

Approved For Release 2005/06/06 : CIA-RDP78B04770A002700010022-9

PHOTO INTERPRETATION

RAPID COPY VIEWER

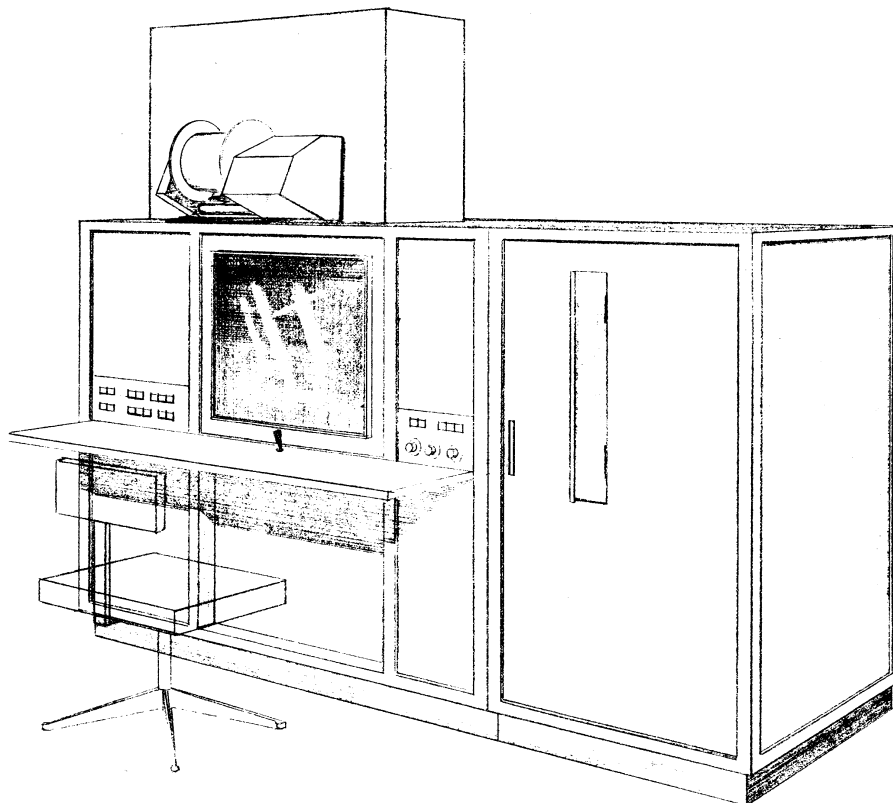
PROJECT 9618

Declass Review by NGA.

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INTRODUCTION

It is the intent of this briefing to highlight those areas in the design, development and manufacturing of the P.I. Rapid Copy Viewer which served to cause an increase in the direct labor hours and manufacturing dollars expended. The equipment description outlines the utilization and development philosophy behind our approach and the final design goals which we will attain.

The section concerned with performance specifications shall serve to depict those areas wherein variations occurred during and after the time that contractual considerations were made. Most of these changes occurred in the form of an addendum sheet to the basic contract.

During our proposal period consideration was given by the proposal team to base our design philosophy upon certain basic criteria developed and maintained as part of [] standard approaches to unique areas in the field of viewing and printing technology. It was with this standard approach in mind that we proceeded to propose in the areas of film transport mechanisms, sensitometric considerations and several other areas as outlined.

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The problem areas encountered such as the condenser lens design, and the incorporation of the 10x10 print capability to mention a few are once again based on the fact that a standard condenser lens was considered at the proposal period only to find it was not sufficient for the quality and illumination characteristics required and the request stated in the addendum package for the additional print capability, the latter not having been considered in the original proposal.

The areas of consideration define each of these problems in detail stressing such points as interface, redesign and additional considerations required for each category.

The status, labor hours and cost summary will show the hours and dollars expended to date by category, the percentage of each category that is completed and the material dollars remaining to completion.

During the initial and interim phases of this project the program was tracked in accordance with the accounting and administrative procedures as shown in the charts and progress reports submitted on a monthly basis to the contractors representative.

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It is our belief that the operational system to be realized from this development effort despite the problems realized to date will prove to be a satisfactory, highly reliable and usefull instrument in the performance of its required mission. The efficiency as such a system is easily measured and we are sure quite apparent to the users organization for which it is intended.

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EQUIPMENT DESCRIPTION

STAT The Photointerpretation Rapid Copy Viewer-Printer is a highly versatile single console instrument providing rapid access to 10- by 10- or 20- by 20-inch damp dry prints for tactical briefing conferences. The viewer-printer accepts either chip or roll film input photography in standard widths from 70 millimeters to 9 1/2 inches. This imagery is projected at any of five magnifications (2,4,1,6,8,10 & 21x) onto a 20- by 20-inch viewing screen. A two-speed film transport system with y-axis translation capability permits the selection of any portion of the input material for viewing and printing. The printer module employs a diffusion transfer reversal (DTR) process to produce positive to positive prints. All operating controls are conveniently located within easy reach of a seated operator.

The P.I. Rapid Copy Viewer-Printer satisfies the film editing and copying requirements of most photointerpretation facilities. Primary emphasis is placed on simplicity of operation, both in preliminary loading functions and in equipment control and manipulation. Photographically trained personnel are not required for operation and maintenance.

PERFORMANCE SPECIFICATIONS

	<u>Original Proposal</u>	<u>Present Design</u>
Input Film	70mm to 9 1/2 inches, up to	Same
Sizes	1,000 - Foot Spool Capacity	Chip Loading*
Output Print	20 x 20 inch cut sheet	20 x 20 inch cut sheet*
Size	(Damp Dry)	&10 x 10 inch cut sheet
Printing Characteristics		
Magnification	2,4,1,6.8,10 & 21x	2,4,08,6.79,10.48 & 22x*
Light Source	G.E. 1500T24/15 Lamp	Same
Resolution Measured At Output Platen, Lines Per MM		
2,4,1, 6.8x	10	Same (At 2,4,08,6.79, x)
10x	7	Same (At 10.48x)
21x	5	Same (At 22x)
Printing & Processing Technique		
Diffusion Transfer - Anken		Same
Process, Positive-to-positive		
Exposure Time	Less than 1 second	Same
Exposure Control	Manual	Automatic*

PERFORMANCE SPECIFICATIONS (Cont.)

	<u>Original Proposal</u>	<u>Present Design</u>
Controls		
On-Off	All circuits Energized In the "Power-On" condition	Same
Print	Push Button to Initiate Print Cycle	Same
Footage Indicator	BI-Directional Display	Same
X Indicator	Resetable for each frame	Same
Y Indicator	Nonresetable, <u>±</u> indication of distance from Optical centerline	Same
Magnification		
Selection	Automatic	Same
Mirror		
Control	Automatic	Same
Installation Data		
Operating Conditions	Room Light Operations, safe-light loading	Cassette Loading*
Mounting Data	Locking-Type Casters	with leveling jacks*
Weight	900 pounds	Same
Power	115 volts, 60 cycles AC, 20 amperes	Same
Size		

PERFORMANCE SPECIFICATION IMPROVEMENTS

Output Print Size - 10 x 10 Inch Cut Sheet

- Cost Saving (Material) 60-75%
- Ease of Handling
- Reduction in Processing Time
- Area Selection of Large Format

Magnification - Revised Optical Path Length

- Reduced Width of Console
- Allowed for better human engineering and overall configuration
- Better Access to Chip Loading Mechanism (Original Configuration almost impossible to load film chips from front to machine)

Exposure Control - Automatic

- Improved print quality
- Increased Speed of Operation

Operating Conditions - Cassette Loading

- No darkroom loading necessary
- Increased speed of material loading and material change over (20" to 10" size)

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PERFORMANCE SPECIFICATIONS IMPROVEMENTS (cont.)

