

**Özkartallar Campak Joint Venture**

# **Solid Waste Management Plan for Shadra (UC-07)**

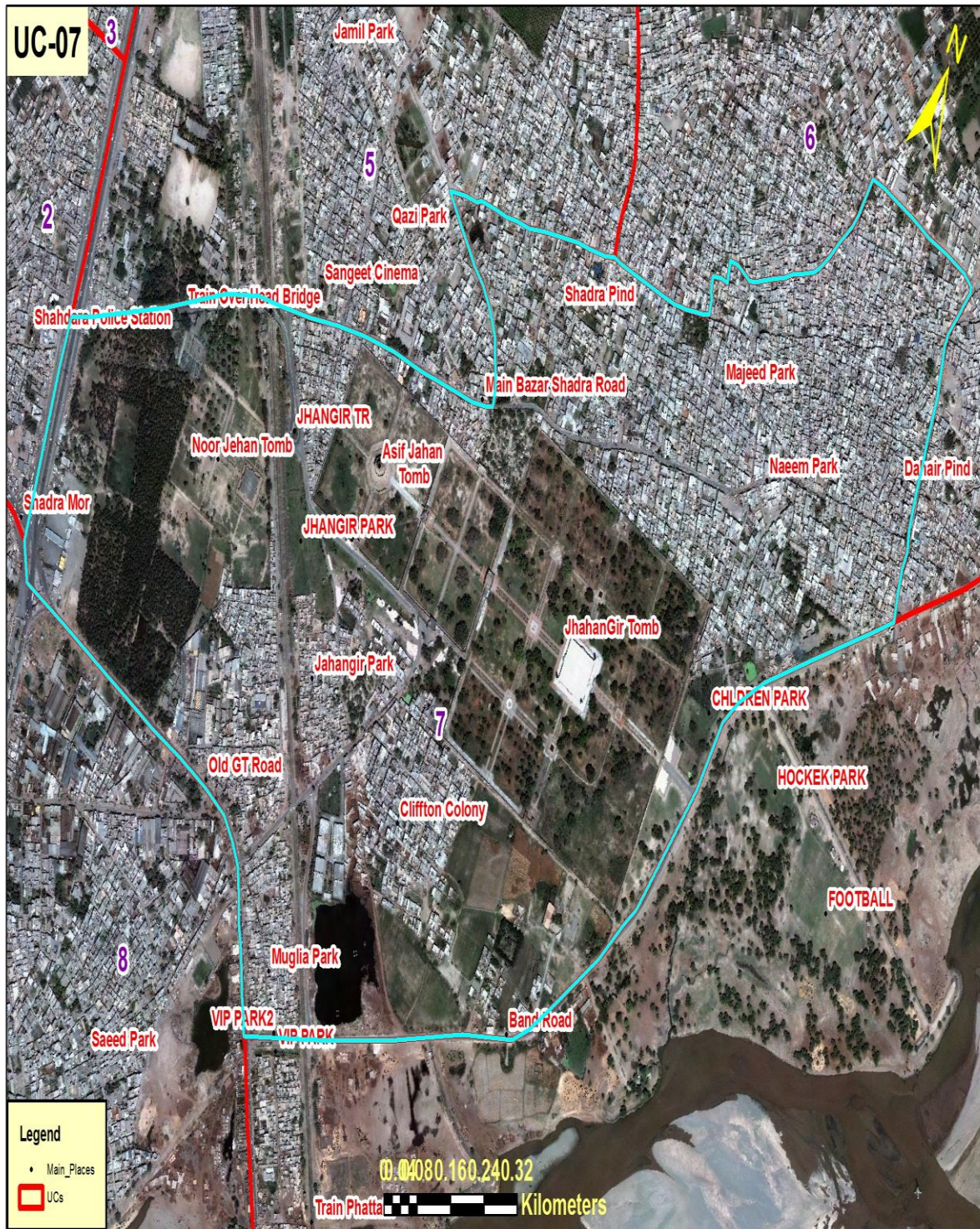


**By**

*Muhammad Hassan  
Deputy Manager Operations*

**5<sup>th</sup> Floor Shaheen Complex, Egerton Road, Lahore**

# Map of UC 07 Shadra



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## 1. INTRODUCTION

Union Council – (Shadra) is located in Ravi Town. Total population of UC-07 is 61678 with area 1469860 m<sup>2</sup> and predominantly low income area with unplanned settlement/infrastructure.



*Fig: 1. Pictorial View of Important Areas of UC-07*

### 1.1. IMPORTANT PLACES OF UNION COUNCIL-07

From Sanitation point of view Union Council-07 has important Places like Commercial Markets, Parks, Graveyard Important Roads, and Mosques etc.

