Project:	**Irish Hunger Memorial Waterproofing Contractor**	**Date:**	**October 20, 2015**
		RE:	**Addendum #3**
		# of Pages:	**43**

The following clarifications are to be made to the Request for Proposals for Irish Hunger Memorial Waterproofing Contractor. The clarifications are provided in response to questions submitted by prospective proposers.

Questions: (answers to all question are shown in **Bold** immediately after the question)

Will the soil and planting of the Lower Furrows and Middle Furrows be removed or protected as part of the project? If the plan is for them to be protected, what would be the protection required? **Protect in place based upon contractor means and methods. If the proposer can gain efficiencies by removing material in the lower two furrows in order to create access to the upper furrow, then the proposer may propose this change in its approach to the Project and reflect any gained efficiencies in its schedule and in its bid number. If an alternate approach is suggested, the cost proposal should reflect a cost without the modification and an alternate cost with the modification.**

When are the approximate start and finish dates for the project? **It is BPCA's objective to complete the Project as professionally, expeditiously and cost-effectively as possible and to close public access to the Memorial for as short a period as is feasible. It is anticipated that the construction duration will run from approximately Nov 2015 to May-July 2016, depending upon the exercise of weather protection alternate.**

Can Jersey barriers with 6' chain link fence and mesh be used in place of the chain link fence alone? Concern of the stability of the chain link fence with the wind. **Determination to be made by proposer according to its selected means and methods.**

Are there any liquidated damages? **No**

During the removal of the existing stacking stone, there is a possibility of damaging some. Can you please provide us with a provider? **BPCA does not have a supplier for this material.**

Will power be available, or are generators required? **Power is available.**

Will there be access to water? **Ground hydrants are available on the site but are turned off and blown out in November for winterization.**

Is Alternate 1 to be expected to stay in place for full duration, or only winter months? **Only as needed**
Can soil be removed with machines? **Yes, providing that the soil is not driven over or compacted in the process.**

Is a Site Safety Manager required? **No**

Is a site safety plan required? **Yes**

Can trailers be stored onsite or is a field office going to be provided? **Assume contractor to provide trailer. Provide as a separate line item in the cost proposal the cost for the trailer. Do not include the trailer cost in the total bid price.**

What are the hours of work? **Normal work hours 7:00 am – 5:00 pm, or as agreed upon**

Are existing and final surveys required? **Yes**

Regarding MBE and WMB requirements, if requirements are not meant [sic], please confirm that a letter stating why percentages could not be made is acceptable. **A request for a waiver of the MWBE requirements must be submitted to Empire State Development Company ("ESDC"), but the requested waiver must be granted prior to the execution of a contract. Therefore, the waiver request must be submitted immediately upon notification to a proposer that it has been selected. If the request is not approved then the selected proposer must be prepared to meet the requirements, or an alternate proposer may be selected. The granting or denial of a waiver is a determination made by ESDC, not BPCA.**

Who is responsible for all permits? DOT, BUILDNG PERMIT, WORK PERMIT? **Contractor**

As per the provided Exhibit F – form of schedule of values document will there be further detail / bid form scope breakdown? **No. Provide costs per Exhibit F**

Page 7 of the provided Project Manual, Item C refers to Title 40 Protection of Environment: Environmental Compliance and Pollution Prevention Guide "only" pertains to *the treatment of the area to be painted and the disposal of the debris resulting from the surface preparation.* Please clarify? **This Title 40 item refers to painting. The gate is the only painting in the Project.**

Page 8 of the provided Project Manual, Item G: references all temporary pedestrian protection / sidewalk sheds – installation and maintenance *"in compliance with current law."* What is the current law? Please provide referral documents for review of all rules

and regulations. **Proposer is responsible for identification and interpretation of current law applicable to the scope of the Project.**

Page 8 of the provided Project Manual, Item I – refers to hours of work per BPCA direction – please define or indicate any overtime / night / weekend work / holiday work / winter work? **Normal work hours 7:00 am – 5:00 pm, or as agreed upon**

Are there any specific requirements/restrictions for deliveries of materials, routing/trucking, or site /area restrictions? **No.**

Page 8 of the provided Project Manual, Item 1.05 Owner Occupancy – please define owner operations activity during construction durations? **Memorial will be closed for the duration of the Project.**

Page 8 of the provided Project Manual, Item 1.07 ***Destructive inspection*** – please define in further detail this term and the percentage associated with this process (2.5%)?
Destructive inspection refers to probes requiring removal and replacement of materials accounting for up to 2.5% of the total contract amount to allow for design team inspection of work.

For all requested Warranty Pricing / Items: Section 3.5.2 Warrantee scope / costs to provide appropriate costs, are you requesting a breakout / description of warranties for pertinent items?
Bid is to include a description of all warranties provided which should be covered by the total bid amount. These do not need to be broken out.

During bid process – can contractor assume/obtain interior access to inspect current set up of watering system / sprinkler – for all tie in's and any additional scope pertaining to current system?
Contractor can make an appointment to visit the site on 10/22 or 10/23.

Does the resin basin waterproofing system application apply to all verticals/ wall's etc being waterproofed?
Yes.

Does the BPCA – have a recommended list of electrical and plumbing contractors pre-approved and recommended for the project? If so can you please provide? **No.**

During Cataloging and removal/demo phases of the project is there a specific software or digital location/template/etc. to provide photography activity and documentation for the project? Or is it the responsibility of the contractor to provide this? **Contractor is responsible for cataloging and documentation and selection of appropriate means and methods.**

All existing granite paving surround [sic] the monument is it required to protect all paving with protection [sic] surfacing due to the fragility and availability of new material for potential replacement? If so please provide further details of potential protection measures for the entire area or specific areas of most usage?
It is proposer's responsibility to select the appropriate means and methods of protecting all existing site elements, including paving, designated to remain on the site during construction.

It is our assumption at this time that all removed / salvaged materials are to be stored off site and no materials are to be stored on site, please clarify?
There is very limited space available on site, so the proposer should assume that removed/salvaged material are to be stored off site in accordance with the proposer's selected means and methods. Off-site storage location to be reviewed and approved by design team, CM, and BPCA.

Please provide a structural slab weight limitation diagram or drawing to define equipment usage on the deck during construction?
No weight bearing analysis is currently available. Proposer is to provide a proposed list of equipment including weights, etc. for review and approval.

Landscape Demolition plan removal legend indicates existing irrigation mains to remain – verification and testing of watering systems / mains must be conducted to verify mains are usable for new construction? What testing measures / verification process should contractor assume? **Selected proposer is to verify valve to be retained as being operable.**

Is there an existing or forth coming grading plan to verify all scope pertaining to removals / reinstallation, sitework, etc..? **All removals are to be down to the structure to expose waterproofing.**

Landscape Demolition plan refers to Irrigation as built drawing set. Are these documents available if so can you please provide for review?
See attached as built drawings from the original construction of the structure

Is there an available and/or specific recommended list of approved off-site storage locations for soils and other materials? **Proposer is to submit its proposed storage location for approval by landscape architect and BPC Parks. At this time there is no space in BPC to store soils.**

Landscape Demolition Detail 3 Page DM.150.00, indicates Drainage Mat on structural fill to be protected in place – during demo process and potential damage and defects –

should contractor provide percentage of new material installation or add alternate for new drainage mat? **Provide a unit price per square foot for new drainage mat. Need for replacement will be determined by design team.**

Is the project expected to be broken down into phases of construction in conjunction with our included Bar Chart Project Schedule?
Proposer should clarify proposed schedule and any proposed phasing, and submit with bid.

At the West area of the site is public access and protection measures required allowing access from the waterfront park walkway areas or will this area of the site be completely blocked off? **The work site will end at the cobble band on the west side, and there will be no public access into the work site; however, public access to the west of the site will remain open and in use.**

Please define security measure requirements during construction? **Site is to be kept safe and secure as part of the contractor's selected means and methods.**

If current limestone paving is damaged during any phase/s of construction – Is the contractor responsible for providing new material? This can be provided as an allowance / ad alt for new material percentage to replace currently damaged material or damaged material during construction? **Contractor is responsible for protection and/or replacement of any existing material damaged during the Project.**

Please provide location / contact info of existing granite paver stone provider?
Contractor is to source materials.

As site walk thru was conducted 9.30.15 the existing limestone paving, in certain areas have existing damage. Will a cataloging and documentation of current limestone paving existing conditions be conducted or required?
Contractor is to document existing conditions.

Is it suggested for the contractor to provide an equipment plan upon bid date submission?
Yes.

Is it suggested for the contractor to provide a logistics plan upon bid date submission?
Yes.

Is there a logistics plan available for reference?
No.

Is there a SWPP plan available as Site Clearing Section 311000 references Temporary Erosion and sedimentation control measures? **See 311000 3.2 Erosion control as per standards.**

Soils to be removed and stored off site please define amendment/s measures required? **TBD after soil is tested by contractor and amendments are recommended.**

Section 311000 Site Clearing Item 3.6 Topsoil Stripping Item D. note states *"when stockpiling Planting Soil ONSITE do so away from edge of excavations without intermixing with other materials*" From previous notes assumed all soils to be removed and stockpiled off site – please clarify? **No soil is to be stockpiled on site.**

Specification Section 312000 Earth Moving – 3.6 Storage of Soil Materials Stockpile planting soil materials off structure and at a preapproved location – please provide preapproved location? **See response to #21 above. Contractor to provide storage location for design team, CM and BPCA review and approval.**

Are there any noise restrictions in reference to equipment usage and types during construction? **Normal restrictions apply.**

Is a mock up required for Exposed Aggregate Concrete walkways?
Yes.

Please define edging type at Exposed Aggregate Concrete walk ways?
Edging to match existing. Subject to sample approval by Artist and BPCA.

Please define edging type at landscape areas?
Edging to match existing. Subject to sample approval by Artist and BPCA.

Please clarify if Welded Wire Mesh or Rebar is required for Concrete Walks for reinforcing?
Refer to drawing A-703

Please indicate where there is an available onsite water source (outside and inside the building)? **Ground hydrants are located at plaza level but are winterized in November.**

Is there an available PLA agreement document for review? **There is no project labor agreement associated with the Project.**

Will Public Bicycle racks / bikes be accessible to the public during construction?
Yes

Alternate pricing Alt 1 coverage heated weather enclosure – can you please provide further information / details / specifications of potential coverage systems / measures suggested by the owner if work is to be conducted during winter work periods?
As stated in Alternate: Provision of a full coverage, heated weather enclosure to encapsulate the monument for the duration of work allowing work to proceed in all weathers.

As per Drawing A-703.00 Detail 1 – New Reinforced Poured Concrete Slab please define areas / scope ***Exhibit A Scope of Work*** does not refer to this scope of work.
The referenced area is the Monument walkway. Refer to drawing A-100.

Drawing A-703.00 Detail 1 – New Reinforced Poured Concrete Slab 4" Thick please verify the required depth?
4" minimum.

As per drawing L-200.00 Diagrammatic Grading & Soils Placement Plan – Please verify the total # of Landscape Drains is 5 and each drain is to remain and be protected. **3 drains to remain and protect in place. See architectural dwgs attached to RFP for further information.**

As per drawing L-200.00 Diagrammatic Grading & Soils Placement Plan will there be updated / further detailed grading plan provided? **Grades will be restored as per the existing conditions survey. Contractor to perform survey as per specifications**

Can you please provide any structural, civil, and architectural drawing sets as various details refer to architectural, structural plan sets reference? **See attached as-built drawings for the original construction of the structure.**

Drawing L-250.00 Details 1 thru 4-shows Impermeable Membrane material – please define or provide specification for scope. **See architectural dwgs. attached to RFP.**

Removal of Portions of the Stone Cladding at the past through entrance corridor to the monument is there an exact or approximate quantity of stone to be removed or further detail of this scope of work?
Remove as needed to install louvers. Refer to drawing A-202.

Blank Glass Panels in the stone cladding areas to be removed is removed material expected to be salvaged or discarded and new material provided?

Glass panels to be removed and reinstalled as/if needed. All materials to be salvaged to greatest extent possible.

Please indicated location of Metal Vault Hatches for removal and replacement scope of work?
On Monument walkway. Refer to drawing A-100.

During Demo and removal stages of construction all existing CMU/Concrete core walls expected to remain is the contractor responsible for inspection / testing / surveying the integrity of core walls for approval of new stone material and all applicable items for wall construction?
Yes.

Can you define in regards to bidding process removal and rebuilding loose or damaged portions of core walls (i.e. percentage, allowance). **Proposer to provide a unit price for replacing core walls per square foot.**

Should contractor price full removal and reinstallation of new CMU/Core walls as alternate (pending on core wall structural integrity / condition)?
No, provide unit pricing per square foot. Need will be determined by design team.

Prepare prime and paint sliding gate at monument entrance – is contractor expected to provide new sliding gate and/or remove / store / upgrade / reinstall the gate?
Prepare, Prime, & Paint. Remove & store as/if needed to perform work.

Please define suggested staging areas on site? **Project area defined by curbline on the north and east sides, south boundary is the retaining wall, and the west boundary is the cobble band at the tree planting pit.**

Is the contractor responsible for street closure / lane closure on either North End or Vesey Place Avenue / Streets?
Contractor to determine necessity for street closing.

Is a complete street closure possible at Vesey Place Avenue? **No.**

The existing lawn area South / adjacent to the site, will this area or can this area be used for staging, storage, logistic / equipment usage? **No.**

For all removed soils what is the expected depth of removal? **See attached as-built drawings.**

By signing the line below, I am acknowledging that all pages of the addendum have been received reviewed and understood, and will be incorporated into the bid price submitted. This document must be attached to the proposal for consideration.

_____ _____

Print Name Signature Date

Number of pages received: _____<fill in>

GENERAL NOTES AND SPECIFICATIONS

1. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE OWNER'S PROPERTY, FROM INJURY OR LOSS ARISING IN CONNECTION WITH THIS CONTRACT. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO ERRORS IN THE CONTRACT DOCUMENTS OR CAUSED BY AGENTS OR EMPLOYEES OF THE OWNER. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS PROVIDED BY LAW AND THE CONTRACT DOCUMENTS.

2. THE CONTRACTOR 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 WORKERS AND THE PUBLIC AND SHALL POST DANGER SIGNS WARNING AGAINST THE HAZARDS CREATED BY SUCH FEATURES OF CONSTRUCTION AS PROTRUDING NAILS, HOD JOISTS, HOLES, HATCHWAYS, SCAFFOLDING, WINDOW OPENINGS, STAIRWAYS AND FALLING MATERIALS.

3. NO WORK SHALL BE PERFORMED IN A MANNER WHICH WILL THREATEN OR COMPROMISE THE STRUCTURAL STABILITY OF THE STRUCTURE, OR WHICH IN ANY WAY ENDANGERS THE SAFETY OF ANY PERSON WHATSOEVER. ANY AND ALL SHORING, RIGGING, SCAFFOLDING OR OTHER TEMPORARY SUPPORT STRUCTURES SHALL BE MAINTAINED AND SECURED IN SAFE CONDITION AT ALL TIMES.

4. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES AND PROPERTY FREE FROM ACCUMULATIONS OF WASTE MATERIAL OR RUBBISH CAUSED BY HIS EMPLOYEES OF WORK, AND AT THE COMPLETION OF THE WORK HE SHALL REMOVE ALL HIS RUBBISH FROM THE PROPERTY AND ALL HIS TOOLS, SCAFFOLDING AND SURPLUS MATERIALS AND SHALL LEAVE HIS WORK "BROOM CLEAN" OR ITS EQUIVALENT, UNLESS MORE IS EXACTLY SPECIFIED.

5. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY LAYING OUT THE WORK AND FOR LINES AND MEASUREMENTS FOR THE WORK. HE SHOULD BE FAMILIAR WITH AND VERIFY ALL OF THE INFORMATION ON THE DRAWINGS AND REPORT ANY IRREGULARITIES TO THE ARCHITECT BEFORE COMMENCING WORK. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD. ALL LAYOUT TO BE APPROVED BY ARCHITECT.

6. SUBMITTALS, REQUIRED SHOP DRAWINGS, PRODUCT DATA AND SAMPLES SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. THEY SHALL INCLUDE:

- LIGHTING FIXTURES
- STRUCTURAL SUBMITTALS (SEE STRUCTURAL DRAWINGS)
- PLUMBING AND DRAINAGE COMPONENTS (SEE PLUMBING DRAWINGS)
- ELECTRICAL COMPONENTS (SEE ELECTRICAL DRAWINGS)
- LANDSCAPE COMPONENTS (SEE LANDSCAPE DRAWINGS)

7. IN ADDITION TO SAMPLES AND OTHER SUBMITTALS, THE FOLLOWING FULL SIZE MOCK-UPS ARE REQUIRED:

- STONE AND GLASS BASE WITH LIGHTING
- PATH SURFACE
- FURROWS
- CONCRETE CANTILEVER UNDERSIDE

MOCK-UPS SHALL BE A MINIMUM SIZE OF 4' X 8' OR AS REQUIRED TO FULLY INNSTRATE THE DESIGN INTENT. MOCK-UPS TO BE SUBMITTED FOR ARCHITECT'S APPROVAL.

8. THE CONTRACTOR SHALL MAINTAIN FAMILIARITY WITH, AND ADHERENCE TO THE SPECIFICATIONS AT ALL TIMES. IN PARTICULAR, THE SPECIFICATIONS OF ANY GIVEN PORTION OF THE WORK TO INSURE THAT THE CONTENT AND INTENT OF THE SPECIFICATIONS AND CONTRACT DOCUMENTS ARE MAINTAINED.

9. CONTRACTOR SHALL PROVIDE AND MAINTAIN A CURRENT WORK SCHEDULE AT THE JOBSITE.

10. CONTRACTOR AND ALL SUBCONTRACTORS SHALL BE LICENSED CONTRACTORS. ALL WORK TO COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS WHICH MAY GOVERN.

11. CONTRACTOR SHALL MAINTAIN PROJECT RECORD DOCUMENTS AND COLLECT ONE COPY EACH OF THE FOLLOWING DOCUMENTS AND LABEL EACH ONE PROJECT RECORD, AS FOLLOWS:

- DRAWINGS, SPECIFICATIONS AND ADDENDA.
- CHANGE ORDERS, AND OTHER MODIFICATIONS.
- ARCHITECTS FIELD ORDERS AND ANY WRITTEN INSTRUCTIONS.
- FIELD TEST RECORDS.
- PROJECT MEETING MINUTES.
- PROGRESS SCHEDULE.

11. KEEP RECORD DOCUMENTS IN CONTRACTOR'S FIELD OFFICE, SEPARATE FROM DOCUMENTS USED FOR CONSTRUCTION AND AVAILABLE FOR ARCHITECT'S INSPECTION. MARK RECORD DRAWINGS, SPECIFICATIONS AND ADDENDA NEATLY AND LEGIBLY, WITH COLORED PENCIL OR FELT TIP MARKER, TO SHOW ACTUAL CONSTRUCTION AND PRODUCTS USED. KEEP RECORD CURRENT WITH CONSTRUCTION PROGRESS; DO NOT COVER UP WORK UNTIL REQUIRED

12. CLOSE-OUT SUBMITTALS - BEFORE APPLYING FOR FINAL PAYMENT, THE CONTRACTOR SHALL SUBMIT:

- COMPLETION NOTICE AND ALL CERTIFICATES OF INSPECTIONS AND OTHER EVIDENCE OF COMPLIANCE WITH REGULATORY AGENCY REQUIREMENTS.
- EVIDENCE OF PAYMENTS AND RELEASE OF LIENS IN ACCORD WITH CONDITIONS OF THE CONTRACT.
- CERTIFICATE OF INSURANCE FOR PRODUCTS AND COMPLETED OPERATIONS.
- PROJECT RECORD DOCUMENTS.
- EXTRA STOCK, SPARE PARTS, MAINTENANCE MATERIALS, KEYS AND SPECIAL TOOLS REQUIRED BY PRODUCT SECTIONS.
- WARRANTIES, SERVICE/MAINTENANCE CONTRACTS, AND MANUALS REQUIRED BY PRODUCT SECTIONS.
- AS-BUILT DRAWINGS

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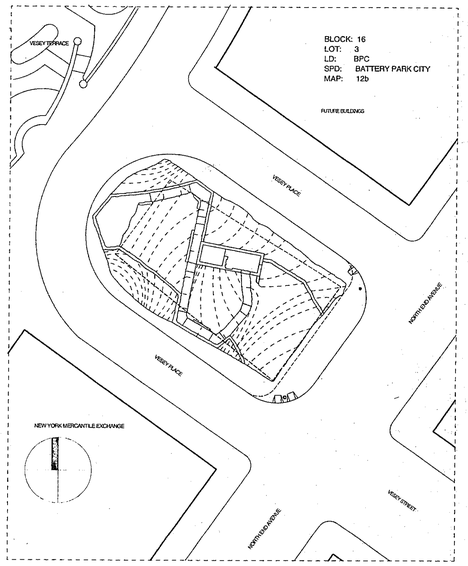
DRAWING INDEX

AS-BUILT PLANS



1 A0.00 PLOT PLAN
NOT TO SCALE

MTC
REC 05-10-01
10:00 AM
HAND DELIVERED
BY CASHIN TO
FIELD

"THIS SET"
METROTECH MAIN OFFICE

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT, VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL, CHAIRMAN TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014

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CONSULTANT

REV:	
	50% DESIGN DEVELOPMENT SUBMISSION- 4/11/01
	90% DESIGN DEVELOPMENT SUBMISSION- 04/27/01

TITLE:	TITLE SHEET		A 0.00
ISSUE:	90% / 100% DESIGN DEVELOPMENT SUBMISSION		
DATE:	05/09/01	DRAWN BY: AB/EK	

07000 - THERMAL AND MOISTURE PROTECTION

1.01 RELATED SECTIONS / DOCUMENTS

TOPCOAT Detail Drawings, site specific drawings and General Provisions of the contract, including General, Supplementary and Special Conditions found in Division - 7 Specification Sections, apply to the work addressed in this section.

1.02 SYSTEM DESCRIPTION

Extent of TOPCOAT-CRT Roofing System work is indicated on the drawings and is further defined by provisions of this section which includes roofing, flashing and reinforcing of joints and junctions, and roof penetrations / accessories. Areas to be re-roofed include existing structural concrete roofs as indicated on drawings. Final determination of the fitness of the TOPCOAT-CRT System, or its components, for any given concrete roof may not be made by any representative of TOPCOAT, Inc., other than a member of TOPCOAT's Technical Department.

1.03 SUBMITTALS

Submit copy of TOPCOAT-CRT's technical product data sheets, installation instructions and samples for each type of required roofing product.

1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Provide primary products, including TOPCOAT-CRT Roofing Membrane, TOPCOAT Flashing Grade, TOPESTER Fabric, etc., by a single manufacturer (TOPCOAT, Inc.), which has produced this type of product successfully for not less than twenty (20) years. Provide secondary products only as approved by TOPCOAT, Inc., for use with the specified TOPCOAT-CRT Roofing System.

B. Installer Qualifications: A single Installer or Firm ("Roofer") shall perform all work addressed in this section, and shall be certified by TOPCOAT, Inc., for installation of the TOPCOAT-CRT Roofing System.

C. Installer Authorization: Installer shall possess written authorization from TOPCOAT, Inc., which certifies they are approved for installation of the TOPCOAT-CRT Roofing System.

1.05 REGULATORY REQUIREMENTS

UL Listing: Provide TOPCOAT-CRT Roofing System and component materials which have been evaluated by Underwriters Laboratories for flame-spread, and are listed in "Underwriters Laboratory Roofing Materials and Systems Directory" for Class A construction over existing metal or other non-combustible roofing (Flame-spread must pass ASTM #E-108 with unlimited slope). Provide roof covering materials, bearing UL approval marking on container, which indicates that material has been subjected to UL's examination, test procedures and follow-up inspection service.

1.06 INSURANCE CERTIFICATES

Assist owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with extended coverage insurance on roofing and associated work.

1.07 PRE-INSTALLATION MEETING

Approximately two (2) weeks prior to scheduled commencement of roofing installation and associated work, conduct meeting at the project site with Installer, Architect/Owner, TOPCOAT representative and any other persons directly concerned with the performance of the work. The Installer shall record conference discussions to include decisions and agreements reached (or disagreements), and furnish copies of recorded discussions to each attending party. The main purpose of this meeting is to review foreseeable methods and procedures related to roofing work, including but not necessarily limited to the following:

A. Tour representative areas of roofing substrates to inspect and discuss conditions of substrate, penetrations and other preparatory work to be performed.

B. Review TOPCOAT-CRT Roofing System requirements (TOPCOAT-CRT Specifications and other contract documents).

C. Review required submittals, both completed and yet to be completed.

D. Review and finalize construction schedule related to roofing work, and verify availability of materials, Installer's personnel, equipment and facilities needed to consistently make progress and avoid delays.

E. Review required inspection(s), testing, certifying and material usage accounting procedures.

F. Review weather and forecasted weather conditions, as well as, procedures for coping with unfavorable conditions including possibility of temporary roofing work.

1.08 DELIVERY, STORAGE AND PROTECTION

Store and handle TOPCOAT materials in a manner which shall ensure there is no possibility of contamination. Store in a dry, well-ventilated, weather-tight place at temperatures between 50¡F and 80¡F until product is ready to be applied (keep from freezing). Do not stack material pallets more than two (2) high. Do not subject existing roof to unnecessary loading of stockpiled materials. Please note that all TOPCOAT water-based products are packaged in plastic containers.

1.09 ENVIRONMENTAL CONDITIONS

Proceed with roofing work only when existing and forecasted weather conditions will permit work to be performed in accordance with TOPCOAT recommendations and guarantee requirements as follows:

A. Do not begin work if rain is expected within twenty-four hours of application, or if temperatures are expected to fall below 42¡F during the duration of the job. (NOTE: SB-900 Flashing Grade and FlexSeal can be used in temperatures lower than 42¡F. Therefore, they are excluded from this temperature restriction.)

B. Upper temperature restriction (both air and substrate) for application of TOPCOAT products is 120¡F. If substrate temperatures exceed 120¡F, TOPCOAT products should be applied during cooler periods of the day. *No moisture can be present when applying TOPCOAT products onto concrete substrates.*

C. Taking into consideration the UV curing properties of TOPCOAT-CRT Roofing Membrane and Flashing Grade, allow for sufficient daylight hours necessary for curing of materials.

CAUTION: Other weather and environmental conditions to consider are mist, dew, condensation and relative humidity. These factors can lengthen TOPCOAT drying times. If various TOPCOAT products are exposed to rain before they are completely dry, product may "wash-off" the roof.

1.10 SUBSTRATE CONDITIONS

A. The TOPCOAT-CRT Roofing System is to be applied over ***structural concrete only*** with a minimum slope of _"-12". Concrete roof substrate must be completely cured and dry before application of TOPCOAT products. Substrate should not pond water for a period longer than 48 hours. TOPCOAT-CRT shall ***not*** be used for application on lightweight concrete.

B. The TOPCOAT-CRT Roofing System is not to be used on heavy-traffic bearing substrates. If foot traffic is expected, cover the TOPCOAT-CRT System with indoor-outdoor carpet or heavy rubber mat using TOPCOAT FlexSeal LV as a bonding adhesive. If it is anticipated that the carpet may stay wet for an extended period of time (greater than 48 hours), a rooftop walkway system shall be used in lieu of the carpet.

C. The bonding surface must be free of ponding water, ice and snow.

D. If any questions arise regarding the compatibility of TOPCOAT products with an existing substrate, Installer shall prepare test patches to check adhesion (addressed in Part 3 of this specification). Always contact TOPCOAT's Technical Department concerning questionable substrates, required additional information and recommended test patch materials.

1.11 GUARANTEE

Provide TOPCOAT System Guarantee per the requirement of the Building Owner and/or Project Architect. In order to obtain any TOPCOAT System Guarantee, the following conditions apply:

A. Determination of the appropriateness of the TOPCOAT-CRT Roofing System for any given structural concrete roof must be obtained from TOPCOAT's Technical Department prior to offering any TOPCOAT-CRT System Guarantee. TOPCOAT will refuse to offer a guarantee on any TOPCOAT-CRT System being installed over an unfit, unsound or inappropriate substrate.

B. Installer must be a Certified TOPCOAT Contractor. System Guarantee work cannot be sub-contracted to a non-certified applicator.

C. TOPCOAT-CRT Roofing System must be applied to the full area of the roof. A System Guarantee will not be issued for TOPCOAT-CRT System installations over a section of any roof unless otherwise approved in advance by the TOPCOAT Warranty Department.

D. Immediately after contract award, Installer shall submit the appropriate section of the TOPCOAT System Guarantee Form to the TOPCOAT Warranty Department. Installer shall provide a copy of the roof drawing, plus a minimum of 6 photographs which include descriptions of the roof and all unusual flashing details, with the form.

E. Installer shall provide TOPCOAT Warranty Department at least two (2) weeks notice for scheduling of on-site technical support / inspections.

F. TOPCOAT-CRT Roofing Membrane must be spray-applied. Any installation where TOPCOAT-CRT Roofing Membrane will be applied by another method must be pre-approved in writing by the TOPCOAT Warranty Department.

G. All gutters and roof areas which pond water for more than 48 hours after precipitation ceases are excluded from coverage under the TOPCOAT System Guarantee.

H. Completed Guarantee Registration Card must be returned to the TOPCOAT Warranty Department with appropriate Installer and Building Owner signatures no later than 30 days after issuance by TOPCOAT.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

TOPCOAT, Inc. (a subsidiary of GAF Materials Corporation).

2.02 MATERIALS - GENERAL

A. Drying Times: Listed drying times for various TOPCOAT products are directly affected by environmental conditions and thickness of application. Additional drying time must be allowed when experiencing high relative humidity, low temperatures and/or very thick product application to prevent improper curing and/or product "wash-off".

B. TOPCOAT MB Two-Step Asphaltic Residue Treatment

1. TOPCOAT Precote: Step one of the two-step MB SYSTEM. Clear, solvent-based liquid to be applied as the first coat on any areas having residual asphalt. Precote provides for optimum adhesion of TOPCOAT products on residual asphaltic areas.

Application Rate: 1 gallon / 100 sq. ft.
Application Method: Brush or roller
Application Temperature (air, surface): 42¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 30 minutes
Total Solids (by weight): 28.4% – 1%
Specific Gravity / Weight per Gallon: 0.86 / 7.2 lbs
Viscosity (75¡F): 200 – 100 cps

2. TOPCOAT MB: Step two of the two-step MB SYSTEM. White, water-based product to be applied over Precote as the final separation between residual asphalt and TOPCOAT products. TOPCOAT MB prevents oils from the residual asphalt from bleeding through the TOPCOAT-CRT System. Do not apply in temperatures under 42¡F.

Application Rate: 1 gallon / 100 sq. ft.
Application Method: Brush, roller or airless sprayer
Application Temperature (air, surface): 42¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 8 hours
Total Solids (by weight): 63% – 1%
Specific Gravity / Weight per Gallon: 1.38 / 11.5 lbs
Viscosity (75¡F): 16,000 – 2,000 cps

C. TOPCOAT Flashing Grade (Regular and *Spray Formula*)
Light-gray, water-based synthetic rubber sealant to be applied on all joints, roof penetrations, cracks, splits and stress areas. Curing is enhanced by UV exposure. A sprayable version of Flashing Grade *(Flashing Grade — Spray Formula)*is available for use. Flashing Grade - Spray Formula has all of the same properties as regular Flashing Grade, but is lower in viscosity. Do not apply in temperatures under 42¡F.

Application Rate: 5 gallons total / 125 ft. (6" width)
Application Method: Brush or caulking gun *(airless sprayer)*
Application Temperature (air, surface): 42¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 24 hours
Total Solids (by weight): 65% – 1%
Specific Gravity / Weight per Gallon: 1.44 / 12.0 lbs
Viscosity — Regular (75¡F): 225,000 – 22,500 cps
Viscosity —*Spray Formula* (75¡F): 140,000 – 14,000 cps

D. SB-900 Solvent-Based Flashing Grade
White, solvent-based Flashing Grade compound designed for use in a wider range of temperatures.

Application Rate: 5 gallons total / 150 ft. (6" width)
Application Method: Stiff-brush, trowel or caulking gun
Application Temperature (air, surface): 20¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 24 hours
Total Solids (by weight): 78.5% – 1%
Specific Gravity / Weight per Gallon: 1.26 / 10.5 lbs
Viscosity (75¡F): 500,000 – 100,000 cps

E. TOPESTER Reinforcing Fabric
Non-woven, spun-bonded polyester fabric that must be used in conjunction with Flashing Grade and/or SB-900 at all cracks, roof penetrations, joints or changes in plane that have high shear or stress.

TOPESTER Fabric Roll Sizes: 6" x 150', 12" x 150'

F. TOPCOAT-CRT Roofing Membrane
Water-based, spray-applied liquid roofing membrane. Curing is enhanced by UV exposure. Available in white, gray and other standard as well as custom colors. Do not apply in temperatures under 42¡F.

Application Rate: 1.25 — 1.75 gallons / 100 sq. ft. per coat
Application Method: Airless sprayer
Application Temperature (air, surface): 42¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 24 hours per coat
Wet Mil Thickness: Silver-CRT System: Base Coat - 20 wet mils
(2 coats) Finish Coat - 28 wet mills
Bronze-CRT System: 28 wet mils
Dry Mil Thickness: Silver-CRT System: Base Coat - 12 dry mils
(2 coats) Finish Coat - 16 dry mils
Bronze-CRT System: 16 dry mils
Total Solids (by weight): 71 – 3%
Specific Gravity: 1.48 – 0.06
Weight per Gallon: 12.3 – 0.5 lbs
Viscosity (75¡F): 19,000 – 3,000 cps
pH: 10.0 – 1.0
Elongation: 375% – 25%
Tensile Strength: 275 – 25 psi
Water Permeability: 0.003 perm inch (ASTM E96-80)
Freeze-Thaw Stability: Passes five (5) cycles
Low Temperature Flexibility: 35 mil dry film will bend 180¡ @ -30¡F without fracturing

Weatherability - 1,000 hours Atlas Weather-o-meter® exposure per ASTM G-26
Tensile Strength: 150% of original
Elongation: 85% of original

- 1,500 hours Atlas Weather-o-meter® exposure per ASTM G-26
No cracking, embrittlement, loss of adhesion or discoloration

- 2,000 hours QUVe exposure, type UVB bulb, per ASTM G-53
No cracking, embrittlement, loss of adhesion or discoloration

G. TOPCOAT FlexSeal *(Regular and Low Viscosity — LV*
White, solvent-based synthetic elastomeric compound designed to line / waterproof gutters and roof drain areas. FlexSeal is capable of withstanding ponding water. This product is easiest to apply at temperatures over 42¡F. A low viscosity version of FlexSeal *(FlexSeal LV)* is available for use in cold temperatures. FlexSeal LV can also be used on relatively flat concrete surfaces because it is self-leveling.

Application Rate: 5 gallons / 100 sq. ft.
Application Method: Trowel or stiff-bristle brush
Application Temperature (air, surface): 20¡ - 120¡F
Drying Time (75¡F, 50% RH): Approximately 24 hours
Dry Mil Thickness: 50
Total Solids (by weight): 77% – 2%
Specific Gravity / Weight per Gallon: 1.24 / 10.3 lbs
Viscosity — Regular (75¡F): 500,000 – 100,000 cps
Viscosity —*LV* (75¡F): 150,000 – 15,000 cps

H. Airless Sprayer and Accessories: As recommended by TOPCOAT Technical Department for application of sprayable TOPCOAT products.

Monolithic Membrane 6125
Manufactured by
American Hydrotech, Inc.
303 E. Ohio Street
Chicago, Illinois 60611
Installed per Manufacturer's
Instructions

PART 3 - EXECUTION

3.01 PREPARATION OF SUBSTRATE

A. Examine Substrates to receive new roofing. Do not proceed with installation of the TOPCOAT-CRT Roofing System until unsatisfactory conditions have been corrected in a manner acceptable to the manufacturer (TOPCOAT, Inc.).

B. Preparation of the Roof Substrate is the responsibility of the Installer. Installer shall address and correct all of the following:

o Treatment of large gaps and cracks
o Treatment of ponding water areas
o Thorough cleaning / Removal of existing paints and coatings
o Treatment of residual asphalt
o Miscellaneous items

C. Treatment of Large Gaps and Cracks: All large gaps and cracks (greater than _") shall be repaired using a high quality concrete grout. Grout must be fully cured before application of TOPCOAT products.

D. Treatment of Ponding Water Areas: Installer shall make every effort to eliminate all ponding water areas on the roof prior to application of TOPCOAT products ("ponding water" is defined as water which does not properly drain and remains for more than 48 hours after precipitation stops). Ponding water areas which cannot be eliminated shall be treated with FlexSeal LV prior to application of other TOPCOAT products.

E. Thorough Cleaning / Removal of Existing Paints and Coatings: Structural concrete substrate must be pressure-washed with water. A minimum working pressure of 3,000 psi shall be used to remove all dirt, dust, previous paints / coatings which are delaminating and waste products (oil, oil-based roof cements, solvents, grease, animal fats, etc.). All existing silicone-based sealants must be completely removed from roof substrate prior to application of TOPCOAT products.

F. Treatment of Residual Asphalt: Installer shall make every effort to remove asphaltic roofing elements. Removal efforts must include use of methods such as pressure-washing, scrapers, wire brushes, electrical drill wire-wheels, or other similar tools. Residual asphalt is defined as asphaltic material remaining after the exercise of all required removal efforts, and exists when there is asphaltic material greater in thickness than 3 mils over an area greater than 1 square foot. Residual asphaltic areas are to be addressed with the two-step MB System. Apply TOPCOAT Precote to the entire asphaltic area to be treated. After sufficient drying time, apply TOPCOAT MB over the Precote to block any remaining oils from penetrating the TOPCOAT-CRT Roofing Membrane.

G. Preparation of Test Patches: Installer shall prepare no less than three (3) test patches for all questionable roof substrates to verify adhesion of TOPCOAT products. Minimum test patch size shall be one (1) square foot. After the test patches have been applied, allow at least one week of drying time before checking adhesion. Check adhesion by slicing an "X" (approx. 6" in size) near the center of the test patch. Then try to remove the TOPCOAT material at the center of the "X" with a spatula. Test patches shall be labeled and photographed to document adhesion test results. Installer shall consult with the TOPCOAT Technical Department concerning all adhesion test results.

H. Miscellaneous Items:

o Pitch Pans: For most situations, pitch pans shall be capped with sheet metal so they can be sealed with TOPCOAT products. Contact TOPCOAT's Technical Department for particulars.

o Neoprene Pipe Boots: TOPCOAT recommends installation of neoprene boots prior to flashing work being performed for certain types of pipe penetrations. Neoprene boots must first be sealed to the roof using a bead of FlexSeal prior to mechanical attachment with EverTite® fasteners. Contact TOPCOAT's Technical Department for particulars.

o Condensate Lines: TOPCOAT recommends installation of condensate lines from HVAC units to gutters as part of the overall roofing contract. Type of piping used for condensate lines may vary depending on local building codes. Lines must be securely fastened to the concrete deck.

3.02 APPLICATION AND INSPECTION INFORMATION

A. Flashing Work: All joints, cracks, stress areas and roof penetrations must be treated with a 6" wide area of TOPCOAT Flashing Grade, (1) layer of TOPESTER Fabric and a final layer of Flashing Grade to completely embed the TOPESTER Fabric. Flashing Grade must be feathered at least 1" beyond each side of the 6" width to allow water to flow over the seam.

B. Interim Inspection: Inspect substrate preparation and flashing work for problem areas (e.g., gaps, cracks, fishmouths, air pockets, etc.) to ensure that work is complete and satisfactory prior to application of TOPCOAT-CRT Roofing Membrane.

C. Inform Project Architect and TOPCOAT Warranty Department when all substrate preparation and flashing work will be complete and the Installer is ready to proceed with application of TOPCOAT-CRT Roofing Membrane. Allow a minimum of two (2) weeks for the interim inspection to be made by the TOPCOAT Technical Department. Any final roofing installation prior to this interim inspection is subject to rejection by the Project Architect and/or the TOPCOAT Technical Department.

D. Coating Application(s):

1. Silver-CRT System (10-year Labor and Material Guarantee):

a. Spray-Apply Base Coat (gray) of TOPCOAT-CRT Roofing Membrane at a rate of 1.25 gallons per 100 square feet. Allow at least 24 hours drying time and inspect the base coat for defects, flaws or holidays. Correct any unsatisfactory conditions prior to proceeding.

b. Spray-Apply Finish Coat (white) of TOPCOAT-CRT Roofing Membrane at a rate of 1.75 gallons per 100 square feet. It should not be applied unless the base coat is clean and will provide proper adhesion. Allow a minimum of 24 hours drying time prior to allowing foot traffic or inspection of roof surface.

c. After at Least 24 Hours Has Elapsed, inspect the final roof surface for flaws, holidays, insufficient thickness, etc. Specified Silver-CRT System dry mil thickness is 28 mils in the field of the roof. All unsatisfactory areas must be repaired.

