

URBAN ORE ***and BEYOND*** – **A Visual and Conceptual Tour**

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Illinois Recycling Association
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Disposal and Business Priorities

- **Reuse first.**
- **Recycle second.**
- **Waste as a last resort.**

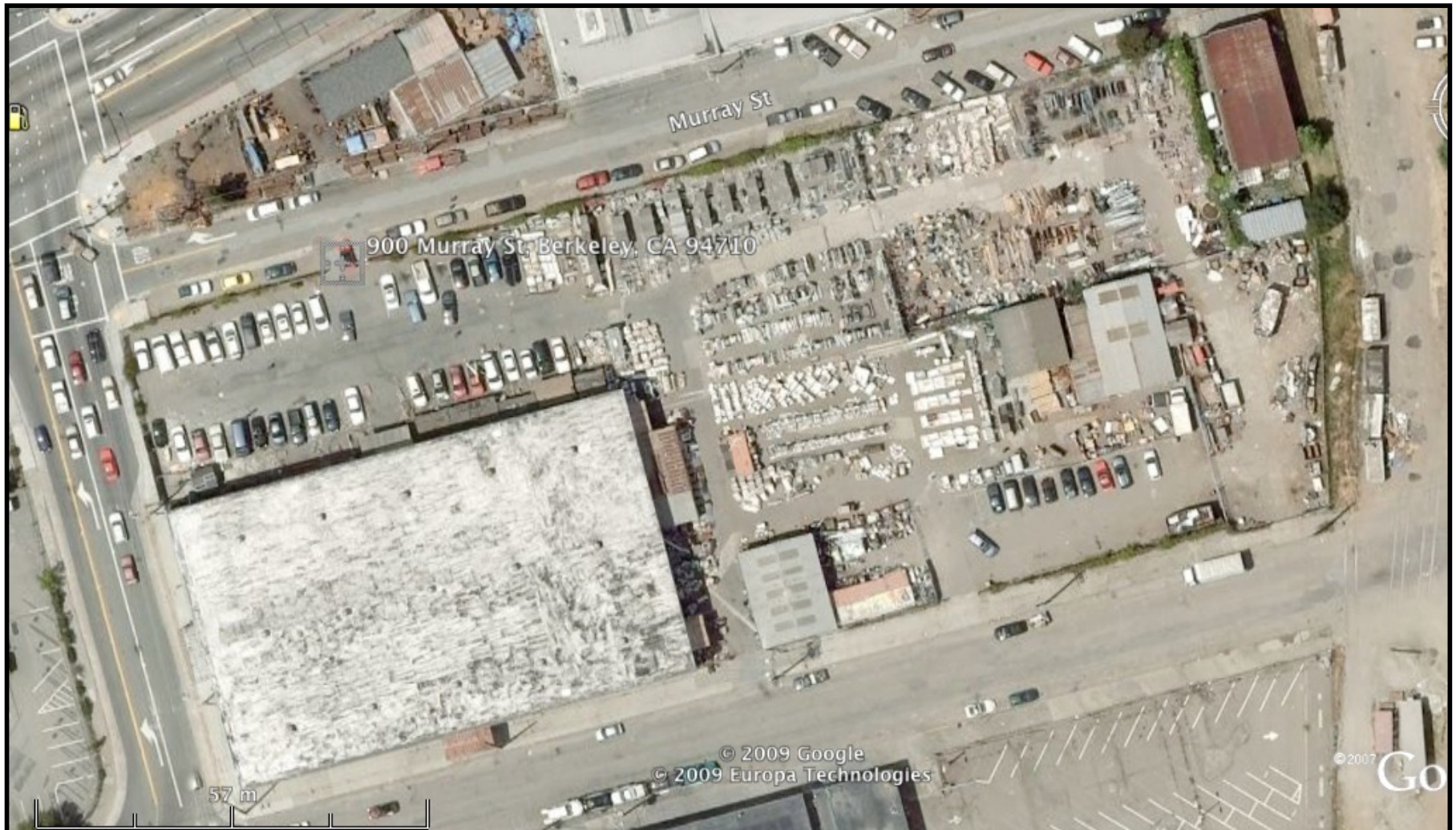
We implement these priorities in concepts, in operations, and in design.

We act locally around the globe.

Business Model In a Nutshell

**We take people's discards
and return them to commerce,
primarily through retail sales.**

3 acres



Outside – Building Materials



Inside (about 25% of floor)



Inside – Gallery



Business Model

- We are for profit.
- Nobody guarantees us a profit.
- We are NOT subsidized by taxes.
- The City transfer station charges \$125/ton in tipping fees, pays us \$40/ton to salvage from the floor, and keeps \$85/ton.
- Wasting is our true competitor.
- We waste 2% or less of what we receive.

How we salvage

1 →

2 →



Financial Impact

Annual Income **\$2,500,000**

Community's financial benefit

Wages & benefits **1,275,000**

Purchases for resale **153,400**

Sales taxes **214,000**

Property taxes **96,600**

Wasting avoided **98,600**

TOTAL \$1,837,600

Fixed assets – low value

- Land and buildings biggest asset.



Fixed assets – low value

- **Land and buildings biggest asset.**
- **Not much equipment.**
 - 4 trucks**
 - 2 forklifts**
 - 3 electric trucks**
 - Racks, shelving, store fixtures**
 - Cash registers, computers, phones**
 - Hand and power tools**

Fixed assets – low value

- **Land and buildings biggest asset.**
- **Not much equipment.**
- **Inventory valued at \$13,600.**

Deal with IRS lets us calculate value as a percentage of last 3 months' purchases for resale.

Fixed assets – low value

- Land and buildings biggest asset.
- Not much equipment.
- Inventory valued at \$13,600.

Deal with IRS lets us calculate value as a percentage of last 3 months' purchases for resale.

- Low value = low borrowing power.

Information and human assets – high value

- Entrepreneurial zeal.

From this  to this 



Information and human assets – high value

- Entrepreneurial zeal.
- The Urban Ore Way.

Information and human assets – high value

- Entrepreneurial zeal.
- The Urban Ore Way.
- Staff.



Staff

- 35-37, all fulltime but 4 who chose to be parttime.
- Selected for liking people, being diverse culturally, believing in mission.



Staff

- **Compensation.**
 - **Living Wage** - higher than national average for hardware stores.
 - **Income sharing** in every check.
 - **Profit sharing** twice a year.
 - **2 weeks paid time off**, 11 days unpaid.
 - **Fully paid health premium** for employee and all dependents, with dental and vision. Reimburse copay for doctors' visits.
 - **50% discount** on purchases.

Supply – how we get stuff

- **Sources:**
 - 75% the public brings it to Receiving.
 - 15% we salvage from the transfer station.
 - 10% we pick up responding to calls.
- **Cost of goods sold:**
 - Mostly we accept dropoffs but also buy with cash and trade credit.

Supply – how we get stuff

2-3 salvagers a day bring in 2-6 tons.



Supply – how we get stuff

**We pay for
the best
things.**



Supply – how we get stuff

The general public and haulers bring us most things.