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#### **Graveyards**

- Pindi Graveyard

#### **Important Roads**

- Maqbra road
- Shashtra underpass

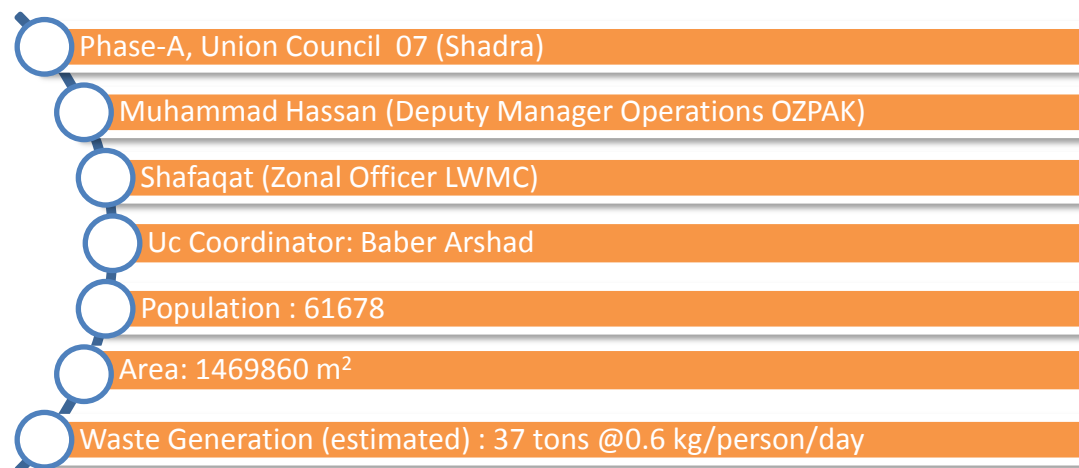
#### **Mosques**

- jamiya masjid bahar-e-Madina kot barkat
  - jamiya masjid gulzar-e-Madina muslim park
  - jamiya masjid Baitullah Baitullah road
  - jamiya masjid Naqshya Ghosia GT road
  - jamiya masjid Ghosia ghariib nagar
- 

### 1.2. SOLID WASTE GENERATION

Estimated solid waste generation is 37 metric tons per day @ waste generation rate of 0.6 kg/person/day.

### 1.3. PARTICULARS



## 2. SOLID WASTE MANAGEMENT PRACTICES

This area is under control of M/s. OZPak J.V for solid waste management. Existing arrangements for SWM based upon actual operations are as follows:

### 2.1 . OPERATIONAL ACTIVITIES - FIRST SHIFT PLAN

#### MANUAL SWEEPING OPERATION

Manual sweeping of the roads, streets, markets, footpaths and every paved and unpaved passageway is being done with Sanitary Workers equipped with all necessary operational tools and PPE's (Personal protective equipment's)

- ✓ Manual sweeping in first shift is carried out from 6AM to 2PM.
- ✓ Personal protective equipment's include Proper uniform, Gloves, Mask, Proper Shoes, Long Boots and Rain Coat in case of monsoon Season.
- ✓ Operational Requirement for Sanitary Worker includes Broom, Shovel, Wheelie Bin, Waste Bags, Scrapper and Hand Cart.



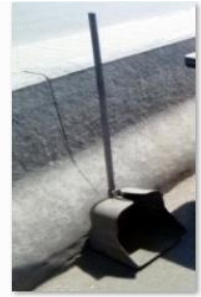
Broom



Hand Cart



Whellie Bin



Shovel



Proper Uniform with PPE's



Waste Bag



Scraper



Shovel 1



Monsoon SOP's (Long Boats & Rain Coat)

**Fig: 3. Pictorial View of Operational Equipment's, PPE's & Monsoon SOP's for Sanitary Worker**

- ✓ Sanitary Workers are managed by Sanitary Supervisors in Union Council and each sanitary worker has its own defined Beat (Area).
- ✓ During Manual Sweeping Operation in 1<sup>st</sup> Shift, Waste is also collected by sanitary workers from households i.e. collected from their house entrance.
- ✓ Waste Bags are also used by sanitary workers to collect waste from the roads, streets and households which are then hauled through wheellie bins and hand carts to the waste containers.
- ✓ Furthermore to increase the efficiency of waste collection we are distributing waste bags daily to every vendor on main roads(to stop littering and open heaps of waste)

## MANUAL SWEEPING OPERATION DETAILS



## OPEN PLOT CLEARANCE OPERATION

Large Number of open plots are present in Union Council 7 and as it is a cattle free area with poor infrastructure of roads and sewerage, access of machinery is not possible in every area of Union Council which results into daily throwing of waste in open plots by house holds.



