



The Kling-Lindquist Partnership, Inc.

Presentation for
Full Comprehensive Architectural and MEP Engineering Services for

Forest City Tech Place Associates

New York, New York

May 15, 1992

Architect, Engineering, Interior Design and Consulting Services
2301 Chestnut St., Philadelphia, Pennsylvania 19103-3035
215 564 2900



Presentation to
Forest City Tech Place Associates
May 15, 1992

INTRODUCTION

M. J. Sotnick, PE, Chairman & CEO

TKLP, AN ARCHITECTURAL / ENGINEERING FIRM

Warren J. Mathison, AIA
Principal & Project Director

Alexander H. Ralston, Jr., PE
Managing Principal & Director of Special Projects

ARCHITECTURAL SERVICES

W. Mathison

- Introduction
- Interaction
- Approach
- Design

PROJECT CONTROL SYSTEMS

Robert N. Kennedy, PE
Manager of Project Controls & Chief Cost Estimator

BREAK

MEP ENGINEERING SERVICES

A. Ralston

- Introduction
- Management
- Technical Work Session

TKLP PRESENTATION WRAP-UP

W. Mathison, A. Ralston



Attending from TKLP:

M. J. Sotnick, PE

Chairman & CEO

Architectural Group:

Warren J. Mathison, AIA

Rick Focke, IBD

John H. Sassmann, AIA

William J. Waffle, AIA

Kenneth E. Yarnell, IALD

Principal-in-Charge

Interior Design Principal

Project Manager

Architectural Technical Manager

Lighting Designer

Engineering Group:

Alexander H. (Chip) Ralston, Jr., PE

J. Patrick Carpenter, PE

Gerald W. Fink, PE

Thomas E. Reed, PE

Robert L. Roth, PE

Robert N. Kennedy, PE

Principal-in Charge

Senior Engineering Design Principal

Project Manager

Chief Instrumentation & Controls Engineer

Chief Electrical Engineer

Chief Project Controls Engineer

Why TKLP?

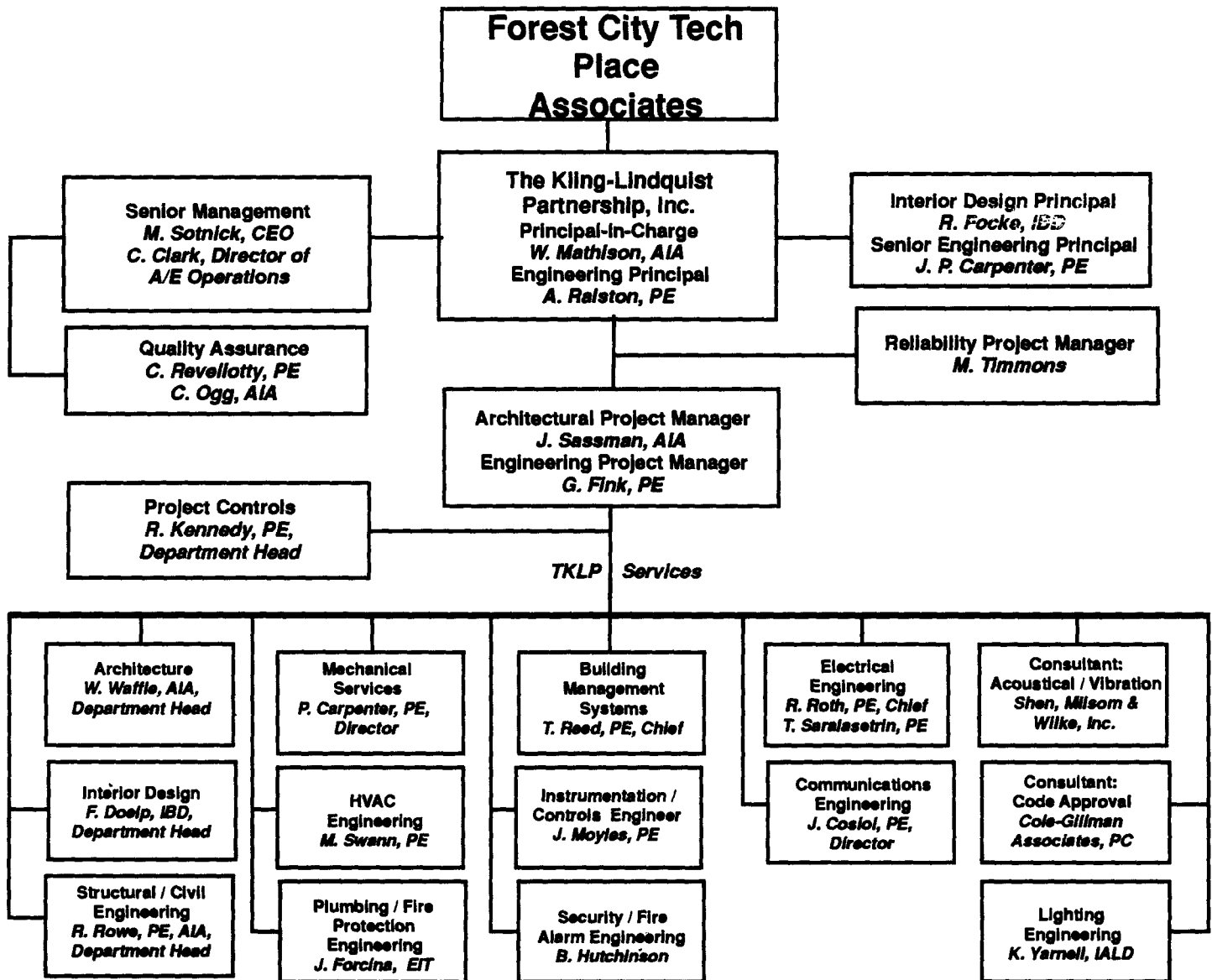
- **Experience**
- **Depth of Resources**
- **Proven Delivery System**
- **Excellent Team**
- **We Listen**
- **We're Responsive**
- **Good Working Rapport**

TKLP



Project Team Organization

Full Architectural & Engineering Services



On-Budget History

Project	Est. Cost	Final Cost	Variance
United Technologies, Newington, CT	6.0	6.0	0.0%
Merrill Lynch & Co., Inc., Staten Island, NY	40.0	40.0	0.0%
Philadelphia Savings Fund Society (PSFS)	17.7	17.9	+1.1%

TKLP

On-Time History

Project	Scheduled Completion	Actual Completion	Variance
United Technologies, Newington, CT	Apr. 1991	Apr. 1991	0.0%
Merrill Lynch & Co., Inc., Staten Island, NY	Dec. 1988	Dec. 1988	0.0%
Philadelphia Savings Fund Society (PSFS)	Apr. 1984	Apr. 1984	0.0%

