RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
SERVICES

July 23, 2008

Ms. Donna J. Wilson
Environmental Engineer
NCDENR – Division of Waste Management
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605

Re: **Response to Comments**
Application for Thornton Road Mixed Waste Transfer Station
Shotwell Transfer Station, Inc.

Dear Ms. Wilson:

On behalf of Shotwell Transfer Station, Inc., Richardson Smith Gardner & Associates, Inc (RSG) has prepared this response to our telephone conversation on July 22, 2008. The following revisions address each comment with reference to the application previously submitted on December 14, 2007:

Revision No.1

Page **ES-2** of the Executive Summary, paragraph titled *Application Requirements* has been revised as follows:

"The following sections correspond with the permit application for a transfer facility as outlined in the North Carolina Solid Waste Transfer Facilities Rules."

A revised Executive Summary is included as **Appendix A**.

Revision No.2

The language in **Section 2.4** of the Operations Manual has been revised as follows:

"In order to assure that prohibited wastes are not entering the facility, screening programs have been implemented. Waste received at both the scale house entrance and waste taken to the tipping areas or recycling areas are monitored by trained personnel."

Revision No.3

The language in **Section 2.7** of the Operations Manual has been revised as follows:

"The facility's recycling area located north of the transfer station is used to store, separate, and contain recyclable materials. These materials are generated from source separated waste from the transfer station and/or pre-sorted materials such as new C&D directly off-loaded into an appropriate container."

A revised Section 2 of the Operations Manual is included as **Appendix B**.

Revision No.4

The Material Storage Areas table on **Drawing S2** has been revised as follows:

- "On Ground" was deleted from Area Number 1 in reference to pallets;
- "100 CY Stockpiled" was added to Area Number 5 in reference to Concrete/Brick/Block;
- "All containers shall be covered at the end of each day" was added to the bottom of the table.

A revised Drawing No. S2 is included as **Appendix C**.

Should you have any questions or require clarification, please contact us at your earliest convenience at (919) 828-0577 or by email listed below.

Sincerely,
Richardson Smith Gardner & Associates, Inc.

Shannon F. Sisell
Engineering Technician (ext. 139)
shannon@rsgengineers.com

Stacey A. Smith, P.E.
Project Manager (ext. 127)
stacey@rsgengineers.com

Attachments

Cc: Mr. David King, Shotwell Transfer Station, Inc.
Ms. Michelle Pearson, Debris Removal Partners
Mr. Bradley Bailey, NCDENR
File

h:\projects\shotwell transfer station(s)\thornton road (north raleigh)\king 07-1 (thornton road transfer)\response to comments - ncdenr\response letter7-23-08.doc

Appendix A

Revised Executive Summary

PERMIT APPLICATION

Thornton Road
Mixed Waste Transfer & Recycling Center
Raleigh, North Carolina

Prepared for:

Shotwell Transfer Station, Inc.
Raleigh, North Carolina

November 2007
Revised July 2008

PERMIT ISSUE DOCUMENTS

RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
SERVICES

EXECUTIVE SUMMARY

GENERAL

The following is a Transfer Facility Permit Application submitted on behalf of Shotwell Transfer Station, Inc. (Shotwell) for the construction and operation of a Mixed Waste Transfer Station and Recycling Center over the closed[1] Neuse Demolition Landfill and at the current location of Shotwell Transfer Station, Inc.[2] Construction Waste Transfer Facility (NC Solid Waste Permit No. 92-27T), *formerly known as PCM North Raleigh C&D Transfer Facility*, site in Wake County, North Carolina. It is the intent of Shotwell to expand the existing facility operations to include MSW and C&D transfer operations and recycling upon approval of this application.

This submittal focuses on the application and operational requirements of the proposed transfer and recycling facility. The attachments included herein comply with the submittal requirements under 15A NCAC 13B .0400 (Transfer Facilities), *Guidelines for the Preparation of Permit Applications for Transfer*, and applicable sections of Session Law 2007-550 (Solid Waste Management Act of 2007).

