FULTON COUNTY

Vision

People *Families* *Neighborhoods*

Mission

To serve, protect and govern in concert with local municipalities

Values

People *Customer Services*
Ethics *Resource Management*
Innovation *Equal Opportunity*

REQUEST FOR PROPOSAL NO. #10RFP75166K-JD

ARCHITECTURAL AND ENGINEERING SERVICES FOR FULTON COUNTY GOVERNMENT CENTER WATERPROOFING VOLUME I

For

GENERAL SERVICES DEPARTMENT

RFP DUE DATE AND TIME: November 8, 2010, 11:00 A.M.
RFP ISSUANCE DATE: September 28, 2010
PRE-BID CONFERENCE DATE: October 21, 2010
PURCHASING CONTACT: Joyce Daniel @ 404-612-5824
E-MAIL: joyce.daniel@fultoncountyga.gov

LOCATION: FULTON COUNTY DEPARTMENT OF PURCHASING & CONTRACT COMPLIANCE
130 PEACHTREE STREET, S.W., SUITE 1168
ATLANTA, GA 30303

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SECTION 1
INTRODUCTION

1.1 PURPOSE

Fulton County, Georgia ("County") is seeking Proposals from vendors experienced and qualified to provide Architectural and Engineering services for the Government Center Waterproofing of the Fulton County Government Center located at 141 Pryor Street and 130 Peachtree Street, Atlanta, GA, 30303. The Fulton County Government Center consists of the Tower, Assembly, Atrium, Mid-rise, and Public Safety Buildings comprising all that space within the entire city block bounded by Pryor Street, Mitchell Street, Peachtree Street and Martin Luther King Boulevard (MLK) in downtown Atlanta.

Through the issuance of this Request for Proposal ("RFP" and/or "Proposals"), the County is soliciting Proposals from qualified Proposers for the **#10RFP75166K-JD-Architectural and Engineering Services for Fulton County Government Center Waterproofing.**

Proposals provided in response to this RFP that comply with the submittal requirements set forth in Section 4.0, including all forms and certifications, will be evaluated in accordance with the criteria and procedures described in Section 5.0. Based on the results of the evaluation, the County will award the **#10RFP75166K-JD-Architectural and Engineering Services for Fulton County Government Center Waterproofing** to the most advantageous Proposer based on the cost and the evaluation factors set forth in the RFP.

1.2 DESCRIPTION OF THE PROJECT

This project involves services that are professional in nature. This RFP is requesting Architectural and Engineering design services for the Architectural and Engineering Services for Fulton County Government Center Waterproofing and repair of the Government Center Complex. Tasks shall include but are not limited to services listed under Section 3.3 Scope of Work.

1.3 BACKGROUND

The project is anticipated to be completed in two phases. Phase one will consist of terraces design and repair. Phase II will consist of exterior envelope systems, skylights, roofs and canopies, and design and repair. Task shall include but are not limited to services listed under Section 3.3 Scope of Work.

1.4 COUNTY OBJECTIVES

The following are the County Objectives for this project:

Fulton County desires to retain a qualified and experienced consultant to provide Architectural and Engineering Services for the Waterproofing and repair of the Fulton County Government Center Complex.

1.5 Purchasing the RFP

This document and supporting documents can be downloaded at the Fulton County Website, http://www.fultoncountyga.gov under "Bid Opportunities".

COPIES ARE NOT PERMITTED TO BE MADE OF THE DRAWINGS

1.6 SUBCONTRACTING OPPORTUNITIES

Potential prime contractors submitting a bid on this project for Fulton County and are seeking subcontractors and/or suppliers can advertise those subcontracting opportunities on the County's website, http://www.fultoncountyga.gov under "Subcontracting Bid Opportunities".

1.7 PRE-PROPOSAL CONFERENCE

Date: **Thursday, October 21, 2010**
Time: **9:00 A.M.**
Site Visit : **Immediately following the Pre-Proposal Conference**

The County will hold a Pre-Proposal Conference, on **Thursday, October 21, 2010 at 9:00 A.M.** in the Bid Conference Room of the Department of Purchasing and Contract Compliance, Fulton County Public Safety Building, Suite 1168, 130 Peachtree Street, S.W., Atlanta, Georgia 30303. Attendance at the Pre-Proposal Conference is voluntary for responding to this RFP; however Proposers are encouraged to attend. The purpose of the Pre-Proposal Conference is to provide information regarding the project and to address any questions and concerns regarding the services sought by the County through this RFP.

The Site Visit will be held **Thursday, October 21, 2010**, immediately following the pre-proposal conference.

1.8 PROPOSAL DUE DATE

All proposals are due in the Department of Purchasing and Contract Compliance of Fulton County located in the Public Safety Building, Suite 1168, 130 Peachtree St, S.W., Atlanta Georgia 30303 on or before **Monday, November 8, 2010 at 11:00 A.M.,** legal prevailing time. All submitted proposals will be time and date stamped according to the clock at the front desk of the Fulton County Department of Purchasing and Contract Compliance. Any proposals received after this appointed schedule will be considered

late and subject to be returned unopened to the Proposer. The proposal due date can be changed only by addendum.

1.9 DELIVERY REQUIREMENTS

Any proposal received after the above stipulated due date and time will not be considered and will be rejected and returned. It shall be the sole responsibility of the Proposer to have his/her proposal delivered to the Fulton County Department of Purchasing and Contract Compliance for receipt on or before the above stipulated due date and time. If a proposal is sent by U.S. Mail, the proposer shall be responsible for its timely delivery to the Department of Purchasing and Contract Compliance.

1.10 CONTACT PERSON AND INQUIRIES

Any questions or suggestions regarding this RFP should be submitted in writing to the Purchasing Department contact person, Joyce Daniel Assistant Purchasing Agent 130 Peachtree Street S.W. Suite 1168, Atlanta, Georgia 30303; (404) 612-5824, Fax: (404) 335-5806 joyce.daniel@fultoncountyga.gov. Any response made by the County will be provided in writing to all Proposers by addendum. No verbal responses shall be authoritative.

SECTION 2
INSTRUCTIONS TO PROPOSERS

2.1 PROCUREMENT PROCESS

The procurement will be on a formally advertised basis. All technical requirements, unless otherwise specified, must be met, or be capable of being met by the Proposer or their proposal will be disqualified as being non-responsive.

2.2 CONTRACT DEFINITIONS

In addition to any other terms that may be defined in this solicitation, the following terms have the following meaning:

Addendum – Revision to the RFP documents issued by the County prior to the receipt of proposals.

Agreement – refers to the executed contract between the County and Contracting Entity.

County – Fulton County Government and its authorized representatives.

Contact Person – Purchasing staff designated by the Fulton County Department of Purchasing and Contract Compliance to submit any questions and suggestions to.

Offeror – the entity of individual submitting a proposal in response to this RFP.

Owner – Fulton County Government

Proposal – the document submitted by the offeror in response to this RFP.

Proposer – the entity or individual submitting a proposal in response to his RFP.

Scope of Work – All the services specified, indicated, shown, or contemplated by the Contract, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plants, supplies, power, water, transportation and other things necessary to complete such services in accordance with the Contract.

Direct Salary Expense (DSE)- The direct salary of the assigned staff position without the portion of the cost of mandatory and customary contributions and benefits related thereto, such as employment taxes and other statutory employment benefits, insurance, sick leave, holidays, vacations, pensions and similar contributions and benefits.

Burden-The cost of mandatory and customary contributions and benefits applied to direct Salary Expense, such as employment taxes and other statutory employment benefits, insurance, sick leave, holidays, vacations, pensions and similar contributions and benefits.

Direct Personnel Expense (DPE)-The sum of Direct Salary Expense and Burden.

LEED-Leadership in Energy and Environment Design-(LEED) an independent certification program that provides voluntary guidelines for developing high-performance, sustainable buildings. Created by the U.S. Green Building Council (USGBC), the program awards varying levels of certification to buildings that meet LEED rating standards in five major categories: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

CADD-Computer Assisted Design and Drafting -software application for 2D and 3D design and drafting.

2.3 NO CONTACT DURING PROCUREMENT PROCESS

It is the policy of Fulton County that the evaluation and award process for County contracts shall be free from both actual and perceived impropriety, and that contacts between potential vendors and County officials, elected officials and staff regarding pending awards of County contracts shall be prohibited.

A. No person, firm, or business entity, however situated or composed, obtaining a copy of or responding to this solicitation, shall initiate or continue any verbal or written communication regarding this solicitation with any County officer, elected official, employee, or designated County representative, between the date of the issuance of this solicitation and the date of the County Manager's recommendation to the Board of Commissioners for award of the subject contract, except as may otherwise be specifically authorized and permitted by the terms and conditions of this solicitation.

B. All verbal and written communications initiated by such person, firm, or entity regarding this solicitation, if same are authorized and permitted by the terms and conditions of this solicitation, shall be directed to the Purchasing Agent.

C. Any violation of this prohibition of the initiation or continuation of verbal or written communications with County officers, elected officials, employees, or designated County representatives shall result in a written finding by the Purchasing Agent that the submitted bid or proposal of the person, firm, or entity in violation is "non-responsive", and same shall not be considered for award.

2.4 CLARIFICATION & ADDENDA

Proposers may submit requests for clarifications or interpretations regarding this RFP and the Contract. Proposers must prepare such requests in writing for the County's consideration as set forth in this section of this RFP. While the County has not placed an initial limitation on the number of requests which can be submitted, Proposers are

cautioned that if Proposers do not request meaningful clarifications or interpretations in an organized manner (e.g., limited frequency of requests), the County will set restrictions on the frequency and number of requests permitted. The County will not respond to requests, oral or written, received after **Wednesday, October 27, 2010 at 2:00 P.M,** local prevailing time. Proposers are advised that this section places no obligation on the part of the County to respond to any or all requests for clarification or interpretation, and that the County's failure to respond to any such request will not relieve the Proposer of any obligations or conditions required by this RFP.

Requests for clarification or interpretation regarding this RFP shall only be submitted in writing (letter, fax or email) to:

Fulton County Department of Purchasing & Contract Compliance
Attn: Joyce Daniel
Public Safety Building
130 Peachtree Street S.W. Suite 1168
Atlanta GA 30303
Email: Joyce.Daniel@fultoncountyga.gov
P: (404) 612- 5824 - F: (404) 335-5806

RE: #10RFP75166K-JD-Architectural and Engineering Services for Fulton County Government Center Waterproofing

All responses to written requests for clarification, interpretation, or additional information will be distributed as addenda to this RFP and posted on the Fulton County website www.fultoncountyga.gov.

No oral interpretation, instruction, or information concerning this RFP given by any employee or agent of the County shall be binding on the County. Proposers who submit a Proposal in reliance on any such oral information risk having their response to this RFP deemed non-responsive by the County. Only written responses issued by addendum to this RFP should be considered by the Proposers.

During the period provided for the preparation of Proposals, the County may issue addenda to this RFP. These addenda will be numbered consecutively and will be posted on the Fulton County website, www.fultoncountyga.gov. These addenda will be issued by, or on behalf of, the County and will constitute a part of this RFP. Each Proposer is required to acknowledge receipt of each addendum by submitting an executed acknowledgment form. This acknowledgment shall include all addenda distributed prior to the Proposal Submission Date. All responses to this RFP shall be prepared with full consideration of the addenda issued prior to the Proposal Submission Date.

2.5 MULTI-YEAR CONTRACT TERM

The initial term of the contract shall be for a one (1) year term, with two (2), one (1) year renewal options.

The period of this Agreement shall consist of a series of Terms as defined below. The County is obligated only to pay such compensation under this Agreement as may lawfully be made from funds budgeted and appropriated for that purpose during the County's then current fiscal year.

a. Commencement Term

The "Commencement Term" of this Agreement shall begin on the date of execution of the Agreement in the year 2011, the starting date, and shall end absolutely and without further obligation on the part of the County on the 31st day of December, 2011. The Commencement Term shall be subject to events of termination and the County's termination rights that are described elsewhere in this Agreement. Notwithstanding anything contained in this Agreement, the County's obligation to make payments provided under this Agreement shall be subject to the County's annual appropriations of funds for the goods, services, materials, property and/or supplies procured under this Agreement by the County's governing body and such obligation shall not constitute a pledge of the County's full faith and credit within the meaning of any constitutional debt limitation.

b. Renewal Terms

Unless the terms of this Agreement are fulfilled with no further obligation of the part of either party on or before the final date of the Commencement Term as stated above, or unless an event of termination as defined within this Agreement occurs during the Commencement Term, this Agreement may be renewed at the written option of the County upon the approval of the County Board of Commissioners for two (2) one-year ("Renewal Terms"). However, no Renewal Term of this Agreement shall be authorized nor shall any Renewal Term of this Agreement commence unless and until each Renewal Term has first been approved in writing by the County Board of Commissioners for the calendar year of such Renewal Term. If approved by the County Board of Commissioners, the First Renewal Term shall begin on the 1st day of January, 2012 and shall end no later than the 31st day of December, 2012. If approved by the County Board of Commissioners, the Second Renewal Term shall begin on the 1st day of January, 2013 and shall end no later than the 31st day of December, 2013. If the County chooses not to exercise any Renewal Term as provided in this Section, then the Term of this Agreement then in effect shall also be deemed the "Ending Term" with no further obligation on the party of either party.

c. Term Subject to Events of Termination

All "Terms" as defined within this Section are subject to the section of this Agreement which pertain to events of termination and the County's rights upon termination.

d. Same Terms

Unless mutually agreed upon in writing by the parties, or otherwise indicated herein, all provisions and conditions of any Renewal Term shall be exactly the same as those contained within in this Agreement.

e. Statutory Compliance Regarding Purchase Contracts.

The parties intend that this Agreement shall, and this Agreement shall operate in conformity with and not in contravention of the requirements of O.C.G.A. § 36-60-13, as applicable, and in the event that this Agreement would conflict therewith, then this Agreement shall be interpreted and implemented in a manner consistent with such statute.

2.6 REQUIRED SUBMITTALS

See **Exhibit 1** for the Required Submittal Checklist. This checklist will assist you to ensure that all required submittals are submitted. Failure to submit all required submittals may deem your proposal non-responsive.

2.7 PROPOSAL EVALUATION

All proposals will be evaluated using the criteria specified in Section 4 of this RFP. Selection will include an analysis of proposals by a Vendor Selection Committee composed of County personnel who will review the proposal submittals in accordance with the submittal requirements and the evaluation criteria set forth in Section 4 of this RFP. The committee may request oral interviews and/or site visits.

2.8 DISQUALIFICATION OF PROPOSERS

The submission of more than one (1) proposal to the County as the primary Proposer or member of a joint venture for the same work by and individual firm, partnership or corporation under the same or different names may be considered as sufficient for disqualification of a Proposer and the rejection of the proposal.

2.9 RESERVED RIGHTS

The County reserves the right to accept or reject any and/or all proposals, to waive irregularities and technicalities, and to request resubmission. Any sole response that is

received may or may not be rejected by the County depending on available competition and timely needs of the County. There is no obligation on the part of the County to award the contract to the lowest proposer and the County reserves the right to award the contract to the responsible proposers submitting responsive proposals with resulting agreements most advantageous and in the best interest of the County. The County shall be the sole judge of the proposals and the resulting agreements that are in its best interest and its decision shall be final. Also, the County reserves the right to make such

investigation as it deems necessary to determine the ability of any proposer to perform the work or service requested. Information the County deems necessary to make this determination shall be provided by the proposer. Such information may include, but shall not be limited to, current financial statements by an independent CPA; verification of availability of personnel; and past performance records.

2.10 APPLICABLE LAWS

All applicable laws and regulations of the State of Georgia and ordinances and regulations of Fulton County shall apply. Protestors shall seek resolution of their complaints in the manner provided in the Fulton County Code of Laws §2-324 which is incorporated by reference herein.

2.11 MINIMUM PARTICIPATION REQUIREMENTS FOR PRIME CONTRACTORS

Pursuant to Fulton County Code 102-357, Prime Bidders on the project must perform no less than 51% of the scope of work required under the project.

2.12 INSURANCE AND RISK MANAGEMENT PROVISIONS

Insurance and Risk Management provisions and Indemnification and Hold Harmless provisions are outlined in Section 7 of this RFP.

2.13 ACCURACY OF RFP AND RELATED DOCUMENTS

The County assumes no responsibility that the specified technical and background information presented in this RFP, or otherwise distributed or made available during this procurement process, is complete or accurate. Without limiting the generality of the foregoing, the County will not be bound by or be responsible for any explanation or interpretation of the Proposal documents other than those given in writing as an addendum to this RFP.

Should a recipient of this RFP find discrepancies in or omissions from this RFP and related documents, the recipient of this RFP shall immediately notify the Purchasing Contact Person identified in Section 1.11 in writing at the following address: Fulton County Department of Purchasing and Contract Compliance, Public Safety Bldg, 130 Peachtree Street S.W., Suite 1168 Atlanta, GA 30303. A written addendum, if necessary, then will be made available to each recipient of this RFP.

2.14 RESPONSIBILITY OF PROPOSER

Each Proposer is encouraged to conduct all necessary investigations and review all available and relevant data and information, which are necessary in its judgment in order to assume this responsibility prior to the submittal of its Proposal. Proposers are reminded of Fulton County's **"No Contact During Procurement"** policy and may only contact the person designated by the RFP.

2.15 CONFIDENTIAL INFORMATION

If any Proposal contains technical, financial, or other confidential information that the Proposer believes is exempt from disclosure, the Proposer must clearly label the specific portions sought to be kept confidential and specify on what the exemption is based. The County, at its sole discretion and subject to applicable law, will determine whether such exemption applies. The County has sole discretion to make such determination regarding the disclosure of information, and by responding to this RFP, Proposers waive any challenge to the County's decisions in this regard. Marking all or substantially all of a Proposal as confidential may result in the Proposer being deemed non-responsive to this RFP.

Notwithstanding the foregoing, Proposers recognize and agree that the County, its staff, and its Consultants will not be responsible or liable in any way for any losses that the Proposer may suffer from the disclosure of information or materials to third parties.

2.16 COUNTY RIGHTS AND OPTIONS

This RFP constitutes an invitation to submit Proposals to the County. Without limitation or penalty, the County reserves and holds at its sole discretion, the following rights and options:

- This RFP does not obligate the County to select, procure or contract for any services whatsoever

- The County reserves the right to change or alter the schedule for any events associated with this procurement and, if required, notify the Proposers. A Proposer, by submitting a Proposal, agrees to be bound by any modifications made by the County

- All costs incurred by a Proposer in connection with responding to this RFP, the evaluation and selection process undertaken in connection with this procurement, and any negotiations with the County will be borne by the Proposer.

- The County reserves the right to reject all Proposals and components thereof to eliminate all Proposers responding to this RFP from further consideration for this procurement, and to notify such Proposers of the County's determination.

- The County may cancel this RFP without the substitution of another RFP and terminate this procurement at any time without any liability whatsoever.

- The County reserves the right to waive any technicalities or irregularities in the Proposals.

- The County reserves the right to eliminate any Proposer who submits incomplete

or inadequate responses or is not responsive to the requirements of this RFP.

- The County may request Proposers to send representatives to the County for interviews and presentations.

- To the extent deemed appropriate by the County, the County may select and enter into discussion and negotiations with the Proposer(s) submitting Proposal(s), which are found to be reasonably susceptible for award.

- The County reserves the right to discontinue negotiations with any selected Proposer.

- The County reserves the right, without prior notice, to supplement, amend, or otherwise modify this RFP.

- All Proposals (other than portions thereof subject to patent or copyright protection) become the property of the County and will not be returned, and the County reserves the right to utilize all such information contained in the Proposals without further cost to the County

- The County may add to or delete from the Project Scope of Work set forth in this RFP.

- Any and all Proposals not received by the Proposal Submission Date shall be rejected and returned unopened.

- Neither the County, its staff, its representatives, nor any of its consultants or attorneys will be liable for any claims or damages resulting from the solicitation, collection, review, or evaluation of responses to this RFP.

- The County, including its representatives and consultants, reserves the right to visit and examine any of the facilities referenced in any Proposal and to observe and investigate the operations of such facilities.

- The County reserves the right to conduct investigations of the Proposers and their responses to this RFP and to request additional evidence to support the information included in any such response.

By responding to this RFP, Proposers acknowledge and consent to the rights and conditions set forth in this RFP.

2.17 COST OF PROPOSAL PREPARATION AND SELECTION PROCESS

Each Proposal, including preparation of all information required to be included in a Proposal pursuant to this RFP, shall be prepared at the sole cost and expense (including, but not limited to, engineering and legal costs) of the Proposer. In addition, the Proposer shall be solely responsible for all costs (including engineering and legal

costs) incurred by such Proposer in connection with this selection process, including any costs incurred by the Proposer in any subsequent negotiations entered into in connection with developing the Proposal. There shall be no claims whatsoever against the County, its staff, or its consultants for reimbursement for the costs or expenses (including, but not limited to, engineering and legal costs) incurred during the preparation of the Proposal or other information required by this RFP or procurement process or in connection with the selection process or any negotiations.

2.18 TERMINATION OF NEGOTIATIONS

The County at its sole discretion may, at any time, to the extent permitted by Applicable Law, exclude a Proposer from further participation in any negotiation process if the County determines that such Proposer is failing to progress in the negotiations or if the terms of its Proposal are less advantageous than those of other Proposers and such Proposer is deemed to be no longer susceptible of selection. The County will give written notice of its decision to the Proposer, which shall be sent in writing, signed by the County.

2.19 WAGE CLAUSE

Pursuant to 102-391, Each Contractor shall agree that in the performance of the Contract he will comply with all lawful agreements, if any, which the Contractor had made with any association, union, or other entity, with respect to wages, salaries, and working conditions, so as not to cause inconvenience, picketing, or work stoppage.

2.20 ADDITIONAL OR SUPPLEMENTAL INFORMATION

After receipt of the submittals, the County will evaluate the responses, including the references, financial statements, experience and other data relating to the Respondent's qualifications. If requested by the Fulton County Department of Purchasing and Contract Compliance, Respondent's may required to submit additional or supplemental information to determine whether the Respondent meets all of the qualification requirements.

2.21 REPORTING RESPONSIBILITIES

The successful Proposer will report directly to the Project Manager, Building Construction, or designated representative.

2.22 GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT

This Request for Proposal is subject to the Georgia Security & Immigration Compliance Act. Pursuant to the Georgia Security & Immigration Compliance Act of 2006, as amended on May 11, 2009, bidders and proposers are notified that all bids/proposals for services that are to be physically performed within the State of Georgia must be accompanied by proof of their registration with and continuing and future participation in the E-Verify program established by the United States Department of Homeland Security. A completed affidavit must be submitted on the top of the bid/proposal at the

time of submission, prior to the time for opening bids/proposals. Under state law, the County cannot consider any bid/proposal which does not include a completed affidavit. It is not the intent of this notice to provide detailed information or legal advice concerning the Georgia Security & Immigration Compliance Act. All bidders/proposers intending to do business with the County are responsible for independently apprising themselves and complying with the requirements of that law and its effect on County procurements and their participation in those procurements. For additional information on the E-Verify program or to enroll in the program, go to: https://e-verifty.uscis.gov.enroll.

See Section 5, Proposal Forms for declarations and affidavits.

2.23 AUTHORIZATION TO TRANSACT BUSINESS

If the Proposer is a Georgia corporation, the corporation, prior to contract execution, shall submit documentary evidence from the Secretary of State that the Corporation is in good standing and that the corporation is authorized to transact business in the State of Georgia.

If the Proposer is a foreign (non-Georgia) corporation, the corporation, prior to contract execution shall submit a Certificate of Authority and documentary evidence from the Georgia Secretary of State of good standing which reflects that the corporation is authorized to do business in the State of Georgia.

2.24 RIGHT TO PROTEST

Any actual bidder or offeror who is aggrieved in connection with the solicitation or award of a contract shall protest in writing to the Director of Purchasing & Contract Compliance. An actual bidder or offeror is defined as a person or entity who has submitted a bid or proposal on the project for which they are filing a protest. A protest shall be submitted to and received by the Director of Purchasing & Contract Compliance in writing within 14 days after such aggrieved entity known or should have known of the solicitation, the award of contract to another or other acts giving rise to a protest. An oral protest or a protest to an official, employee, User Department, or other person apart from the Director of Purchasing & Contract Compliance does not comply.

2.25 GENERAL REQUIREMENTS

The following information pertains to the submission of a proposal to Fulton County ("County"), and contains instructions on how proposals must be presented in order to be considered. If specific conditions or instructions in the text of the Request for Proposal ("RFP") conflict with the General Requirements as listed here, those conditions or instructions in the RFP shall prevail.

1. Proposals submitted in response to the attached RFP must be formatted as specified in the RFP. Additional sheets, literature, etc., should be clearly identified.

2. The original and the required number of copies of the proposal must be returned to:

   Fulton County Purchasing Agent
   Department of Purchasing & Contract Compliance
   130 Peachtree Street, S.W., Suite 1168
   Atlanta, Georgia 30303

3. The envelope in which the proposal is submitted must be sealed and clearly labeled with the RFP project name and number, due date and time, and the name of the company or individual submitting the proposal. Proposals must be received by the opening date and time shown on this RFP in order to be considered. The Purchasing Agent has no obligation to consider proposals which are not in properly marked envelopes. The Technical Proposal, Cost Proposal and Contract Compliance submittals shall be submitted in separate sealed envelopes. The inclusion of any cost information in the Technical Proposal may result in such proposal being rejected by the County.

4. Proposals received after the time and date specified will not be opened or considered.

5. By submitting a signed proposal, Offeror agrees to accept an award made as a result of the submission of the prices and terms contained in that proposal. Prices proposed must be audited by the Offeror to insure correctness before the proposal is submitted. Person signing the proposal is responsible for the accuracy of information in it. The specifications, provisions, and the terms and conditions of the RFP and proposal shall become a valid contract between Fulton County and the Offeror upon notice of award of contract in writing and/or issuance of a purchase order.

6. Any contract awarded as a result of this proposal, shall comply fully with all Local, State, and Federal laws and regulations.

7. Absolutely no fax proposals or reproduction proposals will be accepted, except that if multiple copies of the proposal are required, photocopies of the original may be submitted as the additional copies, provided that they are clearly marked as such.

8. Type or neatly print company name, as well as the full legal name and title of the person signing the proposal, in all appropriate places. The Offeror's signature must be executed by a Principal of the company duly authorized to make contracts and bind the company to all terms being proposed.

9. Proposals may be withdrawn upon receipt of a written request prior to the stated due date and time. If a firm seeks to withdraw a proposal after the due date and time, the firm must present a notarized statement indicating that an error was made, with an explanation of how it occurred. The withdrawal request must be accompanied by documentation supporting the claim. Prior to approving or

disapproving the request, an opinion will be obtained from Fulton County's Legal Counsel indicating whether the firm is bound by its proposal.
Proposals for projects that are solicited pursuant to the Georgia Local Government Public Works Construction Law (O.C.G.A. § 36-91-1 et seq.) may be withdrawn as follows:

The County must advise Offeror's in the request for proposals of the number of days that Offeror's will be required to honor their proposals. If an Offeror is not selected within 60 days of opening the proposals, any Offeror that is determined by the governmental entity to be unlikely of being selected for contract award will be released from the proposal.

10. Show information and prices in the format requested. Prices are to be quoted F.O.B. destination, and must include all costs chargeable to the Offeror in executing the contract, including taxes. Unless otherwise provided in the Contract, Fulton County shall have no liability for any cost not included in the price. The Offeror shall provide Fulton County the benefit through a reduction in price of any decrease in the Offeror's costs by reason of tax exemptions based upon Fulton County's status as a tax-exempt entity.

11. Propose all items specified or indicate under each item what alternative is being proposed and why it should be considered in lieu of the original specification. Failures to indicate any exceptions shall be interpreted as the Offeror's intent to fully comply with the specifications as written. Conditional or qualified proposals (except as specifically allowed in the specifications) are subject to rejection in whole or in part.

12. Fulton County shall be the sole judge of the quality and the applicability of all proposals. Design, features, overall quality, local facilities, terms and other pertinent considerations will be taken into account in determining acceptability.

13. The successful Offeror must assume full responsibility for delivery of all goods and services proposed and agree to relieve Fulton County of all responsibility and costs for prosecuting claims.

14. The successful Offeror must assume full responsibility for replacement of all defective or damaged goods and/or performance of contracted services within thirty (30) days notice by the County of such defect, damage or deficiency.

15. The successful Offeror must assume full responsibility for providing warranty service on all goods, materials, or equipment provided to the County with warranty coverage. Should a vendor be other than the manufacturer, the vendor and not the County is responsible for contacting the manufacturer. The Offeror is solely responsible for arranging for the service to be performed.

16. The successful Offeror shall be responsible for the proper training and certification of personnel used in the performance of the services proposed.

17. The successful Offeror shall not assign, transfer, convey, sublet, or otherwise dispose of any contract resulting from the RFP or of any of all of its rights, title or interest therein without prior written consent of the Fulton County Board of Commissioners.

18. Proposals must contain references which reflect successful completion of contracts for the types of goods, materials, equipment, or services for which the vendor is submitting a proposal to the County. In instances where that does not apply, the proposal must contain a statement and supporting documentation demonstrating such expertise, knowledge, or experience to establish the vendor submitting the proposal as capable of meeting the demands of the proposal should an award be made to them.

19. Offeror's submitting proposals may be required to furnish evidence that they maintain permanent places of business of a type and nature compatible with their proposal, and are in all respects competent and eligible vendors, able to fulfill the terms of the specifications. Fulton County may make such investigations as it deems necessary to determine the ability of the Offeror to perform such work, and reserves the right to reject any proposal if evidence fails to indicate that the proposed vendor is qualified to carry out the obligation of the contract and to complete the work satisfactorily.

20. By submitting a signed proposal, Offeror certifies that there has been no collusion with any other Offeror. Reasonable grounds for believing Offeror has an interest in more than one proposal will result in rejection of all proposals in which the Offeror has an interest. Any party to collusion may not be considered in future proposals for the same or similar work.

21. Upon notice of selection, the Offeror submitting the proposal is obligated to perform. Should a successful Offeror refuse to enter into a contract subsequent to an award, a penalty may be assessed and/or the Offeror may be found to be "non-responsible" in the future.

22. In case of default by the successful Offeror, Fulton County may procure the articles or services from another source and hold the successful Vendor responsible for any resultant excess cost.

23. Successful Offeror's contract directly with the County and are the party or parties obligated to perform. Contracts may not be assigned and any failure to perform the Contract in accordance with the specifications will constitute a breach of contract and may result in an Offeror being found to be "non-responsible" in the future.

24. Invoice(s) must list each item separately and must show Fulton County's purchase order number as well as the proper department and address to whom the service or product was provided.

25. Fulton County reserves the right to accept or reject any or all proposals, or any part thereof, and to waive any technicalities. Fulton County reserves the right to award a contract based on this RFP and the proposal(s) received (in whole or in part) to one or several Vendors.

26. Awards will not necessarily be based on cost alone. Other factors, as detailed in the RFP, will be considered in determining what proposal will be deemed to best meet the needs of Fulton County.

27. All proposals and bids submitted to Fulton County are subject to the Georgia "Open Records Act", Official Code of Georgia, Annotated (O.C.G.A.) § 50-18-70 et seq.

28. All proposals and bids submitted to Fulton County involving Utility Contracting are subject to the Georgia law governing licensing of Utility Contractors, O.C.G.A. §43-14-8.2(h). The Utility Contractor License number of the person who will perform the utility work shall be written on the face of the bid envelope.

29. Prior to beginning any work, the successful Offeror shall furnish to Fulton County (for the contracting firm and for any subcontractors) a certificate from an insurance company showing issuance of Workers' compensation coverage for the State of Georgia or a certificated from the Georgia Workers' Compensation Board showing proof of ability to pay compensation directly.

30. It is the policy of Fulton County that the evaluation and award process for County contracts shall be free from both actual and perceived impropriety, and that contacts between potential vendors and County officials, elected officials and staff regarding pending awards of County contracts shall be prohibited.

A. No person, firm, or business entity, however situated or composed, obtaining a copy of or responding to this solicitation, shall initiate or continue any verbal or written communication regarding this solicitation with any County officer, elected official, employee, or designated County representative, between the date of the issuance of this solicitation and the date of the County Manager's recommendation to the Board of Commissioners for award of the subject contract, except as may otherwise be specifically authorized and permitted by the terms and conditions of this solicitation.

B. All verbal and written communications initiated by such person, firm, or entity regarding this solicitation, if same are authorized and permitted by the terms and conditions of this solicitation, shall be directed to the Purchasing Agent.

C. Any violation of this prohibition of the initiation or continuation of verbal or written communications with County officers, elected officials, employees, or designated County representatives shall result in a written finding by the Purchasing Agent that

the submitted bid or proposal of the person, firm, or entity in violation is "non-responsive", and same shall not be considered for award.

31. Any Offeror intending to respond to this solicitation as a Joint Venture must submit an executed Joint Venture Agreement with this offer. This agreement must designate those persons or entities authorized to execute documents or otherwise bind the Joint Venture in all transactions with Fulton County, or be accompanied by a document, binding upon the Joint Venture and its constituent members, making such designation. Offers from Joint Ventures that do not include these documents will be rejected as being "non-responsive".

32. Any Offeror intending to respond to this solicitation must complete all of the Procurement Affidavit Forms provided in Section 5. Proposals that do not include these completed documents will be rejected as being "non-responsive".

SECTION 3
PROPOSAL REQUIREMENTS

3.1 SUBMISSION REQUIREMENTS

3.1.1 Proposal Submission Date and Submittal Format

All Proposals, including all attachments, must be received by the County in a sealed package no later than **Monday, November 8, 2010 at 11:00 A.M.** and must be addressed to:

REQUEST FOR PROPOSALS RFP #10RFP75166K-JD
Architectural and Engineering Services for Fulton County Government Center Waterproofing
Fulton County Department of Purchasing & Contract Compliance
Public Safety Building
130 Peachtree Street S.E. Suite 1168
Atlanta GA 30303

The Proposal shall consist of a Technical Proposal, a Cost Proposal and all documents listed on the Required Submittal Checklist (Exhibit 1). The Technical Proposal shall include proposer information, technical information, business-related information, and any Technical Proposal forms requested. The Cost Proposal shall include the Cost Proposal Forms and any information describing the basis for pricing and must be separately, sealed, marked and packaged.

The required content of the Technical Proposal and Cost Proposal is further specified in this section of the RFP. The Proposal must be signed and acknowledged by the Proposer, including certain information to be provided under oath as required under applicable law, in accordance with the instructions herein and the various proposal forms.

THE TECHNICAL PROPOSAL, THE COST PROPOSAL AND CONTRACT COMPLIANCE EXHIBITS SHALL BE SUBMITTED IN SEPARATE, SEALED ENVELOPES OR PACKAGES. THE INCLUSION OF ANY COST INFORMATION IN THE TECHNICAL PROPOSAL MAY RESULT IN SUCH PROPOSAL BEING REJECTED BY THE COUNTY.

Each envelope or package shall be clearly marked as follows:

REQUEST FOR PROPOSALS RFP#10RFP75166K-JD
Architectural and Engineering Services for Fulton County Government Center Waterproofing
[Technical or Cost Proposal]
Proposer's Name and Address

3.1.2 Number of Copies

Proposers shall submit one (1) original of the Technical Proposal and five (5) copies on CD media in PDF format. Proposers shall submit one (1) original of the Contract Compliance Exhibits with the Technical Proposal marked "Original" and one (1) copy in a separate sealed envelope. Proposers shall submit one (1) original of the Financial Information with the Technical Proposal marked "Original" and one (1) copy in a separate sealed envelope.

Proposers shall submit one (1) original and one (1) copy of the Cost Proposal in a separate sealed envelope.

All Proposals must be complete with all requested information.

3.2 OVERVIEW OF PROPOSAL REQUIREMENTS

Proposers shall submit Proposals in accordance with the content and format requirements set forth in this RFP. Proposals should be clearly organized and structured in a manner that allows materials included in the document to be located easily.

Each of the instructions set forth in this section must be followed for a Proposal to be deemed responsive to this RFP. In all cases, the County reserves the right to determine, at its sole discretion, whether any aspect of the Proposal meets the requirements set forth in this section. The County reserves the right to reject any Proposal, which in its judgment, does not comply with these Proposal submission requirements.

3.3 SCOPE OF WORK

3.3.1 INTENT

1. The County intends to select a qualified A/E team to provide technical, professional and other services for this RFP as broadly described in the scope of services. The team should have specific expertise showing a minimum of 5 years of experience and a minimum of 3 to 5 Projects of equal value and complexity for the services described in Phase I and Phase II in the following pages of this document. The A/E team must also have planning and management experiences.

2. For the purpose of this Agreement, the General Services Department is designated as the County's representatives to act for the County in regard to approvals and authorizations for all work required and provided for in this Agreement. No work shall commence without a written notice to proceed signed by an authorized representative of the General Services Department.

3. The intent of this Agreement is for the A/E team to provide all of the technical, professional, architectural and engineering services for this RFP. The A/E team will submit a written proposal for the Project detailing all services. The County may accept or reject the proposal, or decline such services when it is in the best interest

of the County to do so. If the A/E team's proposal is accepted, the County may issue a work authorization and notice to proceed which specifies the "not-to-exceed" amount of the work authorization. After having received the notice to proceed including a written approval of the scope of services and the estimate of fees for this Project, the A/E team shall provide the services required in accordance with the two phases identified below. No work outside that scope of services shall start without an amended notice to proceed. The County may cancel an outstanding notice to proceed or work authorization at any time at the County's convenience if it is in the County's best interest. Upon the cancellation of an outstanding notice to proceed, the County will pay the A/E team for any authorized work which has been satisfactorily performed up to and through the date of cancellation.

4. It is understood and agreed by the A/E team that the services performed under Phase I and Phase II of this Agreement shall include, but not be limited to, those services described below and to the extent desired by the County.

5. The A/E team's Basic Services consist of the work described in paragraphs 1.1 and 1.2 and include any other services included in Article IV or any other article of this Agreement as part of Basic Services.

PHASE I – TERRACES

3.3.2 RESEARCH AND ASSESSMENT

1. A previous assessment will be available for the A/E team's reference; however a thorough and complete investigation of water leakage, points of water entry into the building, root cause of leakage from interior and exterior terraces into lower level offices and other occupied and unoccupied areas shall be performed.

2. Report on extent of damage occurred to building components (waterproofing, topping materials, drainage system and/or structural members).

3. Provide a comprehensive mobilization plan which includes swing space, traffic flow, and occupant flow impact that may occur during the construction phase.

4. Evaluate environmental and health safety impacts and concerns of prolonged water penetration into different arrears of the building.

5. Investigation of HVAC, Plumbing, Mechanical, Electrical and Sprinkler Systems and damage due to moisture and water leaks.

6. Provide report on mold growth – extent of areas affected and nature of severity.

7. Provide assessment on inefficient interior/ exterior drainage system, ponding of water due to installation of faulty flashing and poor maintenance.

8. An assessment on the impact on building occupants work areas and surrounding streets traffic during demolition and renovation of various parts of the Government Center should be performed.

9. Research design criteria and investigation of materials, construction methods, and equipment and other necessary functions related to this project.

10. Provide support services such as surveying, materials testing, and other services as necessary to complete the work requested.

11. The designated A/E team representatives for the Project shall be prepared to coordinate Project work with specified General Services Department representatives, where necessary.

12. Investigate and determination of requirements related to the Project (e.g.: utilities, drainage system, etc) and coordinate work with others with respect to such systems.

3.3.3 DEMOLITION, CLEANING AND PREPARATION

1. Provide program, sequence and timeline for Demolition work required of different segments and components of the Project as outlined below:
   a. Removal of such materials from the site and disposing of the same.
   b. Coordination with all the Utility Companies (e.g. water, gas, power, phone, data lines) for disconnecting and restoring services upon completion of phases of the work.
   c. Impact of demolition on department personnel, building tenants, street traffic and any services interrupted by Project work.
   d. Removal of all landscaping material in areas (interior and exterior) including planters in the atrium area.
   e. Removing exterior terrace pavers and drainage system.

3.3.4 CONCEPTUAL AND SCHEMATIC DESIGN PHASE

1. Prepare the Project concept report, which shall be developed to accommodate solutions to maintain dry interiors and moisture and leak proof terraces. The concept report shall include several options that are to be formally presented to the County. The County must approve the report prior to the Consultant beginning further development of the Project plans. It is recognized by the parties that the approved concept may be modified by the County as required by the County and reapproved by the County during the course of design due to input from specific department heads, budget and/or operational limitations.

2. Validate (check and update) the approved Project concept and prepare a Project Design Book for approval by the County prior to the beginning of preliminary plans.

3. Prepare environmental studies, documentation, and reports on indoor air quality for the Project that show the Project is in compliance with the provisions of the U.S. Environmental Protection Agency's Office of Air and Radiation, as appropriate to the

Project funding. The Consultant shall submit to the County all environmental documents and reports for review and approval by the County.

4. Perform all surveys, investigation studies and evaluations needed for design of the Project.

5. Perform all work required to obtain Project permits. These efforts shall be coordinated with the County.

6. Prepare the Project's drainage design for all exterior terraces roof areas.

7. Prepare studies, outline specifications, preliminary construction plans including a cost estimate for the Preliminary Plan Review.

8. Provide certification, by a Georgia Registered Professional Engineer and Architect that the construction plans have been prepared under the guidance of the professional engineer/architect and are in accordance with ADA, NFPA and state and local codes.

9. The A/E team shall follow the County's Plan Development Process, which involves a review, followed by County approval of each phase of the work, to include the Conceptual and Schematic Phase, Design Development Phase and the Construction Document Phase. Cost estimates for the Design Development and Construction Document Phases shall also be submitted for County approval.

10. Failure of the A/E team to follow the County's Plan Development Process will jeopardize the use of funds in some or all of the categories outlined in this RFP and it shall be the responsibility of the Consultants to make up the loss of that funding.

11. All Sub consultant hired by the A/E team to provide services on the Project shall be prequalified with the Count in the appropriate area-classes. The County shall, on request, furnish the A/E team with a list of prequalified Consultants in the appropriate area-classes.

12. The Project construction plans shall be prepared in English units.

13. All drafting and design work performed on the Project shall be done utilizing AutoCAD software and shall be organized as per the County's guidelines on electronic file management.

14. County shall review and has approval authority for all aspects of the Project, provided however this review and approval does not relieve the Consultant of its responsibilities under the terms of this RFP. County will work with the authorities having jurisdiction to obtain all needed approvals with information furnished by the Consultant.

15. The Consultant shall be responsible for the overall design, details, specifications and preparation of any required water penetration and leakage studies within the limits of this Project.

16. The Consultant shall follow the County's procedures for identification of existing and proposed utility facilities on the Project.

17. The Consultant shall address all concerns, comments, and requirements to the satisfaction of the County.

18. The Consultant agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under the terms of this Agreement shall become the property of the County. This data shall be organized, indexed, bound, and delivered to the County no later than the advertisement of the Project for bidding. The County shall have the right to use this material without restriction or limitation and without compensation to the Consultant.

19. The A/E team shall coordinate with the County to ascertain the requirements of the Project and shall develop the Project Programming for County review and approval.

20. The A/E team shall provide a preliminary evaluation of the program and the Project budget requirement, each in terms of the other, subject to the limitations set forth by the County.

21. The A/E team shall review with the County alternative approaches to design and construction of the Project.

22. Based on the mutually agreed upon program and Project budget requirements, the A/E team shall prepare, for approval by the County, Schematic Design Documents consisting of drawings and other documents.

23. The A/E team shall submit to the County a Statement of Probable Construction Cost based on unit costs.

3.3.5 DESIGN DEVELOPMENT PHASE

1. Based on the approved Conceptual and/or Schematic Design Documents and any adjustments authorized by the County in the program or Project budget, the A/E team shall prepare Design Development Documents consisting of preliminary construction plan drawings, outline specifications of materials, a preliminary cost estimate and other documents to describe the size and character of the entire Project. All documents shall be submitted to the County for approval.

2. The A/E team shall also coordinate all phases of the work in all respects with planning and work being done by others, including utility companies (when applicable), as directed by the Owner.

3. The A/E team shall assist the County in the preparation of the necessary bidding information, bidding forms, the conditions of the contract, and the form of agreement between the County and Contractor.

4. The A/E team shall advise the County of any adjustments to previous statements of probable construction cost indicated by changes in requirements or general market conditions.

3.3.6 CONSTRUCTION DOCUMENTS PHASE

1. Based on the approved Design Development Documents and any further adjustments in the scope or quality of the Project or in the Project budget authorized by the Owner, the A/E team shall prepare, for approval by the Owner, Construction Documents consisting of drawings, specifications and a construction cost estimate setting forth in detail the requirements for the construction of the Project.

2. The A/E team shall submit said working drawings, specifications (including bid documents) and construction cost estimates to the County and/or the County designee(s) for review and/or approval. Before approval is given, the A/E team shall plan to meet with the County and its representatives to discuss the plans and specifications to address any questions or concerns. Where disciplines are similar, plans (drawings) should be jointly signed by Consultant and any Subcontractor or Sub consultant hired by Consultant, with professional seals.

3. The Consultant shall make every effort to provide the most economical design. The Consultant shall consider construction problems and sequencing in the design. The Consultant shall meet and discuss economic considerations and construction staging with the County prior to final design.

4. Compliance with governing permitting agencies will be required. All required standards shall be followed. All costs and efforts to achieve such permitting will be included in the proposed work.

5. Design coordination will be required with A/E team for the duration of the Project in order to reduce impact on existing and/or future developments. Coordination meetings will be held with A/E team and Fulton County present (especially before the bidding phase; a quality control review meeting must be conducted by the A/E Team).

3.3.7 BIDDING PHASE

1. The A/E team shall assist the County in connection with the County responsibility for filing documents required for the approval of governmental authorities having

jurisdiction over the Project and specifically in obtaining any and all necessary permits required for approval and/or construction.

2. The A/E team, following the County's approval of the Construction Contract Documents and of the latest Statement of Probable Construction cost, shall assist the County in obtaining bids and assist in preparing contracts for construction.

3. The A/E team may be called upon to prepare a list of prospective bidders for the County and to submit recommendations on the award of contracts to the County on the bids received.

4. The A/E team shall participate with the County in pre-bid conferences, if requested by the County, so as to be informed and assist the County in resolving questions about contract documents including plans and specifications and requests on the part of contractors and suppliers concerning the work.

3.3.8 CONSTRUCTION PHASE

A. Administration Management

1. The Construction Phase will commence with the award of the Contract for Construction and together with the A/E team's obligation to provide Basic Services under this Agreement, will terminate when final payment is approved and released to the Contractor as otherwise agreed in writing. To the extent practicable, General Services will request the A/E team to provide Construction Administration for the duration of the Project including management of the construction of the Project.

2. Unless otherwise provided in this Agreement and incorporated in the Contract Documents for construction of a Project, the A/E team shall provide administration of the Contract Documents for Construction as set forth below and in the General Conditions of the County's Contract Documents for Construction.

3. The A/E team shall recommend to the County approval or disapproval of the construction schedule and schedule of values submitted by the successful bidder prior to commencement of work.

4. Pre-construction conference. Attend a pre-construction conference with County representatives to coordinate with and give instructions to Contractor.
5. Substitutions. Advise the County as to acceptable substitute materials and equipment proposed by the Contractor.

6. Shop drawings. Review shop drawings, samples, and submittals for general conformance to the Project design and for compliance with the contract documents.

7. Request for Information. Provide answers to Contractor Request for Information pertaining to design concept.

8. Errors and omissions. Assist the County in rectifying any design errors and omissions. The County may ask for plan revisions for errors and omissions at no extra cost to the County.

9. The A/E team shall be a representative of the County as described in the Contract Documents during the Construction Phase, and shall advise and consult with the County. Instructions to the Contractor shall be forwarded through the A/E team. The A/E team shall have authority to act on behalf of the County only to the extent provided in the Contract Documents unless otherwise modified by written instrument.

10. The A/E team shall visit the site at intervals appropriate at each stage of construction or as otherwise agreed by the A/E team in writing to become generally familiar with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of such on-site observations as an A/E team, therefore A/E team shall keep the County informed of the progress and quality of the Work, and shall endeavor to guard the County against defects and deficiencies in the Work of the Contractor.

11. The A/E team shall at all times have access to the Work wherever it is in preparation or progress.

12. The A/E team shall determine the amounts owed to the Contractor based on observations at the site and on evaluations of the Contractor's Applications for Payment. The A/E team shall maintain a log of Applications for Payment received, indicating the date and the time received.

13. The signature of the A/E team to the County, based on the A/E team's observations at the site and on the data comprising the Contractor's Application for Payment, signifies that the Work has progressed to the point indicated, to the best of the A/E team's knowledge, information and belief. The quality of the Work is in accordance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contact Documents correctable prior to completion, upon the A/E teams' review and to any specific qualifications stated in an A/E approved Application for Payments.

14. The A/E team shall reject Work which does not conform to the Contract Documents. Whenever, in the A/E team's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract or testing of the Work in progress, the Contractor shall test in accordance to the A/E team's instructions or provide an approved alternate method of testing.

15. The A/E team shall review and approve or take other appropriate action upon the Contractor's submittals such as shop drawings, product data and samples, but only for conformance with the design concept of the Work and with the formation given in the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay. The A/E team's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

16. The A/E team shall assist the Owner in the preparation of Change Orders for the Owner's approval execution in accordance with the Contract Documents, and shall have authority to order minor changes in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time which are not inconsistent with the intent of the Contract Documents.

17. The A/E team shall conduct inspection to determine the Dates of Substantial Completion and Final Completion and shall receive and forward to the County's review written warranties and related documents required by the Contract Documents and assembled by the Contractor.

18. The extent of the duties, responsibilities and limitations of authority of the A/E team as the County's representative during construction shall not be modified or extended without written agreement from the County, the Contractor and the A/E team.

19. The A/E team shall conduct inspections of all construction based on their specifications and shall report findings to the County. In the event of legal action, the A/E team shall analyze and make recommendations regarding the disposition of claims for or against the County.

20. The A/E team shall prepare and submit all supplemental agreements and/or change orders for approval by the County and others, as required, revise design drawings to show "construction record" (as built) conditions, keep accounts of construction completed and review and approve contractor pay requests. Throughout the construction process, the A/E team shall keep the County advised of job costs and provide cost accounting of job costs.

21. Work under this RFP is to commence upon receipt of the "Notice to Proceed" from the County. The Scope of Work services shall be completed within the scheduled period proposed by the Consultant and approved by the County.

22. The Consultant's primary contact for this Project is the Project Manager assigned to the Project by the County General Services Department. All submittals shall be directly submitted to the County's Project Manager at 141 Pryor Street, SW, Atlanta, GA 30303-3472 or as otherwise instructed by the Project Manager.

B. Field Representation

1. The A/E team, with the approval of the County, shall furnish staff of qualified inspection personnel as required for the duration of construction to coordinate and review the work of the contractors. This will be done to assure compliance with the intent and provisions of the working drawings and specifications and to guard the County against defects in the work and to keep the County informed regarding progress of the work.

2. The staff shall conduct intermediate and final field observations to assure a completed Project in compliance with the intent and provisions of the drawings and specifications, and assist in the transfer of the completed facilities to the County.

3. The A/E team shall not be responsible for the contractor's failure to carry out construction in accordance with the working drawings and specifications. It is mutually agreed, however, that the A/E team is obligated to report promptly to the County any known defect or deficiency in the contractor's work materials.

3.3.9 PROJECT SCHEDULE

1. Project schedule development is one of the core planning processes involved in overall Project plan development. Therefore, the A/E Team shall produce a Project schedule to be approved by The County at the beginning of the Project. The A/E Team shall include the County at the inception of the Project, before the research and assessment phase, so that it is aware of the design alternatives from the outset. The A/E Team shall update the schedule monthly with Project progress, and shall document reasons for any Project delays and indicate how the Project will be brought back on schedule. The schedule shall provide a computerized critical-path summary identifying the Project phases, sequence of work, duration and relationships among Project activities, as well as the following: summarize cash flow, material accomplishments and program milestones; provide Project updates in summary format.

2. When the Project is in the conceptual and schematic design phase the consultant shall meet with The County so that it is involved in the initial programming/layout of the Project design. As the Project moves into the design development phase the Consultant shall ensure that all of The County's needs are met by updating and revising the original schedule before the construction document phase of the Project begins.

3. During the construction document phase the Consultant shall incorporate a three-submittal County Project schedule review and approval process, one at 35%, one at 65% and one at 95%. This ensures that The County is allowed to review the progress of the Project against the schedule, and ensures that the Project is designed as planned in the previous schematic and design development phases.

4. When the construction phase of the Project begins, the Consultant shall maintain a master schedule that includes total float, critical-path activities, key deliverable milestones, and logic relationships among activities, duration of activities and resources needed. The schedule should utilize state of the art software to generate all reports, diagrams and charts. From the master schedule the Consultant shall develop cost-loaded detailed schedules for the Project, including timelines for engineering design, permitting activities, critical equipment delivery, financial management and regulatory compliance.

PHASE II – EXTERIOR ENVELOPE SYSTEMS, SKYLIGHT ROOFS & CANOPIES

3.3.10 RESEARCH AND ASSESSMENT

1. A previous assessment will be available for the A/E team's reference, however a thorough and complete assessment and investigation of water leakage, points of water entry into the building, root cause leakage from expansion joints, vertical granite veneer, windows, skylights, and roofs into atrium, offices and all other areas shall be performed. The A/E Team shall additionally provide a comprehensive assessment of roof accessibility for maintenance.

2. Report on extent of damage which has occurred to building components including but not limited to:
   A. waterproofing
   B. flashing
   C. seals
   D. roofing system
   E. granite veneer
   F. structural members supporting granite veneer

3. Report on state of gutters, downspouts, roof and area drains if inadequate or damaged, and whether they should be replaced.

4. Provide a report on Environmental and Health Safety impact and concerns of prolonged water penetration into the different areas of the building.

5. Provide report on mold growth – extent of areas affected and nature of severity.

6. Provide assessment on all hard to access areas of skylights for proper and periodical maintenance.

7. An assessment on the impact on building occupants work areas and surrounding streets traffic during demolition and renovation of various parts of the Government Center should be performed.

8. Research design criteria and investigation of materials, construction methods, and equipment and other necessary functions related to this project.

9. Support services such as surveying, materials testing, and other services as necessary to complete the work requested.

10. The designated A/E team representatives for the Project shall be prepared to coordinate Project work with specified General Services Department representatives, where necessary.

3.3.11 CONCEPTUAL AND SCHEMATIC DESIGN PHASE

1. Prepare the Project concept report, which shall be developed to accommodate sound and dependable solutions to enclose building envelope, maintain dry interiors and moisture and leak proof terraces. The concept report shall be approved by the County prior to the Consultant beginning further development of the Project plans. It is recognized by the parties that the approved concept may be modified by the County and re-approved by the County during the course of design due to input from specific department heads, budget and/or operational limitations.

2. Develop schematic design plans to include drawings and details that resolve issues and accommodate sound and dependable solutions to enclose building envelope, maintain dry interiors, moisture and leak proof terraces, as well as accessible systems for roof access.

3. Validate (check and update) the approved Project concept and prepare a Project Design Book for approval by the County prior to the beginning of preliminary plans.

4. Perform all work required to obtain life safety and Project permits. These efforts shall be coordinated with the County.

5. Provide certification, by a Georgia Registered Professional Engineer and Architect that the construction plans have been prepared under the guidance of the professional engineer/architect and are in accordance with ADA, NFPA and state and local codes.

6. The A/E team shall follow the County's Plan Development Process, which involves a review, followed by County approval of each phase of the work, to include the Conceptual and Schematic Phase, Design Development Phase and the Construction Document Phase. Cost estimates for the Design Development and Construction Document Phases shall also be submitted for County approval.

7. Failure of the A/E team to follow the County's Plan Development Process will jeopardize the use of funds in some or all of the categories outlined in this RFP, and it shall be the responsibility of the consultants to make up the loss of that funding.

8. All Sub consultant teams hired by the A/E team to provide services on the Project shall be prequalified with the County in the appropriate area-classes. The County shall, on request, furnish the A/E team with a list of prequalified consultant teams in the appropriate area-classes.

9. The Project construction plans shall be prepared in English units.

10. All drafting and design work performed on the Project shall be done utilizing AutoCad software and shall be organized as per the County's guidelines on electronic file management.

11. County shall review and has approval authority for all aspects of the Project provided however this review and approval does not relieve the Consultant of its responsibilities under the terms of this RFP. County will work with the authorities

having jurisdiction to obtain all needed approvals with information furnished by the Consultant.

12. The Consultant shall be responsible for the overall design, details and specifications and preparation of any required water leakage and subsequent damages studies within the limits of this Project.

13. The Consultant shall follow the County's procedures for identification of existing and proposed utility facilities on the Project.

14. The Consultant shall address all concerns, comments, and requirements to the satisfaction of the County.

15. The Consultant agrees that all reports, plans, drawings, studies, specifications, estimates, maps, computations, computer diskettes and printouts, and any other data prepared under the terms of this Agreement shall become the property of the County if required. This data shall be organized, indexed, bound, and delivered to the County no later than the advertisement of the Project for bidding. The County shall have the right to use this material without restriction or limitation and without compensation to the Consultant.

16. The A/E team shall coordinate with the County to ascertain the requirements of the Project and shall develop the Project Programming for County review and approval.

17. The A/E team shall provide a preliminary evaluation of the program and the Project budget requirement, each in terms of the other, subject to the limitations set forth by the County.

18. The A/E team shall review with the County alternative approaches to design and construction of the Project.

19. Based on the mutually agreed upon program and Project budget requirements, the A/E team shall prepare, for approval by the County, Schematic Design Documents consisting of drawings and other documents.

20. The A/E team shall submit to the County Statement of Probable Construction Cost based on unit costs.

3.3.12 DESIGN DEVELOPMENT PHASE

1. Based on the approved Conceptual and/or Schematic Design Documents and any adjustments authorized by the County in the program or Project budget, the A/E team shall prepare Design Development Documents consisting of preliminary construction plan drawings, outline specifications of materials, a preliminary cost estimate and other documents to describe the size and character of the entire Project. All documents shall be submitted to the County for approval.

2. The A/E team shall also coordinate all phases of the work in all respects with planning and work being done by others, including utility companies (when applicable), as directed by the County.

3. The A/E team shall assist the County in the preparation of the necessary bidding information, bidding forms, the conditions of the contract, and the form of agreement between the County and Contractor.

4. The A/E team shall advise the County of any adjustments to previous statements of probable construction cost indicated by changes in requirements or general market conditions.

3.3.13 CONSTRUCTION DOCUMENTS PHASE

1. Based on the approved Design Development Documents and any further adjustments in the scope or quality of the Project or in the Project budget authorized by the County, the A/E team shall prepare, for approval by the County, Construction Documents consisting of drawings, specifications and a construction cost estimate setting forth in detail the requirements for the construction of the Project.

2. The A/E team shall submit said working drawings, specifications (including bid documents) and construction cost estimates to the County and/or the County designee(s) for review and/or approval. Before approval is given the A/E team shall plan to meet with the County and its representatives to discuss the plans and specific actions to address any questions or concerns. Where disciplines are similar, plans (drawings) should be jointly signed by Consultant and any subcontractor or Sub consultant hired by Consultant, with professional seals.

3. The Consultant shall make every effort to provide the most economical design. The Consultant shall consider construction problems and sequencing in the design. The Consultant shall meet and discuss economic considerations and construction staging with the County prior to final design.

4. Compliance with governing permitting agencies will be required. All required standards shall be followed. All costs and efforts to achieve such permitting will be included in the proposed work.

5. Design coordination will be required with A/E team for the duration of the Project in order to reduce impact on existing and/or future developments. Coordination meetings will be held with A/E team and County present (especially before the bidding phase; a quality control review meeting must be conducted by the A/E Team).

3.3.14 BIDDING PHASE

1. The A/E team shall assist the County in connection with the County's responsibility for filing documents required for the approval of governmental authorities having

jurisdiction over the Project and specifically in obtaining any and all necessary permits required for approval and/or construction.

2. The A/E team, following the County's approval of the Construction Contract Documents and of the latest Statement of Probable Construction cost, shall assist the County in obtaining bids and assist in preparing contracts for construction.

3. The A/E team may be called upon to prepare a list of prospective bidders for the County and to submit recommendations on the award of contracts to the County on the bids received.

4. The A/E team shall participate with the County in pre-bid conferences, if requested by the County, so as to be informed and assist the County in resolving questions about contract documents including plans and specifications and requests on the part of contractors and suppliers concerning the work.

3.3.15 CONSTRUCTION PHASE

A. Administration Management

1. The Construction Phase will commence with the award of the Contract for Construction and, together with the A/E team's obligation to provide Basic Services under this Agreement, will terminate when final payment is approved and released to the Contractor as otherwise agreed in writing. To the extent practicable, General Services will request the A/E team to provide Construction Administration throughout the duration of the project including management of the construction of the project.

2. Unless otherwise provided in this Agreement and incorporated in the Contract Documents for construction of a Project, the A/E team shall provide administration of the Contract Documents for Construction as set forth below and in the General Conditions of the County's Contract Documents for Construction.

3. The A/E team shall recommend to the County approval or disapproval of the construction schedule and schedule of values submitted by the successful bidder prior to commencement of work.

4. Pre-construction conference. Attend a pre-construction conference with County representatives to coordinate with and give instructions to Contractor.

5. Substitutions. Advise the County as to acceptable substitute materials and equipment proposed by the Contractor.

6. Shop drawings. Review shop drawings, samples, and submittals for general conformance to the Project design and for compliance with the contract documents.

7. Request for Information. Provide answers to Contractor Request for Information pertaining to design concept.

8. Errors and omissions. Assist the County in rectifying any design errors and omissions. The County may ask for plan revisions for errors and omissions at no extra cost to the County.

9. The A/E team shall be a representative of the Owner as described in the Contract Documents during the Construction Phase, and shall advise and consult with the Owner. Instructions to the Contractor shall be forwarded through the A/E team. The A/E team shall have authority to act on behalf of the Owner only to the extent provided in the Contract Documents unless otherwise modified by written instrument.

10. The A/E team shall visit the site at intervals appropriate at each stage of construction or as otherwise agreed by the A/E team in writing to become generally familiar with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. On the basis of such on-site observations as an A/E team, therefore A/E team shall keep the County informed of the progress and quality of the Work, and shall endeavor to guard the County against defects and deficiencies in the Work of the Contractor.

11. The A/E team shall at all times have access to the Work wherever it is in preparation or progress.

12. The A/E team shall determine the amounts owed to the Contractor based on observations at the site and on evaluations of the Contractor's Applications for Payment. The A/E team shall maintain a log of Applications for Payment received, indicating the date and the time received.

13. The signature of the A/E team to the County, based on the A/E team's observations at the site and on the data comprising the Contractor's Application for Payment, signifies that the Work has progressed to the point indicated to the best of the A/E team's knowledge, information and belief. The quality of the Work is in accordance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contact Documents correctable prior to completion, upon the A/E team's review and to any specific qualification stated in an A/E approved Application for Payments.

14. The A/E team shall reject Work which does not conform to the Contract Documents. Whenever, in the A/E team's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Contract or testing of the Work in progress.

15. The A/E team shall review and approve or take other appropriate action upon the Contractor's submittals such as shop drawings, product data and samples, but only for conformance with the design concept of the Work and with the formation given in the Contract Documents. Such action shall be taken with reasonable promptness so

as to cause no delay. The A/E team's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

16. The A/E team shall assist the County in the preparation of Change Orders for the County's approval in accordance with the Contract Documents, and shall have authority to order minor changes in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time which are not inconsistent with the intent of the Contract Documents.

17. The A/E team shall conduct inspection to determine the Dates of Substantial Completion and Final Completion and shall receive and forward to the County for the County's review written warranties and related documents required by the Contract Documents and assembled by the Contractor.

18. The extent of the duties, responsibilities and limitations of authority of the A/E team as the County's representative during construction shall not be modified or extended without written agreement from the County, the Contractor and the A/E team.

19. The A/E team shall conduct inspections of all construction based on their specifications and shall report findings to the County. In the event of legal action, the A/E team shall analyze and make recommendations regarding the disposition of claims for or against the County.

20. The A/E team shall prepare and submit all supplemental agreements and/or change orders for approval by the County and others, as required, revise design drawings to show "construction record" (as built) conditions, keep accounts of construction completed and review and approve contractor pay requests. Throughout the construction process, the A/E team shall keep the County advised of job costs and provide cost accounting of job costs.

21. Work under this RFP is to be commenced upon receipt of "Notice to Proceed" from the County. The Scope of Work Services shall be completed within the scheduled period proposed by the Consultant and approved by the County.

22. The Consultant's primary contact for this Project is the Project Manager assigned to the Project by the County General Services Department. All submittals shall be directly submitted to the County's Project Manager at 141 Pryor Street, SW, Atlanta, GA 30303-3472 or as otherwise instructed by the Project Manager.

B. Field Representation

1. The A/E team, with the approval of the County, shall furnish staff of qualified inspection personnel as required for the duration of construction to coordinate and review the work of the contractors. This will be done to assure compliance with the intent and provisions of the working drawings and specifications and to guard the County's against defects in the work and to keep the County informed regarding progress of the work.

2. The staff shall conduct intermediate and final field observations to assure a completed Project in compliance with the intent and provisions of the drawings and specifications, and assist in the transfer of the completed facilities to the County.

3. The A/E team shall not be responsible for the contractor's failure to carry out construction in accordance with the working drawings and specifications. It is mutually agreed, however, that the A/E team is obligated to report promptly to the County any known defect or deficiency in the contractor's work materials.

C. Special Services

1. When mutually agreed to by the County and the A/E team, the A/E team shall provide professional planning, engineering and/or architectural services for Project and/or construction other than that specifically described herein. These services may include, but not limited to, review of construction activities performed by contractors.

2. When directed by the County, the A/E team shall also provide professional engineering services for the installation of specialized equipment, devices and systems which may be furnished by others.

3. If requested by the County, the A/E team shall make studies, analyses, cost estimates and/or reports on items or equipment; operating procedures or functions; physical administrative or financial aspects of a Project.

3.3.16 PROJECT SCHEDULE

1. Project schedule development is one of the core planning processes involved in overall Project plan development. Therefore, the A/E team shall produce a Project schedule to be approved by The County at the beginning of the Project. The A/E team shall include The County at the inception of the Project, before the research and assessment phase, so that it is aware of the design alternatives from the outset. The A/E team shall update the schedule monthly with Project progress, and shall document reasons for any Project delays and indicate how the Project will be brought back on schedule. The schedule shall provide a computerized critical-path summary identifying the Project phases, as well as the following: summarize cash flow, material accomplishments and program milestones; provide Project updates in summary format.

2. When the Project is in the conceptual and schematic design phase the Consultant shall meet with The County so that it is involved in the initial programming/layout of the Project design. As the Project moves into the design development phase the Consultant shall ensure that all of The County's needs are met by updating and revising the original schedule before the construction document phase of the Project begins.

3. During the construction document phase the Consultant shall incorporate a three-submittal County Project schedule review and approval process, one at 35%, one at 65% and one at 95%. This ensures that The County is allowed to review the

progress of the Project against the schedule, and ensures that the Project is designed as planned in the previous schematic and design development phases.

4. When the construction phase of the Project begins, the Consultant shall maintain a master schedule that includes total float, critical-path activities, key deliverable milestones, and logic relationships among activities, duration of activities and resources needed. The schedule should utilize state of the art software to generate all reports, diagrams and charts. From the master schedule the Consultant shall develop cost-loaded detailed schedules for the Project, including timelines for engineering design, permitting activities, critical equipment delivery, financial management and regulatory compliance.

3.3.17 OWNER'S RESPONSIBILITY

1. The County may provide information regarding requirements for the Project including previous assessments, which may set forth County's design objectives, constraints and criteria, including space requirements and relationships, flexibility and expandability, special equipment and systems and site requirements. It will be the A/E's responsibility to ascertain information and requirements necessary for this Project.

2. Notwithstanding anything contained in this Agreement, County reserves the right, at its sole discretion to enter into architectural, engineering and/or construction management agreements with Consultants other than A/E team and any of its sub-Consultants named in this Agreement.

3. The County will designate, a representative authorized to act on its behalf with respect to the Project. The County/and or County's designee will promptly render any decision necessary for the orderly progress of the work.

4. The County will furnish to the A/E team any information or materials in its possession which relate to a specified Project as expeditiously as possible.

5. The County shall designate, when necessary, a representative authorized to act in the County's behalf with respect to the Project. The County or such authorized representative shall examine the documents submitted by the A/E team and shall render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the A/E team services.

6. The County shall furnish required information and services and shall render approvals and decisions as expeditiously as necessary for the orderly progress of the A/E team's services and of the Work.

7. The County reserves the right to remove any personnel employed by the A/E team who is assigned to perform services for the County's Project.

3.3.18 REIMBURSABLE EXPENSES

1. All reimbursable expenses will be paid at cost. Pay requests submitted by the A/E team for reimbursable expenses must be accompanied by invoices and receipts and will be paid to the A/E team upon approval by the County. County reserves the right to disapprove of any request for reimbursable expenses which is not submitted in the form, in the manner and under the circumstances authorized by the County under this Agreement.

2. Reimbursable expenses shall be specified in the original scope of Project services (proposal). Airline transportation will not be paid.

3. Reimbursable expenses shall be limited to: Fees paid for securing approval of authorities having jurisdiction over the Project; Expenses of large format reproductions and handling of Drawings, Specifications and other documents, excluding reproductions for the Office; Expenses of renderings, models and mock-ups requested by the County; other expenses deemed reimbursable by the County.

3.4 TECHNICAL PROPOSAL FORMAT AND CONTENT

The Technical Proposal shall include the appropriate and requested information in sufficient detail to demonstrate the Proposer's knowledge, skills and abilities to provide requested services.

The Technical Proposal shall be arranged and include content as described below:

Section 1 - Executive Summary

The executive summary shall include the following information:

- Provide the legal name of the entity responding to this proposal.
- Provide the business type of the entity responding to this proposal (i.e. Joint Venture, Partnership, etc).
- Include a brief statement of approach to the work, understanding of the project's goals and objectives and demonstrated understanding of the project's potential problems and concerns.

Describe your process and approach to Phase I –Terraces and Phase II – Exterior Envelope Systems Roofs & Canopies. Include project management approach, Quality Control processes, decision making, accountability, delivery, cost and scheduling control.

Provide a statement of your definition of your firm's overall role and responsibility in this project, your anticipated level of management responsibility and accountability for project concerns.

Provide a statement of interest for the project including a narrative describing the proposer's unique qualifications.

Provide a statement on the availability and commitment of the proposer's assigned staff (provide names and positions) to undertake the project.

Section 2 – Project Plan

1. Name, address and telephone number of one (1) individual to whom all future correspondence and/or communications will be directed.

2. The Project Plan must address the management approach in completing the work identified in Section 3.3 Scope of Work. At a minimum, the plan must identify all major tasks, when the major tasks will start and finish, planned reviews of work associated with each major task, project completion date, and any other information that will assist in the planning and tracking this project successfully. Describe methodologies including best practices and benchmarks to be used.

   A. Project Approach Work plan: Provide a project approach work plan summarizing the team's quality control, method for coordination of disciplines, production methods, cost control, schedule control measures, goals and objectives.

   B. Project Schedule Control: Describe the schedule control you will provide in developing this project. Show schedule control milestones and events through each phase of the design and engineering work, including County decision points and reviews and approvals of the County and permitting authorities having jurisdiction. This schedule will demonstrate your teams understanding of the project's potential problems and concerns.

   C. Project Cost Control: (One page max.) Describe the construction cost estimating control you will provide in designing and engineering this project within the established budget. Show special cost control milestones and events through each phase of the design and engineering work, including County decision points and reviews and approvals of the County and permitting authorities having jurisdiction.

   D. Building Commissioning: (One page max.) Include a statement on how the Proposer will incorporate building commissioning into the design and construction administration services.

3. Description of project deliverables.

Section 3 – Project Team Qualifications/ Qualifications of Key Personnel

1. Provide resumes for each of the key personnel proposed for this project with specific

emphasis on the lead Project Manager and the Principle in Charge and all other personnel to be assigned to this project, their responsibilities, previous and current experience, educational and professional history, registrations and length of time employed by the firm as a full time employee.

2. The general and specific capabilities and experience of the Proposer's team that the

   Proposer believes will benefit Fulton County and other information the Proposer finds pertinent to submit to Fulton County.

3. Provide a Team Directory showing each team member and include the following for each team member listed: firm name; corporate home office location, address and phone number.

4. Each resume should be limited to no more than three pages per person and be organized according to the following:

   - Name and Title
   - Professional Background
   - Current and Past Relevant Experience
   - Relevant Training and Education
   - Courses completed during past five years
   - Previous Work Experience related to waterproofing design and project of equal size
   - Include two references for each key personnel member on similar projects.
   - Include the role and responsibilities that each key personnel member will perform on this project.

5. Provide an Organizational Chart which clearly indicates each discipline, company name, principal-in-charge, and project manager(s) assigned with the overall project coordination. This shall include the following associated persons:

   - Architectural Design & Specifications
   - Interior Design & Specifications
   - Furnishings Space Planning & FF&E Specifications
   - Civil Engineering & Specifications
   - Structural Engineering & Specifications
   - Landscape Design & Specifications
   - Electrical Engineering & Specifications
   - Security/Fire Alarm/Communication Engineering & Specifications
   - Plumbing Engineering & Specifications
   - Fire Protection Engineering & Specifications
   - Mechanical Engineering & Specifications
   - Hardware Selection & Specifications
   - ADA Compliance Review of Drawings & Specifications
   - Certified Construction Cost Estimator
   - Commissioning Agent

Section 4 – Relevant Project Experience

Identify five projects where the Proposer has performed at least three analysis or process reviews of an Architectural & Engineering service with entities comparable to Fulton County within the past three years. Limit your response to one page per project; please provide the following information for each project:

- The name of the project, the owner, year performed and the project location.
- Facility description, a photo of the interior and exterior of the facility, indicate size, functions housed, completed cost, and, year completed.
- Services the proposing firm provided.
- Indicate whether participation was as prime or sub-consultant.
- A reference, including a contact name, addresses and phone number. This reference should be the owner's staff member who was in charge of the project for the owner.
- Budget Performance: Bid vs. Budget Performance: Provide a summary showing dollar amounts of owner's budget compared with actual project bids for each of the projects listed under team's recent project experience and recent renovation experience. For projects that bid over the owner budget, provide explanation.

Section 5 – Proposer Financial Information

It is the policy of the County to conduct a review of a firm's financial responsibility in order to determine the firm's capability to successfully perform the work.

If submitting as a Joint Venture, Partnership, Limited Liability Corporation or Limited Liability Partnership, the financials must be submitted for each entity that comprises the prime contractor.

The following documentation is required in order for the County to evaluate financial responsibility:

(1) Provide audited financial statements for the last three (3) years, including income statements, balance sheets, and any changes in financial position.
(2) The latest quarterly financial report and a description of any material changes in financial position since the last audited financial statement.
(3) Proposer's most recent Dun & Bradstreet, Value Line Reports or other credit ratings/report.
(4) Identify any evidence of access to a line or letter of credit.

Proposer's financial statements will be reviewed. The review will focus on the Proposer's Statement of Income, Balance Sheet and Cash Flow Statements.

The following documentation and statements are required. Failure to provide the required submittals shall result **in your** firm receiving a "Fail" for the "Financial Responsibility" Criteria for the Proposal Evaluation Criteria provided in Section 4.

Section 6 - Availability of Key Personnel

(1) Percentage of time key personnel will spend on this project
(2) Current workload of key personnel

Section 7- Location of Firm

Local Preference is given to businesses that have a business location within the geographic boundaries of Fulton County. In order to receive the Local Preference points of ten (10) points the Proposer must provide one (1) of the following supporting documentation to the Department of Purchasing & Contract Compliance:

1. Copy of occupational tax certificate (business license);
2. Copy of a lease or rental agreement;
3. Proof of ownership interest in a location within the geographical boundaries of Fulton County.

The term business location means a physical structure, office or suite but does not include a post office box or a temporary job or project site location. If submitting as a Joint Venture or Partnership, provide a copy of the Joint Venture or Partnership agreement including the business address of all members.

Failure to provide the required supporting documentation with your proposal submittal shall result in your firm receiving a "0" (zero) for Local Preference.

Section 8 – Disclosure Form and Questionnaire

It is the policy of Fulton County to review the history of litigation of each Proposer that includes bankruptcy history, insolvency history, civil and criminal proceedings, judgments and termination for cause in order to determine whether a firm's business practices, legal practices and overall reputation in the industry is one that would be acceptable to perform work for Fulton County. The Disclosure Form and Questionnaire is provided in Section 5, Proposal Forms, Form D.

Section 9 – Cost

The hourly rates of each respondent will be totaled and divided by the number of classifications requested to determine the respondents' average hourly rate. The respondent with the lowest average hourly rate will receive the full 5 points. For respondents with the second, third, fourth, etc., their average hourly rates will be

divided into the lowest average hourly rate and multiplied by 5, the total points allowed for cost.

The County has established the following formula to evaluate cost proposals for Request for Proposals (RFP):

Lowest cost submitted

Each successive cost X Points allocated for cost in RFP = Cost proposal score

3.5 COST PROPOSAL FORMAT AND CONTENT

The Cost Proposal shall be provided in a **separate sealed envelope.** The Cost Proposal shall include current information and shall be arranged and include content as described below:

Section 1 - Introduction

The Proposer shall include an introduction which outlines the contents of the Cost Proposal.

Section 2 - Completed Cost Proposal Forms

The Proposer is required to complete **all** of the Cost Proposal Forms provided.

a. Cost proposals shall be completed and submitted on Exhibit 2 Cost Proposal Form within this RFP.

b. The detailed cost proposal shall show the positions and hourly rates for all employees that may be assigned to the work. Hourly rates shall include labor unit costs, multipliers, overhead, and profit.

c. Following opening of the cost proposals, the County may require clarifications associated with scope and cost assumptions. Clarifications shall be provided by the Proposer within twenty-four hours of written request.

d. This cost proposal will be the basis of cost for individual standby task proposals. The selected firms shall provide a cost proposal prior to program development for each project assigned based upon these rates.

e. A firm should only fill in hourly rates for positions they can actually provide. If a firm does not provide a position or multiple positions listed then the firm is encouraged to contact the Fulton County Department of Contract Compliance to consider and pursue teaming opportunities with Fulton County certified vendors.

EXHIBIT 2

Cost Proposal Form

I. SCHEDULE OF FEES

This form shall be completed and submitted as the cost proposal. The complete Cost Proposal is to be submitted separately from the Technical Proposal in a sealed envelope.

II. PROPOSED PROJECT PERSONNEL HOURLY RATES

A. Personnel hourly rates for each staffing position to be used in performing the work must be provided.

B. The proposed rates will also apply to Additional Services, if such services are authorized by the County during the contract period.

STAFFING POSITION	Direct Salary Expense (DSE)		Burden Multiplier		Direct Personnel Expense (DPE)		OH & P (%)		TOTAL HOURLY SALARY EXPENSE
Program Manager	$	X		=	$	+	%	=	$
Assistant Program Manager	$	X		=	$	+	%	=	$
Program/Construction Manager/Director	$	X		=	$	+	%	=	$
Interior Designer	$	X		=	$	+	%	=	$
Senior Architect	$	X		=	$	+	%	=	$
Design Architect	$	X		=	$	+	%	=	$
Draftsperson/CADD	$	X		=	$	+	%	=	$
Administrative/Clerical	$	X		=	$	+	%	=	$
Specifications Writer	$	X		=	$	+	%	=	$
Cost Estimator	$	X		=	$	+	%	=	$
Structural Engineer	$	X		=	$	+	%	=	$
Mechanical Engineer	$	X		=	$	+	%	=	$
Plumbing Designer	$	X		=	$	+	%	=	$
Waterproofing Consultant	$	X		=	$	+	%	=	$
Landscape Architect	$	X		=	$	+	%	=	$
TOTAL	$	X		=	$	+	%	=	$

SECTION 4
EVALUATION CRITERIA

4.1 PROPOSAL EVALUATION – SELECTION CRITERIA

The following criteria will be used to evaluate the proposals submitted in response to this RFP:

Evaluation Criteria	Weight
Project Plan	30 Points
Qualifications of Key Personnel	15 Points
Relevant Project Experience	15 Points
Financial Responsibility	5 Points
Availability of Key Personnel	10 Points
Past performance on previous contracts	10 Points
Disclosure Form and Questionnaire	5 Points
Location of Firm	5 Points
Cost Proposal	5 Points
TOTAL POINTS	**100 Points**

SECTION 5
PROPOSAL FORMS

5.1 INTRODUCTION

To be deemed responsive to this RFP, Proposers must provide the information requested and complete in detail all Proposal Forms. The appropriate individual(s) authorized to commit the Proposer to the Project must sign the Proposal Forms. Proposers should reproduce each Proposal Form, as required, and complete the appropriate portions of the forms provided in this section.

Form A: Certification Regarding Debarment

Form B: Non-Collusion Affidavit of Bidder/Offeror

Form C: Certificate of Acceptance of Request for Proposal Requirements

Form D: Disclosure Form and Questionnaire

Form E: Georgia Security and Immigration Contractor Affidavit/Agreement

Form F: Georgia Security and Immigration Subcontractor Affidavit

Form G: Professional License

5.2 PROPOSAL FORMS DESCRIPTION

The following paragraphs present an overview of each Proposal Form required.

5.2.1 Certification Regarding Debarment

Proposer shall complete and submit Form A, which certifies that neither it nor its subcontractors are presently debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from doing business with any government agency.

5.2.2 Non-Collusion Affidavit of Bidder/Offeror

The Proposal shall include a copy of Proposal Form B, executed by an authorized officer of the corporation. Proposals developed by a joint venture shall be similarly executed by all joint venture participants.

5.2.3 Certificate of Acceptance of Request for Proposal Requirements

Proposer shall complete and submit Form C, which certifies that Proposer has read the solicitation including all addenda, exhibits, attachments and appendices.

5.2.4 Disclosure Form and Questionnaire

Proposer shall complete and submit Form D, which requests disclosure of business and litigation.

5.2.5 Georgia Security and Immigration Contractor Affidavit and Agreement

Proposer shall complete and submit Form F, in order to comply with the requirements of O.C.G.A. 13-10-91 and the Georgia Department of Labor Rule 300-10-01-.02.

5.2.6 Georgia Security and Immigration Subcontractor Affidavit

Proposer shall ensure that any subcontractor(s) that will be utilized for this project shall complete and submit Form G, Subcontractor Affidavit.

5.2.7 Professional License

Proposer and any subcontractor(s) performing work required by state law to be licensed must provide a copy of their license for the work they will perform on this project.

FORM A: **CERTIFICATION REGARDING DEBARMENT**

(1) The Offeror certifies that neither it or its subcontractors is presently debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from doing business with any government agency. Any such exclusion may cause prohibition of your firm from participating in any procurement by the Fulton County Government.

(2) If the Offeror is unable to certify to any of the statements in this certification, such Offeror or subcontractor shall attach an explanation to this bid or proposal.

INSTRUCTIONS FOR CERTIFICATION

By signing and submitting this certification, the Offeror is providing the certification set out below:

(1) The certification in this clause is a material representation of fact upon which reliance will be placed. If it is later determined that the prospective vendor knowingly rendered a false certification, the Purchasing Agent may pursue all available remedies, including suspension and/or debarment, for withdrawal of award or termination of a contract.

(2) The prospective Offeror shall provide immediate written notice to the Purchasing Agent if at anytime the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(3) Offeror shall be under a continuing duty to immediately inform the Purchasing Agent in writing of any changes, if as a result of such changes, the Offeror certification regarding debarment is affected.

DEBARMENT ORDINANCE

The following Section 2-322 of Fulton County Code of Laws establishes the procedure for the debarment of contractors.

(a) ***Authority to suspend.***

After reasonable notice to the entity involved and reasonable opportunity for that entity to be heard, the Purchasing Agent, after consultation with user department, the County Manager and the County Attorney shall have the authority to suspend an entity for cause from consideration for award of county contracts. As used in this section, the term entity means any business entity, individual, firm, contractor, subcontractor or business corporation, partnership, limited liability corporation, firm, contractor, subcontractor or business structured; provided, further, that any such entity shall also be subject to suspension under this section if any of its constituents, members, subcontractors at any tier of such entity's and the entity, or any constituent or member, knew or should have known of the commission of the act. The suspension shall be for a period not to exceed three (3) years unless cause is based on a felony conviction for an offense related or associated with fraudulent contracting or misappropriation of funds wherein the suspension shall not exceed seven (7) years.

(b) *Causes for Suspension.* The causes for suspension include:

1) Conviction for commission of a criminal offense as an incident to obtain or attempting to obtain a public or private contract or subcontract, or in performance of such contract or subcontract;

2) Conviction of state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or other offense indicating a lack of business integrity or business honesty which currently, seriously and directly affects responsibility as a county contractor.

3) Conviction of state or federal anti-trust statues arising out of the solicitation and submission of bids and proposals;

4) Violation of contract provisions, as set forth below, of a character which is regarded by the Purchasing Agent to be so serious as to justify suspension action:

    a. Failure to perform in accordance with the specifications within a time limit provided in a county contract;

    b. A recent record of failure to perform or unsatisfactory performance in accordance with the terms of one or more contracts; provided, that failure to perform or unsatisfactory performance caused by acts beyond the control of the contractor shall not be considered to be a basis for suspension;

    c. Material representation of the composition of the ownership or workforce or business entity certified to the county as a minority business enterprise; or

    d. Falsification of any documents.

i. For violation of the ethical standards set forth in Fulton County Code Chapter 9, Code of Ethics.

ii. Knowing misrepresentation to the county, of the use which a majority owned contractor intends to make a minority business enterprise (a business entity at least 51 percent of which is owned and controlled by minority persons, as defined in Fulton County Code Chapter 6, Article B, Minority
Business Enterprise Affirmative Action Program and certified as such by the County) as a subcontractor or a joint venture partner, in performing work under contract with the County.

Failure to fully and truthfully provide the information required, may result in the disqualification of your bid/proposal from consideration or termination of the Contract, once awarded. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

Under penalty of perjury, I declare that I have examined this certification and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this _____ day of _____, 2010

_____

(Legal Name of Proponent) (Date)

_____

(Signature of Authorized Representative) (Date)

_____

(Title)

STATE OF GEORGIA

COUNTY OF FULTON

FORM B: **NON-COLLUSION AFFIDAVIT OF BIDDER/OFFEROR**

I, _____ certify that pursuant to Fulton County Code Section 2-320 (11), this bid or proposal is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same work, labor or service to be done or the supplies, materials or equipment to be furnished and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences and civil damages awards. I agree to abide by all conditions of this bid or proposal and certify that I am authorized to sign this bid or proposal for the bidder.

Affiant further states that pursuant to O.C.G.A. Section 36-91-21 (d) and (e), _____ has not, by itself or with others, directly or indirectly, prevented or attempted to prevent competition in such bidding or proposals by any means whatsoever. Affiant further states that (s)he has not prevented or endeavored to prevent anyone from making a bid or offer on the project by any means whatever, nor has Affiant caused or induced another to withdraw a bid or offer for the work.

Affiant further states that the said offer of _____ is bona fide, and that no one has gone to any supplier and attempted to get such person or company to furnish the materials to the bidder only, or if furnished to any other bidder, that the material shall be at a higher price.

_____
(COMPANY NAME)

_____
(PRESIDENT/VICE PRESIDENT)

Sworn to and subscribed before me this _____ day of _____, 2010

_____
(SECRETARY/ASSISTANT SECRETARY)

(Affix corporate seal here, if a corporation)

Notary Public: _____

County: _____

Commission Expires: _____

NOTE:

IF THE OFFEROR IS A PARTNERSHIP, ALL OF THE PARTNERS AND ANY OFFICER, AGENT, OR OTHER PERSON WHO MAY HAVE REPRESENTED OR ACTED FOR THEM IN BIDDING FOR OR PROCURING THE CONTRACT SHALL ALSO MAKE THIS OATH.

IF THE OFFEROR IS A CORPORATION, ALL OFFICERS, AGENTS, OR OTHER PERSONS WHO MAY HAVE ACTED FOR OR REPRESENTED THE CORPORATION IN BIDDING FOR OR PROCURING THE CONTRACT SHALL MAKE THE OATH.

FORM C: **CERTIFICATE OF ACCEPTANCE OF REQUEST FOR PROPOSAL REQUIREMENTS**

This is to certify that on this day, offeror acknowledges that he/she has read this solicitation document, pages #_____ to #_____ inclusive, including any addenda # to #_____ exhibit(s) #____ to #_____, attachment(s) #_____ to #_____, and/or appendices #_____ to #,_____in its entirety, and agrees that no pages or parts of the document have been omitted, that he/she understands, accepts and agrees to fully comply with the requirements therein, and that the undersigned is authorized by the offeror to submit the proposal herein and to legally obligate the offeror thereto.

Company:_____

Signature:_____

Name: _____

Title:_____ Date: _____

(Affix Corporate Seal)

FORM D: OFFEROR'S DISCLOSURE FORM AND QUESTIONNAIRE

1. Please provide the names and business addresses of each of the Offeror's firm's officers and directors.

   For the purposes of this form, the term "Offeror" means an entity that responds to a solicitation for a County contract by either submitting a proposal in response to a Request for Proposal or a Request for Qualification or a Bid in response to an Invitation to Bid.
   Describe accurately, fully and completely, their respective relationships with said Offeror, including their ownership interests and their anticipated role in the management and operations of said Offeror.

2. Please describe the general development of said Offeror's business during the past five (5) years, or such shorter period of time that said Offeror has been in business.

3. Please state whether any employee, agent or representative of said Offeror who is or will be directly involved in the subject project has or had within the last five (5) years: (i) directly or indirectly had a business relationship with Fulton County; (ii) directly or indirectly received revenues from Fulton County; or (iii) directly or indirectly receives revenues from the result of conducting business on Fulton County property or pursuant to any contract with Fulton County. Please describe in detail any such relationship.

LITIGATION DISCLOSURE:

Failure to fully and truthfully disclose the information required, may result in the disqualification of your bid or proposal from consideration or termination of the Contract, once awarded.

1. Please state whether any of the following events have occurred in the last five (5) years with respect to said Offeror. If any answer is yes, explain fully the following:

   (a) whether a petition under the federal bankruptcy laws or state insolvency laws was filed by or against said Offeror, or a receiver fiscal agent or similar officer was appointed by a court for the business or property of said Offeror;

   (b) whether Offeror was subject of any order, judgment, or decree not subsequently reversed, suspended or vacated by any court of competent jurisdiction, permanently enjoining said Offeror from engaging in any type of business practice, or otherwise eliminating any type of business practice; and

   (c) whether said Offeror's business was the subject of any civil or criminal proceeding in which there was a final adjudication adverse to said or Offeror, which directly arose from activities conducted by the business unit or corporate division of said Offeror which submitted a bid or proposal for the subject project. If so please explain.

2. Have you or any member of your firm or team to be assigned to this engagement ever been indicted or convicted of a criminal offense within the last five (5) years?

   Circle One: YES NO

3. Have you or any member of your firm or team been terminated (for cause or otherwise) from any work being performed for Fulton County or any other Federal, State or Local Government?

   Circle One: YES NO

4. Have you or any member of your firm or team been involved in any claim or litigation adverse to Fulton County or any other federal, state or local government, or private entity during the last three (3) years?

   Circle One: YES NO

5. Has any offeror, member of offeror's team, or officer of any of them (with respect to any matter involving the business practices or activities of his or her employer), been notified within the five (5) years preceding the date of this offer that any of them are the target of a criminal investigation, grand jury investigation, or civil enforcement proceeding?

   Circle One: YES NO

If you have answered "YES" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, the name of the court and the file or reference number of the case, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your proposal.

NOTE: If any response to any question set forth in this questionnaire has been disclosed in any other document, a response may be made by attaching a copy of such disclosure. (For example, said Offeror's most recent filings with the Securities and Exchange Commission ("SEC") may be provided if they are responsive to certain items within the questionnaire.) However, for purposes of clarity, Offeror should correlate its responses with the exhibits by identifying the exhibit and its relevant text.

Disclosures must specifically address, completely respond and comply with all information requested and fully answer all questions requested by Fulton County. Such disclosure must be submitted at the time of the bid or proposal submission and included as a part of the bid/proposal submitted for this project. Disclosure is required for Offeror's, joint venture partners and first-tier subcontractors.

Failure to provide required disclosure, submit officially signed and notarized documents or respond to any and all information requested/required by Fulton County can result in the bid/proposal declared as non-responsive. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

Under penalty or\f perjury, I declare that I have examined this questionnaire and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this _____ day of _____, 2010

_____

(Legal Name of Proponent) (Date)

_____

(Signature of Authorized Representative) (Date)

_____

(Title)

Sworn to and subscribed before me,

This _____ day of _____ , 2010

_____

(Notary Public) (Seal)

Commission Expires _____

(Date)

FORM E: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT

Instructions:

Contractors must attest to compliance with the requirements of O.C.G.A 13-10-91 and the Georgia Department of Labor Rule 300-10-01-.02 by executing the Contractor Affidavit. The affidavit should be executed by Contractors with 100 or more employees.

STATE OF GEORGIA

COUNTY OF FULTON

FORM E: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **[insert name of prime contractor]** _____ on behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services to this contract with **Fulton County Government**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **Fulton County Government** at the time the subcontractor(s) is retained to perform such service.

_____
EEV/Basic Pilot Program* User Identification Number

_____
BY: Authorized Officer of Agent
(Insert Subcontract Name)

_____
Title of Authorized Officer or Agent of Subcontractor

_____
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this _____ day of _____, 2010.

Notary Public: _____

County: _____

Commission Expires: _____

NOTE:

*** As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).**

FORM F: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

Instructions:

In the event that your company is awarded the contract for this project, and will be utilizing the services of any subcontractor(s) in connection with the physical performance of services pursuant to this contract, the following affidavit must be completed by such subcontractor(s). Your company must provide a copy of each such affidavit to Fulton County Government, Department of Purchasing & Contract Compliance with the proposal submittal.

All subcontractor affidavit(s) shall become a part of the contract and all subcontractor(s) affidavits shall be maintained by your company and available for inspection by Fulton County Government at any time during the term of the contract. All subcontractor(s) affidavit(s) shall become a part of any contractor/subcontractor agreement(s) entered into by your company.

STATE OF GEORGIA

COUNTY OF FULTON

FORM F: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **[insert name of prime contractor]** _____behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

_____
EEV/Basic Pilot Program* User Identification Number

_____
BY: Authorized Officer of Agent
(Insert Subcontract Name)

_____
Title of Authorized Officer or Agent of Subcontractor

_____
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this _____ day of _____, 2010.

Notary Public: _____

County: _____

Commission Expires: _____

NOTE:

*** As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).**

FORM G: GEORGIA PROFESSIONAL LICENSE CERTIFICATION

NOTE: Please complete this form for the work your firm will perform on this project.

Contractor's Name:

_____

Performing work as: Prime Contractor ____Sub-Contractor _____

Professional License Type:

_____

Professional License Number:

_____

Expiration Date of License:

_____

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: _____

Date: _____

(ATTACH COPY OF LICENSE)

SECTION 6
CONTRACT COMPLIANCE REQUIREMENTS

6.1 NON-DISCRIMINATION IN CONTRACTING AND PROCUREMENTS

It is the policy of Fulton County Government that discrimination against businesses by reason of the race, color, gender or national origin of the ownership of any such business is prohibited. Furthermore, it is the policy of the Board of Commissioners ("Board") that Fulton County and all vendors and contractors doing business with Fulton County shall provide to all businesses the opportunity to participate in contracting and procurement paid, in whole or in part, with monetary appropriations of the Board. Similarly, it is the policy of the Board that the contracting and procurement practices of Fulton County should not implicate Fulton County as either an active or passive participant in the discriminatory practices engaged in by private contractors or vendors seeking to obtain contracts with Fulton County.

Equal Business Opportunity Plan (EBO Plan): In addition to the proposal submission requirements, each vendor **must** submit an Equal Business Opportunity Plan (EBO Plan) with their bid/proposal. The EBO Plan is designed to enhance the utilization of a particular racial, gender or ethnic group by a bidder/proposer, contractor, or vendor or by Fulton County. The respondent **must** outline a plan of action to encourage and achieve diversity and equality in the available procurement and contracting opportunities with *this solicitation*.

The Plan **must** identify and include:

1. Potential opportunities within the scope of work of *this solicitation* that will allow for participation of racial, gender or ethnic groups. (Ex: subcontracting, joint venturing, etc.)

2. Efforts that will be made by the bidder/proposer to encourage and solicit minority and female business utilization in *this solicitation*. (Ex: media solicitation directed to M/FBEs, contacting Fulton County certified M/FBEs listed in the M/FBE Directory, etc.)

Fulton County encourages joint ventures, teaming, partnering and mentor-protégé relationships with minority and female businesses in an effort to achieve contracting and procurement diversity.

Prompt Payment: The prime contractor **must** certify in writing and **must** document on the Exhibit G Form (Prime Contractor/Subcontractor Utilization Report) that all subcontractors, sub-consultants and suppliers have been promptly paid for work and materials, (less any retainage by the prime contractor prior to receipt of any further progress payments). In the event the prime contractor is unable to pay subcontractors, sub-consultants or suppliers until it has received a progress payment from Fulton County, the prime contractor shall pay all subcontractors, sub-consultants or suppliers funds due from said progress payment within forty-eight (48) hours of receipt of payment from Fulton County. In no event shall a subcontractor, sub-consultant or supplier be paid later than fifteen (15) days as provided for by state law.

6.2 REQUIRED FORMS AND EBO PLAN

In order to be compliant with the intent and provisions of the Fulton County Non-Discrimination in Purchasing and Contracting Ordinance (99-0960), bidders/proposers **must** submit the following completed documents. Failure to provide this information **shall** result in the proposal being deemed non-responsive.

- Exhibit A – Promise of Non-Discrimination
- Exhibit B – Employment Report
- Exhibit C – Schedule of Intended Subcontractor Utilization
- Exhibit D – Letter of Intent to Perform as a Subcontractor or Provide Materials or Services
- Exhibit E – Declaration Regarding Subcontractors Practices
- Exhibit F – Joint Venture Disclosure Affidavit
- Equal Business Opportunity Plan (EBO Plan). This document is not a form rather a statement created by the bidder/proposer on its company letter head addressing the EBO Plan requirements.

The following document must be completed as instructed if awarded the project:

- Exhibit G – Prime Contractor's Subcontractor Utilization Report

All Contract Compliance documents (Exhibits A – F and EBO Plan) are to be placed in a **separate sealed envelope** clearly marked "Contract Compliance". The EBO Plan must be submitted on company letterhead. These documents are considered part of and should be submitted with the Technical Proposal.

EXHIBIT A – PROMISE OF NON-DISCRIMINATION

"Know all persons by these presents, that I/We (_____),
Name

_____ _____
Title Firm Name

Hereinafter "Company", in consideration of the privilege to bid on or obtain contracts funded, in whole or in part, by Fulton County, hereby consent, covenant and agree as follows:

1) No person shall be excluded from participation in, denied the benefit of, or otherwise discriminated against on the basis of race, color, national origin or gender in connection with any bid submitted to Fulton County for the performance of any resulting there from,

2) That it is and shall be the policy of this Company to provide equal opportunity to all businesses seeking to contract or otherwise interested in contracting with this Company without regard to the race, color, gender or national origin of the ownership of this business,

3) That the promises of non-discrimination as made and set forth herein shall be continuing in nature and shall remain in full force and effect without interruption,

4) That the promise of non-discrimination as made and set forth herein shall be made a part of, and incorporated by reference into, any contract or portion thereof which this Company may hereafter obtain,

5) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract entitling the Board to declare the contract in default and to exercise any and all applicable rights and remedies, including but not limited to cancellation of the contract, termination of the contract, suspension and debarment from future contracting opportunities, and withholding and/or forfeiture of compensation due and owning on a contract; and

6) That the bidder shall provide such information as may be required by the Director of Contract Compliance pursuant to Section 4.4 of the Fulton County Non-Discrimination in Purchasing and Contracting Ordinance.

SIGNATURE:_____

ADDRESS:_____

_____

TELEPHONE NUMBER:_____

EXHIBIT B – EMPLOYMENT REPORT

The demographic employment make-up for the bidder/proposer **must** be identified and submitted with this bid/proposal. In addition, if subcontractors will be utilized by the bidder/proposer to complete this project, then the demographic employment make-up of the subcontractor(s) must be identified and submitted with this bid.

EMPLOYEES

CATEGORY	NATIVE AMERICAN		AFRICAN AMERICAN		ASIAN AMERICAN		HISPANIC AMERICAN		CAUCASIAN AMERICAN		OTHER	
Male/Female	M	F	M	F	M	F	M	F	M	F	M	F
Mgmt/Official												
Professional												
Supervisors												
Office/ Clerical												
Craftsmen												
Laborers												
Other (specify)												
TOTALS												

FIRM'S NAME: _____

ADDRESS: _____

_____

TELEPHONE NUMBER: _____

This completed form is for (Check one) _____Bidder/Proposer _____ Subcontractor
Submitted by: _____ Date Completed:_____

EXHIBIT C - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION

If the bidder/proposer intends to subcontract any portion of this scope of work/service(s), this form **must be** completed and **submitted with the bid/proposal.** All prime bidders/proposers **must** include Letter(s) of Intent (Exhibit D) in the bid document for all subcontractors who will be utilized under the scope of work/services.

Prime Bidder/Proposer:_____

ITB/RFP Number:_____

Project Name or Description of Work/Service(s):_____

_____

_____

1. My firm, as Prime Bidder/Proposer on this scope of work/service(s) is_____is not____a minority or female owned and controlled business enterprise. (Please indicate below the portion of work, including, percentage of bid/proposal amount that your firm will carry out directly):

   _____
   _____

2. If the Prime Bidder/Proposer is a Joint Venture, please complete Exhibit F: Joint Venture Disclosure Affidavit and attach a copy of the executed Joint Venture Agreement.

3. Sub-Contractors (including suppliers) to be utilized in the performance of this scope of work/service(s), if awarded, are:

SUBCONTRATOR NAME:_____
ADDRESS:_____
_____
PHONE:_____
CONTACT PERSON:_____
ETHNIC GROUP*:_____COUNTY CERTIFIED**_____
WORK TO BE PERFORMED:_____
_____
DOLLAR VALUE OF WORK: $_____ PERCENTAGE VALUE:_____%

***Ethnic Groups: African American (AABE); Asian American (ABE); Hispanic American (HBE); Native American (NABE); White Female American (WFBE); **If yes, please attach copy of recent certification.**

SUBCONTRATOR NAME:_____
ADDRESS:_____
_____
PHONE:_____
CONTACT PERSON:_____
ETHNIC GROUP*:_____COUNTY CERTIFIED**_____
WORK TO BE PERFORMED:_____
_____
DOLLAR VALUE OF WORK: $_____ PERCENTAGE VALUE:_____%

SUBCONTRATOR NAME:_____
ADDRESS:_____
_____
PHONE:_____
CONTACT PERSON:_____
ETHNIC GROUP*:_____COUNTY CERTIFIED**_____
WORK TO BE PERFORMED:_____
_____
DOLLAR VALUE OF WORK: $_____ PERCENTAGE VALUE:_____%

SUBCONTRATOR NAME:_____
ADDRESS:_____
_____
PHONE:_____
CONTACT PERSON:_____
ETHNIC GROUP*:_____COUNTY CERTIFIED**_____
WORK TO BE PERFORMED:_____
_____
DOLLAR VALUE OF WORK: $_____ PERCENTAGE VALUE:_____%

SUBCONTRATOR NAME:_____
ADDRESS:_____
_____
PHONE:_____
CONTACT PERSON:_____
ETHNIC GROUP*:_____COUNTY CERTIFIED**_____
WORK TO BE PERFORMED:_____
_____
DOLLAR VALUE OF WORK: $_____ PERCENTAGE VALUE:_____%

***Ethnic Groups: African American (AABE); Asian American (ABE); Hispanic American (HBE); Native American (NABE); White Female American (WFBE); **If yes, please attach copy of recent certification.**

EXHIBIT C - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION

Total Dollar Value of Subcontractor Agreements: ($)

Total Percentage Value: (%)

CERTIFICATION: The undersigned certifies that he/she has read, understands and agrees to be bound by the Bid/Proposer provisions, including the accompanying Exhibits and other terms and conditions regarding sub-contractor utilization. The undersigned further certifies that he/she is legally authorized by the Bidder/Proposer to make the statement and representation in this Exhibit and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder/Proposer knowing them to be false, or if there is a failure of the intentions, objectives and commitments set forth herein without prior approval of the County, then in any such event the Contractor's acts or failure to act, as the case may be, shall constitute a material breach of the contract, entitling the County to terminate the Contract for default. The right to so terminate shall be in addition to, and in lieu of, any other rights and remedies the County may have for other defaults under the contract.

Signature:_____ **Title:**_____

Firm or Corporate Name:_____

Address:_____

_____

Telephone: ( )_____

Fax Number: ( )_____

Email Address:_____

EXHIBIT D

LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR OR PROVIDE MATERIALS OR SERVICES

This form **must** be completed by **ALL** known subcontractor and submitted with the bid/proposal. The Prime Contractor **must** submit Letters of Intent for **ALL** known subcontractors at time of bid submission.

To:_____
(Name of Prime Contractor Firm)

From:_____
(Name of Subcontractor Firm)

ITB/RFP Number:_____

Project Name:_____

The undersigned is prepared to perform the following described work or provide materials or services in connection with the above project (specify in detail particular work items, materials, or services to be performed or provided):

Description of Work	Project Commence Date	Project Completion Date	Estimated Dollar Amount

_____ _____
(Prime Bidder) **(Subcontractor)**

Signature_____ **Signature**_____

Title_____ **Title**_____

Date_____ **Date**_____

EXHIBIT E - DECLARATION REGARDING SUBCONTRACTING PRACTICES

If the bidder/proposer **does not intend to subcontract** any portion of the scope of work services(s), this form **must be** completed and submitted with the bid/proposal.

_____hereby declares that it is my/our intent to perform 100% of the work required for_____

(Bidder) **(ITB/RFP Number)**

_____

(Description of Work)

In making this declaration, the bidder/proposer states the following:

1. That the bidder/proposer does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform **all elements** of the work on this project with his/her own current work forces;

2. If it should become necessary to subcontract some portion of the work at a later date, the bidder/proposer will comply with all requirements of the County's Non-Discrimination Ordinance in providing equal opportunities to all firms to subcontract the work. The determination to subcontract some portion of the work at a later date shall be made in good faith and the County reserves the right to require additional information to substantiate a decision made by the bidder/proposer to subcontract work following the award of the contract. Nothing contained in this provision shall be employed to circumvent the spirit and intent of the County's Non-Discrimination Ordinances;

3. The bidder will provide, upon request, information sufficient for the County to verify Item Number one.

AUTHORIZED COMPANY REPRESENTATIVE

Name:_____ **Title:**_____ **Date:**_____

Signature:_____

Firm:_____

Address:_____

Phone Number:_____

Fax Number:_____

Email Address:_____

EXHIBIT F - JOINT VENTURE DISCLOSURE AFFIDAVIT

ITB/RFP No._____

Project Name_____

This form must be completed and submitted with the bid/proposal if a joint venture approach is to be undertaken.

In order to evaluate the extent of small, minority and female business involvement being proposed by a Bidder/Proposer, certain relevant information must be provided prior to contract award. The information requested below is to clearly identify and explain the extent of small business participation in the proposed joint venture. All items must be properly addressed before the business entity can be evaluated.

1. **Firms:**

   1) **Name of Business:**_____
   Street Address:_____
   Telephone No.:_____
   Nature of Business:_____

   2) **Name of Business:**_____
   Street Address:_____
   Telephone No.:_____
   Nature of Business:_____

   3) **Name of Business:**_____
   Street Address:_____
   Telephone No.:_____
   Nature of Business:_____

NAME OF JOINT VENTURE (If applicable):_____

ADDRESS:_____

_____

PRINCIPAL OFFICE:_____

OFFICE PHONE:_____

Note: Attach additional sheets as required

1. Describe the capital contributions by each joint venturer and accounting thereof.

2. Describe the financial controls of the joint venture, e.g., will a separate cost center be established? Which venturer will be responsible for keeping the books? How will the expense therefore be reimbursed? What is the authority of each joint venture to commit or obligate the order?

3. Describe any ownership, options for ownership, or loans between the joint ventures. Identify terms thereof.

4. Describe the estimated contract cash flow for each joint venturer.

5. To what extent and by whom will the on-site work be supervised?

6. To what extent and by whom will the administrative office be supervised?

7. Which joint venturer will be responsible for material purchases including the estimated cost thereof? How will the purchase be financed?

8. Which joint venturer will provide equipment? What is the estimated cost thereof? How will the equipment be financed?

9. Describe the experience and business qualifications of each joint venturer.

10. Submit a copy of all joint venture agreements and evidence of authority to do business in the State of Georgia as well as locally, to include all necessary business licenses.

11. Percent of Minority/Female Business Enterprises ownership by each joint venture in terms of profit and loss sharing:_____

12. The authority of each joint venturer to commit or obligate the other:_____

13. Number of personnel to be involved in project, their crafts and positions and whether they are employees of the Minority/Female Business Enterprises enterprise, the majority

firm or the joint venture: _____

14. Identification of control and participation in venture; list those individuals who are responsible for day-to-day management and policy decision-maker, including, but not limited to, those with prime responsibility for areas designated below; (use additional sheets if necessary)

Name	Race	Sex	Financial Decisions	Supervision Field Operation
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

In connection with any work that these firms, as a joint venture, might be authorized to perform in connection with above captioned contract, we each do hereby authorize representatives of the Fulton County Department of Contract Compliance, Departments of Purchasing and Contract Compliance, and Finance, under the direction of the County Manger's Office, to examine, from time to time, the books, records and files to the extent that such relate to this County project.

WE DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT, AND THAT WE ARE AUTHORIZED, ON BEHALF OF THE ABOVE FIRMS, TO MAKE THIS AFFIDAVIT AND GRANT THE ABOVE PRIVILEGE.

FOR_____
(Company)

Date:_____ _____
(Signature of Affiant)

_____
(Printed Name)

_____
(Company)

Date:_____ _____
(Signature of Affiant)

_____
(Printed Name)

State of_____:

County of_____:

On this _____ day of _____, 20_____, before me, appeared_____, the undersigned officer, personally appeared_____, known to me to be the person described in the foregoing Affidavit and acknowledges that he (she) executed the same in the capacity therein stated and for the purpose therein contained.

EXHIBIT – G PRIME CONTRACTOR/SUB-CONTRACTOR UTILIZATION REPORT

This report **must** be submitted by the **tenth day** of each month, along with a copy of your monthly invoice (schedule of values/payment application) to Contract Compliance. Failure to comply **shall** result in the County commencing proceedings to impose sanctions to the prime contractor, in addition to pursuing any other available legal remedy. Sanctions may include the suspending of any payment or part thereof, termination or cancellation of the contract, and the denial of participation in any future contracts awarded by Fulton County.