2. Bronze-CRT System (5-year Labor and Material Guarantee) *NOTE: The Bronze-CRT System is only available for concrete roofs which have smooth surfaces and/or previous coatings which are well adhered*:

a. Spray-Apply Finish Coat (white) of TOPCOAT-CRT Roofing Membrane at a rate of 1.75 gallons per 100 square feet. Allow a minimum of 24 hours drying time prior to allowing foot traffic or inspection of roof surface.

b. After at Least 24 Hours Has Elapsed, inspect the final roof surface for flaws, holidays, insufficient thickness, etc. Specified Bronze-CRT System dry mil thickness is 16 mils in the field of the roof. All unsatisfactory areas must be repaired.

E. Inform Project Architect and TOPCOAT Warranty Department when final spray application will be complete. All guaranteed installations of the TOPCOAT-CRT Roofing System must be inspected upon completion by a representative from TOPCOAT's Technical Department. Installer shall repair all defective work found during the final inspection. Installer shall repair all damages to roofing which has occurred subsequent to roofing installation and prior to final inspection.

3.03 OTHER ITEMS

A. Installer shall take photographs of representative roof areas, including detail work, at the following intervals (minimum):

o Before work commences
o After roof has been thoroughly cleaned and prepared for application of TOPCOAT-CRT Roofing System products
o After all flashing and detail work has been performed
o After spray application of TOPCOAT-CRT Roofing Membrane

B. Installer shall provide the following support for on-site inspections by a representative from TOPCOAT's Technical Department (list is not comprehensive):

o Representative from Installer's company who has authority to make binding decisions
o Required means to access all areas of the treated roof (e.g., various ladders)
o Previous photographs of the roof including test patch results, as applicable
o TOPCOAT products and application equipment required to repair roof areas where destructive tests are to be performed by the TOPCOAT Technical Department

C. Special care must be taken to avoid shading when spraying dark TOPCOAT-CRT Roofing Membrane colors. When applying a dark TOPCOAT-CRT Membrane color, Installer must be very careful to always spray wet material onto wet material so that spray lines do not appear. TOPCOAT highly recommends installation of any dark-colored finish coat by spraying two lighter coats (instead of one heavy coat) using a smaller orifice spray tip.

D. Installer shall take special care when moving spray hoses and other equipment on the roof so that flashing work is not damaged. Also, all spray equipment shall remain on the ground for the duration of the job.

E. It is strongly recommended that walkways designed for concrete roofing systems be installed in all high traffic areas. Contact the TOPCOAT Technical Department for recommendations.

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HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	VESEY GREEN, NEW YORK
GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK	JAMES F. GILL CHAIRMAN
CHARLES J. URSTADT VICE CHAIRMAN	TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
212.416.5300
ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281

BRIAN TOLLE, ARTIST	I 100 ARCHITECT, P.C.	GAIL E. WITTWER, ASLA
212.777.1145	212.645.1011 FACSIMILE 212.645.4670	917.445.5424 FACSIMILE 212.253.9915
18 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014	125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

REV:
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: SPECIFICATIONS SHEET 1
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 0.01

SECTION 07140
FLUID-APPLIED WATERPROOFING
PART 1 GENERAL

1.1 SUMMARY
A. Section includes below grade rubberized hydrocarbon polymer spray applied membrane waterproofing.
B. Related Sections:
1. Section 02 320 - B ackfill.
2. Section 02620 - Suodrainage.
3. Section 05810 - Expansion Joint Cover Assemblies.
4. Section 07212 - Board Insulation: Perimeter [and horizontal] insulation.

1.2 REFERENCES
A. ASTM C836 - High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use With Separate Wearing Course.
B. ASTM D95 - Test Method for Water and Petroleum Products and Bituminous Materials by Distillation.
C. ASTM D412 - Test Method for Vulcanized Rubber and Thermoplastic Rubbers and Thermo plastic Elastomers - Tension.
D. ASTM D429 - Test Method for Rubber Property-Adhesion to Rigid Substrates.
E. ASTM D2020 - Test Method for Mildew and (Fungus) Resistance of Paper and Paper Board.
F. ASTM D2240 - Test Method for Rubber Property - Durometer Hardness.
G. ASTM D4299-83 - Test Method for Effect of Bacterial Contamination on Permeance of Adhesive Preparations and Adhesive Film.
H. ASTM E96 - Test Method for Water Vapor Transmission of Materials.
I. ASTM E154 - Test Method for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
J. ASTM G29-75 - Practice for Determining Algal Resistance of Plastic Film.

1.3 SYSTEM DESCRIPTION
A. Waterproofing System: Below grade spray applied material to prevent moisture migration to interior.

1.4 PERFORMANCE REQUIREMENTS
A. Waterproofing System: Capable of resisting water under pressure and preventing moisture migration to interior.

1.5 SUBMITTALS
A. Section 01330 - Submittal Procedures: Submittal procedures.
B. Shop Drawings: Indic ate special joint or termination condition s and conditions of interface with other materials.
C. Product Data: Submit data for flexible waterproofing membrane, with temperature range for application of waterproofing membrane.
D. Manufacturer's Installation Instructions: Submit special procedures and perimeter conditions requiring special attention.
E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.6 QUALIFICATIONS

A. Waterproofing Material Manufacturer: Company specializing in waterproofing membrane with minimum three years documented experience.
B. Applicator: Company specializing in performing the work of this section with minimum three years documented experience; and approved and certified by manufacturer.

1.8 PRE-INSTALLATION MEETING
A. Section 01300 - Administrative Requirements: Preinstallation meeting.
B. Convene minimum one week prior to commencing work of this section.

1.9 ENVIRONMENTAL REQUIREMENTS
A. Section 01600 - Product Requirements.
B. Maintain ambient temperatures above 15 degrees F during application and until liquid or mastic accessories have cured.
C. Environmental Limitation s: Apply waterproofing within the range o f ambient and substrate temperatures recommended by waterproofing manufacturer.
1. Do not apply waterproofing in snow, rain, fog or mist, or when such weather conditions are imminent during application.
2. Minimum Application Temperature: 15 degrees F.
D. Maintain adequate ventilation during application and curing of waterproofing materials.

PART 2 PRODUCTS

2.1 FLUID APPLIED WATERPROOFING

A. Manufacturer:
1. Rubber Polymer Corporation, 1135 West Portage Trail Ext., Akron, Ohio 44313, USA. Telephone 1-800-860-721, Email rpclink@worldnet.att.net
2. Product:
a. Graywall.
1) Color: Gray.
B. Substitutions: [Section 01600 - Product Requirements] [Not Permitted].

2.2 COMPONENTS
A. Waterproofing Membrane: ASTM C836 ; one component hydrocarbon polymers in hydrocarbon solvents, elastomeric compound; hot spray applied, quick setting.

PROPERTIES	TEST	RESULTS
Elongation	ASTM D412 (die C)	1,000+ percent
Low-Temperature Flexibility	Bend around 0.5 inch mandrel	Flexible to minus 20 degrees F
Abrasion Resistance	700 psi on 0.06 inch x 0.06 inch	Less than 0.10 percent point moving 1 inch per second membrane loss
Asphalt Content	Not Applicable	0.0 percent
180 Degree Peal Adhesion	Metal plate	18 pounds per inch
Crack Bridging	ASTM C836	Exceeds ten cycles to 1/8 inch at minus 15 degrees F
Water Vapor Permeance	ASTM E96 (water method)	0.21 perms for 40 -mildry coating grams per square foot per hour in Hg
Liquid Water Absorption	ASTM D95	Less than 0.5 percent (weight)
Resistance to Bacteria	ASTM D4299-83 (modified)	No attack
Resistance to Degradation in Soil	ASTM E154 (soil preparation)	Excellent
Resistance to Algae	ASTM G29-75 (modified)	No attack
Resistance to Fungus	ASTM D2020 (modified)	No attack
Resistance to Chemical Attack	Visual	Unaffected by chemicals in concentrations typically found in soils
Solvent Resistance	Visual	Exceeds performance of modified asphalts
Life Expectancy	Arrhenius projection theory	Exceeds 100 years

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01300 - Administrative Requirements: Coordination and project conditions.
B. Verify substrate surfaces are free of frozen matter, dampness, loose particles, cracks, pits, projections, penetrations, or foreign matter detrimental to adhesion or application of waterproofing system.
C. Verify substrate surfaces are smooth, free of honeycomb or pitting , and not detrimental to full contact bond of waterproofing materials.
D. Verify items penetrating surfaces to receive waterproofing are securely installed.
E. Verify substrate surface slopes to drain for horizontal waterproofing applications.

3.2 PREPARATION

A. Protect adjacent surfaces not designated to receive waterproofing.
B. Clean and prepare surfaces to receive waterproofing.
C. Do not apply waterproofing to surfaces unacceptable to manufacturer or applicator.
D. Seal cracks and joints with sealant materials using depth to width ratio (as recommended by sealant manufacturer.) [in accordance with Section [07 900] [_ _____ _]:]

3.3 INSTALLATION

A. Apply waterproofing material in strict conformance with manufacturer's specific procedures for this project.
1. Applicator: Apply product by manufacturer's certified applicators only.
2. Method: Airless spray.
3. Density: 6.8 to 7.8 pounds per gallon.
4. Application Rate:
a. Parged Concrete Masonry Unit Walls: 35 to 45 square feet per gallon.
b. Poured Concrete Walls: 40 to 45 square feet per gallon.

3.4 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01700 - Execution Requirements: Protecting installed construction.

END FLUID-APPLIED WATERPROOFING 07140-6

SECTION 07190
WATER REPELLENTS

PART 1 GENERAL

1.01 SUMMARY
A. Section Includes: Penetrating water repellents, stain repellents, graffiti repellents and breathable color coatings for above-grade, vertical and horizontal masonry, concrete, tile and natural stone surfaces.
B. Related Sections: Section(s) related to this section include:
Masonry: Division 4 Masonry Sections.

1.02 SYSTEM DESCRIPTION
A. Performance Requirements: Provide protective treatment which is designed to provide the specified level of protection when applied to the designated substrate(s). Install according to manufacturer's recommendations.
B. Water Repellent Performance: Provide water repellent which achieves the following performance standards when applied to the designated substrate(s).
1. Absorption: [Specify minimum percentage and time period.]
a. Brick (ASTM C67): [Specify minimum percentage and time period.]
b. Stone (ASTM 97): [Specify minimum percentage and time period.]
c. Concrete Unit Masonry (ASTM C140): [Specify minimum percentage and time period.]
d. Hardened Concrete (ASTM C642): [Specify minimum percentage and time period.]
2. Water-Vapor Transmission (ASTM E96): [Specify minimum percentage and time period.]
3. Water Absorption (RILEM Test Method No. II.4): [Specify minimum absorption in ml or mph and time period.]
4. Durability (ASTM G53): [Specify minimum percentage and time period.]

1.03 SUBMITTALS
A. General: Submit listed submittals in accordance with *Conditions of the Contract* and Division 1 Submittal Procedures Section.
B. Product Data: Submit product data, including manufacturer's product sheet, for specified products.
C. Samples: Submit selection and verification samples for finishes, colors and textures.
D. Quality Assurance Submittals: Submit the following:
1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria, and physical requirements.
a. Submit certificate by water repellent manufacturer certifying compliance with regulations controlling VOC content.
3. Manufacturer's Instructions: Manufacturer's installation instructions.
4. Manufacturer's Field Reports: Manufacturers field reports specified herein.
E. Closeout Submittals: Submit the following:
1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
2. Warranty: Warranty documents specified herein.

1.04 QUALITY ASSURANCE
A. Qualifications:
1. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
a. Certificate: When requested, submit certificate indicating qualification.
2. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction, approving acceptable installer and approving application method.
B. Regulatory Requirements: [Specify applicable VOC requirements of regulatory agencies.]
D. Preinstallation Meetings: Conduct preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
E. Preinstallation Testing: Before full-scale application, review manufacturer's product data sheets to determine the suitability of each product for the specific surfaces. Apply each protective treatment to test panels to determine number of applications, coverage rates, compatibility, effectiveness, surface preparation, application procedures and desired results.
F. Apply protective treatments to test panels in accordance with manufacturer's instructions. Allow 48 hours or until test panels are thoroughly dry before evaluating final appearance and results. Do not begin full-scale application until test panels are inspected and approved by the architect.
G. Test panel requirements:
1. Size: Minimum 4' by 4' (1.2 x 1.2 m) each.
2. Locations: As determined by the Architect.
3. Number: As required to completely test each protective treatment with each type of substrate to be protected.

1.05 DELIVERY, STORAGE & HANDLING
A. General: Comply with Section 01 Product Requirements Sections.
B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
D. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

1.06 PROJECT CONDITIONS
A. Environmental Requirements/Conditions: Substrate and ambient air temperature shall be in accordance with manufacturer's requirements.
1. Do not apply at surface and air temperatures below 40°F (4°C) or above 95°F (35°C) unless otherwise indicated by manufacturer's written instructions.
2. Do not apply when surface and air temperature are not expected to remain above 40°F (4°C) for a minimum of 8 hours after application, unless otherwise indicated by manufacturer's written instructions.
3 Do not apply under windy conditions such that protective treatment may be blown to surfaces not intended.
4. Do not apply to frozen substrate. Allow adequate time for substrate to thaw, if freezing conditions exist, before application.
5. Do not apply earlier than 24 hours after rain or if rain is predicted for a period of 6 hours after application, unless otherwise indicated by manufacturer's written instructions.

1.07 WARRANTY
A. Project Warranty: Refer to *Conditions of the Contract* for project warranty provisions.
B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document.
Specifier Note: Coordinate paragraph below with manufacturer's warranty requirements.
1. Warranty Period: [Specify term.] years commencing on Date of Substantial Completion.

PART 2 PRODUCTS

2.01 WATER REPELLENTS
A. Manufacturer: PROSOCO, Inc.
1. Contact: 3741 Greenway Circle, Lawrence, KS 66046; Telephone: (800) 255-4255, (785) 865-4200, Fax: (785) 830-9797.
B. Proprietary Product(s)/System(s): PROSOCO Water Repellents.
1. Sure Klean ® Weather Seal Protective Water Repellents for Vertical and Horizontal Surfaces.
2. Consolideck ® Protective Water Repellents for Horizontal Surfaces.
3. Stand Off ® Stain Repellents.
4. Defacer Eraser ® Graffiti Repellents.
5. BMC ® Breathable Masonry Color Coats.

2.02 PRODUCT SUBSTITUTIONS
A. Substitutions: No substitutions permitted.

2.03 MATERIALS
A. Water Repellents:
1. Weather Seal Siloxane / Siloxane WB / Siloxane PD: [Specify for penetrating water repellent for vertical concrete, brick and clay tile surfaces.]
a. Weather Seal Siloxane Characteristics: Oligomeric siloxane active substance; 5.8% active substance content; clear liquid form; 0.793 Specific Gravity; 108°F. (42.2°C.) Flash Point; less than 760 g/L VOC; 6.6 lbs. wt./gal. (0.791 kg/L).
b. Weather Seal Siloxane WB Concentrate Characteristics: Microemulsion concentrate of silanes and oligomeric alkyl alkoxysiloxanes active substance; 100% concentrate solids; clear amber liquid form; 1.000 Specific Gravity; 90°F. (32°C.) (in concentrate) Flash Point; 318 grams/liter (ASTM D5095) VOC
c. Weather Seal Siloxane PD Characteristics: Emulsion of silanes and oligomeric alkyl alkoxysiloxanes active substance; 7.0% solids; white milky liquid form; 1.000 Specific Gravity; greater than 200°F. (93°C.) Flash Point; less than 200 grams/liter (ASTM D3960) VOC.
2. Weather Seal SL20/SL40/SL40-c600/SL100: [Specify for colorless protection of vertical or horizontal concrete, colored concrete, cast stone or color sensitive surfaces.]
a. Weather Seal SL20 Characteristics: Clear liquid; Alkyl alkoxy silane active substance; 20% solids; 0.828 Specific Gravity; 41°F. (5°C.) Flash Point; 6.87 lbs. wt./gal. (0.823 kg/L).
b. Weather Seal SL40 Characteristics: Clear liquid; Alkyl alkoxy silane active substance; 40% active solids; 0.838 Specific Gravity; 58°F. (14.4°C.) Flash Point; 6.97 lbs. wt./gal. (0.835 kg/L).
c. Weather Seal SL40-c600 Characteristics: Clear liquid; Alkyl alkoxy silane active substance; 48% active solids; 0.853 Specific Gravity; 56°F. (13.3°C.) Flash Point; 7.10 lbs. wt./gal (0.851 kg/L).
d. Weather Seal SL100 Water Repellent Characteristics: Clear to slight yellow liquid; modified alkyl alkoxysilane active substance; greater than 95% active content; 0.921 Specific Gravity; 108°F. (42°C.) Flash Point; 350 grams/liter VOC.
Specifier Note: Billow Custom Masonry Sealer weatherproofs porous custom masonry, concrete block, cast stone and precast concrete.
3. Custom Masonry Sealer: [Specify for water-repellent protection of porous custom masonry, concrete block, cast stone and precast concrete.]
a. Characteristics: Clear liquid; silicone elastomer active substance; 0.797 Specific Gravity; 100°F. (37.8°C.) Flash Point; 6.63 lbs. wt./gal. (0.795 kg/L).
4. Blok-Guard ® and Graffiti Control: [Specify for water repellent protection for hard-to-seal, porous concrete block and masonry.]
a. Characteristics: Clear liquid; silicone elastomer active substance; 0.797 Specific Gravity; 100°F. (37.8°C.) Flash Point; 6.63 lbs. wt./gal. (0.795 kg/L).
5. Weather Seal H40: [Specify for deep-penetrating protection and strengthening of deteriorating masonry.]
a. Characteristics: Clear liquid; 40% active material content; 0.851 Specific Gravity; 20°F. (6.7°C.) Flash Point; 7.10 lbs. wt./gal. (0.851 kg/L).
6. Natural Stone Treatment. [Specify for siloxane water repellent for limestone, marble and most other masonry.]
a. Natural Stone Treatment Characteristics: Clear liquid form; 15% active substance content; 0.811 Specific Gravity; 89°F (37.2°C) Flash Point; 6.75 lbs wt./gal. (0.809 kg wt./L.).
b. Natural Stone Treatment (less than 400 g/L VOC) Characteristics: Clear liquid form; 15% active substance content; 0.915 Specific Gravity; 93°F. (33.9°C.) Flash Point; 7.59 lbs wt./gal. (0.914 kg wt./L.).
c. Natural Stone Treatment (less than 600 g/L VOC) Characteristics: Clear liquid form; 15% active substance content; 0.859 (minimum) Specific Gravity; 93°F (33.9°C) Flash Point; 7.15 lbs wt./gal. (0.858 kg wt./L.).
7. Penetrating Water Repellent WB: [Specify for water repellent protection of porous, light colored natural stone and grout.]
a. Characteristics: Clear liquid; 2.0% active substance content; 1.002 (minimum) Specific Gravity; No Flash Point; 8.49 lbs. wt./gal. (1.017 kg/L); 0 g/L VOC; 12 pH.
8. Consolideck ® Saltguard/Saltguard WB/SX: [Specify for water repellent protection of horizontal steel-reinforced concrete.]
a. Consolideck ® Saltguard Characteristics: Clear liquid; oligomeric siloxane active substance; 10% active content; 0.802 Specific Gravity; 102°F. (38.8°C.) Flash Point; 6.68 lbs. wt./gal. (0.800 kg/L).
b. Consolideck ® Saltguard WB Characteristics: White, milky liquid; emulsion of silanes and oligomeric alkyl alkoxysiloxanes active substance; 10% active material content; 0.996 Specific Gravity; less than 200°F. (93.3°C.) Flash Point; 8.29 lbs. wt./gal. (0.993 kg/L); greater than 200 grams/liter (ASTM D3960) VOC.
c. Consolideck ® SX: Characteristics: Clear liquid; oligomeric siloxane active substance; 16% active substance content; 0.815 Specific Gravity; 102°F. (38.8°C.) Flash Point; 6.78 lbs. wt./gal. (0.812 kg/L); 714.5 g/L VOC.
9. Stand Off ® SLX 100 Water and Oil Repellent: [Specify for VOC compliant water and oil repellent for colorless protection of dense colored concrete, cast stone, and natural stone surfaces.]
a. Characteristics: Clear liquid; modified alkyl alkoxysilane active substance, greater than 90% active content, 0.94 Specific Gravity; 57°F. (14°C.) Flash Point; 7.84 lbs. wt./gal. (0.939 kg/L), less than 380 g/L VOC.
10. Stand Off ® Limestone and Marble Protector: [Specify for protection of natural stone, tile and grout surfaces against oil, water and common food staining.]
a. Characteristics: Clear liquid; modified silane active substance content, 9.0% active content, 0.800 Specific Gravity, 77°F. (25°C.) Flash Point; 6.62 lbs. wt./gal. (0.794 kg/L).
11. Stand Off ® Stone, Tile and Masonry Protector (STMP): [Specify for water-based, VOC compliant protection against oil, water and common food staining.]
a. Characteristics: Clear liquid; organic fluoro chemical active content, 1.005 Specific Gravity; non-flammable; less than 32°F. (0°C.) Freeze Point; 8.42 lbs. wt./gal. (1.009 kg/L); less than 120 g/L VOC; 6-7 pH.
12. Blok-Guard ® and Graffiti Control: [Specify for a coating that forms a durable, breathable, invisible barrier that prevents penetration of most types of graffiti into porous masonry or concrete. Remove graffiti attacks with Defacer Eraser ® Graffiti Wipe.]
a. Characteristics: Clear liquid; silicone elastomer active substance; 9% active substance content; 0.775 Specific Gravity; 100°F. (37.8°C.) Flash Point; 6.63 lbs. wt./gal. (0.795 kg/L).
13. Defacer Eraser ® Graffiti Control WB: [Specify for VOC compliant, water-based silicone elastomer protects surfaces subject to repeated graffiti attacks. Remove graffiti attacks with Defacer Eraser ® Graffiti Wipe.]
a. Characteristics: White milky liquid; silicone elastomer active substance; 20% active substance content; 1.00 Specific Gravity; greater than 212°F. (100°C.) Flash Point; 8.32 lbs. wt./gal. (0.986 kg/L), less than 200 g/L VOC.
14. Defacer Eraser ® SC-1 Sacrificial Coating: [Specify for coating that forms a graffiti resistant sacrificial coating on masonry, concrete, metal, glass, and most painted surfaces. Remove graffiti attacks with hot water or Defacer Eraser ® Graffiti Wipe and re-apply SC-1 Coating.]
a. Characteristics: White, semi-opaque liquid; micro crystalline wax-active substance; 7% active substance content; 0.976 Specific Gravity; greater than 200°F. (93.3°C.) Flash Point; 8.12 lbs. wt./gal. (0.973 kg/L). 0 g/L VOC.
15. Breathable Masonry Coating 55: [Specify for VOC compliant color coat suitable for masonry and non-masonry surfaces.]
a. Characteristics: Acrylic emulsion; titanium dioxide rutile, inorganic and organic colored pigments, modified-acrylic polymer binder; 47.2% solids by weight; 36.6 percent solids by volume; 10.37 lbs wt./gal. (1.242 kg/L); No Flash Point; Water Reduction; Water Clean Up; Coalescence type of cure.
16. Weather Seal Blok-Guard ® Stain: [Specify for VOC compliant, semi-opaque stain uniformly colors and weatherproofs architectural concrete block and other highly porous masonry.]
a. Characteristics: Water based blend of acrylic and silicone resins; 20% active substance content; 1.047 Specific Gravity; No Flash Point; 8.71 lbs wt./gal. (1.043 kg/L); 107 g/L VOC; 87% Breathability (ASTM E96 Water Method).

2.04 RELATED MATERIALS
A. Related Materials: Refer to other sections listed in Related Sections paragraph herein for related materials.

2.05 MIXES
A. Mixing: Mix proprietary materials in accordance with manufacturer's instructions, including product data and product technical bulletins.

2.06 SOURCE QUALITY
A. Source Quality: Obtain water repellent materials and surface preparation cleaners from a single manufacturer.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS
A. Compliance: Comply with manufacturer's product data and container label instructions for installation.

3.02 EXAMINATION
A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION
A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
B. Surface Preparation: Clean all dirt, dust, oil, grease and other contaminants from surfaces that interfere with penetration or performance of protective treatment(s). Use cleaners approved by the water repellent manufacturer where necessary. Rinse thoroughly to remove cleaner residues and soiling. Allow surfaces to dry completely. Repair, patch and fill cracks, voids, defects and damaged areas in surfaces as approved by Architect. Allow repair materials to cure completely. Apply specified sealants and caulking and allow to cure completely.
C. Test Application: [Specify requirements of test application for water repellents to suit project requirements and substrate conditions.]

3.04 INSTALLATION
A. Protective Treatment Installation:
1. Apply protective treatment in accordance with manufacturer's written instructions, environmental regulations and application procedures determined from test panels approved by the Architect.
2. Apply to clean, dry, cured and properly prepared surfaces approved by the Architect.
3. Consult manufacturer's written instructions for information on application equipment to be used and precautions to be taken with specified products.
4. Dilute only as specified with clean, potable water in accordance with the manufacturer's written instructions.
5. Do not apply to below-grade surfaces.
6. Do not apply to compensate for structural or material defects in substrate.
7. Avoid over spray, wind drift and splash of protective treatments.
B. Inspection: Inspect protective treatment work with the Contractor, Architect, applicator and PROSOCO representative, and compare with test panels approved by the Architect. Determine if the substrates are suitably protected.
C. Manufacturer's Field Services: Provide the services of a manufacturer's authorized field representative to verify specified products are in accordance with the manufacturer's written instructions and the test panel results approved by the Architect.
D. Finish Colors: [Specify installation finishes coordinated with finishes specified in Part 2 Products.]
E. Related Products Installation: Refer to other sections listed in Related Sections paragraph herein for related products installation.

3.05 FIELD QUALITY REQUIREMENTS
A. Site Tests [Installation and Post Installation Testing]: [Specify applicable test requirements to be performed during and/or after product installation.]
B. Inspection: [Specify applicable product inspection requirements to be performed after product installation.]
C. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.
1. Site Visits: [Specify number and duration of periodic site visits.]

3.06 CLEANING
A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.07 PROTECTION
A. Protection: Protect installed product and finish surfaces from damage during construction.

END OF SECTION

Permaquik Capillary Waterproofing
by Permaquik Inc.
101 Commercial St.
Plainview, NY 11803
Installed per Manufacturer's
Instructions on concrete retaining
walls

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REV:
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: SPECIFICATIONS SHEET 2
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 0.02

SECTION - 03330

ARCHITECTURAL CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 GENERAL REQUIREMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. This section specifies additional and separate requirements to The Structural Concrete Sections and applies to Cast-in-Place Architectural Concrete as designated on the drawings.

1.2 QUALITY ASSURANCE

A. Concrete Quality Control Technician: The contractor shall assign a quality control person to oversee the architectural concrete work. The primary duty is to be responsible for the required execution of the work.

B. Quality Control Program: The contractor shall submit a quality control program including a checklist and sign-off sheet that the quality control person shall complete and submit to the Architect's site representative for each placement.

1.3 SUBMITTALS

A. General:
1. Comply with submittal requirements for Structural Concrete Section as modified with the following requirements.
2. Do not proceed with the construction of the cast-in-place architectural concrete in the project, including fabrication of the formwork, until all samples, product data, and mock-up have been approved by the Architect.

B. Placing: Submit layout or description of each placement showing sequence and projected time between deposits.

D. Product Data: Manufacturer's technical information and name of supplier for each of the following products:
1. Cement.
2. Aggregates, each type.
3. Admixtures, each type.
4. Color admixture
5. Form surface material for soffit
6. Form surface material for edge beam and cantilevered beam bottom
7. Form release coating.
8. Reinforcing bar support devices
9. Curing sheet material
10. Abrasive blasting sand and equipment
11. Water repellent sealer.
12. Inserts and embedments, each type
13. Concrete mix supplier certification.
14. Qualifications for designated Quality Control Person.
15. Quality Control Program and checklist

E. Samples:
1. Concrete Samples:
a. Submit samples as follows for the cast-in-place concrete:
b. Concrete color samples: 12"x12"x1", cast flat, using specified form material, to establish the color. Finish with specified abrasive blast finish treatment. Submit as required to attain approval of the Architect.
2. Embedded stones with anchor

F. Mock-up for Formed Concrete Work:
1. Mock-up shall consist of the following placements:
a. Foundation and framework of a size adequate to support the work. When the formwork is removed shall allow viewing from beneath with 8 ft of headroom.
b. Slab soffit area with a minimum of two beams and a minimum of 10x 8 ft of soffit area between beams.
c. Beams free form shape sculpted soffit slab as generally shown on the drawings.
d. Soffit of supported slab shall have random 6" to 16" faceted stones hand set into the soffit so the stone projects from the soffit when the form material is removed. Place a minimum of 5 stones from 6" to 16"
e. Finish exposed surfaces with the specified abrasive blast finishes.
2. Reinforce units as per the similar detail on the drawings and add necessary reinforcing and/or supports to maintain stability.

G. Concrete mix designs: As specified in Structural Concrete Section, and as specified herein.

PART 2 PRODUCTS

2.1 GENERAL

A. All materials shall be new or like new condition free from defects which will impair achieving the specified durability or appearance of the Architectural Cast-in-Place Concrete.

2.2 CONCRETE MATERIALS

A. Each concrete material shall be the product of a single plant and raw material source throughout project.

B. Cement: ASTM C-150, Type I or II, light gray in color. Cement shall be Essroc, Nazareth, or Whitehall manufactured from raw material in the Lehigh Valley In Pennsylvania

C. Fine and Coarse Aggregate: ASTM C-33, light tan in color, rounded gravel, graded with maximum size 2". Aggregate shall be from Long Island.

D. Admixtures:
1. All admixtures must be certified to be compatible with the cement, aggregates, and all other constituent materials in the mix and shall contain less than 0.05% of Calcium Chloride.
2. Air Entrainment shall be 5 to 6 percent
3. Medium or High Range Water Reducing (M/HRWR): ASTM C-494, type F or G. M/HRWR shall be Rheobuild 1000 or Polyheed by Master Builders; Daracem 100 or ADVA by W.R. Grace; or approved equal.
4. Color Admixture: Shall be manufactured specifically for this project, packaged in units for treatment of one cubic yard and have integral Plasticizers and dispersal agents. The full amount of color admixture shall be manufactured in one production run and stored as directed by the manufacturer. Color to be selected by the Architect. Admixture shall be Cromix, group-3 by L.M. Scofield, Atlanta, GA.

E. Water: Potable

2.3 FORMWORK:

A. Formed Surfaces for Vertical Surfaces:
1. Formed surfaces shall be plastic coated plywood panels in sizes to cover surface areas between joint lines shown on the drawings. Panels shall medium density plastic overlay on exterior grade plywood.

B. Formed Surfaces for Soffit of Supported Slab:
1. Construct a base structure for support and apply the following:
2. Beam bottoms, and soffits between beams shall be B-B plywood or better.
3. Construct a framework for the soffit form panels to produce profiles as shown on the drawings.
4. Joints between panels shall be accomplished so the surface does not have a break in plane. At joints where there is a break in the continuity of plane nail a 6" to 12" wide strip of sheet metal (22 gage flashing material) to achieve a curved effect between panel surfaces. If wider strips are required use 1/8" plywood sheets.
5. Provide a curved cant strip between the soffit panels and the vertical edge form. Use thin plywood (1/8") 4 inch wide strips. Screw at center of strips and force strips into a curved transition between side form and soffit.

C. Form Release Coating: Colorless, non-staining and having no deleterious effects on the concrete, manufactured specifically for non-absorbent surfaces and for reducing surface voids.

D. Reinforcing and Accessories:
1. Reinforcing as required in the Structural Section.
2. Support rei..orcing on fiberglass post supports set on the soffit or through the soffit to the main deck. After stripping and abrasive blasting cut off posts as required to blend into surface texture.
3. Tie wire used to secure reinforcing steel adjacent to architectural form surfaces shall be non-corrosive or plastic coated wire.

3.4 MISCELLANEOUS MATERIALS

A. Curing Compound: ASTM C-309, shall be diffusive and maintain 90% of the moisture in the mass for a minimum of 72 hours.

B. Curing Sheet Material: shall be reinforced, 6 mill, Polyethylene, white

C. Sealer: For all exposed-to-view formed and un-formed surfaces shall be "Weatherseal SL-100" by ProSoCo, Kansas City, KA. or approved equal.

D. Patching Additive: Shall be a liquid, acrylic-polymer bonding agent specifically made to be integrally mixed with mortar. Additive shall be as manufactured by Master Builders, "Acryl Set", or approved equal.

PART 3 EXECUTION

2.1 CONCRETE MIXTURES

A. Comply with the requirements of Structural Concrete Section and as specified herein.

B. All concrete shall have an Air Entrainment and a Medium or High Range Water Reducing Admixture (M/HRWR) and a color additive.

C. Mix, prior to the addition of M/HRWR, shall be designed for minimum water content (optimum slump of 2.5 inches or w/c ratio of 0.41). Fluidity shall be attained by the addition of a Medium Range Water Reducing Admixture to a slump of 7"±1"

D. Mix design shall designate the optimum duration of fluid stability for the mix for the placing conditions.

2.2 FORMWORK

A. Fabrication:
1. Comply with the Structural Concrete Section, and as herein specified.
2. Forms shall be fabricated so the concrete can be adequately placed, vibrated and finished to achieve the specified finishes.

E. Coating of Forms: Prior to use, all forms shall be coated with the specified form release costing in accordance with the manufacturer's written instructions. Coat evenly and remove excess material from form surface with a damp absorbent cloth. Surface applied with specified release agent shall not be oily to the touch. Do not allow coating to come in contact with previously placed concrete or with reinforcing steel.

2.3 FORMWORK TOLERANCES

A. Hydraulic pressures: Design forms to limit deflections of plywood between supports and form surface between ties to L/360 of the.
B. Finish Lines: Fabricate and position formwork to maintain hardened concrete finish lines in an even surface without unsightly offsets.

3.4 REINFORCEMENT

A. Comply with the requirements of the Structural Concrete Section and as specified herein.

B. Support accessories shall be spaced to adequately support the bars.

C. Tie wire for reinforcing steel shall be tied in a manner so that wire ends will points away from the architectural formwork surface.

D. All reinforcing steel, including bands, shall be secured a minimum of 2-_" from the contact surface of the formwork prior to placing concrete.

3.5 MIXING AND TRANSPORTING CONCRETE

A. All concrete for each placement, or a minimum of three truck loads shall be on the site prior to starting the placement. The concrete shall be completely discharged into the forms within the time determined by the design mixes to be the optimum duration of fluid stability provided by the mix design. In no case will the concrete be placed after stiffening of the concrete has occurred. Discharge two trucks into the pump or bucket at one time in a manner that will enable one truck to be half full and discharging while the other is finished and being replaced with another truck.

3.6 PLACING CONCRETE

A. Before placing concrete in the forms, verify that all forms have met all requirements specified; that reinforcing steel, embedded materials are in place and securely anchored; that forms are absolutely clean; and that entire preparation has been approved by the Architect.

B. Cleaning Forms: Immediately prior to placing concrete, clean all form interiors free of foreign material and debris.
1. Force debris out of forms prior to closing the last section with a jet stream of compressed air and/or water. Where form openings are not available, collect debris with vacuum cleaners and heavy duty magnets. Remove all wire clippings, sawdust and other debris from beam bottoms.
2. Protect cleaned forms if placing does not commence immediately, covering openings with tarpaulins.

C. Depositing:
1. Deposit concrete as nearly as practical in its final position, but not farther than 6 feet horizontally from the final position.
2. Do not drop concrete more than 18 inches. All deposits of concrete shall have a subsequent deposit place on top and/or adjacent to the fresh face and consolidated within 15 minutes.

D. Consolidation:
1. All concrete shall be consolidated by internal vibration using two vibrators at each placement. One vibrator shall follow deposit location and consolidate concrete after deposit is leveled. Vibrator shall be placed into the concrete vertically at a consistent spacing that will thoroughly blend the deposits, remove entrapped air, and consolidate the concrete. Vibrator head shall be inserted rapidly and withdrawn slowly to remove maximum amount of entrapped air.
2. Caution must be exercised in using vibrators to prevent undue njury to the form surface material or displacement of embedded items.
3. Keep one spare working vibrator on site at all times.

3.7 CURING AND FORM REMOVAL

A. Curing:
1. Cure all concrete for a minimum of seven days.
2. Fog immediately and continually after finishers finish leave an area of surface and until curing sheet is applied.
3. Cure formed concrete surfaces by leave the formwork securely in place and covering the exposed top surface tightly with polyethylene sheet.

B. Form Removal:
1. Comply with requirements of the Structural Concrete Section.
2. Care shall be taken so as not to damage the concrete surfaces and edges in removing the forms.

3.8 FINISHES

A. Formed Surfaces: Shall be finished as specified herein as indicated on the drawings.
1. At exposed top of edge surfaces, hard trowel flat and finish with square edge to top of form. After concrete is hard stone edge to achieve an eased edge with a 1/16" radius.

3.9 TREATMENTS

A. General: Prior to treating, all surfaces shall receive the following preparation and cleanup.
1. All surfaces to receive treatment shall be a minimum of 14 days old. All surfaces can be treated at end of project.
2. Remove all stains using an appropriate non-abrasive stain remover for each type.
3. During operations, protect all adjacent work. At completion of day's work, leave area clean. At completion of work, remove all equipment, waste and excess material and leave area clean

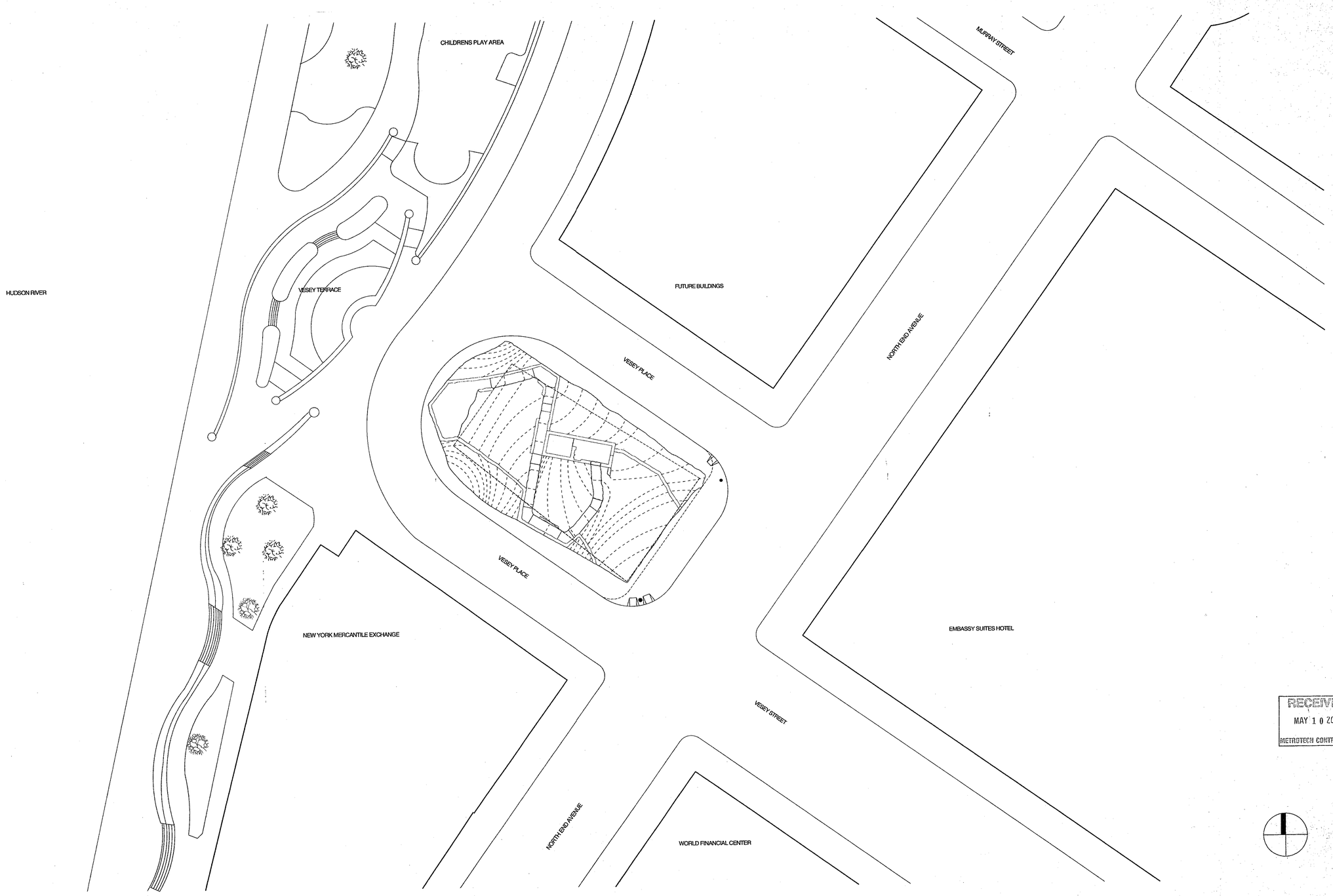
B. Formed Building Surfaces:
1. Treat the exposed-to-view concrete surfaces with the following applications.
a. Heavy abrasive-blast treatment. The blast shall expose all the large particles of aggregate.
b. Sealer Treatment:
1) To all abrasive-blasted surfaces apply the specified sealer.
2) Apply one wet coat as per manufacturer instructions.

