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GEMSouthwest

ASSET MANAGEMENT



GEMSouthwest

ELECTRONIC RECYCLING



ITAD SOLUTIONS - SAFE AND SECURE

02

About us

GEM SOUTHWEST ITAD is an R2, ISO 14001:45001:9001 certified ITAD and Electronics Recycling company with facilities in Ontario, CA and Dallas, TX. We perform the full suite of hardware lifecycle management services including de- installations, on-site packaging and inventory of hardware, transportation logistics/ Chain of Custody, data sanitization and hard-drive/ hardware physical destruction services, recycling and component recovery, and remarketing and resale solutions.





GEMSouthwest

Sustainability - Security - Compliance

To provide world class IT Asset Disposition Service and global excellence in Electronic Recycling Services.



IT Asset Disposition Services

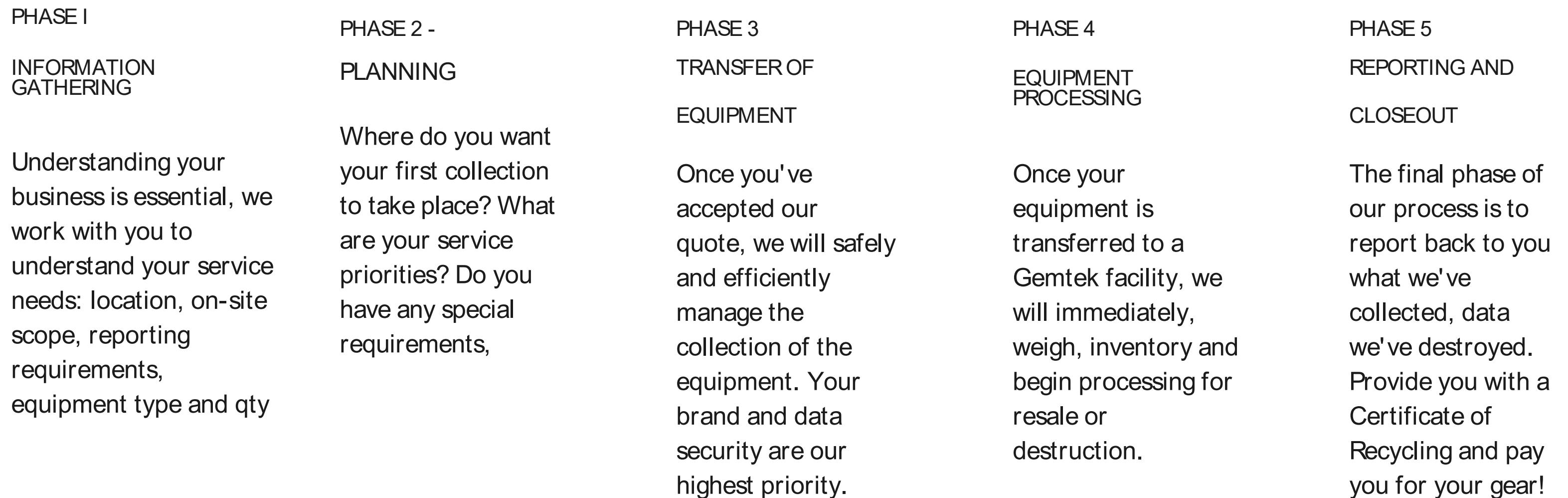


GEM Southwest Excels at:

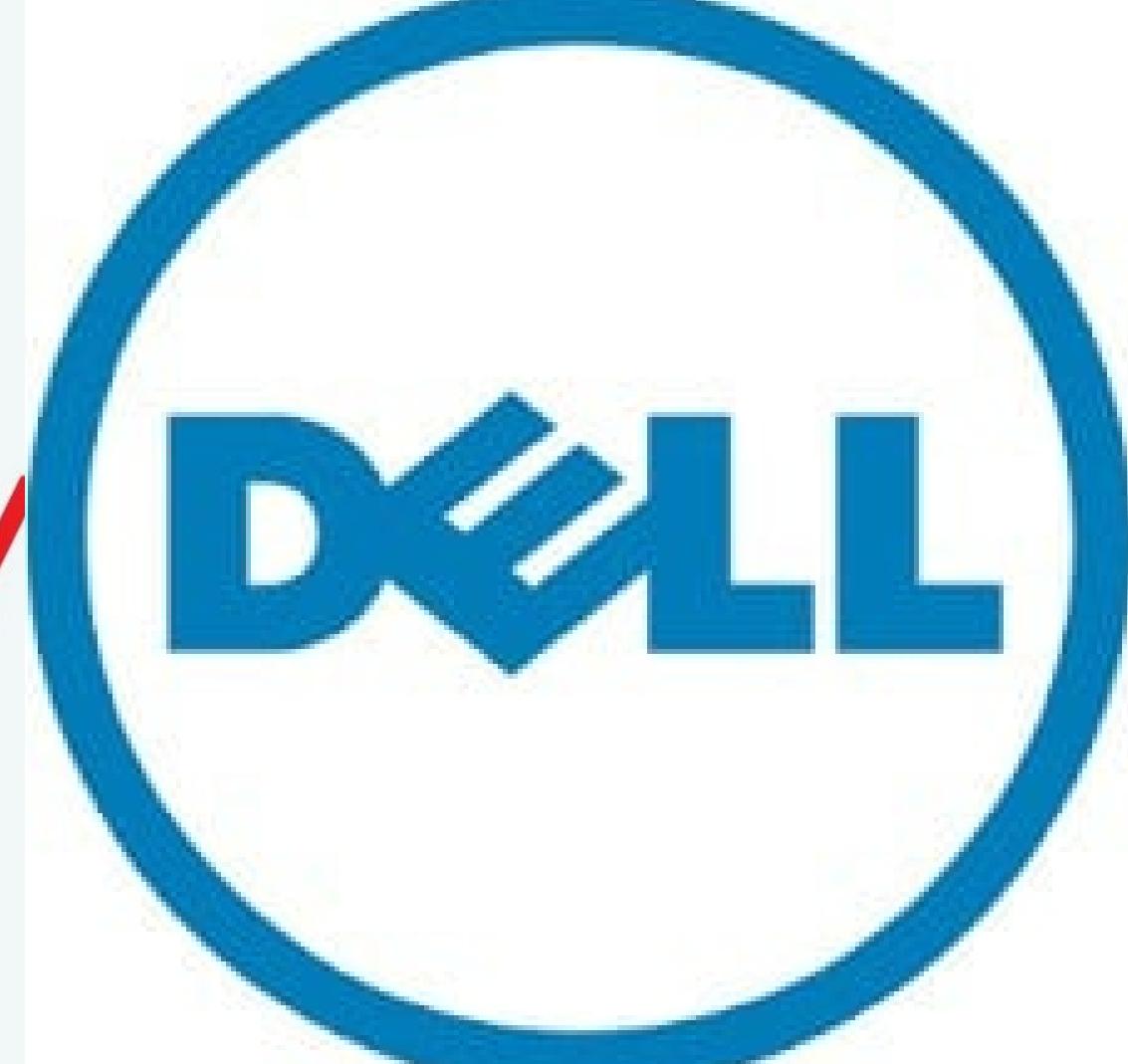
- Highest recovery in Industry for used and surplus electronics
- Trusted downstream partner for most Major US ITAD companies
- Component recovery solutions for equipment that cannot be resold
- Vertically integrated processes with industry leading scrap metal processing capabilities, processing over 1 million pounds per month
- Southern California and Northwest Texas processing facilities



How we work



verizon



AT&T



ARCHITECTURE
PRESENTATION

Some of our notable
clients



Large scale Electronic Destruction Recycling



- Destruction of offspec products
- Destruction of returns
- Electronics Recycling
- shredding and processing
- Secure Data Destruction
- (Hard Drive) Services
- Recalled products
- Destruction Witnessed
- Destruction Services

GEM Southwest- Battery Division

GEM Southwest LLC
3950 Platinum Way
Dallas, TX 75237

www.gemsouthwestbattery.com



GEM Southwest- Battery Division

OEM OBSTACLES

Recycling offers pros and cons

Stockpile of Lithium Ion Battery Packs

Experts estimate global stockpile of 3.4 million EV battery packs by 2030 as demand for EVs grows.

