City of Brookings

WORKSHOP Agenda

City Council

Monday April 7, 2014, 4:00pm
City Hall Council Chambers, 898 Elk Drive, Brookings, OR 97415

The City Council will meet in **Executive Session at 3:30 PM**, in the City Manager's office, under authority of ORS 192.660(2)(f), "to consider information or records that are exempt by law," and ORS 192.660 (2)(e), "to conduct deliberations with persons designated by the governing body to negotiate real property transactions."

A. Call to Order

B. Roll Call

C. Topics

1. Klamath Management Zone Fisheries Coalition Membership. [City Manager, pg. 2]
   a. Letter from KMZFC President Jim Relaford [pg. 3]
   b. Del Norte County Triplicate article [pg. 5]
2. Hassett Street Deferred Improvement Agreements (DIAs) relative to upcoming street paving project. [Building, pg. 7]
   a. Photo of Hassett Street [pg. 9]
   b. Hasset Street DIA map [pg. 10]
   c. DIA #36 [pg. 11]
3. Geographic Information Systems (GIS) status update. [PWDS, pg. 18]
4. Water Master Plan update. [PWDS, pg.20]
   a. Executive summary [pg. 22]
   b. Email from Bill Pavlich dated February 26, 2014 [pg. 31]
   c. Staff memo dated March 20, 2014 [pg. 32]
5. Pavement Management Plan (PMP). [PWDS, pg. 34]
   a. Past street priorities [pg. 36]
   b. PMP Technical Memo summarizing the PMP [pg. 37]
   c. PMP and DIA map to be provided at workshop
6. Tourism Promotion Advisory Commission. [City Manager, pg. 55]
   a. Draft Chapter 2.57 language [pg. 57]
   b. Apple Box Media email and invoice [pg. 59]

D. Council Member Requests for Workshop Topics

E. Adjournment

All public City meetings are held in accessible locations. Auxiliary aids will be provided upon request with at least 10 days advance notification. Please contact 469-1102 if you have any questions regarding this notice.

CITY OF BROOKINGS

COUNCIL WORKSHOP REPORT

Meeting Date: April 7, 2014

Originating Dept: City Manager

Signature (submitted by)

City Manager Approval

Subject: Klamath Management Zone Fisheries Coalition Membership

Financial Impact:
$500 annual dues.

Background/Discussion:
We have received a letter from Klamath Management Zone Fisheries Coalition requesting that the City become a member. See attached letter.

This membership is not budgeted for the current fiscal year.

KMZFC President Jim Relaford will attend the meeting to discuss this matter with the City Council

Attachment(s):

a. Letter from KMZFC President Jim Relaford.
b. Del Norte County Triplicate article.

KMZFC

Klamath Management Zone Fisheries Coalition

(541) 469-5902

Chairman:
Jim Relaford

Vice-Chairman:
Ben Doane

Treasurer:
Tony Hobbs

Secretary:
Tony Hobbs

Board Members:
Tim Klassen

March 9, 2014

Dear ,

As you know, recreational salmon fishing is essential for a strong coastal economy. The 2014 salmon and halibut management meetings are starting and we need strong and consistent representation in the often difficult process. The preliminary prospects for this year's season look good but our representatives need to be there to protect our fishery.

Last year the Klamath Management Zone Coalition team attended every meeting and worked hard on your behalf. The KMZFC represents a huge coastline in Southern Oregon and Northern CA. Our volunteer delegates are well versed in salmon management and are highly respected by agencies and elected officials. Last year's salmon season generated millions of dollars for our coastal communities.

In the past you or your organization was a member of the KMZFC. Your dues or donation will help get our representatives to all the important meetings where our season will be discussed. Thank you for your past support and your assistance to insure a great season this year.

Individual membership is $10.00
Companies and business organizations dues are $250
Cities and Counties dues are $500

Sincerely,

Jim Relaford
President

Bridging the Gap

Thank you for your help making sure we have a good Salmon Season in 2014!

Please send your dues payment to:

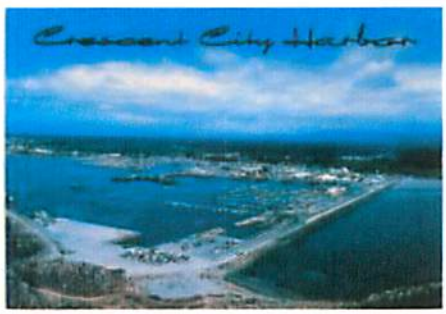
Klamath Management Zone Fisheries Coalition
P.O. Box 7769
Brookings, OR 97415

print this

Fishing for full seasons

Written by Adam Spencer, The Triplicate March 02, 2012 10:38 pm

Coalition calls for more time to catch salmon



A postcard from the early 1980s shows a much larger number of recreational fishing boats than present recently. Submitted

Sport ocean salmon fishing was once an economic boon for port communities up and down the North Coast. After the collapse of many salmon populations in the Pacific, fishing advocates have to fight for what limited seasons they can get.

Although prospects are good for a relatively full season this year, a regional group of stakeholders are making sure the fishing season decision-makers know the economic significance of salmon fishing to port cities like Crescent City.

The Klamath Management Zone Fisheries Coalition (KMZFC) was formed in the 1970s to represent interests in the Klamath Management Zone (KMZ), a region of water centered on the mouth of the Klamath, including the port towns of Crescent City, Brookings and Eureka.

Those towns should be granted what counts as a full season nowadays, based on this year's count of jacks (salmon less than 2 years old, which are the basis for determining salmon abundance) that returned to the Klamath and Sacramento rivers, according to the KMZFC.

There were 74,222 jacks that returned to spawn on the Klamath River, where only natural salmon are counted. On the Sacramento River, where hatchery fish are also counted, there were 85,719 jacks.

This week, the Oregon Department of Fish and Wildlife released projections of 1.6 million chinook salmon returning to the Klamath River — a six-fold increase over last year's numbers. The Sacramento River is projected to see 819,400 chinook return this year — four times last year's amount.

Ben Doane, vice-chairman of the KMZFC, predicted that with those jack numbers, the Pacific Fishery Management Council (PFMC), which crafts the season, will give sport fishermen a decent season this year.

A more recent aerial view of the harbor shows virtually no recreational fishing boats. Courtesy F.L. Hiser Jr.

Doane will be representing the KMZFC from Mar. 2–7 at the PFMC's meeting, where he will advocate a salmon season from at least Memorial Day to Labor Day, with fishing allowed seven days a week.

"It looks like the 2012 season will be what we'd consider a full season, but 2013 is definitely in question," Doane said.

Ted Souza, who works on the fisheries committee of Friends of Del Norte, had doubts about how many fish will really be out there to catch.

"(They) gave us a season last year, but there wasn't any fish," Souza said.

Souza remembers that in 1972, there were 528 sport salmon fishing boats in the Crescent City harbor. Now there's less than 40. In the 1970s, during the Fourth of July weekend, trucks waiting to launch their boats into the harbor would be backed up on Anchor Way all the way to Highway 101, Souza said.

Crescent City Harbormaster Richard Young also remembers the good ol' days when the strong sport ocean salmon fishing industry was "absolutely" important to Crescent City.

As recently as 1998, the harbor raked in $74,217 in slip fees for the outer boat basin, which is primarily used by sport fishermen. In 2006, that number had dropped to $21,856.

As the seasons became more and more restrictive over the years, people moved on to work in other industries.

"It's been gone so long, people have adjusted to do other things," Young said.

A line graph showing recreational salmon landings in Crescent City shows about 40,000 salmon landed in 1989 and then a steady drop that has almost flat- lined in the last ten years.

Young is heavily involved in the KMZFC when he isn't recovering from tsunamis damaging the harbor. The KMZFC was formed to keep the salmon fishing industry from completely dying in the area, he said.

"The idea was to have a voice so we don't get over-shouted at the meetings that set the season, and to argue to keep fisheries alive in our area," Young said.

The KMZFC was formed in the wake of the creation of the Klamath Management Zone, the area from Humbug Mountain in Oregon to Horse Mountain in California, where many salmon that spawn in the Klamath are predicted to be.

The KMZFC was created "in an attempt to allow fishing of the Klamath River stocks when there was available fish and to drive the economics of the region," Doane said, adding that many of the business groups that used to be represented in the KMZFC have dropped out after decades of stinted seasons.

"We represent not only fishermen but fishing-related businesses, and what we're trying to do is maximize the amount of time that fishermen can pursue the salmon," Doane said.

The Pacific Coast Federation of Fishermen's Association wrote an article in 2001 titled "Why the Klamath Basin matters." The article highlights the steady downward trend of Klamath River salmon. It states:

"Season cutbacks and reductions became the rule within KMZ ports as fisheries managers were forced to keep pace with these declines. In the past 20 years especially, the end result has been systematic economic strangulation of KMZ coastal ports, culminating in almost complete closures by the early 1990s."

Poor returns of salmon in recent years prompted fisheries managers to completely close recreational and commercial ocean salmon fishing in 2008 and 2009 — the largest ocean salmon fishery closure on record.

After a couple partially open seasons, the KMZFC has been quiet in recent years, but the group met recently and decided to forge ahead and send a representative to upcoming meetings of the PFMC, which decides the salmon season.

"This group is suffering from a pretty good year," said Richard Heap, a member of the KMZFC who also sits on the Salmon Advisory Subpanel (SAS) of the PFMC. Heap said the reputation of two-state KMZFC is respected by fisheries managers. "This organization is on the radar ... and that's worth something."

Doane said having Heap as a KMZFC member is a major benefit.

"It provides us with a contact we might not otherwise have," Doane said. The California representative on the SAS is from the Bay Area.

"His allegiance lies a little farther south of the KMZ," Doane said.

Sometimes the interests of fishermen in the far-flung areas of Northern California and Southern Oregon are downplayed when the salmon seasons are decided.

"We're like the bastard children of Oregon and California when it comes to representation at the state level," Doane said. "We go representing the state of Jefferson."

The audio and the presentation from the March 2–7 PFMC meeting can be streamed online at www.pcouncil.org/2012/02/19433/march-council-meeting-internet-audio-stream/.

The Los Angeles Times contributed to this report.

Reach Adam Spencer at aspencer@triplicate.com.

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: April 7, 2014

Originating Dept: PW/DS

Laura Lee Snook
Building Official

City Manager Approval

Subject: Deferred Improvement Agreements (DIAs) related to the upcoming street paving project for the east section of Hassett Street and direction for same as related to future projects.

Recommendation: Discuss the following alternatives;

1) Install 90' sidewalk segment as described in Option 1 and call in/not call in DIAs.
2) Install 500' of sidewalk as described in Option 2, call in DIAs and form a local improvement district.

Financial Impact: The City Council approved paving Hassett Street from Pioneer Road to Old County Road as a priority for 2013-14 street paving projects. Staff evaluated two options to obtain ADA compliance and "call in" DIAs as follows;

Option 1 is the minimum requirement to comply with ADA law and allows for an unobstructed path of travel. Option 1 involves installation of 90 feet of sidewalk to the Joshua Court intersection and a cross walk at Joshua Court connecting the path of travel to the north side of Hassett Street. The estimated cost for this option is $13,000; the new sidewalk will extend along two properties which have recorded DIAs. If called in, there would be no long term financial impact to the City as these costs would be eventually paid by the property owners. If this option is chosen staff recommends calling in a third, remaining DIA, for a proportionate share of the paving cost which will close out the DIAs in this area.

Option 2 is a full sidewalk extension on the south side of Hassett Street from Pioneer Rd to Old County Road. This involves 500' of sidewalk and 5 driveway aprons along 6 property frontages, 3 of which have DIAs. The City could call in the DIAs for this sidewalk extension and form a local improvement district (LID) to install a sidewalk to Old County Road. The estimated cost of option 2 to the local improvement district is $65,000. In addition, DIA property owners are liable for the costs of half street paving. If an LID is formed, the sidewalk would have no long term financial impact to the City as costs will be recouped through the LID.

Background/Discussion: DIAs have been allowed since 1988, and used when a developer was not able to comply with the land development code for frontage street requirements. An agreement was recorded "deferring" these frontage improvements until a time when the larger segments of street frontage could be addressed for drainage and sidewalk. Conversely, ADA law has evolved and is now prompted by any street paving project. As explained at the March 6th workshop discussion regarding the paving project on 5th Street, all paving projects prompt ADA compliance under federal law.

Hassett Street clearly illustrates a condition that would require ADA "barrier removal" by installing the sidewalks to provide a continuous path of travel. The key terms used in ADA law

are "path of travel," and "readily achievable barrier removal." In the case of a road with no sidewalks the path of travel is the road shoulder and there is no requirement to install sidewalks, unless the entire roadway is being reconstructed. In the case of a road with orphaned sidewalks the path of travel is considered obstructed by the intervening sections without sidewalks. Hassett Street could be made to comply with ADA law by either Option 1 or Option 2.

Staff recommends the approval of option 1 and calling in the outstanding DIAs. The eastern most property would be paying a portion of paving only, as there would be no need to extend the sidewalk onto that frontage. It seems unlikely given the topography and use of Old County Road that sidewalks would be proposed for this area, therefore the sidewalk need not be extended past the intersection of Joshua Court.

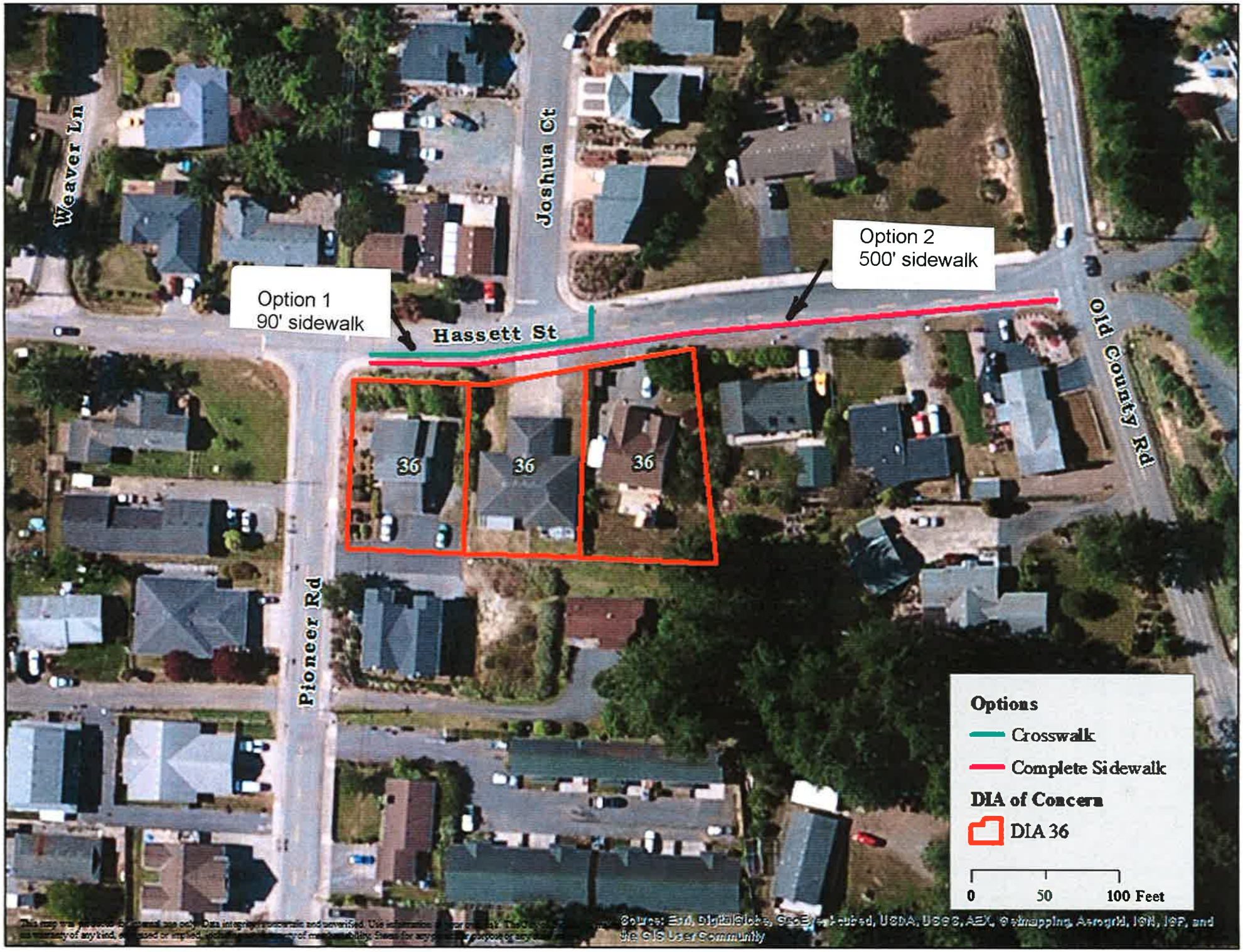
City Council has been interested in a long term plan to address DIAs. Cashing out DIAs is a challenge because the funds can only be used for the same property frontage improvement. Staff recommends addressing existing DIAs at the time the City pursues paving improvements and requiring new developers to cash out the value of the DIA at the time of their permit approval to avoid incurring any more recorded DIAs. The City's Pavement Management Plan provides for an annual maintenance plan for all City Streets which typically is every 10 years. If this concept is followed all DIAs would be called in or the decision made to forgive them within 10 years.

