SANTA CRUZ PUBLIC WORKS DEPARTMENT

SANTA CRUZ, CALIFORNIA

SANTA CRUZ RESOURCE RECOVERY FACILITY

FLARE STATION IMPROVEMENTS

SEPTEMBER 2025

VICINITY MAP

NOT TO SCALE

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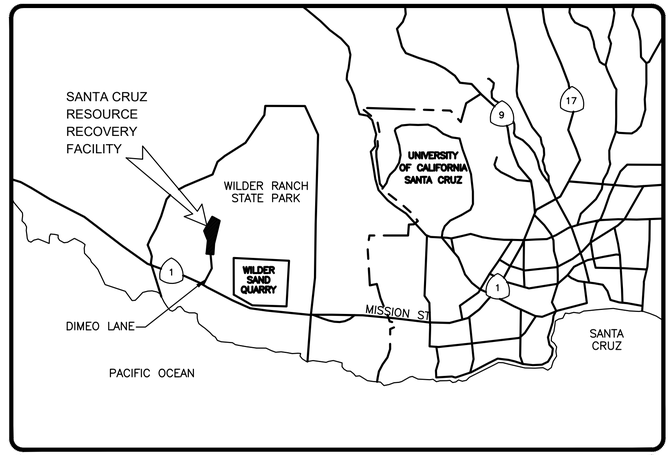
CITY OF SANTA CRUZ

TETRA TECH

21700 COPLEY DRIVE SUITE 200
DIAMOND BAR, CALIFORNIA 94109
TEL: (909) 860-7777
FAX: (909) 396-1768



LOCATION MAP

NOT TO SCALE

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EE-005-0853	120 VAC & INSTRUMENTATION ELEMENTARY (2 OF 4)
EE-005-0853	120 VAC & INSTRUMENTATION ELEMENTARY (3 OF 4)
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PA-001-1452	GAS HANDLING SYSTEM TOP ASSEMBLY
PA-001-1454	COMBUSTION AIR BLOWER TOP ASSEMBLY
OS-009-0334	OVERALL SITE LAYOUT

SITE ADDRESS:

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
605 DIMEO LANE
SANTA CRUZ, CA 95060

OWNER:

CITY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT
809 CENTER STREET, ROOM 201
SANTA CRUZ, CA 95060

CIVIL ENGINEER:

PAUL J. STOUT, P.E.
TETRA TECH
21700 COPLEY DRIVE, SUITE 200
DIAMOND BAR, CA 91765
TEL 909.860.7777 FAX 909.860.8017

BASIS OF BEARINGS:

COORDINATES SHOWN ARE BASED ON THE WGS84 COORDINATE SYSTEM

ELEVATIONS ARE BASED ON THE NAVD 88.

UNDERGROUND SERVICE ALERT

DIG ALERT BEFORE YOU DIG

Call: TOLL FREE

811

AT LEAST TWO DAYS BEFORE YOU DIG

RECOMMENDED: _____
PROJECT MANAGER DATE

ACCEPTED: _____
SENIOR ENGINEER DATE

APPROVED: _____
DEPUTY DIRECTOR DATE

NOTE:
THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE, AND UTILITY LINES MAY EXIST WHERE NONE ARE SHOWN. SOME INFORMATION MAY HAVE BEEN DERIVED FROM INFORMATION PROVIDED TO THE ENGINEER BY OTHERS. SUCH INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. CONTACT DIG ALERT AT 1-811-227-2600 AND ANY NON-PARTICIPATING UTILITY COMPANIES AT LEAST 48 HOURS BEFORE CONSTRUCTION. THE SUBCONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF PERTINENT UTILITIES, LANDFILL LINERS, AND OTHER EXISTING FEATURES IN OR NEAR THE AREA OF WORK, WHETHER INDICATED ON THESE DRAWINGS OR NOT. SHOULD A CONFLICT EXIST, THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE. THE SUBCONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DISTURBING ANY UNDERGROUND UTILITIES. THE SUBCONTRACTOR SHALL COORDINATE ANY POTENTIAL DISRUPTIONS IN UTILITY SERVICE WITH THE UTILITY COMPANIES AFFECTED AT LEAST 24 HOURS PRIOR TO THE DISRUPTION. THE SUBCONTRACTOR SHALL REPAIR DAMAGE TO EXISTING UTILITIES AT THE SUBCONTRACTOR'S EXPENSE.

REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

TITLE SHEET

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
G-001

PRELIMINARY - NOT FOR CONSTRUCTION

NOTES:

1. 2025 AS-BUILT SURVEY INFORMATION PROVIDED BY BOB-HANAGON SURVEYING ON MARCH 19, 2025.
2. AERIAL SURVEY OF THE LANDFILL PROPERTY WAS PERFORMED BY ERIK OHLSON & ASSOCIATES PROFESSIONAL LAND SURVEYORS ON MARCH 7, 2025.
3. 2025 GCCS PROPOSED WELLS SURVEY INFORMATION PROVIDED BY BOB-HANAGON SURVEYING ON FEBRUARY 19, 2025.
4. 2024 GCCS AS-BUILT INFORMATION PROVIDED BY OPAL FUELS, DATE OF RECORD DRAWINGS: MAY 29, 2024.

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR TO SURVEY AND STAKE CONCRETE CORNER LOCATIONS AND OBTAIN APPROVAL FROM THE ENGINEER AND OWNER PRIOR TO PROCEEDING.
2. THE CONTRACTOR SHALL LAY OUT THE PIPE TO CONFORM TO FIELD CONDITIONS. PROVIDE 36" MINIMUM COVER AND 5% MINIMUM SLOPE CROSSING BELOW PERIMETER AND MAIN HAUL ROADS. PROVIDE MINIMUM PIPE DRAINAGE SLOPES OF 3% WITHIN WASTE LIMIT AND 1% OUTSIDE OF WASTE LIMIT. CONTRACTOR RESPONSIBLE FOR CUT (12" MAX, UNLESS OTHERWISE NOTED PER PLAN) AND FILL BENEATH PIPE TO ENSURE PROPER DRAINAGE, AS APPROVED BY THE ENGINEER AND OWNER.
3. FEATURES, CONTOURS, AND ELEVATIONS OF THESE BASE MAPS ARE APPROXIMATE INDICATIONS OF CURRENT AND FUTURE CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR INSPECTING WORK AREAS AT PRE-BID SITE WALK AS CURRENT CONDITIONS FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY THE ACTUAL LOCATIONS OF THESE ELEMENTS PRIOR TO, AND DURING CONSTRUCTION, AND SHALL FINALIZE THE GAS SYSTEM LOCATIONS TO ACCOMMODATE FINAL FIELD CONDITIONS, AS APPROVED BY THE ENGINEER AND OWNER.
4. ALL CONNECTIONS TO EXISTING PIPING SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. SOME CONNECTIONS MAY REQUIRE EXCAVATION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL DISCONNECTIONS AND RECONNECTIONS FOR INSTALLATION OF NEW PIPING WHERE NECESSARY.
6. WORK SHALL NOT VARY FROM DESIGN WITHOUT APPROVAL OF THE ENGINEER. WORK THAT VARIES FROM DESIGN WITHOUT APPROVAL WILL BE SUBJECT TO REWORK TO MAINTAIN ADHERENCE TO THE APPROVED DESIGN. ANY REWORK AS A RESULT WILL NOT BE PAID FOR.
7. FORCE MAIN TO BE PRESSURE TESTED IN TRENCH FOR 30 MINUTES AT 4 PSIG THEN 30 MINUTES AT 100 PSIG. GREATER THAN 10% DROP IN PRESSURE OVER 1 HOUR SHALL INDICATE A LEAK EXISTS AND SHALL BE REPAIRED. PIPE SHALL BE TESTED IN SEGMENTS NO LONGER THAN 2,000 FEET UNLESS APPROVED BY THE ENGINEER.
8. ALL PIPING GREATER THAN 6 INCHES IN DIAMETER SHALL BE PRESSURE TESTED FOR 1 HOUR AT 10 PSIG. GREATER THAN 10% DROP IN PRESSURE OVER 1 HOUR SHALL INDICATE A LEAK EXISTS AND SHALL BE REPAIRED AND RETESTED. PIPE SHALL BE TESTED IN SEGMENTS NO LONGER THAN 2,000 FEET UNLESS APPROVED BY THE ENGINEER.
9. CONTRACTOR TO REMOVE AND REUSE EXISTING PUMPS, PIPING AND FITTINGS WHERE APPLICABLE. CAP ALL ABANDONED PIPE. IF ABANDONED PIPE IS HDPE, USE FUSED ON HDPE CAP. IF ABANDONED PIPE IS PVC, USE PVC SCH 40 CAP SECURED WITH SET SCREWS AT 90° AND CEMENT.
10. ALL EXISTING PIPING THAT IS NOT IN USE, AS DIRECTED BY THE OWNER, SHALL BE RELOCATED BY THE CONTRACTOR TO THE ON-SITE STORAGE FACILITY.
11. CONTRACTOR TO USE FACTORY MOLDED/FABRICATED CONCENTRIC REDUCER FITTINGS AS NECESSARY.
12. CONTRACTOR TO PROTECT IN PLACE THE EXISTING ABOVE AND BELOW GRADE LATERALS DURING CONSTRUCTION. IF EXISTING PIPING NEEDS TO BE RELOCATED TEMPORARILY DURING CONSTRUCTION, THE CONTRACTOR WILL ENSURE CONSTANT SLOPE IS MAINTAINED ON THE PIPE AND THE LATERALS WILL BE RETURNED TO THEIR EXISTING CONDITION FOLLOWING CONSTRUCTION ACTIVITIES.
13. ELECTROFUSION COUPLERS SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER AND OWNER.
14. ALL EQUIPMENT, CONDUIT, PIPING AND OTHER MATERIALS, UNLESS OTHERWISE NOTED, ARE TO BE PROVIDED BY THE CONTRACTOR.
15. THE CITY SHALL FURNISH, PROVIDE AND DELIVER THE PROPOSED EQUIPMENT OF THIS PROJECT. THE CONTRACTOR SHALL OFF-LOAD AND INSTALL THE EQUIPMENT FURNISHED BY THE CITY AND CONSTRUCT THE ASSOCIATED IMPROVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT TO CONSTRUCT A NEW FLARE SYSTEM IN ACCORDANCE WITH THIS CONTRACT. THE WORK SHALL INCLUDE FURNISHING AND INSTALLING ALL MATERIALS NOT PROVIDED BY THE MANUFACTURER, AND COORDINATING WITH THE MANUFACTURER FOR ANY MISSING PARTS AND MATERIALS FOR THE PROPOSED SYSTEM, COMPLETE AND IN PLACE. SEE THE CONSTRUCTION SPECIFICATIONS FOR THE MATERIALS TO BE PROVIDED BY THE MANUFACTURER.

CONSTRUCTION NOTES

1. AC DRIVEWAY WITH THICKENED EDGE — 1 C-501, 2 C-501
2. CONCRETE LANDSCAPE WALL — 9 S-501
3. GRATED LINE DRAIN (SIZE TBD) PER CALTRANS STD DTLS D98 H & I
4. CHDPE BURIED CULVERT (SIZE TBD)
5. RELOCATED STORM DRAIN, BURIED AS REQUIRED TO MAINTAIN MINIMUM SLOPE, SIZE AND MATERIAL TO MATCH EXISTING
6. CONNECT RELOCATED STORM DRAIN TO EXISTING STORM DRAIN, POINT OF CONNECTION TO BE FIELD VERIFIED
7. EXISTING ELECTRICAL MAIN PANEL
8. EARTH FILL
9. EXISTING ABANDONED STORM DRAIN, REMOVE AS REQUIRED FOR NEW CONSTRUCTION
10. TIE-IN PROPOSED CONDENSATE LINE AT EXISTING EXISTING CONDENSATE LINE
11. TIE-IN PROPOSED AIR LINE TO EXISTING AIR LINE VIA TEE CONNECTION — 2 M-501
12. TIE-IN PROPOSED 10" HDPE SDR-17 LFG PIPE TO EXISTING 12" HDPE SDR-17 HEADER VIA TEE CONNECTION — 2 M-501
13. PROPOSED 12"x10" HDPE SDR-11 REDUCER
14. SLOPE DESIGNED TO KEEP LIQUIDS WITHIN PIPE UNTIL CONTINUING TO THE EXISTING SUMP
15. ADD GRAVEL WITHIN FENCE
16. TIE IN CONDENSATE LINE TO KNOCK OUT POT VIA 2" FNPT TO NPT CONNECTION
17. PROPOSED AIR COMBUSTION BLOWER (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR) — 4 M-501
18. PROPOSED 1,000 SCFM FLARE STACK, CONTRACTOR TO COORDINATE WITH THE CITY AND ENGINEER ON EXISTING FLARE SHUTDOWN DURING INSTALLATION (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
19. PROPOSED FLARE STACK AND AIR COMBUSTION BLOWER FOUNDATION — 1 S-101
20. PROPOSED 10" SS10 AND 10" SDR-11 HDPE FLANGE CONNECTION — 3 M-501
21. PROPOSED 10" PIPE SUPPORT/FOOTING ON PROPOSED FOUNDATION — 8 S-501
22. PROPOSED MANUAL DOUBLE SWING GATE — 2 S-103
23. PROPOSED 10" 304 SS SCH 10 PIPE, WELD (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
24. PROPOSED FLOW METER INSTALLED 45 DEGREES FROM BOTTOM OF PIPE. SHOWN ROTATED FOR CLARITY (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
25. PROPOSED FLAME ARRESTOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
26. PROPOSED BLOWER SKID (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
27. PROPOSED CONTROL PANEL (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
28. PROPOSED KNOCK OUT POT (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
29. PROPOSED BLOWER(S) (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
30. PROPOSED 10" ABOVE GRADE HDPE SDR-17 PIPE
31. PROPOSED 10" FAIL CLOSE VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
32. PROPOSED 6' HIGH CHAIN LINK FENCE — 1 S-103
33. PROPOSED 8" 304 SS 90° ELBOW (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
34. PROPOSED 8" MANUAL BUTTERFLY VALVE (PROVIDED AND INSTALLED BY CONTRACTOR)
35. PROPOSED 10" HDPE SDR-11 ELBOW
36. PROPOSED 10" PIPE SUPPORT/FOOTING ON EXISTING FOUNDATION — 2 S-102
37. PROPOSED PRESSURE TRANSMITTER (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
38. PROPOSED 1/2" BALL VALVE (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
39. TIE IN PROPOSED ELECTRICAL CONDUITS TO PROPOSED CONTROL PANEL
40. FURNISH AND INSTALL 300A (NEW FLARE CONTROL PANEL) AND 100A (NEW AIR COMPRESSOR), 3 POLE, 65 KAIC CIRCUIT BREAKERS TO EXISTING SWITCHGEAR
41. PROPOSED 1/2" SOLENOID VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
42. PROPOSED EXPANSION JOINT (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
43. PROPOSED SCH 40 PRESSURE REGULATOR WITH PRESSURE GAUGE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
44. PROPOSED SCH 40 ANGLE VALVE (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
45. INSTALL PRESSURE SWITCH, PS-401 (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
46. PROPOSED 2" SS10 CONDENSATE PIPE (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
47. PROPOSED 1/2" B.I. PROPANE LINE INSTALLED ABOVE GRADE (PROVIDED AND INSTALLED BY CONTRACTOR)
48. PROPOSED 3/8" STAINLESS STEEL TUBING AIR LINE, AIR LINES SARE TO BE PROPERLY SECURED DURING INSTALLATION (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR) — 4 M-501
49. PROPOSED 1/2" STAINLESS STEEL TUBING CONDENSATE LINE, INSULATED ABOVE GRADE (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
50. CONNECT PROPOSED LFG BLOWER TO PROPOSED 480V ELECTRICAL CONDUIT
51. TIE IN PROPOSED PRESSURE TRANSMITTER INTO PROPOSED 120V ELECTRICAL AND COMMUNICATION CONDUITS
52. PROPOSED SS TO HDPE TRANSITION FITTING
53. CONNECT PROPOSED SOLENOID VALVES TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
54. CONNECT PROPOSED FLARE THERMOCOUPLES AND UV SCANNER TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
55. CONNECT PROPOSED FLOW TRANSMITTER TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
56. PROPOSED 10" X 4" HDPE SDR-11 REDUCER
57. CONNECT PROPOSED PRESSURE CONTROL VALVE TO PROPOSED 120V ELECTRICAL AND COMMUNCATIONS CONDUITS
58. CONNECT PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS TO KOP LIQUID LEVEL SENSOR
59. CONNECT PROPOSED FAIL CLOSED VALVE INTO PROPOSED 120V ELECTRICAL CONDUIT
60. ANCHORING PROPOSED EQUIPMENT TO PROPOSED FOUNDATION — 2 S-102, 2 S-101
61. PROPOSED 10" MANUAL BUTTERFLY VALVE (PROVIDED AND INSTALLED BY FLARE MANUFACTURER)
62. PROPOSED 4" X 2" HDPE SDR-11 REDUCER
63. INSTALL BARE 4/0 FROM EX. GROUND GRID TO TWO SS GROUND PLATES ON GHS, COMB. AIR BLOWER MOTOR FRAME, FLARE 2, AND AIR COMPRESSOR. MAKE CONNECTIONS WITH EXOTHERMIC WELDS OR MECHANICAL LUGS. 24" MINIMUM COVER
64. TIE IN PROPOSED AIR LINE TO 10" FAIL CLOSE VALVE
65. CONNECT PROPOSED 480V ELECTRICAL CONDUIT INTO PROPOSED AIR COMBUSTION BLOWER
66. GROUND LEVEL (SLOPE AWAY FROM SLABS)
67. EXISTING 150 KVA TRANSFORMER
68. CONNECT PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS TO PROPOSED CONTROL PANEL
69. PROPOSED PROPANE TANKS (PROVIDED AND ANCHORED VIA UNISTRUT BY THE CONTRACTOR) — 9 S-501
70. PROPOSED AIR COMPRESSOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
71. PROPOSED RAIN SHIELD (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
72. PROPOSED AIR CONDITIONER (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
73. PROPOSED VOLTAGE TRANSFORMER (SKID MOUNTED PROVIDED BY FLARE MANUFACTURER)
74. PROPOSED BLOWER SKID FOUNDATION — 1 S-102
75. PROPOSED GRAVEL DRIVE
76. TIE-IN FOR 3/8" PROPOSED AIR LINE TO EXISTING 3/8" SST COMPRESSED AIR LINE
77. PROPOSED 1/2" HAND VALVE
78. TIE IN PROPOSED PROPANE LINE TO PROPOSED FLARE
79. PROPOSED CONCENTRIC REDUCER (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
80. PROPOSED 3/8" BALL VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
81. INSTALL TWO 3" ELECTRICAL CONDUITS AND ONE 1-1/2" CONDUIT FOR FUTURE PROJECT BY OTHERS
82. TIE IN 2" HDPE SDR-11 CONDENSATE LINE TO EXISTING 8" HDPE LFG HEADER VIA 8" TEE AND REDUCERS
83. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO EXISTING POWER POLE, CONFIRM AERIAL FEED IS STILL GOOD FROM PANEL 320 IN BUILDING
84. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO PROPOSED CONTROL PANEL
85. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO PROPOSED VOLTAGE TRANSFORMER
86. PROPOSED 3/8" CHECK VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
87. INSTALL FLOW METER, FT-401 (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
88. TIE IN PROPOSED 120V & 480V ELECTRICAL CONDUITS TO PROPOSED AIR COMPRESSOR. FURNISH AND INSTALL PRESSURE SWITCH TO MONITOR LOW AIR PRESSURE.
89. PROPOSED 2" HDPE SDR-11 CONDENSATE LINE, INSULATED ABOVE GRADE (PROVIDED AND INSTALLED BY CONTRACTOR)
90. PROPOSED 10" FLANGED FLEX HOSE PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
91. TIE IN TO EXISTING SOIL VAPOR VIA 10" TEE — 2 M-501
92. TIE IN TO EXISTING LFG LINE VIA 10" TEE — 2 M-501
93. PROPOSED 1/2" GLOBE VALVE (SKID MOUNTED, PROVIDED BY FLARE CONTRACTOR)
94. PROPOSED 8" AUTOMATED FLOW CONTROL VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)

PRELIMINARY - NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

CONSTRUCTION NOTES

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
G-002

LEGEND

- 242 — EXISTING MINOR CONTOUR
- 300 — EXISTING MAJOR CONTOUR
- EXISTING DRAINAGE DITCH
- AAG — EXISTING 1" AIR LINE
- CAG — EXISTING 2" CONDENSATE LINE
- EXISTING 8" LFG
- EXISTING SUMP
- AAG — PROPOSED AIR LINE
- CAG — PROPOSED CONDENSATE LINE
- PROPOSED LFG EQUIPMENT/PIPING
- PROPOSED FENCING
- PROPOSED GRAVEL
- PROPOSED LIGHT POLE
- PROPOSED J-TRAP
- WOODRAT MIDDEN AREA

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0 10 20

SCALE IN FEET

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CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

ENDANGERED SPECIES AREA

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
G-003

PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

- EXISTING MAJOR CONTOUR (300)
- EXISTING MINOR CONTOUR
- EXISTING POWER POLE
- EXISTING OVERHEAD ELECTRIC (OE)
- EXISTING 1" AIR LINE
- EXISTING 2" CONDENSATE LINE
- EXISTING 4" LFG (BELOW GRADE)
- EXISTING 4" LFG
- EXISTING 6" LFG (BELOW GRADE)
- EXISTING 6" LFG
- EXISTING 8" LFG (BELOW GRADE)
- EXISTING 8" LFG
- EXISTING 10" LFG (BELOW GRADE)
- EXISTING 10" LFG
- EXISTING 12" LFG (BELOW GRADE)
- EXISTING 12" LFG
- EXISTING LFG PIPING
- EXISTING SUMP
- EXISTING GAS WELL (H8A)
- EXISTING GAS PROBE (W-8G)
- CELL LIMIT