REGULATORY REFERENCES

This submittal has been prepared in accordance with the requirements of the North Carolina Transfer Facilies Rules (15A NCAC 13B.0400), *Guidance for Preparation of Permit Applications for Transfer Facilities*, Wake County Stormwater Ordinances, and the North Carolina Sedimentation Control Rules (15A NCAC 4) which are enforced by the Division of Waste Management (DWM), Wake County Environmental Services, and the Division of Land Quality, respectively, of the North Carolina Department of Environment and Natural Resources.

Included in this document are the following attachments *(with applicable rule(s) in italics)*:

Legal Description of the Property *(.0401 (3));*
Erosion and Sediment Control Plan (*.0401 (3))*;
Landfill Closure Documentation (*.0401 (3))*;
Wetlands Determinations (*.0401 (3))*;
Zoning Documentation (*.0401 (2));*
Operations Manual *(.0402)*;
Traffic Requirements *(§130A-295.5);*
Financial Assurance *(§130A-294 (b2));* and
Project Drawings *(.0401(1)).*

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[1] Correspondence dated February 8, 1999 from Mr. Wayne Woodlief of Wake County to Mr. Wayne Adams of Neuse Landfill, Inc. accepting closure of the facility.

[2] Correspondence dated May 4, 2007 from Mr. J. Gardner of RSG to Mr. E. Mussler, NCDENR requesting change in owner/applicant/operator.

PROPERTY DESCRIPTION

The development is proposed on property owned by Dynasty Holdings, LLC. The complete tract is approximately 9.85 acres which is accessed from central portion of its southern boundary as shown in the Project Drawings provided in **Attachment K**.

The property is described in three (3) deed instruments as follows:

1. Wake County Deed Book 12249, Pages 225-227;
2. Wake County Deed Book 12876, Pages 394-397; and
3. Wake County Deed Book 12876, Pages 398-403.

The complete property is further clarified as "New Lot 3 Area" by a Recombination Plat described in Wake County Book of Maps 2007, Page 2838. It is noted that a series of property swaps occurred during the development of the site such that the complete property is resolved by adding and subtracting individual tracts from an initial "Old Lot Area" described in the Recombination Plat. Legal descriptions for this property is included in **Attachment A.**

PROPERTY OWNERSHIP AND OPERATION

The proposed facility will be operated by Shotwell Transfer Station, Inc. on property owned by Dynasty Holdings, LLC as described in correspondence to the Division dated May 4, 2007. A Landowner Authorization is provided as **Attachment B**. The owner of Dynasty formed Shotwell Transfer Station, Inc. to operate the facility. Articles of Incorporation for this new entity are also provided as **Attachment B.** *It is our understanding that the both the owner, Dynasty Holdings, LLC, and the operator, Shotwell Transfer Station, Inc., will be named on the permit.*

Owner and Operator:	Dynasty Holdings, LLC & Shotwell Transfer Station, Inc.
Contact:	Mr. David King
Address:	3209 Gresham Lake Road, Suite 115 Raleigh, North Carolina 27615
Phone:	(919) 773-9899
Email:	daviddebris@bellsouth.net

APPLICATION REQUIREMENTS

The following sections correspond with the permit application for a transfer facility as outlined in the North Carolina Solid Waste Transfer Facilities Rules. The site plan drawing was prepared by a professional engineer duly registered in the State of North Carolina.

SITING AND DESIGN STANDARDS

The following sections explain how the transfer and recycling facility complies with siting and design standards in Transfer Facilities Guidelines provided by the North Carolina Division of Waste Management and 15A NCAC 13B.0400.

Floodplain

The transfer and recycling facility is not located within a floodplain. However, the floodplain boundaries which border the property are shown on the project site plan and a copy of the flood plain map is included in **Attachment C**.

Surface Water Quality Standards

The facility is located over the closed Neuse Demolition Landfill and is bordered by wetlands and shallow surface water bodies ("beaver impoundments") to the north. An un-named tributary is located to the northwest of the site that discharges into the Neuse River. All runoff within the facility boundary is controlled through channels and by two (2) sediment basins prior to discharge off site. All site development will be conducted in accordance with the Neuse River Basin - Nutrient Sensitive Waters Managment Strategy (15A NCAC 2B .0235) and Wake County Stormwater Ordinances. The site does not include any wetlands within the development based on recent evaluation, currently under review by the Division of Water Quality and the Army Corps of Engineers. A copy of a preliminary wetlands evaluation determination by Jonathon Hopkins of Delineation Plus and surveyed by Murphy Geomatics is included in **Attachment D**.

