ALL WORK DETAINED ON THESE PLANS SHALL BE CONSTRUCTED TO THE SATISFACTION OF THE CITY ENGINEER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION LATEST EDITION (INCLUDING ALL AMENDMENTS, ADDITIONS AND ENGINEER'S OFFICE CORRECTIONS) AND THE REQUIREMENTS OF THESE PLANS AND IN ACCORDANCE WITH THE STANDARD DRAWINGS OF THE CITY OF SIMI VALLEY UNLESS OTHERWISE SPECIFIED.

ANY MECHANICALLY, ELECTRICALLY OR Structurally SIGNIFICANT DEVIATION FROM THOSE PLANS SHOWN BY THE CONTRACTOR SHALL BE DOCUMENTED BY THE CONTRACTOR AND APPROVED BY THE OWNER AND THE BUILDING DEPARTMENT PRIOR TO IMPLEMENTATION.

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ALLOW SAFE OPERATIONS AND CIRCULATION OF VEHICLES IN THE AREA OF WORK, AND SHALL MAKE EVERY EFFORT TO MAINTAIN DISRUPTIONS OF NORMAL VEHICLE CIRCULATION. CONTRACTOR SHALL COORDINATE ANY RESTRICTIONS IN VEHICLE CIRCULATION RELATED TO THE INSTALLATION WITH THE OWNER AND THE BUILDING DEPARTMENT PRIOR TO IMPLEMENTATION.

ANY REDUCTION IN EXISTING VEHICLE FUELING CAPABILITY SHALL BE COORDINATED AND AGREED TO BY THE OWNER AT LEAST 48 HOURS BEFORE IMPLEMENTATION.

FOR THE EASE OF REFERENCE BETWEEN DRAWINGS, WRITTEN SPECIFICATIONS AND IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN RECOMMENDATIONS, INSTRUCTIONS AND SPECIFICATIONS.

INSTALLATION AND START-UP OF ALL EQUIPMENT AND COMPONENTS SHALL BE IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN RECOMMENDATIONS, INSTRUCTIONS AND SPECIFICATIONS.

IN THE EVENT OF ANY INCONSISTENCY BETWEEN DRAWINGS, WRITTEN SPECIFICATIONS AND REFERENCED STANDARDS, THE MOST STRINGENT ONE SHALL GOVERN.

PROVIDE 12 MONTH COMPREHENSIVE PARTS AND LABOR WARRANTY ON ALL EQUIPMENT, MATERIALS AND SYSTEMS INSTALLED, EXCLUSIVE OF CONSUMABLES SUCH AS LUBE OIL AND OTHER WEAR PARTS MANUFACTURER'S PUBLISHED DATA.

PROVIDE 3 SETS OF BOUND AND INDEXED OWNERS MANUALS FOR ENTIRE SYSTEM AS INSTALLED.

PROVIDE RED-LINED FIELD DRAWINGS AND AS BUILT DRAWINGS IN PDF FORMAT SHOWING CLOSED CHANGES MADE FOLLOWING APPROVAL OF THE ORIGURAL CONSTRUCTION DRAWINGS.

AT THE END OF PROJECT ALL INSTRUMENTS, METERING DEVICES, WRITTEN SPECIFICATIONS, AND REFERENCED STANDARDS, THE MOST STRINGENT SHALL GOVERN.

ALL INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS, AS ADOPTED BY THE CITY OF SIMI VALLEY AND CITY OF VENTURA:

- CALIFORNIA BUILDING CODE (CBC 2019)
- CALIFORNIA SAFETY CODE (CSC 2019)
- CALIFORNIA ELECTRICAL CODE (CEC 2017)
- CALIFORNIA MECHANICAL CODE (CMC 2018)
- CALIFORNIA FIRE CODE (CFC 2018)
- CALIFORNIA PLUMBING CODE (CP 2018)
- CALIFORNIA GAS CODE (CGC 2019)
- U.S. MILITARY FACILITIES AND REPAIR GARAGES
- NFPA 522 VEHICULAR GAS FUEL SYSTEMS
- OTHER REQUIREMENTS SET FORTH IN THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS.
A. DEENERGIZE PRIMARY POWER TO MSB. DISCONNECT AND REMOVE MSB. COORDINATE TIMING AND SEQUENCE FOR INSTALLATION OF REPLACEMENT UNIT PER ELECTRICAL DRAWINGS. COORDINATE WORK WITH SOCAL EDISON AS REQUIRED.