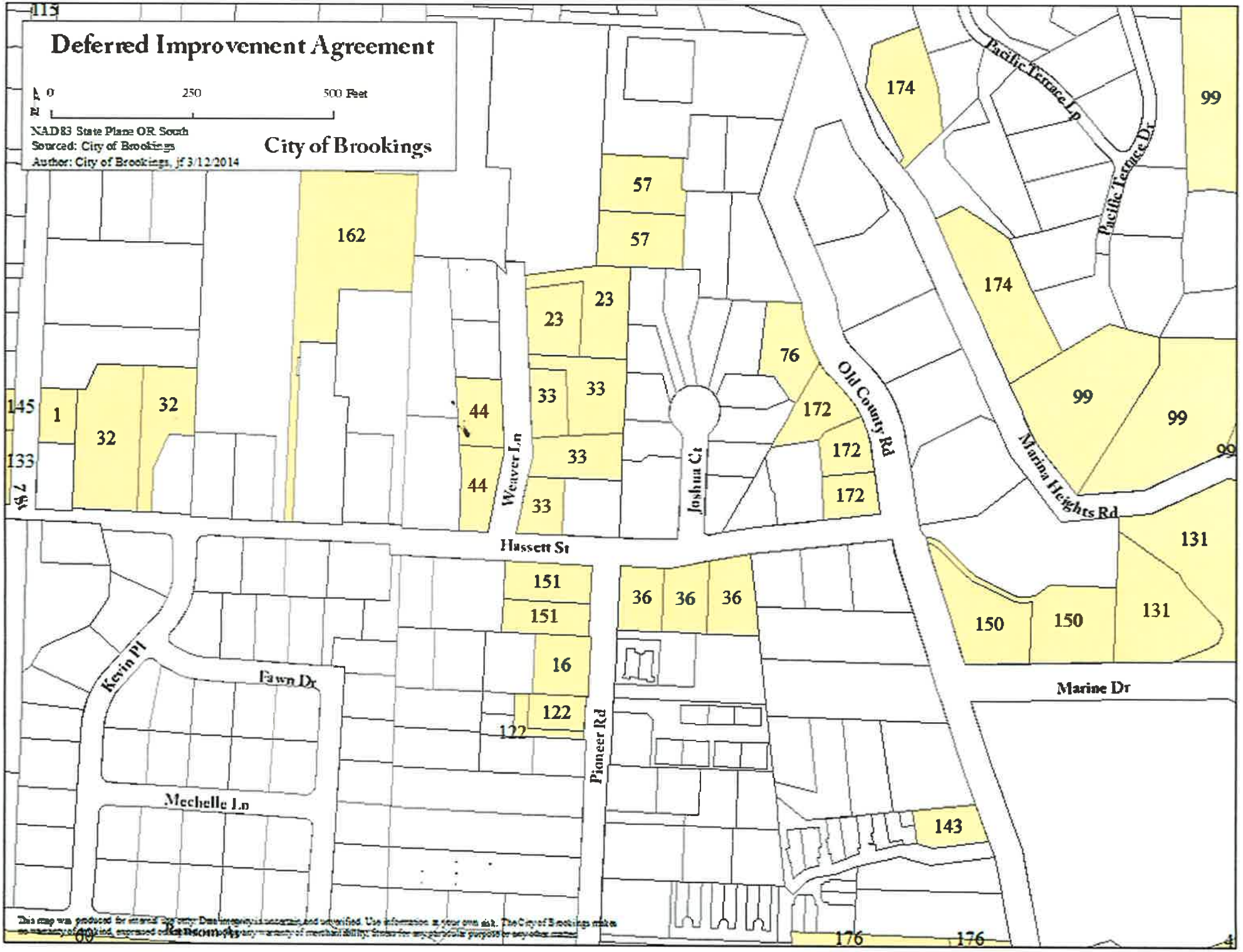
Policy Considerations: DIAs were called in for the project on the western portion of Hassett Street, calling in the DIAs at this location would be in keeping with that policy. Installation of sidewalks to tie Hassett Street to the sidewalk improvements on Joshua Court would be in keeping with the policy to provide ADA access as required by the Department of Justice.

The concrete work for a street improvement must be completed prior to paving. Calling in DIAs or forming a local improvement district on Hassett Street will delay the paving until next year.

Attachment(s):

a. Photo of Hassett Street
b. DIA map Hassett Street
c. Deferred improvement agreement #36


Weaver Ln
Joshua Ct
Option 1
90' sidewalk
Option 2
500' sidewalk
Hassett St
Old County Rd
Pioneer Rd
36
36
36
Options
Crosswalk
Complete Sidewalk
DIA of Concern
DIA 36
0
50
100 Feet
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community


Deferred Improvement Agreement
0
250
500 Feet
N
NAD83 State Plane OR South
Sourced: City of Brookings
Author: City of Brookings, jf 3/12/2014
City of Brookings
115
162
57
57
174
Pacific Terrace Ln
Pacific Terrace Dr
99
174
23
23
76
Old County Rd
99
99
99
145
1
32
32
133
44
33
33
172
172
172
Weaver Ln
Joshua Ct
Marina Heights Rd
44
33
33
Hussett St
131
151
36
36
36
151
150
150
131
16
Kevin Pl
Fawn Dr
122
122
Marine Dr
Pioneer Rd
Mechelle Ln
143
176
176

Att. 6

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DEFERRED IMPROVEMENT AGREEMENT

Property identification: Tax Lot 300, Assessor's Parcel Map No. 41-13-5BB

This agreement between the CITY OF BROOKINGS, hereinafter referred to as "City", and Richard Wilson _____, hereinafter referred to as "Owner".

WHEREAS, Owner desired to develop the property described in Exhibit "A" but wishes to defer construction of permanent improvements beyond the time limits otherwise required, and City agrees to such deferment provided Owner agrees to construct improvements as herein provided, NOW, THEREFORE, IT IS AGREED AS FOLLOWS:

I. AGREEMENT BINDING ON SUCCESSORS IN INTEREST

This agreement is an instrument affecting the title and possession of the real property described in Exhibit "A". All the terms and conditions herein imposed shall run with the land and shall be binding upon and inure to the benefit of the successors in interest of Owner. Upon any sale or division of the property described in Exhibit "A", the terms of this agreement shall apply separately to each parcel and the owner of each parcel shall succeed to the obligations imposed on Owner by this agreement.

II. NATURE OF OBLIGATION

A. City and Owner agree that the improvements set forth in this section may be deferred because immediate installation of such improvements is not deemed practical at this time due to the project's incremental relationship to the intended holistic design function of said improvements.

B. Owner agrees to construct the following improvements in the manner set forth in this agreement:

1. Curb, gutter and five (5) foot sidewalk, plus pavement to match existing pavement along that portion of Pioneer and Hassett Street fronting the subject above described property (Exhibit "A").

att. C

C. When the City Engineer determines that the reason(s) for the deferment no longer exist(s), he shall notify Owner, in writing, of terms for performance of the work. The notice shall be mailed to the current owner or owners of the land as shown on the latest adopted county assessment roll. All or any portion of said improvement may be required at a specified time. Each Owner shall participate on a pro rata basis of the cost of installation of the improvements.

III. PERFORMANCE OF THE WORK

Owner agrees to the performance of the work deferred hereby, by conformance with one of the following options:

A. WORK PERFORMED BY OWNER - Owner is responsible for performance of the work and obtaining contractors therefor. Owner shall cause satisfactory plans and specifications for the improvements to be prepared and to submit said plans and specifications to the City Engineer for approval prior to commencement of the work to be done. Such work shall be done in accordance with City standards in effect at the time the improvement plans are submitted for approval. Owner agrees to make payments required by the City including, but not limited to engineering deposits, permit fees and inspection fees. Owner shall notify the City Engineer at least 48 hours prior to the start of work.

Prior to approval of improvement plans by the City, Owner may be required to execute and deliver to the City, a performance bond in an amount and form acceptable to the City, to be released by the City in whole or in part upon the City's final acceptance of the work performed.

If Owner disagrees with the requirements set forth for installation of improvements as provided in this section, he shall, within 30 days of the date the notice from the City Engineer was mailed, request a review of the requirements by the City Council. The decision of this Council shall be binding upon both the City and the Owner.

B. CONSTRUCTION AS LOCAL IMPROVEMENT TO BE ASSESSED AGAINST PROPERTY - Owners signature hereon shall be equivalent to a petition for establishment of a Local Improvement District. If Owner does not complete the improvements himself under provisions

of paragraph III, A, above, the City may do the work as a local improvement project following the procedures established by ordinance for such projects and assess the cost against the property specially benefited. Permission to enter onto the property of the owner is granted to the City or its contractor as may be necessary to construct such improvements.

IV. MAINTENANCE OF IMPROVEMENTS

Owner agrees to provide any necessary temporary facilities, access road or other required improvements, to assume responsibility for the proper functioning thereof, to submit plans to the appropriate City agency for review if required, and to maintain said improvements and facilities in a manner which will preclude any hazard to life or health or damage to adjoining property.

City agrees to accept for maintenance those improvements specified in Section II, excepting sidewalks, which are constructed in accordance with City standards, which are installed within ritht-of-ways or easements dedicated and accepted by the City, and which have received final acceptance by the City. Where the required work is performed by Owner pursuant to the above Section III, A, the City Engineer will provide adequate and timely progress inspection of said work and upon completion of any said improvements in accordance herewith, will issue to the Owner his final certificate of inspection and acceptance thereof; provided, however, the Owner shall guarantee all improvements to be constructed in a workmanlike manner and to be free of defects for a period of one year from the date of issuance of the final certificate and acceptance. If, in the opinion of the City Engineer, it shall be necessary to repair or replace all or part of such improvement within said one year period, the City Engineer shall so notify the Owner and it shall be the responsibility of said Owner to construct the necessary repair or replacement. If such construction is not accomplished in a timely fashion, the City may construct or contract for such construction, and the Owner shall be responsible for all costs incurred. Assessment for such construction shall be as provided in Part III, B.

DATED this 28 day of August, 1987.

BK 136 PAGE 354

OWNER

By Richard R. Wilson

Glenda L. Westeren

CITY OF BROOKINGS

By Richard A. Ullian
Planning Director

Subscribed and sworn to before me this 28th day of August 1987.

BY Richard R. Wilson, Glenda L. Westeren, and Richard A. Ullian

FORM NO. 23 — ACKNOWLEDGMENT
STEVENS-NESS LAW PUB CO., PORTLAND, ORE.

STATE OF OREGON,
County of Oregon } ss.

BE IT REMEMBERED, That on this 28th day of August, 1987, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Richard R Wilson and Glenda L Westeren and Richard Ullian

known to me to be the identical individual s described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

Betty L Doan
Notary Public for Oregon.
My Commission expires 7-26-90

May 13, 1987

Richard Wilson
41-13-5BB t/l 300
Minor Partition

BR 136 PAGE 355

PARCEL III:

A parcel of land lying within the Northwest Quarter of the Northwest Quarter (NW 1/4 - NW 1/4) of Section 5, Township 41 South, Range 13 West, Willamette Meridian, City of Brookings, Curry County, Oregon, being more particularly described as follows:
Beginning at a point described as being South 12.55 feet and East 554.22 feet from the northwest corner of said Section 5;
thence North 78°10'01" East, along the southerly right of way line of Hassett Street, 74.59 feet to the northwest corner of that property described in Book of Records 106, page 808, Official Records of Curry County;
thence South 08°14'34" East. along the westerly boundary of said property and that property described in Book of Records 117, page 145, Official Records of Curry County, 147.12 feet to the northeast corner of that property described in Deed Volume 45, page 398, Official Records of Curry County;
thence West, along the north boundary of said property, 94.10 feet;
thence North, leaving said line, 130.31 feet to the Point of Beginning.

TOGETHER WITH and SUBJECT TO easements of records, if any.

EXHIBIT "A"

May 13, 1987

BR 136 PAGE 356

Richard Wilson
41-13-5BB t/l 300
Minor Partition

PARCEL II:

A parcel of land lying within the Northwest Quarter of the Northwest Quarter (NW 1/4 - NW 1/4) of Section 5, Township 41 South, Range 13 West, Willamette Meridian, City of Brookings, Curry County, Oregon, being more particularly described as follows:
Beginning at a point described as being South 12.55 feet and East 554.22 feet from the northwest corner of said Section 5; thence South 130.31 feet to a point lying on the northerly boundary line of that property described in Deed Volume 45, page 398, Official Records of Curry County;
thence West, along said line, 78.52 feet;
thence North. leaving said line, 115.96 feet to a point lying on the southerly right of way line of Hassett Street;
thence West, along said right of way line, 10.00 feet;
thence North 78°10'01" East (record North 78°03'45" East), along said right of way line, 70.00 feet to the Point of Beginnng.

TOGETHER WITH and SUBJECT TO easements of record, if any.

EXHIBIT "A"

May 13, 1987

BK 136 PAGE 357

Richard Wilson
41-13-5BB t/l 300
Minor Partition

PARCEL 1:

A parcel of land lying within the Northwest Quarter of the Northwest Quarter (NW 1/4-NW 1/4) of Section 5, Township 41 South, Range 13 West, Willamette Meridian, City of Brookings, Curry County, Oregon, being more particularly described as follows:
Begining at a point described as being South 26.9 feet and East 390.71 feet from the northwest corner of said Section 5;
thence East, along the southerly right of way line of Hassett Street, 85.00 feet;
thence South, leaving said right of way, 115.95 feet;
thence West, along the northerly boundary of that property described in Deed Volume 45, page 398, Official Records of Curry County, 85.00 feet to a point lying on the easterly right of way of Pioneer Road;
thence North, along said right of way, 115.95 feet to the Point of Beginning.

TOGETHER WITH and SUBJECT TO easements of record, if any.

EXHIBIT "A"

Indexed In Deeds
State of Oregon } ss.
County of Curry }
I hereby certify that the within instrument was filed for record Sept. 11, 1987
at 4:00 o'clock P M. and recorded in Book of Records Vol. 136 Page 351-357
EUGENE P. BAUMANN, County Clerk
Deputy
Fee Rec'd. $28.00

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: April 7th, 2014

Originating Dept: PWDSGIS

(Jordan)
Signature (submitted by)

City Manager Approval

Subject: State of the GIS

Recommendation: Informational only

Financial Impact: N/A

Background/Discussion: In August of 2012 the City created a new position within the Public Works Department to overhaul the GIS program. In March of 2013, the Council was given an overview of the program including: preliminary findings, current project status updates, and possible future projects. In the past year the GIS program has reached critical benchmarks, achieved goals, and attained modest levels of enlightenment.

One reason for why so much has been accomplished in a relatively short period of time is the leveraging of advanced technology to augment available manpower. In July of last year the city was bombarded with lasers and photographed over a hundred thousand times in a matter of hours by a lone Toyota Prius. The results have allowed a single person to build an accurate database in a fraction of the time it would have taken to accomplish by hand. Further, data can be extracted in perpetuity regardless of weather, time of day, or resources. This Mobile Mapping information has been utilized on a continuous and almost daily basis since collection. It has saved hundreds of hours in field time, countless traffic delays, and has resulted in a safer and more efficient method of data collection.

Ultimately the goal of a city GIS is to promote efficiency, decrease dependency on individuals, and increase productivity. While the Brookings GIS is still in its infancy, remarkable steps have been made to create a system that can be exploited fully. Department wide integration has been a key component of building a reliable, usable, and functional GIS. An arsenal of wall maps and atlas books has been cached for easy deployment throughout the Public Works department. With regular use, these maps will be tested against real world data to ensure they meet departmental needs in both the office as well as out in the field. Having accurate and intelligible information at the fingertips of those who use it will prove invaluable for efficient operations. In the near future data will be available city wide over the internet allowing for instantaneous data dispersal and minimal overhead.

The 2014 State of the GIS presentation will expound upon the following topics:

- Utility Infrastructure – Asset management and data continuity.
- Planning operations and city management
- Department use of GIS

- Multi-Agency GIS Agreements
- Future projects and city needs.

Attachment(s):
Packets will be provided during workshop.

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: March 6, 2014

Originating Dept: PW/DS

Signature (submitted by)

City Manager Approval

Subject: 2013 Water Master Plan Update

Recommendation: Discussion on the 2013 Water Master Plan Update prepared by Pace Engineering

Financial Impact: This document identifies future capital improvement projects (CIP) which will direct staff on priorities for future budgets. The document estimates $6.1 million dollars needed for piping improvements, additional storage requirements, pump station and treatment plant upgrades.

Background/Discussion: The previous Water Master Plan update occurred in 2008. Master plans updates are recommended every five years for these reasons;

1) System development charges (SDC) are calculated based on the CIP projects identified in the master plan.
2) Future of SDC funds requires the project to be listed in the master plan.
3) Grant applications almost always require the project to be included in a master plan.
4) Priorities changes and new projects emerge.
5) Growth projects can differ than what was projected.
6) City Council direct staff to update all master plans in the City's strategic plan.
7) Master plans are necessary for future rate study and SDC updates.
8) Budgets are developed from master plans.

The Executive Summary as seen in Attachment (a) provides an overview of the findings in the water master plan. The new master plan addresses a 20 year planning period to year 2033 assuming an annual growth rate of 2%. After evaluating the past to present master plans, areas of interest include;

Demographics

- The population of persons over 65 has dropped by 47.3 percent and the average household size dropped from 2.3 to 2.26 persons per household.

Water consumption

- Water use per capita has decreased 10% since the last master plan update in 2007 and 40% since the 2000 master plan update, or 77.8 gallons per capita per day (gpcd), 96.9 gpd, and 133 gpcd respectively.

Unaccounted for water use

- Has dropped to 10% which is considered acceptable in the industry. In 2007, the water loss was 13%, and in 2000 the water loss was 20%.

Water supply

- Staff does not concur with the recommendations for the water treatment plant. Attachment b) is a detailed explanation on the reasons staff does not support budgeting for water treatment plant expansion or removal.

Water storage

- The master plan recommends increased water storage in the Old County Road area (minimum of 250,000 gallons) and an estimated cost of $860,000.

Distribution

- The most costly recommendation in this master plan is $6.1 million dollars recommended for piping infrastructure improvements.

Booster Pumps

- The report recommends Mountain drive pump station replacement and a new pump station of the proposed Old County Road tank at a total of $863,000. Staff will explore if the decommissioned Vista Ridge Pump Station as a part of the Airport infrastructure project can be reused for the Mountain Drive pump station, thereby eliminating a majority of the replacement costs.

Staffing

The report recommends increased staffing for maintenance and preventative maintenance such as valve exercising.

The Water Master Plan and attachments will be presented to City Council for adoption after 35 day notice, review and approval of the Planning Commission.

Policy Considerations:

Attachment(s):

a) Executive Summary from Pace Engineering
b) Email from Bill Pavlovich dated 2/26/14
c) Memorandum from staff dated 3/20/14

BACKGROUND

Significant changes have occurred since adoption of the 2007 Water Master Plan Update. Impacts of the recession on local economics and growth were marked and perceptions of future growth, while still optimistic, are more modest than was previously the case. Even though the City has grown, water production requirements are actually lower than in 2007. Water rights issues associated with the City's intake have been resolved and require modifying the previous plan for water supply expansion. Some projects that were in design or ready to bid in 2007 were not constructed; others were constructed but with significant modifications. Currently the City is in design phase of developing a project to extend water and sewer service to the Brookings Airport that will entail construction of a reservoir on the hillside above the airport. The project also entails the removal of several pump stations and a reservoir and will result in significant changes to the affected service areas and service area boundaries.

PLANNING PERIOD

This Plan uses a 20 year planning period (through the year 2033).

POPULATION AND DEMOGRAPHIC CHARACTERISTICS

Population increased by 16.3 percent between the 2000 and 2010 censuses. Median age of the population increased to an average of 46.9 years. Most notably the population of persons over 65 years old dropped by 47.3 percent. Housing units increased by 21.8 percent – higher than the percent increase in population. As a result, average household size dropped from 2.30 to 2.26 persons per household.