Property Line Buffer

Although transfer facilities do not have a minimum buffer requirement, City of Raleigh Zoning buffers exist as follolws:

- 50 foot buffer from development along the road frontage
- 20 foot side yard buffer from development within the I-1 zoning district
- 40 foot transitional side yard buffer from development adjacent to the R-4 zoning district.

Residential and Well Buffers

The nearest residence is approximately 500 feet from the transfer area. The transfer area, at its closed point, is greater than 300 feet from the property line bordering these residences.

Public Access

The site will not allow uncontrolled public access. The entrance road to the site passes the guard house. The boundaries outside the transfer and recycling areas currently include wetlands to the north and east, Thornton Road to the south, and a residential property to the west. The site will be protected from uncontrolled access through the use of fencing and gates.

Sedimentation Pollution Control Law

A Sedimentation and Erosion Control Plan and Stormwater Plan will be submitted to Wake County for approval. A preliminary plan is included in **Attachment E**. All future correspondence will be copied to the Division of Waste Management. This plan outlines measures to be taken during facility construction to minimize any sediment run-off due to land disturbance and will comply with both Wake County and City of Raleigh erosion control and stormwater ordinances.

Existing Closed Neuse Demolition Landfill

The proposed development occurs over a closed land clearing and inert debris (LCID) landfill which will require additional design and management concerns as follows:

- All structures shall be equipped with gas monitoring equipment to detect, at a minimum, the presence of H_2S and CH_4;
- All sediment basins shall be lined with a low permeability liner to minimize infiltration;
- All grading activities shall be conducted to replace a minimum of one (1) foot of soil cover and shall not allow standing water inside the limits of the closed landfill.;
- Areas where LCID materials are encountered will be simply excavated and hauled to the Shotwell Landfill, Inc. C&D facility (NC Solid Waste Permit No. 92-26) for either grinding or disposal. If unacceptable non-hazardous, non-C&D or non-LCID wastes are encountered, they will be containerized and covered until a load is generated wherein it will be transported to a facility licensed to accept MSW materials such as South Wake Landfill (NC Solid Waste Permit No. 92-22). If hazardous wastes are encountered, construction operations will cease and will be assessed by a hazardous removal contractor wherein the Division of Waste Management will be notified and an appropriate response plan will be developed dependent on the nature of the hazard. All waste manifests shall be obtained and recorded.;
- All tires encountered will be disposed at the North Wake Landfill (NC Solid Waste Permit No. 92-09); and
- All structures shall be designed by a licensed Professional Engineer.

The Neuse Demolition Landfill was operated under a Wake County Solid Waste Permit and was closed in 1999. A copy of the landfill permit and the closure acceptance by Mr. Wayne Woodlief of Wake County is included as **Attachment F.**

Existing Transfer Area Operations

Most all of the new construction associated with this application will not interfere with existing operation. Once the new transfer station is ready for operations and approved by the Division, operations will transfer away from the existing area. This area will then be graded and placed into its final condition as shown on the Permit Drawings.

ZONING

A letter from the City of Raleigh Planning & Zoning Department, the agency having zoning jurisdiction, has been obtained for the proposed project and has been included in **Attachment G**. The proposed transfer and recycling activities are allowed within the existing zoning.

OPERATIONS MANUAL

The Operations Manual outlines and describes protocols for facility operation and maintenance and was prepared to provide facility personnel with a clear understanding of how the Design Engineer assumed that the completed facility would be operated. Along with the Project Drawings, the Operations Manual has been prepared to comply with the requirements of 15A NCAC 13B.0402. A copy of the Operations Manual is included in **Attachment H**

TRAFFIC STUDY

In accordance with Session Law 2007-550, documentation from Mr. J.W. Bowman, P.E., Division Engineer with the North Carolina Department of Transportation (DOT) has been obtained and has been included in **Attachment I**. The proposed transfer and recycling center will not have a substantial impact on the limited controlled access highway (US 1).

