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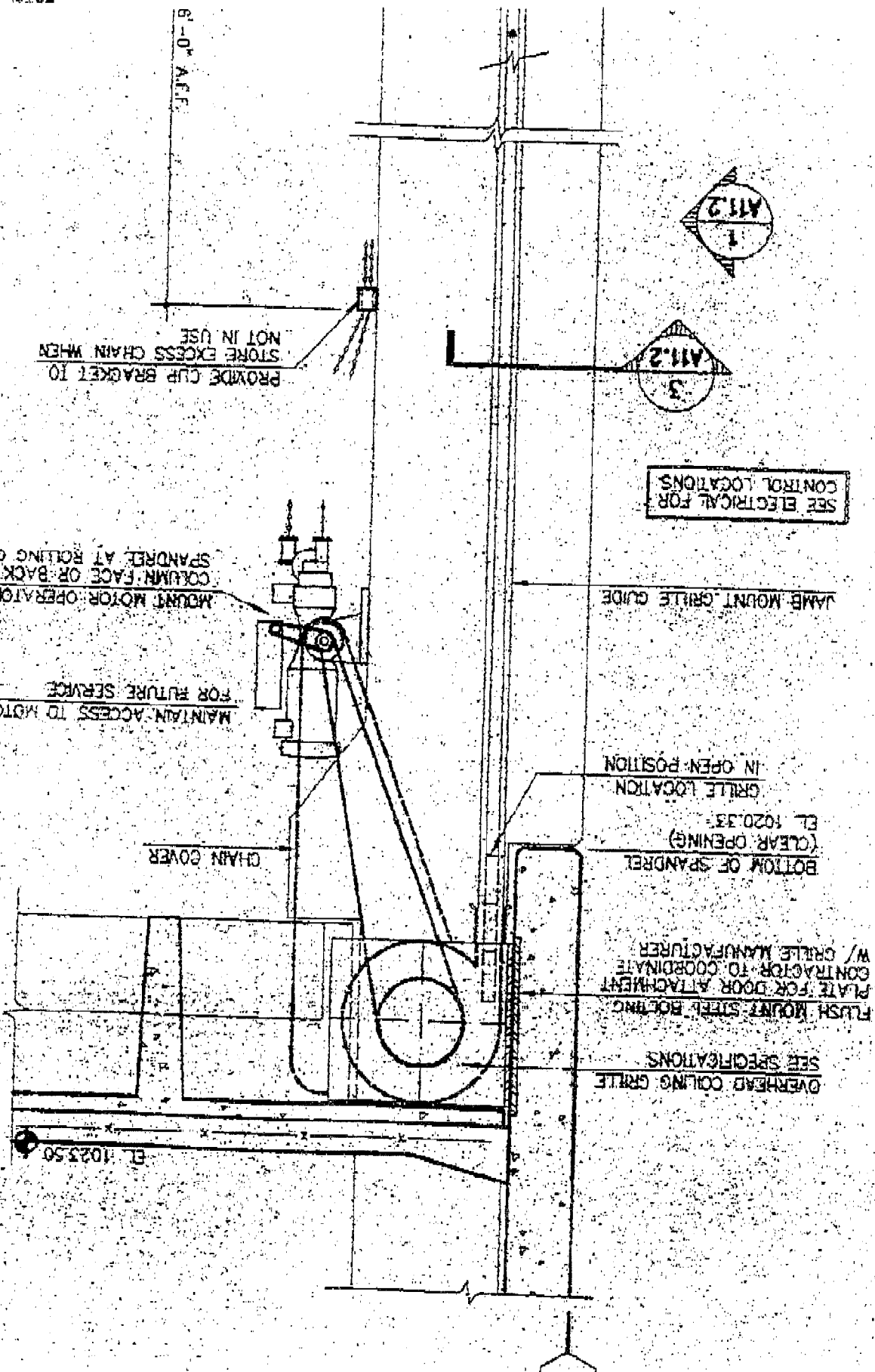
1997-0080

883 Congress St.

Garage, Office, overpass

Main Medical Bldg.

on Spreadsheet







Dufresne-Henry, Inc.  
Consulting Engineers

### Dufresne-Henry, Inc.

22 Free Street  
Portland, Maine 04101-3900  
207-775-3211  
Fax: 207-775-6434

#### FAX TRANSMISSION COVER SHEET

Date: July 21, 1998 Time: 8:30 AM

To: RICK KNOWLAND

Fax: 756-8258

Re: MAINE MEDICAL CENTER REVISED PLANS

Sender: JEFF PRESLE

YOU SHOULD RECEIVE 4 PAGE(S), INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 207-775-3211.

COMMENTS:

Rick-

The only problem we see with the revised  
plans is the proposed swale along Boynton  
street instead of the storm drain line. This  
concept needs further development to make sure  
the grades will work.

Give me a call if you have any questions.

JEFF



22 Free Street . Portland, Maine 04101-3900 . Tel: 207.775.3211 . Fax: 207.775.6434 . E-mail: dhmaine@agate.net

July 21, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, Maine 04101

**RE: Maine Medical Center Office Building**

Dear Rick:

We have reviewed the July 8, 1998 letter from Mediplex Medical Building Corporation (MMBC) regarding the changes to the proposed Maine Medical Center Office and Parking Garage project. Of the changes listed, items 4, 5, and 6 deal with site development issues. These are discussed further below.

Item 4:

This item changes the thickness of the gravel material under the proposed concrete sidewalks to 6 inches. This meets the City's standard design criteria for sidewalks.

Item 5:

MMBC is proposing an alternate grit separator, a Downstream Defender as manufactured by HIL Technology and Superior Concrete, for this project. A Vortechincs Model 4000 was originally proposed for this project. This is a similar request as was made and approved for the Home Depot project. At the time we reviewed this for the Home Depot project (please refer to our July 11, 1996 letter attached), we noted that the Downstream Defender has less storage capacity than the Vortechincs unit. We do not object to installing the alternate grit separator, however, because of the smaller capacity a more frequent clean out schedule will be required.

Item 6:

The proposal for replacing the storm drain along Boynton Street with a drainage swale requires some further development. It is not clear if the proposed catch basin at the northeastern corner of the site at Boynton Street will remain or be eliminated. If the catch basin were to remain, the invert elevation out of the structure would be around 43.5 feet. This would require a change in the proposed grades along Boynton Street. If a field inlet and culvert is used instead of the catch basin, the proposed invert would be higher and making the drainage swale along

Corporate Headquarters:  
North Springfield, Vermont  
www.d-hinc.com

Area Offices:  
Boston, Massachusetts  
Greenfield, Massachusetts  
Westford, Massachusetts

Portland, Maine  
Manchester, New Hampshire  
Montpelier, Vermont  
South Burlington, Vermont

Port Charlotte, Florida  
Naples, Florida  
Sarasota, Florida

Mr. Richard Knowland  
July 21, 1998  
Page 2

Boynton Street easier to grade. The location of the swale would also need to be coordinated with the location of the benches shown on the landscape plan. We would be pleased to review this option once more details become available.

Please contact Tim Michaud or me if you have any questions in review of our comments.

Very truly yours,

DUFRESNE-HENRY, INC.



Jeffrey D. Preble, P.E.  
Project Manager

Enclosure

File C:\civil\8160054\Knowland\tr11.wpd





A DVI Company

22 Free Street ◊ Portland, Maine 04101-3900 ◊ Tel.: 207 / 775 / 3211 ◊ Fax: 207 / 775 / 6434

July 11, 1996

Mr. Richard Knowland, Senior Planner  
 City of Portland Planning Department  
 389 Congress Street  
 Portland, Maine 04101

RE: Home Depot



Dear Mr. Knowland:

We have reviewed the June 26, 1996 submittal from White Brothers, Inc. requesting a change in the proposed grit and oil separator. The original plans called for a Vortechinics Model 5000 grit and oil removal system, while White Brothers has proposed to use a Downstream Defender as manufactured by H.I.L. Technology and Superior Concrete. This product is listed in the stormwater BMP's as an acceptable technology for grit and oil separation, and we do not object to installing the Downstream Defender at the Home Depot site.

There are some differences when comparing the Vortechinics unit with the Downstream Defender, with the most notable item being the grit storage capacity within the units. The Vortechinics unit lists a grit storage capacity of 5 cubic yards, while the Downstream Defender has a total capacity of less than 1 cubic yard. Because of this difference a more frequent grit removal schedule will be required. The frequency of cleaning out the structure will depend on many factors including available grit storage in the catchbasin sumps leading to the separator, amount of sand used during the winter, and parking lot sweeping schedule. This could have an effect on the maintenance agreement between the City and Home Depot.

Please let us know if we can provide any further assistance with this matter.

Respectfully submitted,

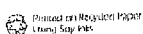
DUFRESNE-HENRY, INC.

A handwritten signature in dark ink, appearing to read 'Jeffrey D. Preble'. The signature is fluid and cursive.

Jeffrey D. Preble, P.E.  
 Project Manager

jdp

Corporate Headquarters:  
 North Springfield, Vermont



Area Offices:  
 Boston, Massachusetts  
 Greenfield, Massachusetts  
 Westford, Massachusetts  
 Portland, Maine

Manchester, New Hampshire  
 Montpelier, Vermont  
 Port Charlotte, Florida  
 Naples, Florida  
 Sarasota, Florida

**AGREEMENT BETWEEN  
CITY OF PORTLAND  
AND  
MAINE MEDICAL CENTER**

**AGREEMENT** made this 26<sup>th</sup> day of January, 1998 by and between the **CITY OF PORTLAND**, a body corporate and politic, located in Cumberland County and State of Maine (hereinafter the "**CITY**") and **MAINE MEDICAL CENTER**, a Maine Corporation (hereinafter "**MAINE MEDICAL**").

**W I T N E S S E T H:**

**WHEREAS**, **MAINE MEDICAL** did request a rezoning of property located at 883-903 Congress Street, in Portland, in order to permit the establishment and operation of professional office space, clinics and parking; and

**WHEREAS**, the Planning Board of the City of Portland, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberation thereon, recommended the rezoning of the property as aforesaid, subject, however, to certain conditions; and

**WHEREAS**, the **CITY** by and through its City Council has determined that said rezoning would be pursuant to and consistent with the **CITY'S** comprehensive land use plan and consistent with the existing and permitted uses within the original zone; and

**WHEREAS**, the **CITY** has determined that because of the unusual nature of the proposed development it is necessary or appropriate

to impose by agreement the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

**WHEREAS**, the CITY authorized the execution of this Agreement on July 7, 1997;

**NOW, THEREFORE**, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49 of the Portland City Code, by adopting the map change amendment shown on Attachment 1.
2. The property shall be developed substantially in accordance with the conceptual site plan and elevations shown on Attachment 2; provided, however, that such plan and elevations shall be subject to full site plan review by the Planning Board and approval of this Agreement shall not imply any approval of any element that must be reviewed pursuant to §14-526 of the Portland City Code.
3. **MAINE MEDICAL** shall be authorized to establish and maintain general, business and professional offices, as defined in section 14-47 of the Portland City Code, clinics, as defined in the same section of the Code, and parking on the site.
4. Setbacks shall be as delineated on Attachment 2, but shall in no event exceed ten (10) feet for the front yard and shall not be less than seven (7) feet for the rear yard. The westerly side yard shall be at least ten (10) feet, except the ventilation shaft and the exterior stair tower. The easterly side yard shall be at least fifteen (15) feet, except the ventilation shaft and the exterior stair tower.
5. The maximum height of any structure on the site shall not exceed seventy-two (72) feet.

6. The lease for the proposed skywalk shall be approved by the Portland City Council and the Maine Department of Transportation.
7. **MAINE MEDICAL** shall replace all curb and sidewalks abutting the site on Congress Street, Forest Street, and Boynton Street, as required by the Public Works Department.
8. Signage on the site shall comply with the requirements of the B-2 zone, as set forth in Division 22 of Chapter 14 of the Portland City Code.
9. Development on the site shall comply with the requirements of sections 14-186 and 14-187 of the Portland City Code.
10. **MAINE MEDICAL** shall submit a parking management plan for all of its parking facilities for review and approval by the Planning Board as part of the site plan review of this project.
11. **MAINE MEDICAL** shall provide a landscaped/open space area between the parking garage and Boynton Street. This area shall be reviewed as part of the site plan approval process.

The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with the subject premises, shall bind **MAINE MEDICAL**, its successors and assigns, as permitted by this Agreement, of said property or any part thereof or interest therein, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit of and be enforceable by the **CITY**, by and through its duly authorized representatives.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such

portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

Except as expressly modified herein, the use and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event that MAINE MEDICAL or any successor fail to continue to utilize the property in accordance with this Agreement, or in the event of a breach of any condition(s) set forth in this Agreement, the Planning Board shall have the authority, after hearing, to resolve the issue resulting in the breach or the failure to operate. The resolution may include a recommendation to the City Council that the site be rezoned to R-6 or any successor zone and that this Agreement be terminated, requiring a cessation of the general, business and professional offices, clinics and parking uses permitted under this terms of this Agreement.

WITNESS:

*Sonia Bran*

CITY OF PORTLAND

By: *Robert Ganley*  
Robert B. Ganley  
Its City Manager

WITNESS:

*Rene Masselin*

MAINE MEDICAL CENTER

By: *John E. Page*



MMCCONGRESSSTREZ.CON.AP  
07.14.97

Its:

STATE OF MAINE  
CUMBERLAND, ss.

, 1997

Personally appeared the above-named Robert B. Ganley, in his capacity as City Manager, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the City of Portland.

Before me,

Sonia T. Bean  
Notary Public/~~Attorney at Law~~  
SONIA T. BEAN  
NOTARY PUBLIC, MAINE  
MY COMMISSION EXPIRES JANUARY 10, 2003

STATE OF MAINE  
CUMBERLAND, ss.

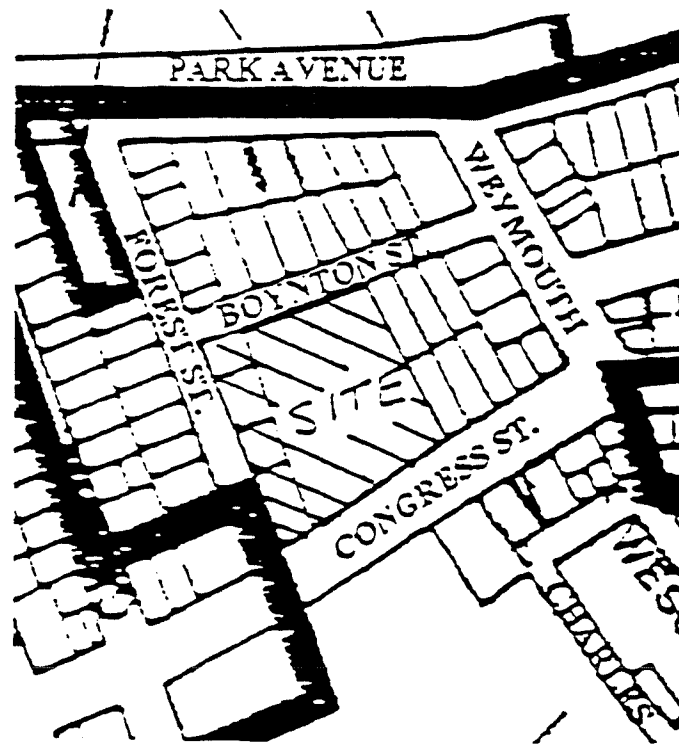
October 29, 1997


Personally appeared the above-named John E. Heze, in his/~~her~~ capacity as Treasurer of Maine Medical Center and acknowledged the foregoing instrument to be his/~~her~~ free act and deed and the free act and deed of Maine Medical Center.

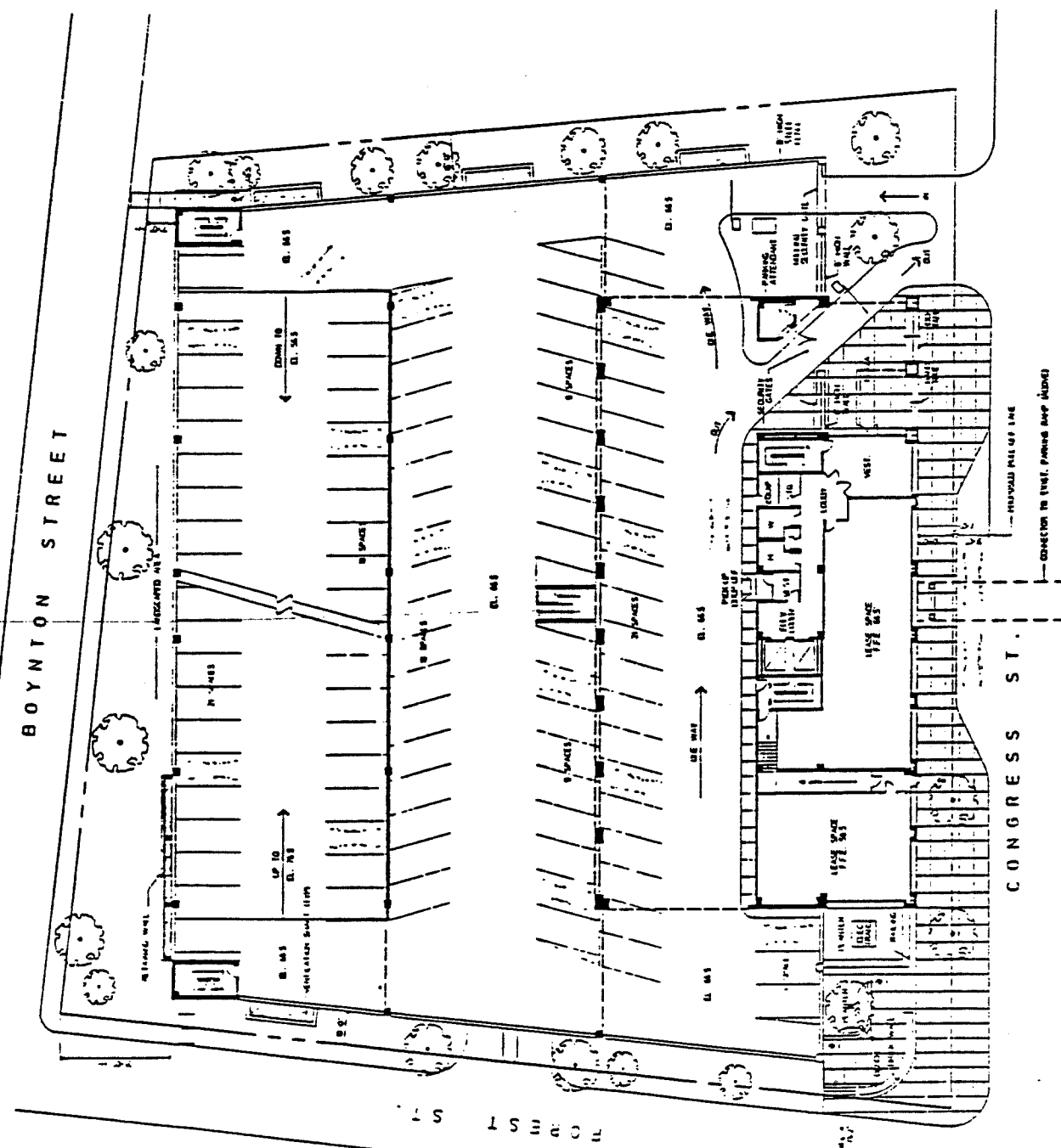
Before me,

Debra L.S. Winkler  
Notary Public/~~Attorney at Law~~  
My Comm. Exp. 10/10/02

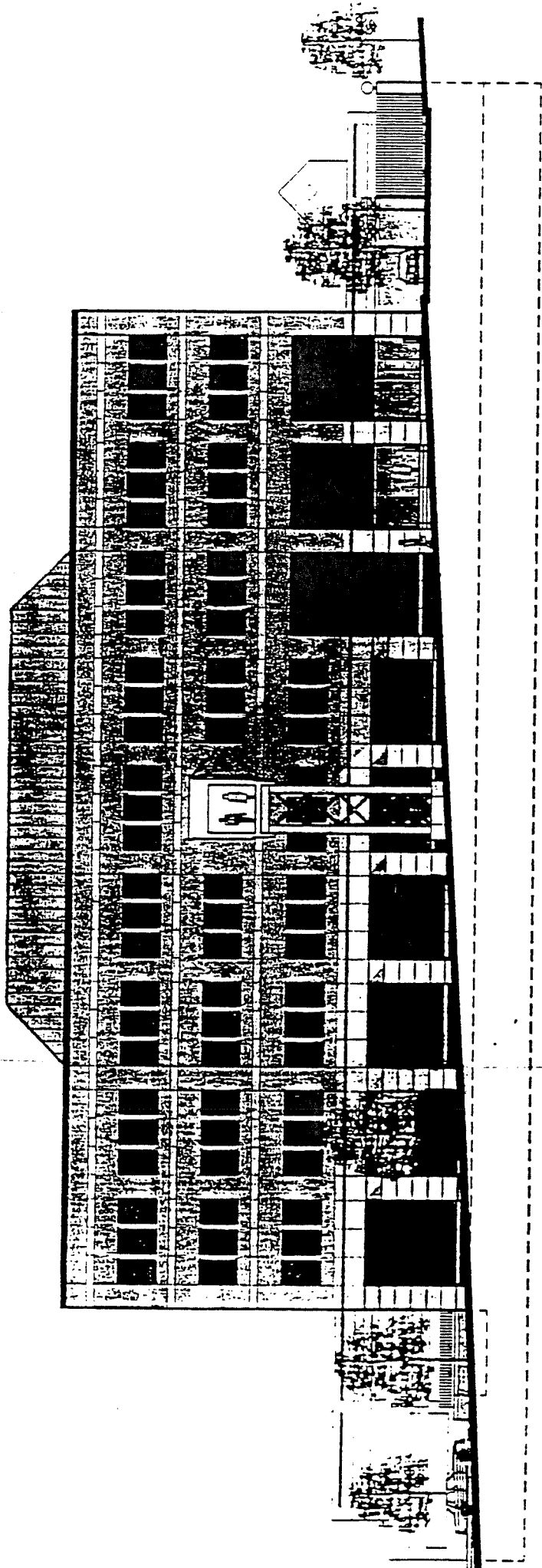
# SITE OF PROPOSED CONTRACT ZONE



 <p>                 MEDICAL BUILDING CORPORATION                  100 STATE ST. SUITE 200                  PORTLAND, MAINE 04101             </p>	<p>                 PROPOSED MEDICAL OFFICE BUILDING                  &amp; PARKING GARAGE FOR                  MAINE MEDICAL CENTER                  PORTLAND, MAINE             </p>	<p>                 DATE: 10/05/83                  DRAWN BY: J.B.                  CHECKED BY: J.B.                  PROJECT NO: 5195             </p>	<p>                 SHEET NO: 4             </p>																																
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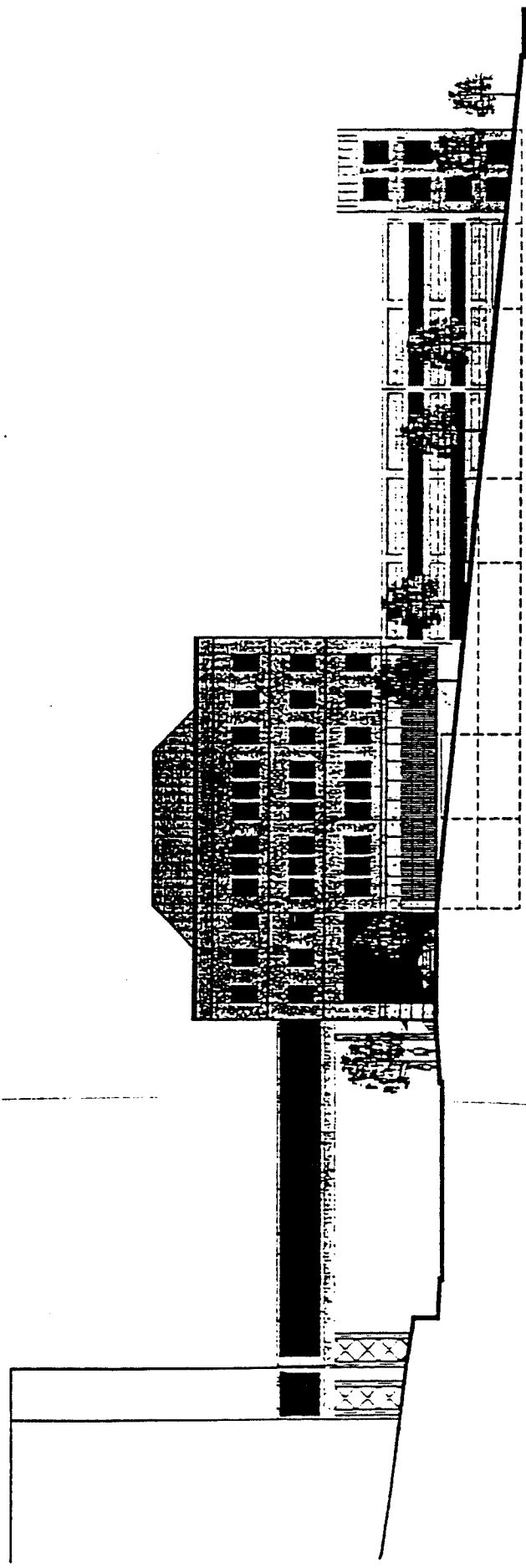
N  
 0 10 20  
 FEET  
 VS. VU  
**FIRST FLOOR PLAN**



SOUTH ELEVATION



1/8" = 1'-0"



EAST ELEVATION



## CITY OF PORTLAND

October 22, 1998

Mr. Jim Morrison, Architect  
Maine Medical Center  
22 Bramhall Street  
Portland ME 04102

RE: Forest Street

Dear Jim:

To summarize our discussions of Tuesday, October 20, 1998, the City of Portland is formally requesting Maine Medical Center to provide the following in conjunction with its new parking ramp/office building at 883-903 Congress Street:

1. Widen Forest Street between Congress Street and the entrance to the ramp from its existing 22 feet to at least 28 feet curb to curb. MMC should identify any issues encountered in reestablishing a minimum 5 ft. sidewalk, green space, right-of-way, etc., and any other issue that would impede the widening of Forest Street. The City will work with you to resolve such design and/or engineering issues.

This portion of Forest Street will, upon issuance of the Certificate of Occupancy, become a two-way street. Forest Street from the ramp exit/entrance to Park Avenue will retain its current one-way status.

2. The entrance/exit to the ramp will need to provide for left-out only so that vehicular traffic cannot physically exit to the right onto Forest Street.
3. The traffic signal that was to have been installed at Forest St./Park Ave. will now have to be located at Forest St./Congress St. and will include a full compliment of vehicle and pedestrian actuation and guidance.

If MMC cannot accomplish any of the above then engineering documentation and justification must be provided.

The City is seeking to minimize the traffic impact this development will have on adjacent neighborhoods and MMC is certainly a neighbor and part of this community.

Mr. Jim Morrison  
Page 2  
October 22, 1998

City staff is looking forward to working with MMC to realize these goals and to assist in any way we can. Should there be any questions as we proceed, please do not hesitate to call me 874-8894 so that all matters may be resolved as expeditiously as possible.

Sincerely,  
**CITY OF PORTLAND**



Larry Ash  
Traffic Engineer

LA:jw

pc: Tom Kane, Mayor  
Karen Geraghty, City Councilor, District 2  
Robert B. Ganley, City Manager  
Nadeen M. Daniels, Assistant City Manager  
William J. Bray, P.E., Director of Public Works  
Bruce A. Bell, Operations Manager  
Joe Gray, Planning  
Alex Jaegerman, Planning  
Rick Knowland, Planning  
John Peverada, Parking Manager



**CITY OF PORTLAND**

August 26, 1998

Jim Clarkson  
Mediplex Medical Building Corp.  
5308 West Plano Parkway  
Plano TX 75093

re: Maine Medical Center; 883-903 Congress St.

Dear Jim:

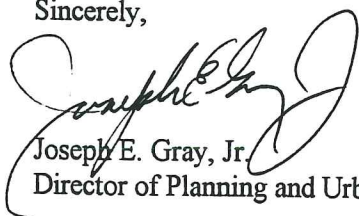
This letter is in reference to the internal reorganization of the parking garage and deletion of the lower parking level.

This revision to the parking garage has been reviewed by the Planning Authority, and has been found to be acceptable. This assumes that the number of parking spaces within the parking garage will not be reduced to less than 430 spaces; that the commitment of Maine Medical Center for Sea Dog parking and resident snowday parking is not affected by this change; and that the exterior of the parking garage remains unchanged from the original approved plan.

Please note that this letter does not approve requested changes regarding lighting, brick size, Boynton Street storm drain outlined in your letter of July 8, 1998. See letter of August 7, 1998, from Richard Knowland, regarding staff comments on other issues.

Should you have any questions concerning this letter, please call me.

Sincerely,



Joseph E. Gray, Jr.  
Director of Planning and Urban Development

cc: Alexander Jaegerman, Chief Planner  
Richard Knowland, Senior Planner  
Larry Ash, Traffic Engineer  
John Peverada, Parking Manager  
Marge Schmuckal, Zoning Administrator  
Paul Gray; Vice-President of Planning, Maine Medical Center, 22 Bramhall St, Ptd ME 04101  
Jim Morrison; Engineering, Maine Medical Center, 22 Bramhall St, Ptd ME 04101

O:\PLAN\REZONE\CONG883\LETTERS\CLARKSN2.LEC





## CITY OF PORTLAND

August 7, 1998

Jim Clarkson  
Mediplex Medical Building Corp.  
5308 West Plano Parkway  
Plano TX 75093

re: Maine Medical Center; 883-903 Congress St.

Dear Jim:

This letter is in reference to your letter of July 8, 1998, regarding certain revisions for the Maine Medical Center office and parking garage.

1. Reorganization of the parking garage and deletion of the lower level:

Staff has reviewed the submitted drawings including the overlay plan. We do not have any objections to the revised plan; however, before we sign-off on the changes, please submit the following information:

- a. A summary of the number of parking spaces on each level (original plan vs. revised plan) with a grand total showing the same number of spaces.
- b. A letter from Maine Medical Center that the revised plan will not affect their pledge to preserve Sea Dog parking and resident snowday parking.
- c. A definitive statement that the exterior appearance of the parking garage remains the same.

2. Lighting

If fixture location, lamp types, pole heights, and wattages are the same for all the fixtures as stated in your letter, then presumably the revised plan is in the ballpark. I'm sure there is some variation in the light fixtures. Could you confirm the photometric level for the new fixtures in comparison to the original fixtures?

Also, the Kenall fixture does not appear to have the same glare control and shield control as the original fixture (Kim). We will need more information on this before we sign off on this change.

3. Larger brick.

I know the larger brick is economical, but the smaller brick is in keeping with the architectural character of Portland. We do not feel comfortable approving this change. Also, we have concerns about the change in the cornice line detail. The original detail worked much better than your latest proposal.

4. Sub-base under pavement of sidewalk

A six-inch gravel base for the concrete sidewalk has been reviewed by the Development Review Coordinator, and has been found to be acceptable.

5. Alternate grit separator

The use of a Downstream Defender as a substitute for the Vortechview 4000 has been reviewed by the Development Review Coordinator, and has been found to be acceptable. However, Maine Medical Center should be aware that it requires more maintenance.

6. Change in storm drain along Boynton Street

We cannot approve this change at this time. A piped system would be more secure and reliable than a swale. We do not want to risk a situation where storm water ends up crossing Boynton Street and into residential properties.

Should you have any questions concerning this letter, please call me.

Sincerely,



Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr.; Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
Paul Gray; Vice-President of Planning, Maine Medical Center, 22 Bramhall St, Ptd ME 04101  
Jim Mornson; Engineering, Maine Medical Center, 22 Bramhall St, Ptd ME 04101

 **Maine Medical Center**

**FAX TRANSMITTAL**

22 Bramhall Street, Portland, Maine 04102

**ENGINEERING SERVICES**  
**TELEPHONE NUMBER (207) 871-2447**  
**FAX NUMBER (207) 871-6195**

8

**DATE:** 7/13/98  
**TO:** Richard Knowland  
Department of Planning and Urban Development  
City of Portland

**PHONE:**

**FAX:** 756-8258

**FROM:** Jim Morrison  
**SUBJECT:** Congress Street Medical Office Building

**NUMBER OF PAGES INCLUDING TITLE PAGE: 2**

**Rick:**  
Attached see parking space tabulation report which coordinates with the current set of parking garage drawings for the Congress Street Medical Office Building.

# CITY OF PORTLAND, MAINE

## PLANNING BOARD

John Carroll, Chair  
Jaimey Caron, Vice Chair  
Kenneth M. Cole III  
Cyrus Y. Hagge  
Deborah Krichels  
Erin Rodriguez  
Mark Malone

April 28, 1998

Mr. Paul Gray  
Maine Medical Center  
22 Bramhall Street  
Portland ME 04102

RE: Medical Office and Parking Garage in the Vicinity of 883-903 Congress Street

Dear Mr. Gray:

On April 14, 1998 the Portland Planning Board voted unanimously (7-0) to approve the site plan (including under the Site Location of Development Law) for a medical office building and parking garage in the vicinity of 883-903 Congress Street for Maine Medical Center. The approval was granted for the project with the following conditions:

- i. That the design of the skywalk shall be revised and submitted for Planning Board review and approval.
- ii. That the site plan be revised reflecting the following note: "MMC shall replace all curb and sidewalks abutting the site on Congress Street, Forest Street, and Boynton Street as required by Public Works Department."
- iii. That deeded easements be submitted to the City for the portion of the sidewalk along Congress Street that is outside the right-of-way and for the landscaped area along Boynton Street.
- iv. That the parking management plan be revised reflecting the comments of John Peverada, Parking Manager (memo dated 4-10-98).
- v. The Park Avenue and Forest Street intersection shall be monitored on a monthly basis up to one year from parking garage occupancy to determine whether a traffic signal is warranted.
- vi. That the operation of heavy equipment and snow removal equipment to clear snow from the top of the parking deck and the dumping of snow onto the Boynton Street snow removal area shall be limited to the hours of 6:00 a.m. to 9:00 p.m.

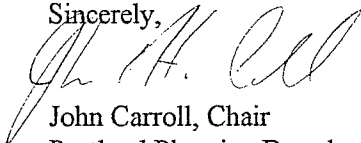
The approval is based on the <sup>#11-98</sup> submitted site plan and the findings related to site plan review standards as contained in Planning Report ~~#18-97~~, which is attached. As you are aware, traffic issues under the Site Location of Development Law are being reviewed by the Maine Department of Environmental Protection and the Maine Department of Transportation.

Please note the following provisions and requirements for all site plan approvals:

1. A performance guarantee covering the site improvements as well as an inspection fee payment of 1.7% of the guarantee amount and 7 final sets of plans must be submitted to and approved by the Planning Division and Public Works prior to the release of the building permit. If you need to make any modifications to the approved site plan, you must submit a revised site plan for staff review and approval.
2. The site plan approval will be deemed to have expired unless work in the development has commenced within one (1) year of the approval or within a time period agreed upon in writing by the City and the applicant. Requests to extend approvals must be received before the expiration date.
3. A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.
4. Prior to construction, a preconstruction meeting shall be held at the project site with the contractor, development review coordinator, Public Work's representative and owner to review the construction schedule and critical aspects of the site work. At that time, the site/building contractor shall provide three (3) copies of a detailed construction schedule to the attending City representatives. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.
5. If work will occur within the public right-of-way such as utilities, curb, sidewalk and driveway construction, a street opening permit(s) is required for your site. Please contact Carol Merritt at 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

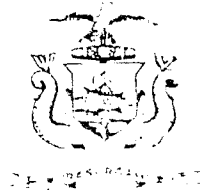
The Development Review Coordinator (874-8300 ext. 8722) must be notified five (5) working days prior to date required for final site inspection. Please make allowances for completion of site plan requirements determined to be incomplete or defective during the inspection. This is essential as all site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind. If there are any questions, please contact the Planning Staff.

Sincerely,



John Carroll, Chair  
Portland Planning Board

- cc: Joseph E. Gray, Jr., Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
— Richard Knowland, Senior Planner  
P. Samuel Hoffses, Building Inspector  
Marge Schmuckal, Zoning Administrator  
Tony Lombardo, Project Engineer  
Development Review Coordinator  
William Bray, Deputy Director of Public Works  
Jeff Tarling, City Arborist  
Associate Corporation Counsel  
Lt. Gaylen McDougall, Fire Prevention  
Mary Gresik, Building Permit Secretary  
Kathleen Brown, Director of Economic Development  
Susan Doughty, Assessor's Office  
Jim Morrison, Maine Medical Center



## CITY OF PORTLAND

August 7, 1998

Jim Clarkson  
Mediplex Medical Building Corp.  
5308 West Plano Parkway  
Plano TX 75093

re: Maine Medical Center; 883-903 Congress St.

Dear Jim:

This letter is in reference to your letter of July 8, 1998, regarding certain revisions for the Maine Medical Center office and parking garage.

1. Reorganization of the parking garage and deletion of the lower level:

Staff has reviewed the submitted drawings including the overlay plan. We do not have any objections to the revised plan; however, before we sign-off on the changes, please submit the following information:

- a. A summary of the number of parking spaces on each level (original plan vs. revised plan) with a grand total showing the same number of spaces.
- b. A letter from Maine Medical Center that the revised plan will not affect their pledge to preserve Sea Dog parking and resident snowday parking.
- c. A definitive statement that the exterior appearance of the parking garage remains the same.

2. Lighting

If fixture location, lamp types, pole heights, and wattages are the same for all the fixtures as stated in your letter, then presumably the revised plan is in the ballpark. I'm sure there is some variation in the light fixtures. Could you confirm the photometric level for the new fixtures in comparison to the original fixtures?

Also, the Kenall fixture does not appear to have the same glare control and shield control as the original fixture (Kim). We will need more information on this before we sign off on this change.

3. Larger brick.

I know the larger brick is economical, but the smaller brick is in keeping with the architectural character of Portland. We do not feel comfortable approving this change. Also, we have concerns about the change in the cornice line detail. The original detail worked much better than your latest proposal.

4. Sub-base under pavement of sidewalk

A six-inch gravel base for the concrete sidewalk has been reviewed by the Development Review Coordinator, and has been found to be acceptable.

5. Alternate grit separator

The use of a Downstream Defender as a substitute for the Vortechview 4000 has been reviewed by the Development Review Coordinator, and has been found to be acceptable. However, Maine Medical Center should be aware that it requires more maintenance.

6. Change in storm drain along Boynton Street

We cannot approve this change at this time. A piped system would be more secure and reliable than a swale. We do not want to risk a situation where storm water ends up crossing Boynton Street and into residential properties.

Should you have any questions concerning this letter, please call me.



Sincerely,



Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr.; Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
Paul Gray; Vice-President of Planning, Maine Medical Center, 22 Bramhall St, Ptd ME 04101  
Jim Mornson; Engineering, Maine Medical Center, 22 Bramhall St, Ptd ME 04101

### PARKING SPACE TABULATION CHART

LEVEL	HOSPITAL EMPLOYEES		MOB STAFF AND VISITORS		TOTAL
	STANDARD		STANDARD		
B3	23	-	-	-	23
B2	121	-	-	-	121
B1	61	-	54	3	118
1	-	-	102	4	106
2	-	-	63	-	63
<b>TOTAL</b>	205		226		<b>431</b>





# Maine Medical Center

22 Bramhall Street, Portland, Maine 04102

## FAX TRANSMITTAL

**ENGINEERING SERVICES**

TELEPHONE NUMBER (207) 871-2447

FAX NUMBER (207) 871-6195

DATE:

8/12

TO:

Richard Knowland

FROM:

Re:

Number of pages including cover sheet 2

**Message**



August 12, 1998

Richard Knowland  
Department of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Congress Street Medical Office Building

Dear Rick

This is written in response to a comment in your letter dated August 7, 1998 and concerning the revised parking plan for the above-mentioned project.

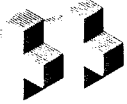
The revisions to the parking plan will in no way affect the intent of MMC to provide Sea Dog parking and resident snowday parking.

If there are any questions, please contact this office.

Sincerely,

Paul Gray  
Senior Vice President, Planning

Cc: Ryan  
Swan  
Bremm



**MMBC**

MEDIPLEX MEDICAL BUILDING CORPORATION  
5308 WEST PLANO PARKWAY  
PLANO, TEXAS 75093-4821

July 8, 1998

Via: Fed-X Standard

Mr. Rick Knowland, Senior Planner  
Portland City Hall  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: PROJECT REVISIONS  
MAINE MEDICAL CENTER MOB AND PARKING GARAGE**

Dear Mr. Knowland,

Several revisions to the above project are necessary due to the fact that our bids came in substantially over the budget. We are submitting several of these revisions that affect the scope of work approved via the site plan review for your review and comment.

1. We are deleting the lower level of the garage. By revising the layout of the upper levels, and relocating the division separating the two parts of the garage, we maintain the 430 spaces requested by the City. Therefore, it will not be necessary to construct additional garage on the top deck. The appearance and function of the garage remain essentially the same as approved at the site plan review. Please see the attached sketches.
2. We are also looking at revising the lighting. We have enclosed the product data for our proposed fixtures. The pole fixtures are very similar to the pole fixtures submitted at the site plan review. The ceiling-mounted fixtures will be similar to the PGL1's that are used in the garage constructed at Marketplace by City Hall. We will use a version of this fixture that has an internal shield, which blocks the light from one side of the luminaire at the perimeter locations. Pole fixtures are of the same cut-off type. Fixture locations, lamp types, pole heights, and wattages will remain as originally submitted. Overall, the package represents substantial savings from the fixtures originally submitted and should function similarly. Rick, I've expressed concerns to you previously about the cost of originally specified fixture. The subcontractor has found a suitable substitution to this very expensive fixture.
3. Next we are proposing a larger brick size. There is substantial labor savings in laying larger but a lesser quantity of brick. The brick we are proposing has a 4"x8" face with the same finish as that proposed during site plan review. The larger brick is appropriate for the large building mass, and does not conflict with that of

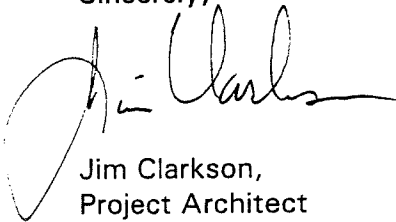


adjacent structures. Further, the majority of the street facade at the level of the passerby is precast and glass.

4. We are also modifying the sub-base under pavement of walks to City of Portland standards. We wish to verify this criteria. Attached is a sketch of our proposed revision.
5. We are also proposing an alternate oil/grit separator. We are enclosing the product data on the item for review by Public Works. Again, it should function equivalent to that originally specified.
6. Finally, we are proposing replacing the storm drain along Boynton revised grading such that the water collected along the east property line can be collected at the corner of Boynton and Forest. The construction of our project does not significantly alter the existing drainage of this part of site. We understand the desire to keep this area from draining onto Boynton and propose we channel the small amount of drainage under the snow removal drive and on to the corner. See attached sketch.

These are the main issues that we submit for your consideration. I have submitted a similar list to building inspection consisting of several items not applicable to the site plan review. We feel the above items do not significantly alter the site issues that were of concern to the planning board during the review process. Yet, just these few items represent a substantial savings to the project. We appreciate your consideration of each item. Please let me know if we can provide additional information.

Sincerely,



Jim Clarkson,  
Project Architect

cc: Phil Taylor  
Ron Blackwell  
Damian Donati

JUN-30 98 11:15 FROM: CHAFFIN INC.

TO: 2877728950

PAGE: 87

KKA/KKB/KKC

# CAMBRIDGE I & II

## APPLICATIONS

Planned communities, parks, walkways, parking areas, stairs, entrances, residential streets, marinas, school campuses and other no-glare applications.

## CONSTRUCTION FEATURES

**Housing** — One piece die-cast aluminum housing with soft radius corners. Lens door is also cast aluminum with soft radius corners. Lens is a clear tempered, impact resistant, glass held in-place with sealant and retaining clips. A continuous gasket seals the door assembly to the housing.

**Mounting** — An extruded aluminum arm, using four bolts, is provided for rigid attachment of luminaire to pole.

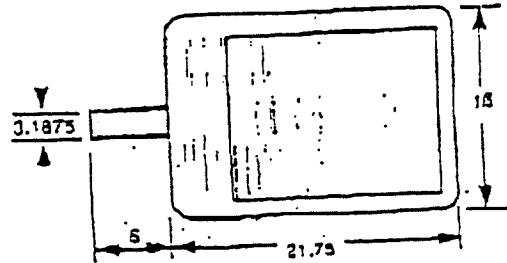
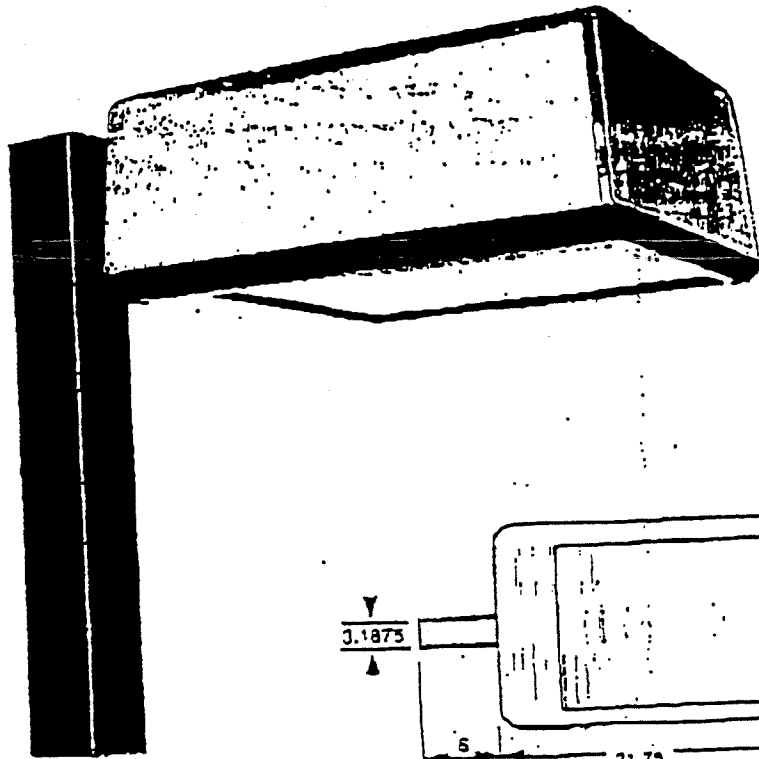
**Optical Assemblies** — Specular anodized aluminum reflectors provide square symmetrical (type V), forward throw (type IV) or narrow asymmetrical (types I and III) lighting patterns. Reflector is mounted with hinges and captive locking screws into housing for easy access to ballast.

**Ballast Assembly** — Starting rated to -20°F. Ballasts for Metal Halide are constant wattage autotransformer type. Ballasts for High Pressure Sodium are constant wattage autotransformer type using an electronic starter. Ballasts are mounted directly to die-cast housing for reduced temperature and increased life. All ballasts are high power factor.

**Lamps** — Luminaires accommodate Metal Halide and High Pressure Sodium mogul base lamps.

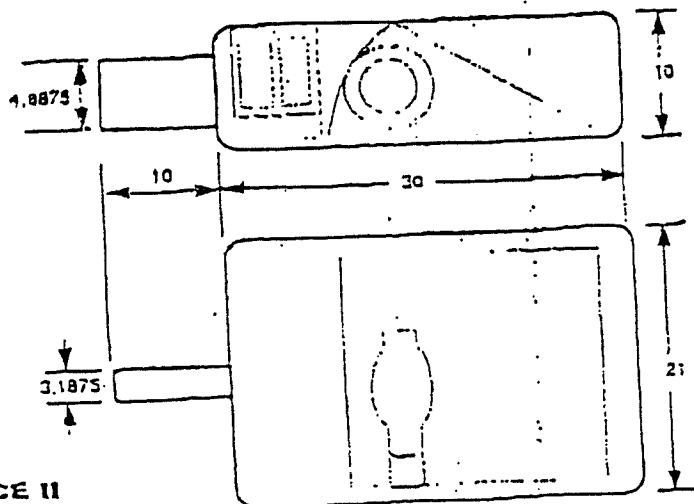
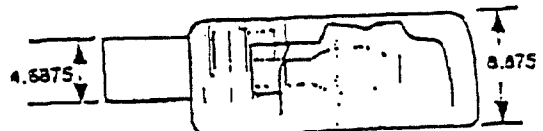
**Lampholder** — Mogul base glazed porcelain socket with spring loaded, nickel plated center contact and reinforced lamp grip screw shell. High Pressure Sodium sockets are pulse rated.

**Finish** — Durable baked-on polyester paint finish is available in 10 standard colors. Other finishes are available.



### CE I

Effective Projected Area  
1.5 Sq. Ft.



### CE II

Effective Projected Area  
2.9 Sq. Ft.

# SPAULDING

ILLUMINATION, INC.

TO: 2077720950

PAGE: 08



JUN-30 98 11:16 FROM: CHARRON INC.

# CAMBRIDGE I & II

KKA/KKB/KKC

U.L. & CSA Listed

## LUMINAIRE ORDERING GUIDE

Model	CEI - small size (EPA - 1.6)						CEII - large size (EPA - 2.0)			
Mounting Mode	PM						WB			
										
	Pole Mount						Wall Bracket			
Lamp Type/Watts	small size S100 S150 S250 S400 M175 M250 M400						large size S400 S1000 M400 M1000			
Reflector	I - asymmetric III - asymmetric IV - forward throw VS - symmetric square									
Voltage	120 208 240 277 347 480 MT - Multi-tap									
Options	PC - photoelectric cell 120-277v, up to 400w PR - photo receptacle (less cell) VG - polycarbonate vandal guard						SF - single fuse DF - double fuse CS - house side cutoff shield			
Colors for Luminaire and Pole	DBZ	BGE	RRN	SCB	WHT	FGP	TBP	RBP	CMB	LTG
	dark bronze	beige	rocket red	black	white	forest green	teal blue	royal blue	burgundy	lite gray

Luminaire Ordering Example	Model	Mounting Mode	Lamp Type Watts	Reflector	Voltage	Options	Color
	CEI		S100	I	120	VG	DBZ
	CEII	WB	M175	III	208	PC	BGE
			M250	IV	240	PR	RRN
			M400	VS	277	DF	SCB
			M1000		347	CS	WHT
					480		FGP
					MT		TBP
							RBP
							CMB
							LTG

### POLE ORDERING

Refer to Poles/Brackets Section for ordering information.

JUN-30 98 11:17 FROM: CHARRON INC.

TO: 2077720950

PAGE: 09

# SQS

# KKA / KKB

Nom. Height Ft.	Order Part Number	Allowable EPA Wind Velocity w/T 3 gust				Shaft Size		Anchor Bolt Size	Wt./Lbs.
		40	50	60	70	Dim	Ga		
10'	10-SQS-411	28	28.5	22	17	4	11	1/2x15	31
10'	10-SQS-511	50	46	36	20	5	11	3/4x15	106
12'	12-SQS-411	28	21	15	12	4	11	1/2x15	104
12'	12-SQS-511	49	33	23	20	5	11	3/4x15	152
14'	14-SQS-411	25	17	12.5	9.5	4	11	1/2x15	116
14'	14-SQS-407	20.5	23.5	20	13	4	7	1/2x15	136
14'	14-SQS-511	28	28.5	21.5	16.8	5	11	3/4x15	128
16'	16-SQS-411	19.5	14	10.5	7.5	4	11	1/2x15	128
16'	16-SQS-407	29.5	21.5	16	12	4	7	3/4x15	178
16'	16-SQS-511	29	23.5	17.5	13.5	5	11	3/4x15	183
16'	16-SQS-507	47.8	28.5	22	21.6	5	7	3/4x15	214
18'	18-SQS-411	18.5	11.5	8.5	6	4	11	3/4x20	147
18'	18-SQS-407	25.5	18	13.5	10.5	4	7	3/4x20	201
18'	18-SQS-511	27.5	20	14	11	6	11	3/4x20	195
18'	18-SQS-507	42	31	23.5	18	5	7	3/4x20	242
20'	20-SQS-411	12.5	9.5	6.5	4.5	4	11	3/4x20	173
20'	20-SQS-407	22	18	11.5	8.5	4	7	3/4x20	180
20'	20-SQS-511	23.5	17	12	9	5	11	3/4x20	191
20'	20-SQS-507	34.5	27	20	18.5	5	7	3/4x20	268
20'	20-SQS-407	51	38	28.5	22	6	7	3/4x20	312
25'	25-SQS-411	8.5	5	3	1.5	4	11	1x20	278
25'	25-SQS-407	14.5	10	6.5	4.5	4	7	1x20	284
25'	25-SQS-511	15	10.5	6.5	4	5	11	1x20	231
25'	25-SQS-507	26	18	12.5	9.5	5	7	1x20	324
25'	25-SQS-525	38.5	26	19	14	5	7	1x20	407
25'	25-SQS-407	28.5	28	20.5	15	6	7	1x20	404
30'	30-SQS-407	8.5	4.5	2.5	1.5	4	7	1x20	313
30'	30-SQS-511	7.5	3.5	2.5	NA	5	11	1x20	274
30'	30-SQS-507	18	12	8	4.8	5	7	1x20	298
30'	30-SQS-425	22	16	10	8	6	25	1x20	533
30'	30-SQS-607	20	20	14	9	6	7	1x20	447
30'	30-SQS-624	42	30	22	16	6	25	1x20	820
35'	35-SQS-407	20.5	17	8	4.5	6	25	1x20	726
35'	35-SQS-625	26	18	12	7.5	6	25	1x20	814
40'	40-SQS-407	11	8	3.5	NA	6	25	1x20	732
40'	40-SQS-425	14	10.5	5.5	2.5	6	25	1x20	732

### CONFIGURATION - SUFFIX

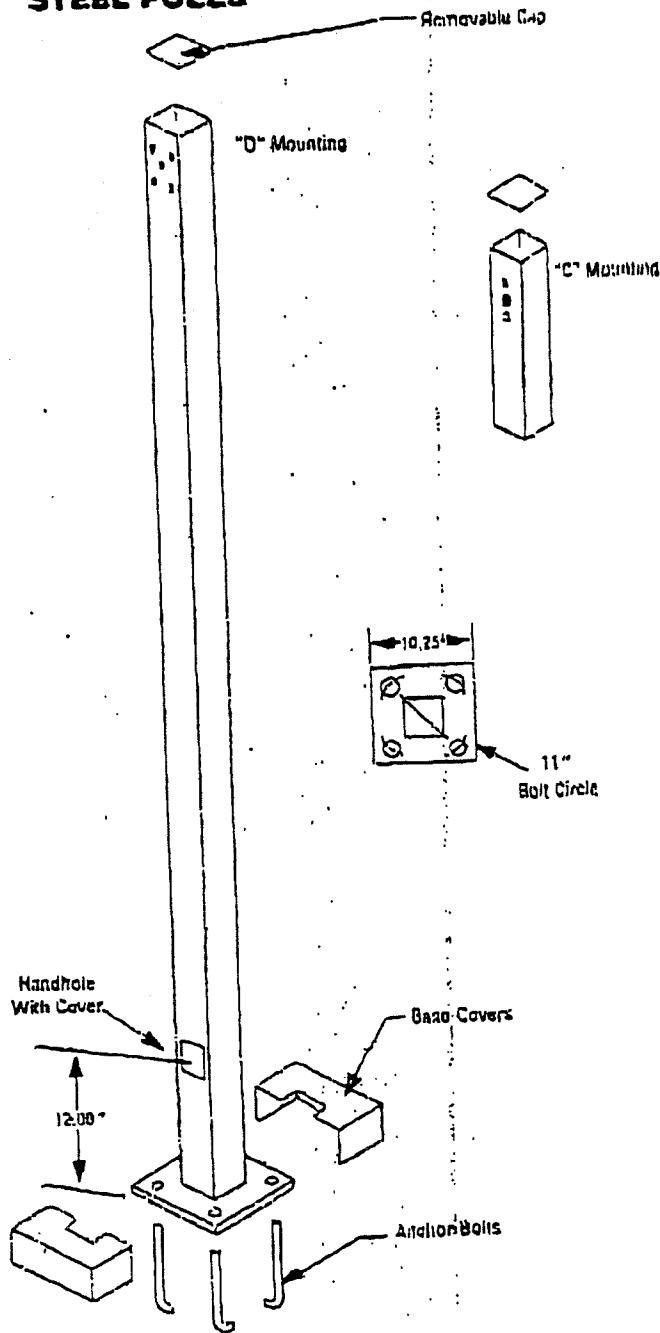
SGL	DBL	DBL-90	TPL	QUAD

### MOUNTING HOLE PATTERN - SUFFIX

Luminaire	POLE	PATTERNS AVAILABLE							
		4"	5"	6"	7"	4"	5"	6"	8"
Catalina I, II, III, 3000	X	X	X	X					
Santa Fe I, II, III, 4000	X	X	X	X					
Cambridge I, II, 4000	X	X	X	X					
Shuttle I					X	X	X	X	
Shuttle II, III	X	X	X	X					
Oakland Vibration I	X	X	X	X					
Cambridge I					X	X	X	X	
Oakland II, III	X	X	X	X					
Aviation	X	X	X	X					
Osaka/Escort	X	X	X	X					
Delroy/Alcor	X	X	X	X					
Whisper I, II, Lumina	X	X	X	X					
Manchester Vibration					X	X	X	X	
Manchester III, LaSalle	X	X	X	X					
Alma					X	X	X	X	
Novus	X	X	X	X					
Novus II	X	X	X	X					
Litex I, II, Nov	X	X	X	X					
Oriente Sq. I, II, Exant	X	X	X	X					

x Available provided EPA is not exceeded.

## SQUARE STRAIGHT STEEL POLES



### NOTE:


All poles have a GRIMER, high-visibility polyester paint finish to match the luminaire's color. Cleaning instructions for hand covers, footcopes, and page 16 of Pole & Base Brochure. All poles are furnished with anchor bolts and double nuts. Note: All dimensions in inches.

SPECIFY COLOR

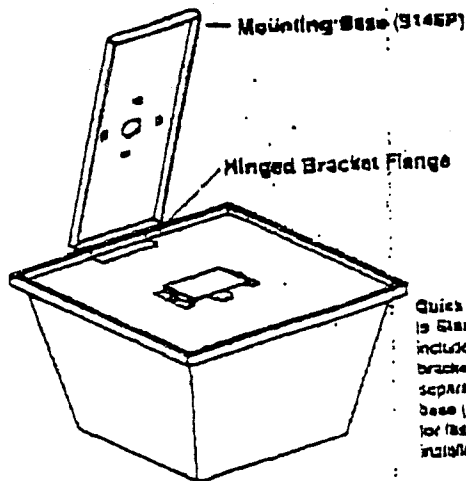
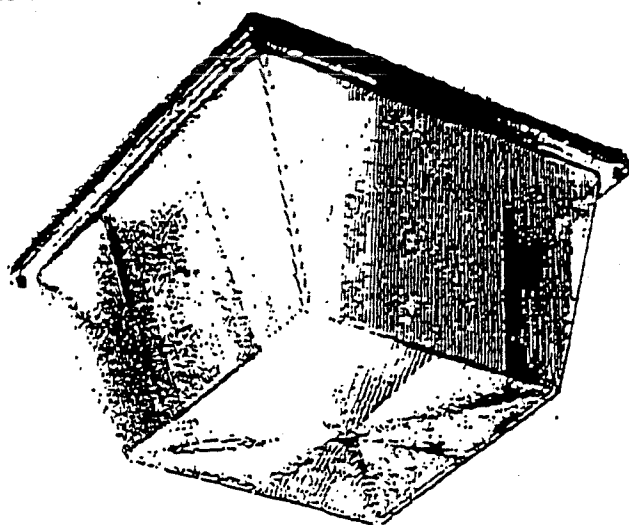
# SPAULDING/WHITEWAY LIGHTING, INC.

JOB NAME:

FIXTURE TYPE:



**High Abuse**  
50/70/100W  
High Pressure Sodium  
50/70/100W Metal Halide



Quick Mount is standard. Fixture includes a mounting bracket and a separate mounting base (9146J or 9146P) for fast one-person installation.

U.L. Listed for Ceiling Dry and Damp Locations

The DecPro™ 4600 series is ideal for low-mount, high traffic areas. Seven inch profile, high strength lens which completely encloses metal components, and efficient operation makes the DecPro ideal for parking decks, park shelters, canopies and strip malls.

**FEATURES**

- Quick mount is standard for fast one-person installation.
- With 69% fixture efficiency and 19% uplight, the DecPro provides high vertical and ceiling illumination with exceptional uniformity.
- Seven inch profile makes it suitable for low clearance ceilings. Designed to withstand abusive conditions such as moisture, cold temperatures, corrosion, swage, U.V. and impact.
- Meets IES standards with an optimal square, symmetrical lighting pattern and provides 3:1 spacing to mounting height ratio for parking deck applications requiring two fixtures per bay.

**GENERAL SPECIFICATIONS**

- Refractor—For HPS units—injection molded polycarbonate in a clear prismatic refractor. UV stabilized. For Metal Halide units—injection molded polycarbonates in a clear prismatic refractor with UVsorb™ protective coating. Both polycarbonate lens types feature internal prisms, smooth outside for ease of cleaning. Wraparound design completely encloses and protects the interior of unit from moisture and contaminants. Nominal thickness .125 inch.
- Baseplate—Corrosion resistant, marine grade .680 inch aluminum.
- Finish—All prime cold rolled steel materials are phosphate coated and electrostatically

finished after all other operations with a 2.5 mil white polymer powder and baked to form a 92% reflective, smooth, glossy, non-corrosive durable coating.

- Ballast Housing—22 gauge cold rolled steel with a white urethane finish is corrosion resistant.
- Mounting Base (9146J or 9146P)—Quick mount is standard and requires a separate mounting base for fixtures installed in dry and damp locations. Specify the 9146J for use with surface conduit. Specify the 9146P for use over an existing recessed junction box. For wet locations specify the -W option. Preinstall mounting base. Attach luminaire to hinged bracket flange. Make wire connections. Close and slide luminaire into locked position for secure operation. Locking mechanism may be released through the luminaire interior for removal and maintenance as necessary. Factory installed lamp (specify -L accessory) eliminates the need to open fixture prior to installation.
- Ballast—Uses one high power factor, high pressure sodium (HPS) or metal halide (MH) ballast:
 

4660	50W HPS (S62/MED/B-17)
4663-PC	50W MH (M110/MED/ED-17)
4670	70W HPS (S62/MED/B-17)
4673-PC	70W MH (M98/MED/ED-17)
4680	100W HPS (S54/MED/B-17)
4680-PC	100W MH (M90/MED/ED-17)
- Lamp (not included)—Use one medium base lamp.
 

4660	50W HPS (S62/MED/B-17)
4663-PC	50W MH (M110/MED/ED-17)
4670	70W HPS (S62/MED/B-17)
4673-PC	70W MH (M98/MED/ED-17)
4680	100W HPS (S54/MED/B-17)
4680-PC	100W MH (M90/MED/ED-17)

- Hardware—Four POSIGRIP tamperproof, stainless steel screws are supplied to secure refractor to baseplate.
- Socket—Medium base, porcelain socket, 4KV pulse rated.

**OPTIONS**

- Internal Shield (-IS)—Die formed aluminum with spread specular pattern blocks light from one side of luminaire.
- Installed Lamp (-L)—Prewired fixture is packaged with lamp installed and refractor completely secured to baseplate to reduce mounting procedure for quick mount steps.
- Wet Location (-W)—Provides broad (9.5 inch square) based mounting. In lieu of quick mount feature; for installation directly to surface. Includes high quality closed cell neoprene rubber gasket to block out insects, moisture and dirt. Not available with quick mount feature.

**MOUNTING**

UL listed for dry and damp locations, ceiling installations only. For wet locations specify -W option. Quick mount is standard and requires a separate mounting base (9146J or 9146P). We recommend using all four holes provided in the baseplates for mounting with:

- Four 1/2-20 machine screws with masonry anchors to mount to brick or concrete.
- Four 1/2" lag screws or toggle bolts for mounting in frame construction.

Mounting hardware not included. Please refer to dimensional drawings on page three for exact location of mounting holes. Instruction sheet packaged with each fixture and accessory.



JN-30 08 11:12 FROM: CHARRON INC.

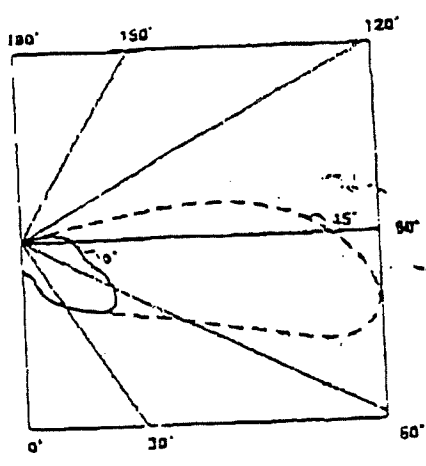
**PHOTOMETRIC DATA**

MODEL 4880-HPF

One 100w HPS Lamp  
 Efficiency = 68.8%  
 CIE Type Semi-Direct

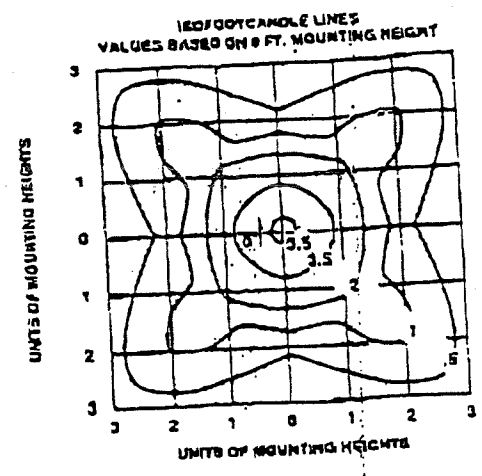
Clear Prismatic Lens  
 Uplight = 18.7%  
 Report #ITL38649

Ceiling Mounted  
 S/M/M = 3.2



**Coefficients of Utilization - Zonal Cavity Method**  
**Effective Floor Cavity Reflectance 0.20**

MC	70				50				30			
h/w	70	50	30	10	70	50	30	10	70	50	30	10
0	.75	.70	.70	.78	.57	.53	.53	.61	.44	.44	.44	.51
1	.68	.67	.63	.68	.48	.46	.44	.51	.37	.37	.37	.43
2	.64	.64	.60	.64	.44	.43	.41	.47	.33	.33	.33	.39
3	.60	.60	.56	.60	.40	.39	.37	.43	.29	.29	.29	.35
4	.56	.56	.52	.56	.36	.35	.33	.39	.25	.25	.25	.31
5	.52	.52	.48	.52	.32	.31	.29	.35	.21	.21	.21	.27
6	.48	.48	.44	.48	.28	.27	.25	.31	.17	.17	.17	.23
7	.44	.44	.40	.44	.24	.23	.21	.27	.13	.13	.13	.19
8	.40	.40	.36	.40	.20	.19	.17	.23	.09	.09	.09	.15
9	.36	.36	.32	.36	.16	.15	.13	.19	.05	.05	.05	.11
10	.32	.32	.28	.32	.12	.11	.09	.15	.01	.01	.01	.07



**CATALOG NUMBER LAMP TYPE MULTIPLIER**

MOUNTING HEIGHT	4880	1643-PC	4878	1673-PC	6880	1643-PC
	100W HPS	100W MH	100W HPS	100W MH	100W HPS	100W MH
0'	.53	.46	.78	.67	1.07	1.04
1'	.42	.36	.61	.53	1.00	.92
2'	.34	.29	.49	.43	.81	.87
3'	.28	.24	.41	.35	.67	.75
4'	.24	.20	.34	.29	.56	.66

**OPERATING SPECIFICATIONS**

**HIGH PRESSURE SODIUM**  
 LAMP: Medium Base, 24,000 Hour Life  
 BALLAST: HX-HPF, -40°F to 90°F Ambient

WATTAGE	50		70		100	
	4,000		6,400		9,500	
LUMENS	120	277	120	277	120	277
LINE VOLTAGE (V)	.93	.91	1.30	.85	1.80	.85
MAXIMUM CURRENT (A)	.55	.28	.75	.38	1.06	.50
OPERATING CURRENT (A)	.82	.68	.88	.88	1.15	1.38
INPUT POWER (W)	HPF	HPF	HPF	HPF	HPF	HPF

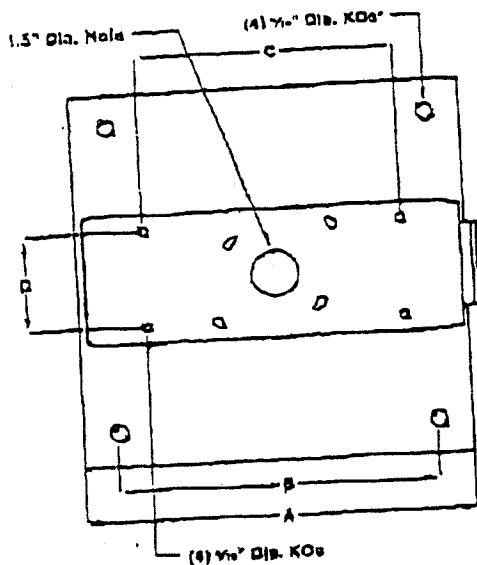
**METAL HALIDE**  
 LAMP: Medium Base  
 BALLAST: HX-HPF, -30°F to 90°F Ambient

WATTAGE	50		70		100	
	3,400		5,000		7,800	
LUMENS	5,000		8,000		10,000	
LIFE (HOURS)	120	277	120	277	120	277
LINE VOLTAGE (V)	1.00	.86	1.59	.72	2.60	1.15
MAXIMUM CURRENT (A)	.86	.30	.85	.37	1.15	.50
OPERATING CURRENT (A)	.72	.72	.89	.89	1.29	1.29
INPUT POWER (W)	HPF	HPF	HPF	HPF	HPF	HPF

**DIMENSIONS**

**4600 SERIES**

**Housing Top View**

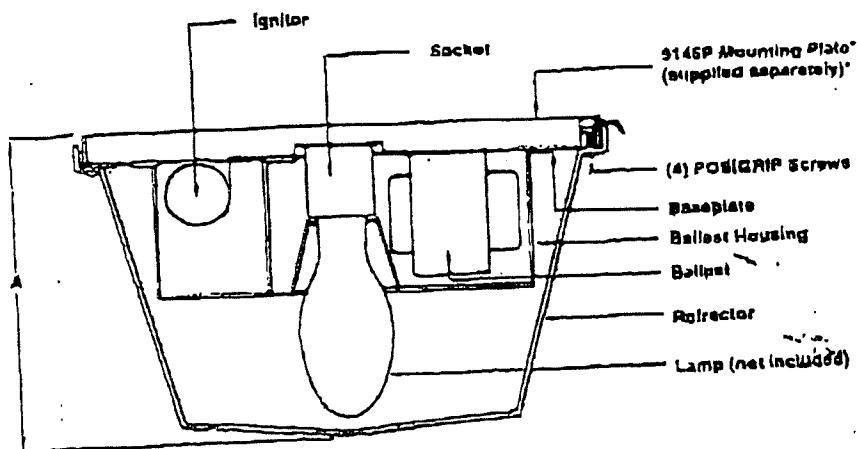


Size	A	B	C	D
in.	12.375	9.50	8	3.125
cm.	31.43	24.13	20.32	7.93

\*For use with  
-W option

**CUTAWAY VIEW**

4600 Series  
Length: 12.375" Width: 12.375" Height: 7"



\*9146P or 9146J  
required for all  
units installed in  
dry/damp locations

	A	B	C
Cat. No.	4800-W	4600/9146P	4600/9148J
in.	7.0825	7.375	8.375
cm.	17.93	18.73	21.27

LN-30 96 11:13 FROM: CHARRON INC.

TQ: 2077720950

PAGE: 04

**ORDERING INFORMATION**

Catalog number	Prismatic Lens	Wattage (lamp type)	Voltage/ power factor	Starting temp (F)	Posigrip screws
4660	Polycarbonate	50W HPS (S68/MED/B-17)	120/HPF	-40°	Four
4663-PC	P.U.V.	50W MH (M11/MED/ED-17)	120/277 HPF	-20°	Four
4670	Polycarbonate	70W HPS (S62/MED/B-17)	120/HPF	-40°	Four
4673-PC	P.U.V.	70W MH (M98/MED/ED-17)	120/277 HPF	-20°	Four
4680	Polycarbonate	100W HPS (S54/MED/B-17)	120/HPF	-40°	Four
4683-PC	P.U.V.	100W MH (M80/MED/ED-17)	120/277 HPF	-20°	Four

\* U.V. - Polycarbonate with UV absorber - Produces glare  
Quick mount is optional. Mounting base (9146J) is standard base of 8" (40P listed)  
is optional. See also wall, ground when not in standard

**OPTIONS**

- OT 120/277V HPF ballast for high pressure sodium fixture. Standard on metal halide units.
- IS Internal shield
- L Fixtures include lamp installed in prewired fixture
- QR Hot restrike system for maximum 70W DC bay quartz lamp (lamp not included)
- W Suitable for wet ceiling locations. Not available with quick mount feature—9146J or 9146P mounting base not required.

**ACCESSORIES**

- 9105 50W HPS (S68/MED/B-17) lamp
- 9107 70W HPS (S62/MED/B-17) lamp
- 9109 100W HPS (S54/MED/B-17) lamp
- 9146J Mounting junction box for preinstallation of quick mount luminaire in conjunction with surface conduit.
- 9146P Mounting plate (quick mount feature) for preinstallation of quick mount luminaire in conjunction with an existing recessed junction box.
- 9241 HLR fuse and holder. Specify fixture and type (GLR or GMF).
- 9500 POSIGRIP screwdriver

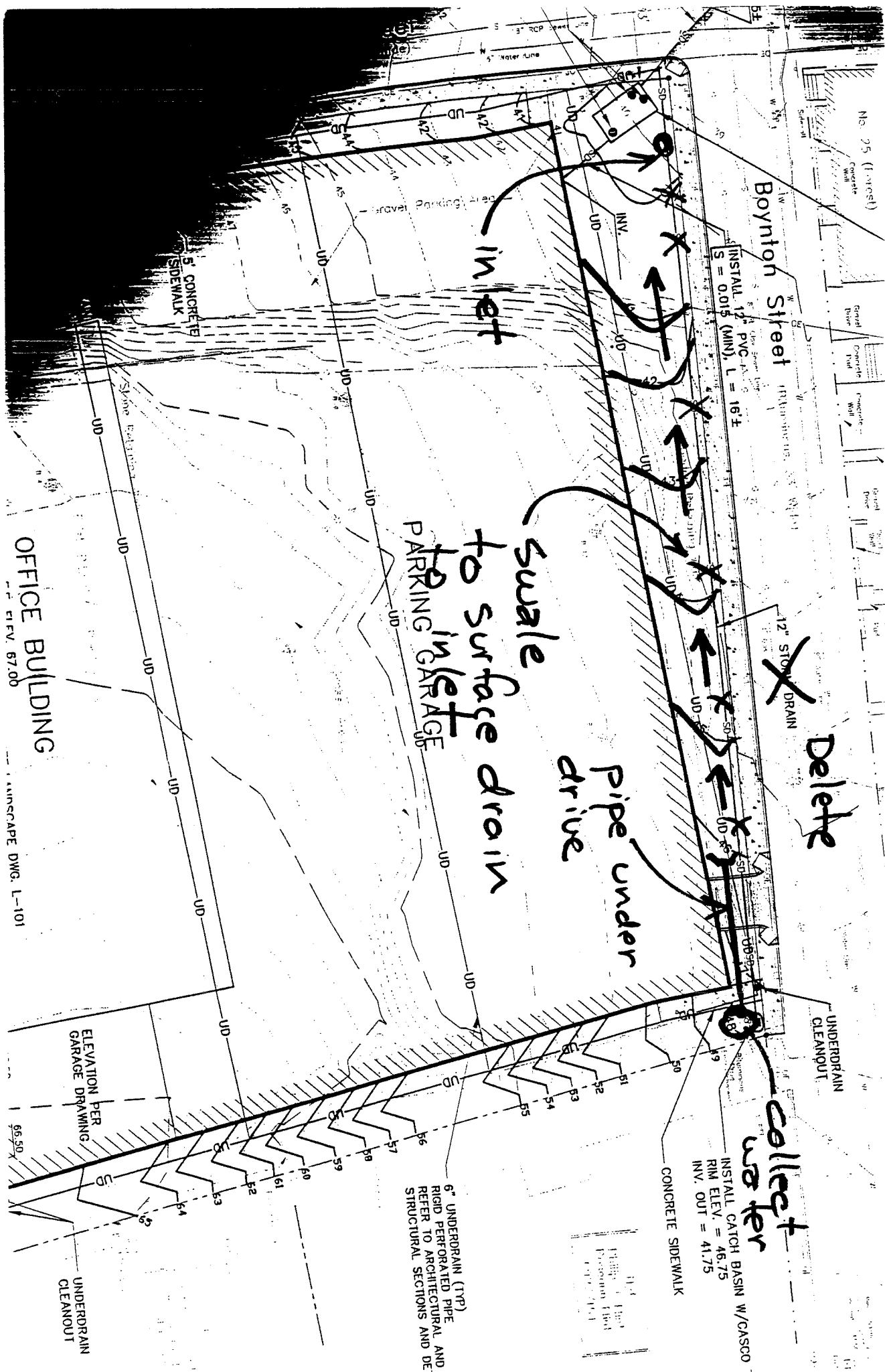
**Peace of Mind Guarantees**

Kenall high abuse luminaires are designed and built to take exceptional physical punishment. When installed according to our instructions, Kenall will repair or replace any fixture using a polycarbonate refractor, diffuser or lens/housing rendered inoperable due to physical abuse within three years of purchase. Thereafter, Kenall will replace any refractor, diffuser or lens/housing broken during the life of the fixture free, subject to a handling charge equal to 25% of the published list price.

**NOTES:**

All Kenall high abuse fixtures are provided with POSIGRIP screws. Be sure to order 9500 screwdrivers with an drop shipment of Kenall high abuse fixtures. Availability and specifications subject to change without notice. Call 1-800-2-KENALL (453-8255) for standard product modification, photometric assistance or reports, product sample requests, technical clarification, product literature and the location or phone number of local sales representative.

\* GGA 4680-277  
 \*\*\* GGBC 4683-QR-277-IS  
 GGD 4683-277  
 GGDC 4683-277-IS  
 GGF 4683-277-QR



Boynton Street

OFFICE BUILDING

PARKING GARAGE

inlet

swale to surface drain

pipe under drive

12" STON DRAIN

Delete

collect water

INSTALL CATCH BASIN W/CASCO TRAN  
RIM ELEV. = 46.75  
INV. OUT = 41.75

CONCRETE SIDEWALK

6" UNDERDRAIN (TYP)  
RIGID PERFORATED PIPE  
REFER TO ARCHITECTURAL AND DETAIL  
STRUCTURAL SECTIONS AND DETAIL

ELEV. 67.00

LANDSCAPE DWG. L-101

No. 25 (1 street)

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

Concrete Wall

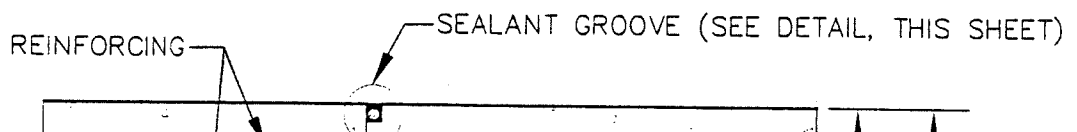
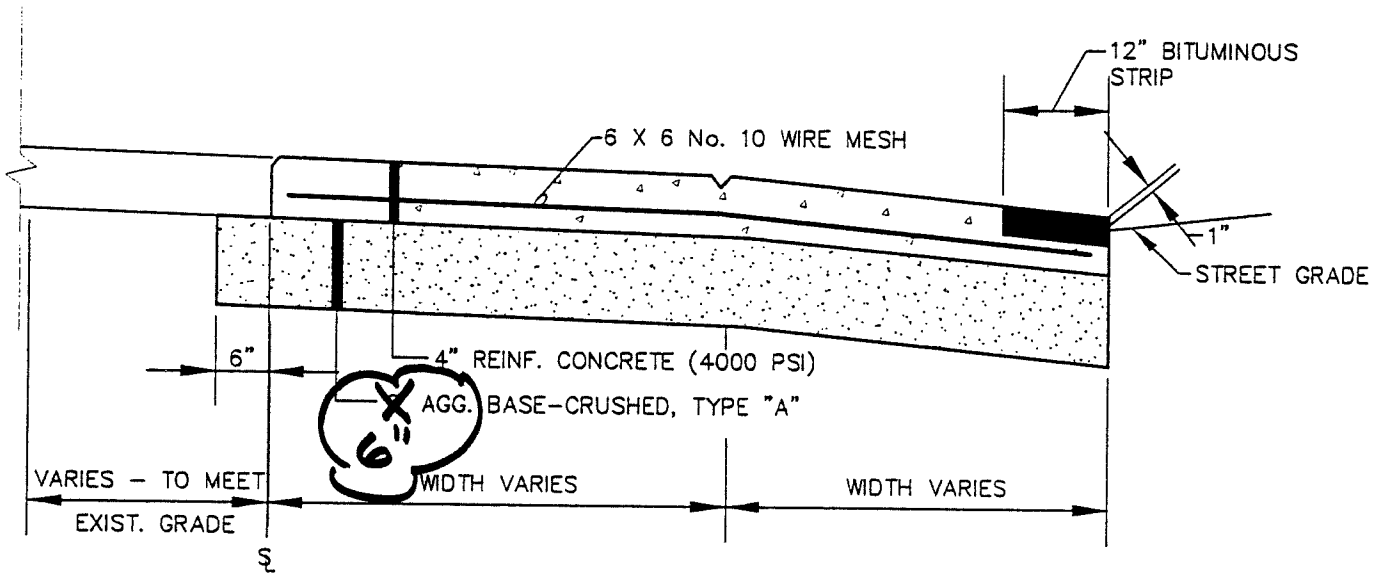
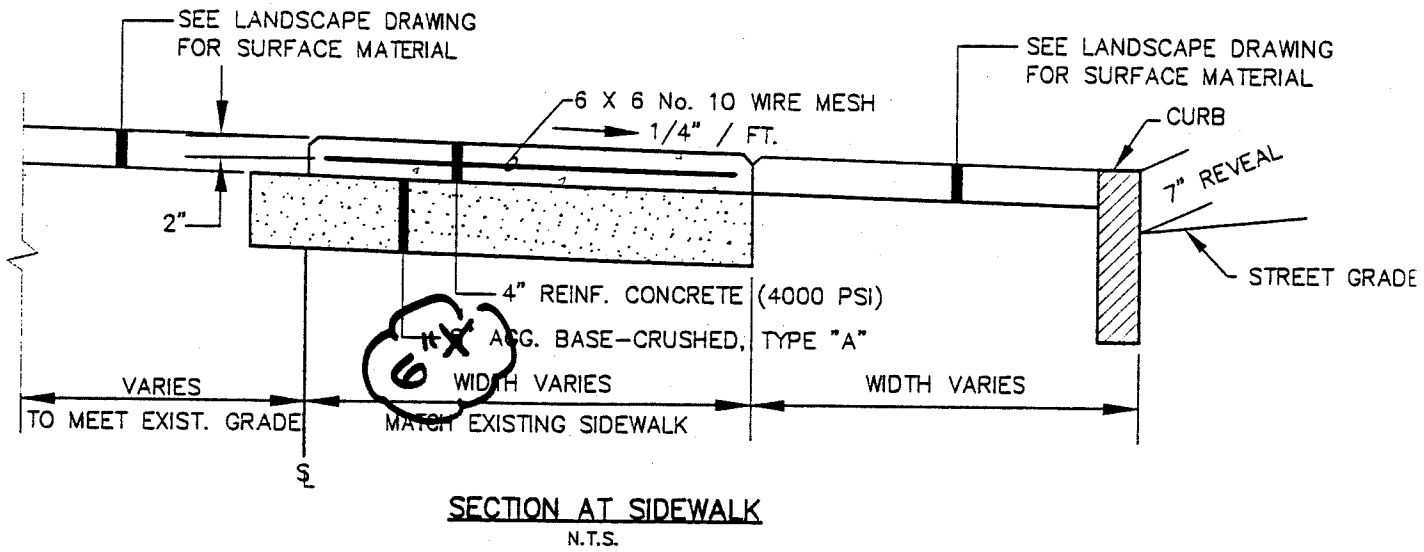
Concrete Wall

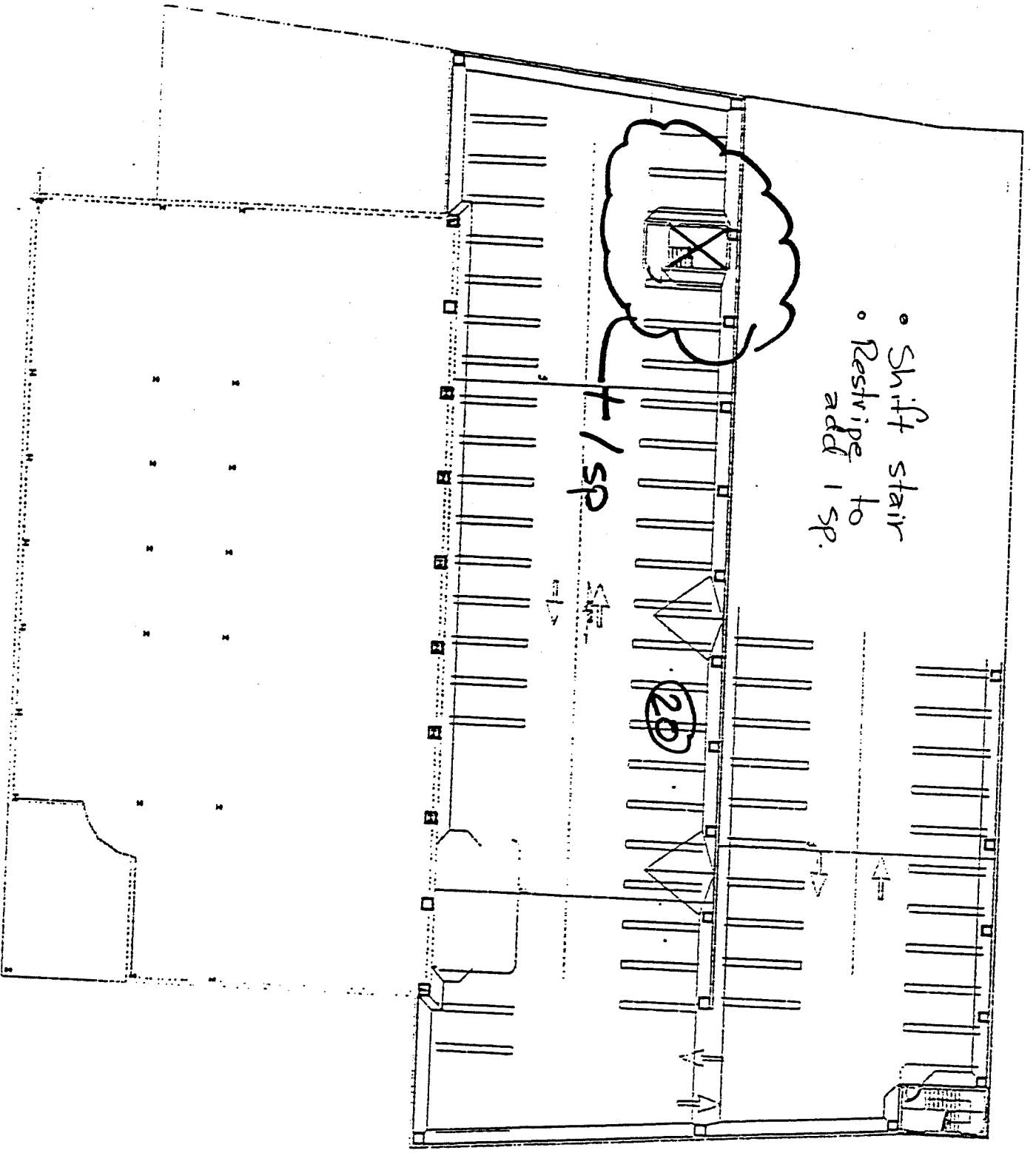
Concrete Wall

Concrete Wall

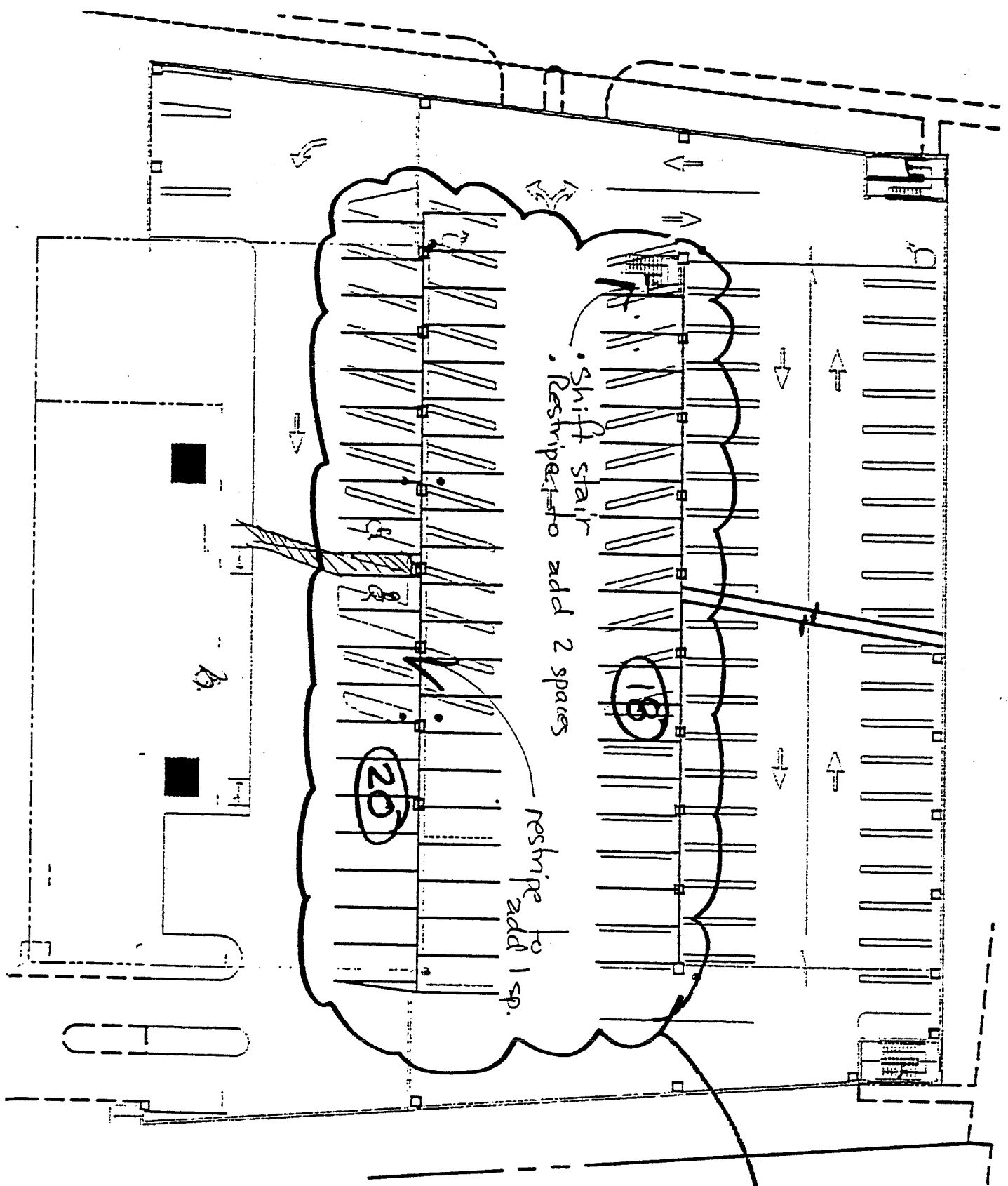
Concrete Wall

Concrete Wall





Level 2



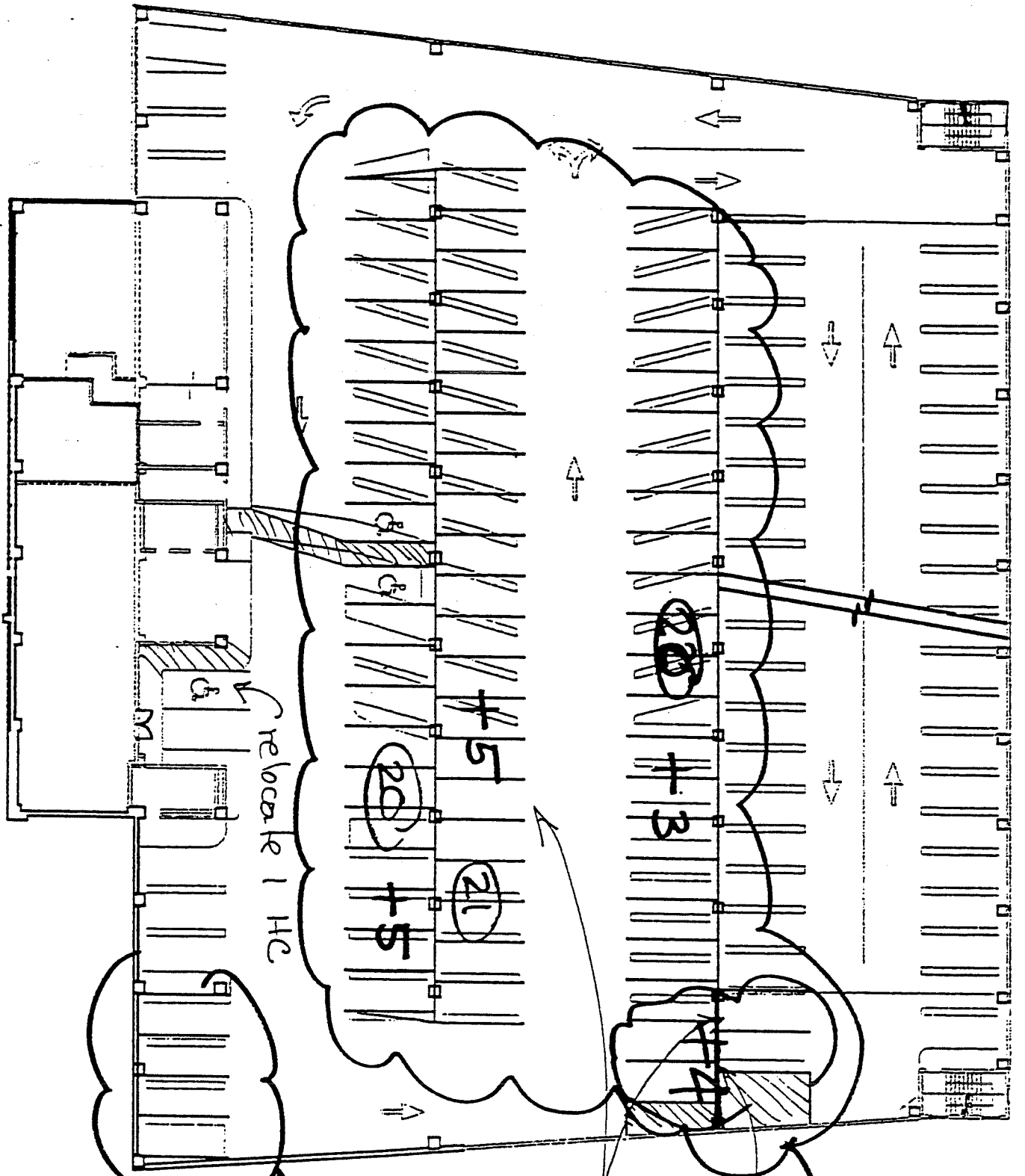
Shift stair  
Reshape to add 2 spaces

Reshape to add 1 sp.

+ 3 sp

Level 1

# Level B1

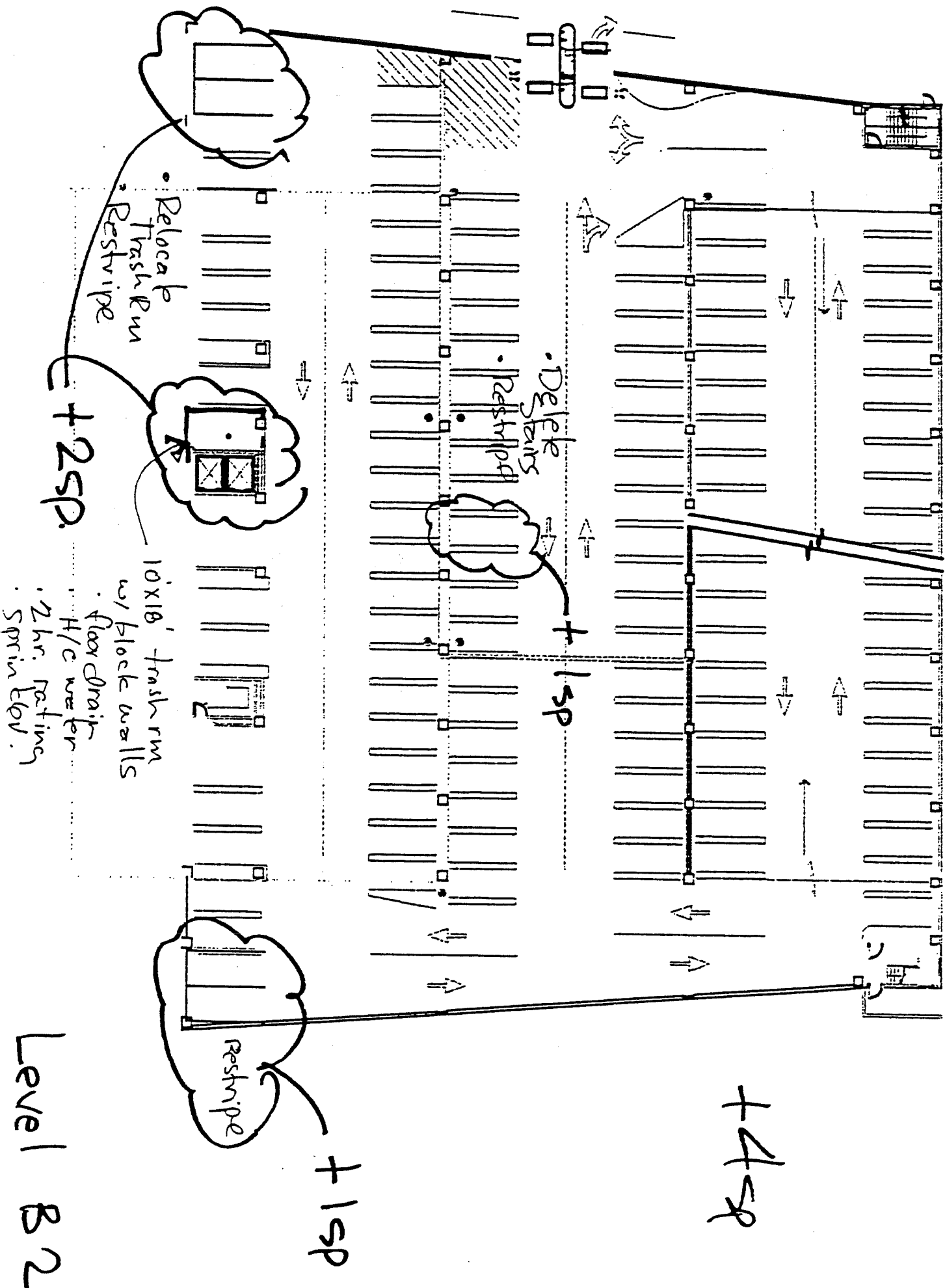


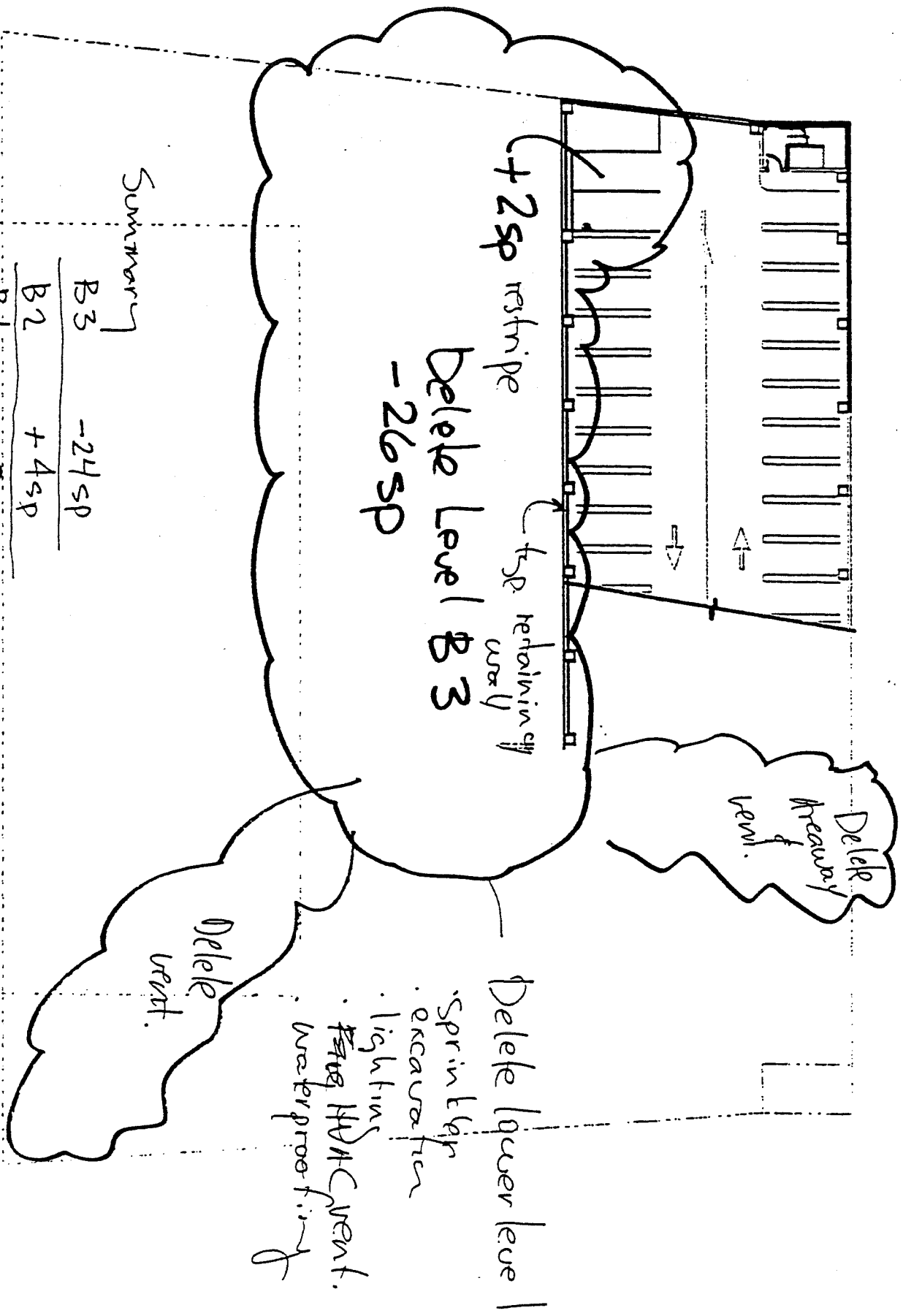
+1 sp  
restripe

Delete Ballards  
and drive  
lane — restrip

17 sp  
new divider.







+2sp restripe

Delete Level B3  
-26sp

1 sp retaining wall

Delete Area of Level

Delete vent.

- Delete lower level
- Sprinkler excavation
- lighting
- ~~HVAC~~ HVAC vent.
- waterproofing

Summary

B3 -24sp

B2 +4sp

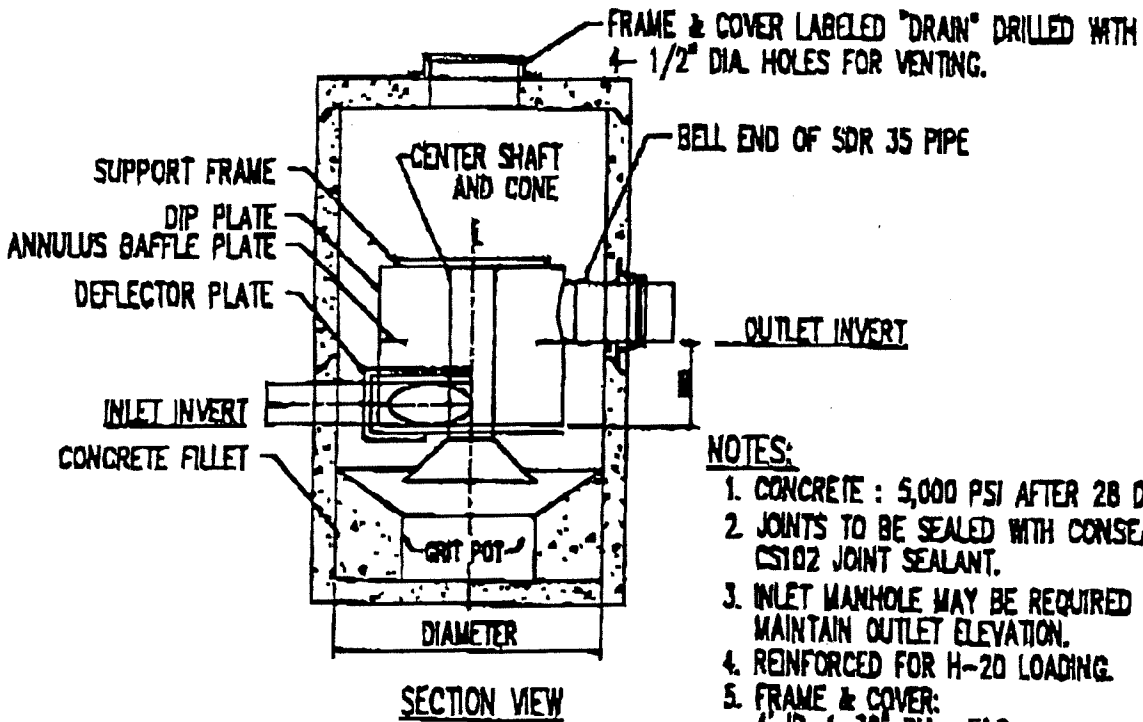
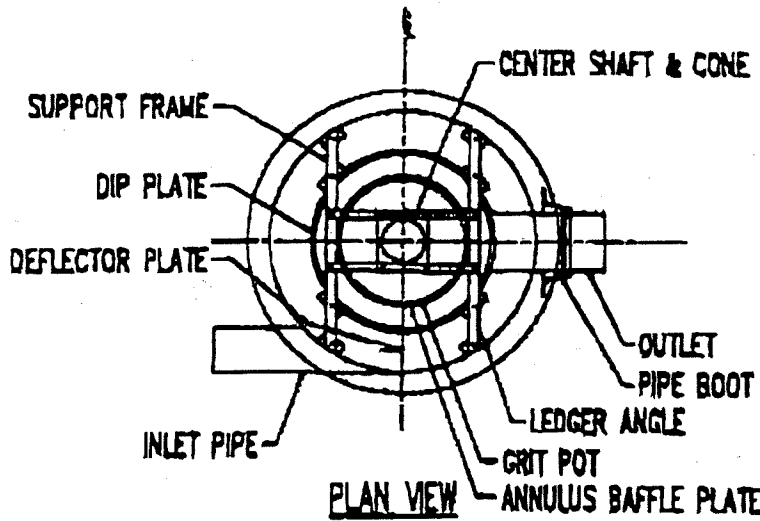
B1 +18sp

1 +3sp

2 +1sp

total net +2 spaces.

Level B3



**NOTES:**

1. CONCRETE : 5,000 PSI AFTER 28 DAYS.
2. JOINTS TO BE SEALED WITH CONSEAL CS102 JOINT SEALANT.
3. INLET MANHOLE MAY BE REQUIRED TO MAINTAIN OUTLET ELEVATION.
4. REINFORCED FOR H-20 LOADING.
5. FRAME & COVER:
  - 4' ID. 1-30" DIA. F&C.
  - 6' ID. 1-18" DIA. & 1-24" DIA. F&C.
  - 8' & 10' ID 2 - 24" DIA. F&C's.

UNIT DIAMETER	APPROXIMATE FLOW RANGE* (CFS)	INLET PIPE SIZE	OUTLET PIPE SIZE	GRIT POT DIAMETER
4'-0"	0-0.75	8"	12"	2'-0"
6'-0"	0.75-3	12"	18"	3'-0"
8'-0"	3-7	18"	24"	4'-0"
10'-0"	7-13	24"	30"	5'-0"

\*BASED ON 90% REMOVAL OF ALL PARTICLES WITH SPECIFIC GRAVITY OF 2.65 DOWN TO 150 MICRONS.  
 \*AT FLOWS LESS THAN DESIGN, THE DOWNSTREAM DEFENDER WILL HAVE BETTER REMOVAL EFFICIENCIES.



**SUPERIOR  
 CONCRETE CO., INC.  
 AUBURN, ME.**

**DOWNSTREAM DEFENDER™  
 STORMWATER SYSTEM**

**SUPERIOR CONCRETE CO., INC.—AUBURN, MAINE 04210  
 1-800-482-7417**

V C 1

# Downstream Defender™ Design Chart (Imperial)

UNIT DIAMETER (feet)	DESIGN FLOW / CAPACITY		INLET PIPE DIAMETER (inches)	OUTLET PIPE DIAMETER (inches)	HEADLOSS DESIGN FLOW (inches)	HEADLOSS CAPACITY (inches)	WEIGHT FULL (lbs)	WEIGHT EMPTY (lbs)	OIL STORAGE CAPACITY (gallons)	SEDIMENT STORAGE CAPACITY (cy)	UNIT DIAMETER (feet)
	(cfs)	(gpm)									
0.75/3.0	330/1,350	8	12	3	23	13,200	10,000	70	0.70		
3.00/8.0	1,350/3,350	12	18	7	33	32,800	22,400	230	2.10		
7.00/15.0	3,140/5,730	18	24	9	23	63,000	39,000	525	4.65		
13.0/25.0	5,830/11,220	24	30	10	22	140,300	94,000	1,050	8.70		



1. Based on 90% removal of all particles with specific gravity of 2.65 down to 150 microns.
  2. Headloss is defined as the difference between the top water level upstream and the top water level downstream of the unit.
  3. Weights are calculated with stainless steel internal components. Components are also available in polypropylene.
- AutoCAD drawings and WordPerfect specification available on disk.
  - For pricing, delivery, and custom designs, please call H.L.L. Technology, Inc., Proposal Engineering Department.

H.L.L. TECHNOLOGY INC.

H.L.L. TECHNOLOGY INC., 94 Hutchins Drive, Portland, ME 04102 • (207) 756-6200 • (207) 756-6112 (Fax) • E-mail: hltech@hl-tech.com



## CITY OF PORTLAND

August 7, 1998

Jim Clarkson  
Mediplex Medical Building Corp.  
5308 West Plano Parkway  
Plano TX 75093

re: Maine Medical Center; 883-903 Congress St.

Dear Jim:

This letter is in reference to your letter of July 8, 1998, regarding certain revisions for the Maine Medical Center office and parking garage.

1. Reorganization of the parking garage and deletion of the lower level:

Staff has reviewed the submitted drawings including the overlay plan. We do not have any objections to the revised plan; however, before we sign-off on the changes, please submit the following information:

- a. A summary of the number of parking spaces on each level (original plan vs. revised plan) with a grand total showing the same number of spaces.
- b. A letter from Maine Medical Center that the revised plan will not affect their pledge to preserve Sea Dog parking and resident snowday parking.
- c. A definitive statement that the exterior appearance of the parking garage remains the same.

2. Lighting

If fixture location, lamp types, pole heights, and wattages are the same for all the fixtures as stated in your letter, then presumably the revised plan is in the ballpark. I'm sure there is some variation in the light fixtures. Could you confirm the photometric level for the new fixtures in comparison to the original fixtures?

Also, the Kenall fixture does not appear to have the same glare control and shield control as the original fixture (Kim). We will need more information on this before we sign off on this change.

3. Larger brick.

I know the larger brick is economical, but the smaller brick is in keeping with the architectural character of Portland. We do not feel comfortable approving this change. Also, we have concerns about the change in the cornice line detail. The original detail worked much better than your latest proposal.

4. Sub-base under pavement of sidewalk

A six-inch gravel base for the concrete sidewalk has been reviewed by the Development Review Coordinator, and has been found to be acceptable.

5. Alternate grit separator

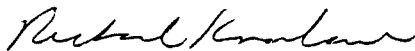
The use of a Downstream Defender as a substitute for the Vortechview 4000 has been reviewed by the Development Review Coordinator, and has been found to be acceptable. However, Maine Medical Center should be aware that it requires more maintenance.

6. Change in storm drain along Boynton Street

We cannot approve this change at this time. A piped system would be more secure and reliable than a swale. We do not want to risk a situation where storm water ends up crossing Boynton Street and into residential properties.

Should you have any questions concerning this letter, please call me.

Sincerely,



Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr.; Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
Paul Gray; Vice-President of Planning, Maine Medical Center, 22 Bramhall St, Ptd ME 04101  
Jim Mornson; Engineering, Maine Medical Center, 22 Bramhall St, Ptd ME 04101



**FAX TRANSMITTAL**

22 Bramhall Street, Portland, Maine 04102

**ENGINEERING SERVICES**  
**TELEPHONE NUMBER (207) 871-2447**  
**FAX NUMBER (207) 871-6195**

8

**DATE:** 7/13/98  
**TO:** Richard Knowland  
Department of Planning and Urban Development  
City of Portland

**PHONE:**

**FAX:** 756-8258

**FROM:** Jim Morrison  
**SUBJECT:** Congress Street Medical Office Building



**NUMBER OF PAGES INCLUDING TITLE PAGE: 2**

**Rick:**

Attached see parking space tabulation report which coordinates with the current set of parking garage drawings for the Congress Street Medical Office Building.

2

### PARKING SPACE TABULATION CHART

LEVEL	HOSPITAL EMPLOYEES		MOB STAFF AND VISITORS		TOTAL
	STANDARD		STANDARD		
B3	23	-	-	-	23
B2	121	-	-	-	121
B1	61	-	54	3	118
1	-	-	102	4	106
2	-	-	63	-	63
<b>TOTAL</b>	205		226		431





# Maine Medical Center

22 Bramhall Street, Portland, Maine 04102

## FAX TRANSMITTAL

**ENGINEERING SERVICES**  
TELEPHONE NUMBER (207) 871-2447  
FAX NUMBER (207) 871-6195

DATE:

8/12

TO:

Richard Knowland

FROM:

Re:

Number of pages including cover sheet 2

Message



August 12, 1998

Richard Knowland  
Department of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Congress Street Medical Office Building

Dear Rick

This is written in response to a comment in your letter dated August 7, 1998 and concerning the revised parking plan for the above-mentioned project.

The revisions to the parking plan will in no way affect the intent of MMC to provide Sea Dog parking and resident snowday parking.

If there are any questions, please contact this office.

Sincerely,

A handwritten signature in cursive script that reads "Paul Gray".

Paul Gray  
Senior Vice President, Planning

Cc: Ryan  
Swan  
Bremm



August 12, 1998

Richard Knowland  
Department of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Congress Street Medical Office Building

Dear Rick

This is written in response to a comment in your letter dated August 7, 1998 and concerning the revised parking plan for the above-mentioned project.

The revisions to the parking plan will in no way affect the intent of MMC to provide Sea Dog parking and resident snowday parking.

If there are any questions, please contact this office.

Sincerely,

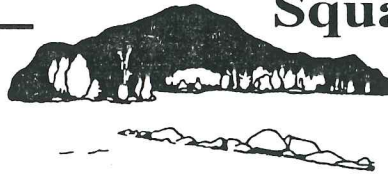
A handwritten signature in black ink that reads "Paul Gray". The signature is written in a cursive style with a large initial "P" and a long, sweeping underline.

Paul Gray  
Senior Vice President, Planning

Cc: Ryan  
Swan  
Bremm



# Squaw Bay Corp



**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

December 3, 1997

Mr. Rick Knowland  
Office of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center/Medplex Medical Building Corporation  
Congress Street Medical Office Building**

Dear Rick:

Since the October 28, 1997 Planning Board Workshop meeting for the referenced project, we have made revisions to the site development drawings as well as progress in other areas.

Per our 12/1/97 telephone conversation we are submitting seven (7) full size and one (1) 11"x17" size prints of the following Squaw Bay Corp drawings:

<u>Description</u>	<u>Drawing #</u>	<u>Revision</u>
Site Plan	C-101	C
Miscellaneous Civil Details	C-300	C
Erosion and Sedimentation Control Plan	C-302	C
Landscape Plan	L-101	C

Also, progress has been made in the following areas:

- We have met with Jim Wendell from DeLuca Hoffman and Tony Lombardo, Bob Worcester, and Dave Peterson of the Portland Public Works Department to review the stormwater runoff issues. We have concluded that an oil/water separator will be required to receive runoff from the parking garage area to address the water quality issue. Runoff from the office building roof will be allowed to flow directly to the City's combined system without passing through an oil/water separator.

