
2013 AIA AAJ Conference
American Institute of Architects
Academy of Architecture for Justice (AIA/ AAJ) Conference

Theme: The Future Is Now: Alternative Project Delivery

September 18-21, 2013

Hilton Portland & Executive Tower, Portland, Oregon

At-Risk Program Management:

The next evolution in project delivery. . . .

AIA /AAJ Conference: Session CD-04: *September 19, 2013: 3:30 PM*

An Update for 2013

Bill Echols, Jr., AIA, NCARB

At-Risk PM: The Next Evolution

- *At-Risk Program Management*: What is it, how does it work, and can it work for your facility program?
- Attendees will learn through presentation and discussion where the At-Risk Program Management (“*At-Risk PM*”) approach has been successful in the delivery of two phases of the new **Kankakee County, Illinois, Adult Detention Facility**:
 - **Phase I: \$19,500,000.00, 312-Beds, completed December 2004.**
 - **Phase II: \$13,500,000.00: 144-Beds and new Intake and Processing, commenced May 2005; completed July 2006.**

Presentation Outline

- Owners, architects, engineers and builders have all seen the methods of project delivery change and reshape themselves, then change again to meet the ever-changing demands of our industry and economic conditions.
- *At-Risk Program Management* (“*At-Risk PM*”) is perhaps the next link in the project delivery evolutionary chain. It offers to bring to Owners the opportunities and benefits of other proven project delivery methods with one fundamental difference. *At-Risk PM* provides for complete responsibility and single accountability for the entire facility improvements program.

Presentation Outline

- *At-Risk PM* is an approach that can guarantee results for time, scope, quality and cost for all components of project delivery
 - from concept to design/bidding/construction
 - from FF&E purchase/installation to move-in/occupancy
 - including. . .
 - planning & programming
 - land selection, investigation & purchase
 - operational start-up & training of personnel, and
- *Single accountability project delivery -- start to finish*
 - *More than traditional Program Management (Agency)*
 - *More than Design/Build*
 - *More than Construction Management At-Risk*
 - *Maybe the combination of the best of each/ALL project delivery methodologies*

Presentation Outline

- *Introduction of Delivery Methods*
- *Common Elements for Each Methods*
- *At-Risk Program Management Approach*
- *Two Step Delivery Process*
- *Contracting Methodology: Two Tier Plan*
- *Checks and Balance of Single Accountability*
- *Summary*
- *Project Case Study & Other Project Examples*

At-Risk PM: The Next Evolution

- **Methods of project delivery have changed and reshaped themselves, and will continue to do so in the future**
- **First, let us review the delivery methods. . .**
 - *Where have we been?*
 - *Where are we going?*

At-Risk PM: The Next Evolution

- All of the many project delivery methods are with us today
- What are they?
 - *Design-Bid-Build*
 - *Design/Build*
 - *Bridging*
 - *Construction Management (Agency)*
 - *Construction Management (At-Risk)*
 - *Project/Program Management*
- Each has its own selection and contracting method
 - *Advantages and Disadvantages ignored here for clarity*

At-Risk PM: The Next Evolution

- What are the common elements, more or less, for each?
 - *Focus is primarily construction related activities, with design-related support elements that lead to or deal only with the construction-at-risk aspects of a project or program*
 - No single methodology or team member truly accepts the Owner's responsibility for *total facility delivery* from concept to planning to design to construction to occupancy . . . *at-risk for ALL* . . .

At-Risk PM: The Next Evolution

- **Program Management (Agency) services move the closest to accepting greater responsibility**
 - *but for agency role for management services only*, not in an At-Risk position as maybe viewed from the Owner's standpoint. No guarantees of costs, quality and time; little to no risk by Agency PM. *Design/Build comes close.*
- **To date**, At-Risk ventures have been contracted solely from the project viewpoint for construction only, where risk remained an Owner held activity not shared by the other members of the project “team.”

At-Risk PM: The Next Evolution

- Thus, we have a marketplace that is becoming interested in and receptive to *the next evolution in project delivery*. . .

At-Risk Program Management. . .

- *What is it, how does it work and can it work for every facility?*

At-Risk PM: The Next Evolution

- In its simplest form and definition. . .
 - *the At-Risk Program Management approach is exactly what the name implies*
 - Program Manager is “At-Risk” for guaranteeing delivery of the entire program:
 - *schedule*
 - *costs*
 - *quality*
 - *scope*
 - *a new dimension for project delivery. . .*
 - » *for both the public and private sectors*

At-Risk PM: The Next Evolution

- **General parameters of the concept:**
 - Incorporates any of the listed delivery methods
 - Embracing the benefits and best practices of all
 - The process is in the global program level view
 - *Owner must be willing to transfer control of all aspects of the facility improvements program to the At-Risk PM, then step back. . .*
 - but remain in a position for collaborative input and decision making at a high level of program development and oversight

At-Risk PM: The Next Evolution

- The At-Risk Program Manager is directly responsible for providing all aspects of the entire program -- every element, using any or all delivery methods. . .from start to finish. . .
 - *financial feasibility studies (and option to finance)*
 - *site evaluation & selection and property acquisition*
 - *utility, traffic, codes & zoning studies*
 - *government and agency reviews/permitting*
 - *programming & master planning; concept designs*
 - *design, competitive bidding & construction; and FF&E*
 - *move-in and set-up, and personnel training*
 - *start-up for maintenance & operations*

At-Risk PM: The Next Evolution

- For many developers and corporate real estate managers, the question is

*“... What’s new about this. This is our business, what we do, have to do and have done. .
.everyday, all the time, what’s the difference?”*

- For many, if not all public sector facility managers, the question is

“... We’ve been trying to get this done, to go in this direction, but can’t; what’s the difference?”

