIZING. USE 1/8" FILLET SEAL WELDS BETWEEN REQUIRED STRENGTH WELDS BEFORE GALVANIZING.
  - 4.9. "BEAM TO BEAM" OR "BEAM TO COLUMN" CONNECTIONS NOT DETAILED ON THESE DRAWINGS SHALL BE AISC STANDARD CAPABLE OF SUPPORTING THE REACTION (ONE-HALF THE TOTAL LISTED LOAD) OBTAINED FROM THE "ALLOWABLE LOADS ON BEAMS" TABLE, PAGES 2-30 THRU 2-140, AISC ALLOWABLE STRESS DESIGN, NINTH EDITION.
  - 4.10. UNLESS SHOWN OR OTHERWISE NOTED, THE MINIMUM SIZE FILLET WELDS SHALL BE THE GREATER OF 3/16" OR THAT REQUIRED BY AISC ALLOWABLE STRESS DESIGN, SECTION J2, USING E-7018 ELECTRODES ONLY.
  - 4.11. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL GUSSET PLATES SHALL BE 3/8" MINIMUM THICKNESS.
  - 4.12. ALL BRACING SHALL HAVE END CONNECTIONS CAPABLE OF DEVELOPING THE CAPACITY OF THE BRACING MEMBER IN TENSION UNLESS NOTED OTHERWISE ON THE DRAWINGS. WHEN NOTED, EACH END CONNECTION SHALL BE CAPABLE OF DEVELOPING THE COMPRESSION (-), OR TENSION (+) FORCE THAT IS NOTED ON THE DRAWING.
  - 4.13. DOUBLE ANGLE BRACING SHALL BE PROVIDED WITH FILLER PLATES AND CONNECTORS AS PER AISC E4.
  - 4.14. GUSSET PLATES FOR VERTICAL DIAGONAL BRACING SHALL CONNECT TO BOTH THE BEAM AND COLUMN, WHENEVER POSSIBLE.
  - 4.15. WORKING POINTS FOR BRACING CONNECTIONS SHALL BE "CENTER OF BEAM TO CENTER OF BEAM" OR "CENTER OF BEAM TO CENTER OF COLUMN" UNLESS OTHERWISE NOTED.
5. **MECHANICALLY GALVANIZED DIRECT TENSION INDICATORS. (SEE BOLT ASSEMBLY DETAIL)**
  - 5.1. SHALL BE USED WITH A325 HOT DIP AND MECHANICALLY GALVANIZED HIGH-STRENGTH BOLTS AND NUTS.
  - 5.2. GAP SHALL BE REDUCED TO 0.005 INCH MAX. WHILE TURNING NUT TO TIGHTEN.
  - 5.3. WHEN THE DIRECT TENSION INDICATOR IS UNDER THE TURNED ELEMENT, HEAD OR NUT, A HARDENED WASHER SHALL BE USED BETWEEN THE TURNED ELEMENT AND THE DIRECT TENSION INDICATOR.
  - 5.4. DIRECT TENSION INDICATORS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695 CLASS 50 SPECIFICATIONS.
6. **GALVANIZING**
  - 6.1. STRUCTURAL STEEL, BOLTING MATERIALS, AND MISCELLANEOUS HARDWARE SHALL BE CLEANED AND HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM SPECIFICATIONS A123, A143, A153, A384, A386, A563 OR B695, WHICHEVER IS APPLICABLE AND PER INSTRUCTIONS TO BIDDERS.
  - 6.2. TOUCHUP DAMAGED GALVANIZED SURFACES AFTER ERECTION BY THE APPLICATION OF AN APPROVED INORGANIC ZINC COMPOUND.
7. **GRATING**
  - 7.1. PLATFORM WALKING SURFACES SHALL BE 1 1/4" X 3/16" WELDED STEEL SERRATED GRATING, UNLESS OTHERWISE NOTED.
  - 7.2. ALL GRATING SHALL BE GALVANIZED PER SECTION 2.5.
  - 7.3. GRATING FASTENERS SHALL BE EPI GRATE CLAMP FASTENERS OR FASTENERS BY GRATE-FAST, INC.
8. **STAIRWAYS**
  - 8.1. STAIRWAYS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH OSHA REQUIREMENTS AND DWG. 24103.
  - 8.2. STAIR TREADS SHALL BE FABRICATED FROM SERRATED STEEL GRATING. TREADS SHALL BE GALVANIZED AND HAVE DIAMOND PLATE NOSING. TREAD WIDTH SHALL BE AS SPECIFIED ON THE DRAWINGS.
9. **LADDERS**
  - 9.1. LADDERS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH OSHA REQUIREMENTS.
  - 9.2. ALL SAFETY GATES SHALL BE SELF-CLOSING TYPE AS MANUFACTURED BY INTREPID INC. PASADENA, TEXAS OR AN APPROVED EQUAL.
10. **HANDRAIL**
  - 10.1. HANDRAILS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH OSHA REQUIREMENTS.
11. **SHOP DRAWINGS**
  - 11.1. APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE FABRICATOR OF RESPONSIBILITY FOR DESIGN ADEQUACY OF CONNECTIONS, DETAIL DIMENSIONS ON SHOP DRAWINGS, NOR THE GENERAL FIT-UP OF PARTS TO BE ASSEMBLED IN THE FIELD.



REQUIRED A325 BOLT ASSEMBLY DETAIL  
6"=1'-0"

NOTES:  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

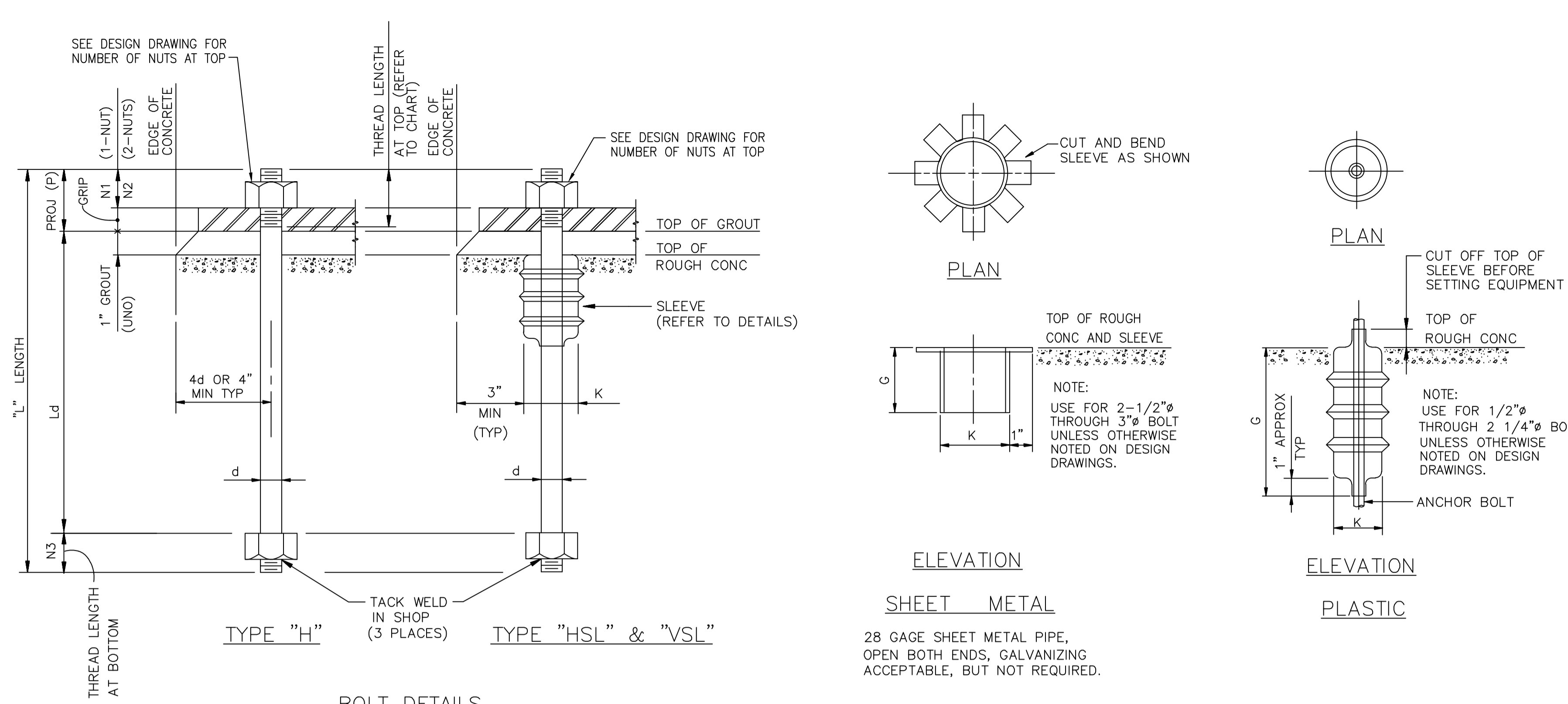
| NO. | REVISION                                       | BY  | DATE    | APR     |
|-----|--|-----|---------|---------|
| 1   | ADDED 1.4 AND 1.5 TO THE GENERAL NOTES SECTION | REH | 5-20-15 | JV JV   |
| 0   | ISSUED USE                                     | JAV | 6-22-10 | JAV JAV |

|                   |         |
|-------------------|---------|
| PROJECT LOCATION: | NSHQ    |
| DRAWN BY:         | JAV     |
| DATE:             | 6-22-10 |
| CHECKED:          | JAV     |
| DATE:             | 6-22-10 |
| APPROVED:         | JAV     |
| DATE:             | 6-22-10 |
| SCALE:            | NONE    |

ORIGINAL PROJECT NO.

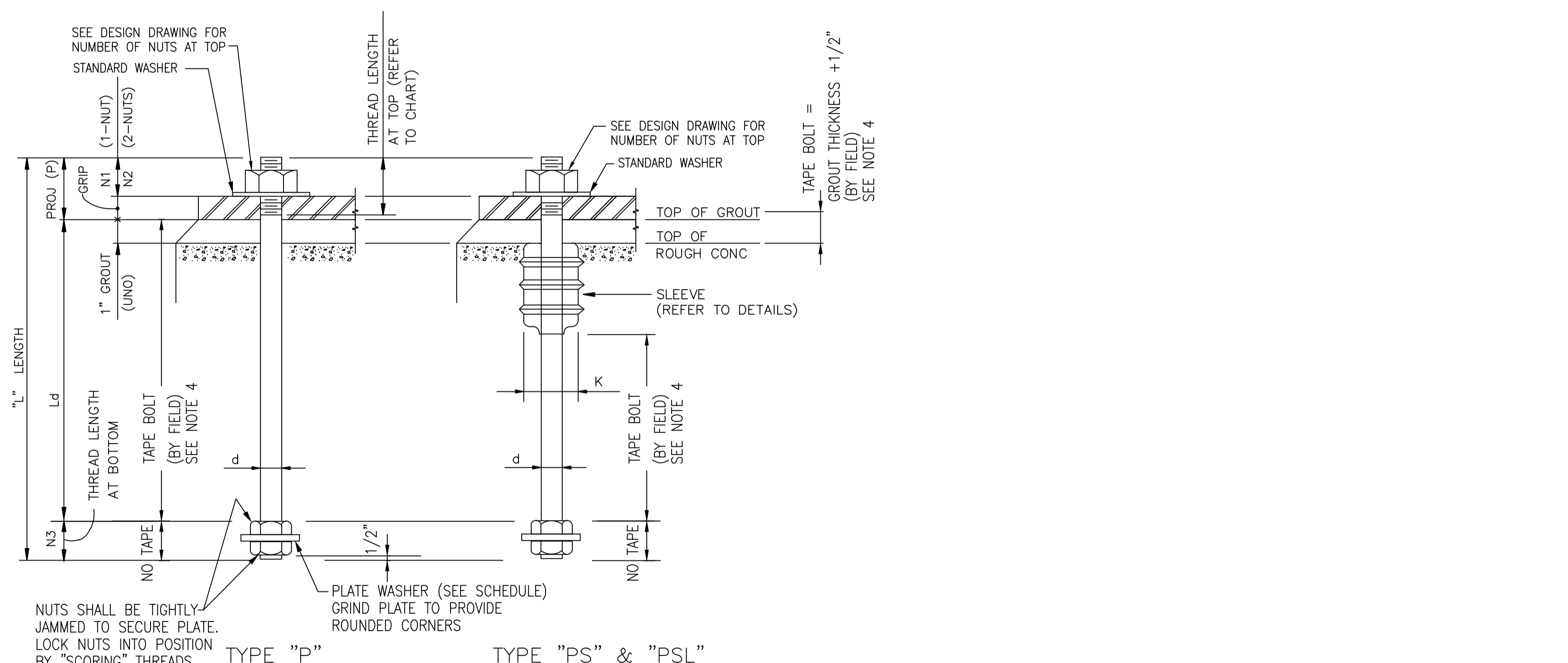
DRAWING NO. NSCE-CS-002

REV. 0



**BOLT DETAILS**  
**MATERIAL SPECIFICATIONS**  
 ANCHOR BOLT - ASTM A36 OR A307  
 NUT - ASTM A563, GRADE A HEAVY HEX  
 STD. WASHER - F436 (PROVIDE ONLY IF NOTED ON DESIGN DWG.)

**SLEEVE DETAILS**  
 28 GAGE SHEET METAL PIPE,  
 OPEN BOTH ENDS, GALVANIZING  
 ACCEPTABLE, BUT NOT REQUIRED.



**BOLT DETAILS**  
**MATERIAL SPECIFICATIONS**  
 ANCHOR BOLT - ASTM A193 GRADE B7  
 NUT - ASTM A194 GRADE 2H, HEAVY HEX  
 STD. WASHER - F436  
 PLATE WASHER - A36

STANDARD "H", "HSL" AND "VSL" ANCHOR BOLT DATA TABLE

| BOLT DIA<br>d | ALLOWANCE FOR NUTS |        |                           | THREAD LENGTH AT TOP | SLEEVE NOTE 1.1 |       | STRUCT. AND OTHER EQUIP. "H" AND "HSL" BOLTS |                             |          | VERTICAL VESSELS ONLY "VSL" BOLTS |                             |          | BOLT DIA<br>d |
|---------------|--------------------|--------|---------------------------|----------------------|-----------------|-------|--|-----------------------------|----------|-----------------------------------|-----------------------------|----------|---------------|
|               | N1                 | N2     | N3 (THREAD LENGTH AT BOT) |                      | K               | G     | MAX GRIP                                     | EMBED LENGTH L <sub>d</sub> | LENGTH L | MAX GRIP                          | EMBED LENGTH L <sub>d</sub> | LENGTH L |               |
| 1/2"          | 3/4"               | 1 1/4" | 1"                        | 2 1/4"               | 2"              | 5"    | 3/4"   | 10"                         | 1'-2"    | 9"                                | 1'-0"                       | 2'-0"    | 1/2"          |
| 5/8"          | 1"                 | 1 3/4" | 1"                        | 2 3/4"               | 2"              | 7"    | 1"   | 11"                         | 1'-4"    | 9"                                | 1'-2"                       | 2'-3"    | 5/8"          |
| 3/4"          | 1 1/4"             | 2"     | 1 1/4"                    | 3"                   | 2"              | 7"    | 1 1/4"                                       | 1'-0"                       | 1'-6"    | 9"                                | 1'-4"                       | 2'-5"    | 3/4"          |
| 7/8"          | 1 1/4"             | 2 1/4" | 1 1/4"                    | 3 1/2"               | 2"              | 7"    | 1 1/2"                                       | 1'-2"                       | 1'-8"    | 9"                                | 1'-8"                       | 2'-10"   | 7/8"          |
| 1"            | 1 1/2"             | 2 1/2" | 1 1/2"                    | 3 1/2"               | 3"              | 10"   | 1 1/2"                                       | 1'-4"                       | 1'-11"   | 1'-0"                             | 1'-11"                      | 3'-5"    | 1"            |
| 1-1/4"        | 2"                 | 3 1/4" | 1 3/4"                    | 4 1/4"               | 3"              | 10"   | 2"   | 1'-6"                       | 2'-2"    | 1'-0"                             | 2'-2"                       | 3'-8"    | 1-1/4"        |
| 1-1/2"        | 2 1/4"             | 3 3/4" | 2"                        | 4 3/4"               | 4"              | 1'-3" | 2 1/4"                                       | 1'-10"                      | 2'-7"    | 1'-0"                             | 3'-0"                       | 4'-7"    | 1-1/2"        |
| 1-3/4"        | 2 3/4"             | 4 1/2" | 2 1/4"                    | 5 1/2"               | 4"              | 1'-3" | 2 3/4"                                       | 1'-11"                      | 2'-10"   | 1'-0"                             | 3'-2"                       | 4'-10"   | 1-3/4"        |
| 2"            | 3"                 | 5"     | 2 1/2"                    | 6"                   | 4"              | 1'-6" | 3"   | 2'-3"                       | 3'-3"    | 1'-6"                             | 3'-8"                       | 5'-11"   | 2"            |
| 2-1/4"        | 3 1/2"             | 5 3/4" | 2 3/4"                    | 6 3/4"               | 4"              | 1'-6" | 3 1/2"                                       | 2'-4"                       | 3'-5"    | 1'-6"                             | 3'-10"                      | 6'-2"    | 2-1/4"        |
| 2-1/2"        | 3 3/4"             | 6 1/4" | 3"                        | 7 1/4"               | 6"              | 2'-0" | 3 3/4"                                       | 2'-5"                       | 3'-7"    | 1'-6"                             | 4'-0"                       | 6'-4"    | 2-1/2"        |
| 2-3/4"        | 4 1/4"             | 7"     | 3 1/4"                    | 8"                   | 6"              | 2'-0" | 4 1/4"                                       | 2'-6"                       | 3'-10"   | 1'-6"                             | 4'-10"                      | 6'-7"    | 2-3/4"        |
| 3"            | 4 1/2"             | 7 1/2" | 3 1/2"                    | 8 1/2"               | 6"              | 2'-0" | 4 1/2"                                       | 2'-8"                       | 4'-1"    | 1'-6"                             | 4'-10"                      | 7'-4"    | 3"            |

TYPE "P", "PS" AND "PSL" ANCHOR BOLT DATA TABLE

| BOLT DIA<br>d | ALLOWANCE FOR NUTS |        |                           | THREAD LENGTH AT TOP | SLEEVE NOTE 1.1 |       | STRUCT. AND OTHER EQUIP. "P" AND "PS" BOLTS |                             |          | VERTICAL VESSELS ONLY "PSL" BOLTS |                             |          | PLATE SIZE         |
|---------------|--------------------|--------|---------------------------|----------------------|-----------------|-------|---|-----------------------------|----------|-----------------------------------|-----------------------------|----------|--------------------|
|               | N1                 | N2     | N3 (THREAD LENGTH AT BOT) |                      | K               | G     | MAX GRIP                                    | EMBED LENGTH L <sub>d</sub> | LENGTH L | MAX GRIP                          | EMBED LENGTH L <sub>d</sub> | LENGTH L |                    |
| 3/4"          | 1 1/4"             | 2"     | 2 3/4"                    | 3 1/4"               | 2"              | 7"    | 1 1/4"                                      | 1'-0"                       | 1'-6"    | 9"                                | 1'-4"                       | 2'-6"    | 3/4"x3"x3"         |
| 7/8"          | 1 1/4"             | 2 1/4" | 3"                        | 3 1/2"               | 2"              | 7"    | 1 1/2"                                      | 1'-2"                       | 1'-9"    | 9"                                | 1'-8"                       | 2'-11"   | 3/4"x3 1/2"x3 1/2" |
| 1"            | 1 1/2"             | 2 1/2" | 3 1/2"                    | 4"                   | 3"              | 10"   | 1 1/2"                                      | 1'-4"                       | 2'-0"    | 1'-0"                             | 2'-0"                       | 3'-6"    | 1"x4"x4"           |
| 1-1/4"        | 2"                 | 3 1/4" | 4 1/4"                    | 4 3/4"               | 3"              | 10"   | 2"  | 1'-6"                       | 2'-4"    | 1'-0"                             | 2'-2"                       | 3'-10"   | 1 1/4"x5"x5"       |
| 1-1/2"        | 2 1/4"             | 3 3/4" | 5"                        | 5 1/2"               | 4"              | 1'-3" | 2 1/4"                                      | 1'-10"                      | 2'-9"    | 1'-0"                             | 3'-0"                       | 4'-9"    | 1 1/2"x6"x6"       |
| 1-3/4"        | 2 3/4"             | 4 1/2" | 6"                        | 6 1/4"               | 4"              | 1'-3" | 2 3/4"                                      | 1'-11"                      | 3'-1"    | 1'-0"                             | 3'-2"                       | 5'-0"    | 1 3/4"x7"x7"       |
| 2"            | 3"                 | 5"     | 6 3/4"                    | 7"                   | 4"              | 1'-6" | 3"  | 2'-3"                       | 3'-6"    | 1'-6"                             | 3'-8"                       | 6'-2"    | 2"x8"x8"           |
| 2-1/4"        | 3 1/2"             | 5 3/4" | 7 1/2"                    | 7 3/4"               | 4"              | 1'-6" | 3 1/2"                                      | 2'-4"                       | 3'-9"    | 1'-6"                             | 3'-10"                      | 6'-5"    | 2 1/4"x9"x9"       |
| 2-1/2"        | 3 3/4"             | 6 1/4" | 8"                        | 8 1/2"               | 6"              | 2'-0" | 3 3/4"                                      | 2'-5"                       | 3'-11"   | 1'-6"                             | 4'-0"                       | 6'-8"    | 2 1/4"x10"x10"     |

- 1.0 SPECIFICATIONS
- 1.1 PLASTIC SLEEVES SHALL BE WILSON ANCHOR BOLT SLEEVES AS MANUFACTURED BY SINCO PRODUCTS, INC., OR APPROVED EQUAL.
  - 1.2 HEADED BOLTS OF AT LEAST THE SAME LENGTH ABOVE THE BOTTOM NUT ARE AN ACCEPTABLE SUBSTITUTION FOR TYPE "H", "HSL" & "VSL" BOLTS.
  - 1.3 UNLESS OTHERWISE SPECIFIED, ALL BOLTS AND NUTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153. A193 BOLTS SHALL BE PROTECTED FROM HYDROGEN EMBRITTELEMENT IN ACCORDANCE WITH ASTM A143.
  - 1.4 EXCESS GALVANIZING MATERIAL SHALL BE REMOVED FROM THE THREADED PORTIONS OF THE BOLTS BY THE USE OF A CENTRIFUGE OR BY MECHANICAL CHASING OF THE BOLT THREADS.
- 2.0 INSTALLATION
- 2.1 TOLERANCES WILL BE AS FOLLOWS:
    - a. BOLT PROJECTION: + 1/4", -0"
    - b. CENTER-TO-CENTER OF ANY 2 BOLTS WITHIN A BOLT GROUP: ±1/8"(w/SLEEVES) ±1/16"(w/o SLEEVES) (SUCH AS AN EQUIPMENT FOUNDATION OR BASE PLATE)
    - c. CENTER TO CENTER BETWEEN BOLT GROUPS: ±1/4" (SUCH AS A SERIES OF COLUMNS)
    - d. PLUMBNESS: 1/8" IN 3'-0"
  - 2.2 STRUCTURE AND PROCESS EQUIPMENT ANCHOR BOLT SLEEVES SHALL BE FILLED WITH GROUT U.N.O.. TYPE PS AND PSL ANCHOR BOLT SLEEVES SHALL BE FILLED WITH SILICONE SEALANT PRIOR TO GROUTING U.N.O. ON DESIGN DRAWINGS.
  - 2.3 NUTS FOR ANCHOR BOLTS SHALL BE TIGHTENED TO SNUG CONDITION EXCEPT WHERE TORQUE VALUE IS SPECIFIED ON THE DESIGN DRAWINGS, OR AT THE LOCATIONS OF SLIDE PLATES.
- 3.0 FABRICATION
- 3.1 FIT OF NUTS ON THREADS OF ANCHOR BOLTS SHALL BE VERIFIED BEFORE SHIPMENT.
  - 3.2 ANCHOR BOLTS SHALL ALWAYS BE CALLED OUT ON THE DESIGN DRAWING OR BILL OF MATERIAL AND BILLED GIVING THE QUANTITY, BOLT DIAMETER x LENGTH, TYPE, PROJECTION (P) ABOVE TOP OF GROUT, WITH ONE OR TWO HEAVY HEX NUTS EACH (FOR EXAMPLE, 15-1 1/2" x 2" - 5" "HSL" P=3 1/2" WITH 2 NUTS). IF LENGTH IS DIFFERENT THAN SHOWN IN TABLE THIS DRAWING, THE DESIGN DRAWING SHALL GOVERN.
  - 3.3 FOR SAMPLE ANCHOR BOLT CALLOUT SEE DRAWING 25131.
- GENERAL NOTES:
1. BOLT LENGTH SHALL CONFORM TO THE SCHEDULE ON THIS DRAWING, UNLESS OTHERWISE NOTED ON THE DESIGN DRAWINGS.
  2. TYPE "H", "HSL" AND "VSL" BOLTS SHALL HAVE UNC-2A THREADS. NUTS SHALL BE AMERICAN STANDARD, HEAVY HEX WITH UNC-2B THREADS.
  3. THREAD FOR TYPE "P", "PS" & "PSL" BOLTING MATERIAL 1" IN DIAMETER AND SMALLER SHALL BE UNC-2A FOR THE BOLTS AND UNC-2B FOR THE NUTS. OTHERS SHALL BE BUN-2A FOR THE BOLTS AND BUN-2B FOR THE NUTS, IN ACCORDANCE WITH ASME B1.1-1989.
  4. TYPE P, PS AND PSL ANCHOR BOLTS SHALL BE WRAPPED AS INDICATED WITH (3) LAYERS OF DUCT TAPE TO PREVENT BOND BETWEEN CONCRETE AND BOLT.
  5. ALL BOLTS AND NUT THREADS SHALL BE CLEAN AND FREE OF NICKS, BURRS AND OTHER IMPERFECTIONS. THE THREADS SHALL BE WELL LUBRICATED PRIOR TO TIGHTENING THE BOLTS.
  6. MILL REPORT SHALL BE SUPPLIED TO PROJECT STRUCTURAL ENGINEER AND CONSTRUCTION MANAGER BY THE FABRICATOR FOR ALL A193 MATERIAL PURCHASED.

NOTES:  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

| NO. | REVISION   | BY  | DATE    | APR |
|-----|------------|-----|---------|-----|
| 0   | ISSUED USE | JAV | 6-22-10 | JAV |

PROJECT LOCATION: NSHQ

|               |               |
|---------------|---------------|
| DRAWN BY: JAV | DATE: 6-22-10 |
| CHECKED: JAV  | DATE: 6-22-10 |
| APPROVED: JAV | DATE: 6-22-10 |
| SCALE: NONE   |               |

ORIGINAL PROJECT NO. \_\_\_\_\_

DRAWING NO. NSCE-CS-003

REV. 0

# DRAWING INDEX

| MECHANICAL    |  |          |
|---------------|--|----------|
| DRAWING NO.   | DRAWING DESCRIPTION                                    | REV. NO. |
| DRAWING INDEX |  |          |
| STOT-04-104   | MECHANICAL/STRUCTURAL DRAWING INDEX – PROJECT WC_00247 | 0        |
| STOT-24-100   | KEY PIPING PLAN – TERMINAL SITE                        | 0        |
| STOT-24-113   | PIPING PLAN – TO/FROM TKS 33007 & 30006                | 0        |
| STOT-24-114   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-115   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-116   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-117   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-118   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-119   | PIPING PLAN – PIPE RACK – NORTH WALL                   | 0        |
| STOT-24-120   | PIPING PLAN – PIPE RACK – COMBUSTOR AREA               | 0        |
| STOT-24-127   | PIPING PLAN – TO/FROM TKS 33007 & 30006                | 0        |
| STOT-24-128   | PIPING PLAN – TO/FROM TKS 33007 & 30006                | 0        |
| STOT-24-129   | PIPING PLAN – TO/FROM TKS 33007 & 30006                | 0        |
| STOT-24-130   | PIPING PLAN – TO/FROM TKS 33007 & 30006                | 0        |
| STOT-24-148   | PIPING PLAN – TK-1504 AREA                             | 0        |
| STOT-24-152   | PIPING PLAN – LOADING PUMP AREA                        | 0        |
| STOT-24-153   | PIPING PLAN – TRUCK RACK – BAYS #8, #7                 | 0        |
| STOT-24-154   | PIPING PLAN – TRUCK RACK – BAY #5                      | 0        |
| STOT-24-155   | PIPING PLAN – TKS-8001 & 8002 FILL LINE                | 0        |
| STOT-24-159   | PIPING PLAN – TK-3301 SOUTH                            | 0        |
| STOT-24-160   | PIPING PLAN – TKS-8001 & 8002 FILL LINE                | 0        |
| STOT-24-161   | PIPING PLAN – TKS-8001 & 8002 FILL LINE                | 0        |
| STOT-24-162   | PIPING PLAN – TKS-8001 & 8002 FILL LINE                | 0        |
| STOT-24-163   | PIPING PLAN – TKS-8001 & 8002 FILL LINE                | 0        |
| STOT-24-164   | PIPING PLAN – PIPE BRIDGE OVER                         | 0        |
| STOT-24-171   | PIPING PLAN – TK-4901                                  | 0        |
| STOT-24-172   | PIPING PLAN – TK-8801                                  | 0        |
| STOT-25-012   | PIPING SECTIONS – TRUCK UNLOADING – BAY #5, #6         | 0        |
| STOT-25-013   | PIPING SECTIONS – TRUCK UNLOADING – BAY #5, #6         | 0        |

| STRUCTURAL    |   |          |
|---------------|---|----------|
| DRAWING NO.   | DRAWING DESCRIPTION                                     | REV. NO. |
| DRAWING INDEX |   |          |
| STOT-32-100   | KEY FOUNDATION LOCATION PLAN – TERMINAL SITE            | 0        |
| STOT-32-113   | FOUNDATION LOCATION PLAN – TO/FROM TKS 33007 & 30006    | 0        |
| STOT-32-114   | FOUNDATION LOCATION PLAN – PIPE RACK – NORTH WALL       | 0        |
| STOT-32-115   | FOUNDATION LOCATION PLAN – PIPE RACK – NORTH WALL       | 0        |
| STOT-32-116   | FOUNDATION LOCATION PLAN – PIPE RACK – NORTH WALL       | 0        |
| STOT-32-117   | FOUNDATION LOCATION PLAN – PIPE RACK – NORTH WALL       | 0        |
| STOT-32-118   | FOUNDATION LOCATION PLAN – PIPE RACK – NORTH WALL       | 0        |
| STOT-32-127   | FOUNDATION LOCATION PLAN – TO/FROM TKS 33007 & 30006    | 0        |
| STOT-32-128   | FOUNDATION LOCATION PLAN – TO/FROM TKS 33007 & 30006    | 0        |
| STOT-32-129   | FOUNDATION LOCATION PLAN – TO/FROM TKS 33007 & 30006    | 0        |
| STOT-32-130   | FOUNDATION LOCATION PLAN – TO/FROM TKS 33007 & 30006    | 0        |
| STOT-32-152   | FOUNDATION LOCATION PLAN – LOADING PUMP AREA            | 0        |
| STOT-32-159   | FOUNDATION LOCATION PLAN – TK-3301 SOUTH                | 0        |
| STOT-32-163   | FOUNDATION LOCATION PLAN – TKS-8001 & 8002 FILL LINE    | 0        |
| STOT-32-164   | FOUNDATION LOCATION PLAN – PIPE BRIDGE OVER             | 0        |
| STOT-32-171   | FOUNDATION LOCATION PLAN – TK-4901                      | 0        |
| STOT-32-172   | FOUNDATION LOCATION PLAN – TK-8001                      | 0        |
| STOT-32-184   | FOUNDATION LOCATION PLAN – PH-02                        | 0        |
| STOT-32-189   | FOUNDATION LOCATION PLAN – T-8 & SWBD-8                 | 0        |
| STOT-33-115   | FOUNDATION DETAILS – PIPE SUPPORT FOUNDATION DETAILS    | 0        |
| STOT-33-116   | FOUNDATION DETAILS – PUMP FOUNDATION DETAILS            | 0        |
| STOT-33-117   | FOUNDATION DETAILS – PUMP CONTAINMENT P-045 & P-044     | 0        |
| STOT-33-118   | FOUNDATION DETAILS – PUMP CONTAINMENT                   | 0        |
| STOT-34-108   | FOUNDATION DETAILS – SWBD-8 FOUNDATION DETAILS          | 0        |
| STOT-34-109   | FOUNDATION DETAILS – ELEC. BLDG PLAN, SECTION & DETAILS | 0        |
| STOT-36-114   | STRUCTURAL DETAILS – PIPE SUPPORT DETAILS               | 0        |
| STOT-36-115   | STRUCTURAL DETAILS – PIPE SUPPORT DETAILS               | 0        |
| STOT-36-116   | STRUCTURAL DETAILS – PIPE SUPPORT DETAILS               | 0        |
| STOT-36-126   | STRUCTURAL DETAILS – PIPE SUPPORT DETAILS               | 0        |
| STOT-36-127   | STRUCTURAL DETAILS – PIPE SUPPORT DETAILS               | 0        |
| STOT-36-130   | PIPE SUPPORT PS-311 FRAMING – STRUCTURAL DETAIL         | 0        |
| STOT-36-131   | PIPE SUPPORT PS-311 DETAILS – STRUCTURAL DETAIL         | 0        |

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**

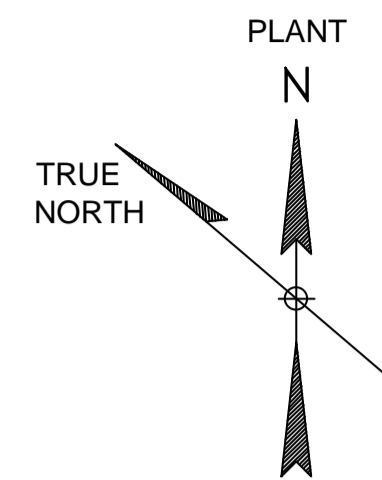
| NO. | REVISION                  | BY  | DATE    | APR     |
|-----|---------------------------|-----|---------|---------|
| 0   | APPROVED FOR CONSTRUCTION | TKB | 9/26/19 | RLM JAA |

**PROJECT LOCATION:**

|               |               |
|---------------|---------------|
| DRAWN BY: TKB | DATE: 9/24/19 |
| CHECKED: JAA  | DATE: 9/24/19 |
| APPROVED: JAA | DATE: 9/24/19 |
| SCALE: NONE   |               |

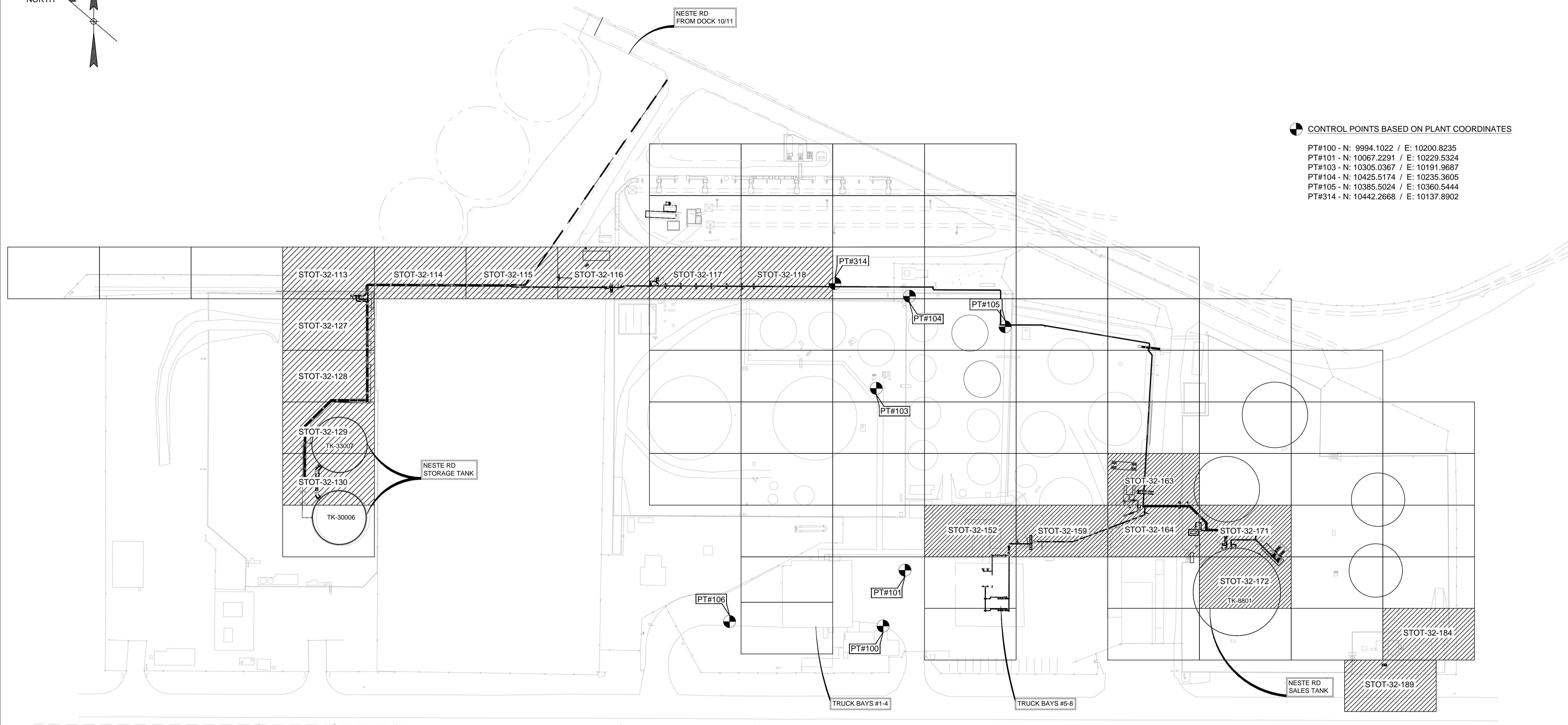
**STOCKTON TERMINAL  
MECHANICAL/STRUCTURAL DRAWING INDEX  
PROJECT WC\_00247**

ORIGINAL PROJECT NO. **WC\_00247**  
DRAWING NO. **STOT-04-104** REV. **0**



● CONTROL POINTS BASED ON PLANT COORDINATES

PT#100 - N: 9994.1022 / E: 10200.8235  
 PT#101 - N: 10067.2291 / E: 10229.5324  
 PT#103 - N: 10305.0367 / E: 10191.9687  
 PT#104 - N: 10425.5174 / E: 10235.3605  
 PT#105 - N: 10385.5024 / E: 10360.5444  
 PT#314 - N: 10442.2668 / E: 10137.8902



NOTES:  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

| NO. | REVISION                           | BY  | DATE    | APR   |
|-----|------------------------------------|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR |
| A   | ISSUE FOR ENGINEERING REVIEW       | KLV | 6/11/19 | JV JR |

PROJECT LOCATION:

|               |                |
|---------------|----------------|
| DRAWN BY: KLV | DATE: 10/01/18 |
| CHECKED: JV   | DATE:          |
| APPROVED: JR  | DATE:          |
| SCALE: 1"=60' |                |

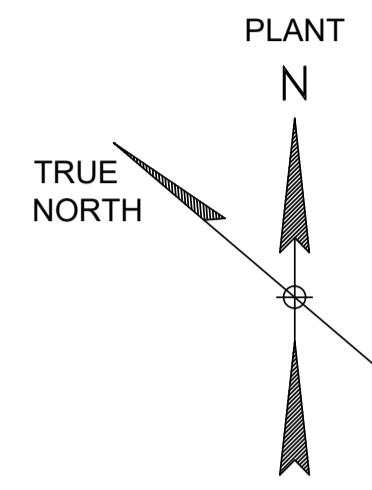
STOCKTON TERMINAL  
 KEY FOUNDATION LOCATION PLAN  
 TERMINAL SITE

ORIGINAL PROJECT NO. WC\_00247

DRAWING NO. STOT-32-100

REV. 0

DRAWING LIMITS



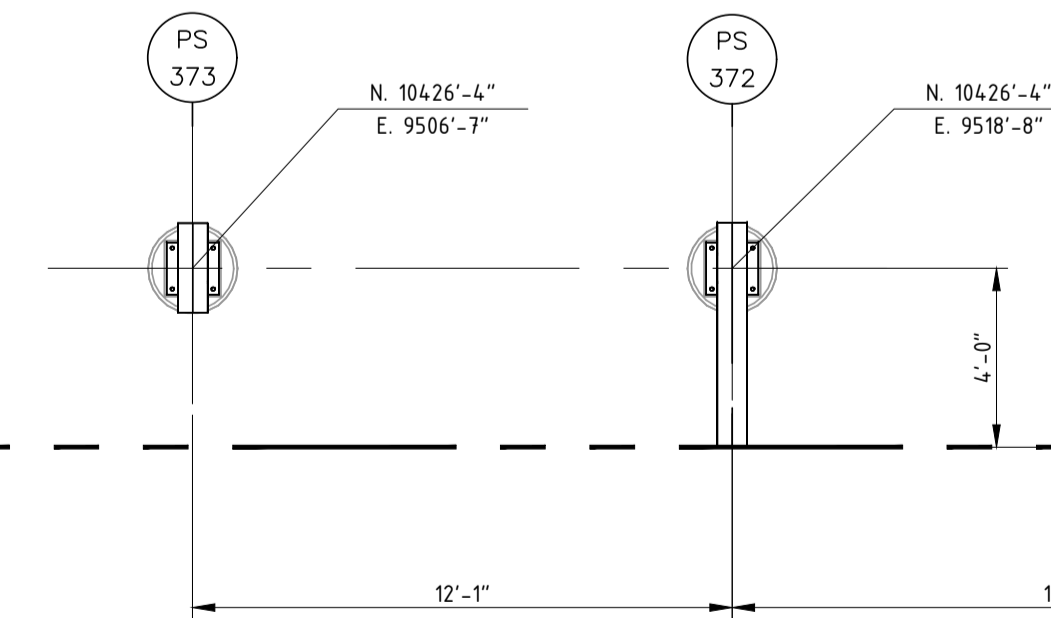
MATCHLINE SEE DWG. STOT-32-112

MATCHLINE SEE DWG. STOT-32-114

67'-6"

MATCHLINE SEE DWG. STOT-32-127

120'-0"



**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
STOT-32-100 KEY FDN LOCATION PLAN  
STOT-34-113 PIPING PLAN  
STOT-33-115 FOUNDATION SCHEDULE  
STOT-36-115 STRUCTURAL STEEL DETAILS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLV JR |

PROJECT LOCATION:

DRAWN BY: REH

DATE: 3/13/19

CHECKED: KLV

DATE:

APPROVED:

DATE:

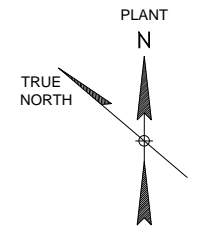
SCALE: 1/4" = 1'-0"

STOCKTON TERMINAL  
FOUNDATION LOCATION PLAN  
TO/FROM TKS 33007 & 30006

ORIGINAL PROJECT NO. WC\_00247

DRAWING NO. STOT-32-113

REV. 0



DRAWING LIMITS

MATCHLINE SEE DWG. STOT-32-113

MATCHLINE SEE DWG. STOT-32-115

67'-6"

REMOVED SUPPORTS  
PS-374 - PS-379

DRAWING LIMITS

120'-0"

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

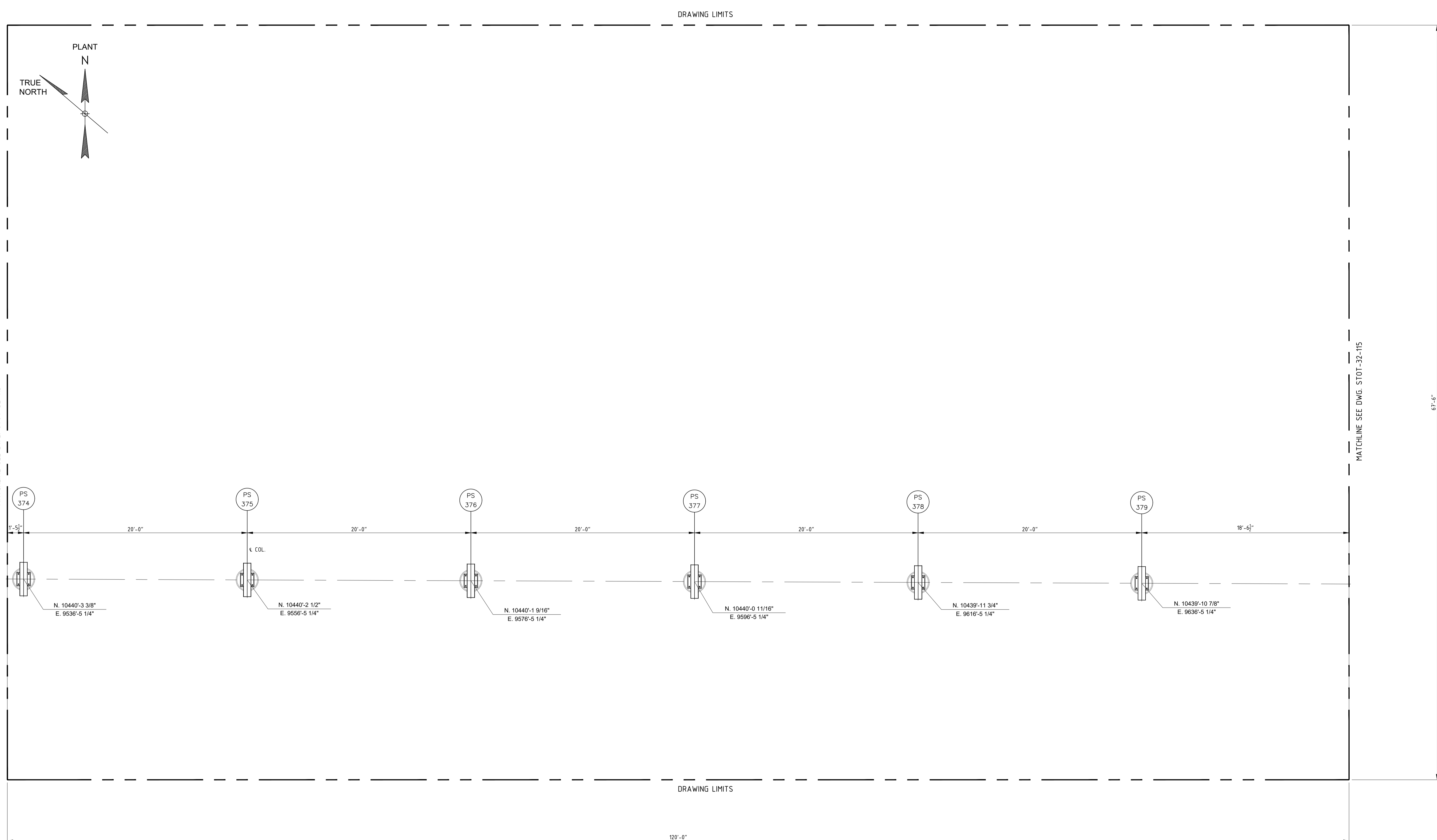
**REFERENCE DRAWINGS:**  
STOT-32-100 KEY FDN LOCATION PLAN  
STOT-24-114 PIPING PLAN  
STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                              | BY  | DATE     | APR    |
|-----|---------------------------------------|-----|----------|--------|
| 1   | REMOVED SUPPORTS PER U/G INTERFERENCE | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247    | KLV | 6/21/19  | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW          | JBF | 5/6/19   | KLV JR |

**PROJECT LOCATION:**  
DRAWN BY: REH      DATE: 3/13/19  
CHECKED: KLV      DATE:  
APPROVED: JR      DATE:  
SCALE: 1/4" = 1'-0"

STOCKTON TERMINAL  
FOUNDATION LOCATION PLAN  
PIPE RACK NORTH WALL  
ORIGINAL PROJECT NO. WC\_00247  
DRAWING NO. STOT-32-114      REV. 1





**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

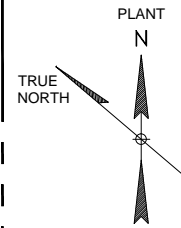
**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-114 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLK | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLK JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/13/19  
**CHECKED:** KLK **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

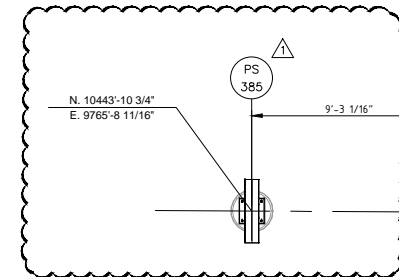
**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK NORTH WALL**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-114** **REV. 0**

DRAWING LIMITS



MATCHLINE SEE DWG. STOT-32-114

**REMOVED SUPPORTS  
PS-380 - PS-384**



MATCHLINE SEE DWG. STOT-32-116

67'-6"

DRAWING LIMITS

120'-0"

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

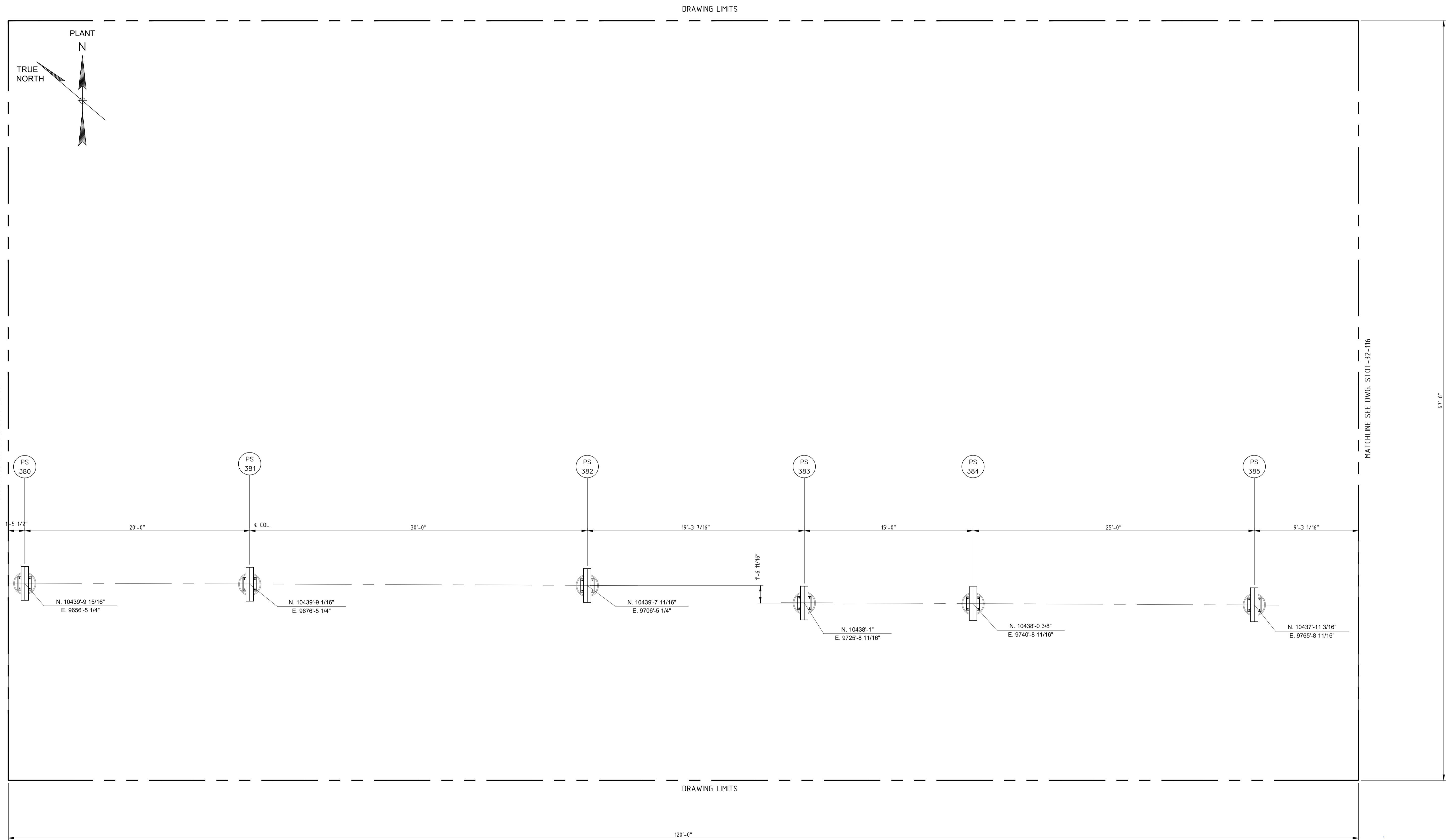
**REFERENCE DRAWINGS:**  
STOT-32-100 KEY FDN LOCATION PLAN  
STOT-24-115 PIPING PLAN  
STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE     | APR    |
|-----|------------------------------------|-----|----------|--------|
| 1   | UPDATED PER U/G INTERFERENCE       | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19  | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19   | KLV JR |

**PROJECT LOCATION:**

|                            |                      |
|----------------------------|----------------------|
| <b>DRAWN BY:</b> REH       | <b>DATE:</b> 3/13/19 |
| <b>CHECKED:</b> KLV        | <b>DATE:</b>         |
| <b>APPROVED:</b> JR        | <b>DATE:</b>         |
| <b>SCALE:</b> 1/4" = 1'-0" |                      |

|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION LOCATION PLAN<br/>PIPE RACK NORTH WALL</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>   |               |
| <b>DRAWING NO. STOT-32-115</b>   | <b>REV. 1</b> |



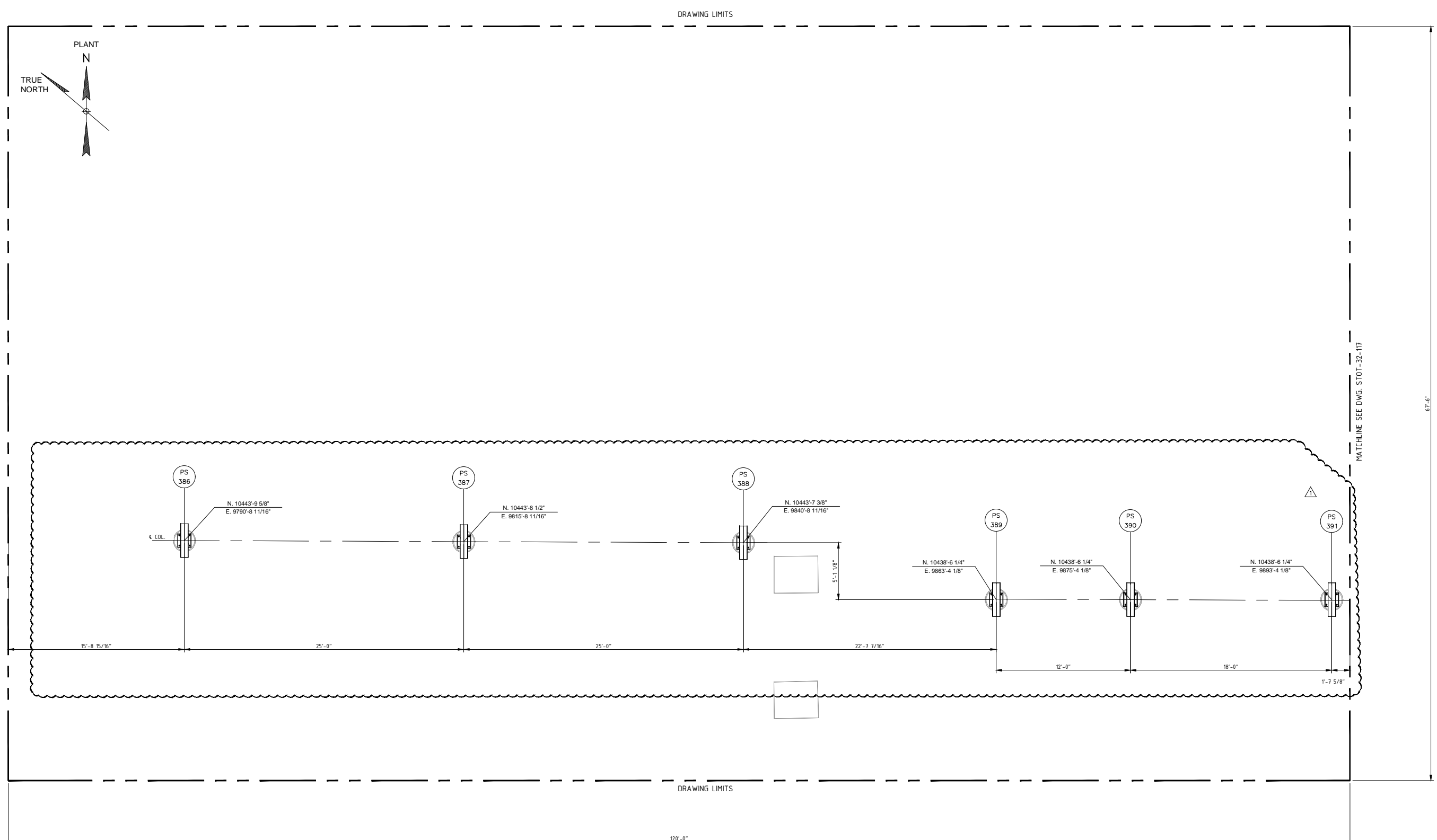
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-115 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/13/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK NORTH WALL**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-115** **REV. 0**



**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

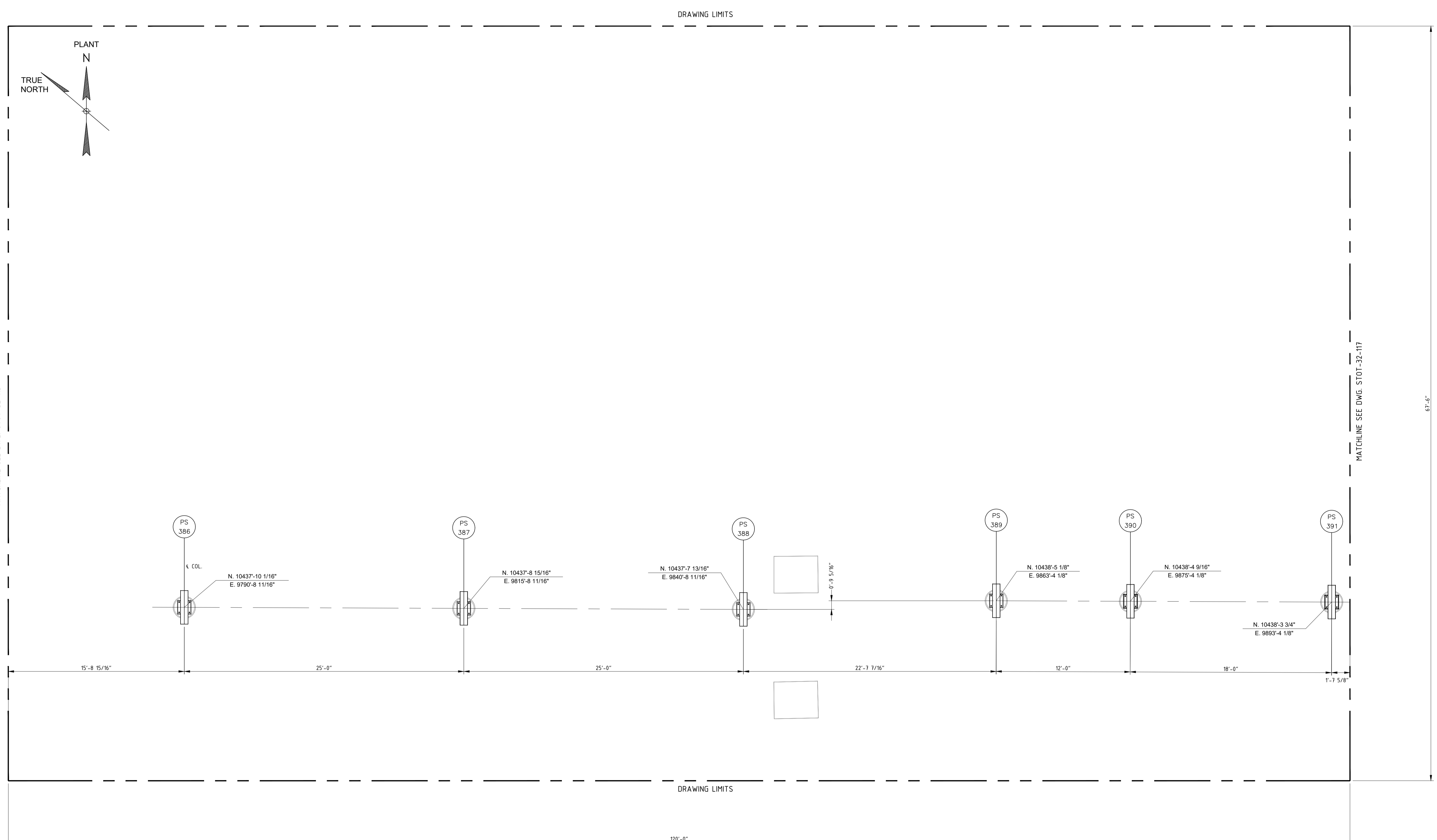
**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-116 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE     | APR    |
|-----|------------------------------------|-----|----------|--------|
| 1   | UPDATED PER U/G INTERFERENCE       | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19  | NW JR  |
| B   | UPDATED PER DESIGN WC_00247        | KLV | 6/04/19  | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19   | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/13/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK NORTH WALL**

**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-116** **REV. 1**



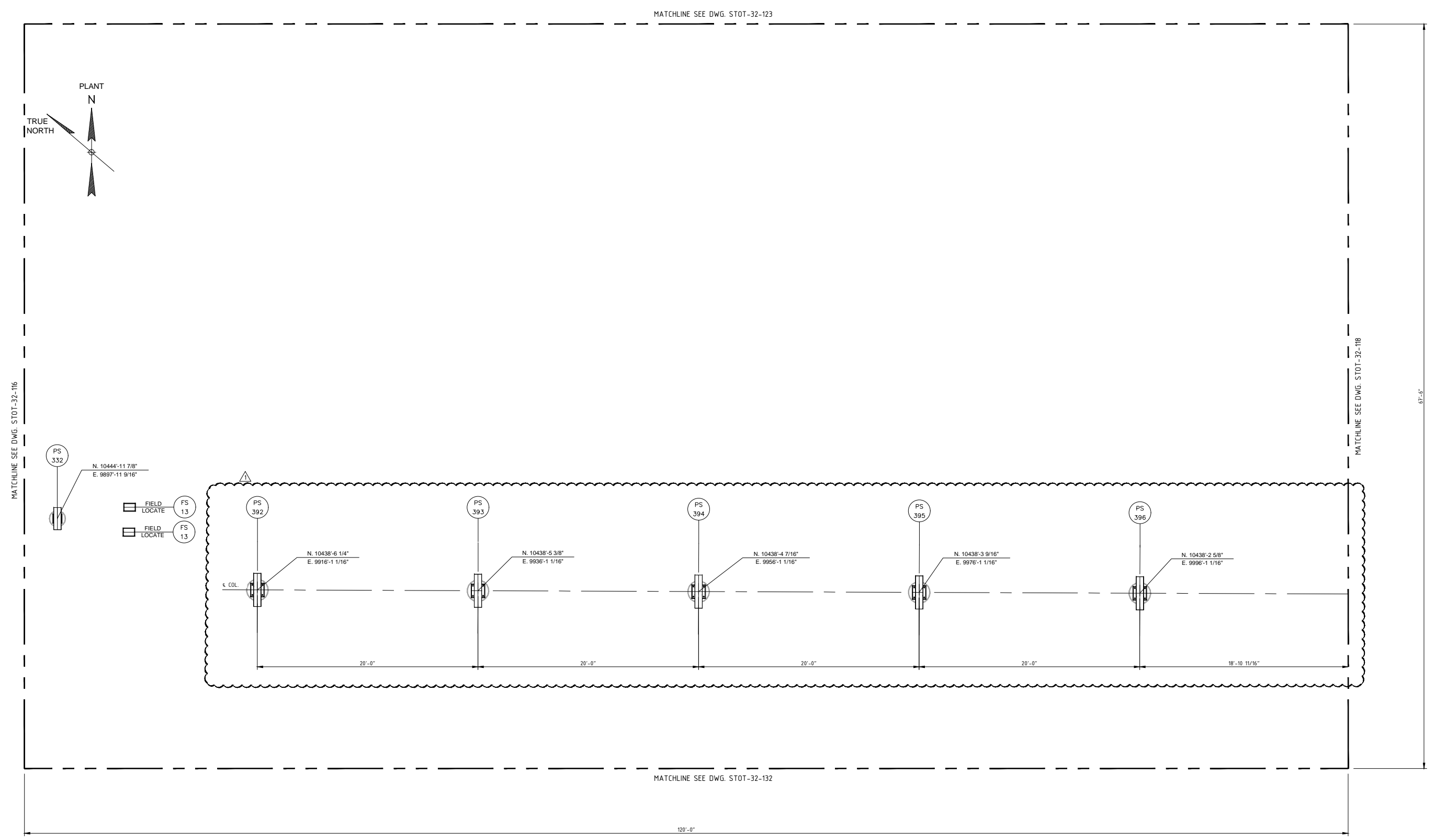
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-116 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | NW JR  |
| B   | UPDATED PER DESIGN WC_00247        | KLV | 6/04/19 | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/13/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK NORTH WALL**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-116** **REV. 0**



**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

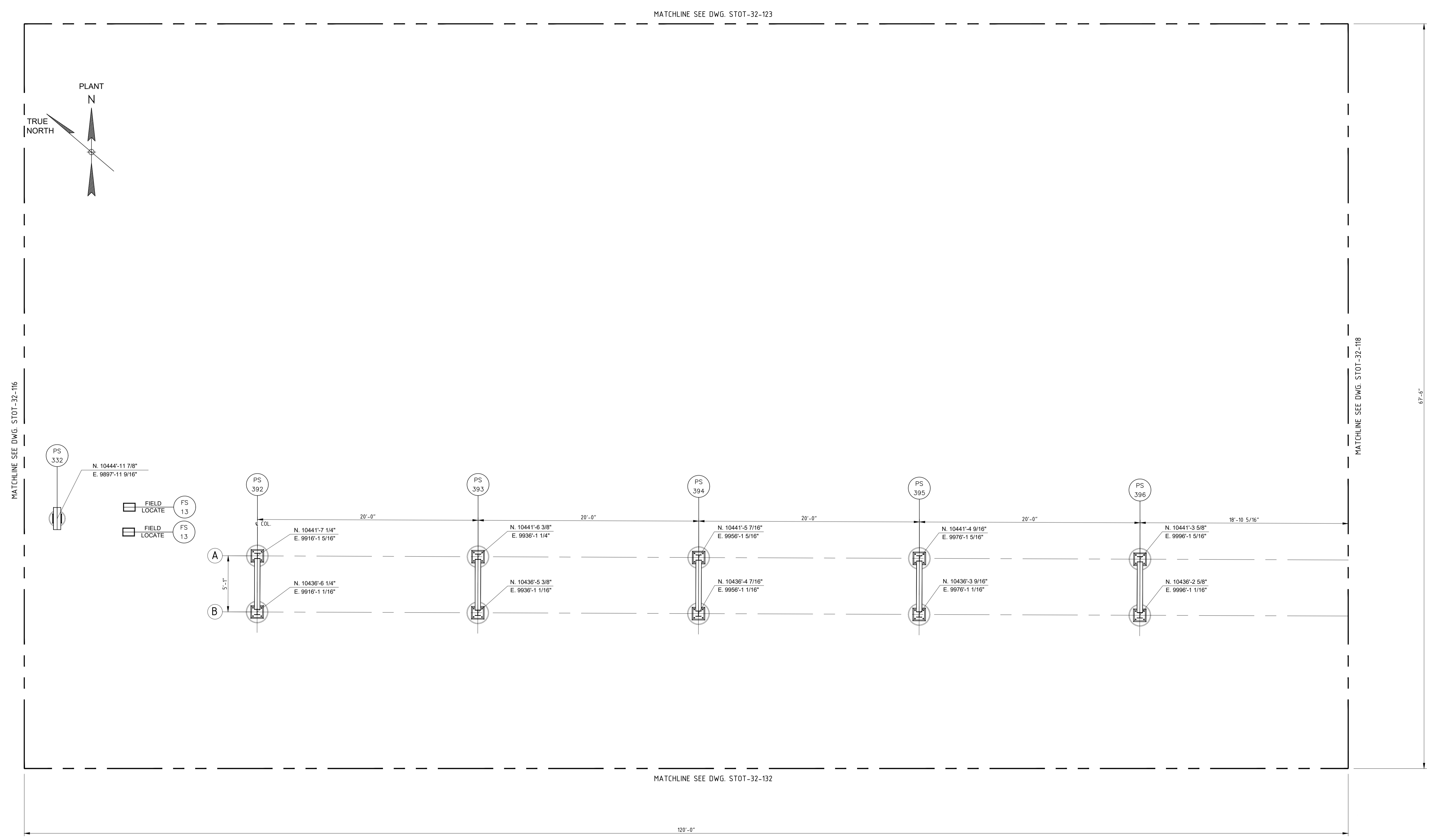
**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-118 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                           | BY  | DATE     | APR    |
|-----|------------------------------------|-----|----------|--------|
| 1   | UPDATED PER U/G INTERFERENCE       | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19  | NW JR  |
| B   | UPDATED PER DESIGN WC_00247        | KLV | 6/04/19  | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19   | NW JR  |

**PROJECT LOCATION:** STOCKTON, CA  
**DRAWN BY:** KLV **DATE:** 2/16/17  
**CHECKED:** JV **DATE:** 3/28/18  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK - NORTH WALL**

**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-117** **REV. 1**



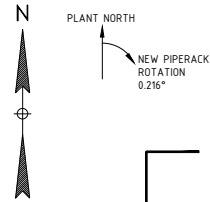
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-118 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

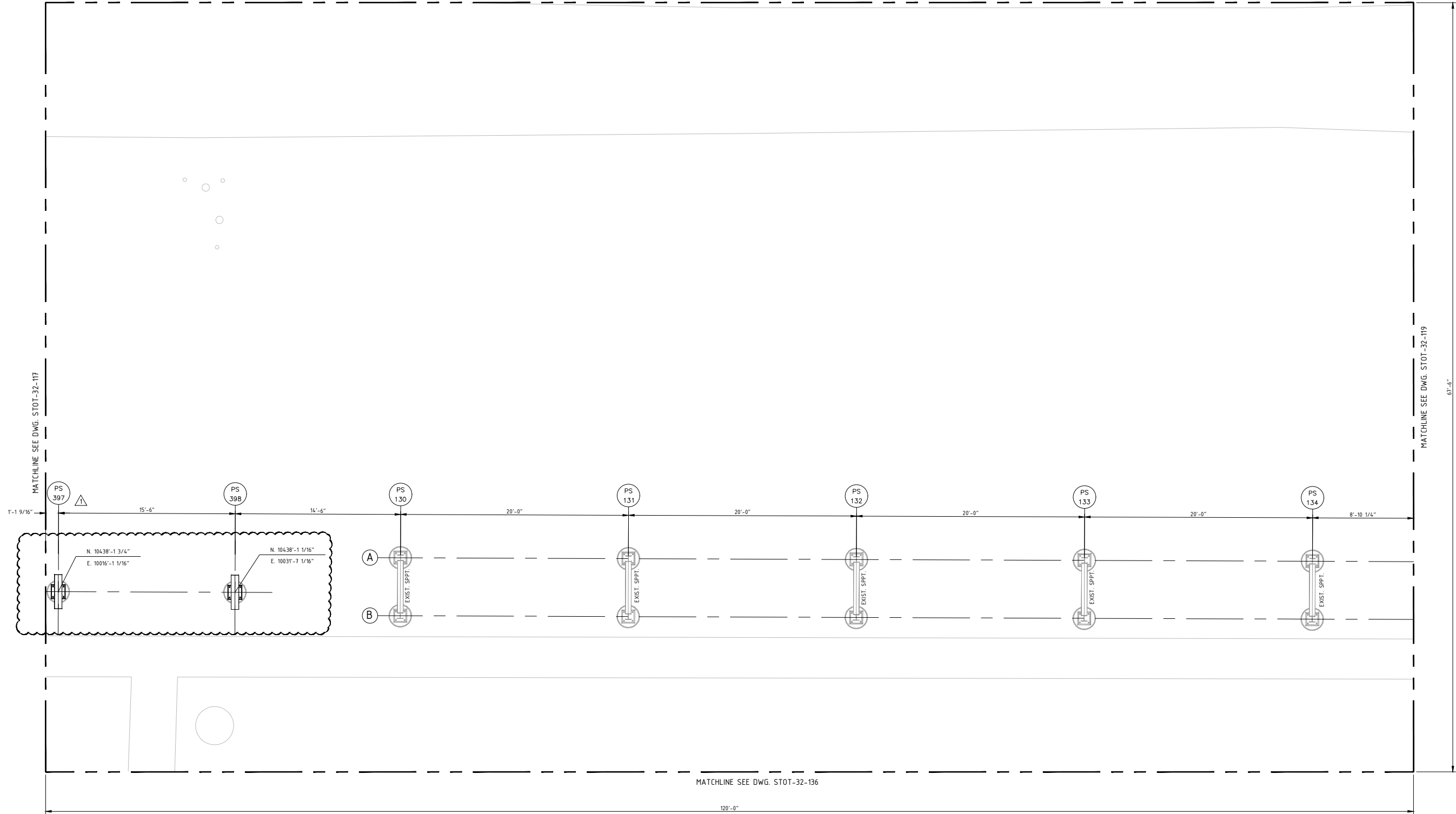
| NO. | REVISION                           | BY  | DATE    | APR   |
|-----|------------------------------------|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | NW JR |
| B   | UPDATED PER DESIGN WC_00247        | KLV | 6/04/19 | NW JR |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | NW JR |

**PROJECT LOCATION:** STOCKTON, CA  
**DRAWN BY:** KLV **DATE:** 2/16/17  
**CHECKED:** JV **DATE:** 3/28/18  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 PIPE RACK - NORTH WALL**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-117** **REV. 0**



MATCHLINE SEE DWG. STOT-32-132



MATCHLINE SEE DWG. STOT-32-119

67'-6"

MATCHLINE SEE DWG. STOT-32-136

120'-0"

**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

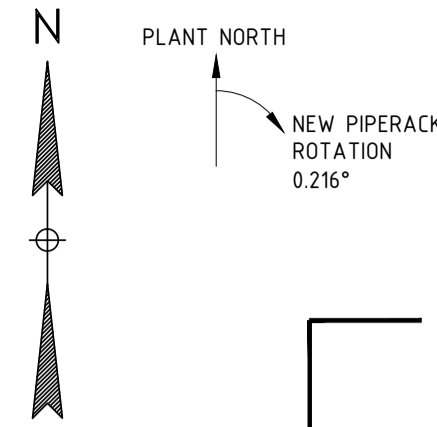
**REFERENCE DRAWINGS:**  
 STOT-24-118 PIPING PLAN  
 STOT-33-108 FOUNDATION SCHEDULE  
 STOT-36-115 PIPE SUPPORT SCHEDULE

| NO. | REVISION                           | BY  | DATE     | APR    |
|-----|------------------------------------|-----|----------|--------|
| 1   | UPDATED PER U/G INTERFERENCE       | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19  | NW JR  |
| B   | UPDATED PER DESIGN WC_00247        | KLV | 6/04/19  | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19   | KLV JS |

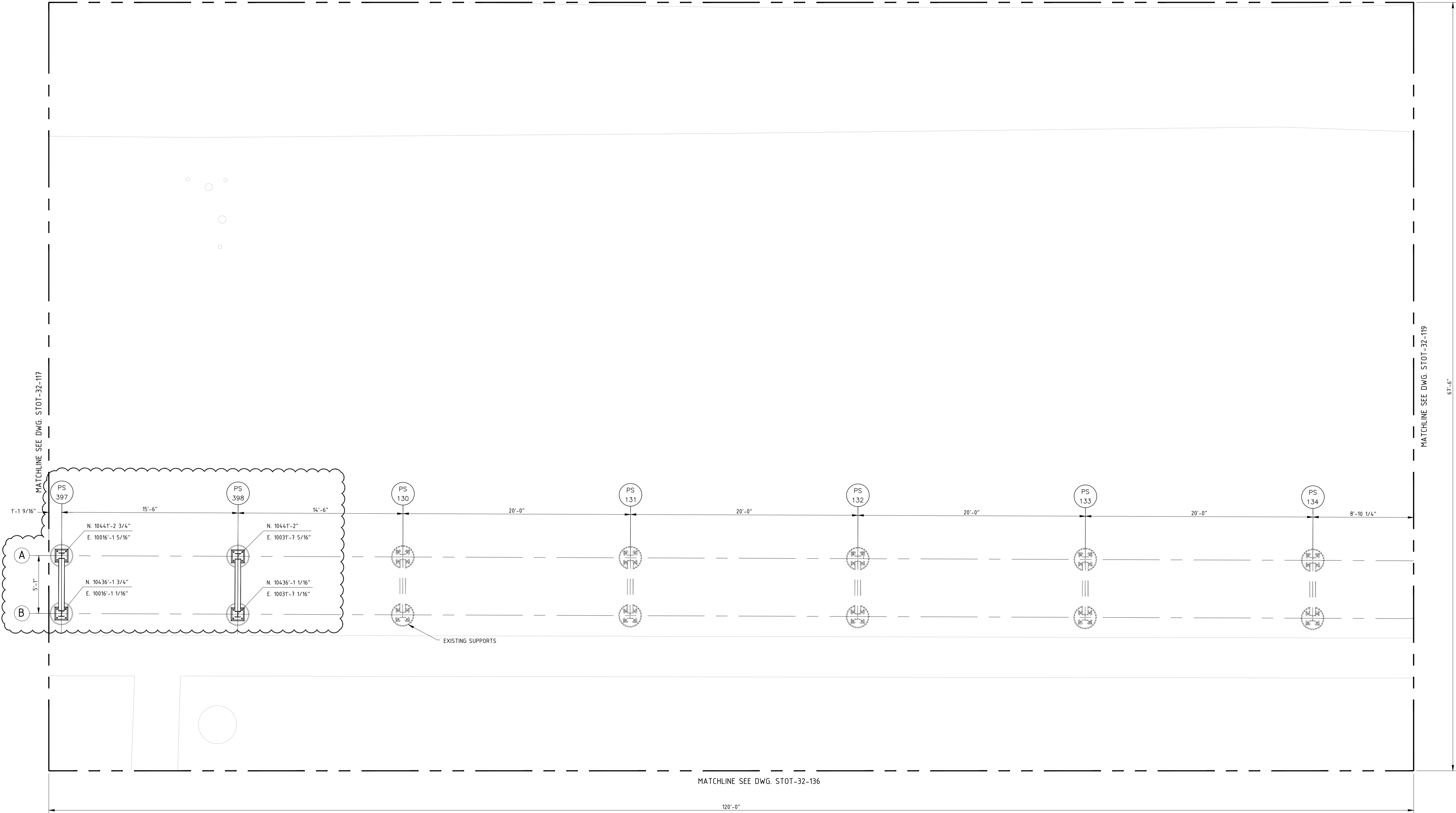
|                                       |                       |
|---------------------------------------|-----------------------|
| <b>PROJECT LOCATION:</b> STOCKTON, CA |                       |
| <b>DRAWN BY:</b> KLV                  | <b>DATE:</b> 10/01/18 |
| <b>CHECKED:</b> JV                    | <b>DATE:</b>          |
| <b>APPROVED:</b> JR                   | <b>DATE:</b>          |
| <b>SCALE:</b> 1/4"=1'-0"              |                       |

|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION LOCATION PLAN<br/>PIPE RACK - NORTH WALL</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00410</b>   |               |
| <b>DRAWING NO. STOT-32-118</b>   | <b>REV. 1</b> |





MATCHLINE SEE DWG. STOT-32-132



MATCHLINE SEE DWG. STOT-32-119  
67'-6"

MATCHLINE SEE DWG. STOT-32-136

120'-0"

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
STOT-24-118 PIPING PLAN  
STOT-33-108 FOUNDATION SCHEDULE  
STOT-36-115 PIPE SUPPORT SCHEDULE

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLW | 6/21/19 | NW JR  |
| B   | UPDATED PER DESIGN WC_00247        | KLW | 6/04/19 | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLW JS |

|                                       |                       |
|---------------------------------------|-----------------------|
| <b>PROJECT LOCATION:</b> STOCKTON, CA |                       |
| <b>DRAWN BY:</b> KLW                  | <b>DATE:</b> 10/01/18 |
| <b>CHECKED:</b> JV                    | <b>DATE:</b>          |
| <b>APPROVED:</b> JR                   | <b>DATE:</b>          |
| <b>SCALE:</b> 1/4"=1'-0"              |                       |

|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION LOCATION PLAN<br/>PIPE RACK - NORTH WALL</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00410</b>   |               |
| <b>DRAWING NO. STOT-32-118</b>   | <b>REV. 0</b> |



**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

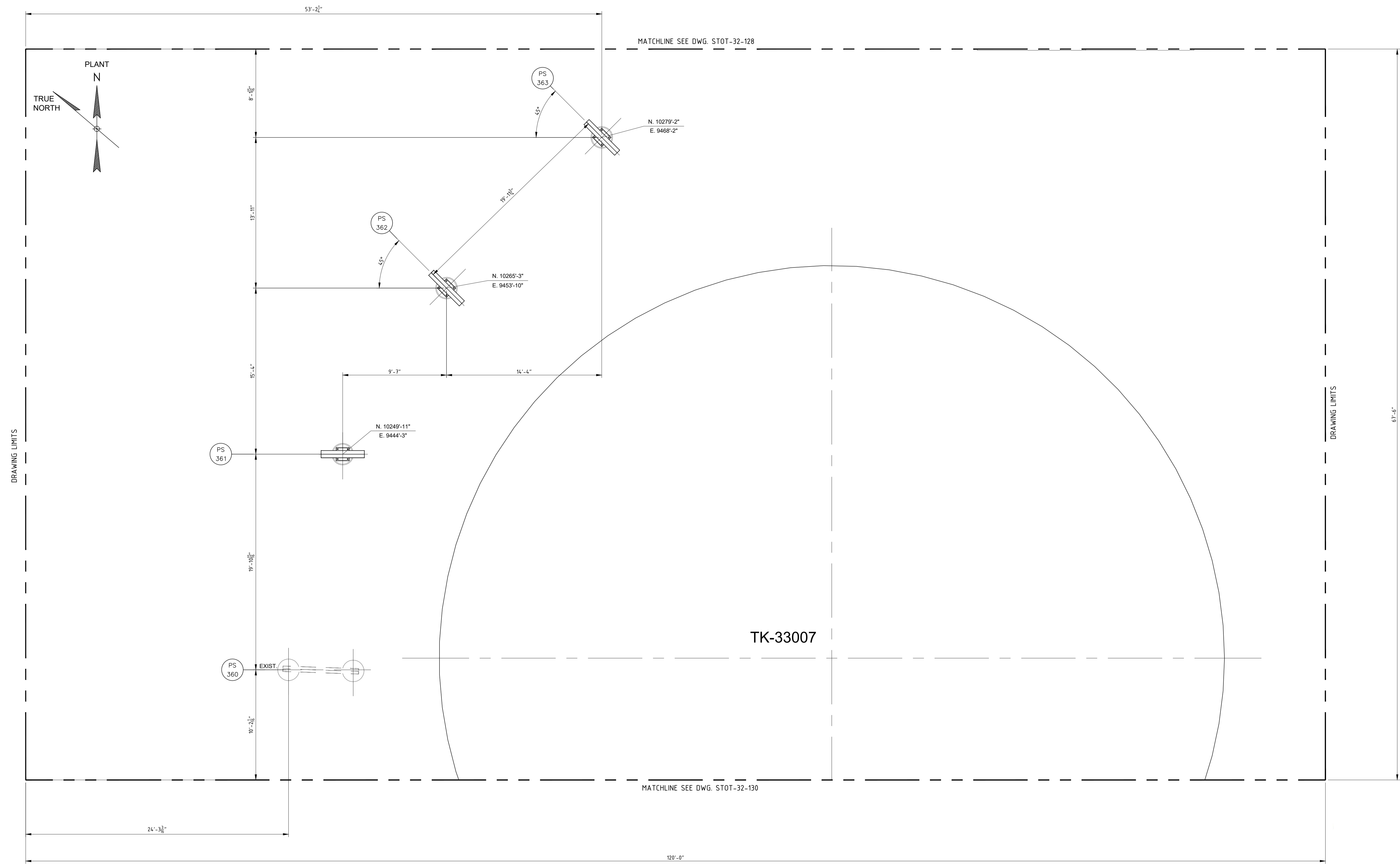
**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FDN LOCATION PLAN  
 STOT-24-127 PIPING PLAN  
 STOT-33-108 FOUNDATION SCHEDULE  
 STOT-36-115 STRUCTURAL STEEL DETAILS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | REH | 5/6/19  | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/13/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 TO/FROM TKS 33007 & 30006**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-127** **REV. 0**