FINANCIAL ASSURANCE

In accordance with Session Law 2007-550, an estimate has been provided for financial assurance of the transfer and recycling facility center. A copy of the estimate has been included in **Attachment J**.

Appendix B

Revised Operations Manual

(Section 2.0)

Operations Manual

Thornton Road
Mixed Waste Transfer & Recycling Center
Raleigh, North Carolina

Prepared for:

Shotwell Transfer Station, Inc.

Raleigh, North Carolina

November 2007
Revised July 2008

RICHARDSON SMITH GARDNER
& ASSOCIATES
ENGINEERING & GEOLOGICAL
SERVICES

SHOTWELL TRANSFER STATION, INC.
THORNTON ROAD MIXED WASTE TRANSFER & RECYCLING CENTER

OPERATIONS MANUAL

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SECTION 2.0
WASTE HANDLING OPERATIONS

2.1 OVERVIEW

This section describes the required waste handling operations for the Thornton Road Transfer Station facility. In addition to the MSW and C&D waste received at this facility, the facility also processes recyclables new construction wastes such as lumber, ferrous and non-ferrous metals, etc. These materials are stored at the facility until there are sufficient quantities for pick up by various recycling contractors.

2.2 ACCEPTABLE WASTES

2.2.1 MSW Transfer Station

Only the waste as defined by NC General Statute 130A-290 (a) (18a) may be received at the MSW transfer station.

2.2.2 C&D Transfer Station

Only the following wastes may be received at the C&D transfer station:

- Construction and Demolition Debris Waste: (Waste or debris from construction, remodeling, repair, or demolition operations on pavement or other structures)
- Inert Debris Waste: (Concrete, brick, concrete block, uncontaminated soils and rock, untreated and unpainted wood, etc.)
- Land Clearing & Inert Debris: as defined by G.S. 130A-290 (a) (15), specifically, waste that is generated solely from land-clearing activities, such as stumps, trees, etc.
- Asphalt: in accordance with G.S. 130A-294 (m)
- Other Wastes as Approved by the Solid Waste Section of the Division of Waste Management.

2.2.3 Recycling Area

Only the following wastes may be received at the facility recycling area or as source separated in the transfer area(s):

- Non-treated, non-painted clean wood (lumber)[1];
- Pallets (damaged and un-damaged);
- Cardboard;
- Brick and block (undamaged and un-painted); and
- Metal (ferrous and non-ferrous).

[1] Engineered wood products such as particle board or glue laminated timbers are not acceptable for recycling.

2.3 PROHIBITED WASTES

2.3.1 MSW Transfer Station

Only wastes as defined in **Section 2.2.1** above may be accepted in the MSW transfer station. No other wastes may be accepted including the following wastes:

- Whole Scrap Tires
- Used Oil
- White Goods
- Lead Acid Batteries
- Yard Waste
- Construction and Demolition Debris (C&D) (Except as allowed in the C&D transfer station)
- Discarded computer equipment
- Oyster Shells
- Rigid plastic containers
- Aluminum Cans

In addition, operating criteria prohibit other materials from receipt within the MSW transfer station. These materials include:

- Hazardous waste as defined by NC General Statute 130A-290 (a) (8), including hazardous waste from conditionally exempt small quantity generators.
- Polychlorinated biphenyls (PCB) wastes as defined in 40 CFR 761 with the exception of trace amounts found in materials such as consumer electronics.
- Bulk or non-containerized liquid wastes unless the waste is household waste other than septic waste and waste oil. A liquid determination will be performed by the paint filter test (see **Appendix A** for apparatus and procedure).
- Containers holding liquid wastes unless the waste is household waste.

2.3.2 C&D Transfer Station

Only wastes, as defined in **Section 2.2.2** above may be accepted in the C&D transfer station. No other wastes may be accepted.

2.4 WASTE SCREENING PROGRAMS

In order to assure that prohibited wastes are not entering the facility, screening programs have been implemented. Waste received at both the scale house entrance and waste taken to the tipping areas or recycling areas are monitored by trained personnel. These individuals have been trained to spot indications of suspicious wastes, including: hazardous placarding or markings, liquids, powders or dusts, sludges, bright or unusual colors, drums or commercial size

containers, and "chemical" odors. Screening programs for visual and olfactory characteristics of prohibited wastes are an ongoing part of the facility operation.