REPORTING PERIOD		PROJECT NAME:	
FROM:		PROJECT NUMBER:	
TO:		PROJECT LOCATION:	

PRIME CONTRACTOR		Contract Award Date	Contract Award Amount	Change Order Amount	Contract Period	% Complete to Date
Name:						
Address:						
Telephone #:						

AMOUNT OF REQUISITION THIS PERIOD: $_____
TOTAL AMOUNT REQUISITION TO DATE: $_____
TOTAL AMOUNT REQUISITION TO DATE: $_____

SUBCONTRACTOR UTILIZATION (add additional rows as necessary)

Name of Sub-Contractor	Description of Work	Contract Amount	Amount Paid To Date	Amount Requisition This Period	Contract Period Starting Date	Contract Period Ending Date
TOTALS						

Executed By: _____ _____
(Signature) *(Printed Name)*

Nortary: _____ **Date:** _____

My Commission Expires: _____

Should you have questions regarding any of the documents contained in Section 6, please feel free to contact the Office of Contract Compliance at (404) 612-6300, for further assistance.

Insurance and Risk Management Provisions
Architectural & Engineering Services – Government Center Waterproofing

It is Fulton County Government's practice to obtain Certificates of Insurance from our Contractors and Vendors. Insurance must be written by a licensed agent in a company licensed to write insurance in the State of Georgia, with an A.M. Best rating of at least A- VI, subject to final approval by Fulton County. Respondents shall submit with the bid/proposal evidence of insurability satisfactory to Fulton County Government as to form and content. Either of the following forms of evidence is acceptable:

- A letter from an insurance carrier stating that upon your firm/company being the successful Bidder/Respondent that a Certificate of Insurance shall be issued in compliance with the Insurance and Risk Management Provisions outlined below.
- A Certificate of Insurance complying with the Insurance and Risk Management Provisions outlined below (Request for Bid/Proposal number and Scope of Services must appear on the Certificate of Insurance).
- A combination of specific policies written with an umbrella policy covering liabilities in excess of the required limits is acceptable to achieve the applicable insurance coverage levels.

Upon award, the Contractor/Vendor must maintain at their expense, insurance with policy limits equal to or greater than the limits described below. Proof of insurance must be provided to Fulton County Government prior to the start of any activities/services as described in the bid document(s). Any and all Insurance Coverage(s) and Bonds required under the terms and conditions of the contract shall be maintained during the entire length of the contract, including any extensions or renewals thereto, and until all work has been completed to the satisfaction of Fulton County Government.

Accordingly the Respondent shall provide a certificate evidencing the following:

1. **WORKERS COMPENSATION/EMPLOYER'S LIABILITY INSURANCE – STATUTORY (In compliance with the Georgia Workers Compensation Acts and any other State or Federal Acts or Provisions in which jurisdiction may be granted)**

Employer's Liability Insurance	BY ACCIDENT	EACH ACCIDENT	$100,000
Employer's Liability Insurance	BY DISEASE	POLICY LIMIT	$500,000
Employer's Liability Insurance	BY DISEASE	EACH EMPLOYEE	$100,000

2. **COMMERCIAL GENERAL LIABILITY INSURANCE (Including contractual Liability Insurance)**

Bodily Injury and Property Damage Liability	Each Occurrence	$1,000,000
(Other than Products/Completed Operations)	General Aggregate	$2,000,000

Products\Completed Operation	Aggregate Limit	$2,000,000
Personal and Advertising Injury	Limits	$1,000,000
Fire Damage	Limits	$100,000

3. **BUSINESS AUTOMOBILE LIABILITY INSURANCE**
   Combined Single Limits Each Occurrence $1,000,000
   (Including operation of non-owned, owned, and hired automobiles).

4. **UMBRELLA LIABILITY** Each Occurrence $1,000,000
   (In excess of above noted coverages)

5. **PROFESSIONAL LIABILITY**
   Per Claim/Aggregate $2,000,000/$4,000,000
   (To be provided when the Contract includes specified Professional Services, and will be written with all Environmental/Pollution exclusions deleted).
   Extended Reporting Period 3-5 Years

Certificates of Insurance

Certificates shall state that the policy or policies shall not expire, be cancelled or altered without at least sixty (60) days prior written notice to Fulton County Government. Policies and Certificates of Insurance are to list Fulton County Government as an Additional Insured (except for Workers' Compensation) and shall conform to all terms and conditions (including coverage of the indemnification and hold harmless agreement) contained in the Insurance and Risk Management Provisions. The General Liability Additional Insured language should apply to on-going and completed-operations, using ISO form CG 2010 (11/85 version) or equivalent.

The Contractor agrees to name the Owner and all other parties required of the Contractor/Vendor shall be included as additional insureds on the CGL, using ISO Additional Insured Endorsement forms CG 2010 11/85 or its equivalent coverage to the additional insureds. This insurance for the additional insureds shall be as broad as the coverage provided for the named insured Contractor. It shall apply as Primary Insurance before any other insurance or self-insurance, including any deductible, non-contributory, and Waiver of Subrogation provided to the Additional Insureds.

Additional Insured under the General Liability, Auto Liability, Umbrella Policies (with exception of Workers Compensation and Professional Liability), with no Cross Suits exclusion.

If Fulton County Government shall so request, the Respondent, Contractor or Vendor will furnish the County for its inspection and approval such policies of insurance with all endorsements, or confirmed specimens thereof certified by the insurance company to be true and correct copies.

Such certificates and notices **must** identify the "Certificate Holder" as follows:

Fulton County Government – Purchasing and Contract Compliance Department
130 Peachtree Street, S.W.
Suite 1168
Atlanta, Georgia 30303-3459

Certificates **must** list Project Name (where applicable).

Important:

It is understood that **Insurance in no way Limits the Liability of the Contractor/Vendor.**

USE OF PREMISES

Contractor/Vendor shall confine its apparatus, the storage of materials and the operations of its workers to limits/requirements indicated by law, ordinance, permits and any restrictions of Fulton County Government and shall not unreasonably encumber the premises with its materials.

PROTECTION OF PROPERTY

Contractor/Vendor will adequately protect its own work from damage, will protect Fulton County Government's property from damage or loss and will take all necessary precautions during the progress of the work to protect all persons and the property of others from damage or loss.

Contractor/Vendor shall take all necessary precautions for the safety of employees of the work and shall comply with all applicable provisions of the Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where work is being performed.

Contractor/Vendor shall erect and properly maintain at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of its employees, Fulton County Government employees and the public and shall post all applicable signage and other warning devices t protect against potential hazards for the work being performed.

INDEMNIFICATION AND HOLD HARMLESS AGREEMENT

To the fullest extent of the Law, Contractor/Vendor hereby agrees to release, indemnify, defend and hold harmless Fulton County, its Commissioners, officers, employees, subcontractors, successors, assigns and agents, from and against any and all losses (including death), claims, damages, liabilities, costs and expenses (including but not limited to all actions, proceedings, or investigations in respect thereof and any costs of judgments, settlements, court costs, attorney's fees or expenses, regardless of the outcome of any such action, proceeding, or investigation), caused by, relating to, based upon or arising out of any act or omission by Contractor/Vendor, its directors, officers, employees, subcontractors, successors, assigns or agents, or otherwise in connection (directly or indirectly) with its acceptance, or the performance, or nonperformance, of its obligations under these agreements. Such obligations shall not be construed to negate,

abridge or otherwise reduce any other rights or obligations of indemnity which would otherwise exist as to any party or person as set forth in this paragraph.

Contractor/Vendor's obligation to protect, defend, indemnify and hold harmless, as set forth hereinabove, shall also include, but is not limited to, any matter arising out of any actual or alleged infringement of any patent, trademark, copyright, or service mark, or other actual or alleged unfair competition disparagement of product or service, or other tort or any type whatsoever, or any actual or alleged violation of trade regulations.

Contractor/Vendor further agrees to protect, defend, indemnify and hold harmless Fulton County, its Commissioners, officers, employees, subcontractors, successors, assigns and agents from and against any and all claims or liability for compensation under the Worker's Compensation Act, Disability Benefits Act, or any other employee benefits act arising out of injuries sustained by any employees of Contractor/Vendor. These indemnities shall not be limited by reason of the listing of any insurance coverage.

If the bid/quotation involves construction services Contractor/Vendor will be responsible fully for any and all damage to the work during the course of construction, until the point of Final acceptance by Fulton County.

FULTON COUNTY ACKNOWLEDGES THAT ALL PROVISIONS OF THIS INDEMNITY AGREEMENT MAY NOT BE APPLICABLE TO THE CONTRACTOR/VENDOR'S BUSINESS. TO THE EXTENT THAT CONTRACTOR/VENDOR MAY DEMONSTRATE SUCH NONAPPLICABILITY, FULTON COUNTY MAY NEGOTIATE AMENDMENTS TO THIS AGREEMENT AS THE CIRCUMSTANCES DICTATE.

CONTRACTOR/VENDOR ACKNOWLEDGES HAVING READ, UNDERSTANDING, AND AGREEING TO COMPLY WITH THIS INDEMNIFICATION AND HOLD HARMLESS AGREEMENT, AND THE REPRESENTATIVE OF THE CONTRACTOR/VENDOR IDENTIFIED BELOW IS AUTHORIZED TO SIGN CONTRACTS ON BEHALF OF THE RESPONDING CONTRACTOR/VENDOR.

COMPANY: _____ SIGNATURE: _____

NAME:_____TITLE: _____

DATE: _____

FULTON COUNTY

Vision

People *Families* *Neighborhoods*

Mission

To serve, protect and govern in concert with local municipalities

Values

People *Customer Services*
Ethics *Resource Management*
Innovation *Equal Opportunity*

CONTRACT DOCUMENTS FOR

PROJECT NUMBER

PROJECT TITLE

For

DEPARTMENT NAME

Index of Articles

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ARTICLE 2. SEVERABILITY
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CONTRACT AGREEMENT

Consultant: ***[Insert Consultant Name]***

Contract No.: ***[Insert Project Number and Title]***

Address: ***[Insert Consultant Address]***
City, State

Telephone: ***[Insert Consultant telephone #]***

Facsimile: ***[Insert Consultant Facsimile #]***

Contact: ***[Insert Consultant Contact Name]***
[Insert Consultant Contact Title

This Agreement made and entered into effective the _____ day of _____, 20 by and between **FULTON COUNTY, GEORGIA**, a political subdivision of the State of Georgia, hereinafter referred to as **"County"**, and **[Insert Consultant Company Name]** to provide professional consulting services in Georgia, hereinafter referred to as **"Consultant".**

WITNESSETH

WHEREAS, County through its ***[Insert User Department Name]*** hereinafter referred to as the **"Department"**, desires to retain a qualified and experienced Consultant to perform ***[Insert project description/services to be provided***, hereinafter, referred to as the **"Project"**.

WHEREAS, Consultant has represented to County that it is experienced and has qualified and local staff available to commit to the Project and County has relied upon such representations.

NOW THEREFORE, for and in consideration of the mutual covenants contained herein, and for other good and valuable consideration, County and Consultant agree as follows:

ARTICLE 1. CONTRACT DOCUMENTS

County hereby engages Consultant, and Consultant hereby agrees, to perform the services hereinafter set forth in accordance with this Agreement, consisting of the following contract documents:

I. Form of Agreement;
II. Addenda;
III. Exhibit A: General Conditions;
IV. Exhibit B: Special Conditions [where applicable];
V. Exhibit C: Scope of Work
VI. Exhibit D: Project Deliverables;
VII. Exhibit E: Compensation;
VIII. Exhibit F: Office of Contract Compliance Forms;
IX. Exhibit G: Insurance and Risk Management Forms

The foregoing documents constitute the entire Agreement of the parties pertaining to the Project hereof and is intended as a complete and exclusive statement of promises, representations, discussions and agreements oral or otherwise that have been made in connection therewith. No modifications or amendment to this Agreement shall be binding upon the parties unless the same is in writing, conforms to Fulton County Policy and Procedure 800-6 governing change orders, is signed by the County's and the Consultant's duly authorized representatives, and entered upon the meeting minutes of the Fulton County Board of Commissioners.

If any portion of the Contract Documents shall be in conflict with any other portion, the various documents comprising the Contract Documents shall govern in the following order of precedence: 1) the Agreement, 2) the RFP, 3) any Addenda, 4) change orders, 5) the exhibits, and 6) portions of Consultant's proposal that was accepted by the County and made a part of the Contract Documents.

The Agreement was approved by the Fulton County Board of Commissioners on ***[Insert Board of Commissioners approval date and item number].***

ARTICLE 2. SEVERABILITY

If any provision of this Agreement is held to be unenforceable for any reason, the unenforceability thereof shall not affect the remainder of the Agreement, which shall remain in full force and effect, and enforceable in accordance with its terms.

ARTICLE 3. DESCRIPTION OF PROJECT:

County and Consultant agree the Project is to perform ***[Insert project description]***. All exhibits referenced in this agreement are incorporated by reference and constitute an integral part of this Agreement as if they were contained herein.

ARTICLE 4. SCOPE OF SERVICES

Unless modified in writing by both parties in the manner specified in the agreement, duties of Consultant shall not be construed to exceed those services specifically set forth herein. Consultant agrees to provide all services, products, and data and to perform all tasks described in Exhibit C, Scope of Services.

ARTICLE 5. DELIVERABLES

Consultant shall deliver to County all reports prepared under the terms of this Agreement that are specified in Exhibit D, Project Deliverables. Consultant shall provide to County all deliverables specified in Exhibit D, Project Deliverables. Deliverables shall be furnished to County by Consultant in a media of form that is acceptable and usable by County at no additional cost at the end of the project.

ARTICLE 6. SERVICES PROVIDED BY COUNTY

Consultant shall gather from County all available non-privileged data and information pertinent to the performance of the services for the Project. Certain services as described in Exhibit C, Scope of Services, if required, will be performed and furnished by County in a timely manner so

as not to unduly delay Consultant in the performance of said obligations. County shall have the final decision as to what data and information is pertinent.

County will appoint in writing a County authorized representative with respect to work to be performed under this Agreement until County gives written notice of the appointment of a successor. The County's authorized representative shall have complete authority to transmit instructions, receive information, and define County's policies, consistent with County rules and regulations. Consultant may rely upon written consents and approvals signed by County have authorized representative that is consistent with County rules and regulations.

ARTICLE 7. **MODIFICATIONS**

If during the course of performing the Project, County and Consultant agree that it is necessary to make changes in the Project as described herein and referenced exhibits, such changes will be incorporated by written amendments in the form of Change Orders to this Agreement. Any such Change Order and/or supplemental agreement shall not become effective or binding unless approved by the Board of Commissioners and entered on the minutes. Such modifications shall conform to the requirements of Fulton County Policy 800-6, which is incorporated by reference herein.

ARTICLE 8. **SCHEDULE OF WORK**

Consultant shall not proceed to furnish such services and County shall not become obligated to pay for same until a written authorization to proceed (Notice to Proceed) has been sent to Consultant from County. The Consultant shall begin work under this Agreement no later than five (5) days after the effective date of notice to proceed.

ARTICLE 9. **CONTRACT TERM**

[Insert contract term and any renewal options]

ARTICLE 10. **COMPENSATION**

Compensation for work performed by Consultant on Project shall be in accordance with the payment provisions and compensation schedule, attached as Exhibit E, Compensation.

The total contract amount for the Project shall not exceed ***[Insert amount approved by BOC]***, which is full payment for a complete scope of services.

ARTICLE 11. **PERSONNEL AND EQUIPMENT**

Consultant shall designate in writing a person(s) to serve as its authorized representative(s) who shall have sole authority to represent Consultant on all manners pertaining to this contract.

Consultant represents that it has secured or will secure, at its' own expense, all equipment and personnel necessary to complete this Agreement, none of whom shall be employees of or have any contractual relationship with County. All of the services required hereunder will be performed by Consultant under his supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services.

Written notification shall be immediately provided to County upon change or severance of any of the authorized representative(s), listed key personnel or subcontractor performing services on this Project by Consultant. No changes or substitutions shall be permitted in Consultant's key personnel or subcontractor as set forth herein without the prior written approval of the County. Requests for changes in key personnel or subcontractors will not be unreasonably withheld by County.

ARTICLE 12. **SUSPENSION OF WORK**

Suspension Notice: The County may by written notice to the Consultant, suspend at any time the performance of all or any portion of the services to be performed under this Agreement. Upon receipt of a suspension notice, the Consultant must, unless the notice requires otherwise:

1) Immediately discontinue suspended services on the date and to the extent specified in the notice;
2) Place no further orders or subcontracts for material, services or facilities with respect to suspended services, other than to the extent required in the notice; and
3) Take any other reasonable steps to minimize costs associated with the suspension.

Notice to Resume: Upon receipt of notice to resume suspended services, the Consultant will immediately resume performance under this Agreement as required in the notice.

ARTICLE 13. **DISPUTES**

Except as otherwise provided in this Agreement, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Fulton County [insert user department name] designated representative. The representative shall reduce the decision to writing and mail or otherwise furnish a copy thereof to the Consultant. The Consultant shall have 30 days from date the decision is sent to appeal the decision to the County Manager or his designee by mailing or otherwise furnishing to the County Manager or designee, copy of the written appeal. The decision of the County Manager or his designee for the determination of such appeal shall be final and conclusive. This condition shall not be pleaded in any suit involving a question of fact arising under this Agreement, unless the same is fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or is not supported by substantial evidence. In connection with any appeal proceeding under this clause, Consultant shall be afforded an opportunity to be heard and to offer evidence in support of an appeal. Pending any final decision of a dispute hereunder, Consultant shall proceed diligently with performance of the Agreement and in accordance with the decision [insert user department name] of the designated representative.

ARTICLE 14. **TERMINATION OF AGREEMENT FOR CAUSE**

(1) Either County or Consultant may terminate work under this Agreement in the event the other party fails to perform in accordance with the provisions of the Agreement. Any party seeking to terminate this Agreement is required to give thirty (30) days prior written notice to the other party.

(2) Notice of termination shall be delivered by certified mail with receipt for delivery returned to the sender.

(3) **TIME IS OF THE ESSENCE** and if the Consultant refuses or fails to perform the work as specified in Exhibit C, Scope of Services and maintain the scheduled level of effort as proposed, or any separable part thereof, with such diligence as will insure completion of the work within the specified time period, or any extension or tolling there of, or fails to complete said work within such time. The County may exercise any remedy available under law or this Agreement. Failure to maintain the scheduled level of effort as proposed or deviation from the aforesaid proposal without prior approval of County shall constitute cause for termination

(4) The County may, by written notice to Consultant, terminate Consultant's right to proceed with the Project or such part of the Project as to which there has been delay. In such event, the County may take over the work and perform the same to completion, by contract or otherwise, and Consultant shall be required to provide all copies of finished or unfinished documents prepared by Consultant under this Agreement to the County as stated in Exhibit D, "Project Deliverables".

(5) Consultant shall be entitled to receive compensation for any satisfactory work completed on such documents as reasonably determined by the County.

(6) Whether or not the Consultant's right to proceed with the work has been terminated, the Consultant shall be liable for any damage to the County resulting from the Consultant's refusal or failure to complete the work within the specified time period, and said damages shall include, but not be limited to, any additional costs associated with the County obtaining the services of another Consultant to complete the project.

ARTICLE 15. **TERMINATION FOR CONVENIENCE OF COUNTY**

Notwithstanding any other provisions, the County may terminate this Agreement for its convenience at any time by a written notice to Consultant. If the Agreement is terminated for convenience by the County, as provided in this article, Consultant will be paid compensation for those services actually performed. Partially completed tasks will be compensated for based on a signed statement of completion to be submitted by Consultant which shall itemize each task element and briefly state what work has been completed and what work remains to be done.

ARTICLE 16.**WAIVER OF BREACH**

The waiver by either party of a breach or violation of any provision of this Agreement, shall not operate or be construed to be, a waiver of any subsequent breach or violation of the same or other provision thereof.

ARTICLE 17. **INDEPENDENT CONTRACTOR**

Consultant shall perform the services under this Agreement as an independent contractor and nothing contained herein shall be construed to be inconsistent with such relationship or status. Nothing in this Agreement shall be interpreted or construed to constitute Consultant or any of its agents or employees to be the agent, employee or representative of County.

ARTICLE 18. **PROFESSIONAL RESPONSIBILITY**

Consultant represents that it has, or will secure at its own expenses, all personnel appropriate to perform all work to be completed under this Agreement;

All the services required hereunder will be performed by Consultant or under the direct supervision of Consultant. All personnel engaged in the Project by Consultant shall be fully qualified and shall be authorized or permitted under applicable State and local law to perform such services.

None of the work or services covered by this Agreement shall be transferred, assigned, or subcontracted by Consultant without the prior written consent of the County.

ARTICLE 19. **COOPERATION WITH OTHER CONSULTANTS**

Consultant will undertake the Project in cooperation with and in coordination with other studies, projects or related work performed for, with or by County's employees, appointed committee(s) or other Consultants. Consultant shall fully cooperate with such other related Consultants and County employees or appointed committees. Consultant shall provide within his schedule of work, time and effort to coordinate with other Consultants under contract with County. Consultant shall not commit or permit any act, which will interfere with the performance of work by any other consultant or by County employees. Consultant shall not be liable or responsible for the delays of third parties not under its control nor affiliated with the Consultant in any manner.

ARTICLE 20. **ACCURACY OF WORK**

Consultant shall be responsible for the accuracy of his work and shall promptly correct its errors and omissions without additional compensation. Acceptance of the work by the County will not relieve Consultant of the responsibility of subsequent corrections of any errors and the clarification of any ambiguities. Consultant shall prepare any plans, report, fieldwork, or data required by County to correct its errors or omissions. The above consultation, clarification or correction shall be made without added compensation to Consultant. Consultant shall give immediate attention to these changes so there will be a minimum of delay to others.

ARTICLE 21. **REVIEW OF WORK**

Authorized representatives of County may at all reasonable times review and inspect Project activities and data collected under this Agreement and amendments thereto. All reports, drawings, studies, specifications, estimates, maps and computations prepared by or for Consultant, shall be available to authorized representatives of County for inspection and review at all reasonable times in the main office of County. Acceptance shall not relieve Consultant of its professional obligation to correct, at its expense, any of its errors in work. County may request at any time and Consultant shall produce progress prints or copies of any work as performed under this Agreement. Refusal by Consultant to submit progress reports and/or plans shall be cause for County, without any liability thereof, to withhold payment to consultant until Consultant complies with County's request in this regard. County's review recommendations shall be incorporated into the plans by Consultant.

ARTICLE 22. **INDEMNIFICATION**

The Consultant shall indemnify, defend and hold harmless the County, its officers, agents, employees and successors and assigns from and against any and all liability, loss, damages, claims, suits, liens, and judgments including attorneys fees, of whatever nature, including claims for contributions and/or indemnification, for injuries to or death or any person or persons, or damage to property or other rights of any person or persons caused by (1) any failure by the Consultant to perform its obligations under this Agreement; (2) the negligent, intentional or willful misconduct of the Consultant or any of its officers, directors, employees, representatives, agents or Subcontractors in connection with this Agreement; (3) Consultant's fault; or (4) the performance of the Consultant's obligations under this Agreement. The Consultant shall also indemnify the County to the extent provided elsewhere in this Agreement. To the extent there is a determination that Consultant has acted as an agent of the County, the Consultant is specifically excluded from the term "agent" mentioned in the previous sentence, such that Consultant will be required to comply with the requirements of this Article. Consultant's obligation to protect, defend, indemnify, and hold harmless, as set forth hereinabove, shall also included but not limited to any matter arising out of any actual or alleged infringement of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition disparagement of produce or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations. Consultant shall not indemnify or hold harmless the County for the sole acts or omissions of employees or officers of the County. Consultant further agrees to protect, defend, indemnify and hold harmless County, its officers, agents and employees from and against any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employees of Consultant. These Consultant indemnities shall not be limited by reason of the listing of any insurance coverage.

These indemnity provisions are for the protection of the County indemnities only and shall not establish, of themselves, any liability to third parties. The provisions of this article shall survive termination of this Agreement.

ARTICLE 23. **CONFIDENTIALITY**

Consultant agrees that its conclusions and any reports are for the confidential information of County and that it will not disclose its conclusions in whole or in part to any persons whatsoever, other than to submit its written documentation to County, and will only discuss the same with it

or its authorized representatives, except as required under this Agreement to provide information to the public. Upon completion of this Agreement term, all documents, reports, maps, data and studies prepared by Consultant pursuant thereto and any equipment paid for by County as a result of this Agreement, shall become the property of County and be delivered to [insert user department name].

Articles, papers, bulletins, reports, or other materials reporting the plans, progress, analyses, or results and findings of the work conducted under this Agreement shall not be presented publicly or published without prior approval in writing of County.

It is further agreed that if any information concerning the Project, its conduct results, or data gathered or processed should be released by Consultant without prior approval from County, the release of the same shall constitute grounds for termination of this Agreement without indemnity to Consultant, but should any such information be released by County or by Consultant with such prior written approval, the same shall be regarded as Public information and no longer subject to the restrictions of this Agreement.

ARTICLE 24. **OWNERSHIP OF INTELLECTUAL PROPERTY AND INFORMATION**

Consultant agrees that Fulton County is the sole owner of all information, data, and materials that are developed or prepared subject to this Agreement. Consultant or any subcontractor is not allowed to use or sell any information subject to this contract for educational, publication, profit, research or any other purpose without the written and authorized consent of the ***[Insert User Department Representative for project]***. All electronic files used in connection to this Agreement, which are by definition, any custom software files used in connection to this Agreement, (collectively, the "Software"), shall be turned over to the County for its use after termination hereof and Consultant shall have no interest of any kind in such electronic files. Any required licenses and fees for the Software or other required materials shall be purchased and/or paid for by Consultant and registered in the name of the ***[Insert User Department Representative for project]*** , if possible. The Software as defined hereunder, specifically excludes all software, documentation, information, and materials in which Consultant has pre-existing proprietary rights and/or has otherwise been licensed to Consultant prior to this Agreement, and any upgrades, updates, modifications or enhancements thereto. Consultant agrees to provide at no cost to County any upgrades to any software used in connection with this Agreement which may be subsequently developed or upgraded for a period of three (3) years from the date of completion of the work under the Agreement, except in the case of commercial Software licensed to the County or ***[Insert User Department Representative for project]***. Any information developed for use in connection with this Agreement may be released as public domain information by the County at its sole discretion.

ARTICLE 25. **COVENANT AGAINST CONTINGENT FEES**

Consultant warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees maintained by Consultant for the purpose of securing business and that Consultant has not received any non-County fee related to this Agreement without the prior written consent of County. For breach or violation of this warranty, County shall have the right to annul this Agreement without liability or at its discretion

to deduct from the Contract Price or consideration the full amount of such commission, percentage, brokerage or contingent fee.

ARTICLE 26. **INSURANCE**

Consultant agrees to obtain and maintain during the entire term of this Agreement, all of the insurance required as specified in the Agreement documents, Exhibit G, Insurance and Risk Management Forms, with the County as an additional insured and shall furnish the County a Certificate of Insurance showing the required coverage. The cancellation of any policy of insurance required by this Agreement shall meet the requirements of notice under the laws of the State of Georgia as presently set forth in the Georgia Code.

ARTICLE 27. **PROHIBITED INTEREST**

Section 27.01 **Conflict of interest:**

Consultant agrees that it presently has no interest and shall acquire no interest direct or indirect that would conflict in any manner or degree with the performance of its service hereunder. Consultant further agrees that, in the performance of the Agreement, no person having any such interest shall be employed.

Section 27.02 **Interest of Public Officials:**

No member, officer or employee of County during his tenure shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

ARTICLE 28. **SUBCONTRACTING**

Consultant shall not subcontract any part of the work covered by this Agreement or permit subcontracted work to be further subcontracted without prior written approval of County.

ARTICLE 29. **ASSIGNABILITY**

Consultant shall not assign or subcontract this Agreement or any portion thereof without the prior expressed written consent of County. Any attempted assignment or subcontracting by Consultant without the prior expressed written consent of County shall at County's sole option terminate this Agreement without any notice to Consultant of such termination. Consultant binds itself, its successors, assigns, and legal representatives of such other party in respect to all covenants, agreements and obligations contained herein.

ARTICLE 30. **ANTI-KICKBACK CLAUSE**

Salaries of engineers, surveyors, draftsmen, clerical and technicians performing work under this Agreement shall be paid unconditionally and not less often than once a month without deduction or rebate on any account except only such payroll deductions as are mandatory by law. Consultant hereby promises to comply with all applicable "Anti-Kickback" Laws, and shall insert appropriate provisions in all subcontracts covering work under this Agreement.

ARTICLE 31. **AUDITS AND INSPECTORS**

At any time during normal business hours and as often as County may deem necessary, Consultant shall make available to County and/or representatives of the County for examination all of its records with respect to all matters covered by this Agreement.

It shall also permit County and/or representative of the County to audit, examine and make copies, excerpts or transcripts from such records of personnel, conditions of employment and other data relating to all matters covered by this Agreement. Consultant's records of personnel, conditions of employment, and financial statements (hereinafter "Information") constitute trade secrets and are considered confidential and proprietary by Consultant. To the extent County audits or examines such Information related to this Agreement, County shall not disclose or otherwise make available to third parties any such Information without Consultant's prior written consent unless required to do so by a court order. Nothing in this Agreement shall be construed as granting County any right to make copies, excerpts or transcripts of such information outside the area covered by this Agreement without the prior written consent of Consultant. Consultant shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred on the Project and used in support of its proposal and shall make such material available at all reasonable times during the period of the Agreement and for three years from the date of final payment under the Agreement, for inspection by County or any reviewing agencies and copies thereof shall be furnished upon request and at no additional cost to County. Consultant agrees that the provisions of this Article shall be included in any Agreements it may make with any subcontractor, assignee or transferee.

ARTICLE 32. **ACCOUNTING SYSTEM**

Consultant shall have an accounting system, which is established, and maintaining in accordance with generally accepted accounting principles. Consultant must account for cost in a manner consistent with generally accepted accounting procedures, as approved by Fulton County.

ARTICLE 33. **VERBAL AGREEMENT**

No verbal agreement or conversation with any officer, agent or employee of County either before, during or after the execution of this Agreement, shall affect or modify any of the terms of obligations herein contained, nor shall such verbal agreement or conversation entitle Consultant to any additional payment whatsoever under the terms of this Agreement. All changes to this shall be in writing and the form of a change order in supplemental agreement, approved by the County, and entered on the Minutes of the Board of Commissioners.

ARTICLE 34. **NOTICES**

All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid.

Notice to County, shall be addressed as follows:

[Insert User Department Representative Position for project]
[Insert User Department Address
Atlanta, Georgia 30303
Telephone:
Facsimile:
Attention: ***[Insert User Department Representative for project]***

With a copy to:

Fulton County Department of Purchasing & Contract Compliance
Interim Director
130 Peachtree Street, Suite 1168
Atlanta, Georgia 30303
Telephone: (404) 730-5800
Facsimile: (404) 893-6273
Attention: Felicia Strong-Whitaker

Notices to Consultant shall be addressed as follows:

[Insert Consultant Representative for project]
[Insert Consultant Address]
Telephone:
Facsimile:
Attention: ***[Insert Consultant Representative for project]***

ARTICLE 35. **JURISDICTION**

This Agreement shall be administered and interpreted under the laws of the State of Georgia. Jurisdiction of litigation arising from this Agreement shall be in that state. If any part of this Agreement is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said laws, but the remainder of this Agreement shall be in full force and effect.

Whenever reference is made in the Agreement to standards or codes in accordance with which work is to be performed, the edition or revision of the standards or codes current on the effective date of this Agreement shall apply, unless otherwise expressly stated.

ARTICLE 36. **EQUAL EMPLOYMENT OPPORTUNITY**

During the performance of this Agreement, Consultant agrees as follows:

Section 36.01 Consultant will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin;

Section 36.02 Consultant will, in all solicitations or advertisements for employees placed by, or

on behalf of, Consultant state that all qualified applicants, will receive consideration for employment without regard to race, creed, color, sex or national origin;

Section 36.03 Consultant will cause the foregoing provisions to be inserted in all subcontracts for any work covered by the Agreement so that such provision will be binding upon each subcontractor, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

ARTICLE 37. **FORCE MAJEURE**

Neither County nor Consultant shall be deemed in violation of this Agreement if either is prevented from performing its obligations hereunder for any reason beyond its control, including but not limited to acts of God, civil or military authority, act of public enemy, accidents, fires, explosions, earthquakes, floods or catastrophic failures of public transportation, provided however, that nothing herein shall relieve or be construed to relieve Consultant from performing its obligations hereunder in the event of riots, rebellions or legal strikes.

ARTICLE 38. **OPEN RECORDS ACT**

The Georgia Open Records Act, O.C.G.A. Section 50-18-70 et seq., applies to this Agreement. The Consultant acknowledges that any documents or computerized data provided to the County by the Consultant may be subject to release to the public. The Consultant also acknowledges that documents and computerized data created or held by the Consultant in relation to the Agreement may be subject to release to the public, to include documents turned over to the County. The Consultant shall cooperate with and provide assistance to the County in rapidly responding to Open Records Act requests. The Consultant shall notify the County of any Open Records Act requests no later than 24 hours following receipt of any such requests by the Consultant. The Consultant shall promptly comply with the instructions or requests of the County in relation to responding to Open Records Act requests.

ARTICLE 39. **CONSULTANT'S COMPLIANCE WITH ALL ASSURANCES OR PROMISES MADE IN RESPONSE TO PROCUREMENT**

Where the procurement documents do not place a degree or level of service relating to the scope of work, M/FBE participation, or any other matter relating to the services being procured, should any Consultant submit a response to the County promising to provide a certain level of service for the scope of work, M/FBE participation, or any other matter, including where such promises or assurances are greater than what is required by the procurement documents, and should this response containing these promises or assurances be accepted by the County and made a part of the Contract Documents, then the degree or level of service promised relating to the scope of work, M/FBE participation, or other matter shall be considered to be a material part of the Agreement between the Consultant and the County, such that the Consultant's failure to provide the agreed upon degree or level of service or participation shall be a material breach of the Agreement giving the County just cause to terminate the Agreement for cause, pursuant to ARTICLE 14 of the Agreement.

ARTICLE 40. **INVOICING AND PAYMENT**

Consultant shall submit monthly invoices for work performed during the previous calendar month, in a form acceptable to the County and accompanied by all support documentation requested by the County, for payment and for services that were completed during the preceding phase. The County shall review for approval of said invoices. The County shall have the right not to pay any invoice or part thereof if not properly supported, or if the costs requested or a part thereof, as determined by the County, are reasonably in excess of the actual stage of completion.

Time of Payment: Invoices for payment shall be submitted to County by the first (1st) calendar day of the month to facilitate processing for payment in that same month. Invoices received after the first (1st) calendar day of the month may not be paid until the last day of the following month. The County shall make payments to Consultant by U.S. mail approximately thirty (30) days after receipt of a proper invoice. Parties hereto expressly agree that the above contract term shall supersede the rates of interest, payment periods, and contract and subcontract terms provided for under the Georgia Prompt Pay Act, O.C.G.A. 13-11-1 et seq., pursuant to 13-11-7(b), and the rates of interest, payment periods, and contract and subcontract terms provided for under the Prompt Pay Act shall have no application to this Agreement; parties further agree that the County shall not be liable for any interest or penalty arising from late payments.

Submittal of Invoices: Consultant shall submit all invoices in original and one (1) copy to:

[Insert User Department Representative Position for project]
[Insert User Department Address]
Atlanta, Georgia 30303
Telephone:
Facsimile:
Attention: ***[Insert User Department Representative for project]***

Consultant's cumulative invoices shall not exceed the total not-to-exceed fee established for this Agreement.

Optional: [A narrative of one (1) page only, listing the scope of services billed for shall accompany each invoice.]

County's Right to Withhold Payments: The County may withhold payments for services that involve disputed costs, involve disputed audits, or are otherwise performed in an inadequate fashion. Payments withheld by the County will be released and paid to the Consultant when the services are subsequently performed adequately and on a timely basis, the causes for disputes are reconciled or any other remedies or actions stipulated by the County are satisfied. The County shall promptly pay any undisputed items contained in such invoices.

Payment of Sub-consultants/Suppliers: The Consultant must certify in writing that all sub-consultants of the Consultant and suppliers have been promptly paid for work and materials and previous progress payments received. In the event the prime Consultant is unable to pay sub-consultants or suppliers until it has received a progress payment from Fulton County, the prime Consultant shall pay all sub-consultants or supplier funds due from said progress payments within forty-eight (48) hours of receipt of payment from Fulton County an in no event later than fifteen days as provided for by State Law.

Acceptance of Payments by Consultant; Release. The acceptance by the Consultant of any payment for services under this Agreement will, in each instance, operate as, and be a release to the County from, all claim and liability to the Consultant for work performed or furnished for or relating to the service for which payment was accepted, unless the Consultant within five (5) days of its receipt of a payment, advises the County in writing of a specific claim it contends is not released by that payment.

ARTICLE 41. **NON-APPROPRIATION**

This Agreement states the total obligation of the County to the Consultant for the calendar year of execution. Notwithstanding anything contained in this Agreement, the obligation of the County to make payments provided under this Agreement shall be subject to annual appropriations of funds thereof by the governing body of the County and such obligation shall not constitute a pledge of the full faith and credit of the County within the meaning of any constitutional debt limitation. The Director of Finance shall deliver written notice to the Consultant in the event the County does not intend to budget funds for the succeeding Contract year.

Notwithstanding anything contained in this Agreement, if sufficient funds have not been appropriated to support continuation of this Agreement for an additional calendar year or an additional term of the Agreement, this Agreement shall terminate absolutely and without further obligation on the part of the County at the close of the calendar year of its execution and at the close of each succeeding calendar year of which it may be renewed, unless a shorter termination period is provided or the County suspends performance pending the appropriation of funds.

ARTICLE 42. **WAGE CLAUSE**

Consultant shall agree that in the performance of this Agreement the Consultant will comply with all lawful agreements, if any, which the Consultant had made with any association, union, or other entity, with respect to wages, salaries, and working conditions, so as not to cause inconvenience, picketing, or work stoppage.

IN WITNESS THEREOF, the Parties hereto have caused this Contract to be executed by their duly authorized representatives as attested and witnessed and their corporate seals to be hereunto affixed as of the day and year date first above written.

OWNER:

FULTON COUNTY, GEORGIA

John H. Eaves, Commission Chair
Board of Commissioners

ATTEST:

Mark Massey
Clerk to the Commission (Seal)

APPROVED AS TO FORM:

Office of the County Attorney

APPROVED AS TO CONTENT:

[Insert Department Head Name
Insert Department Head Title]

CONSULTANT:

[Insert Consultant COMPANY NAME]

[Insert Name & Title of person authorized to sign contract]

ATTEST:

Secretary/
Assistant Secretary

(Affix Corporate Seal)

ADDENDA

Instructions for Users: Acknowledgement(s) of any addenda should be inserted behind this cover sheet.

EXHIBIT A

GENERAL CONDITIONS

Instructions for Users: Insert any General Conditions that were in the solicitation document behind this cover sheet.

Example: "Fulton County Purchasing Department Request For Proposal (RFP) General Requirements".

EXHIBIT B

SPECIAL CONDITIONS

Instructions for Users: Insert any Special Conditions that were in the solicitation document behind this cover sheet. If no Special Conditions were required, on a separate page behind this cover page please use the following language:

No Special Conditions were required for this Project

EXHIBIT C

SCOPE OF WORK

Instructions for Users: Insert the detailed Scope of Work to be provided by the Consultant behind this cover sheet.

EXHIBIT D

PROJECT DELIVERABLES

Instructions for Users: Insert any Project Deliverables to be provided by the Consultant behind this cover sheet.

EXHIBIT E

COMPENSATION

Instructions for Users: Insert the detailed Compensation to Consultant (payment to consultant providing service) behind this cover sheet.

EXHIBIT F

OFFICE OF CONTRACT COMPLIANCE FORMS

Instructions for Users: Insert the Contract Compliance forms submitted by the Consultant. Please contact Contract Compliance to insure you have the correct forms. Insert forms behind this cover sheet.

EXHIBIT G

INSURANCE AND RISK MANAGEMENT FORMS

Instructions for Users: Insert the following information behind this cover sheet.

1. **Insurance and Risk Management Provisions from Solicitation Document**

The following information should be inserted after you have received submittals from the Consultant:

2. **Certificate of Insurance**
3. **Payment Bonds (if applicable)**
4. **Performance Bonds (if applicable)**

SECTION 9
EXHIBITS

Exhibit 1- Required Proposal Submittal Check List

Exhibit 2-Cost Proposal Summary

Exhibit 3- Building Areas

EXHIBIT 1

The following submittals shall be completed and submitted with each proposal *(see table below "Required Proposal Submittal Check List.").* ***Please check to make sure that the required submittals are in the envelope before it is sealed. Failure to submit all required submittals may deem your proposal non-responsive.***

Submit one (1) Original proposal and five (5) CD's as required in Section 3.1.2 of the RFP.

Item #	Required Proposal Submittal Check List	Check (√)
1	One (1) Proposal marked **"Original"**, five (5) CD's	
2	*Form E: Georgia Security and Immigration Contractor Affidavit(s) and Agreement *Note: If prime contractor is a joint venture, partnership, LLC, each member of the entity must submit an affidavit*	
3	*Form F: Georgia Security and Immigration Subcontractor Affidavit (s)	
4	Technical Proposal	
5	Cost Proposal (submitted in a separate sealed envelope)	
6	Financial Information (submitted in a separate sealed envelope)	
7	Acknowledgement of each Addendum	
8	Executive Summary Project Plan Project Team Qualifications/Qualifications of Key Personnel Relevant Project Experience Proposer Financial Information Availability of Key Personnel Location of Firm Disclosure Form and Questionnaire	
9	Purchasing Forms Form A: Certificate Regarding Debarment Form B: Non-Collusion Affidavit of Bidder/Offeror	

	Form C: Certificate of Acceptance of Request Proposal Requirements Form D: Disclosure Form & Questionnaire Form G: Professional License	
10	Office of Contract Compliance Requirements (separate envelope) Exhibit A: Promise of Non-Discrimination Exhibit B: Employment Record Exhibit C: Schedule of Intended Subcontractor Utilization Exhibit D: Letter of Intent to Perform as Subcontractor Exhibit E: Declaration Regarding Subcontractor Practices Exhibit F: Joint Venture Disclosure Affidavit Exhibit G: Prime Contractor/Subcontractor Utilization Report Equal Business Opportunity Plan (EBO Plan)	
11	Evidence of Insurability, proposer must submit one (1) of the following: Letter from insurance carrier Certificate of Insurance An umbrella policy in excess of required limits for this project	
12	Verify that Bidder/Proposer is registered w/Georgia Secretary of State and attach a copy of print out for each	
13	Verify Georgia Utility License Number and attach a copy of print out for each Bidder/Proposer (If applicable)	
14	Verify Professional License and attach a copy of the print out for each Bidder/Proposer (If applicable)	

EXHIBIT 2

Cost Proposal Form

I. SCHEDULE OF FEES

This form shall be completed and submitted as the cost proposal. The complete Cost Proposal is to be submitted separately from the Technical Proposal in a sealed envelope.

II. PROPOSED PROJECT PERSONNEL HOURLY RATES

A. Personnel hourly rates for each staffing position to be used in performing the work must be provided.

B. The proposed rates will also apply to Additional Services, if such services are authorized by the County during the contract period.

STAFFING POSITION	Direct Salary Expense (DSE)		Burden Multiplier		Direct Personnel Expense (DPE)		OH & P (%)		TOTAL HOURLY SALARY EXPENSE
Program Manager	$	X		=	$	+	%	=	$
Assistant Program Manager	$	X		=	$	+	%	=	$
Program/Construction Manager/Director	$	X		=	$	+	%	=	$
Interior Designer	$	X		=	$	+	%	=	$
Senior Architect	$	X		=	$	+	%	=	$
Design Architect	$	X		=	$	+	%	=	$
Draftsperson/CADD	$	X		=	$	+	%	=	$
Administrative/Clerical	$	X		=	$	+	%	=	$
Specifications Writer	$	X		=	$	+	%	=	$
Cost Estimator	$	X		=	$	+	%	=	$
Structural Engineer	$	X		=	$	+	%	=	$
Mechanical Engineer	$	X		=	$	+	%	=	$
Plumbing Designer	$	X		=	$	+	%	=	$
Waterproofing Consultant	$	X		=	$	+	%	=	$
Landscape Architect	$	X		=	$	+	%	=	$
TOTAL	$	X		=	$	+	%	=	$

EXHIBIT 3
Building Areas

Building Areas

Building Name	Building Number	Size (approximate)
Government Center Tower 141 Pryor Street Atlanta, Georgia 30303	B613052	263,577 sq. ft.
Government Center Midrise 141 Pryor Street Atlanta, Georgia 30303	B613022	137,019 sq. ft.
Public Safety Building 130 Peachtree Street, SW Atlanta, Georgia 30303	B6103042	75,100 sq. ft
Government Center Atrium 141 Pryor Street Atlanta, Georgia 30303	B613062	68,179 sq. ft
Government Center Assembly 141 Pryor Street Atlanta, Georgia 30303	B613012	83,064 sq ft.

FULTON COUNTY

Vision

People *Families* *Neighborhoods*

Mission

To serve, protect and govern in concert with local municipalities

Values

People *Customer Services*
Ethics *Resource Management*
Innovation *Equal Opportunity*

REQUEST FOR PROPOSAL NO. #10RFP75166K-JD

ARCHITECTURAL AND ENGINEERING SERVICES FOR FULTON COUNTY GOVERNMENT CENTER WATERPROOFING VOLUME II

For

GENERAL SERVICES DEPARTMENT

RFP DUE DATE AND TIME: November 8, 2010, 11:00 A.M.
RFP ISSUANCE DATE: September 28, 2010
PRE-BID CONFERENCE DATE: October 21, 2010
PURCHASING CONTACT: Joyce Daniel @ 404-612-5824
E-MAIL: joyce.daniel@fultoncountyga.gov

LOCATION: FULTON COUNTY DEPARTMENT OF PURCHASING & CONTRACT COMPLIANCE
130 PEACHTREE STREET, S.W., SUITE 1168
ATLANTA, GA 30303

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VOLUME II

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EXHIBIT I

Phase 1: Terrace Investigation Report-Final

Fulton County Government Center
Phase I
Terrace Investigation Report - Final
Commission No. 203061.00-12.C
March 23, 2004

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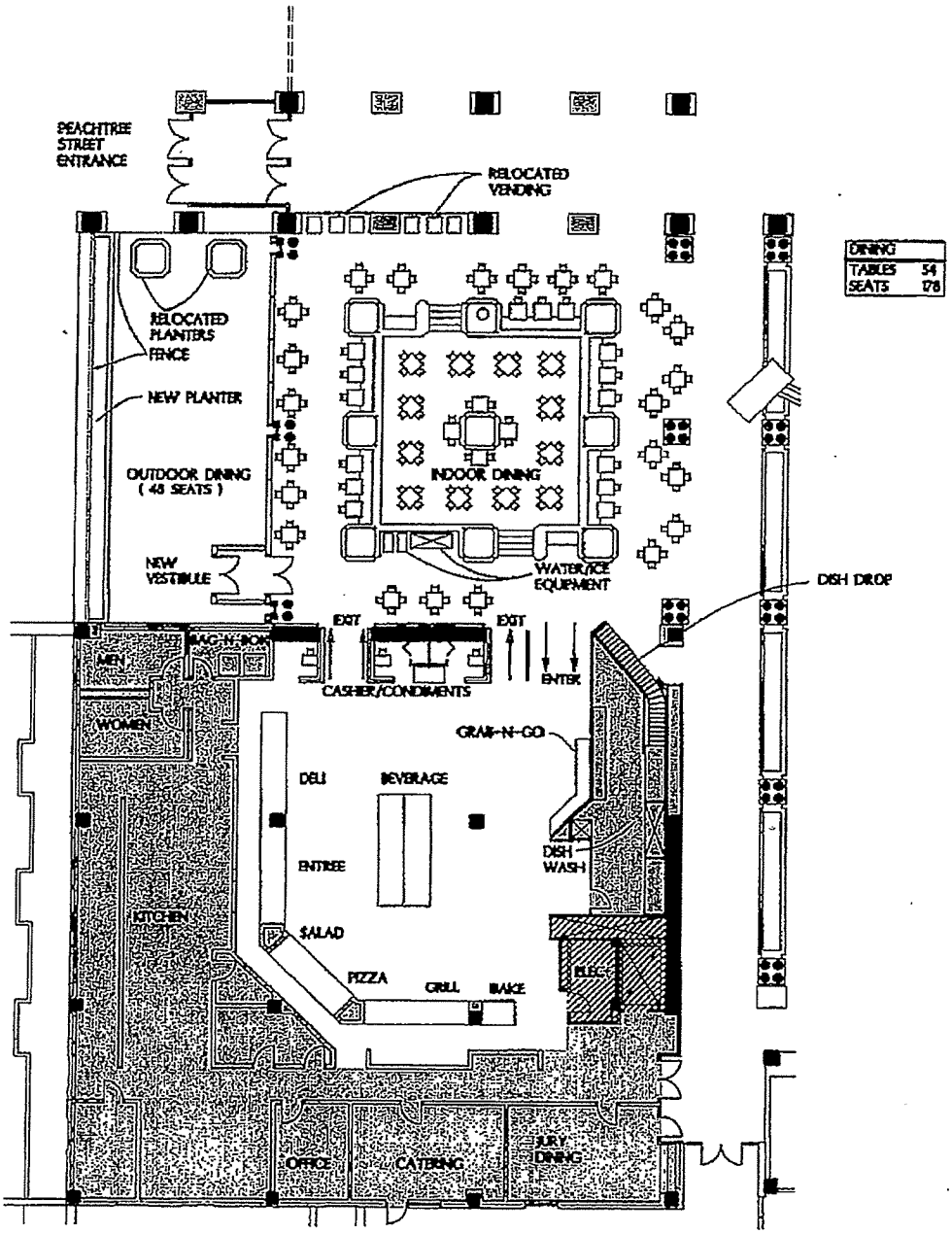

FULTON COUNTY GOVERNMENT CENTER

PROPOSED CAFETERIA PLAN

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

April 14, 2004

Fulton County Government Center
Phase I
Terraces Investigation

1. EXECUTIVE SUMMARY

A. Findings

Fulton County Government Center is a complex of 6 buildings which cover a city block between Peachtree St. and Pryor St., and Martin Luther King Jr. Dr. and Mitchell St. Construction of the buildings was phased. The first began in 1987.

The complex contains several exterior terraces, balconies, planters, a kitchen, and a servery which are built over occupied tenant spaces on the floors below. The tenant areas have been subject to leaks believed to be coming from the terraces, balconies, planters, kitchen and servery above. In addition, the 6 buildings which make up the complex are separated by expansion joints which reportedly are a major source of leaks into the tenant spaces.

All of the areas investigated were found to have multiple water control problems, which will require extensive repair and/or remodeling. These problems include the following:

1. Inadequate waterproofing flashing height and curb around wet areas.
2. Damaged and deteriorated waterproofing.
3. Lack of waterproofing and drainage mats.
4. Undersized drains and piping.
5. Clogged drain piping.
6. Incorrect drain type.
7. Lack of overflow drains and scuppers.
8. Kitchen areas without proper grease traps.
9. Lack of provision for thermal expansion and contraction.
10. Window wall system weeps into the building wall cavity.
11. Uninsulated overhead exterior concrete slabs.
12. Uncontrolled stormwater runoff at Upper Terrace canopy.
13. Inadequate expansion joint treatment.

To eliminate the leaks, all of the areas investigated will, at a minimum, require the removal of all existing pavers, sand and mortar beds, protection boards and the existing waterproofing down to the structural concrete slabs. Additionally, the base course of exterior granite wall cladding surrounding these areas will need to be removed and reconstructed. This will include replacing portions of the curtainwall and outswinging doors. All planting materials, furniture, and equipment (including walk-in coolers and freezers and the Kitchen hot water heater) will be removed and replaced to facilitate this work.

While this occurs, the occupied tenant areas below will need to be vacated to avoid undue disruption to the tenants and mitigate likely impact of foreseeable leaking while the existing waterproofing is removed. Additionally, the overhead piping will need to be replaced and/or redesigned, and, in some areas, underslab insulation added. This work will require the removal and replacement of the ceiling systems and effected lights and HVAC devices.

FCGC will relocate tenants during construction and provide tenant space renovations and improvements as separate scopes of work. Fulton County has determined that the Fulton County Government Center does not have adequate space to accommodate the necessary tenant relocation. Therefore, the County will lease additional space outside the complex to accommodate the relocation.

In the areas where major equipment cannot be relocated during the repair process above, additional precautions and protection of the equipment will be required. These areas include the main switchgear, main telephone gear, Central Energy Plant, cooling towers and emergency generator. The 9th Floor IT Department that is located below the 10th Floor balcony is also an area that will require significant in-place protection unless Fulton County can temporarily relocate the computers during construction.

After the areas below have been vacated, ceilings removed, and immovable items protected, the demolition of the existing waterproofing will be conducted. Then the replacement waterproofing and finishes can be installed. The remedial process will need to include adding drains at the subslab's low points as identified after demolition, additional pipe investigation after current blockages are removed, and adding drains at curtainwall and entry doors.

The basic terrace remediation will include the following:

1. Removal of all existing pavers, setting bed, protection board and loose or damaged waterproofing.
2. Remove base course of surrounding stone wall cladding.
3. Remove drain bodies, undersized drains and drain piping.
4. Construct curb for flashing (minimum 8" typical) at surrounding walls.
5. Clean and prepare intact existing waterproofing.
6. Install new drain bodies and piping at existing low points, near doors and curtainwalls, and as required.
7. Install hot applied, monolithic waterproofing and flashing of new curbs.
8. Install replacement stone base course.
9. Install new pedestal mounted stone paver system.

The basic Kitchen Servery remediation will include the following:

1. Remove all Kitchen/Servery equipment including hot water heater and demolish low Servery walls.
2. Remove all existing Kitchen, Servery, and Kitchen toilets, flooring and setting beds.
3. Remove and replace all Kitchen and Servery drains, drain piping, and grease traps.

4. Re-route water and electrical service to come from above, not through floor.
5. Provide curb around perimeter of renovated area.
6. Remove existing waterproofing.
7. Install epoxy topping sloped to drain and epoxy seamless flooring or thickset bed with porcelain pavers throughout Kitchen Servery area.
8. Install Kitchen equipment including new walk-in coolers and freezer, dishwasher and hot water heater.

The scope of the Kitchen renovation will be confirmed by the in-progress Kitchen calculations.

During the remedial work, Fulton County needs to be aware of the likelihood of some complaints regarding smells and/or noise.

B. Pricing

Based on the above means of repair and the below listed Fulton County scopes of work and phasing of construction, SRSS anticipates the following conceptual costs and schedule:

Phase A1 - Kitchen, Servery, Dining, and Peachtree Terrace	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	6 months
Total Time	23 months
Construction Cost**	$1,610,000.00
Design, Administration, and Reimbursables** (Includes Contractor Prequalification and full time, on-site rep. - 5 months)	$322,000.00
Total Cost**	$1,932,000.00
Phase A2 - Upper Terrace	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	5 months
Total Time	22 months
Construction Cost	$600,000.00
Design, Administration, & Reimbursables (Includes Contractor Prequalification and full time, on-site rep. - 3 months)	$170,000.00
Total Cost	$770,000.00

Phase C1-Lower Terrace and 10th Floor Balconies	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	4 months
Total Time	21 months
Construction Cost	$775,000.00
Design, Administration, & Reimbursables (Includes Contractor Prequalification and full time, on-site rep. - 3 months)	$161,000.00
Total Cost	$936,000.00

* Construction contracts should be timed so as not to require exterior terrace waterproofing between November and March.

** Costs do not include Kitchen equipment, design and construction costs for a new layout. These costs to be provided in Phase III - Cafeteria Final Report.

All costs are based on current market conditions and will need to be increased to account for escalation if projects are not bid prior to a change in market conditions.

Some of the separate Fulton County costs not incorporated above include the following: relocation space procurement, move costs, tenant space renovation or improvement, landscape plant removal, contingency funds, testing, and operations impact.

2. PROJECT SCOPE:

At the request of Fulton County, SRSS and our consultants have investigated the following areas of the buildings:

A. Phase A1

1. **Kitchen Servery:** Approximately 7,700 sq. ft., located at the 2nd floor of building Three. Space below includes the Department of Motor Vehicle tag purchasing, offices and systems furniture cubicles.

2. **Interior Dining:** Located at the 2nd level of the Atrium. 9 planters, 5' x 5' x 5' high surround the dining area. Space below includes individual offices and systems furniture cubicles in the Tax Assessors Department.

3. **Exterior Dining:** Approximately 1,750 sq. ft. of terrace, and four planters totaling 250 sq. ft., located at the 2nd floor west of the Atrium along Peachtree Street. Space below includes individual offices and systems furniture cubicles in the Tax Assessors Department.

4. **Peachtree Street Terrace:** Approximately 2,800 sq. ft., located at the 2nd floor west of the Tower Building and the exterior dining area. Space below includes individual offices and systems furniture cubicles in the Tax Assessors Department.

B. Phase A2

1. **Upper Terrace:** Approximately 4000 sq. ft. of terrace areas, and 6000 sq. ft. of planter areas. Located at the 2nd floor between building Three and the Public Safety Building. Space below includes the Parking Deck, Central Energy Plant, Switchgear room, Telephone room, Cooling Towers and Generator room.

C. Phase C1

1. **Lower Terrace:** Approximately 2,700 sq. ft. located at the 1st floor between buildings One, Two, and the Public Safety Building. Space below includes the loading dock, adjacent corridors and offices in the Public Safety Building.

2. **10th Floor Balconies:** 4 balconies, one on each face of the building, totaling 4,300 sq. ft., located at the 10th floor of the Tower Building. Space below includes the I.T. Department, individual offices and systems furniture cubicles

3. ARCHITECTURAL ANALYSIS

A. Terraces and Balconies

The terraces and balconies are inconsistently, but generally, constructed with brick pavers, sand setting bed, protection board, and waterproofing membrane over a concrete substrate. The pavers are sloped to drain the surface water. Water that penetrates the pavers saturates and pools in the paver bed above the waterproofing on the concrete substrate. The concrete substrate does not slope to the drains or have a drainage mat. The terrace drains also do not admit the water pooled above the waterproof membrane at the substrate level. The water ponding in the setting beds dissolves minerals in the mortar which are later deposited in and clog the drain lines.

Surrounding the terraces are vertical granite panels and aluminum window and door systems. The waterproofing at the perimeter is turned up the vertical walls, but not higher then the top of the pavers, which allows the surface water adjacent to the perimeter walls to escape behind the waterproofing membrane, and into tenant areas. New waterproofing and curbs will need to extend higher to prevent surface water from entering the building.

The pavers, as installed, do not allow for any thermal expansion because the pavers abut the perimeter exterior building walls. This is evident by the broken granite panels, caused by the pavers pushing against the lower portion of the granite panels. The bottom of the granite panels will need to be raised, to allow the pavers to run underneath. This will allow the pavers to move as needed for thermal requirements, without damaging the granite panels.

Broken granite panels will need to be replaced. If matching stone cannot be located in sufficient quantity, all base stone will need to be replaced in an aesthetically appropriate pattern so as not to detract from the building's appearance.

The drain bodies examined do not allow for drainage of water below the paving system. Investigation of the drain pipes revealed 2" & 3" drain pipes that have been significantly reduced in some locations by mineral deposits. All of the drain bodies & horizontal pipe serving the terraces and balconies should be replaced.

B. Kitchen/Servery

The Kitchen/Servery floor is a 6 x 6 ceramic tile with granite slab accents. The finish floor is built over a thin mortar setting bed, a sloped sand bed, and a waterproof membrane on a flat concrete substrate. The waterproofing membrane under the finish floor extends to the kitchen perimeter walls, but does not turn up the walls. This allows any water at the perimeter to escape below the membrane.
In addition, the utilities serving the kitchen equipment penetrate the floor from below, penetrating the membrane at each location. These multiple penetrations are

additional potential leaks, and are a maintenance issue when trying to locate leaks.

The cafeteria floor, in its entirety will need to be removed and replaced with a new floor and waterproofing system. The sand bed should be eliminated. Proper perimeter curbs and flashings need to be provided. SRSS recommends that natural stone not be included in any future floor options for the Food Service Area. To reduce the existing number of floor penetrations, we recommend that the power and water be distributed from above, having only the waste and gas lines and floor drains to penetrate the floor.

The existing kitchen equipment will need to be removed and stored while the floors and waterproofing are removed and replaced. Some of the equipment needs to be replaced, such as the walk-in coolers and freezers, dishwasher, and hot water heater. A separate investigation has been issued to Fulton County of the current kitchen operations layout and equipment.

The Cafeteria's waste / drainage system is a series of drains which begin in the dishwash room and connect every drain throughout the dishwash, servery, and kitchen into one pipe. This pipe has become inundated with grease, sand and other debris collected from the food service operations. Fulton County reported they have replaced portions of the system, but replacing based on the original design.

The entire waste / drainage system should be replaced. We recommend a new design that provides grease traps and multiple shorter pipe runs with proper slopes to manage the flow and requirements for the food service operations.

C. <u>Planters</u>

The planters, both interior and exterior, are constructed of precast concrete with granite panels applied to the planters outside surfaces. The interior faces of the planters are generally protected with a waterproof membrane and protection board.

The waterproofing membrane was found to be in very poor condition. Seams between the sheets of membrane have become separated, and roots from the plants were found growing behind the membrane. In addition, there are multiple penetrations through the waterproof membrane for electrical conduits, electrical junctions boxes and irrigation tubing. These items should be limited to only those required for the planter, as each penetration is a potential source for leaks.

It is our recommendation that the waterproofing and protection board be removed and replaced.

The existing drains found in the planters were not intended to be used for planters. The grate on the drain body was meant for a floor drain found in a restroom or

kitchen. The drain grates were found to be clogged with dirt and decaying plant material. The piping for the drains was clogged with small pebbles and planter soil, preventing water from draining properly. It was apparent that there had been previous efforts to correct leaks directly around the drains, as a caulking had been applied to the joint between the drain and the waterproof membrane. The chemical make-up of the caulking and the waterproof membrane were not compatible, as the waterproof membrane had deteriorated around the caulking.

It is our recommendation that the drains be replaced, and the piping be removed cleaned and reinstalled.

PIE recommends sediment bucket type drains at planters and terraces.

Consulting Engineering Design, Inc.

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Mailing Address: Post Office Box 813395 Smyrna, Georgia 30081
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March 22, 2004 (Amended)

David Cameron
Smallwood Reynolds Stewart, Stewart & Associates, Inc.
One Piedmont Center
3565 Piedmont Road, NE
Suite 303
Atlanta, Georgia 30305-1521

Re: Site Visit and report for Plumbing Engineering Services for the renovation to the Fulton County Government Center Phase One Kitchen & Dining, Terraces and Balcony Drainage Systems.

Dear David,

Consulting Engineering Design, Inc. performed a site visit on the existing Fulton County Government Center Phase One Kitchen & Dining Area, Terraces and Balconies. The findings of our site visit are from our own visual methods and . We are attaching an investigative report detailing our findings, our opinions regarding our findings and our recommendations to repair the inaccuracies we discovered.

Should you have any questions regarding this report please do not hesitate to contact our office.

Sincerely,

Cynthia E Davis

Cynthia E Davis
President

INITIAL OBSERVATIONS FOR THE KITCHEN & DINING

I. The drains installed were not of the "Kitchen Specified Type". The existing drains that were installed are commonly known as floor drains that are installed in toilet rooms. The drains do not have sediment buckets that would normally capture excess food and waste particles that are washed down into the drains. The drains appear to be only two inch (2") in outlet diameter. These drains are meant for small spillage and only can handle a small amount of water drainage. They are not manufactured for kitchen use.

II. There were "Hub Drains", which is nothing but an extension of a waste pipe up to approximately one inch to two inches (1"- 2") above the finished floor and left open. The waste line from the kitchen equipment which is usually smaller in diameter than the opening to the hub drain is then inserted into the hub drain. We discovered mostly two inch (2") diameter hub drains with nearly the same size waste line inserted. In most cases there was more than one (1) waste lines inserted into the same hub drain.

III. There is a lack in the amount of both floor drains and hub drains that should have been installed in the kitchen area. There were several pieces of kitchen equipment that did not even have a drain located near for proper drainage.

IV. From reviewing the existing as-built plans of the kitchen drainage layout it appears that the overall sizing, the number of drains connected to a single branch line and the routing of the drains waste lines are incorrect. The existing layout does not meet the Plumbing code requirements for venting nor does it meet the standards for a safe waste and/or combination waste & vent system normally used for a kitchen. Also it did not appear that the proper usage of the grease waste system was adhered to.

V. The existing drains in the planters within the dining area are not of the type for this usage. The drains in the planters located outside in the dining plaza area are not recommended for this type of usage, nor are they of adequate size.

VI. The existing drains in the plaza and balcony areas are not of the type for this type of usage nor is the size adequate.

REPAIR RECOMMENDATIONS

I. Replace the existing drains with approved "kitchen waste" floor sinks that have the capacity in outlet diameter size to handle the load and are equipped with sediment buckets.

II. Replace the existing "hub drains" with a larger size and place new ones under each piece of kitchen equipment that has a drain usage. In the event of two pieces of kitchen equipment that are adjacent, install a new hub drain of adequate size to handle both. In some cases the kitchen equipment can not utilize a hub drain due to not enough clearance underneath. In this case a floor sink with either a half-grate (1/2) or three-quarter (3/4) grate would be

installed. Also to avoid extra over spillage a funnel-type hub drain could be used in lieu of just an open pipe.

III. A definite increase of the correct type of floor sinks is required. We determine that the approved type floor sinks should be used where indirect drainage of the equipment is located. There is also a need for an increase of full grate floor sinks to be installed throughout the main kitchen floor areas. These drains also have sediment buckets, however are larger in size to handle the everyday wash down of the general floor areas.

IV. The existing kitchen waste and vent system that is installed under the kitchen slab is not up to code nor does it even meet code requirements at the time it was installed. A complete new kitchen waste and vent system should be installed. This would consist of removing the existing waste and vents lines that are now installed (only piping serving the kitchen area) and installing a complete new system that would meet code requirements. The area of construction would be only the area that affects the kitchen. The new vent piping would re-connect back into the existing venting system. However, there may be a possibility of having to install a new grease interceptor, that per the City of Atlanta, may need to move from it's current location to outside. Proper sized waste lines with the allotted number of drains per branch line needs to be installed. The venting requirements for drains that exceed the Plumbing code's maximum allowed length from drain to main trunk line must be met. The correct Combination Waste and Vent System should be installed along with a correct Master Trap Assembly, Grease Waste System, Grease Waste Venting and Fresh Air Venting System.

V. The drains for planter use should be approved planter type drains. These drains have strainers and can be equipment with a mesh material to avoid clogging from soil.

VI. Area drains need to be installed in all exterior uncovered balconies and plaza areas. The drains that need to be installed are called area drains and are very similar to roof drains.

INITIAL OBSERVATIONS FOR THE TERRACES & BALCONIES

VII. Some terrace & balconies had the basic code approved roof drain installed while the plazas did not. The drains appeared clogged from debris such as leaves, trash materials and internal scaling.

VIII. Based upon the As-built Drawings provided and our visual inspection, the size and amount of drains installed were not of adequate size and quantity (Calculations will be provided below). The terraces, balconies and plazas definitely need to have the drains replaced, along with a larger quantity and size.

IX. Interior leakage was denoted. This may have occurred from the clogged drains that allowed standing water to back into the buildings. This instance occurred in all three conditions, balconies, terraces and plazas.

UPPER TERRACE CALCULATIONS FOR PRIMARY AREA DRAINS @ 4"/HR.

I. Total of 14,480 square feet of calculated terrace area consisting of 3,280 square feet of terrace and 11.200 square feet of wall.
II. There are nine (9) area drains installed which calculate out to 1,609 square feet each.
III. Based upon the code for a 1,609 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate that four (4") inch drains are installed, however visual inspection indicates only a two (2") inch drain is installed. This is not adequate in size.

LOWER TERRACE CALCULATIONS FOR PRIMARY AREA DRAINS @ 4"/HR.

IV. Total of 15,800 square feet of calculated terrace area consisting of 2,300 square feet of terrace and 13,500 square feet of wall.
V. There are fourteen (14) area drains installed which calculate out to 1,128 square feet each.
VI. Based upon the code for a 1,128 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate three (3") inch drains are installed. This is adequate in size.

EXTERIOR DINING TERRACE CALCULATIONS FOR PRIMARY AREA DRAINS @ 4"/HR.

VII. Total of 6,940 square feet of calculated terrace area consisting of 3,100 square feet of terrace and 3,840 square feet of wall.
VIII. There are eight (8) area drains installed which calculate out to 868 square feet each.
IX. Based upon the code for a 868 square foot capacity the drain needs to be a minimum of two inches (2"). The as-builts indicate three (3") inch drains are installed. This is adequate in size.

TENTH FLOOR TOWER TERRACE

X. Total of 9,456 square feet of calculated roof area consisting of 4,736 square feet of roof and 4,720 square feet of wall and scuppers.
XI. There are six (6) roof drains installed which calculate out to 1576 square feet each.
XII. Based upon the code for a 1576 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate four (4) inch drains are installed. This is adequate in size.

CONCLUSIONS

I. After performing calculations on the primary area drain systems, it appears that most of the drains are adequate in size.
II. Only visual inspection could be derived on the area drain body itself. The piping was not visible.
III. The drains need to be replaced with new ones. Also the paving needs to be replaced with a more definite sloping arrangement. The new drains can be designed to incorporate the slope. It may be necessary to add more drains;, but it is necessary to design a system that will allow the flow of water to reach the drains to not allow water to pond.

Again, should there be any questions regarding this report, please do not hesitate to contact our office.

Site Visit performed by:

Cynthia E Davis
President
Consulting Engineering Design, Inc.

Phase 1 Waterproofing Site Investigation
Fulton County Government Center
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CLIENT:
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PROJECT NUMBER: W&A-203346

NOVEMBER 26, 2003

INTRODUCTION

Williamson and Associates has undertaken a series of destructive tests to determine the general nature of the installed Split Slab Waterproofing. Specific areas at the Lower Level Plaza, Upper Level Plaza, Dining Room, Outside Dining, Peachtree Street Level Walk, 10th floor Balconies, and Kitchen were selected, excavated, examined and photographed. The investigative work took place on site primarily during weekends. Dates of actual investigation are October 17, 18, 19, 21, 23, and 25, 2003.

Captioned photographs and sketches are coordinated with each excavation designated in chronological order. Each area of investigation is designated 1 through 16 on the floor plans. Sketches are numbered accordingly with a "P" prefix. The photographic series is numbered 1 through 16 with letter suffixes. Example, excavation 1 on the floor plan has a sketch label P1 and a photographic series labeled 1A through 1F.

The findings are rather consistent throughout the excavations. All areas have flat, non-sloped structural slabs. All areas (except the planter in the dining room and a small portion of exterior dining) are set on a bed of leveling sand. All areas use Bituthene sheet. "The turned up" dam height at the perimeter of the waterproofing (except the planter in the dining room) was below the elevation of the walking surface. None of the areas have drainage mats. The top surfaces of the pavers are sloped to drains. Surface water can flow into the drains. Water can build up and overflow the perimeter "turned up" waterproofing enddams at a lower level than the surface drains. Water that gets below the top surface of the pavers to the sand bed will slowly seep to the top of the existing waterproofing collecting (ponding) at low spots between drains.

The relationship of the vertical wall to the horizontal paver system is problematic. In all exterior locations the vertical granite panels extend below the top of the pavers nominally by 2". Cracking and fracturing of the granite has occurred. The storefront door thresholds and sidelights, the curtainwall sill and some window wall sills are nominally only ½" above the top of the pavers. Additionally the typical window wall weep or water control system actually is interior of the perimeter weather sealant.

The dam height of the waterproofing must be increased. The floors must be insulated. The perimeter vertical walls must be modified and the flooring systems constructed to prevent breakage of the perimeter vertical wall construction and floor buckling.

OBSERVATIONS

Excavation #1 at Lower Terrace, reference sketch 1 and photographs 1A through 1 F.

The topping pavers are set on a sand bed. Two 1" thick sheets of extruded polystyrene sheets set atop Bituthene sheet adhered directly to the concrete slab. The curb height below the interior pavers upon which the storefront framing is set is less than 2" tall. *i.e. the dam height of the waterproofing is 3" below the top of the paver-walking surface.*

The bottom of the entrance sidelight is ½" above the top of the pavers. The top of the door entrance threshold is 1" above the top of the pavers.

The top perimeter of the pavers are sealed to the vertical granite. The vertical granite as well as the interior pavers must be modified to allow installation of higher dam height for the waterproofing. The outside edge of the interior pavers must not extend outboard of the interior edge of the door threshold and store front flashing. The vertical granite must be temporarily removed and cut down to allow for the increase in waterproofing dam height and movement of the pavers due to thermal changes.

Excavation #2 at Lower Terrace, reference sketch P2 and photographs 2A through 2 L.

The topping pavers are set on a sand bed. Notice that the extruded polystyrene was not installed at this location. A thin asphalt protection board was found in this location on top of the Bituthene sheet that was adhered directly to the concrete slab. The top of the pavers were 6" above the waterproofing; the Dam height of the waterproofing sheet was 3 ½" above the waterproofing.

Concealed formed aluminum flashing, fastened to the vertical steel support studs, was sealed to the interior surface of the vertical granite. The granite support angles were located nominally 12" above the top of the pavers

The top perimeter of the pavers are sealed to the vertical granite. The vertical granite must be temporarily removed and cut down to allow for the increase in waterproofing dam height and movement of the pavers to thermal changes.

Excavation #3 at Lower Terrace, reference sketch P3 and photographs 3A through 3F.

Notice that the detailing of the paver setting is the same as in Excavation #2. However the condition at the window wall differs. A small granite strip is installed under the window sill and the typical vertical granite panel. The strip extends 2 ½" below the top of the horizontal pavers. The window wall sill is 4" above the top of the horizontal brick pavers.

The perimeter weather sealant is applied outboard of the water control line of the window wall. This means that water entering the glazing system of the window wall will be diverted out of the weeps down the back of the granite strip to further challenge the low dam height of the waterproofing membrane. Additionally the split tail (see photo 3F) anchors provide a transfer point for water to be diverted interior of the waterproofing membrane.

The window wall system and the granite strip detail must be reworked to prevent water transfer interior of the waterproofing, increase the waterproofing dam height and allow movement of the horizontal walking surface due to thermal changes.

Excavation #4 at Lower Terrace, reference sketch P4 and photographs 4A through 4I.

The area excavated around the drain had brick pavers set on a sand bed and 1" thick extruded polystyrene set on a thin asphalt protection board. The protection board covered Bituthene waterproofing membrane adhered directly to the concrete surface.

Reference Floor Plans. A water level was used to determine the slope of the structure below the split slab. The structure from the drain to excavation #2 sloped 1 ½" toward excavation #2. The structure from the drain to excavation # 3 sloped approximate 1/8" to excavation # 3. The structure from excavation #3 sloped approximately 1" to excavation #2.

The drain body was very corroded and the water proofing around the actual drain was incomplete (see photos 4H and 4I)

Notice that the top of the pavers was 4 ¾" from the waterproofing membrane compared with the 6" dimension at the two perimeter excavations (#2 and #3). The pavers were sloped to the drain but the waterproofing sloped toward the perimeter. Thus surface water on top of pavers may access through drain but water below pavers would seep to the perimeter conditions without drains.

Drains must be set at low points in the structure. A paver on pedestal system would allow for consistent insulation, better drainage and easier access for maintenance.

Excavation #5 at Upper Terrace, reference sketch P5 and photographs 5A through 5E.

The split slab waterproofing at the upper terrace was similar to the lower terrace. The primary difference was lack of protection board and additional extruded polystyrene insulation at the upper terrace.

The #5 opening was made at a loose granite panel at a parapet wall. The anchorage of the vertical granite was similar to that found at the lower terrace except the anchors were transferring dead load and wind load to concrete rather than steel studs. The removal of the loose granite panel revealed that the temporary removal of the granite panels may

prove difficult. That difficulty may result in a rather high rate of granite breakage. Whole granite panels can be removed but the process will create audio disturbance. Stainless steel split tie anchors can be sawed off.

Excavation #6 at Upper Terrace, reference sketch P6 and photographs 6A to 6G.

The walking surface side of the partition wall at the large planter was excavated to reveal similar waterproofing materials and methods. The primary difference is that the vertical substrate that the waterproofing dam height is adhered to is directly exposed to the weather. Only the polyurethane sealant between the pavers and the concrete wall offer protection to the turned up waterproofing membrane. Note (photo 6G the membrane is loose).

Reference photo 6E. The concrete wall is capped by granite block. Note that the waterproofing is dependent upon surface polyurethane sealant.

Vertical granite does not need to be modified in this area. However, coping/counter flashing perimeter detailing will be required to protect waterproofing to the dam height and provide movement capabilities for the horizontal walking surface.

Excavation #7 at Upper Terrace, reference sketch P7 and photographs 7A through 7E.

The planter side of the partition wall did not have insulation, sand setting bed or tiles. The waterproofing membrane was the same Bituthene. The installation also differed in that a top sheet starting 12" from the top of the waterproofing membrane was loose at the bottom that covered the actual dam height of 3 ½". The top of the turned up waterproofing did not have a term bar but had fasteners at random dimension averaging 12" on center.

Note on the sketch the polyurethane sealant intersects the waterproofing membrane. The planter waterproofing will have to be completely redone with a much higher dam height counter flashing and coping.

Excavation #8 at Upper Terrace, reference sketch P8 and photographs 8A through 8E.

The excavation of the storefront entrance frame to vertical wall revealed similar conditions to #1 excavation at the Lower Terrace. 2" thick pavers are set on sand setting bed and 1" extruded polystyrene insulation is set on top of Bituthene waterproofing sheet. The curb height under the protruding interior pavers is 3" above the structure but 2 ½" below the top of the horizontal walking surface.

The bottom of the entrance sidelight is ½" above the top of the pavers. The top of the door entrance threshold is 1" above the top of the pavers.

The top perimeters of the pavers are sealed to the vertical granite. The vertical granite as well as the interior pavers must be modified to allow installation of higher dam height for the waterproofing. The outside edge of the interior pavers must not extend outboard of the interior edge of the door threshold and storefront flashing. The vertical granite must be temporarily removed and cut down to allow for the increase in waterproofing dam height and movement of the pavers due to thermal changes.

Excavation #9 at Outside Dining, reference sketch P9 and photographs 9A through 90.

This was the most difficult excavation because one section of brick pavers (photo 9A reference C) were set in concrete on top of a built-up combination of Bitumen membrane sheet and cold applied mastic. Also reference 9F, A, noting the dark strata of concrete and the arrow pointing to the polyethylene slip sheet. The typical sand setting bed was found on the right side of this section. To the right, pavers on sand setting bed on extruded polystyrene, and to the left, dimensional granite on concrete were found.

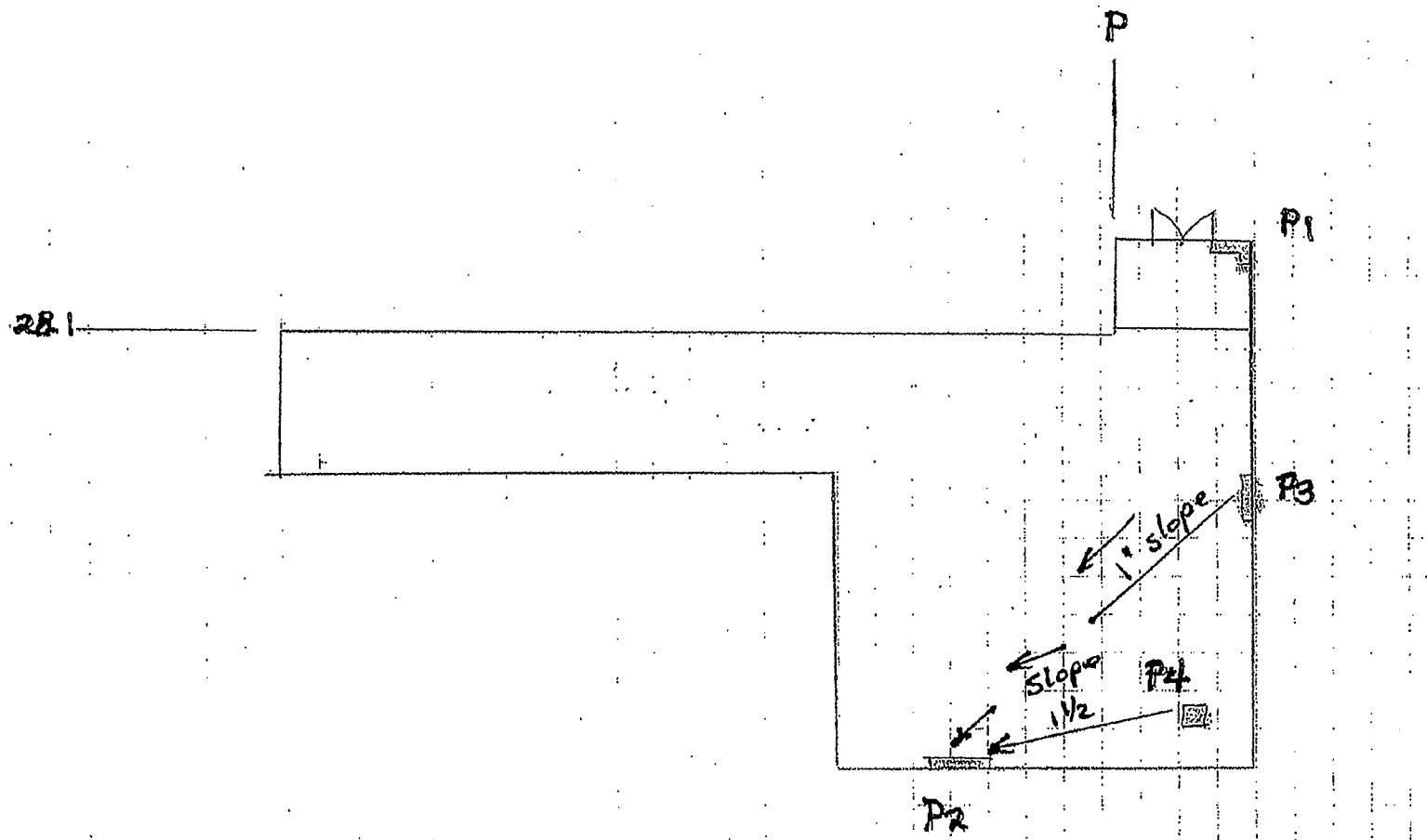
Examine the referenced sketch P9. The left hand side is very similar to the typical excavations with the vertical granite extending below the top of the paver, however the Bituthene waterproofing membrane was turned up to the bottom of the dimensional granite paver also set on concrete.

The curtainwall sill interface with the paver/waterproofing dam height is similar to that of the storefront entrance frames at the lower and upper level terraces. The bottom of the sills and horizontal aluminum panels are 0 to ½" above the top of the pavers (see 90). The major difference is sill flashing for the curtain wall doesn't exists and the true "dry-line" is approximately 2" interior of the exterior of the face caps.

The expansion joint is covered by a build up of Bituthene sheet and LM3000 cold applied mastic. The mastic was not adhered at several points.

Note the sketch reference to "weep tube" and the green lines representing polyurethane sealant. The weathering tie-ins over the expansion joint are polyurethane sealant to aluminum to the right, granite to the left and Bituthene sheet below.

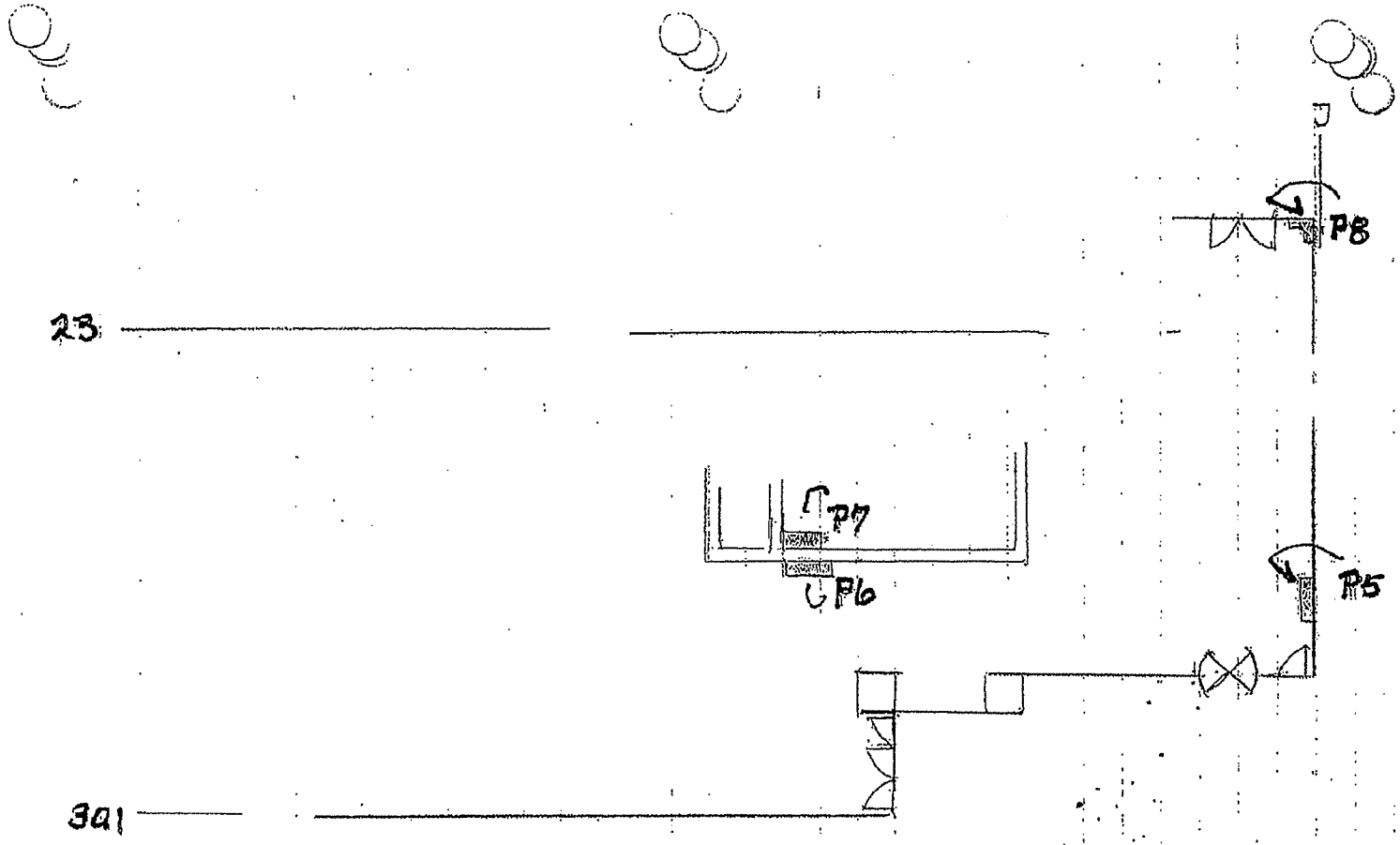
Glass, aluminum window wall components and granite will have to be removed. Some modifications to the granite and the window wall components will have to be modified prior to reinstallation. The waterproofing system will require a bellows type expansion joint compatible for silicone sealant transition to the above surface waterproofing. As in other areas the granite will have to be cut down to allow movement of the walking surface due to thermal changes.



LOCATION PLAN

LOWER LEVEL PLAZA
11/25/03

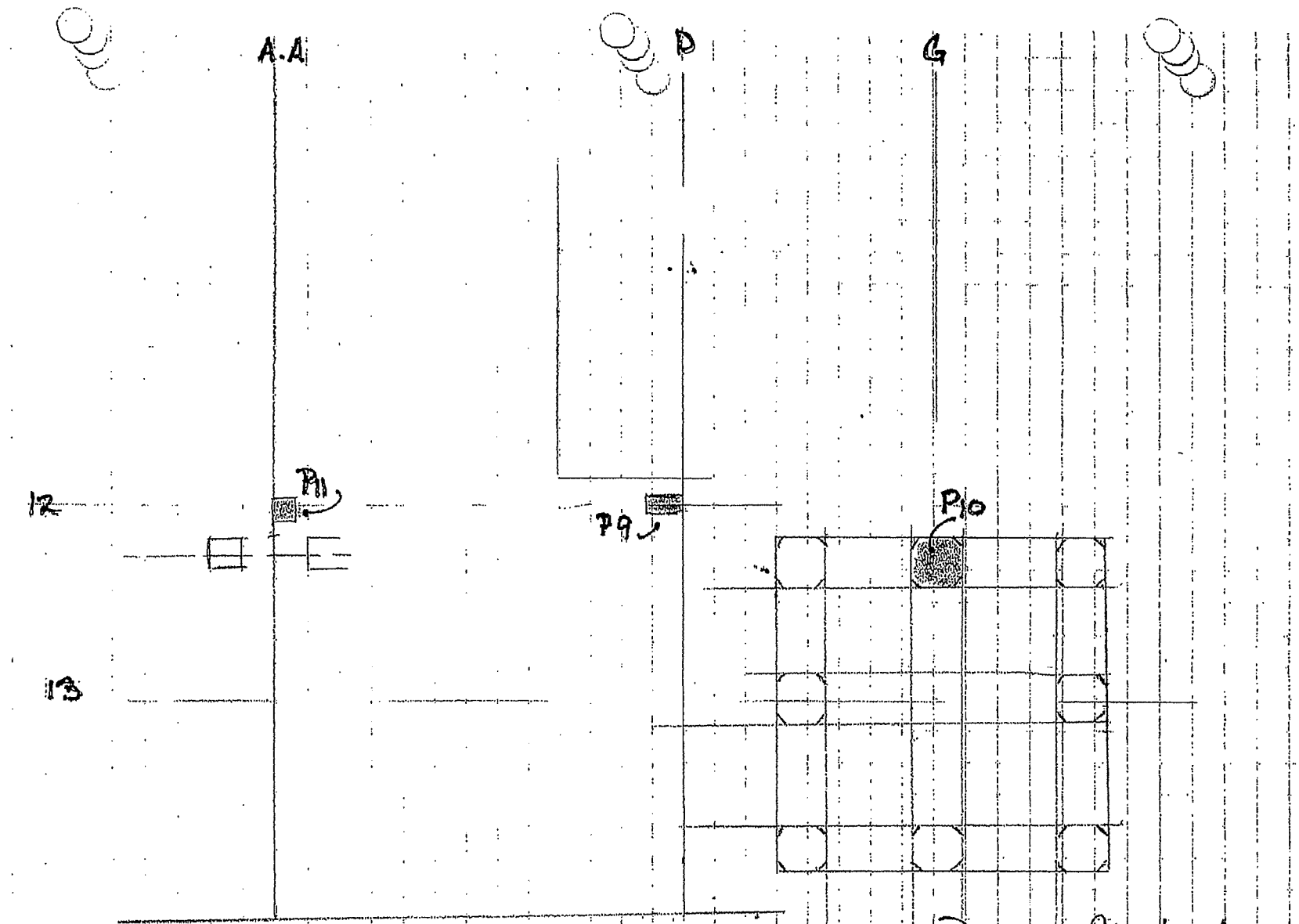
Fulton City Ct. PHASE I
W+A #203346



Fulton Cty Ct PHASE I
W+A# 203346

LOCATION PLAN

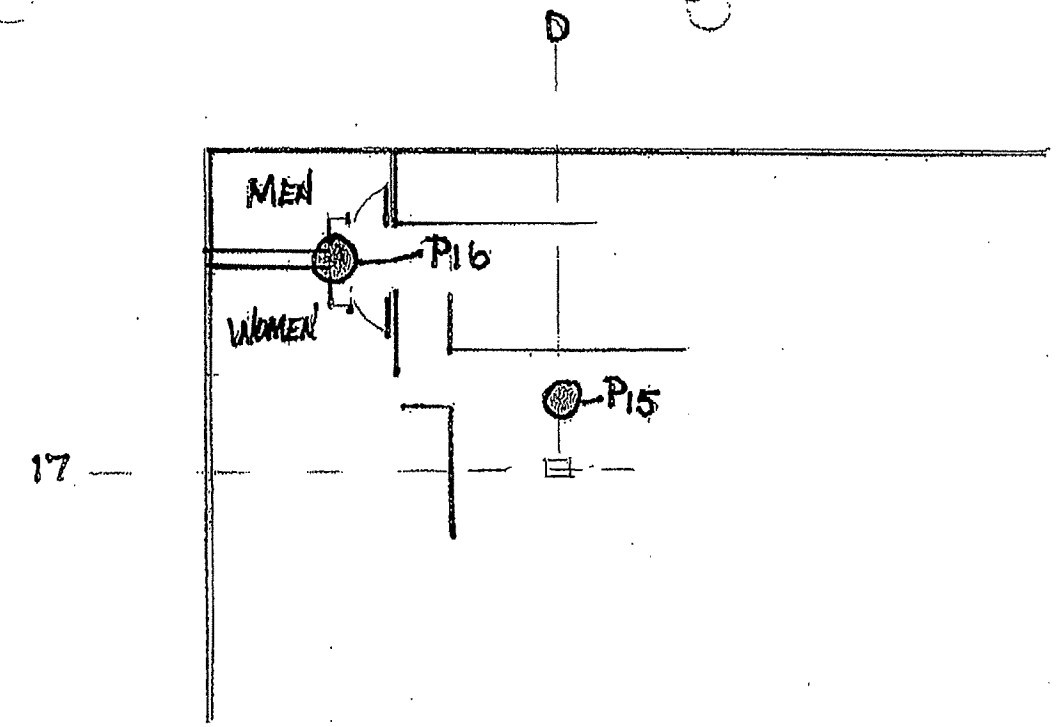
2ND LEVEL PLAZA
11/25/03



Fulton Cty Ct PHASE I
W+A# 20334b

Location Plan

Dining + Planter Area
11/25/03



Fulton Cty Ct Phase II
W+A #203346

Location Plan

Kitchen
11/25/03

Williamson & Associates, Inc.
Construction Consultants

PHASE 1 WATERPROOFING SITE INVESTIGATION
FULTON COUNTY GOVERNMENT CENTER
W&A 203346
November 19, 2003

VOLUME II
PHOTOGRAPHS

5180 Roswell Road, Suite 100 South, Atlanta, Georgia 30342
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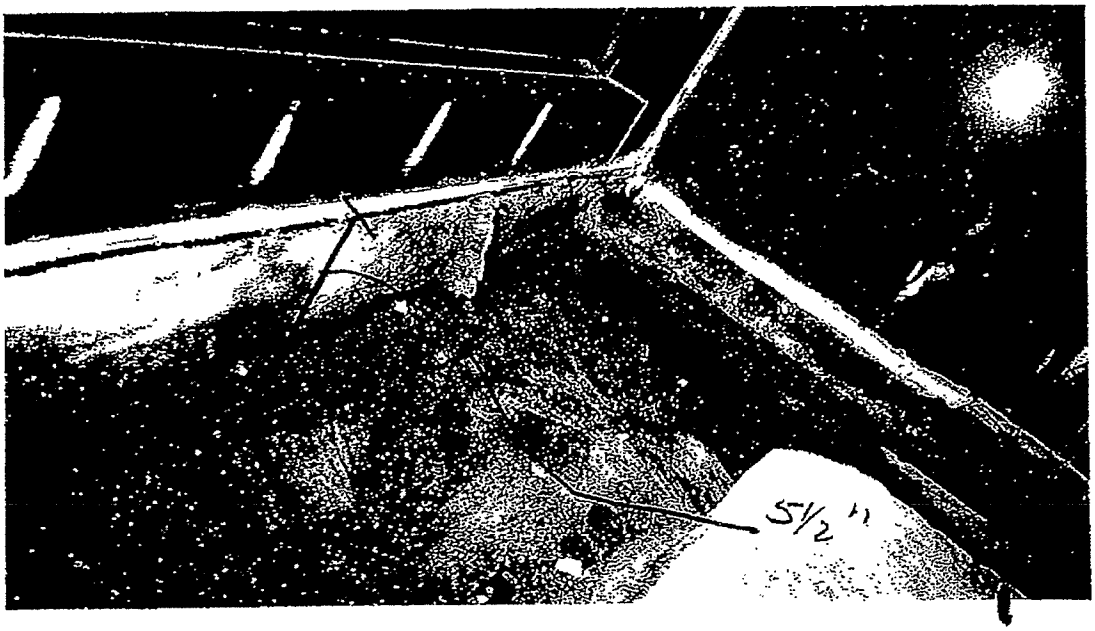
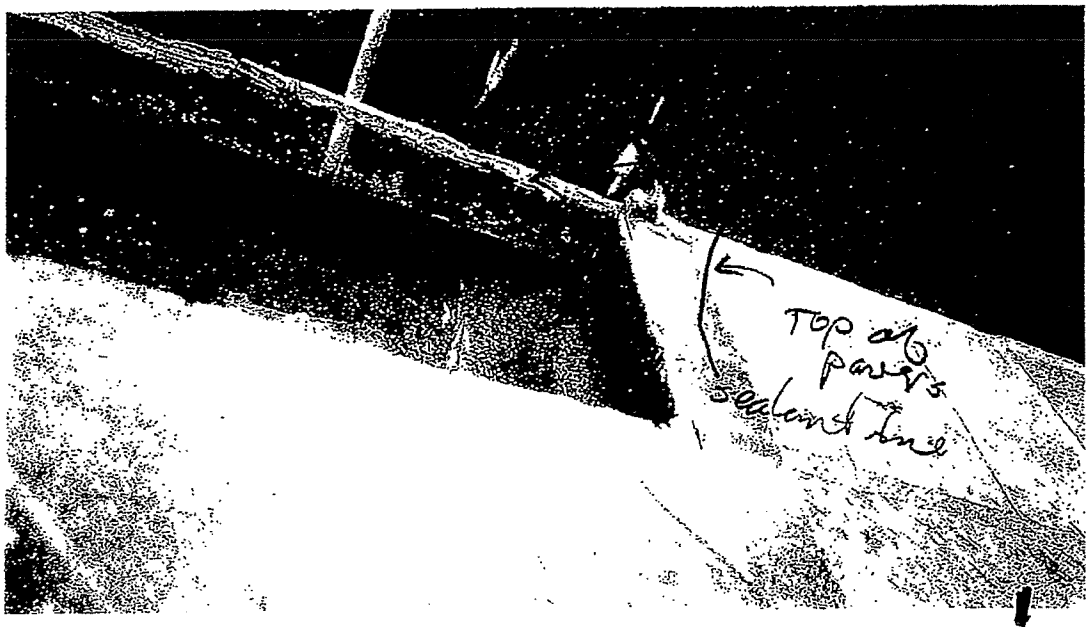
1A: Re. sketch P1. Lower level terrace "storefront" entrance.

1B: Re. sketch P1. Note that the remaining line of sealant on the vertical granite is at the height of the Terrance pavers.

1C: Re. sketch P1. The base waterproofing membrane only turns up 2"; 3" below the top of the pavers.

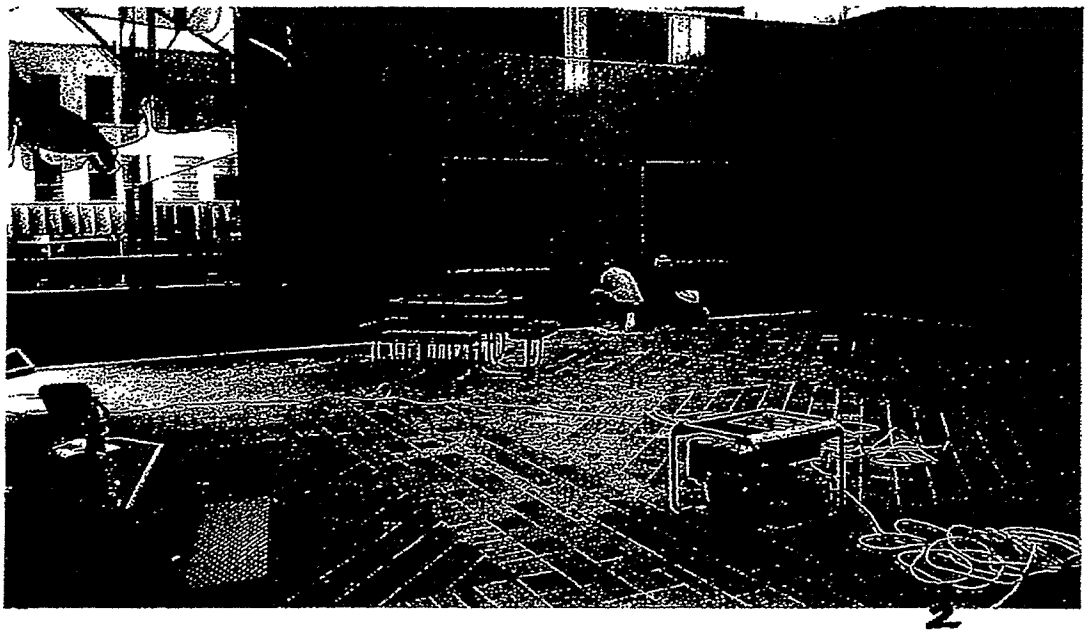


1D: Re. sketch P1. The storefront's sub sill is nominally ½" above the tope of the pavers.

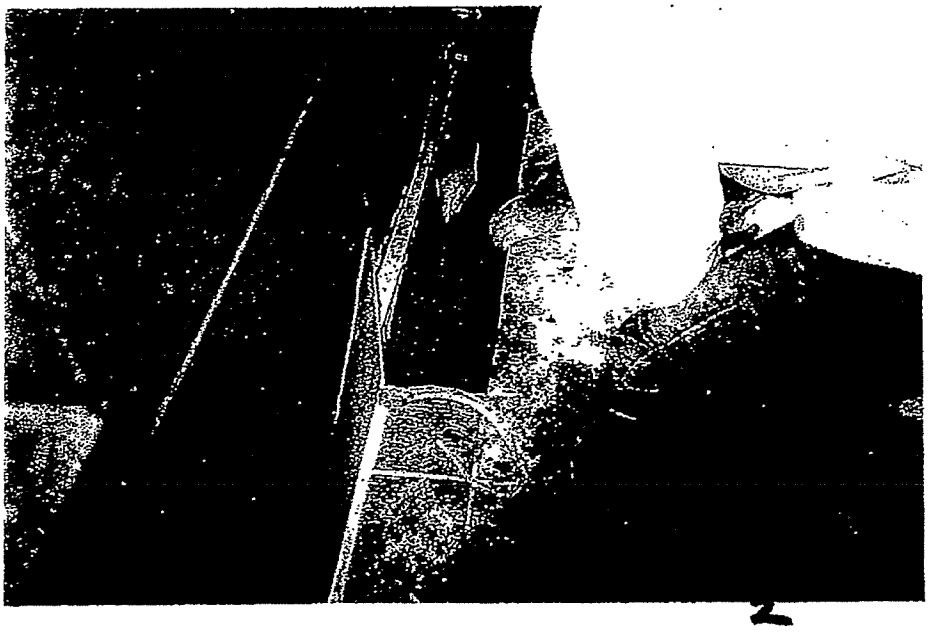


1E: Re. sketch P1. The photograph illustrates the relationship between top of pavers, the vertical granite and the waterproofing membrane.

1F: Re. sketch P1. The photograph illustrates the relationship between top of pavers, the vertical granite and the waterproofing membrane.



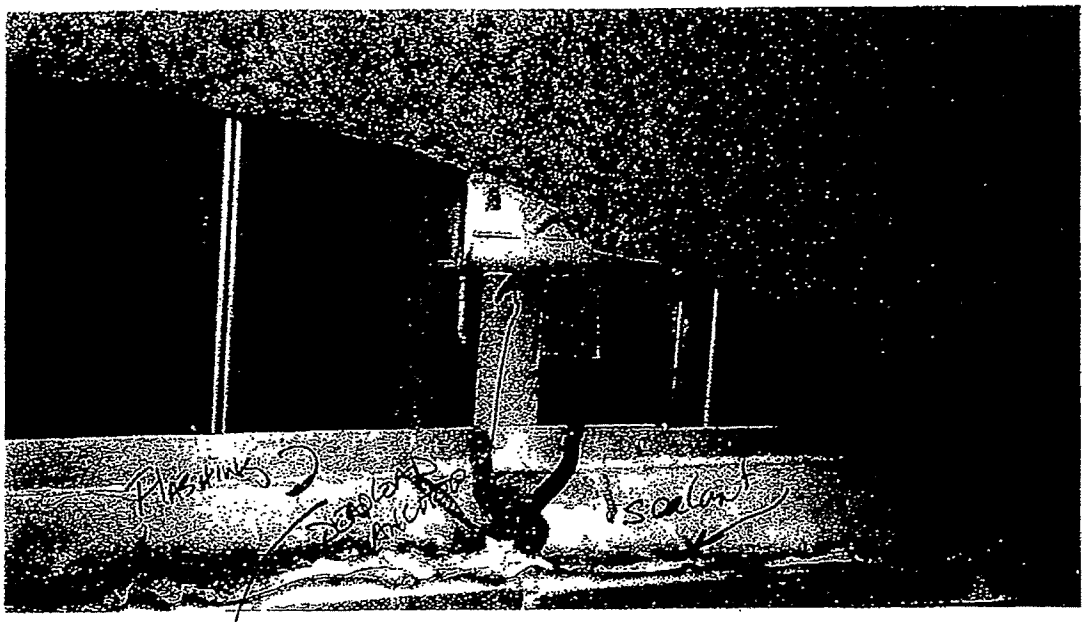
2A: Re. sketch P2. Lower level terrace pavers to vertical wall interface.



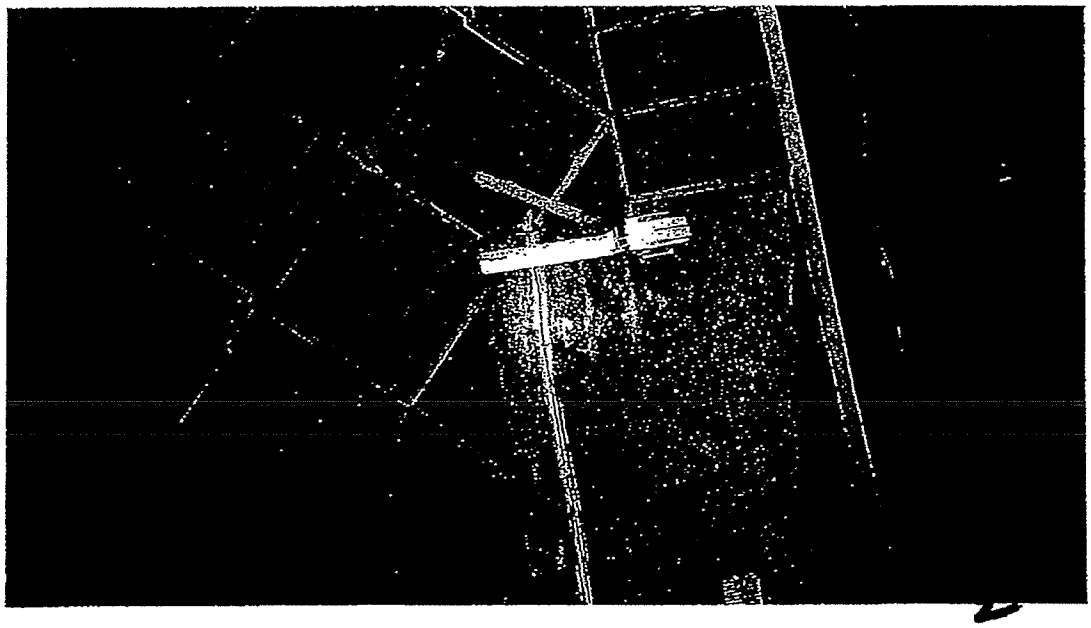
2B: Re. sketch P2. Brick pavers, the broken granite pieces sand setting bed, wire and protection board was removed to access the waterproofing membrane, "peel and stick bitumen sheet".

2C: Re. sketch P2. Wire exposed under sand setting bed.

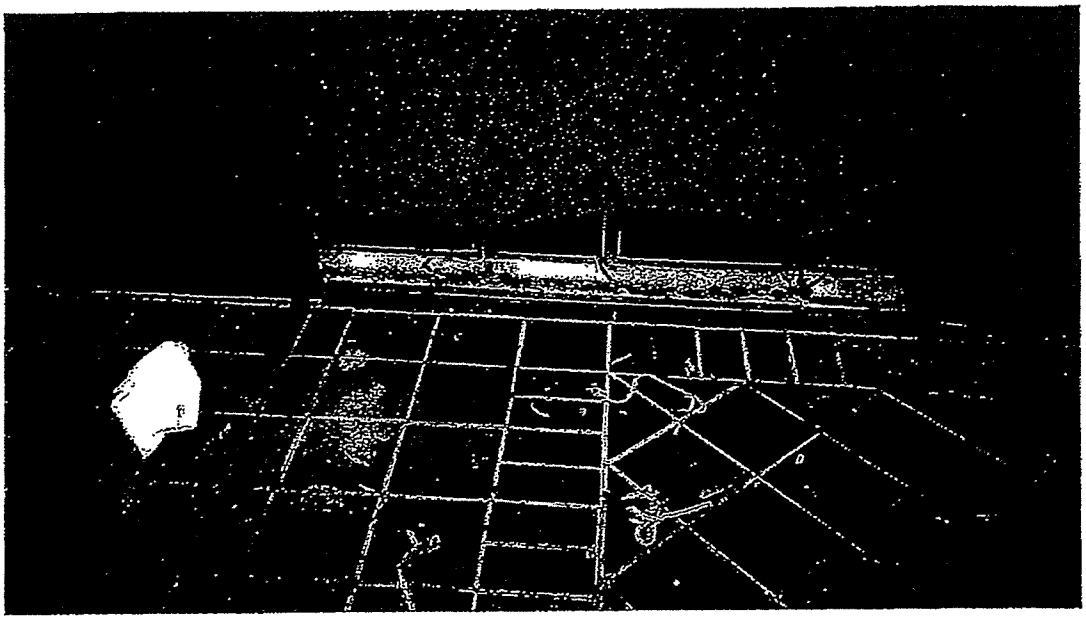
2D: Re. sketch P2. Exposed "concealed flashing" sealed to the back of granite.



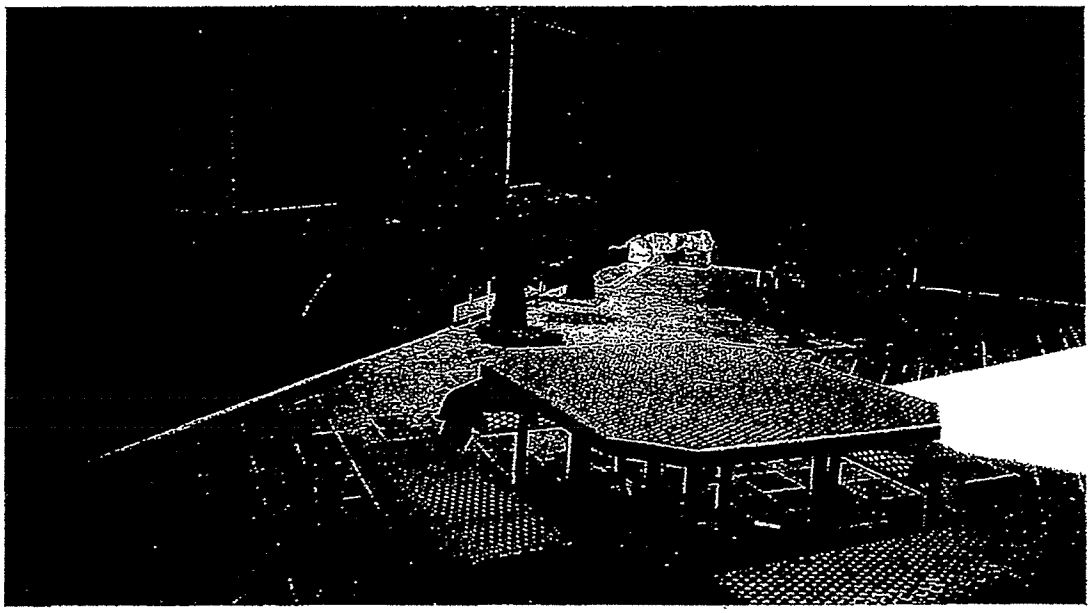
2E: Re. sketch P2. Note dead load anchor welded to stud.



