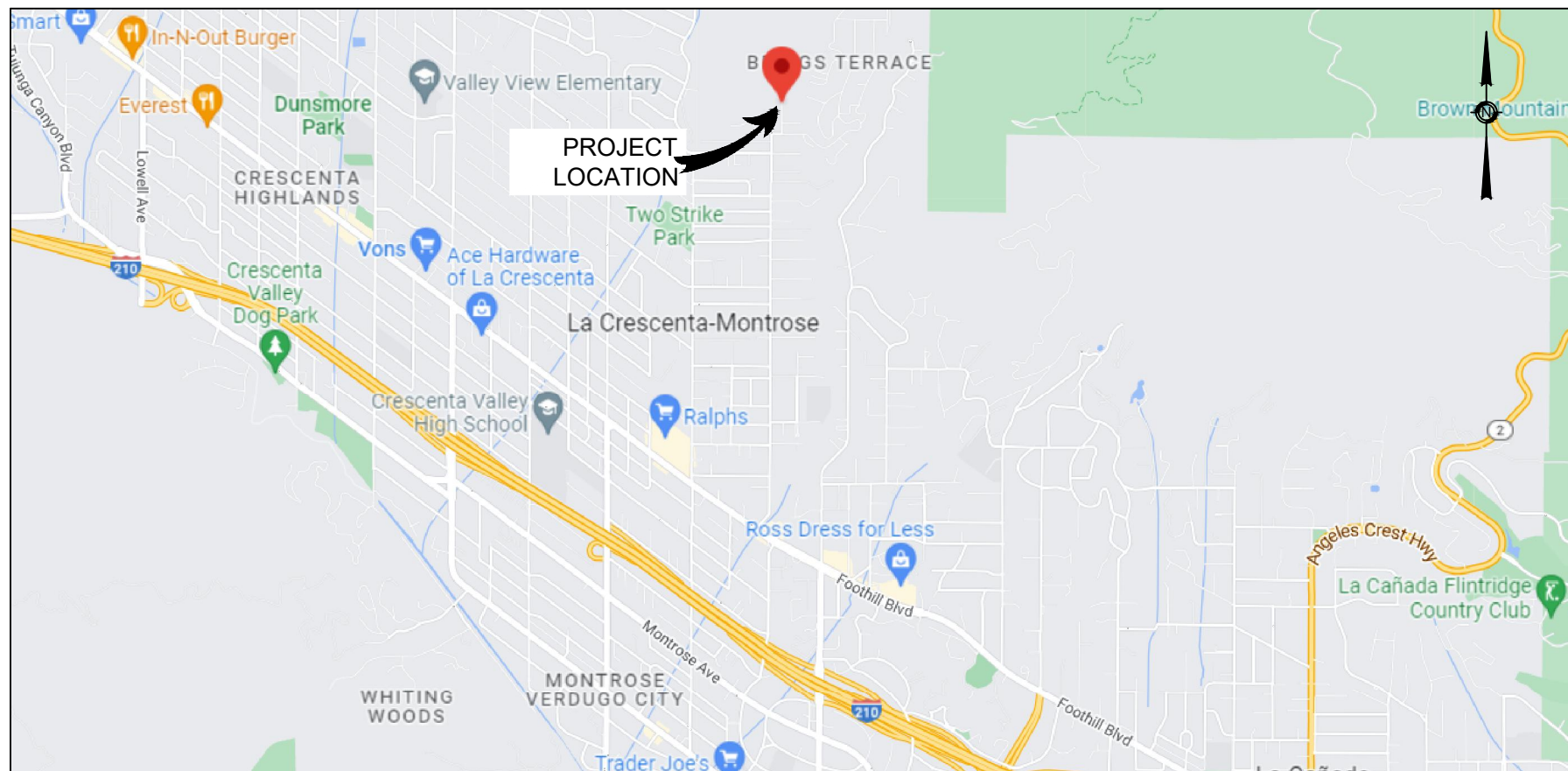


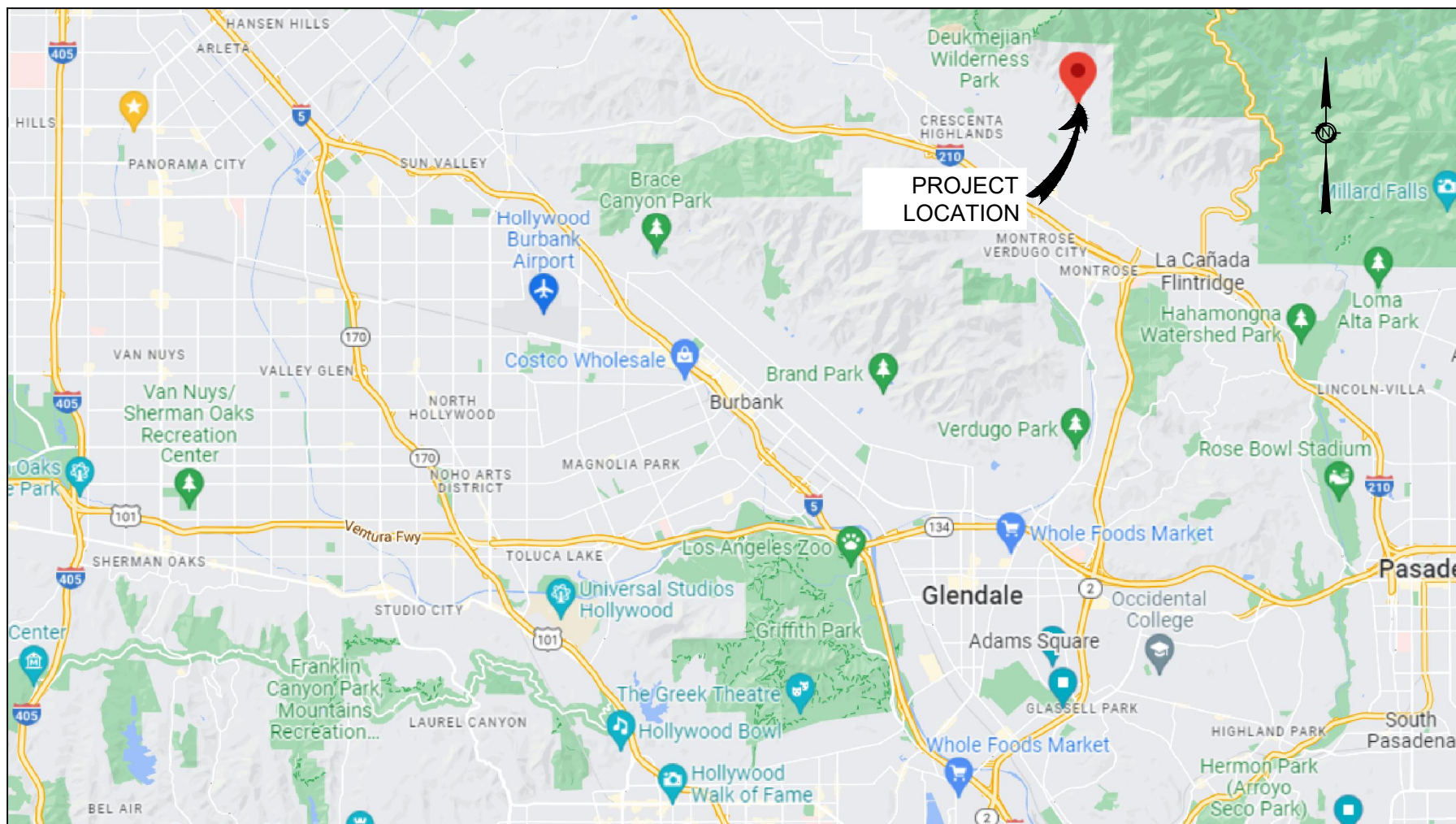
# CRESCENTA VALLEY WATER DISTRICT

## PLANS FOR REHABILITATION OF THE GOSS CANYON NO. 1 RESERVOIR

LA CRESCENTA, CALIFORNIA  
DECEMBER 2022



VICINITY MAP  
NTS



INDEX MAP  
NTS

SITE LOCATION: 5560 GOSS CANYON AVE, LA CRESCENTA-MONTROSE, CA 91214

APPROVED BY:

\_\_\_\_\_  
R.C.E. DATE

SUBMITTED BY:

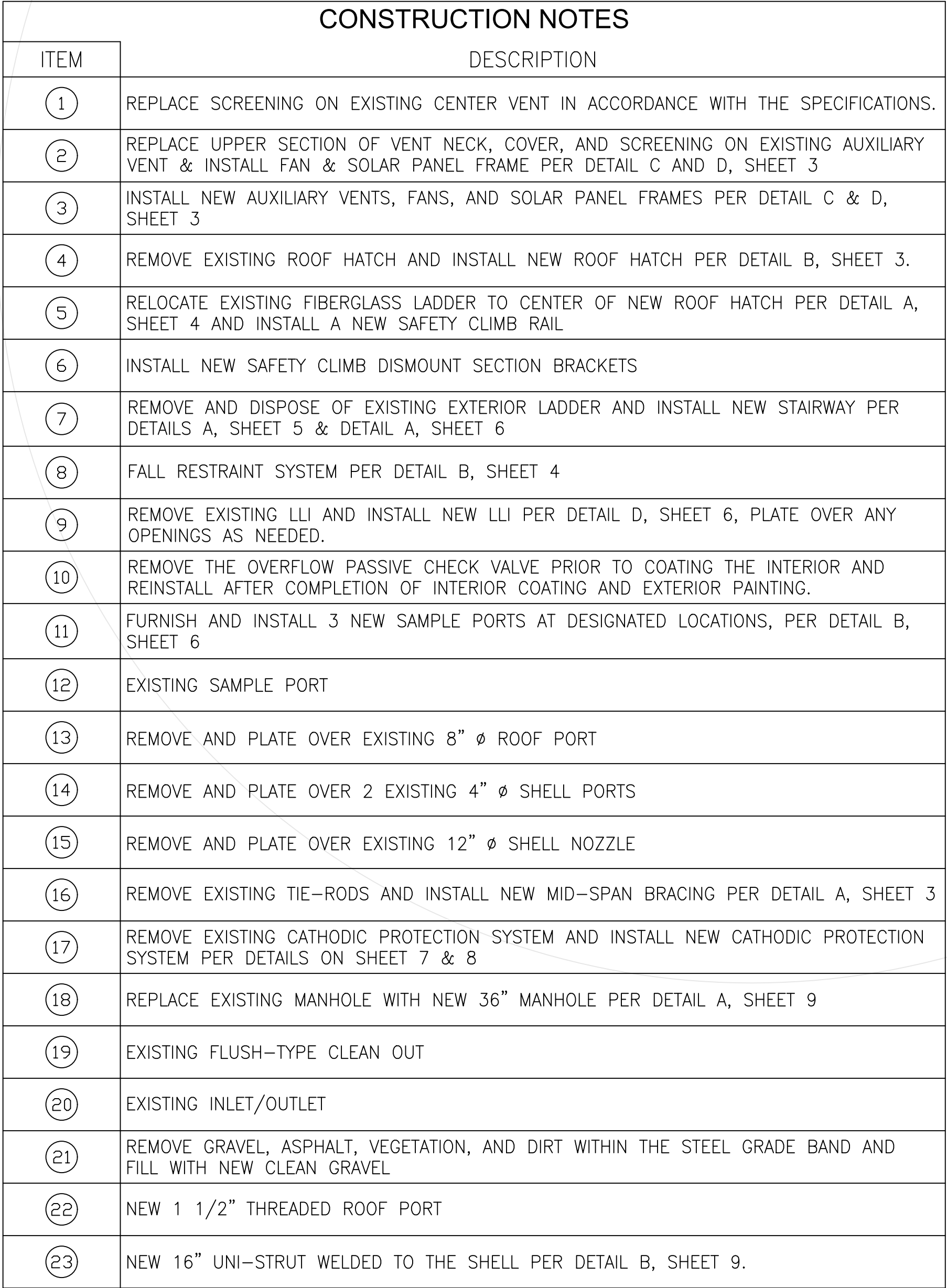
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KRISTA HARPER R.C.E. 71280 DATE