Mounting Data - Leveling Jacks

Improve Console Mounting

Better Alignment Between Viewer and Printer Processor

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DESIGN PHILOSOPHY

Past Experience

Variable Width Rear Projection Viewers
Dual Magnification Viewers
Mensuration Viewer
Precision Film Reader
Film Record Reader
Jr. Film Reader
RAPP Variable Format Printer

Formalized Experience and Standard Approach

Film Transports
Platent Assemblies
Image Registration
Chip Loading
Drive Mechanisms
Cassette Loading
Variable Magnification Drivers
Condenser Design
Operational Considerations
Human Engineering
Sensitometric Requirements

DESIGN PHILOSOPHY (cont)

Utilization of Following Standards

Lens Turret Design
Condenser System
Film Loading & on Loading
Sensitometric Requirement
Controls - Manual - Automatic.

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P R O B L E M A R E A S

CONDENSOR DESIGN

CHIP MECHANISM

CAPPING SHUTTER

10 x 10 PRINT

INTERNEGATIVE MATERIAL

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AREAS OF CONSIDERATION

COST

Increase in Material Costs
Impact of Material Change EK 4427-2427
Increase in Overhead - G&A Rates

FILM CHIP MECHANISM

Anticipated Use of Standard Design
Loading & Unloading
Maintain Image Quality
Maintain Registration
X-Translation of Chip

10 x 10 PRINTS

Original Proposal 20 x 20 Only
Adjustable Loading Control
Centering of 10 x 10 format
Maintain Dimensional Integrity
Human Engineering

AREAS OF CONSIDERATION (cont.)

AUTOMATIC EXPOSURE CONTROL

Semi-Automatic Control Originally Considered

Eng. Investigation for Optimum Unit

Interface Mechanical

Interface Electrical

Interface Processor

MISCELLANEOUS

Adjustable Masks (Chips)

Mechanisms

Exposure Platen

Modify Edge Guides

10" - 20" Pilot Light Automatic

Interface Mechanical

Interface Electrical

Corner Marking (10x10)

Align & Calibration

Rotation to Flipping Mirror

Human Engineering

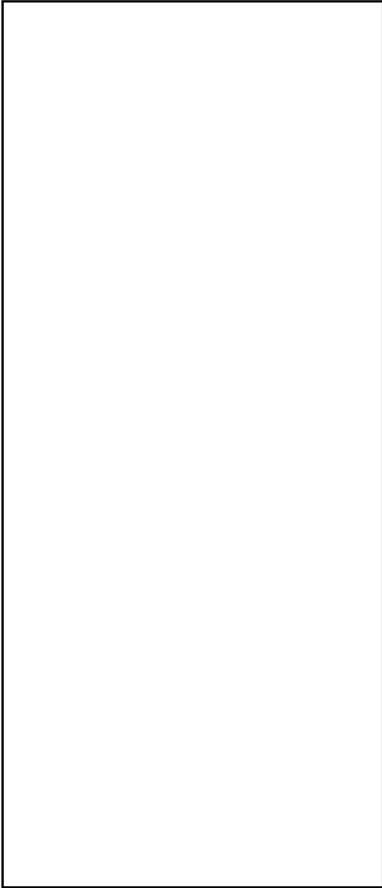
Original Configuration

Capping Shutter

3 Folding Mirrors (From One)

Configuration

STATUS

	<u>Category</u>	STAT
Engineering 92.9% - Completed D.L.H.	02 03 04 CTC - 04	
Design & Drafting 84.7% Completed D.L.H.	06 07 CTC - 06 07	
Procurement 42.9% Material Dollars Expended	materials CTC - materials	
Manufacturing 30.9 Completed D.L.H.	10 CTC - 10	
Assembly 35.1 Completed D.L.H.	12	
Test 0% Completed D.L.H.		

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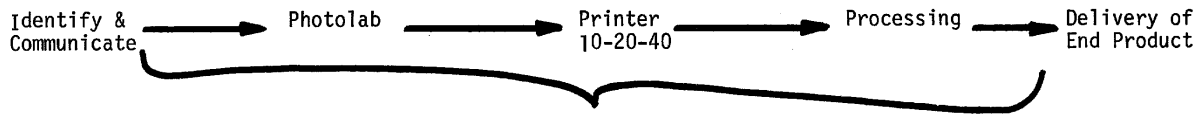
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OPERATIONAL EFFICIENCY

I.



- Time Consuming
- Necessity for Re-Work High
- Communication Problem

II.



- 30 Seconds
- No interface or communication problems
- P.I. Controls entire operation

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FIRST MONTHLY REPORT

DATE TO: March 31, 1967

1.0 Activity During Reporting Period

PROJECT

During this reporting period the work schedules have been planned and plotted on spread sheets. The general plan as presented in the proposal bar chart has been reversed to more realistically reflect the work schedules anticipated.

MECHANICAL

The heart of the mechanical configuration is based on the optical path layout. This path length was revised from 54 to 75 inches and is more compact to allow better operator access to the film platen. The film chip accomodation (section 2.7 of the proposal) plays a substantial part in the optical path layout since it requires operator access to the film platen. The external configuration is still as shown in the proposal with the only exception being the film transport not centered over the viewing screen but slightly to the left. The x translation is being incorporated to drive only the platen assembly.

The mechanical design layout is proceeding to incorporate the lens tree assembly, the film drive, the condenser assembly, the printer/process interface and other major sub assemblies.

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OPTICAL

With the new optical path length a revised selection of projection lenses has been made. The rotating mirror has been eliminated and the change from viewing to printing mode is accomplished by a flipping mirror. This mirror also serves as a light valve to prevent unwanted viewing screen illumination caused by room ambient light from entering the optical path during printing. The condenser scheme was programmed for computer analysis by the optical engineering section. A number of exposure control schemes have been formulated but not finalized. Fine focus will be motorized rather than manually operated.

ELECTRICAL

The control panel and control panel logic was organized. The number of controls was increased to more closely follow the requirements in the proposal and the addendum. The location of the control panel has not been finalized but it appears that part may be on the vertical face and part may be on the horizontal table. A parts list and circuit diagrams from other similar units were being investigated to assist in early expediting of parts.

PRINTER/PROCESSOR

Tentative layout of processing module has been prepared. Interface was discussed with the viewer module design group for common situations of human engineering, optical alignment, mechanical instruction and electrical circuitry, power and signal processing. The layout includes all features listed in the proposal. Film and paper materials have been ordered from Kodak and Anken for experimental purposes. Information on assemblies and parts from the platemaster equipment for use in the printer/processor was collected and was investigated. The film

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cassette design and the testing of processing chemistry was started.