2.4.1 Waste Receiving and Inspection

All vehicles must stop at the scale house located at the entrance of the facility and visitors are required to sign-in. All waste transportation vehicles are weighed and the content of the load assessed. The scale attendant(s) requests from the driver of the vehicle a description of the waste it is carrying to ensure that unacceptable waste is not allowed into the facility. The attendant(s) then visually checks the vehicle as it crosses the scale. Signs informing users of the acceptable and unacceptable types of waste are posted at the scale house. Once passing the scales, the vehicles are routed to the appropriate transfer or recycling area as appropriate.

Vehicles are randomly selected for screening on a regular basis, depending on personnel available. At least one vehicle per week will be randomly selected by inspection personnel. A random truck number and time will be selected (e.g., the tenth load after 10:00 a.m.) on the day of inspections. However, if something looks suspicious is spotted in any waste load, that load is inspected further.

Vehicles selected for inspection are directed to an area on the tipping floor where the vehicle will be unloaded. Waste is carefully spread using suitable equipment. An attendant trained to identify wastes that are unacceptable inspects the waste discharged at the screening area. If unacceptable waste is found, the load will be isolated, reloaded, and the generator/hauler will be logged and escorted out of the facility. For unacceptable wastes that are non-hazardous, the Owner will then notify officials of the DWM (see **Section 1.2**) within 24 hours of attempted disposal of any waste the facility is not permitted to receive in order to determine the proper course of action. The hauler is responsible for removing unacceptable waste from the facility property.

If no unacceptable waste is found, the load will be pushed into the transfer trailer and/or equipment. All random waste inspections will be documented by operations staff using the waste screening form provided in **Appendix B**.

In addition to random waste screening described above, waste unloaded on the tipping floor face will be inspected by the equipment operators, trained to spot unacceptable wastes, before and during pushing into the transfer trailer and/or equipment. Any suspicious looking waste is reported immediately to the designated primary inspector for further evaluation.

2.5 FACILITY OPERATIONS

2.5.1 Operating Capacity

The Operating Capacity for the transfer area is estimated to be approximately 1,000 tons per day of mixed waste (MSW and C&D wastes).

2.5.2 Service Area

The anticipated service area for the transfer facility (subject to change) is generally anticipated to be concentrated in Wake County and its surrounding counties as follows: Johnston, Durham, Granville, Franklin, Nash, Harnett, and Chatham. Waste will not be accepted from out of state or from Orange County.

2.5.3 Disposal Facility

The anticipated disposal facilities for the transfer station (subject to change) includes any facility in the State of North Carolina or the Commonwealth of Virginia that holds a solid waste permit for the specific waste disposed. However, is generally anticipated for disposal at the following facilities (In order of priority):

MSW
1. Upper Piedmont Regional Landfill (Permit No. 73-04)
2. Sampson County MSW Landfill (Permit No. 82-02)
3. South Wake MSW Landfill (Permit No. 92-22)

C&D
1. Shotwell C&D Landfill (Permit No. 92-26)
2. WCA Material Recovery C&D Landfill (Permit No. 92-31)
3. Red Rock Disposal C&D Landfill (Permit No. 92-28)

In the event that new disposal facility agreements are negotiated other than the list (above). Shotwell will provide a notice to the Division of Waste Management within 30 calendar days.

2.5.4 Personnel Requirements

The anticipated personnel requirements for operation and maintenance of the site are listed in the following table.

Description	Primary Function (Allocation)
1) Site Manager	Overall management of the facility
2) Scale house Attendant	Receiving and weight for incoming loads
3) Operators (3)	Management of tipping floor and recycling areas
4) Commercial Drivers (4-6)*	Transfer of C&D and MSW Waste
5) Labor (3)	General labor and operational staff around the site

***** Commercial drivers subject to change in response to actual volume of waste received.

2.5.5 Equipment Requirements

The anticipated equipment requirements for operation and maintenance of the site are listed in the following table.