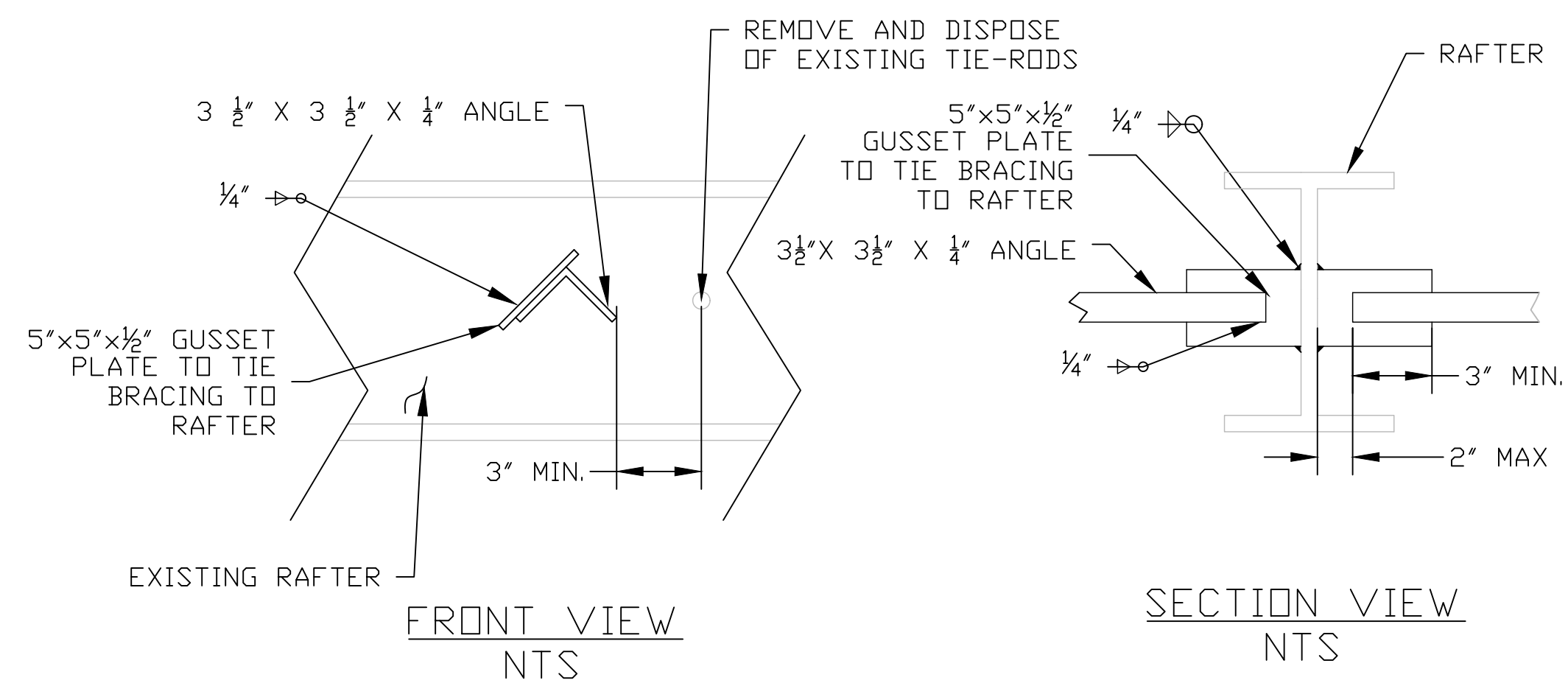


AERIAL MAP  
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| SHEET NO. | DESCRIPTION                                                      |
|-----------|------------------------------------------------------------------|
| 1         | COVER PAGE                                                       |
| 2         | RESERVOIR LAYOUT                                                 |
| 3         | MID-SPAN BRACING, ROOF HATCH, & VENT DETAILS                     |
| 4         | INTERIOR LADDER & FRS DETAILS                                    |
| 5         | STAIRWAY & ENCLOSURE DETAILS                                     |
| 6         | STAIRWAY BRACING, SAMPLE NOZZLE, SEALANT, & INLET/OUTLET DETAILS |
| 7         | CATHODIC PROTECTION LAYOUT                                       |
| 8         | CATHODIC PROTECTION DETAILS                                      |
| 9         | ADDENDUM NO. 1 DETAILS                                           |

|                                                                                                                                                                                                                                  |      |               |     |             |       |          |                                                                                          |                                |                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------------|-----|-------------|-------|----------|------------------------------------------------------------------------------------------|--------------------------------|-------------------|
|  <div>Harper &amp; Associates Engineering, Inc.<br/>Consulting Engineers<br/>1240 East Ontario Ave., Ste 102-312, Corona, CA 92881-8671</div> | SEAL | DESIGN: KH    |     |             |       |          | CRESCENTA VALLEY WATER DISTRICT<br>GOSS CANYON NO. 1 RESERVOIR<br>REHABILITATION PROJECT | SHEET TITLE<br><br>TITLE SHEET | PROJECT NO. 3131  |
|                                                                                                                                                                                                                                  |      | DRAWN: AA     |     |             |       |          |                                                                                          |                                | SHT. 1 OF 9 SHTS. |
|                                                                                                                                                                                                                                  |      | CHECKED: KH   |     |             |       |          |                                                                                          |                                |                   |
|                                                                                                                                                                                                                                  |      | DATE: 12-2-22 | NO. | DESCRIPTION | DATE: | APPROVED |                                                                                          |                                | SCALE: NTS        |
|                                                                                                                                                                                                                                  |      | REVISIONS     |     |             |       |          |                                                                                          |                                |                   |
|                                                                                                                                                                                                                                  |      |               |     |             |       |          |                                                                                          |                                |                   |





MID-SPAN BRACING DETAILS

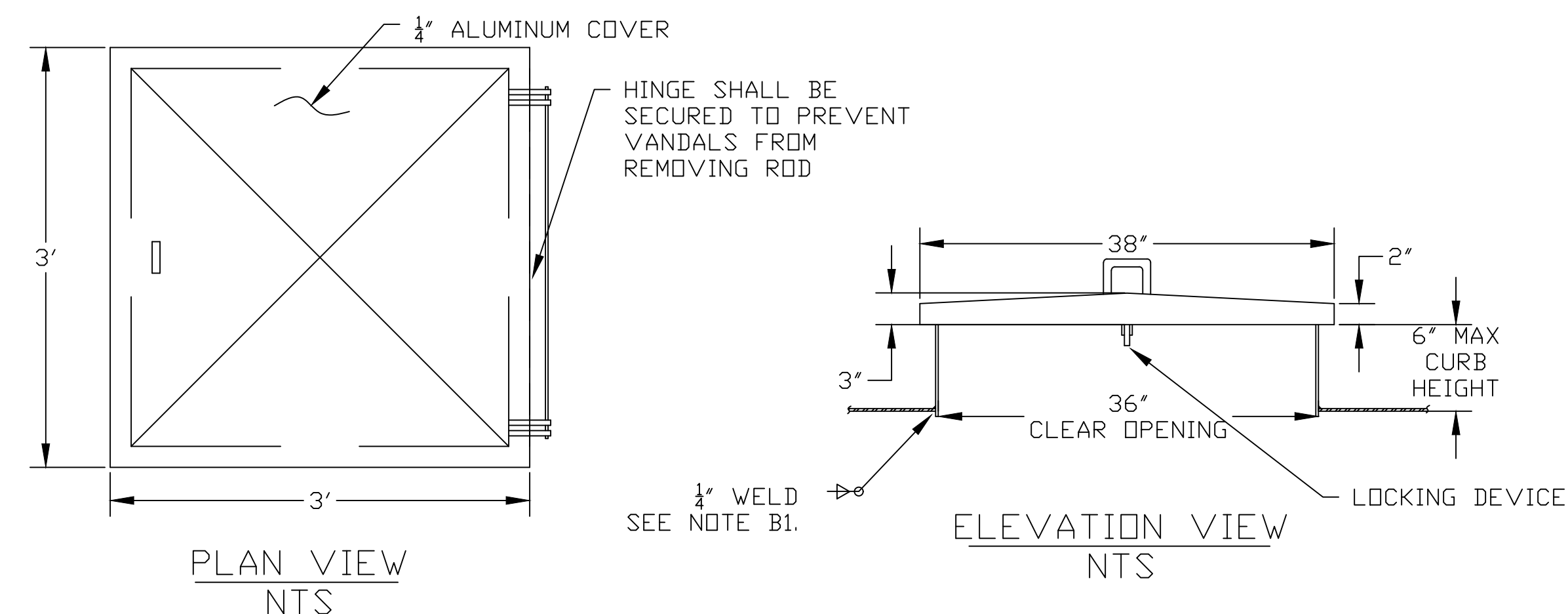
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A

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NOTES:

- A1. REMOVE AND DISPOSE OF ALL EXISTING TIE-RODS.
- A2. INSTALL NEW LATERAL BRACING AT THE MID-SPAN OF THE JACK RAFTERS.



ROOF HATCH DETAILS

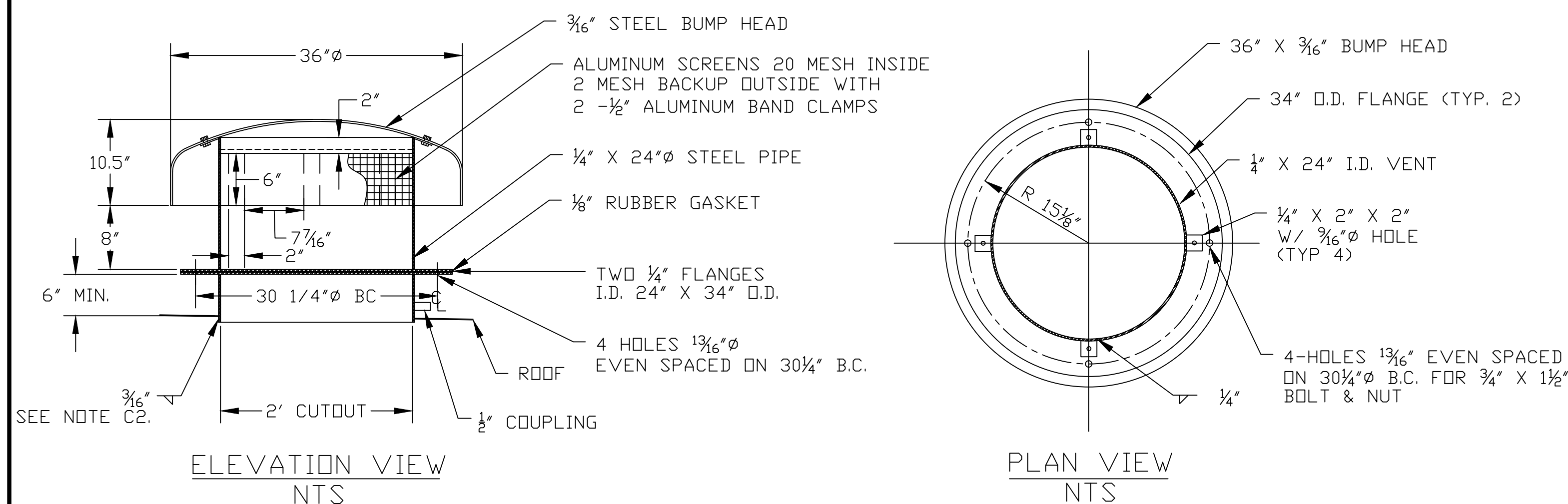
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B

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NOTE:

- B1. HATCH CURB MUST PENETRATE THE ROOF A MIN. OF 1" AND MAX. OF 2" ON THE LOW SIDE OF THE ROOF. PLACE SEAL WELD ON INTERIOR AND EXTERIOR OF THE RESERVOIR.
- B2. HATCH SHALL OPEN TOWARDS THE CENTER OF THE TANK.



24" AUXILIARY VENT

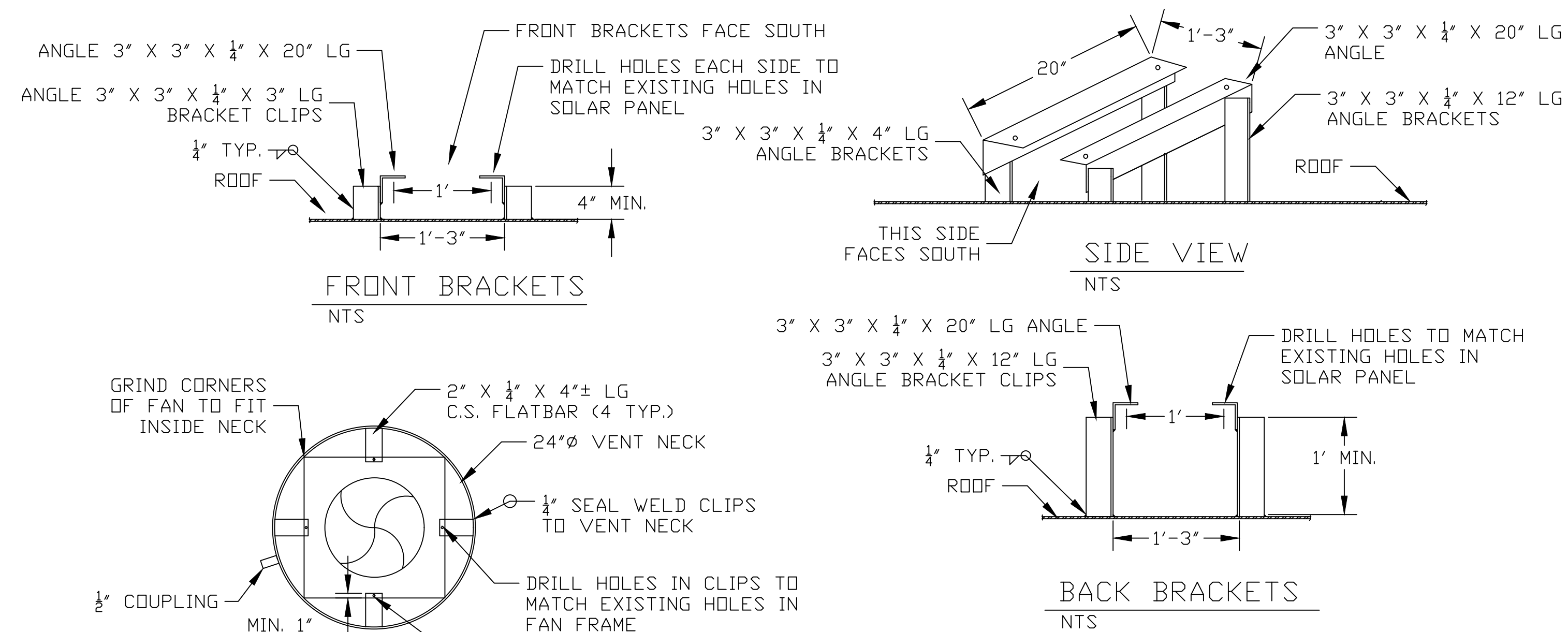
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C

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NOTE:

- C1. VENT CENTER LOCATION SHALL BE APPROXIMATELY 5-FEET AWAY FROM THE SHELL AND APPROXIMATELY. THE VENT SHALL BE ADJUSTED AS NEEDED TO FIT BETWEEN RAFTERS.
- C2. CUT NECK FLUSH WITH THE ROOF AND SEAL WELD ON BOTH INTERIOR AND EXTERIOR OF ROOF.
- C3. REPLACE VENT ABOVE FLANGE, INCLUDING SCREENING AND COVER ON THE EXISTING AUXILIARY VENT.