TKLP



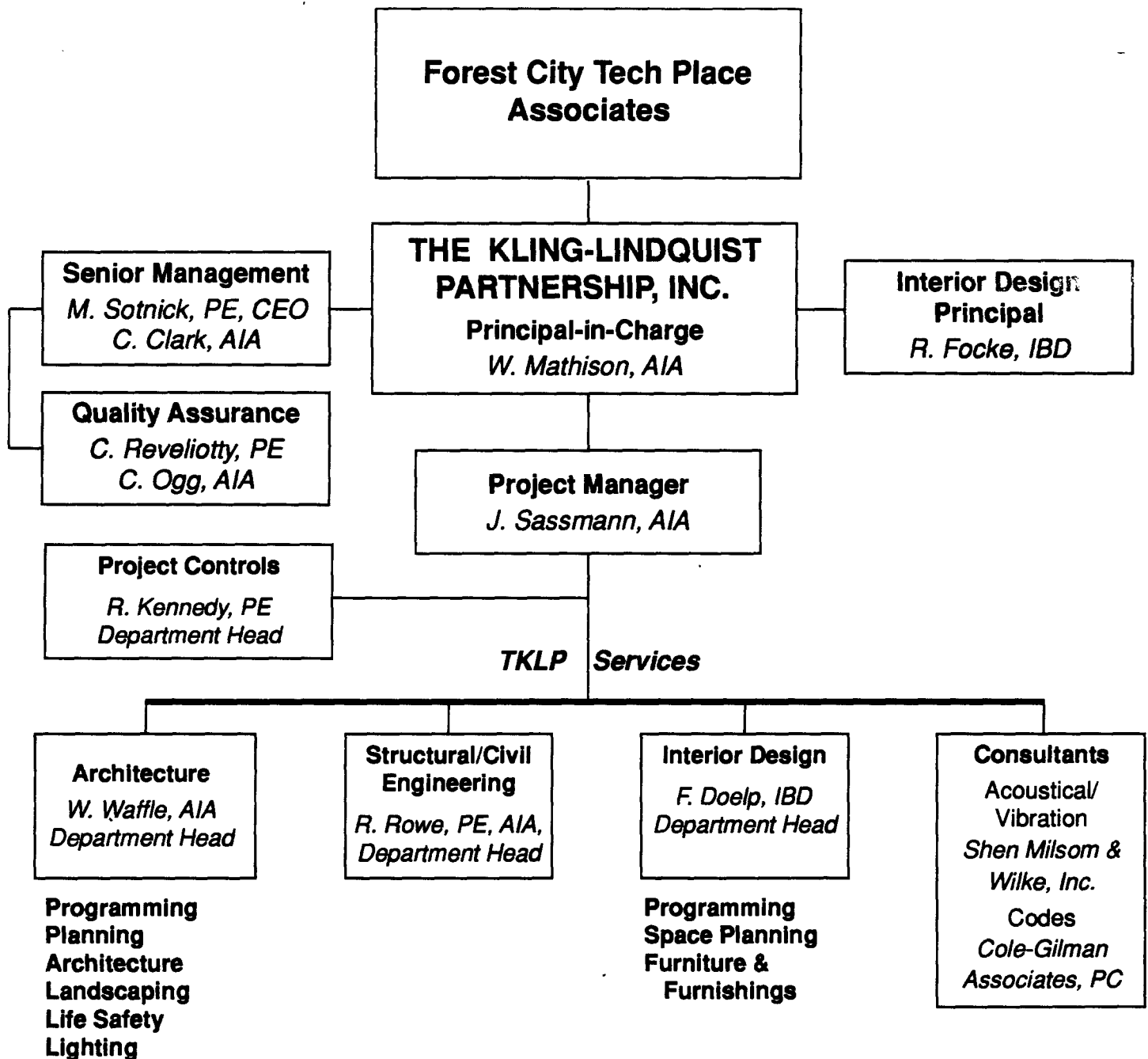
The Kling-Lindquist Partnership, Inc.

Architectural Services



Project Team Organization

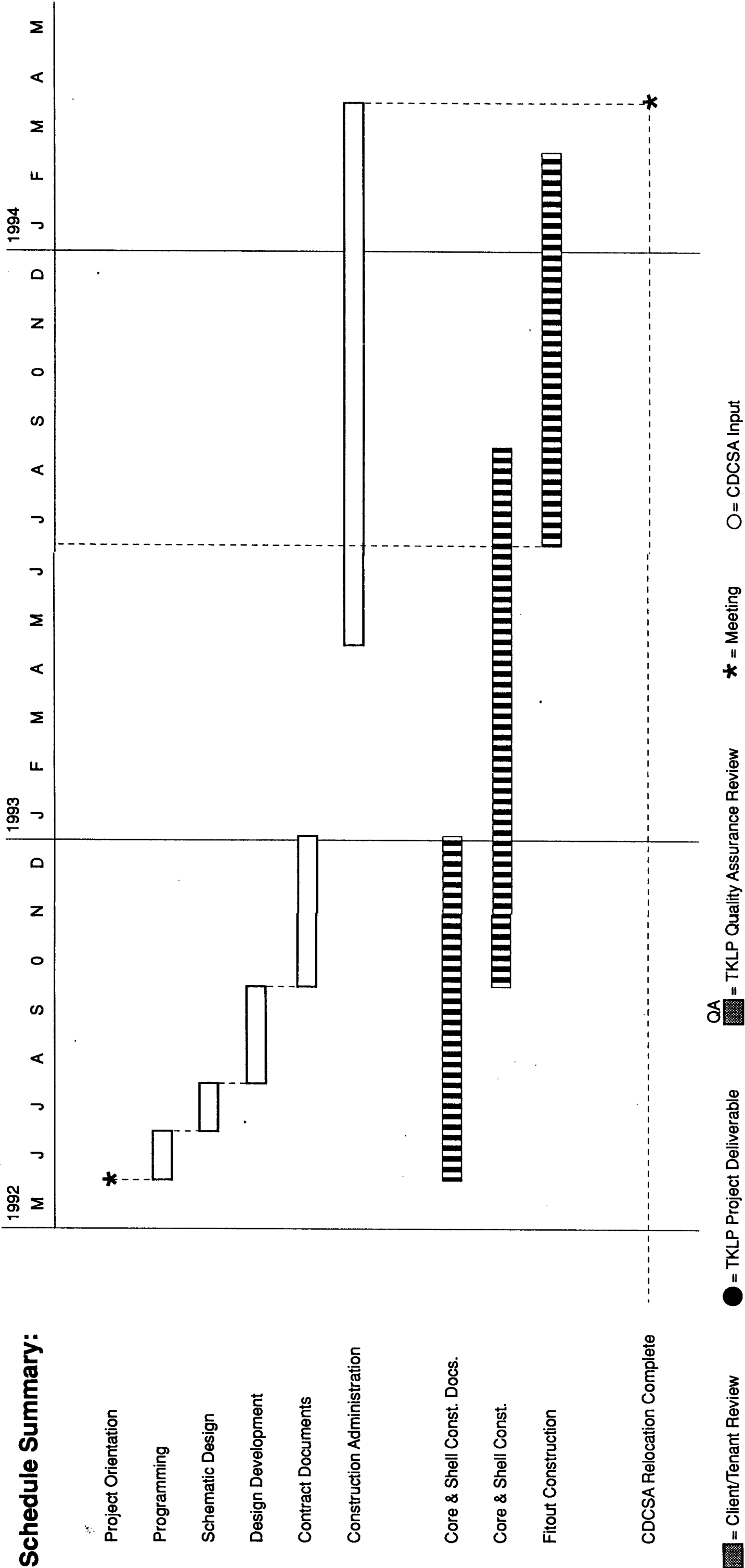
Full Architectural Services



TKLP

Schedule Summary — Architectural

Schedule Summary:





Project Orientation Meeting & Programming — Architectural

Project Orientation Meeting:

- Scope of Services
- Project Scope
- Key Personnel (TKLP, Client, & Tenant)
- Communications Procedure
- Distribution
- Meeting & Conferences with Base Building Architect (Schedule)
- List of Utility & Service Companies Serving Site
- Approving Agencies
- Project Schedules
- Project Budgets
- Methods of Bidding & Procurement
- Estimating Procedures
- Drawing Format (CADD Requirements)
- Specifications
- Submittals
- CDCSA Input

Issue Project Procedures Manual

Programming:

Review Space Studies

Receive Data Center Program

Specialty Requirements (Schedule, MEP, Service Access, Security)
Power, Data, Voice Requirements

Receive Office Area Program

Specialty Requirements (Schedule, MEP, Service Access, Security)
Power, Data, Voice Requirements

Program Progress Review Meeting (BBA, FA & ID Coord.)