C. Patching: Only areas designated by the Architect shall be patched. Where minor patching is required as directed by the Architect as a means of rendering the surface acceptable, it shall consist of patching with a texture matching technique and color matching mortar mix. Test patches shall be placed on the mock-up or other approved surface and approved by the Architect prior to commencing any patching of the work. Patching mortar shall be one part cement and two parts aggregate mixed with a liquid acrylic-polymer bonding additive.

3.10 PROTECTION

A. Protect all Architectural Cast-in-Place Concrete surfaces from damage of any kind. Pay special attention to surfaces near work of other trades. All Architectural Concrete surfaces shall be free of damage at the time of acceptance. This protection shall assure protection from paint, oils, rust, stains, impact, or any other kind.

END OF CONTRACT SECTION



1 CONTEXT PLAN
SCALE: 1" = 30' - 0"

A0710 - BPCA013726

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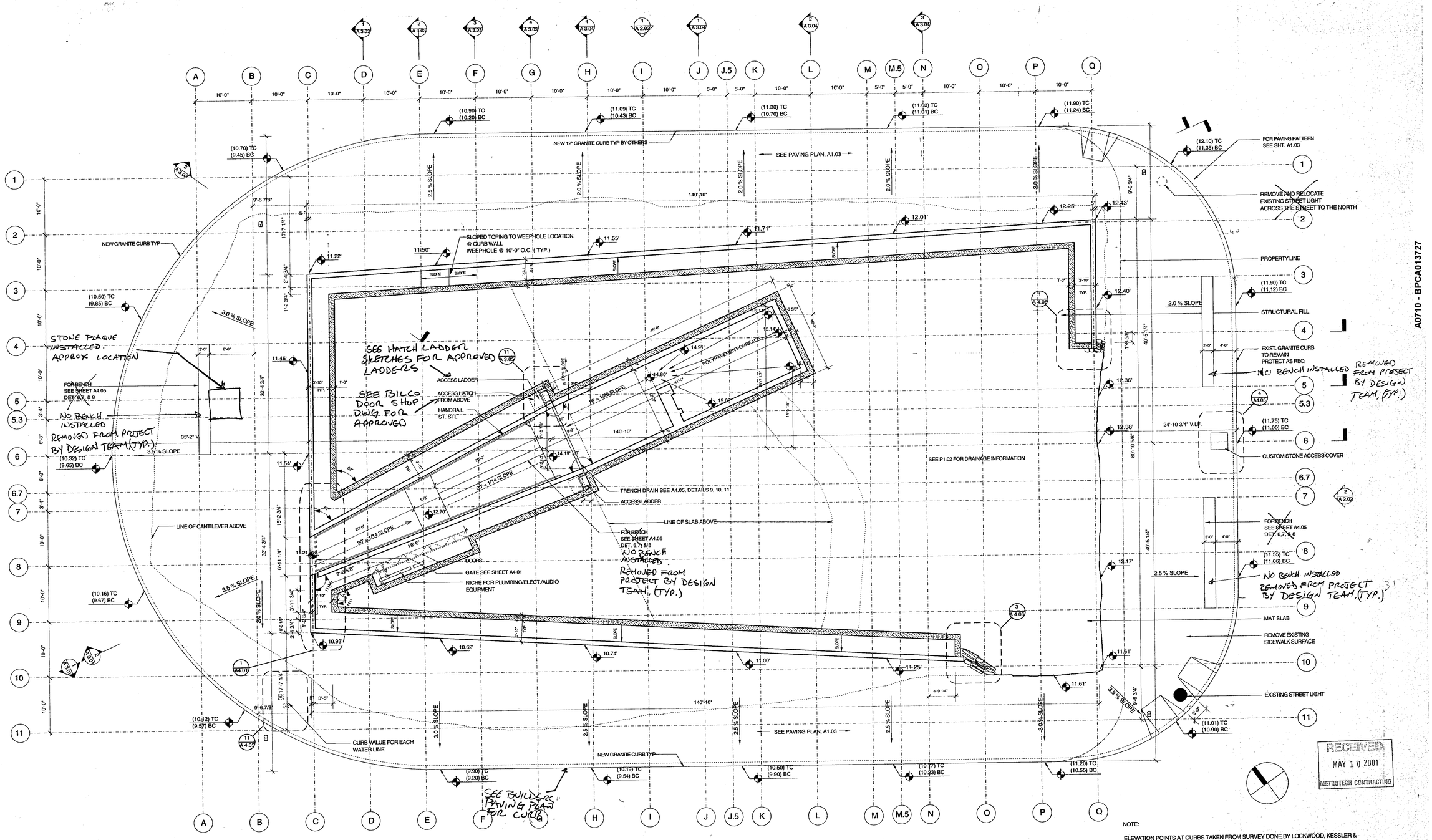
CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION- 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: CONTEXT PLAN
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB / EK

A 1.00



1 GROUND LEVEL
SCALE: 1/8" =1' - 0"

NOTE:

ELEVATION POINTS AT CURBS TAKEN FROM SURVEY DONE BY LOCKWOOD, KESSLER & BARTLETT - SHT. EX-1 DATED FEB. 16, 1995. (ELEVATIONS SHOWN HEREON ARE REFERRED TO THE DATUM OF THE TOPOGRAPHICAL BUREAU, BOROUGH OF MANHATTAN, WHICH IS 2.75 FEET ABOVE THE USC & GS DATUM AT SANDY HOOK N.J.) THESE ELEVATION POINTS TO BE VERIFIED BY CONTRACTOR.

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ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281

BRIAN TOLLE, ARTIST
212.777.1145
18 EAST 8TH STREET, NEW YORK 10003

1100 ARCHITECT, P.C.
212.645.1011 FACSIMILE 212.645.4670
435 HUDSON STREET, NEW YORK 10014

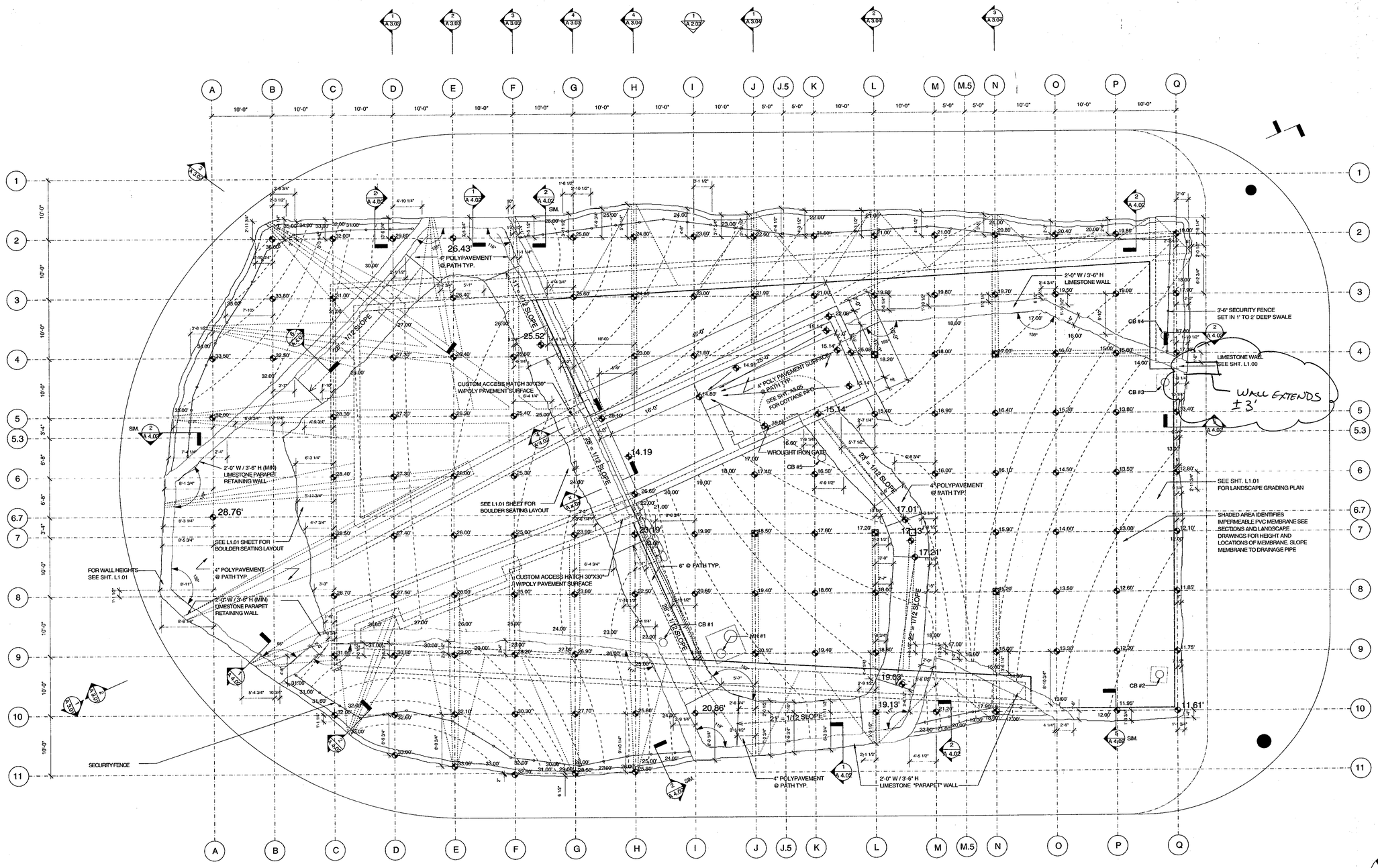
GAIL E. WITTWER, ASLA
917.445.5424 FACSIMILE 212.253.9915
125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION - 04/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: GROUND LEVEL
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 1.01



1 UPPER LEVEL / TOPOGRAPHY
SCALE: 1/8" =1' - 0"

NOTE:

FOR ADDITIONAL INFORMATION PLEASE REFER TO LANDSCAPE PLAN

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MAY 10 2001
METROTECH CONTRACTING

A0710 - BPCA013728

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL CHAIRMAN TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009

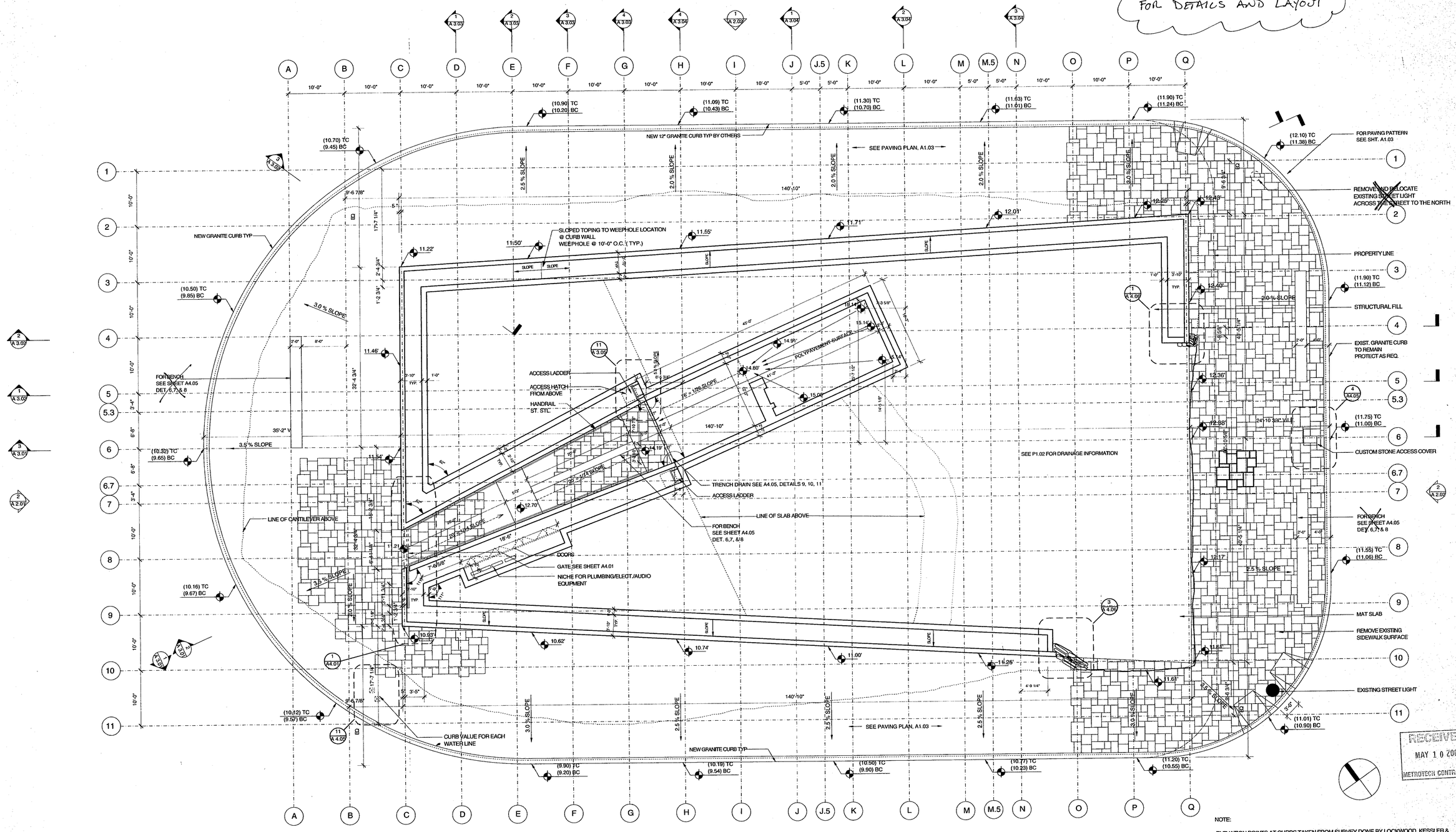
CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION 04/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: UPPER LEVEL / TOPOGRAPHY
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 1.02

REFER TO MTC BUILDERS ~~PAVING PLAN~~ AS-BUILTS FOR DETAILS AND LAYOUT



1 GROUND LEVEL
SCALE: 1/8" =1' - 0"

NOTE:

ELEVATION POINTS AT CURBS TAKEN FROM SURVEY DONE BY LOCKWOOD, KESSLER & BARTLETT - SHT. EX-1 DATED FEB. 16, 1995 . (ELEVATIONS SHOWN HEREON ARE REFERRED TO THE DATUM OF THE TOPOGRAPHICAL BUREAU, BOROUGH OF MANHATTAN, WHICH IS 2.75 FEET ABOVE THE USC & GS DATUM AT SANDY HOOK NJ.) THESE ELEVATION POINTS TO BE VERIFIED BY CONTRACTOR.

RECEIVED
MAY 10 2001
METROTECH CONTRACTING

A0710 - BPCA013729

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL VESEY GREEN, NEW YORK
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK
CHARLES J. URSTADT, VICE CHAIRMAN
JAMES F. GILL, CHAIRMAN
TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
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1100 ARCHITECT, P.C.
212.645.1011 FACSIMILE 212.645.4670
435 HUDSON STREET, NEW YORK 10014

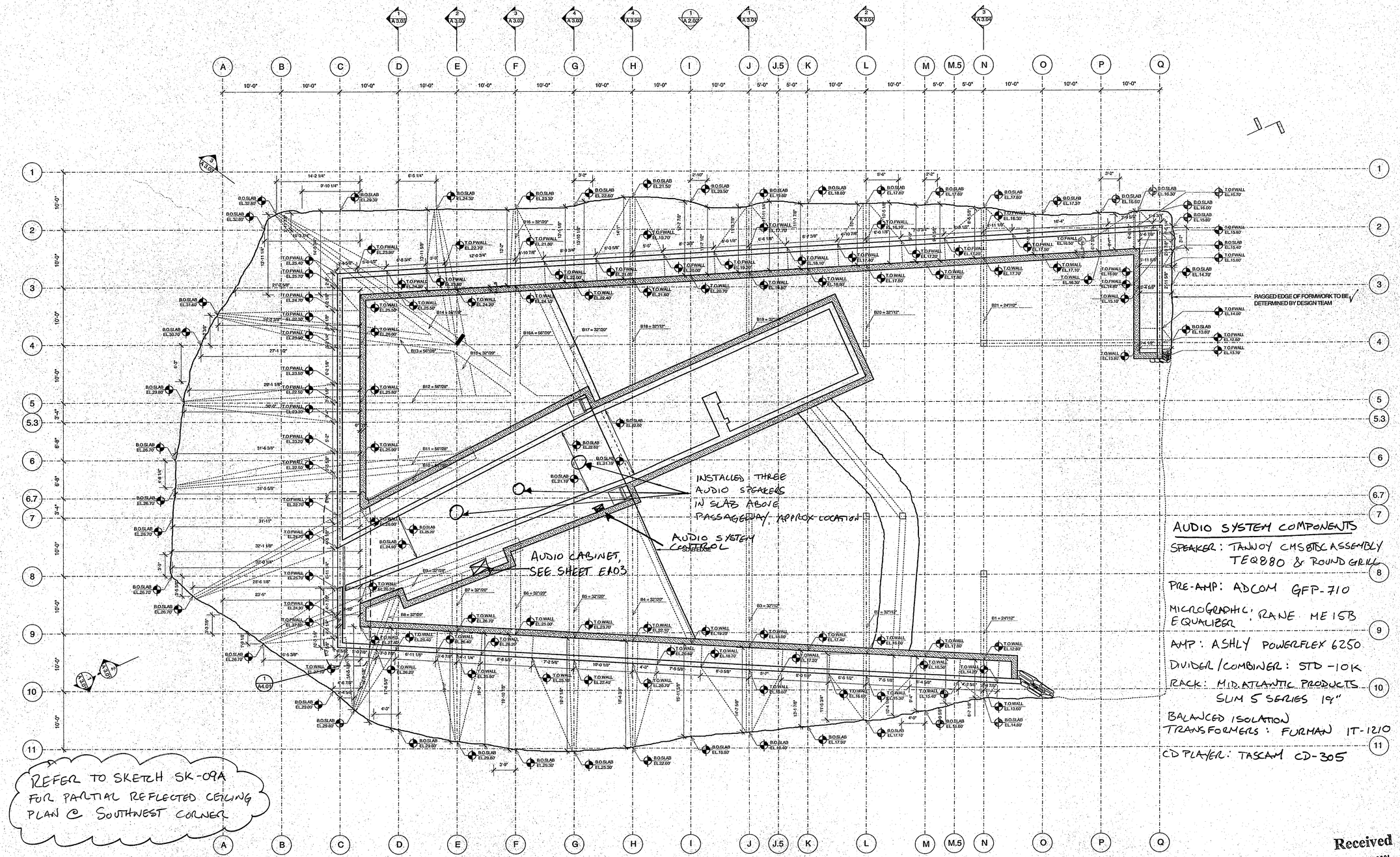
GAIL E. WITTWER, ASLA
917.445.5424 FACSIMILE 212.253.9915
125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

REV:

TITLE: GROUND LEVEL PAVING PLAN
ISSUE: 90% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: JB

A 1.03



AUDIO SYSTEM COMPONENTS

SPEAKER: TANNOY CMS8TIC ASSEMBLY TEQ880 & ROUND GRILL

PRE-AMP: ADCOM GFP-710

MICROGRAPHIC EQUALIZER: RANE ME15B

AMP: ASHLY POWERFLEX 6250

DIVIDER/COMBINER: STD-10K

RACK: MID ATLANTIC PRODUCTS SLIM 5 SERIES 19"

BALANCED ISOLATION TRANSFORMERS: FURMAN IT-1210

CD PLAYER: TASCAM CD-305

1 REFLECTED CEILING PLAN
SCALE: 1/8" =1'-0"

Received
MAY 16 2001
MTC

A0710 - BPCA013730

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	VESEY GREEN, NEW YORK
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK	JAMES F. GILL, CHAIRMAN
CHARLES J. URSTADT, VICE CHAIRMAN	TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
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1100 ARCHITECT, P.C.
212.645.1011 FACSIMILE 212.645.4670
435 HUDSON STREET, NEW YORK 10014

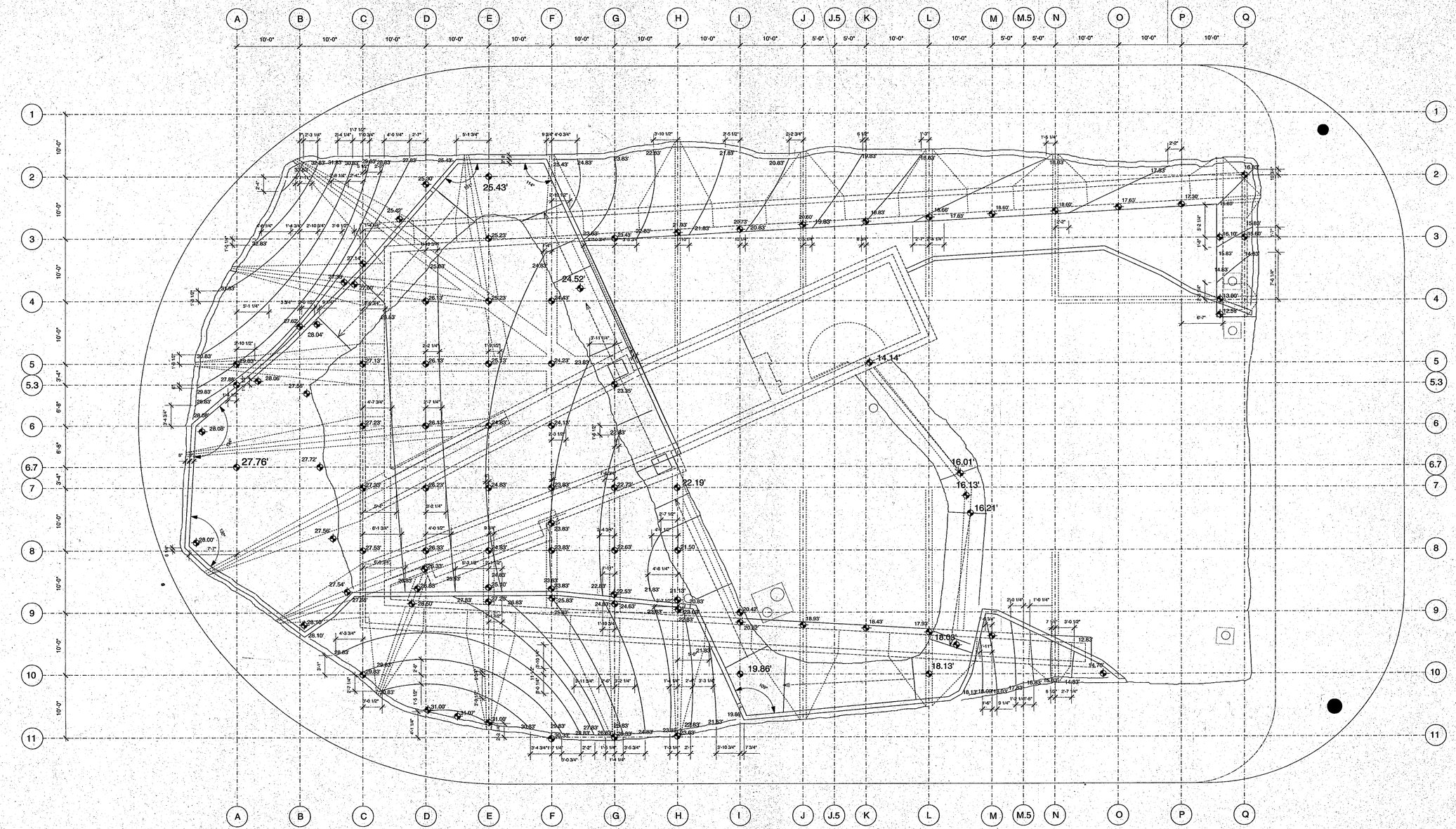
GAIL E. WITTWER, ASLA
917.445.5424 FACSIMILE 212.253.9915
125 EAST 77TH STREET, NEW YORK 10009

CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION - 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: REFLECTED CEILING PLAN & AUDIO SYSTEM
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 1.04



A0710 - BPCA013731

Received
JUN 15 2001
MTC

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL VESEY GREEN, NEW YORK
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK
JAMES F. GILL, CHAIRMAN
CHARLES J. URSTADT, VICE CHAIRMAN
TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
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ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281

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1100 ARCHITECT, P.C.
212.645.1011 FACSIMILE 212.645.4670
435 HUDSON STREET, NEW YORK 10014

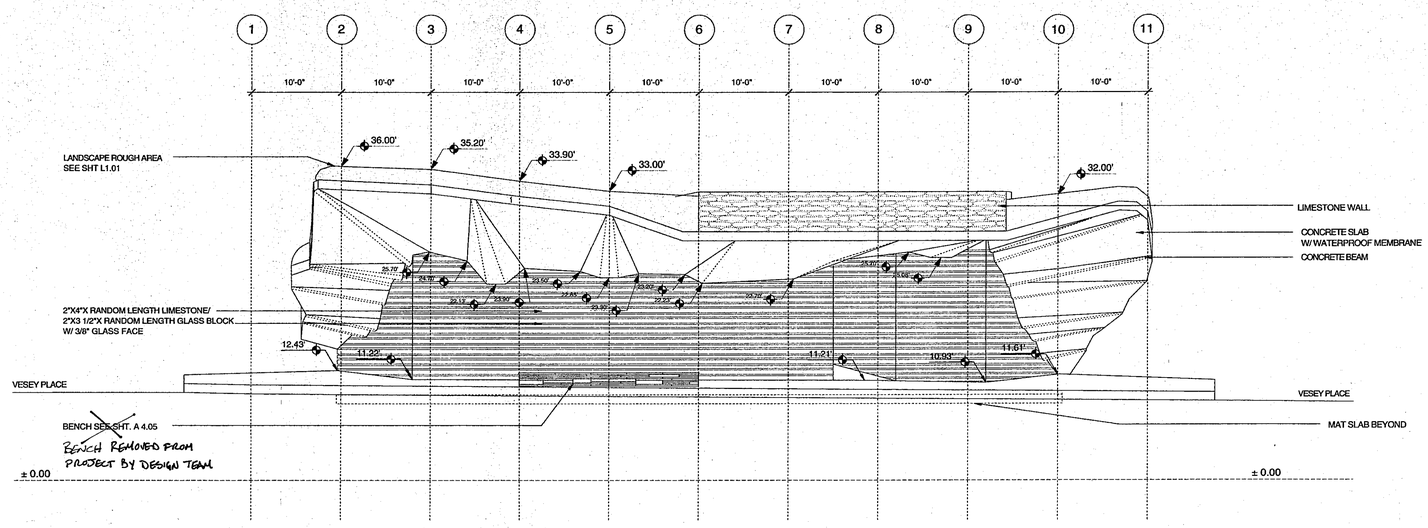
GAIL E. WITTWER, ASLA
917.445.5424 FACSIMILE 212.253.9915
125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

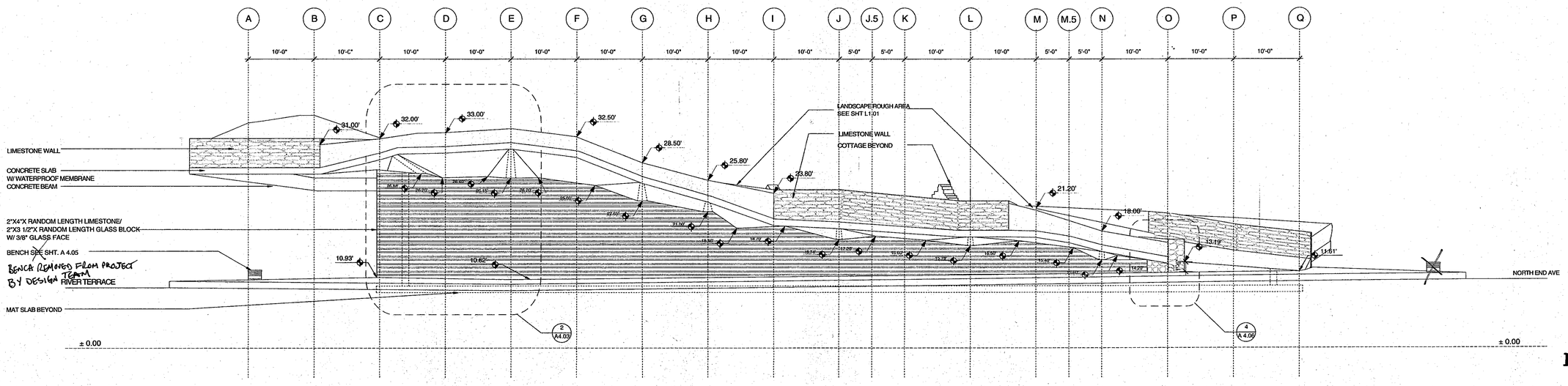
REV: STRUCTURAL REVISION: DIMENSIONAL ADJUSTMENTS - 06/07/01

TITLE: UPPER LEVEL SLAB PLAN
ISSUE:
DATE: 06/07/01 DRAWN BY: EK

A 1.05



2 WEST ELEVATION
SCALE: 1/8" =1' - 0"



1 SOUTH ELEVATION
SCALE: 1/8" =1' - 0"

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JUN 15 2001
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HUGH L. CAREY BATTERY PARK CITY AUTHORITY

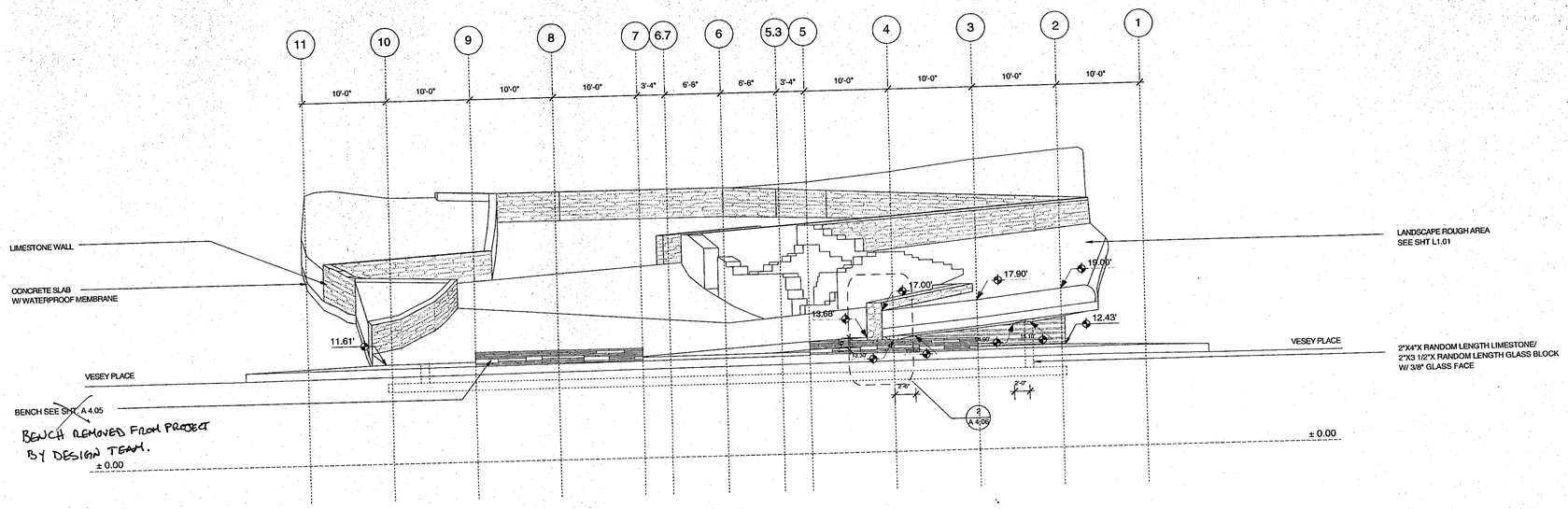
IRISH HUNGER MEMORIAL GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL CHAIRMAN TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

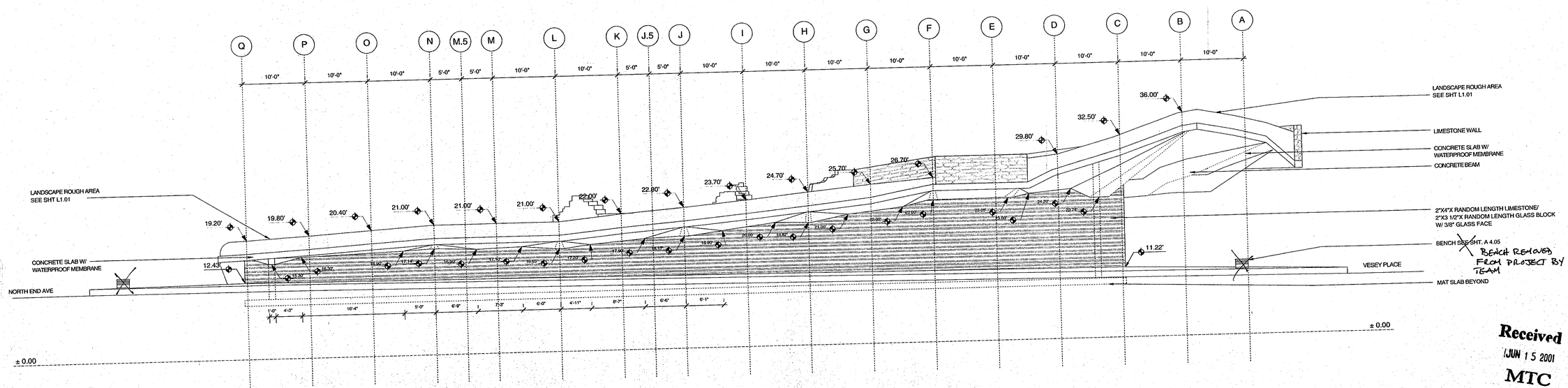
REV: 50% DESIGN DEVELOPMENT SUBMISSION - 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: SOUTH & WEST ELEVATIONS
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 2.01



2 EAST ELEVATION
SCALE: 1/8" =1' - 0"



1 NORTH ELEVATION
SCALE: 1/8" =1' - 0"

Received
JUN 15 2001
MTC

A0710 - BPCA013733

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL CHAIRMAN TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION - 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: NORTH & EAST ELEVATIONS
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 2.02

GLASS SIZES

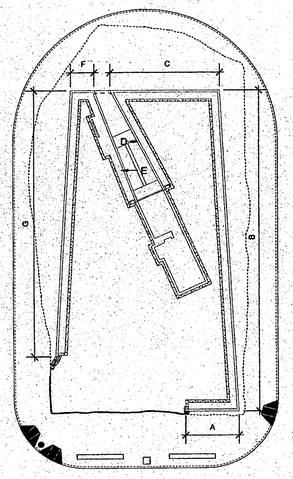
1 — 41.125" X 3.125" TYP.

