

Automated Parking Solutions

*Taking the Space Out of
Parking & Futureproofing
the Podium*

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Why Automated Parking ?

- *Demand for Parking Spaces in Urban Areas Changing – Developers and Cities want to:*
- *Reduce Cost*
- *Increase Density*
- *Use Land More Efficiently*






Types of Automated Parking

- Stackers – just up & down, often tandem
- Puzzle Lifts – most commonly used by SDG in its mixed-use projects
 - <https://vimeo.com/246154246>
- Parking Tower – Installed at SDG's HIVE Development
 - <https://vimeo.com/256845701>



Features of Automated Parking Solutions

Key Features By Type

	 STACKER	 PUZZLE	 TOWER
NEW CONSTRUCTION	✓	✓	✓
RETROFIT	✓	✓	✓
INDEPENDENT ACCESS FOR DRIVER		✓	✓
EV CHARGING		✓	✓
REMOTE MONITORING		✓	✓
MAXIMUM # LEVELS	2	7	20
RETRIEVAL SPEED (SECONDS)	45 – 180	30 – 45	90 – 120
BENEFITS	<ul style="list-style-type: none"> • Min 12' clear height • Small to large scale project • Easy to install 	<ul style="list-style-type: none"> • Min 12' clear height • Price and operating cost 	<ul style="list-style-type: none"> • Efficient design • Narrow space • Standalone or part of new structure



Reducing Cost

Puzzle lift –

Two, three or four levels:

- *\$17,000 to \$20,000 per space vs. \$50,000 to \$60,000 in a conventional parking podium*
- *Add roughly \$3,000 to \$5,000 for pits*

Tower Lifts-

- *\$25,000 to \$30,000 per space*
- *HIVE tower 39 spaces on area for 7 spaces*

- **Warranty: \$12 or \$25 per space/mo.**
- **Energy: \$11/yr. approx./space**
- **Power Needs: 208v, 3 Phase, 40 amp**
- **Puzzle Motors draw only 4kw**



Market Acceptance & Benefits

- *Perceived Safe and Secure Storage of Car*
- *Reduced Greenhouse Emissions*
- *Higher Volume Ceilings in Garages Feel Better to Residents*
- *Podium Height Allows for Mezzanine Uses*

More Efficient Use of Land

- *Perfect for tight infill multi-family sites*
- *Typically uses 1/4 to 1/3 of land area than conventional*
- *Allows for Alternate Ground Floor Uses and More Units in Areas with Height Limits*
- *Podium Height Provides Better Human Scale for Retail Storefronts and Street Scene*





Futureproofing the Podium

Automated Parking – Futureproofing the Podium

A. Expect Long-term Changes in Parking Demand:

- ***Proliferation of Ride Sharing, Bicycles, Scooters***
- ***More Transit***
- ***Driverless Cars***
- ***Cost of Rent – Tenants forgoing Car Ownership***

B. Podium Dimensions Allow for Alternative Future Uses

- ***Typical 18.5' to 22' Podium Heights for 3 Level Puzzle***
- ***13.6 to 15' Heights for 2 Level Puzzle***

****Note: Future Uses and Zoning Considerations***