children park.jpg



fareed colony (1).jpg



main road muglia park.jpg



mustafa bad 6 no phatek.jpg



fareed colony (2).jpg



fareed colony maengal bazaar.jpg



mustafa bad railway line 2.jpg



mustafa bad railway line.jpg



naeem park (1).jpg



naeem park (2).jpg



ravi clifton.jpg



ravi clifton (1).jpg





naeem park (3).jpg



ravi ciliffton.jpg



ravi clifton (2).jpg



ravi clifton (3).jpg



ravi clifton (4).jpg



ravi clifton (5).jpg



ravi clifton (6).jpg

### WORKING PLAN FOR MANUAL CLEARANCE OF OPEN PLOTS

Manual Clearance of Open plots is conducted after 11am Daily in Group Working and daily 3-4 plots are cleared in Union Council 7.

UNION COUNCIL 7	
Day	Open Plots Plan
Monday	Naeem Park(2 plots)
Tuesday	Main Road Maqbara jahangeer(2 plots)
Wednesday	Main Road Muglia Park (1 plot) + Main road phatak(1 plot)
Thursday	Mustafabad + Ravi Clifton plaza Plot(total 2 plots)
Friday	Naeem Park(2 plots)
Saturday	Main Road Maqbara jahangeer(2 plots)



### EMPTY AREAS MANUAL SWEEPING PROTOCOL

Large Population of shadra expanded over vast area of land. That's why we have many empty areas where we have no sanitary worker to provide regular waste collection and sweeping services. So we cover these empty areas in group working after 11am according to fix schedule.

### EMPTY AREAS UC-7

<b>UNION COUNCIL 7</b>
Ravi Clifton Streets
Fareed Colony
Muglia Park link streets
Pathan Colony
<u>Gulshan tufail streets</u>
<u>Purana mustafabad</u>
Hanif Park
<u>Mohalla hujray</u>
<u>Mohalla kagran wala</u>
Noor jahan Street
<u>Makhan Pura</u>
Band Road sweeping

### GROUP WORKING PLAN UC-7

<b>UNION COUNCIL 7</b>	
<b>Day</b>	<b>Open Plots Plan</b>
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### SOLID WASTE COLLECTION OPERATION (CONTAINER COLLECTION & DOOR TO DOOR COLLECTION)

Solid waste collection process is done through two ways.

1. Container Collection
2. Door to Door Collection

### CONTAINER COLLECTION

Solid waste generated is stored in waste containers(Collection Capacity is 250kg/0.25 tons) which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection. This waste is than dumped at dumping Site (Mehmood Booti).

- ✓ Total 55 waste containers are in place in Union Council at different Points.
- ✓ Total waste storage capacity in 55 containers is 13.75 tons in one time lifting.
- ✓ These Waste Containers are lifted by Hydraulic Compactor Vehicles having a Compaction Ratio of 1:3.
- ✓ One large Compactor and small compactor(shared between UC 6 & 7) is deployed for waste collection in Union Council 7. Compactor has two helpers equipped with all necessary operational tools and PPE's (Personal protective equipment's).
- ✓ Compactor's responsibility is to lift all the containers in its route during the shift and also to collect all open heaps from the roads and linked streets to maintain efficient cleanliness standards.



Compactor Hydraulic System



Compactor



Proper Uniform with PPE's



Broom



Shovel 1

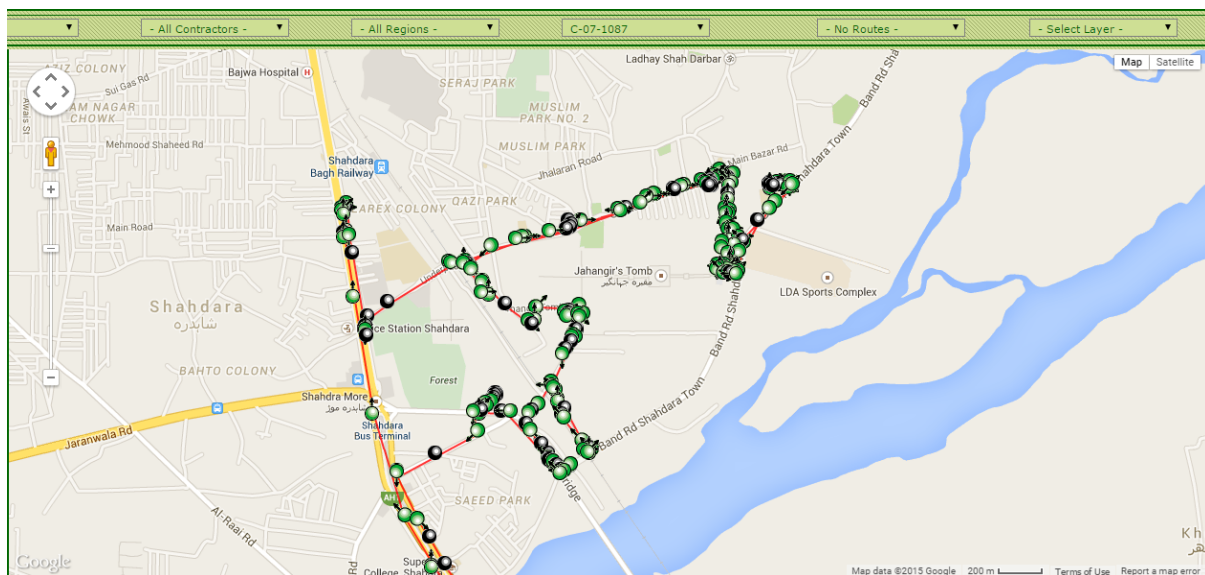
*Fig: 4. Pictorial View of Vehicles & Operational Equipment's for Helpers*