N

0 100 200
SCALE IN FEET

CELL 1
CELL 2
CELL 3A
CELL 3B

LANDFILL GAS FLARE STATION

SEE SHEETS C-101, C-102, M-101, AND M-103 FOR ENLARGED PLAN VIEW OF THIS AREA

SEE SHEETS C-101, C-102, M-102 AND M-104 FOR ENLARGED PLAN VIEW OF THIS AREA

PRELIMINARY - NOT FOR CONSTRUCTION

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

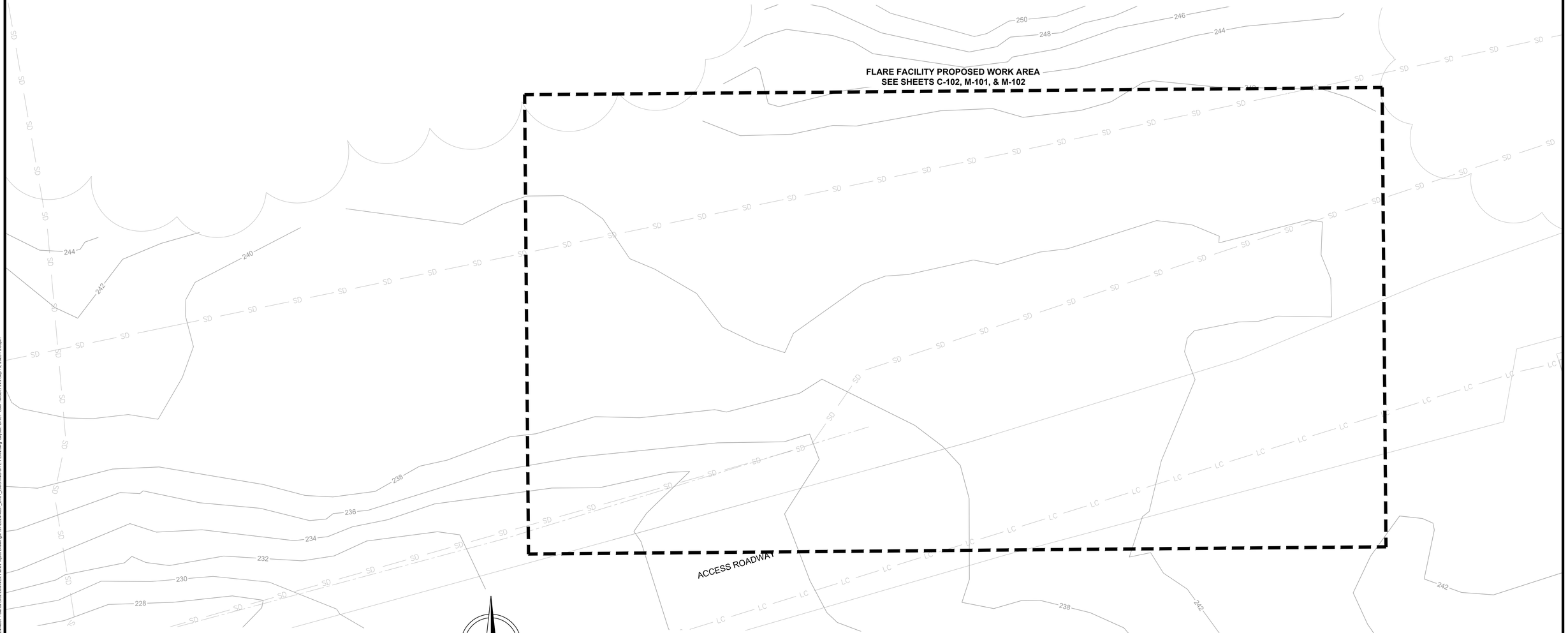
EXISTING SITE PLAN

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
C-100

LEGEND

- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- P — EXISTING PROPANE LINE
- SD — EXISTING STORM DRAIN
- 240 — EXISTING MAJOR CONTOUR
- 238 — EXISTING MINOR CONTOUR
- EXISTING BOLLARD
- EXISTING TREE LINE



N

0 5 10

SCALE IN FEET

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

ENLARGED EXISTING SITE PLAN

DESIGNED BY : ADL	CHECKED BY : MAS	DATE : 09-19-2025
DRAWN BY : ADL	APPROVED BY : GRB	

SHEET
C-101

PRELIMINARY - NOT FOR CONSTRUCTION

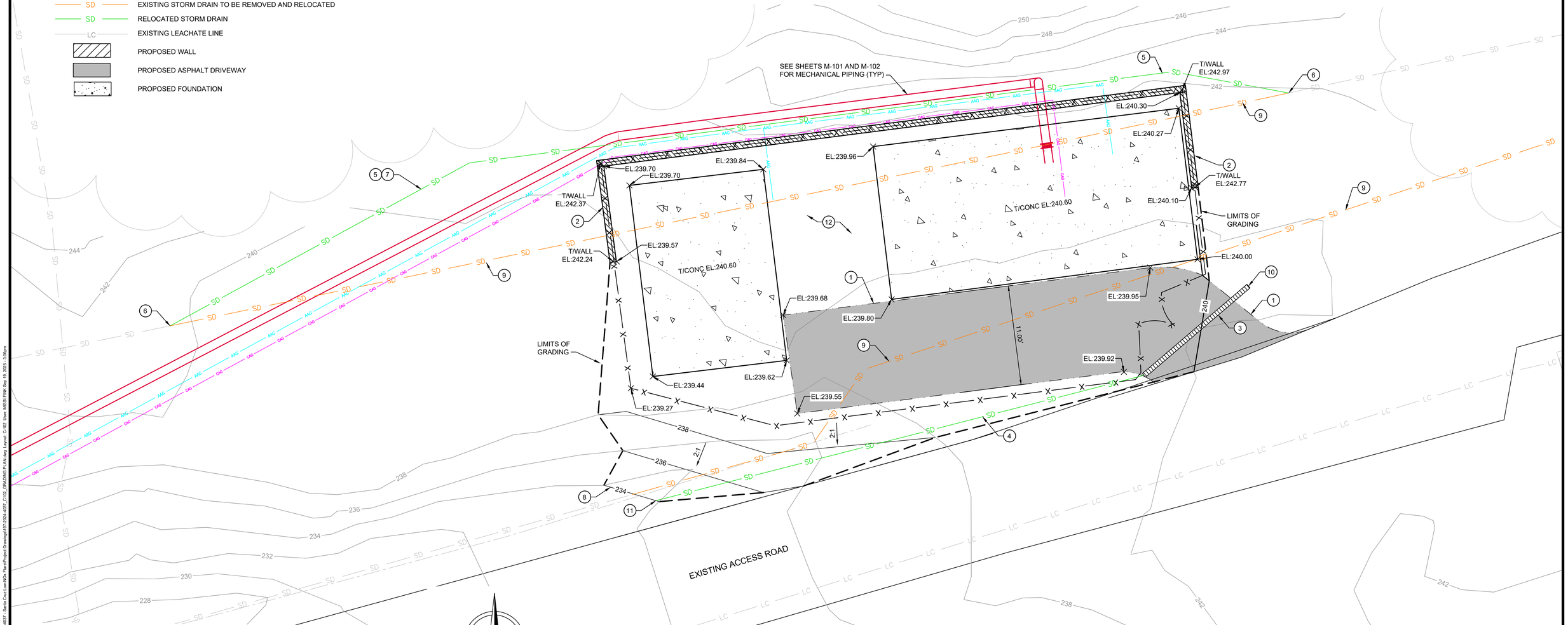
File: I:\ca\oak\ed\19\PROJECTS\SANTA CRUZ\197.2024-4007 - Santa Cruz Low-NOx Flare\Project Drawings\197.2024-4007_C101_EXISTING SITE PLAN.dwg Layout: C-101 User: MISSI.FINK Sep 19, 2025 - 3:06pm

LEGEND

- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- SD — EXISTING STORM DRAIN
- 240 — EXISTING MAJOR CONTOUR
- 238 — EXISTING MINOR CONTOUR
- EXISTING BOLLARD
- EXISTING TREE LINE
- PROPOSED CONTOUR
- PROPOSED PIPING AND EQUIPMENT
- CAG — PROPOSED ABOVE GROUND CONDENSATE LINE
- CBG — PROPOSED BELOW GROUND CONDENSATE LINE
- P — PROPOSED PROPANE GAS LINE
- TRANSITION FROM ABOVE GRADE TO BELOW GRADE
- AAG — PROPOSED ABOVE GROUND AIR LINE
- PROPOSED FENCE
- PROPOSED GRAVEL
- SD — EXISTING STORM DRAIN TO BE REMOVED AND RELOCATED
- SD — RELOCATED STORM DRAIN
- LC — EXISTING LEACHATE LINE
- PROPOSED WALL
- PROPOSED ASPHALT DRIVEWAY
- PROPOSED FOUNDATION

CONSTRUCTION NOTES

1. AC DRIVEWAY WITH THICKENED EDGE — (1) C-501, (2) C-501
2. CONCRETE LANDSCAPE WALL — (9) S-501
3. GRATED LINE DRAIN 6" W X VARIABLE D PER CALTRANS STD DTLS D98 H & I
4. 6" CHDPE BURIED CULVERT
5. RELOCATED STORM DRAIN, BURIED AS REQUIRED TO MAINTAIN MINIMUM SLOPE, SIZE AND MATERIAL TO MATCH EXISTING
6. CONNECT RELOCATED STORM DRAIN TO EXISTING STORM DRAIN, POINT OF CONNECTION TO BE FIELD VERIFIED
7. ANCHOR STORM DRAIN ON GRADE WITH MINIMUM 1 CY SOIL PILE AT 20-FT ON CENTER SPACING ALONG LENGTH OF ON-GRADE STORM DRAIN
8. EARTH FILL
9. EXISTING ABANDONED STORM DRAIN, REMOVE AS REQUIRED FOR NEW CONSTRUCTION
10. BEGIN NEW 6" WIDE X VARIABLE DEPTH GRATED LINE DRAIN OPEN END, IE = 238.5'V (ON SE END)
11. "DAYLIGHT 6" CHDPE CULVERT WITH MANUFACTURED END SECTION, IE 234'. GRADE TO DRAIN NORTH
12. ALL AREAS NOT PAVED WITH ASPHALT OR CONCRETE TO HAVE WEED MATT AND GRAVEL



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SCALE IN FEET

REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

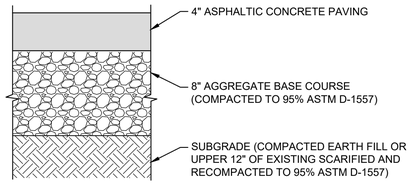
CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

GRADING PLAN

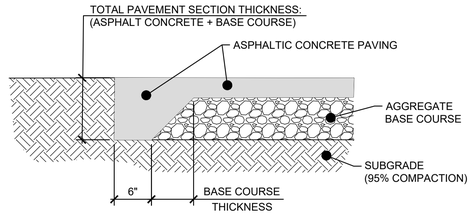
DESIGNED BY : ADL	CHECKED BY : MAS	DATE : 09-19-2025
DRAWN BY : ADL	APPROVED BY : GRB	

SHEET
C-102

PRELIMINARY - NOT FOR CONSTRUCTION



1	DETAIL - PAVEMENT STRUCTURAL SECTION
NTS	REFERENCE SHEET: C-102



2	DETAIL - PAVEMENT THICKENED EDGE
NTS	REFERENCE SHEET: C-102

3	DETAIL
NTS	REFERENCE SHEET:

4	DETAIL
NTS	REFERENCE SHEET:

5	DETAIL
NTS	REFERENCE SHEET:

6	DETAIL
NTS	REFERENCE SHEET:

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

CIVIL DETAILS

DESIGNED BY : ADL	CHECKED BY : MAS	DATE : 09-19-2025
DRAWN BY : ADL	APPROVED BY : GRB	

SHEET
C-501

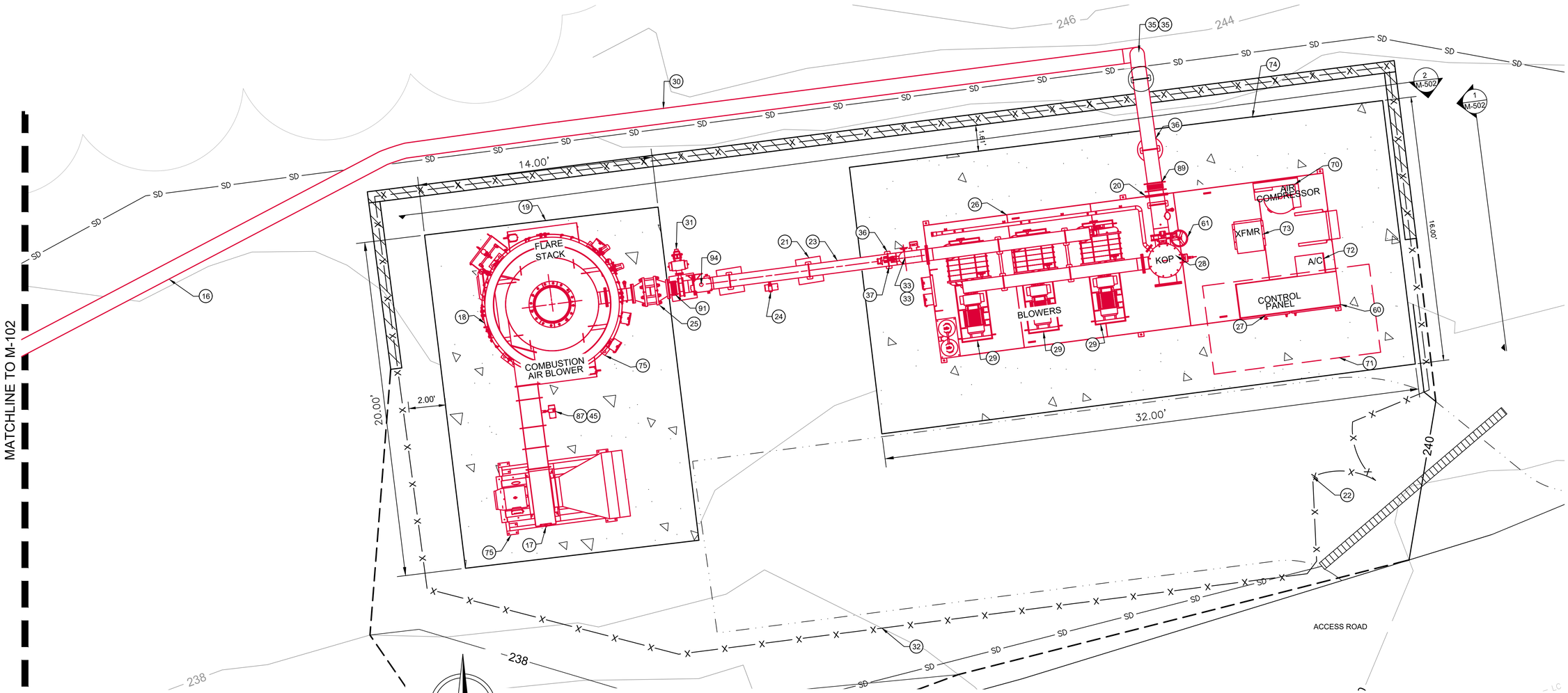
PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

- EXISTING PIPING AND EQUIPMENT
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING BOLLARD
- EXISTING MAJOR CONTOUR
- PROPOSED PIPING AND EQUIPMENT
- PROPOSED EQUIPMENT FOUNDATION
- TOC — TOP OF CONCRETE
- FG — FINAL GRADE
- PROPOSED FENCE
- SD — EXISTING STORM DRAIN
- SD — RELOCATED STORM DRAIN
- LC — EXISTING LEACHATE LINE
- EDGE OF PAVEMENT
- EXISTING TREE LINE
- PROPOSED WALL

CONSTRUCTION NOTES

17 PROPOSED AIR COMBUSTION BLOWER (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
18 PROPOSED 1,000 SCFM LOW NOX FLARE STACK (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
19 PROPOSED FLARE STACK AND AIR COMBUSTION BLOWER FOUNDATION — 1 / S-101
20 PROPOSED 10" SS10 AND 10" SDR-11 HDPE FLANGE CONNECTION — 3 / M-501
21 PROPOSED 8" PIPE SUPPORT/FOOTING ON PROPOSED FOUNDATION (PIPE SUPPORTS TO BE PROVIDED BY FLARE MANUFACTURER, FOUNDATION MATERIALS FOR PIPE SUPPORTS AND INSTALLATION TO BE PROVIDED BY CONTRACTOR) — 8 / S-501
22 PROPOSED MANUAL DOUBLE SWING GATE — 2 / S-103
23 PROPOSED 8" 304 SS SCH 10 PIPE, WELD (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
24 PROPOSED FLOW METER INSTALLED 45 DEGREES FROM BOTTOM OF PIPE. SHOWN ROTATED FOR CLARITY (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
25 PROPOSED FLAME ARRESTOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
26 PROPOSED BLOWER SKID (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
27 PROPOSED CONTROL PANEL (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
28 PROPOSED KNOCK OUT POT (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
29 PROPOSED BLOWER(S) (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
30 PROPOSED 10 " HDPE SDR-17 HEADER PIPE INSTALLED ABOVE GRADE WITH SOIL MOUND — 5 / M-501
31 PROPOSED 8" FAIL CLOSE VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
32 PROPOSED 6' HIGH CHAIN LINK FENCE — 1 / S-103
33 PROPOSED 8" 304 SS 90° ELBOW (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
35 PROPOSED 10" HDPE SDR-11 90° ELBOW
36 PROPOSED 8" PIPE SUPPORT/FOOTING ON PROPOSED BLOWER SKID FOUNDATION — 8 / S-501
37 PROPOSED PRESSURE TRANSMITTER (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
45 PROPOSED PRESSURE SWITCH, PS-401 (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
60 ANCHOR PROPOSED BLOWER SKID TO PROPOSED BLOWER SKID FOUNDATION — 2 / S-102
61 PROPOSED 10" MANUAL BUTTERFLY VALVE (PROVIDED BY FLARE MANUFACTURER)
70 PROPOSED AIR COMPRESSOR (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER) — 8 / S-501
71 PROPOSED RAIN SHIELD (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
72 PROPOSED AIR CONDITIONER (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
73 PROPOSED VOLTAGE TRANSFORMER (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
74 PROPOSED BLOWER SKID FOUNDATION — 1 / S-102
75 ANCHOR PROPOSED FLARE TO PROPOSED FOUNDATION — 2 / S-101
87 PROPOSED FLOW METER, FT-401 (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
89 PROPOSED 10" EXPANSION JOINT INSTALLED VIA FLANGE CONNECTION (PROVIDED AND INSTALLED BY CONTRACTOR)
91 PROPOSED 8" FLANGED FLEX HOSE (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
94 PROPOSED 8" AUTOMATED FLOW CONTROL VALVE (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)



REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT
CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

ASSEMBLY PLAN

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-101

PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

- EXISTING 12" HDPE PIPE
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING MAJOR CONTOUR
- PROPOSED PIPING AND EQUIPMENT
- EXISTING TREE LINE
- EXISTING AIR LINE
- EXISTING CONDENSATE
- EXISTING STORM CHANNEL

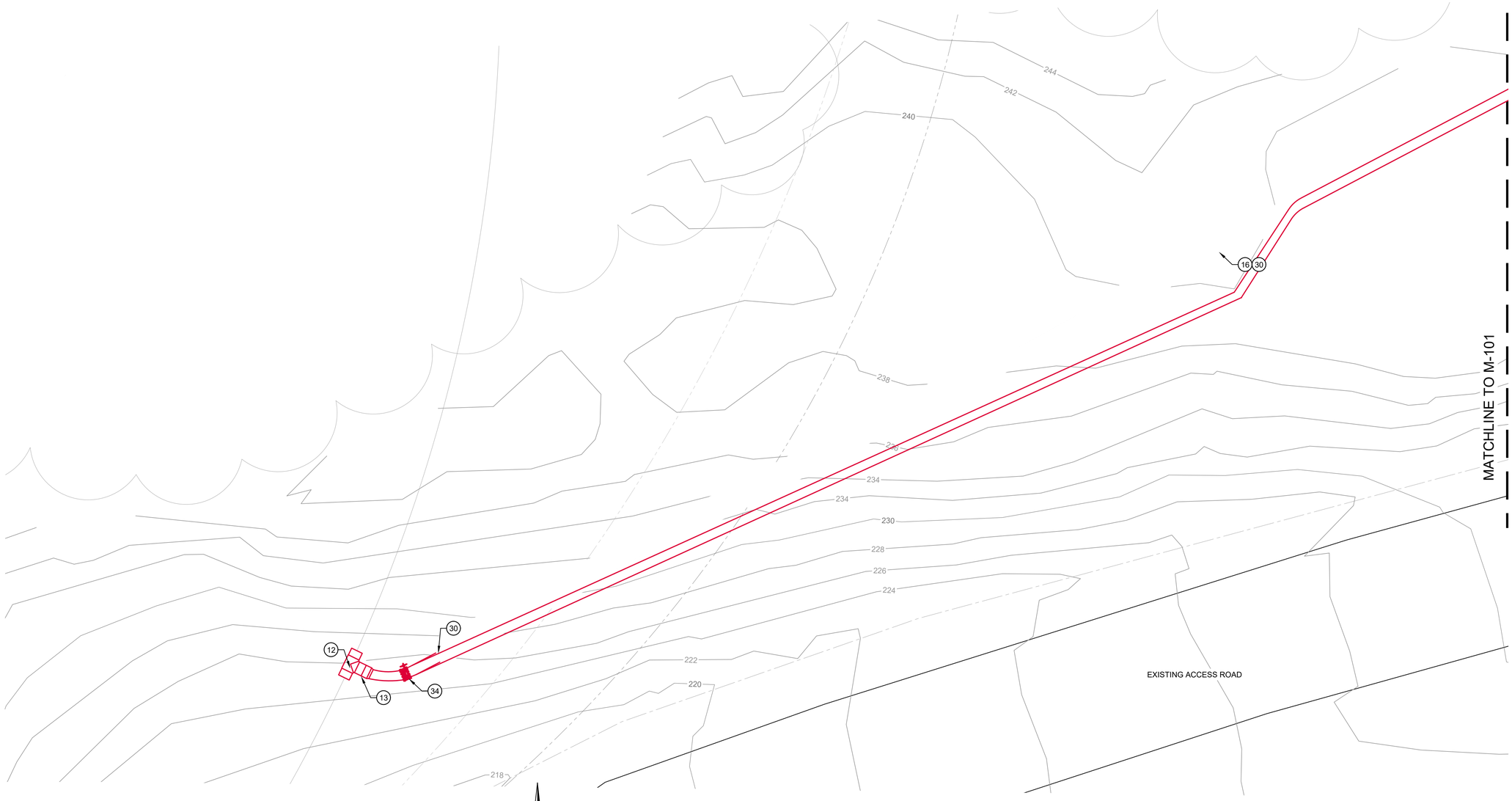
CONSTRUCTION NOTES

(12) TIE-IN PROPOSED 10" HDPE SDR-17 LFG PIPE TO EXISTING 12" HDPE SDR-17 HEADER VIA TEE CONNECTION AND — 2 / M-501

(13) PROPOSED 12"x10" HDPE SDR-11 REDUCER

(30) PROPOSED 10 " HDPE SDR-17 HEADER PIPE INSTALLED ABOVE GRADE WITH SOIL MOUND — 4 / M-501

(34) PROPOSED 10" MANUAL BUTTERFLY VALVE (PROVIDED AND INSTALLED BY CONTRACTOR) — 1 / M-501



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REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