B. DEENERGIZE POWER SUPPLY TO STARTER PANEL FOR 75 HP COMPRESSOR SKID 'B'. DISCONNECT AND REMOVE MOTOR STARTER PANEL.

C. ISOLATE GAS SUPPLY AND ELECTRICAL POWER TO GAS DRYER. SAFELY BLOW DOWN GAS DRYER, DISCONNECT AND REMOVE DRYER. COORDINATE TIMING AND SEQUENCE FOR INSTALLATION OF REPLACEMENT UNIT PER MECHANICAL DRAWINGS.

D. DEENERGIZE AND ISOLATE SUCTION AND DISCHARGE LINES FOR COMPRESSOR SKID 'B'. DISCONNECT AND REMOVE COMPRESSOR SKID.

E. DEENERGIZE AND REMOVE MOTOR STARTER FOR REMAINING SKID A. DEENERGIZE ONLY AFTER REPLACEMENT SKID B IS CONNECTED AND OPERATIONAL AS APPROVED BY THE OWNER.

GENERAL DRAWING NOTES

1. REMOVE AND HAUL OFF ALL EQUIPMENT, OUTSIDE OF INDUSTRIAL WASTE PRODUCTS AND MATERIALS AS REQUIRED BY LOCAL, STATE AND FEDERAL REQUIREMENTS.

2. REPAIR HOLES IN CANOPY ROOF RESULTING FROM REMOVAL OF ALL VENT RISER PIPES AS REQUIRED.

3. COORDINATE AND SCHEDULE ALL SHUT DOWNS AND INTERRUPTIONS IN CNG OPERATION WITH OWNER AT LEAST TWO WORK DAYS IN ADVANCE.

4. PRESERVE (E) LINES, CONDUITS AND WIRES WHERE FEASIBLE AS NEEDED FOR REINSTALLATION OF (N) REPLACEMENT EQUIPMENT.

5. ALL CUTS SHALL BE NEAT AND CLEAN, AS NEEDED TO REMAKE CONNECTIONS WHERE APPLICABLE.

6. REMOVE AND REPLACE ALL SAFETY SIGNS AT CNG FUELING EQUIPMENT AND FUELING AREA.

7. AT LEAST ONE CNG COMPRESSOR SKID AND ENTIRE TIME-FILL DISTRIBUTION SYSTEM SHALL BE OPERATIONAL EVERY DAY BETWEEN 6PM AND 6AM, UNLESS APPROVED OTHERWISE BY THE OWNER.
<table>
<thead>
<tr>
<th>PART</th>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CNG STORAGE VESSELS (BASE)</td>
<td>2</td>
<td>STYLE E</td>
<td>20” ID X 30’ L, APPROX. 600 SCF CAPACITY AT 4500 PSIG, 5500 PSIG MAWP. PROVIDE EACH WITH 3/4” SERVICE VALVE, 1” PRV SET AT 5500 PSI W/ 1/2” PROCESS TUBING AND NEMA 3R ENCLOSURE.</td>
</tr>
<tr>
<td>2</td>
<td>CNG STORAGE VESSELS (PER Bank)</td>
<td>1</td>
<td>STYLE E</td>
<td>ADDITIVE ALTERNATE FOR EACH OF 3 BANKS</td>
</tr>
<tr>
<td>3</td>
<td>HOSE CNG FAST-FILL DEPENDING</td>
<td>1</td>
<td>STYLE E</td>
<td>CNG EQUIPMENT SCHEDULE</td>
</tr>
<tr>
<td>4</td>
<td>COMPRESSION SKID W/ (E) REMAIN</td>
<td>1</td>
<td>STYLE E</td>
<td>100 HP, 480V, 1-PHASE MOTOR. ADD I/O AS NEEDED FOR CONNECTION TO NEW CONTROLLER.</td>
</tr>
<tr>
<td>5</td>
<td>INSTALLATION HANGING HARDWARE FOR (E) DEFUELING PANEL</td>
<td>1</td>
<td>STYLE E</td>
<td>PROVIDE HANGING HARDWARE TO (E) DEFUELING PANEL, INCLUDING 3/8” X 12’ HOSE, INLINE BREAKAWAY, AND OPW ‘BDN’ NOZZLE. INSTALL NOZZLE REST AT (E) 5.</td>
</tr>
<tr>
<td>6</td>
<td>GRAY-FULLY VENTED</td>
<td>1</td>
<td>STYLE E</td>
<td>GRAVITY VENTILATOR LOREN COOK TRE-18X36X3 TIER, NON-DUCTED, CONSTRUCTED OF HIGH QUALITY EXTRUDED ALUMINUM, WITH THROAT DIMENSIONS OF 18”X36”, AND CONTROLLED TO OPEN ONLY WHEN AT LEAST ONE COMPRESSOR IS RUNNING. DURACHOICE OR EQUAL VBC2KF-200 (N)</td>
</tr>
<tr>
<td>7</td>
<td>METER</td>
<td>1</td>
<td>STYLE E</td>
<td>1-PHASE XFMR AND APPURTENANCES AS REQUIRED IN 'E' DRAWINGS. (SEE SCHEDULE NOTE 5)</td>
</tr>
<tr>
<td>8</td>
<td>POWER</td>
<td>1</td>
<td>STYLE E</td>
<td>1-PHASE XFMR AND APPURTENANCES AS REQUIRED IN 'E' DRAWINGS. (SEE SCHEDULE NOTE 5)</td>
</tr>
<tr>
<td>9</td>
<td>CONTROLLER</td>
<td>1</td>
<td>STYLE E</td>
<td>INCLUDES INTEGRATED PLC FOR MONITORING AND CONTROL OF ALL (N) AND (E) COMPRESSORS, COMMUNICATION CAPABILITY, AND CAPABILITY FOR COMMUNICATION VIA WEB-BASED INTERFACE FOR STATUS, FAULT HISTORY AND PARAMETER MODIFICATIONS. PANEL SHALL BE APPROVED AND PACKAGED BY THE COMPRESSOR-SKID PACKAGER.</td>
</tr>
<tr>
<td>10</td>
<td>RAW Diesel-Fuel</td>
<td>1</td>
<td>STYLE E</td>
<td>FUELING EQUIPMENT</td>
</tr>
<tr>
<td>11</td>
<td>SYSTEM UPGRADE, AS REQUIRED BY THE PLANS, DRAWINGS, AND SPECIFICATIONS, AND AS APPROVED BY THE OWNER. REFER TO THE DRAWINGS FOR ADDITIONAL REQUIREMENTS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>CNG COMPRESSOR SKID W (E) REMAIN</td>
<td>1</td>
<td>STYLE E</td>
<td>100 HP, 480V, 1-PHASE MOTOR. ADD I/O AS NEEDED FOR CONNECTION TO NEW CONTROLLER.</td>
</tr>
</tbody>
</table>