Supply – how we get stuff

The Outside Traders pick up.



Supply – how we get stuff

The Outside Traders pick up.



URBANORE®
TO END THE AGE OF WASTE

Demand – returning resources to commerce

- **Processing: sorting, cleaning, pricing, delivering to sales.**
- **Selling at retail.**

Selling at retail

- **Cash registers record about 60 reuse categories.**
- **2 retail divisions:**
 - **Building Materials – doors, windows, lumber, ceramics, metals, toilets, tubs, sinks, glass, garden.**
 - **General Store – cabinets, hardware, sports, furniture, housewares, clothing, arts & media, stoves, Gallery, eBay.**

Demand – returning resources to commerce

- **Processing: sorting, cleaning, pricing, delivering to sales.**
- **Selling at retail.**
- **Recycling.**
 - **Processing: sorting, cleaning, dismantling, upgrading.**
 - **We recycle about 25 categories and compost onsite.**
 - **Wasting is one category: dry rubbish.**

Underlying operating principles

- Incentivize honesty and penalize cheating; reward hard work, teamwork, and fair dealing; price for a balance of optimal income and turnover.
- The more categories, the more income.
- Don't push; help people solve problems.
- Don't second-guess the market; people buy the darndest things.

Underlying operating principles

- If it can't be reused, then recycle it.
- Waste as a last resort, and pay full cost.
- Share income, profits, and (eventually) equity.
- Educate as part of advertising.

Educate as part of advertising

- We print our purpose on every receipt.
- We advertise separately for supply and demand.
- We tell the public about current issues.
- We tell the truth.
- They learn to trust us.

**Educate as
part of
advertising**



URBANORE®
TO END THE AGE OF WASTE

Educate as part of advertising

PAID ADVERTISEMENT

WHICH WAY SHOULD WE RECYCLE?

DISCARDS TO SINGLE STREAM RECYCLING

IT'S SO EASY! SOMEBODY ELSE CAN SORT IT OUT!

WASTE HAPPENS

RESULT: CONTAMINATED, LESS VALUABLE MATERIALS - MORE WASTE!

MANAGING "WASTE" - MOST EXPENSIVE DISPOSAL

DISCARDS TO SOURCE SEPARATED RECYCLING

I CAN USE ALL OF THIS!

CLEAN RESOURCES FLOW

ZERO WASTE RECYCLING

DEVELOPING RESOURCES - CHEAPEST DISPOSAL

Discards aren't a problem to be managed; they're resources to be developed.

Achieving Zero Waste – no landfilling and more recycling-based businesses – means we have to do the best recovery we can while streamlining our systems. Some recyclables such as bottles and cans can be mixed, but "singlestream" recycling (all recyclables in one bin) mixes paper and glass, often pressing broken glass into the paper. The mixture results in more "residue" to be landfilled, and the abrasive glass damages paper mills' equipment. Plastic bags can wrap around sorting equipment and slow recyclers' processing. Both problems waste resources even when people try to recycle.

Nothing beats source separation for providing the highest-quality resources.

URBANORE®
TO END THE AGE OF WASTE

Educate as part of advertising

PAID ADVERTISEMENT

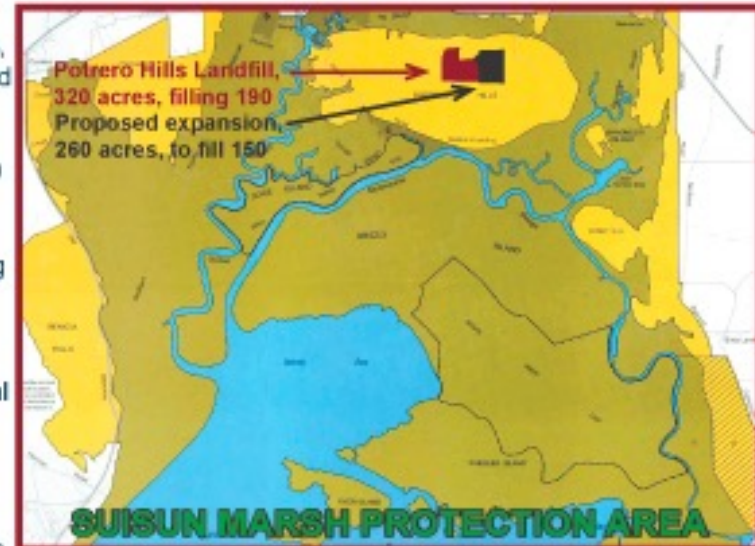
CHEAP LANDFILLING IS THE ENEMY OF RECYCLING

— David Tam, recycling activist

The Potrero Hills Landfill, owned by Republic Industries, is surrounded by the protected Suisun Marsh, the largest marine estuary on the West Coast. The dump sits on 320 acres, fills 190 of them, and when complete it will be 130 feet deep - a 13-story building on 190 acres.

Now it wants to expand vertically and horizontally. If permitted, it would be equal to a 25-story building covering 340 acres.

This dump draws garbage from a 150-mile radius and charges from \$15-\$30 per ton less than landfills in areas that use landfill surcharges to grow recycling, such as San Jose and Alameda County. One environmental activist calculated that in 2004, this dump's cheap rates cost recycling programs more than \$3 million per year. **Expanding** would require moving a creek and building new habitat for an endangered salamander. The Environmental Protection Agency says ALL landfills will leak someday. Ask the Bay Conservation and Development Commission to STOP THE EXPANSION.



This map corrects a previously published version that incorrectly showed the landfill occupying the entire Potrero Hills landscape feature. If permitted, the expanded dump would be like a 25-story building covering 340 acres.

TOTAL RECYCLING recirculates discarded manufactured products and already-refined resources. It creates jobs, builds the economy and provides feedstocks for new products, while preventing landfilling and extraction of virgin resources. If you're not for zero waste, how much waste are you for?

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TO END THE AGE OF WASTE

URBANORE®
TO END THE AGE OF WASTE

Educate as part of advertising



Business partners and allies

- **Dump operator:** we started as a subcontractor.
- **The City:** we have been a contractor to City for 27 years at transfer station.
- **Other City contractors:** two nonprofits at the transfer station, CCC and Ecology Center.

Business partners and allies

- **NGOs:** we work with and contribute to NCRA, CRRA, WeBAIC, Sierra Club, SPRAWLDEF, GAIA, GRRN, Earth Island.
- **Commodity buyers, vendors:** American Iron, American Freon Removal, Standard Metals, Industrial Safety Supply, Oakland Electric, many more.

Business partners and allies

- **Lenders:** SBA, community banks, StopWaste, City of Berkeley.
- **Insurers:**
 - **Workers Compensation.**
 - Injury record “you can put on your thumbnail,” said one insurer’s analyst.
 - Experience modification rate in the low 70s as percentage of industry average. Category: Used Building Materials.
 - Insurer has kept more than 90% of premium for the last 3 years.
 - Professional scavenging has proven safe over 30 years.

Business partners and allies

- **Insurers:**

- **Liability coverage.**

- Low rates (good agent).
 - Few claims.

