FCMAT
FISCAL CRISIS & MANAGEMENT ASSISTANCE TEAM

Tulare Joint Union High School District

Technology Review

June 19, 2008

Joel D. Montero
Chief Executive Officer

June 19, 2008

Howard Berger, Superintendent
Tulare Joint Union High School District
426 N. Blackstone
Tulare, California 93274

Dear Superintendent Berger,

In December 2007, the Fiscal Crisis and Management Assistance Team (FCMAT) entered into an agreement for a position control review with the Tulare Joint Union High School District. The request specified that FCMAT would:

1. Assess the organization, staffing and operations of the district's technology services department and make recommendations for improvement.

FCMAT visited the district to conduct fieldwork and interview staff. This draft report is the result of that effort.

The attached final report contains the study team's findings with regard to the above areas of review. We appreciate the opportunity to serve you, and we extend our thanks to all the staff of the Tulare Joint Union High School District.

Sincerely,

Joel Montero
Chief Executive Officer

FCMAT
Joel D. Montero, Chief Executive Officer
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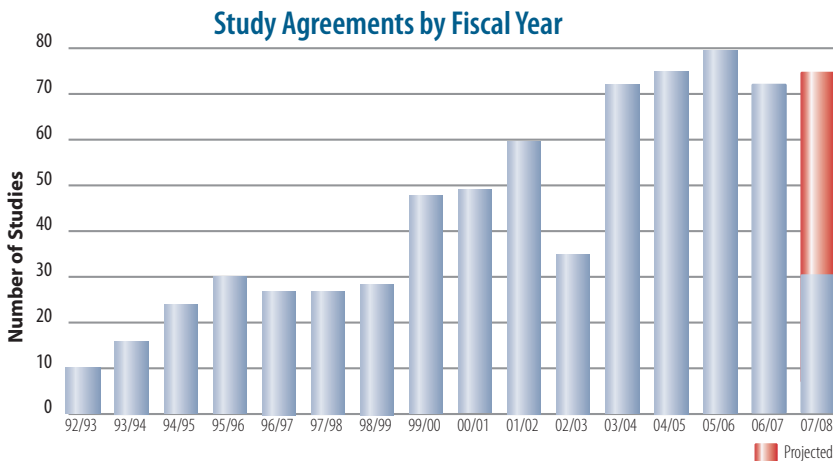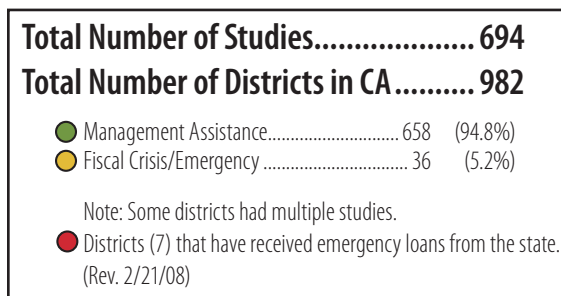
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Foreword

FCMAT Background

The Fiscal Crisis and Management Assistance Team (FCMAT) was created by legislation in accordance with Assembly Bill 1200 in 1992 as a service to assist local educational agencies in complying with fiscal accountability standards.

AB 1200 was established from a need to ensure that local educational agencies throughout California were adequately prepared to meet and sustain their financial obligations. AB 1200 is also a statewide plan for county offices of education and school districts to work together on a local level to improve fiscal procedures and accountability standards. The legislation expanded the role of the county office in monitoring school districts under certain fiscal constraints to ensure these districts could meet their financial commitments on a multiyear basis. AB 2756 provides specific responsibilities to FCMAT with regard to districts that have received emergency state loans. These include comprehensive assessments in five major operational areas and periodic reports that identify the district's progress on the improvement plans.

Since 1992, FCMAT has been engaged to perform nearly 700 reviews for local educational agencies, including school districts, county offices of education, charter schools and community colleges. Services range from fiscal crisis intervention to management review and assistance. FCMAT also provides professional development training. The Kern County Superintendent of Schools is the administrative agent for FCMAT. The agency is guided under the leadership of Joel D. Montero, Chief Executive Officer, with funding derived through appropriations in the state budget and a modest fee schedule for charges to requesting agencies.