PROPOSED LFG TIE IN LOCATION

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-102

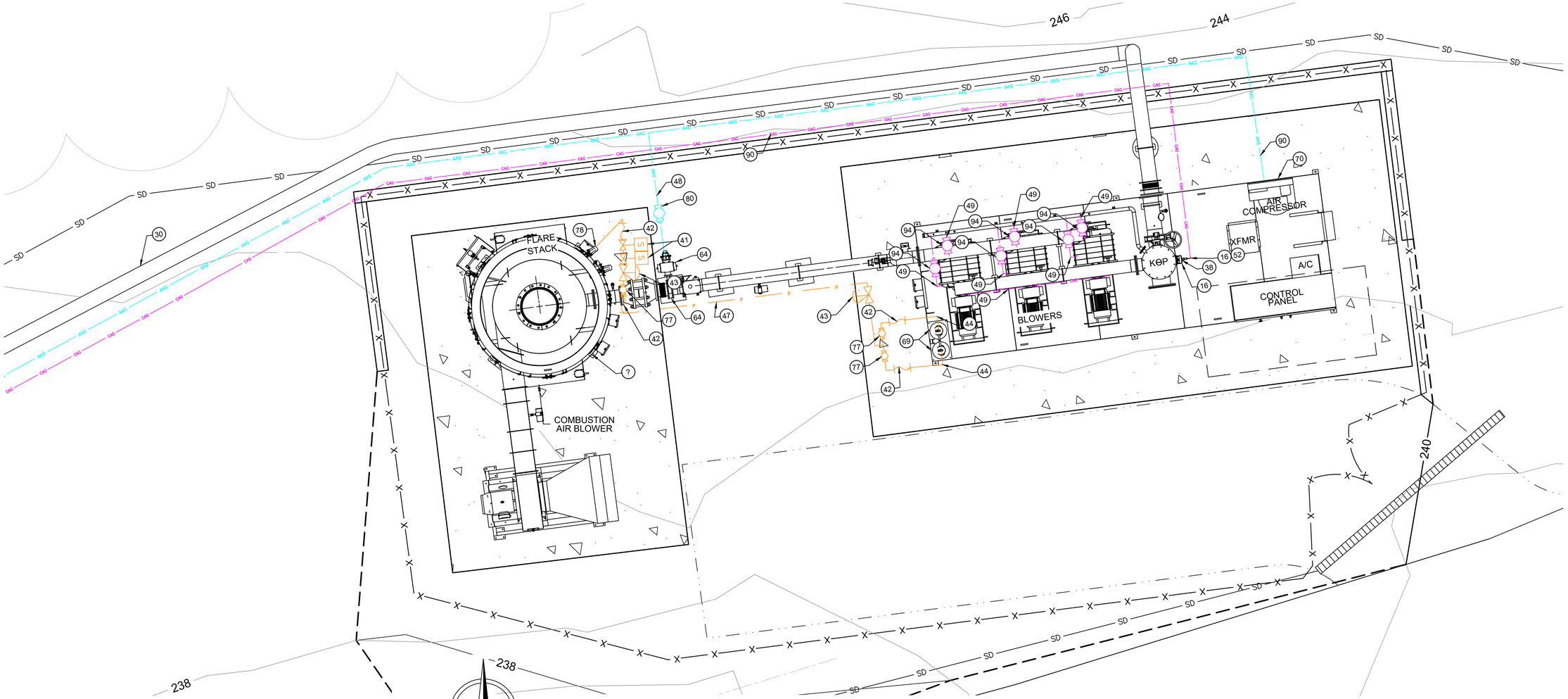
PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING PROPANE LINE
- EXISTING MAJOR CONTOUR
- EXISTING BOLLARD
- PROPOSED PIPING AND EQUIPMENT
- PROPOSED ABOVE GROUND CONDENSATE LINE
- PROPOSED PROPANE GAS LINE
- TRANSITION FROM ABOVE GRADE TO BELOW GRADE
- PROPOSED ABOVE GROUND AIR LINE
- PROPOSED FENCE
- EXISTING TREE LINE
- PROPOSED BALL VALVE
- PROPOSED PRESSURE REGULATOR WITH PRESSURE GAUGE
- PROPOSED HOSE WITH ADAPTER
- PROPOSED CONCENTRIC REDUCER
- PROPOSED SOLENOID VALVE
- PROPOSED GLOBE VALVE

CONSTRUCTION NOTES

16 TIE IN 2" HDPE SDR-11 CONDENSATE LINE TO KNOCK OUT POT VIA 2" FNPT TO NPT CONNECTION WITH TRANSITION FITTING
30 PROPOSED 10" ABOVE GRADE HDPE SDR-17 PIPE
38 PROPOSED 2" BALL VALVE (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
41 PROPOSED 1/2" SOLENOID VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
42 PROPOSED EXPANSION JOINT (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
43 PROPOSED 1/2" PRESSURE REGULATOR WITH PRESSURE GAUGE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
44 PROPOSED SCH 40 ANGLE VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
46 PROPOSED 2" SS10 CONDENSATE PIPE (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
47 PROPOSED 1/2" B.I. PROPANE LINE INSTALLED ABOVE GRADE (PROVIDED AND INSTALLED BY CONTRACTOR)
48 PROPOSED 3/8" STAINLESS STEEL TUBING AIR LINE, AIRLINES ARE TO BE PROPERLY SECURED UPON INSTALLATION (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR) — 4 / M-501
49 PROPOSED 1/2 STAINLESS STEEL TUBING CONDENSATE LINE, INSULATED ABOVE GRADE (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
52 PROPOSED SS TO HDPE TRANSITION FITTING
64 TIE IN PROPOSED AIR LINE TO 8" FAIL CLOSE VALVE
69 PROPOSED PILOT PROPANE GAS STORAGE TANKS (2 TOTAL) TO BE PROVIDED BY THE CONTRACTOR AND INSTALLED BY THE CONTRACTOR ON PROPANE TANK RACK (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER — 9 / S-501
70 PROPOSED AIR COMPRESSOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
77 PROPOSED 1/4" SS BALL VALVE
78 TIE IN PROPOSED PROPANE LINE TO PROPOSED FLARE
79 PROPOSED CONCENTRIC REDUCER (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
80 PROPOSED 3/8" BALL VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
82 TIE IN 2" HDPE SDR-11 CONDENSATE LINE TO EXISTING CONDENSATE LINE
90 PROPOSED 2" HDPE SDR-11 CONDENSATE LINE, INSULATED ABOVE GRADE (PROVIDED AND INSTALLED BY CONTRACTOR)
94 PROPOSED 1/2" SS GLOBE VALVE (SKID MOUNTED AND PROVIDED BY FLARE MANUFACTURER)



REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

PROPOSED UTILITY SITE PLAN

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-103

PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING MAJOR CONTOUR
- PROPOSED PIPING AND EQUIPMENT
- CAG — PROPOSED ABOVE GROUND CONDENSATE LINE
- AAG — PROPOSED ABOVE GROUND AIR LINE
- EXISTING STORM CHANNEL

CONSTRUCTION NOTES

(10) TIE-IN PROPOSED 2" HDPE SDR- CONDENSATE LINE TO EXISTING EXISTING CONDENSATE LINE VIA TEE CONNECTION AND ASSOCIATED REDUCERS AND ELBOWS AS NEEDED — 2 / M-501

(11) TIE-IN PROPOSED 2" AIR LINE TO EXISTING AIR LINE VIA TEE CONNECTION AND ASSOCIATED REDUCERS AND ELBOWS AS NEEDED — 2 / M-501

(14) SLOPE PROPOSED CONDENSATE PIPING TO DRAIN TO THE EXISTING CONDENSATE PUMP NORTH OF THE PROPOSED FLARE STATION

(62) PROPOSED 2" HDPE CONDENSATE PIPE

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SCALE IN FEET

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

PROPOSED UTILITY TIE IN LOCATIONS

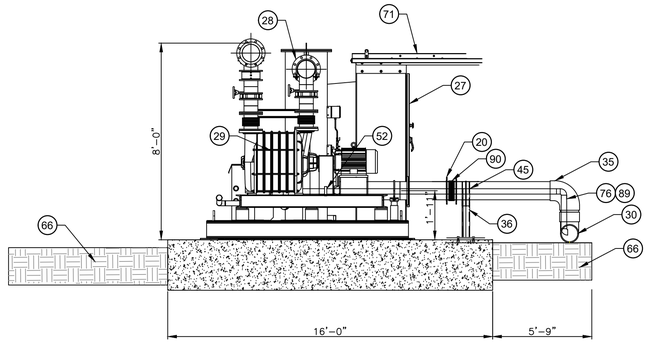
DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-104

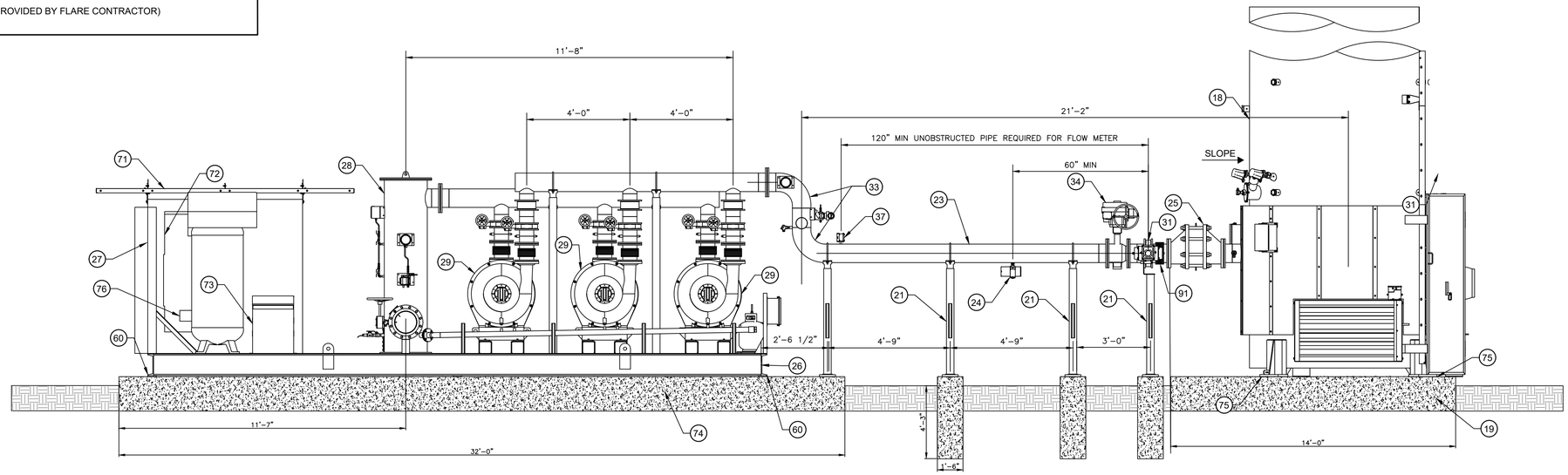
PRELIMINARY - NOT FOR CONSTRUCTION

CONSTRUCTION NOTES

18 PROPOSED 1,000 SCFM FLARE STACK, CONTRACTOR TO COORDINATE WITH THE CITY AND ENGINEER ON EXISTING FLARE SHUTDOWN DURING INSTALLATION (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
19 PROPOSED FLARE STACK AND AIR COMBUSTION BLOWER FOUNDATION — 1 / S-101
20 PROPOSED 10" SS10 AND 10" SDR-11 HDPE FLANGE CONNECTION — 3 / M-501
21 PROPOSED 10" PIPE SUPPORT/FOOTING ON PROPOSED FOUNDATION — 1A / S-102, 1B / S-102
22 PROPOSED 10" HDPE SDR-11 TEE — 2 / M-501
23 PROPOSED 10" 304 SS SCH 10 PIPE, WELD (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
24 PROPOSED FLOW METER INSTALLED 45 DEGREES FROM BOTTOM OF PIPE. SHOWN ROTATED FOR CLARITY (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
25 PROPOSED FLAME ARRESTOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
26 PROPOSED BLOWER SKID (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
27 PROPOSED CONTROL PANEL (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
28 PROPOSED KNOCK OUT POT (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
29 PROPOSED BLOWER(S) (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
30 PROPOSED 10" ABOVE GRADE HDPE SDR-17 PIPE
31 PROPOSED 10" FAIL CLOSE VALVE (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
32 TIE INTO EXISTING 10" HDPE SDR-17 PIPE WITH 10" HDPE SDR-11 TEE — 2 / M-501
33 PROPOSED 10" 304 SS 90° ELBOW (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
34 PROPOSED 10" MANUAL BUTTERFLY VALVE (PROVIDED AND INSTALLED BY CONTRACTOR)
35 PROPOSED 10" HDPE SDR-11 ELBOW
36 PROPOSED 10" PIPE SUPPORT/FOOTING ON PROPOSED BOWER SKID FOUNDATION — 2 / S-102
37 PROPOSED PRESSURE TRANSMITTER (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
45 PROPOSED AIR AND CONDENSATE LINES TO BE PROPERLY SECURED TO STRUT CHANNEL
52 PROPOSED SS TO HDPE TRANSITION FITTING
60 ANCHOR PROPOSE BLOWER SKID TO PROPOSED BLOWER SKID FOUNDATION — 2 / S-102
61 TRANSITION FROM ABOVE GRADE TO BELOW GRADE
66 GROUND LEVEL (SLOPE AWAY FROM SLABS)
70 PROPOSED AIR COMPRESSOR (PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
71 PROPOSED RAIN SHIELD (PROVIDED BY FLARE MANUFACTURER AND INSTALLED BY CONTRACTOR)
72 PROPOSED AIR CONDITIONER (SKID MOUNTED, PROVIDED BY FLARE MANUFACTURER)
73 PROPOSED VOLTAGE TRANSFORMER (SKID MOUNTED PROVIDED BY FLARE MANUFACTURER)
74 PROPOSED BLOWER SKID FOUNDATION
75 ANCHOR PROPOSED FLARE TO PROPOSED FOUNDATION — 2 / S-101
76 PROPOSED 2" HDPE AIR PIPE TO EXISTING 3/8" SST COMPRESSED AIR LINE VIA TEE CONNECTION
89 PROPOSED 2" HDPE SDR-11 CONDENSATE LINE, INSULATED ABOVE GRADE (PROVIDED AND INSTALLED BY CONTRACTOR)
90 PROPOSED 10" FLANGED FLEX HOSE PROVIDED BY FLARE MANUFACTURER, INSTALLED BY CONTRACTOR)
93 PROPOSED 1/2" GLOBE VALVE (SKID MOUNTED, PROVIDED BY FLARE CONTRACTOR)



1 SECTION A-A'
NTS



2 SECTION B-B'
NTS

REV	REVISION DESCRIPTION	DATE

TETRA TECH
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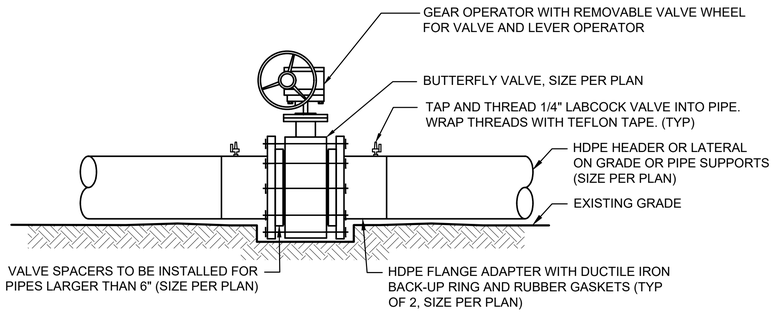
CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT
CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS
FLARE STATION SECTIONS

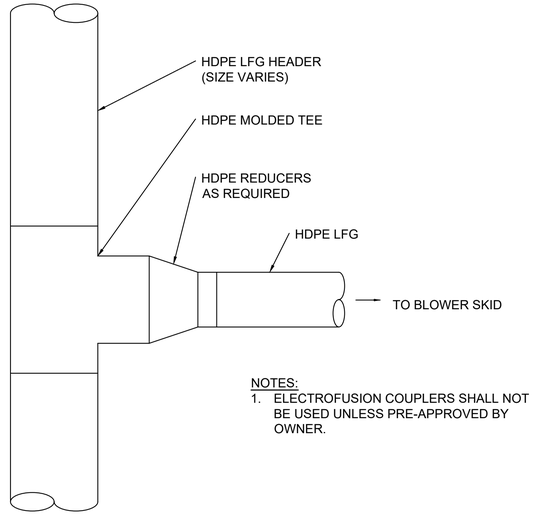
DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-301

PRELIMINARY - NOT FOR CONSTRUCTION

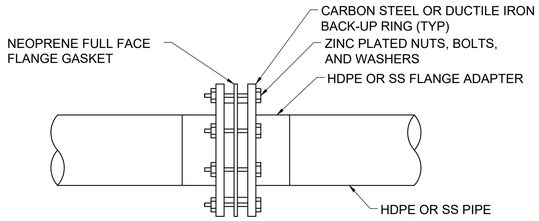


1	ABOVE GRADE VALVE DETAIL
NTS	REFERENCE SHEET: M-101

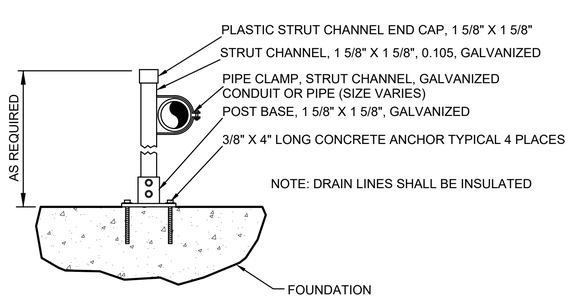


NOTES:
1. ELECTROFUSION COUPLERS SHALL NOT BE USED UNLESS PRE-APPROVED BY OWNER.

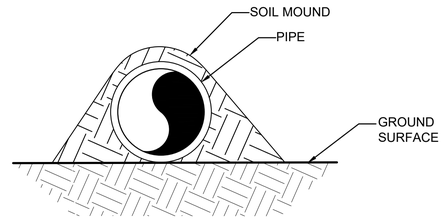
2	LFG TIE-IN WITH TEE
NTS	REFERENCE SHEET: M-101



3	FLANGE CONNECTION
NTS	REFERENCE SHEET: M-101



4	SMALL PIPE SUPPORT DETAIL
NTS	REFERENCE SHEET: M-101



NOTES:

1. SOIL MOUNDING TO BE PLACED EVERY 25 FEET AT MINIMUM.
2. MOUND SHALL EXTEND A MINIMUM OF ONE FOOT ABOVE TOP OF PIPE AND COMPLETED USING CLEAN SOIL.

4	SOIL MOUNDING FOR ABOVE GRADE PIPE STABILIZATION
NTS	REFERENCE SHEET: M-100

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

TYPICAL DETAILS

DESIGNED BY : LGM	CHECKED BY : CMM	DATE : 09-19-2025
DRAWN BY : MLF CDH	APPROVED BY : PMN	

SHEET
M-501

PRELIMINARY - NOT FOR CONSTRUCTION

RELAY FUNCTION DESIGNATIONS TYPES

MISCELLANEOUS SYMBOLS

- I/P = CURRENT TO PNEUMATIC
- A/M = AUTO/MANUAL
- A/D = ANALOG/DIGITAL
- L/R = LOCAL/REMOTE
- HOA = HAND/OFF/AUTO
- S = SOLENOID VALVE
- I = INTERLOCK
- R = RESET FOR LATCH TYPE ACTUATOR
- AND = INTERLOCK IF ALL INPUTS EXIST
- OR = INTERLOCK IF ANY ONE OR MORE INPUTS EXIST
- 1 / 2 = DETAIL NUMBER; SHEET NUMBER DETAIL IS DRAWN ON

INSTRUMENT SYMBOLS

- = LOCALLY MOUNTED INSTRUMENT
- = PLC CONTROLLED DEVICE
- = CONTROL PANEL MOUNTED INSTRUMENT
- = LOCALLY PANEL MOUNTED UNIT
- = INSTRUMENT MOUNTED BEHIND BOARD
- = LOCAL BOARD MOUNTED INSTRUMENT
- = INSTRUMENT MOUNTED BEHIND LOCAL BOARD
- = PILOT LIGHT (R=RED; G=GREEN; A=AMBER; B=BLUE; W=WHITE; C=CLEAR; N=NEON)
- = CONTROL PANEL MOUNTED INSTRUMENT
- = REMOTE MONITORING
- = REMOTE CONTROL

LINE & SIGNAL SYMBOLS

- = PNEUMATIC TRANSMISSION, INSTRUMENT AIR, PIPE OR TUBING
- = ELECTRICAL TRANSMISSION
- = SOFTWARE COMMUNICATION LINK
- = EXISTING CONNECTION TO PROCESS, MECHANICAL LINK
- = EXISTING CONDENSATE TRANSMISSION PIPING
- = EXISTING PROPANE GAS PIPING
- = INSULATION
- = PROPOSED DECOMMISSIONED PIPING
- = PROPOSED LFG PIPING
- = PROPOSED CONDENSATE TRANSMISSION PIPING
- = PROPOSED PROPANE GAS PIPING
- = EQUIPMENT TO BE PROVIDED BY FLARE MANUFACTURER
- = PROPOSED COMPRESSED AIR LINE

INSTRUMENTATION DEVICES & ACCESSORIES

- = PILOT TUBE OR PILOT VENTURI TUBE
- = PISTON OPERATED VALVE WITH HANDWHEEL, SIDE-MOUNTED
- = SELF-CONTAINED PRESSURE CONTROL VALVE
- = HYDRAULIC OR PNEUMATIC (SPRING RETURN) PISTON-OPERATED VALVE
- = SOLENOID-OPERATED 2-WAY VALVE
- = SOLENOID-OPERATED 3-WAY VALVE
- = PRESSURE RELIEF VALVE
- = PISTON-OPERATED VALVE WITH OPEN AND CLOSED POSITION SWITCHES AND WITH HANDWHEEL, SIDE MOUNTED
- = CONTROL VALVE WITH I/P TRANSDUCER
- = ANGLE VALVE
- = BUTTERFLY VALVE, HAND OPERATED
- = BALL VALVE, HAND OPERATED
- = CHECK VALVE
- = NEEDLE VALVE, HAND OPERATED
- = HAND VALVE, HAND OPERATED
- = 3-WAY HAND VALVE, HAND OPERATED
- = PRESSURE REGULATOR W/PRESSURE GAUGE
- = BUTTERFLY VALVE, AUTOMATED
- = BUTTERFLY VALVE, GEAR OPERATED
- = GEAR OPERATOR
- = Y-STRAINER
- = PNEUMATIC POSITIONER
- = FLEX CONNECTOR
- = FLEX CONNECTOR WITH FLANGE CONNECTION
- = FLANGE CONNECTION
- = BLIND FLANGE
- = UNION
- = CAP OR PLUG
- = MAN WELL
- = CONCENTRIC REDUCER
- = ECCENTRIC REDUCER
- = SAMPLE PORT
- = MANUAL ACTUATOR/OVERRIDE
- = EXPANSION JOINT
- = ELECTRIC MOTOR WITH FAN
- = BLOWER

