



# Omnitrans: Connecting Our Community



San Bernardino Clean Communities Plan Working Group

June 13, 2012



## Omnitrans Overview

### Public Transit Agency for San Bernardino Valley

- **32 Bus Routes**
  - Demand Response: Access/ADA Service, Omnilink
- **650 employees**
- **3 Facilities (2 in San Bernardino, 1 in Montclair)**

### Clean Fuel Technology

- **161 buses: 100% Natural Gas Powered**
- **On site fuel tanks (LNG, unleaded gasoline, diesel, oils)**
- **Daily deliveries of LNG**
- **Daily fuel dispensing**



## LNG Fuel Facts

### Natural Gas: Clean & Safe

#### What is LNG?

- Liquefied Natural Gas
- Natural gas cooled to  $-260^{\circ}$
- Cleanest burning fossil fuel

#### Is LNG Safe?

- In liquid form, natural gas cannot burn
- LNG not explosive or flammable
- Natural gas in gaseous state has narrow flammability range
- Evaporates and dissipates quickly in atmosphere

#### Omnitrans Safety Measures

- Leak detection and fire suppression systems
- Frequent inspections by staff and expert vendor





## Safety Compliance

### **SAFETY COMPLIANCE**

**Omnitrans LCNG stations, bus fuel and safety monitoring systems have passed review by:**

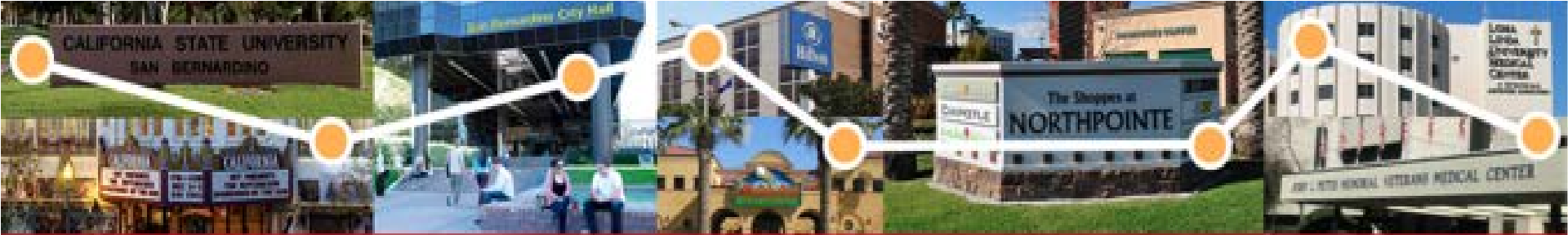
- **California Department of Health Services**
- **San Bernardino City Fire Department**
- **California Division of Occupational Safety and Health**
- **San Bernardino County Fire Marshal**
- **California Highway Patrol (vehicles)**



## L/CNG Fuel at Omnitrans

### **NATURAL GAS FUELING AT OMNITRANS**

- Fuel delivered/stored as liquefied natural gas (LNG) -260o F
- LNG not stored under high pressure
- LNG not flammable or explosive
- Un-odorized
- LNG converted to compressed natural gas (CNG) for bus fuel
- Natural gas is lighter than air and quickly dissipates



## L/CNG Fuel at Omnitrans

### FUEL SAFETY OVERVIEW

- Daily safety testing by Omnitrans staff and regular inspection and testing by an expert outside vendor
- L/CNG equipment protected by methane detection sensors, fire sensors/suppression system and emergency stop circuits
  - Methane sensors in maintenance buildings, at fuel storage areas, fuel dispensing areas and on buses
- Visual/auditory alarms occur if leak is detected
  - exhaust fans triggered
  - system shut down
- System operating 10 YEARS without hazardous incident