Total Number of Studies	**694**
Total Number of Districts in CA	**982**

🟢 Management Assistance 658   (94.8%)
🟡 Fiscal Crisis/Emergency 36   (5.2%)

Note: Some districts had multiple studies.
🔴 Districts (7) that have received emergency loans from the state.
(Rev. 2/21/08)

Study Agreements by Fiscal Year

Introduction

Located in the central San Joaquin Valley, the Tulare Joint Union High School District serves more than 4,500 students in grades 9-12 and has a large adult school enrollment of over 2,000 students. The district has two comprehensive high schools, Union and Western. The district's third comprehensive high school is scheduled to open for the 2008-09 school year. Several alternative schools offer programs in career training, independent study, and alternative classroom instruction.

In November 2007, the district contacted the Fiscal Crisis and Management Assistance Team (FCMAT) to request an evaluation of its technology services. The scope and objectives of the study agreement between the district and FCMAT are as follows:

1. Review the organizational structure and staffing of the district's technology services department and make suggestions for improvement.

2. Review the district's delivery of administrative and instructional technology services and make suggestions for improvement.

Study Team

Andrew Prestage
Management Analyst
Fiscal Crisis and Management
 Assistance Team
Bakersfield, California

Laura Haywood
Public Information Specialist
Fiscal Crisis and Management
 Assistance Team
Bakersfield, California

Terrell Tucker*
Director of Information and Technology Services
Panama-Buena Vista Elementary School District
Bakersfield, California

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Executive Director
California Educational Technology
 Professionals Association
Sacramento, California

*As members of this study team, these consultants were not representing their employers, but were working solely as independent contractors for FCMAT.

Study Guidelines

Representatives of FCMAT visited the district on February 19 and 20, 2008 to interview employees, review documentation, and conduct site visits. This report is the result of that effort and is divided into the following sections:

- Executive Summary
- Communication
- Planning and Project Management
- Staffing and Staff Utilization
- Security and Internal Controls

Executive Summary

Employees in the Tulare Joint Union High School District's Technology Department are well-liked by district staff. The department is well-positioned to successfully deliver technology to the classroom. However, interviews with site staff revealed a number of issues that are preventing overall success in that goal.

The Superintendent shared two personal goals with the study team regarding district use of technology:

- Technology should assist in the teaching process
- Technology should provide data to help facilitate student learning

While these goals are not easily reached, the district can be successful with improvement in several key areas.

Communication appears to be the area most in need of improvement. Infrastructure and application changes have been applied with inadequate planning and organization. As a result, teachers feel frustrated and are not confident in the availability of technology in their classrooms. While communication is not the only factor, this lack of confidence increases when no advance notification of significant changes occurs.

Over the past several years, projects have been implemented with no long-range plan or effective project management. A concise plan needs to be developed that indicates the resources and time necessary to implement infrastructure changes. Without such a plan and departmental oversight, confusion will continue and teacher frustration will increase.

The Technology Department is in dire need of an effective help desk configuration along with a more appropriate work order system. Phone calls from users are directed to staff members who are working on projects. A Help Desk Technician position combined with an efficient online help desk management system would greatly increase the level of technology support. It would also assist with timely support delivery to end users and increased communication of work order status.

High schools have intensive technology support needs. The district should strongly consider maintaining a dedicated staff member at each comprehensive high school. Technology support at alternative education sites is severely lacking. The Technology Director needs to develop a plan to address this issue. Existing staff should be utilized to provide support to all departments and educational areas.

Site-level technicians need a higher level of server access, if only for short periods of time. Their inability to perform basic functions at school sites limits the support they can provide. While network security is always a primary concern, access by site technicians

may be necessary when district staff is not available for routine installations or equipment replacement.

The Technology Department manages and delivers student data very well. A management system was developed in-house for use by administrators to assist in student learning and achievement. While highly successful, this system has become difficult to maintain and adjust to changes required by local administration and the CDE. The district should evaluate the system's ongoing support cost versus the purchase of a commercial system. Keeping the current system in place may be the best course of action, but the district must be fully aware of its cost in terms of staffing level and time required for ongoing changes.

Professional development and user training are minimal. The Technology Director needs to develop an ongoing plan to provide training on student data maintenance and retrieval and use of technology in the classroom. This may be best provided by an external source, but is essential to making better use of the Data Assessment Specialist, who spends much time providing reports to users who should be capable of retrieving the information.

An assessment of current contracts with external agencies needs to be initiated. Contracts with the city of Tulare and feeder districts should be reviewed to determine the support time required. The resources required by these contracts should be incorporated into the overall plan of support delivery by the Technology Department.