Project Communications Systems

Project Security & Access

Program Presentation Meeting

Receive Approved Program

BBA, FA & ID Coor. Meeting

Coordination:

Fitout Architecture & Interior Design

Base Building Architect

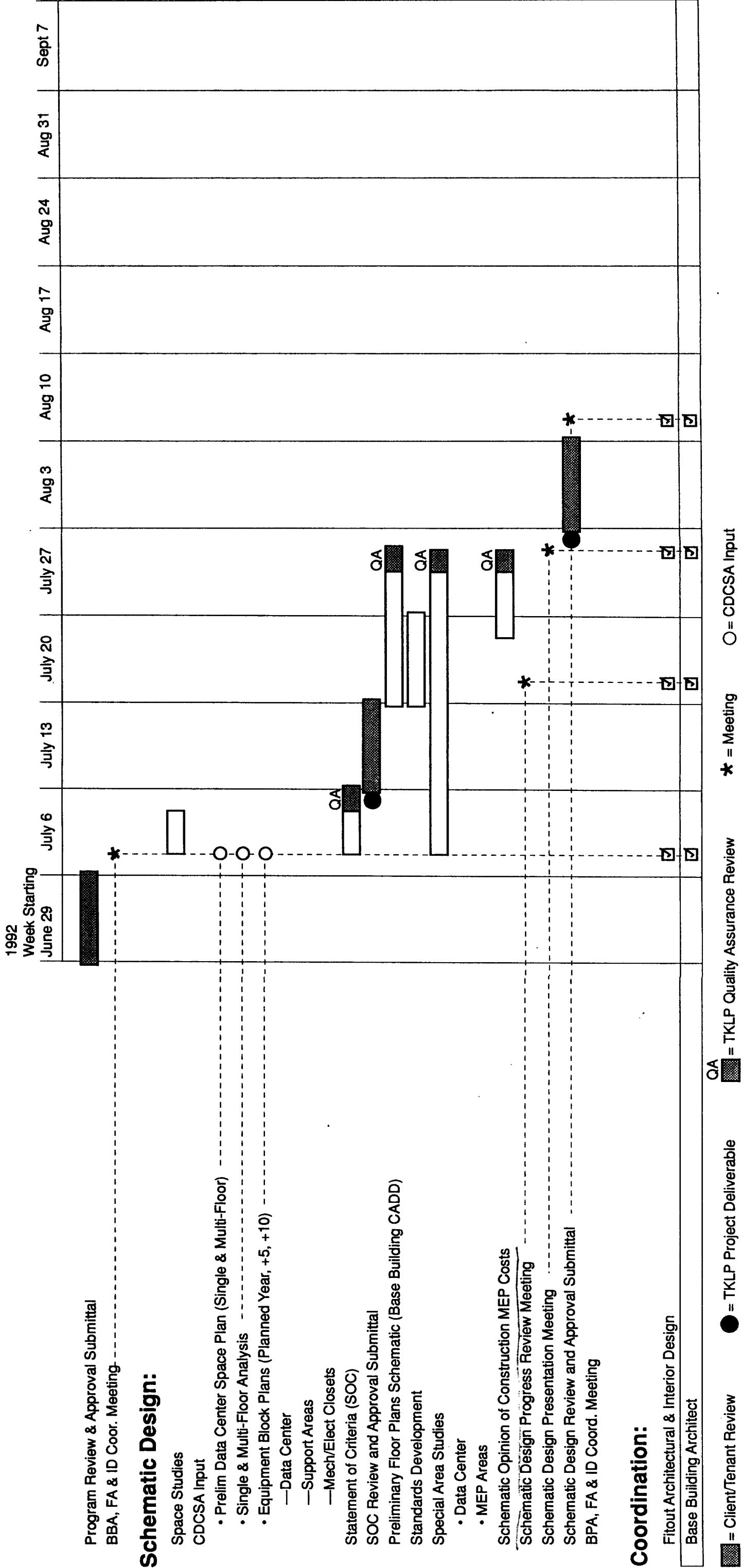
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 = Client/Tenant Review
 = TKLP Project Deliverable
 QA

*** = Meeting** **O = CDCSA Input**

TKLPP

Schematic Design — Architectural



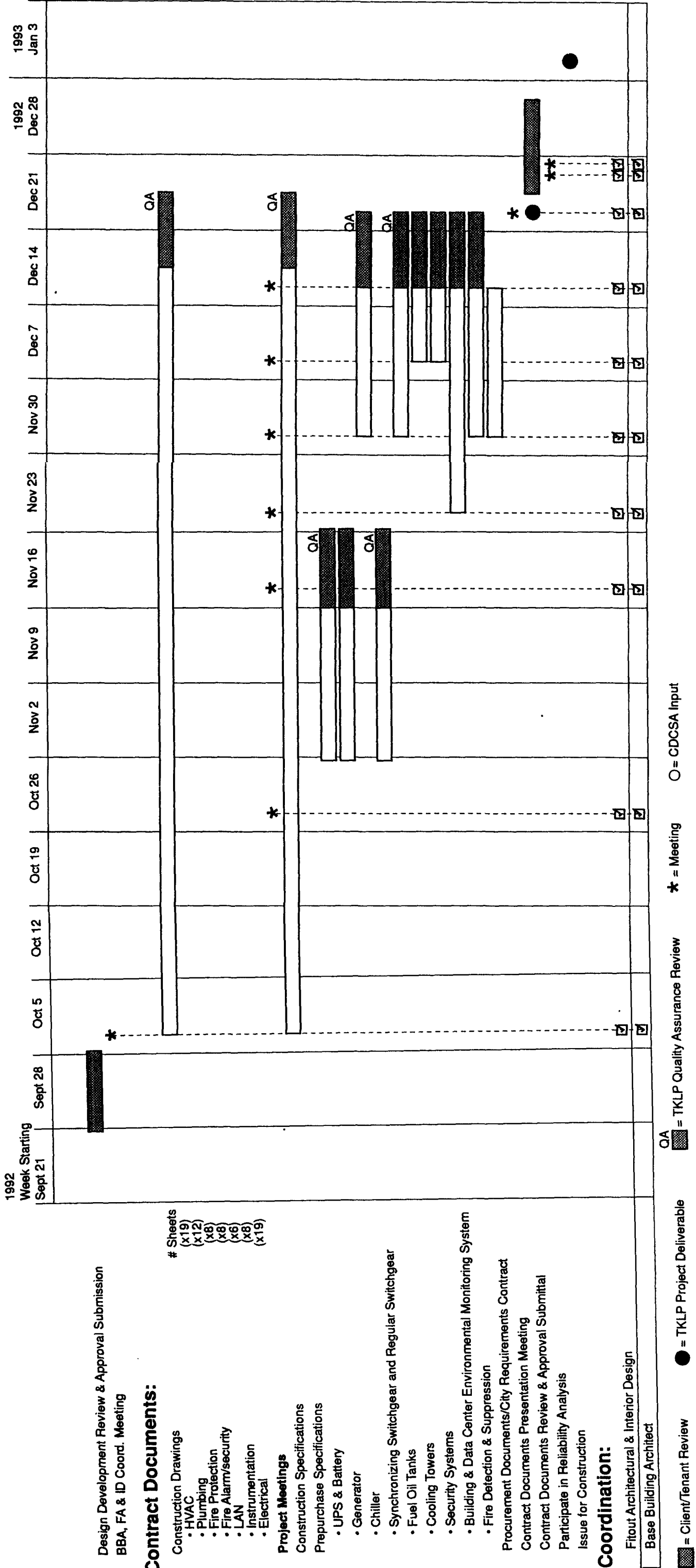


Design Development — Architectural

1992	Week Starting	Aug 3	Aug 10	Aug 17	Aug 24	Aug 31	Sept 7	Sept 14	Sept 21	Sept 28	Oct 5	Oct 12
Schematic Design Review & Approval BBA, FA & ID Coord. Meeting Design Development: Evaluate/Update Statement of Criteria • Design Objectives and Functions • Base Building Design Requirements • Base Building Operating Requirements Develop Project Opinion of Cost Basis of Design (BOD) BOD Review and Approval Submittal Value Engineering Assistance • Cost (Operating & Capital) • Risk of Loss (Outages) • Repair Time CDCSA Inputs: • Office Space Telecommunications Closet Layouts • Data Center Equipment Layouts Data Center BBA, FA, & ID Coord. Meeting Design Development Drawings (for Sign-Off) Outline Specifications Update Opinion of Cost Code Reviews Security (Access Control) System Review Design Development Presentation Meeting Design Development Review, Approval & Sign-Off BBA, FA & ID Coord. Meeting Coordination: Fitout Architecture & Interior Design Base Building Architect												
Legend: = Client/Tenant Review, = TKLP Project Deliverable, = TKLP Quality Assurance Review, = Meeting, = CDCSA Input												