**Schedule Notes:**

- The list of equipment is partial. Contractor shall furnish all equipment, labor, consult, wire, piping, material and testing services as required to deliver a complete and functional CNG system, as required by the plans, drawings, and specifications. As approved by the owner, refer to the drawings for additional requirements.
- In additional system requirements on sheets AY, and other drawings, refer to the specification sections 43.01-01.25.
- All equipment and materials used for CNG service shall be for a maximum of 500 psi. NPS.
- For items 3, 5, 7, 13 and 26, see electrical drawings for additional requirements.
NOTES

1. WIRING SHOWN ON THIS DIAGRAM IS PROVIDED TO SHOW INTENT, IS NOT FINAL, AND MAY VARY BASED ON ACTUAL EQUIPMENT THAT IS PROVIDED BY THE CONTRACTOR, PROVIDE AND COORDINATE FINAL CONDUIT AND WIRING REQUIREMENTS PER THE WRITTEN INSTRUCTION OF THE RESPECTIVE EQUIPMENT MANUFACTURERS.

2. PREPARE PLAN FOR LOW-VOLTAGE CONDUITS & WIRING REQUIRED BY THIS DIAGRAM AND SUBMIT TO THE OWNER FOR APPROVAL.

3. ALL LINE-VOLTAGE AND LOW-VOLTAGE EQUIPMENT SHALL BE WIRED PER THE WRITTEN INSTRUCTIONS OF THE RESPECTIVE EQUIPMENT MANUFACTURERS.

4. CONDUITS CONTAINING LOW-VOLTAGE WIRES SHALL NOT CONTAIN LINE-VOLTAGE WIRES.

5. FINAL TERMINATIONS AND INITIATION OF THE FUEL MANAGEMENT TERMINAL AND CONNECTION TO EXISTING PC-HOST SOFTWARE SHALL BE PROVIDED BY A FACTORY AUTHORIZED TECHNICIAN.

6. MINIMUM CONDUIT SIZE IS 3/4", UNO, AND AS REQUIRED BY THE NEC.

7. ALL CONDUITS THAT ARE ROUTED THROUGH OR TERMINATE IN A CLASSIFIED AREA SHALL HAVE CONDUIT SEALS AT BOTH ENDS.

8. ESOP LOOP SHALL BE WIRING AS 120V NORMALLY CLOSED / FAIL OPEN AND SHALL CONNECT TO ESOP BUTTONS SHOWN AT FAST FILL ISLAND AND AT TIME FILL POSTS.