MISCELLANEOUS ABBREVIATIONS

A	=	ACTUATOR
AC or A/C	=	AIR CONDITIONER
ACFM	=	ACTUAL CUBIC FEET PER MINUTE
ADS	=	AUTO DIALER SYSTEM
AF	=	AMPERE FRAME SIZE (CIRCUIT BREAKER)
AFF	=	ABOVE FINISH FLOOR
AI	=	ANALOG INPUT
AIO	=	ANALOG INPUT OUTPUT
AOUT	=	ANALOG OUTPUT
AL	=	ALUMINUM
AMP	=	AMPERES, AMPERAGE
AP	=	AUXILIARY PORT
AT	=	AMPERE TRIP
AUTO	=	AUTOMATIC
AWG	=	AMERICAN WIRE GAUGE
B	=	BLOWER
BALL	=	BURNER ALARM LOW LOW
BATT	=	BATTERY
BC	=	BARE COPPER
BE	=	BURNER ELEMENT (UV SCANNER)
BG	=	BURNER GLASS
BI	=	BLACK IRON
BKR	=	BREAKER
BNR	=	BURNER
BOM	=	BILL OF MATERIAL
BPS	=	BUILDING PROTECTION SYSTEM
BS	=	BURNER SWITCH (FLAME SAFEGUARD)
BTM	=	BOTTOM
BTU	=	BRITISH THERMAL UNIT
C	=	CONDUIT
CAH	=	CURRENT ALARM HIGH
CAL	=	CURRENT ALARM LOW
CBL	=	CABLE
CC	=	CENTER TO CENTER
CGH	=	COMBUSTIBLE GAS HIGH
CGHH	=	COMBUSTIBLE GAS HIGH HIGH
CGI	=	COMBUSTIBLE GAS INDICATOR
CGT	=	COMBUSTIBLE GAS TRANSMITTER
CH	=	CHANNEL
CHR	=	CHART RECORDER
CI	=	CURRENT INDICATOR
CIR	=	CIRCUIT
CNT	=	COUNTER
CO	=	CONDUIT ONLY
COMM	=	COMMUNICATION
CMP or COMP	=	COMPRESSOR
CP	=	CONTROL PANEL
CPT	=	CONTROL POWER TRANSFORMER
CPVC	=	CHLORINATED POLYVINYL CHLORIDE
CR	=	CONTROL RELAY
CS	=	CARBON STEEL
CSH	=	CURRENT SWITCH HIGH
CSL	=	CURRENT SWITCH LOW
CT	=	CURRENT TRANSFORMER
CU	=	COPPER
CV	=	CONTROL VALVE (MODULATING)
D	=	DRYER
DI	=	DIGITAL INPUT
DISTR	=	DISTRIBUTION
DL	=	DAYLIGHT
DP	=	DELTA OR DIFFERENTIAL PRESSURE
DPI	=	DIFFERENTIAL PRESSURE INDICATOR
DPS	=	DIFFERENTIAL PRESSURE SWITCH
DS	=	DISCONNECT SWITCH
DWG	=	DRAWING
E	=	ELECTRICAL MOTOR
E/E	=	VOLTAGE TRANSFORMER
EDP	=	ELECTRICAL DISTRIBUTION PANEL
EI	=	VOLTAGE INDICATOR
EL OR ELEV	=	ELEVATION
EMER	=	EMERGENCY
EMT	=	ELECTRICAL METALLIC TUBING
ENCL	=	ENCLOSURE, ENCLOSED
EQPT	=	EQUIPMENT
ETM	=	ELAPSED TIME METER
EXH	=	EXHAUST
EXIST	=	EXISTING
EXP	=	EXPLOSION PROOF
°F	=	DEGREE FAHRENHEIT
FLT or F	=	FILTER
FA	=	FLAME ARRESTER
FAH	=	FLOW ALARM HIGH
FAHH	=	FLOW ALARM HIGH HIGH
FAL	=	FLOW ALARM LOW
FALL	=	FLOW ALARM LOW LOW
FBO	=	FURNISHED BY OTHERS
FC	=	FLOW CONTROLLER
F.C.	=	FAIL CLOSE
FCV	=	FLOW CONTROL VALVE
FD	=	FUSED DISCONNECT
FDR	=	FEEDER
FE	=	FLOW ELEMENT (FLOW METER)
FFA	=	FLAME FAILURE ALARM
FG	=	FINISH GRADE
FI	=	FLOW INDICATOR
FIR	=	FLOW INDICATING RECORDER
FIT	=	FLOW INDICATING TRANSMITTER
FL	=	FLOWLINE
FLA	=	FULL LOAD AMPS
FLR	=	FLARE
FX or FLEX	=	FLEXIBLE HOSE
FLTP	=	PORT FILTER
F.O.	=	FAIL OPEN
FOR	=	FORWARD
FQI	=	FLOW TOTALIZER INDICATOR
FR	=	FLOW RECORDER
FRG	=	FILTER REGULATOR
FRL	=	FILTER/REGULATOR/LUBRICATOR
FRP	=	FIBERGLASS REINFORCED PLASTIC
FS	=	FLOW SWITCH OR FINISH SURFACE
FSH	=	FLOW SWITCH HIGH
FSL	=	FLOW SWITCH LOW
FSV	=	FLOW SAFETY VALVE (CHECK VALVE)
FT	=	FLOW TRANSMITTER
FU	=	FUSE
FUH	=	FUSE HOLDER
FUT	=	FUTURE
FV	=	FLOW VALVE
GAC	=	GRANULAR ACTIVATED CARBON
GB	=	GRADE BREAK
GCCS	=	GAS COLLECTION AND CONTROL SYSTEM
GF	=	GROUND FAULT
GFI	=	GROUND FAULT INTERRUPTER
GM	=	GAS MONITOR
GND or GRND	=	GROUND
HDPE	=	HIGH DENSITY POLYETHYLENE
HOA	=	HAND-OFF-AUTO
HP	=	HORSEPOWER OR HIGH POINT
HS	=	HAND SWITCH
HT	=	HEAT TRACE
HTR	=	HEATER
HV	=	HAND VALVE
HVP	=	HAND VALVE PORT
HZ	=	HERTZ
I	=	CURRENT
II	=	CURRENT INDICATOR
I/I	=	CURRENT TRANSFORMER
IAH	=	CURRENT ALARM HIGH
IAHH	=	CURRENT ALARM HIGH HIGH
IAL	=	CURRENT ALARM LOW
IALL	=	CURRENT ALARM LOW LOW
IAS	=	INSTRUMENT AIR SUPPLY
IG or IGN	=	IGNITOR
IIR	=	CURRENT INDICATING RECORDER
INST	=	INSTANTANEOUS
INSTR	=	INSTRUMENT
INV	=	INVERT
ISC	=	SHORT CIRCUIT CURRENT
IT	=	CURRENT TRANSMITTER
ITC	=	INDUSTRIAL TECHNICAL CORPORATION
KI	=	TIME INDICATOR
KV	=	KILOVOLTS
KVA	=	KILOVOLT AMPERES
KW	=	KILOWATTS
LAH	=	LEVEL ALARM HIGH
LAHH	=	LEVEL ALARM HIGH HIGH
LAL	=	LEVEL ALARM LOW
LALL	=	LEVEL ALARM LOW LOW
LC	=	LEVEL CONTROLLER
LCH	=	LEVEL CONTROLLER HIGH
LCL	=	LEVEL CONTROLLER LOW
LCP	=	LOCAL CONTROL PANEL
LCR	=	LATCHING CONTROL RELAY
LE	=	LEVEL ELEMENT
LEL	=	LOWER EXPLOSIVE LIMIT
LFG	=	LANDFILL GAS
LG	=	LEVEL GAGE
LI	=	LEVEL INDICATOR
LMP	=	LAMP
LO	=	LUBE OIL
LOC	=	LOCAL
LOS	=	LOCK-OUT-STOP
LP	=	LIGHTING PANEL
LS	=	LEVEL SWITCH
LSH	=	LEVEL SWITCH HIGH
LSHH	=	LEVEL SWITCH HIGH HIGH
LSL	=	LEVEL SWITCH LOW
LSLL	=	LEVEL SWITCH LOW LOW
LT	=	LEVEL TRANSMITTER OR LIGHT(S)
LTG	=	LIGHTING
LUB	=	LUBRICATOR
M	=	MOTOR
MA	=	MILLIAMPS
M.A.	=	METHANE ANALYZER
MAL	=	METHANE ALARM LOW
MALL	=	METHANE ALARM LOW LOW
MAG	=	MAGNETIC
MAN	=	MANWAY
MAX	=	MAXIMUM
MCC	=	MOTOR CONTROL CENTER
MCM	=	THOUSAND CIRCULAR MILS
MCP	=	MAIN CONTROL PANEL
MH	=	MANHOLE
MI	=	METHANE INDICATOR
MIR	=	METHANE INDICATING RECORDER
MIN	=	MINIMUM
MIT	=	METHANE INDICATOR TRANSMITTER
MMS	=	MANUAL MOTOR STARTER
MOD	=	MODEM
MOT	=	MOTOR
MOV	=	MOTOR OPERATED VALVE
MS	=	MOTOR STARTER
MSB	=	MAIN SWITCH BOARD
MTD	=	MOUNTED
M.W.	=	MANWAY
NA	=	NON-AUTOMATIC
NBK	=	NEUTRAL BLOCK
N.C.	=	NORMALLY CLOSED
N.C.T.C.	=	NORMALLY CLOSED TIMED TO CLOSE
N.C.T.O.	=	NORMALLY CLOSED TIMED TO OPEN
NEG	=	NEGATIVE
NIC	=	NOT IN CONTRACT
N.O.	=	NORMALLY OPEN
N.O.T.C.	=	NORMALLY OPEN TIMED TO CLOSE
N.O.T.O.	=	NORMALLY OPEN TIMED TO OPEN
NP	=	NAMEPLATE
NTS	=	NOT TO SCALE
NOX	=	OXIDES OF NITROGEN
O	=	OXYGEN
O/C	=	OPEN/CLOSE
O.C.	=	ON CENTER
OA	=	OXYGEN ANALYZER
OAH	=	OXYGEN ALARM HIGH
OAHH	=	OXYGEN ALARM HIGH HIGH
OE	=	OXYGEN ELEMENT
OI	=	OXYGEN INDICATOR
OIR	=	OXYGEN INDICATING RECORDER
OT	=	OXYGEN TRANSMITTER
OIT	=	OXYGEN INDICATOR TRANSMITTER
OSF	=	OXYGEN SENSOR FAILURE
OL	=	OVERLOAD
PDI	=	PRESSURE DIFFERENTIAL INDICATOR
PMP or P	=	PUMP
PB	=	PUSH BUTTON
PA	=	PURGE AUTO
PAH	=	PRESSURE ALARM HIGH
PAHH	=	PRESSURE ALARM HIGH HIGH
PAL	=	PRESSURE ALARM LOW
PALL	=	PRESSURE ALARM LOW LOW
PC	=	PRESSURE CONTROLLER
PCV	=	PRESSURE CONTROL VALVE
PDI	=	PRESSURE DIFFERENTIAL INDICATOR
PE	=	POLYETHYLENE
PG	=	PILOT GAS
PH	=	PHONE
PI	=	PRESSURE INDICATOR
P&ID	=	PIPING AND INSTRUMENTATION DIAGRAM
PIC	=	PRESSURE INDICATING CONTROLLER
PIR	=	PRESSURE INDICATING RECORDER
PIT	=	PRESSURE INDICATING TRANSMITTER
PLC	=	PROGRAMMABLE LOGIC CONTROLLER
PLT	=	PILOT
PNL	=	PANEL
POS	=	POSITION, POSITIVE
POT	=	POTENTIOMETER
POZ	=	POSITIONER
PP	=	POWER PANEL or POWER POLE
PS	=	PRESSURE SWITCH
PSE	=	PRESSURE SAFETY ELEMENT
PSH	=	PRESSURE SWITCH HIGH
PSI	=	POUNDS PER SQUARE INCH
PSL	=	PRESSURE SWITCH LOW
PT	=	PRESSURE TRANSMITTER
PRV	=	PRESSURE RELIEF VALVE
PVC	=	POLYVINYL CHLORIDE
PWR	=	POWER
QL	=	TOTALIZER
REQD	=	REQUIRED
RD	=	RUPTURE DISK
RDAH	=	RUPTURE DISK ALARM HIGH
RDS	=	RUPTURE DISK SWITCH
RECEPT	=	RECEPTACLE
RES	=	RESISTOR
RGS	=	RIGID GALVANIZED STEEL
RM	=	RELAY MODULE
RPM	=	REVOLUTIONS PER MINUTE
RT	=	RETENTION TIME
RTC	=	RETENTION TIME CALCULATOR
S	=	AIR STRIPPER
SB	=	SPECTACLE BLIND
SCFM	=	STANDARD CUBIC FEET PER MINUTE
SCH	=	SCHEDULE
SD	=	SHUTDOWN
SD/O	=	SHUTDOWN OR ON
SDR	=	STANDARD DIMENSION RATIO
SDV	=	SHUTDOWN VALVE
SEC	=	SECONDARY, SECONDS
SECT	=	SECTION
SEL	=	SELECTOR
SEQ	=	SEQUENCE, SEQUENCER
SF	=	SUPPLEMENTAL FUEL
SFR	=	SENSOR FAILURE
SG	=	SIGHT GLASS
SHLD	=	SHIELD, SHIELDED
SHT	=	SHEET
SI	=	SPEED INDICATOR
SOV	=	SOLENOID VALVE
SP	=	SAMPLE PORT
SPECS	=	SPECIFICATION
SS	=	STAINLESS STEEL
SSR	=	SURGE ARRESTOR
ST	=	SHUNT TRIP
STA	=	STATION
STD	=	STANDARD
STR	=	STRAINER
SW	=	SWITCH
SYS	=	SYSTEM
T or TK	=	TANK
TACH	=	TACHOMETER
TAH	=	TEMPERATURE ALARM HIGH
TAHH	=	TEMPERATURE ALARM HIGH HIGH
TAL	=	TEMPERATURE ALARM LOW
TALL	=	TEMPERATURE ALARM LOW LOW
TB	=	TERMINAL BLOCK
TC	=	TEMPERATURE CONTROLLER
TCV	=	TEMPERATURE CONTROL VALVE
TCZ	=	TEMPERATURE CONTROLLER POSITIONER
TD or TDR	=	TIME DELAY RELAY
TE	=	TEMPERATURE ELEMENT (THERMOCOUPLE)
TEMP	=	TEMPERATURE
TES	=	TEMPERATURE ELEMENT SWITCH
TEW	=	TEMPERATURE ELEMENT WELL
THERM	=	THERMOSTAT
TI	=	TEMPERATURE INDICATOR
TIC	=	TEMPERATURE INDICATOR CONTROLLER
TIR	=	TEMPERATURE INDICATOR RECORDER
TIT	=	TEMPERATURE INDICATOR TRANSMITTER
TMR	=	TIMER
TR	=	TEMPERATURE RECORDER
TS	=	TEMPERATURE SWITCH OR TOP OF SLAB
TSE	=	TEMPERATURE SAFETY ELEMENT
TSH	=	TEMPERATURE SWITCH HIGH
TSL	=	TEMPERATURE SWITCH LOW
TSO	=	TIGHT SHUTOFF
TSV	=	TEMPERATURE SAFETY VALVE
TT	=	TEMPERATURE TRANSMITTER
TV	=	TEMPERATURE VALVE
TYP	=	TYPICAL
UG	=	UNDERGROUND
UPS	=	UNINTERRUPTIBLE POWER SUPPLY
UV	=	ULTRAVIOLET SCANNER
V	=	VESSEL
VA	=	VIBRATION ALARM
VAH	=	VIBRATION ALARM HIGH
VAHH	=	VIBRATION ALARM HIGH HIGH
VB	=	VACUUM BREAK
VFD	=	VARIABLE FREQUENCY DRIVE
VI	=	VIBRATION INDICATOR
VIR	=	VIBRATION INDICATING RECORDER
VP	=	VAPOR PROOF
VS	=	VIBRATION SWITCH
VSD	=	VARIABLE SPEED DRIVE
VSH	=	VIBRATION SWITCH HIGH
VT	=	VIBRATION TRANSMITTER
W	=	WATTS
W.C.	=	WATER COLUMN
WP	=	WEATHER PROOF
XFMR	=	TRANSFORMER
XP	=	EXPLOSION PROOF
YA	=	EVENT ALARM
YI	=	EVENT INDICATOR
YIC	=	EVENT INDICATOR CONTROLLER
ZA	=	POSITION ALARM
ZC	=	POSITION CONTROLLER
ZI	=	POSITION INDICATOR
ZS	=	POSITION SWITCH
ZSC	=	POSITION SWITCH CLOSED
ZSO	=	POSITION SWITCH OPENED

REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

SYMBOLS AND ABBREVIATIONS

DESIGNED BY : LCM	CHECKED BY : CMM	DATE : 09-19-2025
DRAWN BY : MLF CDH	APPROVED BY : PMN	

SHEET
M-600

PRELIMINARY - NOT FOR CONSTRUCTION

FLT-301

PROPOSED FUEL FILTER/MOISTURE SEPARATOR
MFR: PEI
MATERIAL: HDPE
NOZZLE SIZE: 10" INLET, 8" OUTLET
99% REMOVAL OF 6 MICRON OR LARGER

BLR-301/302/303

PROPOSED CENTRIFUGAL BLOWER
MFR: CONTINENTAL
MODEL:031A-06
MOTOR: 40 HP, 3600 RPM

BLR-401

PROPOSED COMBUSTION AIR BLOWER
MFR: INDUSTRIAL AIR TECH.
MODEL: BCHS, 227
FLOW RATE: 7,200 SCFM
SHAFT: 1045 (STANDARD)
STAINLESS STEEL DRAIN

FT-301

PROPOSED THERMAL MASS FLOW METER/TRANSMITTERS
MFR: KURZ
MODEL: 756053
TYPE: INTEGRAL
POWER: 24VDC
OUTPUT: 4-20mA
FLOW: 0-1000 SCFM

CMP-2

PROPOSED AIR COMPRESSOR
MFR: ATLAS COPCO
MODEL: GA 22
SIZE: 30 HP

DRY-801

RECEIVE TANK DRYER AND FILTER
SIZE: 400 GAL

TSE-301

PROPSOED FLAME ARRESTOR
MFR: ENARDO
TYPE: ECCENTRIC CONNECTION: 8" FLANGE
MATERIAL: ALUMINUM HOUSING AND SS ELEMENT
DRAIN/PRESSURE PORTS

FLR-2

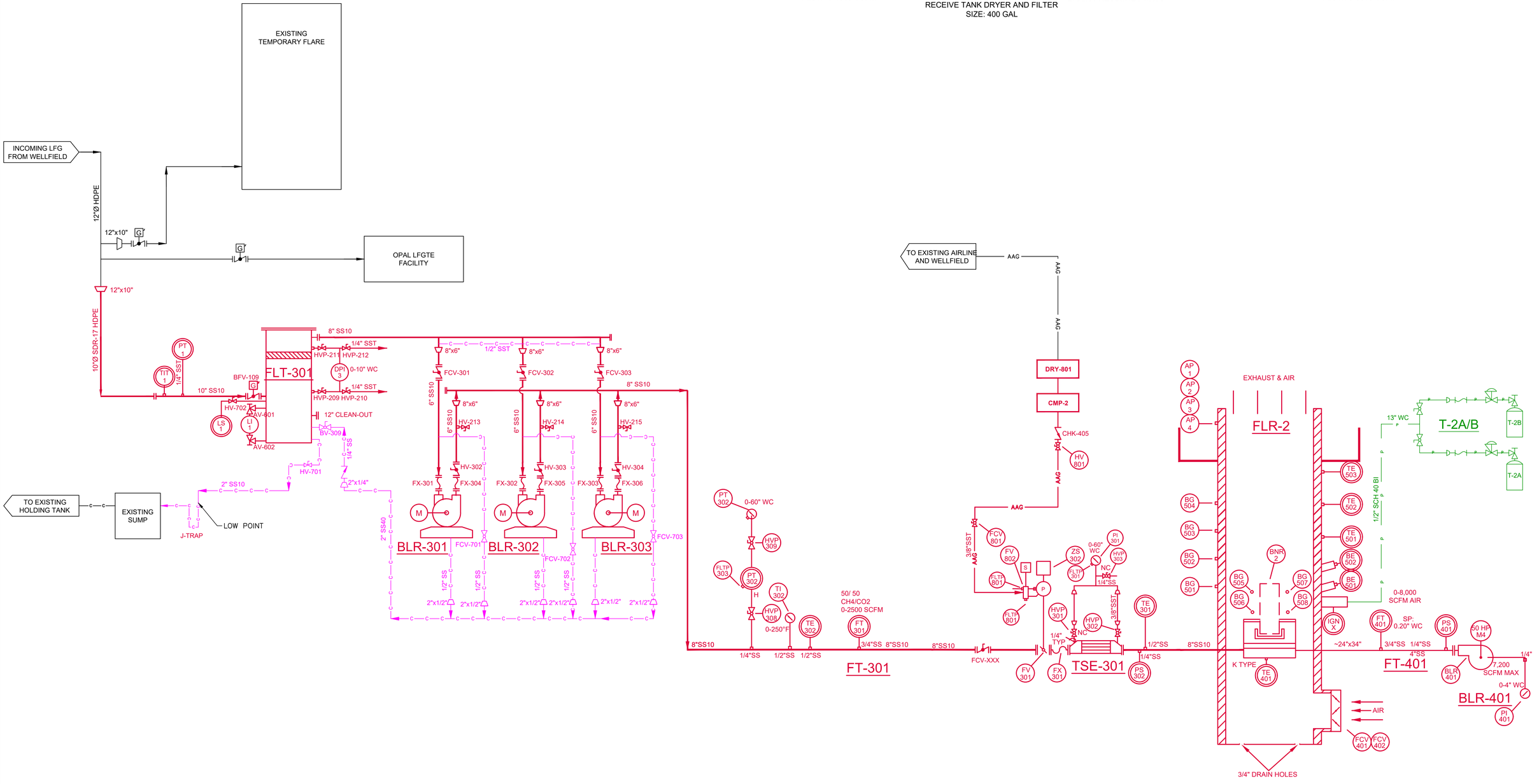
PROPOSED FLARE
MFR: PEI
SIZE: 33 MMBTU/h
FLOW: 1,000 SCFM MAX.
(30% TO 55% CH4)

FT-401

PROPOSED THERMAL MASS FLOW METER/TRANSMITTERS
MFR: KURZ
MODEL: 756053
TYPE: INTEGRAL
POWER: 24VDC
OUTPUT: 4-20mA
FLOW: 0-8000 SCFM

T-2A/B

PROPANE BOTTLES
2 PROPOSED
SIZE: 8 GALLON



REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

PROCESS FLOW DIAGRAM

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
M-601

PRELIMINARY - NOT FOR CONSTRUCTION

File: \\tt-local\vol9:\19PROJECTS\SANTA CRUZ\197-2024-4037 - Santa Cruz Low-NOx Flare\Project Drawings\197-2024-4037_M601_PROCESS FLOW.dwg, Layout: M-601, User: MSSI, FRM: Sep 19, 2025 - 3:06pm

STRUCTURAL NOTES

THESE NOTES SHALL APPLY UNLESS SHOWN/INDICATED OTHERWISE ELSEWHERE IN THE STRUCTURAL DRAWINGS.