- **Health coverage.**

- We pay 100% of premium for employee and all dependents, including dental and vision.
 - We reimburse copays for doctors' visits.
 - Costs have doubled in about five years.

Politics –
We use the strength of
coalitions to adapt the
political environment for
our industry's growth.

Politics

- **Stopped Berkeley incinerator** with initiative (1982).
- **Set city's 50% recycling goal**, first in state (1982), and passed initiative to implement with a plan (1984).
- **Helped defeat about 7 other incinerators** in SF Bay Area (1980s).

Politics

- **Created Source Reduction and Recycling Board** as subset of existing countywide Waste Board, through initiative (1989). Whole entity renamed StopWaste.
- **Coauthored language for permitted use “Material Recovery Enterprise”** in local zoning law (1999).
- **Coauthored Berkeley’s Zero Waste resolution** (2004).

Politics

- **Today – working to save industrially zoned lands for recycling-based businesses,** fighting pressure from developers to build biotech research campuses.



URBAN ORE
is a
sociology
experiment –
that worked!

BEYOND OPERATIONS –

**expanding Zero-Waste
recovery**

UODA URBAN ORE Development Associates

- **We design Zero Waste** transfer and materials recovery facilities.
- **We've done about 30 so far** in the USA, UK, New Zealand, Australia, India, and South Africa.

UODA

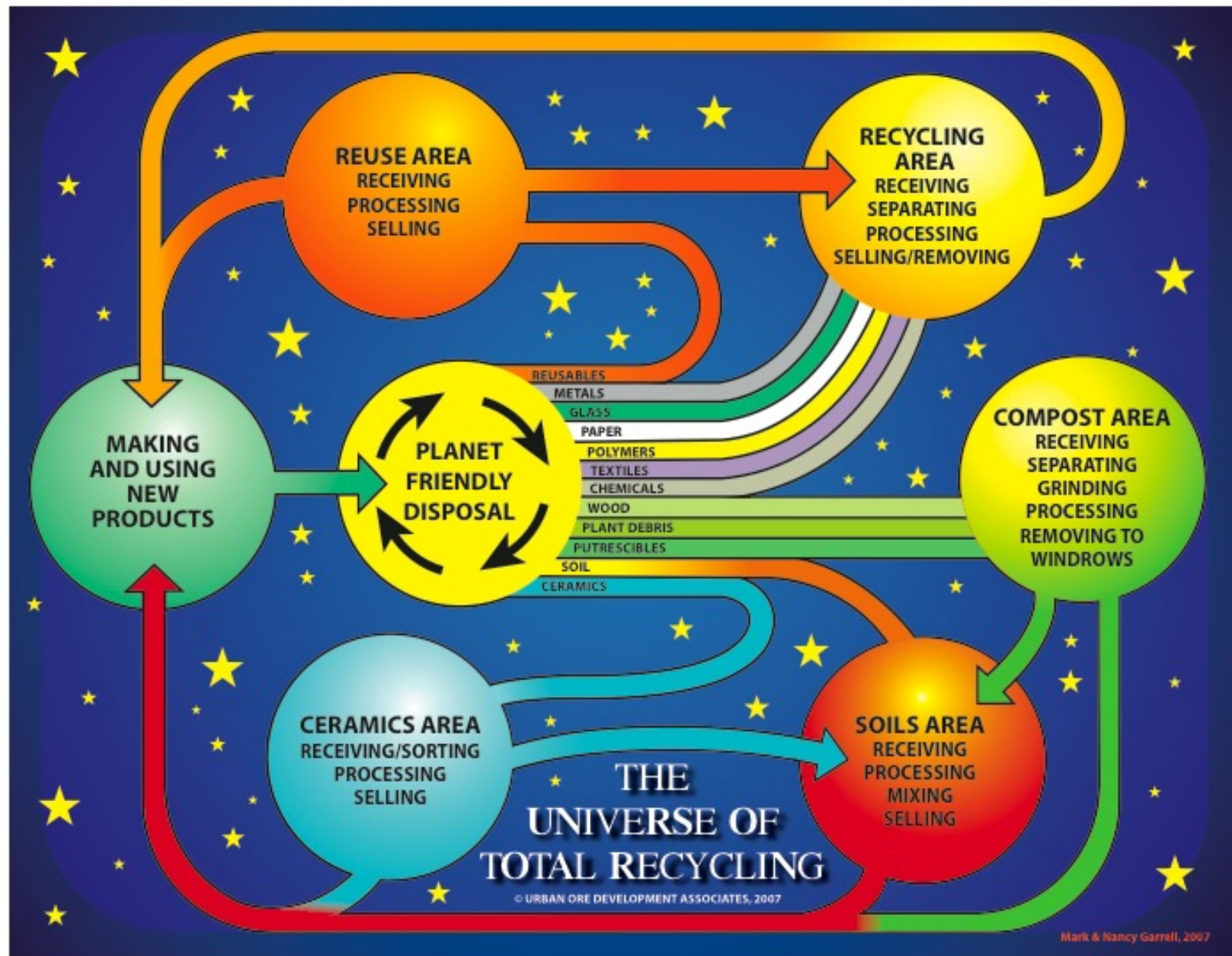
- **We team up** with engineers, architects, and other professionals as needed.
- **We don't respond to solid waste RFPs.**
- **The bases for our designs** are our **operating knowledge** and our **Zero Waste design principles.**

Operating knowledge

- **Frequent forced moves** drove our own **multiple redesigns** and **optimizations**.
- **Our own sites are near-zero waste** and handle many subsets of the **12 Master Categories** of recoverable resources.
- **We understand customers' needs** based on our handshake markets for both supply and demand.