AUXILIARY VENT FAN

NTS

D

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NOTES:

- D1. SOLAR PANEL SHALL BE MOUNTED 12" FROM THE AUXILIARY VENT
- D2. INSTALL GALVANIZED CONDUIT AND FITTINGS FROM VENT NECK TO SOLAR PANEL. CONNECT WIRES IN A JUNCTION BOX.
- D3. INSTALL FAN TO CIRCULATE AIR FROM OUTSIDE THE TANK TO INSIDE THE TANK.



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CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

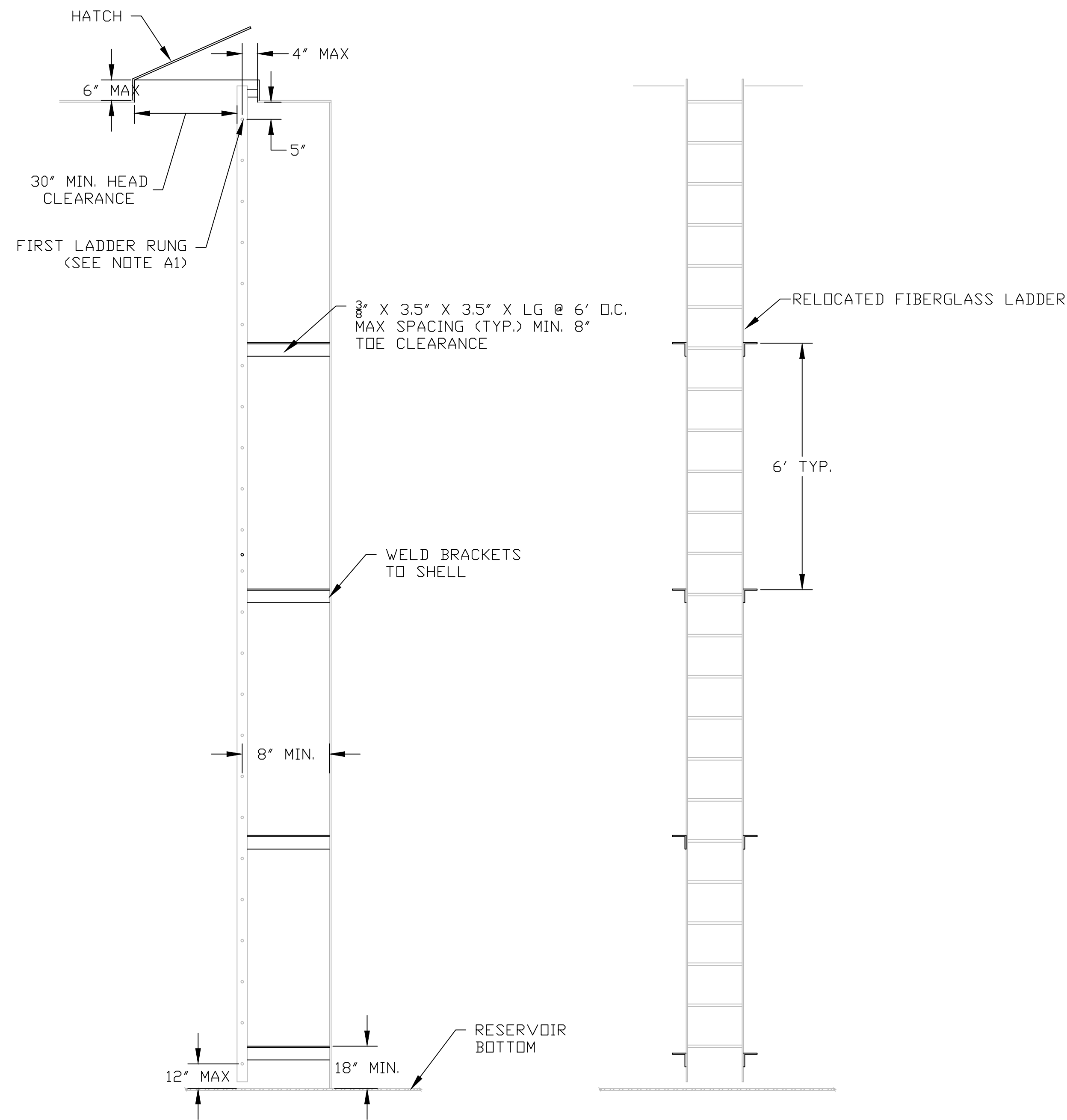
SHEET TITLE

MID-SPAN BRACING,  
ROOF HATCH, & VENT DETAILS

PROJECT NO. 3131

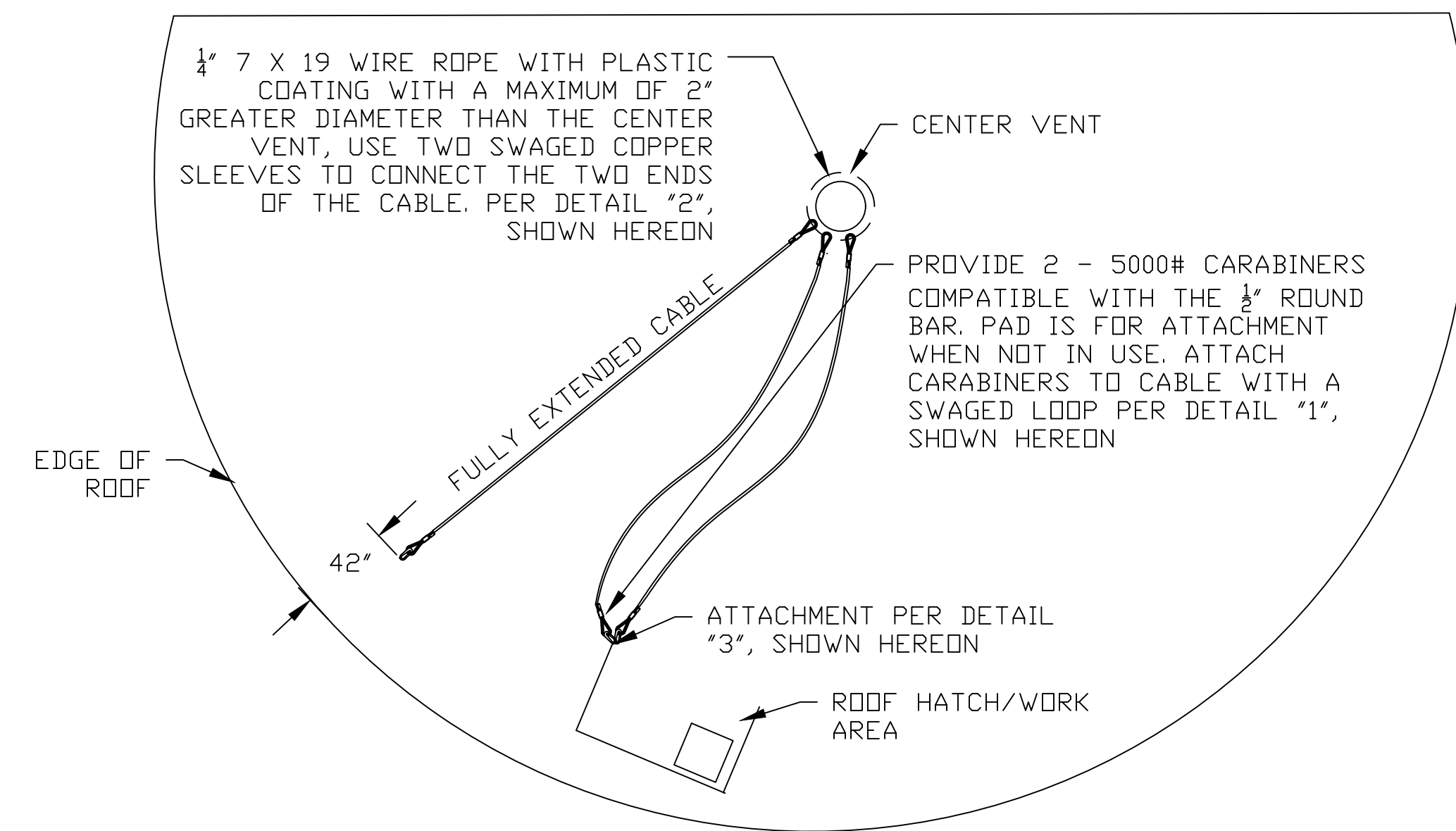
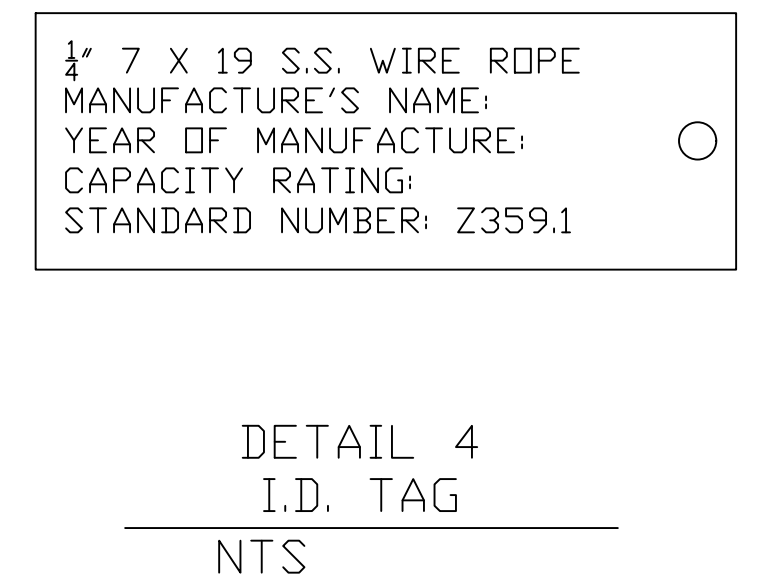
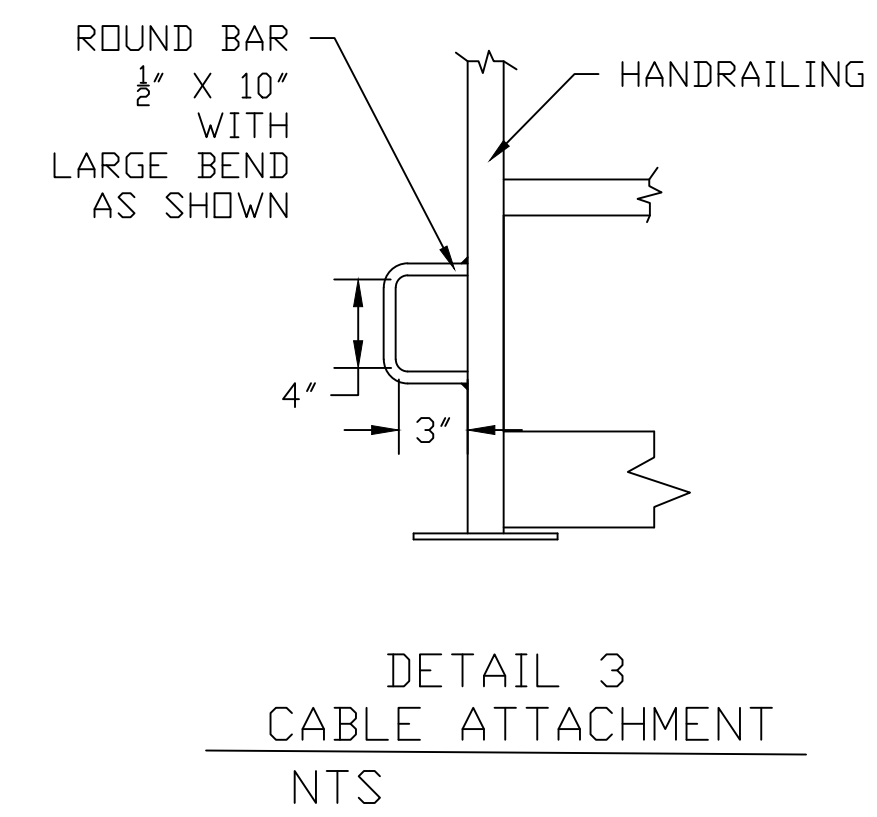
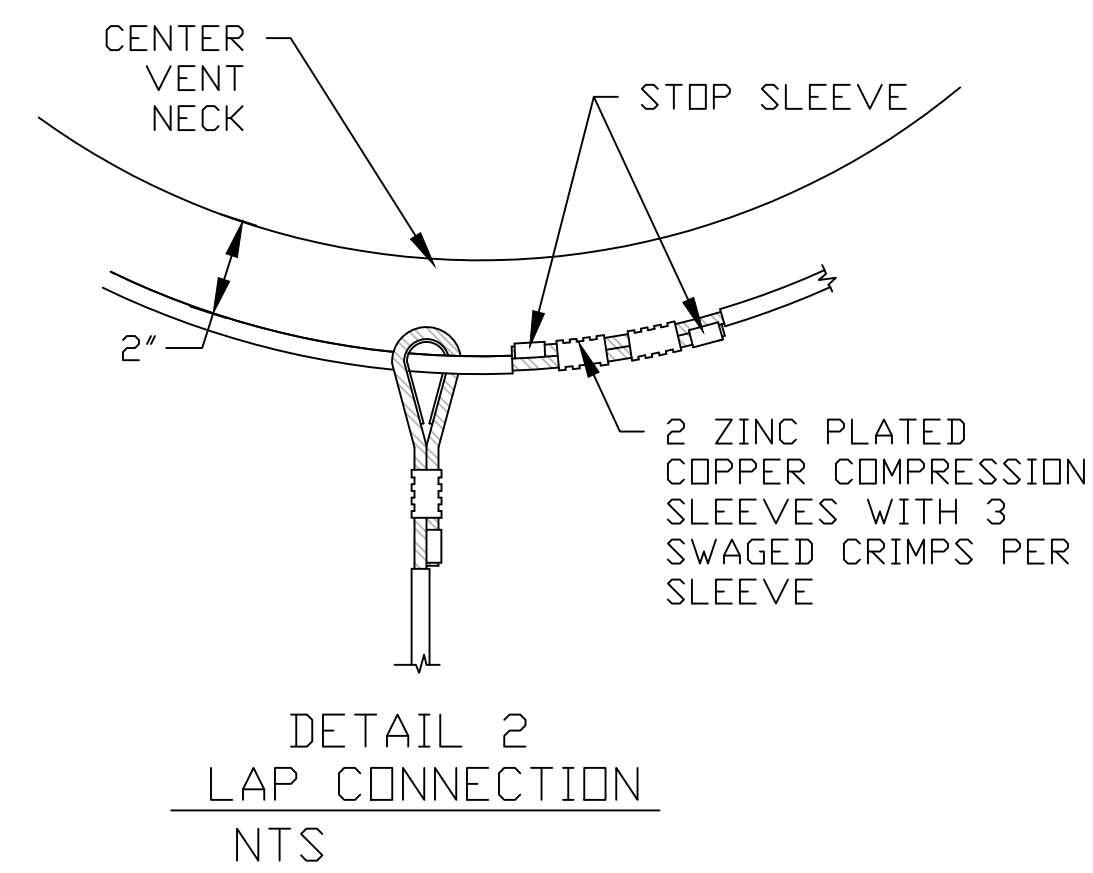
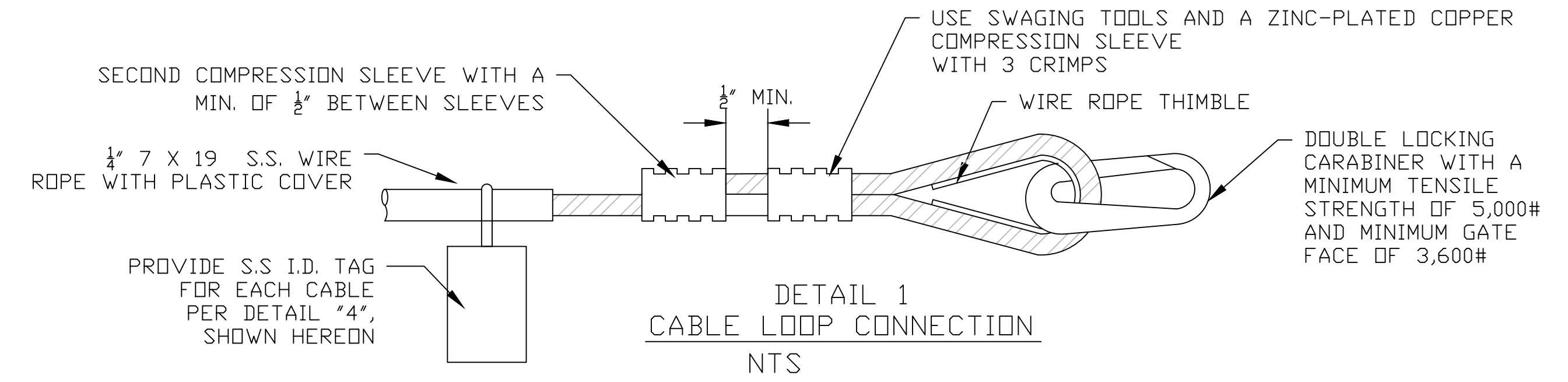
SHT. 3 OF 9 SHTS.