At-Risk PM: The Next Evolution

- *The difference for the Owner, for the Project, is in the risk assignment, and **risk management & control**, through outsourcing; and in asking yourself the following question.*
 - *when has a Program Manager (Agency) provided a guaranteed “At-Risk” responsibility approach to conceive, plan, program, budget, schedule, acquire land, design, provide FF&E, construct, & relocate. . total project responsibilities?*

At-Risk PM: The Next Evolution

- **The At-Risk PM concept provides**
 - Early cost and schedule *guarantees. . . . by contract*
 - Risk assignment. . . risk management/control:
 - through outsourcing development and delivery of the entire facility through and by the At-Risk program Manager
 - Owner participation at the program's very highest level. . . But, still a participatory level of involvement to review/approve design, observe construction and guide occupancy and move-in
 - *goal oriented, task delivery, responsibility*

At-Risk PM: The Next Evolution

- **Process works best under a two step process:**
 - ***STEP 1:*** Owner and At-Risk PM *jointly develop* program's scope, quality levels, schedule and budget, in broad definable terms under a mutually agreeable delivery strategy, for measurement of the deliverables; set forth in the **GMP Document:**
 - *Based upon these terms, team members are identified and selected, and work elements are assigned with budgets and schedules.*
 - *All under the control and contracts of the At-Risk PM; under a single responsibility contract between the Owner and At-Risk PM.*

At-Risk PM: The Next Evolution

- **GMP Document:** *Governing Document:*
 - SECTION 1: Prime Agreement for Services.
 - SECTION 2: Amendment to the Prime Agreement for Acceptance of the GMP Document.
 - SECTION 3: Facility Space Requirements and Square Footages.
 - SECTION 4: Property Survey and Geo-Technical Report/Information & Recommendations
 - SECTION 5: Preliminary Design Development (“Self-Bridging”) documents, inclusive of engineering systems, in accordance with Section 3 above for the Facility Space Requirements and Square Footages.

At-Risk PM: The Next Evolution

- **GMP Document:**

- SECTION 6: Preliminary Outline Specifications (POS) of architectural and engineering elements and components of the proposed design.
- SECTION 7: Room Finish Schedule.
- SECTION 8: Preliminary Listing of all proposed Furniture, Fixtures & Equipment (FF&E.) As established by the FF&E Allowance.
- SECTION 9: Project Management Plan and Strategy for bidding, selecting and contracting the construction & FF&E work of the contractors, vendors and suppliers.

At-Risk PM: The Next Evolution

- **GMP Document:**

- SECTION 10: Proposed Preliminary Master Project Schedule.
- SECTION 11: Detailed Cost Estimate and proposed **Guaranteed Maximum Price (GMP)**; including Exclusions, Alternatives, Allowances, and Clarifications.

At-Risk PM: The Next Evolution

- The proposed **Guaranteed Maximum Price (GMP)** will be comprised of two primary components: *Two Tier Approach*:
 - Professional Fees and
 - Cost of Work for Construction and FF&E.

At-Risk PM: The Next Evolution

- **STEP 2:** The program, with all its elements of services, is implemented by the At-Risk PM using any one or combination of the traditional project delivery methods, under direct control, contract and management of the **At-Risk PM:**
 - *Design-Bid-Build*
 - *Design/Build*
 - *Bridging (utilizing a “self-bridging” design approach)*
 - *Construction Management (Agency and At-Risk)*
 - *Project /Program Management (Agency)*
- ALL in accordance with established budgets, schedule, quality levels, etc. agreed to and accepted by the Owner by the approved **GMP Document**

At-Risk PM: The Next Evolution

- **Owner/At-Risk PM Contracting terms, conditions and compensation methodologies:**
 - Traditional single fixed total lump sum agreements can work, but can force too much of the risk over to the At-Risk PM, at a cost premium to the project and Owner, resulting in early or inflated contingencies or unnecessary adjustments to the program of requirements.
 - So, what can work or works best for all parties?

At-Risk PM: The Next Evolution

- Preferred method is Two Tier:
 - *TIER ONE: Management and Project Level Fees:*
 - For program/project management, design & engineering services, survey & geotechnical and construction phase testing, pre-construction services for design management, estimating & scheduling, construction phase general conditions, on-site supervision and overhead & profit, including risk fee:
 - To be negotiated between Owner and At-Risk PM
 - Based on program, costs and schedule, and risk
 - With all Tier One Fees fully payable to the At-Risk Program Manager
 - *Owner retains 100% of ALL savings!*

At-Risk PM: The Next Evolution

- **TIER TWO:** *Direct reimbursement* for all cost of work categories for construction, FF&E and move-in costs, under a guaranteed maximum budget, with open-book accounting/audit rights by owner, under a fully substantiated billing & invoicing process: no receipt, no paper: no payment.
 - **100% of all savings to remain with Owner**, or remain in project for use as directed by Owner for the project.
 - **NO sharing of savings:** At-Risk PM-developed costs are not inflated to bloat the total GMP for savings at end of project.

At-Risk PM: The Next Evolution

- **Opportunity for incentives for total team performance under At-Risk PM approach:**
 - **At-Risk PM Fee: Incentive-Based:**
 - *based on budget adherence*
 - *based on schedule adherence*
 - *based on established quality level*
 - *based on delivery of established program or scope*
 - *At-Risk PM Fee tied to contracted, measurable goals within the program: earned, NOT guaranteed.*

At-Risk PM: The Next Evolution

- **Incentives for earning At-Risk PM Fee:**

- **Maybe 1%?** Maybe 2%? Or more?