**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

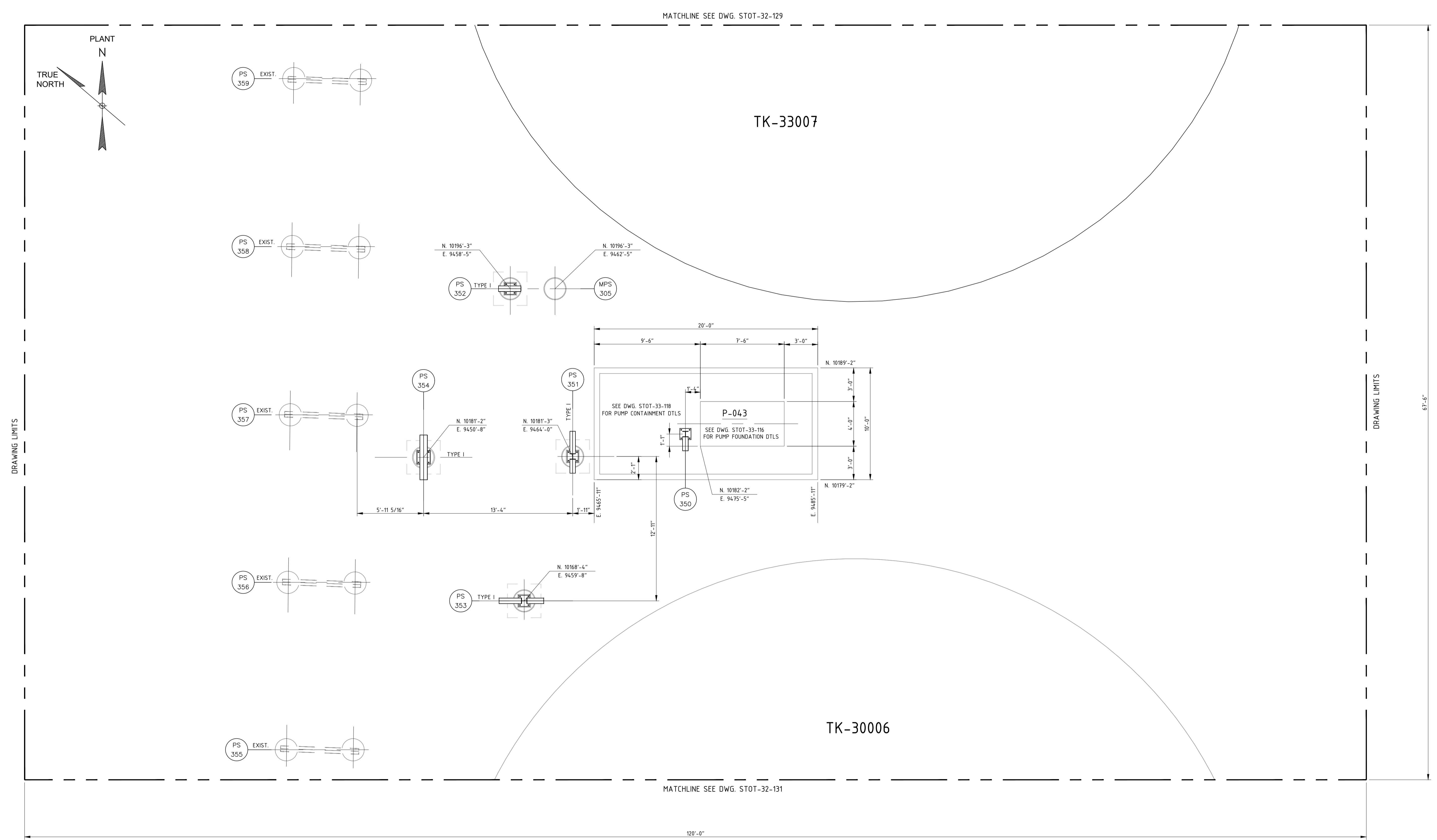
**REFERENCE DRAWINGS:**  
 STOT-32-100 - KEY FOUNDATION PLAN  
 STOT-32-129 - PIPING PLAN  
 STOT-33-115 - FOUNDATION SCHEDULE  
 STOT-36-115 - STRUCTURAL STEEL DETAILS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | REH | 5/6/19  | KLV JR |

|                     |               |
|---------------------|---------------|
| PROJECT LOCATION:   |               |
| DRAWN BY: REH       | DATE: 3/15/19 |
| CHECKED: KLV        | DATE:         |
| APPROVED: JR        | DATE:         |
| SCALE: 1/4" = 1'-0" |               |

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 TO/FROM TKS 33007 & 30006**  
 ORIGINAL PROJECT NO. **WC\_00247**  
 DRAWING NO. **STOT-32-129**

REV. 0



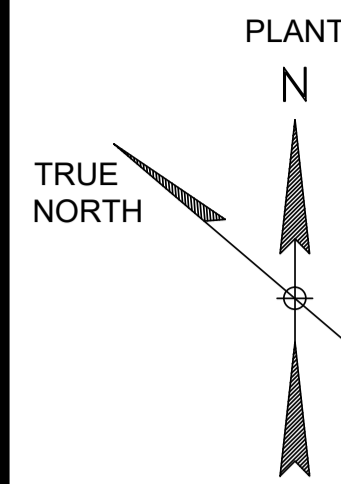
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 - KEY FOUNDATION LOCATION PLAN  
 STOT-24-130 - PIPING PLAN  
 STOT-33-115 - FOUNDATION SCHEDULE  
 STOT-36-115 - PIPE SUPPORT DETAILS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| A   | ISSUE FOR ENGINEERING REVIEW       | REH | 5/6/19  | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** REH **DATE:** 3/15/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4" = 1'-0"

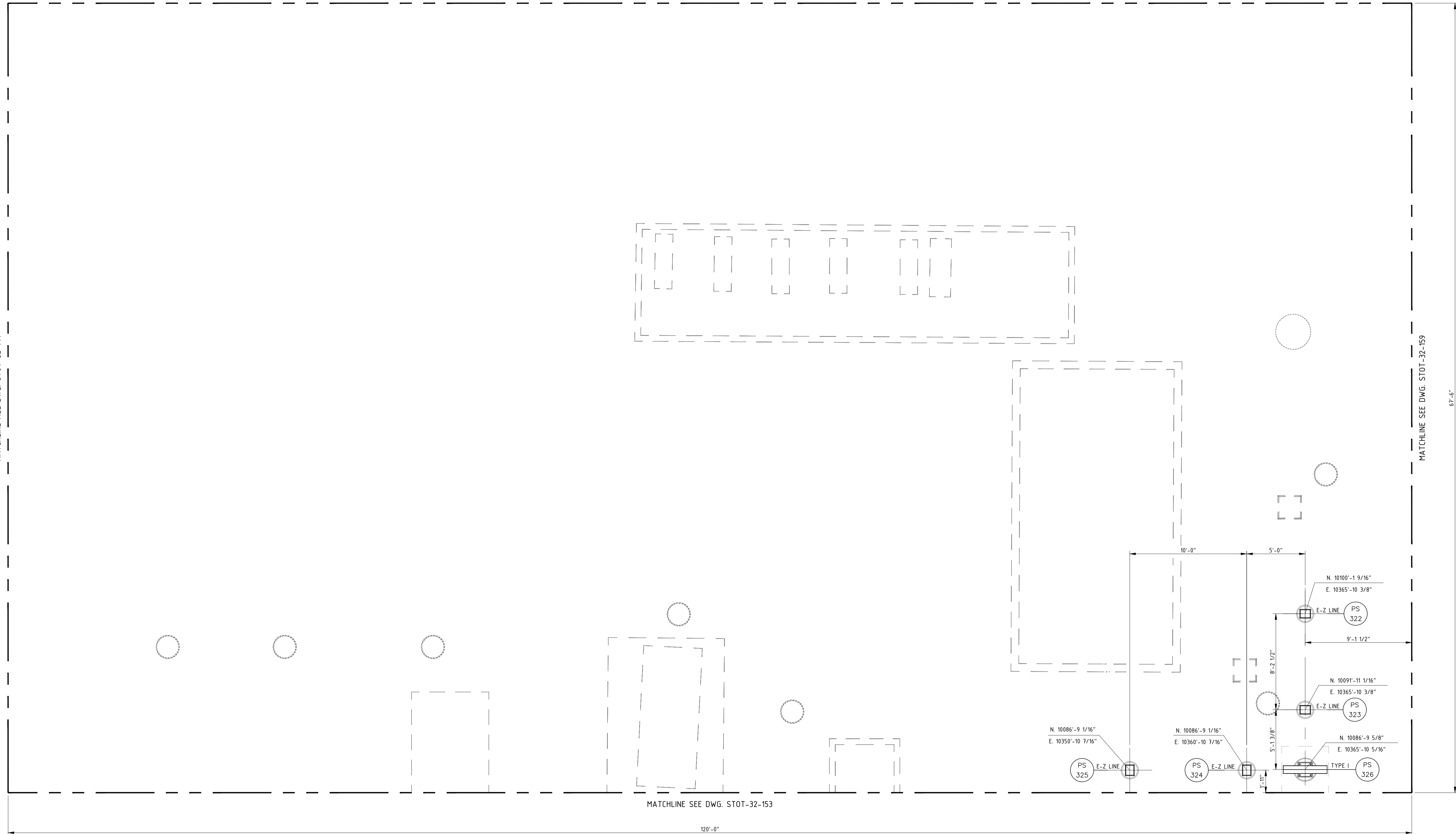
**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 TO/FROM TKS 33007 & 30006**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-130** **REV. 0**



MATCHLINE SEE DWG. STOT-32-151

MATCHLINE SEE DWG. STOT-32-147

MATCHLINE SEE DWG. STOT-32-159



MATCHLINE SEE DWG. STOT-32-153

120'-0"

67'-5"

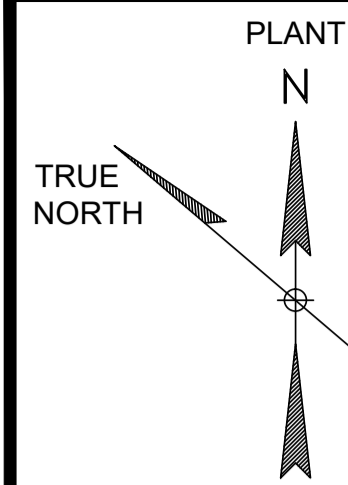
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FOUNDATION LOCATION PLAN  
 STOT-24-152 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | JV JR |
| B   | UPDATED PER DESIGN WC_00247             | KLV | 6/04/19 | JR JV |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | JBF | 5/6/19  | JV JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> KLV     | <b>DATE:</b> 6/21/18 |
| <b>CHECKED:</b> JV       | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> 1/4"=1'-0" |                      |

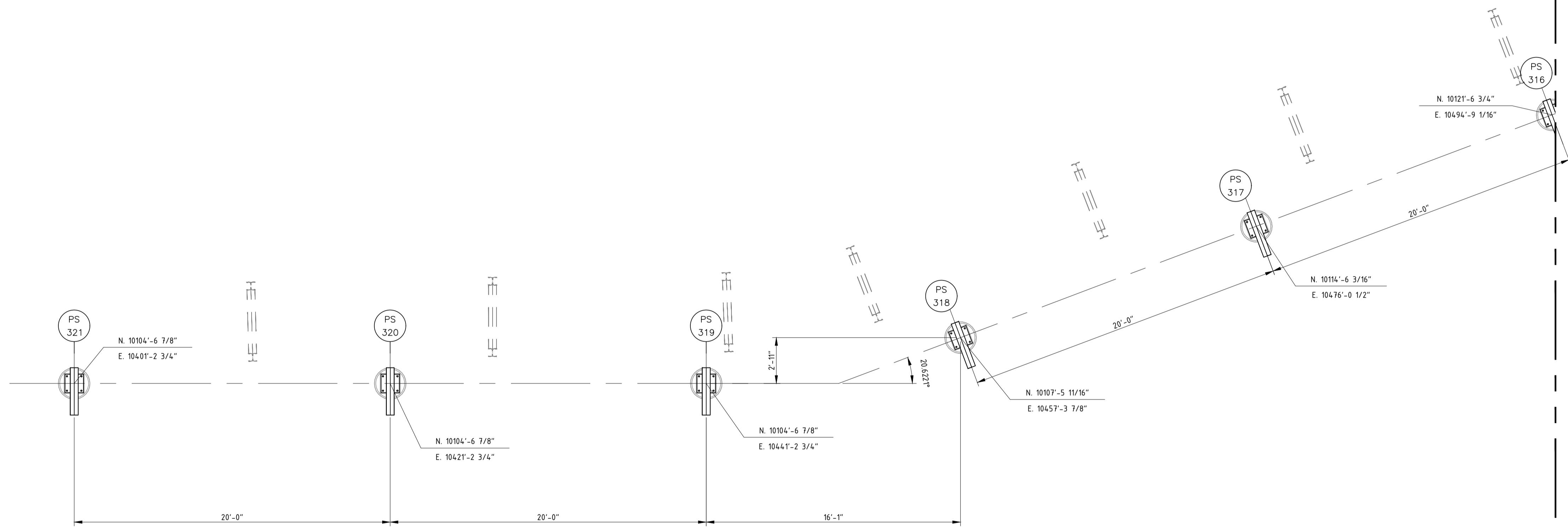
|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION LOCATION PLAN<br/>LOADING PUMP AREA</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>  |               |
| <b>DRAWING NO. STOT-32-152</b>  | <b>REV. 0</b> |



MATCHLINE SEE DWG. STOT-32-158

MATCHLINE DWG. STOT-32-152

MATCHLINE SEE DWG. STOT-32-164



DRAWING LIMITS

120'-0"

67'-6"

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
STOT-32-100 KEY FDN LOCATION PLAN  
STOT-24-158 PIPING PLAN  
STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | JV JR |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | JBF | 5/6/19  | JV JR |

PROJECT LOCATION:

DRAWN BY: KLV

DATE: 6/21/18

CHECKED: JV

DATE:

APPROVED: JR

DATE:

SCALE: 1/4"=1'-0"

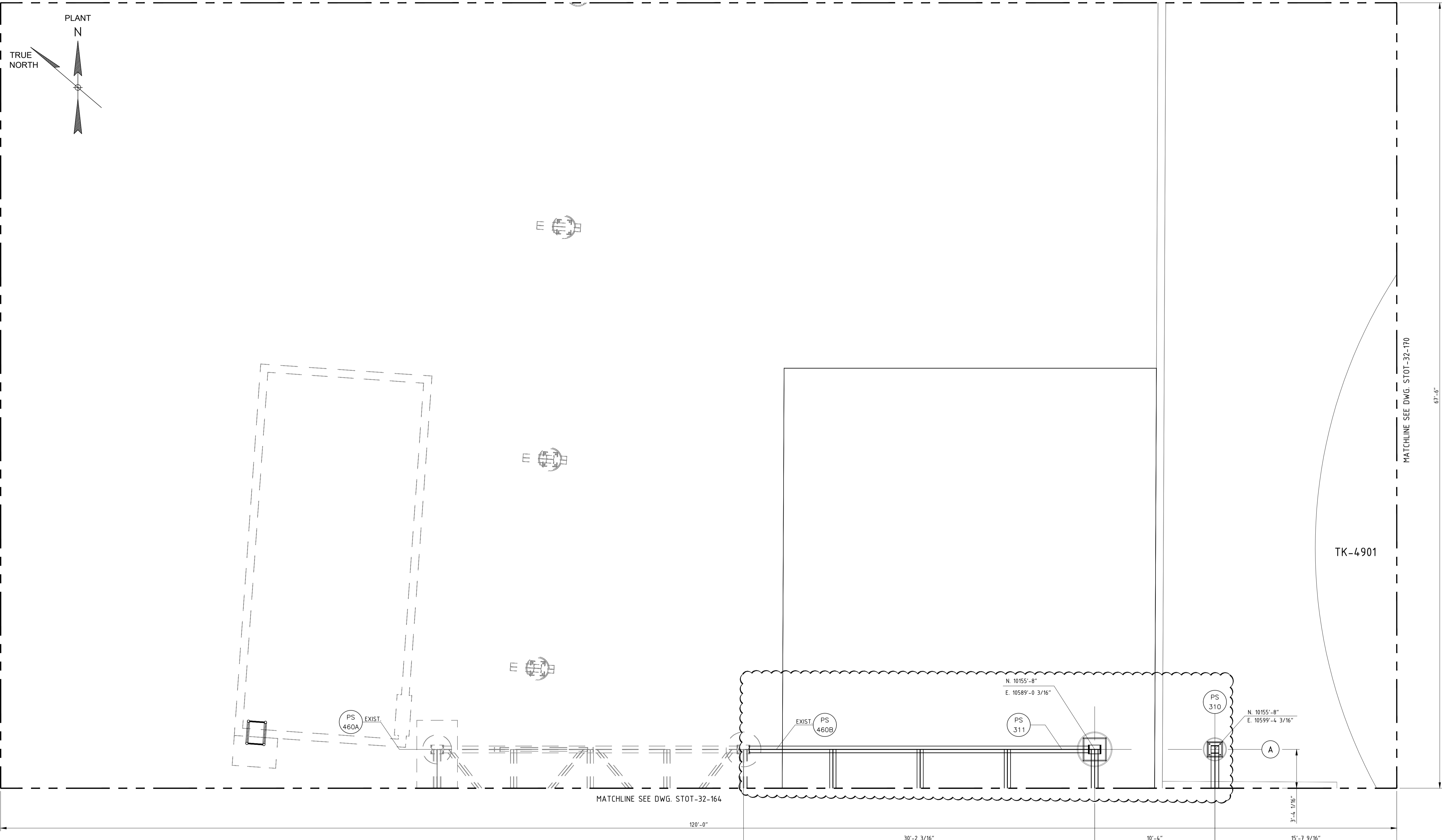
STOCKTON TERMINAL  
FOUNDATION LOCATION PLAN  
TK-3301 SOUTH

ORIGINAL PROJECT NO. WC\_00247

DRAWING NO. STOT-32-159

REV. 0

MATCHLINE SEE DWG. STOT-32-162



MATCHLINE SEE DWG. STOT-32-158

MATCHLINE SEE DWG. STOT-32-170

MATCHLINE SEE DWG. STOT-32-164

TK-4901

67'-6"

120'-0"

30'-2 3/16"

10'-4"

3'-4 7/16"

15'-7 9/16"

**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

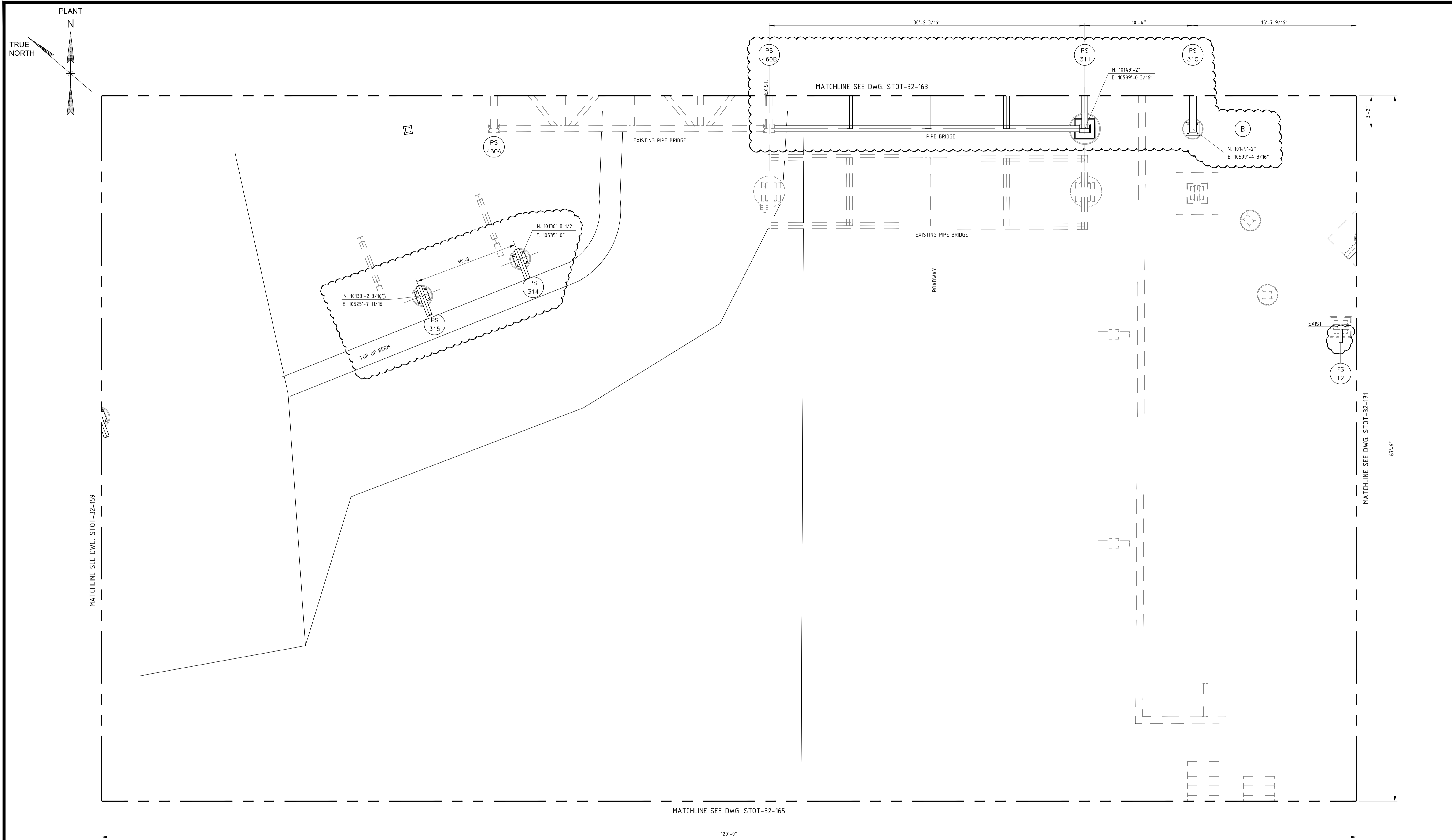
**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY FOUNDATION LOCATION PLAN  
 STOT-24-163 PIPING PLAN  
 STOT-33-115 FOUNDATION SCHEDULE

| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | NW JR |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | JBF | 5/6/19  | NW JR |

| PROJECT LOCATION  |               |
|-------------------|---------------|
| DRAWN BY: KLV     | DATE: 6/21/19 |
| CHECKED: JV       | DATE:         |
| APPROVED: JR      | DATE:         |
| SCALE: 1/4"=1'-0" |               |

| STOCKTON TERMINAL<br>FOUNDATION LOCATION PLAN<br>TKS-8001 & 8002 FILL LINE |        |
|--|--------|
| ORIGINAL PROJECT NO. WC_00247  |        |
| DRAWING NO. STOT-32-163  | REV. 0 |





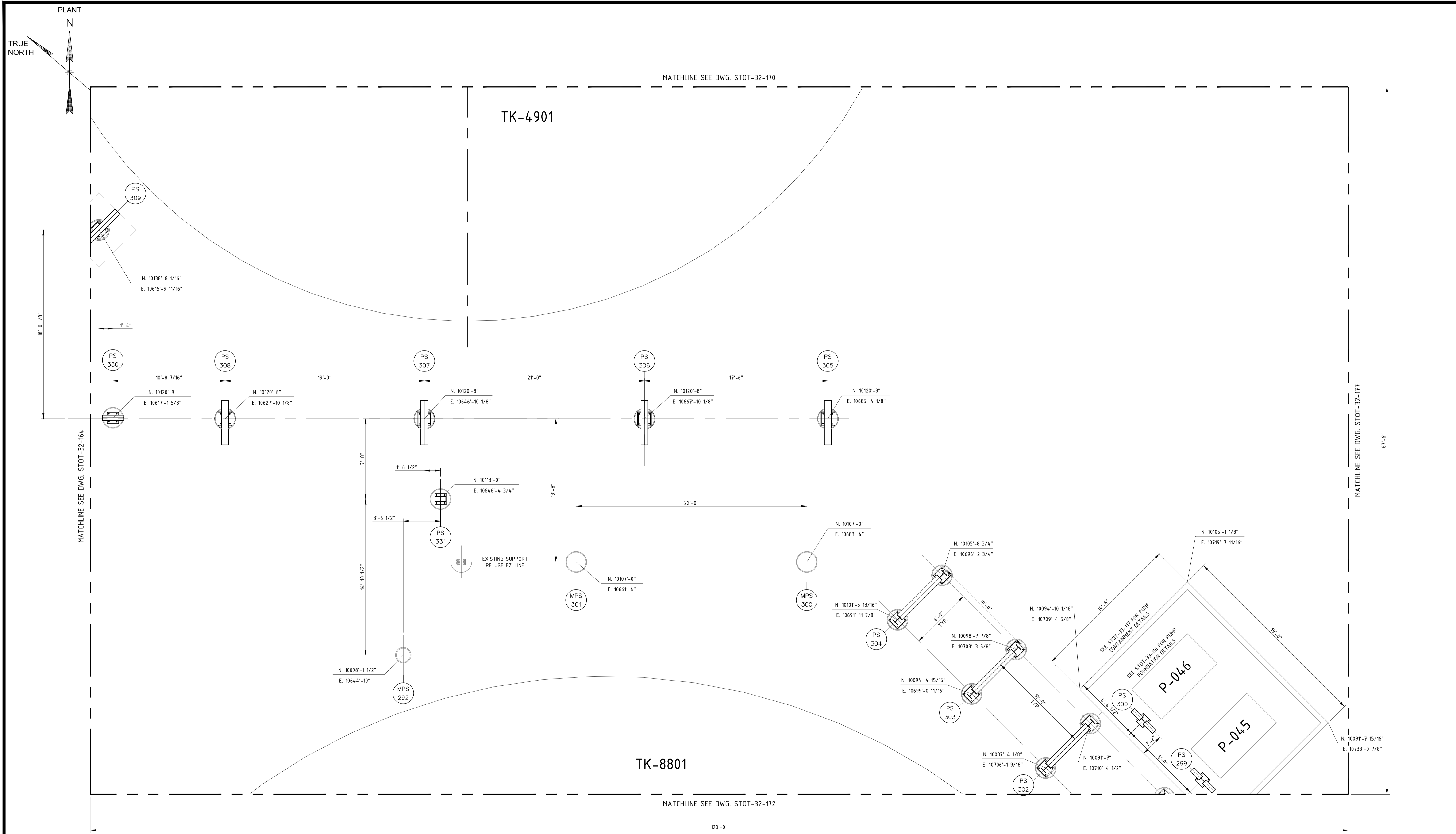
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 - KEY FOUNDATION LOCATION PLAN  
 STOT-24-164 - PIPING PLAN  
 STOT-33-115 - FOUNDATION SCHEDULE

| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | NW JR |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | JBF | 5/6/19  | NW JR |

**PROJECT LOCATION:**  
**DRAWN BY:** KLV **DATE:** 6/21/18  
**CHECKED:** JV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4"=1'-0"

**STOCKTON TERMINAL  
 FOUNDATION PLAN  
 PIPE BRIDGE OVER**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-164** **REV. 0**



**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 - KEY FOUNDATION LOCATION PLAN  
 STOT-33-115 - FOUNDATION DETAILS  
 STOT-33-116 - PUMP FOUNDATION DETAILS  
 STOT-33-117 - PUMP CONTAINMENT DETAILS

| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | NW JR |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | KLV | 5/6/19  | NW JR |

**PROJECT LOCATION:**  
**DRAWN BY:** KLV **DATE:** 10/01/18  
**CHECKED:** JV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4"=1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 TK-4901**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-171** **REV. 0**



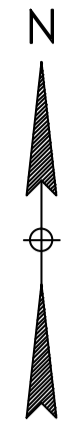
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 - KEY FOUNDATION LOCATION PLAN  
 STOT-24-172 - PIPING PLAN  
 STOT-33-115 - FOUNDATION SCHEDULE

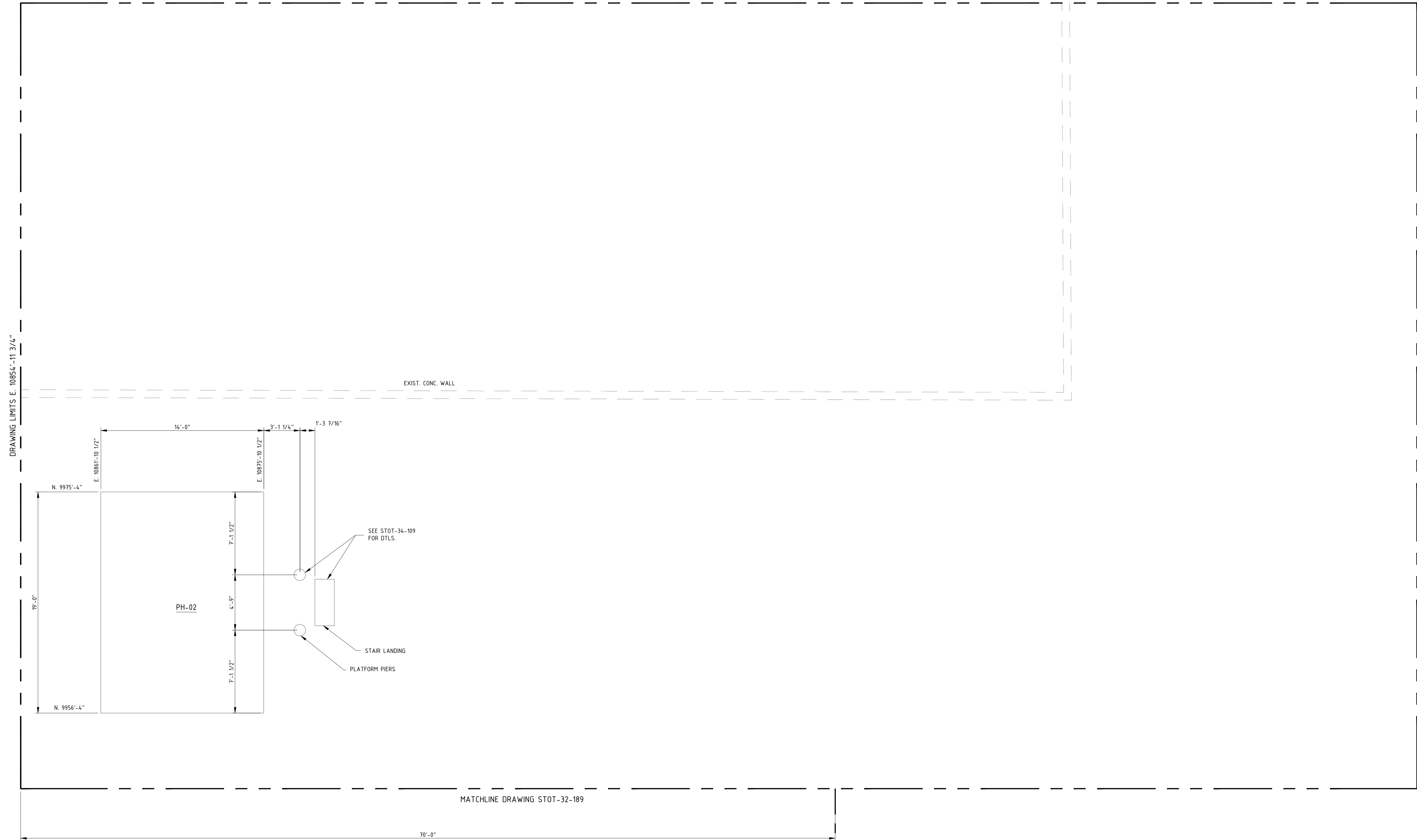
| NO. | REVISION                                | BY  | DATE    | APR   |
|-----|---|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247      | KLV | 6/21/19 | JV JR |
| A   | ISSUE FOR ENGINEERING REVIEW - WC_00247 | JBF | 5/6/19  | JV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** KLV **DATE:** 3/12/19  
**CHECKED:** JV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** 1/4"=1'-0"

**STOCKTON TERMINAL  
 FOUNDATION LOCATION PLAN  
 TK-8801**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-32-172** **REV. 0**



DRAWING LIMITS N. 10017'-4"



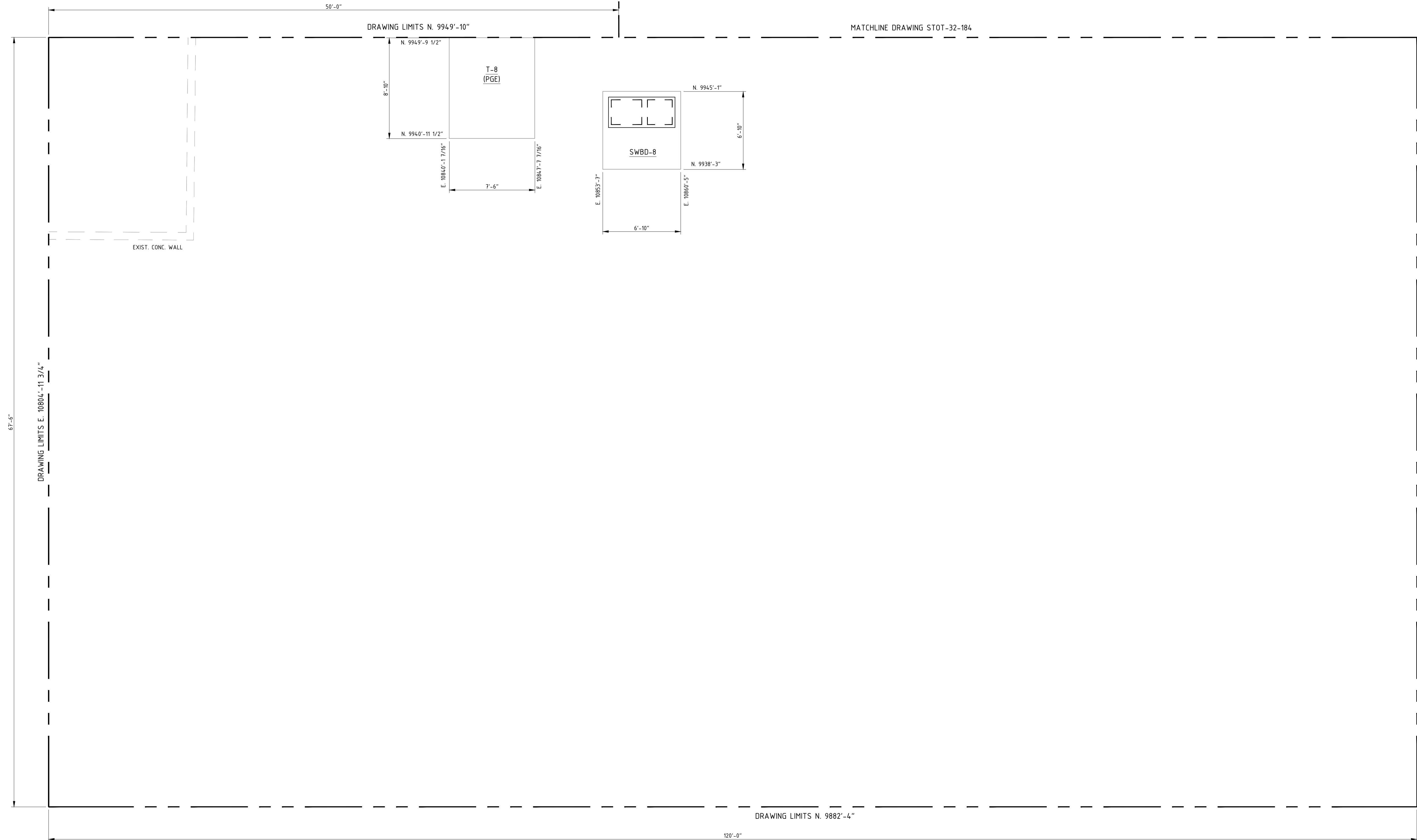
**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
STOT-32-100 KEY PIPING PLAN  
STOT-34-109 FOUNDATION DETAILS

| NO. | REVISION                               | BY  | DATE    | APR   |
|-----|--|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247     | KLV | 4/09/20 | NW JR |
| A   | ISSUED FOR ENGINEERING REVIEW WC_00247 | KLV | 4/08/20 | NW JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> KLV     | <b>DATE:</b> 4/08/20 |
| <b>CHECKED:</b> NW       | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> 1/4"=1'-0" |                      |

|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>PIPING PLAN<br/>PH-02</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>               |               |
| <b>DRAWING NO. STOT-32-184</b>                     | <b>REV. 0</b> |



**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
 STOT-32-100 KEY PIPING PLAN  
 STOT-34-108 FOUNDATION DETAILS

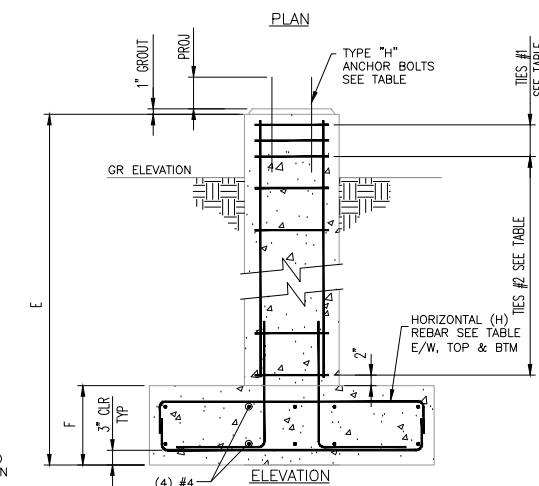
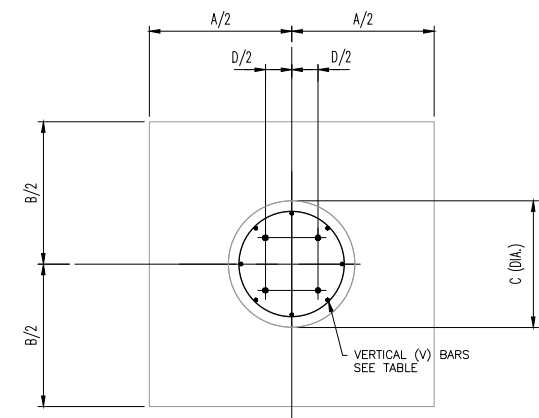
| NO. | REVISION                               | BY  | DATE    | APR   |
|-----|--|-----|---------|-------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247     | KLV | 4/09/20 | NW JR |
| A   | ISSUED FOR ENGINEERING REVIEW WC_00247 | KLV | 4/08/20 | NW JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> KLV     | <b>DATE:</b> 4/08/20 |
| <b>CHECKED:</b> NW       | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> 1/4"=1'-0" |                      |