Description	Primary Function (Allocation)
1) Excavator	Recycling operations and sorting
2) Front End Loader	Loading, recycling, and site cleanup
3) Skid Steer Loader	Loading, recycling, and site cleanup
4) Transfer Trucks (4-6)*	Collection and transfer of C&D and MSW Waste
5) Compaction System	Package product system to achieve higher compaction rates of MSW in transfer operations
6) Dump Truck	Hauling material around site.

***** Commercial drivers subject to change in response to actual volume of waste received.

2.5.6 Building Features

The anticipated building features of the transfer area are listed in the following table.

Description	MSW	C&D
1) Roof	Yes	Yes
2) Sides (3)	Yes	Yes
3) Concrete Floor	Yes	Yes
4) Leachate Collection and Storage	Yes	Yes
5) Ventilation	Yes	Yes
6) Water Supply	Yes	Yes
7) Lighting	Yes	Yes
8) Interior Office & Bathrooms	No	No
9) Explosive Gas Monitoring	Yes	Yes
10) Communications (Telephone, Radios, Cell Phones)	Yes	Yes
11) Fire Suppression/Sprinkler System	No	No

2.6 TRANSFER OPERATIONS

2.6.1 Access

Traffic will be clearly directed to the appropriate transfer or recycling area. For the transfer area(s). Traffic speed on the site should be less than 10 MPH. Rutting of gravel roadway surfaces must be repaired by placement of additional gravel on the roadway and not solely by grading the rut. This will maintain the separator geotextile placed below most gravel roadway surfaces.

2.6.2 General Procedures

The transfer operations will be conducted in accordance with the approved Operation Plan and conditions of the Solid Waste Permit issued by the North Carolina Division of Solid Waste Management (DWM).

Facility operations are anticipated as follows:

1. Collection vehicles delivering waste to the facility will enter through the main entrance;

2. Pass by and over the scales and scalehouse for weight;

3. Continue along the access road until reaching the transfer station tipping area or recycling area;

4. The tipping area has “push” walls running along the interior of the building that direct the waste to feed “hoppers”overlying the transfer trailers and/or equipment on the lower level of the building. The building is divided into two separate tipping areas, one for MSW and one for C&D. The attendant will direct vehicles, waiting to unload, to back into the facility through the entrance. Adequate area is available in front of the transfer area for drivers to queue their vehicles into a backing maneuver. Station operating personnel will be on the station floor to direct and guide the vehicles.

5. The vehicles will back onto the tipping floor to an area designated by the attendant. MSW vehicles will be directed to one side of the floor, whereas C&D vehicles will be directed to the opposite portion of the building.

6. Once the vehicle is in position, the waste load will be discharged directly onto the tipping floor.

7. A spotter will inspect the discharged waste before it is mixed with other waste on the tipping floor and pushed by a rubber-tired loader into the open top transfer trailers, specifically designed for hauling MSW and C&D wastes, respectively, located in the lower level of the Transfer Station. All MSW waste will stay in the covered area of the transfer station.

2.6.3 Recycling/Source Separation

As a means of capturing recyclable materials and/or waste screening, source separation will be conducted on the tipping floor as follows:

1. The track hoe, loader, or laborers will separate materials to be recycled and/or processed from the loads before the waste is pushed into the open top transfer trailers. It is anticipated that most of the recyclables and materials to be separated will arrive at the transfer area as C&D waste. Demolition debris will not be recycled and/or processed and will be directly pushed into the transfer vehicle. Asbestos (known) containing C&D will not be accepted. MSW wastes will not be recycled and/or processed.

2. Materials to be recycled and/or processed may stay on the floor of the building (not in containers) for no longer than the close of the business day. At the end of each day, all recyclable materials shall be transported by skid steer loader, etc. to the recycling area in appropriately labeled bins or roll-off containers.

3. Treated wood and/or engineered wood productes (any wood other than virgin wood) waste must be discarded in the C&D trailer.

4. Materials, as defined in **Section 2.2.3,** to be recycled will be pulled from the C&D waste and loaded into roll-off containers in the transfer floor area or immediately outside the transfer station to the recycling area in appropriately labeled bins or roll-off containers.

5. Cardboard will be transported to the recycling area into an appropriately labeled container.

6. Concrete (cement and asphaltic/bituminous) may be delivered and stockpiled at the limits of the recycling area until a load is generated or it is removed from the site for sale as fill, aggregate, etc., as markets allow.