2F: Re. sketch P2. The vertical granite extends 2" below top of pavers.

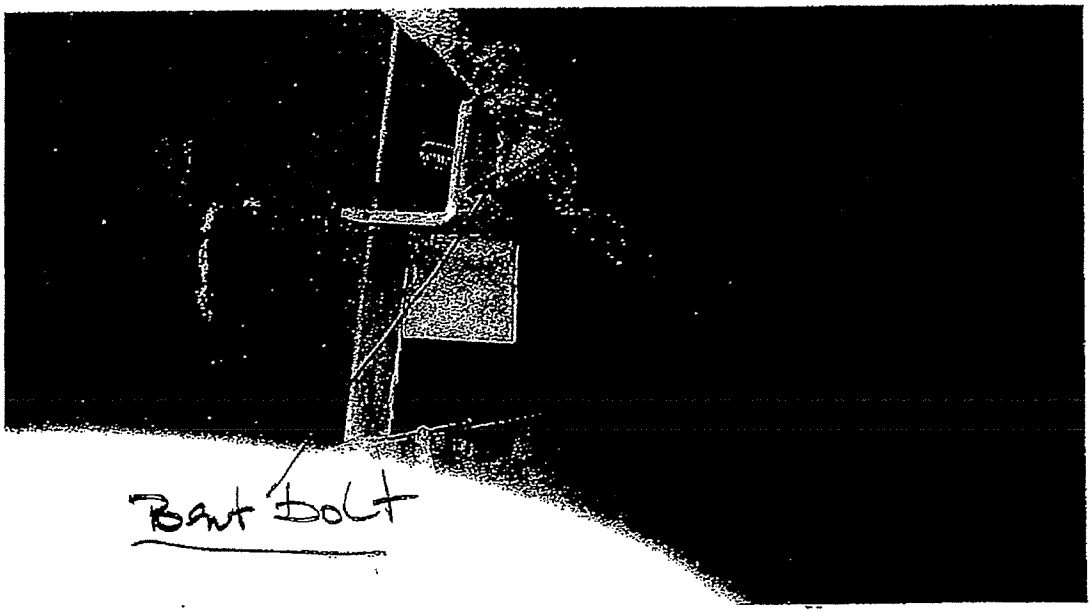


2G: Re. sketch P2. Elevation of the excavated area.

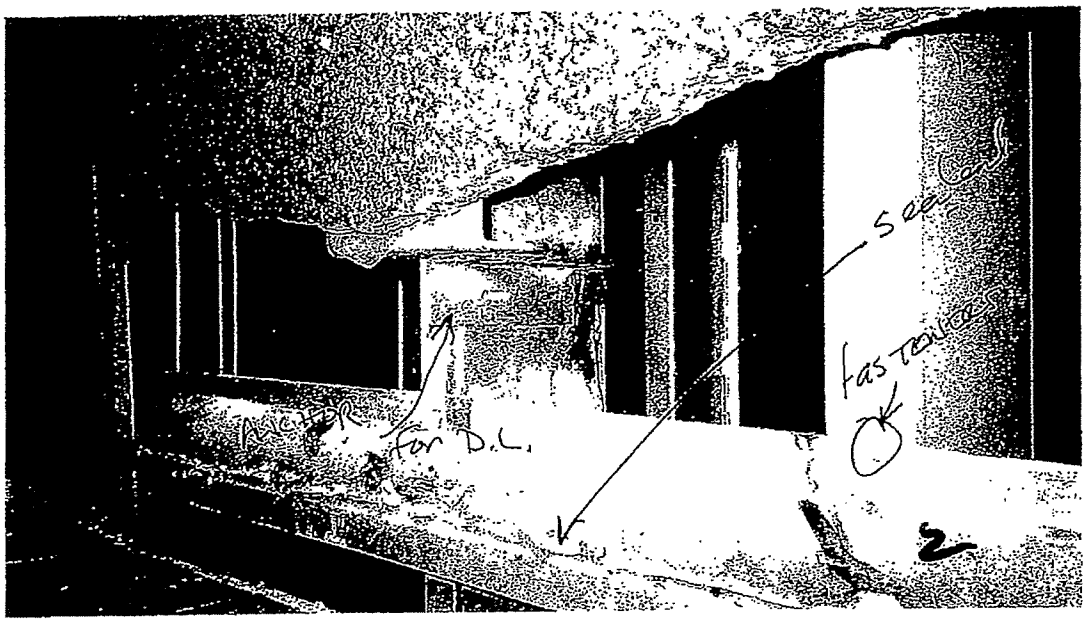


2H: Re. sketch P2. Location shot of the excavated area.

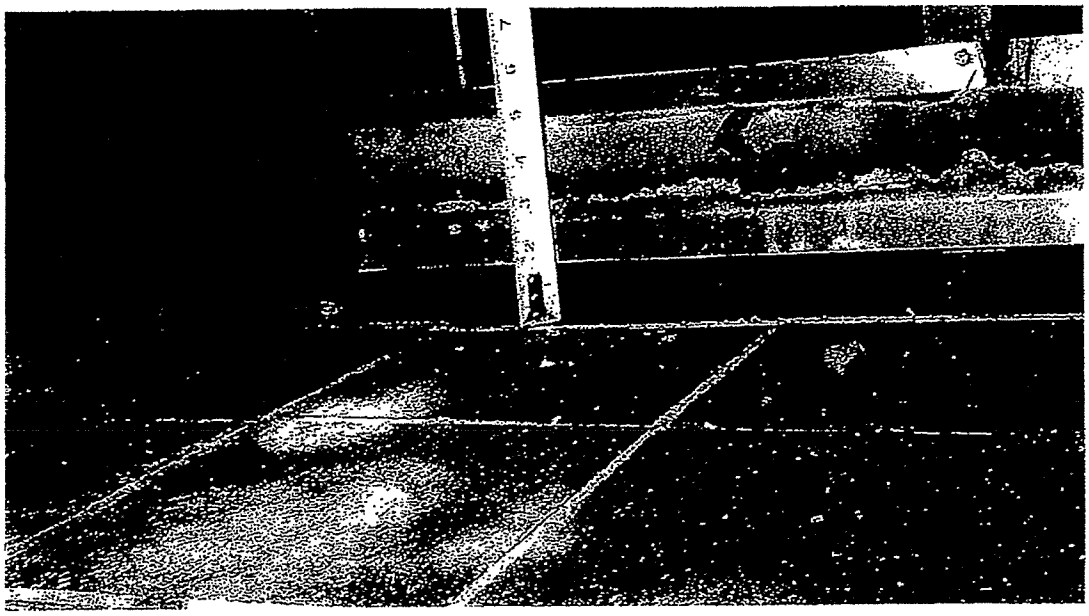
2I: Re. sketch P2. The perimeter waterproofing is below the pavers and below the top of the sand setting bed.



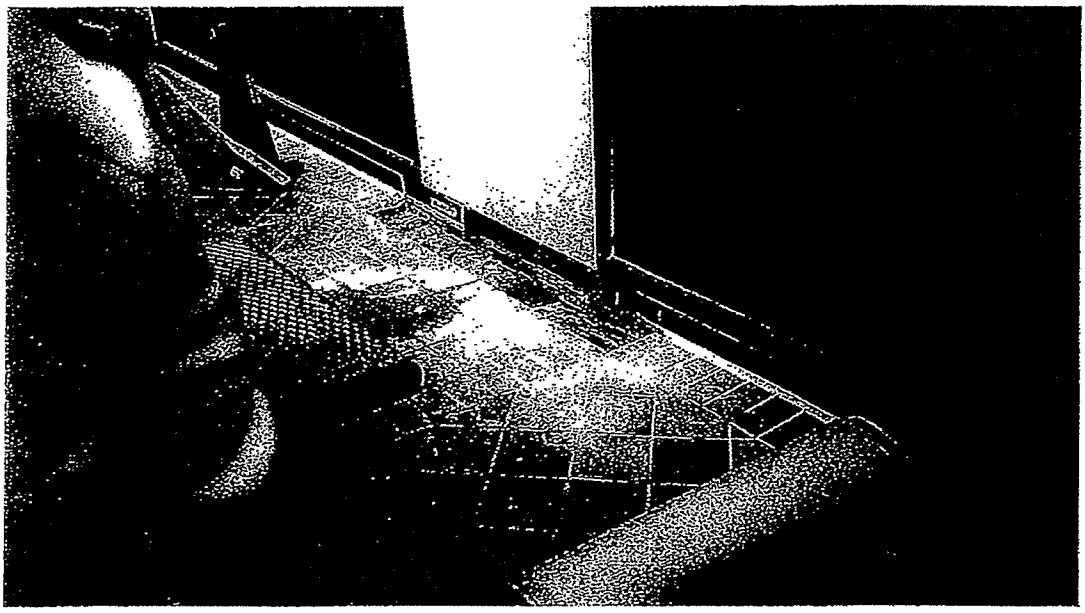
2J: Re. sketch P2. The granite dead load is transferred to the stud by a bent bolt and angle.



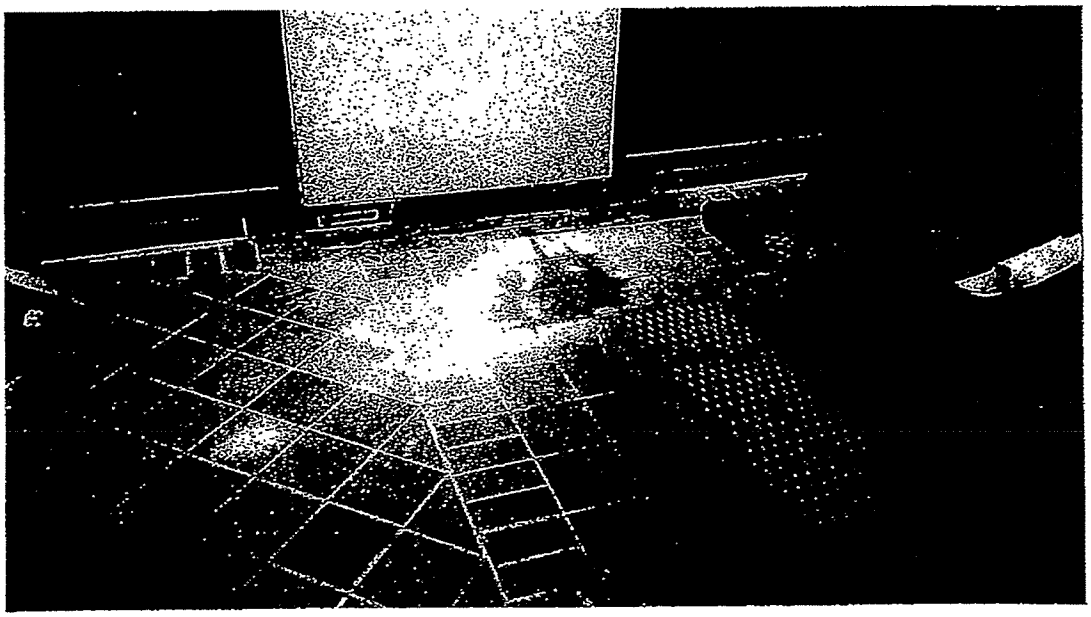
2K: Re. sketch P2. The granite dead load is significantly above the top of the pavers. The concealed flashing is attached to the face of vertical studs.



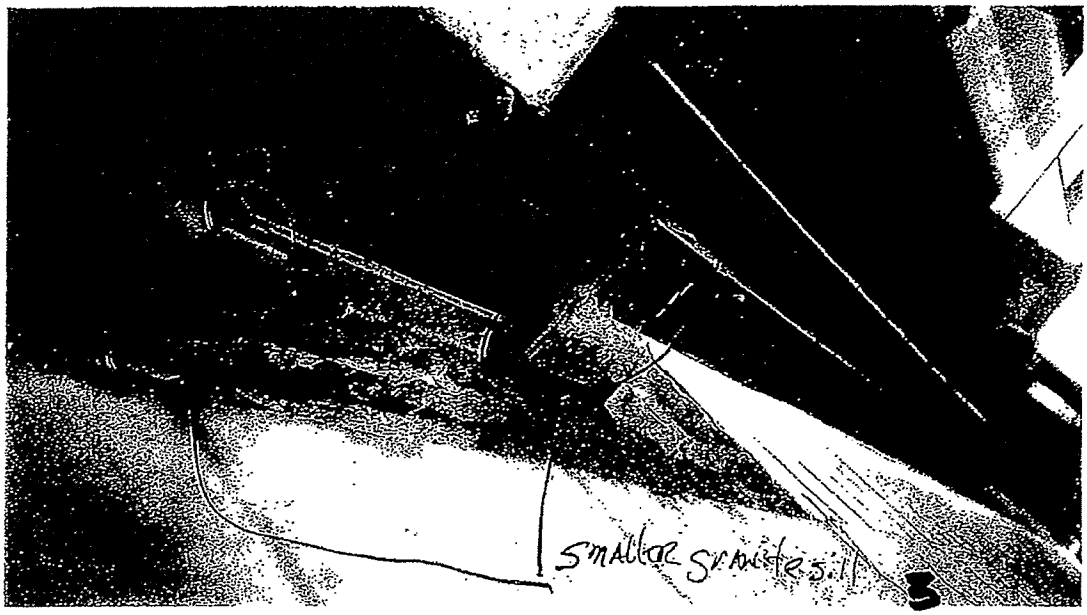
2L: Re. sketch P2. The bottom of the concealed flashing is approximately 1 ½" above the top of the pavers.



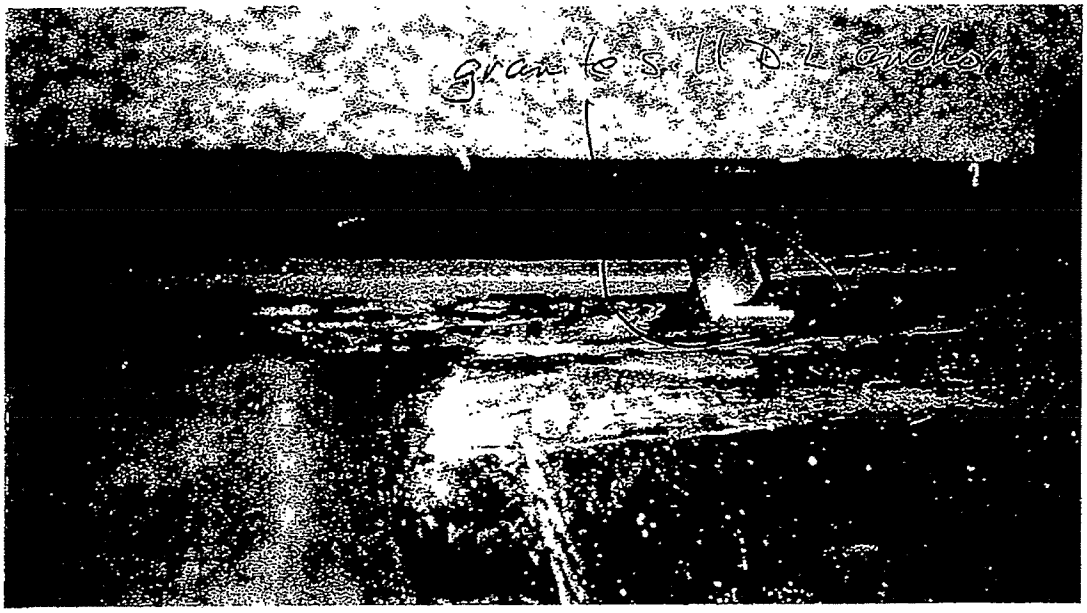
3A: Re. sketch P3. A lower level terrace area was excavated at a window sill and granite sill interface detail.



3B: Re. sketch P3. A lower level terrace area was excavated at a window sill and granite sill interface detail.

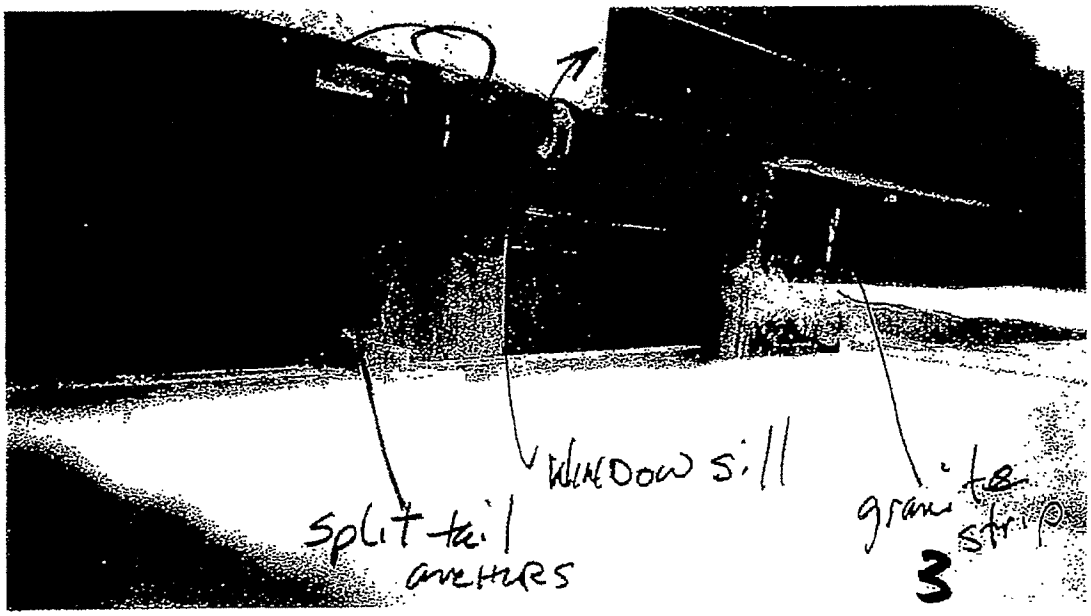


3C: Re. sketch P3. The smaller dark granite piece requires a dead load anchor that is lower than the top of the terrace pavers.

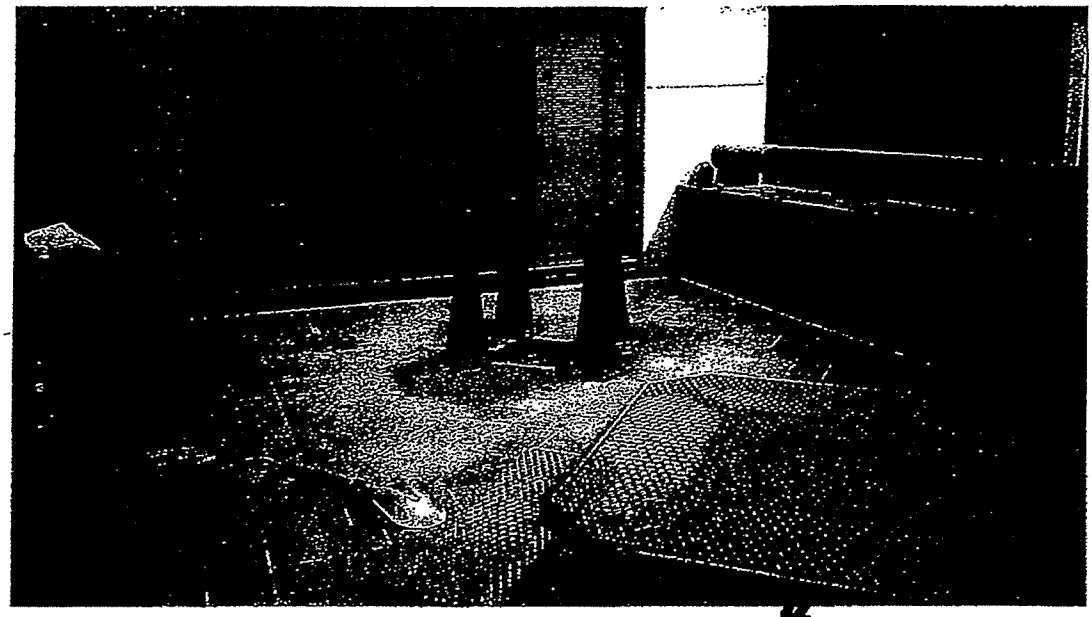


3D: Re. sketch P3. The dead load anchor for the small granite strip.

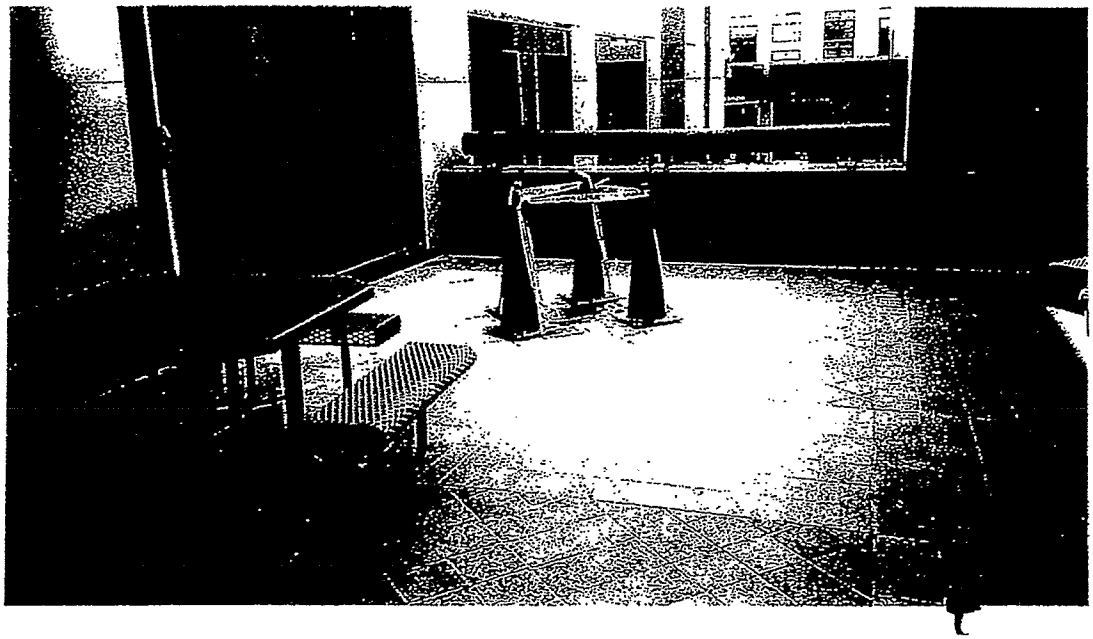
3E: Re. sketch P3. An example of the temporary "dry-in".



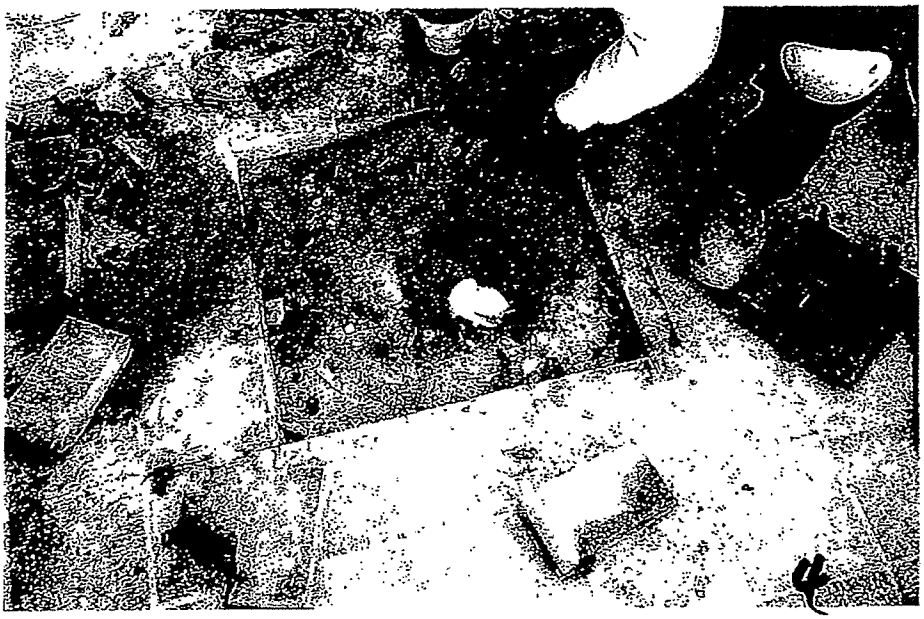
3F: Re. sketch P3. The window sill is set nominally 4" above the top of the pavers. Note the split-tail anchors used to hold the granite strip in place.



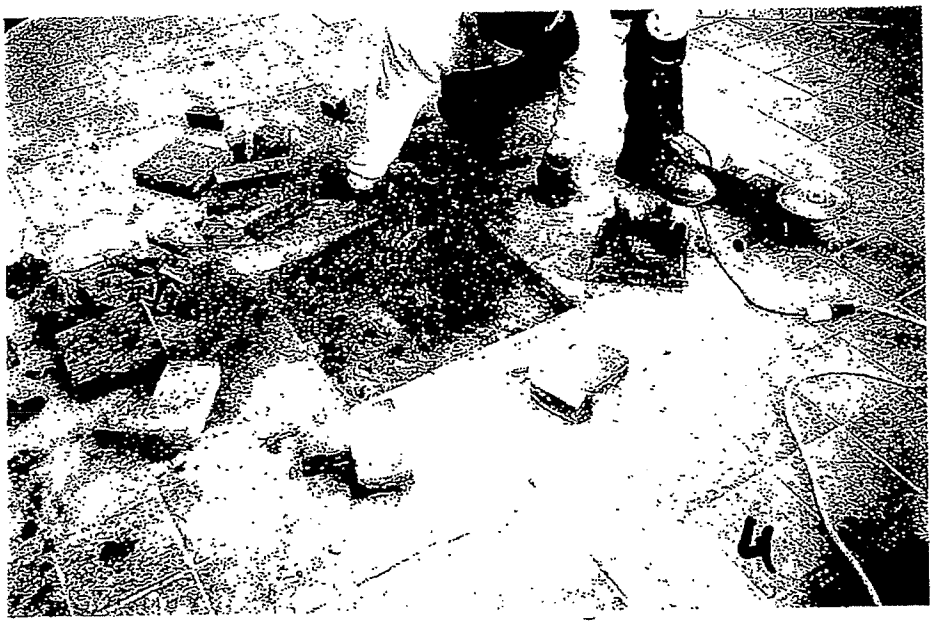
4A: Re. sketch P4. The paving area around a drain at the lower terrace was excavated.



4B: Re. sketch P4. An example of the temporary "dry-in" of the work in progress.



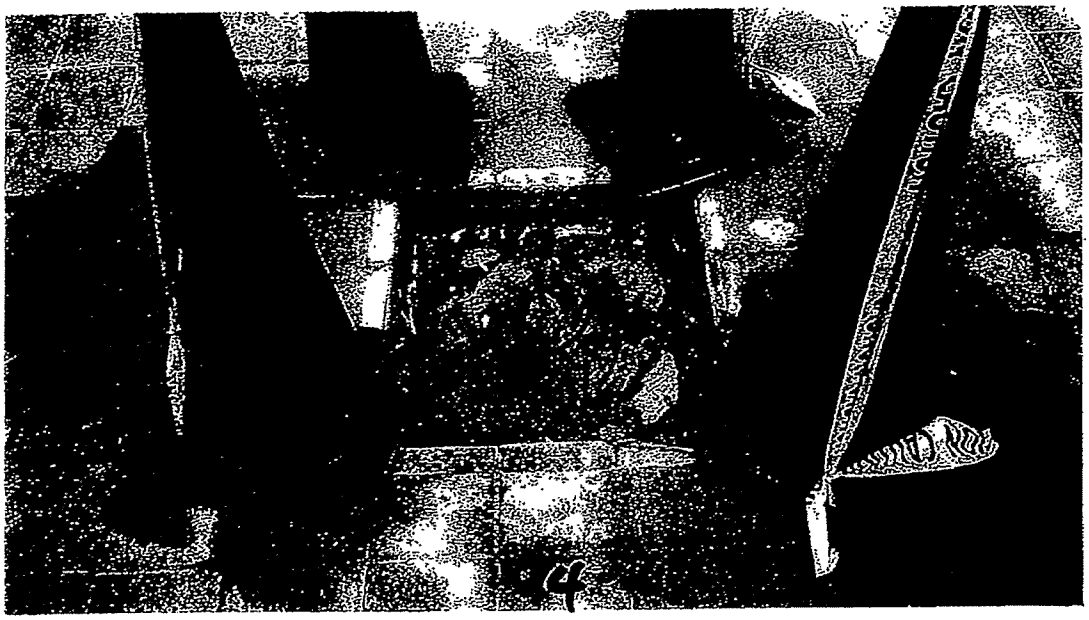
4C: Re. sketch P4. The removal process around the drain required more of the existing pavers to be destroyed.



4D: Re. sketch P4. The drain was corroded and in poor condition.

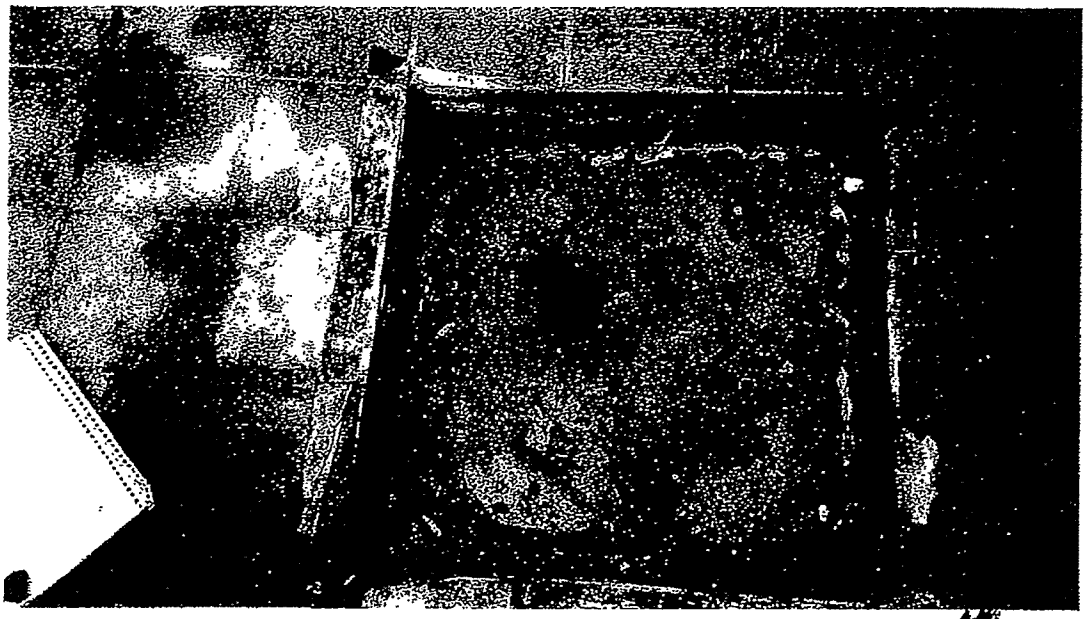
4E: Re. sketch P4. Each layer was examined during the excavation.

4F: Re. sketch P4. Each layer was examined during the excavation.

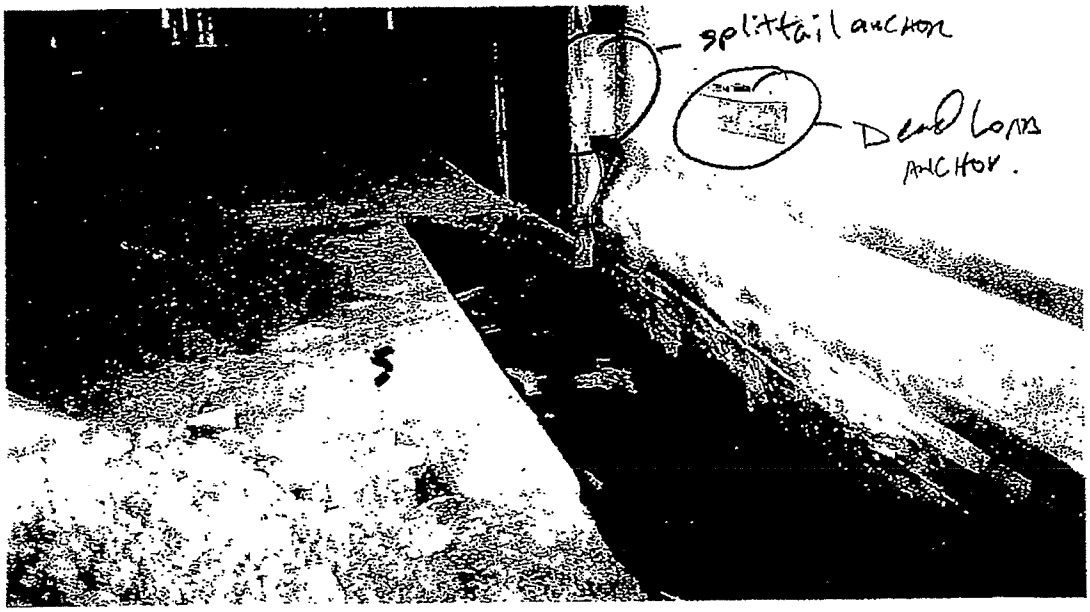


4G: Re. sketch P4. The drain head fastening was corroded.

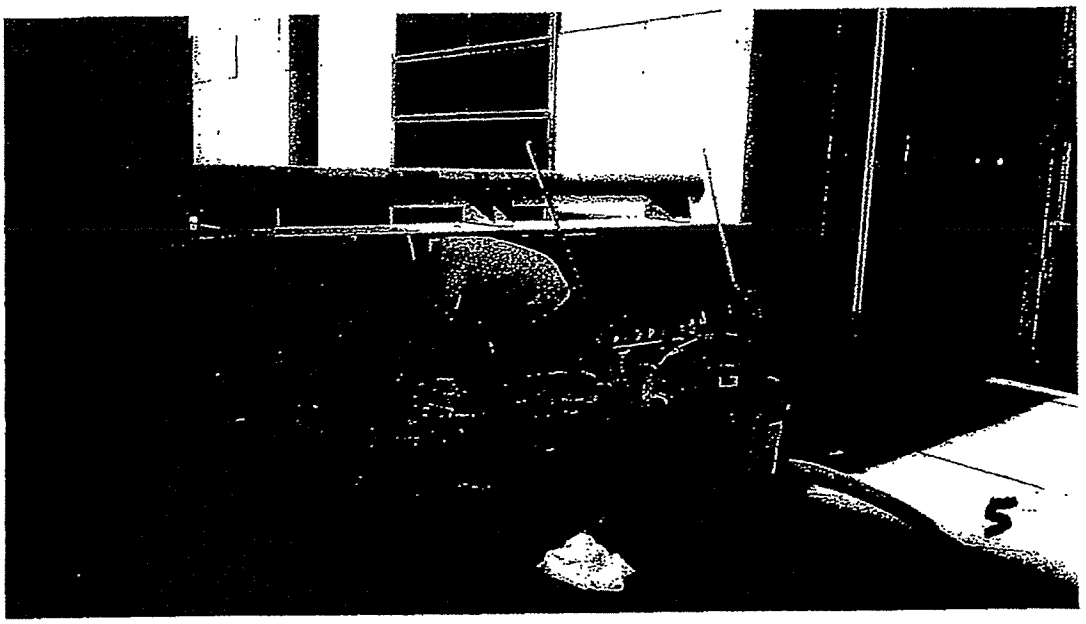
4H: Re. sketch P4. The drain head fastening was corroded.



4I: Re. sketch P4. The perimeter of the drain was delaminating from the sheet waterproofing.

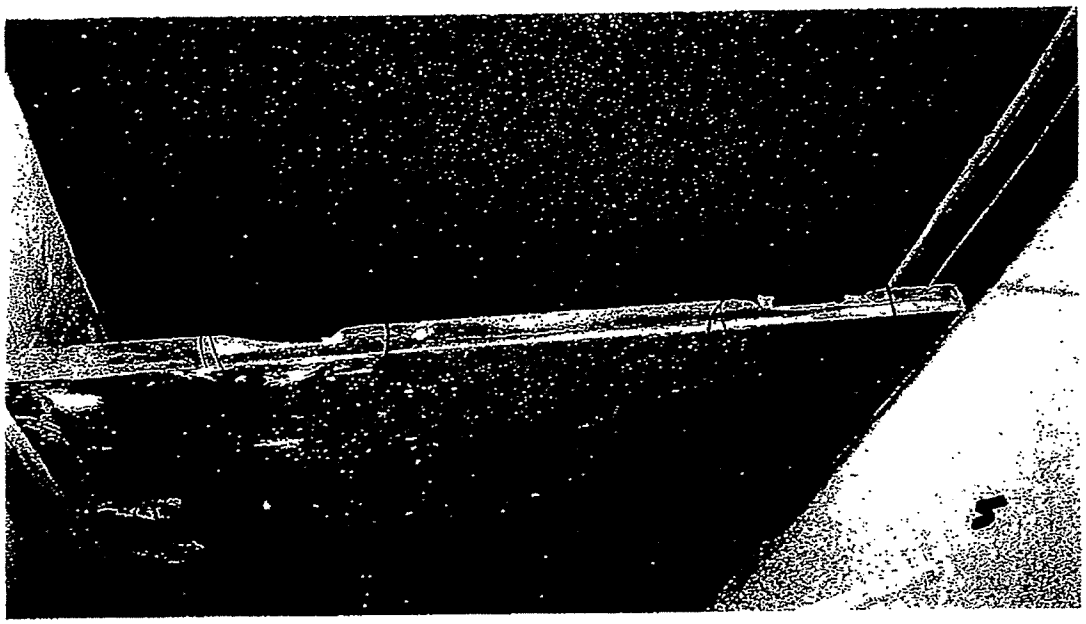


5A: Re. sketch P5, upper terrace. The installation of the vertical granite and pavers on the upper terrace is essentially the same as the lower terrace. The upper terrace did not have asphalt protection board. Note here the granite dead load clips and concealed flashings are attached to a concrete wall in lieu of metal studs.



5B: Re. sketch P 5, upper terrace. This is a location photograph of the excavation.

5C: Re. sketch P5, upper terrace. The vertical granite dead load is very similar to the lower terrace; however the wind load fasteners are different. Note, split tail anchors are used in kerfs on the vertical edges of the granite for wind load connections.



5D: Re. sketch P5, upper terrace. The ends of the granite were broken at the side kerf

5E: Re. sketch P5, upper terrace. Note the intact dead load anchor and the failed granite at the side kerf anchor wind load locations.

6A: Re. sketch P6, upper terrace. Both sides of the curb wall (terrace and planter side) were excavated.

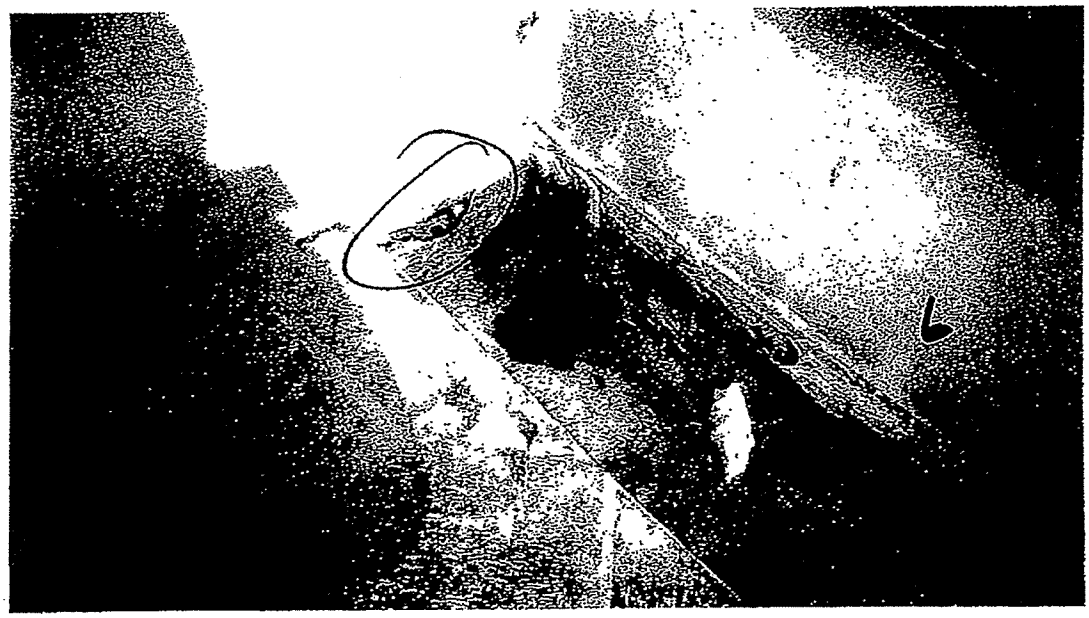
6B: Re. sketch P6, upper terrace. Both sides of the curb wall were excavated.

6C: Re. sketch P6, upper terrace. Notice the dark moist areas.

6D: Re. sketch P6, upper terrace. Notice the dark moist areas.

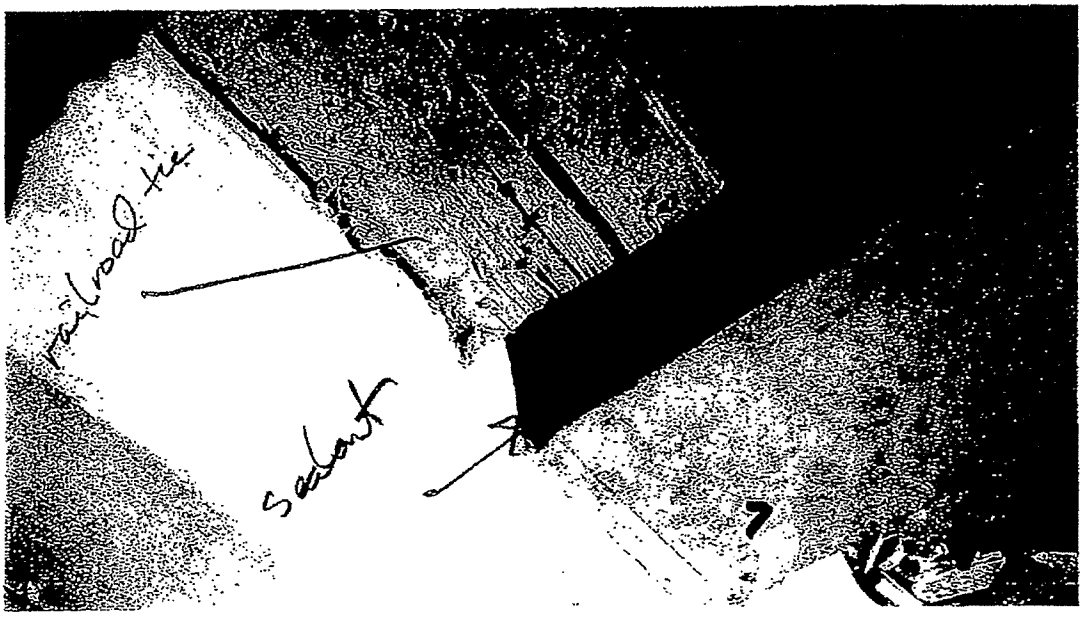
6E: Re. P7, upper terrace. The polyurethane sealant at the granite cap stone intersection with the concrete wall failed cohesively and adhesively.

6F: Re. P6, upper terrace. The top of the bituthene sheet is nominally 1" lower than the top of the pavers.



6G: Re. P6, upper terrace. The top of the bituthene sheet was loose.

7A: Re. P7, upper terrace, planter side of wall. Note penetration requirements.



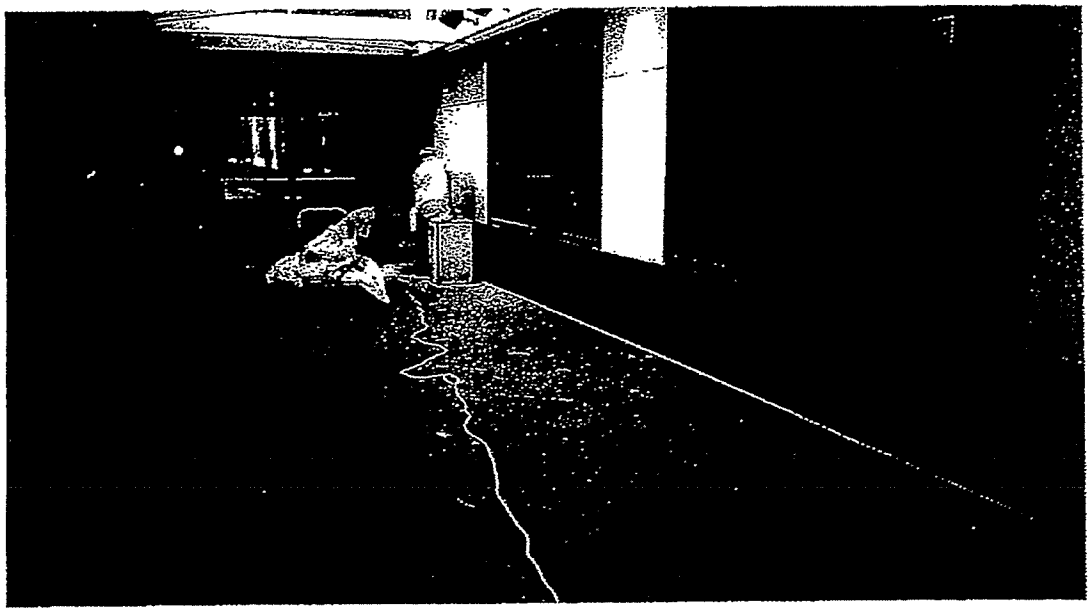
7B: Re. P7, upper terrace. The polyurethane sealant continues through the line of the top of the sheet waterproofing.

7C: Re. P7, upper terrace. The top side of the sheet membrane waterproofing is loose and torn.

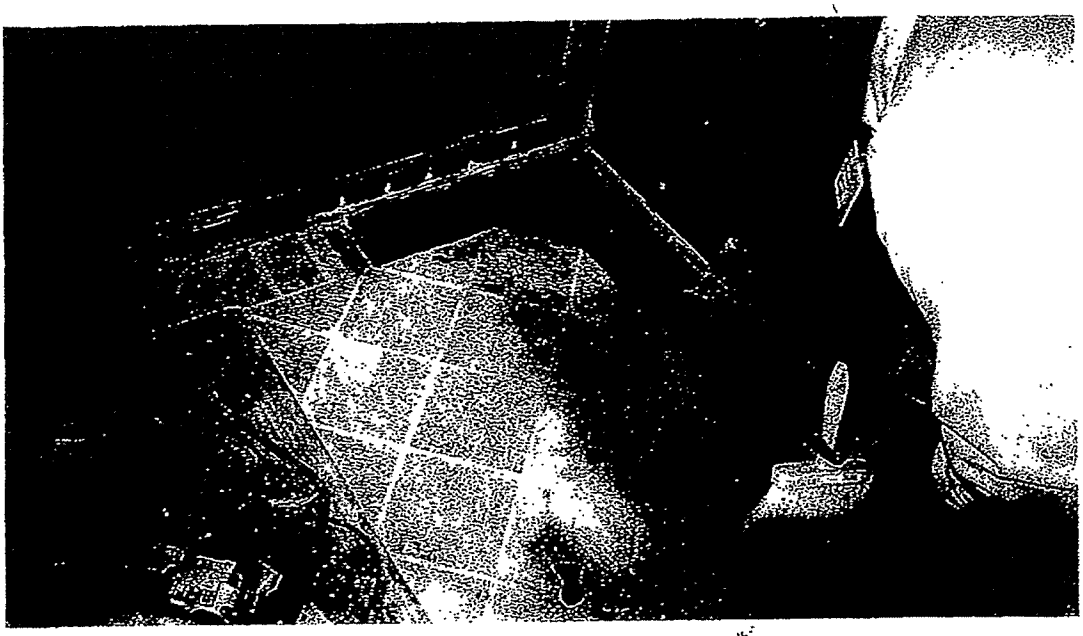
7D: Re. P7, upper terrace. The top side of the sheet membrane waterproofing is loose.

7E: Re. P7, upper terrace. The loose membrane is not attached or stuck to the actually waterproofing sheet that extends only 3 ½" up the curb.

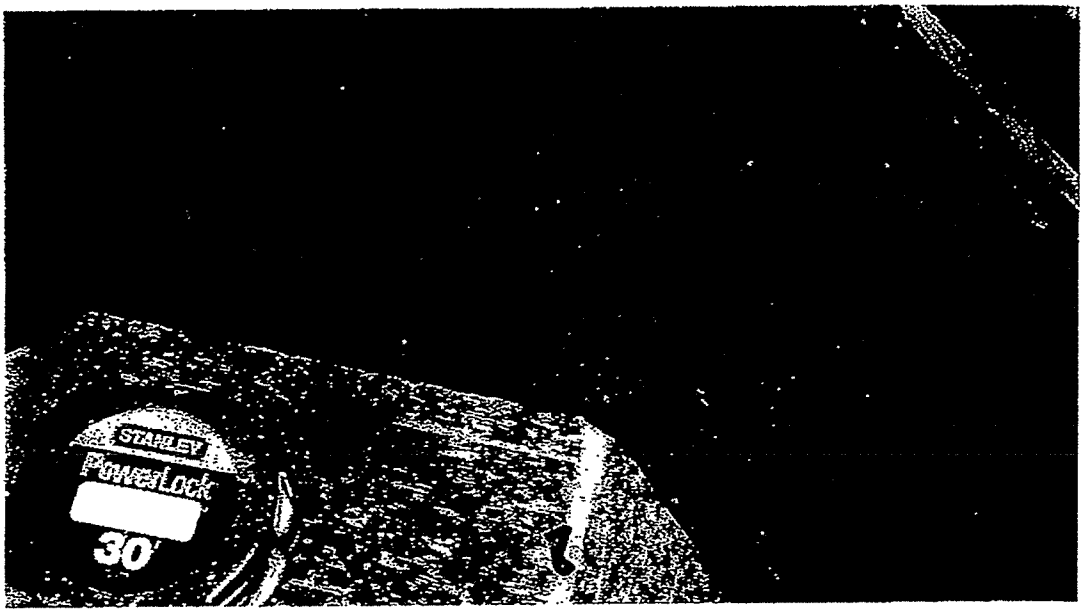
8A: Re. P8, upper terrace. The terrace side of the storefront entry frame was excavated. The findings were quite similar to the findings at P1, lower level terrace entrance.



8B: Re. P8, upper terrace. The terrace side of the storefront entry frame was excavated. The findings were quite similar to the findings at P1, lower level terrace entrance.

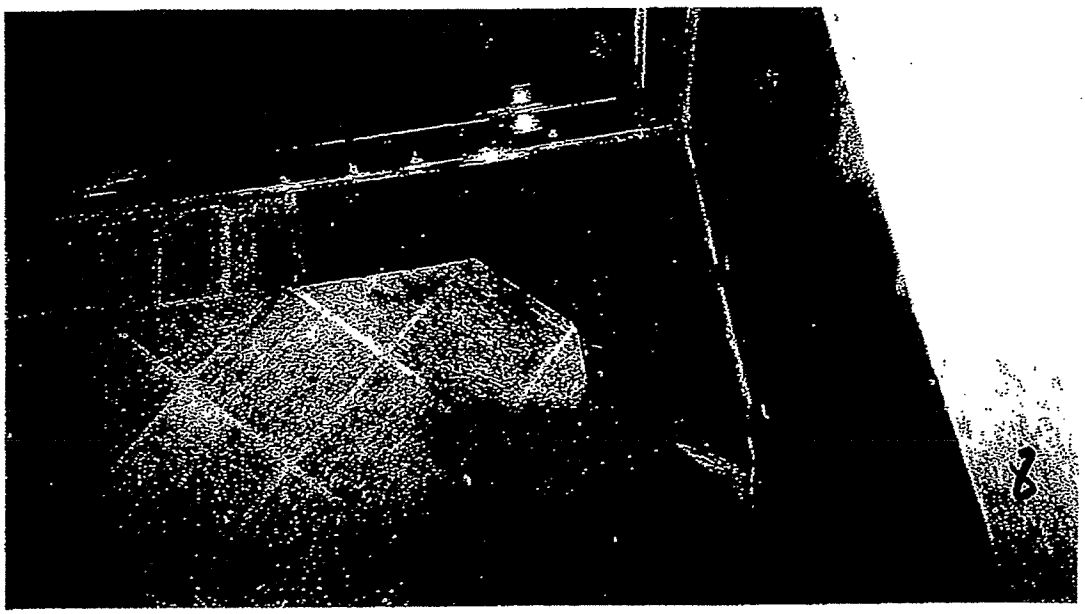


8C: Re. P8, upper terrace. This entry area had one layer of polystyrene board where the lower terrace had two layers.



8D: Re. P8, upper terrace. Moisture was found between the sheet waterproofing and the top of the slab.

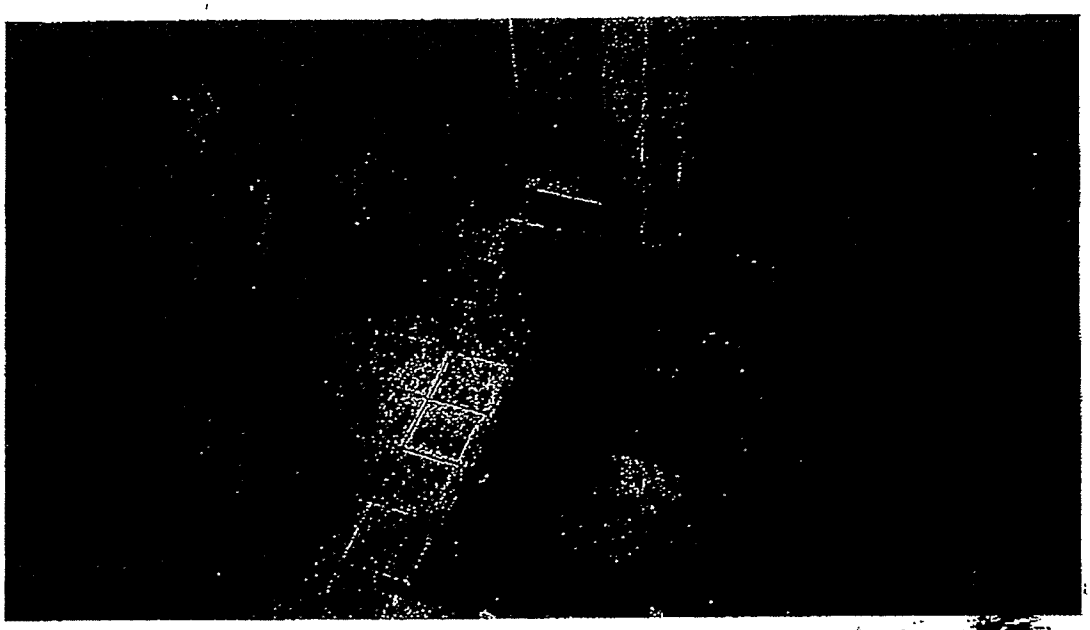
8E: Re. P8, upper terrace. The store front sill was nominally ½" higher than the top of the pavers, similar to P1, lower terrace.



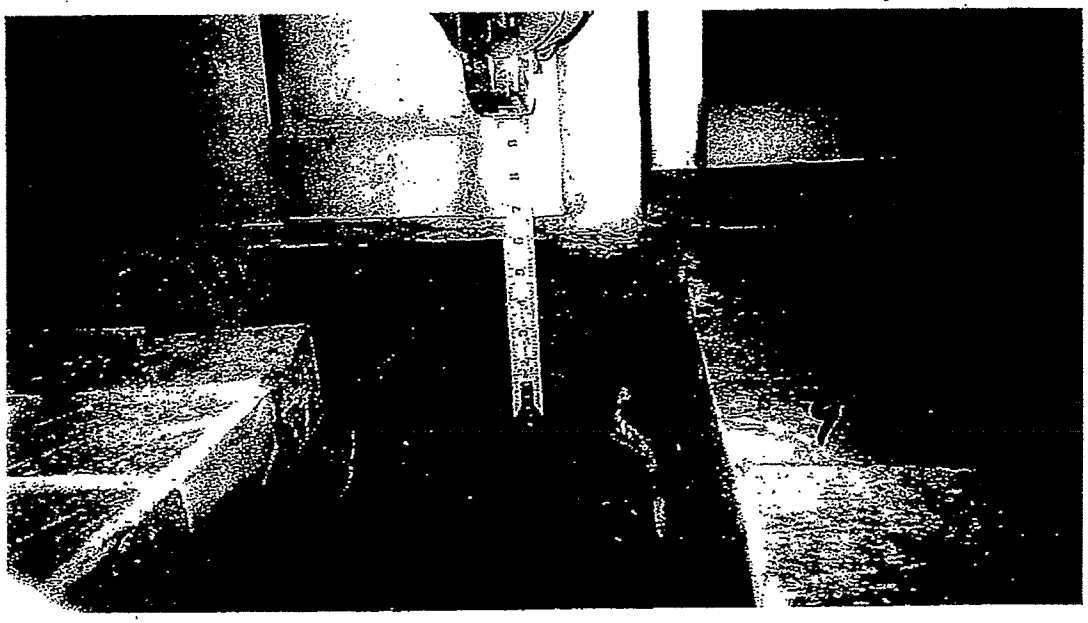
8E: Re. P8, upper terrace. Essentially they relationship of the vertical granite, curb and waterproofing was very similar to P1, lower terrace.

9A: Re. P9, outside dining. The excavation at outside dining took several trips to complete. Re. C on P9, the pavers alone the line perpendicular to the plane of the curtainwall was set into concrete rather than the sand bed to the right and left of that line.

9B: Re. P9, outside dining. The excavation at outside dining took several trips to complete. Re. C on P9, the pavers alone the line perpendicular to the plane of the curtainwall was set into concrete rather than the sand bed to the right and left of that line.



9C: Re. P9, outside dining. The interface details included curtainwall sills, vertical granite and various forms or formed aluminum panels.

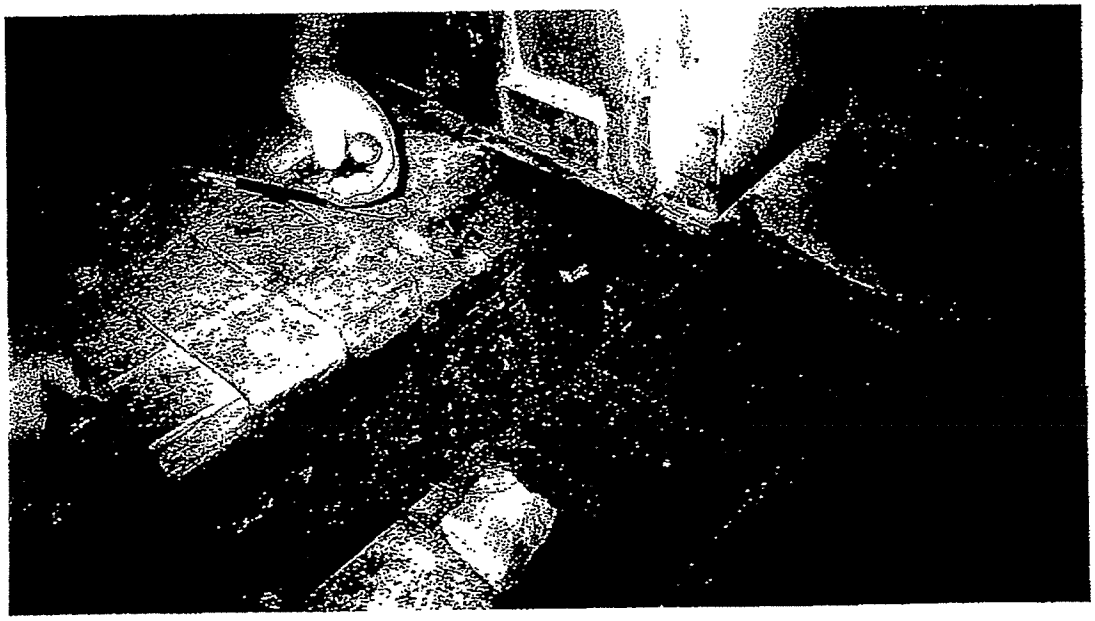


9D: Re. P9, outside dining. The sheet waterproofing was turned up the vertical substrate to a line just below the top of the pavers, below the curtain wall sill.

9E: Re. P9, outside dining. The portion of the pavers set in concrete was a departure to all other conditions at the excavations.

9F: Re. P9, outside dining. 'A', the dark strata under the pavers is concrete. The other arrow points to a polyethylene slip sheet.

9G: Re. P9, outside dining. As in F the dark strata is the concrete as one can see that the slip sheet is setting atop a build-up of LM-3000 waterproofing.



9H: Re. P9, outside dining. A day's delay was necessary to confirm the approval of the demolition of brick pavers set in concrete.

9I: Re. P9, outside dining. A different angle, reference 9E.

9J: Re. P9, outside dining. A different angle, reference 9F.

9K: Re. P9, outside dining. The concrete set pavers were removed to reveal a heavy build up of LM-3000 waterproofing set over the typical sheet waterproof. The adhesive of the LM-3000 was inconsistent.

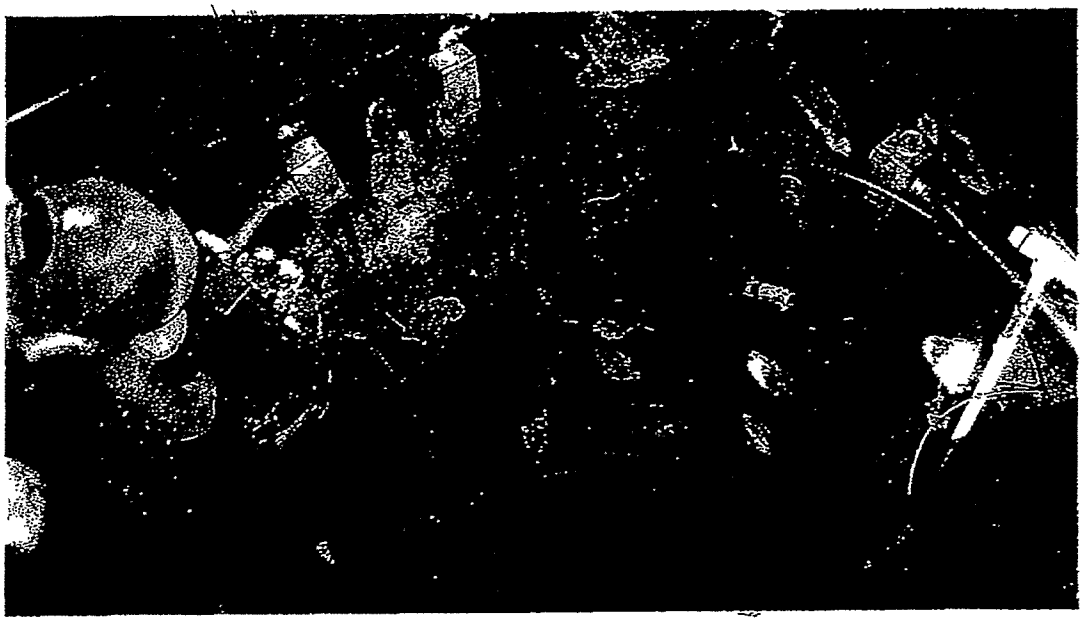
9L: Re. P9, outside dining. The destruction of a few pavers revealed the granite (under the workman's knees) was set on a sand bed and relatively easy to temporarily remove.

9M: Re. P9, outside dining. The suspected expansion joint area was directly below the concrete set pavers and the slip sheet.

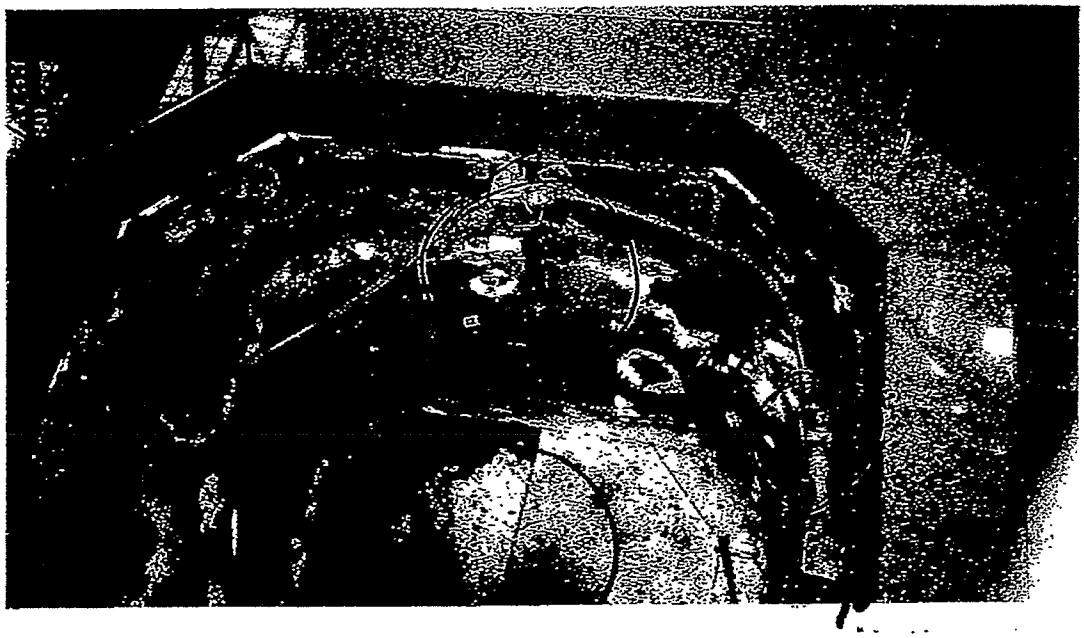
9N: Re. P9, outside dining. The suspected expansion joint area was directly below the concrete set pavers.

9O: Re. P9, outside dining. A view of the excavation with the pavers on sand bed to the right.

10A: Re. planter in the dining room. The planter was excavated by Fulton County personnel. Specific protection board was not found. However remnants of the 1" thick expanded polyethylene board were found over the W.R. Grace Bituthene 1000 sheet.

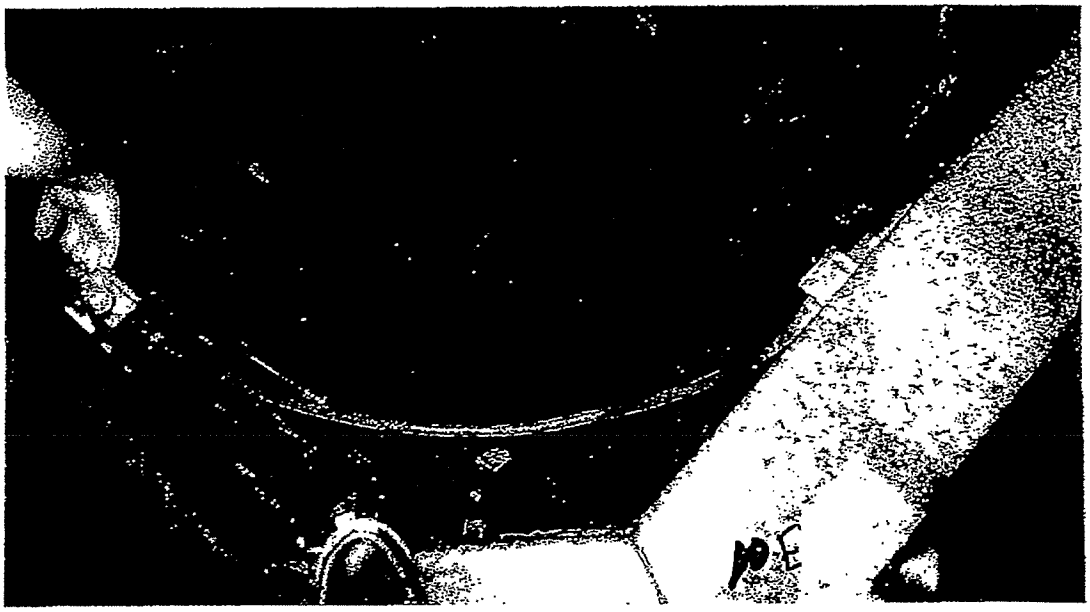


10B: Re. planter in the dining room. Obviously the waterproofing sheet is penetrated by various conduits.

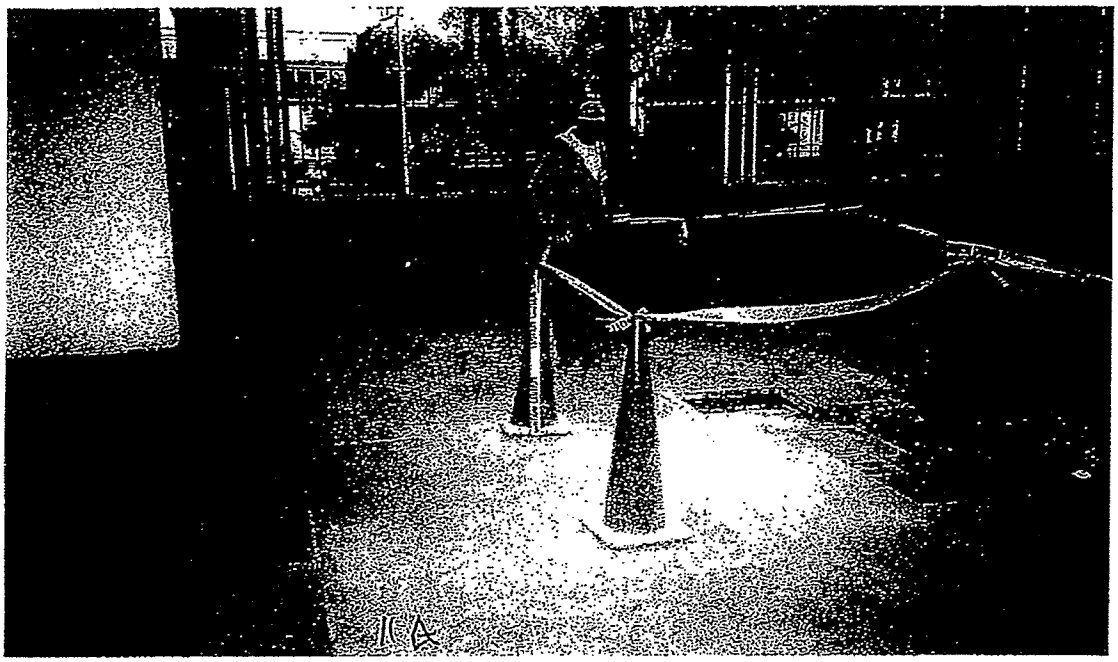


10C: Re. planter in the dining room. Holes in vertical seams of the waterproofing sheet were found created by plant roots as well as failed adhesion.

10D: Re. planter in the dining room. Holes in the vertical seams of the waterproofing sheet were found created by plant roots as well as failed adhesion.

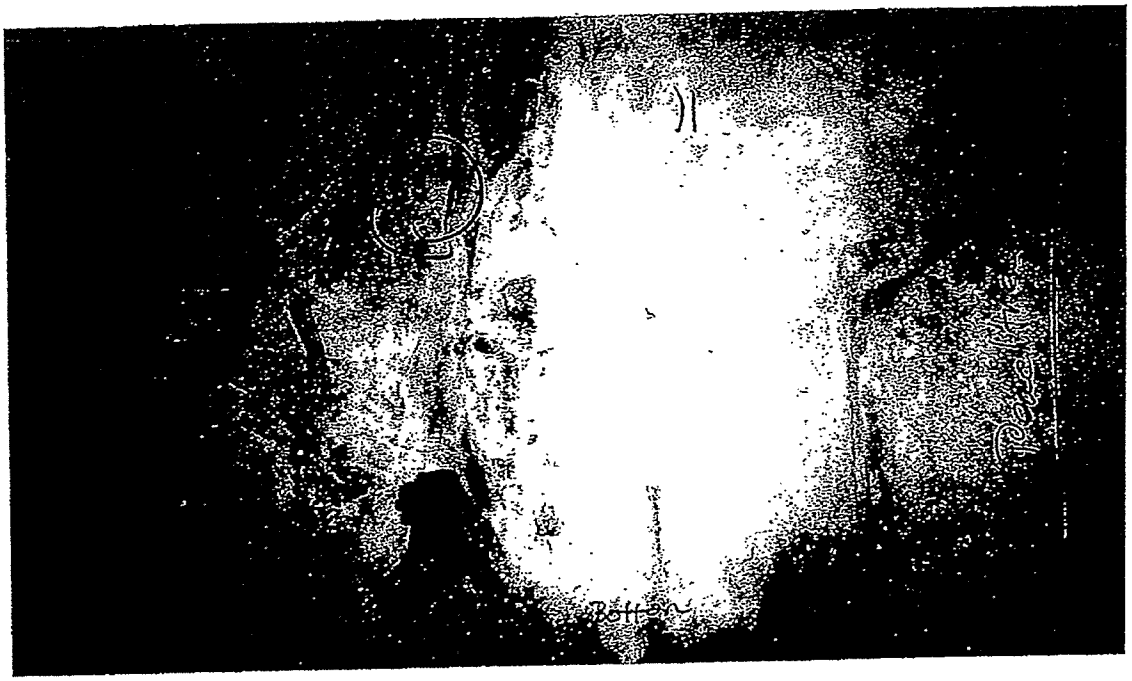


10E: Re. planter in the dining room. Note the penetration holes in the bottom of the planter as well as the clog drain.

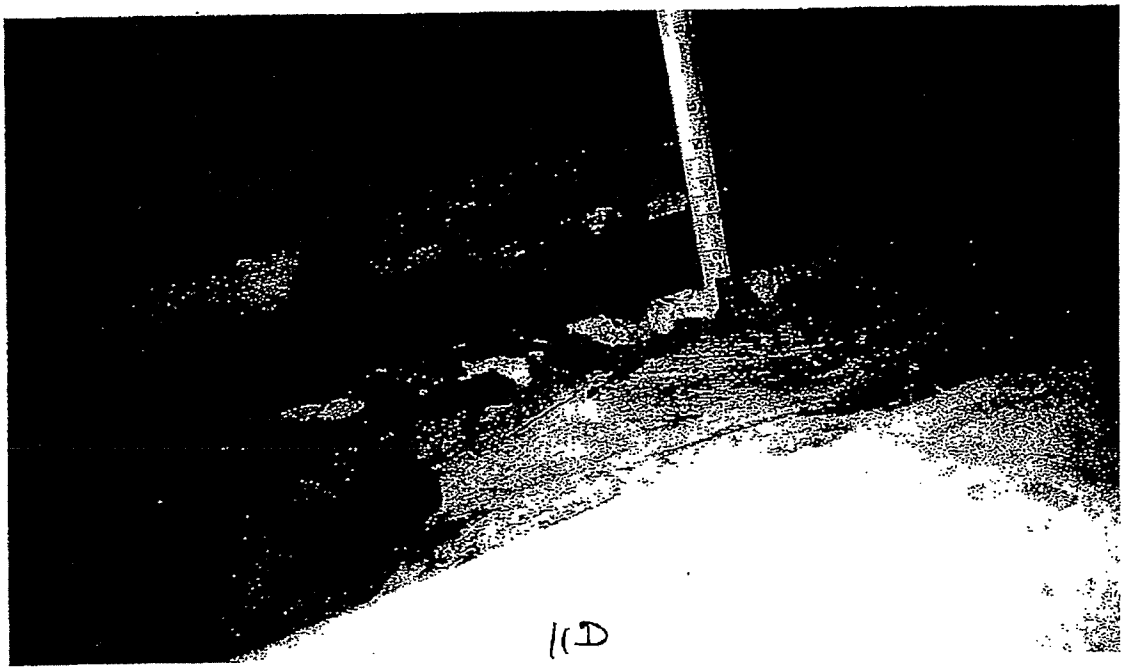


11A: Re. P11 excavation exterior of dining, Peachtree street side. An additional area of excavation was requested exterior of the building envelope.

11B: Re. P11, exterior of dining. Note that the sheet membrane waterproofing terminates along a line parallel with Peachtree Street.

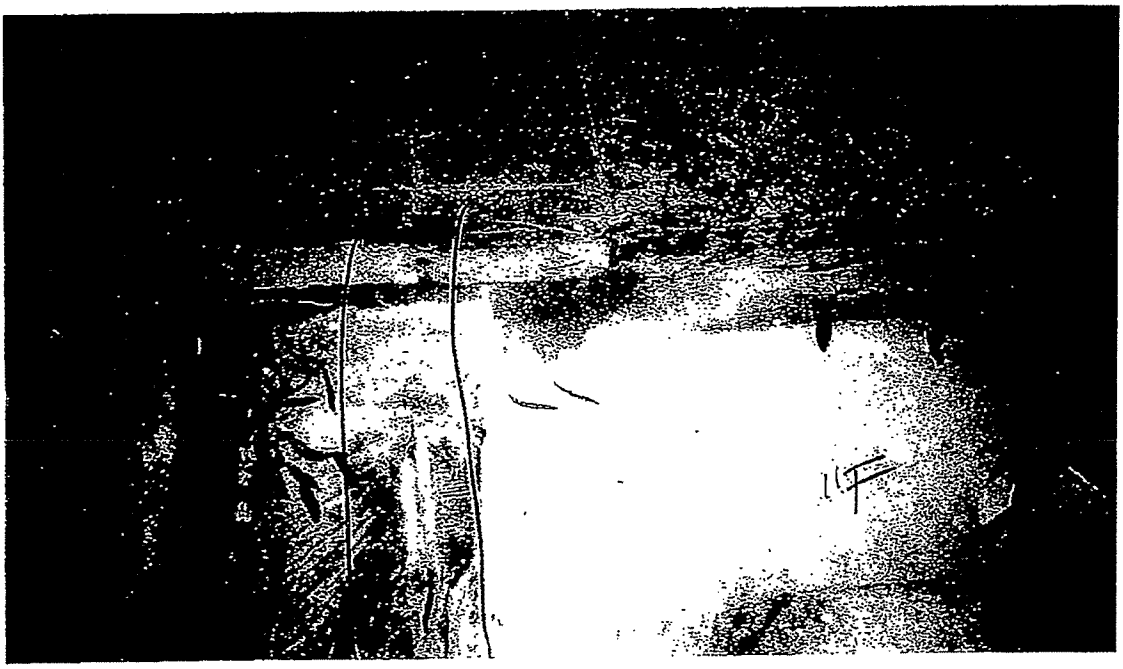


11C: Re. P11, exterior of dining. A tear in a polyurethane sealant was found at the sheet membrane along the suspected expansion joint.

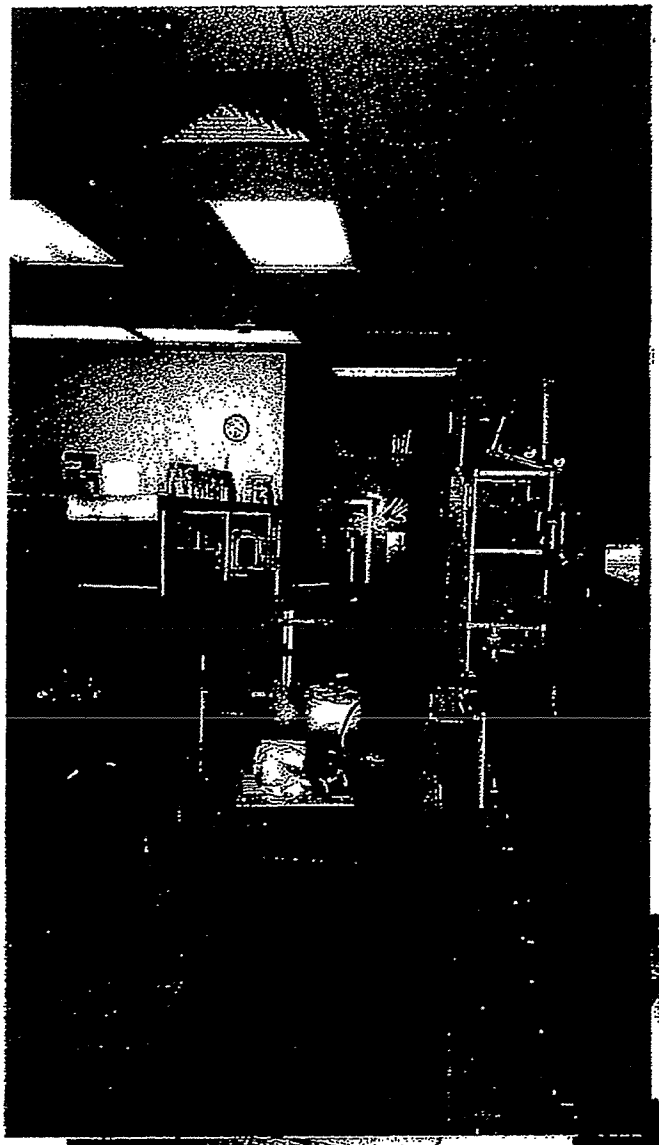


11D: Re. P11, exterior of dining. The section of the tile set is quite similar to the lower and upper terrace.

11E: Re. P11, exterior of dining. Splits, tears and separations appear along the line of the suspected expansion joint.

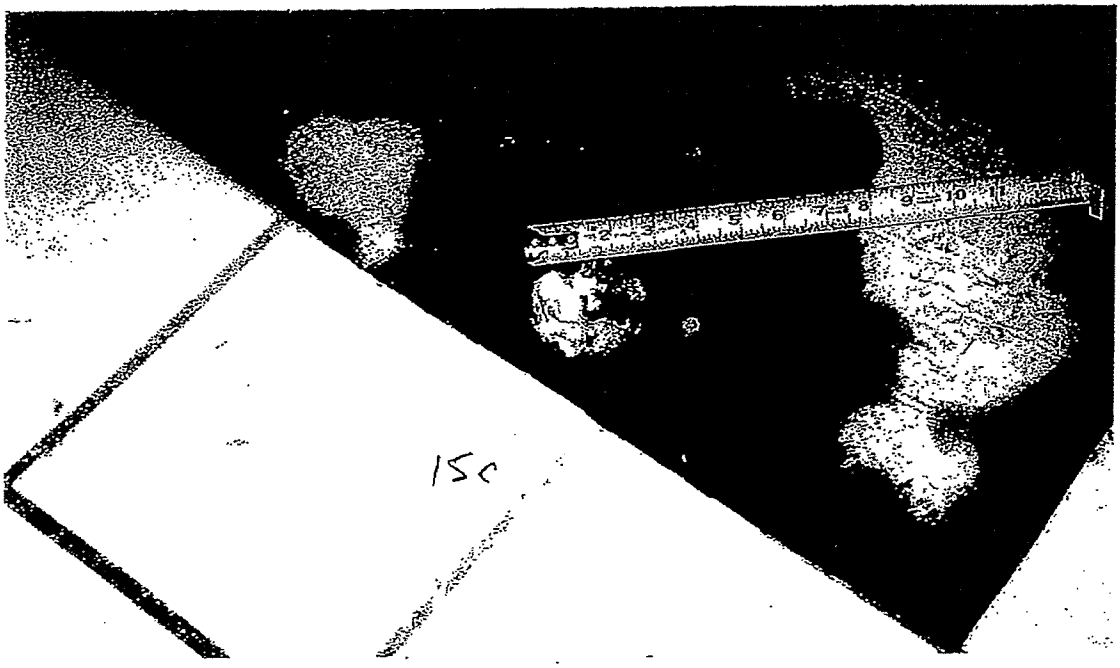


11F: Re. P11, exterior of dining. Splits, tears and separations appear along the line of the suspected expansion joint.



15A: Re. P15, Kitchen floor drain. The tiles and tile setting at a typical floor drain and between the restrooms were excavated.

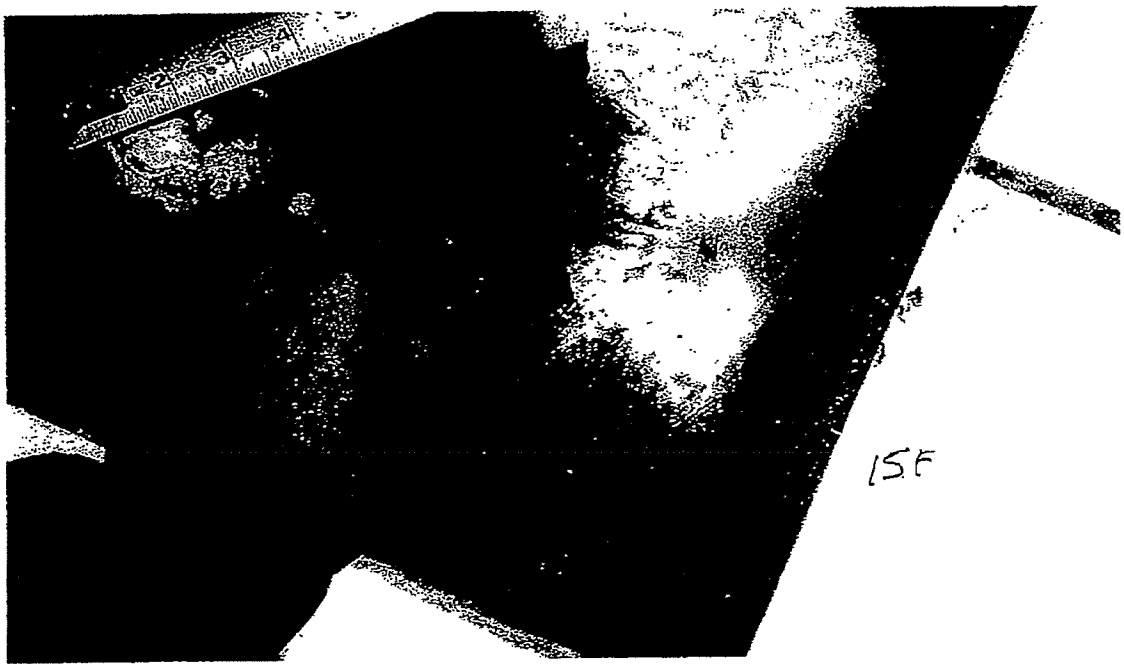
15B: Re. P15 Kitchen floor drain. The sand setting bed was a surprise. A 1" layer of concrete separated the tiles and the sand setting bed.



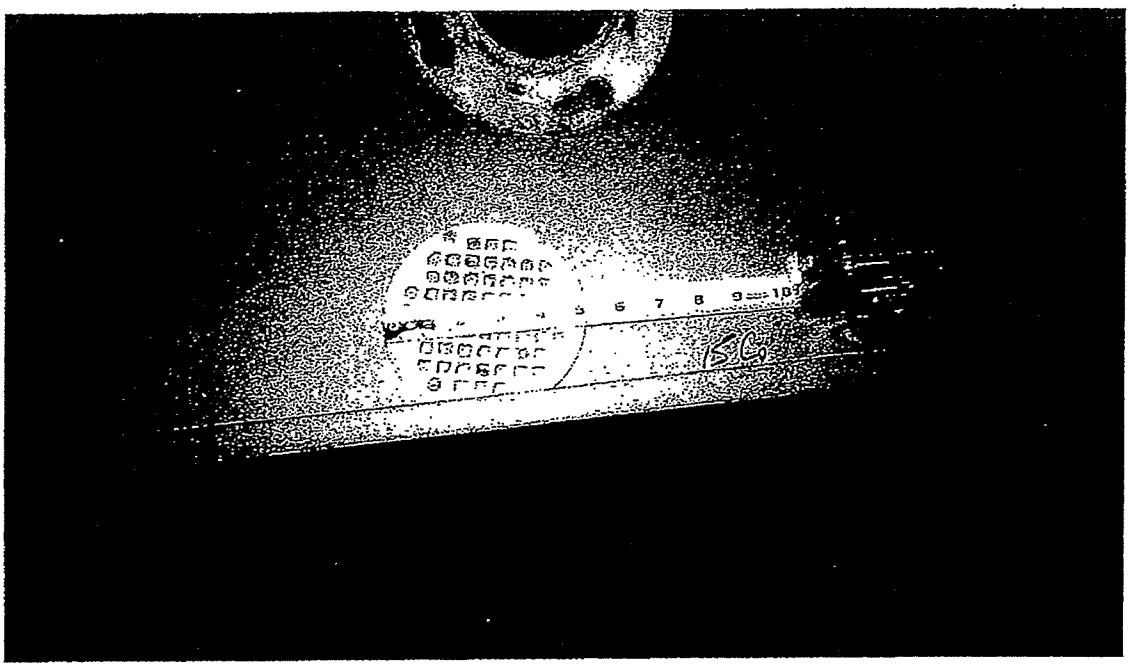
15C: Re. P15 Kitchen floor drain. The sand setting bed was quite moist.

15D: Re. P15, Kitchen floor drain. This is a section of the floor construction.

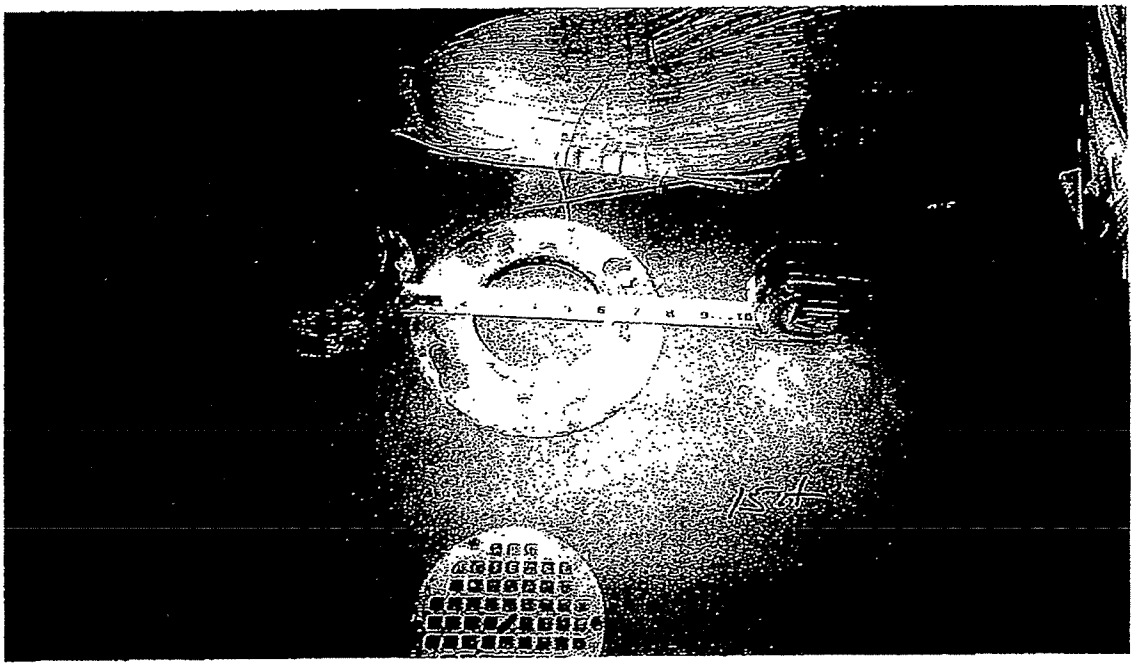
15E: Re. P15, Kitchen floor drain. The waterproofing membrane sheet was not well adhered.



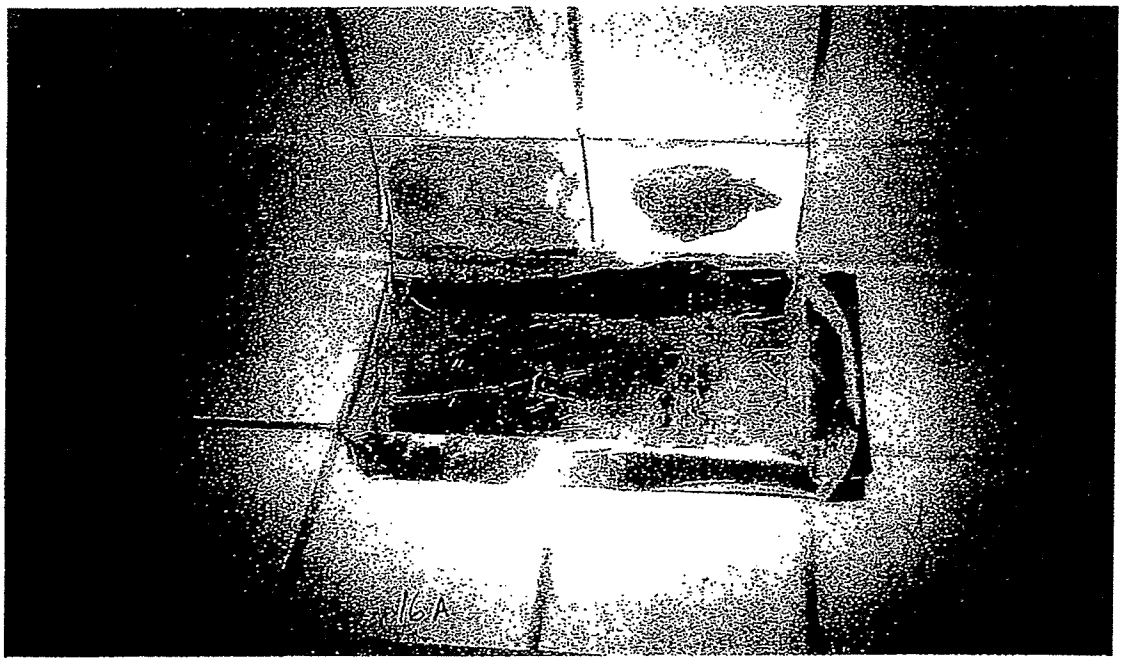
15F: Re. P15, Kitchen floor drain. The waterproofing membrane sheet was not well adhered. Moisture was found between the wipe. sheets and the concrete slab.



15G: Re. P15, Kitchen floor drain. Drain components.

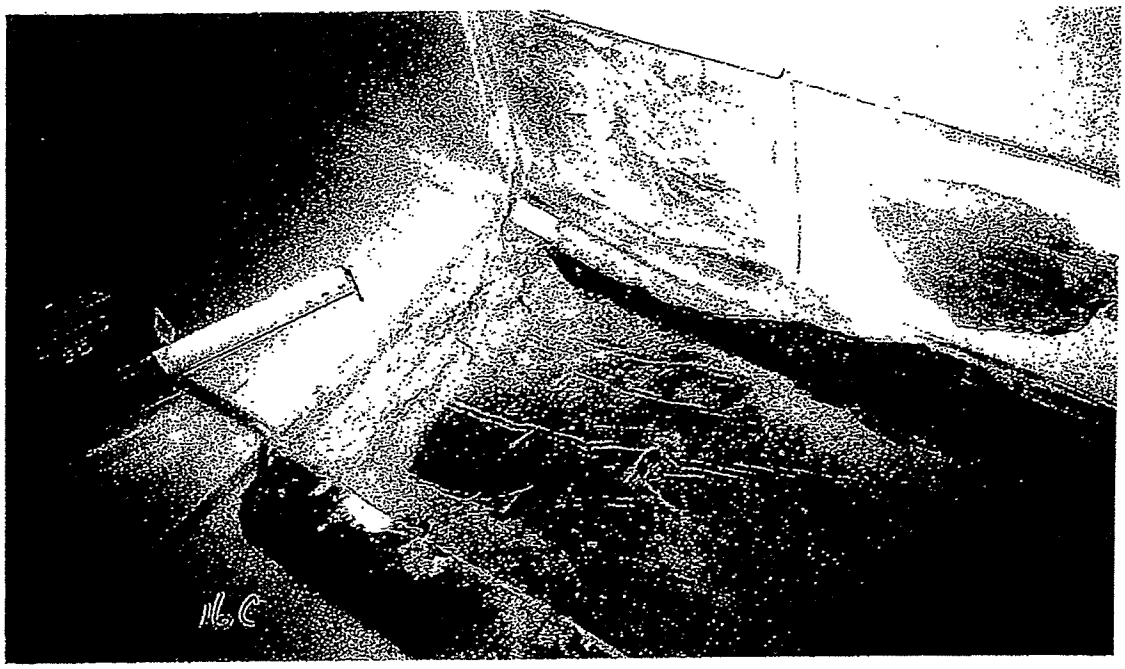


15H: Re. P15, Kitchen floor drain. Drain components.



16A: Re. P15, Kitchen floor. An alternative area for the typical floor was chosen located between the two restrooms. The detail shows the same construction as

16B: Re. P15, Kitchen floor. An alternative area for the typical floor was chosen located between the two restrooms. The detail shows the same construction as around the floor drain with the membrane turned up the sheet rock wall substrate.



16C: Re. P15, Kitchen floor. The sheet membrane turned up the sheet rock substrate was not well adhered.

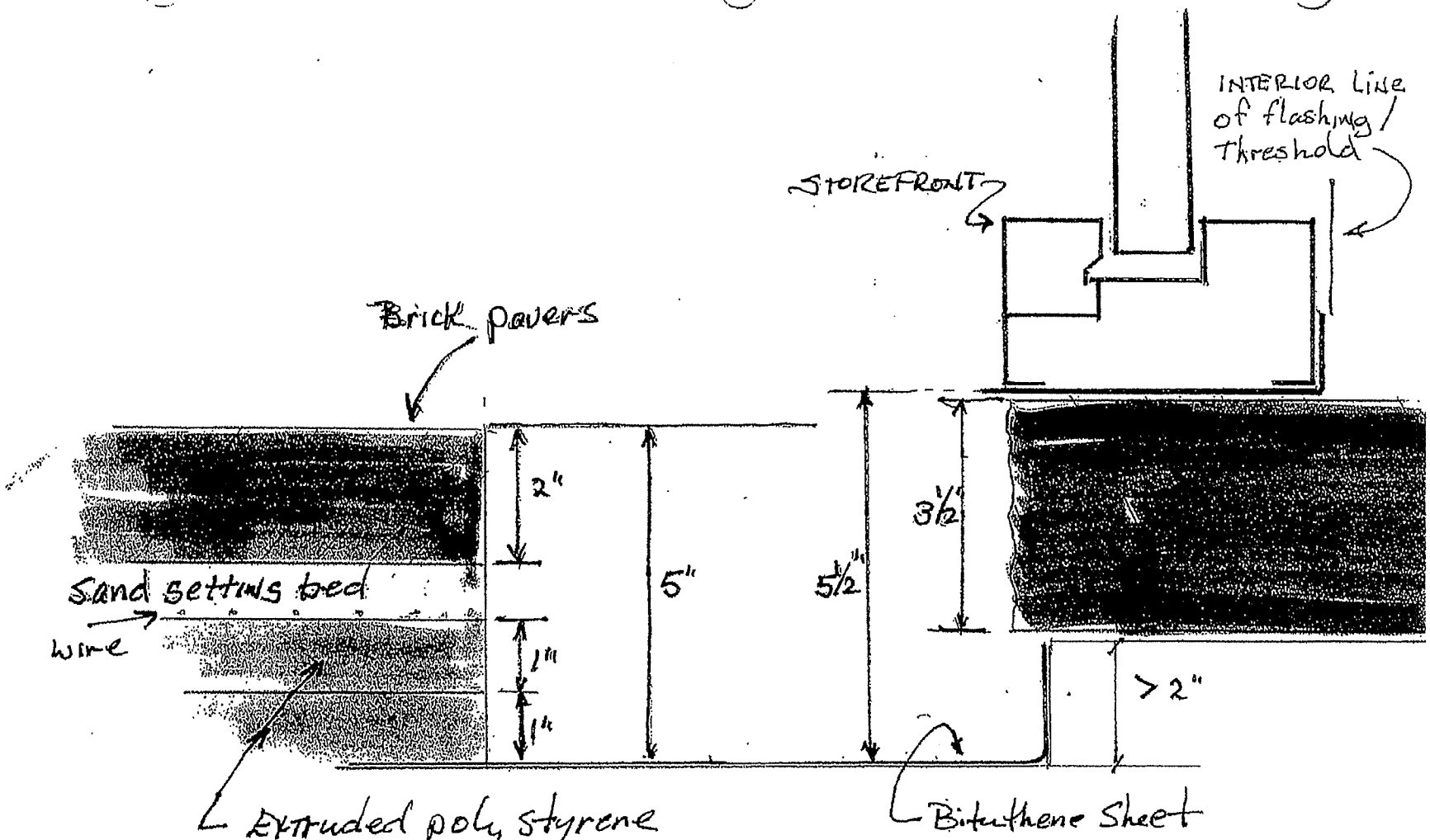
16D: Re. P15, Kitchen floor. The sheet membrane turned up the sheet rock substrate was not well adhered.

