

February 17, 2016

FINAL REPORT

Cost-Revenue Analysis of Paid Parking Ocean Boulevard/Route 1A in Rye, NH

This report summarizes the results of a cost-revenue analysis of implementing on-street paid parking in high-use areas of Ocean Boulevard/Route 1A in the Town of Rye. The report includes detailed capital and operational cost estimates and revenue projections suitable for budgeting purposes. It also includes recommended next steps should the Town decide to move forward and seek approval from the New Hampshire Department of Transportation (NHDOT) to implement on-street metered parking.

This cost-revenue analysis was a recommended next step in the Parking Assessment Study Report completed for the Town in January 2015 by Tighe & Bond. The assessment included a preliminary analysis of implementing metered parking on a seasonal basis (Memorial Day to Labor Day) in the congested areas of the Ocean Boulevard corridor (Marsh Road to Highland Park Avenue and Harbor Road to Perkins Road). It concluded that projected annual parking revenues would exceed initial start-up costs plus yearly operating and maintenance costs. However, it recommended that a more in-depth financial and parking analysis be completed prior to implementing metered parking.

The scope of work for the cost-revenue analysis is comprised of six primary tasks:

1. Identify the limits of paid parking, pay station locations, hours and rates
2. Identify pay station equipment type, technology and applications for use
3. Identify parking enforcement approach, technology and coverage
4. Recommend staffing and service contracts needed to support the paid parking program
5. Develop capital/operating cost estimates & revenue projections suitable for budgeting
6. Develop an Action Plan with recommended next steps

Potential Limits of Paid Parking

The first step in the analysis was to identify the potential limits of paid parking based on the results of the Tighe & Bond (T&B) study and in consultation with Town staff. The T&B study estimated that there could be as many as 140 paid parking spaces from Marsh Road to Highland Park Avenue and 506 from Harbor Road to Perkins Road. Per the study report, this was just a ballpark estimate not based on a detailed assessment or physical layout of parking pay stations and parking areas.

Regarding the layout of parking areas, the T&B study report recommended that parking spaces be striped to provide more defined parking areas and to ensure that proper sight distances are maintained to and from intersections and driveways. **For this analysis, it is assumed that a minimum 8-foot wide paved shoulder is needed to stripe/designate a lawful parallel parking stall for paid parking.** This minimum dimensional requirement for on-street parallel parking is typical in many communities. It is the depicted lane width included in parking markings diagrams in the Manual of Uniform Traffic Control Devices (MUTCD), 2009 Edition published by the Federal Highway Administration.

A field investigation revealed that almost all paved shoulder areas on Ocean Boulevard between Marsh Road (in the vicinity of Wallis Sands Beach) and Highland Park Avenue, where parking is currently allowed, are substantially less than 8 feet wide. Therefore, they would be of insufficient width to stripe for paid parking. It may be possible at a later date to extend the width of paved shoulder on these sections by either reducing travel lane widths and restriping the roadway for wider shoulders or via a paving project to widen the shoulder/roadway.

However, on the 1.1-mile section of Ocean Boulevard between Harbor Road and Perkins Road, most of the paved shoulder is nominally 8 feet wide or more. Based on this minimum paved stall width, an average stall length of 20 feet, and a minimum 20-foot (no parking) corner clearance to side streets, there is an estimated 287 potential paid parking spaces within this roadway section. Table 1 shows the 287 paved spaces by roadway section as well as the anticipated number of pay stations that would be needed should demand justify paid parking.

Table 1
Ocean Boulevard – Jenness Beach/Perkins Road to Harbor Road
Estimated Number of Paved Parking Stalls by Roadway Section

Roadway Section	East Side	West Side	Total	Pay Stations Needed ES/WS
Jenness Beach adjacent to Beach Lot*	15	0	15	1/0
Brown Court to Baker Ave.	5	0	5	1/0
Baker Ave. to Myrica Road	13	0	13	1/0
Myrica Ave. to E Street	12	0	12	1/0
E Street to Cable Road	13	0	13	2/0
Cable Road to Jenness Ave.	11	11	22	1/1
Jenness Ave. to East Atlantic Ave.	8	11	19	0/1
Jenness Beach to E. Atlantic Subtotal	77	22	99	7/2
East Atlantic Ave. to Locke Road	64	61	125	5/5
Jenness Beach to Lock Road Subtotal	141	83	224	12/7
Locke Road to Harbor Road**	33	30	63	2/2
Jenness Beach to Harbor Road Total	174	113	287	14/9

* Proposed parking not currently allowed at this location.