2.6.4 Transfer Manifest Documentation

Shotwell employs a truck scale data management software program to track all inbound and outbound waste. Inbound traffic will follow procedures outlined in **Section 2.6.2**. Outbound transfer operations are anticipated as follows:

1. Once the transfer trailer is full, the driver will exit over the scales and scalehouse for weight;

2. The scalehouse attendant will prepare a load summary including weight and a source summary for all wastes received in that trailer's load. The attendant will then instruct the driver to the appropriate disposal facility as outlined in **Section 2.5.3** based on waste type and/or source summary.

2.7 RECYCLING AREA OPERATIONS

The facility's recycling area located north of the transfer station is used to store, separate, and contain recyclable materials. These materials are generated from source separated waste from the transfer station and/or pre-sorted materials such as new C&D directly off-loaded into an appropriate container. A temporary recycle storage area is included in the transfer station tipping floor prior to storage in this area which must be cleaned each day. The facility is equipped with equipment to facilitate hand sorting of materials, and bins for storage as defined in **Section 2.5.5**.

2.7.1 Containers

Containers (generally 8'x20' or 8'x15') holding various recyclable, separated, or other transfer related items will be stored in the recycling area. The containers will be removed from the site as they are filled.

2.7.2 Other Storage Areas

All other recyclable waste products will be stored around the recycling area. These products will be maintained in discrete piles and/or containers as follows:

- Wood pallets will be delivered and containerized (~100 CY);
- Concrete/asphalt materials will be delivered and stockpiled (~100 CY); and
- Clean wood debris will be delivered and containerized (~100 CY).

2.7.3 Markets

The final destination of the recyclable materials separated from the waste may vary depending on market prices for such materials. However, final markets are anticipated as follows:

a. Metals: TT&E, Wise Recycling, Raleigh Metals, etc.

b. Pallets: Shotwell C&D Landfill for grinding to Craven County Waste to Energy (WTE) or McGill Environmental for compost.

c. Clean Wood: Shotwell C&D Landfill for grinding to Craven County Waste to Energy (WTE) or McGill Environmental for compost.

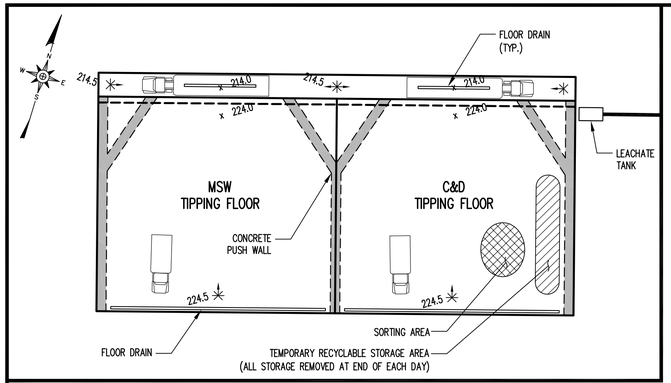
d. Cardboard: Paper Stock Dealers, Sonoco Products, etc.

No grinding or composting will be performed on-site.

Appendix C

Revised Drawing

(Drawing S2)



TIPPING AREA FLOOR PLAN
SCALE: 1"= 30'

CITY OF RALEIGH SANITARY SEWER
(SEE REFERENCE 3)

FEMA FLOOD ZONE
(SEE REFERENCE 2)

PROPERTY LINE
(SEE REFERENCE 6)

SEDIMENT BASIN 2

MANHOLE

4"ø HDPE (SDR 11)
GRAVITY LEACHATE PIPING
(SEE SHEET NO. 4, DRAWING NO. L1)

TIE-IN TO CITY OF RALEIGH
SEWER SYSTEM

ZONING LINE

DC-2B

DC-2A

C&D

MSW

SCALES

SCALE HOUSE (OPTIONAL)

DRAINAGE CHANNEL (TYP.)