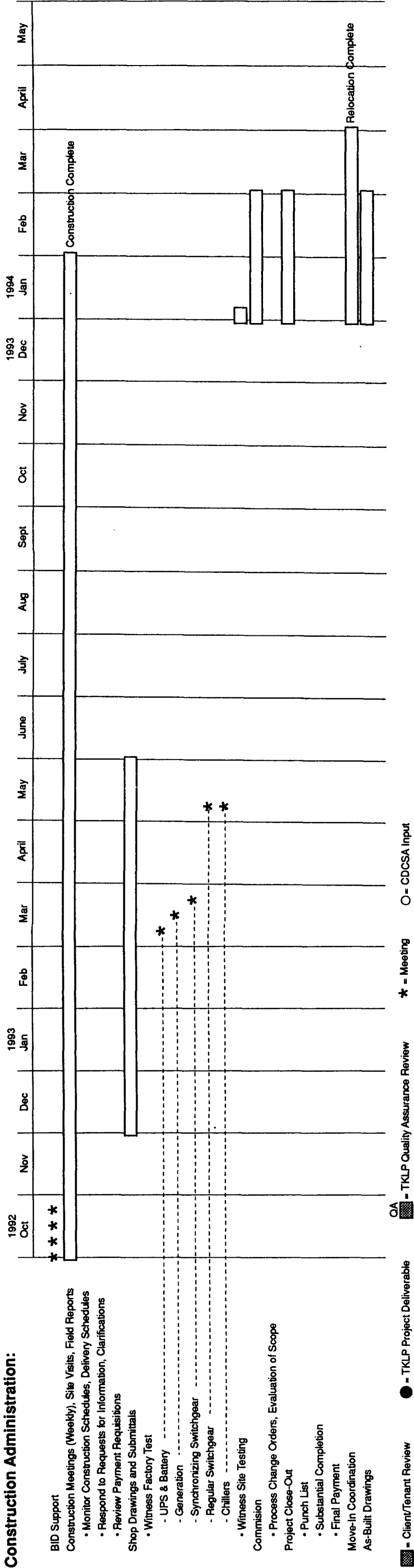
TKLPP

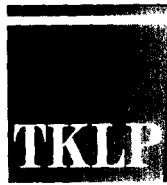
Contract Documents — Architectural





Construction Administration — Architectural





NEW YORK CITY COMPUTER AND DATA COMMUNICATIONS SERVICES AGENCY

**FOREST CITY TECH PLACE ASSOCIATES
11 METROTECH CENTER**

RESPONSES TO ARCHITECTURAL PROPOSAL QUESTIONS



NEW YORK CITY COMPUTER AND DATA COMMUNICATIONS SERVICES AGENCY

**FOREST CITY TECH PLACE ASSOCIATES
11 METROTECH CENTER**

Responses to Architectural Questions

We are in receipt of your letter dated 12 May 1992. The following are the responses to the architectural questions as stated in order:

- a. How many alternative analysis are assumed in value engineering?

We have assumed alternative evaluation of interior construction systems such as:

Partitions - movable vs. fixed
Raised Floors - concrete vs. steel vs. steel clad wood
Ceilings
Carpet
Furniture - evaluation of furniture systems and other similar studies as these systems are selected. We anticipate this as a single event.

- b. What type of CAD is in use?

It is our intent to produce this project using our Microstation CAD System. We can also produce this work in AutoCAD Release 11. We are capable of translating to other systems through DXF file transfers.

- c. Please have samples of work to review:

- Drawing details
- Output from prior value engineering study

We will bring both representative drawings and value engineering studies.

- d. Please bring design team to meeting.

Yes, we will bring the design team to the meeting.

- e. Please explain services for security and telecommunications specifically extent of scope for voice design (e.g. call sequencing, audio response).

Under the Architectural Services in the Programming Data Collection process we will collect and correlate information for the physical requirements for security and telecommunications. This will be integrated with the overall design process valued in the Architectural Proposal. This will be done in conjunction with our security and communications engineers. These engineering services have been valued for in the engineering proposal.



- f. Extent of services for cabling (e.g. copper, fiber)?

We will provide for in our Design Services space, architectural components and coordination for cabling requirements determined by the appropriate engineers and the representatives for the computer systems.

- g. Did you recognize City's leadership role to comply with intent of codes for disabled and environmental concerns?

We recognize the City's role and will follow appropriate codes, seek the City's representatives advice on what the intent is beyond code compliance and incorporate it into the project.

- h. Is New York State sales tax included on all interior work?

The New York State sales tax has not been included in our fee proposal as with all sales taxes it will be added as applicable at time of billing. Is there a potential for an exemption with the City of New York as the ultimate payee?

- i. How do you integrate specialty groups involved on this project?

We are quite comfortable with highly technical projects and the necessity to involve specialists in the design process and do it on a regular basis. In our Engineering Proposal we have included such speciality groups from our in-house staff such as security, telecommunications and special fire protection. The involvement of other specialists will be coordinated into the project and made part of the team.

- j. How will the commutation effect your performance on the project (i.e. will the fact that you are Philadelphia firm impact our project)?

There should be no effect on our performance on the project because of our Philadelphia location and the intent is to have this transparent to you. We have made working arrangements in New York to accommodate our needs in making this happen.

We are not more than 1 hour and 10 minutes from Penn Station by train. We are within a 1 1/2 hour driving distance for early or late meetings. These are quite common commuting times for people who's offices are in New York City. The solution to performance is less impacted by an hour distance than the impact of poor planning. TKLP prides itself on planning its work well and performing against the plan. Coordination reviews, approvals, and general meetings are planned so they are effective, efficient, and timely.

- k. Who did the interior design of the projects in your proposal? Is She/He proposed on our project?

Rick Focke is the principal designer and he is assigned to the project.

- l. What was construction budget for those project? Specifically, the data center project?

We will bring construction cost information to our interview.



- m. Can you tell us more about you in-house lighting capabilities?

We have full service lighting design capabilities for an in-depth response to lighting needs both from the aesthetic and technical perspective. We have covered lighting in our services for interior design and will evaluate alternatives to select the design solutions to meet criteria.

- n. Confirm Jerry Gillman's availability and scope.

Jerry Gillman (Cole/Gillman) will be available to provide building code construction services and to expedite the approval process with the Department of Buildings on the interior architectural construction.

- o. Is there a standard for lighting a data center? Please discuss.

Although there is no standard per say for data center lighting, we will be guided by the Recommended Practice Guidelines of the Illuminating Engineering Society of North America for VDT lighting.

- p. CADD time is billed hourly - is this cost included in fee?

We have included our CADD costs in our Basic Services costs. The rate was included for information on any other services which may be required on a hourly basis.

- q. Is New York State sales tax included on all interiors work?

See item "H".

- r. Please address the City's interior design concerns regarding the preparation of purchase orders for furniture procurement and the furniture selection from City contracts.

We understand that New York City has existing procurement contracts for furniture and purchase order requirements for new purchases. As part of our services we will do a limited CDCSA inventory of existing furniture, selection of furniture, including that from standard City contract, and the filling out of purchase orders as required.



ARCHITECTURAL/INTERIOR DESIGN
 FEE PROPOSAL BREAKDOWN FOR FCTPA/CDCSA
 May 15, 1992

ARCHITECTURAL BID ITEMS	FEE BREAKDOWN
INTERIOR DESIGN SERVICES	
BASIC SERVICES	327,240
AS BUILT DRAWINGS	15,000
GRAPHICS	<u>15,000</u>
SUBTOTAL:	357,240
COSTS CONSULTING (TKLP)	30,000
FEE PACKAGE	
FURNITURE SURVEY	20,000
FURNITURE COORDINATION	35,000
FURNITURE CONSULTANT/MANAGEMENT CONSULTANT	0
PURCHASE ORDERS	<u>35,000</u>
SUBTOTAL:	90,000
TELECOMMUNICATIONS, EQUIPMENT & SECURITY	0
ACOUSTICAL CONSULTANT	20,000
LIGHTING CONSULTANT (TKLP)	20,000
CODE (BUILDING DEPARTMENT) CONSULTANT	<u>15,000</u>
SUBTOTAL:	<u>55,000</u>
TOTAL:	<u>532,240</u>