** Minimum 8-foot shoulders on Ocean Blvd. only extend an estimated 700 ft. north of its intersection w/Locke Rd.

The next step in the analysis is to determine whether seasonal paid parking is justified on all, or just a portion of the 287 spaces listed in Table 1. Key to this determination will be a projection of parking use based on parking surveys and measured use of the state-owned Jenness Beach parking lot. Where demand justifies paid parking, revenue projections will be generated. For the revenue forecasts, paid parking program parameters must be established including the duration of the paid parking season, hours of operation, the parking rate and enforcement coverage needed.

Paid Parking Program Parameters

The T&B study estimated a 50% average parking utilization rate for Ocean Boulevard between Perkins Road and Harbor Road (to account for inclement weather days, undesirable beach temperatures and weekdays) based on visual observations and the following assumptions:

- Paid parking in effect between Memorial Day and Labor Day (assumed 90 days)
- Paid parking hours of 8:00 a.m. to 4:00 p.m., 7 days/week

- Paid parking rate of \$2.00/hour similar to State-maintained parking lot rates
- Pay & Display parking method - requires customers to pay at the kiosk, obtain a receipt and then return to their car to place receipt on the dashboard for enforcement inspection
- Pay station spacing: 1 unit per 15 paid parking spaces

It is recommended that these program parameters be modified as follows:

Paid Parking Season: May 1st to September 30th

Based on actual pay station revenue and use data at the Jenness Beach parking lot, which is presented later in this report, it is recommended that the paid parking season extend for the full 5-month period listed. At the Jenness Beach parking lot the State charges for parking from April 1st through October 31st. The parking rate is \$1/hour in the months of April and October and \$2/hour for May through September. However, paid parking demand in April and October is extremely weak compared to the other 5 months even with the \$1/hour rate. In contrast, paid parking demand ramps up quickly in the weekends leading up to Memorial Day and demand in September is very strong. In fact, September is a higher revenue month for the lot than June.

Paid Parking Hours: 8:00 a.m. to 6:00 p.m., 7 days/week

Observed parking use along Route 1A and in the Jenness Beach lot justifies extending the end of the recommended paid parking hours of operation from 4:00 p.m. to 6:00 p.m. The state's Jenness Beach lot charges from 8:00 a.m. to Midnight and is typically very busy in the 4:00 p.m. to 6:00 p.m. period.

Paid Parking Rate: \$2.00/hour

No change recommended.

Pay Station Payment Method: Pay-by-License Plate

Pay-by-license plate parking eliminates the need for customers to walk back to their car after paying for parking. After parking, the customer simply walks to a pay station, enters their license plate number with their payment for a specified time period, and continues on their way. Enforcement officers can use a smart phone application with plate look-up to determine if a customer has paid. One of the major benefits of pay-by-license plate versus Pay & Display is that it can reduce the number of pay stations that must be purchased/provided. Because Pay & Display requires customers to walk back to their cars after paying to display the receipt, the recommended spacing between units is shorter than with Pay-by-license plate. Another advantage of Pay-by-license plate is the Town can integrate smart phone enforcement of hourly parking with beach parking permits since both are tracked to a license plate number. This allows for the elimination of permit stickers if desired since the license plate becomes the customer's permit. An alternative to pay-by-license plate is pay-by-space whereby a unique number is painted on each parking stall and the customer enters the stall number with payment at the pay station. It also eliminates the need for customers to walk back to their car after paying for parking.

Pay Station Spacing: 1 unit per 12 paid parking spaces or less

The typical range of pay station spacing to provide good levels of customer service and access for on-street parallel parking is 1 pay station for every 8 to 12 parallel parking spaces. In a downtown, where there are numerous destinations for parkers – a pay station every 8 parking spaces may be warranted. For a beach parking location, where the beach is the primary destination for parkers – pay station spacing closer to one unit every 12 spaces should be acceptable.