The City and it's consultants will not require stormwater detention to attenuate runoff flows. (Please see the attached copy of Conference Report of 10/23/97 meeting with Public Works personnel).

97-242  
know1203.let  
1 of 2

Mr. Rick Knowland  
December 3, 1997

- The landscape drawing has been revised to show a pedestrian/park area between the parking garage structure and Boynton Street. This was done to address the concerns of the Board which were expressed at the last workshop meeting. We have not been able to arrange a meeting with the Planning Board member who expressed the most interest in this area but will continue to do so. If a meeting cannot be arranged prior to the workshop meeting, I will have the landscape architect attend the workshop meeting to resolve landscape issues.
- The Portland Water District and Northern Utilities have been contacted regarding the details of water and gas service to the facility. Please see attached copy of 11/26/97 letters to the utility companies.
- Bill Goodwin of the Portland Public Works has been contacted regarding the details of sewer service. Please see attached copy of 11/26/97 letter.
- Also included is Carl Walker's preliminary lighting design.

It is my understanding that Maine Medical Center and its consultant will be submitting information relative to traffic and parking issues and that the Planning Board workshop meeting will focus on these two issues.

We trust the information contained herein will adequately address the concerns of the Planning Board. Please call me if you have any questions or desire additional information.

Very truly yours,

SQUAW BAY CORP



W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson, MMBC w/enclosures  
Jim Morrison, MMC w/enclosures



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

November 26, 1997

Mr. Bill Goodwin  
Public Works Department  
55 Portland Street  
Portland, ME 04102

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Bill:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

Prior to the Portland Planning Board granting approval for the project, Maine Medical Center must provide documentation to verify that the sanitary sewer service can and will be provided to the building. At your convenience please contact me so we may begin discussions regarding the details of sewer service.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

November 26, 1997

Mr. John Nicely  
Northern Utilities Inc.  
1075 Forest Avenue  
Portland, ME 04103

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Mr. Nicely:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

At your convenience please contact me so we may begin discussions regarding the details of gas service to the proposed building.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

November 26, 1997

Mr. Dave Coffin  
Portland Water District  
225 Douglas Street  
Portland, ME 04102

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Dave:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

Prior to the Portland Planning Board granting approval for the project, Maine Medical Center must provide documentation to verify that the Portland Water District can and will provide water service to the building. At your convenience please have someone contact me so we may begin discussions regarding the details of water service.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin





# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

## Conference Report

Mediplex Medical Building Corporation  
(MMBC)

Maine Medical Center (MMC)  
Congress Street Medical Office Building

**Location:** Portland Public Works Department

**Date:** October 23, 1997

**Participants:** Tony Lombardo, Portland Public Works  
Bob Worcester, Portland Public Works  
Dave Peterson, Portland Public Works  
Scott Decker, Squaw Bay Corp

**Subject:** General Review of Project

**Distribution:** Participants  
Jim Clarkson, MMBC  
Jim Morrison, MMC  
Bill Goodwin, Portland Public Works

1. The 18" combined RCP sewer in Forest Street was installed in 1967 and appears to be adequate to receive both sanitary sewer and stormwater runoff flows. Stormwater flows will not require detention. Sanitary sewer and stormwater flows will have to enter the system in separate pipes.
2. The sidewalks in Forest Street (both brick and concrete) and Boynton Street (concrete), are in very good condition. If disturbed during construction of the Medical Office Building project they will have to be replaced in kind.

Please notify the writer of any omissions or misunderstandings in this report.

Submitted by:

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

'97-242  
conf1023.rpt  
1 of 1

November 24, 1997

Mr. Jim Clarkson  
 Mediplex Medical Building Corporation  
 5308 West Plano Parkway  
 Plano, TX 75093-4821

**Re: Maine Medical Center – Parking Garage Lighting  
 CWI Project No. 3500.04**

Dear Jim:

As state-of-the-art parking garage designers, CWI typically provides input to the electrical engineer regarding lighting levels, fixture type, fixture spacing, and operational suggestions. Since there is concern from the City of Portland regarding light spillover, we felt it would be appropriate to address all of the lighting issues at this time.

The lighting criteria outlined below is based on the Illuminating engineering Society (IES) guidelines and our many years of experience in parking structure design.

**Interior Parking Areas and Drive Aisles (Illumination in Foot-candles, fc)**

	<u>General Parking Areas</u>	<u>Vehicle Crossovers</u>	<u>Vehicle Entry/Exits</u> Day Night		<u>Pedestrian Lobbies</u>
<i>Kalamazoo</i>	Average	5 fc	50*	10 fc	20 fc
<i>Dallas</i>	Minimum	1.25 fc	12.5*	2.25 fc	5 fc
<i>Denver</i>	Avg./Min.	4:1 max.	4:1	4:1	4:1 max

*Chicago* \*Daytime infiltration plus artificial lighting.

*Philadelphia*

*Atlanta*

High Pressure Sodium (HPS) fixtures are recommended for the covered parking areas. HPS fixtures provide more illumination at a lower operating cost than metal halide (MH) or florescent lights. Also, HPS fixtures have a longer lamp life than MH fixtures. Enclosed is a lighting layout that will provide the light levels required in the table above. Also enclosed is an HPS fixture cut sheet.

Carl Walker, Inc.  
 13747 Montfort Drive  
 Suite 105  
 Dallas, TX 75240  
 U.S.A.

### **Roof Level Lighting**

Average: 2.4 fc  
Minimum: 0.6 fc  
Avg./Min.: 4:1 max.

For the roof level fixture, we recommend a pole-mounted HPS fixture with a cut-off shield designed to block excessive spillover into the surrounding neighborhood. The mounting height will be determined upon the completion of an illumination analysis. The placement of the fixtures will be as shown in the enclosed roof level lighting plan. Approximate light angles are also provided. Also enclosed is a cut sheet for a fixture appropriate for this application.

### **Lighting at Stairs**

We recommend using metal halide fixtures in and around the stair locations. MH fixtures produce a "white" light which is perceived by pedestrians to be warmer and more secure. The white light also contrasts with the amber colored HPS fixtures in the parking areas. This helps the visibility and recognition of the stair areas.

### **Operational Recommendations**

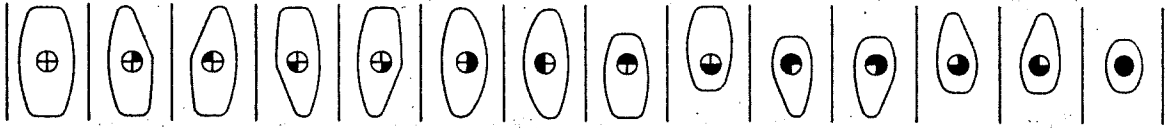
The high lighting levels at the vehicle entry/exit locations is designed to reduce the abrupt transition from light to dark on bright sunny days. On cloudy days and at night, the light levels can be greatly reduced. Therefore, most of the fixtures at the vehicle entry/exit locations should be on a separate circuit and turned off at night.

The typical fixture spacing is 2 per bay offset laterally 15 feet to each side of the drive aisle centerline. On the northern-most bay, the fixtures closest to line E should be on a separate circuit which is off during the day. These fixtures would be controlled by a photocell to come on at dusk. All remaining fixtures would be on during all hours of operation.

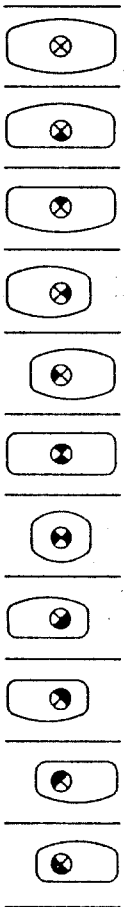
To further reduce energy costs, the public area of the garage can be circuited such that 75% of the fixtures are off during the hours in which the garage is closed. The remaining lights left on should be the minimum required for security and emergency lighting. The roof area should be controlled by a photocell to come on at dusk and on cloudy days and may be reduced as discussed above during closed hours. The hospital employee area of the garage should be considered 24-hour operation.

# PGL Omni-System™

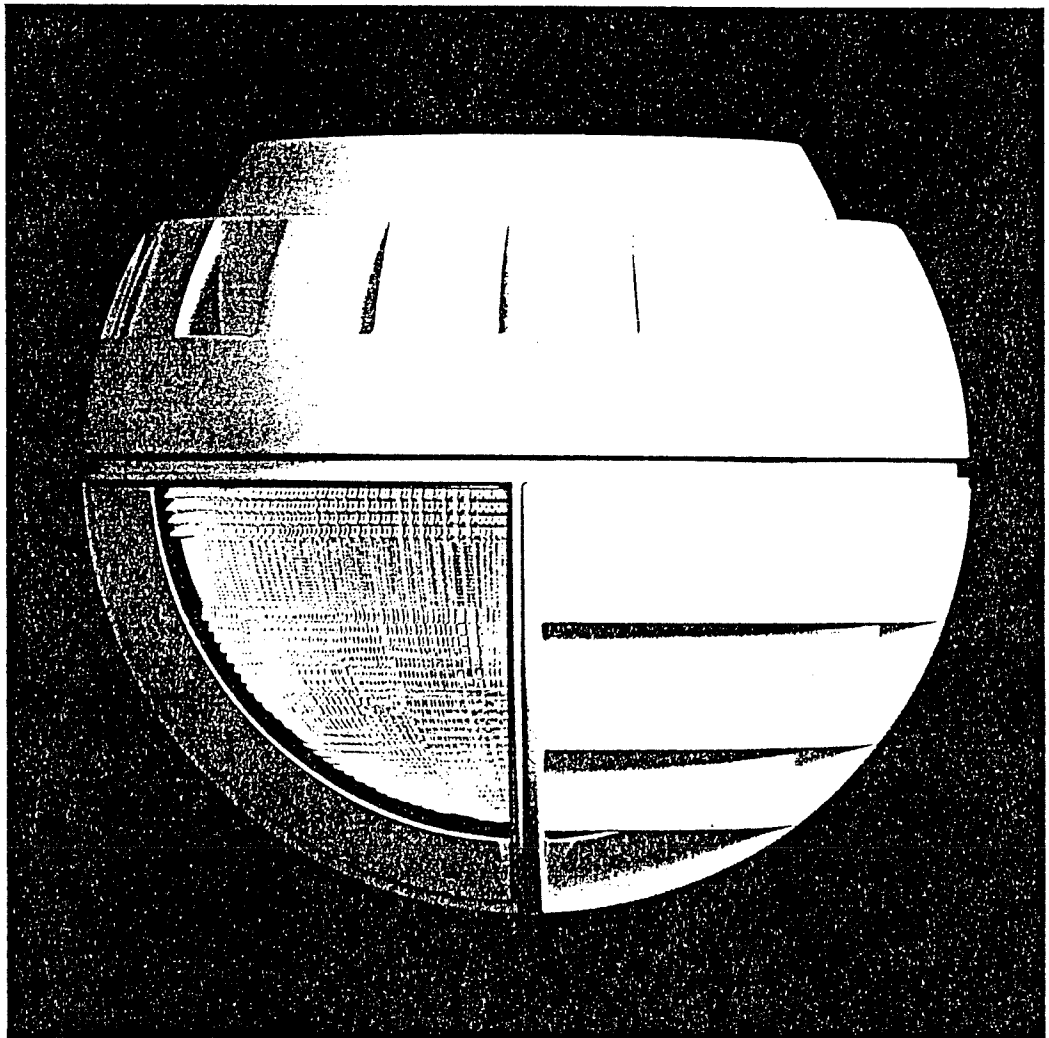
- 3-Dimensional Illumination
- Performance Task-Driven Optics
- Modular Brightness control
- Permanence
- Easy Installation and Maintenance



\* PGL3 Double Row System



PGL2 Single Row System



SITE / AREA  
 PARKING STRUCTURE  
 ROADWAY  
 ARCHITECTURAL FLOOD / ACCENT  
 LANDSCAPE  
 FOUNTAIN LIGHTING

16555 EAST GALE AVENUE  
 PO BOX 1275  
 CITY OF INDUSTRY, CALIFORNIA 91749  
 U.S.A.  
 PHONE 818 / 968 5666  
 FAX 818 / 369 2695

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Mr. Jim Clarkson  
Mediplex Medical Building Corporation  
November 24, 1997  
Page 3

The lighting layouts enclosed may require slight adjustments as required from the illumination study. Our plans are to have final foot-candle readings available prior to the 99% CD Review meeting.

Hopefully, the information provided herein will be appropriate for the December 9, 1997 site plan review workshop. If necessary, I can be available to answer any questions Maine Medical Center or the City of Portland may have concerning the garage lighting. Please call should you have any questions.

Sincerely,

*Carl Walker, Inc.*



Joey D. Rowland, P.E.  
Project Manager

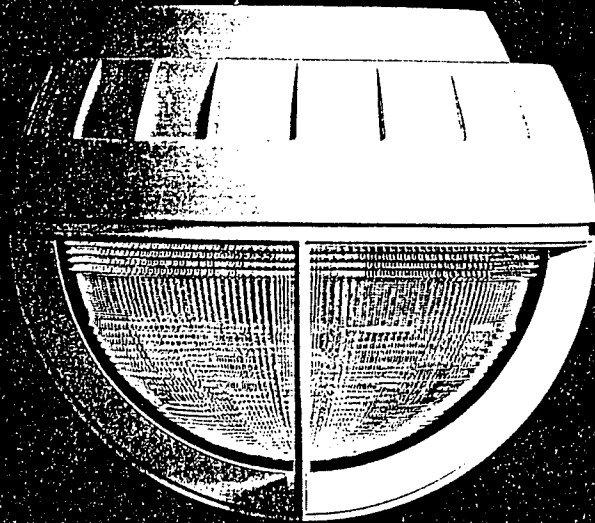
Enclosures

# PGL Omni-System™

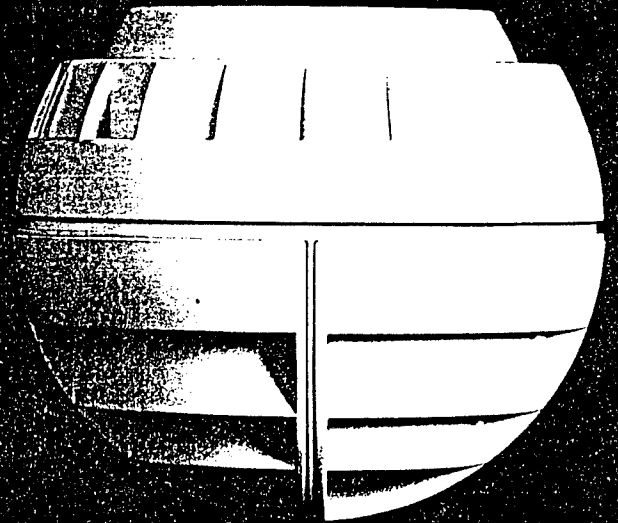
PARKING STRUCTURE  
**PGL2/3**  
SERIES

The Next Generation in Parking Garage Lighting

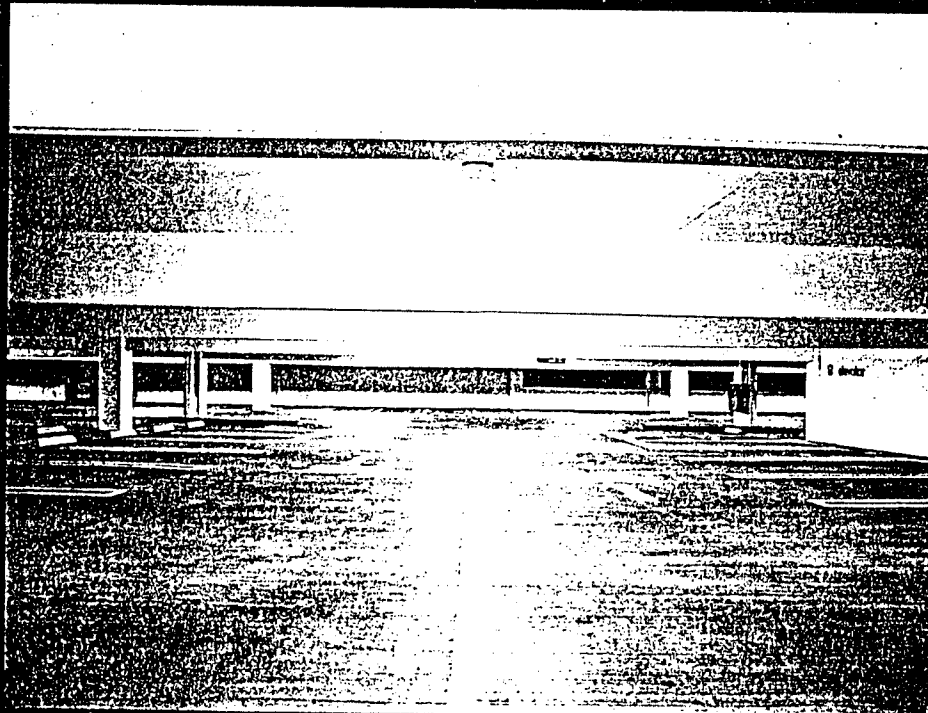
TYPICAL



**KIM LIGHTING**



- 3-Dimensional Illumination
- Performance Task-Driven Optics
- Modular Brightness Control
- Permanence
- Easy Installation and Maintenance





# Maine Medical Center

## PHONE CONVERSATION RECORD

DATE: 7/20/98

PROJECT: Congress Street MOB

TO: Rick Knowland

PROJECT NO: 97014

FROM: Jim Morrison

SUBJECT: Connector Design/Planning Review

This is to confirm our conversation this date during which you informed me that you needed a date from MMC for submission of drawings for the connector design prior to your release of the construction documents for review by other disciplines within the City. You further reminded me of your previous request that the connector design be before the Planning Board no later than September 1998. Also, you noted that the date for submission to the Planning Board may be changed at a later date.

Therefore, the date that is currently agreed on for submission of drawings to the Planning Board is September 30, 1998.

Cc: Gray  
Swan  
Bremm



# Maine Medical Center

## PHONE CONVERSATION RECORD

DATE: 7/27/98

PROJECT: Congress Street MOB

TO: Rick Knowland

PROJECT NO: 97014

FROM: Jim Morrison

SUBJECT: Conditions of Approval/Connector Design

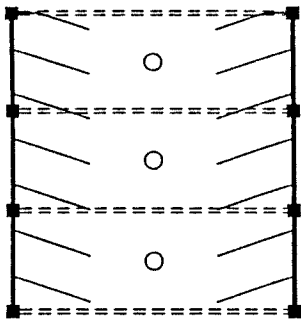
This is to confirm our conversation this date, during which we agreed that with the exception of the deeded easement, all MMC requirements for approval of the project mentioned above have been met.

Further, Rick Knowland informed Jim Morrison that presentation of the revised connector design to the Planning Board has been put on the agenda for September 30, 1998.

Cc: Gray  
Ryan  
Swan  
Bremm  
Clarkson

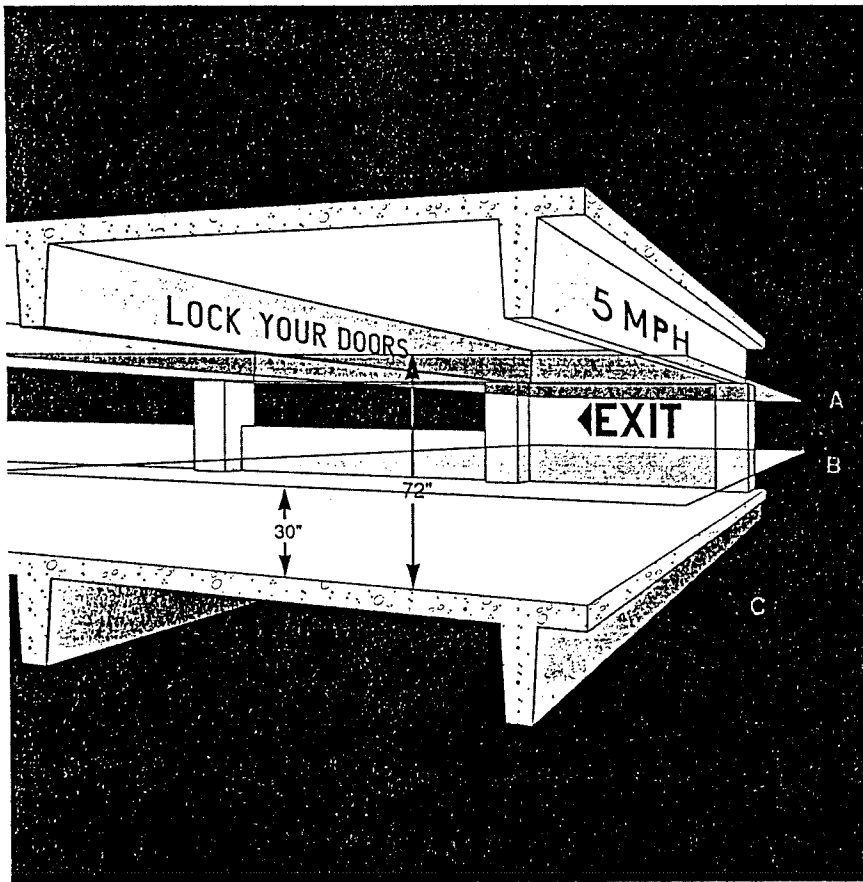
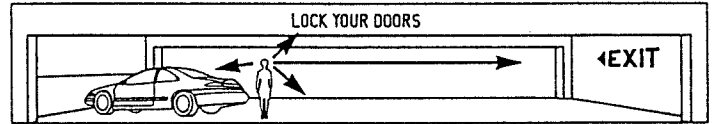


# 3-Dimensional Illumination



Parking garage lighting is generally evaluated as though the parking bays were simply two-dimensional floor plans. This is comparable to lighting an office as if walls and ceilings did not exist. The two-dimensional approach to garage lighting is a carry over from parking lot lighting where illumination levels are evaluated solely on the pavement.

Since parking garages are essentially interior spaces, their illumination must be achieved in three-dimensions. Ceilings must be lighted to eliminate the cave effect, beams and walls must be illuminated for signage and visual comfort, and vehicles must be lighted at elevations above the floor where tasks actually occur. Floor illumination is only one element of good parking garage lighting.



**Today's illumination requirements for parking structures involve both horizontal and vertical footcandles up to 72" above the floor.**

Sources: IES Illuminating Engineering Society  
NPA National Parking Association

**Level A**—IES recommendation: At 72" above the floor, vertical illumination values on such objects as columns and walls should equal horizontal illumination values on the floor. (See Level C)

**Level B**—NPA recommendation—Average maintained horizontal illumination 30" above the floor:

Interior Parking and Driving Areas	6Fc
Min. at Perimeters or Vehicle Restraints	2Fc
Surface and Roof Parking Areas	2Fc
Vehicle Entrances	40Fc
Vehicle Exits	20Fc
Stairways and Exits	20Fc
Average to Minimum Illumination	3:1

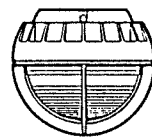
**Level C**—IES recommendation—Average maintained horizontal illumination on the floor:  
(See Level A)

	DAY	NIGHT
General Parking & Pedestrian Areas	5Fc	5Fc
Minimum at any location	1.25Fc	
Ramps and Corners	10Fc	5Fc
Entrance Areas	50Fc	5Fc
Average to Minimum Illumination	4:1	4:1

**Ceilings**—While no specific recommendations exist for ceilings, it is widely accepted that ceilings must be well lighted to eliminate the insecure feeling of entering a dark, cave-like structure. To accomplish this, between 12%-15% of the luminaire's output must be projected upward.

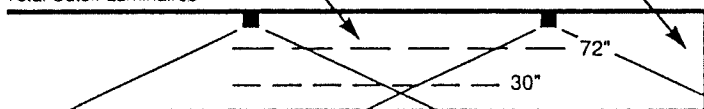
Total cutoff luminaires cannot meet IES or NPA illumination requirements because their light distribution is too narrow. These luminaires do an excellent job of floor illumination, but fall short at elevations above the pavement where vertical illumination on cars, walls, beams and ceilings is required.

Current garage lighting practice includes the illumination of interior shear walls. Signage is often placed on these walls at least 6' above the floor. In addition, it has been found that when these walls are well lighted, they play an important role in creating a bright ambience and secure feeling inside the garage.

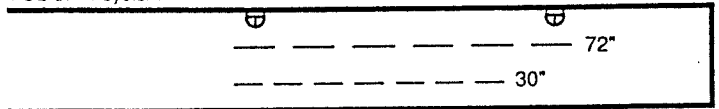


The PGL Omni-System bathes the garage interior with light from floor to ceiling. This approach is virtually dictated by the IES and NPA recommendations listed above. At the same time, the inevitable consequence of this approach is excessive brightness in certain viewing directions. This quandary, and its solution represent the ingenious composition of form and function embodied in the PGL Omni-System. It is the first parking garage luminaire capable of meeting all IES and NPA requirements, while providing the flexibility of modular brightness control.

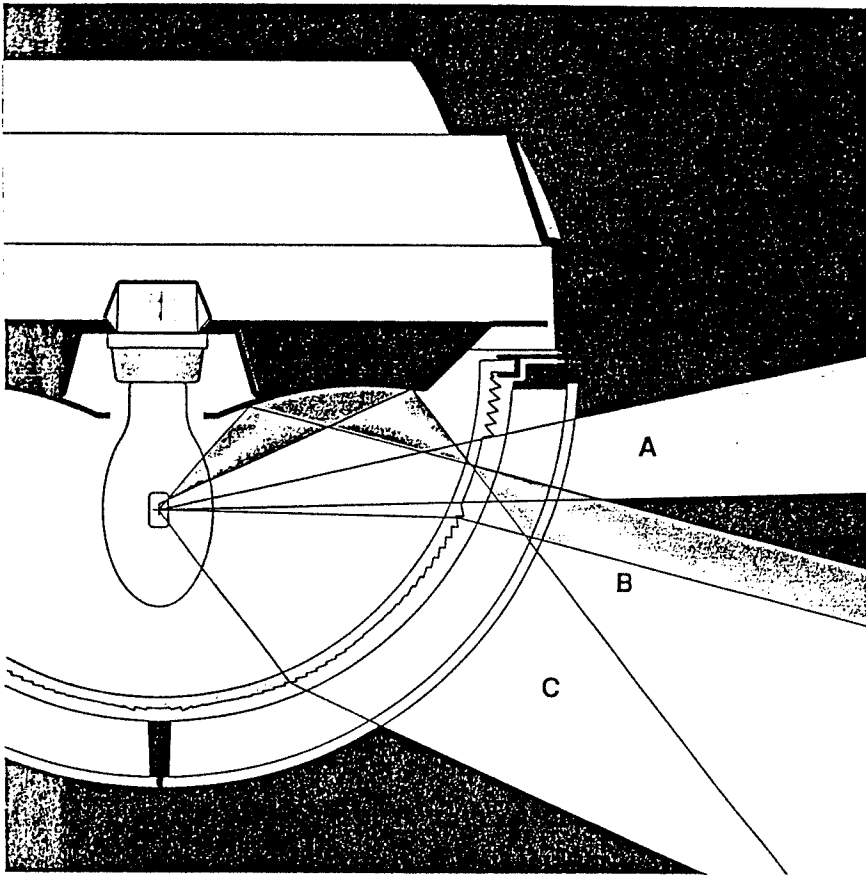
Total Cutoff Luminaires



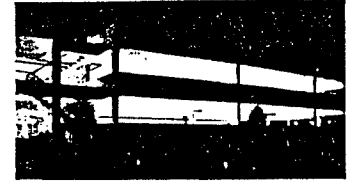
PGL Omni-System



# Performance Task-Driven Optics

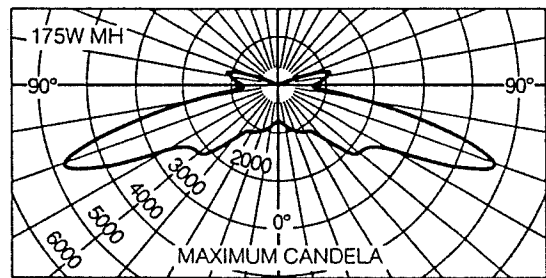


**A** Ceiling illumination is primarily generated by light passing through a clear window area in the refractor. This window is located slightly above the lamp center, and is engineered to produce a uniform wash of light over large ceiling areas. This illumination projects a secure image to visitors.



**B** A precision hydroformed reflector captures the up-light and redirects it downward through the clear window area. This light augments the main beam for greater efficiency.

**C** The main beam is generated by internal and external prisms. It is engineered to meet IES and NPA lighting recommendations while providing outstanding uniformity on both horizontal and vertical surfaces.



## Two Fixture Types Offered:

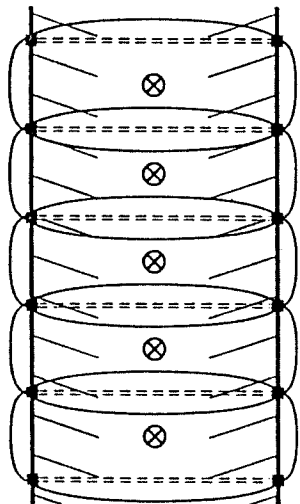
### PGL2 Single Row System

Fixture Icon Shows Plan View Orientation of Lens Cage



PGL2 fixtures are factory assembled with the lens cage oriented 45° to the driving lane. This allows optimum use of Louver Modules as described on page 3. PGL2s are installed with the rectangular light pattern running across the parking bays as shown at left. The light pattern has been perfectly sized for optimum efficiency within all typical garage bays whether one-way or two-way drives are used.

See page 3 for explanation of Modular Brightness Control system as applied to the PGL2.



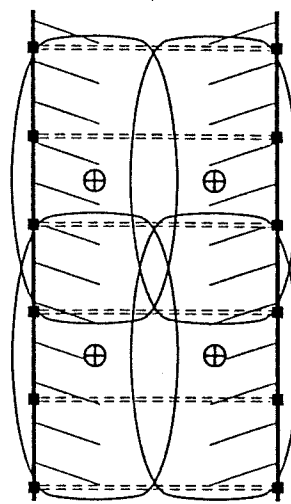
### \*PGL3 Double Row System

Fixture Icon Shows Plan View Orientation of Lens Cage

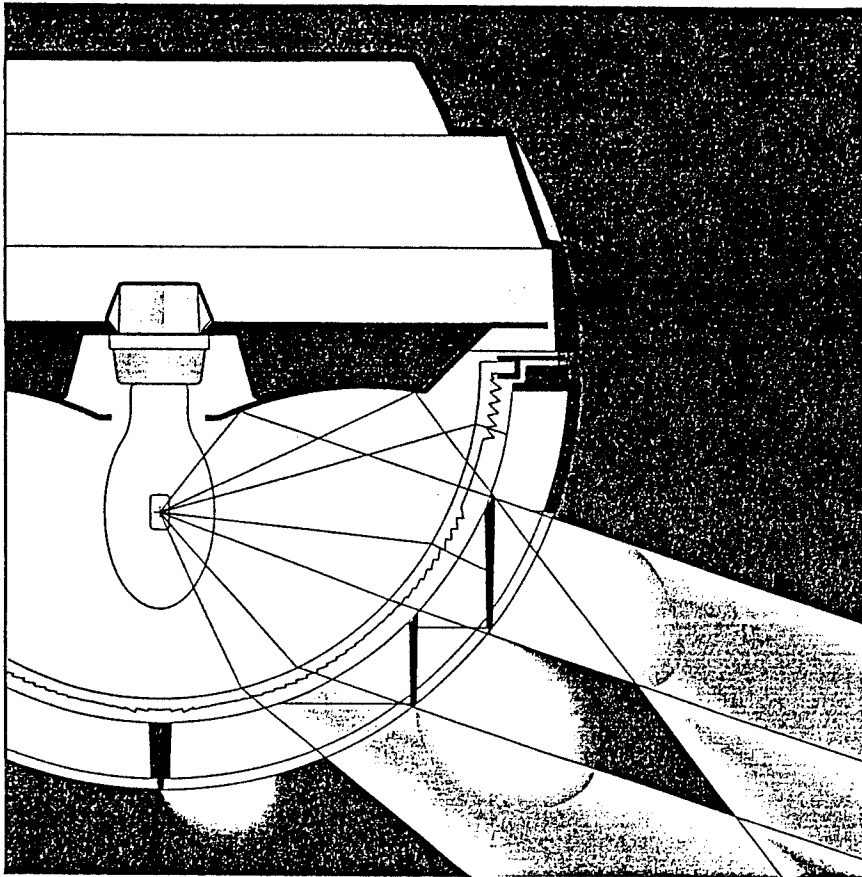


PGL3 fixtures are factory assembled with the lens cage oriented at right angles to the driving lane. This allows optimum use of Louver Modules as described on page 3. PGL3s are installed with the rectangular light pattern running parallel with the driving lane as shown at left. This arrangement utilizes the rectangular light pattern to its optimum advantage and efficiency within the garage bays whether one-way or two-way drives are used.

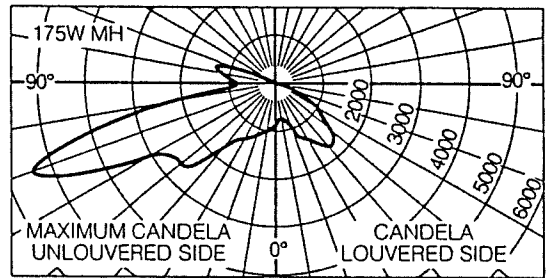
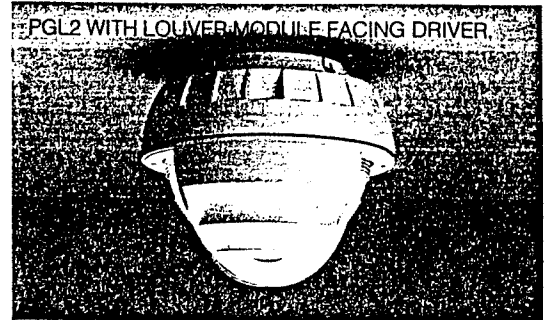
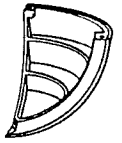
See page 3 for explanation of Modular Brightness Control system as applied to the PGL3.



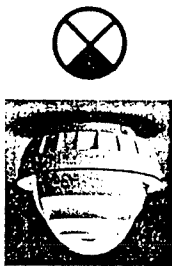
# Modular Brightness Control



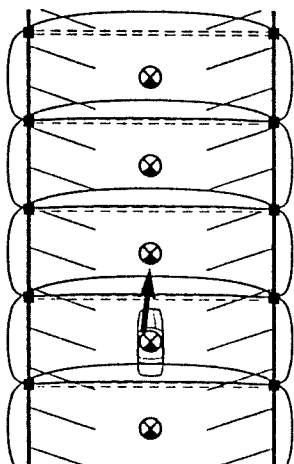
The PGL Omni-System employs an optional Louver Module that can be inserted in any quadrant of the lens cage. It is NOT a total light shield. Instead, it has been carefully engineered to reduce fixture brightness to the same approximate level as its surrounding ceiling and beams.



## PGL2 Single Row System



Because the PGL2 lens cage is oriented at 45° to the driving lane, a Louver Module directly faces the driver, providing maximum brightness control. The fixture icon is solid in the quadrant where the louver is to be installed.

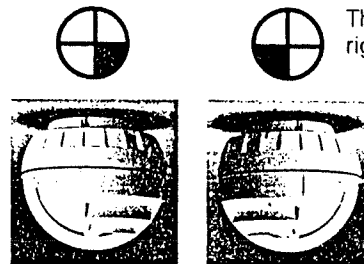


In a typical PGL2 single row layout, one Louver Module would face the driver in a one-way driving bay. The rectangular light pattern is minimally affected by the louver, and the system still provides full coverage of the bay. See page 14 for actual system performance.

For two-way drives, two Louver Modules would be installed on opposite sides of the PGL2.

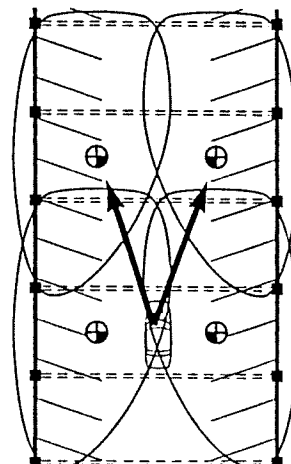


## \* PGL3 Double Row System



The PGL3 lens cage is oriented at right angles to the driving lane.

This allows the Louver Modules to face the driver who is viewing the fixtures at oblique angles. The fixture icon is solid in the quadrant where the louver is to be installed.

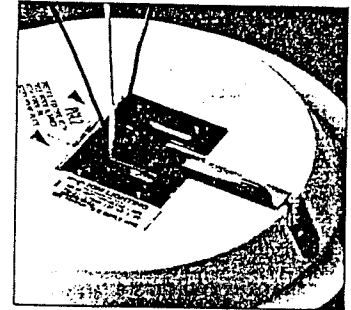
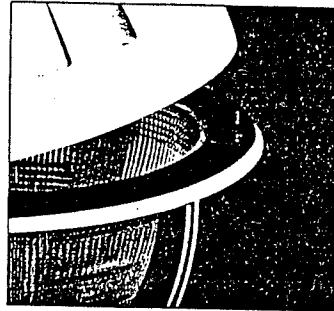
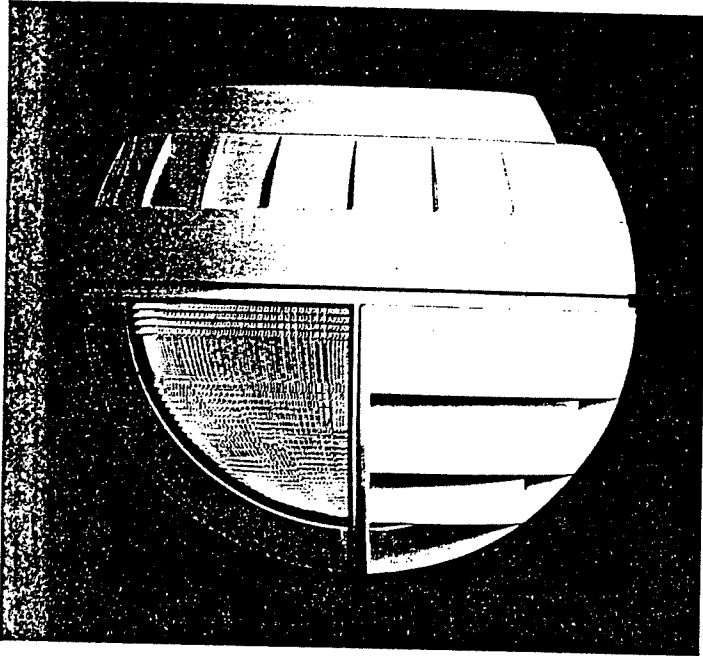


In the typical PGL3 double row layout at left, one Louver Module faces the driver in each fixture. The rectangular light pattern is shortened by the louver, but is filled in by the next fixture. See page 15 for actual system performance.

For two-way drives, two Louver Modules would be installed in adjacent fixture quadrants. To compensate for louver loss, the lateral fixture spacing can be shortened.



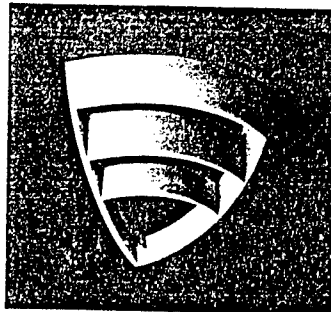
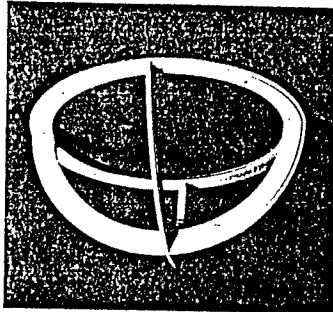
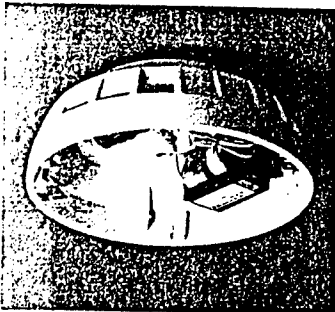
# Permanence



## Totally Sealed Optics

Parking garages are open structures allowing outside air and moisture to enter. In addition, vehicle exhaust constantly attacks the fixture. If any of these contaminants are allowed to penetrate the luminaire, light output will steadily decrease as the optical components become coated with a film of pollutants.

To prevent this, the PGL Omni-System is totally sealed against outside air and moisture. A one piece molded silicone gasket wraps around the lens flange and lens cage to seal the lens-housing interface. At the fixture top, wire penetrations are sealed by a silicone grommet. The luminaire is UL listed and CSA certified for wet locations.

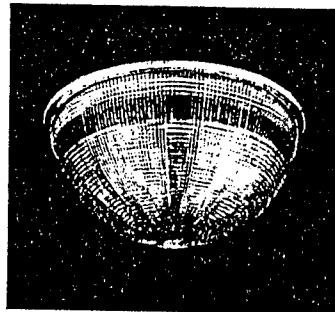


## Die Cast Aluminum Components

The Electrical Housing, Lens Cage and Louver Module are all die cast aluminum with extra heavy wall thickness. Die casting gives the components a clean and precise look while accurately controlling tolerances and repeatability.

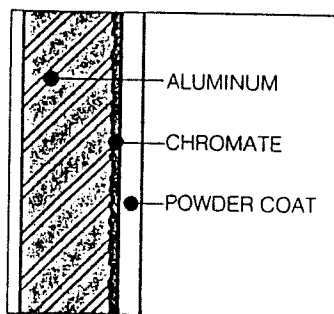
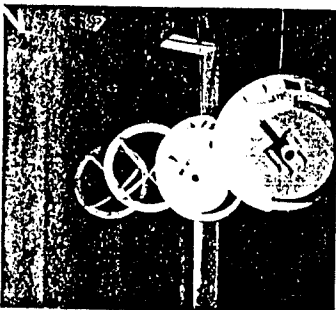
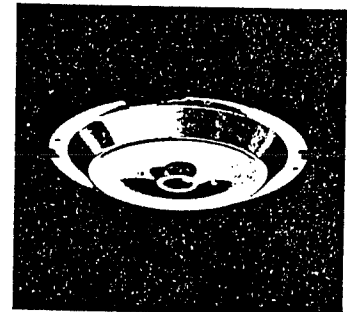
## Glass Refractor

The complex PGL Omni refractor is molded in tempered borosilicate glass. It is virtually unaffected by heat, UV or any airborne contaminants. In addition, it is unaffected by any cleaning soaps or solvents that may be used for maintenance.



## Hydroformed Reflector

The Aluminum reflector is hydroformed to obtain a smooth and precise reflecting surface. After hydroforming, the reflector is finished with the Alzak® process which imparts a clear anodic coating to prevent surface deterioration.



## Eight Stage Finish

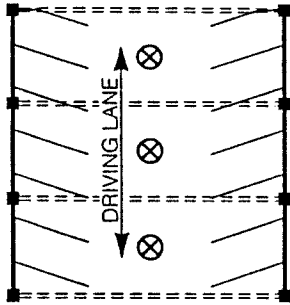
Like all Kim products, the PGL Omni is protected by an eight stage powder coat finish:




1. Power wash and degrease.
2. Detergent tank bath.
3. Clear water rinse bath.
4. Chromate bath – the best known pretreatment of aluminum for corrosion resistance and paint adhesion.

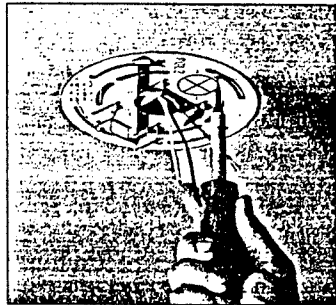
5. Clear water rinse bath.
6. Dry off oven.
7. Powder coating – 2.5 mil nominal thickness.
8. Bake for 20 minutes at 410°F.

The PGL Omni is finished in Kim's standard white WH-P color, rated at 2500 hour salt spray test endurance.

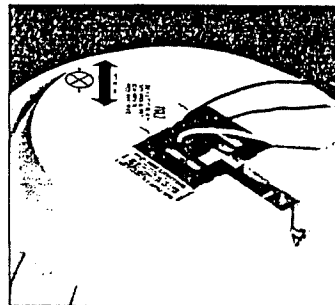
# Easy Installation and Maintenance



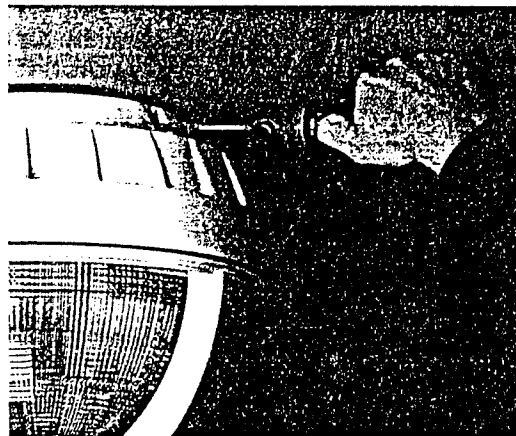
To assure a correct installation, the specifier should key the fixture locations on the garage plan with the icon for a PGL2  or PGL3 . If Louver Modules are to be installed, their location should be marked by a solid quadrant in the icon .



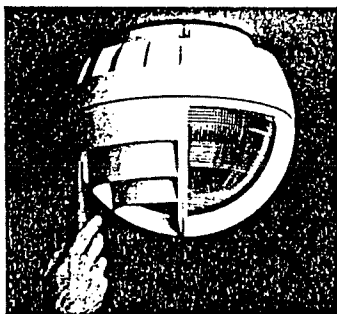
The contractor first installs the Kim speed mount to the J-box. The Kim speed mount is labeled with the correct icon for the specified fixture. In addition, the speed mount label also orients to the driving lanes by a large arrow.



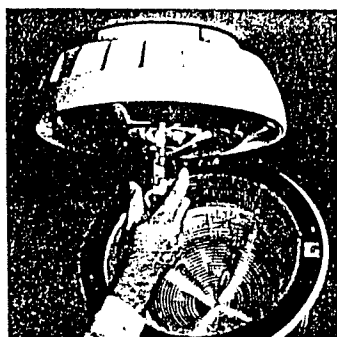
When the complete fixture is removed from its carton, a label will appear on top that matches the speed mount label. These identical labels will assure the contractor that the right fixture is being installed, and is correctly oriented.



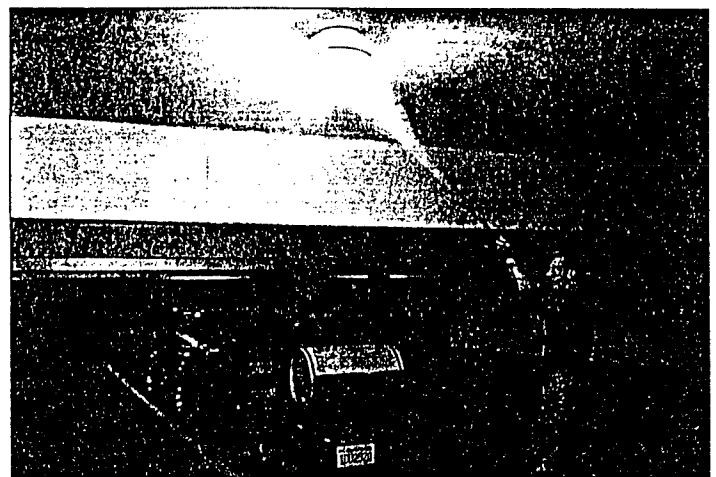
After the speed mount is attached to the J-box, the fixture is suspended by a hook, freeing both hands to make field wire splices. Then the fixture is raised and slipped onto hooks protruding from the speed mount. Final securing is by a single screw which activates a mechanism that pulls and locks the fixture onto the speed mount. Should removal of the fixture become necessary, the screw is reversed and the unit is detached from the speed mount.



Louver Modules are supplied with two captive screws already assembled in the louver. These attachment screws are concealed from normal view between the first and second louver blades. The Louver Module attaches to pre-drilled holes included in every lens cage. Louver Modules can be added, removed or relocated at any time.



Relamping is easily accomplished by loosening four captive screws in the lens cage. The lens and lens cage hinge down as one unit, and can be quickly removed by unhooking the hinge should ballast access be required. For ballast replacement, the hydroformed reflector is removed by four screws.



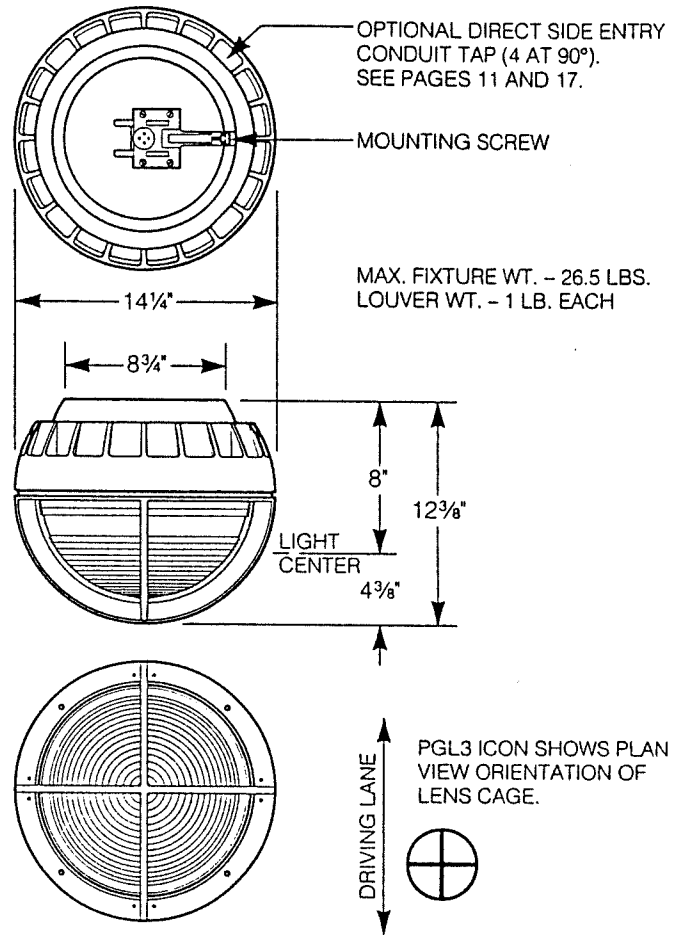
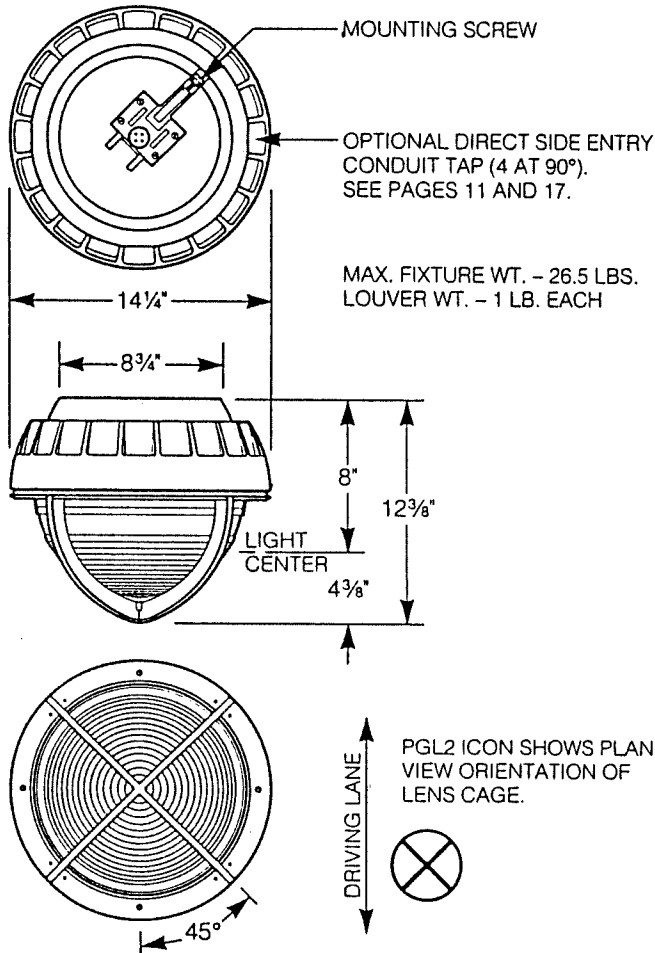
Because parking garages are open structures, fixtures eventually become dirty with air and exhaust pollutants. With large numbers of fixtures in most garages, it is simply not practical or cost effective to hand clean the luminaires. To solve this dilemma, the PGL Omni is sealed against upward spray to allow power washing – a fast and effective way to keep the fixtures at peak efficiency through regular maintenance.

# Specifications

**Warning:** Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

## PGL2 Single Row System

## \* PGL3 Double Row System



**Speed Mount:** Formed steel, electro zinc plated for mounting to standard 4" J-boxes or mud boxes. Integral hooks are provided for mounting and securing the fixture. Speed mount is labeled with fixture icon and driving direction. (See Certification).

**Electrical Housing:** Die cast aluminum with integral cooling ribs. A stainless steel plate and hook are provided on the fixture top for suspending the fixture from the speed mount during field wire connections, and for final securing to the speed mount. Fixture wires are sealed at the exit point by a silicone grommet in the fixture top. A single stainless steel phillips head screw operates a mechanism that pulls and secures the fixture to the speed mount. Four locations are provided for optional direct side conduit entry (consult factory). Top is labeled with the fixture icon and driving direction to match the speed mount label.

**Lens Cage and Refractor:** Die cast aluminum lens cage retains a tempered borosilicate glass refractor. A one piece molded silicone gasket surrounds the refractor flange and seals the lens cage to the electrical housing. Stainless steel clips secure the refractor to the lens cage. Lens cage ribs are 3/8" thick and divide the refractor into four quadrants for insertion of optional louver module. Lens cage hinges open by a removable stainless steel wire hinge and safety catch. Lens cage closure screws are captive stainless steel phillips head with optional tamper resistant socket head available. Lens cage is pre-drilled in each quadrant for optional louver module.

**Reflector and Socket:** Hydroformed aluminum reflector with Alzak® finish. Integral socket is porcelain medium base rated 4KV. Reflector is removable by four screws for ballast access.

**Electrical Components:** High power factor ballasts are rigidly mounted inside the electrical housing, factory pre-wired with leads extending through a silicone grommet out the top of the housing. Starting temperatures are - 40°F for HPS lamp modes and - 20°F for MH lamp modes.

**Optional Louver Module:** Die cast aluminum for field attachment into one quadrant of the lens cage. Mounting screws are captive stainless steel phillips head (2).

**Finish:** White TGIC thermoset polyester powder coat paint applied over a chromate conversion coating on electrical housing, lens cage and optional louver module. 2500 hours salt spray test endurance rating. Custom colors are subject to additional charges, minimum quantities and longer lead times. Consult factory.

**Certification:** UL listed (for 120, 208, 240 and 277 volt only) and CSA certified (for 120 and 347 volt only) for wet locations. For Canadian installations, J-box may not be used to hang fixture. A special speed mount will be furnished for direct attachment to ceiling. Photometrics based on Independent Testing Laboratory (ITL) reports.


# Ordering Information


*2012/2013 25125 325 ea - Land to Company Inc 10.11*

## 1 Fixture

## Ordering Guide

Cat. No.

**PGL2** Single Row System.  
 Lens cage is oriented 45° to the driving lane.

**PGL3** Double Row System.  
 Lens cage is oriented at right angles to the driving lane.

↑ DRIVING LANE  
 ↓ DRIVING LANE

FIXTURE      ELECTRICAL MODE      FIXTURE OPTIONS

EXAMPLE: **PGL2 / 175MH277 / QS / TS / SF**

1                      2                      3                      4                      5

Order Fixture Accessories Separately.

## 2 Electrical Mode

**Caution:** All manufacturers of metal halide lamps recommend turning them off for 15 minutes once per week when under continuous operation. This will reduce the risk of arc tube rupture at end of life. Also, color temperature may differ between manufacturers of metal halide lamps. See lamp manufacturers' specification sheets.

All fixtures are available pre-lamped by Kim. Consult representative for pricing.

Lamp Mode (Lamps by others)	Electrical Mode Cat. No.	Line Volts	Input Watts	Operating Amps	Starting Amps
100 Watt Clear High Pressure Sodium ED17 Med. Base	<b>100HPS120</b>	120	115	1.05	1.50
	<b>100HPS208</b>	208	130	0.67	0.76
	<b>100HPS240</b>	240	130	0.58	0.66
	<b>100HPS277</b>	277	130	0.50	0.60
	<b>100HPS347</b>	347	130	0.39	0.44
150 Watt Clear High Pressure Sodium ED17 Med. Base	<b>150HPS120</b>	120	170	1.50	2.20
	<b>150HPS208</b>	208	188	0.95	1.15
	<b>150HPS240</b>	240	188	0.83	1.00
	<b>150HPS277</b>	277	188	0.72	0.85
	<b>150HPS347</b>	347	188	0.56	0.52
100 Watt Clear Metal Halide ED17 Med. Base	<b>100MH120</b>	120	129	1.15	1.15
	<b>100MH277</b>	277	129	0.50	0.50
	<b>100MH347</b>	347	129	0.40	0.40
175 Watt Clear Metal Halide ED17 Med. Base	<b>175MH120</b>	120	215	1.80	1.30
	<b>175MH208</b>	208	215	1.05	0.75
	<b>175MH240</b>	240	215	0.90	0.65
	<b>175MH277</b>	277	215	0.80	0.55
	<b>175MH347</b>	347	215	0.65	0.44

### Fixture Options

## 3 Quartz Standby

Cat. No. **QS**  
 Integral electronic device energizes a T-4 mini-can socket during lamp warm-up and after power interruption. Socket de-energizes prior to the HID lamp reaching full brightness. 100W T-4 mini-can lamp by others.

### Fixture Accessories

## Louver Module

Cat. No. **LM**  
 Die cast aluminum for field attachment into one quadrant of the lens cage. White powder coat finish. Louver Modules will be shipped in packs of 12 with one carton adjusted to complete exact quantity ordered.



## 4 Tamper Resistant Lens Cage Screws

Cat. No. **TS**  
 Four captive stainless steel socket head screws provided in lens cage in place of standard phillips head screws.

## 5 Fusing

Cat. No. **SF**  
 Single fusing for 120V, 277V and 347V primary.

Cat. No. **DF**  
 Double fusing for 208V and 240V primary.

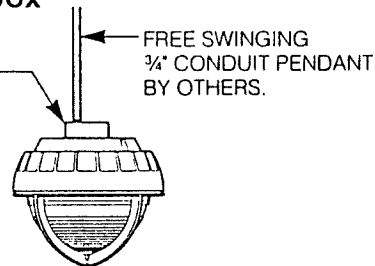
All fusing is factory installed inside the electrical housing.

## Direct Side Entry Conduit Taps

Consult Factory. Four locations are provided on the electrical housing 90° apart for 1/2" or 3/4" N.P.T. Fixture is UL listed and CSA certified for 90°C through-wiring. See pages 10 and 17.

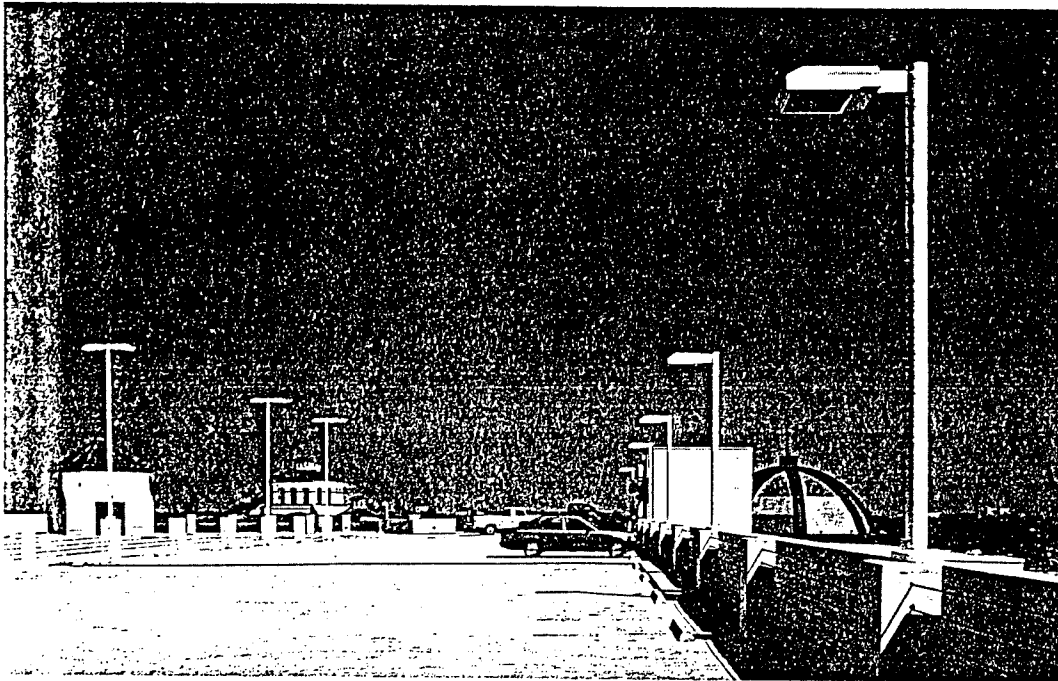
## Balanced Pendant J-Box

Cat. No. **PB1**  
 Cast aluminum J-box with offset 3/4" N.P.T. pendant entry to balance fixture when a free-swinging pendant is used. Standard speed mount adapts directly to the PB1 for fixture mounting. Natural aluminum as-cast finish. See page 17.





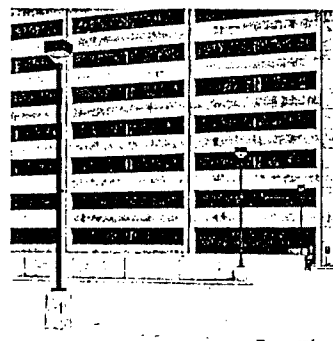
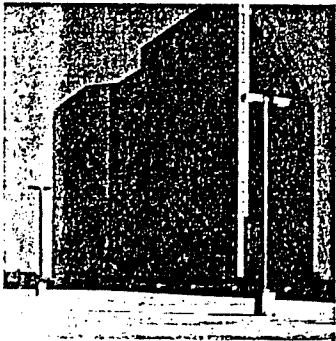
# Related Products



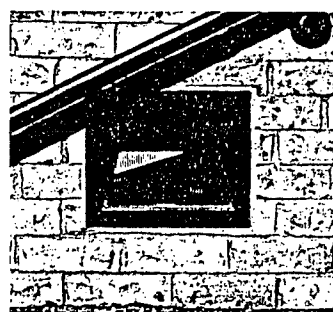
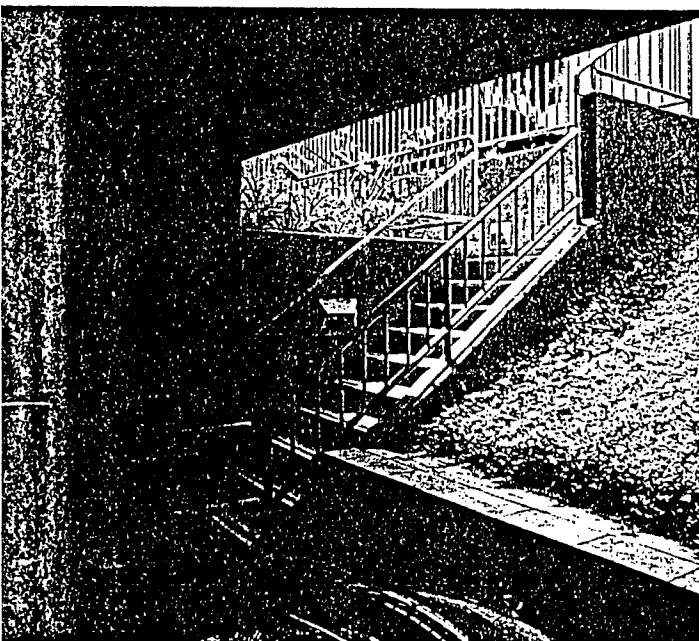
## Top Deck Lighting

An open top deck is essentially a parking lot where pole mounted luminaires offer the greatest efficiency. Because they are totally exposed to the elements, these fixtures must be of the highest quality. Of equal importance, top deck luminaires must complement the building architecture since their relationship is openly visible to aesthetic scrutiny. Kim Lighting offers a comprehensive line of pole mounted luminaires combining rugged construction, high performance and architectural compatibility. They are being used for top deck lighting throughout the world with unqualified success.

Refer to the following Kim product lines and their respective catalogs:



- \*AR The Archetype
- CC/CCS Curvilinear Cutoff
- VL Vertical Lamp Luminaires
- OTS Outdoor Tube System
- EKG Generation 2
- 5SQ Type 5
- SBC Square Beam Cutoff
- WTC-2 Wide Throw Cutoff



## Stairways and Pedestrian Bridges

The I.E.S. recommends a maintained average of 10 to 20 foot-candles on stairways. This requires a luminaire far more efficient than the typical step light. The Kim Low Level Floodlight is a perfect solution for stairways and pedestrian bridges because of its sophisticated optics. An entire flight of stairs can normally be illuminated with a single LLF because the light is thrown downward at the same angle as the stairway. For pedestrian bridges, the standard LLF wide beam allows fewer fixtures to accomplish high levels of illumination. The LLF is a cast-in fixture with a low profile architectural face. See Kim LLF catalog.



# The Archetype®

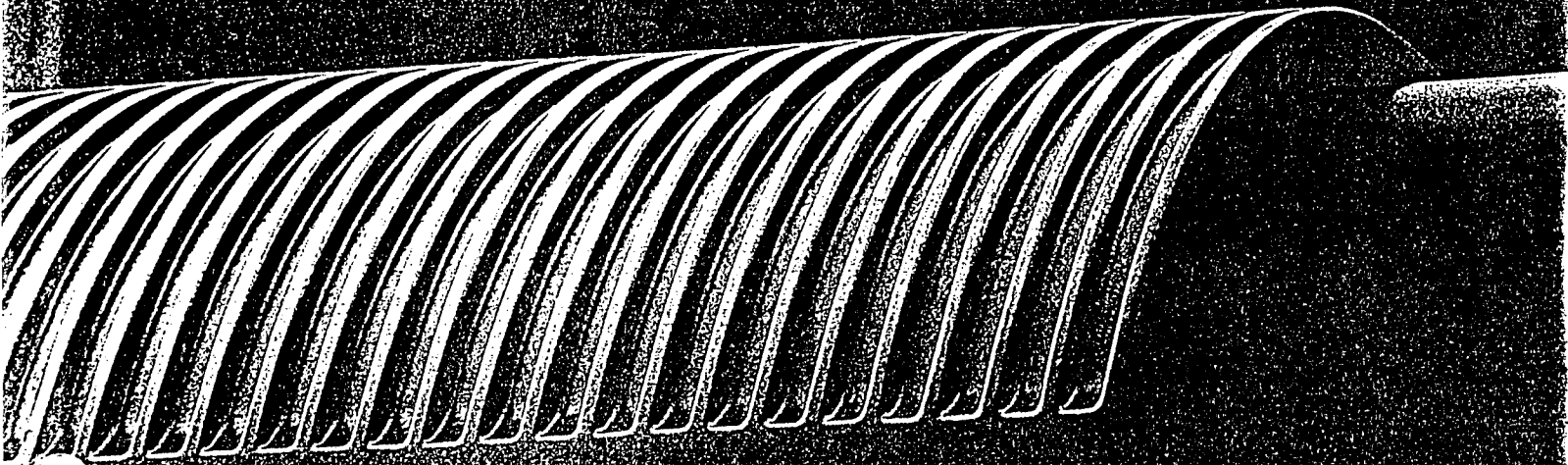
Technology and Form Combined to Create a New Standard for Outdoor Color Illumination



**AR Model 150-400W Mogul Base**



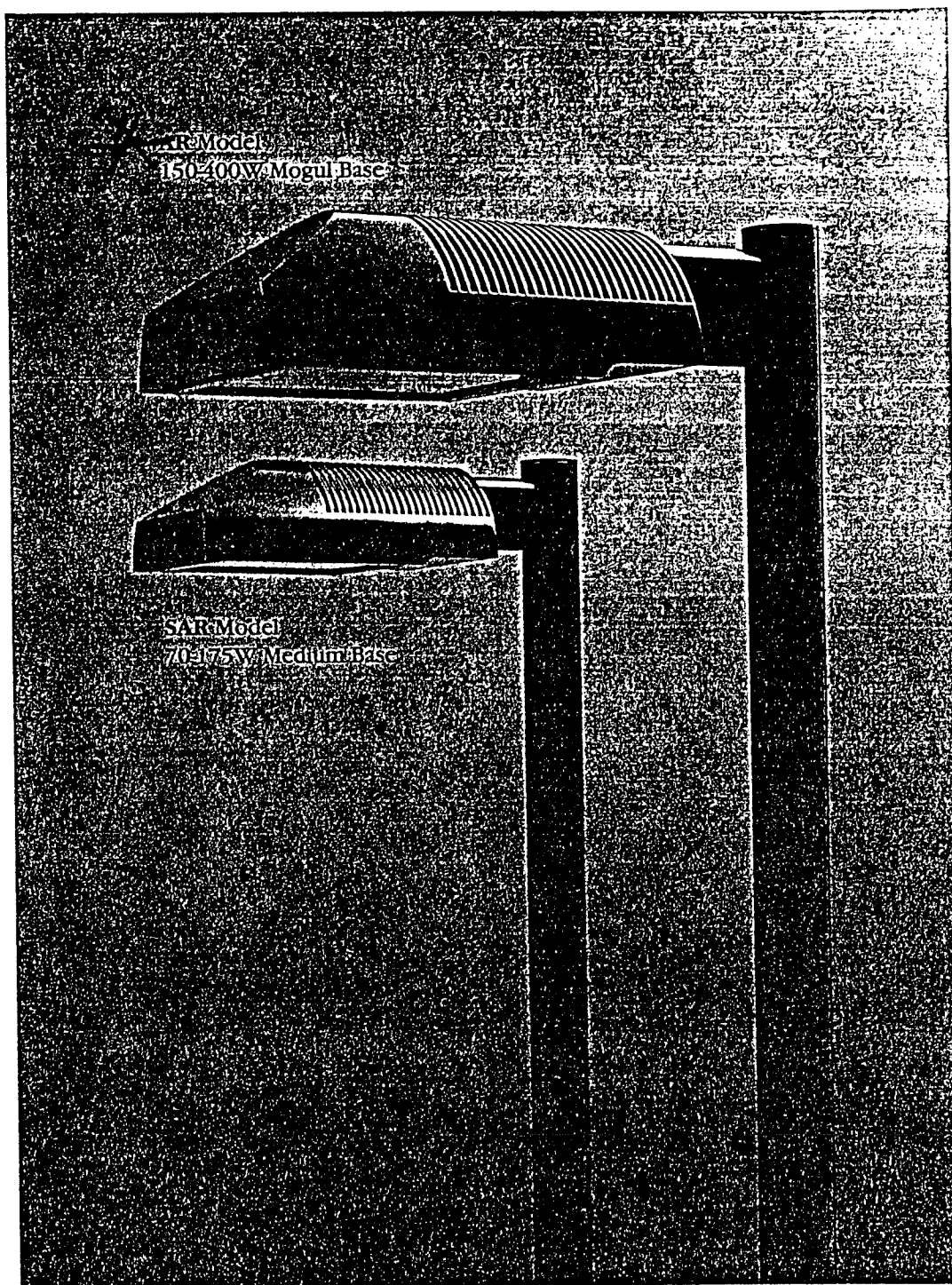
**SAR Model 70-175W Medium Base**



**KIM LIGHTING**

archetype (är'ke tip') 1: the original pattern or model of which all things of the same type are representations or copies.  
 2: a perfect example of a type or group.

The Archetype® took three years to develop and nearly twenty years to evolve. It replaces the "hoebox" fixture as the standard for architectural cutoff luminaires. During the 60s and 70s, the dominant curvilinear character of buildings made the "hoebox" a preferred luminaire where architectural compatibility was important. Now, both architecture and industrial design have evolved into a new era. Today's architecture often combines curvilinear, rectilinear, classic and neo-classic form into a single structure. Industrial design emphasizes a new design logic where product function is expressed by articulated form. The Archetype is so advanced that it antiquates all other outdoor cutoff luminaires. Its eclectic shape universally adapts to today's architecture while its function is beautifully expressed by its form. Lighting performance, ergonomics, materials and rugged construction all combine to make the Archetype the new state-of-the-art luminaire for outdoor cutoff lighting.



The Archetype is registered in the U.S. Patent and Trademark Office.

  
**KIM LIGHTING**

P.O. Box 1275  
 16555 East Gale Avenue  
 Industry, California 91749  
 Phone 818/968-5666  
 FAX 818/369-2695

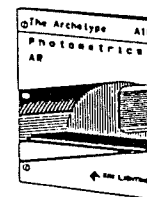
**Kim Products**  
 Street and Area Lighting  
 Parking Garage Lighting  
 Floodlighting  
 Environmental Lighting  
 Landscape Lighting  
 Fountain Lighting

©1989 Kim Lighting Inc.  
 This version ©1991  
 Patents Pending

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6-7	Performance and Flexibility
8-9	Installation and Maintenance
10-11	Applications
13	Computer Layout and Diskette Service
14-15	Specifications - AR
16-17	Specifications - SAR
18-19	Ordering - AR
20-21	Ordering - SAR

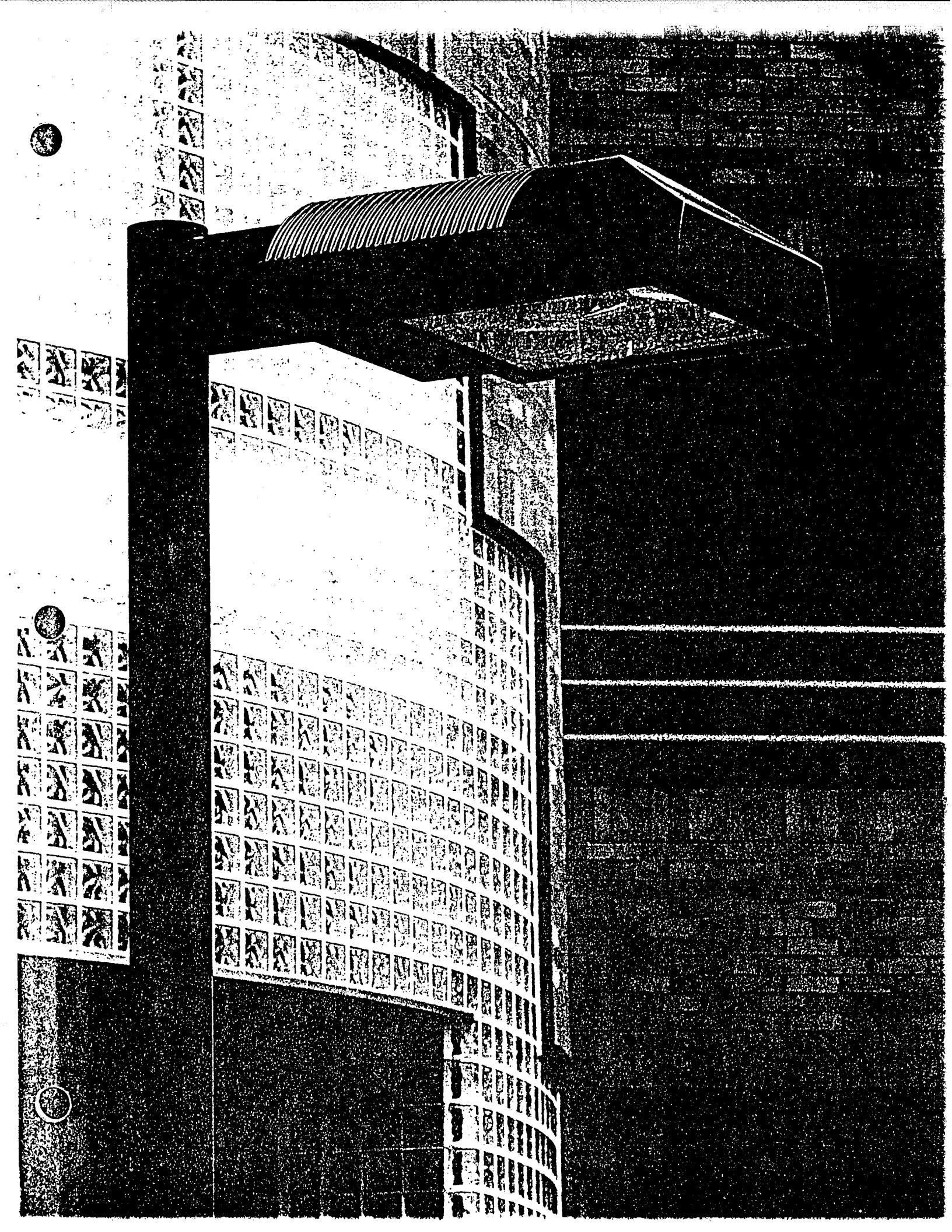
**Photometrics**  
 See separate Photometric catalogs:

**A1b**  
 AR Model



**A1c**  
 SAR Model

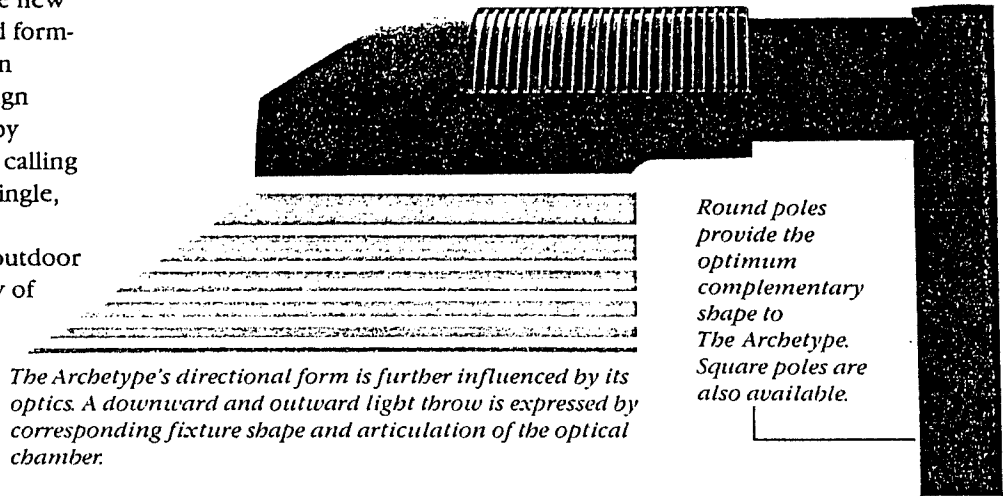




# Design LOGIC

Throughout history, design philosophy has undergone many changes, sometimes creating form that disguises function while other times adhering to a strict expression of the object's function and purpose. The new logic of design logic is more than a rigid form-follows-function philosophy which can sometimes generate ugly objects. Design logic adheres to the creation of form by function, but also answers to a higher calling demanding an overall shape that is a single, unified, aesthetically pleasing design statement. The Archetype is the first outdoor luminaire to exemplify the philosophy of design logic while also providing the necessary compatibility with its surrounding architecture. It is a blend of design and engineering that makes a bold and refreshing new statement about cutoff lighting.

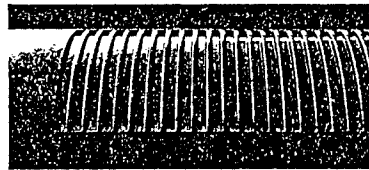
*Arm-mounted luminaires often look overly massive and unbalanced. The Archetype's slanted nose, undercut ballast compartment and oval arm combine to reinforce and balance its directional nature and soft form.*



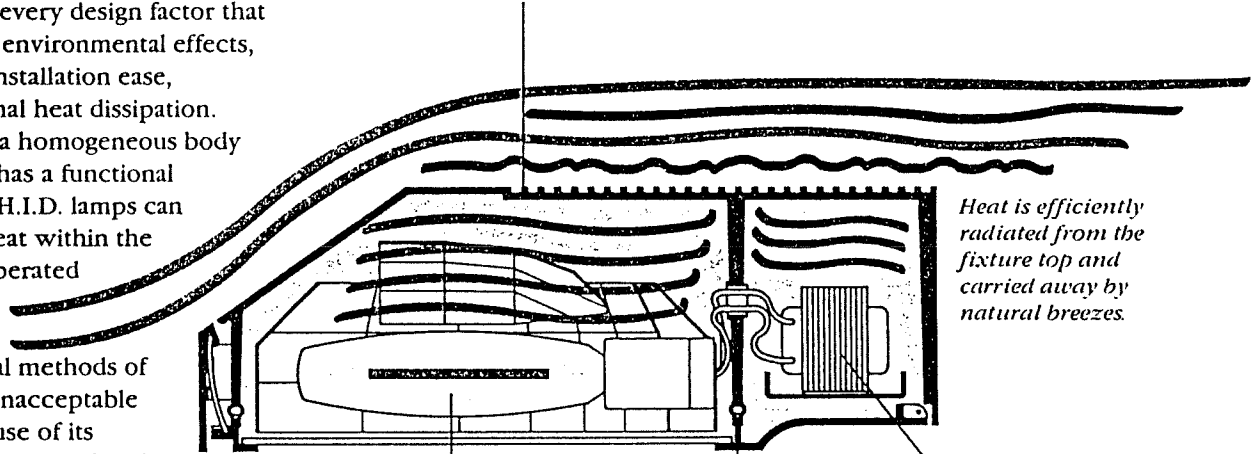
*The Archetype's directional form is further influenced by its optics. A downward and outward light throw is expressed by corresponding fixture shape and articulation of the optical chamber.*

*Round poles provide the optimum complementary shape to The Archetype. Square poles are also available.*

Function is synonymous with form under the concept of design logic. Every engineering factor must contribute directly to the evolution of shape and mechanics. The Archetype reflects every design factor that must be accounted for: environmental effects, lighting performance, installation ease, serviceability and internal heat dissipation. The die cast housing is a homogeneous body in which every feature has a functional purpose. For example, H.I.D. lamps can produce tremendous heat within the housing, yet they are operated by temperature-sensitive electrical components. Traditional methods of controlling heat were unacceptable in The Archetype because of its compact size. A combination of surface radiators and a solid barrier wall are employed to keep operating temperatures well below the allowable for maximum component life. The optical compartment has been totally sealed from the electrical compartment including all wire penetrations. With full door frame and lens gasketing, there is no possibility of moisture, insects or air contamination entering the optical chamber.



*Cooling ribs increase surface area by 100% allowing rapid heat dissipation by radiation from the fixture top.*



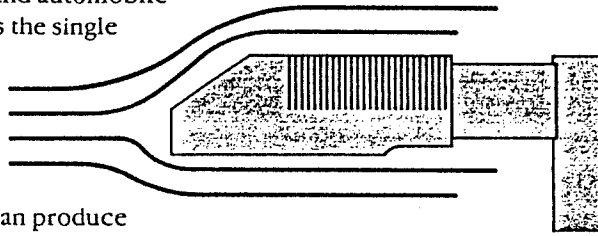
*Heat is efficiently radiated from the fixture top and carried away by natural breezes.*

*Primary heat source. A 400 Watt lamp produces bulb temperatures as high as 400°C.*

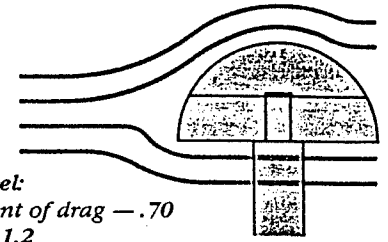
*An extra-thick barrier wall separates the optical chamber from the electrical compartment. The optical chamber is totally sealed.*

*Secondary heat source. The ballast produces heat while adjacent capacitor and ignitor components must operate below 90°C. The electrical compartment also ventilates through the mounting arm.*

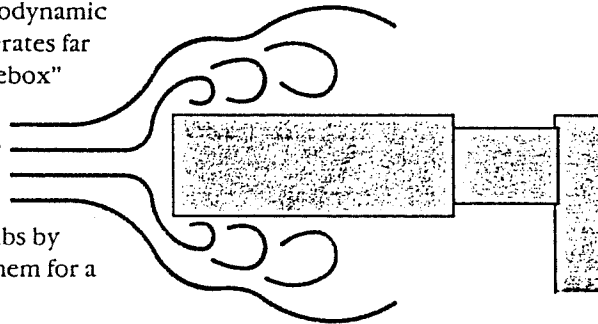
Aerodynamics is a science normally associated with aircraft and automobile design. Yet, luminaire shape is the single most important factor that determines pole size. Furthermore, poles are often more expensive than luminaires, which means that a reduction in pole size can produce a significant savings in overall cost. Fixture weight has little influence on pole size because wind loading produces the greatest lateral force. The aerodynamic shape of The Archetype generates far less wind loading than a "shoebox" luminaire thereby permitting lighter poles to be used when available. The aerodynamic shape also improves the effectiveness of the cooling ribs by keeping the air flow against them for a longer period of time.



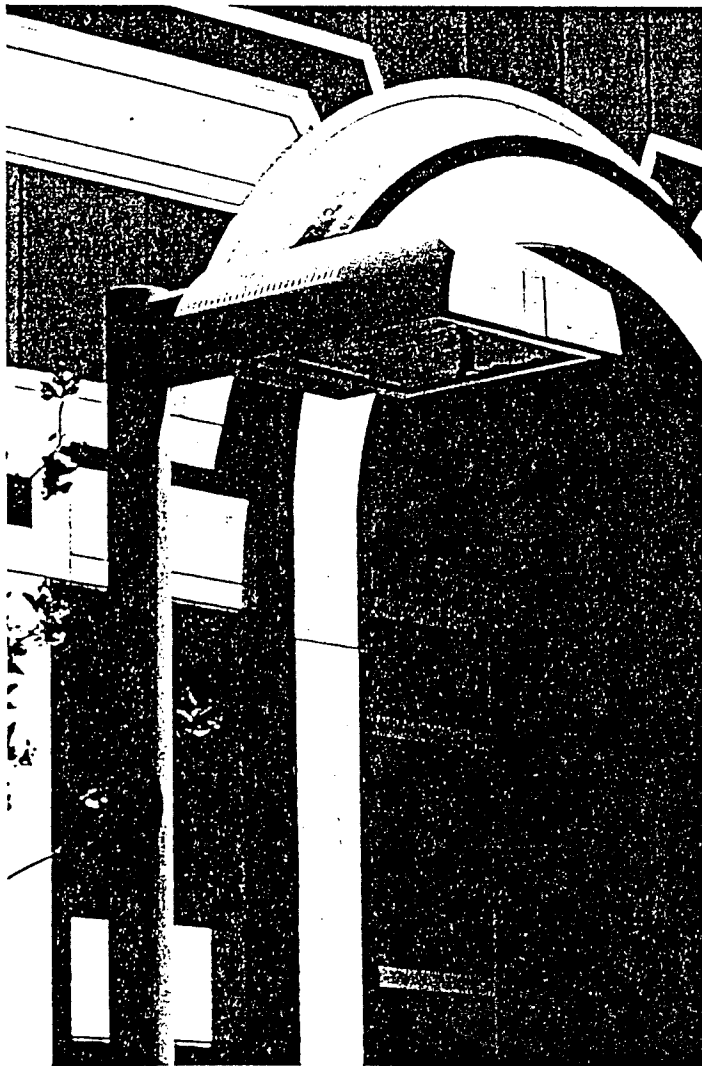
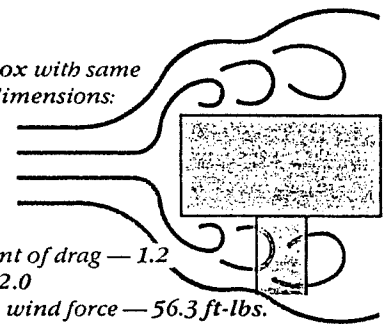
**AR Model:**  
Coefficient of drag — .70  
E.P.A. — 1.2  
80 m.p.h. wind force — 32.7 ft.-lbs.



**A Shoebox with same overall dimensions:**

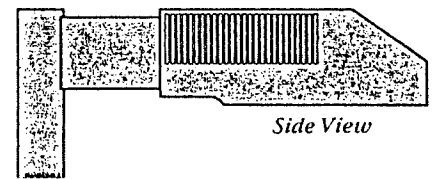


Coefficient of drag — 1.2  
E.P.A. — 2.0  
80 m.p.h. wind force — 56.3 ft.-lbs.

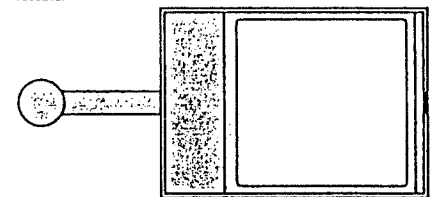


Architecture is the backdrop that controls the design of an architectural luminaire. Buildings with singular geometry demand lighting fixtures that echo the same simple form, traditionally square or round. However, much of today's architecture is eclectic, combining square, round and neo-classic shapes into a single structure. The Archetype is the first outdoor luminaire specifically designed to be eclectic in form and outwardly expressive of function. Yet, this variety in shape and purpose has been beautifully sculptured into a single unified luminaire design that makes a strong statement for both aesthetics and engineering.

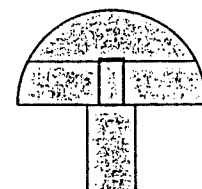
*The Archetype's eclectic form is evident in these three views. From the side, its function is clearly stated. The bottom view is rectilinear yet the overall length is a simple half cylinder. All elements combine into a soft, unified sculptural form that will integrate with virtually any setting whether it is architecture or landscape.*



Side View



Bottom View

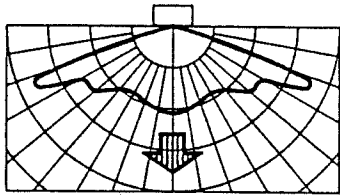


Front View

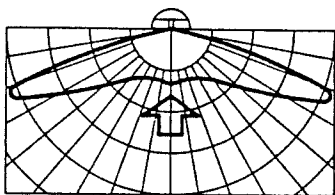


# PERFORMANCE AND FLEXIBILITY

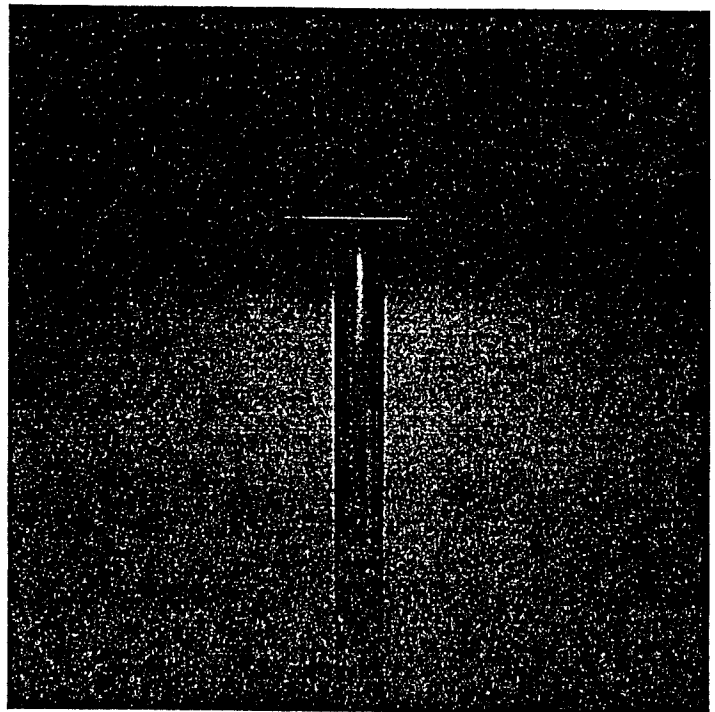
Horizontal-lamp fixtures are normally specified for their excellent glare control or cutoff. However, uniformity of illumination has traditionally been difficult to control. The Archetype employs a new horizontal-lamp reflector technology that maintains sharp cutoff while producing uniformity approaching that of a vertical-lamp luminaire. In addition, very broad light distributions have been developed to achieve maximum pole spacing. A flat tempered glass assures total cutoff above horizontal, and optional houseside shielding is available for light trespass prevention.



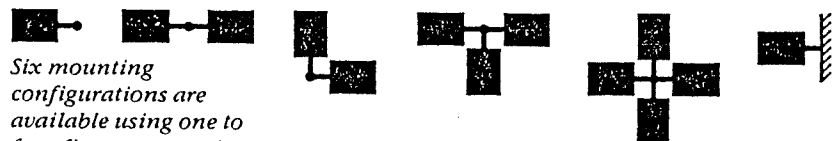
*Typical horizontal-lamp fixtures produce excessive straight-down illumination in relation to their side-throw. This causes poor uniformity.*



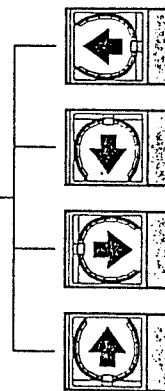
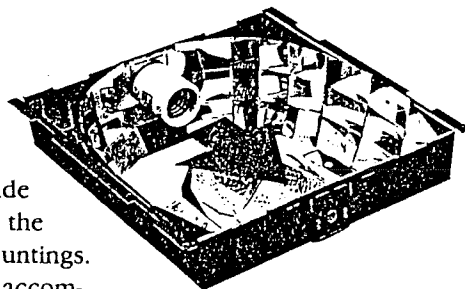
*The Archetype achieves a reduction in straight-down illumination with increased side-throw producing excellent uniformity and pole spacing.*



Maximum flexibility is a requirement for today's site lighting if optimum energy efficiency is to be achieved. The AR Model is available in four light distributions and six mounting configurations. In addition, each of the four light distributions is field-rotatable in 90° increments within the housing. This gives The Archetype tremendous flexibility in the initial lighting layout, plus field-adjustability by rotating the reflector or completely changing the reflector module. Rotatable reflector modules also provide substantial cost savings by eliminating the need for expensive parallel fixture mountings. A parallel reflector orientation can be accomplished with any of the standard multiple-fixture mountings shown above regardless of 90° or 180° fixture orientation on the pole. See example below.

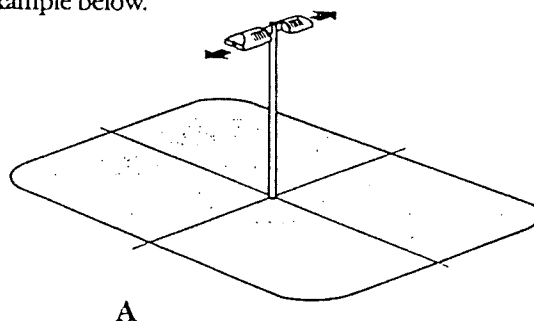


*Six mounting configurations are available using one to four fixtures per pole, plus single wall mounting.*

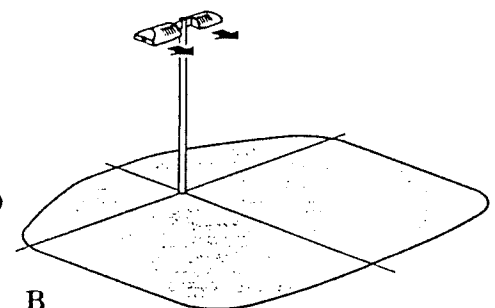


*Each reflector is a self-contained module, easily rotated in 90° increments. AR reflectors can be completely replaced with a different light distribution should lighting adjustments become necessary.*

*Example "A" would be the standard reflector orientation for parking lots using twin fixtures. Rotating the reflectors to a parallel orientation, example "B", would be ideal for automobile dealerships or tennis court lighting.*

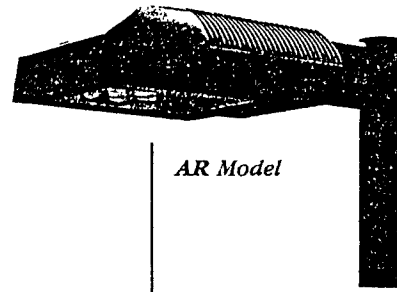


A



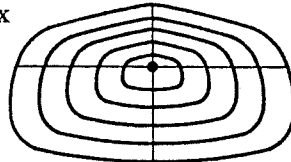
B

Site geometry determines the specific light distribution, or combination of light distributions that will efficiently light the area. Twenty years of cutoff lighting experience has shown Kim that four light distributions will satisfy any site requirement from parking lots to roadways. In addition, light trespass must be controlled in sensitive areas bordered by residential property. The AR Model is available in four highly efficient light patterns, and offers houseside shielding on appropriate models. Combine this with six mounting arrangements and rotatable reflector modules, and the result is a universally applicable lighting system. Kim Lighting has a fully staffed application department capable of providing layout assistance and computer printouts. See page 13.

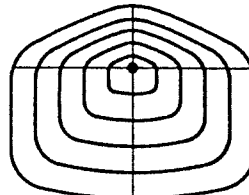


AR Model

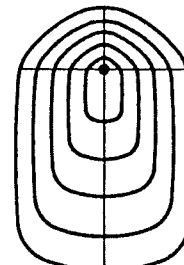
SAR Model available in Type III only. Use twin or quad mounts to achieve rectangular or square light patterns.



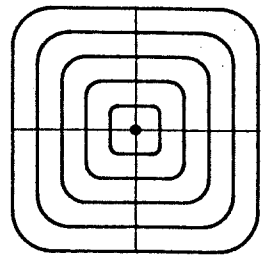
I.E.S. Type II



I.E.S. Type III

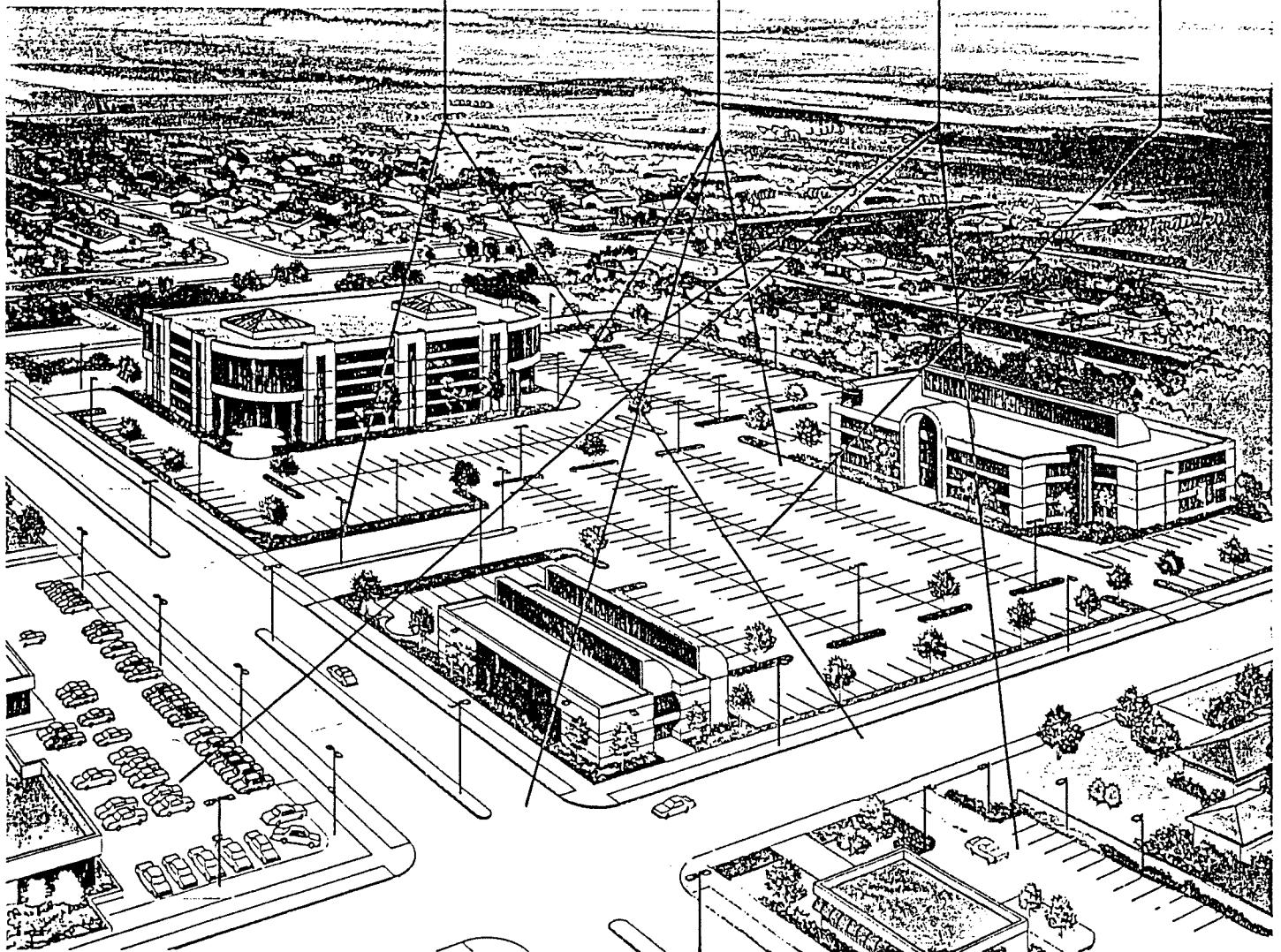


I.E.S. Type IV Forward Throw



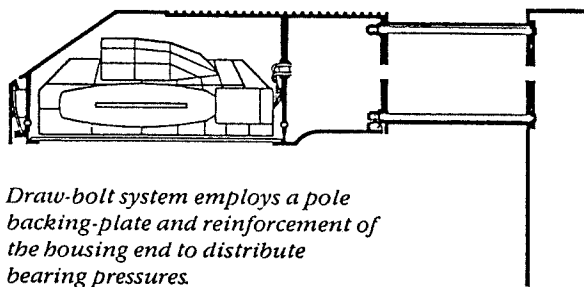
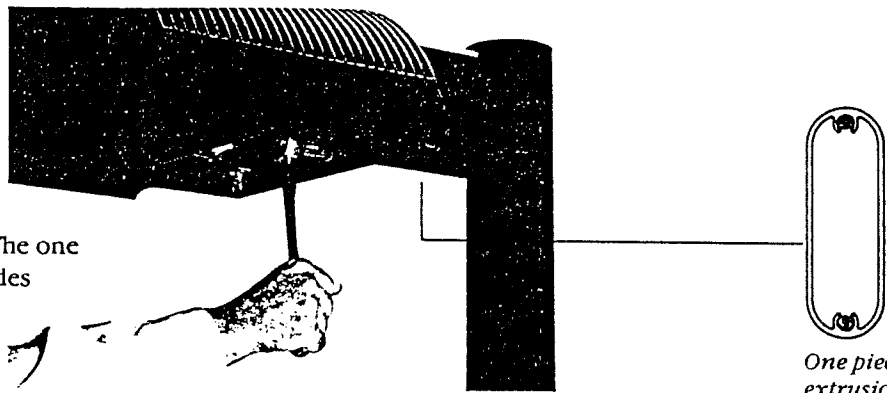
Type V Sq.

Houseside shield available on Types II, III and IV.



# Installation and Maintenance

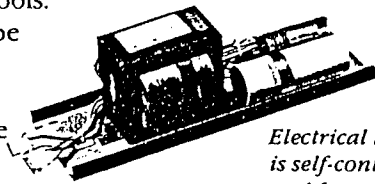
The attachment of lighting fixtures to poles is one of the most abused details, often ruining a well-designed luminaire. Visible nuts, bolts and crews are unacceptable on architectural lighting fixtures. The Archetype uses an internal draw-bolt system that totally conceals all mounting hardware. The one piece arm extrusion has internal bolt guides which position and hold the arm during fixture mounting. This system is easy to install and preserves the ultra-clean detailing of the entire fixture. Each arm extrusion is circular-cut for the selected round pole, thereby seating the arm in exact vertical alignment when the bolts are tightened. Easy bolt access is provided by snap-out electrical and lens frame modules. The oval arm provides a beautiful complement to the housing, and makes the fixture-to-pole transition look like a homogeneous connection.



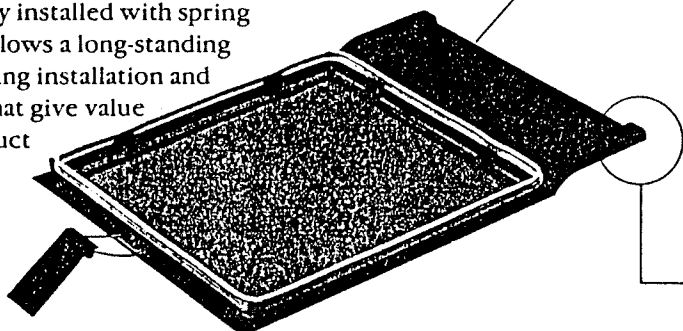
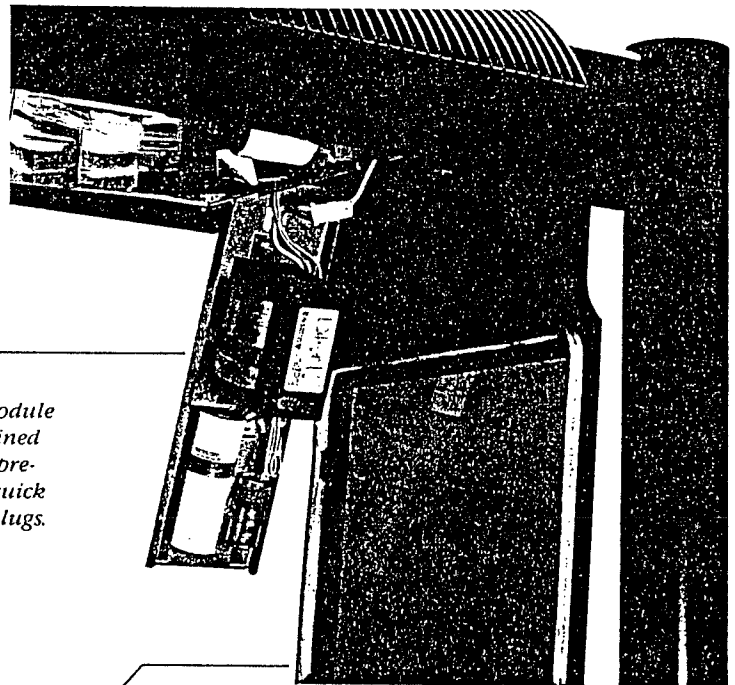
*One piece arm extrusion has internal bolt tracks and curved ends to complement the soft lines of the fixture and pole.*

*Draw-bolt system employs a pole backing-plate and reinforcement of the housing end to distribute bearing pressures.*

Ease of maintenance is a feature that distinguishes a lifetime product from an inferior substitution. The Archetype was designed with an understanding of long-term maintenance costs. To reduce expensive lift-truck rental time, a single latch quickly opens the lens frame for relamping, and if ballast replacement is required, the entire electrical module snaps out without tools. A spare ballast module can be quickly inserted to eliminate down-time, while the old module can be repaired and stored for future use. To maintain light efficiency between relampings, the optical chamber is totally sealed from outside air, moisture and insect contamination. It is also sealed from the inside by a solid barrier wall between the optical and electrical compartments. Should lens replacement become necessary, the entire lens frame is quickly disengaged without tools, and a new lens is quickly installed with spring lips. The Archetype follows a long-standing time tradition of providing installation and maintenance features that give value and longevity to a product that should last the life of the building.

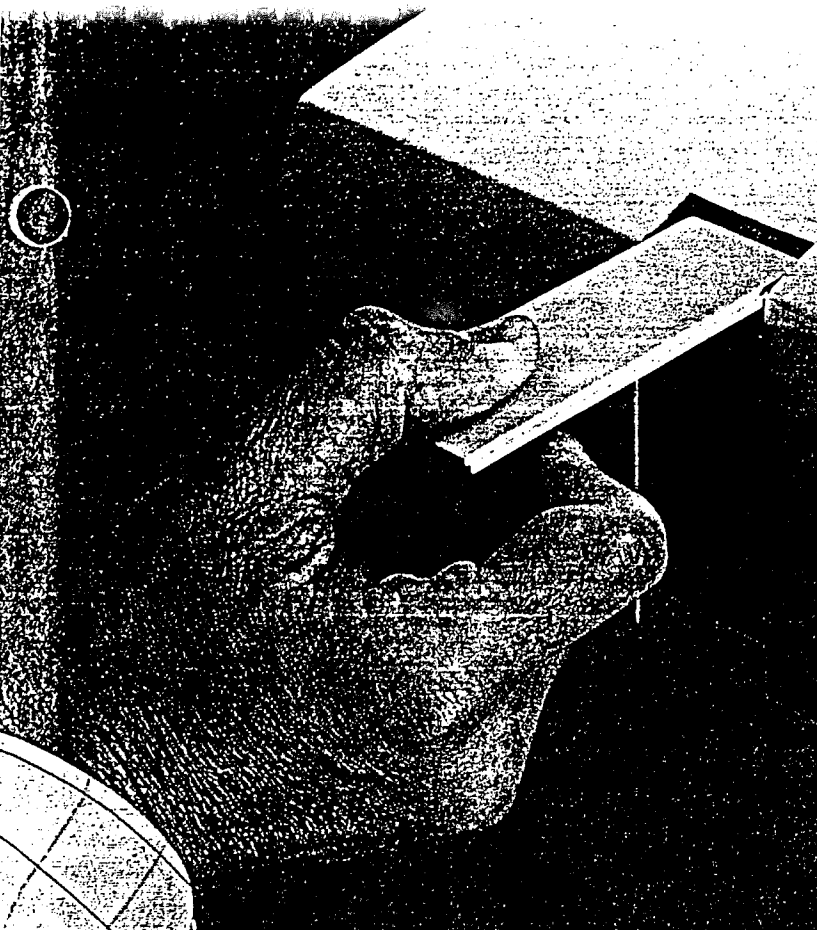


*Electrical module is self-contained and factory pre-wired with quick disconnect plugs.*




*Lens frame utilizes stainless steel hinge pins and hanger books for no-tool mounting and removal.*






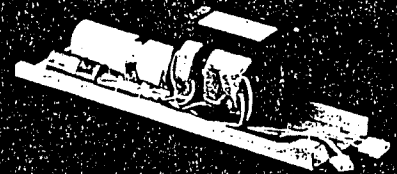
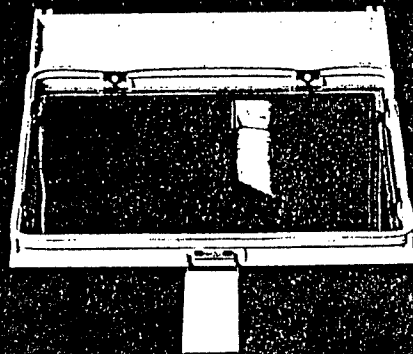
Single latch closure of  
The Archetype is made  
possible by the rigid die cast  
construction of the lens  
frame which maintains  
uniform gasket pressure. The  
latch is beautifully integrated  
into the die cast housing with  
flush surfaces and articulated  
joints. All associated  
hardware is stainless steel.



The modular construction of  
The Archetype is designed to  
further promote longevity.  
Lamp technology is  
continuously evolving, and  
lamps of the future will  
undoubtedly be more energy  
efficient than today's.



Modular construction allows  
easy adaptation to new  
technology by replacing  
modules rather than  
rebuilding or replacing the  
entire luminaire.



# Specifications - AR Model

Mogul Base - 150 to 400 Watt

**Certification:** Underwriters Laboratories listed for wet locations. Photometrics based on independent testing laboratory (ITL) reports.

**Housing:** One piece die cast aluminum with integral cooling fins over the optical chamber and electrical compartment. Solid barrier wall separates optical and electrical compartments. Double-thick wall with gussets on the support-arm mounting end. Housing forms a half-cylinder shape with 55° front face plane providing a recess to allow a flush single-latch detail. All hardware is stainless steel or electro-zinc plated steel.

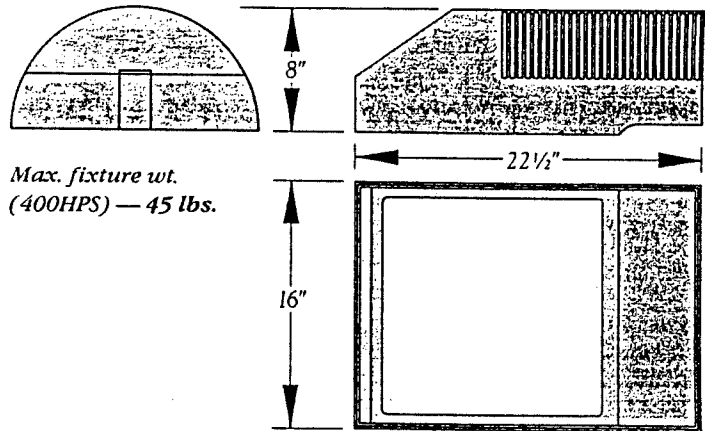
**Lens Frame and Latch:** One piece die cast aluminum lens frame with 1" minimum depth around the gasket flange. Internal hinges with stainless steel pins provide no-tool mounting and removal from housing. Single die cast aluminum cam-latch provides positive locking and sealing of the optical chamber by a one piece extruded and vulcanized silicone gasket. Clear 1/16" thick tempered glass lens retained by eight stainless steel clips with full silicone gasketing around the perimeter.

**Reflector Module:** Specular Alzak® optical segments rigidly mounted in an aluminum frame which attaches to housing as a one piece module. Reflector module is field-rotatable in 90° increments. All HPS and MV sockets are porcelain mogul base rated 4KV. MH sockets are pin-oriented and include a molded silicone lamp stabilizer. All sockets are factory prewired to a quick-disconnect plug and include a wire seal through the barrier wall. Available in four light distributions, all interchangeable within the same housing.

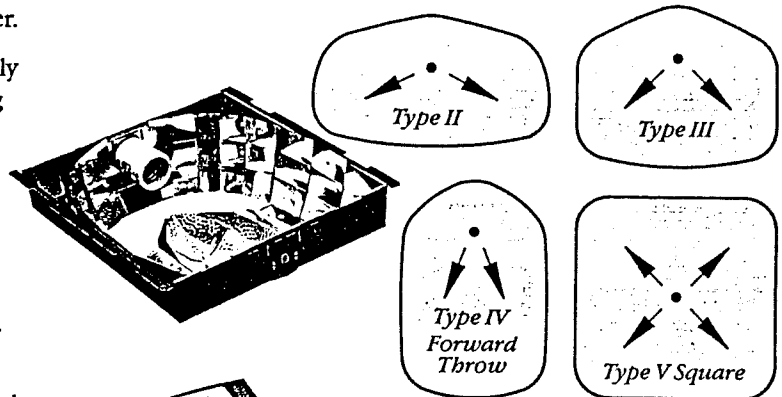
**Electrical Module:** All electrical components are UL recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Electrical Module attaches to housing with no-tool hinges and latches, accessible by opening the lens frame only. All ballasts are high power factor rated for -20°F starting.

**Support Arm:** One piece extruded aluminum with internal bolt guides and fully radiussed top and bottom. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. Arm is circular cut for specified round pole.

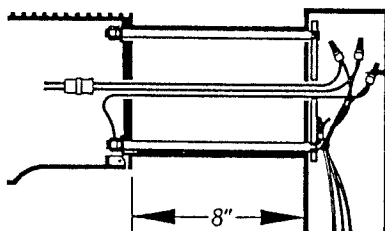
**Finish:** Housing, lens frame, latch and support arm are finishing TGIC Thermoset Polyester Powder-Coat Paint available in black, dark bronze, light gray aluminum or white. Powder-coating is 2.5 Mil nominal thickness, and all components are thoroughly cleaned and primed with a protective chromate\* conversion coating prior to powder-coating. \*See copy at right.



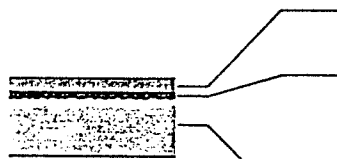
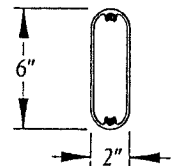
Max. fixture wt.  
(400HPS) — 45 lbs.



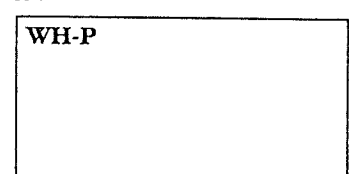
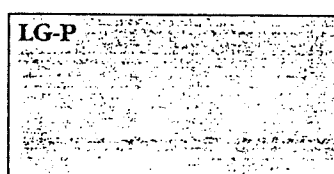
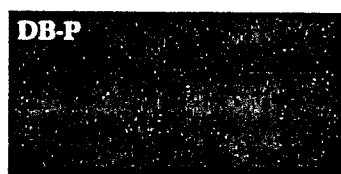
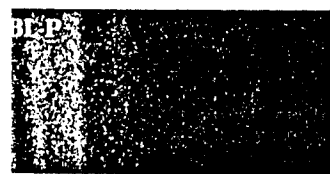
**Warning:** Fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.