## SOLID WASTE COLLECTION OPERATION (CONTAINER COLLECTION) DETAILS

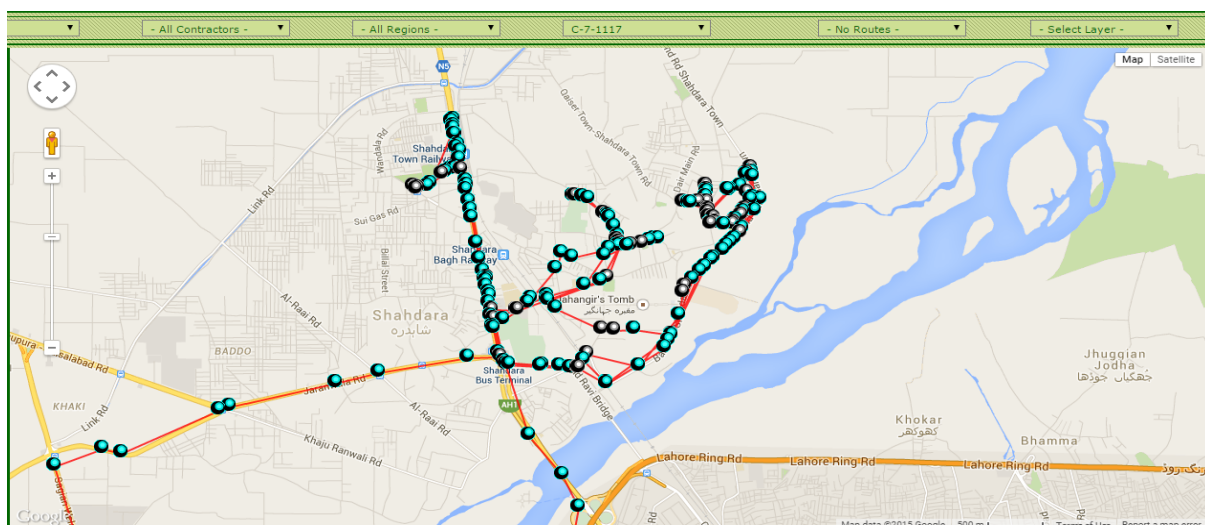
- Containers Placed: 55
- Container Points: 40
- Compactor Vehicles: C13-1087 (13m<sup>3</sup> Compactors) & C07-1117(7m<sup>3</sup> Compactor)
- Compactors Waste Collection: 13m<sup>3</sup> Compactor can carry 9-12 tons of waste with one trip in 1st shift so the Collection Capacity in 1st Shift is 12 tons & 7m<sup>3</sup> Compactor can carry 8-9 tons of waste in 2 trips.