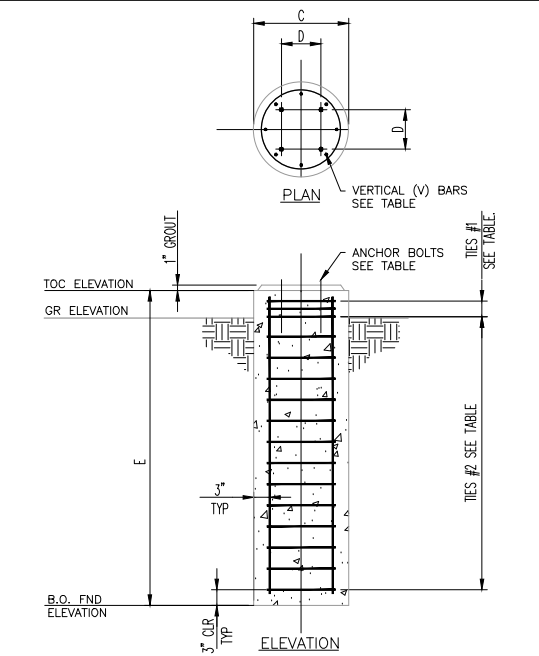
|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>PIPING PLAN<br/>T-8 &amp; SWBD-8</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>                          |               |
| <b>DRAWING NO. STOT-32-189</b>                                | <b>REV. 0</b> |

| NESTE - PIPE SUPPORT FOUNDATION SCHEDULE - WC_00247 |                 |                |             |              |            |       |       |           |        |       |                   |      |                     |        |               |               |              |          |        |       |      |  |
|---|-----------------|----------------|-------------|--------------|------------|-------|-------|-----------|--------|-------|-------------------|------|---------------------|--------|---------------|---------------|--------------|----------|--------|-------|------|--|
| SUPPORT #   | DWG. NO.        | TYPE           | GRADE EL.   | TOC EL.      | DIMENSIONS |       |       |           |        |       | VERTICAL (V) BARS |      | HORIZONTAL (H) BARS |        | REBAR TIES #1 | REBAR TIES #2 | ANCHOR BOLTS |          |        |       |      |  |
|   |                 |                |             |              | A          | B     | C     | D         | E      | F     | #                 | SIZE | #                   | SIZE   |               |               | #            | SIZE     | LENGTH | EMBED | PROJ |  |
| MPS-300   | STOT-32-171     | II             | 4'-9 5/8"   | 5'-6 5/8"    |            |       | 2'-0" | N/A       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | N/A          | -        | -      | -     | -    |  |
| MPS-301   | STOT-32-171     | II             | 4'-9 5/8"   | 5'-6 5/8"    |            |       | 2'-0" | N/A       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | N/A          | -        | -      | -     | -    |  |
| MPS-305   | STOT-32-130     | II             | 3'-6"       | 4'-1 5/8"    |            |       | 2'-0" | N/A       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | N/A          | -        | -      | -     | -    |  |
| MPS-292   | STOT-32-171     | II             | 4'-3 1/4"   | 5'-5 5/8"    |            |       | 2'-0" | 9"        | 5'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | N/A          | -        | -      | -     | -    |  |
| PS-299  | STOT-32-171     | IN CONTAINMENT | NA          | 3'-9 1/2"    |            |       | NA    | 9"        | NA     |       |                   |      |                     |        |               |               |              |          |        |       |      |  |
| PS-300  | STOT-32-171     | IN CONTAINMENT | NA          | 3'-9 1/2"    |            |       | NA    | 9"        | NA     |       |                   |      |                     |        |               |               |              |          |        |       |      |  |
| PS-301  | STOT-32-172     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 11"       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-302  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 11"       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-303  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 11"       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-304  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 11"       | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-305  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-306  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-307  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-308  | STOT-32-171     | II             | 4'-0"       | 4'-4"        |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-309  | STOT-32-171     | I              | 4'-0"       | 4'-4"        | 5'-3"      | 5'-3" | 3'-0" | 14"       | 4'-6"  | 1'-6" | 8                 | #7   | 6                   | #5 T/B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-310A/B   | STOT-32-163/164 | II             | 4'-5"       | 4'-9"        |            |       | 2'-0" | 11"       | 10'-0" |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-311A/B   | STOT-32-163/164 | II             | 3'-9 1/2"   | 6'-2"        |            |       | 3'-0" | 6"        | 12'-7" |       | 8                 | #7   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-314  | STOT-32-164     | II             | 3'-9"       | 4'-6 3/8"    |            |       | 2'-0" | 11"       | 10'-0" |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-315  | STOT-32-164     | II             | 4'-0"       | 4'-6 3/8"    |            |       | 2'-0" | 11"       | 10'-0" |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-316  | STOT-32-159/164 | II             | 4'-1"       | 4'-6 3/8"    |            |       | 2'-0" | 11"       | 10'-0" |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-317  | STOT-32-159     | II             | 4'-10"      | 5'-7 3/8"    |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-318  | STOT-32-159     | II             | 4'-10"      | 5'-7 3/8"    |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-319  | STOT-32-159     | II             | 3'-11"      | 5'-7 3/8"    |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-320  | STOT-32-159     | II             | 3'-3"       | 5'-7 3/8"    |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-321  | STOT-32-159     | II             | 3'-8"       | 5'-7 3/8"    |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-322  | STOT-32-152     | II             | 3'-9 1/2"   | 5'-0"        |            |       | 1'-6" | 7"x5 1/2" | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 1/2" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-323  | STOT-32-152     | II             | 3'-6"       | 5'-0"        |            |       | 1'-6" | 7"x5 1/2" | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 1/2" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-324  | STOT-32-152     | II             | 3'-9"       | 5'-0"        |            |       | 1'-6" | 7"x5 1/2" | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 1/2" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-325  | STOT-32-152     | II             | 3'-7"       | 5'-0"        |            |       | 1'-6" | 7"x5 1/2" | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 1/2" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-326  | STOT-32-152     | I              | 3'-11"      | 5'-0"        | 5'-0"      | 5'-0" | 2'-0" | 11"       | 4'-6"  | 1'-6" | 8                 | #5   | 6                   | #5 T&B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-330  | STOT-32-171     | II             | 4'-0"       | 4'-6"        |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-331  | STOT-32-171     | II             | 5'-6"       | 5'-9 1/4"    |            |       | 2'-0" | 9"        | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-332  | STOT-32-117     | II             | 2'-9"       | 3'-0 5/8"    |            |       | 1'-6" | 6"x5"     | 6'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-350  | STOT-32-130     | IN CONTAINMENT | N/A         | 3'-8"        |            |       | NA    | 9"        | NA     |       |                   |      |                     |        |               |               |              |          |        |       |      |  |
| PS-351  | STOT-32-130     | I              | 3'-4 1/2"   | 4'-1"        | 4'-0"      | 4'-0" | 2'-0" | 9"        | 6'-0"  | 1'-2" | 8                 | #5   | 5                   | #5 T&B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-352  | STOT-32-130     | I              | 3'-6"       | 4'-1"        | 4'-0"      | 4'-0" | 2'-0" | 9"        | 4'-6"  | 1'-2" | 8                 | #5   | 5                   | #5 T&B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-353  | STOT-32-130     | I              | 4'-2"       | 4'-6"        | 4'-0"      | 4'-0" | 2'-0" | 9"        | 4'-6"  | 1'-2" | 8                 | #5   | 5                   | #5 T&B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-354  | STOT-32-130     | I              | 2'-11"      | 3'-10 15/16" | 4'-0"      | 4'-0" | 2'-0" | 11"       | 4'-6"  | 1'-2" | 8                 | #5   | 5                   | #5 T&B | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-361  | STOT-32-129     | II             | 2'-6 5/8"   | 3'-10 15/16" |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-362  | STOT-32-129     | II             | 2'-11"      | 3'-10 15/16" |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-363  | STOT-32-129     | II             | 2'-11"      | 3'-10 15/16" |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-364  | STOT-32-128     | II             | 2'-11 7/16" | 3'-10 15/16" |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-365  | STOT-32-128     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-366  | STOT-32-128     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-367  | STOT-32-128     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-368  | STOT-32-127     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-369  | STOT-32-127     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-370  | STOT-32-127     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-371  | STOT-32-127     | II             | 2'-11 7/8"  | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-372  | STOT-32-113     | II             | 2'-11 1/2"  | 4'-0 7/16"   |            |       | 3'-0" | 11"       | 10'-0" |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-373  | STOT-32-113     | II             | 3'-3"       | 4'-0 7/16"   |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-374-384  | REMOVED         |                |             |              |            |       |       |           |        |       |                   |      |                     |        |               |               |              |          |        |       |      |  |
| PS-385  | STOT-32-115     | II             | 2'-9"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-386  | STOT-32-116     | II             | 2'-5"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-387  | STOT-32-116     | II             | 2'-3"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-388  | STOT-32-116     | II             | 2'-8"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-389  | STOT-32-116     | II             | 2'-9"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-390  | STOT-32-116     | II             | 2'-8"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-391  | STOT-32-116     | II             | 2'-9"       | 3'-0"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-392  | STOT-32-117     | II             | 2'-10"      | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-393  | STOT-32-117     | II             | 2'-11"      | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-394  | STOT-32-117     | II             | 3'-1"       | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-395  | STOT-32-117     | II             | 3'-1"       | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-396  | STOT-32-117     | II             | 3'-2"       | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-397  | STOT-32-118     | II             | 3'-2"       | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |
| PS-398  | STOT-32-118     | II             | 3'-2"       | 3'-9"        |            |       | 2'-0" | 11"       | 7'-0"  |       | 8                 | #5   |                     |        | #3 @ 6" O.C.  | #3 @ 12" O.C. | 4            | 3/4" DIA | 1'-4"  | 1'-0" | 4"   |  |

MODIFIED PS-385 THRU PS-398



FOUNDATION DETAIL ~ TYPE I  
SCALE:



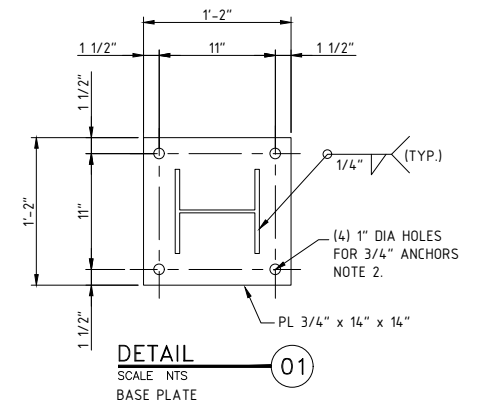
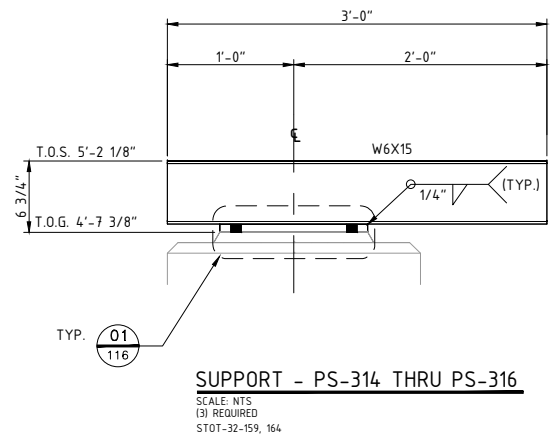
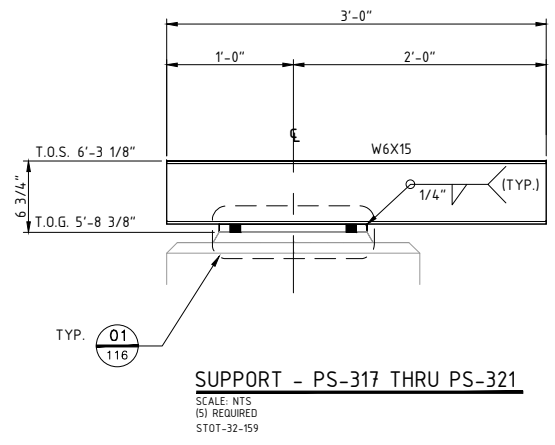
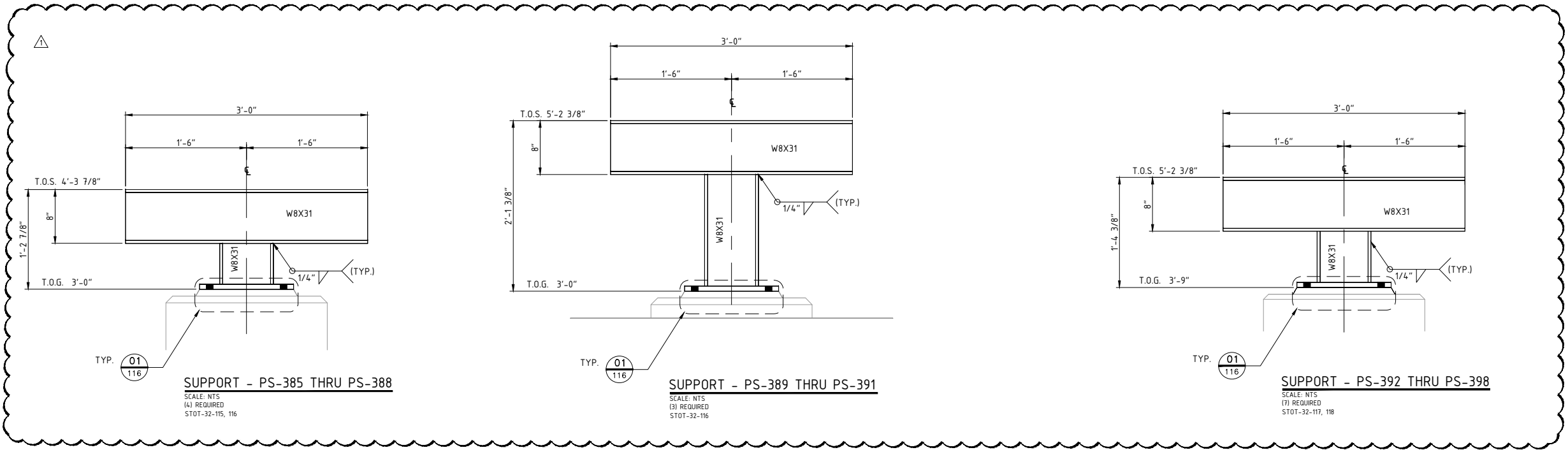
FOUNDATION DETAIL ~ TYPE II  
SCALE:

NOTES:  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:

| NO. | REVISION                               | BY  | DATE     | APR    |
|-----|--|-----|----------|--------|
| 1   | MODIFIED SUPPORTS PER U/G INTERFERENCE | KLV | 02/09/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247     | KLV | 6/21/19  | NW JR  |
| B   | ISSUE FOR ENGINEERING REVIEW WC_00247  | KLV | 6/04/19  | NW JR  |
| A   | ISSUE FOR BID FOR WC_00247             | KLV |          |        |

REMOVED PS-374 THRU PS-384



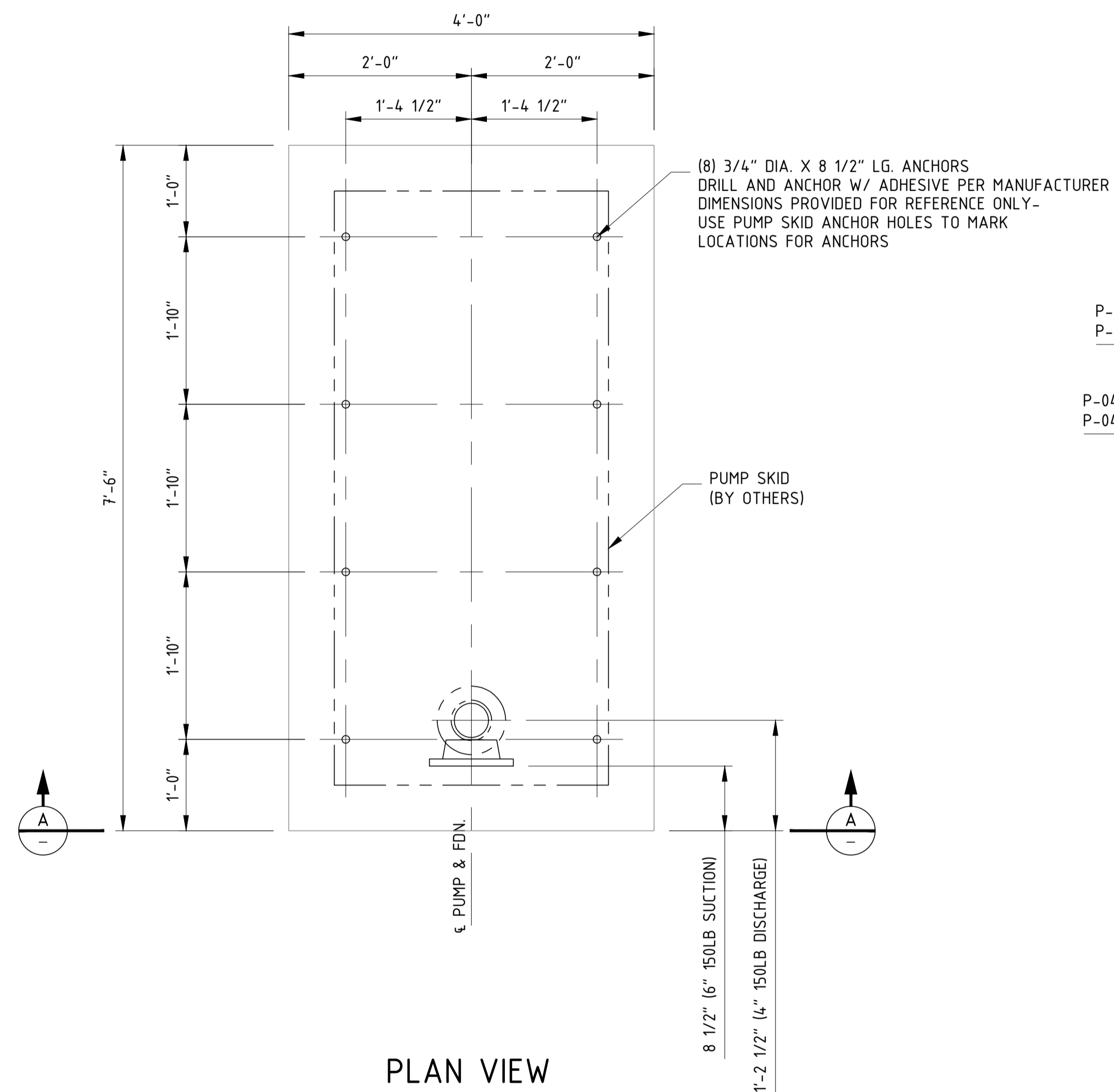
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
 2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
 STOT-24-100 KEY PIPING PLAN  
 STOT-32-100 KEY FOUNDATION PLAN

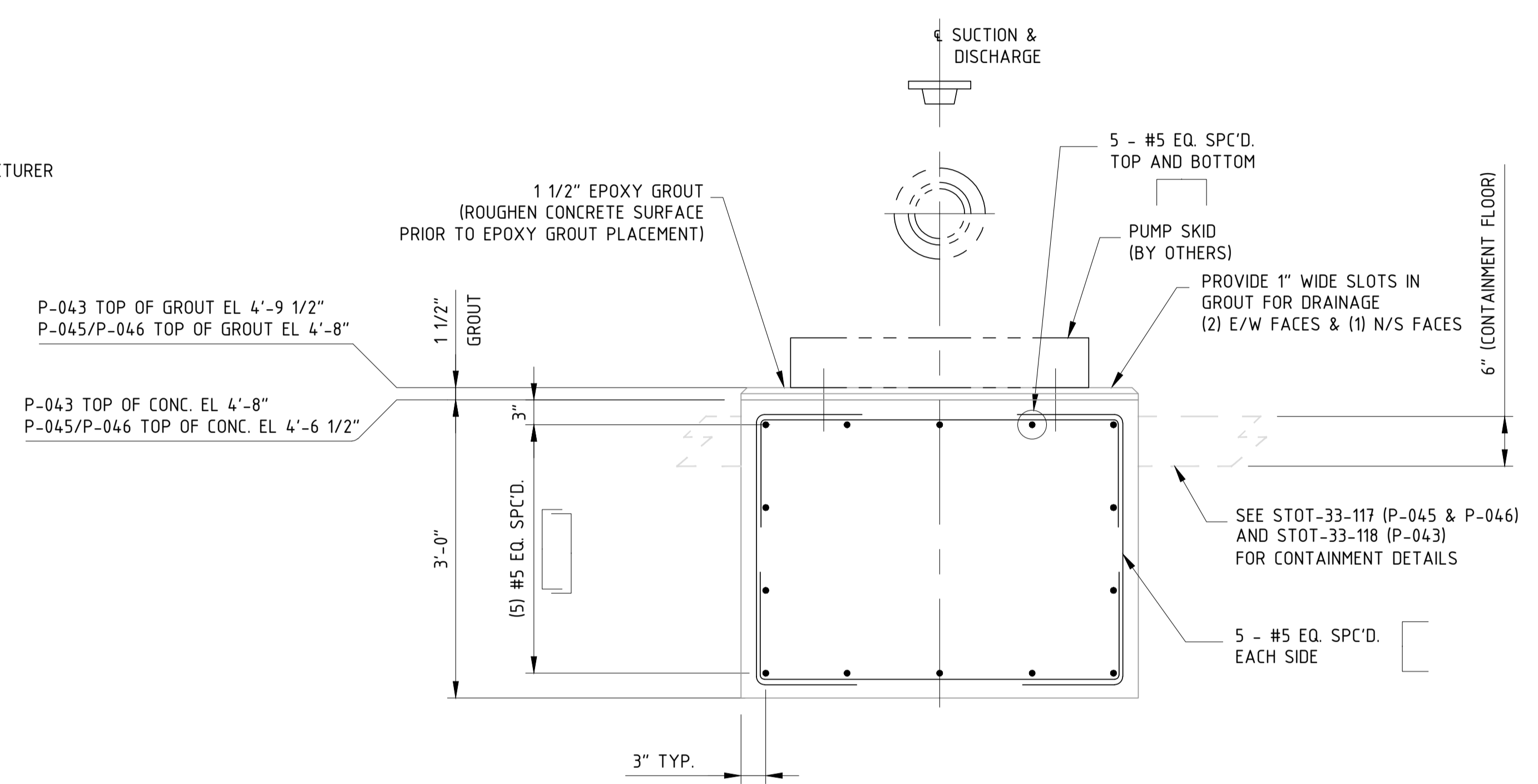
| NO. | REVISION                              | BY  | DATE    | APR    |
|-----|---------------------------------------|-----|---------|--------|
| 1   | UPDATED SUPPORTS PER U/G INTERFERENCE | KLV | 2/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247    | KLV | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW WC_00247 | REH | 5/6/19  | KLV JR |
| A   | ISSUE FOR BID CW_00247                | JBF | 3/22/19 | KLV JR |

**PROJECT LOCATION:**  
**DRAWN BY:** JBF **DATE:** 3/19/19  
**CHECKED:** KLV **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** NONE

**STOCKTON TERMINAL STRUCTURAL DETAIL PIPE SUPPORT DETAILS**  
**ORIGINAL PROJECT NO. CW\_00247**  
**DRAWING NO. STOT-36-116** **REV. 1**



**PLAN VIEW**  
NOTE: EA FDN. REQUIRES 3.3 CU. YDS. CONCRETE



**SECTION A - A**

**(3) FOUNDATIONS REQUIRED - P-043, P-045 & P-046**

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

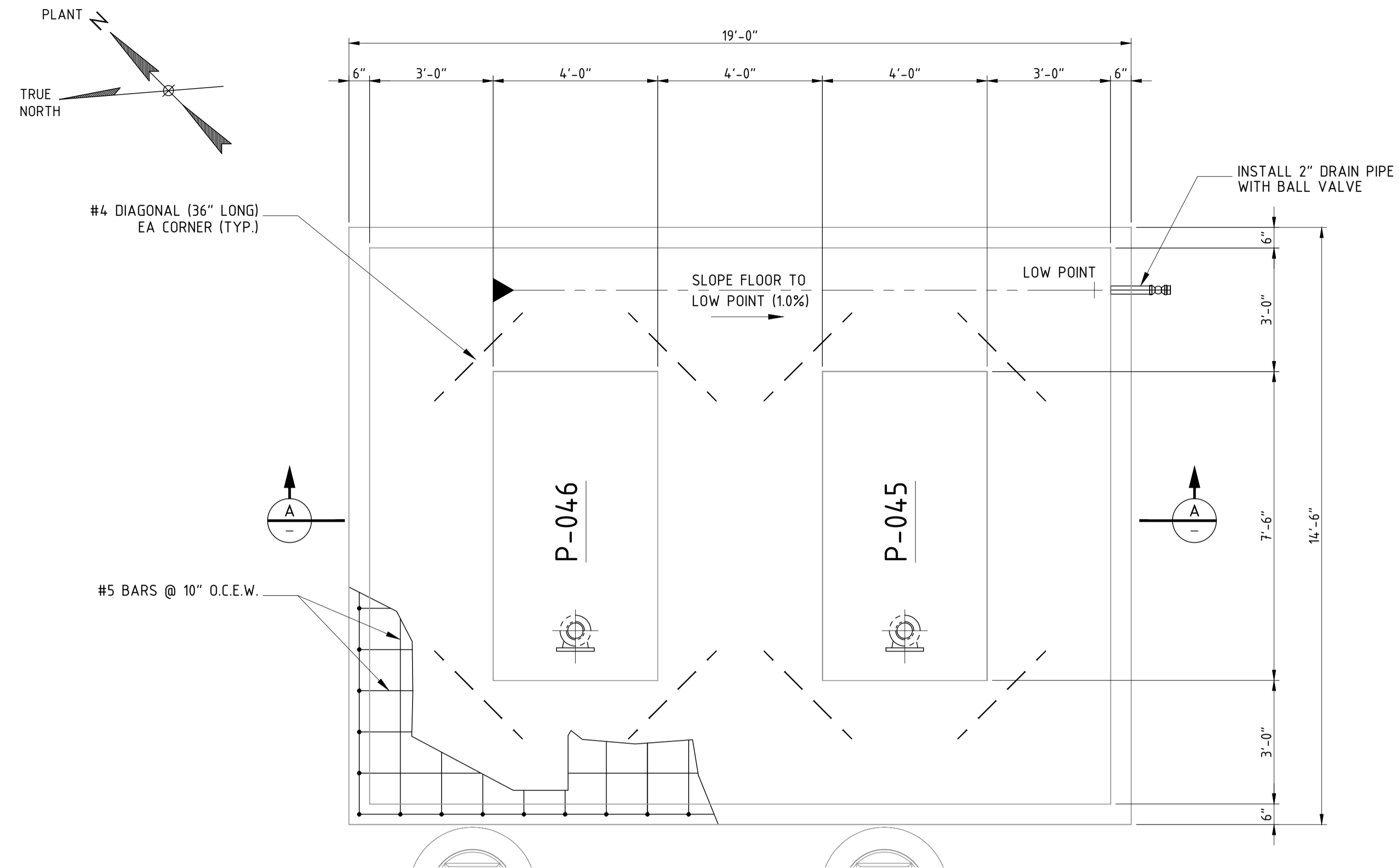
**REFERENCE DRAWINGS:**  
NSCE-CS-001 - CIVIL GENERAL NOTES  
STOT-33-117 CONTAINMENT DETAILS P-045 & P-046  
STOT-33-118 CONTAINMENT DETAILS P-043  
STOT-32-130 FOUNDATION LOCATION PLAN (P-043)  
STOT-32-171, 172 FOUNDATION LOCATION PLANS (P-045, P-046)  
STOT-24-171, 172 PIPING PLANS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW       | JBF | 4/26/19 | KLV JR |
| A   | ISSUE FOR BID FOR WC_00247         | KLV | 3/22/19 | JV JR  |

**PROJECT LOCATION:**  
DRAWN BY: KLV DATE:  
CHECKED: JV DATE:  
APPROVED: JR DATE:  
SCALE: 1/2" = 1' - 0"

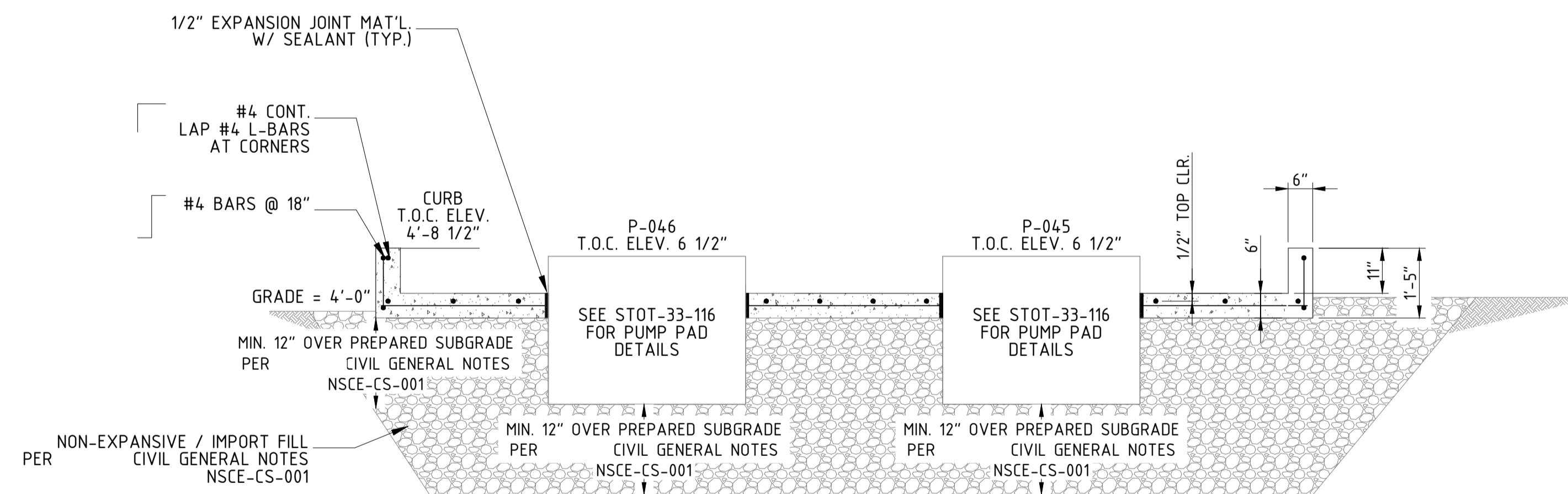
**STOCKTON TERMINAL  
FOUNDATION DETAILS  
PUMP FOUNDATION DETAILS**  
ORIGINAL PROJECT NO. **WC\_00247**  
DRAWING NO. **STOT-33-116** REV. 0





PLAN VIEW

NOTE: CONTAINMENT LESS PUMP PADS REQUIRES 5.2 CU. YDS. CONCRETE



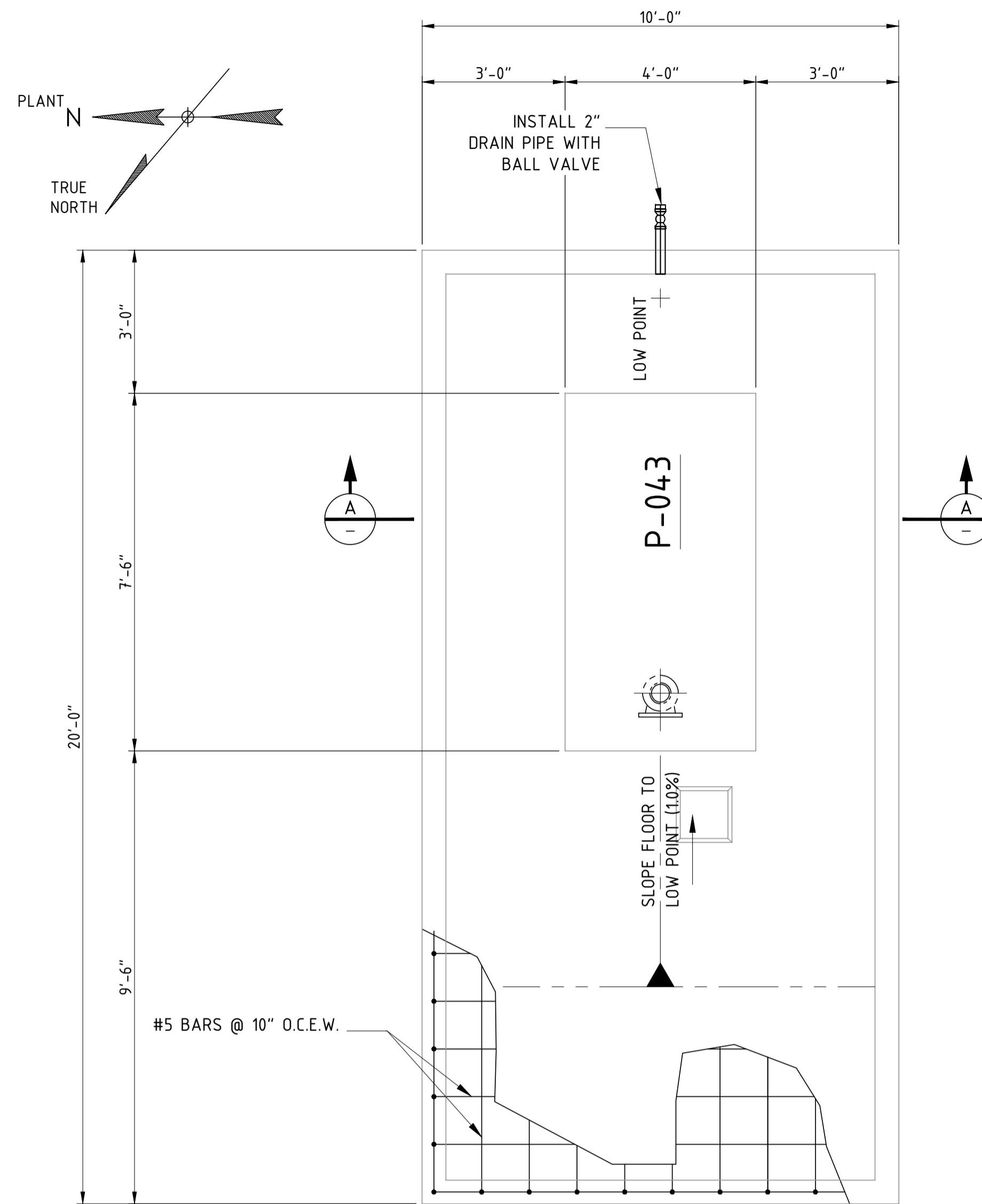
NOTES:  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:  
STOT-24-171, 172 - PIPING PLANS  
STOT-33-116 - PUMP FOUNDATION DETAILS  
STOT-32-171,172 - FOUNDATION LOCATION PLANS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLW | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW       | JBF | 4/26/19 | KLW JR |
| A   | ISSUE FOR BID PER NESTE - WC_00247 | KLW | 3/22/19 | JV JR  |

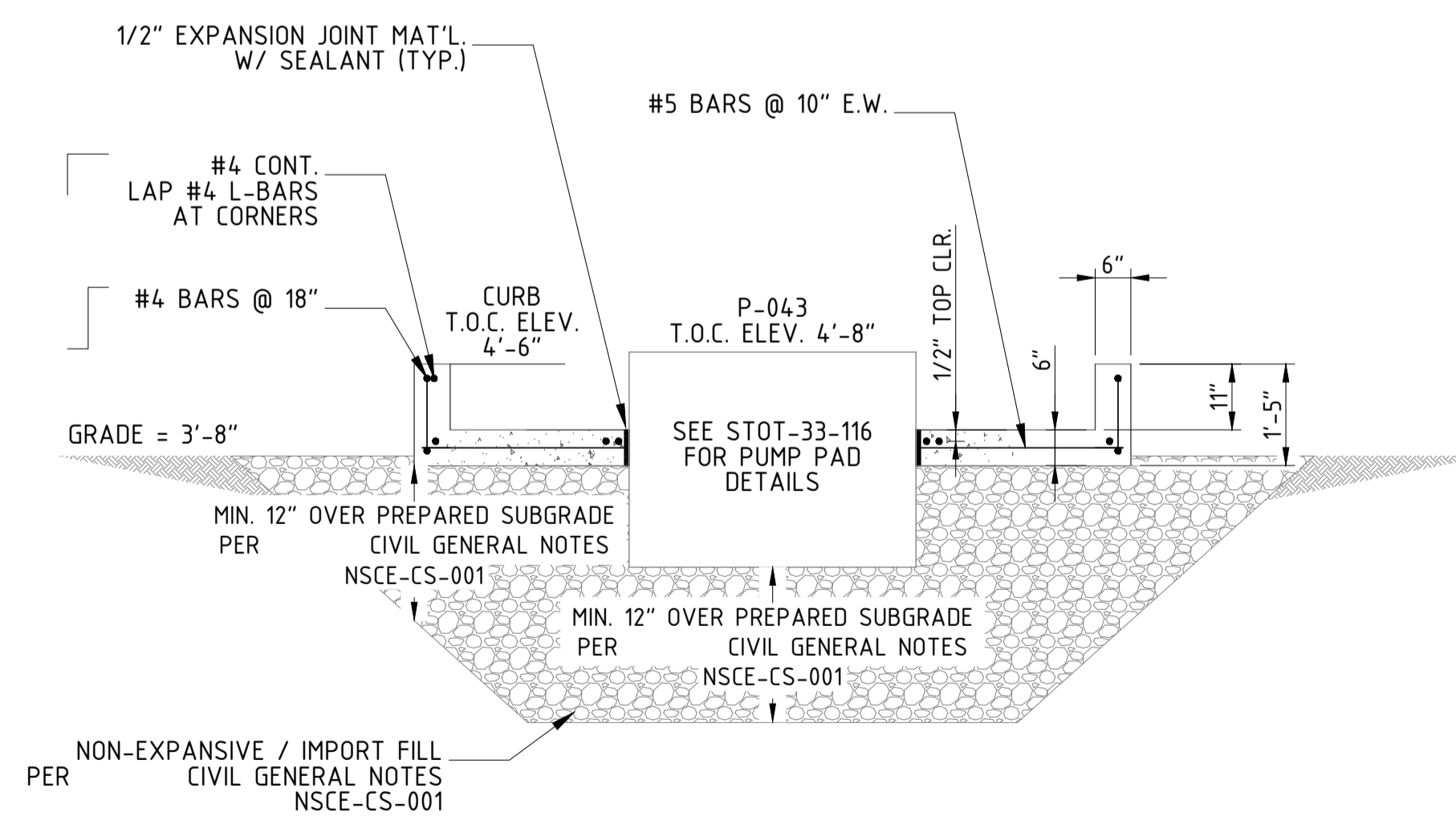
|                     |               |
|---------------------|---------------|
| PROJECT LOCATION:   |               |
| DRAWN BY: KLW       | DATE: 3/20/19 |
| CHECKED: JV         | DATE:         |
| APPROVED: JR        | DATE:         |
| SCALE: 1/2" = 1'-0" |               |

|   |        |
|---|--------|
| STOCKTON TERMINAL<br>FOUNDATION DETAILS<br>PUMP CONTAINMENT P-044 & P-045 |        |
| ORIGINAL PROJECT NO. CW_00247   |        |
| DRAWING NO. STOT-33-117   | REV. 0 |



PLAN VIEW

NOTE: CONTAINMENT LESS PUMP PAD REQUIRES 4.2 CU. YDS. CONCRETE



SECTION A - A

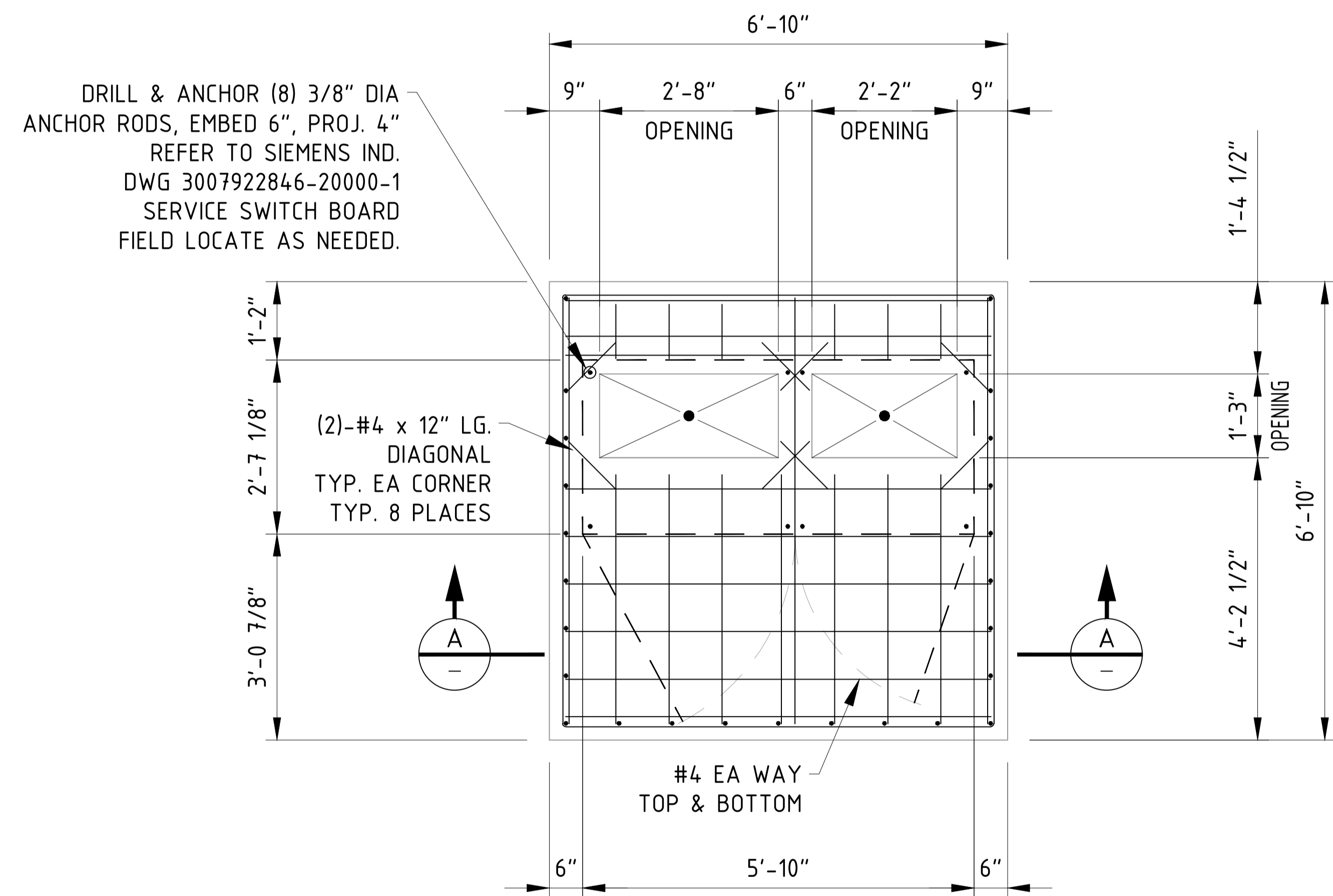
NOTES:  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

REFERENCE DRAWINGS:  
STOT-24-130 - PIPING PLAN  
STOT-32-130 - FOUNDATION LOCATION PLAN  
STOT-33-116 - PUMP FOUNDATION DETAILS

| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLW | 6/21/19 | JV JR  |
| B   | ISSUED FOR ENGINEERING REVIEW      | JBF | 4/26/19 | KLW JR |
| A   | ISSUE FOR BID PER NESTE - WC_00247 | KLW | 3/22/19 | JV JR  |

|                     |               |
|---------------------|---------------|
| PROJECT LOCATION:   |               |
| DRAWN BY: KLW       | DATE: 3/20/19 |
| CHECKED: JV         | DATE:         |
| APPROVED: JR        | DATE:         |
| SCALE: 1/2" = 1'-0" |               |

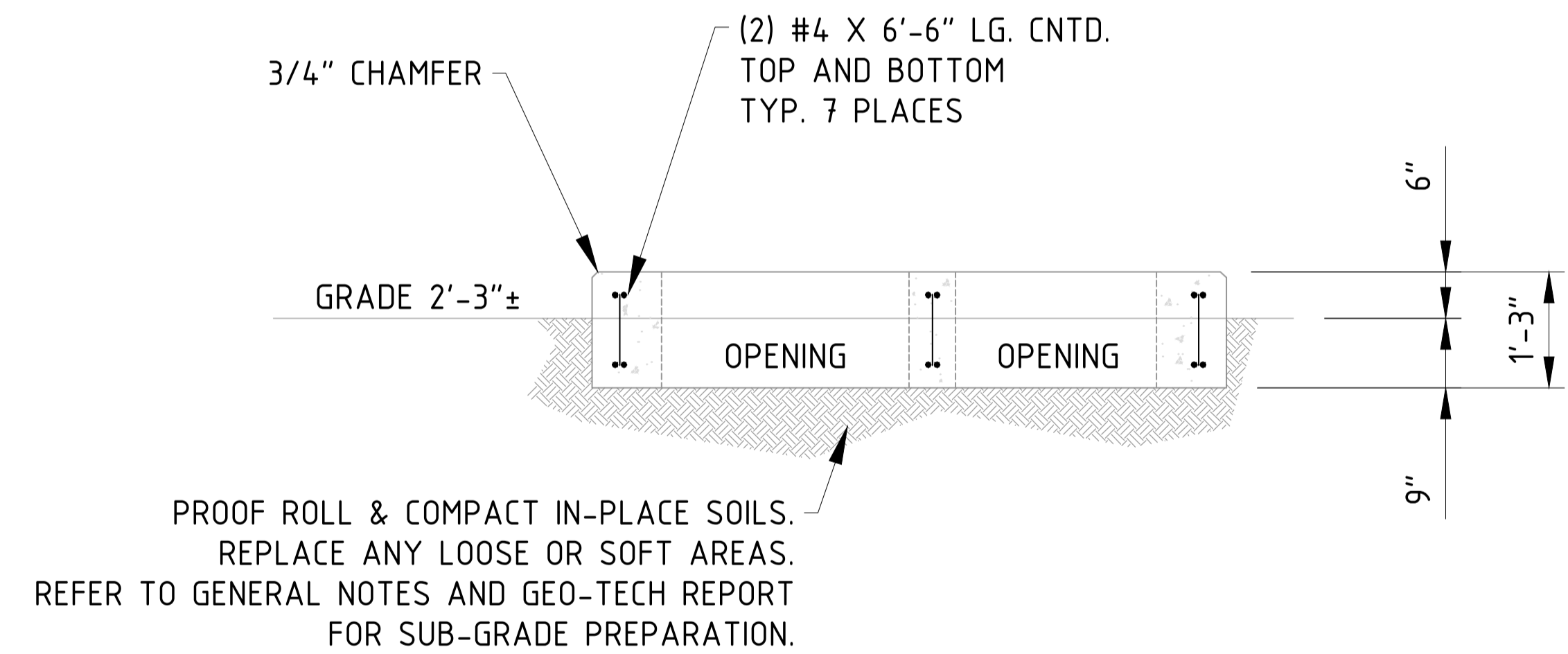
|  |        |
|--|--------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION DETAILS<br/>PUMP CONTAINMENT</b> |        |
| ORIGINAL PROJECT NO. <b>CW_00247</b>                                 |        |
| DRAWING NO. <b>STOT-33-118</b>                                       | REV. 0 |



DRILL & ANCHOR (8) 3/8" DIA ANCHOR RODS, EMBED 6", PROJ. 4" REFER TO SIEMENS IND. DWG 3007922846-20000-1 SERVICE SWITCH BOARD FIELD LOCATE AS NEEDED.