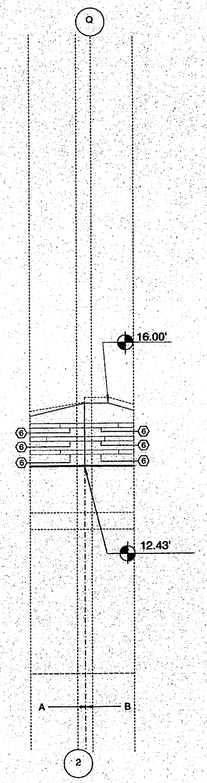
3 — 34.125" X 3.125"

4 — 24.125" X 3.125"

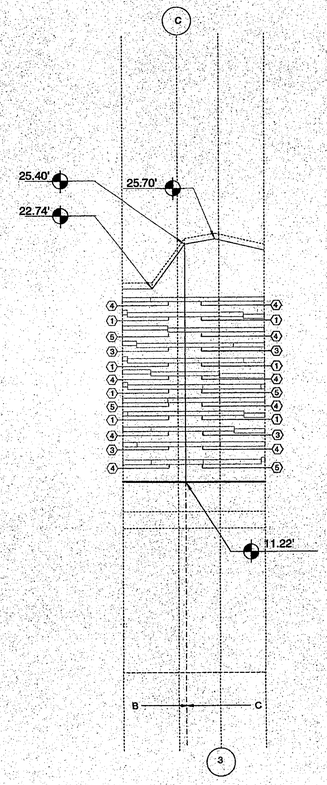
5 — 12.125" X 3.125"

6 — VARIABLE

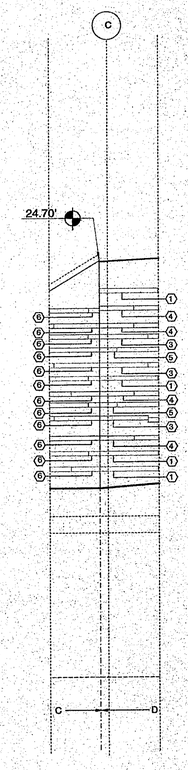




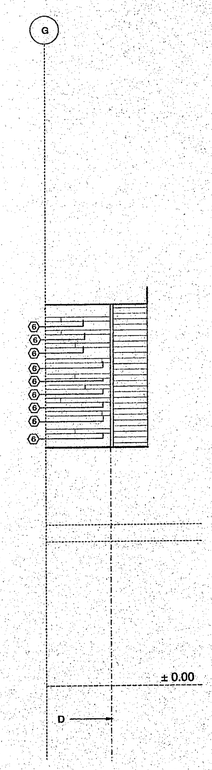
2 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



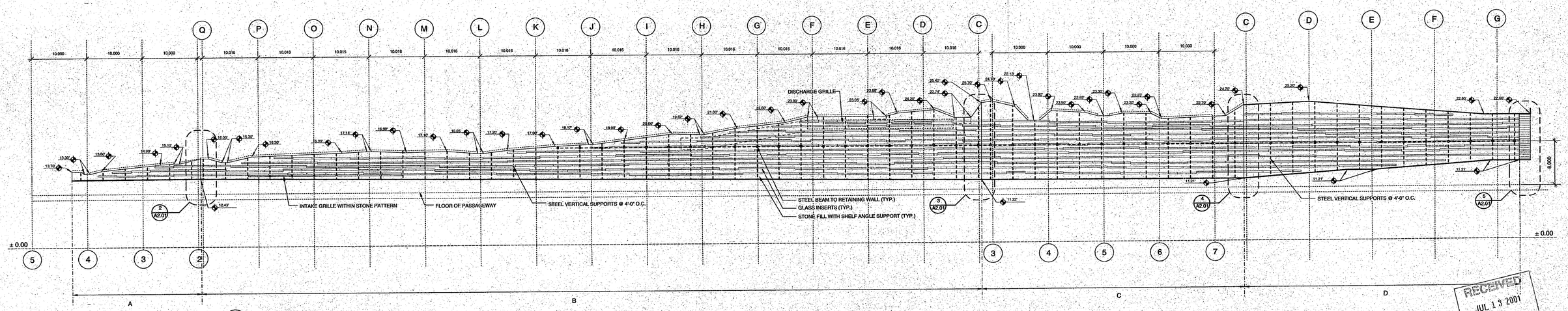
3 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



4 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



5 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



1 UNFOLDED ELEVATION 1
SCALE: 1/8" =1' - 0"

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	VESEY GREEN, NEW YORK
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK	JAMES F. GILL, CHAIRMAN
CHARLES J. URSTADT, VICE CHAIRMAN	TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
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435 HUDSON STREET, NEW YORK 10014

GAIL E. WITTWER, ASLA
917.445.3424 FACSIMILE 212.253.9915
125 EAST 77TH STREET, NEW YORK 10009

CONSULTANT

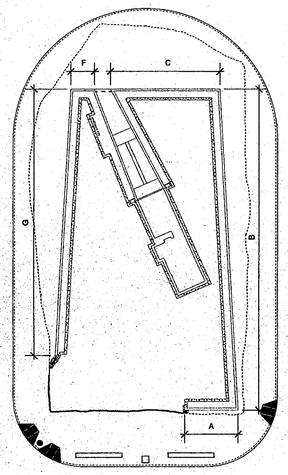
REV: 50% DESIGN DEVELOPMENT SUBMISSION - 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

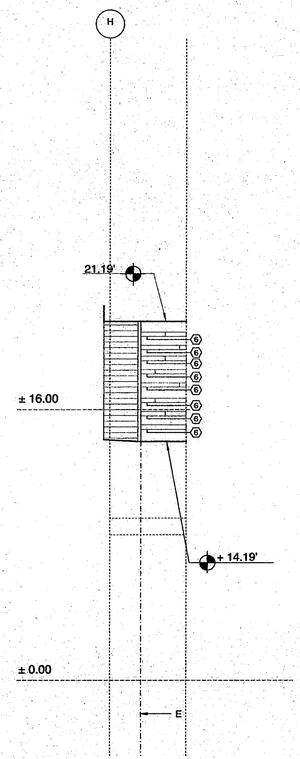
TITLE: UNFOLDED ELEVATION 1
ISSUE: FOR PRICING
DATE: 07/12/01 DRAWN BY: JP/AB

A 2.03

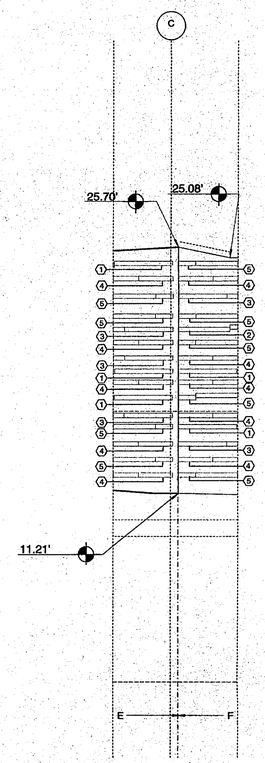
GLASS SIZES

- 1 — 41.125" X 3.125" TYP.
- 2 — 36.125" X 3.125"
- 3 — 34.125" X 3.125"
- 4 — 24.125" X 3.125"
- 5 — 12.125" X 3.125"
- 6 — VARIABLE

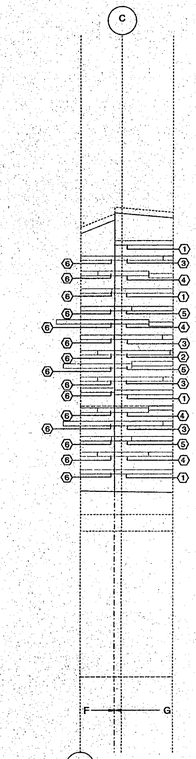




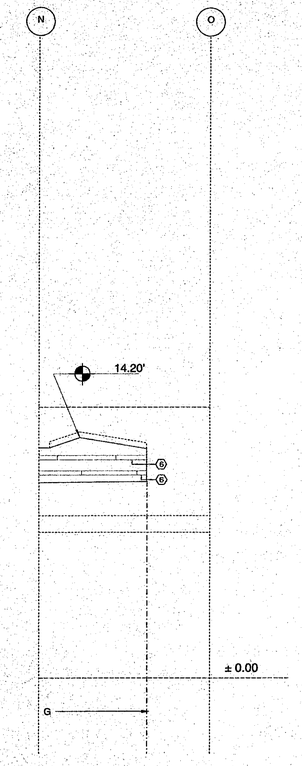
2 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



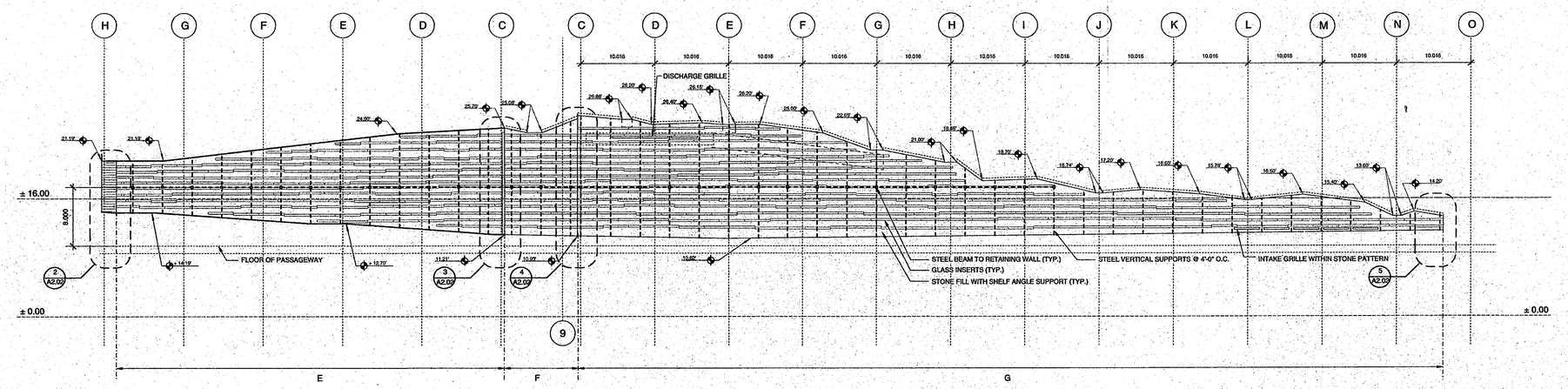
3 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



4 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



5 GLASS SIZES @ CORNER
SCALE: 1/4" =1' - 0"



1 UNFOLDED ELEVATION 2
SCALE: 1/8" =1' - 0"

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	VESEY GREEN, NEW YORK	BATTERY PARK CITY AUTHORITY	BRIAN TOLLE, ARTIST	1100 ARCHITECT, P.C.
GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK	JAMES F. GILL CHAIRMAN	212.416.5300	212.777.1145	212.645.1011 FACSIMILE 212.645.4670
CHARLES J. URSTADT VICE CHAIRMAN	TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	18 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014

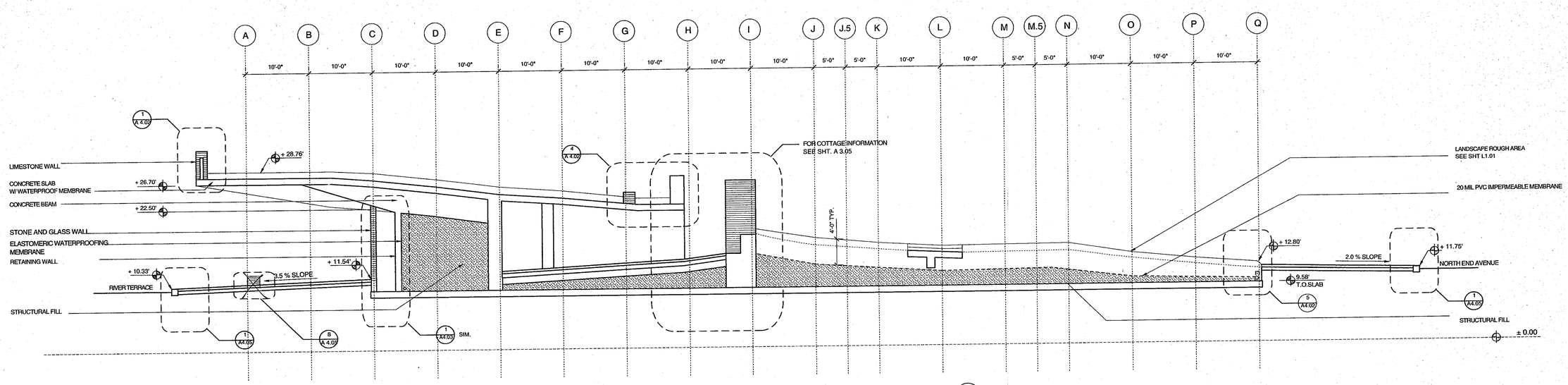
GAIL E. WITTWER, ASLA	917.445.5424 FACSIMILE 212.253.9915
125 EAST 7TH STREET, NEW YORK 10009	

CONSULTANT

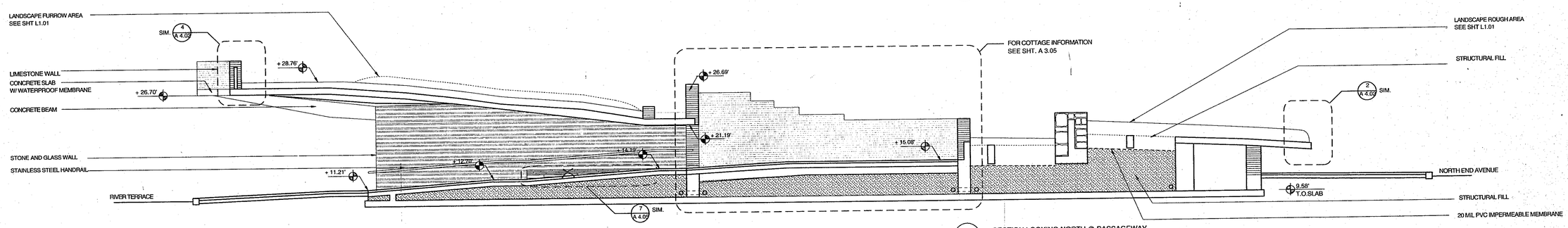
REV: 50% DESIGN DEVELOPMENT SUBMISSION - 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: UNFOLDED ELEVATION 2
ISSUE: FOR PRICING
DATE: 07/12/01 DRAWN BY: JP/AB

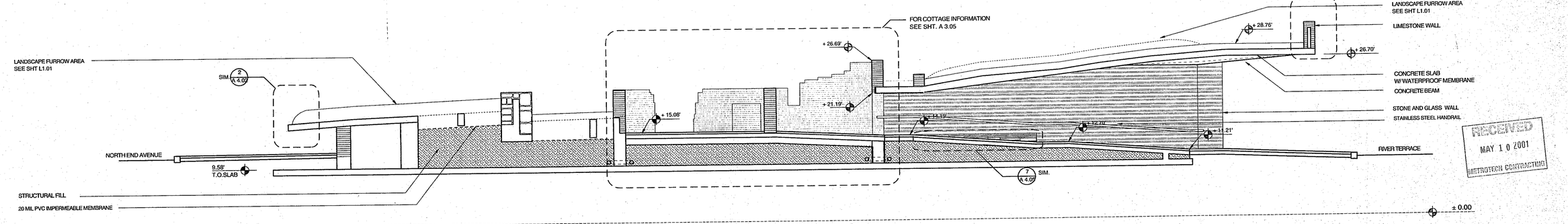
A 2.04



3 SECTION 6-6
SCALE: 1/8" =1' - 0"



2 SECTION LOOKING NORTH @ PASSAGEWAY
SCALE: 1/8" =1' - 0"



1 SECTION LOOKING SOUTH @ PASSAGEWAY
SCALE: 1/8" =1' - 0"

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MAY 1 0 2001
METROTECH CONTRACTING

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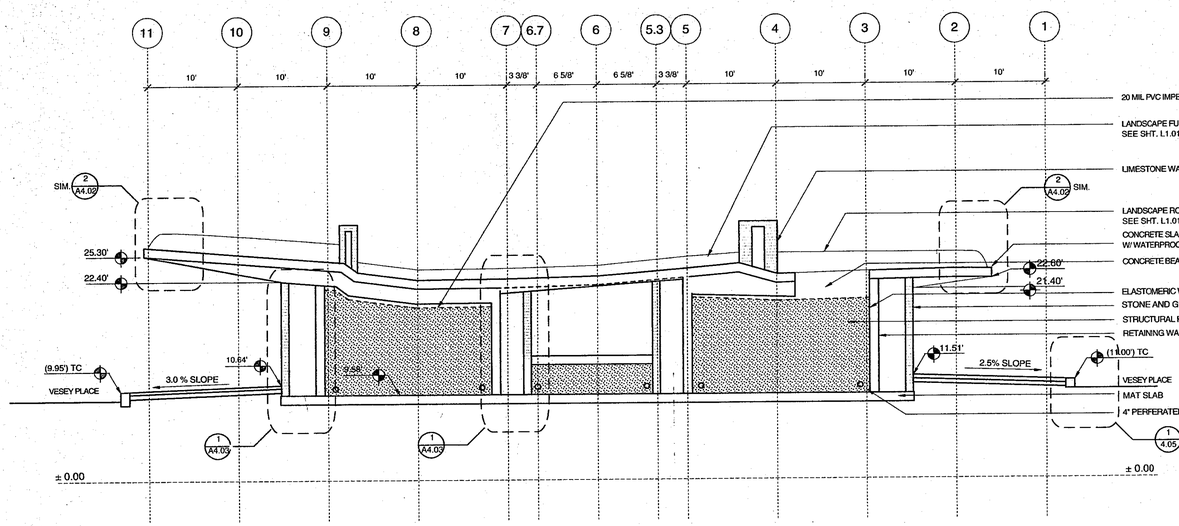
HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL CHAIRMAN TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009	CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION - 04/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: SECTIONS @ RAMP & COL. LINE 6-6
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 3.01



4 SECTION G-G
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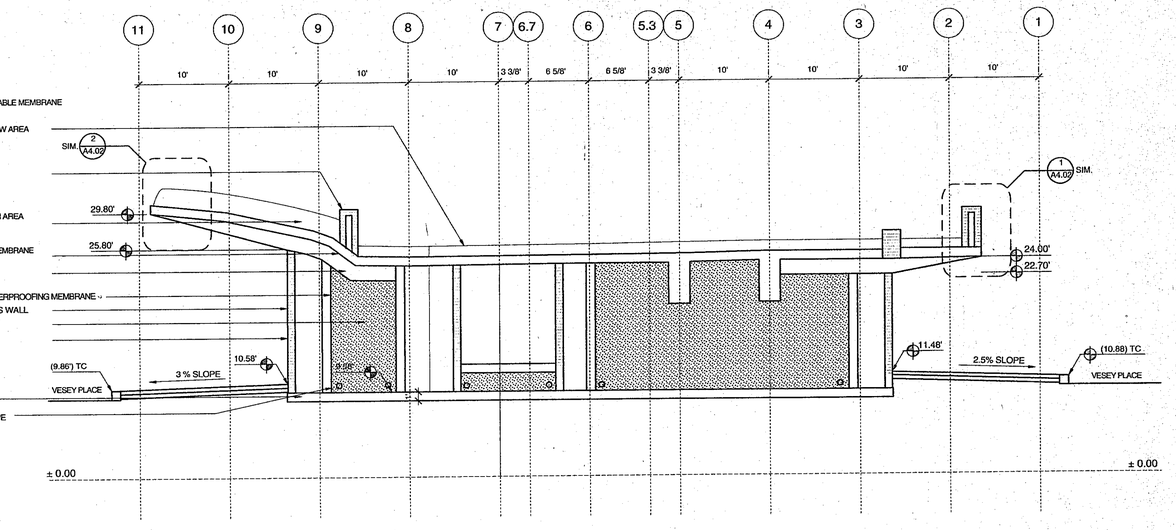

2 SECTION E-E
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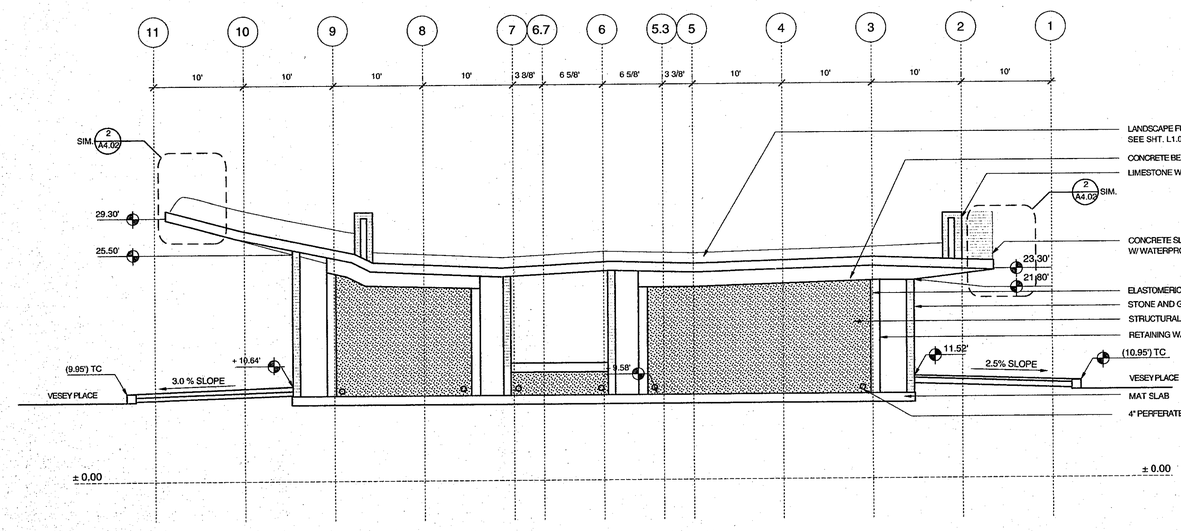

3 SECTION F-F
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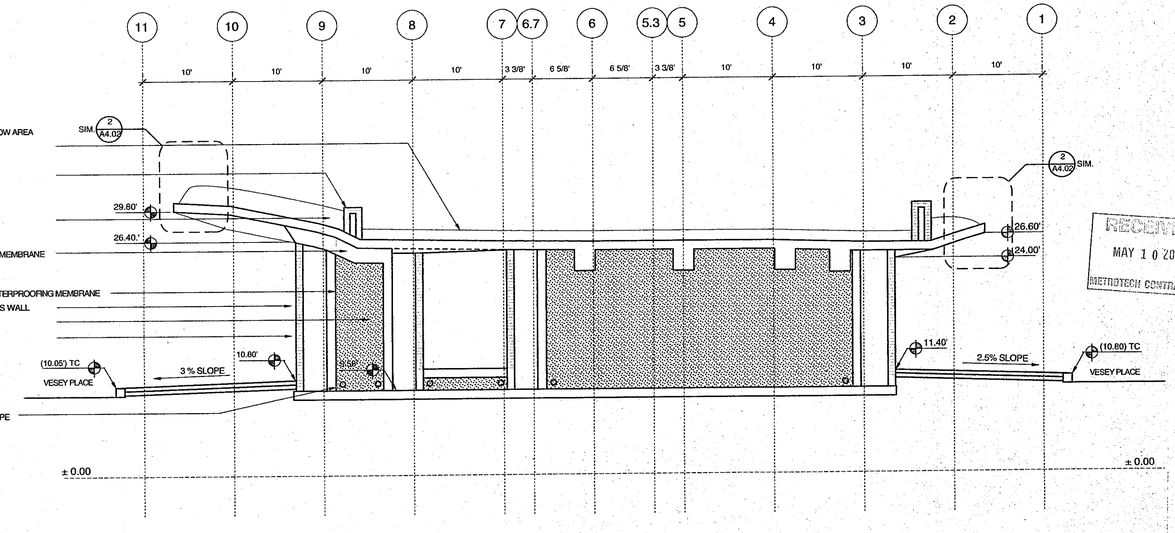


1 SECTION D-D
SCALE: 1/8" =1' - 0"

A0710 - BPCA013738

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

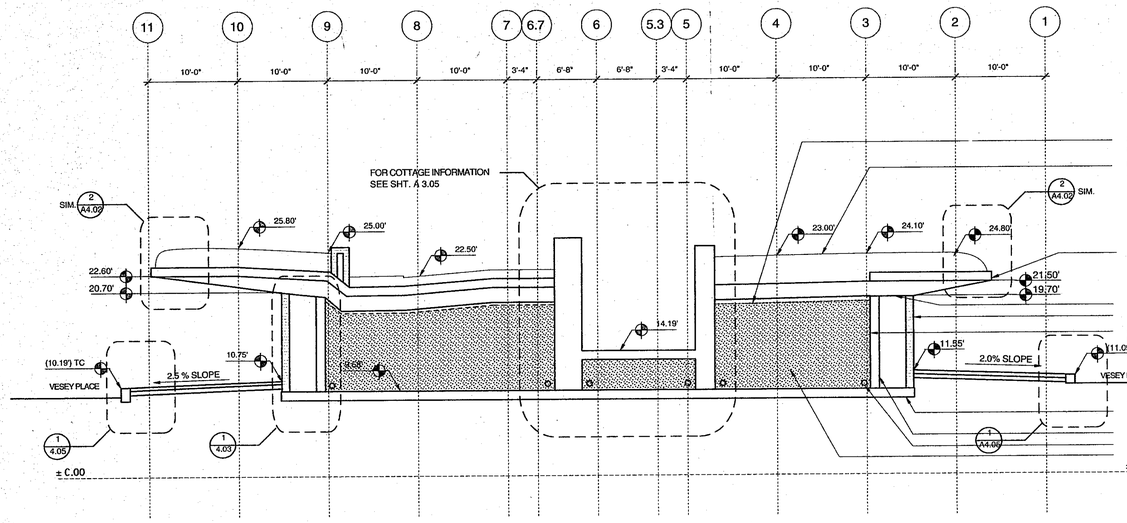
IRISH HUNGER MEMORIAL GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT, VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL, CHAIRMAN TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

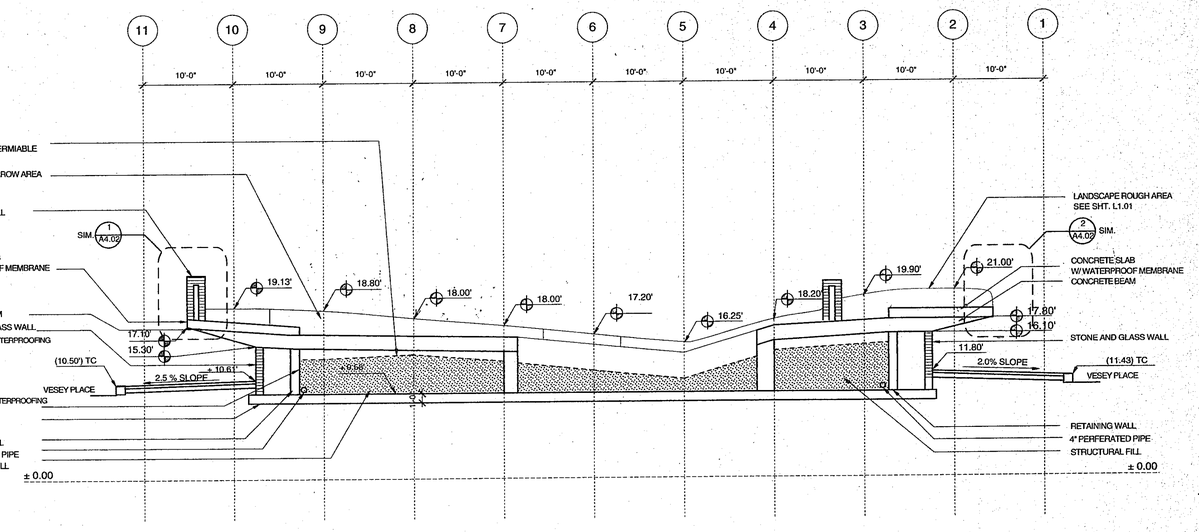
REV: 50% DESIGN DEVELOPMENT SUBMISSION 04/11/01
90% DESIGN DEVELOPMENT SUBMISSION 04/27/01

TITLE: SECTIONS @ COL. LINES D-D,E-E,F-F & G-G
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

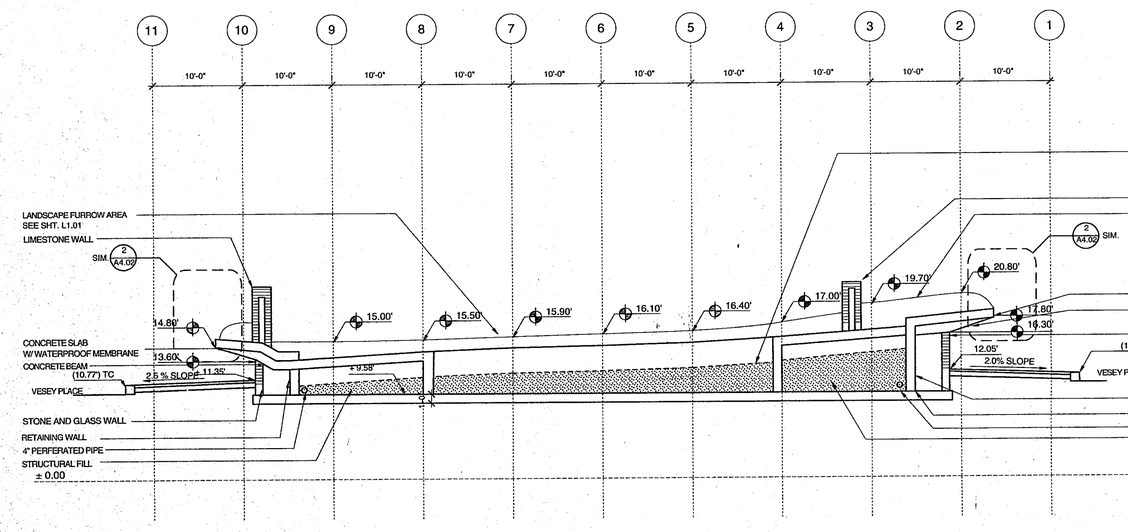
A 3.03



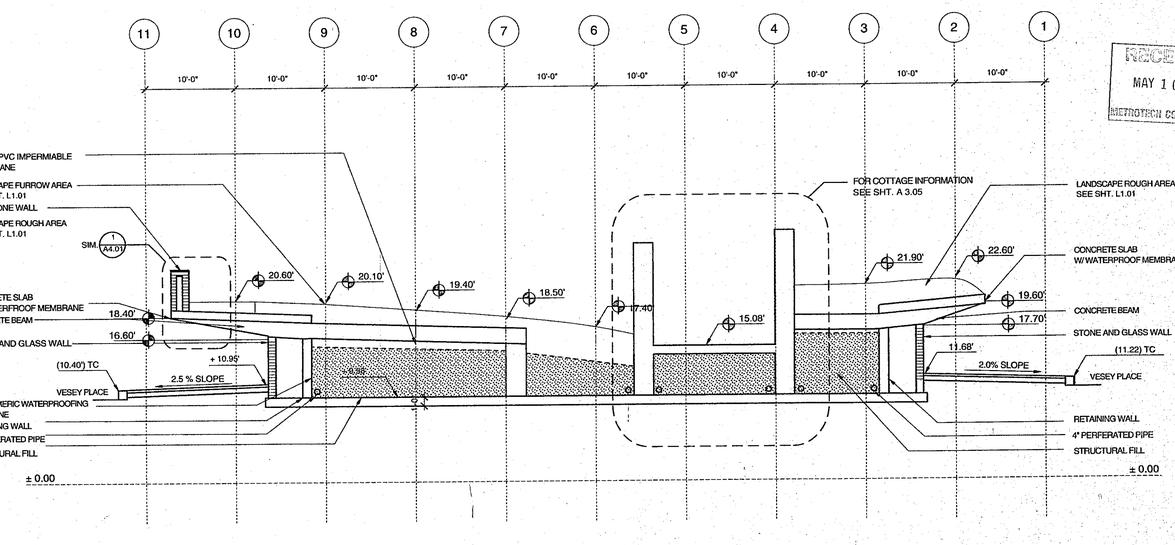
4 SECTION H-H
SCALE: 1/8" =1' - 0"



2 SECTION L-L
SCALE: 1/8" =1' - 0"



3 SECTION N-N
SCALE: 1/8" =1' - 0"



1 SECTION J-J
SCALE: 1/8" =1' - 0"

RECEIVED
MAY 10 2001
METROTECH CONTRACTING

A0710 - BPCA013739

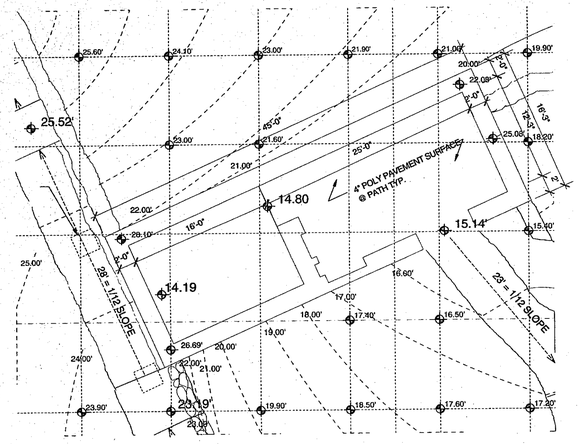
HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT, VICE CHAIRMAN VESEY GREEN, NEW YORK JAMES F. GILL, CHAIRMAN TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 435 HUDSON STREET, NEW YORK 10014	GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009	CONSULTANT

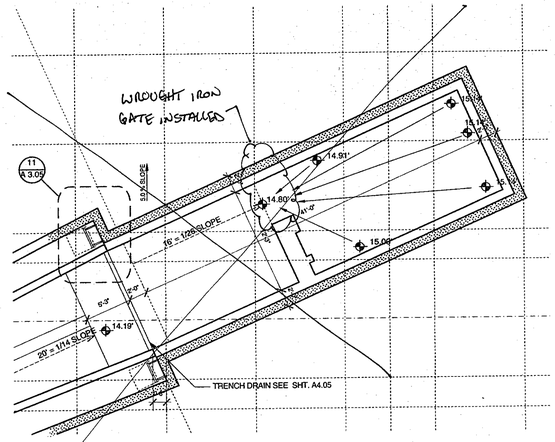
REV: 50% DESIGN DEVELOPMENT SUBMISSION 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION 04/27/01

TITLE: N-S SECTIONS @ H-H, J-J, L-L & N-N
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB

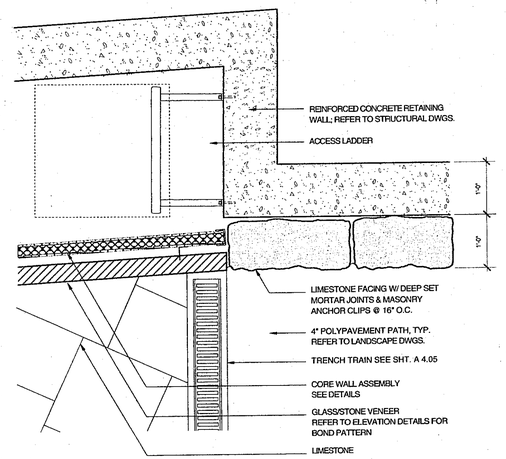
A 3.04



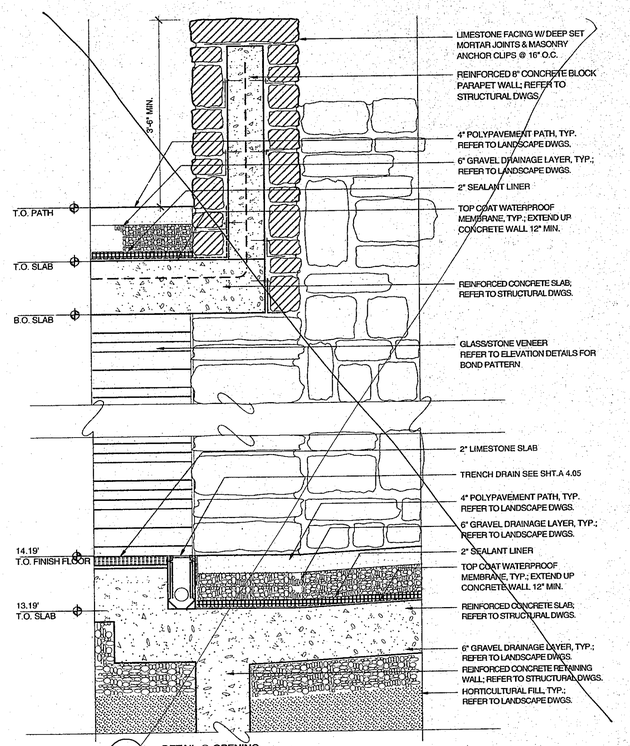
1 UPPER LEVEL
SCALE: 1/8" =1' - 0"



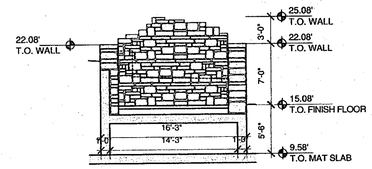
1A GROUND LEVEL
SCALE: 1/8" =1' - 0"
SEE SK-02A



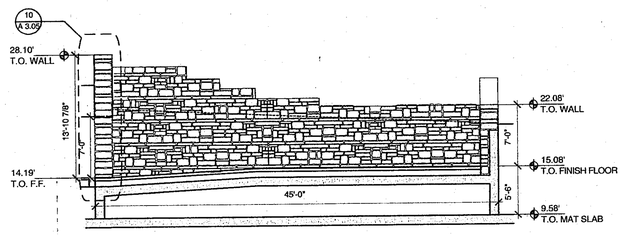
11 DETAIL @ OPENING
SCALE: 3/4" =1' - 0"



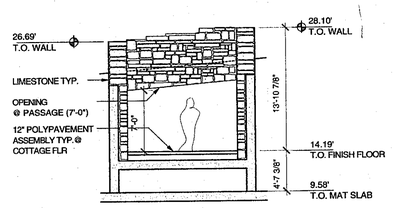
10 DETAIL @ OPENING
SCALE: 3/4" =1' - 0"
SEE SK-01



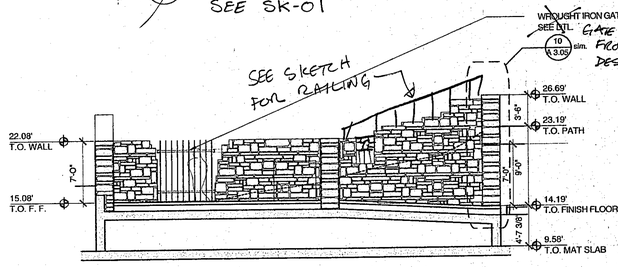
2 NORTH-SOUTH SECTION LOOKING EAST
SCALE: 1/8" =1' - 0"



3 WEST-EAST SECTION LOOKING NORTH
SCALE: 1/8" =1' - 0"

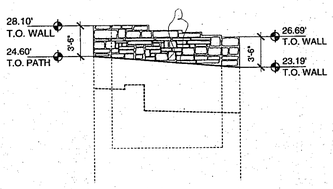


4 NORTH-SOUTH SECTION LOOKING WEST
SCALE: 1/8" =1' - 0"

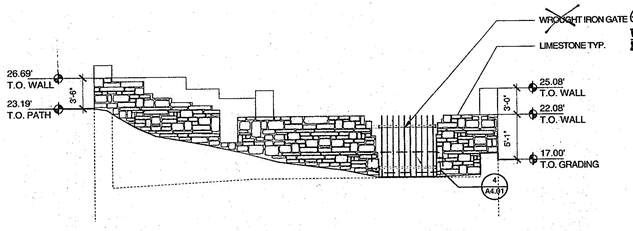


5 EAST-WEST SECTION LOOKING SOUTH
SCALE: 1/8" =1' - 0"

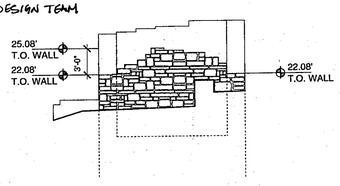
± 0.00'



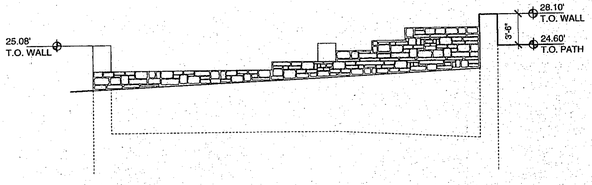
6 WEST ELEVATION
SCALE: 1/8" =1' - 0"



7 SOUTH ELEVATION
SCALE: 1/8" =1' - 0"



8 EAST ELEVATION
SCALE: 1/8" =1' - 0"



9 NORTH ELEVATION
SCALE: 1/8" =1' - 0"

± 0.00'

RECEIVED
MAY 10 2001
METROTECH CONTRACTING

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HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	
GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK	VESEY GREEN, NEW YORK JAMES F. GILL CHAIRMAN
CHARLES J. URSTADT VICE CHAIRMAN	TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER

BATTERY PARK CITY AUTHORITY
212.416.5300
ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281

BRIAN TOLLE, ARTIST	1100 ARCHITECT, P.C.	GAIL E. WITTWER, ASLA
212.777.1145	212.645.1011 FACSIMILE 212.645.4670	917.445.5424 FACSIMILE 212.253.9915
18 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014	125 EAST 7TH STREET, NEW YORK 10009

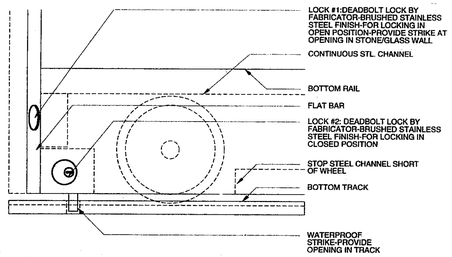
CONSULTANT

REV: 50% DESIGN DEVELOPMENT SUBMISSION- 4/11/01
90% DESIGN DEVELOPMENT SUBMISSION- 4/27/01

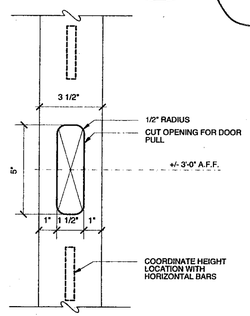
TITLE: PLAN, ELEVATION AND SECTION @ COTTAGE
ISSUE: 90% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB / EK

A 3.05

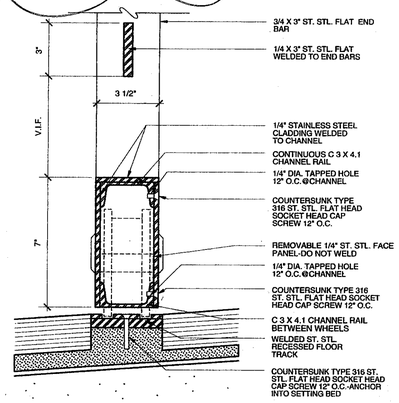
REFER TO HALLEN STEEL
SHOP DRAWINGS M2 & M3
FOR APPROVED SHOP DRAWINGS



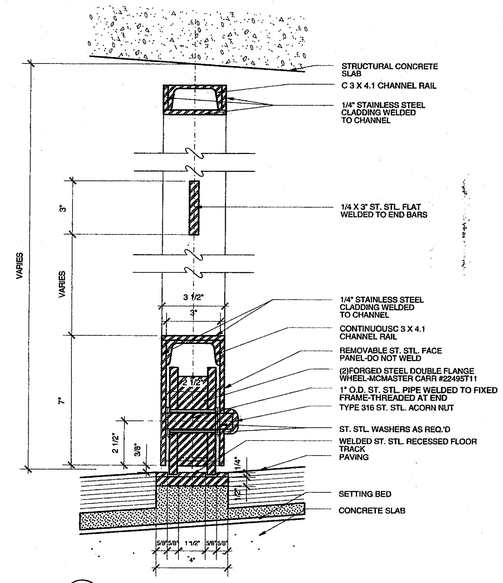
9 ELEVATION DETAIL-GATE LOCK
SCALE: 3" =1' - 0"



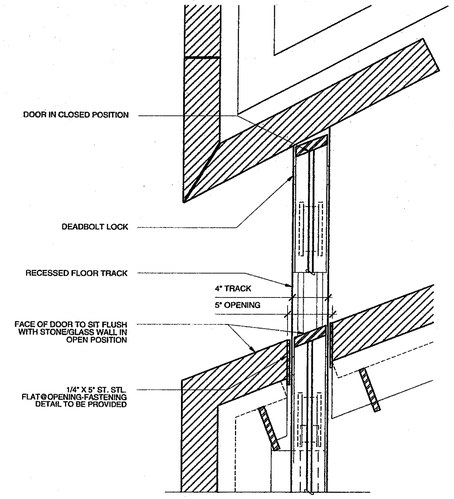
8 ELEVATION DETAIL-DOOR PULL
SCALE: 3" =1' - 0"



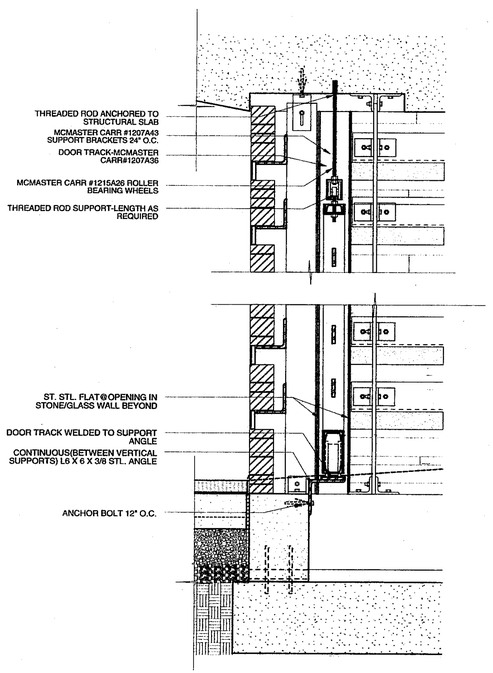
7 SECTION DETAIL @ BOTTOM DOOR RAIL
SCALE: 3" =1' - 0"