## Omnitrans Goes Above and Beyond

**Daily:** Each shift, staff does visual inspection and leak detection.

- *Most LCNG stations are inspected weekly*

**Weekly:** Maintenance is multiple times each week by vendor

- *Most LCNG stations get maintenance every three months*

**Monthly:** A detailed facility inspection conducted by Clean Energy Corp. Technician

- *Most LCNG stations get maintenance every three months*

**Immediate Response:** Clean Energy Technician is on call 24/7 and responds within 2 hours of notification.

- *Spare parts stored on site for quick corrective action.*



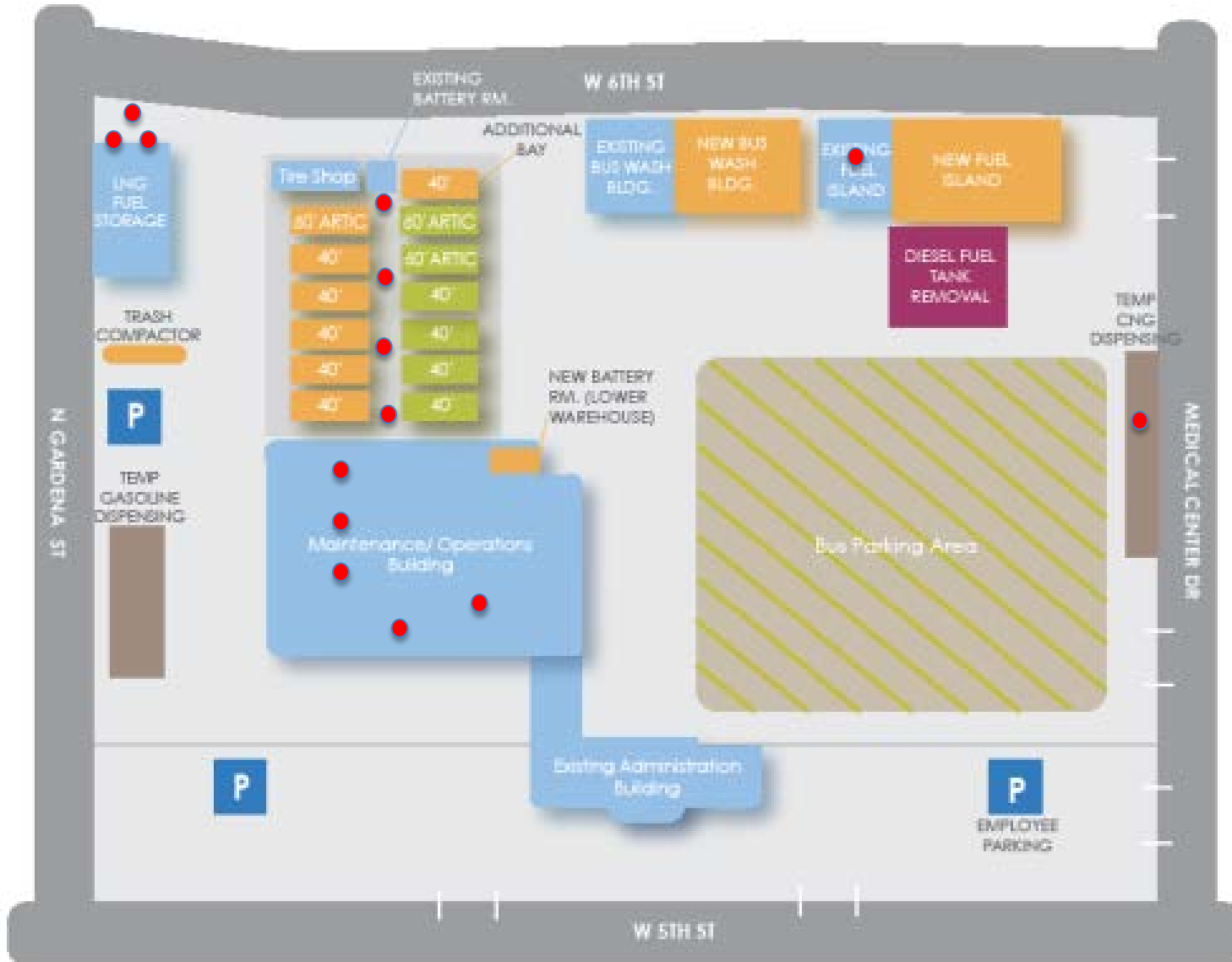


## Methane Detection System

### How Sensors Work

- Visual warning if methane level reaches 20% of LFL
- Audible warning and station shut down if methane level reaches 40% of LFL
- LFL (lower flammability level): To burn, gas needs the right mixture of fuel and air plus an ignition. LFL is the lowest concentration of methane in air capable of combustion.
- At both 20% and 40% LFL, cannot burn even if flame present
- Alarm system satisfies NFPA code requirements (National Fire Protection Association)





- P Parking
- Existing Structure
- Bus Bays
- Facility Updates
- Temp Dispensing
- Diesel Tank Removal
- Methane Sensors





## East Valley Vehicle Maintenance Facility Upgrade Project

### VEHICLE MAINTENANCE FACILITY PROJECT

**UPGRADE** the San Bernardino Fifth Street location to make room for 14 new 60-foot vehicles to operate on the sbX line.