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE (C.B.C.).
2. THE CONTRACTOR ACKNOWLEDGES RESPONSIBILITY FOR JOBSITE SAFETY AND ACKNOWLEDGES THAT THE ENGINEER WILL NOT HAVE SUCH RESPONSIBILITY. IF A LAWSUIT IS FILED BY ONE OF THE CONTRACTOR'S OR SUBCONTRACTOR'S EMPLOYEES, OR ANY ONE ELSE, THE CONTRACTOR WILL INDEMNIFY, DEFEND AND HOLD THE OWNER AND TETRA TECH, INC., THEIR PARENT AND SUBSIDIARY COMPANIES HARMLESS OF ANY AND ALL SUCH CLAIMS.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. SHOULD CONDITIONS EXIST WHICH ARE CONTRARY TO THOSE SHOWN ON PLANS, THE ENGINEER SHALL BE NOTIFIED IN WRITING BEFORE PROCEEDING WITH WORK.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL WORK IS ADEQUATELY BRACED AND SHORED DURING CONSTRUCTION. ALL BRACING/SHORING SHALL BE DESIGNED BY A REGISTERED ENGINEER HIRED BY THE CONTRACTOR.
5. UNLESS DETAILED, SPECIFIED, OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN THE APPLICABLE TYPICAL DETAILS AND THESE GENERAL NOTES. TYPICAL DETAILS ARE MEANT TO APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS ON DRAWINGS WHERE THEY OCCUR.
6. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKERS AND PEDESTRIANS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, TEMPORARY STRUCTURES, AND PARTIALLY COMPLETED WORK, ETC. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT BE CONSIDERED AS INSPECTION OF SUCH ITEMS.
7. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
8. ALL WORK SHALL CONFORM TO THE PLANS AND SPECIFICATIONS IN ALL RESPECTS AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
9. BY ACCEPTING THIS CONTRACT, CONTRACTOR HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND, HOLD HARMLESS THE OWNER, ENGINEER, (HEREINAFTER TETRA TECH, INC.), THEIR PARENT AND SUBSIDIARY COMPANIES, AGENTS, EMPLOYEES, CONSULTANTS AND REPRESENTATIVES FOR ANY AND ALL DAMAGE TO PERSONS OR PROPERTY OR WRONGFUL DEATH REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE, ACTIVE OR PASSIVE, OF OWNER, ENGINEER, THEIR PARENT AND SUBSIDIARY COMPANIES AS WELL AS THEIR AGENTS AND EMPLOYEES, TO THE FULLEST EXTENT PERMITTED BY LAW. SUCH INDEMNIFICATION SHALL EXTEND TO ALL CLAIMS, DEMANDS, ACTIONS, OR LIABILITY FOR INJURIES, DEATH OR DAMAGES OCCURRING AFTER COMPLETION OF THE PROJECT, AS WELL AS DURING THE WORK'S PROGRESS. CONTRACTOR FURTHER AGREES THAT IT SHALL ACCOMPLISH THE ABOVE AT ITS OWN COST, EXPENSE AND RISK EXCLUSIVE OF AND REGARDLESS OF ANY APPLICABLE INSURANCE POLICY OR POSITION TAKEN BY ANY INSURANCE COMPANY REGARDING COVERAGE.
10. CONTRACTOR SHALL VERIFY LOCATION OF ALL SITE UTILITIES PRIOR TO STARTING WORK, BOTH ABOVE GROUND AND BELOW GROUND, WHICH MAY BE IMPACTED BY THE WORK SHOWN ON THESE DRAWINGS. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
11. CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CLIENT AND TETRA TECH, INC. THEIR PARENT AND SUBSIDIARY COMPANIES, ITS EMPLOYEES, OFFICERS, OR AGENTS, HARMLESS AGAINST ANY AND ALL CLAIMS BY ANY PARTIES ARISING FROM, OR RELATED TO, ANY AND ALL DAMAGES, INCLUDING LEGAL COSTS AND ATTORNEY'S FEES, RESULTING FROM INTERFERENCE WITH, INTERRUPTION OF, DAMAGE TO, OR ANY AND ALL INJURIES WHICH RESULT FROM DAMAGE CAUSED TO SUBSURFACE INSTALLATION, WHICH IS UNFORESEEN AND DESPITE ENGINEER'S EFFORT DURING THE DESIGN PROCESS WAS NOT LOCATED, EXCEPTING ONLY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ENGINEER IN PROVIDING ITS SERVICES.
12. ALL ITEMS SHOWN ON THESE PLANS ARE NEW UNLESS NOTED (E), EXIST. OR EXISTING.

REINFORCING NOTES

1. REINFORCEMENT FOR CONCRETE SHALL BE DEFORMED BARS CONFORMING TO A.S.T.M. SPECIFICATION A615. GRADE 60 . WELDED REINFORCEMENT SHALL CONFORM TO ASTM A706 OR EQUAL.
2. ALL REINFORCEMENT, ANCHOR BOLTS, AND OTHER ANCHORAGES PLACED IN CONCRETE SHALL BE ACCURATELY PLACED AND POSITIVELY SECURED AND SUPPORTED BY CONCRETE BLOCKS, METAL CHAIRS, SPACERS, OR METAL HANGERS, AND SHALL BE IN POSITION BEFORE CONCRETE PLACING OR GROUTING IS BEGUN. DETAILING AND PLACING OF BARS SHALL CONFORM TO THE A.C.I. MANUAL OF STANDARD PRACTICES.
3. BARS SPECIFIED AS "CONTINUOUS" SHALL EXTEND THE FULL LENGTH OF THE MEMBER CONTAINING THEM AND MAY BE SPLICED (UNLESS NOTED OR SHOWN WITHOUT SPLICES ON THE PLANS). IN CONCRETE, PROVIDE LAPS PER TYPICAL DETAILS. STAGGER ALL SPLICES.
4. DOWELS SHALL BE PROVIDED AT ALL POUR JOINTS AND SHALL BE THE SAME SIZE AND SPACING AS REINFORCING DIRECTLY BEYOND POUR JOINTS.
5. WELDING OF REINFORCING STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE OR MASONRY CONSTRUCTION SHALL CONFORM TO ANSI/AWS D1.4-11. USE LOW HYDROGEN E-70 SERIES ELECTRODES FOR WELDING OF REINFORCING BARS. CONTINUOUS INSPECTION IS REQUIRED OF ALL FIELD WELDING IN ACCORDANCE WITH C.B.C. CHAPTER 17.
6. THE SPECIFIED DIMENSIONS OF THE VERTICAL LEGS OF "L" DOWELS, WHOSE HORIZONTAL LEGS ARE CAST INTO A FOOTING OR SLAB CAST ON TOP OF EARTH, ARE BASED UPON THE SLAB THICKNESS AS SHOWN ON THE DRAWINGS. IF A SLAB IS POURED THICKER THAN SHOWN ON THE DRAWINGS, SUCH AS FOR THE SUBGRADE OCCURRING AT A LOWER ELEVATION THAN SHOWN, THE VERTICAL LEGS MUST BE FABRICATED TO A LONGER LENGTH OR THE HORIZONTAL TAILS MUST BE SUPPORTED ABOVE SUBGRADE HIGH ENOUGH TO PROVIDE THE SAME AMOUNT OF LAP LENGTH BETWEEN THE DOWEL AND THE WALL VERTICAL REINFORCING.

CONCRETE NOTES

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-19 AND SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED ON THESE DRAWINGS OR IN THE PROJECT SPECIFICATIONS. AGGREGATES SHALL CONFORM TO A.S.T.M. C33. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO A.S.T.M. C330.
2. CEMENT FOR CONCRETE SHALL BE TYPE II OR TYPE V PORTLAND CEMENT CONFORMING TO A.S.T.M. C150.
3. CONCRETE COVER FOR REINFORCING BARS SHALL BE:
   CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH = 3"
   EXPOSED TO EARTH OR WEATHER: NO. 6 THROUGH NO. 18 BARS = 2"
   NO. 5 BARS AND SMALLER = 1 1/2"
4. DRYPACK SHALL BE 1 PART CEMENT AND 3 PARTS SAND (BY VOLUME).
5. NO PIPES OR DUCTS SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL, PROCESS AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES THROUGH WALLS AND FLOORS.
6. THE LOCATION OF ALL CONSTRUCTION JOINTS NOT SPECIFICALLY NOTED OR SHOWN SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
7. "ROUGHENED SURFACES", WHERE SPECIFIED ON THE DRAWINGS, SHALL BE MECHANICALLY ROUGHENED SUCH THAT A 1/4" AMPLITUDE (±) IS ACHIEVED BETWEEN HIGH AND LOW SPOTS OF THE ROUGHENED SURFACE. THE SURFACE SHALL BE CLEAN AND FREE OF LAITANCE.
8. BOTH FACES OF CONCRETE WALLS, EDGES OF CONCRETE FOUNDATIONS, AND OTHER FORMED CONCRETE SURFACES WHERE THE SPECIFIED CONCRETE COVER IS 2 INCHES, SHALL BE PLACED AGAINST FORMWORK WHICH COMPLIES WITH THE PROJECT SPECIFICATIONS. CONCRETE FOR THESE ELEMENTS SHALL NOT BE CAST AGAINST EARTH.
9. IF NOT SPECIFIED ON DRAWINGS, ALL JOINTS SHOWN ON STRUCTURAL DRAWINGS SHALL BE ROUGHENED. SEE NOTE 7 FOR MORE INFORMATION.
10. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CONCRETE CORNERS.

STRUCTURAL STEEL NOTES

1. ALL WIDE FLANGE MEMBERS, CHANNELS, AND ANGLES SHALL BE IN ACCORDANCE WITH A.S.T.M. A-992. ALL OTHER STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE ASTM A36 UNLESS NOTED OTHERWISE. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL STRUCTURAL STEEL IN ACCORDANCE WITH CBC SECTION 1705.2.1, UNLESS FABRICATION IS PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION, IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTION 1704.2.5.1 OF THE 2019 CBC. AT THE COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE CITY BUILDING OFFICIAL (OR OWNER IF THE PROJECT IS NOT UNDER THE JURISDICTION OF A BUILDING DEPARTMENT) AND TO THE ENGINEER STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. HSS STEEL RECTANGULAR AND ROUND SHALL CONFORM TO A.S.T.M. A500, GRADE C OR BETTER, UNLESS NOTED OTHERWISE.
3. STEEL PIPES SHALL CONFORM TO A.S.T.M. A53 GR. B.
4. BOLTS SHALL CONFORM TO A.S.T.M. F3125 GR. A325 OR BETTER, UNLESS NOTED OTHERWISE.
5. HOLES FOR BOLTS IN STEEL SHALL BE OF SAME DIAMETER AS BOLT +1/16" MAXIMUM.
6. ALL WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER IN A FABRICATION SHOP REGISTERED AND APPROVED IN ACCORDANCE WITH NOTE 1 ABOVE. CONTINUOUS INSPECTION IS REQUIRED OF ALL FIELD WELDING IN ACCORDANCE WITH AWS D1.1.
7. NO STRUCTURAL STEEL MEMBER SHALL BE CUT FOR PIPES, DUCTS, ETC. UNLESS SPECIFICALLY DETAILED AND APPROVED BY STRUCTURAL ENGINEER.
8. STAINLESS STEEL SHALL CONFORM TO A.S.T.M. A276/A.I.S.I. 316. STAINLESS STEEL BOLTS SHALL CONFORM TO A.S.T.M. F593. STAINLESS STEEL NUTS SHALL CONFORM TO A.S.T.M. F594.
9. WELDING OF STAINLESS STEEL SHALL CONFORM TO STRUCTURAL WELDING CODE - STAINLESS STEEL, ANSI/AWS D1.6-07.
10. WHERE SPECIFIED, USE OF HIGH-STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING A.S.T.M. A325 OR A490 BOLTS" APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS OF THE ENGINEERING FOUNDATION (RCSC). SPECIAL INSPECTION OF HIGH-STRENGTH BOLT CONNECTIONS IS REQUIRED.
11. ALL NON-STAINLESS STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153, AS APPLICABLE. REPAIR OF DAMAGED GALVANIZED COATING SHALL BE IN ACCORDANCE WITH ASTM A780. ALL OTHER NON-STAINLESS STEEL SHALL BE COATED WITH TWO COATS OF SHOP APPLIED PRIMER
12. WELDING EQUIPMENT SHALL BE CHECKED PRIOR TO WELDING AS REQUIRED BY AISC 360-16 TABLE N5.4-1.

POST-INSTALLED ANCHORS (HILTI)

1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST ICC REPORT.
2. SPECIAL INSPECTION SHALL BE PROVIDED DURING ANCHOR INSTALLATION. SEE SHEET S-002.
3. ALTERNATIVE ANCHOR PRODUCT MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL, PROVIDED THAT IT HAS A CURRENT I.C.C. EVALUATION REPORT APPROVAL.
4. ALL ABANDONED HOLES SHALL BE FILLED WITH A DRYPACK GROUT A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI. THE FILLED HOLE(S) SHALL BE PREPARED AND CLEANED AS REQUIRED BY THE GROUT MANUFACTURER.
5. LOCATE EXISTING REINFORCING USING A NON-DESTRUCTIVE METHOD (PACHOMETER OR OTHER), PRIOR TO STEEL FABRICATION OF THE AFFECTED COMPONENTS AND PRIOR TO DRILLING HOLES FOR ANCHORS. MAINTAIN A MINIMUM CLEARANCE OF 1" BETWEEN THE REINFORCEMENT AND THE ANCHOR. NOTIFY ENGINEER IF ADHESIVE ANCHORS CANNOT BE INSTALLED DUE TO REBAR INTERFERENCE(S) SO STRUCTURAL STEEL DETAILING SHOWN HEREON CAN BE MODIFIED TO ACCOMMODATE.

FLARE STACK AND AIR COMBUSTION BLOWER EQUIPMENT NOTES

1. ANCHORAGE FOR TRAILERS, CONTAINERS, TANKS AND EQUIPMENT NOT SPECIFICALLY DETAILED IN THESE DRAWINGS SHALL BE DESIGNED AND PROVIDED BY THE GENERAL CONTRACTOR OR THE TANK OR EQUIPMENT MANUFACTURER. THE CALCULATIONS AND SHOP DRAWINGS FOR THE ANCHORAGE SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION. ALL CALCULATIONS AND ANCHORAGE SHOP DRAWINGS SHALL BE SIGNED, SEALED AND DATED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.

   A. FLARE STACK
      WEIGHT = 30,000 LBS
      CENTER OF GRAVITY = 19' - 0 1/2" (FROM BOT OF BASE PLATE)

   B. COMBUSTION AIR BLOWER
      WEIGHT = 3,000 LBS
      CENTER OF GRAVITY = 3'-6 1/2" (FROM BOT OF BASE PLATE)

   C. BLOWER SKID (GAS HANDLING SYSTEM)
      WEIGHT = 46,000 LBS
      CENTER OF GRAVITY = 3'-3 9/16" (FROM BOT OF BASE PLATE)

2. THE DESIGN OF ANY EQUIPMENT NOT SPECIFICALLY DETAILED SHALL BE DONE IN ACCORDANCE TO THE 2022 CALIFORNIA BUILDING CODE AND THE ASCE 7-16. TANKS OR EQUIPMENT MOUNTED TO A CONCRETE FOUNDATION SHALL BE DESIGNED AS A "NONBUILDING STRUCTURE" PER CHAPTER 15 OF ASCE 7-16. REFER TO DESIGN CRITERIA SECTION FOR ADDITIONAL INFORMATION.
3. CAST-IN-PLACE SHALL MEET ALL OF THE REQUIREMENTS OF ACI 318-19 CHAPTER 17, INCLUDING SEISMIC LOADING AND DUCTILE FAILURE REQUIREMENTS FOR TANKS ONLY. THE EMBEDMENT OF ANCHORS IN CONCRETE SHALL BE AS MEASURED FROM THE TOP OF THE FOUNDATION. THE PORTION OF ANCHORS IN CONCRETE HOUSEKEEPING PADS, WHERE SUCH PADS OCCUR, SHALL NOT BE INCLUDED IN THE EMBEDMENT OF THE ANCHORS.
4. CAST-IN-PLACE ANCHORS SHALL BE H.D.G. STEEL CAST-IN-PLACE ANCHOR BOLTS OR POST-INSTALLED ADHESIVE ANCHORS. EXPANSION ANCHORS MAY NOT BE USED FOR TANK ANCHORAGE TO CONCRETE.

DESIGN CRITERIA

DESIGN CODES AND REFERENCES:
- 2022 CALIFORNIA BUILDING CODE
- ASCE 7-16, MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES
- AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS 15TH EDITION
- ACI 318-19, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

SEISMIC DESIGN PARAMETERS:
LOCATION: LAT.: 36.989126, LONG.: -122.100983
SITE CLASS: C
SEISMIC DESIGN CATEGORY: D
Fa = 1.20 Fv = 1.40
Ss = 1.650 S1 = 0.625
Sds = 1.320 Sd1 = 0.583

FLARE STACK:
R = 2 (STEEL CHIMNEYS AND STACKS, ASCE 7-16 TABLE 15.4-2)
Ω = 2
RISK CATEGORY = II
Ie = 1.0
Cs = 0.47

COMBUSTION AIR BLOWER:
R = 1.25 (ALL OTHER SELF-SUPPORTING STRUCTURES, TANKS, AND VESSELS, ASCE 7-16 TABLE 15.4-2)
Ω = 2.00
RISK CATEGORY = II
Ie = 1.0
Cs = 1.06

BLOWER SKID (GAS HANDLING SYSTEM):
R = 1.25 (ALL OTHER SELF-SUPPORTING STRUCTURES, ASCE 7-16, TABLE 15.4-2)
Ω = 2.00
Ie = 1.0
Cs = 1.06

PIPE SUPPORTS:
R = 1.25(ALL OTHER SELF-SUPPORTING STRUCTURES, ASCE 7-16, TABLE 15.4-2)
Ω = 2.00
Ie = 1.00
Cs = 1.06

WIND LOAD DESIGN PARAMETERS:
RISK CATEGORY = II
ULTIMATE DESIGN WIND SPEED = 92 MPH
EXPOSURE CATEGORY = C

SOIL DESIGN PARAMETERS: (GEOTECH REPORT #BAS 23-212E: "NEW FLARE STATION BY TETRA TECH, DATED DECEMBER 4, 2024)

(i) MAT FOUNDATIONS
ALLOWABLE BEARING CAPACITY (NET): 1,200 PSF (1/3 INCREASE FOR TRANSIENT LOADS)
COEFFICIENT OF FRICTION: 0.3
UNIT MODULES OF SUBGRADE REACTION: 200 PCI (TO BE ADJUSTED BASED ON MAT SIZE)
PASSIVE RESISTANCE: (NEGLECT UPPER 12 INCHES) 180 PSF/FT (1/3 INCREASE FOR TRANSIENT LOADS)

(ii) RETAINING WALL AND FOUNDATIONS
ALLOWABLE BEARING CAPACITY (NET): 2,500 PSF (1/3 INCREASE FOR TRANSIENT LOADS)
COEFFICIENT OF FRICTION: 0.3
PASSIVE RESISTANCE: (NEGLECT UPPER 12 INCHES) 180 PSF/FT (1/3 INCREASE FOR TRANSIENT LOADS)
LATERAL ACTIVE PRESSURE: 59z + 0.47 x Q

(iii) EMBEDDED POSTS AND PIPE SUPPORTS
ALLOWABLE BEARING CAPACITY (NET): 1,500 SF
PASSIVE RESISTANCE: (NEGLECT UPPER 12 INCHES) 150 PSF/FT
300 PFS/FT (FOUND NOT AFFECTED BY 0.5" MOVEMENT)

STRUCTURAL ABBREVIATIONS

A.B.	ANCHOR BOLT
A.C.I.	AMERICAN CONCRETE INSTITUTION
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ARCH.	ARCHITECT
A.S.T.M.	AMERICAN SOCIETY FOR TESTING AND MATERIALS
A.W.S.	AMERICAN WELDING SOCIETY
BTM.	BOTTOM
C.B.C.	CALIFORNIA BUILDING CODE
CIDH	CAST-IN-DRILLED HOLE PILE
C/J	CONSTRUCTION JOINT
CLR.	CLEAR
CONC.	CONCRETE
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
C.R.S.I.	CONCRETE REINFORCING STEEL INSTITUTE
DIA.	DIAMETER
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
EL.	ELEVATION
ELEV.	ELEVATION
EQ.	EQUAL
E.W.	EACH WAY
EXIST.	EXISTING
FDN.	FOUNDATION
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
GA.	GAUGE
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GEN.	GENERAL
H	HIGH
H.D.G.	HOT DIP GALVANIZED
HORIZ.	HORIZONTAL
HSS	HOLLOW STEEL SECTION
HT.	HEIGHT
ICC	INTERNATIONAL CODE COUNCIL
INV	INVERT
K	KIPS
KSI	KIPS PER SQUARE INCH
MAX.	MAXIMUM
MECH.	MECHANICAL
MFR.	MANUFACTURER
MIN.	MINIMUM
No.	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
PCF	POUNDS PER CUBIC FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF.	REINFORCING
REQ'D.	REQUIRED
SF	SQUARE FEET
SIM.	SIMILAR
SPECS.	SPECIFICATIONS
S.M.S.	SHEET METAL SCREW
SQ.	SQUARE
STRUCT.	STRUCTURAL
T.O.	TOP OF
T.O.F.	TOP OF FOOTING
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W	WIDE
w/	WITH
WF	WIDE FLANGE
W.P.	WORKING POINT
@	AT
&	AND
#	NUMBER

PRELIMINARY - NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE

TETRA TECH

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT
CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS
STRUCTURAL NOTES

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

SHEET
S-001

SPECIAL INSPECTIONS REQUIRED

SPECIAL INSPECTIONS REQUIRED FOR THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH C.B.C. CHAPTER 17. SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN APPROVED INSPECTION AGENCY U.N.O, EMPLOYED BY THE OWNER.