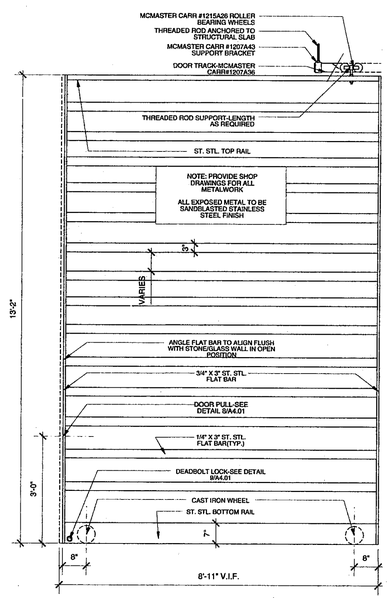
6 SECTION DETAIL @ THROUGH WHEEL ASSEMBLY
SCALE: 3" =1' - 0"



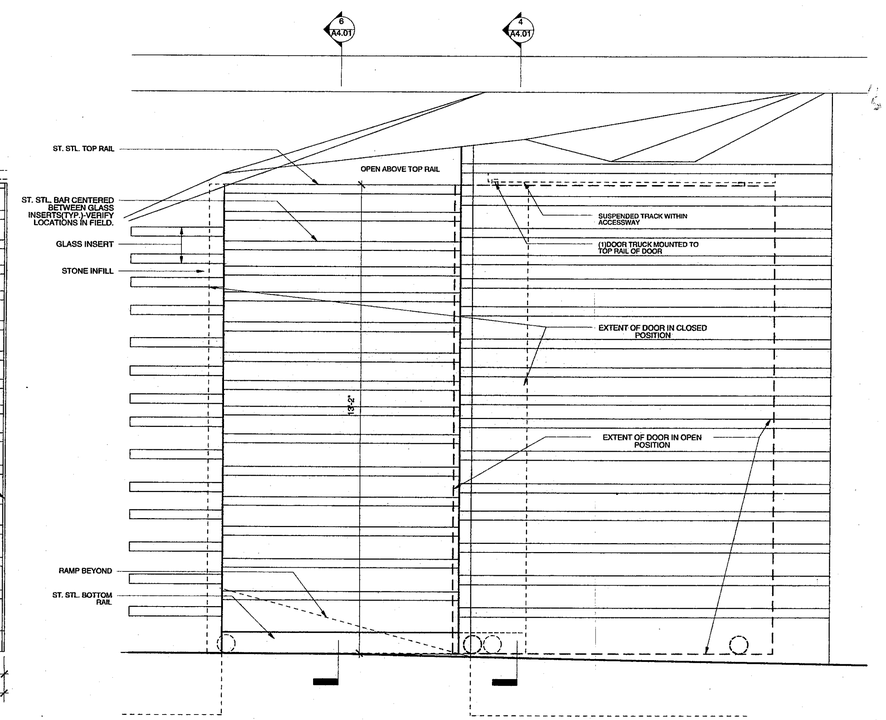
5 PLAN DETAIL @ SLIDING DOOR
SCALE: 1 1/2" =1' - 0"



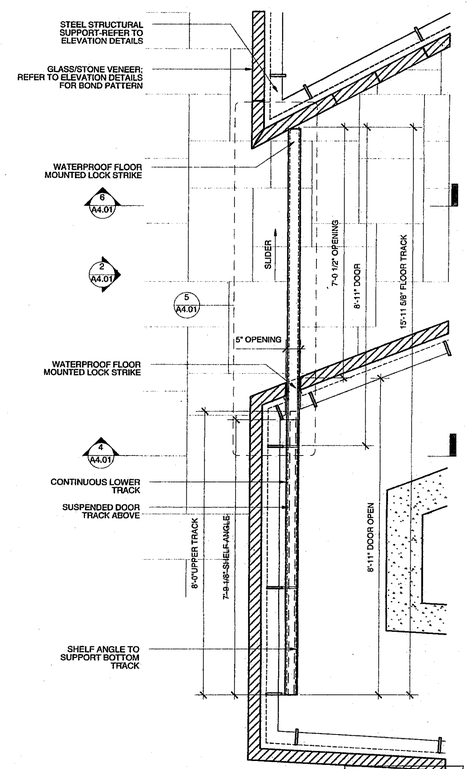
4 SECTION DETAIL @ SLIDING DOOR
SCALE: 1" =1' - 0"



3 SLIDING DOOR ELEVATION
SCALE: 1/2" =1' - 0"



2 ELEVATION @ SLIDING ENTRY DOOR
SCALE: 1/2" =1' - 0"



1 PLAN @ SLIDING ENTRY DOOR
SCALE: 1/2" =1' - 0"

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JUL 16 2001
METROTECH CONTRACTING

A0710 - BPCA013741

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

IRISH HUNGER MEMORIAL	VESEY GREEN, NEW YORK
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK	JAMES F. GILL, CHAIRMAN
CHARLES J. URSTADT, VICE CHAIRMAN	TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER

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435 HUDSON STREET, NEW YORK 10014

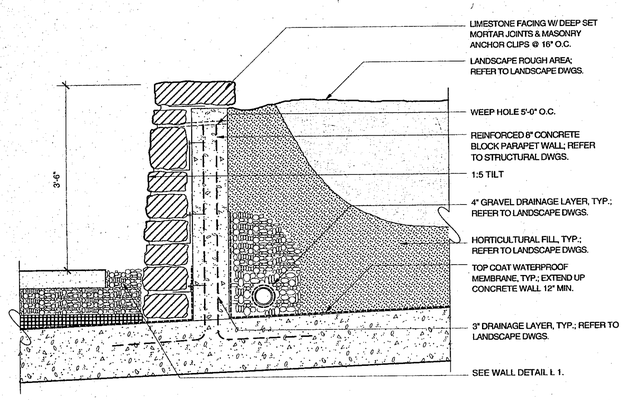
GAIL E. WITTWER, ASLA
917.445.5424 FACSIMILE 212.253.9915
125 EAST 7TH STREET, NEW YORK 10009

CONSULTANT

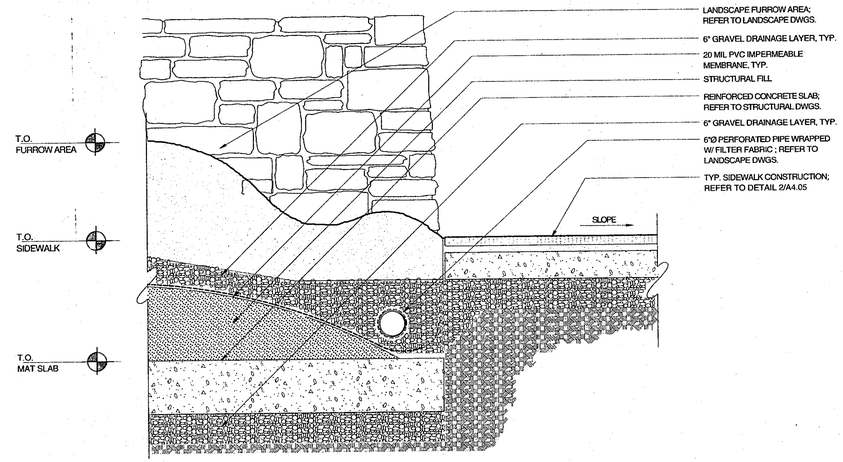
REV: 90% DESIGN DEVELOPMENT SUBMISSION 5/09/01
PRELIMINARY

TITLE: BASE PLAN DETAILS-ENTRANCE GATE
ISSUE: FOR PRICING
DATE: 07/13/01 DRAWN BY: JE

A 4.01

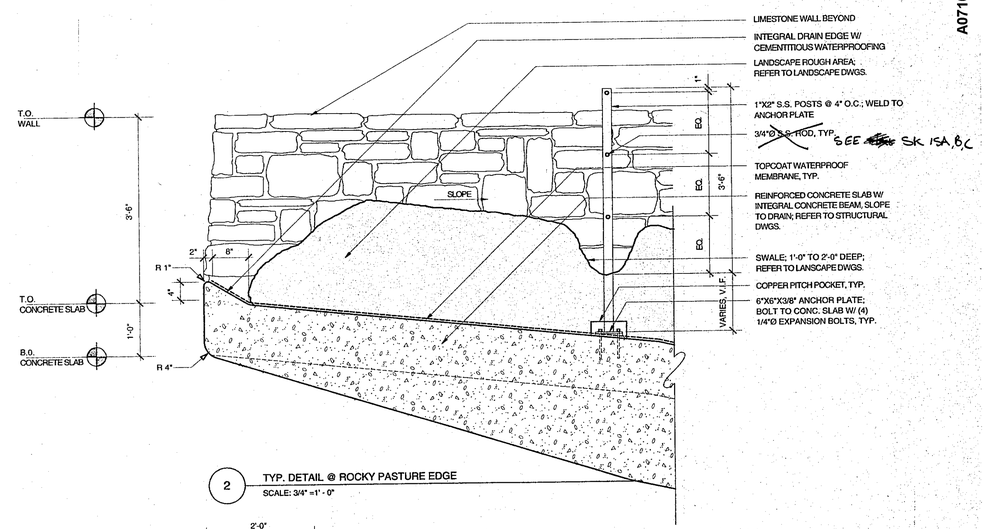


6 TYP. DETAIL @ STONE RETAINING WALL / VEGETATED SWALE
SCALE: 3/4" =1' - 0"

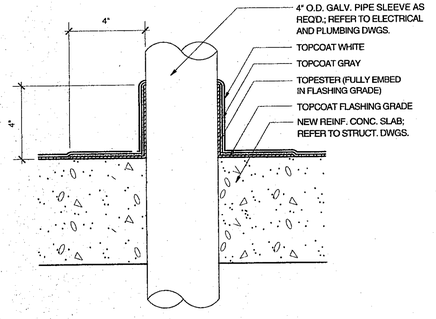


5 TYP. DETAIL @ FURROW / SIDEWALK EGDE
SCALE: 3/4" =1' - 0"

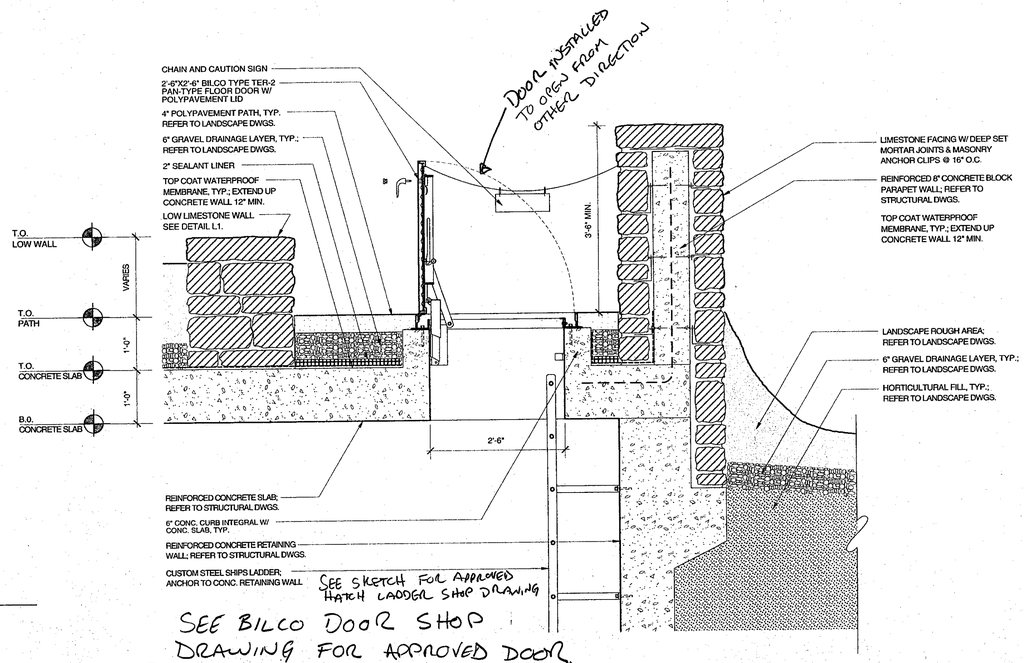
3 TYP. DETAIL @ FURROW EDGE
SCALE: 3/4" =1' - 0"



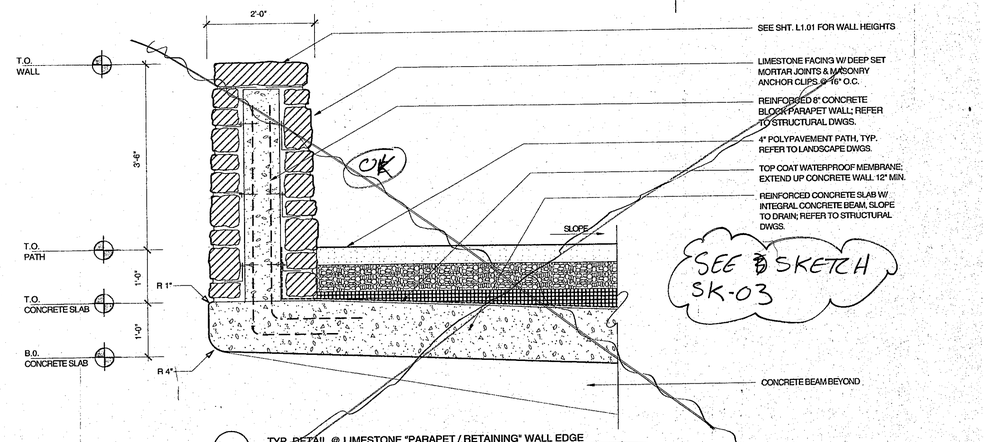
2 TYP. DETAIL @ ROCKY PASTURE EDGE
SCALE: 3/4" =1' - 0"



7 TYP. DETAIL @ PIPE PENETRATION
SCALE: 3" =1' - 0"



4 DETAIL @ CUSTOM HATCH
SCALE: 3/4" =1' - 0"



1 TYP. DETAIL @ LIMESTONE "PARAPET / RETAINING" WALL EDGE
SCALE: 3/4" =1' - 0"

A0710 - BPCA013742

HUGH L. CAREY BATTERY PARK CITY AUTHORITY

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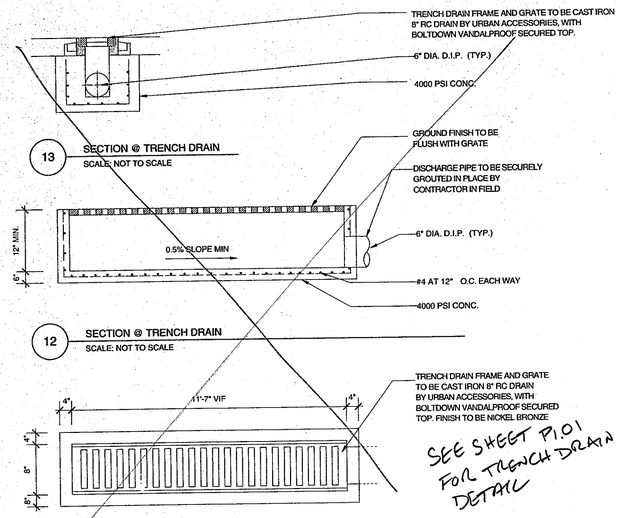
CONSULTANT

REV:
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: EDGE CONDITION DETAILS
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: AB/EK

A 4.02

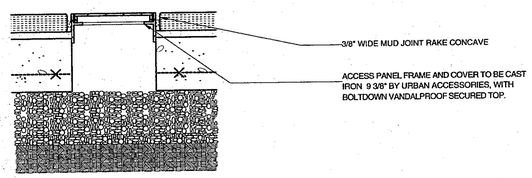


13 SECTION @ TRENCH DRAIN
SCALE: NOT TO SCALE

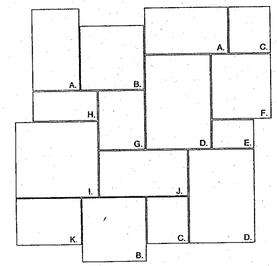
12 SECTION @ TRENCH DRAIN
SCALE: NOT TO SCALE

SEE SHEET P1.01 FOR TRENCH DRAIN DETAIL

11 PLAN @ TRENCH DRAIN
SCALE: NOT TO SCALE



11 SECTION DETAIL @ CURB VALVE COVER
SCALE: 1 1/2" =1' - 0"



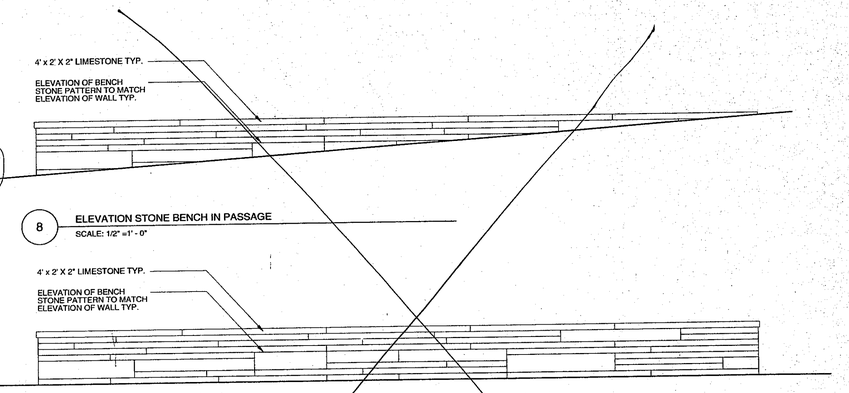
NOTE: ALL LIMESTONE SIZES ARE IN CENTIMETERS

A. 70 x 40
B. 55 x 54
C. 40 x 35
D. 80 x 55
E. 35 x 24
F. 55 x 50
G. 50 x 39
H. 55 x 25
I. 70 x 64
J. 75 x 39
K. 55 x 40

SLAB THICKNESS 2" TYPICAL

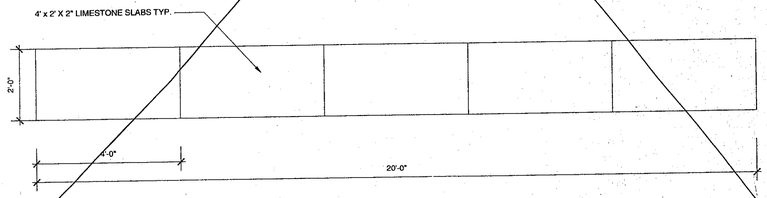
10 TYPICAL PAVING UNIT
SCALE: 1/2" =1' - 0"

REFER TO MTC BUILDERS PAVING PLAN AS-BUILTS FOR DETAILS & LAYOUT

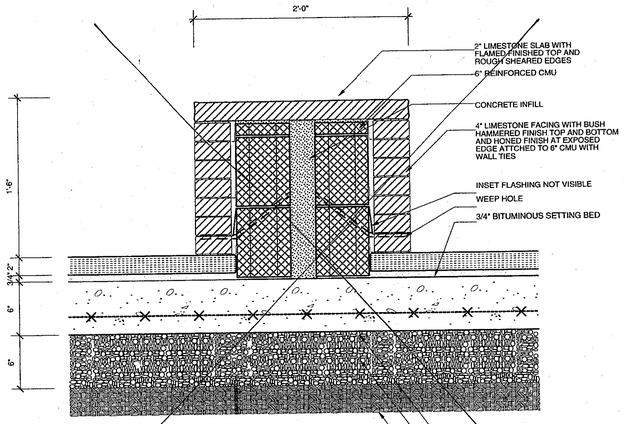


8 ELEVATION STONE BENCH IN PASSAGE
SCALE: 1/2" =1' - 0"

7 ELEVATION STONE BENCH (TYP)
SCALE: 1/2" =1' - 0"

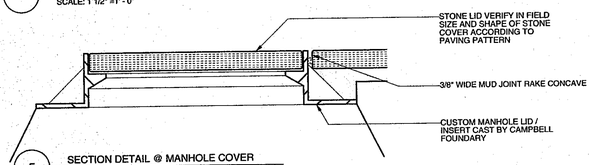


6 PLAN STONE BENCH
SCALE: 1/2" =1' - 0"

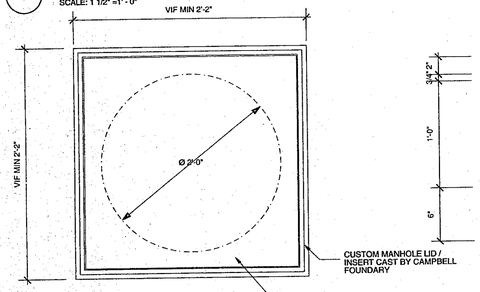


9 SECTION @ BENCH
SCALE: 1 1/2" =1' - 0"

BENCH REMOVED FROM PROJECT BY DESIGN TEAM

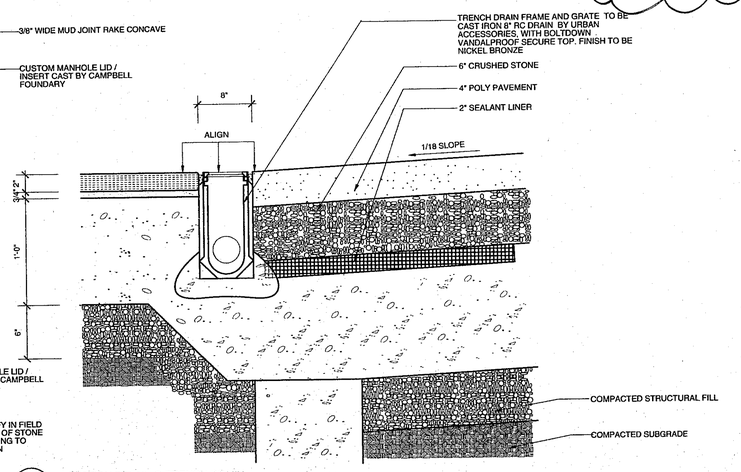


5 SECTION DETAIL @ MANHOLE COVER
SCALE: 1 1/2" =1' - 0"

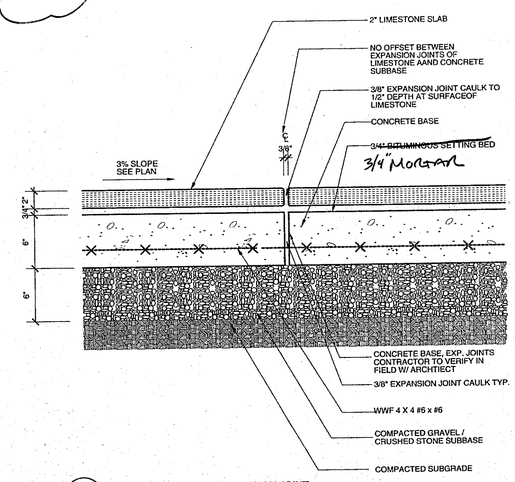


NOTE: MANHOLE COVER MUST SUPPORT H-20 LOADING

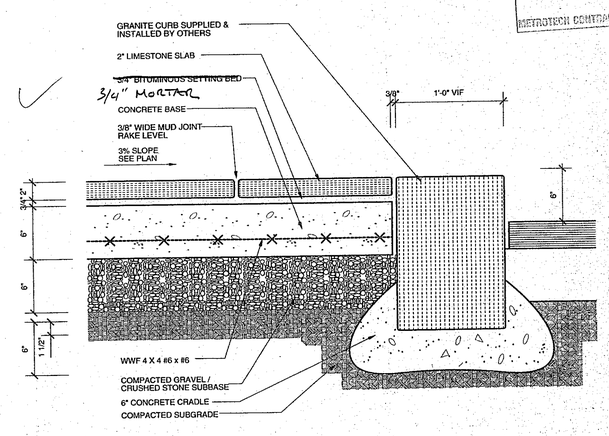
4 PLAN DETAIL @ MANHOLE COVER
SCALE: 1 1/2" =1' - 0"



3 SECTION DETAIL @ TRENCH DRAIN
SCALE: 1 1/2" =1' - 0"



2 TYPICAL PAVING @ EXPANSION JOINT
SCALE: 1 1/2" =1' - 0"



1 TYPICAL CURB AND PAVING DETAIL
SCALE: 1 1/2" =1' - 0"

NOTE: CONFRIM DRAINAGE SLOPE WITH PLAN TYPICAL.

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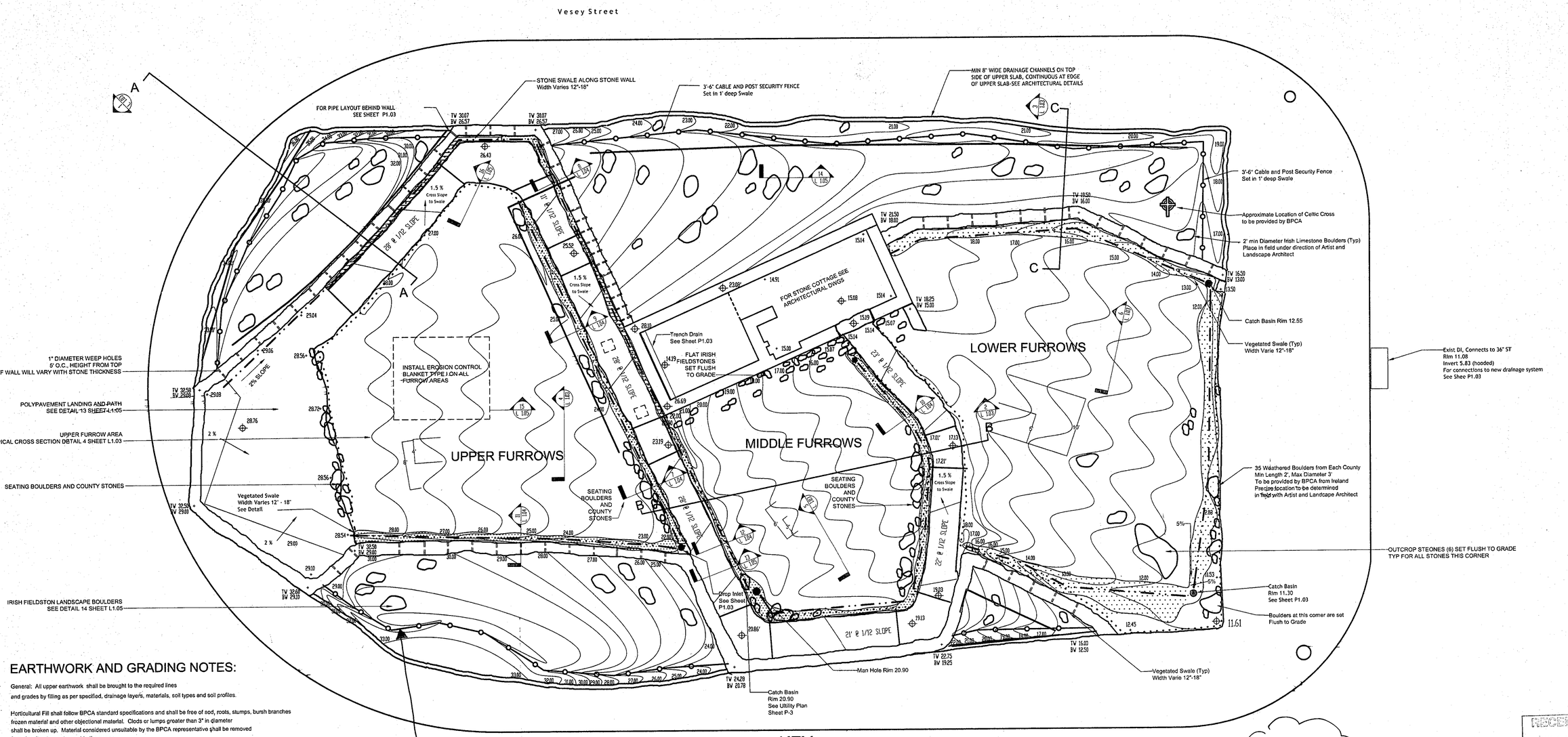
CONSULTANT

REV:

TITLE: PAVING / SIDEWALK DETAILS
ISSUE: 90% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: JB

A 4.05



SEE HALLEN DWG. M1 FOR SECURITY FENCE APPROVED SHOP DRAWINGS.

SEE ~~EA~~ SKETCHES SK-15A,B,C FOR DETAILS

SEE SHEET P1.02, P1.03 FOR DRAINAGE

EARTHWORK AND GRADING NOTES:

General: All upper earthwork shall be brought to the required lines and grades by filling as per specified, drainage layers, materials, soil types and soil profiles.

Horticultural Fill shall follow BPCA standard specifications and shall be free of sod, roots, stumps, bursh branches frozen material and other objectional material. Clods or lumps greater than 3" in djameter shall be broken up. Material considered unsuitable by the BPCA representative shall be removed from the site at no extra cost to the owner.

Site Preparation:
The site shall be completely staked out with Grade stakes showing spot elevations showing all area where there are breaks in grade, alongs swales, furrows, and as otherwise required to grade properly. Establish and maintain bench marks.

Provide uniform levels and slopes between all proposed grades. Fine grading to be performed under the supervision of the Artist, Landscape Architect and BCPA representative. Regrade surfaces as indicated to assure positive drainage towards proposed swales, catchbasins and landscape catchment areas.

Grade stakes shall be set where spot elevations are show, along center lines, at breaks in grade, along drainage swales, and as otherwise required to rough grade the area. Upon completion of rough grading obtain Artist and Landscape Architects approval before commencing fine grading. Tolerances: Rough grading of subsurface: plus or minus .10 feet. Finish required will be obtain from either blade grader or hand operation.

Soil Stabilization:
When exposed subgrade surfaces become soggy during construction operations and soil stabilization is required, stabilize subgrade materials as direction by the BPCA representative. For permanent surface slope stabilization use Erosion Control Blanket Type 1 (Landlok BonTerra CFZ or approved equal, 100 % maching spun coconut fiber) and for subsufrace slope stabilization use Erosion Control Blanket Type II (Landlok: BonTerra C2 or approved equal, 100 % mattress grade coconut fiber mechanically bound on both sides) See specifications Sheet L1.06.

Compaction:
Compact the to 6" of subgrade and each layer of fill material on planted area to 90 % of maximum dry densit at optimum moisture contct, in accordance with ASTM D698-Standard Proctor Method. Water settling, puddling and jetting of fill and backfill materials as a compaction method are not acceptable. Maintain moisture contect of materials during compaction operations within required moisture range to obtain indicated compaction density.

KEY

- Proposed Contour
- Center Line of Swale
- Center Line of Security Fence
- Catch Basin
- Woven Wattle Fence
- Vegetated Swale SEE DETAIL SHEET L1.04
- Stone Swale SEE DETAIL SHEET L1.04

1 UPPER LEVEL / GRADING AND SURFACE DRAINAGE
SCALE: 1/8" =1' - 0"

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REV: 50% DESIGN DOCUMENTS 4/11/012
PRELIMINARY

TITLE: UPPER LEVEL / GRADING
ISSUE: SCHEMATIC DESIGN
DATE: 04/27/01 DRAWN BY: AB/EK, GW

L1.0

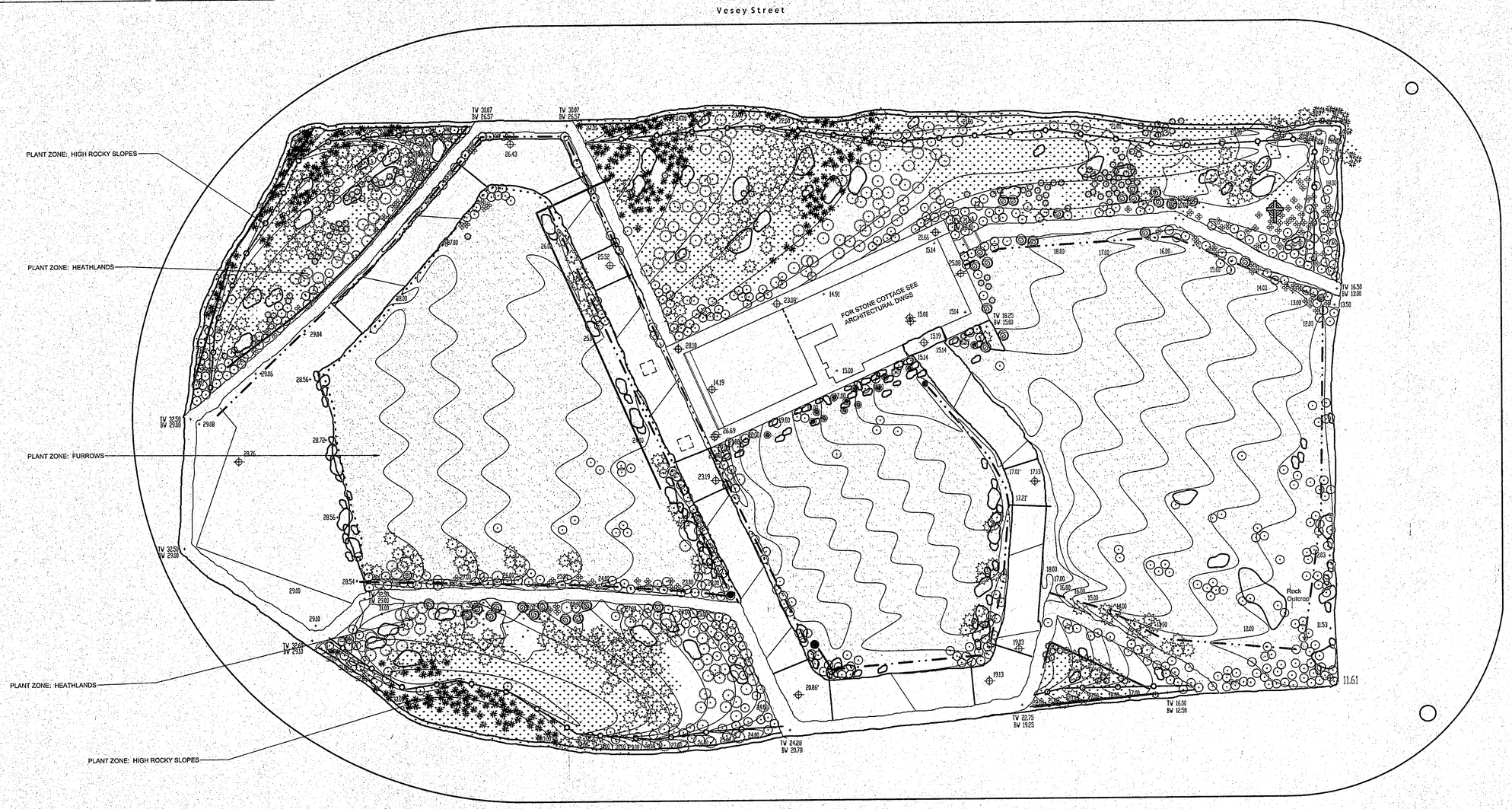
PLANT LIST		
QTY	BOTANICAL NAME	SIZE
100	*Calluna vulgaris 'Allegro'*	1 gallon
350	*Calluna vulgaris 'Mullion'*	1 gallon
80	*Calluna vulgaris 'Rubrum'*	1 gallon
160	*Erica x Darleyensis 'Kramer's Rote'*	1 gallon
120	*Erica tetralix 'George Frazer'*	1 gallon

QTY	BOTANICAL NAME	SIZE
30	*Rosa x hibernica*	4 x 4
25	*Rosa x spinossima*	5 x 4

QTY	BOTANICAL NAME	SIZE
500	*Arctostaphylus uva-ursi*	6"-9"
500	*Juncus effusus*	2 gallon
250	*Juncus effusus*	1 gallon
160	*Iris pseudacorus*	1 gallon
400	*Carex stipata*	1 quart
200	*Carex stricta*	1 quart
400	*Carex vulpinoidea*	1 quart
80	*Osmunda regalis*	1 quart

QTY	BOTANICAL NAME	SIZE
420	*Armeria maritima 'Lauchenana'*	1 Quart
60	*Digitalis purpurea 'Foxy'*	1 Quart
48	*Echinops bannaticus 'Blue Globe'*	1 Quart
380	*Geranium sanguinium*	1 Quart
240	*Ranunculus acris 'Multiplex'*	1 Quart
240	*Ranunculus yakusimanus*	1 Quart
120	*Sedum acre var. aureum*	1 Quart
120	*Sedum album 'Murale'*	1 Quart
120	*Sedum reflexum*	1 Quart
600	*Thymus serphyllum*	1 Quart

QTY	BOTANICAL NAME	SIZE
500	*Arctostaphylus uva-ursi*	lb
500	*Juncus effusus*	2 gallon
200	*Juncus effusus*	1 gallon
150	*Iris pseudacorus*	1 gallon
200	*Carex stipata*	2" plug
200	*Carex stricta*	2" plug
80	*Osmuda regalis*	1 Quart



KEY TO PLANT SYMBOLS

PLANTS FROM CONTAINERS

- Allium babingtonii
- Arameria maritima
- Calluna vulgaris
- Digitalis purpurea
- Erica tetralix
- Iris pseudacorus 1 QT
- Juncus effusus 2 Gallon
- Rosa x hibernica

Ulex gallii

PLANTS FROM SEED

Grass and Wildflower Mix: Rough Areas
Seed 4 lbs/acre
2" plugs 1 min to 3 max per/square foot
See Sheet L1.04 for species and proportion

Grass and Wildflower Mix: Furrow Areas
Seed 6 lbs/acre
2" plugs 1 min to 3 max per/square foot
See Sheet L1.04 for species and proportion

SMALL TREES

Prunus spinosa

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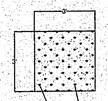
PROTOTYPICAL PLUG AND SEEDING PLAN FOR TOP OF FURROWS

PROPORTION %	FURROWS-HIGH AREAS	TYPE	QTY PER SY
15	*Alopecurus alopecuroides*	2" Plug	4
15	*Bouteloua dactyloides*	2" Plug	6
6	*Chrysopsis villosa*	2" Plug	2
12	*Coreopsis rosea*	2" Plug	6
10	*Festuca ovina*	Seed	2 oz
8	*Festuca rubra*	Seed	1 oz
10	*Koeleria cristata*	Seed	1 oz
5	*Panicum virgatum*	2" Plug	1
4	*Tridens flavus*	Seed	1 oz
4	*Tridens muticus*	Seed	1 oz
4	*Vitis aestalis*	2" Plug	1
100	TOTAL PER SY		18

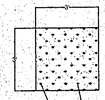


Set 2" Plugs 6" O.C.
in Triangulated Pattern

Overseed Plugged Area at Time of Planting
See List for Seeding Rates

PROTOTYPICAL PLUG AND SEEDING PLAN FOR BOTTOM OF FURROWS

PROPORTION %	FURROWS-LOW AREAS	TYPE	QTY PER SY
8	*Agrostis stolonifera*	2" Plug	3
10	*Bouteloua curtipendula*	2" Plug	4
15	*Buchloe dactyloides*	2" Plug	4
8	*Carex annectens xanthocarpa*	2" Plug	3
12	*Carex pennsylvanica*	2" Plug	3
6	*Carex stipatiga*	2" Plug	2
15	*Festuca ovina*	Seed	
15	*Festuca rubra*	Seed	
4	*Ranunculus repens*	2" Plug	1
5	*Vulpia pratensis*	2" Plug	1
100	TOTAL		18

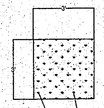


Set 2" Plugs 6" O.C.
in Triangulated Pattern

Overseed Plugged Area at Time of Planting
See List for Seeding Rates

PROTOTYPICAL PLUG AND SEEDING PLAN FOR ROUGH AREAS

PROPORTION %	ROCKY AREAS-HIGH SLOPES	TYPE	QTY PER SY
PERCENTAGE	BOTANICAL NAME	SIZE	
8	*Bouteloua curtipendula*	2" Plug	3
15	*Agrostis stolonifera*	2" Plug	4
20	*Schizachyrium scoparium*	2" Plug	5
6	*Centaurea lutea*	2" Plug	
6	*Centaurea cyanus*	Seed	02 oz
15	*Festuca ovina*	Seed	02 oz
8	*Gaillardia aristata*	2" Plug	2
8	*Hypericum perforatum*	2" Plug	2
20	*Koeleria cristata*	Seed	04 oz
100	TOTAL		18



Set 2" Plugs 6" O.C.
in Triangulated Pattern

Overseed Plugged Area at Time of Planting
See List for Seeding Rates

1 UPPER LEVEL / PLANTING PLAN
SCALE: 1/8" =1' - 0"

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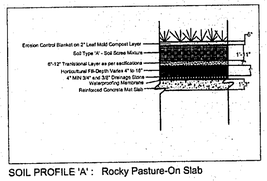
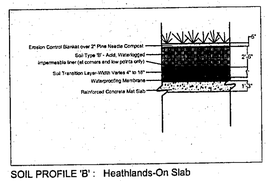
TITLE: UPPER LEVEL /PLANTING
ISSUE: 90% DESIGN DOCUMENTS
DATE: 04/27/01 DRAWN BY: AB/EK, GW

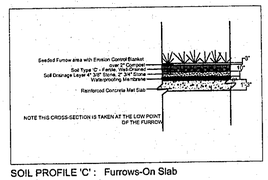
L1.01



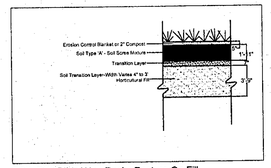
SOIL PROFILE 'A' : Rocky Pasture-On Slab



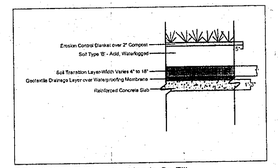
SOIL PROFILE 'B' : Heathlands-On Slab



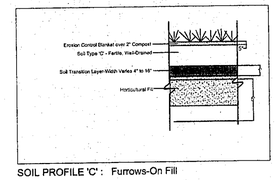
SOIL PROFILE 'C' : Furrows-On Slab



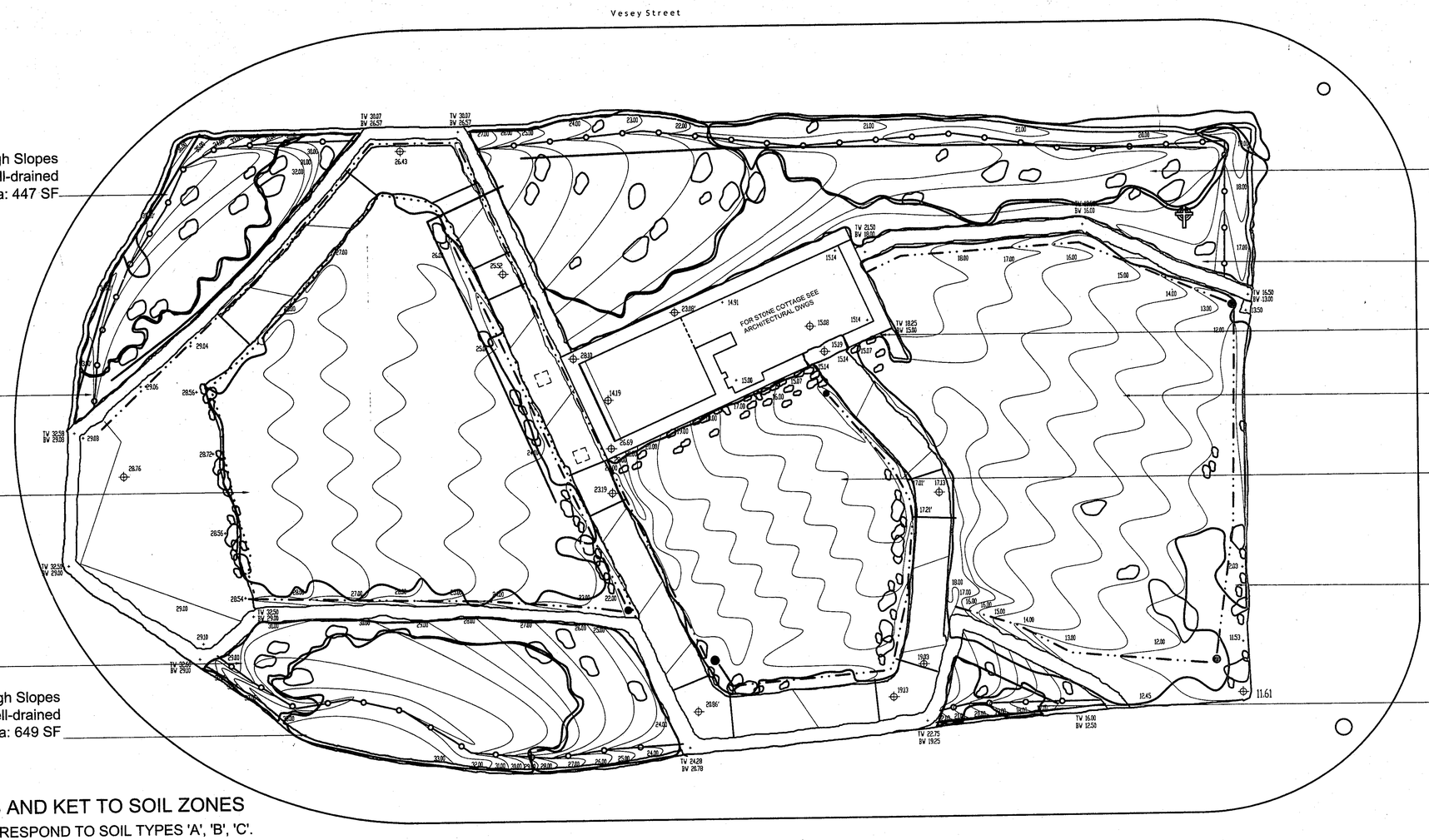
SOIL PROFILE 'A' : Rocky Pasture-On Fill



SOIL PROFILE 'B' : Heathlands-On Fill



SOIL PROFILE 'C' : Furrows-On Fill



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SOIL SPECIFICATIONS AND KET TO SOIL ZONES

SOIl PROFILES 'A', 'B', 'C' CORRESPOND TO SOIL TYPES 'A', 'B', 'C'.