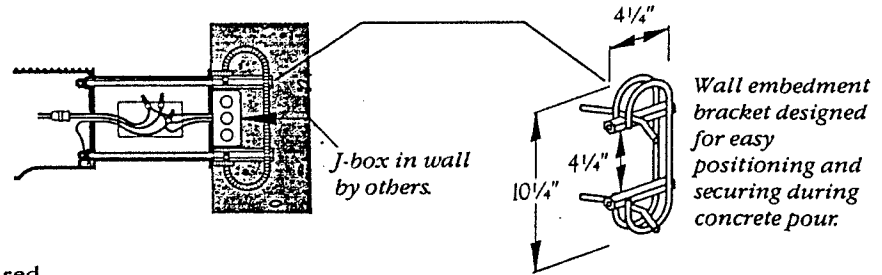
For all standard pole mounts, field splices are made at the pole top.



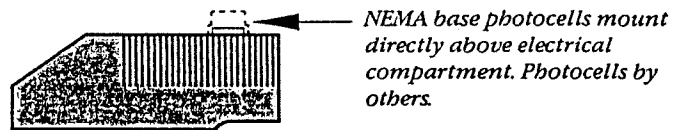
Powder-coating, 2.5 Mil nominal thickness.  
Chromate conversion coating. Best known preparation of aluminum for paint adhesion and retardation of oxidation.  
Aluminum



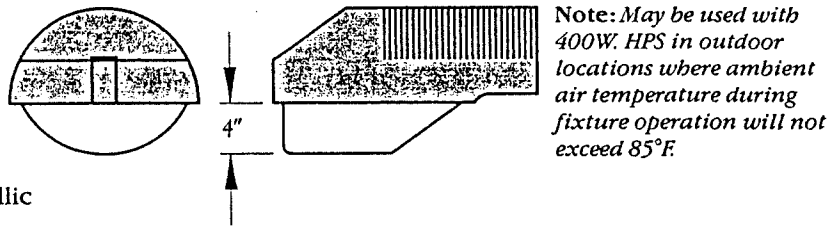
**Wall Mounting:** (For poured concrete walls only): Modified support arm with side access hole to allow field splices within the arm. Wall embedment bracket provided to accept draw-bolts. Trim plate provided to cover wall-embedded J-box, finished to match fixture and arm. Junction box in wall by others.



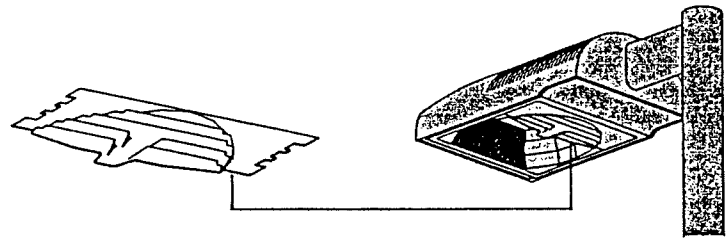
**Optional Photocell Receptacle:** Factory prewired receptacle installed directly above electrical compartment with full gasketing around the perimeter. For multiple fixture mountings (250W. or less), one fixture is supplied with a photocell receptacle to operate the others. Four 400W. fixtures require two fixtures with photocell receptacles. NEMA base photocells by others.



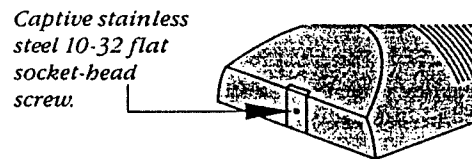
**Optional Lexan Shield:** One piece vacuum formed clear UV stabilized polycarbonate enclosure replaces standard tempered glass lens. Fully gasketed cylindrical enclosure with 55° back face to match fixture housing. 250 Watt maximum (see note at right). CAUTION: Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight, mercury vapor and metallic halide lamps.



**Optional Houseside Shield (For AR2, AR3 and AR4 only):** Stamped aluminum shield with bypass louvers for streetside light. Louvers block houseside light from lamp. Clear anodized finish. Attaches to lens frame interior on any of four sides to insure correct orientation with reflector. Black anodized panel added to reflector to reduce houseside reflections. Note: Use for clear lamps only. Effectiveness is reduced for coated lamps.

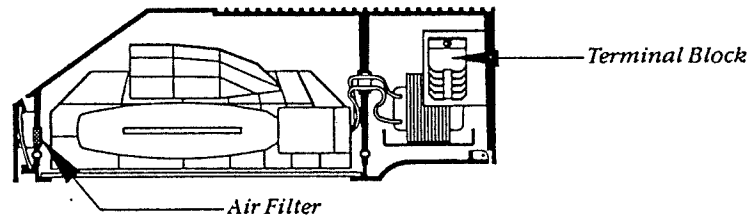


**Optional Tamper-Resistant Latch:** Standard die cast latch is provided with a captive 10-32 stainless steel flat socket-head screw to prevent unauthorized opening. Note: Required only for vandal protection in locations where fixtures can be reached by unauthorized persons.



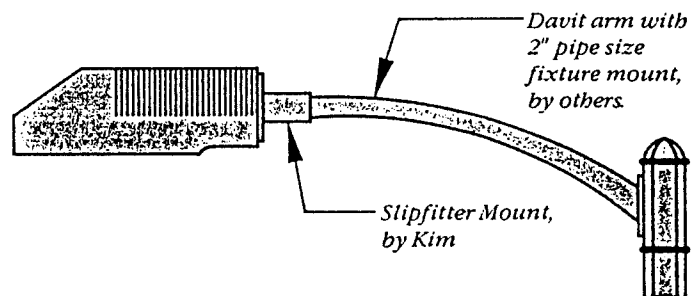
## Special Options for Street Lighting

**Optional Terminal Block (for field wire connections):** 85AMP, 600 Volt box clamp terminal block mounted to housing inside electrical compartment. Accepts #14-4 wire. Factory prewired to ballast module disconnect plug.



**Optional Air Filter:** Allows optical chamber to breath, filtering out all air particles above 500 microns. Multi-layer disc assembly mounted in solid wall between optical compartment and latch cavity.

**Optional Slipfitter Mount:** Cast aluminum clamp-type slipfitter mount with single set-screw anti-rotation lock. Bolts to housing from inside electrical compartment using mounting holes for standard support arm. Fitter clamps to any horizontal pole davit-arm with 2" pipe size mounting end (2 3/8" O.D.).



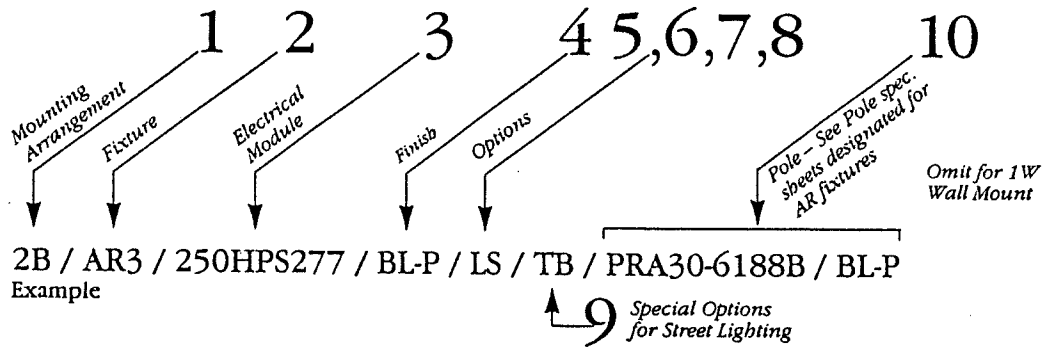
# Ordering Information - AR Model

Mogul Base - 150 to 400 Watt

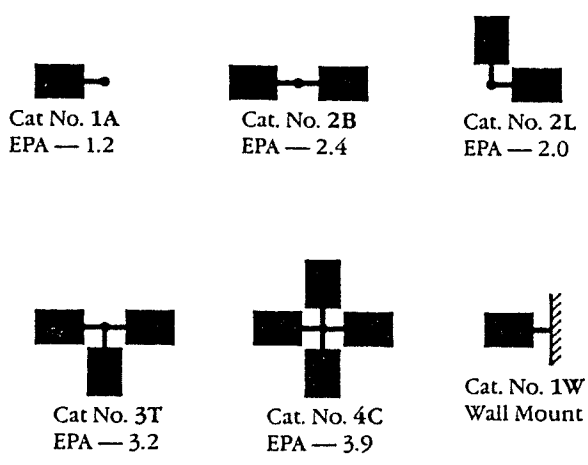
## Ordering Guide

Fixture and pole are described by a single number sequence as illustrated at right.

Order lamps separately.

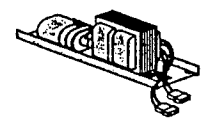


## 1 Mounting Arrangement



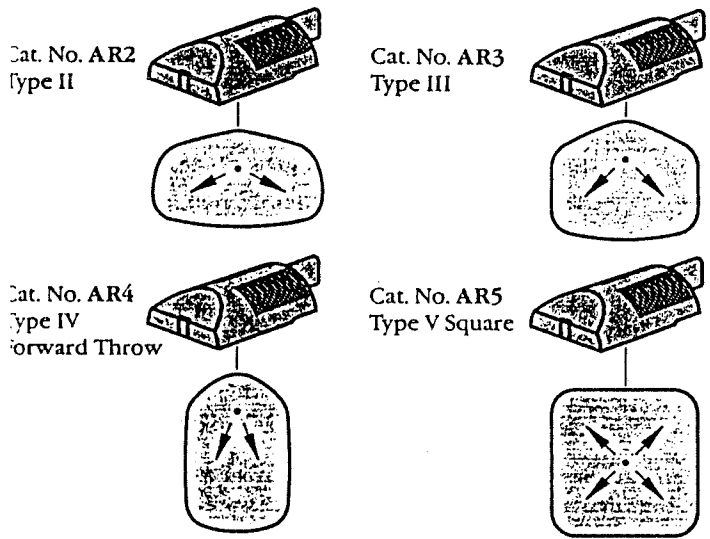
## 3 Electrical Module

\*Lamp available from Kim, see p. 19.



Lamp (by others)	Ballast Module Cat. No.	Line Volts	Line Watts	Max. Amps.
<b>150 Watt</b>				
High Pressure Sodium	150HPS120	120	170	2.20
E-23½ Clear Mogul Base	150HPS208	208	188	1.15
55 Volt	150HPS240	240	188	1.00
	150HPS277	277	188	0.85
	150HPS480	480	188	0.44
<b>250 Watt</b>				
High Pressure Sodium	250HPS120	102	300	2.75
E-18 Clear Mogul Base	250HPS208	208	300	1.60
	250HPS240	240	300	1.38
	250HPS277	277	300	1.20
	250HPS480	480	300	0.69
<b>400 Watt</b>				
High Pressure Sodium	400HPS120	120	465	4.30
E-18 Clear Mogul Base	400HPS208	208	465	2.48
	400HPS240	240	465	2.15
	400HPS277	277	465	1.86
	400HPS480	480	465	1.07
<b>175 Watt</b>				
Metallic Halide BT-28 or ED-28 Clear Pin	175MH120	120	215	1.80
Oriented Mogul Base	175MH208	208	215	1.04
	175MH240	240	215	0.90
	175MH277	277	215	0.78
	175MH480	480	215	0.45
<b>250 Watt</b>				
Metallic Halide BT-28 or ED-28 Clear Pin	250MH120	120	295	2.50
Oriented Mogul Base	250MH208	208	295	1.44
	250MH240	240	295	1.25
	250MH277	277	295	1.08
	250MH480	480	295	0.65
<b>400 Watt</b>				
Metallic Halide ED-28 Clear Venture* Pin	400SMH120	120	455	4.00
Oriented Mogul Base	400SMH208	208	455	2.30
	400SMH240	240	455	2.00
	400SMH277	277	455	1.75
	400SMH480	480	455	1.00
<b>175 Watt</b>				
Mercury Vapor E-28 Coated Mogul Base	175MV120	120	200	1.75
	175MV208	208	200	1.00
	175MV240	240	200	0.87
	175MV277	277	200	0.78
	175MV480	480	200	0.44
<b>250 Watt</b>				
Mercury Vapor E-28 Coated Mogul Base	250MV120	120	285	2.50
	250MV208	208	285	1.50
	250MV240	240	285	1.25
	250MV277	277	285	1.10
	250MV480	480	285	0.62

## 2 Fixture Catalog number indicates light distribution.



See catalog A1b for selection of fixture and mounting arrangement based on photometric performance.

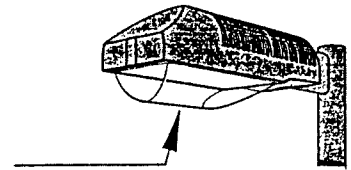
## 4 Finish

TGIC Thermoset Polyester Powder-Coat Paint applied over a chromate conversion coating to housing, lens frame, latch and support arm. Select pole finish from pole spec sheet.

Cat. No.	Color
BL-P	Black.
DB-P	Dark Bronze, resembles 313 Duranodic color.
LG-P	Light Gray Aluminum.
WH-P	White.
	See photographs on page 14.

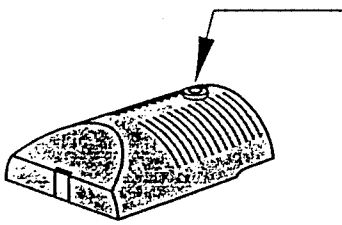
## 5 Optional Lexan Shield

One piece vacuum formed clear UV stabilized polycarbonate enclosure replaces standard tempered glass lens. 250 Watt maximum (see specs for higher wattage). CAUTION: Use only when vandalism is anticipated to be high. Useful life is limited by UV discoloration from sunlight, mercury vapor and metallic halide lamps.



Cat. No. LS

## 6 Optional Photocell Receptacle

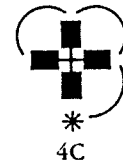
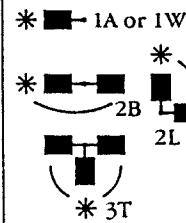


Factory prewired receptacle installed directly above electrical compartment with full gasketing. For multiple fixture mountings (250W. and less), one fixture is supplied with a photocell receptacle to operate the others. Four 400W. fixtures require two fixtures with photocell receptacles. NEMA base photocells by others.

Cat. No. A-25

Mounting Arrangement

\* Fixture with photocell receptacle and slave unit(s)



Wattage Per Fixture

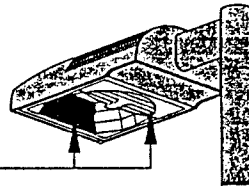
70-400W.

70-250W.

400W.

## 7 Optional Houseside Shield

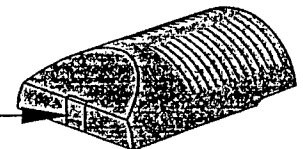
For AR2, AR3 and AR4 fixtures only. Stamped aluminum shield with bypass louvers for streetside light. Attaches to lens frame interior on any of four sides to insure correct orientation with reflector. Black anodized panel added to reflector to reduce houseside reflections. Cat. No. HS



Note: Use for clear lamps only. Effectiveness is reduced for coated lamps.

## 8 Optional Tamper-Resistant Latch

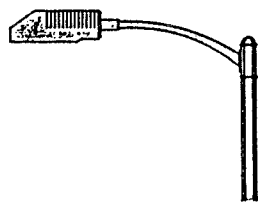
Standard latch is provided with a captive 10-32 stainless steel flat socket-head screw to prevent unauthorized opening.



Cat. No. TL

Note: Required only for vandal protection in locations where fixtures can be reached by unauthorized persons

## 9 Special Options for Street Lighting



85 AMP, 600 Volt box clamp Terminal Block for field wire connections. Mounted to housing inside electrical compartment and factory prewired to electrical module disconnect plug. Accepts #14-4 wire.

Cat. No. TB

Optional Air Filter permits optical chamber to breathe. Filters out all air particles above 500 microns. Mounted in solid wall between optical compartment and latch cavity.

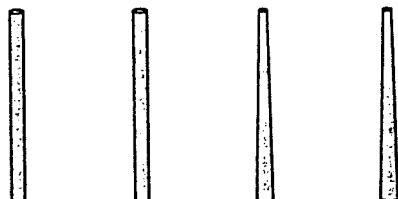
Cat. No. AF

Optional Slipfitter Mount for horizontal pole davit-arm with 2" pipe size mounting end (2 3/4" O.D.). Cast aluminum with clamp-type action and single set-screw anti-rotation lock. Bolts to housing from inside electrical compartment.

Cat. No. SF

## 10 Poles

See Kim pole specification sheets designated for AR fixtures.



Round Pole Types:

Alum. Non-Tapered

Steel Non-Tapered

Alum. Tapered

Steel Tapered

Kim Spec Sheet:

PRA

PRS

PTRA

PTRS

(Square poles may also be used)

## 11 Venture Metallic Halide Lamp

400 Watt, 40,000 initial horizontal lumens, 4000K°, 20,000 hours\*, ED-28 clear pin-oriented mogul base.

Cat No. MS 400/HOR/ED28 Ballast module must be 400SMH series, see p. 18.

\*Average life, based on 10 hours operation per start.



13747 Montfort Dr., Suite 105 • Dallas, Texas 75240 • 972-458-9855 • Fax: 972-458-9649

**Maine Medical Center**  
*CWI Project No. 3500.05*

**TRANSMITTAL**

**DATE:** July 17, 1998

**FROM:** Dillon Whisler

**Sent By:** Overnight

**TO:** City of Portland

Planning Dept.

City Hall

389 Congress St., 4<sup>th</sup> Floor

Portland, Maine 04101


Attn: Rick Knowland

We are sending:

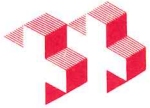
- Prints  Reproducibles
- Copies  Mail
- Shop Drawings  Other

Copies	Sheet No.	Description
<b>1</b>	<b>F1.1, F2.1 thru F2.4</b>	<b>Functional Plans</b>

**REMARKS:**

By:   
 Dillon Whisler





**MMBC**

MEDIPLIX MEDICAL BUILDING CORPORATION  
5308 WEST PLANO PARKWAY  
PLANO, TEXAS 75093-4821

July 8, 1998

Via: Fed-X Standard

Mr. Rick Knowland, Senior Planner  
Portland City Hall  
City of Portland  
389 Congress Street  
Portland, ME 04101

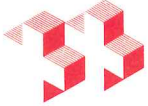
**RE: PROJECT REVISIONS  
MAINE MEDICAL CENTER MOB AND PARKING GARAGE**

Dear Mr. Knowland,

Several revisions to the above project are necessary due to the fact that our bids came in substantially over the budget. We are submitting several of these revisions that affect the scope of work approved via the site plan review for your review and comment.

1. We are deleting the lower level of the garage. By revising the layout of the upper levels, and relocating the division separating the two parts of the garage, we maintain the 430 spaces requested by the City. Therefore, it will not be necessary to construct additional garage on the top deck. The appearance and function of the garage remain essentially the same as approved at the site plan review. Please see the attached sketches.
2. We are also looking at revising the lighting. We have enclosed the product data for our proposed fixtures. The pole fixtures are very similar to the pole fixtures submitted at the site plan review. The ceiling-mounted fixtures will be similar to the PGL1's that are used in the garage constructed at Marketplace by City Hall. We will use a version of this fixture that has an internal shield, which blocks the light from one side of the luminaire at the perimeter locations. Pole fixtures are of the same cut-off type. Fixture locations, lamp types, pole heights, and wattages will remain as originally submitted. Overall, the package represents substantial savings from the fixtures originally submitted and should function similarly. Rick, I've expressed concerns to you previously about the cost of originally specified fixture. The subcontractor has found a suitable substitution to this very expensive fixture.
3. Next we are proposing a larger brick size. There is substantial labor savings in laying larger but a lesser quantity of brick. The brick we are proposing has a 4"x8" face with the same finish as that proposed during site plan review. The larger brick is appropriate for the large building mass, and does not conflict with that of






adjacent structures. Further, the majority of the street facade at the level of the passerby is precast and glass.

4. We are also modifying the sub-base under pavement of walks to City of Portland standards. We wish to verify this criteria. Attached is a sketch of our proposed revision.
5. We are also proposing an alternate oil/grit separator. We are enclosing the product data on the item for review by Public Works. Again, it should function equivalent to that originally specified.
6. Finally, we are proposing replacing the storm drain along Boynton revised grading such that the water collected along the east property line can be collected at the corner of Boynton and Forest. The construction of our project does not significantly alter the existing drainage of this part of site. We understand the desire to keep this area from draining onto Boynton and propose we channel the small amount of drainage under the snow removal drive and on to the corner. See attached sketch.

These are the main issues that we submit for your consideration. I have submitted a similar list to building inspection consisting of several items not applicable to the site plan review. We feel the above items do not significantly alter the site issues that were of concern to the planning board during the review process. Yet, just these few items represent a substantial savings to the project. We appreciate your consideration of each item. Please let me know if we can provide additional information.

Sincerely,



Jim Clarkson,  
Project Architect

cc: Phil Taylor  
Ron Blackwell  
Damian Donati

JUN-30 98 11:15 FROM: CHARRON INC.

TO: 2077720950

PAGE: 87

KKA/KKB/KKC

# CAMBRIDGE I & II

## APPLICATIONS

Planned communities, parks, walkways, parking areas, stairs, entrances, residential streets, marinas, school campuses and other no-glare applications.

## CONSTRUCTION FEATURES

**Housing** — One piece die-cast aluminum housing with soft radius corners. Lens door is also cast aluminum with soft radius corners. Lens is a clear tempered, impact resistant, glass held in place with sealant and retaining clips. A continuous gasket seals the door assembly to the housing.

**Mounting** — An extruded aluminum arm, using four bolts, is provided for rigid attachment of luminaire to pole.

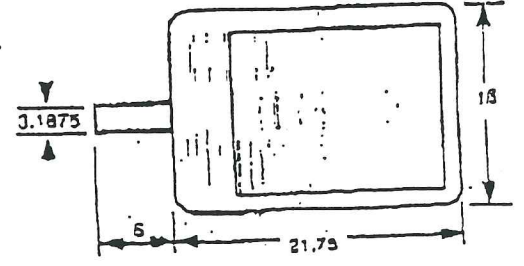
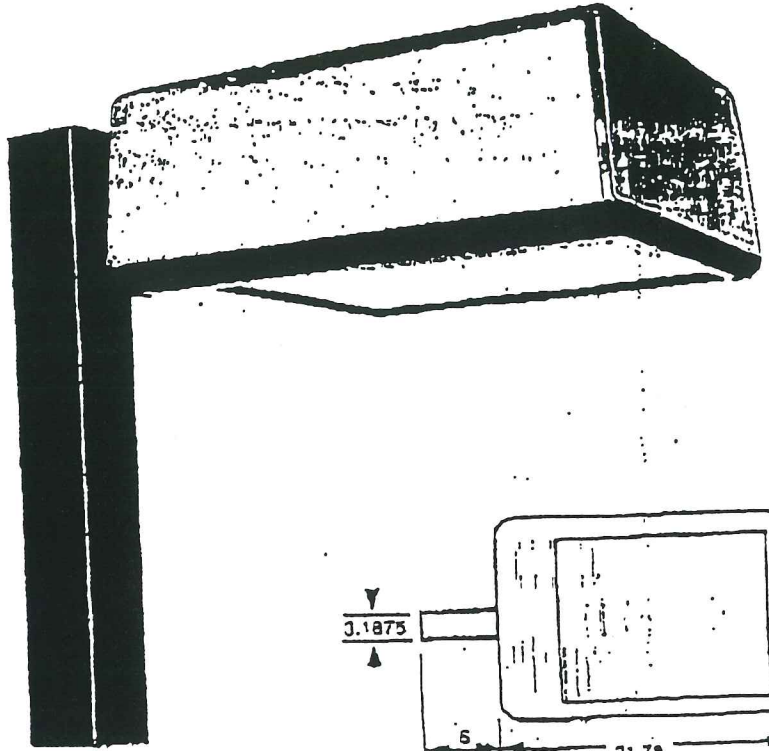
**Optical Assemblies** — Specular anodized aluminum reflectors provide square symmetrical (type V), forward throw (type IV) or narrow asymmetrical (types I and III) lighting patterns. Reflector is mounted with hinges and captive locking screws into housing for easy access to ballast.

**Ballast Assembly** — Starting rated to -20°F. Ballasts for Metal Halide are constant wattage autotransformer type. Ballasts for High Pressure Sodium are constant wattage autotransformer type using an electronic starter. Ballasts are mounted directly to die-cast housing for reduced temperature and increased life. All ballasts are high power factor.

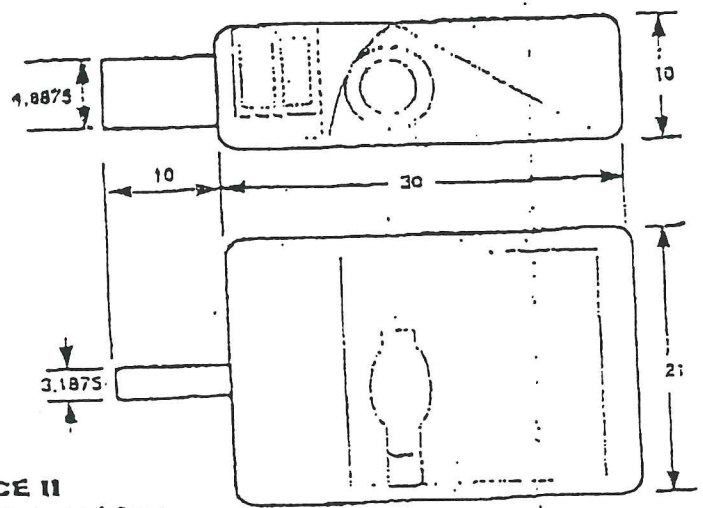
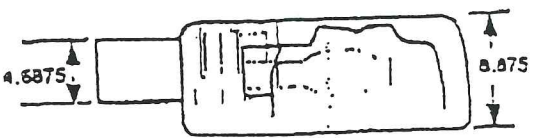
**Lamps** — Luminaires accommodate Metal Halide and High Pressure Sodium mogul base lamps.

**Lampholder** — Mogul base glazed porcelain socket with spring loaded, nickel plated center contact and reinforced lamp grip screw shell. High Pressure Sodium sockets are pulse rated.

**Finish** — Durable baked-on polyester paint finish is available in 10 standard colors. Other finishes are available.



**CE I**  
Effective Projected Area  
1.5 Sq. Ft.



**CE II**  
Effective Projected Area  
2.9 Sq. Ft.

**SPAULDING**  
LIGHTING, INC.

JUN-30 88 11:16 FROM: CHARRON INC.

TO: 2077720950



PAGE: 08

# CAMBRIDGE I & II

KKA/KKB/KKC

U.L. & CSA Listed

## LUMINAIRE ORDERING GUIDE

Model	CEI - small size (EPA - 1.6)						CEII - large size (EPA - 2.0)			
Mounting Mode	PM						WB			
										
	Pole Mount						Wall Bracket			
Lamp Type/Watts	small size S100 S150 S250 S400 M175 M250 M400						large size S400 S1000 M400 M1000			
Reflector	I - asymmetric		III - asymmetric		IV - forward throw		VS - symmetric square			
Voltage	120	208	240	277	347	480	MT - Multi-tap			
Options	PC - photoelectric cell 120-277v, up to 400w PR - photo receptacle (less cell) VG - polycarbonate vandal guard						SF - single fuse DF - double fuse CS - house side cutoff shield			
Colors for Luminaire and Pole	DBZ	BGE	RRN	SGB	WHT	FGP	TBP	RBP	CMB	LTG
	dark bronze	beige	rocket red	black	white	forest green	teal blue	royal blue	burgundy	file gray

### Luminaire Ordering Example

Model	Mounting Mode	Lamp Type Watts	Reflector	Voltage	Options	Color
CEI		S250/M			VG	

CEI: PM: pole mount: side arm for CEI  
 KKA/KKB: 14-10" arm for CEI  
 KKC: WB: wall bracket  
 Small: S100, S150, S250, S400  
 Large: L400, L1000, L4000, L10000  
 I: asymmetric, III: asymmetric, IV: forward throw, VS: V-square, MT: multi-tap  
 PC: photoelectric cell 120-277v, up to 400w  
 PR: photo receptacle (less cell)  
 SF: single fuse, DF: double fuse, VG: polycarbonate vandal guard, CS: house side cutoff shield  
 DBZ: dark bronze, BGE: beige, RRN: rocket red, SGB: black, WHT: white, FGP: forest green, TBP: teal blue, RBP: royal blue, CMB: burgundy, LTG: file gray

### POLE ORDERING

Refer to Poles/Brackets Section for ordering information.

**SPAULDING LIGHTING, INC.**

18415 Excelsior Drive, Santa Fe Springs, California 90670 (310) 966-8470





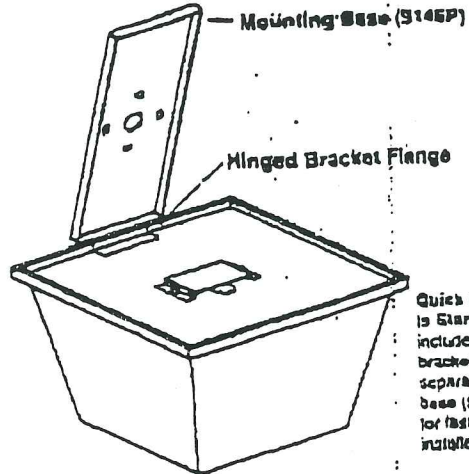
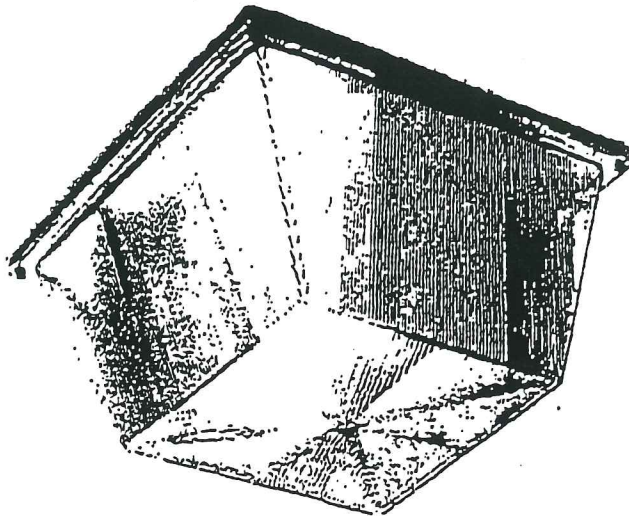
JOB NAME:

FIXTURE TYPE:

# KENALL

## DecPro™ 4600

High Abuse  
5070/100W  
High Pressure Sodium  
5070/100W Metal Halide



Quick Mount is standard. Fixture includes a mounting bracket and a separate mounting base (9146J or 9146P) for fast one-person installation.

U.L. Listed for Ceiling Dry and Damp Locations

The DecPro™ 4600 series is ideal for low-mount, high traffic areas. Seven inch profile, high strength lens which completely encloses metal components, and efficient operation makes the DecPro ideal for parking decks, park shelters, canopies and strip malls.

### FEATURES

- Quick mount is standard for fast one-person installation.
- With 59% fixture efficiency and 19% uplight, the DecPro provides high vertical and ceiling illumination with exceptional uniformity.
- Seven inch profile makes it suitable for low clearance ceilings. Designed to withstand abusive conditions such as moisture, cold temperatures, corrosion, swage, U.V. and impact.
- Meets IES standards with an optimal square, symmetrical lighting pattern and provides 3:1 spacing to mounting height ratio for parking deck applications requiring two fixtures per bay.

### GENERAL SPECIFICATIONS

- Refractor—For HPS units—Injection molded polycarbonate in a clear prismatic refractor. UV stabilized. For Metal Halide units—Injection molded polycarbonate in a clear prismatic refractor with UVsorb™ protective coating. Both polycarbonate lens types feature internal prisms, smooth outside for ease of cleaning. Wraparound design completely encloses and protects the interior of unit from moisture and contaminants. Nominal thickness .125 inch.
- Baseplate—Corrosion resistant, marine grade .080 inch aluminum.
- Finish—All prime cold rolled steel materials are phosphate coated and electrostatically

finished after all other operations with a 2.5 mil white polymer powder and baked to form a 92% reflective, smooth, glossy, non-corrosive durable coating.

- Ballast Housing—22 gauge cold rolled steel with a white urethane finish is corrosion resistant.
- Mounting Base (9146J or 9146P)—Quick mount is standard and requires a separate mounting base for fixtures installed in dry and damp locations. Specify the 9146J for use with surface conduit. Specify the 9146P for use over an existing recessed junction box. For wet locations specify the -W option. Preinstall mounting base. Attach luminaire to hinged bracket flange. Make wire connections. Close and slide luminaire into locked position for secure operation. Locking mechanism may be released through the luminaire interior for removal and maintenance as necessary. Factory installed lamp (specify -L accessory) eliminates the need to open fixture prior to installation.
- Ballast—Uses one high power factor, high pressure sodium (HPS) or metal halide (MH) ballast:
 

4660	50W HPS (S68/MED/B-17)
4683-PC	50W MH (M110/MED/ED-17)
4670	70W HPS (S62/MED/B-17)
4673-PC	70W MH (M98/MED/ED-17)
4680	100W HPS (S54/MED/B-17)
4680-PC	100W MH (M90/MED/ED-17)
- Lamp (not included)—Uses one medium base lamp.
 

4660	50W HPS (S68/MED/B-17)
4683-PC	50W MH (M110/MED/ED-17)
4670	70W HPS (S62/MED/B-17)
4673-PC	70W MH (M98/MED/ED-17)
4680	100W HPS (S54/MED/B-17)
4680-PC	100W MH (M90/MED/ED-17)

• Hardware—Four POSIGRIP tamperproof, stainless steel screws are supplied to secure refractor to baseplate.

• Socket—Medium base, porcelain socket, 4KV pulse rated.

### OPTIONS

- Internal Shield (-IS)—Die formed aluminum with spread specular pattern blocks light from one side of luminaire.
- Installed Lamp (-L)—Prewired fixture is packaged with lamp installed and refractor completely secured to baseplate to reduce mounting procedure for quick mount steps.
- Wet Location (-W)—Provides broad (9.5 inch square) based mounting. In lieu of quick mount feature, for installation directly to surface. Includes high quality closed cell neoprene rubber gasket to block out insects, moisture and dirt. Not available with quick mount feature.

### MOUNTING

UL listed for dry and damp locations, ceiling installations only. For wet locations specify -W option. Quick mount is standard and requires a separate mounting base (9146J or 9146P). We recommend using all four holes provided in the baseplates for mounting with:

- Four 1/2-20 machine screws with masonry anchors to mount in brick or concrete.
- Four 1/2" lag screws or toggle bolts for mounting in frame construction.

Mounting hardware not included. Please refer to dimensional drawings on page three for exact location of mounting holes. Instruction sheet packaged with each fixture and accessory.

JN-30 02 11:12 FROM: CHARRON INC.

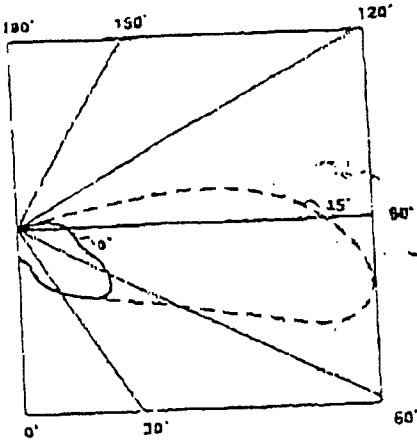
**PHOTOMETRIC DATA**

MODEL 4880-HPF

One 100w HPS Lamp  
Efficiency = 68.8%  
CIE Type Semi-Direct

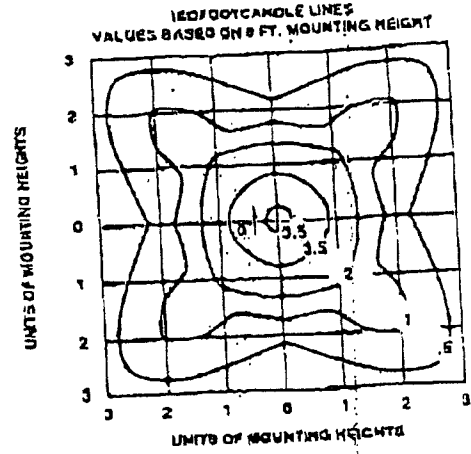
Clear Prismatic Lens  
Uplight = 18.7%  
Report #TL38549

Ceiling Mounted  
S/MH = 3.2



Coefficients of Utilization - Zonal Cavity Method  
Effective Floor Cavity Reflectance 0.20

FC	70				50				30			
HW	70	50	30	10	70	50	30	10	70	50	30	10
0	73	70	70	70	57	53	53	53	44	44	44	44
1	62	57	53	48	52	48	44	41	47	44	41	38
2	54	48	45	42	41	38	37	37	37	37	37	37
3	48	42	39	35	34	32	32	32	32	32	32	32
4	43	37	35	32	30	29	29	29	29	29	29	29
5	39	34	32	30	28	27	27	27	27	27	27	27
6	35	31	29	28	26	25	25	25	25	25	25	25
7	32	28	27	26	24	23	23	23	23	23	23	23
8	30	26	25	24	22	21	21	21	21	21	21	21
9	28	24	23	22	20	19	19	19	19	19	19	19
10	26	22	21	20	18	17	17	17	17	17	17	17



MOUNTING HEIGHT	CATALOG NUMBER/LAMP TYPE/MULTIPLIER					
	4880 100W HPS	4880-PC 100W MH	4870 70W HPS	4870-PC 70W MH	4880 100W HPS	4880-PC 100W MH
0'	.53	.46	.78	.67	1.00	1.04
10'	.42	.36	.61	.53	.81	.87
11'	.34	.29	.49	.43	.67	.73
12'	.26	.22	.41	.35	.51	.56

**OPERATING SPECIFICATIONS**

HIGH PRESSURE SODIUM  
LAMP: Medium Base, 24,000 Hour Life  
BALLAST: HX-HPF, -40°F to 90°F Ambient

WATTAGE	50		70		100	
	4,000		6,400		9,500	
LUMENS	120	277	120	277	120	277
LINE VOLTAGE (V)	.95	.91	1.30	.85	1.80	.85
MAXIMUM CURRENT (A)	.55	.38	.75	.38	1.00	.50
OPERATING CURRENT (A)	.82	.66	.88	.88	1.15	1.38
INPUT POWER (W)	HPF	HPF	HPF	HPF	HPF	HPF

METAL HALIDE  
LAMP: Medium Base  
BALLAST: HX-HPF, -20°F to 90°F Ambient

WATTAGE	50		70		100	
	3,400		5,000		7,800	
LUMENS	120	277	120	277	120	277
LIFE (HOURS)	5,000	8,000	120	277	120	277
LINE VOLTAGE (V)	1.00	.85	1.39	.72	2.60	1.13
MAXIMUM CURRENT (A)	.86	.60	.85	.37	1.13	.50
OPERATING CURRENT (A)	.72	.72	.89	.89	1.29	1.29
INPUT POWER (W)	HPF	HPF	HPF	HPF	HPF	HPF

LN-30 98 11:13 FROM: CHARRON INC.

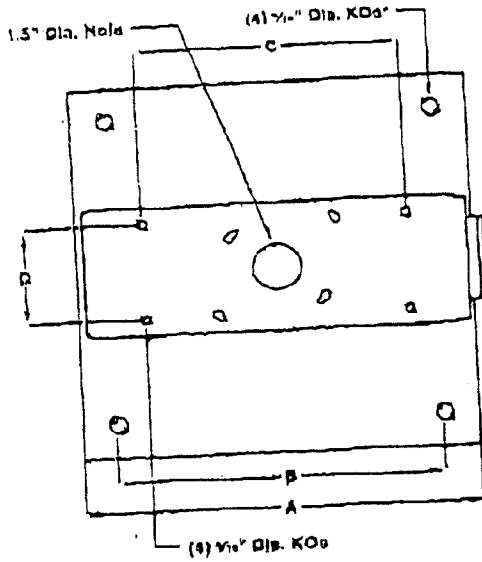
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PAGE: 03

### DIMENSIONS

4600 SERIES

Housing Top View

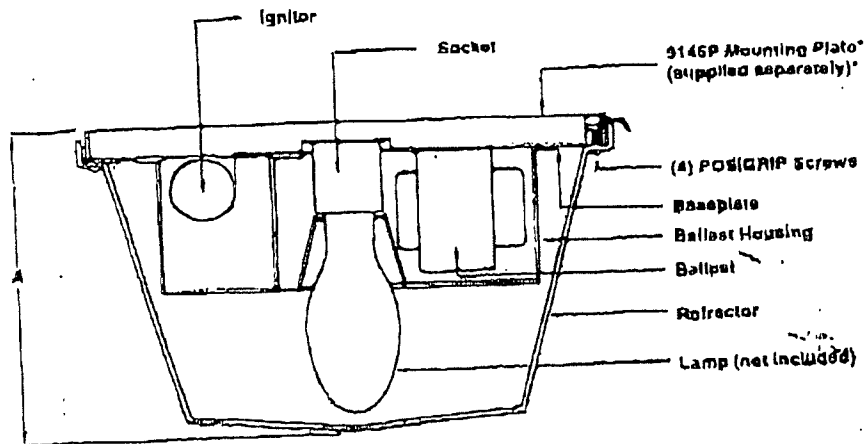


Size	A	B	C	D
in.	12.375 ±.01	9.50	8	3.125
cm.	31.43	24.13	20.32	7.93

\*For use with  
-W option

### CUTAWAY VIEW

4600 Series  
Length: 12.375" Width: 12.375" Height: 7"



\*9146P or 9146J  
required for all  
units installed in  
dry/damp locations

	A		
Cat. No.	4800-W	4600/9146P	4600/9148J
in.	7.0625	7.375	8.375
cm.	17.93	18.73	21.27







No. 25 (Forest)

Boynton Street

INSTALL 12" PVC-L-5  
S = 0.015 (MIN), L = 16' ±

~~12" STORM DRAIN~~

Delete

inlet

swale  
to surface drain  
PARKING GARAGE

Pipe under  
drive

collect  
water

INSTALL CATCH BASIN W/CASCO TRAF  
RIM ELEV. = 46.75  
INV. OUT = 41.75

CONCRETE SIDEWALK

UNDERDRAIN  
CLEANOUT

6" UNDERDRAIN (TYP)  
RIGID PERFORATED PIPE  
REFER TO ARCHITECTURAL AND  
STRUCTURAL SECTIONS AND DETAILS

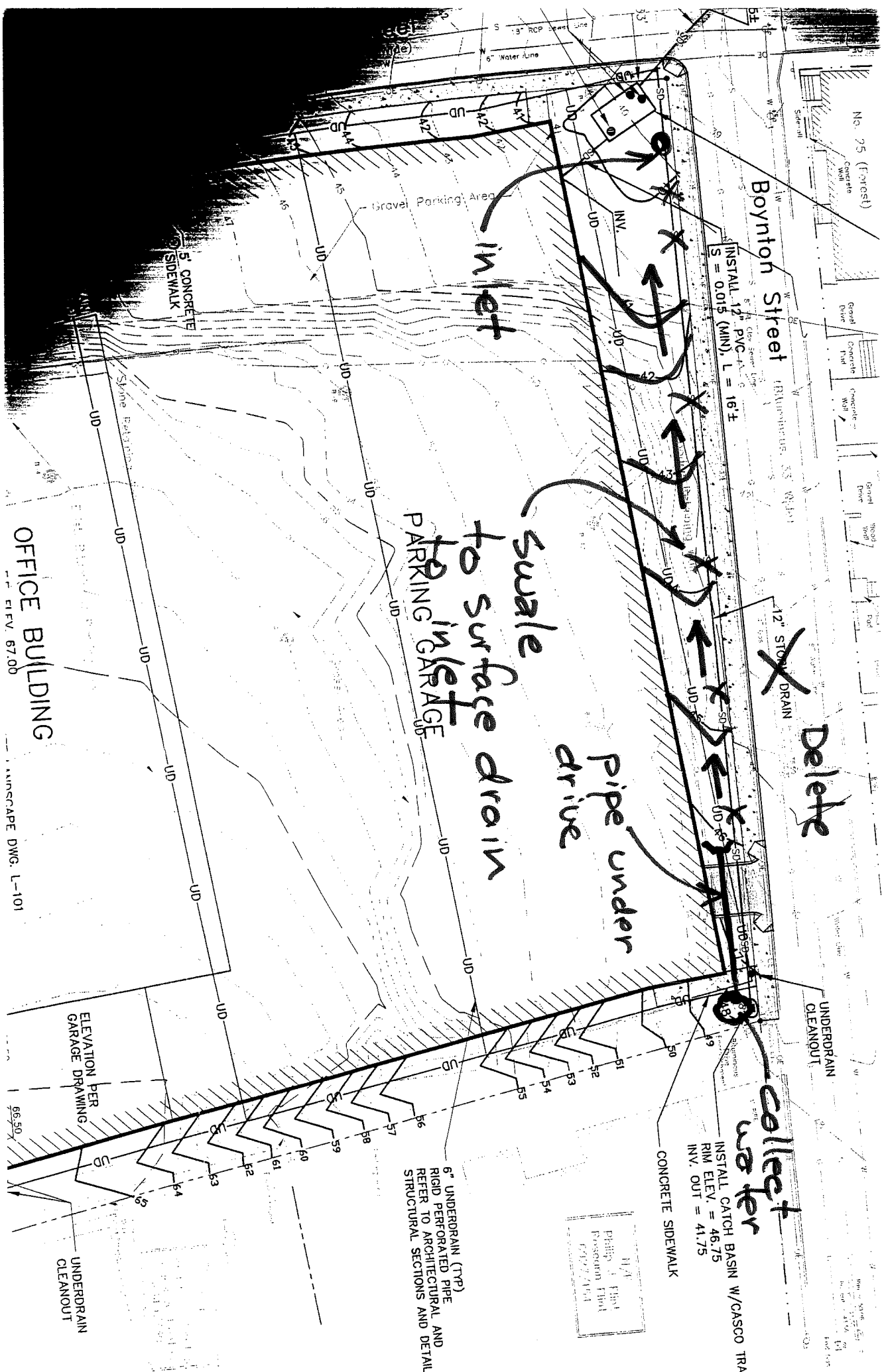
H.A.  
Plan  
Proposed  
5/12/74

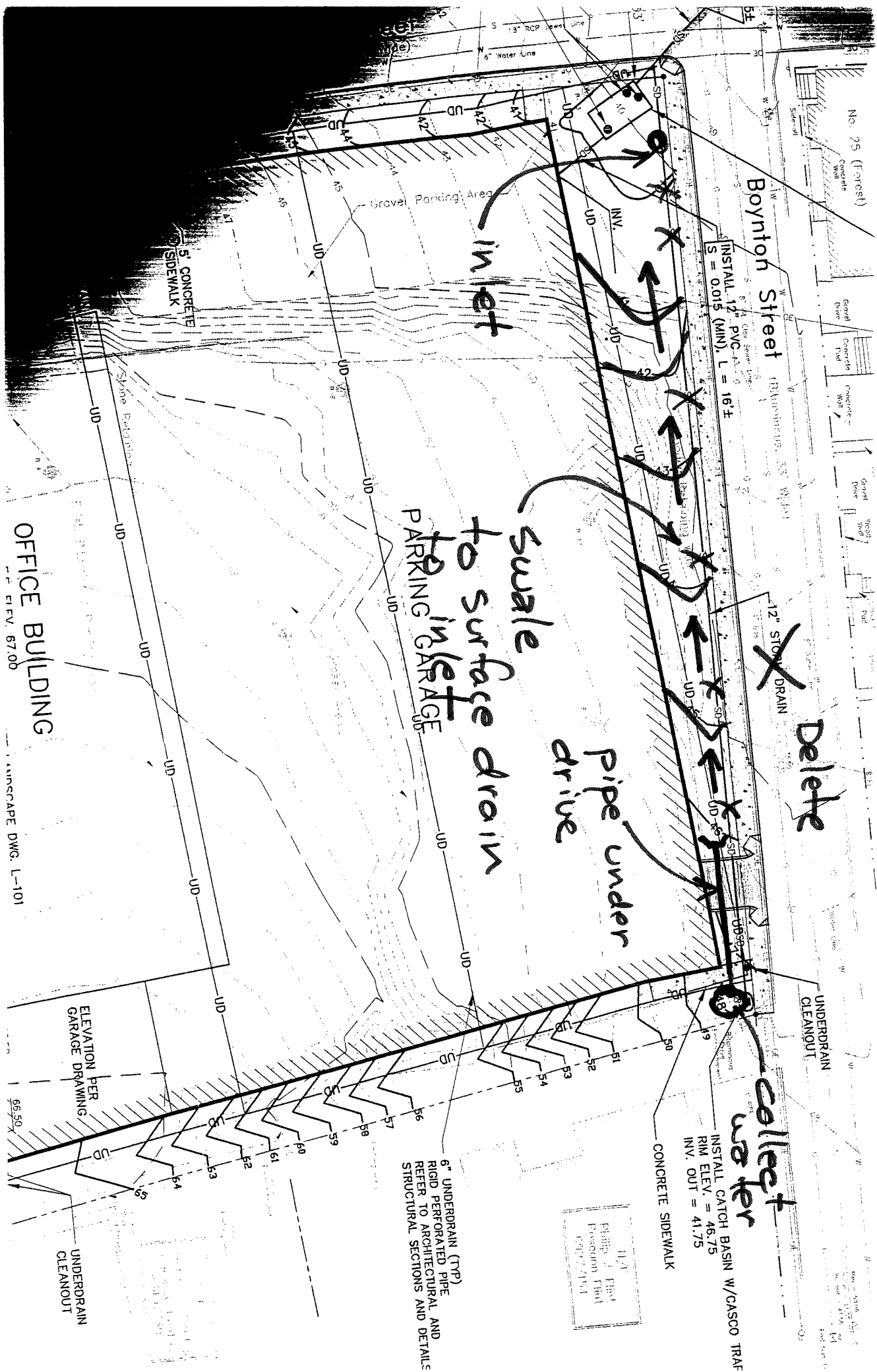
OFFICE BUILDING

LANDSCAPE DWG. L-101

ELEVATION PER  
GARAGE DRAWING

UNDERDRAIN  
CLEANOUT





INSTALL 12" PVC 1.5' S = 0.015 (MIN), L = 16' ±

INSTALL CATCH BASIN W/CASCO TRAF  
RIM ELEV. = 46.75  
INV. OUT = 41.75

inlet

swale to surface drain  
to parking garage

pipe under drive

collect water

Delete

OFFICE BUILDING

LANDSCAPE DWG. L-101

6" UNDERDRAIN (TYP) RIGID PERFORATED PIPE REFER TO ARCHITECTURAL AND STRUCTURAL SECTIONS AND DETAILS

1/4" Plot  
Final  
Passover Final  
07/27/14

ELEVATION PER GARAGE DRAWING

UNDERDRAIN CLEANOUT

UNDERDRAIN CLEANOUT

No. 25 (Project)

Boynton Street

Gravel Parking Area

5" CONCRETE SIDEWALK

12" STON DRAIN

CONCRETE SIDEWALK

Same Elevation

6" RCP

LANDSCAPE DWG. L-101

UNDERDRAIN CLEANOUT

No. 25 (Project)

Boynton Street

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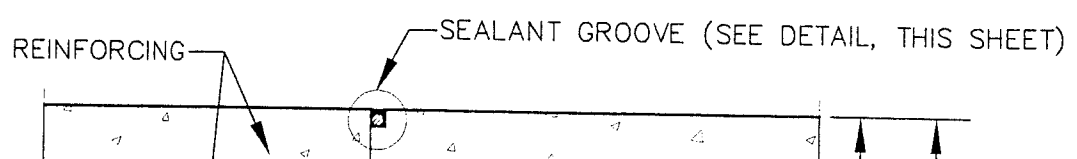
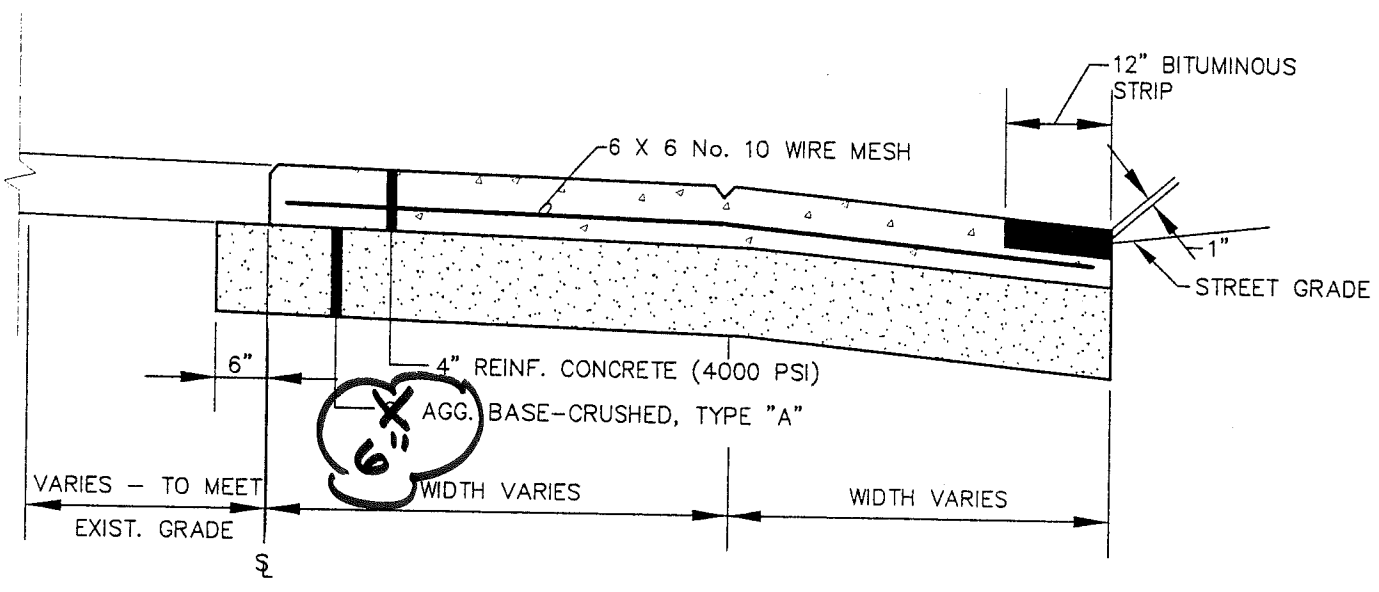
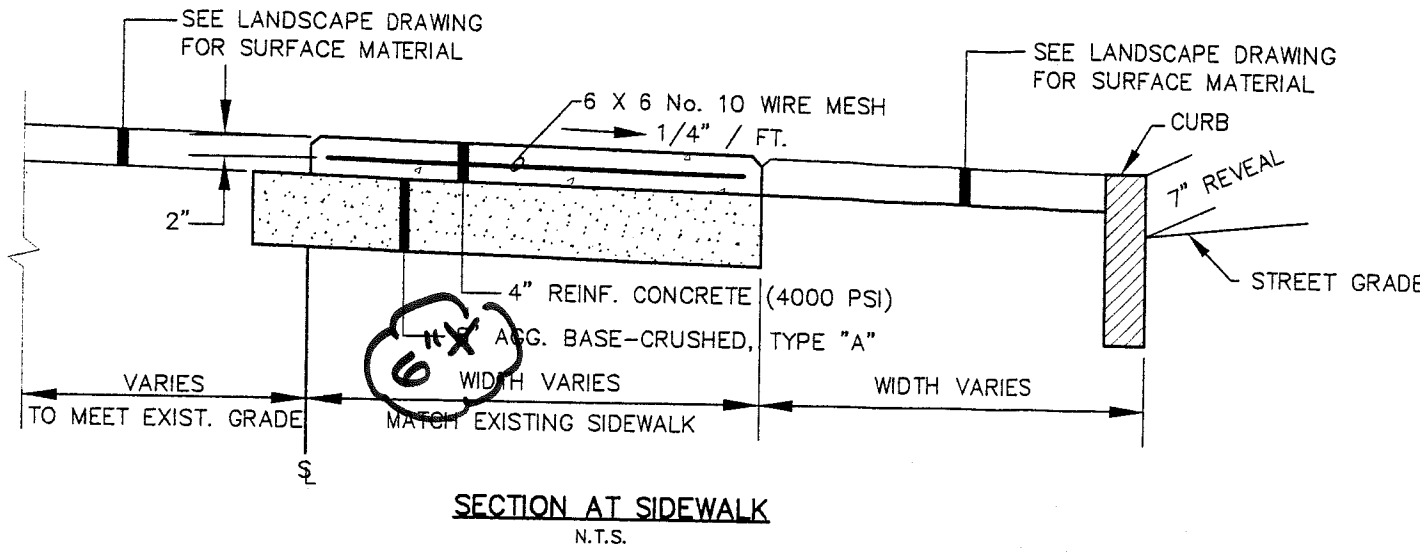
Boynton Street

Gravel Parking Area

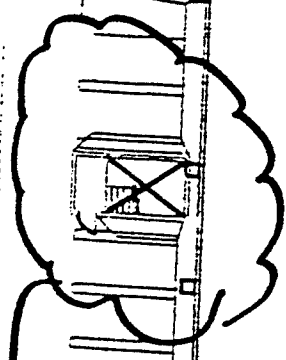
5" CONCRETE SIDEWALK

12" STON DRAIN

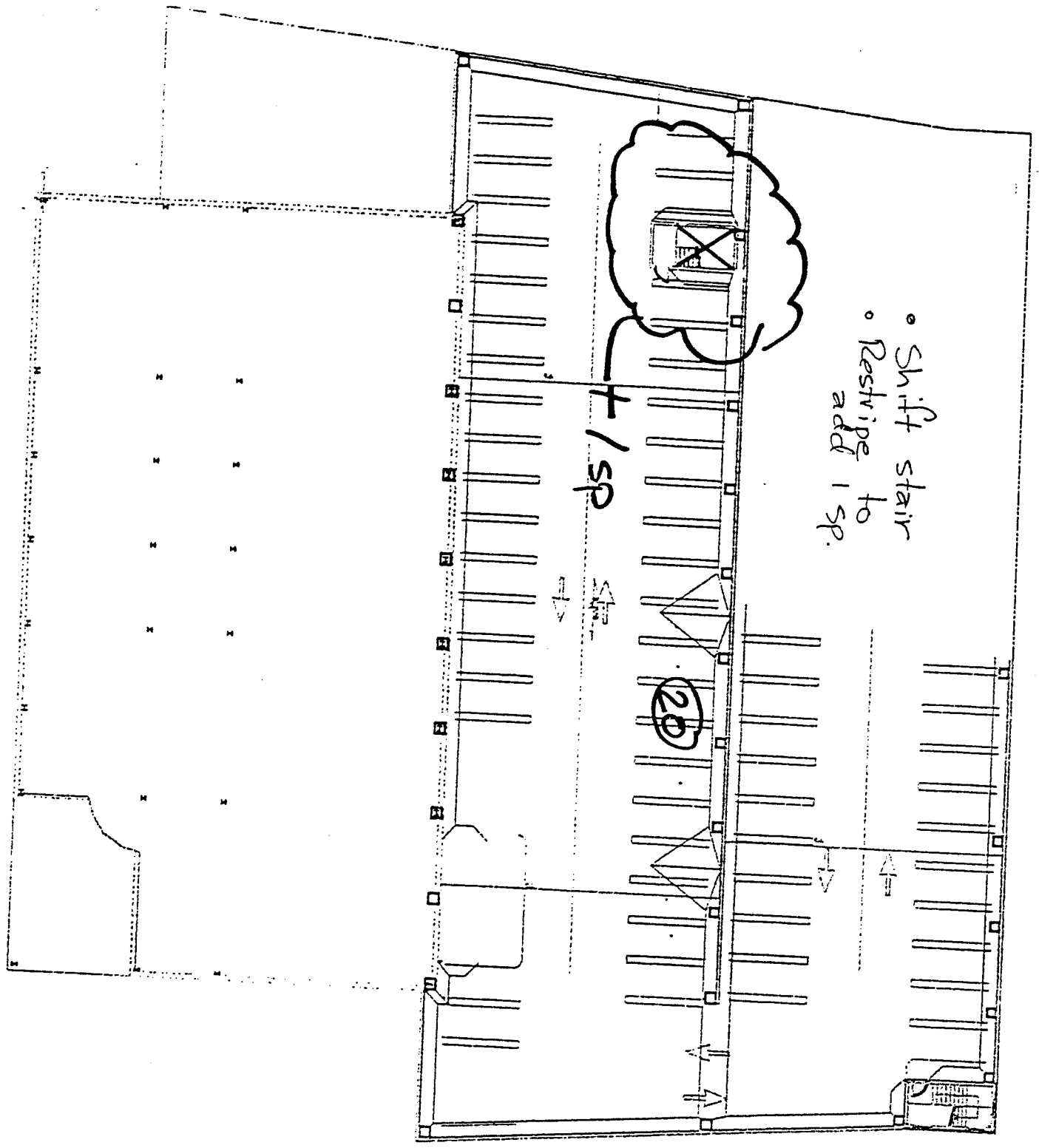
CONCRETE SIDEWALK



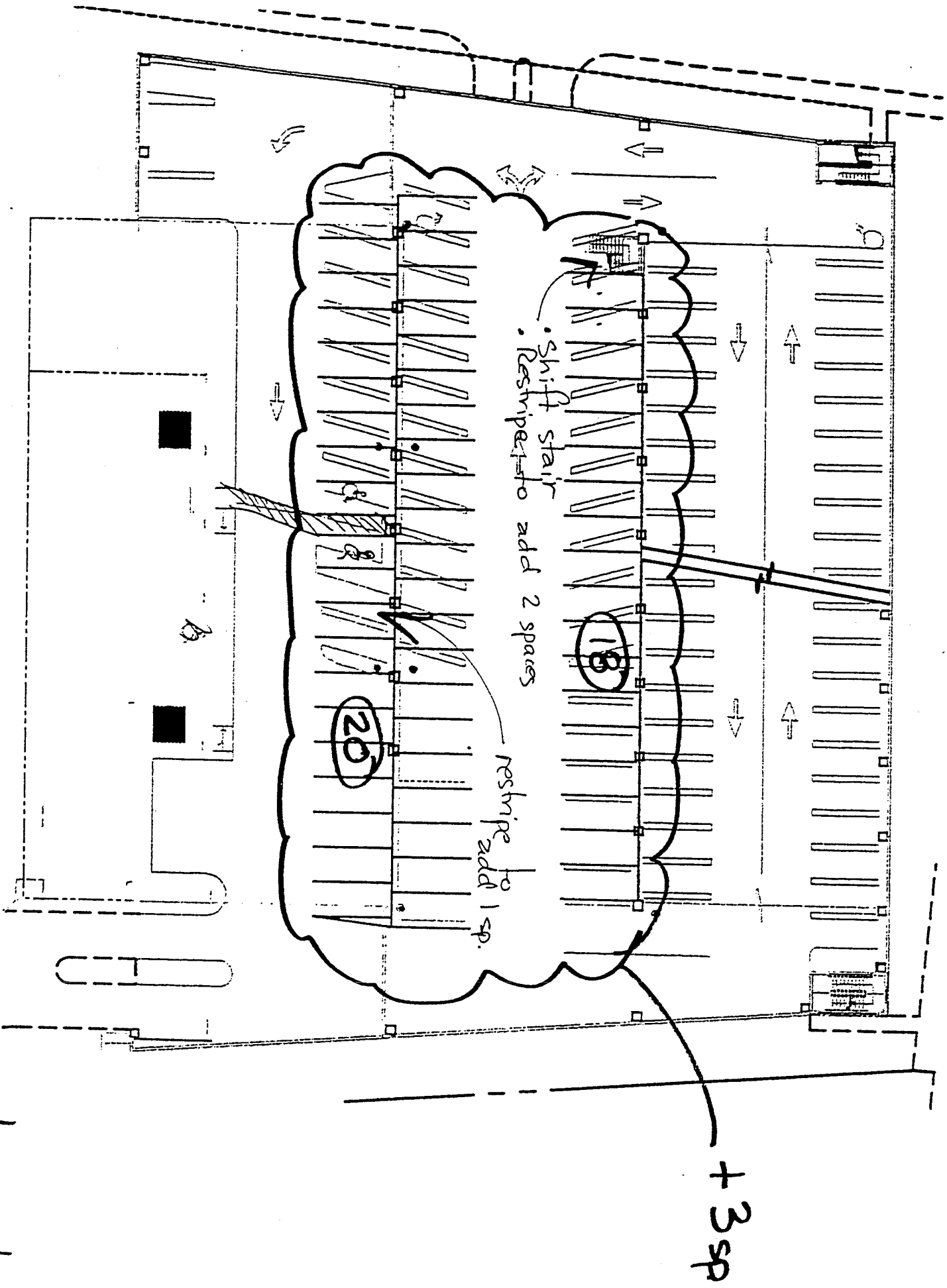
- Shift stair
- Restripe to add 1 sp.



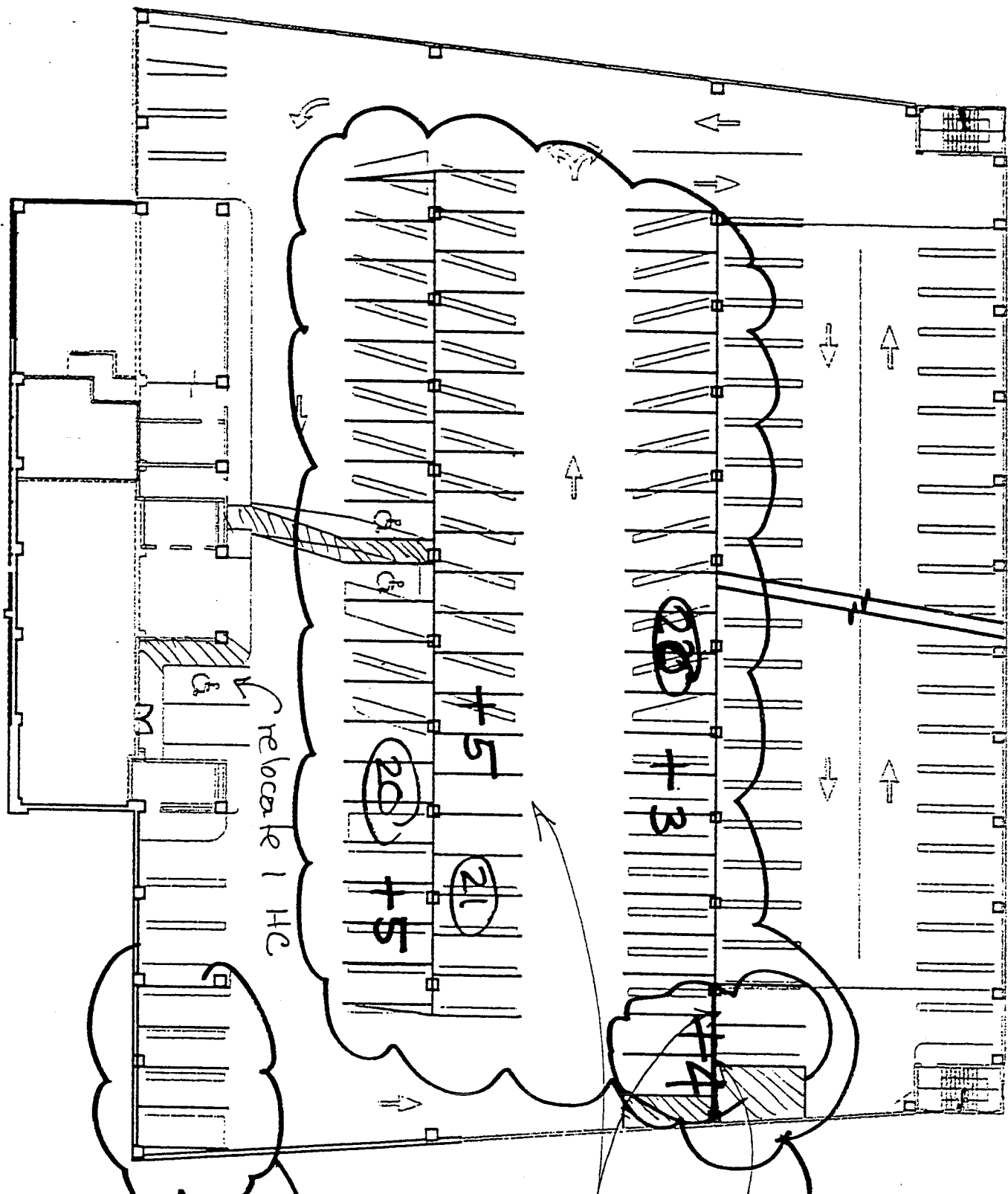
+ / sp



Level 2



Level 1



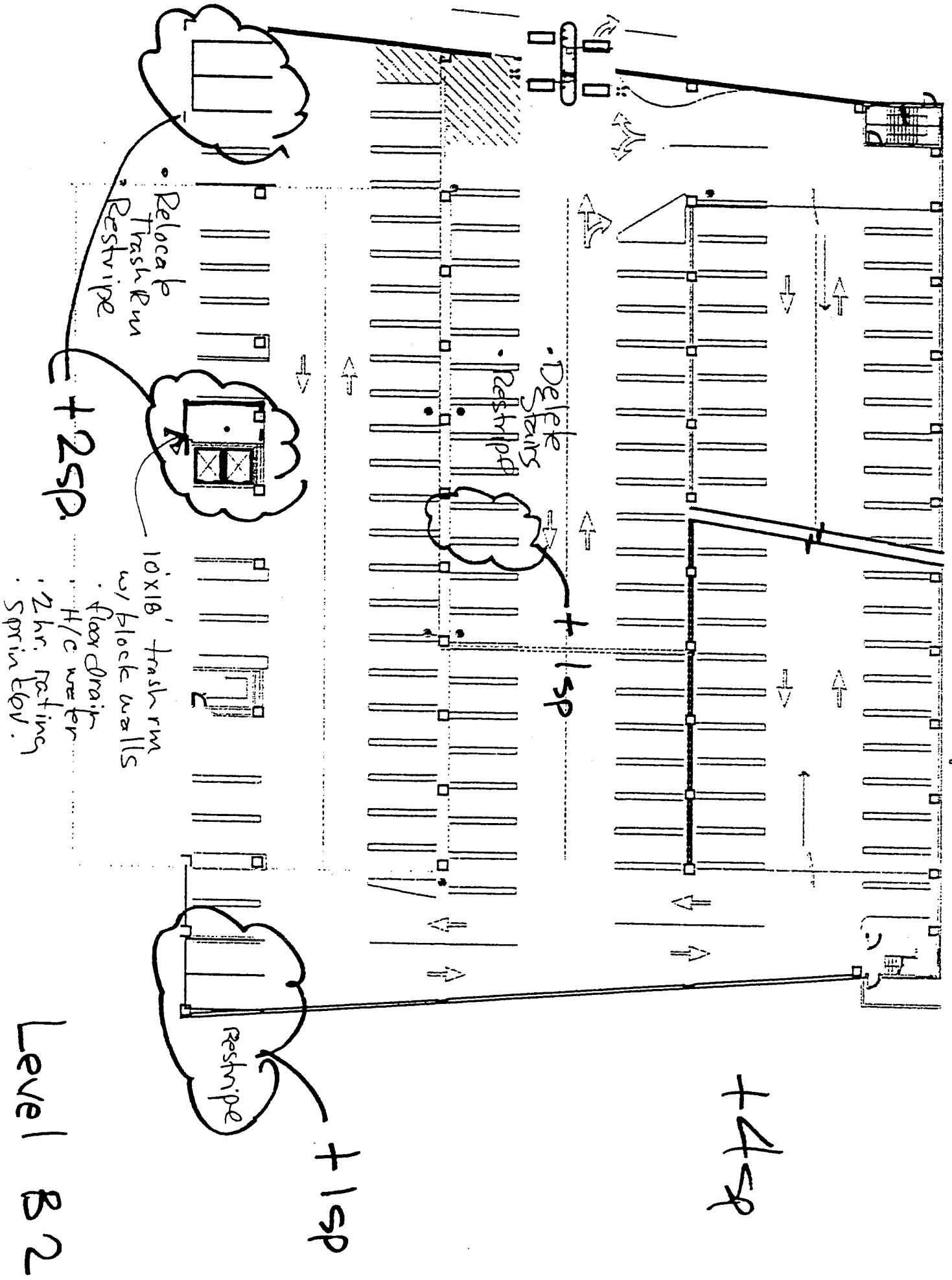
relocate 1 HC

+1 sp  
restripe

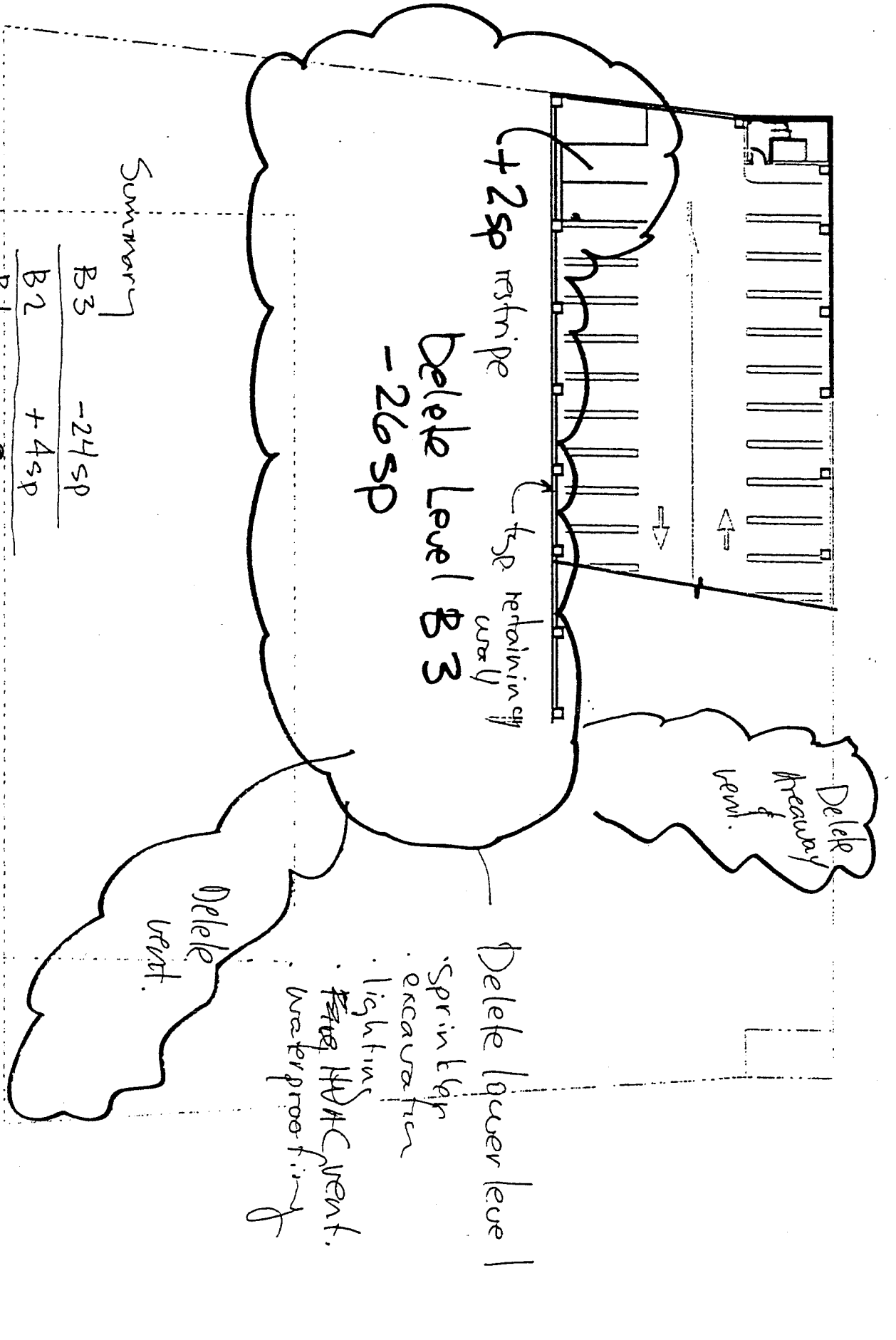
Delete Bollards  
and drive  
lane - restrip

17 sp  
new divider.

Level B1

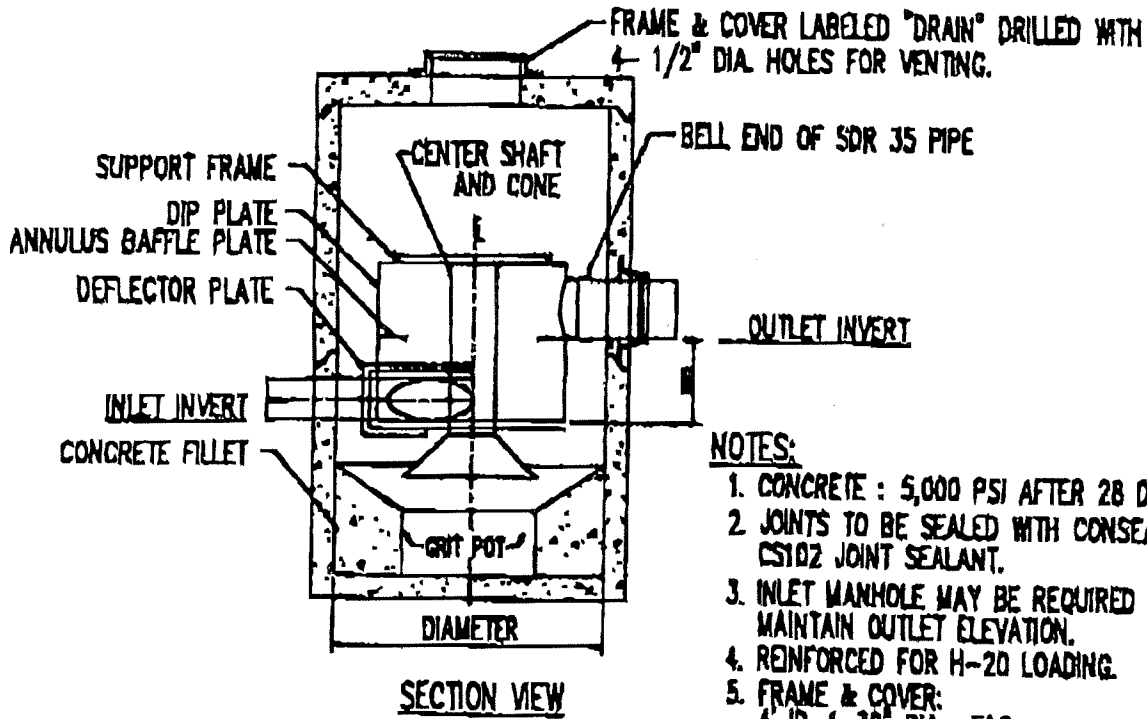
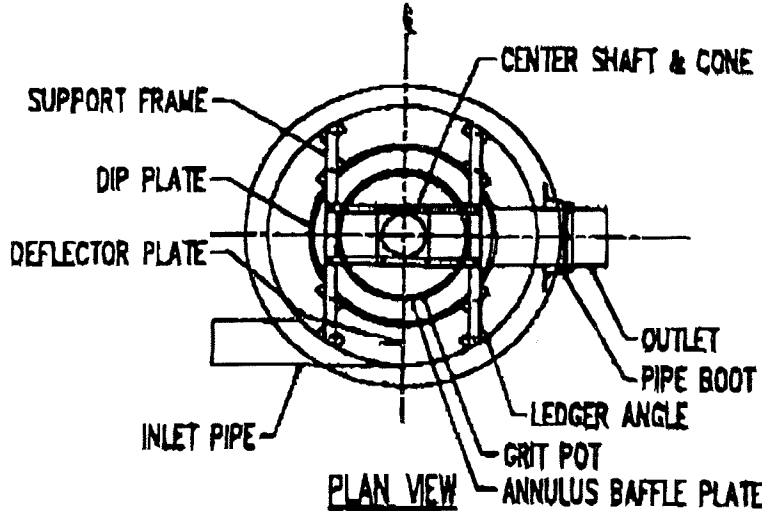


Level B2



Level B3





NOTES:

1. CONCRETE : 5,000 PSI AFTER 28 DAYS.
2. JOINTS TO BE SEALED WITH CONSEAL CST02 JOINT SEALANT.
3. INLET MANHOLE MAY BE REQUIRED TO MAINTAIN OUTLET ELEVATION.
4. REINFORCED FOR H-20 LOADING.
5. FRAME & COVER:
  - 4' ID. 1-30" DIA. F&C.
  - 6' ID. 1-18" DIA. & J-24" DIA. F&C.
  - 8' & 10' ID 2 - 24" DIA. F&C's.

UNIT DIAMETER	APPROXIMATE FLOW RANGE* (CFS)	INLET PIPE SIZE	OUTLET PIPE SIZE	CRIT POT DIAMETER
4'-0"	0-0.75	8"	12"	2'-0"
6'-0"	0.75-3	12"	18"	3'-0"
8'-0"	3-7	18"	24"	4'-0"
10'-0"	7-13	24"	30"	5'-0"

\*BASED ON 90% REMOVAL OF ALL PARTICLES WITH SPECIFIC GRAVITY OF 2.65 DOWN TO 150 MICRONS.  
 \*AT FLOWS LESS THAN DESIGN, THE DOWNSTREAM DEFENDER WILL HAVE BETTER REMOVAL EFFICIENCIES.

**SUPERIOR**  
 CONCRETE CO, INC.  
 AUBURN, ME.

**DOWNSTREAM DEFENDER™**  
 STORMWATER SYSTEM

SUPERIOR CONCRETE CO., INC.—AUBURN, MAINE 04210  
 1-800-482-7417

V C 1

# Downstream Defender™ Design Chart (Imperial)

UNIT DIAMETER (feet)	DESIGN FLOW / CAPACITY		INLET PIPE DIAMETER (Inches)	OUTLET PIPE DIAMETER (Inches)	HEADLOSS DESIGN FROM (Inches)	HEADLOSS @ CAPACITY (Inches)	WEIGHT FULL (lbs)	WEIGHT EMPTY (lbs)	OIL STORAGE CAPACITY (gallons)	SEDIMENT STORAGE CAPACITY (cu ft)	UNIT DIAMETER (feet)
	(cfs)	(gpm)									
	0.75/3.0	330/1,350	8	12	3	23	13,200	10,000	70	0.70	
	3.00/8.0	1,350/3,590	12	18	7	33	32,800	22,400	230	2.10	
	7.00/13.0	3,140/6,730	18	24	9	23	63,000	39,000	525	4.65	
	13.0/25.0	5,800/11,220	24	30	10	22	140,300	94,000	1,050	8.70	

1. Based on 90% removal of all particles with specific gravity of 2.65 down to 150 microns.

2. Headloss is defined as the difference between the top water level upstream and the top water level downstream of the unit.

3. Weights are calculated with stainless steel internal components. Components are also available in polypropylene.

• AutoCAD drawings and WordPerfect specification available on disk.

• For pricing, delivery, and custom designs, please call H.L.L. Technology, Inc., Proposal Engineering Department.

H.L.L. TECHNOLOGY INC., 94 Hutchins Drive, Portland, ME 04102 • (207) 756-6200 • (207) 756-6212 (Fax) • E-mail: hltech@hl-tech.com

H.L.L.  
TECHNOLOGY  
INC.

July 21, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, Maine 04101

**RE: Maine Medical Center Office Building**

Dear Rick:

We have reviewed the July 8, 1998 letter from Mediplex Medical Building Corporation (MMBC) regarding the changes to the proposed Maine Medical Center Office and Parking Garage project. Of the changes listed, items 4, 5, and 6 deal with site development issues. These are discussed further below.

Item 4:

This item changes the thickness of the gravel material under the proposed concrete sidewalks to 6 inches. This meets the City's standard design criteria for sidewalks.

Item 5:

MMBC is proposing an alternate grit separator, a Downstream Defender as manufactured by HIL Technology and Superior Concrete, for this project. A Vortechincs Model 4000 was originally proposed for this project. This is a similar request as was made and approved for the Home Depot project. At the time we reviewed this for the Home Depot project (please refer to our July 11, 1996 letter attached), we noted that the Downstream Defender has less storage capacity than the Vortechincs unit. We do not object to installing the alternate grit separator, however, because of the smaller capacity a more frequent clean out schedule will be required.

Item 6:

The proposal for replacing the storm drain along Boynton Street with a drainage swale requires some further development. It is not clear if the proposed catch basin at the northeastern corner of the site at Boynton Street will remain or be eliminated. If the catch basin were to remain, the invert elevation out of the structure would be around 43.5 feet. This would require a change in the proposed grades along Boynton Street. If a field inlet and culvert is used instead of the catch basin, the proposed invert would be higher and making the drainage swale along

Mr. Richard Knowland

July 21, 1998

Page 2

Boynton Street easier to grade. The location of the swale would also need to be coordinated with the location of the benches shown on the landscape plan. We would be pleased to review this option once more details become available.

Please contact Tim Michaud or me if you have any questions in review of our comments.

Very truly yours,

DUFRESNE-HENRY, INC.



Jeffrey D. Preble, P.E.  
Project Manager

Enclosure

File C:\civil\8160054\Knowlandltr11.wpd





July 11, 1996

Mr. Richard Knowland, Senior Planner  
City of Portland Planning Department  
389 Congress Street  
Portland, Maine 04101

**RE: Home Depot**



Dear Mr. Knowland:

We have reviewed the June 26, 1996 submittal from White Brothers, Inc. requesting a change in the proposed grit and oil separator. The original plans called for a Vortechincs Model 5000 grit and oil removal system, while White Brothers has proposed to use a Downstream Defender as manufactured by H.I.L. Technology and Superior Concrete. This product is listed in the stormwater BMP's as an acceptable technology for grit and oil separation, and we do not object to installing the Downstream Defender at the Home Depot site.

There are some differences when comparing the Vortechincs unit with the Downstream Defender, with the most notable item being the grit storage capacity within the units. The Vortechincs unit lists a grit storage capacity of 5 cubic yards, while the Downstream Defender has a total capacity of less than 1 cubic yard. Because of this difference a more frequent grit removal schedule will be required. The frequency of cleaning out the structure will depend on many factors including available grit storage in the catchbasin sumps leading to the separator, amount of sand used during the winter, and parking lot sweeping schedule. This could have an effect on the maintenance agreement between the City and Home Depot.

Please let us know if we can provide any further assistance with this matter.

Respectfully submitted,

DUFRESNE-HENRY, INC.

Jeffrey D. Preble, P.E.  
Project Manager

jdp



## PARKING MANAGEMENT PLAN

### Overview

The City of Portland/Maine Medical Center contract zone for the medical office building and parking garage at 883-903 Congress Street includes a provision for MMC to develop a parking management plan for the Bramhall campus. This parking management plan addresses the needs of three major groups:

- Patients and others who accompany them to the campus;
- Physicians who come to the campus to examine and treat their patients; and
- Employees of Maine Medical Center.

This plan includes strategies that have already been implemented as well as those still in development. MMC welcomes the opportunity to continue to work with the City of Portland to develop and implement this plan.

The proposed garage associated with the medical office building will have excess capacity built into it; in other words, the facility will have more than enough spaces to meet the demands of the 49,150 s.f. office building. Of the 430 spaces to be built, 226 are required for the office building, for visitors and employees, leaving 204 spaces for the general needs of the Bramhall campus.

The sale of the Gateway garage is also planned as a separate action. A summary of the impact of the combined actions of constructing the office building, sale of the Gateway, and lease of the St. John lot on the overall existing parking supply is as follows:

<u>Action</u>		<u>Net Gain/Loss in Spaces</u>
Sale of Gateway Garage	- 530	(Gateway has 650 spaces but 120 will be retained by MMC use.)
Loss of 52 spaces currently on site	- 52	
Construction of Proposed Building/Garage	+ 204	(Excess once office needs are met.)
Lease of St. John Street Lot	+ 150	
Overall Net Loss	- 228	

While the supply for MMC will be reduced due to the sale of the Gateway Garage, which is planned as a separate action, the proposed garage will reduce the loss over what would otherwise be experienced when the Gateway Garage is sold. In addition, the spaces in the Gateway are not fully utilized due to the remoteness from the Bramhall campus.

### Supply and Demand

An essential element of a parking management plan is a professionally prepared analysis of the supply of and demand for parking. In the Spring of 1996, MMC retained DeLuca-Hoffman Associates, Inc. The analysis was updated in March 1997 to incorporate the changes in supply and demand associated with the proposed medical office building and other MMC initiatives. This parking management plan incorporates the major findings from the DeLuca-Hoffman analysis. The existing supply, including planned changes with the development of the Congress Street Medical Office Building/Parking Garage, and the estimated demand are presented in Exhibit 1.

### Exhibit 1

#### Maine Medical Center Parking Supply and Demand Current and Planned Changes

<u>Location</u>	<u>Spaces</u>
Main Congress Street Garage	1,276
Congress Street Medical Office Garage	430
Admitting	9
Visitors Lot Bramhall	315
Maine Magnetic Imaging	11
Gilman Street Lot A	15
Emergency	10
Radiation Therapy/Oncology	10
Gateway Garage	120
Gilman Street Lot B	15
Farmers Market Garage	12
St. John Street	<u>150</u>
Total	2,373
Demand Following Completion of Bean Building and Relocation of Programs and Employees to the Scarborough Campus	1,914
Completion of Congress Street Building	<u>226</u>
	2,140

Source: "Parking Analysis for a Proposed Expansion to the Bean Building at MMC" DeLuca-Hoffman Associates," June 1996, and March 1997 Update.

Thus, the overall planned supply exceeds the demand by 233 spaces (11%). Specifically with respect to employees, approximately 1,300 employees work the day shift. MMC currently meets that need with the Main Congress Street Garage (1,276 spaces), the St. John's Street lot (150 spaces), and a portion of the Gateway Garage (200 spaces), for a total of 1,626 spaces. The challenge facing MMC is to make the best use of that supply. The balance of this plan identifies the strategies MMC is pursuing in order to better manage the demand and to minimize the impact of the demand on the neighborhood surrounding the Bramhall campus.

**Parking Management Strategies**

This plan includes strategies that address the following issues:

- Sale of the Gateway Garage and development of the Congress Street Garage.
- Parking access and traffic flow.
- Decentralization of MMC Bramhall campus.
- Contractor requirements during construction/renovation projects.
- Alternative transportation.
- Street parking enforcement.

**A. Sale of the Gateway Garage and Development of the Congress Street Office Building Parking Garage**

In 1992, in order to expand its supply of parking, MMC purchased the 650-space Gateway Garage at the corner of High Street and Cumberland Avenue and initiated an employee parking program at the garage. Since then, all new employees have been assigned to park there and a shuttle service is provided to the MMC campus. While the program has worked, many employees find the shuttle inconvenient and time consuming. As a result, some employees park on the streets around the Bramhall campus which are subject to strict City of Portland parking enforcement. In order to eliminate the inconvenience, a central strategy is the sale of the Gateway Garage and the development of the Congress Street Office Building Parking Garage. This strategy brings the employees back to the campus, eliminates the shuttle inconvenience and should eliminate the current on-street parking by employees who should be parking at the Gateway.

**B. Parking Access and Traffic Flow**

**Gilman St. Garage**

In 1997, MMC implemented a new approach to the management of the utilization of the 1,276-space Main Parking Garage at the corner of Congress Street and Gilman Street. Prior to 1997, in the 6:30-8:30 AM period when most employees arrive, the garage would begin to fill and as a result a one-in/one-out pattern developed, causing queuing of cars on Gilman and Congress. That policy was changed such that when the garage is full, it is closed until approximately 1:30 PM and employees are directed to park at the St. John Street lot and are shuttled to the Bramhall campus. This policy has eliminated the queuing on the streets and given the much shorter shuttle ride, employees have made good use of the St. John Lot. As part of our parking management plan, MMC is committed to maintaining the St. John Street Lot as long as demand warrants.

**St. John Street Lot**

MMC is committed to maintaining the shuttle to the St. John Street lot and making it free and convenient for employee use. The current shuttle system has been very well received by the employees. MMC has also committed to Mr. Peverada to make a special effort to educate doctors and staff at McGeachey Hall to use the shuttle rather than to park on Vaughn Street.



### Proposed Garage

MMC plans to design the new garage to minimize delay and provide security to encourage staff to utilize the garage rather than parking on street. Specific measures to be taken include the following:

- Security person assigned to the garage to monitor entering and exiting traffic and to create a safe atmosphere, encouraging use of the garage.
- Direct entry on the employee side of the garage (Forest Street) without gates during the peak periods of traffic flow. This will eliminate potential delay upon entering the garage.
- MMC will evaluate the use of proximity cards to reduce the delay when leaving the garage. Mr. Peverada stated he has had favorable experience with these.
- Low user charge of 50 cents per day to eliminate the potential of cost being a deterrent.

### Valet Parking

Another element of the parking access and traffic flow strategy is our valet parking program at the Admitting Lobby entrance and at the Emergency Department. This program has been very successful, serving 100 campus patients/visitors every day. Valet parking reduces congestion at the entrances, lowers frustration and the temptation to park on the street, and provides for significant improvement in the use of the spaces in the Admitting Lot, the Main Congress Street Garage and the Bramhall Lot. MMC will improve the signage advising the public about the service and include information on the service in patient pre-admission material. MMC is committed to maintaining the valet parking program after construction of the Bean addition.

Sea Dogs and Parking Bans - Based on meetings with city officials, MMC will make available spaces in the new garage (as we do with the main garage) for evening Sea Dogs games. We will work with the city to define the numbers of spaces. The charge will be the same as the existing garage. For Parking Bans, MMC will make space available on a schedule to be agreed upon, perhaps 6 pm to 6 am, at a charge competitive with other facilities. Strict towing rules will be enforced.

### C. Decentralization of the Bramhall Campus

Since 1991, MMC has been actively pursuing a Board of Trustees approved decentralization policy for the Bramhall campus. Each program/service that is moved from the Bramhall campus to other locations in the greater Portland area reduces the demand for parking at the Bramhall campus. Major examples of this strategy have included:

- MMC Scarborough Campus - This plan involves the relocation from the Bramhall campus of over 200 MMC employees and 25,000 patient visits to outpatient programs to the Scarborough campus. The Scarborough campus is not yet fully operational. The main remaining element is the consolidation of MMC's labs from the Bramhall and Brighton campuses and leased space on John Roberts Road, South Portland, to the Scarborough campus.

- Relocation of the 80-bed New England Rehabilitation Hospital of Portland and 20 MMC rehabilitation beds to the Brighton campus. This move reduced demand on the Bramhall visitor lot and the Main Congress Street Garage.
- Gateway Garage Condominiums - MMC owns condominiums at the Gateway Garage where 120 employees (data management and patient accounts) work who were formerly at the Bramhall campus. After the sale of the Gateway Garage, MMC will continue to lease 120 spaces at the Gateway Garage for these employees.
- Congress Street Medical Office Building - Consolidates several private practices in office buildings around the campus, reducing demand for on-street parking by patients of those practices.
- Holt Hall - In 1998, MMC will relocate 25 employees (and provide parking) from the Bramhall campus to the 7,000 sq. ft. at Holt Hall. The approval for Holt Hall included 25 on-site parking spaces.
- Brighton Campus - When MMC discontinued inpatient services at the Brighton Medical Center campus, it committed to continuing two major programs at that campus: urgent care and ambulatory surgery. By maintaining those programs, the 20,000 urgent care patients and 2,500 ambulatory surgery patients do not place demands for parking on the Bramhall campus which would have been the case if those programs had been discontinued.

MMC will continue to pursue other opportunities to decentralize its programs, further reducing the demand on the MMC Bramhall campus.

**D. Internal Education**

MMC will make a brochure available to all its staff and doctors detailing where MMC parking is located, requesting people to park in the garages, and to carpool or use the bus whenever possible. Information on parking will also be made available for patients and visitors. MMC will also work with the staff of the Portland Area Comprehensive Transportation Committee (PACTS) to develop a data base for use in their rideshare program.

Information in the brochure will include the following:

- Map of available off-street parking along with designations (i.e., staff, visitor, etc.).
- Handicapped parking locations.
- Valet instructions.
- Ride share information.
- Metro information.
- Overnight parking.
- Snow bans.

#### **E. Contact Person**

MMC will provide a contact person for coordinating directly with John Peverada on parking issues. MMC supports regular monthly meetings to address issues.

#### **F. Contractor Requirement During Renovation/Construction Projects**

The Bramhall campus will be in a period of continuous construction for the next several years. Our construction agreements with contractors have strict provisions regarding our expectations of their responsibility to manage the parking of their employees. MMC generally has a construction manager or general contractor overseeing the parking of the construction workers. The contract specifies where and when workers can park. Mr. Peverada has given MMC a copy of the specifications the City used in renovating Merrill Hall relative to contractor parking. It is expected that contractors and their employees for the office building will park at offsite locations (not on city streets) acceptable to MMC. MMC will utilize this information in preparing upcoming contracts. During the development of the Medical Office Building, MMC will provide additional parking at the St. John Street shuttle lot as necessary to replace the 52 surface spaces on the site.

#### **G. Alternative Transportation**

MMC has a ride share program to encourage people to car pool to work. The program includes a guaranteed ride home provision and participants are provided preferential parking. MMC proposes a renewed commitment to this program and proposes the following specific action:

- MMC will work with PACTS to develop a database for use in their ride share program.
- MMC will appoint a person to be in charge of the parking program and work with the City in identifying potential solutions to issues as they arise.
- Promote ride share and use of Metro with our employees.

#### **H. Parking Enforcement**

MMC fully supports aggressive efforts by the City of Portland to enforce the rules and regulations on the streets surrounding the Bramhall campus. We would encourage the City to step up its enforcement even further and to consider further restrictions on on-street parking. MMC supports increased enforcement of on-street parking through time limitation changes or restrictions. In addition, MMC supports the use of parking meters on Brackett, Chadwick and Gilman Streets.

## CITY OF PORTLAND

## MEMORANDUM

TO: Rick Knowland, Senior Planner  
FROM: John Peverada, Parking Manager J.P.  
DATE: April 10, 1998  
RE: MMC Parking Management Plan

This afternoon, MMC sent over a revised Parking Management Plan in response to my memo of March 27th; however, they have still not completely addressed all issues.

In section "F. Contractor Requirements During Renovation / Construction Projects", the hospital continues to state that they will provide additional parking at the St. John St. shuttle lot as necessary to replace the 52 surface spaces on the site. **However, as I have stated previously, there are currently over 120 vehicles parked on the site** (47 in the Congress St. lot, 30 in the Forest St. lot and 45 in the Boynton St. lot). Per the hospital's figures, there are only 150 spaces in the St. John St. lot, and those are already being counted toward employee parking.

If this issue is not dealt with, we will have major neighborhood issues to deal with, which may linger on long after the project is completed.

On page 4, reference is made to Sea Dogs and Parking Bans; however it is still vague. MMC states that they "will make spaces available in the new garage (as they do in the main garage) for evening Sea Dogs games. We will work with the City to define the number of spaces. The charge will be the same as the existing garage". I have to honestly say that since the first Sea Dogs season I was unaware the main garage has been available for Sea Dogs parking. In any case, let's state the rate in this plan, and establish and agree on a minimum number of spaces to be available in the new garage for Sea Dogs games at this time.

Provided that these two issues are addressed accordingly in a revised parking management plan submitted prior to Tuesday's Planning Board meeting, I would agree that Maine Medical Center has completed it's Parking Management Plan to my satisfaction.

Please advise the appropriate people at Maine Medical Center and the Planning Board of my comments. I do not want to nit pick; however, I do want to avoid any future misunderstandings.

If you should have any additional questions or concerns, please do not hesitate to contact me.

cc: Joe Gray, Planning  
Councilor Karen Geraghty  
Larry Ash, Traffic Engineer

CITY OF PORTLAND

ATTACHMENT B

MEMORANDUM

TO: Rick Knowland, Senior Planner  
FROM: John Peverada, Parking Manager J.P.  
DATE: March 27, 1998  
RE: Maine Medical Center Parking Management Plan

At last night's neighborhood meeting, Paul Gray gave me a copy of the revised Parking management Plan, dated February 11, 1998. He apologized, and said that he thought his secretary sent us a copy weeks ago. Please find attached a copy for your review.

In the last paragraph on page two, the hospital answered my previous question "...provide the City with verifiable documentation that every employee will have an off-street parking space", by stating that they have approximately 1,300 daytime employees, and 1,626 parking spaces. I will take their word on this, and remind any of their employees of the same if they complain about tickets or boots.

If the hospital makes the following few additional revisions to the plan, I will be satisfied:

1. Section F - Contractor Requirements During Renovation / Construction Projects

- a. A sentence should be added that states all contractors, subcontractors and their employees are to park off-site. Even though this is alluded to by the hospital agreeing to utilize the information on the Merrill Auditorium specs, I feel that it should be clarified here.
- b. The hospital states that during the development of the garage/office building, they will provide additional parking at the St. John St. shuttle lot as necessary to replace the 52 surface spaces on the site. At first this sounds good, until you refer to page two of the plan, and realize that there are only 150 parking spaces in the St. John St. lot, and more importantly, **there are currently over 120 vehicles presently parked on the site** (47 in the Congress St. lot, 30 on the Forest St. lot and 45 on the Boynton St. lot).

In order to get this project off to a good start with the neighborhood, it is going to be imperative that this issue be dealt with prior to the issuance of a building permit.

2. The parking plan should make reference to the meeting between the City (Bob Ganley, Councilor Geraghty and Joe Gray) and MMC (Vincent Conti and Paul Gray), in which the hospital agreed to make the new garage available for Sea Dogs and Snow Ban parking. The hospital should state when the parking will be available, how many spaces will be available and at what rate, if any.

I assume that you will forward these comments to the appropriate people at Maine Medical Center. Please contact me if you have any additional questions or concerns.

cc: Gloria Thomas, Department Head  
Joe Gray, Director of Planning ✓  
Councilor Karen Geraghty  
Larry Ash, Traffic Engineer (with attachment)

HARRIMAN ASSOCIATES

January 30, 1998  
Fax Confirmation Sent January 30, 1998

Mr. Rick Knowland  
Senior Planner  
Planning & Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

Re: Maine Medical Center  
Medical Office Building, Parking Structure and Overhead Connector  
Portland, Maine  
Project No. 97.129-00

Dear Rick:

The following responses are comments to your letter, dated December 24, 1997, outlining staff comments regarding the proposed Maine Medical Center Office Building on Congress Street.

1. *Please submit catalog cut information on the proposed grating, fencing material, and security gate.*

See attached cut sheets for information.

2. *Describe the dark vertical detail (width, material, it is indented?) on the facade.*

See attached detail drawing C4 for information on recessed brick.

3. *Are the windows clear tinted (if yes, what color?) or reflective?*

The windows are bronze tinted, but not reflective.

4. *Has any consideration been given to an alternative color to brown for the window frames? When viewed in the context of the building, brown gives the facade a dark tone. What about green? This color selection has also influenced such elements as the metal roof of the parking garage elevator. Although color is in the eye of the beholder, the trim color seems a bit somber for the building.*

HARRIMAN ASSOCIATES

Mr. Rick Knowland

Page 2

January 30, 1998

The window frames are medium bronze in color. This color will coordinate with the color palette of the rest of MMC's Portland Campus and integrate well with the proposed color of the brick and precast concrete.

- 5. *Are the window frames a baked enamel or anodized? A baked enamel color would be preferred.*

Bronze anodized.

- 6. *Please show a typical cross section of the window and the surrounding brick wall.*

See attached window detail drawings A1, A2, B1, B2, C1, and C2.

- 7. *The southerly elevation shows a fence with two posts. The white color of the posts doesn't seem appropriate, given the material and colors of the building facade.*

The posts will be clad with brick and precast concrete to match the building facade.

- 8. *Please describe or show a detail of the facade design of the parking garage concrete panel.*

See attached detail 4 Basement Wall Section for the profile of the parking garage precast panels. A sample of the proposed precast concrete for the garage is enclosed.

- 9. *Is the color of the precast concrete on the building facade the same color as the parking garage concrete panels?*

The color of the precast concrete specified for the project will be consistent throughout the entire project.

- 10. *Indicate the exterior material of the roof top structures.*

See attached cut sheet for information on the roof top screen material for mechanical equipment. The stair enclosure will be covered with standing seam metal roofing material. The color for both of these systems will be medium bronze to match the window fenestration.

HARRIMAN ASSOCIATES

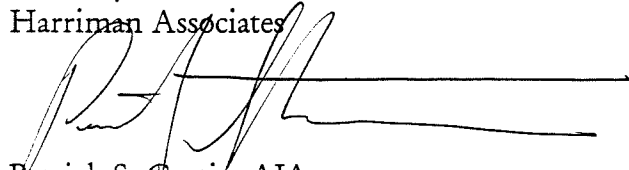
Mr. Rick Knowland  
Page 3  
January 30, 1998

11. *We are very interested in the latest version of the skywalk. Please let us know when the latest version is available. Obviously, we view the building and skywalk as a cornerstone project to help revitalize this area of Congress Street.*

The skywalk design is still being reviewed by Maine Medical Center. The final design will be forwarded as soon as it is available.

If you have additional questions, please call me.

Sincerely,  
Harriman Associates



Patrick S. Costin, AIA  
Project Architect

sjtho

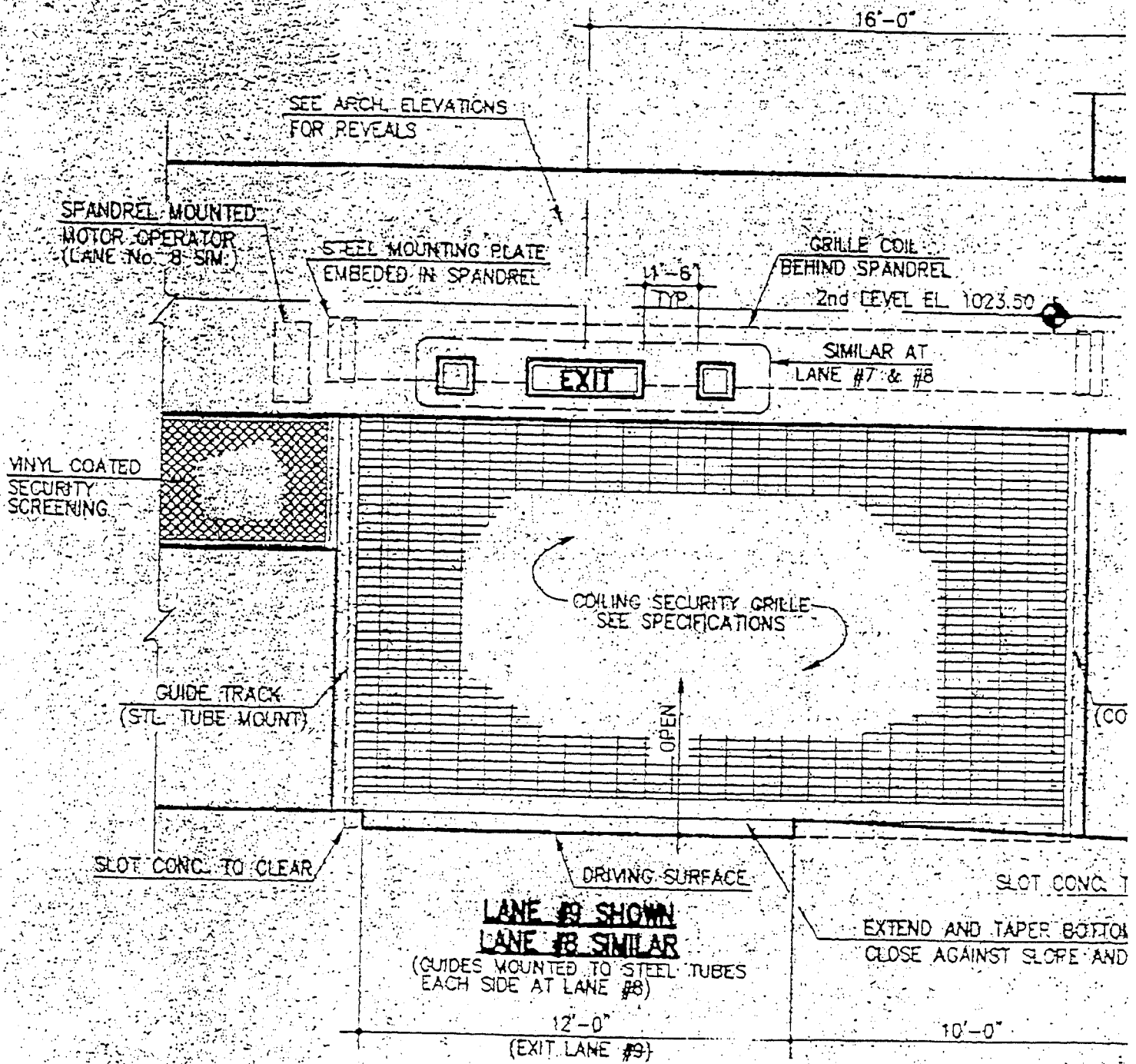
Enclosure

cc: Jim Clarkson (via fax 972-931-8966)  
Jim Morrison (via fax 871-6195)



# PROPOSED SECURITY GATE @ GARAGE ENTRY/EXIT

C-4



1 ELEVATION  
 A11.2 SCALE: 1/4" = 1'-0"

# FENCING MATERIAL

## Product Presentation

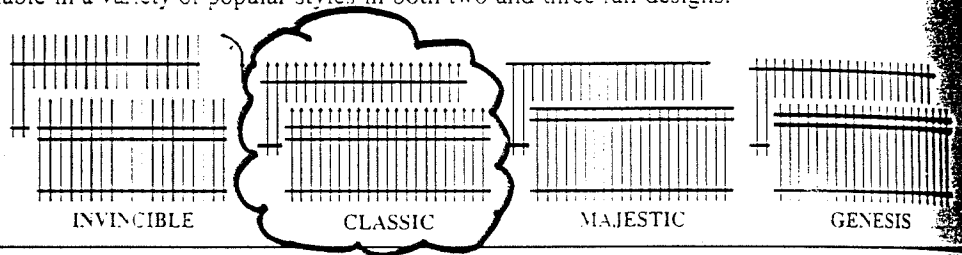
C-5

AEGIS II™ - A revolutionary system of fencing posts, framework and mounting accessories that are easily assembled attractive "good neighbor" appearance with no exposed fasteners.

### The Aegis II™ Advantage

- STRENGTH**
- Aegis II™ is the strongest ornamental component fence system available.
  - Superior vertical and horizontal load capacities with all-steel framework and specially designed Forerunner™ Rail.
- SECURITY**
- No external fasteners resulting in increased security and strength.
  - Special one-way security fastener for rail-to-bracket connection.
  - Internal retaining rod for picket-to-rail connection cannot be breached when panels are in place.
- VALUE**
- Due to the unique patented design using high technology roll form equipment (in-house tube) Ameristar is able to supply an affordable ornamental fence as a welcome alternative to chain link fencing.
- QUALITY**
- G-90 galvanized steel resulting in superior rust protection.
  - Maintenance free *Permacoat™* (double layer) powder coat system.
- APPEARANCE**
- Architecturally pleasing, free flowing lines with no external fasteners.
  - Visually reflects strength, security and beauty.
  - Offered in four colors - Black, Brown, Desert Sand and White.
  - Available in a variety of popular styles in both two and three rail designs.

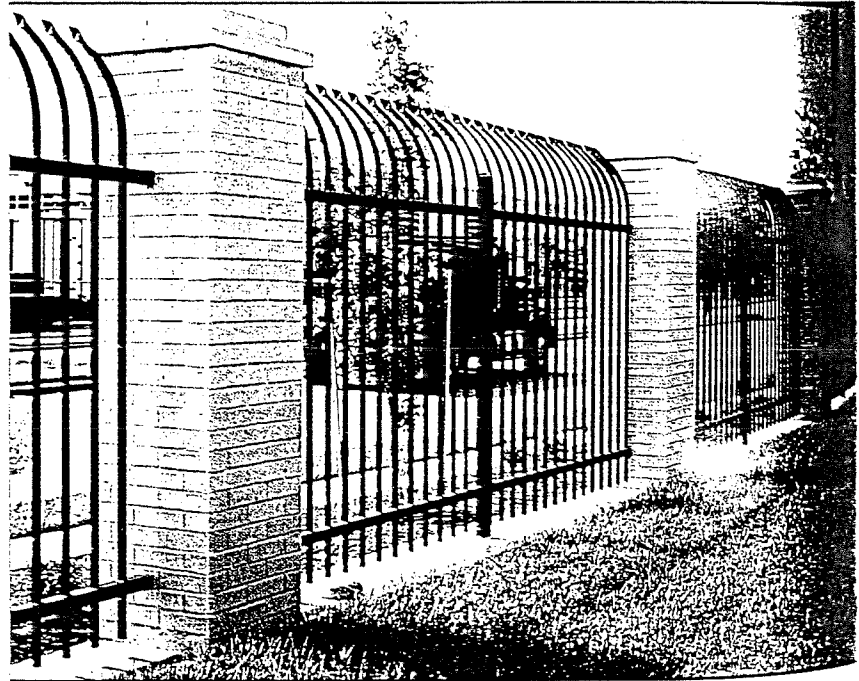
### Styles Available



### Invincible



Available In:  
Style I2 (2-Rail)  
or I3 (3-Rail)



#### 2-Rail

Security and protection are combined with the beauty of ornamental fencing in the Invincible design. Each picket is spear-shaped and extends one foot above the top rail, curving outward to make this fence incapable of being overcome, as the name implies.

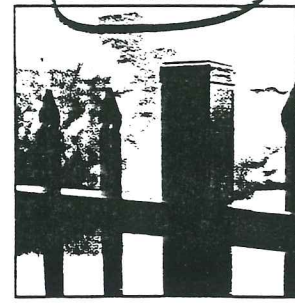
#### 3-Rail

The extra strength of the third rail, coupled with the strength of the Forerunner™ cross-section, make the Invincible an increasingly popular alternative to security fencing of chain link and barbed wire.

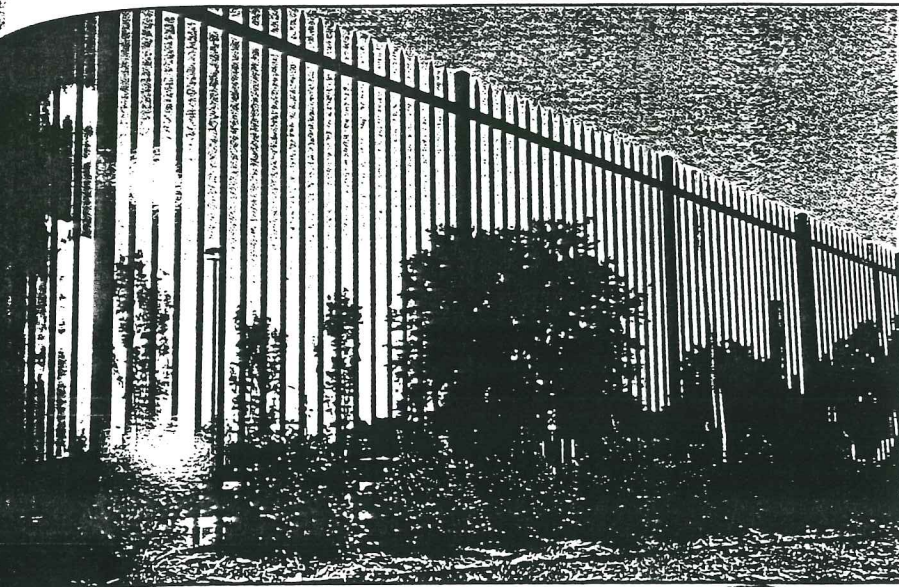
C-6

02830/AMI  
BuyLine 3012

**Classic**



Available In:  
Style C2 (2-Rail)  
or C3 (3-Rail)

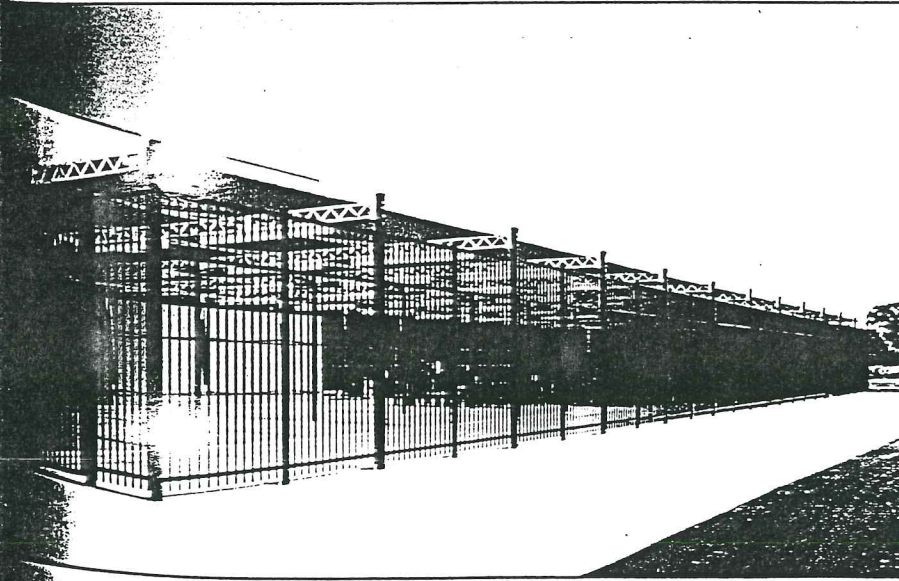


**2-Rail**

Ameristar's spear-shaped picket extends through the runner™ top rail to form the attractive traditional Classic design. The picket is formed with a 3/8" diameter rounded tip rather than a sharp point.