- *Current facility completed in 1998 to serve 40-foot buses*

#### Project Timeline (12 months)

- Late 2012: Begin Construction
- Late 2013: Complete Construction





# A NEW MODE OF TRANSIT FOR THE VALLEY

## WHAT IS SBX?

- First Bus Rapid Transit (BRT) service in the Inland Empire.
  - Time competitive with auto travel
  - Reduce vehicle congestion
  - Environmentally friendly
- 15.7-mile from north San Bernardino to Loma Linda.
- Beginning of larger system for the Valley
- Estimated 220 Jobs created during construction.





## A NEW MODE OF TRANSIT FOR THE VALLEY

### 3 ELEMENTS

- **15.7-mile corridor construction, now underway**
  - 16 stations at university, government, business, entertainment and medical centers, include public art elements.
  - 4 park-and-rides.
- **14 60-foot articulated CNG transit vehicles**
- **Vehicle Maintenance Facility Upgrade**





# East Valley Vehicle Maintenance Facility Upgrade Project

## About the Upgrades

### Modify 3 service bays in shop:

- 75-foot long bays for 60' buses
- Relocate battery storage area

### New bus wash with 3 lanes

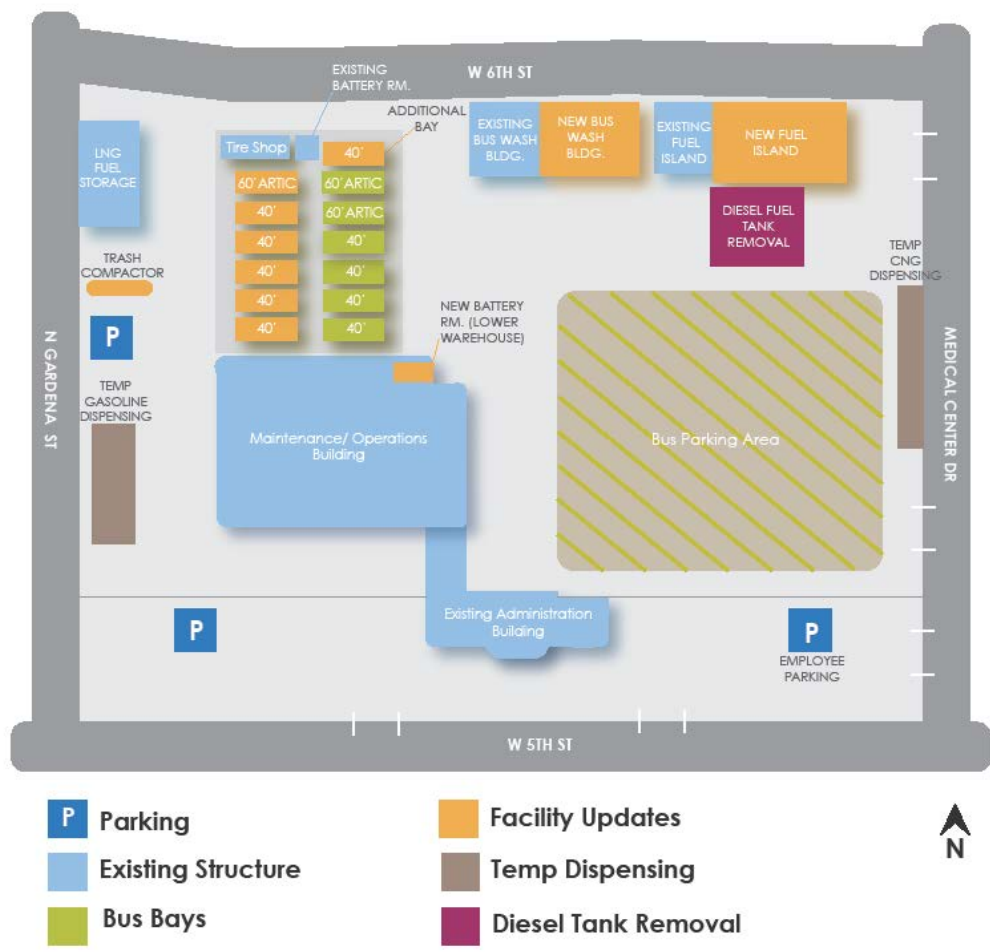
- Drive-through for buses
- Chassis wash system
- Inspection pit

### New fueling island with 3 lanes

- Service 40- and 60-foot buses
- Speed up refueling process.