Projected Parking Utilization: Jenness Beach/Perkins Road to Harbor Road

The primary parking generator in this section of Ocean Boulevard is Jenness Beach. On-street parking demand generally increases the closer you get to Jenness Beach and decreases the further you move away from it. Parking demand is of course highly dependent on summer weather conditions. For example, on warm, good-weather weekend days parked cars can extend from Jenness Beach to points beyond Locke Road. But on rainy days on-street parking use can be almost non-existent. Parking demand also varies widely by time-of-day, day-of-week and month-of-year.

Methodology

Parking utilization projections by roadway section were generated by:

1. Conducting an on-street parking occupancy survey during the “peak” month of August;
2. Calculating the on-street parking utilization rates for August by roadway section; and
3. Adjusting the peak August utilization rates to provide monthly forecasted rates for May, June, July and September using actual monthly variations in 2015 parking revenue data from the 67-space Jenness Beach paid parking lot¹.

Parking Occupancy Survey and Utilization Rates

A parking occupancy survey was conducted by the Rye Police Department on an hourly basis (8:00 a.m. to 6:00 p.m.) over a 16-day period in August (8/15/15 to 8/30/15). During this period there were 10 sunny or partly sunny days, 3 cloudy days and 3 rainy days. 62.5% of the days were sunny or partly sunny, which compares to a 61.3% monthly average for August². Therefore, it is assumed that the survey period represented average August weather conditions.

Table 2 shows average “peak” monthly on-street parking utilization rates calculated from the survey data.

Table 2
Average Parking Utilization Rates
Ocean Boulevard – Perkins Road to Harbor Road
8 a.m. to 6 p.m., August 15th through 30th, 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 extremely low “peak” month parking utilization rate of 5.6%, the Locke Road to Harbor Road section of Ocean Boulevard is not recommended for paid parking. It should also be noted that average parking utilization rates between Cable Road and East Atlantic Avenue are significantly higher than 27.5% while utilization rates from East Atlantic Avenue to Locke Road are significantly lower.

Table 3 lists 2015 monthly pay station transactions and revenue for the Jenness Beach parking lot (67-paid spaces) for the period May 1st through September 30th. It also shows the monthly revenue as a percentage of total revenue for the 5-month period. August is the peak revenue month followed closely by

¹ As provided by the New Hampshire Department of Resources and Economic Development (NHDRED).

² As provided by the National Climatic Data Center for weather center in Concord, NH.

July. September is the third highest revenue month followed closely by June. The average transaction for the entire season was \$4.93 with an average parking session of 2 hours and 28 minutes.

Table 3
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
Total	\$143,839.40	100.0	29,150

*Provided by the NHDRED.

Based on the August utilization rates from Table 2 and the monthly variance in pay station revenues/use at the Jenness Beach lot in Table 3, average monthly utilization rates were projected for each section of Ocean Boulevard between Jenness Beach and Locke Road as shown in Table 4.

Table 4
Projected Average Monthly Parking Utilization Rates
Ocean Boulevard - Jenness Beach/Perkins Road to Locke Road

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

*These spaces are assumed to have the same parking utilization rate from 8:00 a.m. to 6:00 p.m. as the Jenness Beach lot. The utilization rates shown were estimated from the Jenness Beach lot data previously noted.

These projections are based on the assumption that current “no parking areas” on Ocean Boulevard and its side streets will be properly signed, striped and strictly enforced. With Ocean Boulevard metered, there will be additional pressure on the side streets from those seeking free parking, so proper signage and enforcement is key to preventing unlawful parking and maximizing use of on-street metered parking.

Projected Parking Revenue: Jenness Beach/Perkins Road to Locke Road

The revenue generated from a paid parking program on this 3/4-mile section of Ocean Boulevard will come from two primary sources: (1) parking pay station revenue and (2) expired meter fines and late fees. The Town is already issuing citations in the corridor for parking in no parking areas and other non-meter violations - so no additional revenue for such violations is included in these projections.

A third source of parking program revenue could be generated through additional permit sales. Current parking permit sales could be expanded to allow residents the ability to park on Ocean Boulevard in the

paid parking area north of East Atlantic Avenue where parking utilization drops. This could increase resident permit sales as well as use of paid parking between East Atlantic Avenue and Locke Road.

