

# Cost–Revenue Analysis of Metered Parking Ocean Boulevard, Rye, NH



Rye Board of Selectmen  
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# Cost–Revenue Analysis – Metered Parking

## I. Introduction

John Burke, CAPP, Consultant  
Parking, Transit & Downtown Development

- Certified Administrator of Public Parking (CAPP)
- MBA/Public Finance
- 25+ years experience
- Former Parking & Transportation Director
  - City of Portsmouth, NH
  - City of Evanston, IL
- ❖ Independent consulting services since 2009

# Cost–Revenue Analysis – Metered Parking

## I. Introduction

### Municipal Parking Projects in New England

- Haverhill, MA
- Manchester, CT
- Mansfield, MA
- Narragansett, RI
- Newburyport, MA
- Newport, RI
- Plymouth, MA
- Portsmouth, NH
- Wareham, MA
- Worcester, MA

# Cost–Revenue Analysis – Metered Parking

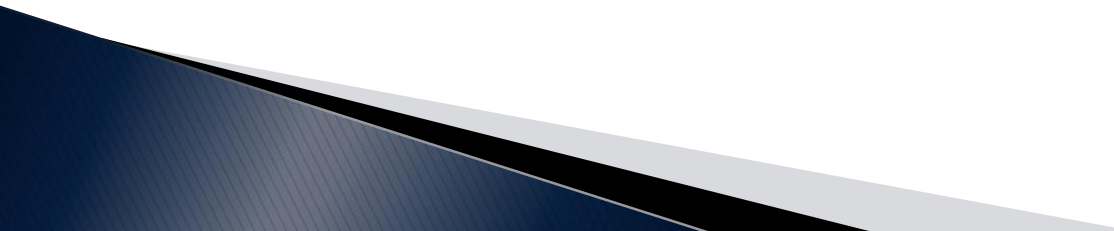
## II. Background

*Ocean Boulevard Parking Assessment Study,  
Tighe & Bond, Jan. 2015*

- Recommended on–street parking spaces be striped to better define parking areas and to ensure proper sight distances to intersections and driveways.
- Concluded that metered parking would generate annual revenue in excess of initial start–up and O&M costs based on preliminary analysis.
- Recommended a more in–depth financial & parking analysis be completed prior to implementing metered parking.

# Cost–Revenue Analysis – Metered Parking

## III. Study Overview

- Recommend limits of paid parking, hours & rates
  - Recommend parking pay station spacing, technology and applications for use
  - Recommend parking enforcement approach
  - Recommend staffing and service contracts needed to support the paid parking program
  - Develop capital & operating cost and revenue projections suitable for budgeting
  - Develop Action Plan/next steps
- 

# Cost–Revenue Analysis – Metered Parking

## IV. Recommended Program Parameters

### Limits of Paid Parking

Assumed min. 8–ft. wide paved shoulder is needed to stripe a lawful parking stall for paid parking.

#### (X) Less than 8–foot Shoulders

- Highland Park Ave. to Marsh Rd (Wallis Sands Beach)

#### (√) Nominal 8–foot Shoulders or Wider

- Harbor Road to Perkins Road (Jenness Beach)

\*Atypical metered parking application as there are no sidewalks or raised vertical curbing on Rt. 1A\*