THE SPECIAL INSPECTOR SHALL BE CERTIFIED BY THE INTERNATIONAL CODE COUNCIL (I.C.C.) AND/OR THE LOCAL JURISDICTION TO PERFORM INSPECTION FOR THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND/OR THE ENGINEER. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE STRUCTURAL ENGINEER AND TO THE BUILDING OFFICIAL.

THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THIS CODE.

IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROVIDE AT LEAST 48 HOURS ADVANCE NOTICE TO THE OWNER/OWNER'S REPRESENTATIVE WHEN HIS WORK IS READY FOR ANY REQUIRED SPECIAL INSPECTIONS.

SHOP INSPECTION OF STEEL CONSTRUCTION IS NOT REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVAL SHALL BE BASED UPON REVIEW OF THE FABRICATOR'S WRITTEN PROCEDURAL AND QUALITY CONTROL MANUALS AND PERIODIC AUDITING OF FABRICATION PRACTICES BY AN APPROVED SPECIAL INSPECTION AGENCY. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

CONTRACTOR RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTION.

OWNER OR OWNER'S REPRESENTATIVE SHALL BE SYNONYMOUS WITH 'BUILDING OFFICIAL' IN THE FOREGOING IF THE PROJECT IS NOT UNDER THE JURISDICTION OF A BUILDING DEPARTMENT

SPECIAL INSPECTION SHALL BE PROVIDED FOR THE FOLLOWING TYPES OF WORK PERFORMED IN THE FIELD, OR NOT PERFORMED IN AN APPROVED FABRICATION SHOP AS DEFINED ABOVE, UNLESS NOTED AS "N/A".

SPECIAL INSPECTIONS REQUIRED (■ YES ☐ NO)

	CONT	PERIODIC	N/A
REQUIRED VERIFICATION AND INSPECTION OF SOILS (TO BE PERFORMED BY A LICENSED GEOTECHNICAL ENGINEER):			
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	☐	■	☐
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	☐	■	☐
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	☐	■	☐
4. PERFORM CLASSIFICATION AND TESTING OF NATIVE SOILS TO VERIFY ANY SOIL PROPERTIES ASSUMED AS PART OF DESIGN FOR THIS PROJECT IN THE ABSENCE OF A SOILS REPORT (SEE SOIL PROPERTIES ON THIS DRAWING). THIS TESTING SHALL BE PERFORMED IN ADVANCE OF ANY CONSTRUCTION. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IF THE ASSUMED VALUES ARE NOT VALID.	☐	☐	■
5. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	■	☐	☐
6. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	☐	■	☐
CONCRETE CONSTRUCTION:			
1. INSPECT REINFORCMENT, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	☐	■	☐
2. REINFORCING BAR WELDING:			
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	☐	■	☐
B. INSPECT SINGLE-PASS FILLET WELD, MAXIMUM 5/16"; AND	☐	■	☐
C. INSPECT ALL OTHER WELDS.	■	☐	☐
3. INSPECTION OF ANCHORS CAST IN CONCRETE	☐	■	☐
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS			
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	■	☐	☐
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	☐	■	☐
5. VERIFYING USE OF REQUIRED DESIGN MIX	☐	■	☐
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	■	☐	☐
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	■	☐	☐
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	☐	■	☐
9. INSPECT PRESTRESSED CONCRETE FOR:			
A. APPLICATION OF PRESTRESSING FORCES; AND	☐	☐	■
B. GROUTING OF BONDED PRESTRESSING TENDONS.	☐	☐	■
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	☐	☐	■
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	☐	■	☐
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED	☐	■	☐

	C	P	N/A
STEEL CONSTRUCTION (STRUCTURAL STEEL):			
P - INSPECT THESE ITEMS ON A PERIODIC BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS			
C - INSPECT THESE ITEMS ON A CONTINUOUS BASIS			
1. INSPECTION TASKS PRIOR TO WELDING	☐	■	☐
A. WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	■	☐	☐
B. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	☐	■	☐
C. MANUFACTURERS CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	☐	■	☐
D. MATERIAL IDENTIFICATION (TYPE/GRADE)	☐	■	☐
E. WELDER IDENTIFICATION SYSTEM			
F. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)			
- JOINT PREPARATION			
- DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)			
- CLEANLINESS (CONDITION OF STEEL SURFACES)			
- TACKING (TACK WELD QUALITY AND LOCATION)	☐	■	☐
- BACKING TYPE AND FIT (IF APPLICABLE)			
G. FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K- JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)			
- JOINT PREPARATIONS			
- DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)			
- CLEANLINESS (CONDITION OF STEEL SURFACES)	☐	■	☐
- TACKING (TACK WELD QUALITY AND LOCATION)	☐	■	☐
H. CONFIGURATION AND FINISH OF ACCESS HOLES			
I. FIT-UP OF FILLET WELDS			
- DIMENSIONS (ALIGNMENT, GAPS AT ROOT)			
- CLEANLINESS (CONDITION OF STEEL SURFACES)			
- TACKING (TACK WELD QUALITY AND LOCATION)	☐	■	☐
2. INSPECTION TASKS DURING WELDING			
A. CONTROL AND HANDLING OF WELDING CONSUMABLES			
- PACKAGING	☐	■	☐
- EXPOSURE CONTROL	☐	■	☐
B. NO WELDING OVER CRACKED TACK WELDS			
C. ENVIRONMENTAL CONDITIONS			
- WIND SPEED WITHIN LIMITS	☐	■	☐
- PRECIPITATION AND TEMPERATURE			
D. WPS FOLLOWED			
- SETTINGS ON WELDING EQUIPMENT			
- TRAVEL SPEED			
- SELECTED WELDING MATERIALS			
- SHIELDING GAS TYPE/FLOW RATE			
- PREHEAT APPLIED			
- INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.)	☐	■	☐
- PROPER POSITION (F, V, H, OH)			
E. WELDING TECHNIQUES			
- INTERPASS AND FINAL CLEANING			
- EACH PASS WITHIN PROFILE LIMITATIONS	■	☐	☐
- EACH PASS MEETS QUALITY REQUIREMENTS			
F. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	☐	■	☐
3. INSPECTION TASKS AFTER WELDING	■	☐	☐
A. WELDS CLEANED	■	☐	☐
B. SIZE, LENGTH AND LOCATION OF WELDS			
C. WELDS MEET VISUAL ACCEPTANCE CRITERIA			
- CRACK PROHIBITION			
- WELD/BASE-METAL FUSION			
- CRATER CROSS SECTION			
- WELD PROFILES			
- WELD SIZE			
- UNDERCUT	■	☐	☐
- POROSITY	■	☐	☐
D. ARC STRIKES			
E. K-AREA			
- WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75 MM) OF THE WELD	■	☐	☐
F. WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES			
- AFTER ROLLED HEAVY SHAPES (SEE AISC SECTION A3.1C) AND BUILT-UP SHAPES (SEE AISC SECTION A3.1D) ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS	■ ■	☐ ☐	☐ ☐
G. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	■	☐	☐
H. REPAIR ACTIVITIES	☐	■	☐
I. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER			
J. NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR	■	☐	☐
4. INSPECTION TASKS PRIOR TO BOLTING	☐	■	☐
A. MANUFACTURER'S CERTIFICATION AVAILABLE FOR FASTENER MATERIALS			
B. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	☐	■	☐
C. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE; TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FORM SHEAR PLANE)	☐	■	☐
D. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL			
E. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	☐	■	☐
F. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	☐	■	☐
G. PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS			
5. INSPECTION TASKS DURING BOLTING	☐	■	☐
A. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS ARE POSITIONED AS REQUIRED	☐	■	☐
B. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	☐	■	☐
C. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FOR ROTATING			
D. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	☐ ■	■ ☐	☐ ☐
6. INSPECTION TASKS AFTER BOLTING			
A. DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONECTIONS	☐	☐	■
7. INSPECTION OF STEEL ELEMENTS OF COMPOSITE CONSTRUCTION PRIOR TO CONCRETE PLACEMENT	☐	☐	■
A. PLACEMENT AND INSTALLATION OF STEEL DECK	☐	☐	■
B. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS			
C. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS			

ADHESIVE AND EXPANSION ANCHORS:

	CONT	PERIODIC	N/A
1. VERIFY ANCHOR TYPE:	☐	■	☐
2. VERIFY ADHESIVE IDENTIFICATION AND EXPIRATION DATE	☐	■	☐
3. VERIFY ANCHOR DIMENSIONS:	☐	■	☐
4. VERIFY CONCRETE TYPE:	☐	■	☐
5. VERIFY CONCRETE COMPRESSIVE STRENGTH	☐	■	☐
6. VERIFY HOLE DRILLING METHOD	☐	■	☐
7. VERIFY HOLE DIMENSIONS	☐	■	☐
8. VERIFY HOLE CLEANING PROCEDURES	☐	■	☐
9. VERIFY ANCHOR SPACING	☐	■	☐
10. VERIFY EDGE DISTANCES	☐	■	☐
11. VERIFY CONCRETE THICKNESS	☐	■	☐
12. VERIFY ANCHOR EMBEDMENT	☐	■	☐
13. VERIFY TIGHTENING TORQUE	☐	■	☐
14. VERIFY ADHERENCE TO THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS	☐	■	☐

THE SPECIAL INSPECTOR MUST VERIFY THE INITIAL INSTALLATIONS OF EACH TYPE AND SIZE OF ADHESIVE ANCHOR INSTALLED BY THE CONSTRUCTION PERSONNEL ON SITE. SUBSEQUENT INSTALLATIONS OF THE SAME ANCHOR TYPE AND SIZE BY THE SAME CONSTRUCTION PERSONNEL MAY BE PERMITTED, WITH THE APPROVAL OF THE ENGINEER AND THE SPECIAL INSPECTOR, TO BE PERFORMED IN THE ABSENCE OF THE SPECIAL INSPECTOR. ANY CHANGE IN THE ANCHOR PRODUCT BEING INSTALLED OR THE PERSONNEL PERFORMING THE INSTALLATION REQUIRES AN INITIAL INSPECTION. FOR ONGOING INSTALLATIONS OVER AN EXTENDED PERIOD, THE SPECIAL INSPECTOR MUST MAKE REGULAR INSPECTIONS TO CONFIRM CORRECT HANDLING AND INSTALLATION OF THE PRODUCT. THE SPECIAL INSPECTOR SHALL INFORM THE ENGINEER OF THE FREQUENCY OF THE PERIODIC ANCHOR INSPECTIONS. THE ENGINEER MAY REQUEST ADDITIONAL INSPECTIONS AT ANY TIME.

STRUCTURAL OBSERVATION

THE STRUCTURAL ENGINEER, OR ANOTHER ENGINEER DESIGNATED BY THE STRUCTURAL ENGINEER SHALL BE RETAINED BY THE OWNER TO PERFORM STRUCTURAL OBSERVATION AS REQUIRED BY C.B.C. CHAPTER 17. STRUCTURAL OBSERVATION SHALL BE PROVIDED DURING THE STAGES OF CONSTRUCTION LISTED BELOW. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AT LEAST 48 HOURS ADVANCE NOTICE TO THE STRUCTURAL ENGINEER WHEN HIS WORK IS READY FOR STRUCTURAL OBSERVATION FOR EACH OF THESE STAGES.

STRUCTURAL OBSERVATIONS REQUIRED (■ YES ☐ NO)

1. CONCRETE:
   REINFORCING STEEL AND EMBEDDED STRUCTURAL ANCHORAGES PRIOR TO PLACEMENT OF CONCRETE FOR THE FOLLOWING:
   A. FOUNDATIONS ■
   B. WALLS AND SLABS ■

SHOP DRAWINGS AND SUBMITTALS

1. REVIEW OF SHOP DRAWINGS AND SUBMITTALS BY THE EOR IS FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.
2. SHOP DRAWINGS SHALL BE SUBMITTED TO EOR FOR REVIEW PRIOR TO FABRICATION. THE CONTRACTOR WILL REMAIN RESPONSIBLE FOR ALL ERRORS OF DETAILING, FABRICATION, AND FOR CORRECT FITTING OF ALL STRUCTURAL MEMBERS INCLUDING COORDINATION WITH OTHER TRADES.
   A. SHOP DRAWINGS SHALL BE SUBMITTED A MINIMUM OF 4 WEEKS PRIOR TO SCHEDULED FABRICATION.
   B. EOR WILL RETURN SHOP DRAWING AND SUBMITTALS CLEARLY MARKED WITH COMMENTS. ANY REQUIRED RECORD SET COPIES SHALL BE MADE FROM THIS RETURNED SET.
   C. REPRODUCTION OF THE STRUCTURAL PLANS AND DETAILS FOR SHOP DRAWINGS IS PROHIBITED. SUBCONTRACTOR/FABRICATOR IS TO PROVIDE INDEPENDENTLY CREATED DRAWINGS BASED ON THE STRUCTURAL PLANS AND DETAILS.
   D. ANY PROPOSED CHANGES TO THE STRUCTURAL DOCUMENTS MUST BE SUBMITTED IN WRITING AS A REQUEST FOR SUBSTITUTION TO THE ARCHITECT AND EOR FOR APPROVAL.
3. THE FOLLOWING LIST SUMMARIZES IMPORTANT STRUCTURAL SUBMITTALS FOR THIS PROJECT. REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST AND ADDITIONAL REQUIREMENTS.

CONCRETE REINFORCEMENT:
- A. MANUFACTURER'S PRODUCT DATA, SPECIFICATIONS AND INSTALLATION PROCEDURES FOR PROPRIETARY MATERIALS AND REINFORCEMENT.
- B. STEEL PRODUCER CERTIFICATES OF MILL ANALYSIS, TENSILE AND BEND TESTS.
- C. SHOP DRAWINGS FOR FABRICATION BENDING AND PLACEMENT.

CAST-IN-PLACE CONCRETE:
- A. DESIGN MIX FOR EACH CONCRETE MIX.
- B. MATERIAL TEST REPORTS.
- C. MATERIAL CERTIFICATES FOR CEMENT, AGGREGATES AND ADMIXTURES.
- D. MANUFACTURER'S PRODUCT DATA FOR BONDING AGENTS, VAPOR RETARDERS, JOINT FILLER, CURING MATERIALS AND FLOOR.
- E. TREATMENT SHOP DRAWINGS FOR PROPOSED LOCATIONS OF ADDITIONAL CONSTRUCTION OR CONTROL JOINTS NOT SHOWN ON THE STRUCTURAL PLANS.
- F. MINUTES FROM REINSTALLATION CONFERENCE.

DEFERRED SUBMITTALS/CERTIFICATIONS

1. OFF-SITE FABRICATION:
   FABRICATORS SHALL BE CITY, COUNTY AND/OR C.B.C. APPROVED FABRICATORS. FABRICATORS

   FOR ALL OFFSITE FABRICATION OF THE ITEMS LISTED BELOW:

   A. STRUCTURAL STEEL (MILL REPORTS AND IDENTIFICATION OF STEEL, AFFIDAVIT OF COMPLIANCE

2. DEFERRED SUBMITTALS:
   SUBMITTAL DOCUMENTS FOR THE DEFERRED SUBMITTAL ITEMS LISTED BELOW SHALL BE DESIGNED BY A LICENSED PE OR SE AND SUBMITTED BY THE CONTRACTOR TO THE BUILDING DEPARTMENT/APPROVAL AGENCY AND STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

   A. CONCRETE MIX

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

STRUCTURAL OBSERVATIONS AND SPECIAL INSTRUCTIONS

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

SHEET
S-002

PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

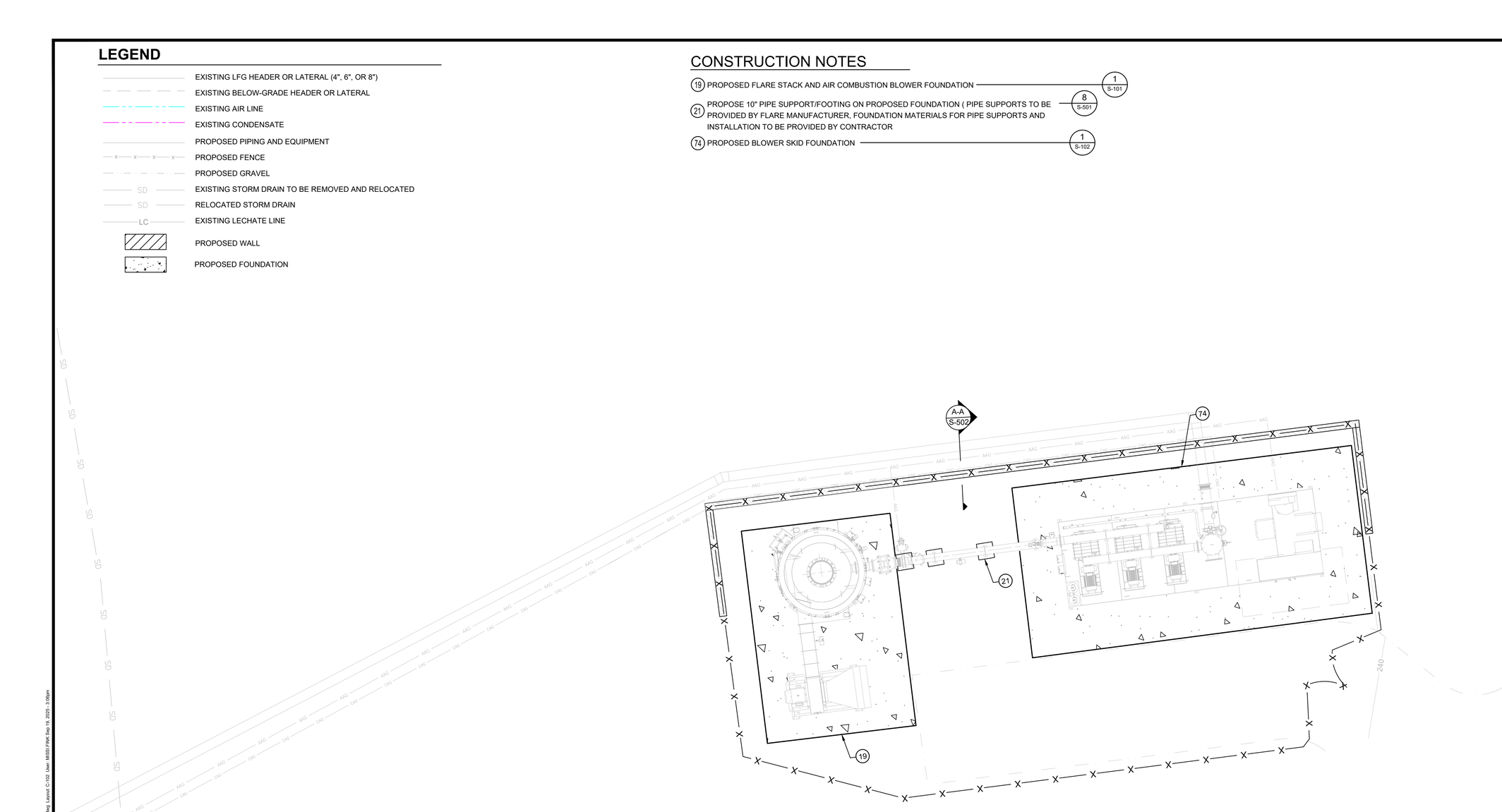
- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING AIR LINE
- EXISTING CONDENSATE
- PROPOSED PIPING AND EQUIPMENT
- PROPOSED FENCE
- PROPOSED GRAVEL
- SD — EXISTING STORM DRAIN TO BE REMOVED AND RELOCATED
- SD — RELOCATED STORM DRAIN
- LC — EXISTING LECHATE LINE
- PROPOSED WALL
- PROPOSED FOUNDATION

CONSTRUCTION NOTES

(19) PROPOSED FLARE STACK AND AIR COMBUSTION BLOWER FOUNDATION — 1 / S-101

(21) PROPOSE 10" PIPE SUPPORT/FOOTING ON PROPOSED FOUNDATION (PIPE SUPPORTS TO BE PROVIDED BY FLARE MANUFACTURER, FOUNDATION MATERIALS FOR PIPE SUPPORTS AND INSTALLATION TO BE PROVIDED BY CONTRACTOR — 8 / S-501