SCALE: NTS



INTERIOR LADDER DETAIL  
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NOTES:  
A1. FIRST LADDER RUNG SHALL BE LOCATED A MIN. OF 5' AND MAX 10' BELOW ROOF PLATE AND MIN. OF 8' FROM SHELL.



FALL RESTRAINT SYSTEM  
NTS



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CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

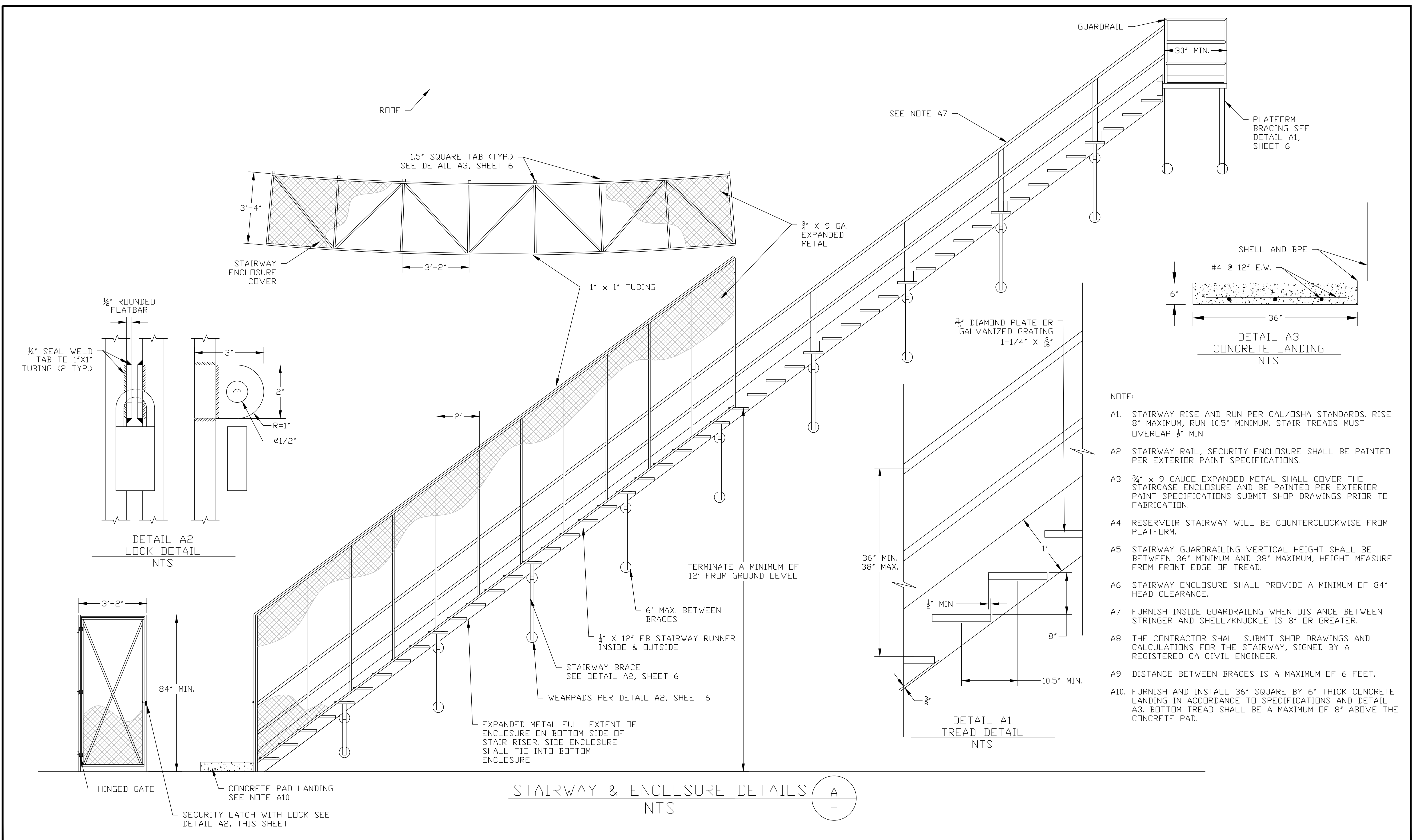
SHEET TITLE

INTERIOR LADDER & FRS DETAILS

PROJECT NO. 3131

SHT. 4 OF 9 SHTS.