Population projections are based on a 2 percent average annual growth rate (AAGR). The growth rate is consistent with the City's Comprehensive Plan and was coordinated with the City Planner prior to utilization in this master plan. Population projections are shown below:

City of Brookings Population Projections (2% AAGR)

Year	In-City Population (Persons)	Outside City Population (Persons)	Water System Population (Persons)	Percent Increase Over Year 2013
2013	6,561	906	7,467	
2033	9,749	1,346	11,096	48.6

WATER USAGE AND DEMANDS

Metered water usage for the period October 2011 to September 2012 is summarized by customer category in Table 5.1. Residential usage constitutes 73 percent of total metered use – approximately the same as noted in the 2007 Water Master Plan. Residential usage in the City averages 77.8 gpcd (gallons per capita per day) – down considerably from the 96.9 gpcd noted in the 2007 Plan. The reason for this is not known with certainty; however, it is likely that new and retrofit construction with water efficient fixtures may be a factor. In addition, the City had a water conservation program until a few years ago that may have also contributed. Average per capita residential use has dropped over 40 percent from the 133 gpcd noted in the 2000 Water Master Plan.

Recent water production is summarized in Table 5.3. For the four water years reviewed, the overall trend is for lower annual water production even though the City has been growing at a modest rate. This reflects a continuation of the trend noted in the 2007 Water Master Plan.

Recent Water Production (October 2008 - September 2012)

	Oct 08 - Sept 09 (mgd)	Oct 09 - Sept 10 (mgd)	Oct 10 - Sept 11 (mgd)	Oct 11 - Sept 12 (mgd)
Annual (gal)	358,595,000	339,974,000	324,936,000	324,131,000
Avg Day (mgd)	0.982	0.931	0.890	0.888
Max Month	1.408	1.603	1.234	1.152

mgd = million gallons per day

Current unaccounted-for water is approximately 10%. This reflects an improvement over the 13.7% reported in the 2007 Master Plan and over the 20% reported in the 2000 Master Plan. Improvements are likely attributed to more detailed water auditing, leak detection and correction, and recent water main and water meter improvement projects. Additional reductions may be possible for the City; however, even maintenance of a 10% level of unaccounted-for water requires a sustained level of effort.

Projected water production demands for the Brookings water system are shown below.

Projected Water Production Demands

Year	2013	2018	2023	2028	2033	2063
Population	7,467	8,244	9,102	10,050	11,096	20,098
EDUs	5,090	5,620	6,205	6,851	7,564	13,700
Average Day Demand (mgd)	0.9	1.0	1.1	1.2	1.3	2.4
Maximum Day Demand (mgd)	2.1	2.3	2.6	2.8	3.1	5.7

EDU = Equivalent Dwelling Units

WATER SOURCE AND WATER RIGHTS

The Ranney Collector source, near the Chetco River, provides an ample supply of high quality water and is currently the City's only developed source. This source has adequate capacity for the 20-year planning horizon. Year 2033 MDD (maximum day demand) is 3.1 mgd; the water rights for this source total 3.6 mgd.

Note: *While the source, intake structure, and water rights are adequate for the planning period, installed water supply capacity, associated with the intake pumps and water treatment plant, is not.*

WATER SUPPLY

In a very general sense, the water supply system is currently at capacity. The water supply system, including the intake pumps, water treatment plant and clearwell pumps, have been used at full capacity for meeting peak day system demands (MDD). The City has operated under these conditions for a number of years as increased water usage efficiencies have kept pace with system growth. This is a tenuous balance and one not likely to be sustained for much longer. It also leaves the City vulnerable to potential supply shortages since there is no reserve capacity upon which to depend. Supply system improvements are likely to be costly to implement, so

the process of financing, in addition to design and construction, can mean that several years may elapse before the needed capacity increase (to address the shortages) is realized.

The current system MDD of 2.1 mgd is approximately equal to the current installed capacity of the system. Expanding system capacity has ramifications for each component of the supply system: intake, water treatment plant (WTP), and transmission mains. Several alternatives for expanding the supply were developed.

Each alternative includes upgrades at the intake and to the transmission mains. Transmission upgrades are largely the same for each alternative: replacement of old, undersized AC transmission mains with new 16-inch lines. Sizing is generally consistent with long-term full development of the Ranney Collector water right. The proposed 16-inch lines will be consistent with newer sections of the existing transmission main that were constructed with 16-inch pipe.

The existing WTP is 37 years old, has been maintained well beyond its design life of 20+ years, and is currently at capacity. Based on the reviewed turbidity data and the State's classification of the source water as groundwater, it appears the facility is not needed for regulatory compliance. Currently it is not used for filtration purposes during the "summer", but is utilized and needed to pump water into the City via the clearwell and clearwell pumps. The existing electrical system has been modified many times and there is no master electrical documentation that coherently describes what is in place. Abandoned parts of the system have not been removed. Much of the control system is old and obsolete and, at a minimum, should be updated to a PLC-based system. A detailed evaluation of the WTP was beyond the scope of this plan; but based on its age, it is expected that mechanical and other deficiencies will be found that should be addressed in any comprehensive upgrade. It is also expected, again based on its age, that some deficiencies will likely be missed because the defects are internal and not yet visible.

Alternative #1: New WTP. This alternative maintains the City's treatment capabilities. Initial installed capacity should be lower, since the year 2033 MDD is 3.1 mgd; however, the building and overall design should be consistent with a future treatment capacity expansion to 3.6 mgd (the full Ranney Collector water right). Membrane microfiltration is recommended for the treatment process, consistent with previous Master Plan recommendations and discussions with the City, and should work well with the high quality raw water.

Benefits of this alternative are the extra measure of safety and somewhat higher level of water quality provided. Negatives include the high capital cost for construction (compared to Alternative #2) as well as high operations, maintenance, and replacement costs (relative to the other alternatives).

Alternative #2: Eliminate WTP. This alternative eliminates the WTP based on the lack of regulatory need for it. Elimination simplifies the overall supply system since the intake pumps can, when replaced, pump directly to the City's distribution system. New disinfection and corrosion control systems would be needed near the intake site as well as a comprehensive upgrade of the intake electrical system, and the provision of new pumps with VFDs (variable frequency drives).

Benefits of this alternative are simplicity and significantly lower costs than Alternative #1 and Alternative #3. Negatives are primarily associated with giving up treatment capabilities that have been historically perceived by the City as providing an extra measure of safety. There is also a risk, probably very low, that the regulatory

turbidity limit could be exceeded. This would trigger a regulatory review and possible requirement to construct a treatment plant. Harbor has a Ranney Collector and does not provide filtration; and the City of Brookings also does not provide filtration for a good part of the year.

Note: *Review comments on the draft Master Plan received March 24, 2014 indicate that the bench turbidimeter used to measure turbidity in the raw water was not measuring accurately. A new turbidimeter has been ordered. The potential impact of new turbidity data on the viability of Alternative #2 is unclear at this time.*

Alternative #3: Upgrade WTP. This alternative entails upgrades to the intake (pumps, electrical, disinfection) and WTP (pumps, electrical, and miscellaneous). Filtration capacity would not be increased since the filters are typically used in winter when demand is lower. The filters may be operated up to the 2.6 mgd rated capacity, but actual maximum utilization will depend on the intake pumps selected and the available flow adjustment provided by the variable frequency drives (VFDs). If demand exceeds the maximum filtration rate, the City would need to decide whether to go with no filtration or with filtration plus changes in reservoir storage. The latter option is not recommended as a general operational strategy, but only as a fallback, emergency option for short-term application. The hydraulic capacity of the WTP (for flows bypassing the filters) will be increased. Pumps at the intake and clearwell would be replaced with new pumps fitted with VFDs. The VFDs would allow the filtration process to be utilized, but allow higher rates of pumping (when the filters are bypassed) in order to meet design MDD.

Benefits of this alternative are lower cost than alternative #1 and the retention of some treatment capabilities. Additional benefits include: the potential for cutting back on use of the filters gradually until the City is more comfortable with the idea of not having filtration capabilities, and lower costs than construction of a new WTP. Negatives are similar to those described for Alternative #1. Additional negatives include: substantial investment in a facility and equipment that has already greatly exceeded its design life, and the potential for significant and unforeseen problems to arise during the next 20 years. This is a compromise approach that may only defer the treatment/supply issue rather than fully satisfy the City's needs over the next 20 years.

Supply Recommendations. From the standpoint of cost and mechanical reliability, Alternative #2 is the clear choice; however, the selection also entails the assumption of an unquantifiable, but probably very low, risk on the part of the City for elimination of filtration capabilities. The decision to go without a treatment plant is largely political in nature – but Harbor does provide a successful, local example of this approach.

A basic comparison is provided in the following table.

Water Supply Comparison

Order-of-Magnitude Cost Comparison

Item/Description	Water Supply Alternatives Order-of-Magnitude Cost Comparison		
	Alt #1: New WTP	Alt #2: Eliminate WTP	Alt #3: Upgrade WTP
Intake			
New Chlorination Facilities	-	$150,000	$150,000
Electrical/Telemetry Upgrade	$200,000	$200,000	$200,000
Pump Upgrade	$150,000	$180,000	$150,000
Flowmeter	-	$50,000	
Misc. Improvements (Allowance)	$50,000	$50,000	$50,000
Intake Subtotal	**$400,000**	**$630,000**	**$550,000**
Water Treatment Plant (WTP)			
New Membrane MF Plant	$7,000,000	-	-
Upgrade Electrical	-	-	$300,000
Upgrade Pumps	-	-	$150,000
Upgrade Disinfection	-	-	$100,000
Misc. Improvements (Allowance)	-	$20,000	$500,000
WTP Subtotal	**$7,000,000**	**$20,000**	**$1,050,000**
Transmission			
Project T1 (4,900 LF of 16")	$800,000	$800,000	$800,000
Project T2 (7,000 LF of 16")	$1,100,000	$1,100,000	$1,100,000
16" Connection to/from WTP	$160,000		$160,000
Transmission Subtotal	**$2,060,000**	**$1,900,000**	**$2,060,000**
Construction Subtotal	**$9,460,000**	**$2,550,000**	**$3,660,000**
Contingencies	$1,892,000	$510,000	$692,000
Engineering and Construction Observation	$2,365,000	$637,500	$915,000
Legal and Administration	$473,000	$127,500	$173,000
Project Total	**$14,190,000**	**$3,825,000**	**$5,490,000**

b. Qualitative Comparison

Item/Description	Water Supply Alternatives Qualitative Comparison		
	Alt #1: New WTP	Alt #2: Eliminate WTP	Alt #3: Upgrade WTP
WTP Filtration Capacity	3.1 mgd	None	up to 2.6 mgd
Hydraulic Capacity	3.1 mgd	3.1 mgd	3.1 mgd
Meets OHA Requirements	Yes	Yes	Yes
Meets Environmental Requirements	Yes	Yes	Yes
Estimated Operational Reliability	High	High	Moderate
Relative Operations, Maintenance, Replacement Costs (OM&R)	High	Low	Moderate

The magnitude of the project is such as to require funding assistance through one or more of the State or Federal Financing programs. These typically require a preliminary engineering report and environmental report relevant to the project as part of the overall funding application and approval process.

A preliminary engineering report (PER) will be needed to refine the project scope, elements, design, and costs including specific operations, maintenance, and replacement costs. An opinion of probable cost for preparing the PER is $50,000. The environmental report (ER) will add a minimum of $10,000 to the cost.

RESERVOIR STORAGE

For the water system as a whole, the recommended storage capacity is three times the average day demand (3xADD) plus fire flow (FF). Recommended FF is 3,500 gpm for 3 hours (0.63 MG reserve). The table below projects storage capacity for the City as a whole. With the addition of the Airport Reservoir, the City will meet the projected year 2023 storage capacity needs.

Projected City Reservoir Capacity Needs

	Average Day Demand (ADD) (mgd)	3x ADD (mgd)	Reservoir Volume Needed at 3xADD + FF (MG)	Existing Reservoir Volume (MG)	Additional Volume Needed (MG)
City Total 2013	0.9	2.7	3.33	3.43	-0.10
City Total 2023	1.1	3.3	3.93	3.43	0.50
City Total 2033	1.3	3.9	4.53	3.43	1.10

Old County service area is the largest higher level service area in the City and highly deficient in storage capacity. A new reservoir is needed to provide the additional storage required. A nominal capacity of 250,000 gallons is recommended. Sites for the proposed reservoir are limited. Potential sites have been discussed with City staff. It is recommended that these sites be further researched and the most suitable site or easement be acquired. The opinion of probable cost for the reservoir is $860,000.

Operation of the Seacrest Reservoir has been problematic. An altitude valve installed at the 1.5 MG Reservoir would allow better overall utilization of Seacrest Reservoir by effectively taking the 1.5 MG Reservoir off-line at times to allow for filling and better cycling of water through Seacrest. An opinion of probable cost for the construction of an altitude valve, vault and connections is $87,000. The project will be most effective once the recommended supply improvements have been implemented.

More efficient cycling of water through Seacrest could alleviate some of the water quality concerns in the northwest area, especially if paired with a recommended distribution improvement that reduces the length of the deadend line to Lone Ranch.

Additional reservoir improvements are included in the CIP.

DISTRIBUTION

An assessment of Brookings' needs was developed primarily through map review, review of previous Master Plan recommendations that have not yet been constructed, and information from staff on problem areas. The focus has been on lines with additional concerns such as main break frequency, need for looping to eliminate dead-ends, and general hydraulic and fire protection needs. The CIP includes approximately 30 recommended distribution improvements; total cost is $6,160,000.

Fire protection concerns and needs were reviewed with Jim Watson of the Brookings Fire Department. Recent City main improvements in the southwest part of the City have alleviated many areas of concern, but one area of the City still stands out as being a serious concern. The area of concern focuses on Moore Street (west of Arnold Lane) where development is large and dense and fire flow is limited through a dead-end 6-inch main. Hub Street and Iris Street, immediately south of Moore, are also underserved through a long looped 4-inch main. The opinion of probable cost for improvements in this area is $462,000.

Unaccounted-for water losses currently total 10% and indicate that the water system does not have excessive losses; nevertheless, periodic leak detection should be conducted to maintain or even reduce the water loss figure. Replacement of leak prone lines should also reduce water losses as well as O&M costs associated with emergency main repairs.

BOOSTER PUMPING

Comprehensive upgrades are needed for Mountain Drive #1, #2, and #3 pump stations. From an electrical and controls standpoint, the facilities have been upgraded several times but not with any kind of consistency or coherent plan. Controls, starters, and other key electrical components should be upgraded according to a coherent plan. To achieve this, all three pump stations should be addressed as part of one project. Consideration should also be given to pump replacement and the provision of redundant pump capacity in Mountain Drive Pump Station #3. Anticipated project cost is $188,000.

The 1.5 MG Reservoir Pump Station is actually two separate pump stations: one pumping to the Old County service area and one pumping to the Pacific View service area. The Old County pumping system needs a capacity upgrade to approximately 300 gpm plus a third pump. A new pump station is needed to provide firm capacity (3 pumps) and the increased capacity for the "Old County" system. The part of the station that serves Pacific View is adequate from a capacity standpoint and does provide firm capacity; however, given the overall age and condition, it would be prudent to include its function in the proposed new 1.5 MG Reservoir Pump Station. Constructing a new pump station will allow the old station to remain in operation with minimal complications and down time during the transition from the old to the new system. An opinion of probable cost for the proposed new 1.5 MG Reservoir Pump Station is $675,000.

CAPITAL IMPROVEMENT PLAN (CIP)

The Plan includes a detailed CIP provided in a spreadsheet format. The CIP includes approximately $10,000,000 in recommended improvements exclusive of the water supply improvements which add approximately $4,000,000 - $14,000,000 depending on which alternative is selected. Costs in the CIP can be easily updated by simply entering the current Engineering News Record Construction Cost Index (ENRCCI) number.

OPERATIONS AND MAINTENANCE (O&M)

Most of the recommended capital improvements will not result in increased O&M costs; however, O&M costs are subject to market changes and inflationary pressures, so annual increases are typically required. Budgets and water rates are typically adjusted to take recent or anticipated changes into account; however, system deficiencies that have not been addressed can increase O&M costs in ways and to an extent not easily foreseen. This may take the form of emergency (overtime) call outs and extra cost, interim measures that may be needed until the problem can be addressed correctly, and un-budgeted emergency projects of potentially significant expense. Over time, such costs can add significantly to the overall utility budget.

From an O&M standpoint, there are additional tasks that the City could and should be doing (such as valve exercising). As the City emerges from the recession, the City should budget for, and hire, one additional FTE for the water utility. Ideally the new hire will be certified for both distribution and treatment so as to provide more operational flexibility in scheduling. Actual need may exceed the one FTE recommended; the City should periodically assess staffing adequacy and add staff as warranted so as not to compromise the level of service provided.

WATER RATES AND RATE IMPACTS OF PROJECT FINANCING

The City of Brookings current water rates are divided into two categories: "inside City limits" ($11.18 base rate plus $2.42 per 100 cubic feet overage), and "outside City limits" ($22.36 base rate plus $4.84 per 100 cubic feet overage). There are no additional distinctions such as user type or category, or meter size. An additional "system replacement fee" (SRF) is billed each month on a flat $2.90 per EDU basis.

With the current rate structure, this yields an average, per inside-City-limits residential account, monthly billing of $29.79. If computed on a per EDU basis (3,264 EDUs, 4,617.7 gallons, 617.3 cubic feet), the result is $26.82 per EDU per month.

Aside from the fairly nominal base rate, the City's rate structure reflects a flat rate per volume basis. This has probably contributed to the lower per capita water usage since customers can readily see conservation efforts in the form of lower water bills. In general, such a rate structure is less reliable in providing stable revenue generation because of the large amount of control available to the individual accounts.

Water rates should be simple, sufficient, and fair (equitable). Brookings' rates are certainly simple to understand and apply, and appear to be sufficient based on a review of current budget documents. "Fairness" is less straightforward - though guidelines exist - and are often based, at least in part, on local perception. A detailed water rate study that includes consideration of alternative rate structures would be needed to evaluate the "fairness" issue in any kind of detail.

The following table includes debt service and rate impacts on a per EDU basis for projects funded through the programs identified in the Plan, plus a computation using a 6.5% interest rate. Programs generally have a maximum per project loan, so computations for loans in excess of this amount are omitted in the table. Very large projects often require funding through multiple sources; rate impacts for multiple funding sources are simply added together.