### PLAN VIEW

NOTE: FDN. REQUIRES 1.67 CU. YDS. CONCRETE



### SECTION A - A

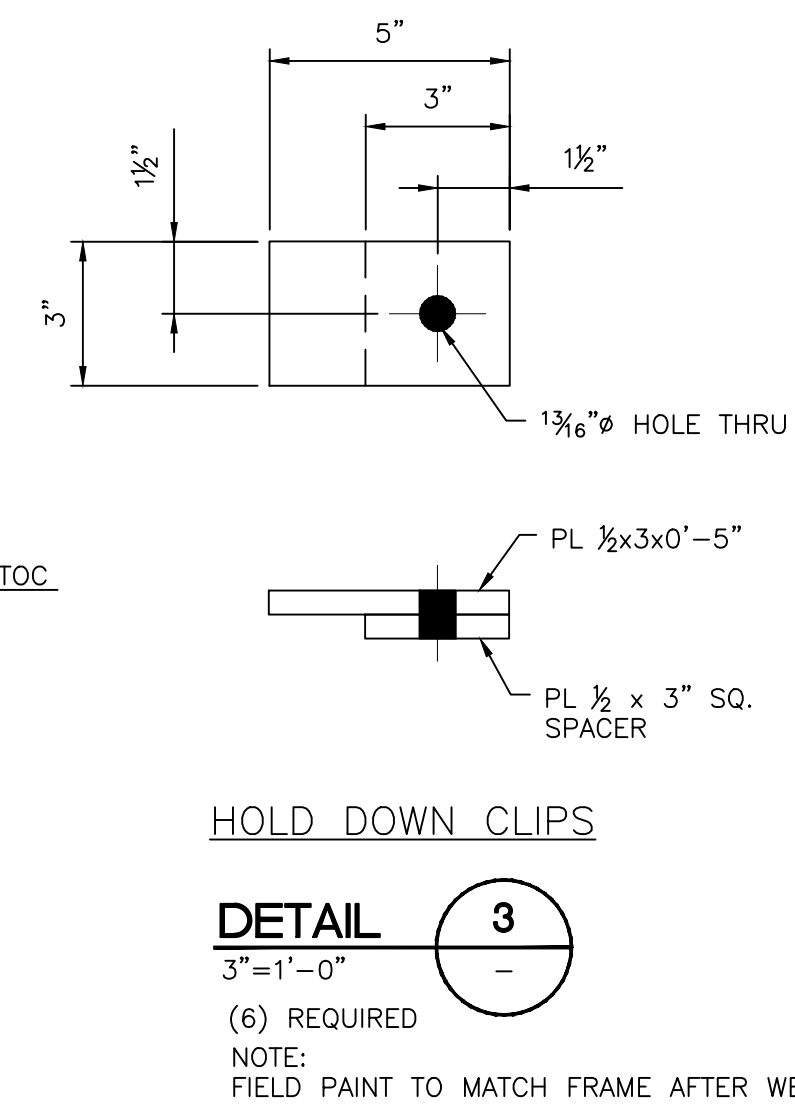
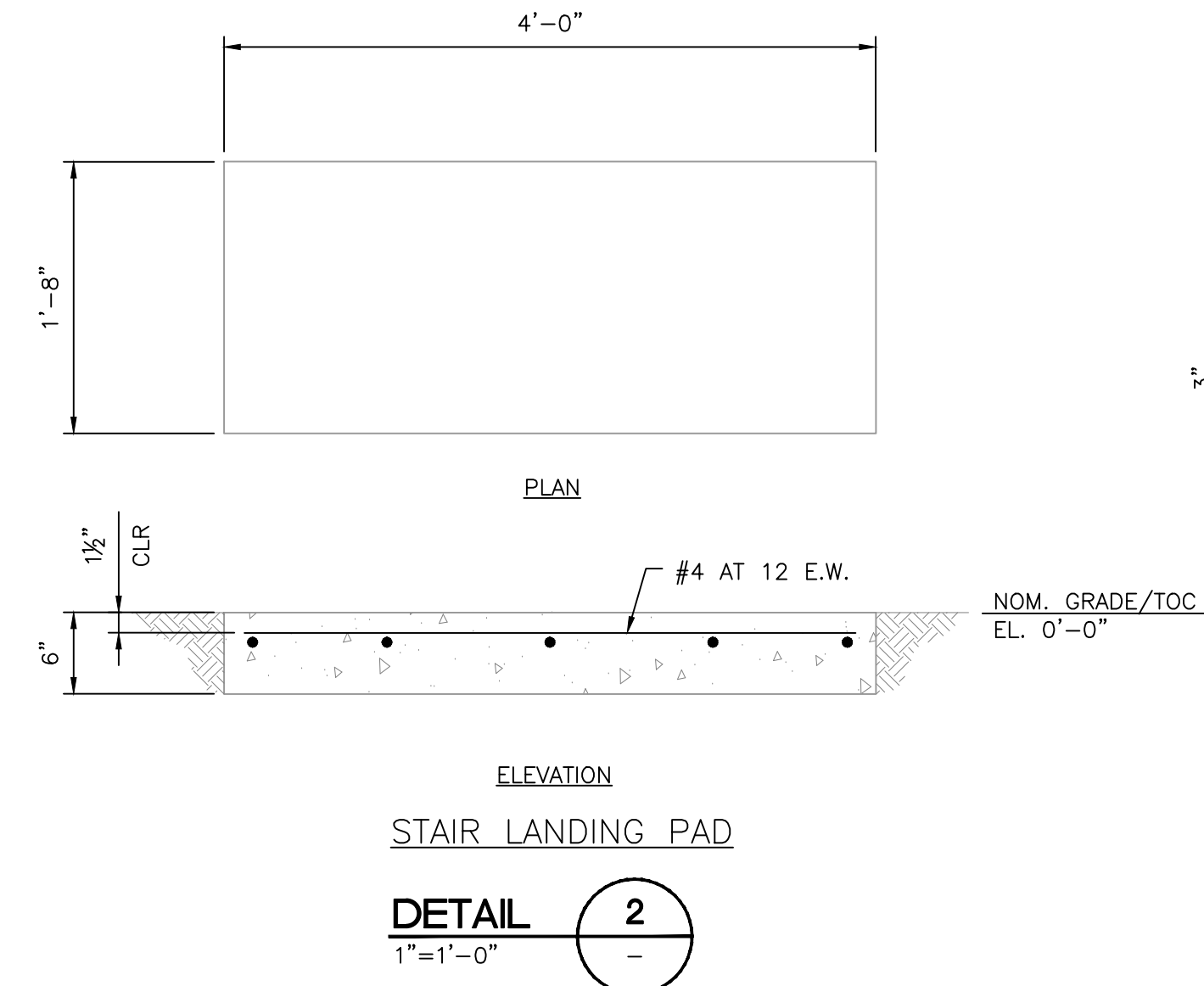
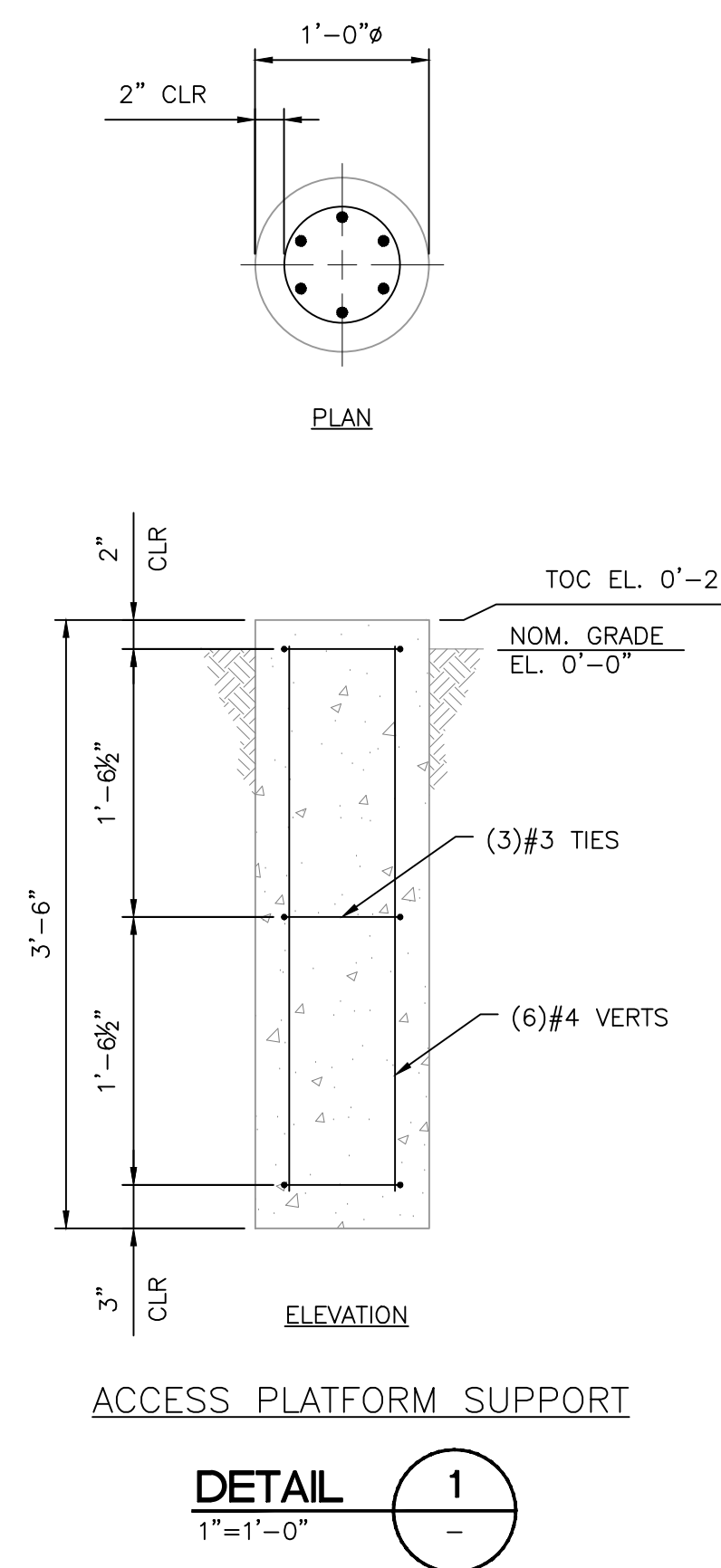
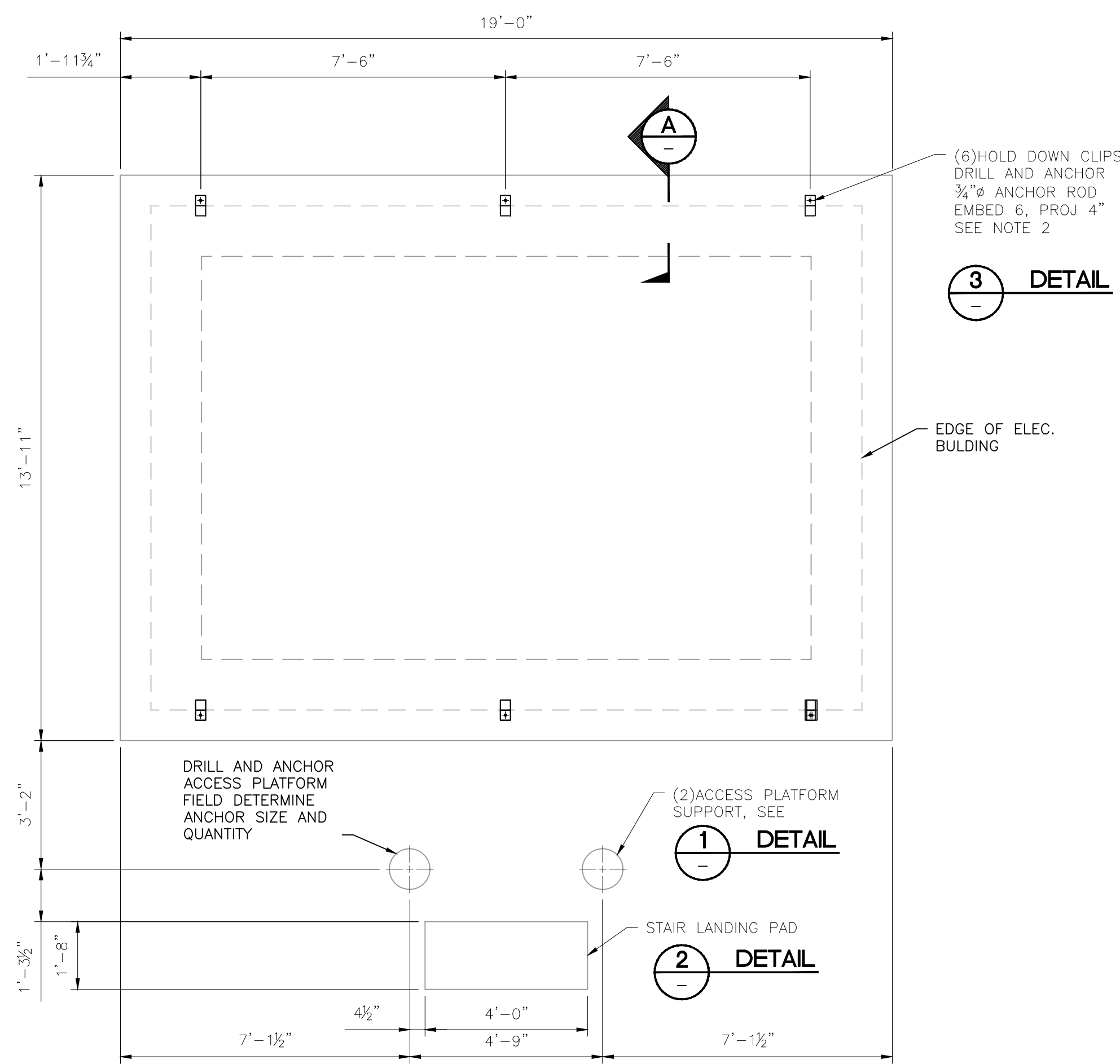
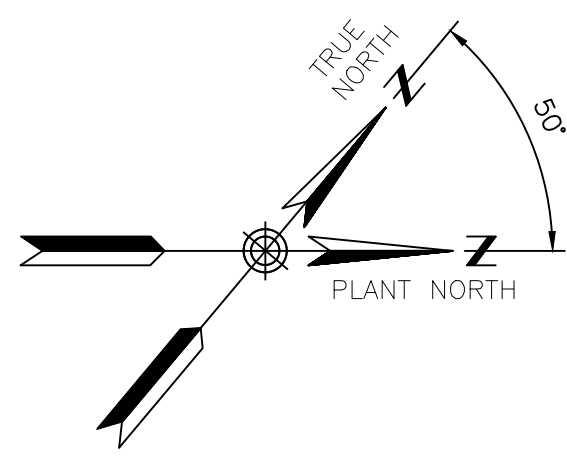
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
 2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
 NSCE-CS-001 - CIVIL GENERAL NOTES

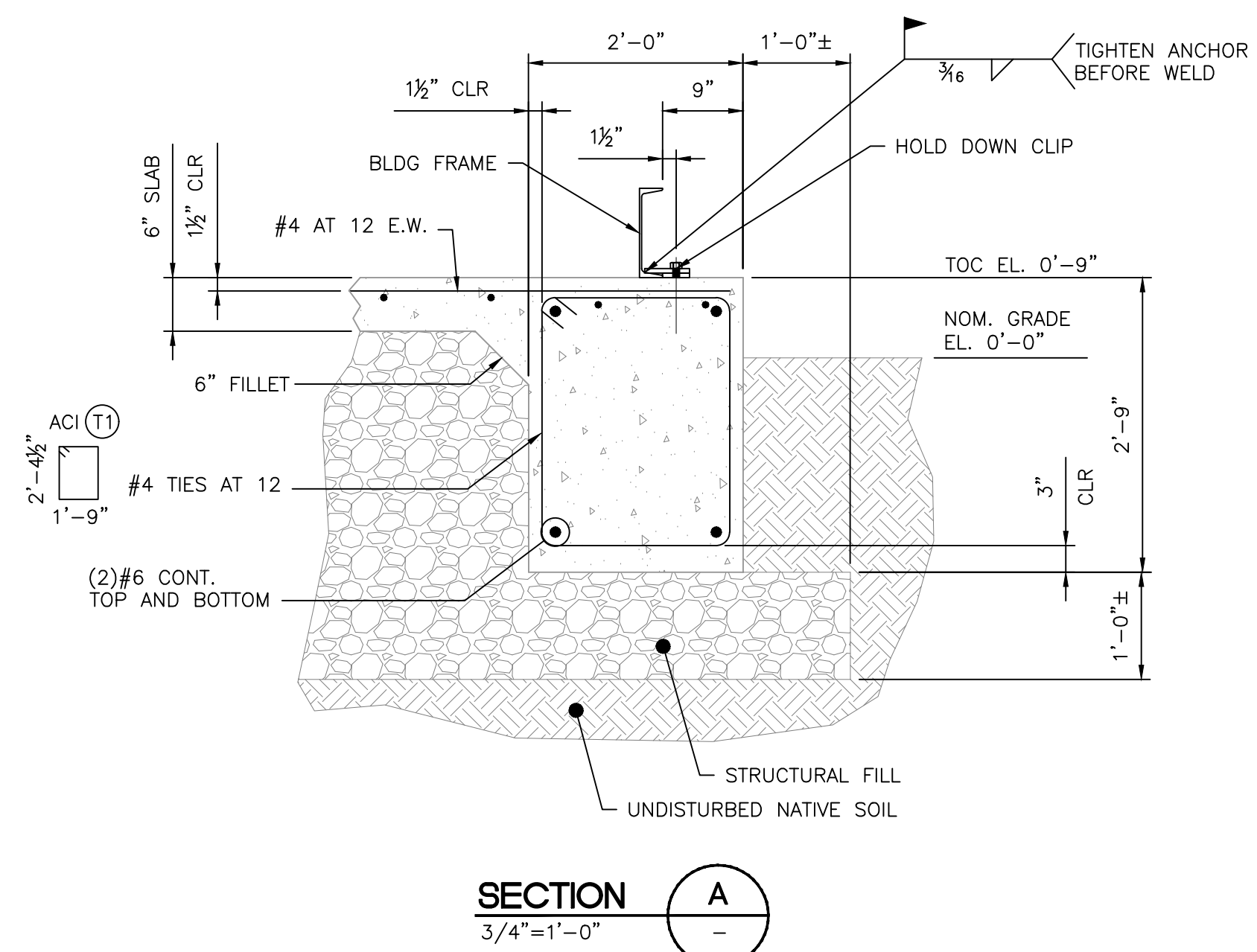
| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLV | 4/09/20 | NW JR  |
| A   | ISSUE FOR REVIEW - WC_00247        | JBF | 4/08/20 | KLV JR |

|                              |                     |
|------------------------------|---------------------|
| <b>PROJECT LOCATION:</b>     |                     |
| <b>DRAWN BY:</b> JBF         | <b>DATE:</b> 4/6/20 |
| <b>CHECKED:</b> KLV          | <b>DATE:</b> 4/6/20 |
| <b>APPROVED:</b> JR          | <b>DATE:</b> 4/6/20 |
| <b>SCALE:</b> 1/2" = 1' - 0" |                     |

|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>FOUNDATION DETAILS<br/>SWBD-8 FOUNDATION DETAILS</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>  |               |
| <b>DRAWING NO. STOT-34-108</b>  | <b>REV. 0</b> |



**STRUCTURAL NOTES:**  
1. ALL STRUCTURAL NOTES PER STRUCTURAL GENERAL NOTES STANDARD DWG NSCE-CS-002.  
2. ADHESIVE FOR DRILL AND ANCHOR TO BE SIMPSON SET-3G. ANCHOR RODS TO BE ASTM F1554 GRADE 36, ATR (ALL THREAD ROD), FURNISH BLACK, U.N.O. FURNISH WITH 45° CHISEL POINT FOR EMBEDDED END, AND HEAVY HEX NUT AND COMPATIBLE ROUND PLATE WASHER. NUTS FOR ANCHOR RODS SHALL BE TIGHTENED TO SNUG CONDITION. LOCATE REINFORCING STEEL PRIOR TO HOLE DRILLING.



**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

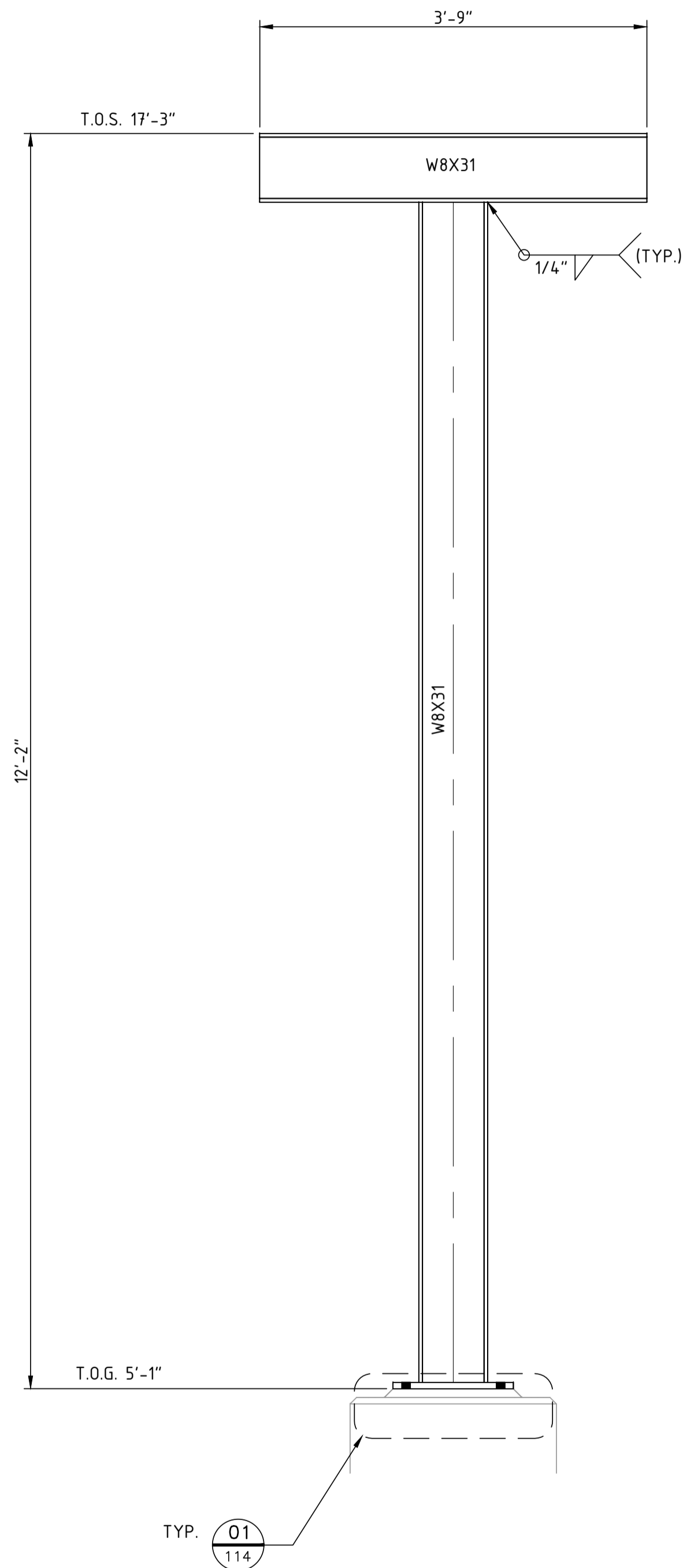
**REFERENCE DRAWINGS:**

| NO. | REVISION                           | BY  | DATE     | CHK | APP |
|-----|------------------------------------|-----|----------|-----|-----|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | JAR | 07/08/20 | ARM | JAA |

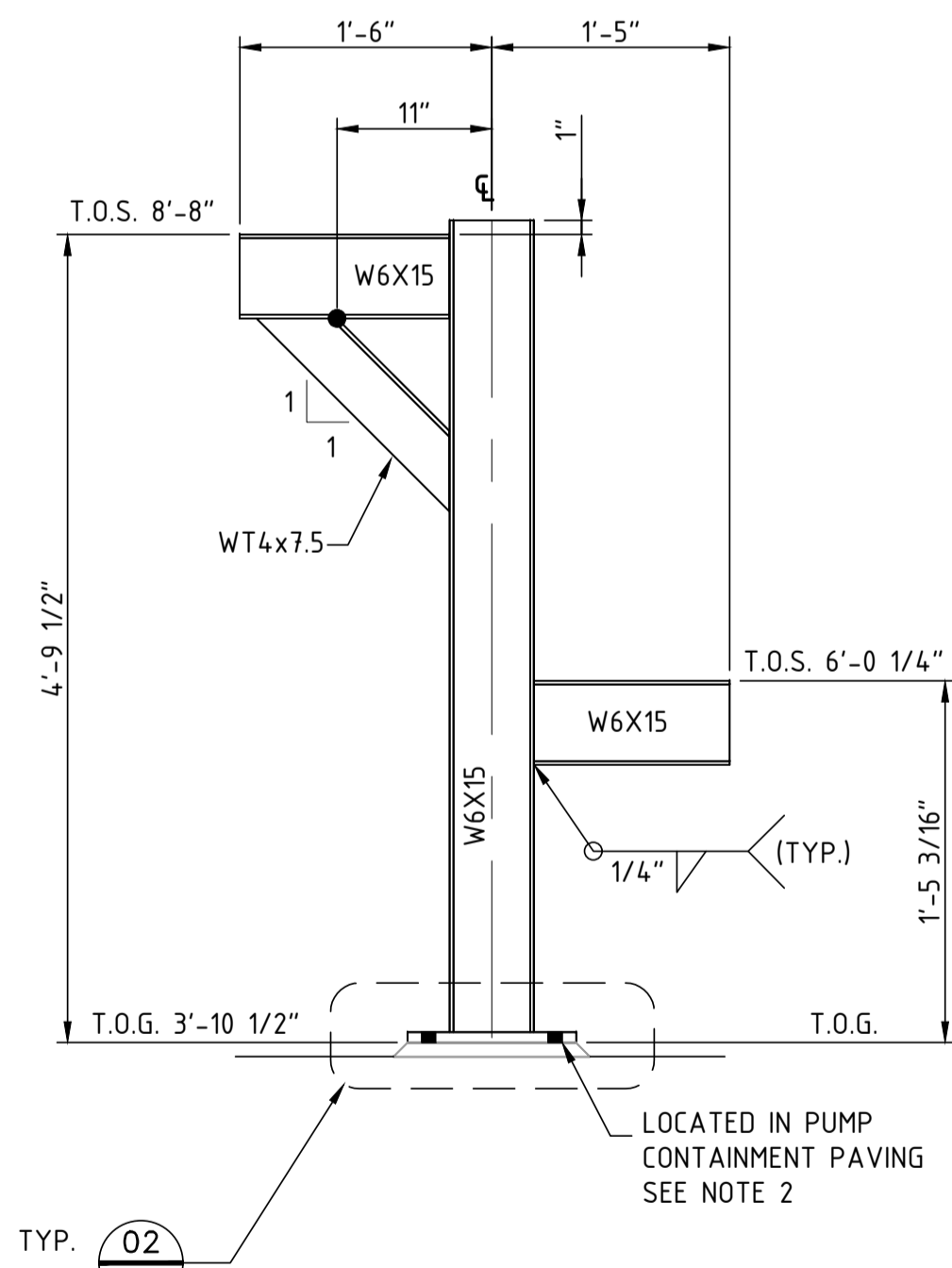
|                          |                       |
|--------------------------|-----------------------|
| <b>PROJECT LOCATION:</b> |                       |
| <b>DRAWN BY:</b> JAR     | <b>DATE:</b> 07/06/20 |
| <b>CHECKED:</b> ARM      | <b>DATE:</b> 07/06/20 |
| <b>APPROVED:</b> JAA     | <b>DATE:</b> 07/06/20 |
| <b>SCALE:</b> AS NOTED   |                       |

|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL FOUNDATION</b>           |               |
| <b>ELEC. BLDG PLAN, SECTION &amp; DETAILS</b> |               |
| ORIGINAL PROJECT NO.                          |               |
| <b>DRAWING NO. STOT-34-109</b>                | <b>REV. 0</b> |

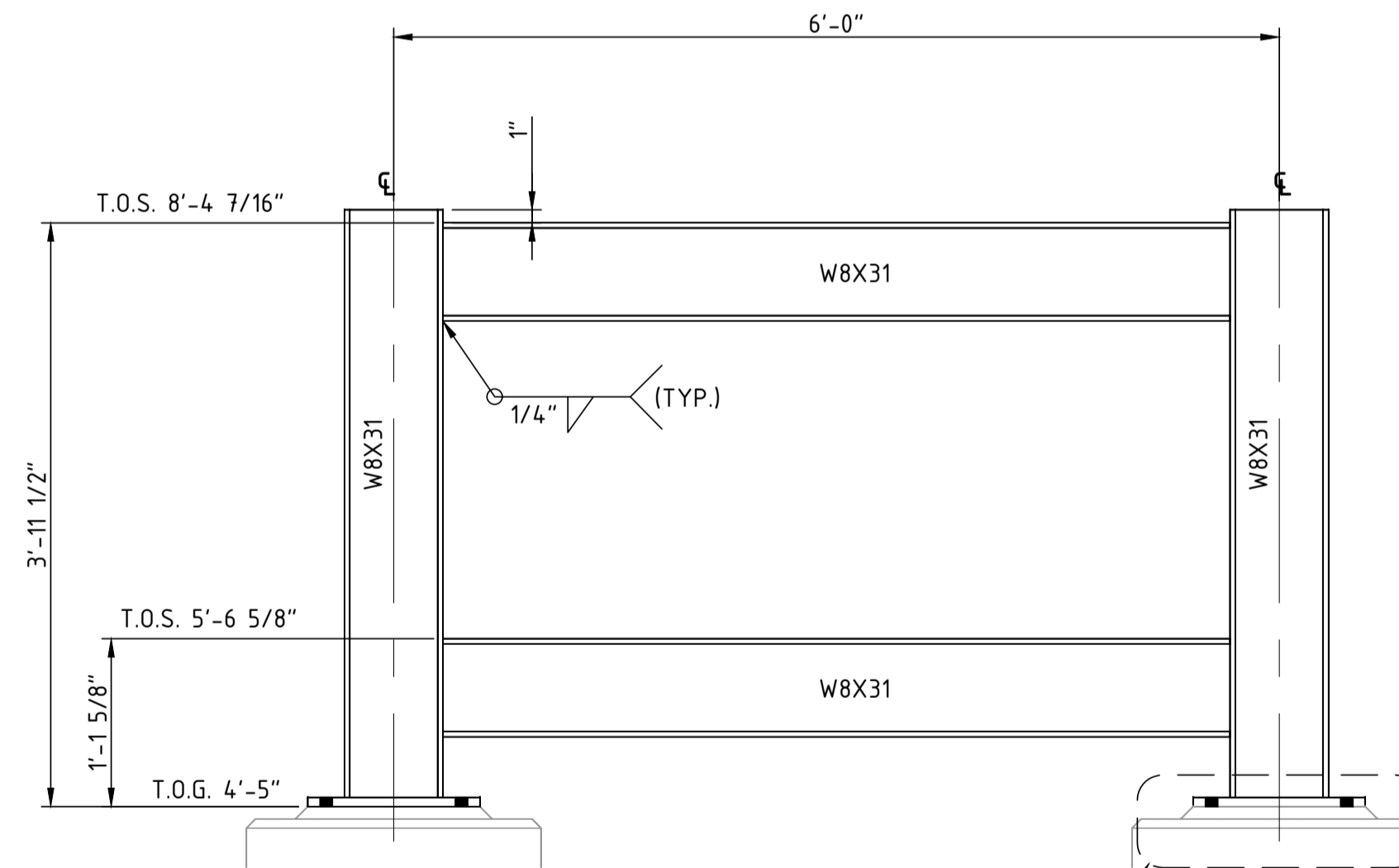
N.E. #  
RV1023



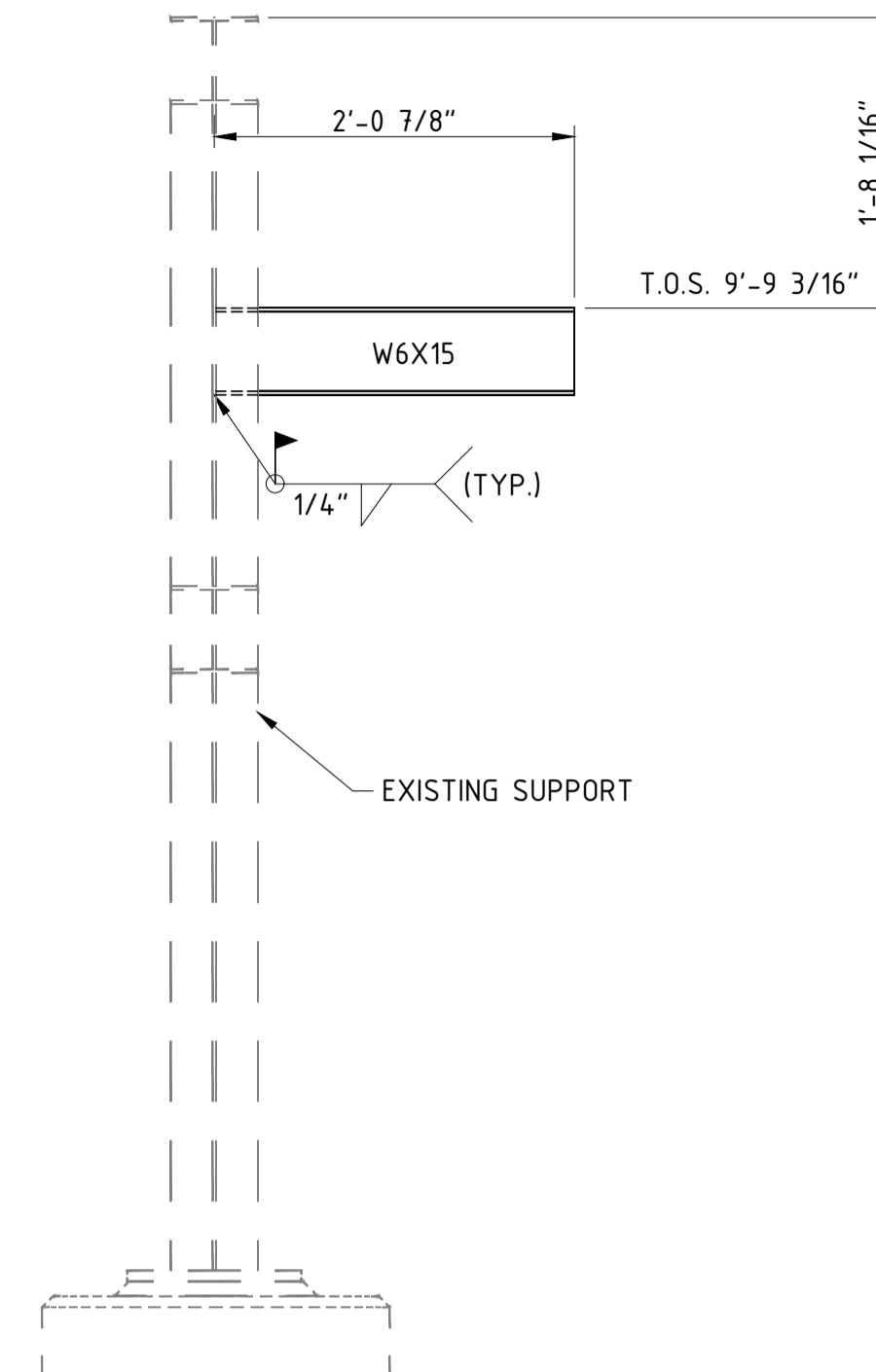
**SUPPORT - PS-326**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-152



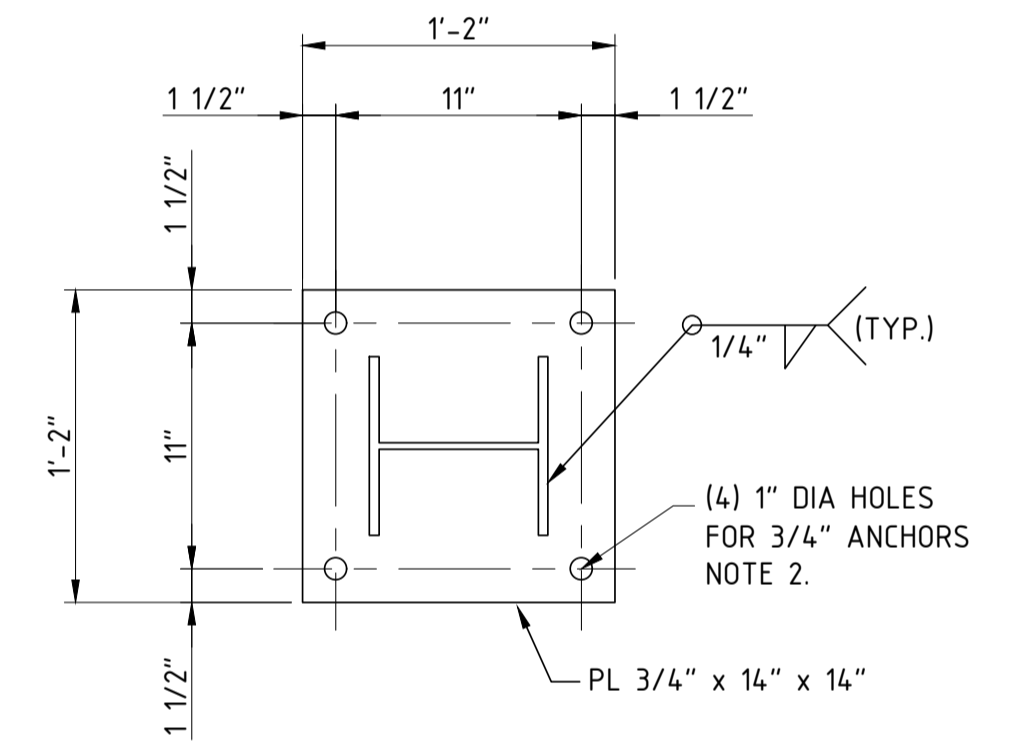
**SUPPORT - PS-299 & PS-300**  
SCALE: NTS  
(1) REQUIRED  
(2) REQUIRED  
STOT-32-171



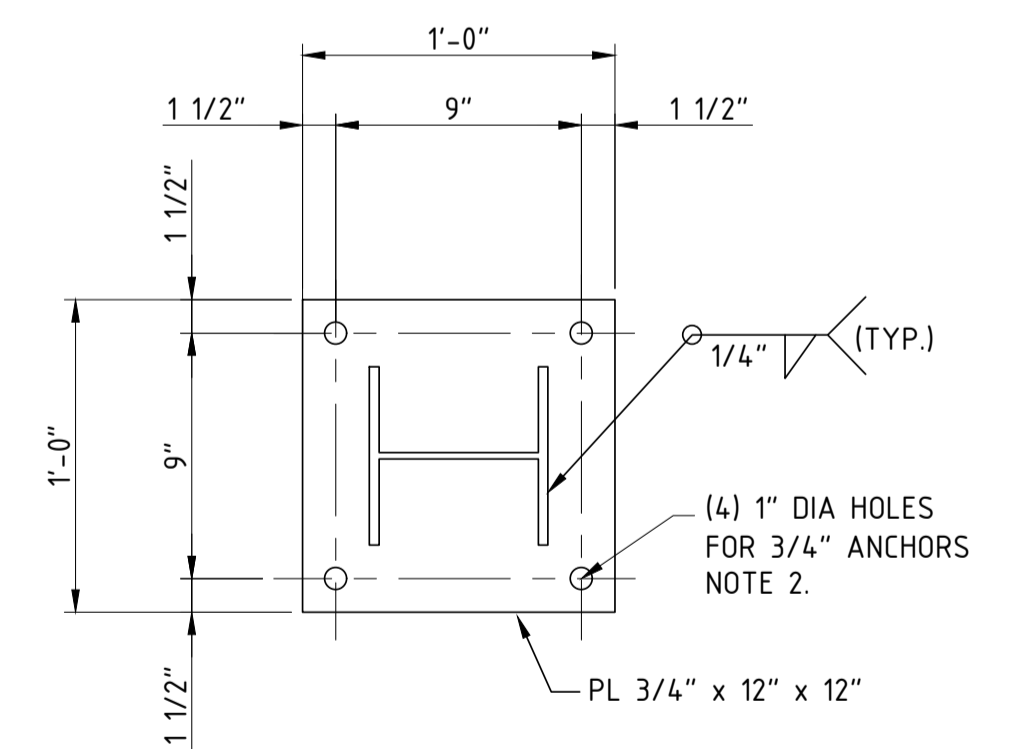
**SUPPORT - PS-301 THRU PS-304**  
SCALE: NTS  
(4) REQUIRED  
STOT-32-171, 172



**SUPPORT - PS-122**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-153



**DETAIL 01**  
SCALE: NTS  
BASE PLATE



**DETAIL 02**  
SCALE: NTS  
BASE PLATE

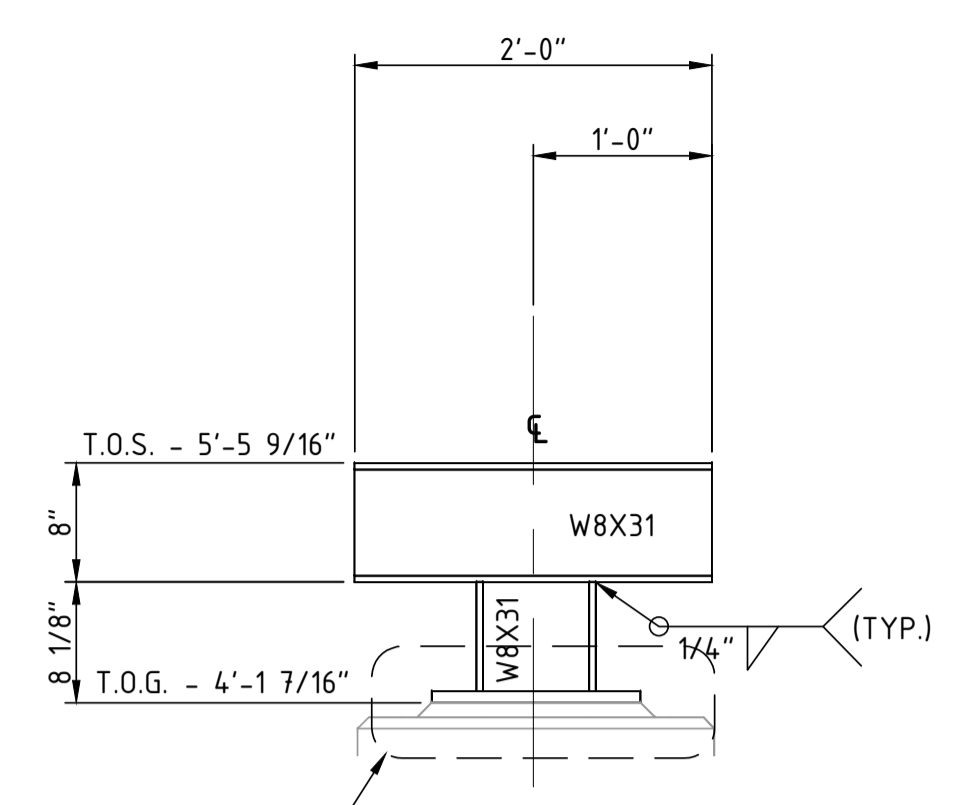
**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
STOT-33-115 - FOUNDATION SCHEDULE