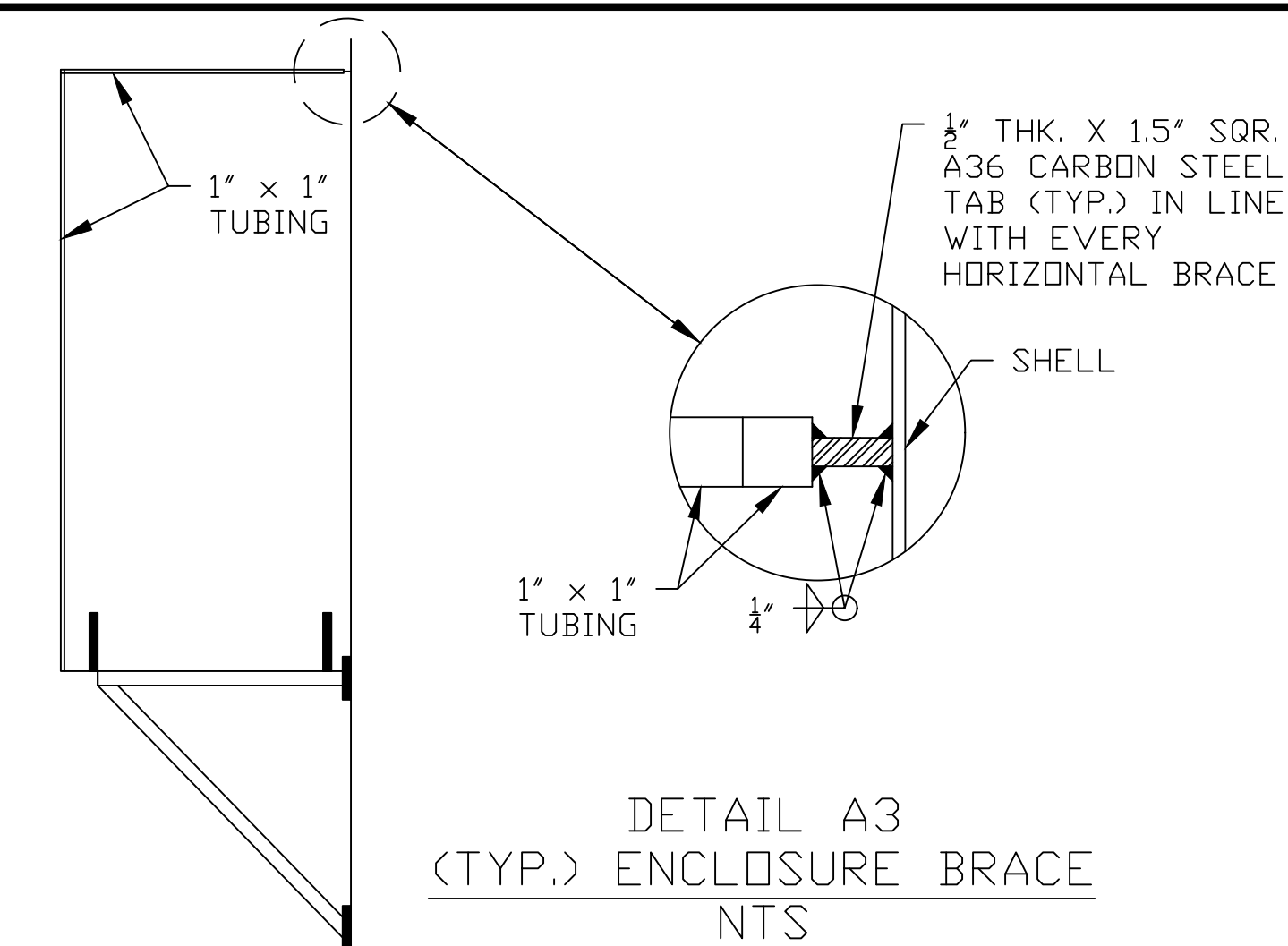
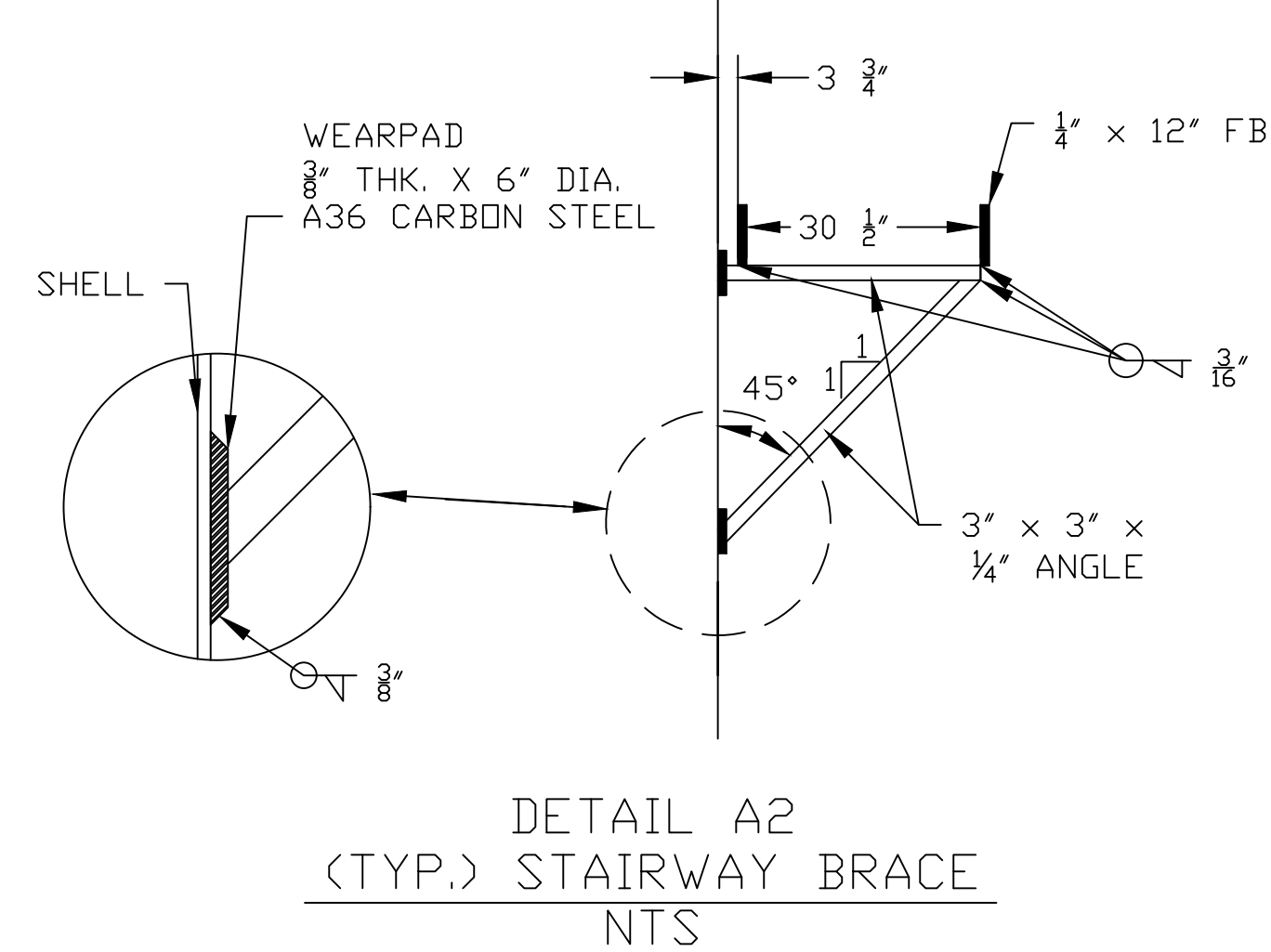
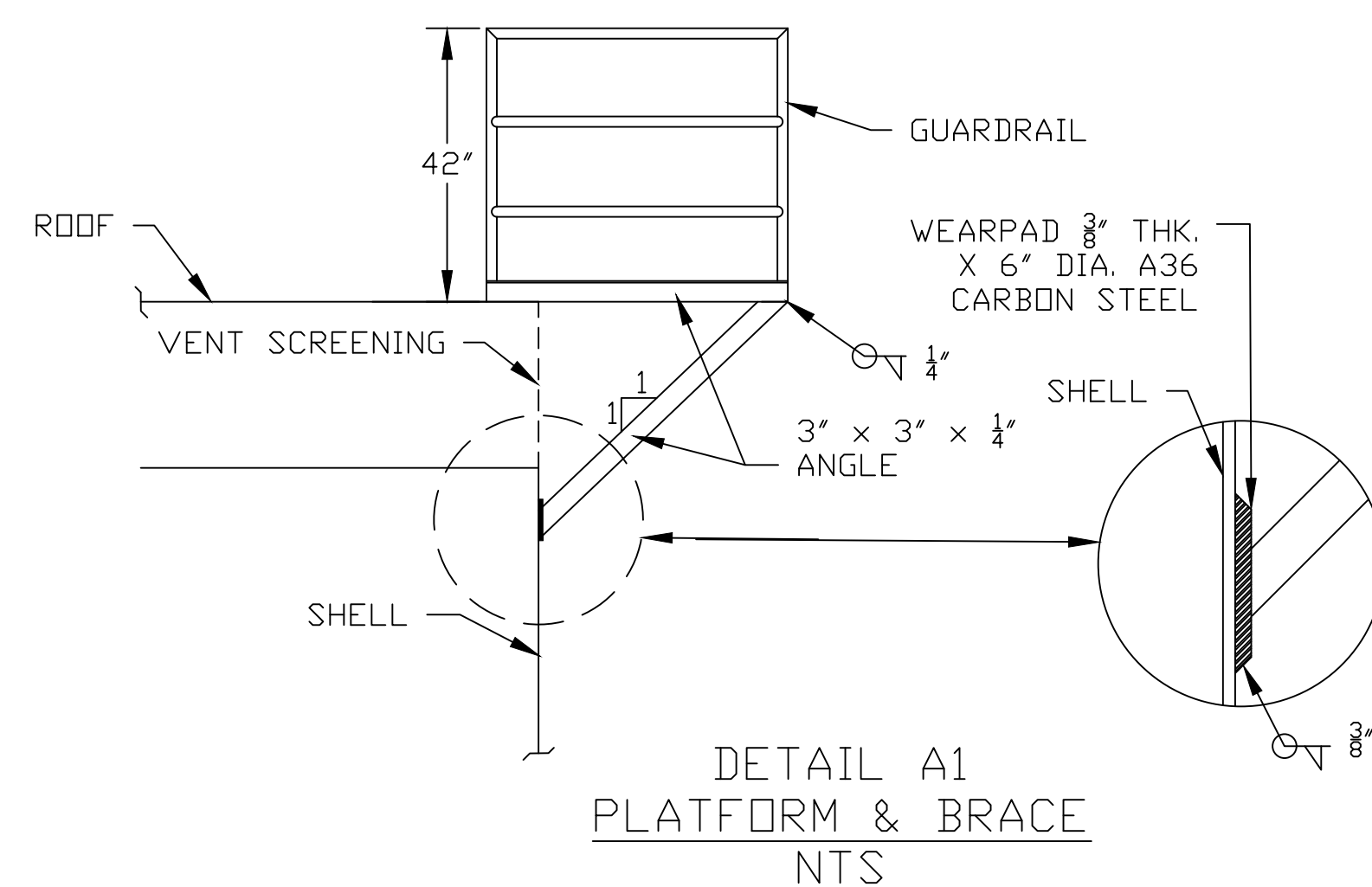
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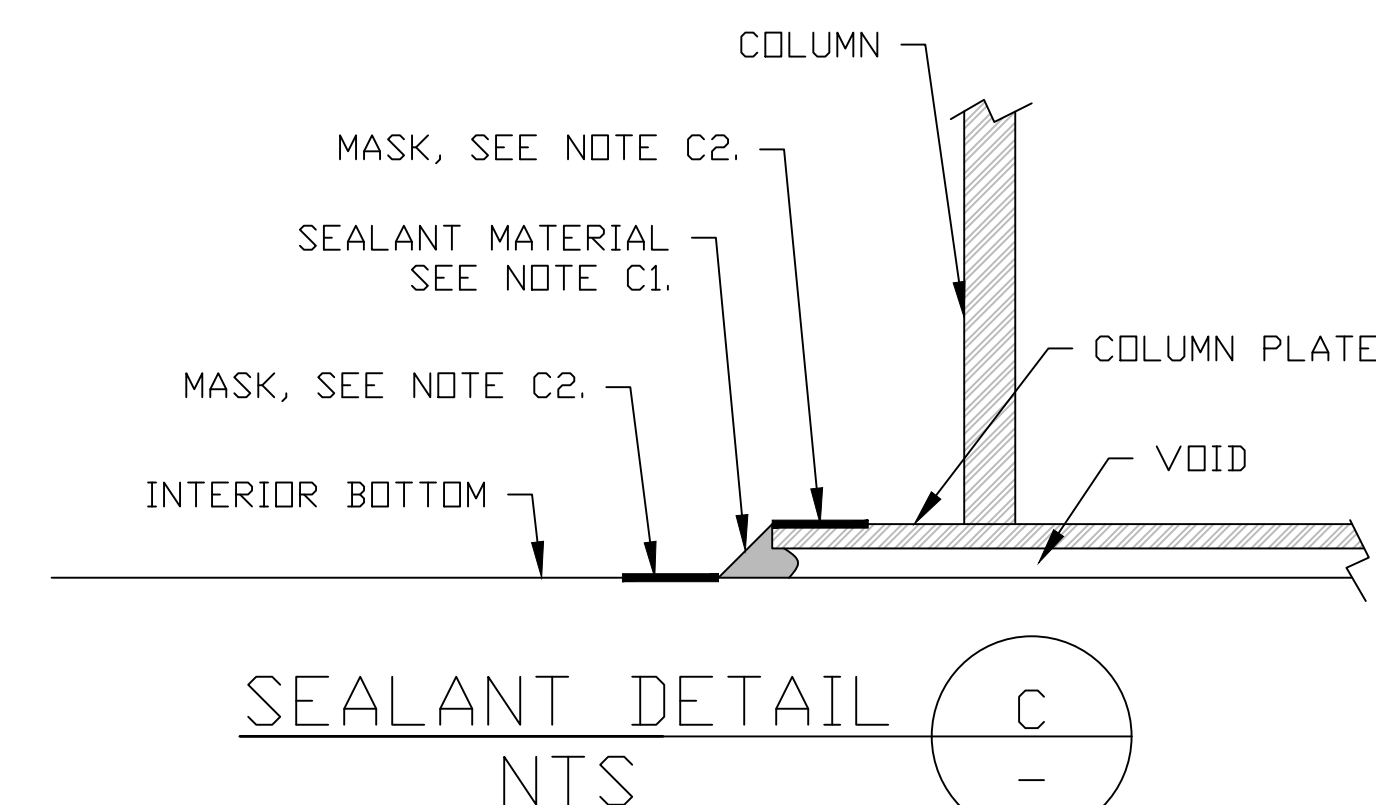
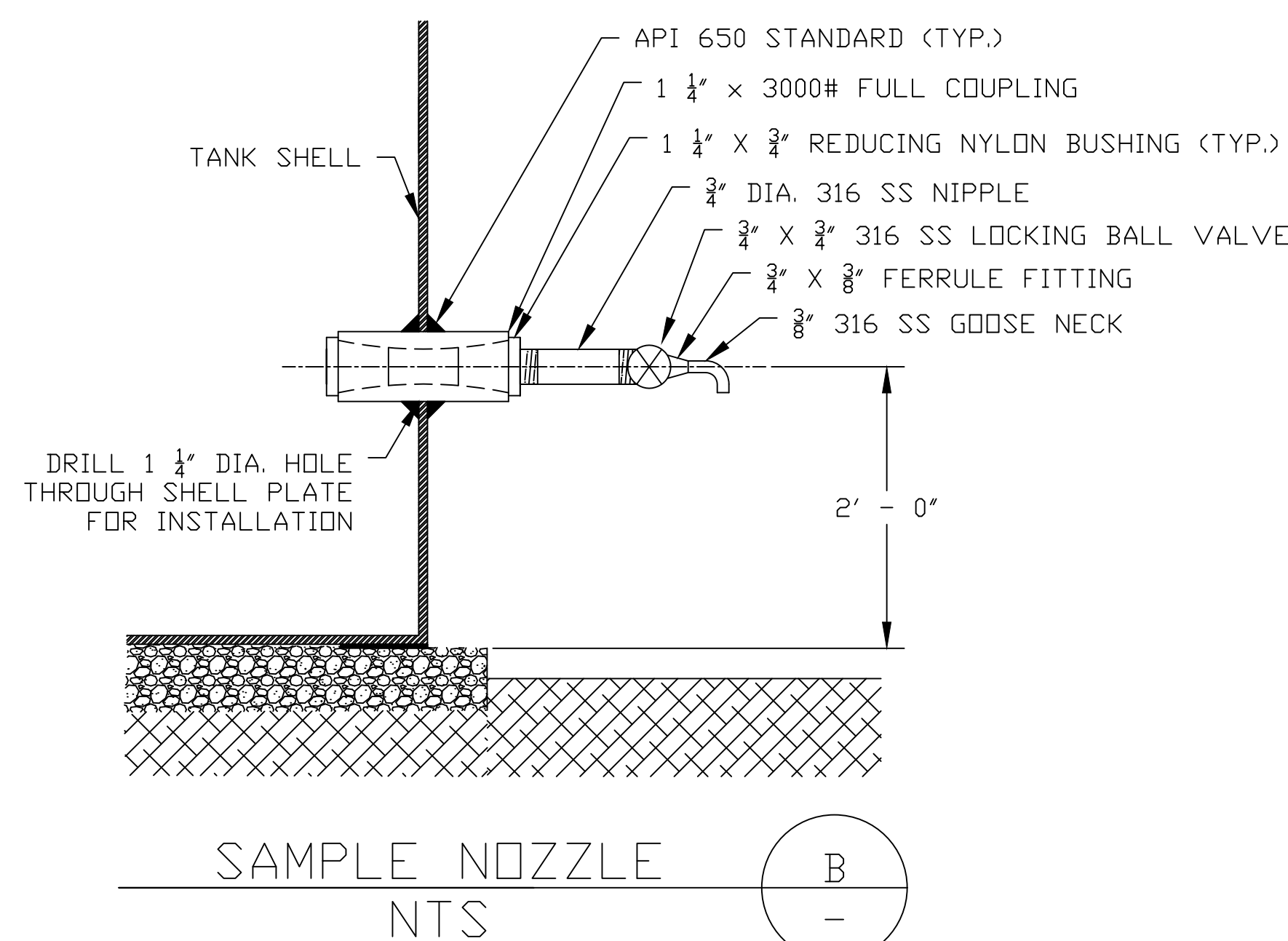
- NOTE:
- A1. STAIRWAY RISE AND RUN PER CAL/OSHA STANDARDS. RISE 8" MAXIMUM, RUN 10.5" MINIMUM. STAIR TREADS MUST OVERLAP 1/2" MIN.
  - A2. STAIRWAY RAIL, SECURITY ENCLOSURE SHALL BE PAINTED PER EXTERIOR PAINT SPECIFICATIONS.
  - A3. 3/4" x 9 GAUGE EXPANDED METAL SHALL COVER THE STAIRCASE ENCLOSURE AND BE PAINTED PER EXTERIOR PAINT SPECIFICATIONS SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
  - A4. RESERVOIR STAIRWAY WILL BE COUNTERCLOCKWISE FROM PLATFORM.
  - A5. STAIRWAY GUARDRAILING VERTICAL HEIGHT SHALL BE BETWEEN 36" MINIMUM AND 38" MAXIMUM, HEIGHT MEASURE FROM FRONT EDGE OF TREAD.
  - A6. STAIRWAY ENCLOSURE SHALL PROVIDE A MINIMUM OF 84" HEAD CLEARANCE.
  - A7. FURNISH INSIDE GUARDRAILING WHEN DISTANCE BETWEEN STRINGER AND SHELL/KNUCKLE IS 8" OR GREATER.
  - A8. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR THE STAIRWAY, SIGNED BY A REGISTERED CA CIVIL ENGINEER.
  - A9. DISTANCE BETWEEN BRACES IS A MAXIMUM OF 6 FEET.
  - A10. FURNISH AND INSTALL 36" SQUARE BY 6" THICK CONCRETE LANDING IN ACCORDANCE TO SPECIFICATIONS AND DETAIL A3. BOTTOM TREAD SHALL BE A MAXIMUM OF 8" ABOVE THE CONCRETE PAD.

