



CITY COUNCIL MEETING AGENDA
Council Chambers, 1000 Laurel Street

October 12, 2015
Monday

Study Session
7:00 p.m.

- 1. Call to Order**
- 2. Roll Call of Council Members**
- 3. Study Items**
 - a. Flashing Crosswalk Signs**
 - b. Well Study Presentation**
 - c. 28th / Milton Way Intersection Study**
- 4. Presentation**
 - a. Development Update**
- 5. Adjournment**

Note: Public comment is generally not taken at Study Sessions. However, on some occasions, public comments may be allowed at the discretion of the Chair and Council. The public may also submit written communications, via letters or emails to dperry@cityofmilton.net. Any item received by noon on the day of the meeting will be distributed to Council.

If you need ADA accommodations, please contact City Hall at (253) 517-2705 prior to the meeting. Thank you.



To: Mayor Perry and City Council Members
From: Aaron C. Nix, Community Development and Interim Public Works Director
Jeff Joy, Public Works Superintendent
Date: October 12, 2015
Re: Solar-Powered Pedestrian Crossing Signals

ATTACHMENTS: Cost estimate from sole-source vendor (Traffic Safety Supply, Inc.)

TYPE OF ACTION:

Information Only Discussion Action Public Hearing Expenditure

Issue: The Council has expressed concerns associated with the Interurban Trail Crossings where it intersects with Porter Street and Kent Street. Previous Director Mecham researched this issue and evaluated various options for the City, recommending the attached system that is a solar-powered system.

Discussion: Public Works Superintendent Jeff Joy will cover the particulars associated with the chosen system for the Council's review.

This system was ordered by previous Director Mecham. When current Staff became aware of the purchase, Mr. Joy evaluated the variety of systems available to verify that this is the best choice, especially concerning the reliability of a purely solar-powered system. He consulted with several vendors, other municipalities, and expert personnel with Pierce County Transportation, ultimately agreeing with Mr. Mecham's choice, from the perspectives of both cost and reliability. The amount of traffic at the two proposed locations will generate enough recharge of these systems during the day to last through the evening hours, even during the dead of winter.

Recommendation: Staff recommends that the Council authorize the Mayor to purchase two sets of solar-powered pedestrian crossing signals from Traffic Safety Supply, Inc. for the costs identified within the attached quotation. The Action item would then be presented for approval in the consent agenda on October 19.



TRAFFIC SAFETY SUPPLY CO., INC

2324 SE UMATILLA ST.
PORTLAND OR 97202-7495
503 235-8531
800-547-8518
FAX# 503-235-5112

QUOTATION

QUOTE#: 100795
DATE: 07/17/2015
TERMS: NET 30 DAYS
FREIGHT:PREPAID

QUOTE ENDS: 30 DAYS

email: sales@tssco.com

CONTACT NAME MICHAEL

2972

PHONE # 253 922 8738

Billed To: CITY OF MILTON
1000 LAUREL ST
MILTON WA 98354

Ship To: CITY OF MILTON
714 KENT ST.
MILTON WA 98354

FAX #253 922-3466

| <u>QTY</u> | <u>PART#</u> | <u>SIZE</u> | <u>ITEM</u> | <u>BID</u> | <u>U/M</u> |
|------------|--------------|-------------|--|------------|------------|
| 8.00 | 18502300 | 30x30 | ADV PEDESTRIAN CROSSING SYMBOL, B/FY, DG3, .080 ALUM | 68.75 | EA |
| 8.00 | 18502303 | 24x12 | CROSSING ARROW, B/FY, DG3, .080 ALUM | 22.00 | EA |
| 2.00 | 14801 | EA | RRFB-XL BACK-TO-BACK SYSTEM, SOLAR POWERED | 6,405.00 | EA |
| 8.00 | 14847530 | EACH | RRFB-XL SINGLE SIDED LIGHT BAR W/ PED INDICATORS | | |
| 4.00 | 14847515 | EACH | ALUM CABINET, BULLDOG CONTROLLER, 55 WATT SOLAR, 48 AHR BATTERY, WIRELESS RADIO | | |
| 4.00 | 14847520 | EACH | BULLDOG PUSH BUTTON W/ PUSH BUTTON PLAQUE | | |
| 1.00 | 14847610 | EACH | WINDOWS BASED SOFTWARE W/ PROGRAMMING CABLES | 190.00 | |
| 16.00 | 16500825 | EACH | 4.5" PIPE SIGN POST BRACKETS W/ CARRIAGE BOLT | 20.12 | EA |
| 4.00 | 26500 | EA | 14' 4.5" OD ALUM POST PACKAGE (INCLUDES THE FOLLOWING) | 558.00 | EA |
| 4.00 | 12605025 | 14 FT | PIPE POST, 4.5" O.D. ALUM, SCH 40, THREADED | | |
| 4.00 | 12603100 | EACH | PEDESTAL BASE, #203-00014 | | |
| 16.00 | 12604100 | EACH | J BOLTS (GALV. ANCHOR BOLTS) 3/4 X 18 X 4 X 6 | | |
| 32.00 | 12604200 | EACH | GALVANIZED HEX NUT, 3/4" | | |