Critical Mineral shortage

Battery manufacturers will face shortage of critical mineral domestic

Domestic Market Cost

Domestic recyclers often pose a significant cost and
branding risk





Risk Management

We reduce OEM's brand risk by recycling 100% domestic.

Closed Loop

We start with shredding and planning on refining raw materials **recovery** needed by manufacturers.

Remanufacture

We turn recycled EV battery into other Lithium Ion battery applications such as powerpack.

GEM Southwest- Battery Division

Testing, Sorting,
Discharging &
Dismantling Center





SAFETY

We ensure the well-being of our team by making safety our top priority.

Training & Personal Protective Equipment

Contingency procedures in place (eye washing station, fire safety). CellBlock and vermiculite. Gloves, face shields and lab aprons. Temperature monitoring from arrival, during discharge and dismantling.

Prevention is our Principle

We use infrared thermal guns to continuously monitor for hot spots among stored battery packs. We plan to upgrade this technology to Flir's thermal heat detecting sensors as we expand.

OSHA Compliant for Handling & Shipping

We follow top standards and train our staff ongoingly to ensure their safety and wellbeing start to end. Non conductive storage and packaging as well as tools (pliers, screwdrivers, etc.)

Testing & Sorting

We use portable voltage capacity indicators to get a reading for each pack and sort according to State of Charge (SOC). We monitor our storage facility with infrared thermal technology for safety.

Discharging & Dismantling

For healthy packs, we discharge and dismantle to separate and label healthy modules.

For low health packs, we discharge, dismantle, and test their state of health at modular level.

Top of the Line Equipment

Arbin testing towers (RBT series) as well as Midtronics (GRX-5100 and XMB-9640) as we scale up to 100,000 sq ft and want to increase efficiency and cut down on processing time.

Pack Level & Modular Level Sorting

We make sure to closely examine each pack and module received, and to assess their potential.



3 Years

Joint venture in place to close the loop from refining raw material, and sell to US manufacturers.

2 Years

Triple amount of tonnes per year. Blockchain database established. New Recycling Technology Development and Trial.

100,000 sqft Processing facility end of 2022

4,800 Tonnes/year. Testing, Sorting, Discharging, Dismantling and shredding facility.

Base plate with cooling system

Who we serve

OEMs and Manufacturers

Solutions that benefit the producers and ensure a green future.

Battery Repair Service Providers

Solutions to the aftermarket, which needs sustainable options for recycling.

What we continue Research and Development

Working with Texas Colleges on improving Battery recycling method .

Battery management system



The Value of R2

Asset Management for OEMs

Environmental & Public Health:
Reducing our impact
Documentation & Auditing
No Land Fill Policy

Worker and Health Safety:
OSHA Audit
Security of Data & Facility:
Your data and brand are protected

Permits:
Texas Commission on Environmental Quality (TCEQ)
Storm Water (TXRNEBG94) & Air Permit (Reg #161926)
Certificate of Liability Insurance- Environmental Impact

**Electronic and Non-Ferrous
Recycling**
Recycle Electronic Components
and Non-Ferrous commodities



Battery Shredding
We test, sort, discharge and
dismantle before shredding

Remanufacturing
Batteries are dismantled to the modular
level and goes to power pack application if
they pass the health line

Positive Value

GEM Southwest is an experienced R2
Certified Recycler and Non-Ferrou
Recycler. We will add all possible value to
our Clients to create positive value