TIPPING AREA
(SEE INSET)

DROP INLET

ALL-WEATHER ACCESS

T&T
SALVAGE

50' ZONING BUFFER

UTILITY POLE
(TO BE RELOCATED)

CONCRETE ENTRANCE

EXTEND EXISTING CONCRETE PIPE

TREE PROTECTION AREA

SEDIMENT BASIN 1

TREE PROTECTION AREA

THORNTON ROAD

THORNTON ROAD

GROUND COVER SUMMARY	
GROUND COVER TYPE	AREA (ACRES)
IMPERVIOUS (ALL WEATHER ACCESS, CONCRETE ENTRANCE)	2.26
BUILDING FOOTPRINT	0.46
GRASS (ALL OTHER AREAS WITHIN LIMIT OF DISTURBANCE)	3.68

LEGEND

- EXISTING 10' CONTOUR (SEE REFERENCE 1)
- EXISTING 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED 1' CONTOUR (SEE NOTE 1)
- DRAINAGE CHANNEL
- PIPE (WITH OUTLET PROTECTION)
- PROPERTY LINE
- FEMA FLOOD ZONE "X" (SEE REFERENCE 2)
- FEMA FLOOD ZONE "AE" (SEE REFERENCE 2)
- NEUSE RIVER BUFFER
- NEUSE RIVER BUFFER (DISTURBABLE LIMITS)
- SURVEYED WETLANDS (SEE REFERENCE 5)
- ZONING LINE

NOTES
1. PROPOSED CONTOURS AT 1' INTERVAL SHOWN FOR CLARITY ONLY IN AREAS NEEDED.

REFERENCES
1. EXISTING TOPOGRAPHY PROVIDED BY STOCKS ENGINEERING, P.A., DATED OCTOBER 2007.
2. FLOOD ZONE LIMITS FROM FLOOD INSURANCE RATE MAP (FIRM) NUMBER 3720173800J, PANEL 1738, EFFECTIVE DATE MAY 2, 2006.
3. CITY OF RALEIGH SINITARY SEWER LOCATIONS PROVIDED BY STOCKS ENGINEERING, P.A., DATED OCTOBER 2007.
4. ZONING LINES FROM SURVEY BY MURPHY GEOMATICS, PRESENTED IN DRAWING ENTITLED "RECOMBINATION PLAT FOR THORNTON II" DATED AUGUST 2006.
5. WETLAND DELINEATION FROM DRAWING ENTITLED "WEBTHOR PRELIMARY WETLAND DELINEATION", PREPARED BY MURPHY GEOMATICS, DATED OCTOBER 29, 2007.
6. SITE PROPERTY LINE FROM DRAWING ENTITLED "RECOMBINATION PLAT FOR DYNASTY HOLDINGS, LLC" PREPARED BY MURPHY GEOMATICS, DATED NOVEMBER 2007.

0 50' 100' 150'

MATERIAL STORAGE AREAS	
AREA NUMBER	MATERIALS
1	NON-TREATED, NON-PAINTED CLEAN WOOD AND DAMAGED PALLET (100 CY. TRAILER)
2	METAL (FERROUS & NON-FERROUS) (40 CY. ROLL-OFF CONTAINER)
3	CARDBOARD (40 CY. ROLL-OFF CONTAINER)
4	PALLETS (UNDAMAGED) (100 CY. ROLL-OFF CONTAINER)
5	CONCRETE/BRICK/BLOCK (100 CY.)
* ALL CONTAINERS SHALL BE COVERED AT THE END OF EACH DAY	

PERMIT ISSUE
NOT FOR CONSTRUCTION

NO.	DATE	REVISION
3	7/23/08	REVISED MATERIAL STORAGE AREA TABLE
2	7/17/08	UPDATES
1	6/3/08	UPDATE PER CITY OF RALEIGH GRADING PLAN; ADDED SEWER TIE-IN

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SEAL

SEAL

PROJECT TITLE:
THORNTON ROAD
MIXED WASTE TRANSFER & RECYCLING CENTER
SHOTWELL TRANSFER STATION, INC.

DRAWING TITLE:
SITE PLAN

DESIGNED BY:	DRAWN BY:
S.A.S.	C.T.J.
CHECKED BY:	PROJECT NO.:
	KING 07-1
SCALE:	DATE:
AS SHOWN	NOV. 2007
FILE NAME	
KING-D0004C	
SHEET NO.	DRAWING NO.
3	S2

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