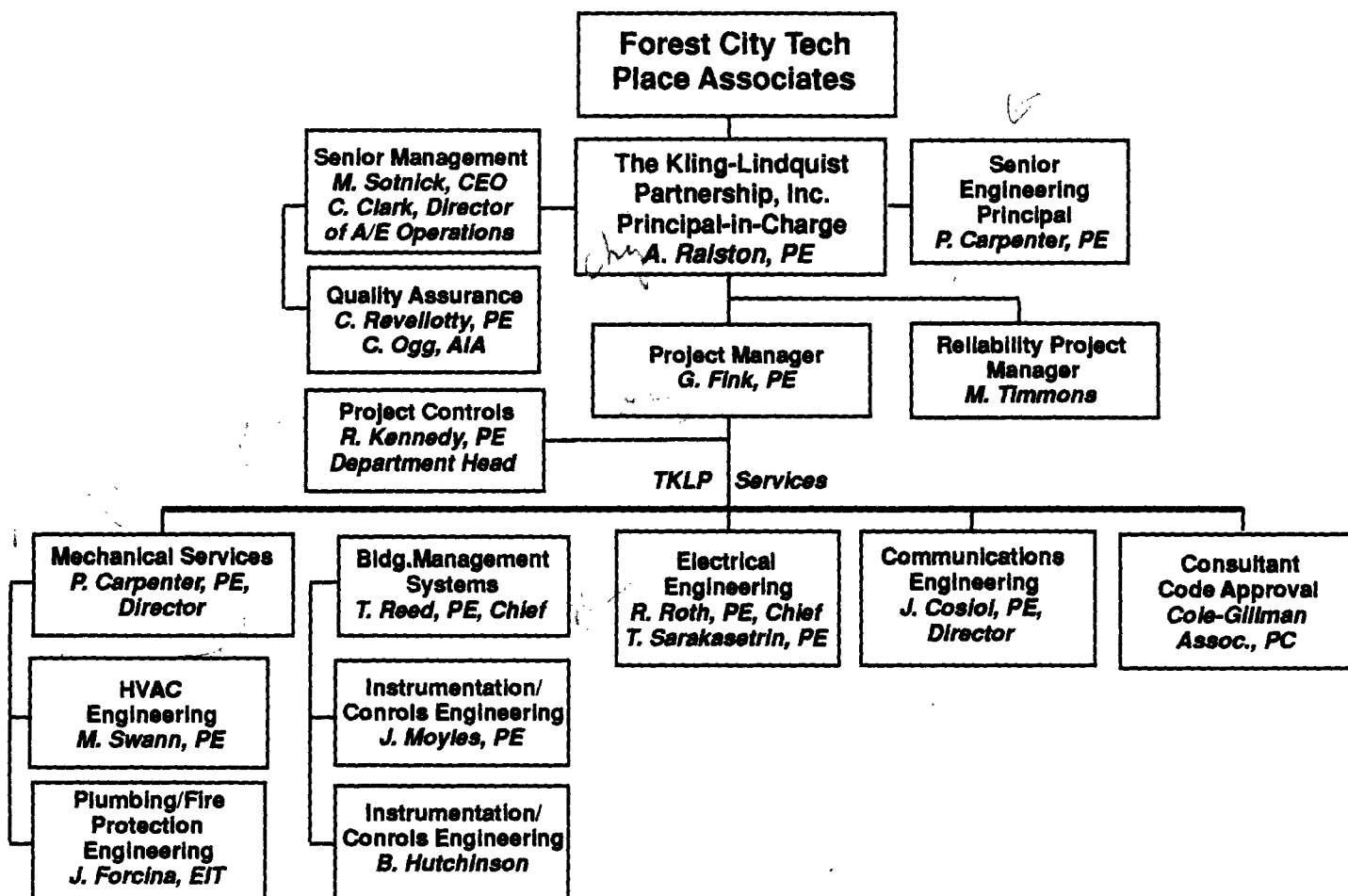
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MEP Engineering Services