Parking Pay Station Revenue

From the monthly utilization rates in Table 4, monthly revenue projections were calculated for each roadway section and are shown in Table 5. Total parking pay station revenue is projected to be \$185,998 or \$830.35/on-street metered space for the proposed 5-month paid parking season. This compares to \$2,146.86/metered space in the Jenness Beach parking lot for the same 5-months³. No increase in projected revenue was included for customer “overpayment” of parking time⁴. The additional revenue derived by customer overpayment is assumed to approximately offset any revenue reduction from would-be parkers seeking free parking alternatives to the now metered spaces on Ocean Boulevard.

Table 5
Projected Monthly Pay Station Revenue
Ocean Boulevard - Jenness Beach/Perkins Road to Locke Road

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

Expired Meter Fine & Late Fee Revenue

The expired meter fine revenue projection was based on having a parking enforcement officer monitoring all 224 on-street paid parking spaces during all hours of paid parking. It is assumed that the part-time officers on duty would also be issuing tickets for other citations (parked in a no parking area, handicapped parking, etc.) in the corridor and side streets. Given the increased enforcement coverage in the corridor it is expected the number of those types of citations issued would increase. However, as mentioned earlier, to be conservative, ticket revenue for non-meter violations is not included in this projection.

It is projected that on average two (2) expired meter tickets per hour will be issued over the paid parking season. At a \$30 fine rate, this will result in 2 tickets x \$30/ticket x 10 hours/day x 153 days = \$91,800. Assuming a 75% collection rate on outstanding tickets⁵, the Town would realize \$91,800 x 0.75 = \$68,850 in expired meter revenue for the paid parking season. Assuming late fees will represent 12% of the expired meter tickets paid⁶, the Town would realize an estimated \$8,262 in late fee revenue.

In summary, total expired meter fine and late fee revenue is projected to be \$68,850 + \$8,262 = \$77,112.

³ It is the same 5-month period, however, paid hours of operation in the beach lot are longer (8 a.m. to midnight).

⁴ Most customers have “time on the meter” when they leave their parking stall. This occurrence would not be captured in the parking occupancy survey, which was the basis for the revenue projections.

⁵ Town’s collection rate on parking tickets from 2013 to 2015 was 74.7% based on Rye Police Department data.

⁶ Late fee revenue from 2013 to 2015 was 11.88% of the collected fine revenue based on data provided by the Rye Police Department.

Total Projected Seasonal Parking Revenue

Total parking revenue projected for Ocean Boulevard between Jenness Beach and Locke Road for the 5-month parking season is therefore $\$185,998 + \$77,112 = \$263,110$.

Capital Purchase & Installation Budget/Cost

Up-front capital costs include the purchase and installation of:

- parking pay stations;
- sign posts and paid parking instructional/directional signs (to pay stations);
- striping of parking stalls and corner clearances; and
- smart phone and printer for parking enforcement officer ticket issuance.

Parking Pay Stations

Number and Location: From Table 1, implementing paid parking from Jenness Beach to Locke Road would include installation of a recommended 19 pay stations – 12 on the east side of Ocean Boulevard and 7 on the west side. This would result in an average pay station spacing of 224 spaces/19 pay stations = 11.8 spaces/pay station, which is within the recommended spacing standard discussed earlier.

The typical installation for parking pay stations where on-street parallel parking is allowed is to have the pay stations installed off the roadway on or adjacent to a raised sidewalk. The raised curb/sidewalk provides physical separation of the pay station and paying customer from the roadway/parking areas. A typical back-of-sidewalk installation is shown in figure to the right.



Typical Back-of-Sidewalk Pay Station Installation

An example of a raised-curb pay station installation for a beach parking area is shown in the figure to the right. Since there are no raised sidewalks or curbing on Route 1A in Rye, and no plans for their installation, it is assumed that pay stations would be located off the roadway shoulder surface but within the State Right-of-Way on concrete pads protected by bollards⁷. The pay stations and bollards would be installed each spring at the start of the paid parking season and removed each fall. An example of pay stations with bollard protection is the Jenness Beach Lot shown below.