All aspects of technology support should be identified to determine appropriate staffing levels. Outside consultants have been used successfully by other school districts and may provide some help for short-term projects such as E-rate. The district's technology goals need to drive all decisions regarding allocation of internal technology resources.

Communication

The district's previous Technology Director was absent from work for several months. No direction was given for existing projects and no initiative was taken by the staff to complete them or plan for future projects, even after an interim director was named. This has resulted in a backlog of projects and a lack of communication both in the department and with the rest of the district. Recent projects, such as the district-wide installation of Office 2007, have been performed without adequate communication to staff and have resulted in staff confusion and frustration.

The Technology Department does not have department-wide staff meetings to communicate issues or discuss planned projects. Staff spend most of their time solving immediate problems and do not communicate issues to each other. End users do not receive ongoing training, which results in repeated problems because of user error. No technology documentation is provided to the sites. No staff member is designated to answer the phone at any given time. The result is inconsistent communication and support with the sites and other departments.

The work order system is used inconsistently and does not properly communicate the status of work orders to users. Users do not know if their issue is common or unique, if it has been resolved in the past, or if there is a way to solve the problem themselves. This results in excessive phone calls to the department and frustration at the user level.

The Technology Director does not communicate with his supervisor regarding project time lines. He does not consistently attend site meetings or cabinet meetings.

Recommendations

The district should:

1. Implement weekly meetings of the Technology Department staff, with an agenda that provides for discussion of issues resolved during the week and planning for ongoing and future projects.

2. Implement weekly meetings between the Technology Director and the Assistant Superintendent of Curriculum to discuss technology status and plans.

3. Require consistent attendance of the Technology Director at site-based technology or staff meetings to effectively communicate project plans and progress. Provide site staff the opportunity to communicate issues to the director.

4. Require consistent attendance of the Technology Director at cabinet meetings to inform the district leadership of the progress and plans for projects.

5. Develop and implement a standard procedure for communicating a planned system outage or upgrade. Include the date, time, duration and expected result of the project.

6. Develop a rotation or hire staff to answer the phone in the Technology Department so that users' issues are documented and addressed. Record the issue in the work order system and assign it to a staff member if the issue cannot be resolved immediately.

7. Improve or replace the work order system so that all issues are recorded and the end user can use the system to record, track and document issues and solutions.

Planning and Project Management

The Technology Director has not sufficiently assessed or created long-range plans for upcoming projects. Previous technology plans exist but are not being implemented. Numerous projects have not progressed since the previous director went on leave. The recent implementation of a new firewall was begun with no assessment of project scope. This resulted in time-consuming repairs and changes, causing a great deal of frustration with end users. New projects are continually added to the list and the backlog of unfinished projects grows larger. User expectations are falling, and some are forced to limit their use of technology.

The Technology Department installed Microsoft Office 2007 on all district computers over the winter break with no prior communication to district or school site staff. When the school year resumed, the staff was surprised and frustrated by the change because no training or documentation had been provided. Other applications used by school sites were affected by this change and instruction was interrupted.

Servers and other equipment are upgraded or replaced without communicating with the users. This often creates problems for users since there is generally no plan for resolution of possible problems. Users become increasingly frustrated with technology while they wait for problems to be resolved.

All purchase orders for technology acquisition are sent to the Technology Director for approval. This is meant to ensure that the technology being ordered can be supported by Technology Department staff. Often, purchasing delays occur because requisitions are waiting for approval. Purchased equipment may not be installed for months. For example, printers that were purchased six to 12 months ago for the Adult Education and Alternative Education departments have not been installed.

The Technology Department has built some systems internally to address users' needs. The assessment system is well-liked and used throughout the district. The work order system was also built internally. While these systems were inexpensive to create, no staff is assigned to support these systems and there is no plan for future support. This can result in substantial expense when changes are needed.

The district's data needs are high and still increasing. Users understand the importance of data in evaluating student learning. Much time is spent creating data exports and reports for users. Some of this is done through Aeries query system and some is done externally.

A district Technology Plan exists but is not used in planning. The Technology Department is not involved in the development or maintenance of site technology plans.

Recommendations

The district should:

1. Implement a series of planning sessions during which the Technology Director and department staff assess existing projects to determine time lines, scope, resources needed and costs.

2. Develop a process by which technology purchases are evaluated in a timely manner regarding installation, training, support and maintenance. Follow this process for each technology purchase to determine its scope.

3. Revise the district's Technology Plan so it can be used in planning.

4. Revise site technology plans in partnership with the technology committees and/ or principals at each site to clarify the future of technology for their schools.