1.A Percentage of Work Completed as of Reporting Date

A little better than 10% of the work has been completed as of 3/31/67.

2.0 Planned Activity for Next Reporting Period

PROJECT

On April 20, 1967 the contracting officer representative will visit

STAT Discussions will concentrate on progress of the program and interpretation of technical approaches.

MECHANICAL

The mechanical design layout and optical path layout will be completed. Detail of sub assemblies and parts should be started. The film chip scheme and platen traverse assembly should be worked out.

OPTICAL

The projection lenses will be ordered. The condenser lenses should be finalized with detail drawings and specifications. The exposure control scheme will be completed and incorporated into the control panel logic.

ELECTRICAL

Long lead items will be ordered. The control panel logic will be near completion. Main circuit diagrams are to be initiated.

PRINTER/PROCESSOR

STAT Two trips are planned. One is to for drawings and spare parts from the 20" x 24" Platemaster. The other trip is to for discussion of sensitometer and chemistry. Continuation of design layout and experimental work on sensitometer, chemistry and exposure control. An order will be placed for finalized

- 4 -

components. There will be continuation of interface liaison with viewer console group.

3.0 Unresolved Technical Problems

- a. The exposure control scheme.
- b. The condenser lenses configuration and specifications.
- c. The film chip platen and x traverse assembly.
- d. Investigation data needed for processing chemistry, sensitometer and photometry.

4.0 Unresolved Contractual Problems

See letter of 29 March 1967 to Contracting Officer of the program
from

5.0 Oral Agreements or Understanding Not Requiring Approval

None

6.0 Oral Agreements or Understanding Requiring Approval

None

7.0 Unresolved Matters

None

8.0 Status of Funds

See separate sheet.

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SECOND MONTHLY REPORT

DATE TO: April 30, 1967

1.0 Activity During Reporting Period

PROJECT

On April 20, 1967 the contracting office representative visited

Every detail of the program was reviewed. Much of what was discussed has become part of this progress report.

MECHANICAL

Detailing has started in the lens turret and mirror mounting areas. Engineering design continues on the film transport, condenser assembly, condenser drive and film chip platen area. The X traverse for film chips will be motorized rather than manual. The cabinets of the viewer and the printer-processor will be matched in size even though the printer-processor could have its outer skin reduced.

OPTICAL

The projection lenses have been ordered. The design of the condenser lenses is about 90% complete. Calculations have been performed for the depth of focus and depth of field for each magnification using the required resolution figures. The aperture settings have been determined for each lens. The mirror specifications and mirror thickness are being investigated.

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The contracting office representative called requesting that the masking not be considered fixed for each chip size but adjustable to accommodate any chip size not smaller than 70 by 70mm and not larger than 9 1/2 by 9 1/2 inches. Non-centering of the film chip could result from the adjustable masks. The roll film masks would also be adjustable. The adjustable masking approach will be investigated during the next report period.

The exposure control is one of the more important areas that was discussed with the contracting office representative. The design goals of the exposure control scheme as it now stands is as follows:

1. Lamp: Use the 1500 watt bulb called for in the proposal.
2. Lamp Voltage Control: Manual setting of lamp voltage control during viewing. The setting should be indicative of the format presented, therefore, the voltage setting, lamp brightness, shall be the same during printing. The lamp shall not be used for any photographic override.
3. Lamp Shutter: Investigate the possibility of a lamp shutter for the exposure of the print. Possibility of the lamp on and off performing the shuttering. Also, possibility of combination of lamp shutter and lamp on and off.
4. Neutral Density Filters: A reduction ratio to drop the viewing light down to an acceptable print light value. This will only be used if the calculations indicate unreasonably fast exposure times. However, there is a good possibility that the use of a diffuser will

- 3 -

serve the purpose of gross light reduction in the print mode. Therefore a mechanism is to be provided which will intersect the condenser light beam and carry provisions for both a diffuser and a neutral density filter.

5. Heat Absorbing Filters: Heat absorbing filters will be mounted in the condenser system. The 45° mirror will be a dichroic "cold" mirror. The heat absorbing filter should be placed between the dichroic mirror and the main condenser lenses.
6. Filter Wheel: No filter wheel will be included.
7. Lens Aperture Setting: The lens apertures shall be set at one fixed opening. An attempt will be made to equalize illumination by the aperture stop setting chosen for each lens magnification. Evenness of illumination will also have an effect on the aperture setting.
8. Lens Shutter: No lens shutters will be used for exposure timing. Lenses will be purchased without shutters.
9. Diffuser: A diffuser plate will be used in the printing mode. It will not be used during viewing.
10. Exposure Metering: A reflection type probe (similar to those used in photographic enlargers) exposure meter is to be used. It shall integrate the light reflected from the entire print format. The exposure meter information shall be used to time the shutter action. No readout will be available.

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11. Exposure Override: A continuously varying dial with 1/2 stop readings to ± 2 stops. A central position will be a factory calibrated exposure setting.
12. Exposure Time: The "less than one second" exposure time is under investigation. It may be necessary to change this requirement to ".5 second to 2 seconds" exposure time range. Many parameters presently under investigation influence the exposure time, however, this area should be finalized before the end of the next reporting period.

ELECTRICAL

Long lead items are being ordered. The main functional block diagram has been started.

PRINTER-PROCESSOR

The design is continuing with the following percent complete results, the drive 50%, frame 100%, vacuum platen 90%, transport positive paper cassette to processor 50%. Detailing was started in most of these areas.

Trips were made to [REDACTED] STAT
[REDACTED] Useable parts of the [REDACTED] "Platemaster" were determined. STAT
Film information was gained on the [REDACTED] DTR Process (Diffusion STAT
Transfer Reversal).

The finished print sandwich will exit at hand height in the center processor-printer rather than lower right hand corner. There is no need for print tray; the operator opens a door and remove

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the print sandwich by hand. Edge guides used in the exposure platen will be clear plastic.

1.a. Percentage of Work Complete as of Reporting Date

Better than 20% of the work has been completed as of 4/30/67.

2.0 Planned Activity for Next Reporting Period

MECHANICAL

Continuation of design layout and detailing. The film transport, condenser lens drive and film chip platen should be designed.

OPTICAL

Condenser lens complete. Drawings will be made of each lens and the lenses will be ordered.

ELECTRICAL

Continuation of parts ordering and circuit drawing layout. Finalize control panel.

PRINTER-PROCESSOR

Continue design and detailing of printer-processor.