All material used in this contract is guaranteed to be as specified, and the entire job is to be done in a neat and workmanlike manner. Any deviation or alteration from the specification herein agreed upon involving extra cost of labor and/or materials will be accepted only upon a written order or instructions, and will become an extra charge over costs as mentioned in this contract.

TRAFFIC SAFETY SUPPLY CO., INC.

BRITTNEE

Service Quote

Invoice#: 100795

Continued...

Date: 07/17/2015

| <u>QTY</u> | <u>PART#</u> | <u>SIZE</u> | <u>ITEM</u> | <u>BID</u> | <u>U/M</u> |
|------------|--------------|-------------|---|------------|------------|
| 32.00 | 12604300 | EACH | GALVANIZED PLATE WASHER, 3/4" X 3"OD X 1/4" | | |
| 4.00 | 12603150 | EACH | TEMPLATE FOR J-BOLT, ALUMINUM | | |
| 4.00 | 12603050 | EACH | PIPE CAP FOR 4-1/2" ROUND POST | | |
| 4.00 | 12603180 | EACH | PEDESTAL BASE LOCKING COLLAR | | |

SUBTOTAL: 16,279.92

1.00 DES MANAGEMENT FEE (0.74%): 120.48

TAX (9.4%): 1,541.64

TOTAL: 17,924.04

*PRICING REFLECTS DISCOUNT ALLOWED ON

WA STATE CONTRACT #02612 FOR INTELLIGENT

TRANSPORTATION SYSTEM EQUIPMENT 2. THIS

IS A DELIVERED PRICE TO MILTON, WA.

[Back to Agenda Bill](#)



To: Mayor Perry and City Council Members
From: Aaron C. Nix, Community Development and Interim Public Works Director
Glen Baker, Water, Storm and Streets Supervisor
Date: October 12, 2015
Re: Additional Water Source, Deep Well Drilling

ATTACHMENTS: Robinson/Noble PowerPoint with note sections

TYPE OF ACTION:

Information Only Discussion Action Public Hearing Expenditure

Issue: The City initially entered into a contract with Robinson/Noble in order to investigate alternative water sources in September of 2013. The scope from that initial work was as follows:

The project includes the drilling and testing of an approximately 900-foot deep fluid rotary test well. The test well is to be constructed with 6-inch casing, and will be installed and constructed using an 8-inch temporary casing placed in a 12-inch nominal borehole. The project includes completion and testing of aquifers encountered as appropriate. The location for this work was at the City's water tower property on 18th St. Ct. in Edgewood (Well #14).

The results of that initial study concluded that a deeper penetration into the lower aquifer systems was needed in order to better quantify the production capacity and water quality of these systems for municipal production purposes.

The City initiated additional study, as directed by the City Council (October 2014). The results of this deeper study revealed the following information:

- Several more permeable zones identified
- Encountered bedrock at 1360 feet
- Tested most promising zone
- Low yield
- Poor water quality (H₂S, Arsenic and Manganese)

The purpose of this work study item is to review the results of this additional work with the Council.

Discussion: No discussion points at this time. The purpose of the presentation is to provide the Council with the information that was acquired in this study and let the Council draw their own conclusions based on the information and the suggestions from the City's consultant.

Recommendation: Staff is seeking Council direction for next steps related to seeking other potential water resources, based on the Robinson/Noble presentation.