### COMPACTOR WORKING 1<sup>ST</sup> SHIFT

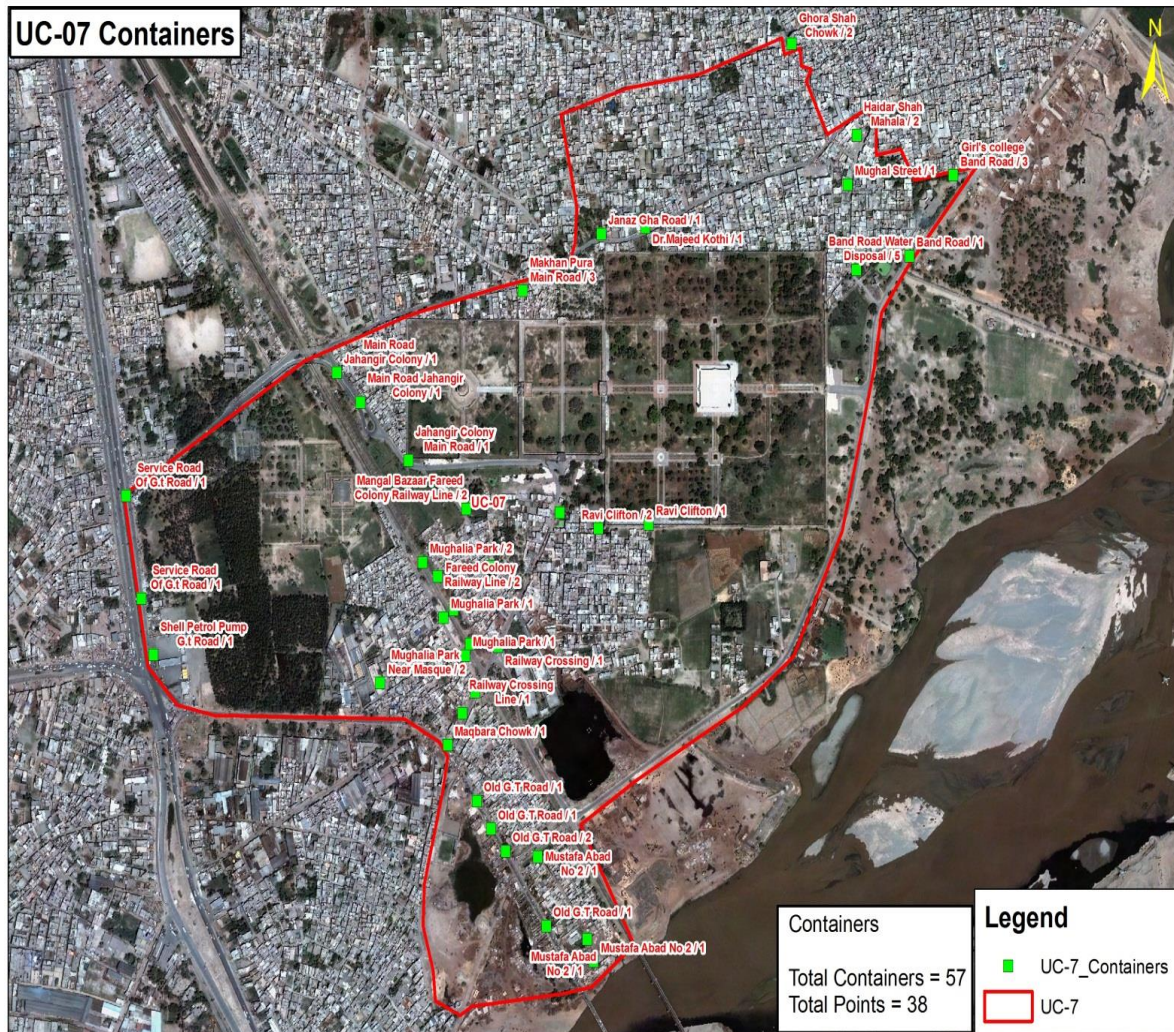
#### C13-1087



#### C07-1117



## CONTAINER LOCATIONS ON MAP UC 07



Map: 01. Location of Containers

## DOOR TO DOOR COLLECTION

- ✓ Door to Door Waste Collection is the backbone of Solid Waste Management Operation. But it is very difficult to implement Door to Door Waste Collection service in area like Shadraa with low income rate, low literacy rate, Poor roads and sewerage infrastruture. But still we have successfully implemented Door to Door Service in Union Council 7(Areas having access and infrastruture for Door to Door Collection)
- ✓ MD-17 is the code of mini dumper which is deployed for UC-07 working with OZPAK JINGLE collecting Door to Door waste. Door to Door Waste Collection time is from 08:00AM to 01:00PM.

**Note:** Door to Door Waste Collection service is provided to houses having access of Mini Dumper. Our sanitary workers are collecting waste from areas where infrastruture is poor with narrow streets and sewerage problems.