**3-Rail**

Adding the third rail gives the traditional Classic look 50% greater strength. It is ideal when situations require greater fence heights and the fence must withstand heavier vertical loads.



**Majestic**



Available In:  
Style M2 (2-Rail)  
or M3 (3-Rail)

**3-Rail**

Large estates and many companies are moving toward the strength and "no-nonsense" elegance of the 3-Rail Majestic design. The double top rail at the top of this fence enhances the lines of many contemporary facility designs.

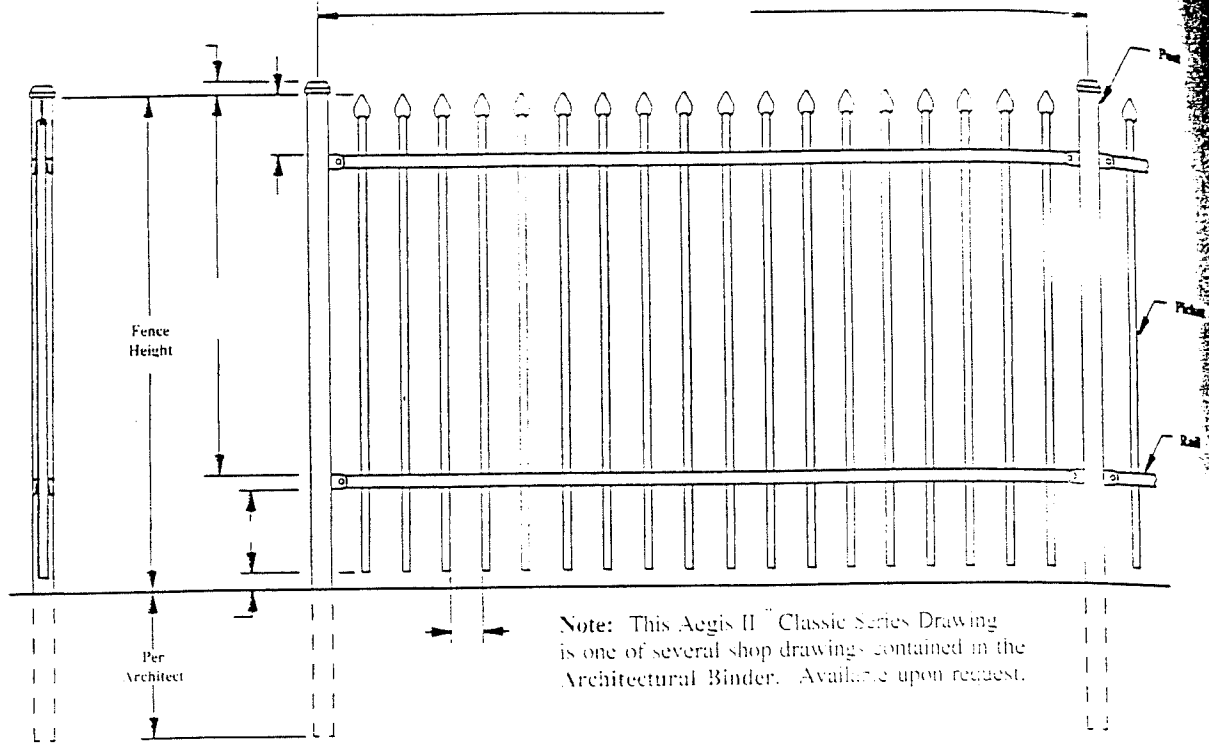
**Genesis (Not Pictured)**

The Genesis style offers extended pickets similar to the Classic, but is differentiated by having a flat rather than a spear-shaped picket top. Genesis is becoming increasingly popular as a perimeter for apartments and condominiums. Available in both 2 and 3-Rail styles (Style G2 or G3).



# Comprehensive Product Information

## Shop Drawings



### Framework

Pickets	Rails	Posts
1" X 16 GA.	1-3/4" X 14 GA.	See Table Below

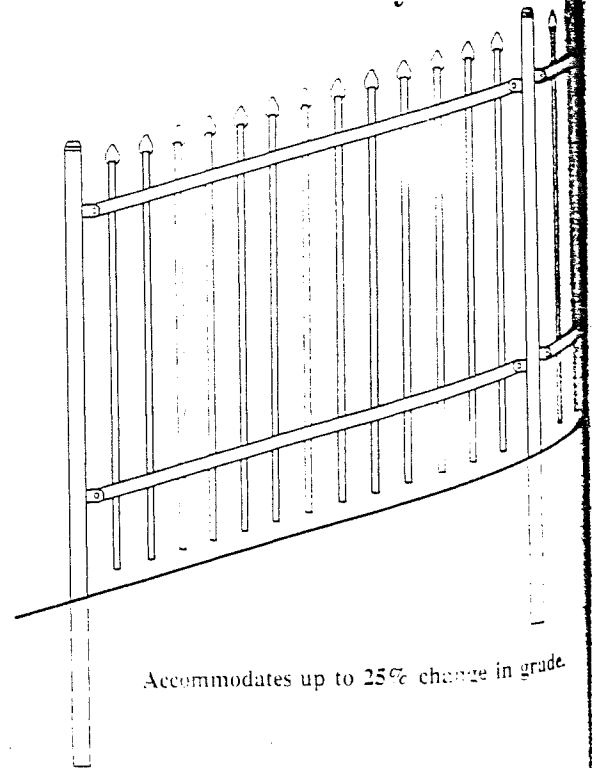
\* Special Roll-Formed Forerunner™ Shape

### Wind Loading

Height (FT)	Rail Length	Post Size	Wind Load Capacity Factor (PSF)	Typical Wind Load Capacity (mph)
6	6	2-1/2" X 12 GA.	45.5	133
		3" X 12 GA.	54.6	143
	8	2-1/2" X 12 GA.	34.2	113
		3" X 12 GA.	41.0	127
7	6	2-1/2" X 12 GA.	33.4	114
		3" X 12 GA.	40.0	125
	8	2-1/2" X 12 GA.	25.0	99
		3" X 12 GA.	30.0	103
8	6	2-1/2" X 12 GA.	25.6	100
		3" X 12 GA.	30.7	110
	8	2-1/2" X 12 GA.	19.2	97
		3" X 12 GA.	23.0	95
9	6	3" X 12 GA.	24.0	97
10	6	3" X 12 GA.	21.6	92

Note: Mph calculated using ANSI/ASCE 7-88, "American Society of Civil Engineers Minimum Design Loads for Buildings and other Structures." Exposure Category B: urban and suburban areas with closely spaced obstructions having the size of single-family dwellings or larger. For wind loading applicable to a particular specification, consult the appropriate Building Code.

### Biasability



Accommodates up to 25% change in grade.

C-8

# SECURITY GRATING @ GARAGE

## Choosing the proper posts Anchor framework is available in



The End, Corner and Gate Posts must be strong to withstand the strain of the fabric which is stretched between them. If they are not of the proper strength, they will bow or bend.

**COMPARISON CHART**  
Based on Calculated load/or yielding of Post

POST TYPE	BEND STRENGTH
2 1/2" Square Post	547 lbs.
3" O.D. Pipe Post (Sch 40)	444 lbs.
2 1/2" O.D. Pipe Post (Sch 40)	234 lbs.

A 2 1/2" Square Post is 25% Stronger Than a 3" O.D. Sch. 40 Pipe Post.



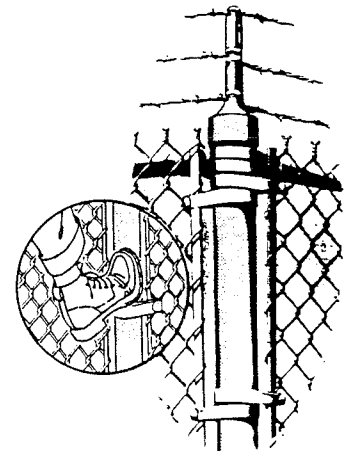
The clips that attach the fabric and posts do not afford a foothold to climb.

You may consider these square posts

OR

~~You may consider round posts...~~

- With Round Corner, End or Gate Posts You Lose a Degree of Security.
- The Bands That Hold the Fabric to a Round Post Act as a Ladder to Climb.
- The Round Band Can be Removed by Loosening its Nut & Bolt.
- Bands are Also Less Attractive Than the Clip that Holds the Fabric to Anchor's Square Post.



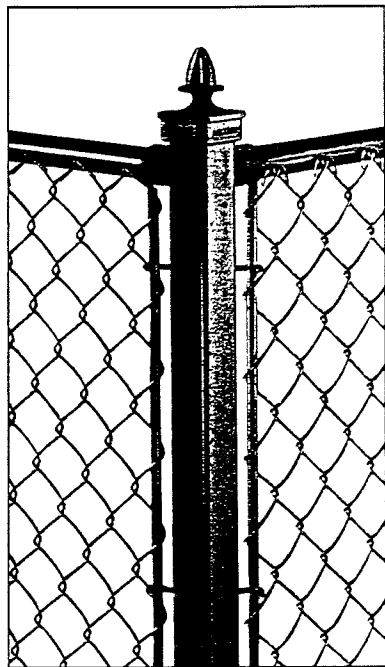
Complete drawings and specs available in CAD or hard copy.

410/633-6500

Anchor offers both the pipe posts and the square posts...but...you get more for your money with the stronger, more attractive square posts.

# You must also choose a coating for your framework

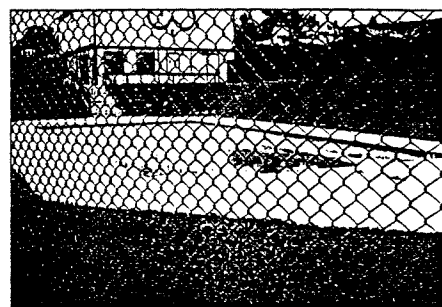
Whether you choose the square end, corner or gate post, and the "C" line posts; or the pipe framework, all are available with galvanized coating or thermally fused vinyl coated over galvanize.



Like the fabric, the metallic galvanized coating will have limited life because of oxidation and rust. On the other hand, the vinyl coated framework will give many additional years of maintenance free life and service.

A quality coated fence system will not only add many years of life to your fence, but will also enhance the appearance of your factories, schools, parks, or other properties. This will give the message that your facility is a major contributor to a successful community.

We at Anchor take more steps to assure that your vinyl coating will be the very best value your money can buy. While some coaters merely apply vinyl to uncleaned or semi-cleaned framework pipe, Anchor takes all of the steps listed to the right so that all parts of the thermally fused PVC framework comply to the adhesion specifications listed in ASTM F1234.



Vinyl Coated Framework is Available in

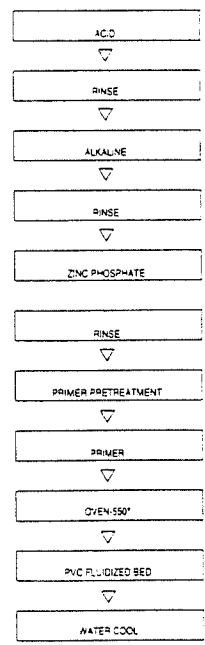
- Woodland Green
- Ensor Green
- Earth Brown
- Black

Custom colors available at slightly higher cost.

Ask for complete specifications & drawings.

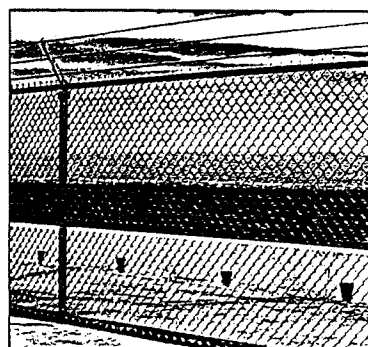
410/633-6500

## Anchor's 11 Step Cleaning Process



No one else does this much!

# link fabric you have a wide styles and finishes

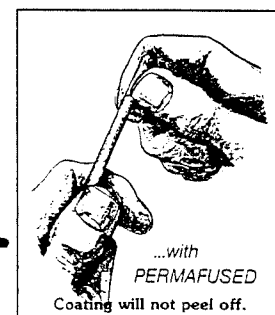
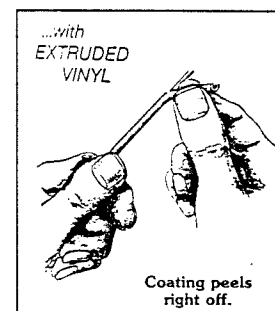
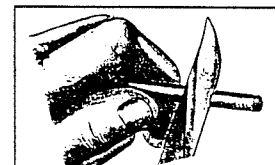
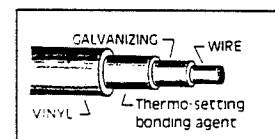


Both "ASTM" and the "Federal" specifications require that the steel core wire be equal to the gauge that is specified (not the combination of the steel core and the vinyl coating). Beware, however, there are also fabrics with less steel and less strength that do not meet any recognized specification.

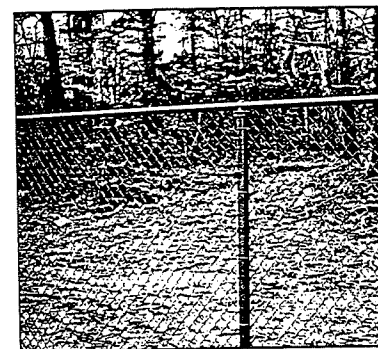
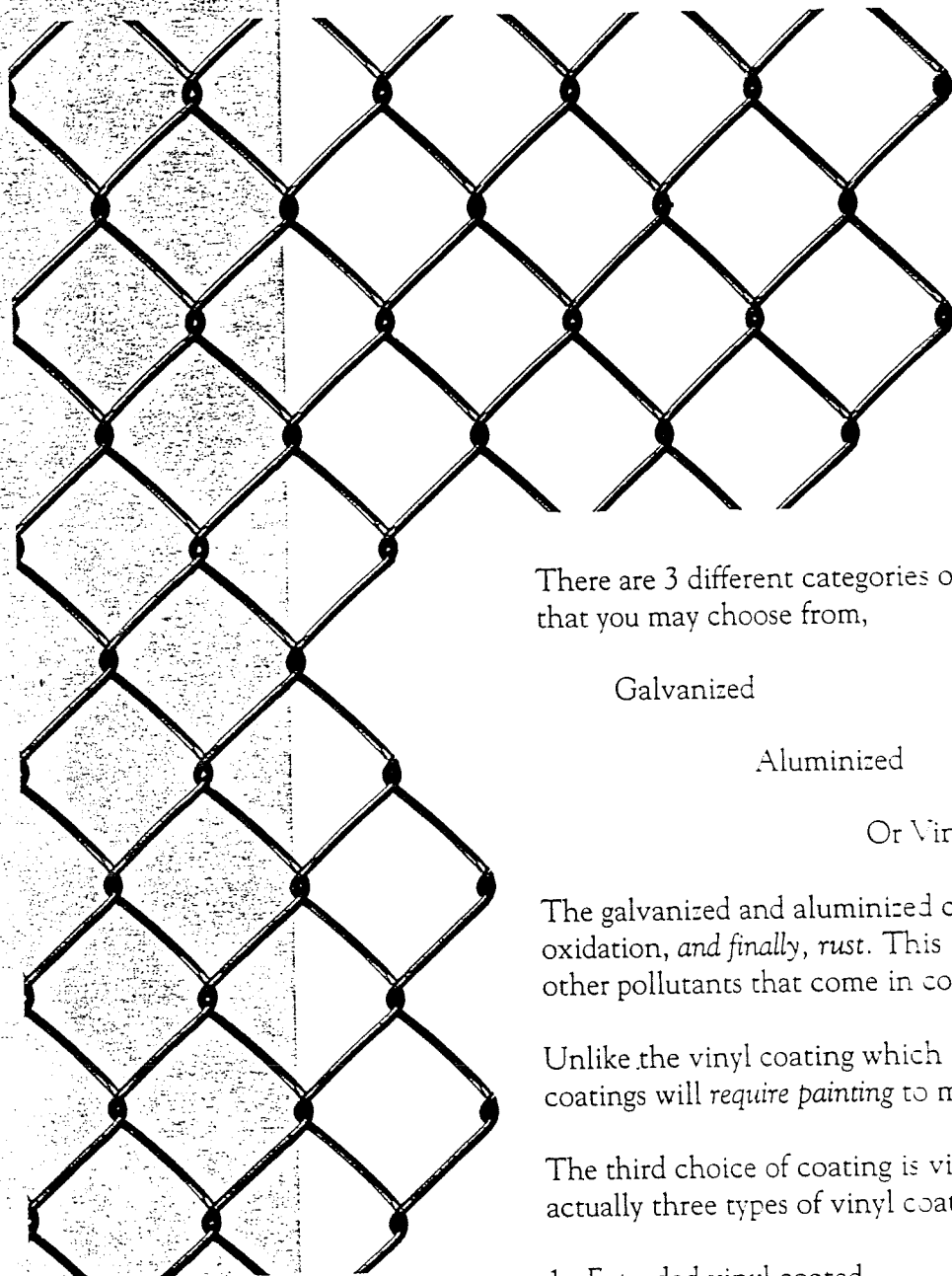
[9 ga. = .148" core wire; 6 ga. = .192" core wire]

True spec wire also requires equal amounts of galvanize (zinc coating) under the vinyl coating. This leaves the vinyl coating itself to be the ingredient that you must choose. Here are the differences:

1. The first type is extruded coating which means that a loose sleeve of vinyl is pulled over the wire, like electrical wire. This coating is easily removed by vandals.
2. The second type is extruded and adhered to (glued) which has a thin coat of glue to help stop the vinyl from slipping. This type is sometimes called "bonded." Don't be fooled by that term, the vinyl can still be easily removed.
3. The third type is thermally fused which means that the vinyl is permanently fused to the galvanized steel core wire. The adhesion must be greater than the cohesive strength of the vinyl coating to assure that this vinyl coat cannot be removed. This type is called "Permafused." Whether you call for "Permafused" by name or use the generic term of ASTM F668-2b (thermally fused), this type will be your best investment.



# When it comes to chain choice of



There are 3 different categories of fabric coatings that you may choose from,

Galvanized

Aluminized

Or Vinyl Coated over Galvanized Wire

The galvanized and aluminized coatings are metallic and subject to oxidation, *and finally, rust*. This is accelerated as a result of *acid rain* and other pollutants that come in contact with the fence coatings.

Unlike the vinyl coating which is impervious to acid rain, these metallic coatings will *require painting* to maintain their strength and appearance.

The third choice of coating is vinyl coated over galvanized. There are actually three types of vinyl coated fabric,

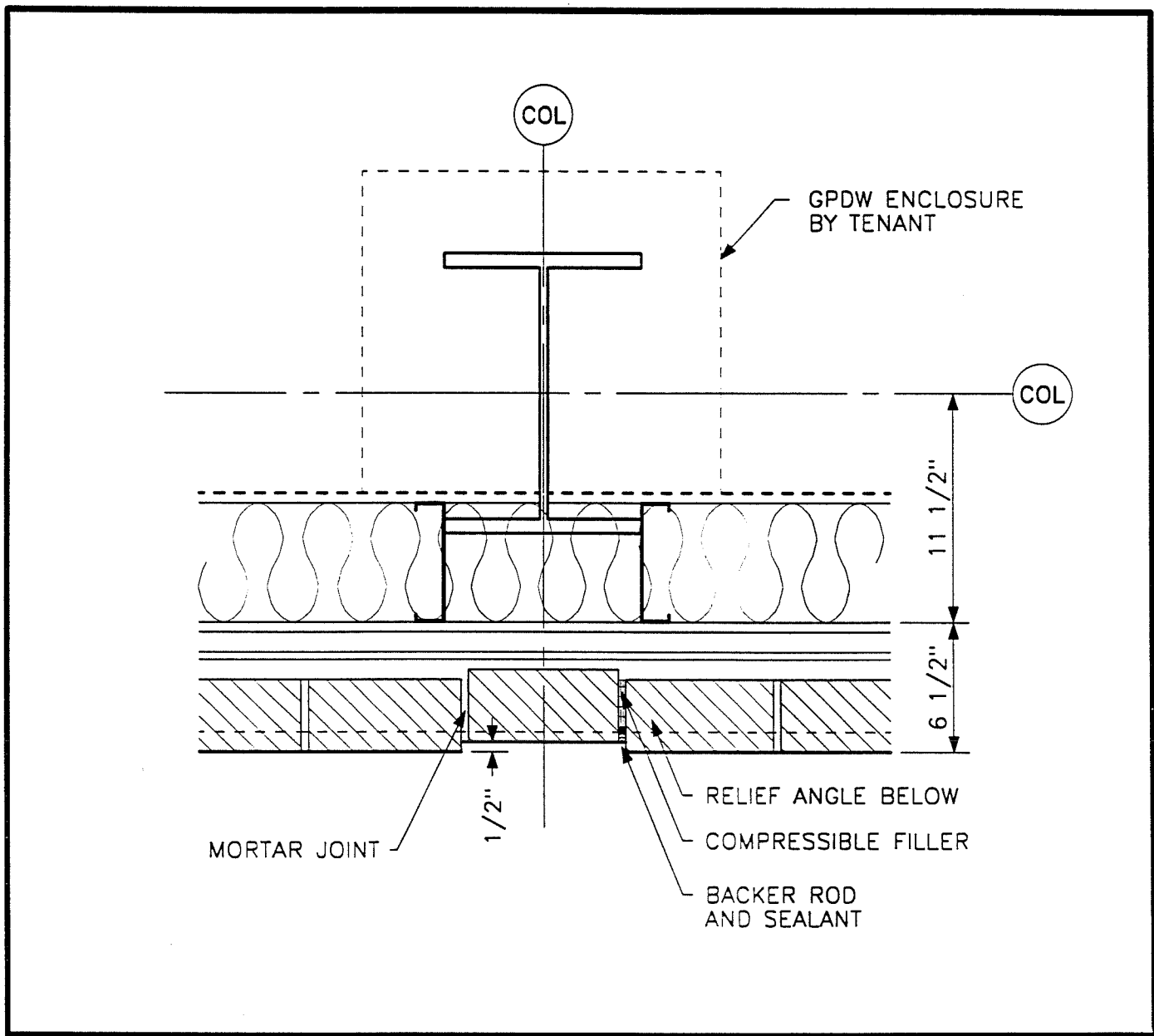
1. Extruded vinyl coated,
2. Extruded & Adhered to (glued) vinyl coated,
3. Thermally fused vinyl coated.

Ask for complete details.

410/633-6500



# VERTICAL DETAIL WITH RECESSED ACCENT BRICK ON BUILDING FACADE

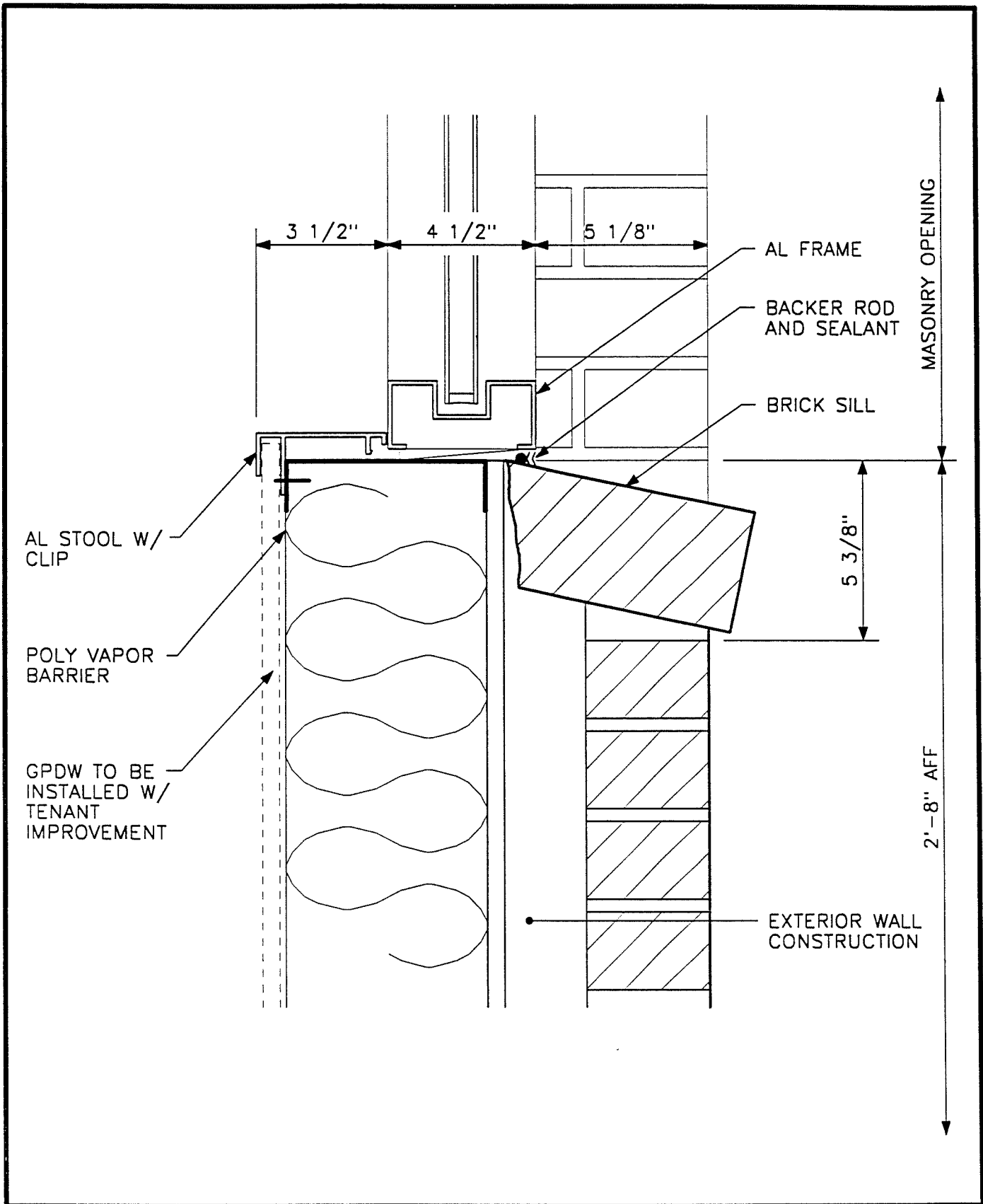


BRICK RECESS AT RELIEF ANGLE

1 1/2" = 1'-0"

REF: A5.1, A5.2

C4

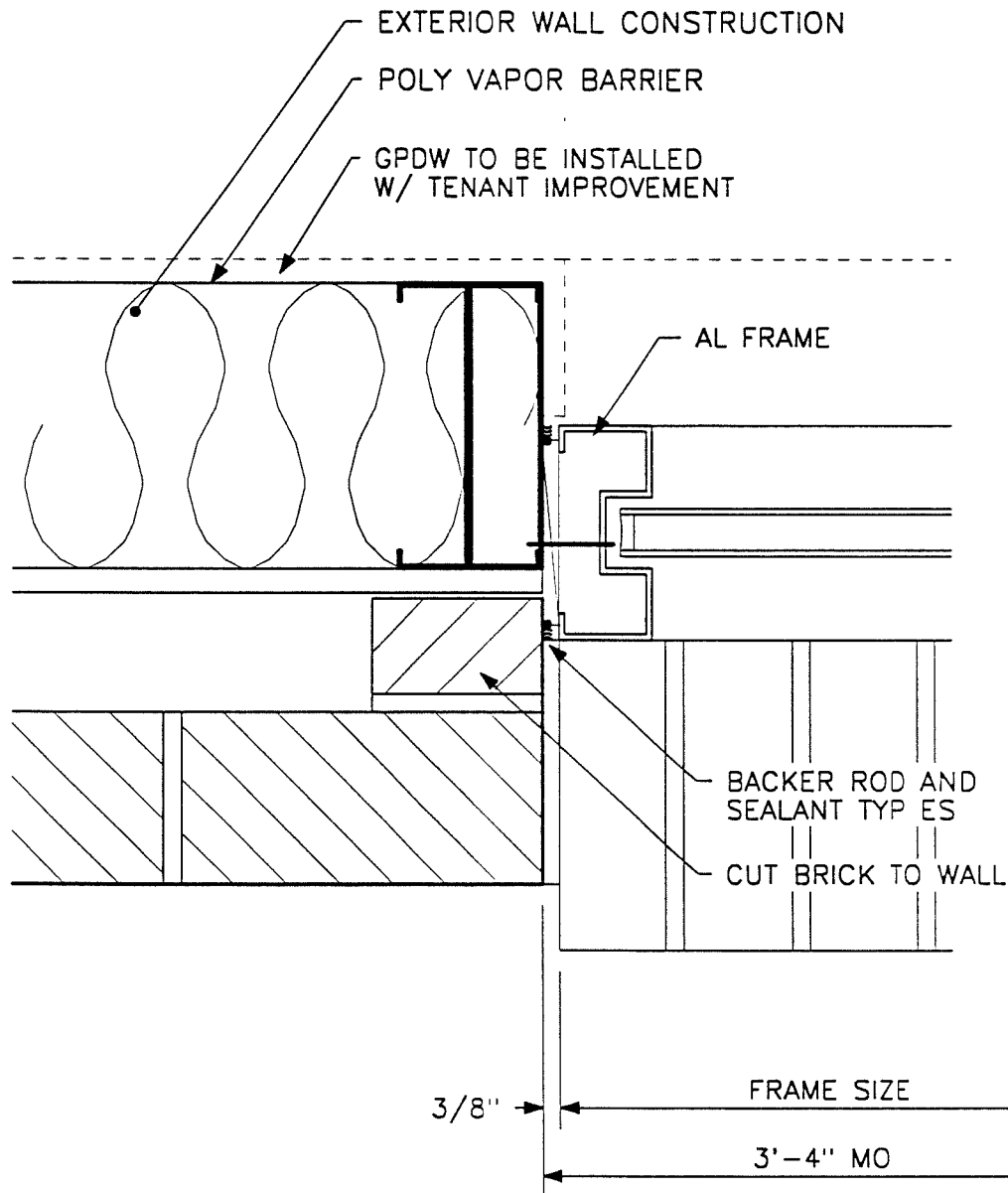


WINDOW SILL DETAIL

3" = 1'-0"

REF: A10.1

A1

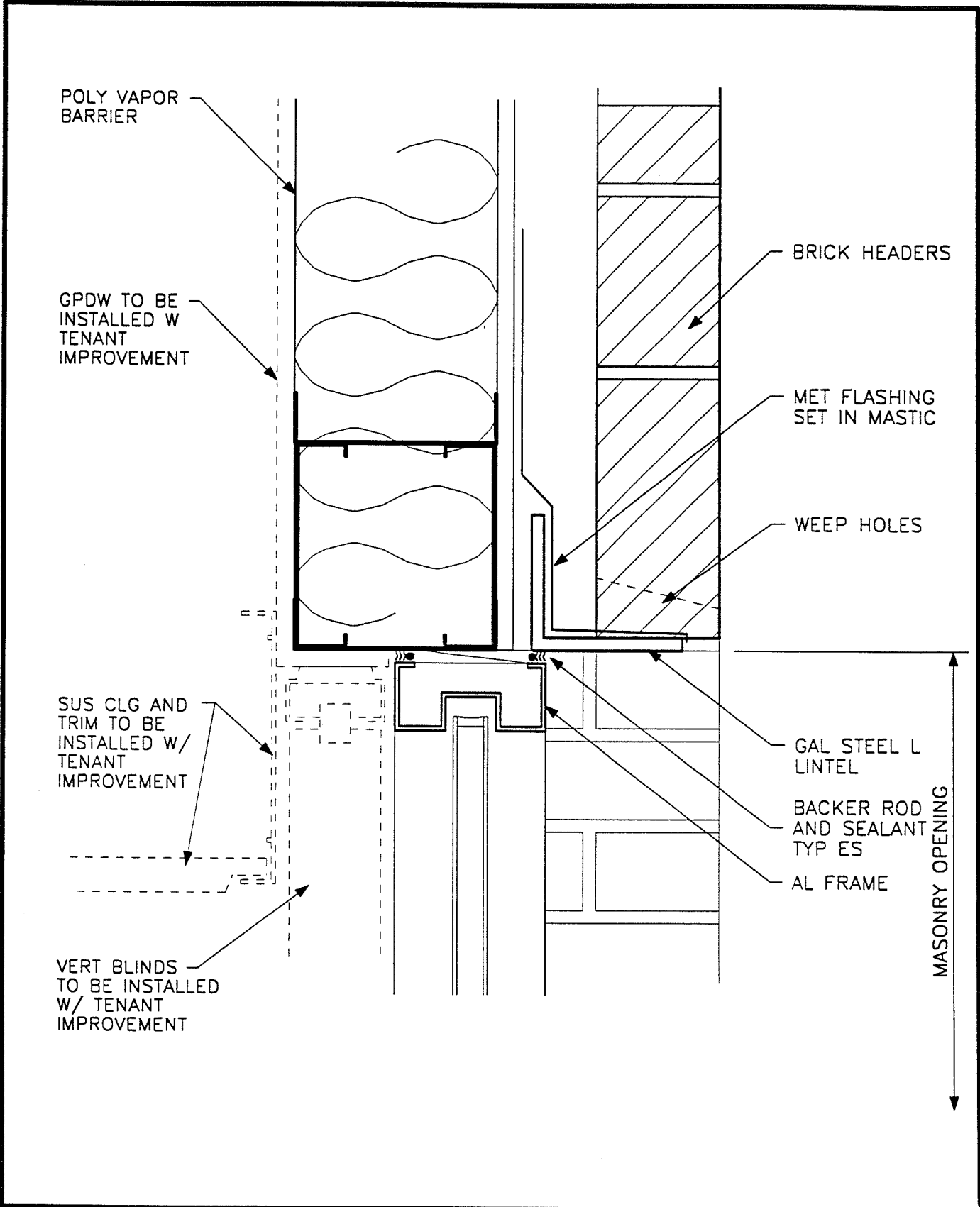


WINDOW JAMB DETAIL

3" = 1'-0"

REF: A10.1

B1



WINDOW HEAD DETAIL

3" = 1'-0"

REF: A10.1

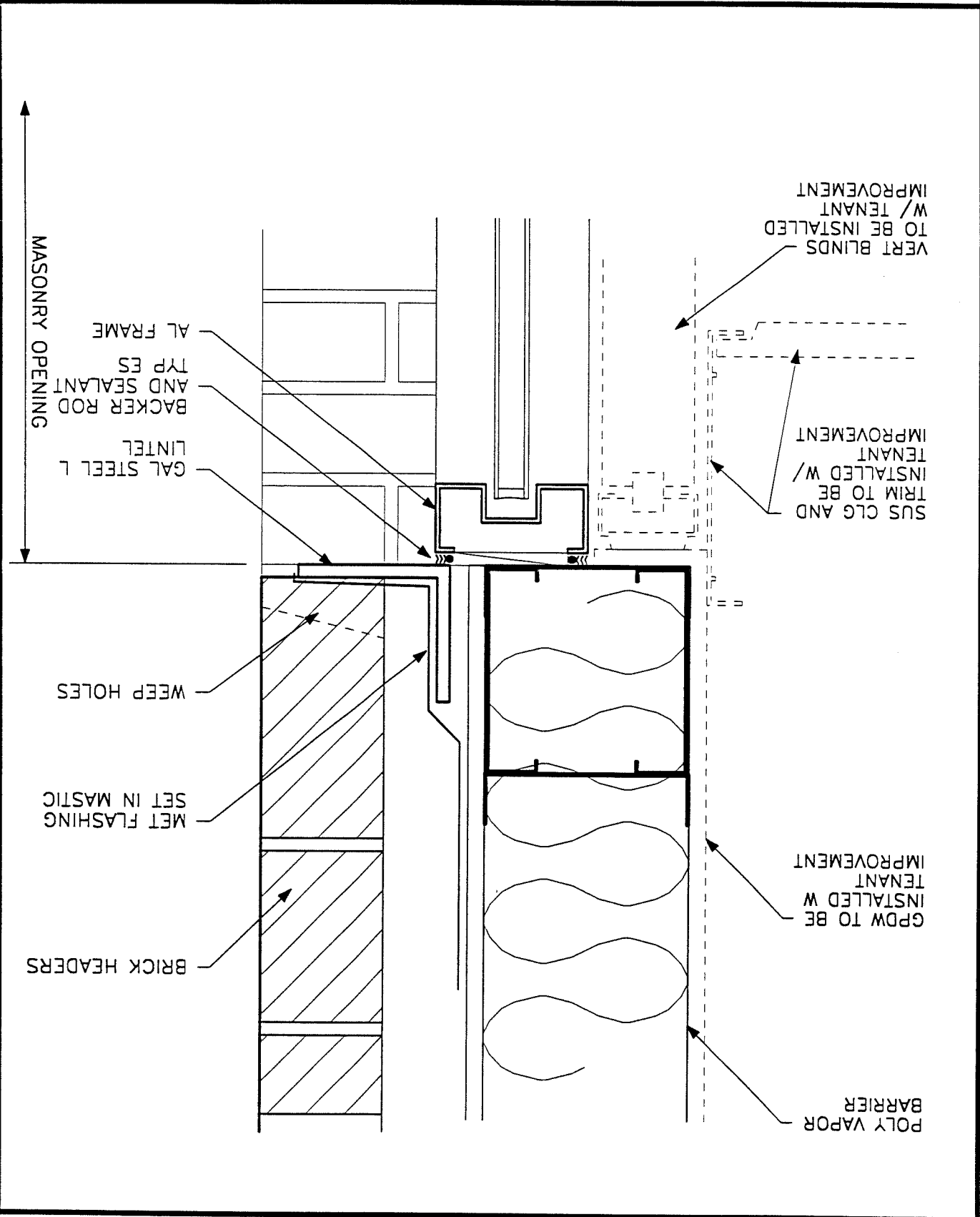
C1

C1

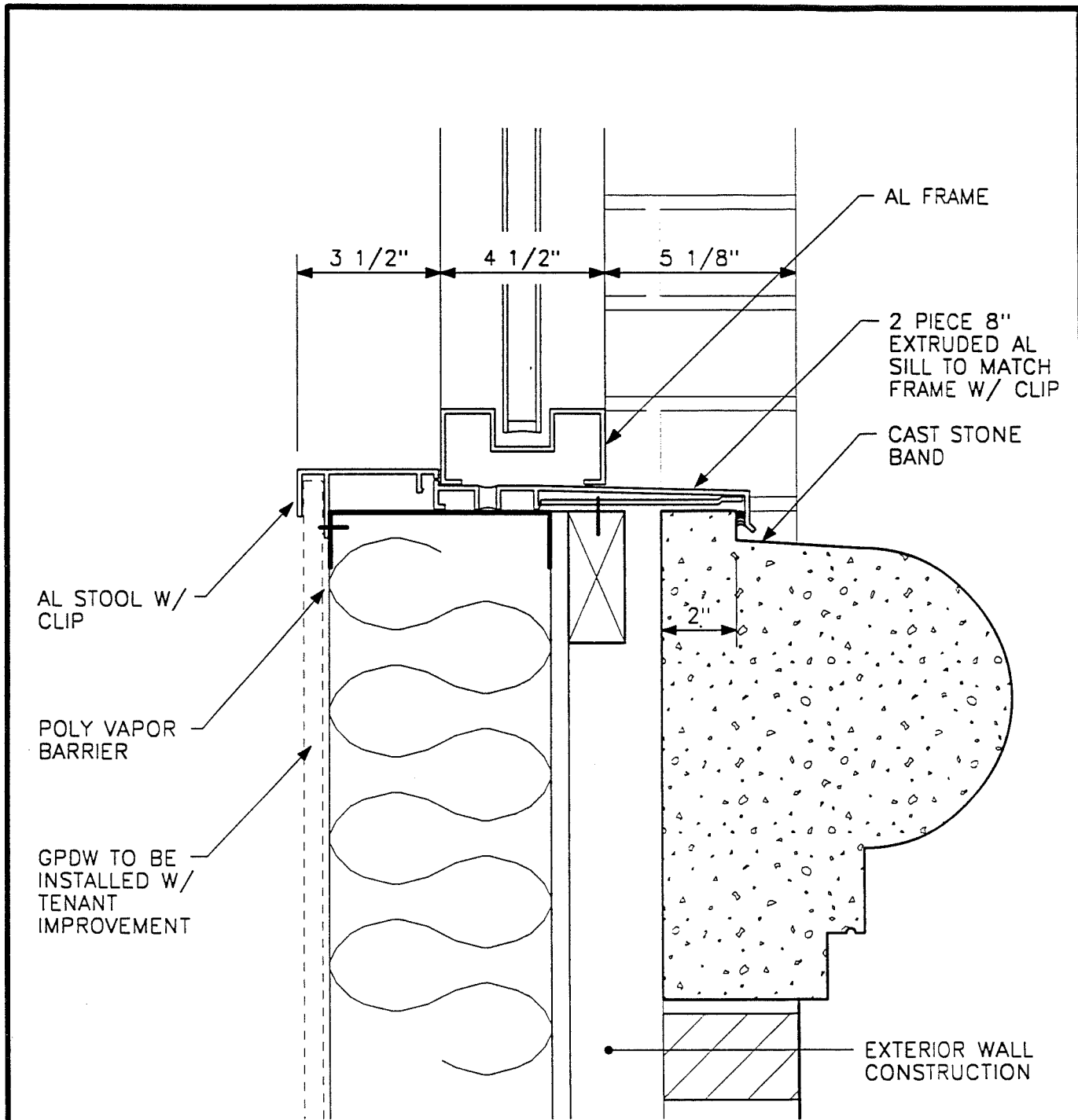
REF: A10.1

3" = 1'-0"

WINDOW HEAD DETAIL

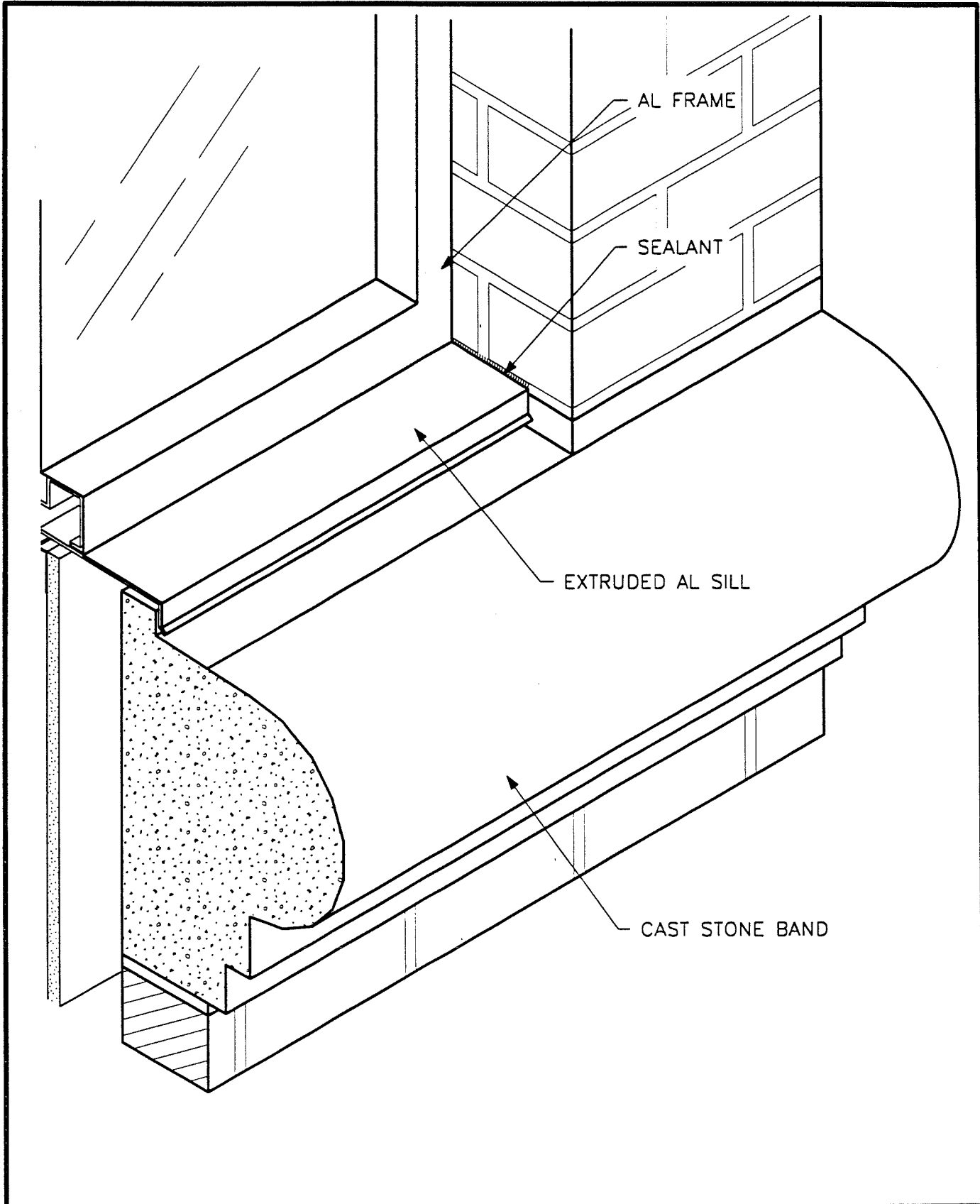


C-15



NOTE: SEE DETAIL B2/A10.6 FOR ISOMETRIC VIEW OF SILL CONDITION

WINDOW SILL DETAIL AT CAST STONE BAND		<b>A2</b>
3" = 1'-0"	REF: A10.1	

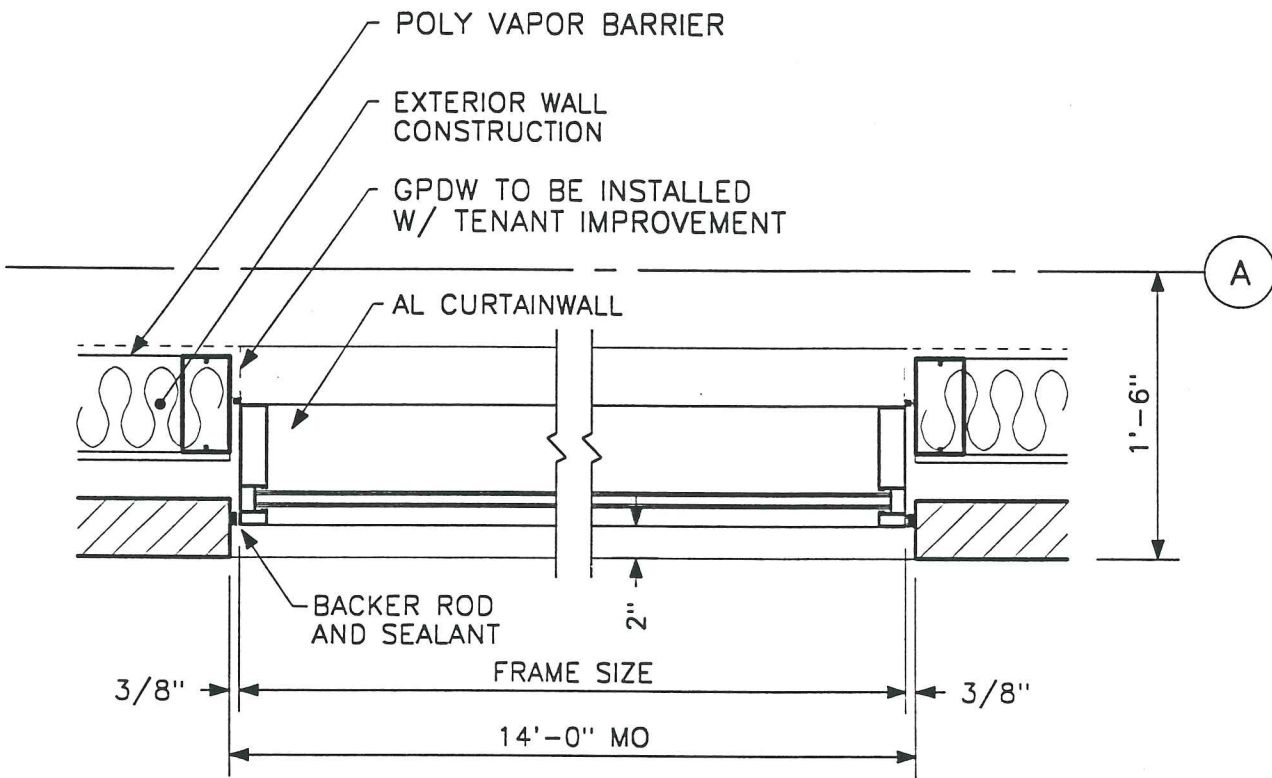


ISOMETRIC WINDOW SILL DETAIL AT CAST STONE BAND

**B2**

NTS

REF: A10.6



PLAN DETAIL

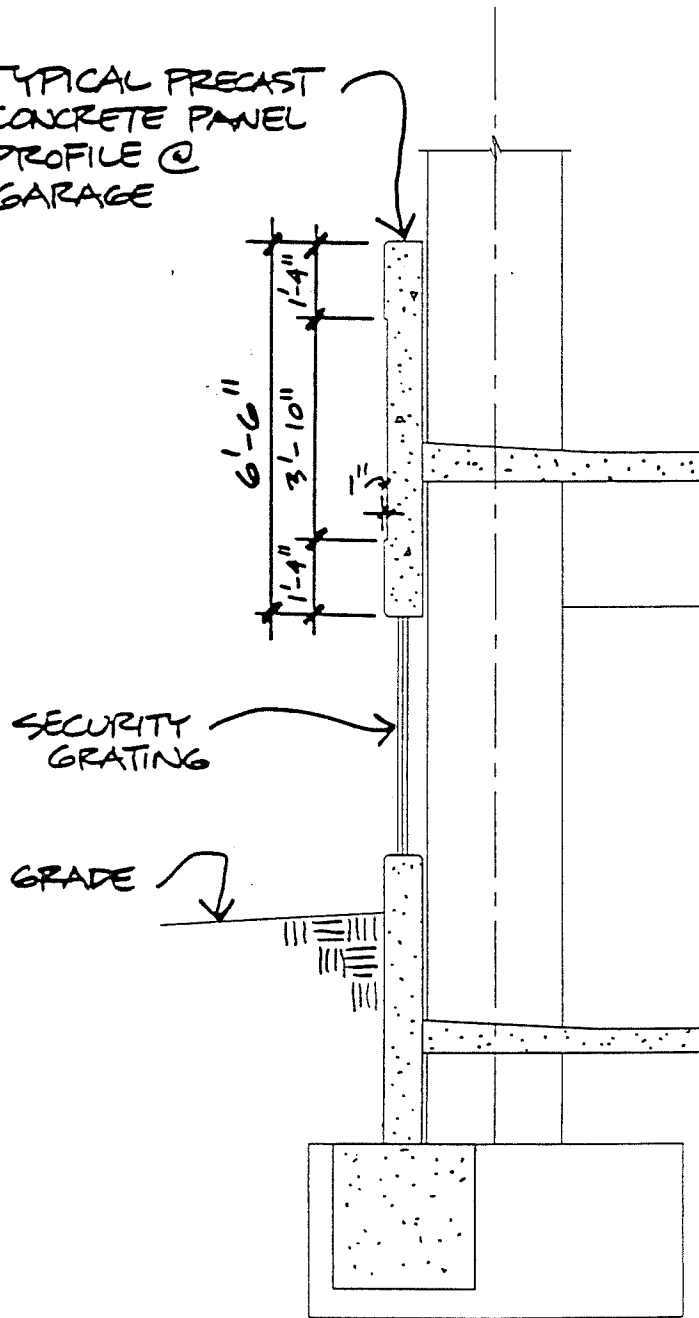
1" = 1'-0"

REF: A2.3

C2



TYPICAL PRECAST  
CONCRETE PANEL  
PROFILE @  
GARAGE



4 BASEMENT WALL SECTION  
1/2" = 1'-0"

# C/S VERT-A-CADE

# ROOF TOP MECHANICAL SCREENING MATERIAL

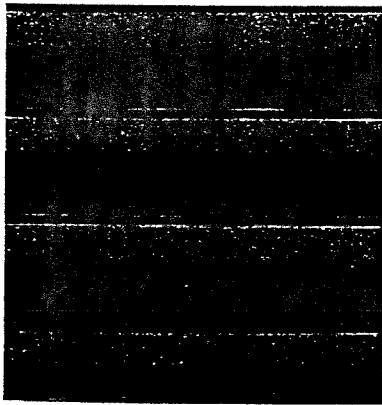
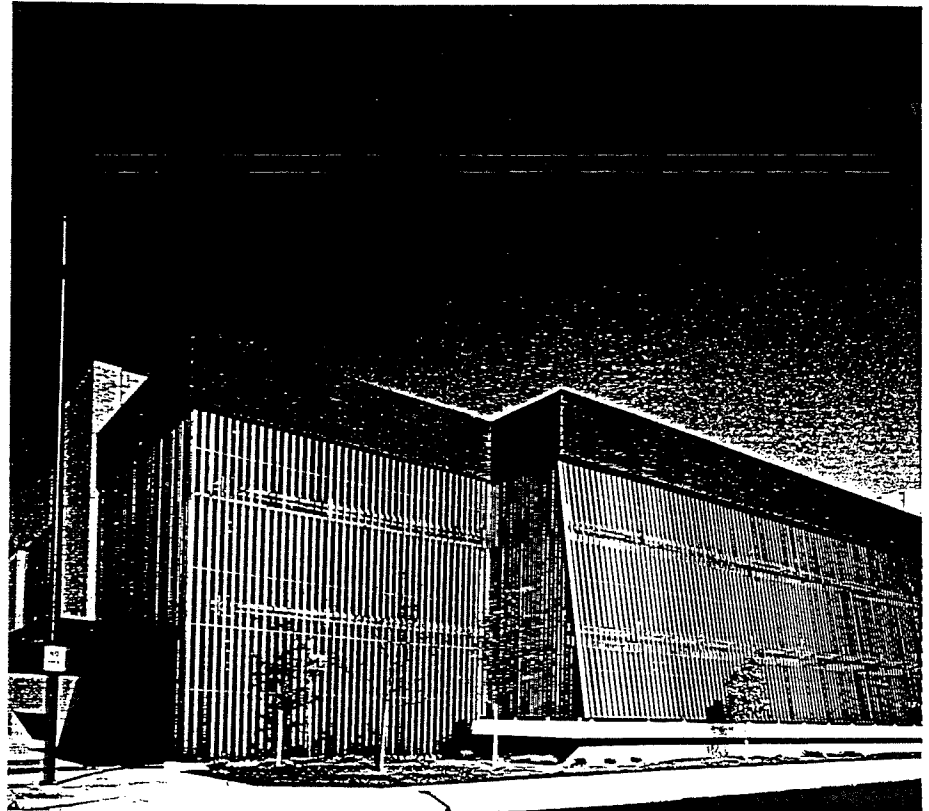
LINCOLN NATIONAL LIFE INSURANCE CO., Ft. Wayne, Indiana. Architect: MARTINDALE TOURNEY & GIBSON, INC., Ft. Wayne, Indiana. Parking Garage Screen: A modified version of the C/S Vert-A-Cade 500 system. Finish: C/S Duranodic #313 Dark Bronze.

Whatever the sight screening problem, there is a C/S Vert-A-Cade pattern to do the job—attractively and effectively.

A wide range of existing and completely new patterns are available, each varying in width, depth, shape, module and free area.

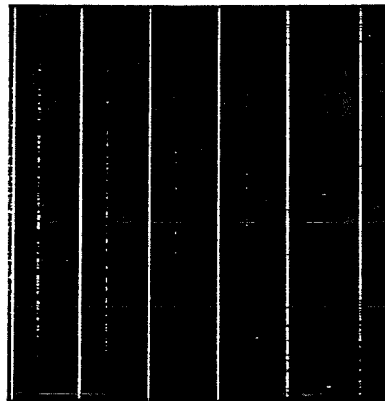
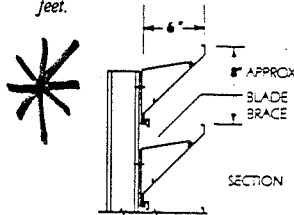
### SPECIFICATION SUMMARY

- 1. GENERAL:** The aluminum screening material as shown on the drawings shall be Vert-A-Cade 500 (or other pattern), as manufactured by Construction Specialties, Inc., Cranford, New Jersey, San Marcos, California or Mississauga, Ontario.
- 2. MATERIALS:** All Vert-A-Cade components and trim shall be of aluminum. Miscellaneous hardware shall be of aluminum or type 302 stainless steel.
- 3. CONSTRUCTION:** Fasteners for anchorage of the Vert-A-Cade blades shall be concealed so as not to be visible on the exterior face of the material.
- 4. FINISH:** Vert-A-Cade panels and trim shall be in a standard C/S Kynar 500 finish. Other finishes available: C/S Duranodic 300, C/S Duracolor, Clear Anodize, and C/S TRI-X. Aluminum supports shall be in mill finish. A 5 year or extra cost 20 year limited warranty against failure of the Kynar 500\* finish shall be supplied.



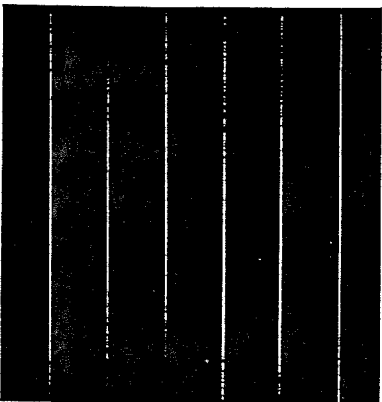
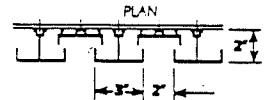
### VERT-A-CADE 300

Free Area 58%  
Extruded aluminum, 6063-T52 alloy, minimum .081" thick. No blade joints in sections less than 20 feet.



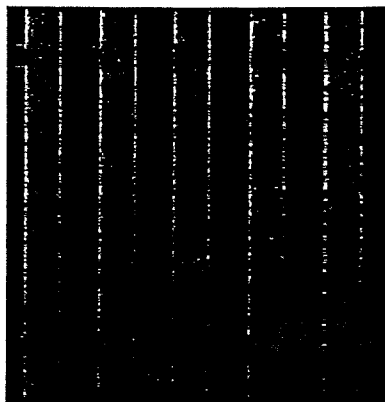
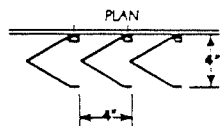
### VERT-A-CADE 500

Free Area 20%  
Extruded aluminum, 6063-T52 alloy, minimum .062" thick. No horizontal blade joints in sections less than 20 feet high.



### VERT-A-CADE 400

Free Area 32%  
Extruded aluminum, 6063-T52 alloy, minimum .081" thick. No horizontal blade joints in sections less than 20 feet high.



### VERT-A-CADE 500M

Free Area 50%  
Extruded aluminum, 6063-T52 alloy, minimum .062" thick. No horizontal blade joints in sections less than 20 feet high.

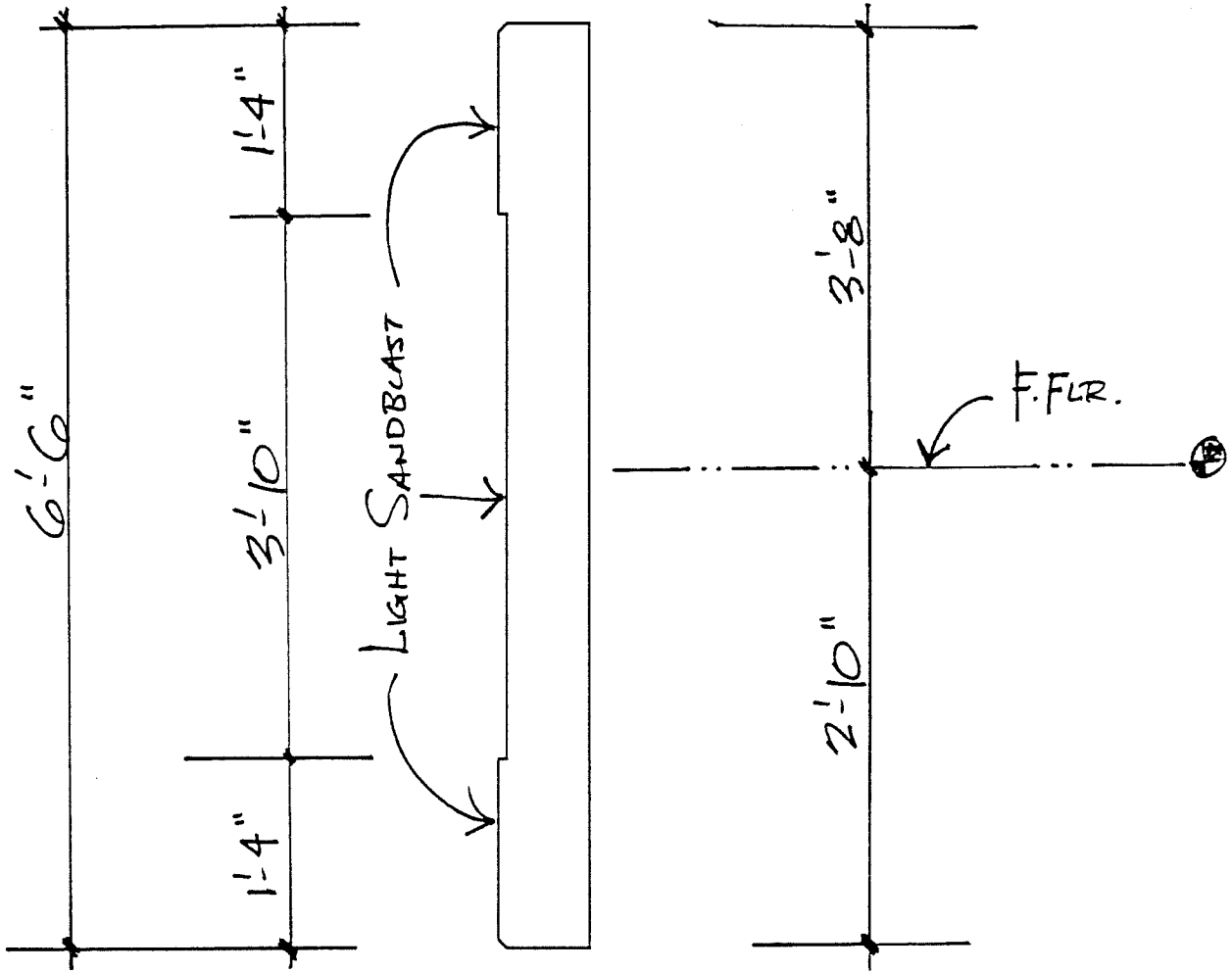
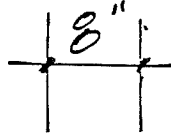


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CARL WALKER, INC. <sup>C-21</sup>

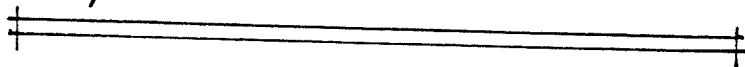
3500.04

1.6.98



①

TYPICAL SPANDREL

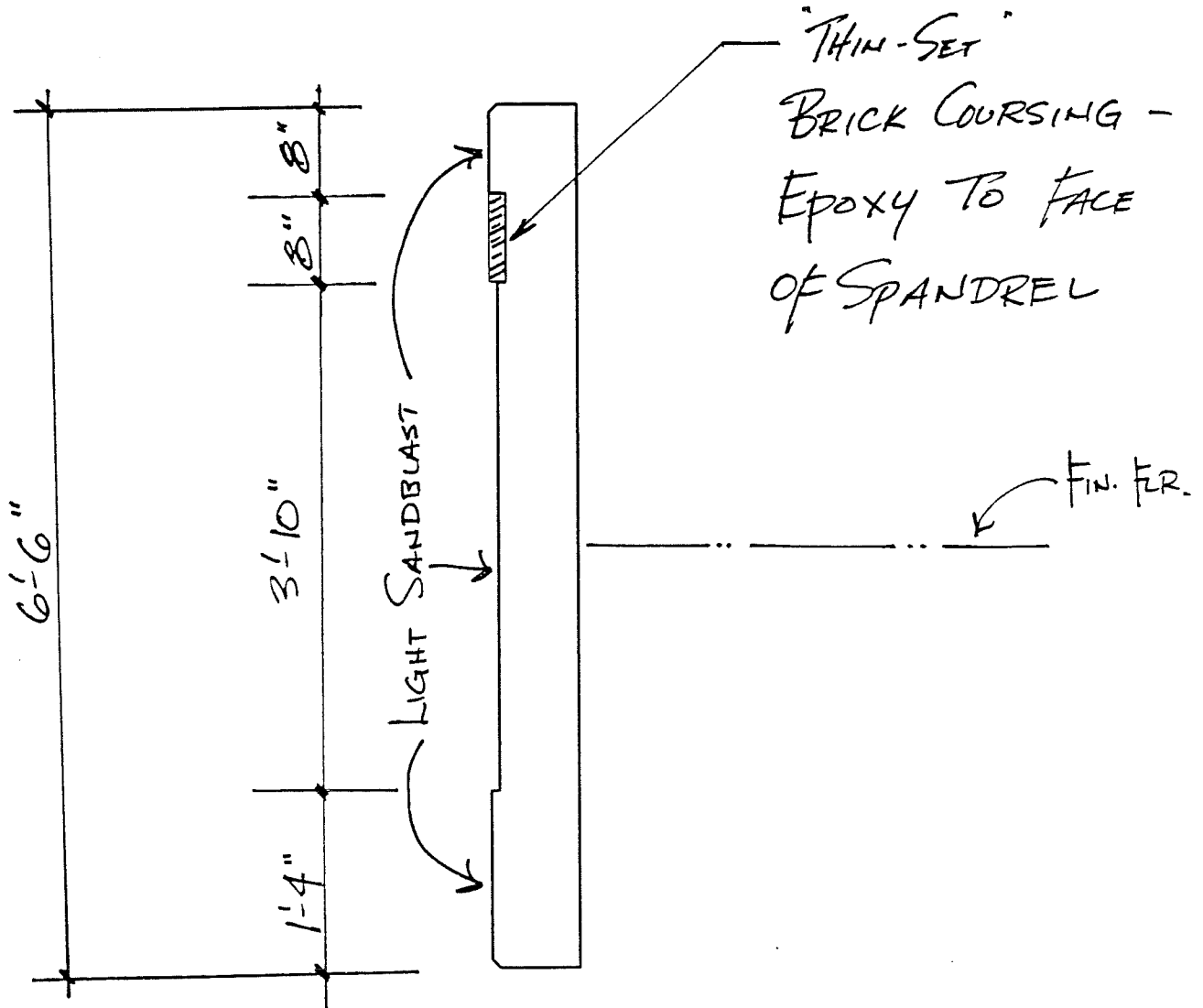


MAINE MEDICAL CENTER

3500.04

CARL WALKER, INC.  
C-22

1.6.98



2

LEVEL 2 SPANDREL

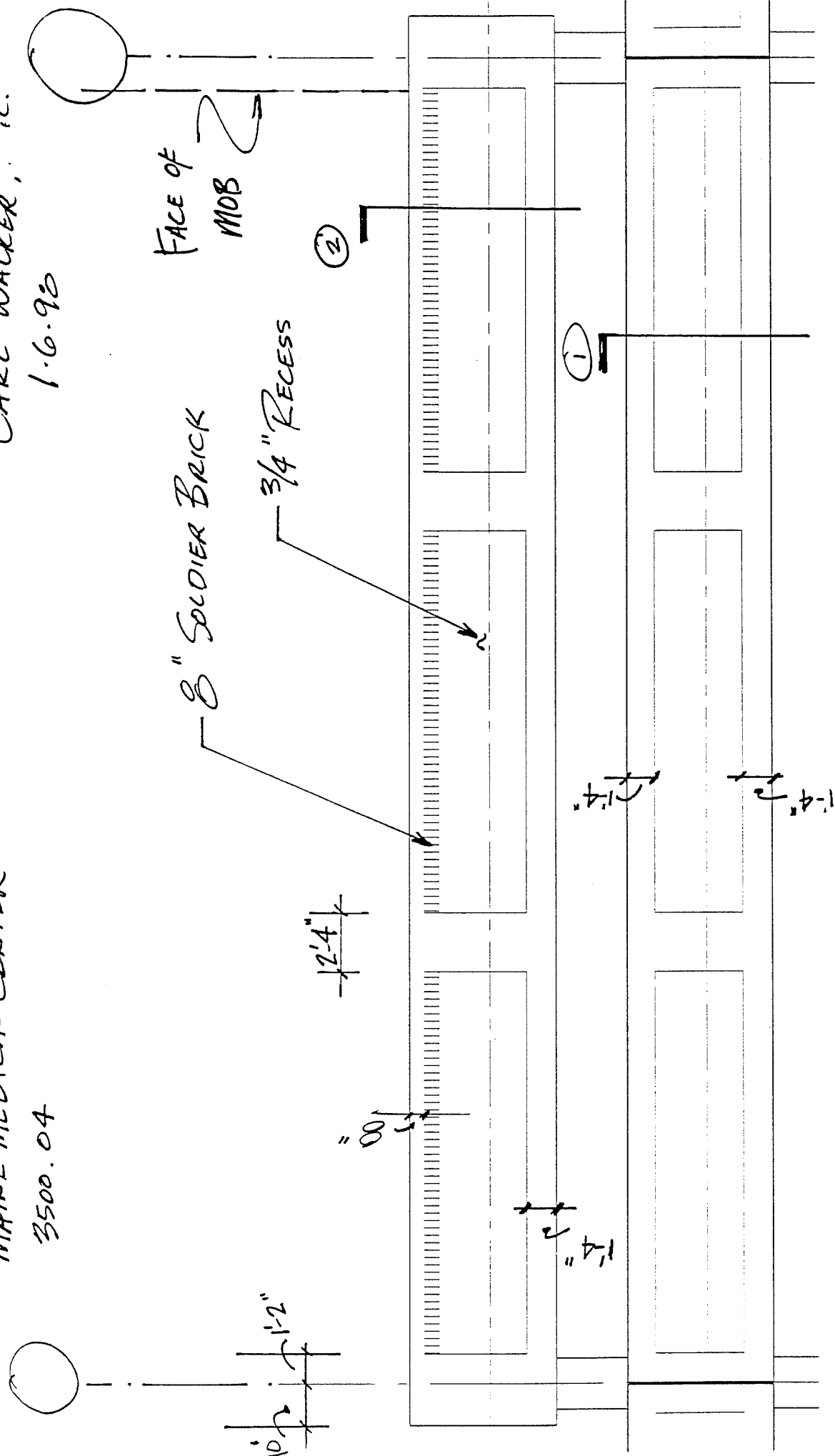
MAINE MEDICAL CENTER

3500.04

CARL WACKER, T.I.C.

1.6.90

C-23



# PARTIAL FOREST ST. ELEVATION

MAI, MEDICAL CENTER

3500.04

CARE WALK R, INC.

1.6.98

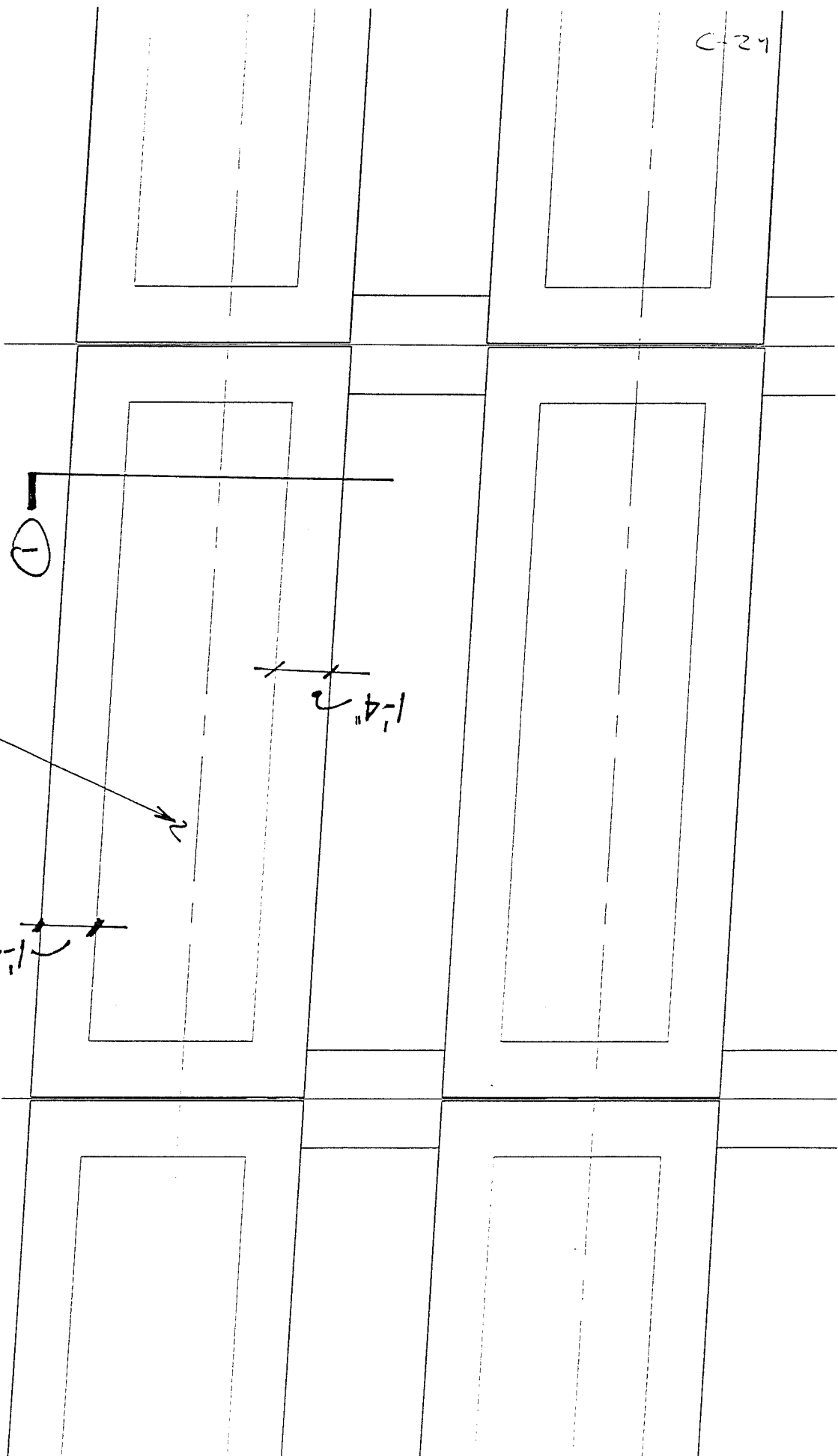
PARTIAL ELEVATION  
BOYNTON

1'-2"

3/4" RECESS

1'-4"

1'-4"



ATTACHMENT D



22 Free Street Portland, Maine 04103-9000 Tel: 207 / 775 / 3211 Fax: 207 / 775 / 6434



February 3, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, Maine 04101

**RE: Maine Medical Center Office Building**

Dear Rick:

We have completed a review of the January 29, 1998 plans, revision H, and the enclosed project documents for the proposed Maine Medical Center Office and Parking Garage project. The comments in our January 12, 1998 letter have been addressed, as have the other review comments.

We would be happy to review the final project design plans and documents when they become available. Let me know if you have any questions or, need additional information.

Very truly yours,

DUFRESNE-HENRY, INC.

Jeffrey D. Preble, P.E.  
Project Manager

File N:\civil\8160054\Knowlandlr7.wpd

Post-it® Fax Note	7671	Date	3/26	# of pages	▶
To	RICK	From	JEFF		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #	756-8258	Fax #			

Corporate Headquarters:  
North Springfield, Vermont

Area Offices:  
Greenfield, Massachusetts  
Westford, Massachusetts  
Portland, Maine

Manchester, New Hampshire  
Montpelier, Vermont  
Panama City, Florida  
Naples, Florida

**From:** ANTHONY LOMBARDO  
**To:** rwk  
**Date:** 1/14/98 3:27pm  
**Subject:** Me Medical Center.....Proposed Offices/Parking @883-887 Congress St.

Rick,  
Squaw Bay Corp. has made the revisions requested by Public Works. The only item that is still missing as part of their submission is a copy of the capacity letter for the combined sewer in Forest St. This letter has been requested from Bill Goodwin here at Public Works, but no actual letter verifying capacity of this sewer has been submitted.



Post-It* Fax Note	7671	Date	4/10/98	# of pages	ONE
To	Richard Knowland	From	Frank Brancely		
Co./Dept.		Co.			
Phone #	x 8725	Phone #			
Fax #	756-8258	Fax #	874-8852		

Department of Public Works

Nadeen M. Daniels  
Assistant City Manager  
Director

CITY OF PORTLAND

William J. Bray  
Deputy Director

March 6, 1998

Mr. Scott Decker, P.E., Principal  
Squaw Bay Corporation  
P.O. Box #86A  
Cumberland Center Maine 04021

**RE: Sanitary Sewer Capacity to Handle Anticipated Wastewater Flows from the Proposed Maine Medical Center Office Building/Parking Structure on the Northeast Corner of Congress Street, at Forest Street.**

Dear Mr. Decker:

The existing eighteen inch reinforced concrete sanitary sewer pipe located in Forest Street, and the sewage treatment facilities, in the City of Portland, have adequate capacity to transport and treat the anticipated wastewater flows of 16,390 GPD, from your proposed office building/parking structure to be located at #883-#903 Congress Street, City of Portland.

Proposed Wastewater Flows from the Proposed Office Building/Parking Structure:		
Proposed 60 Doctors	@ 80 GPD/Doctor	= 4800 GPD
Proposed 180 Assistants	@ 15 GPD/Assistant	= 2700 GPD
Proposed 1800 Patients	@ 05 GPD/Patient	= 9000 GPD
Proposed 430 Parking Spaces	@ 01 GPD/Parking Space	= 430 GPD
Total Proposed Increase in Wastewater Flows for this Project		=16,930 GPD

If I can be of further assistance, please call me at 874-8832.

Sincerely,  
CITY OF PORTLAND

*Frank Brancely*  
Frank J. Brancely, B.A., M.A.  
Senior Engineering Technician

FJB:jw

pc: Joseph E. Gray, Director, Department of Planning & Urban Development, City of Portland  
Katherine A. Staples, P.E., City Engineer, City of Portland  
William B. Goodwin, P.E., Environmental Projects Engineer, City of Portland  
Anthony W. Lombardo, P.E., Project Engineer, City of Portland

✓desk file

Decker.doc



**FAX TRANSMITTAL**

22 Bramhall Street, Portland, Maine 04102

**ENGINEERING SERVICES**  
**TELEPHONE NUMBER (207) 871-2447**  
**FAX NUMBER (207) 871-6195**

**DATE:** 7/27/98  
**TO:** Richard Knowland  
Department of Planning and Urban Development  
City of Portland  
**PHONE:**  
**FAX:** 756-8258  
**FROM:** Jim Morrison  
**SUBJECT:** Congress Street Medical Office Building

**NUMBER OF PAGES INCLUDING TITLE PAGE:** 3

Rick:  
Attached find phone reports.

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MAINE MEDICAL CENTER

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January 5, 1998

Mr. Rick Knowland, Senior Planner  
City Hall  
389 Congress Street, 4<sup>th</sup> Floor  
Portland, Maine 04101

**Re: Response to Jaimey Caron's December 11, 1997 Memorandum  
Maine Medical Center Office Building  
Congress Street**

Dear Rick:

Comment 1:

*The parking report should be updated to reflect all MMC offices and properties in the area, including projections for space that MMC owns but is not yet using. A condition of approval should require MMC to submit an updated report for staff review and approval. It would be helpful at the public hearing if staff could generate a list of MMC properties in the city.*

Response 1:

We will review with the staff the MMC properties in the Bramhall campus area prior to the January 27 public hearing..

Comment 2:

*The Parking Management Report needs to have specific programs for managing parking problems on the Western Prom and should have a mechanism for the city to be involved in seeing that those items are enforced. I would look to John Peverada for suggestions of effective management programs and target areas. I would suggest the creation of a "Western Prom Parking Oversight Committee" consisting of businesses, neighborhood and city representatives working under the city's Parking Division (similar in concept to the Old Port Task Force) to oversee parking and vehicle circulation problems in the neighborhood. The group would monitor the impact of management strategies and provide a forum for feedback and modifications to the plan. I would appreciate your comments and suggestions for crafting a condition of approval for this concept.*

Mr. Rick Knowland  
January 5, 1998  
Page 2

Response 2:

MMC does propose to provide a contact person for coordinating directly with John Peverada on parking issues. MMC supports regular monthly meetings with Mr. Peverada to address issues. MMC will make a brochure available to all its staff and doctors detailing where MMC parking is located, requesting people to park in the garages, and to carpool or use the bus whenever possible. MMC will also work with the staff of the Portland Area Comprehensive Transportation Committee (PACTS) to develop a data base for use in their rideshare program. MMC has also committed to Mr. Peverada to make a special effort to educate doctors and staff at McGeachey Hall to use the shuttle rather than to park on Vaughn Street.

Comment 3:

*At the workshop, the applicant indicated that parking would need to be removed from Forest Street in the area around the access drive to the garage. Because of the narrow street width, the applicant's traffic engineer stated that Forest Street may be blocked at times if these spaces are not eliminated, particularly in the winter. It is the applicant's responsibility to mitigate the impacts of their development. Since removing these parking spaces requires City Council approval, a condition of approval should be included that, in the event the City Council does not grant the request, the applicant shall submit a revised site plan for the Planning Board's review. An alternative approach would be to provide a turning lane adjacent to the garage on MMC land.*

Response 3:

MMC is working with Mr. Bray and Mr. Ash to prepare a request to remove 26 spaces along Congress Street. The city is proposing to remove two spaces directly across from the proposed Forest Street driveway and MMC is working with Mr. Bray on that issue.

Comment 4:

*As discussed by the Board at the workshop, the restriping of Congress Street should minimize the removal of existing on-street parking spaces. This is particularly important in minimizing the impact of this development on existing business and neighbors in the area.*

*In the event the applicant does not revise the plan for Congress Street, a condition of approval should be included that would require the applicant to resubmit alternate plans for the Board's review.*

Response 4:

There have been ongoing discussions with Mr. Knowland, Mr. Bray and Mr. Ash regarding the need to eliminate parking on Congress Street. The left turn into the garage on Congress Street is an essential element of the project. We continue to support the proposal to change the parking on Congress Street to eliminate parking from 6 a.m. to 6 p.m. This proposal would make the

Mr. Rick Knowland

January 5, 1998

Page 3

parking available to area businesses and residents during the times of day when it is in greater demand. In addition, since most Sea Dogs games begin at 7:00 p.m., parking would be available for those events. We have reviewed our proposal to change the parking on Congress Street with Mr. Paul Severino, Sportsman's Grill. He is in full support of the proposal.

Comment 5:

*The current plan indicates the skybridge will allow users of the lower lot to access the main building through the Gilman Street garage. It is not clear to me that there is a safe pedestrian route beyond the skybridge, particularly across the access road behind the hospital. Given the grades, sight lines and stopping distances on the access road, winter use is a particular concern. How many employees will travel this route to and from the hospital? Additionally, how do the employees in the Gilman Street garage currently access the hospital? Staff should review the end of the proposed route and I would suggest a condition of approval requiring signage, striping, bollards, etc. in this area for pedestrian safety as a minimum. Although beyond the Board's authority, ADA access is also a concern.*

Response 5:

Approximately 1,500 people in the Gilman Street garage currently cross the access road behind the hospital. This is the only entrance to MMC from the garage. Advance warning signs delineate this crossing. This road is a private road and does not have significant traffic. Handicapped employees are not required to park in the garage. Handicap parking is provided elsewhere on the campus.

Comment 6:

*In the event that light poles on the roof of the garage are included in the final submission, I would like a condition of approval crafted that would restrict the height and location so as to be inconspicuous to the surrounding neighborhood on three sides.*

Response 6:

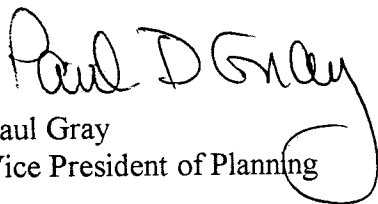
MMC continues to work with the staff on the lighting issue.

Mr. Rick Knowland  
January 5, 1998  
Page 4

If you have any questions or need further information concerning the material above, please contact me.

Sincerely,

MAINE MEDICAL CENTER

A handwritten signature in black ink that reads "Paul D. Gray". The signature is written in a cursive style with a large, looping flourish at the end of the word "Gray".

Paul Gray  
Vice President of Planning

PG/TLG/sq/JN1471/Knowland1-5

C: John Peverada  
Larry Ash  
Tom Gorrill

# Squaw Bay Corp

Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

January 29, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center  
Medical Office Building**

Dear Rick:

This letter addresses the comments received in your January 20, 1998 letter to me.

**Jeffrey Preble's 1/12/98 letter to you**

**Drawing C-101**

Comment #1: *"The proposed plans show a drainage swale along the easterly property line which outlets over the sidewalk and into Boynton Street. It does not appear there are any catch basins along Boynton Street to collect his runoff. We would suggest adding a catch basin and stormdrain to collect the runoff in this area and tie it into the existing combined sewer line in Boynton Street."*

**Response:** During our recent telephone conversation, you informed me that Tony Lombardo noted that under current conditions icing occurs along Boynton Street and Maine Medical Center should attempt to mitigate this condition. Therefore, enclosed drawing C-101 has been revised to include the requested catch basin. The sewer line in Boynton Street is an 8" sanitary line so we have connected the catch basin to the 12" oil/grit structure discharge line.

Comment #2: *"The existing sidewalk at the Forest Street and Boynton Street intersection is at elevation 39.0. The elevation of the catch basin grate on the Fortechules unit is 39.75. This should be lowered if the intention is to collect runoff from the swale along the northern property boundary."*

**Response:** Enclosed Site Plan drawing C-101 has been revised to reflect a lowered catch basin grate elevation.

Comment #3: *"A dimension of 2'-9" has been shown on the Forest Street and Boynton Street Right-of-Way. We are not sure what this dimension represents."*

97-242

know0129.let

1 of 4

P.O. Box 86A, 4 Blanchard Road, Cumberland Center, ME 04021

Phone: (207) 829-6994 • Fax: (207) 829-5692 • Email: squawbay@neis.net

Mr. Rick Knowland  
January 29, 1998

**Response:** Enclosed Site Plan drawing C-101 has been revised to note the right-of-way width of 33' as depicted on Titcomb Associates' survey drawing.

Comment #4: *"The curb schedule will need to be completed prior to construction."*

**Response:** The curb schedule will be completed when all issues regarding parking, sidewalk widths and building dimensions have been resolved.

### **Drawing C-302**

Comment #1: *"Grades for the underdrain system have not been shown on the plan. The location for the underdrain cleanouts should be shown on the plans."*

**Response:** The final location of underdrains (both horizontal and vertical) will be established following final design of the office building and parking garage.

Comment #2: *"It is not clear where the underdrain discharges."*

**Response:** Enclosed Erosion and Sedimentation Control Plan drawing C-302 has been revised to show the underdrain system outletting to the Vortechs unit discharge line.

Comment #3: *"The location of the construction entrance is not shown on the plan. It might be worth specifying a location for construction traffic to access the site."*

**Response:** We prefer to allow the contractor to plan this element of the project. He will submit his plan for a construction entrance for approval by the Owner's Engineer and the City of Portland Public Works Department. If Public Works has specific ideas where the entrance must be, it would be helpful if the location was identified.

Comment #4: *"Please note that the details for the overhead walkway have not been included with this submission. The affect on the sidewalk width is therefore not known at this time."*

**Response:** The final details of the overhead pedestrian walkway have not been completed by the project architect. They await approval of the walkway concept by the Maine Medical Center. However, it is understood at this juncture that the supports on the medical office building side of Congress Street will be constructed into the building and will extend no more than 30" into the sidewalk. The support on the south side of Congress Street will not encroach into the sidewalk but may abut the sidewalk.



Mr. Rick Knowland  
January 29, 1998

**John Peverada's 1/9/98 memorandum addressed to you**

The traffic comments raised by Mr. Peverada have been or will be addressed directly by Maine Medical Center.

*Comment: "The list of MMC traffic improvements should be put on a site plan. In addition, the following statement should be added to the Site Plan:"*

*"Applicant shall be responsible for monitoring the intersection of Park Avenue and Forest Street for a period of one year after a Certificate of Occupancy has been issued for the office building and parking garage. Applicant shall submit a traffic report to the City Traffic Engineer for review and approval. If the City Traffic Engineer determines that a traffic light is required, the applicant shall be responsible for the purchase and installation of the traffic light. An escrow account/performance guarantee shall be established by MMC prior to the issuance of a building permit."*

**Response:** The Site Plan drawing C-101 has been revised to include the requested traffic improvement information.

*Comment: "Some, but not all, of the questions/issues that are listed in my memo of 12-24-97 to Patrick Costin have been addressed (see Attachment C)."*

**Response:** The architectural related comments will be addressed directly by Harriman Associates.

*Comment: "We need to get a definitive letter from MMC indicating that they will maintain the oil and grit separator, along with the schedule for maintenance."*

**Response:** Enclosed is a copy of a letter from Maine Medical Center addressed to you which addresses this comment.

*Comment: "Please indicate the dimensions and height of the transformer along Forest Street."*

**Response:** The transformer will be 6'x6'x6' cube situated on a 9'x9' concrete pad.

*Comment: "Note #9 on Sheet C-101, as well as related notes on curb and sidewalk, need to be changed. Note #9 should read "all curb and sidewalk shall be reconstructed along the entire frontage of the site..." We are skeptical that you will be able to "save" the existing curbs and sidewalks during construction, on this tight site. After construction, we can review the situation again to see if you were able to save the curb and sidewalk on Forest Street and Boynton Street. However, we are not comfortable with the present notes shown on the plans and Note #9."*

Mr. Rick Knowland  
January 29, 1998

**Response:** Enclosed Site Plan drawing C-101 has been revised to address this issue.

*Comment:* "We will need a draft deed to the City for that portion of the sidewalk that is on MMC property."

**Response:** The draft deed will be submitted directly to the City by Maine Medical Center.

*Comment:* "Do you have a catalog cut of the Miramat material shown on L-101?"

**Response:** Enclosed is a catalogue cut of the Miramat material.

*Comment:* "How high are the ventilation shafts in relation to the adjacent grade, and is there grating so that someone doesn't fall in?"

**Response:** The ventilation shafts will extend no more than one foot above ground and will contain a grate to prevent children and animals from entering.

*Comment:* "See the memo from Anthony Lombardo (Attachment D)."

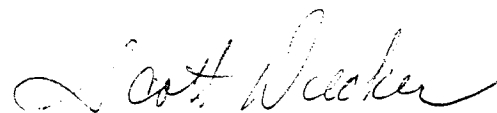
*"Squaw Bay Cop has made the revisions requested by Public Works. The only item that is still missing as part of their submission is a copy of the capacity letter for the combined sewer in Forest Street. This letter has been requested from Bill Goodwin here at Public Works, but no actual letter verifying capacity of this sewer has been submitted."*

**Response:** Mr. Frank Brancely has coordinated with and received additional information from Harriman Associates plumbing engineer and Mr. Brancely continues to review the project relative to sewage flows.

Please call me if you have any questions or require additional information

Very truly yours,

SQUAW BAY CORP



W. Scott Decker, P.E.  
Principal

WSD/cms  
cc: Jim Clarkson  
Jim Morrison

97-242  
know0129.let  
4 of 4

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**MAINE MEDICAL CENTER**

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January 27, 1998

Mr. Richard Knowland  
Senior Planner  
Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**Re: Congress Street MOB Oil and Grit Separator**

Dear Mr. Knowland,

This is to inform you of the intention of Maine Medical Center to maintain the oil and grit separator required for this project. The inspection and cleaning of this separator will be performed in accordance with the specifications outlined on the attached sheet.

If you have any questions, please contact this office.

Sincerely,  
Maine Medical Center



Robert D. Bremm  
Director, Engineering Services

## Vortechs Oil and Grit Separator

### Maintenance Plan

#### Inspection

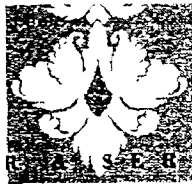
In the first year, Maine Medical Center will inspect the Vortech's Oil/Grit separation structure in January, February, March, spring, summer and fall. The inspection schedule can then be modified in subsequent years according to experience or to meet specific stormwater permit requirements.

During routine inspections, sediment accumulation will be determined by slowly lowering a measuring stick into the center of the grit chamber (accessed through the manhole above the grit chamber) until it contacts the top of the pile. The system is full and should be cleaned when the top of the pile is approximately one foot below the dry weather water level. The measuring stick should be easy to read and not too finely graduated (such as a carpenter's tape with large easy to read numbers). A stadia rod with flashlight can be used for this purpose. For deep systems where reading the measuring stick directly is difficult, dusting the rod will clearly show the depth to the sediment pile as the wet portion of the rod. To avoid underestimating the volume of sediment in the chamber, the measuring stick must be carefully lowered to the top of the sediment pile as the finer, silty particles are typically at the top and offer less resistance to the end of the stick or rod than the larger particles located towards the bottom of the pile<sup>1</sup>.

#### Cleaning

Cleanout of the Vortechs with a vacuum truck is generally the best and most convenient method. Only the manhole cover above the grit chamber (the one furthest from the system outlet) needs to be opened to remove water and contaminants. As the grit chamber is pumped out, the oil and water drains back into it so that oil scum, particulates, and floatables are removed along with the accumulated sediments. With the Vortechs System, a pocket of water between the grit chamber and flow controls seals the bottom of the oil barrier and prevents the loss of floatables to the outlet during cleanings. Manhole covers should be securely seated following cleaning activities to ensure that surface runoff does not leak into the unit from above.

<sup>1</sup>The height of the sediment pile is perhaps more precisely determined by taking two measurements with a stadia rod. The first being the water depth (i.e., water surface to bottom of the tank); the second being the water surface to the top of the sediment pile. The difference between the measurements is the sediment pile depth.



MOHR & SEREDIN  
Landscape Architects, Inc.

TRANSMITTAL

Date: JAN 27, 1998  
Project: MMC PARKING GARAGE  
To: SCOTT DECKER

Project Number: 136

From: KIM TURNER

Copy:

Message:

RECOMMEND 3/8" THICKNESS.

MIRAFI, INC  
PO BOX 240967  
CHARLOTTE, NC 28224  
1-800-438-1855

- Mailed
- Delivered



Fax

Number

829-5692

No. of Pages (including cover)

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18 Pleasant Street, Portland, Maine 04101

(207) 871-0003

# MIRAMAT:

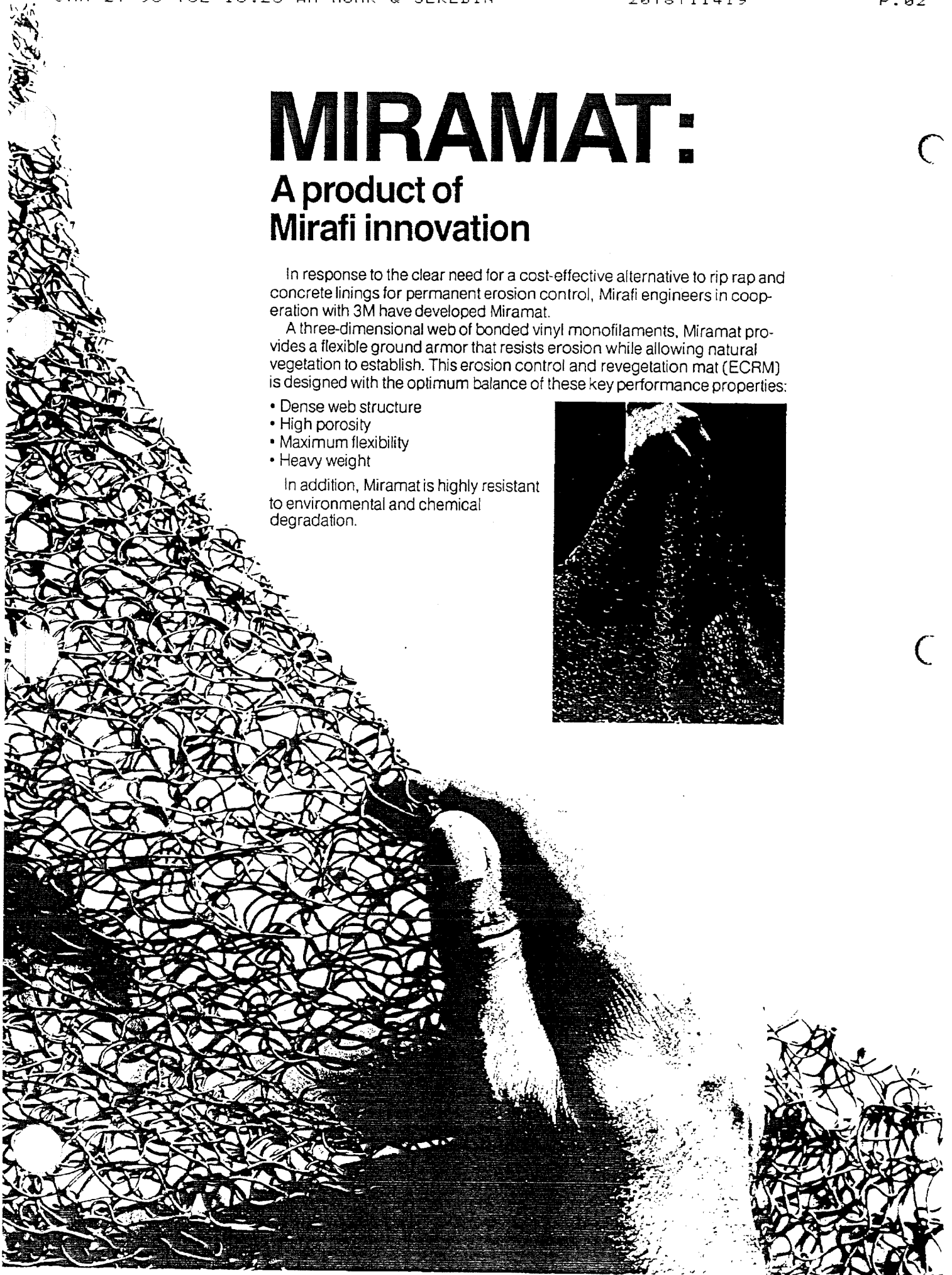
## A product of Mirafi innovation

In response to the clear need for a cost-effective alternative to rip rap and concrete linings for permanent erosion control, Mirafi engineers in cooperation with 3M have developed Miramat.

A three-dimensional web of bonded vinyl monofilaments, Miramat provides a flexible ground armor that resists erosion while allowing natural vegetation to establish. This erosion control and revegetation mat (ECRM) is designed with the optimum balance of these key performance properties:

- Dense web structure
- High porosity
- Maximum flexibility
- Heavy weight

In addition, Miramat is highly resistant to environmental and chemical degradation.

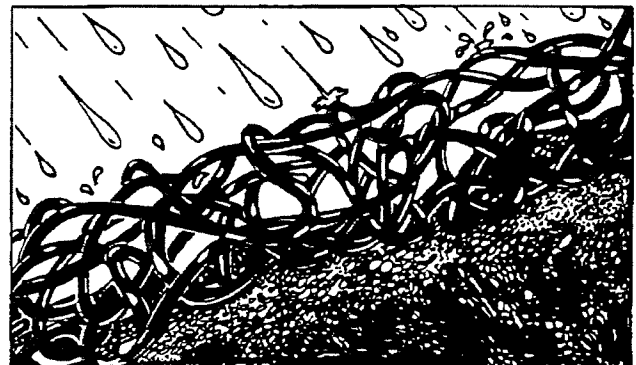


**Miramat: Performance that generates results**



In order to establish and maintain vegetation growth in areas subject to severe erosion, Miramat has been carefully engineered for superior performance in its primary functions: temporary erosion control, mulching, and permanent erosion control. A secondary benefit to Miramat's use is reduced runoff velocity.

In addition to its "ECRM" functions, Miramat's green color provides an aesthetically pleasing natural grass appearance while vegetation is establishing.



**Temporary Erosion Control**

Miramat's flexibility, weight, web structure, and porosity make it extraordinarily effective in temporary erosion control.

- Conforms easily to the ground surface.
- Remains firmly in place as a stable ground armor.
- Shields soil surface from the erosive force of wind and rain.
- Prevents soil, seed, and fertilizer from washing away.
- Provides a rough surface to retain sediment deposits during runoff.



**Mulching**

Miramat's 3-dimensional, high porosity web structure acts as a non-deteriorating mulch.

- Holds soil, seed, and fertilizer in place.
- Retains sediment runoff as a medium for root growth.
- Retains moisture and heat necessary for germination.
- Allows uninhibited growth of grass and other vegetation.

**Permanent Erosion Control**

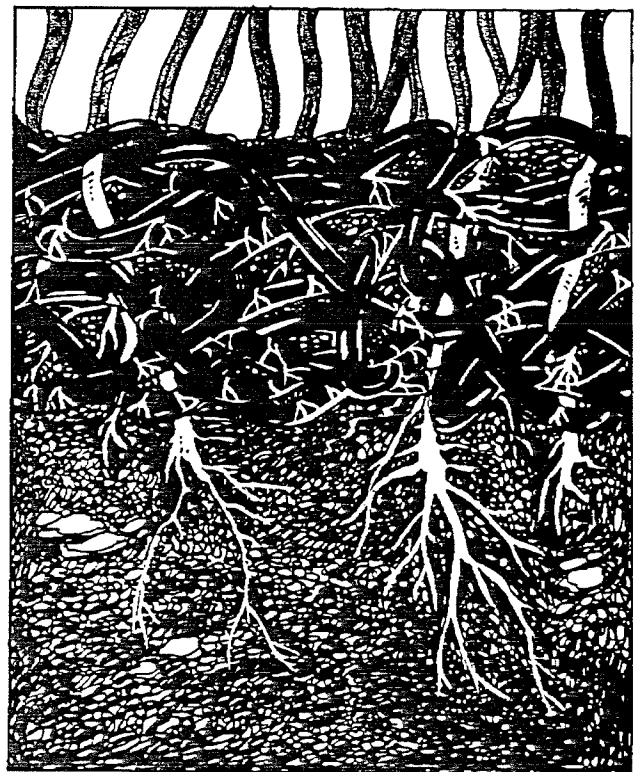
Once vegetation growth is established, Miramat continues to provide permanent erosion control as it becomes embedded in the new stem and root system.

- Protects new vegetation from washout.
- Reinforces and anchors the vegetation in place as a cohesive unit.

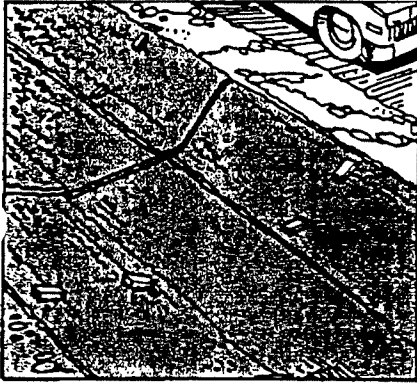
**Reduced Runoff Velocities**

Revegetated slopes and ditches reinforced with Miramat reduce runoff flow velocities. This is an important advantage that cannot be achieved with concrete lining.

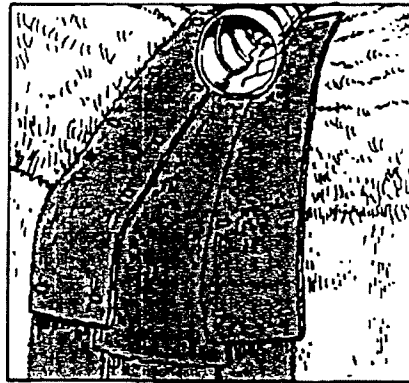
- Reduces runoff flow volume and concentrations.
- Reduces the need for energy dissipation at the ditch outlet or slope base.
- Promotes water percolation and ground water recharge.



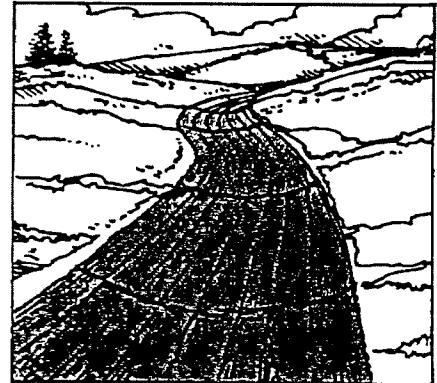
**Miramat: A Cost-Effective ECRM with many applications**



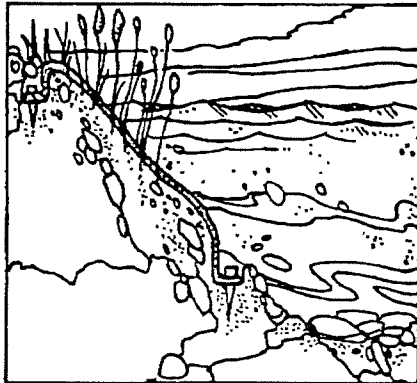
**ROADWAY DITCHES**



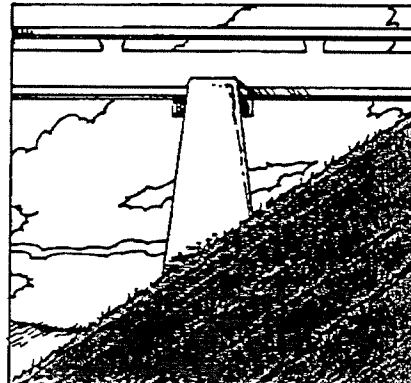
**PIPE OUTLETS**



**STORM CHANNELS**



**POND BANKS**



**BRIDGE ABUTMENTS**

Miramat is designed for erosion control and revegetation in those areas where simple mulching techniques do not work because of severe erosive forces. For example, steep slopes, ditches, and banks.

Such applications have typically required the armor protection of expensive rip rap or concrete linings. However, these methods, while usually effective, are costly, difficult to install, and frequently impractical at remote sites where access by heavy haul trucks is difficult.

Miramat provides a cost-effective, easily installed alternative to heavy armor protection for many applications.

- Ditches for roadway and parking lot runoff.
- Storm and irrigation channels.
- Outlets for pipes and culverts.
- Slopes for roadway, berms, bridge abutments, and building sites.
- Banks of ponds and lakes.

The source and magnitude of the erosive forces, as well as the slope and geometry of the area to be protected, will dictate the effectiveness of Miramat. Contact your Mirafit representative for recommendations.

**Miramat: General Installation Guidelines**

**Site Preparation**

- Grade surface of finished areas so that ground is smooth and compact.
- Remove all rock, dirt clods, grass clumps, trash and other obstructions which will prevent mat from lying in direct contact with the soil surface.

**Mat Anchor Trenches**

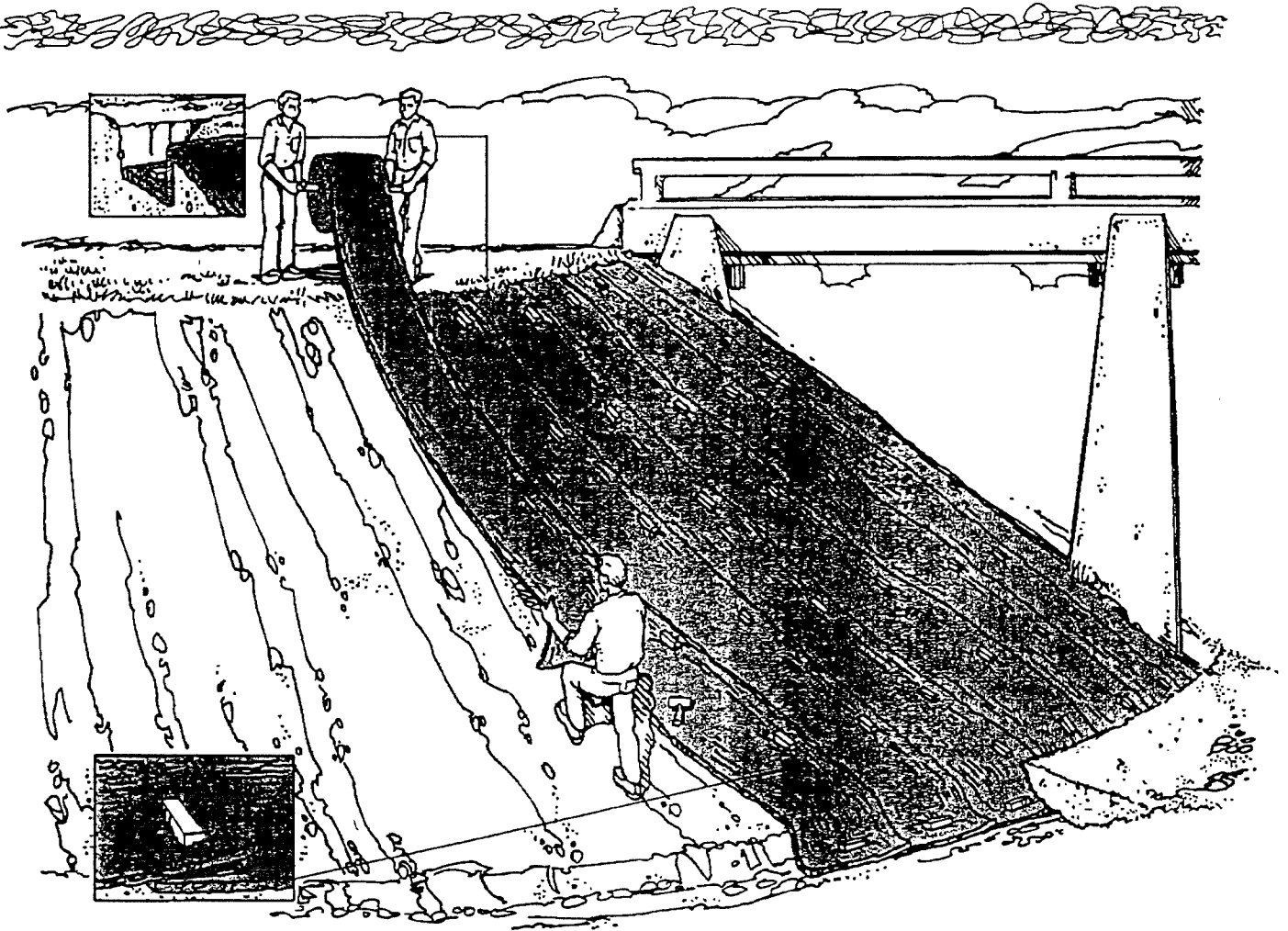
- Excavate terminal trenches to a minimum 12" deep and 6" wide before placing mat.
- Dig check slots 6" deep by 6" wide transverse to mat at approximately 25' intervals.

**Seeding**

Seed and fertilizer may be spread before or after mat installation. Rate of application should be specified by owner or contractor.

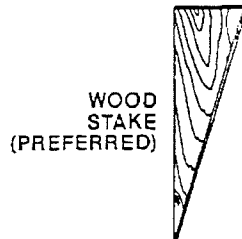


**Miramat: General Installation Guidelines**

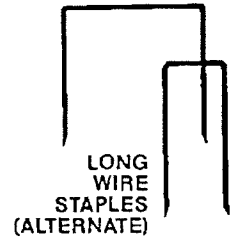


**Mat Placement**

- Unroll mat onto ground in direction of water flow.
- Mat should lay flat. Do not stretch mat over ground. Stretching may cause mat to bridge depressions in the surface and allow erosion underneath.
- Bury transverse terminal ends of Miramat to secure and prevent erosive flow underneath. Place mat as shown. (Fig. 1A and 1B.)
- Secure mat snugly into all transverse check slots. (Fig. 2A and 2B.)
- Backfill and compact trenches and check slots after staking the mat in bottom of trench... see "Ground Fastening."
- Overlap roll ends by 3' (min.) with upslope mat on top to prevent uplift of mat end by water flow. (Fig. 3.) Note: If installing in the direction of a concentrated water flow, start new rolls in a transverse ditch.
- Overlap adjacent edges of mat by 3" (min.) and stake... see "Ground Fastening;" (Fig. 4.)



WOOD STAKE (PREFERRED)



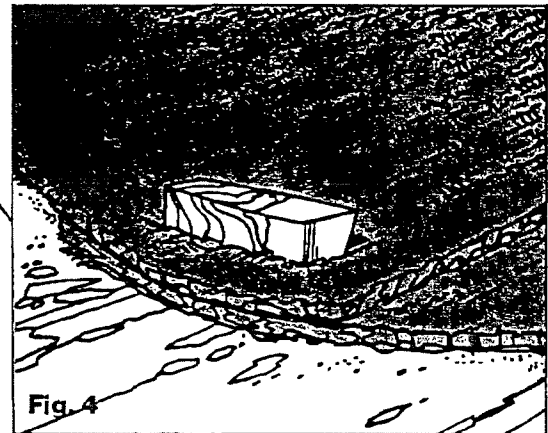
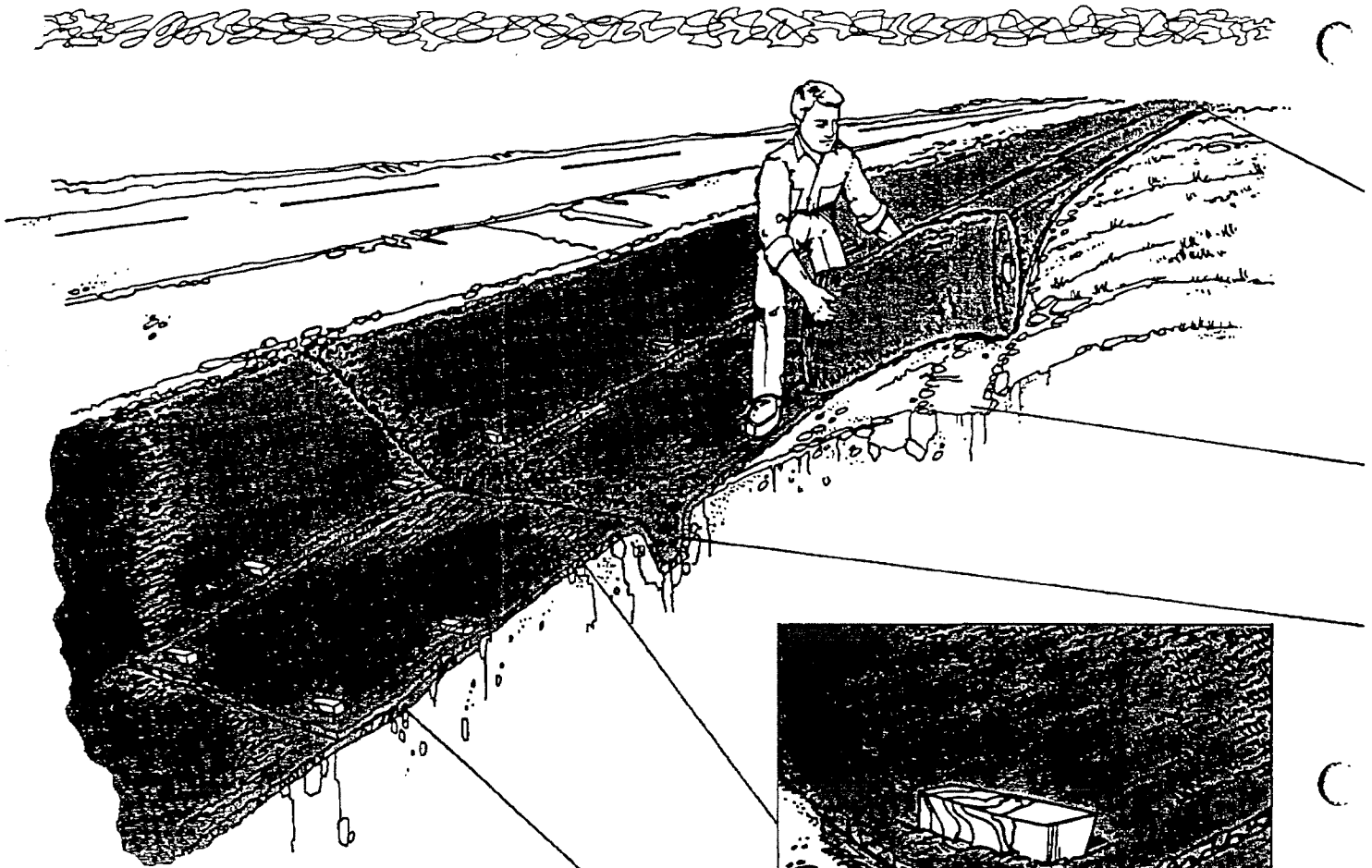
LONG WIRE STAPLES (ALTERNATE)

**Ground Fastening**

Wood stakes are recommended for pinning Miramat to the ground surface. Stakes should be 1" x 3" nominal stock cut in a triangular shape. Stakes should be 12" to 18" long depending on soil density

- Drive wood stakes to within 3" of ground surface. Do not drive flush to surface.
- In all transverse terminal trenches and check slots stake each mat at its center and at overlapped edges before backfilling and compacting.
- Stake overlaps longitudinally at 3' to 5' intervals.