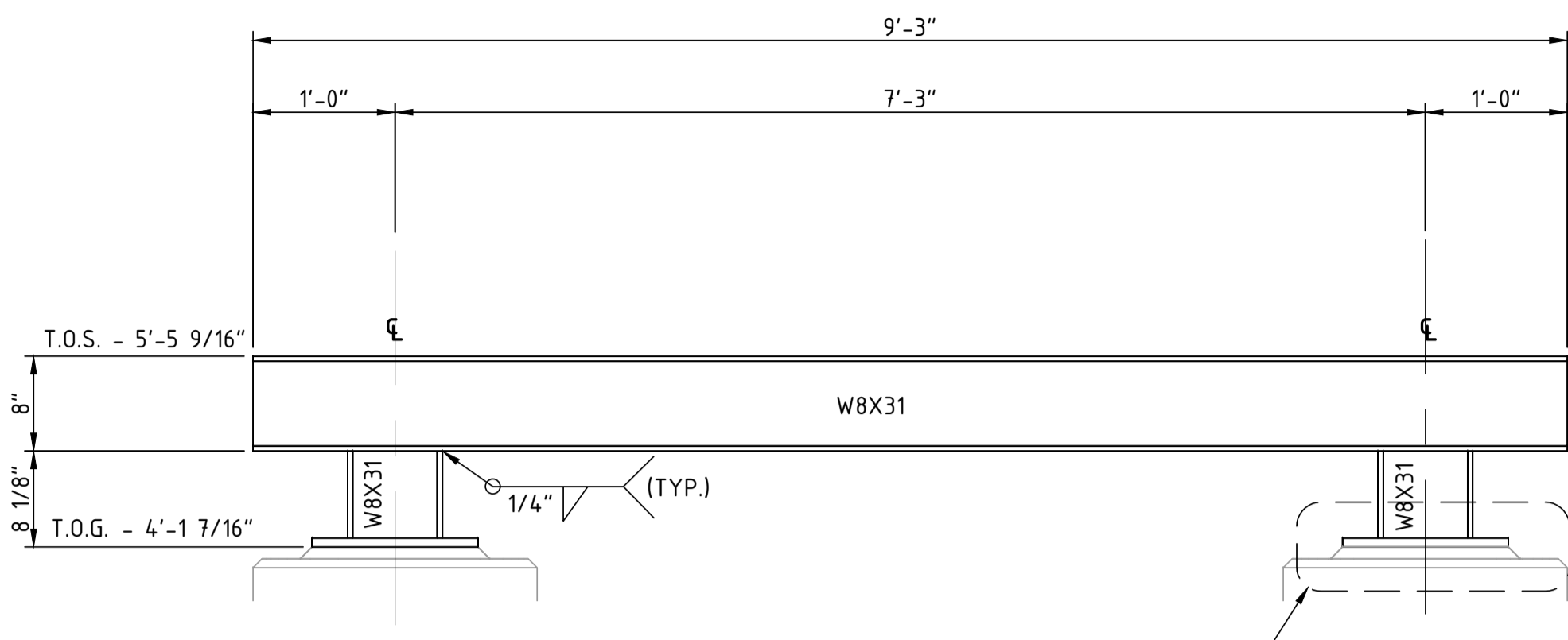
| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLW | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW       | JBF | 5/6/19  | KLW JR |
| A   | ISSUE FOR BID CW_00247             | JBF | 3/22/19 | KLW JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> JBF     | <b>DATE:</b> 3/19/19 |
| <b>CHECKED:</b> KLW      | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> NONE       |                      |

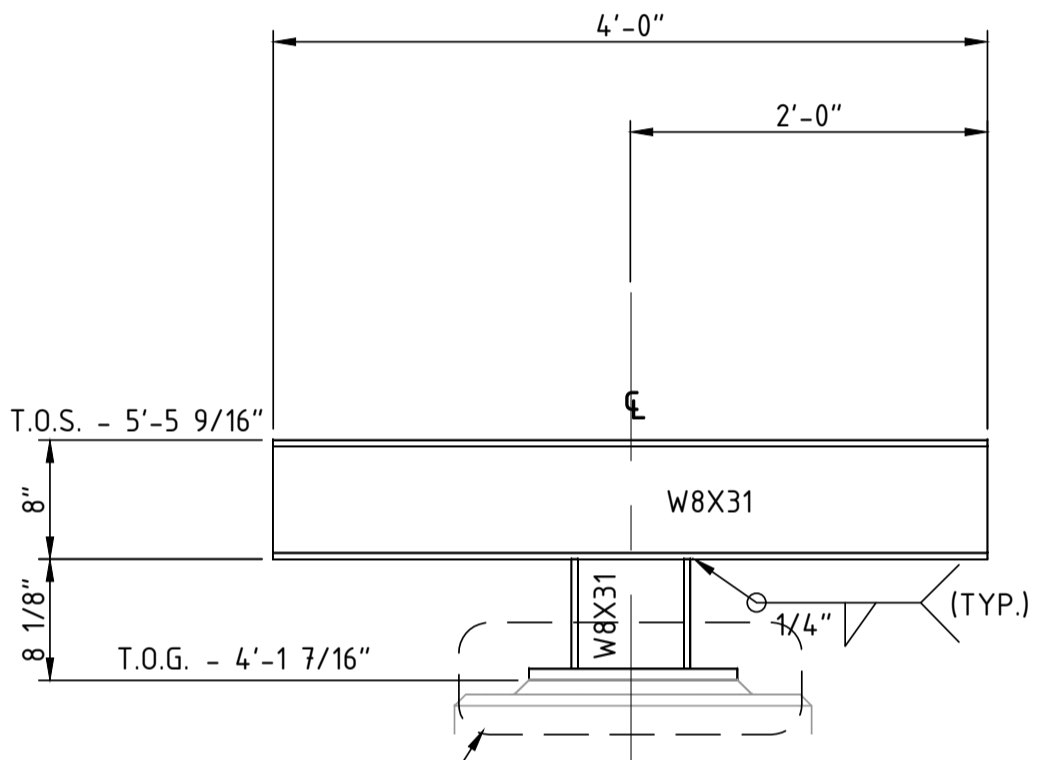
|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT DETAILS</b> |               |
| <b>ORIGINAL PROJECT NO. CW_00247</b>                                    |               |
| <b>DRAWING NO. STOT-36-114</b>  | <b>REV. 0</b> |



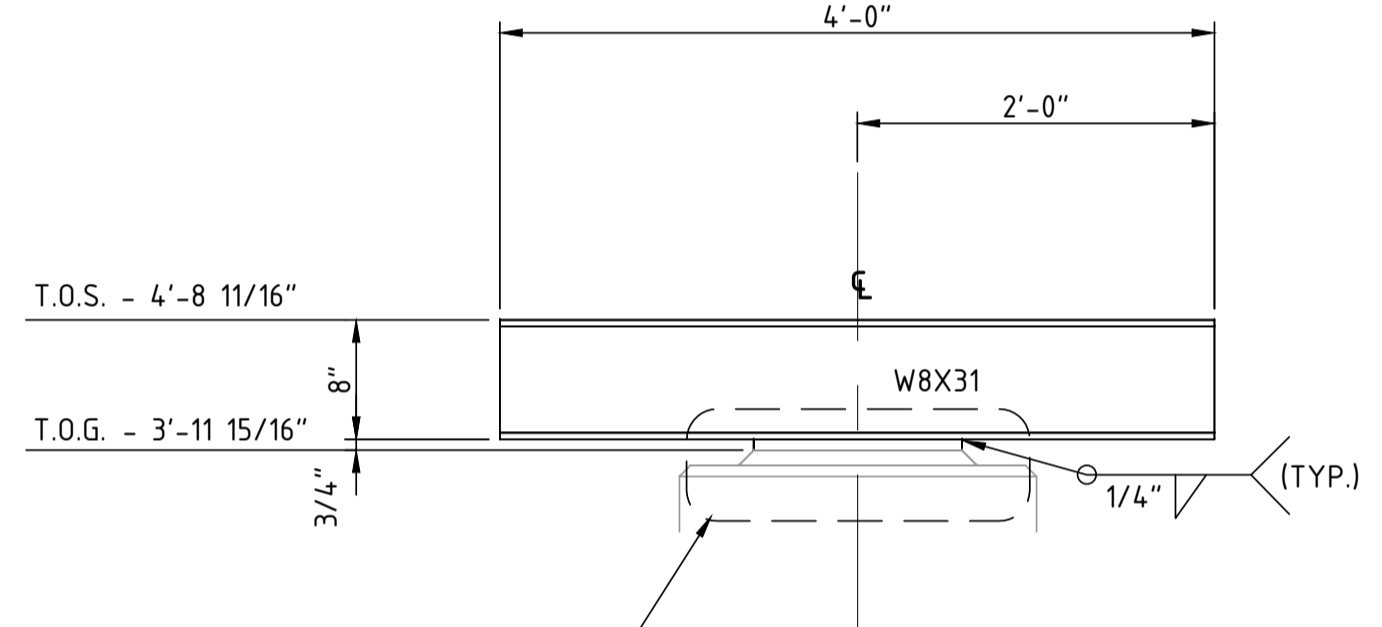
TYP. **SUPPORT - PS 373**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-113



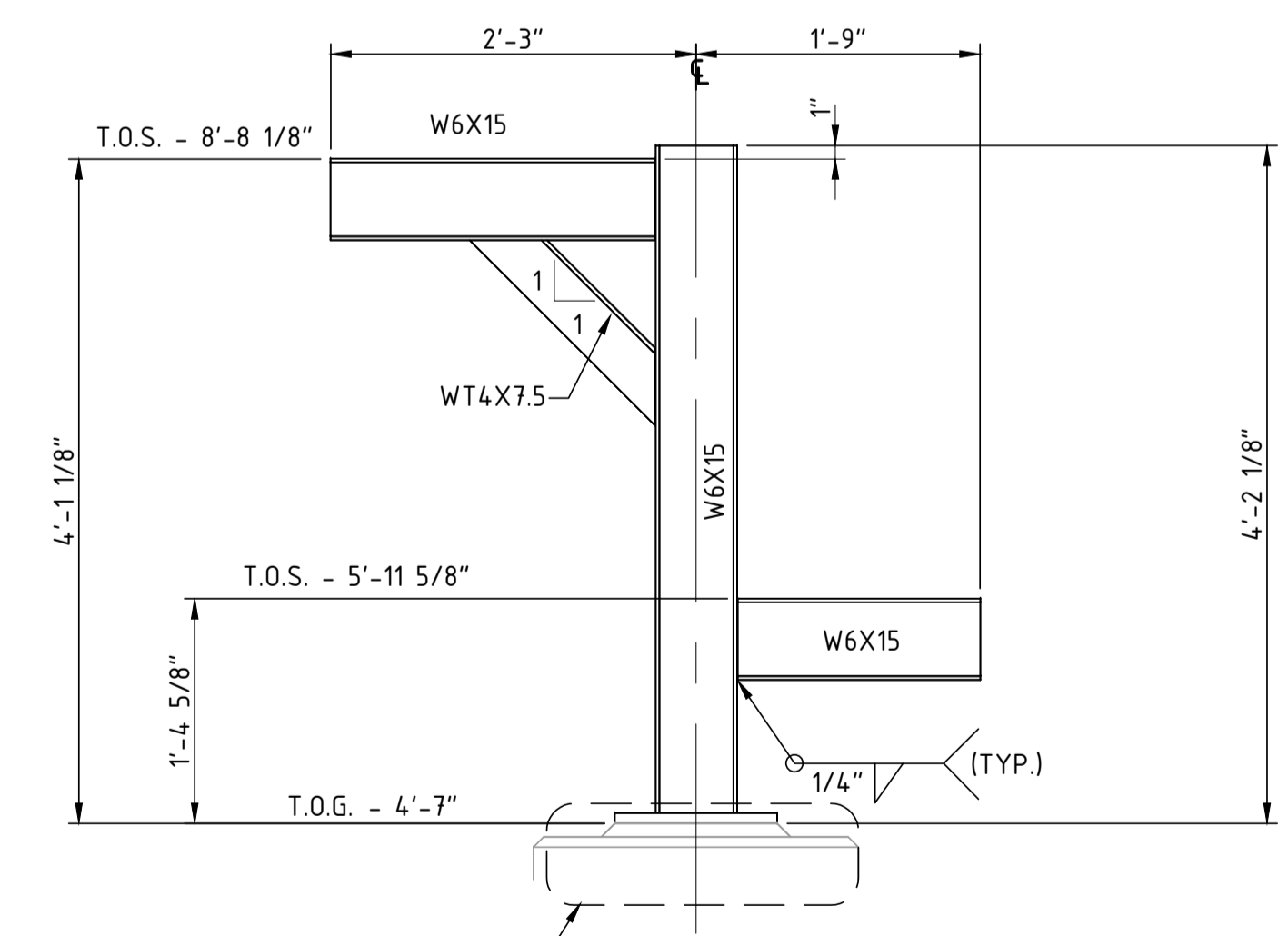
TYP. **SUPPORT - PS 372**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-113, 127



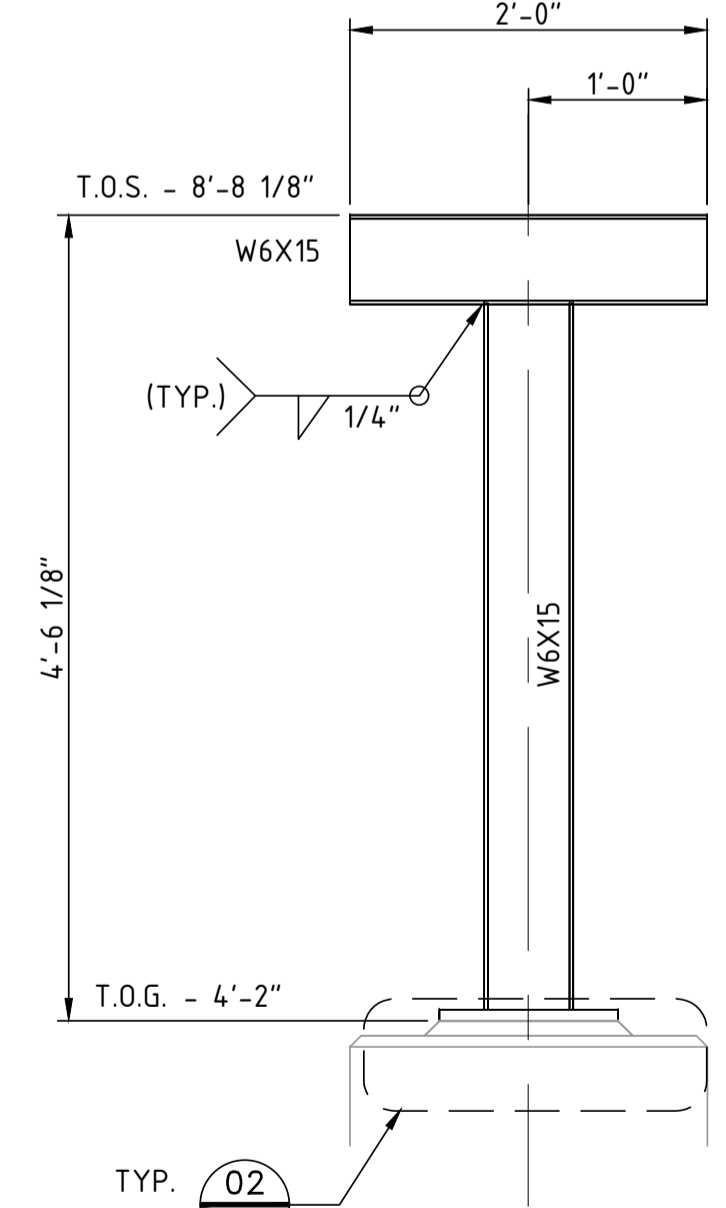
TYP. **SUPPORT - PS 365 THRU 371**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-127, 128



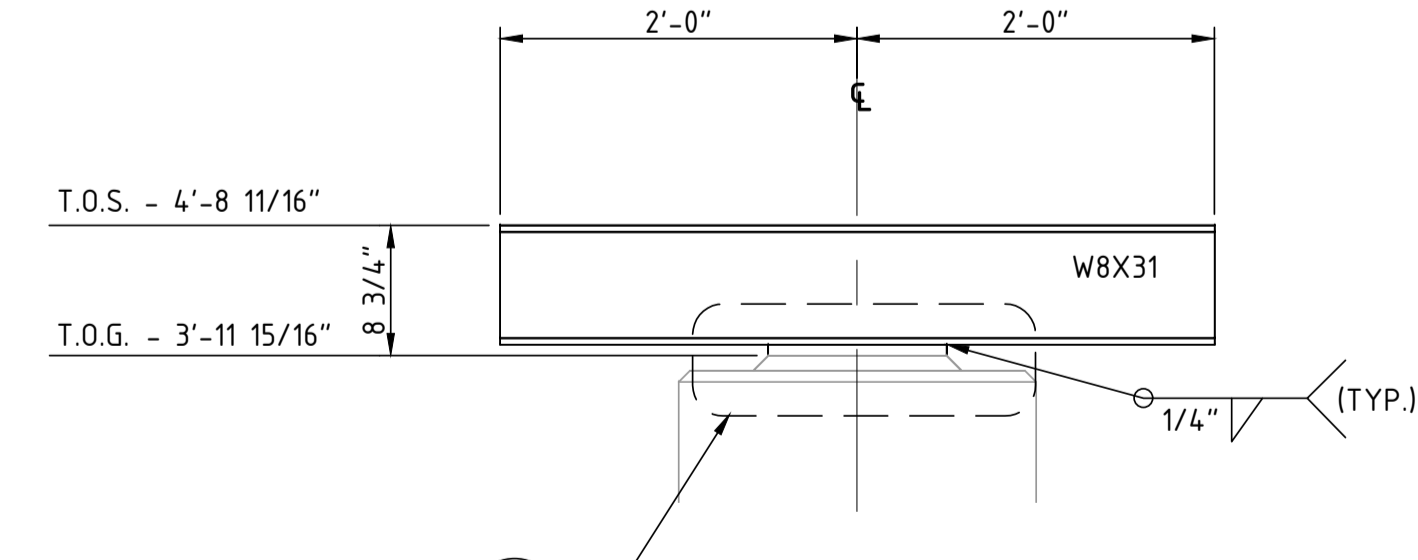
TYP. **SUPPORT - PS 361 THRU 364**  
SCALE: NTS  
(4) REQUIRED  
STOT-32-128, 129



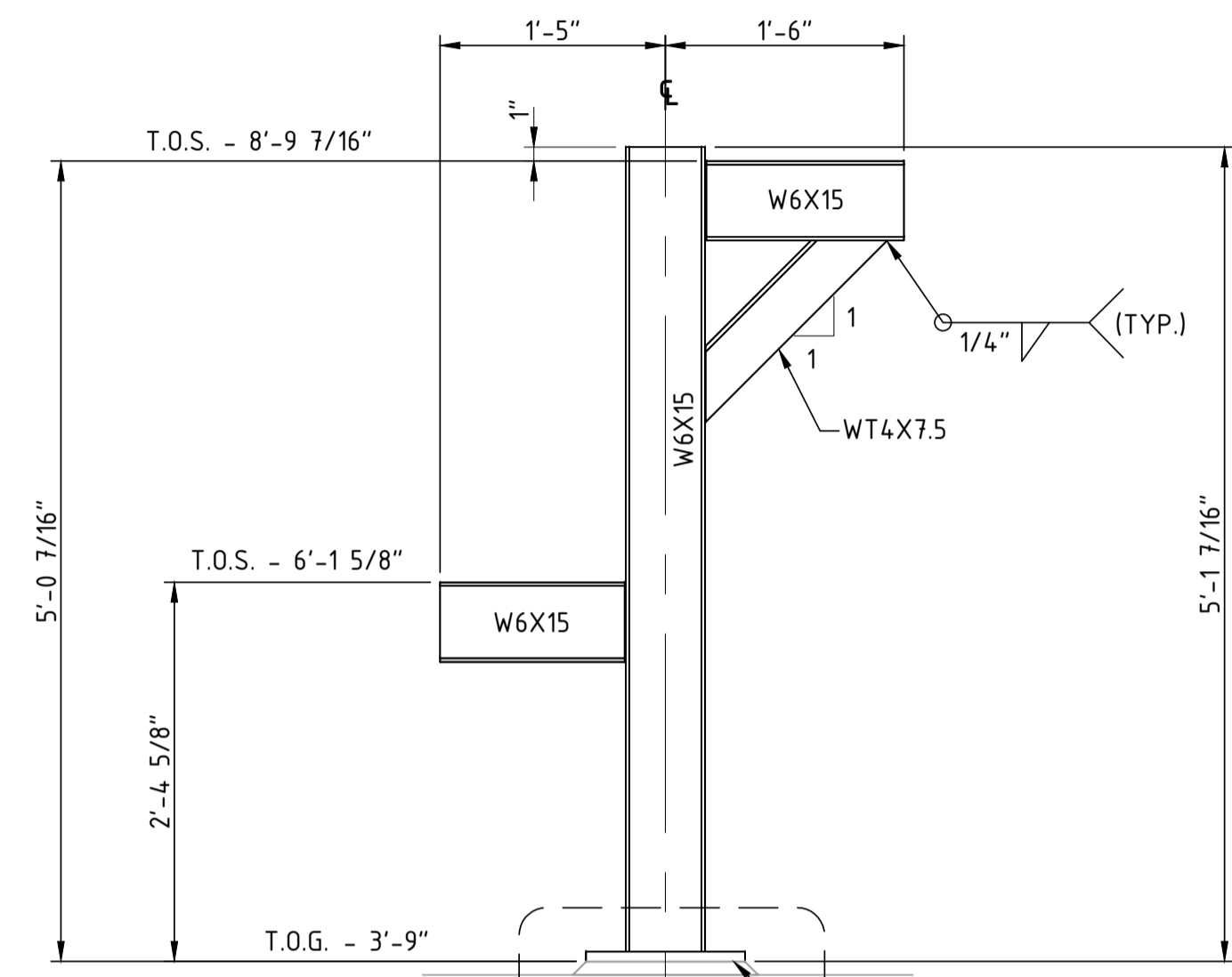
TYP. **SUPPORT - PS 353**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-130



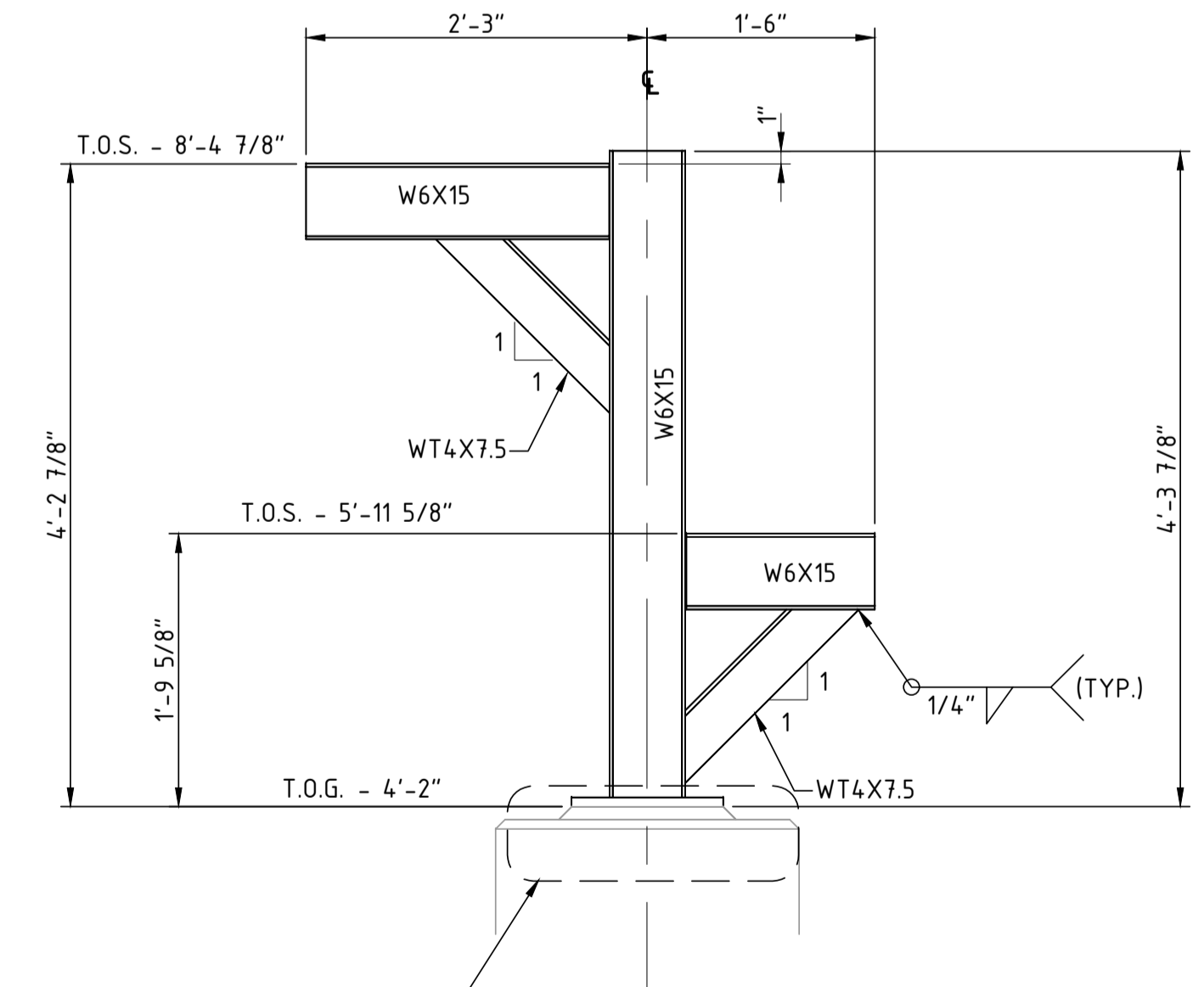
TYP. **SUPPORT - PS 352**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-130



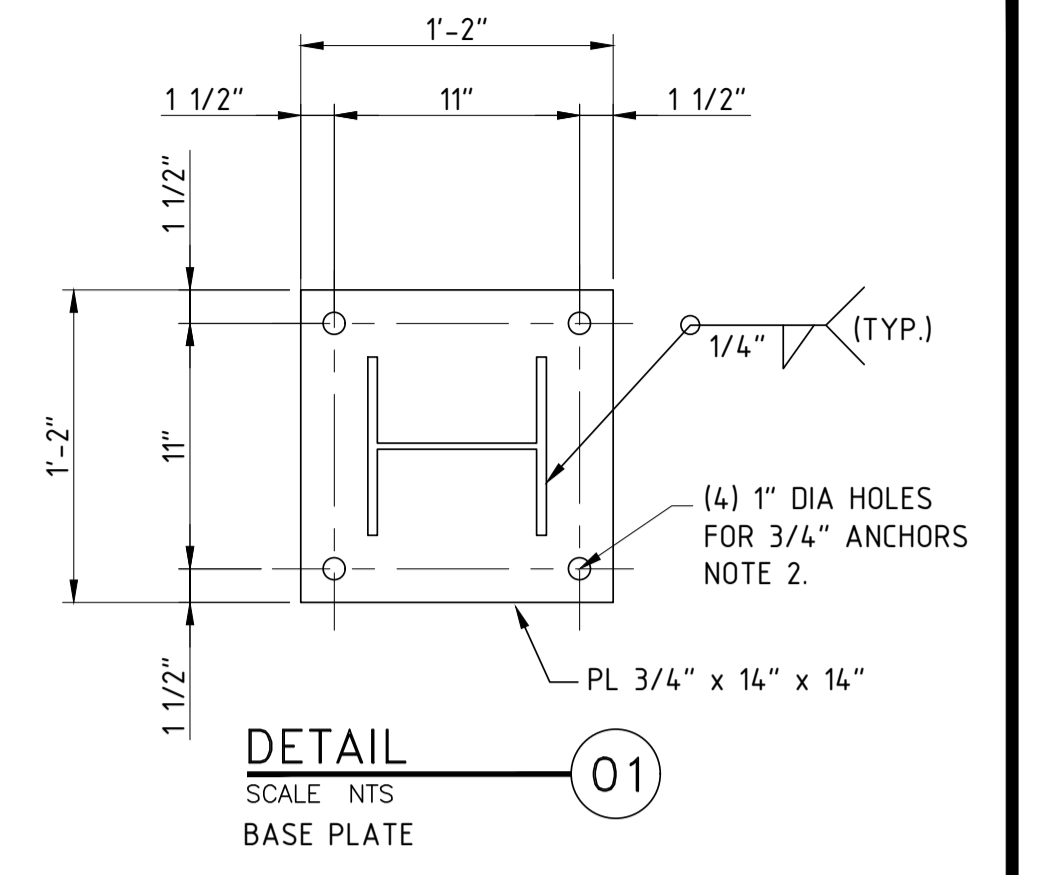
TYP. **SUPPORT - PS 354**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-130



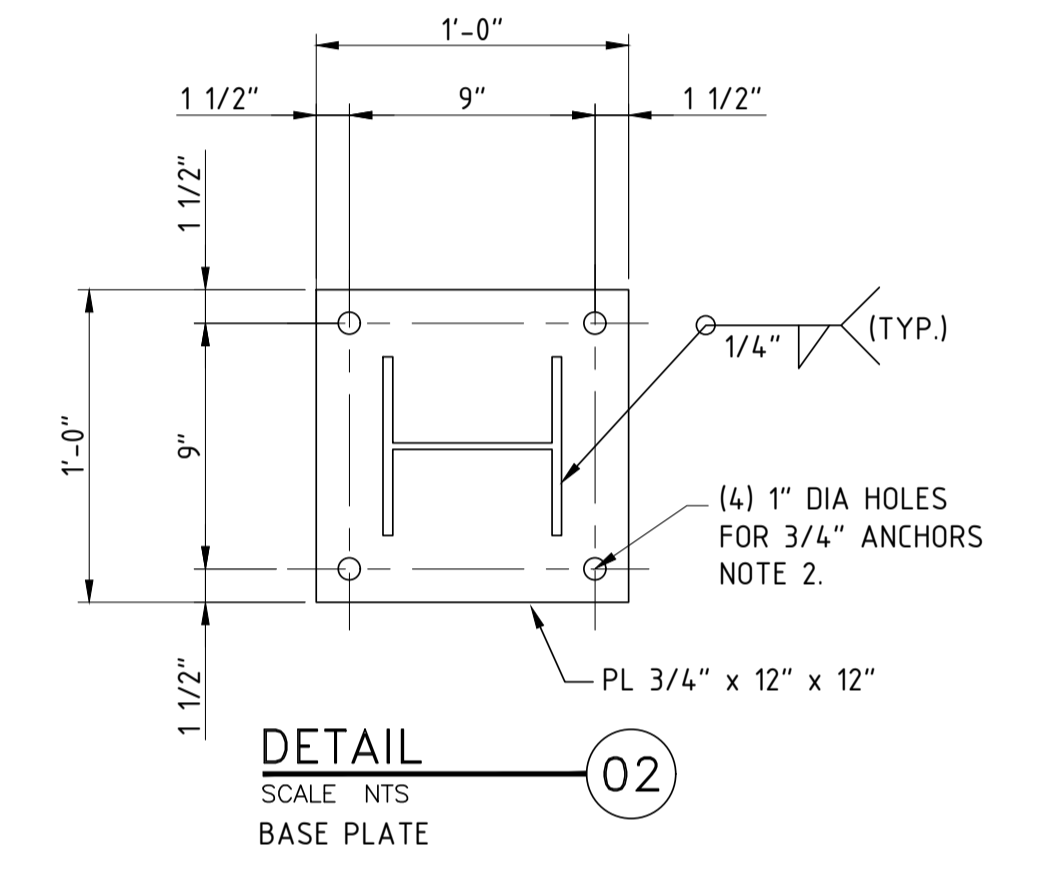
TYP. **SUPPORT - PS 350**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-130



TYP. **SUPPORT - PS 351**  
SCALE: NTS  
(1) REQUIRED  
STOT-32-130



**DETAIL 01**  
SCALE: NTS  
BASE PLATE



**DETAIL 02**  
SCALE: NTS  
BASE PLATE

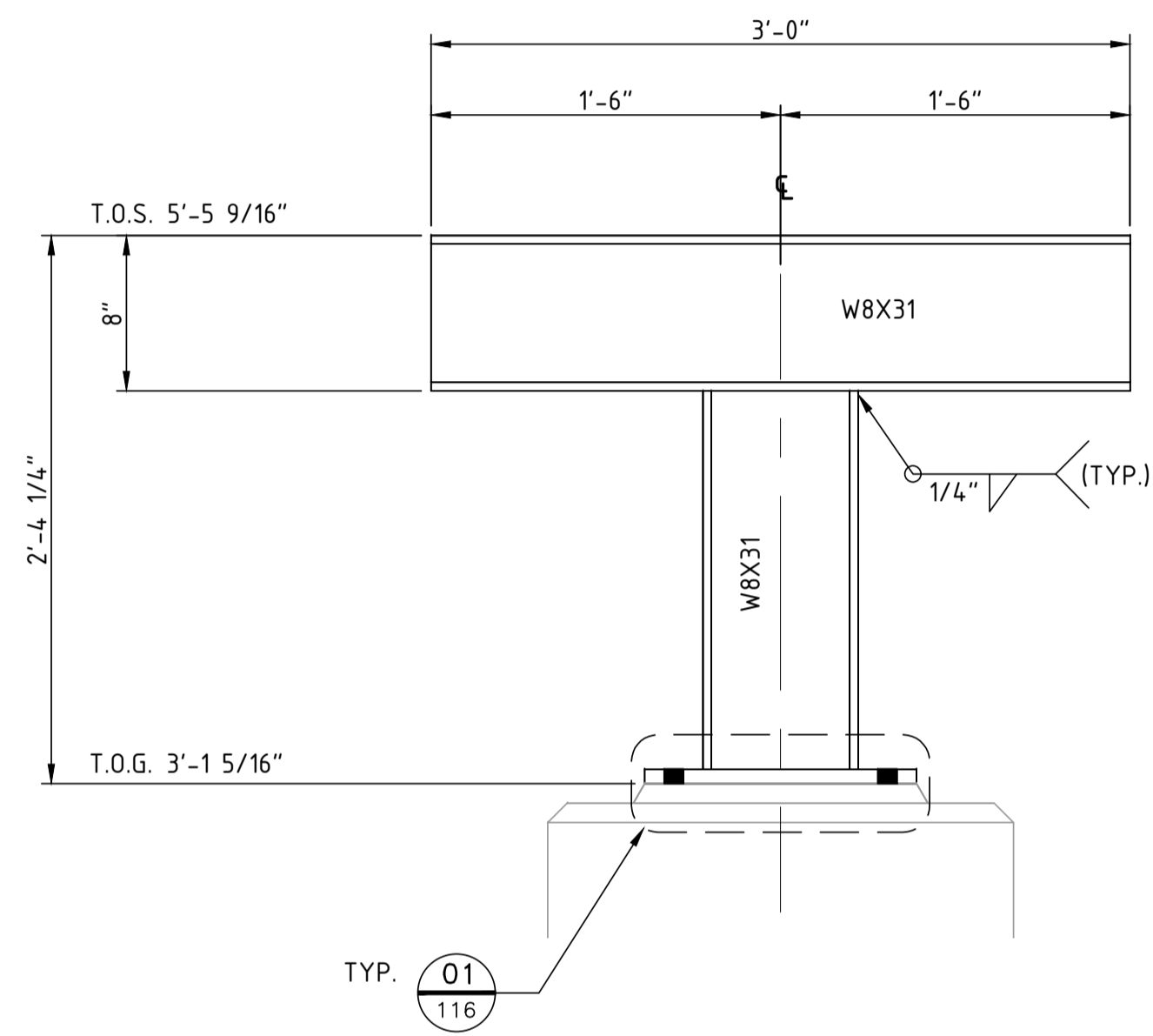
**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
STOT-33-115 - FOUNDATION DETAILS

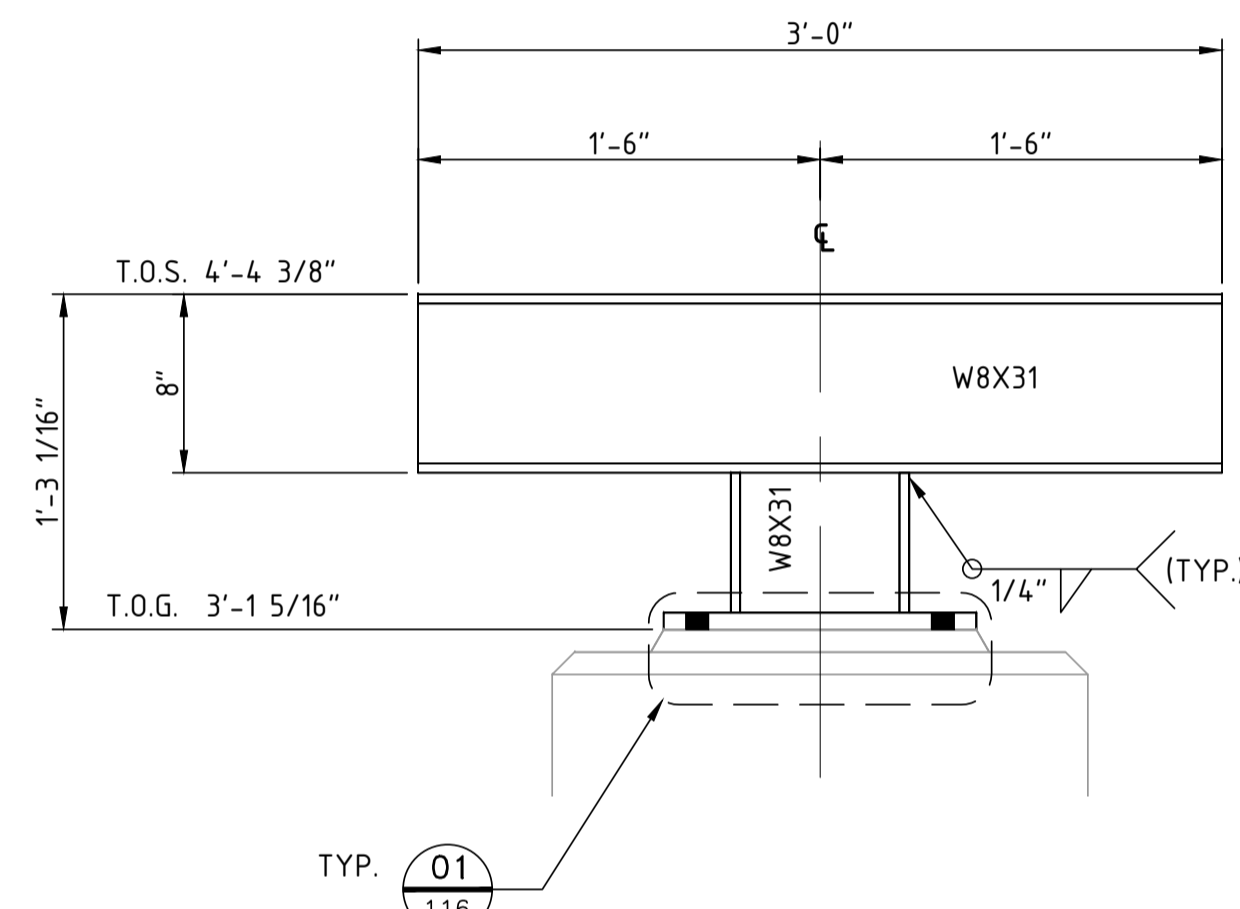
| NO. | REVISION                           | BY  | DATE    | APR    |
|-----|------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247 | KLK | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW       | REH | 5/6/19  | KLK JR |
| A   | ISSUE FOR BID CW_00247             | REH | 3/22/19 | KLK JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> REH     | <b>DATE:</b> 3/21/19 |
| <b>CHECKED:</b> KLK      | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> NONE       |                      |

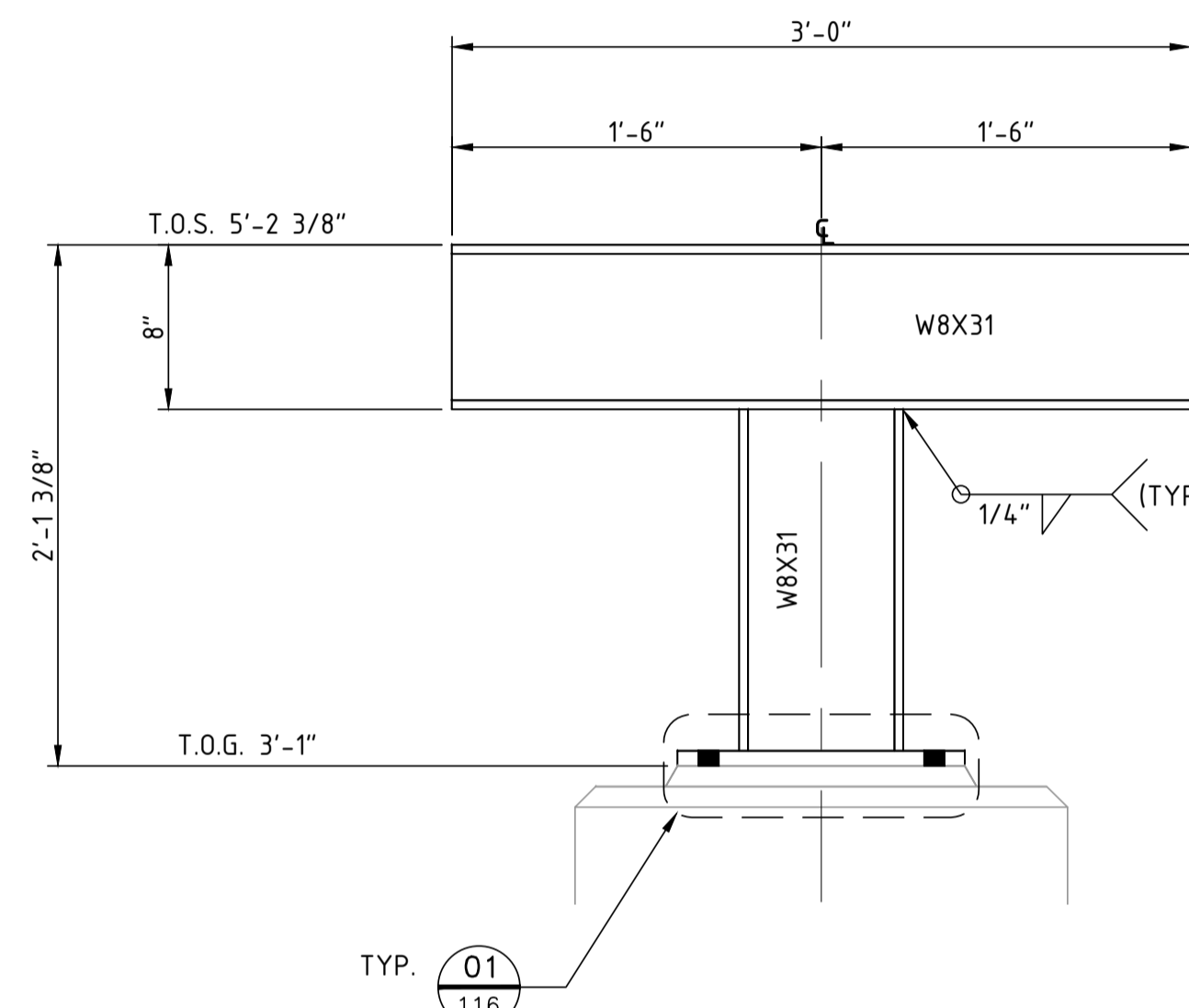
|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT DETAILS</b> |               |
| <b>ORIGINAL PROJECT NO. CW_00247</b>                                    |               |
| <b>DRAWING NO. STOT-36-115</b>  | <b>REV. 0</b> |