Deep Test Well Drilling Summary

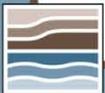
City of Milton

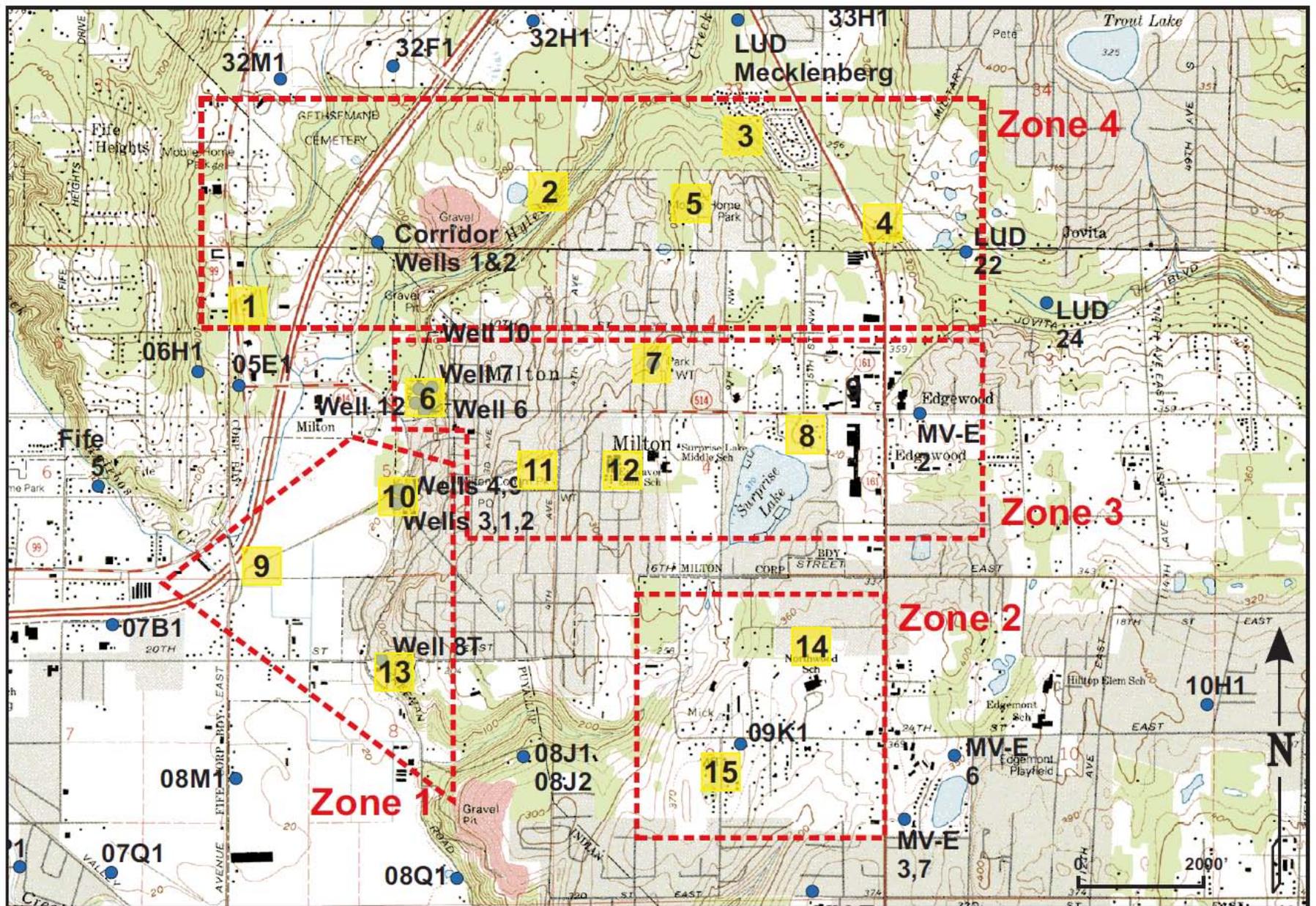
Robinson Noble, Inc.

October 2015

2008 Study

- Comprehensive investigation of the stratigraphy of the area
- Analyzed aquifer systems
- Evaluated potential areas for exploration drilling
- Identified preferred drilling locations for the City to explore further





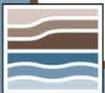
Initial drilling program

- Location selected at the City's water tower property on 18th St. Ct. in Edgewood (#14)
- Reverse-circulation fluid-rotary drilling
- Test well drilled to 918 feet



Phase I Drilling Results

- Identified 4 aquifer systems
- Limited time for well construction and testing
- Tested two zones in the deep system
- Low quantity, but acceptable quality
- Promising zones left untested due to schedule



Where to go next

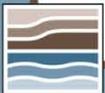
Options included:

- Testing intermediate aquifer zones
- Testing additional deep aquifer zones
- Drilling deeper



Selected deeper drilling

- Based on stratigraphic correlations
- Regionally correlated geologic sequences
- Possibility of deeper permeable zones
- Most importantly, deeper drilling leaves more options open
 - Still can test other, shallower zones



Second phase of drilling

- Started in late fall of 2014
- Different drilling method, but same equipment
- Drilled to 1380 feet