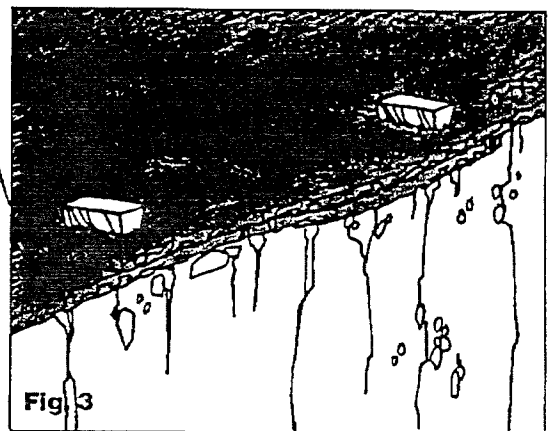
**Installation Guidelines for Ditches/Channels**



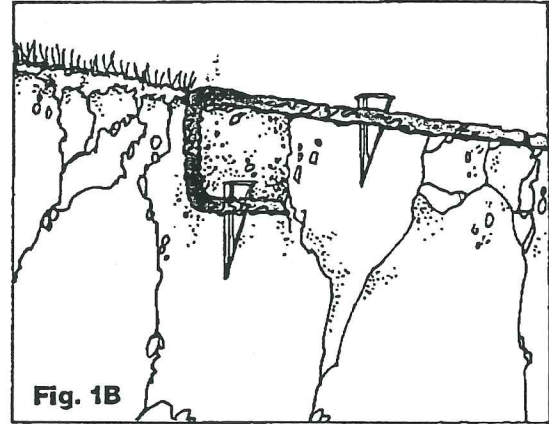
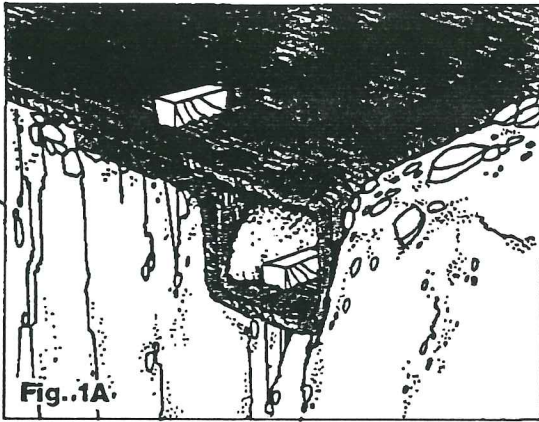
**OVERLAP ADJACENT EDGES**

When installing Miramat in ditches or channels, special steps in addition to the preceding guidelines must be followed.

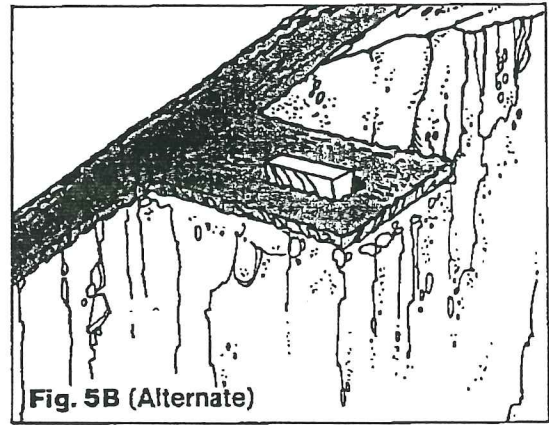
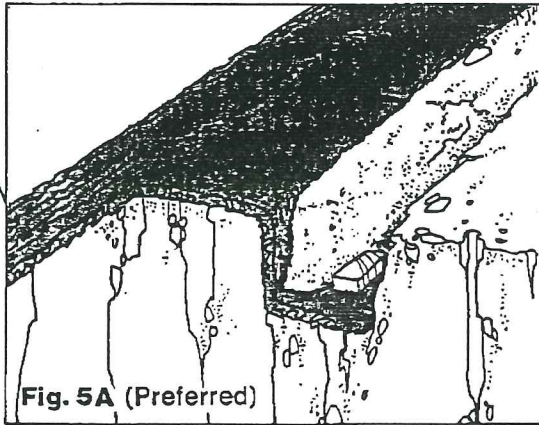
- Cut check slots across bottom and up the sides of the ditch... see "Mat Anchor Trenches" (Fig. 2A and 2B.)
  - Cut 4" (min.) ledge or trench at top of side slope. (Fig. 5A and 5B.)
  - Center mat in ditch bottom and unroll starting at upper end of ditch.
  - Roll adjacent widths of mat, overlapping side edges of mat by 3". (Fig. 4.)
  - Lay outside edge of mat on ledge or into trench at top of side slope. (Fig. 5A and 5B.) Stake at 3'-5' intervals along ledge or in trench.
  - Backfill ledge or trench and compact.
  - In check slots stake each mat at its center at overlapped edges, and outside edges. (Fig. 2A and 2B.)
  - Overlap each roll end of mat by 3' with upslope mat on top. (Fig. 3.)
- Backfill all check slots and anchor trenches with soil or stone and compact.



**OVERLAP ROLL ENDS**

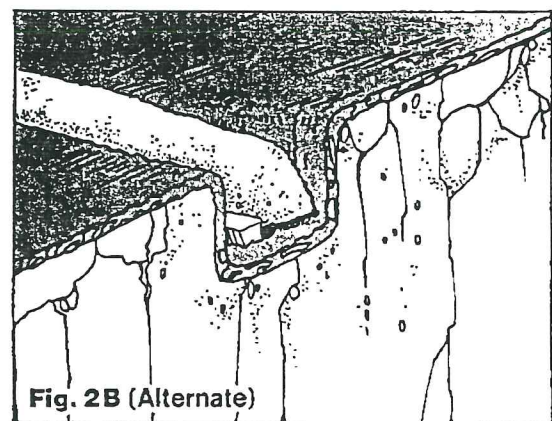
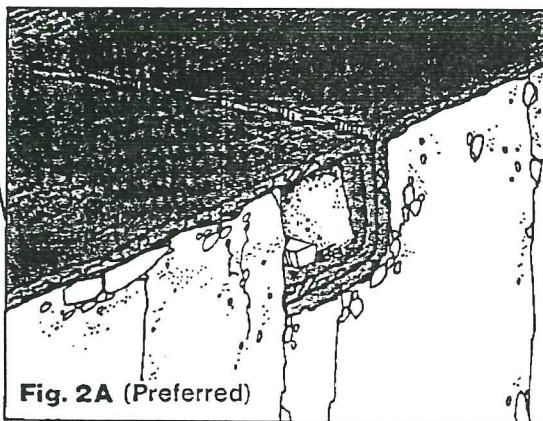


**BURIAL OF TRANSVERSE TERMINAL END**



**EDGE ANCHOR IN TRENCH**

**EDGE ANCHOR ON LEDGE**



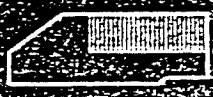
**SECURE MAT IN CHECK SLOTS**



# The Archetype®

AT

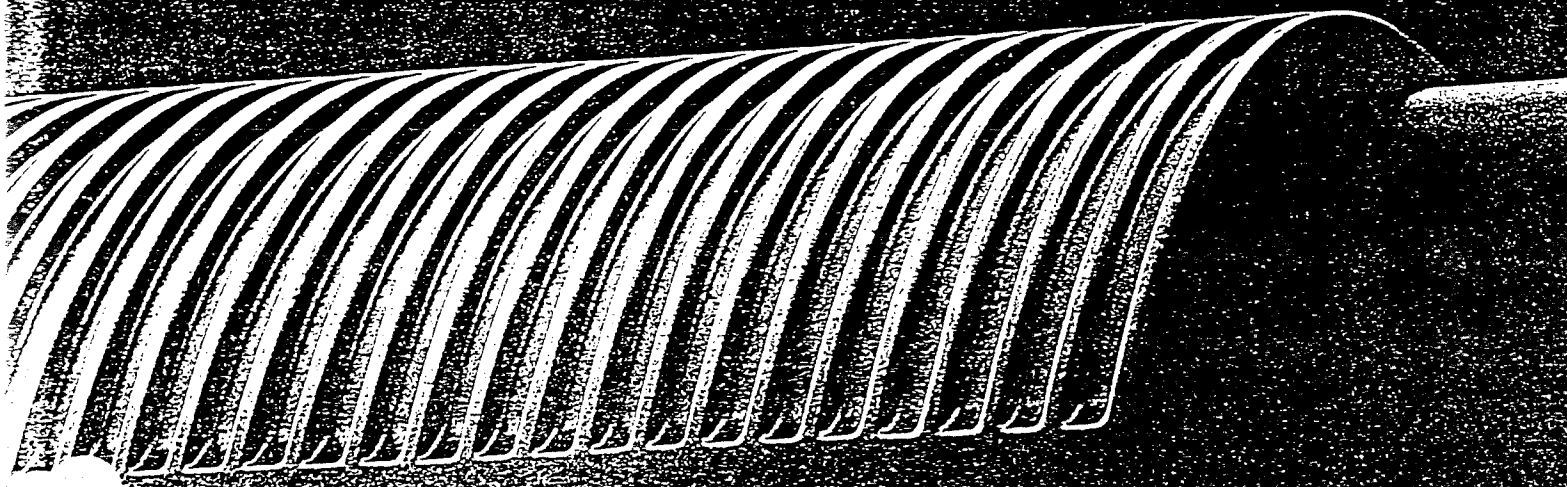
Technology and Form Combined to Create a New Standard for Outdoor Colorful Luminaires



**AR Model 150-400W Mogul Base**



**SAR Model 70-175W Medium Base**



archetype (är'ke tīp') 1: the original pattern or model of which all things of the same type are representations or copies.  
 2: a perfect example of a type or group.

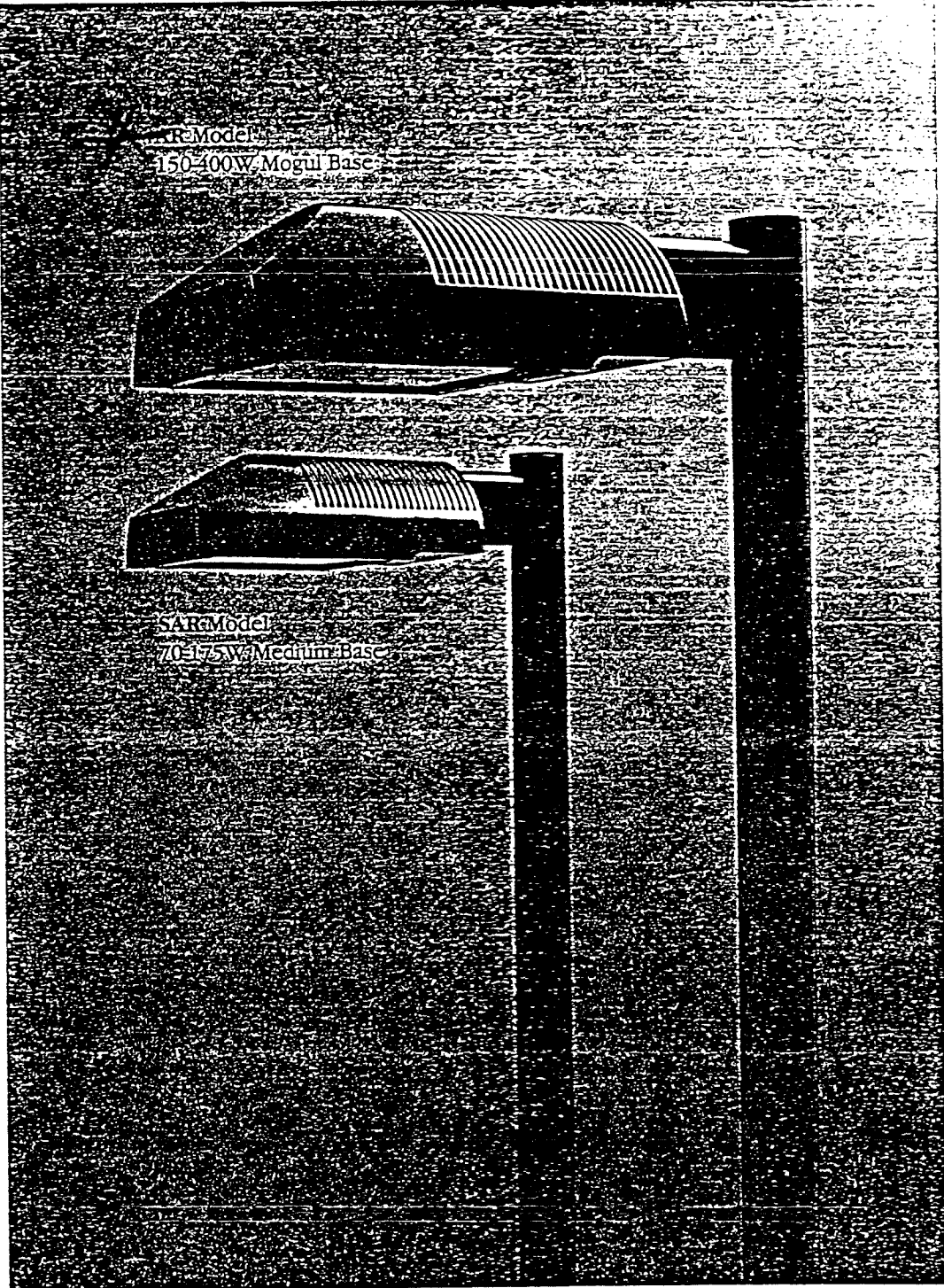
The Archetype took nearly twenty years to develop. It replaces the "recessed" fixture as the standard for architectural lighting luminaires. During the 1960s and 70s, the dominant lighting fixture character of the "recessed" fixture was a preferred luminaire where architectural compatibility was important. Both architecture and industrial design have moved into a new era. Today's architecture often combines curvilinear, linear, classic and neo-classic form into a single structure. Industrial design emphasizes a new design where product function is expressed by articulated form. The Archetype is so functional it antiquates all other recessed or cutoff luminaires. Its eclectic shape universally adapts to today's architecture while its function is beautifully expressed by its form. Outstanding lighting performance, ergonomics, materials and rugged construction all combine to make the Archetype the new state-of-the-art luminaire for recessed or cutoff lighting.

The Archetype is registered in the U.S. Patent and Trademark Office.



# KIM LIGHTING

Box 5  
 155 East Gale Avenue  
 Industry, California 91749  
 Phone 818/968-5666  
 Telex 818/369-2695



**Kim Products**  
 Street and Area Lighting  
 Parking Garage Lighting  
 Floodlighting  
 Environmental Lighting  
 Landscape Lighting  
 Fountain Lighting

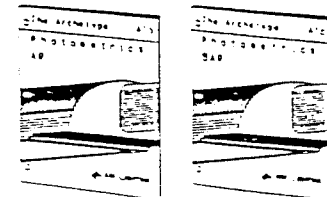
© 1989 Kim Lighting Inc.  
 This version © 1991  
 Patents Pending

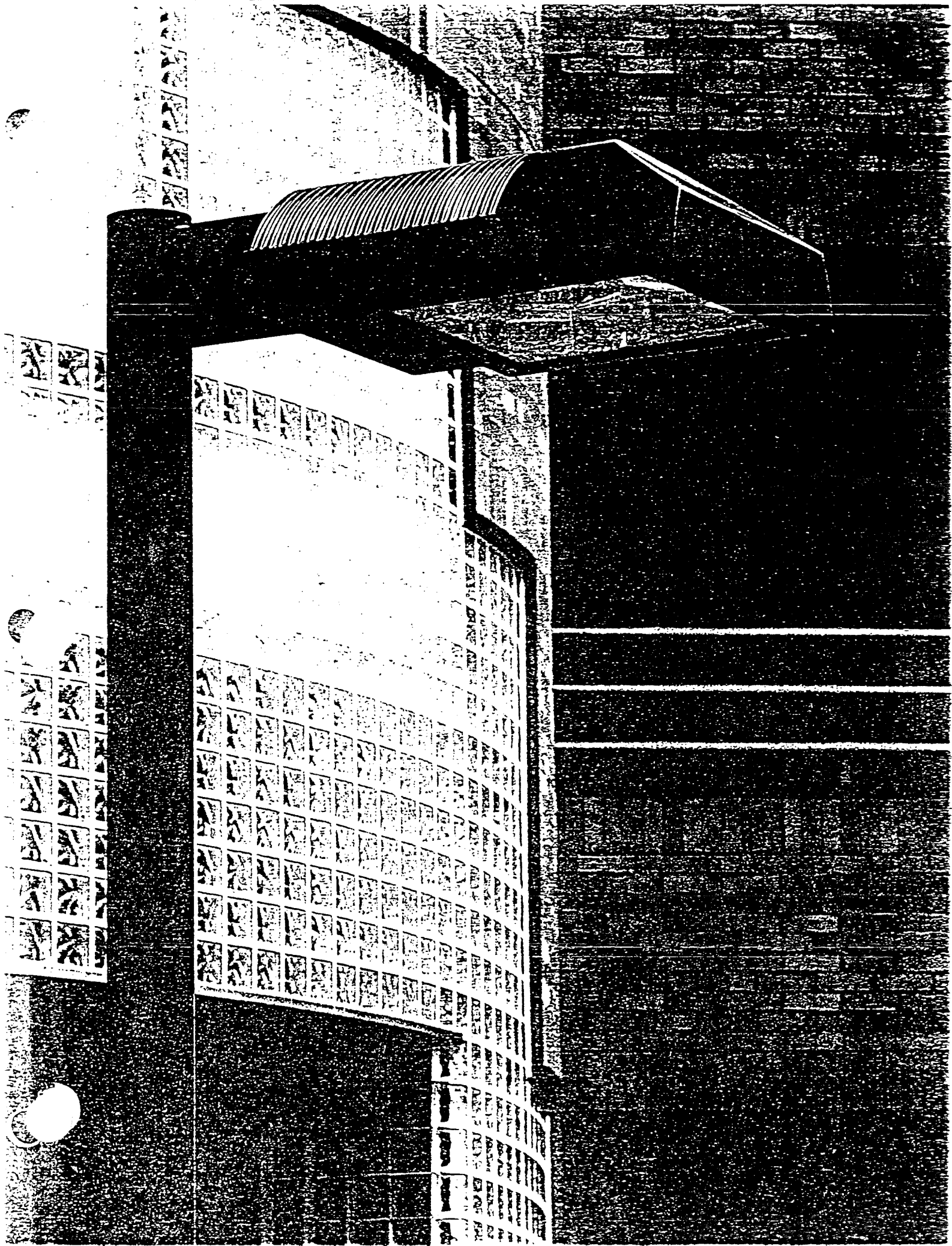
**Contents**

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14-15	Specifications - AR
16-17	Specifications - SAR
18-19	Ordering - AR
20-21	Ordering - SAR

**Photometrics**  
 See separate Photometric catalogs:

A1b AR Model      A1c SAR Model

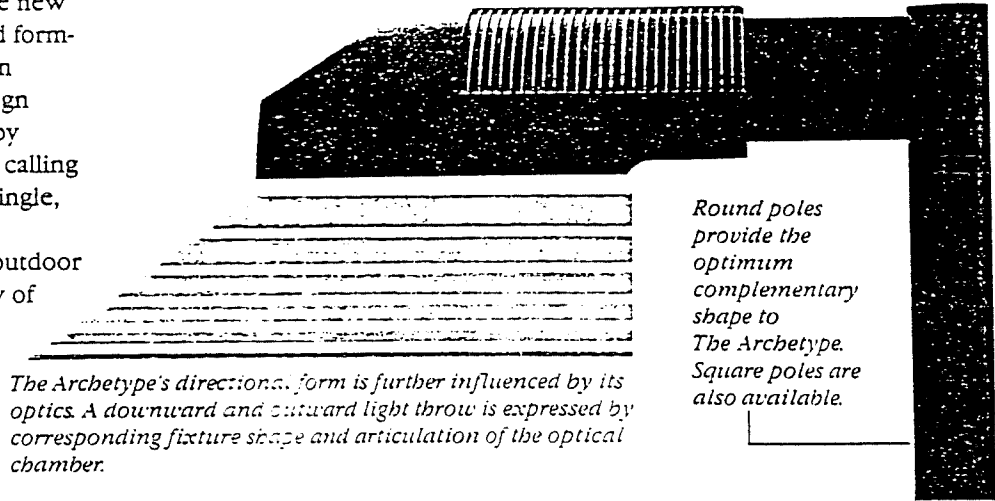




# Design Logic

Throughout our history, design philosophy has undergone many changes, sometimes taking form that disguises function while at other times adhering to a strict expression of object's function and purpose. The new design logic is more than a rigid form-follows-function philosophy which can sometimes generate ugly objects. Design is a response to the creation of form by function, but also answers to a higher calling of providing an overall shape that is a single, unified, aesthetically pleasing design element. The Archetype is the first outdoor luminaire to exemplify the philosophy of design logic while also providing the necessary compatibility with its surrounding architecture. It is a blend of design and engineering that makes a bold and refreshing statement about cutoff lighting.

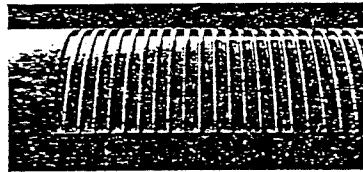
Arm-mounted luminaires often look overly massive and unbalanced. The Archetype's slanted nose, undercut ballast compartment and oval arm combine to reinforce and balance its air-directional nature and soft form.



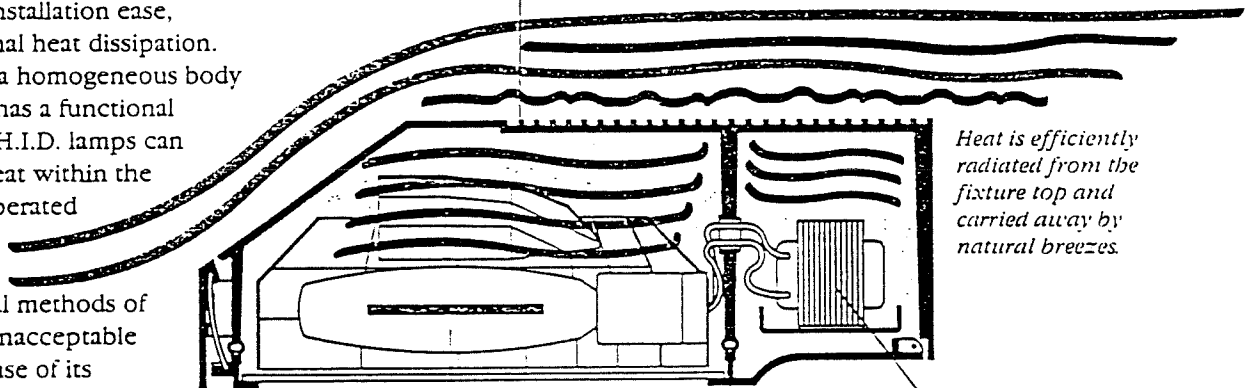
The Archetype's directional form is further influenced by its optics. A downward and outward light throw is expressed by corresponding fixture shape and articulation of the optical chamber.

Round poles provide the optimum complementary shape to The Archetype. Square poles are also available.

Function is synonymous with form under the concept of design logic. Every engineering factor must contribute directly to the development of shape and mechanics. The Archetype reflects every design factor that must be accounted for: environmental effects, mounting performance, installation ease, serviceability and internal heat dissipation. The die cast housing is a homogeneous body in which every feature has a functional purpose. For example, H.I.D. lamps can produce tremendous heat within the housing, yet they are operated at high temperature-sensitive electrical components. Traditional methods of controlling heat were unacceptable for The Archetype because of its compact size. A combination of surface radiators and a solid barrier wall are employed to keep operating temperatures well below the allowable for maximum component life. The electrical compartment has been totally sealed from the optical compartment including all wire penetrations. With full door gaskets and lens gasketing, there is no possibility of moisture, insects or air contamination entering the optical chamber.



Cooling ribs increase surface area by 100% allowing rapid heat dissipation by radiation from the fixture top.



Heat is efficiently radiated from the fixture top and carried away by natural breezes.

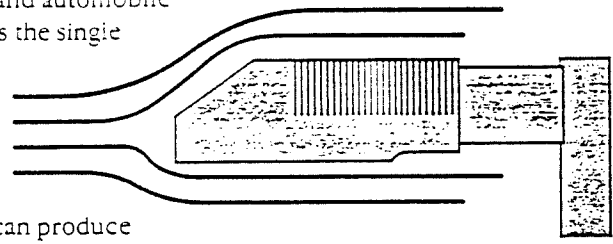
Primary heat source. A 400 Watt lamp produces bulb temperatures as high as 4000°C.

An extra-thick barrier wall separates the optical chamber from the electrical compartment. The optical chamber is totally sealed.

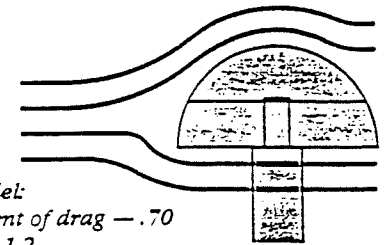
Secondary heat source. The ballast produces heat while adjacent capacitor and ignitor components must operate below 90°C. The electrical compartment also ventilates through the mounting arm.

Aerodynamics is a science normally associated with aircraft and automobile design. Yet, luminaire shape is the single most important factor that determines pole size. Furthermore, poles are often more expensive than luminaires, which means

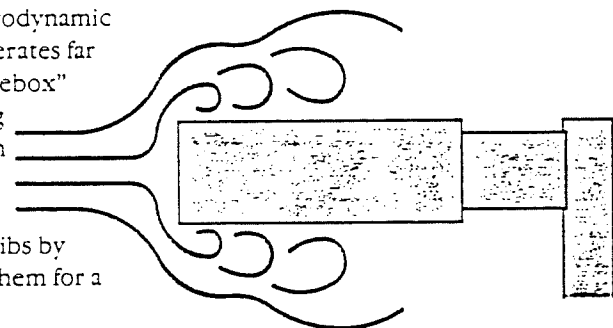
that a reduction in pole size can produce a significant savings in overall cost. Fixture weight has little influence on pole size because wind loading produces the greatest lateral force. The aerodynamic shape of The Archetype generates far less wind loading than a "shoebox" luminaire thereby permitting lighter poles to be used when available. The aerodynamic shape also improves the effectiveness of the cooling ribs by keeping the air flow against them for a longer period of time.



*AR Model:*  
Coefficient of drag — .70  
E.P.A. — 1.2  
80 m.p.h. wind force — 32.7 ft.-lbs.



*A Shoebox with same overall dimensions:*

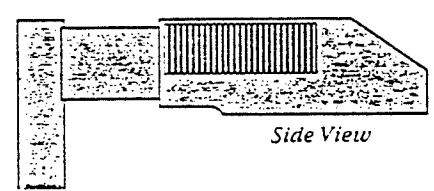


Coefficient of drag — 1.2  
E.P.A. — 2.0  
80 m.p.h. wind force — 56.3 ft.-lbs.

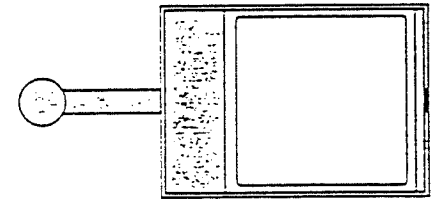


Architecture is the backdrop that controls the design of an architectural luminaire. Buildings with singular geometry demand lighting fixtures that echo the same simple form, traditionally square or round. However, much of today's architecture is eclectic, combining square, round and neo-classic shapes into a single structure. The Archetype is the first outdoor luminaire specifically designed to be eclectic in form and outwardly expressive of function. Yet, this variety in shape and purpose has been beautifully sculptured into a single unified luminaire design that makes a strong statement for both aesthetics and engineering.

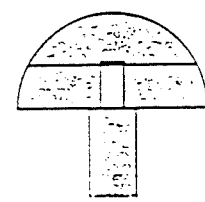
*The Archetype's eclectic form is evident in these three views. From the side, its function is clearly stated. The bottom view is rectilinear yet the overall length is a simple half cylinder. All elements combine into a soft, unified sculptural form that will integrate with virtually any setting whether it is architecture or landscape.*



*Side View*



*Bottom View*



*Front View*

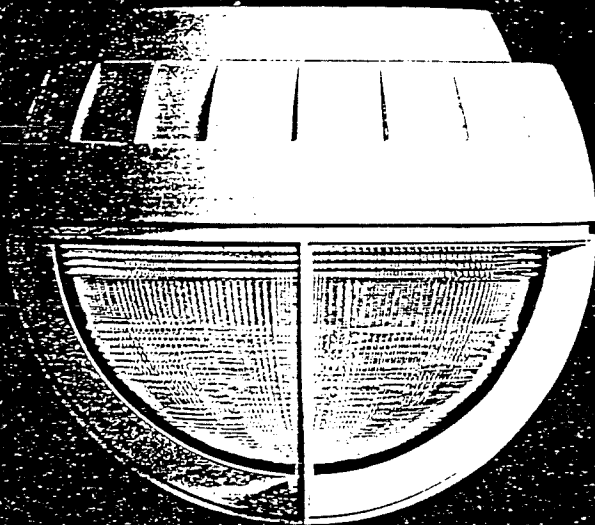


# PGL Omni-System™

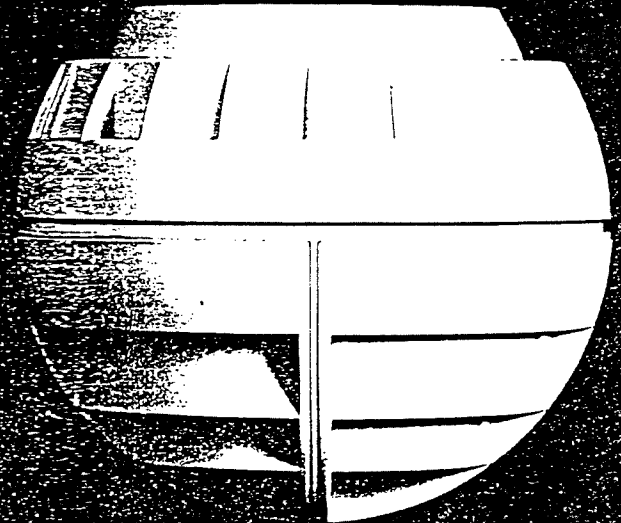
PARKING STRUCTURE  
**PGL2/3**  
SERIES

The Next Generation in Parking Garage Lighting

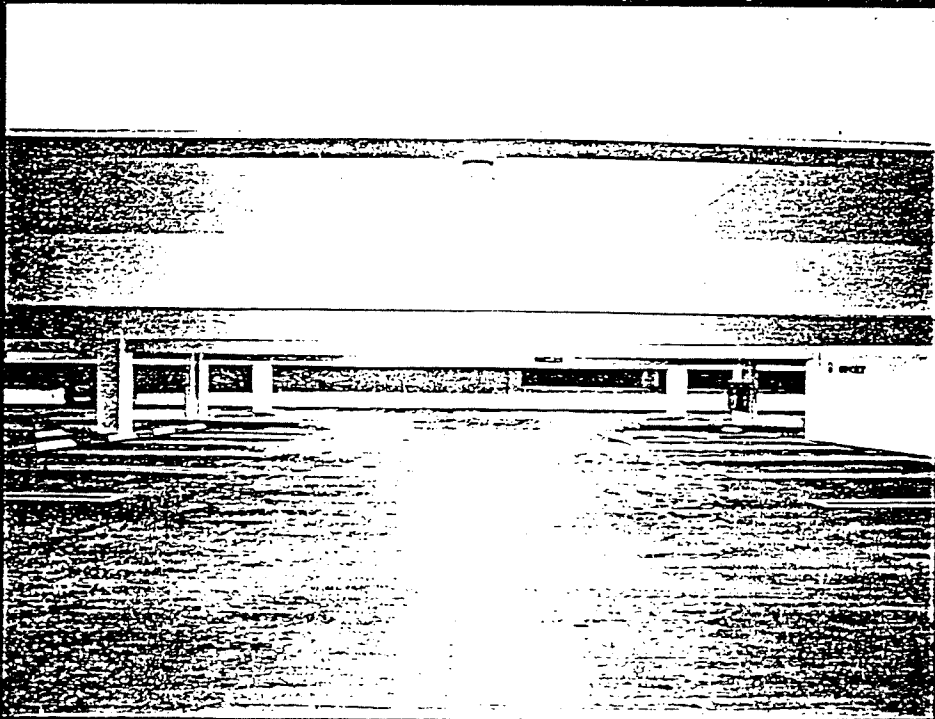
TYPICAL



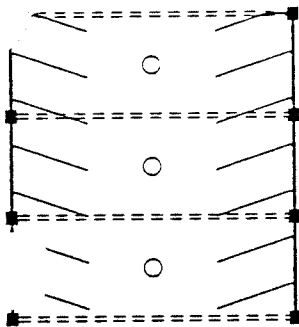
 **KIM LIGHTING**



- 3-Dimensional Illumination
- Performance Task-Driven Optics
- Modular Brightness Control
- Permanence
- Easy Installation and Maintenance

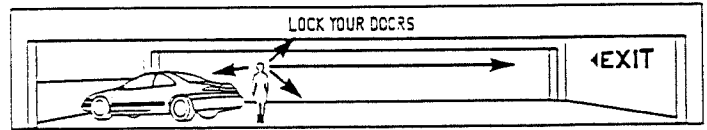


# 3-Dimensional Illumination



Parking garage lighting is generally evaluated as though the parking bays were simply two-dimensional floor plans. This is comparable to lighting an office as if walls and ceilings did not exist. The two-dimensional approach to garage lighting is a carry over from parking lot lighting where illumination levels are evaluated solely on the pavement.

Since parking garages are essentially interior spaces, their illumination must be achieved in three-dimensions. Ceilings must be lighted to eliminate the cave effect, beams and walls must be illuminated for signage and visual comfort, and vehicles must be lighted at elevations above the floor where tasks actually occur. Floor illumination is only one element of good parking garage lighting.



Today's illumination requirements for parking structures involve both horizontal and vertical footcandles up to 72" above the floor.

Sources: IES Illuminating Engineering Society  
NPA National Parking Association

**Level A**—IES recommendation—At 72" above the floor, vertical illumination values on such objects as columns and walls should equal horizontal illumination values on the floor. (See Level C)

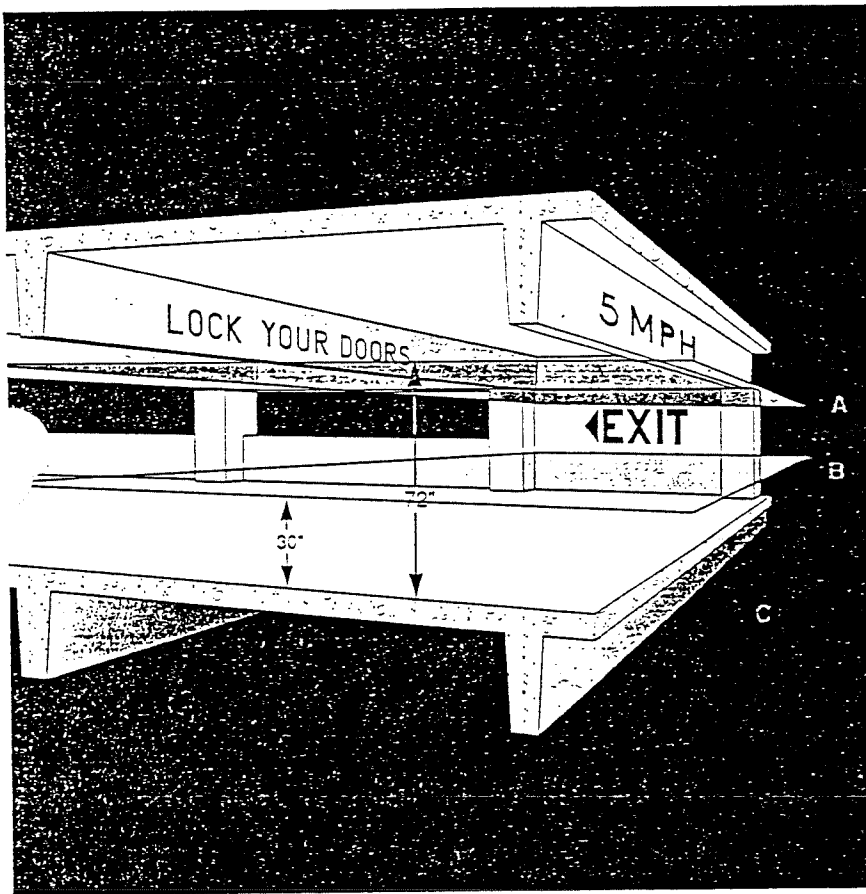
**Level B**—NPA recommendation—Average maintained horizontal illumination 30" above the floor:

Interior Parking and Driving Areas	6Fc
Min. at Perimeters or Vehicle Restraints	2Fc
Surface and Roof Parking Areas	2Fc
Vehicle Entrances	40Fc
Vehicle Exits	20Fc
Stairways and Exits	20Fc
Average to Minimum Illumination	3:1

**Level C**—IES recommendation—Average maintained horizontal illumination on the floor:

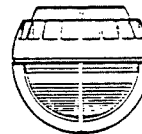
	DAY	NIGHT
General Parking & Pedestrian Areas	5Fc	5Fc
Minimum at any location	1.25Fc	
Ramps and Corners	10Fc	5Fc
Entrance Areas	50Fc	5Fc
Average to Minimum Illumination	4:1	4:1

**Ceilings**—While no specific recommendations exist for ceilings, it is widely accepted that ceilings must be well lighted to eliminate the insecure feeling of entering a dark, cave-like structure. To accomplish this, between 12%-15% of the luminaire's output must be projected upward.

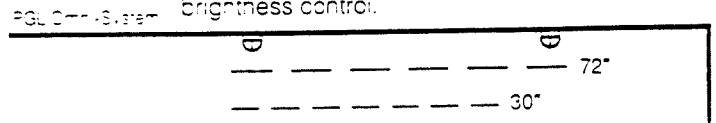
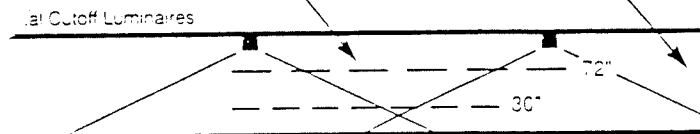


Total cutoff luminaires cannot meet IES or NPA illumination requirements because their light distribution is too narrow. These luminaires do an excellent job of floor illumination, but fall short at elevations above the pavement where vertical illumination on cars, walls, beams and ceilings is required.

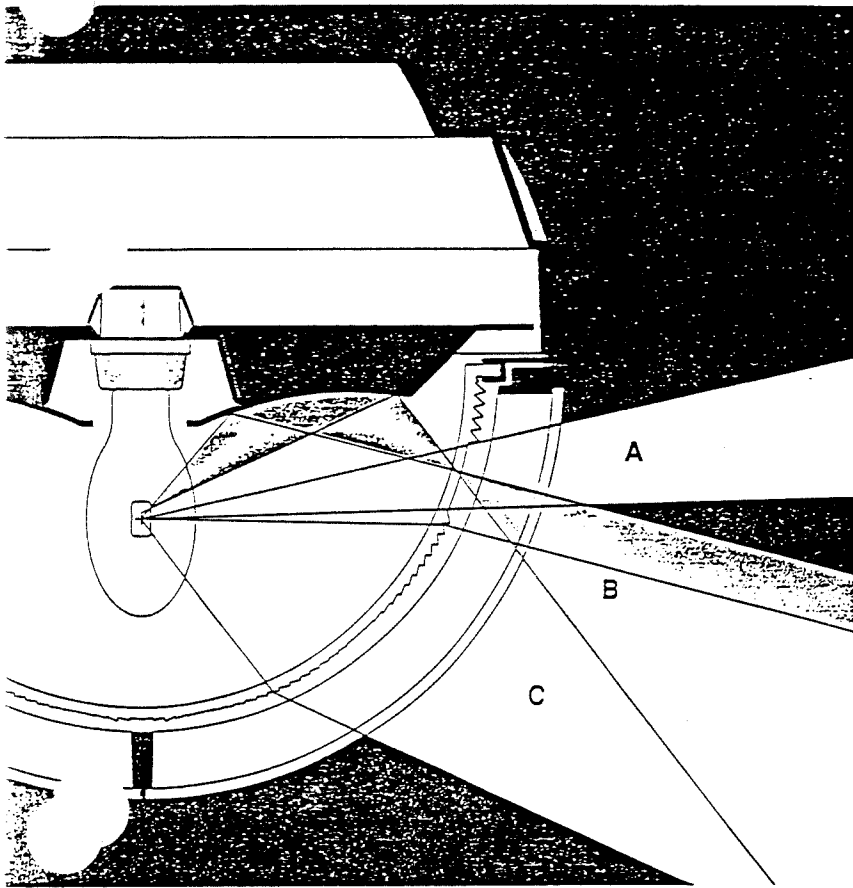
Current garage lighting practice includes the illumination of interior shear walls. Signage is often placed on these walls at least 6' above the floor. In addition, it has been found that when these walls are well lighted, they play an important role in creating a bright ambience and secure feeling inside the garage.



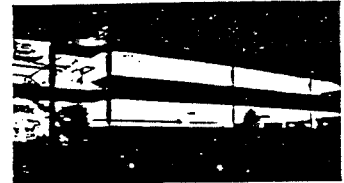
The PGL Omni-System bathes the garage interior with light from floor to ceiling. This approach is virtually dictated by the IES and NPA recommendations listed above. At the same time, the inevitable consequence of this approach is excessive brightness in certain viewing directions. This quandary, and its solution represent the ingenious composition of form and function embodied in the PGL Omni-System. It is the first parking garage luminaire capable of meeting all IES and NPA requirements, while providing the flexibility of modular brightness control.



# Performance Task-Driven Optics

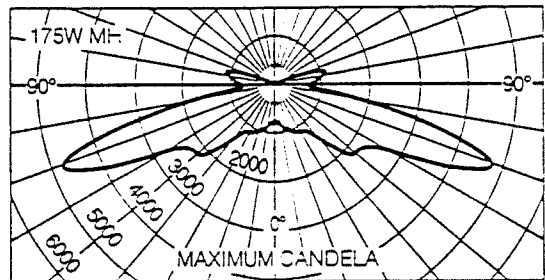


**A** Ceiling illumination is primarily generated by light passing through a clear window area in the refractor. This window is located slightly above the lamp center, and is engineered to produce a uniform wash of light over large ceiling areas. This illumination projects a secure image to visitors.



**B** A precision hydroformed reflector captures the up-light and redirects it downward through the clear window area. This light augments the main beam for greater efficiency.

**C** The main beam is generated by internal and external prisms. It is engineered to meet IES and NPA lighting recommendations while providing outstanding uniformity on both horizontal and vertical surfaces.



## Two Fixture Types Offered:

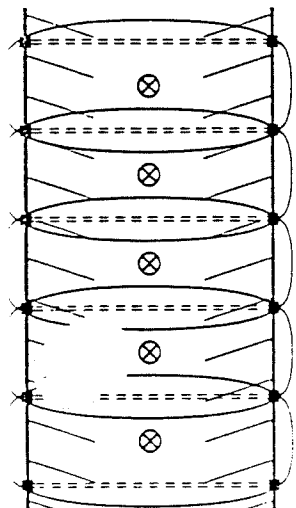
### GL2 Single Row System

Fixture Icon Shows Plan View Orientation of Lens Cage



PGL2 fixtures are factory assembled with the lens cage oriented 45° to the driving lane. This allows optimum use of Louver Modules as described on page 3. PGL2s are installed with the rectangular light pattern running across the parking bays as shown at left. The light pattern has been perfectly sized for optimum efficiency within all typical garage bays whether one-way or two-way drives are used.

See page 3 for explanation of Modular Brightness Control system as applied to the PGL2.



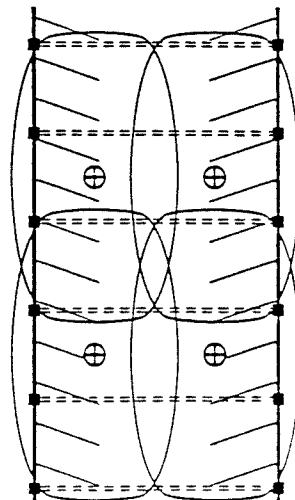
### \* PGL3 Double Row System

Fixture Icon Shows Plan View Orientation of Lens Cage

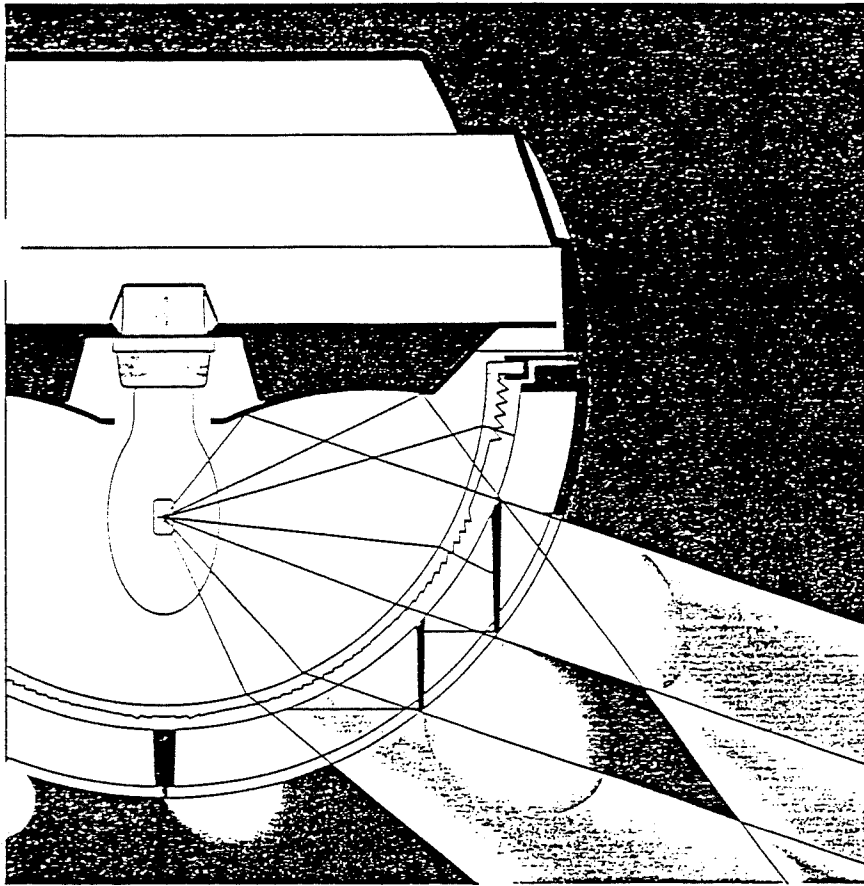


PGL3 fixtures are factory assembled with the lens cage oriented at right angles to the driving lane. This allows optimum use of Louver Modules as described on page 3. PGL3s are installed with the rectangular light pattern running parallel with the driving lane as shown at left. This arrangement utilizes the rectangular light pattern to its optimum advantage and efficiency within the garage bays whether one-way or two-way drives are used.

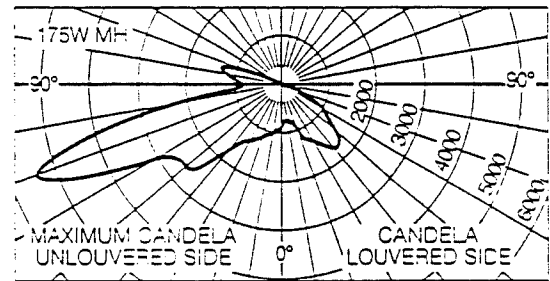
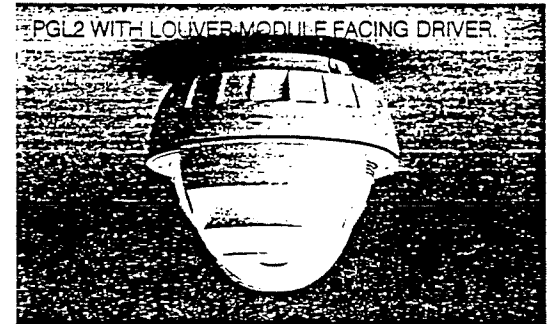
See page 3 for explanation of Modular Brightness Control system as applied to the PGL3.



# Modular Brightness Control



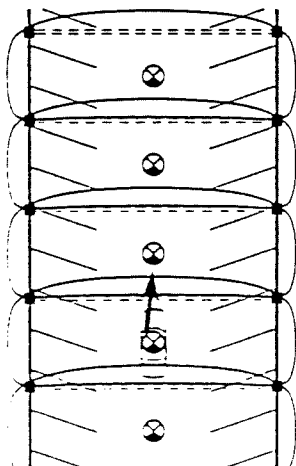
The PGL Omni-System employs an optional Louver Module that can be inserted in any quadrant of the lens cage. It is NOT a total light shield. Instead, it has been carefully engineered to reduce fixture brightness to the same approximate level as its surrounding ceiling and beams.



## PGL2 Single Row System



Because the PGL2 lens cage is oriented at 45° to the driving lane, a Louver Module directly faces the driver, providing maximum brightness control. The fixture icon is solid in the quadrant where the louver is to be installed.

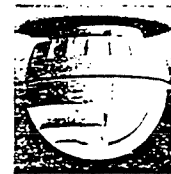


In a typical PGL2 single row layout, one Louver Module would face the driver in a one-way driving bay. The rectangular light pattern is minimally affected by the louver, and the system still provides full coverage of the bay. See page 14 for actual system performance.

For two-way drives, two Louver Modules would be installed on opposite sides of the PGL2.

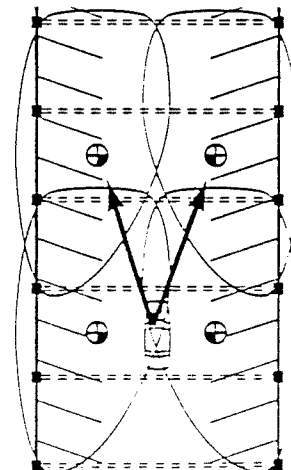


## PGL3 Double Row System



The PGL3 lens cage is oriented at right angles to the driving lane.

This allows the Louver Modules to face the driver who is viewing the fixtures at oblique angles. The fixture icon is solid in the quadrant where the louver is to be installed.



In the typical PGL3 double row layout at left, one Louver Module faces the driver in each fixture. The rectangular light pattern is shortened by the louver, but is filled in by the next fixture. See page 15 for actual system performance.

For two-way drives, two Louver Modules would be installed in adjacent fixture quadrants. To compensate for louver loss, the lateral fixture spacing can be shortened.



# PGL1HP

Parking Garage Luminaire

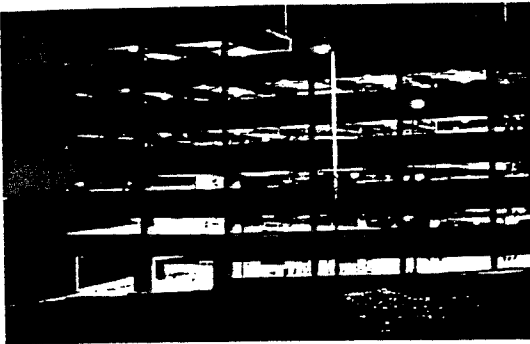


*The High Performance  
Luminaire Exclusively  
Designed For  
Parking Garages.*



**KIM LIGHTING**

# Three Functions in One Luminaire



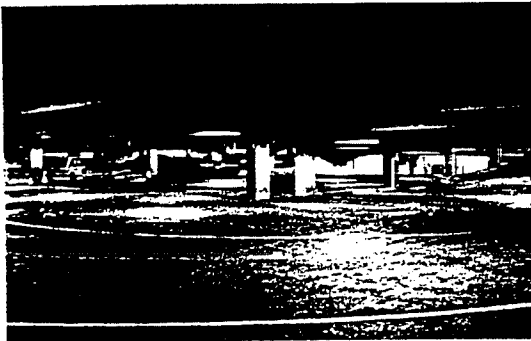
## 1. Indirect Luminaire

**Purpose:** Garage ceilings must be illuminated to avoid the "cave effect" or the feeling of entering a dark insecure place. The PGL1HP luminaire has a unique uplight component which lights ceilings and beams, creating a bright and secure ambience within the garage interior. Up-lighting also reflects off the ceiling and beams, thereby adding to the floor illumination and softening shadows.



## 2. Cutoff Luminaire

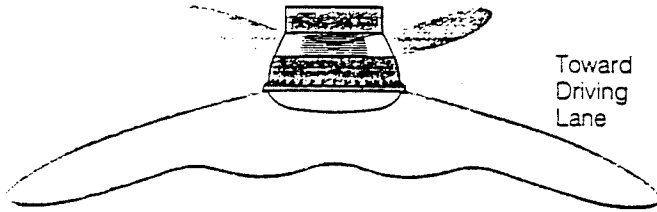
**Purpose:** Cutoff luminaires have long been acknowledged as providing the best illumination for driving because glare is eliminated at high angles where it can cause loss of visibility. The PGL1HP luminaire has been engineered to provide cutoff lighting up and down the driving lanes for optimum driver and pedestrian visibility. The lamp is fully shielded from high angle view by the opaque section of the luminaire. Collectively the cutoff down-light combines with the indirect up-light to create a bright garage interior void of harsh luminaire intensity.



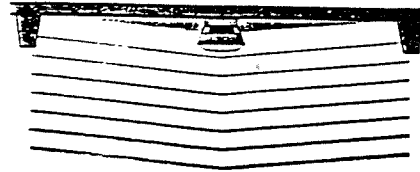
## 3. Semi-Direct Luminaire

**Purpose:** Once an automobile leaves the driving lane and is parked, the lighting requirements change. Additional light is needed at high angles to light the area between cars, help light inside the car and to provide a secure environment for people leaving or re-entering their vehicles. The PGL luminaire employs prisms in a selected portion of the up-light window to bend light downward toward the parking stalls. This additional downward light helps fill the parking areas with increased illumination directly from the luminaire and reflected from the ceiling and beams.

Up-light distribution through clear portion of upper window.

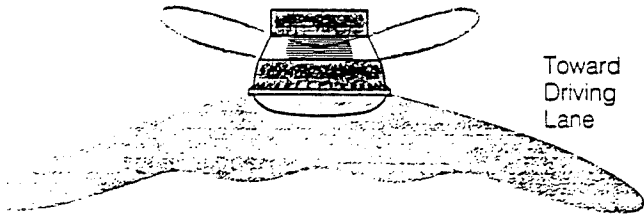


Toward Driving Lane

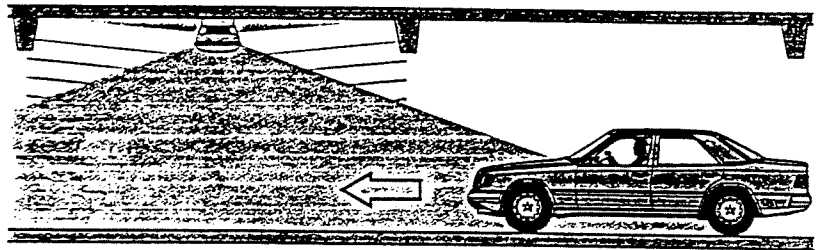


**Result:** The PGL helps any parking garage give users a secure and inviting feeling even before entering. Up-light eliminates the "cave effect".

Down-light distribution through lower window.

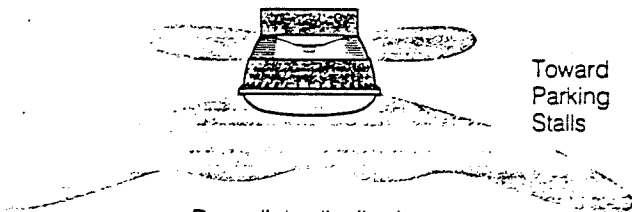


Toward Driving Lane



**Result:** The PGL generates uniform glare-free lighting for safe and comfortable driving within the garage.

Up-light and down-light distribution through prisms portion of upper window.

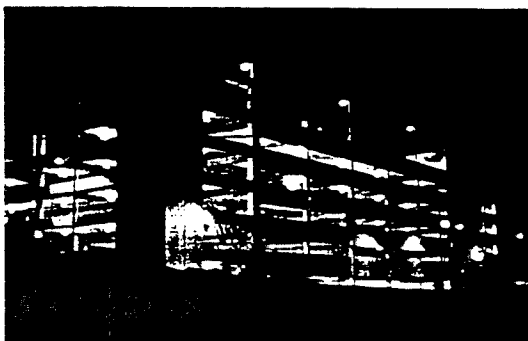


Toward Parking Stalls

Down-light distribution through lower window.



**Result:** The PGL provides excellent lighting in the parking stalls for security.



#### **Conclusion:**

The Kim Parking Garage Luminaire is an innovative solution to a complex lighting task. Never before has parking garage lighting been so thoroughly analyzed and solved by a single product with multiple functions. Today's parking garages must be highly illuminated and visually inviting or they will be avoided. The PGL can create a bright and secure

garage ambience without polluting the surrounding neighborhood with glare. In addition to superb lighting, the PGL fixture has a designer-look instead of the typical utilitarian look so common in today's garage luminaires. Day or night, the PGL will complement and enhance the growing effort to make parking garages an integral part of the architectural design theme.

# Features and Enhancements

**Note:** All enhancements are completely interchangeable with any previous PGL model.

## New Wire Seal

A molded silicone grommet now adds greater protection against moisture entry by sealing all three wires exiting the fixture top.

## New Speed Mount

The Kim "Speed Mount" has been redesigned to eliminate the need for a Mud Box Adapter Plate (old cat.# M). Now this quick mounting device easily attaches to mud boxes as well as standard 4" J-boxes.

## Hydroformed Up-Light Reflector

The one piece hydroformed up-light reflector is configured to capture and redirect lamp output to useful angles. It also retains the lamp socket, and is easily removable for access to the electrical components.

## Die Cast Housing, New Finish

The electrical housing is die cast aluminum finished in Kim's exclusive Light Gray "Super TGIC" powder coat paint. Housing hangs from the "Speed Mount" for easy wiring, and locks into place once it is raised to the final mounting position.

## Electrical Components

All ballasts and related components are rigidly mounted inside the die cast housing and 100% tested before shipment.

## New Housing Gasket

For added longevity, the housing gasket has been upgraded to a one piece molded silicone component.

## Up-Light to Parking Stalls

Two prism areas in the up-light window bend light downward for extra fill into the parking stalls. Prism areas are 180° apart.

## Up-Light Component

A generous amount of up-light is provided to illuminate the ceiling and beams. This reduces the "cave effect", providing a more secure parking garage with a sense of security.

## New Hanger Hinge

A new stainless steel hanger hinge now allows easy no-tool removal of the down-light window.

## Wide Throw Down-Light

The primary garage illumination is provided by cutoff down-light in which the lamp is fully shielded above horizontal. Full coverage of the garage bay is achieved by the wide throw and high candlepower.

## New Hydroformed Reflector

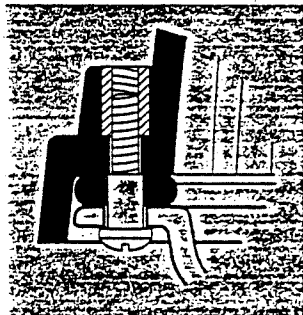
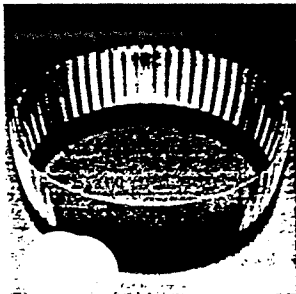
The primary reflector is now a one piece hydroformed aluminum component with an Alzak® finish. This change was made to provide maximum longevity, maintained light output and easier care over the previous vacuum-metalized reflector. Vertical facets prevent reflected light from passing through the lamp for greater efficiency and lamp life. The reflector is retained inside the one piece injection molded polycarbonate optical housing. See photo below.

## New Gasket and Fasteners

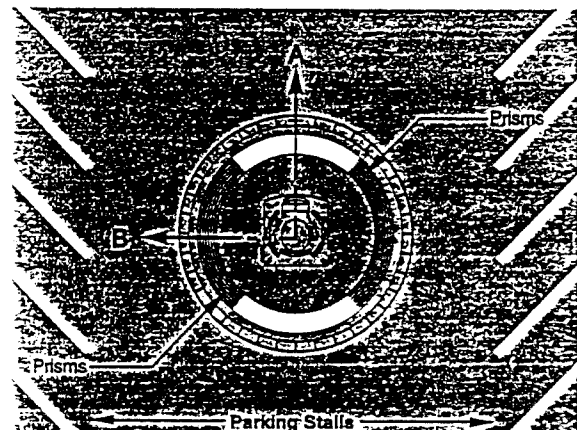
The down-light window gasket has been changed to silicone for maximum recovery of shape after relamping. The closure fasteners are stainless steel captive shoulder screws to prevent over-tightening and cracking of the lens. See detail below.

## New Down-Light Window

The injection molded down-light window has been reconfigured for greater performance by increasing the light transmission at high angles. This new lens produces an average increase of 6% in overall efficiency versus the old lens. The standard material is high temperature U.V. stabilized acrylic with optional polycarbonate available.



Top view of luminaire and orientation to parking stalls.





# City of Portland, Maine Planning Department

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City Hall  
389 Congress Street, 4th Floor  
Portland, Maine 04101  
Fax Number: 756-8258

## FAX TRANSMISSION COVER SHEET

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TO: SCOTT DECKER

COMPANY: SQUAW BOX

FROM: RICK KNOWLAND

FAX #: 829-5692

# OF PAGES: 3

DATE: 10-21-97

RE: MMC

SCOTT- ATTACHED ARE HANDWRITTEN COMMENTS CONCERNING

THE OCTOBER 16TH STAFF MEETING REVIEW OF MMC. I'LL

FORWARD OTHER COMMENTS AS THEY BECOME AVAILABLE

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If you do not receive all of the pages, please call 874-8721 or 874-8719.

10-21-97

4

TO: SCOTT DECKER, SQUAW BAY

FROM: RICK KNOWLAND, SENIOR PLANNER

RE: MMC STAFF COMMENTS

THIS MEMO IS INTENDED TO SUMMARIZE COMMENTS FROM THE OCTOBER 16TH STAFF MEETING. AS OTHER COMMENTS ARE RECEIVED I WILL FORWARD THEM ACCORDING

- PARKING FACILITY MANAGEMENT PLAN REQUIRED BY CONTRACT ZONE HAS NOT BEEN SUBMITTED
- OTHER TRAFFIC FLOW INFO. TO IMPROVE CIRCULATION IN THE VICINITY OF THE EXISTING PARKING GARAGE HAS NOT BEEN SUBMITTED
- LANDSCAPE / OPEN SPACE DESIGN FOR THE AREA BETWEEN THE PARKING GARAGE AND BOYNTON STREET NEEDS TO BE SUBMITTED
- SHOW HEIGHT OF BRICK WALL AND LANDSCAPING PLANTING DETAIL
- SHOW SECURITY GATE DETAIL

- WATER QUALITY TREATMENT - HOW WILL IT BE DONE
- SHOW ALL BUILDING SETBACKS ON THE SITE PLAN
- SIDEWALKS AND CURBING WILL NEED TO BE REPLACED  
AFTER CONSTRUCTION
- WHERE IS THE SNOW DUMP?
- PARKING SPACES BEING DISPLACED - EXISTING ON SITE AND  
ON STREET
- NEED A COLORED RENDERING OF THE BUILDING ELEVATION
- DETAILS AND MATERIALS OF THE SKYWALK
- INFO ON EXTENDED CONNECTION OPTION BY EXISTING  
PARKING GARAGE.
- NEED INFO ON PARKING GARAGE MATERIALS AND  
ARTICULATION
- TREATMENT OF SECOND FLOOR BY ENTRANCE - IS GLASS  
SETBACK OR IS IT ENCLOSED



• WATER QUALITY TREATMENT - HOW WILL IT BE DONE

• SHOW ALL BUILDING SETBACKS ON THE SITE PLAN

• SIDEWALKS AND CURBING WILL NEED TO BE REPLACED  
AFTER CONSTRUCTION

• WHERE IS THE SNOW DUMP?

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- NEED INFO ON PARKING GARAGE MATERIALS AND ARTICULATION
- TREATMENT OF SECOND FLOOR BY ENTRANCE - IS GLASS SETBACK OR IS IT ENCLOSED

Precision Park  
North Spring Field, VT 05150  
(802) 886-2261

**Dufresne Henry**  
22 Free Street  
Portland, ME 04101  
(207) 775-3211

Ref. Loc.: MMC  
Date: April 14, 1999  
Report No.: 3

Calender Days Contract: \_\_\_\_\_  
Calender Days Consumed: \_\_\_\_\_  
Calender Days Remaining: \_\_\_\_\_

Weather: cloudy Temp: 50's

D-H Project No.: 8160054 Municipality or Owner: City of Portland  
Project Name: Maine Medical Center - Parking Garage/Office Building  
Contractor: MEDIPLEX MEDICAL BUILDING CORP.  
Sub Contractors: GRANGER NORTHERN, SHAW BROS.

CLASSIFICATION OF LABOR	CLASSIFICATION OF EQUIPMENT		CLASSIFICATION OF WORK
	Quantity	Size	
Superintendent			Layout
Foreperson			Excavation
Operator			Electrical
Pipelayer			Drainage
Laborer			Demolition
Electrician			Grading
Driver			Backfill
Flagger			Restoration
Surveyor			Compaction
			Testing
			Reclaiming
			Compaction
			Landscaping
			Concrete
			Paving
			Markings
Contractor's Hours:			

NAME(S): \_\_\_\_\_ VISITORS \_\_\_\_\_ REPRESENTING: \_\_\_\_\_

Description of Project Activities and Observations: Ron Blackwell from MMBC is on vacation this week. Spoke with Mike about work in progress and walked around the site with him. Primary focus of work continues to be concrete and structural steel. Several of the parking level slabs have been placed to date. Little site work activity is currently being undertaken. Tracked excavator is being used at the site for grading, placement of fill, and other activities. This piece of equipment was observed being moved along Congress St to Forest St. use of this equipment should be minimized along city streets. Other items to note

By: \_\_\_\_\_  
Resident Engineer

SETBACK OR IS IT ENCLOSED

TREATMENT OF SECOND FLOOR BY ENTRANCE - IJ (LAD)

### ARTICULATION

NEED INFO ON PARKING GARAGE MATERIALS AND

### PARKING GARAGE

INFO ON EXTENDED CONNECTION OPTION BY EXISTING

DETAILS AND MATERIALS OF THE SKYWALK

NEED A COLUMN RENDITION OF THE BUILDING ELEVATION

### ON STREET

PARKING SPACES BEING DISPLACED - EXISTING ON SITE AND

WHERE IS THE SNOW DUMP?

### AFTER CONSTRUCTION

SIDEWALK AND CURBING WILL NEED TO BE REPLACED

SHOW ALL BUILDING SETBACKS IN THE SITE PLAN

WATER QUALITY TREATMENT - HOW WILL IT BE DONE



HARRIMAN ASSOCIATES

One Auburn Business Park  
Auburn, Maine 04210

207.784.5100 telephone  
207.782.3017 fax  
www.harriman.com

Offices in Maine  
and Connecticut

TRANSMITTAL

To  
CITY OF PORTLAND PLANNING DEPT  
309 CONGRESS ST.  
PORTLAND, ME 04101  
Attention  
R. KNOWLAND

Date  
3-30-99  
Project name  
MMC MEDICAL OFFICE BLDG & CONNECTOR  
Project number  
97129  
Re  
PRESENTATION BOARD

We are sending you the following items:  
 Attached  
 Under separate cover via \_\_\_\_\_

- Shop drawings
- Prints
- Requisitions
- Samples
- Specifications
- Copy of letter
- Change order
- \_\_\_\_\_

Copies	Date	Drawing no.	Specs. sec. no.	Description
1		30 X 36		RENDERED ELEVATION
2		11 X 17		COPIES

Transmitted for:  
 Approval  
 Action as shown  
 Other  
 For use  
 Review/comment  
 Prints returned after loan to us  
 As requested  
 Resubmission

Remarks

Copy to J. Morrison - MMC, J. CLARKSON - MMBC  
 Client  
 BGS  
 Clerk  
 File  
Signature: Mark D. Lee



Precision Park  
 North Spring Field, VT 05150  
 (802) 886-2261

**Dufresne Henry**  
 22 Free Street  
 Portland, ME 04101  
 (207) 775-3211

Ref. Loc.: MMC  
 Date: April 14, 1999  
 Report No.: 3

Weather: cloudy Temp: 50's

Calendar Days Contract: \_\_\_\_\_  
 Calendar Days Consumed: \_\_\_\_\_  
 Calendar Days Remaining: \_\_\_\_\_

D-H Project No.: 8160054 Municipality or Owner: City of Portland  
 Project Name: Maine Medical Center - Parking Garage/Office Building  
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	Quantity	Size	
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Foreperson	Backhoe		Excavation
Operator	Excavator		Electrical
Pipelayer	Loader		Drainage
Laborer	Bulldozer		Demolition
Electrician	Grader		Grading
Driver	Paver		Backfill
Flagger	Roller		Restoration
Surveyor	Truck, Dump		Compaction
	Reclaimer		Testing
	Compressor		Reclaiming
	Scraper		Compaction
			Landscaping
Contractor's Hours:			Concrete
			Paving
			Markings

NAME(S): \_\_\_\_\_ VISITORS \_\_\_\_\_ REPRESENTING: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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By: \_\_\_\_\_ Resident Engineer Page 1 of 2

Precision Park  
North Spring Field, VT 05150  
(802) 886-2261

Dufresne Henry  
22 Free Street  
Portland, ME 04101  
(207) 775-3211

D-H Project No.: 8160054  
Ref. Loc.: MMC  
Date: 4-14-99  
Report No.: 3

Description of Project Activities and Observations (cont.):

include:

- Stabilized construction entrances should be installed at both Forest and Baynton entrances to minimize tracking of sand onto streets and creating a dust problem.
- Erosion control measures at the corner of Forest and Baynton have been destroyed and should be reestablished.
- A portion of the sheeting installed along Forest st has moved towards the work area. The sidewalk in this area has settled from the face of the granite curbing towards the sheeting. The concrete sidewalk has cracked and will need to be replaced. Action should be taken here to prevent further settlement of the road.
- A portion of the Congress st. sidewalk has been closed. The sidewalk closure is not well marked.

DH will follow up with Ron on these items when he returns next week.

By: Jeff Probie  
Resident Engineer

Precision Park  
 North Spring Field, VT 05150  
 (802) 886-2261

**Dufresne Henry**  
 22 Free Street  
 Portland, ME 04101  
 (207) 775-3211

Ref. Loc.: MMC  
 Date: Apr 14, 1999  
 Report No.: 3

Weather: cloudy Temp: 50's

Calendar Days Contract: \_\_\_\_\_  
 Calendar Days Consumed: \_\_\_\_\_  
 Calendar Days Remaining: \_\_\_\_\_

D-H Project No.: 8160054 Municipality or Owner: City of Portland  
 Project Name: Maine Medical Center - Parking Garage/Office Building  
 Contractor: MEDIPLEX MEDICAL BUILDING CORP.  
 Sub Contractors: GRANGER NORTHERN, SHAW BROS.

CLASSIFICATION OF LABOR	CLASSIFICATION OF EQUIPMENT		CLASSIFICATION OF WORK
	Quantity	Size	
Superintendent _____	Backhoe _____	_____	Layout _____
Foreperson _____	Excavator _____	_____	Excavation _____
Operator _____	Loader _____	_____	Electrical _____
Pipelayer _____	Bulldozer _____	_____	Drainage _____
Laborer _____	Grader _____	_____	Demolition _____
Electrician _____	Paver _____	_____	Grading _____
Driver _____	Roller _____	_____	Backfill _____
Flagger _____	Truck, Dump _____	_____	Restoration _____
Surveyor _____	Reclaimer _____	_____	Compaction _____
_____	Compressor _____	_____	Testing _____
_____	Scraper _____	_____	Reclaiming _____
_____	_____	_____	Compaction _____
Contractor's Hours: _____	_____	_____	Landscaping _____
_____	_____	_____	Concrete _____
_____	_____	_____	Paving _____
_____	_____	_____	Markings _____

NAME(S): \_\_\_\_\_ VISITORS \_\_\_\_\_ REPRESENTING: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Description of Project Activities and Observations: Ron Blackwell from MMBC is on vacation this week. Spoke with Mike about work in progress and walked around the site with him. Primary focus of work continues to be concrete and structural steel. Several of the parking level slabs have been placed to date. Little site work activity is currently being undertaken. Tracked excavator is being used at the site for grading, placement of fill, and other activities. This piece of equipment was observed being moved along Congress St to Forest St. use of this equipment should be minimized along city streets. Other items to note

By: \_\_\_\_\_ Resident Engineer Page 1 of 2

Precision Park  
North Spring Field, VT 05150  
(802) 886-2261

Dufresne Henry  
22 Free Street  
Portland, ME 04101  
(207) 775-3211

D-H Project No.: 8160054  
Ref. Loc.: MMC  
Date: 4-14-99  
Report No.: 3

Description of Project Activities and Observations (cont.):

include:

- Stabilized construction entrances should be installed at both Forest and Baynton entrances to minimize tracking of sand onto streets and creating a dust problem.
- Erosion control measures at the corner of Forest and Baynton have been destroyed and should be reestablished.
- A portion of the sheeting installed along Forest St has moved towards the work area. The sidewalk in this area has settled from the face of the granite curbing towards the sheeting. The concrete sidewalk has cracked and will need to be replaced. Action should be taken here to prevent further settlement of the road.
- A portion of the Congress St. sidewalk has been closed. The sidewalk closure is not well marked.

DH will follow up with Ron on these items when he returns next week.

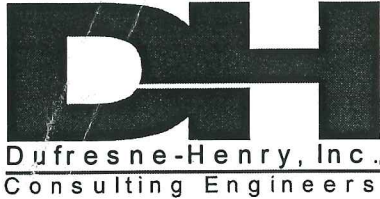
By: Steve Probst  
Resident Engineer

**From:** Nancy Knauber  
**To:** Rick Knowland  
**Date:** Tue, Mar 30, 1999 1:19 PM  
**Subject:** MMC Garage Building

I received a call from a Linda Dagnise (work 822 - 2000) today, her mother lives at 879 Congress St. and is bothered by the lights and noise at night from the MMC construction. I called and spoke to Roger Blackwell at the site, it seems they have been working nights without a "Time Wavier". He said that they would be down to request a wavier the next time thy work nights and will try to angle the lights away from the apartment house. Roger did tell me that the night work will continue for another 2 -3 months while they finish the concrete pours.


Since Public Works is only responsible for noise when they work in the Public Way, I'll have the residents contact you about other conserns.

**CC:** Todd Merkle



22 Free Street, Portland, ME 04101

(207) 775-3211

**MEMO TO:** Rick Knowland, Senior Planner  
**FROM:** Jeffrey D. Preble, P.E.   
**DATE:** December 9, 1998  
**SUBJECT:** Maine Medical Center - Parking Garage/Office Building

---

I stopped by the Maine Medical Center Parking Garage and Office Building site today as requested. Most of the work is focused on the building foundation, with a little bit of site work being done. I would suggest we stop by the site once per month during the winter months, with possibly more frequent inspections once some of the additional site work and restoration work begins in the spring. We are always available to stop by the site on an as requested basis.

Ron Blackwell requested that I send him a copy of the inspection reports we generate. A copy of the reports will also be provided to Jim Morrison at Maine Medical Center as well. Let me know if you have any questions regarding this project.

C: Ron Blackwell, Mediplex Medical Building Corporation  
Jim Morrison, Maine Medical Center

File C:\Civil\8160054\Project 'G' MMC\mmc memo 1.wpd

Precision Park  
 North Spring Field, VT 05150  
 (802) 886-2261

**Dufresne Henry**  
 22 Free Street  
 Portland, ME 04101  
 (207) 775-3211

Ref. Loc.: MMC  
 Date: DEC 9, 1998  
 Report No.: 1  
 Calendar Days Contract: \_\_\_\_\_  
 Calendar Days Consumed: \_\_\_\_\_  
 Calendar Days Remaining: \_\_\_\_\_

Weather: CLEAR Temp: 40's

D-H Project No.: 8160054 Municipality or Owner: City of Portland  
 Project Name: Maine Medical Center - Parking Garage/Office Building  
 Contractor: MEDIPLEX MEDICAL BUILDING CORPORATION  
 Sub Contractors: SHAW BROS. - SITE WORK SUBCONTRACTOR

CLASSIFICATION OF LABOR	CLASSIFICATION OF EQUIPMENT		CLASSIFICATION OF WORK
	Quantity	Size	
Superintendent			Layout
Foreperson			Excavation
Operator	Backhoe		Electrical
Pipelayer	Excavator		Drainage
Laborer	Loader		Demolition
Electrician	Bulldozer		Grading
Driver	Grader		Backfill
Flagger	Paver		Restoration
Surveyor	Roller		Compaction
	Truck, Dump		Testing
	Reclaimer		Reclaiming
	Compressor		Compaction
	Scraper		Landscaping
Contractor's Hours:			Concrete
			Paving
			Markings

NAME(S): VISITORS REPRESENTING:

Description of Project Activities and Observations: Talked with Ron Blackwell and Larry Swinard regarding current work activities. Currently working on building foundation. Also talked with Shaw Bros. site Superintendent, Wayne, about site work activities completed to date. Items completed include new catch basin near corner of Congress St & Forest St., several portions of the building underdrain system, as well as the new Vortecmics oil/grit separator and tie-in at Forest St. New catch basin at NE corner of site has not been installed yet. Very little site work related activities will be taking place during

By: \_\_\_\_\_  
 Resident Engineer

Precision Park  
North Spring Field, VT 05150  
(802) 886-2261

Dufresne Henry  
22 Free Street  
Portland, ME 04101  
(207) 775-3211

D-H Project No.: 8160054  
Ref. Loc.: MMC  
Date: 12/9/98  
Report No.: ①

Description of Project Activities and Observations (cont.):

the winter mantus - Shaw plans to continue install underdrain as work on the footings & foundation proceed. Sidewalks, landscaping, restoration work etc will take place in the Spring.

Erosion control measures installed at site currently includes a hay bale barrier at the corner of Forest & Baynton Sts, near the oil/water grit separator. Work is below street level so additional silt fencing or hay bales is not warranted at this time. A stabilized construction entrance did not appear to be installed at either the Forest St. or Baynton St. construction entrance. There was minor tracking of materials from site onto the streets.

By: JEFF PREBUS  
Resident Engineer





**CITY OF PORTLAND**

February 9, 1999

Jim Morrison  
Maine Medical Center, Engineering Div.  
22 Bramhall St.  
Portland ME 04102

RE: Maine Medical Center - 883 Congress St.

Dear Jim:

This letter is in reference to our recent telephone conversation concerning the relocation of the transformer for Maine Medical Center project at 883 Congress Street. With the potential widening of Forest Street and the limited amount of space between the street and the new building, we would concur that relocating the transformer from Forest Street makes sense. Relocating the transformer to the "notch" on the corner of Congress Street and Forest Street (where the transformer was originally located) would be acceptable. However, we will require that the proposed transformer color and type of screening be reviewed and approved by the Planning Office.

Should you have any questions about this letter, please call me.

Sincerely,

Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr., Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
Marge Schmuckal, Zoning Administrator

O:\PLAN\REZONE\CONG883\LETTERS\MORRISON.LEC

**DUFRESNE-HENRY, INC**  
 22 Free Street  
 Portland, Maine 04101-3900

Tel. (207) 775-3211 Fax (207) 775-6434  
 To: Planing & Urban Development  
389 Congress St.  
Portland, Maine 04101

**LETTER OF TRANSMITTAL**

Date	Feb 4, 1999	Job no:	8160054
Attention:	Rick Knowland		
Subject:	MMC Office Building		

WE ARE SENDING YOU:  Attached  Under Separate Cover Via \_\_\_\_\_ the following items:

Shop Drawings  Prints  Plans  Samples  Specifications

Copy of Letter  Change Order  Inspection Report

Copies	Date:	No.	Description:
1		2	Inspection Report

THESE ARE TRANSMITTED as checked below:

For Approval  Approved as Submitted  Resubmit \_\_\_ copies for approval

For Your Use  Approved as Noted  Submit \_\_\_ copies for distribution

As requested  Returned for corrections  Return \_\_\_ corrected prints

For Review and Comment  \_\_\_\_\_

FOR BIDS DUE \_\_\_\_\_ 19 \_\_\_\_\_  PRINTS RETURNED AFTER LOAN TO US

REMARKS

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Ron Blackwell, Mediplex Building Corp

Copy to Jim Morrison, Maine Medical Center

SIGNED:

  
 Jeffrey D. Preble, P.E.

If enclosures are not as noted, kindly notify us at once.

Precision Park  
North Spring Field, VT 05150  
(802) 886-2261

**Dufresne Henry**  
22 Free Street  
Portland, ME 04101  
(207) 775-3211

Ref. Loc.: MMC  
Date: Feb. 4, 1999  
Report No.: 2

Weather: CLAY

Temp: 30's

Calender Days Contract: \_\_\_\_\_  
Calender Days Consumed: \_\_\_\_\_  
Calender Days Remaining: \_\_\_\_\_

D-H Project No.: 8160054 Municipality or Owner: City of Portland  
Project Name: Maine Medical Center - Parking Garage/Office Building  
Contractor: MEDIPLEX MEDICAL BUILDING CORP  
Sub Contractors: GRANGER NORTHERN, SHAW BROS

CLASSIFICATION OF LABOR	CLASSIFICATION OF EQUIPMENT		CLASSIFICATION OF WORK
	Quantity	Size	
Superintendent			Layout
Foreperson	Backhoe		Excavation
Operator	Excavator		Electrical
Pipelayer	Loader		Drainage
Laborer	Bulldozer		Demolition
Electrician	Grader		Grading
Driver	Paver		Backfill
Flagger	Roller		Restoration
Surveyor	Truck, Dump		Compaction
	Reclaimer		Testing
	Compressor		Reclaiming
	Scraper		Compaction
			Landscaping
Contractor's Hours:			Concrete
			Paving
			Markings

NAME(S): \_\_\_\_\_ VISITORS \_\_\_\_\_ REPRESENTING: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description of Project Activities and Observations: Work is continuing on building foundation & structural columns. Underdrain system is being installed as sections of the foundation are completed. Catch basin at NE corner of site (corner of Baynton & private driveway) has not been installed yet. Structure is located very close to property line & will likely require support to prevent losing driveway into work area. Erosion control measures are still in place at NW corner of site. Work is still below street level.

By: \_\_\_\_\_  
Resident Engineer

C:\Civ\8160054\Project 'G' MMC\Daily report.WB3

Precision Park  
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Portland, ME 04101  
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D-H Project No.: 8160054  
Ref. Loc.: MMC  
Date: Feb. 4, 1999  
Report No.: 2

Description of Project Activities and Observations (cont.):

Silt fence and hay bales will still require some adjustment & maintenance prior to spring work activities. Sand construction entrance is keeping most materials on-site and off the street. Some sand is getting tracked onto Forest St, but does not appear to be a problem.

By: JEFF PROBLE  
Resident Engineer

# Squaw Bay Corp

Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.



December 29, 1998

*Rec'd  
See me on  
This*

Mr. Jim Clarkson  
MMBC  
5308 West Plano Parkway  
Plano, TX 75093-4821

**RE: Maine Medical Center  
Medical Office Building  
Congress Street, Portland, ME**

Dear Jim:

Accompanying this letter are a conceptual plan sketch SK-1 and roadway typical section, dwg. SK-2, for the planned widening of Forest Street. Please note the sketches are based on widening the street only with a 3/4" pavement overlay at completion of widening and not full depth reconstruction for the entire street. The City may require complete reconstruction of the affected portion of Forest Street. During final design review meetings with the city, different options will be discussed and a different typical section may be established. It should also be noted that the goal of a 5' sidewalk is met on the MOB side of the street only with the sketches as presented. Also the MOB transformer may have to be relocated to provide a 5' sidewalk and a right-of-way or easement will have to be granted to the City to construct the sidewalk outside the street right-of-way.

Please call me if you have any questions.

Sincerely,

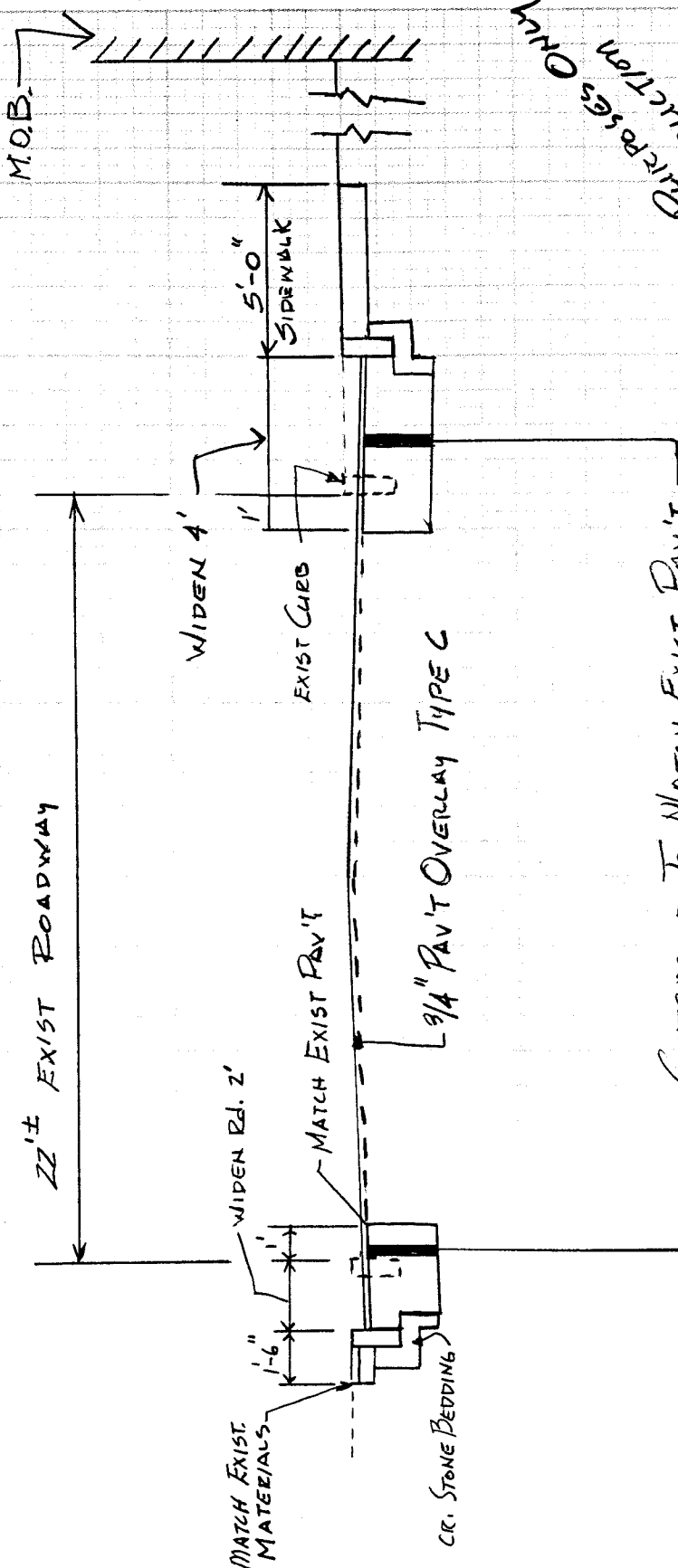
SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

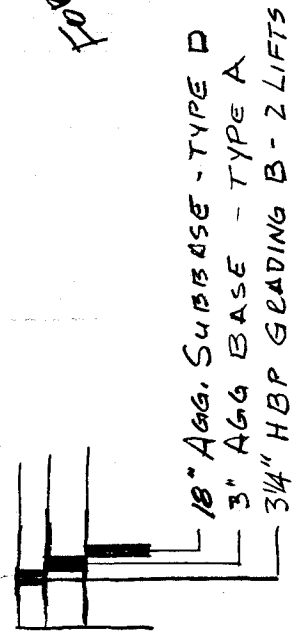
WSD/cms

97242/clarkson1229.let

PROJECT		MEDICAL OFFICE BUILDING		MEDICAL OFFICE BUILDING	
COMP BY		S. Decker		FOREST ST. WIDENING	
JOB NO.		97222		DATE	
				12/29/98	



CONTRACTOR TO MATCH EXIST PAV'T BUILD UP. FOR COST ESTIMATING PURPOSES, USE THE FOLLOWING:



FOR ESTIMATING PURPOSES ONLY  
FOR NOT FOR CONSTRUCTION

SK-2

FOREST ST. WIDENING  
SCALE = 1" = 5'

# FENCING MATERIAL Product Presentation

AEGIS II™ - A revolutionary system of fencing posts, framework and mounting accessories that are easily assembled attractive "good neighbor" appearance with no exposed fasteners.

## The Aegis II™ Advantage

### STRENGTH

- Aegis II™ is the strongest ornamental component fence system available.
- Superior vertical and horizontal load capacities with all-steel framework and specially designed Forerunner™ Rail.

### SECURITY

- No external fasteners resulting in increased security and strength.
- Special one-way security fastener for rail-to-bracket connection.
- Internal retaining rod for picket-to-rail connection cannot be breached when panel is in place.

### VALUE

- Due to the unique patented design using high technology roll form equipment (in-house tube forming) Ameristar is able to supply an affordable ornamental fence as a welcome alternative to chain link fencing.

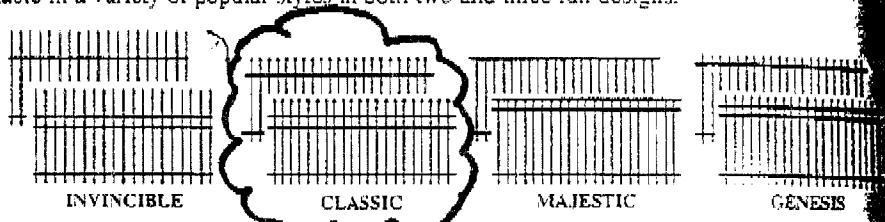
### QUALITY

- G-90 galvanized steel resulting in superior rust protection.
- Maintenance free *Permacoat*™ (double layer) powder coat system.

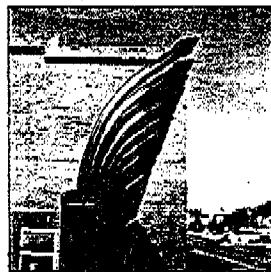
### APPEARANCE

- Architecturally pleasing, free flowing lines with no external fasteners.
- Visually reflects strength, security and beauty.
- Offered in four colors - Black, Brown, Desert Sand and White.
- Available in a variety of popular styles in both two and three rail designs.

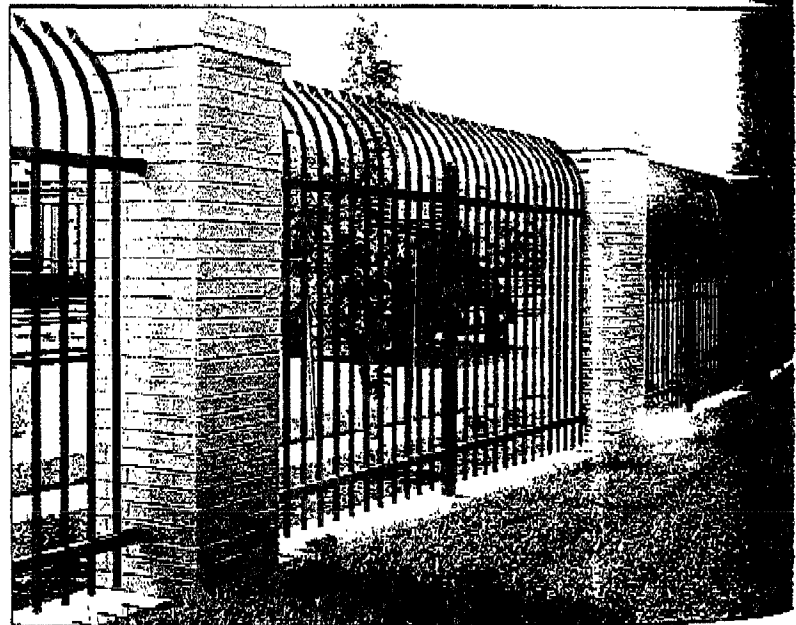
## Styles Available



## Invincible



Available In:  
Style I2 (2-Rail)  
or I3 (3-Rail)



### 2-Rail

Security and protection are combined with the beauty of ornamental fencing in the Invincible design. Each picket is spear-shaped and extends one foot above the top rail, curving outward to make this fence incapable of being overcome, as the name implies.

### 3-Rail

The extra strength of the third rail, coupled with the strength of the Forerunner™ cross-section, make the Invincible an increasingly popular alternative to security fencing of chain link and barbed wire.

Architects + Engineers

HARRIMAN ASSOCIATES

One Auburn Business Park  
Auburn, Maine 04119

207.794-1100 telephone  
207.794-1012 fax  
www.harriman.com

900 Congress Street  
Portland, Maine 04101

January 30, 1998  
Fax Confirmation Sent January 30, 1998

Mr. Rick Knowland  
Senior Planner  
Planning & Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

Post-it® Fax Note	7671	Date	1/30/98	# of pages	22
To	Rick Knowland	From	Patrick Costin		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #	754-8258	Fax #			

Re: Maine Medical Center  
Medical Office Building, Parking Structure and Overhead Connector  
Portland, Maine  
Project No. 97.129-00

Dear Rick:

The following responses are comments to your letter, dated December 24, 1997, outlining staff comments regarding the proposed Maine Medical Center Office Building on Congress Street.

1. *Please submit catalog cut information on the proposed grating, fencing material, and security gate.*

See attached cut sheets for information.

2. *Describe the dark vertical detail (width, material, it is indented?) on the facade.*

See attached detail drawing C4 for information on recessed brick.

3. *Are the windows clear tinted (if yes, what color?) or reflective?*

The windows are bronze tinted, but not reflective.

4. *Has any consideration been given to an alternative color to brown for the window frames? When viewed in the context of the building, brown gives the facade a dark tone. What about green? This color selection has also influenced such elements as the metal roof of the parking garage elevator. Although color is in the eye of the beholder, the trim color seems a bit somber for the building.*



## HARRIMAN ASSOCIATES

Mr. Rick Knowland

Page 2

January 30, 1998

The window frames are medium bronze in color. This color will coordinate with the color palette of the rest of MMC's Portland Campus and integrate well with the proposed color of the brick and precast concrete.

5. *Are the window frames a baked enamel or anodized? A baked enamel color would be preferred.*

Bronze anodized.

6. *Please show a typical cross section of the window and the surrounding brick wall.*

See attached window detail drawings A1, A2, B1, B2, C1, and C2.

7. *The southerly elevation shows a fence with two posts. The white color of the posts doesn't seem appropriate, given the material and colors of the building facade.*

The posts will be clad with brick and precast concrete to match the building facade.

8. *Please describe or show a detail of the facade design of the parking garage concrete panel.*

See attached detail 4 Basement Wall Section for the profile of the parking garage precast panels. A sample of the proposed precast concrete for the garage is enclosed.

9. *Is the color of the precast concrete on the building facade the same color as the parking garage concrete panels?*

The color of the precast concrete specified for the project will be consistent throughout the entire project.

10. *Indicate the exterior material of the roof top structures.*

See attached cut sheet for information on the roof top screen material for mechanical equipment. The stair enclosure will be covered with standing seam metal roofing material. The color for both of these systems will be medium bronze to match the window fenestration.

HARRIMAN ASSOCIATES

Mr. Rick Knowland

Page 3

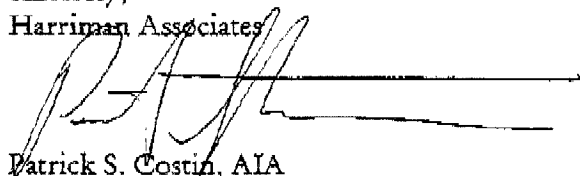
January 30, 1998

11. *We are very interested in the latest version of the skywalk. Please let us know when the latest version is available. Obviously, we view the building and skywalk as a cornerstone project to help revitalize this area of Congress Street.*

The skywalk design is still being reviewed by Maine Medical Center. The final design will be forwarded as soon as it is available.

If you have additional questions, please call me.

Sincerely,  
Harriman Associates



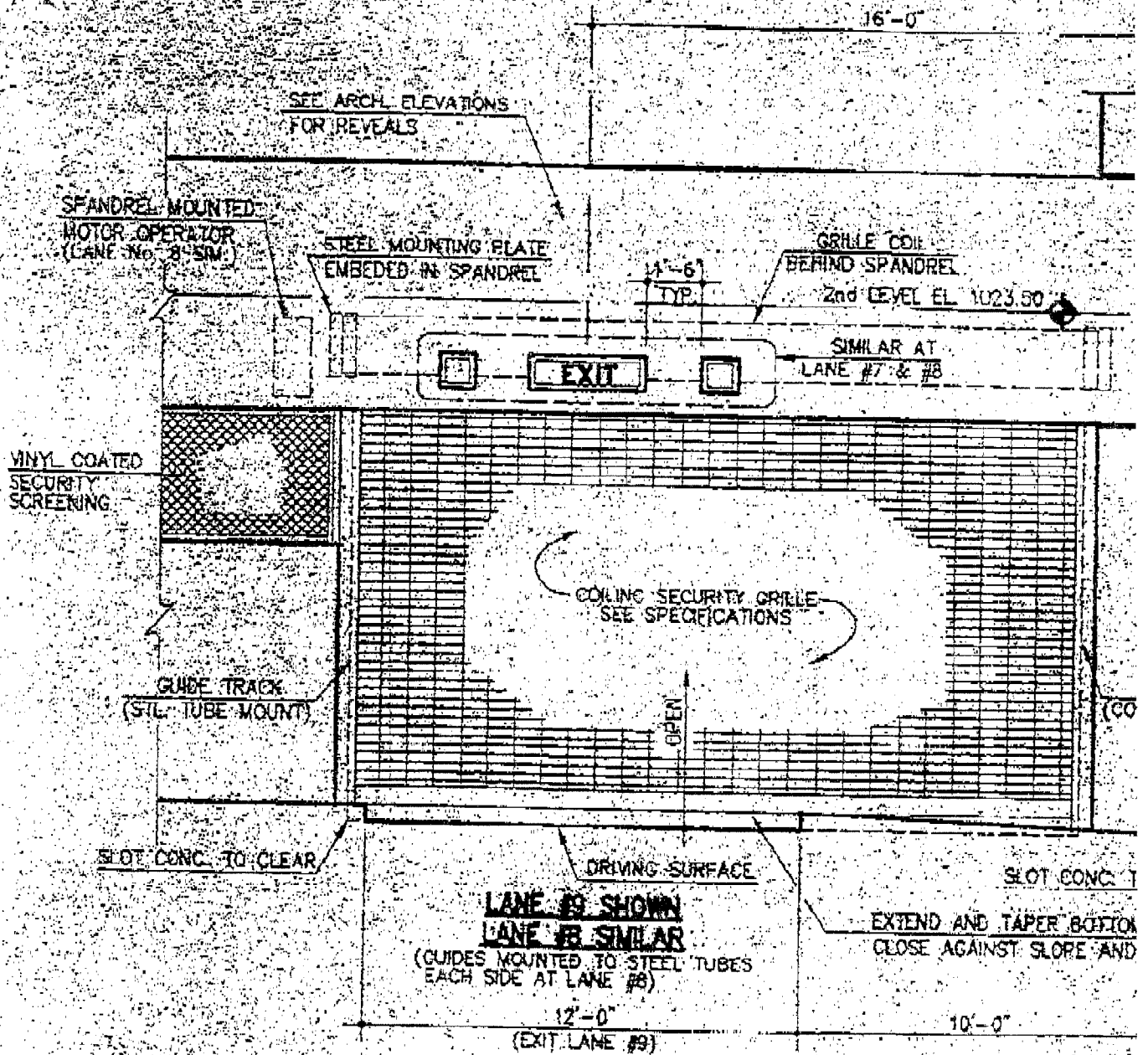
Patrick S. Costin, AIA  
Project Architect

sjtho

Enclosure

cc: Jim Clarkson (via fax 972-931-8966)  
Jim Morrison (via fax 871-6195)

# PROPOSED SECURITY GATE @ GARAGE ENTRY/EXIT



1  
A112

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



02830/AMI  
BuyLine 3012



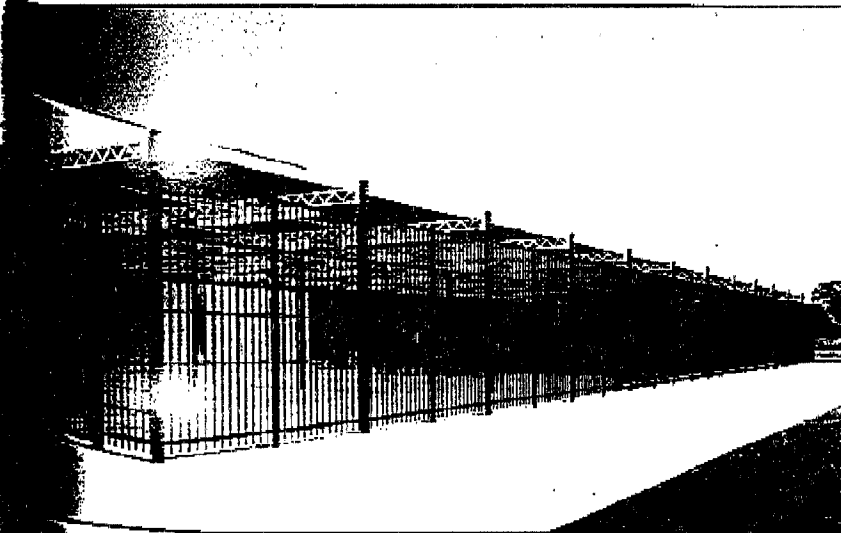
Available In:  
Style C2 (2-Rail)  
or C3 (3-Rail)

**2-Rail**

Ameistar's spear-shaped picket extends through the bottom top rail to form the attractive traditional Classic design. The picket is formed with a 3/8" diameter rounded tip rather than a sharp point.

**3-Rail**

Adding the third rail gives the traditional Classic look 50% greater strength. It is ideal when situations require greater fence heights and the fence must withstand heavier vertical loads.



**Majestic**



Available In:  
Style M2 (2-Rail)  
or M3 (3-Rail)

**3-Rail**

Majestic design is formed to a configuration of contemporary simplicity that maintains a stately look of elegance. Use of the special bottom-punched top rail with rounded pickets makes this a safe perimeter for a

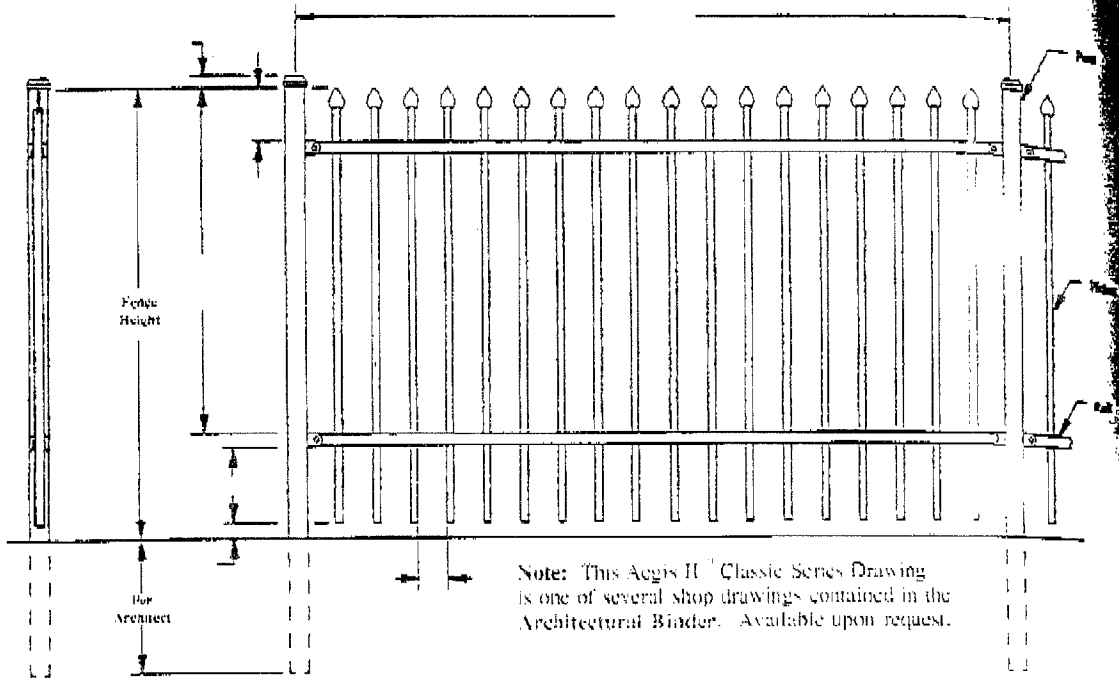
Large estates and many companies are moving toward the strength and "no-nonsense" elegance of the 3-Rail Majestic design. The double top rail at the top of this fence enhances the lines of many contemporary facility designs.

**Genesis (Not Pictured)**

Genesis style offers extended pickets similar to the Classic, but is differentiated by having a flat rather than a spear-shaped picket top. Genesis is becoming increasingly popular as a perimeter for apartments and condominiums. Available in both 2 and 3-Rail styles (Style G2 or G3).

# Comprehensive Product Information

## Shop Drawings



### Framework

Pickets	Rails	Posts
1" X 16 GA.	1-3/4" X 14 GA.	See Table Below

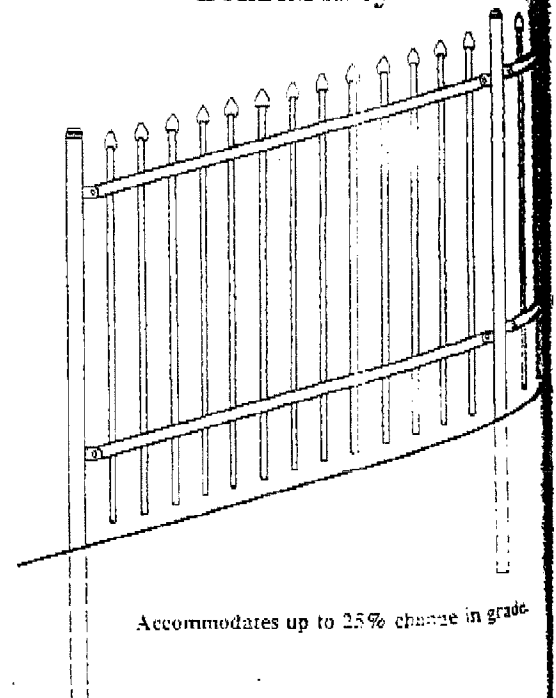
\* Special Roll-Formed Forerunner™ Shape

### Wind Loading

Height (FT)	Rail Length	Post Size	Wind Load Capacity Factor (PSF)	Typical Wind Load Capacity (mph)
6	6	2-1/2" X 12 GA.	45.5	133
		3" X 12 GA.	54.5	146
	8	2-1/2" X 12 GA.	34.2	116
		3" X 12 GA.	41.0	127
7	6	2-1/2" X 12 GA.	33.4	114
		3" X 12 GA.	40.0	125
	8	2-1/2" X 12 GA.	25.0	99
		3" X 12 GA.	30.0	108
8	6	2-1/2" X 12 GA.	25.6	100
		3" X 12 GA.	30.7	110
	8	2-1/2" X 12 GA.	19.2	87
		3" X 12 GA.	23.0	95
9	6	3" X 12 GA.	24.0	97
10	6	3" X 12 GA.	21.6	92

Note: Mph calculated using ANSI/ASCE 7-88, "American Society of Civil Engineers Minimum Design Loads for Buildings and other Structures." Exposure Category B (urban and suburban areas with closely spaced obstructions having the size of single-family dwellings or larger). For wind loading applicable to a particular specification, consult the appropriate Building Code.

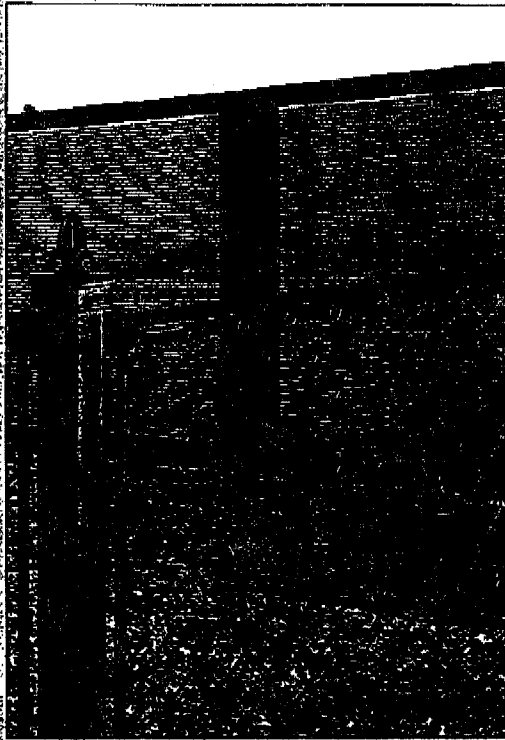
### Biasability



# SECURITY GRATING @ GARAGES

## Choosing the proper posts

Anchor framework is available in



The End, Corner and Gate Posts must be strong to withstand the strain of the fabric which is stretched between them. If they are not of the proper strength, they will bow or bend.

**COMPARISON CHART**  
Based on Calculated load/or yielding of Post

POST TYPE	BEND STRENGTH
2 1/2" Square Post	547 lbs.
3" O.D. Pipe Post (Sch 40)	444 lbs.
2 1/2" O.D. Pipe Post (Sch 40)	234 lbs.

A 2 1/2" Square Post is 25% Stronger Than a 3" O.D. Sch. 40 Pipe Post.



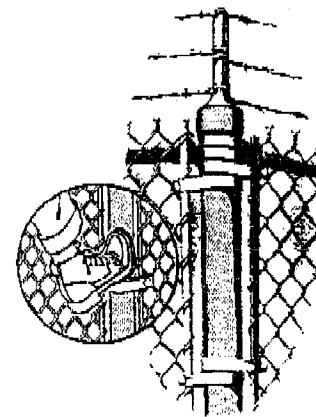
The clips that attach the fabric and posts do not afford a foothold to climb.

You may consider these square posts

OR

~~You may consider round posts...~~

- With Round Corner, End or Gate Posts You Lose a Degree of Security.
- The Bands That Hold the Fabric to a Round Post Act as a Ladder to Climb.
- The Round Band Can be Removed by Loosening its Nut & Bolt.
- Bands are Also Less Attractive Than the Clip that Holds the Fabric to Anchor's Square Post.



Complete drawings and specs available in CAD or hard copy.

410/633-6500

Anchor offers both the pipe posts and the square posts...but...you get more for your money with the stronger, more attractive square posts.

# You must also choose a coating for your framework

Vinyl Coated Framework is Available in

- Woodland Green
- Ensor Green
- Earth Brown
- Black

Custom colors available at slightly higher cost.

Ask for complete specifications & drawings.

410/633-6500

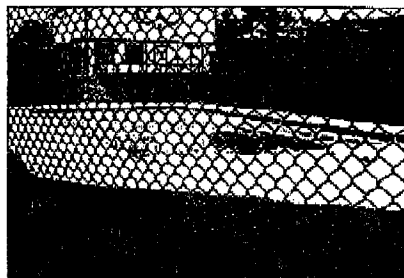
Whether you choose the square end, corner or gate post, and the "C" line posts; or the pipe framework, all are available with galvanized coating or thermally fused vinyl coated over galvanize.



Like the fabric, the metallic galvanized coating will have limited life because of oxidation and rust. On the other hand, the vinyl coated framework will give many additional years of maintenance free life and service.

A quality coated fence system will not only add many years of life to your fence, but will also enhance the appearance of your factories, schools, parks, or other properties. This will give the message that your facility is a major contributor to a successful community.

We at Anchor take more steps to assure that your vinyl coating will be the very best value your money can buy. While some coaters merely apply vinyl to uncleaned or semi-cleaned framework pipe, Anchor takes all of the steps listed to the right so that all parts of the thermally fused PVC framework comply to the adhesion specifications listed in ASTM F1234.



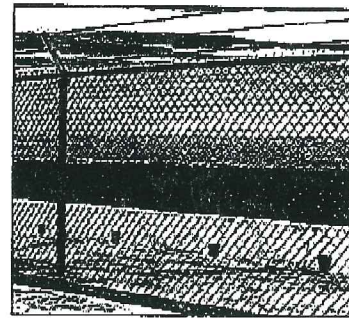
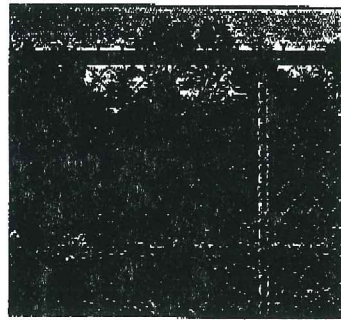
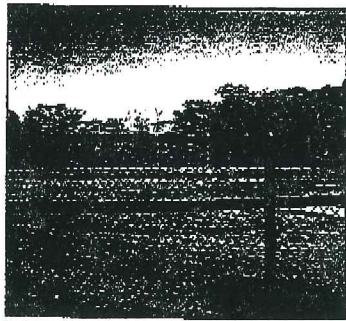
## Anchor's 11 Step Cleaning Process

1. ACID
2. RINSE
3. ALKALINE
4. RINSE
5. ZINC PHOSPHATE
6. RINSE
7. POLYMER PRETREATMENT
8. PRIMER
9. OVEN-DRY
10. PVC FLUORIDE BED
11. WATER COOL

No one else does this much!



# link fabric you have a wide styles and finishes



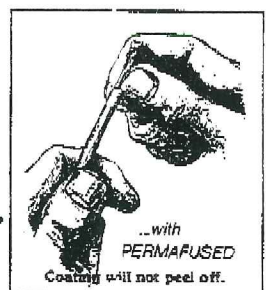
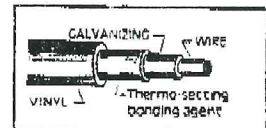
Both "ASTM" and the "Federal" specifications require that the steel core wire be equal to the gauge that is specified (not the combination of the steel core and the vinyl coating). Beware, however, there are also fabrics with less steel and less strength that do not meet any recognized specification.