Note: *The table is for general planning purposes only. Actual interest rates, terms, and availability of funds through any given source may vary and are not locked in until an offer of funding is accepted by the City.*

Debt Service and Rate Impacts (per EDU basis)

	Annual Debt Service	Monthly Per EDU Rate Increase	Annual Debt Service	Monthly Per EDU Rate Increase	Annual Debt Service	Monthly Per EDU Rate Increase	Annual Debt Service	Monthly Per EDU Rate Increase
Interest Rate (%):	**2.50**		**3.65**		**4.56**		**6.5**	
Term (years):	**40**		**25**		**25**		**25**	
Reserve (%):	**10**							
EDUS:		**5090**		**5090**		**5090**		**5090**
Loan Total ($)								
$1,000,000	$43,819.86	$0.72	$61,665.89	$1.01	$67,856.14	$1.11	$81,981.48	$1.34
$2,000,000	$87,639.71	$1.43	$123,331.79	$2.02	$135,712.27	$2.22	$163,962.96	$2.68
$3,000,000	$131,459.57	$2.15	$184,997.68	$3.03	$203,568.41	$3.33	$245,944.44	$4.03
$4,000,000	$175,279.43	$2.87	$246,663.58	$4.04	$271,424.54	$4.44	$327,925.92	$5.37
$5,000,000			$308,329.47	$5.05	$339,280.68	$5.55	$409,907.41	$6.71
$6,000,000			$369,995.37	$6.06	$407,136.81	$6.67	$491,888.89	$8.05
$7,000,000					$474,992.95	$7.78	$573,870.37	$9.40
$8,000,000					$542,849.08	$8.89	$655,851.85	$10.74
$9,000,000					$610,705.22	$10.00	$737,833.33	$12.08
$10,000,000					$678,561.36	$11.11	$819,814.81	$13.42

IMPLEMENTATION

Capital improvements can be implemented over the planning period according to the nature of the projects, the relative prioritization of the project, and other financial and practical considerations that the City may have. Several of the projects, the water supply project in particular, are high priority and should be addressed as soon as practicable. Because of the high costs, funding agency participation will likely be needed. Once the City has determined which projects to include, the City should contact IFA to set up a One- Stop Meeting in Salem to discuss potential project funding. Representatives of potential funding agencies attend the meeting and can assist in developing an optimal funding approach.

Attachment b

Loree Pryce

From: Bill Pavlich
Sent: Wednesday, February 26, 2014 9:22 AM
To: Loree Pryce (lpryce@brookings.or.us)
Subject: Water Supply Delayed Implementation

Hi Loree,
I thought a bit more about timing of the water supply project given the City's position of not wanting to address it in the next three years. Conservation in general will probably not get you there given the current levels of use and water rates in place. Targeted conservation may be sufficient to allow deferment of the project without excessive risk to the City. According to weather statistics (see Section 2.2.1 of the Plan) there are typically only a few days a year when temperatures rise above 90 F. If the City were to impose water use restrictions whenever the forecast indicated hot weather (say temps over 90 F) are expected, the reduced water demand may be sufficient to keep within system capacity in the near-term.

While I believe the City would be better served by proceeding with the supply project ASAP, there are certain benefits to the approach outlined above. Imposition of the use reductions will make the City's situation much more "real" and understandable to the public. This should help in getting the support needed to implement the water supply improvements. It also allows time for public education and involvement since there are major decisions involved.

Planning, funding, design, and construction of the water supply improvements could easily take three years; consequently, waiting too long to start addressing the water supply issue could result in significant problems for the City. Just some thoughts – Thanks.

Bill

PACE
Civil | Structural | Planning | Survey
www.paceengrs.com

Bill Pavlich | Sr. Project Manager
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p. 503.597.3222 | *f.* 503.597.7655
Celebrating 20+ Years of Success

Attachment c

City of Brookings

PUBLIC WORKS/DEVELOPMENT SERVICES DEPARTMENT

898 Elk Drive, Brookings, OR 97415

(541) 469-1138, Fax (541) 469-3650, TTY (800) 735-1232

lpryce@brookings.or.us

Memorandum

Date: March 26, 2014

To: City Council

From: Public Works/Development Services Director LP

CC: City Manager

Subject: Water Master Plan Additional Comments from staff

The City recently retained the services of Bill Pavlovich with Pace Engineering to update the water system master plan. The purpose of a master plan update is to evaluate existing infrastructure compared to future development and population growth trends for up to 20 years. The master plan will identify deficiencies and infrastructure needs and serves as a tool for grants, system development charge updates (SDC) and capital improvement project (CIP) budgeting. The last update to the water master plan occurred in 2008.

The intent of this memorandum is to document staff's opinion which differs from a recommendation made in the recent water master plan update. The master plan proposes an upgrade or elimination of the water treatment plant. Staff disagrees with elimination of the treatment plant, and sees no urgency in upgrading the treatment plant. Staff argues that deficiencies are not with the treatment plant capacity, but with the hydraulics of the associated piping/pump systems. The water master plan considers the water treatment plant a bottleneck to adequate water supply for future demand (3.1 MGD) and recommends upgrading, eliminating or building a new treatment plant to meet future capacities. All three options have a significant financial impact ranging from $3.8 to $14 million dollars.

The existing treatment plant is a 2.6 million gallon per day (MGD) capacity plant located on the North Bank Chetco River in the vicinity of the Freeman rock quarry. The distribution pumping at the WTP is designed for 2.6 MGD but currently runs a total of 2 of the 3 pumps at 2.1 MGD peak flow. The water supply is collected underground via the Rainey Collector on the gravel bank of the Chetco River, injected with chlorine, and conveyed to the water treatment plant. The treatment plant consists of a clear well (or underground holding tank for water), 3 distribution pumps that pump the water into the City's distribution system, and 2 sedimentation tanks and 2 filter bays which is the treatment process for the water system. After several years of providing water samples to Department of Health Services (DHS), the pre treated disinfected water samples collected from the Rainey Collector's intake have passed DHS standards. The DHS permit was downgraded such that the permit no longer requires the use of the treatment plant in order to comply with the permit. The master plan suggests removing the water treatment plant (WTP) or upsizing it to meet future water

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demands. Harbor Water is an example of not having a water treatment plant and only disinfects the water supply.

Staff's position on the WTP is as follows;

1) The investment was already made to install a WTP and removal costs far exceed the cost to maintain what we already have in place.

2) The WTP is only operated during peak winter weather when the river is turbid.

3) The WTP operates at minimal expense.

4) The WTP is an insurance policy in the event there is an issue with the water intake quality.

5) The deficiency in the treatment plant capacity can be overcome with evaluating the hydraulics of the distribution pumps, piping, and Rainey intake capacity.

6) The highest water demand is in the summer when the WTP is not operated therefore it is not the main bottle neck in the distribution system.

7) Regulations continue to increase over time. If at a later date the City had trouble meeting higher water quality regulation, the City could find itself needing the treatment plant again.

8) If the WTP is currently not required, then future demands could be met by mixing the treated water with raw water and providing the customers of Brookings a higher quality of water.

9) The clearwell and distribution pumps are located at the WTP. The distribution pumps and Rainey pumps are required with or without a WTP and incur most of the expense to operate, not the treatment process.

10) Increased storage in the distribution system via the Airport infrastructure project and proposed Old County Rd storage will assist with meeting peak demand flows.

11) Increased water conservation can reduce peak demands in summer months.

Unless given further direction by City Council, staff has no further plans to change it's current WTP operation practice or budget according to the WTP strategies recommended in the master plan. Staff will proceed with evaluating the distribution system hydraulics and report to Council at a later date on what measures will be necessary on the pipe/ pump capacities.

CITY OF BROOKINGS

Council WORKSHOP Report

Workshop Date: April 7, 2014

Originating Dept: PW/DS

Public Works/Development Services Director

City Manager Approval

Subject: Pavement Management Plan (PMP)

Recommendation: Discussion on the results of the Pavement Management Plan (PMP) and future paving projects

Financial Impact: The PMP indicates the cost of $2.157 million needed for 32 miles of City street repair and maintenance needs where $1.07 million is for major street reconstruction and $868K for minor maintenance. These costs do not include American's with Disability Act (ADA) improvements, or subsurface infrastructure needs. At the current budget amount of $250,000 per year and assuming no ADA or utility improvements, it would take 9 years at the current budget to address the entire City of Brookings streets.

Background/Discussion: Willdan Engineering was retained by the City in 2008/09 to provide a PMP for the City of Brookings. The effort was rekindled over the past year to update the mapping and assess cost savings with alternative paving options. The PMP process was discussed at a City Council workshop in May of last year. A majority of Brookings streets are not in need of major reconstruction involving extensive sub grade work. A majority of streets can be rehabilitated by milling and paving with an asphalt cement (AC) overlay or a cape seal or slurry seal application. Cape seal is a chip seal/slurry seal application and used in cases where the asphalt is not experiencing significant sub grade or tire path failure.

The PMP assessed each street in the City of Brookings. Based on the observed condition and type of failure of the existing asphalts, the PMP rated each street. The result of this rating provides a paving strategy as shown in the technical memo and mapping, Attachment a and b.

The paving applications are summarized as follow and are ranked in order of degree of paving effort/cost;

A) No treatment required
B) Slurry seal treatment – a non structural oil emulsion that treats existing asphalt by extending the life of the asphalt.
C) Cape seal treatment – An inexpensive combination of chip seal application with a slurry seal application.
D) 1.5" AC overlay
E) 1.75" AC overlay
F) 2" AC overlay with high tensile fiber enforcement – The fiber tensile is suggested in lieu of a 3" AC overlay to increase the strength of the lesser AC overlay.

G) CCPR (cold central plant recycling) – The street needs to be reconstructed and the existing asphalt can be milled and used in combination with new asphalt to reduce the costs. Recent discussions with Tidewater indicate that the equipment is not locally and readily available. Therefore the alternative options are to pulverize the existing asphalt and reapply as a sub grade, or reconstruction of sub grade and pave 3-inch as defined in the Engineering Requirements and Standard Specifications for Public Works Infrastructure, updated and adopted 1/27/14.

The ability to perform minor street work rather than a full reconstruction and overlay will save significant costs.

Policy Considerations: The use of alternative paving conventions such as cape seal may prompt questions from the public and should be evaluated for longevity and costs. Attachment a includes historic street paving priorities which may not align with future paving priorities due to the extent of underground utility work needed or additional Americans with Disabilities Act (ADA) requirements.

Attachment(s):

a. Past street priorities
b. Technical Memo Summarizing the PMP
c. PMP and DIA map will be provided at the workshop

Attachment a

MAJOR MAINTENANCE PROJECT LIST – updated 11-4-10

Year	Name	From	To	Cost	Subtotal/ Year
1	Valley Street	Hillside Drive	Chetco Avenue	78,000	
1	Woodland	Del Norte	culdesac	13,660	
1	Ross Road	Elk Drive	Chetco Avenue	53,000	
1	Alder Street	Pine Street	Redwood Street	15,000	
1	Ransom Avenue	Chetco Avenue	Pioneer	97,000	
				Subtotal	$ 256,660
2	5th Street	Elk Drive	Easy Street	157,489	
2	Fir Street	Oak Street	Old County Road	148,000	
				Subtotal	$ 305,489
3	Old County Road	Pacific Avenue	Rosichelli Lane	176,000	
3	Mill Beach Road	Allen Lane	Macklyn Cove Dr	2,745	
3	Memory Lane	Railroad Street	Tanbark Road	57,617	
				Subtotal	$ 236,362
4	Richard Street	Easy Street	Richard Street	6,974	
4	Hassett Street	Pioneer	Seventh Street	221,000	
				Subtotal	$ 227,974
5	Sandy Lane	Macklyn Cove Drive	culdesac	42,118	
5	7th Street	Pioneer Lane	Meadow Lane	21,627	
5	Mendy Street	Pacific Avenue	termination	24,102	
5	Kevin Place	Hassett Street	Ransom Avenue	44,586	
5	1st Street	Ransom Avenue	Easy Street	31,847	
5	Easy Manor Drive	Easy Street	Easy Street	80,355	
5	Hub Street	Arnold Lane	culdesac	7,470	
				Subtotal	$ 252,105

Updated 11-4-10

WILLDAN Engineering

Memorandum

TO: Loree Pryce, Public Works Director
City of Brookings

FROM: Roxanne Hughes

DATE: 11/5/13

SUBJECT: Revised 2012 PMS Update Technical Memo

This Technical Memorandum summarizes the City of Brookings 2012 Pavement Management System Update. There are now 31.71 miles of paved streets in the Brookings PMS system, covering 4,475,650 square feet of roadway surface. It should be noted that, with respect to street condition assessment, the 2012 PMS Update was limited to adding construction history to update PCI/SI values on streets that were paved since the 2009 PMS was prepared. Therefore, the distress data and related PCI/SI values listed are based on the 2009 street rating survey. In addition, the PMS is a network-level tool that is designed to prioritize needs relative to the overall street system. This update includes preparation of the following documents for use by the City in implementing capital improvements projects for targeting street repairs that will make the best use of the public works funds:

1) Identification of street repair backlog and potential for "catch-up" using $250K annual budget for street repair and maintenance.
2) Logic Tree: Identifies 9 different strategies, including "do nothing" and minor maintenance (slurry seal) and 7 different overlay alternatives.
3) Cost Matrix: Provides unit cost calculation for each strategy, documenting assumptions and detailing what work is included in each repair alternative.
4) Example Unit Price Breakdown: Provides examples of how the Cost Matrix calculates the unit prices
5) Overall List of Streets: Alphabetical index of all City streets in the PMS network, including segment details, PCI and SI value, and identified repair strategy with estimated cost.
6) Slurry Street List: Alphabetical index of the City streets recommended for Slurry Seal (Strategy 2)
7) Major Maintenance Lists (Alpha and Priority): Index of City streets recommended for Overlay stratefies; one sorted alphabetically and the other sorted by SI in ascending order.
8) The Treatment Strategy Map: GIS-based map that highlights all of the recommended strategies in different colors per the legend. The mapped data also includes Section ID and SI values adjacent to each segment for quick reference back to the street indexes.

The logic tree and strategy assignments indicate that there is a $2.157 million backlog in street repair and maintenance needs. The major maintenance backlog includes $1.07M, while the rest is minor maintenance consisting of $868K of Cape Seal and $219K of Slurry Seal. Using $250K per year to address these needs is possible, given that the structural sections are in good condition and the majority of the backlog in minor maintenance needed to improve PCI values as opposed to SI values. It is recommended that the minor maintenance begin to be implemented within the first 2 to 3 budge cycles to prevent these streets slipping into structural needs.

It is important that upon implementation of recommended street repairs, a project-level analysis is performed along with appropriate engineering for preparation of the Plans, Technical Specifications and Estimate of Cost (PS&E) in order to advertise a construction bid. The project scoping will include incorporating knowledge of other CIP projects, community events and priorities, funding mechanisms such as DIAs, and specific quantification of necessary repairs based on a current field review of the selected street segments.

There are two condition indexes utilized to gauge the relative condition of the streets in this report. One index is the PCI (pavement condition index), which is the conventional overall deterioration index provided in conformance with

standard protocols of the U.S. Army Corps of Engineers (USACOE). The other is the SI (structural index), which is similar to the PCI but focused solely on structural conditions. The SI provides a different perspective on street condition; it is a useful way to evaluate the cracking that usually drives the final decision to provide a structural upgrade (which normally takes the form of an overlay). The structural index often does not correspond very closely with the PCI because other distresses—such as surface texture, bumps, and utility cuts—can have a disproportionate impact on the PCI as compared to the SI. For example, a street with a midrange SI value of 68 may have a very low PCI value of 19. This means that this street segment does not have a lot of structural cracking; however it has significant levels of utility patching, surface raveling and/or poor ride quality which have lowered the PCI value. Using both PCI and SI indexes together in our decision process, it is apparent that a structural upgrade is a lower priority for this segment over another segment that has both a low SI and a low PCI.

SI values are computed by starting with a nominal value of 100 to represent a street with no cracking in the wheel path area, then subtracting the percentage of cracked wheel paths in a target segment. The results are arrayed as follows:

SI	From	To
Excellent	100	98
Very Good	97	95
Good	94	90
Fair	89	70
Poor	69	30
Very Poor	29	11
Failed	10	0

The current structural conditions of pavements in the street network can be represented by an average SI that ranges 0 to 100, and is normalized among all the streets in Brookings by area of pavement. The overall average SI for the streets in Brookings is at 89.7, which is considered at the very bottom of “Good” condition. The more cracking that occurs, the lower the structural index becomes. In comparison, the overall weighted average PCI is at 56.7 (Good) for the current conditions, which is reflective of the incorporation of non-structural distresses that are prevalent in the street system today. For the 2012 PMS Update, a Logic Tree was prepared that utilizes the SI value to assign repair Strategies. Of note; the Logic Tree establishes and overlay cut-off value at SI=70. This means that streets can have up to 30% of the wheel path areas cracked, and still be scheduled for a slurry seal or a cape seal. Streets exhibiting SI values above 70 and also with PCI values above 40 are scheduled for slurry seal, whereas if the PCI value is below 40 it is then scheduled for cape seal. The cape seal is a cost effective way to improve PCI when the road structure is in good condition, however it utilizes a 3/8” chip seal with a slurry seal on top and therefore will not look as nice nor ride as smoothly as an overlay. It is recommended that the City implement a cape seal project and see how it is received by the community, and then adjust the strategy to thin overlay if needed.

Given the years that have elapsed since the last field rating of the streets, it is recommended that the streets that are listed with SI values between 71 and 79 be reviewed in the field before a final decision is made to limit repairs to a cape or slurry seal. If the cracking has expanded significantly in the last few years, the streets may need to be scheduled for overlay instead. The following table provides a list of these streets (alphabetically).