- *The first quarter-per cent* could be based upon meeting pre-determined, well-defined start dates for construction: foundations, structure topped-out, building dried-in, etc.
 - *A second quarter-per cent* could be based upon meeting all substantial completion dates for occupancy or start of a critical operational function: housing of inmates, emergency 911 centers operational, call center operational, warehouse takes delivery of finished products, etc.

At-Risk PM: The Next Evolution

- Incentives for earning additional fee:
 - *The third quarter-per cent* could be based upon meeting all budgets, or returning a set amount of savings.
 - *The fourth quarter-per cent* could be based SOLELY upon client satisfaction.
 - Gaining this last quarter-per cent is left solely to the client and their own perception and measurement of the At-Risk Program Manager's performance: no appeal, no dispute by At-Risk PM.
 - An interesting way to measure a job well done: if you get the money, you must have done all right; if you don't, well you get the picture, but not the check.

At-Risk PM: The Next Evolution

- **Concerns for checks and balance in a single responsibility structure. . .**
 - All program elements are established jointly by the Owner and At-Risk PM; and established by and in the Contract: Owner remains involved. . . .
 - budget
 - scope
 - schedule
 - quality
 - early development, early controls

early guarantees. . .

At-Risk PM: The Next Evolution

- **Large scale of programs and lender's financial requirements, and newness of At-Risk concept will limit participation to the larger more experienced management and real estate companies**
 - Thus raising concerns about estimating and pricing of program and construction costs
 - inflated numbers
 - hidden fees and profits
 - **Open-book . . subject to Owner audits . . by contract**

At-Risk PM: The Next Evolution

- **Concern for checks and balance for construction costs and selected subcontractors, vendors and suppliers is controlled through open, public competitive bidding (*that mimics Owner's public competitive policies*) of final design/bidding documents by the At-Risk PM to selected, invited contractors, subcontractors, vendors & suppliers**
 - This level of competitive pricing for purchasing construction should help to assure public (and private) sector Owners that the marketplace has determined the lowest cost, helping to maintain needed checks and balances of early and ongoing estimates based upon evolving design documents

At-Risk PM: The Next Evolution

- ***Value-added benefit: At-Risk PM Approach***
 - *Single point of accountability and responsibility for delivery of the entire program*
 - *Early confirmation and early guarantees for scope, budget, quality and time*
 - *Yet, ability for At-Risk PM to provide to Owner the needed and contracted **checks and balances** in competitive bidding/purchasing of construction, and open-book substantiated billings & invoices for delivery of project services and costs*

Kankakee County, IL

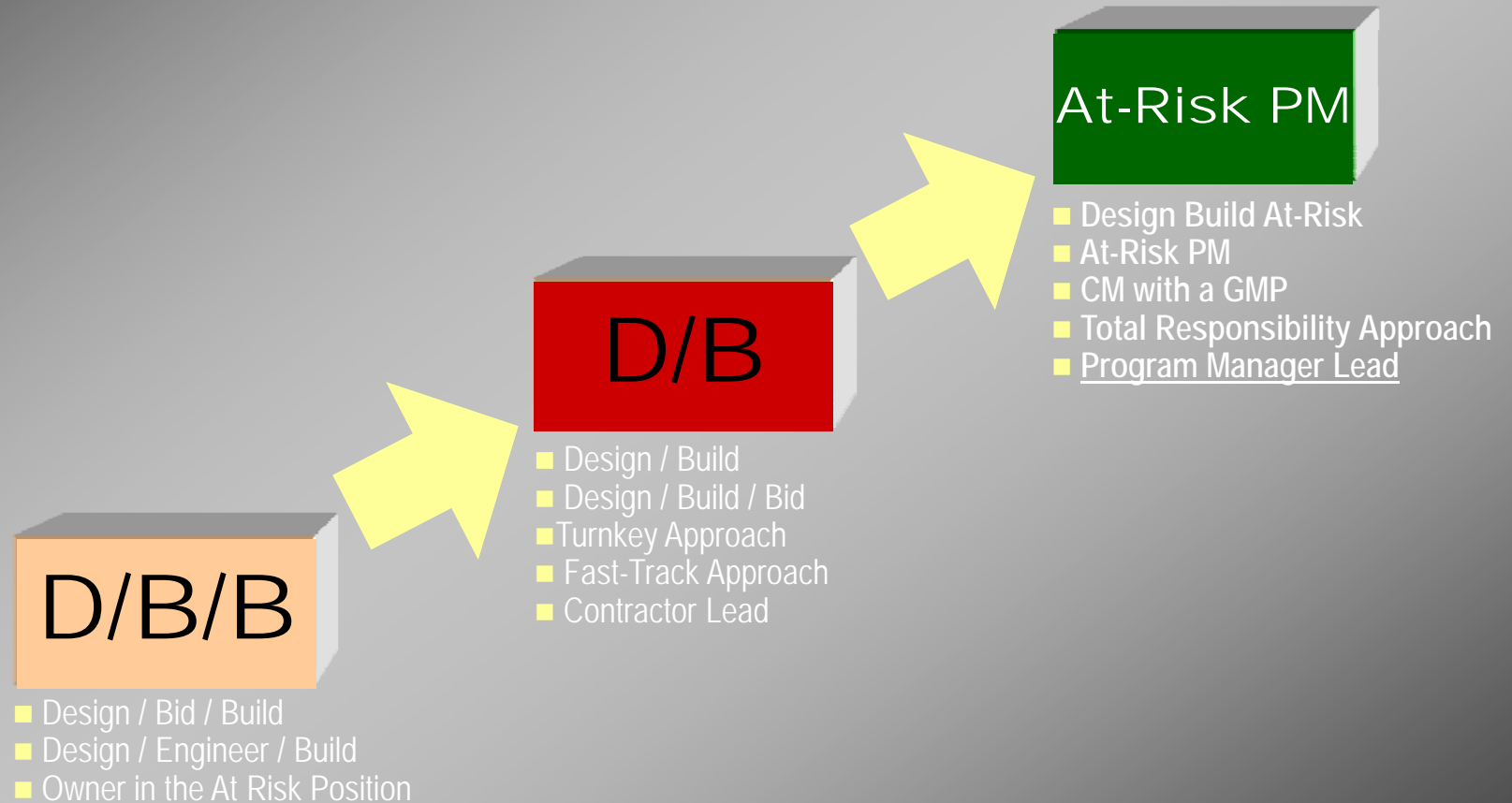
- **Following is a brief case history presentation of the At-Risk PM Approach utilized for the new Adult Detention Facility, in Kankakee County, Illinois:**