Mini Dumper Hydraulic System



Mini Dumper



Proper Uniform with PPE's



Broom



Shovel 1



Waste Bag



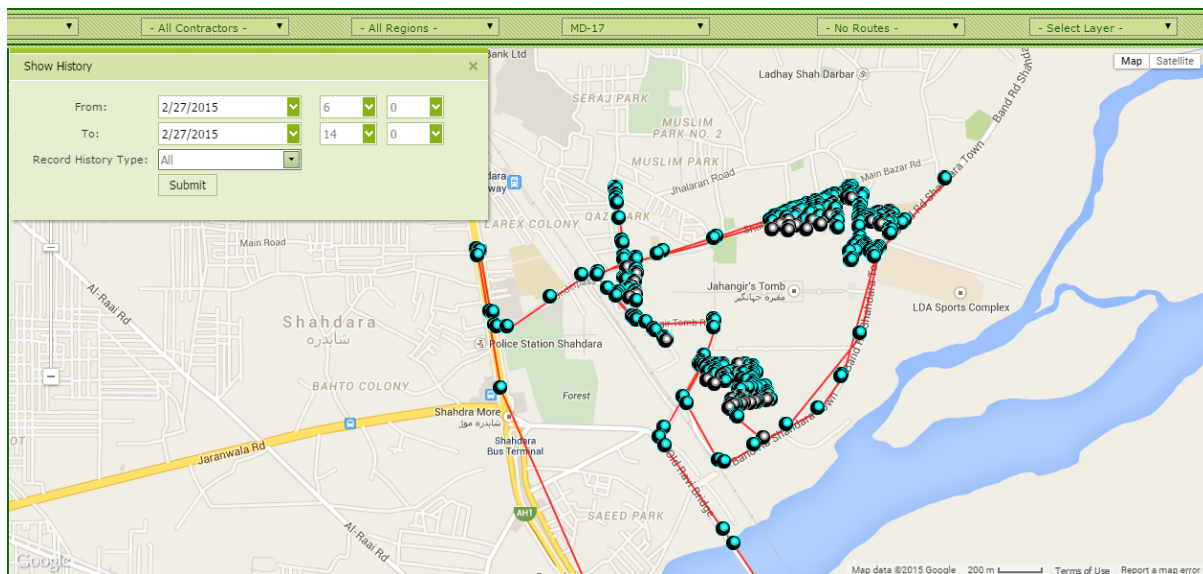
## DOOR TO DOOR COLLECTION DETAILS



Mini Dumper: MD-17

Mini Dumper Driver: Riasat Ali (3234026159) with 1 Helper (Properly Equipped)

## DOOR TO DOOR WORKING OF MINI DUMPER IN UNION COUNCIL 7



## LIFTING OF WASTE BAGS FILLED DURING GROUP WORKING

Manual Open Plot Clearance is a major part of solid waste management operation in Shadra. Due to involvement of Mini Dumper in DTD Collection. It was big problem to lift waste filled bags from narrow streets with mini dumper during 1<sup>st</sup> shift. For this purpose we are using one extra mini dumper to lift waste bags daily from plots all over the shadra zone in 2<sup>nd</sup> Shift.



### 2.2. OPERATIONAL ACTIVITIES - SECOND SHIFT PLAN

#### MANUAL SWEEPING OPERATION

Manual sweeping of the Main roads, Important markets, 1139 complaints is done with Special Gang (Group of Sanitary Workers) equipped with all necessary operational tools and PPE's (Personal protective equipment's)

- ✓ Manual sweeping in 2nd shift with Special Gang is carried out from 2PM to 10PM.

- ✓ Personal protective equipment's include Proper uniform, Gloves, Mask, Proper Shoes, Long Boots and Rain Coat in case of monsoon Season.
- ✓ Operational Requirement for Special Gang includes Broom, Shovel, Wheelie Bin, Waste Bags, and Scrapper.