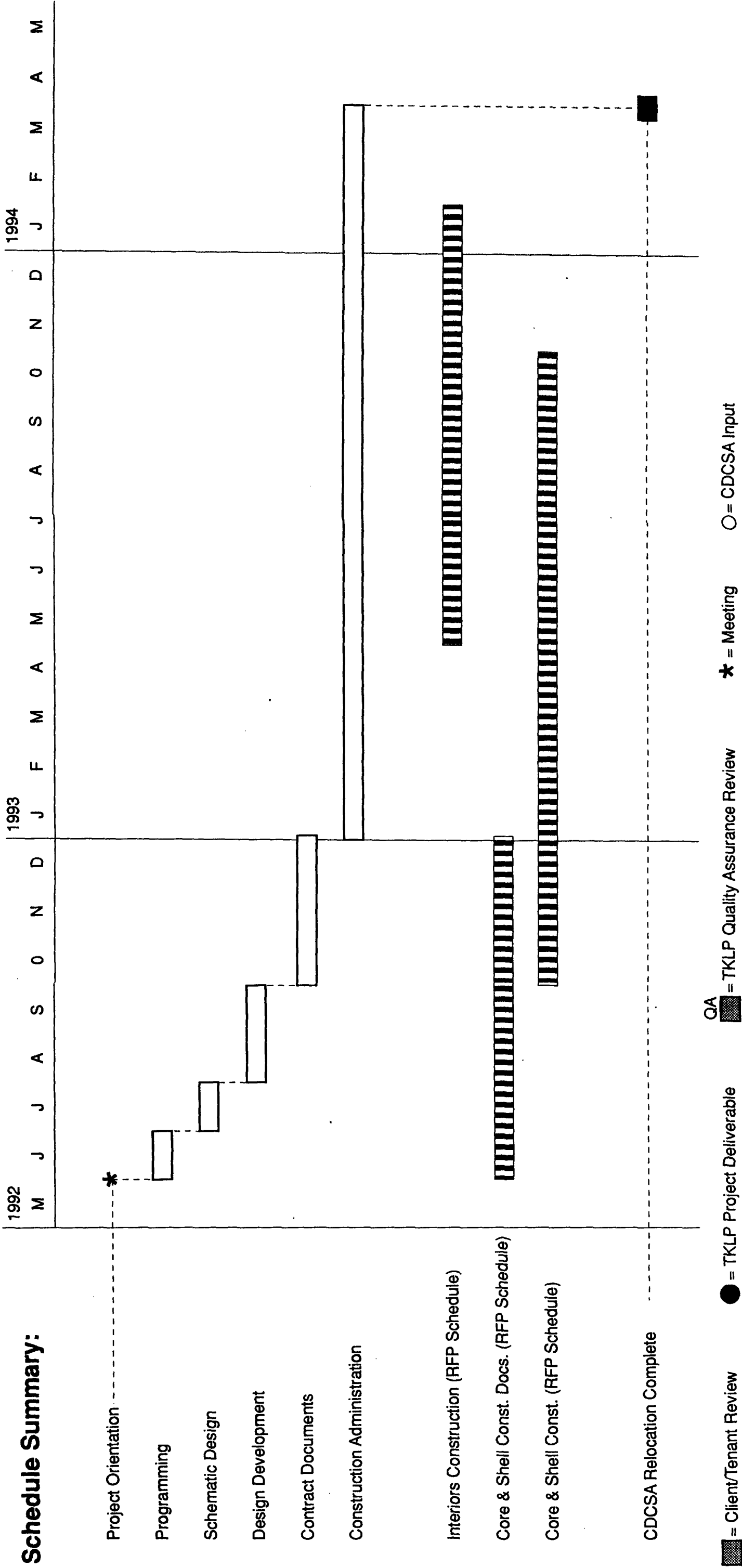
Project Team Organization

Full Engineering Services



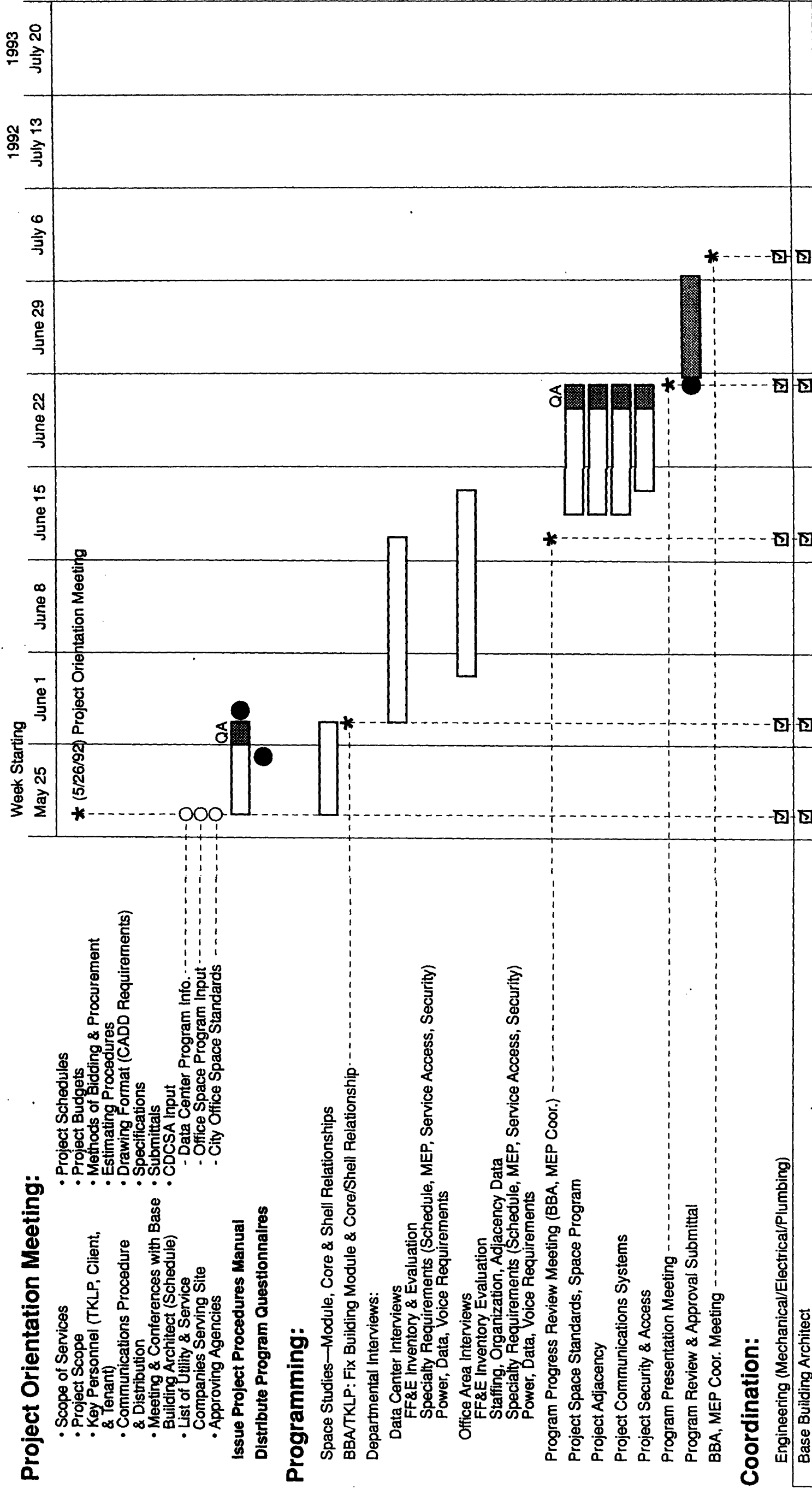


Schedule Summary — Engineering

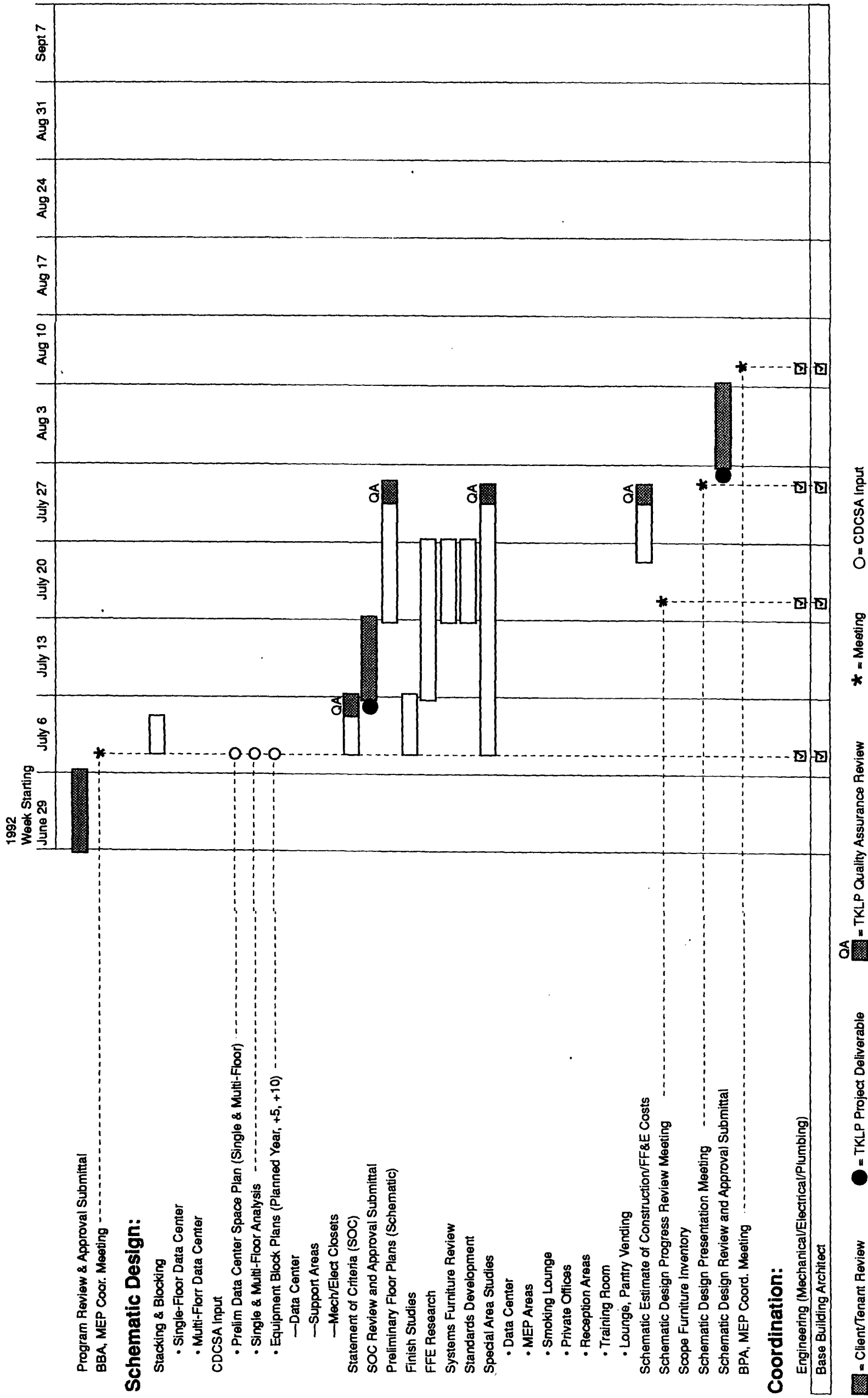




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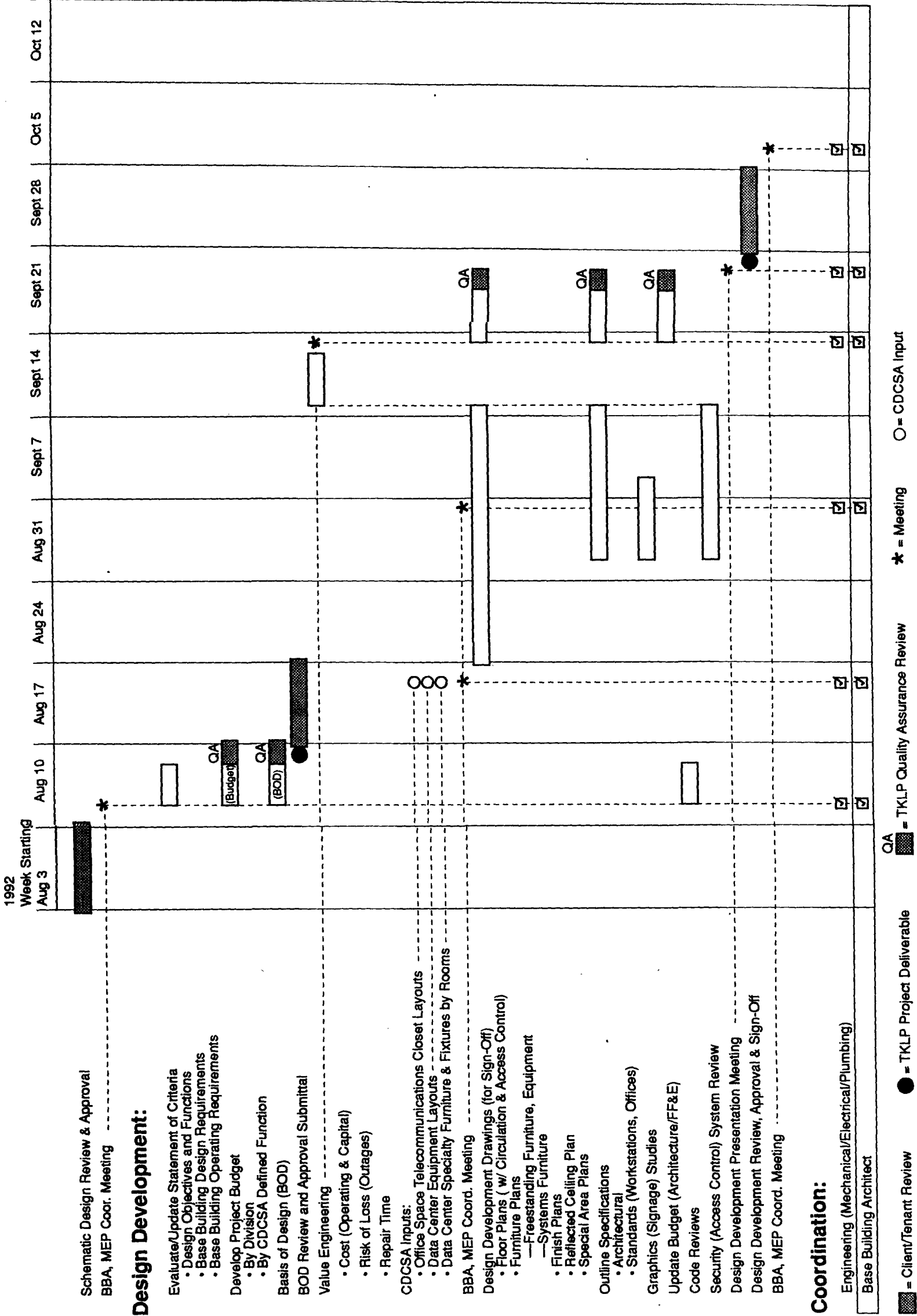


1992



TKLPP

Design Development — Engineering





Contract Documents — Engineering

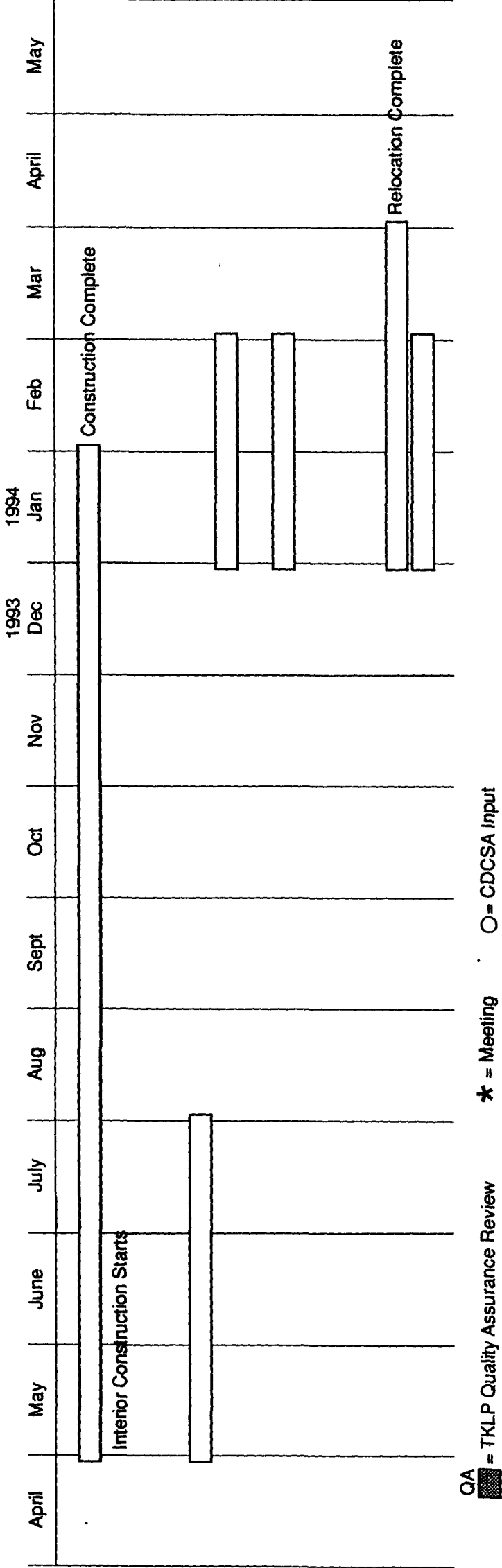
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Construction Administration — Engineering

Construction Administration:

- BID Support
- Construction Meetings (Weekly), Site Visits, Field Reports
 - Monitor Construction Schedules, Delivery Schedules
 - Respond to Requests for Information, Clarifications
 - Review Payment Requisitions
- Shop Drawings and Submittals
- Observe & Report FF&E Delivery & Placement
 - Process Change Orders, Evaluation of Scope
- Project Close-Out
 - Punch List
 - Substantial Completion
 - Final Payment
- Move-In Coordination
- As-Built Drawings

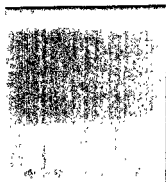




NEW YORK CITY COMPUTER AND DATA COMMUNICATIONS SERVICES AGENCY

**FOREST CITY TECH PLACE ASSOCIATES
11 METROTECH CENTER**

RESPONSES TO MEP PROPOSAL QUESTIONS



NEW YORK CITY COMPUTER AND DATA COMMUNICATIONS SERVICES AGENCY

FOREST CITY TECH PLACE ASSOCIATES
11 METROTECH CENTER

Responses to MEP Questions

We are in receipt of your letter dated 12 May 1992. The following are the responses to the MEP questions as stated in order:

1. For the value engineering included in your scope of work, please describe how you would perform this task and show us how you have documented such a study for another client.

TKLP's engineering utilizes our field services/estimating department to direct the value engineering on projects. These are individuals who have worked in construction, both in estimating and in project management. They review the documentation and make suggestions as to how the costs can be reduced. TKLP's design team evaluates the suggestions to see if they will affect their system's effectiveness. TKLP's design team will review these suggestions and the impacts on the system's performance with their client to decide whether they will be acceptable or not.

TKLP will then review other engineering systems in order to analyze reliability and effectiveness throughout all of the engineering systems. A final budget is then developed with client agreement.