3.0 Unresolved Technical Problems

3.1 Film Chip Insertion and Masking

3.2 Exposure Cycle Details and Exposure Time Duration

4.0 Unresolved Contractual Problems

None

5.0 Oral Agreements or Understandings not Requiring Approval (Between Contracting Office Representative and Project Manager)

- 5.1 Leveling casters on printer-processor same as viewer, no shock absorbers.
- 5.2 Fine focus control knob not in easy access location.
- 5.3 Magnifications changed slightly but still within tolerance of original proposal.
- 5.4 Three folding mirrors instead of one.
- 5.5 Rotating mirror replaced by flipping mirror.
- 5.6 Optical path length is 75 inches not 54 inches.
- 5.7 Corner markings for 10 x 10 image.
- 5.8 Center cross hair 1" by .005" wide.
- 5.9 Motorized fine focus instead of manual.
- 5.10 Resolution requirements assumed to be AWAR, some areas lower than others.
- 5.11 Image Plane Sizes

<u>Magnification</u>	<u>Film Size</u>	<u>Image</u>
2.01X	9 1/2"	Clear area around edge
4.08X	5"	Cut off .050 of edge of film
6.79X	70mm	Clear area around edge
10.48X	1 7/8"	Area on screen
21.97X	7/8"	Area on screen

- 5.12 Filter wheel is out.
- 5.13 Neutral density filter is out.
- 5.14 Possible use of diffuser plate during printing.

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- 5.15 There has been an increase in the number of controls.
- 5.16 The 10" - 20" pilot light is automatic.
- 5.17 Exposure platen to have vertical edge guides, made of transparent plastic if possible, not to cover more than 1/2" from each edge.

6.0 Oral Agreements or Understandings Requiring Approval (Written)

- 6.1 Exposure Time: Request revision of "less than one second", exposure time. Would like to consider ".5 to 2 second range," requested.
- 6.2 Film Chip: Use of adjustable masks. Customer requested.

7.0 Unresolved Matters

None

8.0 Status of Funds

See separate sheet.

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*NOTE: Where shown, all expenditures include the appropriate Overhead and/or G&A. The Accrued Fee is shown separately for greater clarity.

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THIRD MONTHLY REPORT

DATE TO: May 31, 1967

1.0 Activity During Reporting Period

MECHANICAL

The lens turret assembly has been released for procurement. A preliminary layout was made of the cabinet frame. Work will continue on the frame as each sub-assembly design area is complete. Early release of the frame is necessary because of its long delivery time. The condenser assembly and the condenser drive are now in design detailing. The film transport, film drive and film chip drive are also in design detailing.

OPTICAL

The condenser lenses design is complete. The mirrors have been specified and have been ordered. The only remaining optical area is the finalizing of the photometry for view and printing illumination. A Kodak photo-electric exposure-time meter is being investigated as the most probable unit for automatic exposure control. As per the proposal and the contract there is no capability for image rotation.

ELECTRICAL

The circuit drawings are being prepared. Parts lists have been formulated and parts are being procured. The film drive scheme is being investigated to determine motors, torques and linear film speeds. A main functional schematic has been prepared showing all the electrical performance functions necessary for the viewer and printer-processor and their interface.

PRINTER-PROCESSOR

Design detailing and release for procurement is continuing. Laboratory work is being performed on photographic material sensitometry. The cutting knife and metering assembly have been received from IBP. Drawings are 75% complete. DTR process samples of improved receptor sheet and transfer solution have been received.

2.0 Planned Activity for Next Reporting Period

MECHANICAL

Continuation of design layout and detailing. All main sub-assemblies will be design engineered and in design detailing. Parts to be released for procurement as soon as a sub-assembly is completed.

OPTICAL

Completion of photometry light levels and ordering of the photo-electric exposure meter. This unit will be designed into the main viewing console for an off-axis reflection view of the entire 20x20 exposure platen. Condenser lenses to be released for procurement.

ELECTRICAL

Circuits to be finalized with all parts being released.

PRINTER-PROCESSOR

Continue detailing of printer-processor with release of all finished items. Continue laboratory sensitometry effort. Possible start of printer-processor assembly.

3.0 Unresolved Technical Problems

3.1 Exposure cycle details and exposure time duration.

3.2 awaiting written comments on previous progress report.

4.0 Unresolved Contractual Problems

4.1 awaiting written comments on item (6) of previous progress report.

5.0 Oral Agreements or Understandings (Between contracting representative and Project Manager)

5.1 The fine focus is motorized with linear (vertical) velocity reduced by a factor of 2 over AM-4 design.

6.0 Oral Agreement or Understanding Requiring Approval

6.1 See previous monthly report.

7.0 Unresolved Matters

None

8.0 Status of Funds

See separate sheet.

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PHOTO INTERPRETATION RAPID COPY VIEWER/PRINTER

FOURTH MONTHLY REPORT

DATE TO: June 30, 1967

1.0 Activity During Reporting Period

MECHANICAL

All engineering design work has been completed. The film transport and condenser assembly are being detailed. The installation drawing as well as the installation data sheets have been prepared and were forwarded to the C.O.R. earlier.

OPTICAL

Mirrors and condenser lens are out for quotation. The photo-electric operation manual was received and is being reviewed for its suitability.

STAT

ELECTRICAL

The circuit drawings are being finalized.

PRINTER-PROCESSOR

The Printer-Processor drawings have been 100% released for fabrication and procurement. The negative cassette contains 75 ft. of material and the positive contains 200 ft. of material.

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2.0 Planned Activity for Next Reporting Period

MECHANICAL

Completion of all details and release of 90% of all hardware.

OPTICAL

Place the order for lens and mirror. Place the order for the Kodak exposure meter.

ELECTRICAL

Complete electrical circuit drawings.

PRINTER-PROCESSOR

Start assembly of Printer-Processor.

3.0 Unresolved Technical Problems

No new unresolved technical problems.

4.0 Unresolved Contractual Problems

4.1 Delivery date on condenser lens is January 2, 1968.

4.2 Assembly of the viewer printer will probably not start until the month of October, 1967 rather than September as originally planned.

5.0 Oral Agreements or Understandings

No new oral agreements or understandings.

6.0 Oral Agreements or Understandings Requiring Approval

No new oral agreements or understandings requiring approval.

7.0 Unresolved Matters

No new unresolved matter.

8.0 Status of Funds

See separate sheet.

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Proposal Number 66-3557

PHOTOINTERPRETATION RAPID COPY VIEWER/PRINTER
Addendum #1

This addendum to the Photointerpretation Rapid Copy Viewer/Printer proposal has been generated to clarify several of the performance features of this equipment. The related proposal paragraphs are identified with each item for appropriate reference.

- Item 1 Screen Illumination - Variation in illumination level between any two points on the viewing screen will not exceed 20%. (Para. 2.4)
- Item 2 Exposure Control - In order to simplify equipment operation and insure generation of quality prints, an automatic exposure control device will be included. This system element will control both printing lamp intensity and lens shutter timing to produce properly exposed prints. The photosensing device will view the completely illuminated negative format and produce electronic signals equivalent to the integrated density characteristics of the image. A manual override capability will be provided to allow operator control of exposure should this be required. (Para. 2.4.2.)
- Item 3 Film Chip Accommodation - Provisions will be included in the Film Transport Design for x translation of input film chips. This translation will be initiated manually from the control panel with suitable connections to a rack and pinion assembly mounted orthogonally to the Y translation axis. (Para. 2.7)

Item 4 Focus Control - The equipment will contain the facility for fine focus of any of the five (5) lenses. Since the lens configuration is mounted on a single vertical shaft, vertical translation of the shaft can provide fine focus control for any lens position. During factory test and alignment of this equipment nominal lens position focus will be established for each magnification. (Para. 2.3)

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Item 5 Variable Transport - The film and paper transport utilized in the Processor may be accommodated to accept either 10" wide or 20" wide material. Metering of both materials may be adjusted to avoid excessive waste. Changeover from wide to narrow web material is accomplished by control panel adjustment of metered length and modification of film guides and spool mountings. Suitable masking is provided at the print platen to avoid fogging of unexposed sensitized material. The minimum size of the output format will be 10" x 10".