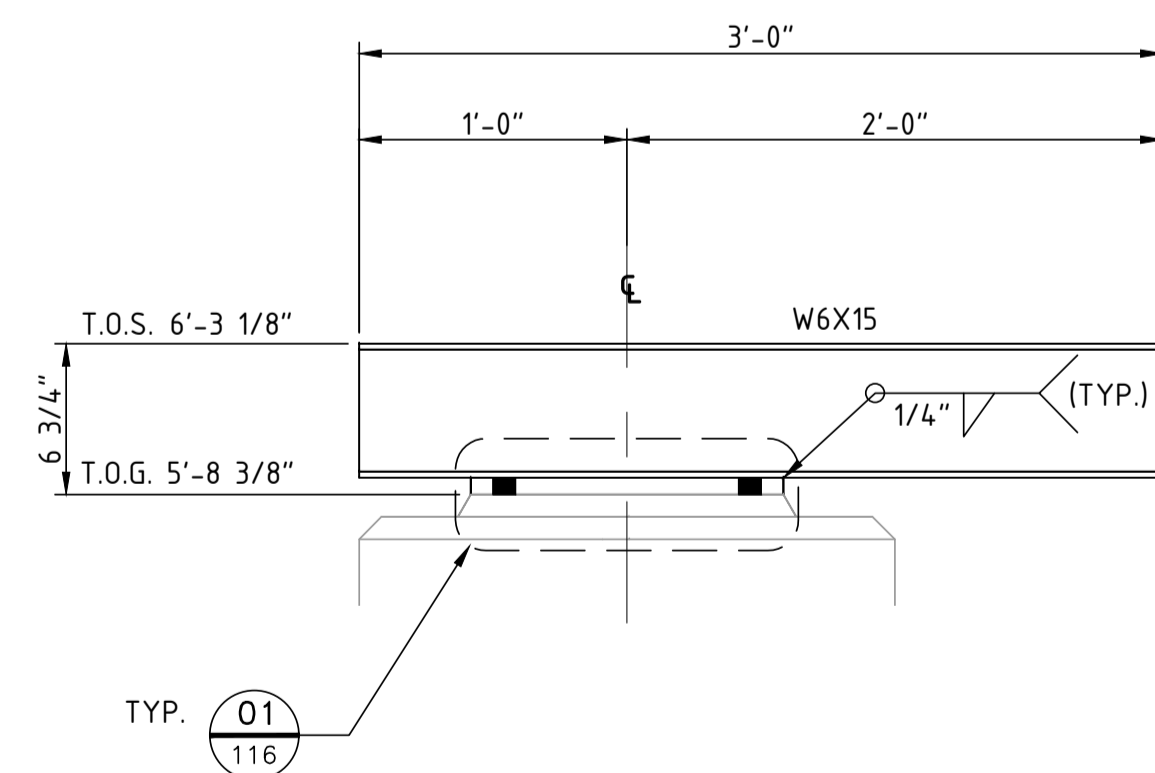
**SUPPORT - PS-374 THRU PS-387**  
 SCALE: NTS  
 (1) REQUIRED  
 STOT-32-114, STOT-32-115 & STOT-32-116



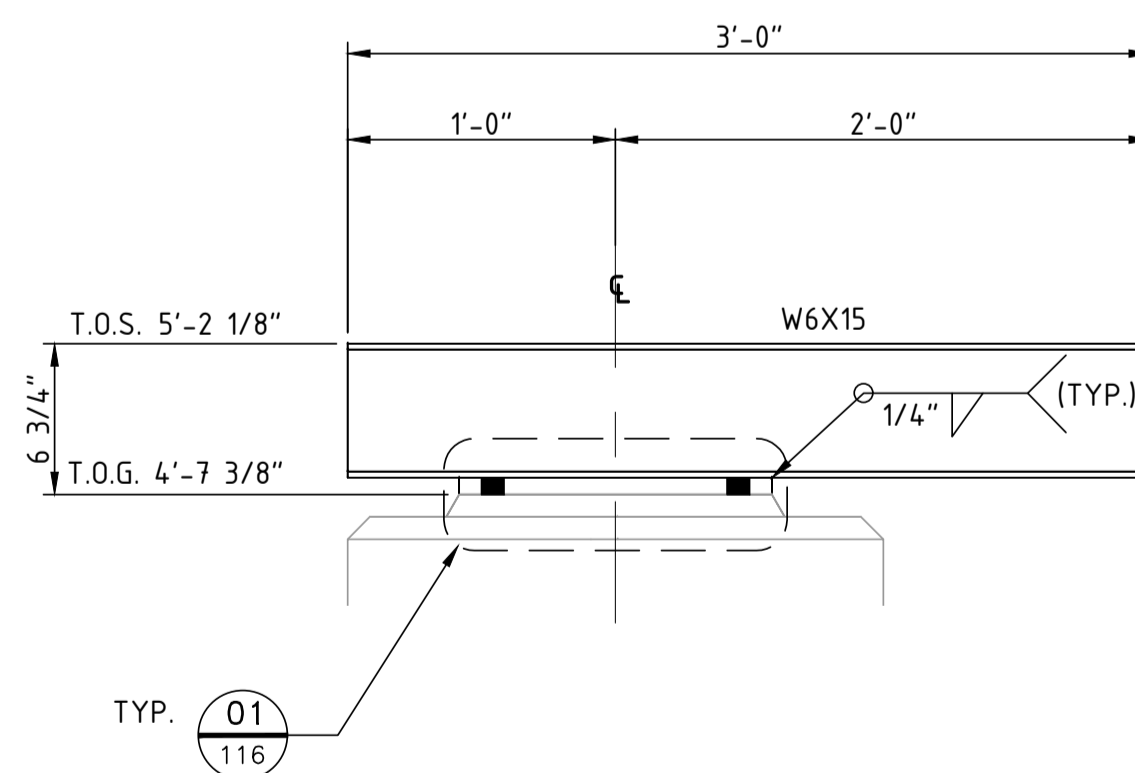
**SUPPORT - PS-388**  
 SCALE: NTS  
 (1) REQUIRED  
 STOT-32-116



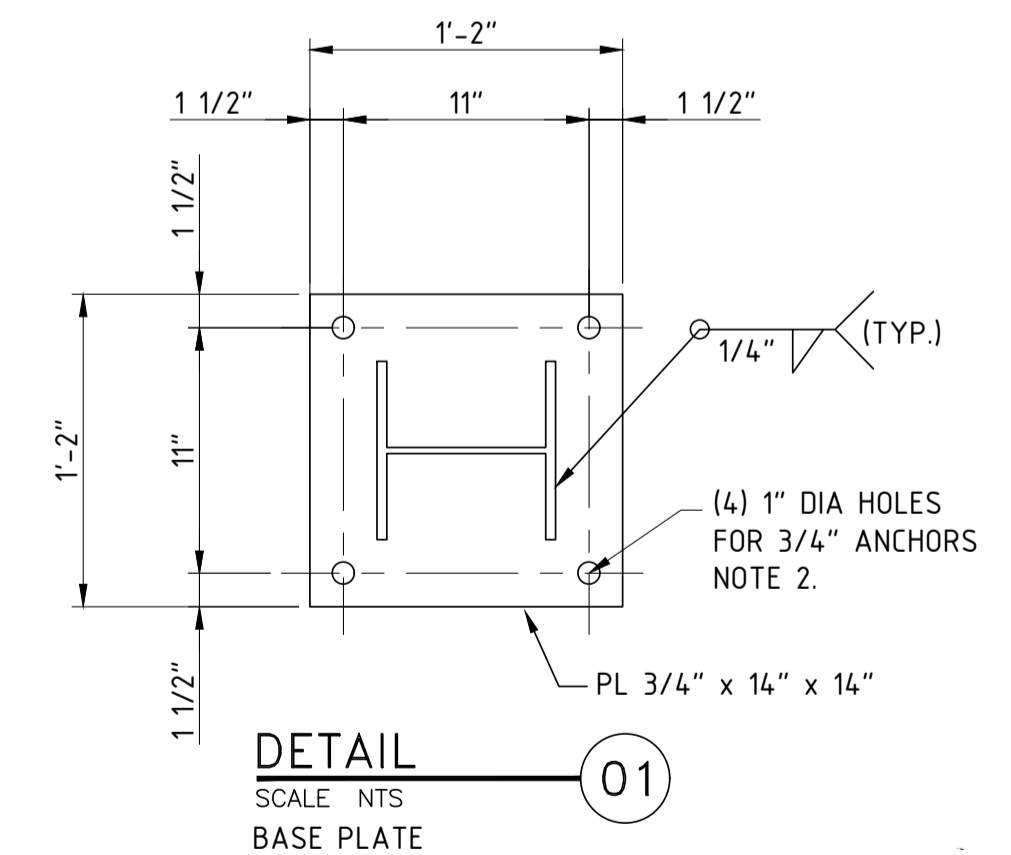
**SUPPORT - PS-389 THRU PS-391**  
 SCALE: NTS  
 (3) REQUIRED  
 STOT-32-116



**SUPPORT - PS-317 THRU PS-321**  
 SCALE: NTS  
 (5) REQUIRED  
 STOT-32-159



**SUPPORT - PS-314 THRU PS-316**  
 SCALE: NTS  
 (3) REQUIRED  
 STOT-32-159, 164



**DETAIL**  
 SCALE: NTS  
 BASE PLATE

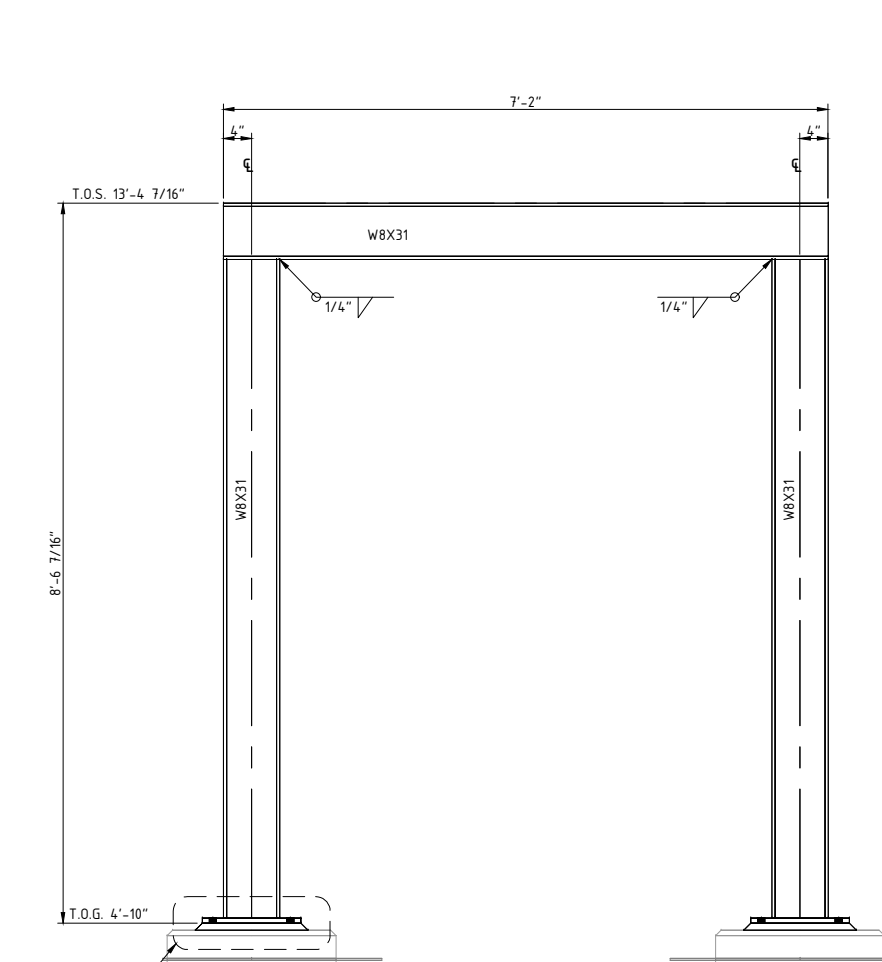
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
 2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
 STOT-24-100 KEY PIPING PLAN  
 STOT-32-100 KEY FOUNDATION PLAN

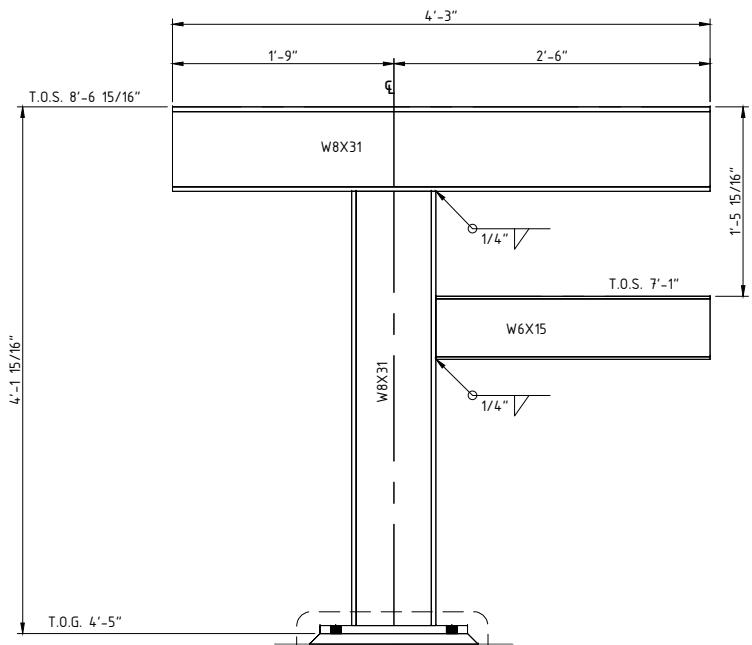
| NO. | REVISION                              | BY  | DATE    | APR    |
|-----|---------------------------------------|-----|---------|--------|
| 0   | APPROVED FOR CONSTRUCTION WC_00247    | KLW | 6/21/19 | JV JR  |
| B   | ISSUE FOR ENGINEERING REVIEW WC_00247 | REH | 5/6/19  | KLW JR |
| A   | ISSUE FOR BID CW_00247                | JBF | 3/22/19 | KLW JR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> JBF     | <b>DATE:</b> 3/19/19 |
| <b>CHECKED:</b> KLW      | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> NONE       |                      |

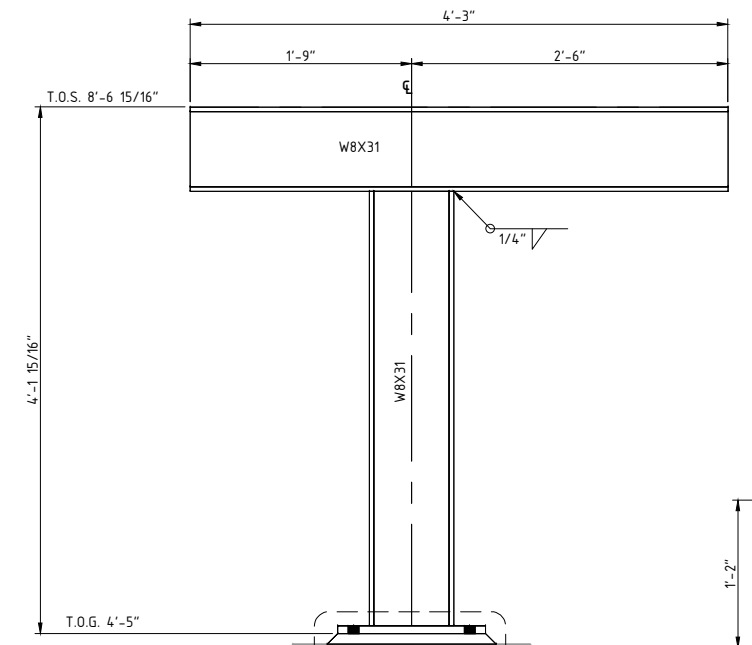
|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT DETAILS</b> |               |
| <b>ORIGINAL PROJECT NO. CW_00247</b>                                    |               |
| <b>DRAWING NO. STOT-36-116</b>  | <b>REV. 0</b> |



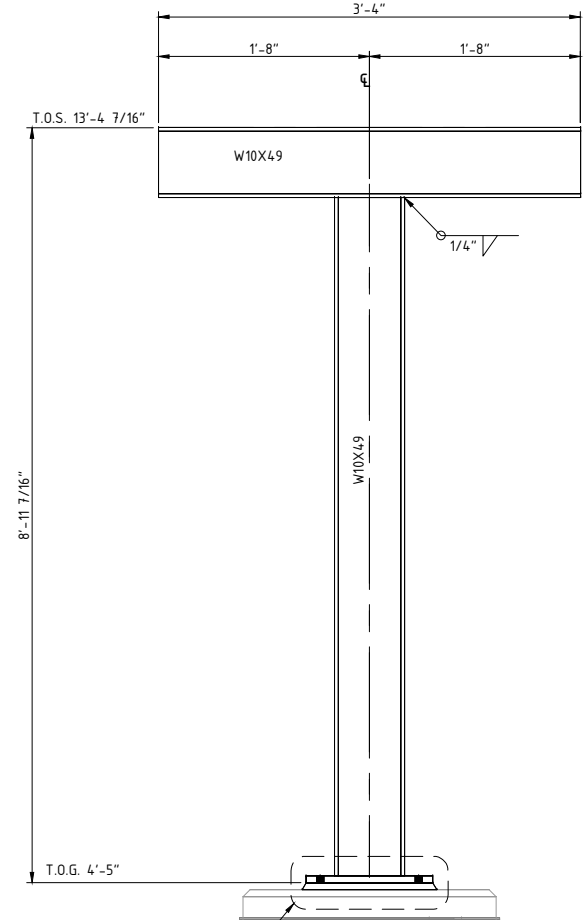
ELEVATION VIEW - LKG EAST  
**SUPPORT - PS 310**  
 SCALE: 1/2"=1'-0"  
 (1) REQUIRED  
 STOT-32-163, 164



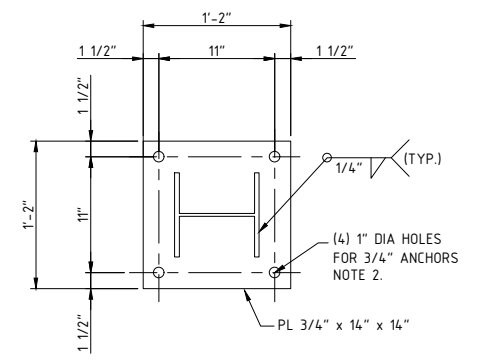
ELEVATION VIEW - LKG EAST  
**SUPPORT - PS 307, 308**  
 SCALE: 1/2"=1'-0"  
 (2) REQUIRED  
 STOT-32-171



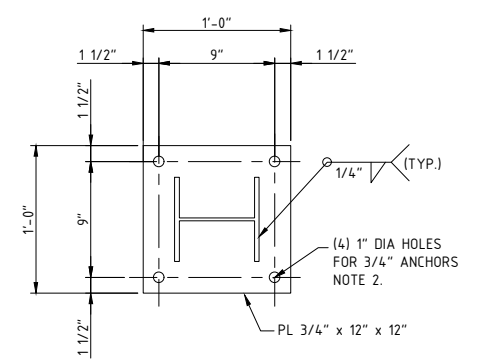
ELEVATION VIEW - LKG EAST  
**SUPPORT - PS 305, 306**  
 SCALE: 1/2"=1'-0"  
 (2) REQUIRED  
 STOT-32-171



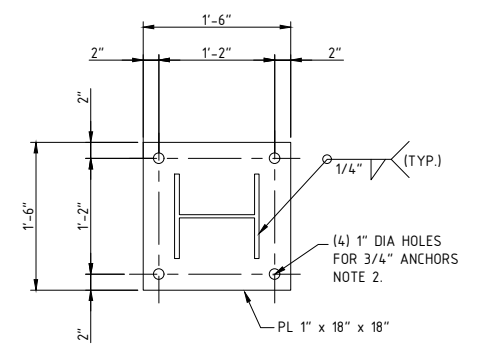
ELEVATION VIEW - LKG NORTH WEST  
**SUPPORT - PS 309**  
 SCALE: 1/2"=1'-0"  
 (1) REQUIRED  
 STOT-32-171



**DETAIL 01**  
 SCALE: NTS  
 BASE PLATE



**DETAIL 02**  
 SCALE: NTS  
 BASE PLATE



**DETAIL 03**  
 SCALE: NTS  
 BASE PLATE

**MODIFIED PS-392 THRU PS-398  
 MOVED TO STOT-36-116**

**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
 2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

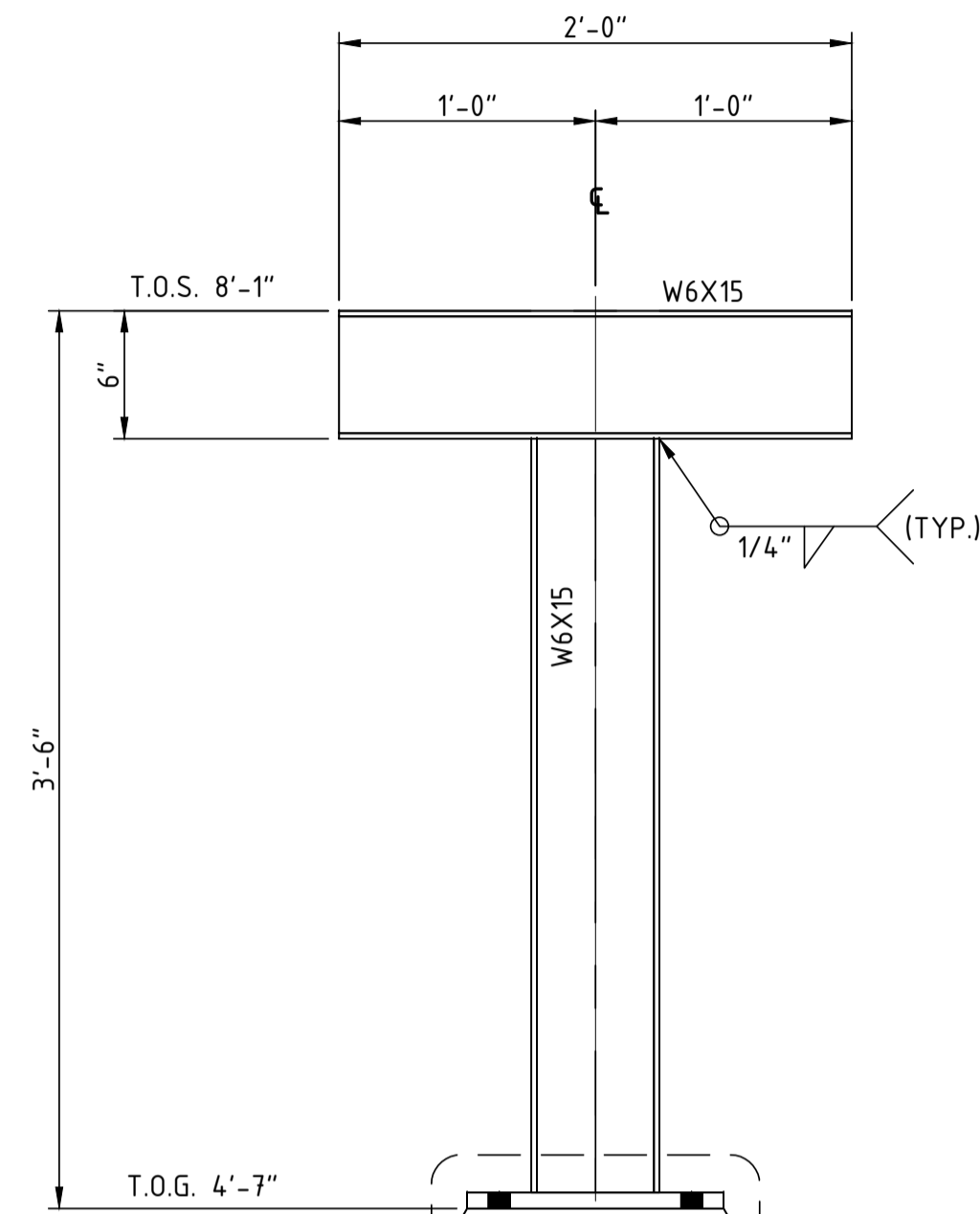
**REFERENCE DRAWINGS:**  
 STOT-33-115 - FOUNDATION SCHEDULE

| NO. | REVISION                               | BY  | DATE     | APR    |
|-----|--|-----|----------|--------|
| 1   | MODIFIED SUPPORTS PER U/G INTERFERENCE | KLV | 02/08/21 | NSD JR |
| 0   | APPROVED FOR CONSTRUCTION WC_00247     | KLV | 6/21/19  | NW JR  |
| A   | ISSUE FOR ENGINEERING REVIEW WC_00247  | KLV | 3/22/19  | KLV JR |

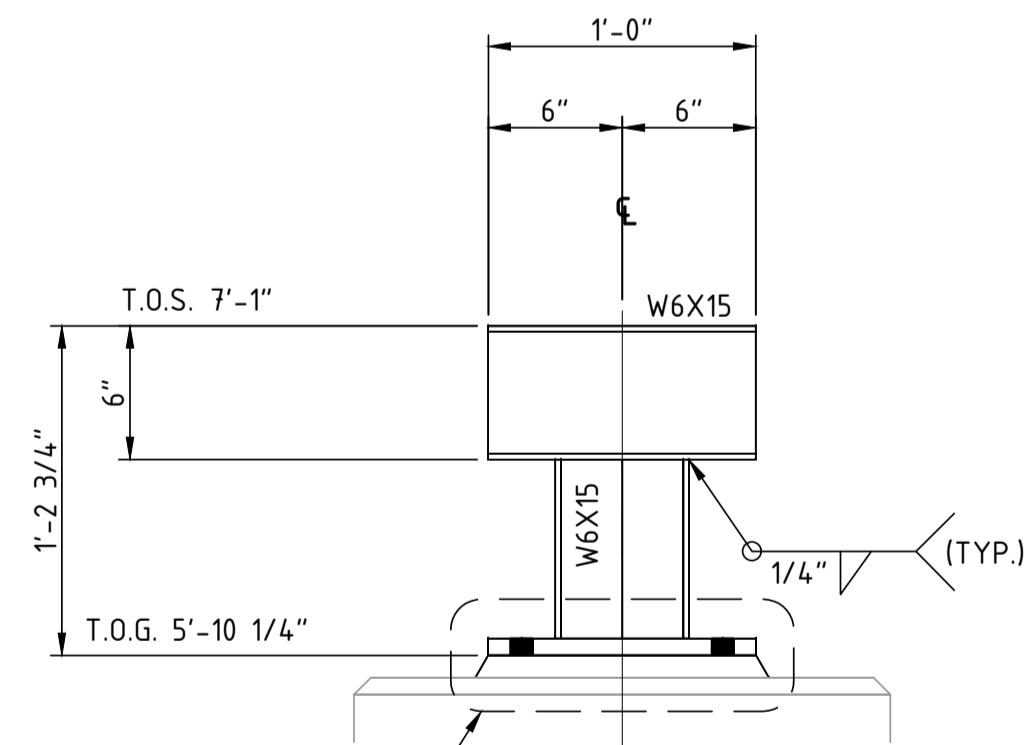
**PROJECT LOCATION:**  
**DRAWN BY:** KLV **DATE:** 02/10/20  
**CHECKED:** NW **DATE:**  
**APPROVED:** JR **DATE:**  
**SCALE:** NONE

**STOCKTON TERMINAL  
 STRUCTURAL DETAIL  
 PIPE SUPPORT DETAILS**  
**ORIGINAL PROJECT NO. WC\_00247**  
**DRAWING NO. STOT-36-126** **REV. 1**

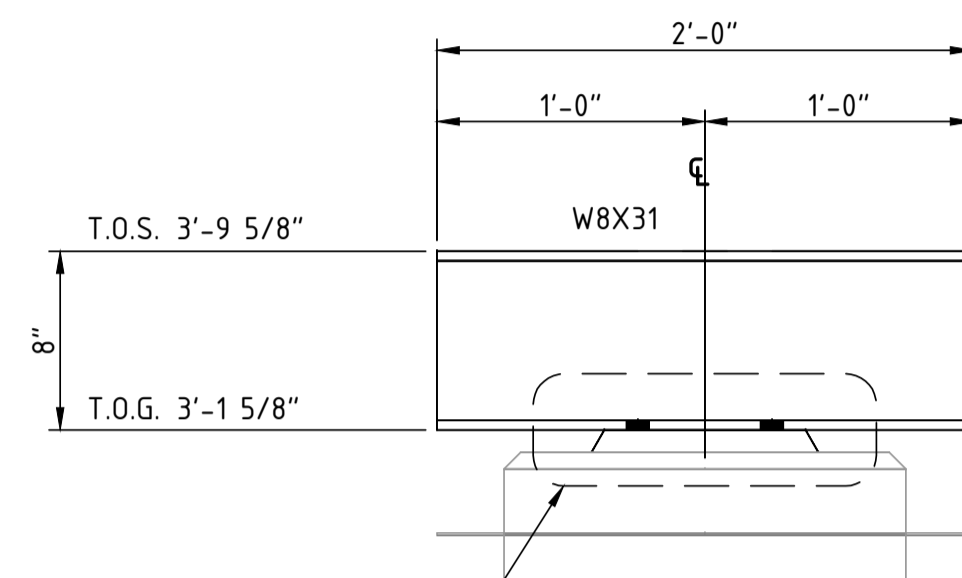




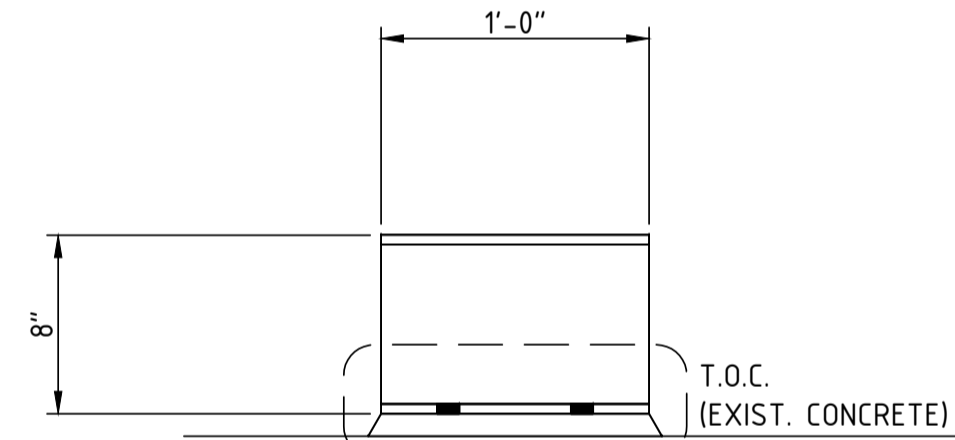
TYP. 02  
127  
**SUPPORT - PS-330**  
SCALE: 1 1/2" = 1'-0"  
(1) REQUIRED  
STOT-32-111



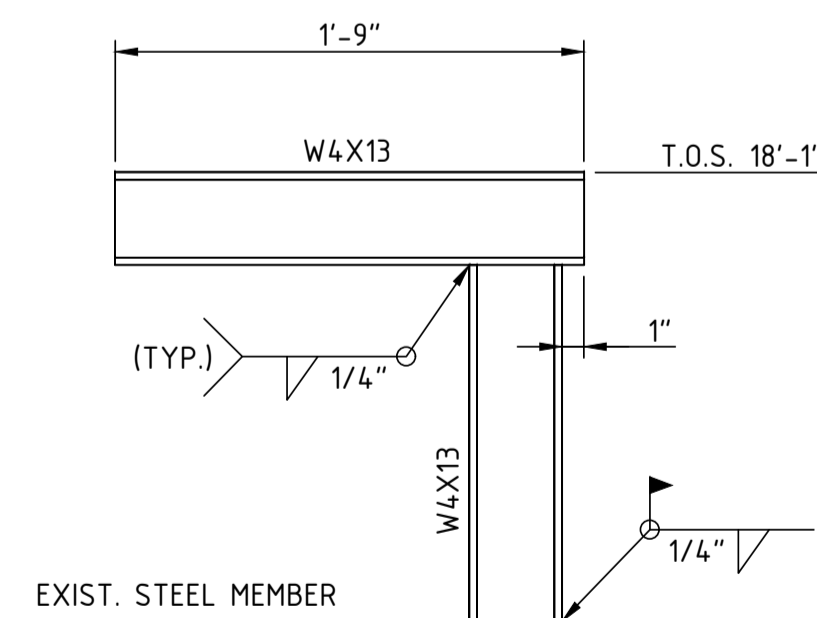
TYP. 02  
127  
**SUPPORT - PS-331**  
SCALE: 1 1/2" = 1'-0"  
(1) REQUIRED  
STOT-32-111



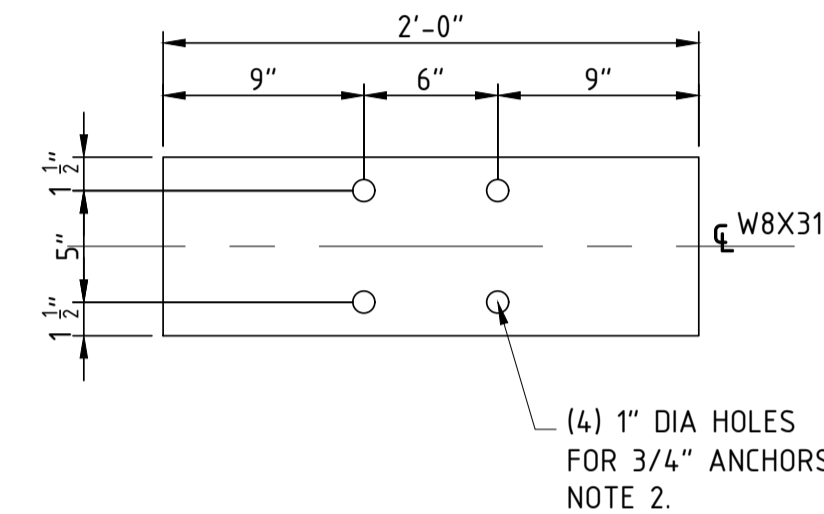
TYP. 01  
127  
**SUPPORT - PS-332**  
SCALE: 1 1/2" = 1'-0"  
(1) REQUIRED  
STOT-32-117



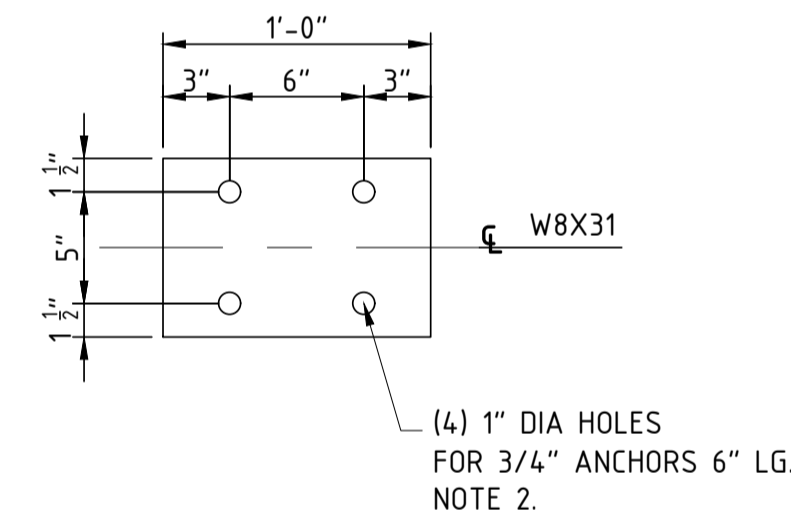
TYP. 03  
127  
**SUPPORT - FS-13**  
SCALE: 1 1/2" = 1'-0"  
(2) REQUIRED  
STOT-32-117



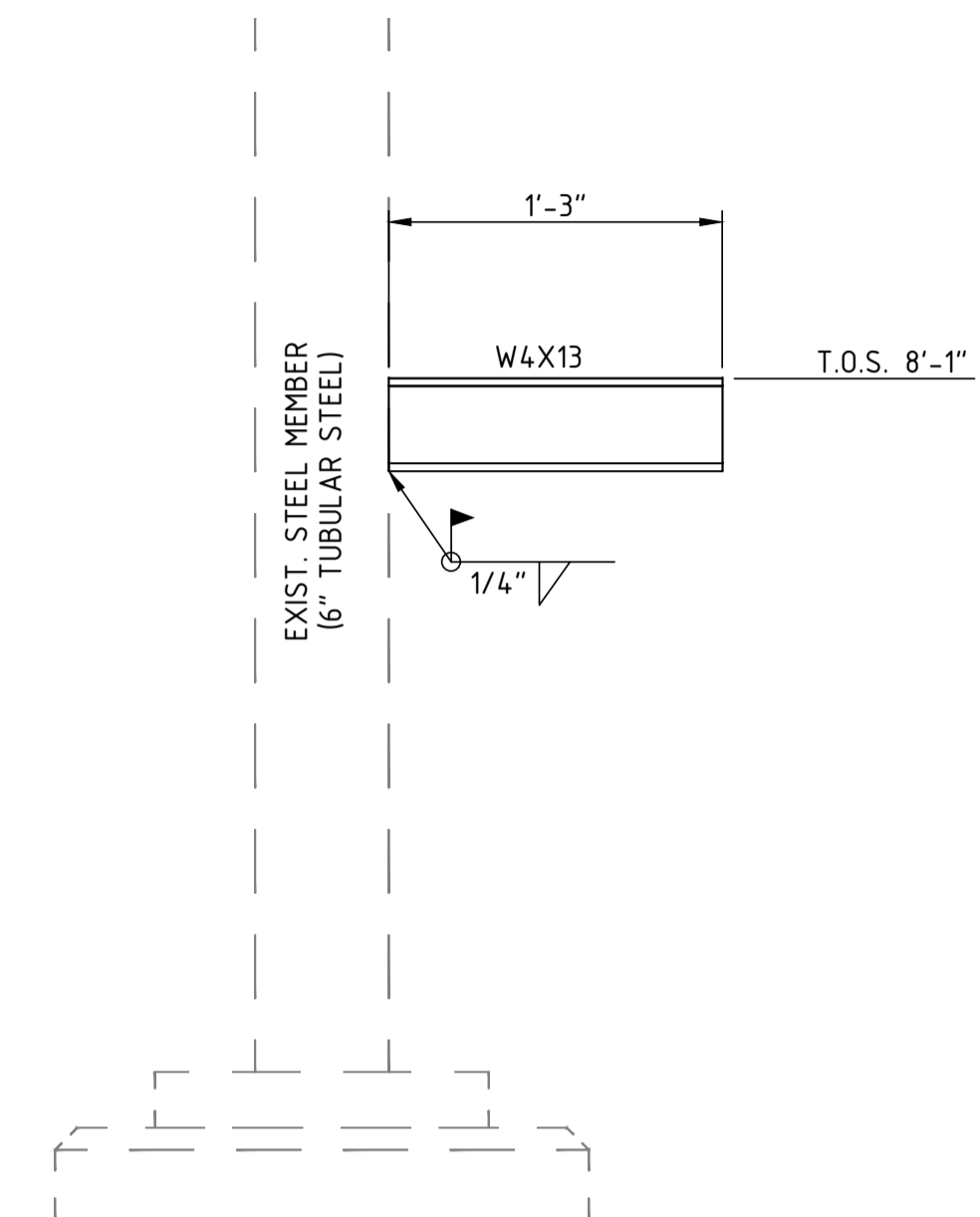
**SUPPORT - FS-14**  
SCALE: 3" = 1'-0"  
(6) REQUIRED  
STOT-32-153, STOT-32-154



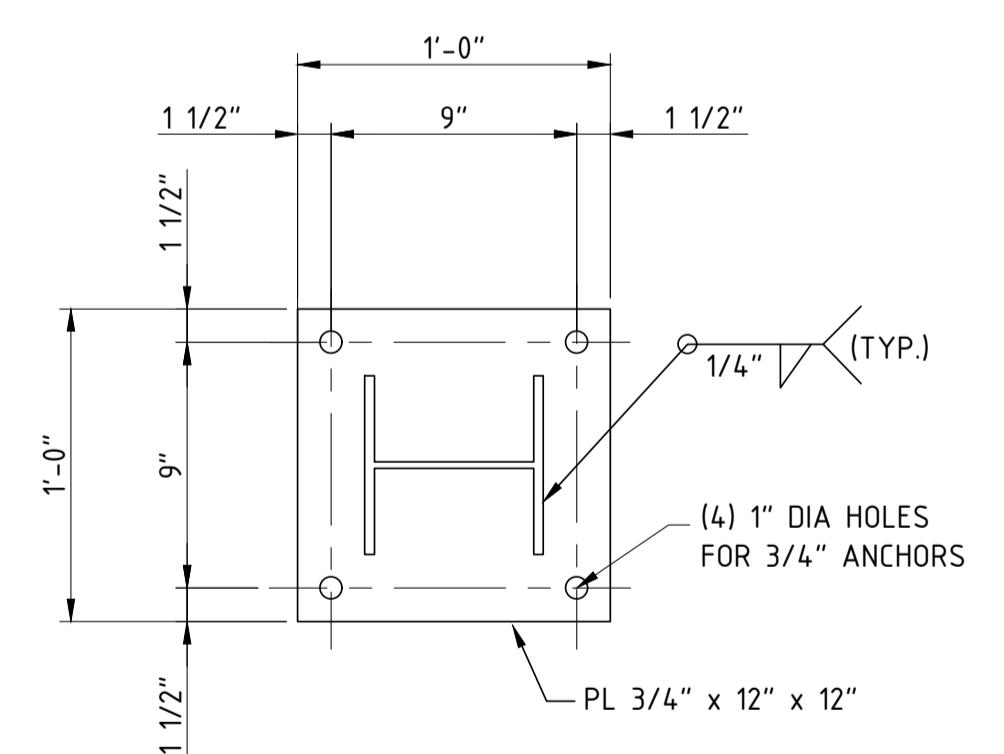
**DETAIL 01**  
SCALE: NTS



**DETAIL 03**  
SCALE: NTS



**SUPPORT - FS-12**  
SCALE: 1 1/2" = 1'-0"  
(1) REQUIRED  
STOT-32-164



**DETAIL 02**  
SCALE: NTS  
BASE PLATE

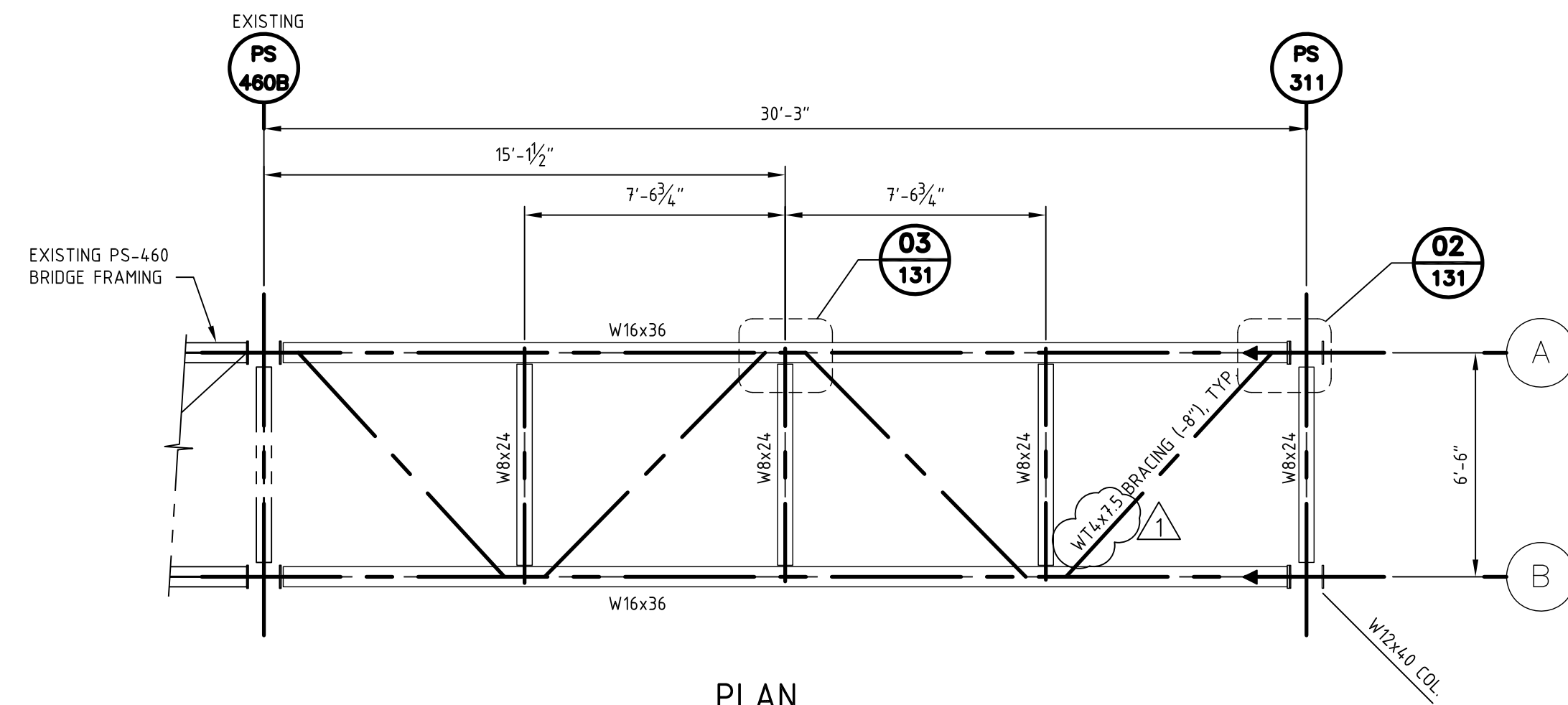
**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
2) POST DRILLED ANCHORS SHALL USE ADHESIVE SYSTEM.