Staffing and Staff Utilization

Numerous factors affect staffing levels and organizational structure in technology departments: the expected level of support, number of essential applications, etc.

Site staff are very supportive of technology staff members. However, those same site staff believe they receive an inadequate level of technology support. High schools typically need more technology support, both in quantity and quality, than K-8 environments. There is some support for the idea of rotating technicians based on work orders rather than dedicating staff to specific sites. However, it might be more effective to retain the current structure until technology committees can provide input regarding their support needs.

Site technicians are not granted the security levels necessary to install printers on campus. The salary level of the site technicians appears low, creating a higher turnover rate than necessary.

The Data Assessment Specialist has a vast array of responsibilities including support of the Aeries student information system, CSIS and CalPADS reporting, and all of the district's data needs with internally developed systems. This employee is often the only staff member in the office and is interrupted frequently by phone calls from users.

Servers at numerous sites are desperately in need of upgrades. The two network technicians appear to work as a team much of the time. They appear to be exploring new technologies while their customers are extremely unhappy with the level of support services being offered. One of those technicians is tasked with support of the alternative and adult schools in addition to helping with support at the two comprehensive high schools. Support to the alternative programs has not been provided, to the detriment of the instructional process.

One FTE should be able to manage most of the infrastructure-related duties in a district the size of Tulare JUHSD. The Network Technician I should be tasked with support of alternative and adult school programs as well as providing assistance to the site technicians. This employee should also be available to assist when help is needed with infrastructure projects.

The Database Administrator (DBA) position was previously held by the current Director of Technology. Historically, the DBA would write and support local applications. This in-house system development was done in an effort to save money; however, it does not appear that total cost of ownership studies were completed. In-house development can be a very expensive process that depends on ongoing local expertise.

External Contracts

Contracts for technology support are in effect with the city of Tulare and three one-school feeder districts. While external contracts can provide much-needed revenue, they often come at a high staffing cost. It is not clear how much support is required for these external contracts, but the district's demand for technology support staff time appears to be too high to justify this type of support burden.

Training

The Technology Department staff attempts to stay up to date with current technology but is not often given the opportunity to receive formal training. It is very risky to deploy a new product without sufficient staff training on the product. This can also result in a slowdown or complete reversal of the installation.

District and site staff are not fully trained and must rely on the already overburdened Technology Department to complete tasks that fully trained site staff could do. Data extracts for grants and other programs, attendance data and other reports could be run by the staff responsible for the data, leaving the Technology Department responsible only for support and subsequent training.

Technology Department staff are also required to clean up or correct data that is incorrectly entered into Aeries. This places no ownership on those entering the data and creates extra work for the technology staff.

There is no formal district training process on Aeries for incoming teachers or classified staff. There are no meetings with these staff members to communicate upcoming upgrades or other changes.

Recommendations

The district should:

1. Consider redefining the role of the two network technicians as described above.

2. Consider eliminating the DBA position. Establish a Help Desk Technician position and consider a third Site Technician that would be assigned to campuses as needed.

3. Seriously consider assigning a new Site Technician to Mission Oak High School when it opens. Consider a shared position with other district functions until the new high school has reached its intended enrollment.

4. Perform an in-depth analysis of all servers and network switches in operation at all sites. Begin an upgrade program very soon, perhaps over the summer, to

replace units more than three or four years old. Make network switches a priority given the upcoming installation of leased fiber services to all schools.

5. Perform an analysis of all district-supported departments and schools to determine the necessary levels of technology support.

6. Evaluate current external contracts, detailing revenue and expected support burden. Blend this analysis with the previously mentioned internal support study to determine the impact of these contracts on internal district needs.

7. Include the cost of formal training for Technology Department staff and site or department staff in any technology purchases if the product is new to the district or is a significant upgrade.

8. Develop a training plan for the Technology Department staff on the technology systems in use.

9. Fully train district and site staff in Aeries so they can extract and report their own data.

10. Consider changing the contract with Eagle Software to allow users to call Eagle directly with support questions on Aeries, thereby reducing calls to the department.

11. Make Aeries manuals available to site and district staff and encourage staff to review the documentation before phoning the department.

12. Create and maintain documentation for all custom aspects of Aeries and make the documentation available to site and district staff.

13. Create a training plan for Aeries that includes classes for new teachers and classified staff. Hold at least one round of classes before the school year begins to allow staff to assimilate any updates that may have occurred over the summer. Offer mid-school year classes and/or meetings with site staff that could be held at each site in conjunction with site staff meetings.