- Kankakee County, Illinois



- Approximately 60 miles south of Chicago
- Phase I: 312 Beds, \$19,500,000.00
- Phase II: 144 Beds, \$13,500,000.00

Evolution of At-Risk Pm Delivery

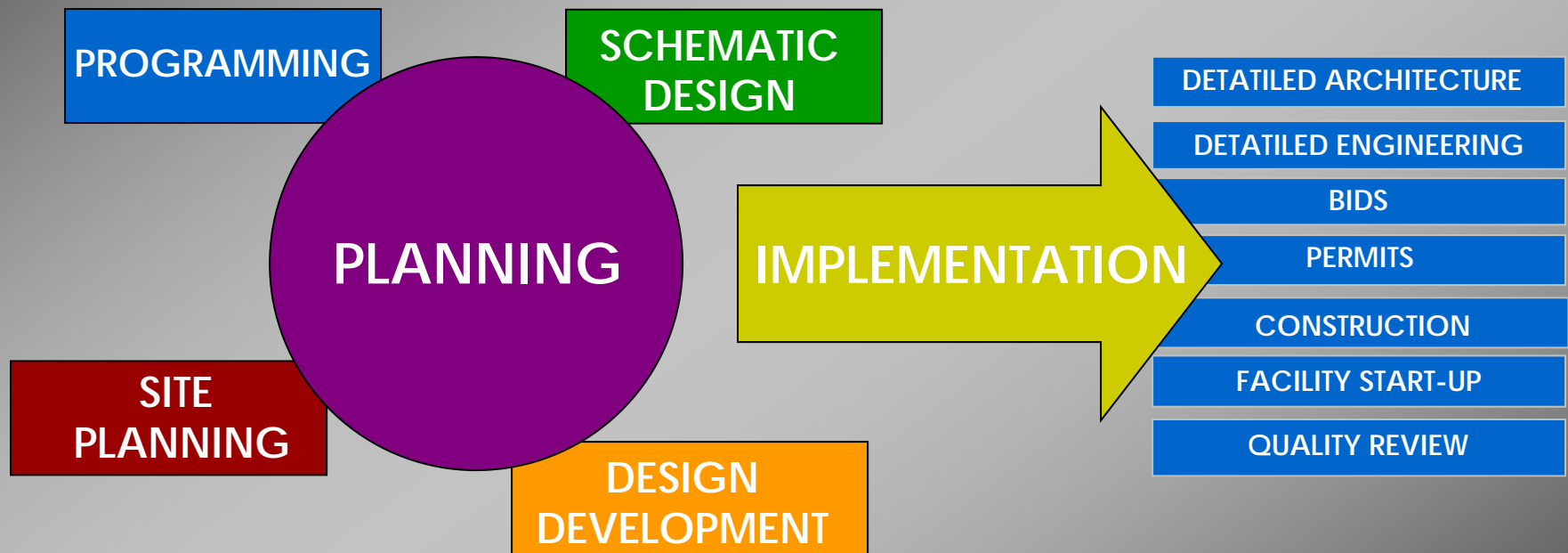


At-Risk PM Approach

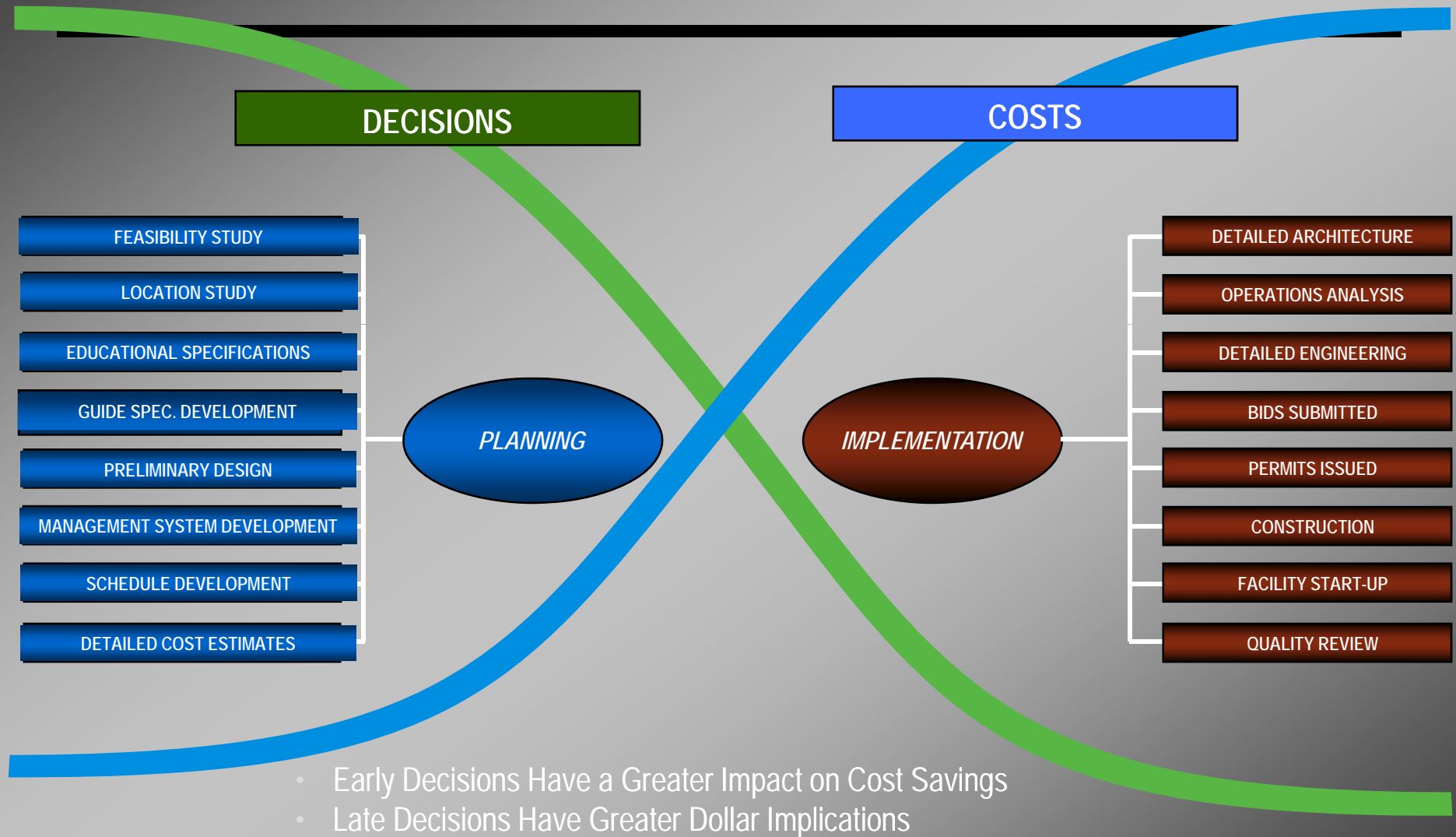


- Single Point of Responsibility delivery
- Guaranteed Maximum Price
- Fast Tracking / Phased Construction
- Cooperative Approach
- Designer and Builder on Unified Team
- Better Cost and Quality Control
- Reduced Potential for Document Conflicts
- Competitive Bids
- Increased Opportunity for Local Contractor / Subcontractor Participation
- 100 % Construction Savings to Owner

Planning & Implementation Model



DECISION COST CURVE



Project Approach

DECISIONS

COSTS

Program
Confirmation