STAIRWAY & ENCLOSURE DETAILS  
NTS

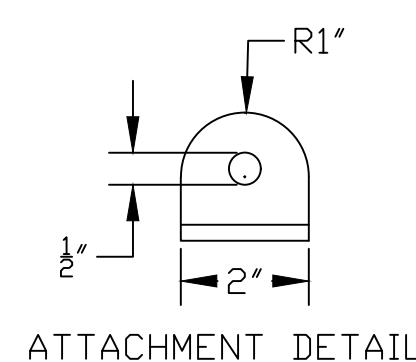
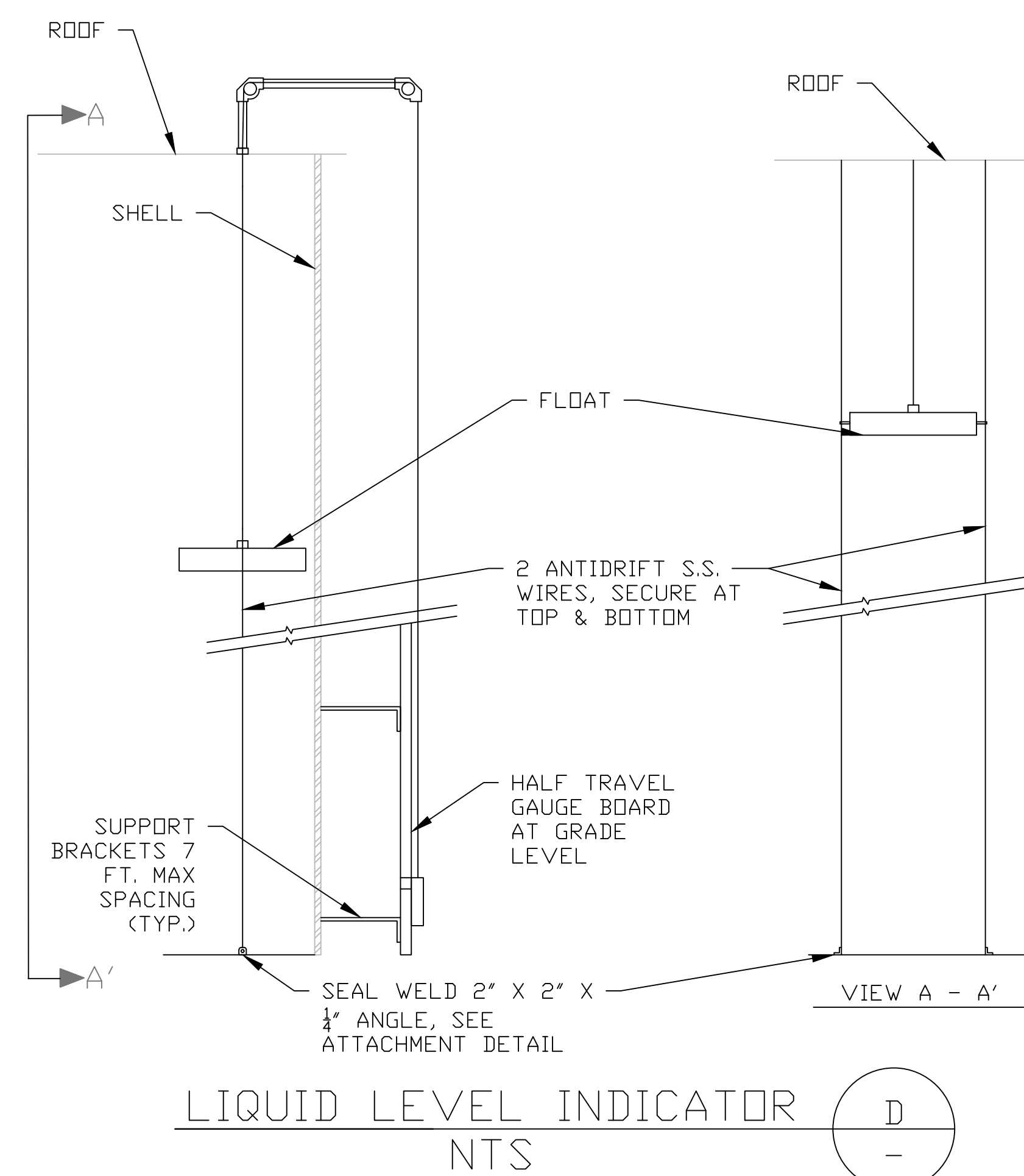
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|  <div>Harper &amp; Associates Engineering, Inc.<br/>Consulting Engineers<br/>1240 East Ontario Ave., Ste 102-312, Corona, CA 92881-8671</div> | SEAL | DESIGN: KH    |     |             |       | CRESCENTA VALLEY WATER DISTRICT<br>GOSS CANYON NO. 1 RESERVOIR<br>REHABILITATION PROJECT | SHEET TITLE<br><br>STAIRWAY & ENCLOSURE DETAILS | PROJECT NO. 3131 |                   |
|                                                                                                                                                                                                                                  |      | DRAWN: AA     |     |             |       |                                                                                          |                                                 |                  | SHT. 5 OF 9 SHTS. |
|                                                                                                                                                                                                                                  |      | CHECKED: KH   |     |             |       |                                                                                          |                                                 |                  |                   |
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|                                                                                                                                                                                                                                  |      |               |     |             |       |                                                                                          |                                                 |                  |                   |



STAIRWAY & PLATFORM BRACING  
NTS



- NOTES:
- C1. THE SEALANT MATERIAL SHALL BE PUSHED INTO THE VOID BELOW THE PLATE AND TROWELED AT A 45° ANGLE FROM THE OUTER TOP EDGE OF THE PLATE.
- C2. MASK A DISTANCE OF 45° AWAY FROM APPLICATION AREA TO OBTAIN A CLEAN LINE. REMOVE MASKING AFTER COMPLETION OF CAULKING.



- NOTE:
- D1. INSTALL 1/2" Ø RUBBER GROMMET IN THE 1/2" HOLE FROM MCMASTER-CARR PRODUCT#9600K54.



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REVISIONS

CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

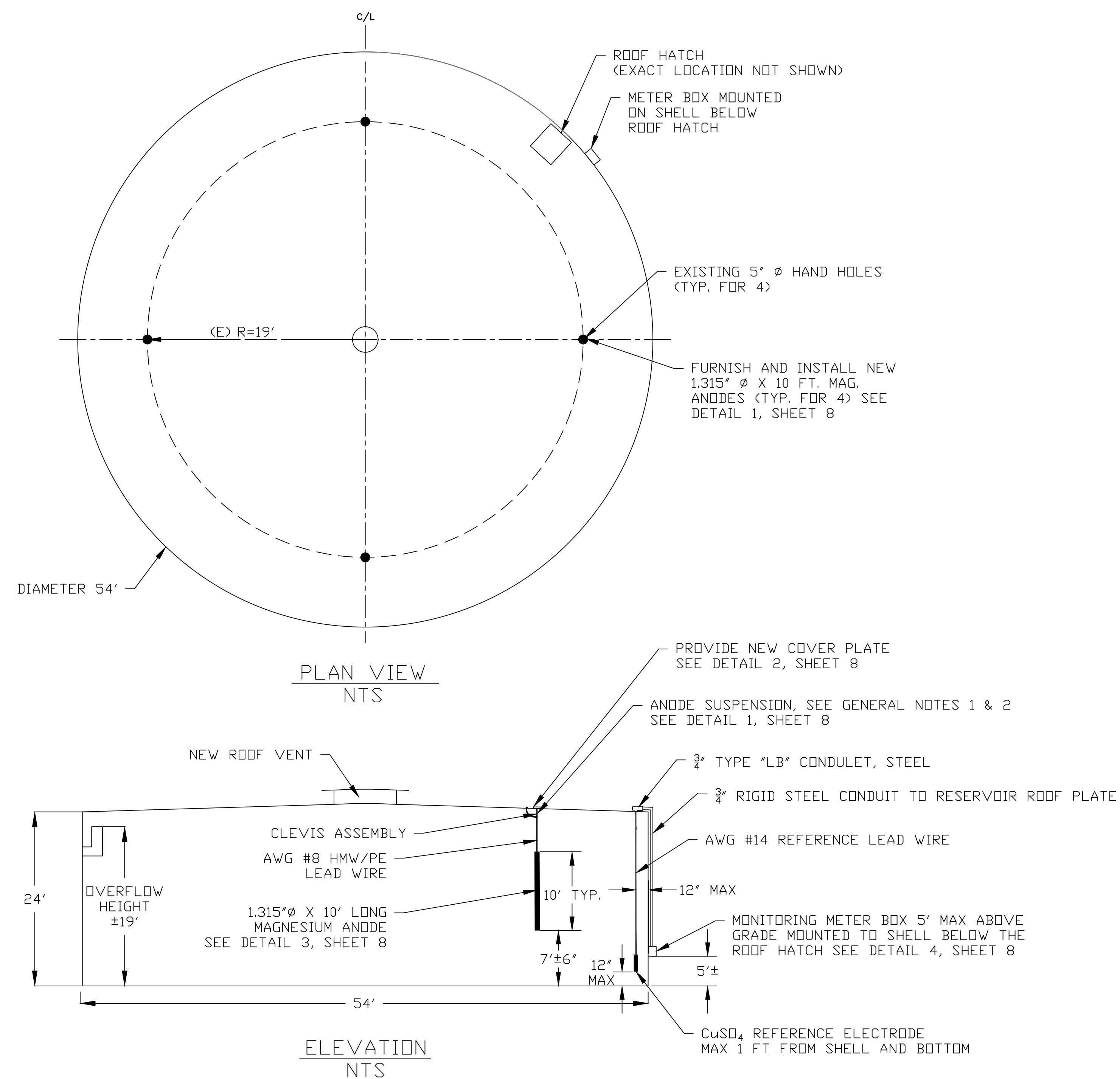
SHEET TITLE

STAIRWAY BRACING, SAMPLE NOZZLE,  
SEALANT, & INLET/OUTLET DETAILS

PROJECT NO. 3131

SHT. 6 OF 9 SHTS.

SCALE: NTS



#### GENERAL NOTES

1. PROVIDE NEW ANODE MOUNTING HARDWARE PER DETAIL 1, SHEET 8
2. ANODES TO BE SUSPENDED BY THEIR OWN LEAD WIRE PER DETAIL 1, SHEET 8
3. CLEAN METAL UNDER SOLDERLESS LUG TO BARE WITH GRINDER OR WIRE BRUSH. COVER ALL EXPOSED METAL WITH MIN.  $\frac{1}{16}$ " EPOXY AFTER ASSEMBLY.
4. REMOVE AND DISPOSE OF EXISTING CATHODIC PROTECTION SYSTEM.