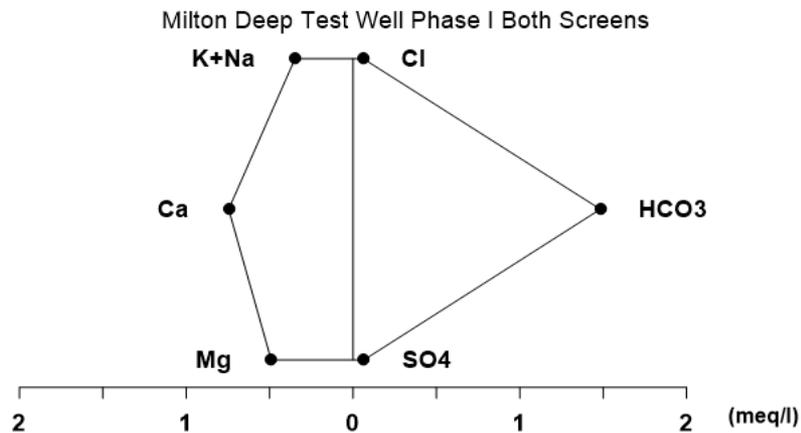
Phase II drilling results

- Several more permeable zones identified
- Encountered bedrock at 1360 feet
- Tested most promising zone
- Low yield
- Poor water quality (H₂S, Arsenic and Manganese)

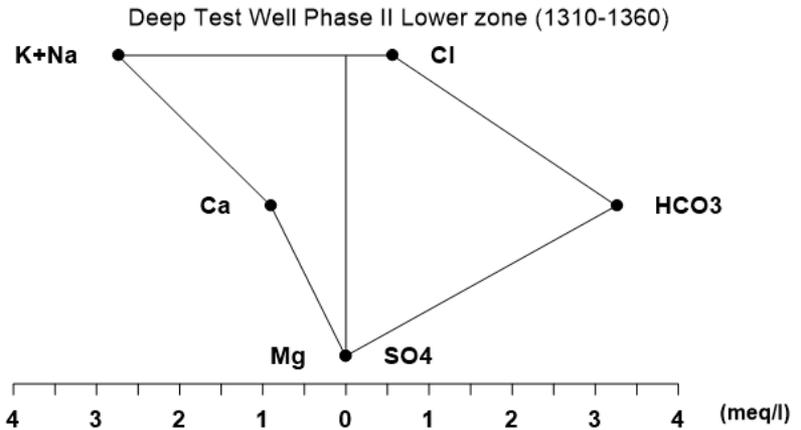


Water Quality Discussion

Phase I Completion



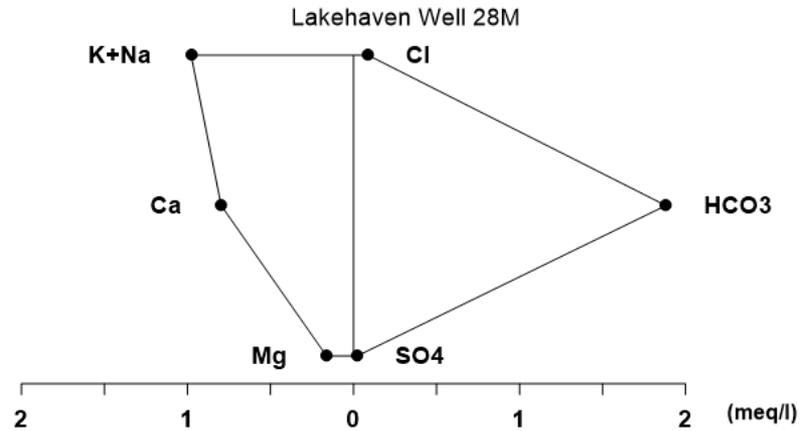
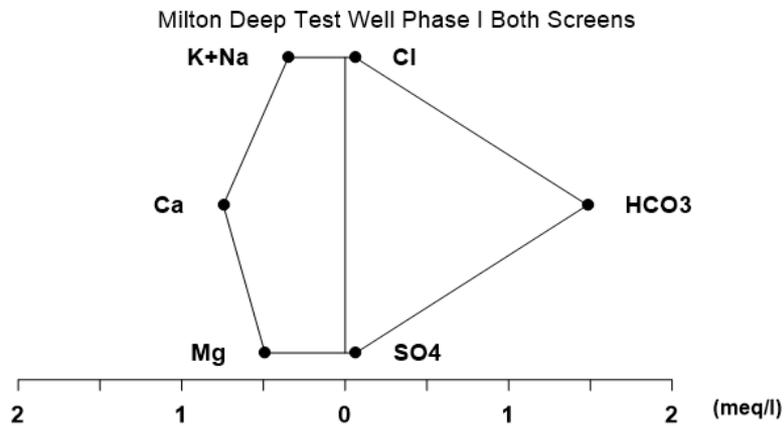
Phase II Completion



