



# Agenda

## San Miguel Community Services District

### Equipment & Facilities Committee Meeting

Friday, February 17, 2017  
9:30 AM

**SMCSD Boardroom 1150 Mission St. San Miguel, CA 93451**

**Cell Phones:** As a courtesy to others, please silence your cell phone or pager during the meeting and engage in conversations outside the Boardroom.

**Americans with Disabilities Act:** If you need special assistance to participate in this meeting, please contact the CSD Clerk at (805) 467-3388. Notification 48 hours in advance will enable the CSD to make reasonable arrangements to ensure accessibility to this meeting. Assisted listening devices are available for the hearing impaired.

**Public Comment: When public attendance is over ten (10) persons, the following policies will go into effect:** Any person wishing to address the Board or Standing Committee, please complete a "Request to Speak" form located at the podium in the boardroom in order to address the Board of Directors on any agenda item. Comments are limited to three minutes, unless you have registered your organization with CSD Clerk prior to the meeting.

**If you wish to speak on an item not on the agenda,** you may do so under "Oral Communications." Any member of the public may address the Board of Directors on items on the Consent Calendar. Please complete a "Request to Speak" form as noted above and indicate which item number you wish to address.

**Meeting Schedule:** Regular Board of Director meetings are generally held on the fourth Thursday of each month at 7:00 P.M in the CSD boardroom. Agendas are posted on the CSD's website at: [www.sanmiguelcsd.org](http://www.sanmiguelcsd.org)

**Agendas:** Agenda packets are available for the public inspection 72 hours prior to the scheduled meeting at the Counter/ San Miguel CSD, Fire Station located at 1150 Mission St., San Miguel, during normal business hours. Any agenda-related writings or documents provided to a majority of the Board of Directors after distribution of the agenda packet are available for public inspection at the same time at the counter/ San Miguel CSD, Fire Station located at 1150 Mission St., San Miguel, during normal business hours.

I. Call to Order 9:30 AM

II. Pledge of Allegiance

III. Roll Call Directors: Parent \_\_\_\_\_ Reuck \_\_\_\_\_

IV. Oral and Written Communications:

Persons wishing to speak on a matter **not on the agenda** may be heard at this time; however, no action will be taken until placed on a future agenda. Speakers are limited to three minutes. Please complete a "Request to Speak" form and place in basket provided.

V. AGENDA

1. Review and Discuss Purchase of Thermal Imaging Cameras for Fire Department, and make a recommendation to Board.

**Staff Recommendation:** Review and Discuss Purchase of Thermal Imaging Cameras for Fire Department with a recommendation to Board of Directors.

**Public Comment:**

M \_\_\_\_\_ S \_\_\_\_\_

2. Review and Discuss a recommendation to the Board regarding the status on SCADA installation and consider alternatives for additional software purchase.

**Staff Recommendation:** Review and Discuss the status report on SCADA installation and consider alternatives for additional software purchase.

**Public Comment:**

M \_\_\_\_\_ S \_\_\_\_\_

3. Receive and Review a status report on 10<sup>th</sup> Street and Mission Street water lines conditions.

**Staff Recommendation:** Receive and review the report. No action required.

**Public Comment:**

**VI. COMMITTEE COMMENTS:**

This section is intended as an opportunity for Committee members to make brief announcements, request information from staff, request future agenda item(s) and/or report on their own activities related to District business. No action is to be taken until an item is placed on a future agenda.

**ADJOURNMENT**

**Time:** \_\_\_\_\_

**ATTEST:**

STATE OF CALIFORNIA                    )  
COUNTY OF SAN LUIS OBISPO        ) ss.  
COMMUNITY OF SAN MIGUEL            )

I, Tamara Parent, Account Clerk/Operations Coordinator of San Miguel Community Services District, hereby certify that I caused the posting of this agenda at the SMCSO office on February 9, 2017.

Date: February 9, 2017

*Tamara Parent*

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Tamara Parent,  
Account Clerk II/Operations Coordinator

Next E & F Committee Meeting is tentatively scheduled for March 16, 2017.



## San Miguel Community Services District Equipment & Facilities Committee Staff Report

February 17, 2017

AGENDA ITEM: V. 1

**SUBJECT:** Review and Discuss purchase of two thermal imaging cameras for use by the fire department at a cost of \$18,447 including tax from Fire Capital Reserves

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### **STAFF RECOMMENDATION:**

Review and Discuss purchasing two thermal imaging cameras for use by the fire department and make a recommendation to the Board to approve \$18,447 including tax from Fire Capital reserves or Fire Impact fees.

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### **BACKGROUND:**

In the fire service great efforts have been made in making fighting fire as safe as possible thru fire safety gear and equipment with new technologies. Although we can't eliminate the dangers all together, we can drastically reduce the time and exposure to the dangerous elements with newer safety gear and equipment that helps us achieve our goals.

Firefighters are already limited to the time they can be in a burning structure due to the amount of air in there SCBA, a thermal image camera (TIC) can speed the process up drastically and reduce the time exposed by giving the firefighter the ability to see through smoke and dark buildings so they can move quicker. This reduces the time and exposure firefighters have to be subjected to heat and toxic gasses or a building structure that has been compromised by fire or earthquake. The (TIC) also has the potential of locating victims quicker in a hazardous situation, whom otherwise would not survive.

In the past 5 years, San Miguel Firefighters have on average responded to 53 calls per year where a (TIC) could have been put to use. The TIC has become a standard piece of fire safety equipment in emergency serves and is a very versatile tool, through its ability to detect temperature variations. A TIC can ensure that all heat and fire extension has been suppressed after fire attack.

The use of a TIC will reduce the time it takes to locate the heat in walls, floors, ceilings, hard to access areas and limit the time and amount of damage created in searching out the fires extension in a structure when the firefighters are making sure the fire is completely out. There are several applications were a TIC would benefit first responders in locating a heat sources far quicker than searching without. Not only can a TIC locate victims and heat sources quickly. In other applications a TIC can be used to detect gas leaks or fluid levels in a container from a distance

without getting up close. The TIC is capable of finding victims in a car accident who have been thrown from a vehicle, it can even identify how many victims were in a car if they have fled the scene thru heat signatures in the seats where the bodies were prior to the accident.