The input materials will be cassette-spooled with spacers provided on the mounting spindles for aligning either size format with respect to the Printer platen. The procedure for changing from 20" x 20" to 10" x 10" prints will consist of removing the 20" cassettes, removal of the 20" paper and substituting the 10" spools with the attached spacers, manually sliding the negative film drive roller assembly to the detent position marked 10, threading the new materials, and rotating a hinged light mask into position. The film and paper metering and cut-off system will be automatically adjusted by the position of the negative film drive rollers and a pilot lamp at the operators control panel will indicate the print size.

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The use of a paper cassette, hinged light mask, and a sliding drive roller system will provide a rapid change-over capability with a down-time requirement of less than five (5) minutes. The cassettes may be darkroom loaded and then loaded in the viewer/printer under normal room light. (Para. 2.9)

- Item 6 Processor Assembly - The diffusion transfer reversal processing assembly may be removed for cleaning. Under normal operating conditions this assembly should be cleaned periodically every two weeks. The processor plumbing will include a filter assembly which must also be replaced periodically. The processor pinch roller assembly will contain scrapping knives to prevent chemical buildup on the roller portion. (Para. 2.9)
- Item 7 Operating Life of Chemistry - Under continuous use at 100 prints per day the processing chemicals must be replaced daily, however, if the printing rate is not achieved on a daily basis, then the chemicals may be utilized up to approximately one week or until the 100 print level is reached. Extension of the operating life of the chemistry may be accomplished by returning the solution from the processing tray to the container when not in constant use and maintenance of the ambient room environment (below 80°F).

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PROJECT PERFORMANCE CHART

Project Number 9618

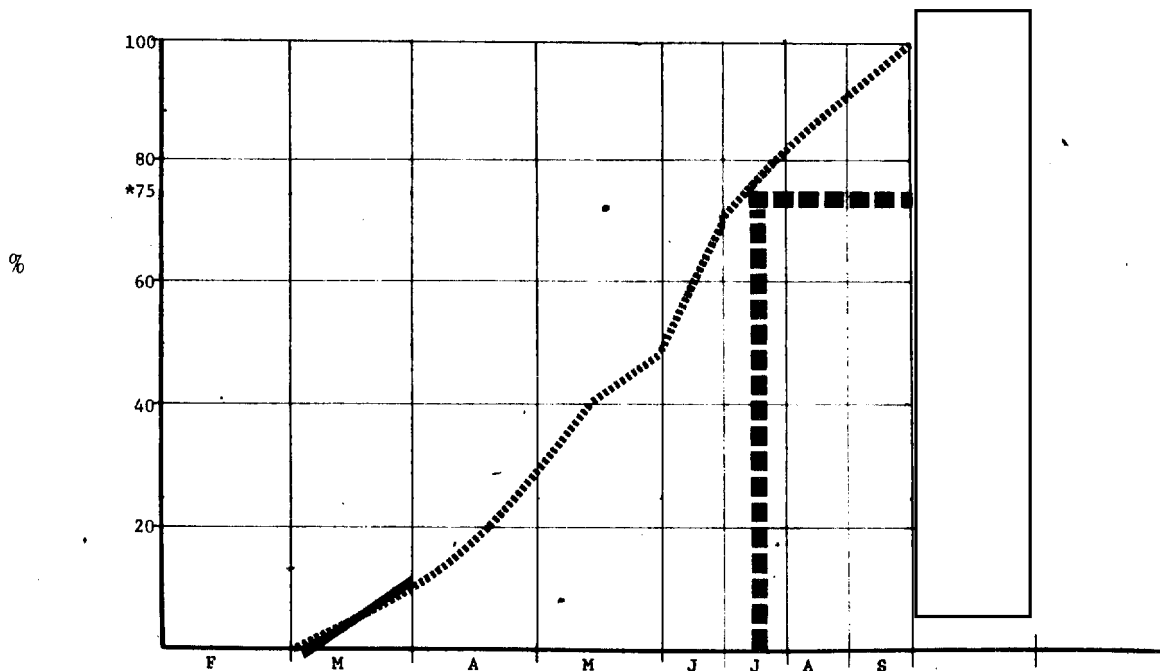
Project Mgr. M M 30.36

Division GISD Contract Type CPIF

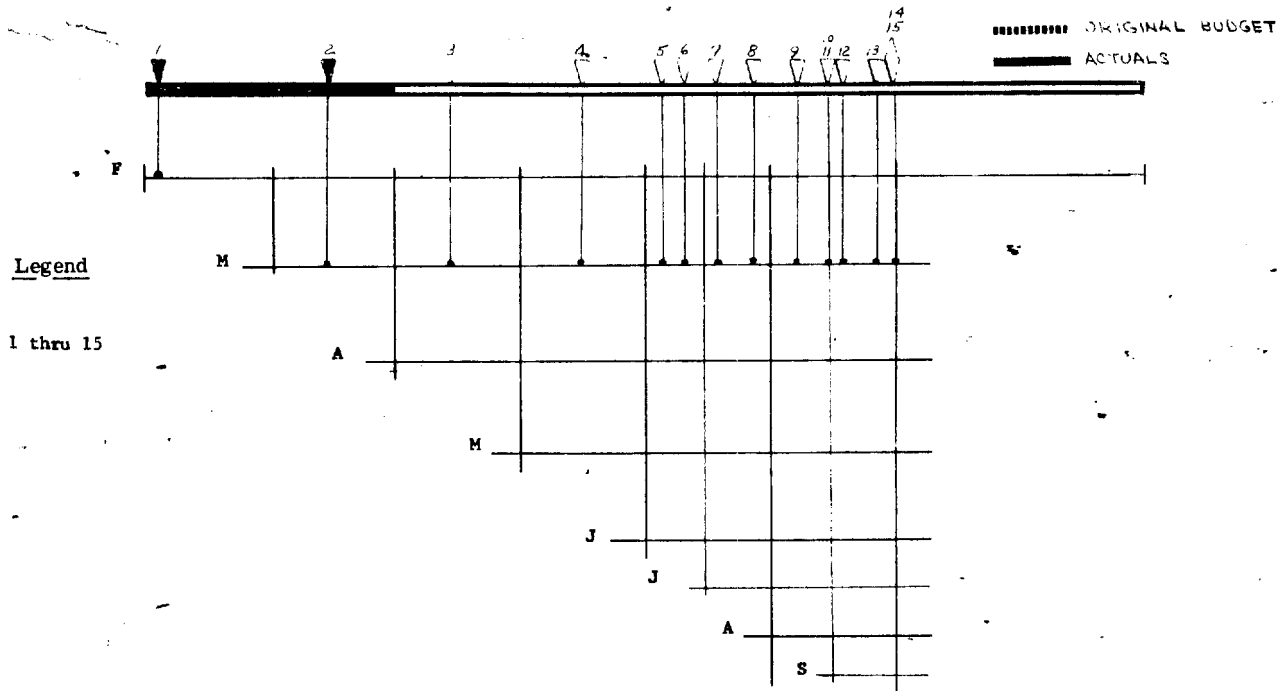
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*Note: Customer must be notified when expenditures reach 75% of total contract cost.