ALL BASE TOPSOIL SHALL CONFORM TO SECTION 02900 OF THE CONTRACT SPECIFICATIONS
ISSUED FEBRUARY 8, 2001 FOR THE IRISH HUNGER MEMORIAL WITH THE CLARIFICATIONS AND MODIFICATIONS AS ITEMIZED BELOW:

TOPSOIL TYPE 'A'
SHALL CONSIST OF 25% BASE TOPSOIL, 25% LEAF MOLD, 25% SAND and 25% CRUSHED BLUESTONE. PH: 6.0 to 7.0 INCLUSIVE

TOPSOIL TYPE 'B'
SHALL CONSIST OF 80% BASE TOPSOIL AND 20% PINE OR OAK LEAF COMPOST. PH: 5.5 to 6.5 INCLUSIVE.

TOPSOIL TYPE 'C'
SHALL CONSIST OF 100% BASE TOPSOIL. PH: 6.0 to 7.0 INCLUSIVE

CONTRACTOR SHALL FOLLOW ALL STIPULATIONS FOR SUBMITTALS AND TEST FOR EACH INDIVIDUAL SOIL TYPE.

Hugh L. Carey Battery Park City Authority

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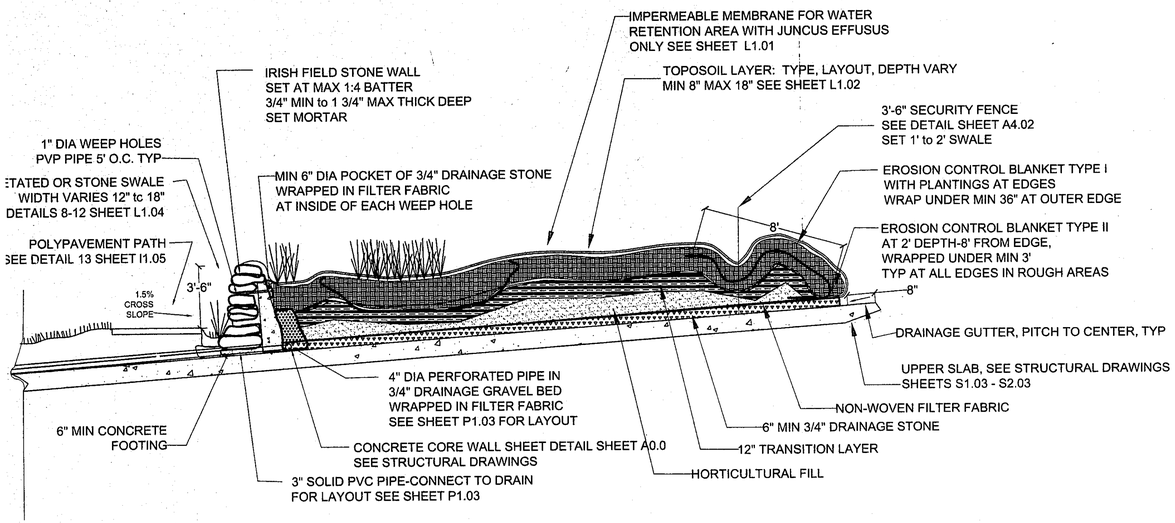
REV:

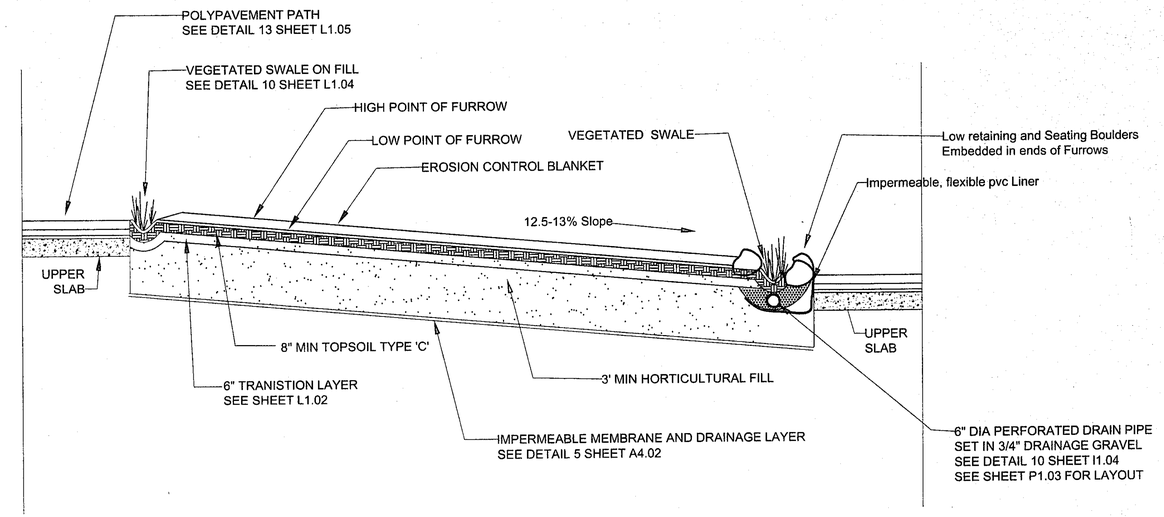
PRELIMINARY

TITLE: UPPER LEVEL / SOIL ZONE MAP
ISSUE: 90% DESIGN DOCUMENTS
DATE: 04/27/01 DRAWN BY: AB/EK, GW

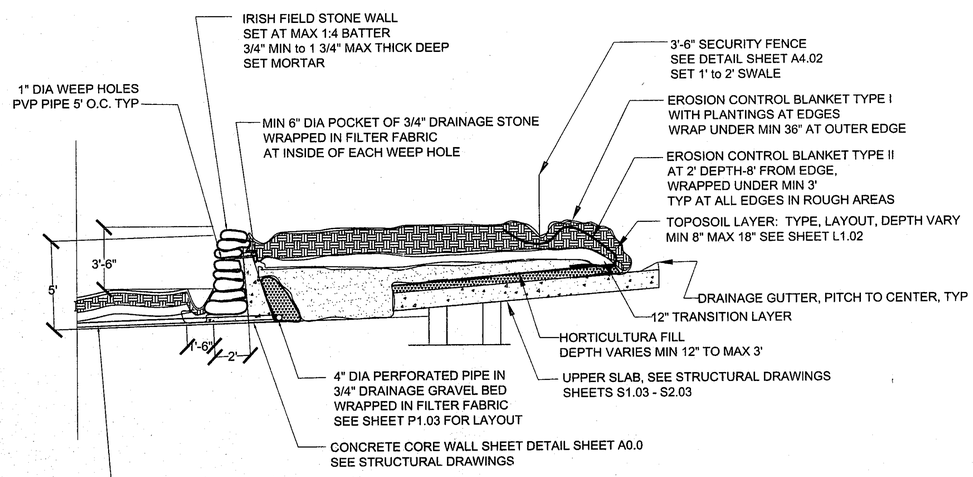
L1.02



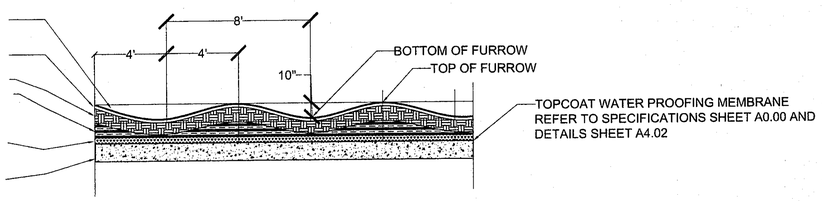
1 SECTION A-A: STONE WALL AND ROCKY AREA ON SLAB
SCALE: 1/4" = 1'- 0"



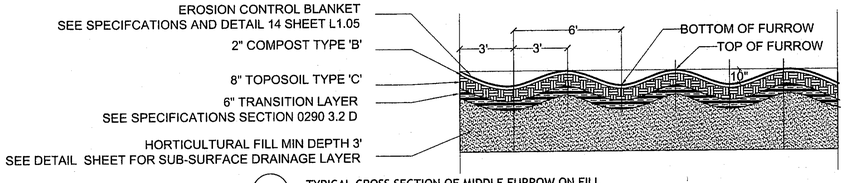
2 SECTION B-B: TYPICAL CROS SECTION OF FURROW ON FILL
1/2" = 1'-0"



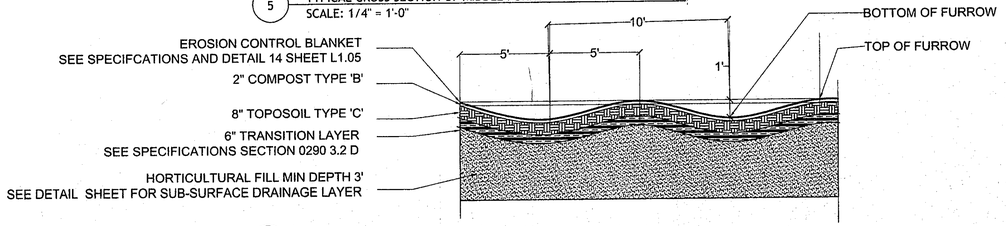
3 SECTIONC-C: TYPICAL CROSS SECTION OF ROCKY AREA ON SLAB AND FILL
SCALE: 1/2" = 1' - 0"



4 TYPICAL CROSS SECTION OF UPPER FURROW ON SLAB
SCALE: 1/4" = 1'-0"



5 TYPICAL CROSS SECTION OF MIDDLE FURROW ON FILL
SCALE: 1/4" = 1'-0"



6 TYPICAL CROSS SECTION OF LOWER FURROW ON FILL
SCALE: 1/4" = 1'-0"

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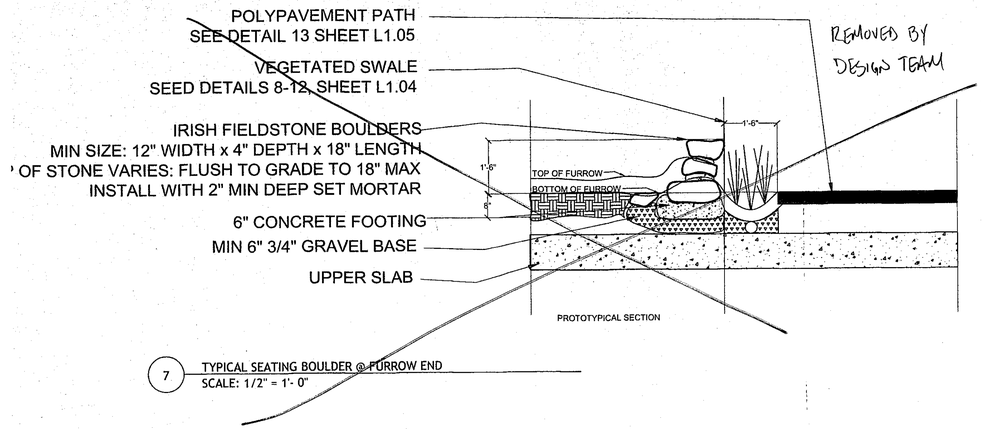
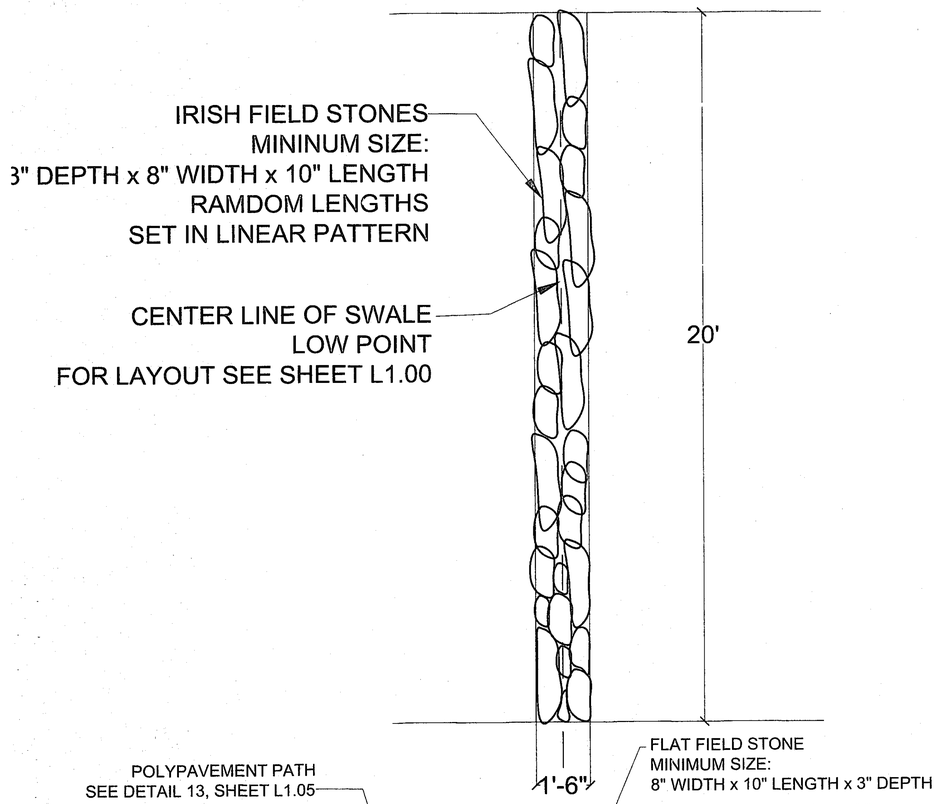
REV: 90% DESIGN DEVELOPMENT 04/27/01

TITLE: LANDSCAPE DETAILS
ISSUE: 100% DESIGN DOCUMENTS
DATE: 05/09/01 DRAWN BY: GW

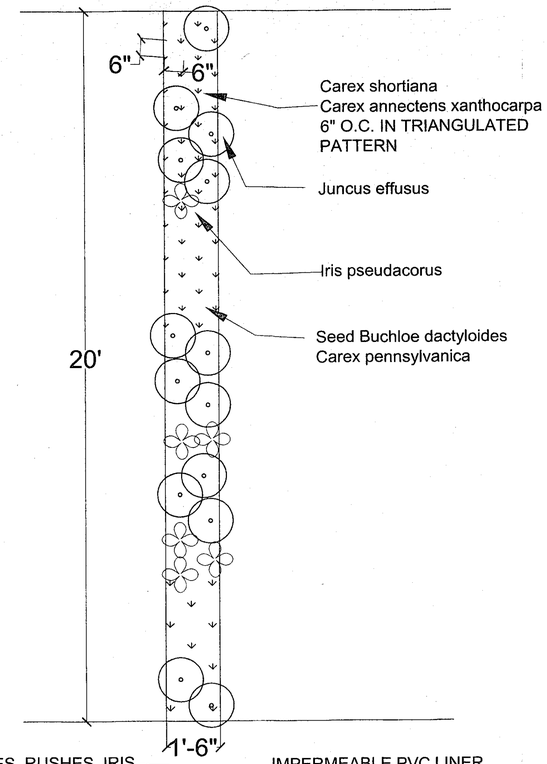
L1.03



7 TYPICAL SEATING BOULDER @ FURROW END
SCALE: 1/2" = 1'- 0"



8 TYPICAL STONE SWALE ON UPPER SLAB
SCALE: 1/2" = 1'- 0"



NOTE:
PATTERN REPEATS
AT CORNERS USE JUNCUS EFFUSUS ONLY-6' IN EACH DIRECTION

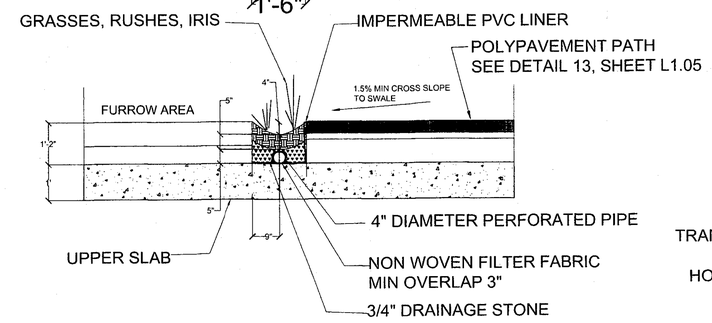
PLAN DETAIL REFLECTS PROTOTYPICAL LAYOUT

ALL PLANT MATERIAL TO BE LAID OUT UNDER
THE DIRECTION OF THE ARTIST AND LANDSCAPE ARCHITECT

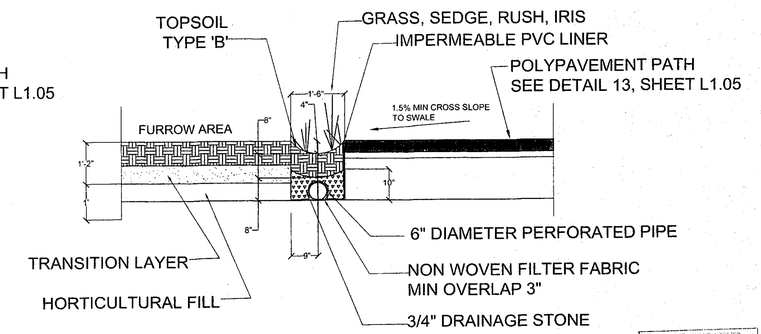
INSTALL FILTER FABRIC ON TOP OF SOIL AFTER SEEDING AND PLANTING,
SET SOIL STAPLES IN TRIANGULATED PATTERN 18" O. C.

PLANT LIST PER 30 SF

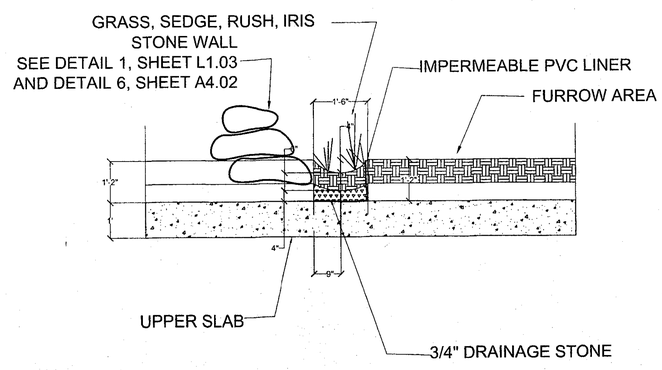
QTY	PLANT NAME	SIZE
15	Juncus effusus	2 gallon
3	Iris pseudacorus	1 gallon
22	Carex stipata	2" plug
22	Carex vulpionoidea	2" plug
1/4	Buchloe dactyloides	oz. Seed
1/4	Carex pennsylanica	oz. Seed



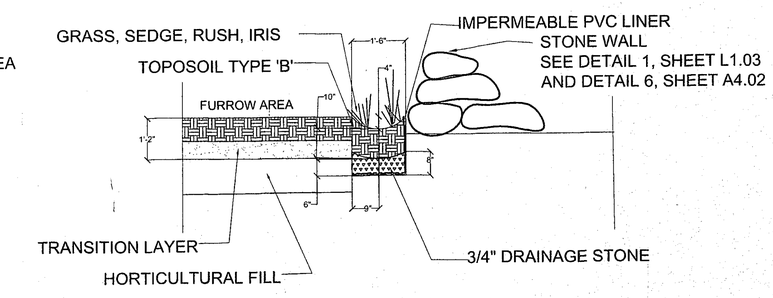
9 TYPICAL VEGETATED SWALE SLAB, WITH PIPE
SCALE: 1/2" = 1'- 0"



10 TYPICAL VEGETATED SWALE ON FILL, WITH PIPE
SCALE: 1/2" = 1'- 0"



11 TYPICAL VEGETATED SWALE SLAB, NO PIPE
SCALE: 1/2" = 1'- 0"



12 TYPICAL VEGETATED SWALE ON FILL, NO PIPE
SCALE: 1/2" = 1'- 0"

A0710 - BPCA013756

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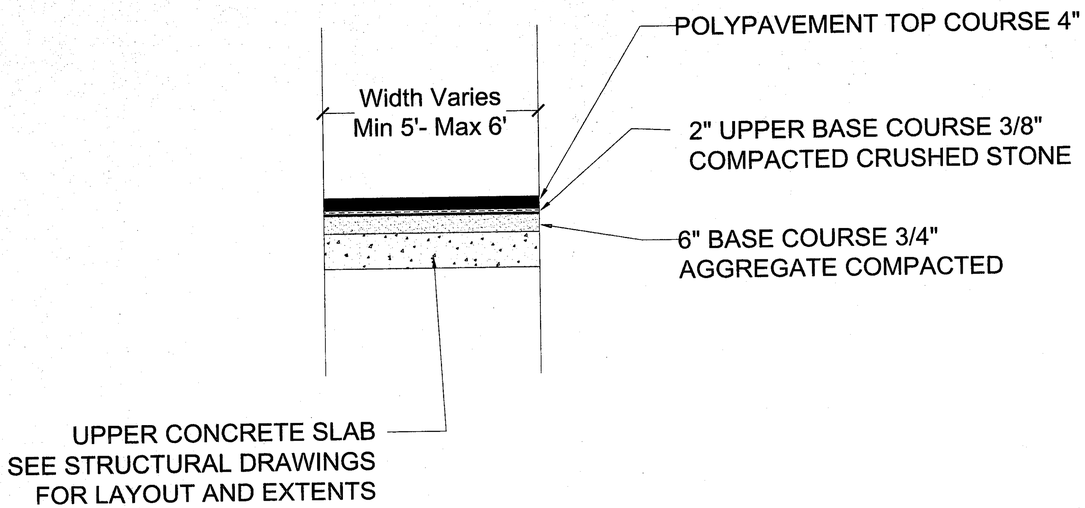
IRISH HUNGER MEMORIAL GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK CHARLES J. URSTADT, VICE CHAIRMAN	VESEY GREEN, NEW YORK JAMES F. GILL, CHAIRMAN TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER	BATTERY PARK CITY AUTHORITY 212.416.5300 ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	BRIAN TOLLE, ARTIST 212.777.1145 18 EAST 8TH STREET, NEW YORK 10003	1100 ARCHITECT, P.C. 212.645.1011 FACSIMILE 212.645.4670 WASHINGTON STREET, NEW YORK 10014
GAIL E. WITTWER, ASLA 917.445.5424 FACSIMILE 212.253.9915 125 EAST 7TH STREET, NEW YORK 10009	CONSULTANT	REV: 90% DESIGN DEVELOPMENT 04/27/01	TITLE: LANDSCAPE DETAILS ISSUE: 100% DESIGN DOCUMENTS DATE: 05/09/01 DRAWN BY: GW	L1.04

SEE DI
AND DI

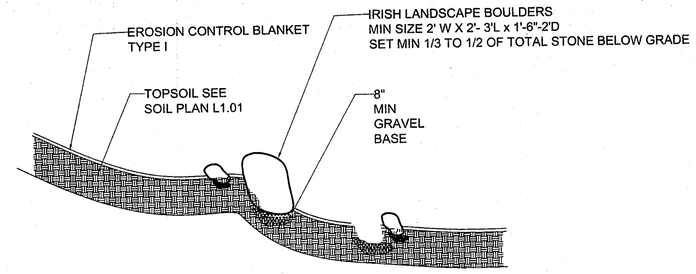
NOTES:

Refer to drawing and manufacturers specifications for PolyPavement installation specications.

Confirm layout of all path edges in field prior to commencement of paving with Design Team.



13 TYPICAL CROSS SECTION THROUGH POLYPAVEMENT PATH
SCALE: 1/2" = 1'- 0"

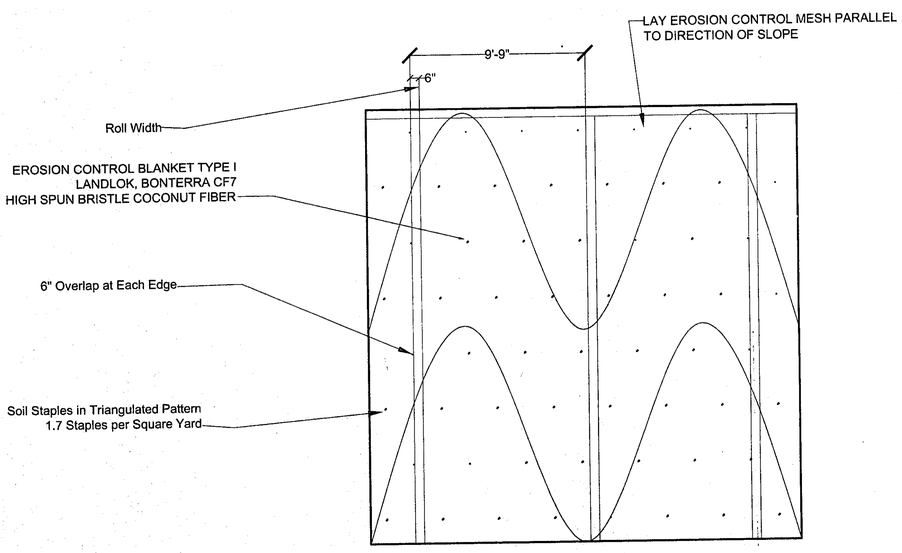


NOTE:
ALL LANDSCAPE BOULDERS TO BE PLACED IN FIELD
UNDER THE DIRECTION OF THE ARTIST AND LANDSCAPE ARCHITECT

STABILIZE WITH 50% 3/8", 50% 3/4" DRAINAGE STONE
AT BASE OF BOULDER AS NECESSARY

PROVIDE POCKETS OF TOPSOIL TYPE 'A' and TOPSOIL TYPE 'B'
AS SPECIFIED ON SOIL PLAN L1.01

14 TYPICAL DETAIL OF LANDSCAPE BOULDERS IN ROUGH AREAS
SCALE: 1/4" = 1'- 0"

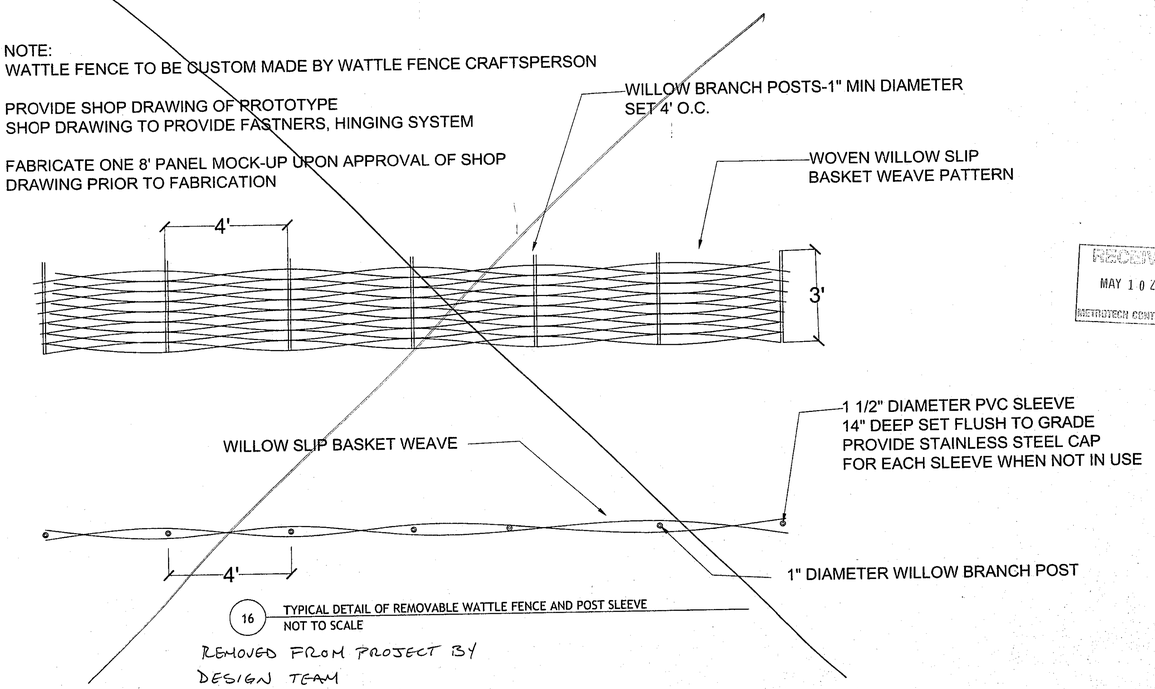


15 PROTOTYPICAL LAYOUT OF EROSION CLOTH ON FURROWS
SCALE: 1/4" = 1'- 0"

NOTE:
WATTLE FENCE TO BE CUSTOM MADE BY WATTLE FENCE CRAFTSPERSON

PROVIDE SHOP DRAWING OF PROTOTYPE
SHOP DRAWING TO PROVIDE FASTNERS, HINGING SYSTEM

FABRICATE ONE 8' PANEL MOCK-UP UPON APPROVAL OF SHOP
DRAWING PRIOR TO FABRICATION



16 TYPICAL DETAIL OF REMOVABLE WATTLE FENCE AND POST SLEEVE
NOT TO SCALE

REMOVED FROM PROJECT BY
DESIGN TEAM

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CONSULTANT

REV: 90% DESIGN DEVELOPMENT 04/27/01

TITLE: LANDSCAPE DETAILS
ISSUE: 100% DESIGN DOCUMENTS
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L1.05

SECTION 02500
SPECIFICATIONS FOR PAVING AND SURFACING-POLYPAVEMENT
PART 1-GENERAL

1.1 SECTION SUMMARY
A. Pathway paving system with soil material consisting of silty clay soil, limestone fines and river stone aggregate solidified with PolyPavement.

B. Paving System Summary Description
1. Base Course: Preparation of ¾" aggregate base on upper slab
2. Base Course: Preparation of 3/8" crushed stone base on aggregate.
3. Top Course: Preparation of silty clay soil, limestone fines and river aggregate mix:
4. Mix and Compact: PolyPavement solidifying emulsion with top course.
5. Formwork: Flexible wooden forms for fixing irregular edge when setting.

C. Include field sample of materials to be used and mock-up of paving system for selection and approval prior to procurement for full extent of Project work installation.

1.2 RELATED WORK OF OTHER SECTIONS
A. Earthwork: See Section 02200

B. Other paving systems, stone swales and stone walls. See plans and section details.

C. Surface components including drains, manholes, valve boxes and the like of site Utilities. See various Sections of Division 2 as applicable.

1.3 SUBMITTALS
A. Refer to and comply with Section 01300, Submittal, for procedures and additional submittal criteria.
B. Product Data:
1. Submit for each material and manufacture item of this Section required to complete PolyPavement. Include descriptive information, test reports and other data of manufacturer.

a. For Base Course, submit material Certification and Analysis Report, Refer to and comply with requirements specifications in Section 02200 as approved applicable.

2. Submit, prior to installation of silty clay soil, limestone fines and river aggregate, selection mock-up to indicate aggregate and mix proportions for each type. Resubmit to confirm product selections after selection mock-up completion.

C. Office Samples
1. Granular limestone fines: In quantity equal to one (1) pound.
2. River aggregate stones: In quantity equal to one (1) pound.
3. Silt Clay Soil: In quantity equal to one (1) pound.

D. Field Samples/Mock-Ups: Construct at earliest possible time and at approved location before proceeding with respective work and after Design Teams approval of office samples.

1. For Poly Pavement: As requested by Design team and BPCA for approved Construction schedule contractor shall prepare Field Samples. Mock-ups for each of the PolyPavement systems specified for review and selection of material to be used on the Project.

a. Each Field Sample/Mock-up for the selection process shall be constructed at an approved location on site of the same size 4 feet by 6 feet minimum. The PolyPavement surface shall be present place full compacted as specified on a firm sub-base representing the specified base course. Sample to include flexible wooden formwork.

b. Selection by Design Team and the Owner will be based upon a visual evaluation of The proposed finish components to include color, texture, material blends, and other Characteristics as related to on-site conditions, compatibility, and being complimentary with other finish materials on site (example: Irish Fieldstone Walls).

c. Mock-up construction for PolyPavement Path work will be utilized as a visual confirmation of proposed finish components in addition to establishing a standard for Project construction.

2. Field Samples/Mock-ups of PolyPavement Path surfacing must be approved by Design Team and Owner before actual on-site paving work may proceed. If necessary, Remove and reconstruct Field Samples/Mock-up surfacing until approved. Approved sample surfacing shall serve as a standard of acceptance for PolyPavement path surfacing work.

1.4 PROJECT SITE CONDITIONS

A. Environmental Requirements:
1. Prevent wind or rain disturbance of setting material, project form sheet slow from a adjacent areas, and generally maintain optimum installation conditions.

2. Do not install PolyPavement in conditions of standing water. Surface and sub-surface drainage must be assured at all times.

3. Cold Weather Protection
Temperature: Do not Install PolyPavement path surfacing when the ambient temperature Is below 42 degrees Farenheit, or when there is frost in the base course, or any other time When weather conditions are unsuitable for the type a material being placed. The temperature has to remain above 42 degrees Fahrenheit for a sustained period of time sufficient to allow the newly installed PolyPavement to dry and cure.

B. Layout and Grades: All lines not previously established at the site shall be laid out by a registered Land Surveyor or Professional Engineer employed by the Contractor in accordance With the Contract Documents. Coordinate surfacing layout with work of other sections.

PART 2- PRODUCTS

2.1 MATERIALS
A. Base Course: Probed crushed aggregate consisting of washed, hard durable crushed rock Base Course shall conform to the following gradation:

Screen Size Percent Passing by Weight
2" 100
1 ½" 85 to 100
No. 4 27 to 47
No. 200 2 to 12

B. Upper Base Course: Crushed aggregate consisting of washed, hard durable crushed rock Upper Base Course shall conform to the following gradation:

Screen Size Percent Passing by Weight
2" 100
1 ½" 100
No. 4 65-100
No. 200 2-65

C. Granular Limestone Fines Systems: Provide limestone fines material and mixes with approved color range shall be a selected and approved by Design team from samples submitted and from approved Mock-ups.
1. Stone Fines material will Limestone Fines by George Scholfield Co.
2. Stone Fines Grading: Provide stone with fines, match approved office samples And final Mock-up Sample for selection, and of the following gradation:

Screen Size Percent Passing by Weight
3/8" 100
No. 4 90 to 100
1/8" 75 to 90
No.20 30 to 50
No. 40 20 to 40
No. 80 10 to 25
No. 200 5 to 15

D. Silty Clay Soil: Provide Silty Clay soil Minimum 35% Silt 50% Sand 15% Clay Soil must be clean and free of man-made chemical contaminants. Peform soil suitability test and soil contamination test as recommended by PolyPavement.

E. Smooth River Stone:
1. Smooth River stone will be by George Scholfield Co.
2. Smooth River Stone Grading: Provide 3/8" to ¾" smooth river stones, match approved office samples and final Mock-up Sample for selection.

F. Soil Solidfying Emulsion: Soil Solidifying Emulsion shall be PolyPavement Soil Solidifier or equivalent. PolyPavement is an environmentally safe water-based polymer emulsion. PolyPavement Soil Solidifier has been developed specifically for use as natural soil pavement. PolyPavement is a non-corrosive and water-dilutable emulsion which utilizes a non-ionic, biodegradable emulsifier. PolyPavement Soil Solidifier dries and cures to a colorless, water insoluble, binding and cementing agent.

G. Flexible Wooden Edge: Provide flexible wooden or equally flexible edging for forming Of edge layout, minimum depth 6". Set with steel stakes 18" on center. Final layout of Formwork to be approved by Design Team in Field before path is to be installed.

PART 3 - EXECUTION

3.1 VERIFICATIONS
A. PolyPavement path system Installer shall examine the sub-grades in areas designated to receive PolyPavement system for correct compaction, grade, pitch as a base for PolyPavement Installation.

B. Proof roll prepared sub-grade surface to check for unstable areas and areas requiring Additional compaction. Sub-grade under paving systems shall be compacted to a minimum Of 95% modified Proctor density.

C. Report unsatisfactory conditions to the Owner's Representative and contract responsible For sub-grade. Do not begin PolyPavement path system until unsatisfactory conditions Have been corrected and substrate is ready to receive paving.

D. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

3.2 PREPARATION AND INSTALLATION

A. Base Course:

1. Constructed crushed aggregate base course to 6" compacted thick at not less than 90% nor more and 92% relative density.

B. Upper Base Course
1. During construction of base course in top 1 ½" to 2" of aggregate base course Work in specified Upper Base Course fines until aggregate cannot receive any more fines to form tightly compacted and smooth base course for Top Course Mixture.

C. Top Course:
1. Top course shall consist of a mixture of 35% silty clay soil 50% limestone screenings and 15% smooth river stone aggregate or as adjust base on Mock-ups.

2. Field Quality Control; Contractor shall engage and pay for the services of a qualified Soils testing laboratory/Agency to perform testing and inspections of Base Course, Upper Base Course and Top Course material and installations.

C. PolyPavement Mixing and Installation:

1. Installation shall consist of blending PolyPavement Soil Solidifier with the top 4 inches of constructed pathway soil after grading and compacting the sub-surface material to final elevations, and re-compacting. Then applying a surface toughening spray-on application of diluted solidifying emulsion. And last, applying a final spray-on application of diluted PolyPavement Soil Solidifier. PolyPavement Soil Solidifier shall be applied according to the manufacturer's custom prepared application instructions and as specified in these plans and the special provisions. Place Top Course mixture in one (1) layer Raked smooth as required to obtain a minimum 4" total thickness.

2. After final grading and compacting, the soil material shall be scarified to a depth of 4 inches. PolyPavement Soil Solidifier shall be diluted at the appropriate dilution ratio. (See Soil Moisture Field Test in the special provisions of these plans.)

3. Diluted PolyPavement shall be spray-applied to the scarified soil material at the spread rate calculated to achieve optimum moisture content for compaction (OMC) and to obtain a residual PolyPavement emulsion content of 2.0 percent by total volume of compacted soil material.

4. The diluted PolyPavement emulsion shall be thoroughly mixed and blended with the soil material to the measurable depth of 4 inches.

5. The treated soil material shall then be graded and compacted to final elevations with steel drum compacting equipment that weighs not less than 6 tons.

6. If required by the manufacturer, upon completing the soil compaction process, a spray-on application of properly diluted PolyPavement Soil Solidifier shall be applied at the Minimum Spread Rate of 0.25 gallon per square yard and allowed to dry. If required by the manufacturer, a second spray-on application of properly diluted PolyPavement Soil Solidifier shall be applied at the Minimum Spread Rate of 0.125 gallon per square C yard and allowed to dry.

D. Quality Control and Company Specifications: The above dilutions and spread rates may be adjusted in the field by the Engineer or the Soil Solidifying Emulsion Manufacturer as required to address specific field conditions such as the type of soil and/or the moisture content of the soil. All field adjustments shall be made in a manner that does not change the amount of soil solidifying emulsion that is applied to the soil per unit area and/or in a manner that does not change the depth of treatment.

The contract price paid per square yard for soil solidifying emulsion shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved Installing soil solidifying emulsion, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Supplier Information: PolyPavement, The Natural Soil Pavement
P.O. Box 36339, Los Angeles, California 90036
Phone: (323) 954-2240 · Fax: (323) 954-2244
E-mail:tech@polypavement.com

D. Tolerances for PolyPavement Path Surfacing:

1. The final paving surface level shall not deviate from the design levels by more than plus or minus 1/16 inch. The surface level of the paving immediately adjacent to drainage swales, catch basins shall not deviate by more than 3/16". The final surface, when measure under a 10 foot long steel or aluminum straightedge, shall not vary by more than 3/16".

3.2 INSPECTION AND ADJUSTMENTS

A. Finished PolyPavement Path surface shall be smooth, uniform and solid, with no evidence of Chipping or cracking. Cured, compacted PolyPavement shall be firm all the way through. Loose Material shall not be present.

B. Loose gravel on the surface, or unconsolidated crushed aggregate screen below the surface, Is considered evidence of improper bonding due to poor mixing or insufficient watering.

C. Unconsolidated areas shall be dug out, and shall be replaced with new PolyPavement surfacing. Patched areas shall be wetting thoroughly and rolled smooth as specified for installations.

D. Any significant irregularities shall e smoothed out prior to final acceptance of work. Smoothing shall be accomplished by re-wetting/ re-applying emulsion to rough areas and then rolling the surface again with a heavy roller (1000-1500 lbs powered walk-behind or small rider type).

END OF SECTION

EROSION CONTROL BLANKETS

Type I & Type II

1.1 DESCRIPTION OF WORK

The contractor shall furnish all labor, incidental materials, tool, supervision, transportation and equipment necessary for the installation of erosion control blankets as specified herein and as shown on the drawings. The contractor shall be prepared to install the erosion control blankets in conjunction with earthwork and other components of the landscaped areas.

1.1 REFERENCES

Latest version of American Society for Testing and Materials (ASTM) standards:

1. ASTM D-17772 Standard Test Method for Thickness
2. ASTM D-5035 Standard Test Method for Tensile Strength
3. ASTM D-5035 Standard test Method for Elongation
4. ASTM D-5261 Standard Test Method for Mass Per Unit Area

PART 2 - PRODUCT

2.1 EROSION CONTROL BANKET PROPERTIES

The Type I erosion control blanket shall be Landlok® BonTerra® CF7 Erosion Control Blanket available from SI® Geosolutions, 6025 Lee Highway, Suite 435, Chattanooga, Tennessee 37421, USA.
The Type II erosion control blanket shall be Landlok® BonTerra® CF2 Erosion Control Blanket available from SI® Geosolutions, 6025 Lee Highway, Suite 435, Chattanooga, Tennessee 37421, USA.

CS2 USGB

In addition to the product information above:

1. The Type I erosion control blanket shall be 100% machine spun bristle coconut fiber, woven into a high strength matrix. Every component of the blanket shall be biodegradable.
2. The Type II erosion control blanket shall consist of 100% mattress grade coconut fiber mechanically bound and covered on both sides by netting. The coconut fiber shall be homogeneously blended and evenly distributed throughout the blanket. Netting shall be photodegradable polypropylene with mesh openings of approximately 5/8 inch by 5/8 inch (16mm by 16mm). The blanket shall be sewn on approximately 2 in photodegradable polypropylene thread.

2.2 MANUFACTURING QUALITY CONTROL

The Type I and Type II Erosion Control Blankets shall be manufactured with quality control procedures that meet generally accepted industry standards.
The Type I and Type II Erosion Control Blanket manufacturer shall supply and test results of the erosion control blankets that demonstrate that the product complies with the specifications.

2.3 LABELING

The Type I and Type II Erosion Control Blankets shall be supplied in rolls wrapped in relatively impermeable and opaque protective covers.
The erosion control blanket rolls shall be labeled with the following information:

manufacturer's name;
product identification;
lot number;
roll number; and
roll dimensions

If any special handling is required, it shall be marked so by the Type I and Type II Erosion Control Blanket Manufacturer on the Erosion Control Blanket component (i.e. "This Side Up" or "This side Against Soil to be Retained").

2.4 HANDLING AND STORAGE

Handling, storage and care of the Type I and Type II Erosion Control Blankets following installation of the products at the site shall be the responsibility of the Contractor. The Contractor shall be liable for all damage to the materials incurred.
The Contractor shall be responsible for storage of the Type I and Type I erosion control blankets at the site after the material is delivered and after the Contractor begins mobilization to the site. The Type I and Type II Erosion Control Blankets shall be stored off the ground and out of direct sunlight and shall be protected from excessive heat or cold, mud, light or dust. Any additional storage procedures that are required b Erosion Control Blanket manufacturer shall be the Contractor's responsibility.

PART 3 - EXECUTION

3.1 FAMILIARIZATION

Prior to implementing any of the work described in this Section, the Contractor and the Type I and Type II Erosion Control Blanket Installer shall become thoroughly familiar with all portion of the work included in this Section
Inspection. Prior to implementing any of the work in this Section, the Contractor shall carefully inspect the work of all other Sections and verify that all work is complete to the point where the work in this Section may properly commence without adverse impact.
If the Contractor has nay concerns regarding the installed work of other Sections, he/she shall notify the Engineer in writing prior to the start of the work in this Section. Failure to inform the Engineer in writing or the installation of the Type I and Type II Erosion Control Blankets will be construed as the Contractor's acceptance of the related work of all other Sections.

3.2 HANDLING AND PLACEMENT

The Type I and Type II Erosion Control Blankets shall be handled in such a manner as to ensure they are not damaged in any way.
On slopes, the Type I and Type II Erosion Control Blankets shall be secured in the anchor trench and then rolled down the slope in a manner as to continually keep the erosion control blankets in tension.
If necessary, the Type I and Type II Erosion Control Blankets shall be positioned by hand after being rolled so as to minimize wrinkles.
The Type I and Type II Erosion Control Blankets shall not be cut using a hooked utility blade.
After unwrapping the Type I and Type II Erosion Control Blankets from their opaque cover, the Type I and Type II Erosion Control Blankets shall not be left exposed for a period in excess of 30 days.

3.3 SEAMS AND OVERLAPS

The components of the Type I and Type II Erosion Control Blanket are not bonded together and the edges and ends of the rolls. Each component will be secured or seamed to the like component at overlaps.
Type I and Type II Erosion Control Blanket Components:
1. The Type I and Type II Erosion Control Blanket components shall be overlapped by at least 6 inches. These overlaps shall be secured by tying.
2. Tying shall be achieved with nylon cable ties. Tying devices shall be white or yellow for easy inspection. Metallic devices shall not be used.
3. Tying shall be at a minimum of every 5 feet along a slope, every 2 feet across a slope, every 6 inches in the anchor trench and every 10 feet on horizontal surfaces.

3.5 REPAIR

Any holes or tears in the Type I and Type II Erosion Control Blankets shall be repaired by placing a patch extending 2 feet beyond the edges of the hole or tear. The patch shall be secured by tying approved tying devices every 6 inches through the bottom of the Type I and Type II Erosion Control Blankets needing repair. If the hole or tear width across the roll is more than 50 percent of the width of the roll, the damaged the two portions of the Type I and Type II Erosion Control Blankets shall be joined in accordance with Section 3.4 above.

3.6 PLACEMENT OF SOIL MATERIALS

The Contractor of Type I and Type II Erosion Control Blanket Installer shall place all soil materials in such a manner as to ensure that:
The Type I and Type II Erosion Control Blankets and underlying materials are not damaged
Minimal slippage occurs between the Type I and Type II Erosion Control Blankets and underlying layers.

3.7 PRODUCT PROTECTION

The Contractor shall use all means necessary to protect all prior work and all materials and completed work in other Sections.
In the event of damage, the Contractor shall immediately make all repairs and replacements as necessary, to the approval of the BPCA Consultant and at no additional cost to the owner.

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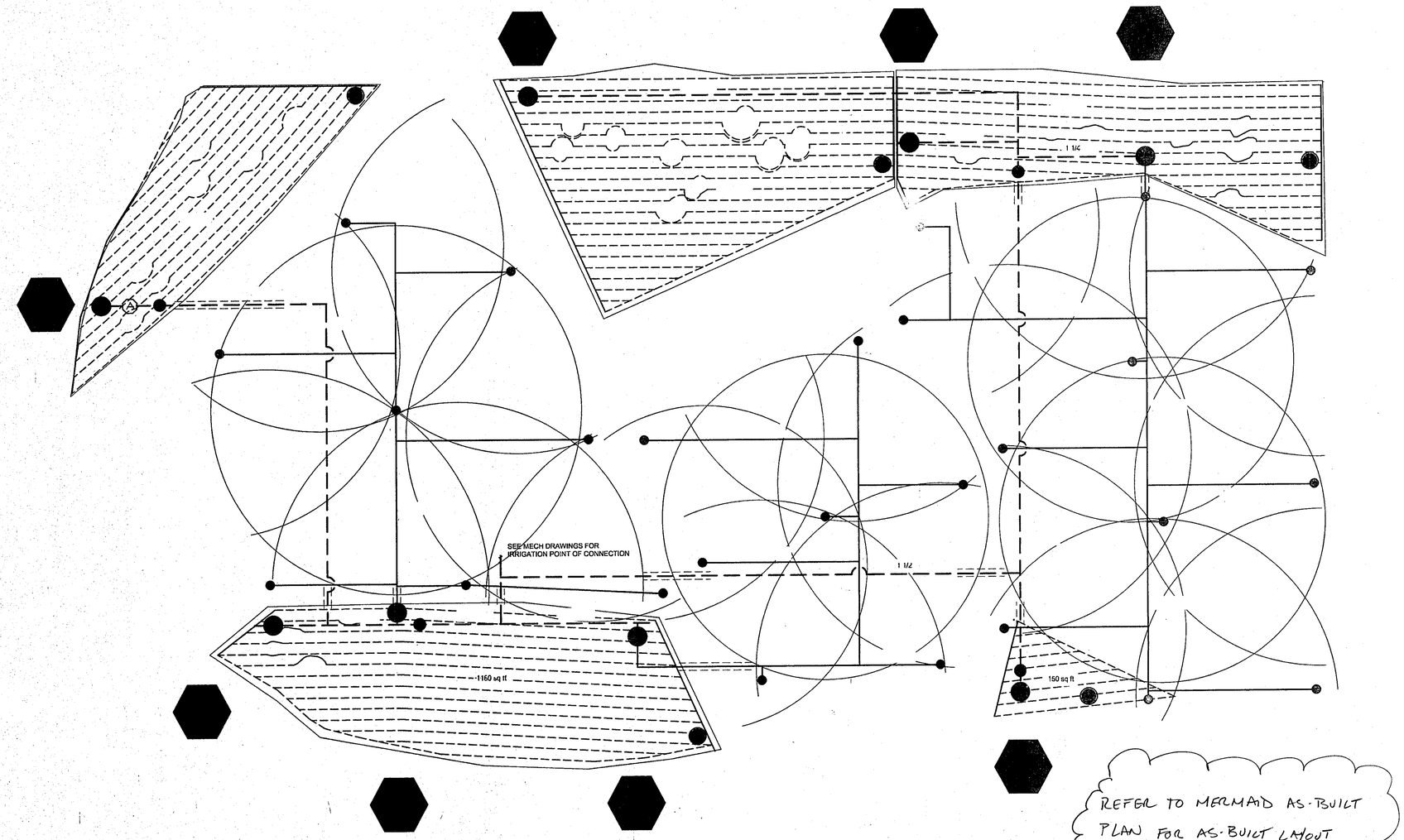
GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK	JAMES F. GILL CHAIRMAN	212.416.5300	212.777.1145	212.645.1011 FACSIMILE 212.645.4670	917.445.5424 FACSIMILE 212.253.9915			ISSUE: 100% DESIGN DOCUMENTS	
CHARLES J. URSTADT VICE CHAIRMAN	TIMOTHY S. CAREY PRESIDENT & CHIEF EXECUTIVE OFFICER	ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	18 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014	125 EAST 7TH STREET, NEW YORK 10009			DATE: 05/09/01 DRAWN BY: GW	



REFER TO MERMAID AS-BUILT PLAN FOR AS-BUILT LAYOUT

IRRIGATION LEGEND

- HUNTER P.C. I-20 SPRINKLER W/4.0 NOZZLE 4.0 GPM @ 50 PSI, 25' SPACING
- HUNTER P.C. I-20 SPRINKLER W/2.0 NOZZLE 2.0 GPM @ 50 PSI, 25' SPACING — 5 / 120
- HUNTER P.C. I-20 SPRINKLER W/1.0 NOZZLE 1.0 GPM @ 50 PSI, 25' SPACING
- A — AUTOMATIC CONTROLLER — 3 / 120
- A1 / 1 1/2" / 40 — VALVE NUMBER / VALVE SIZE / ZONE GPM
- A — AIR RELEASE VALVE ASSEMBLY
- AUTOMATIC VALVE ASSEMBLY - DRIP IRRIGATION — 1 / 120
- AUTOMATIC VALVE ASSEMBLY — 2 / 120
- MURDOCK LAWN HYDRANT (REFER TO MECHANICAL DRAWING DETAILS)
- STEEL SLEEVES
- SCH 80 PVC MAINLINE PIPE — 6 / 120
- SCH 80 PVC LATERAL PIPE
- NETAFIM TECHLINE DRIP TUBING — 6 / 120

SYSTEM COMPONENTS:

CONTROLLER: RAINMASTER EVOLUTION DX2

RAIN SENSOR: RAINBIRD

QUICK COUPLER: RAINBIRD #5LRC

BOOSTER PUMP (NYMEX ROOM): WATERTRONICS #LSTB - 1.5-208-3-2"

GENERAL NOTES

1. IRRIGATION PLAN IS DIAGRAMMATIC. ALL IRRIGATION EQUIPMENT WILL BE LOCATED IN THE FIELD BY THE IRRIGATION INSTALLER.
2. IRRIGATION INSTALLER TO LAYOUT AND STAKE ALL IRRIGATION EQUIPMENT PRIOR TO INSTALLATION. LOCATIONS SHALL BE APPROVED BY THE ARCHITECT.
3. INSTALL ONE 4" PIPE AND ONE 2" PIPE AT EACH SLEEVE LOCATION.
4. IRRIGATION INSTALLER TO INSTALL RAIN SENSOR IN A LOCATION APROVED BY THE ARCHITECT.
5. INSTALL BOOSTER PUMP IN MECHANICAL ROOM OF NYMEX BUILDING.

SYSTEM REQUIREMENT
24 GPM @ 75 PSI

1 UPPER LEVEL / IRRIGATION
SCALE: 1/8" =1' - 0"

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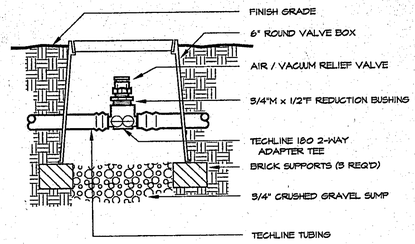
CONSULTANT

REV:

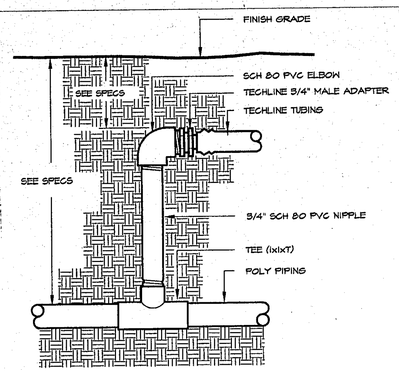
PRELIMINARY

TITLE: UPPER LEVEL / IRRIGATION
ISSUE: ~~90%~~ 100% DESIGN DEVELOPMENT
DATE: ~~04/27/01~~ 5/09/01 DRAWN BY: AB/EK, GW

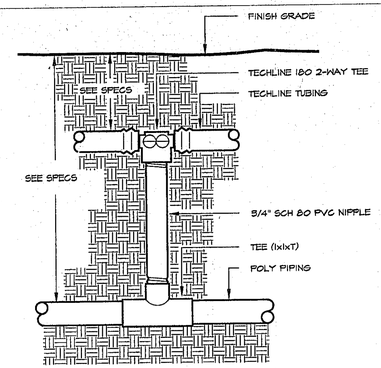
L2.0



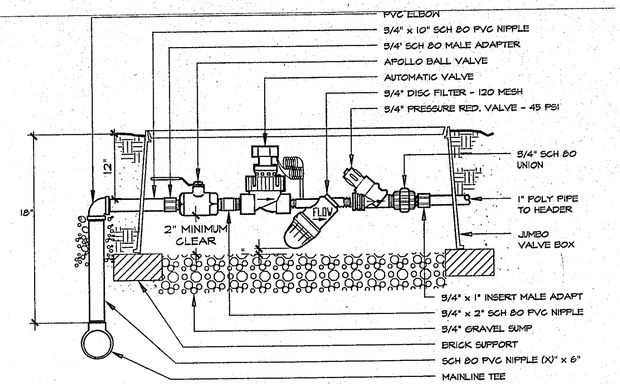
10 L2.01 TECHLINE AIR/VACUUM RELIEF VALVE
NOT TO SCALE



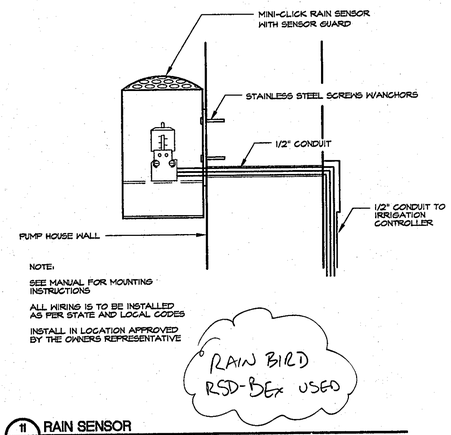
7 L2.01 TECHLINE START CONNECTION - END
NOT TO SCALE



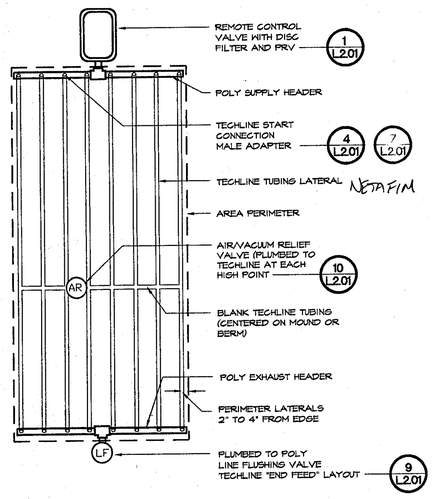
4 L2.01 TECHLINE START CONNECTION WITH PVC RISER
NOT TO SCALE



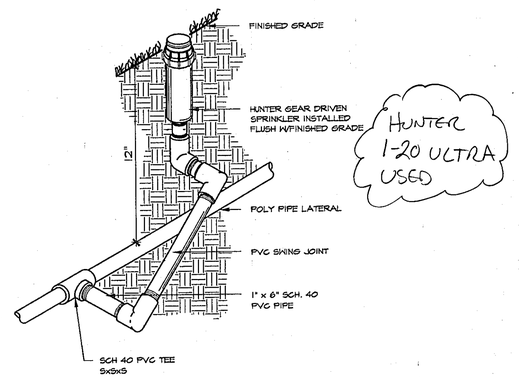
1 L2.01 DRIP IRRIGATION VALVE ASSEMBLY
NOT TO SCALE



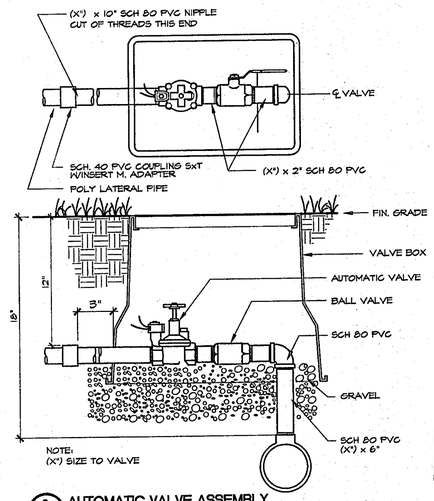
11 L2.01 RAIN SENSOR
NOT TO SCALE



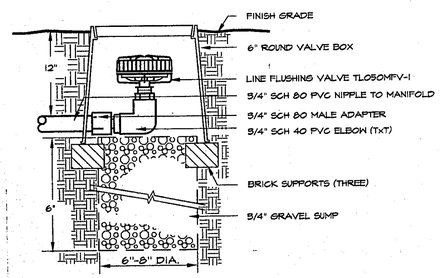
8 L2.01 TYPICAL TECHLINE LAYOUT
NOT TO SCALE



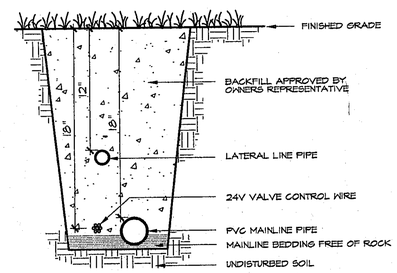
5 L2.01 HUNTER GEAR DRIVEN SPRINKLER
NOT TO SCALE



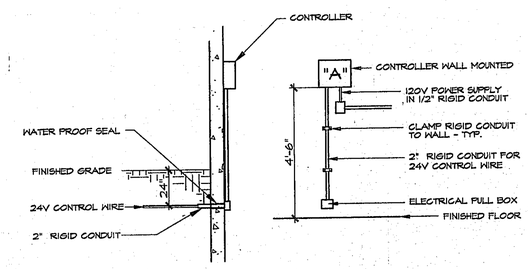
2 L2.01 AUTOMATIC VALVE ASSEMBLY
NOT TO SCALE



9 L2.01 TECHLINE LINE FLUSHING VALVE - PLUMBED TO POLY
NOT TO SCALE



6 L2.01 TRENCH
NOT TO SCALE



NOTE:
ALL ELECTRICAL WORK IS TO BE DONE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES

3 L2.01 CONTROLLER INSTALLATION
NOT TO SCALE

1 IRRIGATION DETAILS
SCALE: AS NOTED

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REV:
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TITLE: UPPER LEVEL / IRRIGATION
ISSUE: ~~90%~~ 100% DESIGN DEVELOPMENT
DATE: ~~04/27/01~~ 5/09/01
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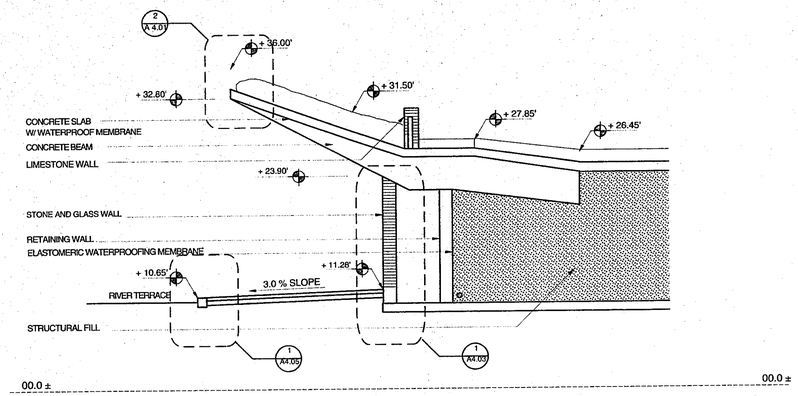
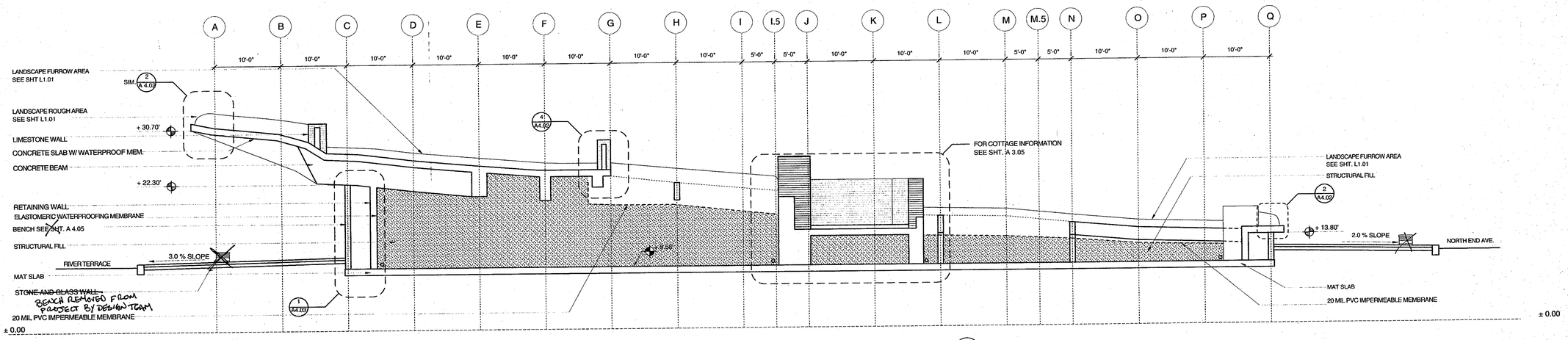
L2.01

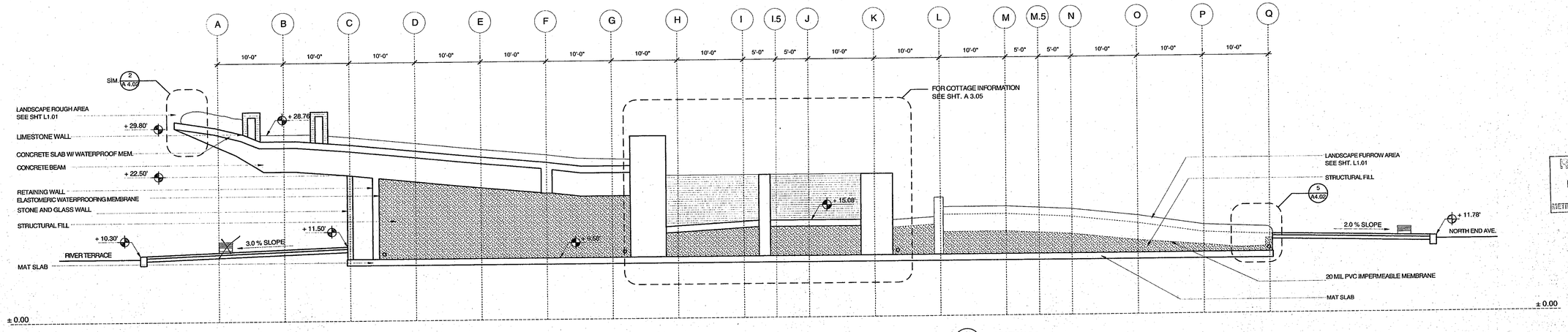
A0710 - BPCA013760



3 SECTION @ BEAM 14
SCALE: 1/8" =1' - 0"



2 SECTION 4-4
SCALE: 1/8" =1' - 0"



1 SECTION 5-5
SCALE: 1/8" =1' - 0"

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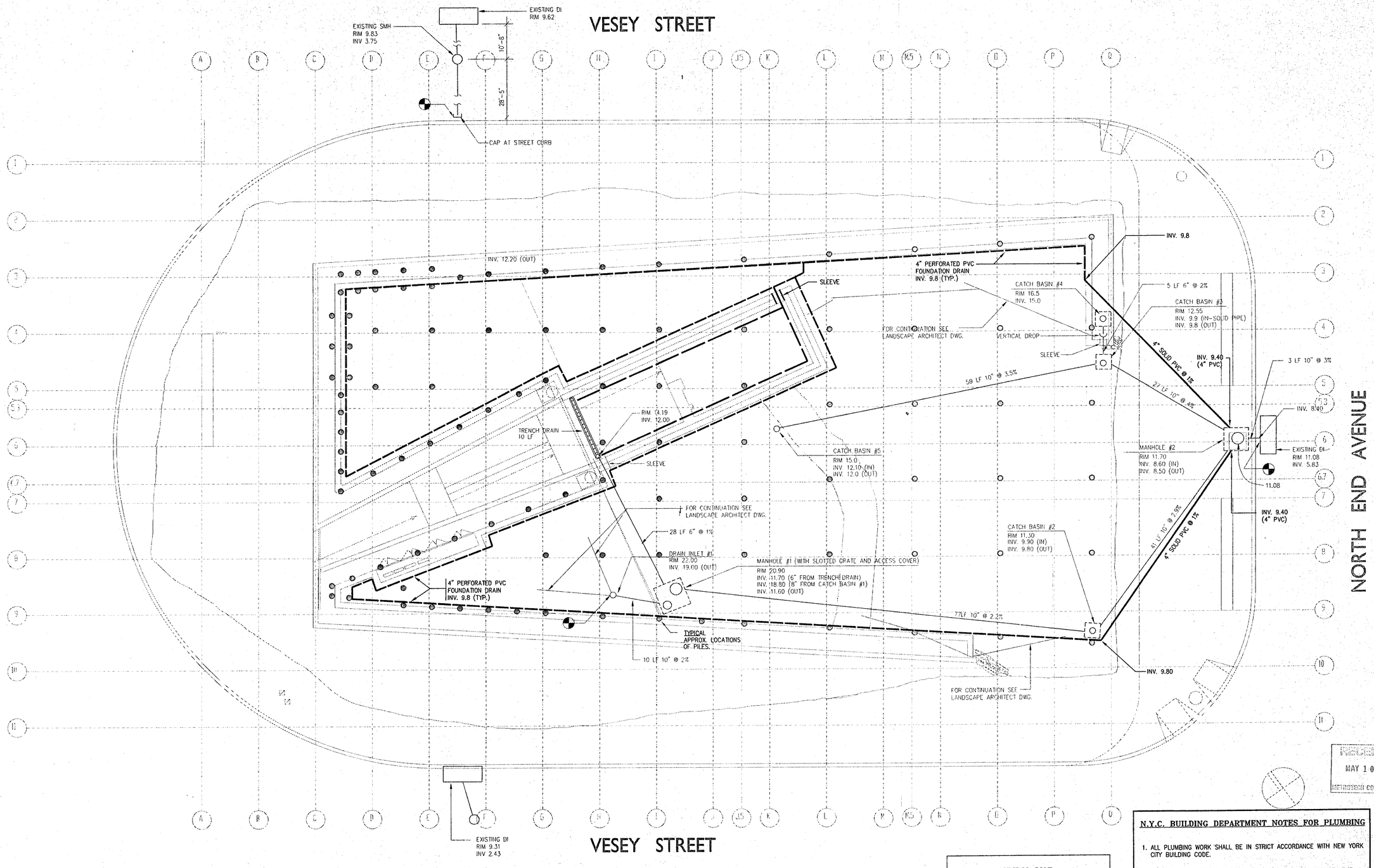
REV: 50% DESIGN DEVELOPMENT SUBMISSION - 04/11/01
90% DESIGN DEVELOPMENT SUBMISSION - 04/27/01

TITLE: SECTIONS @ COL. LINES 5-5 & 4-4 & BEAM 14
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: EK/ AB

A 3.02

A0710 - BPCA013737



MAT SLAB/ STREET LEVEL DRAINAGE PLAN

SCALE: 1/8" =1' - 0"

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MAY 10 2001
METROTECH CONTRACTING

SYMBOL LIST

— — —	SUB-DRANAGE PIPE
— — —	PERFORATED PVC PIPE (BY LANDSCAPE ARCH.)
———	DRAIN PIPE
CB	CATCH BASIN
MH	MANHOLE

N.Y.C. BUILDING DEPARTMENT NOTES FOR PLUMBING

1. ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH NEW YORK CITY BUILDING CODE.
2. CHANGES IN DIRECTION IN DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF 45 DEGREE WYES, LONG SWEEPS: SHORT SWEEPS, SIXTH, QUARTER, EIGHTH OR SIXTEENTH BENDS: OR BY A COMBINATION OF THESE OR EQUIVALENT FITTINGS.
3. SANITARY TEES AND QUARTER BENDS MAY BE USED IN DRAINAGE LINES ONLY WHERE THE DIRECTION OF FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.
4. SHORT SWEEPS WILL BE PERMITTED IN DRAINAGE PIPING 3 IN. DIAMETER OR LARGER FOR ANY OFFSETS EITHER HORIZONTAL OR VERTICAL.

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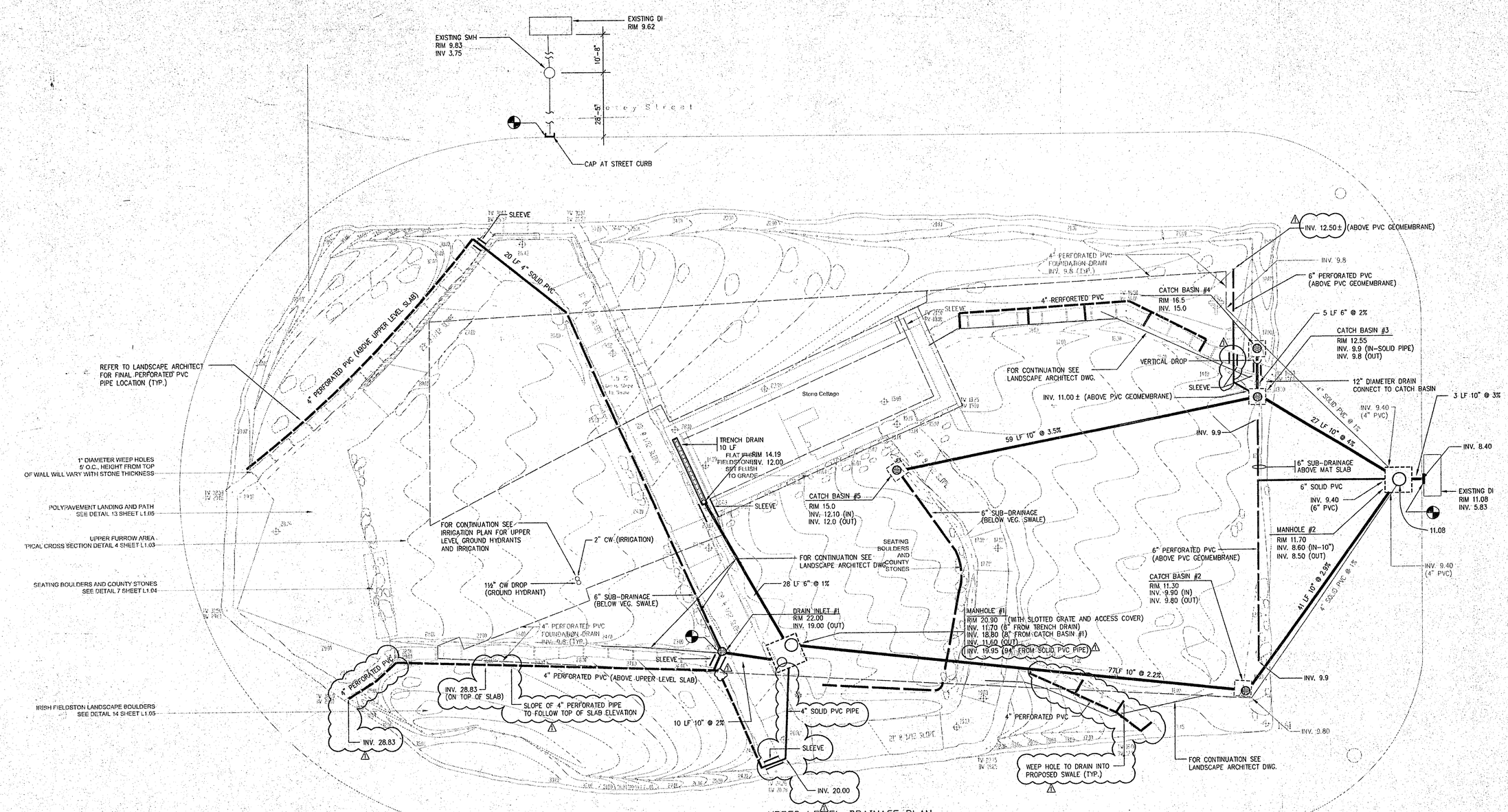
1001 AVENUE OF THE AMERICAS, NEW YORK, 10018

REV:

TITLE: MAT SLAB/ STREET LEVEL DRAINAGE PLAN
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: NN

P1.02

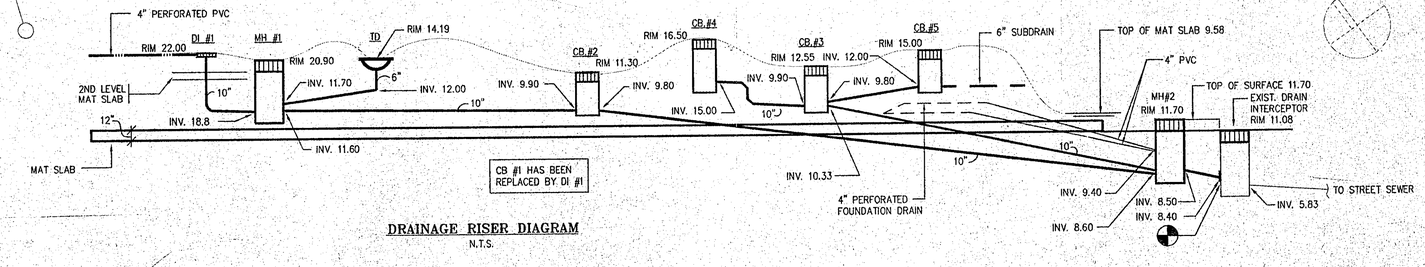
A0710 - BPCA013765



UPPER LEVEL DRAINAGE PLAN

SCALE: 1/8" =1' - 0"

CONTRACTOR MAY SUBSTITUTE HDPE OR PVC IN LIEU OF DUCTILE PIPE SUBJECT TO ARCHITECT, NYC DOB AND BATTERY PARK CITY AUTHORITY FINAL APPROVAL



DRAINAGE RISER DIAGRAM

N.T.S.