Design
Development

GMP
Document

Design Completion/
Construction

Transition/
Move-In

PLANNING

IMPLEMENTATION

Upon confirmation of proposed design, schedule & cost, prepare GMP Document to include:

- Prime At-Risk PM Agreement
- Facility Space Requirements and Square Footages
- Property Survey and Geo-Technical Report
- Preliminary Design Development Documents ("Self-Bridging")
- Preliminary Project Outline Specifications (PPOS)
- Room Finish Schedule
- Proposed Furniture, Fixtures, and Equipment (FF&E) Allowance
- Strategy for Bidding and contracting construction work
- Master Project Schedule
- Detailed Cost Estimate (GMP)

Kankakee County, Illinois:

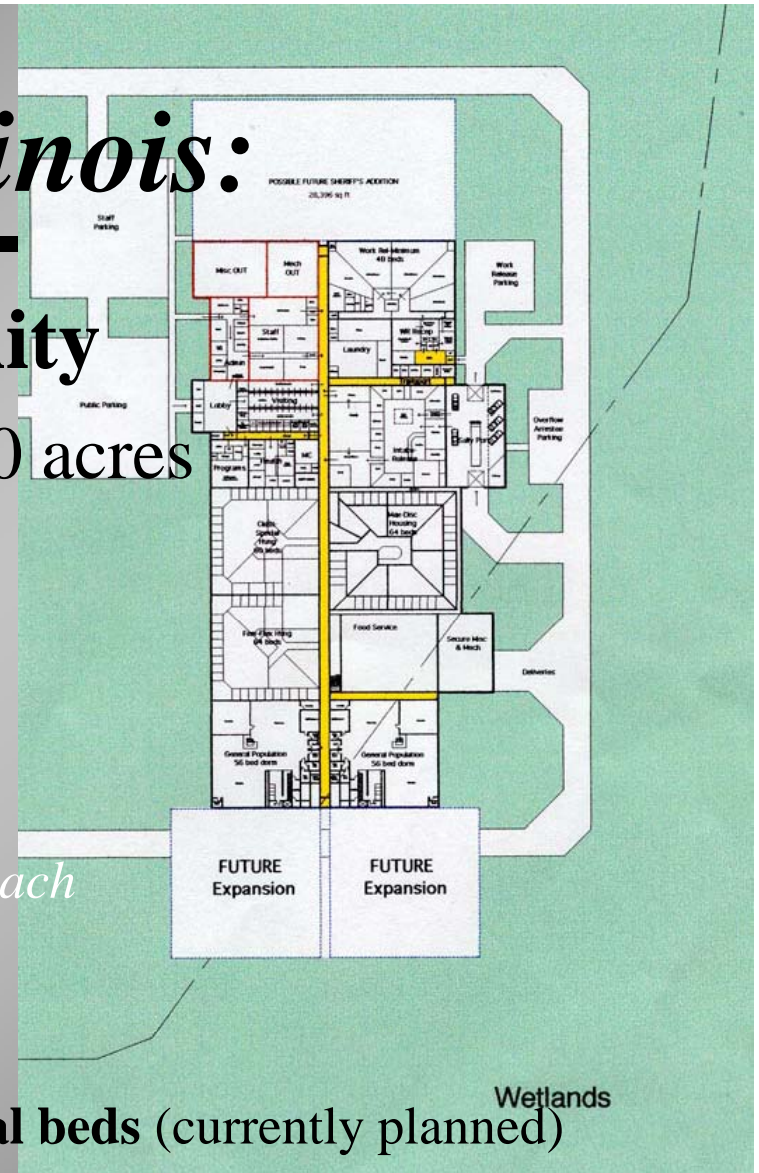
- **New Adult Detention Facility**
 - Green Site: Approximately 20 acres