Water Quality Discussion

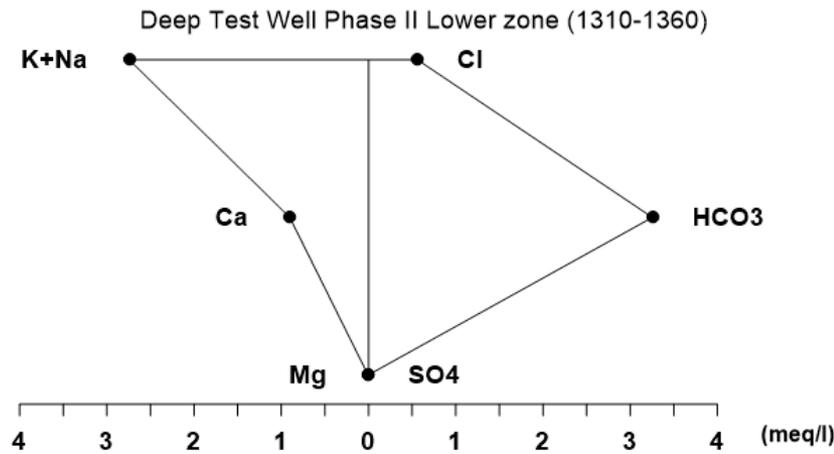
Phase I Completion

Lakehaven 28M

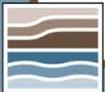
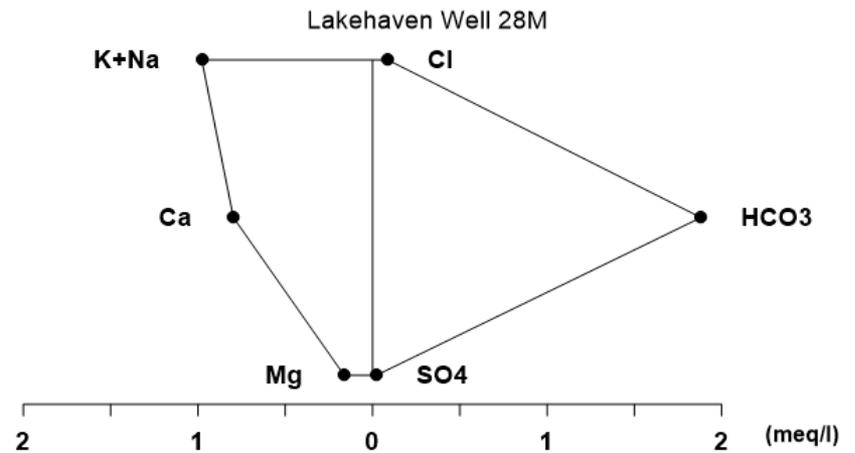


Water Quality Discussion

Phase II Completion

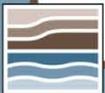


Lakehaven 28M



Information Gained

- Regional stratigraphic understanding is improved
- Identified possible target zones to enhance production at the City's other locations, specifically Well 5
- This information should be used to guide future water system plan decision making
- Often it is less expensive to develop or improve a source where there is already infrastructure present
- The City's future needs and plans will dictate what happens when



Sources and Capacity

The City of Milton currently operates 5 sources:

Corridor 1 and 2

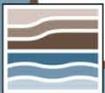
Well 3

Well 10

Well 12

All of these wells are completed in the Redondo-Milton Channel aquifer

These wells are “clustered” within 4,000 feet along the edge of the upland



Sources and Capacity

| | |
|------------|-----------------|
| Corridor 1 | 500* GPM |
| Corridor 2 | 300* GPM |
| Well 3 | 225 GPM |
| Well 10 | 500 GPM |
| Well 12 | 385-475 GPM |
| | |
| Total: | 1810 – 1900 GPM |

* Due to well interference, we recommend 700 GPM combined for the Corridor Wells



Water Rights Summary

- 9 Certificates and Permits, a combination of Primary and Supplemental rights
 - Total Qi 5,240 GPM
 - Total Qa 3,203 Acre-Feet/Year
- Applications
 - Not for new water, but rather flexibility in where that water is produced



Needs?

- Source capacity where water rights aren't met
- Source capacity where system demands are highest
- Future planning



Now what?

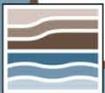
The answer depends on what the City needs.

Evaluate the City's needs.

Apply what has been learned.

Pick the low fruit.