(74) PROPOSED BLOWER SKID FOUNDATION — 1 / S-102



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SCALE IN FEET

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

SITE FOUNDATION PLAN

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

SHEET
S-100

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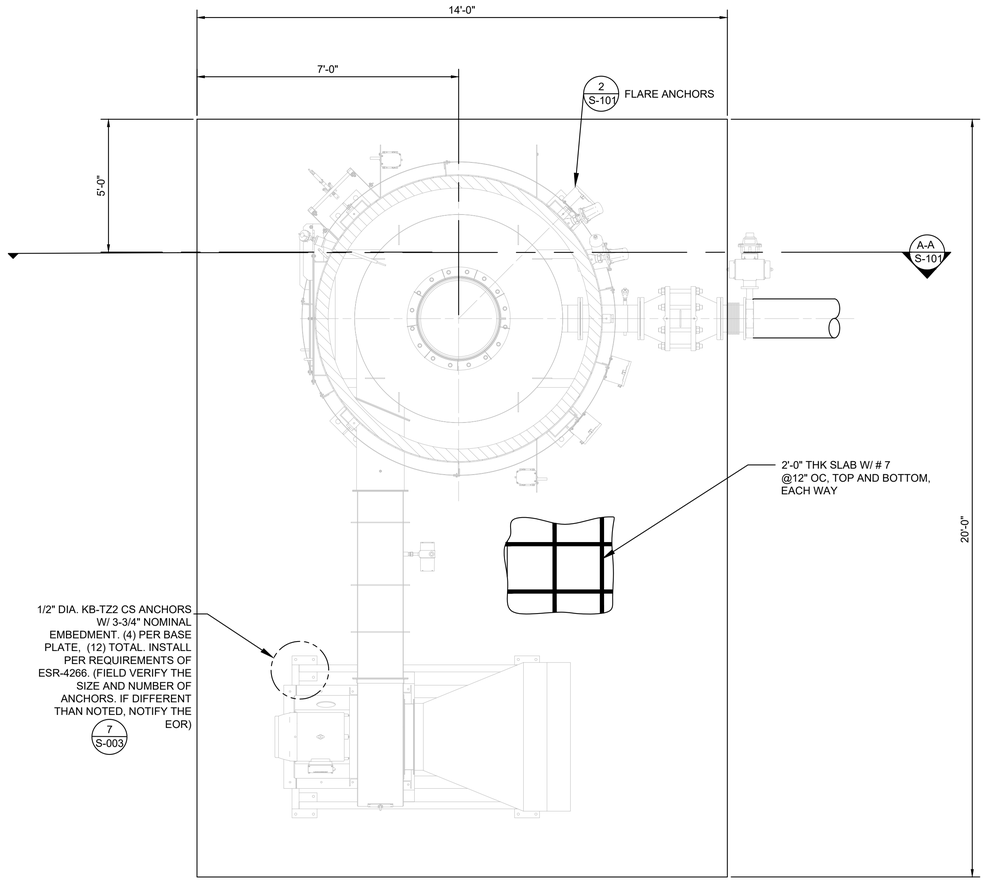
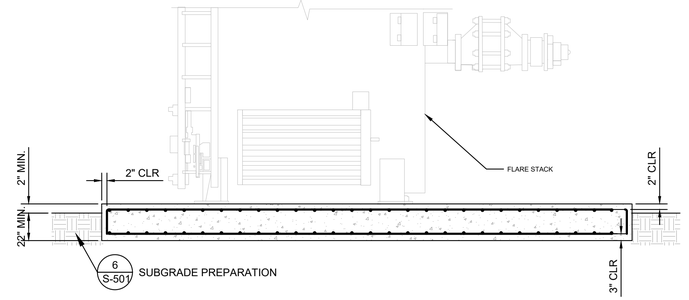
File: \\tt-local\vol9:\19PROJECTS\SANTA CRUZ\197-2024-4037 - Santa Cruz Low-NOx Flare\Project Drawings\197-2024-4037 - S-100 SITE FOUNDATION PLAN.dwg Layout: C-102 User: MISSI FINK Sep 19, 2025 - 3:06pm

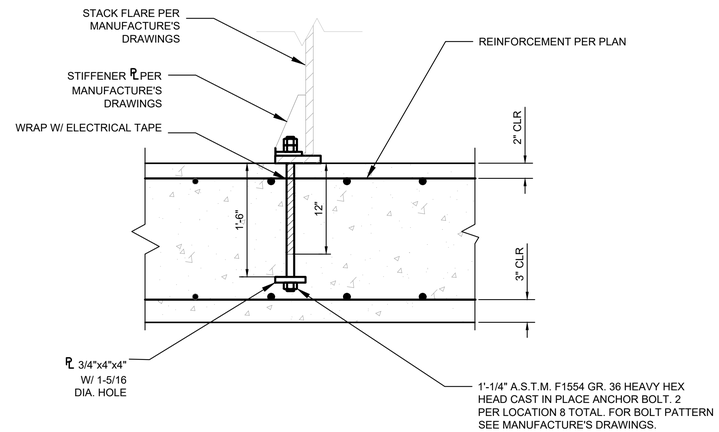


NOTES:
1. REFER TO DETAIL 2/S-003 FOR CONTROL JOINTS AND DETAIL 3/S-501 FOR CONSTRUCTION JOINTS. CONTRACTOR SHALL DETERMINE THE LOCATIONS OF CONSTRUCTION JOINTS.
2. USE ANCHOR BOLT TEMPLATE (PROVIDED BY THE FLARE VENDOR) TO SET CAST-IN-PLACE ANCHORS.

1	FLARE STACK & COMBUSTION BLOWER FOUNDATION PLAN
1"=2'-0"	REFERENCE SHEETS: C-102, M-101



A-A	FOUNDATION SECTION
1"=2'-0"	REFERENCE SHEETS: C-102, M-101



NOTES:
1. ALL ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED (SEE GENERAL NOTES FOR MORE INFORMATION)

2	FLARE STACK ANCHORING
NTS	REFERENCE SHEETS: C-102, M-101

REV	REVISION DESCRIPTION	DATE

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

FLARE AND COMBUSTION BLOWER FOUNDATION

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

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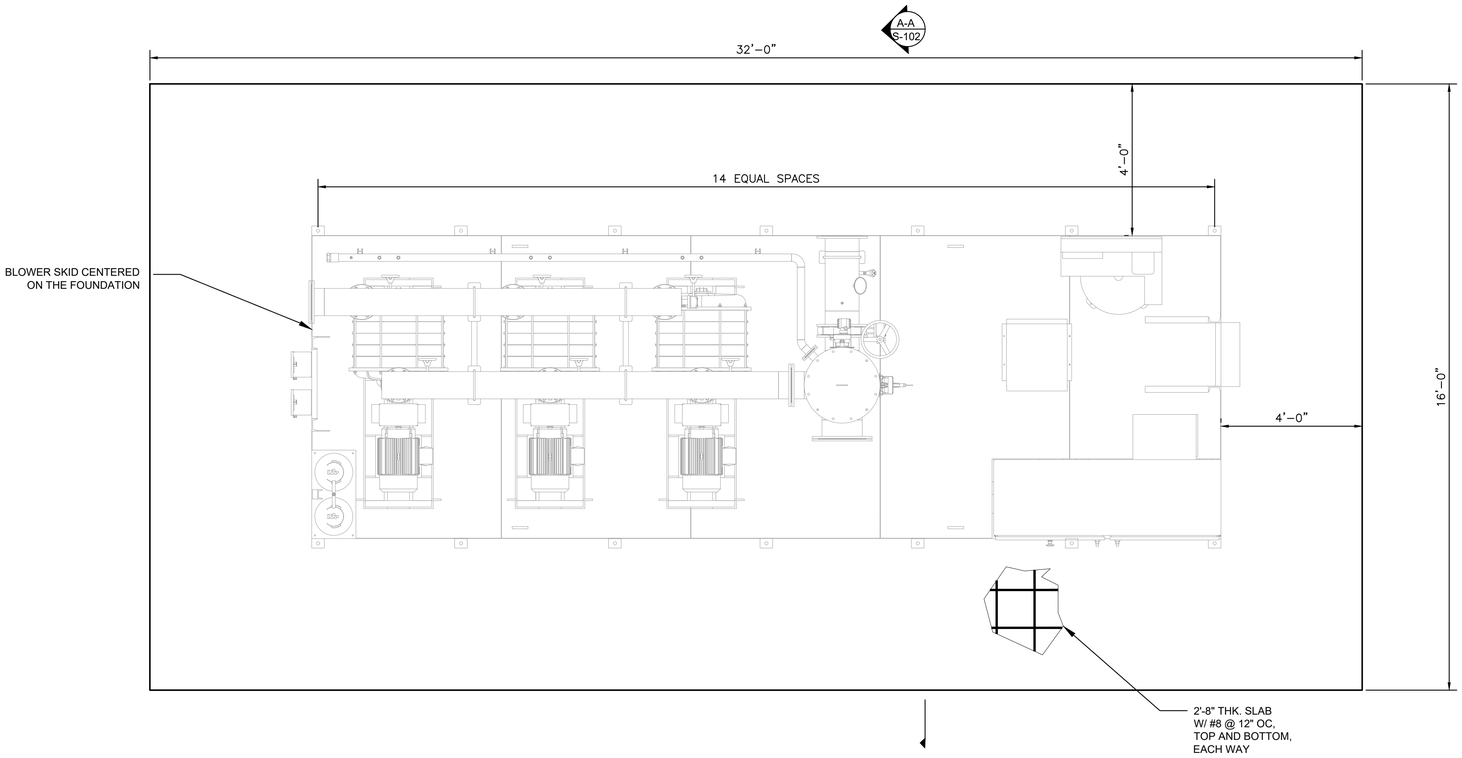
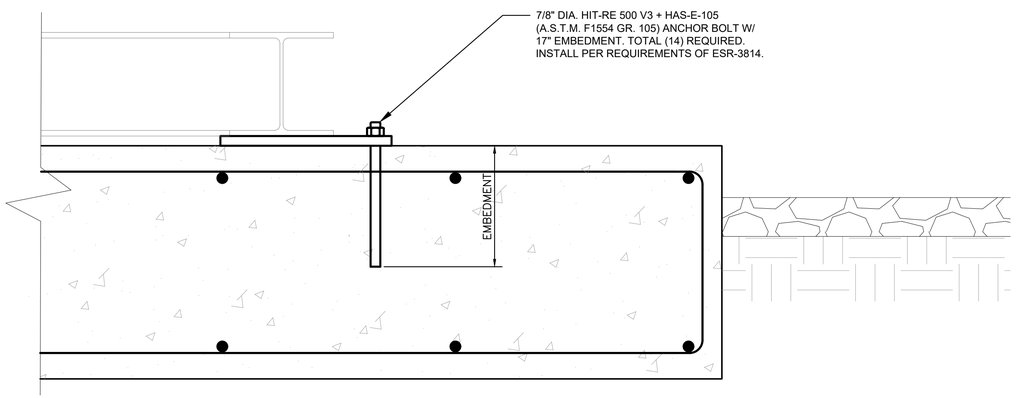


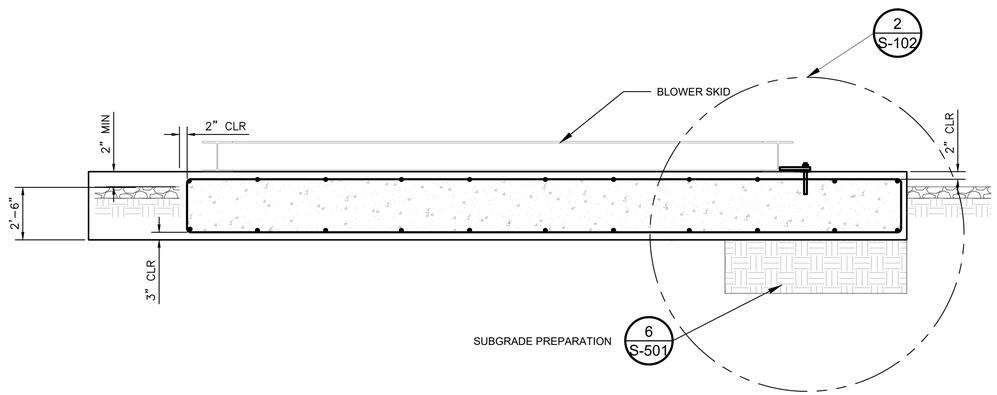
1 BLOWER SKID FOUNDATION DETAILS

1" = 2'-0" | REFERENCE SHEETS: C-102, M-101



2 BLOWER SKID ANCHORING DETAILS

NTS | REFERENCE SHEETS: C-102, M-101



A-A BLOWER SKID CONCRETE PAD SECTION

1" = 20'-0" | REFERENCE SHEETS: C-102, M-101

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

BLOWER SKID FOUNDATION DETAILS

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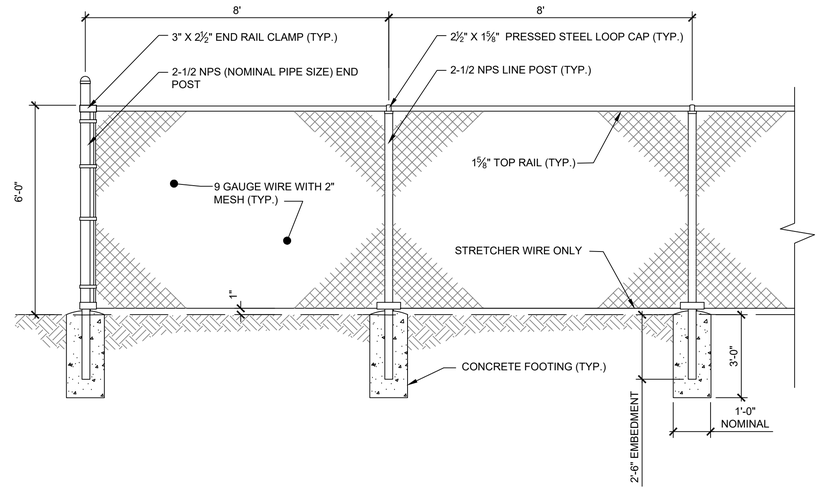
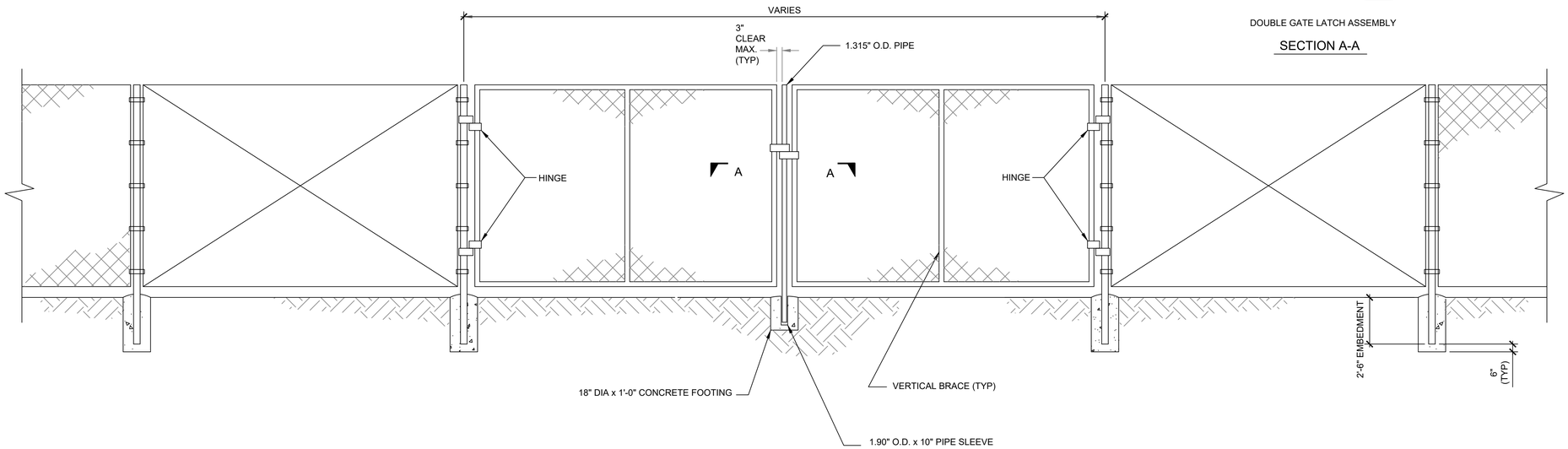


1	6' HIGH CHAIN LINK FENCE
NTS	REFERENCE SHEETS: C-102, M-101

DOUBLE GATE LATCH ASSEMBLY

SECTION A-A



CHAIN LINK FENCING AND GATES NOTES:

1. THE CONTRACTOR SHALL FURNISH AND INSTALL CHAIN LINK FENCING AND GATE AS SHOW.
2. ALL CHAIN LINK FABRIC, INCLUDING ALL GATES, SHALL BE 9-GAUGE WOVEN IN A 2-INCH DIAMOND MESH. PIPE SHALL BE USED FOR END, CORNER, AND SLOPE AND GATEPOSTS, AND SHALL HAVE EXTENSION ARMS MADE SPECIFICALLY TO BE ATTACHED TO THE PIPE IN A MANNER TO PREVENT EASY REMOVAL. ALL SELVAGES SHALL BE KNUCKLED.
3. ALL CHAIN LINK MATERIALS AND COMPONENTS SHALL BE GALVANIZED.
4. STEEL PIPE USED FOR ALL POSTS, BRACES, TOP RAILS, AND GATE FRAMES SHALL CONFORM TO THE REQUIREMENTS OF ASTM F 1083, SCHEDULE 40, FOR CLASS 1.
5. CONSTRUCTION OF FENCING AND GATE SHALL CONFORM TO THE REQUIREMENTS OF THE GREENBOOK, 2018 EDITION, SECTION 304-3 "CHAIN LINK FENCE".
6. REFER TO GREENBOOK, 2012 STANDARD PLAN 600-3 "CHAIN LINK FENCE AND GATES".

2	MANUAL DOUBLE SWING GATE
NTS	REFERENCE SHEETS: C-102, M-101

REV	REVISION DESCRIPTION	DATE

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

FENCING DETAILS

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

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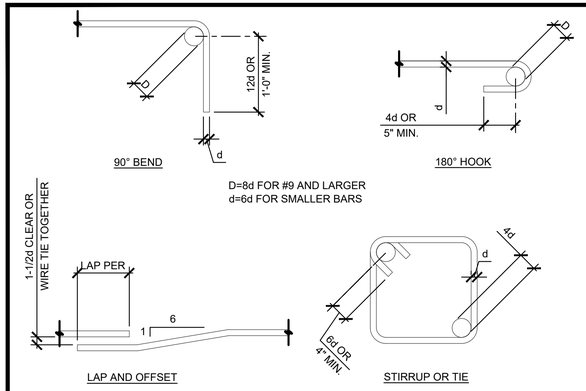
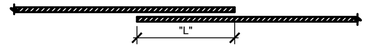


1 TYPICAL BAR BENDS

NTS | REFERENCE SHEET:

REINFORCING LAP SPLICE SCHEDULE				
BAR	f'c=2500	f'c=3000	f'c=4000	f'c=5000
	L (inches)	L (inches)	L (inches)	L (inches)
3	24	22	19	17
4	32	29	25	23
5	39	36	31	28
6	47	43	37	34
7	69	63	54	49
8	78	72	62	56
9	88	81	70	63

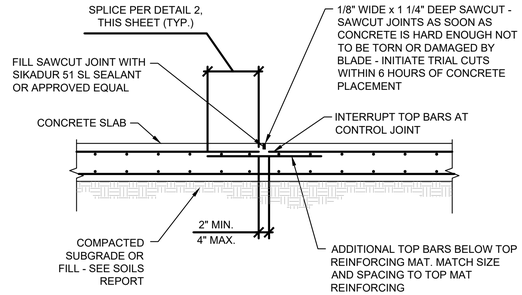


NOTES:

1. LAPS SHOWN IN THIS TABLE ARE CLASS B, CATEGORY 3 TYPE SPLICES. LAP LENGTH IS BASED UPON SMALLER OF TWO BARS BEING SPLICED WHEN NOT THE SAME SIZE.
2. INCREASE LAP LENGTHS BY A FACTOR OF 1.3 FOR HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THIS REINFORCEMENT.

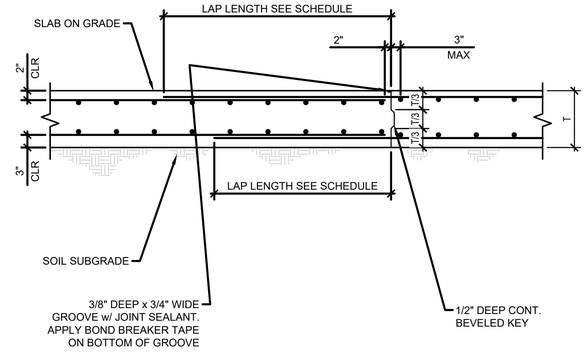
2 CONC. REINFORCING LAP SPLICE SCHEDULE

NTS | REFERENCE SHEET:



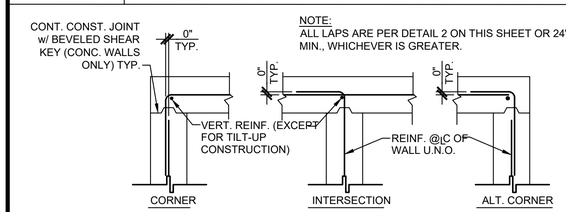
3 CONTROL JOINTS

NTS | REFERENCE SHEET:

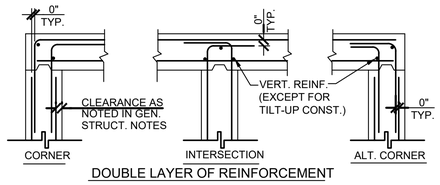


4 TYPICAL HORIZONTAL SLAB CONSTRUCTION JOINT

NTS | REFERENCE SHEET:



SINGLE LAYER OF REINFORCEMENT



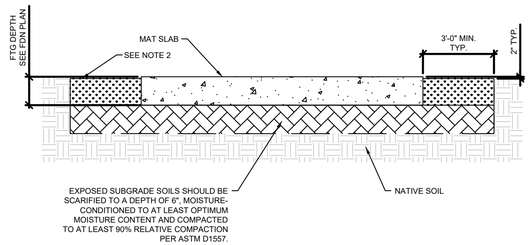
DOUBLE LAYER OF REINFORCEMENT

5 WALL AND FOOTING REINFORCING AT CORNERS AND INTERSECTIONS

NTS | REFERENCE SHEET:

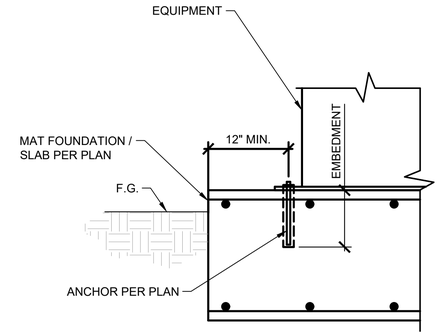
NOTES:

1. ANY AREAS OR POCKETS OF SOFT OR LOOSE SOILS, VOID SPACES MADE BY BURROWING ANIMALS, UNDOCUMENTED FILL, OR OTHER DISTURBED SOIL THAT IS ENCOUNTERED, SHOULD BE EXCAVATED TO EXPOSE FIRM NATIVE MATERIAL. CARE SHOULD BE TAKEN DURING SITE GRADING TO MITIGATE (E.G. EXCAVATE AND RE-COMPACT) ALL SOIL DISTURBED BY STRIPPING AND DEMOLITION.
2. ALL FILL PLACED TO ACHIEVE FINISH GRADE OR SUBGRADE, OR UTILITY TRENCH BACKFILL SHOULD BE MOISTURE CONDITIONED TO AT LEAST 110% (COHESIONLESS SOILS) OR 120% (FINE-GRAINED SOILS) AND COMPACTED TO AT LEAST 90% RELATIVE COMPACTION PER ASTM D1557. THE UPPER 1' OF SOILS BELOW PAVEMENTS AND FLATWORK SHOULD BE PROCESSED AND COMPACTED TO AT LEAST 95% RELATIVE COMPACTION PER ASTM D1557.