Our Zero Waste design principles

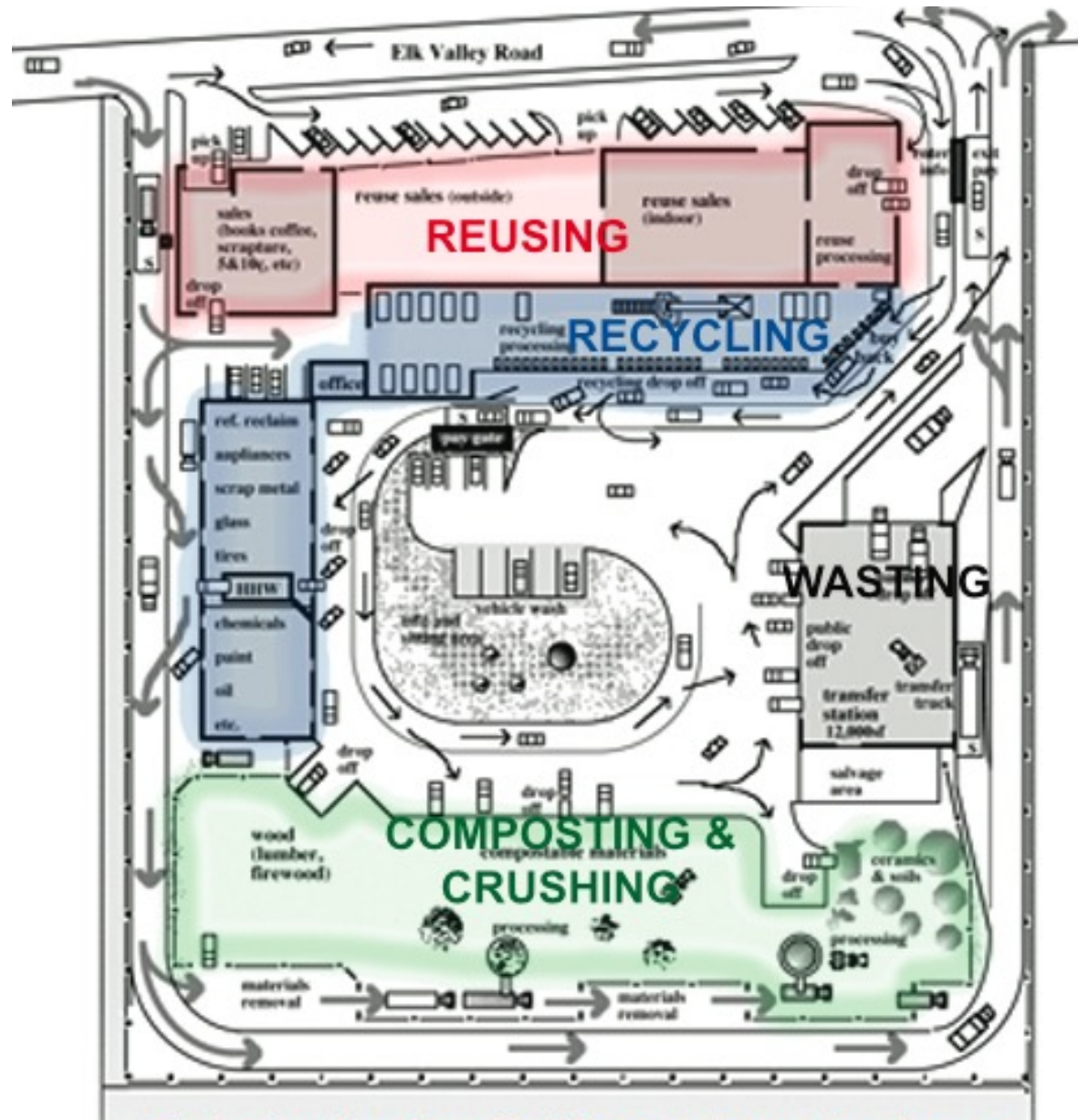
- **A Zero Waste** recovery facility must handle **all 12 master categories** of commodities.
- **Physical design and customer expense follow policy priorities.** Reuse is cheapest and comes first, followed by recycling. Wasting is last and most expensive.



Mark & Nancy Garrell, 2007

Our Zero Waste design principles

- Subsets organize themselves into affinity clusters.

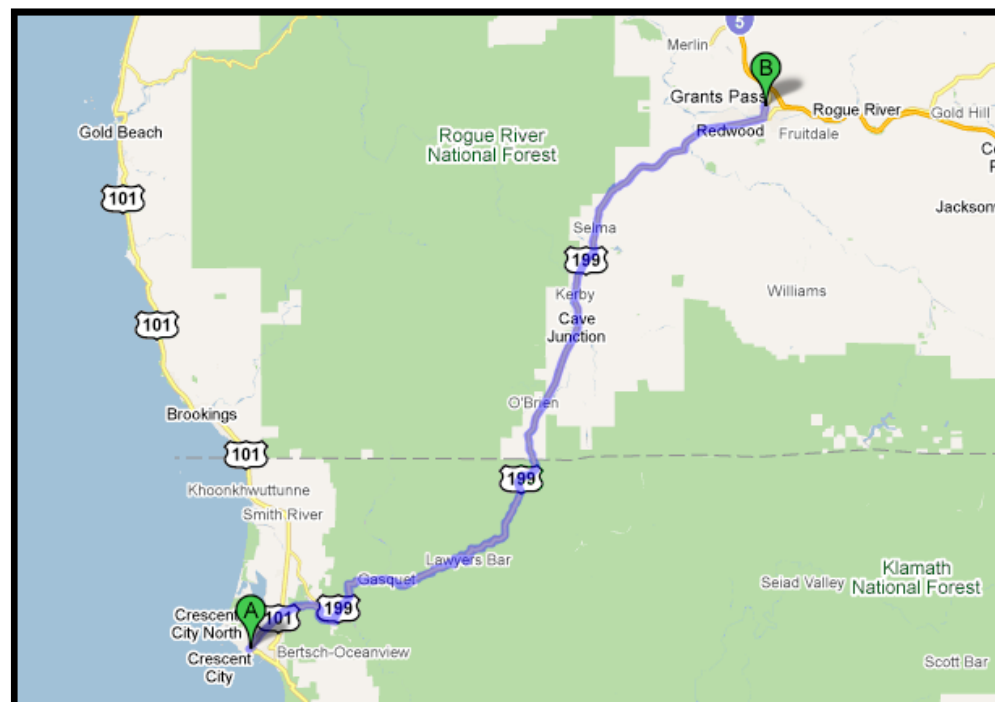


Our Zero Waste design principles

- **Zero Waste recovery facilities can be virtual** (integrated throughout the community), designed as **retrofits** for existing facilities, **or purpose-built**.

Case study, Rural JPA Del Norte County, CA

- Situation: rural coastal; remote from commodities markets; declining economy; local landfill closed, garbage travels 3 hours over mountain roads.

