

# Department of Public Works

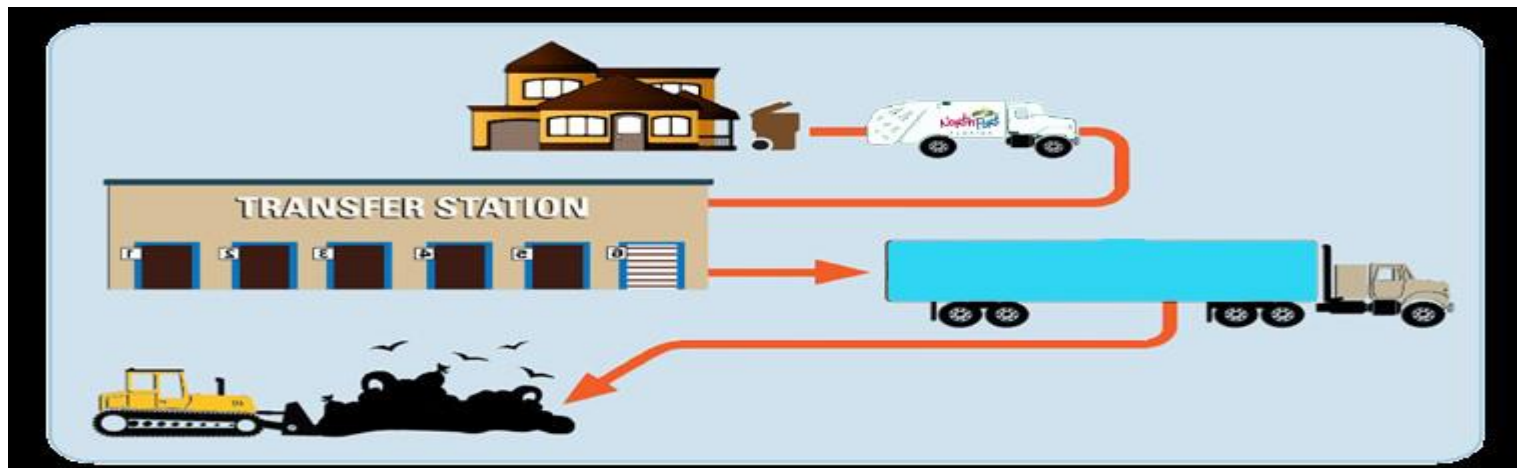
## Solid Waste District Transfer Station Presentation November 23, 2021



# WHAT IS A TRANSFER STATION?

A transfer station is a temporary holding facility for solid waste material which serves as a convenient hub to manage refuse.

- Reduces cost of transporting solid waste to distant sites
- Affordable and environmentally-sound way to handle all collected solid waste material for communities that do not have convenient access to disposal sites
- Important part of the modern solid waste management process



# WHAT DOES A TRANSFER STATION LOOK LIKE?



# WHAT TO LOOK FOR IN A PROPERTY

- Lot size
- Undeveloped
- Zoning/Future Land use options
- Amount of property within site (acreage that can be developed) after considering quantity of wetlands and flood hazard area
- Close Proximity to collector roads
- Total cost to develop site (utilities, surface features, or other factors)
- Ability to permit site into transfer station