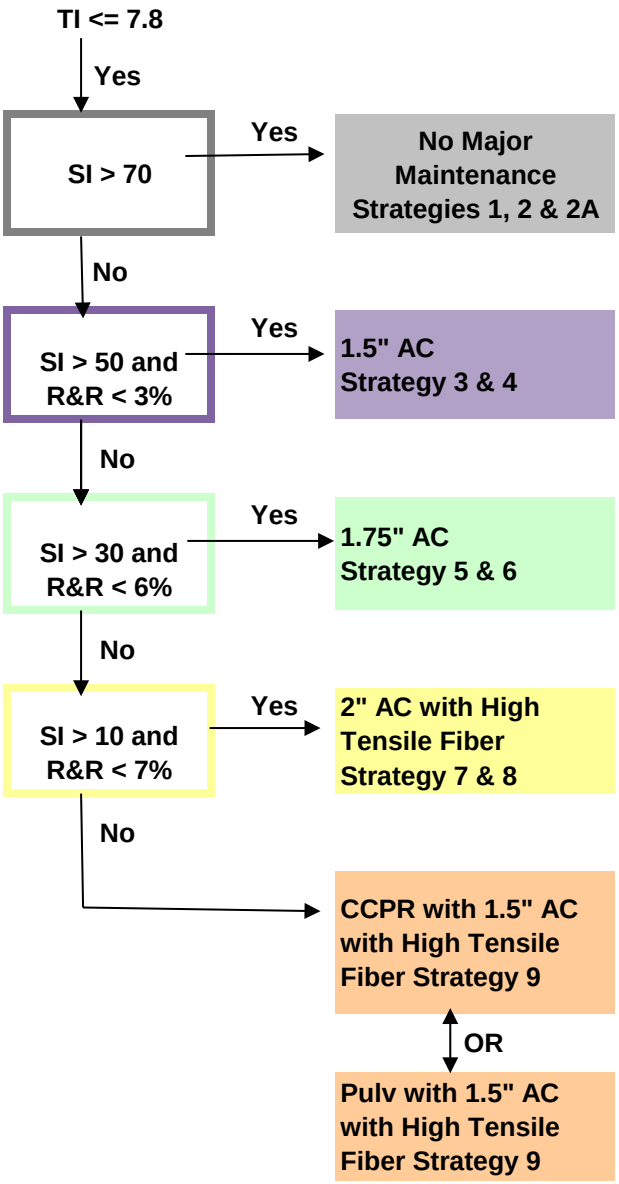
Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI
1013	5 ST	5TH ST FORK	BARBRA LN DIRT	210	32	2	6.5	27	72
1019	5 ST	HELEN LN	ARCH LN	1690	33	2	6.5	35	71
1030	ALDER ST	PINE ST	REDWOOD ST	290	26	2	5	1	73
1032	ALDER ST	SPRUCE DR	RAILROAD ST	230	36	2	5	29	73
1088	DAWSON RD	HWY 101	PASSLEY RD DIRT	320	26	2	6	11	73
1099	EASY ST	FERN AV	PIONEER RD	1170	45	2	6.5	12	71

Memorandum

1101	ELK DR	FRONTAGE RD	FERN AV	1190	34	2	5	31	72
1122	GLENWOOD DR	HARRIS HTS RD	SEACREST LN	240	36	2	5	30	78
1157	HIGHLAND WY	HASSETT ST	RANSOM AV	720	32	2	5	12	74
1160	HOMESTEAD RD	RANSOM AV	VIEW CT	500	32	2	5	13	79
1161	HUB ST	ARNOLD LN	CULDESAC	890	13	2	4.5	2	73
1170	KINDEL	MEMORY LN	CULDESAC	230	19	2	4.5	12	77
1237	PACIFIC AV	COTTAGE ST	RAILROAD ST	520	45	2	5	40	76
1241	PACIFIC AV	AZALEA PK RD	FERN AV	1240	42	2	6	26	73
1267	RAILROAD ST	WHARF ST	OAK ST	1630	27	2	5.5	34	78
1287	RICHARD ST	EASY ST	RICHARD ST	160	21	2	5	2	72
1314	SPRUCE DR	SPRUCE ST	LINDEN LN	1570	30	2	5	11	78
1331	TRUMAN LN	BARCLAY LN	CULDESAC	180	9	2	4.5	1	78

CITY OF BROOKINGS
2012 PAVEMENT MANAGEMENT SYSTEM UPDATE
STRATEGY AND LOGIC TREE

STRATEGY LOGIC TREE FOR MAJOR MAINTENANCE



LEGEND

TI = Traffic Index. Indicates level of traffic loading. Typical range is 4.5 (low loading/cul-de-sac) to 11 (high loading/arterial).

PCI = Pavement Condition Index
Indicates overall pavement condition based on observed distresses.
0 = Failed to 100 = Excellent

SI = Structural Index
Indicates amount of wheelpath that is cracked.
100 = no wheelpath cracking.
Calculation: 100-% wheelpath cracked
Example: SI =60 indicates that 40% of the wheelpath is cracked (100-40 = 60)

High Tensile Fiber= Reinforcing fibers added to hot mix at AC plant during production. Fibers strengthen pavement matrix, extending pavement life. (ie: Forta-fi)

CCPR = Cold Central Plant Recycling
Includes grinding, cold recycling and repaving existing AC section only in place. Does not enter base section. Remove and replace failed base sections in advance.

Pulv = Pulverize existing AC section
Includes in-place grinding/pulverization and recompaction to use as base for new overlay. May incorporate existing base into recompaction; limiting need for repair of base failures.

CITY OF BROOKINGS
PAVEMENT MANAGEMENT SYSTEM
2012 COST MATRIX

Legend:

AC	Convential Asphalt Concrete hot mix (HMAC)
Slurry	Type II or Recycled Asphalt Pavement (RAP) emulsion aggregate slurry seal
HTF	High Tensile Fiber Reinforcement added to AC matrix as fibers during hot mix production (ie: Forta-fi)
CCPR	Cold Central Plant Recycling OR Pulverize/Recompact
Geofabric Patch	Removal and replacement of 10" subbase with geofabric and either PMB or asphalt grindings; in addition to regular R&R
R&R	Point repairs for failed pavement, removal and replacement of existing AC and base section
TC, SS, MH's	Traffic Control, Signing/Striping and Manhole raising
Chip	Chip Seal Medium (3/8") gradation aggregate screenings, rolled into Emulsified Asphalt Tack Coat

Base Rates:	$/sf	Notes
1" AC	$0.62	Hot Mix Asphalt Concrete; at $100/ton
Geofabric Patch	$4.00	Add to R&R for replacement of subbase
R&R	$6.00	remove and replace - subbase OK
CCPR	$1.50	cold central plant recycling
Chip =	$0.44	$4/SY
HTF, per 1" AC	$0.09	High Tensile Fiber additive; at $15/Ton
Edge Grind	$0.08	assume 1/4 sf grind/sf of street
Full Grind	$0.40	full width grind
Type II or RAP Slurry	$0.25	$375/ELT
Crack Seal	$0.08	Assumes $7K/day at 90K sf/day
TC, SS, MH's =	$0.58	Overlays only

Residential, Minor Collectors and Rural (TI ≤7.8)

MAINTENANCE TREATMENT

Strategy	SI Value	Street Condition	Treatment	Construction Unit Cost ($/sf)	Engineering & Inspection	Total Unit Cost ($/sf)	Total Unit Cost ($/Lane Mile)	Assumptions
1	90-100	AC dry surface.	No Action	$0.00	0%	$0.00	$0	
2	70-89	AC raveled or polished aggregate.	Slurry Seal	$0.33	20%	$0.39	$24,922	No R&R required
2A	SI>70 & PCI<40	Severe weathering/patching & cuts with very little alligator cracking or other load related distress	Chip+Slurry (Cape Seal)	$0.81	20%	$0.98	$61,924	2% R&R Required

REHABILITATION TREATMENT

Strategy	SI Value	Street Condition	Treatment	Construction Unit Cost ($/sf)	Engineering & Inspection	Total Unit Cost ($/sf)	Total Unit Cost ($/Lane Mile)	Assumptions
3			1.5" AC Overlay	$1.64	25%	$2.05	$129,888	1% R&R Required
4	51-69	Wheel Path Alligator Cracking Less Than Approx. 3% of Total Area	1.5" AC Overlay	$1.74	25%	$2.18	$137,808	2% R&R Required + 1% subbase replaced
5		Wheel Path Alligator Cracking <6% of Total Area; Block Cracks smaller than 6' diameter or severe edge cracking over 40%	1.75" AC Overlay	$1.95	25%	$2.44	$154,770	3% R&R Required + 1% subbase replaced
6	31-49		1.75" AC Overlay	$2.03	25%	$2.54	$161,106	3% R&R Required with all subbase replaced
7			2" AC Overlay w/HTF	$2.37	25%	$2.97	$187,968	3% R&R Required w/subbase replaced
8	10-20	Extensive Wheel Path Base Failure > 3.5% But < 7% of Total Area.	2" AC Overlay w/HTF	$2.49	25%	$3.12	$197,472	5% R&R Required w/3% subbase replaced
9	0-9	Serious Overall Structural Failure; Wheel Path Base Failure Greater Than 7% of Total Area	CCPR+1.5" AC w/HTF (or Pulverize/Recomp)	$3.64	25%	$4.55	$288,585	1% R&R required w/subbase replaced

CITY OF BROOKINGS PAVEMENT MANAGEMENT SYSTEM - 2012
EXAMPLE UNIT COST BREAKDOWN

The construction unit costs indicated on the "2012 Cost Matrix" spreadsheet combine several cost factors to come up with one price per square foot that includes everything that will be needed to accomplish the chosen treatment strategy. The following are example calculations to show how the Unit Cost figures are obtained:

EXAMPLE NO. 1

Treatment Strategy 7 = 2" AC Overlay w/HTF **(SI 10-20)**

This strategy includes placement of an overlay of 2" thick asphalt concrete (AC) that is modified to include Forta-fi fiber reinforcement in the hot mix production. The unit cost breakdown includes items for the AC hot mix, addition of the Forta-fi fibers to the hot mix, edge grinding of the street, removal and replacement of failed areas (R&R), geofabric for subbase replacement, traffic control during construction (TC), raising of manholes (MHs) and restriping (SS).

Item Description	Unit Cost $/sf	Notes
Grinding	$0.08	Assumes edge grinding, estimated at 25% of street surface
2" AC	$1.23	2 times the 1" AC $/sf (based on $100/ton)
HTF	$0.19	2 times the HTF, per 1" AC $/sf (based on $15/Ton)
3% R&R	$0.18	Assumes 3% of pavement area is failed and requires removal and replacement (.03 times $/sf for R&R line item)
Geofabric Patch	$0.12	Assumes all R&R will require subbase replacement and geofabric installation (.03 times $/sf for geofabric line item)
TC, SS, MHs	$0.58	Based on cost of approx. $16 per linear foot of street
TOTAL =	**$2.37**	Estimated construction unit cost per square foot of street pavement

EXAMPLE NO. 2

Treatment Strategy 9 = CCPR+1.5" AC w/Forta-fi **(SI 0-9) (or Pulverize/Recompact)**

This strategy includes performing cold central plant recycling (CCPR) of the existing failed pavement and adding a 1.5" thick asphalt-concrete with Forta-fi overlay top course. The unit cost breakdown includes items for the CIPR, AC hot mix, addition of the Forta-fi fibers to the hot mix, full width grinding of the street, removal and replacement of failed areas (R&R), geofabric for subbase replacement, traffic control during construction (TC), raising of manholes (MHs) and restriping (SS).

Item Description	Unit Cost $/sf	Notes
Grinding	$0.40	Assumes full width grinding, needed to make room for the AC overlay
CIPR	$1.50	Cold central plant recycling, full street width and length
1.5" AC	$0.93	1.5 times the 1" AC $/sf (based on $100/ton)
HTF	$0.14	1.5 times the HTF, per 1" AC $/sf (based on $15/Ton)
1% R&R	$0.06	Assumes 3% of pavement area is failed and requires removal and replacement (.03 times $/sf for R&R line item)
Geofabric Patch	$0.04	Assumes all R&R will require subbase replacement and geofabric
TC, SS, MHs	$0.58	Based on cost of approx. $16 per linear foot of street
TOTAL =	**$3.64**	Estimated construction unit cost per square foot of street pavement

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1001	1 ST	RANSOM AV	EASY ST	850	18	2	5	3	57	1.5	$33,278	4
1002	2 ST	MARVISTA	EASY ST	160	22	2	4.5	87	100	0	$0	1
1003	2 ST	RANSOM AV	MARVISTA	640	22	2	5	87	100	0	$0	1
1004	2 ST	RANSOM AV	CULDESAC	660	23	2	4.5	20	95	0	$14,836	2A
1006	2ND ST UNNAMED	2 ST	CULDESAC	120	21	2	4.5	21	100	0	$2,463	2A
1007	3 ST	CORAL CT	EASY ST	570	30	2	6.5	58	94	0	$0	1
1008	3 ST	HASSETT ST	MIDLAND ST	750	33	2	6.5	61	96	0	$0	1
1009	3 ST	HIDDEN CT	TIMBERLINE DR	590	33	2	6.5	82	100	0	$0	1
1010	3 ST	RANSOM AV	HASSETT ST	720	34	2	6.5	25	81	0	$23,925	2A
1011	3 ST	RANSOM AV	CORAL CT	200	20	2	5	86	100	0	$0	1
1012	4 ST	RANSOM AV	EASY ST	780	17	2	5	63	100	0	$0	1
1013	5 ST	5TH ST FORK	BARBRA LN DIRT	210	32	2	6.5	27	72	0	$6,568	2A
1014	5 ST	BARBRA LN DIRT	RANSOM AV	360	32	2	6.5	11	15	2	$35,904	8
1015	5 ST	CHETCO AV	ELK DR	230	34	2	6.5	91	100	0	$0	1
1016	5 ST	CHETCO AV	RAILROAD ST	750	41	2	6.5	91	100	0	$0	1
1017	5 ST	EASY ST	5 ST	240	32	2	6.5	91	100	0	$0	1
1018	5 ST	ELK DR	EASY ST	1320	35	2	6.5	6	31	1.75	$117,473	6
1019	5 ST	HELEN LN	ARCH LN	1690	33	2	6.5	35	71	0	$21,936	2
1020	5 ST	RANSOM AV	LIMBAUGH WY	280	25	2	6.5	4	58	1.5	$15,225	4
1021	6 ST	JASMINE CT	EASY ST	320	24	2	5	100	100	0	$0	1
1022	6 ST	RANSOM AV	JASMINE CT	470	19	2	5	13	90	0	$8,728	2A
1023	7 ST	PIONEER LN	MEADOW LN	530	18	2	5	2	54	1.5	$20,750	4
1354	7 ST	HASSETT ST	PIONEER RD	640	18	2	5	36	87	0	$4,531	2
1024	ALDER ST	BIRCH ST	MAPLE ST	310	21	2	5	100	100	0	$0	1
1025	ALDER ST	CHETCO AV	SPRUCE DR	230	35	2	5	64	95	0	$0	1
1026	ALDER ST	HAZEL ST	MEMORY LN	400	20	2	5	100	100	0	$0	1
1027	ALDER ST	HEMLOCK ST	SPRUCE DR	90	29	2	5	25	40	1.75	$6,636	6
1028	ALDER ST	MAPLE ST	NORTH HAZEL ST	260	20	2	5	100	100	0	$0	1
1029	ALDER ST	NORTH HAZEL ST	HAZEL ST	260	20	2	5	100	100	0	$0	1
1030	ALDER ST	PINE ST	REDWOOD ST	290	26	2	5	1	73	0	$7,369	2A
1031	ALDER ST	RAILROAD ST	BIRCH ST	330	21	2	5	62	97	0	$0	1
1032	ALDER ST	SPRUCE DR	RAILROAD ST	230	36	2	5	29	73	0	$8,092	2A
1033	ALDER ST	SPRUCE DR	HEMLOCK ST	230	21	2	5	87	100	0	$0	1
1034	ALLEN LN	MILL BEACH RD	CULDESAC	300	25	2	4.5	24	43	1.75	$18,320	5
1035	ALTA LN	DEL NORTE	CULDESAC	170	22	2	4.5	47	98	0	$0	1
1036	ANDRUSS DR	PASSLEY RD	CULDESAC	240	16	2	4.5	100	100	0	$0	1
1037	ARCH LN	5 ST	ARCH LN	430	20	2	5	91	100	0	$0	1
1038	ARCH LN	SEACREST LN	UNNAMED DIRT	530	30	2	5	54	94	0	$0	1
1039	ARNOLD LN	CHETCO AV	MOORE ST	380	19	2	5	74	100	0	$0	1
1040	ARNOLD LN	MOORE ST	IRIS ST	590	19	2	5	4	80	0	$10,956	2A
1041	ARNOLD LN	IRIS ST	ROWLAND LN	360	22	2	5	5	69	1.5	$16,236	3
1044	AZALEA PARK RD	PACIFIC AV	OLD COUNTY RD	850	37	2	6.5	62	95	0	$0	1
1045	BARCLAY LN	COLLIS LN	CULDESAC	320	9	2	4.5	27	84	0	$2,815	2A
1049	BIRCH ST	ALDER ST	DEL NORTE	660	20	2	5	58	96	0	$0	1

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1050	BLUEBERRY DR	DAWSON RD	BLUEBERRY DR	420	28	2	5	91	100	0	$0	1
1051	BLUEBERRY DR	HOLMES DR	BLUEBERRY DR	290	28	2	5	91	100	0	$0	1
1053	BOYER CT	2 ST	CULDESAC	250	31	2	4.5	58	100	0	$0	1
1054	BRIDGE RD	CHETCO AV	CULDESAC	860	22	2	4.5	9	90	0	$18,491	2A
1055	BROOKE LN	5 ST	3 ST	1030	33	2	5	82	100	0	$0	1
1056	BUENA VISTA	BUENA VISTA	MEMORY LN	960	28	2	5	22	100	0	$26,271	2A
1059	CAMEO CT	RANSOM AV	CULDESAC	460	32	2	4.5	20	94	0	$14,386	2A
1061	CEDAR ST	MAPLE ST	MEMORY LN	910	30	2	5	58	100	0	$0	1
1062	CENTER ST	CHETCO AV	RAILROAD ST	690	48	2	6	7	56	1.5	$72,036	4
1071	CHETCO LN	CHETCO AV	CULDESAC	460	30	2	4.5	29	57	1.5	$30,015	4
1072	CLAIR LN	EASY ST	CULDESAC	240	21	2	4.5	82	100	0	$0	1
1073	COLLIS LN	ARNOLD LN	ROWLAND LN	140	28	2	5	62	96	0	$0	1
1074	COLLIS LN	ROWLAND LN	CULDESAC	490	18	2	4.5	38	96	0	$3,469	2
1079	CORAL CT	3 ST	CULDESAC	240	30	2	4.5	20	100	0	$7,037	2A
1080	COTTAGE ST	PACIFIC AV	MILL ST	660	27	2	5	32	83	0	$7,009	2
1081	COVE RD	RAILROAD ST	CULDESAC	1030	33	2	4.5	35	93	0	$13,369	2
1082	CRESTWOOD PL	RANSOM AV	CULDESAC	410	30	2	4.5	100	100	0	$0	1
1083	CRISSEY LP	CRISSEY LP	CHETCO AV	650	14	2	5	91	100	0	$0	1
1084	CUSHING CT	TANBARK RD	CULDESAC	450	21	2	4.5	47	100	0	$0	1
1085	CYPRESS ST	MAPLE ST	MEMORY LN	920	35	2	5	20	97	0	$31,470	2A
1086	DAWSON RD	BLUEBERRY DR	GARVIN CT	660	33	2	5	61	96	0	$0	1
1087	DAWSON RD	HOLMES DR	SPINDRIFT RD	220	25	2	5	48	100	0	$0	1
1088	DAWSON RD	HWY 101	PASSLEY RD DIRT	320	26	2	6	11	73	0	$8,131	2A
1089	DAWSON RD	OCEANSIDE DR	OCEAN PARK DR	870	26	2	5	91	100	0	$0	1
1090	DAWSON RD	PASSLEY RD	ZIA CT	370	26	2	5	89	100	0	$0	1
1091	DAWSON RD	SPINDRIFT RD	OCEANSIDE DR	630	20	2	5	89	100	0	$0	1
1094	DEL NORTE	WOODLAND	MEMORY LN	1610	21	2	6.5	100	100	0	$0	1
1095	EASY MANOR DR	EASY ST	EASY ST	920	21	2	5	1	43	1.75	$47,193	5
1096	EASY ST	3 ST	FERN AV	2430	24	2	6.5	91	100	0	$0	1
1097	EASY ST	CHETCO AV	2ND ST	790	20	2	6.5	39	86	0	$6,215	2
1098	EASY ST	2ND ST	3 ST	590	22	2	6.5	38	95	0	$5,105	2
1099	EASY ST	FERN AV	PIONEER RD	1170	45	2	6.5	12	71	0	$51,457	2A
1100	ELK DR	5 ST	FRONTAGE RD	250	33	2	5	61	96	0	$0	1
1101	ELK DR	FRONTAGE RD	FERN AV	1190	34	2	5	31	72	0	$15,914	2
1102	ENGLISH CT	1 ST	CULDESAC	250	32	2	4.5	20	100	0	$7,819	2A
1103	FAWN DR	MECHELLE LN	KEVIN PL	720	32	2	5	100	100	0	$0	1
1104	FERN AV	CHETCO AV	SPRUCE ST	200	39	2	5	100	100	0	$0	1
1105	FERN AV	EASY ST	RANSOM AV	770	23	2	5	79	100	0	$0	1
1106	FERN AV	ELK DR	EASY ST	850	28	2	5	10	62	1.5	$48,790	3
1107	FERN AV	HEMLOCK ST	RAILROAD ST	210	29	2	5	100	100	0	$0	1
1108	FERN AV	PACIFIC AV	ELK DR	910	25	2	5	64	97	0	$0	1
1109	FERN AV	PINE ST	FLEET ST	740	42	2	5	18	91	0	$30,376	2A
1110	FERN AV	SPRUCE ST	HEMLOCK ST	230	29	2	5	100	100	0	$0	1
1111	FIFIELD ST	DIRT	SMITH DR	1130	20	2	5	100	100	0	$0	1