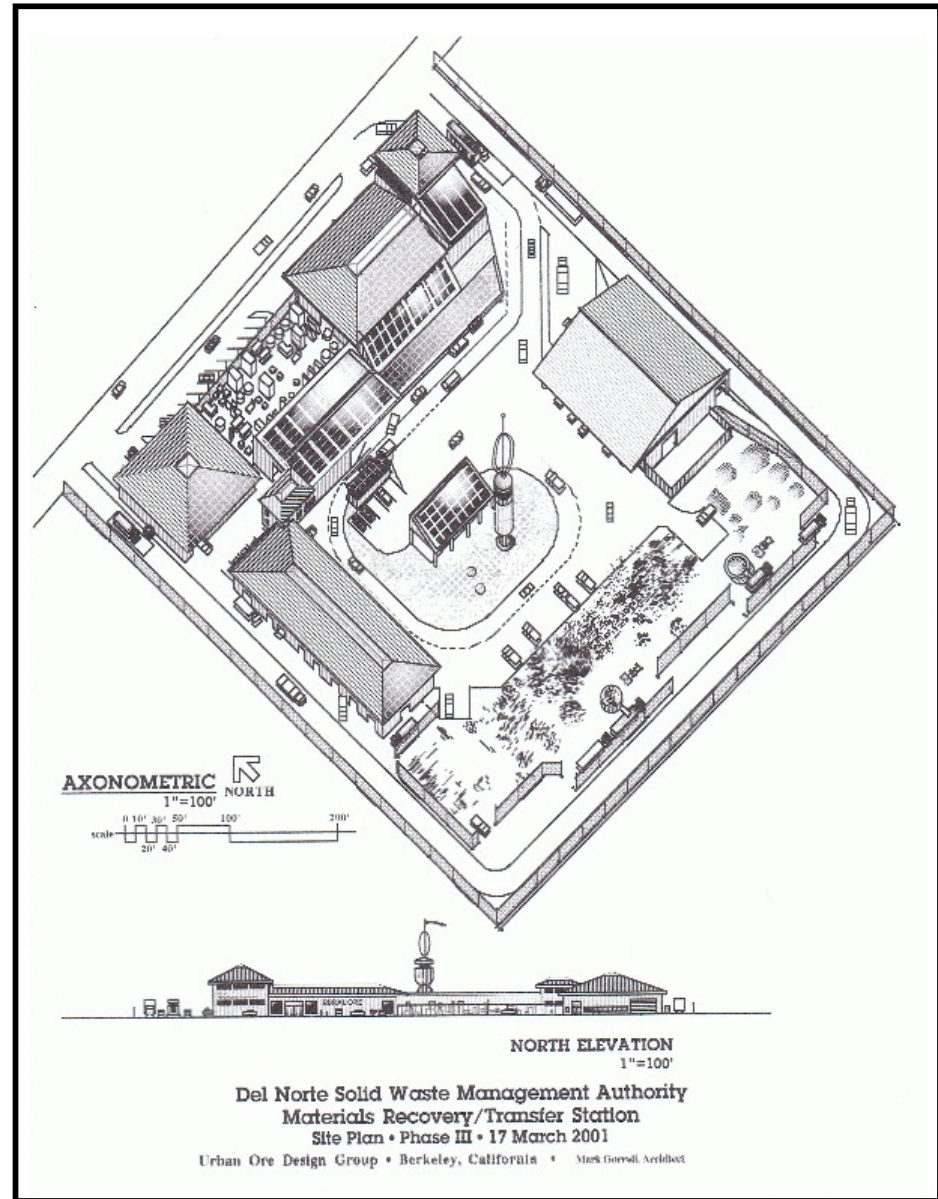


Del Norte County, CA

- **Development pattern:**
 - **15 years** so far.
 - **Site acquisition difficulties** required multiple designs.
 - **Funding patterns** required **phased development**.
 - **Today 2/3** of final site **is complete**.
 - **Back end was built first**, with transitional reuse and recycling provisions; main front-end reuse and recycling areas still to be built.

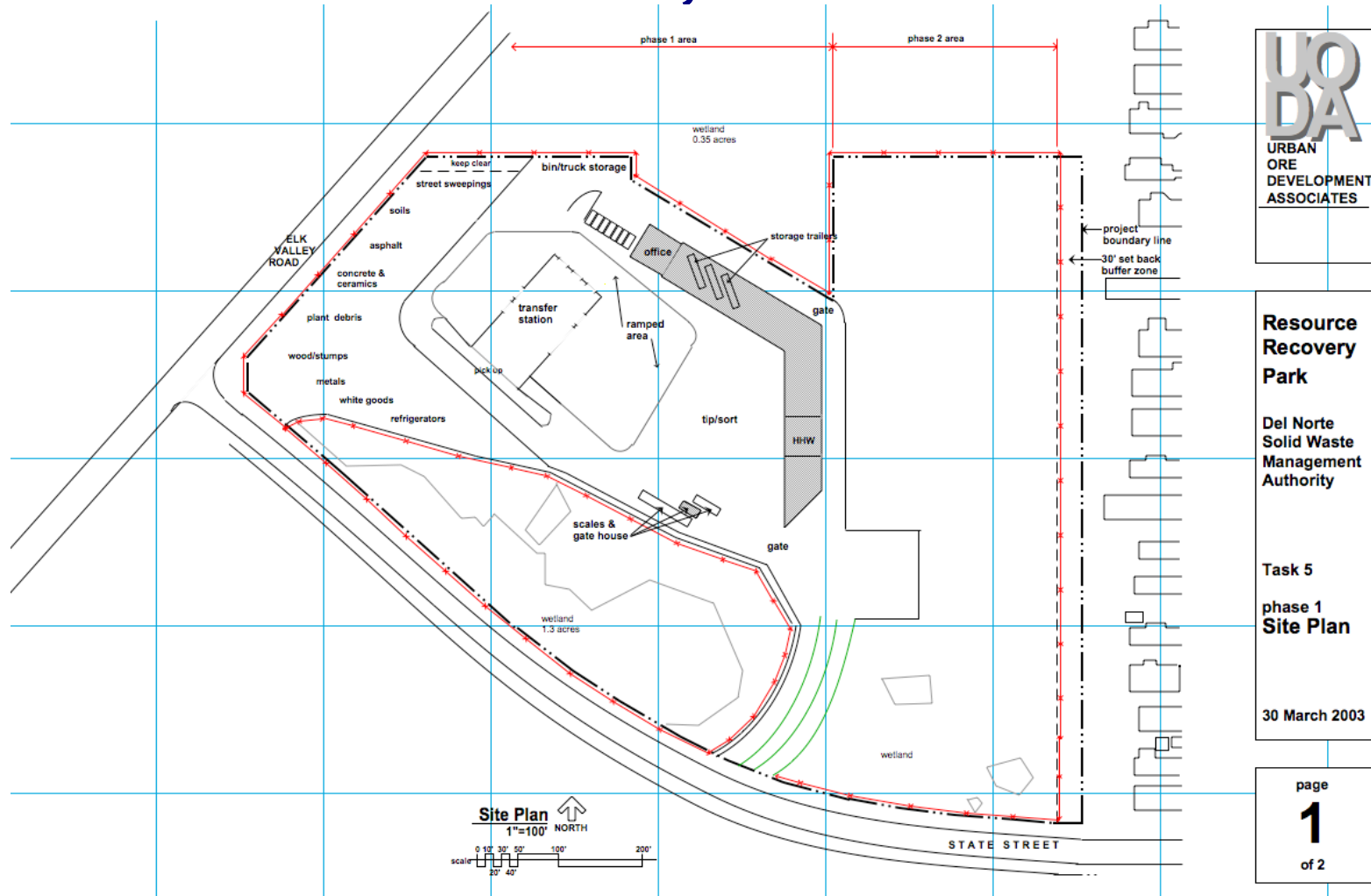
Del Norte County, CA

Site 1
had environmental
problems.