# Cost–Revenue Analysis – Metered Parking

## IV. Recommended Program Parameters

### Limits of Paid Parking

Harbor Road to Perkins Road

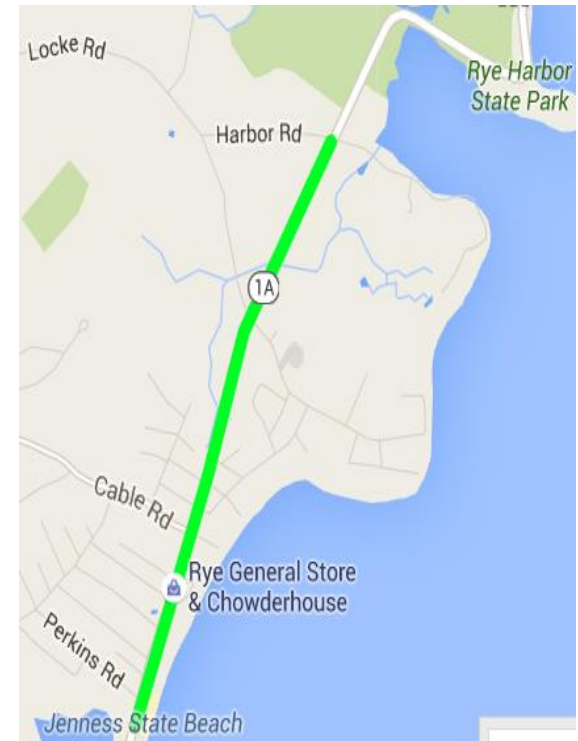
- 1.1–mile section of roadway
- 287 potential parking spaces

based on:

Avg. 20–ft. stall length

Min. 8–ft. stall width

Min. 20–ft. corner clearances



# Cost–Revenue Analysis – Metered Parking

## IV. Recommended Program Parameters

**Paid Parking Season:** May 1<sup>st</sup> to September 30<sup>th</sup>

**Paid Parking Hours:** 8 am to 6 pm, 7 days/week

**Paid Parking Rate:** \$2.00/hour

**Pay Station Payments Accepted:** bills & credit cards

**Pay Station Method:** Pay-by–License Plate

**Pay Station Spacing:** 1 unit/12 paid spaces





# Cost–Revenue Analysis – Metered Parking

## V. Projected Parking Pay Station Utilization

### Methodology

1. Conduct on–street parking occupancy survey during “peak” month of August;
2. Calculate on–street parking utilization rates for August by roadway section; and
3. Adjust the peak August utilization rates to provide monthly forecasts for May, June, July and September using actual monthly variations in 2015 parking revenue data from the 67–space Jenness Beach Lot.

# Cost–Revenue Analysis – Metered Parking

## V. Projected Parking Pay Station Utilization

### Parking Occupancy Survey

- Hourly survey conducted by Rye Police Department 8:00 a.m. to 6:00 p.m. from 8/15/15 to 8/30/15
- Average August weather conditions verified

**Average Parking Utilization Rates**  
**Ocean Boulevard – Perkins Road to Harbor Road**  
**8 a.m. to 6 p.m., August 15<sup>th</sup> through 30<sup>th</sup>, 2015**

Roadway Section	Estimated # of Paid Spaces	Avg. Utilization Rate
Perkins Road to Cable Road	43	70.0%
Cable Road to Locke Road	166	27.5%
Locke Road to Harbor Road	63	5.6%

Based on the low “peak” utilization rate, Locke Road to Harbor Road is not recommended for paid parking.

# Cost–Revenue Analysis – Metered Parking

## V. Projected Parking Pay Station Utilization

### Jenness Beach Lot Monthly Pay Station Revenue

**2015 Monthly Pay Station Revenue\***  
**Jenness Beach Parking Lot (67-paid spaces)**

Month	Revenue	% of Total Revenue for 5-Month Period	Transactions
May	\$14,419.45	10.0	3,452
June	\$21,914.75	15.3	4,688
July	\$40,883.35	28.4	7,894
August	\$42,283.95	29.4	8,139
September	\$24,337.90	16.9	4,977
<b>Total</b>	<b>\$143,839.40</b>	<b>100.0</b>	<b>29,150</b>

\*Provided by the NHDRED.