Pay Station Location in Beach Area

Payment Options: It is recommended that the pay stations accept bills, debit/credit cards but not coin. It is recommended they not provide change. The elimination of coin and change-making will significantly cut operational costs related to coin carrying, counting and replenishment. It will eliminate coin jams, reduce battery draw-down and eliminate the need for a coin acceptor, which can cost as much as \$1,500/machine. It is expected that most people will pay by credit card anyway since 77.7% of all transactions at the Jenness Beach lot in 2015 were by credit card, 17.3% by bills and 5.0% by coin⁸.

⁷ Pay station locations subject to NHDOT permitting and approval.

⁸ As provided by NHDRED.

It is recommended the Town consider offering complementary pay-by-phone service through a third-party vendor, which will allow registered customers with a credit card on file to pay for and extend parking sessions directly from their cell phones (not requiring use of the pay station). This would be a particularly useful service to beach-goers who could add time to their paid parking session remotely from the beach. Pay-by-phone service can be provided in addition to, or less often, in place of parking pay-stations - the pros & cons of which are discussed in the Appendix.

Power and Communication: It is recommended that the pay stations be solar powered given the significant cost and expense of running 12Vac power to these units. Going with solar-powered units will also eliminate a monthly electric bill. Since the units will only be in service for 5-months out of the year (mostly in summer) it is expected that the batteries will last longer than a typical pay station installation, requiring less re-charging and replacement.



**Jenness Beach Parking Lot
Pay Station with Bollards**

The pay stations rely on cellular communications for credit card transactions, data transfer and systems management. Cellular service can be intermittent and unreliable in coastal areas. However, the cellular service provided through the pay station vendor at Jenness Beach has been reportedly reliable.⁹ Cellular communications testing and refinement is typically required of pay station vendors prior to purchase.

Enforcement Technology and Approach

Smart Phone w/Plate Look-up Application: The Rye Police Department currently employs part-time seasonal enforcement officers who issue handwritten parking tickets. With the pay-by-license plate system, the lowest cost enforcement option is to purchase/lease smart phones; load a parking application provided by the pay station vendor on the smart phone that would allow an officer to look-up plates in real-time to determine payment status; and purchase a wireless Bluetooth printer to be carried by the officer with a loaded citation generator application to allow for printed tickets. It is recommended that two smart phones and printers be leased/purchased for the enforcement coverage recommended.

Pavement Markings and Signage

As previously discussed, the 224 paid parking stalls and corner clearance (no parking) zones would be striped to provide better definition of parking areas and ensure proper sight distance to side streets and driveways. For the cost estimate it is assumed that these pavement markings will be done in paint. Instructional signs and large identifying signs will be needed at the 19 pay station locations. Instructional signage will also be needed on both sides of the roadway at regular intervals (assumed every 100 feet) between pay stations. Some examples of instructional signage are shown in the figures to the right.



Sample Pay-by-Plate Instructional Signs

⁹ As reported by NHDRED. Current pay station vendor provides T Mobile and AT&T 3G cellular communication.

The total estimated purchase and installation budget/cost based on the recommended program parameters and assumptions provided in Table 6 below is **\$228,350**.

**TABLE 6: INSTALLATION OF PARKING PAYSTATIONS, RYE, NH
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:	Pay-by-License Plate
# of Pay Stations:	19
# of Paid Spaces:	224 (11.8 spaces/pay station)
Power Source:	Solar
Payments Accepted:	Credit/Debit Cards and Bills
Change Provided:	No
Enforcement Technology:	Smart Phone, Enf/Plate Look-up/Citation Issuance App/printer

ESTIMATED BUDGET/COST: PURCHASE & INSTALLATION

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

Total Estimated Cost: \$228,350

**Assumes contractor installation of pay stations on concrete pads w/bollard protection and having vendor onsite during installation/commissioning & staff training. Actual costs subject to NHDOT approved locations/plans.*

***Assumes purchase of 19 pay station “Pay Here” signs, 19 pay station instruction signs, and approximately 80 directional/instruction signs on contractor-installed U-channel posts spaced 100 feet apart. Signs installed by RPW.*

**** Assumes contractor striping of 224 parking stalls and end aisle corner clearance lines to side streets, driveways and crosswalks using paint.*

Operating Budget/Cost

The projected **\$69,650** annual operating budget presented in Table 7 below was developed based on the recommended program parameters and operating assumptions listed. A key assumption is that a current Town Department would be accountable and responsible for providing management and oversight of the paid parking program - while other Departments may provide support services as needed. For example, it is not unusual for a Finance Department/Treasurer to provide parking accounting/bookkeeping support.