There are countless applications were a (TIC) can and will improve our safety and abilities in serving the district.

The reason we are requesting this specific brand (Bullard) it is built and designed for the firefighting environment. Where other brand may appear to provide the same function, they will not hold up to the abuse they are subjected by water, physical trauma during an interior search. Bullard (TIC's) have been tested, warrantied and widely used throughout the fire service.

**General Manager's Analysis and Recommendation:**

There is no objection or argument about the practicality and potential use of thermal imaging cameras for fire-fighting purposes. Such equipment items are customary listings in a fiscal year budget either as a capital expenditure or an operating & maintenance budget expense.

There is much speculation and interpretation that, as General Manager, there is some unstated objection to the usefulness or, even, the need for this equipment. Neither conclusion is correct.

There is, however, much misunderstanding about how and why a fiscal budget is supposed to function in a public agency, such as the CSD. A District created over 16 years by consolidating other districts into a single public district.

The purchase of the requested equipment should be a part of the customary budget approval process used by the Board and Standing Committees. A process that has been used effectively for the past 2 years to control expenses while providing needed and requested equipment or facilities. This practice is consistent with financial accounting practices and requirements used to demonstrate accountability and transparency to the public on fiscal matters.

There have been no requests for this purchase in the past 2 years of fiscal budgeting. The issue is to determine whether or not there is sufficient reason to acquire these devices immediately or whether or not, the normal budget cycle is appropriate. There is also no justification for rejecting the acquisition of such equipment but there may be sufficient reason to direct the purchase be scheduled for the FY 2017-18 budget review.

**Recommended Alternatives:**

The E & F Committee can recommend to the Board one or more of the following:

- 1) Advise that this purchase be scheduled for FY 2017-18 Budget expenditures;
- 2) Appropriate funding from Fire Impact Fees as a qualified facilities and equipment expenditure allowed by impact fee usage, at a not-to-exceed cost of \$18,447 as quoted by L N Curtis;

- 3) Take no action and request staff to provide additional quotes for the requested purchases prior to making a recommendation to the Board; or
- 4) Reject the requested purchase as unwarranted or unjustified.

**Fiscal Impact:**

The quote of \$18,447 including tax, if 2 cameras are necessary for operational purposes. Purchase would require an appropriation from Fire Capital Reserves or from Fire Impact fee account.

**Staff Recommendation:**

Staff recommends that the Committee review and discuss recommendations available, including the General Manager’s analysis listed above for purchasing the requested equipment.

The requested equipment is an unallocated budget item and will require an appropriation by the Board of Directors for the purchase of 2 thermal imaging cameras at a cost of \$18,447 including taxes. The Board will make a determination where the funding will come from, either Capital Reserves or Fire Impact Fees.

If the Committee elects to recommend that the Board approve the acquisition now, then the funding should be appropriated from Fire Impact fees, not Capital Reserves.

PREPARED BY:

**Rob Roberson**

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Rob Roberson, Fire Chief

REVIEWED AND SUPPLEMENTED BY:

*Darrell Gentry*

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Darrell Gentry, General Manager

Attachment: LN Curtis quote

Bullard Brochure

Ph: 510-839-5111  
 TF: 800-443-3556  
 Fax: 510-839-5325  
 oaksales@lncurtis.com  
 DUNS#: 00-922-4163



Pacific North Division  
 1800 Peralta Street  
 Oakland, CA 94607  
 www.LNCURTIS.com  
 Quotation No. 29530

# Quotation

**CUSTOMER:**  
 SAN MIGUEL COMMUNITY  
 SERVICE DISTRICT  
 P.O. BOX 180  
 SAN MIGUEL CA 93451

**SHIP TO:**  
 SAN MIGUEL COMM. SERV.  
 DIST.  
 ATTN: CHIEF DODDS  
 1150 MISSION STREET  
 SAN MIGUEL CA 93451

QUOTATION NO.	ISSUED DATE	EXPIRATION DATE
29530	01/05/2017	02/28/2017

SALESPERSON	CUSTOMER SERVICE REP
Trevor Murphy tmurphy@lncurtis.com 408-314-3789	Ken Perry kperry@lncurtis.com 510-268-3326

REQUISITION NO.	REQUESTING PARTY	CUSTOMER NO.	TERMS	OFFER CLASS
	Kelly Dodds	C33181	Net 30	FR

F.O.B.	SHIP VIA	REQ. DELIVERY DATE
DEST	Best Way	

### NOTES & DISCLAIMERS

THANK YOU FOR THIS OPPORTUNITY TO QUOTE. WE ARE PLEASED TO OFFER REQUESTED ITEMS AS FOLLOWS. IF YOU HAVE ANY QUESTIONS, NEED ADDITIONAL INFORMATION, OR WOULD LIKE TO PLACE AN ORDER, PLEASE CONTACT YOUR SALESPERSON OR CUSTOMER SERVICE REP AS NOTED ABOVE.

TRANSPORTATION IS INCLUDED IN BELOW PRICING.

LN	QTY	UNIT	PART NUMBER	DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	1	EA	T4XBUNDLE BULRD	METALLIC BLUE T4X THERMAL IMAGER WITH POWERHOUSE BUNDLE	\$8,600.00	\$8,600.00

SMALL BUSINESS  
 CAGE CODE: 5E720  
 DUNS NUMBER: 009224163  
 SIC CODE: 5099  
 FEDERAL TAX ID: 94-1214350

THIS PRICING REMAINS FIRM UNTIL 02/28/2017. CONTACT US FOR UPDATED PRICING AFTER THIS DATE.

<b>Subtotal</b>	\$8,600.00
<b>Tax Total</b>	\$623.50
<b>Transportation</b>	\$0.00
<b>Total</b>	<b>\$9,223.50</b>



## CLEARANCE - THERMAL IMAGERS



[\[+\] View Larger Images](#)

### Demo Bullard T4MAX Thermal Imaging Camera

The T4MAX Thermal Imager from Bullard offers the latest technology to the fire service in a small, lightweight and compact package. T4 integrates an ultra-high resolution infrared engine, widescreen display, digital zoom, Super Red Hot™ colorization and Electronic Thermal Throttle™ for maximum performance and clarity.