# Cost–Revenue Analysis – Metered Parking

## V. Projected Parking Pay Station Utilization

**Projected Average Monthly Parking Utilization Rates  
Ocean Boulevard - Jenness Beach/Perkins Road to Locke Road**

<b>Roadway Section</b>	<b># of Spaces</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Average Total</b>
On-street spaces adjacent to Jenness Beach Lot*	15	30.3%	46.3%	86.0%	89.0%	51.2%	<b>60.6%</b>
Perkins Road to Cable Road	43	23.8%	36.4%	67.6%	70.0%	40.2%	<b>47.6%</b>
Cable Road to Locke Road	166	9.4%	14.3%	26.6%	27.5%	15.8%	<b>18.7%</b>

- Projected utilization rates assume “no parking areas” on Ocean Boulevard and side streets are properly signed, striped and enforced.
- Total of 224 paid parking spaces from Jenness Beach Lot to Locke Road.

# Cost–Revenue Analysis – Metered Parking

## VI. Projected Annual Parking Revenue Pay Stations

**Projected Monthly Pay Station Revenue  
Ocean Boulevard - Jenness Beach/Perkins Road to Locke Road**

<b>Roadway Section</b>	<b># of Spaces</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>	<b>Total</b>
On-street spaces adjacent to Jenness Beach Lot	15	\$2,818	\$4,167	\$7,998	\$8,277	\$4,608	<b>\$27,868</b>
Perkins Road to Cable Road	43	\$6,345	\$9,391	\$18,022	\$18,662	\$10,372	<b>\$62,792</b>
Cable Road to Locke Road	166	\$9,675	\$14,243	\$27,376	\$28,305	\$15,739	<b>\$96,338</b>
<b>Average Total</b>	<b>224</b>	<b>\$18,838</b>	<b>\$27,801</b>	<b>\$53,396</b>	<b>\$55,244</b>	<b>\$30,719</b>	<b>\$185,998</b>

# Cost–Revenue Analysis – Metered Parking

## **VI. Projected Annual Parking Revenue**

### **Expired Meter Fines & Late Fees**

- Assumed 2 expired meter tickets/hour.
- 75% collection rate on outstanding tickets.
- Late fees represent 12% of collected fine revenue.

Expired Meter Fine Revenue = \$68,850

Ticket Late Fee Revenue = \$ 8,262

Total Meter Fine & Late Fee Revenue = \$77,112

### **Total Projected Annual Parking Revenue**

Annual Pay Station Revenue = \$185,998

Annual Meter fine & Late Fee Revenue = \$ 77,112

Total Meter Fine & Late Fee Revenue = \$263,110

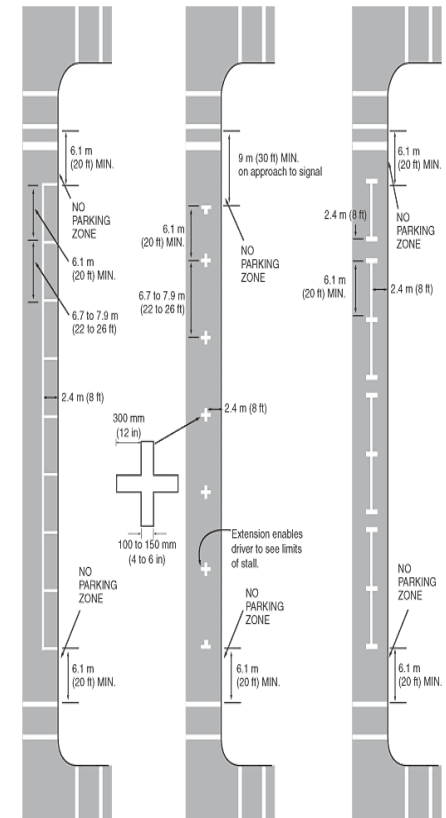
# Cost–Revenue Analysis – Metered Parking

## VII. Est. Capital Purchase & Installation Cost

- Parking pay stations on concrete pads with bollard protection
- Posted parking signs
- Pavement markings
- Parking enforcement equipment