Table 7

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
Subtotal Annual Kiosk-Related Costs	\$40,450.00	
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	
Subtotal Annual Enforcement-Related costs	\$29,200.00	
Totals	Annual Cost	Comments
Total Annual Operating Cost	\$69,650.00	

*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 Results

Based on the cost-revenue analysis, the installation of metered parking between Jenness Beach and Locke Road would result in projected annual parking revenue of approximately \$263,110 offset by an initial start-up budget/cost of \$228,350 and an annual operating budget/cost of \$69,650 resulting in a first year deficit of \$34,890. However, with equipment paid off, subsequent year net income is projected to be close to \$200,000.

Town of Rye officials have indicated that one of the objectives of this undertaking is to generate revenue to help offset current, town-financed, beach-related expenses. The Town Administrator reported that in

2014 the town expended a total of \$52,525 for beach-related expenses such as lifeguards, parking enforcement, equipment, trash pick-up, and water quality monitoring.

It is also recommended that a renewal and replacement fund for the pay stations be established by setting aside \$15,000 to \$20,000 annually from net revenues starting in year two.

Action Plan/Recommended Next Steps

While metered parking is generally allowed on state-owned roadways, it is subject to the approval of the NHDOT. Prior to approving metered parking, NHDOT has advised the Town that safety and functionality of the highway for motorists, bicyclists and pedestrians as well as summer and winter maintenance operations will need to be evaluated for specific metered locations¹⁰.

NHDOT Scoping Meeting and Submission of Required Review Plans

If the Town decides to proceed with on-street metered parking, the first step will be to schedule a “Scoping Meeting” with the NHDOT District 6 Office in Durham to discuss the information they will require to make a specific determination of where metered parking will be allowed. It is anticipated that plans showing the roadway cross-section in relationship to the proposed pay station, sign and pavement markings locations will be required. A typical section for the pay station install will also likely be needed to show the pay station pedestal footing, anchor bolt, plating and bollard dimensions/specifications. Any proposed walkway connections from the concrete pads supporting the pay station to the existing paved shoulder will also need to be provided.

Assuming NHDOT is favorable to proceeding, they will then advise on how State approvals with the Town will be memorialized (Use & Occupancy Permit, Maintenance & Encroachment Agreement, etc.) and what potential conditions may be applied.

Organizational Structure/Budget Development – Paid Parking Program

While it has been recommended that only one Town Department have the accountability and responsibility for the paid parking program, the delivery of services in small Towns generally involve the support of multiple Town Departments including Police, Public Works and Finance in particular. Using the preliminary budgeting information included in this report, it is recommended that the Town Administrator meet with the appropriate Department Heads to incorporate parking staffing and other operational costs as well as revenues into the appropriate departmental budgets. Town Ordinances may also need to be drafted and enacted to allow for and enforce paid parking.

Procurement of Parking Pay Stations, Contract Work and Service Agreements

A Request for Proposal (RFP) for the purchase of parking pay stations, ticket-writing equipment, sign design/fabrication, back office software and management systems will need to be drafted and advertised. The RFP will need to include specifications for the desired equipment, therefore it is recommended that a consultant with this expertise be hired to draft it. Additionally, contractor services will need to be procured for the pay station and sign pole installations as well as the required pavement markings.

¹⁰ Provided in letter from NHDOT to the Town Board of Selectmen dated October 27, 2015.

Pay Stations, Signs and Pavement Markings Installation, Training and Commissioning

The final phase of implementation will involve contractor installations, staff training and commissioning of the equipment into service.

Projected Start Date for Paid Parking

It is estimated that a minimum of 4 to 6 months is be needed to obtain State approvals and permits and procure, install and commission the specified equipment.