Security and Internal Controls

Previous Technology Department leadership exercised a great deal of control and implemented restrictive technology access policies for technology staff, which nevertheless worked well. When the department was without a director, there was an immediate halt to long-range planning, and strategic decisions were deferred until the position was filled.

When the director position was eventually filled, the support burden had greatly increased for two primary reasons:

1. In the absence of a director the technology staff performed the tasks each thought were important, without a district vision.

2. The lack of strategic planning left the existing infrastructure untouched, resulting in numerous pieces of equipment that are well beyond their useful life.

Technology support has become inadequate for schools and non-existent for several district departments. Alternative and adult school staff each stated there has been a distinct lack of support services for at least a year. Every staff member interviewed expressed satisfaction with technology staff members, but repeatedly indicated more staff is needed.

Each comprehensive high school has a dedicated support technician who is responsible for all site-user support. District personnel oversee infrastructure-related items, including servers, network switches and data wiring. This approach appears to work well for those high schools, with one notable exception. Site-based technicians have insufficient permissions for many server-based tasks. This would be considered an appropriate level of security in most school districts. However, with technology support staff at a minimal level, it appears impractical. Most printers in these two schools are networked and served by a print server. Technicians have insufficient permissions to add a network printer, so new or replacement printers have to wait to be installed by district personnel. This has resulted in long waiting periods for equipment sorely needed in classrooms.

The Technology Department has many responsibilities. Many technology-specific issues are a result of numerous systems having been developed by internal staff, such as the data assessment product. It has supported instruction and student learning quite well over the years. Nevertheless, it can be burdensome to support such a system. The Data Assessment Specialist is responsible for supporting the assessment software. A lack of documentation and user training typically results in numerous interruptions to address specific questions individually.

Filings for E-rate discounts of telecommunications and infrastructure expense are completed by the Director of Technology. This appears on the surface to be a cost savings to the district, but can become very time consuming. Hard deadlines and time lines that

are part of the E-rate process quite often become difficult to manage. The director must spend much time staying current with the rules that govern the E-rate process, as there are frequent changes.

The help desk/work order system in use by the district is outdated and doesn't appear to be widely used. Site staff members communicate with technology staff by phone when support is needed.

Infrastructure changes are in progress without adequate training of district installers. The absence of a formal leadership plan seems to be fostering an environment of haphazard research and system deployment that will likely result in greater user dissatisfaction.

Recommendations

The district should:

1. Consider hiring a consultant to process E-rate applications and conduct periodic evaluations of telecommunications and infrastructure needs to properly leverage available discounts.

2. Develop a plan that will dedicate use of current technology staff to support district departments. Include a somewhat rigid schedule for previously neglected areas, specifically the alternative and adult schools.

3. Provide training and security access on a temporary basis for site technicians to allow them access for low-level server-based functions, at least until the backlog of support services is resolved.

4. Investigate commercial work order systems to provide users and technology staff with a more effective tool. Look for features that provide good communication with end users and progress updates through e-mail. Once an acceptable system has been procured, initiate a marketing campaign with all end users to encourage use of the system rather than placing multiple phone calls.

Appendices

Appendix A - Study Agreement

FISCAL CRISIS & MANAGEMENT ASSISTANCE TEAM
DRAFT STUDY AGREEMENT
December 17, 2007

The **FISCAL CRISIS AND MANAGEMENT ASSISTANCE TEAM** (FCMAT),
hereinafter referred to as the Team, and the Tulare Joint Union High School District,
hereinafter referred to as the District, mutually agree as follows:

1.   **BASIS OF AGREEMENT**

The Team provides a variety of services to school districts and county offices of
education upon request. The District has requested that the Team provide for the
assignment of professionals to study specific aspects of the Tulare Joint Union
High School District's technology operations. These professionals may include
staff of the Team, County Offices of Education, the California State Department
of Education, school districts, or private contractors. All work shall be performed
in accordance with the terms and conditions of this Agreement.

2.   **SCOPE OF THE WORK**

A. Scope and Objectives of the Study

The District currently faces ongoing challenges of increased enrollment and
will be opening a third high school in the 2008-09 fiscal year. The District is
requesting the Team to conduct an in depth review of the District's Technology
Department

1. Assess the organization, staffing and operations of the district's
technology services department and make recommendations for
improvement.

B. Services and Products to be Provided

1) Orientation Meeting - The Team will conduct an orientation session at the District to brief District management and supervisory personnel on the procedures of the Team and on the purpose and schedule of the study.