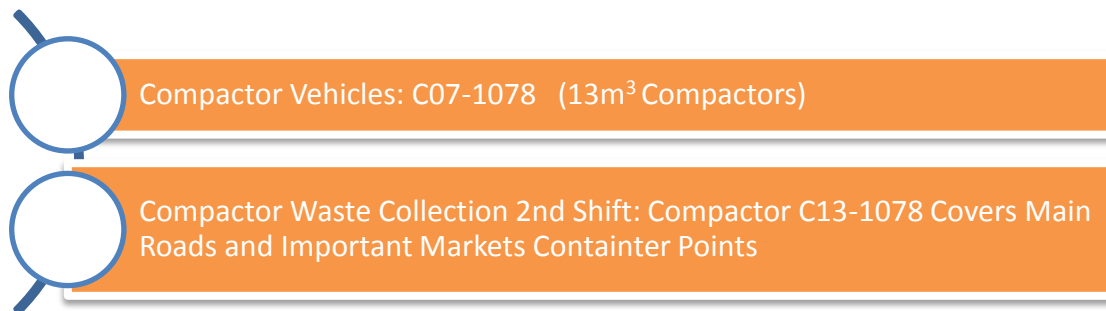
#### MANUAL SWEEPING OPERATION DETAILS



#### SOLID WASTE COLLECTION OPERATION (CONTAINER COLLECTION)

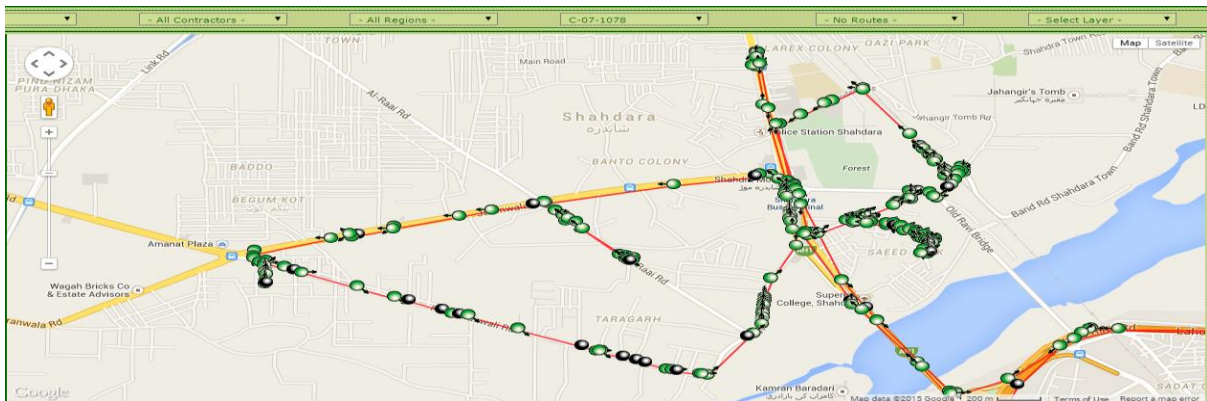
Solid waste generated is stored in waste containers which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection and dump the waste at Dumping Site (Mehmood Booti).

#### SOLID WASTE COLLECTION OPERATION (CONTAINER COLLECTION) DETAILS





## COMPACTOR WORKING 2<sup>nd</sup> Shift



### 2.3. OPERATIONAL ACTIVITIES - THIRD SHIFT PLAN MANUAL SWEEPING OPERATION

Manual Sweeping Operation is not carried out in 3rd Shift.

#### SOLID WASTE COLLECTION OPERATION (CONTAINER COLLECTION)

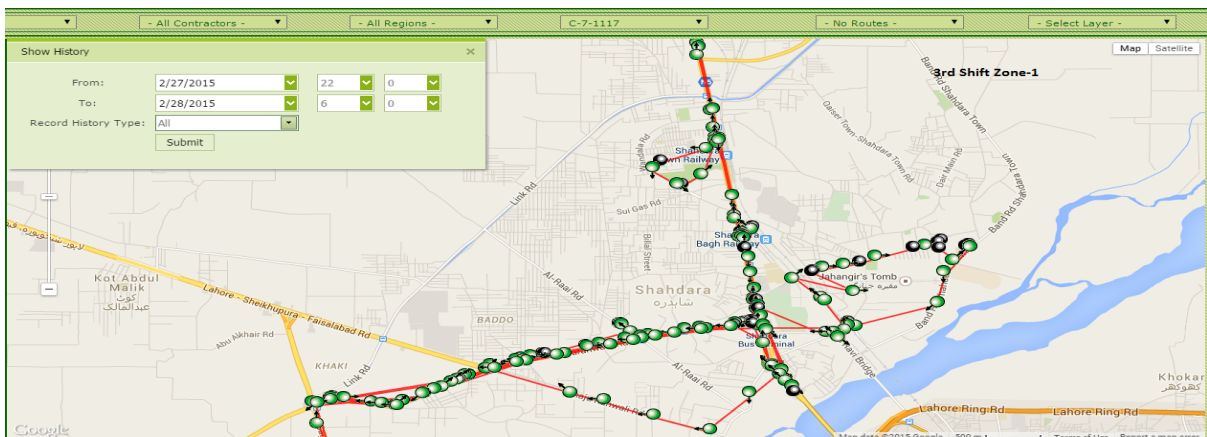
Solid waste generated is stored in waste containers which are placed all over the Union Council. These waste containers are lifted by Hydraulic Compactor Vehicles moving in the union council on a specific route for the purpose of waste collection and dump the waste at Dumping Site (Mehmood Booti).