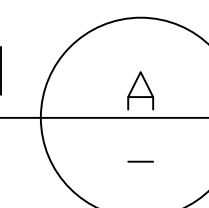
#### LEGEND

- EXISTING 5"  $\phi$  HANDHOLES - PROVIDE NEW 1.315"  $\phi$  X 10' MAGNESIUM ANODES (TYP. FOR 4) WITH COVER

#### MATERIAL LIST

| ITEM                                     | QUANTITY | DESCRIPTION                                                                                                                                                                                                  |
|------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 ANODE                                  | 4        | 1.315" DIA. X 10' MAGNESIUM GALVOROD ANODE WITH 15' AWG. #8 STRANDED COPPER LEAD WIRE, HMW/PE INSULATION, BLACK.                                                                                             |
| 2 SOLDERLESS LUG                         | 4        | T & B #31003 COPPER OR BRONZE, SIZED FOR AWG #8 CONDUCTOR (OR APPROVED EQUAL)                                                                                                                                |
| 3 SERVICE SLEEVE                         | 4        | HOT-DIPPED GALVANIZED STEEL CRIMPABLE SLEEVE, SIZED TO FIT AROUND TWO CONDUCTORS.                                                                                                                            |
| 4 CLEVIS ASSEMBLY                        | 4        | STEEL HEAVY DUTY, GALVANIZED WITH CERAMIC SPOOL                                                                                                                                                              |
| 5 HANDHOLE COVER                         | 4        | 6" DIA. X $\frac{3}{32}$ " GALVANIZED STEEL PLATE WITH 7 $\frac{1}{2}$ " X 1" X $\frac{1}{4}$ " GALVANIZED STEEL BAR, STAINLESS STEEL $\frac{1}{2}$ " BOLT AND FULL FACE NEOPRENE RUBBER GASKET AND GROMMET. |
| 6 BOLTS/NUTS FOR CABLE LUG               | 4        | $\frac{1}{4}$ " - 20 STAINLESS STEEL BOLTS AND NUTS, LENGTH APPROX. 1".                                                                                                                                      |
| 7 METER ASSEMBLY AND REFERENCE ELECTRODE | 1        | FIBERGLASS OR POLYCARBONATE ENCLOSURE BOX PLUS METER AND SWITCH, COPPER SULFATE REFERENCE                                                                                                                    |

CATHODIC PROTECTION  
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CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

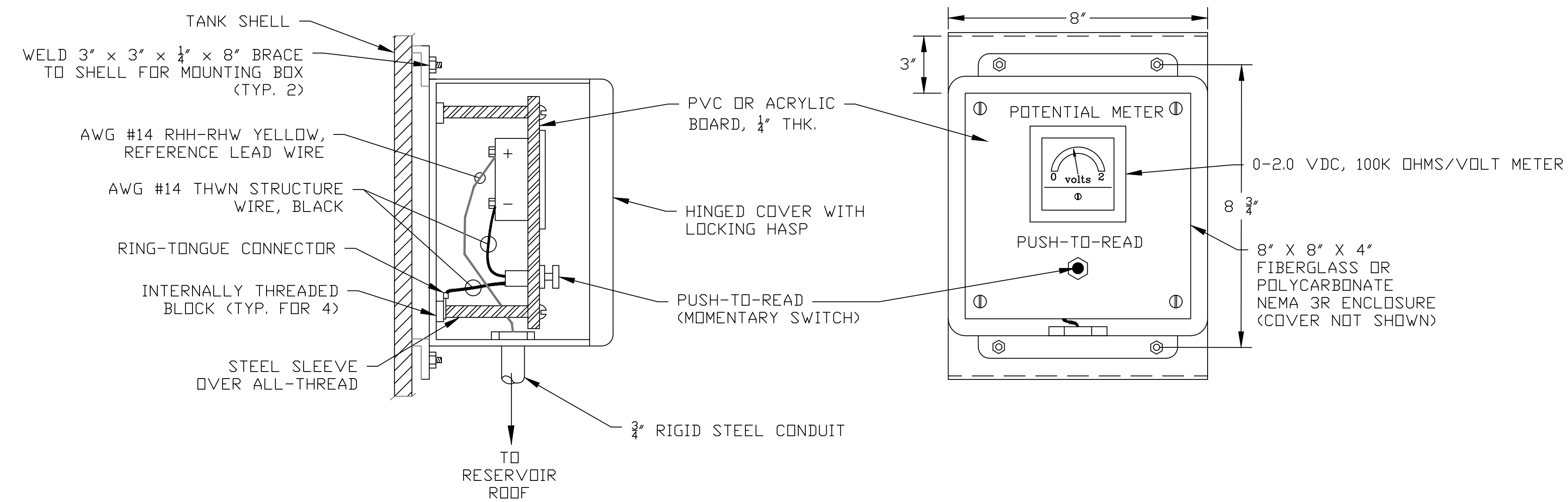
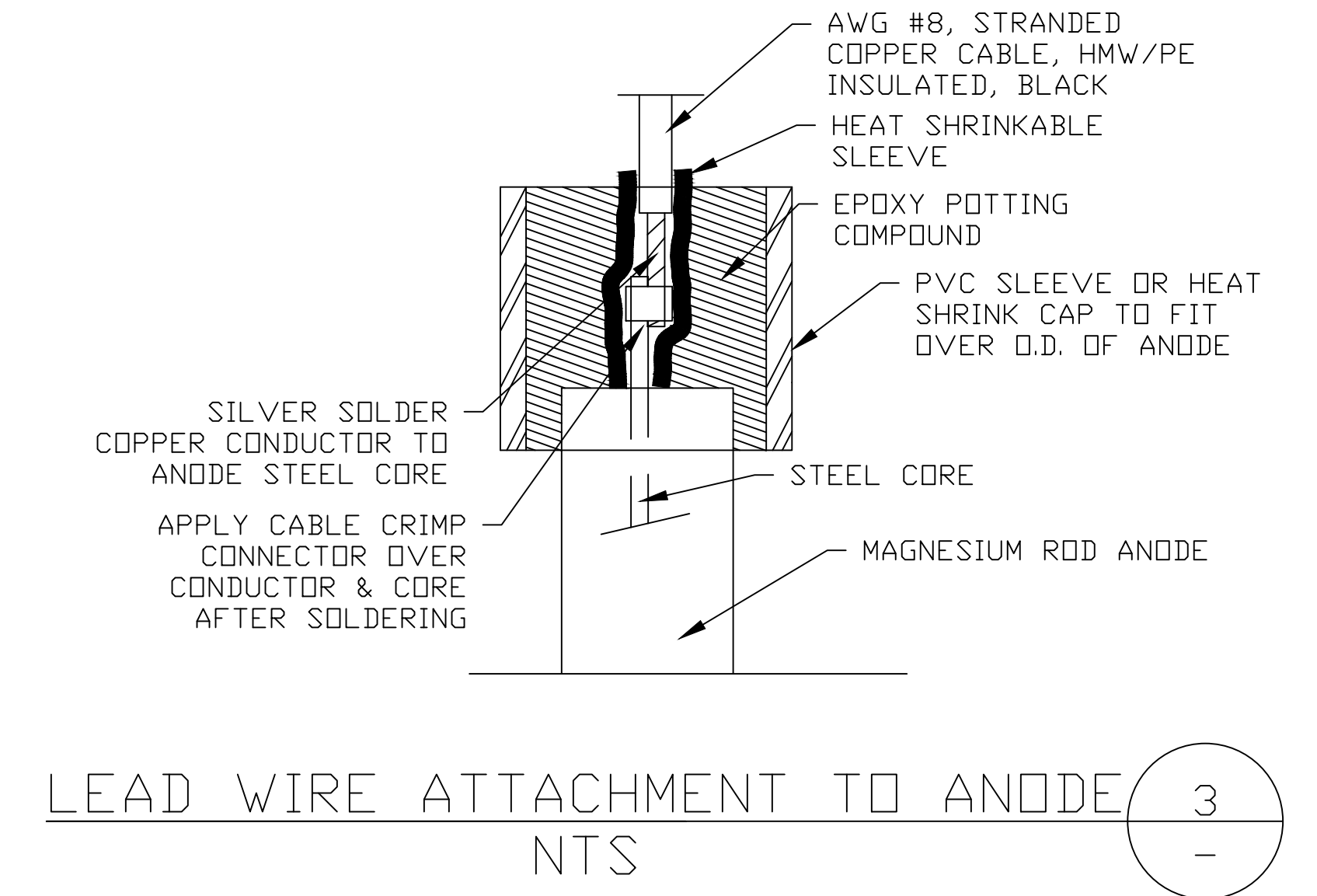
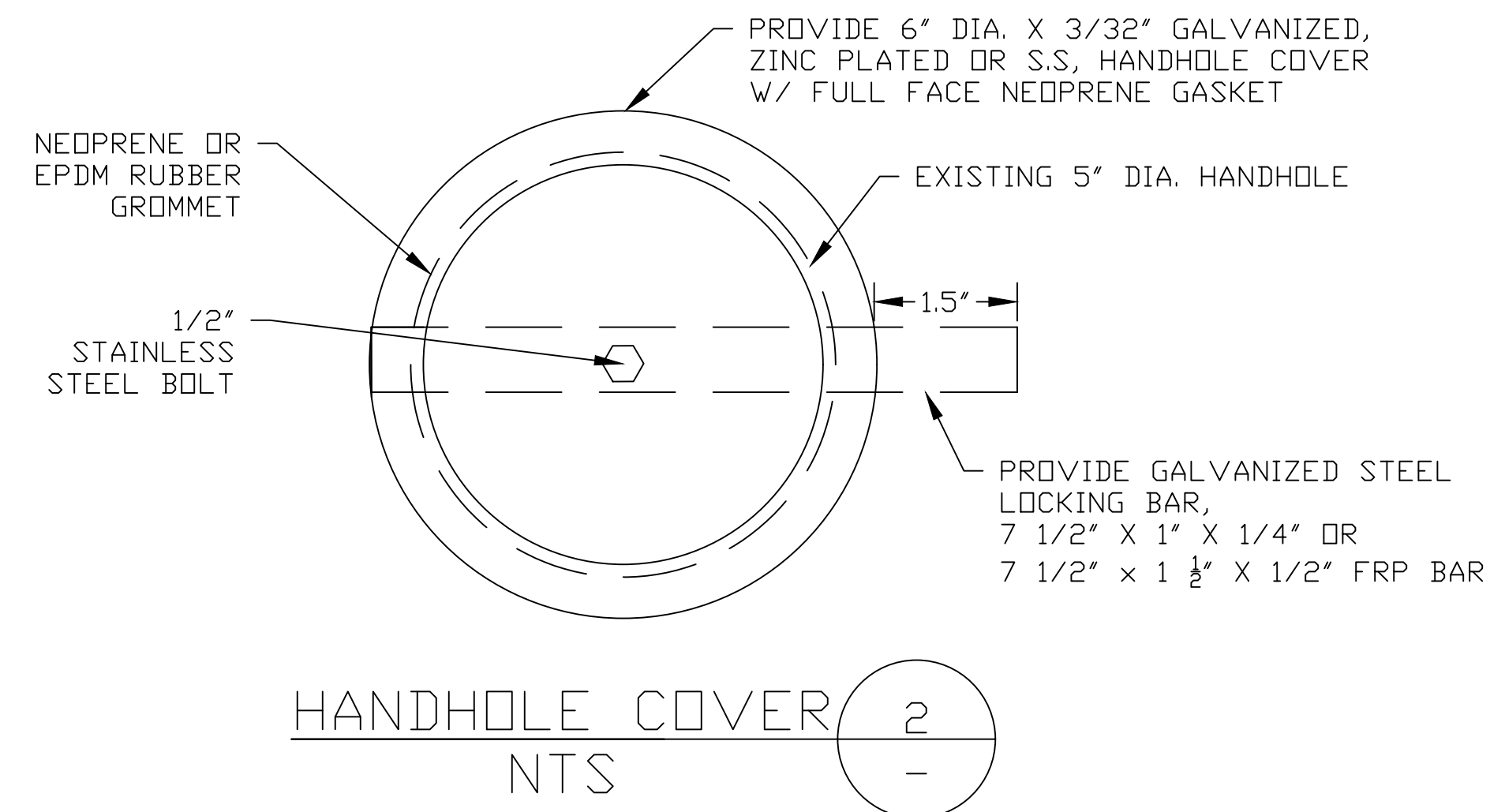
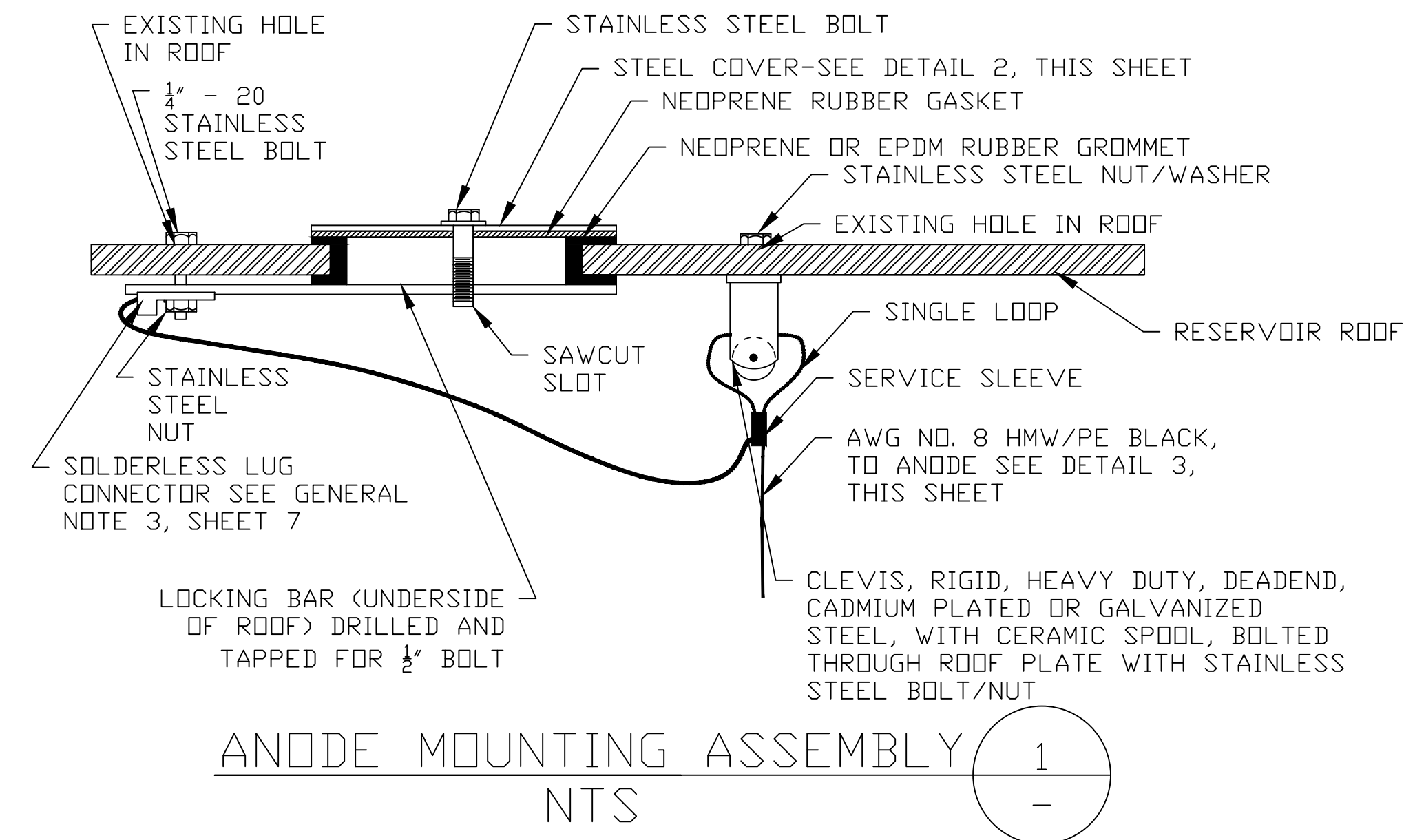
SHEET TITLE

CATHODIC PROTECTION LAYOUT

PROJECT NO. 3131

SHT. 7 OF 9 SHTS.