- **Phase I: 312 beds**
 - approximately 92,000 GSF
- **Sheriff's Office**



- *Separate project by others*
- *Utilized similar At-Risk PM approach*

- **Future Phases:**
 - **Phase II: 144 Beds (completed)**
 - Future Phase: **up to 284 additional beds** (currently planned)
- **Total build-out of: 740+ beds**
 - plus existing downtown facility of approximately 125 beds



Kankakee Phase I:

- **Project Overview: Phase I:**
 - \$19.5 Million: Total GMP Contract Amount
 - Approximately \$100,000.00 of project improvements
 - Approximately \$125,000.00 of savings returned
 - 312 Beds: combination of:
 - 2-bed cells
 - Single bed cells
 - Open dormitory beds
 - Precast Concrete Cells
 - Insulated Metal Panel Exterior Wall System
 - Roof-top HVAC System



Kankakee Phase I:

- **Project Overview: Phase I:**
 - Administration Offices
 - Facility Main Entrance and Waiting
 - Facility Intake and Booking/Holding Cells
 - Inmate Property Storage
 - Medical Beds; located within housing units
 - Video-visitation booths
 - Main Control Room (for Phase I and Future)
 - Warming Kitchen and Storage/Dock Areas
 - Emergency Generator System



Kankakee Phase I:

- **Total Architectural & Engineering Services:**
 - Programming & Master Planning
 - Full Design & Engineering Services
 - Architecture
 - Civil & Structural
 - MEP/FP
 - Including specialty design-related services:
 - physical & electronic security
 - food service for warming/prep kitchen
 - *Self-bridging of design for GMP*

Kankakee Phase I:

- **Pre-Construction Services**
 - Cost Estimating: development of GMP
 - Bid Package Scope documents
 - Competitive Bidding: mimicked County public competitive bid procedures
 - Pre-bid Conferences for each/all bid packages
 - Bid openings (all attended by County and Sheriff's staffs)
 - Pre-construction conferences for each/all bid packages
 - All Subcontractors Contracted to At-Risk PM
 - Permitting: design reviews through outside code consultant to assist county building department

Kankakee Phase I:

- **Construction Services:**
 - Full-time on-site superintending staff:
 - Superintendent
 - Project engineer
 - Administrative Assistant
 - Materials Testing
 - Temporary building heating for all trades; to allow continuation of construction through winter months
 - Monthly meetings with County and Sheriff's Staffs

Kankakee Phase II:

- **Project Overview: Phase II:**
 - \$13.5 Million: Total GMP Contract Amount
 - Approximately \$800,000.00 of savings returned
 - 144 Beds: combination of:
 - 2-bed cells
 - Open dormitory beds
 - **Pre-manufactured Metal Wall Panel Cells**
 - **Cells and Dormitory Housing Units**
 - Manufactured by Trussbilt, South Dakota & Minnesota
 - Installed by Norment, Montgomery, AL
 - Insulated Metal Panel Exterior Wall System
 - Roof-top HVAC System



Kankakee Phase II:

- **Project Overview: Phase II:**
 - Construction of approximately 93,000 GSF
 - 40,000 GSF for Phase II 144-bed addition and new intake area
 - Second Intake and Booking/Holding Cells
 - » Primarily for US Marshal's Services Intake
 - » Later renovated into small cell housing area
 - Expansion of Kitchen into full prep-kitchen

Kankakee Phase II:

- **Project Overview: Phase II:**
 - Also, included construction of **shelled-in space** for more rapid start of proposed Phase III
 - Installation of RTUs for proposed future Phase III
 - Primary underground sanitary lines
 - Gravel base (*no slab-on-grade poured*)
 - Minimal lighting, and fire protection systems, and
 - 12 x 12 overhead door for access for Phase II and future Phase III work

Kankakee Phase II:

- **Project Overview: Phase II:**
 - Project Management Plan: GMP Approach
 - Design approach
 - Design/Build/GMP for extension of security electronics system
 - » By same Phase I subcontractor: Accurate Controls, Ripon, WI
 - » Guaranteed extension and expansion of existing system
 - Deduct provided to Owner: \$250,000.00 off design fees
 - Early Bidding and Contracting: Subcontractors
 - Structural Steel: Same as Phase I; local County company
 - Pre-manufactured Wall Panel Cell system; Trussbilt/Norment
 - Security electronics system: Design/Build/GMP approach

Kankakee Phase II:

- **Permitting**

- Engaged code consultant from Phase I to continue design review services

- **Competitive Bidding**

- Again, open public competitive bidding, mimicking County bidding policies
 - Concrete Foundations & Slabs
 - All finishes
 - Roofing, Insulated Exterior Metal Wall Panels
 - MEP/FP
 - FF&E

Kankakee Phase II:

- **Construction Services:**

- Full-time on-site superintending staff:
 - Superintendent
 - Assistant Project Manager
 - Administrative Assistant
- Materials Testing
- Temporary building heating for all trades; to allow continuation of construction through winter months
- Monthly meetings with County and Sheriff's Staffs