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1112	FIR ST	OAK ST	OLD COUNTY RD	1230	25	2	5	100	100	0	$0	1
1116	FOUNTAIN	DEL NORTE	CULDESAC	130	24	2	4.5	79	98	0	$0	1
1117	FRONTAGE RD	CHETCO AV	ROSS RD	570	50	2	5	91	100	0	$0	1
1118	FRONTAGE RD	ROSS RD	ELK DR	90	30	2	5	1	5	1.5	$12,298	9
1119	GARVIN CT	DAWSON RD	CULDESAC	550	22	2	4.5	91	100	0	$0	1
1121	GLENWOOD DR	HWY 101	SEACREST LN	130	30	2	6	80	100	0	$0	1
1122	GLENWOOD DR	HARRIS HTS RD	SEACREST LN	240	36	2	5	30	78	1.5	$17,712	3
1123	GLENWOOD DR	SEACREST LN	GLENWOOD DR DIRT	980	35	2	5	82	100	0	$0	1
1125	HAMPTON RD	200' E/HAMPTON RD	CULDESAC	260	11	2	4.5	82	100	0	$0	1
1126	HAMPTON RD	HAMPTON RD	CULDESAC	320	11	2	4.5	80	100	0	$0	1
1127	HAMPTON RD	OAKWOOD CT	200' E/HAMPTON RD	200	24	2	5	87	100	0	$0	1
1128	HAMPTON RD	PARKVIEW DR	OAKWOOD CT	520	20	2	5	68	96	0	$0	1
1130	HARRIS HGTS RD	UNNAMED DIRT	HARRIS HGTS RD	600	24	2	5	58	96	0	$0	1
1005	HASSETT ST	MIDLAND ST	3 ST	280	33	2	5	60	94	0	$0	1
1138	HASSETT ST	3 ST	2ND ST	20	33	2	5	60	94	0	$0	1
1139	HASSETT ST	5 ST	HIGHLAND WY	820	33	2	5	57	93	0	$0	1
1140	HASSETT ST	5 ST	CULDESAC	630	33	2	4.5	59	97	0	$0	1
1141	HASSETT ST	7 ST DIRT	CULDESAC	290	13	2	4.5	49	100	0	$0	1
1142	HASSETT ST	HIGHLAND WY	MIDLAND ST	260	33	2	5	82	100	0	$0	1
1143	HASSETT ST	JOSHUA CT	PIONEER RD	150	21	2	5	9	61	1.5	$6,458	3
1144	HASSETT ST	KEVIN PL	WEAVER LN	1030	21	2	5	10	91	0	$21,140	2A
1145	HASSETT ST	OLD COUNTY RD	JOSHUA CT	380	32	2	5	35	90	0	$4,783	2
1146	HASSETT ST	3RD ST	CULDESAC	590	33	2	5	91	100	0	$0	1
1148	HAZEL ST	DEL NORTE	NORTH HAZEL ST	260	19	2	5	91	100	0	$0	1
1149	HAZEL ST	NORTH HAZEL ST	ALDER ST	660	20	2	5	96	100	0	$0	1
1150	HEATHER LN	CHETCO AV	CULDESAC	320	32	2	4.5	22	100	0	$10,008	2A
1151	HELEN LN	JODEE LN	5 ST	1680	33	2	5	82	100	0	$0	1
1152	HEMLOCK ST	ALDER ST	OAK ST	400	27	2	5	2	43	1.75	$26,381	5
1153	HEMLOCK ST	FERN AV	WHARF ST	690	35	2	5	31	80	0	$9,499	2
1154	HEMLOCK ST	OAK ST	WILLOW ST	400	20	2	5	20	97	0	$7,819	2A
1155	HEMLOCK ST	WILLOW ST	FERN AV	430	19	2	5	1	50	1.75	$19,957	5
1156	HIDDEN CT	3 ST	CULDESAC	230	24	2	4.5	91	100	0	$0	1
1157	HIGHLAND WY	HASSETT ST	RANSOM AV	720	32	2	5	12	74	0	$22,518	2A
1158	HILLSIDE DR	VALLEY ST	PACIFIC AV	680	40	2	6.5	24	91	0	$26,583	2A
1159	HOLMES DR	DAWSON RD	BLUEBERRY DR	1390	12	2	5	39	91	0	$6,561	2
1160	HOMESTEAD RD	RANSOM AV	VIEW CT	500	32	2	5	13	79	0	$15,637	2A
1161	HUB ST	ARNOLD LN	CULDESAC	890	13	2	4.5	2	73	0	$11,308	2A
1164	IRIS ST	ARNOLD LN	CULDESAC	830	21	2	4.5	58	97	0	$0	1
1165	JASMINE CT	6 ST	CULDESAC	180	27	2	4.5	91	100	0	$0	1
1166	JODEE LN	5 ST	KRISTA LN	1220	33	2	5	82	100	0	$0	1
1167	JOSHUA CT	HASSETT ST	CULDESAC	230	32	2	4.5	91	100	0	$0	1
1168	JULIE DR	RANSOM AV	VIEW CT	530	33	2	5	91	100	0	$0	1
1169	KEVIN PL	HASSETT ST	RANSOM AV	770	32	2	5	3	54	1.5	$53,592	4
1170	KINDEL	MEMORY LN	CULDESAC	230	19	2	4.5	12	77	0	$4,271	2A

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1171	KING ST	WHARF ST	RAILROAD ST	960	25	2	5	13	87	0	$23,456	2A
1172	KNOLL LN	ROWLAND LN	CULDESAC	210	35	2	4.5	24	100	0	$7,183	2A
1173	KRISTA LN	JODEE LN	5 ST	910	33	2	5	91	100	0	$0	1
1174	LILAC CT	MEMORY LN	CULDESAC	250	32	2	4.5	22	100	0	$7,819	2A
1175	LIMBAUGH WY	5 ST	CULDESAC	210	22	2	4.5	91	100	0	$0	1
1176	LINDA LN	TANBARK RD	CULDESAC	200	20	2	4.5	86	100	0	$0	1
1177	LINDEN LN	MULBERRY LN	SPRUCE DR	400	30	2	5	82	100	0	$0	1
1178	LUCKY LN	CHETCO AV	CULDESAC	270	27	2	4.5	91	100	0	$0	1
1179	LUMBERVIEW DR	PASSLEY RD	CULDESAC	280	18	2	4.5	89	100	0	$0	1
1180	LUNDEEN RD	OLD COUNTY RD	CULDESAC	960	20	2	4.5	69	100	0	$0	1
1181	MACKLYN COVE DR	SANDY LN	CULDESAC	420	22	2	4.5	18	82	0	$9,031	2A
1182	MAGNOLIA CT	EASY ST	CULDESAC	320	33	2	4.5	82	100	0	$0	1
1183	MAPLE ST	ALDER ST	DEL NORTE	770	20	2	5	88	100	0	$0	1
1184	MAPLE ST	OXFORD ST	ALDER ST	790	32	2	5	20	100	0	$24,707	2A
1185	MAR VISTA LN	1 ST	CULDESAC	210	16	2	4.5	84	100	0	$0	1
1186	MARDON CT	EASY ST	CULDESAC	350	34	2	4.5	20	100	0	$11,630	2A
1187	MARINA HEIGHTS RD	OLD COUNTY RD	PACIFIC TERRACE DR	2920	20	2	5	39	92	0	$22,971	2
1188	MARINE DR	MARINE DR	CULDESAC	610	10	2	4.5	27	92	0	$5,962	2A
1189	MARINE DR	OLD COUNTY RD	MARINE DR	2190	17	2	5	35	93	0	$14,644	2
1190	MARVISTA	2 ST	CULDESAC	220	12	2	4.5	16	95	0	$2,580	2A
1191	MATOT ST	RAILROAD ST	CULDESAC	330	21	2	4.5	82	100	0	$0	1
1192	MEADOW LN	7 ST	MEADOW LN DIRT	960	17	2	5	78	100	0	$0	1
1193	MECHELLE LN	KEVIN PL	FAWN DR	430	32	2	5	8	55	1.5	$29,928	4
1194	MEMORY LN	RAILROAD ST	TANBARK RD	810	28	2	6.5	1	32	1.75	$57,669	6
1195	MEMORY LN	TANBARK RD	ALDER STREET	1540	21	2	6.5	52	93	0	$0	1
1195a	MEMORY LN	ALDER ST	DEL NORTE	1080	21	2	6.5	100	100	0	$0	1
1196	MENDY ST	PACIFIC AV	CULDESAC	490	21	2	4.5	3	55	1.5	$22,381	4
1197	MIDLAND ST	2ND ST	RANSOM AV	720	32	2	5	9	88	0	$22,518	2A
1198	MIDLAND ST	3 ST	HASSETT ST	1050	27	2	5	56	100	0	$0	1
1199	MIDLAND ST	MIDLAND ST S	MIDLAND ST S	200	27	2	5	81	100	0	$0	1
1356	MIDLAND ST	MIDLAND ST N	MIDLAND ST N	200	27	2	5	81	100	0	$0	1
1200	MILL BEACH RD	ALLEN LN	MACKLYN COVE DR	20	33	2	5	1	1	1.5	$3,006	9
1201	MILL BEACH RD	CHETCO AV	CULDESAC	480	28	2	4.5	73	100	0	$0	1
1202	MILL BEACH RD	MILL BEACH RD DIRT	RAILROAD ST	470	28	2	5	49	96	0	$0	1
1203	MILL BEACH RD	RAILROAD ST	SMITH DR	470	24	2	5	84	100	0	$0	1
1204	MILL BEACH RD	SMITH DR	ALLEN LN	630	24	2	5	56	95	0	$0	1
1205	MILL ST	CHETCO AV	RAILROAD ST	580	38	2	5	91	100	0	$0	1
1206	MOORE ST	ARNOLD LN	CULDESAC	860	36	2	4.5	35	84	0	$12,178	2
1207	MULBERRY LN	LINDEN LN	SPRUCE DR	420	24	2	5	20	98	0	$9,852	2A
1208	MUSSER	DEL NORTE	MEMORY LN	580	16	2	5	5	82	0	$9,070	2A
1211	NO NAME FERN E	FERN AV	NO NAME FERN W	160	34	2	5	89	100	0	$0	1
1212	NO NAME FERN W	NO NAME FERN E	CHETCO AV	640	17	2	5	91	100	0	$0	1
1213	NORTH DR	DAWSON RD	CULDESAC	320	20	2	4.5	96	100	0	$0	1
1214	NORTH HAZEL ST	HAZEL ST	ALDER ST	770	20	2	5	89	100	0	$0	1

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1215	OAK ST	CHETCO AV	SPRUCE ST	200	38	2	6.5	80	100	0	$0	1
1216	OAK ST	PACIFIC ST	CHETCO AV	1050	42	2	6.5	64	94	0	$0	1
1217	OAK ST	HEMLOCK ST	RAILROAD ST	160	39	2	6.5	41	82	0	$2,454	2
1218	OAK ST	SPRUCE ST	HEMLOCK ST	230	38	2	6.5	91	100	0	$0	1
1219	OAKWOOD CT	HAMPTON RD	CULDESAC	290	23	2	4.5	91	100	0	$0	1
1220	OCEAN PARK CT	OCEAN PARK DR	CULDESAC	200	28	2	4.5	91	100	0	$0	1
1221	OCEAN PARK DR	OCEAN PARK CT	DAWSON RD	350	33	2	5	91	100	0	$0	1
1222	OCEANSIDE DR	DAWSON RD	CULDESAC	720	19	2	4.5	91	100	0	$0	1
1223	OLD COUNTY RD	AZALEA PARK RD	LUNDEEN RD	280	27	2	5	24	90	0	$7,389	2A
1224	OLD COUNTY RD	AZALEA PARK RD	CONSTITUTION WY	1100	27	2	5	61	96	0	$0	1
1225	OLD COUNTY RD	HASSETT ST	MARINE DR	1840	27	2	6	20	95	0	$48,554	2A
1226	OLD COUNTY RD	LUNDEEN RD	PACIFIC AV	340	29	2	5	8	69	1.5	$20,213	3
1227	OLD COUNTY RD	MARINA HEIGHTS RD	PACIFIC TERRACE DR	630	27	2	5	83	100	0	$0	1
1229	OLD COUNTY RD	PACIFIC AV	ROSICHELLI LN	250	27	2	6	1	1	1.5	$30,744	9
1230	OLD COUNTY RD UNNAMED	OLD COUNTY RD	CULDESAC	180	20	2	4.5	79	100	0	$0	1
1233	OVERGLEN CT	TIMBERLINE DR	CULDESAC	210	33	2	4.5	100	100	0	$0	1
1234	OXFORD ST	FLORAL DR	MAPLE ST	410	32	2	5	20	100	0	$12,823	2A
1235	OXFORD ST	RAILROAD ST	FLORAL DR	80	32	2	5	20	100	0	$2,502	2A
1236	PACIFIC AV	CHETCO AV	COTTAGE ST	150	41	2	5	63	93	0	$0	1
1237	PACIFIC AV	COTTAGE ST	RAILROAD ST	520	45	2	5	40	76	0	$9,204	2
1238	PACIFIC AV	PARK AV	CHETCO AV	900	24	2	6	84	100	0	$0	1
1239	PACIFIC AV	AZALEA PK RD	OLD COUNTY RD	1060	21	2	6	89	100	0	$0	1
1240	PACIFIC AV	PARK AV	FERN AV	340	40	2	6	77	96	0	$0	1
1241	PACIFIC AV	AZALEA PK RD	FERN AV	1240	42	2	6	26	73	0	$50,900	2A
1242	PACIFIC HGTS ST	DAWSON RD	RIDGEWAY DR	280	33	2	5	91	100	0	$0	1
1243	PACIFIC HGTS ST	RIDGEWAY DR	CULDESAC	200	24	2	4.5	91	100	0	$0	1
1246	PARADISE LN	RANSOM AV	CULDESAC	550	32	2	4.5	22	100	0	$17,201	2A
1247	PARK AV	PACIFIC AV	FERN AV	540	29	2	5	51	90	0	$0	1
1252	PARKVIEW DR	HAMPTON RD	VISTA RIDGE RD	3250	22	2	5	100	100	0	$0	1
1253	PARKVIEW DR	HWY 101	HAMPTON RD	1430	21	2	6	24	82	0	$29,349	2A
1254	PASSLEY RD	ANDRUSS DR	WEST CLIFF DR	300	22	2	5	91	100	0	$0	1
1255	PASSLEY RD	PASSLEY RD DIRT	SUSAN PL	290	18	2	5	86	100	0	$0	1
1256	PASSLEY RD	SUSAN PL	ANDRUSS DR	360	22	2	5	67	100	0	$0	1
1257	PASSLEY RD	WEST CLIFF DR	OCEAN PARK CT	590	33	2	5	91	100	0	$0	1
1258	PINE ST	ALDER ST	OAK ST	820	19	2	5	88	100	0	$0	1
1259	PINE ST	FERN AV	CULDESAC	460	22	2	4.5	89	100	0	$0	1
1260	PIONEER LN	7 ST	CULDESAC	340	15	2	4.5	11	88	0	$4,984	2A
1261	PIONEER RD	PACIFIC AV	EASY ST	680	52	2	6.5	100	100	0	$0	1
1262	PIONEER RD	RANSOM AV	HASSETT ST	1500	21	2	6	34	93	0	$12,390	2
1263	RAILROAD ST	MILL BEACH RD	PACIFIC AV	1070	41	2	5.5	91	100	0	$0	1
1264	RAILROAD ST	DEL NORTE	ALDER ST	530	27	2	6.5	100	100	0	$0	1
1265	RAILROAD ST	OAK ST	ALDER ST	500	27	2	5.5	100	100	0	$0	1
1266	RAILROAD ST	RAILROAD ST	END	1980	27	2	6.5	20	91	0	$52,248	2A
1267	RAILROAD ST	WHARF ST	OAK ST	1630	27	2	5.5	34	78	0	$17,311	2