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PROJECT PERFORMANCE CHART

Project Number 9618

Project Mgr. []

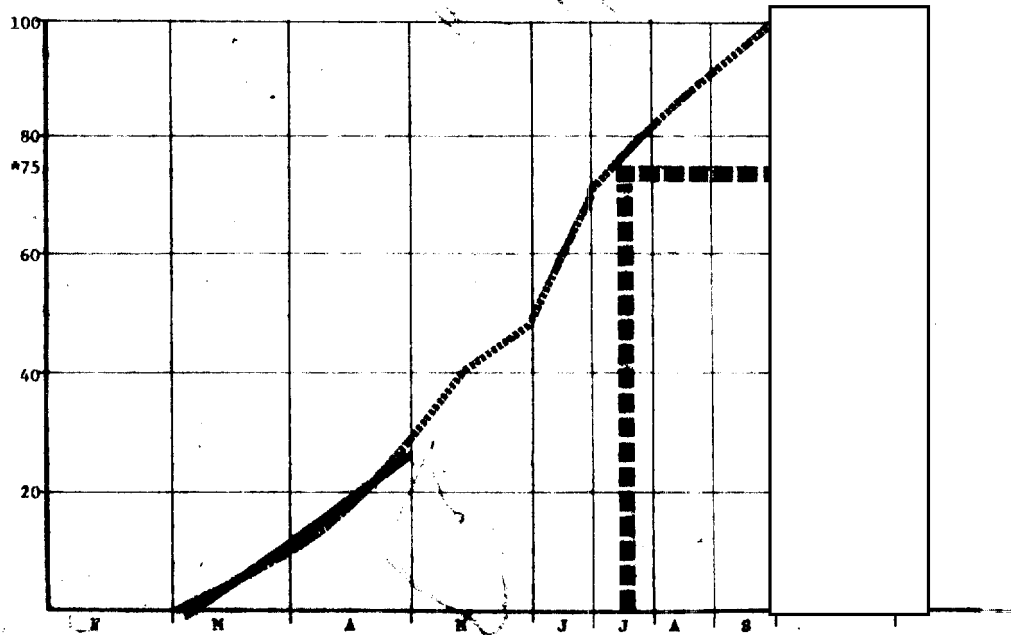
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Division GISD

Contract Type CPIF

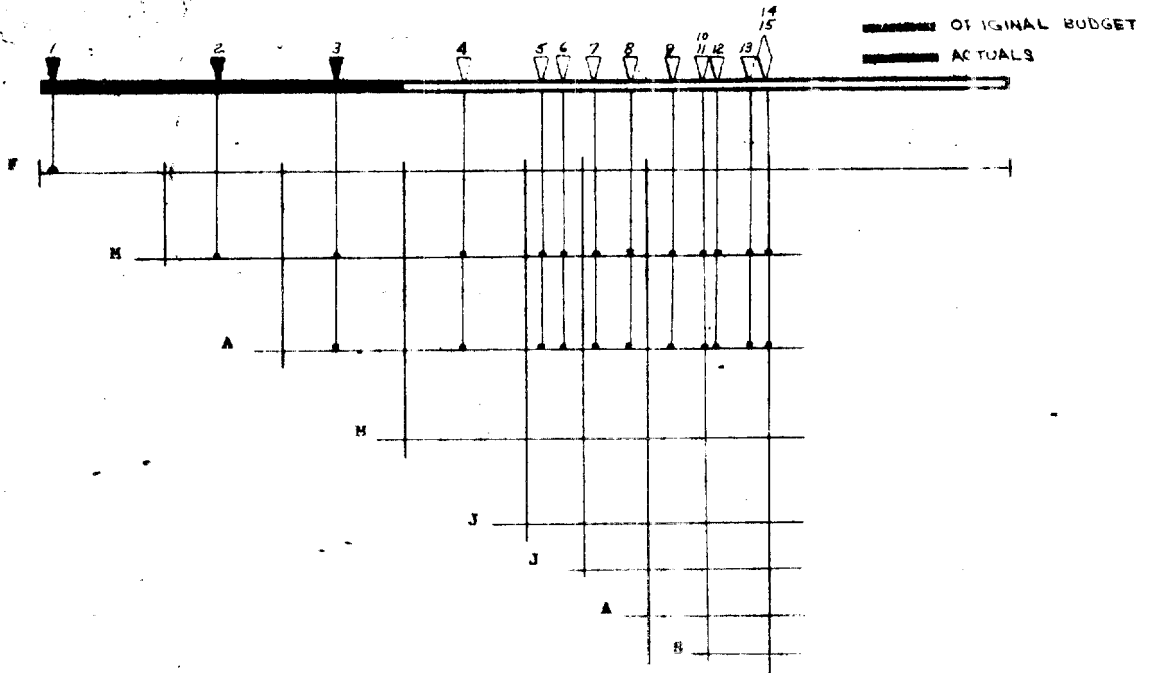
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PROJECT PERFORMANCE CHART

Project Number 9618

M M 30.36

Project Mgr. []