[9 ga. = .148" core wire; 6 ga. = .192" core wire]

True spec wire also requires equal amounts of galvanize (zinc coating) under the vinyl coating. This leaves the vinyl coating itself to be the ingredient that you must choose. Here are the differences:

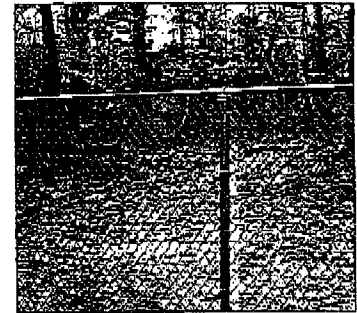
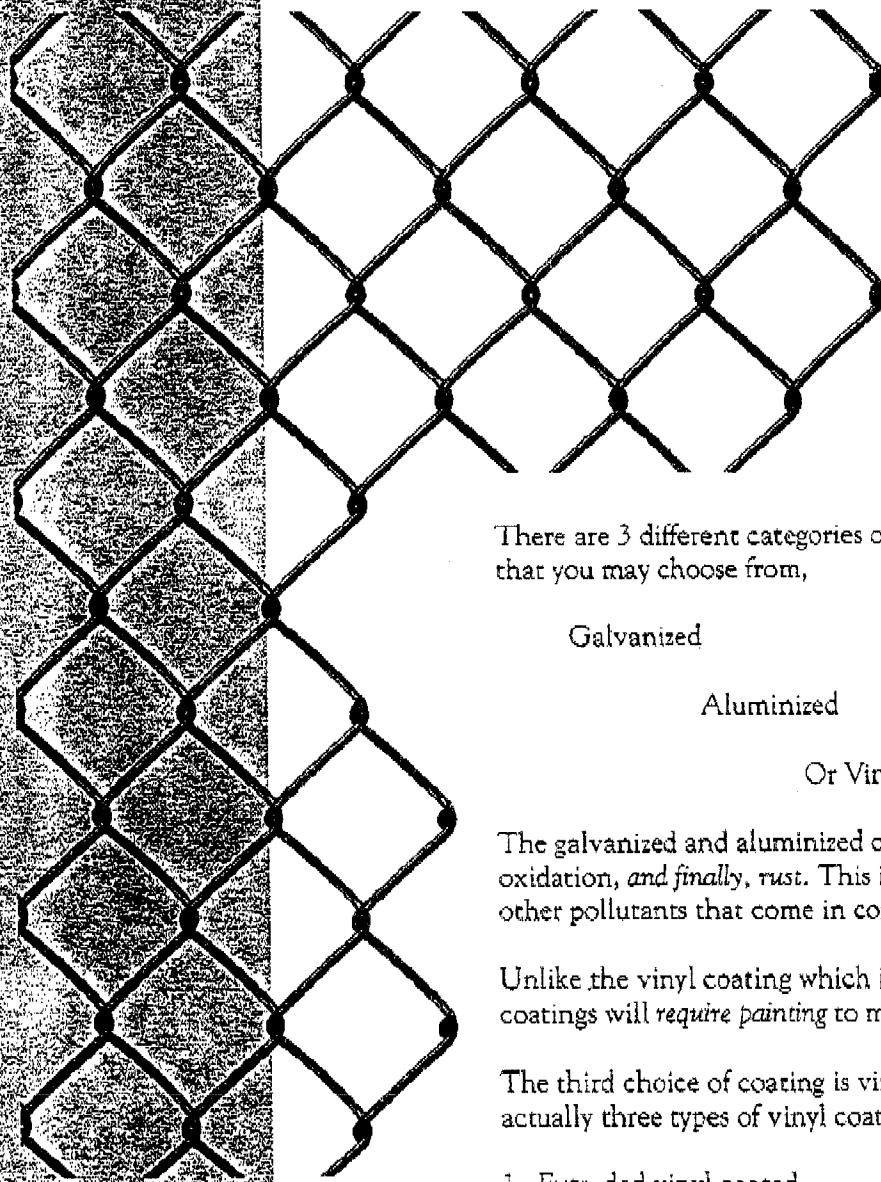
1. The first type is extruded coating which means that a loose sleeve of vinyl is pulled over the wire, like electrical wire. This coating is easily removed by vandals.
2. The second type is extruded and adhered to (glued) which has a thin coat of glue to help stop the vinyl from slipping. This type is sometimes called "bonded." Don't be fooled by that term, the vinyl can still be easily removed.

3. The third type is thermally fused which means that the vinyl is permanently fused to the galvanized steel core wire. The adhesion must be greater than the cohesive strength of the vinyl coating to assure that this vinyl coat cannot be removed. This type is called "Permafused." Whether you call for "Permafused" by name or use the generic term of ASTM F668-2b (thermally fused), this type will be your best investment.





# When it comes to chain choice of



There are 3 different categories of fabric coatings that you may choose from,

Galvanized

Aluminized

Or Vinyl Coated over Galvanized Wire

The galvanized and aluminized coatings are metallic and subject to oxidation, *and finally, rust*. This is accelerated as a result of *acid rain* and other pollutants that come in contact with the fence coatings.

Unlike the vinyl coating which is impervious to acid rain, these metallic coatings will *require painting* to maintain their strength and appearance.

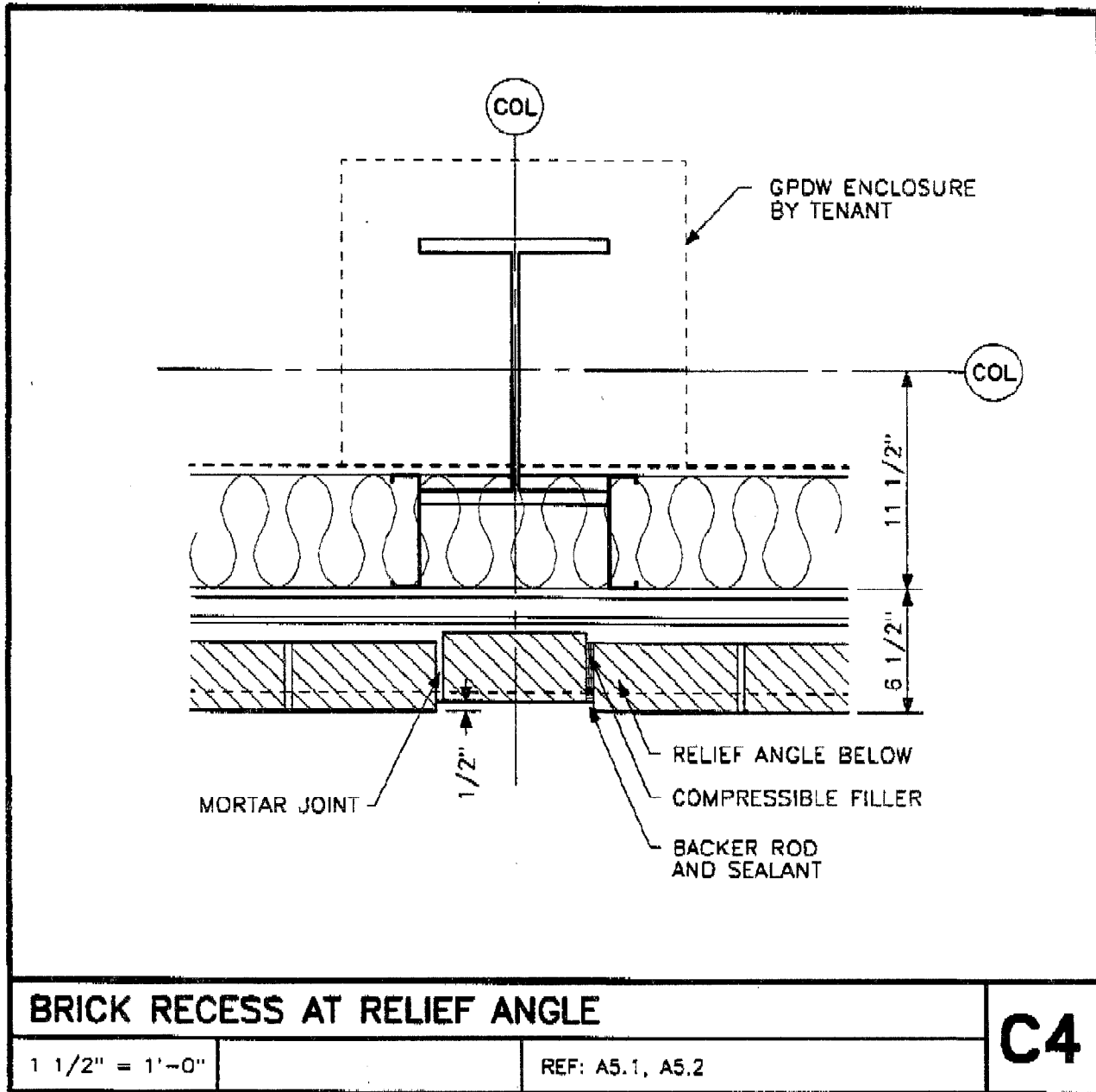
The third choice of coating is vinyl coated over galvanized. There are actually three types of vinyl coated fabric,

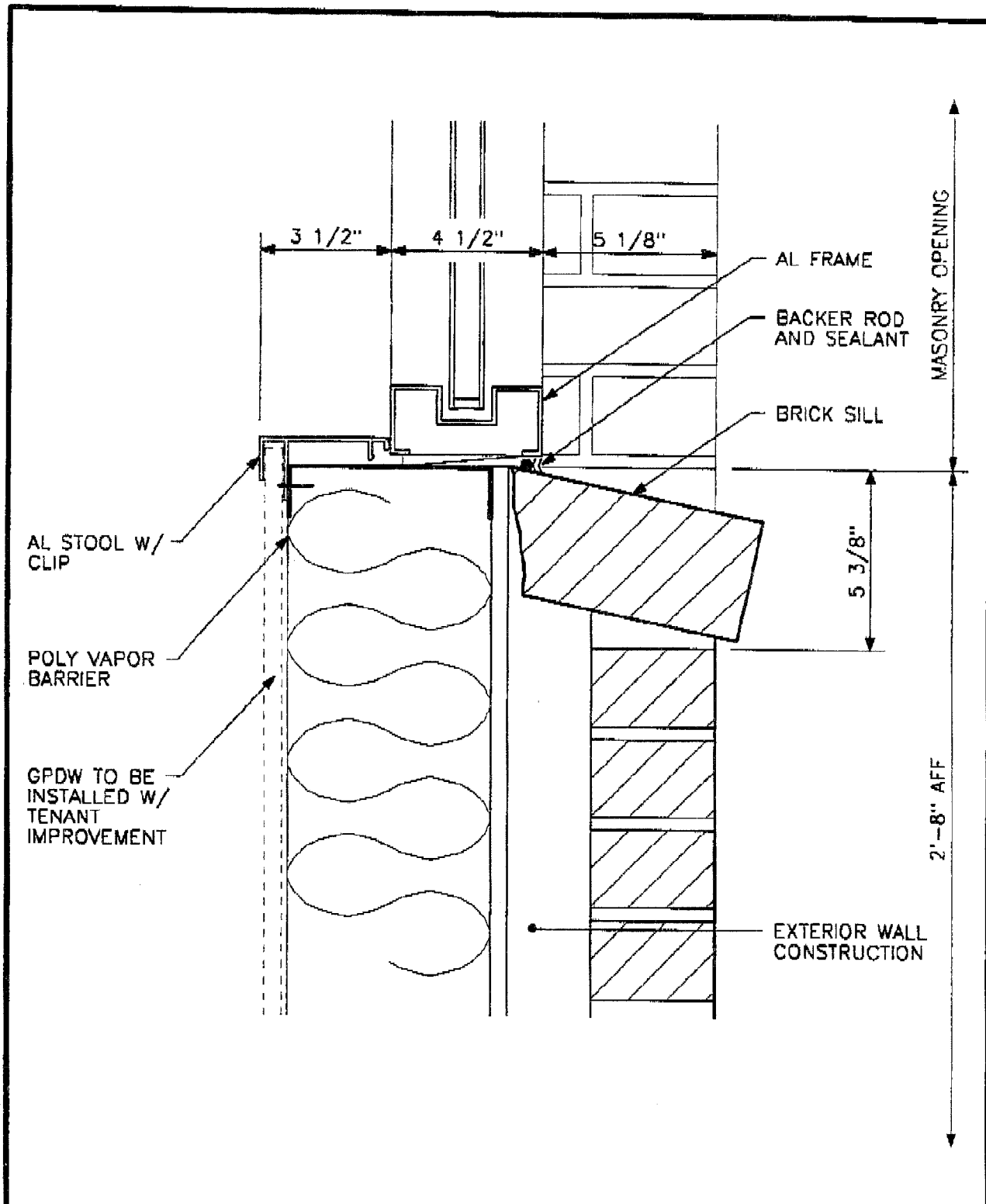
1. Extruded vinyl coated,
2. Extruded & Adhered to (glued) vinyl coated,
3. Thermally fused vinyl coated.

Ask for complete details.

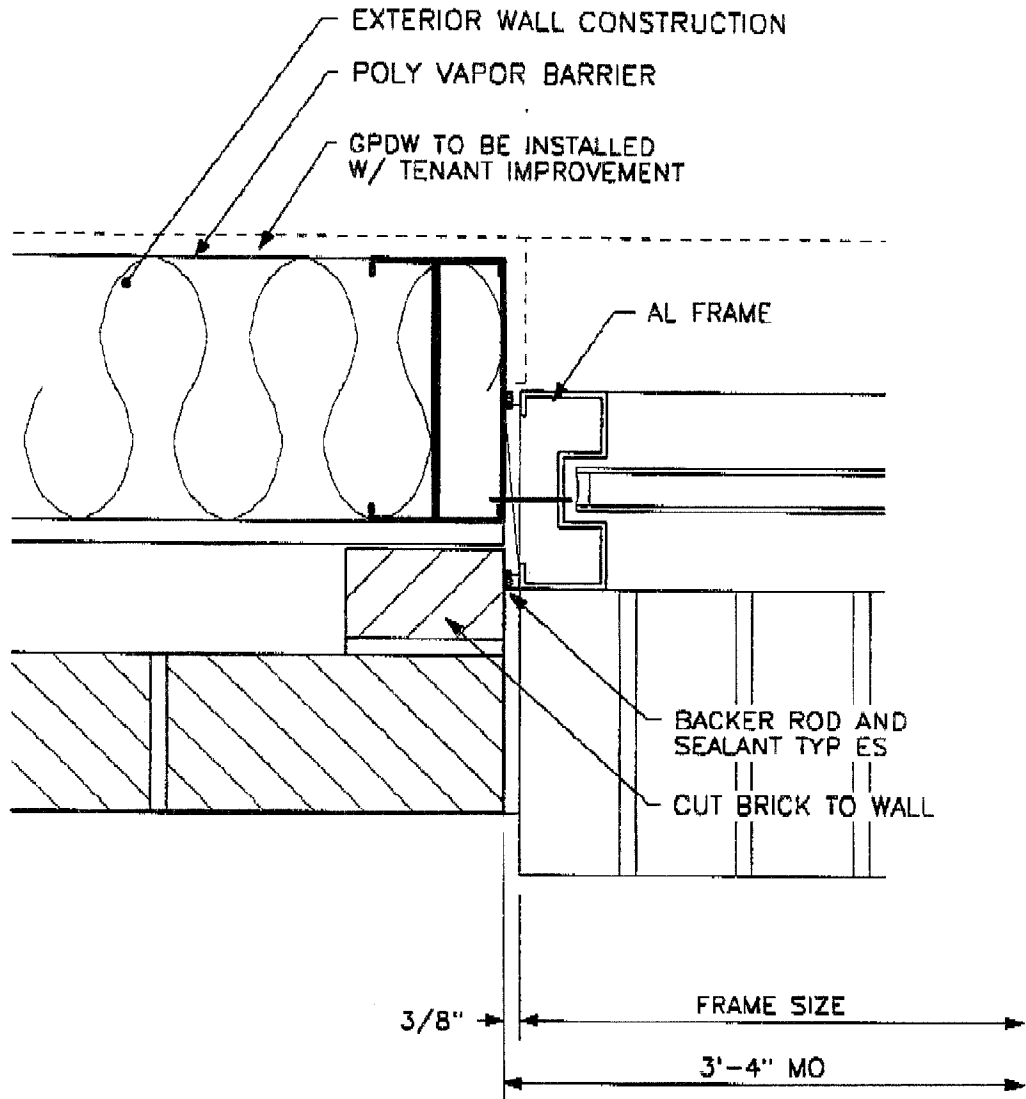
410/633-6500

# VERTICAL DETAIL WITH RECESSED ACCENT BRICK ON BUILDING FACADE





<b>WINDOW SILL DETAIL</b>		<b>A1</b>
3" = 1'-0"	REF: A10.1	

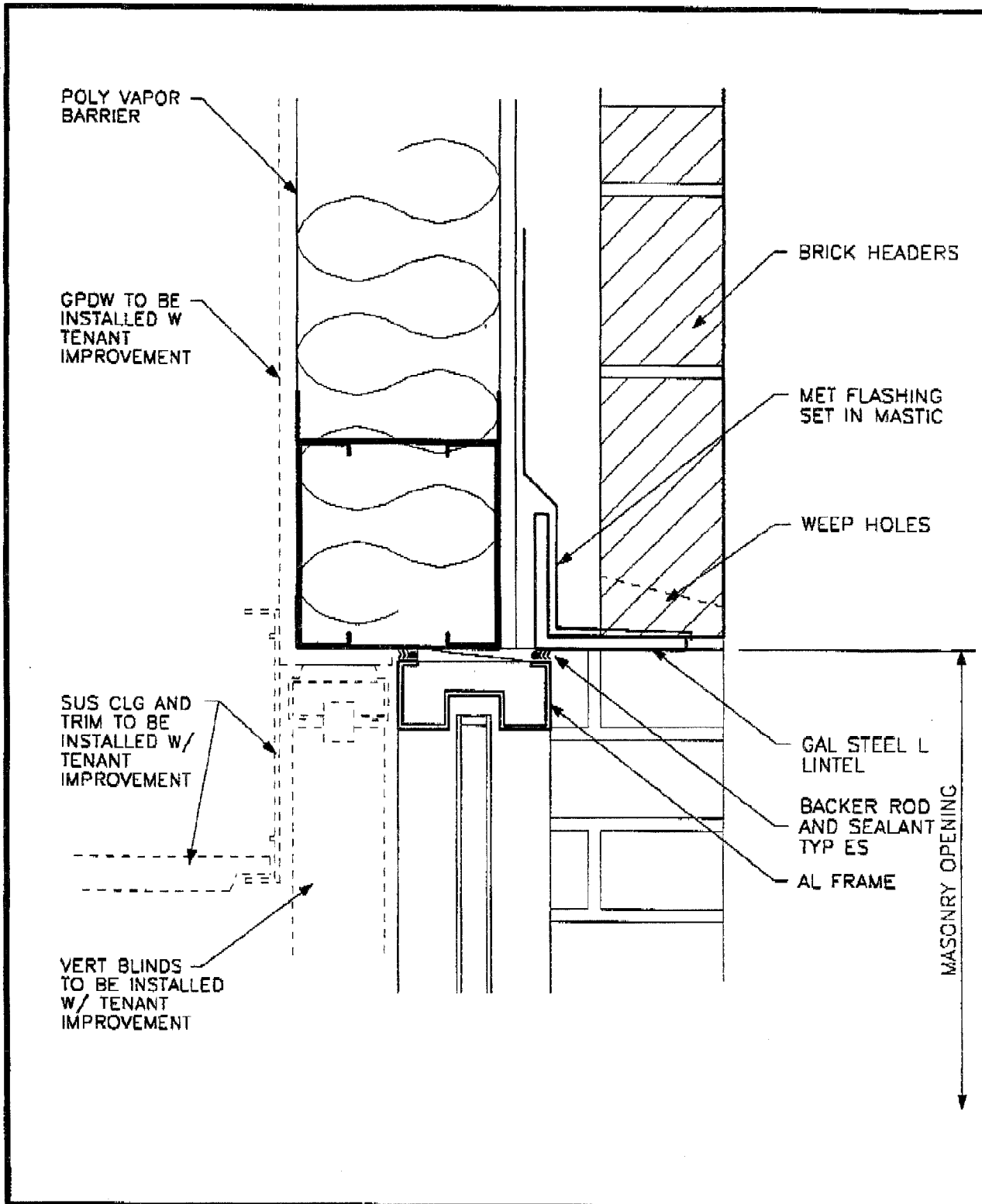


**WINDOW JAMB DETAIL**

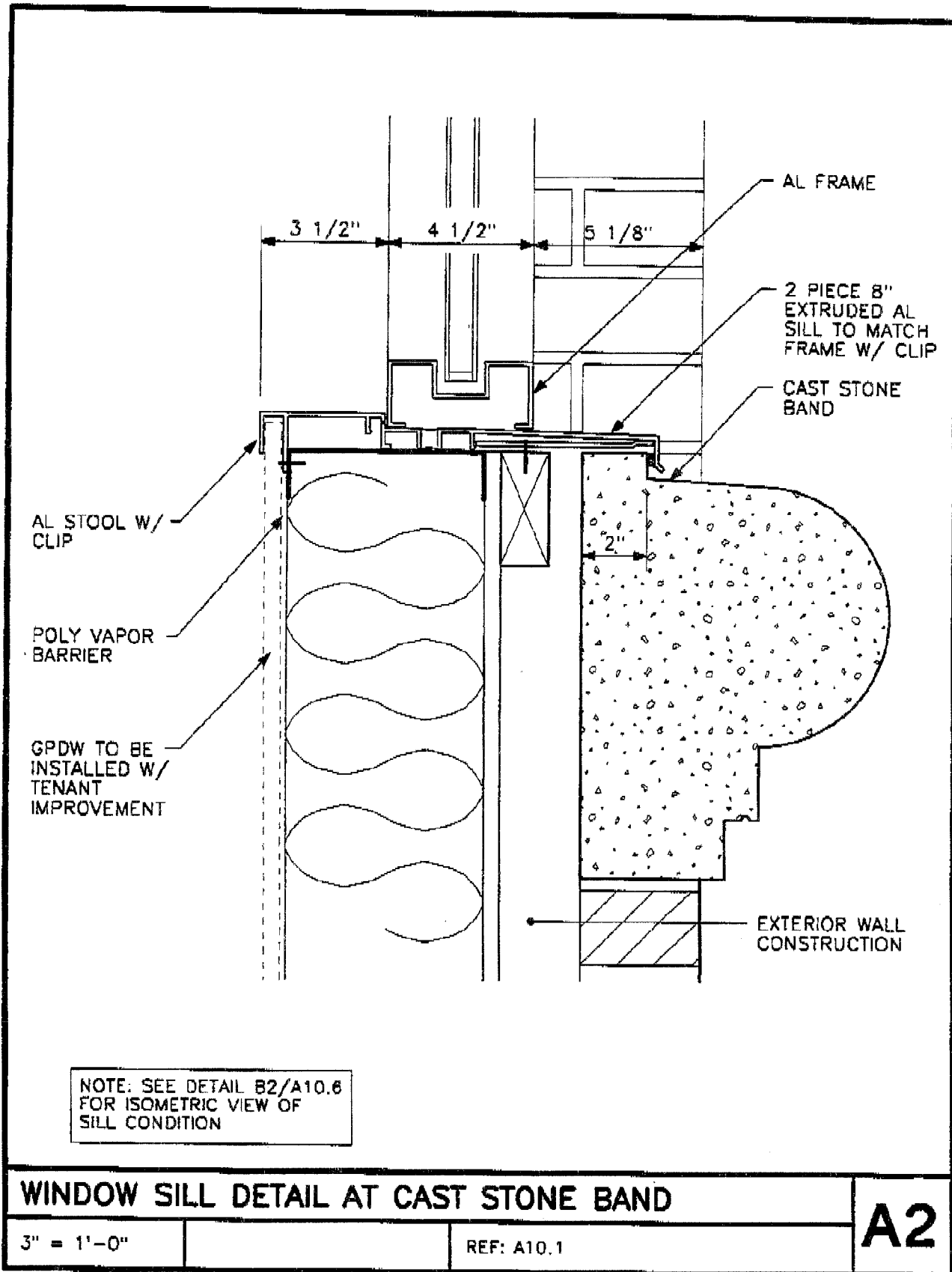
3" = 1'-0"

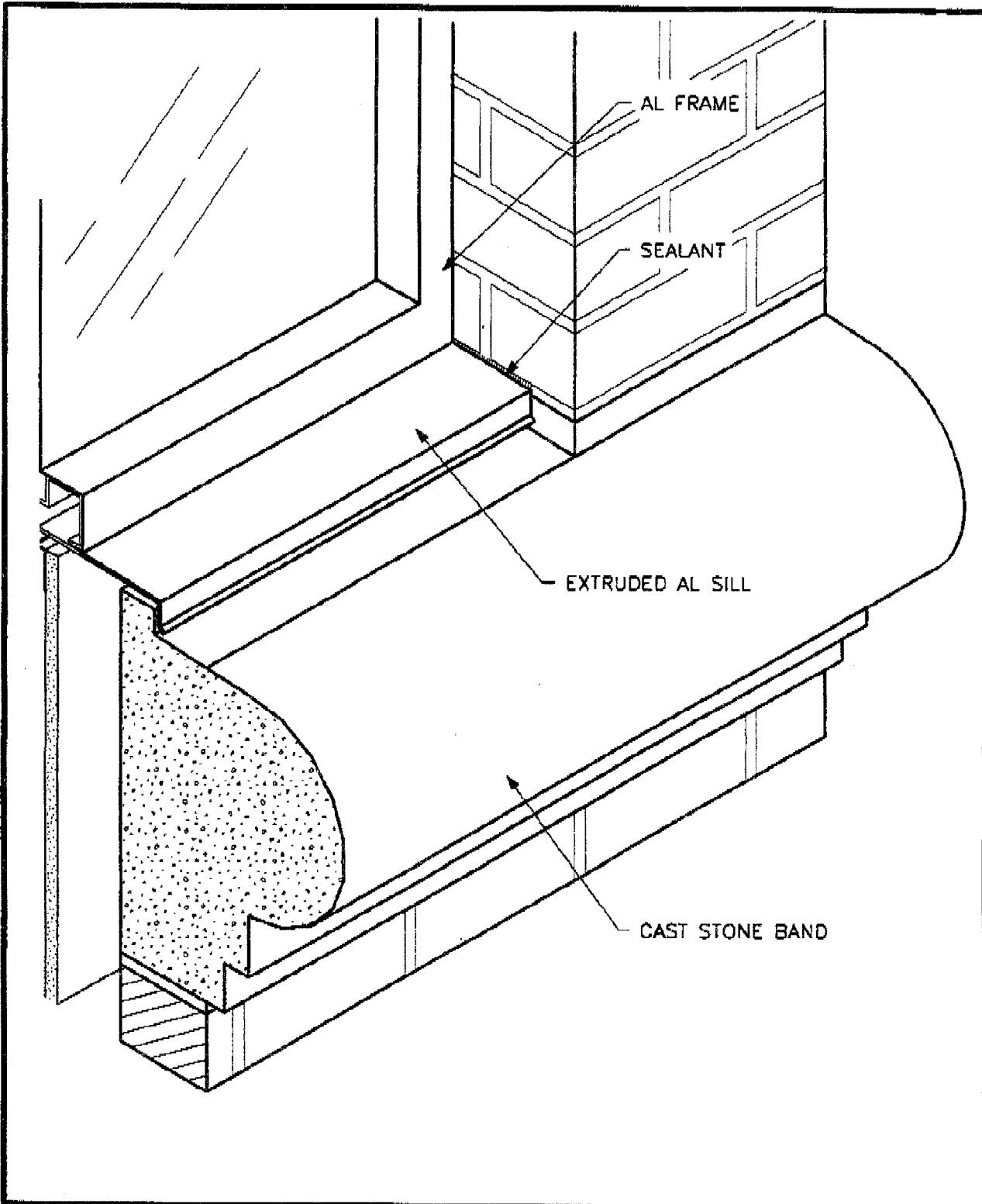
REF: A10.1

**B1**



<b>WINDOW HEAD DETAIL</b>		<b>C1</b>
3" = 1'-0"	REF: A10.1	



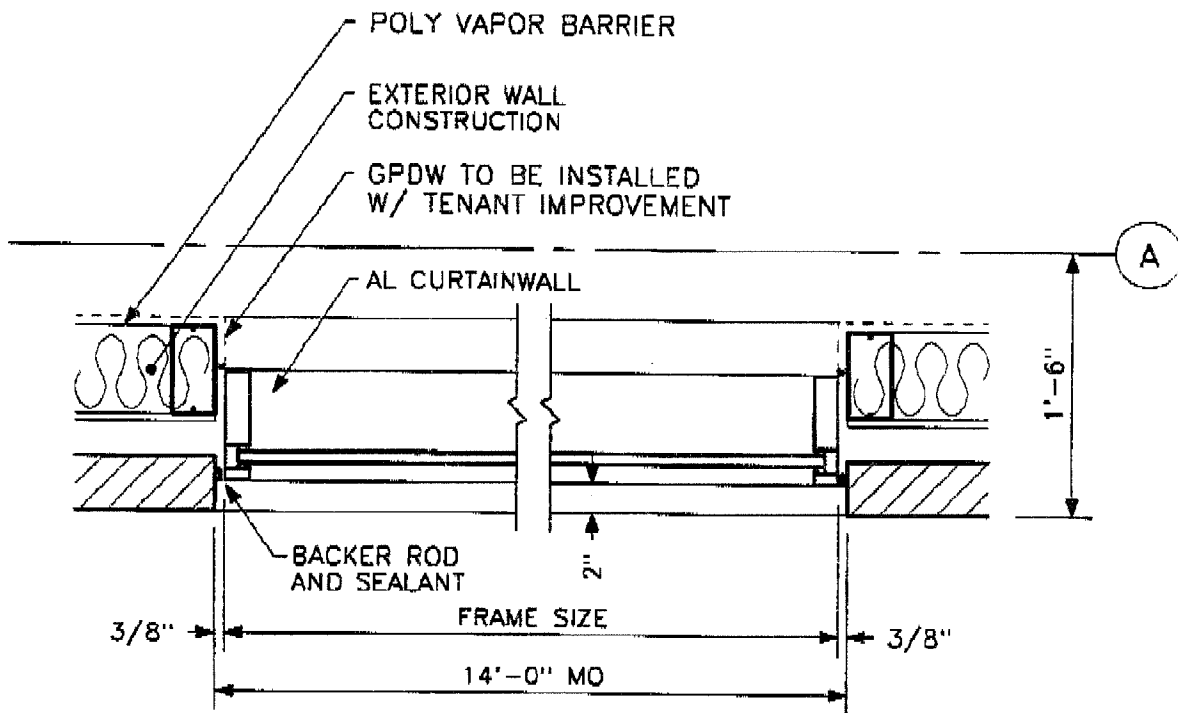


ISOMETRIC WINDOW SILL DETAIL AT CAST STONE BAND

**B2**

NTS

REF: A10.6



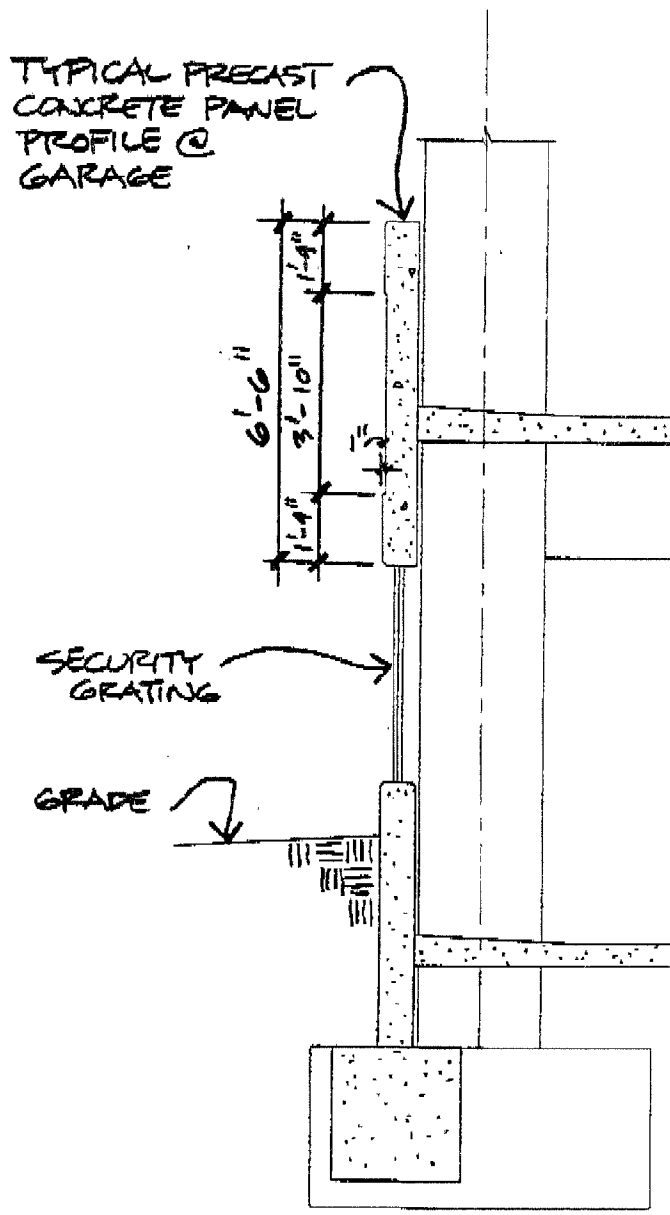
**PLAN DETAIL**

1" = 1'-0"

REF: A2.3

**C2**





TYPICAL PRECAST  
CONCRETE PANEL  
PROFILE @  
GARAGE

SECURITY  
GRATING

GRADE

4 BASEMENT WALL SECTION  
1/2" = 1'-0"

**C/S VERT-A-CADE**

**ROOF TOP MECHANICAL SCREENING MATERIAL**

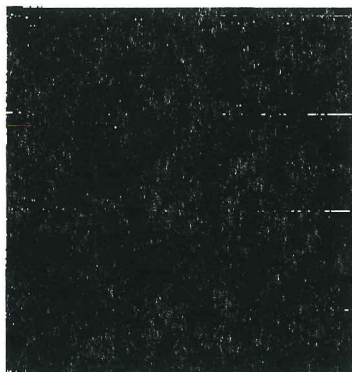
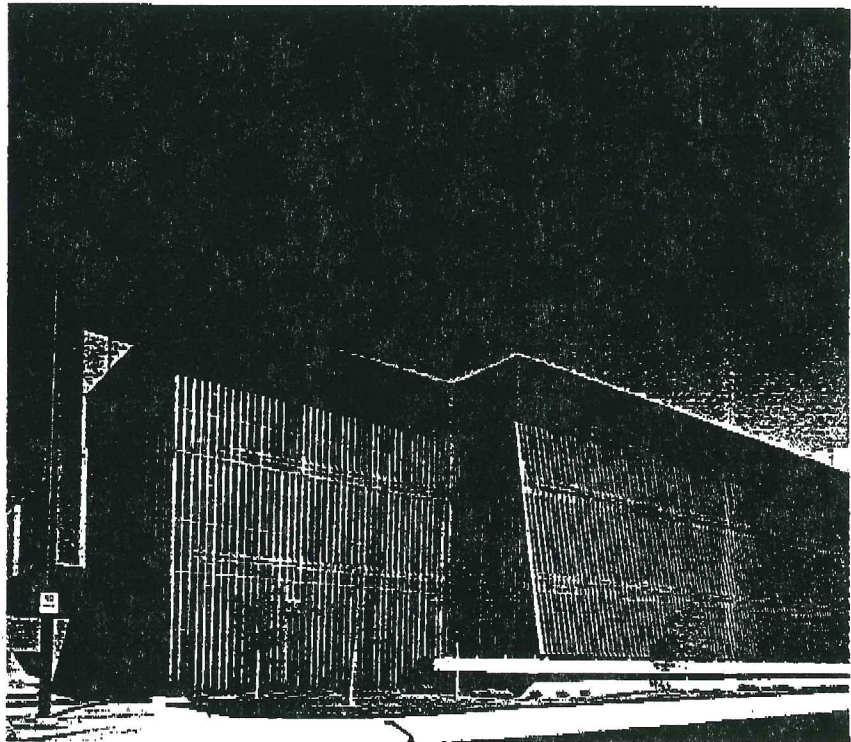
LINCOLN NATIONAL LIFE INSURANCE CO., Ft. Wayne, Indiana. Architect: MARTINDALE TOURNEY & GIBSON, INC., Ft. Wayne, Indiana. Parking Garage Screen: A modified version of the C/S Vert-A-Cade 500 system. Finish: C/S Duranodic #313 Dark Bronze.

Whatever the sight screening problem, there is a C/S Vert-A-Cade pattern to do the job—attractively and effectively.

A wide range of existing and completely new patterns are available, each varying in width, depth, shape, module and free area.

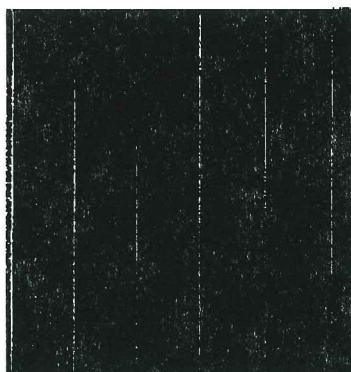
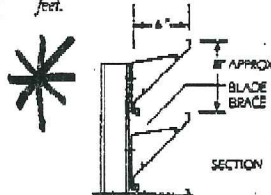
**SPECIFICATION SUMMARY**

- 1. GENERAL:** The aluminum screening material as shown on the drawings shall be Vert-A-Cade 500 (or other pattern), as manufactured by Construction Specialties, Inc., Cranford, New Jersey, San Marcos, California or Mississauga, Ontario.
- 2. MATERIALS:** All Vert-A-Cade components and trim shall be of aluminum. Miscellaneous hardware shall be of aluminum or type 302 stainless steel.
- 3. CONSTRUCTION:** Fasteners for anchorage of the Vert-A-Cade blades shall be concealed so as not to be visible on the exterior face of the material.
- 4. FINISH:** Vert-A-Cade panels and trim shall be in a standard C/S Kynar 500 finish. Other finishes available: C/S Duranodic 300, C/S Duracolor, Clear Anodize, and C/S TRI-X. Aluminum supports shall be in mill finish. A 5 year or extra cost 20 year limited warranty against failure of the Kynar 500® finish shall be supplied.



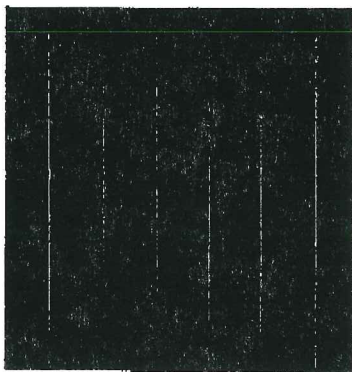
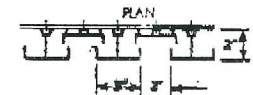
**VERT-A-CADE 300**

Free Area 58%  
Extruded aluminum, 6063-T52 alloy, minimum .081" thick. No blade joints in sections less than 20 feet.



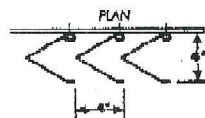
**VERT-A-CADE 500**

Free Area 20%  
Extruded aluminum, 6063-T52 alloy, minimum .062" thick. No horizontal blade joints in sections less than 20 feet high.



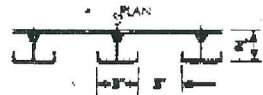
**VERT-A-CADE 400**

Free Area 32%  
Extruded aluminum, 6063-T52 alloy, minimum .081" thick. No horizontal blade joints in sections less than 20 feet high.

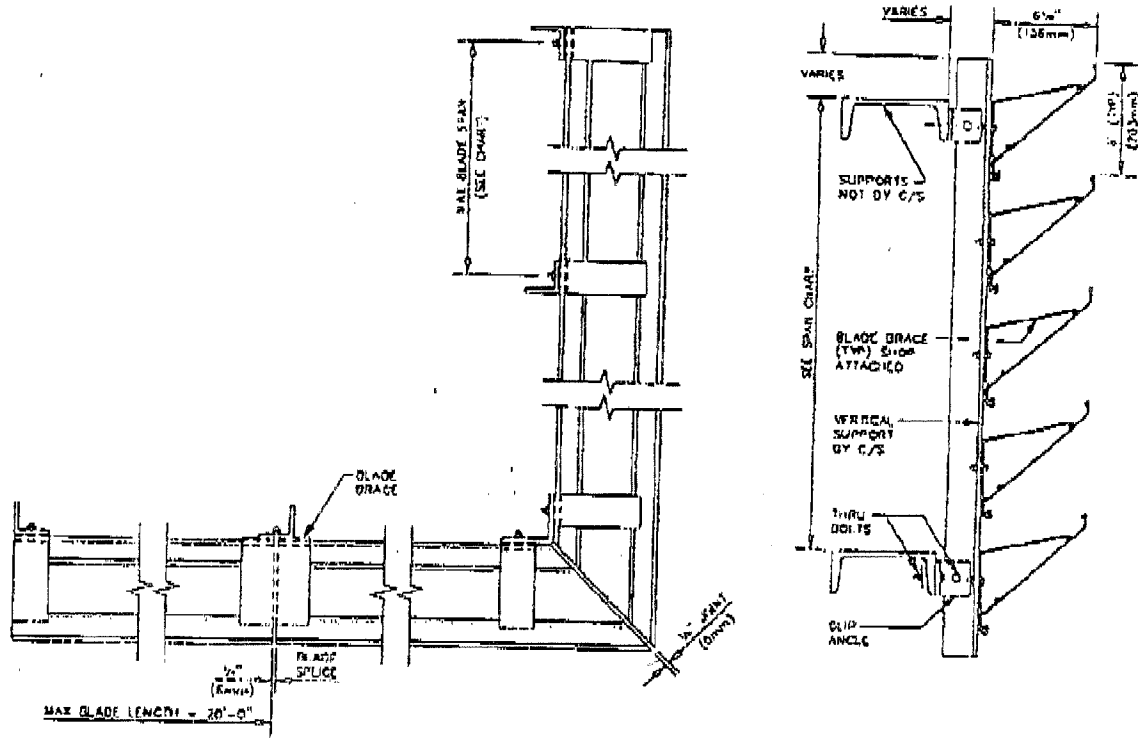


**VERT-A-CADE 500M**

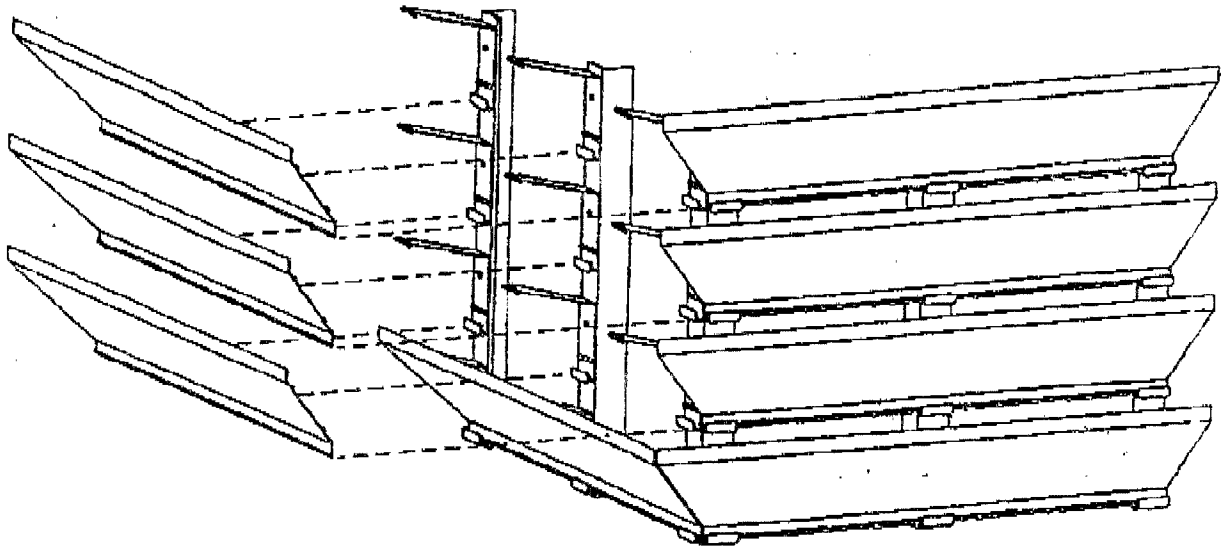
Free Area 50%  
Extruded aluminum, 6063-T52 alloy, minimum .062" thick. No horizontal blade joints in sections less than 20 feet high.



0175455805



**MODEL VC-300**





DeLUCA-HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS

778 MAIN STREET  
SUITE 8  
SOUTH PORTLAND, MAINE 04106  
TEL. 207 775 1121  
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

## Telephone Memo

**Client:** MMC  
**Caller:** Rick Knowland  
**Person Contacted:** Tom Gorrill  
**Job #:** 1471  
**Date:** December 24, 1997

**Comments:** Rick said John Peverada has contacted the Sportsman's Grill to discuss parking. The Sportsman's Grill is not opposed to a restriction of parking between 6:00 AM and 6:00 PM on the southerly side of Congress Street. However, they would like two unrestricted spaces kept on the southerly side of Congress Street across the street from the restaurant. I told Rick I would discuss this with Larry Ash and Roland Roy. Rick encouraged MMC to contact the Sportsman's Grill directly.

Signed: Thomas L. Gorrill, P.E.

Distribution: Paul Gray  
Jim Morrison  
Larry Ash  
Rick Knowland



**MAINE MEDICAL CENTER**

**Engineering Department**

22 Bramhall Street  
Portland, Maine 04102

**LETTER OF TRANSMITTAL**

DATE 1/7/98      JOB NO. 97014

TO: Mr. Rick Knowland  
Department of Planning and Urban  
Development  
City of Portland  
389 Congress Street  
Portland ME 04101

WE ARE SENDING YOU

Attached     Under Separate  
Cover

RE: Congress St. Medical Office Building

VIA:US Mail

No:	Date:		Description:
12c	1/5/97		Parking Management Plan
12c	1/5/97		Response to Jamey Caron 12/11/97 memorandum
12c	1/5/97		Response to John Peverada 12/5/97 Memorandum.

For use and distribution

COPY TO: file

SIGNED



If enclosures are not as noted, kindly notify us at once.



DeLUCA HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS

778 MAIN STREET  
SUITE 8  
SOUTH PORTLAND, MAINE 04106  
TEL. 207 775 1121  
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

## TELEPHONE MEMORANDUM

**CALLER:** Tom Gorrill  
**PERSON CONTACTED:** John Peverada, Parking Manager in Portland  
**JOB #:** 1471  
**DATE:** 1/9/98

---

John said in general he was happy with the parking management plan but would like to see the following changes made:

1. Under the "Proposed Garage" heading of Section B - When the security person is discussed it should be emphasized that the purpose is to create a safe atmosphere.
2. Under "Valet Parking" of Section B - Add that MMC will improve signage and distribute printed information advising people with appointments of valet parking.
3. Under Section C, "Decentralization of the Bramhall campus" - John said no mention was made of the Falmouth facility. I told John that my understanding was that the Falmouth facility does not significantly impact the Bramhall campus.
4. Under Section D "Internal Education" - MMC should add that the brochure will also be distributed to patients and visitors.
5. Under Section F, "Contractor Requirements During Renovation/Construction Projects" - John would like a sentence added requiring all contractors, employees, and subcontractors to park off site.
6. Under Section H, "Parking Enforcement" - John would like Chadwick Street added for parking meters.
7. In the Conclusion section - Add the changes in 1-6 above.
8. John said he still needs MMC to verify there is a space for every employee.
9. John said MMC needs to develop a plan for how parking during construction of the Medical Office Building will be accommodated. This needs to include the 52 MMC spaces which will be displaced and what will be done with the construction workers working on the Bean Building who are currently parking on site.

Signed: 

Thomas L. Gorrill, P.E.

Distribution: Paul Gray, Maine Medical Center  
Jim Morrison, Maine Medical Center  
Rick Knowland, City of Portland  
John Peverada, City of Portland

22 Bramhall Street, Portland, Maine 04102

# FAX TRANSMITTAL

ENGINEERING SERVICES  
TELEPHONE NUMBER (207) 871-2447  
FAX NUMBER (207) 871-6195

DATE: 1/6/98

TO : Richard Knowland  
Department of Planning and Urban Development  
City of Portland

FAX: 756-8258

FROM: Jim Morrison

Re: Congress Street Medical Office Building

Number of pages including cover sheet 2

## Message

Rick:

Attached find my notes from this morning's meeting for your review and distribution.

## MEETING REPORT

**Meeting Date:** 1/6/98

**Location:** Portland City Manager's Conference Room

**Attending:** Bob Ganley- City Manager  
Bill Bray-Portland Dept. of Public Works  
Larry Ash-Portland Dept. Of Traffic Engineering  
Joe Gray-Portland Planning Department  
Alex Jaegerman-Portland Planning Department  
Rick Knowland-Portland Planning Department  
Paul Gray-MMC  
Jim Morrison-MMC  
Tom Gorrill-MMC/Daluca-Hoffman

**Report Date:** 1/6/98

This meeting was called by City Planning staff to discuss revisions to Congress Street proposed by Mr. Bray and Mr. Ash at a meeting held at the Public Works Department on January 29, 1997.

- Joe Gray described the project and indicated that the widening of Congress Street had been proposed to avoid any problems which might occur at the public hearing for the project. Potentially, an abutter might complain about the loss of parking spaces along Congress.
- Mr. Bray said he feels that if MMC presents the existing proposal for Congress Street (no parking from 6:00 AM to 6:00 PM-even though it has been documented that the spaces in question are used by MMC employees who would theoretically be housed in the proposed MOB garage) the City Council would not approve the project.
- Paul Gray and Tom Gorrill said that the spaces being deleted during the 6:00 AM to 6:00 PM hours were used by MMC employees, that those spaces would be provided for in the proposed MOB parking garage, and that deleting the spaces along Congress would have no detrimental effect on the abutting businesses.
- Mr. Peverada said he had had a conversation with Mr. Severino (owner of the Sportsman) who indicated that he did not have a problem with the spaces being deleted during the 6:00 AM to 6:00 PM period, but would like to have spaces for his customers in the evening. Mr. Peverada said he felt that Mr. Severino might be more concerned about spaces on Forest Street rather than on Congress Street, and suggested that MMC talk to Mr. Severino to "bring him on board".
- Tom Gorrill indicated that Roland Roy at the DEP would be in favor of the 6:00 AM to 6:00 PM restrictions on Congress.
- Mr. Ganley indicated that it was not the responsibility of the city to provide parking for businesses, that it seemed leaving this portion of Congress Street alone and letting left turns occur would be no different than anyplace else in the city. He further suggested that a meeting be held with Mr. Severino to make sure he has no objections to the parking restrictions on Congress.
- Joe Gray suggested that a meeting be held prior to the public hearing with all the abutters to inform them of the project and parking restrictions. He suggested that Rick Knowland, of the Planning Department attend this meeting.
- Joe Gray said that the project would be put on the agenda for the public hearing without the widening of Congress Avenue, with the proviso that MMC meet the abutters as described above.

CC: T. LaLiberty  
P. Gray  
B. Bremm



HARRIMAN ASSOCIATES

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TRANSMITTAL

To RICK KNOWLAND Date 9.16.97  
PORTLAND PLANNING Project name MMC MOB  
BOARD Project number 97.129-00  
Attention Re SITE PLAN APPROVAL

We are sending you the following items:


Attached  Shop drawings  Prints  Requisitions  
 Under separate cover via \_\_\_\_\_  Samples  Specifications  Copy of letter  
 Change order  COLOR ELEVATIONS

Copies	Date	Drawing no.	Specs. sec. no.	Description
<u>1 EA (OF 2)</u>	<u>12.9.97</u>			<u>BLACKLINE PRINTS w/ MATERIAL INDICATIONS</u>
<u>1 EA (OF 2)</u>	<u>12.9.97</u>			<u>COLOR PRINTS OF BUILDING ELEVATIONS</u>

Transmitted for:

Approval  For use  As requested  
 Action as shown  Review/comment  Resubmission  
 Other  Prints returned after loan to us

Remarks HAND DELIVERED BY PTN / MOUNTED ON BOARDS

Signature 

Copy to JIM MORRISON (MMC)  
 Client JIM CLARKSON (MMBC)  
 BGS  Clerk  File

If enclosures are not as shown, please notify us at once



## SECTION 02721

### PRECAST CONCRETE OIL AND GRIT TRAPS

#### PART 1.00 GENERAL

##### 1.01 DESCRIPTION

###### A. Work included:

The Contractor, and/or a manufacturer selected by the Contractor and approved by the Engineer, shall furnish all labor, materials, equipment and incidentals required and install all precast concrete oil and grit traps and appurtenances in accordance with the Drawings and these specifications.

###### B. Related work described elsewhere:

1. Unit Masonry
2. Miscellaneous Metals
3. Waterproofing

##### 1.02 QUALITY CONTROL INSPECTION

- A. The quality of materials, the process of manufacture, and the finished sections shall be subject to inspection by the Engineer. Such inspection may be made at the place of manufacture, or on the work site after delivery, or at both places, and the sections shall be subject to rejection at any time on account of failure to meet any of the specification requirements, even though sample sections may have been accepted as satisfactory at the place of manufacture. Sections rejected after delivery to the site shall be marked for identification and shall be removed from the site at once. All sections which have been damaged after delivery will be rejected and, if already installed, shall be acceptably repaired, if permitted, or removed and replaced, entirely at the Contractor's expense.

- B. All sections shall be inspected for general appearance, dimensions, soundness, etc. The surface shall be dense, close textured and free of blisters, cracks, roughness and exposure of reinforcement.
- C. Imperfections may be repaired, subject to the acceptance of the Engineer, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final acceptance. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi at the end of 7 days and 5,000 psi at the end of 28 days when tested in 3 inch by 6 inch cylinders stored in the standard manner. Epoxy mortar may be utilized for repairs.

### 1.03 SUBMITTALS

#### A. Shop Drawings

The Contractor shall submit to the Engineer six (6) sets of shop drawings showing details for construction, reinforcing, joints, any cast-in-place appurtenances and method of sealing pipe entrances.

#### B. Affidavit on patent infringement

The Contractor shall submit to the Engineer, prior to installation of the oil and grit trap, an affidavit regarding patent infringement rights stating that any suit or claim against the Owner due to alleged infringement rights shall be defended by the Contractor who will bear all the costs, expenses and attorney's fees incurred thereof.

## PART 2.00 PRODUCTS

### 2.01 MATERIALS AND DESIGN

- A. Concrete for precast oil and grit traps shall conform to ASTM Designation C 857-87 and C 858-83 and meet the following additional requirements:
  - 1. The wall thickness shall not be less than 6 inches or as shown on the Drawings.

2. Sections shall have tongue and groove joints with a butyl mastic sealant conforming to ASTM C990.
3. Cement shall be Type III Portland cement conforming to ASTM Designation C 150.
4. Pipe openings shall be provided with a flexible rubber sleeve or shall be sealed by the Contractor with cement mortar and shall be sized to accept pipes of the specified size(s) and material(s).
5. Internal metal components shall be aluminum alloy 6061-T6 in accordance with ASTM designation B 221 or High Density Polyethylene conforming to ASTM D 1248, ASTM D 3350 and ASTM F 894.
6. Brick or masonry used to build the manhole frame to grade shall conform to ASTM Designation C32 or ASTM Designation C 139 and the Masonry Section of these Specifications.
7. Casting for manhole frames and covers shall be in accordance with The Miscellaneous Metals Section of these Specifications.
8. All sections shall be cured by an approved method. Sections shall not be shipped until the concrete has attained a compressive strength of 4,000 psi or until 5 days after fabrication and/or repair, whichever is the longer.

## **2.02 HYDRAULIC DESIGN**

The oil and grit trap shall be of a hydraulic design that includes a flow control to be sized by accepted principles of fluid mechanics to raise the water level inside the tank to a specific level that can be demonstrated, by calculations performed by a registered professional engineer, to minimize Reynolds number of the influent flow stream and to prevent the re-entrainment of trapped floating particulates in a 2-month storm event.

The oil and grit trap shall include a circular swirl chamber with a tangential inlet that induces a swirling flow pattern that will accumulate settleable solids in a manner and a location that will not be vulnerable to re-suspension of previously settled particulates.

## 2.03 MANUFACTURER

The oil and grit trap shall be the Vortechs System as manufactured by Vortechics, Inc., Portland, Maine or authorized licensee of Vortechics, Inc.

## PART 3.00 EXECUTION

### 3.01 INSTALLATION

- A. Oil and grit traps shall be constructed according to the sizes shown on the Drawings and as specified herein. Install at elevations and locations shown on the Drawings or as otherwise directed by the Engineer.
- B. Place the precast base unit on a granular subbase of minimum thickness of six inches after compaction or of greater thickness and compaction if specified elsewhere. The granular subbase shall be checked for level prior to setting and the precast base section of the trap shall be checked for level at all four corners after it is set. If the slope from any corner to any other corner exceeds 0.5% the base section shall be removed and the granular subbase material re-levelled.
- C. Prior to setting subsequent sections place butyl mastic sealant equal to ASTM C990 along the construction joint in the section that is already in place.
- D. Prior to setting the precast roof section place butyl mastic sealant equal to ASTM C990 along the top of the baffle wall, using more than one layer of mastic if necessary, to a thickness at least one inch (1") greater than the nominal gap between the top of the baffle and the roof section. The nominal gap shall be determined either by field measurement or the shop drawings. After placement of the roof section has compressed the butyl mastic sealant in the gap, finish sealing the gap with an approved non-shrink grout on both sides of the gap using the butyl mastic as a backing material to which to apply the grout. Also apply non-shrink grout to the joints at the side edges of the baffle wall.
- E. Prior to setting the precast roof section install the circular swirl

chamber wall by sealing the bottom edge of the semi-circle on the downstream side of the chamber to the trap floor with an approved caulk, mastic or grout and by sealing the trap sidewalls to the outside of the swirl chamber from the floor the same height as the inlet pipe invert using a butyl mastic or approved equal sealant. Bolt the swirl chamber to the side walls at the three (3) tangent points and at 3-inch wide inlet tab using lag bolts 1/2-inch diameter by 3-inch length minimum at heights of approximately three inches (3") off the floor and at the mid-height of the completed trap. Before the completion of the installation, bolt the swirl chamber to the three side wall tangent points and inlet tab approximately three inches from the top of the swirl chamber.

- F. After setting the precast roof section of the oil and grit trap, set precast concrete manhole riser sections, to the height required to bring the cast iron manhole covers to grade, so that the sections are vertical and in true alignment with a 1/4 inch maximum tolerance allowed. Fill the outside and inside joint with a comparatively dry mortar (one part cement and two parts sand) and finish flush with the adjoining surfaces. Backfill in a careful manner, bringing the fill up evenly on all sides. If leaks appear, clean the inside joints and caulk with lead wool to the satisfaction of the Engineer. Precast sections shall be set in a manner that will result in a watertight joint.
- G. Plug holes in the concrete sections made for handling or other purposes with a nonshrink grout or by grout in combination with concrete plugs.
- H. Where holes must be cut in the precast sections to accommodate pipes, do all cutting before setting the sections are in place to prevent any subsequent jarring which may loosen the mortar joints. The Contractor shall make all pipe connections

### 3.02 FIELD TESTING

All oil and grit traps incorporated in the storm drain line shall be filled full of water up to the lowest pipe invert and tested for exfiltration. Any loss of water constitutes a trap not watertight and the leak must be found and corrected.

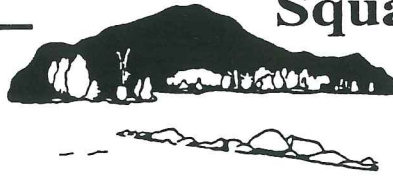
All oil and grit traps shall then be tested for leakage around the grit chamber portion by pumping out the grit chamber while leaving water in the rest of the trap up to the lowest pipe invert. If water flows into the grit chamber the leak must be found and corrected.

## Cleaning

Cleanout of the Vortechs with a vacuum truck is generally the best and most convenient method. Only the manhole cover above the grit chamber (the one furthest from the system outlet) needs to be opened to remove water and contaminants. As the grit chamber is pumped out, the oil and water drains back into it so that oil scum, particulates, and floatables are removed along with accumulated sediments. With the Vortechs

System, a pocket of water between the grit chamber and flow controls seals the bottom of the oil barrier and prevents the loss of floatables to the outlet during cleanings. Manhole covers should be securely seated following cleaning activities to ensure that surface runoff does not leak into the unit from above.

<sup>1</sup>. The height of the sediment pile is perhaps more precisely determined by taking two measurements with a stadia rod. The first being the water depth (i.e., water surface to bottom of the tank); the second being the water surface to the top of the sediment pile. The difference between the two measurements is the sediment pile depth.



**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

October 7, 1997

Mr. Rick Knowland  
Office of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center  
Congress Street Medical Office Building**

Dear Mr. Knowland:

As you are aware, Mediplex Medical Building Corporation ("MMBC") has been working with the Maine Medical Center (MMC) to provide turnkey development, architectural and construction services in conjunction with a Medical Office Building, parking structure and overhead connector located on land owned by the Hospital on the corner of Congress and Forest Streets in Portland.

The project involves a 50,000± gsf Medical Office Building and a parking garage for 430± cars. On behalf of MMC and MMBC we are submitting seven copies of the following documents in preparation for the Planning Board October 23, 1998 workshop meeting:

1. Geotechnical Investigation Report (narrative only)
2. Traffic Study Report (Executive Summary and Sections I-XII)
3. Parking Study Report
4. Shadow Study Report
5. Existing Conditions Plan by Titcomb Associates
6. MMBC Site Development Plan - Drawing #4, Revision #6
7. Harriman Associates Exterior Elevations - Drawing A31.1, dated 10/2/97
8. Harriman Associates Exterior Elevations - Drawing A31.2, dated 10/2/97
9. MMBC Shadow Study, Sheet #9, Revision #1
10. MMBC Shadow Study, Sheet #10, Revision #1
11. MMBC Shadow Study, Sheet #11, Revision #1

We have also included an 11" x 17" copy of each drawing and one complete copy of the geotechnical investigation and traffic study reports.





Mr. Rick Knowland  
October 7, 1997  
Page Two

Please contact me if you have any questions or need additional information.

Very truly yours,

SQUAW BAY CORP

A handwritten signature in cursive script that reads "Scott Decker". The signature is written in dark ink and is positioned above the printed name and title.

W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson, MMBC  
Jim Morrison, MMC

# S.W. COLE

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161 Water St., P.O. Box 220, Caribou, ME 04736 TEL (207) 496-1511 FAX (207) 496-1507

96-043 S

March 24, 1997

Maine Medical Center  
% Mediplex Building Corp.  
Attn: Mr. Edmund C. Gazinski  
14755 Preston Road  
Suite 600, Lock Box 15  
Dallas, TX 75240

Subject: Subsurface Exploration and Geotechnical Engineering  
Proposed Medical Office Building and Parking Garage  
Forest Street and Congress Street  
Portland, Maine

Dear Mr. Gazinski:

In accordance with our Proposal dated December 12, 1996, and addendum dated January 9, 1997, we have made the subsurface investigation for the proposed Medical Office Building and Parking Garage Project on Forest and Congress Streets in Portland, Maine.

## 1.0 INTRODUCTION

**1.1 Scope of Work** - The purpose of the investigation has been to explore the subsurface conditions and provide recommendations relative to foundation design and earthwork associated with the proposed building and parking garage structure. The investigation included the making of eighteen test boring explorations, laboratory testing, and a geotechnical evaluation of the findings as they relate to the proposed construction. The contents of this report are subject to the limitations set forth in Attachment A.

**1.2 Proposed Construction** - We understand that the proposed structure will be generally rectangular in shape and occupy nearly all of the site. The structure will be on the order of 230 by 240 feet in plan dimensions. The structure will consist of two sections; one

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being a medical office building and the other a parking garage structure. The office building portion will be at the southerly end, adjacent to Congress Street, and will be on the order of 90 by 165 feet in plan dimensions. The office portion will be generally 4 levels with two additional sub-levels (smaller in footprint) below Congress Street grade. The lowest office building floor elevation is proposed to be 47.0.

The parking garage will be attached to the office building portion on the northerly, easterly and westerly sides. We understand the parking garage will be 5 levels with the lowest level having a finish floor elevation of 36.5.

Based on the drawings provided, we understand there will be four major rows of columns situated parallel with Congress Street (Lines B, C, D and E). We understand column loads will be:

<u>Line</u>	<u>Total Load</u>
B	425 ± kips
C	950 ± kips
D	950 ± kips
E	510 ± kips

We understand the medical office building will be steel framed with brick veneer. An elevated enclosed walkway connector will be constructed from the new medical office portion of the structure to an existing parking garage located on the opposite (south) side of Congress Street. The parking structure will likely be constructed of cast-in-place and post tension concrete. Cast-in-place concrete retaining walls will be needed to support grade changes of nearly 30 feet at the perimeter of the parking garage structure.

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## **2.0 EXPLORATION AND TESTING**

*2.1 Exploration Work* - Eighteen test borings were made at the site during the period of January 6 through 18, 1997, by Great Works Pump and Test Borings, Inc. of Rollinsford, New Hampshire. Two supplemental test borings (B-1A and B-13A) were made on January 29, 1997, at the same locations as B-1 and B-13 in order to obtain deeper soils information. The test boring locations were selected by Mediplex Building Corporation and established in the field by S. W. COLE ENGINEERING, INC. based on a site plan provided by Mediplex Building Corporation and taped measurements from existing site features. The approximate test boring locations, as provided by Titcomb Associates (project surveyors), are shown on the "Exploration Location Plan", attached as Sheet 1. Logs of the test borings, based on our observations and testing of samples, are attached as Sheets 2 through 25. A key to the notes and symbols used on the logs is attached as Sheet 26. Elevations noted on the logs are based on interpolation of topographic information shown on Sheet 1.

*2.2 Laboratory Testing* - Laboratory and field testing was performed on selected samples recovered from the test borings. Moisture content and laboratory and field strength test results are noted on the test boring logs. The results of six grain size analyses are presented graphically on Sheets 27 and 28.

## **3.0 SITE & SUBSURFACE CONDITIONS**

*3.1 Site Location and Surficial Conditions* - The site of the proposed structure is located on the northeasterly side of the intersection of Congress and Forest Streets in Portland, Maine. The site is currently occupied by an existing paved parking lot along Congress Street, a gravel surface parking lot adjacent to Forest Street and an open unoccupied area north of the existing paved lot. The site is bordered to the north by Boynton Street, to the west by Forest Street and to the south by Congress Street. At least one multi-story residential structure exists adjacent to the easterly property line.

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A hill is situated south of the site, across from Congress Street, which slopes steeply downward to the north from the existing parking garage area to Congress Street. The ground surface then slopes gradually to the northwest toward Boynton Street. Within the area of the proposed structure the ground surface slopes generally downward southeast to northwest from about elevation 68 down to about 40. It has been reported that this lot was once utilized as a construction laydown yard and was likely filled and/or regraded from near Congress Street, north about 150 feet. It appears that the site has also been utilized as a disposal area for lawn and tree clippings which appear to be deposited mostly in the central portion of the site. A gravel surfaced parking lot exists adjacent to Forest Street which is on the order of 50 by 170 feet in plan dimensions. The parking lot slopes downward to the north. It appears this area may have been excavated to achieve current grades. A dry lain stone retaining wall exists along the easterly edge of this lot supporting a grade change varying from about 2 to 7 feet.

Although no structures exist on the site currently, information obtained by S. W. COLE ENGINEERING, INC. during our research for the Phase I Environmental Services (report dated February 12, 1997), indicates several structures once existed at this site. It is believed that many foundations and footings may still exist, under the existing site, particularly along Congress, Forest and Boynton Streets.

3.2 Subsurface Conditions - The explorations encountered a general stratigraphy consisting of granular fill soils overlying a layered glacial marine deposit of brown and gray silty sands, gray silty clay and sands with clay layers. Gray sand and silt with some gravel (glacial till) was encountered below the marine soils at each exploration.

Fill soils were found at each of the test borings. The fill encountered typically consists of sands with varying amounts of silt and gravel. Pieces of brick and asphalt pavement, wood and other debris was also encountered in the fill at Borings B-1, B-2, B-4, B-5, B-6 and B-7. The fills were generally loose to dense and varied in thickness from about 2 to 13 feet at the explorations. It is likely that fills, demolition debris and old foundation and utility structures exist throughout the site particularly adjacent to Congress Street.

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Forest Street and Boynton Street where structures once occupied the site.

With the exception of Borings B-1, B-1A, B-15 and B-16 all explorations encountered the marine soils below the fills. Borings B-1, B-1A, B-15 and B-16 encountered glacial till directly below the fill. The remainder of the explorations encountered either medium to stiff gray silty clay, loose to dense silty sand with varying amounts of gravel and sands with clay layers below the fill. This zone of layered glacial marine soils was found to vary in thickness from about 6 to 28 feet at the explorations. These borings encountered a layer of compressible gray silty clay within the glacial marine soil layer that varied from about 3 to 10 feet in thickness.

Borings B-2 through B-14 encountered glacial till at depths varying from about 15 to as much as 30 feet below the ground surface. The glacial till is generally medium dense to dense becoming very dense with depth. All of the explorations were terminated in glacial till at depths ranging from 27 to 128 feet below the ground surface. Borings B-1A, B-7, B-8, B-11 and B-13A were advanced to greater depths in the glacial till in an effort to access soil density with depth and the depth to bedrock. These explorations were all terminated in dense to very dense till. Bedrock was not encountered within the depths of the explorations. For a more detailed description of subsurface conditions, please refer to the attached boring logs. Interpretive subsurface profiles are presented on Sheet 29.

The following table is a brief summary of fill thicknesses and depths/elevations to glacial till and bottom of exploration:

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Boring No.	Approx. Surf. Elev. (ft.)	Approx. Fill Thick. (Incl. Possible Fill) (ft.)	Approx. Depth/Elev. of Top of Glacial Till (ft.)	Approx. Depth/Elev. of Bottom of Exploration (ft.)
1	65	13	13.0/52.0	27.0/38.0
1A	65	13	13.0/52.0	46.3/18.7
2	60	8	14.5/45.5	27.0/33.0
3	55	2	18.0/37.0	27.0/28.0
4	58	2	23.0/35.0	27.0/31.0
5	62.5	3	23.0/39.5	27.0/35.5
6	60	8	23.0/37.0	27.0/33.0
7	57	8	23.0/35.0	128.0/-70.0
8	48	2	22.0/26.0	31.0/17.0
9	53	3	24.0/29.0	27.0/26.0
10	52	6	23.2/28.8	27.0/25.0
11	50.5	3	28.5/22.0	36.0/14.5
12	50	9	25.0/25.0	26.5/23.5
13	40	2	Not Encountered	27.0/13.0
13A	40	2	30.0/10.0	41.5/-1.5
14	58	10.5	13.5/44.5	37.0/21.0
15	65	2	2.0/63.0	27.0/38.0
16	66.5	2	2.0/64.5	42.0/24.5

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3.3 Groundwater - Groundwater observations were made in the boreholes during the exploration work. These observations were limited by the duration of the exploration program. Based on our observations at the site, it appears that groundwater was generally about 10 feet below the ground surface during the time of exploration. It must be expected that higher groundwater levels exist during wet seasons of the year. Additionally, water is likely perched in the granular fills and glacial marine soils seasonally and during heavy precipitation events.

#### 4.0 EVALUATION & RECOMMENDATIONS

4.1 Site Suitability - Based on the findings at the exploration locations and our knowledge of structural loading, it is our opinion that the surficial fills and underlying glacial marine soils (sands, silts and clay) are not suitable for support of the proposed column loads and below grade perimeter wall foundations. Support of structural loads will need to derive support from the underlying glacial till. The on-grade paved parking and any slabs-on-grade can be supported on compacted fill placed on densified existing granular fills or the glacial marine soils.

The fill encountered at the explorations varies from about 2 to 13 feet in thickness and is generally granular, but does contain pieces of asphalt and wood, brick and other construction debris at several locations. This material is not suitable for support of the proposed structural loadings but could be densified to support slabs-on-grade and/or asphalt pavement. The glacial marine soil deposit overlying the glacial till generally consists of loose to medium dense sands and medium to stiff compressible gray silty clay. Depths to the top of till varies from about 2 to 28 feet from the existing ground surface at the explorations.

We have made an analysis of allowable bearing capacity of the underlying medium dense glacial till. It is our opinion that these soils have an allowable bearing capacity of 4 ksf for support of shallow spread footings. Given the magnitude of structural loading, spread footing dimensions would be quite large.



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A shallow spread footing foundation system would involve removal of all existing fill and marine soils from beneath foundation areas and placement of foundations directly on the glacial till or on a compacted structural fill placed on glacial till. This would require a significant amount of over-excavation below foundation grade in some areas, particularly along the northerly portion of the easterly wall, the entire southerly wall, the entire westerly wall, westerly side of the southerly wall and westerly columns along D-Line. These areas would require 8 feet or more of over-excavation work. This would require off-site disposal of removed soil and replacement with a compacted structural fill. There are also other concerns and risks associated with utilizing a spread footing foundation system for the deep unsuitable soil areas of the site, including:

- The fill and marine soils may be thicker in unexplored areas of the site - Although the information at the boring locations indicate fill and marine soil thicknesses range from about 2 to 28 feet, there may be areas where these soils are thicker.
- Excavations will be located adjacent to streets and the existing buildings - General excavation to proposed floor elevations and any over excavation below foundation grade of unsuitable soils will extend significantly below existing grades requiring engineered braced shoring and dewatering.
- Contaminated soils may be encountered - Although not observed during drilling, records indicate that four underground storage tanks were previously on this site. Actual location of the tanks or if they have been removed is not known. Thus, it should be anticipated that some of the soils at this site may be contaminated with petroleum products. A contingency for contaminated soil will need to be provided and a hazardous material handling program should be developed prior to excavation work. Further exploration and analytical sampling would be needed during excavation work to determine the extent and type of contamination (if encountered).

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4.2 Foundation Alternatives - Based on the information gathered to date and the assessment of risks discussed above, we recommend that a combination of spread footing foundations and deep foundations be utilized for support of the structural loads. Spread footings would be utilized where the bearing soils can be reasonably reached and deep foundation systems would be used in deep unsuitable soil areas. The on-grade level of the parking structure (asphalt, base and subbase) can be placed on prepared existing soils (see Section 4.11).

We have prepared a general description of several pile foundation systems and associated costs. The cost estimates provided are intended for comparison only and are based upon discussions with foundation specialty contractors. The option chosen should be based on the structural engineers recommendations. Actual constructed cost of the selected foundation system(s) will vary from the estimates provided below.

#### 1. Caissons

Caissons would need to extend on the order of 10 to 15 feet into the glacial till to bear in dense glacial till. An allowable bearing contact pressure of about 12 ksf would be used for the dense till. Caissons would likely be 4.5 to 5.5 feet in diameter and vary from 20 to 40 ± feet in length. Load tests are not required for caissons. An auger would be used in an attempt to reach dense till. A temporary casing would be required to support the excavation sidewalls. The bearing surface would need to be inspected and, potentially, be hand cleaned prior to placing concrete. Caissons can be time consuming to install and may encounter difficulties in augering through the fills and into the dense till. Difficult augering is expected. The auger may not be able to penetrate cobbles and boulders in medium dense till.

#### Cost Estimate

Installation of Caissons = \$360 ±/cubic yard concrete installed

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Approximate Working Load =  $230 \pm$  kips

Note: This estimate does not include the cost of survey work, removal and disposal of soil, materials testing, bottom inspection, disposal of contaminated soils (if encountered) and cost of over-excavating for obstructions.

### 2. Auger-Cast Piles

An auger would be advanced into the glacial till, attempting to reach dense till. Auger-cast piles generally range from 12 to 18 inches in diameter. The piles would be installed with a hollow stem auger through which grout is pumped as the auger is retracted. This system is susceptible to the need for over-excavation with an excavator or resetting at an adjacent location if cobbles, boulders or construction debris is encountered. The pile would need to extend 10 to 15 feet into the dense till. The bottom cannot be inspected, thus, there is some risk of not bearing on a sound surface. Only a few piles could be installed per pile group per day because of disturbance from the drilling process. A load test would need to be performed on one pile which would require about 1 week to allow curing of the concrete. Difficult augering is expected. The auger may not be able to penetrate cobbles and boulders in medium dense till.

Because of the anticipated augering difficulties and the relatively low capacities of the piles, we do not recommend this option.

### 3. Steel H-Piling

Based on the information obtained at the explorations, we believe that steel H-piles would likely need to be driven 15 to 30 feet into the glacial till to achieve a working load of about 80 to 100 tons. Consideration could be given to the use of either an HP 12X53 (A572 Grade 50 or A36) or an HP 14X73 (A36) pile.

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Availability is good for both sections, however, the A572 Grade 50 steel requires ordering, while as many piling firms stock the A36 steel. Thus, lead time for ordering will need to be considered. A static load test program would be needed.

#### Cost Estimate

Steel H-Pile installed = \$25 ±/foot

Approximate Working Load = 80 to 100 Tons

#### 4. Franki Piles

A Franki Pile is a cast-in-situ concrete pile with an enlarged base. A thick walled sleeve would be driven through the upper soils into the till and a base of gravel or stiff concrete is then driven out of the sleeve causing densification of the till soils and forming the enlarged base. The Franki Piles would not need to extend deep into the till soils to develop support. The pile would likely extend less than 10 feet into the till. A thin walled sleeve is then installed for a form for the shaft. A steel reinforcing cage is typically lowered in the sleeve prior to placing the concrete shaft. A static load test program would be needed. We have obtained the following approximate cost and load carrying capacities from a specialty contractor.

#### Cost Estimate

Franki Pile installed = \$1600 to \$2200/each

Approximate Working Load = 125 Tons Each

Summary - We recommend that steel H-piling or Franki piles be considered for support of the new structure. The H-piling will have a better chance of advancing through

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cobbles or construction debris obstructions than augers piles or caissons and are easier to splice and/or cut to length. The Franki Piles would not need to extend deep into the glacial till. Rather, the enlarged end would be developed likely within the top 10 feet of till. The length of these piles are easily adjusted by cutting the thin sleeve to the correct length prior to placing concrete fill in the shaft.

**4.3 Spread Foundation Design** - We recommend that spread foundations for the columns and heavily loaded walls be supported on at least 12 inches of compacted "gravel fill" overlying a geotextile fabric placed upon glacial till. Foundations supported on glacial till should be designed for a net allowable bearing contact pressure of 4 ksf or less. In areas requiring over excavation (greater than 12 inches below bottom of foundations) due to unsuitable subgrade soils needing removal, we recommend that a geotextile fabric be placed on the subgrade and a compacted "granular borrow fill" be used to bring the area up to the bottom of the proposed "gravel fill". Potentially, some lightly loaded foundations could be placed on densified fills or marine soils. These foundations should be designed for a net allowable bearing contact pressure of 2.5 ksf or less and must be designed to accommodate some differential movement relative to the rest of the structure. All footings should be at least 24 inches in width.

**4.4 Seismic Design** - The subsurface conditions at the site suggest the use of a seismic coefficient of 1.0 for soil profile S-1.

**4.5 Soil and Geotextile Fabric Parameters** - It should be noted that the following soils parameters are typical values for soils similar to those found on site and are not based on direct laboratory testing.

- A. Modulus of Subgrade Reaction
  - Kv (densified existing silty sand fill) = 150 kcf
  - Kv (compacted gravel fill) = 400 kcf (min. 12" compacted gravel fill)
  - Kv (glacial till) = 250 kcf

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- B. Shear Modulus  
G (densified existing silty sand fill) = 5000 psi  
G (compacted gravel fill) = 15,000 psi  
G (glacial till) = 9000 psi
- C. Young's Modulus, Modulus of Elasticity  
E (densified existing silty sand fill) = 4000 psi  
E (compacted gravel fill) = 15,000 psi  
E (glacial till) = 10,000 psi
- D. Poisson's Ratio  
 $\nu$  (densified existing silty sand fill) = .30  
 $\nu$  (compacted gravel fill) = .40  
 $\nu$  (glacial till) = .35
- E. Allowable Soil Bearing Capacity  
qa = 4.0 ksf (min. 12" compacted gravel fill overlying glacial till)  
qa = 2.5 ksf (min. 12" compacted gravel fill overlying existing fill  
or marine soils) (For lightly loaded foundations only - see Section  
4.3)
- F. Woven Geotextile Fabric For Subgrade Reinforcing
- Subgrade Reinforcement  
Apparent Opening Size (AOS) = 30 to 50  
Grab Strength = 200 lbs
  - Surrounding Foundation Drain Lines  
Apparent Opening Size (AOS) = At least 70

**4.6 Frost Protection** - The design freezing index for the Portland, Maine area is on the order of 1250 Fahrenheit degree days. Thus, a frost penetration of 4.5 feet should be anticipated. All foundations, including interior column foundations, retaining wall foundations and pile caps should be placed at least 4.5 feet below exterior finish grade.

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Proposed utilities should also be placed below frost penetration depths.

**4.7 Excavation Work** - Excavation for foundations will encounter miscellaneous granular fill (sand with varying amounts of silt and gravel), existing concrete foundation structures, construction rubble, glacial marine sands, silts and clay, and glacial till. Petroleum contaminated soils may also be encountered. Existing foundation structures and rubble fill will need to be removed from beneath all proposed foundations. Existing foundation structures should be removed to at least 3 feet below the proposed pavement or slab areas. Rubble will also need to be removed for construction of utilities. Groundwater will be encountered in the excavations and will need to be controlled to a level at least 12 inches below subgrade. Excavation below proposed spread footing foundations should continue laterally (from the edge of foundation) a distance equal to the depth of excavation (1V to 1H slope). This is to allow placement of new compacted fill up to the bottom of foundations at the same slope (1V to 1H).

Care should be taken to minimize subgrade soil disturbance. Should the subgrade become loose, sloppy and difficult to work, the loose, unsuitable soils should be over-excavated and replaced with a geotextile fabric and clean compacted gravel fill. Excavation sidewalls in the fill and marine soils at the site are susceptible to caving and sloughing. All excavations will need to be properly shored and/or sloped back to protect the construction area. All excavations should be consistent with OSHA guidelines (20 CFR Part 1926).

**4.8 Backfill and Compaction Recommendations** - After grubbing and cutting is completed, subgrades consisting of granular fill or sand which will remain beneath the paved areas or slabs should be proof-rolled prior to placing any new fill. Subgrades should be densified (proof-rolled) by at least 5 passes with a roller compactor weighing about 15 kips. Use of vibration may or may not be advantageous depending upon the soil moisture content at the time proof-rolling occurs. Proof rolling with vibration should not be performed if soils are wet or if clays exist.

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All new fill should be placed in horizontal lifts and be compacted. Lift thicknesses should be such that desired density is achieved throughout the entire lift thickness, typically with 3 to 5 passes of the compaction equipment. Lift thicknesses should generally be on the order of 8 to 12 inches. If over excavation is needed below foundations (below the proposed 12 inch thickness of gravel fill), the excavation should be backfilled with compacted granular borrow. We recommend that all fill placed beneath foundations be compacted to at least 97 percent of its maximum dry density as determined by ASTM D-1557. Fill beneath slabs and paved areas should be compacted to at least 95 percent of ASTM D-1557. Fill adjacent to perimeter wall foundations (inside and out) should be clean "select backfill". At least 12 inches of compacted "gravel fill" should be placed directly below proposed concrete floor slabs and column and wall foundations. General structural fill, other than fill placed adjacent to the perimeter foundations and directly beneath the slab can be a "granular borrow fill". The structural fills should meet the following gradations:

Sieve Size	GRAVEL FILL		
	SELECT BACKFILL	(MDOT 703.06 Type B Base)	GRANULAR BORROW FILL
6 Inch	---	---	100
4 Inch	100	100	---
3 Inch	90-100	Portion Passing 3"	---
2 Inch	---	---	---
1/2 Inch	---	35-75	---
1/4 Inch	25-90	25-60	---
#40	0-30	0-25	0-70
#200	0-5.0	0-5.0	0-10



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Some excavated, on-site granular soils may be suitable as "granular borrow fill" beneath the slabs or paved areas provided the soil is at a moisture content at the time of construction that is workable and consistent with the compaction required. Grain size analyses and moisture content testing of the excavated soils should be performed during excavation work to assess potential uses on site. Any soils containing organics must not be used beneath structures or paved areas. Sheet 30 is a detail showing sub-slab fill details.

**4.9 Foundation Drainage** - We recommend that a foundation drainage system with a positive gravity outlet be provided at foundation depth around the periphery of the structure and along the southerly side of the two interior wall lines (Lines C and D). The two interior drainage lines should also be placed at least 4.5 feet below finish grade and should connect to the peripheral drainage line at the lower end. It is recommended that rigid, perforated underdrain pipe with hole diameters of 1/4 to 5/8 inch be utilized. At least 6 inches of 3/4 inch crushed stone should be used to bed the drain pipe. The stone should be wrapped with filter fabric with an apparent opening size of 70 to 100. See Sheet 30 for details.

We understand the structure will have an elevator extending down to sub-level 2 (elevation 46.5). Elevators typically have a service pit extending about 4 feet below floor elevation. The pit slab should be underlain with at least 12 inches of crushed stone. An individual underdrain line should be installed with a gravity outlet. If drainage cannot be provided, the pit must have a water proofing treatment. If water proofing is done, a sump pit should be provided to allow the installation of a sump pump in the future, should the water proofing prove to be ineffective.

**4.10 Lateral Earth Pressure for Retaining Walls** - We anticipate that the parking garage retaining walls will support as much as  $25 \pm$  feet of grade change. Considering a compacted select fill adjacent to the walls and foundation drainage, we recommend the following parameters be considered:

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- Compacted Granular Fill Unit Weight = 130 pcf
- Friction Factor between Mass Concrete on Compacted Gravel Fill ( $\tan\delta$ ) = 0.55
- Friction Factor between Formed Concrete on Compacted Gravel or Select Fill = 0.30
- Active Lateral Earth Pressure Coefficient ( $K_a$ ) = 0.31
- Passive Lateral Earth Pressure Coefficient ( $K_p$ ) = 3.2
- At-Rest Lateral Earth Pressure Coefficient ( $K_o$ ) = 0.47

Wall backfill should be compacted between 92 and 95 percent of ASTM D-1557. Over compaction may result in excessive pressures on the walls. The design will also need to consider construction and long term surface loading.

4.11 Paved Areas - We understand that the ground level of the parking structure will be asphalt pavement. It is our opinion that the asphalt section can be supported on existing soils. We recommend that all existing pavement, topsoil and organics be removed from beneath the proposed paved areas. Once the area has been excavated to subgrade, granular soil subgrades should be densified (proof-rolled at least five passes with a roller compactor weighing about 15 kips) prior to placing aggregate sub-base material. Clayey subgrades should be overlain by a geotextile fabric prior to placing subbase gravel. Clayey subgrades or saturated soil subgrades should not be proof-rolled. A soils technician should be on site to observe the densification process to assess subgrade soil suitability. Any soils that continue to yield should be over-excavated and replaced with granular fill.

We recommend that the pavement structure consist of 3 inches of bituminous pavement consisting of 1 inch of surface and 2 inches of binder over a 4 inch base (MDOT Type A base), and a 12 inch sub-base structure (MDOT Type D sub-base).

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Percent Finer By Weight

Sieve Size	MDOT Type A	MDOT Type D
6 Inch	100	100
	Portion Passing 3"	
2 Inch	100	---
1/2 Inch	45-70	---
1/4 Inch	30-55	25-70
#40	0-20	0-30
#200	0-5.0	0-7.0

The base and sub-base materials should be compacted to at least 95 percent of their maximum dry density as determined by ASTM D-1557.

**4.12 Construction Quality Control** - It is important that a construction quality control and environmental monitoring program be implemented for the project before the start of earthwork. It is our opinion that an S. W. COLE ENGINEERING, INC. geotechnical engineer and/or engineering technician should be on site to make observations during excavation, subgrade preparation, foundation construction, and backfilling operations and to monitor soils from an environmental standpoint. Decisions will have to be made in the field by the owner or owner's representative and the geotechnical engineer during the excavation and foundation construction phase.

Field testing and monitoring services should include:

1. Observations and sampling of excavated soil material and subgrades during excavation work
2. Observations of groundwater conditions

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March 24, 1997

3. Field soil sampling and testing including:
  - moisture-density testing (proctor tests)
  - grain size analyses
  - field soil density testing (compaction tests)

Materials testing and quality control will need to be performed on other construction materials such as concrete, steel and form work. A scope of work and budget for this work will be developed prior to construction activity.

#### 5.0 CLOSURE:

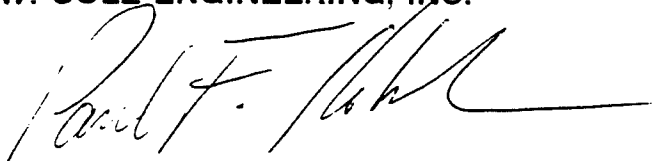
Due to the complexity of the site conditions and proposed foundation alternatives, we expect that further geotechnical consultation will be needed to complete foundation design. We will work closely with your structural designers during this phase.

We request that S. W. COLE ENGINEERING, INC. be provided the opportunity to review the final design and specifications to determine that our earthwork and foundation recommendations have been properly interpreted and implemented.

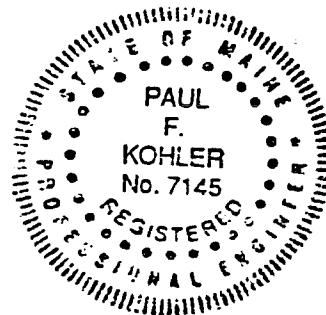
It has been a pleasure to be of assistance to you with this phase of your project. If you have any questions, please do not hesitate to contact us.

Very truly yours,

**S. W. COLE ENGINEERING, INC.**



Paul F. Kohler, P.E.



PFK/jel

cc: Paul Gray - V.P. of Planning at Maine Medical Center (3 copies)

**Attachment A**  
**Limitations**

This report has been prepared for the exclusive use of Maine Medical Center % Mediplex Building Corporation for specific application to the Proposed Medical Office Building and Parking Garage in Portland, Maine. S. W. COLE ENGINEERING, INC. has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S. W. COLE ENGINEERING, INC. should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S. W. COLE ENGINEERING, INC.



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- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

March 11, 1997

Mr. Paul Gray  
Vice President Planning  
Maine Medical Center  
22 Bramhall Street  
Portland, ME 04102-3175

**Subject: Maine Medical Center Parking Demand**

Dear Mr. Gray:

Per your request, DeLuca-Hoffman Associates, Inc. has completed a parking analysis for Maine Medical Center (MMC). This analysis has been based on the following conditions:

- Completion of the current expansion of the Bean Building and renovation of other portion of the MMC campus.
- Completion of the proposed 49,156 s.f. medical office building and related parking.
- Sale of the Gateway Garage reducing the available parking to MMC from 650 spaces (capacity of the garage) to approximately 120 spaces.

The purpose of this letter is to summarize the demand and supply with the above conditions in place.

#### Parking Supply

DeLuca-Hoffman Associates, Inc. completed a parking analysis in June 1996 for the proposed additions to the Bean building which showed a parking supply of 2,363 spaces. Based upon preliminary plans dated 2/10/97 prepared by Mediplex for the proposed 49,156 s.f. medical office building on Congress Street northerly of Sportsman's Grill, there are 430 spaces planned as part of the office building. The location of the office building is shown in Figure 1 following this page. The proposed office building will displace 52 spaces currently on the site for a net gain of 378 spaces (430-52) over MMC's current supply.

Two other factors which will affect the parking supply are MMC's planned sale of the Gateway Garage which has 650 spaces and the lease of 150 parking spaces on St. John Street. As a condition of the sale of the Gateway garage, 120 spaces will be reserved for MMC employees who currently work at the Gateway.

Based on these factors and supply data previously furnished by MMC, DeLuca-Hoffman Associates, Inc. has summarized the supply after the Gateway sale and completion of the proposed Medical Office Building in Table 1 as follows:



Mr. Paul DiGray  
March 11, 1997  
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<b>Location</b>	<b>Number of Available Spaces</b>
Ramp Parking Garage	1,276
Congress Street. Parking Lot by Sportsman's Grill	430
Admitting	9
Visitors Parking Lot	315
MRI	11
In back of Gilman Street	15
Emergency	10
Oncology	10
Gateway Garage (Not shown in Figure 1)	120
Diabetes Center	15
Spaces Leased on St. John Street	150
Spaces Reserved at Farmers Market Garage	12
<b>Total Available Spaces</b>	<b>2,373</b>

Parking Demand

Based on the "Parking Analysis for a Proposed Expansion to the Bean Building at Maine Medical Center" completed by DeLuca-Hoffman Associates, Inc. in June 1996, the estimated demand upon completion of the Bean addition and relocation of employees from MMC to the ambulatory care facility in Scarborough was anticipated to be 1,914 spaces.

Very little information exists through transportation technical publications such as the Institute of Transportation Engineers or the Urban Land Institute to establish the parking demand for a medical office building. Methodologies are set forth in these publications based on the number of employees, however the number of employees is not currently known. DeLuca-Hoffman Associates, Inc. conducted parking inventories at similar facilities on February 11, 1997 from 7:30 a.m. to 3:30 p.m. at the existing Stroudwater Crossing on Congress Street in Portland and on February 12, 1997 from 7:30 a.m. to 3:30 p.m. at the existing medical building on 1250 Forest Avenue in Portland which are very similar to the proposed facility. This information is summarized in the table below:

Use	Available	Size (s.f.)	Peak # of Vehicles Park at Any Time	Occupied Spaces/1,000 s.f.	Available Spaces/1,000 s.f.
Stroudwater Crossing	147	32,190	123	3.8	4.6
1250 Forest Avenue Medical Building	127	40,317	80	2	3.2

Based on this information, DeLuca-Hoffman Associates, Inc. has used a parking ratio of 4.6 spaces/1,000 s.f. to estimate the parking demand for the proposed 49,156 s.f. medical office building. Based on this rate, the proposed office building will require 226 spaces (4.6 x 49,156). Thus, the proposed medical office building will increase the total campus parking demand to 2,140 spaces (1,914 + 226).



Mr. Paul DiGray  
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Page 3

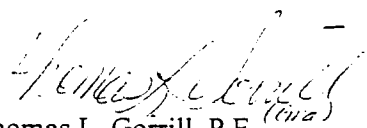
Parking Demand Compared to Supply

Based upon the information presented previously in this letter, the parking supply will be 2,373 upon completion of the proposed 49,156 s.f. medical office building with its associated 430 space parking garage and the sale of the Gateway garage. This supply of 2,373 is 233 spaces in excess of the forecast demand of 2,140 spaces upon completion of the office building and full operation of the Scarborough and John Roberts Road facilities. Thus, the supply exceeds the demand by 11%.

Please review these findings and contact me if you have questions or would like to discuss these findings in more detail.

Sincerely,

DeLUCA-HOFFMAN ASSOCIATES, INC.

  
Thomas L. Gorrill, P.E.  
Vice President of Transportation

TLG/ajm/1471/brem1-14

c: Robert Bremm

**DRAFT**

**TRAFFIC IMPACT STUDY  
FOR A PROPOSED  
MAINE MEDICAL OFFICE FACILITY  
PORTLAND, MAINE**

**Prepared for**

**Maine Medical Center  
22 Bramhall Street  
Portland, Maine**

**Prepared by**

**DeLuca-Hoffman Associates, Inc.  
778 Main Street, Suite 8  
South Portland, Maine  
(207) 775-1121**

**February 1997**

# TRAFFIC IMPACT STUDY

## INDEX

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### Appendix A

Turning Movement Diagrams

### Appendix B

Capacity Analyses

### Appendix C

Collision Diagrams

### Appendix D

Signal Warrant Analyses

## EXECUTIVE SUMMARY

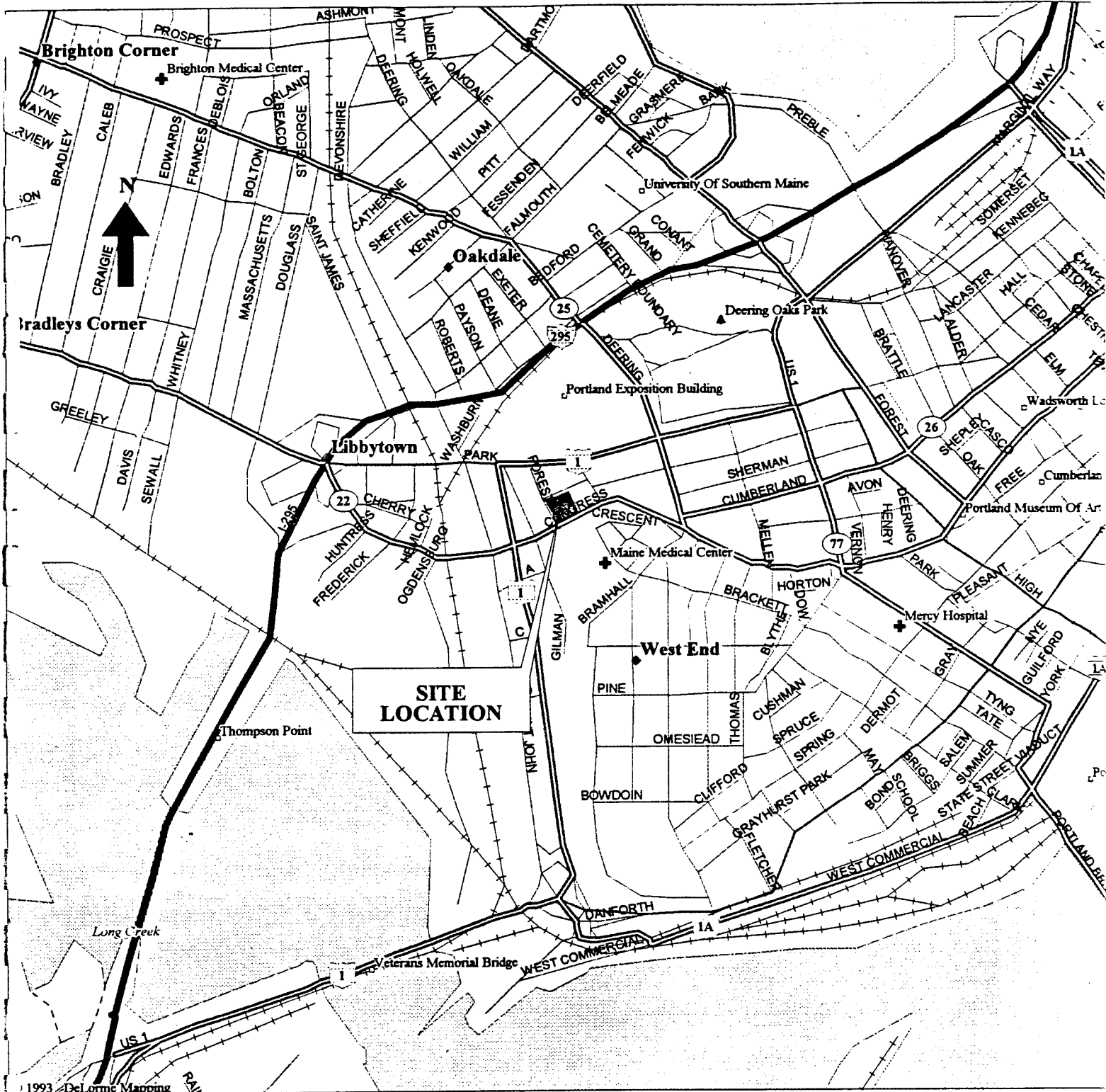
The following executive summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

DeLuca-Hoffman Associates, Inc. has been retained by Maine Medical Center to conduct a traffic impact study for the proposed Medical Office building with an attached 420 space parking garage in Portland, Maine. The proposed site, currently occupied by the existing Maine Medical Center's parking lot, consists of 52 parking spaces, is located on the northeast corner of the intersection of Congress Street and Forest Street, as shown on Figure 1 following this page. The development consists of a proposed 49,150 square foot Medical Office building with an attached 420 space parking garage. The development also includes proposed driveways to Congress Street and Forest Street.

The purpose of this study is to evaluate the impact on the existing street system of the traffic generated by the proposed development and the planned driveway onto Congress Street and Forest Street. The following is a summary of the major findings of the traffic study:

1. It is estimated the proposed project will generate 182 and 212 trip ends during the AM and the PM peak hours. These trips would consist of 126 trips in and 56 trips out of the site during the a.m. peak hour and 42 trips in and 170 trips out of the site during the p.m. peak hour.
2. All of the trips are expected to be primary trips, i.e. newly generated by the development.
3. The proposed Congress Street driveway is located approximately 260 feet east of Forest Street. This driveway would have a single entrance lane and a single exit lane. The Forest Street driveway will consist of a right turn in and right turn out only. Forest Street is a one way street in the northbound direction.
4. The level of service analysis shows that the proposed development will not have a significant impact on the surrounding street system. However, some existing intersections currently have a low level of service.
5. The intersection of Congress Street at the proposed driveway meets MDOT guidelines for consideration of left turn lane for left turning traffic from Congress Street into the driveway. Based on the projected left turning volumes, DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at the site driveway. This will require removal of parking on the southerly side of Congress Street which will require approval of the City Council.

DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for left turning traffic from Congress Street onto Forest Street. This location meets criteria for consideration of providing a left-turn treatment. Based on the projected left turning volumes DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at Forest Street. This will also require removal of parking on the southerly side of Congress Street.



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**LEGEND**

- State Route
- Geo Feature
- ◆ Town, Small City
- ◆ Large City
- ⊕ Hospital
- ▲ Park
- ⊔ Interstate, Turnpike
- ⊔ US Highway
- Population Center
- Street, Road
- Hwy Ramp
- Major Street/Road
- Interstate Highway
- State Route
- US Highway
- Railroad
- - - Intermittent River
- Airfield

Scale 1:15,625 (at center)

1000 Feet

500 Meters

PORTLAND, MAINE

Mag 15.00

Tue Feb 04 14:08:51 1997



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FIGURE

1

6. The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed full width storage lengths with two exceptions as discussed below:

Congress Street and Bramhall Street/Deering Avenue - The Deering Avenue southbound approach for a shared through right turn lane and an exclusive left turn lane, the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Cumberland Avenue.

7. Park Avenue and St. John Street is a high accident location experiencing 45 accidents. To correct the predominant pattern of change lane accidents, DeLuca-Hoffman Associates, Inc. recommends overhead lane use control signs and striping through the intersections for westbound duals left turn lanes.
8. DeLuca-Hoffman Associates, Inc. recommends the following improvements to correct existing offsite roadway deficiencies:

- Restripe the lane uses for northbound approach at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through left turn lane.
- Change the timing and phasing at the intersection of Bramhall and Congress Streets.
- Installation of traffic signal controller at Park Avenue and Forest Street.

Based upon these findings, it is the opinion of DeLuca-Hoffman Associates, Inc. that the traffic generated by the proposed development can be adequately and safely accommodated on the surrounding street system given existing geometric and the improvements of the traffic signal timing and phasing.

## I. EXISTING CONDITIONS

### Site:

The site shown in Figure 1 currently occupied by the existing Maine Medical Center parking lot, is located on the northeast corner of the intersection of Congress Street and Forest Street in Portland, Maine. The existing parking lot contains 52 parking spaces with a single driveway access to Congress Street. The site is bounded by Congress Street to the south, Boynton Street to the north, Forest Street to the west, and an apartment building to the east.

### Adjacent Roads:

The site has frontage on Congress Street, Forest Street, and Boynton Street. Congress Street has a 42 foot wide roadway with on street parking on both sides. Congress Street also has a sidewalk along the site frontage. The posted speed limit is 25 mph. Congress Street connects Interstate I-295 to the west and Portland downtown to the east.

Forest Street is a one way street in a northbound direction. It intersects Congress Street to south and Park Avenue to the north. Forest Street has a 22 foot wide travel way with on street parking on the west side of the street.

Boynton Street is a two way roadway and has a 22 foot wide travel way with on street parking. Boynton Street connects Forest Street to the west and Weymouth Street to the east.

DeLuca-Hoffman Associates, Inc. based this study on the following information:

- A 1"=80'± scale Site Plan dated October 29, 1996 prepared by Mediplex Medical Building Corporation.
- Computerized accident data summary for the period 1993 to 1995 for Congress Street from St. John Street to Bramhall Street, for St. John Street from Congress Street to Park Avenue, and for Park Avenue from St. John Street to Forest Street..
- Traffic Impact Study for the Holt Hall Renovation prepared by Eaton Traffic Engineering on August 1996.
- Total active employees at the existing Maine Medical Center in Portland, Maine provided by Maine Medical Center.
- Turning movement count data collected by DeLuca-Hoffman Associates, Inc. at the following locations on February 4 and 6, 1997 from 6:45 a.m. to 8:45 a.m. and from 3:30 p.m. to 5:30 p.m.
  - Congress Street at St. John Street
  - Congress Street at Valley Street (US Route 1 northbound)
  - Congress Street at Gilman Street
  - Congress Street at Forest Street

- Congress Street at Existing Parking Lot Driveway
- Congress Street at Bramhall Street/Deering Avenue
- Park Avenue at St. John Street
- Park Avenue at Valley Street
- Park Avenue at Forest Street

Additionally DeLuca-Hoffman Associates, Inc. collected the turning movement data at the following locations.

The existing Maine Medical Center Garage driveways on February 7, 1997 from 3:00 p.m. to 6:00 p.m. and on February 10, 1997 from 6:45 a.m. to 8:45 a.m..

The Stroudwater Crossing driveway on February 7, 1997 from 6:45 a.m. to 8:45 a.m. and from 3:30 p.m. to 5:30 p.m..

The result of these turning movement counts are shown for the a.m. and the p.m. peak hour in Figure 2 of Appendix A.

## II. BACKGROUND TRAFFIC CONDITION

The existing turning movement count volumes were adjusted to approximate the 30th highest hour conditions of the year using the Weekly Group Mean Factor data for Group I (Urban) from the Maine Department of Transportation. The methodology used to determine a seasonal adjustment factor from this data is as follows:

<i>Seasonal Adjustment Factor for February, 1997</i>			
Period	WGMF		Seasonal Adjustment Factor
<u>Week of Counts</u>	<u>1.12</u>	=	1.27
4th Lowest Week	0.88		

The proposed facility is planned to be completed in 1998. To approximate traffic in this year, DeLuca-Hoffman Associates, Inc. increased the 1997 counts by 2% and added the traffic generated by other developments expected to be completed in 1998 in the study area. According to the Portland Planning Department, Holt Hall is the only project which is pending. Holt Hall is located on the southeast corner of the intersection of Bramhall Street and Congress Street. The traffic projections associated with this project are included as Figure 3 of Appendix A.

DeLuca-Hoffman Associates, Inc. has combined the existing traffic adjusted to approximately the 30th highest hour, with the peak hour traffic forecasted for the proposed Holt Hall and a 2% annual growth rate yield for the 1998 No-build conditions. The 1998 No-build volumes are shown in Figure 4 of Appendix A.



### III. TRIP GENERATION

The proposed Medical Office building will consist of 49,150 square feet with an attached 420 space parking garage. Approximately 226 parking spaces in the parking garage will be reserved to meet the estimated demand of the medical office building with the remaining 194 being available to Maine Medical employees. This trip generation will be made up of trips associated with the medical office building and with Maine Medical Center employees.

#### *Trips associated with the Medical Office Building*

To estimate the trips associated with the medical office building, DeLuca-Hoffman Associates, Inc. collected traffic counts at Stroudwater Crossing, a 32,190 s.f. medical office building, located on outer Congress Street. These counts were completed on Friday, February 7, 1997 from 6:45 to 8:45 AM and again from 3:30 to 5:30 PM. The results of the count are summarized below:

USE	Trip Ends				Trip Rate / 1,000 s.f.			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Stroudwater Crossing 32,190 s.f	67	101	45	95	2.08	3.14	1.4	2.95

USE	Trip Ends				Trip Rate / Parking Space			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Stroudwater Crossing Parking Spaces =147	67	101	45	95	0.46	0.69	0.31	0.65

Applying these rates to the medical office building results in the following trip estimates:

Medical office building trips based on 49,150 s.f.:

AM Peak Hour  

$$49,150 \text{ s.f.} \times \frac{2.08 \text{ trip ends}}{1,000 \text{ s.f.}} = 102 \text{ trip ends}$$

PM Peak Hour  

$$49,150 \text{ s.f.} \times \frac{3.14 \text{ trip ends}}{1,000 \text{ s.f.}} = 154 \text{ trip ends}$$

Medical Office building trips based on 226 parking spaces

AM Peak Hour

$$226 \text{ spaces} \times \frac{0.46 \text{ trip ends}}{\text{one space}} = 104 \text{ trip ends}$$

PM Peak Hour

$$226 \text{ spaces} \times \frac{0.69 \text{ trip ends}}{\text{one space}} = 156 \text{ trip ends}$$

Based on these calculations, DeLuca-Hoffman Associates, Inc. has used 104 AM and 156 PM trip ends for the portion of the trips generated by the medical office buildings.

Trips associated with the remaining 194 spaces in the parking garage not utilized by the Medical Office building were calculated as follows:

DeLuca-Hoffman Associates, Inc. collected traffic counts at the Maine Medical parking garage on Congress Street to assist in estimating the trips associated with the remaining 194 spaces in the parking garage not utilized by the Medical office building. The results of this data collection is summarized below:

USE	Trip Ends				Trip Rate / Parking Space			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Parking Garage Parking Space = 1276	514	371	355	245	0.4	0.29	0.28	0.19

Applying these rates to the remaining 194 spaces, results in the following trip generation:

AM Peak Hour

$$194 \text{ spaces} \times \frac{0.4 \text{ trip ends}}{\text{one space}} = 78 \text{ trip ends}$$

PM Peak Hour

$$194 \text{ spaces} \times \frac{0.29 \text{ trip ends}}{\text{one space}} = 56 \text{ trip ends}$$

### ***Combined Trip Generation***

Combining the trips associated with the Medical office building and those associated with the Maine Medical Center employees utilizing excess parking in the garage, results in the following total trip generation estimate:

#### **AM Peak Hour**

104 (medical office) + 78 (MMC) = 182 trip ends

#### **PM Peak Hour**

156 (medical office) + 56 (MMC) = 212 trip ends

Based on the above calculations, the proposed development is forecasted to generate 182 trip ends during the AM peak hour and 212 trip ends during the PM peak hour.

## **IV. TRIP COMPOSITION**

The ITE "Trip Generation" manual indicates that all the traffic associated with an office will be primary trips. Primary trips are those which are new to the street system not already passing by the site.

## **V. TRIP DISTRIBUTION AND ASSIGNMENT**

DeLuca-Hoffman Associates, Inc. has distributed the primary trip ends associated with the proposed Medical Office facility with 420 parking spaces based on the gravity model of the existing Maine Medical Center employees. This distribution is summarized as follows:

<b>Trip Distribution Based on Employees Gravity Model</b>	
<b><i>Approaching the Site</i></b>	<b><i>% of Trip Distribution</i></b>
Congress Street from west	37.4%
Congress Street from east	14.0%
Valley Street from south	31.9%
St. John Street from north	16.7%
Total	100%

Site generated traffic is assigned at the two site driveways as shown in Figure 5 of Appendix A. Sixty-two percent of the entering traffic will access the site via the Forest Street driveway and thirty-eight percent use the Congress Street Driveway. Approximately 65% of the exiting traffic is anticipated to leave via the Congress Street and 35% via the Forest Street.

## **VI. STUDY AREA**

Criteria - Section 3b2b of the Maine Department of Environmental Protection's (MeDEP) Site Location of Development Law states the Board may define the study area as follows:

- a. the first major intersection: and
- b. all intersections where, during any one hour period, traffic attributable to the proposed development equals or exceeds:
  - i. 25 vehicles in a left-turn only lane;
  - ii. 35 vehicles in a through lane, right-turn lane, or a combined through and right-turn lane; or
  - iii. 35 vehicles (multiplying the left-turn volume by 1.5) in a combined left-turn and through lane, or a combined left-turn, through and right-turn lane.

Based on the trip assignment summary presented in Figure 5, the study area includes the following intersection:

- Congress Street at St. John Street
- Congress Street at Valley Street (US Route 1 northbound)
- Congress Street at Gilman Street
- Congress Street at Forest Street
- Congress Street at Existing Parking Lot Driveway
- Congress Street at Bramhall Street/Deering Avenue
- Park Avenue at St. John Street
- Park Avenue at Valley Street
- Park Avenue at Forest Street

## **VII. CAPACITY ANALYSIS**

DeLuca-Hoffman Associates, Inc. performed capacity analyses for the intersections contained in the study area. The signalized and unsignalized intersections were evaluated using the Highway Capacity Software computer program. The signalized intersections were evaluated using the SIGNAL 94 program. (See Appendix B)

The capacity analysis assesses the quality of traffic flow at intersections and provides a ranking based upon its delay and Level of Service (LOS). Level of service rankings are similar to the academic grading system where an "A" indicates very little delay and an "F" indicates very poor or extreme conditions. Level of service "D", is generally acceptable at signalized intersections. At an unsignalized intersection, if the level of service falls below a "D", the intersection should be examined further to determine if it meets one or more of the warrants set forth in the Manual on Uniform Traffic Control Devices (MUTCD) for signalization. If a warrant is not met, then the lower level of service is satisfactory.

The following tables summarize the relationship between delay and level of service at both signalized and unsignalized intersections:

<b>Level of Service Criteria for Unsignalized Intersections</b>	
<b>Level of Service</b>	<b>Stopped Delay per Vehicle (sec)</b>
A	Up to 5.0
B	5.1 to 10.0
C	10.1 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	Greater than 45.0

<b>Level of Service Criteria for Signalized Intersections</b>	
<b>Level of Service</b>	<b>Stopped Delay per Vehicle (sec)</b>
A	Less than 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	Greater than 60.0

#### **Description of Signalized Intersections**

**Park Avenue and St. John Street** - This is a four-leg intersection with the westerly leg of the intersection, Park Avenue being one-way westbound. The westbound Park Avenue approach consists of an exclusive right-turn lane, a through lane and a shared through left-turn lane. St. John Street which forms the northbound approach consists of an exclusive left-turn lane, a shared through left-turn lane, and a channelized right turn lane. The St. John Street southbound approach has exclusive right turn lane and a shared through left-turn lane.

**Congress Street and St. John Street** - This intersection is a four leg signalized intersection. The eastbound Congress Street approach is a one way street with an exclusive left-turn lane, a through lane, and a shared through right-turn lane. The westbound Congress Street approach consists of an exclusive left turn lane and an exclusive right turn lane. The northbound St. John Street approach has a through lane and a shared through right turn lane. The southbound leg approach consists of a through lane and a shared through left turn lane. This intersection has a shared traffic controller with Congress Street and Valley Street (US Route 1 northbound).

**Congress Street and Valley Street(US Route 1 northbound)** - This intersection is also a four leg signalized intersection. Congress Street is the east and west legs and Valley Street is the north and south legs. The Congress Street eastbound and westbound approaches have a shared through right turn lane and a shared through left turn lane. The Valley Street (US Route 1 northbound) approach has an exclusive right

turn lane and a shared through right turn lane. The southbound leg is a one way street in the northbound direction. This intersection has a shared a traffic controller with Congress Street and St. John Street.

**Congress Street and Bramhall Street/Deering Avenue** - This intersection is a four legs and fully actuated signalized intersection with an exclusive pedestrian phase. The Congress Street eastbound approach consists of an exclusive right turn lane and a shared through right turn lane. The Congress Street westbound approach has an exclusive right turn lane and a shared through left turn lane. The Bramhall Street approach has an exclusive left turn lane and shared through right turn lane. The Deering Avenue approach has an exclusive right turn lane and a shared through left turn lane.

Capacity analyses are based on the above geometrics. The No-Build evaluation is based on existing timing and phasing, while the Build condition is based on complementation of improvements as discussed in the paragraph following this Table. The results of the analyses of these signalized intersection are discussed below. Computer printouts of the analyses are provided in Appendix B:

<b>Results of Signalized Capacity Analysis</b>					
Approach	Lanes	1998 No- Build		1998 Build	
		AM	PM	AM	PM
<b>St. John St. &amp; Park Avenue</b>					
St. John Street NB	Left	D	F	C	E
	Left/through	D	F	C	E
	Right	D	C	A	A
St. John Street SB	Through/Left	D	C	D	D
	Right	C	C	B	C
Park Avenue WB	Right	C	C	A	A
	Through/Left	C	E	C	D
Overall delay in Second		D 25.0	E 47.7	C 17.8	D 35.0
<b>St. John &amp; Congress Street</b>					
Congress Street EB	Left	D	D	B	B
	Through/Right	D	C	B	B
Congress Street WB	Left	C	C	C	A
	Right	D	F	B	A
St. John Street NB	Through/Right	D	F	B	C
St. John Street SB	Through/Left	C	C	C	C
Overall Delay in Second		D 32.4	E 45.9	B 11.3	B 14.8
<b>Congress &amp; Valley Street</b>					
Congress Street EB	Right/Through/Left	B	A	A	A
Congress Street WB	Right/Through/Left	C	D	B	B
Valley Street NB	Left	B	B	NA	NA
	Through/Right	C	B	NA	NA
	Right	NA	NA	B	B
	Through/Left	NA	NA	B	B
Overall Delay in Second		B 11.3	C 17.7	B 6.1	B 6.7

<b>Congress &amp; Bramhall/Deering</b>					
Congress Street EB	Right	B	B	B	A
	Left/Through	C	C	B	B
Congress Street WB	Right	B	B	B	B
	Left/Through	F	F	B	D
Bramhall Street NB	Right	B	B	B	B
	Left/Through	E	F	B	D
Deering Avenue SB	Right/Through	B	B	C	C
	Left	B	D	B	D
Overall Delay in Second		D 36.1	E 50.0	B 11.9	C 17.9

The results of the analysis of these signalized intersections are discussed below.