[Back to Agenda Bill](#)





To: Mayor Perry and City Council Members
From: Aaron C. Nix, Community Development and Interim Public Works Director
Date: October 12, 2015
Re: 28th Avenue and Milton Way Intersection Study

ATTACHMENTS: Pierce County Study Materials
Cost Estimate on Proposed Solution for Intersection

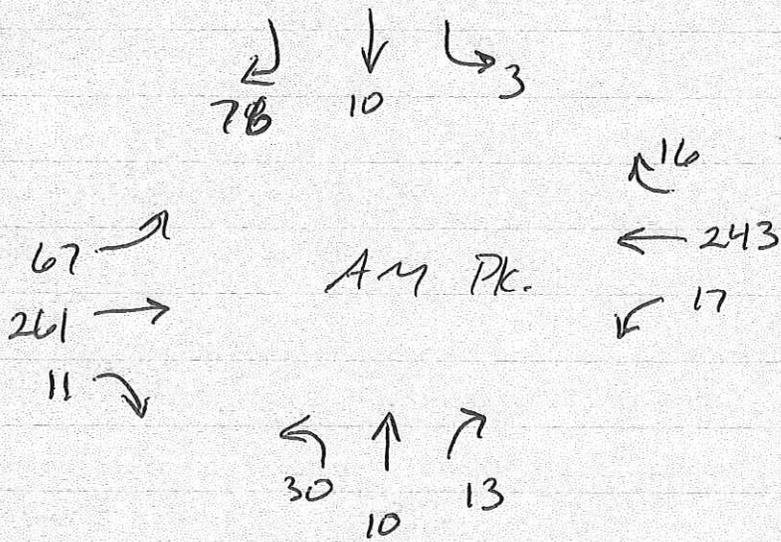
TYPE OF ACTION:

Information Only Discussion Action Public Hearing Expenditure

Issue: Based on several complaints received by Staff, the Mayor and City Council, Staff was asked to investigate traffic flow issues associated with the signal at 28th Street and Milton Way. These complaints included reports of near-miss collisions in the middle of the intersection due to perceived issues with lane alignment and/or light sequencing.

Discussion: Previous Director Mecham had started work with the Pierce County Transportation Group in conducting a roadway and intersection study where Milton Way intersects with 28th Street. The results of this study, in hard data, is supplied to the Council for reference and includes traffic counts during peak AM and PM time periods for review. Based on discussions with Pierce County, the lane configurations appear to meet standards, but flow patterns are a bit awkward, particularly for drivers headed both south- and north-bound through the intersection, especially with the current configuration of the left turn lane out of the Safeway complex. Pierce County has offered a somewhat inexpensive resolution to this, and a cost estimate is provided.

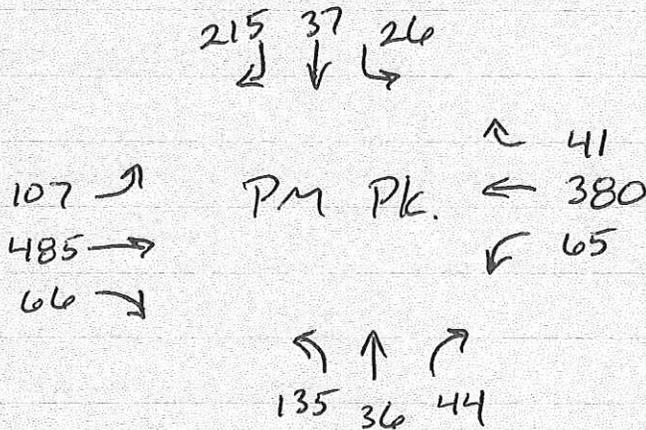
Recommendation: Staff recommends that Council authorize the Mayor to move forward with the suggested improvements at the intersection of 28th and Milton Way, as prescribed by the traffic engineers with Pierce County and described by Staff. The Action item would then be presented for approval in the consent agenda on October 19.