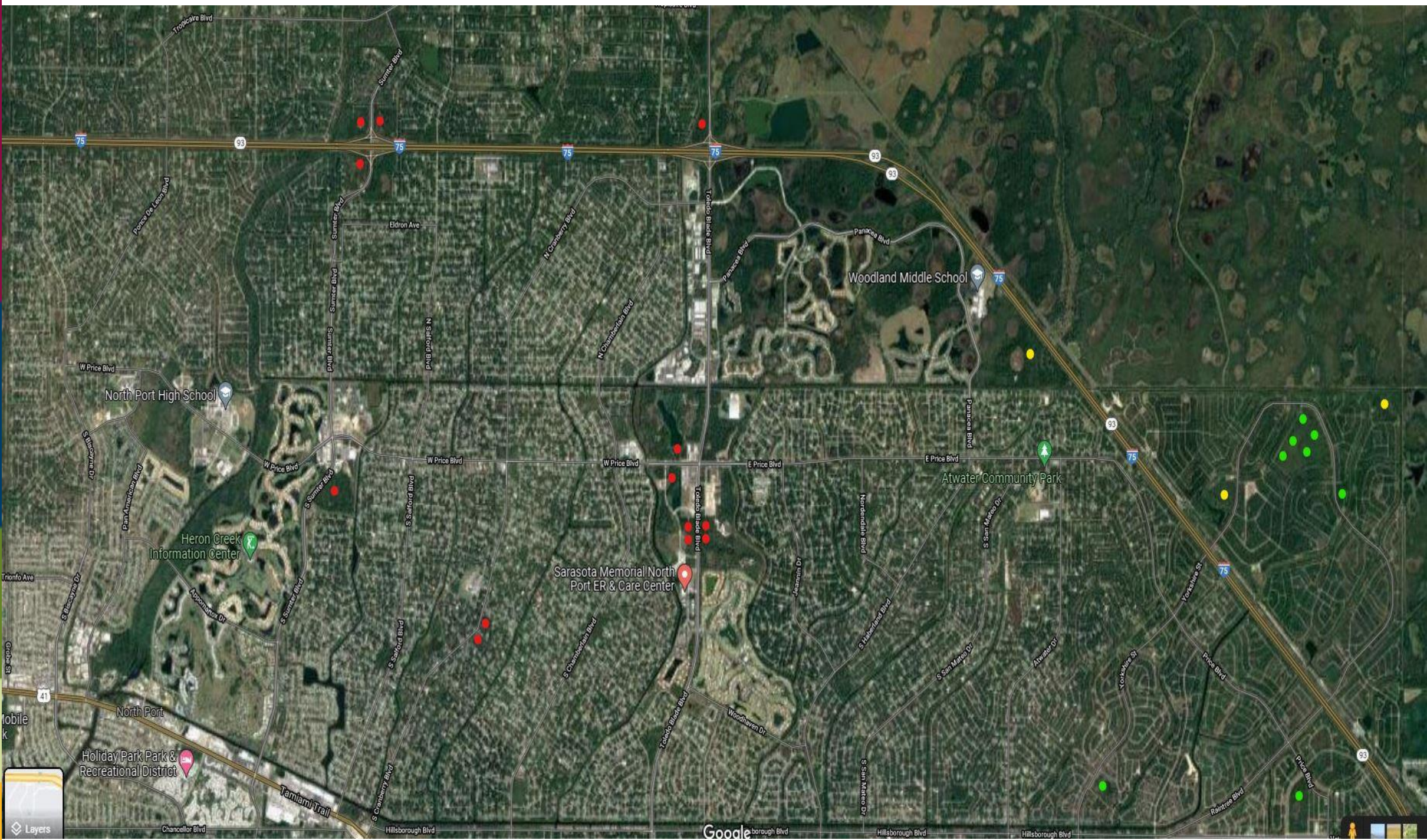


# INVESTIGATED PROPERTIES

| Name                 | Location             | Undev | Zone | Acres | Appraised   | Possibility |
|----------------------|----------------------|-------|------|-------|-------------|-------------|
| Ub Property          | NW Interstate 75     | Yes   | Comm | 36.05 | \$781,300   | Bad         |
| Zoro Property        | SW Interstate 75     | Yes   | Comm | 25.92 | \$916,200   | Bad         |
| UB Property          | NE Interstate 75     | Yes   | Comm | 24.9  | \$555,700   | Bad         |
| Marsh Creek          | Sumter Blvd          | Yes   | Comm | 61.64 | \$2,883,700 | Bad         |
| TTEE                 | S Cranberry          | Yes   | Comm | 8.56  | \$73,800    | Bad         |
| Joint Venture        | S Cranberry          | Yes   | Comm | 5.67  | \$50,300    | Bad         |
| Minh B               | S. Chamberlain       | Yes   | Comm | 4.14  | \$37,500    | Bad         |
| Minh B               | S. Chamberlain       | Yes   | Comm | 6.85  | \$59,800    | Bad         |
| I 75 Interchange 32  | Toledo & 75          | Yes   | Comm | 14.19 | \$272,000   | Bad         |
| American Monument    | Toledo & Price       | Yes   | Comm | 17.59 | \$1,535,100 | Bad         |
|                      | Toledo & Price       | Yes   | Comm | 13.76 | \$1,432,970 | Bad         |
|                      | Toledo & Price       | Yes   | Comm | 18.75 | \$1,926,200 | Bad         |
|                      | Toledo & Price       | Yes   | Comm | 31.36 | \$2,571,400 | Bad         |
| Trinity Holdings     | S. Yorkshire Street  | Yes   | Comm | 21.43 | \$269,400   | Good        |
| City of North Port   | Panacea              | Yes   | Comm | 83.69 | \$948,700   | Neutral     |
| City of North Port   | Langlais Park        | Yes   | Comm | 53.46 | \$268,900   | Good        |
| SRQ Tropical         | N. Yorkshire Street  | Yes   | Comm | 23.66 | \$170,200   | Good        |
|                      | N. Yorkshire Street  | Yes   | Comm | 20.53 | \$147,900   | Good        |
|                      | N. Yorkshire Street  | Yes   | Comm | 10.09 | \$481,500   | Good        |
|                      | N. Yorkshire Street  | Yes   | Comm | 14.33 | \$108,500   | Good        |
|                      | N. Yorkshire Street  | Yes   | Comm | 10.46 | \$84,600    | Good        |
| Solid Waste Property | N. Yorkshire Street  | Yes   | Comm | 9.82  | \$55,007    | Good        |
| City of North Port   | N. Yorkshire Street  | Yes   | Comm | 27.44 | \$154,500   | Neutral     |
| Fullencamp TTEE      | Veterans Blvd Access | Yes   | Comm | 37.92 | \$348,800   | Good        |