Williamson & Associates, Inc.
Construction Consultants

PHASE I WATERPROOFING SITE INVESTIGATION
FULTON COUNTY GOVERNMENT CENTER
W&A 203346
November 19, 2003

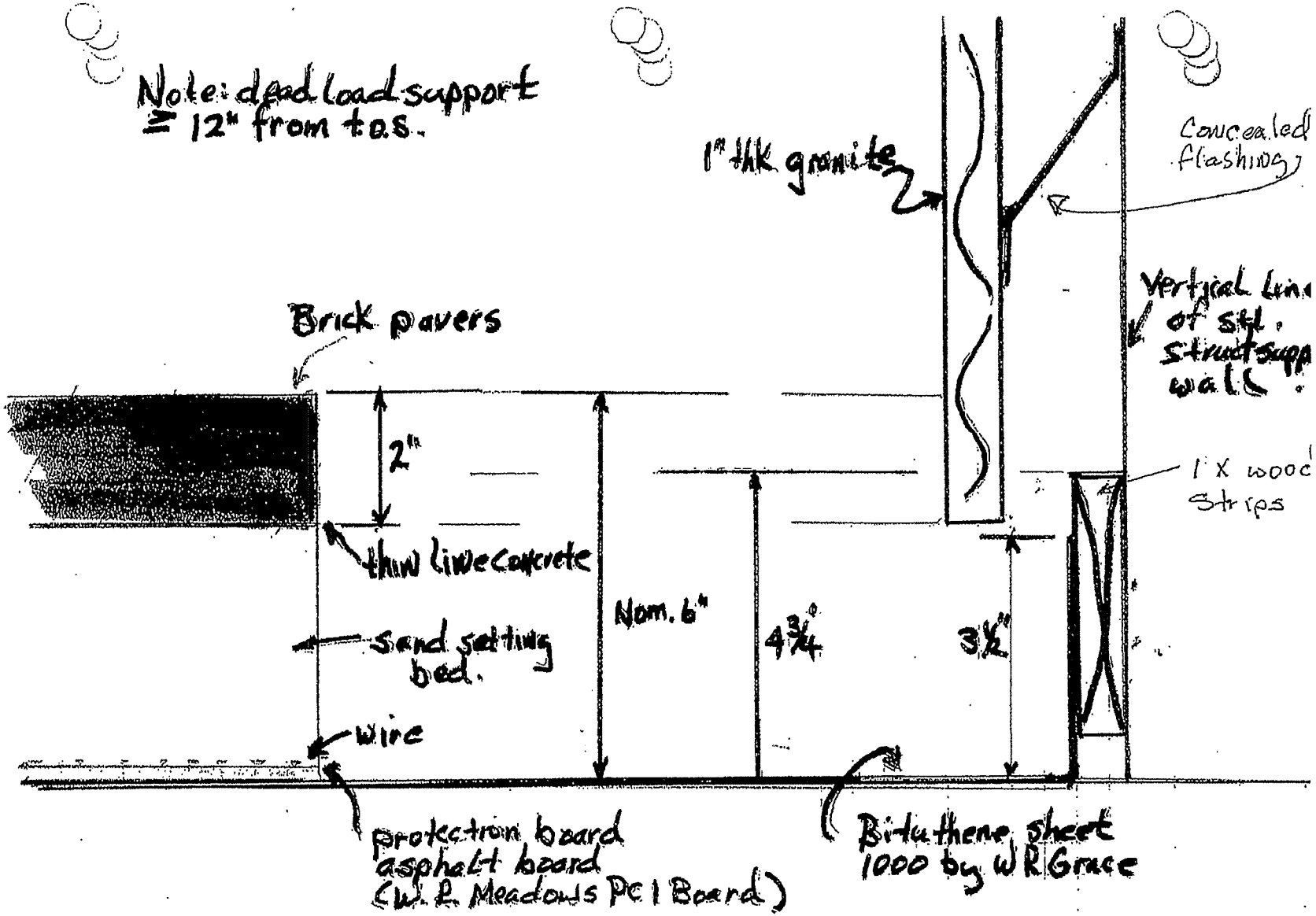
VOLUME III
SKETCHES

5180 Roswell Road, Suite 100 South, Atlanta, Georgia 30342
Office: (404) 256-2388 FAX: (404) 256-1457 E-mail: wa-office@williamsonassoc.com



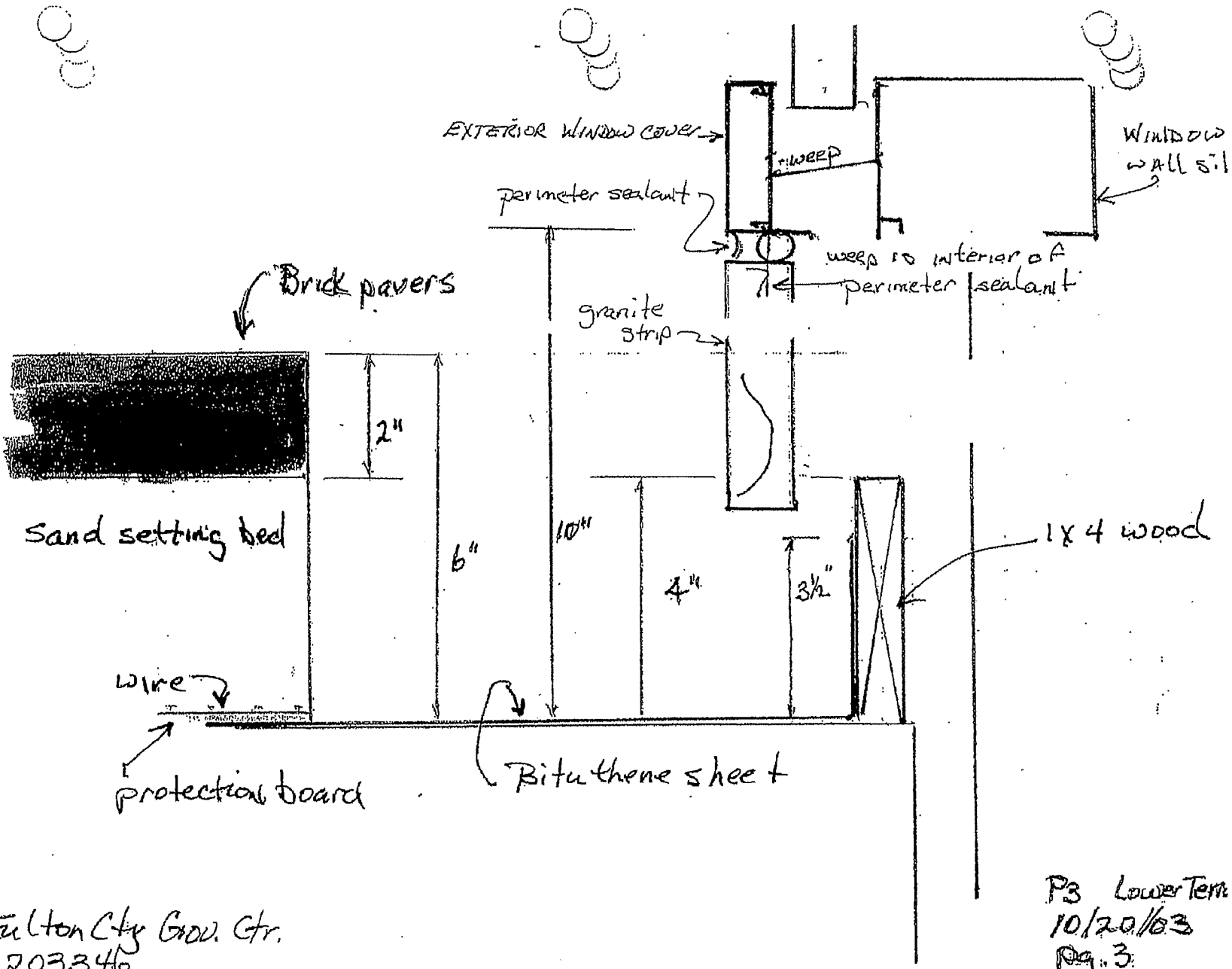
Fulton Cty Gov't.
#203346

P11 · lower terrace
10/20/03
Pg. 1



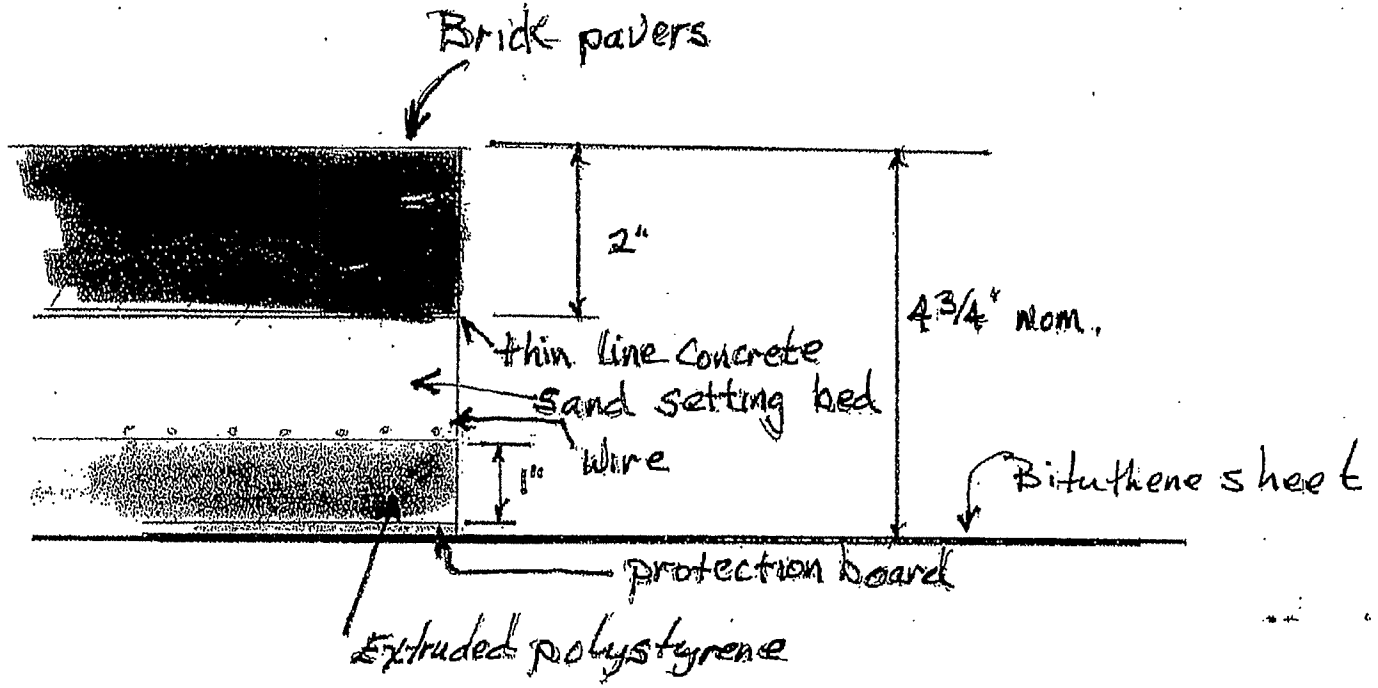
Fulton City Gov. Ctr.
203346

P2 Lower Terrace
10/20/03
D9.2



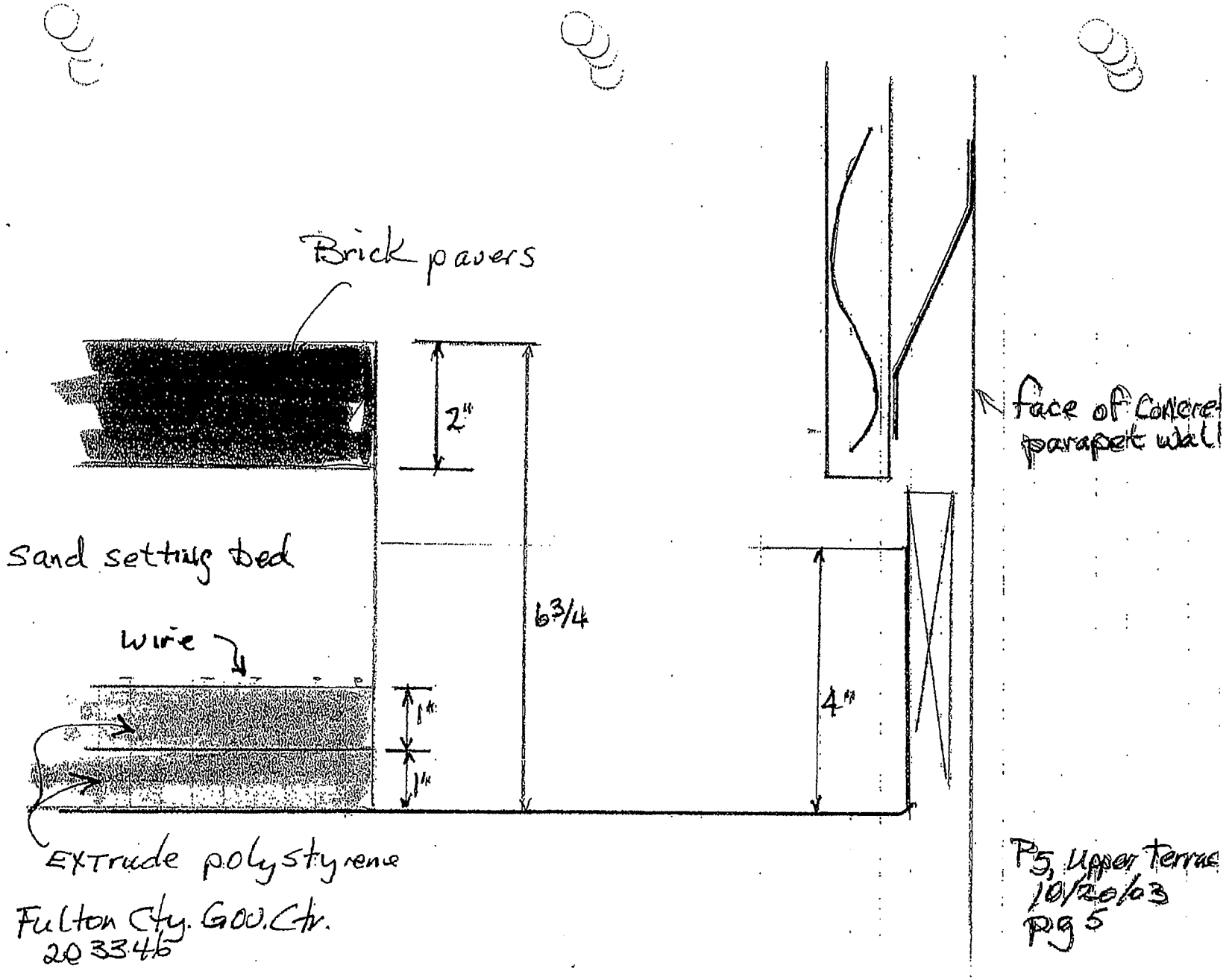
Fulton City Gov. Ctr.
203346

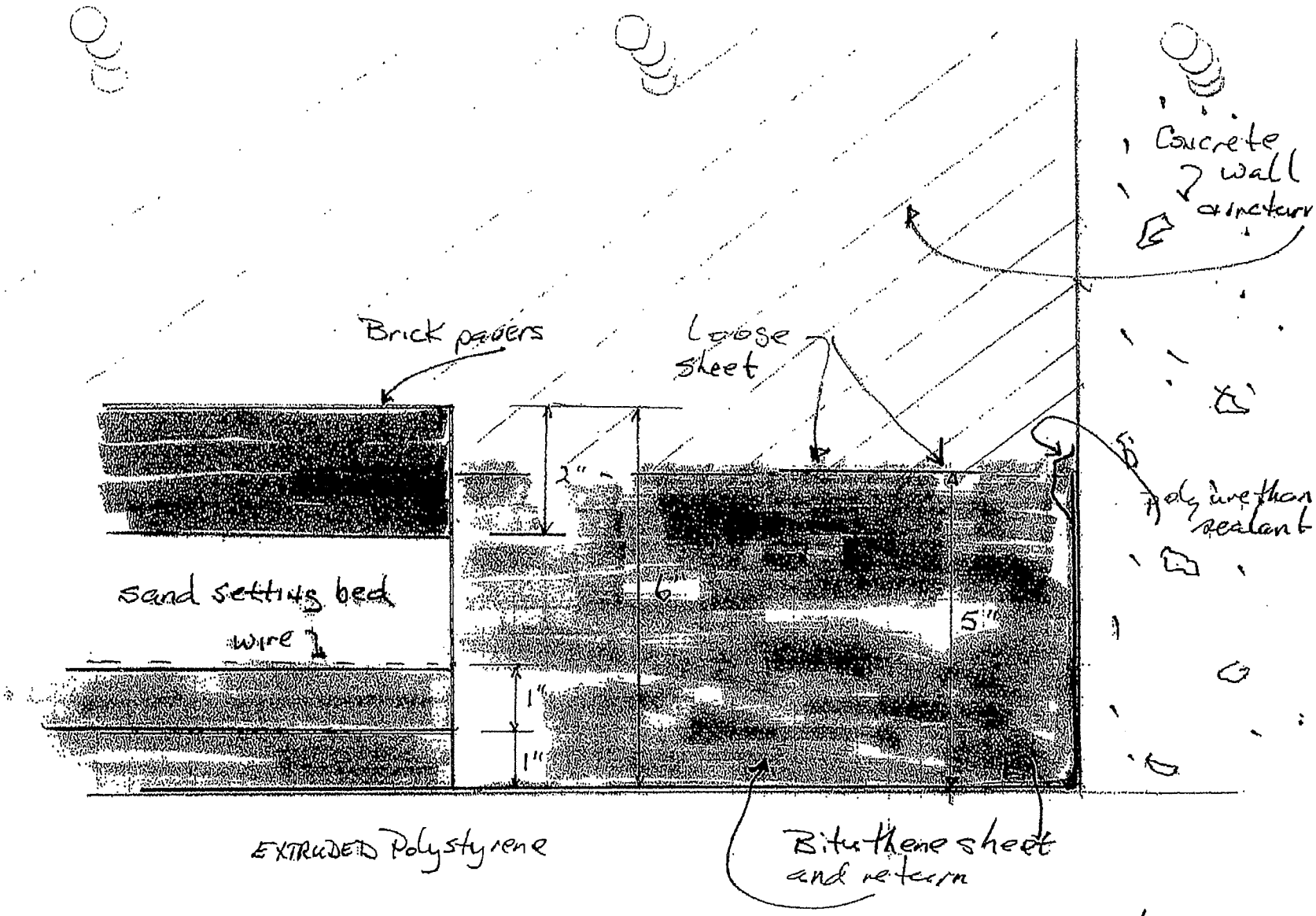
P3 Lower Term
10/20/03
Pg. 3



Fulton Cty. Gov. Ctr.
203346

P4, Lower Terrace
10/20/03
Det. 4


Brick pavers
2"
face of Concrete parapet wall
Sand setting bed
6 3/4
wire
1"
1"
4"
EXTrude polystyrene
Fulton Cty. Gov. Ctr.
203346
P5, Upper Terrace
10/20/03
Pg 5



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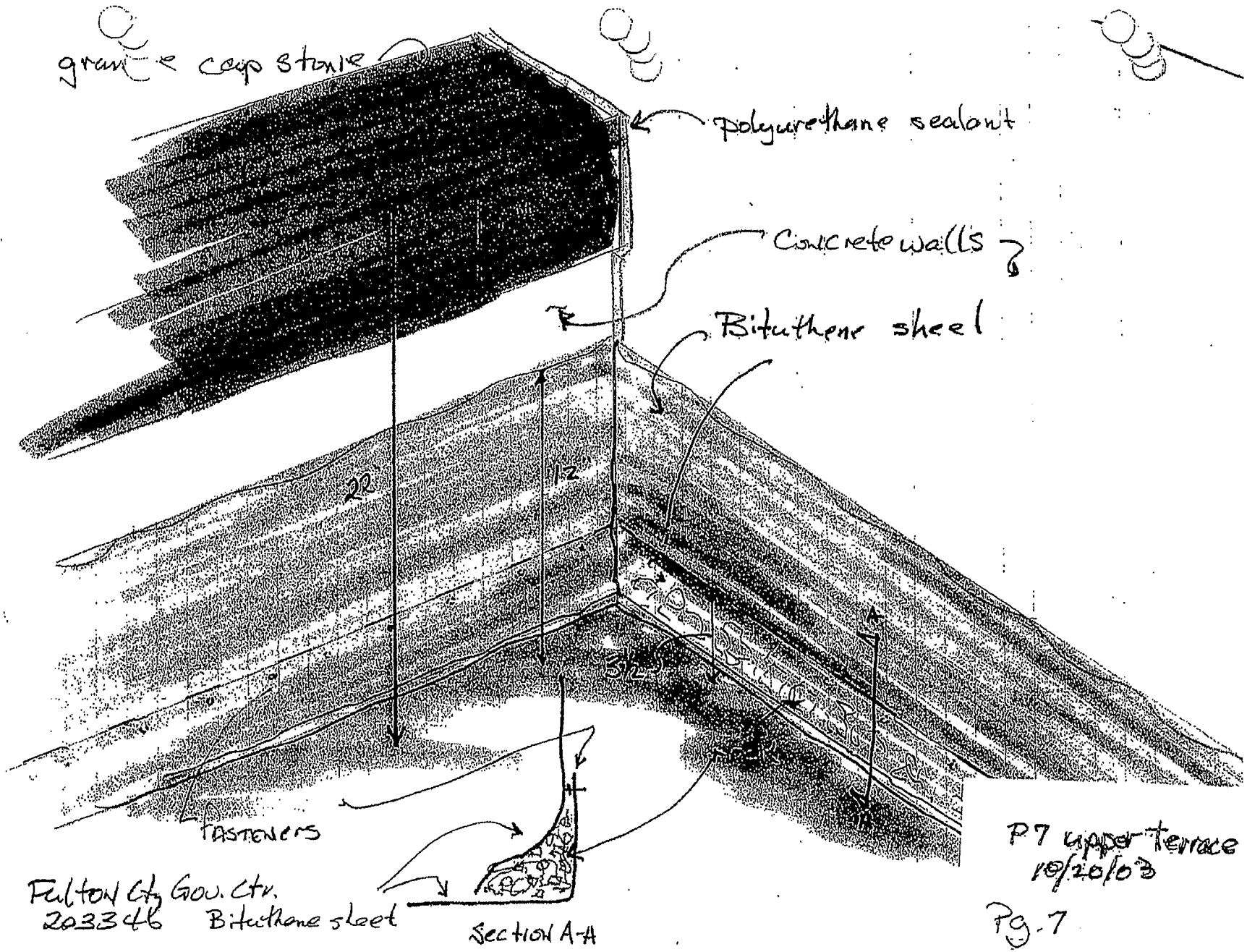
203346

P6 Upper Terrace
10/20/03
Pg. 6



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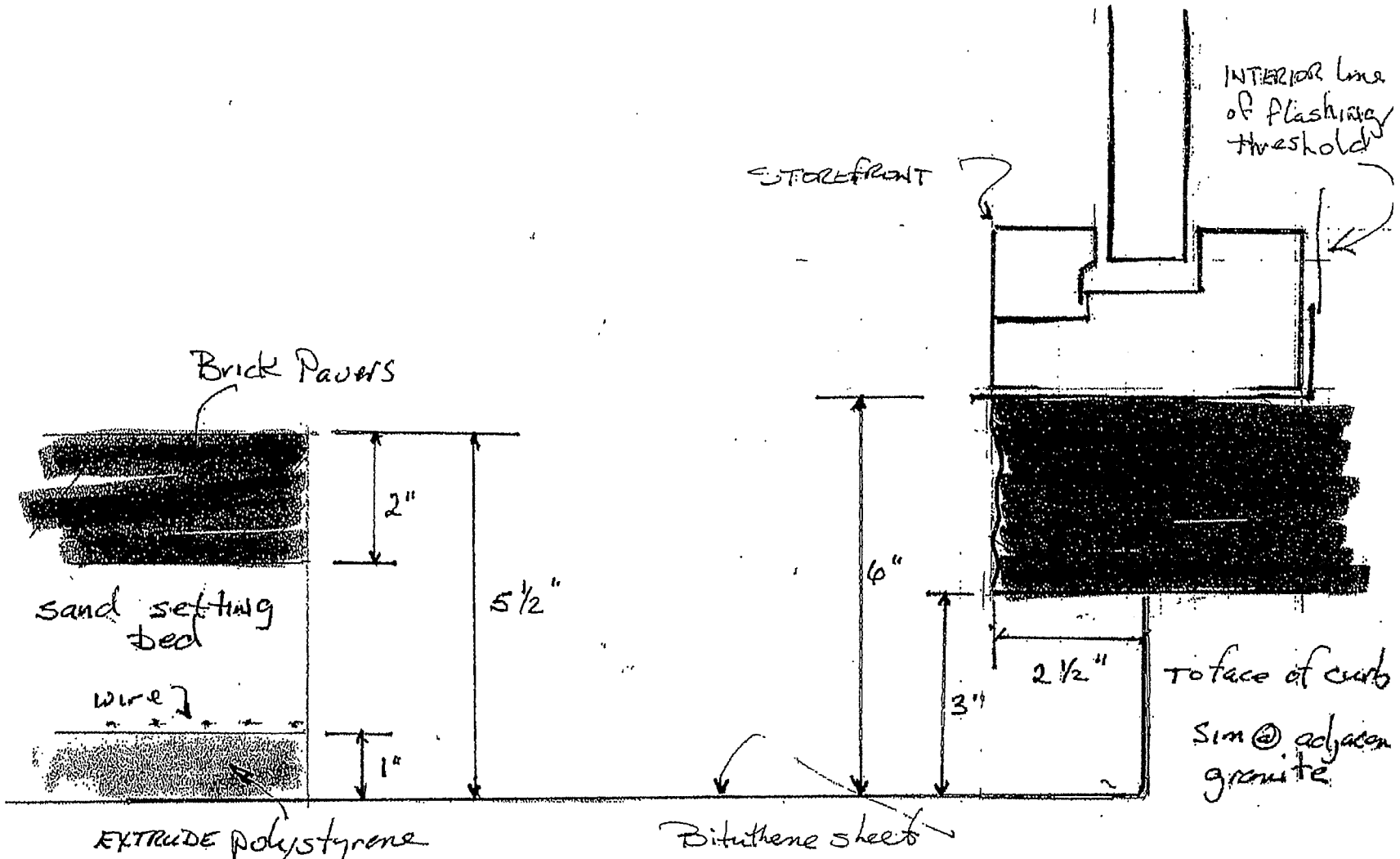
203346

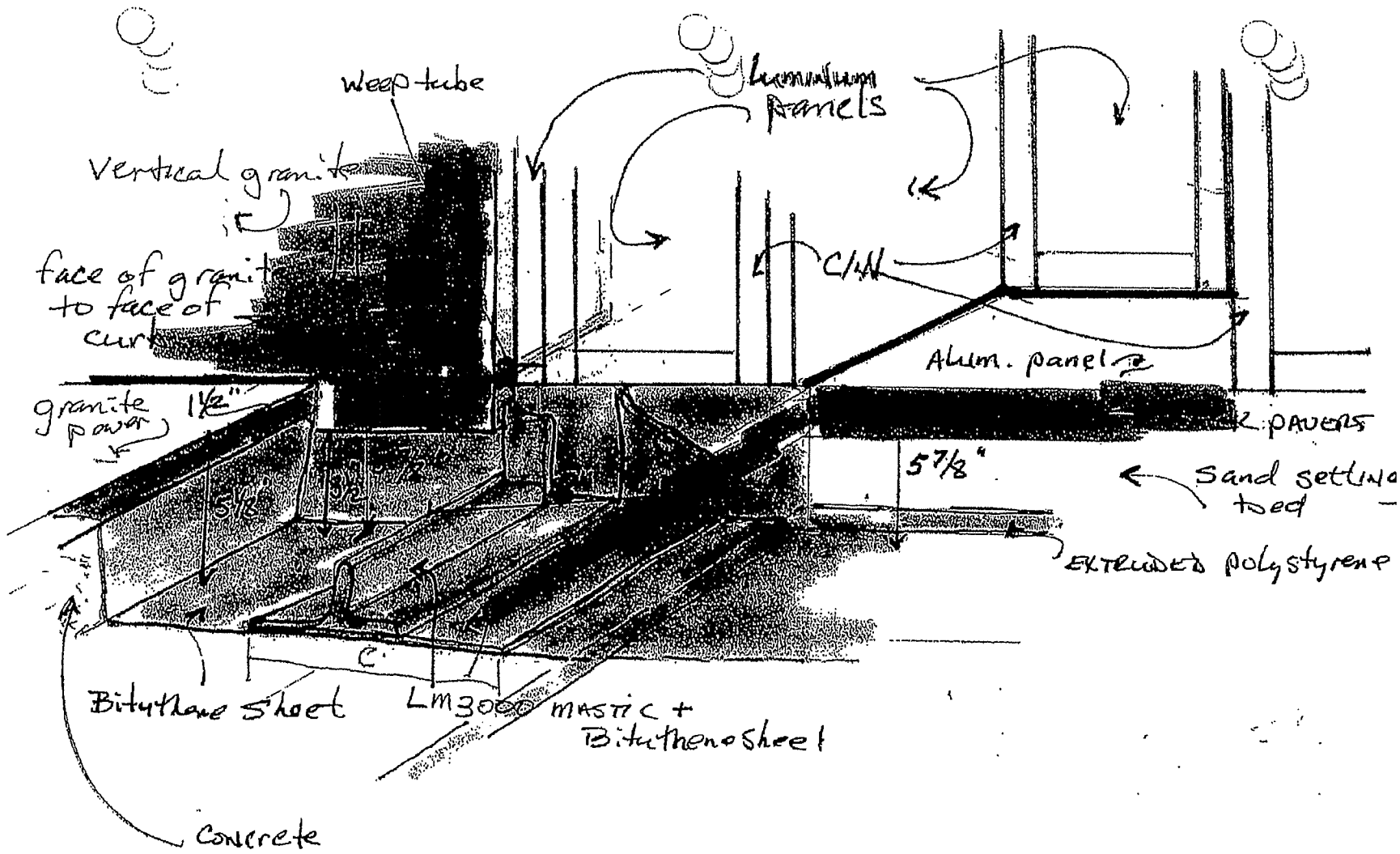
P7 upper terrace
10/20/03

Pg. 7

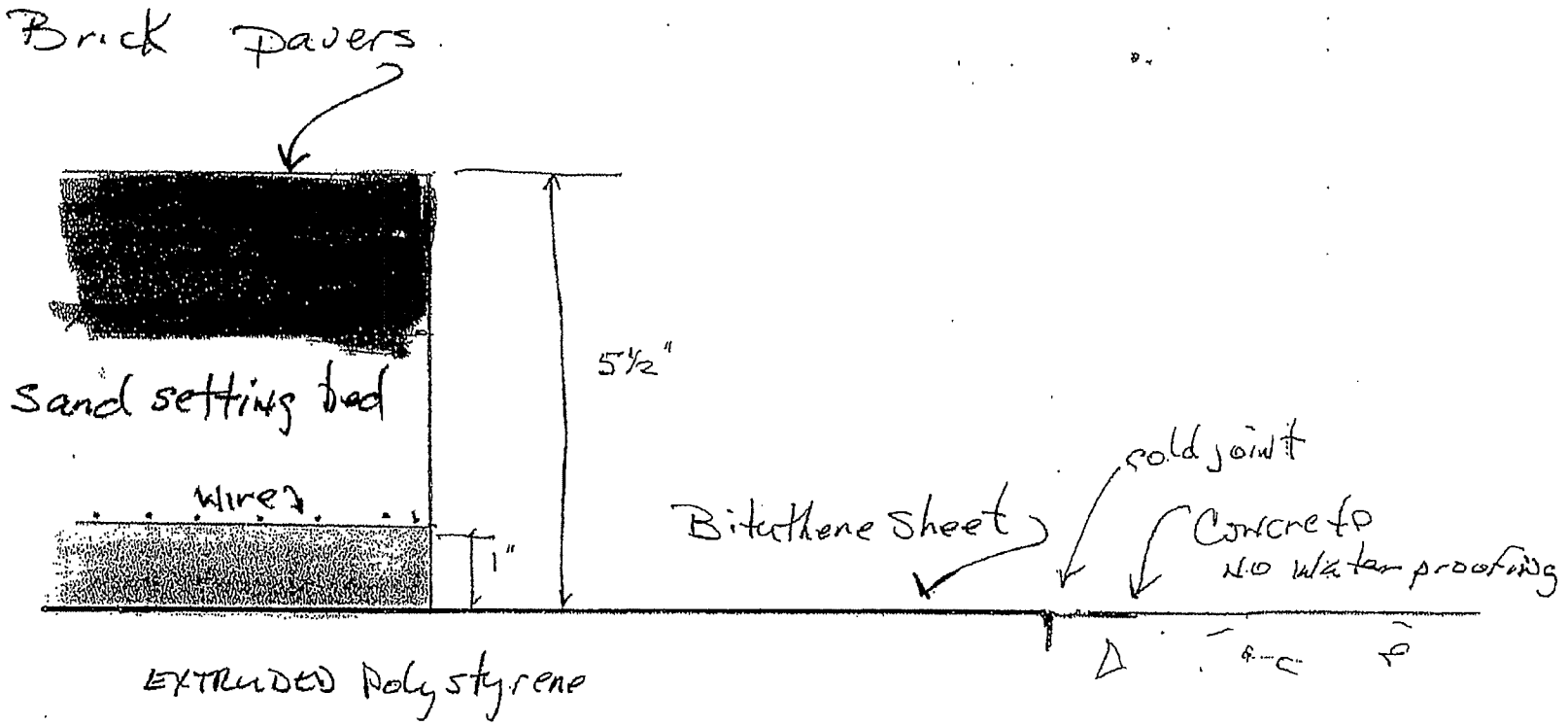


Fulton City Govt Ctr.
203346

P8 upper terrace
10/20/03
Do. 8

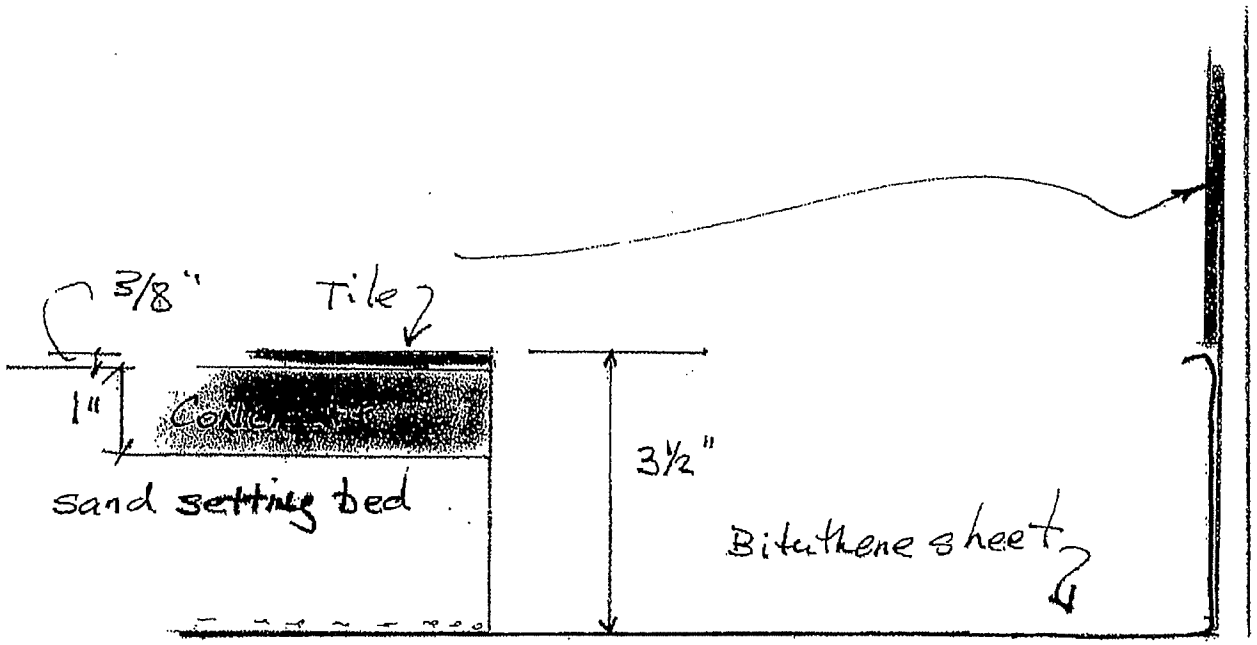


P 9 Outside dining
10/20/03
Pg 9



Fulton Cty. Gov. Ctr.
203346

P11 Exterior Peachtree side
11/1/03
ma 11



P15, 16 Kitchen
10/31/03
Pg. 15

Fulton City Gov. Ctr.
203346

DATE:
November 26, 2003

PROJECT:
Phase 1 Waterproofing Site Investigation
Fulton County Government Center
141 Pryor Street, SW
Atlanta, GA

CLIENT:
Mr. Donn A. Whitacre, AIA
Smallwood, Reynolds, Stewart, Stewart & Associates, Inc.
One Piedmont Center, Suite 303
3565 Piedmont Road
Atlanta, GA 30305

CONSTRUCTION CONSULTANT:
Williamson & Associates, Inc.
5180 Roswell Road
Suite 100 South
Atlanta, GA 30342
PHONE: 404/256-2388
FAX: 404/256-1457

PROJECT NUMBER: W&A 203346

NUMBER OF COPIES:

SUMMARY

The sheet waterproofing utilized for this project W.R. Grace Bituthane showed evidence of negative side water migration below the membrane, which we expected based on the termination problems at the perimeter of all the balconies and plaza areas. The waterproof membrane assembly also did not continuously seal and provide watertight service throughout all the architectural conditions such as planners, intermittent walls and other architectural finishes. As a result of these findings, the observations of errors in the placement of the actual waterproof membrane as well as a lack of proper protection and drainage our options for resolution have certain specific limitations for correction.

Ideally, we would like to have all the concrete structure that is to be waterproofed be properly sloped to drain per ASTM standards. Unfortunately, this is a difficult to impossible effort at this time because of the lack of curb height and entrance height at the perimeter of the balcony assemblies and drain locations. Furthermore, attempting to put slope in the structure would require 100% removal of the waterproof membrane and then an epoxy overlay followed by a reinstallation of the waterproof membrane. In an occupied building such as Fulton County Government Center this would leave, due to sequence, many of the balcony areas un-waterproofed through the course of construction, which would be potentially catastrophic.

If we poured a slope concrete topping to achieve proper subsurface drainage below the finishes on structural balcony decks. We would have to wait a minimum of thirty (30) days for the surfaces to properly cure before we install the waterproofing system.

Williamson & Associates, Inc. also does not recommend Sheet Good waterproofing for horizontal substrates. The problems encountered on this project are so similar to other plaza projects we have worked on with Sheet waterproofing. As we have observed on this project many fish mouths, laps and joint problems have occurred as a result of this products use. In our opinion it is critical to move to a fully adhered liquid applied reinforced material that could be constantly submerged and will not deteriorate over time.

Williamson & Associates, Inc. at this time would recommend the installation of a hot rubberized asphalt system such as Hydrotech 6125 or cold applied liquid reinforced system such as Liquid Plastics or Kemper. If we install the hot rubberized asphalt system the complete removal of the bituthane will not be necessary. The removal of the Polyethylene sheet and loose areas only will need to be removed. This obviously would put us in the best circumstances to make the deck waterproof in rapid most possible time frame.

We are concerned, however, and it will require some discussion with Fulton County about the odor and problems with using a 400° F/rubberized asphalt material on an occupied building. This is why the other possibilities to use the Liquid Plastics or Kemper waterproofing systems (which are cold applied but would require 100% removal of existing waterproofing and shot blasting of the concrete deck to properly install these materials) are in our recommendations. In any case in Williamson & Associates, Inc. opinion we will need to re-waterproof with a new fully adhered waterproofing system and protection board with insulation. Because of the lack of curb height between the building and the deck we would recommend at this time for the owner to consider you

redesigning with a paver and pedestal system. We know that there are strong opinions with regards to the durability and levelness of paver and pedestals, but Williamson & Associates, Inc. has had an excellent track record of installing these systems. Pavers and Pedestals would provide much greater surface drainage and with the additional entry of new drains to the flat structure, we believe we could mitigate the long term water problems. It will also obviously be necessary to saw cut and replace and remove perimeter stone assemblies in the vertical wall system. We will cover this more completely in our second phase of review, but we will need to remove the total perimeter of each balcony on a vertical granite panels so that we can terminate new perimeter flashings to be higher than the finished edge of a paver and pedestal system. Essentially instead of achieving sloped drainage below the future walking surfaces we will just improve the frequency of drain locations and allow the water to pond until it can adequately drain but in no way would the water ever be able to reenter or penetrate the building facility again. The systems that I have recommended also provide extremely long-term durability and we can also achieve long-term warranties. In our opinion it is critical to provide Fulton County not only with an excellent Design but a mechanism that should problems ever develop in the future that remedies and repairs are simplistic and rapid to repair. If a failure occurred in the waterproofing the pavers could easily be lifted to make a fast fix.

In summary the solution requires the complete removal of all the toppings on all the balconies. It will be necessary to re-waterproof continuously throughout the plaza assemblies through planners, over planner walls and under all balcony surfaces. This

means that Smallwood Reynolds Stewart Stewart & Associates, Inc. is also going to have to redesign finishes around if planters and penetrations of the balcony so that the waterproofing materials are continuous underneath them. Waterproofing will not terminate in the planter walls as is currently the case. The waterproofing materials will run continuously across all subassemblies. By using concrete pavers as the finish system with pedestals and adding additional drains based on your drain consultants and plumbing consultants opinions, I believe we can provide the owner a waterproof project that will require little maintenance over time. The new flashings at the perimeters of the balcony and stone repair that we will provide The Fulton County Government Center will result in an extremely long term approach to remedies. As we move into the design specifics after having an opportunity to meet with the Owner and discuss all the extranalities we will bring the details to closure with Smallwood Reynolds Stewart Stewart & Associates, Inc.

The other leak area was the kitchen and dinning area. Williamson & Associates, Inc. recommends 100% removal of all tile and setting bed and sand. Complete removal of the bituthane waterproofing is also required. Williamson & Associates, Inc. recommends that we re-slope the structure with epoxy toppings and install new single stage drains. Williamson & Associates, Inc. then recommends seamless epoxy floor such as Stonehard. We do not have to deal with intermittent rains and general weather problems in resolving these areas.

Smallwood, Reynolds,
Stewart, Stewart
& Associates, Inc.

Architecture • Planning • Interior Design • Landscape Architecture • Graphic Design

Fulton County Government Center - Terraces
Commission No. 203061.00-9A
March 23, 2004

TERRACE AND BALCONY WATERPROOFING OPTIONS PROS AND CONS

Some of the reasons for and against the alternative means of waterproofing the terraces include the following:

1. Recommended Hot-Applied Waterproofing:

   a. Pros
      1.) Allows direct application over existing adhered sheet waterproofing. Quick and efficient.
      2.) High quality installation.
      3.) Shortest exposure to elements for spaces below.
      4.) Least area of exposure to elements below due to adhered existing waterproofing remaining in place.

   b. Cons
      1.) Heated bitumen odor.

2. Optional Cold-Applied Waterproofing:

   a. Pros
      1.) No heated bitumen odor.

   b. Cons
      1.) Solvent fumes.
      2.) All existing waterproofing must be sand blasted from structure to allow application directly to clean structure.
      3.) Longer duration of exposure to elements while existing material is removed.
      4.) Greater area of exposure to elements because all existing waterproofing must be removed prior to applying new waterproofing.

One Piedmont Center, Suite 303, 3565 Piedmont Road, Atlanta, Georgia 30305
404-233-5453 • Fax 404-264-0929 • www.srssa.com

6. REPAIR RECOMMENDATIONS

A. Work to be Performed by Fulton County

Fulton County has indicated that they will address either under separate contract or with their own forces the following scopes of work:

1. Remove rust and peeling paint and repaint steel structure at Upper Terrace and entry canopies at Peachtree Street and Pryor Street.

2. Route all drain lines and unclog blocked drain piping as identified in PIE's Plumbing Analysis, Section 4.
   a. SRSS recommends that Fulton County NOT employ a "jet truck" (high pressure, high volume, non-potable water introduction into a drain line) in order to clean the system.

3. Remove all existing landscaping from planters prior to contracting each respective scope of work that includes planters.

4. Vacate and remove all furniture, fixtures and equipment from each occupied area affected prior to each respective scope of work.

5. After contracted work has been completed, renovate, repair or improve previous existing tenant areas to the extent selected by Fulton County.

6. Perform ongoing air quality testing.

B. Phase A1 - Kitchen, Servery, Dining, and Peachtree Terrace

1. Kitchen, Servery, Dish Wash, and Kitchen Toilet Rooms

   The Kitchen/Servery Area remediation will include the following:
   a. Remove all Kitchen/Servery equipment including hot water heater and demolish low Servery walls.
   b. Remove all existing Kitchen, Servery, and Kitchen toilets, flooring and setting beds.
   c. Demolish ceiling at floor below these areas and remove and replace all Kitchen and Servery drains, drain piping, and grease traps. This work will probably require re-work of existing ductwork and piping. New Kitchen waste floor sinks to include sediment buckets.
   d. Demolish Kitchen, Servery Area ceilings and re-route water and electrical service to come from above, not through floor.
   e. Remove existing waterproofing.
   f. Provide curb around perimeter of renovated area to allow flashing of new waterproofing.

g. Recondition equipment to be reused after floor replacement.
h. Install epoxy topping sloped to drain and seamless epoxy flooring such as Stonehard or thickset bed with porcelain pavers throughout Kitchen/Servery area.
i. Install new ceilings in Kitchen and at floor below where removed for new rough-in. Repaint Kitchen areas.
j. Install new Kitchen equipment including new walk-in coolers and freezer, dishwasher, utility distribution systems, and hot water heater.
k. Reinstall Kitchen equipment to be reused.
l. Install new wallcovering in Servery.

The scope of the Kitchen renovation will be confirmed by the in-progress Kitchen evaluation.

2. Dining (Interior and Exterior)
   a. After Fulton County has removed plants from planters, remove soil and minimize electrical conduit in each planter.
   b. In each planter, install planter type drain with sediment bucket and verify drain lines are clear of all blockage. This will require removal of portions of the ceiling at the floor below.
   c. Re-waterproof planter interior and provide protection board and drainage mats.
   d. Install lightweight planter mix soil and plants.
   e. Replace ceiling areas disrupted below.

3. Exterior Dining Terrace and Peachtree Terrace

The terrace remediation will include the following:
   a. Remove all existing pavers, setting bed, protection board and loose or damaged waterproofing.
   b. Remove base course of surrounding stone wall cladding.
   c. Remove drain bodies, undersized drains and drain piping.
   d. Construct curb for flashing (minimum 8" typical) at surrounding walls.
   e. Clean and prepare intact existing waterproofing.
   f. Demolish ceiling below and install new area drain bodies and piping at existing low points, near doors and curtainwalls, and as required. This work will likely require re-working existing ductwork and fire protection piping.
   g. Install new, fully adhered, hot applied, rubberized asphalt monolithic waterproofing system such as Hydrotech 6125 and flashing of new curbs.
   h. Install replacement stone base course.
   i. Install new pedestal mounted stone paver system.

j. Install new expansion joint and discontinue rigid construction which crosses expansion joint. Provide slip joints at fence/building intersection.
k. Apply spray-on insulation to underside of structure where exterior terraces are located over occupied space.

C. Phase A2 - Upper Terrace

The terrace remediation will include the following:
a. Prior to beginning work, protect all equipment that cannot be relocated (including central plant, generator, switchgear, and communications) from potential water damage.
b. Remove all existing pavers, setting bed, protection board and loose or damaged waterproofing.
c. Remove base course of surrounding stone wall cladding.
d. Remove drain bodies, undersized drains and drain piping.
e. Construct curb for flashing (minimum 8" typical) at surrounding walls.
f. Clean and prepare intact existing waterproofing.
g. Demolish ceiling below and install new area drain bodies and piping at existing low points, near doors and curtainwalls, and as required. This work will likely require re-working existing ductwork and fire protection piping.
h. Install new, fully adhered, hot applied, rubberized asphalt monolithic waterproofing system such as Hydrotech 6125 and flashing of new curbs.
i. Waterproofing to be continuous over all planter walls.
j. Add stone cladding to all planter walls to protect waterproofing.
k. Install replacement stone base course.
l. Install new pedestal mounted stone paver system.
m. Install new expansion joint and discontinue rigid construction which crosses expansion joint.
n. Apply spray-on insulation to underside of structure where exterior terraces are located over occupied space.
o. Planters to be reworked as follows:
    1.) After Fulton County has removed plants from planters, remove soil and minimize electrical conduit in each planter.
    2.) Install planter type drain with sediment bucket and verify drain lines are clear of all blockage.
    3.) Re-waterproof planter interiors and provide protection board and drainage mat.
    4.) Install lightweight planter mix soil and plants.
    5.) Replace ceiling areas disrupted below.
p. Add gutter and downspouts to Upper Terrace canopy. Connect downspouts to storm drainage piping.

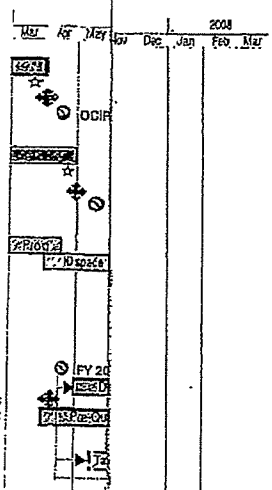
7. PROJECT ESTIMATES

A. Schedule

See attached Project Schedule.

Fulton County Government Center
141 Pryor St
Project Schedule

ssion No. 203061.00/11B
March 23, 2004



Project Investigation & Planning	
Complete Waterproofing Project Cost | Schedule | Fee Proposal	SRSSA
GSD Review	GSD
Fulton County planning/coordination meeting	FC
Establish CIP budget	FC
Complete Kitchen Evaluation - Project Cost | Schedule | Fee Proposal	SRSSA
GSD Review	FC
Fulton County Planning / Coordination Meeting	FC
Establish CIP Budget	FC
Swing Space	
Identify lease space requirements	GSD
Identify potential space (s)	GSD
Negotiate lease | BOC | sign	GSD
Identify Funding FY 2004 (swing space)	FC
Fit-out space	GSD
Move-in	GSD
Waterproofing Design & Construction Documents	
Identify funding FY 2004 (waterproofing, kitchen, tax design)	
Design	
Coordinate Procurement w/ Purchasing & Contract Compliance	GSD/Pur/CC
Pre-Qualify Bidders	GSD/Pur/CC

IDENTIFY FUNDING FY 2005

Bid Package A: Kitchen | Cafeteria | Dining | Upper Terrace

Bid | Review | Recommend
Phase A1-Kitchen | Cafeteria | Dining | P'tree Terrace
NTP
Move-out: Equip, PCs, tele, furn & contents
Construction - waterproofing
Construction - Tax reconfiguration
Construction - Kitchen reconfiguration
Shakeout / Furniture Install
Move-in

Phase A2-Upper Terrace
NTP
Move-out: Equip, PCs, tele, furn & contents
Construction
Punch / Furniture Install
Move-in

Bid Package B: Assembly Roof & Skylight | Public Safety Roof | Midrise Roofs

Bid | Review | Recommend
Phase B1-Assembly Bldg. Skylight & Roof
NTP
Construction
Punch
NIC interior repair

Phase B2-Public Safety Roof
NTP
Construction
Punch
NIC interior repair

Phase B3-Mid-Rise Roofs
NTP
Construction
Punch

IDENTIFY FUNDING FY 2006

Bid Package C: Lower Terrace & 10th Floor Balconies

Bid | Review | Recommend
Phase C1-Lower Terrace & 10th Floor Balconies
NTP
Construction
Punch

Bid Package D: Atrium Roof | Canopies | Sloped Glazing

Bid | Review | Recommend
Phase D1-Atrium Roof | Canopies | Sloped Glazing
NTP
Construction
Punch

Bid Package E: Building Envelope Re-Sealing

Bid | Review | Recommend
Phase E1-Building Envelope Re-Sealing
NTP
Construction
Punch

B. **Construction Cost Estimate**

See attached Conceptual Construction Cost Estimate.

PHASE - A1

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1			$1,607,032										
A1.1 KITCHEN SERVERY													
Misc demo and removal			7,700	231	$4,054	$0	$0	$0	$0	$4,054	$0	$2,050	$6,104
		U.C. per SF -->		0.03B-LABOR	0.53					0.527		0.266	0.79
Remove ceramic tile flooring incl sand, insulation and waterproofing membrane			7,700	616	$10,812	$0	$0	$0	$0	$10,812	$0	$5,466	$16,278
				ALABCLA	1.40					1.404		0.710	2.11
		U.C. per SF -->		0.08									
Remove ceramic tile base			750	264	$6,187	$0	$0	$0	$0	$6,187	$0	$3,128	$9,315
		U.C. per LF -->		0.352ATIFD7	8.25					8.250		4.171	12.42
Remove Kitchen Equipment			1	400	$7,021	$0	$0	$0	$0	$7,021	$0	$3,549	$10,570
		U.C. per LS -->		400ALABCLA	7,020.69					7,020.690		3,549.223	10,569.91
Demo servery wall			450	44	$789	$0	$92	$0	$0	$881	$0	$445	$1,326
		U.C. per SF -->		0.099ULABB9C	1.75		0.20			1.957		0.989	2.95
Concrete curb			320	128	$2,593	$1,600	$1,188	$0	$96	$5,477	$0	$2,769	$8,246
		U.C. per LF -->		0.4CLABC20	8.10	5.00	3.71		0.30	17.117		8.653	25.77
Waterproofing			8,470	847	$21,460	$29,645	$2,334	$0	$1,779	$55,218	$12,810	$34,391	$102,419
	- : MR	U.C. per SF -->		0.1ARFCG1	2.53	3.50	0.28		0.21	6.518	1.512	4.060	12.09
Rework Flashing			320	35	$957	$333	$0	$0	$20	$1,310	$304	$816	$2,430
	- : MR	U.C. per SF -->		0.11ARFCROF	2.99	1.04			0.06	4.094	0.950	2.550	7.59
Epoxy Floor Leveler			7,700	462	$11,781	$15,400	$1,295	$0	$924	$29,401	$6,821	$18,312	$54,534
	- : TI	U.C. per SF -->		0.06ATIMJ3	1.53	2.00	0.17		0.12	3.818	0.886	2.378	7.08
Epoxy Terrazo Floor			7,700	1,072	$27,332	$40,502	$3,007	$0	$2,430	$73,272	$16,999	$45,635	$135,906
	- : TI	U.C. per SF -->		0.139ATIMJ3	3.55	5.26	0.39		0.32	9.516	2.208	5.927	17.65
Reinstall Kitchen Equipment			1	800	$30,517	$1,000	$0	$0	$60	$31,577	$7,326	$19,667	$58,569
	- : PL	U.C. per LS -->		800MPLUPLU	30,516.58	1,000.00			60.00	31,576.580	7,325.767	19,666.589	58,568.94
New Kitchen Equipment replacement & servery Allowance			1		$0	$122,000	$0	$0	$7,320	$129,320	$0	$65,376	$194,696
		U.C. per LS -->				122,000.00			7,320.00	129,320.000		65,376.083	194,696.08
Existing Kitchen Equipment refurbishment			1		$0	$10,000	$0	$0	$600	$10,600	$0	$5,359	$15,959
		U.C. per LS -->				10,000.00			600.00	10,600.000		5,358.695	15,958.70
Temporary Protection - Area Below Work			7,700	77	$1,351	$1,540	$0	$0	$92	$2,984	$0	$1,508	$4,492
		U.C. per SF -->		0.01B-LABOR	0.18	0.20			0.01	0.388		0.196	0.58
Ceiling dml, suspended ceiling, incl system, on suspension system			15,400	410	$7,190	$0	$0	$0	$0	$7,190	$0	$3,635	$10,825
				ALABCLA	0.47					0.467		0.236	0.70
		U.C. per SF -->		0.027									
Susp acst clg bds,24" x 24", 5/8" T			15,400	410	$13,334	$21,098	$0	$0	$1,266	$35,698	$9,460	$22,829	$67,987
	- : AT	U.C. per SF -->		0.027ACARCAR	0.87	1.37			0.08	2.318	0.614	1.482	4.42
Suspension sys for board & tile, 2' x 2' grid, class A, T bar			15,400	379	$12,332	$6,160	$0	$0	$370	$18,861	$4,998	$12,062	$35,921
	- : AT	U.C. per SF -->		0.025ACARCAR	0.80	0.40			0.02	1.225	0.325	0.783	2.33
soffits			1,000	80	$2,604	$1,500	$0	$0	$90	$4,194	$881	$2,566	$7,640
	- : GW	U.C. per SF -->		0.08ACARCAR	2.60	1.50			0.09	4.194	0.881	2.566	7.64
Painting			10,000	200	$5,234	$1,500	$0	$0	$90	$6,824	$1,433	$4,174	$12,431
	- : PS	U.C. per SF -->		0.02APTRPOR	0.52	0.15			0.01	0.682	0.143	0.417	1.24

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1			*$1,607,032*										
A1.1 KITCHEN SERVERY													
Wall covering			2,000	37	$1,037	$3,340	$0	$0	$200	$4,578	$961	$2,800	$8,339
	- : WC	U.C. per SF -->		0.018APAPPAP	0.52	1.67			0.10	2.289	0.481	1.400	4.17
Lighting removal & replacement			15,400	308	$10,944	$23,100	$0	$0	$1,386	$35,430	$9,389	$22,658	$67,477
	- : EL	U.C. per SF -->		0.02EELEELE	0.71	1.50			0.09	2.301	0.610	1.471	4.38
Relocate power and lighting penetration to OH			1	400	$14,214	$2,000	$0	$0	$120	$16,334	$4,328	$10,445	$31,107
	- : EL	U.C. per LS -->		400EELEELE	14,213.50	2,000.00			120.00	16,333.500	4,328.379	10,445.352	31,107.23
Remove Drains			49	147	$5,047	$0	$0	$0	$0	$5,047	$1,171	$3,143	$9,361
	- : PL	U.C. per EA -->		3MPLUQ1	102.99					102.993	23.894	64.147	191.04
Remove Piping			1,000	300	$10,681	$0	$0	$0	$0	$10,681	$2,478	$6,652	$19,811
	- : PL	U.C. per LF -->		0.3MPLUQ2	10.68					10.681	2.478	6.652	19.81
Drains			60	240	$8,239	$18,000	$0	$0	$1,080	$27,319	$6,338	$17,015	$50,673
	- : PL	U.C. per EA -->		4MPLUQ1	137.32	300.00			18.00	455.325	105.635	283.586	844.55
Core drill for new floor drain			11	132	$3,125	$550	$1,262	$0	$33	$4,970	$1,044	$3,040	$9,055
	- : SP	U.C. per EA -->		12COELB89	284.10	50.00	114.75		3.00	451.854	94.889	276.399	823.14
Drain Pipe Includes Fittings			1,200	924	$32,897	$6,600	$0	$0	$396	$39,893	$9,255	$24,846	$73,994
	- : PL	U.C. per LF -->		0.77MPLUQ2	27.41	5.50			0.33	33.244	7.713	20.705	61.66
Demo Grease trap			1	16	$549	$0	$0	$0	$0	$549	$127	$342	$1,019
	- : PL	U.C. per EA -->		16MPLUQ1	549.30					549.300	127.437	342.115	1,018.85
Interceptors, grease, 200 lb fat cap, fabricated steel, 100 GPM			1	16	$549	$5,484	$0	$0	$329	$6,362	$1,476	$3,962	$11,801
	- : PL	U.C. per EA -->		MPLUQ1 16	549.30	5,483.80			329.03	6,362.128	1,476.013	3,962.472	11,800.61
Demo Water Heater			1	20	$687	$0	$0	$0	$0	$687	$159	$428	$1,274
	- : PL	U.C. per EA -->		20MPLUQ1	686.62					686.620	159.297	427.644	1,273.56
Water htr, comi, 125 MBH input, 120 GPH, gas fired, no vent, std cont			1	20	$763	$2,219	$0	$0	$133	$3,115	$723	$1,940	$5,779
	- : PL	U.C. per EA -->		MPLUPLU 20	762.81	2,219.42			133.16	3,115.495	722.796	1,940.402	5,778.69
Misc plumbing work			1	300	$10,299	$16,000	$0	$0	$960	$27,259	$6,324	$16,978	$50,561
	- : PL	U.C. per LS -->		300MPLUQ1	10,299.35	16,000.00			960.00	27,259.350	6,324.169	16,977.719	50,561.24
Rework HVAC & Sprinkler pipe			7,700		$0	$0	$0	$30,800	$0	$30,800	$0	$15,571	$46,371
		U.C. per SF -->						4.00		4.000		2.022	6.02
Subtotal					$264,582	$329,571	$9,179	$30,800					
Taxes					$0	$19,774	$0	$0					
Subcontractor Markups					$53,517	$49,485	$1,805	$0					
Prime Contractor Markups from AA					$160,810	$201,624	$5,553	$15,571					
TOTAL A1.1 KITCHEN SERVERY			9,314		$478,909	$600,454	$16,536	$46,371	$19,774	$653,906	$104,807	$383,557	$1,142,270
7,700.00 SF		*Level Unit Cost-->*			*$62.20*	*$77.98*	*$2.15*	*$6.02*	*$2.57*	*$84.92*	*$13.61*	*$49.81*	*$148.35*

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE-A 1			$1,607,032										
A1.2 INTERIOR DINING (INTERIOR PLAN													
Shrubs & trees removal			1	60	$1,053	$0	$0	$0	$0	$1,053	$0	$532	$1,585
		U.C. per LS -->		60ALABCLA	1,053.10					1,053.100		532.383	1,585.48
Soil Removal & replacement			43	172	$3,019	$0	$0	$0	$0	$3,019	$0	$1,526	$4,545
		U.C. per CY -->		4ALABCLA	70.21					70.207		35.492	105.70
Shrubs & trees allowance			1	72	$1,264	$2,700	$0	$0	$162	$4,126	$1,093	$2,638	$7,857
	- : LS	U.C. per LS -->		72ALABCLA	1,263.72	2,700.00			162.00	4,125.720	1,093.317	2,638.420	7,857.46
Waterproofing removal			1,200	24	$608	$0	$66	$0	$0	$674	$0	$341	$1,015
		U.C. per SF -->		0.02ARFCG1	0.51		0.06			0.562		0.284	0.85
Waterproofing			1,200	120	$3,040	$4,200	$331	$0	$252	$7,823	$1,815	$4,872	$14,510
	- : MR	U.C. per SF -->		0.1ARFCG1	2.53	3.50	0.28		0.21	6.519	1.512	4.060	12.09
Protection Board			1,200	12	$325	$324	$0	$0	$19	$669	$155	$416	$1,240
	- : MR	U.C. per SF -->		0.01ARFCROF	0.27	0.27			0.02	0.557	0.129	0.347	1.03
Rework Flashing			300	33	$898	$312	$0	$0	$19	$1,228	$285	$765	$2,278
	- : MR	U.C. per SF -->		0.11ARFCROF	2.99	1.04			0.06	4.094	0.950	2.550	7.59
Remove Drains			9	54	$1,854	$0	$0	$0	$0	$1,854	$430	$1,155	$3,439
	- : PL	U.C. per EA -->		6MPLUQ1	205.99					205.987	47.769	128.293	382.07
Remove Piping			450	135	$4,806	$0	$0	$0	$0	$4,806	$1,115	$2,994	$8,915
	- : PL	U.C. per LF -->		0.3MPLUQ2	10.68					10.681	2.478	6.652	19.81
Drains			9	36	$1,236	$2,700	$0	$0	$162	$4,098	$951	$2,552	$7,601
	- : PL	U.C. per EA -->		4MPLUQ1	137.32	300.00			18.00	455.324	105.635	283.686	844.55
Drain Pipe Includes Fittings			450	347	$12,336	$2,475	$0	$0	$149	$14,960	$3,471	$9,317	$27,748
	- : PL	U.C. per LF -->		0.77MPLUQ2	27.41	5.50			0.33	33.244	7.713	20.705	61.66
Misc Electrical works in planter			1	40	$1,421	$50	$0	$0	$3	$1,474	$391	$943	$2,808
	- : EL	U.C. per LS -->		40EELEELE	1,421.35	50.00			3.00	1,474.350	350.703	942.864	2,807.91
Temporary Protection - Area Below Work			5,000	50	$878	$1,000	$0	$0	$60	$1,938	$0	$980	$2,917
		U.C. per SF -->		0.01B-LABOR	0.18	0.20			0.01	0.398		0.196	0.58
Ceiling dml, suspended ceiling, incl system, on suspension system			5,000	133	$2,334	$0	$0	$0	$0	$2,334	$0	$1,180	$3,514
		U.C. per SF -->		ALABCLA 0.027	0.47					0.467		0.236	0.70
Susp acst clg bds,24" x 24", 5/8" T			5,000	133	$4,329	$6,850	$0	$0	$411	$11,590	$3,071	$7,412	$22,074
	- : AT	U.C. per SF -->		0.027ACARCAR	0.87	1.37			0.08	2.318	0.614	1.482	4.42
Suspension sys for board & tile, 2' x 2' grid, class A, T bar			5,000	123	$4,004	$2,000	$0	$0	$120	$6,124	$1,623	$3,916	$11,663
	- : AT	U.C. per SF -->		0.025ACARCAR	0.80	0.40			0.02	1.225	0.325	0.783	2.33

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

Report Total: $1,607,032

LEVEL	SUB	QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1		$1,607,032										
A1.2 INTERIOR DINING (INTERIOR PLAN												
Irrigation rework		9	18	$0	$450	$0	$0	$27	$477	$0	$241	$718
	U.C. per EA -->	2			50.00			3.00	53.000		26.793	79.79
Subtotal				$43,406	$23,061	$397	$0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Taxes				$0	$1,384	$0	$0					
Subcontractor Markups				$8,603	$5,720	$77	$0					
Prime Contractor Markups from AA				$26,292	$15,250	$239	$0					
TOTAL A1.2 INTERIOR DINING (INTERIOR PLANTERS)		1,562		$78,301	$45,415	$713	$0	$1,384	$68,247	$14,400	$41,761	$124,428
225.00 SF		*Level Unit Cost-->*		*$348.00*	*$201.84*	*$3.17*		*$6.15*	*$303.32*	*$64.00*	*$185.69*	*$553.01*
A1 PHASE- A 1		$1,607,032										
A1.3 EXTERIOR DINING												
Brick pavement removal, incl sand, insulation and waterproofing membrane		1,750	105	$2,170	$0	$453	$0	$0	$2,624	$609	$1,634	$4,866
			CODL86	1.24		0.26			1.499	0.348	0.934	2.78
	-: MA U.C. per SF -->	0.06										
Demo/chip concrete slab to level		500	100	$1,775	$0	$206	$0	$0	$1,981	$0	$1,001	$2,982
	U.C. per SF -->		0.2ULABB9C	3.55		0.41			3.962		2.003	5.96
Base Stone Removal		600	120	$3,026	$0	$0	$0	$0	$3,028	$703	$1,886	$5,617
	-: MA U.C. per SF -->		0.2AMABD8	5.05					5.047	1.171	3.144	9.36
Base Stone Reinstallation		600	185	$4,659	$1,200	$0	$0	$72	$5,931	$1,376	$3,694	$11,001
	-: MA U.C. per SF -->		0.308AMABD8	7.76	2.00			0.12	9.885	2.293	6.157	18.34
Stone saw cut		200	3	$77	$66	$31	$0	$4	$178	$41	$111	$331
	-: MA U.C. per LF -->		0.016COELB89	0.39	0.33	0.16		0.02	0.892	0.207	0.555	1.65
Base Stone Broken replacement		150		$0	$3,000	$0	$0	$180	$3,180	$738	$1,981	$5,898
	-: MA U.C. per SF -->		AMABD8		20.00			1.20	21.200	4.918	13.204	39.32
Misc demo and removal		2,000	30	$527	$0	$0	$0	$0	$527	$0	$266	$793
	U.C. per SF -->		0.015B-LABOR	0.26					0.263		0.133	0.40
Shrubs & trees removal		1	30	$527	$0	$0	$0	$0	$527	$0	$266	$793
	U.C. per LS -->		30ALABCLA	526.55					526.550		266.192	792.74
Soil Removal & replacement		40	80	$1,404	$0	$0	$0	$0	$1,404	$0	$710	$2,114
	U.C. per CY -->		2ALABCLA	35.10					35.104		17.746	52.85
Shrubs & trees allowance		1	60	$1,053	$4,000	$0	$0	$240	$5,293	$1,403	$3,385	$10,081
	-: LS U.C. per LS -->		60ALABCLA	1,053.10	4,000.00			240.00	5,293.100	1,402.673	3,384.965	10,000.74
Waterproofing removal		1,250	13	$317	$0	$34	$0	$0	$351	$0	$178	$529
	U.C. per SF -->		0.01ARFCG1	0.25		0.03			0.281		0.142	0.42
Waterproofing		3,000	150	$3,801	$10,500	$413	$0	$630	$15,344	$3,560	$9,556	$28,460
	-: MR U.C. per SF -->		0.05ARFCG1	1.27	3.50	0.14		0.21	5.115	1.187	3.185	9.49
Protection Board		3,000	30	$813	$810	$0	$0	$49	$1,672	$388	$1,041	$3,101
	-: MR U.C. per SF -->		0.01ARFCROF	0.27	0.27			0.02	0.557	0.129	0.347	1.03

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIREGT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1			*$1,607,032*										
A1.3 EXTERIOR DINING													
Rework Flashing			250	14	$374	$260	$0	$0	$16	$650	$151	$405	$1,205
	-: MR	U.C. por SF -->		0.055ARFCROF	1.50	1.04			0.06	2.598	0.603	1.618	4.82
Misc rework @ window wall			1	40	$1,084	$250	$0	$0	$15	$1,349	$313	$840	$2,502
	-: MR	U.C. por LS -->		40ARFCROF	1,083.98	250.00			15.00	1,348.980	312.964	840.177	2,502.12
Precast paver 24"x24", pedestal system			1,750	210	$6,289	$12,250	$0	$0	$735	$19,274	$4,472	$12,004	$35,750
	-: MA	U.C. per SF -->		0.12AMABBRI	3.59	7.00			0.42	11.014	2.555	6.860	20.43
Concrete curb			250	50	$1,013	$1,250	$464	$0	$75	$2,802	$0	$1,417	$4,219
		U.C. per LF -->		0.2CLABC20	4.05	5.00	1.86		0.30	11.208		5.666	16.88
Remove Drains			8	24	$824	$0	$0	$0	$0	$824	$191	$513	$1,528
	-: PL	U.C. per EA -->		3MPLUQ1	102.99					102.994	23.895	64.147	191.04
Remove Piping			160	24	$854	$0	$0	$0	$0	$854	$198	$532	$1,585
	-: PL	U.C. per LF -->		0.15MPLUQ2	5.34					5.340	1.239	3.326	9.90
Drains			17	34	$1,167	$5,100	$0	$0	$306	$6,573	$1,525	$4,094	$12,192
	-: PL	U.C. per EA -->		2MPLUQ1	68.66	300.00			18.00	386.662	89.706	240.822	717.19
Core drill for new floor drain			9	54	$1,278	$450	$516	$0	$27	$2,272	$477	$1,390	$4,139
	-: SP	U.C. per EA -->		6COELB89	142.05	50.00	57.36		3.00	252.427	53.010	154.409	459.85
Drain Pipe Includes Fittings			340	131	$4,660	$1,870	$0	$0	$112	$6,643	$1,541	$4,137	$12,321
	-: PL	U.C. per LF -->		0.385MPLUQ2	13.71	5.50			0.33	19.537	4.533	12.168	36.24
Misc Electrical works in planter			1	20	$711	$50	$0	$0	$3	$764	$202	$488	$1,454
	-: EL	U.C. per LS -->		20EELEELE	710.68	50.00			3.00	763.680	202.374	488.374	1,454.43
Temporary Protection - Area Below Work			2,000	20	$351	$400	$0	$0	$24	$775	$0	$392	$1,167
		U.C. per SF -->		0.01B-LABOR	0.18	0.20			0.01	0.388		0.198	0.58
Ceiling dml, suspended ceiling, incl system, on suspension system			2,000	53	$934	$0	$0	$0	$0	$934	$0	$472	$1,406
		U.C. per SF -->	0.027	ALABCLA	0.47					0.467		0.236	0.70
Susp acst clg bds,24" x 24", 5/8" T			2,000	53	$1,732	$2,740	$0	$0	$164	$4,636	$1,229	$2,965	$8,829
	-: AT	U.C. per SF -->		0.027ACARCAR	0.87	1.37			0.08	2.318	0.614	1.482	4.42
Suspension sys for board & tile, 2' x 2' grid, class A, T bar			2,000	49	$1,602	$800	$0	$0	$48	$2,450	$649	$1,566	$4,665
	-: AT	U.C. per SF -->		0.025ACARCAR	0.80	0.40			0.02	1.225	0.325	0.783	2.33
Spray on ceiling Insulation			2,000	20	$542	$2,000	$0	$0	$120	$2,662	$618	$1,658	$4,938
	-: MR	U.C. per SF -->		0.01ARFCROF	0.27	1.00			0.06	1.331	0.309	0.829	2.47
Expansion Joint incld. cover			50	14	$548	$1,274	$0	$0	$76	$1,898	$440	$1,182	$3,521
	-: MR	U.C. per LF -->		0.281SIWSSSW	10.96	25.48			1.53	37.868	8.809	23.647	70.42
Fence Rework			1		$0	$0	$0	$2,000	$0	$2,000	$0	$1,011	$3,011
		U.C. per LS -->						2,000.00		2,000.000		1,011.075	3,011.07

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB	QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1		$1,607,032										
A1.3 EXTERIOR DINING												
Irrigation rework		500		$0	$0	$0	$250	$0	$250	$0	$126	$376
	U.C. per SF -->						0.50		0.500		0.253	0.75
Subtotal				$44,114	$48,270	$2,119	$2,250	$2,536	$99,289	$20,823	$59,578	$181,374
Taxes				$0	$2,896	$0	$0					
Subcontractor Markups				$8,788	$11,720	$317	$0					
Prime Contractor Markups from AA				$26,743	$31,791	$1,231	$1,137					
	TOTAL A1.3 EXTERIOR DINING	1,716		$79,643	$94,677	$3,667	$3,387	$2,896	$99,649	$20,823	$60,903	$181,375
2,000.00 SF		Level Unit Cost-->		$39.82	$47.34	$1.83	$1.69	$1.45	$49.82	$10.41	$30.45	$90.69
A1 PHASE- A 1		$1,607,032										
A1.4 PEACHTREE STREET TERRACE												
Brick pavement removal, incl sand, insulation and waterproofing membrane		2,800	168	$3,472	$0	$726	$0	$0	$4,198	$974	$2,615	$7,786
	- : MA U.C. per SF -->		CODLB6 0.06		1.24		0.26			1.499	0.348	0.934	2.78
Base Stone Removal		210	42	$1,060	$0	$0	$0	$0	$1,060	$246	$660	$1,966
	- : MA U.C. per SF -->		0.2AMABD0		5.05					5.047	1.171	3.144	9.36
Base Stone Reinstallation		210	65	$1,631	$420	$0	$0	$25	$2,076	$482	$1,293	$3,850
	- : MA U.C. per SF -->		0.308AMABD8		7.76	2.00		0.12		9.885	2.293	6.157	18.34
Stone saw cut		70	1	$27	$23	$11	$0	$1	$62	$14	$39	$116
	- : MA U.C. per LF -->		0.016CDELB89		0.39	0.33	0.16	0.02		0.892	0.207	0.555	1.65
Base Stone Broken replacement		53		$0	$1,060	$0	$0	$64	$1,124	$261	$700	$2,084
	- : MA U.C. per SF -->		AMABD8			20.00		1.20		21.200	4.918	13.204	39.32
Misc demo and removal		2,800	42	$737	$0	$0	$0	$0	$737	$0	$373	$1,110
	U.C. per SF -->		0.015B-LABOR		0.26					0.263		0.133	0.40
Waterproofing		3,080	154	$3,902	$10,780	$424	$0	$647	$15,753	$3,655	$9,811	$29,219
	- : MR U.C. per SF -->		0.05ARFCG1		1.27	3.50	0.14	0.21		5.115	1.187	3.185	9.49
Spray on ceiling Insulation		2,800	28	$759	$2,800	$0	$0	$168	$3,727	$865	$2,321	$6,913
	- : MR U.C. per SF -->		0.01ARFCROF		0.27	1.00		0.06		1.331	0.309	0.829	2.47
Rework Flashing		200	11	$299	$208	$0	$0	$12	$520	$121	$324	$964
	- : MR U.C. per SF -->		0.055ARFCROF		1.50	1.04		0.06		2.600	0.603	1.618	4.82
Misc rework @ window wall		1	80	$2,168	$250	$0	$0	$15	$2,433	$564	$1,515	$4,513
	- : MR U.C. per LS -->		80ARFCROF		2,167.97	250.00		15.00		2,432.970	564.449	1,515.308	4,512.73
Precast paver 24"x24", pedestal system		2,800	336	$10,063	$19,600	$0	$0	$1,176	$30,839	$7,155	$19,207	$57,201
	- : MA U.C. per SF -->		0.12AMABBRI		3.59	7.00		0.42		11.014	2.555	6.860	20.43
Concrete curb		200	40	$810	$1,000	$371	$0	$60	$2,242	$0	$1,133	$3,375
	U.C. per LF -->		0.2CLABC20		4.05	5.00	1.86	0.30		11.208		5.666	16.88

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A1 PHASE- A 1

US Cost

Report Total: $1,607,032

LEVEL	SUB	QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A1 PHASE- A 1		*$1,607,032*										
A1.4 PEACHTREE STREET TERRACE												
Ceiling dml, suspended ceiling, incl system, on suspension system		2,800	74	$1,307	$0	$0	$0	$0	$1,307	$0	$661	$1,968
			ALABCLA	0.47					0.467		0.236	0.70
	U.C. per SF -->		0.027									
Susp acst clg bds,24" x 24", 5/8" T		2,800	74	$2,424	$3,836	$0	$0	$230	$6,491	$1,720	$4,151	$12,361
- : AT	U.C. per SF -->		0.027ACARCAR	0.87	1.37			0.08	2.316	0.614	1.482	4.42
Suspension sys for board & tile, 2' x 2' grid, class A, T bar		2,800	69	$2,242	$1,120	$0	$0	$67	$3,429	$909	$2,193	$6,531
- : AT	U.C. per SF -->		0.026ACARCAR	0.80	0.40			0.02	1.225	0.325	0.783	2.33
Drains		4	16	$549	$1,200	$0	$0	$72	$1,821	$423	$1,134	$3,378
- : PL	U.C. per EA -->		4MPLUQ1	137.32	300.00			18.00	455.325	105.635	283.586	844.55
Core drill for new floor drain		4	48	$1,136	$200	$459	$0	$12	$1,807	$380	$1,106	$3,293
- : SP	U.C. per EA -->		12COELB09	284.10	50.00	114.75		3.00	451.853	94.890	276.399	823.14
Drain Pipe Includes Fittings		200	154	$5,483	$1,100	$0	$0	$66	$6,649	$1,543	$4,141	$12,332
- : PL	U.C. per LF -->		0.77MPLUQ2	27.41	5.50			0.33	33.244	7.713	20.705	61.66
Subtotal				$38,070	$43,597	$1,991	$0					
Taxes				$0	$2,616	$0	$0					
Subcontractor Markups				$8,299	$10,644	$366	$0					
Prime Contractor Markups from AA				$23,442	$28,743	$1,191	$0					
TOTAL A1.4 PEACHTREE STREET TERRACE		1,403		$69,811	$85,600	$3,548	$0	$2,616	$86,274	$19,309	$53,376	$158,960
2,800.00 SF		*Level Unit Cost--->*		*$24.93*	*$30.57*	*$1.27*		*$0.93*	*$30.81*	*$6.90*	*$19.06*	*$56.77*

PHASE – A2

Fulton County Goverment Complex

US Cost

Atlanta, GA

LINE ITEMS - DETAIL REPORT

Schematic Design

Repor For: A2 PHASE- A 2

Smallwod, Reynolds, Stewart, Stewart & Associate

Report Total: $599,047

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A2 PHASE- A 2			$599,047										
A2.1 UPPER TERRACE													
Brick pavement removal, incl sand, insulation and waterproofing membrane			4,000	240	$4,960	$0	$1,037	$0	$0	$5,997	$1,391	$3,735	$11,123
	- : MA	U.C. per SF -->	0.06	CODLB6	1.24		0.26			1.499	0.348	0.934	2.78
Base Stone Removal			1,008	202	$5,088	$0	$0	$0	$0	$5,088	$1,180	$3,169	$9,437
	- : MA	U.C. per SF -->		0.2AMABD8	5.05					5.047	1.171	3.144	9.36
Base Stone Reinstallation			1,008	310	$7,827	$2,016	$0	$0	$121	$9,964	$2,312	$6,206	$18,482
	- : MA	U.C. per SF -->		0.308AMABD8	7.76	2.00			0.12	9.885	2.293	6.157	18.34
Stone saw cut			336	5	$130	$111	$52	$0	$7	$300	$70	$187	$556
	- : MA	U.C. per LF -->		0.016COELB09	0.39	0.33	0.16		0.02	0.892	0.207	0.555	1.65
Base Stone Broken replacement			252		$0	$5,040	$0	$0	$302	$5,342	$1,239	$3,327	$9,909
	- : MA	U.C. per SF -->		AMABD8		20.00			1.20	21.200	4.918	13.204	39.32
New Stone veener			2,088	642	$16,214	$41,760	$0	$0	$2,506	$60,480	$14,031	$37,668	$112,179
	- : MA	U.C. per SF -->		0.308AMABD8	7.76	20.00			1.20	28.965	6.720	18.040	53.73
Misc demo and removal			10,000	150	$2,633	$0	$0	$0	$0	$2,633	$0	$1,331	$3,964
		U.C. per SF -->		0.015B-LABOR	0.26					0.263		0.133	0.40
Shrubs & plant removal			1	60	$1,053	$0	$0	$0	$0	$1,053	$0	$532	$1,585
		U.C. per LS -->		60ALABCLA	1,053.10					1,053.100		532.383	1,585.48
Soil Removal & replacement			150	300	$5,266	$0	$0	$0	$0	$5,266	$0	$2,662	$7,927
		U.C. per CY -->		2ALABCLA	35.10					35.103		17.746	52.85
Shrubs & trees allowance			1	120	$2,106	$8,000	$0	$0	$480	$10,586	$0	$5,352	$15,938
		U.C. per LS -->		120ALABCLA	2,106.21	8,000.00			480.00	10,586.210		5,351.723	15,937.93
Waterproofing removal			6,600	66	$1,672	$0	$182	$0	$0	$1,854	$0	$937	$2,791
		U.C. per SF -->		0.01ARFCG1	0.25		0.03			0.281		0.142	0.42
Waterproofing			12,000	600	$15,202	$42,000	$1,653	$0	$2,520	$61,375	$14,239	$38,226	$113,840
	- : MR	U.C. per SF -->		0.05ARFCG1	1.27	3.50	0.14		0.21	5.115	1.187	3.185	9.49
Protection Board			12,000	120	$3,252	$3,240	$0	$0	$194	$6,686	$1,551	$4,164	$12,402
	- : MR	U.C. per SF -->		0.01ARFCROF	0.27	0.27			0.02	0.557	0.129	0.347	1.03
Rework Flashing			1,500	83	$2,244	$1,560	$0	$0	$94	$3,897	$904	$2,427	$7,229
	- : MR	U.C. per SF -->		0.055ARFCROF	1.50	1.04			0.06	2.598	0.603	1.618	4.82
Misc rework @ window wall			1	40	$1,084	$250	$0	$0	$15	$1,349	$313	$840	$2,502
	- : MR	U.C. per LS -->		40ARFCROF	1,083.98	250.00			15.00	1,348.980	312.964	840.177	2,502.12
Precast paver 24"x24", pedestal system			4,000	480	$14,375	$28,000	$0	$0	$1,680	$44,055	$10,221	$27,439	$81,715
	- : MA	U.C. per SF -->		0.12AMABBRI	3.59	7.00			0.42	11.014	2.555	6.850	20.43
Concrete curb			750	150	$3,039	$3,750	$1,392	$0	$225	$8,406	$0	$4,250	$12,656
		U.C. per LF -->		0.2CLABC20	4.05	5.00	1.86		0.30	11.208		5.666	16.88
Remove Drains			9	27	$927	$0	$0	$0	$0	$927	$215	$577	$1,719
	- : PL	U.C. per EA -->		3MPLUQ1	102.99					102.993	23.894	64.147	191.03
Remove Piping			180	54	$1,923	$0	$0	$0	$0	$1,923	$446	$1,197	$3,566
	- : PL	U.C. per LF -->		0.3MPLUQ2	10.68					10.681	2.478	6.652	19.81

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: A2 PHASE- A 2

US Cost

Report Total: $599,047

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
A2 PHASE- A 2			*$599,047*										
A2.1 UPPER TERRACE													
Drains			18	36	$1,236	$5,400	$0	$0	$324	$6,960	$1,615	$4,335	$12,909
	-: PL	U.C. per EA -->		2MPLUQ1	68.66	300.00			18.00	386.662	89.706	240.822	717.19
Core drill for new floor drain			9	54	$1,278	$450	$516	$0	$27	$2,272	$477	$1,390	$4,139
	-: SP	U.C. per EA -->		6COELB89	142.05	50.00	57.36		3.00	252.427	53.010	154.409	459.85
Drain Pipe Includes Fittings			360	277	$9,869	$1,980	$0	$0	$119	$11,968	$2,777	$7,454	$22,198
	-: PL	U.C. per LF -->		0.77MPLUQ2	27.41	5.50			0.33	33.244	7.713	20.705	61.66
Gutters			80	8	$295	$160	$0	$0	$10	$465	$108	$290	$862
	-: MR	U.C. per LF -->		0.1MSHMSHE	3.69	2.00			0.12	5.811	1.348	3.619	10.78
Downspout			30	3	$111	$60	$0	$0	$4	$174	$40	$109	$323
	-: MR	U.C. per LF -->		0.1MSHMSHE	3.69	2.00			0.12	5.810	1.348	3.619	10.78
Misc Electrical works			1	120	$4,264	$250	$0	$0	$15	$4,529	$1,200	$2,896	$8,626
	-: EL	U.C. per LS -->		120EELEELE	4,264.05	250.00			15.00	4,529.050	1,200.199	2,896.350	8,625.60
Irrigation rework			6,000		$0	$0	$0	$3,000	$0	$3,000	$0	$1,517	$4,517
		U.C. per SF -->						0.50		0.500		0.253	0.75
Temporary Protection - Area Below Work			8,000	80	$1,404	$1,600	$0	$0	$96	$3,100	$0	$1,567	$4,667
		U.C. per SF -->		0.01B-LABOR	0.18	0.20			0.01	0.386		0.196	0.58
Ceiling dml, suspended ceiling, incl system, on suspension system			8,000	213	$3,735	$0	$0	$0	$0	$3,735	$0	$1,888	$5,623
		U.C. per SF -->	0.027	ALABCLA	0.47					0.467		0.236	0.70
Susp acst clg bds,24" x 24", 5/8" T			8,000	213	$6,927	$10,960	$0	$0	$658	$18,544	$4,914	$11,859	$35,318
	-: AT	U.C. per SF -->		0.027ACARCAR	0.87	1.37			0.08	2.318	0.614	1.482	4.42
Suspension sys for board & tile, 2' x 2' grid, class A, T bar			8,000	197	$6,406	$3,200	$0	$0	$192	$9,798	$2,596	$6,266	$18,660
	-: AT	U.C. per SF -->		0.025ACARCAR	0.80	0.40			0.02	1.225	0.325	0.783	2.33
Spray on ceiling Insulation			8,000	80	$2,168	$8,000	$0	$0	$480	$10,648	$2,470	$6,632	$19,750
	-: MR	U.C. per SF -->		0.01ARFCROF	0.27	1.00			0.06	1.331	0.309	0.828	2.47
Electrical Temporary Protection			1	100	$3,553	$2,000	$0	$0	$120	$5,673	$1,503	$3,628	$10,805
	-: EL	U.C. per LS -->		100EELEELE	3,553.38	2,000.00			120.00	5,673.380	1,503.445	3,628.151	10,804.98
Expansion Joint incld. cover			300	84	$3,288	$7,644	$0	$0	$459	$11,390	$2,643	$7,094	$21,127
	-: MR	U.C. per LF -->		0.281SIWSSSW	10.96	25.48			1.53	37.988	8.809	23.647	70.42
Subtotal					$133,530	$177,431	$4,833	$3,000					
Taxes					$0	$10,646	$0	$0					
Subcontractor Markups					$26,798	$40,914	$745	$0					
Prime Contractor Markups from AA					$81,052	$115,764	$2,819	$1,517					
TOTAL A2.1 UPPER TERRACE			5,114		$241,379	$344,755	$8,397	$4,517	$10,646	$329,439	$68,457	$201,151	$599,047
10,000.00 SF		*Level Unit Cost-->*			*$24.14*	*$34.48*	*$0.84*	*$0.45*	*$1.06*	*$32.94*	*$6.85*	*$20.12*	*$59.90*

PHASE - C1

Fulton County Goverment Complex

Atlanta, GA

Schematic Design

Smallwod, Reynolds, Stewart, Stewart & Associate

LINE ITEMS - DETAIL REPORT

Repor For: C1 PHASE- C1

US Cost

Report Total: $772,487

LEVEL	SUB		QTY	Hrs	LABOR	MATERIAL	EQUIPMENT	OTHERS	TAXES	DIRECT COST	SUB M/U	PRIME M/U	TOTAL
C1 PHASE- C1			$772,487										
C1.1 LOWER TERRACE													
Brick pavement removal, incl sand, insulation and waterproofing membrane	- : MA	U.C. per SF -->	2,700	162 CODLB6 0.06	$3,348 1.24	$0	$700 0.26	$0	$0	$4,048 1.499	$939 0.348	$2,521 0.934	$7,508 2.78
Base Stone Removal	- : MA	U.C. per SF -->	960	192 0.2AMABD8	$4,845 5.05	$0	$0	$0	$0	$4,845 5.047	$1,124 1.171	$3,018 3.144	$8,987 9.36
Base Stone Reinstallation	- : MA	U.C. per SF -->	960	295 0.308AMABD8	$7,455 7.76	$1,920 2.00	$0	$0	$115 0.12	$9,490 9.885	$2,202 2.293	$5,911 6.157	$17,602 18.34
Stone saw cut	- : MA	U.C. per LF -->	320	5 0.016COELB89	$123 0.39	$106 0.33	$50 0.16	$0	$6 0.02	$285 0.892	$66 0.207	$178 0.555	$529 1.65
Base Stone Broken replacement	- : MA	U.C. per SF -->	420	AMABD8	$0	$8,400 20.00	$0	$0	$504 1.20	$8,904 21.200	$2,066 4.918	$5,546 13.204	$16,515 39.32
Misc demo and removal		U.C. per SF -->	2,700	41 0.015B-LABOR	$711 0.26	$0	$0	$0	$0	$711 0.263	$0	$359 0.133	$1,070 0.40
Waterproofing	- : MR	U.C. per SF -->	2,970	149 0.05ARFCG1	$3,763 1.27	$10,395 3.50	$409 0.14	$0	$624 0.21	$15,190 5.115	$3,524 1.187	$9,461 3.185	$28,175 9.49
Protection Board	- : MR	U.C. per SF -->	2,700	27 0.01ARFCROF	$732 0.27	$729 0.27	$0	$0	$44 0.02	$1,504 0.557	$349 0.129	$937 0.347	$2,790 1.03
Spray on ceiling Insulation	- : MR	U.C. per SF -->	2,700	27 0.01ARFCROF	$732 0.27	$2,700 1.00	$0	$0	$162 0.06	$3,594 1.331	$834 0.309	$2,238 0.829	$6,666 2.47
Rework Flashing	- : MR	U.C. per SF -->	320	18 0.055ARFCROF	$479 1.50	$333 1.04	$0	$0	$20 0.06	$831 2.598	$193 0.603	$518 1.618	$1,542 4.82
Misc rework @ window wall	- : MR	U.C. per LS -->	1	40 40ARFCROF	$1,084 1,083.98	$250 250.00	$0	$0	$15 15.00	$1,349 1,348.980	$313 312.964	$840 840.177	$2,502 2,502.12
Precast paver 24"x24", pedestal system	- : MA	U.C. per SF -->	2,700	324 0.12AMABBRI	$9,703 3.59	$18,900 7.00	$0	$0	$1,134 0.42	$29,737 11.014	$6,899 2.555	$18,521 6.860	$55,158 20.43
Concrete curb		U.C. per LF -->	320	64 0.2CLABC20	$1,297 4.05	$1,600 5.00	$594 1.86	$0	$96 0.30	$3,587 11.208	$0	$1,813 5.666	$5,400 16.88
Remove Drains	- : PL	U.C. per EA -->	14	42 3MPLUQ1	$1,442 102.99	$0	$0	$0	$0	$1,442 102.904	$335 23.895	$898 64.147	$2,674 191.04
Remove Piping	- : PL	U.C. per LF -->	280	84 0.3MPLUQ2	$2,991 10.68	$0	$0	$0	$0	$2,991 10.681	$694 2.478	$1,863 6.652	$5,547 19.81
Drains	- : PL	U.C. per EA -->	18	36 2MPLUQ1	$1,236 68.66	$5,400 300.00	$0	$0	$324 18.00	$6,960 386.662	$1,615 89.706	$4,335 240.822	$12,909 717.19
Core drill for new floor drain	- : SP	U.C. per EA -->	4	24 6COELB89	$568 142.05	$200 50.00	$230 57.38	$0	$12 3.00	$1,010 252.428	$212 53.010	$618 154.410	$1,839 459.85
Drain Pipe Includes Fittings	- : PL	U.C. per LF -->	360	277 0.77MPLUQ2	$9,869 27.41	$1,980 5.50	$0	$0	$119 0.33	$11,968 33.244	$2,777 7.713	$7,454 20.705	$22,198 61.66
Planters 10'x15'x2' granite clad including painting and soil		U.C. per EA -->	1		$0	$0	$0	$12,500 12,500.00	$0	$12,500 12,500.000	$0	$6,319 6,319.216	$18,819 18,819.22

C. **Design Proposal**

Design Proposal provided under separate cover.

8. PROJECT DRAWINGS/DIAGRAMS

A. Phase A1 - Kitchen, Servery, Dining and Peachtree Terrace

See attached.

FULTON COUNTY GOVERNMENT CENTER

LEGEND FOR PHASING PLANS

—— CROSS HATCH INDICATES OCCUPIED SPACE AT FLOOR BELOW AREA OF WORK

—— SHADED ZONE INDICATES CORRECTIVE WORK AREA

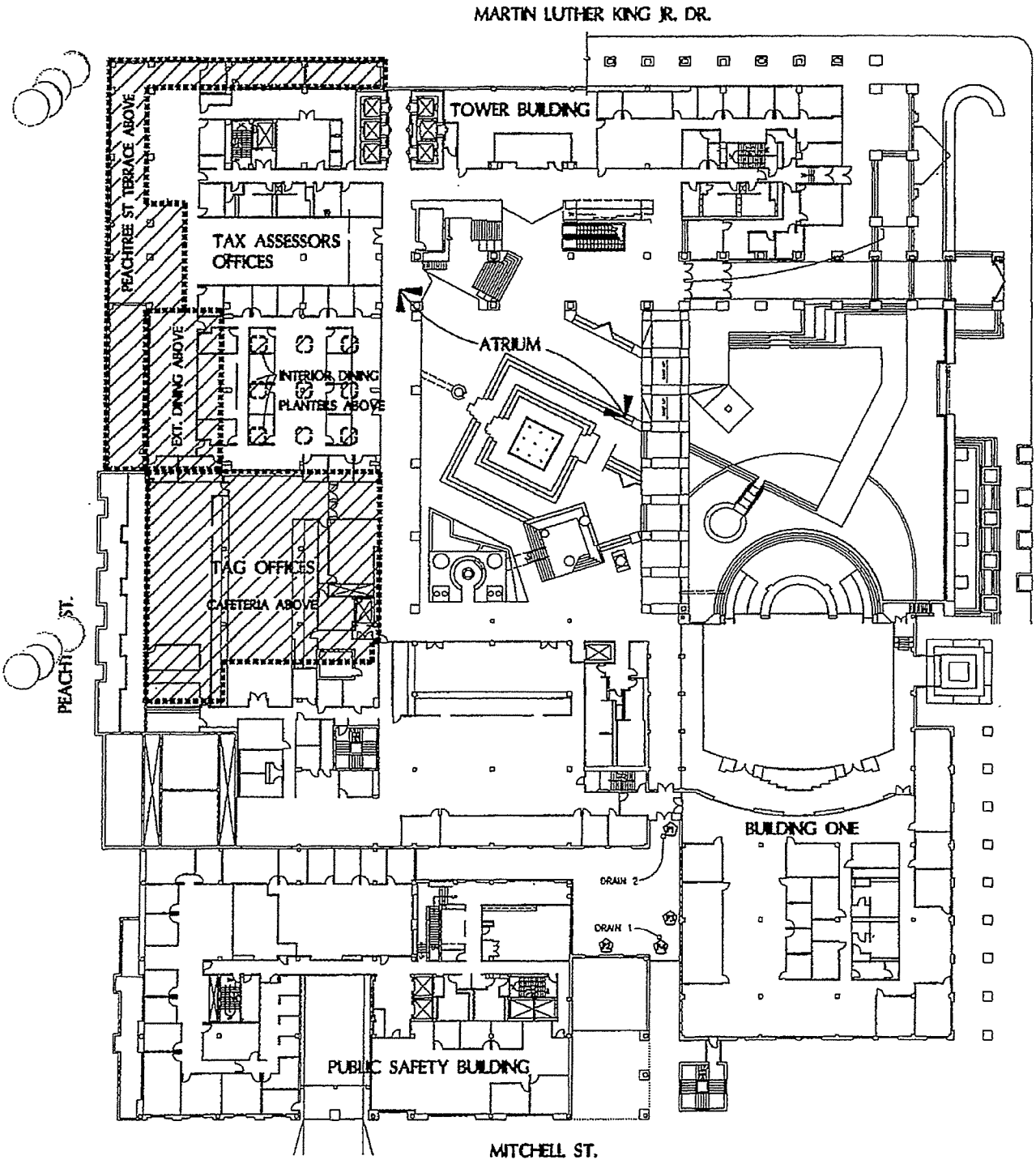
FULTON COUNTY GOVERNMENT CENTER

LEGEND

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004



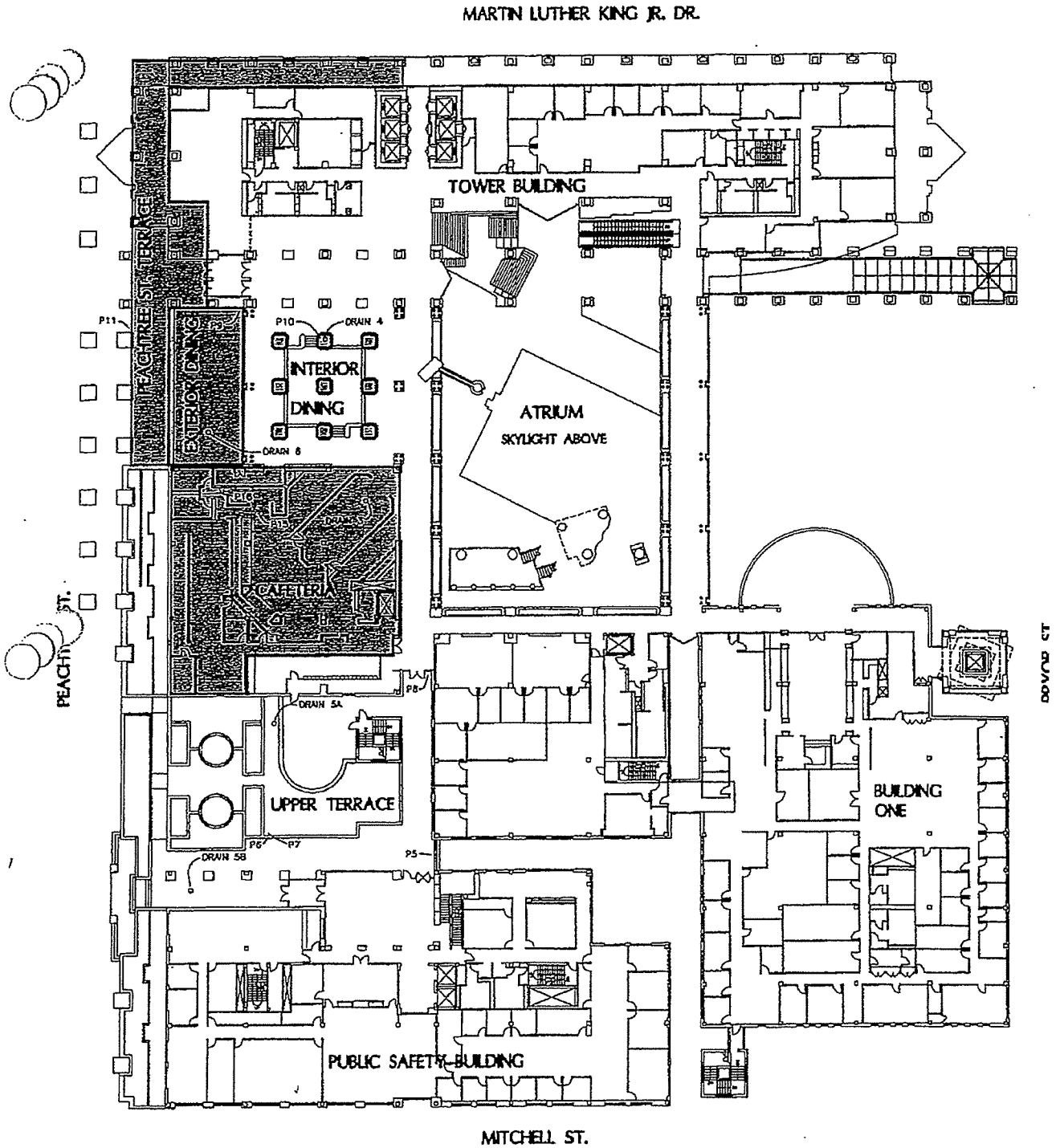
FULTON COUNTY GOVERNMENT CENTER

PHASE A1

CAFETERIA,DINING,PEACHTREE TERRACE – FIRST FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects March 23, 2004



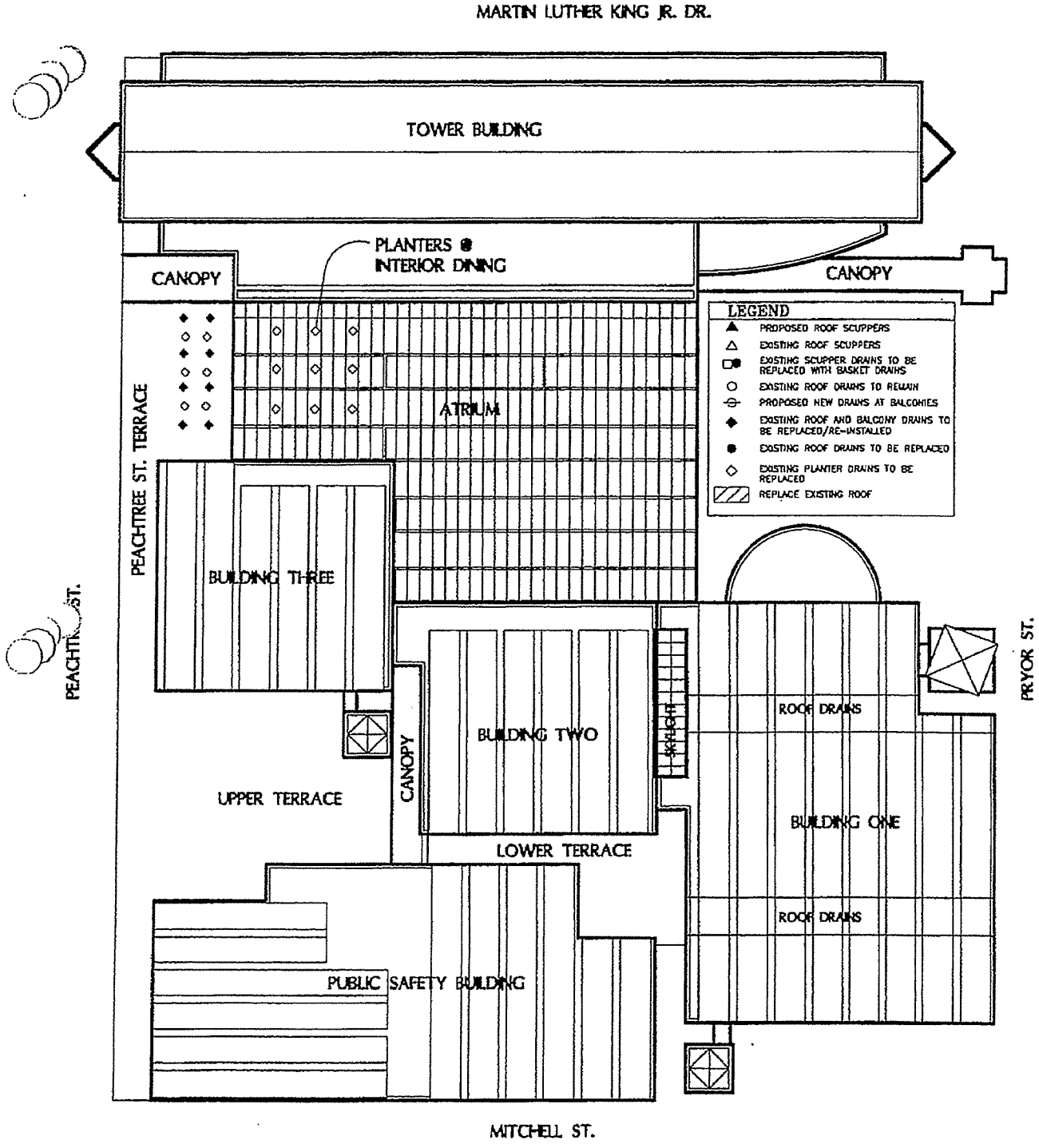
FULTON COUNTY GOVERNMENT CENTER

PHASE A1

CAFETERIA,DINING,PEACHTREE TERRACE – SECOND FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects March 23, 2004



FULTON COUNTY GOVERNMENT CENTER

PHASE A1

DRAINAGE PLAN

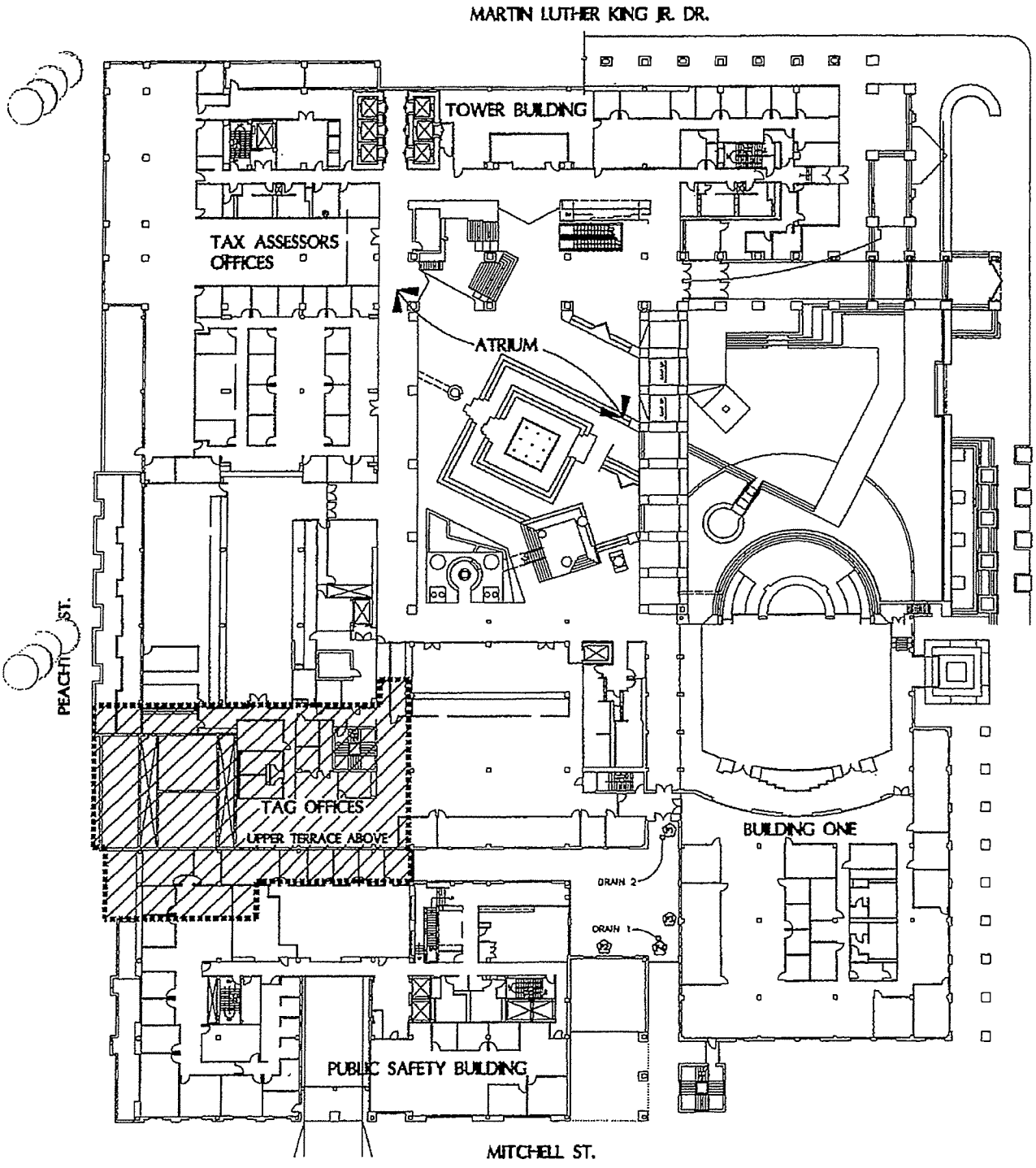
NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004

8. B. Phase A2 - Upper Terrace

See attached.



FULTON COUNTY GOVERNMENT CENTER

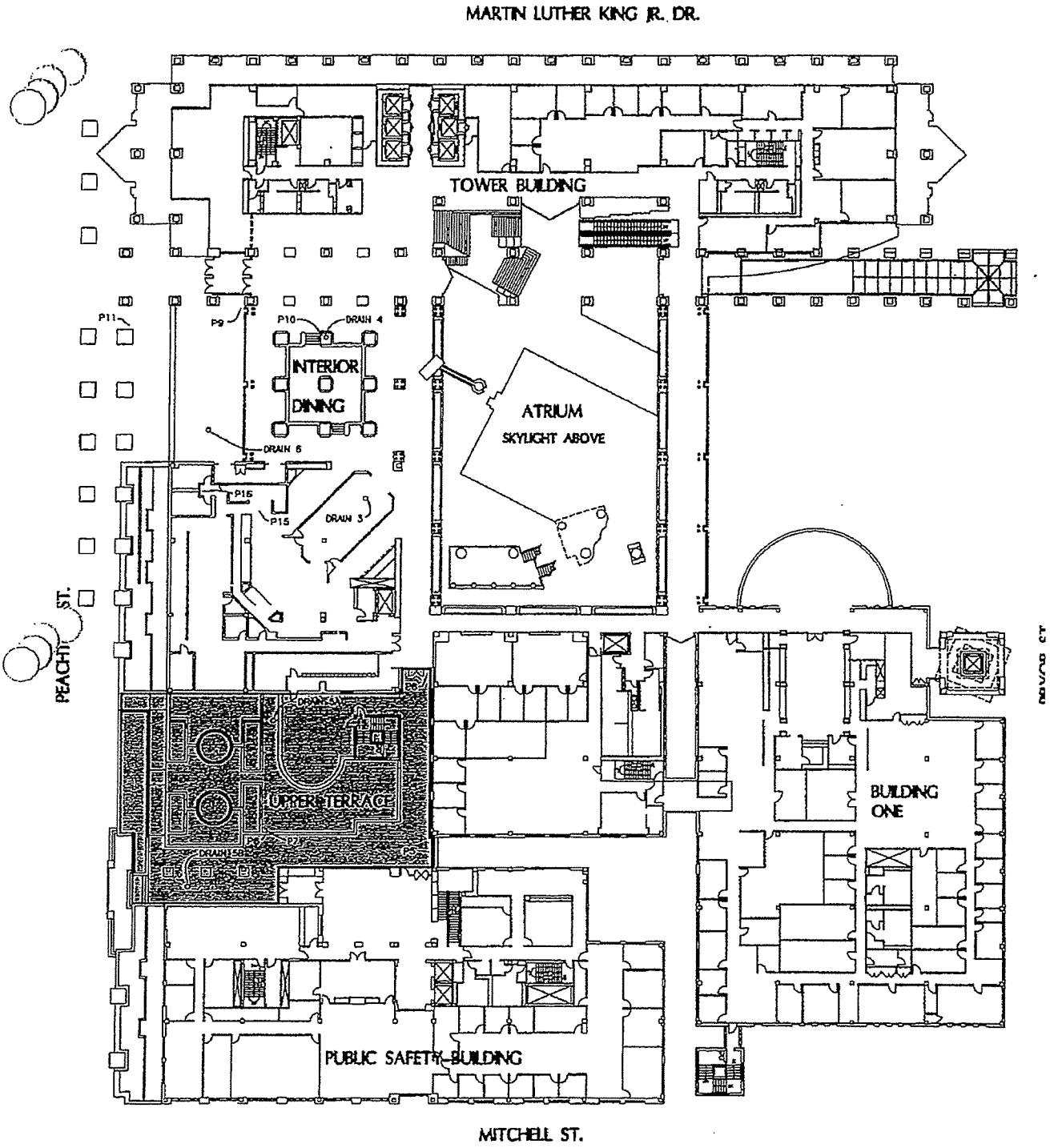
PHASE A2

UPPER TERRACE – FIRST FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004



FULTON COUNTY GOVERNMENT CENTER

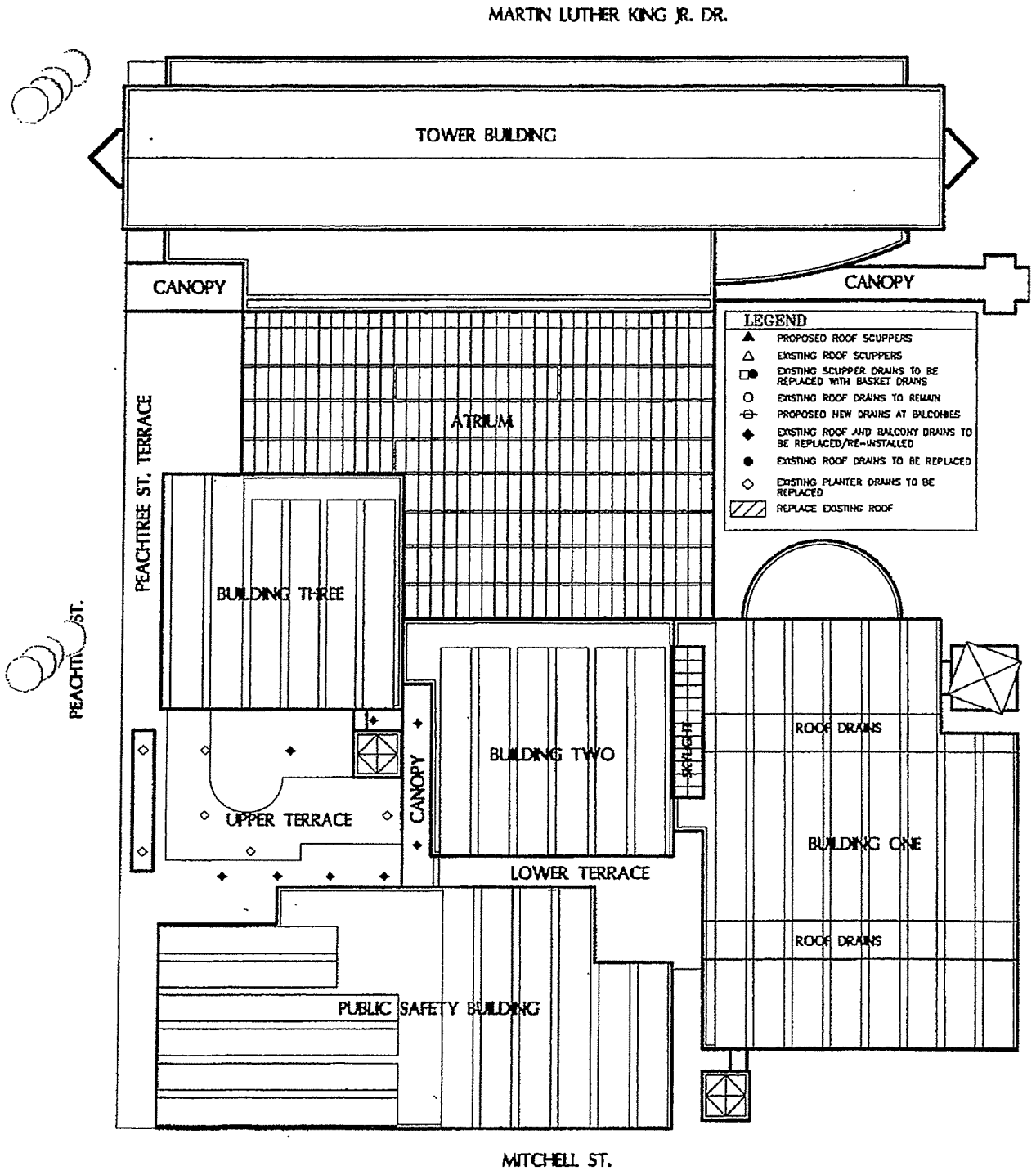
PHASE A2

UPPER TERRACE – SECOND FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004



FULTON COUNTY GOVERNMENT CENTER

PHASE A2

DRAINAGE PLAN

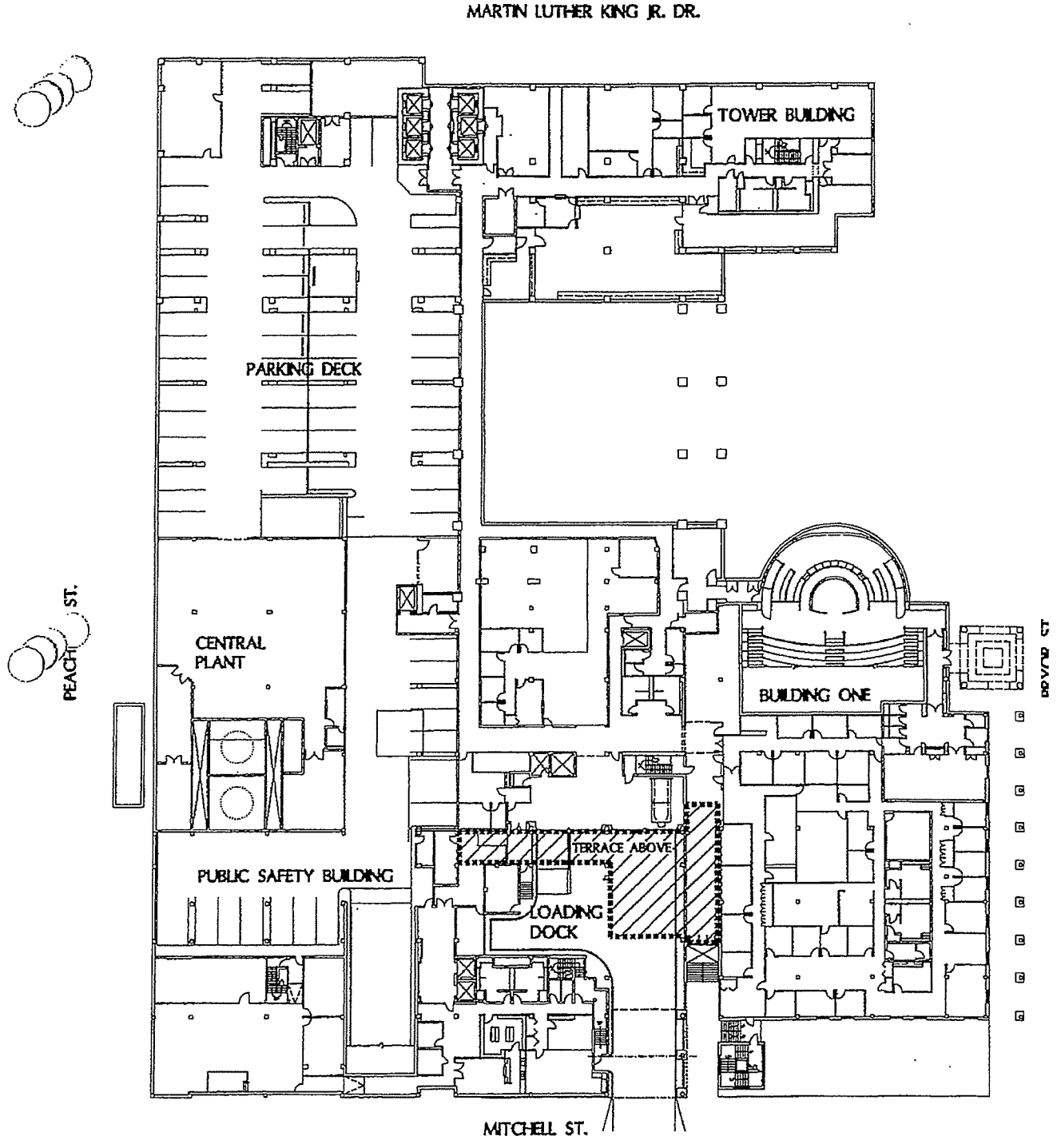
NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004

8. C. Phase C1 - Lower Terrace and 10th Floor Balconies

See attached.