- Technology Optimization Package (T.O.P.) optimizes display and engine performance for unmatched scene dynamics and image clarity
- Ultra-High resolution 320 x 240 detector
- Super Red Hot colorization highlights heat conditions
- Electronic Thermal Throttle isolates heat sources
- Over 1100° saturation temperature
- 4.3" widescreen, digital LCD display
- Super bright display enables viewing in thick smoke and direct sunlight
- 450:1 Contrast Ration emphasizes deep blacks and bright whites to enhance image detail
- 50° horizontal field of view
- 80° display viewing angle
- 2x and 4x digital zoom
- Powerhouse Truck Mount charger
- Desk top battery charger
- Two 10 volt NiMH rechargeable batteries
- Idea for applications including hazardous materials, wildfire or search & rescue

Part #546540200 Qty available: 2

Sale Price: **\$10,995.00** regular price: \$14,500.00

Your Authorized Dealer for:



TEXTILES LIMITED

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24 hour Phone: 1-403-279-0400

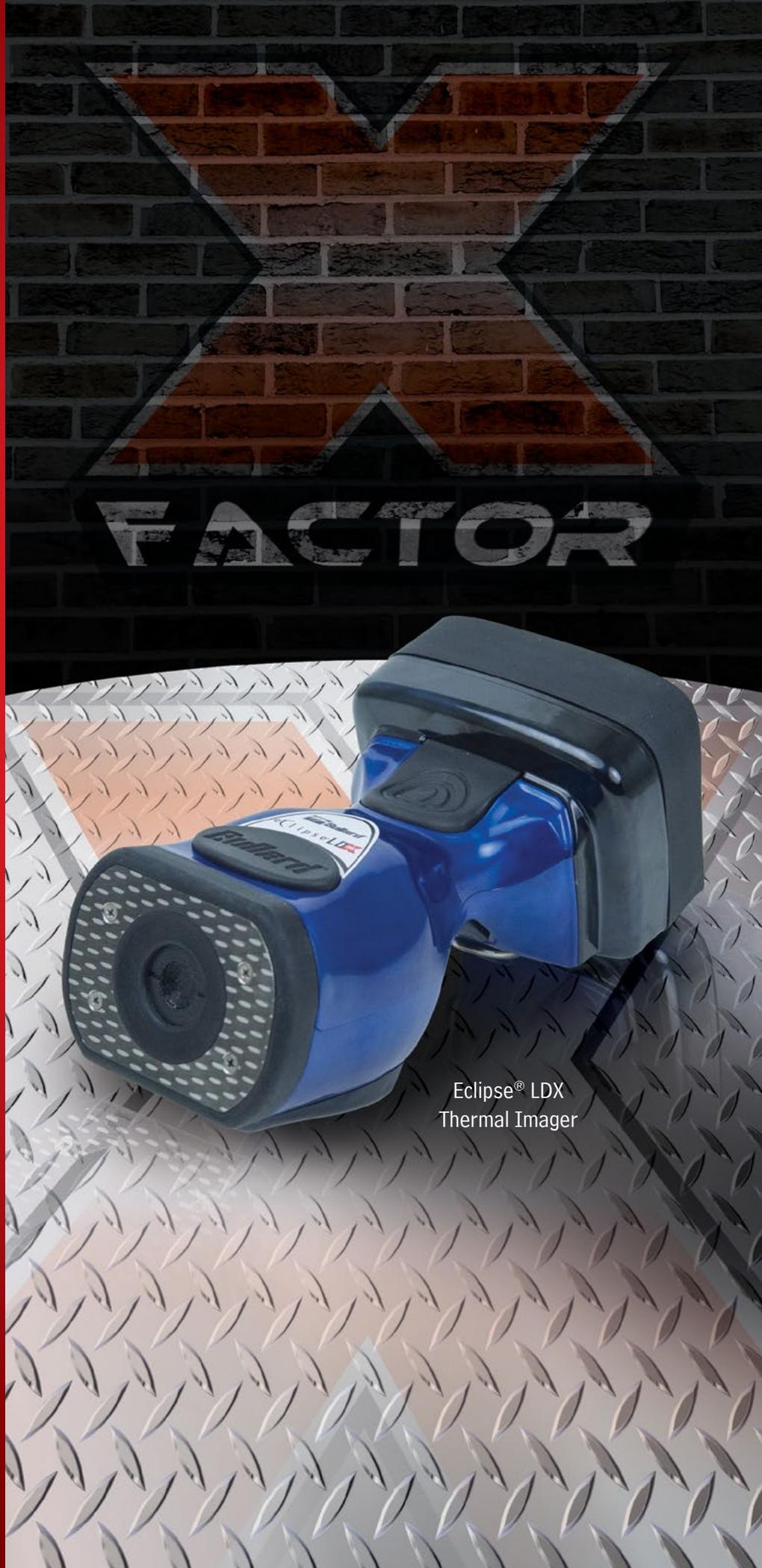
SEE THE CLARITY.



THERMAL IMAGERS

# Thermal Imaging

for the Fire Service



Eclipse® LDX  
Thermal Imager



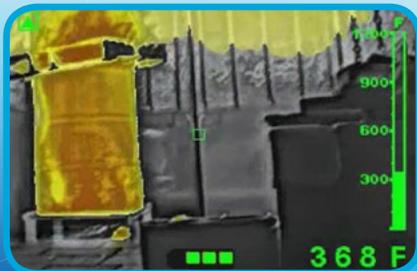
# SEE THE CLARITY.

Seeing critical details in fires is essential. Modern construction materials burn fast and unpredictably. Thermal imagers offer an important understanding of fire load and progression so that firefighters can make quick decisions in the heat of battle.

With X Factor Thermal Imagers, firefighters are better equipped than ever before to capably address ever-changing fire conditions, identify egress points next to raging fire, and reveal potential victims in hot and smoky scenes. Quite simply, it's the best image quality. Ever.



Past



Present



## X Factor Thermal Imagers with ICE™ Technology

Exhilarating performance. Awesome detail. This describes the capability of X Factor Thermal Imagers equipped with Image Contrast Enhancement (ICE™) technology.