Figure 3B-18. Examples of Parking Space Markings



## OCEAN BOULEVARD – JENNESS BEACH TO LOCKE ROAD

### RECOMMENDED PROGRAM ELEMENTS AND PARAMETERS

Installation of parking pay stations along Route 1A/Ocean Boulevard from Jenness Beach to Locke Road in Rye, NH. Recommended program parameters are as follows:

Payment Application Type:	<b>Pay-by-License Plate</b>
# of Pay Stations:	<b>19</b>
# of Paid Spaces:	<b>224 (11.8 spaces/pay station)</b>
Power Source:	<b>Solar</b>
Payments Accepted:	<b>Credit/Debit Cards and Bills</b>
Change Provided:	<b>No</b>
Enforcement Technology:	<b>Smart Phone, Enf/Plate Look-up/Citation Issuance App/printer</b>


### ESTIMATED BUDGET/COST: PURCHASE & INSTALLATION

Pay Stations Purchase:	<b>\$161,500 (\$8,500/unit)</b>
Shipping:	<b>\$ 4,750 (\$250/unit)</b>
Installation/Commissioning*:	<b>\$ 38,000 (\$2,000/unit)</b>
Parking Signs/Posts**:	<b>\$ 12,500</b>
Striping***:	<b>\$ 7,500</b>
Smart Phones/ Load Enf. Apps:	<b>\$ 1,700 (2 units)</b>
<u>Zebra Bluetooth Printers:</u>	<b><u>\$ 2,400 (2 units)</u></b>
Total Estimated Cost:	<b>\$228,350</b>



# Cost-Revenue Analysis – Metered Parking

## **VIII. Estimated Annual Operating Cost/Budget**

- Pay station mgt. system/software fees
  - Pay station cellular service
  - Credit card transaction fees
  - Pay station spare parts/extended warranty
  - Pay station seasonal install/removal
  - Part-time collections/maintenance staffing
  - Part-time enforcement officer staffing
  - Enforcement system/software fees
  - Smart phone cellular service
  - Printer paper, supplies, etc.
- 

## Annual Operating Budget - Paid Parking

Ocean Boulevard - Jenness Beach to Locke Road, Rye, NH

Pay Station Fees/Expenses*	Annual Cost	Comments
Mgt. System/Software Fee (\$50/mo./unit x 5 mo. x 19 units)	\$4,750.00	CC processing, web-based reporting, monitoring, alarm, system/data mgt.
CDMA Cellular Connectivity (\$40/mo./unit x 5 mo. x 19 units)	\$3,800.00	Vendor modem & 3rd party contract
CC Transaction Fees (Merchant Processor/PCI Gateway, etc.)	\$7,000.00	Est. 5% of total credit card revenue**
Spare Parts	\$10,000.00	Major parts for replacement on hand
Kiosk Thermal Paper (Receipts)	\$1,000.00	
Supplies (small tools, cc cleaners, lubricants, dry sacks, etc.)	\$1,000.00	
Sign Repair/Replace	\$500.00	
Miscellaneous Operational Expenses	\$500.00	
Meter Collection/Maintenance Staff - 2 PT @ \$15/hr, 4hrs/week	\$2,400.00	Coll./maint. 1/2 day once/wk, 2 staff
Seasonal Installation/Removal of Pay stations	\$9,500.00	\$500/pay station/year
<b>Subtotal Annual Kiosk-Related Costs</b>	<b>\$40,450.00</b>	
Kiosk Enforcement-related Fees/Expenses*	Annual Cost	Comments
Printer Paper/Envelopes	\$1,000.00	Includes ticket design layout costs
Annual Subscription Fee - Enf/Plate Lookup + Citation Gen. App.	\$2,000.00	enf. look-up & citation generation apps
Smart Phone Cellular Service (\$50/mo./unit x 5 mo. X 2 phones)	\$500.00	
Postage/Paper/Envelopes - late payment notices	\$500.00	
Miscellaneous Operational Expenses	\$500.00	
PT Enf. Officers @ \$15/hr (Jenness to Locke) during all paid hrs	\$22,950.00	\$15/hr x 10hr/day x 153 days (5/1-9/30)
Uniforms	\$250.00	
Overtime for Additional Parking Appeals/Hearings	\$1,500.00	
<b>Subtotal Annual Enforcement-Related costs</b>	<b>\$29,200.00</b>	
Totals	Annual Cost	Comments
<b>Total Annual Operating Cost</b>	<b>\$69,650.00</b>	