RECEIVED JUL - 9 2001 BATTERY CONTRACTORS

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GEORGE E. PATAKI GOVERNOR, STATE OF NEW YORK JAMES F. GILL CHAIRMAN	212.416.5300	212.777.1145	212.645.1011 FACSIMILE 212.645.4670	917.445.5424 FACSIMILE 212.253.9915	212.695.1000 FACSIMILE 212.695.1299		ISSUE: 1 REVISED AS CIRCLED	
CHARLES LIBSTADT TIMOTHY S. CAREY		16 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014	125 EAST 7TH STREET, NEW YORK 10009	1001 AVENUE OF THE AMERICAS, NEW YORK, 10018		DATE: 06/11/01 DRAWN BY: NN	

VESEY STREET

GH-2

GH-3

PIPE SHALL BE BURIED 3'-0" BELOW GRADE ENCASED IN MIN. 3" OF FINE BUILDING SAND, MACHINE COMPACTED

PIPE SHALL BE BURIED 3'-0" BELOW GRADE ENCASED IN MIN. 3" OF FINE BUILDING SAND, MACHINE COMPACTED

SLOPE MIN. 1/8" PER FOOT

2" CAPPED CW FOR IRRIGATION (HEAT TRACE IN VERTICAL)

1½" CW UP TO UPPER LEVEL HYDRANTS (HEAT TRACE IN VERTICAL)

TYPICAL APPROX. LOCATIONS OF PILES.

GH-1

FLUSH MOUNTED NON-FREEZE GROUND HYDRANT WITH VALVE (TYP.)

SLOPE MIN. 1/8" PER FOOT

GH-4

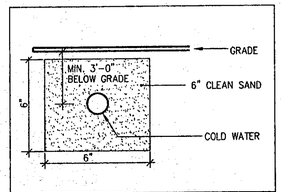
CURB VALVE FOR EACH WATER LINE

ISOLATION VALVE (TYP.)

NORTH END AVENUE

VESEY STREET

REFER TO AQUATECH CONTRACTING CORP. AS-BUILTS



BURIED PIPE DETAIL
NOT TO SCALE

MAT SLAB/ STREET LEVEL PLUMBING PLAN
SCALE: 1/8" =1' - 0"

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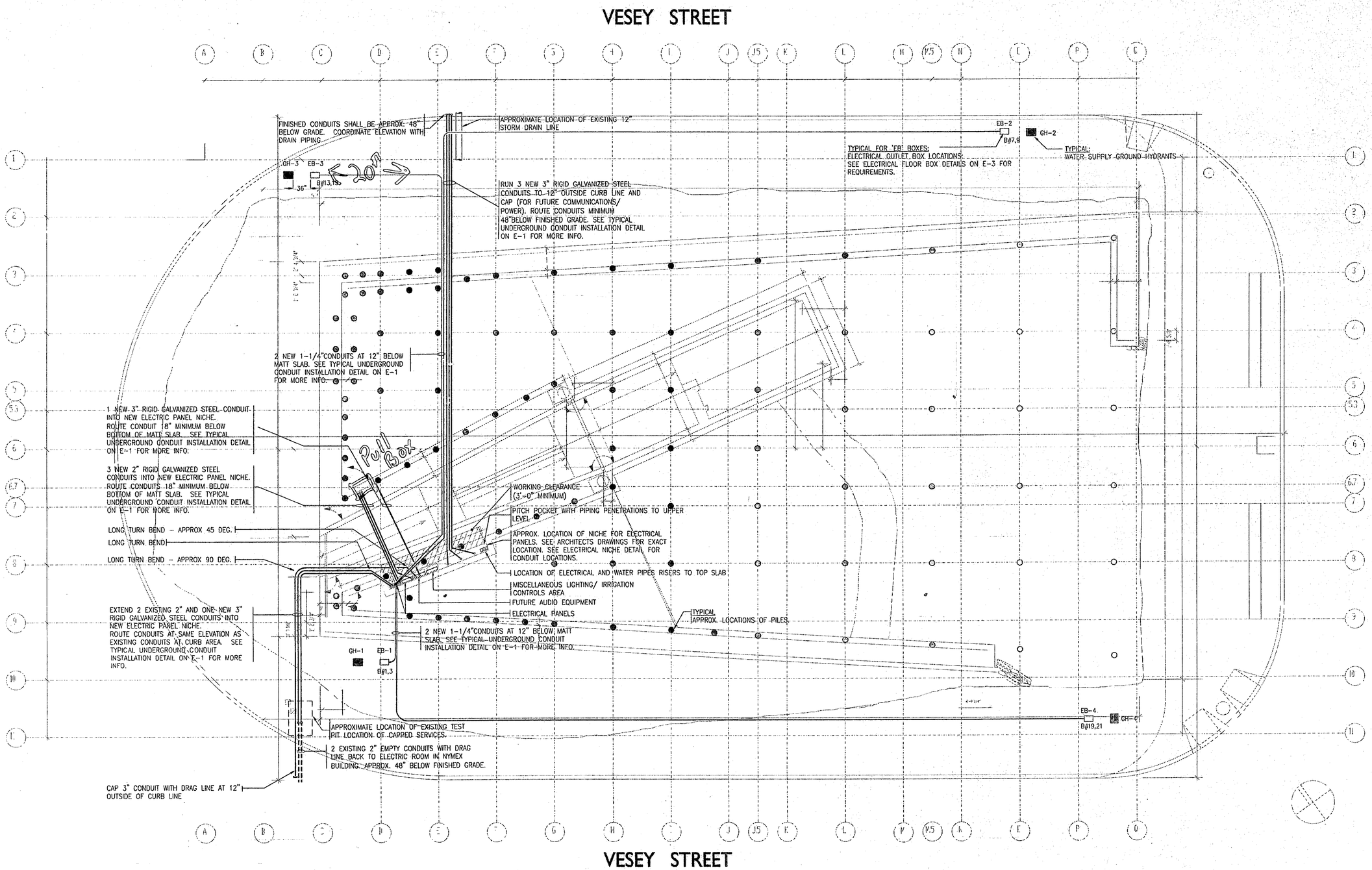
REV:

TITLE: MAT SLAB/STREET LEVEL PLUMBING PLAN
ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
DATE: 05/09/01 DRAWN BY: NN

P1.04



UNDERGROUND ELECTRICAL CONDUIT PLAN

SCALE: 1/8"=1'-0"

AS BUILTS

A0710 - BPCA013769

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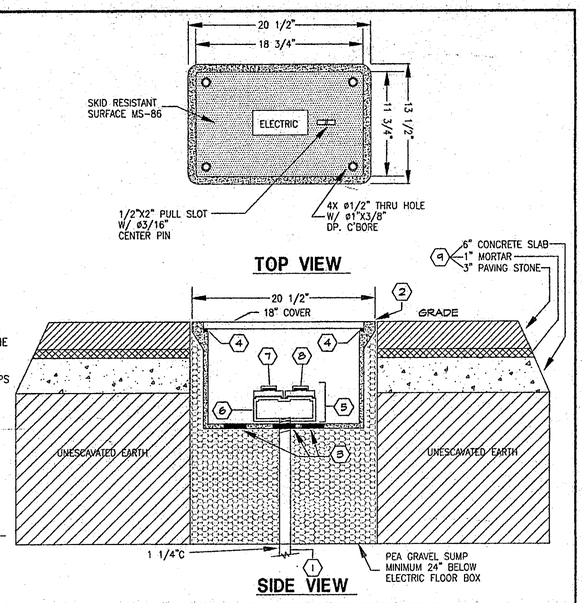
GEORGE E. PATAKI, GOVERNOR, STATE OF NEW YORK — JAMES F. GILL, CHAIRMAN	212.416.5300	212.777.1145	212.645.1011 FACSIMILE 212.645.4670	917.445.5424 FACSIMILE 212.253.9915	212.695.1000 FACSIMILE 212.695.1299		ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION
CHARLES J. URSTADT, VICE CHAIRMAN — TIMOTHY S. CAREY, PRESIDENT & CHIEF EXECUTIVE OFFICER	ONE WORLD FINANCIAL CENTER 24TH FLOOR, NEW YORK 10281	18 EAST 8TH STREET, NEW YORK 10003	435 HUDSON STREET, NEW YORK 10014	125 EAST 7TH STREET, NEW YORK 10009	1001 AVENUE OF THE AMERICAS, NEW YORK, 10018		DATE: 05/09/01 DRAWING NO. E-1

NOTES:

1. TYPICAL: THREADED RIGID STEEL CONDUIT. USE ONLY LONG TURN ELBOWS AND BENDS.
2. REINFORCED PRECAST CONCRETE WATERPROOF FLOOR BOX. STRONGWELL QUAZITE SERIES WITH FLOOR, AND ENGRAVED BOLT DOWN LID WITH GASKETING. CONTACT STRONGWELL FOR SUPPLIERS – 1-800-346-3062
3. CORE HOLES IN BOTTOM COVER OF FLOOR BOX FOR CONDUIT ENTRY AND DRAINAGE TO SUMP.
4. NEOPRENE GASKETING
5. INTERIOR WATERPROOF OUTLET BOX WITH 1 NEMA 5-20R WATERPROOF OUTLET, AND 1 NEMA 6-20R WATERPROOF OUTLET – BOTH WITH SCREW COVER CAPS. DRILL AND TAP BOTTOM OF BOX FOR CONDUIT ENTRY. APPLY DUCTSEAL AROUND CONDUCTORS IN CONDUIT ENTERING THE BOX. CENTER BOX IN BOTH DIRECTIONS WITH CENTERLINE CONCRETE BOX.
6. WATERPROOF TWO GANG, STEEL BOX TO ACCEPT TWO SINGLE GANG COVERPLATES, APPLETON FDB-2L . PROVIDE FIELD TAPS FOR CONDUIT ENTRY.
7. WATERPROOF SINGLE RECEPTACLE COVERPLATE WITH THREADED GASKETED CAP, AND SINGLE 5-20R RECEPTACLE. APPLETON FSK5-20 RECEPTACLE WIRED TO DEDICATED GFCI C.B. IN PANEL.
8. WATERPROOF SINGLE RECEPTACLE COVERPLATE WITH THREADED GASKETED CAP, AND SINGLE 6-20R RECEPTACLE. APPLETON FSK6-20 RECEPTACLE WIRED TO DEDICATED GFCI C.B. IN PANEL.
9. SECTION OF SIDEWALK CONSTRUCTION FOR REFERENCE ONLY – COORDINATE EXACT CONSTRUCTION WITH ARCH DETAILS. SET CONCRETE BOX SURFACE FLUSH WITH PAVER SURFACE



ELECTRICAL FLOOR BOX DETAIL
(TYPICAL FOR 'EB-1', 'EB-2', 'EB-3' & 'EB-4')

NOTES:

1. TYPICAL: THREADED RIGID STEEL CONDUIT. USE ONLY LONG TURN ELBOWS AND BENDS.
2. REINFORCED PRECAST CONCRETE WATERPROOF FLOOR BOX. STRONGWELL QUAZITE SERIES WITH FLOOR, AND ENGRAVED BOLT DOWN LID WITH GASKETING. CONTACT STRONGWELL FOR SUPPLIERS – 1-800-346-3062
3. CORE HOLES IN BOTTOM COVER OF FLOOR BOX FOR CONDUIT ENTRY AND DRAINAGE TO SUMP.
4. NEOPRENE GASKETING
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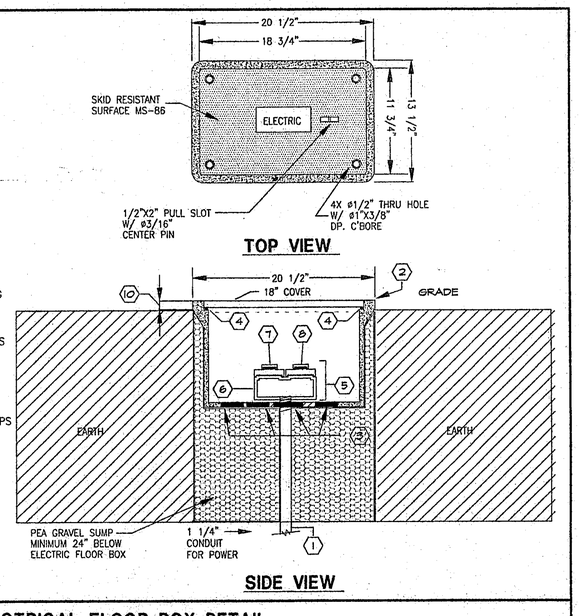
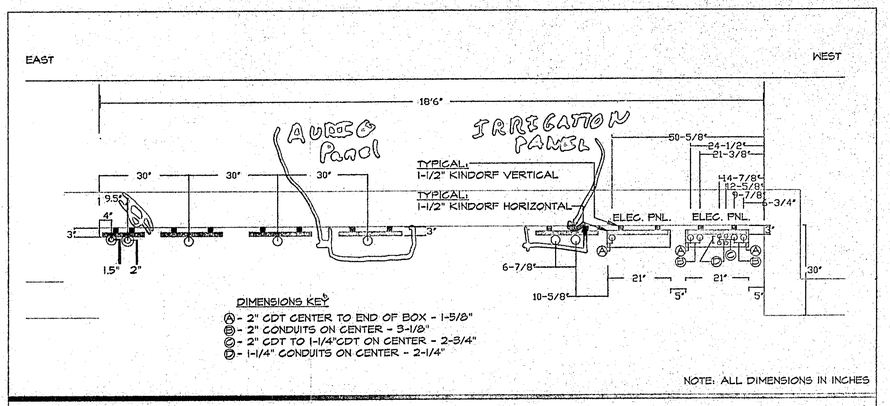
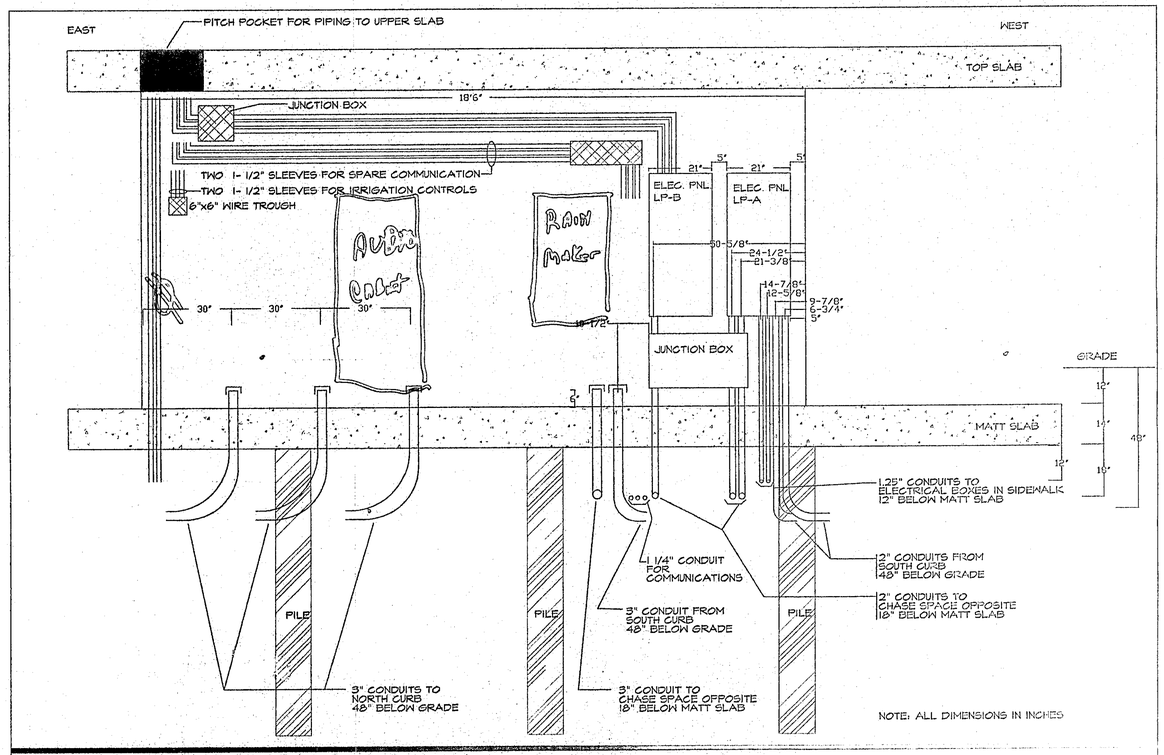
6. WATERPROOF TWO GANG, CAST BOX TO ACCEPT TWO SINGLE GANG COVERPLATES, APPLETON FDB-2L . PROVIDE FIELD TAPS FOR CONDUIT ENTRY.
7. WATERPROOF SINGLE RECEPTACLE COVERPLATE WITH THREADED GASKETED CAP, AND SINGLE 5-20R RECEPTACLE. APPLETON FSK5-20 RECEPTACLE WIRED TO DEDICATED GFCI C.B. IN PANEL. GANG COVERPLATES, APPLETON FDB-2L . PROVIDE FIELD TAPS
8. WATERPROOF SINGLE RECEPTACLE COVERPLATE WITH THREADED GASKETED CAP, AND SINGLE 6-20R RECEPTACLE. APPLETON FSK6-20 RECEPTACLE WIRED TO DEDICATED GFCI C.B. IN PANEL.
9. IN GRASSY AREAS SET BOX TO BE 1/4-1/2" ABOVE GRADE ('EB-5', 'EB-7') IN PAVED AREA (COITAGE) SET BOX LEVEL WITH PAVED SURFACE ('EB-6') .



ELECTRICAL FLOOR BOX DETAIL
(TYPICAL FOR 'EB-5', 'EB-6' & 'EB-7')



ELECTRICAL NICHE DETAIL - PLAN



ELECTRICAL NICHE DETAIL - ELEVATION

AS BUILTS

A0710 - BPCA013770

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	LILKER ASSOCIATES CONSULTING ENGINEERS, P.C. 212.695.1000 FACSIMILE 212.695.1299 1001 AVENUE OF THE AMERICAS, NEW YORK 10018	REV:	TITLE: ELECTRICAL DETAILS ISSUE: [illegible] DATE: [illegible]		

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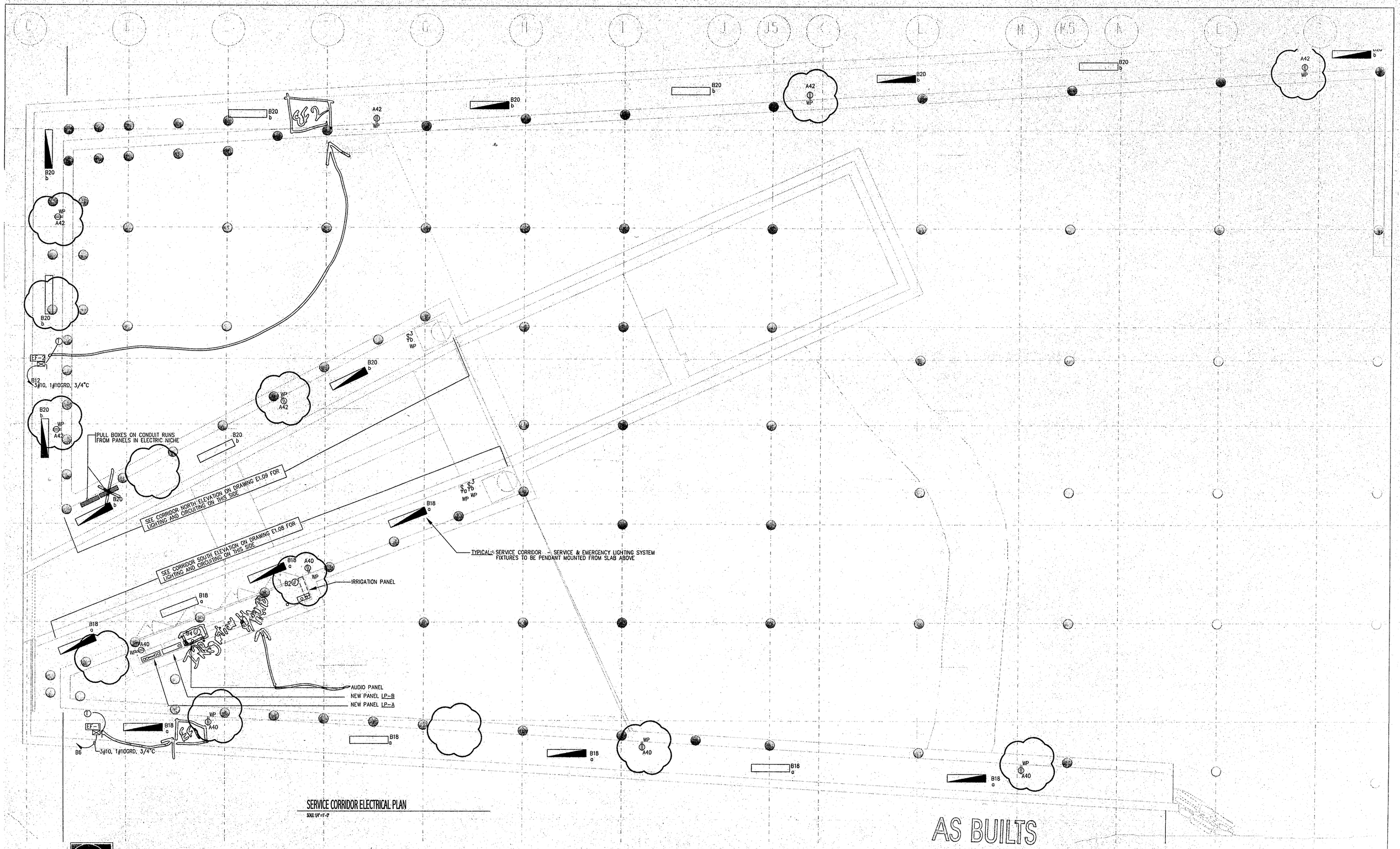

SERVICE CORRIDOR ELECTRICAL PLAN

SCALE: 1/4"=1'-0"

AS BUILTS

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1001 AVENUE OF THE AMERICAS, NEW YORK, 10018

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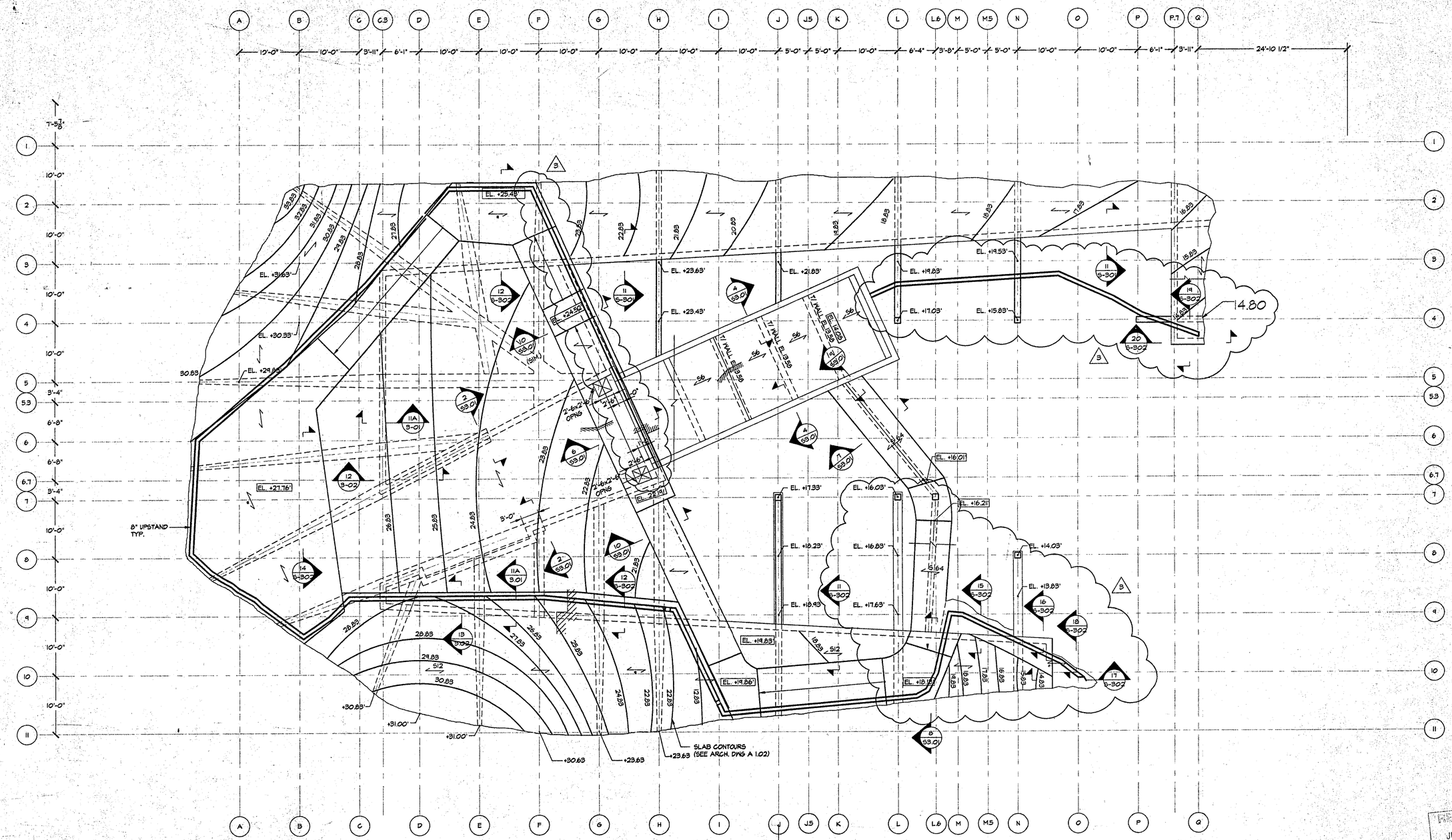
TITLE: SERVICE CORRIDOR ELECTRICAL PLAN

ISSUE: 100% DESIGN DEVELOPMENT SUBMISSION

DATE: 05/09/01

E1.07



NOTES:

1. CONTOURS TO MATCH ARCH'S.DWGS.
2. FOR SLAB EDGE PROFILE, & DIMENSIONS AND UPSTAND LAUOUT- SEE ARCH'S . DRAWINGS

LEGEND:

INDICATES 12" THICK MIN. ONE-WAY SPANNING SLAB U.O.N.

S 6 — INDICATES 6" THICK ONE-WAY SPANNING SLAB W/ #8@9" BOTT.

S 6.4 — INDICATES TAPERED 6" TO 4" SLAB W/ #9@8"(T) + #4 @ 12 SECONDARY REINF.

INDICATES TAPERED SLAB MATCHES TAPERED BEAM PROFILE . PROVIDE ADDITIONAL 6x6x W2.0xW2.0 WWF IN BOTTOM OF SLAB - SEE SECTIONS

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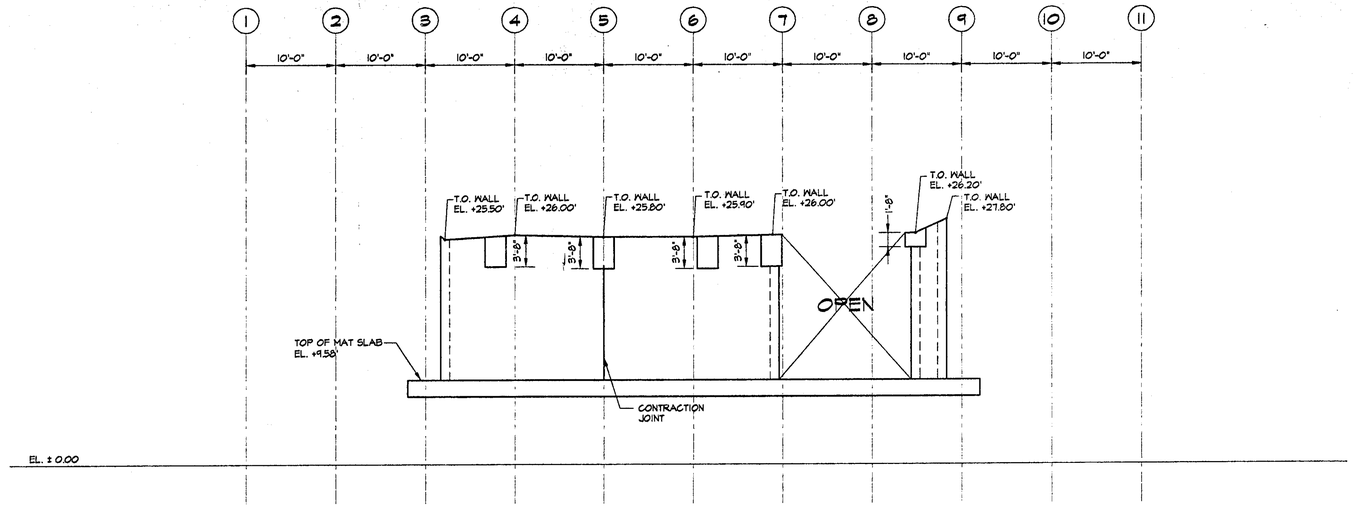
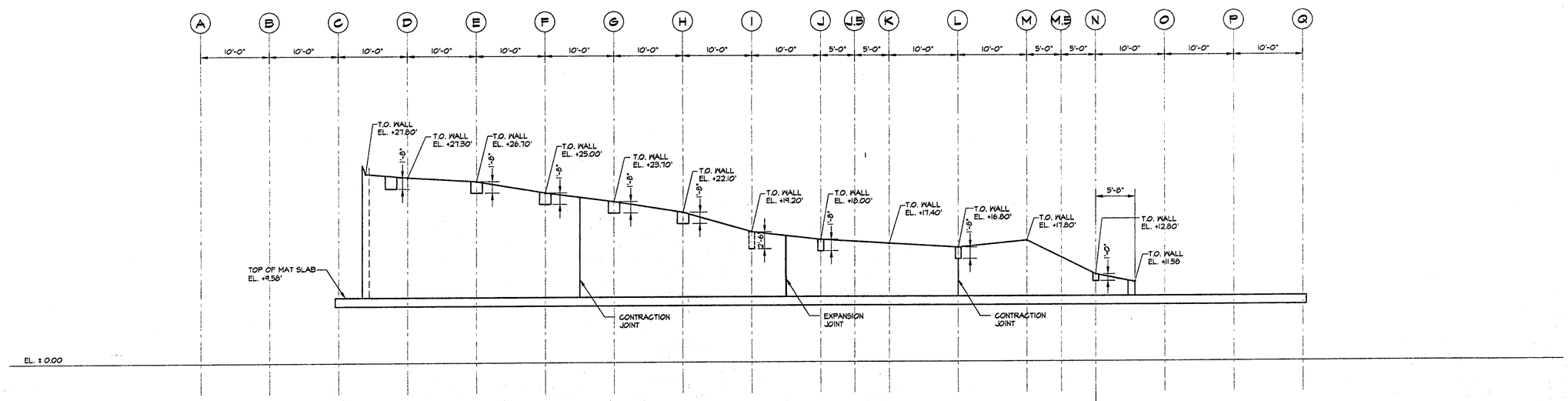


1 WEST WALL ELEVATION
SCALE 1/8"=1'-0"



2 SOUTH WALL ELEVATION
SCALE 1/8"=1'-0"

NOTES:
1. FOR JOINT DETAILS SEE DWG. S2.01

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MAY 10 2001
METROTECH CONTRACTING

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ISSUE: 100% DESIGN DEVELOPEMENT
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JOB # 7774

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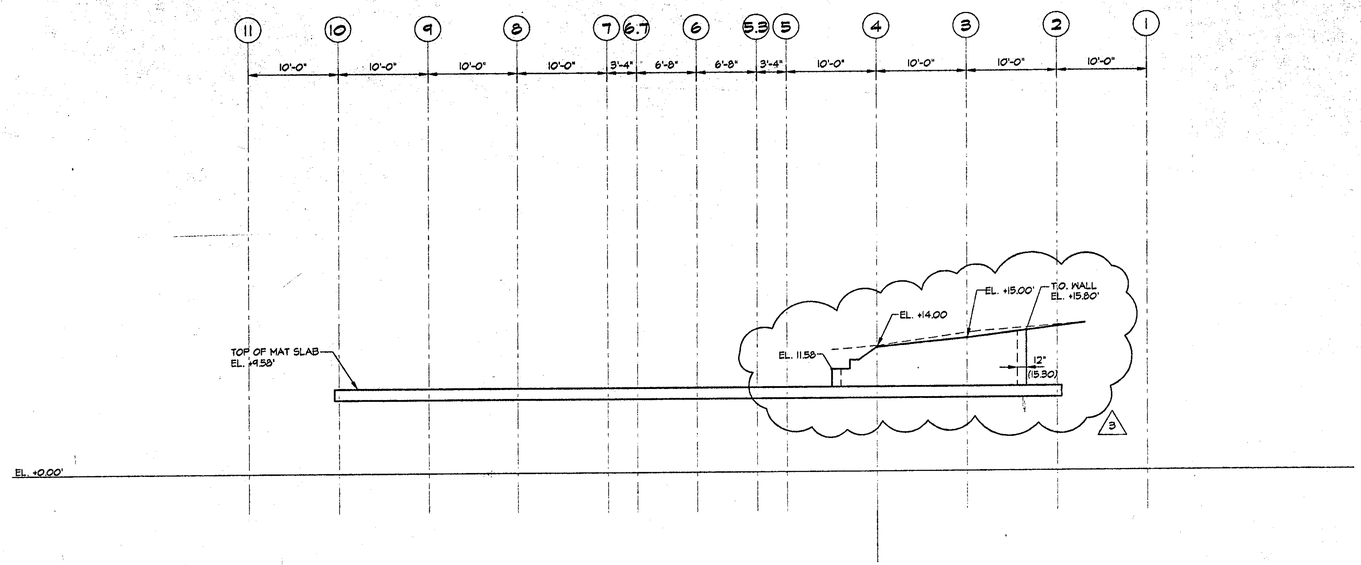
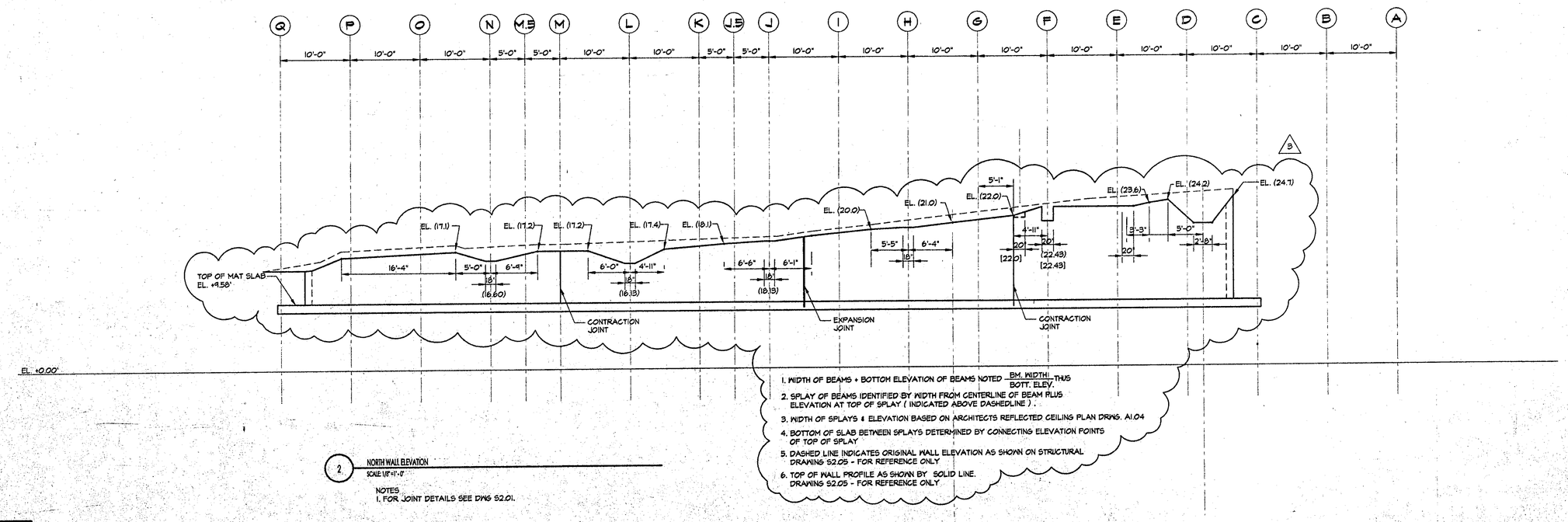


1 EAST WALL ELEVATION
SCALE: 1/8"=1'-0"



1. WIDTH OF BEAMS + BOTTOM ELEVATION OF BEAMS NOTED BM. WIDTH / BOTT. ELEV. THUS
2. SPLAY OF BEAMS IDENTIFIED BY WIDTH FROM CENTERLINE OF BEAM PLUS ELEVATION AT TOP OF SPLAY (INDICATED ABOVE DASHEDLINE) .
3. WIDTH OF SPLAYS & ELEVATION BASED ON ARCHITECTS REFLECTED CEILING PLAN DRWG. A1.04
4. BOTTOM OF SLAB BETWEEN SPLAYS DETERMINED BY CONNECTING ELEVATION POINTS OF TOP OF SPLAY
5. DASHED LINE INDICATES ORIGINAL WALL ELEVATION AS SHOWN ON STRUCTURAL DRAWING S2.05 - FOR REFERENCE ONLY
6. TOP OF WALL PROFILE AS SHOWN BY SOLID LINE. DRAWING S2.05 - FOR REFERENCE ONLY

2 NORTH WALL ELEVATION
SCALE 1/8"=1'-0"

NOTES
1. FOR JOINT DETAILS SEE DWG S2.01.

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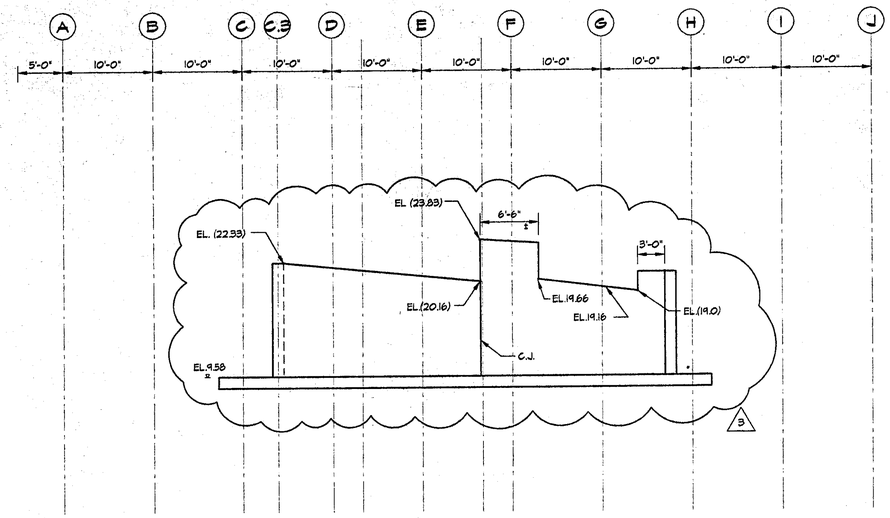
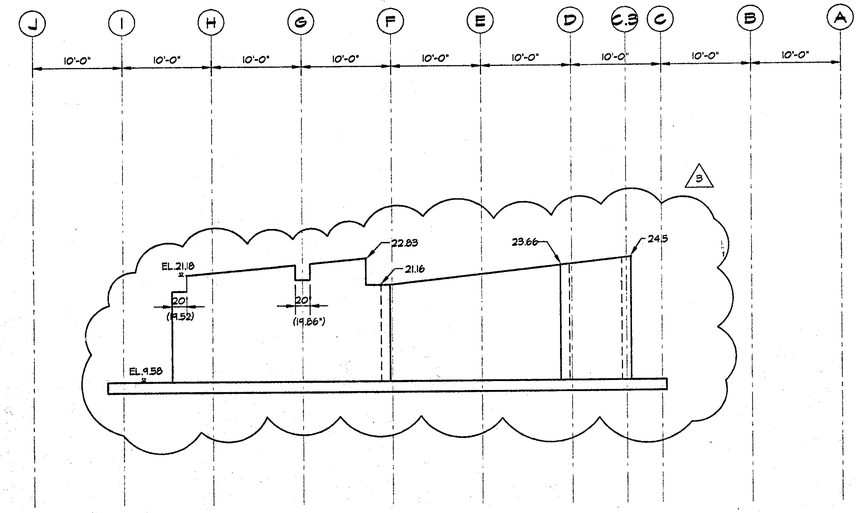


1 NORTH PASSAGEWAY WALL ELEVATION

SCALE: 1/8"=1'-0"

FOR ADDITIONAL NOTES SEE NORTH WALL ELEVATION SKETCH AND DRG. S2.06



2 SOUTH PASSAGEWAY WALL ELEVATION

SCALE: 1/8"=1'-0"

FOR ADDITIONAL INFORMATION SEE NORTH WALL ELEVATION SKETCH AND DRG. S2.06

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