Kankakee Phase I:

- **Key Project Management and Bidding Strategy Points: Phase I:**
 - Use of Insulated Metal Exterior Wall Panels
 - Allowed construction to proceed into winter months, was not weather/temperature sensitive
 - Achieved exterior design intent of Owner: *“Doesn’t look like a jail”* from passing motorists along Interstate 57
 - Precast Concrete Cells; Structural Steel Frame: 1-Story
 - Released for bids before building footprint established; therein allowing all five (5) bidders to bid standard cell size to meet minimum interior cell size without added costs for any cell modifications. . . *cost effective and time savings*
 - Then design and building footprint and steel structure adjusted to overall cell dimensions

Kankakee Phase II:

- **Key Project Management and Bidding Strategy Points: Phase II:**

- Phase II commenced May 2005: 4 months after completion and opening of Phase I; January 2005
 - Promised schedule was completion within 12 months from GMP approval
 - This meant that long lead time of 6 months for precast concrete cells would not meet this timeline; metal wall panel cell construction system was selected to meet schedule
 - Also, structural steel building system needed advance commencement to meet “weather-tight” by October for enclosed structure during winter
 - Early award of security systems and metal panel cell system also worked to assure schedule compliance

Kankakee Phase II:

- **Phase II was completed 2 months ahead of schedule**
 - Because the purpose of Phase beds was/is to house outside inmates from the US Marshal's Service, completion of Phase II was a revenue sensitive matter
 - Completion 2 months ahead of schedule allowed County to begin receiving outside inmates early, to generate revenue for Sheriff's Office and County

Other At-Risk PM Projects:

- **Cherokee County, Georgia**

- **Public Safety Facility: \$35.5 Million: GMP**

- 512-Bed Adult Detention Facility
 - Sheriff's Administration Offices
 - 911 Emergency Call Center
 - Emergency Operations Center
 - Fire-Emergency Services HQ

- **Administration Complex: \$22.3 Million: GMP**

- County Administration Offices
 - Board of Commissioners Meeting Chambers and Offices

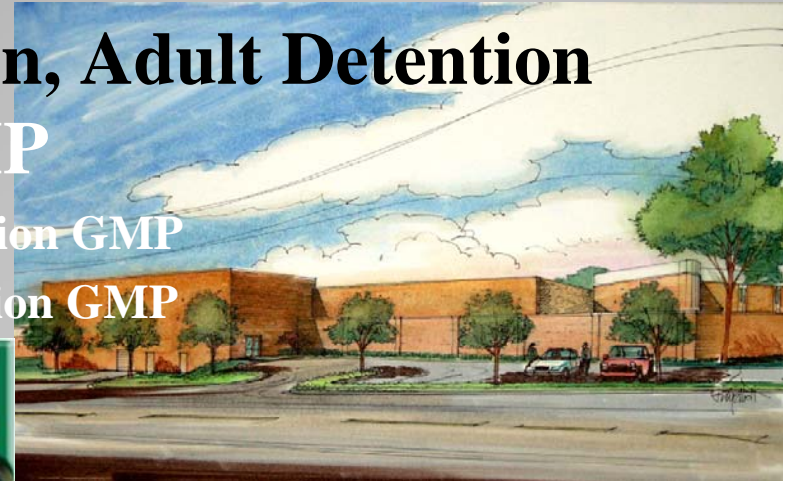
- Conference Center:

- » warming kitchen
 - » seating for 600



Other At-Risk PM Projects:

- **Bibb County, Georgia, Macon, Adult Detention Complex: \$30.0 Million: GMP**
 - 192-Bed Work Release Center: \$5.0 Million GMP
 - 256-Bed Expansion/Addition: \$25.0 Million GMP

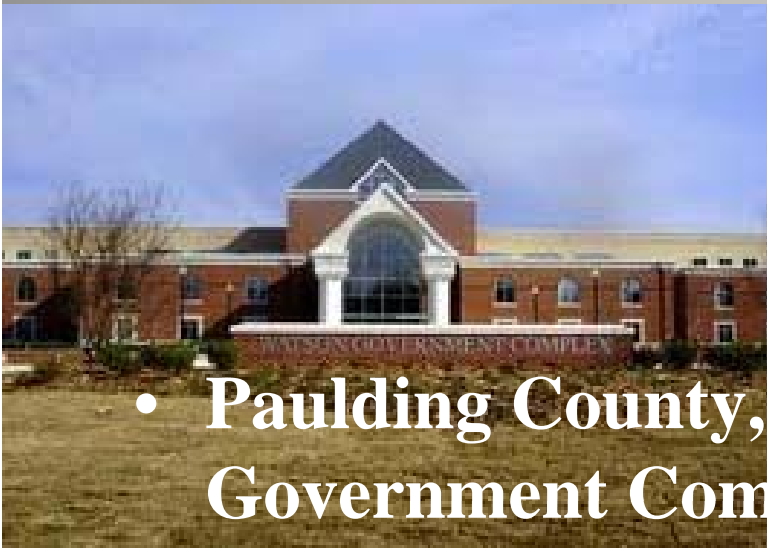
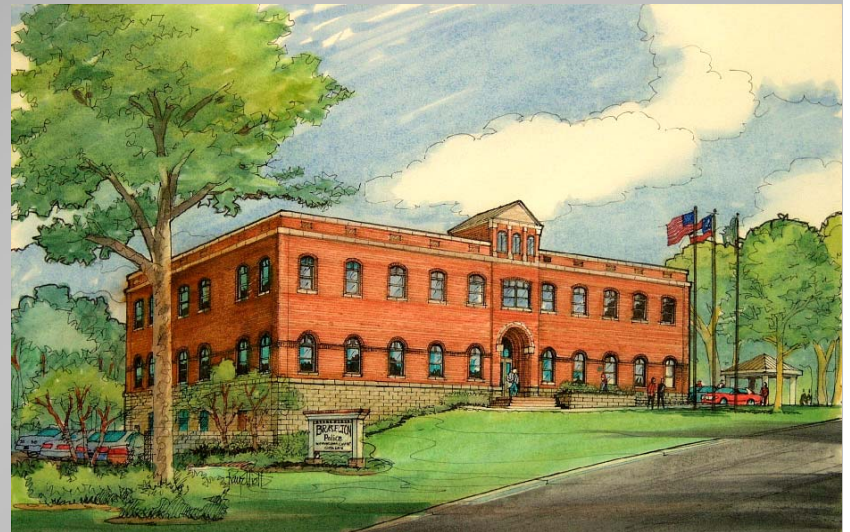