\*Assumes Town provides program mgt./oversight, bookkeeping, PCs/printers, insurance, and vehicles if required.

\*\*Assumes credit card transactions represent 75% of total sales.

# Cost–Revenue Analysis – Metered Parking

## IX. Cost–Revenue Analysis Results

Jenness Beach to Locke Road (224 parking spaces)

Projected Annual Revenue	\$263,110
Estimated Purchase & Install Cost	\$228,350
<u>Estimated Annual Operating Cost</u>	<u>\$ 69,650</u>
Estimated 1 <sup>st</sup> Year Operating Deficit	(\$ 34,890)

Subsequent year net income estimated to be approximately **\$200,000**.

- Recommend pay station renewal & replacement fund of \$15 to \$20k be started in year 2.
- Funds could offset beach–related expenses to Town (lifeguards, parking enf., equipment, trash pick–up, etc.), which totaled \$52,525 in 2014.

# Cost–Revenue Analysis – Metered Parking

## **X. Action Plan/Recommended Next Steps**

- 1.** Initiate NHDOT scoping meeting/plan submission process and secure permit/approval
- 2.** Develop organizational structure, departmental service delivery/budgets & Town Ordinance as needed
- 3.** Procure parking–related equipment, contract work and service agreements
- 4.** Contractor equipment installation, training and commissioning services

Minimum 4 to 6 months needed to obtain State permit approvals and to procure, install and commission the specified equipment.

# Cost-Revenue Analysis – Metered Parking

## **XI. Pay-by-Phone Alternative to Pay Stations**

### **How does it work?**

Can be provided complimentary to, or in place of pay stations

1. Parker registers (online or by phone) a credit/debit card and license plate with the pay-by-phone provider.
2. After parking, they simply enter the location code provided on a nearby sign and the time they wish to park for, and then go on their way.
3. Customer receives a payment confirmation by text or email.
4. Within 10 minutes of their parking session expiring, the customer receives another text message notifying them that their parking session is about to expire.
5. Customer then has the option of adding time to their parking session remotely (from their cell phone).

# Cost-Revenue Analysis – Metered Parking

## **XI. Pay-by-Phone Alternative to Pay Stations**

### **What does it cost?**

- Pay-by-phone provider typically charges the municipality 15 to 25 cents per transaction
- Municipality can decide to absorb the transaction fee or pass it on to the customer as a “convenience fee”
- Normal credit card merchant processing fees apply
- Pay-by-phone signs are typically provided free of charge from the provider but municipality is responsible for installing them
- Enforcement is handled the same way as with pay-by-plate parking with pay stations

# Cost-Revenue Analysis – Metered Parking

## **XI. Pay-by-Phone Alternative to Pay Stations**

### **Pros and Cons**

#### PROS

- Eliminates the purchase, installation, maintenance and operational costs of parking pay stations
- Eliminates cash collection, replenishment & reconciliation
- Potentially makes the NHDOT permit/approval process easier since it only involves posted sign installation
- Allows for integration of monthly parking permits

#### CONS

- Requires Initial Registration/barrier to use
- Some customers do not have debit/credit cards/cellphone
- Cash payers would have to either buy a pre-paid credit card for use; buy a parking permit at Town Hall (if offered); park at the Jenness Beach Lot or in a free on-street parking space.

# QUESTIONS/DISCUSSION