Ex. LOS B 10.8

split ϕ → doubles the delay

LOS C 21.4



Ex. LOS B 14.5

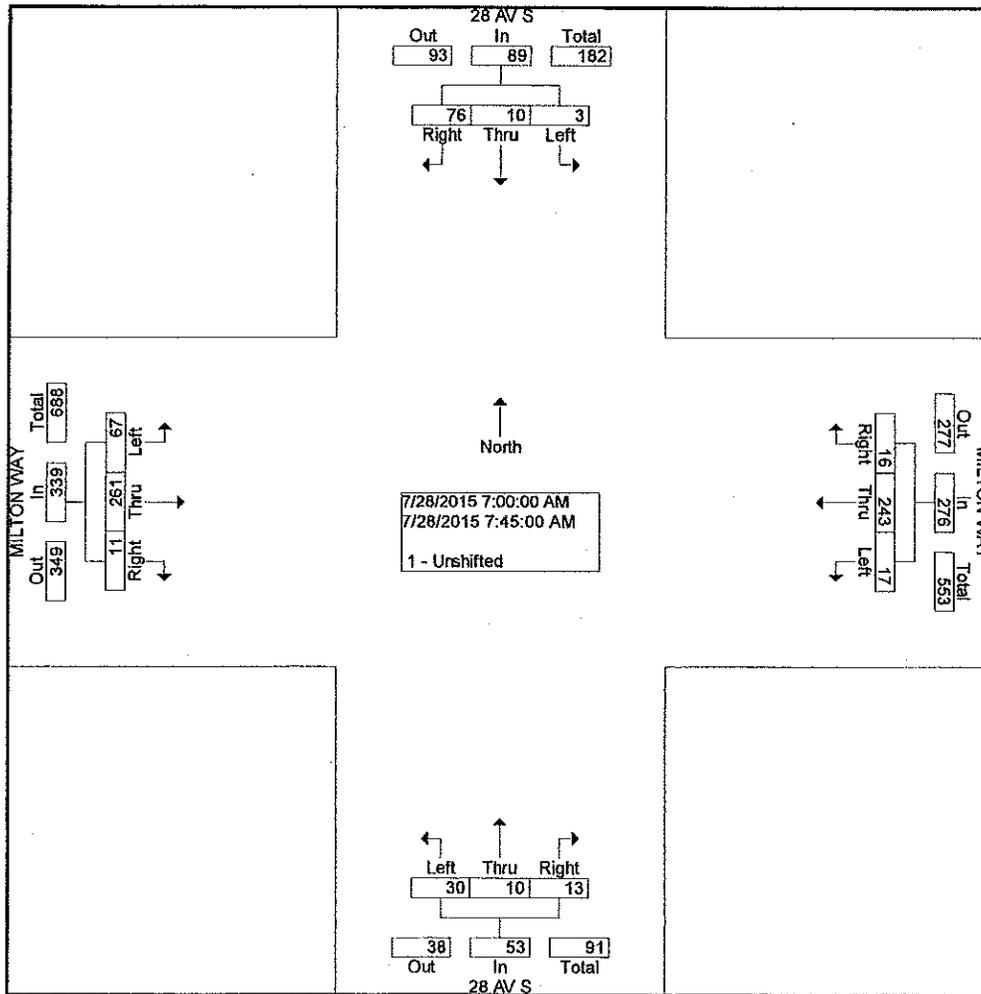
split ϕ → doubles the delay

LOS C 27.6

PIERCE COUNTY PUBLIC WORKS
 TRAFFIC ENGINEERING
 253-798-7250

File Name : MILAT28AAM
 Site Code : 00000000
 Start Date : 7/28/2015
 Page No : 2

| Start Time | 28 AV S From North | | | | MILTON WAY From East | | | | 28 AV S From South | | | | MILTON WAY From West | | | | Int. Total |
|---|-----------------------|------|------|------------|-------------------------|------|------|------------|-----------------------|------|------|------------|-------------------------|------|------|------------|------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| Peak Hour From 06:00 AM to 07:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Intersection | 07:00 AM | | | | | | | | | | | | | | | | |
| Volume | 76 | 10 | 3 | 89 | 16 | 243 | 17 | 276 | 13 | 10 | 30 | 53 | 11 | 261 | 67 | 339 | 757 |
| Percent | 85.4 | 11.2 | 3.4 | | 5.8 | 88.0 | 6.2 | | 24.5 | 18.9 | 56.6 | | 3.2 | 77.0 | 19.8 | | |
| 07:30 | | | | | | | | | | | | | | | | | |
| Volume | 22 | 5 | 2 | 29 | 4 | 79 | 3 | 86 | 7 | 2 | 14 | 23 | 3 | 53 | 19 | 75 | 213 |
| Peak Factor | 0.888 | | | | | | | | | | | | | | | | |
| High Int. | 07:30 AM | | | | | | | | | | | | | | | | |
| Volume | 22 | 5 | 2 | 29 | 4 | 79 | 3 | 86 | 7 | 2 | 14 | 23 | 5 | 67 | 18 | 90 | |
| Peak Factor | 0.767 | | | | 0.802 | | | | 0.576 | | | | 0.942 | | | | |