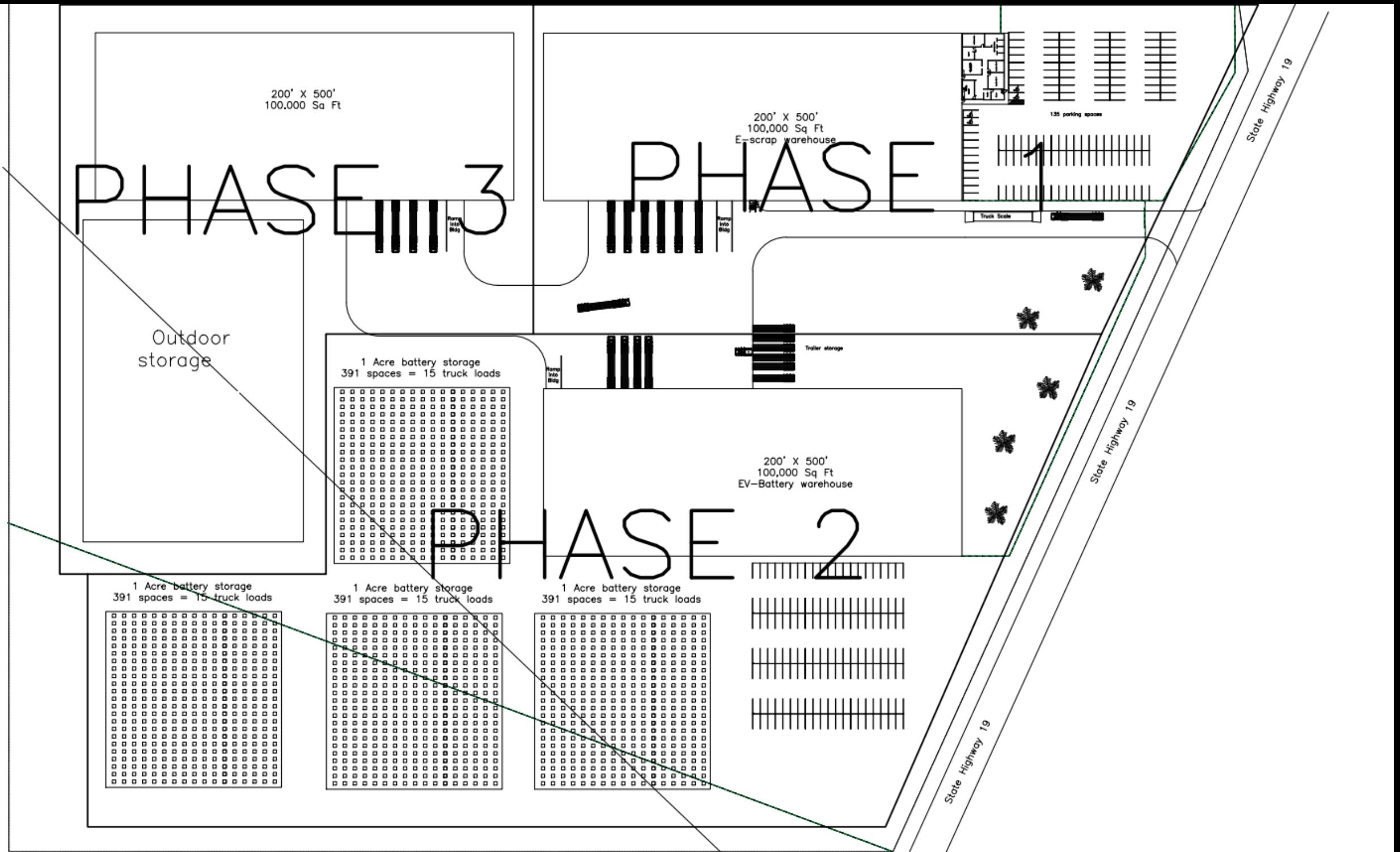
REMANUFACTURING

We make it simple for you

We will use medium health level battery cell/modules to remanufacture the battery into power grid to supply cities, street and industries.



GEM Southwest- Battery Division Current Status



Location
Texas, 30 Acres land, build
to suite facility

Investment
15 million initial investment
phase I

Equipment
We will start shredding at
early 2023, equipment design
flow is in place and permit is
under application.

Cathode to Cathode Direct Recycling

We are under research and development of direct recycling with local colleges.

Hydrometallurgical Metal Recovery

We aim to joint venture with experienced Hydrometallurgical refiner to supply the domestic manufacturing market with critical mineral



MATERIAL RECOVERY REFINING





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US



WEBSITE

www.gemsouthwestllc.com

www.gemsouthwestbattery.com

ADDRESS

3950 Platinum Way Dallas, TX 75237

EMAIL

Linda@gem.us.com

CONTACT

214-333-5055

Work with us