### New trash compactor

- Reduces trash collection frequency







# East Valley Vehicle Maintenance Facility Upgrade Project

## About the Upgrades

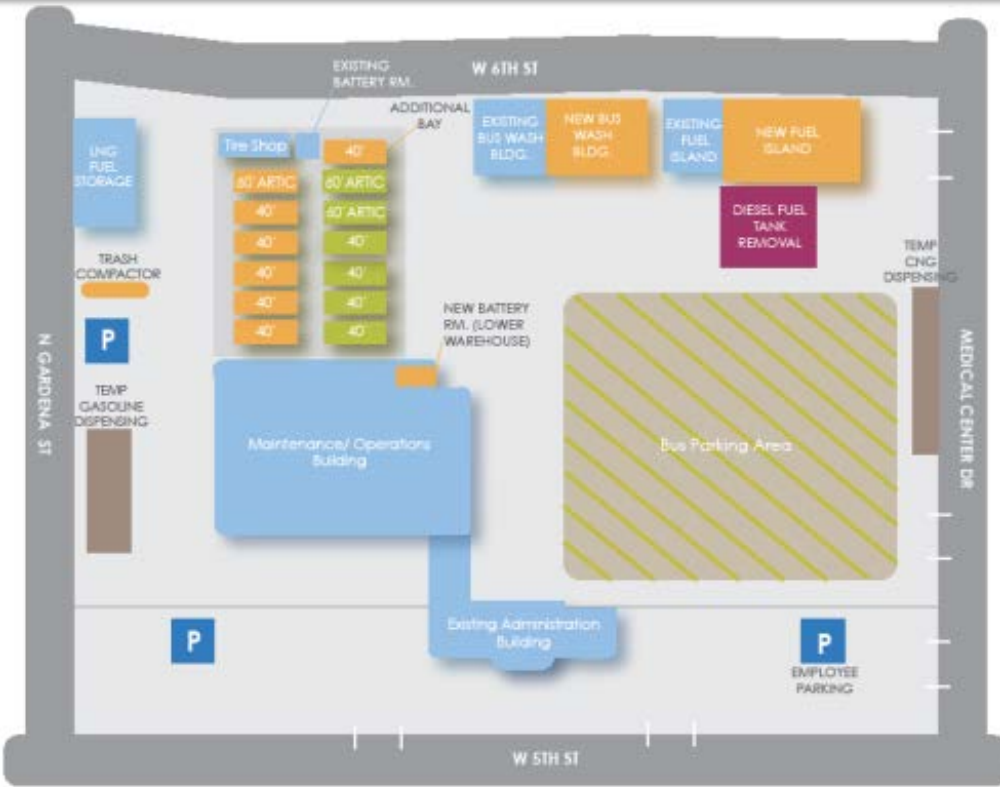
### Remove underground tanks

- Previously for diesel, unleaded gasoline, other fluids
- New above ground tanks for gasoline, oils, other fluids.

### Temporary fuel dispensing

- CNG on the east side
- Unleaded gasoline on west side.
- No changes to natural gas delivery, storage or compression equipment.

### New striping, lighting in yard



<b>P</b> Parking	<b>Orange</b> Facility Updates
<b>Blue</b> Existing Structure	<b>Brown</b> Temp Dispensing
<b>Green</b> Bus Bays	<b>Purple</b> Diesel Tank Removal





## East Valley Vehicle Maintenance Facility Upgrade Project

### **DURING CONSTRUCTION**

- **Safety top priority**
- **Construction zones on Omnitrans property**
- **No disruption to surface street traffic**
- **No disruption of bus operations**
- **Communications with neighbors**
  - **Open house event prior to construction**
  - **Newsletters**
  - **Website: [WWW.OMNITRANS-SBX.COM](http://WWW.OMNITRANS-SBX.COM)**





## East Valley Vehicle Maintenance Facility Upgrade Project

# Questions?

## CONTACT US

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