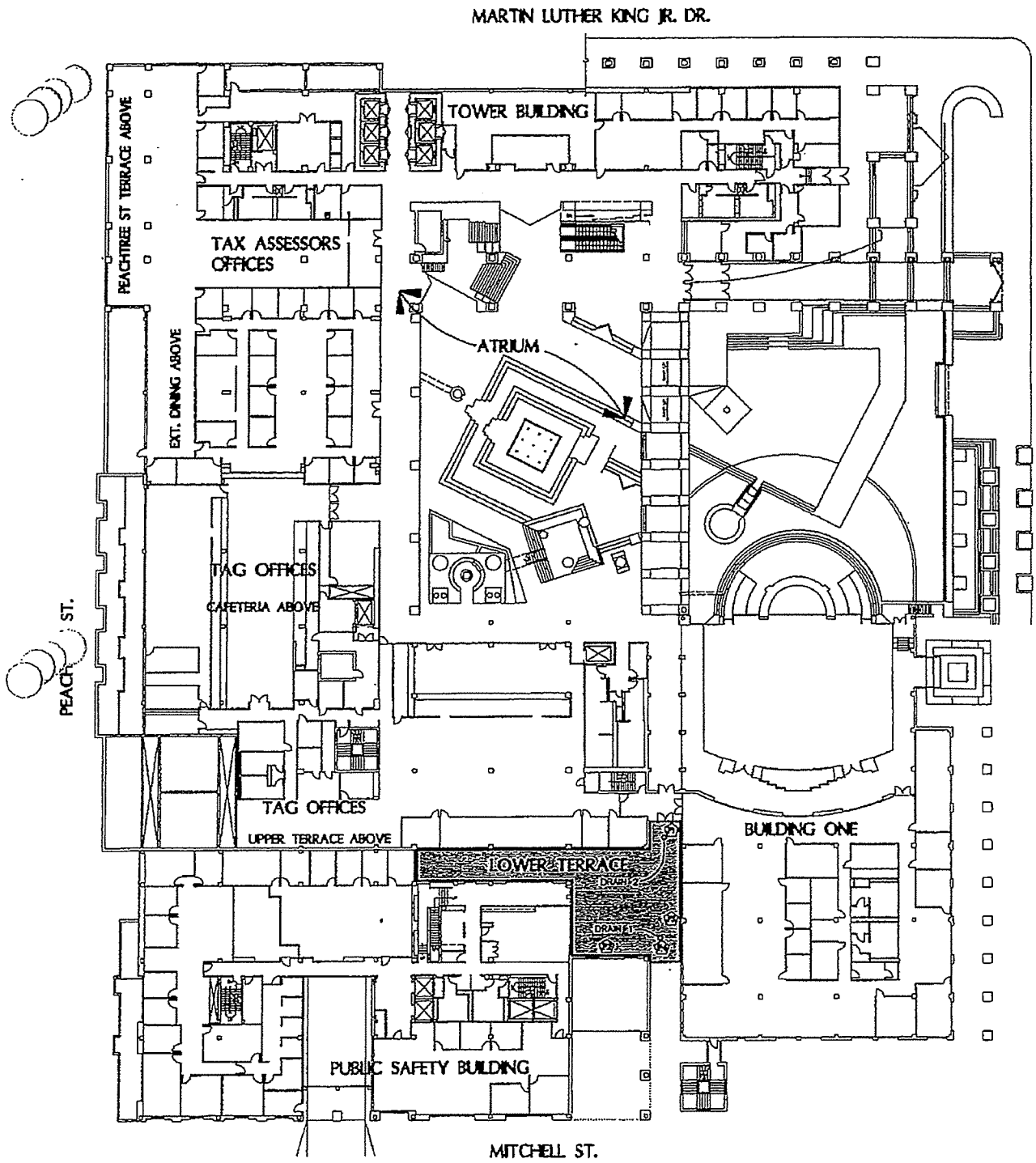
FULTON COUNTY GOVERNMENT CENTER

PHASE C1

LOWER TERRACE AND TENTH FLOOR BALCONIES – GROUND FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects March 23, 2004



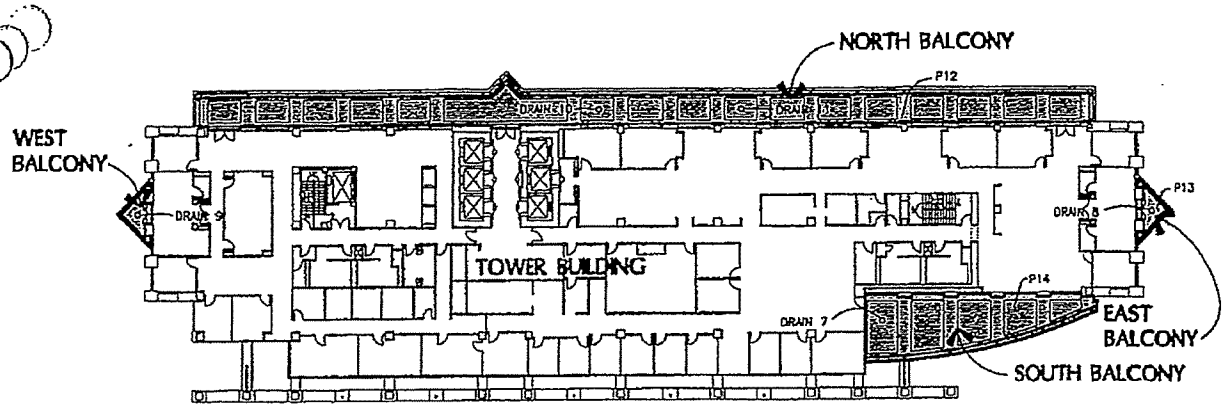
FULTON COUNTY GOVERNMENT CENTER

PHASE C1

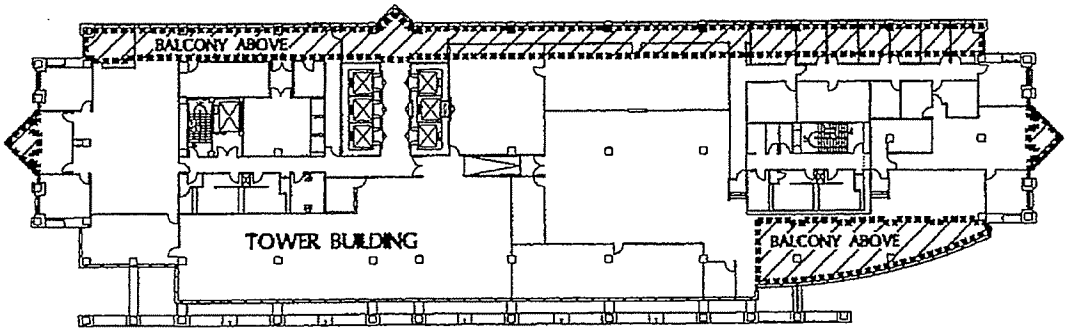
LOWER TERRACE AND TENTH FLOOR BALCONIES - FIRST FLOOR

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects March 23, 2004



TENTH FLOOR PLAN



NINTH FLOOR PLAN

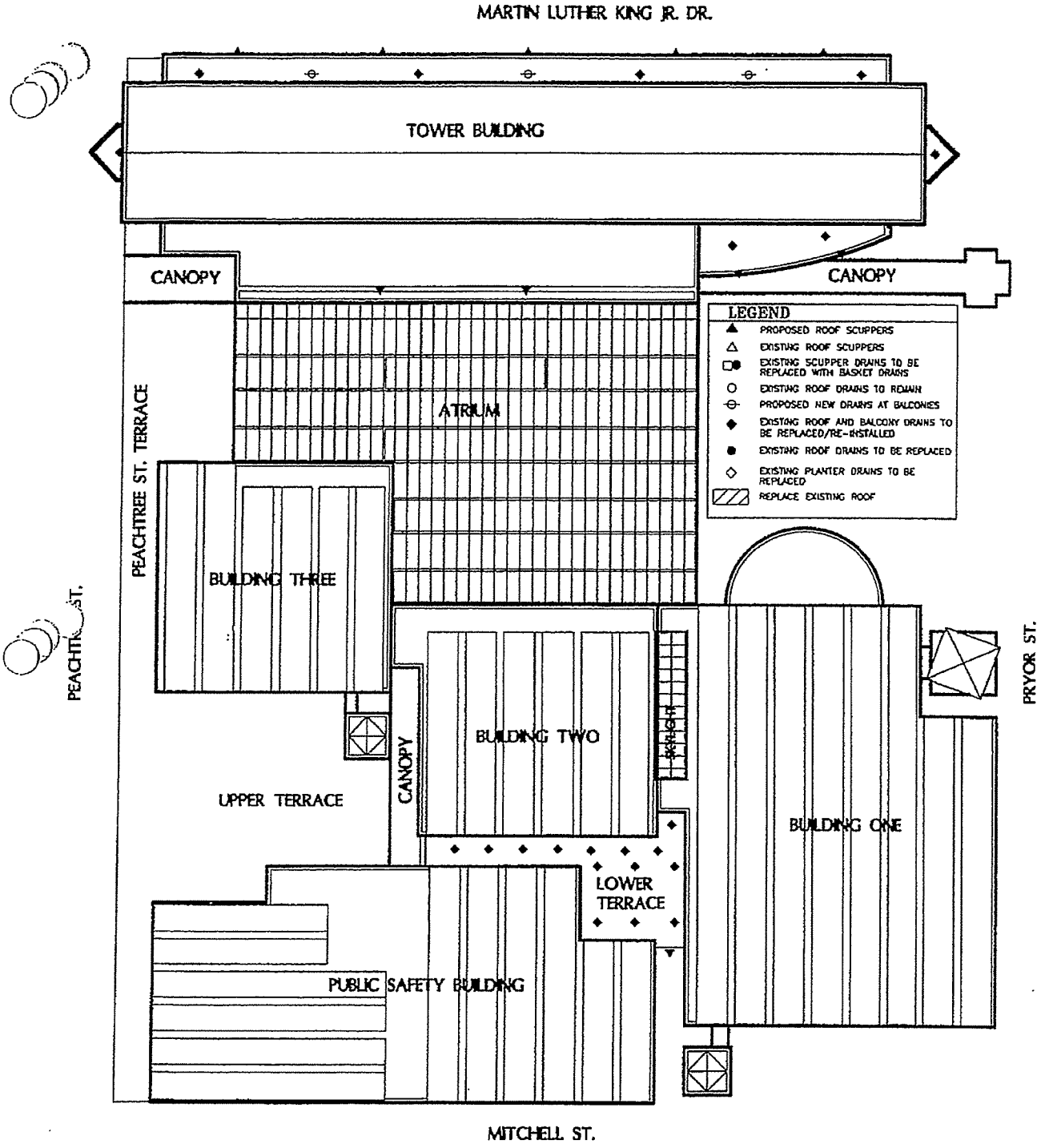
FULTON COUNTY GOVERNMENT CENTER

PHASE C1

LOWER TERR. & TENTH FLOOR BALC.–NINTH & TENTH FLOOR PLANS

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects March 23, 2004



FULTON COUNTY GOVERNMENT CENTER

PHASE C1

DRAINAGE PLAN

NORTH

Smallwood, Reynolds, Stewart, Stewart & Associates, Inc. Architects

March 23, 2004

EXHIBIT II

Phase 2: Building Envelope Investigation Report-Final

Fulton County Government Center
Phase II
Building Envelope Investigation Report - Final
Commission No. 203061.01-12.C
March 23, 2004

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Fulton County Government Center
Building Envelope Investigation

1. EXECUTIVE SUMMARY

A. Findings

Following SRSS' investigation of the Terraces and Balconies at the Fulton County Government Center complex, SRSS and our consultants were asked to conduct a non-destructive review of representative areas of the exterior walls, roof and skylights. Our limited review has been general in nature. Further investigation of specific conditions are recommended after the recommended remedial work has been completed.

The complex's exterior skin contains a multitude of water entry/leak issues. The terraces, balconies, planters and Kitchen/Servery have been addressed separately in our Phase One report dated March 23, 2004. This report focuses on the other significant portions of the building's exterior enclosure systems: the exterior walls and glazing, building/roof interface and expansion joints, atrium skylight, corridor skylight, and roof drainage.

The primary roof storm drainage system appears to be adequate. The other areas investigated have multiple water control deficiencies that will require remediation. These issues include the following:

1. The exterior walls' glazing systems weep (leak) into the wall cavities. Some of the secondary effects of this water entry include the following:
   a. Pooling of water in the glazing sill reglet can degrade the insulated glazing unit seal. Over time, this seal will fail and allow moisture entry and fogging of the space between the two glass lites which comprise those units.
   b. Water traveling down the interior face of the granite veneer panels will promote rust and degradation of the adjoining materials. This includes increased potential for freeze-thaw damage to the saturated stone panels and rusting of the structural anchors that secure the exterior veneer to the building structure.
   c. Water on the interior face of the granite veneer saturates the insulation applied to the back of the stone. This reduces the effective insulating properties of the material and may cause loss of adhesion and subsequent displacement of the insulation.
   d. Water traveling to the bottom of the walls at the terraces will further overwhelm the already inadequate terrace flashings. This causes more water to enter the building.
   e. Water inside the wall cavity may enable the growth of mold and mildew.

2. The skylights have numerous issues including the following:
   a. Insufficient curb and flashing heights above adjoining roofs promotes storm water from roof entering the skylight.
   b. Lack of weather seal between skylights and their gutters allow gutters to overflow into building.
   c. Open joints and gaskets in skylights admit water into building.
   d. Details at adjoining walls and roofs are not watertight and admit water into building.
   e. Failed expansion joints admit water into building.
   f. Lack of access over the atrium skylight inhibits proper maintenance. Lack of maintenance increases the frequency of gutter drains becoming clogged and water overflowing the gutter into the building.
   g. Several skylight glazing units are broken or otherwise damaged and need to be replaced.
   h. The louvers mounted to the exterior of the south facing skylights must be removed to replace the glazing below.
3. The primary roof drainage system should be adequate once the system has been cleaned. However, no overflow system was provided at several areas. SRSS recommends that overflow roof scuppers be added to reduce the potential for the building interior acting as the storm water overflow discharge area.

Due to the considerable amount of water entering the Fulton County Government Center, SRSS and our consultants recommend that the leaks identified by this review be remediated. This process would include the following:

1. Provide a "designed wet seal" for the window systems, curtainwalls, and skylights.
2. Inspect the building skin and seal cracks in the granite veneer and any open joints and penetrations of the building skin.
3. Raise the corridor skylight to provide a minimum 8" curb height.
4. Provide access over the atrium skylight to all skylight gutters for maintenance.
5. Remove and replace damaged skylight glazing.
   a. Fulton County has agreed to delete the exterior shade louvers. These louvers are closed and are reported to no longer be operational. They hinder replacement and wet sealing of the glazing below.
   b. Fulton County has decided to replace the south facing glazing using high efficiency, reflective, insulated glazing units.
   c. Fulton County has decided to add permanent operable maintenance staging over the atrium.
6. Provide drain bodies and drain covers in skylight gutters.
7. Correct and seal skylight gutters so as to not overflow into building.
8. Provide proper weather-resistant expansion joints and building to skylight interface.
9. Flush all storm drainage piping.
10. Replace scupper type roof drains that are set in concrete curb at "doghouses" with standard roof drain with accessible piping.

11. Provide overflow roof scuppers.

Most of this work can occur without undue impact on the occupied tenant areas. However, the occupied tenant areas below new and replacement roof drains will need to be vacated for relatively short periods of time to avoid undue disruption to the tenants and mitigate likely impact of foreseeable leaking while the existing drains are replaced. Additionally, the overhead piping will need to be extended to the new drains. This work will require the removal and replacement of the ceiling systems and effected lights and HVAC devices.

FCGC has determined that the project will be phased as follows:

1. Phase B1 - Assembly Building Corridor Skylight & Roof
2. Phase B2 - Public Safety Building Roof
3. Phase B3 - Mid-Rise (Building One) Roof
4. Phase D1 - Atrium Roof, Canopies, and Sloped Glazing
5. Phase E1 - Reseal Building Walls

B. Pricing

Based on Fulton County's approved means of repair, phasing of construction, and contract delivery method for the construction, SRSS has prepared conceptual pricing estimates for the above phases of work as follows:

Phase B1 - Assembly Building Corridor Skylight & Roof	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	4 months
Total Time	21 months
Construction Cost	$185,000.00
Phase B2 - Public Safety Building Roof	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	3 months
Construction Time *	3.5 months
Total Time	18.5 months
Construction Cost	$145,000.00

Phase B3 - Mid-Rise (Building One) Roof	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	3 months
Construction Time *	3 months
Total Time	18 months
Construction Cost	$70,000.00
Phase B1, B2, & B3 Design & Administration Fee & Reimbursable Costs	$85,000.00
Total Cost B1, B2, & B3	$485,000.00
Phase D1 - Atrium Roof, Sloped Glazing & Canopies	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	16 months
Total Time	33 months
Construction Cost	$2,555,000.00
Design & Administration Fee & Reimbursable Costs (Includes Prequalification of Contractors)	$264,000.00
Total Cost	$2,819,000.00
Phase E1 - Reseal Building Exterior	
Design & Prequalification Schedule	7 months
Bid & Contract	5 months
Lead Time	5 months
Construction Time *	9 months
Total Time	26 months
Construction Cost	$1,475,000.00
Design & Administration Fee & Reimbursable Costs (Includes Prequalification of Contractors)	$155,000.00
Total Cost	$1,630,000.00

* Construction contracts should be timed so as not to require exterior terrace waterproofing between November and March.

All costs are based on the current market and will require escalation if the work is not bid prior to changed market conditions. Some of the separate Fulton County costs not incorporated above include the following: relocation space procurement, move costs, tenant space renovation or improvement, landscape plant removal, contingency funds, testing, and operations impact.

2. PROJECT SCOPE:

At the request of Fulton County, SRSS and our consultants have investigated the following areas of the buildings:

A. Vertical walls:

1. Tower, North elevation (12 stories): Approximately 3,100 sq. ft. of the building facade was water tested and inspected. Adjoining spaces include individual offices, systems furniture cubicles, and conference rooms.

2. Lower Terrace: Approximately 50 sq. ft. of the facade was water tested and inspected. Adjacent spaces include individual offices.

3. Upper Terrace: Approximately 50 sq. ft. of building facade was water tested and inspected. Adjacent spaces include Day Care and Kitchen areas on the Second Floor.

B. Skylights:

1. Corridor Skylight Between Atrium and Lower Terrace: The approximately 800 sq. ft. skylight is located in the ceiling of the double-height walkway connecting the Atrium to the Lower Level Plaza. Adjacent areas include individual offices, Corridors, Restrooms and the Auditorium.

2. Atrium Skylight/Tower Interface: The approximately 15,300 sq. ft. skylight is located centrally within the Fulton County Government Center complex. Adjoining areas include the Cafeteria and South side of the Tower at the 6th Floor. The space below includes the Second Floor Lobby and Reception Area, Cafeteria seating, and Restrooms. Adjacent 3rd through 6th Floor space is typically office space.

3. Atrium Curtainwall/Mid-rise Interface: Granite copes, metal sills and curtain wall jambs were inspected at Second Floor roof between Buildings 1 and 2. Adjacent spaces include Waiting Areas and Corridors.

C. Roof drainage:

Flat, ballasted roof areas of Buildings 1, 2, 3, and the Tower were examined and their water loads compared to the record plumbing drawings documents. Water shed from adjoining vertical walls was taken into account. Doghouse scuppers atop the Public Safety Building roof were examined. Drain capacity was also reviewed for the continuous aluminum gutters that run between skylight A-frames above the Main Atrium space.

3. ARCHITECTURAL ANALYSIS

A. Vertical Walls

The walls surrounding the terraces and comprising the majority of the building's exterior are constructed of approximately 1" thick granite veneer attached to structural steel members.("strong backs") in the wall cavity. Insulated window units and curtainwall systems are installed either flush with the adjacent granite or recessed. The window gaskets and frame assemblies have open joints that admit water. The window and curtainwall assemblies are designed to collect the water that enters the system and discharge it to the building exterior through weepholes at the sill. Unfortunately, these weeps are located behind the weather line of the building. Therefore, the building's exterior skin is compromised and the water in the glazing systems leaks into the interior of the building's perimeter walls. Additionally, failure of the window gasket seal promotes damage to the integrity of the insulated glass unit's seal.

Water entering the glazing systems is migrating into the wall cavity and traveling down the interior face of the granite veneer. The insulation adhered to the back of the granite veneer becomes a sponge for the water and loses its effectiveness as insulation.

In some locations, the alignment of the window frame and granite further exacerbates this problem because the trapped water overwhelms the sealant/backer rod assembly.

Inspection of the vertical wall revealed perimeter sealant at typical window and curtainwall openings in the upper floors to be in good condition, but incorrectly installed, i.e., exterior of the proper location for water control.

The gapped window frame joints must be sealed and the rope wicks removed. Cracks in the granite veneer also contribute to water leakage into the building, and should be repaired.

The abutment of the vertical curtainwall to the Assembly corridor roof (between the atrium and lower terrace) shows gaps in the metal coping and inadequate weather seal at locations where it meets adjacent granite wall panels and parapet. These junctures require sealing to prevent water from entering the building such as that which has damaged the corridor area walls below. Overlap of granite and adjacent window frame at this location contributes to the problem and requires a new detail which would allow maintenance.

3. B. **Skylights**

The atrium skylights rest on painted steel trusses and are constructed of insulated glass units sealed in aluminum frames. Skylight glazing and frames rest on a superstructure of structural steel purlins which support the glazing and frames. Typically, the skylights shed water to grated aluminum gutters which run the entire length of the A-frame skylight modules. The atrium skylights employ an automated louver system to control sunlight at their southern exposures. County personnel reported that the shading louvers were no longer operational.

Similar to the conditions outlined in Section A above, gaps in skylight window gaskets and metal window frame components, together with ineffective weather sealant location, allow water to penetrate the window frame assembly and eventually migrate into the building. This condition is more pronounced at the nearly flat sloped skylight above the loggia, adjacent to the cafeteria seating area, north side.

Expansion joints located between skylights and vertical exterior walls are significant sources of water leakage.

Expansion joint covers which are in disrepair and attached to skylight modules allow water to flow directly into the building. Gutters attached to expansion joint covers (at skylight-building interfaces) have gapped splice joints which allow water penetration.

At all skylight gutter locations clogging at gutter drains causes water to flow under the skylight coping where the coping and gutter lining overlap.

There is a stand-alone conventional skylight above the corridor to the Lower Terrace which rests on a curb, however this curb is poorly constructed and is not, in fact, fully attached to the roof itself. Roofing membrane around this skylight was found to have holes; such openings allow water to travel beneath the membrane to cracks and oversized utility openings in the roof. Accordingly, the detached curb allows easy water penetration due to the lack of an actual weather seal.

Comprehensive remedial waterproofing work at the atrium skylights must take into account the removal and re-installation of the automated louver system, and the installation of access ladders for drainage maintenance. We recommend these measures in addition to sealing the skylight frame joints, metal copings ,and glazing gaskets, and reworking of adjoining expansion joint covers.

3. C. **Roof Drainage**

The flat roofs of the building complex shed rain water via typical basket drains. The water is carried from these drains to underground rain leaders which carry the water to adjacent storm sewers. CED has determined that the drain assemblies and capacities appear to meet the plumbing code in effect at the time of construction, with the exception of the Public Safety Building. All roof drains on the Public Safety Building are undersized and must be replaced.

Building One's mechanical doghouses have scupper-type wall drains that allow water from the adjacent roofs to drain through the penthouses, however the scupper and attendant drain piping are half-submerged in the concrete roof slab and inaccessible for maintenance. Maintenance of these drainage locations would require cutting out the surrounding roof slab to access the drain assembly and piping.

Interior leakage has been noted at locations near roof drains. Roof drains must be maintained free of debris in order to function properly. Existing drainage clogs unrelated to the drain itself will require flushing out the affected lines.

SRSS recommends that a secondary overflow drainage system for the roofs be installed where not currently existing. Greater overflow capacity would relieve the existing roof drains in the event of major rainfalls or unforeseen clogging. Current code requires overflow roof drainage, however, such an update is not required to be in the project scope.

At the Atrium skylight gutters, undersized drains were observed. The record drawings indicate 4" drains. 3" drain openings were observed. No drain bodies were noted. It appears that the 3" drain pipe simply terminates at the bottom of the gutter.

Overflow in the skylight gutters appears to be the result of clogged drains and the subject of ongoing maintenance and water leakage. Skylight maintenance is difficult due to lack of access. Skylight gutter grates and drains must be kept clear of debris, however this can now only be accomplished by ad hoc use of extension ladders to climb over skylight ridges to the next gutter. We recommend that any remedial work to skylight drainage provide accessibility. This may involve installation of a permanent metal ladder system traversing the skylight modules.

SRSS further recommends installation of additional drains in the skylight gutters to reduce overflow, and the installation of gutter emergency overflow scuppers at the nearest vertical walls.

Consulting Engineering Design, Inc.

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March 22, 2004 (Amended)

David Cameron
Smallwood Reynolds Stewart, Stewart & Associates, Inc.
One Piedmont Center
3565 Piedmont Road, NE
Suite 303
Atlanta, Georgia 30305-1521

Re: Site Visit and report for Plumbing Engineering Services for the renovation to the Fulton County Government Center Phase Two Roof Drainage Systems.

Dear David,

Consulting Engineering Design, Inc. performed a site visit on the existing Fulton County Government Center Phase Two Building Roof Areas. The findings of our site visit are from our own visual methods. We are attaching an investigative report detailing our findings, our opinions regarding our findings and our recommendations to repair the inaccuracies we discovered.

Should you have any questions regarding this report please do not hesitate to contact our office.

Sincerely,

Cynthia E Davis

Cynthia E Davis
President

INITIAL OBSERVATIONS FOR BLDGS. ONE - FIVE

I. All roofs had the basic code approved roof drain installed. The drains appeared clogged from debris such as leaves, roofing materials and internal scaling.
II. There was no appearance of an overflow drain system in the majority of the buildings. There were a few cases where scuppers were installed to be used as a secondary overflow drainage system.
III. Based upon the As-built Drawings provided and our visual inspection, the size and amount of drains installed were of adequate size and quantity (Calculations will be provided below). The buildings definitely need to have a secondary drainage system installed.
IV. Interior leakage was denoted. This may have occurred from the storm drain piping joints leaking, broken or cracked piping or roof leaking from around the roof drain body. Roof leaking may be due from the continual standing water when the roof drains do not drain properly.

ROOF CALCULATIONS FOR PRIMARY STORM DRAINS @ 4"/HR.

BUILDING ONE:

I. Total of 22,224 square feet of calculated roof area consisting of 21,504 square feet of roof and 720 square feet of wall.
II. There are twenty (20) roof drains installed which calculate out to 1111 square feet each.
III. Based upon the code for a 1111 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate four (4) inch drains are installed. This is adequate in size.

BUILDING TWO:

IV. Total of 9,876 square feet of calculated roof area consisting of 9,216 square feet of roof and 660 square feet of wall.
V. There are seventeen (17) roof drains installed which calculate out to 580 square feet each.
VI. Based upon the code for a 580 square foot capacity the drain needs to be a minimum of two inches (2"). The as-builts indicate four (4) inch drains are installed. This is adequate in size.

BUILDING THREE:

VII. Total of 8,448 square feet of calculated roof area consisting of 8,448 square feet of roof and no (0) square feet of wall.
VIII. There are sixteen (16) roof drains installed which calculate out to 528 square

IX. Based upon the code for a 528 square foot capacity the drain needs to be a minimum of two inches (2"). The as-builts indicate four (4) inch drains are installed. This is adequate in size.

BUILDING FOUR (ATRIUM):

X. Total of 35,972 square feet of calculated roof area consisting of 23,552 square feet of roof and 12,420 square feet of wall.
XI. There are seventeen (17) roof drains installed which calculate out to 2116 square feet each.
XII. Based upon the code for a 2116 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate four (4) inch drains are installed. However, a representative of Fulton County Maintenance Dept. has stated that the actual size installed is only three (3" inches. This is not adequate in size.

BUILDING FIVE (TOWER):

XIII. Total of 20,928 square feet of calculated roof area consisting of 20,928 square feet of roof and no (0) square feet of wall.
XIV. There are twenty-three (23) roof drains installed which calculate out to 910 square feet each.
XV. Based upon the code for a 910 square foot capacity the drain needs to be a minimum of three inches (3"). The as-builts indicate four (4) inch drains are installed. This is adequate in size.

ROOF DRAINAGE CALCULATIONS FOR PRIMARY STORM DRAINS @ 4"/HR.

BUILDING ONE:

I. There are twenty (20) 4" roof drains installed.
II. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
III. There is a total of nine hundred & twenty (920) feet of 4" pipe.
IV. There is a total of thirty-two (32) feet of 5" pipe.
V. There is a total of thirty-two (32) feet of 6" pipe.
VI. There is a total of fourty-eight (48) feet of 8" pipe.
VII. There is a total of fourty-five(45) feet of 10" pipe.

BUILDING TWO:

VIII. There are seventeen (17) 4" roof drains installed.
IX. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
X. There is a total of two hundred & eight (208) feet of 4" pipe.
XI. There is a total of seventy-two (72) feet of 5" pipe.
XII. There is a total of thirty-two (32) feet of 6" pipe.
XIII. There is a total of one hundred & twenty-four (124) feet of 8" pipe.

BUILDING THREE:

XIV. There are sixteen (16) 4" roof drains installed.
XV. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
XVI. There is a total of two hundred & eighty (280) feet of 4" pipe.
XVII. There is a total of sixteen (16) feet of 5" pipe.
XVIII. There is a total of thirty-two (32) feet of 6" pipe.
XIX. There is a total of one hundred (100) feet of 8" pipe.

BUILDING FOUR (ATRIUM):

XX. There are seventeen (17) 4" roof drains installed.
XXI. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
XXII. There is a total of one thousand two hundred & thirty (1,230) feet of 4" pipe.
XXIII. There is a total of one hundred (100) feet of 5" pipe.
XXIV. There is a total of one hundred & twenty (120) feet of 6" pipe.

BUILDING FIVE (TOWER):

XXV. There are twenty-three (23) 4" roof drains installed.
XXVI. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
XXVII. There is a total of three hundred & twenty (320) feet of 4" pipe.
XXVIII. There is a total of one hundred & fourty-eight (148) feet of 5" pipe.
XXIX. There is a total of two hundred & twenty (220) feet of 6" pipe.
XXX. There is a total of three hundred & sixty (360) feet of 10" pipe.

BUILDING FIVE (TOWER TERRACE):

XXXI. There are six (6) 4" roof drains installed.
XXXII. Based upon the as-builts each roof drain is supplied by a 4" horizontal pipe.
XXXIII. There is a total of three hundred & sixty (360) feet of 4" pipe.

CONCLUSIONS

I. After performing calculations on the primary roof drain system, it appears that the specified size of the drains are adequate.
II. There may be a possibility that the roof drain and the piping from the drain body was not installed as specified.
III. Only visual inspection could be derived on the roof drain body itself. The piping was not visible.
IV. The current code stipulates that wherever roof water may be trapped, a secondary roof drainage system is required. The tower terrace will be supplied with scuppers only to adhere to the above mentioned code requirement. The basis is to eliminate tripping over the raised secondary drains.

REPAIR RECOMMENDATIONS

I. First recommendation would be to flush thru the roof drains with water that maintains a maximum or lower pressure that is rated for the storm drain piping.
II. Should this not clear up the clogged piping then replacing the existing roof drains with new ones along with the storm drain piping. This could be a costly effort because of the occupancy of the building. If found to be necessary, we recommend cutting the piping into floor sections at either the ceiling or floor levels and pulling the sections out one by one and then replacing with new piping simultaneously. The hole where the existing roof drain was removed will need to be temporarily plugged until all new piping is installed.
III. A secondary storm drain system (overflow drains) is needed. Adding more scuppers or installing new scuppers will only waterfall the increased water onto another roof. This may then create the situation of having to increase the size of the drains on the roof below. This is not recommended since the use of the existing openings through the building need to be utilized, except for the tower terrace as stated above.
IV. Installing secondary (overflow) drains may be done by following the same method of removing the existing piping. When opening up the walls to remove the existing piping another hole can be installed and the secondary piping can be inserted into the hole section by section floor by floor.

INITIAL OBSERVATIONS FOR PUBLIC SAFETY BUILDING

V. All roofs had the basic code approved roof drain installed. The drains appeared clogged from debris such as leaves, roofing materials and internal scaling.
VI. There was some appearance of an overflow drain system in certain locations of the building parapet. There were a few cases where scuppers were installed to be used as a secondary overflow drainage system.
VII. Based upon the As-built Drawings provided and our visual inspection, the size and amount of drains installed were not of adequate size and quantity (Calculations will be provided below). This buildings definitely needs to have more roof drains installed and a more secondary drainage (scuppers) installed.
VIII. Interior leakage was denoted, especially over the computer equipment at the 911 Call Center. This may have occurred from the storm drain piping penetrating thru the upper level foundation, piping joints leaking, broken or cracked piping or roof leaking from around the roof drain body.
IX. The visual inspected location of the existing roof drains do not match the location that the Architectural plans indicate.

ROOF CALCULATIONS FOR PRIMARY STORM DRAINS @ 4"/HR.

PUBLIC SAFETY BUILDING:

XVI. Total of 17,836 square feet of calculated roof area consisting of 17,836 square feet of roof and 0 square feet of wall.

XVII. There are twelve (12) roof drains installed which calculate out to 1,486 square feet each.

XVIII. Based upon the code for a 1,486 square foot capacity the drain needs to be a minimum of four inches (4"). The visual inspection indicated that three (3) inch drains are installed. This is not an adequate in size.

CONCLUSIONS

V. After performing calculations on the primary roof drain system, it appears that the specified size of the drains are not adequate.

VI. There may be a possibility that the roof drain and the piping from the drain body was not installed as specified.

VII. Only visual inspection could be derived on the roof drain body itself. The piping was not visible.

VIII. The current code stipulates that wherever roof water may be trapped, a secondary roof drainage system is required. The tower terrace will be supplied with scuppers only to adhere to the above mentioned code requirement. The basis is to eliminate tripping over the raised secondary drains.

REPAIR RECOMMENDATIONS

V. First recommendation would be to re-seal around the opening at the doghouse foundation where the storm drain piping penetrates.

VI. Second recommendation would be to flush thru the roof drains with water that maintains a maximum or lower pressure that is rated for the storm drain piping.

VII. Should this not clear up the clogged piping then replacing the existing roof drains with new ones along with the storm drain piping. This could be a costly effort because of the occupancy of the building. If found to be necessary, we recommend cutting the piping into floor sections at either the ceiling or floor levels and pulling the sections out one by one and then replacing with new piping simultaneously. The hole where the existing roof drain was removed will need to be temporarily plugged until all new piping is installed.

VIII. More of a secondary storm drain system (scuppers) is needed. Adding more scuppers or installing new scuppers will help alleviate the excess of standing water.

Again, should there be any questions regarding this report, please do not hesitate to contact our office.

Site Visit performed by:

Cynthia E Davis
President
Consulting Engineering Design, Inc.

Vertical Exterior Wall, Skylight, and Roof Investigation
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PROJECT NUMBER: W&A-203346.2

JANUARY 19, 2004

INTRODUCTION

Williamson and Associates undertook a series of inspections and tests to determine the possibility of vertical wall contribution to water leakage. Tests and inspections were also utilized to determine the sources of water leaks at skylights, gutters, vertical curtain wall details, and roof to vertical wall and skylight transitions. Please reference enclosed plan view locations, pages 1 through 4, for the following items discussed. Specific areas at the Lower Level Plaza, Upper Level Plaza, 10th floor Balcony, North Elevation of the Office Tower, Mid-Rise Roof, Atrium Skylights and Atrium Skylight to Office Tower transition were inspected and in some cases tested. Hose nozzle tests (AAMA 501.2) were used at a window at the Lower Level Plaza, the Upper Level Plaza, an entrance at the 10th floor balcony and the walkway skylight covering the connecting link between the Lower Level Plaza and the Atrium. A gutter test was conducted at the walkway skylight to Mid-Rise vertical wall. A static pressure differential test (ATSM E 1105) was conducted at a window at the Lower Level Plaza. Vertical access (including sealant peel and adhesion tests) inspections were conducted at the Lower Level Plaza and Upper Level Plaza using a ground base lift. Vertical access visual inspections (including sealant peel and adhesion tests) were conducted on the North Elevation using a swing stage anchored on the 10th floor balcony. All water penetration tests took place on the weekends. Inspection of the vertical walls and Atrium Skylights took place during normal weekdays. Inspections and testing dates started the week of December 8, 2004 and ended the week of January 12, 2004.

Captioned photographs and sketches are included with the report to clarify location and findings. The text is subdivided by definition of area and will reference location plan (1 through 4), relative sketches (1 through4) and photo series. The photo series will be coordinated with each text section.

Typical Vertical Walls (window wall and granite veneer)

Water is being trapped behind the vertical granite veneer below fenestrations. This is evident after rainfall with dark spots on the granite caused by standing water at anchor clips, flashings and wet-backer rod.

The typical flush vertical walls consisting of window wall and granite contribute to the water leakage problems. The installed window system was not designed to be weeped into the wall cavity Water bypasses the exterior weather sealant because the exterior window wall exterior covers align with the exterior face of the thin granite veneer. The window wall covers are not water control members and the granite is not thick enough to allow a second line of sealant to control water penetration though gaps in the covers and gaskets. The rope wicks set at the sill jamb to granite and granite intersections also contribute to water leakage problems by allowing additional water to enter the interior face of the granite. Anchor devices for the windows and insulation pressed against the interior face of the granite transfers water running down the interior of the granite to points interior of the paver flashings at the Plazas. Note even water controlled at the paver flashings add to the water from the plaza decks challenging the paver flashings.

The inset windows recessed into the granite wall have essentially the same problems as described above. Stainless steel flashing was installed below the granite to window sill to transfer water to the interior face of the granite. However additional leaks occur from the flashing well inboard of the vertical granite. The photographs (**Photos 21 through 30**) of the results of the static pressure differential test illustrate the large quantity of water that is diverted to the interior of the vertical granite and water falling inboard of the paver flashings.

The amount of water leakage can be significantly reduced by a "designed wet seal". The gaps in the metal covers must be sealed and the window wall exterior covers to the exterior of the glass must be sealed. The rope wicks must be removed and the remaining hole sealed. The windows must be weeped/vented so that the life of the insulated glass is not jeopardized. The typical silicone sealant weather sealant is in good shape but should be inspected and repaired as necessary. Cracks in the granite must also be repaired.

Atrium to Lower Level Plaza Skylight

Extraordinary uncontrolled water leakage occurs primarily due to the roof and gutter interface to the referenced skylight. The expansion joint must be redesigned. The interface of the roof and gutter to the skylight must be redesigned. The end walls of the gutter should be removed and the corresponding roofing must be repaired. The holes in the roofing membrane must be repaired. The skylight should have a "designed wet seal" applied with weep/vent capabilities.

Roof Scuppers at Mid-rise Roof through "Dog House" Curbs

A scupper was identified as a continuing problem. The scupper transfers water to the interior of the referenced "dog house". The problem occurs at the floor line of the dog house. A portion of the drain line and the elbow is actually below the surface of the floor line making leak repair of the line connections very difficult. Concrete must be removed to allow repair and maintenance access. Drains and drain bodies will require replacement.

Vertical Curtain Wall Sill and Corner Mullion Interface with Sill Coping and Granite Parapet.

Open Joints in formed aluminum sill coping at roof must be appropriately sealed and connected to the curtain wall sill. The vertical corner mullion is partially concealed by vertical elements of granite parapet walls. At minimum the corresponding curtain wall module must be wet sealed.

Typical Atrium Skylights and Gutters

Uncontrolled water leakage occurs when the drains are clogged allowing water to over flow at the gutter to skylight interface. Access is a problem requiring a permanent solution of designed permanent ladders to facilitate more frequent maintenance access. Additional linings with appropriate connection to the skylights could increase the water head capabilities. Additional drains and gutters located at the ends of the gutters could be installed to reduce the water head height accumulated during rain fall.

Wet sealing the skylights would be extraordinarily expensive because of the automated louvers. Glass replacement maintenance due to breakage is very expensive even on the un-louvered sides because of the access issues. Eventually the insulated glass will begin to fog due to seal failure. Presently, expect 25% replacement within the next 10 years. Planning for installation accessibility, operable louver reinstallation, gutter reconfiguration, painting maintenance of steel support members and associated costs is recommended.

Atrium Skylight Interface with Office Tower

The most consistent leak problem reported occurs at the expansion joint located between the Atrium Skylight and Office Tower. The photographs will illustrate a multitude of probable leak contributors. Expansion joint splices are torn leaving a direct path to the interior of the building. Multiple details of the slope glazed frame connecting the vertical wall to the recessed line of the window wall are open to leakage. The sill and jamb details at the vertical wall are similar to the typical window wall in that the perimeter weather sealant is applied to the exterior covers allowing water through the gaps in the covers interior of the granite. Cracks exists in horizontal planes of the granite beam covers allowing water into the atrium space below. An aluminum coping connecting the bellows expansion joint cover to the perimeter of the gutter has opened splice joints allowing water to the interior space. Gaps in the sill purlin/rafters of the skylight's gasket may allow water interior of the flashing into the atrium. The basic gutter is similar to the other skylight gutter in the requirement to clear the drains before water exceeds the height of the gutter and flows in between the skylight coping and the gutter lining. Access to the area is very difficult with the last maintenance estimated to have been done in 1999.

Additional linings with appropriate connection to the skylights could increase the water head capabilities. Additional drains and gutters located at the ends of the gutters could be installed to reduce the water head height accumulated during rainfall. The vertical window wall should have a "designed wet seal" applied. The slope glazed connector should be cleaned and have a "designed wet seal" applied. Cracks in the granite veneer and beam coves should be repaired. The bellows expansion joint should be replaced. The aluminum coping splices require the application of exterior aluminum covers with sealant. Obvious gaps in the purlin to rafter gaskets should be sealed. Permanent access to the area should be designed. Note that an access operable window set within the existing window wall is a possibility.

OBSERVATIONS

Typical Window Wall and Granite Veneer, Reference floor plans pages 1, 2 and 3. Reference sketches 1 and 2. Reference photographs 1 through 37.

The vertical wall consisting of windows and granite veneer on steel strong back contributes to water leakage. The window system has exterior covers that are not water control however the perimeter weather seal to the face of the thin granite veneer permits water to travel past the weather seal; see sketches 1 and 2.

The insulated glass set within the window wall requires weeps to reduce moisture within the glazing reglets. Moisture within the reglets will reduce the life of the insulated glass by eventually penetrating the insulated air space by advancing the aging of the insulated glass seal. The rope wicks set at the sills of the windows were an attempt to allow water to exit the exterior weather seal.

Hose tests and a static water test proved that significant quantities of water flow down the back of the granite to increase the volume of water challenging the plaza deck waterproofing. Window wall and granite anchors transfer water further interior that is not controlled by the plaza deck waterproofing. Insulation is pressed against the back of the granite absorbing water flowing down the interior face of the granite reducing the effectiveness of the insulation as the insulation transfers water interior of the plaza deck water proofing.

Skylight Covering the Walkway Between the Lower Plaza and The Atrium Roofing, Gutter and Curtain Wall Transitions. Reference floor plan page 1. Reference Sketches 3 and 4. Reference photographs 38 through 64.

Reference photographs 39 through 43. Uncontrolled water leakage was reported below the vertical curtainwall above the entry of the Atrium into the skylight covered walkway to the lower level plaza. Photo 39 identifies open coping splices intersecting the bottom of the curtainwall sill. Note to the right of photo 39 granite vertical granite coping is located directly in front of the curtain wall corner vertical mullion. Similar details are shown at photo 40 coping splice to the right and vertical granite in front of vertical curtain wall jamb. Photos 41 and 42 show the outside vertical joint unsealed between the corner of the curtain wall and the sloping granite parapet cap. Photo 43 shows the vertical cover is partially covered by the granite clad parapet cap.

Reference photograph 44. Roof side scupper leads through a concrete curb into the standing seam roofed "dog house into a drain leader. However the scupper pipe and drain leader is partially "embedded" into the concrete floor eliminating repair and maintenance to pipe joints.

Reference photographs 45 through 64 and sketches page 3 and 4. Massive leakage was reported at the skylight covering the walkway connecting the atrium to the lower level terrace. Past leakage was evident by stained ceiling tile in the office spaces and damaged wall coverings on the walkway walls. Hose testing the end and side of the roof to skylight interface and flooding the gutter between the vertical wall and the skylight proved those details are the main entry points that cause the rather dramatic water leakage. Tears in the EPDM roof transition also contributed to the water leakage. An EPDM covered cap covering the building expansion joint proved to be ineffective.

Typical Atrium Skylights. Reference floor plan page 4. Reference photographs 65 through 75.

Access for gutter maintenance, sealant addition and glass replacement is very difficult. Extension ladders had to be set up to access the typical skylights and the majority of the gutters. Over 20 man-hours were used just to place the ladders and remove the ladder gaining access to only 2 additional gutters. The primary concern has been access to the gutters to clear drains when gutters begin to over flow their effective heights. However longer-term concerns have not been addressed.

Glass replacement for broken or fogged units will be very expensive because of access problems and required temporary (or permanent) removal of the automated louvers. Wet sealing the skylights below the louvers will be impossible without the louver removal.

The profile of the gutters and the gutter interface with the bottom of the skylight under the skylight coping will be quite difficult. That work may also require partial removal of louvers.

The filters or grates previously covering the gutter drains have been removed to lengthen the time between debris removal Of course the down side is larger bits and bigger quantities of debris flow into the drains reducing the time when the full length of the lines will have to be cleared.

Atrium Skylight Interface with 10-Story Office Tower. Reference floor plan page 4. Reference photographs 76 through 91.

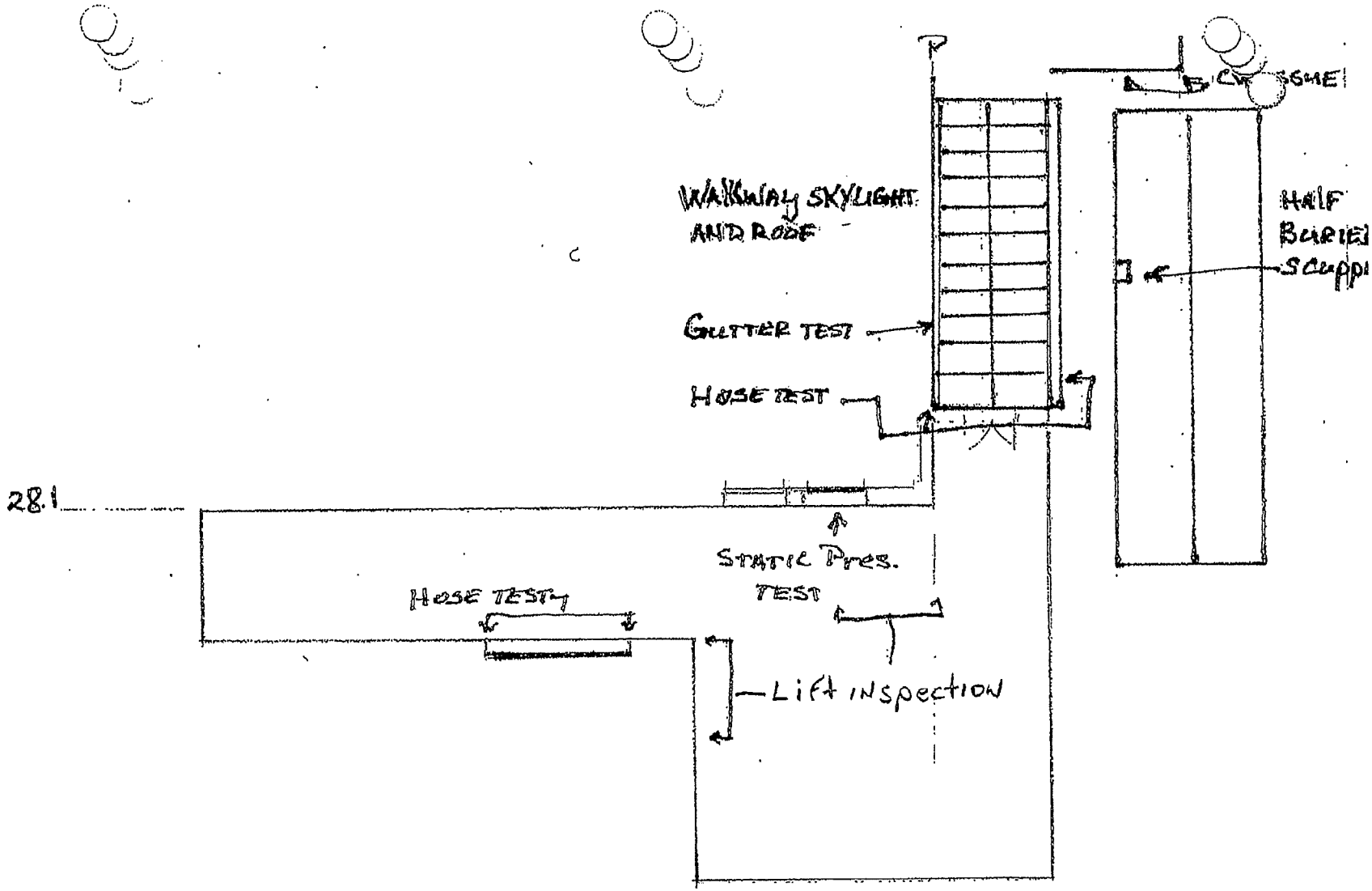
The Atrium Skylight at the 10-story office tower has the same issues as the other atrium skylights and gutters plus many additional problem details. It was reported that the area has not been accessed for maintenance (clearing drains in the gutter) since 1999.

Reference photographs 77 and 78 for an over view of the area.

1. An expansion joint bellows covers the expansion joint between the atrium and the 10 story office building. The splice covers (see photo 80) are torn open to the interior spaces below. The sealant joint of the vertical granite cladding is unsealed below the expansion joint bellows.
2. An additional wide aluminum coping connects the skylight gutter to the expansion joint cover. The coping splices are open because the non-curing sealant has displaced (see photo #81).
3. The vertical granite appears to be rather good shape. However some cracks were noted at beam covers (see photo #82).
4. Slope glazing covers the space between the typical window wall/curtainwall sill and the vertical granite in the same plane as the tower side of the building expansion joint. Photo 87 shows open metal-to-metal joints, eroded paint and line of standing water. Photo 88 shows collection gutters behind granite column covers, open metal-to-metal joints and inside corner interface with the window wall that collects water. Photo #90 shows open metal joints at the sill of the slope glaze.

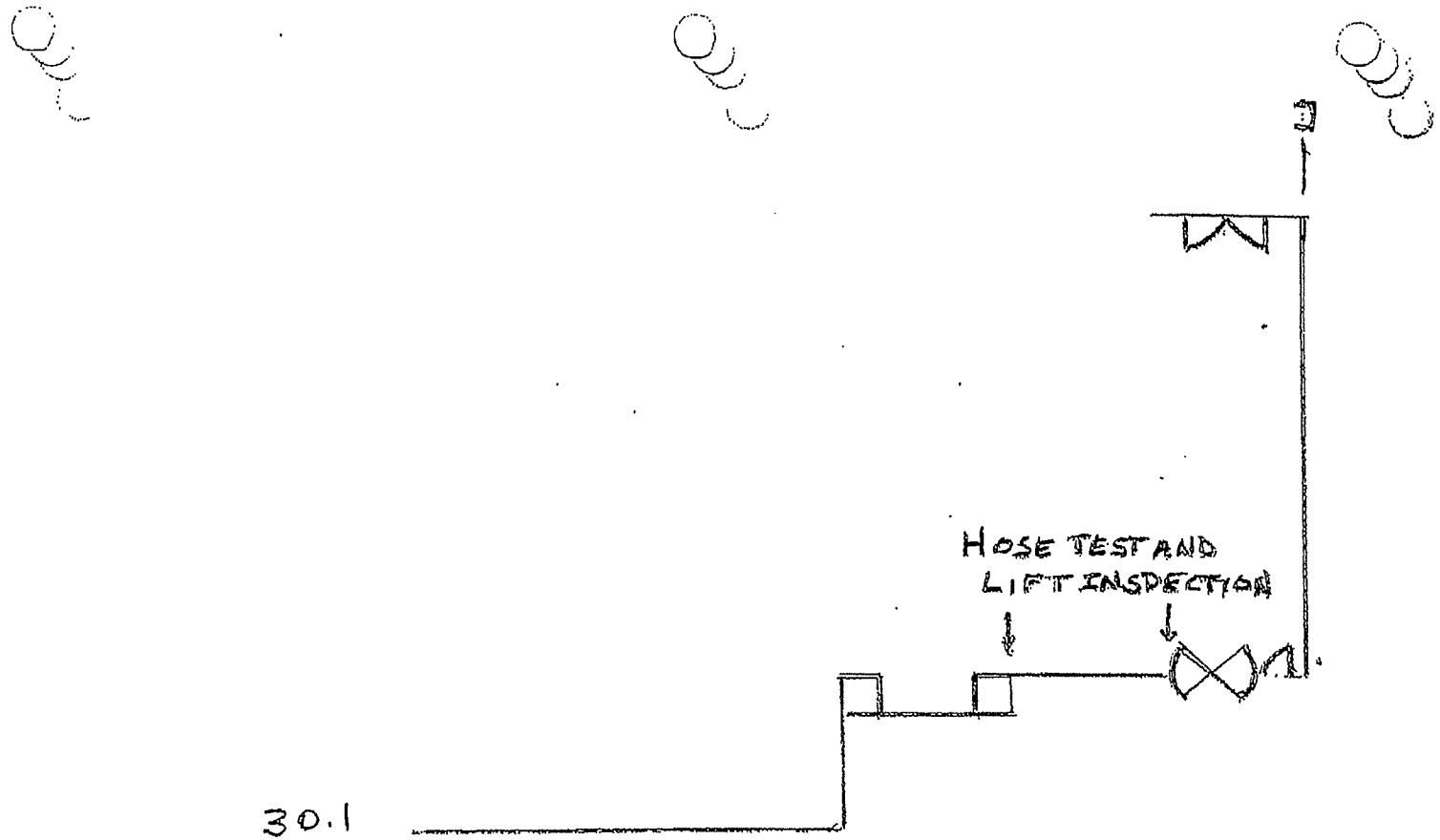
The window wall/curtainwall interface with the slope glazing is similar to the typical window wall to granite veneer discussed earlier as the perimeter weather sealant is applied to the exterior covers allowing water entry through gaps, gaskets and rope wicks. See photos 83, 86, 89 and 91.

END OF REPORT



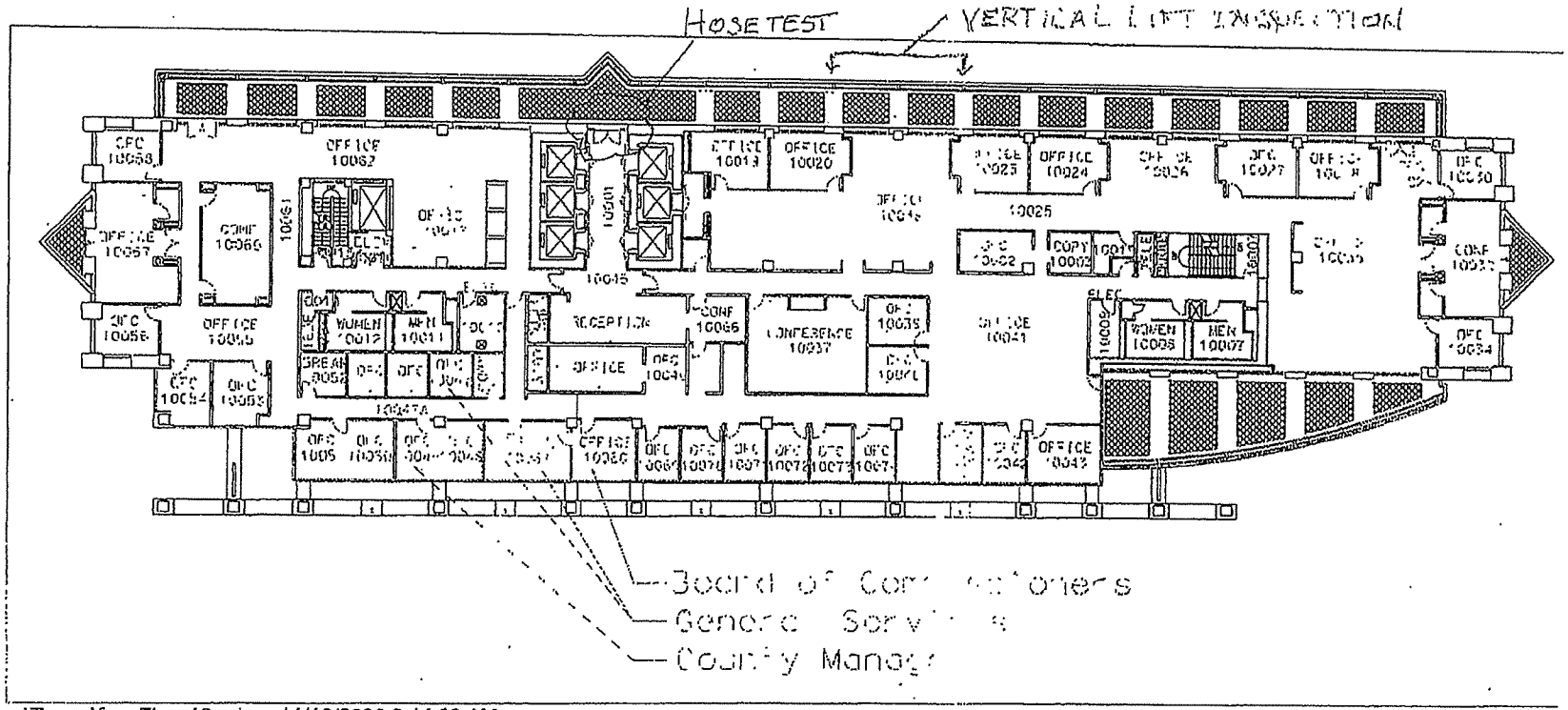
FULTON CTY GOV CTR PHASE 2
W/ + A #7022246.2

LOWER LEVEL PLAZA
WALKWAY SKYLIGHT
1/16/04



FULTON CTY GOV CTR PHASE 2
W+A #203346.2

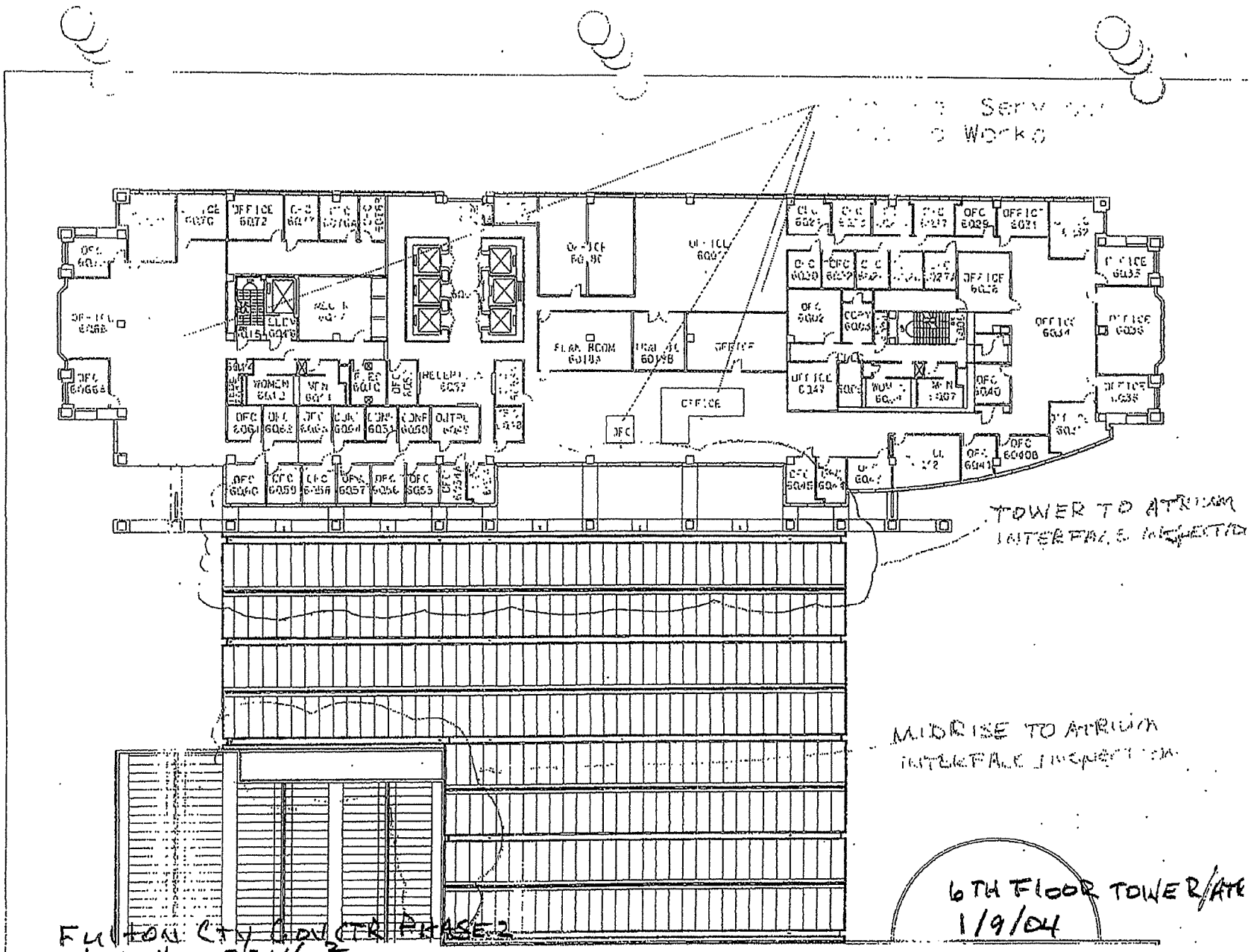
2ND LEVEL PLAZA
11/16/04



...\Tower\fcgcFloor10n.dgn 11/13/2003 8:44:02 AM

Fulton Cty Govctr Phase 2
W+A# 203346.2

10th Floor Tower
1/9/04
Page 3 of 4


TOWER TO ATRIUM
INTERFACE INSPECTION
MIDRISE TO ATRIUM
INTERFACE INSPECTION
6TH FLOOR TOWER/ATR
1/9/04
FULTON CTY GOVT CTR PHASE 2
W+A #203346.2
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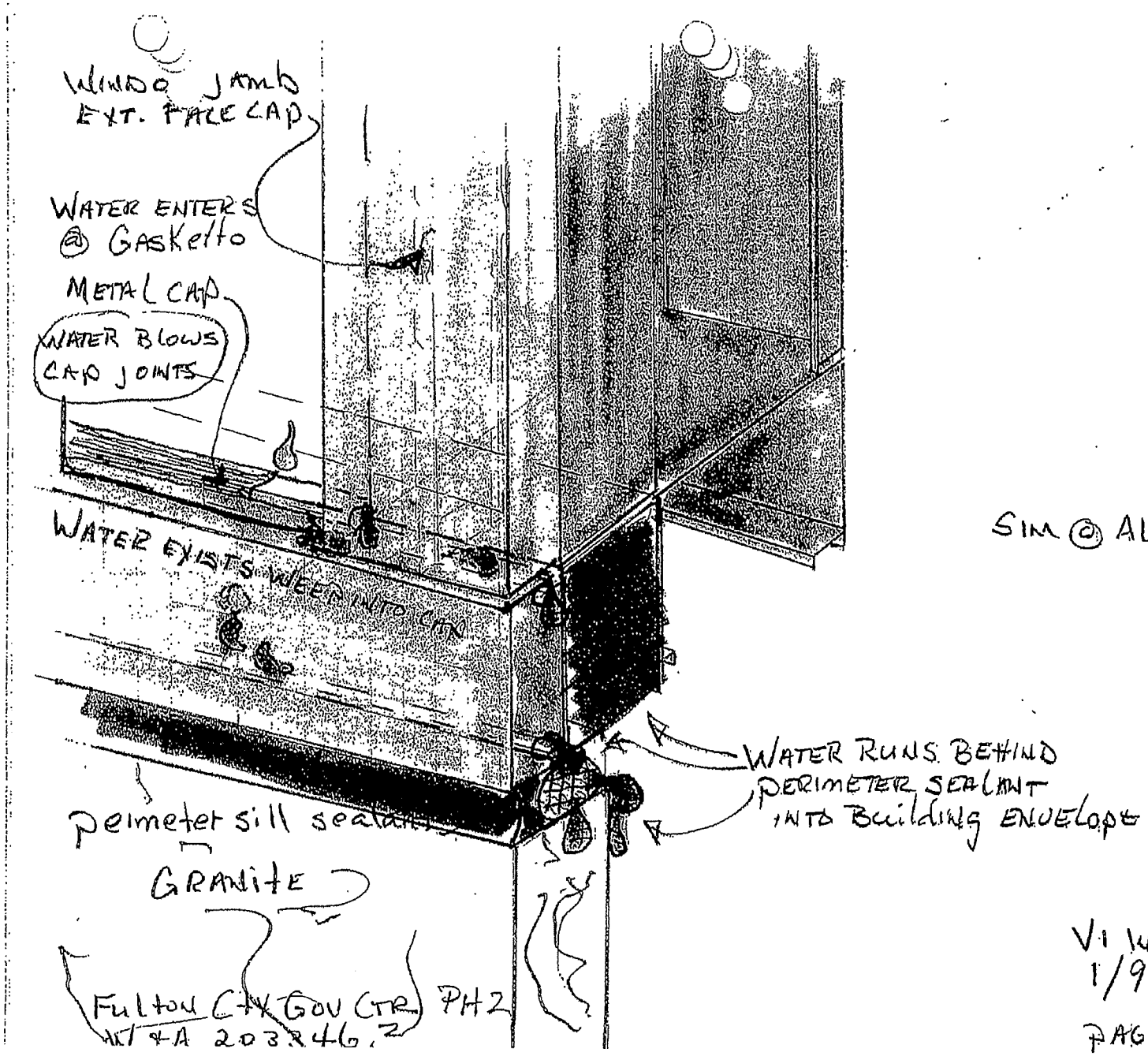
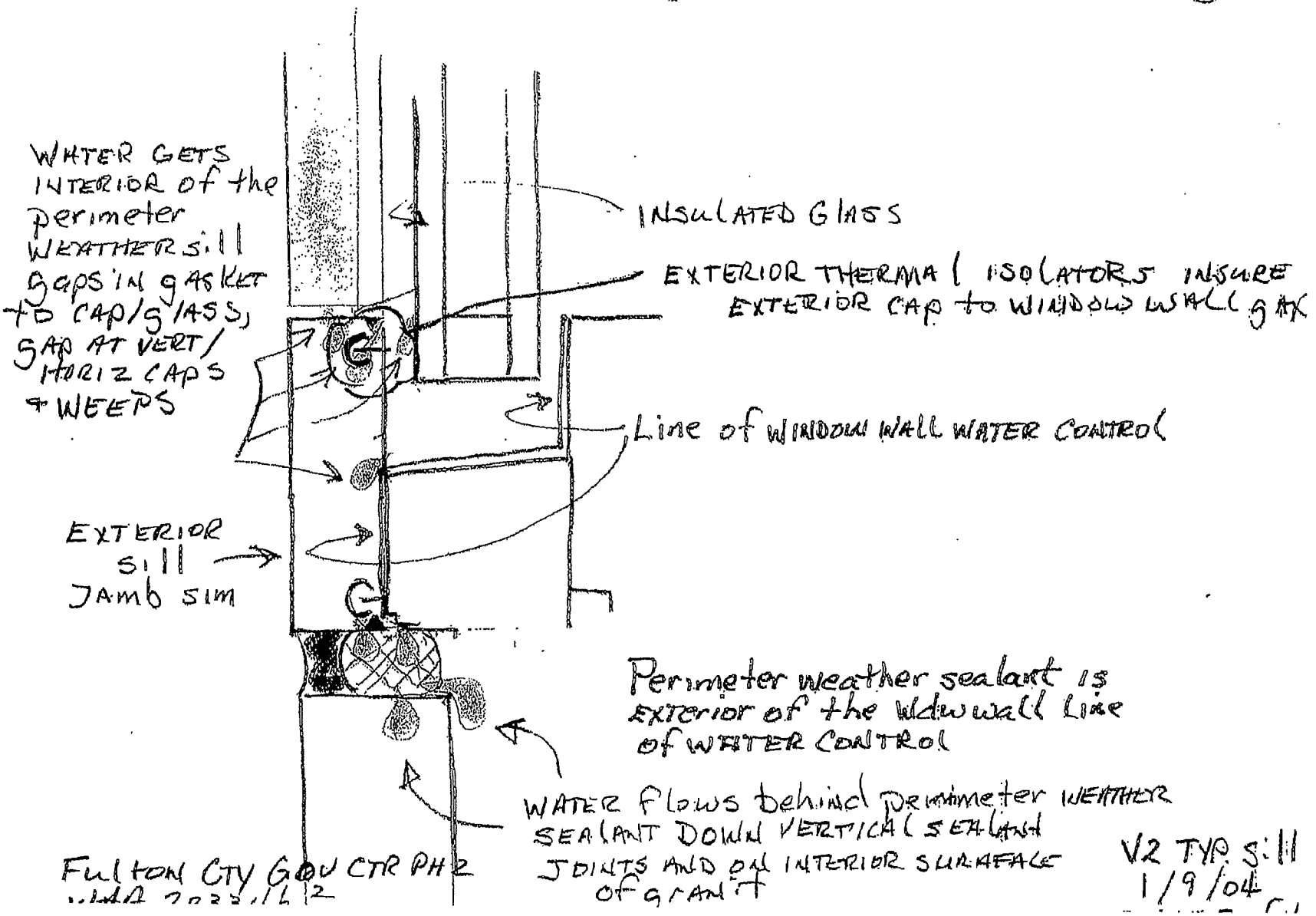


SIM @ ALL WDW WALL

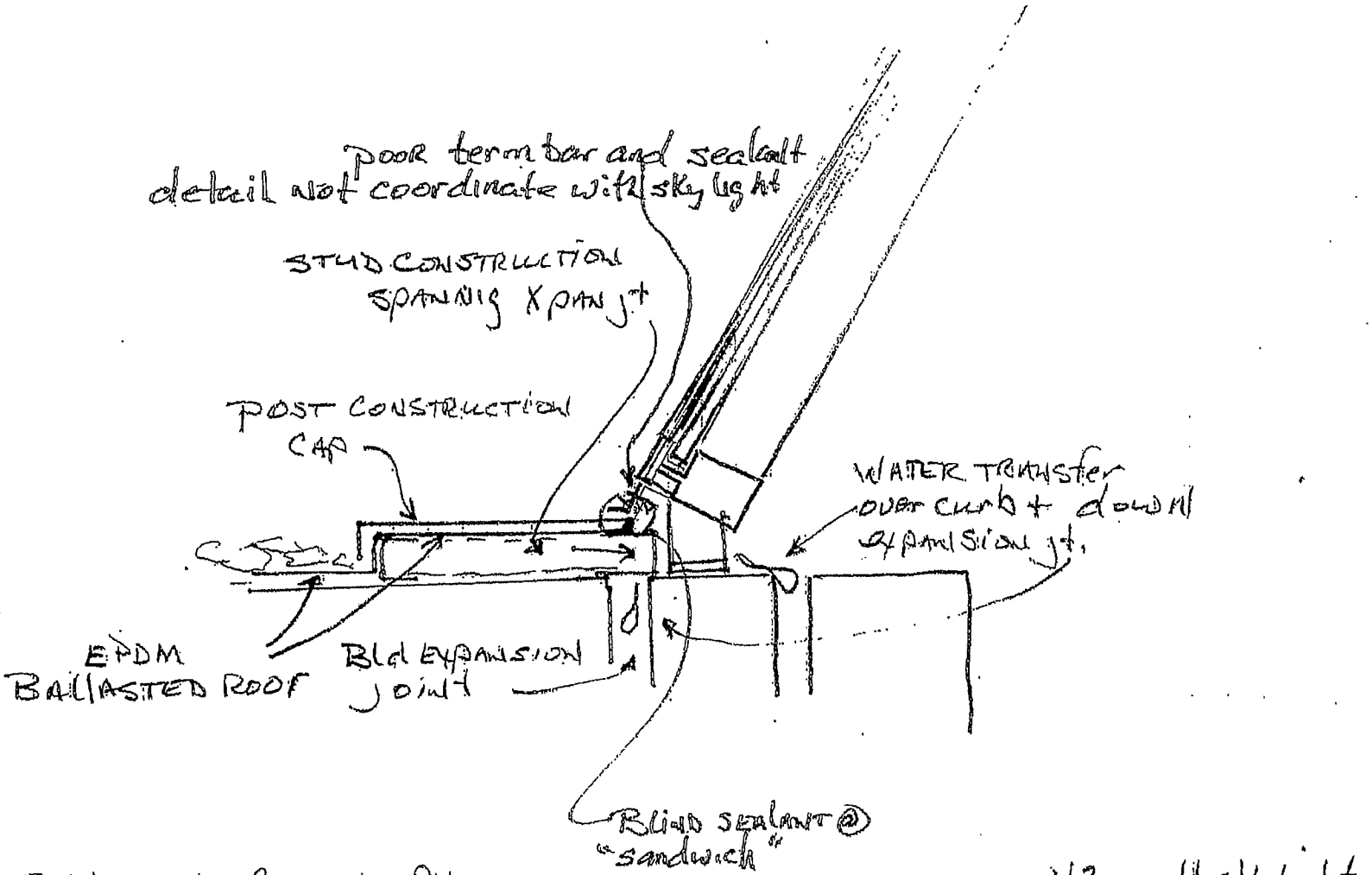
V1 Wdw jmb to sill
1/9/04

PAGE 1 of 4



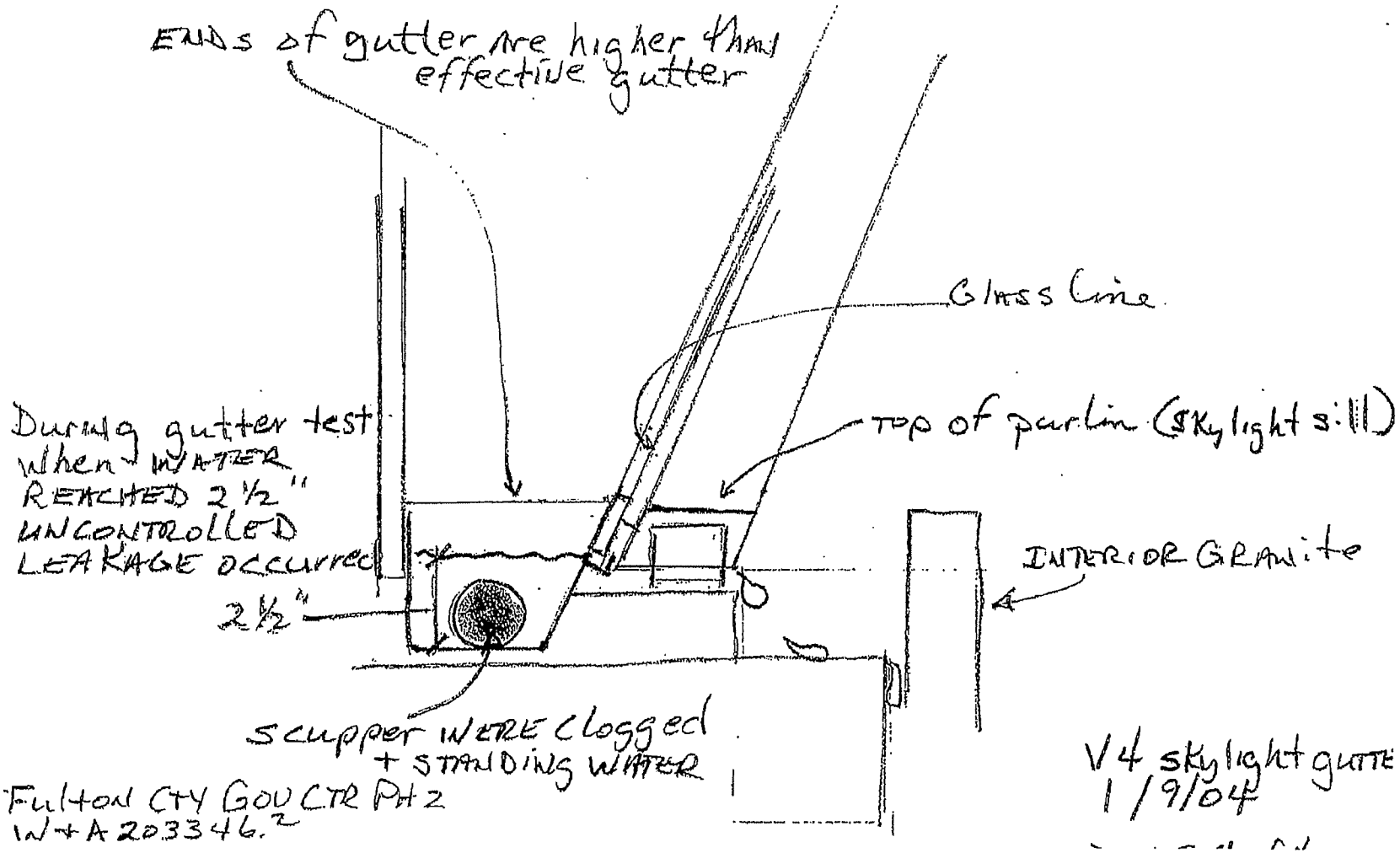
FULTON CTY GOV CTR PH 2

V2 TYP SILL
1/9/04



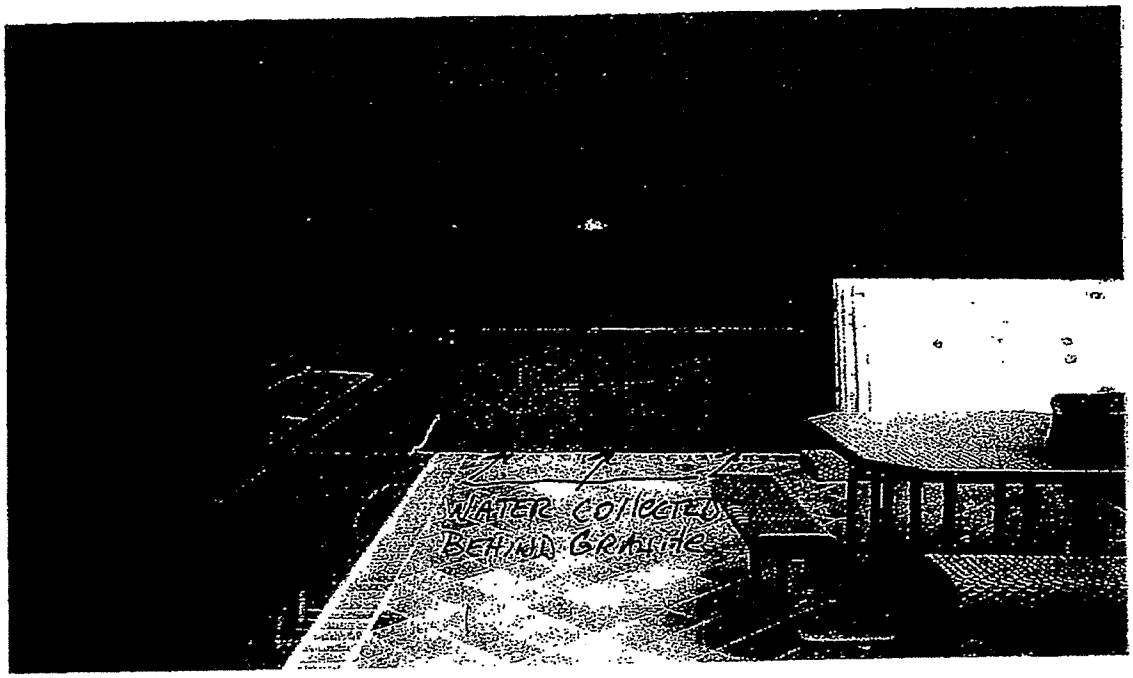
Fulton Cty Gov. Ctr PH 2
W+A 203346.2

V3 small skylight
Curb
1/12/03

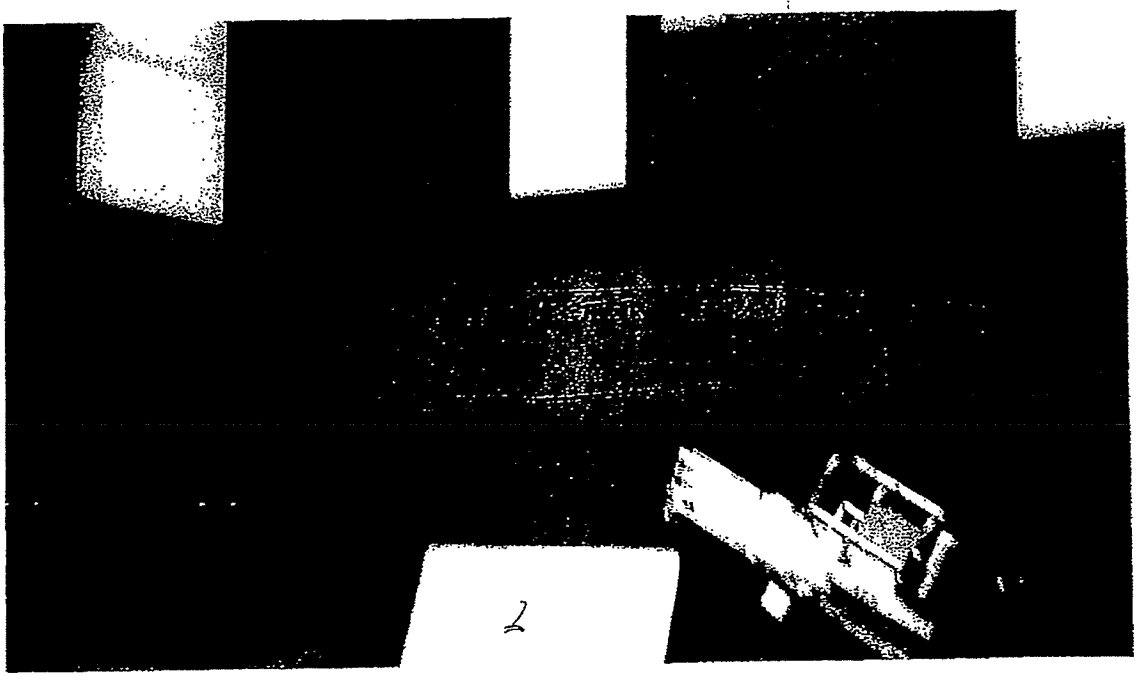


Fulton CTY GOV CTR PH 2
W+A 203346.2

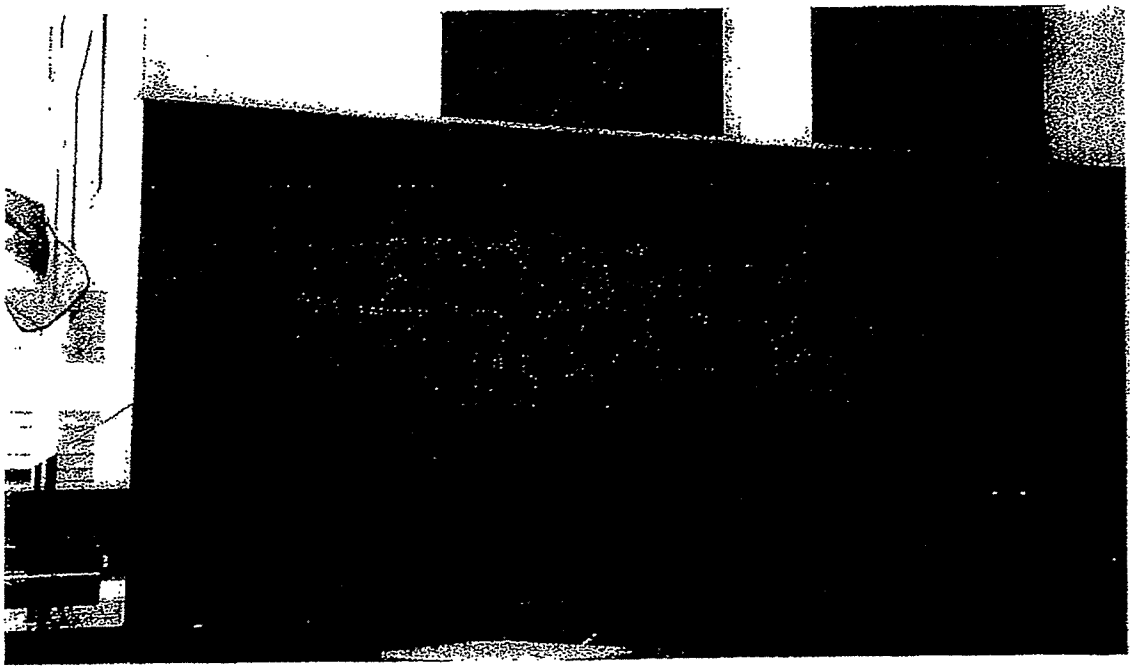
V4 skylight gutte
1/9/04



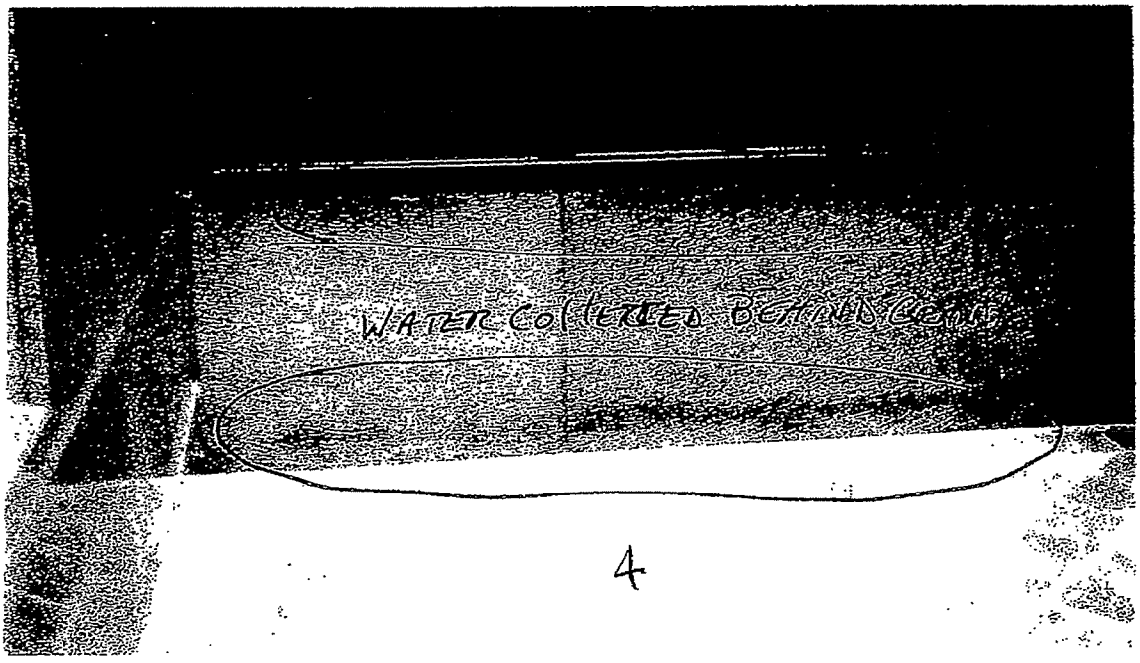
1. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.



2. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.

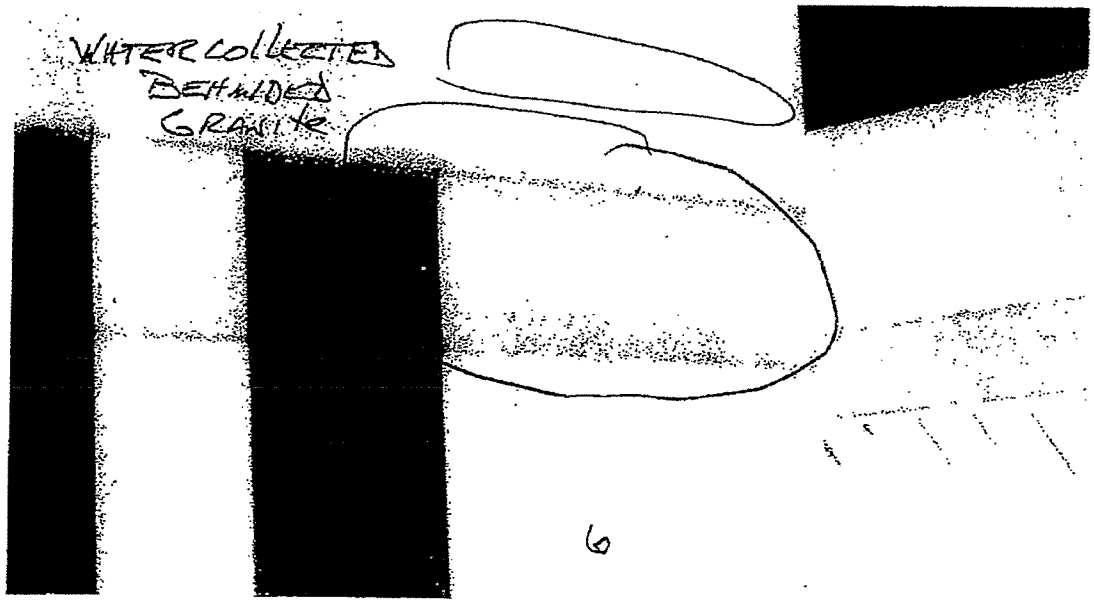


3. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.

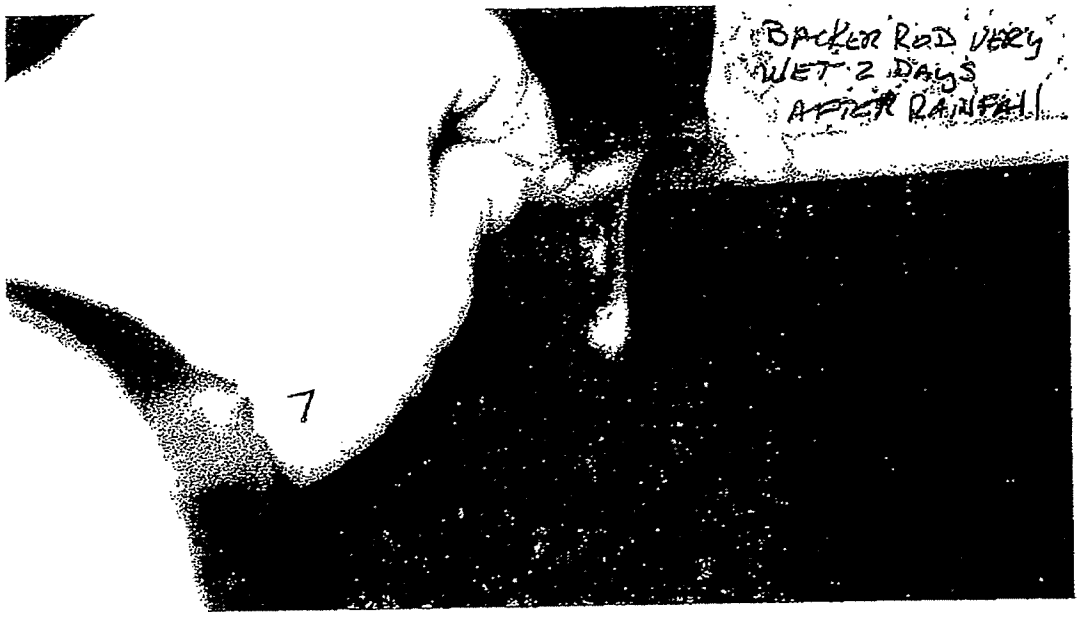


4. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.

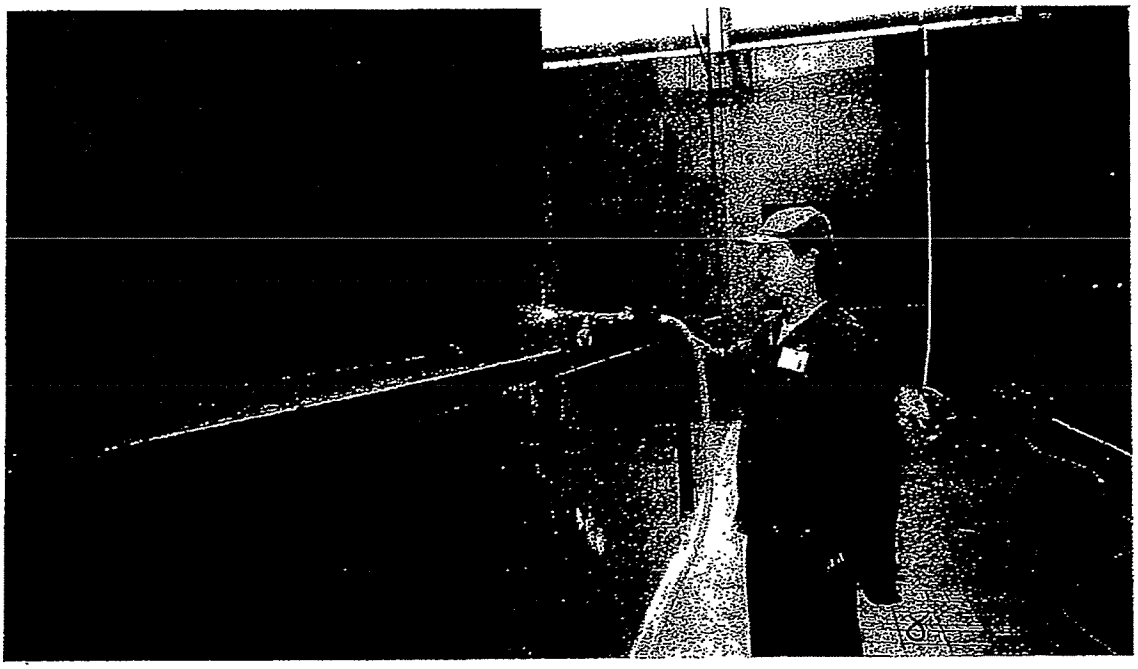
5. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.



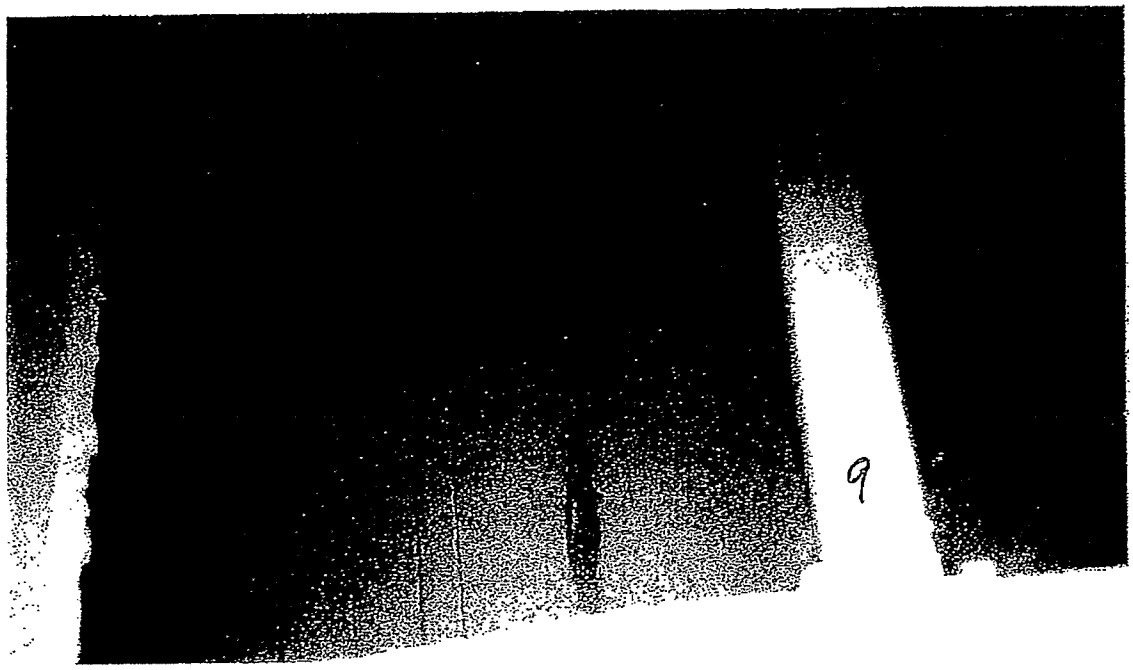
6. Reference Lower Level Plaza. Water trapped behind granite at sealant joints flashing and anchors absorb through granite after rainfall. Appearance occurred typically below fenestrations.



7. Peel and adhesion tests at horizontal sealant joints revealed water saturated open cell backer rod.



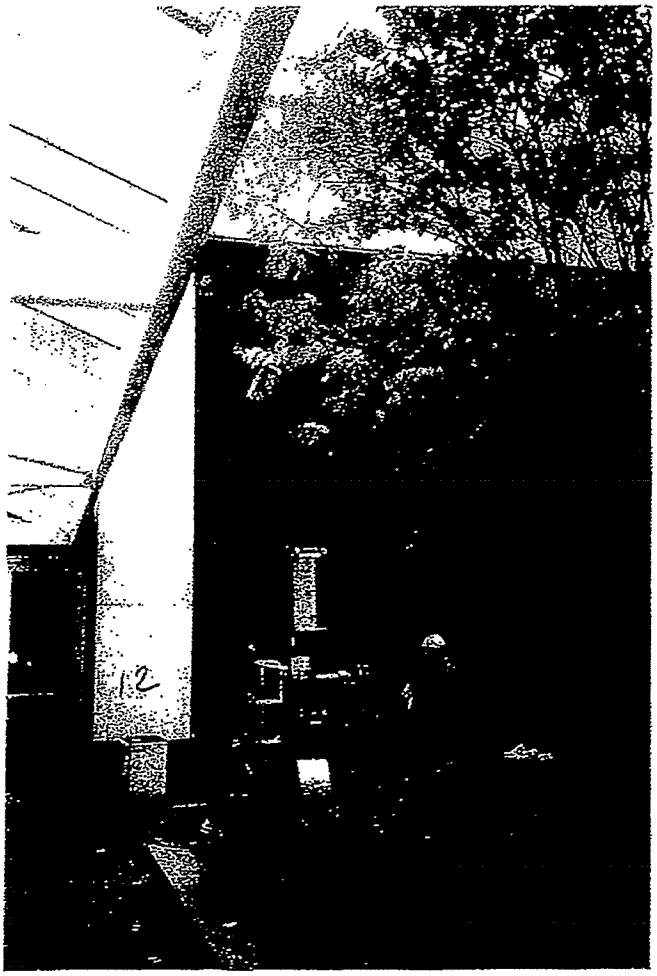
8. See red lined hose test location on page 1 of the floor plans, lower level plaza.



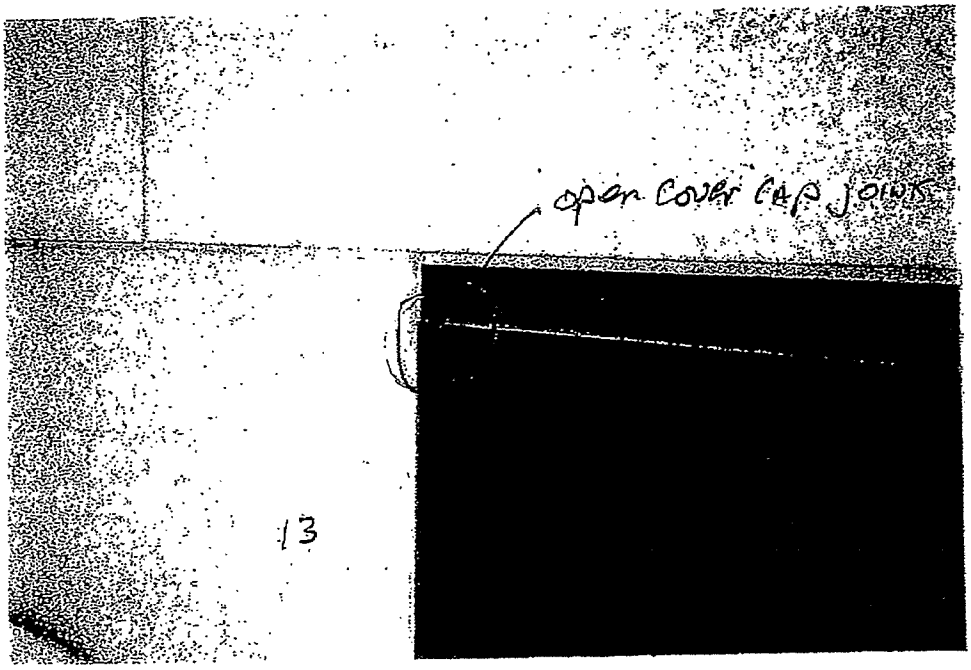
9. Water began to stream down the back of the granite within 15 seconds of the #8 hose test.

10. Uncontrolled water also dripped interior of the granite during the #8 hose test.

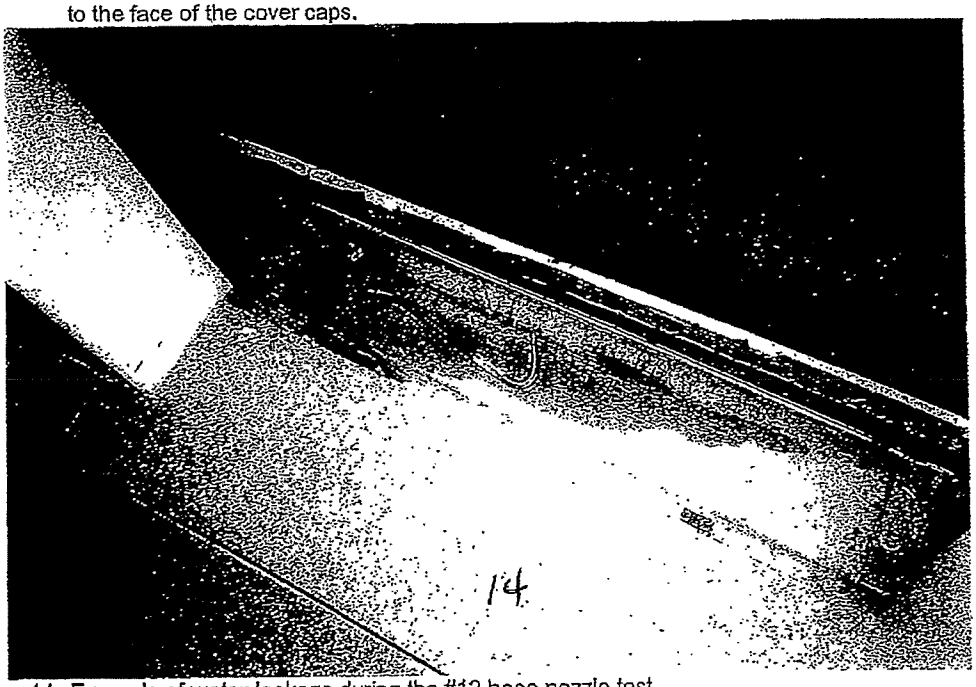
11. Uncontrolled water dripped interior of the insulated during the #8 hose test.



12. See location noted hose test and lift inspection on page 2 of the floor plan, 2nd level plaza.



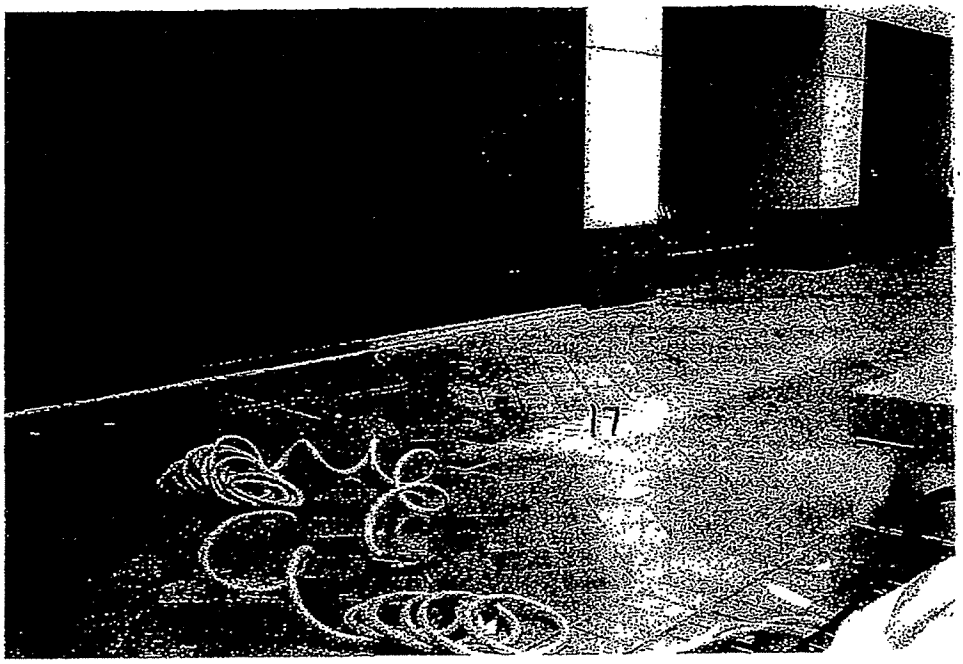
13. Open gaps at the cover caps contribute to leakage because the window wall line of water control is interior of the cover caps. The problem is the weather sealant is applied flush to the face of the cover caps.



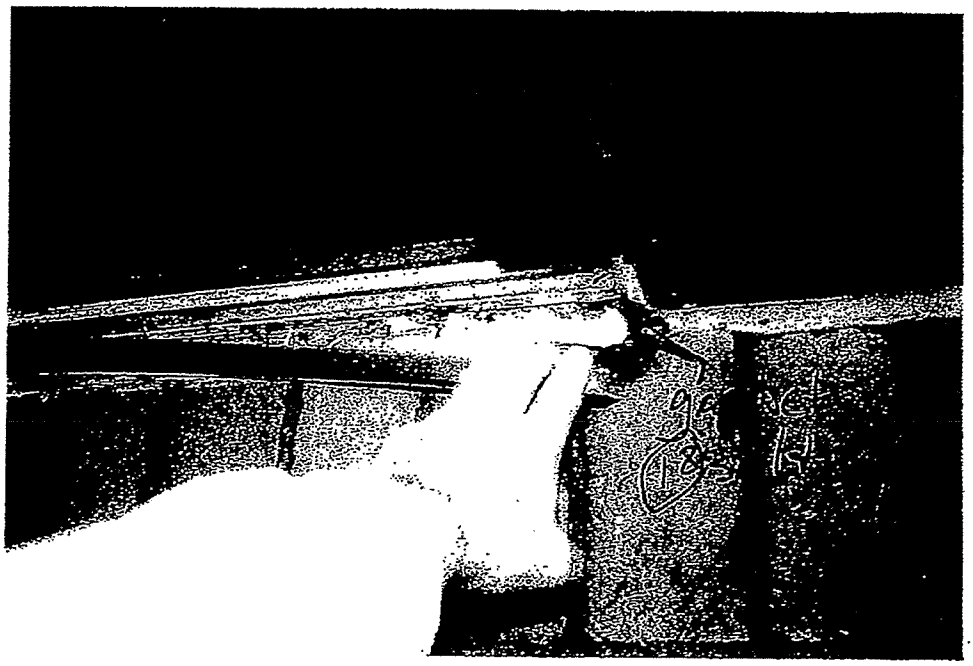
14. Example of water leakage during the #12 hose nozzle test.

15. The granite parapet cap's joint sealant and a few tears in the sealant is shown. Also a few cracks in the granite contributes to water leakage.

16. An interior view of the #12 hose test area.

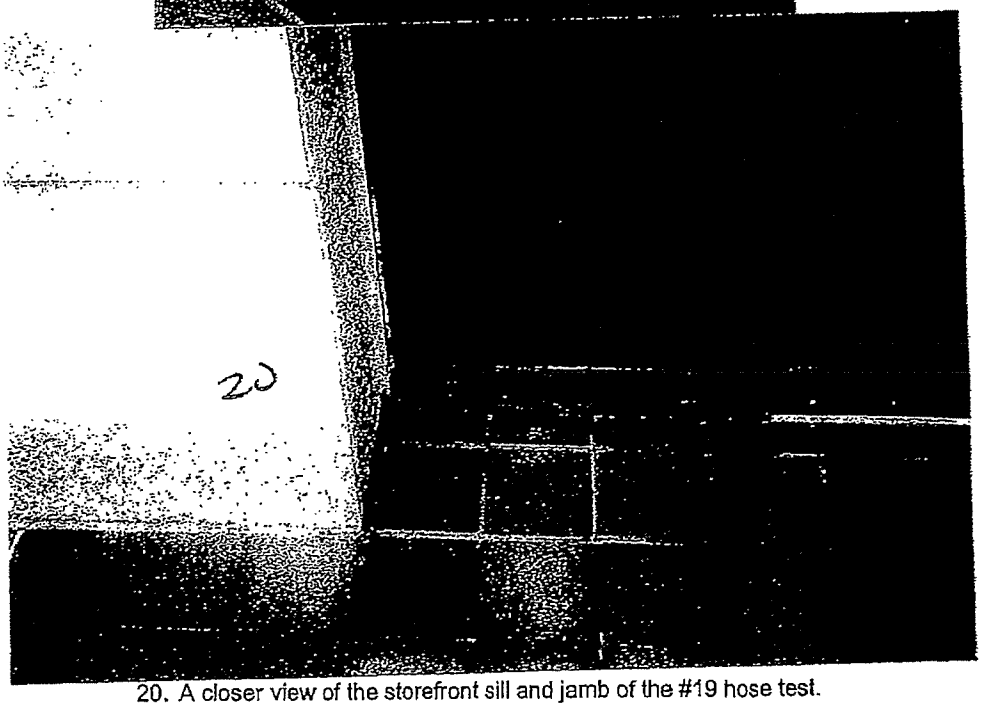


17. An exterior view of the #12 hose test area.

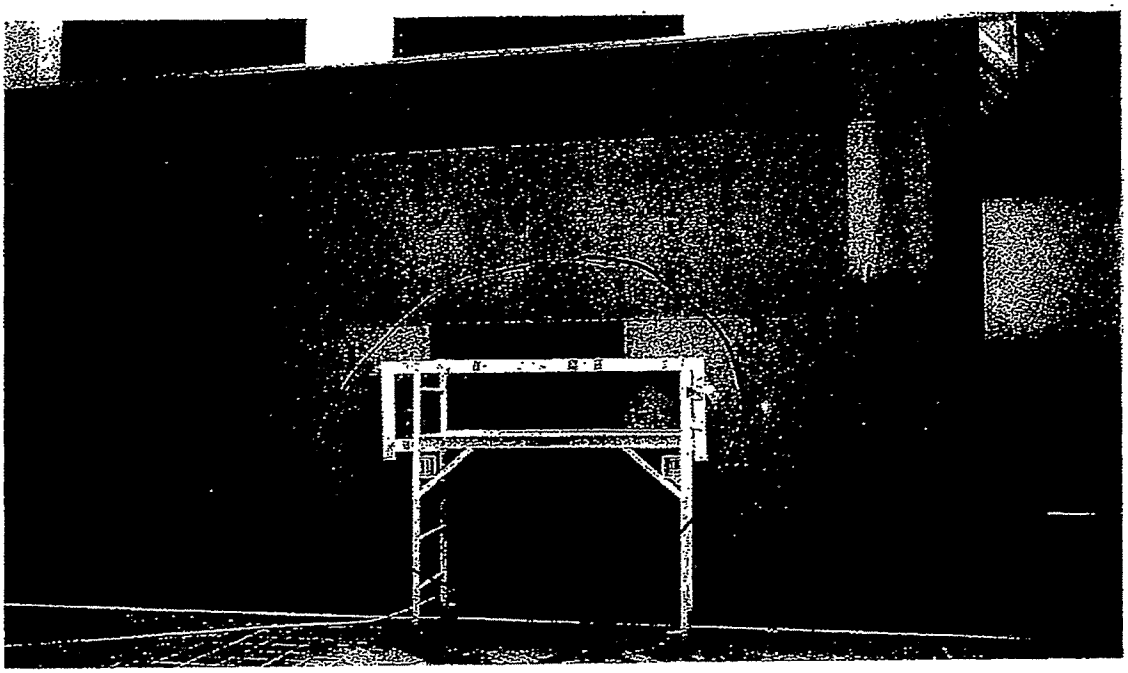


18. Partial removal of the sill cover cap revealed that the sill and jamb perimeter sealant joint did not contact the base (mill finish) portion of the window wall.