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1268	RAILROAD ST	PACIFIC AV	CENTER ST	940	26	2	5.5	46	89	0	$9,613	2
1269	RAILROAD ST	WHARF ST	CENTER ST	340	26	2	6.5	89	100	0	$0	1
1270	RAILROAD UNNAMED	RAILROAD ST	5 ST	720	24	2	5	100	100	0	$0	1
1271	RANSOM AV	2 ST	3 ST	470	19	2	6	57	96	0	$0	1
1272	RANSOM AV	2 ST	2 ST	180	19	2	6	43	89	0	$1,345	2
1273	RANSOM AV	3 ST	MIDLAND ST	270	23	2	6	100	100	0	$0	1
1274	RANSOM AV	4 ST	BARBRA LN DIRT	490	35	2	6	100	100	0	$0	1
1275	RANSOM AV	5 ST	310' E/O 5 ST	310	32	2	6	100	100	0	$0	1
1276	RANSOM AV	6 ST	FERN AV	520	32	2	6	4	30	2	$49,365	7
1277	RANSOM AV	BARBRA LN DIRT	5 ST	220	21	2	6	42	89	0	$1,817	2
1278	RANSOM AV	CHETCO AV	JULIE DR	440	29	2	6	100	100	0	$0	1
1279	RANSOM AV	FAWN DR	PIONEER RD	580	32	2	6	1	1	1.5	$84,535	9
1280	RANSOM AV	FERN AV	KEVIN PL	320	32	2	5	1	17	2	$31,915	8
1281	RANSOM AV	JULIE DR	2 ST	920	29	2	6	57	94	0	$0	1
1282	RANSOM AV	KEVIN PL	FAWN DR	430	32	2	6	2	70	1.5	$28,208	3
1283	RANSOM AV	MIDLAND ST	4 ST	360	35	2	6	100	100	0	$0	1
1275a	RANSOM AV	310' E/O 5 ST	6 ST	310	32	2	6	100	100	0	$0	1
1284	REDWOOD ST	ALDER ST	MYRTLE ST	410	9	2	5	11	93	0	$3,606	2A
1285	REDWOOD ST	FERN AV	OAK ST	710	22	2	5	3	81	0	$15,266	2A
1286	REDWOOD ST	OAK ST	ALDER ST	430	18	2	5	82	100	0	$0	1
1287	RICHARD ST	EASY ST	RICHARD ST	160	21	2	5	2	72	0	$3,284	2A
1288	RICHARD ST	RICHARD ST	RICHARD ST	570	12	2	5	80	100	0	$0	1
1289	RIDGEWAY DR	PACIFIC HGTS ST	CULDESAC	510	27	2	4.5	91	100	0	$0	1
1290	RIVIERA CT	MARINA HEIGHTS RD	CULDESAC	580	22	2	4.5	91	100	0	$0	1
1291	ROSICHELLI LN	OLD COUNTY RD	CULDESAC	450	27	2	4.5	91	100	0	$0	1
1292	ROSS RD	FRONTAGE RD	CULDESAC	380	17	2	4.5	35	88	0	$2,541	2
1293	ROWLAND LN	COLLINS LN	CULDESAC	660	28	2	4.5	62	96	0	$0	1
1294	ROWLAND LN	KNOLL LN	ARNOLD LN	330	33	2	5	91	100	0	$0	1
1295	ROWLAND LN	SMITH DR	KNOLL LN	460	34	2	5	20	100	0	$15,285	2A
1296	RUTH LN	4 ST	CULDESAC	170	32	2	4.5	91	100	0	$0	1
1297	SANDY LN	MACKLYN COVE DR	CULDESAC	370	33	2	4.5	1	1	1.5	$55,613	9
1299	SEACREST LN	ARCH LN	BURGESS LN	690	35	2	5	61	95	0	$0	1
1300	SEACREST LN	BURGESS LN	CULDESAC	330	35	2	4.5	91	100	0	$0	1
1301	SEACREST LN	SEACREST LN	CULDESAC	230	35	2	4.5	91	100	0	$0	1
1302	SEACREST LN	GLENWOOD DR	ARCH LN	100	35	2	5	27	69	1.5	$7,175	3
1303	SEACREST LN	GLENWOOD DR	HARRIS HGTS RD	630	28	2	5	91	100	0	$0	1
1308	SEASCAPE CT	TANBARK RD	CULDESAC	430	11	2	4.5	1	66	1.5	$9,697	3
1309	SHOREWOOD TR	PACIFIC HGTS ST	CULDESAC	760	27	2	4.5	91	100	0	$0	1
1310	SMITH DR	FIFIELD ST	MILL BEACH RD	690	34	2	5	22	100	0	$22,928	2A
1312	SPINDRIFT RD	DAWSON RD	CULDESAC	210	14	2	4.5	91	100	0	$0	1
1313	SPRUCE DR	LINDEN LN	ALDER ST	350	30	2	5	42	98	0	$0	1
1314	SPRUCE DR	SPRUCE ST	LINDEN LN	1570	30	2	5	11	78	0	$46,032	2A
1315	SPRUCE ST	ALDER ST	OAK ST	420	25	2	5	3	21	2	$31,150	7
1316	SPRUCE ST	FERN AV	WHARF ST	620	26	2	5	36	89	0	$6,341	2

OVERALL LIST OF STREETS

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy
1317	SPRUCE ST	OAK ST	WILLOW ST	410	21	2	5	100	100	0	$0	1
1318	SPRUCE ST	WHARF ST	CENTER ST	240	35	2	5	100	100	0	$0	1
1319	SPRUCE ST	WILLOW ST	FERN AV	420	22	2	5	100	100	0	$0	1
1320	SUNRIDGE TR	PASSLEY RD	CULDESAC	340	16	2	4.5	91	100	0	$0	1
1321	SUSAN PL	PASSLEY RD	CULDESAC	170	18	2	4.5	82	100	0	$0	1
1322	TANBARK CR	TANBARK RD	CULDESAC	180	36	2	4.5	91	100	0	$0	1
1323	TANBARK RD	CUSHING CT	SEASCAPE CT	130	34	2	5	91	100	0	$0	1
1324	TANBARK RD	MEMORY LN	CUSHING CT	700	20	2	5	81	98	0	$0	1
1325	TANBARK RD	RAILROAD ST	MEMORY LN	730	26	2	5	89	100	0	$0	1
1326	TANBARK RD	SEASCAPE CT	TANBARK CR	440	33	2	5	39	82	0	$5,711	2
1327	TANBARK RD	TANBARK CR	CULDESAC	140	20	2	4.5	91	100	0	$0	1
1328	TIMBERLINE DR	3 ST	OVERGLEN CT	1160	33	2	5	82	100	0	$0	1
1329	TIMBERLINE DR	CULDESAC	TIMBERLINE DR	190	23	2	4.5	91	100	0	$0	1
1330	TIMBERLINE DR	OVERGLEN CT	HASSETT ST	620	33	2	5	82	100	0	$0	1
1331	TRUMAN LN	BARCLAY LN	CULDESAC	180	9	2	4.5	1	78	0	$1,583	2A
1332	VALLEY ST	HILLSIDE DR	CHETCO AV	350	14	2	5	1	65	1.5	$10,045	3
1333	VELOPA CT	TANBARK RD	CULDESAC	380	33	2	4.5	82	100	0	$0	1
1334	VIEW CT	HOMESTEAD RD	CULDESAC	160	32	2	4.5	33	86	0	$2,014	2
1335	VIEW CT	JULIE DR	HOMESTEAD RD	380	33	2	5	91	100	0	$0	1
1336	VISTA CT	VISTA RIDGE RD	CULDESAC	340	33	2	4.5	91	100	0	$0	1
1337	VISTA RIDGE RD	VISTA CT	GOWMAN LN	1670	33	2	5	84	100	0	$0	1
1338	W HARRIS HTS	GLENWOOD DR	CULDESAC	1130	17	2	4.5	77	100	0	$0	1
1355	WEAVER LN	HASSETT	END	450	18	2	4.5	83	100	0	$0	1
1340	WELCH CT	PARKVIEW DR	CULDESAC	140	27	2	4.5	82	100	0	$0	1
1341	WEST CLIFF DR	PASSLEY RD	CULDESAC	270	16	2	4.5	91	100	0	$0	1
1342	WEST PARK CT	PARKVIEW DR	CULDESAC	390	27	2	4.5	91	100	0	$0	1
1343	WHARF ST	CHETCO AV	SPRUCE ST	280	39	2	5	100	100	0	$0	1
1345	WHARF ST	RAILROAD ST	WHARF ST	1290	29	2	5	89	100	0	$0	1
1347	WHARF ST	SPRUCE ST	RAILROAD ST	430	38	2	6	100	100	0	$0	1
1348	WHITNEY WY	PASSLEY RD	CULDESAC	250	18	2	4.5	51	98	0	$0	1
1349	WILLOW ST	CHETCO AV	SPRUCE ST	200	26	2	5	100	100	0	$0	1
1350	WILLOW ST	HEMLOCK ST	RAILROAD ST	210	21	2	5	100	100	0	$0	1
1351	WILLOW ST	SPRUCE ST	HEMLOCK ST	230	26	2	5	100	100	0	$0	1
1352	WOODLAND	DEL NORTE	CULDESAC	220	18	2	4.5	100	100	0	$0	1
1353	ZIA CT	DAWSON RD	CULDESAC	230	27	2	4.5	91	100	0	$0	1
				Weighted Average =				**56.7**	**89.7**		$2,157,036	

MAJOR MAINTENANCE INVENTORY - Alphabetic Listing

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy	Cumul Cost
1001	1 ST	RANSOM AV	EASY ST	850	18	2	5	3	57	1.5	$ 33,278	4	$ 33,278
1014	5 ST	BARBRA LN DIRT	RANSOM AV	360	32	2	6.5	11	15	2	$ 35,904	8	$ 69,182
1018	5 ST	ELK DR	EASY ST	1320	35	2	6.5	6	31	1.75	$ 117,473	6	$ 186,655
1020	5 ST	RANSOM AV	LIMBAUGH WY	280	25	2	6.5	4	58	1.5	$ 15,225	4	$ 201,880
1023	7 ST	PIONEER LN	MEADOW LN	530	18	2	5	2	54	1.5	$ 20,750	4	$ 222,629
1027	ALDER ST	HEMLOCK ST	SPRUCE DR	90	29	2	5	25	40	1.75	$ 6,636	6	$ 229,266
1034	ALLEN LN	MILL BEACH RD	CULDESAC	300	25	2	4.5	24	43	1.75	$ 18,320	5	$ 247,586
1041	ARNOLD LN	IRIS ST	ROWLAND LN	360	22	2	5	5	69	1.5	$ 16,236	3	$ 263,822
1062	CENTER ST	CHETCO AV	RAILROAD ST	690	48	2	6	7	56	1.5	$ 72,036	4	$ 335,858
1071	CHETCO LN	CHETCO AV	CULDESAC	460	30	2	4.5	29	57	1.5	$ 30,015	4	$ 365,873
1095	EASY MANOR DR	EASY ST	EASY ST	920	21	2	5	1	43	1.75	$ 47,193	5	$ 413,066
1106	FERN AV	ELK DR	EASY ST	850	28	2	5	10	62	1.5	$ 48,790	3	$ 461,856
1118	FRONTAGE RD	ROSS RD	ELK DR	90	30	2	5	1	5	1.5	$ 12,298	9	$ 474,154
1122	GLENWOOD DR	HARRIS HTS RD	SEACREST LN	240	36	2	5	30	78	1.5	$ 17,712	3	$ 491,866
1143	HASSETT ST	JOSHUA CT	PIONEER RD	150	21	2	5	9	61	1.5	$ 6,458	3	$ 498,323
1152	HEMLOCK ST	ALDER ST	OAK ST	400	27	2	5	2	43	1.75	$ 26,381	5	$ 524,704
1155	HEMLOCK ST	WILLOW ST	FERN AV	430	19	2	5	1	50	1.75	$ 19,957	5	$ 544,661
1169	KEVIN PL	HASSETT ST	RANSOM AV	770	32	2	5	3	54	1.5	$ 53,592	4	$ 598,253
1193	MECHELLE LN	KEVIN PL	FAWN DR	430	32	2	5	8	55	1.5	$ 29,928	4	$ 628,181
1194	MEMORY LN	RAILROAD ST	TANBARK RD	810	28	2	6.5	1	32	1.75	$ 57,669	6	$ 685,850
1196	MENDY ST	PACIFIC AV	CULDESAC	490	21	2	4.5	3	55	1.5	$ 22,381	4	$ 708,231
1200	MILL BEACH RD	ALLEN LN	MACKLYN COVE DR	20	33	2	5	1	1	1.5	$ 3,006	9	$ 711,237
1226	OLD COUNTY RD	LUNDEEN RD	PACIFIC AV	340	29	2	5	8	69	1.5	$ 20,213	3	$ 731,450
1229	OLD COUNTY RD	PACIFIC AV	ROSICHELLI LN	250	27	2	6	1	1	1.5	$ 30,744	9	$ 762,194
1276	RANSOM AV	6 ST	FERN AV	520	32	2	6	4	30	2	$ 49,365	7	$ 811,559
1279	RANSOM AV	FAWN DR	PIONEER RD	580	32	2	6	1	1	1.5	$ 84,535	9	$ 896,094
1280	RANSOM AV	FERN AV	KEVIN PL	320	32	2	5	1	17	2	$ 31,915	8	$ 928,009
1282	RANSOM AV	KEVIN PL	FAWN DR	430	32	2	6	2	70	1.5	$ 28,208	3	$ 956,217
1297	SANDY LN	MACKLYN COVE DR	CULDESAC	370	33	2	4.5	1	1	1.5	$ 55,613	9	$ 1,011,830
1302	SEACREST LN	GLENWOOD DR	ARCH LN	100	35	2	5	27	69	1.5	$ 7,175	3	$ 1,019,005
1308	SEASCAPE CT	TANBARK RD	CULDESAC	430	11	2	4.5	1	66	1.5	$ 9,697	3	$ 1,028,701
1315	SPRUCE ST	ALDER ST	OAK ST	420	25	2	5	3	21	2	$ 31,150	7	$ 1,059,851

MAJOR MAINTENANCE INVENTORY - Priority Listing (SI)

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Overlay	Cost	Strategy	Cumul Cost
1200	MILL BEACH RD	ALLEN LN	MACKLYN COVE DR	20	33	2	5	1	1	1.5	$ 3,006	9	$ 3,006
1229	OLD COUNTY RD	PACIFIC AV	ROSICHELLI LN	250	27	2	6	1	1	1.5	$ 30,744	9	$ 33,750
1279	RANSOM AV	FAWN DR	PIONEER RD	580	32	2	6	1	1	1.5	$ 84,535	9	$ 118,285
1297	SANDY LN	MACKLYN COVE DR	CULDESAC	370	33	2	4.5	1	1	1.5	$ 55,613	9	$ 173,898
1118	FRONTAGE RD	ROSS RD	ELK DR	90	30	2	5	1	5	1.5	$ 12,298	9	$ 186,196
1014	5 ST	BARBRA LN DIRT	RANSOM AV	360	32	2	6.5	11	15	2	$ 35,904	8	$ 222,100
1280	RANSOM AV	FERN AV	KEVIN PL	320	32	2	5	1	17	2	$ 31,915	8	$ 254,014
1315	SPRUCE ST	ALDER ST	OAK ST	420	25	2	5	3	21	2	$ 31,150	7	$ 285,164
1276	RANSOM AV	6 ST	FERN AV	520	32	2	6	4	30	2	$ 49,365	7	$ 334,530
1018	5 ST	ELK DR	EASY ST	1320	35	2	6.5	6	31	1.75	$ 117,473	6	$ 452,003
1194	MEMORY LN	RAILROAD ST	TANBARK RD	810	28	2	6.5	1	32	1.75	$ 57,669	6	$ 509,671
1027	ALDER ST	HEMLOCK ST	SPRUCE DR	90	29	2	5	25	40	1.75	$ 6,636	6	$ 516,308
1152	HEMLOCK ST	ALDER ST	OAK ST	400	27	2	5	2	43	1.75	$ 26,381	5	$ 542,689
1034	ALLEN LN	MILL BEACH RD	CULDESAC	300	25	2	4.5	24	43	1.75	$ 18,320	5	$ 561,009
1095	EASY MANOR DR	EASY ST	EASY ST	920	21	2	5	1	43	1.75	$ 47,193	5	$ 608,203
1155	HEMLOCK ST	WILLOW ST	FERN AV	430	19	2	5	1	50	1.75	$ 19,957	5	$ 628,159
1023	7 ST	PIONEER LN	MEADOW LN	530	18	2	5	2	54	1.5	$ 20,750	4	$ 648,909
1169	KEVIN PL	HASSETT ST	RANSOM AV	770	32	2	5	3	54	1.5	$ 53,592	4	$ 702,501
1193	MECHELLE LN	KEVIN PL	FAWN DR	430	32	2	5	8	55	1.5	$ 29,928	4	$ 732,429
1196	MENDY ST	PACIFIC AV	CULDESAC	490	21	2	4.5	3	55	1.5	$ 22,381	4	$ 754,810
1062	CENTER ST	CHETCO AV	RAILROAD ST	690	48	2	6	7	56	1.5	$ 72,036	4	$ 826,846
1001	1 ST	RANSOM AV	EASY ST	850	18	2	5	3	57	1.5	$ 33,278	4	$ 860,123
1071	CHETCO LN	CHETCO AV	CULDESAC	460	30	2	4.5	29	57	1.5	$ 30,015	4	$ 890,138
1020	5 ST	RANSOM AV	LIMBAUGH WY	280	25	2	6.5	4	58	1.5	$ 15,225	4	$ 905,363
1143	HASSETT ST	JOSHUA CT	PIONEER RD	150	21	2	5	9	61	1.5	$ 6,458	3	$ 911,821
1106	FERN AV	ELK DR	EASY ST	850	28	2	5	10	62	1.5	$ 48,790	3	$ 960,611
1332	VALLEY ST	HILLSIDE DR	CHETCO AV	350	14	2	5	1	65	1.5	$ 10,045	3	$ 970,656
1308	SEASCAPE CT	TANBARK RD	CULDESAC	430	11	2	4.5	1	66	1.5	$ 9,697	3	$ 980,352
1302	SEACREST LN	GLENWOOD DR	ARCH LN	100	35	2	5	27	69	1.5	$ 7,175	3	$ 987,527
1041	ARNOLD LN	IRIS ST	ROWLAND LN	360	22	2	5	5	69	1.5	$ 16,236	3	$ 1,003,763
1226	OLD COUNTY RD	LUNDEEN RD	PACIFIC AV	340	29	2	5	8	69	1.5	$ 20,213	3	$ 1,023,976
1282	RANSOM AV	KEVIN PL	FAWN DR	430	32	2	6	2	70	1.5	$ 28,208	3	$ 1,052,184