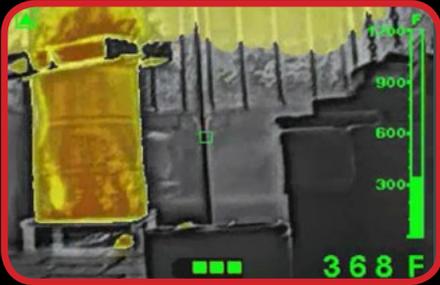
ICE utilizes three state-of-the-art image processing techniques:

- **Edge Enhancement** algorithms sharpen distinctions between objects and regions yielding enhanced image sharpness and clarity.
- **Dynamic Contrast Thresholding** isolates the most significant image content and applies additional image processing to boost image contrast.
- **Adaptive Rescaling** decomposes the image into three spatial frequencies which independently process high, mid, and low frequency scene elements delivering optimal image performance.

X Factor Thermal Imagers have additional important performance benefits:

- All new high-performance displays
- Ultra-fast 60 Hertz frame rates
- Faster shutter speeds that reduce image “freeze” times

# THE RIGHT FEATURES, DONE RIGHT



## Super Red Hot

With Super Red Hot colorization, objects are colorized yellow starting at 500° progressing to red at 1000°.



## Electronic Thermal Throttle

When Electronic Thermal Throttle is engaged, hotter objects are colorized blue, isolating areas of potential concern.



Bullard thermal imagers have all the features you expect from a thermal imager. Our difference is that we design these features to work in concert with the task of firefighting. Colors on our **Super Red Hot** colorization are constant and predictable, enabling firefighters to better comprehend changing heat conditions and isolate the seat of the fire. Colors disappear only when the threat diminishes.

The patented **Electronic Thermal Throttle® (ETT)** pinpoints heat sources in scenes. Beneficial in operations such as size-up, overhaul, and hazmat, ETT saves time and effort by quickly identifying problem areas that could otherwise become active fire or rekindles.



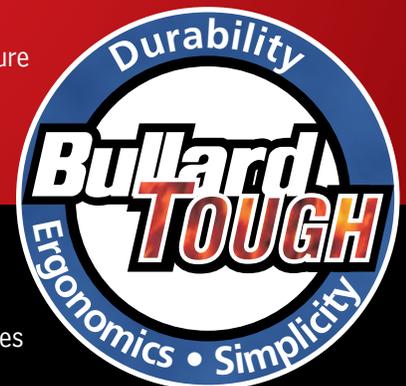
Eclipse LDX Thermal Imagers after freezer test

## Proven Bullard Tough in All Environments

Long before any industry consensus standard emerged, Bullard TIs were enduring torture test after torture test to ensure their ruggedness for firefighting. Bullard TIs are subjected to repeated drops on concrete, tested in the harshest environmental temperature extremes, and committed to countless hours in real burn conditions. Nothing goes to market that doesn't first meet the standard, Bullard Tough!

## Everything Follows Function

Thermal imagers are tools. Designs need to facilitate firefighting tasks enabling firefighters to quickly, effectively, and comfortably do their jobs. Simplicity is paramount. Accessible buttons and intuitive features facilitate function. With Bullard Thermal Imagers, if it complicates the task it doesn't make the cut.



# X FACTOR SERIES THERMAL IMAGERS



## eclipse<sup>®</sup> LDX

Eclipse LDX is a sleek, compact thermal imager enhanced with the newest infrared engine technology and ICE image processing techniques with a price that accommodates any budget. The 1.9 lb. Eclipse LDX is the ideal, lightweight workhorse for any fire department.

- 240 x 180 or 320 x 240 resolutions
- Equipped with ICE image processing technology for greater image clarity
- New LCD display increases brightness and improves contrast
- Super Red Hot colorization alerts firefighters to areas of intense heat
- Temperature measurement in numeric and relative heat indicator formats
- Optional Electronic Thermal Throttle enables firefighters to isolate heat sources
- Optional SceneCatcher DVR records up to five hours of video

**NOW  
STANDARD  
FEATURES**



Standard Five-Year Warranty

## T3X

A traditional handheld favorite is now equipped with the newest state-of-the-art infrared engine technology for the highest quality performance. Now weighing only 2.5 lbs., the T3X is lighter and smaller than most competitive thermal imagers.

- 240 x 180 or 320 x 240 resolutions
- Equipped with ICE image processing technology for greater image clarity
- New LCD display increases brightness and improves contrast
- Super Red Hot colorization alerts firefighters to areas of intense heat
- Temperature measurement in numeric and relative heat indicator formats
- Optional Electronic Thermal Throttle enables firefighters to isolate heat sources
- A handle can be purchased additionally to allow users a different grip and optional Digital Video Recording (DVR) and/or Transmission



Standard Five-Year Warranty

## T4X

The T4X combines advanced features and the industry's largest widescreen display along with the newest infrared engine technology for maximum thermal imaging performance. With all features standard, the T4X gives fire departments everything they'll need in a high performance thermal imager.

- 320 x 240 ultra-high resolution
- Equipped with ICE image processing technology for greater image clarity
- Extra-large 4.3" widescreen format on a new LCD display increases brightness and improves contrast
- Electronic Thermal Throttle enables firefighters to isolate heat sources
- Super Red Hot colorization alerts firefighters to areas of intense heat
- Temperature measurement in numeric and relative heat indicator formats
- 2x and 4x Zoom allows users to get closer to the action
- A handle can be purchased additionally to allow users a different grip and optional Digital Video Recording (DVR) and/or Transmission



Standard Five-Year Warranty

### Upgrade to X Factor TI for a special price

Upgrade your Bullard Thermal Imager to the new Bullard X Factor Series of Thermal Imagers for **\$3999**. Get the **best image quality** of X Factor Technology installed in your TI. **Upgrade now!** Program available through **December 31st, 2016**. For details visit [www.bullard.com/xfactor/upgrade](http://www.bullard.com/xfactor/upgrade).

# X FACTOR SERIES THERMAL IMAGERS



## Five-Year Thermal Imaging Warranty Program

All X Factor Series Thermal Imagers come standard with a five-year full service warranty on parts and labor. Upgrade to the CareFree® warranty to get five years of coverage on batteries. For details visit [www.bullard.com/CareFree](http://www.bullard.com/CareFree).