**Park Avenue at St. John Street** - Based on the capacity analysis, the westbound Park Avenue approach has a level of service E for a shared through left turn lane during the PM peak hour under No-Build conditions. The northbound St. John Street approach has a level of service F for an exclusive left turn lane and a shared through left turn lane during PM peak hour under No-Build conditions. Under Build condition, this intersection is an overall level of service D. However the northbound approach has a level of service E for both a left turn lane and a shared through left turn lane. The land use constraints associated with this intersection are such that the intersection cannot be expanded. DeLuca-Hoffman Associates, Inc. does recommend that the cycle length be reduced from 90 to 60 seconds.

**Congress Street and St. John Street** - Based on the capacity analysis, this intersection has a level of service E under No-Build condition during the PM peak hour. The westbound Congress Street approach has a level of service F for a right turn lane. The northbound St. John Street approach has a level of service F for a shared through right turn lane. Under Build condition, this intersection has a level of service C or better based the following improvements:

- Reduce the cycle length from 90 to 60 seconds.
- Eliminate the following phases:
  - AM peak hour (7:00 to 10:00 AM)
    - Westbound Congress Street a leading phase.
    - Southbound Congress Street a leading phase.
  - PM peak hour (3:00 to 6:00 PM)
    - Eastbound Congress Street a leading phase.
    - Southbound St. John Street a leading phase.

**Congress Street and Bramhall** - Based on the capacity analysis, the Congress Street westbound approach has a level of service F for a shared through left turn lane during the AM and the PM peak hour under both No-Build condition. Under the Build condition, this intersection has a level of service D or better during the AM and the PM peak hour based on the following improvements:

- Implementation of a lead phase from the northbound Bramhall Street approach.
- Retiming of the intersection.

**Congress Street and Valley Street (US Route 1 Northbound)** - This intersection has an acceptable level of service under both No-Build and Build conditions based on the capacity analysis. The Build condition is based on the following improvement:

- Restripe the northbound Valley Street approach lane uses as a exclusive right turn lane and a shared through left turn lane.

### Unsignalized Intersections

<b>Results of Unsignalized Capacity Analysis</b>					
Approach	Lanes	1998 No-build		1998 Build	
		AM	PM	AM	PM
<b>Congress &amp; Gilman Street</b>					
Gilman Street NB	Left/Right/Through	F	E	F	E
Gilman Street SB	Left/Right/Through	C	C	C	C
Congress Street WB	Left	B	B	C	B
Intersection Delay in Second		4.5	2.9	6.7	3.8
<b>Congress St. &amp; Site Drive.</b>					
Congress Street EB	Left	N/A	N/A	A	A
Proposed Driveway SB	Left/Right	N/A	N/A	B	C
Overall				0.3	1.2
<b>Park Ave. &amp; Forest Street</b>					
Forest Street NB	Left/Right	C	F	C	F
Overall		1.2	114	1.7	174.3
<b>Park Ave. &amp; Valley Street</b>					
Valley Street NB	Left	F	F	F	F
	Right	A	A	A	A
Overall		5.4	35.3	5.6	38.6
<b>Congress &amp; Forest Street</b>					
Congress Street EB	Left	A	B	A	B
Overall		.1	0.2	.3	.3

**Congress Street at Gilman Street** - The Gilman Street northbound approach left turn lane has a level of service F with level E during the AM and PM peak hour under both No-Build and Build conditions. Therefore, this location was evaluated to see if signalization is warranted. This analysis contained in Section VIII, shows that signal warrants are not met for both the No-Build and the Build condition. The northbound approach left turn lane has a level of service F, therefore, no mitigation measures are proposed at this location.



**Park Avenue and Forest Street** - The Forest Street northbound approach is a one-way street. Based on the capacity analysis, the Forest Street northbound approach left turn lane has a level of service F during the PM peak hour under both No-Build and Build conditions. This location was also evaluated to see if signalization is warranted. This analysis contained in Section VIII, shows that currently signal warrant peak hour volumes are met based on PM peak hour volumes. The proposed development increases in the traffic volume by one vehicle per minute during the PM peak hour. Therefore, the intersection is required a signal.

**Left Turn Lane Warrant Analysis**

**Congress Street at Forest Avenue** - DeLuca-Hoffman Associates, Inc. has also reviewed the left-turn warrant criteria for Congress Street at Forest Street in accordance with Figure 8-19 of the MDOT Highway Design Guide. Figure 8-19 is based on a two lane travel way. Based on the Figure, this location meets criteria for consideration of a left-turn treatment. Therefore, DeLuca-Hoffman Associates, Inc. recommends a left-turn lane on Congress Street at Forest Street. This will require removal of parking on the southerly side of Congress Street.

**Congress Street at the Proposed Driveway** - DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for Congress Street at the proposed site driveway in accordance with Figure 8-19 of the MDOT Highway Design Guide. Based on the Figure, this location meet criteria for consideration of providing a left-turn treatment. Therefore, DeLuca-Hoffman Associates, Inc. recommends installation of a left-turn lane on Congress Street. This will require removal of parking on the southerly side of Congress Street which will require the approval of the City Council.

**VIII. SIGNAL WARRANT EVALUATION**

The Manual on Uniform Traffic Control Devices (MUTCD) provides eleven conditions for which traffic signal control may be warranted for an intersection. One or more of these warrants should be met before a signal is installed. Traffic conditions evaluated with respect to these warrants are tabulated and discussed below. Warrant analysis worksheets are contained in Appendix D.

Number	Description	Satisfied			
		Gilman & Congress Street		Forest Street & Park Avenue	
		Existing	Proposed	Existing	Proposed
Warrant 1	Minimum vehicular volume	No	No	No	No
Warrant 2	Interruption of continuous traffic	No	No	No	No
Warrant 3	Minimum pedestrian volume	No	No	No	No
Warrant 4	School Crossing.	No	No	No	No
Warrant 5	Progressive movement.	No	No	No	No
Warrant 6	Accident experience	No	No	No	No
Warrant 7	Systems	No	No	No	No
Warrant 8	Combination of warrants	No	No	No	No
Warrant 9	Four hour volumes	No	No	No	No
Warrant 10	Peak hour delays	No	No	No	No
Warrant 11	Peak hour volumes	No	No	Yes	Yes

**Congress Street at Gilman Street** - The above summary shows that the intersection of Gilman Street and Congress Street does not meet the signal warrant. Therefore, no mitigation measures are proposed at this location.

**Forest Street and Park Avenue** - The above summary shows that currently the intersection meets the peak hour volume warrant. The proposed development increase in traffic volume, 1 vehicle per minute during the PM peak hour. Therefore, the installation of a signal is recommended at this intersection.

**IX. STORAGE LENGTH ANALYSIS**

DeLuca-Hoffman Associates, Inc. has evaluated the potential storage lengths at the signalized intersections during the a.m. and the p.m. peak hour, for the 1998 Build condition. The available/proposed storage areas and required lengths as computed using SIGNAL 94 are summarized in the following table.

The available/proposed storage areas are based on the existing conditions.

<b>Stacking Length Analysis for Weekday AM and PM Peak Hour</b>				
<b>Location</b>		<b>Available/Proposed Storage Length</b>	<b>90% Confidence Stacking Length</b>	
			<b>AM</b>	<b>PM</b>
<b>St. John St. &amp; Park Avenue</b>	<b>Lane</b>			
St. John Street NB	Left	800	253	400
	Left/Through	800	272	432
	Right	130	126	65
St. John Street SB	Through/Left	300	294	212
	Right	100	90	72
Park Avenue WB	Right	150	37	34
	Through/Left	600	216	361
<b>St. John &amp; Congress Street</b>				
Congress Street EB	Left	300	163	244
	Through/Right	300	290	292
Congress Street WB	Left	250	45	73
	Right	250	111	153
St. John Street NB	Through/Right	400	215	311
St. John Street SB	Through/Left	800	146	142

<b>Congress &amp; Valley Street</b>				
Congress Street EB	Right/Thru/Left	250	197	138
Congress Street WB	Right/Thru/Left	180	81	141
Valley Street NB	Right	150	140	71
	Through/Left	350	110	126
<b>Bramhall &amp; Congress Street</b>				
Congress Street EB	Left/Through	310	309	274
	Right	100	71	46
Congress Street WB	Left/Through	550	172	245
	Right	100	30	61
Bramhall Street NB	Left	200	70	121
	Right/Through	200	181	307
Deering Street SB	Right/Through	100	229	201
	Left	100	44	121

The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed storage lengths with two exceptions as discussed below:

**Congress Street and Bramhall Street/Deering Avenue** - The Deering Avenue southbound approach has available stacking lengths of 100 feet for a shared through right turn lane and an exclusive left turn lane. Under the AM peak hour the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall Street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also will block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Deering Avenue.

## X. SIGHT LINES

The Maine Department of Transportation (MDOT) publication "Access Management, Improving the Efficiency of Maine Arterials" provides recommended sight distances based on driveway classifications. The classifications are as follows:

- **Low Volume Driveway:** Driveways with a traffic volume of less than 500 vehicle trips per day, or 50 or less vehicle trips per peak hour.
- **Medium Volume Driveway:** Driveways with less than 1,500 trips per day and less than 150 trips during the peak hour.
- **High Volume Driveway:** Driveways with more than 1500 trips per day or 150 trips during the peak hour.

The traffic volume associated with the site at both the proposed driveways are 128 and 95 trips during the p.m. peak hour. Therefore, for the purpose of sight distance analysis, DeLuca-Hoffman Associates, Inc. has evaluated the driveway as Low/Medium volume driveways. The guidelines set forth by MDOT for sight distance criteria for a Low/Medium volume driveway are as follows:

<b>MDOT Standards for Sight Distance For a Low/Medium Volume Driveway</b>	
<b>Speed (mph)</b>	<b>Desirable Sight Distance (full-time)</b>
25	250
30	300
35	350
40	400
45	450
50	500
55	550

DeLuca-Hoffman Associates, Inc. has evaluated the available sight lines at the proposed driveways in accordance with MDOT standards.

The MDOT standards are as follows:

Driveway observation point: 10 feet off major street travel way  
 Height of eye at driveway: 3.5 feet above ground  
 Height of approaching vehicle: 4.25 feet above road surface

The design speed used for the major road is generally the 85th percentile travel speed. This is the speed at which 85% of the traffic is traveling at or below. The posted speed limit on the Congress Street is 25 miles per hour. The estimated 85th percentile travel speed along this road is 5 mph above the posted speed or 30 mph. Therefore, the desirable sight distance is 300 feet.

Forest Street does not have a posted speed limit. Based on field observation, the average vehicle travels approximately 20 to 25 mph. Forest Street has a 22 foot roadway with on street parking, a one way street and is approximately 650 feet long.

The results of the sight line analyses along Congress Street and Forest Street are summarized below:

<b>Driveway Sight Line Evaluation</b>			
<b>Direction</b>	<b>85th Percentile Travel Speed</b>	<b>Required Sight Line</b>	<b>Actual Sight Line</b>
<b>Forest St. Driveway</b>			
From the south	25 mph	250'	275'
<b>Congress St. Driveway</b>			
From the east	30 mph	300'	425'
From the west	30 mph	300'	375'

Based on the above information, the sight distance at the existing and the proposed driveways meet or exceeds the MDOT sight distance standards.

It is recommended that any planting located within the sight triangle will not exceed three feet in height and shall be maintained. Signage shall be placed where it will not obstruct sight lines.

## **XI. ACCIDENT ANALYSIS**

DeLuca-Hoffman Associates, Inc. has based the accident analysis of this study area on data obtained from the MDOT for the period of 1993 to 1995.

In order to evaluate whether a location has an accident problem, MDOT uses two criteria to define High Accident Locations (HAL). Both criteria must be met in order to be classified as an HAL.

1. A critical rate factor of 1.00 or more for a three year period. (A Critical Rate Factor (CRF) compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:

2. A minimum of 8 accidents over a three year period.

Computerized accident data summaries were provided by MDOT for the study area. Data for these study area intersections is provided below:

<b>Accident Data</b>			
<b>Intersection</b>	<b>Number of Accidents</b>	<b>CRF</b>	<b>HAL</b>
Park Ave. & St. John St.	45	1.16	Yes
Congress & St. John St.	22	0.49	No
Congress & Valley St.	24	0.82	No
Congress & Gilman St.	11	1.00	Yes
Congress & Forest St.	5	0.46	No
Congress & Weymouth St.	9	1.04	Yes
Congress & Bramhall St.	14	0.33	No
Link Between Park Avenue & Congress along St. John St.	32	2.16	Yes
Link Between Weymouth & Ellsworth along Congress St.	10	1.35	Yes
Park Avenue & Forest St.	1	0	No
Park Avenue & Valley St.	5	0.57	No

The above table shows that three intersections and two links are HAL . The collision diagrams are shown in Appendix C. HALs are discussed below:

**Park Avenue and St. John Street** - This intersection experienced 45 accidents during the three year study period and the critical rate factor is 1.16. Twelve rear end, nine change lane, and four left turn side swipe accidents occurred northbound on the St. John Street approach. Five rear end, one change lane and five angle accidents occurred westbound on Park Avenue. The St. John Street southbound approach has no clear pattern to determine the problem. The rear end accident for the northbound approach is due to the heavy traffic flow. The rear end collisions are common at signalized intersections. To correct the change lane accidents, DeLuca-Hoffman Associated recommends over head lane use control signs and also striping through the intersections for westbound dual left-turn lanes.

**Congress Street & Weymouth Street** - This intersect experienced 9 accidents in the three year study period with a critical rate factor of 1.04. Two accidents involved angle, rear end, turning movement, and parking vehicles. There is no clear pattern to be corrected. Therefore no mitigation measures are proposed for this location.

**Congress Street & Gilman Street** - Based on the accident table shown, the intersection is HAL with the critical rate factor of 1.00. This intersection experienced 11 accidents. Six of these accidents were angle accidents and four of these angle accidents were on the southbound approach. Two angle accidents were in the northbound approach. One of the angle accident was a physical impairment and two angle accident involved winter conditions. There is no clear pattern to identify as a correctable. Therefore no mitigation is proposed for this location.

**Roadway Segment Between Weymouth & Ellsworth Street along Congress Street** - This link experienced 10 accidents with a critical rate factor of 1.35. Six accidents involved parked vehicles, four of them were located on the north side of Congress Street and two of them on the south side of Congress Street. The remainder of the accidents have no clear accident pattern to identify as a problem. The three accidents involved with parked vehicles occurred during the winter months. Therefore no mitigation measures are proposed at this location.

**Link Between Park Avenue & Congress Street along St. John Street** - This link experienced 32 accidents in three year study period. The critical rate factor is 2.16. Twenty-two accidents occurred along the portion of the link fronting McDonald's. The most correctable accident pattern is in front of McDonald's driveways. Based on the McDonald's expansion Traffic Impact Study, McDonald's is proposed to close two driveways and create a proposed two-way driveway located approximately 60' south of the existing northerly driveway. This change will improve the safety in the area. The rest of the accident patterns are uncorrectable. Therefore no mitigation measures are proposed for this location.

## **XII. CONCLUSION**

DeLuca-Hoffman Associates, Inc. has examined the impact of traffic associated with the proposed Medical office building with attached 420 space parking garage in Portland, Maine..

The following is a summary of the major findings of the traffic study.

1. It is estimated the proposed project will generate 182 and 212 trip ends during the AM and the PM peak hours. These trips would consist of 126 trips in and 56 trips out of the site during the a.m. peak hour and 42 trips in and 170 trips out of the site during the p.m. peak hour.
2. All of the trips are expected to be primary trips, i.e. newly generated by the development.
3. The proposed Congress Street driveway is located approximately 260 feet east of Forest Street. This driveway would have a single entrance lane and a single exit lane. The Forest Street driveway will consist of a right turn in and right turn out only. Forest Street is a one way street in the northbound direction.

4. The level of service analysis shows that the proposed development will not have a significant impact on the surrounding street system. However, some existing intersections currently have a low level of service.
5. The intersection of Congress Street at the proposed driveway meets MDOT guidelines for consideration of left turn lane for left turning traffic from Congress Street into the driveway. Based on the projected left turning volumes, DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at the site driveway. This will require removal of parking on the southerly side of Congress Street which will require approval of the City Council.

DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for left turning traffic from Congress Street onto Forest Street. This location meets criteria for consideration of providing a left-turn treatment. Based on the projected left turning volumes DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at Forest Street. This will also require removal of parking on the southerly side of Congress Street.

6. The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed full width storage lengths with two exceptions as discussed below:

Congress Street and Bramhall Street/Deering Avenue - The Deering Avenue southbound approach for a shared through right turn lane and an exclusive left turn lane, the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Cumberland Avenue.

7. Park Avenue and St. John Street is a high accident location experiencing 45 accidents. To correct the predominant pattern of change lane accidents, DeLuca-Hoffman Associates, Inc. recommends overhead lane use control signs and striping through the intersections for westbound duals left turn lanes.
8. DeLuca-Hoffman Associates, Inc. recommends the following improvements to correct existing offsite roadway deficiencies:
  - Restripe the lane uses for northbound approach at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through left turn lane..
  - Change the timing and phasing at the intersection of Bramhall and Congress Streets.
  - Installation of traffic signal controller at Park Avenue and Forest Street.

Based upon these findings, it is the opinion of DeLuca-Hoffman Associates, Inc. that the traffic generated by the proposed development can be adequately and safely accommodated on the surrounding street system given existing geometric and the improvements of the traffic signal timing and phasing.



**LIST OF IMPROVEMENTS BY MMC  
FOR CONGRESS STREET OFFICE BUILDING**

- Restriping of Congress Street to provide a left turning lane onto Forest Street and into the site driveway on Congress Street. Parking would be prohibited between 6:00 AM and 6:00 PM during weekdays. This will affect 26 parking spaces on the south side of Congress Street.
- Retiming of the intersection of Park Avenue and St. John Street and installation of northbound vehicle loop detectors on St. John Street.
- Restripe the northbound approach at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through/left turn lane.
- Retime the intersections of Valley Street/Congress Street and the intersection of Congress Street and St. John Street.
- Install a traffic signal at the intersection of Park Avenue and Forest Street.

22 Bramhall Street, Portland, Maine 04102

## FAX TRANSMITTAL

ENGINEERING SERVICES  
TELEPHONE NUMBER (207) 871-2447  
FAX NUMBER (207) 871-6195

DATE: 12/3/97

TO : Richard Knowland  
Department of Planning and Urban Development  
City of Portland

FAX: 756-8258

FROM: Paul Gray

Re: Congress Street Medical Office Building

Number of pages including cover sheet \_\_\_\_\_

### Message

Rick:

Attached find Parking Management Plan for your use and distribution.

# Squaw Bay Corp

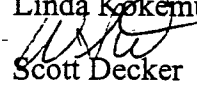


Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

## TELEPHONE MEMORANDUM

PROJECT NO.: 97-242                      DATE: 10/01/97  
CLIENT: MMBC  
PROJECT DESCRIPTION: Maine Medical Center - Congress Street Medical Office Building  
BETWEEN: Linda Kookemuller (DEP)  
AND:   
Scott Decker  
SUBJECT: DEP permits required

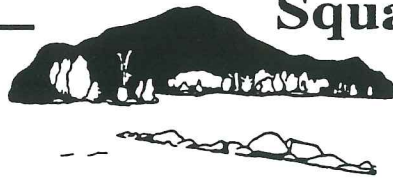
### DISCUSSION:

Linda said recent changes in the DEP regulations require municipalities who previously had delegated authority to reapply with a letter of request. Once this is done Portland will have authority to review for all aspects of the site law and stormwater management.

However, traffic will still have to be reviewed by the DEP and Department of Transportation.

### DISTRIBUTION:

Jim Clarkson, MMBC  
Jim Morrison, MMC  
Rick Knowland, Portland Planning Dept.



# Squaw Bay Corp

*Alex*  
Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

October 7, 1997

Mr. Rick Knowland  
Office of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center  
Congress Street Medical Office Building**

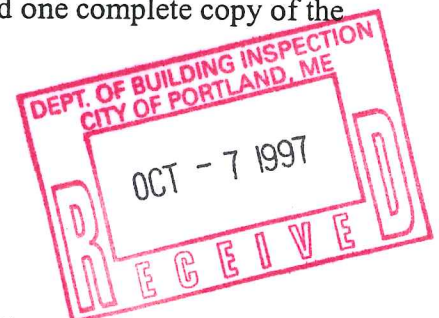
Dear Mr. Knowland:

As you are aware, Mediplex Medical Building Corporation ("MMBC") has been working with the Maine Medical Center (MMC) to provide turnkey development, architectural and construction services in conjunction with a Medical Office Building, parking structure and overhead connector located on land owned by the Hospital on the corner of Congress and Forest Streets in Portland.

The project involves a 50,000± gsf Medical Office Building and a parking garage for 430± cars. On behalf of MMC and MMBC we are submitting seven copies of the following documents in preparation for the Planning Board October 23, 1998 workshop meeting:

1. Geotechnical Investigation Report (narrative only)
2. Traffic Study Report (Executive Summary and Sections I-XII)
3. Parking Study Report
4. Shadow Study Report
5. Existing Conditions Plan by Titcomb Associates
6. MMBC Site Development Plan - Drawing #4, Revision #6
7. Harriman Associates Exterior Elevations - Drawing A31.1, dated 10/2/97
8. Harriman Associates Exterior Elevations - Drawing A31.2, dated 10/2/97
9. MMBC Shadow Study, Sheet #9, Revision #1
10. MMBC Shadow Study, Sheet #10, Revision #1
11. MMBC Shadow Study, Sheet #11, Revision #1

We have also included an 11" x 17" copy of each drawing and one complete copy of the geotechnical investigation and traffic study reports.



Mr. Rick Knowland  
October 7, 1997  
Page Two

Please contact me if you have any questions or need additional information.

Very truly yours,

SQUAW BAY CORP

A handwritten signature in cursive script that reads "Scott Decker". The signature is written in black ink and is positioned above the printed name and title.

W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson, MMBC  
Jim Morrison, MMC

# S.W. COLE

ENGINEERING, INC.  
GEOTECHNICAL CONSULTANTS

Gray Plaza, P.O. Box 378, Gray, ME 04039 TEL (207) 657-2866 FAX (207) 657-2840

Six Liberty Drive, Bangor, ME 04401 TEL (207) 848-5714 FAX (207) 848-2403  
161 Water St., P.O. Box 220, Caribou, ME 04736 TEL (207) 496-1511 FAX (207) 496-1501

96-043 S

March 24, 1997

Maine Medical Center  
% Mediplex Building Corp.  
Attn: Mr. Edmund C. Gazinski  
14755 Preston Road  
Suite 600, Lock Box 15  
Dallas, TX 75240

Subject: Subsurface Exploration and Geotechnical Engineering  
Proposed Medical Office Building and Parking Garage  
Forest Street and Congress Street  
Portland, Maine

Dear Mr. Gazinski:

In accordance with our Proposal dated December 12, 1996, and addendum dated January 9, 1997, we have made the subsurface investigation for the proposed Medical Office Building and Parking Garage Project on Forest and Congress Streets in Portland, Maine.

## 1.0 INTRODUCTION

**1.1 Scope of Work** - The purpose of the investigation has been to explore the subsurface conditions and provide recommendations relative to foundation design and earthwork associated with the proposed building and parking garage structure. The investigation included the making of eighteen test boring explorations, laboratory testing, and a geotechnical evaluation of the findings as they relate to the proposed construction. The contents of this report are subject to the limitations set forth in Attachment A.

**1.2 Proposed Construction** - We understand that the proposed structure will be generally rectangular in shape and occupy nearly all of the site. The structure will be on the order of 230 by 240 feet in plan dimensions. The structure will consist of two sections; one

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96-043 S  
March 24, 1997

being a medical office building and the other a parking garage structure. The office building portion will be at the southerly end, adjacent to Congress Street, and will be on the order of 90 by 165 feet in plan dimensions. The office portion will be generally 4 levels with two additional sub-levels (smaller in footprint) below Congress Street grade. The lowest office building floor elevation is proposed to be 47.0.

The parking garage will be attached to the office building portion on the northerly, easterly and westerly sides. We understand the parking garage will be 5 levels with the lowest level having a finish floor elevation of 36.5.

Based on the drawings provided, we understand there will be four major rows of columns situated parallel with Congress Street (Lines B, C, D and E). We understand column loads will be:

<u>Line</u>	<u>Total Load</u>
B	425 ± kips
C	950 ± kips
D	950 ± kips
E	510 ± kips

We understand the medical office building will be steel framed with brick veneer. An elevated enclosed walkway connector will be constructed from the new medical office portion of the structure to an existing parking garage located on the opposite (south) side of Congress Street. The parking structure will likely be constructed of cast-in-place and post tension concrete. Cast-in-place concrete retaining walls will be needed to support grade changes of nearly 30 feet at the perimeter of the parking garage structure.

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## **2.0 EXPLORATION AND TESTING**

**2.1 Exploration Work** - Eighteen test borings were made at the site during the period of January 6 through 18, 1997, by Great Works Pump and Test Borings, Inc. of Rollinsford, New Hampshire. Two supplemental test borings (B-1A and B-13A) were made on January 29, 1997, at the same locations as B-1 and B-13 in order to obtain deeper soils information. The test boring locations were selected by Mediplex Building Corporation and established in the field by S. W. COLE ENGINEERING, INC. based on a site plan provided by Mediplex Building Corporation and taped measurements from existing site features. The approximate test boring locations, as provided by Titcomb Associates (project surveyors), are shown on the "Exploration Location Plan", attached as Sheet 1. Logs of the test borings, based on our observations and testing of samples, are attached as Sheets 2 through 25. A key to the notes and symbols used on the logs is attached as Sheet 26. Elevations noted on the logs are based on interpolation of topographic information shown on Sheet 1.

**2.2 Laboratory Testing** - Laboratory and field testing was performed on selected samples recovered from the test borings. Moisture content and laboratory and field strength test results are noted on the test boring logs. The results of six grain size analyses are presented graphically on Sheets 27 and 28.

## **3.0 SITE & SUBSURFACE CONDITIONS**

**3.1 Site Location and Surficial Conditions** - The site of the proposed structure is located on the northeasterly side of the intersection of Congress and Forest Streets in Portland, Maine. The site is currently occupied by an existing paved parking lot along Congress Street, a gravel surface parking lot adjacent to Forest Street and an open unoccupied area north of the existing paved lot. The site is bordered to the north by Boynton Street, to the west by Forest Street and to the south by Congress Street. At least one multi-story residential structure exists adjacent to the easterly property line.



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A hill is situated south of the site, across from Congress Street, which slopes steeply downward to the north from the existing parking garage area to Congress Street. The ground surface then slopes gradually to the northwest toward Boynton Street. Within the area of the proposed structure the ground surface slopes generally downward southeast to northwest from about elevation 68 down to about 40. It has been reported that this lot was once utilized as a construction laydown yard and was likely filled and/or regraded from near Congress Street, north about 150 feet. It appears that the site has also been utilized as a disposal area for lawn and tree clippings which appear to be deposited mostly in the central portion of the site. A gravel surfaced parking lot exists adjacent to Forest Street which is on the order of 50 by 170 feet in plan dimensions. The parking lot slopes downward to the north. It appears this area may have been excavated to achieve current grades. A dry laid stone retaining wall exists along the easterly edge of this lot supporting a grade change varying from about 2 to 7 feet.

Although no structures exist on the site currently, information obtained by S. W. COLE ENGINEERING, INC. during our research for the Phase I Environmental Services (report dated February 12, 1997), indicates several structures once existed at this site. It is believed that many foundations and footings may still exist, under the existing site, particularly along Congress, Forest and Boynton Streets.

3.2 Subsurface Conditions - The explorations encountered a general stratigraphy consisting of granular fill soils overlying a layered glacial marine deposit of brown and gray silty sands, gray silty clay and sands with clay layers. Gray sand and silt with some gravel (glacial till) was encountered below the marine soils at each exploration.

Fill soils were found at each of the test borings. The fill encountered typically consists of sands with varying amounts of silt and gravel. Pieces of brick and asphalt pavement, wood and other debris was also encountered in the fill at Borings B-1, B-2, B-4, B-5, B-6 and B-7. The fills were generally loose to dense and varied in thickness from about 2 to 13 feet at the explorations. It is likely that fills, demolition debris and old foundation and utility structures exist throughout the site particularly adjacent to Congress Street.

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Forest Street and Boynton Street where structures once occupied the site.

With the exception of Borings B-1, B-1A, B-15 and B-16 all explorations encountered the marine soils below the fills. BoringS B-1, B-1A, B-15 and B-16 encountered glacial till directly below the fill. The remainder of the explorations encountered either medium to stiff gray silty clay, loose to dense silty sand with varying amounts of gravel and sands with clay layers below the fill. This zone of layered glacial marine soils was found to vary in thickness from about 6 to 28 feet at the explorations. These borings encountered a layer of compressible gray silty clay within the glacial marine soil layer that varied from about 3 to 10 feet in thickness.

Borings B-2 through B-14 encountered glacial till at depths varying from about 15 to as much as 30 feet below the ground surface. The glacial till is generally medium dense to dense becoming very dense with depth. All of the explorations were terminated in glacial till at depths ranging from 27 to 128 feet below the ground surface. Borings B-1A, B-7, B-8, B-11 and B-13A were advanced to greater depths in the glacial till in an effort to access soil density with depth and the depth to bedrock. These explorations were all terminated in dense to very dense till. Bedrock was not encountered within the depths of the explorations. For a more detailed description of subsurface conditions, please refer to the attached boring logs. Interpretive subsurface profiles are presented on Sheet 29.

The following table is a brief summary of fill thicknesses and depths/elevations to glacial till and bottom of exploration:

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Boring No.	Approx. Surf. Elev. (ft.)	Approx. Fill Thick. (Incl. Possible Fill) (ft.)	Approx. Depth/Elev. of Top of Glacial Till (ft.)	Approx. Depth/Elev. of Bottom of Exploration (ft.)
1	65	13	13.0/52.0	27.0/38.0
1A	65	13	13.0/52.0	46.3/18.7
2	60	8	14.5/45.5	27.0/33.0
3	55	2	18.0/37.0	27.0/28.0
4	58	2	23.0/35.0	27.0/31.0
5	62.5	3	23.0/39.5	27.0/35.5
6	60	8	23.0/37.0	27.0/33.0
7	57	8	23.0/35.0	128.0/-70.0
8	48	2	22.0/26.0	31.0/17.0
9	53	3	24.0/29.0	27.0/26.0
10	52	6	23.2/28.8	27.0/25.0
11	50.5	3	28.5/22.0	36.0/14.5
12	50	9	25.0/25.0	26.5/23.5
13	40	2	Not Encountered	27.0/13.0
13A	40	2	30.0/10.0	41.5/-1.5
14	58	10.5	13.5/44.5	37.0/21.0
15	65	2	2.0/63.0	27.0/38.0
16	66.5	2	2.0/64.5	42.0/24.5

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Boring No.	Approx. Surf. Elev. (ft.)	Approx. Fill Thick. (Incl. Possible Fill) (ft.)	Approx. Depth/Elev. of Top of Glacial Till (ft.)	Approx. Depth/Elev. of Bottom of Exploration (ft.)
1	65	13	13.0/52.0	27.0/38.0
1A	65	13	13.0/52.0	46.3/18.7
2	60	8	14.5/45.5	27.0/33.0
3	55	2	18.0/37.0	27.0/28.0
4	58	2	23.0/35.0	27.0/31.0
5	62.5	3	23.0/39.5	27.0/35.5
6	60	8	23.0/37.0	27.0/33.0
7	57	8	23.0/35.0	128.0/-70.0
8	48	2	22.0/26.0	31.0/17.0
9	53	3	24.0/29.0	27.0/26.0
10	52	6	23.2/28.8	27.0/25.0
11	50.5	3	28.5/22.0	36.0/14.5
12	50	9	25.0/25.0	26.5/23.5
13	40	2	Not Encountered	27.0/13.0
13A	40	2	30.0/10.0	41.5/-1.5
14	58	10.5	13.5/44.5	37.0/21.0
15	65	2	2.0/63.0	27.0/38.0
16	66.5	2	2.0/64.5	42.0/24.5

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3.3 Groundwater - Groundwater observations were made in the boreholes during the exploration work. These observations were limited by the duration of the exploration program. Based on our observations at the site, it appears that groundwater was generally about 10 feet below the ground surface during the time of exploration. It must be expected that higher groundwater levels exist during wet seasons of the year. Additionally, water is likely perched in the granular fills and glacial marine soils, seasonally and during heavy precipitation events.

#### **4.0 EVALUATION & RECOMMENDATIONS**

4.1 Site Suitability - Based on the findings at the exploration locations and our knowledge of structural loading, it is our opinion that the surficial fills and underlying glacial marine soils (sands, silts and clay) are not suitable for support of the proposed column loads and below grade perimeter wall foundations. Support of structural loads will need to derive support from the underlying glacial till. The on-grade paved parking and any slabs-on-grade can be supported on compacted fill placed on densified existing granular fills or the glacial marine soils.

The fill encountered at the explorations varies from about 2 to 13 feet in thickness and is generally granular, but does contain pieces of asphalt and wood, brick and other construction debris at several locations. This material is not suitable for support of the proposed structural loadings but could be densified to support slabs-on-grade and/or asphalt pavement. The glacial marine soil deposit overlying the glacial till generally consists of loose to medium dense sands and medium to stiff compressible gray silty clay. Depths to the top of till varies from about 2 to 28 feet from the existing ground surface at the explorations.

We have made an analysis of allowable bearing capacity of the underlying medium dense glacial till. It is our opinion that these soils have an allowable bearing capacity of 4 ksf for support of shallow spread footings. Given the magnitude of structural loading, spread footing dimensions would be quite large.

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A shallow spread footing foundation system would involve removal of all existing fill and marine soils from beneath foundation areas and placement of foundations directly on the glacial till or on a compacted structural fill placed on glacial till. This would require a significant amount of over-excavation below foundation grade in some areas, particularly along the northerly portion of the easterly wall, the entire southerly wall, the entire westerly wall, westerly side of the southerly wall and westerly columns along D-Line. These areas would require 8 feet or more of over-excavation work. This would require off-site disposal of removed soil and replacement with a compacted structural fill. There are also other concerns and risks associated with utilizing a spread footing foundation system for the deep unsuitable soil areas of the site, including:

- The fill and marine soils may be thicker in unexplored areas of the site - Although the information at the boring locations indicate fill and marine soil thicknesses range from about 2 to 28 feet, there may be areas where these soils are thicker.
- Excavations will be located adjacent to streets and the existing buildings - General excavation to proposed floor elevations and any over excavation below foundation grade of unsuitable soils will extend significantly below existing grades requiring engineered braced shoring and dewatering.
- Contaminated soils may be encountered - Although not observed during drilling, records indicate that four underground storage tanks were previously on this site. Actual location of the tanks or if they have been removed is not known. Thus, it should be anticipated that some of the soils at this site may be contaminated with petroleum products. A contingency for contaminated soil will need to be provided and a hazardous material handling program should be developed prior to excavation work. Further exploration and analytical sampling would be needed during excavation work to determine the extent and type of contamination (if encountered).

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4.2 Foundation Alternatives - Based on the information gathered to date and the assessment of risks discussed above, we recommend that a combination of spread footing foundations and deep foundations be utilized for support of the structural loads. Spread footings would be utilized where the bearing soils can be reasonably reached and deep foundation systems would be used in deep unsuitable soil areas. The on-grade level of the parking structure (asphalt, base and subbase) can be placed on prepared existing soils (see Section 4.11).

We have prepared a general description of several pile foundation systems and associated costs. The cost estimates provided are intended for comparison only and are based upon discussions with foundation specialty contractors. The option chosen should be based on the structural engineers recommendations. Actual constructed cost of the selected foundation system(s) will vary from the estimates provided below.

#### 1. Caissons

Caissons would need to extend on the order of 10 to 15 feet into the glacial till to bear in dense glacial till. An allowable bearing contact pressure of about 12 ksf would be used for the dense till. Caissons would likely be 4.5 to 5.5 feet in diameter and vary from 20 to 40 ± feet in length. Load tests are not required for caissons. An auger would be used in an attempt to reach dense till. A temporary casing would be required to support the excavation sidewalls. The bearing surface would need to be inspected and, potentially, be hand cleaned prior to placing concrete. Caissons can be time consuming to install and may encounter difficulties in augering through the fills and into the dense till. Difficult augering is expected. The auger may not be able to penetrate cobbles and boulders in medium dense till.

#### Cost Estimate

Installation of Caissons = \$360 ± /cubic yard concrete installed

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Approximate Working Load =  $230 \pm$  kips

Note: This estimate does not include the cost of survey work, removal and disposal of soil, materials testing, bottom inspection, disposal of contaminated soils (if encountered) and cost of over-excavating for obstructions.

### 2. Auger-Cast Piles

An auger would be advanced into the glacial till, attempting to reach dense till. Auger-cast piles generally range from 12 to 18 inches in diameter. The piles would be installed with a hollow stem auger through which grout is pumped as the auger is retracted. This system is susceptible to the need for over-excavation with an excavator or resetting at an adjacent location if cobbles, boulders or construction debris is encountered. The pile would need to extend 10 to 15 feet into the dense till. The bottom cannot be inspected, thus, there is some risk of not bearing on a sound surface. Only a few piles could be installed per pile group per day because of disturbance from the drilling process. A load test would need to be performed on one pile which would require about 1 week to allow curing of the concrete. Difficult augering is expected. The auger may not be able to penetrate cobbles and boulders in medium dense till.

Because of the anticipated augering difficulties and the relatively low capacities of the piles, we do not recommend this option.

### 3. Steel H-Piling

Based on the information obtained at the explorations, we believe that steel H-piles would likely need to be driven 15 to 30 feet into the glacial till to achieve a working load of about 80 to 100 tons. Consideration could be given to the use of either an HP 12X53 (A572 Grade 50 or A36) or an HP 14X73 (A36) pile.



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Availability is good for both sections, however, the A572 Grade 50 steel requires ordering, while as many piling firms stock the A36 steel. Thus, lead time for ordering will need to be considered. A static load test program would be needed.

#### Cost Estimate

Steel H-Pile installed = \$25 ±/foot

Approximate Working Load = 80 to 100 Tons

#### 4. Franki Piles

A Franki Pile is a cast-in-situ concrete pile with an enlarged base. A thick walled sleeve would be driven through the upper soils into the till and a base of gravel or stiff concrete is then driven out of the sleeve causing densification of the till soils and forming the enlarged base. The Franki Piles would not need to extend deep into the till soils to develop support. The pile would likely extend less than 10 feet into the till. A thin walled sleeve is then installed for a form for the shaft. A steel reinforcing cage is typically lowered in the sleeve prior to placing the concrete shaft. A static load test program would be needed. We have obtained the following approximate cost and load carrying capacities from a specialty contractor.

#### Cost Estimate

Franki Pile installed = \$1600 to \$2200/each

Approximate Working Load = 125 Tons Each

Summary - We recommend that steel H-piling or Franki piles be considered for support of the new structure. The H-piling will have a better chance of advancing through

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GEOTECHNICAL CONSULTANTS  
96-043 S  
March 24, 1997

cobbles or construction debris obstructions than augers piles or caissons and are easier to splice and/or cut to length. The Franki Piles would not need to extend deep into the glacial till. Rather, the enlarged end would be developed likely within the top 10 feet of till. The length of these piles are easily adjusted by cutting the thin sleeve to the correct length prior to placing concrete fill in the shaft.

**4.3 Spread Foundation Design** - We recommend that spread foundations for the columns and heavily loaded walls be supported on at least 12 inches of compacted "gravel fill" overlying a geotextile fabric placed upon glacial till. Foundations supported on glacial till should be designed for a net allowable bearing contact pressure of 4 ksf or less. In areas requiring over excavation (greater than 12 inches below bottom of foundations) due to unsuitable subgrade soils needing removal, we recommend that a geotextile fabric be placed on the subgrade and a compacted "granular borrow fill" be used to bring the area up to the bottom of the proposed "gravel fill". Potentially, some lightly loaded foundations could be placed on densified fills or marine soils. These foundations should be designed for a net allowable bearing contact pressure of 2.5 ksf or less and must be designed to accommodate some differential movement relative to the rest of the structure. All footings should be at least 24 inches in width.

**4.4 Seismic Design** - The subsurface conditions at the site suggest the use of a seismic coefficient of 1.0 for soil profile S-1.

**4.5 Soil and Geotextile Fabric Parameters** - It should be noted that the following soils parameters are typical values for soils similar to those found on site and are not based on direct laboratory testing.

- A. Modulus of Subgrade Reaction
  - Kv (densified existing silty sand fill) = 150 kcf
  - Kv (compacted gravel fill) = 400 kcf (min. 12" compacted gravel fill)
  - Kv (glacial till) = 250 kcf

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March 24, 1997

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- B. Shear Modulus  
G (densified existing silty sand fill) = 5000 psi  
G (compacted gravel fill) = 15,000 psi  
G (glacial till) = 9000 psi
- C. Young's Modulus, Modulus of Elasticity  
E (densified existing silty sand fill) = 4000 psi  
E (compacted gravel fill) = 15,000 psi  
E (glacial till) = 10,000 psi
- D. Poisson's Ratio  
 $\nu$  (densified existing silty sand fill) = .30  
 $\nu$  (compacted gravel fill) = .40  
 $\nu$  (glacial till) = .35
- E. Allowable Soil Bearing Capacity  
qa = 4.0 ksf (min. 12" compacted gravel fill overlying glacial till)  
qa = 2.5 ksf (min. 12" compacted gravel fill overlying existing fill  
or marine soils) (For lightly loaded foundations only - see Section  
4.3)
- F. Woven Geotextile Fabric For Subgrade Reinforcing
- Subgrade Reinforcement  
Apparent Opening Size (AOS) = 30 to 50  
Grab Strength = 200 lbs
  - Surrounding Foundation Drain Lines  
Apparent Opening Size (AOS) = At least 70

**4.6 Frost Protection** - The design freezing index for the Portland, Maine area is on the order of 1250 Fahrenheit degree days. Thus, a frost penetration of 4.5 feet should be anticipated. All foundations, including interior column foundations, retaining wall foundations and pile caps should be placed at least 4.5 feet below exterior finish grade.

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GEOTECHNICAL CONSULTANTS  
96-043 S  
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Proposed utilities should also be placed below frost penetration depths.

**4.7 Excavation Work** - Excavation for foundations will encounter miscellaneous granular fill (sand with varying amounts of silt and gravel), existing concrete foundation structures, construction rubble, glacial marine sands, silts and clay, and glacial till. Petroleum contaminated soils may also be encountered. Existing foundation structures and rubble fill will need to be removed from beneath all proposed foundations. Existing foundation structures should be removed to at least 3 feet below the proposed pavement or slab areas. Rubble will also need to be removed for construction of utilities. Groundwater will be encountered in the excavations and will need to be controlled to a level at least 12 inches below subgrade. Excavation below proposed spread footing foundations should continue laterally (from the edge of foundation) a distance equal to the depth of excavation (1V to 1H slope). This is to allow placement of new compacted fill up to the bottom of foundations at the same slope (1V to 1H).

Care should be taken to minimize subgrade soil disturbance. Should the subgrade become loose, sloppy and difficult to work, the loose, unsuitable soils should be over-excavated and replaced with a geotextile fabric and clean compacted gravel fill. Excavation sidewalls in the fill and marine soils at the site are susceptible to caving and sloughing. All excavations will need to be properly shored and/or sloped back to protect the construction area. All excavations should be consistent with OSHA guidelines (20 CFR Part 1926).

**4.8 Backfill and Compaction Recommendations** - After grubbing and cutting is completed, subgrades consisting of granular fill or sand which will remain beneath the paved areas or slabs should be proof-rolled prior to placing any new fill. Subgrades should be densified (proof-rolled) by at least 5 passes with a roller compactor weighing about 15 kips. Use of vibration may or may not be advantageous depending upon the soil moisture content at the time proof-rolling occurs. Proof rolling with vibration should not be performed if soils are wet or if clays exist.

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 GEOTECHNICAL CONSULTANTS  
 96-043 S  
 March 24, 1997

All new fill should be placed in horizontal lifts and be compacted. Lift thicknesses should be such that desired density is achieved throughout the entire lift thickness, typically with 3 to 5 passes of the compaction equipment. Lift thicknesses should generally be on the order of 8 to 12 inches. If over excavation is needed below foundations (below the proposed 12 inch thickness of gravel fill), the excavation should be backfilled with compacted granular borrow. We recommend that all fill placed beneath foundations be compacted to at least 97 percent of its maximum dry density as determined by ASTM D-1557. Fill beneath slabs and paved areas should be compacted to at least 95 percent of ASTM D-1557. Fill adjacent to perimeter wall foundations (inside and out) should be clean "select backfill". At least 12 inches of compacted "gravel fill" should be placed directly below proposed concrete floor slabs and column and wall foundations. General structural fill, other than fill placed adjacent to the perimeter foundations and directly beneath the slab can be a "granular borrow fill". The structural fills should meet the following gradations:

Sieve Size	GRAVEL FILL		
	SELECT BACKFILL	(MDOT 703.06 Type B Base)	GRANULAR BORROW FILL
6 Inch	---	---	100
4 Inch	100	100	---
3 Inch	90-100	Portion Passing 3"	---
2 Inch	---	---	---
1/2 Inch	---	35-75	---
1/4 Inch	25-90	25-60	---
#40	0-30	0-25	0-70
#200	0-5.0	0-5.0	0-10

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GEOTECHNICAL CONSULTANTS  
96-043 S  
March 24, 1997

Some excavated, on-site granular soils may be suitable as "granular borrow fill" beneath the slabs or paved areas provided the soil is at a moisture content at the time of construction that is workable and consistent with the compaction required. Grain size analyses and moisture content testing of the excavated soils should be performed during excavation work to assess potential uses on site. Any soils containing organics must not be used beneath structures or paved areas. Sheet 30 is a detail showing sub-slab fill details.

**4.9 Foundation Drainage** - We recommend that a foundation drainage system with a positive gravity outlet be provided at foundation depth around the periphery of the structure and along the southerly side of the two interior wall lines (Lines C and D). The two interior drainage lines should also be placed at least 4.5 feet below finish grade and should connect to the peripheral drainage line at the lower end. It is recommended that rigid, perforated underdrain pipe with hole diameters of 1/4 to 5/8 inch be utilized. At least 6 inches of 3/4 inch crushed stone should be used to bed the drain pipe. The stone should be wrapped with filter fabric with an apparent opening size of 70 to 100. See Sheet 30 for details.

We understand the structure will have an elevator extending down to sub-level 2 (elevation 46.5). Elevators typically have a service pit extending about 4 feet below floor elevation. The pit slab should be underlain with at least 12 inches of crushed stone. An individual underdrain line should be installed with a gravity outlet. If drainage cannot be provided, the pit must have a water proofing treatment. If water proofing is done, a sump pit should be provided to allow the installation of a sump pump in the future, should the water proofing prove to be ineffective.

**4.10 Lateral Earth Pressure for Retaining Walls** - We anticipate that the parking garage retaining walls will support as much as 25 ± feet of grade change. Considering a compacted select fill adjacent to the walls and foundation drainage, we recommend the following parameters be considered:

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GEOTECHNICAL CONSULTANTS  
96-043 S  
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- Compacted Granular Fill Unit Weight = 130 pcf
- Friction Factor between Mass Concrete on Compacted Gravel Fill ( $\tan\delta$ ) = 0.55
- Friction Factor between Formed Concrete on Compacted Gravel or Select Fill = 0.30
- Active Lateral Earth Pressure Coefficient ( $K_a$ ) = 0.31
- Passive Lateral Earth Pressure Coefficient ( $K_p$ ) = 3.2
- At-Rest Lateral Earth Pressure Coefficient ( $K_o$ ) = 0.47

Wall backfill should be compacted between 92 and 95 percent of ASTM D-1557. Over compaction may result in excessive pressures on the walls. The design will also need to consider construction and long term surface loading.

4.11 Paved Areas - We understand that the ground level of the parking structure will be asphalt pavement. It is our opinion that the asphalt section can be supported on existing soils. We recommend that all existing pavement, topsoil and organics be removed from beneath the proposed paved areas. Once the area has been excavated to subgrade, granular soil subgrades should be densified (proof-rolled at least five passes with a roller compactor weighing about 15 kips) prior to placing aggregate sub-base material. Clayey subgrades should be overlain by a geotextile fabric prior to placing subbase gravel. Clayey subgrades or saturated soil subgrades should not be proof-rolled. A soils technician should be on site to observe the densification process to assess subgrade soil suitability. Any soils that continue to yield should be over-excavated and replaced with granular fill.

We recommend that the pavement structure consist of 3 inches of bituminous pavement consisting of 1 inch of surface and 2 inches of binder over a 4 inch base (MDOT Type A base), and a 12 inch sub-base structure (MDOT Type D sub-base).



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 GEOTECHNICAL CONSULTANTS  
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 March 24, 1997

Percent Finer By Weight

Sieve Size	MDOT Type A	MDOT Type D
6 Inch	100	100
	Portion Passing 3"	
2 Inch	100	---
1/2 Inch	45-70	---
1/4 Inch	30-55	25-70
#40	0-20	0-30
#200	0-5.0	0-7.0

The base and sub-base materials should be compacted to at least 95 percent of their maximum dry density as determined by ASTM D-1557.

**4.12 Construction Quality Control** - It is important that a construction quality control and environmental monitoring program be implemented for the project before the start of earthwork. It is our opinion that an S. W. COLE ENGINEERING, INC. geotechnical engineer and/or engineering technician should be on site to make observations during excavation, subgrade preparation, foundation construction, and backfilling operations and to monitor soils from an environmental standpoint. Decisions will have to be made in the field by the owner or owner's representative and the geotechnical engineer during the excavation and foundation construction phase.

Field testing and monitoring services should include:

1. Observations and sampling of excavated soil material and subgrades during excavation work
2. Observations of groundwater conditions

S. W. COLE ENGINEERING, INC.  
GEOTECHNICAL CONSULTANTS  
96-043 S  
March 24, 1997

3. Field soil sampling and testing including:
  - moisture-density testing (proctor tests)
  - grain size analyses
  - field soil density testing (compaction tests)

Materials testing and quality control will need to be performed on other construction materials such as concrete, steel and form work. A scope of work and budget for this work will be developed prior to construction activity.

#### 5.0 CLOSURE:

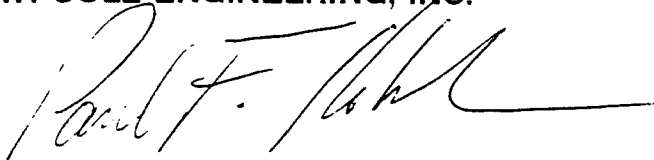
Due to the complexity of the site conditions and proposed foundation alternatives, we expect that further geotechnical consultation will be needed to complete foundation design. We will work closely with your structural designers during this phase.

We request that S. W. COLE ENGINEERING, INC. be provided the opportunity to review the final design and specifications to determine that our earthwork and foundation recommendations have been properly interpreted and implemented.

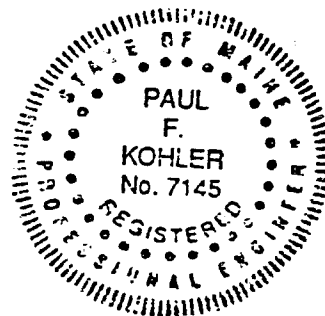
It has been a pleasure to be of assistance to you with this phase of your project. If you have any questions, please do not hesitate to contact us.

Very truly yours,

**S. W. COLE ENGINEERING, INC.**



Paul F. Kohler, P.E.



PFK/jel

cc: Paul Gray - V.P. of Planning at Maine Medical Center (3 copies)

**Attachment A**  
**Limitations**

This report has been prepared for the exclusive use of Maine Medical Center % Mediplex Building Corporation for specific application to the Proposed Medical Office Building and Parking Garage in Portland, Maine. S. W. COLE ENGINEERING, INC. has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S. W. COLE ENGINEERING, INC. should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S. W. COLE ENGINEERING, INC.

# City of Portland Planning Department

389 Congress Street, 4th Floor  
Portland, ME 04101  
(207)874-8721 or (207)874-8719  
Fax: (207)756-8258

## FAX TRANSMISSION COVER SHEET

Date: 11-16-00

To: STEPHEN DE CASTRO

Company: FLEET BANK

Fax #: 874-5168

From: RICK KNOWLAND

RE: STEPHEN - SEE THE ATTACHED DOCUMENT, HOPEFULLY  
THIS IS THE ONE YOU WANTED, CALL ME IF IT ISNT

YOU SHOULD RECEIVE 2 PAGE(S),  
INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES,  
PLEASE CALL (207)874-8721 OR (207)874-8719.

DATE OF AMENDMENT: JANUARY 21, 2000

AMENDMENT TO LETTER OF CREDIT NO.:  
PS1099547

DATE OF ISSUE: JULY 16, 1998

ISSUING BANK:  
FLEET BANK OF MAINE  
A MEMBER OF FLEET FINANCIAL GROUP  
ONE CITY CENTER  
PORTLAND ME 04101

APPLICANT:  
MAINE MEDICAL CENTER  
22 BRAMHALL STREET  
PORTLAND, ME 04102

BENEFICIARY:  
CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

THE ABOVE MENTIONED CREDIT IS AMENDED AS FOLLOWS:

1. THE DATE OF EXPIRY IS AMENDED TO JUNE 1, 2001.
2. THE AMOUNT OF THIS CREDIT HAS BEEN INCREASED BY USD 80,000.00  
THE AMOUNT OF THE CREDIT ISSUED NOW TOTALS UP TO USD 201,873.00
3. THE FOLLOWING CONDITION IS HEREBY DELETED:

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT IS DEEMED TO BE AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR PERIOD(S) OF ONE YEAR EACH FROM THE CURRENT EXPIRY DATE HEREOF, OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO ANY EXPIRATION DATE, WE NOTIFY YOU BY REGISTERED MAIL AT THE ABOVE LISTED ADDRESS THAT WE ELECT NOT TO CONSIDER THIS LETTER OF CREDIT RENEWED FOR ANY SUCH ADDITIONAL PERIOD.

IN THE EVENT THAT OF SUCH NOTICE, YOU MAY DRAW HEREUNDER BY PRESENTATION OF YOUR DRAFT(S) DRAWN ON US AT SIGHT, ACCOMPANIED BY THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS, IF ANY, AND A STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED OFFICER OF THE BENEFICIARY ON BENEFICIARY'S LETTERHEAD READING AS FOLLOWS:

QUOTE

THIS DRAWING RESULTS FROM NOTIFICATION THAT FLEET BANK OF MAINE HAS ELECTED NOT TO RENEW THEIR LETTER OF CREDIT NO. PS1099547.

UNQUOTE

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

  
\_\_\_\_\_  
AUTHORIZED SIGNATURE

THIS DOCUMENT CONSISTS OF 1 PAGE

02/07/2000  
Charles A. Lane  
Asst. City Council



DeLUCA-HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS

778 MAIN STREET  
SUITE 8  
SOUTH PORTLAND, MAINE 04106  
TEL. 207 775 1121  
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

## MEMORANDUM

**TO:** Codes Enforcement – Mike Nugent  
**Alex Jaegerman** - Planning

**FROM:** Gordon Smith, Director of Construction Services

**DATE:** January 12, 2000

**RE:** Medical Office Building Parking Structure and Overhead Connector

I put a call in to, and met with, Larry Chouinard of Granger Northern on site today. Larry and I reviewed the site plans. There had been a revision that added a water quality unit, widened the street to the west, and added a trench drain along the westerly side of the building.

I then walked the site alone and found a number of erosion control problems. Then I went back to Larry's office and we walked the site together. I pointed out the following problems to Larry that need to be corrected prior to issuing a temporary Certificate of Occupancy:

1. Mulch the southwest corner of the site.
2. Mulch the west side of the site below the entrance/exit drive.
3. Silt fence is called for on the entire north side of the building; however, in our opinion, the grading is such that silt fence only needs to be placed in the northeast and northwest corners of the site.
4. The east side of the building site is in bad shape. The erosion and sedimentation control plan calls for check dams along the ditch. Two are shown, however they may need to install more than two. There is no mulch in this area. Also, there is a great deal of runoff from an abutting driveway. Some type of slope protection would be needed (possibly erosion control blankets).
5. Also, the catch basin at the southwest corner and the water quality unit on northwest corner have siltation fabric between the frame and cover. This appears to be working well; however, they will need to be cleaned off occasionally. The erosion and sedimentation details call for hay bales around these catch basin type structures.
6. Benches are to be installed on Thursday, January 13, 2000.

### Conclusion:

Assuming Code Enforcement has not outstanding issues, and once these items are corrected or completed, it is our opinion a temporary Certificate of Occupancy is in order with the following condition:

1. The landscape work could not be completed due to the time of year. This work must be completed by June 15, 2000.

c: Larry Chouinard, Granger Northern  
Nancy Knauber, Public Works



**FAX TRANSMITTAL**

22 Bramhall Street, Portland, Maine 04102

**ENGINEERING SERVICES**  
**TELEPHONE NUMBER (207) 871-2447**  
**FAX NUMBER (207) 871-6195**

**DATE:** 6/18/98  
**TO:** Richard Knowland  
Department of Planning and Urban Development  
City of Portland  
**PHONE:**  
**FAX:** 756-8258  
**FROM:** Jim Morrison  
**SUBJECT:** Congress Street Medical Office Building

**NUMBER OF PAGES INCLUDING TITLE PAGE: 3**

**Rick:**  
Attached find revised Cost Estimate of Improvements to be Covered by Performance Guarantee with the site lighting numbers supplied to us by Mediplex. This is sent to you for City review. It is my understanding that you will notify me when the estimates are approved and at that time I can submit the information relating to guarantees.  
Thanks.

IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date June 18, 1998

Name of Project: Congress Street Medical Office Building

Address Location: 883 Congress Street

Developer: Maine Medical Center

Form of Performance Guarantee:

Type of Development: Subdivision  Site Plan  (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

Item	PUBLIC			PRIVATE		
	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
<b>STREET SIDEWALK</b>						
Reed	1,425 SF	\$2.50	\$3,563.00	1,010 SF	\$2.50	\$2,525.00
Granite Curbing	880 SF	\$30.00	\$5,400.00	240 LF	\$30.00	\$7,200.00
Sidewalks	2,800 SF	\$5.00	\$14,000.00			
Expansion						
Manholes						
Street Lighting						
Other (Brick Pavers)	500 SF	\$10.00	\$5,000	2,000 SF	\$10.00	\$20,000.00
<b>SANITARY SEWER</b>						
Manholes	1	\$2500.00	\$2,500.00			
Piping	20 LF	\$40.00	\$800.00	30 LF	\$40.00	\$1,200.00
Connections	1	\$750.00	\$750.00			
Other	1	\$1,800.00	\$1,800.00			
<b>STORM DRAINAGE</b>						
Manholes						
Catchbasins				2	\$2,500.00	\$5,000.00
Piping	30 LF	\$40.00	\$1,200.00	3	\$1,250.00	\$3,750.00
Detention Basin				230 LF	\$19.50	\$4,485.00
Other (oil/grit separator)						
				1	\$4,500.00	\$4,500.00
				4	\$1,000.00	\$4,000.00
<b>SITE LIGHTING</b>				3	\$400.00	\$1,200.00
<b>EROSION CONTROL</b>	1	\$1,500.00	\$1,500.00	1 LS	\$2,500.00	\$2,500.00
<b>RECREATION AND OPEN SPACE AMENITIES</b>				1 LS	\$4,000.000	\$4,000.000



	PUBLIC			PRIVATE		
	<u>Quantity</u>	<u>Unit Cost</u>	<u>Subtotal</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Subtotal</u>
1.0 DRAWING (SEE... REVISIONS OF 1 AND 2... SHORTAGE AND LATE COSTS)	1 LS		\$5,000.00	1 LS		\$20,000.00
MISCELLANEOUS						
TOTAL			\$41,513.00			\$80,360.00
GRAND TOTAL			\$41,513.00			\$80,360.00

INSPECTION FEE (to be filled out by City)

	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>TOTAL</u>
A 1.7% of totals			
or			
B Alternative Assessment			
Assessed by:	(name)	(name)	

	PUBLIC			PRIVATE		
	<u>Quantity</u>	<u>Unit Price</u>	<u>Subtotal</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Subtotal</u>
10. DRAINAGE - 100' x 100' x 10' (1000 cu yd) (1000 cu yd) (1000 cu yd)	1 LS		\$5,000.00	1 LS		\$20,000.00
MISCELLANEOUS						
TOTAL			\$41,513.00			\$80,360.00
GRAND TOTAL			\$41,513.00			\$80,360.00

INSPECTION FEE (to be filled out by City)

	<u>PUBLIC</u>	<u>PRIVATE</u>	<u>TOTAL</u>
A 1.7% of totals:	_____	_____	_____
or			
B Alternative Assessment:	_____	_____	_____
Assessed by:	(name) _____	(name) _____	_____



**Stephen P. deCastro**  
Assistant Vice President  
Corporate Banking

**Fleet Bank**

Mail Stop: ME1PM 105B  
Two Portland Square  
P.O. Box 1280  
Portland, ME 04104-5000  
307-874-5142  
Fax 207-874-5167  
stephen\_p.decastro@fleet.com

January 27, 2000

Mr. Charles A. Lane  
Corporation Counsel  
City of Portland, Maine  
389 Congress Street  
Portland, Maine 04101

Dear Charlie:

Fleet Bank is prepared to amend the Letter of Credit No. PS1099547 to \$201,873 and extend the final expiration date until June 1, 2001, substantially in the form of the proposed amendment submitted by the City.

Sincerely,

A handwritten signature in black ink, appearing to read 'Stephen deCastro'.

Stephen deCastro  
Assistant Vice President

# City of Portland Planning Department

389 Congress Street, 4th Floor  
Portland, ME 04101  
207-874-8721 or 207-874-8719  
Fax: 207-756-8258

## FAX TRANSMISSION COVER SHEET

Date: 1-27-00

To: MIKE GRIZZANTI

Company: FLOTT BANK

Fax #: 800-775-8743

From: RICK KNOWLSON

RE: REVISION TO MMC LETTER OF CREDIT

cc: STEVIE DICASTRO

YOU SHOULD RECEIVE 2 PAGE(S),  
INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES,  
PLEASE CALL 207-874-8721 OR 207-874-8719.

**AMENDMENT TO LETTER OF CREDIT**

Re: Public Improvements to 883 Congress, Maine Medical Center

1. Fleet Bank issued its Letter of Credit No. PS1099547, in the amount of One Hundred Twenty One Thousand Eight Hundred Seventy Three Dollars (\$121,873.00), on July 16, 1998, in connection with the above described project.
  
2. This amendment increases the amount of the Letter of Credit from One Hundred Twenty One Thousand Eight Hundred Seventy Three Dollars (\$121,873.00) to Two Hundred One Thousand Eight Hundred Seventy Three Dollars (\$201,873.00).
  
3. The Letter of Credit, as amended, will terminate on June 1, 2001.

In all other respects, the terms and conditions of the Letter of Credit described in paragraph 1 are ratified and affirmed.

Dated: January \_\_\_\_, 2000

Fleet Bank

\_\_\_\_\_  
by \_\_\_\_\_  
its \_\_\_\_\_

\*\*\*\*\* -IND. XMT JOURNAL- \*\*\*\*\* DATE JAN-27-2000 \*\*\*\*\* TIME 11:14 \*\*\*\*\*

DATE/TIME = JAN-27-2000 11:13  
JOURNAL No. = 02  
COMM. RESULT = OK  
PAGE(S) = 002  
DURATION = 00:00'43  
FILE No. =  
MODE = TRANSMISSION  
DESTINATION = 98745168  
RECEIVED ID = / 207 874 5168  
RESOLUTION = STD

-CORP. COUNSEL -

\*\*\*\*\* -PORTLAND, MAINE - \*\*\*\*\* 207 874 8497- \*\*\*\*\*



**AMENDMENT TO LETTER OF CREDIT**

Re: Public Improvements to 883 Congress, Maine Medical Center

1. Fleet Bank issued its Letter of Credit No. PS1099547, in the amount of One Hundred Twenty One Thousand Eight Hundred Seventy Three Dollars (\$121,873.00), on July 16, 1998, in connection with the above described project.
2. This amendment increases the amount of the Letter of Credit from One Hundred Twenty One Thousand Eight Hundred Seventy Three Dollars (\$121,873.00) to Two Hundred One Thousand Eight Hundred Seventy Three Dollars (\$201,873.00).
3. *The LOC, as amended, will terminate on 6/1/2001.*  
~~This amendment also enlarges the completion date to June 1, 2001.~~

In all other respects, the terms and conditions of the Letter of Credit described in paragraph 1 are ratified and affirmed.

Dated: January \_\_\_\_, 2000

Fleet Bank

\_\_\_\_\_

by \_\_\_\_\_

its \_\_\_\_\_



STANDBY LETTER OF CREDIT NO. PS1099547  
DATE OF ISSUE: JULY 16, 1998

ISSUING BANK:  
FLEET BANK OF MAINE  
A MEMBER OF FLEET FINANCIAL GROUP  
ONE CITY CENTER  
PORTLAND ME 04101

APPLICANT:  
MAINE MEDICAL CENTER  
22 BRAMHALL STREET  
PORTLAND, ME 04102

BENEFICIARY:  
CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

AMOUNT/CURRENCY:  
UP TO USD 121,873.00  
UP TO ONE HUNDRED TWENTY ONE THOUSAND  
EIGHT HUNDRED SEVENTY THREE AND 00/100'S  
US DOLLARS

DATE AND PLACE OF EXPIRY:  
OCTOBER 2, 2000 AT OUR COUNTERS

FLEET BANK OF MAINE HEREBY ISSUES ITS IRREVOCABLE LETTER OF CREDIT FOR THE ACCOUNT OF MAINE MEDICAL CENTER, AS DEVELOPER (HEREINAFTER REFERRED TO AS THE "DEVELOPER") IN THE NAME OF THE CITY OF PORTLAND IN THE AGGREGATE AMOUNT OF \$121,873.00.

THE CITY OF PORTLAND MAY DRAW ON THE LETTER OF CREDIT BY PRESENTATION OF A SIGHT DRAFT AT FLEET BANK OF MAINE'S OFFICES LOCATED AT FLEET BANK OF MAINE, C/O FLEET PENNSYLVANIA SERVICES, 1 FLEET WAY, SCRANTON, PA 18507-1999 ATTN: TRADESERVICES-STANDBY DEPT. ACCOMPANIED BY A WRITTEN STATEMENT PURPORTEDLY SIGNED BY THE CITY'S DIRECTOR OF PARKS AND PUBLIC WORKS OR DIRECTOR OF PLANNING AND URBAN DEVELOPMENT STATING THAT: "THE DEVELOPER HAS FAILED TO POST WITH THE CITY OF PORTLAND A TEN PERCENT (10%) DEFECT BOND OR GUARANTEE." OR "THE DEVELOPER HAS FAILED TO COMPLETE THE WORK ON THE ROADS AND OTHER PUBLIC IMPROVEMENTS AS SET FORTH IN A CERTAIN SCHEDULE OF COSTS OF PUBLIC IMPROVEMENTS DATED JUNE 18, 1998 BETWEEN THE DEVELOPER AND THE CITY OF PORTLAND." OR "THE DEVELOPER HAS FAILED TO NOTIFY THE CITY OF PORTLAND FOR INSPECTIONS."

THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS THERETO MUST ACCOMPANY ALL DRAFT(S) PRESENTED HEREUNDER FOR OUR ENDORSEMENT THEREON.

IN THE EVENT OF DELIVERY OF DOCUMENTS NOT COMPLYING TO THE TERMS AND CONDITIONS

THIS IS AN INTEGRAL PART OF LETTER OF CREDIT NUMBER: PS1099547

AS SPECIFIED HEREIN, FLEET BANK OF MAINE SHALL NOTIFY THE CITY OF PORTLAND IN WRITING OF THE REASON OR REASONS THEREFORE WITHIN THREE (3) BUSINESS DAYS OF THE DELIVERY OF SUCH DOCUMENTS.

REDUCTIONS TO THE AVAILABLE AMOUNT OF THIS LETTER OF CREDIT MAY BE MADE FROM TIME TO TIME BY A WRITTEN CERTIFICATION PURPORTEDLY BY THE CITY DIRECTOR OF PARKS AND PUBLIC WORKS OR DIRECTOR OF PLANNING AND URBAN DEVELOPMENT CERTIFYING THAT FLEET BANK OF MAINE MAY REDUCE SAID LETTER OF CREDIT BY AN AMOUNT SPECIFIED BY SAID DIRECTOR IN ACCORDANCE WITH CERTAIN IMPROVEMENTS MADE BY THE DEVELOPER AS REQUIRED UNDER A CERTAIN SCHEDULE OF COSTS OF PUBLIC IMPROVEMENTS DATED JUNE 18, 1998 BETWEEN THE DEVELOPER AND THE CITY OF PORTLAND.

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT IS DEEMED TO BE AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR PERIOD(S) OF ONE YEAR EACH FROM THE CURRENT EXPIRY DATE HEREOF, OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO ANY EXPIRATION DATE, WE NOTIFY YOU BY REGISTERED MAIL AT THE ABOVE LISTED ADDRESS THAT WE ELECT NOT TO CONSIDER THIS LETTER OF CREDIT RENEWED FOR ANY SUCH ADDITIONAL PERIOD.

IN THE EVENT THAT OF SUCH NOTICE, YOU MAY DRAW HEREUNDER BY PRESENTATION OF OUR DRAFT(S) DRAWN ON US AT SIGHT, ACCOMPANIED BY THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS, IF ANY, AND A STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED OFFICER OF THE BENEFICIARY ON BENEFICIARY'S LETTERHEAD READING AS FOLLOWS:

QUOTE  
THIS DRAWING RESULTS FROM NOTIFICATION THAT FLEET BANK OF MAINE HAS ELECTED NOT TO RENEW THEIR LETTER OF CREDIT NO. PS1099547.  
UNQUOTE

THIS LETTER OF CREDIT WILL AUTOMATICALLY EXPIRE UPON THE EARLIER OF:

1. FLEET BANK OF MAINE'S RECEIPT OF A WRITTEN NOTIFICATION FROM THE CITY OF PORTLAND THAT SAID WORK AS OUTLINED IN A CERTAIN SCHEDULE OF COSTS OF PUBLIC IMPROVEMENTS DATED JUNE 18, 1998 BETWEEN THE DEVELOPER AND THE CITY OF PORTLAND HAS BEEN COMPLETED IN ACCORDANCE WITH THE CITY OF PORTLAND SPECIFICATIONS AND FLEET BANK OF MAINE LETTER OF CREDIT NO. PS1099547 MAY BE CANCELLED; OR

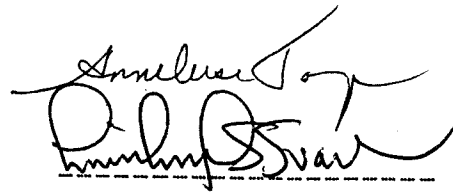
2. THE EXPIRATION DATE OF OCTOBER 2, 2000 OR ANY AUTOMATICALLY EXTENDED DATE AS SPECIFIED HEREIN.

PARTIAL DRAWINGS ARE PERMITTED.

WE ENGAGE WITH YOU THAT DRAFTS DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT WILL BE DULY HONORED IF PRESENTED AT OUR OFFICES AT 1 FLEET WAY, CRANTON, PA 18507-1999 ON OR BEFORE OCTOBER 2, 2000.

THIS LETTER OF CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (1993 REVISION) INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 500 AND AS TO THOSE MATTERS NOT COVERED IN THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS, THEY WILL BE GOVERNED BY THE STATE OF MAINE.

IS IS AN INTEGRAL PART OF LETTER OF CREDIT NUMBER: PS1099547



\_\_\_\_\_  
AUTHORIZED SIGNATURE

THIS DOCUMENT CONSISTS OF 3 PAGE(S).

*Penny Kitter  
7/16/98*



DATE OF AMENDMENT: JANUARY 21, 2000

AMENDMENT TO LETTER OF CREDIT NO. :  
PS1099547

DATE OF ISSUE: JULY 16, 1998

ISSUING BANK:  
FLEET BANK OF MAINE  
A MEMBER OF FLEET FINANCIAL GROUP  
ONE CITY CENTER  
PORTLAND ME 04101

APPLICANT:  
MAINE MEDICAL CENTER  
22 BRAMHALL STREET  
PORTLAND, ME 04102

*amand*  
*d*

BENEFICIARY:  
CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

THE ABOVE MENTIONED CREDIT IS AMENDED AS FOLLOWS:

THE DATE OF EXPIRY IS AMENDED TO JUNE 1, 2001.

THE FOLLOWING CONDITION HAS BEEN ADDED:  
THE FOLLOWING CONDITION HAS BEEN DELETED:

IT IS A CONDITION OF THIS LETTER OF CREDIT THAT IT IS DEEMED TO BE AUTOMATICALLY EXTENDED WITHOUT AMENDMENT FOR PERIOD(S) OF ONE YEAR EACH FROM THE CURRENT EXPIRY DATE HEREOF, OR ANY FUTURE EXPIRATION DATE, UNLESS AT LEAST SIXTY (60) DAYS PRIOR TO ANY EXPIRATION DATE, WE NOTIFY YOU BY REGISTERED MAIL AT THE ABOVE LISTED ADDRESS THAT WE ELECT NOT TO CONSIDER THIS LETTER OF CREDIT RENEWED FOR ANY SUCH ADDITIONAL PERIOD.

IN THE EVENT THAT OF SUCH NOTICE, YOU MAY DRAW HEREUNDER BY PRESENTATION OF YOUR DRAFT(S) DRAWN ON US AT SIGHT, ACCOMPANIED BY THE ORIGINAL LETTER OF CREDIT AND ALL AMENDMENTS, IF ANY, AND A STATEMENT PURPORTEDLY SIGNED BY AN AUTHORIZED OFFICER OF THE BENEFICIARY ON BENEFICIARY'S LETTERHEAD READING AS FOLLOWS:

QUOTE  
THIS DRAWING RESULTS FROM NOTIFICATION THAT FLEET BANK OF MAINE HAS ELECTED NOT TO RENEW THEIR LETTER OF CREDIT NO. PS1099547.  
UNQUOTE

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.

DATE OF AMENDMENT: JANUARY 14, 2000

AMENDMENT TO LETTER OF CREDIT NO.:

PS1099547

DATE OF ISSUE: JULY 16, 1998

ISSUING BANK:

FLEET BANK OF MAINE  
A MEMBER OF FLEET FINANCIAL GROUP  
ONE CITY CENTER  
PORTLAND ME 04101

APPLICANT:

MAINE MEDICAL CENTER  
22 BRAMHALL STREET  
PORTLAND, ME 04102

BENEFICIARY:

CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

THE ABOVE MENTIONED CREDIT IS AMENDED AS FOLLOWS:

THE AMOUNT OF THIS CREDIT HAS BEEN INCREASED BY USD 80,000.00  
THE AMOUNT OF THE CREDIT ISSUED NOW TOTALS UP TO USD 201,873.00

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.



\_\_\_\_\_  
AUTHORIZED SIGNATURE

THIS DOCUMENT CONSISTS OF 1 PAGE(S).



TRADE SERVICES DEPARTMENT - STANDBY UNIT  
1 FLEET WAY  
SCRANTON PA 18507-1999  
TELEPHONE: 1-800-370-7519 EXT. 4316  
FACSIMILE: 570-330-4186

4212

DATE: JANUARY 21,2000

REGISTERED R 465 392 203

CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

APPLICANT: MANIE MEDICAL CENTER.  
LC # PS1099547

GENTLEMEN:

PLEASE BE ADVISED THAT THE ABOVE REFERENCED STANDBY LETTER OF CREDIT ISSUED IN YOUR FAVOR IN THE AMOUNT OF USD 201,873.00 WILL NOT BE EXTENDED BEYOND ITS CURRENT EXPIRATION DATE OF OCTOBER 02,2000.

THIS NOTICE HAS BEEN CONVEYED TO YOU IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SAID LETTER OF CREDIT.

VERY TRULY YOURS,

  
MICHAEL EVANS

# City of Portland Planning Department

389 Congress Street, 4th Floor  
Portland, ME 04101  
207-874-8721 or 207-874-8719  
Fax: 207-756-8258

## FAX TRANSMISSION COVER SHEET

Date: 1-13-00

To: DON BLACKWELL

Company: \_\_\_\_\_

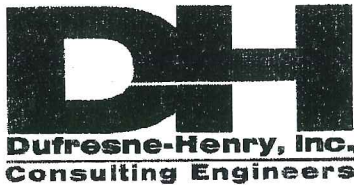
Fax #: 772-6016

From: RICK KNOWLTON

RE: SEE ATTACHED MEMO FROM JEFF PROBLE

YOU SHOULD RECEIVE 2 PAGE(S),  
INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES,  
PLEASE CALL 207-874-8721 OR 207-874-8719.





22 Free Street, Portland, ME 04101

(207) 775-3211

**MEMO TO:** Rick Knowland  
**FROM:** Jeffrey D. Preble, P.E.  
**DATE:** January 7, 2000  
**SUBJECT:** Maine Medical Center Parking Garage

---

As requested, we conducted an inspection of the Maine Medical Center Parking Garage project on January 7, 2000. Our observations are limited to site work related items. We did not inspect the interior of the parking garage structure. The following summarizes our observations.

- The traffic control equipment at both entrances have not been fully installed. Items such as card readers, traffic gates, etc., still need to be installed.
- In the area where Forest Street was widened to accommodate two way traffic, the utility poles have not been removed from the new travel lane. The overhead utility relocation should be completed to allow unobstructed travel along this portion of the street. If pavement striping is needed on this portion of the street, this should be completed in the spring.
- Pedestrian doors have not yet been installed on the pedestrian exits onto Forest St. and Boynton St.
- Additional hay mulch should be placed in the swale along Boynton Street.
- The swale along the east side of the parking structure has not been established. It is present configuration, it is difficult for any drainage to reach the new catch basin located near the snow removal entrance.
- Additional hay mulch should be placed on the esplanade area along Congress Street.
- The temporary pavement repair at the Congress Street and Forest Street intersection will need final repairs in the spring.
- Final landscaping has not been completed around the structure.
- Sidewalks along Congress, Forest and Boynton have been completed.
- Clean up is needed in and around the work area.
- The temporary sanitary utilities should be removed or relocated prior to opening the parking structure.

Let me know if you have any questions regarding any of our observations.



# City of Portland Planning Department

389 Congress Street, 4th Floor  
Portland, ME 04101  
207-874-8721 or 207-874-8719  
Fax: 207-756-8258

## FAX TRANSMISSION COVER SHEET

Date: 1-13-2000

To: JIM MORRISON

Company: MMC

Fax #: 871-6195

From: RICK KNOWLAND

RE: JIM - ATTACHED IN THE ADDENDUM LETTER.

LARRY AJA SUGGESTED I ADD A PHRASE CONCERNING  
THE FOREST STREET PARKING GARAGE ENTRANCE - IE. IN  
CASE PEOPLE START TAKING A RIGHT HAND TURN FROM  
THE ENTRANCE DOWN FOREST STREET.

IF YOU HAVE ANY QUESTIONS, GIVE ME A CALL

THANKS

RIC

YOU SHOULD RECEIVE 1 PAGE(S),  
INCLUDING THIS COVER SHEET.  
IF YOU DO NOT RECEIVE ALL THE PAGES,  
PLEASE CALL 207-874-8721 OR 207-874-8719.



**CITY OF PORTLAND**

January 13, 2000

Mr. Jim Morrison  
Maine Medical Center  
22 Bramhall Street  
Portland ME 04102

RE: Addendum to Schedule of Costs of Public Improvements Dated June 18, 1998 for 883 Congress Street, City of Portland Performance Guarantee

Dear Jim:

This memo is to confirm that the schedule of costs of public improvements (dated June 18, 1998) for the 883 Congress Street project should be increased by \$80,000 from \$121,873 to \$201,873. The \$80,000 increase is intended to cover the cost of related expenses of the acquisition and installation of a traffic signal at the Congress Street and Forest Street intersection, and improvements to the Forest Street parking garage entrance (if necessary).

Should you have any questions on this letter please call me.

Sincerely,

Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr., Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner  
Larry Ash, Traffic Engineer

O:\PLAN\CORRESP\RICK\LETTERS\MORRISON.JMD

# City of Portland, Maine Planning Department

City Hall  
389 Congress Street, 4th Floor  
Portland, Maine 04101  
Fax Number: 756-8258

## FAX TRANSMISSION COVER SHEET

TO: JEFF PROBLE

COMPANY: \_\_\_\_\_

FAX #: 775-6434

FROM: RICK KNOWLTON

# OF PAGES: 3

DATE: 6-1-98

RE: JEFF COULD YOU REVIEW THIS ESTIMATE FOR  
SITE IMPROVEMENTS FOR THE MAINE MEDICAL CENTER PROJECT?  
COULD THIS BE DONE IN THE NEXT DAY OR SO? IF YOU CAN'T  
READ THIS SHEET, PLEASE CALL ME

THANKS,

RIC

If you do not receive all of the pages, please call 874-8721 or 874-8719.

Department of Planning and Urban Development  
 SUBDIVISION/SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date \_\_\_\_\_

Name of Project CONGRESS ST. SIDEWALKS  
 Address/Location 801 CONGRESS ST. PORTLAND ME. 04102  
 Developer MAINE MEDICAL CENTER  
 Form of Performance Guarantee \_\_\_\_\_  
 Type of Development: \_\_\_\_\_ Subdivision  Site Plan (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

Item	PUBLIC			PRIVATE		
	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
1. STREET SIDEWALK						
Road	<u>1425 SF</u>	<u>2.50</u>	<u>3563</u>	<u>1010 LF</u>	<u>2.50</u>	<u>2525</u>
Granite Curbing	<u>180 LF</u>	<u>15.00</u>	<u>2700</u>	<u>240 LF</u>	<u>15.00</u>	<u>3600</u>
Sidewalks	<u>2200 SF</u>	<u>2.00</u>	<u>4400</u>			
Esplanades						
Monuments						
Street Lighting						
Other BRICK PAVEMENTS	<u>500 SF</u>	<u>9.00</u>	<u>4500</u>	<u>2000 SF</u>	<u>9.00</u>	<u>18000</u>
2. SANITARY SEWER						
Manholes	<u>1</u>	<u>2500.00</u>	<u>2500</u>			
Piping	<u>20 LF</u>	<u>25.00</u>	<u>500</u>	<u>20 LF</u>	<u>25.00</u>	<u>750</u>
Connections	<u>1</u>	<u>750.00</u>	<u>750</u>			
Other (ROAD BORDER)	<u>1</u>	<u>1800.00</u>	<u>1800</u>			
3. STORM DRAINAGE						
Manholes				<u>2 EA</u>	<u>1250.00</u>	<u>2500</u>
Catchbasins				<u>3 EA</u>	<u>1250.00</u>	<u>3750</u>
Piping	<u>30 LF</u>	<u>24.00</u>	<u>720</u>	<u>230 LF</u>	<u>19.00</u>	<u>4485</u>
Detention Basin						
Other (OIL/WATER SEPARATOR)				<u>1 EA</u>	<u>4500.00</u>	<u>4500</u>
4. SITE LIGHTING (none?)						
5. EROSION CONTROL	<u>1 LS</u>	<u>1500</u>	<u>1500</u>	<u>1 LS</u>	<u>2500</u>	<u>2500</u>
6. RECREATION AND OPEN SPACE AMENITIES				<u>1 LS</u>		<u>4000</u>

Item	PUBLIC			PRIVATE		
	Quantity	Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
LANDSCAPING (Attach breakdown of plant materials, quantities, and unit costs)	1.45		5,000	1.65		20,000
MISCELLANEOUS			29,109			166,510
TOTAL:						
GRAND TOTAL:						94,699

INSPECTION FEE (to be filled out by City)

	PUBLIC # 96.22	PRIVATE # 11306.87	TOTAL # 1626.89
A: 1.7% of totals:			
OR			
B: Alternative Assessment:			
Assessed by: (name)			

# Diversified Properties, Inc.

P.O. Box 10127, Portland, ME 04104  
Tel 207-773-4988 • Fax 207-773-6875

**COPY**

September 30, 1996

Joseph Gray  
Director of Planning  
City of Portland  
389 Congress Street  
Portland, ME 04101

RE: Buca Run

Dear Mr. Gray:

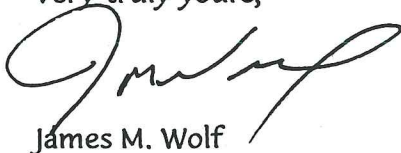
Pursuant to my conversation with Rick Knowland I have been instructed that before cutting trees on the "Buca Run" property it is necessary to obtain permission.

As you know on Tuesday, September 24, 1996, the Planning Board approved the phasing of Buca Run. Phase 1 consists of building a drainage easement along the back side of Milton Street, installing a structure and culvert at what was formally Dedham Street and providing utilities as shown on our plan. Once completed we would be able to obtain Certificates of Occupancy on lots 1, 22, and 23.

The purpose of this letter is to notify the city that we are preparing to cut the trees and brush located on lots 1, 22, and 23 as well as on lots 2 thru 6. It is necessary to cut on these lots so the drainage easement can be built.

Please respond to this letter and inform me what permits, if any, are needed. We would like to begin this work as soon as possible.

Very truly yours,



James M. Wolf

JMW/jy

cc. Richard Knowland ✓



TRADE SERVICES DEPARTMENT - STANDBY UNIT  
1 FLEET WAY  
SCRANTON PA 18507-1999  
TELEPHONE: 1-800-370-7519 EXT. 4316  
FACSIMILE: 570-330-4186

DATE: JANUARY 21,2000

REGISTERED R 465 392 203

CITY OF PORTLAND  
PLANNING & URBAN DEVELOPMENT  
389 CONGRESS STREET  
PORTLAND, ME 04101

APPLICANT: MANIE MEDICAL CENTER.  
LC # PS1099547

GENTLEMEN:

PLEASE BE ADVISED THAT THE ABOVE REFERENCED STANDBY LETTER OF CREDIT ISSUED IN YOUR FAVOR IN THE AMOUNT OF USD 201,873.00 WILL NOT BE EXTENDED BEYOND ITS CURRENT EXPIRATION DATE OF OCTOBER 02,2000.

THIS NOTICE HAS BEEN CONVEYED TO YOU IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SAID LETTER OF CREDIT.

VERY TRULY YOURS,

A handwritten signature in black ink, appearing to read "Michael Evans", written over a horizontal line.

MICHAEL EVANS



## Squaw Bay Corp



Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

December 3, 1997

Mr. Rick Knowland  
Office of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center/Medplex Medical Building Corporation  
Congress Street Medical Office Building**

Dear Rick:

Since the October 28, 1997 Planning Board Workshop meeting for the referenced project, we have made revisions to the site development drawings as well as progress in other areas.

Per our 12/1/97 telephone conversation we are submitting seven (7) full size and one (1) 11"x17" size prints of the following Squaw Bay Corp drawings:

<u>Description</u>	<u>Drawing #</u>	<u>Revision</u>
Site Plan	C-101	C
Miscellaneous Civil Details	C-300	C
Erosion and Sedimentation Control Plan	C-302	C
Landscape Plan	L-101	C

Also, progress has been made in the following areas:

- We have met with Jim Wendell from DeLuca Hoffman and Tony Lombardo, Bob Worcester, and Dave Peterson of the Portland Public Works Department to review the stormwater runoff issues. We have concluded that an oil/water separator will be required to receive runoff from the parking garage area to address the water quality issue. Runoff from the office building roof will be allowed to flow directly to the City's combined system without passing through an oil/water separator.

The City and it's consultants will not require stormwater detention to attenuate runoff flows. (Please see the attached copy of Conference Report of 10/23/97 meeting with Public Works personnel).



Mr. Rick Knowland  
December 3, 1997

- The landscape drawing has been revised to show a pedestrian/park area between the parking garage structure and Boynton Street. This was done to address the concerns of the Board which were expressed at the last workshop meeting. We have not been able to arrange a meeting with the Planning Board member who expressed the most interest in this area but will continue to do so. If a meeting cannot be arranged prior to the workshop meeting, I will have the landscape architect attend the workshop meeting to resolve landscape issues.
- The Portland Water District and Northern Utilities have been contacted regarding the details of water and gas service to the facility. Please see attached copy of 11/26/97 letters to the utility companies.
- Bill Goodwin of the Portland Public Works has been contacted regarding the details of sewer service. Please see attached copy of 11/26/97 letter.
- Also included is Carl Walker's preliminary lighting design.

It is my understanding that Maine Medical Center and its consultant will be submitting information relative to traffic and parking issues and that the Planning Board workshop meeting will focus on these two issues.

We trust the information contained herein will adequately address the concerns of the Planning Board. Please call me if you have any questions or desire additional information.

Very truly yours,

SQUAW BAY CORP



W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson, MMBC w/enclosures  
Jim Morrison, MMC w/enclosures



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

November 26, 1997

Mr. Bill Goodwin  
Public Works Department  
55 Portland Street  
Portland, ME 04102

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Bill:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

Prior to the Portland Planning Board granting approval for the project, Maine Medical Center must provide documentation to verify that the sanitary sewer service can and will be provided to the building. At your convenience please contact me so we may begin discussions regarding the details of sewer service.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.

John R. Kennedy, P.E.

Peter B. Tubbs, P.E., P.L.S.

David W. Young, P.E., P.L.S.

November 26, 1997

Mr. John Nicely  
Northern Utilities Inc.  
1075 Forest Avenue  
Portland, ME 04103

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Mr. Nicely:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

At your convenience please contact me so we may begin discussions regarding the details of gas service to the proposed building.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.

John R. Kennedy, P.E.

Peter B. Tubbs, P.E., P.L.S.

David W. Young, P.E., P.L.S.

November 26, 1997

Mr. Dave Coffin  
Portland Water District  
225 Douglas Street  
Portland, ME 04102

**RE: Mediplex Medical Building Corporation  
Maine Medical Center Medical Office Building**

Dear Dave:

Maine Medical Center is planning to construct a medical office building on Congress Street at the corner of Forest Street in Portland. Enclosed is a project "Site Plan", Squaw Bay Corp drawing C-101, revision B for your review.

Prior to the Portland Planning Board granting approval for the project, Maine Medical Center must provide documentation to verify that the Portland Water District can and will provide water service to the building. At your convenience please have someone contact me so we may begin discussions regarding the details of water service.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

c: Jim Clarkson  
Jim Morrison  
Patrick Costin



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**Consulting Engineers &  
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David W. Young, P.E., P.L.S.

## Conference Report

Mediplex Medical Building Corporation  
(MMBC)

Maine Medical Center (MMC)  
Congress Street Medical Office Building

**Location:** Portland Public Works Department

**Date:** October 23, 1997

**Participants:** Tony Lombardo, Portland Public Works  
Bob Worcester, Portland Public Works  
Dave Peterson, Portland Public Works  
Scott Decker, Squaw Bay Corp

**Subject:** General Review of Project

**Distribution:** Participants  
Jim Clarkson, MMBC  
Jim Morrison, MMC  
Bill Goodwin, Portland Public Works

1. The 18" combined RCP sewer in Forest Street was installed in 1967 and appears to be adequate to receive both sanitary sewer and stormwater runoff flows. Stormwater flows will not require detention. Sanitary sewer and stormwater flows will have to enter the system in separate pipes.
2. The sidewalks in Forest Street (both brick and concrete) and Boynton Street (concrete), are in very good condition. If disturbed during construction of the Medical Office Building project they will have to be replaced in kind.

Please notify the writer of any omissions or misunderstandings in this report.

Submitted by:

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

97-242  
conf1023.rpt  
1 of 1



# Squaw Bay Corp

Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

January 29, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center  
Medical Office Building**

Dear Rick:

This letter addresses the comments received in your January 20, 1998 letter to me.

**Jeffrey Preble's 1/12/98 letter to you**

**Drawing C-101**

Comment #1: *"The proposed plans show a drainage swale along the easterly property line which outlets over the sidewalk and into Boynton Street. It does not appear there are any catch basins along Boynton Street to collect his runoff. We would suggest adding a catch basin and stormdrain to collect the runoff in this area and tie it into the existing combined sewer line in Boynton Street."*

**Response:** During our recent telephone conversation, you informed me that Tony Lombardo noted that under current conditions icing occurs along Boynton Street and Maine Medical Center should attempt to mitigate this condition. Therefore, enclosed drawing C-101 has been revised to include the requested catch basin. The sewer line in Boynton Street is an 8" sanitary line so we have connected the catch basin to the 12" oil/grit structure discharge line.

Comment #2: *"The existing sidewalk at the Forest Street and Boynton Street intersection is at elevation 39.0. The elevation of the catch basin grate on the Vortechntics unit is 39.75. This should be lowered if the intention is to collect runoff from the swale along the northern property boundary."*

**Response:** Enclosed Site Plan drawing C-101 has been revised to reflect a lowered catch basin grate elevation.

Comment #3: *"A dimension of 2'-9" has been shown on the Forest Street and Boynton Street Right-of-Way. We are not sure what this dimension represents."*

97-242

know0129.let

1 of 4

P.O. Box 86A, 4 Blanchard Road, Cumberland Center, ME 04021  
Phone: (207) 829-6994 • Fax: (207) 829-5692 • Email: squawbay@neis.net

### Installation Guidelines for Ditches/Channels

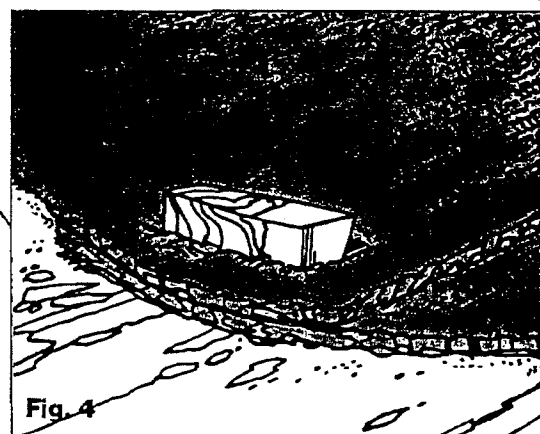
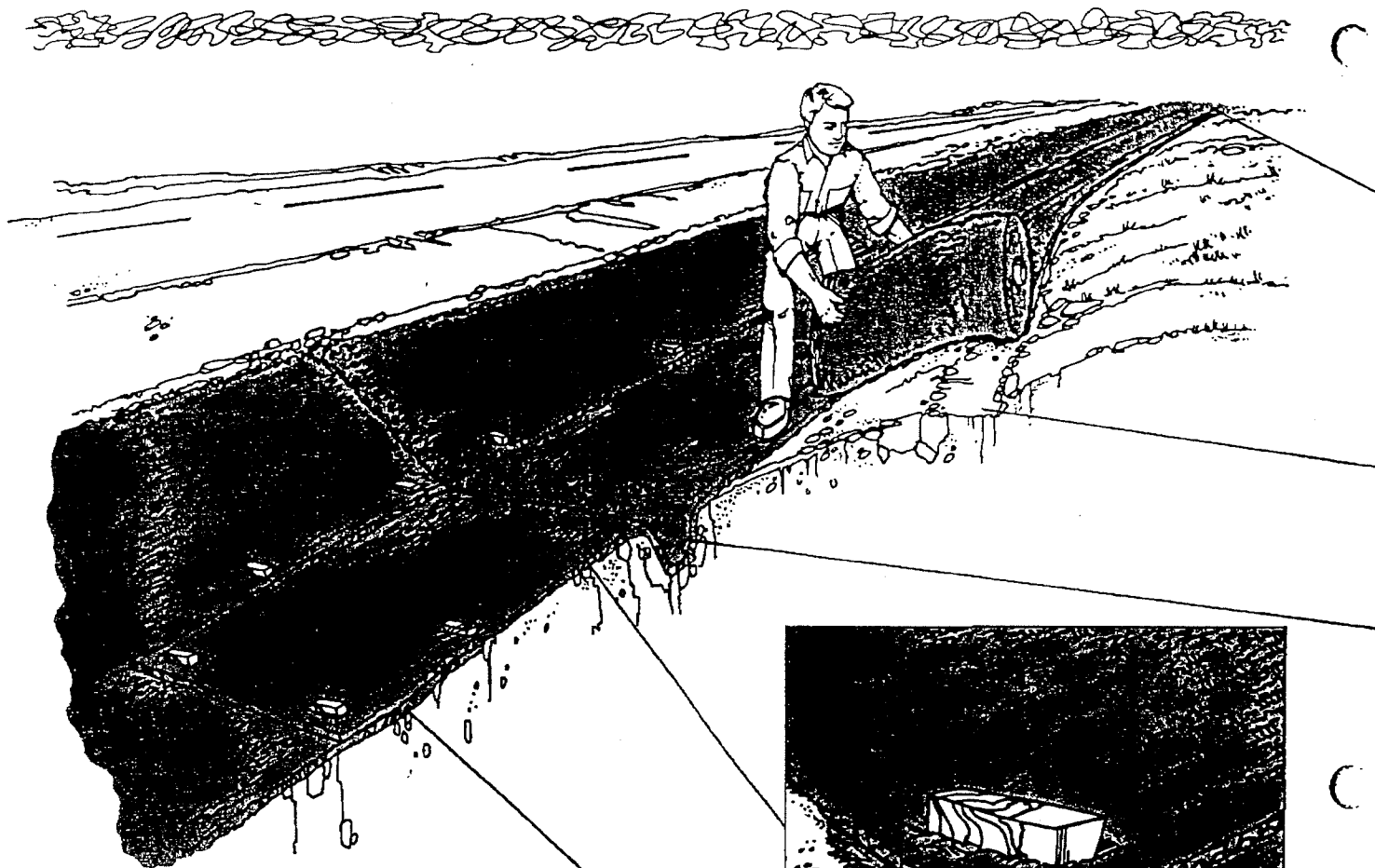


Fig. 4

**OVERLAP ADJACENT EDGES**

When installing Miramat in ditches or channels, special steps in addition to the preceding guidelines must be followed.

- Cut check slots across bottom and up the sides of the ditch... see "Mat Anchor Trenches" (Fig. 2A and 2B.)
- Cut 4" (min.) ledge or trench at top of side slope. (Fig. 5A and 5B.)
- Center mat in ditch bottom and unroll starting at upper end of ditch.
- Roll adjacent widths of mat, overlapping side edges of mat by 3". (Fig. 4.)
- Lay outside edge of mat on ledge or into trench at top of side slope. (Fig. 5A and 5B.) Stake at 3'-5' intervals along ledge or in trench.
- Backfill ledge or trench and compact.
- In check slots stake each mat at its center at overlapped edges, and outside edges. (Fig. 2A and 2B.)
- Overlap each roll end of mat by 3' with upslope mat on top. (Fig. 3.)
- Backfill all check slots and anchor trenches with soil or stone and compact.

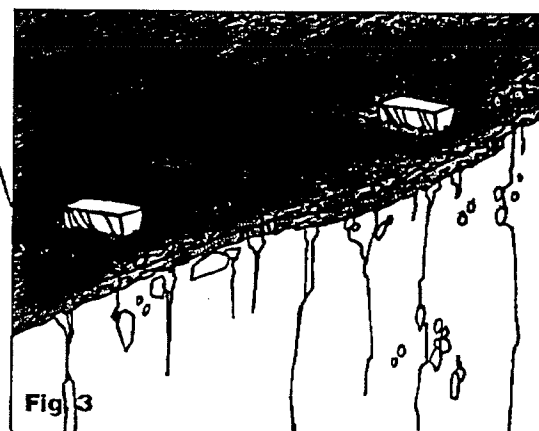


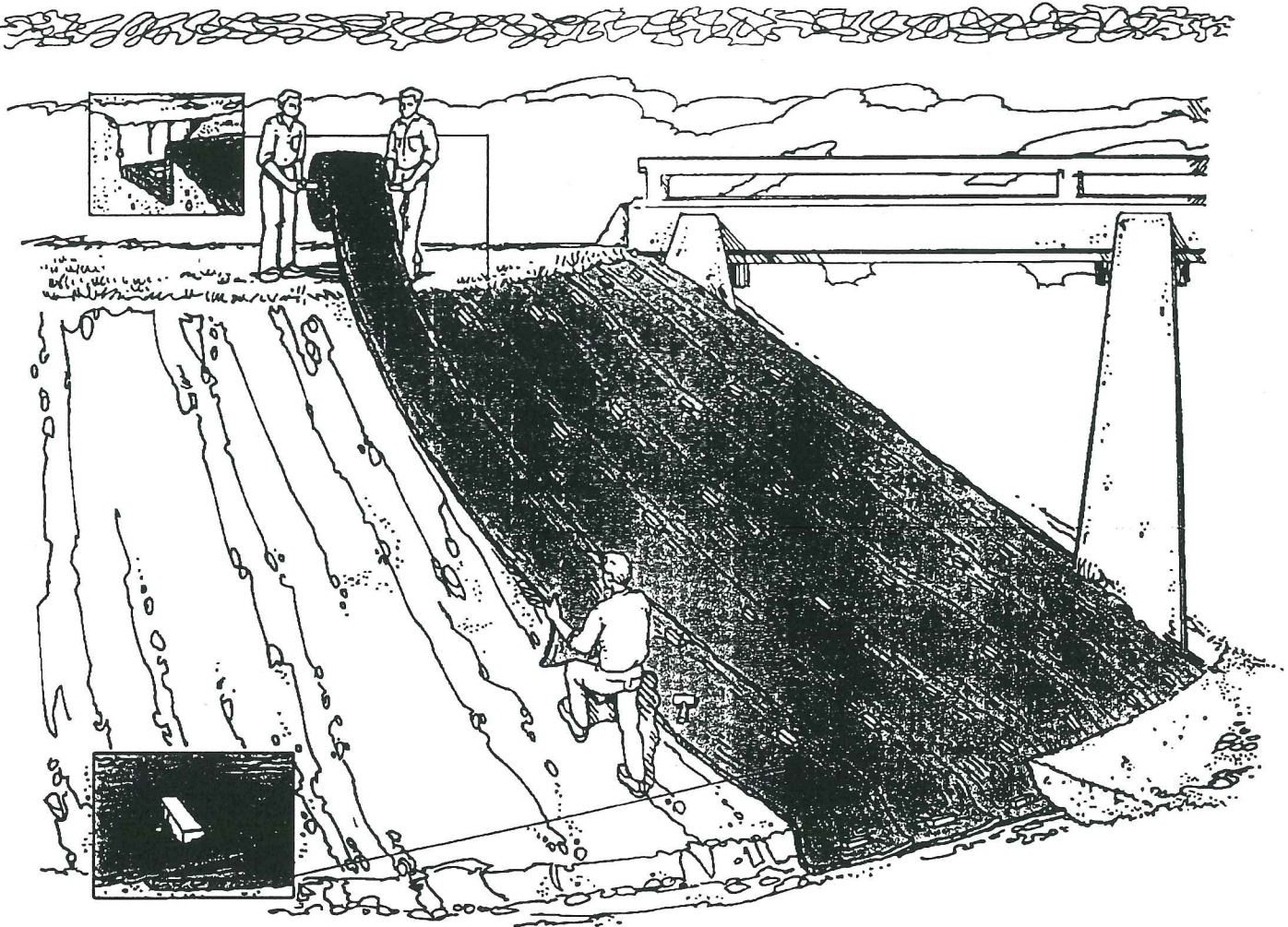
Fig. 3

**OVERLAP ROLL ENDS**



13-11

**Miramat: General Installation Guidelines**



**Mat Placement**

- Unroll mat onto ground in direction of water flow.
- Mat should lay flat. Do not stretch mat over ground. Stretching may cause mat to bridge depressions in the surface and allow erosion underneath.
- Bury transverse terminal ends of Miramat to secure and prevent erosive flow underneath. Place mat as shown. (Fig. 1A and 1B.)
- Secure mat snugly into all transverse check slots. (Fig. 2A and 2B.)
- Backfill and compact trenches and check slots after staking the mat in bottom of trench... see "Ground Fastening"
- Overlap roll ends by 3' (min.) with upslope mat on top to prevent uplift of mat end by water flow. (Fig. 3.) Note: If installing in the direction of a concentrated water flow, start new rolls in a transverse ditch.
- Overlap adjacent edges of mat by 3" (min.) and stake... see "Ground Fastening" (Fig. 4.)



**WOOD STAKE (PREFERRED)**



**LONG WIRE STAPLES (ALTERNATE)**

**Ground Fastening**

Wood stakes are recommended for pinning Miramat to the ground surface. Stakes should be 1" x 3" nominal stock cut in a triangular shape. Stakes should be 12" to 18" long depending on soil density.

- Drive wood stakes to within 3" of ground surface. Do not drive flush to surface.
- In all transverse terminal trenches and check slots stake each mat at its center and at overlapped edges before backfilling and compacting.
- Stake overlaps longitudinally at 3' to 5' intervals.





Department of Planning and Urban Development

SUBDIVISION SITE DEVELOPMENT

COST ESTIMATE OF IMPROVEMENTS TO BE COVERED BY PERFORMANCE GUARANTEE

Date June 15, 1998

Name of Project: Congress Street Medical Office Building

Address Location: 883 Congress Street

Developer: Maine Medical Center

Form of Performance Guarantee: \_\_\_\_\_

Type of Development: \_\_\_\_\_ Subdivision X Site Plan (Major/Minor)

TO BE FILLED OUT BY APPLICANT:

Item	Quantity	PUBLIC		PRIVATE		
		Unit Cost	Subtotal	Quantity	Unit Cost	Subtotal
<b>1. STREET SIDEWALK</b>						
Road	1,425 SF	\$2.50	\$3,563.00	1,010 SF	\$2.50	\$2,525.00
Granite Curbing Sidewalks	980 SF	\$30.00	\$5,400.00	240 LF	\$30.00	\$7,200.00
Esplanades	2,800 SF	\$5.00	\$14,000.00			
Monuments						
Street Lighting						
Other (Brick Pavers)	500 SF	\$10.00	\$5,000	2,000 SF	\$10.00	\$20,000.00
<b>2. SANITARY SEWER</b>						
Manholes	1	\$2500.00	\$2,500.00			
Piping	20 LF	\$40.00	\$800.00	30 LF	\$40.00	\$1,200.00
Connections	1	\$750.00	\$750.00			
Other	1	\$1,800.00	\$1,800.00			
<b>3. STORM DRAINAGE</b>						
Manholes				2	\$2,500.00	\$5,000.00
Catchbasins				3	\$1,250.00	\$3,750.00
Piping	30 LF	\$40.00	\$1,200.00	230 LF	\$19.50	\$4,485.00
Detention Basin						
Other (oil/grit separator)				1	\$4,500.00	\$4,500.00
<b>SITE LIGHTING (none)</b>						
<b>EROSION CONTROL</b>						
	1	\$1,500.00	\$1,500.00	1 LS	\$2,500	
<b>4. RECREATION AND OPEN SPACE AMENITIES</b>						
				1 LS		

CITY OF PORTLAND, MAINE  
MEMORANDUM

TO: Chair Hagge and Members of the Planning Board

FROM: Richard Knowland, Senior Planner

DATE: October 28, 1997

SUBJECT: Maine Medical Center Office and Parking Garage

A workshop has been scheduled to consider a proposed 50,000 sq. ft. medical office building and a 430 space parking garage by Maine Medical Center in the vicinity of 883-903 Congress Street. The City Council has approved a contract zone to accommodate this proposal which was reviewed by the Board previously. See Attachment A.

It is expected that a second workshop will be scheduled prior to the public hearing. The workshop will include a more focused discussion on traffic and parking issues.

The site plan previously submitted during the zone change process is similar to the present one (see Attachment B.) More details have been provided on how the Congress Street streetscape will be treated as well as landscaping. The applicant is in the process of working on water quality treatment, stormwater detention and other related site plan issues.

The office space will be occupied by physicians practicing or employed by MMC and private medical offices. Certain diagnostic services may also be provided.

The office building is four stories high on Congress with two additional levels below grade. The slope of the property masses the apparent size and height of the parking garage by accommodating six levels of parking. At the low point of Boynton Street, only four levels of the garage will be visible.

The total package of site and building improvements provides a unique opportunity to serve as a cornerstone for the revitalization of this area of Congress Street.

#### Building Elevations

Since the zone change public hearing, the building elevations have been developed further. The top of the office building now has a detailed cornice line. Two other cornice lines have been introduced along the facade. The cornice lines help provide a logical base, middle, and top for the building in line with Portland's traditional commercial architecture. Soldier coursing has been added as a sill treatment on the top and bottom of upper story windows. The spacing and proportion of the windows along the facade is now more of an appropriate scale. The basic materials of the facade include brick and precast concrete. The rooftop elevator tower/HVAC penthouse has been significantly reduced in size from the previous plan.

In summary, the office building elevation has improved considerably since the initial submission. A color rendering and material samples will be helpful to understand how the facade elements work together. One further refinement to the facade would be to consider "lowering" the main entrance area so it has more of a human scale.

The parking garage features brick elevator towers with concrete panels on the remainder of the facade.

An elevation of the skywalk that runs from the new building (across Congress Street) to the existing parking garage is shown. A color rendering and sample materials should be submitted to determine how it relates to the surroundings.

### Traffic

Circulation remains unchanged from the preliminary plan. Vehicles will enter and exit the site from Congress Street and Forest Street. A drop-off area is shown along Congress Street although there is also a drop-off area within the parking garage.

A traffic impact study and a parking demand study was previously submitted during the zone change process. See Attachment C.

The traffic study concludes that the "level of service analysis shows that the proposed development will not have a significant impact on the surrounding street system." However, the report does recommend restriping the lane used for north bound traffic at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through left turn lane. A traffic signal is also recommended at Park Avenue and Forest Street. At the Bramhall and Congress Street intersection, a recommendation in the change in timing and phasing of the traffic signals is recommended. It is estimated that the project will generate 182 and 212 trip ends during the a.m. and the p.m. peak hours.

The parking demand study takes into account the new building and the overall parking demand of MMC. The study forecasts a parking demand of 2,140 spaces upon completion of the office building and full operation of the Scarborough and John Roberts Road facilities. A parking supply of 2,373 spaces is listed which is 233 spaces above the forecasted demand.

Condition #10 of the contract requires that the applicant submit a parking management plan for all of its parking facilities for review and approval by the Planning Board as part of the site plan review of this project. This document will be submitted shortly.

Previous comments from Tom Errico, Traffic Engineer, are shown on Attachment E. Larry Ash, City Traffic Engineer, has met with the consulting traffic engineer and has requested further traffic analysis of nearby intersections. The response to these questions will be available for the second workshop.

### Open Space/Landscaping

See Attachment B-5 for landscaping plan. Condition #11 of the contract requires that a landscaped open space be provided between the parking garage and Boynton Street.

Street trees are shown on all three streets abutting the site. Three landscaped pockets are shown adjacent to the Congress Street facade.

Attachments

- A. Contract Zone Change
- B. Site Plan/Building Elevation
- C. Traffic Impact Study
- D. Parking Demand Study
- E. Tom Errico's Comments

MMCCONGRESSREZ.CONPB.FIN  
06.11.97

AGREEMENT BETWEEN  
CITY OF PORTLAND  
AND  
MAINE MEDICAL CENTER

AGREEMENT made this      day of      , 1997 by and between the CITY OF PORTLAND, a body corporate and politic, located in Cumberland County and State of Maine (hereinafter the "CITY") and MAINE MEDICAL CENTER, a Maine Corporation (hereinafter "MAINE MEDICAL").

W I T N E S S E T H:

WHEREAS, MAINE MEDICAL did request a rezoning of property located at 883-903 Congress Street, in Portland, in order to permit the establishment and operation of professional office space, clinics and parking; and

WHEREAS, the Planning Board of the City of Portland, pursuant to 30-A M.R.S.A. §4352(8), and after notice and hearing and due deliberation thereon, recommended the rezoning of the property as aforesaid, subject, however, to certain conditions; and

WHEREAS, the CITY by and through its City Council has determined that said rezoning would be pursuant to and consistent with the CITY'S comprehensive land use plan and consistent with the existing and permitted uses within the original zone; and

WHEREAS, the CITY has determined that because of the unusual nature of the proposed development it is necessary or appropriate

to impose by agreement the following conditions or restrictions in order to insure that the rezoning is consistent with the CITY's comprehensive land use plan; and

**WHEREAS**, the CITY authorized the execution of this Agreement on \_\_\_\_\_, 1997;

**NOW, THEREFORE**, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The CITY shall amend the Zoning Map of the City of Portland, dated March 1958, as amended and on file in the Department of Planning and Urban Development, and incorporated by reference into the Zoning Ordinance by §14-49 of the Portland City Code, by adopting the map change amendment shown on Attachment 1.
2. The property shall be developed substantially in accordance with the conceptual site plan and elevations shown on Attachment 2; provided, however, that such plan and elevations shall be subject to full site plan review by the Planning Board and approval of this Agreement shall not imply any approval of any element that must be reviewed pursuant to §14-526 of the Portland City Code.
3. MAINE MEDICAL shall be authorized to establish and maintain general, business and professional offices, as defined in section 14-47 of the Portland City Code, for use by MAINE MEDICAL and related medical professionals, clinics, as defined in the same section of the Code, and parking on the site.
4. Setbacks shall be as delineated on Attachment 2, but shall in no event exceed ten (10) feet for the front yard and shall not be less than seven (7) feet for the rear yard. The westerly side yard shall be at least ten (10) feet, except the ventilation shaft and the exterior stair tower. The easterly side yard shall be at least fifteen (15) feet, except the ventilation shaft and the exterior stair tower.
5. The maximum height of any structure on the site shall not exceed seventy-two (72) feet.

MMCCONGRESSREZ.CONPB.FIN  
06.11.97

- 6. The lease for the proposed skywalk shall be approved by the Portland City Council and the Maine Department of Transportation.
- 7. MAINE MEDICAL shall replace all curb and sidewalks abutting the site on Congress Street, Forest Street, and Boynton Street, as required by the Public Works Department.
- 8. Signage on the site shall comply with the requirements of the B-2 zone, as set forth in Division 22 of Chapter 14 of the Portland City Code.
- 9. Development on the site shall comply with the requirements of sections 14-186 and 14-187 of the Portland City Code.
- 10. MAINE MEDICAL shall submit a parking management plan for all of its parking facilities for review and approval by the Planning Board as part of the site plan review of this project.
- 11. MAINE MEDICAL shall provide a landscaped/open space area between the parking garage and Boynton Street. This area shall be reviewed as part of the site plan approval process.
- 12. In the event that any portion of the premises becomes subject to taxation under the decision in City of Lewiston v. Marcotte Congregate Housing, Inc., 673 A.2d 209 (Me. 1996), or any successor legislation, then MAINE MEDICAL or any successors in interest shall be liable for a payment in lieu of taxes if such portion later becomes exempt from taxation. The payment in lieu of taxes shall be in the amount of the taxes that would be assessed in the absence of such exemption.

The above stated restrictions, provisions and conditions are an essential part of the rezoning, shall run with the subject premises, shall bind MAINE MEDICAL, its successors and assigns, as permitted by this Agreement, of said property or any part thereof or interest therein, and any party in possession or occupancy of said property or any part thereof, and shall inure to the benefit



MMCCONGRESSREZ.CONPB.FIN  
06.11.97

of and be enforceable by the CITY, by and through its duly authorized representatives.

If any of the restrictions, provisions, conditions, or portions thereof set forth herein is for any reason held invalid or unconstitutional by any Court of competent jurisdiction, such portion shall be deemed as a separate, distinct and independent provision and such determination shall not affect the validity of the remaining portions hereof.

Except as expressly modified herein, the use and occupancy of the subject premises shall be governed by and comply with the provisions of the Land Use Code of the City of Portland and any applicable amendments thereto or replacement thereof.

In the event that MAINE MEDICAL or any successor fail to continue to utilize the property in accordance with this Agreement, or in the event of a breach of any condition(s) set forth in this Agreement, the Planning Board shall have the authority, after hearing, to resolve the issue resulting in the breach or the failure to operate. The resolution may include a recommendation to the City Council that the site be rezoned to R-6 or any successor zone and that this Agreement be terminated, requiring a cessation of the general, business and professional offices, clinics and parking uses permitted under this terms of this Agreement.

WITNESS:

CITY OF PORTLAND

MMCCONGRESSREZ.CONPB.FIN  
06.11.97

\_\_\_\_\_

By \_\_\_\_\_  
Robert B. Ganley  
Its City Manager

WITNESS:

MAINE MEDICAL CENTER

\_\_\_\_\_

By: \_\_\_\_\_

Its:

STATE OF MAINE  
CUMBERLAND, ss.

, 1997

Personally appeared the above-named Robert B. Ganley, in his capacity as City Manager, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of the City of Portland.

Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

STATE OF MAINE  
CUMBERLAND, ss.