SCALE: NTS



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CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

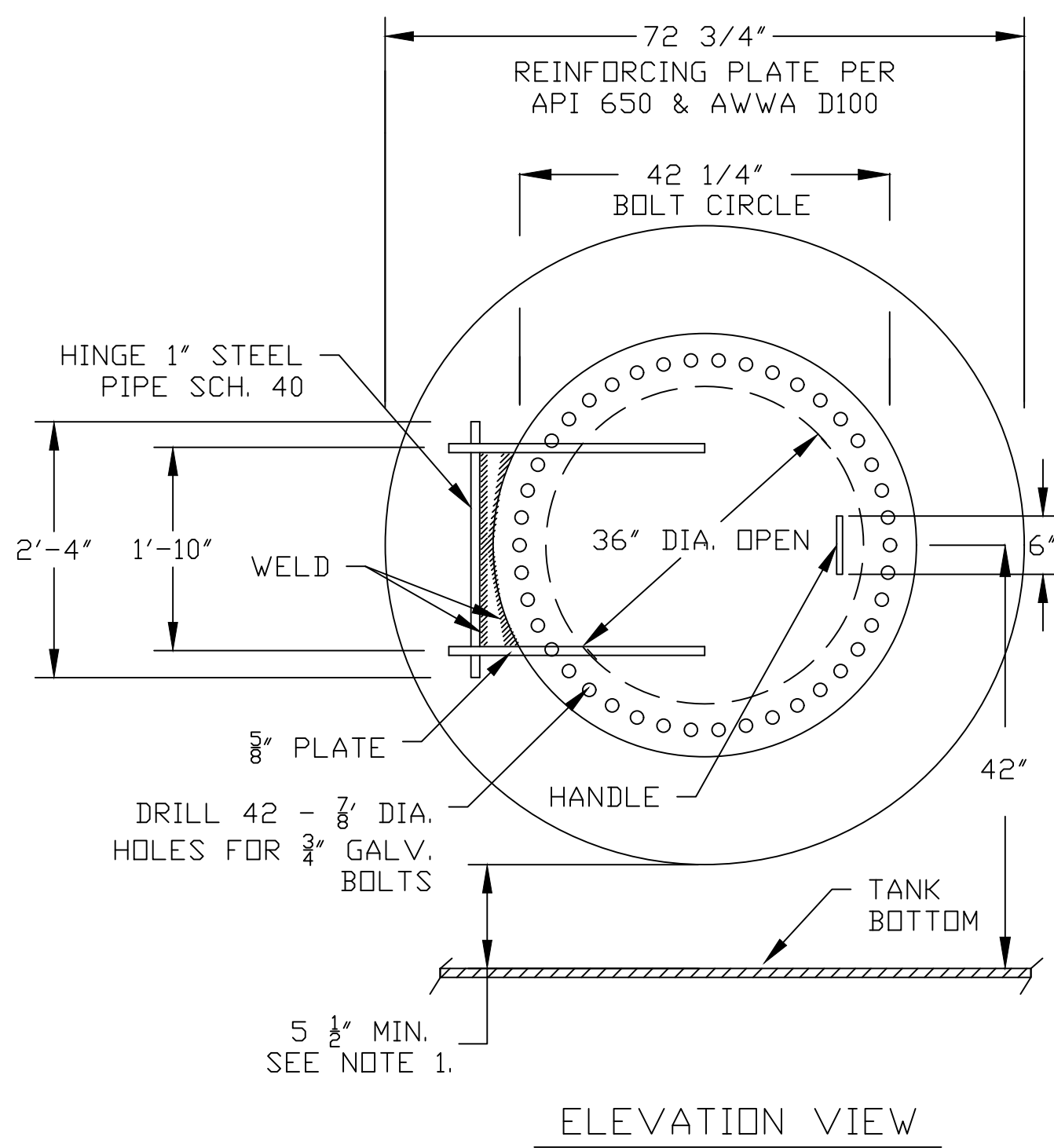
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CATHODIC PROTECTION DETAILS

PROJECT NO. 3131

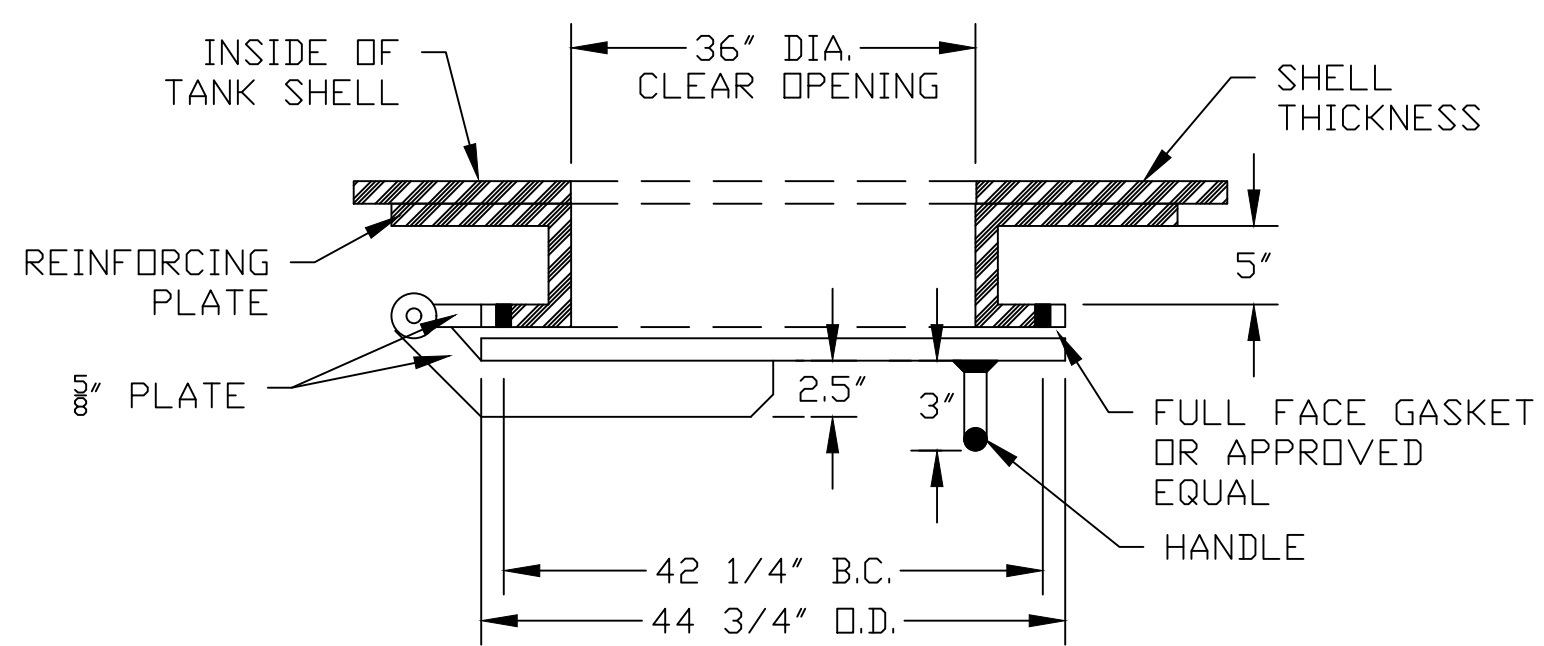
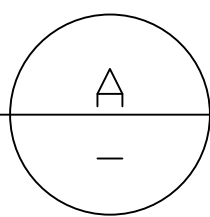
SHT. 8 OF 9 SHTS.

SCALE: NTS



ELEVATION VIEW

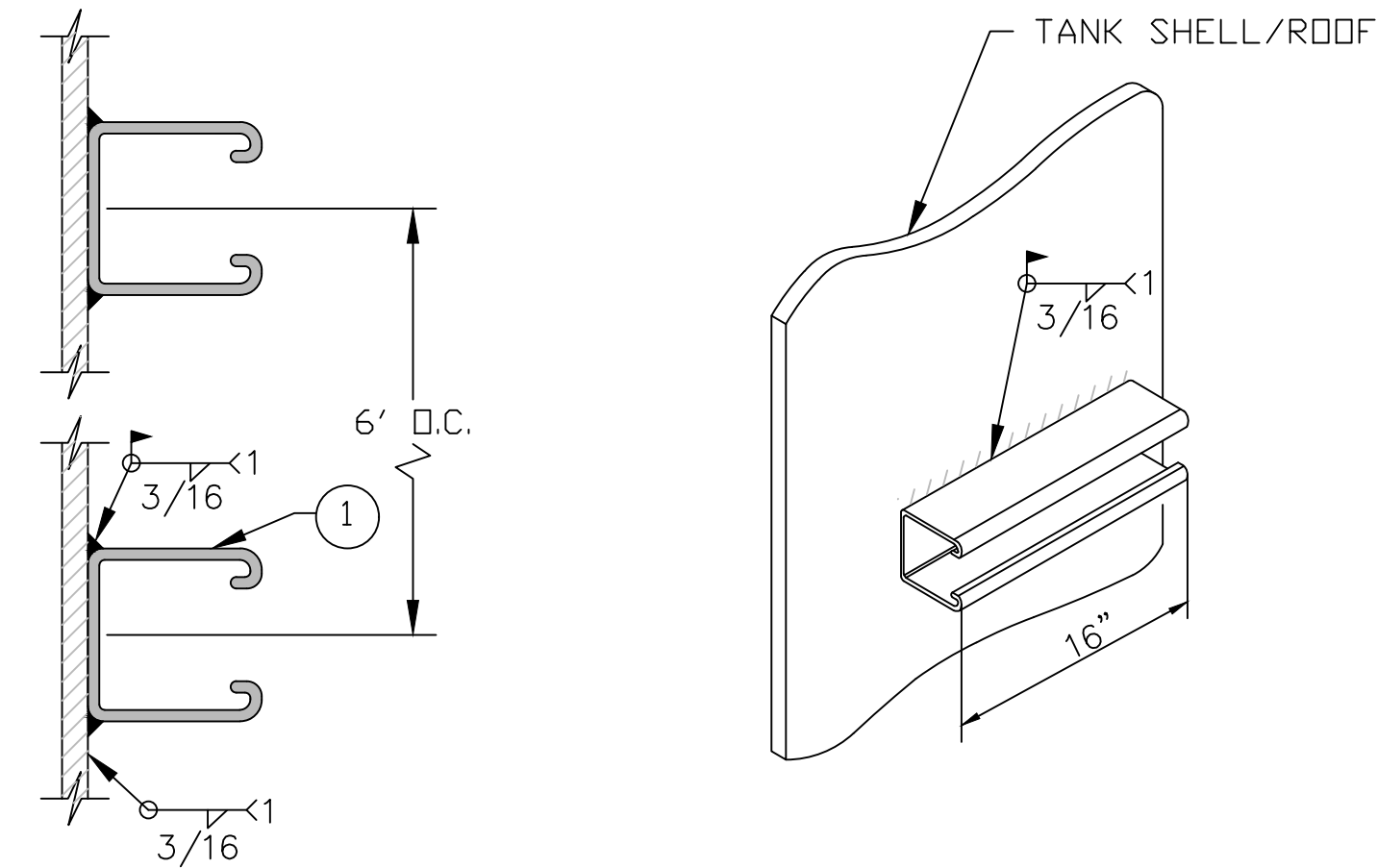
36" Ø MANHOLE  
NTS



PLAN VIEW

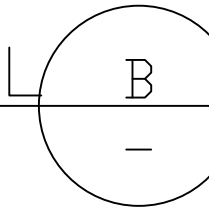
| UNISTRUT BILL OF MATERIALS |     |                                                           |     |         |
|----------------------------|-----|-----------------------------------------------------------|-----|---------|
| ITEM NO.                   | QTY | DESCRIPTION                                               | MTL | COATING |
| 1                          | 5   | UNISTRUT, 12GA X 1 5/8" X 1 5/8" ~ 12" LG (SHELL SUPPORT) | A36 | HDG     |

- NOTES:
1. CONDUIT SUPPORTS TO BE SHOP PRIMED.
  2. REMOVE ALL SHARP EDGES.
  3. CONDUIT SUPPORT LOCATION AND QUANTITY TO BE VERIFIED BY DISTRICT.
  4. MIN. 6' SPACING BETWEEN UNI-STRUT SUPPORTS ON SHELL



UNISTRUT SUPPORT

UNISTRUT DETAIL  
NTS



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REVISIONS

CRESCENTA VALLEY WATER DISTRICT  
GOSS CANYON NO. 1 RESERVOIR  
REHABILITATION PROJECT

SHEET TITLE

ADDENDUM NO. 1 DETAILS

PROJECT NO. 3131

SHT. 9 OF 9 SHTS.

SCALE: NTS