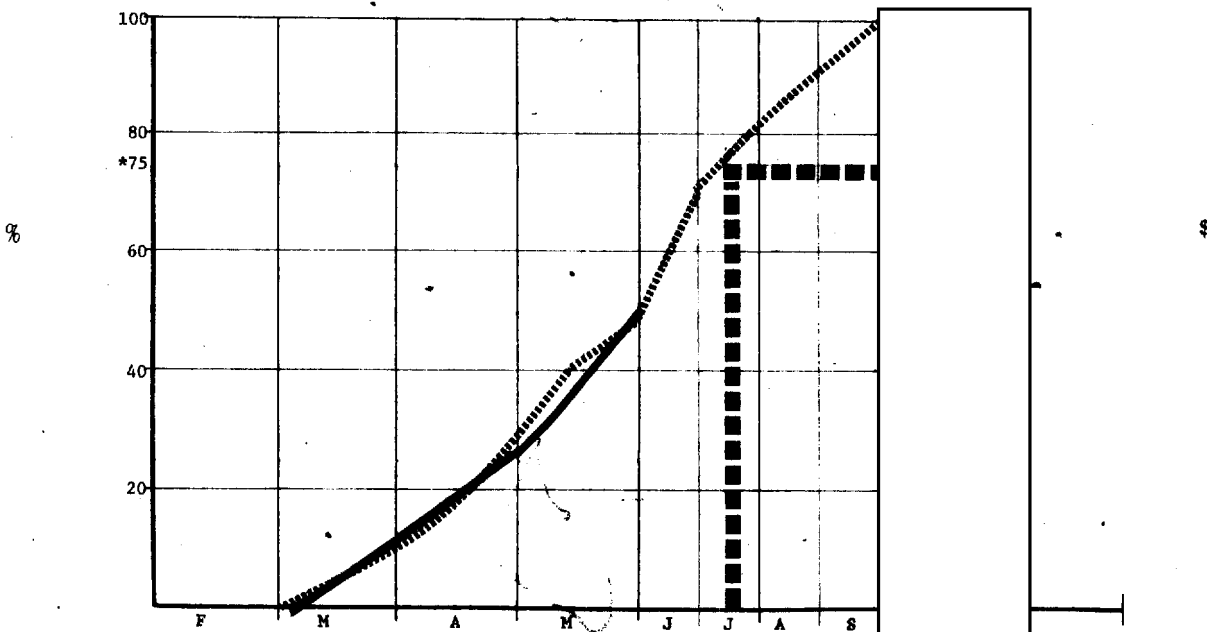
Division GISD

Contract Type CPIF

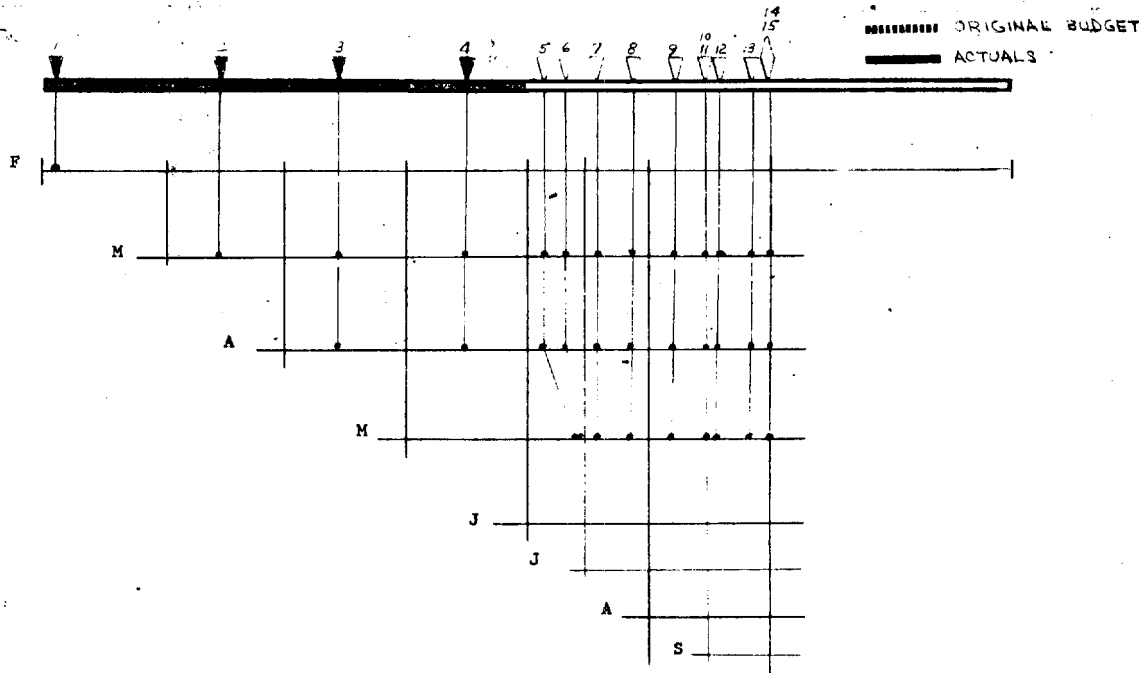
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*Note: Customer must be notified when expenditures reach 75% of total contract cost.



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PROJECT PERFORMANCE CHART

Project Number 9618

Project Mgr. [Redacted]

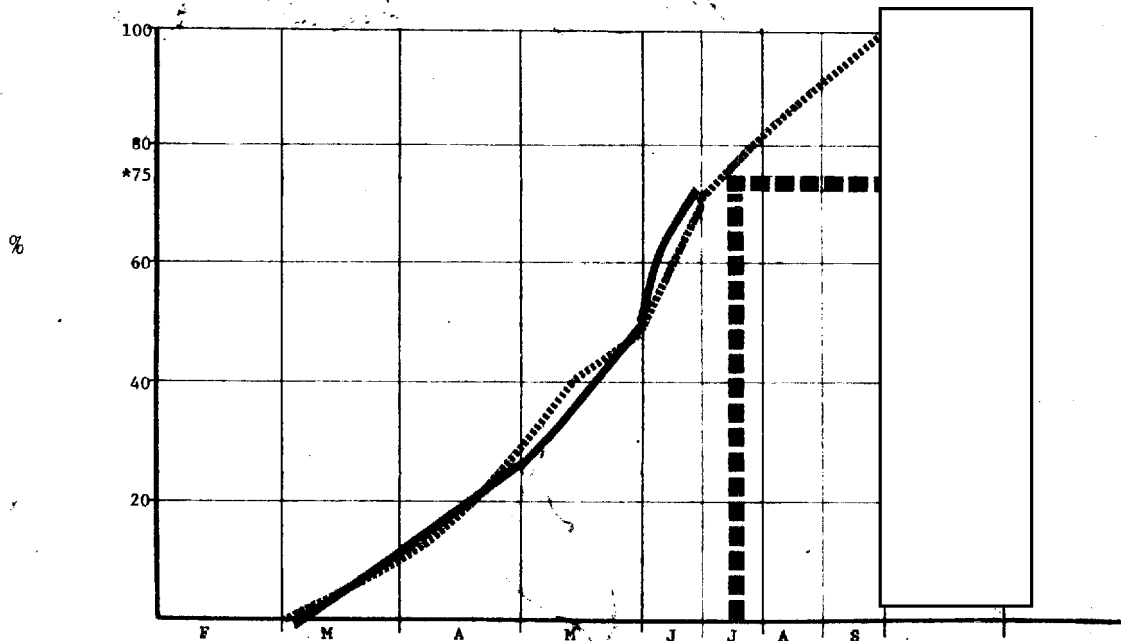
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Division GISD

Contract Type CPIF

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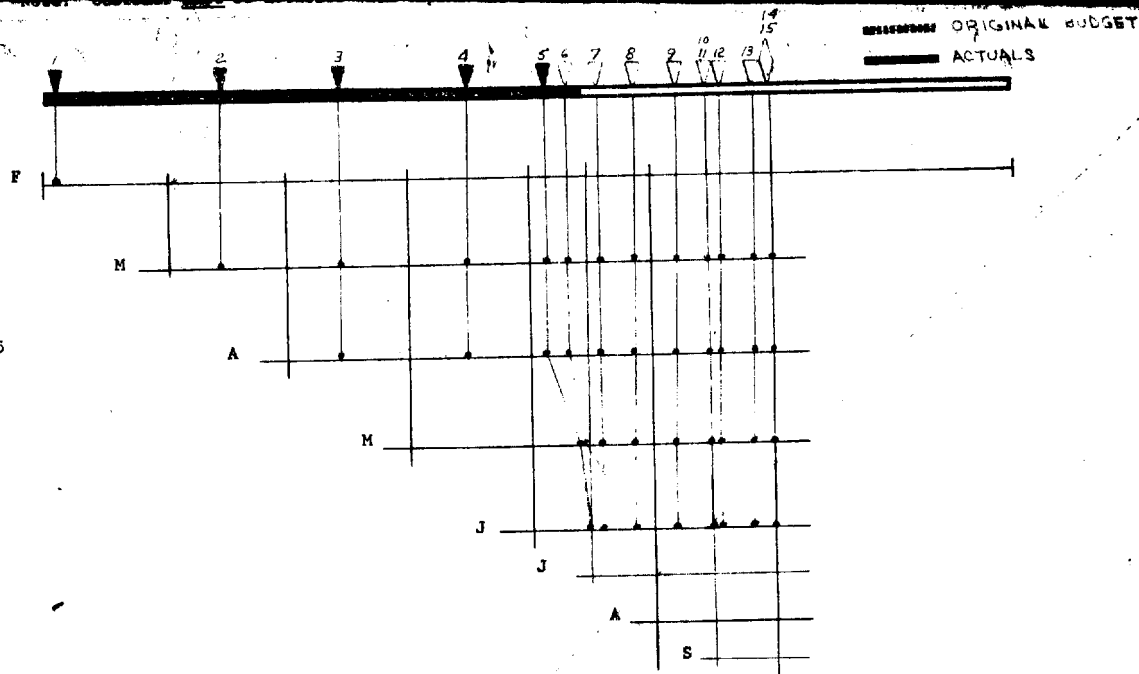
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PROJECT PERFORMANCE CHART