Compactor Vehicles: C07-1117 ( 7m<sup>3</sup> Compactors)

Compactor Waste Collection 3rd Shift: Compactor C07-1117 Covers Main Roads and Important Markets Container Points and Problematic Points covering all Union Councils

## COMPACTOR WORKING 3<sup>rd</sup> Shift



### 3. COMPACTOR VEHICLE STAFF DEPLOYMENT FOR UNION COUNCIL 07

Detail of vehicles deployed in all three shift and contact number of responsible persons are given below:

Conservancy Staff Union Council 7, Zone-1						
Overall Incharge = Muhammad Hassan (0300-8482390)						
Supervisor = Babar (0320-8431703) & M Shahid (0346-4382320)			Supervisor = Babar (0320-8431703) & M Shahid (0346-4382320)		Supervisor = Taj ( 0300-5258304)	
1st shift			2nd shift		3rd shift	
UC	Vehicle No.	Driver Name & Mobile	Vehicle No.	Driver Name & Mobile	Vehicle No.	Driver Name & Mobile
07	1087	Naveed Ahmad(3224676274)	1078	Sabir(3214115393)	1117	Ashraf Laal(3224891824)

*Table: 02. Conservancy Staff UC-07*

### 4. UC COORDINATOR JOB DESCRIPTION/LIST OF WORK

#### 06:00AM-06:45AM

##### Attendance Points:

- Manual and Android Cards Attendance Marking on these fixed attendance points
  - Phatak No. 6
  - Bus Stop
  - Ghoray Shah Chowk

##### Finding Problematic Points & Deployment of Human Resource and Machinery:

- Check arrival of Compactor and Mini Dumper in Union Council
- Deploy Human Resource on Main Roads, Commercial and Residential Areas
- Highlight important open heaps points, Filled Waste bags points and problematic over flowed containers to Compactor and Mini Dumper drivers to attend on priority.

#### 06:45AM-07:30AM

- Direct Mini Dumper to Main Road Heaps
- Check Shadra main Bazar + 6 Containers

#### 07:30AM-08:30AM

- Check Manual Sweeping on Main Roads, Sanitary Workers Attendance and Containers Collection.
  - Jahangeer Colony Main Road + 3 Containers
  - Ravi Clifton Road + 3 Containers
  - Bund Road to Old GT Road +4 Containers

- Chowk Shadra to Old GT Road + 4 Containers

#### **08:30AM-09:00AM**

- Check Muglia Park Manual Sweeping + Open Heaps + 4 Containers
- Check Railway Line Bund Road Open Heaps

#### **09:00AM-10:15AM**

✚ Check Manual Sweeping, Worker Attendance, Container Collection & Door to Door Waste Collection in Inner (Residential) Areas.

- Ravi Clifton Streets + 3 Containers
- Waste Bags Distribution to Old Gt Road Vendors
- Shadra bazar 6 Containers
- Jahangeer Colony 3 Containers
- Jahangeer Park
- Aslam Park
- Pindi Qabrastan Streets
- Bus Stop Containers

✚ During Visit Focusing on Manual sweeping Quality, presence of worker in allocated area, Door to Door Collection efficiency and staying in touch with compactor driver for timely lifting of containers.

#### **10:15AM-11:00AM**

- Break Time from 10:00am to 11:00am
- Workers gather at one Attendance Point (Bus Stop Point)

#### **11:00AM-01:30PM**

✚ Divide work force in groups to cover empty areas, absent worker area, problematic areas and open plots.

✚ Send workers in group in empty areas and on open plots daily according to a fix schedule

✚ Deploy Workers at Shadra Bazar

✚ Check working in empty areas, open plots.

✚ Resolve PMS & 1139 Complaints on priority basis if any

✚ Check again main roads manual sweeping, container collection & Open Heaps Points including some problematic container points

- Check M Check Shadra main Bazar + 6 Containers
- Jahangeer Colony Main Road + 3 Containers
- Ravi Clifton Road + 3 Containers
- Bund Road to Old GT Road +4 Containers
- Chowk Shadra to Old GT Road + 4 Containers
- Muglia Park + 4 Containers
- Check Railway Line Bund Road Open Heaps
- Bus Stop Containers

- ✚ In Final Round Checking focus is to check Group Working, Main Roads Sweeping and Container Collection of important Points.

**Note:** On Wednesday Major portion of UC work force covers waste of Tuesday market on Maqbra jahangeer road.

#### **01:30AM-02:00PM**

- ✚ Manual and Android Cards Attendance Marking on these fixed attendance points
  - Phatak No. 6
  - Bus Stop
  - Ghoray Shah Chowk

### **5. CRUCIAL POINTS**

From Solid Waste Management(Waste Generation, Waste Collection & Social Environment) perspective we have some focus points in every Union Council which are focused daily on priority.

#### **Bus Stop Container Point:**

Very important point in terms of quantity of waste and location



Shadra pind bazar is also a focus point in UC-7.

**Note:** In UC-7, we have 5 such points where more than 1 container is deployed and all are our focus points.

### **6. RECOMMENDATIONS**

As Door to Door Collection is the back bone of waste management system and it is the best way to reduce waste load on containers and compactors by directly collecting waste from houses. To collect waste completely from UC-07 one mini dumper is not enough. One more mini dumper is necessary for 80-90 % Door to Door Collection efficiency.