|         |
|---------|
| Bad     |
|         |
| Good    |
|         |
| Neutral |











# VIABILITY OF A TRANSFER STATION

- Minimize 20-year life cycle cost including capital and operation
- Minimize building and site development costs
- Minimize transportation payloads
- Minimize Greenhouse gas footprint
- Possibility of utilizing electric vehicles in the future



# DESIGN VARIABLES

- Required capacity and amount of waste storage desired
- Types of waste received
- Processes required to recover material from waste stream or preparation for shipment
- Types of collection vehicles using the facility
- Types of vehicles that can be accommodated at the transfer facility
- Site topography and access
- Building types/grade separation cost
- Feasibility

# TRANSFER STATION CAPACITY

- Small capacity (less than 100 tons/day)
  - Simple design
  - Often used in rural areas
- Medium capacity (100 to 500 tons/day)
  - Operating areas dedicated to municipal and commercial collection trucks
  - Open to the Public for private use
- Large capacity (more than 500 tons/day)
  - For large communities with population to serve the transfer station
  - For areas/municipalities with frequent (daily) collections



# AVAILABLE OPTIONS

- The City can choose to develop, build and operate a traditional transfer station and determine which type of transfer station best suits community needs

- Direct Discharge station



- Platform noncompaction station



# AVAILABLE OPTIONS (CONT'D)

- Utilize new technology that reduces capital costs and increases payloads and reduces transfer station operating costs

- Direct discharge compaction station



- Outsourcing
  - Company would design, build and operate on City-owned property or
  - Company purchases land, design, build and then operate





# 10 YEAR OPERATING ESTIMATED COST AND SAVINGS

- Our Continue Current Direct Hauling
  - \$49,426,258
- Traditional Transfer Station
  - \$41,434,786, savings of \$7,991,472
- New Technology Transfer Station
  - \$36,468,443, Savings of \$12,957,815

# ESTIMATED COSTS TO BUILD A TRANSFER STATION

- The following are estimates for a new medium capacity transfer facility from a 2014 costs using 2.5 %/year to 2021 values

|                                               |                                                                   |
|-----------------------------------------------|-------------------------------------------------------------------|
| • Construction                                | \$3,954,000 – includes scale house and scales and 20% contingency |
| • Construction Engineering & Inspection (15%) | \$ 593,100– (15%) of construction cost                            |
| • Mobile Equipment (1 Front End Loader)       | \$ 445,000                                                        |
| • Design & Permitting (20%)                   | <u>\$ 395,400 – (10%) of construction cost</u>                    |
| • TOTAL                                       | \$ 5,387,500                                                      |

- Estimated cost for a transfer station would be \$3,000,000 to \$10,000,000
- Estimated cost for leasing equipment would be \$1,000,000 to \$4,000,000 and \$860,000 annually
- Estimated it will take 1-2 years to payoff the equipment
- Estimates it will take 15-20 years to pay off the construction of a transfer station



# Questions