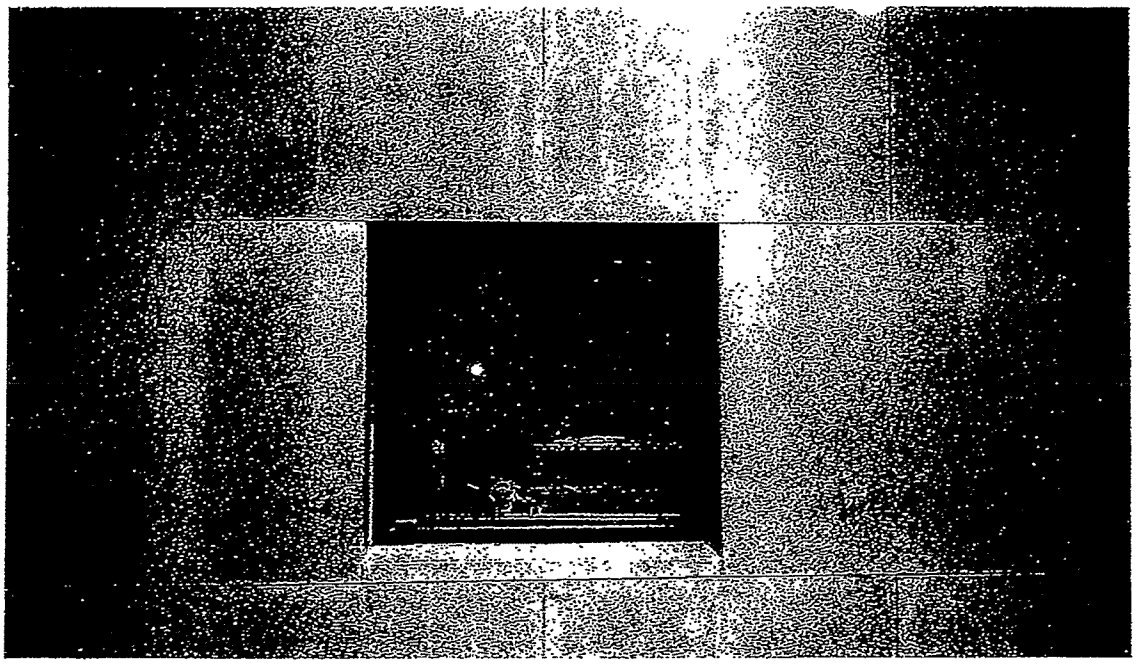
19. Reference 10th floor page 3 floor plan. A hose test was conducted at the entrance noted. Uncontrolled water leakage did not occur during the test.



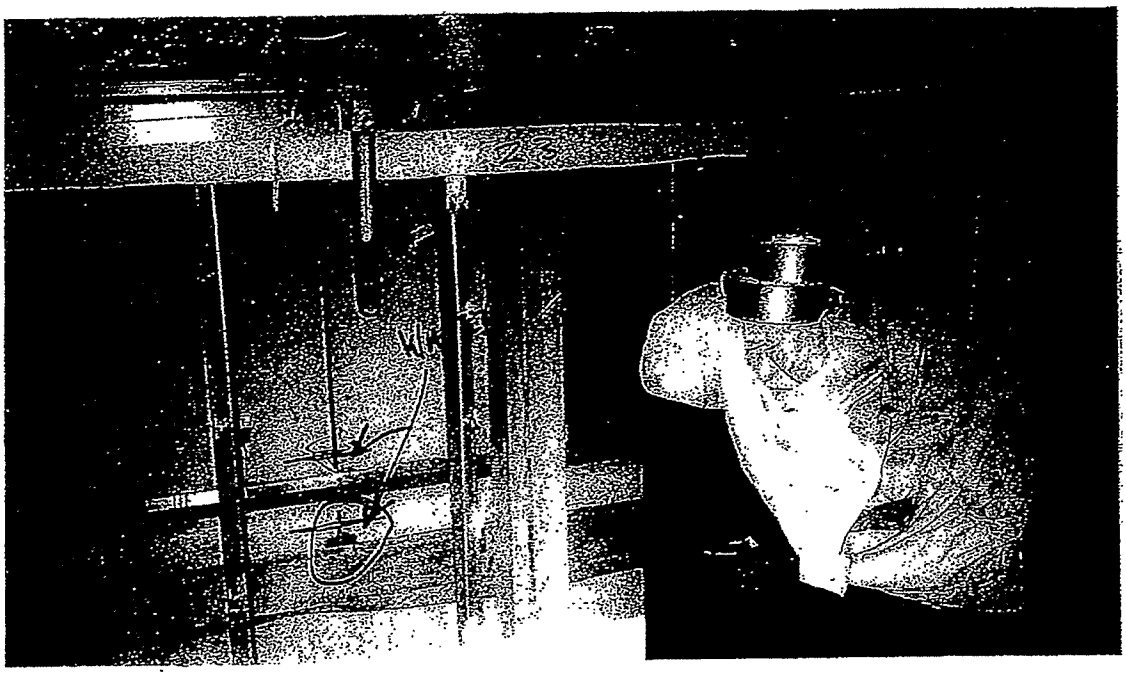
20. A closer view of the storefront sill and jamb of the #19 hose test.



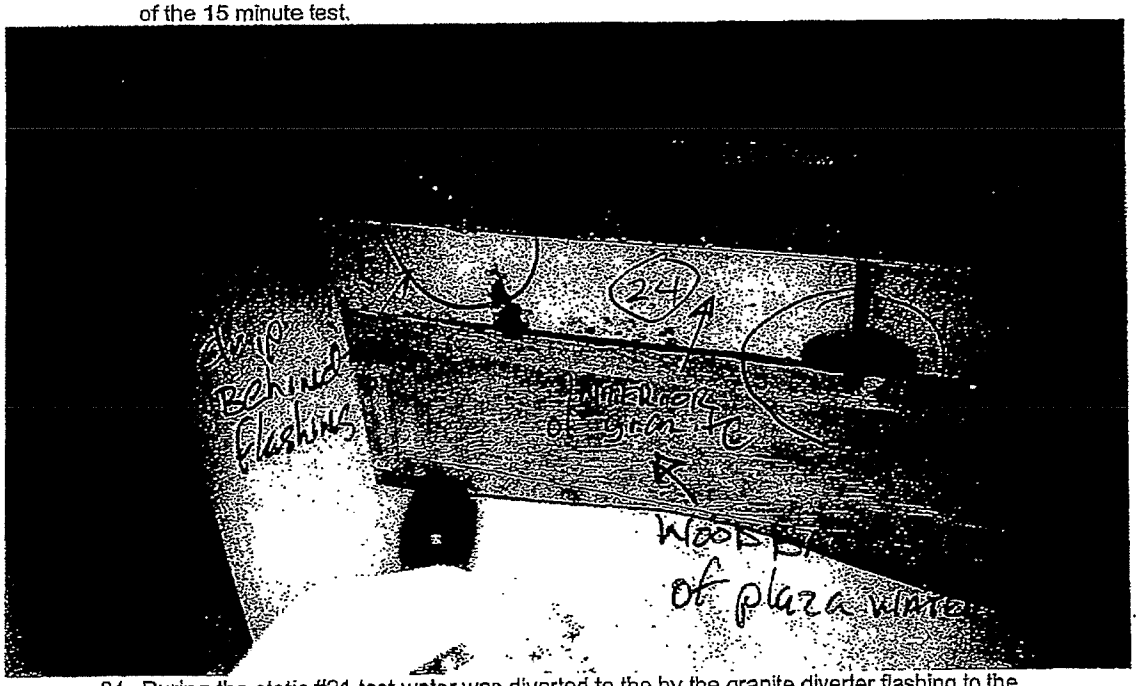
21. Reference page 1 of the floor plans, lower level plaza noting "static pres. test. The circled window wall was tested per ASTM E 1105.



22. A closer view of the # 21 static pressure differential test window.

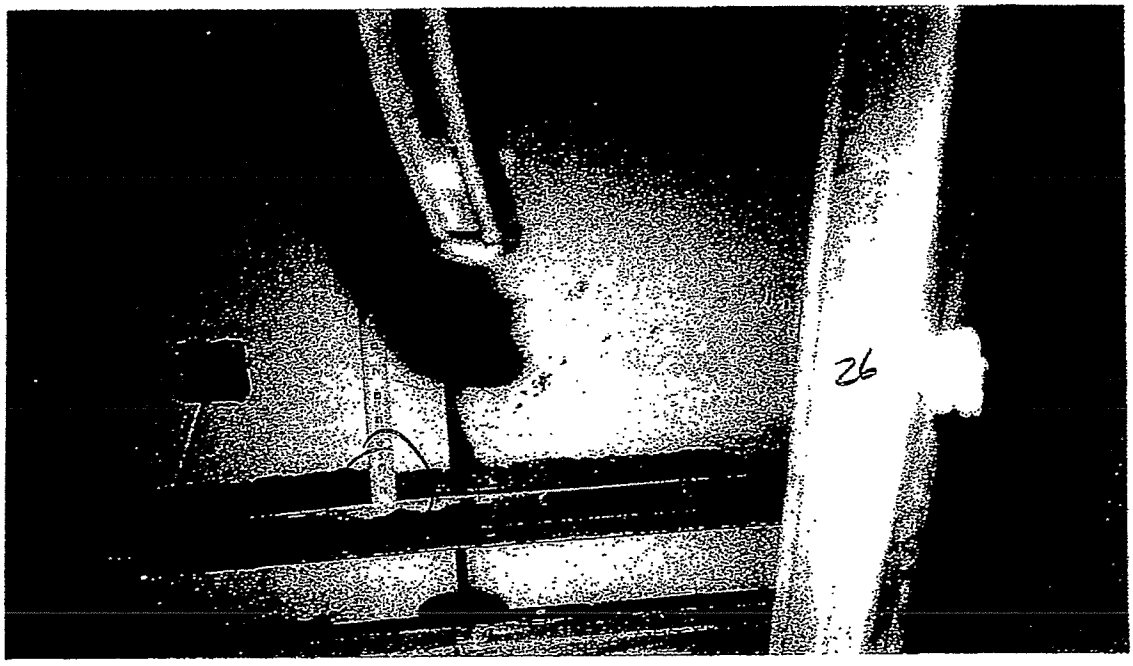


23. Sheet rock and insulation was removed to allow interior view access below the selected window static pressure differential test #21. The water noted occurred within 2 minutes of the 15 minute test.

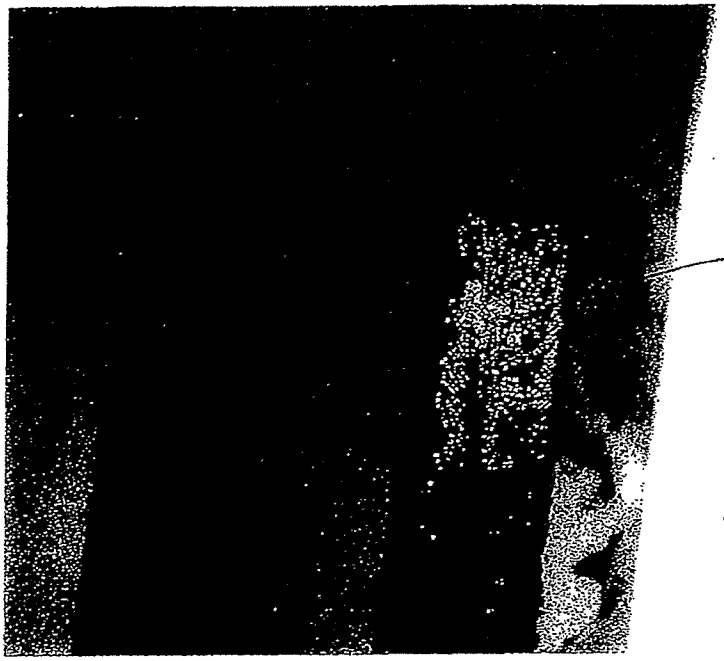


24. During the static #21 test water was diverted to the by the granite diverter flashing to the plaza waterproofing. Some water dripped interior of the granite diverter flashing.

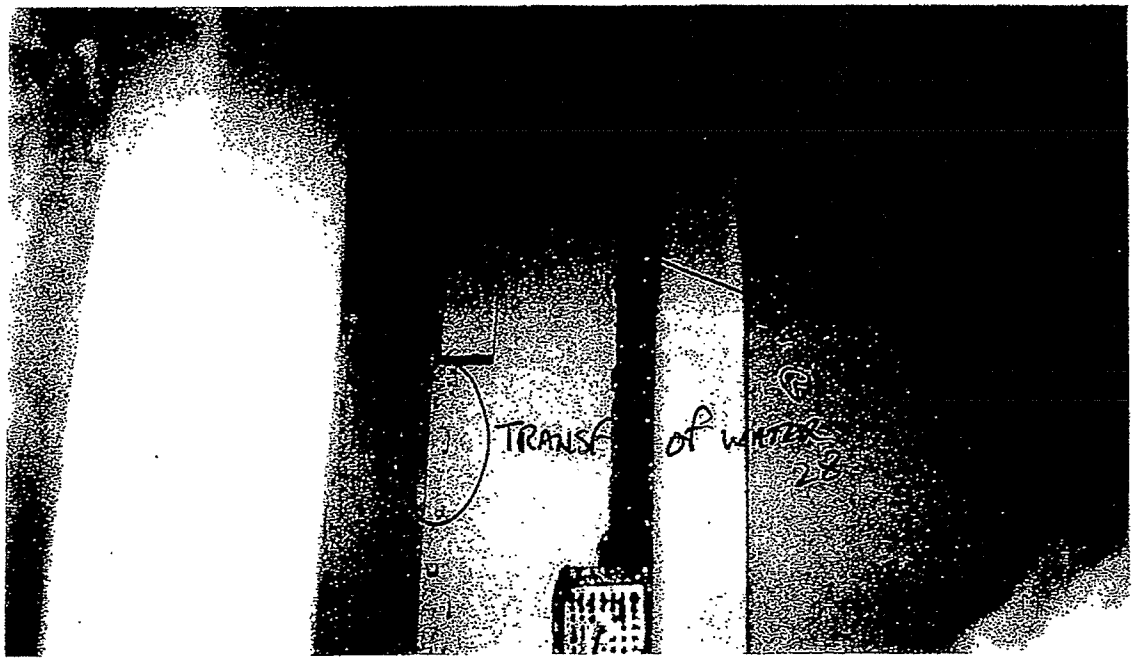
25. Some water ran interior of the plaza waterproofing during the #21 static water test.



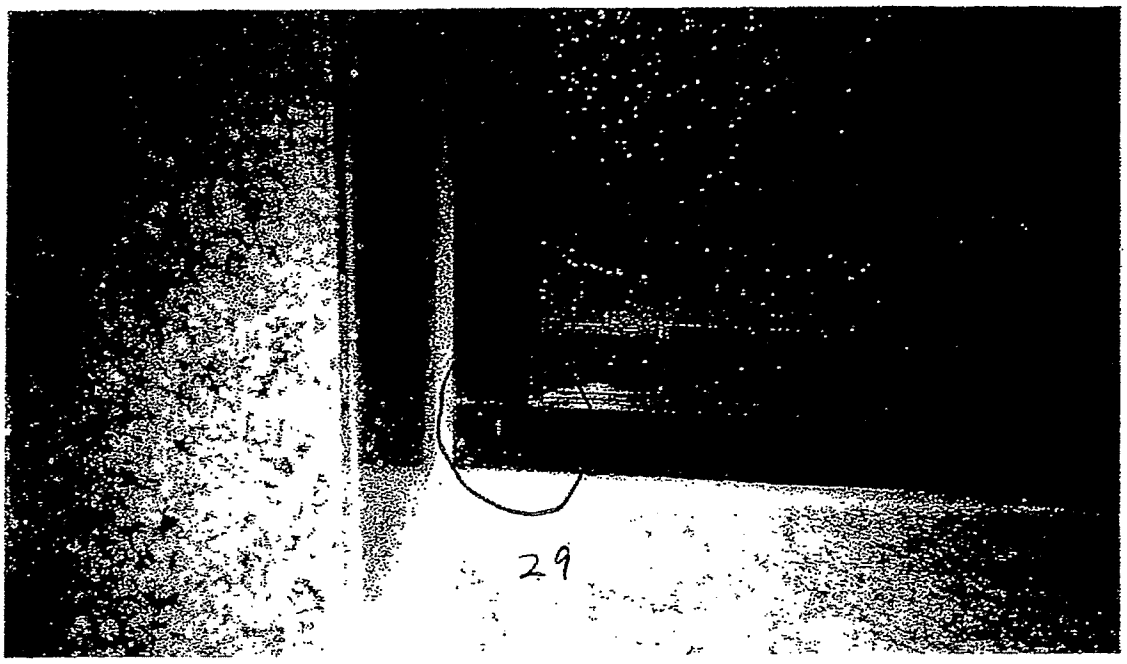
26. Over an inch of water collected in the granite diverter flashing during the #21 static water test. Note the water being absorbed upward by the granite.



27. Stainless steel formed metal was installed beneath the horizontal granite below the window sill. However the pan flashing was not able to prevent large quantities of water to stream past it during the #21 static water penetration test.

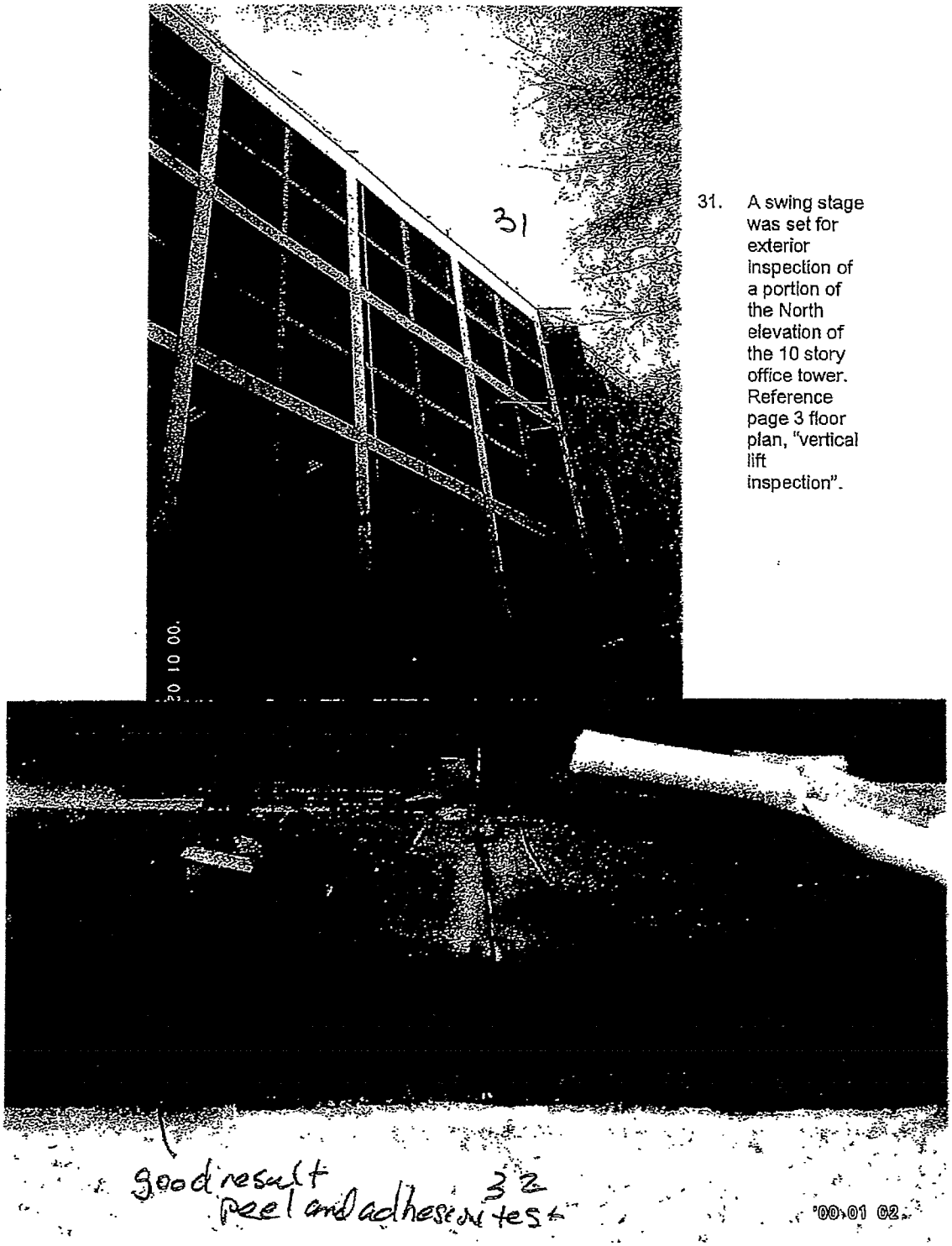


28. Anchors of the windows and granite provide "bridges" to transfer running water further interior of the granite veneer and the plaza deck flashing. Photo at #21 static water penetration test.



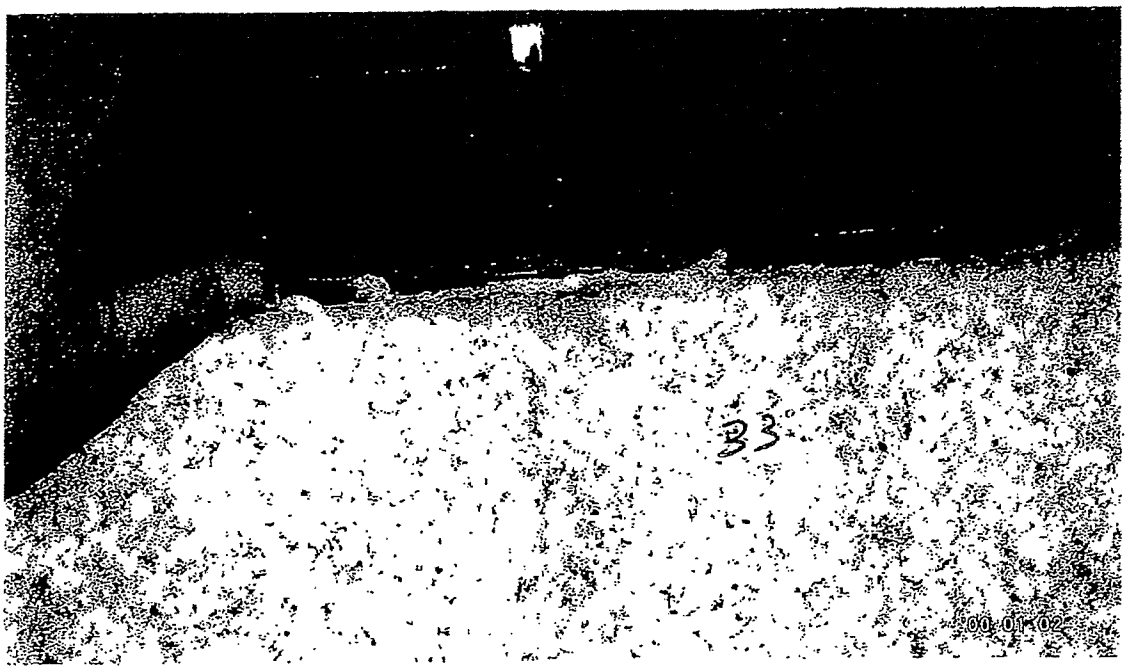
29. Gaps between the jamb to sill cover caps, gaps in the gasket and the rope wick allow water to by-pass the exterior weather sealant. Photo at exterior of #21 static water penetration test specimen.

30. Clear view of rope wick at # 21 exterior of test specimen.

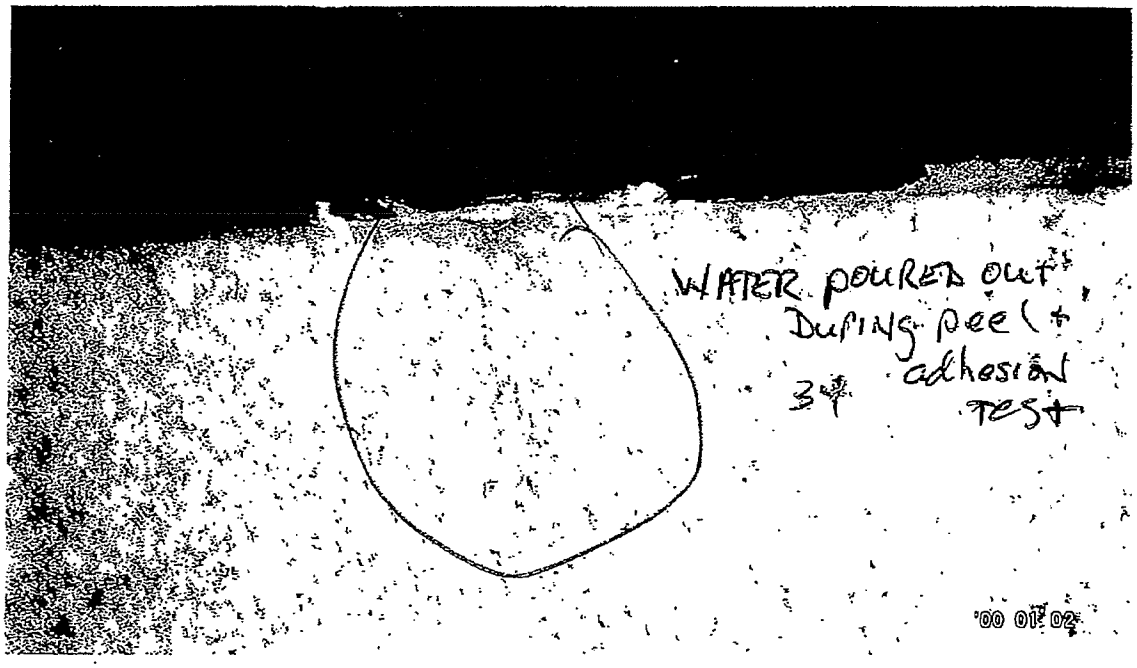


31. A swing stage was set for exterior inspection of a portion of the North elevation of the 10 story office tower. Reference page 3 floor plan, "vertical lift inspection".

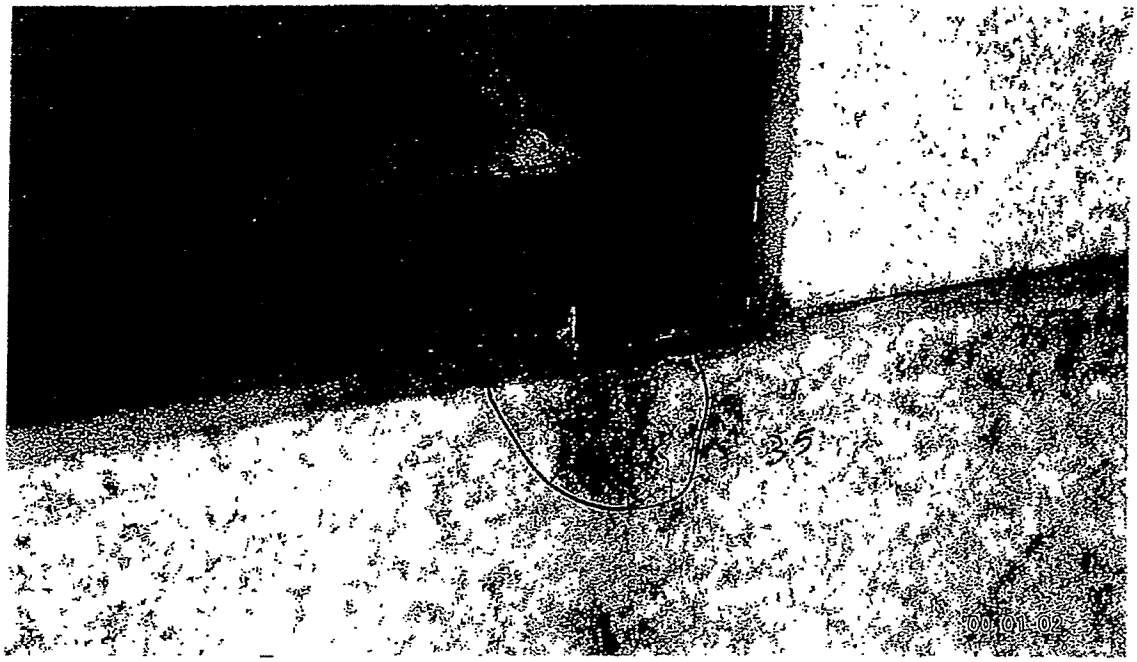
32. All inspections revealed that typically the exterior weather sealant (silicone) was in good shape with good adhesion and good cohesion. However the location of the weather sealant was exterior of the window wall water control line and metal to metal splices were typically open. Reference # 31 vertical inspection.



33. All inspections revealed that typically the exterior weather sealant (silicone) was in good shape with good adhesion and good cohesion. However the location of the weather sealant was exterior of the window wall water control line and metal to metal splices were typically open. Reference # 31 vertical inspection.

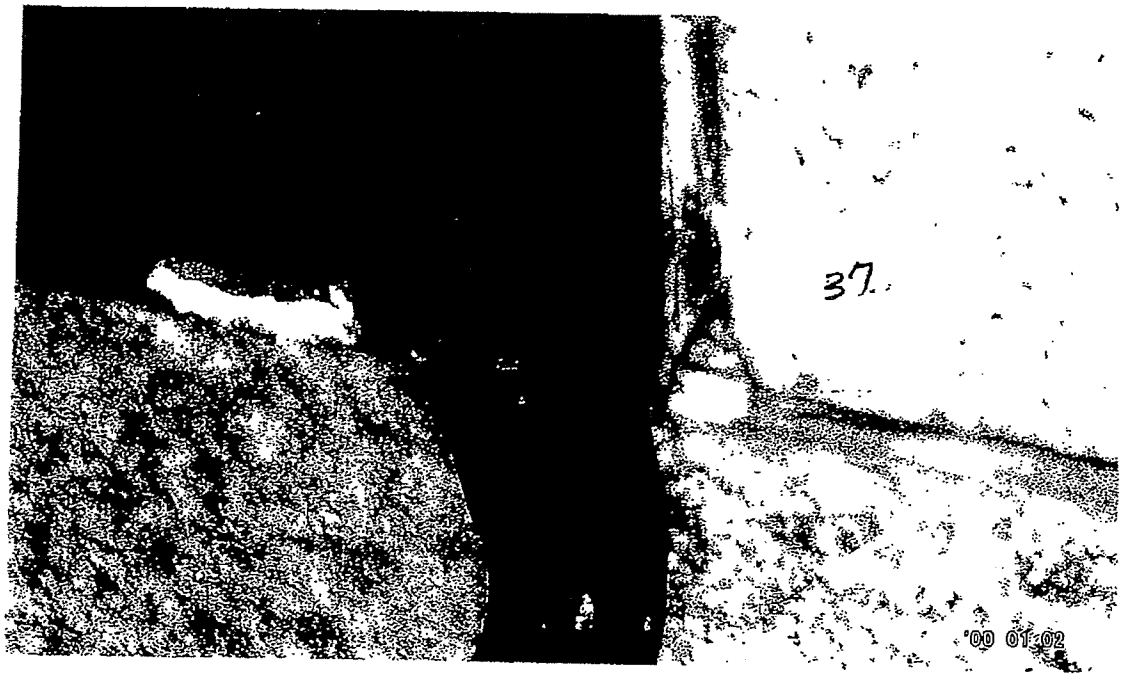


34. Water poured out from behind sealant during the peel and adhesion tests. Reference #31 vertical inspection.

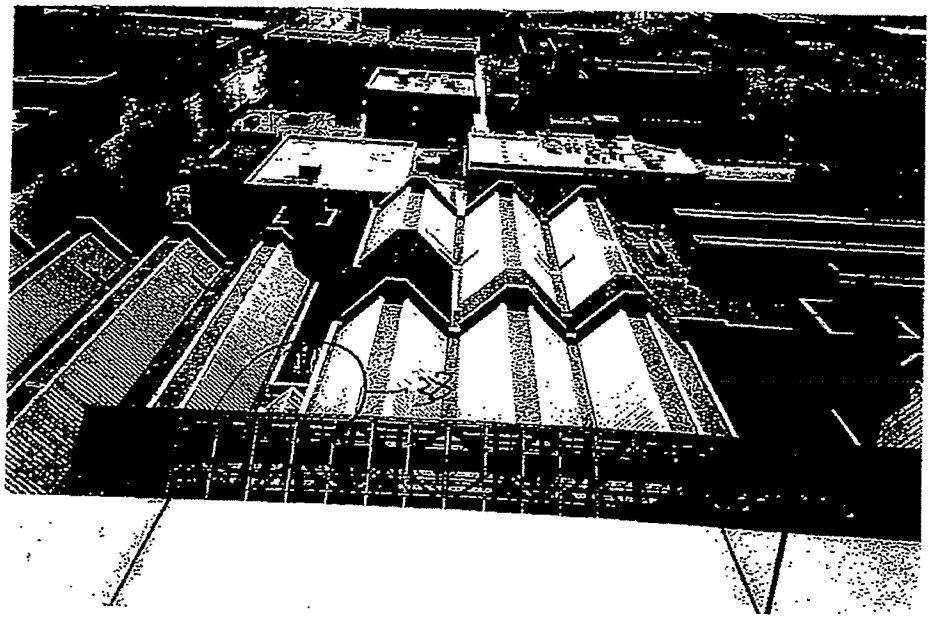


35. Water was seeping out of an unsealed metal to metal joint prior to peel and adhesion test at #21 vertical inspection.

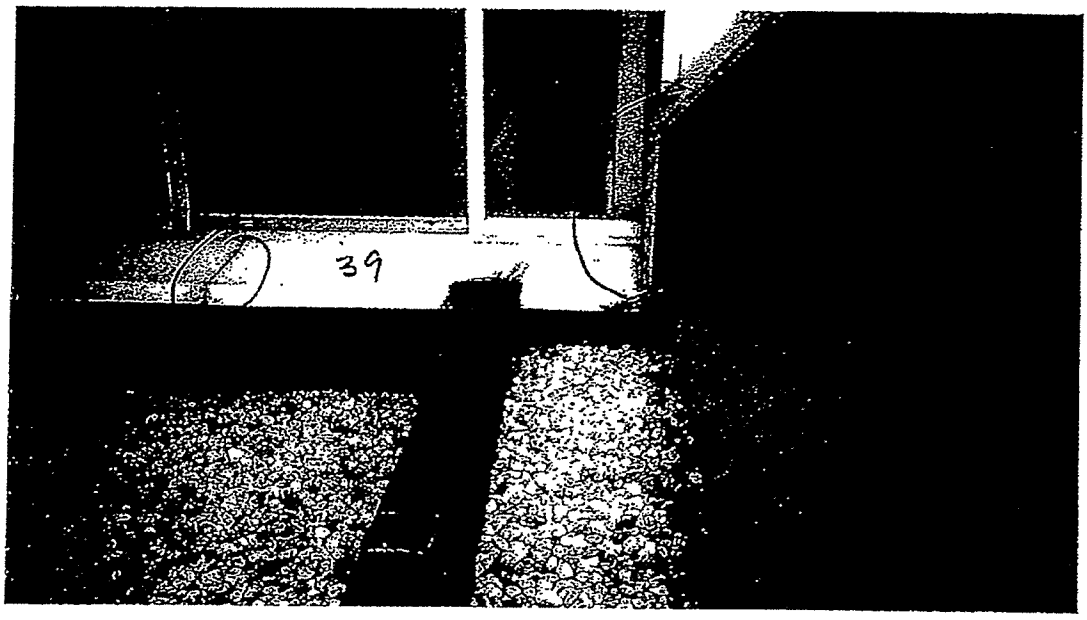
36. Some window configurations have the vertical cover "running through" at the sill cover's. The same problem exist, the sealant has been applied to the face of the cover allowing water to penetrate through opening joints and interior of the weather seal.



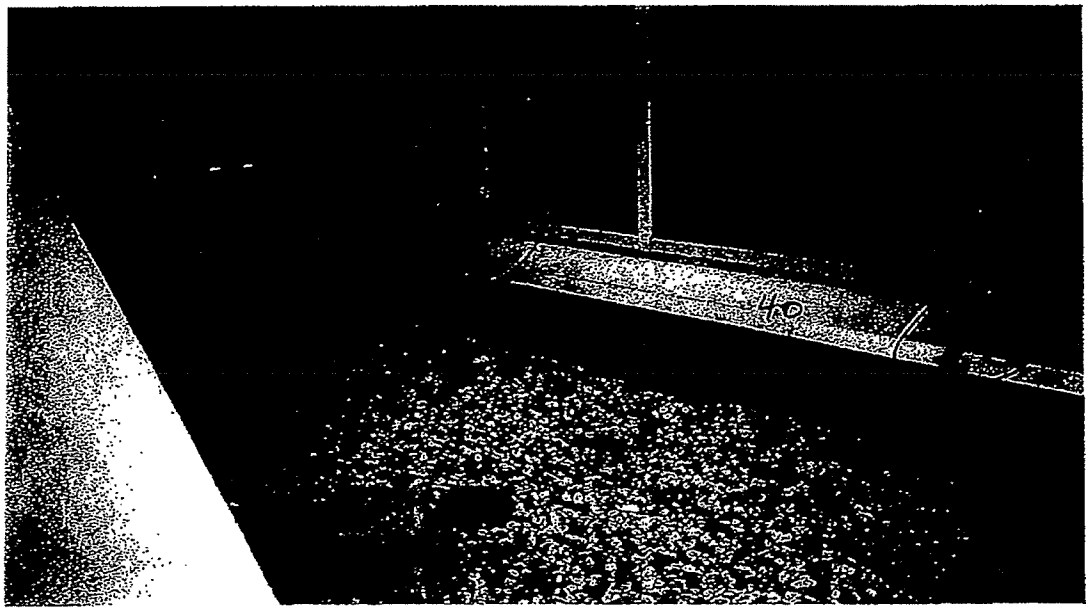
37. Some window configurations have the vertical cover "running through" at the sill cover's. The same problem exist, the sealant has been applied to the face of the cover allowing water to penetrate through opening joints and interior of the weather seal.



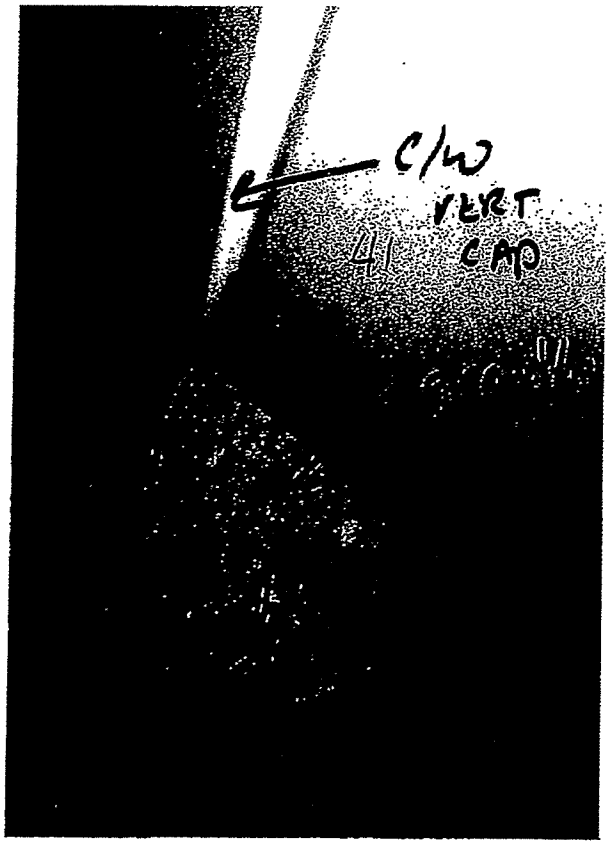
38. The encircled area shows the scope of the inspection and testing of the skylight covering the walkway between the atrium and lower level plaza. Photos 39 through 64 are detail specific shot from the roof and interior of the encircled area.



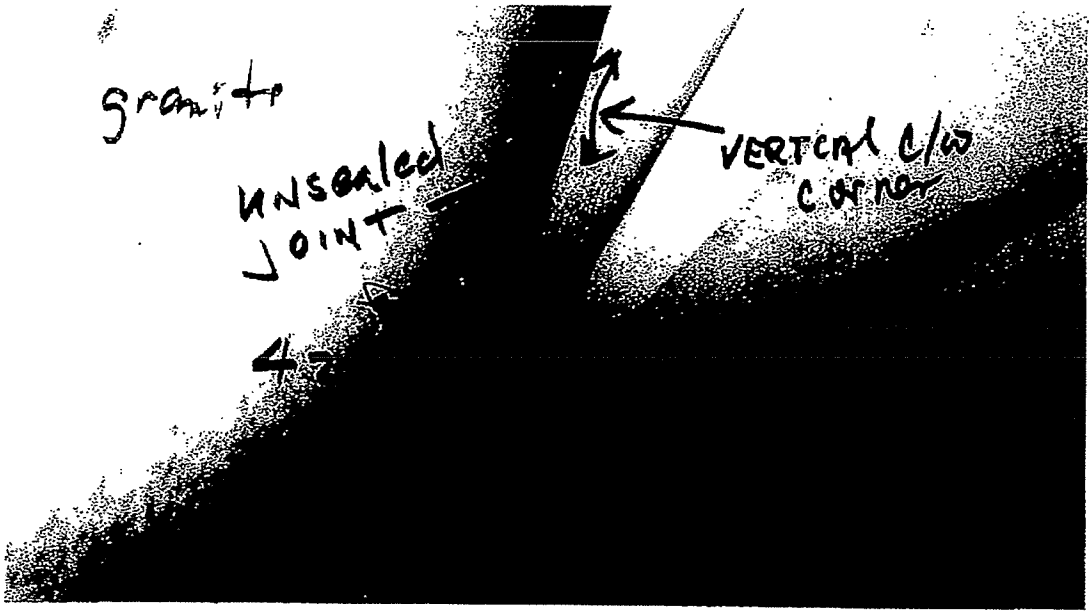
39. A vertical curtainwall above the atrium entry into the skylight covered walkway allows uncontrolled water to damage interior wall finish. Coping splices (to the left) are open. The curtainwall vertical corner is covered by and inadequately sealed to the granite parapet wall.



40. Similar to 39, the vertical curtainwall jamb is inadequately sealed to the vertical granite veneer.

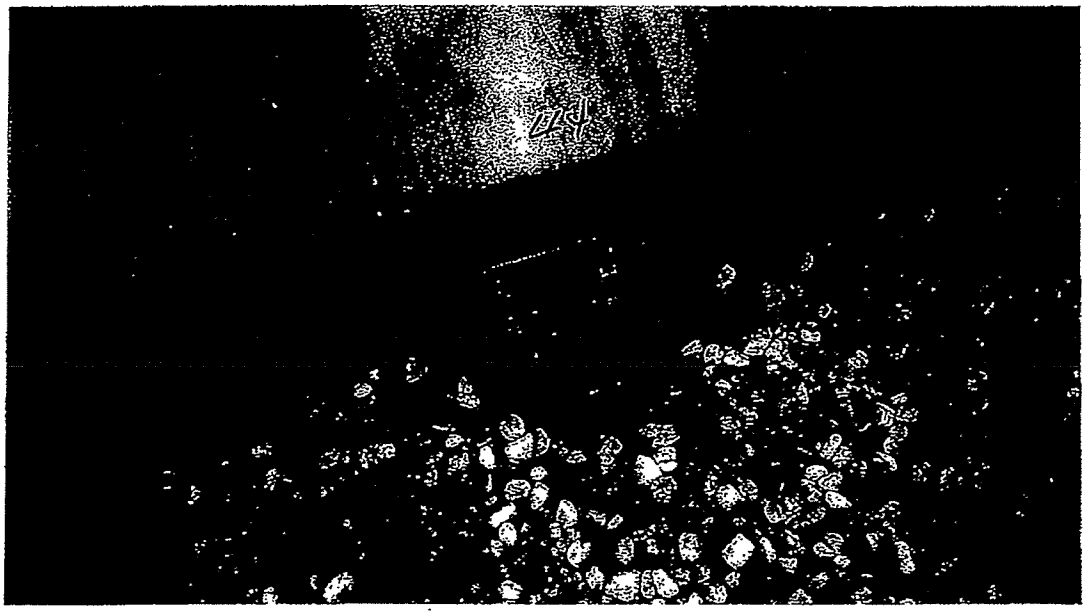


41. This photo taken from above the granite parapet wall to the curtainwall vertical corner illustrates the impossible weather sealant access.

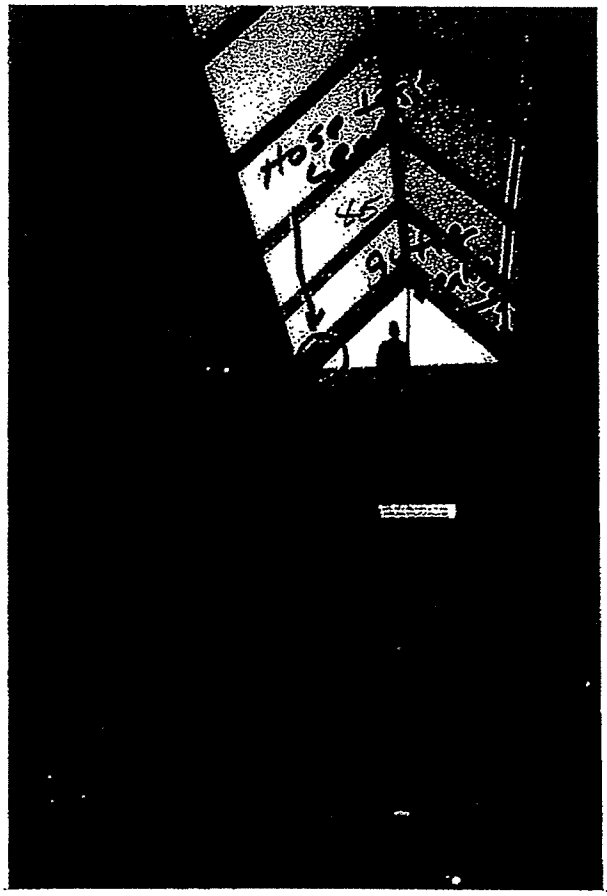


42. This photo taken from above the granite parapet wall to the curtainwall vertical corner illustrates the impossible weather sealant access.

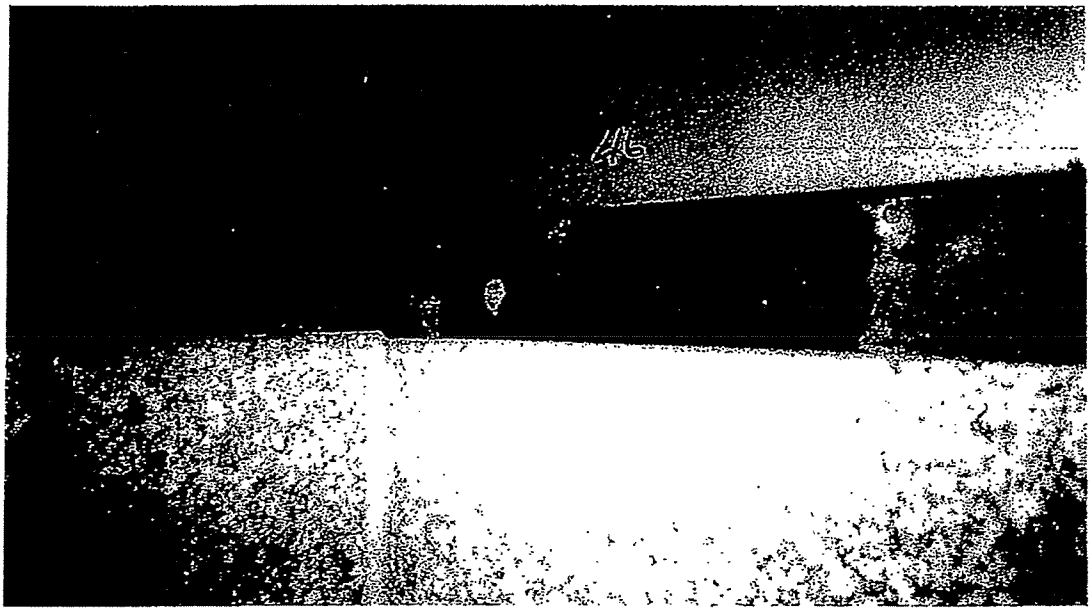
43. A closer view from roof side of the vertical curtainwall corner to the granite parapet wall.



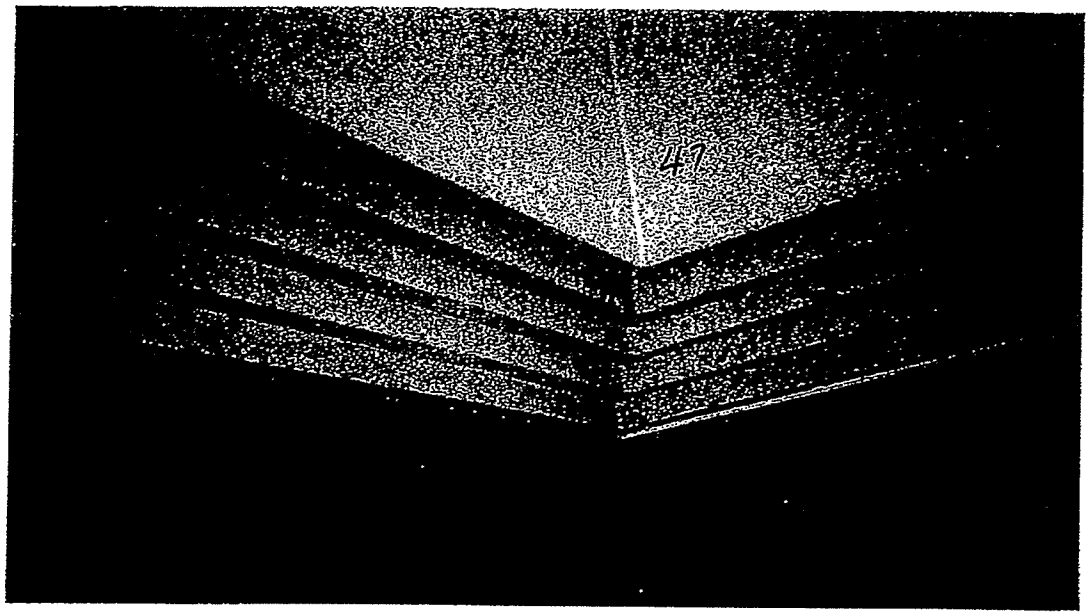
44. A roof scupper through a concrete curb at the standing seam roof clad "dog house" is partially buried by the concrete floor within the dog house. The pipe joints cannot be repaired as is.



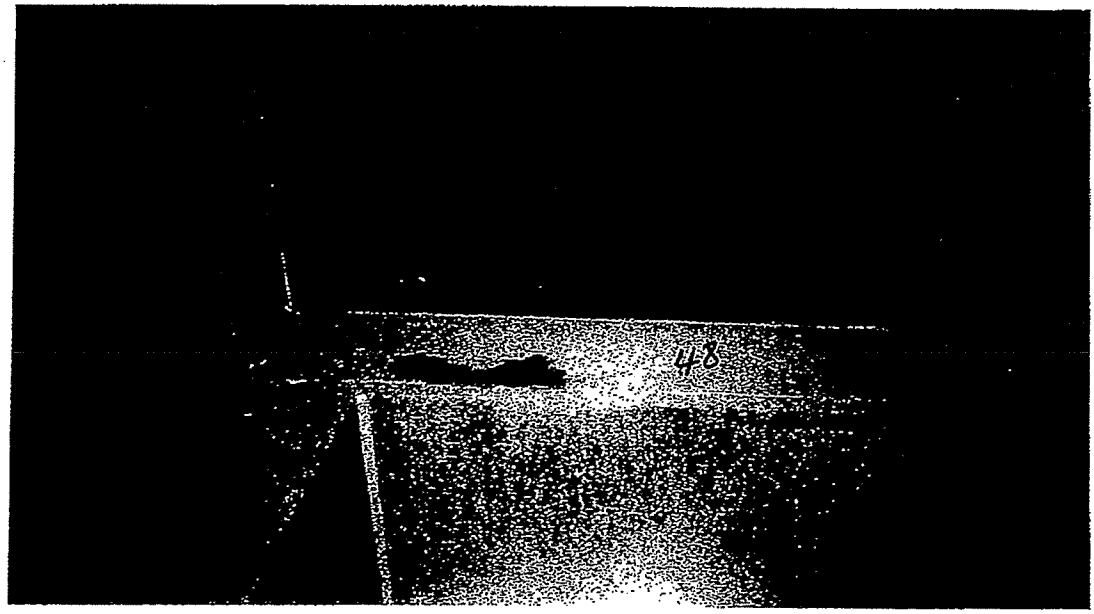
45. Interior view of the skylight covered walkway connecting the atrium to the lower level plaza. An extension ladder was used to view the water entry points during hose test and gutter flood tests. Leaks from the hose test to the left and leaks from the gutter flood test to the right.



46. Water leakage during hose test at roof to skylight transition, see #45.

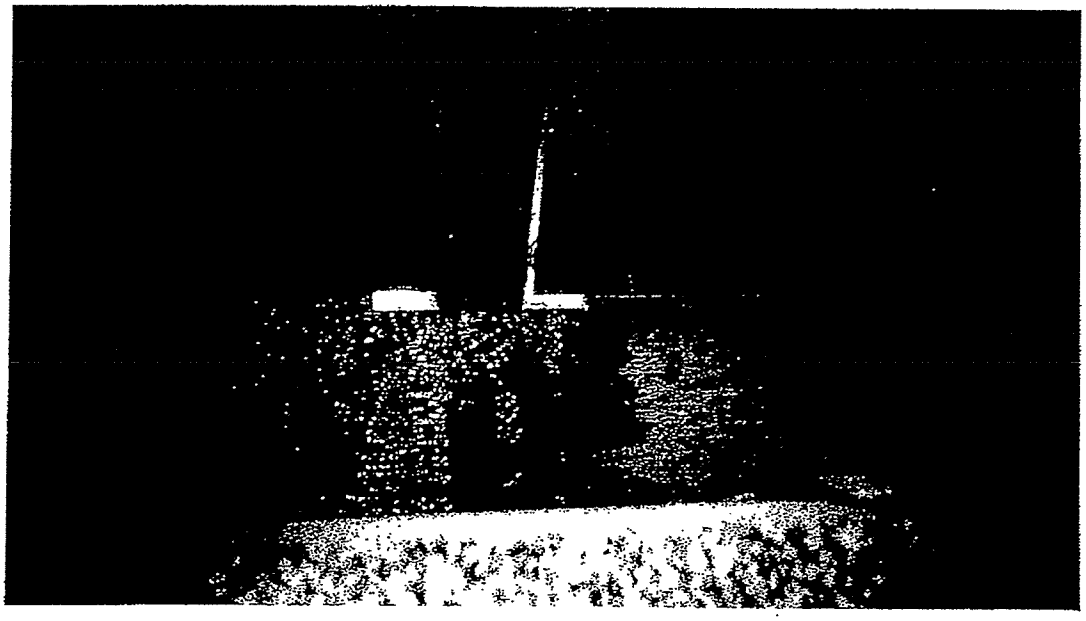


47. Water transferred to the interior of the walkway wall during the hose test, see #46.

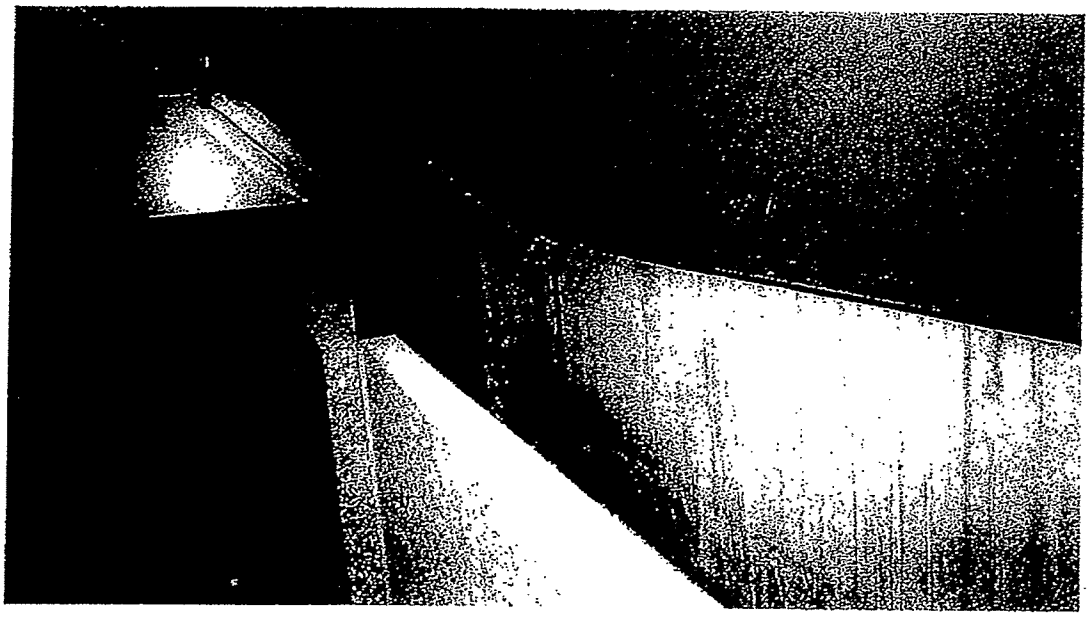


48. Water transferred to the interior of the walkway wall during the hose test, see #46.

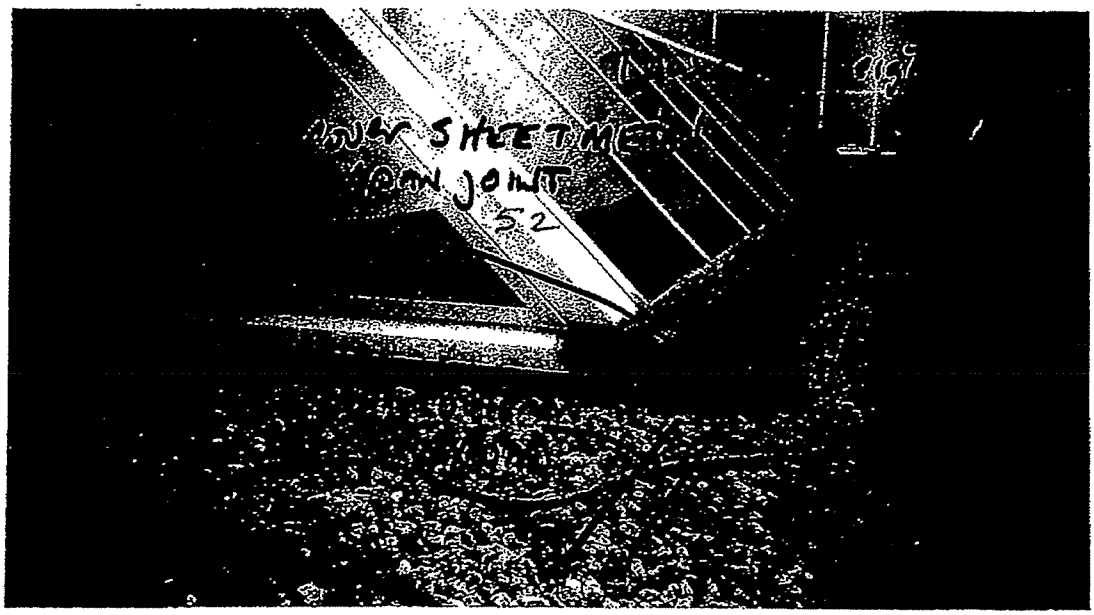
49. End wall of the skylight showing low curb height at roof to skylight transition and the gutter location at vertical wall.



50. Water poured in when the height of water reached 2 ½" in the gutter between the vertical wall and skylight during the gutter flood test.

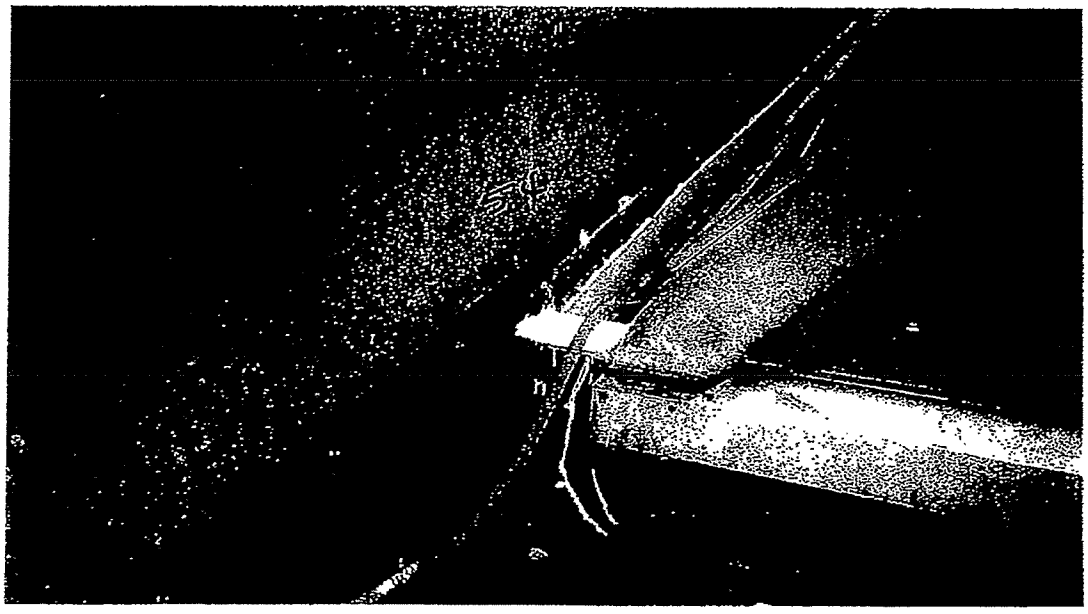


51. See #50 water came into at all ends of skylight rafters when the height of water reached 2 ½: between the vertical wall and skylight during the gutter flood test.

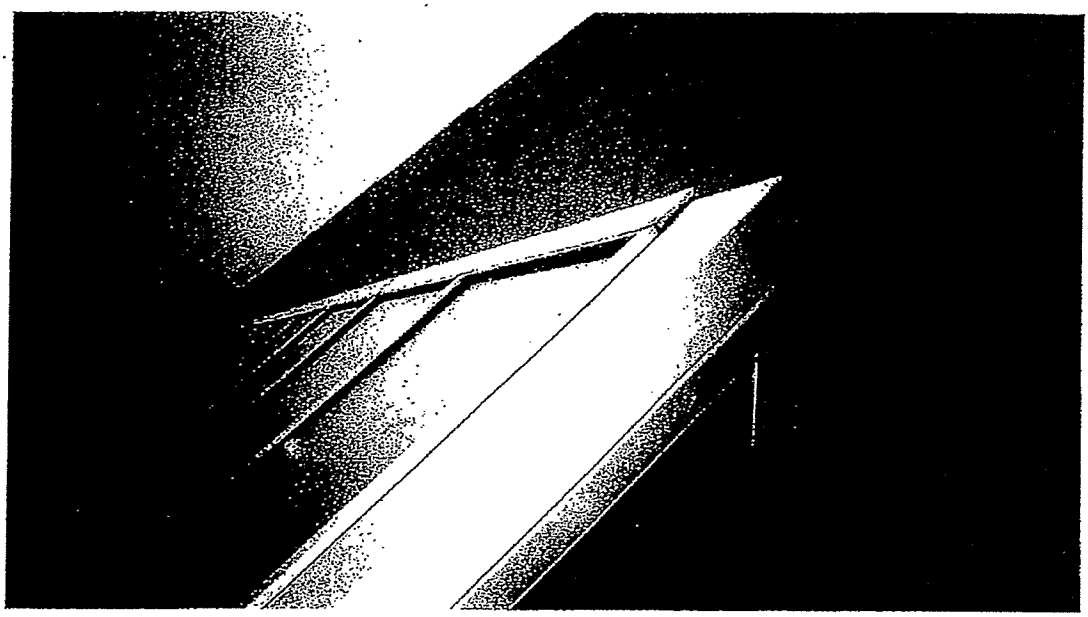


52. An EPDM covered sheet metal cover covered a low curb covered by the roof over a building expansion joint. Note that provisions for expansion in the flat roof was not provided.

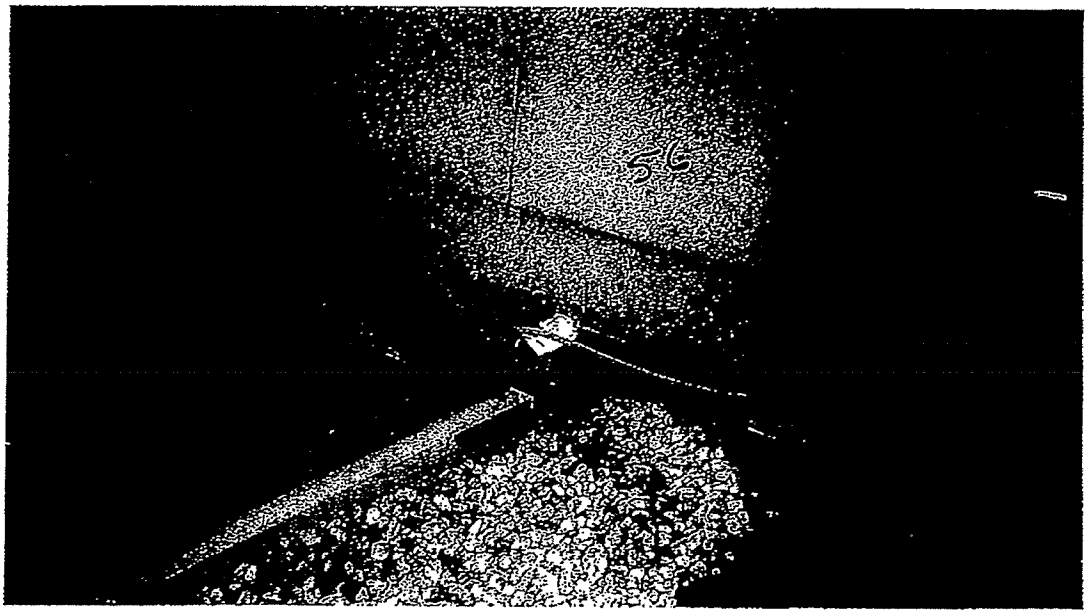
53. The end walls have scupper holes but when clogged permits water to exceed the height of the effective gutter to the unsealed skylight rather bottoms.



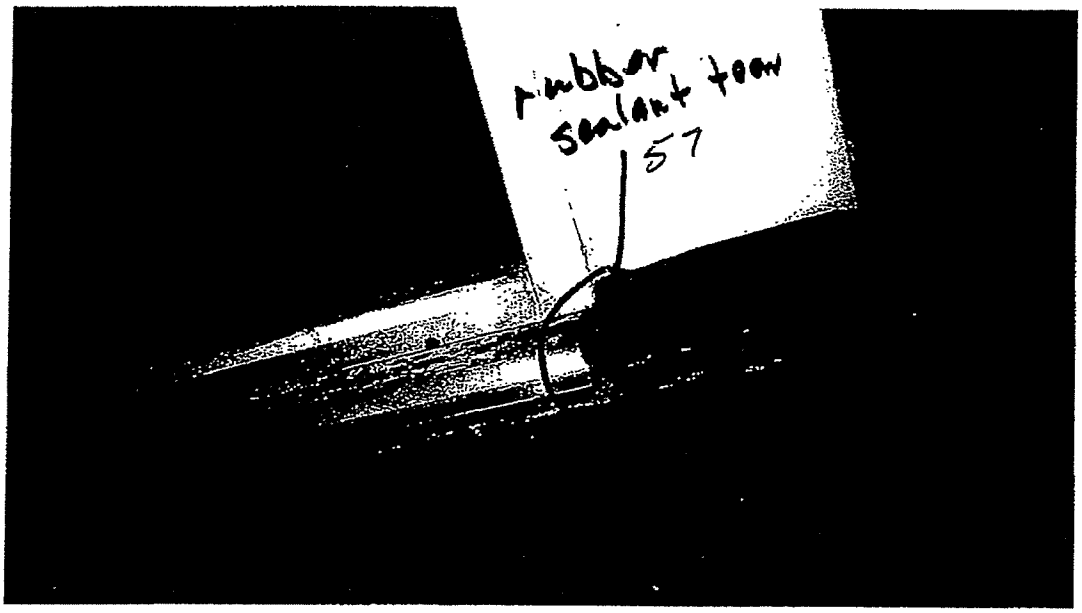
54. The end walls have scupper holes but when clogged permits water to exceed the height of the effective gutter to the unsealed skylight rather bottoms.



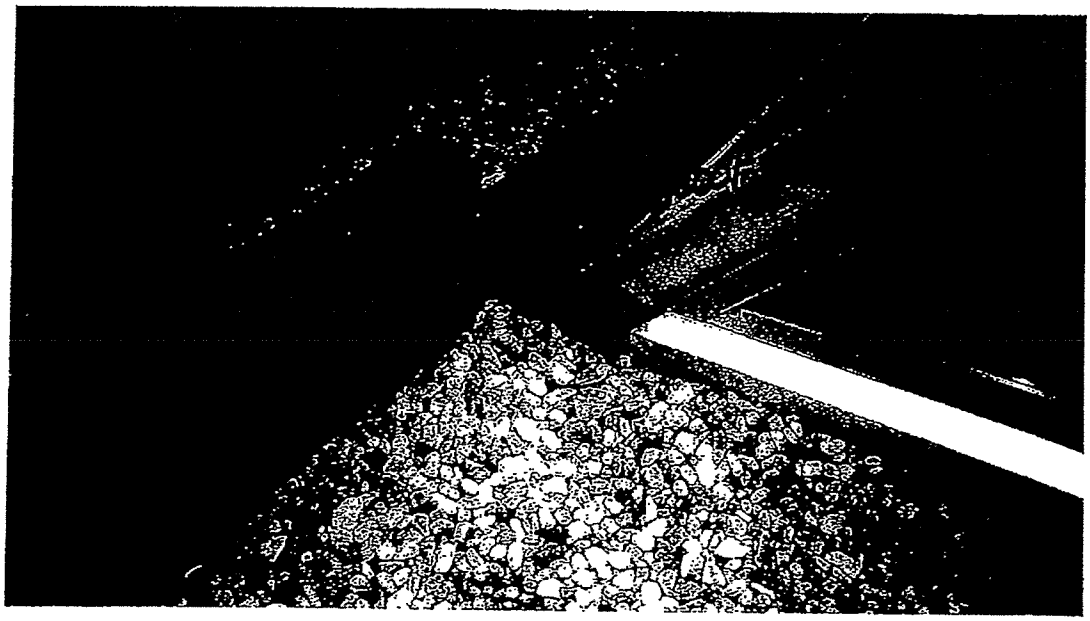
55. Open joints in skylight covers and brake metal should be sealed to prevent contribution of uncontrolled leakage.



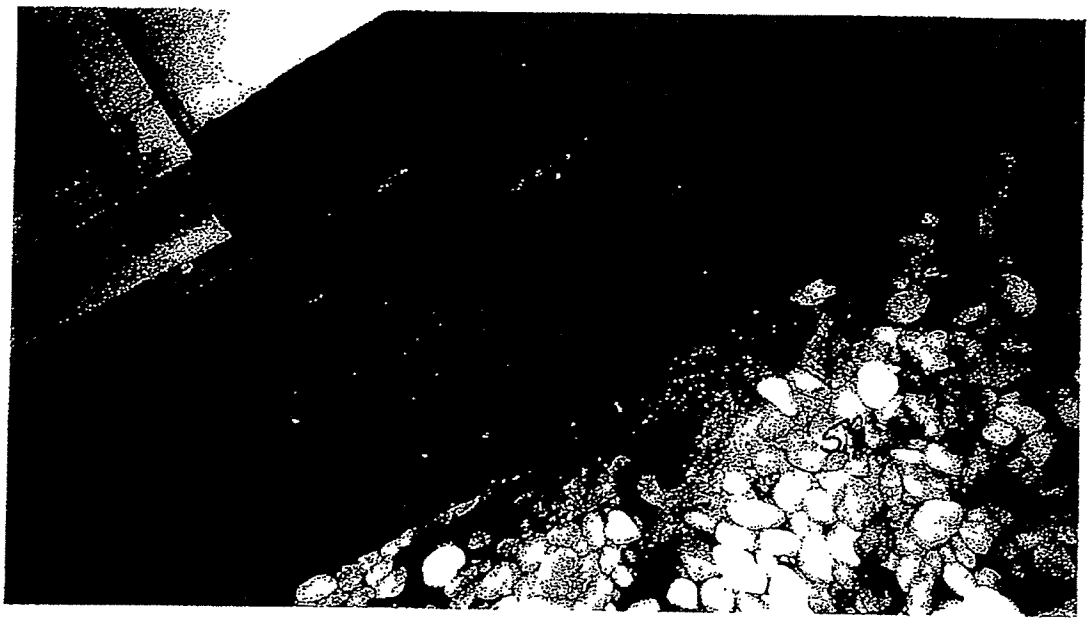
56. Note the low curb height at the roof to skylight transition. The interface detail is inadequate to control water penetration.



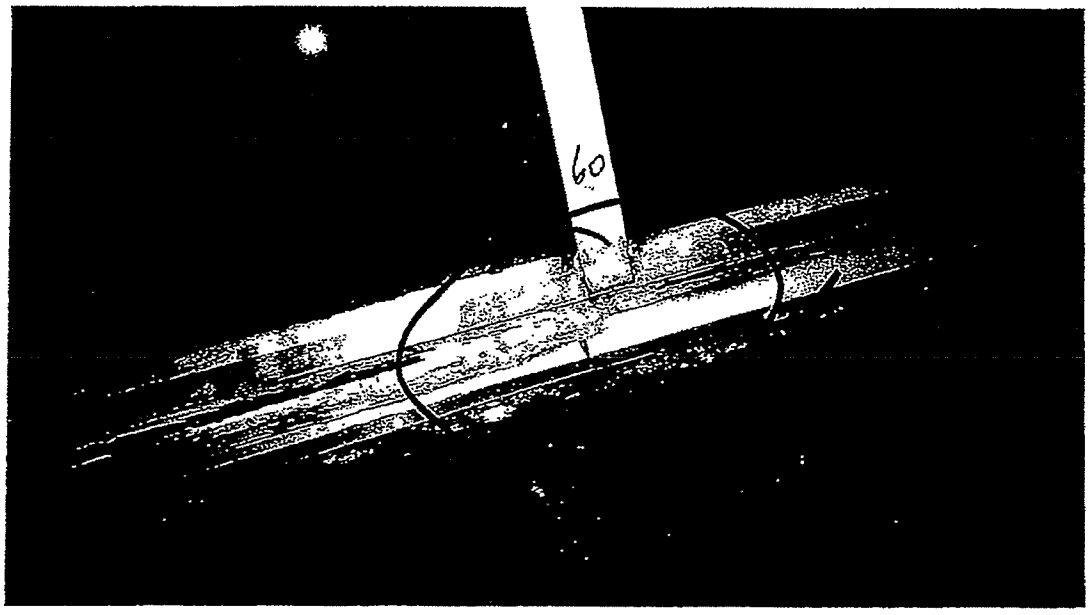
57. Roofing repair did not include adequate detailing with the skylight to increase effective curb height. A tear exist in the rubber sealant connecting the end of the Roofing to the skylight.



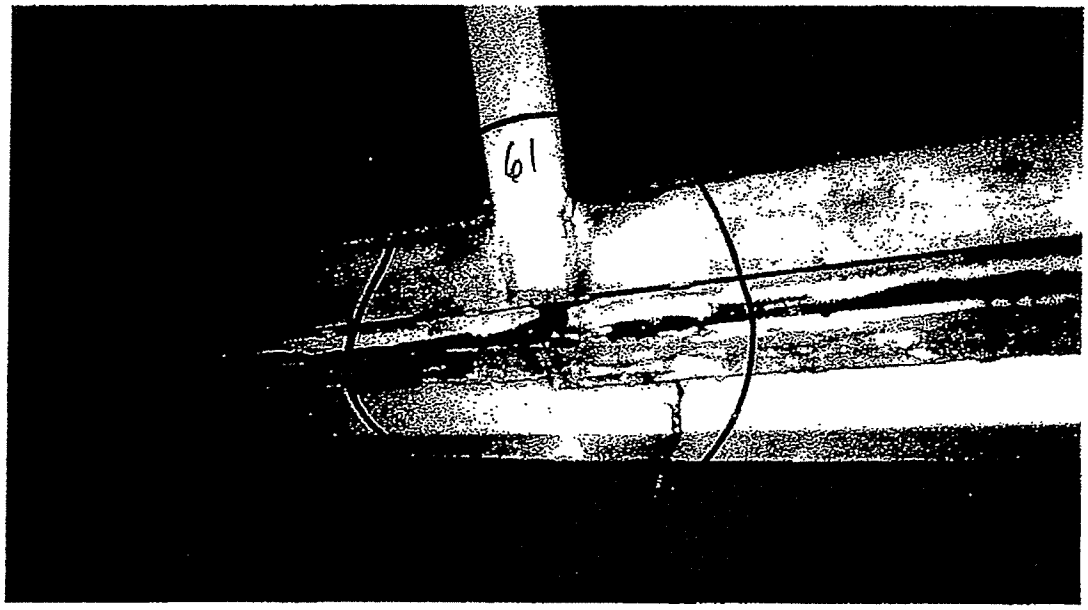
58. A tear in the roof transition at the curb was found.



59. A tear in the roof transition at the curb was found.



60. Messy, inadequate and improperly coordinated roof interface with skylight detailing allows uncontrolled water leakage.



61. Messy, inadequate and improperly coordinated roof interface with skylight detailing allows uncontrolled water leakage.

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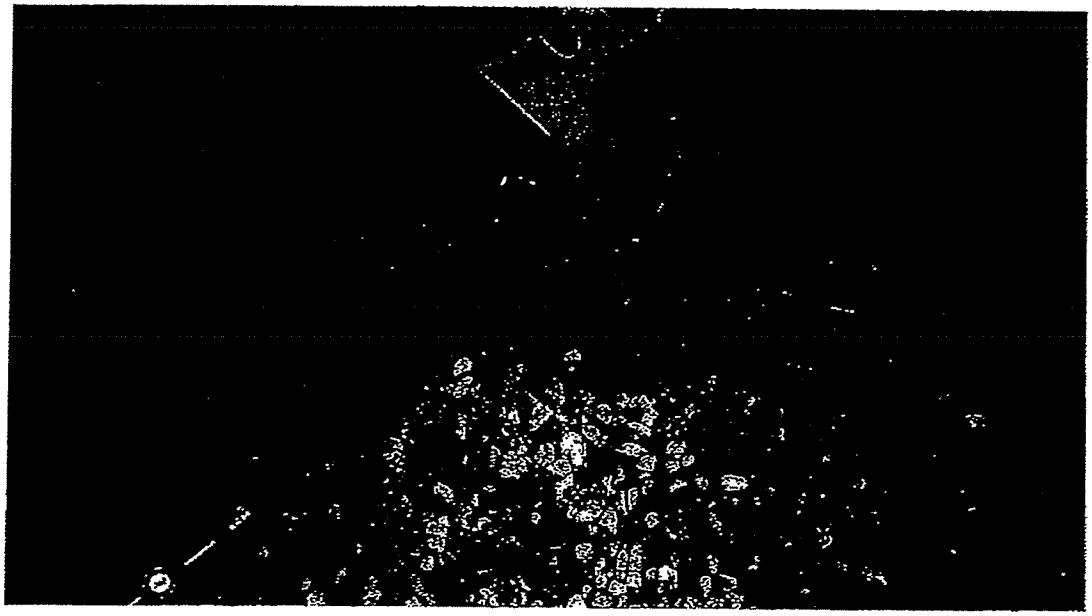
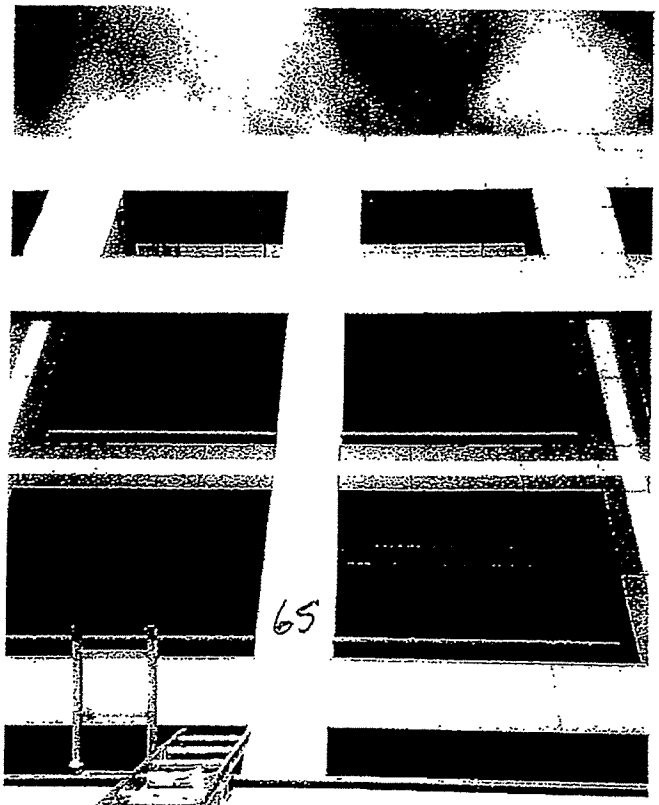
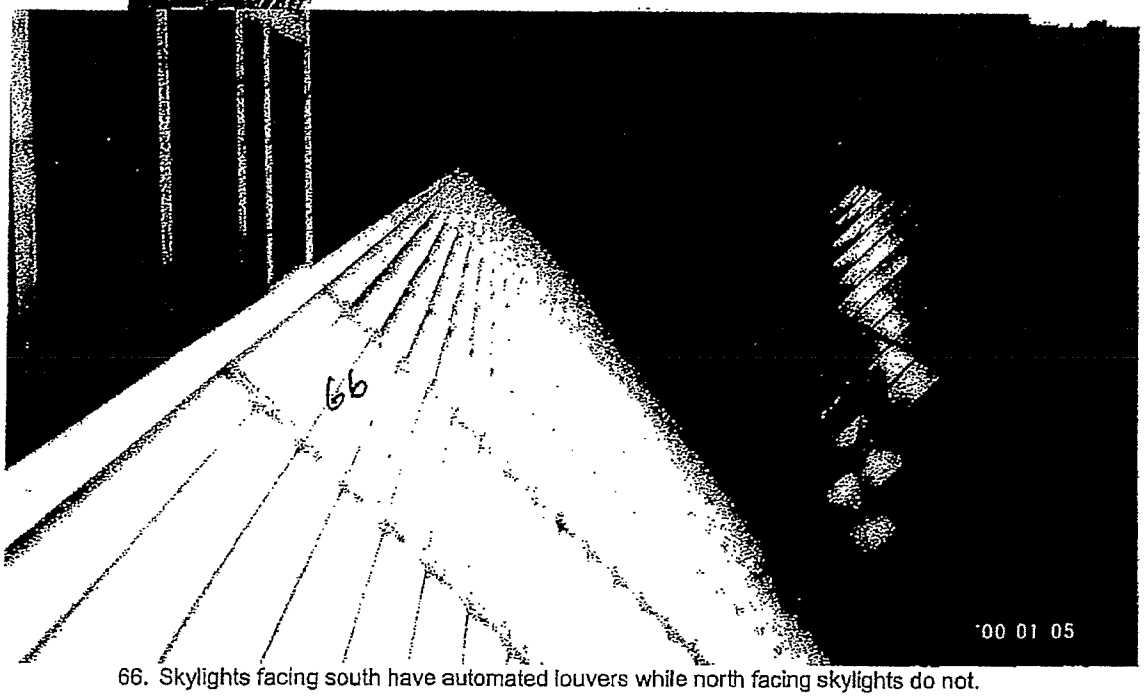


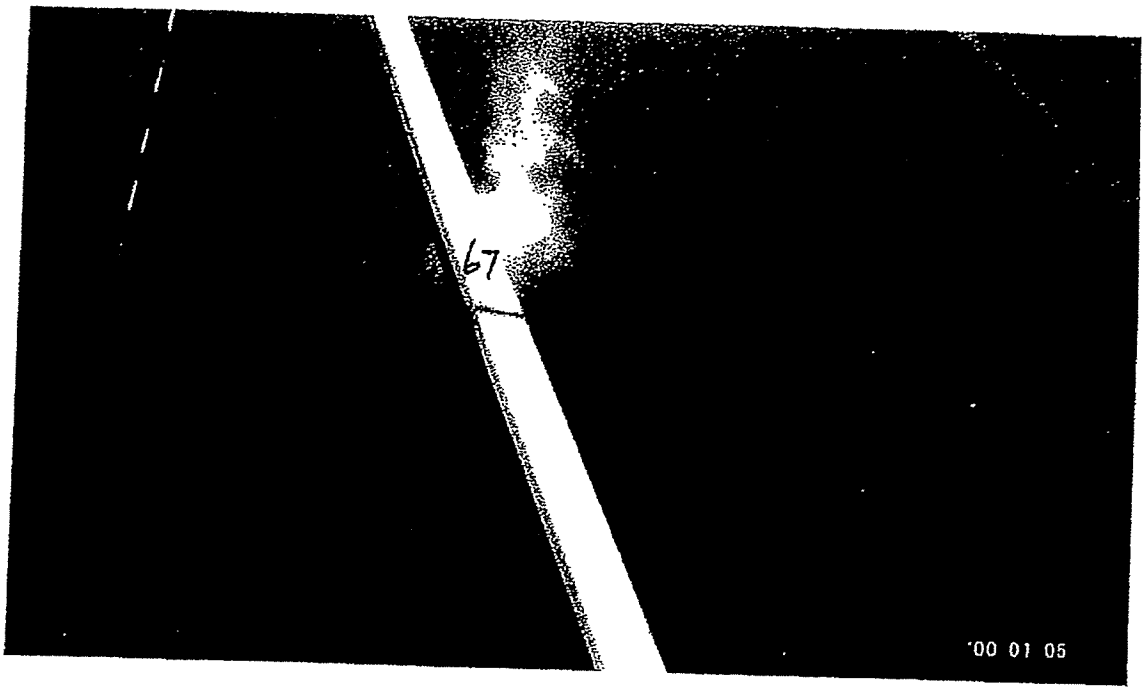
64. A large gap exists less than two inches above top of typical roof at open bottomed cover.



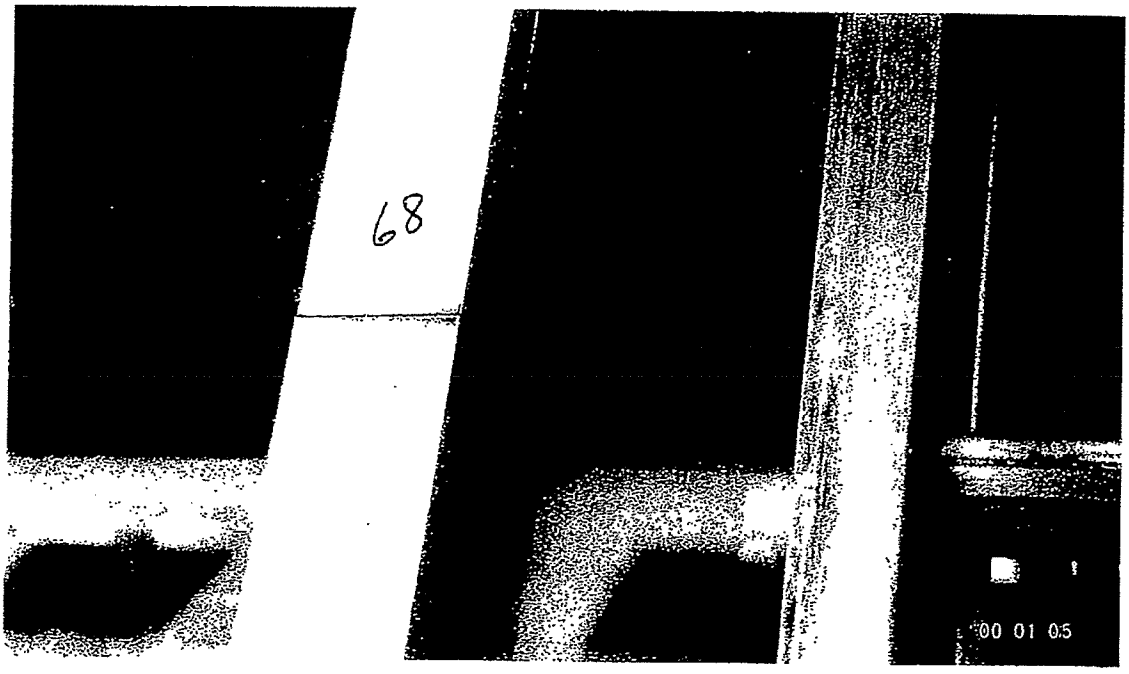
65. Extension ladders are presently required to access the skylight gutters above the atrium area. Based on access preparation for the inspection a minimum of 20 man hours should be allowed for ladder set up and removal. Also note that the time does not include additional safety precautions like safety ropes or rails.



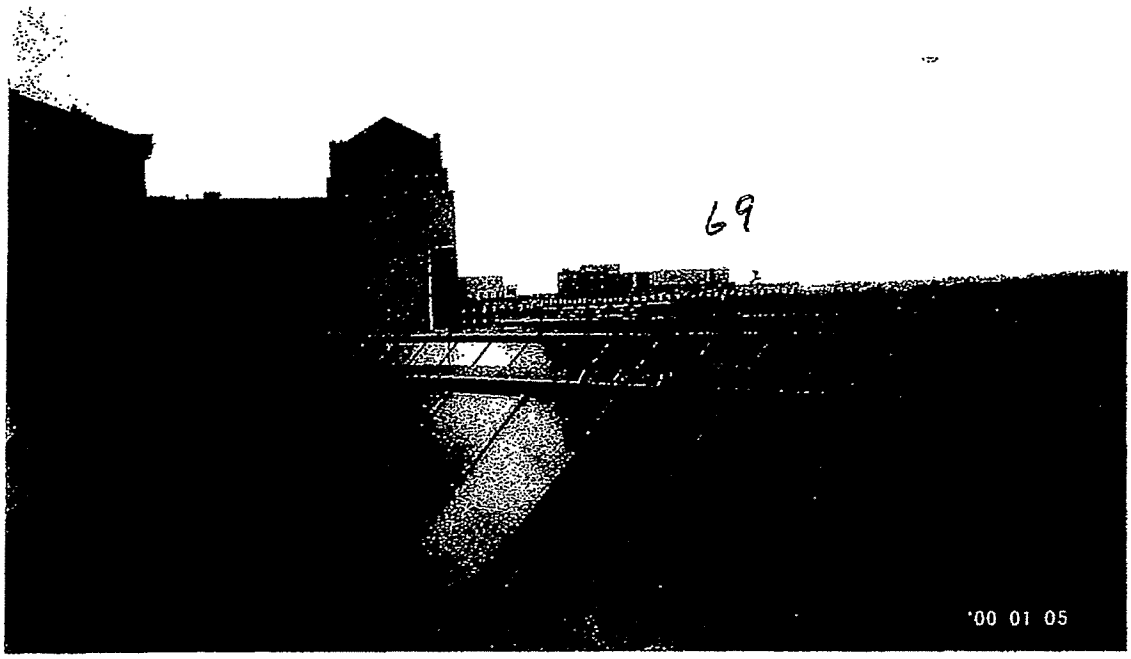
66. Skylights facing south have automated louvers while north facing skylights do not.



67. The typical rafters have exterior pressure bars and exterior covers. The purlins do not have pressure bars but do have silicone sealant weather seal. The purlin detail allows water to run unimpeded. Covers on purlins would contribute to the leakage problem.

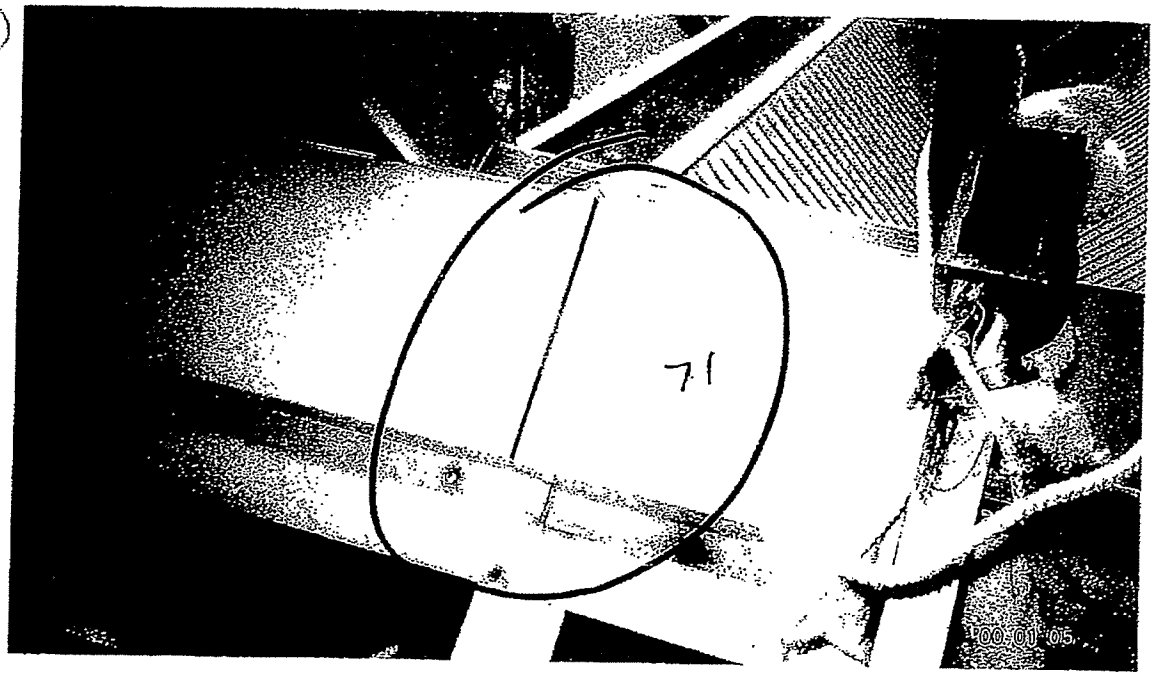


68. A close up of #67. Note that the rafter covers joints are open and the rafter covers are not wet sealed to the glass.



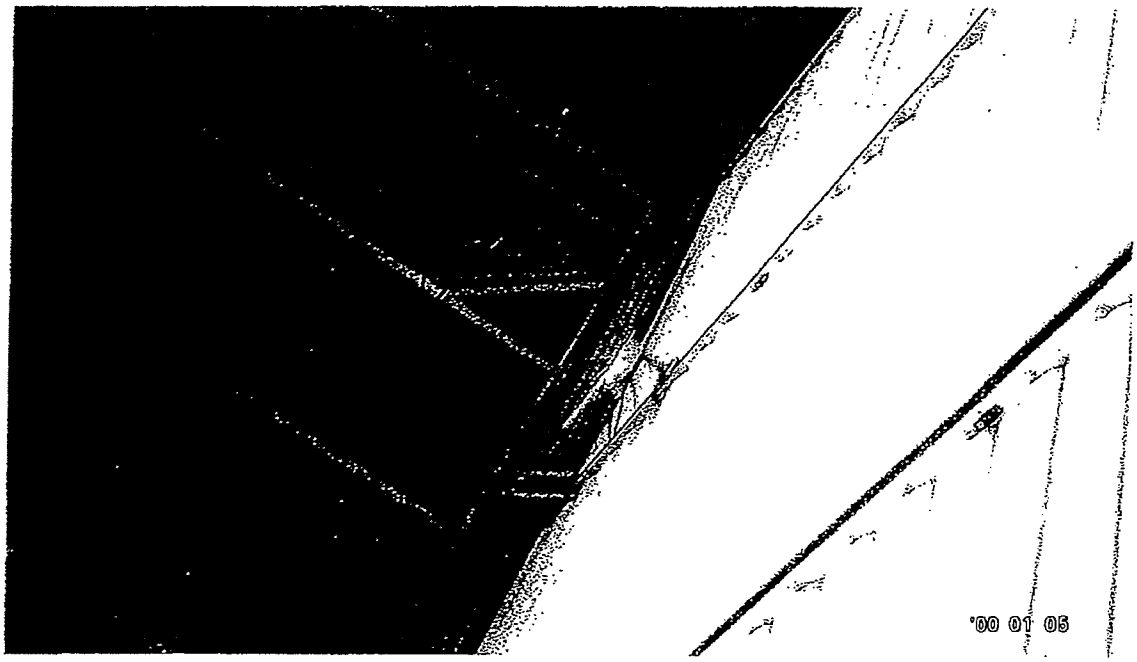
69. Damage ridge formed metal was noted.

70. Metal to metal joints should be sealed.

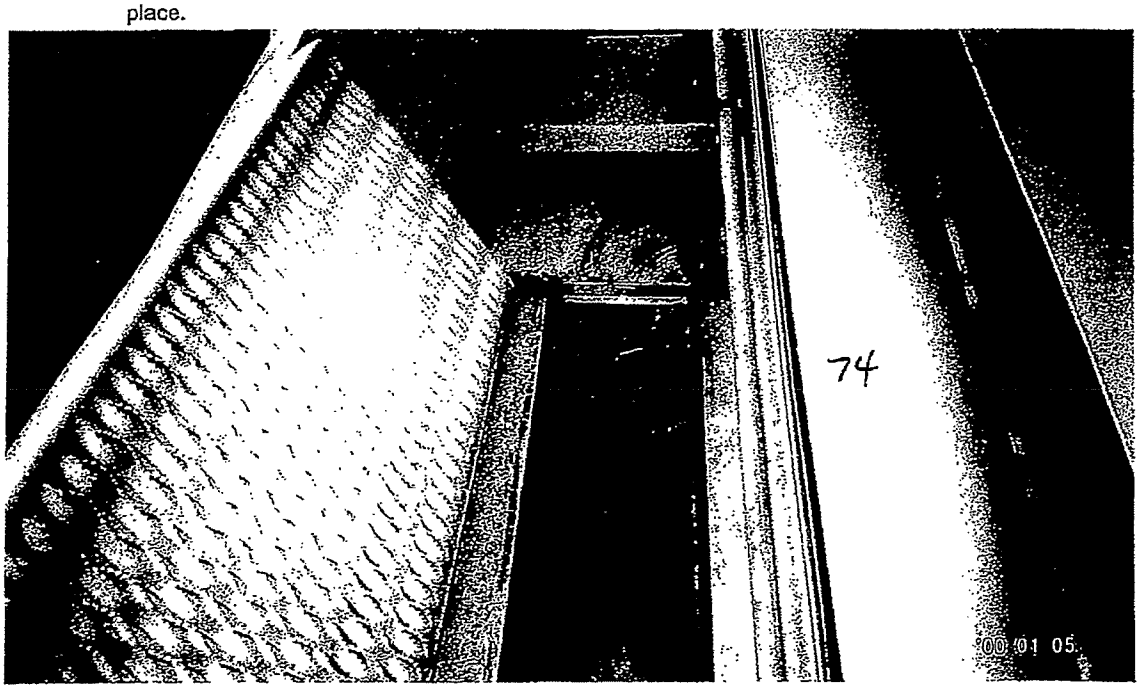


71. Metal to metal joints should be sealed.

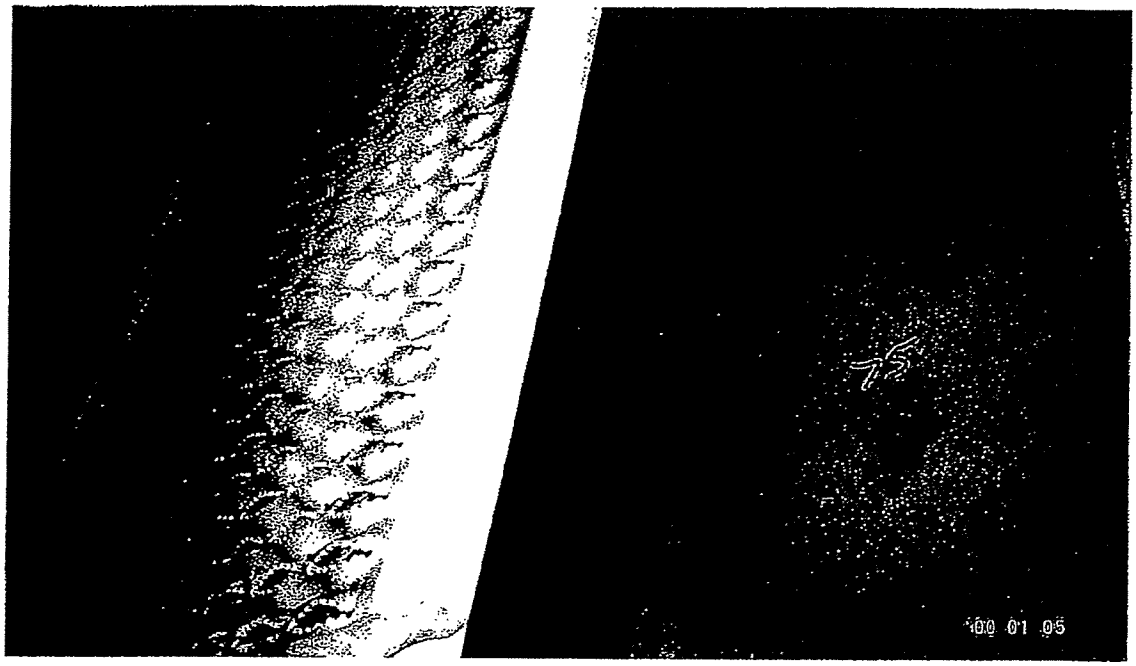
72. Louvers were not removed. Glass replacement or even access for "wet seal" will be extraordinarily expensive.



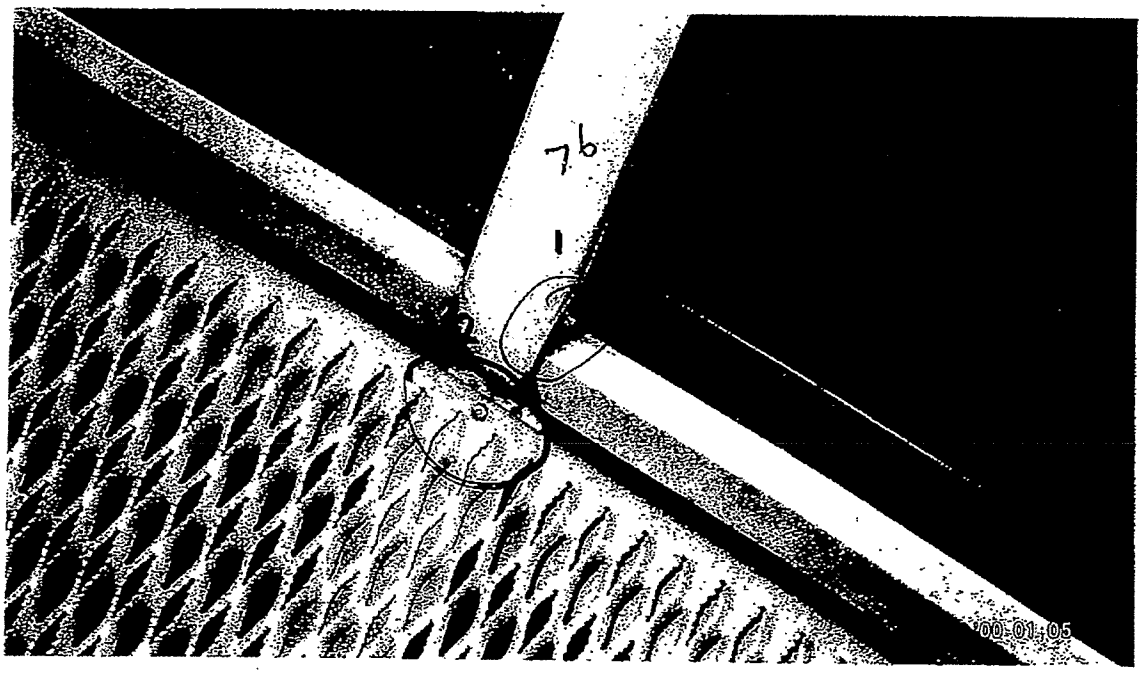
73. The gutters between the atrium skylights are covered by aluminum grates. From south to north, screws were typically stripped out that were intended to help hold the grates in place.



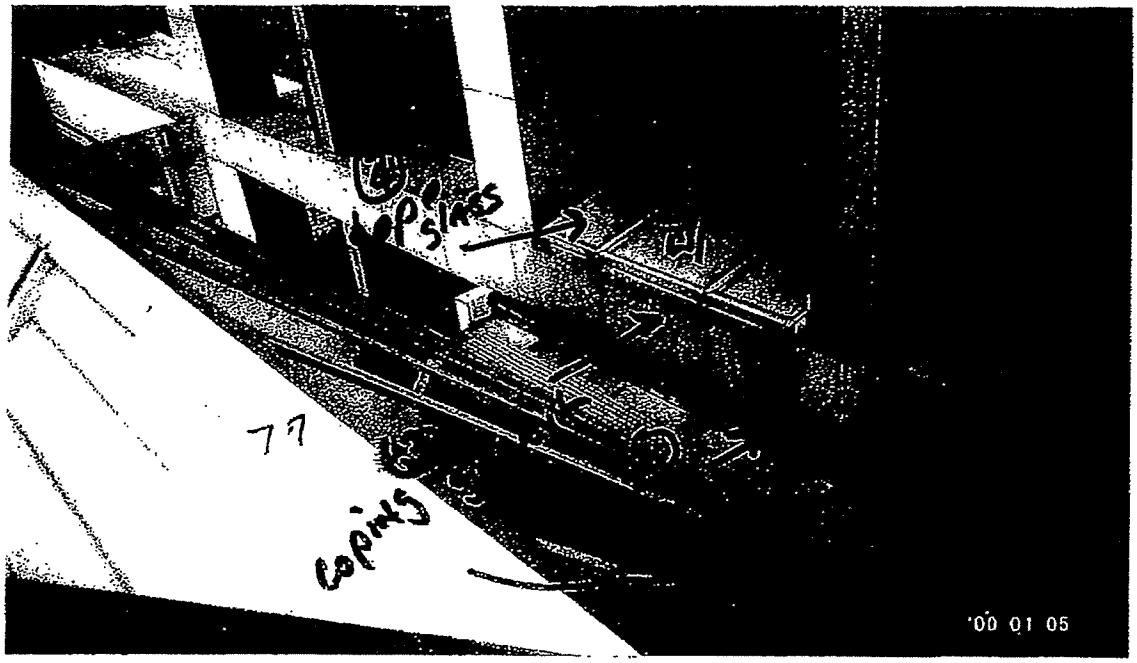
74. The roofing membrane at the gutters will be difficult to replace.



75. The 3" diameter roof drains do not have drain bodies. The drain body simply terminates at the gutters. The filters were removed by the Owners forces to extend the time between maintenance efforts to clear the drains. Clogged drains allow the water to exceed the effective gutter height. The water then over flows into the atrium.



76. 1. Gaps in rafter and purlin gaskets allow water to challenge the internal glazing reglet sealant applications. 2. The grates covering the gutters are fastened to aluminum cross braces. The cross bracings are attached into the aluminum coping covering the gutters.



77. The atrium skylight to the 10 story office building interface involves the same issues as the other skylights and many more details contributing to the reported unresolved leaks beneath the building expansion joint at this location.