APPENDIX

Pay-by-Phone Service Alternatives

As discussed earlier in the report, **pay-by-phone can be provided as an additional payment option** to the pay stations allowing parkers who register a debit/credit card and license plate with the pay-by-phone provider to pay for their parking session using their cell phone. Generally, phone or online registration only takes a few minutes when the parker first joins the pay-by-phone program. After that, they are only asked to enter a location code (designated for Rye) that is provided on a nearby parking sign (see sign from Plymouth, MA); and the time they wish to park for. They can use a mobile application with their smart phone or a call-in number using a standard cell phone.

After initiating a parking session via pay-by-phone, the customer will receive a payment confirmation message on their smart phone - and via email if desired. Generally, within approximately 10 minutes of the parking session expiring, the customer will receive a text message to their cell phone notifying them that their parking session is about to expire. They then have the option of extending their parking session remotely either online via smart phone or through a phone number provided in the text message for a standard cell phone. This expiry notification and extend-time option are obviously very popular features with customers.



Enforcement of pay-by-phone parking is similar to enforcement of the parking pay stations described earlier in this report. Enforcement officers with smart phones are able to view/look-up plates through the pay-by-phone vendor website to determine who has paid for parking. A citation smart phone application in conjunction with a Bluetooth printer attachment allows the enforcement officer to issue printed citations directly from the pay-by-phone website.

The cost of the pay-by-phone service to the town is primarily through a transaction fee charged by the pay-by-phone provider. It is generally between 15 and 25 cents per transaction. Of course, credit card merchant processing fees also apply as they would for credit card payments at a pay station. The signs are generally provided at no charge by the pay-by-phone provider but are installed by the municipality. The municipality has the option of passing the transaction cost along to the customer in the form of a convenience fee (i.e. on top of the hourly parking rate) or absorbing it within the hourly rate. At the end of the month, the pay-by-phone provider issues the municipality a statement showing all transactions and total revenue less transaction and credit card merchant processing fees (unless the Town chooses to use their own merchant processor).

Pay-by-phone can also be implemented as a stand-alone parking payment service – without parking pay stations. While a financial analysis of this alternative is beyond the scope of this study, some of its pros and cons should be noted. With a stand-alone pay-by-phone alternative, the costly purchase and installation of pay stations would be eliminated. However, stand-alone pay-by-phone service for on-street parking is not widely done because it requires customers to pay exclusively by debit/credit card - and in most cases a mobile phone. Cash-paying options can be very limited or non-existent with this payment approach. Two examples of parking entities that have gone to exclusive pay-by-phone service are the Massachusetts Bay Transportation Authority (MBTA) for its commuter parking lots and the City of Galveston, Texas for its on-street seawall/beach parking.

In the case of the MBTA, they have eliminated cash payment options at their commuter rail lots across the State in favor of pay-by-phone service. Customers can pay daily fees and purchase monthly permits through the pay-by-phone service. Pay-by-phone service is a viable option for the MBTA lots primarily because most commuter rail customers are regular/repeat customers and there is a high percentage of monthly permit holders.

In Galveston Texas, the center of their beach and tourist activity takes place along the historic Galveston seawall. The bulk of the public parking exists on-street abutting the sidewalk, seawall and beaches. The City removed its parking pay stations and replaced them with signs supporting the new pay-by-phone service in 2013. The City charges \$1/hour from 10 a.m. to 6 p.m., 7 days/week, 365 days/year and sells annual parking permits for \$25, also through the pay-by-phone system. The City advises customers without credit cards to purchase pre-paid credit cards, which are accepted by the pay-by-phone system at various Galveston stores.



**Pay by Phone Service
Galveston, Texas Seawall**

The benefits of advancing a pay-by-phone-only solution on Route 1A in Rye is that the Town could eliminate the purchase, installation, maintenance and operational costs of the parking pay stations. The NHDOT permit and approval process would presumably be much easier for the posted signage required for the pay-by-phone service than it would be for pay station installations.

However, a significant short-coming of the pay-by-phone only service is that it would eliminate the cash payment option (bills) for on-street parking. People who do not have, or do not wish to use debit/credit cards would be unable to use the on-street spaces unless they either purchased a pre-paid credit card for use with the pay-by-phone system or a seasonal parking permit through the Town – assuming the Town would allow permit parking on Ocean Boulevard. Cash paying parkers could also be directed to use the Jenness Beach parking lot – although, as discussed earlier, it frequently fills during the summer season.