



## Pharmaceutical Application



### Description

The Self-Guided Vehicle System proves efficient handling of production and packaging materials when called upon to support the site's "Work-In-Process" (WIP) requirements.

The SGVS is responsible for transporting material between two inbound conveyors, a 12-aisle/44,000 location AS/RS storage system and two outbound conveyors. Raw material or WIP items are introduced into the system for storage until they are needed by production or packaging. The inbound process requires the SGVS to verify that the load at the end of the inbound conveyor is the appropriate load that the site's upper level system desires to have stored. Once verified, the SGVS then transports the pallet to the correct AS/RS crane aisle for storage. The outbound process calls for the SGVS to pull product from the AS/RS outbound drop-off point and take it to the appropriate Chemical Stock or Outbound Conveyors for use at other production locations throughout the facility. During both operations, the site's upper level host is kept informed of the status of the load / order.

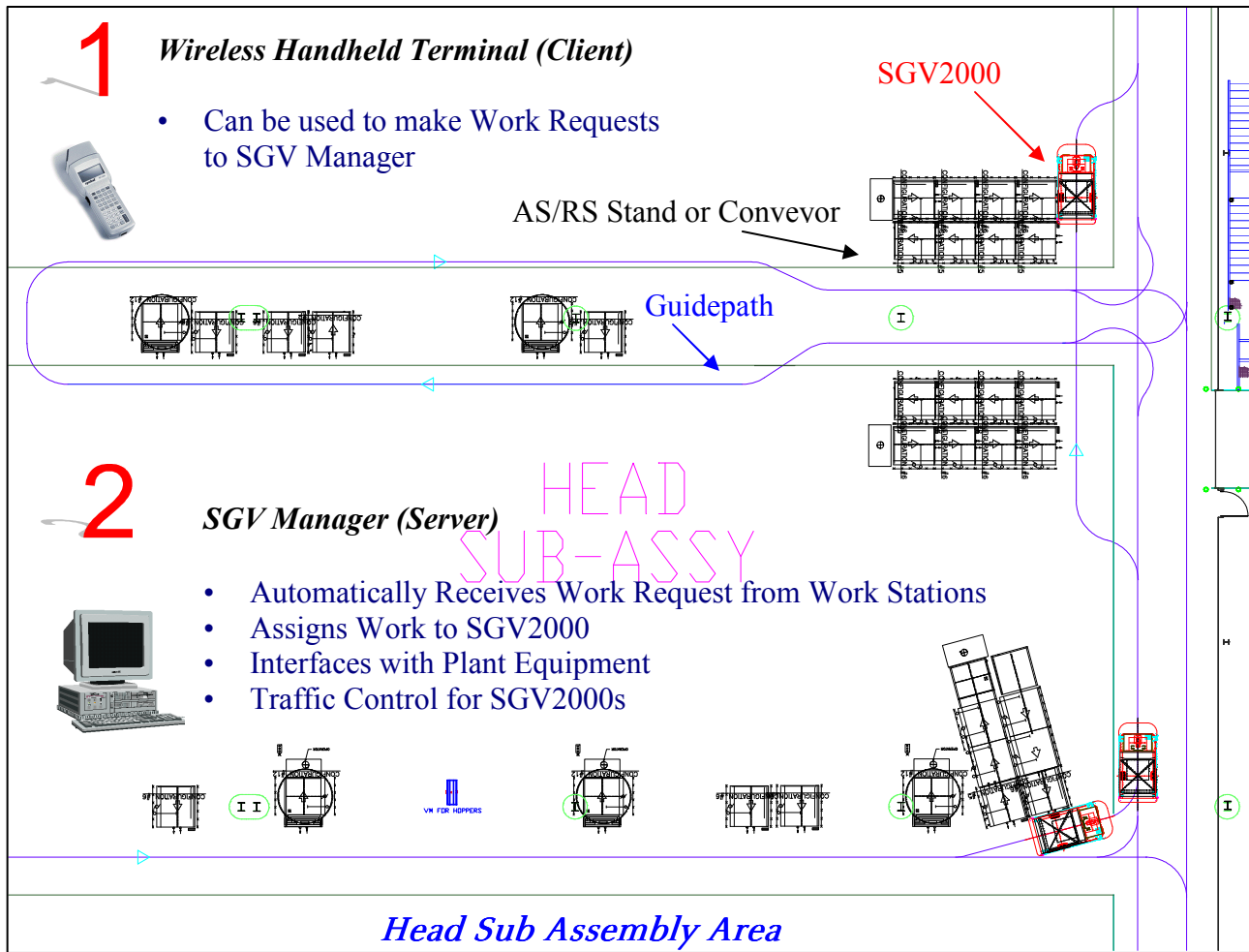
### Features

Date Installed	November 1998
Vehicle Type:	Unit Load with Lift Deck
Number of Vehicles:	5
Application Description:	Warehouse Storage, Wire Guided System
Replacement	
Industry Description:	Pharmaceutical WIP
Guidance Method:	Laser
Load Description:	AS/RS Palletized Loads
SGV Host Controls:	Windows NT®
Path Length:	600-Foot Loop plus Spurs

### Benefits

The SGV System was used to replace an aging wire guided system. Due to the ease of the laser-guided systems' installation, the customer experienced no appreciable downtime or impact to their production all while fully complying with cGMP and validation requirements. They continued to operate their existing system to support production until the FMC Technologies' laser system became operational. The capability of undergoing the installation of a "state of the art" laser guided system while not impacting production was of immeasurable benefit to them – not only in preventing lost revenue or increased overtime but in beginning their ROI earlier than anticipated.

## How a Typical SGV2000 System Works



### 1 Wireless Handheld Terminal (Client)

- Can be used to make Work Requests to SGV Manager

### 2 SGV Manager (Server)

- Automatically Receives Work Request from Work Stations
- Assigns Work to SGV2000
- Interfaces with Plant Equipment
- Traffic Control for SGV2000s

### 3 RF Modem

- Communicates Work Order to SGV2000
- Communicates with Handheld Terminal to receive orders

### 4 SGV2000 Self-Guided Vehicle

- Receives Work Order from RF Modem
- Moves Load per instructions from SGV Manager
- Navigates through plant via Laser Guidance



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