**SceneCatcher:**

Capture five hours of video from a Bullard Thermal Imager. Digital images and videos download easily through a USB. The SceneCatcher Digital Video Recorder (DVR) also offers seamless operation with the Bullard transmitter system.

**Transmitter System:**

For T3 and T4 Series Thermal Imagers, Bullard offers a high-powered transmitter for remote viewing of two thermal imagers (typical performance of up to 600 feet inside commercial construction).

T3/T4 Series  
Powerhouse

Eclipse Series  
Powerhouse



**Powerhouse Truck Charger:**

The Powerhouse truck mount conveniently stores and charges your thermal imager and a spare battery. Mountable in multiple orientations.

**Accessories**



**TacPort:**

T3 and T4 Series Thermal Imagers can be converted from a highly mobile, handheld device to a longer term, fixed-position surveillance unit. The TacPort attachment provides video-out functionality and auxiliary power ports for extended operation from an external power supply.



**MobileLink:**

An exclusive innovation from Bullard, MobileLink handheld receiver enables safety officers and incident commanders to monitor transmitted thermal imaging video while being entirely mobile.



**Glare Shield:**

The Glare Shield eliminates glare in daylight operations and can be held at arm's length or close to the user's face.\*



**Other Accessories:**

Retractable straps  
Hard case for T3/T4 Series  
Alkaline pack for T3/T4 Series

\* Not available for Eclipse LDX

**POWERUP**

**Charger, Analyzer, Conditioner**

**Keep Your Batteries at Peak Performance**

Using PowerUp in conjunction with a regular inspection and maintenance process, a fire department can restore or replace non-performing batteries in inventory before they impact operations. The multi-functional PowerUp keeps thermal imager batteries in peak condition.



**Americas:**  
Bullard  
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Singapore 387383  
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Fax: +65-6745-5176

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Image Contrast Enhancement (ICE™) is a trademark of DRS Technologies.

8194 (1215)



## San Miguel Community Services District

### Equipment & Facilities Committee Staff Report

February 17, 2017

AGENDA ITEM: V. 2

**SUBJECT:** Review and Discuss status report of SCADA installation with a request for additional software purchase.

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**STAFF RECOMMENDATION:**

Review and Discuss status report of SCADA installation with a request for additional software purchase and acquisition. Committee is requested to make a recommendation to the Board for the requested additional software purchase.

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**BACKGROUND:**

In early 2015 staff began the task of developing and advertising an RFP for an upgrade to the existing Telemetry system used by the District. This upgrade included the office, three wells, one tank, and the Machado wastewater Facility. Also taking into consideration future changes due to development. After receiving only three proposals, TESCO was chosen and their contract was subsequently approved by the Board.

Design work and radio studies began after the initial contract was issued late 2015. Submittals were approved by April 2016 and development of the hardware was underway. The SCADA upgrade had been installed by July.

There are, however, “bugs” that needed to be worked out regarding alarms, communication failures, and other issues with the SCADA auto dialer. Some issues were easily corrected. Others, in the case of the communication failures, are intermittent and obscure. TESCO installed additional monitoring equipment to record any future failures so that they can determine the actual cause when it reoccurs. These “bugs” have yet to be fully resolved by TESCO to the satisfaction of the District. As a result, there is final payment that has been withheld until the District is convinced that these “bugs” are resolved in order to make the final payment.

During the installation at the WWTP, it was discovered that the redundant float backup (independent of SCADA) was not functioning as it was supposed to. After completion of the

SCADA components at the WWTP, the TESCO technician installed a “temporary” backup float that would work in the event that the SCADA and transducer failed.

A change order was requested from TESCO to design and install a new backup float system for the lift station. This order was provided to and approved by the Board, the installation of the permanent float was completed February 7<sup>th</sup>.

In addition to the backup floats it became apparent after startup and during the debugging that there was another issue. Although reports and reporting functions for the upgraded system had been discussed throughout the RFP process and design phase, specific language in the contract was missing regarding it. Thus, TESCO did not develop the reporting side during the initial system design phase.

After several phone and in person meetings regarding reporting our system capabilities, TESCO was asked to provide a quote for the needed reporting system that could create daily, monthly, and annual reports needed. Their quote, which is included with this report, includes a credit for Factory acceptance testing which we didn’t have an opportunity to engage in. TESCO and the District agreed that this would be a credit toward this work, as it was part of the initial contract. TESCO also agreed that reporting could have been identified as a problem during this testing had it been done.

The District needs the ability to have SCADA system providing ongoing reports, extract operations data at a specific time or when it is important to determine daily totals or production data directly. There are a multitude of other benefits that will save time and increase accuracy of collected information. This software acquisition is needed but not presently critical or essential to operational needs or functions.

### **Recommended Alternatives for Software Purchase:**

As General Manager, the purchase of the requested software, at this time, is not critical to current operational needs of Utility Services Department. This purchase can be accommodated with the upcoming FY 2017-18 Budget cycle review and adoption by the Board. This practice has been, previously, done for past 2 budget cycles for equipment and software purchases. There is no substantiated justification for the acquisition at this time. The following are options to be discussed and considered:

- 1) The requested software purchase pricing is quoted at \$7,800, which is not an approved FY 2016-17 budget item and would require an appropriation from reserves or general fund accounts as determined by the Board.
- 2) Since there are remaining “bugs” in TESCO system that need to be resolved, it might be more prudent to delay this purchase with a placement of the pricing into upcoming Fiscal Year Budget cycle for 2017-18. This delay would mean that Utility Services continues to prepare the same reports manually as has done for past several years.

**Fiscal Impact:**

The pricing for this additional software acquisition is \$7,800 is proposed as an appropriation from Water and Wastewater Capital Reserves.

**Staff Recommendation:**

Staff recommends that the Committee review the status of SCADA and make a recommendation to support the including the SCADA software purchase in the FY 2017-18 budget or determine that the General Manager’s alternative recommendation is appropriate for the upcoming budget cycle review and adoption.