**REFERENCE DRAWINGS:**  
STOT-24-100 - KEY PIPING PLAN  
STOT-32-100 - KEY FOUNDATION PLAN  
STOT-33-115 - FOUNDATION SUPPORT SCHEDULE

| NO. | REVISION               | BY  | DATE    | APR    |
|-----|------------------------|-----|---------|--------|
| A   | ISSUE FOR BID WC_00247 | JBF | 2/20/20 | KLV JR |

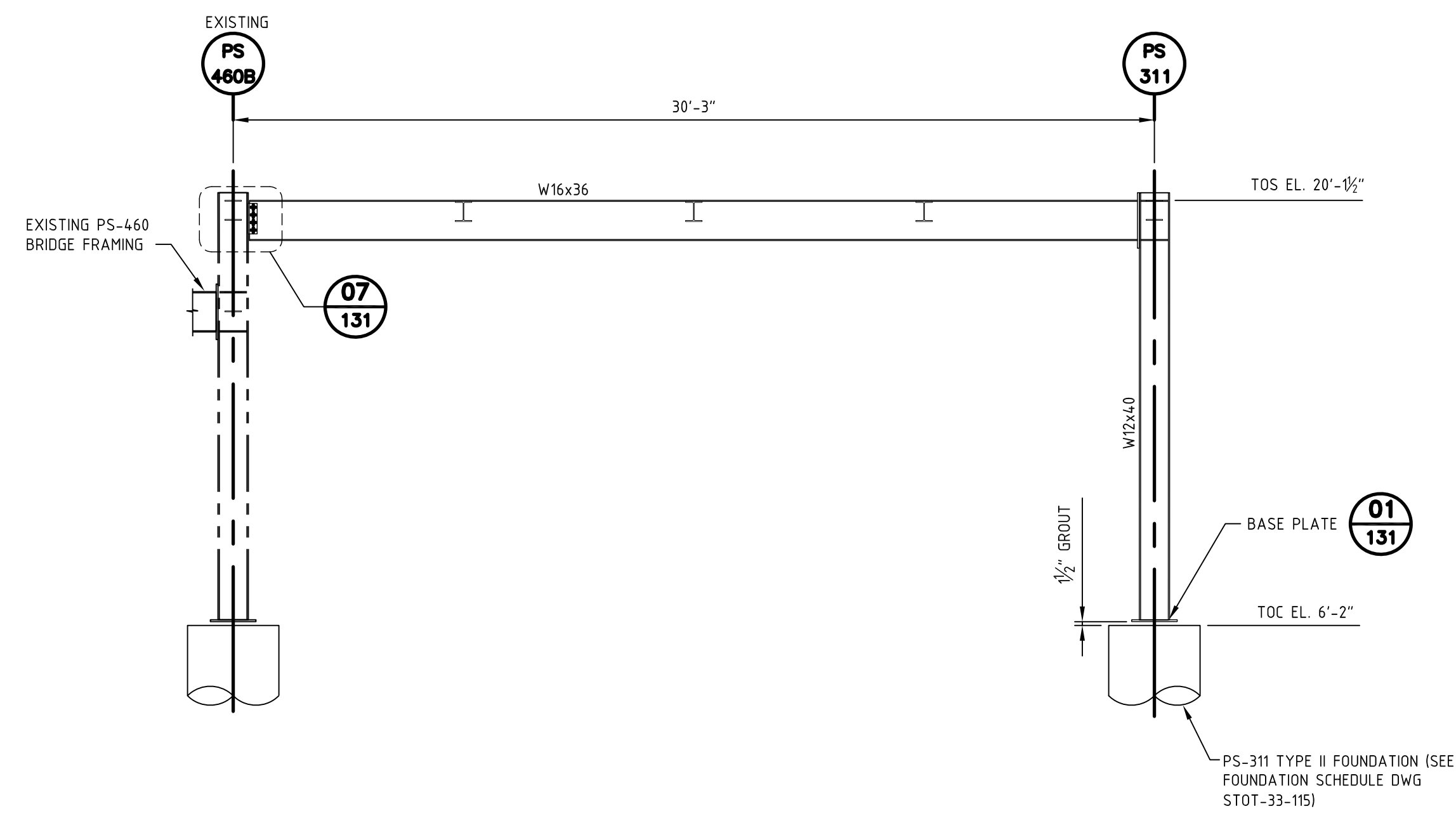
|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> JBF     | <b>DATE:</b> 2/20/20 |
| <b>CHECKED:</b> KLV      | <b>DATE:</b>         |
| <b>APPROVED:</b> JR      | <b>DATE:</b>         |
| <b>SCALE:</b> NONE       |                      |

|   |               |
|---|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT DETAILS</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00247</b>                                    |               |
| <b>DRAWING NO. STOT-36-127</b>  | <b>REV. 0</b> |



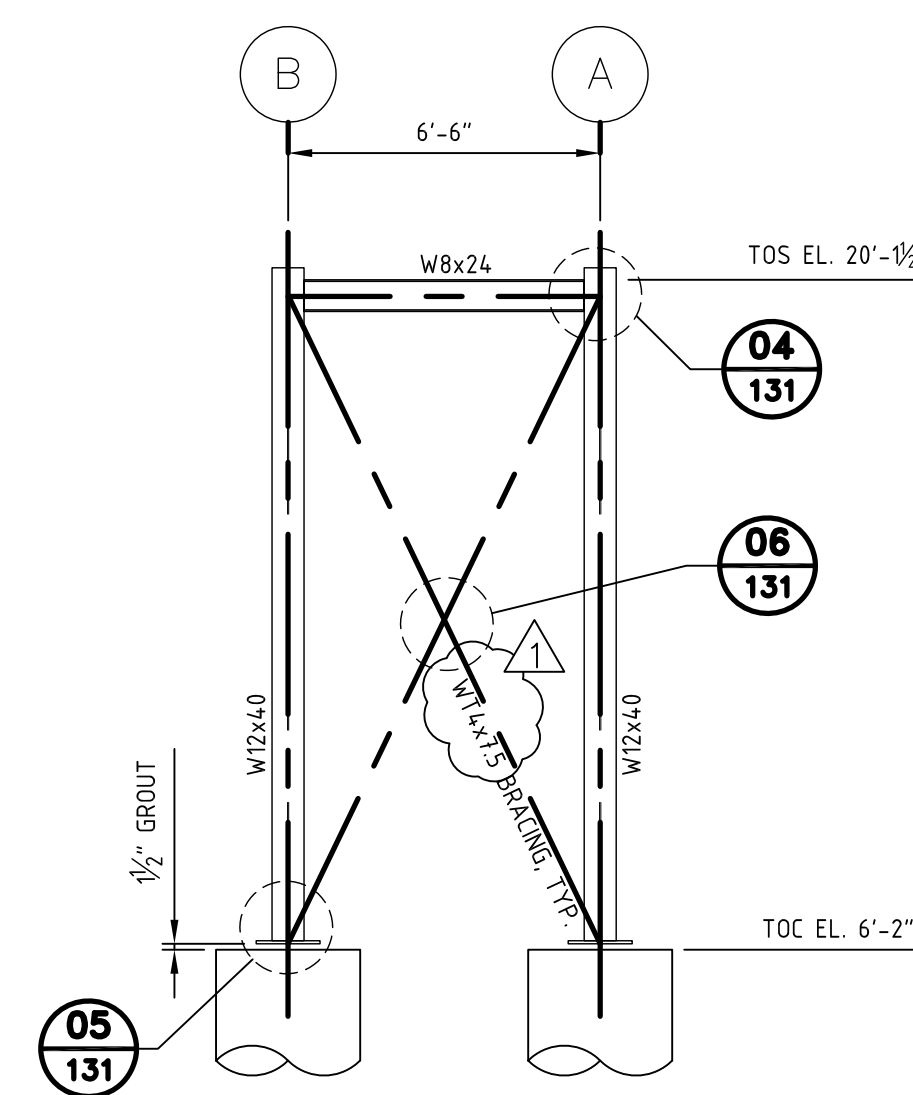
**PLAN**  
**PIPE SUPPORT FRAME (TOS EL. 20'-1 1/2") - PS-311**

SCALE: 1/4"=1'-0"  
 (1) REQ'D (STOT-32-163, 164)



**SOUTH ELEVATION - PS-311**

SCALE: 1/4"=1'-0"



**EAST ELEVATION - PS-311**

SCALE: 1/4"=1'-0"

**STRUCTURAL NOTES:**  
 1. ALL STRUCTURAL NOTES PER NUSTAR  
 STRUCTURAL GENERAL NOTES STANDARD DWG  
 NSCE-CS-002

N.E. #  
 RV1023

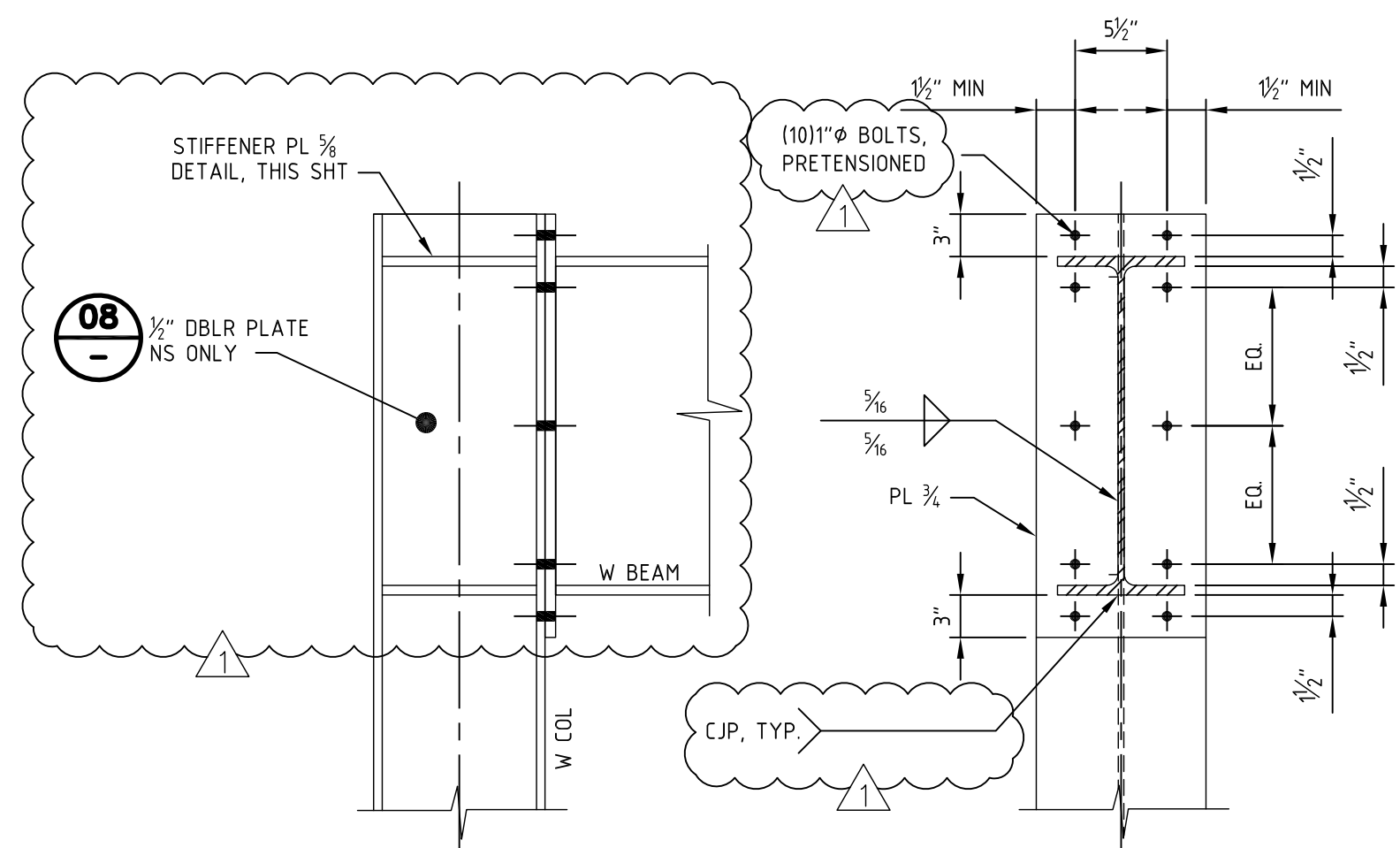
**NOTES:**  
 1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.  
**LEGEND:**  
 ▶ MOMENT CONNECTION - SEE DRAWING STOT-36-131

**REFERENCE DRAWINGS:**  
 STOT-32-163 FOUNDATION LOCATION PLAN  
 STOT-32-164 FOUNDATION LOCATION PLAN

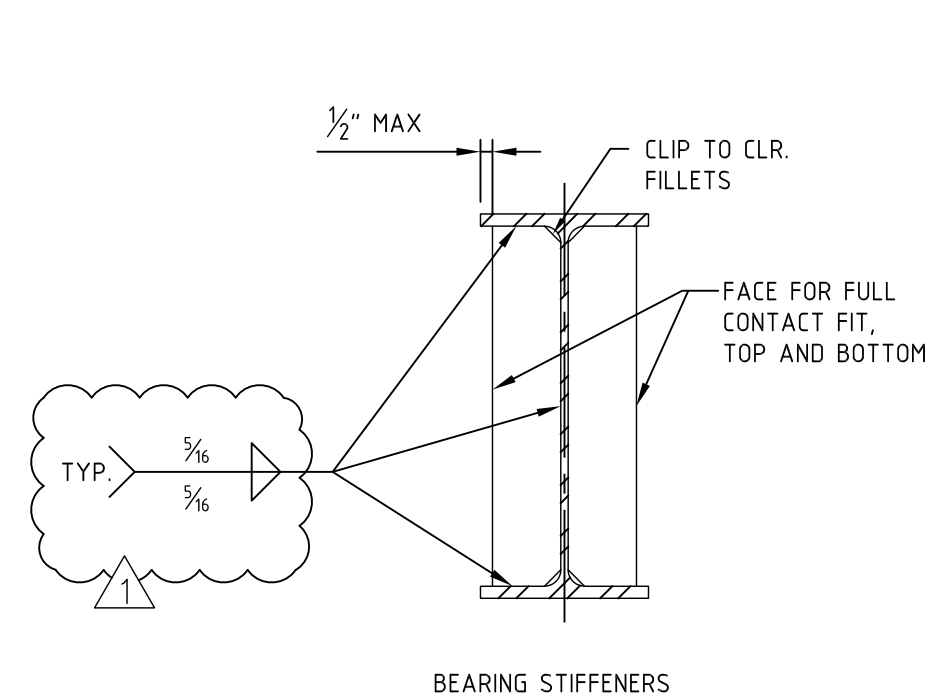
| NO. | REVISION                                   | BY  | DATE     | APR     |
|-----|--|-----|----------|---------|
| 1   | CHANGED BRACING, REISSUED FOR CONSTRUCTION | JAR | 10/06/20 | ARM JAA |
| 0   | ISSUED FOR CONSTRUCTION                    | JAR | 9/26/19  | LTR JAA |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> JAR     | <b>DATE:</b> 8/28/19 |
| <b>CHECKED:</b> RLM      | <b>DATE:</b>         |
| <b>APPROVED:</b> JAA     | <b>DATE:</b>         |
| <b>SCALE:</b> AS NOTED   |                      |

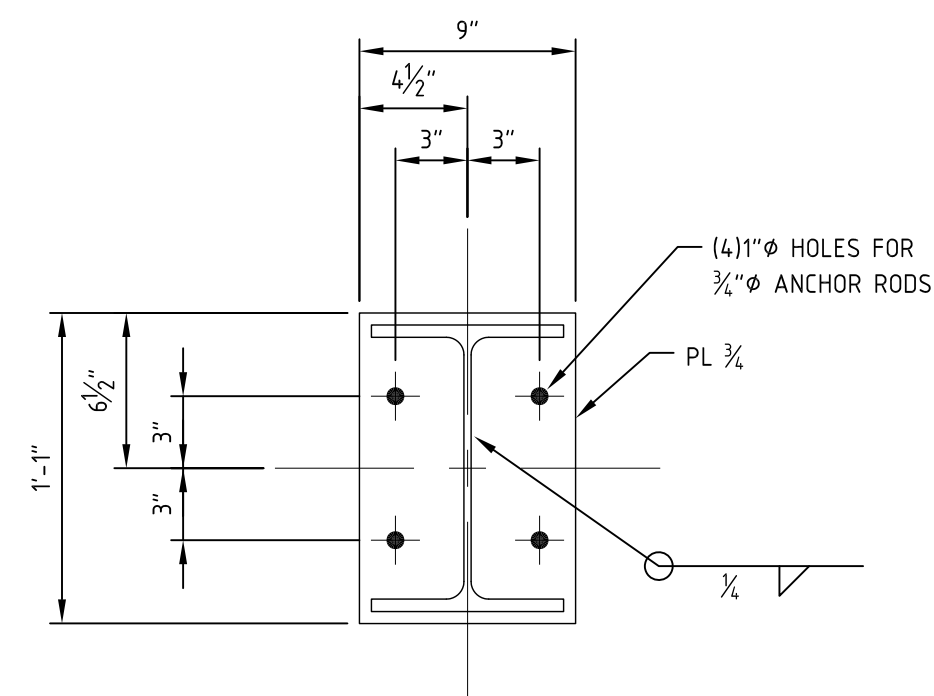
|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT PS-311 FRAMING</b> |               |
| <b>ORIGINAL PROJECT NO. WC_00410</b>   |               |
| <b>DRAWING NO. STOT-36-130</b>   | <b>REV. 1</b> |



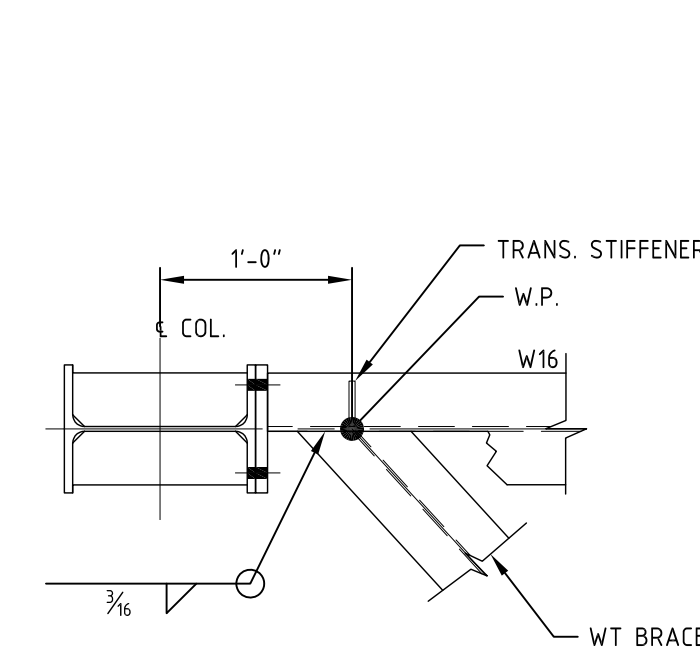
**BEAM-COLUMN MOMENT CONNECTION**  
SCALE: NTS



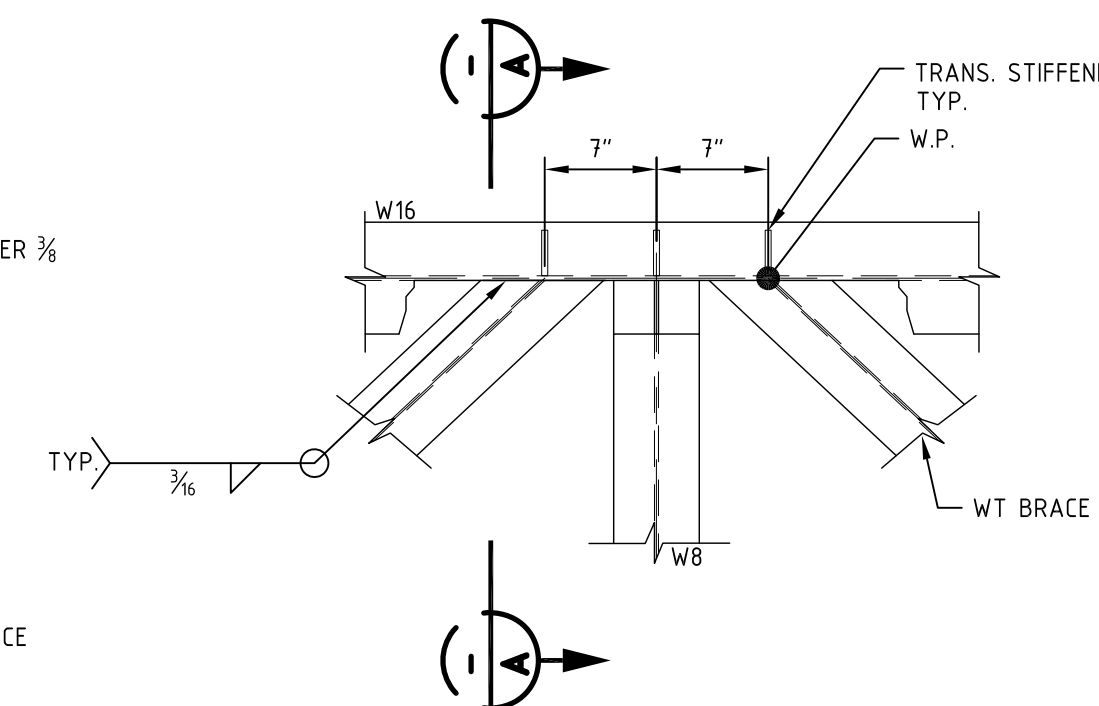
**TRANSVERSE STIFFENER DETAIL**  
SCALE: NTS



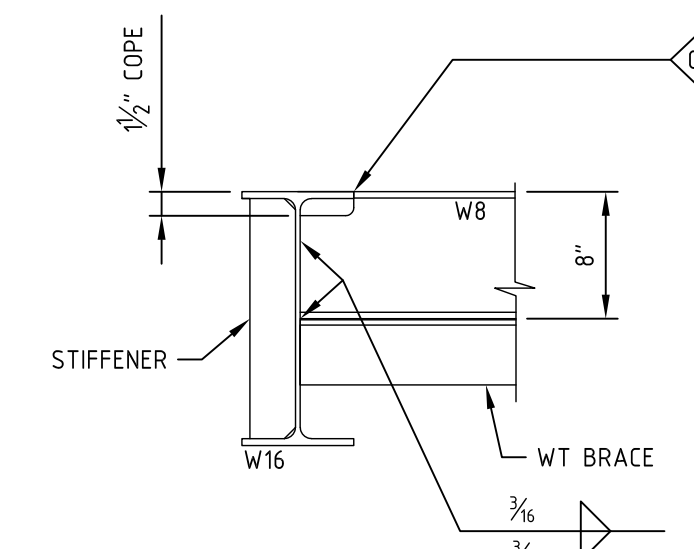
**DETAIL 01**  
SCALE 1 1/2"=1'-0"  
BASE PLATE



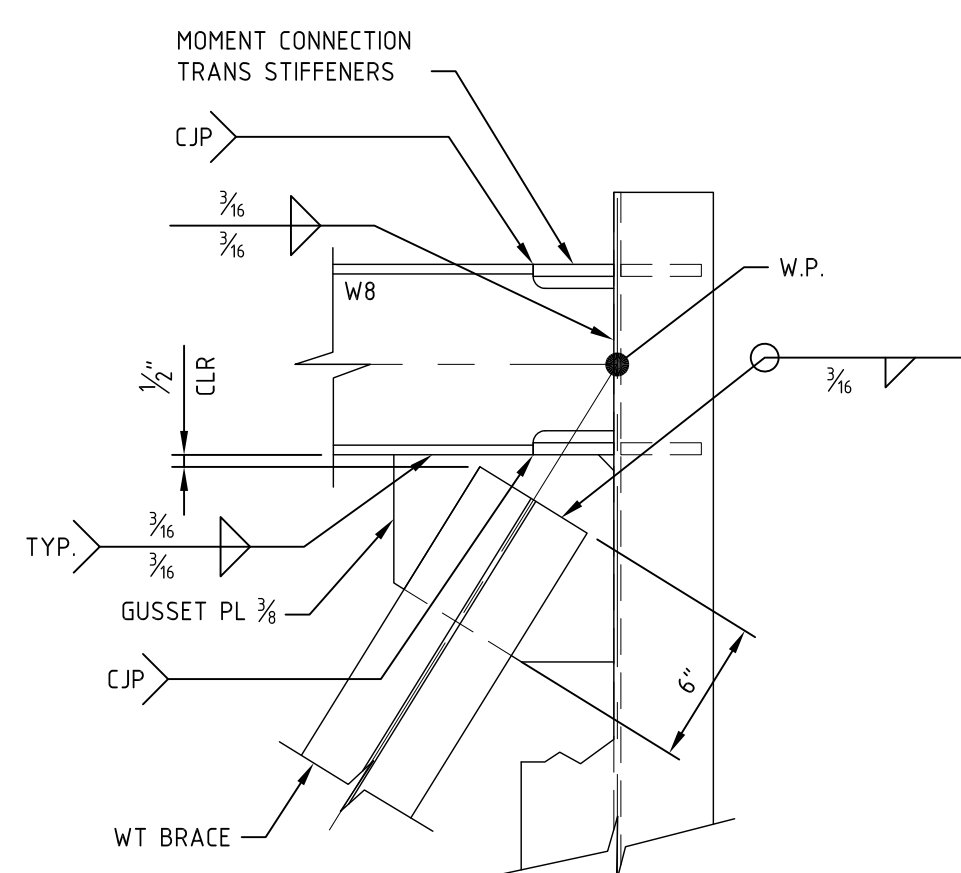
**DETAIL 02**  
SCALE 1"=1'-0"  
BRACE CONN.



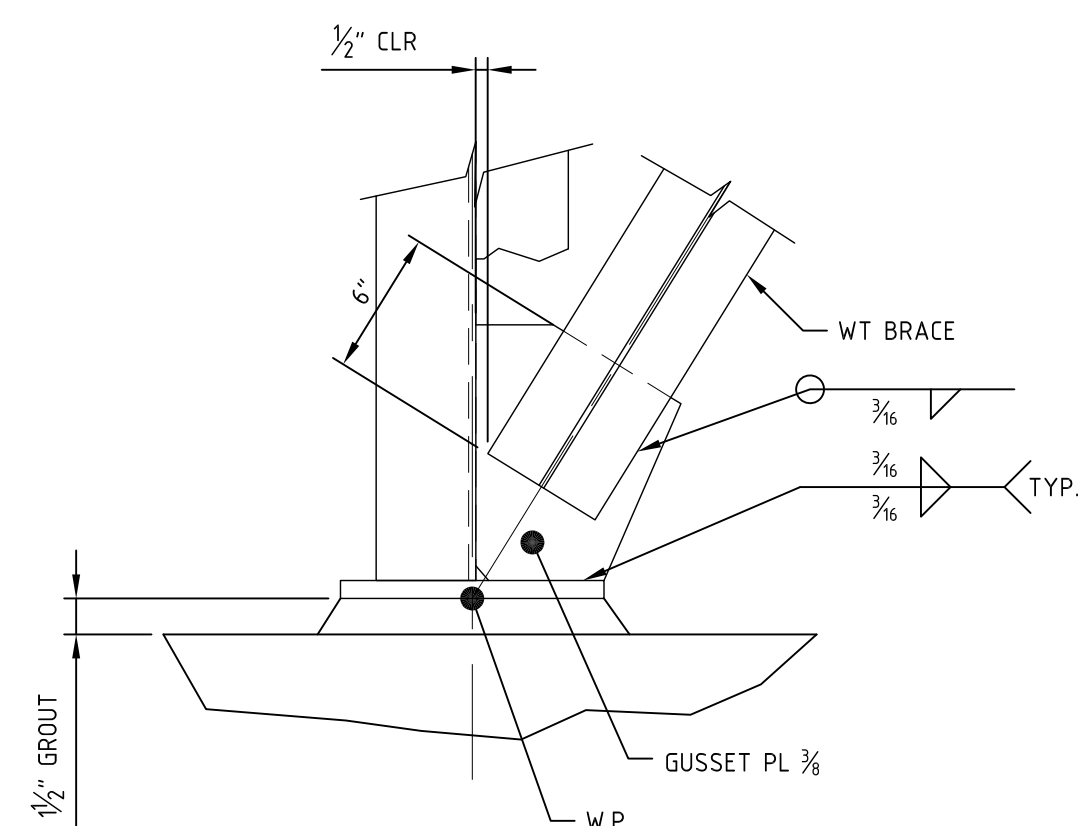
**DETAIL 03**  
SCALE 1"=1'-0"  
BRACE CONN.



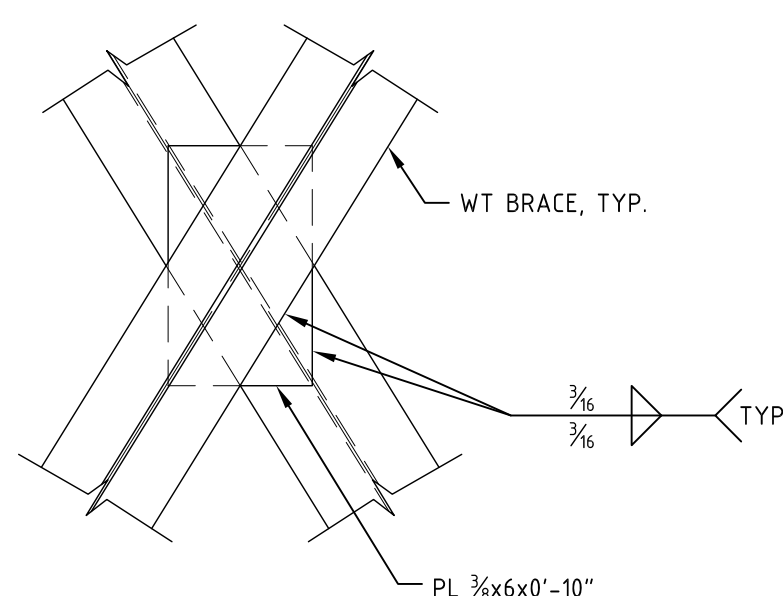
**SECTION A-A**  
SCALE: 1"=1'-0"



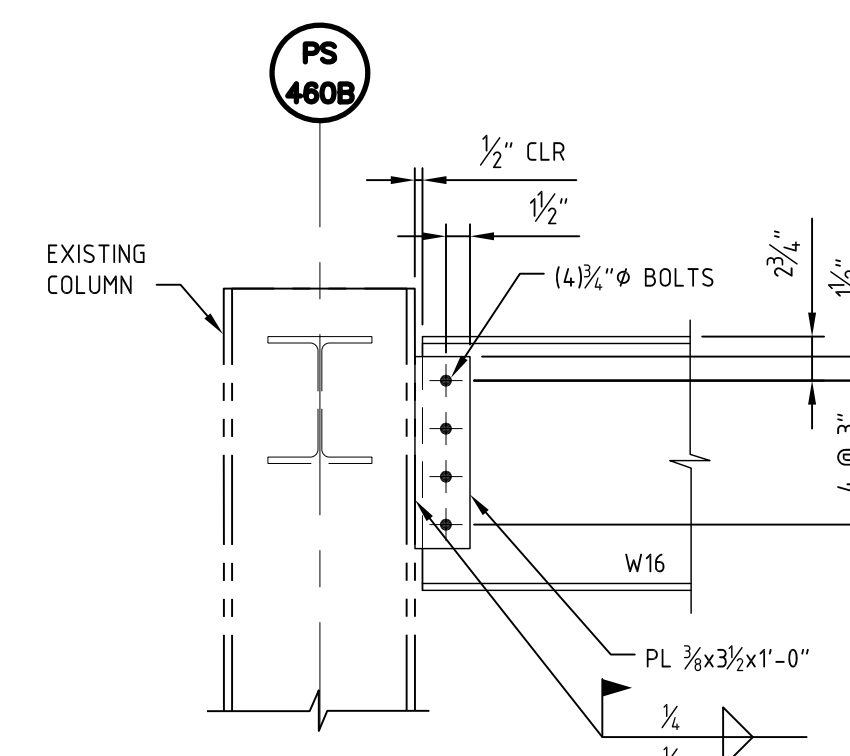
**DETAIL 04**  
SCALE 1 1/2"=1'-0"  
BRACE CONN.



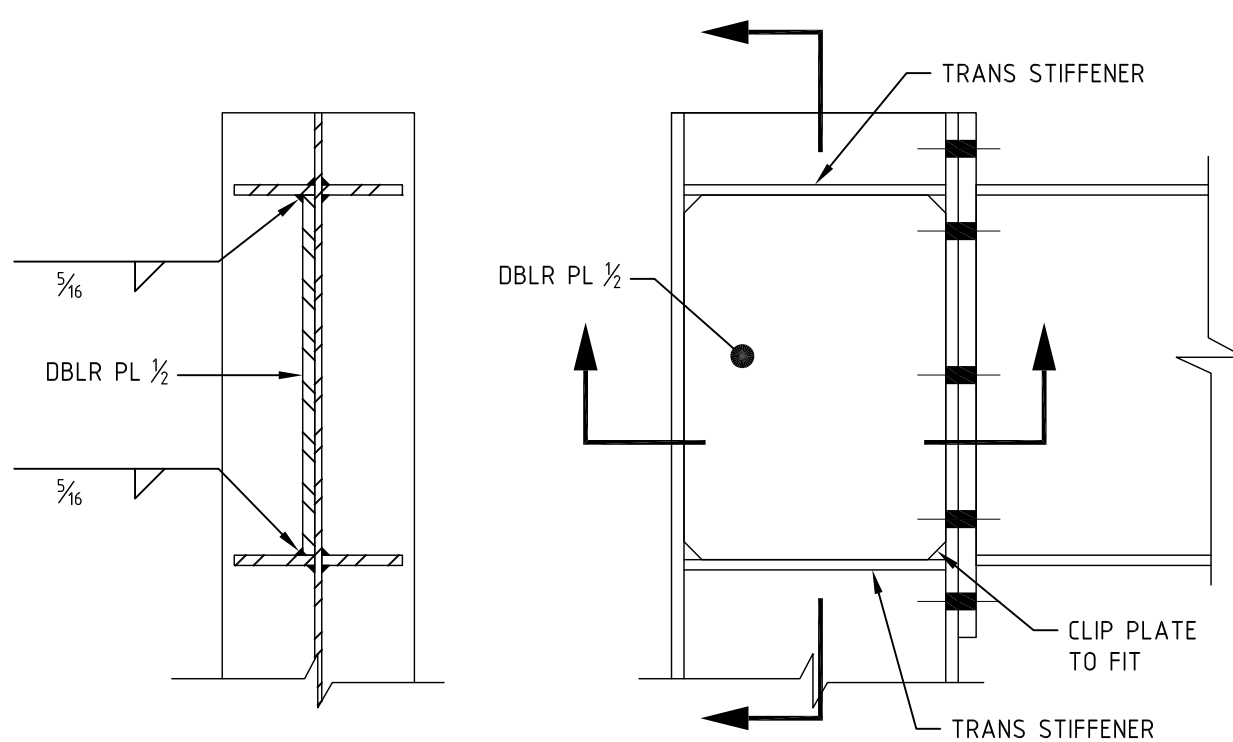
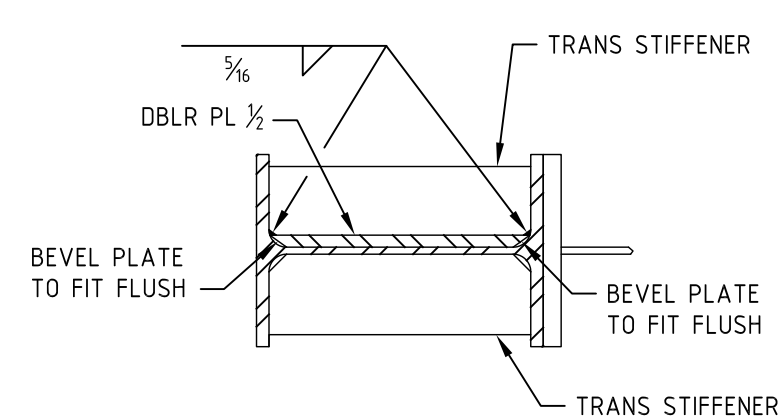
**DETAIL 05**  
SCALE 1 1/2"=1'-0"  
BRACE CONN.



**DETAIL 06**  
SCALE 1 1/2"=1'-0"  
BRACE CONN.



**DETAIL 07**  
SCALE 1"=1'-0"  
SHEAR CONN.



**DETAIL 08**  
SCALE 1 1/2"=1'-0"  
DOUBLER PLATE

**STRUCTURAL NOTES:**  
1. ALL STRUCTURAL NOTES PER MUSTAR  
STRUCTURAL GENERAL NOTES STANDARD DWG  
NSCE-CS-002

**NOTES:**  
1) CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.

**REFERENCE DRAWINGS:**  
STOT-36-130 PIPE SUPPORT PS-460 FRAMING

| NO. | REVISION                                  | BY  | DATE     | APR     |
|-----|---|-----|----------|---------|
| 1   | UPDATED DETAIL, REISSUED FOR CONSTRUCTION | JAR | 10/06/20 | ARM JAA |
| 0   | ISSUED FOR CONSTRUCTION                   | JAR | 9/26/19  | JAA LTR |

|                          |                      |
|--------------------------|----------------------|
| <b>PROJECT LOCATION:</b> |                      |
| <b>DRAWN BY:</b> JAR     | <b>DATE:</b> 8/28/19 |
| <b>CHECKED:</b> RLM      | <b>DATE:</b>         |
| <b>APPROVED:</b> JAA     | <b>DATE:</b>         |
| <b>SCALE:</b> AS NOTED   |                      |

|  |               |
|--|---------------|
| <b>STOCKTON TERMINAL<br/>STRUCTURAL DETAIL<br/>PIPE SUPPORT PS-311 DETAILS</b> |               |
| ORIGINAL PROJECT NO. .   |               |
| <b>DRAWING NO.</b> STOT-36-131   | <b>REV.</b> 1 |