2) On-site Review - The Team will conduct an on-site review at the District office and at school sites if necessary.

3) Progress Reports - The Team will hold an exit meeting at the conclusion of the on-site review to inform the District of significant findings and recommendations to that point.

4) Exit Letter - The Team will issue an exit letter approximately 10 days after the exit meeting detailing significant findings and recommendations to date and memorializing the topics discussed in the exit meeting.

5) Draft Reports - Sufficient copies of a preliminary draft report will be delivered to the District administration for review and comment.

6) Final Report - Sufficient copies of the final study report will be delivered to the District following completion of the review.

7) Follow-Up Support – Six months after the completion of the study, FCMAT will return to the District, if requested, to confirm the District's progress in implementing the recommendations included in the report, at no costs. Status of the recommendations will be documented to the District in a FCMAT Management Letter.

3. **PROJECT PERSONNEL**
The study team will be supervised by Anthony L. Bridges, Deputy Executive Officer, Fiscal Crisis and Management Assistance Team, Kern County Superintendent of Schools Office. The study team **may** also include:

A.   Andy Prestage, Management Analyst

Other equally qualified consultants will be substituted in the event one of the above noted individuals is unable to participate in the study.

4.   **PROJECT COSTS**

The cost for studies requested pursuant to E.C. 42127.8(d)(1) shall be:

A. $500.00 per day for each Team Member while on site, conducting fieldwork at other locations, preparing and presenting reports, or participating in meetings.

B. All out-of-pocket expenses, including travel, meals, lodging, etc. The District will be billed for the daily rate and expenses of the independent consultant, only. Based on the elements noted in section 2 A, the total cost of the study is estimated at $4,000. The District will be invoiced at actual costs, with 50% of the estimated cost due following the completion of the on-site review and the remaining amount due upon acceptance of the final report by the District

C. Any change to the scope will affect the estimate of total cost referenced in item 4B and shall be mutually agreed upon. The terms and conditions proposed by FCMAT may be accepted by the District within a thirty day period from the receipt of this agreement. All terms and conditions contained herein will become null and void should the District fail to execute this agreement within the specified time period.

Payments for FCMAT services are payable to Kern County Superintendent of Schools- Administrative Agent.

5.   **RESPONSIBILITIES OF THE DISTRICT**

A. The District will provide office and conference room space while on-site reviews are in progress. The Team anticipates interviews with the following personnel:

    1)   Board Members
    2)   Superintendent
    3)   Assistant Superintendent of Business Services
    4)   Assistant Superintendent of Instruction
    5)   Technology Department Personnel
    6)   Personnel Department staff
    7)   Site Principals

B. The District will provide the following (if requested):

    1)   A map of the local area

> 2) Existing policies, regulations and prior reports addressing the study request
>
> 3) Current organizational charts by District and Department
>
> 4) Current and four (4) prior years' audit reports
>
> 5) Documents requested on a supplemental listing upon contract approval

C. The District Administration will review a preliminary draft copy of the study. Any comments regarding the accuracy of the data presented in the report or the practicability of the recommendations will be reviewed with the Team prior to completion of the final report.

Pursuant to EC 45125.1(c), representatives of FCMAT will have limited contact with District pupils. The District shall take appropriate steps to comply with EC 45125.1(c).

6. **PROJECT SCHEDULE**

Scheduling of the review will be confirmed following notice by the District to FCMAT of Governing Board approval.

The following schedule outlines the estimated completion dates for key study milestones if confirmation of board approval is received by the end of December, 2007:

Orientation:	Estimated January-February
Staff Interviews:	to be determined
Exit Interviews:	to be determined
Preliminary Report Submitted:	to be determined
Final Report Submitted:	Estimated mid to late February 2008
Board Presentation:	to be determined
Six Month Follow-Up Review:	Recommended: Estimated August 2008

7. **CONTACT PERSON**

Please print name of contact person: Tony Rodriguez, Asst. Superintendent
Telephone (559) 688-2021
FAX
Internet Address   tony.rodriguez@tulare.k12.ca.us

_____
Howard Berger, Superintendent   Date
Tulare Joint Union High School District

Barbara Dean

December 17, 2007

Barbara Dean, Deputy Administrative Officer   Date

Fiscal Crisis and Management Assistance Team

In keeping with the provisions of AB1200, the County Superintendent will be notified of this agreement between the District and FCMAT and will receive a copy of the final report.