2. For the reliability analysis included in your scope of work, please describe in some detail what you will provide. Have you provided this service on other similar projects?

TKLP has included in its proposal attendance at two reliability sessions with its engineers. We have anticipated the following engineers will be in attendance:

- A. Ralston
- G. Fink
- P. Carpenter
- R. Roth
- T. Reed

reliability analysis

TKLP expects that these engineers will explain the systems they have designed using flow sheets. We have also assumed that we would explain what would be required of the contractor with our normal plans and specifications.

We have proposed optional services managing the reliability program. TKLP developed the reliability program with the ingredients explained in the appended description. We have provided portions or all of these services for the following clients: Shearson Lehman Brothers, Morgan Guaranty, United Airlines Apollo Reservation System, Morgan Stanley, Union Carbide, International Monetary Fund, General Electric's GEISCO Division.



3. If design changes result from either the value engineering or the reliability studies, are these changes contemplated in your current scope of work?

We have anticipated making the appropriate adjustments to our documents and designs if the information provided for these sessions is done in a timely fashion. We recommended in our proposal that the reliability sessions be done earlier. The reason we did that was because the timing was such that the changes could be incorporated into the next phase of our documentation easily. If in fact there is a reliability session at the conclusion of contract documents, the prepurchase specifications, final specifications and bid documents will have been completed. There are major changes at this point, it could have a major impact on our costs. We have not valued for these types of changes.

4. How many design alternative studies are included in your fee?

TKLP has not developed their estimated hours to perform this work to include the level of detail as to how many design alternatives would be included. We have, however, performed numerous studies in the New York City area and in other areas of alternatives. We have based this proposal on using these previously completed studies to assist us in working with our client to resolve conclusions. The RFP asked how we would arrive at the right answer first. This is how we will do that, and this will be based on our experience.