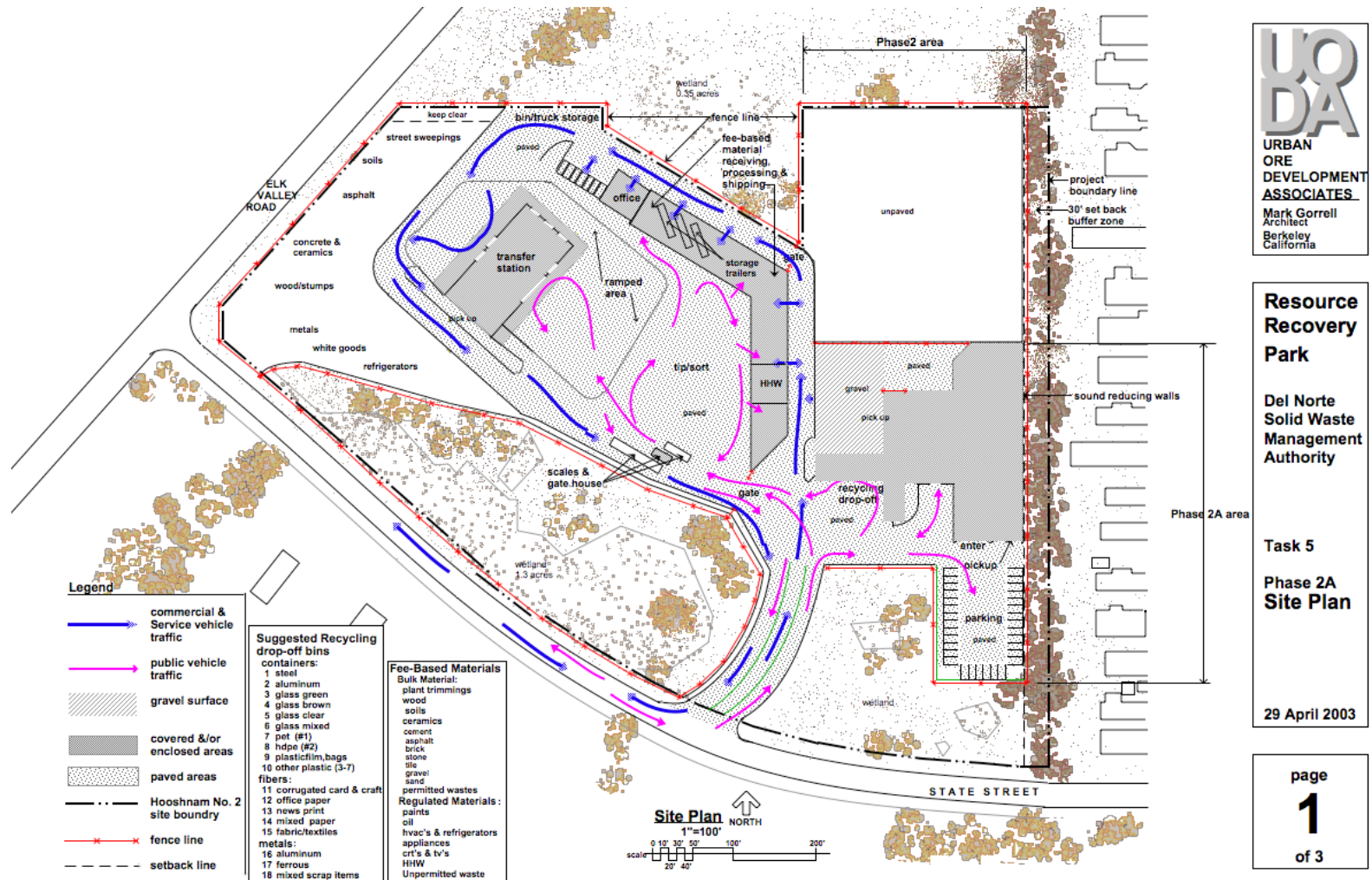
Del Norte County, CA

Final site, Phase 1



Del Norte County, CA

Final site, Phase 2



Del Norte County, CA

Final site, phase 3



Del Norte County, CA

Behavior shapers:

- Commodity-specific pricing, multiple passes over scales generate lowest overall disposal costs.

Separated Recyclable Items no minimum charge:		Commercial, Franchise or Self-Haul wastes \$116.26 / ton
	Non-waxed corrugated cardboard \$	15.08 / ton
	Non-Ferrous metals \$	15.08 / ton
	Ferrous or Mixed metals \$	22.63 / ton
	Brush (no grass or stumps) \$	40.73 / ton
	Grass or leaves \$	40.73 / ton
	Untreated wood or lumber \$	40.73 / ton
	Stumps \$	52.80 / ton
	Clean clothing and textiles \$	116.26 / ton
Bulky Items:		
	Appliance, large and metal \$	24.14 ea.
	Furniture, Bulky \$	4.00 ea+wt. Chg.
	Mattress or box spring \$	7.95ea + wt. Chg.
	Refrigerator \$	31.68 ea
	Trailers, modular homes \$	191.68 / ton
Tires:		
	Auto, pickup, motorcycle each no rims \$	5.28 ea
	Auto, pickup, motorcycle each with rims \$	7.54 ea
	Truck, no rim \$	10.56 ea
	Truck with rims \$	19.61 ea
	Oversize tires (>60" in diameter), no rim \$	113.13 ea
	Small, 10" no rim \$	4.90 ea
	Small, <10" with rim \$	6.03 ea
Separated & Uncontaminated Rocks & Soils:		
	Clean soil, sand, or harbor dredge \$	38.47 / ton
	Asphalt \$	38.47 / ton
	Concrete, no steel \$	42.24 / ton
	street sweepings \$	116.26 / ton
	non-friable asbestos \$	148.57 / ton
Volume - Based Rates (available only when weighing is not possible):		
	Loose Refuse / cu. yd. \$	12.79
	Loose Brush / cu. yd. \$	5.09
	Loose Mixed Metals \$	14.09
Household Hazardous Wastes:		
	Used motor oil \$	0.16 paid / gal
The following materials may be disposed by residents for no charge: Used oil filters, ethylene glycol antifreeze, lead acid batteries, fluorescent tubes, non-aerosol latex paint, and televisions, computer monitors and other items containing cathode ray tubes		

Del Norte County, CA

Behavior shapers:

- Transitional interception area for recyclables, good receiving for regulated materials.



Del Norte County, CA

Behavior shapers:

- Flat floor of transfer station permits staff to salvage and spot hazardous materials.
- No incentives to waste.

We went to see – it “works good.”



Case study, urban conflict Berkeley, CA

- **Situation:**
 - **Voters rejected incinerator.**
 - **Current facility evolved piecemeal.**
 - **Now facility is old and dilapidated.**
 - **Elements of the right system exist but are haphazardly organized.**
 - **Customers experience inconvenience because interface is severely limited.**

Berkeley, CA

- **Development pattern:**
 - In 2005 consultant recommended teardown and rebuild.
 - City hasn't acted as of June 6, 2010.
 - Current issues: \$4 million annual Refuse Fund deficit, elected officials applying pressure, action may follow in coming few months.