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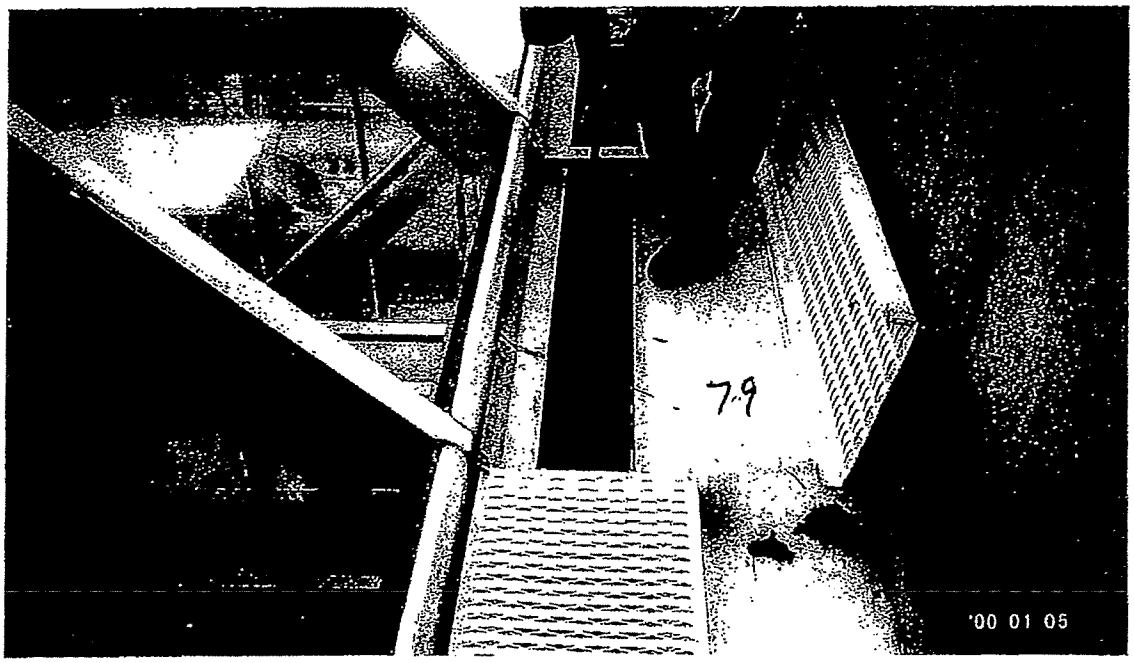
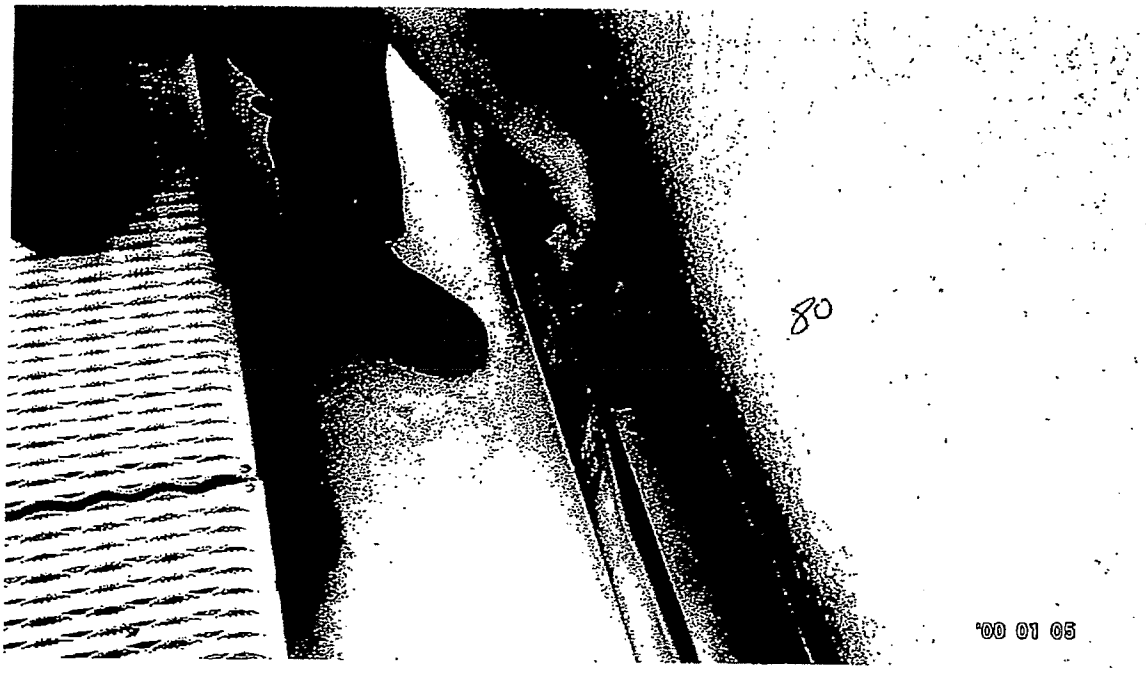
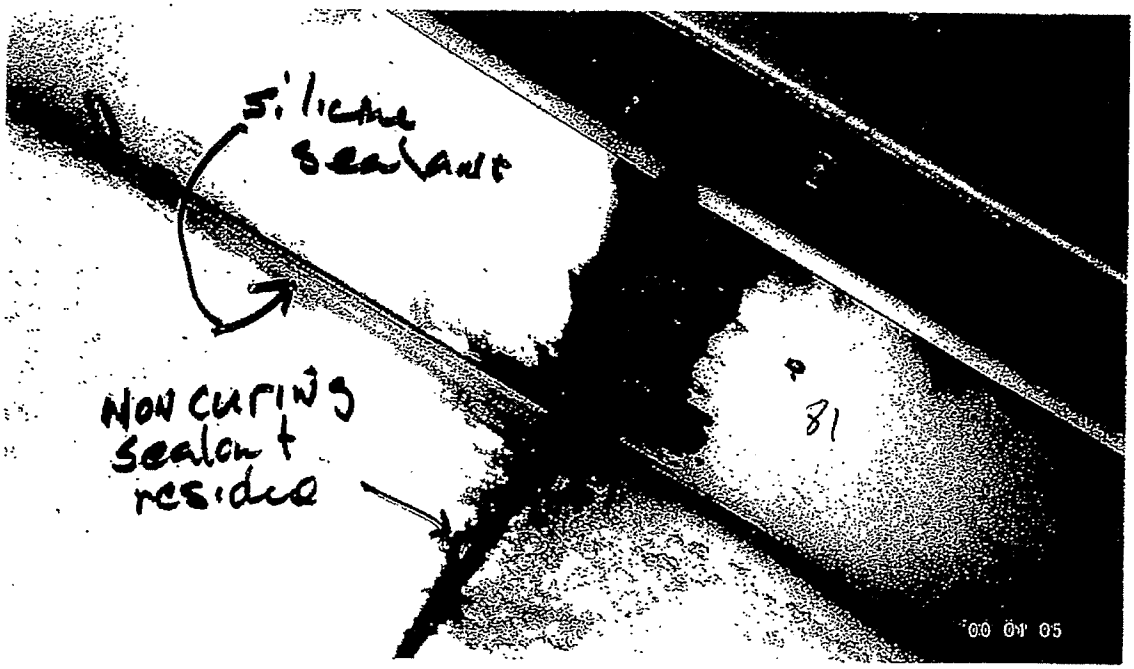


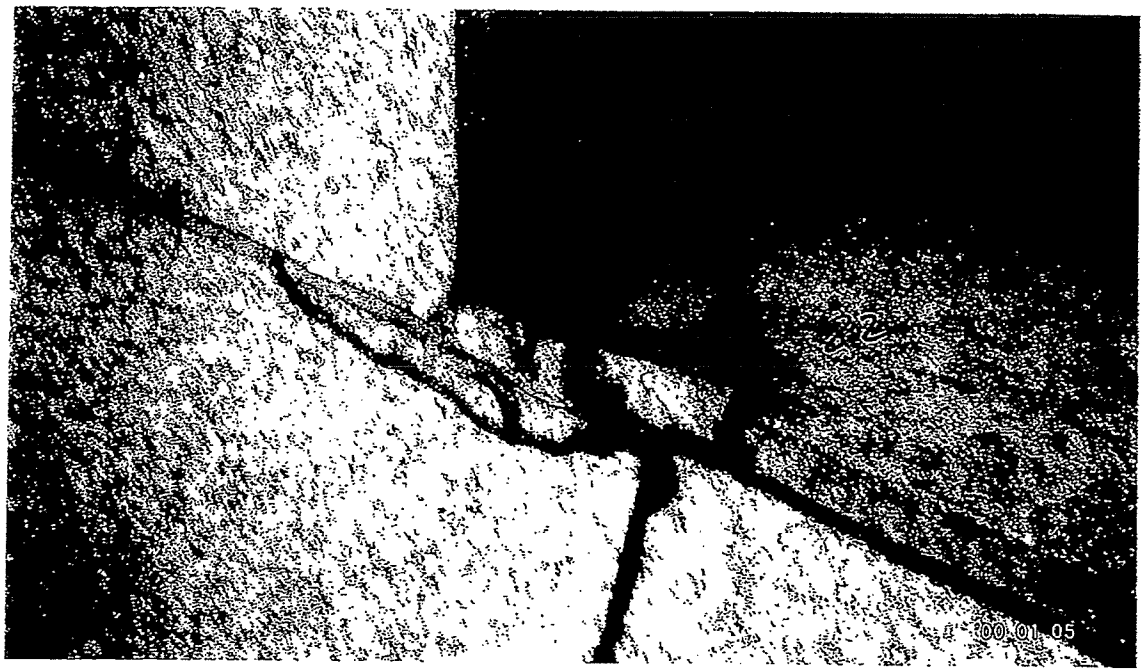
79. A large quantity of debris was cleared from drain to allow standing water to drain. Only 1 drain was located.



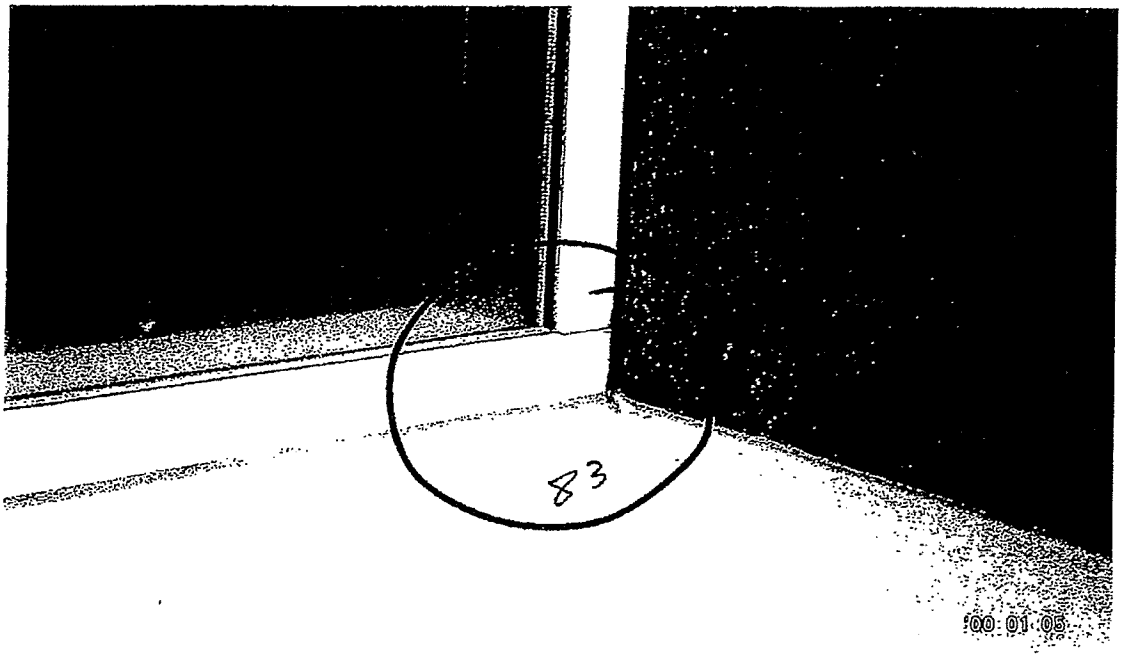
80. Typically the bellows expansion joint covers were torn at their splice covers.



81. The additional aluminum coping splice joints were open. A splice cover was placed under the typical coping splice joints embedded in a non-curing sealant. Over time the non-curing sealant is displaced by movement.

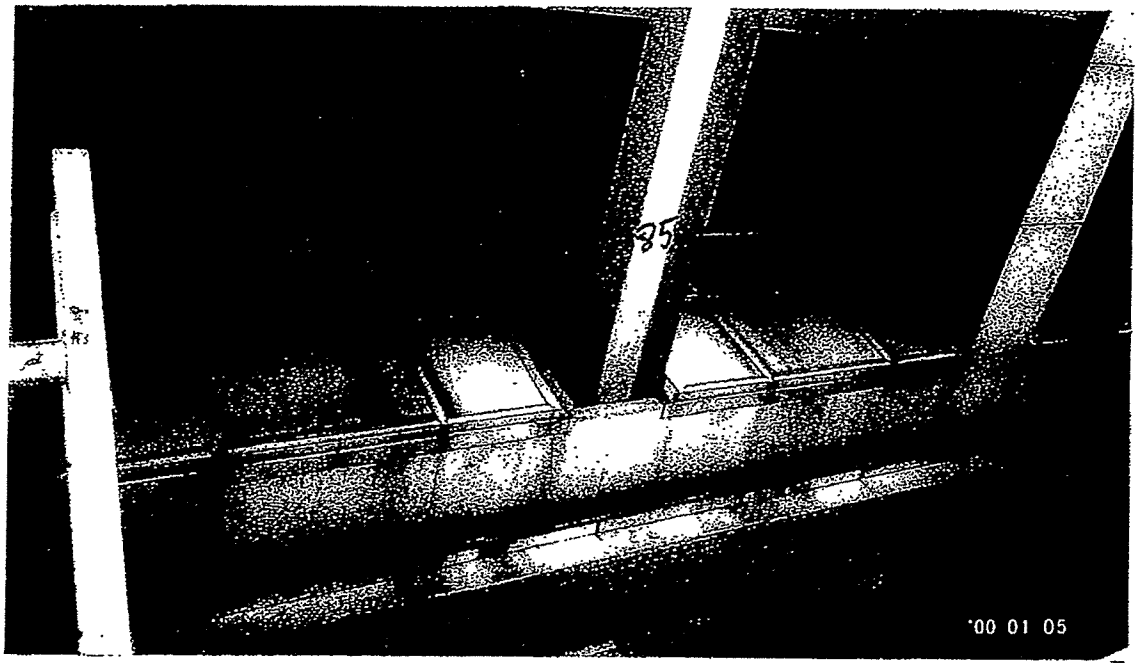


82. Cracks in the granite can contribute to the water leak problem.

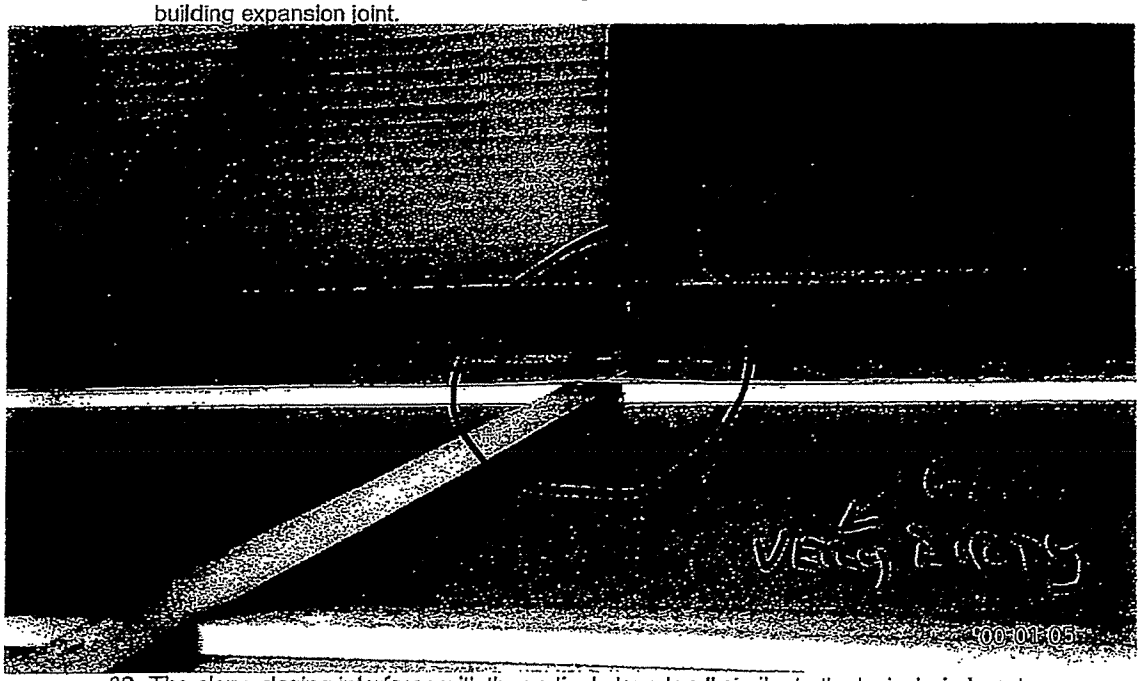


83. The window wall/curtainwall installation at the south elevation of the 10 story tower is similar to the typical window wall to granite veneer describe earlier. The perimeter weather seal is applied to the exterior covers allowing water to by-pass the weather seal though gaps in the metal covers and rope wicks.

84. Sloped glazed frames with glass and aluminum panels cover space between the window wall/curtainwall sill and the vertical face of granite veneer located tower side of the building expansion joint.

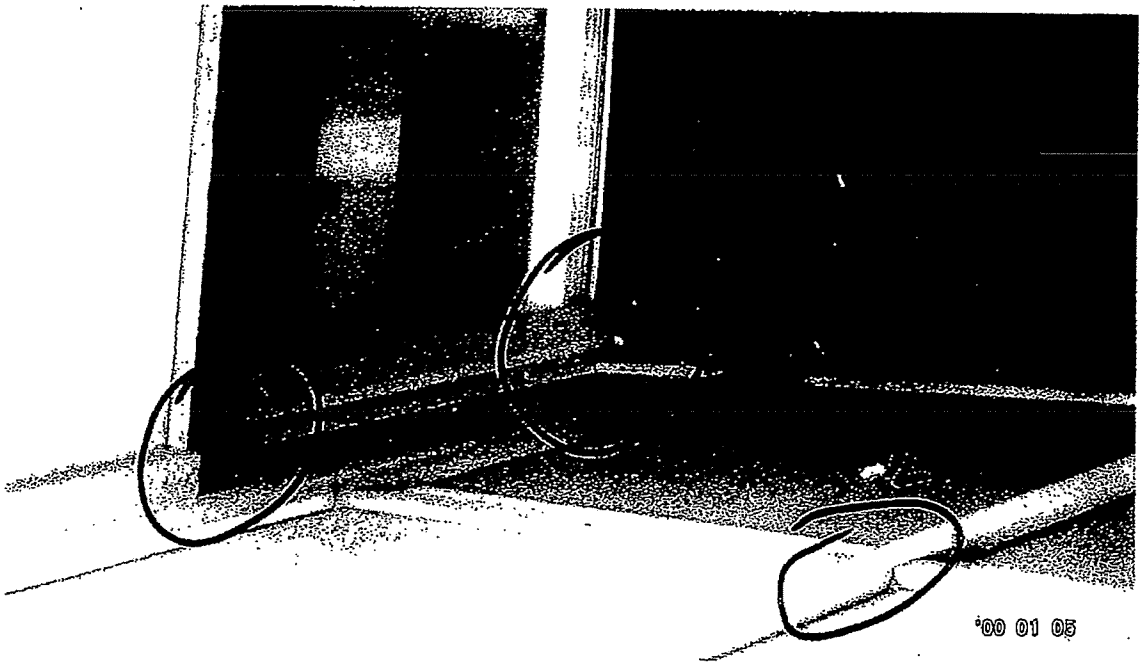


85. Sloped glazed frames with glass and aluminum panels cover space between the window wall/curtainwall sill and the vertical face of granite veneer located tower side of the building expansion joint.

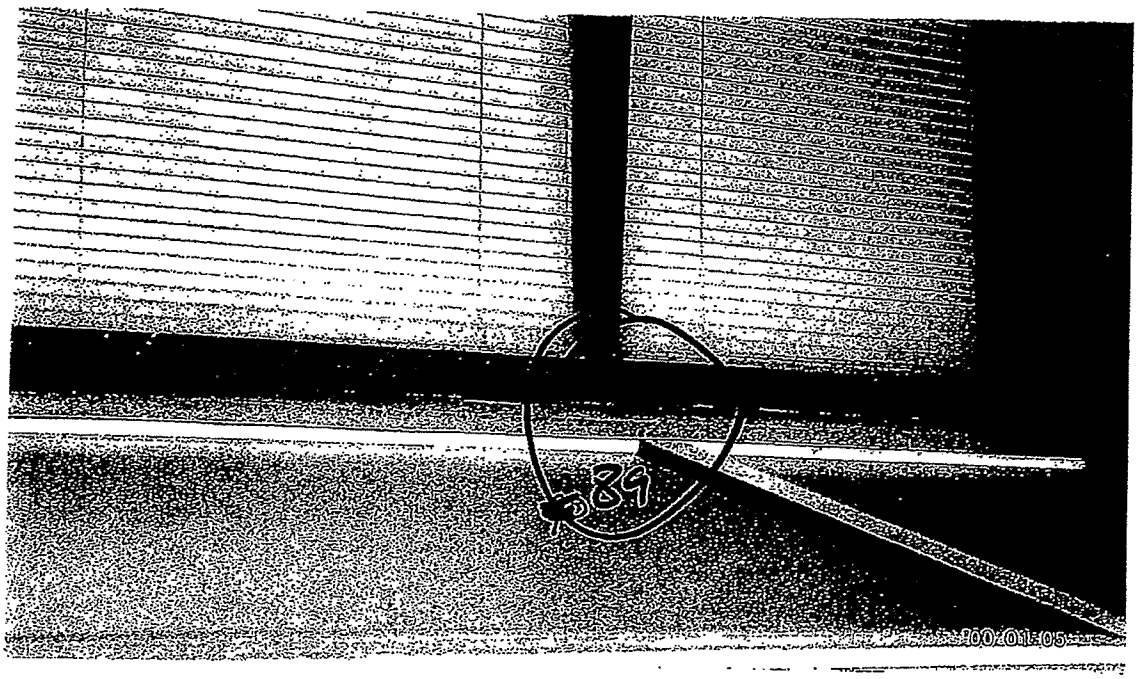


86. The slope glazing interfaces with the vertical glazed wall similar to the typical windows to granite veneer. The perimeter weather sealant is applied to the face of the exterior covers. Note the open splice in the dark horizontal sill cover of the vertical wall and the unsealed coping lapped splice at the top of the sloped glazing. The slope glazing is not wet glazed and the glass may never have been cleaned.

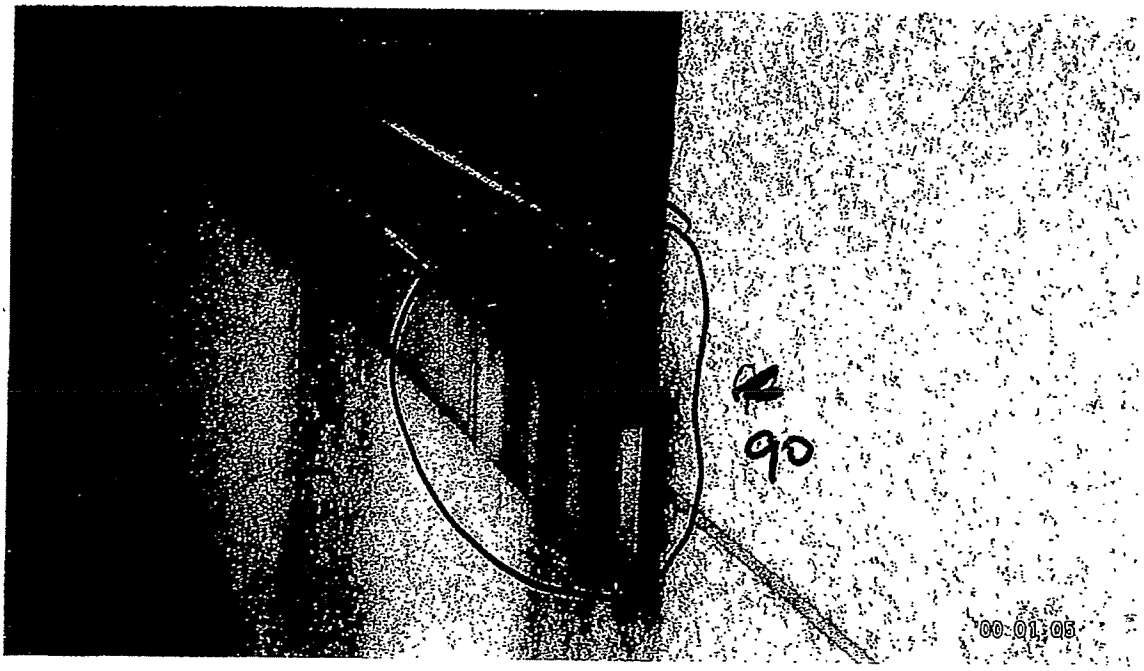
87. The sill transition of the slope glazed frame has 1. a two inch water line where water has set possibly inside the insulated units, 2. exposed aluminum where paint has eroded and 3. open metal to metal joints.



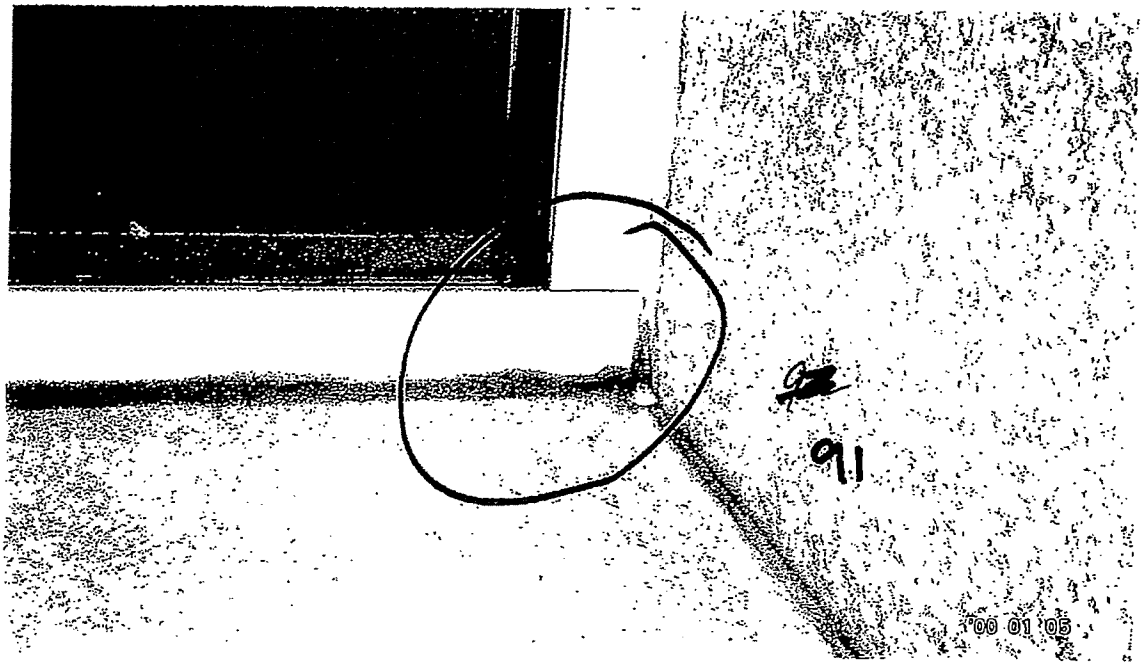
88. The slope glazing installation provides many opportunities for water leak contributions; 1. inside corner interface at window wall, 2. open metal joints without benefit of wet seal, and water collection gutters behind granite column covers.



89. The slope glazing interfaces with the vertical glazed wall similar to the typical windows to granite veneer. The perimeter weather sealant is applied to the face of the exterior covers. Note the open splice in the dark horizontal sill cover of the vertical wall and the unsealed coping lapped splice at the top of the sloped glazing. The slope glazing is not wet glazed and the glass may never have been cleaned.



90. Open metal to metal joints contribute to water leakage.



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Phase 2 General Discussion of Leakage Causes and Recommendations
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PROJECT NUMBER: W&A-203346.2

FEBRUARY 9, 2004

Summary

Phase I investigation revealed problems at the plazas, balconies, planters and the kitchen floor that cause uncontrolled leakage problems. Recommendations were made and options for repair were provided for consideration. The phase 1 investigation also revealed that the exterior vertical walls, skylights, gutters, and roofing interface installations contributed to the water leak problems reported in the building.

Vertical Walls

The vertical walls are 1" thick granite panels attached to steel framing. The insulated glass set in aluminum framing is attached to the same steel framing. Secondary water control systems within the vertical wall were installed but are not effective at preventing water leaks into the building for a number of reasons.

1. The windows were designed for the perimeter sealant to be located approximately ¾" interior of its exterior face. However, the granite detail and sealant requirement for backer rod resulted in the sealant being placed flush with the exterior cover of the window. This sort of installation always allows water to flow inboard of the granite.
2. The rope wicks set through the perimeter sealant just add to the leakage problem by allowing more water inside than allowing to exit.
3. The good thing about the plaza waterproofing is that it is located interior of the granite and collects some of the water that runs down the

interior side of the granite. Unfortunately, as we discovered in Phase I the plaza waterproofing is not tall enough nor installed consistently enough to control all the water from the plaza let alone the vertical wall too.

4. The diverter flashing above the plaza help control some of the water but anchor clips between the steel stud framing and the granite and insulations set against the interior face of the granite transfers water interior of the plaza waterproofing, thus to the unprotected interior of the building.
5. Sub flashings were installed below the granite sills at the "inset windows" to "guide the water" to the backside of the granite. However water also falls from the ends of these units well interior of the granite.

This kind of construction exists around the entire project and the full height of the project. While we recommend the removal of the bottom row of granite at the plaza areas to increase the height of the plaza waterproofing, we do not recommend redesign, removal and reinstallation of the granite and interior flashings of the entire wall.

Williamson and Associates recommends that the windows be wet sealed but permitted to be vented/weeped from the exterior. The wet sealant seals all the joints, the glass to the exterior metal covers and the joints in the metal covers.

The rope wicks would be replaced with sealant. The trick is the placement of a weep hole in the sill cover, then covering the hole with an aluminum strip or medallion. Covering can be done fairly easily but will alter the appearance of the windows. The weep covering can be designed to be inconspicuous, or intentional and original. The alternative is to completely wet seal the window and chance earlier expiration of the insulated glass due to seal failure caused by water trapped in the glazing reglet.

Williamson and Associates has been in virtually hundreds of remedial projects that required as part of their repair, "a wet seal". W&A prefers "designed wet seal". Special requirements of appearance, adherence to manufacturer's specifications for performance and the Weep/Vent details are all carefully considered on "designed wet seal" projects. A number of high profile buildings have been repaired with this method without compromising their appearance. Insulated glass consists of two panes of glass separated by a metal band and sealant about the perimeter of the unit leaving a ½" air space between the two lights of glass. Failure of the perimeter sealant of the insulated unit can allow excessive moisture to enter the air space and condensate, foged up. Continued thermal moisture cycling will result in permanent unsightly staining. Weeping/venting the glazing reglets greatly reduces the opportunity for any moisture to collect around the insulated unit to challenge the aging insulated glass unit perimeter sealant.

It is true that granite will absorb water and a cavity/flashing system of some kind is usually considered in new construction detailing. It is also true that water must lay against the granite for significant periods of time before it becomes apparent similar to the darks lines seen in the photographs with the standing water at the flashings, backer rods and anchor shelves. You will note from the interior view it isn't through the majority of the granite panel, only at the areas of consistent water held against the interior unpolished face of the granite.

Typically the leak problem with dimensional masonry is cracking of the panels. While the project does have some cracked granite it is not a typical condition. So the balance of the typical wall recommendation would be to repair cracks in the granite, inspect and repair perimeter weather sealant and apply a designed wet seal to the windows.

Skylights

The basic skylights over the atrium or above the walkway connecting the atrium to the lower level plaza are very conventional construction. Essentially they are of insulated glass supported by aluminum framing. While a relatively small amount of water leakage may come from the glass and frame portion of the skylight the main (considerable) uncontrolled water leakage comes in through gaps between the bottom of the skylight and adjacent construction, most notably

single-membrane roofing (flashings, counter flashings and membrane) and gutters that fill due to clogged and ineffective drains and scuppers.

The roofing membrane and expansion joint installation must be revised and coordinated with the perimeter base of the skylight above the atrium to the lower plaza hall. The roofing membrane will have to be removed from north to south between the southern curtain wall to the north face of the roof parapet above the lower plaza. All of the ineffective "loose curb installation", skylight sill coping, curtain wall coping, covers and pressure bars will be removed and replaced. The replacement skylight pieces will be designed with effective roof membrane and expansion joint materials and installation so that the combination will prevent water penetration below the roofing membrane.

The west side of the skylight has a gutter detail at the connection to the eastern facing vertical granite wall. The gutter has small scupper pipes at either end. The end walls of the gutters are higher in elevation than the poorly sealed gap between the bottom of the skylight and the gutter. When the scuppers are clogged, the gutter fills and literally floods the interior spaces below. Removal of the ill-conceived gutter and roof membrane replacement will be required. The interface of the gutter to the vertical granite wall will be redesigned as will the roof membrane interface with revised skylight components similar to the east side of the skylight to roof membrane interface.

The atrium skylight gutters are similar to the atrium to lower plaza skylight because they can "overfill" and cause water to pour over the edge between the poorly sealed interface with the coping, cover flashing at the top of the gutter and the bottom of the skylight. More frequent gutter/drain cleaning, additional installations of drains and the increase in the size of the drains will greatly reduce the probability of leakages. However the gutter lining and the interfacing copings, counter flashings and sealants at the skylight to gutters must also be addressed. Coupled with the desire to "wet seal" the skylight glass to the skylight framing as well as maintain the skylight glass brings up a rather large problem for the south facing, louver skylights.

Large banks of louvers must be removed and replaced in order to wet seal, revise the gutters, revise the flashings and/or replace broken glass at the south facing atrium skylights. Williamson and Associates recommends reglazing of the south facing atrium skylights be considered in light of these facts related to waterproofing and maintenance of the skylights and gutters. Optional "glass" types should be researched further to determine the feasibility of permanent removal and disposal of the louvers.

Williamson and Associates understands that the replacement of a single light of skylight glass cost as much as $12,000.00 several years ago. It is notable the replacement occurred at the non-louvered north facing portion of the atrium

skylight. Higher performance glass with good day lighting is now available and may meet the energy saving needs without the louvers.

Another interesting option is reglazing the south facing areas with photovoltaic cell panels. Attached are several articles on the subject. Energy can be produced and incorporated with your energy grid without the use of battery storage. Consider the following quotation from The National Center of Photovoltaics, "Energy paybacks for rooftop systems range from 1 to 4 years, depending on the system. With assumed life expectancies of 30 years, 87% to 97% of the energy that PV systems generate won't be plagued by pollution, greenhouse gases, and resource depletion. Based on models and real data, the idea the PV cannot pay back its energy investment is simply a myth". We understand the Department of Energy provides certain cost saving incentives. Additionally the aluminum louvers may be sold for recycling for $.50 or so per pound and may provide "green" credits as well.

Permanent adequate, safe access for repair, replacement and maintenance for the atrium skylights is needed especially at the center valley as well and the skylights interface with the office tower. To date extension ladders are laid upon the skylights to gain access to these areas. This may be okay for clearing gutters but is totally inadequate for any other work including cleaning the glass. This lack of access is probably expressed best in the cost of the replacement of

one glass unit mentioned above at $12,000.00. The present minimum recommendations of drain additions, gutter repairs, removal (and possible replacement) of louvers) broken glass replacement, and wet sealing of glass to framing members will require safety netting, a crane and custom scaffolding.

This kind of investment indicates that permanent access, material lifting capabilities and safety consideration should be included for future maintenance. The addition of permanent horizontal rails for sliding work platforms (A) shaped with lifting davits may be the most economical. Of course the design will require engineering analysis and quite possibly gutter and skylight reconfigurations for structural mounting. This again brings up the desirability of retaining the louvers The temporary removal of the louvers for replacement of broken or fogged glass would still require special equipment for removal and safety netting below the atrium skylights.

The atrium skylight interface with the office tower is a culmination or exacerbation of all of the problems previously discussed. This interface includes similar problems as the rest of the atrium skylights including the gutter, drain and access issues.

The problem of the gutter is exacerbated because an additional one-foot wide flat aluminum coping, sealant dependant, is exposed the full length of the skylight to a bellows expansion joint to the vertical granite veneer. The lengths of the formed aluminum panels do not exceed 12'0 requiring splice plates. The splice plates are located under the coping and are sealed with a soft butyl type sealant. This type of sealant displaces with movement and allows water to enter the space below. The repair would include an exterior applied aluminum splice with UV stable silicone sealant.

The bellows detail has also failed at every splice (10-'0" to 12'-0") and must be replaced. The vertical granite sealant joints must be perfect as they intersect the bellows termination bar or water will fall into the building space below. Additionally, cracks in the granite will also allow uncontrolled leakage. The repair will include crack repair as well as bellows detail compatibility with silicone sealant.

Approximately 50% of the length of the atrium skylight interface with the office tower includes another skylight. The existence of this skylight (or more appropriately termed "slope glazing" is not well known and appears to have collected dirt since the time of original construction. The slope glazing is almost flat and the exterior covers similar to the other skylights and windows. These tall

EXHIBIT III

Phase 3: Project Manual for Fulton County Government Center
10th Floor Waterproofing
141 Pryor Street
Atlanta, Georgia
Specification and Scope of Work for Completed Waterproofing
Project of the 10th Floor

PROJECT MANUAL FOR

FULTON COUNTY GOVERNMENT CENTER
10TH FLOOR TERRACES WATERPROOFING
141 PRYOR STREET
ATLANTA, GEORGIA

OWNER:
FULTON COUNTY
GOVERNMENT SERVICES/FACILITY CONSTRUCTION
ATLANTA, GEORGIA 30303

ARCHITECT:
SIZEMORE GROUP
1700 COMMERCE DRIVE, NW
ATLANTA, GEORGIA 30318
PHONE (770)605-0690
FAX (770)605-0890

MECHANICAL/ELECTRICAL/PLUMBING ENGINEERS:
MEHA ENGINEERING
NORCROSS, GEORGIA

CONSTRUCTION CONSULTANTS:
WILLIAMSON & ASSOCIATES
ATLANTA, GEORGIA

SPECIFICATION CONSULTANT:
SPIKER BALDWIN ASSOCIATES, INC.
DECATUR, GEORGIA

ISSUE FOR BID: 10 MAR 08

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Document 00710 General Conditions
Exhibit B Contractor Safety and Health Management Process

DIVISION 1 GENERAL REQUIREMENTS

Section 01110 Special Project Conditions
Section 01230 Alternates
Section 01312 Project Meetings
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Section 01330 Submittals
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DIVISION 2 SITE CONSTRUCTION

Section 02225 Selective Demolition

DIVISION 3 CONCRETE

No Sections Required

DIVISION 4 MASONRY

Section 04850 Stone Veneer

DIVISION 5 METALS

No Sections Required

DIVISION 6 WOOD AND PLASTICS

No Sections Required

DIVISION 7 THERMAL AND MOISTURE PROTECTION

Section 07110 Dampproofing
Section 07142 Hot Rubberized-Asphalt Waterproofing
Section 07544 Adhered Single Ply Roof Membrane System (Alternate No. 1)
Section 07600 Flashing and Sheet Metal
Section 07900 Sealants and Caulking

DIVISION 8 THRU DIVISION 14

No Sections Required

DIVISION 15 MECHANICAL

Refer to Engineer's Drawings

DIVISION 16 ELECTRICAL

No Sections Required

End of Table of Contents

DOCUMENT 00611

CONTRACTOR WARRANTY FORM

PROJECT: FULTON COUNTY GOVERNMENT CENTER
10TH FLOOR TERRACES WATERPROOFING

LOCATION: 141 PRYOR STREET
ATLANTA, GA

OWNER: FULTON COUNTY
GOVERNMENT SERVICES/FACILITY CONSTRUCTION
ATLANTA, GA

We, _____, Contractor for the above-referenced project, do hereby warrant that all labor and materials furnished and work performed are in accord with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of two years from Date of Substantial Completion. This warranty commences on

_____
(Date of Substantial Completion affixed by Architect)

and expires on _____
(Expiration Date)

Should defects develop during the warranty period due to improper materials, workmanship or arrangement, the same, including adjacent work displaced, shall be made good by the undersigned at no expense to the Owner.

The Owner will give Contractor written notice of defective work. Should Contractor fail to correct defective work within 60 days after receiving written notice, the Owner may, at his option, correct defects and charge Contractor costs for such correction. Contractor agrees to pay such charges upon demand.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

FOR _____
(Company Name)

BY _____

TITLE _____

DATE _____

End of Contractor Warranty Form

SECTION 00612

INSTALLER WARRANTY FORM

PROJECT: FULTON COUNTY GOVERNMENT CENTER
10TH FLOOR TERRACES WATERPROOFING

LOCATION: 141 PRYOR STREET
ATLANTA, GA

OWNER: FULTON COUNTY
GOVERNMENT SERVICES/FACILITY CONSTRUCTION
ATLANTA, GA

GENERAL CONTRACTOR:

We, _____, Installer
(Company Name)

for _____, as described
(List Trade)

in Specification Section(s) _____

_____,
(List appropriate sections of Specifications)
do hereby warrant that all labor and materials furnished and work performed in conjunction with the above-referenced project are in accord with the Contract Documents and authorized modifications thereto, and will be free from defects due to defective materials or workmanship for a period of _____ year(s) from Date of Substantial Completion. This warranty commences on

_____
(Date of Substantial Completion affixed by Architect)
and expires on _____.
(Expiration Date)

Should defects develop during the warranty period due to improper materials, workmanship or arrangement, the same, including adjacent work displaced, shall be made good by the undersigned at no expense to the Owner.

The Owner will give Installer written notice of defective work. Should Installer fail to correct defective work within 60 days after receiving written notice, the Owner may, at his option, correct defects and charge Installer costs for such correction. Installer agrees to pay such charges upon demand.

Nothing in the above shall be deemed to apply to work which has been abused or neglected by the Owner.

FOR _____ (General Contractor)	FOR _____ (Installer's Company Name)
BY _____	BY _____
TITLE _____	TITLE _____
DATE _____	DATE _____

End of Installer Warranty Form

DOCUMENT 00640

AFFIDAVIT OF PAYMENT AND RELEASE OF LIEN

Contractor shall submit AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims" and AIA Document G706A, "Contractor's Affidavit of Release of Liens", along with supporting documents listed within each document, with each Application for Payment. Contractor shall attach separate Releases or Waivers of Lien from each Contractor, Subcontractor and supplier of material and equipment represented in each Application for Payment.

End of Document

DOCUMENT 00710

GENERAL CONDITIONS

"The General Conditions of the Contract for Construction," AIA Document A201, dated 1997, Articles 1 through 14, pages 1 through 44, of the American Institute of Architects, is hereby made a part of these documents to the same extent as if herein written out in full.

End of Document 00710

SECTION 01110

SPECIAL PROJECT CONDITIONS

PART 1 - GENERAL

1.1 INSPECTION OF EXISTING FACILITIES:

A. Contractor, Contractor's Superintendent, Key Subcontractors, Waterproofing Consultant, Owner's Representative, Architect, and MEP Engineer shall visit the existing facilities and all areas where Work is to be performed to understand area and scope of Contract, access, staging and storage areas, hours of access, security requirements, noise control, dust control, water intrusion prevention, and other special conditions pertaining to performance of Work of this Contract.

B. Upon Award of Contract, Owner's Representative, Architect, and Contractor shall again inspect existing facility and areas of Work and during course of this inspection the three parties to the joint inspection shall prepare a schedule identifying and showing the location of all damage to the existing work which is ascertainable by inspection. The schedule shall be prepared in three counterpart originals each of which shall be dated and signed on behalf of each party to the joint inspection.
   1. An executed and dated counterpart original shall be filed with Owner, Architect and Contractor.

1.2 OWNER USE OF SITE:

A. During Contractor's performance of Work, Owner will continue to occupy all spaces of existing facility. Interruption of building access and usage for normal tenant activities by Contractor shall be minimized and will not be permitted except as further specified and specifically approved in advance by Owner. Except as specifically approved in advance, limit construction operations to those methods and procedures which will not adversely affect occupied spaces and immediate surrounding area, including noise, dust, odors, water intrusion, visual distraction, physical hazards or other undesirable conditions.

B. Indoor Air Quality: Contractor shall schedule work and provide temporary ventilation and/or isolation to insure that fumes from welding, other construction tasks, and out-gassing from construction materials do not migrate to occupied areas.

C. All work that has a potential of disruption of operation of occupied spaces shall be carried out after normal tenant hours or during weekends, unless specifically approved by Owner, in writing, in advance. Contractor shall work with Owner to schedule and sequence the work to be carried out in the occupied spaces.

D. Mechanical, electrical or plumbing outages shall not occur during normal tenant hours. All electrical outages and mechanical, plumbing or other utility outages shall only be scheduled after normal tenant hours, or on weekends.
1. No shut-down of any system shall occur until the Contractor has received Owner's permission in writing.

1.3 KEY SUBCONTRACTORS:

A. General Contractor is required to provide a list of the key Subcontractors to the Owner prior to submitting his Bid. Upon Owner's approval of General Contractor's Key Subcontractors, General Contractor will not be allowed to make any substitutions subsequent to submittal of the List of Subcontractors without the express written consent of the Owner. If the work will not be sub-contracted, the General Contractor should be listed on this form and a Qualification Affidavit included where stipulated for the General Contractor's credential for the work covered, for example, hot applied rubberized-asphalt waterproofing system.

1.4 SEQUENCING PLAN AND SECURITY REQUIREMENTS:

A. Sequencing plan: Contractor shall submit a plan of execution of the work that addresses safety and sequencing methods and timing, including the following:
1. The existing facility will remain in operation throughout the demolition and construction period.
a. Provide safe access for building occupants to all areas of the building during normal business hours (8:00 am through 5:00 pm). Public areas shall fully remain accessible during this time.
b. Segregate work areas from public and tenant areas by means of protective partitions and barricades as herein specified.
c. Protect occupied areas from dust, debris, water intrusions, overspray and damage by covering with non-staining, waterproof covers.
d. For areas requiring restricted access, perform demolition and construction after normal business hours; beginning after 6:00 pm and prior to 7:00 am and on weekends.
1) Contractor shall submit date(s), time(s) and location(s) of work to be performed.
2) For non-business hours work of construction personnel, coordinate security clearance with the Owner's building security.
e. Make mechanical and electrical connections without disruption of service to occupied areas or overloading of existing systems.
f. Work shall be sequenced in such a way that the Owner will be able to continue normal business operations for existing tenants.

2. Plan shall numerically show the sequence of work by which each area will be affected.
   a. Indicate locations of barricades, dust and noise enclosures and protective coverings. Coverings shall include protection of each tenant's furniture and equipment.
   b. Indicate access and egress to and from each area.
   c. Indicate use of areas outside the work limits, including corridors, lobbies, elevators, loading dock and public thoroughfares.
3. Submit safety and sequencing plan as marked up blueline prints.

B. Identification badges: Owner will provide photo identification badges for Contractor and Contractor's personnel.
1. The Contractor, Subcontractors and all construction and delivery personnel shall wear these photo identification badges on the site, throughout demolition and construction period. Badges shall be visible at all times.
2. Badges shall be pin-on or clip-on type. Do not allow lanyard-type badges.
3. Submit monthly list of badges issued to personnel each month. Submit at regular project meetings.
4. Each badge shall contain the following information:
   a. Photograph, full name and signature of badge-holder.
   b. Badge-holder's employer name and contact.
   c. Expiration date of badge.
5. Personnel entering the site without proper identification badges will be required to leave the site.

C. All workmen shall be fully clothed and shall exhibit acceptable behavior at all times. Association with building tenants shall be prohibited.
1. Contractor shall be responsible for the proper attire and actions of all workmen at all times. Any improper attire or actions by any person is cause for immediate dismissal of the offending person from the site and the project.

1.5 10TH FLOOR TERRACE AREAS:

A. While demolishing and removing the existing terrace pavers and waterproofing system, and re-installing the new terrace waterproofing system, drains and pavers, ensure the existing tenants on the 9th Floor below are protected from all damage due to weather and water intrusion and odors or fumes.

1.6 DELIVERIES:

A. Deliveries made during business hours, 7 am to 6 pm, are to be scheduled with the Owner, and coordinated to not disrupt or delay the Owner's deliveries.

B. For deliveries made after business hours, Contractor is to schedule the Owner's loading dock security personnel to be present.

1.7 PERMITS:

A. The Contractor shall be solely responsible for obtaining all permits for sidewalk or street closings from the City of Atlanta.

1.8 CODES AND STANDARDS:

A. The codes and standards referred to are minimum standards. Where requirements of these specifications and the accompanying drawings exceed those of the codes and standards, the drawings and specifications will be followed.

1.9 FIRE PREVENTION:

A. Take adequate and reasonable precautions to protect Work against damage by fire and smoke.
   1. Provide fire extinguishers in readily accessible locations.
   2. Periodically inspect fire extinguishers; remove discharged extinguishers immediately and replace with new or recharged extinguishers.
   3. Keep one operable fire extinguisher within ten (10) feet of any welding or open flame operations.

B. Remove oil-soaked and paint-soaked materials, including paper and rags, from building daily, and more frequently as necessary, to eliminate danger of fire.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CUTTING AND PATCHING:

A. All repairs shall be made as necessary to leave the building walls, floors and ceilings in their original condition, including all cutting, fitting and drilling of masonry, concrete, metal and other materials as specified or required for proper assembly, fabrication, installation and completion of all work under the contract, and including all patching as may be necessary.

B. All provisions required to facilitate removal of existing equipment and installation of new equipment and repair thereof shall be the responsibility of the Contractor.

End of Section

SECTION 01230

ALTERNATES

PART 1 - GENERAL

1.1 DETAIL REQUIREMENTS:

A. Definitions: Alternates are defined as products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Owner's option and under the terms established in the Contract, be selected for the Work in lieu of requirements of the Contract Documents. Selection may occur prior to the contract date, or may, by the Agreement, be deferred for possible selection at a subsequent date.

B. Alternates may or may not change the scope and general character of the Work.

C. Requirements of this section may be related to, but shall not be confused with, requirements of the Contract Documents related to "allowances," "unit prices," "change orders," "substitutions" and similar terms.

D. Refer to the Contract and subsequent modifications thereto, if any, for determination of alternates which have been accepted and included in the Contract.

E. Notification: Immediately following the award of Contract, prepare and distribute to Owner, Architect and other applicable parties a notification of the status of each Alternate. Indicate that Alternates have been accepted, rejected or deferred for consideration at a later date. Indicate dates by which Owner must make decisions on deferred Alternates in order not to delay the project.

F. Execute accepted alternates under same conditions as other Work of this Contract.

G. Schedule: A Schedule of Alternates is included at end of this Section. Specification sections referenced in Schedule contain requirements for materials necessary to achieve Work described under each alternate.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES:

A. General: Description for each Alternate listed below is recognized to be abbreviated but implies that each change shall be complete for the scope of work affected. Refer to applicable specification sections and drawings for specific requirements for each Alternate.

B. Alternate No. 1: State amount, in dollars, to be added to or deducted from Contract Sum and number of consecutive calendar days to be added to or deducted from proposed Contract Time to furnish and install fully adhered roof membrane system specified in Adhered Single Ply Roof Membrane System, at 10th Floor Terraces, in lieu of waterproofing system specified in Hot Rubberized-Asphalt Waterproofing section.

End of Section

SECTION 01312

PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY:

A. Work described: This section defines requirements for project meetings, of such nature as relates to the overall project.

B. Related work described elsewhere: A pre-construction conference relating to a specific trade or specific construction process or sequence is specified in the applicable section.

1.2 CONTRACTOR'S DUTIES:

A. Scheduling and notification:
1. Notify invited parties of meeting time and place at least 36 hours prior to meeting.
2. Coordinate timing of progress meetings with Architect and Owner to coincide with progress of major divisions of work.
3. Make physical arrangements for and preside over meetings.

B. Administration:
1. Prepare meeting agenda and distribute to invited parties at least 36 hours prior to meetings.
2. Record and promptly distribute copies of minutes of significant proceedings and decisions of meetings.
3. Prepare and distribute copies of construction progress schedules as originally issued or subsequently approved, marked to show current progress.

1.3 PRE-CONSTRUCTION CONFERENCE:

A. Scheduling: A pre-construction conference shall be held at a location to be announced, prior to commencement of the Work.

B. Attendance:
1. Owner.
2. Architect and invited consultants.
3. Contractor.
4. Major subcontractors as requested by Owner, Architect and Contractor.
5. Representatives of separate contractors, when applicable.

C. Minimum agenda:
1. Distribute and discuss list of major subcontractors and material suppliers.
2. Distribute and review insurance submittals.
3. Distribute tentative construction progress schedule and submittals schedule, with discussion of critical work sequencing.
4. Identify and designate responsible personnel.

5. Process and distribute field decisions, change orders and other Contract Documents.
6. Process required submittals, including shop drawings, samples and product data, and review Contractor's submittal schedules.
7. Establish procedures for maintaining required Record Documents and Maintenance Manuals.
8. Discuss use of site, including temporary offices, storage areas, erosion control and site use limitations and restrictions.
9. Discuss material and equipment deliveries, storage, protection and priorities.
10. Discuss security procedures and methods.
11 Discuss housekeeping procedures and methods.
12 Discuss special project requirements and conditions.

1.4 PROGRESS AND COORDINATION MEETINGS:

A. Scheduling: Unless otherwise requested by Owner or Architect, a progress and coordination meeting shall be held twice monthly, at time determined by Owner, at job site.

B. Attendance:
1. Contractor, represented by Project Manager or Principal.
2. Contractor's Project Superintendent.
3. Subcontractors and material suppliers specifically invited, as applicable to the progress of the Work.
4. Architect and invited consultants.
5. Owner.

C. Minimum agenda:
1. Review minutes of previous meeting, with review of follow-up and work progress since previous meeting.
2. Review field observations, problems and decisions.
3. Identify problems and potential problems affecting project construction or anticipated progress.
4. Review problems of materials delivery, off-site fabrication and subcontractor scheduling.
5. Develop corrective measures and procedures to regain planned schedule when delays occur.
6. Revise construction progress and submittals schedule to reflect actual progress.
7. Review details of anticipated construction progress prior to next meeting.
8. Review workmanship and maintenance of quality standards.
9. Review proposed changes, including effect on construction progress schedule and completion date.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

End of Section

SECTION 01326

CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.1 SUMMARY:

A. This section covers provisions for construction schedules and supplements provisions of the General Conditions.

1.2 FORM OF SCHEDULES:

A. Prepare in form of "Critical Path Method" schedule for all portions of the Work.
   1. Provide separate horizontal breakdown of each trade or operation.
   2. Order: Chronological order of beginning of each item of work.
   3. Identify each item of work:
      a. By major specification section number.
      b. By logically grouped activities.
   4. Horizontal time scale: Identify first work day of each week.
   5. Scale and spacing: Allow space for updating.

1.3 CONTENT OF SCHEDULES:

A. Provide complete sequence of construction by activity:
   1. Shop drawings, product data and samples:
      a. Submittal data.
      b. Status of each submittal relative to Contractor's Submittal Schedule.
   2. Decision dates for selection of finishes.
   3. Product procurement and delivery dates.
   4. Dates for beginning and completion of each element of construction.

B. Show projected percentage of completion for each element of construction.

C. Provide sub-schedules to define critical portions of work.

1.4 UPDATING:

A. Show all changes since previous submittal of updated schedule.

B. Indicate progress of each activity, show completion dates. Include the following:
   1. Major changes in scope.
   2. Activities modified since previous updating.
   3. Revised projections due to changes.
   4. Other identifiable changes.

C. Provide narrative report, including:
   1. Discussion of problem areas, including current and anticipated delay factors and their impact.
   2. Corrective action taken, or proposed, and its effect.

3. Description of revisions:
   a. Effect on schedule to change of scope.
   b. Revisions in duration of activities.
   c. Other changes that may affect schedule.

1.5 SUBMITTALS:

A. Submit initial schedule at least five calendar days prior to pre-construction conference.

B. Submit updated schedules accurately depicting progress to first day of each month.

C. Submit one reproducible transparency for Architect's information.

D. Distribute reviewed schedules to:
   1. Owner.
   2. Job site file.
   3. Subcontractors.
   4. Architect.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

End of Section

SECTION 01330

SUBMITTALS

PART 1 - GENERAL

1.1 SUMMARY:

A. Definitions:
1. Submittals: General term including samples, shop drawings and product data, as applicable.
2. Shop drawings: Drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
3. Product data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
4. Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B. Shop drawings, product data, samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

C. General provisions:
1. Provisions in this section are mandatory procedures for preparing and submitting samples, shop drawings and product data.
2. Submittals shall be in orderly sequence and timed to cause no delay in the Work.
3. Job delays occasioned by requirement of resubmission of samples, shop drawings and product data not in accord with Contract Documents are Contractor's responsibility and will not be considered valid justification for extension of Contract time.
4. Commence no portion of work requiring submittals until submittal has been approved and stamped by Architect.

D. Informational Submittals; (FIO): Submittals required to be submitted "For Architect's Information Only" (FIO), are required to demonstrate that Work complies with performance requirements of Contract Documents.
1. Calculations, certifications and test reports are submitted for record purposes and Architect's information only and will not be approved by Architect.
   a. Include calculations and required information if not completely covered by load tables and products data.
2. Information Submittals, if acceptable to Architect, will not be returned to Contractor.
3. Submittals may be rejected for not complying with requirements.

1.2 SUBMITTAL SCHEDULE:

A. At least five days prior to date of pre-construction conference, submit a list of all required submittals, by specification section. Indicate timing for submission of required submittals and relation to construction sequence.

B. During course of the Work, maintain an updated submittal schedule showing status of all submittals. Provide copies for Architect's information at project meetings and at other times when requested.

1.3 SAMPLE PREPARATION:

A. Prepare samples in sizes, shapes and finishes in accord with provisions of individual specification sections.

B. Samples submitted for color, sheen or texture selection for approval shall be actual samples of the required material. Where a range of color, sheen or texture is anticipated or proposed, samples shall indicate full range proposed, from which Architect may select the exact range to be provided.

C. Samples furnished under this section are not to be confused with full size, on-the-site "mock-ups" or "sample panels" called for in some specification sections.

D. The number of samples submitted shall be the number required by Contractor, plus one which will be retained by Architect, unless otherwise indicated.

E. Attach a tag to each sample, sized to accept Contractor's and Architect's stamps. Samples submitted to Architect shall have tag stamped with Contractor's stamp and appropriate action shall be indicated thereon.

1.4 SHOP DRAWING PREPARATION:

A. Drawings shall conform to the following requirements:
1. Number drawings consecutively.
2. Indicate working and erection dimensions and relationships to adjacent work.
3. Show arrangements and sectional views, where applicable.
4. Indicate material, gauges, thicknesses, finishes and characteristics.
5. Indicate anchoring and fastening details, including information for making connections to adjacent work.
6. Contract documents prepared by the Architect and his consultants will not be acceptable as shop drawing submittals.

B. Form: Submit three blue or black line bond prints of shop drawings.

1.5 PRODUCT DATA PREPARATION:

A. Include product manufacturer's standard printed material, dated, with product description and installation instructions indicated. Product data may also contain test and performance data, illustrations and special details.

B. Form: Number of copies submitted shall be the number required by Contractor, plus two which will be retained by Architect.

C. Identify each product data item with specification section and paragraph number. Data not related to this project shall be deleted from manufacturer's standard product data.

1.6 INFORMATIONAL SUBMITTALS (FIO):

A. General: Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies: Submit three copies of each submittal, unless otherwise indicated. Architect will not return copies.
2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Test and Inspection Reports: Comply with requirements in Section 01458.

B. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.

D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

E. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.

F. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

G. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements.

H. Material Test Reports: Prepare reports written by qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.

I. Preconstruction Test Reports: Prepare reports written by qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements.

J. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.

K. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.

L. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by qualified testing agency, or on comprehensive tests performed by qualified testing agency.

M. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

N. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Closeout Submittals Section.

O. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

P. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
1. Preparation of substrates.
2. Required substrate tolerances.

3. Sequence of installation or erection.
4. Required installation tolerances.
5. Required adjustments.
6. Recommendations for cleaning and protection.

Q. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

R. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

1.7 CONTRACTOR'S REVIEW:

A. Review for compliance with the Contract Documents, stamp with approval and submit to the Architect drawings, product data, samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents or which are not required by the Contract Documents may be returned by the Architect without action.

B. By approving and submitting submittals, Contractor represents that he has determined and verified materials, field measurements, and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

C. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of shop drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in shop drawings, product data, samples or similar submittals by the Architect's approval thereof.

D. The Contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data, samples or similar submittals, to revisions other than those requested by the Architect on previous submittals.

E. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

F. Where work is indicated "By Others," Contractor shall indicate responsibility for providing and coordinating such work, whether by Subcontractors or under separate contracts.

G. Contractor agrees that submittals processed by Architect are not Construction Change Directives or Change Orders; that purpose of submittals by Contractor is to demonstrate that Contractor understands design concept; that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing fabrication and installation methods he intends to use.

H. Contractor represents by submitting samples, shop drawings and product data that he has complied with provisions herein specified. Submissions made without Contractor's approval indicated thereon will be returned without being reviewed for compliance with this requirement.

I. Date each submittal and indicate name of Project, Architect, Contractor, Subcontractor, as applicable, description or name of equipment, material or product, and identify location at which it is to be used in the Work.

J. Accompany submittal with transmittal letter containing project name, Contractor's name, number of samples or drawings, titles and other pertinent data. Transmittal shall outline deviations, if any, in submittals from requirements of Contract Documents.

K. Perform no portion of the Work requiring submittal and review of submittals until the respective submittal has been approved and stamped by the Architect. Such work shall be in accord with submittals bearing the Architect's stamp.

1.8 ARCHITECT'S REVIEW AND APPROVAL:

A. Architect will review each submittal, mark it with appropriate action, and return it to Contractor with reasonable promptness, except where it must be held for coordination and the Contractor is so advised. Submittals will be marked by Architect as follows:
   1. "Approved" indicates the submittal has been reviewed for conformance with design and no exceptions are taken. Proceed with the work.
   2. "Approved as Noted" indicates Contractor may proceed with the work as noted. All submittals must be "Approved" or "Approved as Noted" before issued for field use.
   3. "Revise and Resubmit" or "Not Approved" indicates submittal to be revised and resubmitted for review prior to proceeding with the work or that submittal does not comply with Contract Documents.

B. Architect's review, approval or other appropriate action is only for checking for conformance with information given and the design concept expressed in the Contract Documents. Architect's approval of a specific item shall not indicate approval of an assembly in which the item is a component.

C. Architect's review of Contractor's submittals shall not relieve Contractor of responsibility for deviation from requirements of Contract Documents unless Contractor has informed Architect in writing of such deviation at time of submission and Architect has given written approval to the specific deviation. Architect's review shall not relieve Contractor from responsibility for errors or omissions in submittals.

D. Submittals required to be submitted "For Architect's Information Only" are required to demonstrate that the Work complies with performance requirements of the Contract Documents. Such submittals, if acceptable to Architect, will not be returned to Contractor.

E. Architect will return one reproducible copy of reviewed shop drawings for printing and distribution by Contractor.

1.9 RESUBMISSION:

A. Make corrections and changes indicated for unapproved submittals, and resubmit in same manner as specified above until Architect's approval is obtained.

B. On resubmittal transmittal, direct specific attention to revisions other than corrections requested by Architect on previous submittals, if any.

1.10 DISTRIBUTION:

A. Contractor is responsible for obtaining and distributing copies of submittals to his subcontractors and material suppliers after, as well as before, final approval. Prints of reviewed shop drawings shall be made from transparencies which carry the Architect's appropriate stamp.

B. For duration of project, Contractor shall maintain a file of approved submittals which shall be delivered to Owner as a part of project closeout documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

End of Section

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 FACILITIES:

A. Temporary offices: Provide sufficient space for Contractor's personnel.
   1. Provide temporary office facilities complete with lighting, heating, air conditioning and telephone service.
   2. Location of temporary office shall be subject to Owner's and Architect's acceptance.
   3. Provide office space complete with desk, layout board, chair, four-drawer file cabinet and plan rack for Architect's use.

B. Temporary storage facilities: Provide weathertight storage sheds with raised floors. Sheds shall be of type and size required by storage conditions. Locations and adequacy of storage facilities shall be subject to Architect's acceptance.

C. Storage and staging areas: Owner will provide limited area(s) within the building for the Contractor's use to store materials and maintain a project office. The area(s) to be provided are limited and will be identified at time of initial inspection of existing facilities.

D. Parking: Owner will not provide parking spaces for the Contractor or Contractor's employees, except for vehicles which are loading or unloading goods, equipment, supplies and materials in the loading area. Contractor shall not block the loading dock area or permit its employees to park in this area.

E. Signs: No project or advertising signs of any description will be allowed. Contractor shall provide directional and warning signs at protective barricades to assure safe passage of pedestrians in and near areas of work.

1.2 TEMPORARY UTILITIES:

A. Electrical service: Electrical power service of existing voltage and amperage may be obtained from Owner's present facility at no cost to Contractor. Contractor shall be responsible for making connections to Owner's service and for extensions of service. Contractor shall provide additional higher voltage power service and pay all costs for such power, including connections and extensions, if required by him for construction purposes.

B. Temporary lighting; provide the following minimum light levels for construction purposes:
   1. General construction and safety lighting: Five foot-candle.
   2. Finishing work and testing: 25 foot-candle.

C. Temporary heat and ventilation:
   1. Provide temporary heat in enclosed spaces to provide minimum temperatures of 40 degrees F. until the time that finishing work begins.
   2. After building is enclosed and installation of finishes begins, maintain spaces in a temperature range of 60 degrees F. to 80 degrees F. at all times, except as may otherwise be required by product manufacturers for proper product installation and performance. Maintain until Date of Substantial Completion.
   3. Maintain relative humidity in a range of 50% to 65% in enclosed spaces after building is enclosed and installation of finishes begins, except as may otherwise be required by product manufacturers for proper product installation and performance. Maintain until Date of Substantial Completion.
   4. Provide ventilation to prevent accumulation of dust, fumes or gases and to cure materials and disperse humidity.

D. Telephone service: Provide temporary telephone service to temporary offices for duration of project. Pay costs of installation and for local service.

E. Water: Water for construction purposes may be obtained from Owner's present facility. Contractor shall be responsible for extending lines from source and for making connections.

F. Sanitary toilet facilities: Provide and maintain temporary toilet facilities for construction personnel.
   1. Permanent new facilities may not be used by personnel.
   2. Sanitary facilities shall meet standards of International Building Code.

G. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
   1. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, assume full responsibility for placing systems in like-new operational status, including replacement of worn parts and cleaning or replacement of pumps, traps, screens and filters before offering Work for acceptance.

1.3 TEMPORARY ELEVATOR AND HOIST EQUIPMENT:

A. Elevator and hoist equipment:
   1. Contractor may use one designated existing service elevator for vertical transportation of personnel, interior materials and equipment. The service elevator will be used during normal hours of operation by Building Tenants. Contractor shall coordinate use of the Service Elevator with Building Manager.
   2. Elevator will be available for Contractor's use off-hours on Monday through Friday and any time on Saturday, Sunday and holidays, upon receipt of Owner's written approval. Contractor shall schedule use with building security.
   3. Contractor shall not restrict use of service elevator to prevent use by others so authorized or by building occupants.

4. Do not overload elevator, hoisting equipment or off-loading areas with materials.
5. Contractor shall make elevator available to separate contractors at Owner's request.

B. Temporary hoist and staging equipment: Provide temporary equipment for transportation of personnel and equipment for exterior terrace materials and personnel.
1. Provide protection devices for building during equipment use.
2. Do not overload building structural system with temporary equipment; do not overload hoisting equipment or staging.
3. Use of building elevators for transporting personnel, exterior building materials and equipment for 10th Floor Terraces is prohibited.

1.4 SECURITY:

A. Security lighting: Provide temporary security lighting for site and structures until permanent building site lighting is installed and in operation on a normal basis.

B. For off-hours work of construction personnel, coordinate security clearance with the Owner's building security. Security clearance is required for work performed during holidays and at times other than 8:00 A. M. to 5:00 P. M., Monday.

1.5 BUILDING ACCESS:

A. The Contractor shall generally be prohibited from entering areas of the building except where work is in progress. Access to roofs through the building shall be coordinated with the Architect. Work and access shall cause as little disruption to building occupants as possible.

B. Schedule the Work and arrange material storage in a manner which leaves the project site as unencumbered as possible. Provide temporary barriers and enclosures, and maintain the site in clean condition. Loading dock areas shall not be blocked.

C. The Contractor shall be responsible for correcting damages to the building caused by his work or passage. Soiled or damaged materials shall be replaced or repaired to satisfaction of the Owner.

D. The limits of construction shall be maintained at all times.

1.6 SPECIAL PROTECTION REQUIREMENTS:

A. Protect buildings and building components from damage, staining or defacing due to the Work. Correct or replace damaged materials or finishes to satisfaction of the Owner.

B. Protect landscape planting from damage, including toxic overspray or run-off from cleaning materials. Damaged or ruined planting shall be replaced by the Contractor with plants of identical variety, size and configurations. Replace damaged ground cover materials to match existing.

C. Provide protective enclosures at building entrances and exterior walkways to protect building occupants. Enclosures shall include protection from cleaning and applied materials. Coordinate placement and location of all protective enclosures with Owner. Building entrances and exits shall not be made inaccessible unless approved in advance by Owner and local fire officials.

D. Control surface water and drainage during the course of construction. Provide equipment and materials to safely remove drainage water from the site. Dispose of drainage water in a manner to prevent damages to any portion of the site or adjacent sites.

E. Provide methods, means and facilities to prevent pollution and contamination of water and air. Enact emergency measures to contain spills, to prevent toxic chemical releases and to remove pollution and contaminated materials.

F. Drives shall not be blocked to extent of restricting vehicular access, and parking area restrictions shall be kept to a minimum. Barriers and restrictions shall be approved in advance by the Owner. Do not work with materials subject to being wind blown during times of high winds.

G. Protect building from rain or water leakage during the course of the Work. Do not open joints and roof areas to extent that openings cannot be protected from inclement weather. Openings shall not be left unprotected overnight.

1.7 RELOCATION AND REMOVAL:

A. Relocate temporary facilities during construction as required by progress of the Work and as directed by Architect at no additional cost to the Owner.

B. At completion of the Work or at the time of permanent utility connections, as applicable, remove temporary facilities, including connections and debris resulting from temporary installation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

End of Section

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 HAZARDOUS SUBSTANCES:

A. The intent of the Contract Documents is to exclude all materials which contain known hazardous substances, including materials containing asbestos, polychlorinated biphenyl (PCB), or any other known substances determined to be a health hazard by the United States Environmental Protection Agency (EPA) and other recognized agencies. In studying the Contract Documents and at any time during execution of the Work, the Contractor shall at once report to the Architect any materials containing hazardous substances that he may discover. Do not proceed with installation of materials containing known hazardous substances.

B. Where products are specified by product, by manufacturer, by reference standard or in descriptive manner without manufacturer's name, model number or trade name, Contractor shall select materials meeting specified requirements which do not contain known hazardous substances in any form.

C. In making requests for substitution, Contractor shall be responsible for determining that materials requested for substitution are free of known hazardous substances in any form.

1.2 QUALITY ASSURANCE:

A. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on exterior.
   1. Labels: Locate required product labels and stamps on concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.
   2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. Nameplate shall contain following information and other essential operating data:
      a. Name of product and manufacturer.
      b. Model and serial number.
      c. Capacity.
      d. Speed.
      e. Ratings.

B. Mock-ups: Mock-ups, as described in individual Specifications Sections, must be installed and approved/ accepted by Architect prior to beginning manufacture/ fabrication of items. Architect's approval of submittals shall not relieve Contractor and manufacturer/fabricator of responsibility of obtaining Architect's approval and acceptance of mock-ups prior to manufacturer/fabricator proceeding with fabrication of items. Architect's approval of mock-ups may result in deviations and changes to Architect's original design.

1.3 DELIVERY, STORAGE AND HANDLING:

A. Requirements of this section are general in nature. Refer to individual specification sections for additional specific requirements.

B. Deliver manufactured products to project site in manufacturer's original packaging with labels and seals intact. Labels shall indicate manufacturer and product name, description, mixing and application instructions. Where applicable, labels shall indicate fire resistive classifications.

C. Inspect materials upon delivery to ensure proper material, color, type and quantity.

D. Prevent corrosion, soiling or breakage of materials or contact with deleterious materials.

E. Handle materials and equipment to prevent damage, deterioration or contamination. Install no materials which are physically damaged or stained prior to time for installation.

F. Flammable or hazardous materials:
1. Store minimum quantities in protected areas.
2. Provide appropriate type fire extinguishers near storage areas.
3. Observe manufacturer's precautions and applicable ordinances and regulations.

G. Comply with instructions and recommendations of manufacturer's product data for product storage and handling.

H. Comply with manufacturer's product data in all aspects of basic material usage, handling, installation and substrate preparation, except where more stringent requirements are specified.

1.4 PROJECT/SITE CONDITIONS:

A. During the course of the work, Contractor shall maintain the project and all permanent materials, equipment and finishes to be free of leaks, moisture, moisture vapor intrusion and other environmental conditions that could prove to be hazardous during and after construction operations.
   1. Should permanent materials, equipment or finishes become damp or wet, adhere to strict ASHRAE standards for elimination of moisture, moisture vapor and damp and wet elements.
   2. If potentially hazardous conditions are observed or suspected, Contractor shall suspend operations, shall notify Owner and Architect in writing, and shall investigate, perform testing and remedy hazardous conditions.
   3. Do not proceed with additional work until these conditions and materials are corrected.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION/MATERIALS:

A. Use materials and equipment that are new and of quality suited to use intended, suitable for function intended, and plainly labeled and delivered to Project site in original unopened containers when nature of materials is suitable for containers.

B. The intent of the Contract Documents is to exclude all materials which contain known hazardous substances, including materials containing asbestos, polychlorinated biphenyl (PCB), or any other known substances determined to be a health hazard by the United States Environmental Protection Agency (EPA) and other recognized agencies. In studying the Contract Documents and at any time during execution of the Work, the Contractor shall at once report to the Architect any materials containing hazardous substances that he may discover. Do not proceed with installation of materials containing known hazardous substances.

C. Where products are specified by product, by manufacturer, by reference standard or in descriptive manner without manufacturer's name, model number or trade name, Contractor shall select materials meeting specified requirements which do not contain known hazardous substances in any form.

D. In making requests for substitution, Contractor shall be responsible for determining that materials requested for substitution are free of known hazardous substances in any form.

E. Compliance with Standards, Codes and Regulations: Where Specifications only require compliance with an imposed code, standard or regulation, select product that complies with standards, codes or regulations specified.

F. Visual Matching: Where Specifications require matching an established sample, Architect's decision will be final on whether a proposed product matches satisfactorily.

2.2 CONTRACTOR'S OPTIONS:

A. For products specified only by reference standard or description, provide any product meeting specifications.

B. For products specified by naming one or more products or manufacturers, no substitutions will be permitted, provide one of named products.

C. Where particular items of materials, products, equipment, assemblies, and mechanical or electrical equipment are specified in Division 2 thru Division 16 as products of certain named manufacturers, products of only those named manufacturers are acceptable. Certain specified construction and equipment details may not be regularly included as part of every named manufacturer's standard catalog equipment, materials, products, or assemblies, but shall be provided by the manufacturer as required for the proper functioning of the equipment. The Contractor shall assume full responsibility to assure that the selected manufacturer provides equipment conforming to indicated and specified requirements. Reasonable minor variations in equipment due to manufacturing methods are expected and will be acceptable; however, indicated and specified performance and material requirements are minimum and all deviations are to be brought to Architect's attention prior to submission, fabrication, and beginning of installation of products, materials, or assemblies. The Architect reserves the right to determine equality of equipment that deviates from any of the indicated and specified requirements.

D. Naming any manufacturer does not imply approval of that manufacturer's nonconforming products.

E. The Contractor shall include in the Work; the materials, products and equipment named in the Contract Documents by trade name, proprietary name or manufacturer's catalog numbers, including all specified modifications thereto unless proposed substitutions are approved in writing by the Architect prior to award of the Contract. After execution of the Contract, the Contractor shall provide only those materials, products and equipment named in the Contract Documents and approved substitutions therefor for inclusion in the Work, except as provided herein.

PART 3 - EXECUTION

3.1 SUBSTRATE CONDITIONS:

A. Verify and obtain substrate conditions, tolerances and material alignments to receive applied or attached materials and construction.

B. Substrates shall be sound, clean, dry and free of imperfections and conditions which would be detrimental to receipt of applied materials and finishes.

C. Align materials to give smooth, uniform surface planes within specified tolerances and straight, level and plumb surfaces.

D. Inspect substrates prior to installation of applied materials and finishes. Correct unacceptable conditions prior to proceeding with work.

E. Existing subsurfaces receiving new finishes shall have existing finish removed or, if sound, prepared in accord with manufacturer's product data to receive new specified finish.

3.2 FINISHED SURFACES:

A. Finished surfaces shall be clean, uniform and free of damages, soiling or defects in material and finish.

B. Finished surfaces shall match color and texture of samples provided or approved by Architect.

C. Protection:
1. Protect finished surfaces from damage and soiling during application, drying or curing, as applicable.
2. Provide temporary protective coverings or barriers required.

3.3 WORKMANSHIP:

A. Follow manufacturer's instructions. When instructions are in conflict with Contract Documents, make request for clarification before proceeding. Maintain copy of manufacturer's instructions at Project site.

B. Comply with industry standards except when specified tolerances indicate more rigid standards or more precise workmanship. Perform Work by persons qualified to produce workmanship of specified quality.

C. Join materials to uniform, accurate fit to meet with straight lines free of smears and overlaps. Install exposed materials appropriately level, plumb, and at accurate right angles or flush with adjoining materials. Attach materials with sufficient strength, number, and spacing of attachments that will not fail until materials joined are broken or permanently deformed.

3.4 INSTALLATION OF PRODUCTS:

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

3.5 CLEANING AND PROTECTION:

A. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

B. Protection:
1. Protect finished surfaces from damage and soiling during application, drying or curing, as applicable.
2. Provide temporary protective coverings or barriers required.

End of Section

SECTION 01630

PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 PRODUCT OPTIONS AND SUBSTITUTIONS:

A. Products are specified by reference standards, performance and manufacturer's name and model number or trade name.
   1. When specified only by reference standard or performance, Contractor may select any product meeting specified standards or performance requirements, by any manufacturer.
   2. When several products or manufacturers are specified as being acceptable, Contractor has the option of choosing among those named.
   3. When one product or manufacturer is specified or indicated as the "basis of design", "basis of selection" or "scheduled", Contractor shall bear costs associated with changes required for application or installation of other products or assemblies.
   4. When proprietary products are specified, substitutions will be allowed only by substitution provisions specified herein, unless it is specifically stated that no substitutions are allowed.

B. If it is desired to use products different from those indicated in the Contract Documents, the party requesting the substitution shall make written application on form provided at the end of this section and as described herein. The burden of proving equality of proposed substitutions rests with the party making the request for substitution.
   1. Requests for substitution will be considered by Architect in accord with the following:
      a. Requests will be considered from Contractor only, following contract award.
      b. Contract sum shall be based only on products and systems specified in the Contract Documents.
      c. Requests for substitution shall be made in a timely manner such that progress of the Work will not be adversely affected if substitution is unacceptable.
      d. Substitution requests shall precede and shall not be made as a part of shop drawings or product data submittals.
   2. Requests for substitution shall be accompanied by such technical data and samples as the party making the request desires to submit. Architect will consider reports from independent testing laboratories, verified experience records from previous users, and other printed or written information valid in the circumstances.
   3. Requests for substitution shall indicate in what respects proposed materials or products differ from those specified and the effect on interfacing or related work.
   4. Requests for substitution shall be accompanied by the manufacturer's dated product data describing the installation, use and care, as applicable, of proposed substitution. Include reference standards, test data and clarification drawings.

5. Requests for substitution shall be accompanied by complete cost data indicating material cost, installed cost and savings, if any, resulting from proposed substitution.
6. Determination as to acceptability of proposed substitutions will be made based only on data submitted.
7. Contractor shall coordinate installation of accepted substitutions with interfacing work, bearing re-design costs and making approved changes in the Work to properly incorporate the substitutions, and shall waive all claims for additional costs related to use of acceptable substitutions which become apparent following acceptance.
8. Contractor shall be responsible for payment of time for research, evaluation, selection and re-design costs incurred by Architect and his consultants for substitutions.

C. The appropriate contract modification will be issued to Contractor if a proposed substitution is accepted by Architect. Response regarding non-acceptance will also be given Contractor. Contractor shall be responsible for furnishing materials and products in accord with the Contract Documents unless requests for substitutions are received and accepted as described above.

D. In the event that specified items cannot be delivered to the job site and incorporated into the Work at such times and in such quantities as to cause no delay, then Contractor may request a substitution in the manner described above. Should the accepted substitution provide a cost savings, the Contract price will be adjusted by Change Order, with Owner receiving the benefit of the net savings. No increase in the Contract price will be allowed on substitutions made after the award of Contract, except where the Contractor can verify a timely placement of orders appropriate to the materials and conditions involved.

E. Inability to obtain specified items due to Contractor's failure to place timely orders will not be considered reason for authorizing substitutions.

End of Section (Attached: Substitution Request Form)

SUBSTITUTION REQUEST FORM

NOTE: This form is for use by Prime Construction Contractor only. Submittals by others will be returned with no response.

PROJECT: FULTON COUNTY GOVERNMENT CENTER, 10TH FLOOR TERRACES WATERPROOFING

LOCATION: 141 PRYOR STREET, ATLANTA, GA

OWNER: FULTON COUNTY GENERAL SERVICES/FACILITY CONSTRUCTION ATLANTA, GA 30303

DATE: _____

We hereby submit for your consideration the following substitution instead of the item specified or shown on the drawings:

Section: _____ Paragraph: _____ Specified Item: _____

Proposed Substitution:

_____

_____

Attach complete product data, drawings and descriptions of product, with fabrication and installation details. Provide laboratory tests if applicable.

Provide sample, if applicable. Indicate if sample will be provided under separate cover.

Include complete information on changes to drawings and/or specifications that proposed substitution will require for its proper installation.

Fill in blanks below: (Include attachments if space is insufficient. Failure to provide information will void submittal.)

A. Reason(s) for proposed substitution: (check all that apply):

____ 1. Request is equivalent to product/material/ assembly specified. (Note: Attach technical documentation.)

____ 2. Specified product or method cannot be provided within the Contract Time. (Note: This request will not be considered if the product or method cannot be provided as a result of the Contractor's failure to pursue the work promptly, or to coordinate the various activities properly, or if the Contractor fails to place timely orders.)

____ 3. Specified product or method cannot receive necessary approval by a governing authority, and the Contractor certifies that the requested substitution can be approved.

____ 4. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting redesign and evaluation costs and the increased cost of other work by the Owner or separate contractors, and similar considerations.

_____ 5. Specified product or method cannot be provided in a manner which is compatible with other materials of the work, and the Contractor certifies that the substitution will overcome the incompatibility.

_____ 6. Specified product or method cannot be properly coordinated with other materials in the work, and the Contractor certifies that the proposed substitution can be properly coordinated.

_____ 7. Specified product or method cannot receive a warranty as required by the Contract Documents, and the Contractor certifies that the proposed substitution can receive the required warranty.

B. Does the substitution affect dimensions or details shown on drawings:

_____ No.
_____ Yes. (Attach marked up prints of drawings showing changes required.)

C. What effect does the substitution have on other trades?

D. Compare significant qualities of proposed substitution with those of work or product originally specified or shown on drawings. Include elements such as size, weight, durability, performance, visual effect, etc.

E. Coordination information. Include all changes required in other elements of the work in order to accommodate the substitution, including work performed by the Owner or separate contractors.

F. State effect the substitution will have on the work schedule in comparison to the schedule which would prevail without the proposed substitution. State the effect of the proposed substitution on the Contract Time.

G. Provide complete cost information, including a proposal of any net change in the Contract Amount.

H. Manufacturer's warranties of the proposed and specified items are:

_____ Same _____ Different (explain on attachment)

The Undersigned Contractor certifies its opinion that, after thorough evaluation, the proposed substitution will result in work that in every significant respect will be equivalent to or superior to the work required by the original Contract Documents and that it will perform adequately in the application indicated. Rights to additional payment or time because of failure of the substitution to perform adequately are hereby waived.

The Undersigned hereby agrees to pay in full for any changes to design, including detailing and engineering costs caused by the requested substitution.

Submitted by: NOTE: Submittal void and will be discarded if unsigned or if signed by entity other than General Construction Contractor.

Signature: _____
(Contractor's Authorized Representative)

_____
(Title)

Contractor's Firm Name: _____

Date: _____

For use by Architect:

_____ Accepted _____ Accepted as Noted

_____ Not Accepted _____ Received Too Late

By: _____

Date: _____

Remarks: _____

_____

_____

End of Form

SECTION 01740

CLEANING UP

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS:

A. Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, remove waste materials and rubbish, tools, construction equipment, machinery and surplus materials, from and about the project. Turn over to Owner at Date of substantial Completion those tools, construction equipment, machinery and surplus materials specifically required by Contract Documents to be left for Owner's maintenance.

B. If Contractor fails to keep project clean or to clean up prior to Date of Substantial Completion, the Owner may do so as provided in the General Conditions, and the cost shall be charged to the Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Provide cleaning products to suit individual cleaning needs for materials, equipment and surfaces to be cleaned, and meeting following general requirements:
1. Product, or products, do not create hazards to health.
2. Will not scratch, mar, stain, discolor or otherwise damage Work or any portion thereof.
3. Are recommended by manufacturer of surface material to be cleaned.

B. Provide brooms, rakes, vacuum cleaners, tools, equipment, buckets, pails, clean cloths and incidentals necessary for proper application and removal of cleaning materials and for execution of interior and exterior cleanup operations.

PART 3 - EXECUTION

3.1 DISPOSAL REQUIREMENTS:

A. Store volatile waste in covered metal containers. Remove from project site daily.
1. Allow no volatile wastes to accumulate on project site.
2. Provide adequate ventilation during use of volatile substances.

B. Do not burn or bury waste materials or rubbish on project site. Comply with governmental and environmental regulatory requirements for disposal of waste.

C. Dispose of no volatile wastes such as mineral spirits, oil or paint thinner in storm or sanitary drains, on pavements, in gutters or on project site.

D. Dispose of no waste or cleaning materials containing materials harmful to plant growth on project site. As quickly as possible, clean up materials which are accidentally spilled.

3.2 CLEANUP DURING CONSTRUCTION:

A. Execute cleaning procedures to ensure that building, project site and adjacent properties are maintained free from debris and rubbish.

B. Throw no waste materials from heights.

C. Provide covered on-site containers for waste collection. Place all waste materials and rubbish in containers in an expeditious manner to prevent accumulation. Remove waste from project site when containers become full.

D. Legally dispose of all waste materials, rubbish, volatile materials and cleaning materials off project site.

E. Dispose of no materials in waterways.

F. Clean and maintain interior spaces in a "broom clean" state until Date of Substantial Completion. Protect newly finished and clean surfaces from contamination during cleaning operations.

G. Allow no accumulation of debris contributing to survival or spread of rodents, roaches or other pests.
   1. On a daily basis, remove debris containing food scraps.
   2. Contractor shall be responsible for securing services of a pest exterminator at no additional cost to the Owner.

3.3 FINAL CLEANUP:

A. Clean all finished surfaces in accord with manufacturer's product data and requirements specified in trade sections, prior to Date of Substantial Completion. All general and specific cleaning shall be performed prior to Contractor's request that the project or portion thereof be inspected for Substantial Completion.

B. Remove manufacturer's labels, tags, stickers and unauthorized identification markings from finished surfaces.
   1. Do not remove permanently affixed nameplates, instructions, markings, Underwriters Laboratories labels and approval stickers, Factory Mutual approval stickers and other identifying markings required by federal, state and local codes, ordinances and regulations.

C. Remove spots, marks, dirt, mud and dust from exposed interior and exterior finished surfaces.

D. Sweep concrete floors not less than broom clean; vacuum where necessary to remove excessive dust; thoroughly clean other hard surfaced floors.

E. Sweep exterior paved surfaces broom clean.

F. Thoroughly clean all items of mechanical and electrical equipment; remove excess oils and grease from exposed surfaces.
   1. Clean permanent filters and replace disposable filters if ventilating units were operated during construction.
   2. Clean ducts, blowers and coils if units were operated without filters during construction.

G. Clean Project site, in area disturbed by construction activities, of rubbish, waste material, litter, and other foreign substances.

H. Remove tools, construction equipment, machinery, and surplus material from Project Site.

I. Remove debris and surface dust from limited access spaces, including plenums and similar spaces.

J. Sweep concrete floors broom clean in unoccupied spaces.

K. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use.

3.4 INSPECTION:

A. Prior to occupancy by Owner of any designated portion of Work, conduct inspection in presence of Owner to verify Work is properly clean and ready for acceptance by Owner.

End of Section

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.1 DESCRIPTION:

A. Closeout includes general requirements in preparation for Final Completion and Final Payment. Closeout is directly related to "Substantial Completion" and may be a single time period for entire work or a series of time periods for parts of the Work accepted as substantially complete.

1.2 PREREQUISITES TO SUBSTANTIAL COMPLETION:

A. Prior to requesting Architect's certification of Substantial Completion, complete the following and list all known exceptions.
   1. If Substantial Completion is being requested for a portion of the Work, define such portion.
   2. Submit application for payment:
      a. Submit sworn statement indicating 100 percent completion of the work claimed as "Substantially Complete".
      b. List incomplete items, value of incomplete work, and reasons for being incomplete.
      c. Include documentation for completion.
   3. Indicate accounting changes to Contract Sum.
   4. Submit for that portion of the Work:
      a. Specific warranties.
      b. Workmanship/maintenance bonds.
      c. Maintenance agreements.
      d. Final certifications.
      e. Record drawings.
      f. Maintenance manuals.
      g. Project photographs, if pertinent to project activities.
      h. Damage or settlement survey.
   5. Obtain and submit releases enabling:
      a. Owner's use of the Work.
      b. Access to services and utilities.
      c. Occupancy permits.
      d. Operating certificates.
   6. Advise Owner of pending insurance change-over requirements.
   7. Obtain and submit operating certificates, final inspection/test certificates, and similar releases enabling Owner's full and unrestricted use of the work and access to services and utilities.
   8. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
   9. Make final change-over of locks and transmit keys to Owner, and advise Owner's personnel of change-over in security provisions. Tag each key to indicate which lock key operates. Accompany keys with final hardware schedule, as specified in Finish Hardware section.
   10. Complete start-up testing of systems and instruction of Owner's operating/maintenance personnel.
   11. Touch-up and otherwise repair and restore marred exposed finishes.

B. Observation procedures:
1. Upon receipt of Contractor's request, Architect will either proceed with observation or advise Contractor of prerequisites not fulfilled.
2. Following initial observation, Architect will either prepare Certificate of Substantial Completion or advise Contractor of work which must be performed prior to issuance of certificate.
3. Re-observe when requested and assured Work has been substantially completed.
4. Results of completed observation will form initial "punch list" for final acceptance.

1.3 PREREQUISITES TO FINAL ACCEPTANCE:

A. General: Prior to requesting Architect's observation for certification of Final acceptance and Final payment, complete the following. List known exceptions.
1. Indicate accounting changes to Contract Sum.
2. Submit Final Application for Payment with:
   a. Final releases.
   b. Supporting documentation not previously submitted and accepted.
   c. Certificates of insurance for Products and Completed Operations where required.
3. Submit copy of Architect's Final Punch List. Contractor shall certify each item has been completed or resolved for acceptance.
4. Submit final meter readings for utilities.
5. Submit:
   a. Specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents not submitted at time of Substantial Completion.
   b. Record drawings and maintenance manuals not submitted at time of Substantial Completion.
   c. Final project photographs.
6. Submit consent of surety.
7. Finishes manual:
   a. Assemble a manual bound in hard cover binders, presenting for Owner's guidance full details of all finish materials used in the building including care and maintenance.
   b. Include a list of all finishes and their product names, numbers, colors, and cleaning and maintenance data. Include a list of installers and service representatives with company names and addresses, names of individual contacts, and telephone numbers.
   c. Submit documents in suitable transfer cases indexed and marked for each division of the Work.
8. Submit executed contracts for extended maintenance or service required by the Contract Documents to Architect for transfer to Owner.
9. Revise and submit evidence of final (continuing) requirements.
10. Complete final clean-up.

B. Re-observance procedure:
1. Upon receipt of contractor's Notice that Work has been completed, including punch list items and excepting incomplete items delayed because of acceptable circumstances, Architect will observe work.
2. Upon completion of observation, Architect will either prepare certificates of Final Acceptance or advise Contractor of work not completed or obligations not fulfilled.
3. If necessary procedure will be repeated.

1.4 RECORD DOCUMENT SUBMITTALS:

A. General:
1. Unless otherwise required, furnish three complete sets of required documents.
2. Do not use required documents for construction purposes.
3. Protect from deterioration and loss in a secure fire resistive location.
4. Provide access to record documents.

B. Record drawings:
1. Maintain a blueline set of Contract Drawings and shop drawings in clean, undamaged condition.
2. Mark up variations in the Work as originally shown.
3. Mark the drawing most capable of showing field condition.
4. Where shop drawings are used for mark-up, cross reference with Contract Drawings.
5. Mark with red erasable pencil and, where feasible, use other colors to distinguish categories of work.
6. Mark up new information of importance not shown on Contract Drawings or shop drawings.
7. Record work covered by subsequent construction or requiring the removal of finish material should maintenance be necessary.
8. Note related Change Order numbers where applicable.
9. Organize Record Drawing sheets into manageable sets. Identify each set.
10. At completion of project, provide the following:
    a. One full set of reproducible prints marked and noted with all variations and revisions. Provide reproducibles and two additional sets of prints made from the reproducibles.
    b. Electronic copy of scanned documents marked and noted with all variations and revisions. Provide in pdf format, on CDs.
    c. Indicate prints of drawings as Record Drawings.

C. Record Project Manual:
1. Maintain one copy of Project Manual, including addenda, Change orders, and similar modifications.
2. Mark up variations occurring in actual work.
3. Record substitutions and selection of options.
4. Cross reference with other documents.
5. Where feasible, mark up variations on blank left-hand pages of Project Manual, opposite original text.

D. Record product data:
   1. Maintain one copy of each Product Data Submittal.
   2. Mark up significant variations in the actual work. Include:
      a. Variations in product as delivered to site.
      b. Variations from manufacturer's instructions and recommendations for installation.
   3. Cross-reference with Change Orders and mark up Record Drawings and Specifications.

E. Record sample submittal: Immediately prior to Date(s) of Substantial Completion, Architect will meet with Contractor at site, and determine which, if any, samples to be transmitted to Owner. Comply with Architect's instructions for packaging, identification marking, and delivery to Owner's sample storage place. Dispose of other samples.

F. Maintenance and operating manuals:
   1. Organize maintenance and operating information into sets of manageable size. Manuals divisions shall match organization and location of specification sections indicated in Project Manual.
   2. Bind into heavy duty 3-ring binders, minimum 2" size, permanently identified and indexed with thumb tabs.
   3. Include:
      a. Name of project, nature of information, Contractor/subcontractor and name and address of local parts supplier and service organization.
      b. Emergency instructions.
      c. Spare parts listing.
      d. Warranties.
      e. Wiring diagrams.
      f. Recommend turn-around cycles.
      g. Inspection procedures.
      h. Applicable shop drawings.
      i. Applicable product data.

G. Miscellaneous record submittals:
   1. Refer to other sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with performance of the work.
   2. Immediately prior to Date(s) of Substantial Completion:
      a. Complete miscellaneous records and place in good order.
      b. Identify and bind or file.
      c. make ready for continued use and reference.

H. Inspection reports: Submit certificates from applicable local governmental agencies that the construction has been inspected as required by laws or ordinances and that the building is approved for occupancy.

I. Warranties: In accord with Contract Conditions, provide warranties as follows:
   1. Contractor shall furnish his warranty and shall require each subcontractor to furnish his warranty, in writing, on the form bound herein. Assemble, bind, label and transmit warranties as required for other manuals above. Unless specifically indicated otherwise in individual sections, the period for warranties shall begin on the Date of Substantial Completion and shall continue for one year. Warranties shall state the Date of Substantial Completion and the date on which the warranty expires.
   2. Contractor shall forward manufacturers' and installers' warranties as specified in the individual specification sections. Assemble, bind, label and transmit warranties as required for other manuals above. Unless specifically indicated otherwise in individual sections, the period for warranties shall begin on the Date of Substantial Completion. Warranties shall state the Date of Substantial Completion and the date on which the warranty expires.

1.5 CONTINUING INSPECTIONS:

A. Comply with Owner's request to participate in inspections at end of each time period required by specific warranties or similar components. Participate in general inspection of Work approximately one year beyond Date(s) of Substantial Completion.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

End of Section

SECTION 02225

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY:

A. Work included in this section, includes, but is not necessarily limited to:
   1. Removal of existing work to accommodate installation of new products and materials as indicated on drawings, includes, but is not limited to, existing terrace pavers and grout and setting bed, insulation, and waterproofing system down to bare concrete deck on 10th floor terraces; and existing ceilings and grids to access piping indicated on 9th floor level; removal and replacement of first course of exterior stone panels on 10th floor terraces; remove door threshold and install new pan and replace door threshold.
   2. Protection of existing finished surfaces.
   3. Cleaning and restoration of existing work to remain.
   4. Removal and storage and/or replacement of existing lay-in acoustical ceilings and grid systems and gypsum board ceiling system indicated on 9th floor level.
   5. Coordinate terrace paver and waterproofing removal and replacement work in such a manner as to keep new waterproofing and paving materials, building, and building interior clean, dry and watertight.
   6. Protections of walls and floors in travel path to access areas of Work.

B. Related work specified elsewhere:
   1. Special Project Conditions.
   2. Temporary facilities and controls.
   3. Hot rubberized-asphalt waterproofing.
   4. Dampproofing.
   5. Flashing and sheet metal work.
   6. Mechanical.
   7. Electrical.

C. In some instances it may have been impracticable to include, in the Drawings and Specifications, all items requiring demolition necessary to achieve desired finished results. Nevertheless, in such instances, Contractor will be required to furnish all labor, materials, and services necessary to perform demolition in compliance with intent of documents.

1.2 SUBMITTALS:

A. Product data: Indicate product description and instructions for use of cleaning materials.

B. Inventory list: Submit list of items designated to be removed and stored or items to be reused in the work.

C. Execution plan: Submit plan of execution for Owner's and Architect's approval. Indicate locations of barricades, dust and noise enclosures and protective coverings. Indicate use of areas outside the work limits, including corridors, lobbies, elevators, loading dock and public thoroughfares. Indicate phasing of the work. Submit phasing plan as marked up blueline prints and in compliance with Special Project Conditions section.

D. Obtain acceptance of Owner's property insurance carrier and waterproofing system warrantor(s) for proposed work involving existing building prior to start of work.

1.3 DELIVERY, STORAGE AND HANDLING:

A. Schedule use of elevators and loading dock with Owner's Representative. See Special Project Conditions and Temporary Facilities and Controls sections for restrictions relative to building access and elevator usage.

B. Store materials to be retained or reused in locations acceptable to Owner.

C. Maintain neat, clean conditions in storage areas; remove rags and waste materials at end of each day's work.

1.4 PROJECT/SITE CONDITIONS:

A. Drawings indicating existing building conditions are available from the Owner for general information only. The Owner assumes no responsibility for the actual condition of structures to be demolished. Conditions existing at the time of inspection for pricing purposes will be maintained by the Owner insofar as practicable.

B. Conduct demolition operations and the removal of debris to ensure minimum interference with tenants, public, roads, streets, walks and adjacent facilities.

C. Do not close or obstruct streets or walks without permission from authorities having jurisdiction. Provide flagman where public thoroughfares are used for debris removal. Maintain thoroughfares free of dirt and debris caused by demolition or hauling operations.

D. Conduct demolition operations to minimize disruption or interference with building occupants and operation, and the use of building facilities not included in the work. Coordinate phasing of work with the Owner.

E. Protect all portions of existing building in area of 10th Floor Terrace paver and waterproofing demolition. Repair or replace portions of building damaged by this work, at no additional cost.

F. Provide temporary enclosures or other methods to limit dust transmission to adjacent areas. Provide temporary weatherproof enclosures for portions of work exposed to weather. Provide temporary noise reduction barriers to separate work areas from adjacent occupied areas.

G. Maintain building security. Secure construction area during non-working hours.

H. Provide temporary protective walkways and covering on existing finish floor and wall surfaces to protect floor and wall finishes. Provide plywood walkways on finish floors where machinery is moved or operated.

I. Schedule high noise level operations to non-business hours as acceptable to Owner where working in close proximity to existing business operations.

J. Schedule removal of debris and cleaning operations so as not to interfere with pedestrian traffic in building lobbies, corridors and elevators.

PART 2 - PRODUCTS

2.1 PROTECTIVE COVERS:

A. Dust protective coverings:
1. Non-asphaltic, non-waxed, non-staining kraft paper.
2. Polyethylene sheeting, six mil thickness.
3. Tape for sealing joints in kraft paper or polyethylene sheeting.

B. Protective covering for floors:
1. Non-asphaltic, non-waxed, non-staining, reinforced kraft paper.
2. Minimum ½" thickness plywood or composition board for walkways.

C. Barricade and corner guard material:
1. Utility grade lumber.
2. Plywood.

PART 3 - EXECUTION

3.1 EXAMINATION AND PRE-DEMOLITION CONFERENCE:

A. Visit project site and compare locations of equipment, electrical and mechanical work with indications in Contract Documents. Report all discrepancies discovered for resolution.

B. Prior to beginning demolition work, a pre-demolition conference will be held to review work to be accomplished and to inventory existing conditions. Contractor, Architect, Owner and related subcontractors involved in demolition work will be present. Contractor shall notify Architect and Owner at least seven days prior to time of conference.

C. Demolition work and inventory of existing equipment, existing damages to work to remain and items to be removed shall be reviewed at conference. Contractor shall make list of inventoried items to be removed, reused or stored.

D. Movable office furniture, file cabinets or other items belonging to Owner, located in work area shall be covered and protected when designated to remain in-place during overhead mechanical work.

3.2 PREPARATION:

A. Plan scheduling and phasing of the work to minimize interference with Owner's existing operations that will remain in use during the work. Minimize disruption of building operations and use of adjacent facilities.

B. Make mechanical and electrical connections without disruption of service to occupied areas or overloading of existing systems.

C. Security:
1. Contractor shall provide safe access to occupied areas during the course of the work.
2. Provide enclosures or partitions to segregate work areas from occupied and used areas.
3. Provide guards or lockable closures for off-hours to secure occupied and used areas of building.

D. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations, as directed by the Architect or governing authorities. Return adjacent areas to condition existing prior to the start of the work.

3.3 DEMOLITION:

A. Interior demolition: Remove interior construction and finishes as required for new construction and to limits indicated on drawings.

B. Temporary partitions:
1. Construct temporary partitions to separate demolition activity from spaces occupied during demolition. Partitions shall be dustproof and noise-reducing.
2. Contractor shall consult Architect for location of temporary partitions. Partitions will be inspected by Architect prior to beginning work.
3. In existing building, where miscellaneous work occurs that cannot be protected by a temporary partition, Contractor shall furnish covers and protection satisfactory to Architect.
4. Contractor shall schedule the work to provide minimum shutdown of the operations of Owner.

C. During demolition, protect adjoining work from damage.

D. Remove existing finishes to limits indicated without damage to substrates or adjacent surfaces. Include removal of mechanical and electrical work as applicable.

E. Where work is to be cut or removed to accommodate new work, form neat, uniform and smooth edges or terminations.

F. Except for items designated to be removed and reused in the work or items retained by Owner for storage, all material resulting from this work shall become property of Contractor and shall be promptly removed from site. Storage or sale of removed materials will not be permitted on project site or within building.

G. Prepare an itemized list of material or equipment for reuse or storage, including, but not limited to lay-in ceiling panels and grid systems and exterior stone panels to be removed at terrace level. List quantities, condition and location. Submit copies to Owner within seven days of removal of item.

H. Remove existing mechanical and electrical equipment, including piping, as indicated and required to complete work.

I. Materials resulting from demolition become the property of the Contractor except as follows:
1. Equipment belonging to utility or public service companies unless abandoned by such companies.
2. Hidden valuable items, buried items and property of third persons.
3. Salvaged equipment and materials noted for reuse.
4. Other items indicated or otherwise identified by Owner or Architect.

3.4 DISPOSAL OF DEMOLISHED MATERIALS:

A. Remove debris, rubbish and other materials resulting from demolition operations from the site. Do not stockpile debris on project site.

B. Removal of debris from interior demolition shall be generally through the exterior perimeter of the building, with removal through occupied spaces or corridors only upon specific permission by Owner.

C. Burning of removed materials from demolished structures will not be permitted on the site.

D. Transport materials removed from demolished structures and dispose of off the site.

E. Chuting and loading debris in streets surrounding site is prohibited.

3.5 INTERIOR CLEANING:

A. Clean exposed surfaces of the following items and surfaces by vacuum, washing with detergent and water, and wiping with clean rags:
1. Acoustical ceiling panels and suspension system.
2. Air diffusers and grilles.

B. Existing light fixtures:
1. Remove lens and clean both sides.
2. Clean interior surfaces of troffers.
3. Wipe lamps clean.

End of Section

SECTION 04850

STONE VENEER

PART 1 - GENERAL

1.1 SUMMARY:

A. Work of this section includes the following:
1. Replacement of existing stone panels damaged beyond repair or to Owner's and Architect's approval.

B. Related work specified elsewhere: Sealants and caulking.

1.2 SUBMITTALS:

A. Shop drawings and calculations:
1. Submit cutting and setting drawings showing sizes, dimensions, sections and profiles of stone units, edge and corner details, jointing, arrangement and provisions for jointing, anchoring system layout, fastening and supports, details for lifting devices and interface with adjacent work.
2. Indicate location of each stone unit on setting drawings with number designation corresponding to number marked on each unit.
3. Design calculations; (FIO): Submit for Architect's information. Include criteria for stone performance and anchors. Indicate stone thickness required. Indicate unit weights and supporting capacity of anchoring system.
4. Design calculations shall bear the seal of a professional engineer registered in the State of Georgia. Indicate that engineer has reviewed shop drawings.
5. Show edge and corner details, reveals, special shapes, returns and jointing details at full scale.
6. Indicate supplementary bracing and anchorage requirements for stone veneer.

B. Samples: Submit for Architect's approval:
1. For installation: Submit one sample, minimum 6" by 6" face size. Samples shall include pieces of required stone, installed with specified sealant material on plywood backup. List of required samples will be indicated by Architect on shop drawing submittal.
2. All approved samples will be retained by Architect and will become standards for stone fabrication and installation.

C. Product data: Include specifications and descriptive data for stone, indicating structural characteristics of material furnished, descriptions of anchors and sealants.

1.3 QUALITY ASSURANCE:

A. Fabricator/installer qualifications: Fabricator/installer shall have at least five years successful experience in the fabrication and installation of stone similar to the type specified and, if required by Architect, shall submit evidence of such experience.

B. Expansion: To ensure uninterrupted delivery, consistency of color, and availabilities for future expansion, granite of a given color shall come from a single quarry owned and operated by fabricator.

1.4 DELIVERY, STORAGE AND HANDLING:

A. Protect stone during storage and construction against moisture, soiling, staining and physical damage.

B. Handle stone to prevent chipping, breakage, soiling or other damage. Use no pinch or wrecking bars without protecting edges of stone. Lift with wide belt type slings; use no wire rope or ropes containing substances which might cause staining. If required, use wood rollers and provide cushion at end of wood slides.

C. Stone indicating flaws or imperfections upon receipt at storage yard or building site shall be referred to Architect for determination as to whether it shall be rejected, patched or redressed fore use.

D. Store stone on wood pallets a minimum of 3" above ground, covered with non-staining, waterproof membrane. Place and stack pallets and stone to distribute weight evenly and to prevent breakage or cracking of stone. Protect stored materials from weather with waterproof, non-staining covers or enclosures; allow air to circulate around stone units.

1.5 PROJECT/SITE CONDITIONS:

A. Environmental requirements: Install no stone when temperature of surrounding air has dropped below 45 degrees F., unless it is rising, and at no time when temperature has dropped below 40 degrees F., except with written permissions from Architect.

B. Protection of work: Protect finished exposed work from stains.

C. Use no frozen materials; do not build on frozen work.

PART 2 - PRODUCTS

2.1 GRANITE VENEER:

A. Characteristics: Meeting requirements of ASTM C615-03.
1. Color and texture: Match existing granite panels when removal necessitates replacement of existing panels with new granite panels.

2. Thickness: As required by usage and to meet loading and anchorage methods, as determined by results of laboratory testing; however, not less than 1-1/4" thickness.
3. Finishes:
   a. Exposed faces and edges: Matching existing granite.
   b. Unexposed surfaces: Natural finish.
4. Internal corners: Matching existing conditions.
5. External corners: Matching existing conditions.
6. Granite shall meet minimum requirements of ASTM C615-03 and ASTM C119-07a.

2.2 ACCESSORY MATERIALS:

A. Weep tubes: 1/4" diameter clear plastic tubing.

B. Anchors, including dowels, cramps and similar shapes, as required, for exterior applications: Stainless steel in accord with ASTM A666-03, Series 300, minimum 14 ga., or extruded aluminum per ASTM B221-06 meeting properties of 6063-T6.

C. Relieving anchors: Stainless steel in accord with ASTM A666-03, Series 300 for exterior applications; steel in accord with ASTM A36-05, hot dip galvanized in accord with ASTM A123-02 for interior applications.

D. Setting buttons: Aluminum or plastic of thickness to maintain uniform joint widths.

E. Sealant: As specified in Sealants and caulking section.

2.3 FABRICATION:

A. Anchor types and assemblies shall comply with ASTM C1242-05.

B. Fabricate stone work in accord with approved shop drawings and samples. Provide holes and sinkages cut or drilled for anchors, fasteners, supports and lifting devices, as necessary to secure work in place. Cut and back-check as required for proper fit and clearance. Shape beds to fit supports.

C. Cut stone panels to shapes indicated on shop drawings. Maintain specified fabrication tolerances.

D. Apply no materials to stone which contain oils or similar contaminants which may stain stone or prevent bonding of setting or sealing materials.

E. Allowable patching: Chips at edges and corners may be patched provided structural integrity of stone is not affected and providing patch matches color and finish of natural stone so that patch does not detract from appearance.

F. Beds and joints: Bed and joint pieces as indicated on approved shop drawings, and cut bedded and jointed surfaces as follows:
1. 3/8" beds and joints for thermal stone, under 4" in thickness: Saw or cut full square back from face. Bed and joint surfaces shall be within ± 3% of 90 degrees to face of piece unless otherwise specified.

G. Backs of pieces:
1. Saw or roughly dress backs of pieces to approximately true planes. Back of surfaces shall be clean of matter that may cause staining.
2. Backs of pieces may be rough or natural quarry split to provide surfaces which vary not more than 1" in 12" from true plane and not more than 1" from their specified thickness.

H. Back-checking and fitting to structure or frame:
1. Stone coming in contact with structural work shall be back-checked as indicated on approved shop drawings. Stones resting on structural work shall have beds shaped to fit supports as required.
2. Maintain a minimum of 1" between stone backs and adjacent structure; 2" between stone backs and bolted connections.

2.4 SOURCE QUALITY CONTROL:

A. Fabrication tolerances:
1. Panel thickness:
a. 3/8" to 1/2" thickness: + 1/32".
b. 3/4" to 1-5/8" thickness: ± 1/8".
c. Panel thickness greater than 1-5/8": ± 1/4".
2. Panel face dimensions: ± 1/16".
3. Face variation from rectangular: ± 1/16". (Maximum out of square)(non-cumulative).
4. Heads/calibrated edges: ± 1/16".
5. Quirk miters(width of nose):
a. Up to 1/4": -0"; +25% of dimension.
b. Over 1/4": -0"; +1/16".
6. Back anchors:
a. Location: ± 1/8".
b. Depth: -0"; +1/16".
7. Anchor slots:
a. From face to centerline of slot: ± 1/16".
b. Lateral placement: ± 1/4".
c. Width: ± 1/16".
d. Depth at maximum: ± 1/8".
8. Anchor holes:
a. From face to centerline of hole: ± 1/16".
b. Lateral placement: ± 1/8".
c. Diameter: ± 1/16"
d. Depth: ± 1/8".
9. Anchor sinkages; depth: -0"; +1/8".

B. Flatness tolerances:
1. Variation from true plane, or flat surfaces, shall be determined by a 4'-0" dimension in any direction on the surface.
2. Flatness tolerances for Thermal and coarse stippled finishes: 3/16".

PART 3 - EXECUTION

3.1 INSTALLATION:

A. Install stone work, including support system, in accord with ASTM C1242-05 and approved shop and setting drawings, plumb, level and true to line within specified tolerances. Install no units which have been broken, stained or otherwise damaged during transit, storage or handling.

B. Secure stone work to concrete backup using dovetail type anchors.

C. Secure stone work to masonry back-up using twisted wire anchors set in grout. Completely fill holes and sinkages with grout. Allow no grout to migrate on face of stone or to remain in joint.

D. Provide setting buttons as required to align units and to maintain specified joint width.

E. Pointing:
1. Maintain joints between panels matching existing joint conditions.
2. Caulk joints in accord with applicable provisions of Sealants and Caulking section. Tool sealants to ensure maximum adhesion to contact surfaces.