PREPARED BY:

Kelly Dodds

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Kelly Dodds, Utility Supervisor

APPROVED BY:

**Darrell Gentry**

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Darrell W. Gentry, General Manager

Attachment: TESCO quote for SCADA software module for reporting

To: San Miguel Community Service District (SMCSD)  
Attn: Kelly Dodds  
Re: SMCSD - SCADA Report Generation

Quote Date: 10/10/16  
Quote No.: 161130Q01

Dear Kelly:

Thank you for your continued interest in TESCO products, services, and solutions. We are pleased to quote the following scope of work pertaining to the above-referenced project.

## Scope of Work

The objective of this project is to generate four (4) reports from the existing ClearSCADA application:

1. One (1) Lift Station Cycle Chart Report
2. Three (3) Well Operational Chart Reports (Well 3, Well 4, San Lawrence Well)

## Scope of Work

The new SCADA reports will reflect the information contained within the handwritten reports provided to TESCO by San Miguel Community Service District (District). TESCO understands the District would like these reports to print daily.

Additionally, Microsoft Excel will be necessary for the report generation. In that regard, TESCO will provide the District with a license for Microsoft Office Professional.

### **Well Operational Log**

The three (3) Well Operation Log reports will be monthly reports and will provide the District with the following information:

- Day of month (1-31)
- Time
- Totalizer
- Production Meter
- Energy Meter
- Well Residual
- Level

### **Lift Pump Cycle Chart**

The one (1) Well Operation Log report will be a monthly report and will provide the District with the following information:

- Day of month (1-31)
- Time
- Pump #1
- Pump #1 Hour
- Pump #2
- Pump #2 Hour
- Gallons Per Day

Please note: the Well Operational Log example provided to TESCO by the District has a column devoted to Sodium Hypochlorite “calibration.” This information is not being collected by SCADA and will not be represented on the newly-implemented reports.

### Scope of Supply

Item	Qty	Description	
1	1	<b>New Software</b> to include: <ul style="list-style-type: none"> <li>▪ Microsoft Office Professional</li> <li>▪ ReportBuilder Version 6</li> </ul>	
2	Lot	<b>Professional Services:</b> <ul style="list-style-type: none"> <li>▪ Project Management</li> <li>▪ SCADA Programming – report development and configuration for (4) reports, in-house testing, in-house remote implementation</li> </ul>	
		<b>TOTAL (including applicable sales tax):</b>	<b>\$9,800.00</b>
		<b>Discount in Lieu of Witnessed Factory Acceptance Testing (FAT):</b>	
			<b>(\$2,000.00)</b>
		<b>GRAND TOTAL (including applicable sales tax &amp; discount)</b>	<b>\$7,800.00</b>

### Project Clarifications

- Unless otherwise stated above, quote is to **furnish only** and does not include trade labor/electrical installation services or field wire terminations.
- This quotation includes remote services only and provides for no onsite services.
- Unless otherwise stated above, the following is **not** included within this quotation:
  - Conduit, field wire, tubing, or basic trade installation materials (brackets, screws, bolts, j-box, stanchions, pull-box, etc.)
  - Instrumentation mounting components, brackets, stanchions, sunshields, etc.
  - Local control stations and/or field mounted disconnects.
  - Instrumentation, devices, components, or equipment not defined by the above quotation.
  - Fiber optic patch panels, cable, splicing or terminations.
  - Networking infrastructure or architecture modifications to existing facilities.
  - Any 3<sup>rd</sup> party independent testing, harmonic testing/analysis, power coordination study, or Arc-Flash Hazard Analysis (AFHA) study.
  - Interconnection or loop diagrams for equipment not furnished by TESCO.

### Terms and Conditions

- Quote is firm for 30 days unless otherwise stated.
- Submittals: submittals will be provided approximately **8-10** weeks after receipt of purchase order, written notice of intent, or notice to proceed.
- Delivery: to be scheduled approximately **8-10** weeks minimum after submittal approval.
- Unless otherwise stated above, price does not include any sales tax, use tax, or applicable fees; please apply any taxes and/or fees as appropriate. Please note that all invoices will include sales tax where applicable.
- TESCO price is FOB factory, full freight allowed.
- TESCO warranties against defect in design workmanship and materials for a period of one year from date of installation, and does not exceed 18 months from the date of shipment from the factory.
- TESCO carries liability insurance, with full workman's compensation coverage.
- Terms are net 30 days on approved credit accounts.
- Interest will be applied to all past due invoices.

- All merchandise sold is subject to lien laws.
- Final retention to be paid within 10 days after the project notice of completion.

Please feel free to contact us at (916) 395-8800 to discuss any questions or comments you may have regarding this quotation.

Sincerely,

TESCO CONTROLS, INC.

Alex Leeth  
Technical Sales  
aleeth@tescocontrols.com

Reports (pages 1 and 2 shall be submitted quarterly by the 20th of February, May, August, and November.

EFFLUENT MONITORING			
	Flow gal/day	Flow gal/day	Flow gal/day
Month	Oct	Nov	Dec
Previous			
1	136186	123872	128915
2	167276	143984	152093
3	146860	132811	-2E+07
4	135506	125356	3E+07
5	143071	174354	151863
6	146303	116120	135011
7	120785	143444	159412
8	118790	143866	106475
9	143280	141207	133935
10	146101	126612	126368
11	144519	136927	144253
12	131259	140048	154888
13	128968	137855	133062
11	150393	162601	139381
15	113205	133278	148509
16	214575	124635	132262
17	98814	132766	183525
18	140080	131789	94995
19	140167	127307	161880
20	137439	148325	135805
21	141228	164872	131297
22	139126	139188	129801
23	139127	143927	133101
24	148926	134986	144577
25	138263	150708	195184
26	141462	137206	72887
27	136952	147371	144431
28	145455	162502	138674
29	140845	191372	141979
30	140845	82855	126989
31	152098		
Mean:	140900	140071	138159
Max:	214575	191372	3E+07

AERATED LAGOON MONITORING						
Monthly	week 1	week 2	week 3	week 4	week 5	
Dissolved Oxygen mg/l	>1	>1	>1	>1	>1	Minimum 1.0 mg.l
	Feet	Feet	Feet	Feet	Feet	
Freeboard	3+	3+	3+	3+	3+	
Sludge Depth (April)						Minimum 2 feet

**DISPOSAL AREA MONITORING:** The disposal area shall be inspected weekly for overflow, seepage, vectors, excessive weed growth, and odors. Evidence of any condition of this nature shall be promptly investigated and remedied; and shall be reported to the Region

**REPORTING:** Monitoring reports shall be submitted by the 20th of January, April, July, and October, and shall contain all data collected or calculated over the previous three months. Each quarter, using data from the current quarter and the previous five samples, the average concentration of each constituent analyzed shall be calculated and included in the quarterly report. Quarterly reports shall also contain a narrative summary of any exceptions pursuant to Disposal Area Monitoring. The April quarterly report must include a summary of the Dischargers' salt management program and it's effectiveness for the previous year. After four quarters of all data collection, the discharger shall evaluate all data collected and submit a groundwater monitoring proposal to the Executive Officer for review and approval by June 1, 2000.