Berkeley, CA

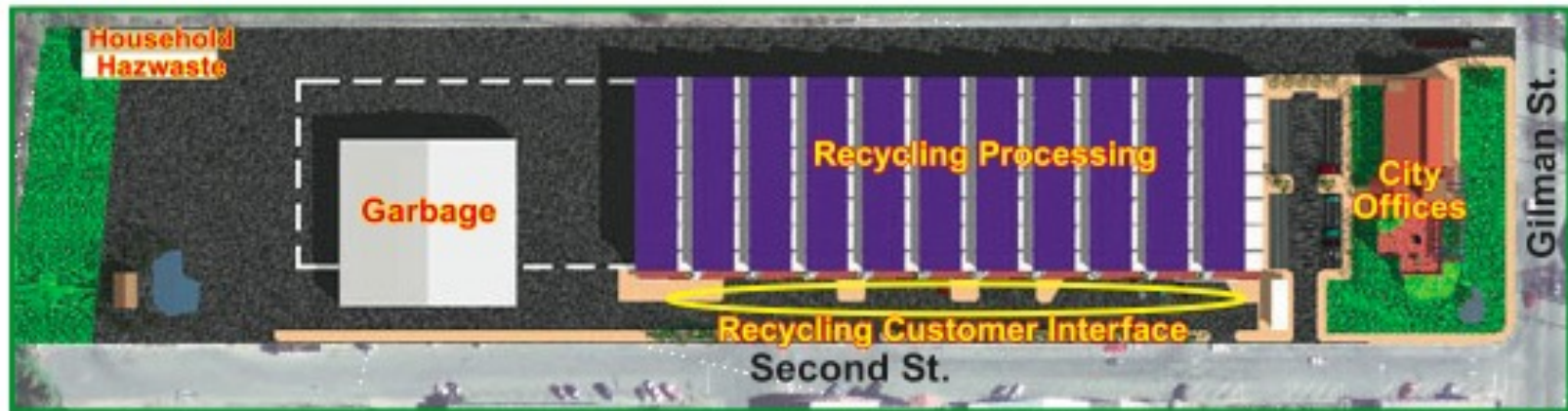
- **UODA design.**
 - In 2007 UODA redesigned the facility based on the consultant's work.
 - In 2007 Urban Ore donated the design to the City.
 - Facility runs like an airport for both customer interface and, potentially, finance.
 - Encourages commodity-specific pricing.
 - Provides huge customer interface, many options for disposal.

Berkeley, CA

- **UODA design.**
 - Main receiving divisions: reuse, commodity recycling, regulated materials, construction and demolition materials, landscape materials; wasting.
 - Resources can be supplied by public dropoff and buyback, and curbside collection vehicles.
 - All green all the time: photovoltaics, solar heating and cooling, living roof, water-runoff control swales.
 - Wasting costs the most at the end of the line.

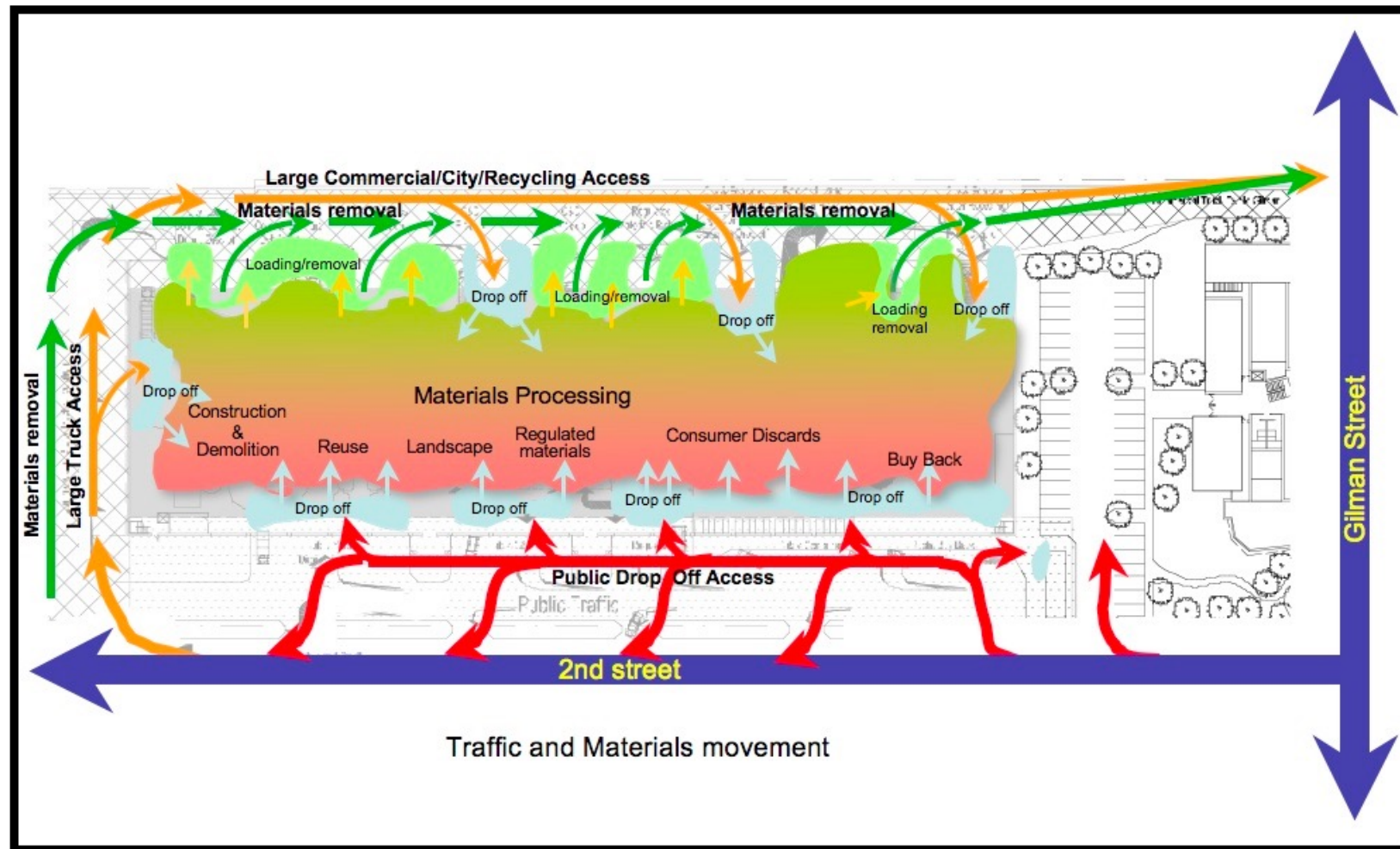
Berkeley, CA

What is (bottom) and what could be (top).