6 SUBGRADE PREPARATION

NTS | REFERENCE SHEET: S-101



7 COMBUSTION BLOWER SKID ANCHORAGE DETAIL

NTS | REFERENCE SHEET: M-101

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

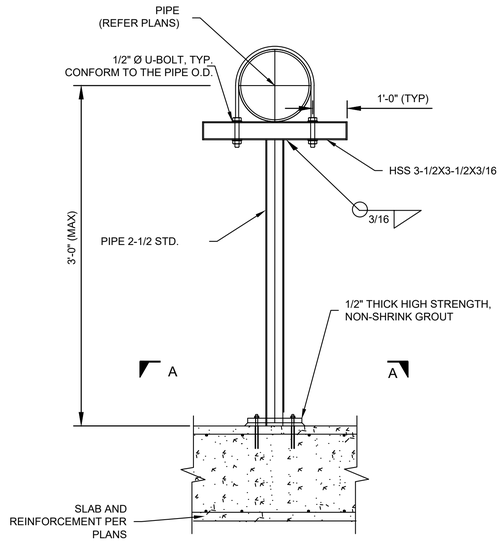
CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

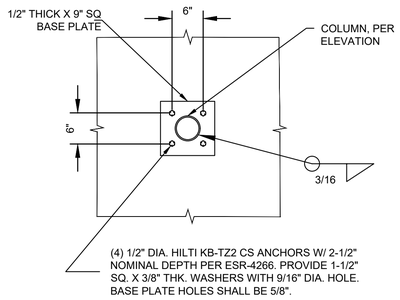
TYPICAL STRUCTURAL DETAILS

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

SHEET
S-501

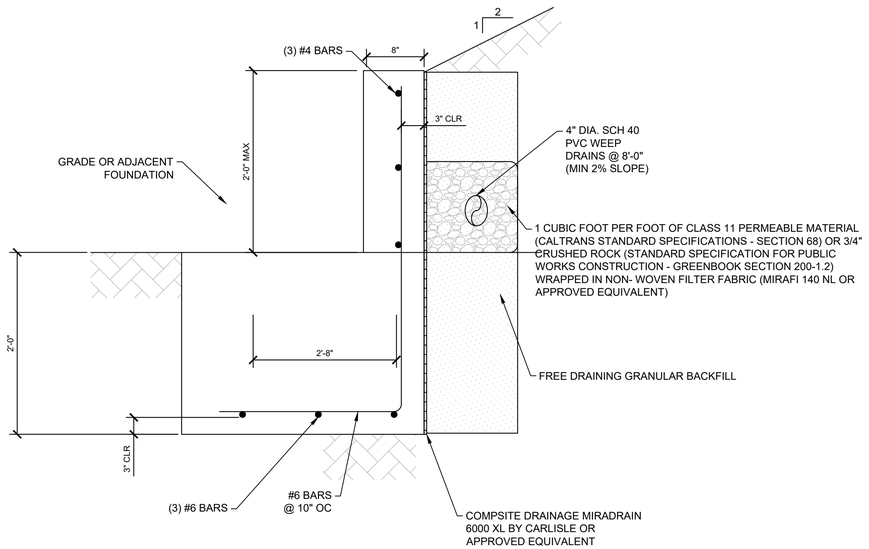
PRELIMINARY - NOT FOR CONSTRUCTION



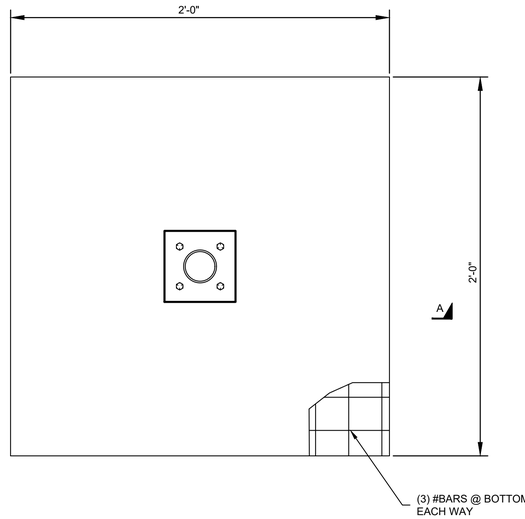


SECTION A-A

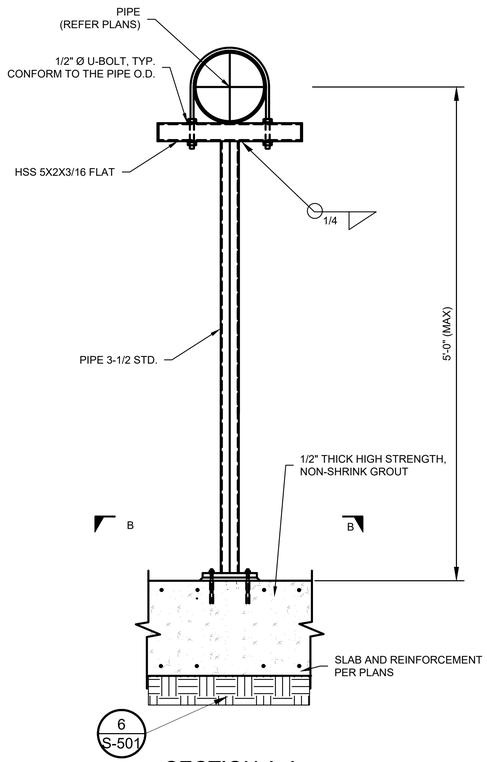
1	PIPE SUPPORT ON EQUIPMENT PAD DETAIL
NTS	REFERENCE SHEET: M-101



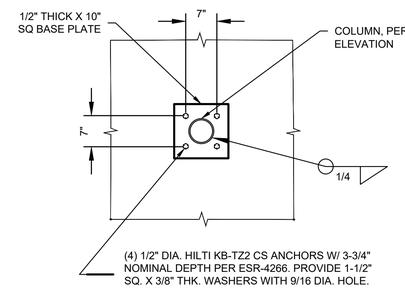
A-A	RETAINING CURB AND FOUNDATION SECTION
1"=10'-0"	REFERENCE SHEET: S-100



FOUNDATION F-X PLAN



SECTION A-A



SECTION B-B

2	PIPE SUPPORT AND FOUNDATION DETAIL
NTS	REFERENCE SHEET: S-100

REV	REVISION DESCRIPTION	DATE

TETRA TECH

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

TYPICAL STRUCTURAL DETAILS

DESIGNED BY : MJB	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : MJB	

SHEET
S-502

PRELIMINARY - NOT FOR CONSTRUCTION

LEGEND

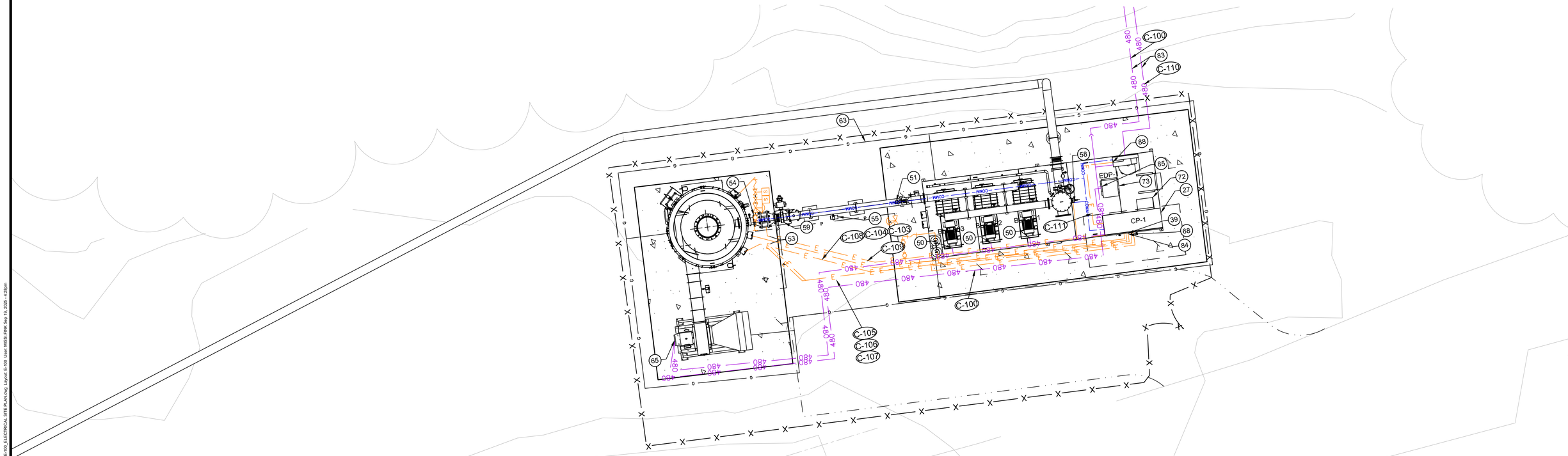
- EXISTING LFG HEADER OR LATERAL (4", 6", OR 8")
- EXISTING BELOW-GRADE HEADER OR LATERAL
- EXISTING ELECTRICAL
- EXISTING BOLLARD
- EXISTING ELECTRIC POLE
- PROPOSED PIPING AND EQUIPMENT
- COMM — PROPOSED COMMUNICATION 4-20MA CONDUIT
- 480 — PROPOSED ELECTRICAL 480V CONDUIT
- E — PROPOSED ELECTRICAL 120V CONDUIT
- G — PROPOSED GROUND LINE
- C-101 — CONDUIT NUMBER

CONDUIT SCHEDULE

CONDUIT TAG	FROM	TO	SIZE	CONDUCTORS	VOLTAGE
C-100	EX. SWITCHBOARD	NEW CONTROL PANEL	3"	(3) 350 KCMIL , #4 GND.	480V
C-101	NEW CONTROL PANEL	BLOWER-401	2"	#2 MC-HL XHHW, #8 GND. VFD CABLE	480V
C-102	EX. CONTROL PANEL	NEW CONTROL PANEL	3/4"	CAT 6	LV
C-103	NEW CONTROL PANEL	JB-HV-1: BE-501, BE-502	3/4"	2#18 STP	24 VDC
C-104	NEW CONTROL PANEL	JB-HV-1: BE-501, BE-502	3/4"	2#14, #14 GND.	24 VDC
C-105	NEW CONTROL PANEL	FCV-301, ZS-301, PS-101, PS-401, PS-302, PS-301	1"	12#14, #14 GND.	120 VAC
C-106	NEW CONTROL PANEL	FLR1-TE-501, FLR1-TE-502, FLR1-TE-503, FLR1-TE-301, FLR1-TE-302, TE-401	1-1/4"	(4) TYPE K TC SHD., (2) TYPE E TC SHD., #18 STP	LV
C-107	NEW CONTROL PANEL	FT-301, FT-401, FCV-301	1-1/4"	4#14, #14 GND., (4) 2#18 STP	24 VDC
C-108	NEW CONTROL PANEL	FLR-FV-301, FLR-FV-101, FLR-FV-102, BNR-501, FCV-405, FCV-406 (@JB-HV)	1"	10#14, #14 GND.	120 VAC
C-109	NEW CONTROL PANEL	FCV-405, FCV-406 (@JB-LV)	3/4"	2#18 STP	24 VDC
C-110	EX. SWITCHBOARD	NEW AIR COMPRESSOR, CMP-2	1-1/2"	3#3, #8 GND.	
C-111	NEW CONTROL PANEL EDP-3	NEW AIR COMPRESSOR DRAIN SOV, PS-101	3/4"	2#14, 2#12, #12 GND.	120 VAC

CONSTRUCTION NOTES

7. EXISTING ELECTRICAL MAIN PANEL
27. PROPOSED CONTROL PANEL (SKID MOUNTED - PROVIDED BY FLARE MANUFACTURER)
39. TIE IN PROPOSED ELECTRICAL CONDUITS TO PROPOSED CONTROL PANEL
40. FURNISH AND INSTALL 300A (NEW FLARE CONTROL PANEL) AND 100A (NEW AIR COMPRESSOR), 3 POLE, 65 KAIC CIRCUIT BREAKERS TO EXISTING SWITCHGEAR
50. CONNECT PROPOSED LFG BLOWER TO PROPOSED 480V ELECTRICAL CONDUIT
51. TIE IN PROPOSED PRESSURE TRANSMITTER INTO PROPOSED 120V ELECTRICAL AND COMMUNICATION CONDUITS
53. CONNECT PROPOSED SOLENOID VALVE TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
54. CONNECT PROPOSED FLARE THERMOCOUPLES AND UV SCANNER TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
55. CONNECT PROPOSED FLOW TRANSMITTER TO PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS
57. CONNECT PROPOSED PRESSURE CONTROL VALVE TO PROPOSED 120V ELECTRICAL AND COMMUNCATIONS CONDUITS
58. CONNECT PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS TO KOP LIQUID LEVEL SENSOR
59. CONNECT PROPOSED FAIL CLOSE VALVE INTO PROPOSED 120V ELECTRICAL CONDUIT
63. INSTALL BARE 4/0 FROM EX. GROUND GRID TO TWO SS GROUND PLATES ON GHS, COMB. AIR BLOWER MOTOR FRAME, FLARE 2, AND AIR COMPRESSOR. MAKE CONNECTIONS WITH EXOTHERMIC WELDS OR MECHANICAL LUGS. 24" MINIMUM COVER.
65. CONNECT PROPOSED 480V ELECTRICAL CONDUIT INTO PROPOSED AIR COMBUSTION BLOWER
68. CONNECT PROPOSED 120V ELECTRICAL AND COMMUNICATIONS CONDUITS TO PROPOSED CONTROL PANEL
72. PROPOSED AIR CONDITIONER (PROVIDED BY FLARE MANUFACTURER)
73. PROPOSED VOLTAGE TRANSFORMER (PROVIDED BY FLARE MANUFACTURER)
81. INSTALL TWO 3" ELECTRICAL CONDUITS AND ONE 1-1/2" CONDUIT FOR FUTURE PROJECT BY OTHERS
83. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO EXISTING power POLE, CONFIRM AERIAL FEED IS STILL GOOD FROM PANEL 320 IN BUILDING
84. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO PROPOSED CONTROL PANEL
85. TIE IN PROPOSED 480V ELECTRICAL CONDUIT TO PROPOSED VOLTAGE TRANSFORMER
88. TIE IN PROPOSED 120V & 480V ELECTRICAL CONDUITS TO PROPOSED AIR COMPRESSOR. FURNISH AND INSTALL PRESSURE SWITCH TO MONITOR LOW AIR PRESSURE.



REV	REVISION DESCRIPTION	DATE

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

ELECTRICAL SITE PLAN

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

SHEET
E-100

PRELIMINARY - NOT FOR CONSTRUCTION

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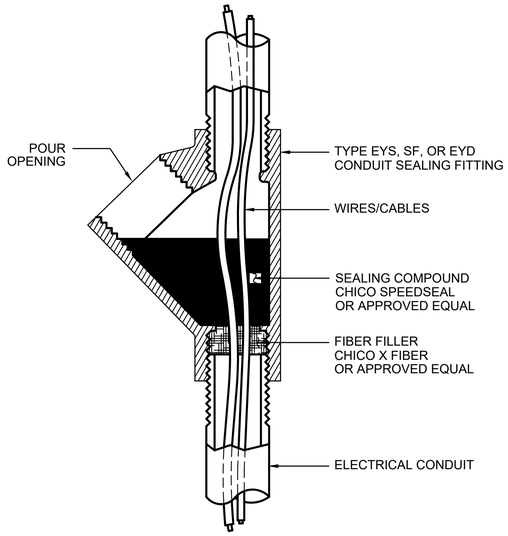
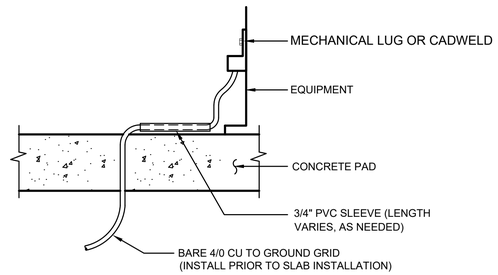


1	CONDUIT SEALOFF
NTS	REFERENCE SHEET: E-101



2	GROUNDING DETAIL
NTS	REFERENCE SHEET: E-101

PRELIMINARY - NOT FOR CONSTRUCTION

REV	REVISION DESCRIPTION	DATE

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CITY OF SANTA CRUZ PUBLIC WORKS DEPARTMENT

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

ELECTRICAL DETAILS

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

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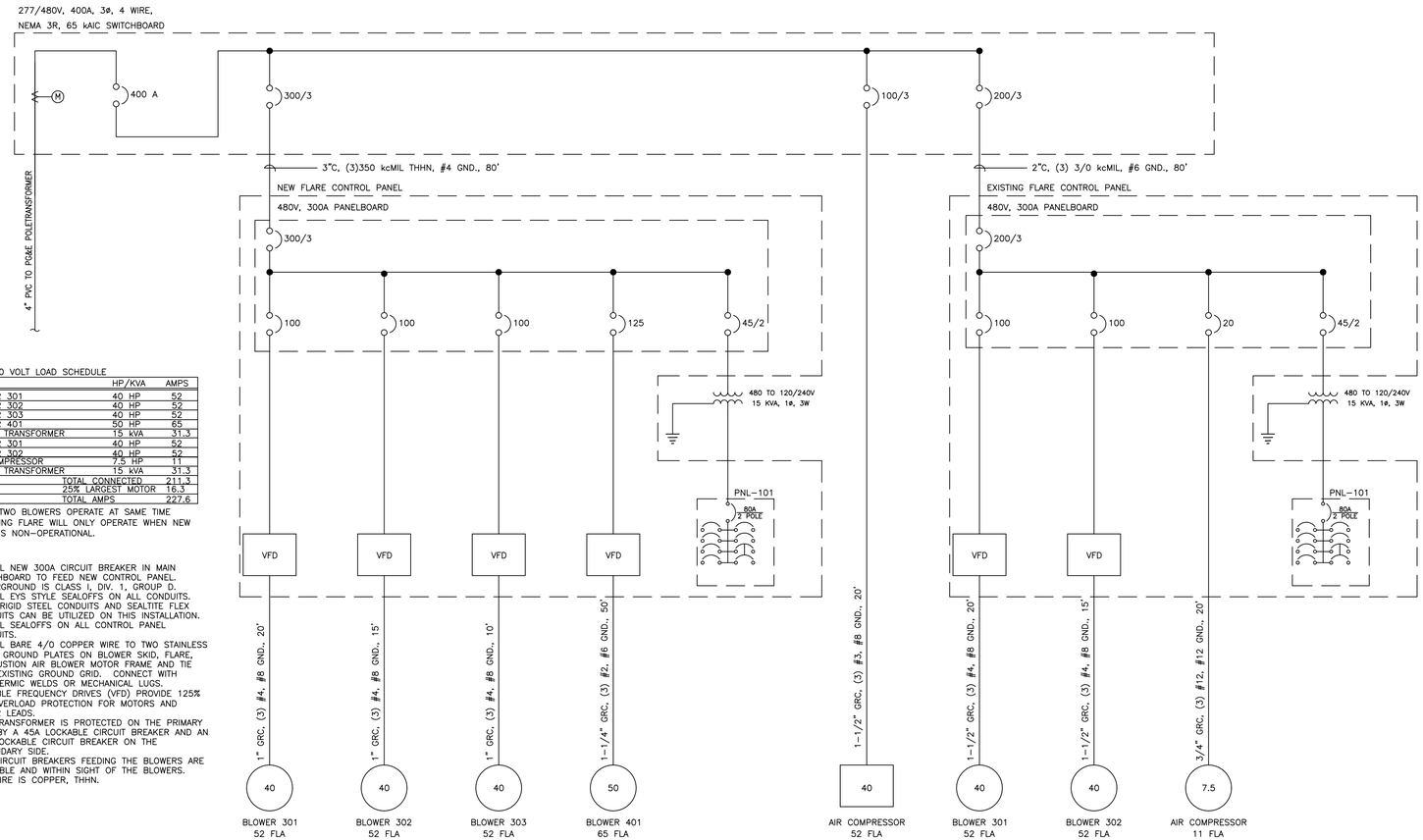
E-501



480 VOLT LOAD SCHEDULE

	LOAD	HP/KVA	AMPS
*	BLOWER 301	40 HP	52
*	BLOWER 302	40 HP	52
*	BLOWER 303	40 HP	52
	BLOWER 401	50 HP	65
	15 kVA TRANSFORMER	15 kVA	31.3
**	BLOWER 301	40 HP	52
**	BLOWER 302	40 HP	52
	AIR COMPRESSOR	7.5 HP	11
**	15 kVA TRANSFORMER	15 kVA	31.3
	TOTAL CONNECTED		211.3
	25% LARGEST MOTOR		16.3
	TOTAL AMPS		227.6

*ONLY TWO BLOWERS OPERATE AT SAME TIME
**EXISTING FLARE WILL ONLY OPERATE WHEN NEW FLARE IS NON-OPERATIONAL.

NOTES:
1. INSTALL NEW 300A CIRCUIT BREAKER IN MAIN SWITCHBOARD TO FEED NEW CONTROL PANEL.
2. UNDERGROUND IS CLASS I, DIV. 1, GROUP D. INSTALL EYS STYLE SEALOFFS ON ALL CONDUITS.
3. ONLY RIGID STEEL CONDUITS AND SEALTITE FLEX CONDUITS CAN BE UTILIZED ON THIS INSTALLATION.
4. INSTALL SEALOFFS ON ALL CONTROL PANEL CONDUITS.
5. INSTALL BARE 4/0 COPPER WIRE TO TWO STAINLESS STEEL GROUND PLATES ON BLOWER SKID, FLARE, COMBUSTION AIR BLOWER MOTOR FRAME AND TIE INTO EXISTING GROUND GRID. CONNECT WITH EXOTHERMIC WELDS OR MECHANICAL LUGS.
6. VARIABLE FREQUENCY DRIVES (VFD) PROVIDE 125% FLA OVERLOAD PROTECTION FOR MOTORS AND MOTOR LEADS.
7. THE TRANSFORMER IS PROTECTED ON THE PRIMARY SIDE BY A 45A LOCKABLE CIRCUIT BREAKER AND AN 80A LOCKABLE CIRCUIT BREAKER ON THE SECONDARY SIDE.
8. THE CIRCUIT BREAKERS FEEDING THE BLOWERS ARE LOCKABLE AND WITHIN SIGHT OF THE BLOWERS.
9. ALL WIRE IS COPPER, THHN.

REV	REVISION DESCRIPTION	DATE

TETRA TECH

CITY OF SANTA CRUZ RESOURCE RECOVERY FACILITY
FLARE STATION IMPROVEMENTS

SINGLE LINE DIAGRAM

DESIGNED BY : LCM	CHECKED BY : CME	DATE : 09-19-2025
DRAWN BY : MLF	APPROVED BY : PJS	

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E-601