**Flow Specifications:** After phase one construction, monthly average shall not exceed 150,000 gpd. After phase two, monthly average shall not exceed 200,000 gpd.

I declare under penalty of perjury that the foregoing is true and accurate and that the sampling procedure and analysis used are as specified in the Waste Discharge Order for this facility.

SIGNATURE: Kelly Dodds DATE: \_\_\_\_\_  
Please submit all copies of all lab analyses sheets.

FACILITY \_\_\_\_\_  
 WELL NO. \_\_\_\_\_

# WELL OPERATIONAL LOG

MONTH \_\_\_\_\_

YEAR \_\_\_\_\_

TIME	SODIUM HYPOCHLORITE			PRODUCTION					ENERGY		RESIDUALS				WELL LEVELS		OPER INIT	WELL LEVELS		REMARKS
	AVAIL	CL2 USED	CALIB	TOTALIZER	UNIT DIFF	GPM	METER	PUMP DIFF SET	METER	DIFF	WELLS		TRANS. SYSTEM		WELL #			WELL #	WELL #	
	CL2	INCHES													STATIC	PUMPING		STATIC	PUMPING	
1																				
2																				
3																				
4																				
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TOTAL																				



# San Miguel Community Services District Equipment & Facilities Committee

## Staff Report

February 17, 2017

AGENDA ITEM: V. 3

**SUBJECT: Review and discuss the current status of water lines on 10<sup>th</sup> and 11<sup>th</sup> Streets as well as potential replacement options.**

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### **STAFF RECOMMENDATION:**

This is a status review of a prior report to E & F Committee and is intended to inform and update E & F Committee members, new and previous members, about the current condition of water lines on 10<sup>th</sup> and 11<sup>th</sup> streets as well as potential replacement options for those lines. **No Action required**

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### **BACKGROUND:**

This report was previously provided to the E & F Committee in November 2016. At that time, the Committee concluded, based on staff recommendations, to: **1)** work with F & B Committee on funding as a Capital Project for FY 2017-18 and longer, if needed; **2)** prepare a grant funding application; **3)** provide a project design that achieves an upsize to a 12-inch line as prudent; and **4)** avoid doing the two locations in work phases, if possible.

A 2017 CDBG grant application has been prepared and submitted, since the November meeting, for funding consideration. The submitted CDBG applications are currently in review by County officials and will be reviewed for funding consideration in this process. General Manager is meeting with State officials and a third party vendor for the State on February 11<sup>th</sup> and will provide a verbal update to the Committee.

### **Prior Background Information Given to Committee Members:**

#### **11<sup>th</sup> Street**

On September 9<sup>th</sup>, the District was alerted to a possible water leak on 11<sup>th</sup> street just east of the railroad tracks. After excavating the site, we found one leak on a 1940's era steel water line at the end of a corrugated steel sleeve. The steel water line is encased in a corrugated steel sleeve and extends beneath the railroad right-of-way. After patching that leak, District Utility Services crew also discovered a second leak on the same line, west and closer to the rail right-of-way. After exposing that leak, during the attempt to do repairs, a new leak developed and was repaired. A determination was made that the best course of action was to replace the entire section (21') of the steel water main that was exposed at that point as the entire length was showing signs of imminent failure.

After removing and replacing the section we extracted the water line from the sleeve and found that almost everywhere that the water line was touching the sleeve it had damage and was showing signs of failure.

It can be inferred from this repair that the entire length under the railroad right-of-way and tracks may be in the same condition. An observation of the existing water main condition shows that the entire length (approximately 170') could fail at any time due to same deterioration. Staff is convinced that there are leaks in other locations which are not yet evident.

Photographs of the existing water main and casing conditions are attached to this report.

### **10<sup>th</sup> Street**

On September 7<sup>th</sup>, District Utility Services crew also discovered a main leak at the intersection of 10<sup>th</sup> and Mission Streets. Repairs were delayed until September 20<sup>th</sup> when a contractor could excavate the site. This delay was possibly due to old concrete highway was in that location. This material would require additional equipment to perform excavation work. The District's purchase of a mini-excavator had not arrived yet.

After site excavation of this location, the same 1940's era steel pipe in a corrugated steel sleeve (same conditions as the water main crossing at 11<sup>th</sup> Street and the railroad line) was discovered by Utility crew. At this location, the water line is also touching the corrugated steel sleeve and shows signs of failure. This length of pipe travels under Mission street from west to east (approximately 100'). It is safe to assume the entire length is likely in the same poor condition and possible failure(s) could occur.

Photographs of the existing water main and casing conditions are attached to this report.

### **Recommended Options:**

**A)** Replace the main in the existing sleeve.

Since the water mains are in sleeves it is possible to pull out the existing line and insert a new HDPE or welded steel line. This repair option is presented for discussion but based on field observations, the casing at both water main locations has reached the end of useful life and must be removed and replaced.

### **PROS:**

- Cheaper than boring or open trench replacement (open trench method cannot be done thru the railroad right of way)
- Minimizes traffic impacts on Mission Street at 10<sup>th</sup> Street.

### **CONS:**

- This option does not allow for any increase in pipe size at this time or in the future.
- This option is only viable if the Railroad will permit it, the line is already above the minimum bury depth of 10' below the rails. Also, the existing corrugated metal sleeve, if it is in good condition, does not meet current structural strength requirements of UPRR's design criteria. Any work done or proposed within the railroad right-of-way will require

an encroachment permit and design plans approved by UPRR prior to construction beginning. It will be necessary to demonstrate to UPRR that the replacement materials and installation meets or exceeds their specification standards in order to get design plans approved with an encroachment permit issued. This is similar to the work done for 16<sup>th</sup> Street sewer crossing.