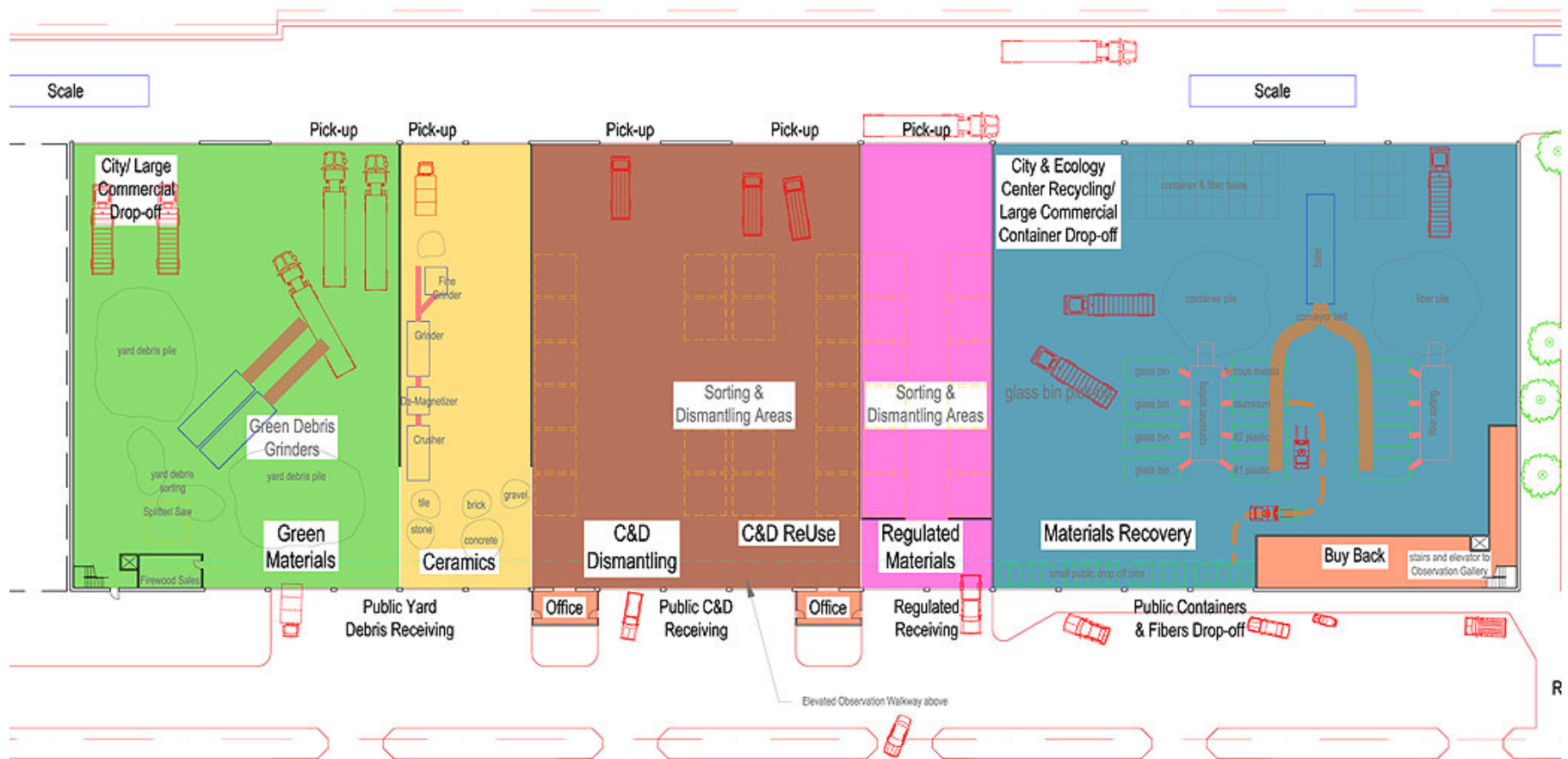
Berkeley, CA

Efficient materials flow.



Berkeley, CA

Adaptable Interior



Berkeley, CA

No internal columns.



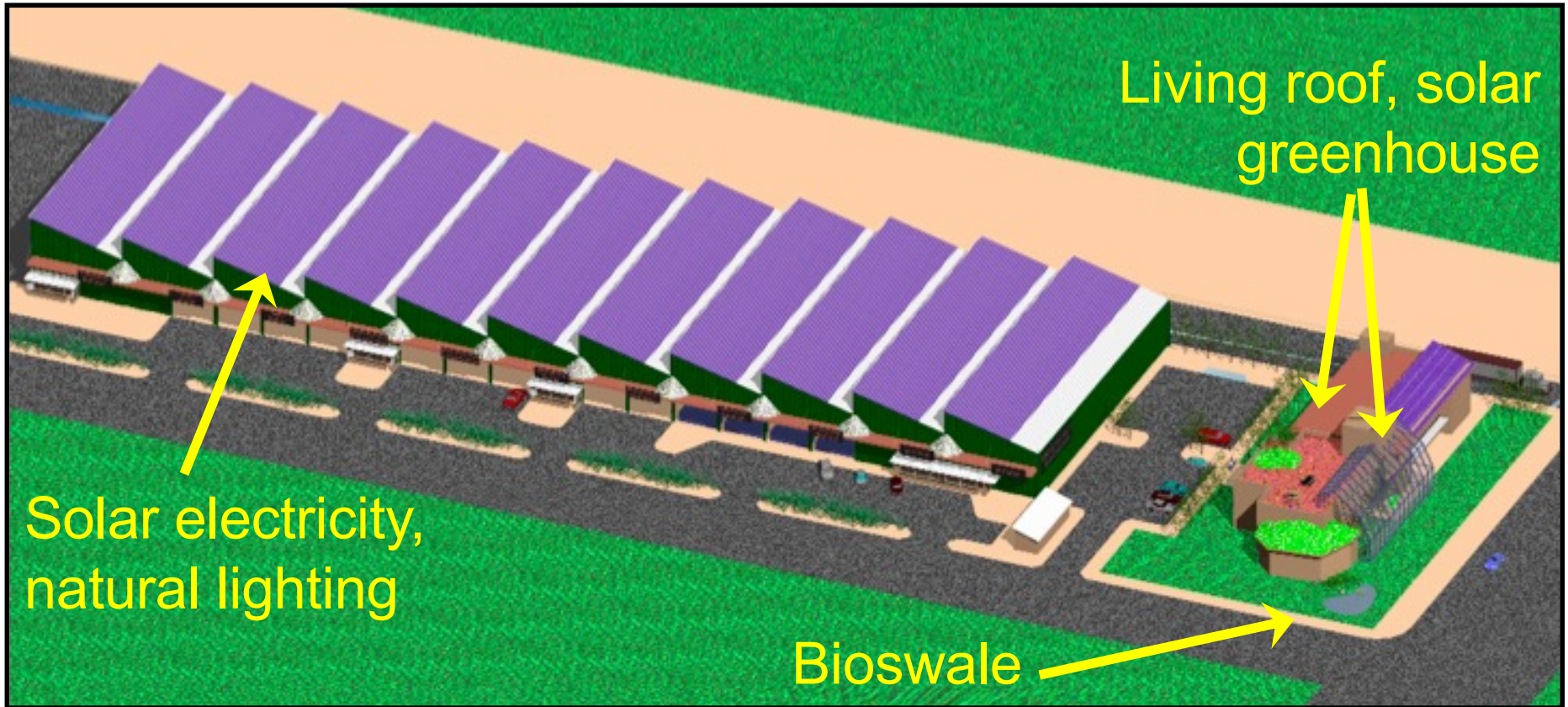
Berkeley, CA

Spacious offices with community rooms.



Berkeley, CA

All green all the time.





**REMEMBER
FOLKS,
*waste isn't
waste until
it's wasted.***



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