Project Number 9618

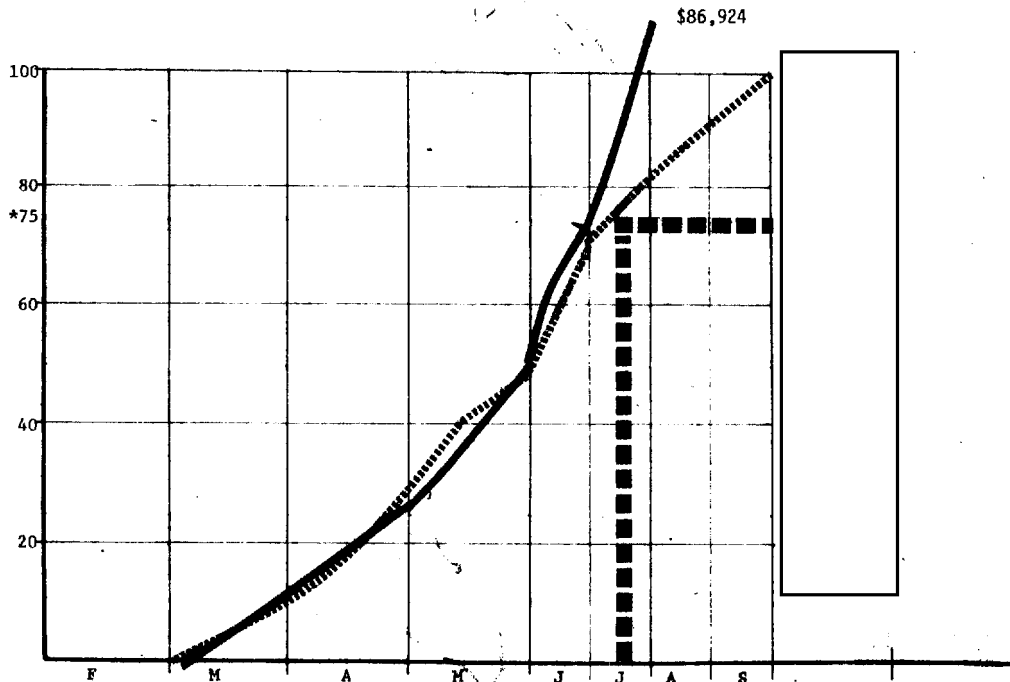
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Project Mgr. [Redacted]

M M 30.36

Division GISD

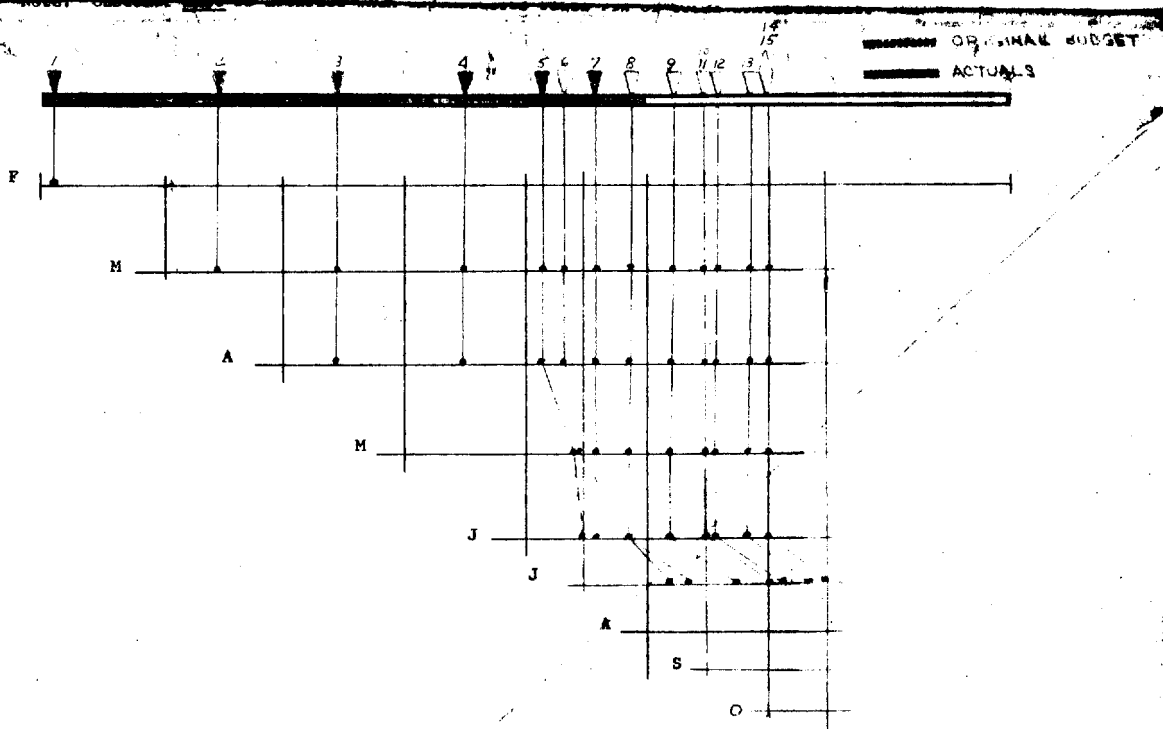
Contract Type CPIF



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SIXTH MONTHLY REPORT

DATE TO: August 31, 1967

1.0 Activity During Reporting Period

PROJECT

Program was stopped during the week of August 7, 1967 due to an anticipated overrun.

2.0 Planned Activity for Next Reporting Period

See Section (1.0)

3.0 Unresolved Technical Problems

See Section (1.0)

4.0 Unresolved Contractual Problems

See Section (1.0)

5.0 Oral Agreements or Understanding

See Section (1.0)

6.0 Oral Agreements or Understanding Requiring Approval

See Section (1.0)

7.0 Unresolved Matters

See Section (1.0)

8.0 Status of Funds

See Section (1.0)