- This option will only work if the sleeve is not compromised, the sleeve may already be collapsed or when the old line is pulled out a collapse may occur which will permanently destroy the sleeve and may cause collapse of the surface structures (IE the road way or rail bed). This corrugated metal casing is at the end of its useful life, and based on field observations replacement is required.

**B) Replace the main by bore and jack**

This option is likely the best and only option for the 11<sup>th</sup> street replacement under the railroad tracks.

**PROS:**

- Replaces existing corrugated metal casing which is at the end of useful life.
- Can install a larger more durable sleeve that meets or exceeds current UPRR structural casing standards.
- Can install a larger main for future planned needs
- More likely to be approved by the County (10<sup>th</sup> Street crossing) and UPRR (11 Street crossing at UPRR)
- Avoids transverse pavement cut in County right-of-way crossing Mission Street at 10<sup>th</sup> Street
- Minimizes traffic impacts during construction.

**CONS:**

- This option is the most expensive for the District.
- Permitting process with UPRR will take additional time.
- Jack and bore pits will require extensive pavement repair in the pit locations and create significant traffic disruptions in 10<sup>th</sup> and 11<sup>th</sup> Street crossings by construction of a new line.

**C) Conventional open trench replacement**

This option is not feasible for 11<sup>th</sup> street but is an option for the 10<sup>th</sup> street crossing.

**PROS:**

- Less expensive than jack and bore option
- May not require a new sleeve crossing Mission Street
- Can install a larger main for future planned needs

**CONS:**

- Will require transverse pavement to be cut in County right-of-way crossing Mission Street
- Will also require saw cutting through old concrete highway beneath a finished road surface
- May cause traffic disruption during construction

- County and Caltrans may require repaving the entire intersection after completion of the project.

**D) No Action Alternative**

A no action alternative is the least desirable option because the risk of water main breaks becomes and remains high. This type of failure would be a chief concern for the UPRR crossing at 11th Street. A failure to this line could result in significant damage to the railroad and fiber optic lines that parallel the right-of-way location. Addressing reconstruction of these pipelines after failure could be very costly to the District.

Engineer’s Opinion of Probable Construction Cost

**10<sup>th</sup> Street Water Main**

Jack & Bore and open trench options for construction are viable options for these water main projects. Consultation with County Public Works may assist with a decision for which option would be chosen. An estimate total budget of \$175,000 to \$200,00 is projected for this capital improvement project. The 10th Street Water Main repair options cost breakdown are:

Item	COST ESTIMATE	
	Jack & Bore Option	Open Trench Option
Engineering Design & Survey	\$35,000	\$30,000
Permits	\$5,000	\$5,000
Potholing	\$6,000	\$6,000
Environmental Review	\$2,500	\$2,500
Bid Phase	\$4,000	\$4,000
Construction	\$125,000	\$100,000
Soils Testing	\$5,000	\$5,000
Construction Management	\$20,000	\$20,000
Contingency @20% of constr.	\$25,000	\$20,000
<b>ESTIMATE TOTAL:</b>	<b>\$221,500</b>	<b>\$192,500</b>

**11<sup>th</sup> Street Water Main**

Staff anticipates that the 11<sup>th</sup> Street water main replacement project would have similar costs to the 16<sup>th</sup> Street sewer replacement project. However, jack & bore pits will be in the paved travel lanes. An estimate total budget of \$250,000 to \$300,000 is projected for this improvement project. The 11<sup>th</sup> Street Water Main repair cost breakdown is:

Item	COST ESTIMATE	
	Engineering Design & Survey	\$35,000
Permits	\$10,000	
Potholing	\$7,500	
Environmental Review	\$5,000	
Bid Phase	\$4,000	
Construction	\$175,000	
Soils Testing	\$5,000	

Construction Management	\$20,000
Contingency @ 20% of constr	\$35,000
<b>ESTIMATE TOTAL:</b>	<b>\$296,500</b>

We are bringing this report forward as an informational item and an update for the Committee. Previously, the Committee had determined that the preferred means to this project and to make a recommendation to the Board so that we can move forward with preparing funding and for bidding purposes. There may be some logic to combining elements of these two projects, such as engineering design, permit processing and environmental review clearance into 1 bidding process with 2 Phases of Work so that combined or consolidating cost could, at least, be revealed for decision-making, for instance: construction management, bid specification preparation, soils testing, potholing, permit processing and environmental review could be consolidated into Phase 1 scope of services. Phase 2 work would be construction and a 2<sup>nd</sup> bidding process for potholing, construction and construction management/inspection.

**Fiscal Impact:**

None at this time, this is informational only. These water main projects are anticipated to be spread across 2 FY budget years. More specific estimate for fiscal expenditure can be provided as we progress through the designing, bidding and construction process. The CDBG procedures will mean that the District has to front-end the design and construction costs for both of these projects, while waiting for CDBG reimbursement to be done.

Our District Engineer can prepare the bid and construction specifications as well as the Scope of Work to be done. A competitive bidding process is required by District policy as well as CDBG procedures.

**Staff Recommendation:**

Staff recommends that the Committee review and discuss this update report.

The 11<sup>th</sup> Street water main replacement has one feasible option, jack and bore installation with abandonment of the old casing/water main, this is likely the only option for replacement that will conform to the UPRR requirements

The 10<sup>th</sup> Street water main replacement has 2 viable options, jack and bore installation and open trench. Open trench is the least costly of these two construction methods. To determine if open trenching construction will be supported by County Public Works, a consultation meeting should be held with a follow-up to Committee. Such a meeting may help determine which course of action for this water main would be appropriate, however, this initial consultation was awaiting a decision on changing District Engineer services.

PREPARED BY:

*Kelly Dodds*

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Kelly Dodds, Utility Supervisor

APPROVED BY:

*Darrell Gentry*

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Darrell W. Gentry, General Manager

Attachment: Photos of 11<sup>th</sup> street and 10<sup>th</sup> street repairs