CAPE SEAL INVENTORY - Priority Listing

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Cost	Cumulative Cost	Strategy
1030	ALDER ST	PINE ST	REDWOOD ST	290	26	2	5	1	73	$ 7,369	$ 7,369	2A
1331	TRUMAN LN	BARCLAY LN	CULDESAC	180	9	2	4.5	1	78	$ 1,583	$ 8,952	2A
1287	RICHARD ST	EASY ST	RICHARD ST	160	21	2	5	2	72	$ 3,284	$ 12,236	2A
1161	HUB ST	ARNOLD LN	CULDESAC	890	13	2	4.5	2	73	$ 11,308	$ 23,544	2A
1285	REDWOOD ST	FERN AV	OAK ST	710	22	2	5	3	81	$ 15,266	$ 38,810	2A
1040	ARNOLD LN	MOORE ST	IRIS ST	590	19	2	5	4	80	$ 10,956	$ 49,766	2A
1208	MUSSER	DEL NORTE	MEMORY LN	580	16	2	5	5	82	$ 9,070	$ 58,835	2A
1197	MIDLAND ST	2ND ST	RANSOM AV	720	32	2	5	9	88	$ 22,518	$ 81,353	2A
1054	BRIDGE RD	CHETCO AV	CULDESAC	860	22	2	4.5	9	90	$ 18,491	$ 99,844	2A
1144	HASSETT ST	KEVIN PL	WEAVER LN	1030	21	2	5	10	91	$ 21,140	$ 120,984	2A
1088	DAWSON RD	HWY 101	PASSLEY RD DIRT	320	26	2	6	11	73	$ 8,131	$ 129,116	2A
1314	SPRUCE DR	SPRUCE ST	LINDEN LN	1570	30	2	5	11	78	$ 46,032	$ 175,148	2A
1260	PIONEER LN	7 ST	CULDESAC	340	15	2	4.5	11	88	$ 4,984	$ 180,132	2A
1284	REDWOOD ST	ALDER ST	MYRTLE ST	410	9	2	5	11	93	$ 3,606	$ 183,739	2A
1099	EASY ST	FERN AV	PIONEER RD	1170	45	2	6.5	12	71	$ 51,457	$ 235,195	2A
1157	HIGHLAND WY	HASSETT ST	RANSOM AV	720	32	2	5	12	74	$ 22,518	$ 257,713	2A
1170	KINDEL	MEMORY LN	CULDESAC	230	19	2	4.5	12	77	$ 4,271	$ 261,984	2A
1160	HOMESTEAD RD	RANSOM AV	VIEW CT	500	32	2	5	13	79	$ 15,637	$ 277,621	2A
1171	KING ST	WHARF ST	RAILROAD ST	960	25	2	5	13	87	$ 23,456	$ 301,077	2A
1022	6 ST	RANSOM AV	JASMINE CT	470	19	2	5	13	90	$ 8,728	$ 309,805	2A
1190	MARVISTA	2 ST	CULDESAC	220	12	2	4.5	16	95	$ 2,580	$ 312,385	2A
1181	MACKLYN COVE DR	SANDY LN	CULDESAC	420	22	2	4.5	18	82	$ 9,031	$ 321,416	2A
1109	FERN AV	PINE ST	FLEET ST	740	42	2	5	18	91	$ 30,376	$ 351,791	2A
1266	RAILROAD ST	RAILROAD ST	END	1980	27	2	6.5	20	91	$ 52,248	$ 404,039	2A
1059	CAMEO CT	RANSOM AV	CULDESAC	460	32	2	4.5	20	94	$ 14,386	$ 418,426	2A
1225	OLD COUNTY RD	HASSETT ST	MARINE DR	1840	27	2	6	20	95	$ 48,554	$ 466,980	2A
1004	2 ST	RANSOM AV	CULDESAC	660	23	2	4.5	20	95	$ 14,836	$ 481,816	2A
1085	CYPRESS ST	MAPLE ST	MEMORY LN	920	35	2	5	20	97	$ 31,470	$ 513,286	2A
1154	HEMLOCK ST	OAK ST	WILLOW ST	400	20	2	5	20	97	$ 7,819	$ 521,104	2A
1207	MULBERRY LN	LINDEN LN	SPRUCE DR	420	24	2	5	20	98	$ 9,852	$ 530,956	2A
1079	CORAL CT	3 ST	CULDESAC	240	30	2	4.5	20	100	$ 7,037	$ 537,993	2A
1102	ENGLISH CT	1 ST	CULDESAC	250	32	2	4.5	20	100	$ 7,819	$ 545,811	2A
1184	MAPLE ST	OXFORD ST	ALDER ST	790	32	2	5	20	100	$ 24,707	$ 570,518	2A
1186	MARDON CT	EASY ST	CULDESAC	350	34	2	4.5	20	100	$ 11,630	$ 582,149	2A
1234	OXFORD ST	FLORAL DR	MAPLE ST	410	32	2	5	20	100	$ 12,823	$ 594,971	2A
1235	OXFORD ST	RAILROAD ST	FLORAL DR	80	32	2	5	20	100	$ 2,502	$ 597,473	2A
1295	ROWLAND LN	SMITH DR	KNOLL LN	460	34	2	5	20	100	$ 15,285	$ 612,759	2A
1006	2ND ST UNNAMED	2 ST	CULDESAC	120	21	2	4.5	21	100	$ 2,463	$ 615,222	2A
1056	BUENA VISTA	BUENA VISTA	MEMORY LN	960	28	2	5	22	100	$ 26,271	$ 641,492	2A

CAPE SEAL INVENTORY - Priority Listing

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Cost	Cumulative Cost	Strategy
1150	HEATHER LN	CHETCO AV	CULDESAC	320	32	2	4.5	22	100	$ 10,008	$ 651,500	2A
1174	LILAC CT	MEMORY LN	CULDESAC	250	32	2	4.5	22	100	$ 7,819	$ 659,319	2A
1246	PARADISE LN	RANSOM AV	CULDESAC	550	32	2	4.5	22	100	$ 17,201	$ 676,520	2A
1310	SMITH DR	FIFIELD ST	MILL BEACH RD	690	34	2	5	22	100	$ 22,928	$ 699,448	2A
1253	PARKVIEW DR	HWY 101	HAMPTON RD	1430	21	2	6	24	82	$ 29,349	$ 728,797	2A
1223	OLD COUNTY RD	AZALEA PARK RD	LUNDEEN RD	280	27	2	5	24	90	$ 7,389	$ 736,186	2A
1158	HILLSIDE DR	VALLEY ST	PACIFIC AV	680	40	2	6.5	24	91	$ 26,583	$ 762,770	2A
1172	KNOLL LN	ROWLAND LN	CULDESAC	210	35	2	4.5	24	100	$ 7,183	$ 769,953	2A
1010	3 ST	RANSOM AV	HASSETT ST	720	34	2	6.5	25	81	$ 23,925	$ 793,878	2A
1241	PACIFIC AV	AZALEA PK RD	FERN AV	1240	42	2	6	26	73	$ 50,900	$ 844,778	2A
1013	5 ST	5TH ST FORK	BARBRA LN DIRT	210	32	2	6.5	27	72	$ 6,568	$ 851,345	2A
1045	BARCLAY LN	COLLIS LN	CULDESAC	320	9	2	4.5	27	84	$ 2,815	$ 854,160	2A
1188	MARINE DR	MARINE DR	CULDESAC	610	10	2	4.5	27	92	$ 5,962	$ 860,122	2A
1032	ALDER ST	SPRUCE DR	RAILROAD ST	230	36	2	5	29	73	$ 8,092	$ 868,214	2A

SLURRY INVENTORY - Alphabetic Listing

Sec ID	Name	From	To	Length	Width	Lanes	TI	PCI	SI	Cost	Cumul Cost	Strategy
1019	5 ST	HELEN LN	ARCH LN	1690	33	2	6.5	35	71	$ 21,936	$ 21,936	2
1354	7 ST	HASSETT ST	PIONEER RD	640	18	2	5	36	87	$ 4,531	$ 26,467	2
1074	COLLIS LN	ROWLAND LN	CULDESAC	490	18	2	4.5	38	96	$ 3,469	$ 29,937	2
1080	COTTAGE ST	PACIFIC AV	MILL ST	660	27	2	5	32	83	$ 7,009	$ 36,946	2
1081	COVE RD	RAILROAD ST	CULDESAC	1030	33	2	4.5	35	93	$ 13,369	$ 50,315	2
1097	EASY ST	CHETCO AV	2ND ST	790	20	2	6.5	39	86	$ 6,215	$ 56,530	2
1098	EASY ST	2ND ST	3 ST	590	22	2	6.5	38	95	$ 5,105	$ 61,635	2
1101	ELK DR	FRONTAGE RD	FERN AV	1190	34	2	5	31	72	$ 15,914	$ 77,550	2
1145	HASSETT ST	OLD COUNTY RD	JOSHUA CT	380	32	2	5	35	90	$ 4,783	$ 82,333	2
1153	HEMLOCK ST	FERN AV	WHARF ST	690	35	2	5	31	80	$ 9,499	$ 91,832	2
1159	HOLMES DR	DAWSON RD	BLUEBERRY DR	1390	12	2	5	39	91	$ 6,561	$ 98,392	2
1187	MARINA HEIGHTS RD	OLD COUNTY RD	PACIFIC TERRACE DR	2920	20	2	5	39	92	$ 22,971	$ 121,363	2
1189	MARINE DR	OLD COUNTY RD	MARINE DR	2190	17	2	5	35	93	$ 14,644	$ 136,007	2
1206	MOORE ST	ARNOLD LN	CULDESAC	860	36	2	4.5	35	84	$ 12,178	$ 148,184	2
1217	OAK ST	HEMLOCK ST	RAILROAD ST	160	39	2	6.5	41	82	$ 2,454	$ 150,639	2
1237	PACIFIC AV	COTTAGE ST	RAILROAD ST	520	45	2	5	40	76	$ 9,204	$ 159,843	2
1262	PIONEER RD	RANSOM AV	HASSETT ST	1500	21	2	6	34	93	$ 12,390	$ 172,233	2
1267	RAILROAD ST	WHARF ST	OAK ST	1630	27	2	5.5	34	78	$ 17,311	$ 189,543	2
1268	RAILROAD ST	PACIFIC AV	CENTER ST	940	26	2	5.5	46	89	$ 9,613	$ 199,156	2
1272	RANSOM AV	2 ST	2 ST	180	19	2	6	43	89	$ 1,345	$ 200,502	2
1277	RANSOM AV	BARBRA LN DIRT	5 ST	220	21	2	6	42	89	$ 1,817	$ 202,319	2
1292	ROSS RD	FRONTAGE RD	CULDESAC	380	17	2	4.5	35	88	$ 2,541	$ 204,860	2
1316	SPRUCE ST	FERN AV	WHARF ST	620	26	2	5	36	89	$ 6,341	$ 211,200	2
1326	TANBARK RD	SEASCAPE CT	TANBARK CR	440	33	2	5	39	82	$ 5,711	$ 216,912	2
1334	VIEW CT	HOMESTEAD RD	CULDESAC	160	32	2	4.5	33	86	$ 2,014	$ 218,925	2
											$ 1,087,139	

CITY OF BROOKINGS

COUNCIL WORKSHOP REPORT

Meeting Date: April 7, 2014

Originating Dept: City Manager

Signature (submitted by)

City Manager Approval

Subject: Tourism Promotion Advisory Commission

Background/Discussion:
The City Council established a Tourism Promotion Advisory Committee (TPAC) in August 2012. The stated purpose of the TPAC was to "work with the City staff and contract service providers in the development and implementation of a tourism promotion program, and to report back to the City Council on the effectiveness of said program."

In August 2013 the City Council indicated that they wanted TPAC to "explore alternative structures for its committee and explore the feasibility of a joint relationship for tourism promotion with the Brookings Harbor Port District and the Brookings Harbor Chamber of Commerce." The Council also indicated its interest in formalizing the TPAC into a City Commission. Staff has prepared a draft Chapter that would be added to the Brookings Municipal Code. The draft Chapter is similar to that which created the Urban Renewal Advisory Commission and indicates that the primary role of the TPAC is to advise the City Council on the use of transient occupancy tax revenues allocated for tourism promotion.

Note that the current TPAC is doing more than making recommendations on the use of TOT revenues at this time. Currently, TPAC members are actually conducting a tourism promotion program by:

1. Making recommendations for contracting with individuals and organizations to conduct events. Interacting with event sponsors concerning how the events are conducted and evaluated.
2. Providing detailed direction to contractors retained to produce video products, including determining and approving program content.
3. Coordinating with other entities, such as the Chamber of Commerce and Port District, on the selection and joint purchase of an event tent, including setting policies on who will own and manage the tent.

TPAC is not adequately staffed to function as a tourism agency. As a result, individual members of TPAC, and TPAC members collectively, have taken on the role of managing various aspects of the TPAC's work, such as evaluating/recommending event sponsors and determining advertising content. Because TPAC...and thereby the City...has become a tourism promotion agency, as opposed to contracting for this service, City staff has been impacted by developing contracts with the various event sponsors and service providers. In many cases, this has involved extensive work by City staff to draft contractual agreements, educate service providers and event sponsors on liability and insurance issues, assist contractors in obtaining insurance, and dealing

with issues such as work not being completed by deadlines. A total of 10 tourism related service contracts have been executed by the City since TPACs inception.

City staff has also become involved in providing "actors" for various video productions, interacting with KOBI-TV on advertising scripts, reviewing and approving advertising invoices, processing invoices for payment and other administrative functions.

The City Manager recommends that the City Council further discuss the role of TPAC before proceeding with formalizing TPAC as a Commission. If the role of TPAC is simply to recommend how TOT funds are to be used, these recommendations would then be implemented and managed by staff upon the approval of the City Council. If TPAC is to continue operating as the City's tourism promotion agency, the City Manager recommends additional staffing to handle administrative matters and provide management oversight.

At its March meeting, a motion was made to recommend a contract with a specific vendor to develop a City tourism promotion website. The City Manager, who was unable to attend the previous meeting, intervened in this discussion noting that the City had not conducted an open solicitation for proposals, that the "proposal" submitted by the proposed vendor was essentially a schedule of fees, the work and "deliverable" to be performed by the vendor was not well defined, issues of who would own/manage the website were not resolved, and there had been no interaction with staff concerning the relationship of the proposed City tourism website to the City's own website, which has a visitor module available.

Using this example going forward and under the role definition as contained in the proposed BMC chapter, TPAC would research the concept of the need for a tourism promotion website and make a recommendation to the City Council. If the decision was made to develop a tourism website independent of the City's website, the City...through its normal administrative processes and utilizing city staff...would define the services to be provided, craft/advertise an RFP, develop a method for reviewing proposals and recommend a contract.

The City Council should discuss the ongoing role that it desires TPAC to play prior to finalizing a BMC provision.

Attachment(s):

a. Draft BMC Chapter 2.57.
b. Apple Box Media email and invoice.

DRAFT

Chapter 2.57
TOURISM PROMOTION ADVISORY COMMISSION

Sections:

2.57.010 Name.

The Brookings City Council hereby creates the Tourism Promotion Advisory Commission.

2.57.020 Powers and duties.

A. Duties and Responsibilities.

1. The Tourism Promotion Advisory Commission is an advisory body to the City Council. It has no authority to spend or approve the expenditure of City funds. Its recommendations are made to the City Council through its minutes.
2. Commission members shall serve at the pleasure of the City Council.
3. Commission membership is honorary and without compensation.
4. All commission meetings shall be open to the public and held in a place that is handicapped accessible.
5. The primary role of the Tourism Promotion Advisory Commission is to advise the City Council on the use of transient occupancy tax revenues allotted for tourism promotion pursuant to BMC Chapter 3.10.
6. Commission minutes, as prepared by staff and approved by the commission, shall be submitted to the City Council for acceptance. The minutes shall be approved, with or without amendments, additions or corrections, by affirmative action of the commission at its next meeting.

2.57.030 Organization.

A. Membership.

1. The commission shall consist of seven voting members to be appointed by the Mayor with approval of the City Council.
2. Insofar as possible, City residents shall have precedence over other applicants.
    a. All members of the commission shall be residents of Curry County. At least four of the seven members shall be residents of the City of Brookings. Non-city residents must have an economic interest, such as property ownership, business ownership, or employment, within the City. These members shall not be officials or employees of the city.
    b. No member of any other City Council-appointed board, commission or committee shall simultaneously serve on the Tourism Promotion Advisory Commission.
3. Meeting minutes shall be recorded by the City Manager, or a designated staff member.

B. Terms of Appointment/Removal/Vacancies.

1. Terms shall be initially staggered so that three members serve a term of three years, two members serve a term of two years and two members serve a term of one year. Thereafter, all terms shall be for three years.
2. No member shall be eligible to serve for more than two full terms on the commission.

3. Vacancies created by a mid-term resignation or termination shall be filled by appointment as provided under BMC Section 2.57.030 (A)(1).

4. Members may be removed by a majority vote of the City Council for any reason and at any time during the member's term of appointment. Failure of a member to attend less than 50 percent of regularly scheduled meetings shall result in automatic termination, unless the absences have been excused by the commission's chair.

C. Election of Officers.

1. At the last meeting of each calendar year, a chair and vice-chair shall be elected from the voting members of the commission to serve a one-year term.

2. Newly elected officers shall take their seats at the first meeting of the next calendar year.

3. No member shall serve more than two consecutive years in any one office.

D. Quorum/Rules/Meetings.

1. A majority of appointed commission members shall constitute a quorum.

2. The commission shall meet at least once each quarter, at a time and place as may be fixed by consensus of the voting members, and at other times as deemed necessary by the City Manager when action is required on referrals from the agency. All meetings shall be open to the public and noticed in accordance with State Public Meeting Law (ORS Chapter 192).

3. Voting by the commission on all matters shall be consistent with the process adopted by the City Council under BMC 2.05.160, with the exception that the staff member taking the minutes shall call the names of each member and record the votes.

4. Recommendations made by the commission shall be submitted to the City Council in the manner prescribed by City administrative regulation.

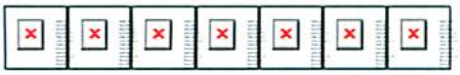
Gary Milliman

From: Chris Vanderschaaf
Sent: Thursday, March 27, 2014 5:12 PM
To: Gary Milliman
Subject: Brookings Videos
Attachments: city of brookings deposit invoice.pdf; city of brookings remainder invoice.jpg

Hi Gary,
I spoke with candice and know you guys are in the process of approving the revisions to the tourism videos. I wasn't sure how frequent the payout schedule was so I thought i'd get this invoice into your system so they're aren't any hold ups when these are approved. I'm working with Candice to set up the youtube channel and get the videos posted and coded when they are approved and the check is cut. I've really enjoyed working on this project with you all and have some other ideas down the road I think you might be interested in.
- Chris

Apple Box Media

Chris Vanderschaaf | owner
Phone: (707) 951-1193
Email: chris@appleboxmediagroup.com
Web: www.appleboxmediagroup.com



Process for payment

apple box media llc

Apple Box Media LLC
1693 Morningsun Dr
Redding, CA 96002

(707)951-1193
chris@appleboxmediagroup.com
http://www.appleboxmediagroup.com

Invoice

Date	Invoice #
03/27/2014	32714
Terms	**Due Date**
Due on receipt	04/05/2014

Bill To

City of Brookings

Amount Due	Enclosed
$5,250	

Please detach top portion and return with your payment.

Activity	Amount
City of Brookings Oregon online advertising videos 50% remaining balance of $10,500	$5,250

Total	$5,250

Gary Milliman

From: Candice Michel
Sent: Tuesday, April 01, 2014 7:36 AM
To: Gary Milliman; Lauri Ziemer
Subject: no response

Gary,

I have not gotten any response to my email about the videos. Shall I assume everyone is OK with them? Chris would like to know.

thanks,
Candice

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