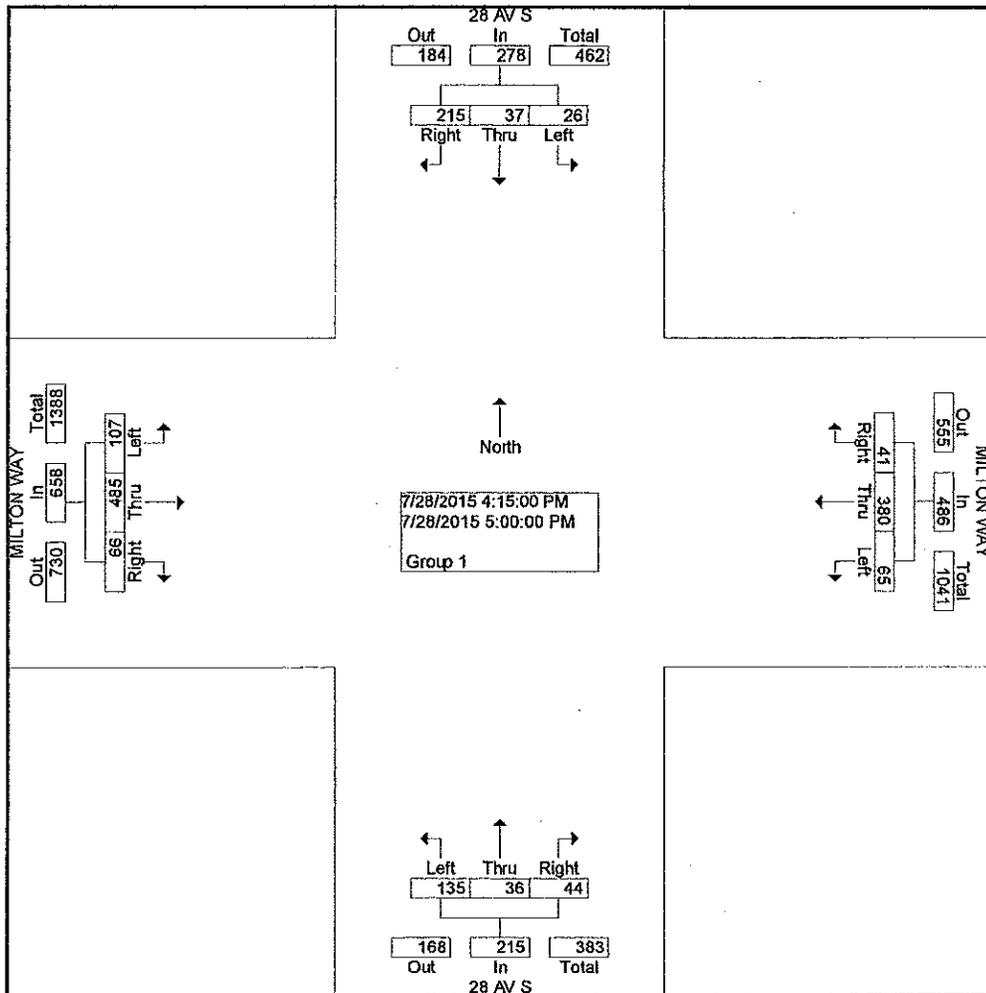


AM Peak 7:00 - 8:00

Pierce County Public Works
 Traffic Engineering Division
 253-798-7250

File Name : MILAT28APM
 Site Code : 00000000
 Start Date : 7/28/2015
 Page No : 3

| Start Time | 28 AV S From North | | | | MILTON WAY From East | | | | 28 AV S From South | | | | MILTON WAY From West | | | | Int. Total |
|---|-----------------------|------|------|---------------|-------------------------|------|------|---------------|-----------------------|------|------|---------------|-------------------------|------|------|---------------|---------------|
| | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | Right | Thru | Left | App. Total | |
| Peak Hour From 03:00 PM to 06:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Intersection | 04:15 PM | | | | | | | | | | | | | | | | |
| Volume | 215 | 37 | 26 | 278 | 41 | 380 | 65 | 486 | 44 | 36 | 135 | 215 | 66 | 485 | 107 | 658 | 1637 |
| Percent | 77.3 | 13.3 | 9.4 | | 8.4 | 78.2 | 13.4 | | 20.5 | 16.7 | 62.8 | | 10.0 | 73.7 | 16.3 | | |
| 04:45 Volume | 55 | 13 | 8 | 76 | 10 | 98 | 21 | 129 | 14 | 7 | 31 | 52 | 17 | 131 | 26 | 174 | 431 |
| Peak Factor | 0.950 | | | | | | | | | | | | | | | | |
| High Int. | 04:15 PM | | | | | | | | | | | | | | | | |
| Volume | 60 | 11 | 5 | 76 | 10 | 98 | 21 | 129 | 7 | 11 | 38 | 56 | 17 | 131 | 26 | 174 | |
| Peak Factor | 0.914 | | | | 0.942 | | | | 0.960 | | | | 0.945 | | | | |



PM Peak 4:15 - 5:15