F. At cavity wall construction, provide weep tubes at sills, relieving angles, door and window heads and in bed joints at 10'-0" maximum vertically. Space weep tubes at 2'-0" horizontally. Install in accord with MIA standards as referenced herein.

G. Allowable erection tolerances:
1. Variation from plumb of wall surfaces, arises, external corners, joints and other conspicuous lines: Do not exceed 1/4" in any story or in 20'-0" maximum.
2. Variation from level from grades shown for horizontal joints and other conspicuous lines: Do not exceed 1/4" in 20'-0" maximum, nor 3/4" in 40'-0" or more.
3. Variation in linear building lines from position shown on drawings and related portion of wall facing: Do not exceed 1/2" in any bay or 20'-0" maximum nor 3/4" in 40'-0" or more.
4. Variation in face plane of adjacent pieces (lippage): Do not exceed 1/4 of width of joint between pieces.
5. Joint size: ± 25%.
6. Tolerances shall not be accumulative.

3.2 CLEANING AND PROTECTION:

A. Shop clean stone at time of final fabrication.

B. After installation and pointing, clean stone, removing dirt, excess mortar, weld splatter, stains, and other site incident defacements.

C. Use soft brushes or wool. Use of wire brushes or of acid or other solutions which will cause discoloration are expressly prohibited. Contact fabricator before using cleaners other than detergents.

D. Remove and replace chipped, broken, stained or otherwise damaged stone panels with panels of matching color and texture.

E. Protect finished work from damage until Date of Substantial Completion. Do not use lumber that will stain stone. Mechanical fasteners shall be galvanized or non-rusting.

F. Just prior to Date of Substantial Completion, clean all stone work with detergent and water solution, cleaning with stiff fiber bristle brushes. Use no acids, other caustic cleaners or wire brushes to clean stone.

End of Section

SECTION 07110

DAMPPROOFING

PART 1 - GENERAL

1.1 SUBMITTALS:

A. Product data: Submit manufacturer's product specifications and installation instructions, including rates of application for each type installation specified.

PART 2 - PRODUCTS

2.1 DAMPPROOFING:

A. Acceptable products; subject to compliance with specified requirements:
1. BASF Building Products, Hydrocide #700B Semi-Mastic.
2. Karnak Corp., Karnak 220 Fibrated, asbestos-free.
3. Lambert Corp., Waterban 60 SM.
4. W. R. Meadows, Inc., Sealmastic Type Two.

B. Characteristics: Non-asbestos, fibrated, mineral colloid asphalt emulsion meeting ASTM D1227-95(2007), Type 2, Class I and ASTM D1187-97(2002)e1, Type 1.

C. Primer: Type recommended by dampproofing manufacturer for application to concrete unit masonry, concrete and fiberglass-faced gypsum sheathing substrate.

D. Reinforcing fabric tape for sheathing joints, other joints and abutting dissimilar substrates: Minimum 2" wide glass fiber mat reinforcement as recommended by dampproofing manufacturer.

E. Sealant:
1. Acceptable products:
a. Basis of design: BASF Building Products NP-2.
b. Pecora Corp., Dynatrol II.
c. Tremco, Inc., an RPM Company, Dymeric 240.
2. Characteristics:
a. Type: Two-part, polyurethane-based sealant meeting ASTM C920-05, Type M, Grade NS, Class 25.
b. Colors: Standard colors as selected by Architect.

PART 3 - EXECUTION

3.1 SURFACE PREPARATION:

A. Prior to application of materials, remove dirt, grease, mortar droppings and other foreign matter from substrate.

B. Prime wall surfaces prior to dampproofing application, as required by manufacturer's product data.

C. Apply dampproofing at temperatures above 40 degrees F., to dry, cured surfaces.

D. Install separate flashings and corner protection stripping, as recommended by dampproofing manufacturer, where indicated to precede application of dampproofing. Comply with details shown and with manufacturer's recommendations. Pay particular attention to requirements at building expansion joints, if any.

E. Protection of Other Work: Prevent spillage and migration onto other surfaces of work by masking or otherwise protecting adjoining work.

3.2 INSTALLATION:

A. Comply with manufacturer's recommendations except where more stringent requirements are indicated and where Project conditions require extra precautions to ensure satisfactory performance of work.

B. Application: Apply dampproofing to the concrete masonry unit surfaces, cast-in-place concrete surfaces, and fiberglass-faced gypsum sheathing surfaces in locations indicated in Drawings.
1. Apply dampproofing to all indicated substrates free of pinholes and bubbles.

C. Application Methods:
1. Brush- or spray-applied at sheathing and other backup substrates behind stone veneer.
2. Trowel-applied over anchors, fasteners, termination bars and other elements as shown on the drawings.

D. Preparation at joints and abutting dissimilar substrates:
1. Sheathing joints and terminations: Apply a 3/8" bead of specified polyurethane sealant each side of joint, and fully embed a layer of specified glass fiber mat reinforcement into wet sealant.
2. Reinforcement shall span joints and junctures and lap onto adjacent surfaces a minimum of 3" each side.
3. Apply a second layer of specified polyurethane sealant over fabric reinforcement to fully embed reinforcement, feathering sealant edges beyond reinforcement.
4. Apply continuous topcoat of dampproofing to all surfaces as further specified.

E. Dampproofing; spray and brush applications:
1. On sheathing-covered walls, spray- or brush-apply dampproofing in a minimum of two coats, in accord with manufacturer's product data, at a rate to achieve a minimum 1/16" wet film coverage.
2. On concrete and masonry walls, spray- or brush-apply dampproofing in two coats required to achieve a minimum 1/16" wet film coverage.
3. Apply second coat at right angles to first coat.
4. All dampproofing shall be pinhole-free.

F. Trowel applications: Trowel-apply dampproofing to cover anchors, fasteners, termination bars and other elements as shown on the drawings.

G. Do not apply dampproofing during temperatures below 40°F. Do not apply dampproofing directly to masonry ties and reinforcing.

H. Seal around items and services projecting through dampproofing surfaces. Apply in compliance with manufacturer's recommendations. Ensure sealed areas are moisture tight.

3.3 CLEANUP:

A. Protect adjacent finished surfaces from damage or staining from this Work by masking prior to application. Repair or replace surfaces damaged or stained by dampproofing Work.

B. At completion of dampproofing operations, remove debris resulting from Work, including spilled materials.

End of Section

SECTION 07142

HOT RUBBERIZED-ASPHALT WATERPROOFING

PART 1 - GENERAL

1.1 SUBMITTALS:

A. Shop Drawings: Plans, elevation cross sections, and details:
1. Terrace plans indicating layout of each layer, relative elevations and slopes.
2. Drain locations and layout.
3. Edge flashing conditions.
4. All major penetrations.
5. Dimensionally located expansion joints.
6. All flashing details.
7. All other pertinent data required for this project.
8. Flashing details not specifically indicated on drawings or in manufacturer's product data details.
9. Insulation layout.
10. Concrete joints and slopes.

B. Product Data: Manufacturer's specifications, limitations, and recommended installation. Provide written assurance of compatibility of hot rubberized-asphalt membrane with sealants and sheet flashing used.
1. Submit a complete listing of each particular component or element of the waterproof membrane system that is required, specified or proposed for use on this project.
a. Each component or element proposed for use shall be identified by product number, name, and pertinent characteristics.
b. Further identify each component or element by indicating the function or location of each within the assembly.
2. Submit product description and complete installation instructions, including standard flashing details, for insulation, waterproofing and accessory materials. Indicate specific systems and procedures proposed for use, deleting inapplicable data.

C. Intent to warrant and certifications; (FIO): Submit an Intent to Warrant executed by authorized representative of membrane system manufacturer, indicating that manufacturer has reviewed drawings and specifications, conditions affecting the work and the relationship of membrane system with related work, and that manufacturer proposes to provide warranty as specified herein without further stipulation.
1. Submit certification that proposed applicator is approved for warranted work by membrane system manufacturer.
2. Submit certification from authorized representative of membrane system manufacturer stating that specified system and materials, as well as indicated surfaces and conditions, are acceptable for purpose of providing specified warranty.

D. Installer Certificates; (FIO): Signed by manufacturers certifying installers comply with requirements.

E. Field reports; (FIO): Submit manufacturer's certified field reports as herein specified.

F. Submittals schedule: Obtain Architect's approval of submittals prior to prewaterproofing conference.

1.2 QUALITY ASSURANCE:

A. Installer Qualifications: Installer with minimum five years continuous and successful experience with hot rubberized-asphalt waterproofing applications similar in material, design, and extent to requirements of this Project.

B. Single-Source Responsibility: Obtain primary waterproofing materials of each type required from single manufacturer.

C. Preinstallation Conference: Hold conference, prior to beginning waterproofing Work, to review Work to be accomplished.
1. Contractor, waterproofing subcontractor, waterproofing system manufacturer's representative, Construction Consultant, and all other subcontractors who have equipment penetrating waterproofing shall be present.
2. Contractor shall notify Architect and other attending parties minimum seven days prior to time for conference.
3. Contractor shall record minutes of meeting and distribute copies of minutes to attending parties.
4. Shop drawings to be available for review at Preinstallation Conference.

1.3 DELIVERY, STORAGE, AND HANDLING:

A. Deliver materials in original unopened containers of packaging clearly labeled with manufacturer's name, brand name, instruction for use, all identifying numbers, and UL labels.

B. Store materials in safe manner, not to exceed allowable structural capacity of storage area.

C. Store materials in clean, dry area protected from water and direct sunlight.

D. Store all adhesives at temperatures between 60° F. and 80° F. If exposed to lower temperatures, restore materials to 60° F. minimum temperature before using.

E. Remove and replace materials that cannot be applied within their stated shelf life.

1.4 PROJECT CONDITIONS:

A. Do not begin application or continue application during inclement weather. All surfaces to receive membrane must be free of water, dew, frost, snow and ice.

B. Do not begin application or continue application when ambient temperature is below 0° F.

C. Do not begin application until substrate construction and penetrating work has been completed.

D. Preparation and application of membrane must be conducted in well ventilated areas.

E. Protection:
1. Protect building from damage and defacing by waterproofing operations.
2. Restore or replace adjacent work or materials damaged during handling of waterproofing materials.
3. Provide protection or avoid traffic on completed surfaces.

F. Remove all trash, tools, debris and extraneous materials from areas during the course of work and upon completion of installation.

1.5 WARRANTY:

A. Manufacturer's warranty: Furnish manufacturer's ten year watertight warranty covering waterproofing, insulation, drainage mat, protection board and related flashings. Warranty shall include labor and materials to correct defects without limit.

B. Installer's warranty: Furnish installer's two-year warranty covering workmanship for installation of waterproofing assembly to correct defective work without limit.

C. Warranties shall take effect on Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

A. Acceptable Products/Systems:
1. Basis of design; American Hydrotech, Inc. "Monolithic Membrane MM6125FR".
2. The Barrett Company "Ram-Tough W. I. 250".
3. Carlisle Coatings & Waterproofing, Inc. "CCW-500-R Reinforced Hot Applied Liquid Membrane System".
4. Tremco, Inc. "TREMproof 150".

2.2 SYSTEM COMPONENT MATERIALS AND ACCESSORY MATERIALS:

A. System description: Hot, fluid-applied, single component rubberized-asphalt compound, flexible membrane waterproofing system.
1. Provide surface conditioner, sealants, reinforcement, cleaning agents, and all other materials recommended by system manufacturer and which are compatible with waterproofing.

B. Reinforcing Sheet:
1. Standard Duty: "Standard Elastosheet" reinforcing sheet for construction joints and joints greater than 1/16".
2. Heavy Duty: "Heavy Duty Elastosheet" for use over expansion joints.

C. Protection Board:
1. Basis of design; American Hydrotech, Inc. "Hydroflex 30".
2. The Barrett Company "Ram-Tough Protection Board".
3. Carlisle Coatings & Waterproofing, Inc. "CCW-Protection Board-HS".
4. Tremco, Inc. "POWERply Standard Smooth".

D. Flexible Sheet Flashing:
   1. "Flex-Flash UN", uncured neoprene flashing at drains, exposed walls, curbs, penetrations, expansion joints and angle channels.
   2. "Flex-Flash F", spun-bonded polyester fabric for use at changes in plane, construction joints and cracks.

E. Hypalon Strip for Expansion/Control Joints: Sika "Sikadur Combiflex" perforated hypalon sheet.
   1. Adhesive: Sika "Sikadur 31 Hi-Mod Gel Adhesive", epoxy adhesive.
   2. Sealant: Sika "Sikaflex-2c NS", two-component, premium-grade, polyurethane-based elastomeric sealant.

F. Metal Termination Bars: Aluminum bars, approximately 1" by 1/8" thick, predrilled at 9" centers.

G. Drainage Mat: High density polyethylene drainage core bonded to calendared nonwoven geotextile fabric for pedestrian traffic and vehicular traffic.
   1. Basis of design; JDR Enterprises, Inc. "Jdrain 1000".
   2. American Hydrotech, Inc.
   3. Nicolon/Mirafi Group.

H. Water-Pervious Fabric: Minimum 2.5 oz./sq. yd. polyester or polypropylene fiber fabric. Subject to compliance with all requirements of this specification, provide named products and systems or comparable products and systems by one of following manufacturers:
   1. DuPont of Canada Ltd. "Fabrene VIE".
   2. International Paper Co. "Confil D689H".
   3. Phillips Fibers Corp. "Rufon P3B".
   4. Carlisle Coatings & Waterproofing "CCW Sure-Seal HP Protection Mat".

I. Rigid Insulation for Horizontal Areas: ASTM C578-07, Type IV, extruded polystyrene rigid insulation, Dow Chemical Co. "Styrofoam Roofmate", thickness indicated.

J. Pavers: Heavyweight, factory-cast, square-edged, concrete units; specially manufactured for use as roof ballast.
   1. Characteristics:
      a. Weight: 18 lb./sq. ft. to 24 lb./sq. ft. (120 kg/sq. m), minimum.
      b. Compressive Strength: 6000 psi to 8000 psi, minimum.
      c. Thickness: Nominal 3".
      d. Size: Nominal 24" by 24" with 3/16" bevel on all edges.
      e. Back: Grooved, with 4-way drainage capability.
      f. Finish: Nonslip paver surface in color and texture selected by Architect.
   2. Acceptable Manufacturers: Subject to compliance with all requirements of this specification, provide named products and systems or comparable products and systems by one of following manufacturers:
      a. American Hydrotech Terra Pavers-H and Accessories.
      b. Hanover Architectural Products, Inc.
      c. Hastings Pavement Company, Inc.
      d. Sunny Brook Pressed Concrete Company.
      e. Roofcap Paver/Div. Olympic Mfg. Group.
      f. Westile Division/Carder Concrete Products.

K. Paver Pedestals and Accessories: American Hydrotech, Inc. pads, shims adjustable pedestals, extenders and spacers as follows:
1. Tabs: "Terra-Tab-Rubber"; SBR rubber pads with shore hardness of 70 with spacing tabs for supporting pavers with 1/8" joint between pavers installed directly over filter fabric over insulation.
a. Size: Octagonal shape; 7" across flats, 5/8" thick.
b. Colors:
1) Pedestal: Gray.
2) 1/16" leveling plate: Black.
3) 1/8" leveling plate: Gray.
4) Durability: Unaffected by freeze-thaw cycling, ozone, humidity or water absorption.
2. Shims: "Terra-Shim-Rubber"; SBR rubber with shore hardness of 70; shims for minor height adjustments.
3. Adjustable Pedestals: "Terra-Adjust"; adjustable high impact styrene pedestals tilt and telescope from 2" to 5fi" to create a level surface for paver installation.
a. Adjustable pedestals are filled with American Hydrotech, Inc. "Terra System One Mix-Preblended" concrete mix for on-site filling after desired height and slope are obtained.
4. Extenders: "Extender-Extension"; adjustable high impact styrene unit adds 4fi" of height to adjustable pedestals for maximum height of 10".
5. Reducers: "Reducer-Pedestal"; adjustable high impact styrene; three stackable rings for installations requiring 2" or less of paver elevation. Reducer starts at 1/2" and expands in 3/8" increments.
a. Reducers are filled with American Hydrotech, Inc. "Terra System One Mix-Preblended" concrete mix for on-site filling after final adjustment.
6. Spacers: High impact styrene; cruciform shaped unit for maintaining 1/8" spacing between pavers.
a. Used with 1/8" shims when limited height clearance prevents use of tabs.

PART 3 - EXECUTION

3.1 PREPARATION AND EXAMINATION:

A. Remove existing pavers, mortar bed, insulation and waterproof membrane in sections to expose existing deck substrate. Thoroughly examine and remove damaged and deteriorated portions of substrate unsuitable as base for new waterproof membrane, insulation and paver system.
1. Remove existing wood nailers and other wood members not suitable for reuse in new waterproofing and flashing system.

B. Remove metal caps, flashings and expansion flashings.
1. Remove roof drains and roof drain top clamping rings. Replace with new roof drain system indicated on drawings.

C. All flashings, including flashings behind first course of stone pavers, shall be removed within the areas to receive new waterproofing system and flashings.

D. Cover openings resulting from removal of waterproofing, pavers, flashings and insulation. Keep water from entering building.

E. Surfaces to receive waterproofing membrane system shall be cleaned, smooth, free of projections, grease, oil and foreign material. Begin application only after surfaces are in proper condition to receive roof membrane system.

F. Ascertain work of other trades penetrating waterproofing membrane system, or intended to be made watertight by membrane application, is in place and accepted prior to installation of waterproofing membrane system. Schedule waterproofing application to minimize traffic on membrane.

G. Examine substrates, areas and conditions, with installer present, for compliance with requirements and other conditions affecting performance.

H. Moisture content: Just prior to installation, measure moisture content of substrates to receive waterproofing system. Do not apply waterproofing until substrate moisture content is within the range acceptable to waterproofing manufacturer.
1. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263-83(2005).
2. Proceed with installation only after unsatisfactory conditions have been corrected.

I. Cast-in-place concrete substrates:
1. Detail cracks in concrete surfaces in accord with manufacturer's product data.
2. Repair holes over 1/2" in length and 1/4" deep and finish flush with surrounding surface.
3. Remove scaling to sound, unaffected concrete and repair exposed area.
4. Grind irregular construction joints to suitable flush surface.

J. Thoroughly clean all surfaces to receive waterproofing in strict compliance with manufacturer's instructions and recommendations. Remove oil, grease, and curing compound with commercial grade alkaline cleaner; thoroughly rinse and dry. Surfaces to receive waterproofing membrane shall have surfaces acceptable to waterproofing membrane manufacturer. Grind or patch slab to eliminate water ponding. Acid-etch or sandblast existing concrete deck, after complete removal of existing waterproofing system, as required by product data to provide appropriate/acceptable substrate to receive waterproofing membrane.

K. Curbs, Joints and Expansion Joints: Form all joints or transitions between planes sharply and free of broken edges or loose aggregate, and completely free of preformed joint fillers, sealants, or back-up materials to depth which is at least twice joint width. It is desirable to curb expansion joints at each side of joint, either by integrally forming it with slab, or securely fastening wood blocking to deck. Chamfered edges are preferable.

L. Apply surface conditioner at rate of one gallon per 300 to 600 square feet, depending on concrete condition and allow to thoroughly dry prior to application of waterproofing.

M. Melt cakes of membrane under continuous agitation until free flowing and lump free. Drawn temperature not to exceed 425° F.

N. Construction Joints and Cracks: At all construction joints and at cracks over 1/16" and less than 1/4" in width, apply liquid membrane 125 mils thick, then center 6" wide strip of standard sheet reinforcement or other approved reinforcement over joint or crack and embed into warm membrane.
1. Avoid air pockets. Apply another coat of liquid membrane 125 mils thick over reinforcement to totally encapsulate it with membrane. Install all reinforcement before continuous, 125 mil thick coating of liquid membrane is applied over entire surface.

O. Expansion Joints:
1. At all expansion joints up to 1/2" in width with designed total movement of less than 50% and at all cracks exceeding 1/4" in width, install standard sheet reinforcement in compliance with manufacturer's standard details.
2. At all expansion joints from 1/2" in width to 2" in width and with designed total movement of less than 50%, loop heavy duty sheet reinforcement down into joint to depth equal to width of joint at its maximum opening install in compliance with manufacturer's standard details.

P. At every location where uncured neoprene sheet occurs, sandwich uncured neoprene sheet between layer of membrane.

Q. Overcoat all uncured neoprene vertical flashings with minimum 125 mil thick membrane.

3.2 MEMBRANE APPLICATION:

A. Pour hot, melted membrane evenly at rate to provide continuous coating averaging 215 mils thick.
1. Reinforced Membrane: Apply membrane to substrates and adjoining surfaces indicated. Spread hot, rubberized-asphalt to thickness of 90 mils. Fully embed membrane-reinforcing-fabric and overlap sheets 2". Follow with another 125 mil thick continuous monolithic coating of membrane layer to provide uniform, reinforced, seamless membrane total 215 mils thick.
2. Apply 1/8" protection board with overlapped joints.

B. Protect membrane from physical damage including spillage of oil and solvents and excess heat.
1. Do not permit heavy equipment and materials to be transported across, or stored on, completed membrane unless adequate provisions are made to prevent damage.
2. Provide temporary walkways wherever workmen must cross completed membrane until all other work is completed.
3. Do not walk on, or allow traffic on, unprotected membrane.

3.3 FIELD QUALITY CONTROL:

A. Flood Testing: Flood test each deck area for leaks, according to recommendations in ASTM D5957-98(2005), after completing waterproofing but before overlying construction is placed. Install temporary containment assemblies, plug or dam drains, and flood with potable water.
   1. Flood to an average minimum depth of 2" and not exceeding a depth of 4". Maintain 2" of clearance from top of sheet flashings.
      a. Flood each area for 48 hours.
      b. Mark all leaks and repair when membrane is dry. Before flood testing, ascertain from structural engineer that structure will withstand water dead load.
      c. After flood testing, repair leaks, repeat flood tests, and make further repairs until waterproofing installation is watertight.
      d. Owner will engage an independent testing agency to observe flood testing and examine underside of decks and terminations for evidence of leaks during flood testing.

3.4 DRAINAGE MAT:

A. Horizontal Drainage Matting:
   1. Roll out horizontal drainage matting board in planters, in areas of vehicular traffic and plaza pedestrian areas to receive pavers and concrete topping.
   2. Cover entire surface.
   3. Butt adjacent panels and glue fabric overlaps with suitable adhesive.
   4. Wrap or cover all cut edges and terminations with filter fabric.
   5. Place concrete topping and bituminous setting bed as applicable, and pavers as soon as possible.

3.5 INSULATION:

A. Install insulation as soon after flood tests as possible, but not more than 30 days after membrane application. Comply with manufacturer's recommendations.

B. Lay out units to minimize cutting and prevent placement of units less than half width or length. Cut with sharp knife or saw.

C. Fit units at parapet and other vertical surfaces to within 1/4" of vertical surface. Stagger end joints and fit edges close but not tight. Drill or cut units to fit around roof penetrations and drains. Lay with channeled side down.

D. Repair broken edges and damaged areas of insulation as recommended by manufacturer.

E. Filter Fabric Placement: Filter fabric is required beneath ballast regardless of ballast type.
   1. Overlap all edges minimum 1'-0".
   2. Install fabric so no joints will exist between sheets parallel to and within 6'-0" of roof perimeter.
   3. Extend fabric 2- to 3" above ballast at perimeter and penetrations.

4. Extend fabric to drain bases or bonnets, but do not cover drains or restrict water flow to drain.
5. Install additional fabric around all penetrations in order to prevent stone entry into space between penetration and insulation.

3.6 PAVER INSTALLATION:

A. Install pavers immediately following fabric installation.

B. Install pavers on pedestals which provide minimum 3/16" air space between paver and insulation.

C. Pavers, weighing minimum 18 lb./sq. ft. are required at all traffic concentration points.

D. Place first row of pavers at exterior edge using 1/2 pedestals at edges and 1/4 pedestals at corners.
1. Run next rows parallel to first row.
2. Place pedestals with spacer ribs facing up.
3. Place paver tight to spacer ribs to maintain 1/8" joint spacing.

E. Leveling: Pedestals can be multiple stacked to accommodate 5/8" increments.
1. Use 1/8" or 1/16" thick leveling plates for fine leveling. Do not use more than two 1/8" thick or four 1/16" thick leveling plates under any one paver.
2. Locate leveling plates on top of pedestal; never in-between pedestals or below pedestals.

3.7 CLEAN-UP:

A. Clean stains from adjacent surfaces with solvent recommended by manufacturer.

B. Remove foreign matter from finished coating surfaces.

End of Section

SECTION 07544

ADHERED SINGLE PLY ROOF MEMBRANE SYSTEM
(ALTERNATE NO. 1)

PART 1 - GENERAL

1.1 SUMMARY:

A. Work of this section includes application of fully adhered roof membrane system over insulation over concrete deck at 10th Floor Terraces following removal of existing pavers, mortar setting bed, insulation, waterproofing membrane and reworking of drains and concrete deck preparation.

B. Related work specified elsewhere:
1. Flashing and sheet metal.
2. Sealants and Caulking.

C. Alternate No. 1: If Owner elects this alternate, furnish and install adhered single ply roof membrane system specified herein, at 10th Floor Terraces, in lieu of waterproofing system specified in Hot Rubberized-Asphalt Waterproofing section.

1.2 SUBMITTALS:

A. Product data:
1. Submit a complete listing of each particular component or element of the roof membrane system that is required, specified or proposed for use on this project.
   a. Identify each component or element proposed for use by product number, name, and pertinent characteristics.
   b. Identify each component or element by indicating the function or location of each within the assembly.
2. Submit product description and complete installation instructions, including standard flashing details, for insulation, roofing and accessory materials. Indicate specific systems and procedures proposed for use, deleting inapplicable data. Indicate fastener types and spacings.

B. Shop drawings:
1. Submit plans, drawings, and details illustrating the following:
   a. Roof plan indicating fastening patterns, layout of each layer, relative elevations and slopes.
   b. Drain locations and layout.
   c. Edge flashing conditions.
   d. Major penetrations.
   e. Dimensionally located expansion joints and area dividers.
   f. Typical Flashing details.
   g. Flashing details not specifically indicated on drawings or in manufacturer's product data details.

h. Walkway pad layouts.
i. All other pertinent data required for this project.

2. Submit for tapered insulation from roof system manufacturer's authorized tapered fabricator. Indicate layout of insulation showing slopes and drain locations. Include longitudinal and transverse sections, and sections showing insulation layers. Indicate method of attachment.
3. Submit for flashing details not specifically indicated on drawings or in manufacturer's product data details.

C. Intent to warrant and certifications: Submit an Intent to Warrant executed by authorized representative of roof membrane system manufacturer, indicating that manufacturer has reviewed drawings and specifications, conditions affecting the work and the relationship of roof membrane system with related work, and that manufacturer proposes to provide warranty as specified herein without further stipulation.
1. Submit certification that proposed applicator is approved for warranted work by roof membrane system manufacturer.
2. Submit certification from authorized representative of roof membrane system manufacturer stating that specified system and materials, as well as indicated surfaces and conditions, are acceptable for purpose of providing specified warranty.

D. Field reports: Submit manufacturer's certified field reports as herein specified.

E. Submittals schedule: Obtain Architect's approval of submittals prior to preroofing conference.

1.3 DELIVERY, STORAGE AND HANDLING:

A. Deliver materials to site in manufacturer's unopened containers bearing manufacturer's name and type of material.

B. Store materials in dry, covered storage, off ground. Handle roll goods to prevent damage to edges. Protect materials from exposure to spark or flame and extended periods at temperatures above 90 degrees F.

C. Store cartons level, standing in upright position. Do not stack cartons. Protect open top containers from debris and precipitation.

D. Store solvent-bearing materials in dry, cool storage. Keep lids tight on opened containers to prevent solvent escape.

1.4 JOB CONDITIONS:

A. Apply roof membrane system in dry weather when temperature is 40 degrees F. or above. Undertake application only when forecasted weather conditions are in accord with requirements of membrane manufacturer's product data.

B. Protection:
1. Protect building from damage and defacing by roofing operations.
2. Restore or replace adjacent work or materials damaged during handling of roofing materials.
3. Provide protection or avoid traffic on completed roof surfaces.

C. Commence application after surfaces to receive roof membrane system are clean, smooth, free of voids or projections, grease, oil, contaminants and foreign material, and are in proper condition to receive roof membrane system.

D. Ascertain that the work of other trades penetrating roof membrane system or intended to be made watertight by membrane application is in place and accepted prior to installation of roof system. Schedule roofing application to minimize traffic on membrane.

1.5 QUALITY ASSURANCE:

A. Qualifications of applicator: Applicator shall be an approved roofing contractor authorized or certified to install roofing systems which can by warranted by the roofing materials manufacturer. Applicator shall be one who can furnish certification from the roofing manufacturer certifying that the applicator has satisfactorily applied the type of roof specified on projects which have been completed for at least five years.

B. Applicable standards:
1. American Society for Testing and Materials (ASTM), standards as referenced herein.
2. Factory Mutual Engineering Corp. (FM):
a. "Wind Loads to Roof Systems and Roof Deck Securement," Data Sheet 1-28, 1996 Edition.
b. "Roof Systems," Loss Prevention Data Sheet 1-28R/1-29R, 1996 Edition.
c. "Above-Deck Roof Components," Loss Prevention Data Sheet 1-29, 1996 Edition.
d. "Perimeter Flashing," Loss Prevention Data Sheet 1-49, 1985 Edition.
3. National Roofing Contractors Association (NRCA): "Roofing and Waterproofing Manual," Fifth Edition, 2001 with 2003 Update.

C. Design criteria:
1. Wind uplift resistance: Comply with wind uplift requirements of International Building Code, 2000 Edition with 2003 Georgia Amendments.
2. Fire resistance: Comply with fire resistance designs indicated on the drawings. Use only manufacturers and type of materials as required by indicated designs.

1.6 WARRANTIES:

A. Roof membrane material warranty: Provide manufacturer's standard 15-year warranty for roof membrane material against manufacturing defects, including factory-made seams and wind-related damage up to 74 mph.

B. Manufacturer's full system warranty: Furnish manufacturer's 15-year comprehensive watertight warranty covering roofing, insulation, accessories and related flashings. Warranty shall include labor and materials to correct defects without limit.

C. Warranties shall begin at Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ROOF MEMBRANE SYSTEM:

A. Acceptable products:
1. Basis of design: Seaman Corp., FiberTite-XT Single Ply EIP Roof System, fully adhered.
2. Sarnafil Roofing and Waterproofing Systems, PVC G410 Adhered Roofing Membrane System, fully adhered.

B. EIP membrane characteristics:
1. Material: Reinforced Ethylene Interpolymer (EIP).
2. Material thickness: Minimum 0.045".
3. Color: Off-white.
4. Tensile strength: 9500 psi, when tested in accord with ASTM D882-02.
5. Tear strength: 125 minimum, when tested in accord with ASTM D751-06.
6. Elongation: 20 x 30% when tested in accord with ASTM D751-06.
7. Water vapor transmission: 1.3 gm/m^2/24 hours when tested in accord with ASTM E96-05.
8. Water absorption: Maximum 5% when tested in accord with ASTM D471-06.
9. Dimensional stability: Maximum 0.5% change when tested in accord with ASTM D1204-07.
10. Hardness: Shore A, 80 minimum, when tested in accord with ASTM D2240-05.
11. Resistance to chemicals and oils: No swelling, cracking or leaking when in contact with ammonia, animal fats and other oils, acids and chemical reagents listed in membrane manufacturer's literature.
12. Sheet size: Maximum size resulting in minimum number of field-made seams in completed installation.
13. Membrane flashing: Same as roof membrane.

C. PVC membrane characteristics:
1. Membrane material: Polyester reinforced Polyvinyl Chloride (PVC) sheet meeting ASTM D4434-06, Type III; minimum 60 mil thickness.
2. Elongation at break: 15% when tested in accord with ASTM D751-06.
3. Seam strength: Minimum 75% of tensile strength when tested in accord with ASTM D751-06, A-Grab Method.

4. Linear dimension change: Maximum 0.5% when tested in accord with ASTM D1204-07.
5. Change in weight after immersion in water: Maximum 3% when tested in accord with ASTM D570-98(2005).
6. Color: Standard, as selected by Architect.

D. Membrane system shall be Class A or B fire-resistant.

E. Heavy-duty walkway pads: Manufacturer's premium quality, heavy-duty walkway pads, heat welded to roof membrane; 24" by 24" in size installed with 6" in between pads.

F. Fastener system for perimeters and penetrations: Type required by roofing system manufacturer's product data and meeting characteristics and wind uplift further specified:
1. Corrosion resistance: Pass FM 4470 Corrosion Test, modified DIN 50018 standard, with a maximum of 15 percent red rust after 15 wet and dry acidic atmosphere cycles in Kesternich cabinet.
2. Plates: Non-corrosive material.

G. Prefabricated accessories: Provide manufacturer's premium quality membrane-clad and prefabricated products and materials, including flashing elements, pipe boots, corners and other standard prefabricated elements.

H. System wind uplift resistance: FM Class 1-90 wind uplift resistance rating.

I. Sealants and adhesive: Types recommended or manufactured by roofing membrane manufacturer. Provide solvent-based adhesives for horizontal and vertical adhesive applications.

2.2 ROOF INSULATION:

A. Isocyanurate roof insulation:
1. Type: NRG/Johns Manville "E'NRG'Y 2", rigid isocyanurate closed-cell foam boards, permanently bonded to non-asphaltic glass facing sheets; minimum compressive strength of 20 psi, complying with requirements of ASTM C1289-07, Class 1, Type II.
2. Face size: Minimum 4'-0" by 4'-0", as required by manufacturer's product data.
3. Total thickness: Indicated in Drawings.
4. Long-term thermal resistance (LTTR) R-value in accord with ASTM C1289-07: R-14 for total thickness.
5. Fire hazard classification: FM Class I.
6. Roof covering classification: UL Classified for installation with Class A roof covering.

B. Tapered insulation units: Provide tapered isocyanurate insulation with same properties and from same manufacturer as flat stock insulation herein specified. Slope for tapered boards shall be 1/4" per foot, across board width.

C. Insulation fastener system; Type required by roofing system manufacturer and meeting characteristics and wind uplift further specified:
   1. Corrosion resistance: Pass FM 4470 Corrosion Test, modified DIN 50018 standard, with a maximum of 15 percent red rust after 15 wet and dry acidic atmosphere cycles in Kesternich cabinet.
   2. Plates: Non-corrosive material.
   3. Wind uplift: FM Class 1-90 wind uplift rating.

D. Adhesive for adhesion of second insulation layer: Roof membrane and insulation manufacturer's recommended product.

2.3 ACCESSORY MATERIALS:

A. Cant strips, tapered edge strips and blocking: Pressure-preservative treated lumber as specified in Rough Carpentry section. Creosote and oil/aliphatic preservatives are not allowed.

B. Pourable filler for pitch pockets: In accord with roof system manufacturer's product data.

C. Compressible insulation for expansion joints:
   1. Material: 2.25 pcf density, unfaced fiberglass.
   2. Thickness: As required to fill space between wood blocking and parapet; compressed 30 percent.
   3. R value at 75 degrees F.: 4.35.

D. Miscellaneous flashing and sheet metal: Refer to Flashing and Sheet Metal section.

PART 3 - EXECUTION

3.1 PRE-ROOFING CONFERENCE:

A. Pre-roofing conference: Prior to beginning roofing work, a pre-roofing conference will be held to review work to be accomplished.
   1. Contractor, Architect, roofing subcontractor, roof membrane system manufacturer's representative and subcontractors who have equipment penetrating roof or whose work involves access to roof shall be present.
   2. Contractor shall notify all parties at least seven days prior to time for conference.
   3. Contractor shall record minutes of meeting and distribute to attending parties.

3.2 PREPARATION AND EXAMINATION:

A. Remove existing pavers, mortar bed, insulation and waterproof membrane in sections to expose existing deck substrate. Thoroughly examine and remove damaged and deteriorated portions of substrate unsuitable as base for new insulation and roof membrane system.
   1. Remove existing wood nailers and other wood members not suitable for reuse in new waterproofing and flashing system.

B. Remove metal caps, flashings and expansion flashings.
   1. Remove roof drains and roof drain top clamping rings. Replace with new roof drain system indicated on drawings.

C. All flashings, including flashings behind first course of existing stone panels, shall be removed within the areas to receive new waterproofing system and flashings.

D. Cover openings resulting from removal of waterproofing, pavers, flashings and insulation. Keep water from entering building.

E. Surfaces to receive waterproofing membrane system shall be cleaned, smooth, free of projections, grease, oil and foreign material. Begin application only after surfaces are in proper condition to receive roof membrane system.

F. Ascertain work of other trades penetrating waterproofing membrane system, or intended to be made watertight by membrane application, is in place and accepted prior to installation of waterproofing membrane system. Schedule waterproofing application to minimize traffic on membrane.

G. Examine substrates, areas and conditions, with installer present, for compliance with requirements and other conditions affecting performance.

H. Moisture content: Just prior to installation, measure moisture content of substrates to receive roofing system. Do not apply roofing until substrate moisture content is within the range acceptable to roofing manufacturer.
   1. Verify that substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D4263-83(2005).
   2. Proceed with installation only after unsatisfactory conditions have been corrected.

I. Cast-in-place concrete substrates:
   1. Remove scaling to sound, unaffected concrete and repair exposed area.
   2. Grind irregular construction joints to suitable flush surface.

J. Thoroughly clean all surfaces to receive roofing in strict compliance with manufacturer's instructions and recommendations. Grind or patch slab to eliminate water ponding. Acid-etch or sandblast existing concrete deck, after complete removal of existing waterproofing system, as required by product data to provide appropriate/acceptable substrate to receive insulation and roofing membrane.

K. Immediately prior to application of roof membrane system, sweep roof deck, removing debris and foreign material.

3.3 RIGID INSULATION INSTALLATION:

A. Install insulation in two layers, with joints staggered between layers. Stagger end joints in adjacent boards. Butt edges for snug contact.

B. Installation over concrete decks: Prime concrete deck and solid-mop first layer of insulation in cold adhesive at rate recommended by insulation manufacturer's product data. Step into place to ensure full adhesion; do not slide into place. No bitumen shall be present on the exposed insulation faces or joints.

C. Solid-mop second and subsequent layers of insulation, including tapered insulation and crickets, in solid cold adhesive mopping at rate recommended by insulation manufacturer's product data. Step into place to ensure full adhesion; do not slide into place.

D. Install only as much roof insulation each work period as can be covered by roofing by end of same work period.

E. Mechanically anchor cant strips and tapered edge strips to wood blocking, in accord with FM Data Sheet 1-49. Butt lengths together and to adjacent construction. Install cant strips at abutting vertical surfaces, except those which have built-in cants.

3.4 ROOF MEMBRANE SYSTEM INSTALLATION:

A. Install roof membrane system, fully adhered, in accord with manufacturer's product data. Adhere membrane using specified solvent-based adhesive; secure perimeters and penetrations with specified fasteners meeting requirements of pullout testing at spacings recommended by product data, achieving FM 1-90 wind uplift resistance classification.

B. Lay out roof membrane sheets with seams located in accord with approved shop drawings: Allow membrane to relax for minimum 15 minutes. Laps in laid out sheets shall be 5" minimum.

C. EIP membrane application:
1. Fold back laid out membrane to expose bottom of membrane and insulation substrate.
2. Secure membrane to insulation prior to sealing seams using 100% continuous coat of adhesive to both membrane and insulation, in accord with approved shop drawings and manufacturer's product data. Application shall achieve required FM I-90 wind uplift resistance classification.
3. Do not allow adhesive to contact seam edges required to be heat welded.
4. Spray- or roller-apply adhesive at rate specified in manufacturer's product data. Allow adhesive to dry to a point of being tacky, but not stringy, to the touch. Do not allow adhesive to dry completely.
5. Carefully roll prepared membrane over prepared substrate, taking precautions to avoid wrinkles or air bubbles.
6. Broom in the adhered portion of the membrane to ensure full contact adhesion. Press completed areas into final position using a weighted, foam-covered lawn roller.
7. Repeat procedure for each section of membrane.

D. PVC membrane application:
   1. Pull back one-half of laid out sheet and apply adhesive to substrate at rate required by membrane manufacturer's product data using paint roller.
   2. Apply adhesive to back side of rolled back membrane in same manner.
   3. Do not allow adhesive to contact seam edges required to be heat welded.
   4. Allow adhesive on membrane to dry for 5-20 minutes, until adhesive legs or strings are evident when lightly touched.
   5. If adhesive dries too long, recoat both substrate and membrane back with adhesive.
   6. Roll adhesive-coated membrane onto adhesive-coated substrate without evidence of wrinkles, air pockets or misalignment of edges.
   7. Roll completed membrane to promote full bond and adhesion, using a large, water-filled lawn roller covered with carpet or foam.
   8. Repeat procedure for each section of membrane.

E. Heat weld laps using roof membrane system manufacturer's required heat welding procedures. If required by roof membrane manufacturer's product data, seal exposed edges with edge sealant at each lap.

F. Mechanically attach roof membrane at perimeter, terminations and penetrations in accord with manufacturer's product data and approved shop drawings.

G. Install base flashing in accord with manufacturer's product data and approved shop drawings using same material as roof membrane. Lap joints and seal. Fully adhere flashing membrane to substrates; wrap top of flashing membrane over parapet walls and down face 2" minimum; cover with metal flashing as specified in Flashing and Sheet Metal section. Where flashing top edge does not return over parapet wall, cover top edge of flashings with metal termination bars and counterflashing.

H. Flash at curbs and similar vertical surfaces same as base flashings. If required by roof membrane manufacturer, provide cant strips at curbs and equipment not having integral curbs. Provide metal counterflashing at curbs which are not self-flashing.

I. Install copings in accord with membrane manufacturer's product data and approved shop drawings and Flashing and Sheet Metal section.

J. Pipe penetrations: Comply with membrane manufacturer's product data, NRCA Detail TP-18A, and approved shop drawings for pipe penetration flashing.
   1. Flash using two layers of flashing membrane adhered to pipe and roof, in layers. Extend first flashing layer a minimum of 6" onto roof and a minimum of two inches up pipe. Extend second layer a minimum of 3" onto roof and a minimum of 8" onto pipe, above roof surface. Seal flashing membrane layers to roof membrane.

2. At top of flashing provide drawband. Finish exposed edges with lap sealant.

K. Roof drain flashing: Comply with membrane manufacturer's product data and approved shop drawings for roof drain flashing.
1. Cut hole in membrane at roof drain locations, smaller than drain clamping ring. Do not allow field-fabricated seams in drain locations.
2. Install water cutoff mastic to seal between membrane and drain.
3. Lock membrane under drain clamping ring. Tighten bolts.

L. Roof Walkway Pads:
1. Install walkways at locations indicated on drawings at areas around rooftop mounted equipment and other locations indicated on drawings.
2. Clean roof membrane in areas to receive walkway material.
3. Cut and position walkway material in accord with manufacturer's product data and spot adhere in place using manufacturer's recommended mastic.
4. Hot air weld entire perimeter of walkway to clean roofing membrane.
5. Provide minimum 6" between walkway pads.

M. Remove all trash, tools, debris and extraneous materials from roof areas during the course of work and upon completion of roof installation.

N. At end of each day's work, provide water cutoff at exposed edges of roof membrane.

O. Upon completion of roof membrane system installation, roof membrane system manufacturer's representative shall inspect installation to ascertain that the roof membrane system has been installed according to manufacturer's published product data, and approved shop drawings.
1. Defects or deviations from manufacturer's product data and approved shop drawings shall be remedied as required to secure manufacturer's warranty.
2. Reinspect installation until defects and deviations are corrected.
3. Provide written report of each inspection, documenting defects, deviations and corrective measures.
4. After corrections have been approved, include statement in final report that roof is installed correctly and is suitable for specified warranty.
5. Submit one copy of each report to Architect immediately following each inspection.

P. Completed roof system shall be free of defects, including leaks and ponded water. No ponding water shall remain within 48 hours of measurable precipitation.

End of Section

SECTION 07600

FLASHING AND SHEET METAL

PART 1 - GENERAL

1.1 SUMMARY:

A. Related work specified elsewhere:
1. Waterproofing system.
2. Sealants and caulking.

1.2 SUBMITTALS:

A. Shop drawings: Indicate material types, sizes, shapes, thicknesses, finishes, fabrication details, anchors, connections, expansion joints and relation to adjacent work. Details and profiles shall be drawn at full scale.

B. Product data: Indicate product description, finishes and installation instructions for all manufactured products, including interface with adjacent materials and surfaces.

C. Stainless Steel Samples: 6" by 6" samples, indicating full range of finish to be expected.

D. Submittals schedule: Obtain Architect's acceptance of submittals prior to pre-waterproofing conference.

1.3 QUALITY ASSURANCE:

A. Applicable standards as referenced herein:
1. American Iron and Steel Institute (AISI), "Stainless Steel Data Manual".
2. ASTM International (ASTM).
3. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA), "Architectural Sheet Metal Manual," Sixth Edition, 2003.
4. Society for Protective Coatings (SSPC), standards as referenced herein.

1.4 DELIVERY, STORAGE AND HANDLING:

A. Store materials off ground, under cover. Protect from damage and deterioration.

B. Handle materials to prevent damage to surfaces, edges and ends of sheet metal items. Damaged material shall be rejected and removed from site.

1.5 WARRANTIES:

A. Warrant flashing and sheet metal work to be free of defects in materials and workmanship. Warranty period shall be ten years beginning at Date of Substantial Completion in compliance with Hot Rubberized-Asphalt Waterproofing section.

PART 2 - PRODUCTS

2.1 MATERIALS:

A. Stainless steel sheet metal flashing: AISI Type 302/304 alloy, 2B finish in following gauges and applications:
1. Davit Cover: Minimum 26 ga.
2. Stone Panel Flashing: Minimum 30 ga.
3. Threshold Pan: Minimum 26 ga.
4. Window Sill Flashing: Minimum 30 ga.

B. Stainless steel soldering materials:
1. Solder flux for stainless steel: Muriatic acid neutralized with zinc.

C. Welding Rods: Type recommended by stainless steel sheet manufacturer for type stainless steel provided.

D. Sealants: Specified in Sealants and Caulking section.
1. Multi-part urethane sealant for concealed joints.
2. Silicone sealant for exposed joints; color selected by Architect.

E. Bituminous coating for separation of dissimilar materials: Cold-applied, asphalt roofing cement meeting SSPC-PS 9.01, minimum 30 mils thickness.

2.2 SHEET METAL FABRICATION:

A. Fabricate sheet metal work in accord with approved shop drawings and applicable standards. Form sheet metal work with clear, sharp and uniform arrises. Hem exposed edges.

B. Provide linear sheet metal items in 10'-0" to 12'-0" sections, except as otherwise noted. Form flashing using single pieces for the full width. Provide shop-fabricated, one-piece corners and transition pieces, with maximum 2'-0" long legs.

C. Wipe and wash clean soldered joints, immediately after soldering, to remove traces of flux.

D. Hem exposed edges of flashings on underside 1/2".

E. Apply flexible flashing or bituminous paint on surfaces where expected to be in contact with cementitious materials or dissimilar metals.

PART 3 - EXECUTION

3.1 SHEET METAL INSTALLATION:

A. Install work in accord with approved shop drawings. Sheet metal items shall be true to line, without buckling, creasing, warp or wind in finished surfaces.

B. Coordinate flashing at waterproofing surfaces with waterproofing work to provide weathertight condition at waterproofing terminations.

C. Perform field joining of lengths as specified for shop fabrication.

D. Seaming: Form seams in direction of flow. Lap seams occurring in members sloping 45 degrees or more than 4", minimum; bed in flashing cement.

E. Form joints in linear sheet metal to allow for 1/2" minimum expansion at 12'-0" o. c., maximum, and maximum 2'-0" from corners. Provide 6" wide cover plate and 1'-0" wide backup plate at intersections. Form plates to profile of sheet metal item.

F. Waterproofing penetration flashing: Refer to Hot Rubberized-Asphalt Waterproofing section.

End of Section

SECTION 07900

SEALANTS AND CAULKING

PART 1 - GENERAL

1.1 SUMMARY:

A. Related work specified elsewhere:
1. Waterproofing system sealants.
2. Flashing and sheet metal work.

B. Definitions:
1. Sealant: A weatherproof elastomer used in filling and sealing joints, having properties of adhesion, cohesion, extensibility under tension, compressibility and recovery; designed to make joints air and watertight. Material is designed generally for application in exterior joints and for joints subject to movement.
2. Caulking compound: A material used in filling joints and seams, having properties of adhesion and cohesion; not required to have extensibility and recovery properties, generally for application in interior joints not subject to movement.
3. Caulk: The process of filling joints, without regard to type of material.
4. Joint failure: A caulked joint exhibiting one or more of the following characteristics:
a. Air and/or water leakage.
b. Migration and/or reversion.
c. Loss of adhesion.
d. Loss of cohesion.
e. Failure to cure.
f. Discoloration.
g. Staining of adjacent work.
h. Development of bubbles, air pockets or voids.

1.2 SUBMITTALS:

A. Product data: Submit manufacturer's product description, indicating conformance with specified requirements and installation instructions for each type of sealant. Indicate preparation and priming requirements for each substrate condition.

B. Color samples:
1. Samples shall be actual materials or literature depicting actual colors of standard color materials. Architect reserves the right to reject work not in conformance with selected colors, based upon samples submitted.
2. Submit samples of manufacturer's standard material colors for full range of standard color sealants.

C. Adhesion compatibility test results; (FIO): Submit a letter from sealant manufacturer indicating adhesion and compatibility testing has been performed and that materials are compatible and that adhesion is acceptable. Indicate requirements for primers or special preparation.

D. Substrate staining test results; (FIO): Submit a letter from sealant manufacturer indicating that substrate stain testing has been performed on actual samples of substrates indicated to receive joint sealant and that sealant was found to be non-staining to substrate. Indicate requirements for primers or special preparation to meet non-staining requirements.

1.3 QUALITY ASSURANCE:

A. Applicable standards as referenced herein:
1. ASTM International (ASTM).

B. Adhesion compatibility tests: Perform tests on actual samples of stainless flashing systems; existing aluminum window and door frames, and existing and new stone panels, to determine that materials are compatible and that adhesion is acceptable. Identify requirements for primers or special preparation.

C. Substrate staining test results: Perform test on actual samples of each type of stone to receive joint sealant to determine that sealant is non-staining to substrate. Identify requirements for primers or special preparation to meet non-staining requirements.
1. Test porous substances in accord with ASTM C1248-06.
2. Test non-porous substrates in accord with ASTM D2203-01(2007).

1.4 PROJECT/SITE CONDITIONS:

A. Weather conditions:
1. Install no materials under adverse weather conditions or when temperatures are below or above those recommended by manufacturer's product data or when substrate moisture content is above manufacturer's recommended level.
2. Proceed with work only when forecasted weather conditions are favorable for joint cure and development of high early bond strength.
3. Wherever joint width is affected by ambient temperature variations, install materials only when temperatures are in lower third of manufacturer's recommended installation temperature range.

B. Protection of adjacent surfaces:
1. Protect by applying masking material or manipulating application equipment to keep materials in joint. If masking materials are used, allow no tape to touch cleaned surfaces to receive sealant. Remove tape immediately after caulking, before surface skin begins to form.
2. Remove misapplied materials from surfaces by using solvents and methods recommended by manufacturer.
3. At surfaces from which materials have been removed, restore to original condition and appearance.

1.5 WARRANTIES:

A. Installer's warranty: Warrant work to be watertight and free from defects in materials and workmanship, including joint failure, for a period of five years. Form of warranty shall be as included in Project Manual.

B. Exterior silicone sealant material warranty: Warrant exterior silicone sealants to be free from defects in materials and to provide structural adhesion, watertight weatherseal and non-staining of adjacent materials for a period of twenty years.

C. Warranties shall begin at Date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SEALANTS:

A. Low modulus silicone sealant for joints in existing stone and new stone panel vertical joint (including control joints) applications:
   1. Acceptable products:
      a. Dow Corning Corp., #790.
      b. Pecora Corp., #890.
      c. Tremco, Inc., an RPM Company, SpecTrem 1.
   2. Characteristics:
      a. Type: One-part, low modulus silicone rubber; meeting ASTM C920-05, Type S, Grade NS, Class 25.
      b. Colors: As selected by Architect.

B. Medium modulus silicone sealant at continuous horizontal joint at base of stone panels and new pavers at building edge, around the stainless steel davit cover, at the door threshold pan, non-porous substrates, exterior joints at perimeter of all aluminum-to-aluminum and metal-to-metal exterior applications:
   1. Acceptable products:
      a. Dow Corning Corp.,#795.
      b. Pecora Corp., #895.
      c. Tremco, Inc., an RPM Company, SpecTrem 2.
   2. Characteristics:
      a. Type: One-part silicone rubber; meeting ASTM C920-05, Type S, Grade NS, Class 25.
      b. Colors: As selected by Architect.

C. Multi-part, non-sag polyurethane sealant integral with waterproofing system; concealed conditions only:
   1. Acceptable products:
      a. Tremco, Inc., an RPM Company, Vulkem 227.
      b. Pecora Corp., Dynatrol II.
      c. BASF Building Products, Sonolastic NP-2.
      d. Tremco, Inc., an RPM Company, Dymeric 511.
   2. Characteristics:
      a. Type: Two-part, polyurethane-based sealant with separate pre-packaged color agent to achieve special colors required; meeting ASTM C920-05, Type M, Grade NS, Class 25.
      b. Colors: Black for all concealed conditions integral with waterproofing system.

2.2 ACCESSORY MATERIALS:

A. Joint cleaner: Type recommended by material manufacturer for substrates indicated.

B. Joint primer/sealer: Type recommended by material manufacturer for substrates, conditions and exposures indicated.

C. Bond breaker tape: Plastic tape applied to contact surfaces where bond to substrate or joint filler must be avoided for material performance.

D. Sealant backer rod: Compressible rod stock as recommended by sealant manufacturer for compatibility with sealant. Provide size and shape of rod to control joint depth.

E. Tooling agent: Agent recommended by material manufacturer to ensure contact of material with inner joint faces.

PART 3 - EXECUTION

3.1 JOINT SURFACE PREPARATION:

A. Clean joints of debris and projections including shims.

B. Clean joint surfaces immediately before caulking joints. Remove dirt, insecure coatings, moisture and other substances which would interfere with bond.

C. Etch concrete and masonry joint surfaces to remove excess alkalinity, unless material manufacturer's product data indicates that alkalinity does not interfere with bond and performance. Etch with 5% solution of muriatic acid; neutralize with dilute ammonia solution; rinse with clean water and allow to dry before caulking.

D. Roughen joint surfaces of non-porous materials, unless material manufacturer's product data indicates equal bond strength as porous surfaces. Rub with fine abrasive cloth or wool to produce dull sheen.

3.2 APPLICATION:

A. Comply with caulking material manufacturer's product data and ASTM C1193-05a except where more stringent requirements are specified.

B. Prime joint surfaces where recommended by material manufacturer. Do not allow primer/sealer to spill or migrate onto adjacent surfaces.

C. Install backer rod for caulking materials, except where recommended by material manufacturer to be omitted for application indicated.
   1. Place backer rod to maintain recommended sealant thickness and profile.
   2. Place rod at depth to provide sealant manufacturer's recommended sealant depth.
   3. Do not twist rod during installation.

4. Place rod to minimize possibility of extrusion when joint is compressed.
5. Install bond breaker tape in lieu of backer rod for shallow, closed joints and as recommended by manufacturer's product data.

D. Employ installation techniques which will ensure that materials are deposited in uniform, continuous ribbons without gaps or air pockets, with complete wetting of joint bond surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form slight cove so that joint will not trap moisture and debris.

E. Do not allow materials to overflow onto adjacent surfaces. Prevent staining of adjacent surfaces.

F. Remove excess and misplaced materials as work progresses. Clean the adjoining surfaces to remove misplaced materials, without damage to adjacent surfaces or finishes.

G. Tool joints of non-sag sealant to concave profile and smooth, uniform surface, flush with edges of substrate. Maintain sealant depth-to-width ratio in accord with manufacturer's product data.

H. Cure sealants and caulking compounds in accord with manufacturer's product data to obtain high early bond strength, internal cohesive strength and surface durability. Protect uncured surfaces from contamination and physical damage.

3.3 CAULKING SCHEDULE:

A. Exterior vertical joints at stone panels: Low modulus silicone sealant.

B. Exterior joints at perimeter of aluminum systems, metal systems, and metal flashings: Medium modulus silicone sealant.

C. Concealed joints integral to waterproofing system: Multi-part polyurethane sealant.

End of Section

Sunny Brook Specifications
SB-73A Natural Diamond Pavers

Property	Value	Test Methods
Pavers	Hydraulically pressed Pavers Suitable for Ballast, Plazas, Terraces and Walkways	ASTM C936
Composition	Aggregates & Cement Limestone, Water, Sand	ASTM C936
Actual Dimensions	23 ½" X 23 ½" X 2"	ASTM C936
Unit Weight (nominal 2")	96 Pounds	ASTM C936
Weight Per Sq.Ft. (2")	24 Pounds	ASTM C936
Concrete Properties		
Unit Density (Nominal)	1.66 pounds per cubic foot	ASTM C140
Compressive Strength (minimum)	8,500 psi	ASTM C140
Flexure (minimum)		
Water Absorption (maximum)	Less than 4%	ASTM C140
Freeze/Thaw Resistance	50 Cycles	ASTM C67
Bearing Surface Area Per Unit	552sq.in per unit	ASTM C936
Abrasive		ASTM C418
Tolerance	+ or – 1/8" in thickness	

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DSET LABORATORIES

ATLAS

Report No.: 5355600
Order No.: 53556
Client Ref.: P.O. # 1102/JOE

HEMISPHERICAL SPECTRAL REFLECTANCE and TOTAL EMITTANCE TEST REPORT

prepared for:

SUNNY BROOK CONCRETE COMPANY
3586 Sunny Brook Road
Kent(Brimfield), OH 44240

Trial Version by Evinco

presented by:
Atlas Weathering Services Group
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SUNNY BROOK CONCRETE COMPANY
Report No.: 5355600
Order No.: 53556

HEMISPHERICAL SPECTRAL REFLECTANCE and TOTAL EMITTANCE TEST REPORT

1.0 INTRODUCTION

This report presents results of spectral reflectance and total emittance measurements on the following three concrete specimens:

#SB-73A, #SB-90C, and #9724-C

2.0 TEST METHODS AND PROCEDURES

Reflectance

Trial Version by Evince

Hemispherical spectral reflectance measurements were performed in accordance with ASTM Standard Test Method E903 (1996). The measurements were performed with a Beckman 5240 Spectrophotometer utilizing an integrating sphere (Fig A1.3 of E903 (1996)). Total reflectance measurements were obtained in the solar spectrum from 2500nm to 300nm at an incident angle of 15°. The measurements employ a detector-baffled, wall-mounted integrating sphere that precludes the necessity of employing a reference standard except to define the instrument's 100% line. The measurements are properly denoted as being 'hemispherical spectral reflectance'.

Total Solar ρ reflectance was obtained by integrating the spectral data against Air Mass 1.5[1] global solar spectrum utilizing 109 weighted ordinates. All spectral data are submitted herewith in the original.

Emittance

Near-normal infrared reflectance measurements were performed in accordance with ASTM E408-71 (reapproved 1996), Method A. A Gier Dunkle Instruments Infrared Reflectometer Model DB 100 was utilized for the measurements.

[1] *ASTM E892-87 (1992), Table 1*

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SUNNY BROOK CONCRETE COMPANY
Report No.: 5355600
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HEMISPHERICAL SPECTRAL REFLECTANCE
and
TOTAL EMITTANCE TEST REPORT

2.0 TEST METHODS AND PROCEDURES (cont'd)

Inside the detector portion are two semi-cylindrical cavities. One of the cavities is heated by an electrical heater and the other stabilizes at approximately room temperature. Thus, the two cavities are maintained at different temperatures. As the cavities rotate, the sample is alternately irradiated at 13 Hz. A vacuum thermocouple views the sample through an optical system that focuses through slits in the ends of the cavities. The detector receives energy emitted by the sample and energy reflected by the sample. Only the reflected energy contains an alternating component as the sample is alternately irradiated by the hot and cold cavities. An amplifier is synchronized with the cavity rotation to pass only the desired alternating signal, which is then rectified and filtered. The zero and gain are set with standards of known emittance. The calibration is rechecked at several intervals during the measurement.

Trial Version by Evince

Near-normal emittance for the client's specimens was calculated from Kirchhoff's Relationship where:

$$\rho + \alpha + \tau = 1, \alpha = \varepsilon$$

Since these specimens are opaque and have no τ in the far IR, the preceding equation reduces to:

$$\rho + \varepsilon = 1 \text{ and } 1 - \rho = \varepsilon$$

3.0 OBSERVATIONS, DEVIATIONS, AND WAIVERS

All measurements were performed on the top surface of the specimens. The values reported for emittance represent the average of at least four measurements.

The disparity at 2300nm in the spectral reflectance charts, is attributed to normal pen response coupled with an automatic filter change in the Beckman 5240 spectrophotometer. The disparity at 720nm, between the VIS and NIR spectral reflectance charts, is attributed to normal pen response coupled with a detector change in the Beckman 5240 spectrophotometer. These disparities generally occur only in regions of change in percent reflectance.

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HEMISPHERICAL SPECTRAL REFLECTANCE and TOTAL EMITTANCE TEST REPORT

3.0 OBSERVATIONS, DEVIATIONS, AND WAIVERS (cont'd)

CAUTION: ASTM Test Method E903 (1996), paragraph 5.4 clearly states "this test method has been found practical . . . except for those materials that are inhomogeneous, patterned, or corrugated". In that the measured specimens exhibit inhomogeneities, the client is cautioned when utilizing the reported measurement values.

Trial Version by Evinco

4.0 RESULTS

Reflectance:

	Specimen Code	% Reflectance
Natural Diamond	#SB-73A	35.4
Charcoal Quarry	#SB-90C	19.5
Red Quarry	#9724-C	30.4

Emittance:

Specimen Code	Reflectance (ρ) Measured	Near-Normal Emittance (ε) Calculated
#SB-73A	.07	.93
#SB-90C	.07	.93
#9724-C	.07	.93

C.I.M. Industries Inc.

CIM 1000

HIGH PERFORMANCE COATINGS AND LININGS

Information presented here is believed to be accurate, but it is not to be construed as a guarantee of minimum performance. Test performance results are obtained in a controlled laboratory environment under procedures that may not represent actual operating environments.

CHEMICAL RESISTANCE

The following chart is a general guide to the resistance of CIM 1000 to various types of exposure. Although we believe this information to be reliable, C.I.M. Industries Inc. has no control over any particular application, installation, or exposure of CIM 1000; and suitable tests should be carried out by the user.

Where chemical concentrations are listed, the designated rating applies to all concentrations up to and including the concentration indicated.

Except as indicated by a footnote, the maximum service temperature is 140F (60C) for continuous service.

Consult C.I.M. Industries for additional information regarding chemical resistance.

Acetic Acid, Glacial	S
Acetic Acid, 25%	R2
Acetic Acid, 10%	R
Ammonium Hydroxide, 10%	R2
Biological Oxidation Ponds	R
Chlorine, Saturated Solution in Water	R1
Citric Acid, 10%	R
Copper Sulfate (Sat.)	R
Crude Oil	S
Diesel Fuel	S
Ethylene Glycol (Antifreeze Solution)	R1
Ferric Chloride, 42%	R
Hydrochloric Acid, 10%	R2
Hydrofluoric Acid, 10%	R2
Hydrogen Sulfide, Saturated Solution in Water	R
Hydrogen Sulfide, Vapor Over Sat. Solution	R
Methanol	R1
Nitric Acid, 10%	R2
Nitric Acid, 40%	S
Outdoor Exposure	R
Phosphoric Acid, 10%	R
Phosphoric Acid, 40%	S
Sewage Disposal Plant (Act. Sludge Sed. Tanks)	R
Sodium Hydroxide, 10%	R
Sodium Hydroxide, 50%	R1
Sodium Hypochlorite, 15%	R
Soil Burial	R
Sodium Silicate, 34%	R
Strawberry Juice	R
Sulfuric Acid, 30% or less	R
Trisodium Phosphate, 10%	R
Water, Salt	R
Wine (for floor protection)	R

Footnote:

R Suitable for continuous immersion.
S Suitable for splash and spillage conditions.
R1 Maximum service temperature limited to 80F.
R2 Maximum service temperature limited to 120F.

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CONTACT C.I.M. INDUSTRIES FOR CURRENT INFORMATION.

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CIM 1000

HIGH PERFORMANCE COATINGS AND LININGS

COVERAGE CHART — MIXED GALLONS

Dry Thickness (mils)	Wet Thickness (mils)	Gal/SF	SF/Gal	Dry Thickness (mils)	Wet Thickness (mils)	Gal/SF	SF/Gal
20	23	0.014	71	18	20	0.012	80
25	28	0.018	57	22	25	0.016	64
30	34	0.021	47	26	30	0.019	53
35	40	0.025	40	31	35	0.022	46
40	45	0.028	35	35	40	0.025	40
45	51	0.032	31	40	45	0.028	36
50	57	0.035	28	44	50	0.031	32
55	62	0.039	26	48	55	0.034	29
60	68	0.042	24	53	60	0.037	27
65	74	0.046	22	57	65	0.041	25
70	79	0.050	20	62	70	0.044	23
75	85	0.053	19	66	75	0.047	21
80	91	0.057	18	70	80	0.050	20
85	96	0.060	17	75	85	0.053	19
90	102	0.064	16	79	90	0.056	18
95	108	0.067	15	84	95	0.059	17
100	114	0.071	14	88	100	0.062	16
105	119	0.074	13	92	105	0.065	15
110	125	0.078	13	97	110	0.069	15
115	131	0.081	12	101	115	0.072	14
120	136	0.085	12	106	120	0.075	13
125	142	0.088	11	110	125	0.078	13

COVERAGE FORMULAS

$$\text{Gallons Required} = \frac{\text{Theoretical Wet Film Thickness (Mils)} \times \text{Sq.Ft. To Be Covered}}{1604} = \frac{\text{Theoretical Dry Film Thickness (Mils)} \times \text{Sq.Ft. To Be Covered}}{1413}$$

1 MIL = .001 of an inch

Coverages are theoretical and do not account for waste, spillage, irregular surfaces, or application technique.

CIM BONDING AGENT

Porous Surface	1 gallon = 300 sq.ft. or .00333 gal/sq.ft.
Non Porous Surface	1 gallon = 600 sq.ft. or .00166 gal/sq.ft.

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CIM 1000

COATING PROFILE

DESCRIPTION CIM 1000 is a liquid applied urethane coating that cures in hours to form a tough elastomeric liner that adheres to most substrates, forming a chemical and abrasion resistant barrier for waterproofing, corrosion protection, and containment of water and most aqueous chemicals.

ADVANTAGES CIM 1000 has over 25 years of proven performance in demanding environments. It remains flexible and resilient and provides exceptional service in a broad range of applications.

- Forms a tough elastomeric liner able to bridge cracks and joints.
- Impervious to water and most aqueous chemicals, providing a long lasting tank and pond liner.
- Asphalt extended urethane formula provides superior wear and weatherability for parking decks and containment areas.
- Adheres to and bridges between common construction materials such as concrete, steel and other metals, asphalt pavement, glass, wood, and most coatings.
- Environmentally sound, complying with the toughest VOC regulations.
- Can be repaired when damaged.
- Excellent abrasion resistance for severe wear applications.
- UV stable.
- Liquid, two-component urethane can be applied to complex shapes, multiple penetrations or to most geotextiles.

SURFACE PREPARATION

GENERAL: Substrates must be **clean and dry** with no oils, grease or loose debris. CIM Bonding Agent is recommended on all non-porous substrates. Perform adhesion tests to confirm adequacy of surface preparation. See C.I.M. Industries' specific substrate Instruction Guide for specific guidelines.

CONCRETE: ICRI-CSP 4-6 surface profile exposing aggregate. Concrete must exhibit minimum 3,000 psi compressive strength and be free of release agents and curing compounds. The substrate must be clean and dry (see CIM Instruction Guide IG-2), and free of contaminates.

STEEL: Minimum 3 mil profile.
Immersion service – SSPC-SP10 / NACE No. 2 Near White Blast.
Non-Immersion service – SSPC-SP6 / NACE No. 3 Commercial Blast.
Use CIM Bonding Agent for greater adhesion.

OTHER METALS: SSPC-SP1 solvent clean and abrasive blast to roughen and degloss the surface. Use CIM Bonding Agent for greater adhesion.

GLASS: Thoroughly clean. CIM Bonding Agent must be used for increased adhesion. For immersion service roughen the surface.

WOOD: Substrate must be clean, dry and free of surface contamination.

PREVIOUS COATINGS AND LININGS: CIM 1000 may be applied over some existing coatings and linings and achieve acceptable performance. CIM Bonding Agent is recommended for greater adhesion. Finished system results vary due to a variety of project specific factors, including the service conditions to which the system is exposed. Therefore, C.I.M. Industries does not accept responsibility for determining the suitability of an existing coating as a substrate for CIM products. Owner shall perform adhesion tests on any existing coating or lining to determine suitability.

EARTH: Use CIM Scrim.

COLOR CIM 1000 is initially shiny black, turning dull over 3 to 6 months when exposed to direct sunlight. For a colored or reflecting surface finish, see C.I.M Industries' Instruction Guide, "Topcoats" (IG-7) for further instructions.

SOLIDS BY VOLUME 88% (1413 dry mils x sq. ft./gal.)

RECOMMENDED COVERAGE Recommended minimum thickness at all points of the coating is 60 wet mils. Higher coverages may be specified, but extended time is required to insure proper solvent release prior to placing the liner in service. Contact C.I.M. Industries for additional information.

VOC 92 g/l (0.76 lb./gal.). CIM 1000 complies with the toughest VOC regulations.

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CIM 1000

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TYPICAL PROPERTIES

Abrasion Resistance–Wt. Loss, Taber Abraser CS–17 Wheel 1000 gr./1000 rev. ASTM D4060	1.2 mg. Loss
Adhesion to Concrete (dry) Elcometer	350 psi
Deflection Temperature ASTM D648	below -60°F
Density (Approx.)	
Premix	8.0 lbs./gal.
Activator	10.1 lbs./gal.
Mixed & Cured	8.3 lbs./gal.
Elastomeric Waterproofing	
ASTM C836	exceeds all criteria
ASTM C957	exceeds all criteria
Extension to Break ASTM D412	400%
Flammability	
ASTM D2859	pass/combustible substrate
UL790	Class A[1]
Hardness, Shore A ASTM D2240 @ 77°F	60
Jet Fuel Resistance FS SS-S-200D	pass for joints
Liner Performance Crack Bridging	
10 cycles @ -15°F	greater than ⅛"
After heat aging	greater than ¼"
Liner Weight (60 mil wet film thickness)	31 lbs./100 sq. ft.
Mix Ratio	
Weight	7:1
Volume	9:1
Mullen Burst Strength ASTM D751, 50 mil	150 psi
Permeability to Water Vapor ASTM E96 Method E, 100°F, 100 mil sheet	0.03 perms
Recovery from 100% extension:	
after 5 minutes	98%
after 24 hours	100%
Salt Spray ASTM B117	pass 2000 hrs.
Service Temperature	-60°F to 220°F
Softening Point, Ring & Ball ASTM D36	>325°F
Tear Strength ASTM D624 (Die C)	150 lbs./in.
Tensile Strength ASTM D 412, 100 mil sheet	900 psi
Weathering ASTM D822	pass 5000 hrs.

[1]Contact C.I.M. Industries for details regarding UL fire ratings

CHEMICAL RESISTANCE

CIM 1000 is resistant to a broad range of acids and alkalis. Consult C.I.M. Industries for additional information regarding chemical resistance after reviewing CIM 1000 Chemical Resistance Chart.

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CIM 1000

GENERAL APPLICATION INFORMATION

USE **FOR PROFESSIONAL USE ONLY.**

PRECAUTIONS Avoid contamination with water or moisture. Keep all pails and jugs tightly closed until ready for use. All equipment, air supplies, and application substrates must be **ABSOLUTELY DRY.** Do not apply in wet weather or when rain is imminent or when the CIM 1000 or the substrate may become wet within 4 hours after coating. Use caution when applying CIM 1000 in confined spaces. See C.I.M. Industries' Instruction Guide, "Applying CIM Within Confined Spaces" (IG-9).

TEMPERATURE Surface should be at least 50°F (10°C) and must be 5°F (3°C) above the dew point. **DO NOT APPLY WHEN THE SUBSTRATE OR AMBIENT TEMPERATURE IS RISING OR COATING IS IN DIRECT SUNLIGHT.** CIM 1000 should be at least 60°F (15°C) when mixed and applied. CIM 1000 may be preheated to facilitate application at low temperatures, but working time will be reduced. See C.I.M. Industries' Instruction Guide "Applying CIM Liners in Cold Weather" (IG-11).

EQUIPMENT Spray equipment requires large diameter hose and air supplied mastic gun. Airless pump may be used to provide fluid side pressure. See "Spray Application of CIM" (IG-12) or contact C.I.M. Industries for specific recommendations. Roller, squeegee, and trowel may also be used.

POT LIFE About 30 minutes. Working time depends on temperature and method of application. Working time for spray application will be significantly shorter.

PRIMING Porous substrates such as wood and concrete may be primed with CIM 61BG Epoxy Primer to minimize outgassing. The recoat window for CIM 61BG Epoxy Primer shall be no longer than 48 hours. See CIM 61BG Epoxy Primer Coating Profile for additional information. Perform adhesion tests to confirm adequacy of adhesion to primer.

MIXING **DO NOT THIN. DO NOT HAND MIX.** Begin mixing each pail (4.5 gal.) of CIM 1000 Premix using a power mixer (e.g. ½" drill and an eight inch mud mixer). Do not draw air into the mix. While mixing, slowly add one jug (0.5 gal.) of CIM 1000 Activator to the pail. Once the CIM 1000 Activator has been added, mix thoroughly for **3 FULL MINUTES.** The proportions are premeasured. **DO NOT ESTIMATE.** Mixing Jigs and Timers from C.I.M. Industries help eliminate mixing errors and increase productivity on the job. See C.I.M. Industries' Instruction Guide, "Mixing CIM Premix and Activator" (IG-8).

APPLICATION Apply CIM 1000 directly to a clean and dry substrate. Vertical surfaces will require multiple coats. See C.I.M. Industries' specific substrate Instruction Guide for additional guidelines.

RECOATING CIM 1000 may be recoated in 1 hour and must be recoated soon after the coating no longer comes off on polyethylene (typically within 4 hours of mixing). If the liner has cured longer than this time, the surface must be severely abraded using surface grinder or other mechanical means, and be free of dust and debris. Use CIM Bonding Agent for better adhesion. For immersion conditions, all coats shall be applied within 4 hours of each other, except at joint lines.

SPREAD RATE **Note: Coverages are theoretical and do not account for waste, spillage, irregular surfaces, or application technique. Consult CIM 1000 coverage chart for additional coverage information.**

CURING TIME CIM 1000 may be placed in service within 24 hours for non-aggressive service. Severe service applications may require a cure time of 72 hours or more. Contact C.I.M. Industries for specific recommendations.

CLEAN-UP Use mineral spirits for clean-up of uncured material. Spray equipment must be flushed regularly during application to prevent material from setting up in the hose and pump. Cured material is very difficult to remove. Soaking in solvent will soften the material and may assist in its removal.

CONTACT C.I.M. INDUSTRIES FOR SPECIFIC RECOMMENDATIONS AND INSTRUCTION GUIDES.

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CIM 1000

SHIPPING, STORAGE AND SAFETY DATA

WARNING **Flammable. Use only in well ventilated areas. Do not store or use near open flame, sparks or hot surfaces. Keep tightly closed. Avoid contact with moisture or water. Keep out of reach of children.**

SAFETY INFORMATION This product contains petroleum asphalt, petroleum distillates, amine compounds and/or other chemical ingredients. Adequate health and safety precautions should be observed during the storage, handling, application and curing. Refer to C.I.M. Industries' Material Safety Data Sheets for further details regarding the safe use of this product.

PACKAGING CIM 1000 is available in mixed units of **5** gallons. Each unit consists of a container of premix and a smaller container of activator. Quantities have been premeasured to provide the proper mixing ratio, leaving sufficient room in the premix container to facilitate adequate mixing. **Do not estimate proportions.**

SHIPPING	**Premix**	**Activator**
Weights		
5.0 gallon units	40 lbs. per pail	5.5 lbs. per jug (33 lbs. per case of 6)
Properties		
Flash Point	101°F	>250°F
Shipping Name	Coating Solution	Not Regulated
DOT Class	Class 3, UN1139, PG III	Not Regulated
STORAGE		
Temperature	20°F to 110°F	70°F to 95°F
Shelf Life	2 years	6 months
NFPA	Class II	Non Flammable

WARRANTY & LIMITATION OF SELLER'S LIABILITY

C.I.M. Industries Inc. (C.I.M.) warrants that for a period of five (5) years from the date of shipment to the initial purchaser, the products, when mixed in proper ratios for the proper length of time, (a) will not become brittle or crack and (b) will provide a water barrier. Due to application variables beyond C.I.M.'s control which may affect results, C.I.M. makes no warranty of any kind, expressed or implied, including that of merchantability, other than that the products conform to C.I.M.'s current quality control standards at time of manufacture. If breach of warranty is established, the buyer's exclusive remedy shall be repayment of the purchase price of the non-conforming CIM membrane product or, at C.I.M.'s option, resupply of conforming product to replace the non-conforming product. The buyer expressly waives any claim to additional damages, including consequential damages.

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CONTACT C.I.M. INDUSTRIES FOR CURRENT INFORMATION.

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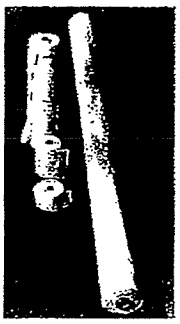
EQUIPMENT DATA SHEET

CIM Scrim

Superior thermal stress resistance; conforms to surface irregularities

High Strength and Toughness
CIM's stitchbonded polyester Scrim offers a sturdy combination of burst strength and toughness for both liner and roofing applications. The flexible polyester allows elongation of up to 50%, providing excellent accommodation to thermal stresses and movements.

Uniformity
The parallel fiber structure of stitchbonded polyester allows for faster and more uniform wicking of the CIM liquid than either fiberglass or polypropylene reinforcement, and the absence of visible fabric texture is an excellent indicator that the recommended minimum CIM liner thickness has been applied. The result is a truly monolithic liner which remains intact even under thermal shock conditions.



Easy Laydown
CIM Scrim rolls out easily with fewer wrinkles than polypropylene or spunbonded fabrics. The soft polyester fabric will also conform to imbedded gravel and standing seam metal roof decks.

Superior Weatherability
Unlike polypropylene fabrics that quickly deteriorate if directly exposed to UV light, CIM Scrim has superior weathering resistance which compliments the built-in UV resistance of CIM liners to add years of service to roofing and pond liner applications.

Specifications
Available in widths of 6" (100 yds. long), 12" (100 yds. long), 40" (108 yds. long) and 120" (100 yds. long).

Average Typical Properties*

Weight	3 oz./square yard
Tensile	57.1 lbs. average‡ (ASTM D 1682)
Elongation	61.65% average‡ (ASTM D 1682)
Mullen Burst	176.8 lbs. (ASTM D 3786)
Trapezoidal Tear Strength	16.1 lbs. average‡ (ASTM D 1117)

*These average typical properties are the averaged results of random tests conducted on this fabric. They are not to be construed as performance specifications. This document reports accurate and reliable information to the best of our knowledge, but our suggestions and recommendations cannot be guaranteed because the conditions of use are beyond our control. C.I.M. Industries, Inc. assumes no responsibility for the use of information presented herein and hereby expressly disclaims all liability in regard to such use.

‡Average machine and cross machine directions.

Keeping Liquids Where They Belong

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Published data and specifications subject to change without notice.

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Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Product Names
CIM Premix for:
CIM 1000, CIM 1061
CIM 1000 Trowel Grade
CIM 800

Description
All CIM premixes are:
Asphalt/resin portion of 2-component urethane coatings.

Emergency Telephone
CHEMTREC (800) 424-9300
C.I.M. Industries Inc. (603) 924-9481
Prepared by:
R. H. Stephens, C.I.M. Industries Inc.
26 July 2006

CAUTION! ***Flammable Liquid — Keep out of reach of children.*** ***May cause eye and skin irritation. Prolonged or repeated contact with skin can be harmful.***

HAZARDOUS CONSTITUENTS

Component	CAS#	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL	% Range	Primary Hazard
Petroleum asphalt	8052-42-4	5 mg/m³ (Note1)		n/a		20 to 80%	n/a
Amine compounds		n/a		n/a		up to 10%	Irritant
Aliphatic hydrocarbon	8052-41-3	100 ppm	n/a	100 ppm	n/a	up to 30%	Flammable liquid
Aromatic Petroleum Distillates	64742-95-6	100 ppm	125 ppm	100 ppm	125 ppm	up to 2%	Flammable liquid

[1] applies to fumes from hot asphalt and is not likely to present a hazard when CIM Premix is used as directed.

HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES	SPECIAL PROTECTION
Eyes May cause eye irritation.	Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. If irritation persists, see a doctor.	Wear chemical safety goggles.
Skin May cause skin irritation. Prolonged or repeated exposure may dry the skin. LD_{50} (rabbit)>5 g/kg.	Remove heavily contaminated clothing and wash skin thoroughly with soap and water. DO NOT use solvents or thinners to remove materials from skin. Asphalt can be removed with vegetable oil or mineral oil.	Skin contact can be minimized by wearing protective clothing and solvent resistant gloves.
Inhalation Breathing solvent vapor can cause central nervous system effects including dizziness, weakness, fatigue, and headache and possible unconsciousness and even death. LC_{50}>2000 ppm.	Move the person to fresh air and apply oxygen if breathing is difficult. If breathing has stopped, apply artificial respiration. Call a doctor.	Use in well ventilated areas only. Wear an OSHA approved type C air supplied respirator if ventilation is inadequate to keep solvent inhalation vapors below the exposure limits listed above.
Ingestion This material contains solvents. An aspiration hazard may exist which could cause chemical pneumonitis which is sometimes fatal. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. LD_{50} (rat)>5 g/kg.	Do not induce vomiting. Get medical attention. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.	Avoid airborne mists which can be inhaled or swallowed. Use protective mask, if necessary.

All information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

FIRE PROTECTION

Flammable Liquid: Solvents contained in this product evaporate and form vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as cigarettes, pilot lights, welding equipment, electrical motors and switches, and static discharge. Fire hazard is greater as liquid temperature rises.

Flash Point: 101°F

Autoignition Temp.: >500°F

Flammability Limits: 1% lower limit, 6% upper limit

Extinguishing Media: CO_2, Dry Chemical, Foam, Water Fog, Halon

Special Fire Fighting Procedures: For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. See Hazardous Decomposition Products. Read the entire MSDS.

NFPA Hazard Rating: Health 1; Flammability 2; Reactivity 0; Special 0, Class II

DOT Hazard: Coating Solution, Class 3, UN1139, PG III

PHYSICAL PROPERTIES

Solubility: Miscible in all proportions with most light halogenated hydrocarbon solvents; soluble to less than 300 ppm in water.

Appearance (Color, Odor, etc.): Black liquid with mineral spirits odor

Boiling Point: ca 310°F (155°C)

Melting Point: n/a

Specific Gravity: 0.9@ 20/20°C

Vapor Pressure: Approximately 3mm Hg @ 68°F (20°C)

Vapor Density (Air=1): Approximately 4.9

Percent Volatile (Volume): less than 15%

ENVIRONMENTAL PROTECTION

Environmental Impact: This material, if not activated with CIM Activator, may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

Precautions if Material is Released or Spilled: Eliminate all open flame in vicinity of spill or released vapor. Clean up small spills using appropriate techniques such as absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.

Waste Disposal Methods: Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Regulatory Status: This product does not contain constituents known to be a carcinogen, mutagen, teratogen or reproductive toxin. This product contains certain aromatic solvents subject to the reporting requirements of section 313 of SARA Title III. Spills in excess of 10,000 lb. must be reported to the appropriate federal, state, and local authorities.

REACTIVITY DATA

Stability (Thermal, Light, etc.): Stable

Incompatibility (Materials to Avoid): May react with strong oxidizing materials.

Hazardous Decomposition Products: Incomplete combustion can produce carbon monoxide. Normal combustion forms carbon dioxide and water vapor and may produce oxides of nitrogen.

Hazardous Polymerization: Will not occur.

n/a = Not Applicable
NDA = No Data Available

ADDITIONAL HEALTH DATA

CIM Premix is used with CIM Activator to form an elastomeric coating for waterproofing and corrosion protection. Consult the MSDS for CIM Activator. Avoid inhalation of airborne activated CIM mixture which contains isocyanates and may result in sensitization and allergic response in some individuals.

No association has been established between industrial exposure to petroleum asphalt and cancer in humans. The International Agency for Research on Cancer has determined there is limited evidence of carcinogenicity for undiluted steam-refined asphalts in experimental animals and insufficient evidence of carcinogenicity for undiluted steam-refined asphalts in humans. These asphalt sources are not constituents of CIM Premix

HANDLING & STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

DO NOT USE OR STORE near flame, sparks or hot surfaces.

USE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

DO NOT weld, heat or drill container. Emptied container still contains hazardous or explosive vapor or liquid.

Store product in accordance with local regulations. Do not exceed indoor limits for storage of Class II liquids. Storage temperature: 20°F to 110°F (Do not warm pails above flash point of 101°F)

11/06

C.I.M. Industries Inc.

CIM 61BG
EPOXY PRIMER

COATING PROFILE

DESCRIPTION CIM 61BG Epoxy Primer is a two component high solids epoxy coating formulated as a primer for porous and non-porous surfaces such as concrete and metal.

ADVANTAGES CIM 61BG Epoxy Primer can be used to prime a variety of surfaces.

- May be used as a primer for freshly blasted metal to prevent flash rust from occurring, prior to coating with CIM.
- May be used as a primer for properly prepared concrete to minimize the effects of outgassing.
- Approved for contact with potable water in accordance with ANSI/NSF 61.

SURFACE PREPARATION

GENERAL: Substrates must be **clean and dry** with no oils, grease or loose debris. Perform adhesion tests to confirm adequacy of surface preparation. See C.I.M. Industries' specific substrate Instruction Guide for specific guidelines.

CONCRETE: ICRI-CSP 4-6 surface profile exposing aggregate. Concrete must exhibit minimum 3,000 psi compressive strength and be free of release agents and curing compounds. The substrate must be clean and dry (see CIM Instruction Guide IG-2), and free of contaminates.

STEEL: Minimum 3 mil profile.
Immersion service – SSPC-SP10 / NACE No. 2 Near White Blast.
Non-Immersion service – SSPC-SP6 / NACE No. 3 Commercial Blast.

OTHER METALS: SSPC-SP1 solvent clean and abrasive blast to roughen and degloss the surface.

WOOD: Substrate must be clean, dry and free of surface contamination.

COLOR CIM 61BG Epoxy Primer is a two component epoxy coating consisting of: CIM 61BG Epoxy Resin which is buff, and CIM 61BG Hardener which is amber.

MIXING RATIO 4 Parts Resin: 1 Part Hardener by Volume

SOLIDS BY VOLUME 80% mixed (1280 dry mil x sq. ft./gal.) ASTM D 2697-7 days)

DENSITY CIM 61BG Resin approximately 13.39 lbs./gal.
CIM 61BG Hardener approximately 8.17 lbs./gal.

THEORETICAL COVERAGE 320 sq. ft./gal. (about 5 wet mils). Irregular surfaces, waste, spillage, and application technique effect actual coverage.

VOC (EPA 24) 170 g/l (1.41 lb./gal.) CIM 61BG Epoxy Primer complies with the toughest VOC regulations.

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C.I.M. Industries Inc.

CIM 61BG
EPOXY PRIMER

GENERAL APPLICATION INFORMATION

USE **FOR PROFESSIONAL USE ONLY.**

PRECAUTIONS Mixing equipment and surfaces where material is applied must be **ABSOLUTELY DRY.** Do not apply in wet weather, when rain is imminent or when the surface may become wet before the coating is dry. Strictly observe mixing, induction times and substrate temperature requirements.

TEMPERATURE **Throughout the curing period, the surface should be minimum 50°F (10°C) AND minimum 5°F (3°C) above the dew point. Contact C.I.M. Industries for lower temperature application.**

EQUIPMENT Air Spray, Airless Spray, Brush, or Roller (3/8" or 1/2" synthetic nap).

Equipment	Air Spray	Airless
	(DeVilbiss, JGA, or MBC)	45:1
Air Hose	1/2"	N/A
Fluid Hose	1/2"	3/8" to 1/2"
Spray Gun	DeVilbiss MBC-510	
Tip	E or D	0.021" to 0.027"
Cap	704	N/A
Atomizing Pressure	up to 100 psi	1500 to 3000 psi
Pot Pressure	10 to 20 psi	N/A

POT LIFE About 3.5 hours at 77°F (25°C).

MIXING Thoroughly mix each of the two components separately: CIM 61BG Epoxy Resin and CIM 61BG Hardener. **DO NOT HAND MIX.** Use a power mixer. Consistency should be uniform and smooth with no settled pigments remaining at the bottom. Add entire contents of each component and thoroughly mix until color and consistency are uniform. **ALLOW A MINIMUM OF 15 MINUTES INDUCTION TIME FOR MIXED PRIMER BEFORE APPLICATION.**

The two components must be combined in proper ratios for this product to set up properly. Failure to adequately mix each component separately to achieve a uniform dispersion or failure to blend to the proper volume proportion will result in a failure of the coating to perform adequately.

DO NOT THIN. Allow cold material to warm to room temperature before attempting to lower viscosity, warm mixed coating before applying. Do not heat open containers above the materials flash point of 80°F (27°C). Do not exceed 110°F (43°C).

APPLICATION

PRIMER: Apply CIM 61BG Epoxy Primer at a coverage rate up to **10 wet mils** per coat. A uniform coating free of holidays or pinholes is necessary to minimize outgassing effects during the application of the CIM membrane to porous surfaces such as concrete. Surfaces may require additional coats to achieve a pinhole free finish.

MEMBRANE: Allow CIM 61BG Epoxy Primer to dry at least 8 hours at 70°F (21°C) to permit solvent loss. Membrane over coating prior to solvent loss may result in bubble formation in the membrane. When applied to porous surfaces, CIM 61BG Epoxy Primer will greatly reduce the effects of outgassing, but it may not completely prevent the occurrence. CIM membranes should be applied following C.I.M.'s published written instructions including application of the membrane when substrate temperature is declining.

RECOATING The recoat window for CIM 61BG Epoxy Primer shall be no longer than 48 hours.

DRYING TIME Allow at least 8 hours between coats or applying a CIM membrane coating. If more than 48 hours has past since the application of CIM 61BG Epoxy Primer, or the CIM 61BG Epoxy Primer is otherwise contaminated, abrasive blast and use CIM Bonding Agent.

CLEAN UP Clean all equipment immediately after use with xylene or MEK. Thoroughly flush spray equipment before coating has had a chance to set up.

CONTACT C.I.M. INDUSTRIES FOR SPECIFIC RECOMMENDATIONS AND INSTRUCTION GUIDES.
www.cimindustries.com

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C.I.M. Industries Inc.

CIM 61BG

EPOXY PRIMER

SHIPPING, STORAGE AND SAFETY DATA

WARNING **Flammable. Use only in well ventilated areas. Do not store or use near open flame, sparks or hot surfaces. Keep tightly closed. Avoid contact with moisture or water.**

SAFETY INFORMATION This product contains ingredients which are considered to be hazardous. Solvent exposure may cause dizziness, headache or nausea. Prolonged exposure may cause permanent brain or nervous system damage. Adequate health and safety precautions should be observed during storage, handling, application and clean-up. Refer to C.I.M. Industries' Material Safety Data Sheets for further details regarding the safe use of this product.

PACKAGING CIM 61BG Epoxy Primer is packaged in 1 gallon units consisting of 0.8 gallon of CIM 61 Resin and 0.2 gallon of CIM 61 Hardener and 5 gallon units consisting of 4 gallons of CIM 61BG Resin and 1 gallon of CIM 61BG Hardener. Proper volumes of each must be mixed thoroughly prior to application.

	CIM 61BG (5 gallon unit)	**CIM 61BG (4-1 gallon kit)**
SHIPPING		
Weights	66 lbs per 5 gallon unit	55 lbs per box (4-1 gallon kits)
Properties		
Flash Point	80°F (27°C)	80°F (27°C)
Shipping Name	Coating Solution	Corrosive Liquid, Flammable, n.o.s.
DOT Class	Class 3, UN1139, PG III	Class 8,UN2920,PGII, (xylene, polyamines)
STORAGE	**CIM 61BG Epoxy Resin**	**CIM 61BG Hardener**
Temperature	40°F to 110°F (5°C to 43°C)	40°F to 110°F (5°C to 43°C)
Shelf Life	24 months	24 months
NFPA	Class IC	Class IC

WARRANTY & LIMITATION OF SELLER'S LIABILITY

C.I.M. Industries Inc. (C.I.M.) warrants only that CIM 61BG Epoxy Primer conforms to C.I.M.'s current quality control standards at the time of manufacture. Due to application variables beyond C.I.M.'s control which may affect results, C.I.M. makes no other warranty of any kind, expressed or implied, including that of merchantability. If breach of warranty is established, the buyer's exclusive remedy shall be repayment of the purchase price of the non conforming CIM product or, at C.I.M.'s option, resupply of conforming product to replace the non-conforming product. The buyer expressly waives any claim to additional damages, including consequential damages.

THE INFORMATION PRESENTED IN THIS PUBLICATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

CONTACT C.I.M. INDUSTRIES FOR CURRENT INFORMATION.

FOR PROFESSIONAL USE ONLY.

www.cimindustries.com

C.I.M. Industries Inc.
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Fax: (603) 924-9482
Web site: www.cimindustries.com

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Material Safety Data Sheet

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Product Name
CIM 61BG Epoxy Hardener

Description
Phenolic Polyamine Cross Linker for Epoxy Resin

Emergency Telephone
CHEMTREC (800) 424-9300
C.I.M. Industries Inc. (603) 924-9481

Prepared by:
R. H. Stephens, C.I.M. Industries Inc.
26 July 2006

CAUTION! ***Flammable Liquid — Keep out of reach of children.*** ***May cause eye, skin, and respiratory irritation. Prolonged or repeated contact with skin and inhalation can be harmful.***

HAZARDOUS CONSTITUENTS Component	CAS#	ACGIH TWA	ACGIH STEL	OSHA TWA	OSHA STEL	% Range	Primary Hazard
Alkylated Phenolic	68413-28-5			2		70-80	Irritant
	68413-29-6					5-10	Irritant
Polyamine	107-15-3	10		10		1.0-5.0	Irritant/Corrosive
Ethylenediamine	100-41-4	100	125	100	125	0.1-1.0	Flammable/Solvent Effects
Ethyl Benzene	1330-20-7	100	150	100	150	10-20	Flammable/Solvent Effects
Xylene							

HEALTH EFFECTS	EMERGENCY & FIRST AID PROCEDURES	SPECIAL PROTECTION
Eyes Irritation of eyes. Prolonged or repeated contact can cause conjunctivitis, blurred vision, tearing of eyes, redness of eyes, severe eye irritation, severe eye irritation or burns, corneal injury.	Flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.	Wear chemical resistant safety goggles.
Skin Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting, blistering, allergic response, severe skin irritation or burns. Possible sensitization to skin. LD_{50} (rabbit) > 1 g/kg.	Wash thoroughly with soap and water. If any product remains, gently rub petroleum jelly, vegetable or mineral/baby oil onto skin. Repeated applications may be needed. Remove contaminated clothing before re-use. Dispose of contaminated leather items, such as shoes and belts.	Skin contact can be minimized by wearing protective clothing and chemical resistant gloves. Use protective cream where skin contact is likely.
Inhalation Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light headedness, headache, un-coordination, nausea, vomiting, blurred vision, coughing, difficulty with speech, central nervous system depression, anesthetic effect or narcosis, difficulty of breathing, asthmatic reaction, tremors, respiratory tract burns, liver damage, kidney damage, loss of consciousness, respiratory failure, asphyxiation, death. Possible sensitization to respiratory tract.	Remove to fresh air. Restore and support continued breathing. Get emergency medical attention. Have trained person give oxygen if necessary. Get medical help for any breathing difficulty.	Use in well ventilated areas only. Wear an OSHA approved type C air supplied respirator if ventilation is inadequate to keep solvent inhalation vapors below the TLV. Particulate, chemical cartridge, air purifying half-mask respirators can be used within certain limitations; consult the respirator manufacturer for specific uses and limitations. Where airborne contaminate concentrations are unknown, the use of a NIOSH/MSHA approved fresh-air supplied respirator is mandatory.
Ingestion Ingestion may cause lung inflammation and damage due to aspiration of material into lungs, dizziness and/or light headedness, nausea, vomiting, diarrhea, gastro-intestinal disturbances, severe abdominal pain, central nervous system depression, burns of the mouth, throat, stomach, liver damage, kidney damage, pulmonary edema. LD_{50} (rat) > 4 g/kg.	Do not induce vomiting. Obtain medical treatment immediately.	Avoid airborne mists which can be inhaled or swallowed. Use protective mask, if necessary.

All information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

FIRE FIGHTING MEASURES

Unusual Fire and Explosion Hazards: Closed containers may explode when exposed to extreme heat or fire. Vapors may ignite explosively at ambient temperatures. Vapors are heavier than air and may travel long distances to a source of ignition and flash back. Vapors can form explosive mixtures in air at elevated temperatures. May decompose under fire conditions emitting irritant and/or toxic gases.

Flash Point(SETA): 80°F/27°C

Autoignition Temp.: NDA

Flammability Limits: 1% lower limit, 6.6% upper limit

Fire Extinguishing Media: CO_2, Dry Chemical or Foam, Water Fog

Fire Fighting Procedures: Water may be used to cool and protect exposed containers. Fire fighters should use full protective clothing, eye protection, and self-contained breathing apparatus. Self-contained breathing apparatus recommended.

Hazardous Decomposition or Combustion Products
Carbon Monoxide, Carbon Dioxide, Oxides of Nitrogen

NFPA Hazard Rating: Health 3; Flammability 3; Reactivity 1; Special 0, Class II

DOT Hazard: Corrosive Liquid, Flammable, n.o.s., 8, UN2920, PGII, (xylene, polyamines),

IMDG: Corrosive Liquid, Flammable, n.o.s. (xylene, polyamines), class 8,(3), UN2920, PGII.

PHYSICAL AND CHEMICAL PROPERTIES

Solubility in Water: Not Available

Appearance (Color, Odor, etc.): Clear amber liquid

Boiling Point: 200°F/93°C

Melting Point: N/A

Specific Gravity: .980

Vapor Pressure: Not Available

Vapor Density (Air=1): Heavier than air

Percent Volatile (Volume): less than 17%

ENVIRONMENTAL PROTECTION

Environmental Impact: This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

Accidental Release Measures: Steps to be taken in case of material is released or spilled - Comply with all applicable health and environmental regulations. Eliminate all sources of ignition. Ventilate area. Ventilate area with explosion-proof equipment. Spills may be collected with absorbent materials. Use non-sparking tools. Evacuate all unnecessary personnel. Place collected material in proper container. Wet down spilled material with water. Complete personal protective equipment must be used during clean-up. Large spills - Shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. Use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. Small spills - Use absorbent to pick up residue and dispose of properly.

Disposal Considerations: Dispose in accordance with all applicable regulations. Avoid discharges to natural waters.

STABILITY AND REACTIVITY

Stability (Thermal, Light, etc.): Under normal conditions stable
See FIRE FIGHTING MEASURES

Incompatibility (Materials to Avoid): Oxidizers, acids, bases, amines, epoxides, nitric acid.

Conditions to Avoid: Elevated Temperatures, Contact with oxidizing agent, sparks, open flame, ignition sources.

Hazardous Polymerization: Will not occur.

N/A = Not Applicable
NDA = No Data Available

ADDITIONAL HEALTH DATA

CIM 61BG Epoxy Hardener is used with CIM 61BG Resin to form an epoxy coating formulated as a primer of porous and non porous surfaces such as concrete and metal. Consult the MSDS for CIM 61BG Epoxy Resin. This product does not contain constituents known to be a carcinogen, mutagen, teratogen or reproductive toxin. This product contains certain aromatic solvents subject to the reporting requirements of section 313 of SARA Title III. Spills in excess of 10,000 lb. must be reported to the appropriate federal, state, and local authorities.Contains a chemical that is toxic by ingestion. Contains a chemical that is toxic by inhalation. Contains a chemical that may be absorbed through the skin.

Notice- Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Other effects of overexposure may include toxicity to liver, kidney, central nervous system.

Based on an International Agency for Research on Cancer (IARC) Conclusion that there is "sufficient evidence in experimental animals for the carcinogenicity of ethyl benzene and inadequate evidence of carcinogenicity in humans, IARC's overall evaluation is that ethyl benzene is possibly carcinogenic to humans" (Group 2B).

High exposure to xylene in some animal studies, often at maternally toxic levels, have affected embryo/fetal development. The significance of this finding to humans is not known.

HANDLING & STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

DO NOT USE OR STORE near flame, sparks or hot surfaces.

USE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

DO NOT weld, heat or drill container. Emptied container still contains hazardous or explosive vapor or liquid.

STORE BELOW 80°F. Store product in accordance with local regulations. Do not exceed indoor limits for storage of Class II flammable liquids.

SECTION 04850

STONE VENEER

PART 1 - GENERAL

1.1 SUMMARY:

A. Work of this section includes the following:
1. Replacement of existing stone panels damaged beyond repair or to Owner's and Architect's approval.

B. Related work specified elsewhere: Sealants and caulking.

1.2 SUBMITTALS:

A. Shop drawings and calculations:
1. Submit cutting and setting drawings showing sizes, dimensions, sections and profiles of stone units, edge and corner details, jointing, arrangement and provisions for jointing, anchoring system layout, fastening and supports, details for lifting devices and interface with adjacent work.
2. Indicate location of each stone unit on setting drawings with number designation corresponding to number marked on each unit.
3. Design calculations; (FIO): Submit for Architect's information. Include criteria for stone performance and anchors. Indicate stone thickness required. Indicate unit weights and supporting capacity of anchoring system.
4. Design calculations shall bear the seal of a professional engineer registered in the State of Georgia. Indicate that engineer has reviewed shop drawings.
5. Show edge and corner details, reveals, special shapes, returns and jointing details at full scale.
6. Indicate supplementary bracing and anchorage requirements for stone veneer.

B. Samples: Submit for Architect's approval:
1. For installation: Submit one sample, minimum 6" by 6" face size. Samples shall include pieces of required stone, installed with specified sealant material on plywood backup. List of required samples will be indicated by Architect on shop drawing submittal.
2. All approved samples will be retained by Architect and will become standards for stone fabrication and installation.

C. Product data: Include specifications and descriptive data for stone, indicating structural characteristics of material furnished, descriptions of anchors and sealants.

1.3 QUALITY ASSURANCE:

A. Fabricator/installer qualifications: Fabricator/installer shall have at least five years successful experience in the fabrication and installation of stone similar to the type specified and, if required by Architect, shall submit evidence of such experience.

B. Expansion: To ensure uninterrupted delivery, consistency of color, and availabilities for future expansion, granite of a given color shall come from a single quarry owned and operated by fabricator.

1.4 DELIVERY, STORAGE AND HANDLING:

A. Protect stone during storage and construction against moisture, soiling, staining and physical damage.

B. Handle stone to prevent chipping, breakage, soiling or other damage. Use no pinch or wrecking bars without protecting edges of stone. Lift with wide belt type slings; use no wire rope or ropes containing substances which might cause staining. If required, use wood rollers and provide cushion at end of wood slides.

C. Stone indicating flaws or imperfections upon receipt at storage yard or building site shall be referred to Architect for determination as to whether it shall be rejected, patched or redressed fore use.

D. Store stone on wood pallets a minimum of 3" above ground, covered with non-staining, waterproof membrane. Place and stack pallets and stone to distribute weight evenly and to prevent breakage or cracking of stone. Protect stored materials from weather with waterproof, non-staining covers or enclosures; allow air to circulate around stone units.

1.5 PROJECT/SITE CONDITIONS:

A. Environmental requirements: Install no stone when temperature of surrounding air has dropped below 45 degrees F., unless it is rising, and at no time when temperature has dropped below 40 degrees F., except with written permissions from Architect.

B. Protection of work: Protect finished exposed work from stains.

C. Use no frozen materials; do not build on frozen work.

PART 2 - PRODUCTS

2.1 GRANITE VENEER:

A. Characteristics: Meeting requirements of ASTM C615-03.
1. Color and texture: Match existing granite panels when removal necessitates replacement of existing panels with new granite panels.

2. Thickness: As required by usage and to meet loading and anchorage methods, as determined by results of laboratory testing; however, not less than 1-1/4" thickness.
3. Finishes:
   a. Exposed faces and edges: Matching existing granite.
   b. Unexposed surfaces: Natural finish.
4. Internal corners: Matching existing conditions.
5. External corners: Matching existing conditions.
6. Granite shall meet minimum requirements of ASTM C615-03 and ASTM C119-07a.

2.2 ACCESSORY MATERIALS:

A. Weep tubes: 1/4" diameter clear plastic tubing.

B. Anchors, including dowels, cramps and similar shapes, as required, for exterior applications: Stainless steel in accord with ASTM A666-03, Series 300, minimum 14 ga., or extruded aluminum per ASTM B221-06 meeting properties of 6063-T6.

C. Relieving anchors: Stainless steel in accord with ASTM A666-03, Series 300 for exterior applications; steel in accord with ASTM A36-05, hot dip galvanized in accord with ASTM A123-02 for interior applications.

D. Setting buttons: Aluminum or plastic of thickness to maintain uniform joint widths.

E. Sealant: As specified in Sealants and caulking section.

2.3 FABRICATION:

A. Anchor types and assemblies shall comply with ASTM C1242-05.

B. Fabricate stone work in accord with approved shop drawings and samples. Provide holes and sinkages cut or drilled for anchors, fasteners, supports and lifting devices, as necessary to secure work in place. Cut and back-check as required for proper fit and clearance. Shape beds to fit supports.

C. Cut stone panels to shapes indicated on shop drawings. Maintain specified fabrication tolerances.

D. Apply no materials to stone which contain oils or similar contaminants which may stain stone or prevent bonding of setting or sealing materials.

E. Allowable patching: Chips at edges and corners may be patched provided structural integrity of stone is not affected and providing patch matches color and finish of natural stone so that patch does not detract from appearance.

F. Beds and joints: Bed and joint pieces as indicated on approved shop drawings, and cut bedded and jointed surfaces as follows:
1. 3/8" beds and joints for thermal stone, under 4" in thickness: Saw or cut full square back from face. Bed and joint surfaces shall be within ± 3% of 90 degrees to face of piece unless otherwise specified.

G. Backs of pieces:
1. Saw or roughly dress backs of pieces to approximately true planes. Back of surfaces shall be clean of matter that may cause staining.
2. Backs of pieces may be rough or natural quarry split to provide surfaces which vary not more than 1" in 12" from true plane and not more than 1" from their specified thickness.

H. Back-checking and fitting to structure or frame:
1. Stone coming in contact with structural work shall be back-checked as indicated on approved shop drawings. Stones resting on structural work shall have beds shaped to fit supports as required.
2. Maintain a minimum of 1" between stone backs and adjacent structure; 2" between stone backs and bolted connections.

2.4 SOURCE QUALITY CONTROL:

A. Fabrication tolerances:
1. Panel thickness:
a. 3/8" to 1/2" thickness: + 1/32".
b. 3/4" to 1-5/8" thickness: ± 1/8".
c. Panel thickness greater than 1-5/8": ± 1/4".
2. Panel face dimensions: ± 1/16".
3. Face variation from rectangular: ± 1/16". (Maximum out of square)(non-cumulative).
4. Heads/calibrated edges: ± 1/16".
5. Quirk miters(width of nose):
a. Up to 1/4": -0"; +25% of dimension.
b. Over 1/4": -0"; +1/16".
6. Back anchors:
a. Location: ± 1/8".
b. Depth: -0"; +1/16".
7. Anchor slots:
a. From face to centerline of slot: ± 1/16".
b. Lateral placement: ± 1/4".
c. Width: ± 1/16".
d. Depth at maximum: ± 1/8".
8. Anchor holes:
a. From face to centerline of hole: ± 1/16".
b. Lateral placement: ± 1/8".
c. Diameter: ± 1/16"
d. Depth: ± 1/8".
9. Anchor sinkages; depth: -0"; +1/8".

B. Flatness tolerances:
1. Variation from true plane, or flat surfaces, shall be determined by a 4'-0" dimension in any direction on the surface.
2. Flatness tolerances for Thermal and coarse stippled finishes: 3/16".

PART 3 - EXECUTION

3.1 INSTALLATION:

A. Install stone work, including support system, in accord with ASTM C1242-05 and approved shop and setting drawings, plumb, level and true to line within specified tolerances. Install no units which have been broken, stained or otherwise damaged during transit, storage or handling.

B. Secure stone work to concrete backup using dovetail type anchors.

C. Secure stone work to masonry back-up using twisted wire anchors set in grout. Completely fill holes and sinkages with grout. Allow no grout to migrate on face of stone or to remain in joint.

D. Provide setting buttons as required to align units and to maintain specified joint width.

E. Pointing:
1. Maintain joints between panels matching existing joint conditions.
2. Caulk joints in accord with applicable provisions of Sealants and Caulking section. Tool sealants to ensure maximum adhesion to contact surfaces.

F. At cavity wall construction, provide weep tubes at sills, relieving angles, door and window heads and in bed joints at 10'-0" maximum vertically. Space weep tubes at 2'-0" horizontally. Install in accord with MIA standards as referenced herein.

G. Allowable erection tolerances:
1. Variation from plumb of wall surfaces, arises, external corners, joints and other conspicuous lines: Do not exceed 1/4" in any story or in 20'-0" maximum.
2. Variation from level from grades shown for horizontal joints and other conspicuous lines: Do not exceed 1/4" in 20'-0" maximum, nor 3/4" in 40'-0" or more.
3. Variation in linear building lines from position shown on drawings and related portion of wall facing: Do not exceed 1/2" in any bay or 20'-0" maximum nor 3/4" in 40'-0" or more.
4. Variation in face plane of adjacent pieces (lippage): Do not exceed 1/4 of width of joint between pieces.
5. Joint size: ± 25%.
6. Tolerances shall not be accumulative.

3.2 CLEANING AND PROTECTION:

A. Shop clean stone at time of final fabrication.

B. After installation and pointing, clean stone, removing dirt, excess mortar, weld splatter, stains, and other site incident defacements.

C. Use soft brushes or wool. Use of wire brushes or of acid or other solutions which will cause discoloration are expressly prohibited. Contact fabricator before using cleaners other than detergents.

D. Remove and replace chipped, broken, stained or otherwise damaged stone panels with panels of matching color and texture.

E. Protect finished work from damage until Date of Substantial Completion. Do not use lumber that will stain stone. Mechanical fasteners shall be galvanized or non-rusting.

F. Just prior to Date of Substantial Completion, clean all stone work with detergent and water solution, cleaning with stiff fiber bristle brushes. Use no acids, other caustic cleaners or wire brushes to clean stone.

End of Section