- **Pickens County, Georgia, Adult Detention Facility: \$8.2 Million GMP**



Other At-Risk PM Projects

- **Braselton, Georgia, Police HQ and Municipal County and Administration Complex: \$4.8 Million**

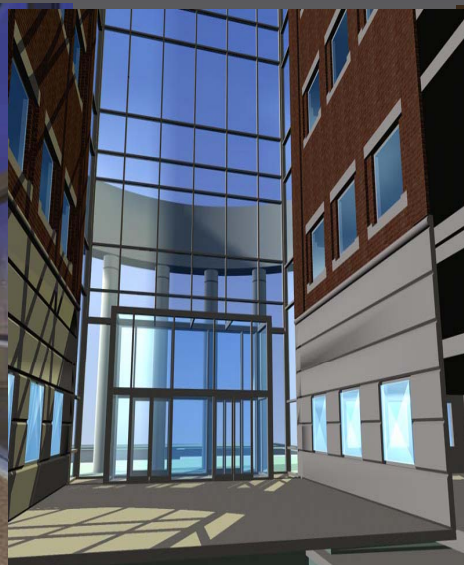
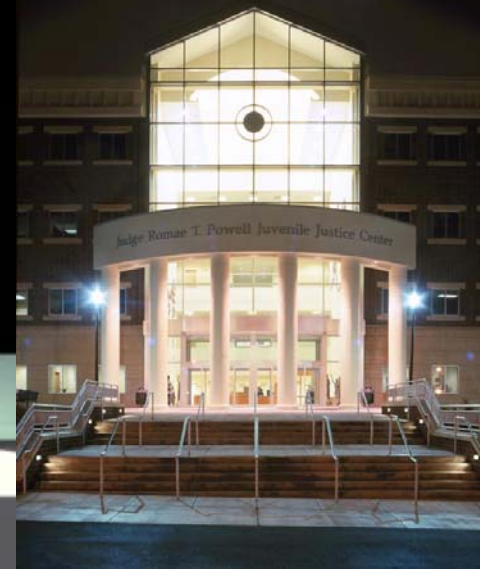


- **Paulding County, Georgia, Government Complex: \$65.0 Million GMP**



Other At-Risk PM Projects:

Fulton County, Georgia, Atlanta, Juvenile Court & Library Complex: \$33.1 Million



Other At-Risk PM Projects:

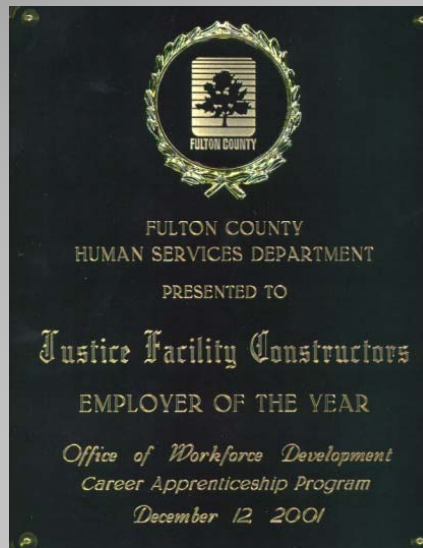


Fulton County, Georgia, Atlanta, Juvenile Court & Library Complex

Promise delivered...At-Risk PM works



- \$33.1 Million Total Project Budget
- 189,000 square-feet (\$175.13/SF)
- Delivered in 26 months
- Delivered within budget
- No Change Orders



2001 Employer of the Year



Fulton County Juvenile Justice Center – Atlanta, GA

@Risk PM: The Next Evolution

- *In summary. . .*
 - *At-Risk Program Management* brings to end-users and facility real estate managers
 - Opportunities and benefits of proven project delivery methods,
 - Under single *At-Risk PM* responsibility that delivers:
 - *early cost guarantees*
 - *reduced total delivery time*
 - *defined scope*
 - *assured quality levels*
 - *under a contracted and documented process*

@Risk PM: The Next Evolution

Questions. . .

Thank you for your attention and interest.

The Presenter. . .

Bill Echols, Jr., AIA, NCARB, is a registered architect (*in GA and other states*) with more than 40 years experience in the program management, design & construction, and design/build/GMP industry.

- Echols has worked as a senior construction program manager, chief operating officer for a 40+ member architectural engineering environmental firm, and served as executive director for \$500.0 Million capital improvement programs for school districts in Alaska and Texas, and held senior marketing and operation positions for national program management, design, engineering and construction firms.
- Echols is currently Director of Capital Projects for Cherokee County, Georgia, (metro Atlanta) providing in-house Program Management for more than \$120.0 Million of parks, fire training, animal shelter, and detention facilities.
- Echols holds a Bachelor of Business Administration from Georgia State University in Atlanta.