5. Specifically what is included in your scope of work regarding security systems and communications design and installation? What members of your project team have specific experience in these fields?

As in Question Series I, Item "e", TKLP's design includes a structured cabling plan for both data and voice services from service entrance points (NPP) to MDF room and PABX, to computer center and vertical distribution of associated copper and fiber cables. Communications closets layouts and elevations will be developed in accordance with agreed-upon standards. Design documents will also include associated horizontal cabling from these closets to each station outlet for combined voice/data use at each workstation and end device (fax, shared printer, etc.). TKLP will develop all pathways for cable distribution and tie-in to active network devices.



Mr. Jeff Cosiol directs a consulting services group that has significant experience in the communications design. Mr. Tom Reed, the director of our instrumentation department, has directed numerous security projects. Some of the projects that we have performed security and communications design for:

<u>Project</u>	<u>Communications</u>	<u>Security</u>
Conrail	X	X
Duane, Morris & Heckscher	X	X
Merck Sharpe & Dohme		X
Merrill Lynch	X	X
J. P. Morgan	X	X
Glaxo RTP	X	X
Glaxo UK	X	X
Sterling Research Group	X	X
United Technologies		X

6. The person you have proposed as the project manager, Gerald Fink, appears to have limited data center design experience. Why is he qualified to lead this project?

Mr. Ralston will be the project director for the engineering effort for this project. He has significant experience in computer operations centers. Mr. Jerry Fink has been working for Mr. Ralston on a number of projects recently that include highly sophisticated utility-type facilities as well as highly reliable mechanical and electrical systems. It is both this mutual experience working with one another and the types of work that they have done together that provides them with the teamwork that will achieve successful management of this team.

7. Please discuss any environmental issues related to cooling or fire protection systems. How can comparable results be obtained while still being sensitive to the environmental issues.

There are refrigerant substitutes for Freon 11 and 22. These substitutes are environmentally friendly and we are specifying them today. The Halon suppression systems substitute is not to the same level of development. The direction the industry is following is to use more highly sensitive sensing elements, such as sampling-type smoke detectors to provide earlier warning, thus allowing the operators to deal with the cause of the fire while it is still controllable. This is generally backed up with a pre-action sprinkler system.

8. Describe your typical client interaction. On your previous data center projects, what percent of your fees were in extras?

We at TKLP interact with our clients on a very extensive basis in the design phases. It is this interactivity that allows us to understand our client's needs and, therefore, be responsive to them in our designs. We believe that if you talk to our references that they will bear this out. The extras on TKLP's projects generally are between 3/4 of 1% and 1% of the construction cost.



9. Please be prepared to explain the design attributes of one of your data center projects, pointing out any key engineering features relating to availability, continuous operation, or cost effectiveness.

TKLP's experience on data centers has included command centers for the Department Defense, hardened facilities, as well as highly reliable mission critical commercial facilities. Our presentation has focused on key engineering issues and features we have used. Many of you are familiar with the Shearson Lehman Brothers data center at 390 Greenwich Street. This we believe to be the first facility where ConEdison has allowed a closed transition of Shearson Lehman Brothers' auxiliary generators with ConEdison's power. This allows Shearson Lehman Brothers to provide the supplemental power needed in a brown-out condition to keep their generators operating effectively. TKLP's engineers were one of the first to develop the fuel oil supply loop in the penthouse that provides startup volumes in fuel as well as a means of circulation to control heat build up and thereby eliminate fuel oil cooling radiators on the roof. These radiators prove to be a major reliability problem.

10. Please have available samples of the type of documentation you propose to deliver on this project. We are particularly interested in the output of the schematic design, prepurchase specifications, construction documents, and any engineering design analysis.

The samples of the documentation have been made available at the presentation.

11. In previous projects, have you exchanged CAD documents with the architectural firm? What were the benefits and what are the problems?

We have exchanged CAD documents with architectural firms. We have done this by simply giving them the computer disk. Where we are using the same system as the architect, there has been no difficulty in their utilizing our disks. Where we are using two different systems, there have been some translation difficulties, but this has not precluded their use of our disks. There has been added time to make the corrections.

ADDITIONAL QUESTIONS & ENGINEERING FEE PROPOSAL

1. If selected for the engineering portion of the work and not the architectural portion, would you propose the same consultants as those listed in your architectural proposal?

We have assumed that the acoustical/vibration consultant will be commissioned by the architect. We will want our documents reviewed for these issues.

2. In your proposal, you stated that you have worked on CDCSA projects. Which ones?

We have not worked with CDCSA previously. We do not believe that we stated that we had worked with this organization.

3. Would you tell us more about the "Project Procedures Manual" and how it serves as a working tool throughout the project?

The project procedures manual sets up the communications requirements on the project. It also provides a distribution as to how the project is organized and who will make the decisions and provide the approvals. This document is dynamic. As time goes on, the organization and the people often change. This document is then kept updated to make sure there is a complete understanding as to what the project operational structure is.

4. Describe your working relationship with other architects on a similar projects such as this one.

TKLP's engineers have worked with SOM on the Shearson Lehman Brothers project. We are presently working with Phillips Janson Group at the World Financial Center. Our relationship with other architects has been a good working relationship. Our contracts in both situations are directly with the client.

5. For your Design Development Phase, you listed the project teams availability for participation in the reliability analysis. Is two (2) days enough time? Describe.

If TKLP is to participate as the engineers of record in the two reliability sessions, then the two-day session is not enough time. If Forest Properties chooses to have TKLP manage the program, there will be a need for a considerable amount of preparation work and documentation.

6. For your Design Development Phase, wouldn't a final presentation be required to address the outcome of the value engineering study?

There was a statement in the RFP that there is a budget for this project now. The RFP also asked how we would make the right decisions in relation to that budget from the initiation of the project. Normally, TKLP would develop the schematic design, including the Statement of Criteria (SOC) and Basis of Design (BOD) around the needs of the user. This work would then be estimated and adjusted to achieve an acceptable budget. Since we understand that a budget already exists, we have assumed that the reconciliation with the budget and the criteria and scope would be done with our senior staff members and the City immediately upon our initiating work on this project. The budget would then control, to a great extent, how the project would evolve. This is the key for us to be able to make the right decision the first time.

The value engineering study is a formal way of reinforcing what we will have been doing in cost control from the inception of this project. We would present the results of the value engineering at the conclusion of the Design Development Phase as the Design Development presentation.

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OMB
VE
process

7. For your Contract Documents Phase, are additional resubmittals by the vendor regarding tests for equipment items covered in your proposal?

We have anticipated that in our base service proposal we would specify that the vendor would submit their tests to us for our review. We have planned to review these tests as we would shop drawings. If we did not find them satisfactory, we would so state and they would be resubmitted. We would review them the second time.

8. Please tell us about "Systems Operation Training."

As part of TKLP's optional reliability program management, we have provided training facilities for operators for computer centers. We first developed the system operations manuals, we then train the operators on the use of these manuals. Normally, the training sessions are done with an interactive approach where senior operators are explaining to junior operators how they would react or respond to emergencies. These are identified in the manuals. We then take this training session to the mechanical and electrical rooms where the operators deal directly with the equipment. The sessions are videotaped by our clients for re-certification or introductory training.



ENGINEERING
FEE PROPOSAL BREAKDOWN FOR FCTPA/CDCSA
May 15, 1992

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ENGINEERING BID ITEMS

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FEE BREAKDOWN

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ENGINEERING DESIGN SERVICES FOR TENANT BUILD OUT
(DATA CENTER & OFFICE)

BASIC SERVICES	685,200
AS BUILT DRAWINGS	<u>10,000</u>
TOTAL BASIC SERVICES/AS-BUILT DRAWINGS:	695,200
 COST CONSULTING	 N/A
TELECOMMUNICATIONS, EQUIPMENT & SECURITY	N/A
ACOUSTICAL AND AUDIOVISUAL CONSULTANT	See Architectural
LIGHTING CONSULTANT (TKLP)	See Architectural
CODE (BUILDING DEPARTMENT) CONSULTANT	<u>15,000</u>
TOTAL CONSULTANTS:	15,000
 TENANT BUILD OUT	 710,200
BASE BUILDING	<u>201,700</u>
TOTAL BASE BUILDING & TENANT BUILD OUT	911,900