9. ALL WIRING SHALL BE NEW, UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER. EXISTING CONDUITS MAY BE REUSED, IF THE SIZE OF ADEQUATE SIZE AND ARE VERIFIED TO BE SERVICEABLE.

10. NEW OR ALTERED EQUIPMENT AND APPURTENANCES ARE SHOWN IN BLACK, EXISTING EQUIPMENT AND APPURTENANCES ARE SHOWN IN GREY.

11. DATA LOW VOLTAGE WIRING SHALL BE SHIELDED AND ISOLATED FROM 480V WIRING PASSING BETWEEN MSP CABINET MODULES.
### E-002

**General Information**

**Address:** 490 WEST LOS ANGELES AVENUE, SIMI VALLEY, CA 93065

**Project Name:** CNG FUELING SYSTEM UPGRADE

**Contact Person:** TRANSPORT MAINTENANCE

**Sutton Enterprises**

**Address:** 6728 Homan Street, Chino, CA 91710, (562) 619-5710

**Email:** suttoncash@gmail.com

### Project Scope

This project includes the development of a lightweight hydrogen fueling system that can be used to power trucks and buses. The system will be designed to meet the needs of the transportation sector, with a focus on reducing emissions and improving efficiency. The project will also include the installation of hydrogen fueling stations to support the new fueling system.

### Electrical Engineering Design & Review

**Company:** FUEL SOLUTIONS

**Address:** 5755 Uplander Way, Suite A, Culver City, CA 90230

**Phone:** 310-207-8548

### Sheet Title

**Client:** SIMI VALLEY TRANSIT

**Sheet Number:** E-002

**Issue Date:** 2/24/20

**Revision Description:** ISSUE FOR PLAN CHECK #1

**Scale:** 1/8" = 1'-0"

**Revision:** E-002

### Outdoor Lighting

**Location:** CALIFORNIA ENERGY COMMISSION

**Project Name:** OUTDOOR LIGHTING

**Description:** The table below shows the typical outdoor lighting design for the project. The lighting fixtures will be designed to meet the energy efficiency standards set by the California Energy Commission. The lighting system will be tested and approved by the California Building Energy Efficiency Standards - 2019 Residential Compliance.

### Comparative Results

<table>
<thead>
<tr>
<th>Area Description</th>
<th>S1</th>
<th>S2</th>
<th>S3</th>
<th>S4</th>
<th>S5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Fixtures</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Annual Energy Savings (kWh)</td>
<td>10,000</td>
<td>20,000</td>
<td>30,000</td>
<td>40,000</td>
<td>50,000</td>
</tr>
<tr>
<td>Project Status</td>
<td>Approved</td>
<td>Checked</td>
<td>Drawn</td>
<td>Designed</td>
<td></td>
</tr>
</tbody>
</table>

### OUTDOOR LIGHTING DESIGN SCHEMES

<table>
<thead>
<tr>
<th>Lighting System</th>
<th>Complete Luminous Intensity (foot-candles)</th>
<th>Total Lumens (lumens)</th>
<th>Luminous Efficiency (lumens/Watt)</th>
<th>Project Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>100,000</td>
<td>100,000</td>
<td>100</td>
<td>Approved</td>
</tr>
<tr>
<td>S2</td>
<td>200,000</td>
<td>200,000</td>
<td>200</td>
<td>Approved</td>
</tr>
<tr>
<td>S3</td>
<td>300,000</td>
<td>300,000</td>
<td>300</td>
<td>Approved</td>
</tr>
<tr>
<td>S4</td>
<td>400,000</td>
<td>400,000</td>
<td>400</td>
<td>Approved</td>
</tr>
<tr>
<td>S5</td>
<td>500,000</td>
<td>500,000</td>
<td>500</td>
<td>Approved</td>
</tr>
</tbody>
</table>

### Additional Notes

- All lighting fixtures will be tested and approved by the California Building Energy Efficiency Standards - 2019 Residential Compliance.
- The lighting system will be designed to meet the energy efficiency standards set by the California Energy Commission.
- The lighting system will be tested and approved by the California Building Energy Efficiency Standards - 2019 Residential Compliance.
NOTE:
Panel layout is shown for reference and may vary. Motor-staters and controls may be provided in common or separate enclosures, provided that they meet the functional requirements of the project.

NEW CONTROL PANEL
SCALE 1:95