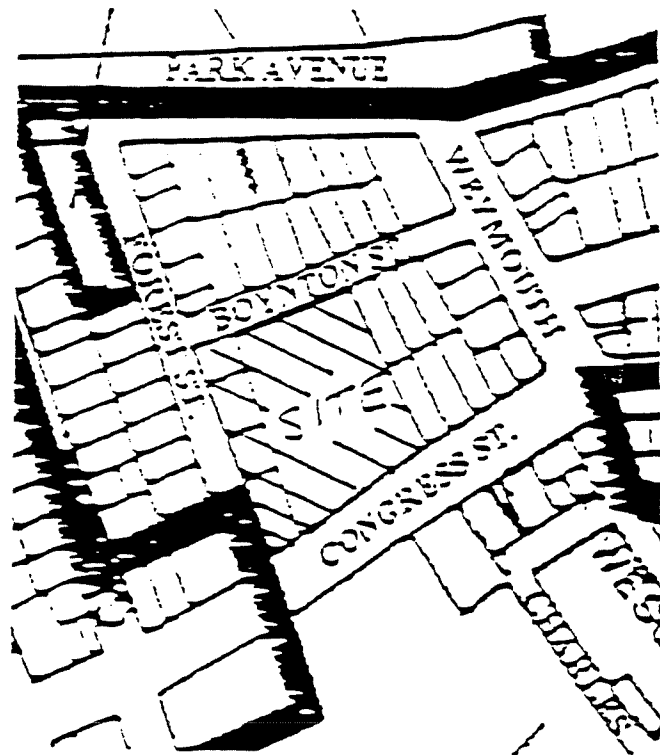
, 1997


Personally appeared the above-named \_\_\_\_\_, in his/her capacity as \_\_\_\_\_ of Maine Medical Center and acknowledged the foregoing instrument to be his/her free act and deed and the free act and deed of Maine Medical Center.

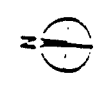
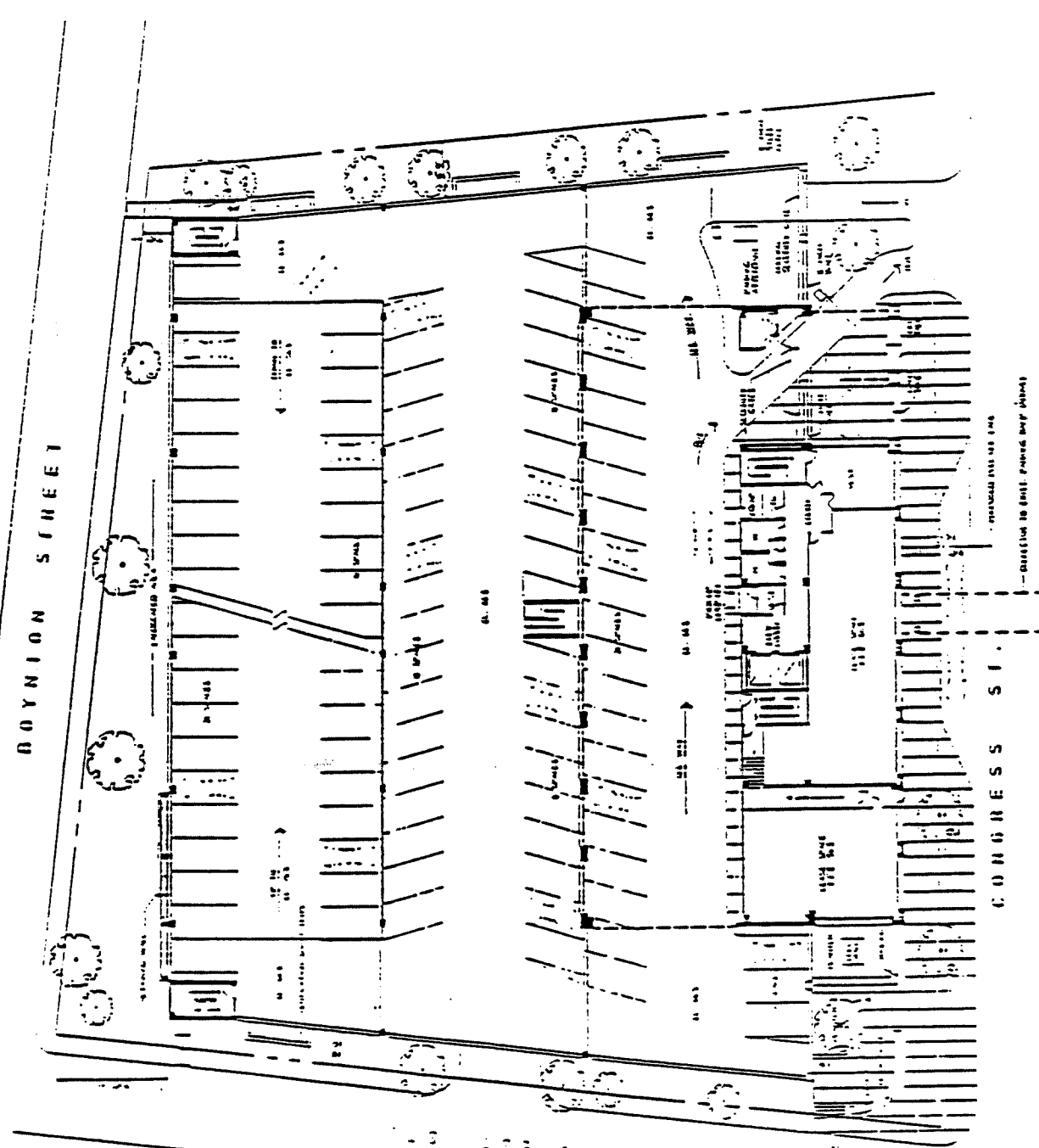
Before me,

\_\_\_\_\_  
Notary Public/Attorney at Law

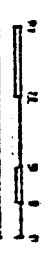
SITE OF PROPOSED CONTRACT ZONE



<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>	 <p>U.S. ARMY CORPS OF ENGINEERS WASHINGTON, D.C.</p>	<p>ENGINEER ARCHITECT PLANNING CONSTRUCTION OPERATION MAINTENANCE REPAIR RECONSTRUCTION DEMOLITION DISPOSAL</p>	<p>U.S. ARMY CORPS OF ENGINEERS WASHINGTON, D.C.</p>	<p>U.S. ARMY CORPS OF ENGINEERS WASHINGTON, D.C.</p>	<p>U.S. ARMY CORPS OF ENGINEERS WASHINGTON, D.C.</p>
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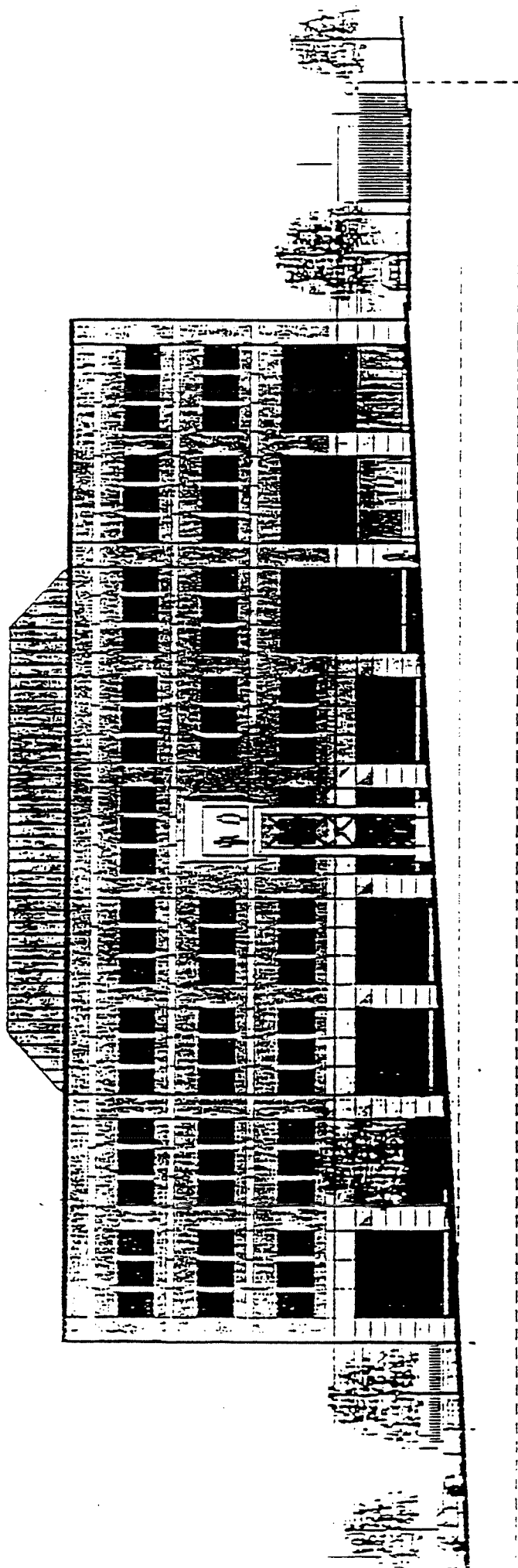
**FIRST FLOOR PLAN**



1/4" = 1'-0"

CONGRESS ST.

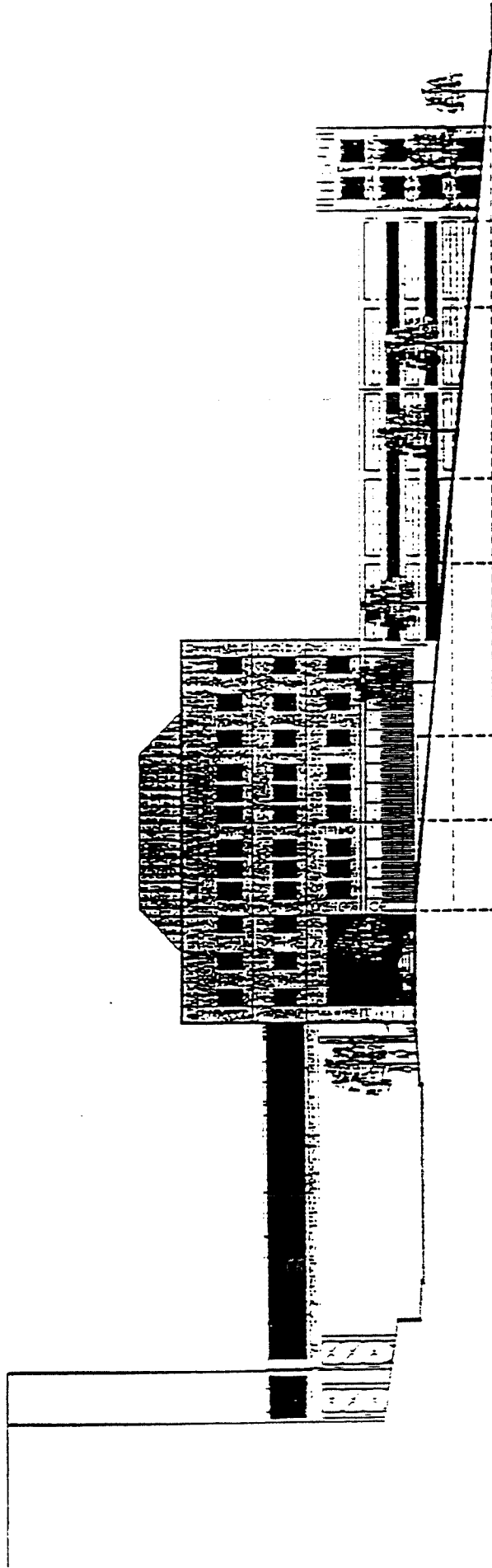
BOYDTON STREET



# SOUTH ELEVATION

1/8" = 1'-0"





**EAST ELEVATION**

**DRAFT**

**TRAFFIC IMPACT STUDY  
FOR A PROPOSED  
MAINE MEDICAL OFFICE FACILITY  
PORTLAND, MAINE**

**Prepared for**

**Maine Medical Center  
22 Bramhall Street  
Portland, Maine**

**Prepared by**

**DeLuca-Hoffman Associates, Inc.  
778 Main Street, Suite 8  
South Portland, Maine  
(207) 775-1121**

**February 1997**

# TRAFFIC IMPACT STUDY

## INDEX

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IV.	TRIP COMPOSITION .....	5
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VI.	STUDY AREA .....	6
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### Appendix A

Turning Movement Diagrams

### Appendix B

Capacity Analyses

### Appendix C

Collision Diagrams

### Appendix D

Signal Warrant Analyses



## EXECUTIVE SUMMARY

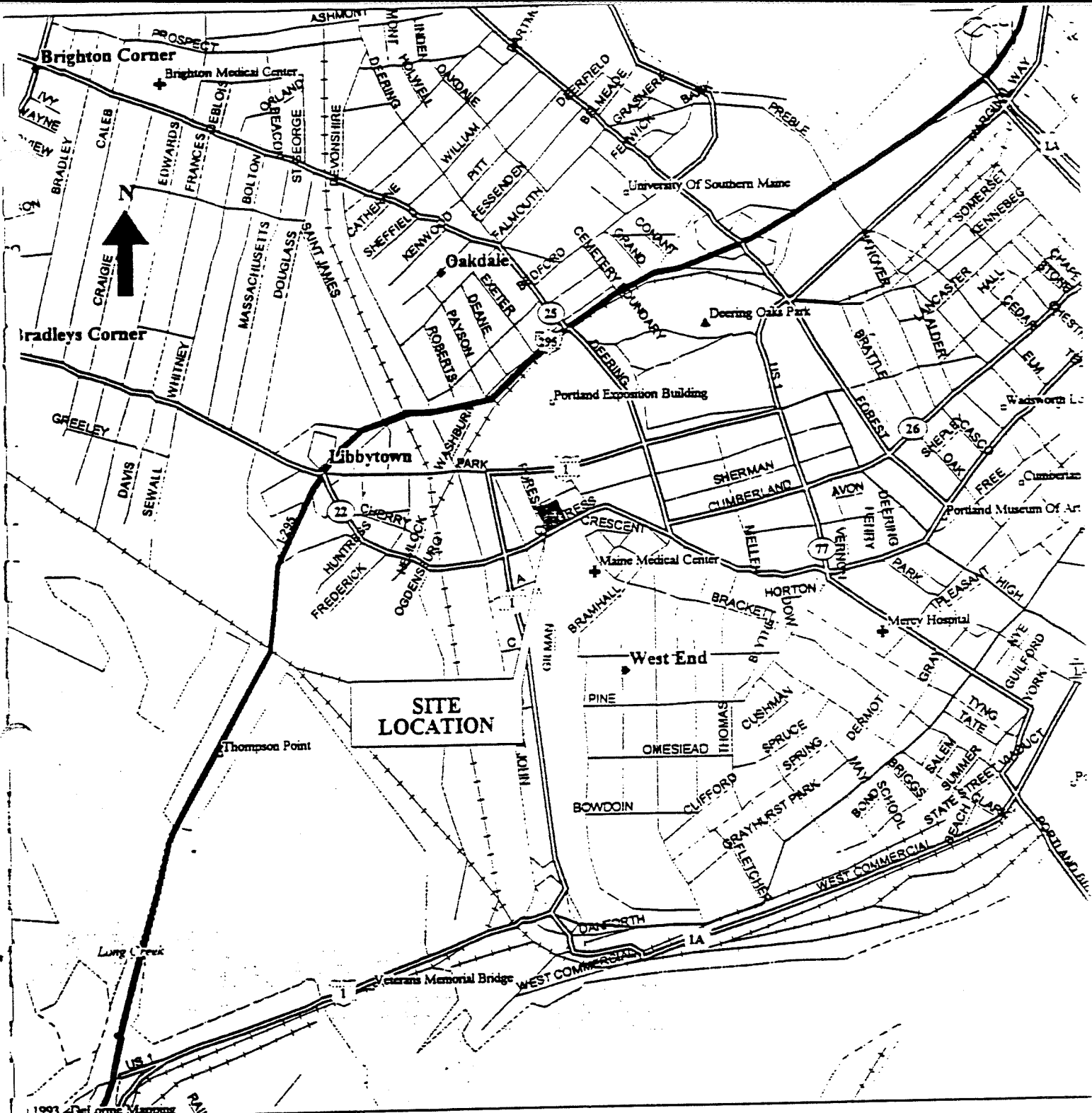
The following executive summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report.

DeLuca-Hoffman Associates, Inc. has been retained by Maine Medical Center to conduct a traffic impact study for the proposed Medical Office building with an attached 420 space parking garage in Portland, Maine. The proposed site, currently occupied by the existing Maine Medical Center's parking lot, consists of 52 parking spaces, is located on the northeast corner of the intersection of Congress Street and Forest Street, as shown on Figure 1 following this page. The development consists of a proposed 49,150 square foot Medical Office building with an attached 420 space parking garage. The development also includes proposed driveways to Congress Street and Forest Street.

The purpose of this study is to evaluate the impact on the existing street system of the traffic generated by the proposed development and the planned driveway onto Congress Street and Forest Street. The following is a summary of the major findings of the traffic study:

1. It is estimated the proposed project will generate 182 and 212 trip ends during the AM and the PM peak hours. These trips would consist of 126 trips in and 56 trips out of the site during the a.m. peak hour and 42 trips in and 170 trips out of the site during the p.m. peak hour.
2. All of the trips are expected to be primary trips, i.e. newly generated by the development.
3. The proposed Congress Street driveway is located approximately 260 feet east of Forest Street. This driveway would have a single entrance lane and a single exit lane. The Forest Street driveway will consist of a right turn in and right turn out only. Forest Street is a one way street in the northbound direction.
4. The level of service analysis shows that the proposed development will not have a significant impact on the surrounding street system. However, some existing intersections currently have a low level of service.
5. The intersection of Congress Street at the proposed driveway meets MDOT guidelines for consideration of left turn lane for left turning traffic from Congress Street into the driveway. Based on the projected left turning volumes, DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at the site driveway. This will require removal of parking on the southerly side of Congress Street which will require approval of the City Council.

DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for left turning traffic from Congress Street onto Forest Street. This location meets criteria for consideration of providing a left-turn treatment. Based on the projected left turning volumes DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at Forest Street. This will also require removal of parking on the southerly side of Congress Street.



© 1993 Delorme Mapping

**LEGEND**

- State Route
- Geo Feature
- Town, Small City
- ◆ Large City
- ▶ Hospital
- ▲ Park
- Interstate, Turnpike
- US Highway
- Population Center
- Street, Road
- Hwy Ramp
- Major Street/Road
- Interstate Highway
- State Route
- US Highway
- Railroad
- - - Intermittent River
- Airfield

Scale 1:15,625 (at center)

1000 Feet

500 Meters

PORTLAND, MAINE

Mag 15.00

Tue Feb 04 14:08:51 1997



DeLUCA-HOFFMAN ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
 778 MAIN STREET  
 SUITE 8  
 SOUTH PORTLAND, MAINE 04106  
 TEL (207) 775-1121  
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FIGURE

1

6. The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed full width storage lengths with two exceptions as discussed below:

Congress Street and Bramhall Street/Deering Avenue - The Deering Avenue southbound approach for a shared through right turn lane and an exclusive left turn lane, the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Cumberland Avenue.

7. Park Avenue and St. John Street is a high accident location experiencing 45 accidents. To correct the predominant pattern of change lane accidents, DeLuca-Hoffman Associates, Inc. recommends overhead lane use control signs and striping through the intersections for westbound duals left turn lanes.
8. DeLuca-Hoffman Associates, Inc. recommends the following improvements to correct existing offsite roadway deficiencies:

- Restripe the lane uses for northbound approach at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through left turn lane.
- Change the timing and phasing at the intersection of Bramhall and Congress Streets.
- Installation of traffic signal controller at Park Avenue and Forest Street.

Based upon these findings, it is the opinion of DeLuca-Hoffman Associates, Inc. that the traffic generated by the proposed development can be adequately and safely accommodated on the surrounding street system given existing geometric and the improvements of the traffic signal timing and phasing.

I. EXISTING CONDITIONS

Site:

The site shown in Figure 1 currently occupied by the existing Maine Medical Center parking lot, is located on the northeast corner of the intersection of Congress Street and Forest Street in Portland, Maine. The existing parking lot contains 52 parking spaces with a single driveway access to Congress Street. The site is bounded by Congress Street to the south, Boynton Street to the north, Forest Street to the west, and an apartment building to the east.

Adjacent Roads:

The site has frontage on Congress Street, Forest Street, and Boynton Street. Congress Street has a 42 foot wide roadway with on street parking on both sides. Congress Street also has a sidewalk along the site frontage. The posted speed limit is 25 mph. Congress Street connects Interstate I-295 to the west and Portland downtown to the east.

Forest Street is a one way street in a northbound direction. It intersects Congress Street to south and Park Avenue to the north. Forest Street has a 22 foot wide travel way with on street parking on the west side of the street.

Boynton Street is a two way roadway and has a 22 foot wide travel way with on street parking. Boynton Street connects Forest Street to the west and Weymouth Street to the east.

DeLuca-Hoffman Associates, Inc. based this study on the following information:

- A 1"=80'± scale Site Plan dated October 29, 1996 prepared by Mediplex Medical Building Corporation.
- Computerized accident data summary for the period 1993 to 1995 for Congress Street from St. John Street to Bramhall Street, for St. John Street from Congress Street to Park Avenue, and for Park Avenue from St. John Street to Forest Street..
- Traffic Impact Study for the Holt Hall Renovation prepared by Eaton Traffic Engineering on August 1996.
- Total active employees at the existing Maine Medical Center in Portland, Maine provided by Maine Medical Center.
- Turning movement count data collected by DeLuca-Hoffman Associates, Inc. at the following locations on February 4 and 6, 1997 from 6:45 a.m. to 8:45 a.m. and from 3:30 p.m. to 5:30 p.m.
  - Congress Street at St. John Street
  - Congress Street at Valley Street (US Route 1 northbound)
  - Congress Street at Gilman Street
  - Congress Street at Fores: Street

- Congress Street at Existing Parking Lot Driveway
- Congress Street at Bramhall Street/Deering Avenue
- Park Avenue at St. John Street
- Park Avenue at Valley Street
- Park Avenue at Forest Street

Additionally DeLuca-Hoffman Associates, Inc. collected the turning movement data at the following locations.

The existing Maine Medical Center Garage driveways on February 7, 1997 from 3:00 p.m. to 6:00 p.m. and on February 10, 1997 from 6:45 a.m. to 8:45 a.m..

The Stroudwater Crossing driveway on February 7, 1997 from 6:45 a.m. to 8:45 a.m. and from 3:30 p.m. to 5:30 p.m..

The result of these turning movement counts are shown for the a.m. and the p.m. peak hour in Figure 2 of Appendix A.

**II. BACKGROUND TRAFFIC CONDITION**

The existing turning movement count volumes were adjusted to approximate the 30th highest hour conditions of the year using the Weekly Group Mean Factor data for Group I (Urban) from the Maine Department of Transportation. The methodology used to determine a seasonal adjustment factor from this data is as follows:

<i>Seasonal Adjustment Factor for February, 1997</i>			
Period	WGMF		Seasonal Adjustment Factor
<u>Week of Counts</u>	<u>1.12</u>	=	1.27
4th Lowest Week	0.88		

The proposed facility is planned to be completed in 1998. To approximate traffic in this year, DeLuca-Hoffman Associates, Inc. increased the 1997 counts by 2% and added the traffic generated by other developments expected to be completed in 1998 in the study area. According to the Portland Planning Department, Holt Hall is the only project which is pending. Holt Hall is located on the southeast corner of the intersection of Bramhall Street and Congress Street. The traffic projections associated with this project are included as Figure 3 of Appendix A.

DeLuca-Hoffman Associates, Inc. has combined the existing traffic adjusted to approximately the 30th highest hour, with the peak hour traffic forecasted for the proposed Holt Hall and a 2% annual growth rate yield for the 1998 No-build conditions. The 1998 No-build volumes are shown in Figure 4 of Appendix A.

### III. TRIP GENERATION

The proposed Medical Office building will consist of 49,150 square feet with an attached 420 space parking garage. Approximately 226 parking spaces in the parking garage will be reserved to meet the estimated demand of the medical office building with the remaining 194 being available to Maine Medical employees. This trip generation will be made up of trips associated with the medical office building and with Maine Medical Center employees.

#### *Trips associated with the Medical Office Building*

To estimate the trips associated with the medical office building, DeLuca-Hoffman Associates, Inc. collected traffic counts at Stroudwater Crossing, a 32,190 s.f. medical office building, located on outer Congress Street. These counts were completed on Friday, February 7, 1997 from 6:45 to 8:45 AM and again from 3:30 to 5:30 PM. The results of the count are summarized below:

USE	Trip Ends				Trip Rate / 1,000 s.f.			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Stroudwater Crossing 32,190 s.f	67	101	45	95	2.08	3.14	1.4	2.95

USE	Trip Ends				Trip Rate / Parking Space			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Stroudwater Crossing Parking Spaces =147	67	101	45	95	0.46	0.69	0.31	0.65

Applying these rates to the medical office building results in the following trip estimates:

Medical office building trips based on 49,150 s.f.:

AM Peak Hour

$$49,150 \text{ s.f.} \times \frac{2.08 \text{ trip ends}}{1,000 \text{ s.f.}} = 102 \text{ trip ends}$$

PM Peak Hour

$$49,150 \text{ s.f.} \times \frac{3.14 \text{ trip ends}}{1,000 \text{ s.f.}} = 154 \text{ trip ends}$$

Medical Office building trips based on 226 parking spaces

AM Peak Hour

$$226 \text{ spaces} \times \frac{0.46 \text{ trip ends}}{\text{one space}} = 104 \text{ trip ends}$$

PM Peak Hour

$$226 \text{ spaces} \times \frac{0.69 \text{ trip ends}}{\text{one space}} = 156 \text{ trip ends}$$

Based on these calculations, DeLuca-Hoffman Associates, Inc. has used 104 AM and 156 PM trip ends for the portion of the trips generated by the medical office buildings.

Trips associated with the remaining 194 spaces in the parking garage not utilized by the Medical Office building were calculated as follows:

DeLuca-Hoffman Associates, Inc. collected traffic counts at the Maine Medical parking garage on Congress Street to assist in estimating the trips associated with the remaining 194 spaces in the parking garage not utilized by the Medical office building. The results of this data collection is summarized below:

USE	Trip Ends				Trip Rate / Parking Space			
	Peak Hour		Peak Hr. of Adj. Street Traffic		Peak Hour		Peak Hr. of Adj. Street Traffic	
	AM	PM	AM	PM	AM	PM	AM	PM
Parking Garage Parking Space = 1276	514	371	355	245	0.4	0.29	0.28	0.19

Applying these rates to the remaining 194 spaces, results in the following trip generation:

AM Peak Hour

$$194 \text{ spaces} \times \frac{0.4 \text{ trip ends}}{\text{one space}} = 78 \text{ trip ends}$$

PM Peak Hour

$$194 \text{ spaces} \times \frac{0.29 \text{ trip ends}}{\text{one space}} = 56 \text{ trip ends}$$

### ***Combined Trip Generation***

Combining the trips associated with the Medical office building and those associated with the Maine Medical Center employees utilizing excess parking in the garage, results in the following total trip generation estimate:

#### **AM Peak Hour**

$$104 \text{ (medical office)} + 78 \text{ (MMC)} = 182 \text{ trip ends}$$

#### **PM Peak Hour**

$$156 \text{ (medical office)} + 56 \text{ (MMC)} = 212 \text{ trip ends}$$

Based on the above calculations, the proposed development is forecasted to generate 182 trip ends during the AM peak hour and 212 trip ends during the PM peak hour.

## **IV. TRIP COMPOSITION**

The ITE "Trip Generation" manual indicates that all the traffic associated with an office will be primary trips. Primary trips are those which are new to the street system not already passing by the site.

## **V. TRIP DISTRIBUTION AND ASSIGNMENT**

DeLuca-Hoffman Associates, Inc. has distributed the primary trip ends associated with the proposed Medical Office facility with 420 parking spaces based on the gravity model of the existing Maine Medical Center employees. This distribution is summarized as follows:

<b>Trip Distribution Based on Employees Gravity Model</b>	
<b><i>Approaching the Site</i></b>	<b><i>% of Trip Distribution</i></b>
Congress Street from west	37.4%
Congress Street from east	14.0%
Valley Street from south	31.9%
St. John Street from north	16.7%
Total	100%

Site generated traffic is assigned at the two site driveways as shown in Figure 5 of Appendix A. Sixty-two percent of the entering traffic will access the site via the Forest Street driveway and thirty-eight percent use the Congress Street Driveway. Approximately 65% of the exiting traffic is anticipated to leave via the Congress Street and 35% via the Forest Street.



**VI. STUDY AREA**

Criteria - Section 3b2b of the Maine Department of Environmental Protection's (MeDEP) Site Location of Development Law states the Board may define the study area as follows:

- a. the first major intersection; and
- b. all intersections where, during any one hour period, traffic attributable to the proposed development equals or exceeds:
  - i. 25 vehicles in a left-turn only lane;
  - ii. 35 vehicles in a through lane, right-turn lane, or a combined through and right-turn lane; or
  - iii. 35 vehicles (multiplying the left-turn volume by 1.5) in a combined left-turn and through lane, or a combined left-turn, through and right-turn lane.

Based on the trip assignment summary presented in Figure 5, the study area includes the following intersection:

- Congress Street at St. John Street
- Congress Street at Valley Street (US Route 1 northbound)
- Congress Street at Gilman Street
- Congress Street at Forest Street
- Congress Street at Existing Parking Lot Driveway
- Congress Street at Bramhall Street/Deering Avenue
- Park Avenue at St. John Street
- Park Avenue at Valley Street
- Park Avenue at Forest Street

**VII. CAPACITY ANALYSIS**

DeLuca-Hoffman Associates, Inc. performed capacity analyses for the intersections contained in the study area. The signalized and unsignalized intersections were evaluated using the Highway Capacity Software computer program. The signalized intersections were evaluated using the SIGNAL 94 program. (See Appendix B)

The capacity analysis assesses the quality of traffic flow at intersections and provides a ranking based upon its delay and Level of Service (LOS). Level of service rankings are similar to the academic grading system where an "A" indicates very little delay and an "F" indicates very poor or extreme conditions. Level of service "D", is generally acceptable at signalized intersections. At an unsignalized intersection, if the level of service falls below a "D", the intersection should be examined further to determine if it meets one or more of the warrants set forth in the Manual on Uniform Traffic Control Devices (MUTCD) for signalization. If a warrant is not met, then the lower level of service is satisfactory.

The following tables summarize the relationship between delay and level of service at both signalized and unsignalized intersections:

Level of Service Criteria for Unsignalized Intersections	
Level of Service	Stopped Delay per Vehicle (sec)
A	Up to 5.0
B	5.1 to 10.0
C	10.1 to 20.0
D	20.1 to 30.0
E	30.1 to 45.0
F	Greater than 45.0

Level of Service Criteria for Signalized Intersections	
Level of Service	Stopped Delay per Vehicle (sec)
A	Less than 5.0
B	5.1 to 15.0
C	15.1 to 25.0
D	25.1 to 40.0
E	40.1 to 60.0
F	Greater than 60.0

**Description of Signalized Intersections**

**Park Avenue and St. John Street** - This is a four-leg intersection with the westerly leg of the intersection, Park Avenue being one-way westbound. The westbound Park Avenue approach consists of an exclusive right-turn lane, a through lane and a shared through left-turn lane. St. John Street which forms the northbound approach consists of an exclusive left-turn lane, a shared through left-turn lane, and a channelized right turn lane. The St. John Street southbound approach has exclusive right turn lane and a shared through left-turn lane.

**Congress Street and St. John Street** - This intersection is a four leg signalized intersection. The eastbound Congress Street approach is a one way street with an exclusive left-turn lane, a through lane, and a shared through right-turn lane. The westbound Congress Street approach consists of an exclusive left turn lane and an exclusive right turn lane. The northbound St. John Street approach has a through lane and a shared through right turn lane. The southbound leg approach consists of a through lane and a shared through left turn lane. This intersection has a shared traffic controller with Congress Street and Valley Street (US Route 1 northbound).

**Congress Street and Valley Street(US Route 1 northbound)** - This intersection is also a four leg signalized intersection. Congress Street is the east and west legs and Valley Street is the north and south legs. The Congress Street eastbound and westbound approaches have a shared through right turn lane and a shared through left turn lane. The Valley Street (US Route 1 northbound) approach has an exclusive right

turn lane and a shared through right turn lane. The southbound leg is a one way street in the northbound direction. This intersection has a shared a traffic controller with Congress Street and St. John Street.

**Congress Street and Bramhall Street/Deering Avenue** - This intersection is a four legs and fully actuated signalized intersection with an exclusive pedestrian phase. The Congress Street eastbound approach consists of an exclusive right turn lane and a shared through right turn lane. The Congress Street westbound approach has an exclusive right turn lane and a shared through left turn lane. The Bramhall Street approach has an exclusive left turn lane and shared through right turn lane. The Deering Avenue approach has an exclusive right turn lane and a shared through left turn lane.

Capacity analyses are based on the above geometrics. The No-Build evaluation is based on existing timing and phasing, while the Build condition is based on complementation of improvements as discussed in the paragraph following this Table. The results of the analyses of these signalized intersection are discussed below. Computer printouts of the analyses are provided in Appendix B:

Results of Signalized Capacity Analysis					
Approach	Lanes	1998 No- Build		1998 Build	
		AM	PM	AM	PM
<b>St. John St. &amp; Park Avenue</b>					
St. John Street NB	Left	D	F	C	E
	Left/through	D	F	C	E
	Right	D	C	A	A
St. John Street SB	Through/Left	D	C	D	D
	Right	C	C	B	C
Park Avenue WB	Right	C	C	A	A
	Through/Left	C	E	C	D
Overall delay in Second		D 25.0	E 47.7	C 17.8	D 35.0
<b>St. John &amp; Congress Street</b>					
Congress Street EB	Left	D	D	B	B
	Through/Right	D	C	B	B
Congress Street WB	Left	C	C	C	A
	Right	D	F	B	A
St. John Street NB	Through/Right	D	F	B	C
St. John Street SB	Through/Left	C	C	C	C
Overall Delay in Second		D 32.4	E 45.9	B 11.3	B 14.8
<b>Congress &amp; Valley Street</b>					
Congress Street EB	Right/Through/Left	B	A	A	A
Congress Street WB	Right/Through/Left	C	D	B	B
Valley Street NB	Left	B	B	NA	NA
	Through/Right	C	B	NA	NA
	Right	NA	NA	B	B
	Through/Left	NA	NA	B	B
Overall Delay in Second		B 11.3	C 17.7	B 6.1	B 6.7

Congress & Bramhall/Deering					
Congress Street EB	Right	B	B	B	A
	Left/Through	C	C	B	B
Congress Street WB	Right	B	B	B	B
	Left/Through	F	F	B	D
Bramhall Street NB	Right	B	B	B	B
	Left/Through	E	F	B	D
Deering Avenue SB	Right/Through	B	B	C	C
	Left	B	D	B	D
Overall Delay in Second		D 36.1	E 50.0	B 11.9	C 17.9

The results of the analysis of these signalized intersections are discussed below.

**Park Avenue at St. John Street** - Based on the capacity analysis, the westbound Park Avenue approach has a level of service E for a shared through left turn lane during the PM peak hour under No-Build conditions. The northbound St. John Street approach has a level of service F for an exclusive left turn lane and a shared through left turn lane during PM peak hour under No-Build conditions. Under Build condition, this intersection is an overall level of service D. However the northbound approach has a level of service E for both a left turn lane and a shared through left turn lane. The land use constraints associated with this intersection are such that the intersection cannot be expanded. DeLuca-Hoffman Associates, Inc. does recommend that the cycle length be reduced from 90 to 60 seconds.

**Congress Street and St. John Street** - Based on the capacity analysis, this intersection has a level of service E under No-Build condition during the PM peak hour. The westbound Congress Street approach has a level of service F for a right turn lane. The northbound St. John Street approach has a level of service F for a shared through right turn lane. Under Build condition, this intersection has a level of service C or better based the following improvements:

- Reduce the cycle length from 90 to 60 seconds.
- Eliminate the following phases:
  - AM peak hour (7:00 to 10:00 AM)
    - Westbound Congress Street a leading phase.
    - Southbound Congress Street a leading phase.
  - PM peak hour (3:00 to 6:00 PM)
    - Eastbound Congress Street a leading phase.
    - Southbound St. John Street a leading phase.

**Congress Street and Bramhall** - Based on the capacity analysis, the Congress Street westbound approach has a level of service F for a shared through left turn lane during the AM and the PM peak hour under both No-Build condition. Under the Build condition, this intersection has a level of service D or better during the AM and the PM peak hour based on the following improvements:

- Implementation of a lead phase from the northbound Bramhall Street approach.
- Retiming of the intersection.

**Congress Street and Valley Street (US Route 1 Northbound)** - This intersection has an acceptable level of service under both No-Build and Build conditions based on the capacity analysis. The Build condition is based on the following improvement:

- Restripe the northbound Valley Street approach lane uses as a exclusive right turn lane and a shared through left turn lane.

Unsignalized Intersections

<b>Results of Unsignalized Capacity Analysis</b>					
Approach	Lanes	1998 No-build		1998 Build	
		AM	PM	AM	PM
<b>Congress &amp; Gilman Street</b>					
Gilman Street NB	Left/Right/Through	F	E	F	E
Gilman Street SB	Left/Right/Through	C	C	C	C
Congress Street WB	Left	B	B	C	B
Intersection Delay in Second		4.5	2.9	6.7	3.8
<b>Congress St. &amp; Site Drive.</b>					
Congress Street EB	Left	N/A	N/A	A	A
Proposed Driveway SB	Left/Right	N/A	N/A	B	C
Overall				0.3	1.2
<b>Park Ave. &amp; Forest Street</b>					
Forest Street NB	Left/Right	C	F	C	F
Overall		1.2	114	1.7	174.3
<b>Park Ave. &amp; Valley Street</b>					
Valley Street NB	Left	F	F	F	F
	Right	A	A	A	A
Overall		5.4	35.3	5.6	38.6
<b>Congress &amp; Forest Street</b>					
Congress Street EB	Left	A	B	A	B
Overall		.1	0.2	.3	.3

**Congress Street at Gilman Street** - The Gilman Street northbound approach left turn lane has a level of service F with level E during the AM and PM peak hour under both No-Build and Build conditions. Therefore, this location was evaluated to see if signalization is warranted. This analysis contained in Section VIII, shows that signal warrants are not met for both the No-Build and the Build condition. The northbound approach left turn lane has a level of service F, therefore, no mitigation measures are proposed at this location.

**Park Avenue and Forest Street** - The Forest Street northbound approach is a one-way street. Based on the capacity analysis, the Forest Street northbound approach left turn lane has a level of service F during the PM peak hour under both No-Build and Build conditions. This location was also evaluated to see if signalization is warranted. This analysis contained in Section VIII, shows that currently signal warrant peak hour volumes are met based on PM peak hour volumes. The proposed development increases in the traffic volume by one vehicle per minute during the PM peak hour. Therefore, the intersection is required a signal.

**Left Turn Lane Warrant Analysis**

**Congress Street at Forest Avenue** - DeLuca-Hoffman Associates, Inc. has also reviewed the left-turn warrant criteria for Congress Street at Forest Street in accordance with Figure 8-19 of the MDOT Highway Design Guide. Figure 8-19 is based on a two lane travel way. Based on the Figure, this location meets criteria for consideration of a left-turn treatment. Therefore, DeLuca-Hoffman Associates, Inc. recommends a left-turn lane on Congress Street at Forest Street. This will require removal of parking on the southerly side of Congress Street.

**Congress Street at the Proposed Driveway** - DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for Congress Street at the proposed site driveway in accordance with Figure 8-19 of the MDOT Highway Design Guide. Based on the Figure, this location meet criteria for consideration of providing a left-turn treatment. Therefore, DeLuca-Hoffman Associates, Inc. recommends installation of a left-turn lane on Congress Street. This will require removal of parking on the southerly side of Congress Street which will require the approval of the City Council.

**VIII. SIGNAL WARRANT EVALUATION**

The Manual on Uniform Traffic Control Devices (MUTCD) provides eleven conditions for which traffic signal control may be warranted for an intersection. One or more of these warrants should be met before a signal is installed. Traffic conditions evaluated with respect to these warrants are tabulated and discussed below. Warrant analysis worksheets are contained in Appendix D.

Number	Description	Satisfied			
		Gilman & Congress Street		Forest Street & Park Avenue	
		Existing	Proposed	Existing	Proposed
Warrant 1	Minimum vehicular volume	No	No	No	No
Warrant 2	Interruption of continuous traffic	No	No	No	No
Warrant 3	Minimum pedestrian volume	No	No	No	No
Warrant 4	School Crossing.	No	No	No	No
Warrant 5	Progressive movement.	No	No	No	No
Warrant 6	Accident experience	No	No	No	No
Warrant 7	Systems	No	No	No	No
Warrant 8	Combination of warrants	No	No	No	No
Warrant 9	Four hour volumes	No	No	No	No
Warrant 10	Peak hour delays	No	No	No	No
Warrant 11	Peak hour volumes	No	No	Yes	Yes

**Congress Street at Gilman Street** - The above summary shows that the intersection of Gilman Street and Congress Street does not meet the signal warrant. Therefore, no mitigation measures are proposed at this location.

**Forest Street and Park Avenue** - The above summary shows that currently the intersection meets the peak hour volume warrant. The proposed development increase in traffic volume, 1 vehicle per minute during the PM peak hour. Therefore, the installation of a signal is recommended at this intersection.

**IX. STORAGE LENGTH ANALYSIS**

DeLuca-Hoffman Associates, Inc. has evaluated the potential storage lengths at the signalized intersections during the a.m. and the p.m. peak hour, for the 1998 Build condition. The available/proposed storage areas and required lengths as computed using SIGNAL 94 are summarized in the following table.

The available/proposed storage areas are based on the existing conditions.

Stacking Length Analysis for Weekday AM and PM Peak Hour				
Location		Available/Proposed Storage Length	90% Confidence Stacking Length	
			AM	PM
St. John St. & Park Avenue	Lane			
St. John Street NB	Left	800	253	400
	Left/Through	800	272	432
	Right	130	126	65
St. John Street SB	Through/Left	300	294	212
	Right	100	90	72
Park Avenue WB	Right	150	37	34
	Through/Left	600	216	361
<b>St. John &amp; Congress Street</b>				
Congress Street EB	Left	300	163	244
	Through/Right	300	290	292
Congress Street WB	Left	250	45	73
	Right	250	111	153
St. John Street NB	Through/Right	400	215	311
St. John Street SB	Through/Left	800	146	142



<b>Congress &amp; Valley Street</b>				
Congress Street EB	Right/Thru/Left	250	197	138
Congress Street WB	Right/Thru/Left	180	81	141
Valley Street NB	Right	150	140	71
	Through/Left	350	110	126
<b>Bramhall &amp; Congress Street</b>				
Congress Street EB	Left/Through	310	309	274
	Right	100	71	46
Congress Street WB	Left/Through	550	172	245
	Right	100	30	61
Bramhall Street NB	Left	200	70	121
	Right/Through	200	181	307
Deering Street SB	Right/Through	100	229	201
	Left	100	44	121

The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed storage lengths with two exceptions as discussed below:

**Congress Street and Bramhall Street/Deering Avenue** - The Deering Avenue southbound approach has available stacking lengths of 100 feet for a shared through right turn lane and an exclusive left turn lane. Under the AM peak hour the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall Street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also will block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Deering Avenue.

## X. SIGHT LINES

The Maine Department of Transportation (MDOT) publication "Access Management, Improving the Efficiency of Maine Arterials" provides recommended sight distances based on driveway classifications. The classifications are as follows:

- **Low Volume Driveway:** Driveways with a traffic volume of less than 500 vehicle trips per day, or 50 or less vehicle trips per peak hour.
- **Medium Volume Driveway:** Driveways with less than 1,500 trips per day and less than 150 trips during the peak hour.
- **High Volume Driveway:** Driveways with more than 1500 trips per day or 150 trips during the peak hour.



The traffic volume associated with the site at both the proposed driveways are 128 and 95 trips during the p.m. peak hour. Therefore, for the purpose of sight distance analysis, DeLuca-Hoffman Associates, Inc. has evaluated the driveway as Low/Medium volume driveways. The guidelines set forth by MDOT for sight distance criteria for a Low/Medium volume driveway are as follows:

<b>MDOT Standards for Sight Distance For a Low/Medium Volume Driveway</b>	
<b>Speed (mph)</b>	<b>Desirable Sight Distance (full-time)</b>
25	250
30	300
35	350
40	400
45	450
50	500
55	550

DeLuca-Hoffman Associates, Inc. has evaluated the available sight lines at the proposed driveways in accordance with MDOT standards.

The MDOT standards are as follows:

- Driveway observation point: 10 feet off major street travel way
- Height of eye at driveway: 3.5 feet above ground
- Height of approaching vehicle: 4.25 feet above road surface

The design speed used for the major road is generally the 85th percentile travel speed. This is the speed at which 85% of the traffic is traveling at or below. The posted speed limit on the Congress Street is 25 miles per hour. The estimated 85th percentile travel speed along this road is 5 mph above the posted speed or 30 mph. Therefore, the desirable sight distance is 300 feet.

Forest Street does not have a posted speed limit. Based on field observation, the average vehicle travels approximately 20 to 25 mph. Forest Street has a 22 foot roadway with on street parking, a one way street and is approximately 650 feet long.

The results of the sight line analyses along Congress Street and Forest Street are summarized below:

Driveway Sight Line Evaluation			
Direction	85th Percentile Travel Speed	Required Sight Line	Actual Sight Line
<b>Forest St. Driveway</b>			
From the south	25 mph	250'	275'
<b>Congress St. Driveway</b>			
From the east	30 mph	300'	425'
From the west	30 mph	300'	375'

Based on the above information, the sight distance at the existing and the proposed driveways meet or exceeds the MDOT sight distance standards.

It is recommended that any planting located within the sight triangle will not exceed three feet in height and shall be maintained. Signage shall be placed where it will not obstruct sight lines.

**XI. ACCIDENT ANALYSIS**

DeLuca-Hoffman Associates, Inc. has based the accident analysis of this study area on data obtained from the MDOT for the period of 1993 to 1995.

In order to evaluate whether a location has an accident problem, MDOT uses two criteria to define High Accident Locations (HAL). Both criteria must be met in order to be classified as an HAL.

1. A critical rate factor of 1.00 or more for a three year period. (A Critical Rate Factor (CRF) compares the actual accident rate to the rate for similar intersections in the State. A CRF of less than 1.00 indicates a rate less than average) and:

2. A minimum of 8 accidents over a three year period.

Computerized accident data summaries were provided by MDOT for the study area. Data for these study area intersections is provided below:

<b>Accident Data</b>			
<b>Intersection</b>	<b>Number of Accidents</b>	<b>CRF</b>	<b>HAL</b>
Park Ave. & St. John St.	45	1.16	Yes
Congress & St. John St.	22	0.49	No
Congress & Valley St.	24	0.82	No
Congress & Gilman St.	11	1.00	Yes
Congress & Forest St.	5	0.46	No
Congress & Weymouth St.	9	1.04	Yes
Congress & Bramhall St.	14	0.33	No
Link Between Park Avenue & Congress along St. John St.	32	2.16	Yes
Link Between Weymouth & Ellsworth along Congress St.	10	1.35	Yes
Park Avenue & Forest St.	1	0	No
Park Avenue & Valley St.	5	0.57	No

The above table shows that three intersections and two links are HAL. The collision diagrams are shown in Appendix C. HALs are discussed below:

**Park Avenue and St. John Street** - This intersection experienced 45 accidents during the three year study period and the critical rate factor is 1.16. Twelve rear end, nine change lane, and four left turn side swipe accidents occurred northbound on the St. John Street approach. Five rear end, one change lane and five angle accidents occurred westbound on Park Avenue. The St. John Street southbound approach has no clear pattern to determine the problem. The rear end accident for the northbound approach is due to the heavy traffic flow. The rear end collisions are common at signalized intersections. To correct the change lane accidents, DeLuca-Hoffman Associated recommends over head lane use control signs and also striping through the intersections for westbound dual left-turn lanes.

**Congress Street & Weymouth Street** - This intersect experienced 9 accidents in the three year study period with a critical rate factor of 1.04. Two accidents involved angle, rear end, turning movement, and parking vehicles. There is no clear pattern to be corrected. Therefore no mitigation measures are proposed for this location.

**Congress Street & Gilman Street** - Based on the accident table shown, the intersection is HAL with the critical rate factor of 1.00. This intersection experienced 11 accidents. Six of these accidents were angle accidents and four of these angle accidents were on the southbound approach. Two angle accidents were in the northbound approach. One of the angle accident was a physical impairment and two angle accident involved winter conditions. There is no clear pattern to identify as a correctable. Therefore no mitigation is proposed for this location.

**Roadway Segment Between Weymouth & Ellsworth Street along Congress Street** - This link experienced 10 accidents with a critical rate factor of 1.35. Six accidents involved parked vehicles, four of them were located on the north side of Congress Street and two of them on the south side of Congress Street. The remainder of the accidents have no clear accident pattern to identify as a problem. The three accidents involved with parked vehicles occurred during the winter months. Therefore no mitigation measures are proposed at this location.

**Link Between Park Avenue & Congress Street along St. John Street** - This link experienced 32 accidents in three year study period. The critical rate factor is 2.16. Twenty-two accidents occurred along the portion of the link fronting McDonald's. The most correctable accident pattern is in front of McDonald's driveways. Based on the McDonald's expansion Traffic Impact Study, McDonald's is proposed to close two driveways and create a proposed two-way driveway located approximately 60' south of the existing northerly driveway. This change will improve the safety in the area. The rest of the accident patterns are uncorrectable. Therefore no mitigation measures are proposed for this location.

**XII. CONCLUSION**

DeLuca-Hoffman Associates, Inc. has examined the impact of traffic associated with the proposed Medical office building with attached 420 space parking garage in Portland, Maine..

The following is a summary of the major findings of the traffic study.

1. It is estimated the proposed project will generate 182 and 212 trip ends during the AM and the PM peak hours. These trips would consist of 126 trips in and 56 trips out of the site during the a.m. peak hour and 42 trips in and 170 trips out of the site during the p.m. peak hour.
2. All of the trips are expected to be primary trips, i.e. newly generated by the development.
3. The proposed Congress Street driveway is located approximately 260 feet east of Forest Street. This driveway would have a single entrance lane and a single exit lane. The Forest Street driveway will consist of a right turn in and right turn out only. Forest Street is a one way street in the northbound direction.

4. The level of service analysis shows that the proposed development will not have a significant impact on the surrounding street system. However, some existing intersections currently have a low level of service.
5. The intersection of Congress Street at the proposed driveway meets MDOT guidelines for consideration of left turn lane for left turning traffic from Congress Street into the driveway. Based on the projected left turning volumes, DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at the site driveway. This will require removal of parking on the southerly side of Congress Street which will require approval of the City Council.

DeLuca-Hoffman Associates, Inc. also reviewed the left-turn warrant analyses for left turning traffic from Congress Street onto Forest Street. This location meets criteria for consideration of providing a left-turn treatment. Based on the projected left turning volumes DeLuca-Hoffman Associates, Inc. recommends construction of a left turn lane on Congress Street at Forest Street. This will also require removal of parking on the southerly side of Congress Street.

6. The anticipated stacking lengths at the signalized intersections in the study area are within the available/proposed full width storage lengths with two exceptions as discussed below:

Congress Street and Bramhall Street/Deering Avenue - The Deering Avenue southbound approach for a shared through right turn lane and an exclusive left turn lane, the stacking length is exceeded by 129 feet. This will block Cumberland Avenue. The Bramhall street approach also exceed the available stacking length of 107 feet during the PM peak hour. This also block the intersection of Bramhall Street and Marshall Street. DeLuca-Hoffman Associates, Inc. recommends the signs "Do Not Block the Street" for both Bramhall Street and Cumberland Avenue.

7. Park Avenue and St. John Street is a high accident location experiencing 45 accidents. To correct the predominant pattern of change lane accidents, DeLuca-Hoffman Associates, Inc. recommends overhead lane use control signs and striping through the intersections for westbound duals left turn lanes.
8. DeLuca-Hoffman Associates, Inc. recommends the following improvements to correct existing offsite roadway deficiencies:

- Restripe the lane uses for northbound approach at the intersection of Congress Street and Valley Street as an exclusive right turn lane and a shared through left turn lane..
- Change the timing and phasing at the intersection of Bramhall and Congress Streets.
- Installation of traffic signal controller at Park Avenue and Forest Street.

Based upon these findings, it is the opinion of DeLuca-Hoffman Associates, Inc. that the traffic generated by the proposed development can be adequately and safely accommodated on the surrounding street system given existing geometric and the improvements of the traffic signal timing and phasing.



DELUCA-HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS

775 MAIN STREET  
SUITE 4  
SOUTH PORTLAND, MAINE 04106  
TEL: 877-773-1121  
FAX: 877-773-1126

ATTACHMENT 0-1

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

March 11, 1997

Mr. Paul Gray  
Vice President Planning  
Maine Medical Center  
22 Bramhall Street  
Portland, ME 04102-3175

**Subject: Maine Medical Center Parking Demand**

Dear Mr. Gray:

Per your request, DeLuca-Hoffman Associates, Inc. has completed a parking analysis for Maine Medical Center (MMC). This analysis has been based on the following conditions:

- Completion of the current expansion of the Bean Building and renovation of other portion of the MMC campus.
- Completion of the proposed 49,156 s.f. medical office building and related parking.
- Sale of the Gateway Garage reducing the available parking to MMC from 650 spaces (capacity of the garage) to approximately 120 spaces.

The purpose of this letter is to summarize the demand and supply with the above conditions in place.

#### Parking Supply

DeLuca-Hoffman Associates, Inc. completed a parking analysis in June 1996 for the proposed additions to the Bean building which showed a parking supply of 2,363 spaces. Based upon preliminary plans dated 2/10/97 prepared by Mediplex for the proposed 49,156 s.f. medical office building on Congress Street northerly of Sportsman's Grill, there are 430 spaces planned as part of the office building. The location of the office building is shown in Figure 1 following this page. The proposed office building will displace 52 spaces currently on the site for a net gain of 378 spaces (430-52) over MMC's current supply.

Two other factors which will affect the parking supply are MMC's planned sale of the Gateway Garage which has 650 spaces and the lease of 150 parking spaces on St. John Street. As a condition of the sale of the Gateway garage, 120 spaces will be reserved for MMC employees who currently work at the Gateway.

Based on these factors and supply data previously furnished by MMC, DeLuca-Hoffman Associates, Inc. has summarized the supply after the Gateway sale and completion of the proposed Medical Office Building in Table 1 as follows:

WHICH GALLERY GARAGE IS NOT SHOWN



MAINE MEDICAL CENTER

BACK EAST TINGLOT

VALLEY

Portland, Maine

1967

Mr. Paul DiGrego  
March 11, 1997  
Page 2

Location	Number of Available Spaces
Ramp Parking Garage	1,276
Congress Street Parking Lot by Sportsman's Grill	430
Admitting	9
Visitors Parking Lot	315
MRI	11
In back of Gilman Street	15
Emergency	10
Oncology	10
Gateway Garage (Not shown in Figure 1)	120
Diabetes Center	15
Spaces Leased on St. John Street	150
Spaces Reserved at Farmers Market Garage	12
<b>Total Available Spaces</b>	<b>2,373</b>

Parking Demand

Based on the "Parking Analysis for a Proposed Expansion to the Bean Building at Maine Medical Center" completed by DeLuca-Hoffman Associates, Inc. in June 1996, the estimated demand upon completion of the Bean addition and relocation of employees from MMC to the ambulatory care facility in Scarborough was anticipated to be 1,914 spaces.

Very little information exists through transportation technical publications such as the Institute of Transportation Engineers or the Urban Land Institute to establish the parking demand for a medical office building. Methodologies are set forth in these publications based on the number of employees, however the number of employees is not currently known. DeLuca-Hoffman Associates, Inc. conducted parking inventories at similar facilities on February 11, 1997 from 7:30 a.m. to 3:30 p.m. at the existing Stroudwater Crossing on Congress Street in Portland and on February 12, 1997 from 7:30 a.m. to 3:30 p.m. at the existing medical building on 1250 Forest Avenue in Portland which are very similar to the proposed facility. This information is summarized in the table below:

Use	Available	Size (s.f.)	Peak # of Vehicles Park at Any Time	Occupied Spaces/1,000 s.f.	Available Spaces/1,000 s.f.
Stroudwater Crossing	147	32,190	123	3.8	4.6
1250 Forest Avenue Medical Building	127	40,317	80	2	3.2

Based on this information, DeLuca-Hoffman Associates, Inc. has used a parking ratio of 4.6 spaces/1,000 s.f. to estimate the parking demand for the proposed 49,156 s.f. medical office building. Based on this rate, the proposed office building will require 226 spaces (4.6 x 49,156). Thus, the proposed medical office building will increase the total campus parking demand to 2,140 spaces (1,914 + 226).



Paul DiGray  
March 11, 1997  
page 3

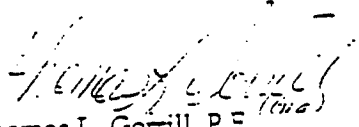
Parking Demand Compared to Supply

Based upon the information presented previously in this letter, the parking supply will be 2,373 upon completion of the proposed 49,156 s.f. medical office building with its associated 430 space parking garage and the sale of the Gateway garage. This supply of 2,373 is 233 spaces in excess of the forecast demand of 2,140 spaces upon completion of the office building and full operation of the Scarborough and John Roberts Road facilities. Thus, the supply exceeds the demand by 11%.

Please review these findings and contact me if you have questions or would like to discuss these findings in more detail.

Sincerely,

DeLUCA-HOFFMAN ASSOCIATES, INC.

  
Thomas L. Gorrill, P.E.  
Vice President of Transportation

TLG/ajm/1-471/brem1-14

c: Robert Bromm

CITY OF PORTLAND - TRAFFIC SECTION  
MEMORANDUM

Date: 03/18/97  
To: Richard Knowland, Senior Planner  
From: Thomas A. Errico, P.E., Traffic Engineer  
Subject: Maine Medical Office Facility - Congress Street

In conjunction with the above project, I have reviewed the traffic impact study prepared by DeLuca-Hoffman Associates, Inc. dated March 1997. In addition, I have reviewed the Parking Analysis also prepared by DeLuca-Hoffman Associates, Inc. dated March 11, 1997. My specific comments are summarized below.

- The Parking Analysis performed indicates the parking supply will exceed demand following the construction of the proposed project. In reviewing the data available, the proposed parking garage supply will be absorbed by the parking requirements of the proposed 49,156 square foot medical office building, and the elimination of parking spaces at the Gateway Garage. As indicated by John Peverada, in his Memorandum to you dated March 11, 1997, parking availability in the vicinity of the Maine Medical Center is poor. If the conclusions of the Parking Analysis are in fact accurate, supply is greater than demand, than improvements in the management of parking should be considered. While this project should not worsen parking conditions, it is recommended that improved parking measures (i.e. increasing supply or improved management) be considered.
- According to the traffic impact study, 62% of the traffic will enter the parking garage via the Forest Street driveway. An explanation should be provided that supports the trip distribution assumptions.
- At the Congress Street Bramhall Street/Deering Avenue intersection, it is recommended that a lead phase be provided from Bramhall Street and the signal timing revised. In conjunction with the lead phase, a five-section signal head will be required. In conjunction with the Holt Hall project, the installation of a five-section head was a condition of approval, and therefore may not be needed for this project. It is recommended that a proposed traffic signal timing plan be provided for implementation after build-out of the project.
- I concur with the recommendation to restripe the northbound Valley Street approach to consist of an exclusive right-turn lane and a shared left/through lane.
- At the Park Avenue/St. John Street intersection, northbound movements from St. John Street currently operate poorly, and will continue to operate poorly following build-out of the project. To help improve conditions, it is recommended that the cycle length be reduced from 90 to 60 seconds. It is recommended that a proposed traffic signal timing plan be provided for implementation after build-out of the project. It should be noted that while the intersection is expected to operate at an acceptable level of service following build-out of the project and revisions to the cycle length, movements from northbound St. John Street will continue to operate poorly.

3/18/97

## CITY OF PORTLAND - TRAFFIC DIVISION

- At the Congress Street/St. John Street intersection, improvements to the traffic signal phasing and timing are recommended to improve operating conditions. It is suggested that a traffic signal phasing and timing plan be prepared for implementation following build-out of the project. In addition, an assessment into the safety implications of eliminating the existing protected phases should be documented.
- An evaluation of signal warrants was performed at the Congress Street/Gilman Street and Forest Avenue/Park Avenue intersections. It appears that all eleven warrants were reviewed, although the study does not reference the data (i.e. delay, eight hour volumes, etc.) needed to evaluate all warrants. An explanation should be provided summarizing the data used in the evaluation of signal warrants.
- Poor levels of service were projected at the unsignalized intersection of Park Avenue and Valley Street. The study did not develop mitigation measures at this location.
- An evaluation of the need for left-turn lanes at the Congress Street/Forest Street and Congress Street/Proposed Project Driveway intersections were performed. Results indicate left-turn lanes are warranted. It is suggested that a conceptual sketch be prepared outlining the proposed roadway configuration. In addition, determination on the number of on-street parking spaces to be removed, as a result of the proposed left-turn lanes, should be estimated. Additionally, recommendations should be developed in respect to the existing Bus Stop located on Congress Street, and whether the proposed left-turn lanes will compromise safety and mobility.
- Although the intersections of Congress Street/St. John Street and Congress Street/Valley Street do not meet the criteria for a potentially hazardous location, the frequency of accidents is significant. It is recommended that a detailed evaluation of accident conditions be performed at these locations.
- Significant pedestrian activity is expected between the proposed Medical Office Building and Maine Medical Center. Provisions should be investigated relative to the crossing of pedestrians on Congress Street.
- The traffic impact study recommends the installation of a traffic signal at the Park Avenue/Forest Street intersection. It is suggested that the intersection be monitored following build-out of the project, and if actual field conditions warrant, a traffic signal should be installed. Accordingly, funds should be provided in an escrow account to ensure a follow-up study is performed and installation of a traffic signal is accomplished, if necessary.

CC: Bruce Bell, Operation Manager of Public Works

Bill Bray, Deputy Director of Public Works

MEMORANDUM

TO: Rick Knowland, Planner  
FROM: John Peverada, Parking Manager J.P.  
DATE: May 15, 1997  
RE: Proposed MMC Parking Garage and Office Building

I support the concept presented by Maine Medical Center to construct an office building and parking garage on the vacant lot at the corner of Congress and Forest Streets. In my opinion, aesthetically the proposed development will be an improvement to the area, however, there is a misconception. Whenever anyone hears about a parking garage associated with this project, they naturally assume that on-street parking in the area will be improved. The perception is that parking will not be an issue.

However, as I have previously stated, it is my opinion that the proposed parking garage associated with this project will not be large enough to handle the demand. In fact, after reading MMC's submission to the Planning Board, I believe that the figures quoted in the March, 1997 letter from Mr. Thomas Gorrill of DeLuca Hoffman, and the January 2, 1997 letter from Mr. Don McDowell support my assumptions. The following is my summary of the estimates provided by, or on behalf of, the hospital:

- 430 parking spaces proposed in the new garage
- 52+ spaces displaced from the existing lot (I'd say more)
- 228 spaces for the new building 4.6/1000 per Mr. Gorrill's letter
- 200+ spaces for vehicles relocated from the Gateway Shuttle, per Mr. McDowell (I'd say more)
- 27+/- spaces on-street lost due to the proposed left turn lane on Congress St.
- 75 space shortfall

Correct me if you think that the above analysis is wrong, but I believe that everyone should be aware of this situation. Additional parking is needed for MMC visitors, patients and employees. Presently, the Bramhall lot is overflowing, with several cars stacked on the street waiting to get in to the lot on a regular basis. The Western Prom neighbors are complaining about on-street parking as are "customers of the hospital". I believe that unless the proposed garage at Forest and Congress Streets is enlarged, we will be duplicating the current problems at Bramhall St. / Western Prom in this neighborhood. The new garage should be larger, or the office building made much smaller.

If MMC proposes to offset the demand for parking by shuttling employees from an off-site lot, then they should present the City with a long-term lease, or verification of ownership of the lot. They should also assure the City that their employees will not be parking on the streets.

Finally, I quickly looked at the plans, and did not see a snow gate on the roof. How do they plan to dump and remove snow?

Please pass this memo on to the Planning Board and Council.

- cc: Bob Ganley, City Manager
- Joe Gray, Director of Planning
- Alex Jaegerman, Chief Planner
- Gloria Thomas, Department Head
- Bill Bray, Deputy Director, Public Works

## CITY OF PORTLAND

## MEMORANDUM

**TO:** Rick Knowland, Planning & Urban Development  
**FROM:** John Peverada, Parking Manager J.P.  
**DATE:** March 11, 1997  
**RE:** Maine Medical Center Parking

Attached are copies of two orders that are tentatively on the March 17, 1997 Council agenda. As you can see, both orders deal with implementing two hour parking restrictions in the vicinity of Maine Medical Center (Thomas and Clifford Sts.), because of the unavailability of existing on-street parking due to the "all day parkers" who, I assume, are affiliated with Maine Medical Center.

Recently, I have been told by visitors of the hospital that there is a waiting line to get into the Bramhall St. parking lot between 11:00 am and 1:00 pm. People are forced to ride around the neighborhood looking for on-street spaces.

My purpose in bringing this to your attention is to let you know that parking is in very tight supply in the vicinity of Maine Medical Center, and each time unrestricted parking is taken off one street, those "all day parkers" are just moved another block away, putting a burden on another neighborhood.

In my opinion, Maine Medical Center should be encouraged to increase the size of the proposed parking garage at Congress and Forest Sts., so that their employees who currently park on the street will have an alternative. Mr. Carl Winslow, a landlord on Boynton St., has already inquired about having Boynton St. signed for two hour parking for the reasons outlined above.

cc: Bob Ganley, City Manager  
Bill Bray, Deputy Director of Public Works  
Joe Gray, Director of Planning  
Alex Jaegerman, Chief Planner  
Gloria Thomas, Department Head

**ORDER (TAB)**

**ORDER AMENDING TRAFFIC SCHEDULE RE: THOMAS STREET - SPONSORED BY ROBERT B. GANLEY, CITY MANAGER.**

The Traffic Division has received a written request from the residents of Thomas Street to change the existing unrestricted on-street parking. The request is for a two-hour parking restriction for the entire street (Spring Street to Pine Street).

The unavailability of the existing on-street parking due to "All Day Parkers" is what has prompted the residents to petition for the two-hour parking restriction. This action will allow Thomas Street residents use of the Residential Permit Parking Sticker Program.

The Traffic Division recommends approval of the proposed two-hour parking Traffic Schedule Amendment.

This item requires five affirmative votes for passage; after an opportunity for public comment has been given.

**ORDER (TAB)**

**ORDER AMENDING TRAFFIC SCHEDULE RE: CLIFFORD STREET - SPONSORED BY ROBERT B. GANLEY, CITY MANAGER.**

The Traffic Division has received a written request from the residents of Clifford Street to change the existing unrestricted on-street parking. The request is for a two-hour parking restriction for the entire street (Vaughn Street to Thomas Street).

The unavailability of the existing on-street parking due to "All Day Parkers" is what has prompted the residents to petition for the two-hour parking restriction. This action will allow residents use of the residential permit parking sticker program.

The Traffic Division recommends approval of the proposed Traffic Schedule Amendment.

This item requires five affirmative votes for passage; after an opportunity for public comment has been given.

**LICENSES:**

**ORDER 221 (TAB)**

**ORDER GRANTING MUNICIPAL OFFICERS' APPROVAL FOR NEW AND RENEWAL STATE LIQUOR LICENSES AND SPECIAL ENTERTAINMENT PERMITS - SPONSORED BY NADEEN M. DANIELS, CITY CLERK.**

*John -  
Fyl*

MAINE MEDICAL CENTER PORTLAND, MAINE

VENDOR NO. A001280

CHECK NO. 1070553

DESCRIPTION	INVOICE DATE	INVOICE #	INVOICE AMOUNT
	12/31/97	M.O.B.	1301.00
TOTAL INVOICE (\$)	0.00	TOTAL DISCOUNT	0.00
		TOTAL CHECK	1301.00

MAINE MEDICAL CENTER FOUNDATION  
 22 BRAMHALL STREET PORTLAND, MAINE 04102

Fleet Bank  
 PORTLAND, MAINE

CHECK NO. 1070553 <sup>52-38</sup>/<sub>112</sub>

DATE OF CHECK

12/31/97

PAY TO THE ORDER OF  
CITY OF PORTLAND

AMOUNT OF CHECK

\*\*\*\*\*\$1,301.00

One thousand three hundred one and 00/100 Dollars

*William R. Camp*  
 VICE PRESIDENT FINANCE/TREASURER

*Michael Kilmer*  
 ASSOCIATE VICE PRESIDENT-FINANCE

VOID AFTER 90 DAYS

⑈ 1070553⑈ ⑆011200365⑆ 000 679 3290⑈

MEDICAL OFFICE BLDG

9704

### CITY OF PORTLAND, MAINE ENGINEERING REVIEW FORM

Address of Proposed Site 883-903 CONGRESS STREET Date 12/22/97  
 Project Description MAINE MEDICAL CENTER OFFICE BLDG + PARKING GARAGE Job # \_\_\_\_\_  
 Applicant MAINE MEDICAL CENTER  
 Applicant's Mailing Address 22 BROMWALL, PORTLAND, ME, 04102

#### Site Review (Planning Department)

#### Right-of-Way Review (Public Works Department)

Review Engineer: DURRING-HENRY  
 Number of Estimated Hours: 25.5  
 Cost Per Hour: \$ 46.90  
 Total Amount: \$ 1,196.

Review Engineer: T. LOMBARDO  
 Number of Estimated Hours: 3  
 Cost Per Hour: \$ 35  
 Total Amount: \$ 105

An engineering fee has been assessed in the amount of \$ 1,301 for the review of your project located at 883-903 CONGRESS ST.

Please make check payable to the City of Portland. The check should be submitted along with this form to the Portland Planning Department, City of Portland, 4th Floor, 389 Congress Street, Portland, ME 04101. Attn: RICHARD KNINLAND

Office Use Only	
Invoice Date: _____	Received: _____ date
Planning Revenue Code: _____	
Public Works Revenue Code: _____	

- cc: Applicant - white  
 Planner - blue  
 Engineer - green  
 Public Works - yellow  
 Financial Officer - pink  
 Review/Inspection Fee File - golden

Post-It* Fax Note	7671	Date	12/23	# of pages	2
To	Jim Morrison	From	Scott Reekes		
Co./Dept.		Co.	SBC		
Phone #		Phone #			
Fax #	871-6195	Fax #			





**CITY OF PORTLAND**

October 31, 1997

Ms. Linda Kokomuller  
Maine Department of Environmental Protection  
312 Canco Road  
Portland ME 04103

re: Maine Medical Center

Dear Ms. Kokomuller:

Maine Medical Center is requesting development review for a 50,000 sq. ft. office building and 430-space parking garage in the vicinity of 883-993 Congress Street. This represents a revision to the MMC site location of development law permit for their campus. With this new development proposal, the total impervious area of the Maine Medical Center will now apparently exceed seven acres.

We are therefore requesting under Sec. 484, the ability of the Portland Planning Board to review this seven acre-plus (impervious) project as a revision to their existing MMC site location permit.

Please confirm whether we may proceed with Planning Board local jurisdiction of this project.

Sincerely,

A handwritten signature in cursive script that reads "Richard Knowland".

✓ Richard Knowland  
Senior Planner

cc: Joseph E. Gray, Jr., Director of Planning and Urban Development  
Alexander Jaegerman, Chief Planner

O:\PLAN\REZONE\883CNGRS\LETTERS\KOKO1031.LEC



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR.  
GOVERNOR

EDWARD O. SULLIVAN  
COMMISSIONER

Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, ME 04101

November 21, 1997

Dear Richard:

I am writing in response to your letter of October 31, 1997, regarding review of a proposed modification of Maine Medical Center's Site Location of Development permit. With the information you have provided, the Department has made the determination that you may proceed with Planning Board local jurisdiction of the project, pursuant to Section 489 of the Site Location of Development statute.

Sincerely,

A handwritten signature in blue ink that reads "Dana Vallean".

Dana Vallean, Project Manager  
Division of Land Resource Regulation  
Bureau of Land and Water Quality

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688  
RAY BLDG., HOSPITAL ST.

BANGOR  
106 HOGAN ROAD  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769-2094  
(207) 764-0477 FAX: (207) 764-1507



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

ANGUS S. KING, JR.  
GOVERNOR

EDWARD O. SULLIVAN  
COMMISSIONER

Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, ME 04101

November 21, 1997

Dear Richard:

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Sincerely,

Dana Vallean, Project Manager  
Division of Land Resource Regulation  
Bureau of Land and Water Quality

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688  
RAY BLDG., HOSPITAL ST.

BANGOR  
106 HOGAN ROAD  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769-2094  
(207) 764-0477 FAX: (207) 764-1507

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**MAINE MEDICAL CENTER**

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**FAX**

**TO:** Rick Knowland  
Portland City Hall  
(207) 874-8300  
FAX (207) 756-8258

**FROM:** Paul D. Gray, Vice President  
MMC Planning Office, (207)871-2451  
Fax (207)871-6212

**DATE:** January 22,1998

**Pages Including Cover: 2**

**MAINE MEDICAL CENTER  
INVITES YOU TO ATTEND  
AN INFORMATIONAL MEETING  
REGARDING OUR PROPOSED  
MEDICAL OFFICE BUILDING AND  
PARKING GARAGE  
AT THE CORNER OF CONGRESS STREET  
AND FOREST STREET**

**THURSDAY, JANUARY 29, 1998  
5:30 PM**

**SPORTSMAN'S GRILL  
911 CONGRESS STREET**



# Squaw Bay Corp

Consulting Engineers &  
Land Surveyors

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

January 8, 1998

Mr. Rick Knowland  
Office of Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center/Mediplex Medical Building Corporation  
Congress Street Medical Office Building**

Dear Rick:

Enclosed is the lighting information which is to be inserted into Section 11 of the Application which we delivered to you yesterday.

Please call me a call if you have any questions.

Very truly yours,

SQUAW BAY CORP

W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson, MMBC

97-242  
know0108.let  
1 of 1

## Overview

The City of Portland/Maine Medical Center contract zone for the medical office building and parking garage at 883-903 Congress Street includes a provision for MMC to develop a parking management plan for the Bramhall campus. This parking management plan addresses the needs of three major groups:

- Patients and others who accompany them to the campus;
- Physicians who come to the campus to examine and treat their patients; and
- Employees of Maine Medical Center.

This plan includes strategies that have already been implemented as well as those still in development. MMC welcomes the opportunity to continue to work with the City of Portland to develop and implement this plan.

The proposed garage associated with the medical office building will have excess capacity built into it; in other words, the facility will have more than enough spaces to meet the demands of the 49,150 s.f. office building. Of the 430 spaces to be built, 226 are required for the office building, leaving 204 spaces for the general needs of the Bramhall campus.

The sale of the Gateway garage is also planned as a separate action. A summary of the impact of the combined actions of constructing the office building, sale of the Gateway, and lease of the St. John lot on the overall existing parking supply is as follows:

<u>Action</u>		<u>Net Gain/Loss in Spaces</u>
Sale of Gateway Garage	- 530	(Gateway has 650 spaces but 120 will be retained by MMC use.)
Construction of Proposed Building/Garage	+204	(Excess once office needs are met.)
Lease of St. John Street Lot	+150	
Overall Net Loss	- 176	

While this is a net loss in current supply, many of the spaces in the Gateway garage are remote and are not fully utilized by MMC employees currently.

## Supply and Demand

An essential element of a parking management plan is a professionally prepared analysis of the supply of and demand for parking. In the Spring of 1996, MMC retained DeLuca-Hoffman Associates, Inc. The analysis was updated in March 1997 to incorporate the changes in supply and demand associated with the proposed medical office building and other MMC initiatives. This parking management plan incorporates the major findings from the DeLuca-Hoffman analysis. The existing supply, including planned changes with the development of the Congress Street Medical Office Building/Parking Garage, and the estimated demand are presented in Exhibit 1.

## Exhibit 1

### Maine Medical Center Parking Supply and Demand Current and Planned Changes

<u>Location</u>	<u>Spaces</u>
Main Congress Street Garage	1,276
Congress Street Medical Office Garage	430
Admitting	9
Visitors Lot Bramhall	315
Maine Magnetic Imaging	11
Gilman Street Lot A	15
Emergency	10
Radiation Therapy/Oncology	10
Gateway Garage	120
Gilman Street Lot B	15
Farmers Market Garage	12
St. John Street	<u>150</u>
Total	2,373
Demand Following Completion of Bean Building and Relocation of Programs and Employees to the Scarborough Campus	1,914
Completion of Congress Street Building	<u>226</u>
	2,140

Source: "Parking Analysis for a Proposed Expansion to the Bean Building at MMC" DeLuca-Hoffman Associates," June 1996, and March 1997 Update.

Thus, the overall planned supply exceeds the demand by 233 spaces (11%). The challenge facing MMC is to make the best use of that supply. The balance of this plan identifies the strategies MMC is pursuing in order to better manage the demand and to minimize the impact of the demand on the neighborhood surrounding the Bramhall campus.



## **Parking Management Strategies**

This plan includes strategies that address the following issues:

- Sale of the Gateway Garage and development of the Congress Street Garage.
- Parking access and traffic flow.
- Decentralization of MMC Bramhall campus.
- Contractor requirements during construction/renovation projects.
- Alternative transportation.
- Street parking enforcement.

### **A. Sale of the Gateway Garage and Development of the Congress Street Office Building Parking Garage**

In 1992, in order to expand its supply of parking, MMC purchased the 650-space Gateway Garage at the corner of High Street and Cumberland Avenue and initiated an employee parking program at the garage. Since then, all new employees have been assigned to park there and a shuttle service is provided to the MMC campus. While the program has worked, many employees find the shuttle inconvenient and time consuming. As a result, some employees park on the streets around the Bramhall campus which are subject to strict City of Portland parking enforcement. In order to eliminate the inconvenience, a central strategy is the sale of the Gateway Garage and the development of the Congress Street Office Building Parking Garage. This strategy brings the employees back to the campus, eliminates the shuttle inconvenience and should eliminate the current on-street parking by employees who should be parking at the Gateway.

### **B. Parking Access and Traffic Flow**

In 1997, MMC implemented a new approach to the management of the utilization of the 1,276-space Main Parking Garage at the corner of Congress Street and Gilman Street. Prior to 1997, in the 6:30-8:30 AM period when most employees arrive, the garage would begin to fill and as a result a one-in/one-out pattern developed, causing queuing of cars on Gilman and Congress. That policy was changed such that when the garage is full, it is closed until approximately 1:30 PM and employees are directed to park at the St. John Street lot and are shuttled to the Bramhall campus. This policy has eliminated the queuing on the streets and given the much shorter shuttle ride, employees have made good use of the St. John Lot. As part of our parking management plan, MMC is committed to maintaining the St. John Street Lot as long as demand warrants.

MMC plans to design the new garage to avoid stacking on Forest Street or Congress Street to enter the building. Vehicles will not be required to stop upon entering the garage at either entrance. MMC will monitor the garage and make changes to avoid any stacking at the garage entrances.

A second element of the parking access and traffic flow strategy is our valet parking program at the Admitting Lobby entrance and at the Emergency Department. This program has been very successful, serving 100 campus patients/visitors every day. Valet parking reduces congestion at the entrances, lowers frustration and the temptation to park on the street, and provides for significant improvement in the use of the spaces in the Admitting Lot, the Main Congress Street Garage and the Bramhall Lot.

### **C. Decentralization of the Bramhall Campus**

Since 1991, MMC has been actively pursuing a Board of Trustees approved decentralization policy for the Bramhall campus. Each program/service that is moved from the Bramhall campus to other locations in the greater Portland area reduces the demand for parking at the Bramhall campus. Major examples of this strategy have included:

- MMC Scarborough Campus - This plan involves the relocation from the Bramhall campus of over 200 MMC employees and 25,000 patient visits to outpatient programs to the Scarborough campus. The Scarborough campus is not yet fully operational. The main remaining element is the consolidation of MMC's labs from the Bramhall and Brighton campuses and leased space on John Roberts Road, South Portland, to the Scarborough campus.
- Relocation of the 80-bed New England Rehabilitation Hospital of Portland and 20 MMC rehabilitation beds to the Brighton campus. This move reduced demand on the Bramhall visitor lot and the Main Congress Street Garage.

Gateway Garage Condominiums - MMC owns condominiums at the Gateway Garage where 120 employees (data management and patient accounts) work who were formerly at the Bramhall campus. After the sale of the Gateway Garage, MMC will continue to lease 120 spaces at the Gateway Garage for these employees.

- Congress Street Medical Office Building - Consolidates several private practices in office buildings around the campus, reducing demand for on-street parking by patients of those practices.
- Holt Hall - In 1998, MMC will relocate 25 employees (and provide parking) from the Bramhall campus to the 7,000 sq. ft. at Holt Hall.
- Brighton Campus - When MMC discontinued inpatient services at the Brighton Medical Center campus, it committed to continuing two major programs at that campus: urgent care and ambulatory surgery. By maintaining those programs, the 20,000 urgent care patients and 2,500 ambulatory surgery patients do not place demands for parking on the Bramhall campus which would have been the case if those programs had been discontinued.

MMC will continue to pursue other opportunities to decentralize its programs, further reducing the demand on the MMC Bramhall campus.

**D. Contractor Requirement During Renovation/Construction Projects**

The Bramhall campus will be in a period of continuous construction for the next several years. Our construction agreements with contractors have strict provisions regarding our expectations of their responsibility to manage the parking of their employees.

**E. Alternative Transportation**

MMC has a ride share program to encourage people to car pool to work. The program includes a guaranteed ride home provision and participants are provided preferential parking. MMC proposes a renewed commitment to this program and proposes the following specific action:

- MMC will work with PACTS to develop a database for use in their ride share program.
- MMC will appoint a person to be in charge of the parking program and work with the City in identifying potential solutions to issues as they arise.
- Promote ride share and use of Metro with our employees.

**F. Parking Enforcement**

MMC fully supports aggressive efforts by the City of Portland to enforce the rules and regulations on the streets surrounding the Bramhall campus. We would encourage the City to step up its enforcement even further and to consider further restrictions on on-street parking.

**G. Other Considerations**

Beyond the strategies outlined above, there are trends in health care which should continue to reduce the demands on the MMC Bramhall campus. We have forecast that declines in admissions and reductions in lengths of stay will result in MMC becoming a 500-bed hospital in the future, rather than the 600-bed hospital it is today. This continued reduction in activity will translate into reduced demand for parking at the Bramhall campus.

**Conclusions**

We believe this plan demonstrates that MMC is committed to finding ways:


- To appoint a person whose duties include administering and monitoring the parking program. This will serve as a mechanism for regular communication with the City on this issue.

- To reduce the demand for parking at the MMC campus by relocating programs to other facilities.
- To making parking for employees more convenient, encouraging their use of our parking rather than the city streets.
- To support the City of Portland in its enforcement of parking regulations.



## CITY OF PORTLAND

## MEMORANDUM

**TO:** Rick Knowland, Senior Planner  
**FROM:** John Peverada, Parking Manager   
**DATE:** December 5, 1997  
**RE:** Maine Medical Center Proposed Parking Garage on Congress St.

Thanks for providing me with the "draft" copy of Maine Medical Center's parking management plan. The following are my concerns.

I assume that of the 430 parking spaces to be built that the 226 required for the office building will satisfy both the visitors and employees of the office building.

The plan states that after the construction of this new garage/office building, the sale of the Gateway Garage and lease of the St. John St. lot, there will be an overall net loss of 176 spaces. However, the 52+ spaces displaced from the existing parking lot on the site of the proposed garage/office building and the 27+ on-street spaces lost to provide a turning lane on the southerly side of Congress St. were not factored in. Therefore, the net loss would actually be 255 spaces, which I think would cause a hardship for the neighboring residents, businesses and the Sea Dog's daytime games.

Exhibit 1, The Parking Supply and Demand Analysis, shows that upon completion of the new garage/office on Congress St., that the overall planned supply for parking on the Bramhall campus will exceed the demand by 233 spaces, and "the challenge facing M.M.C. is to make the best use of that supply." How do they propose to overcome this challenge?

The report states that employees found the shuttle from the Gateway Garage to be inconvenient and time consuming, and as a result, some employees parked on the streets around the Bramhall campus. In the very next paragraph, the plan states that M.M.C. is committed to maintaining the St. John St. lot as long as demand warrants. Are they saying if the employees choose not to use the St. John St. shuttle lot and they park on the neighboring streets, that the shuttle will be eliminated? I hope not, since the present practice of employees in McGeechey Hall is to park on Vaughn St. and leave their work stations and move their cars as soon as they see the Parking Control Officers chalk their tires. As long as the employees continue to move their cars, no tickets can be issued, but more importantly, a customer is being inconvenienced, and deprived of a convenient on-street space.

Will the current valet parking program at the Admitting lobby entrance and at the Emergency Dept. be continued after construction is completed?

How and where will parking be provided for the 25 employees at Holt Hall?



The Bramhall campus will be in a period of continuous construction for the next several years. The plan goes on to state that M.M.C. construction agreements with contractors have strict provisions regarding their expectations of the contractors' responsibility to manage the parking of their employees, but it does not say how.

The concluding statement of the plan states M.M.C. is committed to making parking for employees more convenient, encouraging their use of M.M.C. parking rather than City streets. My question is "how?".

The hospital also wants to "support the City of Portland in its enforcement of parking regulations". Rather than asking "how?", I will ask "who is going to respond to the many letters similar to the one I have attached herewith, addressed to Mr. Ganley, from a 'customer' of the hospital?". This letter truly captures the reality of the parking situation surrounding M.M.C..

Before this project is approved, it is my opinion that the following shall be conditions of approval.

1. M.M.C. shall verify to the City that every employee has an off-street parking space.
2. M.M.C. shall make it a condition of employment with their employees that they will not park on the streets, or somehow assure the City that this will not happen.
3. M.M.C. will continue to promote and maintain the existing valet parking program in place.
4. M.M.C. shall provide the City with a copy of a long-term lease agreement for the 150 spaces in the St. John St. shuttle lot. What will happen when Amtrak arrives?
5. Contractors working at the hospital will have to have their employees park off site, and show the City a parking plan prior to a building permit being issued; a violation of the plan would cause a stop of work.
6. M.M.C. shall produce a brochure to distribute to all patients, visitors etc., outlining parking alternatives.

I believe that the continued growth of the Maine Medical Center is beneficial to the City of Portland, however, if people using the facility are frustrated with parking, the negative reflection will be on the City, not M.M.C..

I would strongly encourage M.M.C. to substantially increase the size/number of parking spaces in the proposed garage/office building on Congress St., for the betterment of the neighborhood, the City and Maine Medical Center, visitors and employees.

Please let me know if you have any questions or concerns regarding my comments. Unless I hear otherwise, I will assume that you will be forwarding this information to the Planning Board and Council.

cc: Bob Ganley, City Manager  
 Joe Gray, Director of Planning  
 Alex Jaegerman, Chief Planner  
 Larry Ash, City Traffic Engineer  
 Gloria Thomas, Parking Department Head

xtm 6-c

March 13, 1997

Mr. Robert Ganley  
Portland City Manager  
389 Congress Street  
Portland, ME 04101

Dear Mr. Ganley,

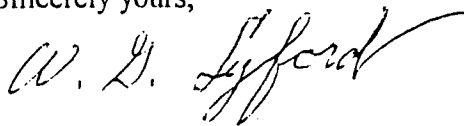
Yesterday, my mother, Mrs. Anna Lyford (91) was in need of the Maine Medical Emergency Room services. In attempting to find parking, I discovered that the emergency room parking facility was under construction and so I frantically drove around the block to the main parking lot. Eight to ten cars were in line waiting to enter the parking lot and so I quickly diverted to the Western Promenade. It was clearly marked one hour parking. That is not my contention.

What troubles me is the seemingly capricious and callous issuance of tickets in that area in the first place. I would assume that most people parked in that area have concerns with the Maine Medical Center facilities. I was greatly concerned for my aged mother being left alone in the cubical of the emergency room due to a very difficult and similar situation about a year ago on March 2nd.

I was aware of the parking time limitation and was doing my best to comply with the time limit. However, circumstances prevented me from relocating my vehicle until 5:02pm. I know the issuing officer was performing his or her duty according to the city's rules, but I strongly feel that special situations regarding the construction and lack of parking in the Maine Medical Center vicinity need to be addressed more appropriately than just handing out tickets. It's an aggravation and insult to those of us concerned with ailing and seriously ill family.

I have inclosed a check for the imposed fine of \$10. I am sending it to your office along with this letter. I am asking the City of Portland administration to either nullify the ticket and return the check to me or pass it on to the treasury department in blatant disregard for the circumstances surrounding the parking nightmare surrounding the Maine Medical Center facilities.

Sincerely yours,



William G. Lyford  
(207) 829-4401

8 Pinewood Drive  
Cumberland Ctr., ME 04021



# Squaw Bay Corp

**Consulting Engineers &  
Land Surveyors**

**Principals:**

W. Scott Decker, P.E.  
John R. Kennedy, P.E.  
Peter B. Tubbs, P.E., P.L.S.  
David W. Young, P.E., P.L.S.

January 29, 1998

Mr. Richard Knowland, Senior Planner  
City of Portland  
Planning and Urban Development  
389 Congress Street  
Portland, ME 04101

**RE: Maine Medical Center  
Medical Office Building**

Dear Rick:

This letter addresses the comments received in your January 20, 1998 letter to me.

**Jeffrey Preble's 1/12/98 letter to you**

**Drawing C-101**

Comment #1: *"The proposed plans show a drainage swale along the easterly property line which outlets over the sidewalk and into Boynton Street. It does not appear there are any catch basins along Boynton Street to collect his runoff. We would suggest adding a catch basin and stormdrain to collect the runoff in this area and tie it into the existing combined sewer line in Boynton Street."*

**Response:** During our recent telephone conversation, you informed me that Tony Lombardo noted that under current conditions icing occurs along Boynton Street and Maine Medical Center should attempt to mitigate this condition. Therefore, enclosed drawing C-101 has been revised to include the requested catch basin. The sewer line in Boynton Street is an 8" sanitary line so we have connected the catch basin to the 12" oil/grit structure discharge line.

Comment #2: *"The existing sidewalk at the Forest Street and Boynton Street intersection is at elevation 39.0. The elevation of the catch basin grate on the Vortechmics unit is 39.75. This should be lowered if the intention is to collect runoff from the swale along the northern property boundary."*

**Response:** Enclosed Site Plan drawing C-101 has been revised to reflect a lowered catch basin grate elevation.

Comment #3: *"A dimension of 2'-9" has been shown on the Forest Street and Boynton Street Right-of-Way. We are not sure what this dimension represents."*

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1 of 4

**P.O. Box 86A, 4 Blanchard Road, Cumberland Center, ME 04021**

Phone: (207) 829-6994 • Fax: (207) 829-5692 • Email: squawbay@neis.net



Mr. Rick Knowland  
January 29, 1998

**Response:** Enclosed Site Plan drawing C-101 has been revised to note the right-of-way width of 33' as depicted on Titcomb Associates' survey drawing.

Comment #4: *"The curb schedule will need to be completed prior to construction."*

**Response:** The curb schedule will be completed when all issues regarding parking, sidewalk widths and building dimensions have been resolved.

### **Drawing C-302**

Comment #1: *"Grades for the underdrain system have not been shown on the plan. The location for the underdrain cleanouts should be shown on the plans."*

**Response:** The final location of underdrains (both horizontal and vertical) will be established following final design of the office building and parking garage.

Comment #2: *"It is not clear where the underdrain discharges."*

**Response:** Enclosed Erosion and Sedimentation Control Plan drawing C-302 has been revised to show the underdrain system outletting to the Vortechs unit discharge line.

Comment #3: *"The location of the construction entrance is not shown on the plan. It might be worth specifying a location for construction traffic to access the site."*

**Response:** We prefer to allow the contractor to plan this element of the project. He will submit his plan for a construction entrance for approval by the Owner's Engineer and the City of Portland Public Works Department. If Public Works has specific ideas where the entrance must be, it would be helpful if the location was identified.

Comment #4: *"Please note that the details for the overhead walkway have not been included with this submission. The affect on the sidewalk width is therefore not known at this time."*

**Response:** The final details of the overhead pedestrian walkway have not been completed by the project architect. They await approval of the walkway concept by the Maine Medical Center. However, it is understood at this juncture that the supports on the medical office building side of Congress Street will be constructed into the building and will extend no more than 30" into the sidewalk. The support on the south side of Congress Street will not encroach into the sidewalk but may abut the sidewalk.

Mr. Rick Knowland  
January 29, 1998

**John Peverada's 1/9/98 memorandum addressed to you**

The traffic comments raised by Mr. Peverada have been or will be addressed directly by Maine Medical Center.

*Comment: "The list of MMC traffic improvements should be put on a site plan. In addition, the following statement should be added to the Site Plan:"*

*"Applicant shall be responsible for monitoring the intersection of Park Avenue and Forest Street for a period of one year after a Certificate of Occupancy has been issued for the office building and parking garage. Applicant shall submit a traffic report to the City Traffic Engineer for review and approval. If the City Traffic Engineer determines that a traffic light is required, the applicant shall be responsible for the purchase and installation of the traffic light. An escrow account/performance guarantee shall be established by MMC prior to the issuance of a building permit."*

**Response:** The Site Plan drawing C-101 has been revised to include the requested traffic improvement information.

*Comment: "Some, but not all, of the questions/issues that are listed in my memo of 12-24-97 to Patrick Costin have been addressed (see Attachment C)."*

**Response:** The architectural related comments will be addressed directly by Harriman Associates.

*Comment: "We need to get a definitive letter from MMC indicating that they will maintain the oil and grit separator, along with the schedule for maintenance."*

**Response:** Enclosed is a copy of a letter from Maine Medical Center addressed to you which addresses this comment.

*Comment: "Please indicate the dimensions and height of the transformer along Forest Street."*

**Response:** The transformer will be 6'x6'x6' cube situated on a 9'x9' concrete pad.

*Comment: "Note #9 on Sheet C-101, as well as related notes on curb and sidewalk, need to be changed. Note #9 should read "all curb and sidewalk shall be reconstructed along the entire frontage of the site..." We are skeptical that you will be able to "save" the existing curbs and sidewalks during construction, on this tight site. After construction, we can review the situation again to see if you were able to save the curb and sidewalk on Forest Street and Boynton Street. However, we are not comfortable with the present notes shown on the plans and Note #9."*

Mr. Rick Knowland  
January 29, 1998

**Response:** Enclosed Site Plan drawing C-101 has been revised to address this issue.

*Comment:* "We will need a draft deed to the City for that portion of the sidewalk that is on MMC property."

**Response:** The draft deed will be submitted directly to the City by Maine Medical Center.

*Comment:* "Do you have a catalog cut of the Miramat material shown on L-101?"

**Response:** Enclosed is a catalogue cut of the Miramat material.

*Comment:* "How high are the ventilation shafts in relation to the adjacent grade, and is there grating so that someone doesn't fall in?"

**Response:** The ventilation shafts will extend no more than one foot above ground and will contain a grate to prevent children and animals from entering.

*Comment:* "See the memo from Anthony Lombardo (Attachment D)."

*"Squaw Bay Cop has made the revisions requested by Public Works. The only item that is still missing as part of their submission is a copy of the capacity letter for the combined sewer in Forest Street. This letter has been requested from Bill Goodwin here at Public Works, but no actual letter verifying capacity of this sewer has been submitted."*

**Response:** Mr. Frank Brancely has coordinated with and received additional information from Harriman Associates plumbing engineer and Mr. Brancely continues to review the project relative to sewage flows.

Please call me if you have any questions or require additional information

Very truly yours,

SQUAW BAY CORP



W. Scott Decker, P.E.  
Principal

WSD/cms

cc: Jim Clarkson  
Jim Morrison

97-242  
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4 of 4

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**MAINE MEDICAL CENTER**

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January 27, 1998

Mr. Richard Knowland  
Senior Planner  
Planning and Urban Development  
City of Portland  
389 Congress Street  
Portland, ME 04101

**Re: Congress Street MOB Oil and Grit Separator**

Dear Mr. Knowland,

This is to inform you of the intention of Maine Medical Center to maintain the oil and grit separator required for this project. The inspection and cleaning of this separator will be performed in accordance with the specifications outlined on the attached sheet.

If you have any questions, please contact this office.

Sincerely,  
Maine Medical Center



Robert D. Bremm  
Director, Engineering Services

## Vortechs Oil and Grit Separator

### Maintenance Plan

#### Inspection

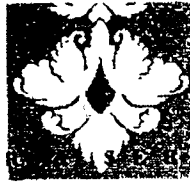
In the first year, Maine Medical Center will inspect the Vortech's Oil/Grit separation structure in January, February, March, spring, summer and fall. The inspection schedule can then be modified in subsequent years according to experience or to meet specific stormwater permit requirements.

During routine inspections, sediment accumulation will be determined by slowly lowering a measuring stick into the center of the grit chamber (accessed through the manhole above the grit chamber) until it contacts the top of the pile. The system is full and should be cleaned when the top of the pile is approximately one foot below the dry weather water level. The measuring stick should be easy to read and not too finely graduated (such as a carpenter's tape with large easy to read numbers). A stadia rod with flashlight can be used for this purpose. For deep systems where reading the measuring stick directly is difficult, dusting the rod will clearly show the depth to the sediment pile as the wet portion of the rod. To avoid underestimating the volume of sediment in the chamber, the measuring stick must be carefully lowered to the top of the sediment pile as the finer, silty particles are typically at the top and offer less resistance to the end of the stick or rod than the larger particles located towards the bottom of the pile<sup>1</sup>.

#### Cleaning

Cleanout of the Vortechs with a vacuum truck is generally the best and most convenient method. Only the manhole cover above the grit chamber (the one furthest from the system outlet) needs to be opened to remove water and contaminants. As the grit chamber is pumped out, the oil and water drains back into it so that oil scum, particulates, and floatables are removed along with the accumulated sediments. With the Vortechs System, a pocket of water between the grit chamber and flow controls seals the bottom of the oil barrier and prevents the loss of floatables to the outlet during cleanings. Manhole covers should be securely seated following cleaning activities to ensure that surface runoff does not leak into the unit from above.

<sup>1</sup>The height of the sediment pile is perhaps more precisely determined by taking two measurements with a stadia rod. The first being the water depth (i.e., water surface to bottom of the tank); the second being the water surface to the top of the sediment pile. The difference between the measurements is the sediment pile depth.



M O H R & S E R E D I N

Landscape Architects, Inc.

TRANSMITTAL

Date: JAN 27, 1998  
Project: MMC PARKING GARAGE  
To: SCOTT DECKER

Project Number: 136

From: KIM TURNER  
Copy:

Message:

RECOMMEND 3/8" THICKNESS.

MIRAFI, INC  
PO BOX 240967  
CHARLOTTE, NC 28224  
1.800.488.1855

- Mailed
- Delivered



Fax

Number

829-5692

No. of Pages (including cover)

7

18 Pleasant Street, Portland, Maine 04101

(207) 871-0003

# MIRAMAT:

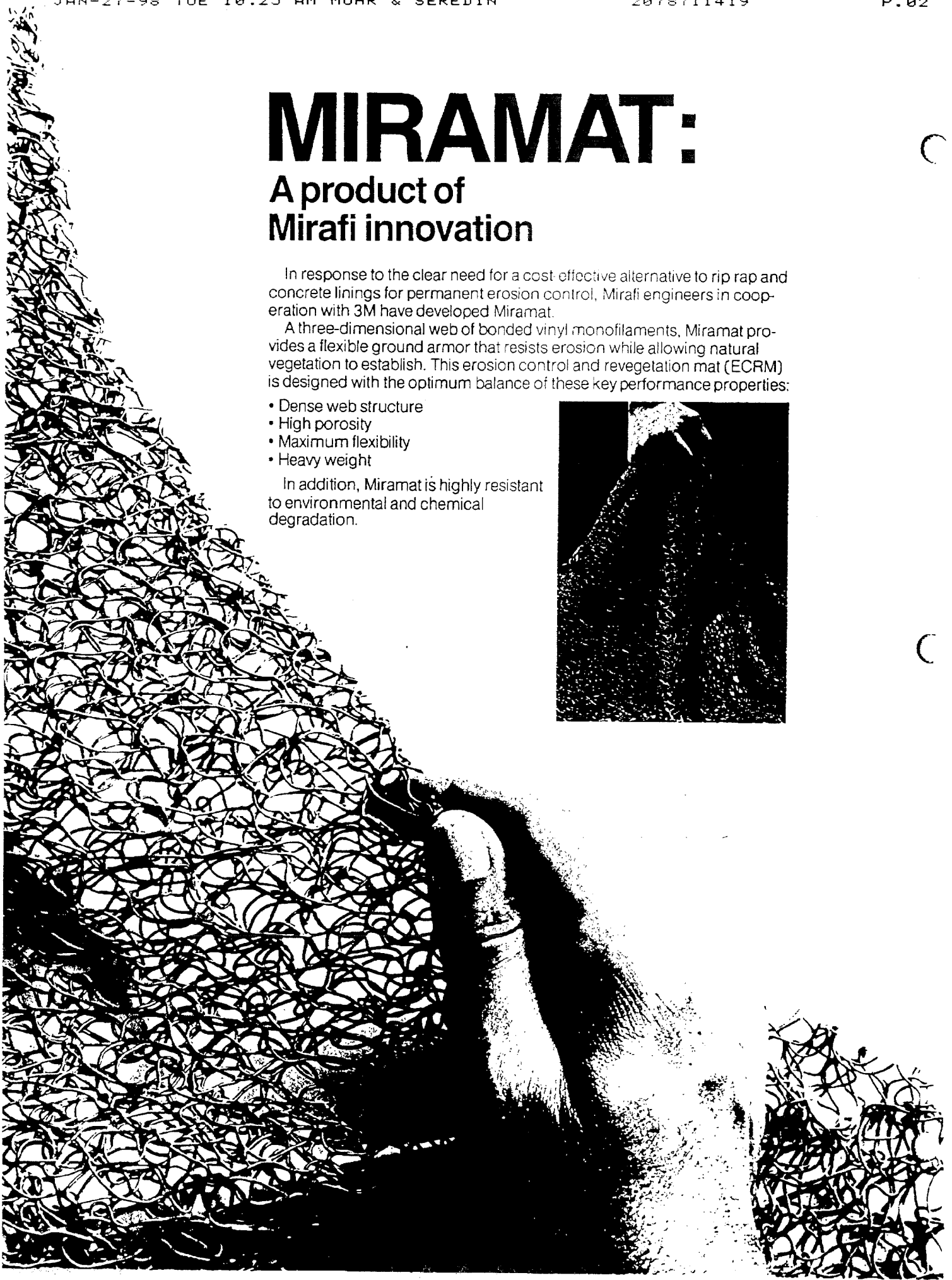
## A product of Mirafi innovation

In response to the clear need for a cost effective alternative to rip rap and concrete linings for permanent erosion control, Mirafi engineers in cooperation with 3M have developed Miramat.

A three-dimensional web of bonded vinyl monofilaments, Miramat provides a flexible ground armor that resists erosion while allowing natural vegetation to establish. This erosion control and revegetation mat (ECRM) is designed with the optimum balance of these key performance properties:

- Dense web structure
- High porosity
- Maximum flexibility
- Heavy weight

In addition, Miramat is highly resistant to environmental and chemical degradation.

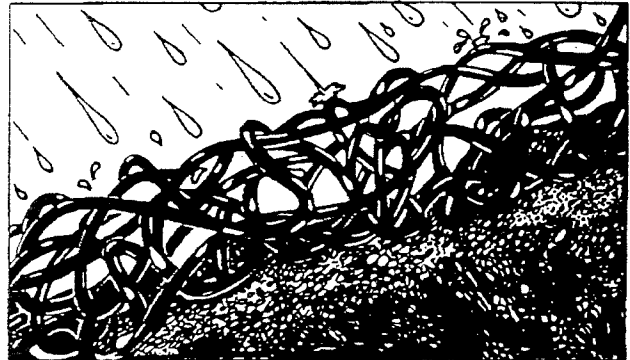


**Miramat: Performance that generates results**



In order to establish and maintain vegetation growth in areas subject to severe erosion, Miramat has been carefully engineered for superior performance in its primary functions: temporary erosion control, mulching, and permanent erosion control. A secondary benefit to Miramat's use is reduced runoff velocity.

In addition to its "ECRM" functions, Miramat's green color provides an aesthetically pleasing natural grass appearance while vegetation is establishing.



**Temporary Erosion Control**

Miramat's flexibility, weight, web structure, and porosity make it extraordinarily effective in temporary erosion control.

- Conforms easily to the ground surface.
- Remains firmly in place as a stable ground armor.
- Shields soil surface from the erosive force of wind and rain.
- Prevents soil, seed, and fertilizer from washing away.
- Provides a rough surface to retain sediment deposits during runoff.



**Mulching**

Miramat's 3-dimensional, high porosity web structure acts as a non-deteriorating mulch.

- Holds soil, seed, and fertilizer in place.
- Retains sediment runoff as a medium for root growth.
- Retains moisture and heat necessary for germination.
- Allows uninhibited growth of grass and other vegetation.

**Permanent Erosion Control**

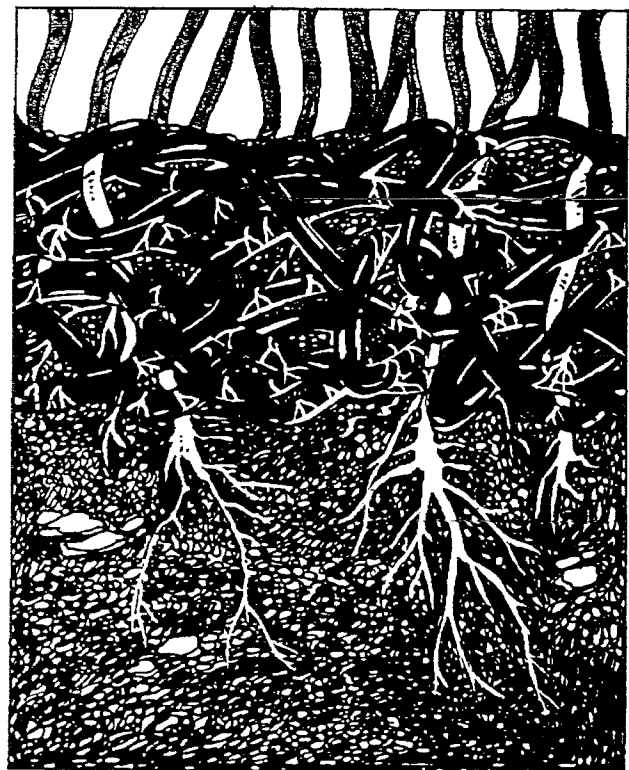
Once vegetation growth is established, Miramat continues to provide permanent erosion control as it becomes embedded in the new stem and root system.

- Protects new vegetation from washout.
- Reinforces and anchors the vegetation in place as a cohesive unit.

**Reduced Runoff Velocities**

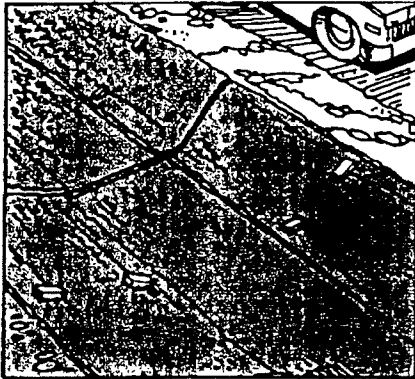
Revegetated slopes and ditches reinforced with Miramat reduce runoff flow velocities. This is an important advantage that cannot be achieved with concrete lining.

- Reduces runoff flow volume and concentrations.
- Reduces the need for energy dissipation at the ditch outlet or slope base.
- Promotes water percolation and ground water recharge.

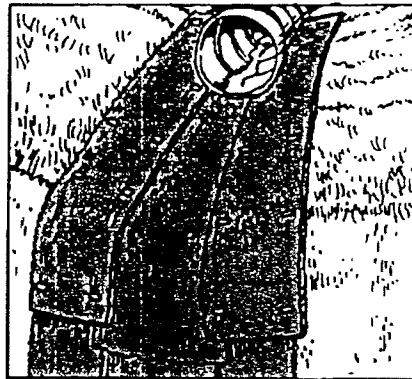




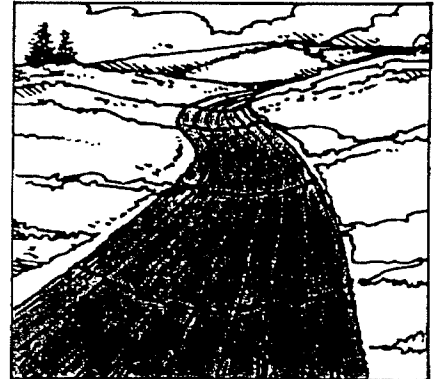
**Miramat: A Cost-Effective ECRM with many applications**



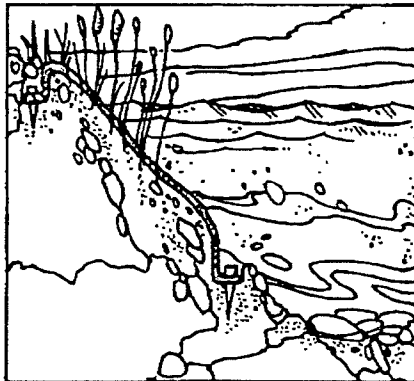
**ROADWAY DITCHES**



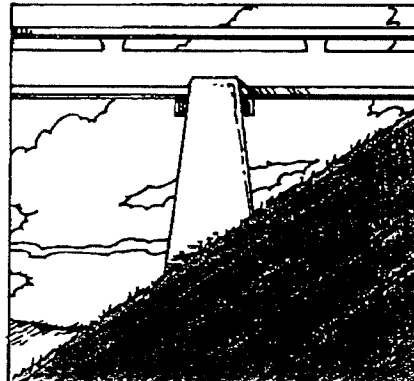
**PIPE OUTLETS**



**STORM CHANNELS**



**POND BANKS**



**BRIDGE ABUTMENTS**

Miramat is designed for erosion control and revegetation in those areas where simple mulching techniques do not work because of severe erosive forces. For example, steep slopes, ditches, and banks.

Such applications have typically required the armor protection of expensive rip rap or concrete linings. However, these methods, while usually effective, are costly, difficult to install, and frequently impractical at remote sites where access by heavy haul trucks is difficult.

Miramat provides a cost-effective, easily installed alternative to heavy armor protection for many applications.

- Ditches for roadway and parking lot runoff.
- Storm and irrigation channels.
- Outlets for pipes and culverts.
- Slopes for roadway, berms, bridge abutments, and building sites.
- Banks of ponds and lakes.

The source and magnitude of the erosive forces, as well as the slope and geometry of the area to be protected, will dictate the effectiveness of Miramat. Contact your Mirafi representative for recommendations.

**Miramat: General Installation Guidelines**

**Site Preparation**

- Grade surface of finished areas so that ground is smooth and compact.
- Remove all rock, dirt clods, grass clumps, trash and other obstructions which will prevent mat from lying in direct contact with the soil surface.

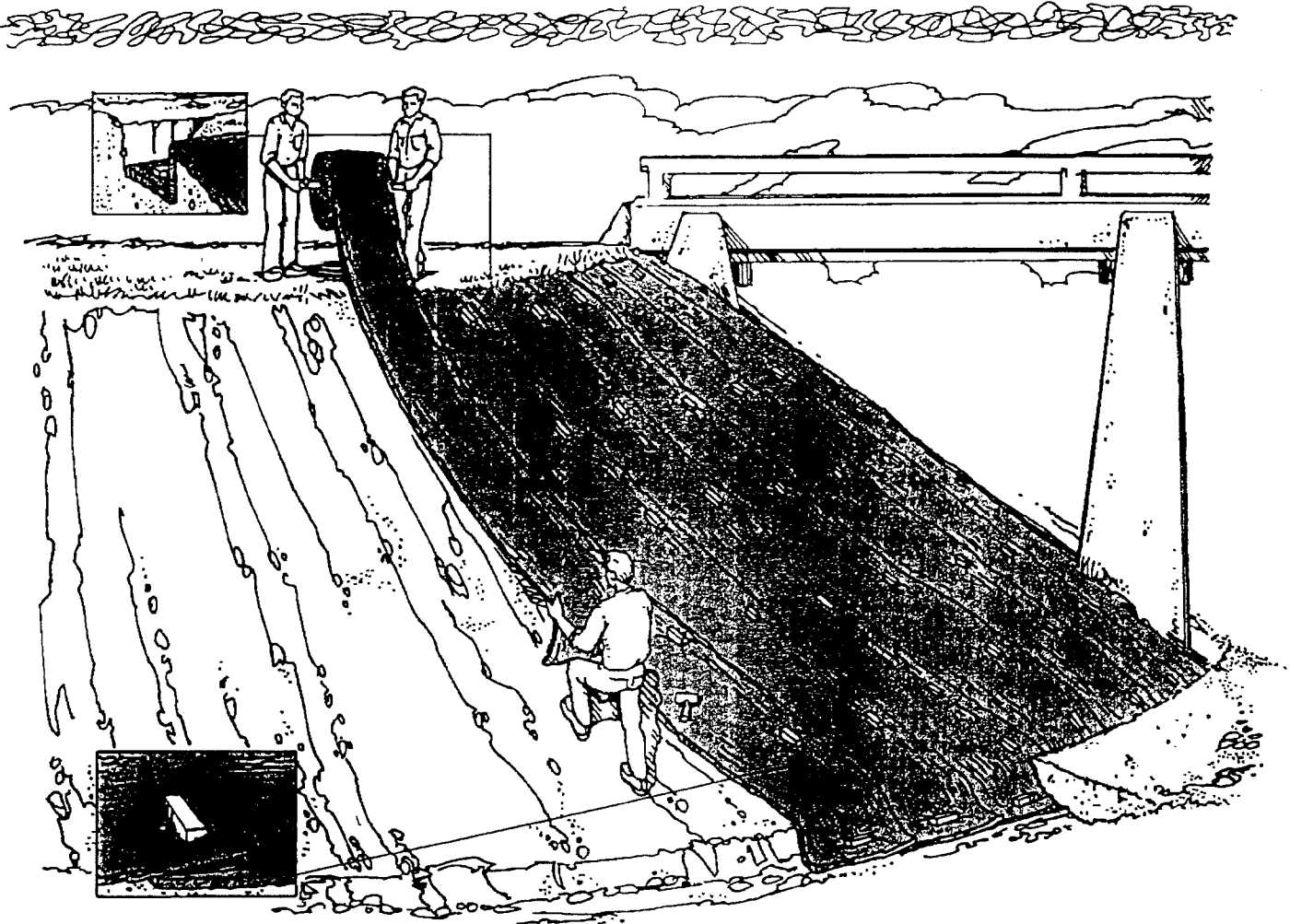
**Mat Anchor Trenches**

- Excavate terminal trenches to a minimum 12" deep and 6" wide before placing mat.
- Dig check slots 6" deep by 6" wide transverse to mat at approximately 25' intervals.

**Seeding**

Seed and fertilizer may be spread before or after mat installation. Rate of application should be specified by owner or contractor.

### Miramat: General Installation Guidelines



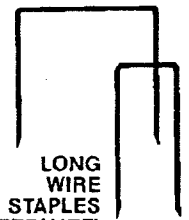
#### Mat Placement

- Unroll mat onto ground in direction of water flow.
- Mat should lay flat. Do not stretch mat over ground. Stretching may cause mat to bridge depressions in the surface and allow erosion underneath.
- Bury transverse terminal ends of Miramat to secure and prevent erosive flow underneath. Place mat as shown. (Fig. 1A and 1B.)
- Secure mat snugly into all transverse check slots. (Fig. 2A and 2B.)
- Backfill and compact trenches and check slots after staking the mat in bottom of trench... see "Ground Fastening."
- Overlap roll ends by 3' (min.) with upslope mat on top to prevent uplift of mat end by water flow. (Fig. 3.) Note: If installing in the direction of a concentrated water flow, start new rolls in a transverse ditch.
- Overlap adjacent edges of mat by 3" (min.) and stake... see "Ground Fastening" (Fig. 4.)

WOOD STAKE (PREFERRED)



LONG WIRE STAPLES (ALTERNATE)

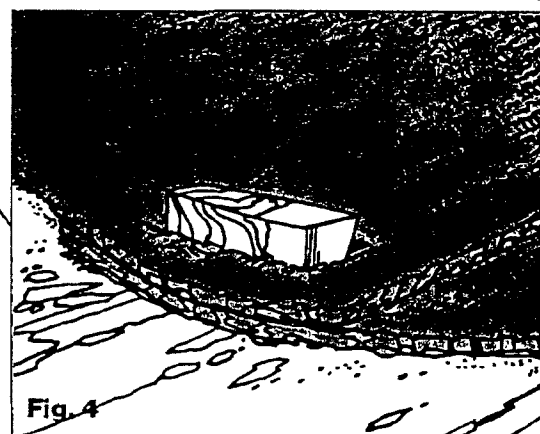
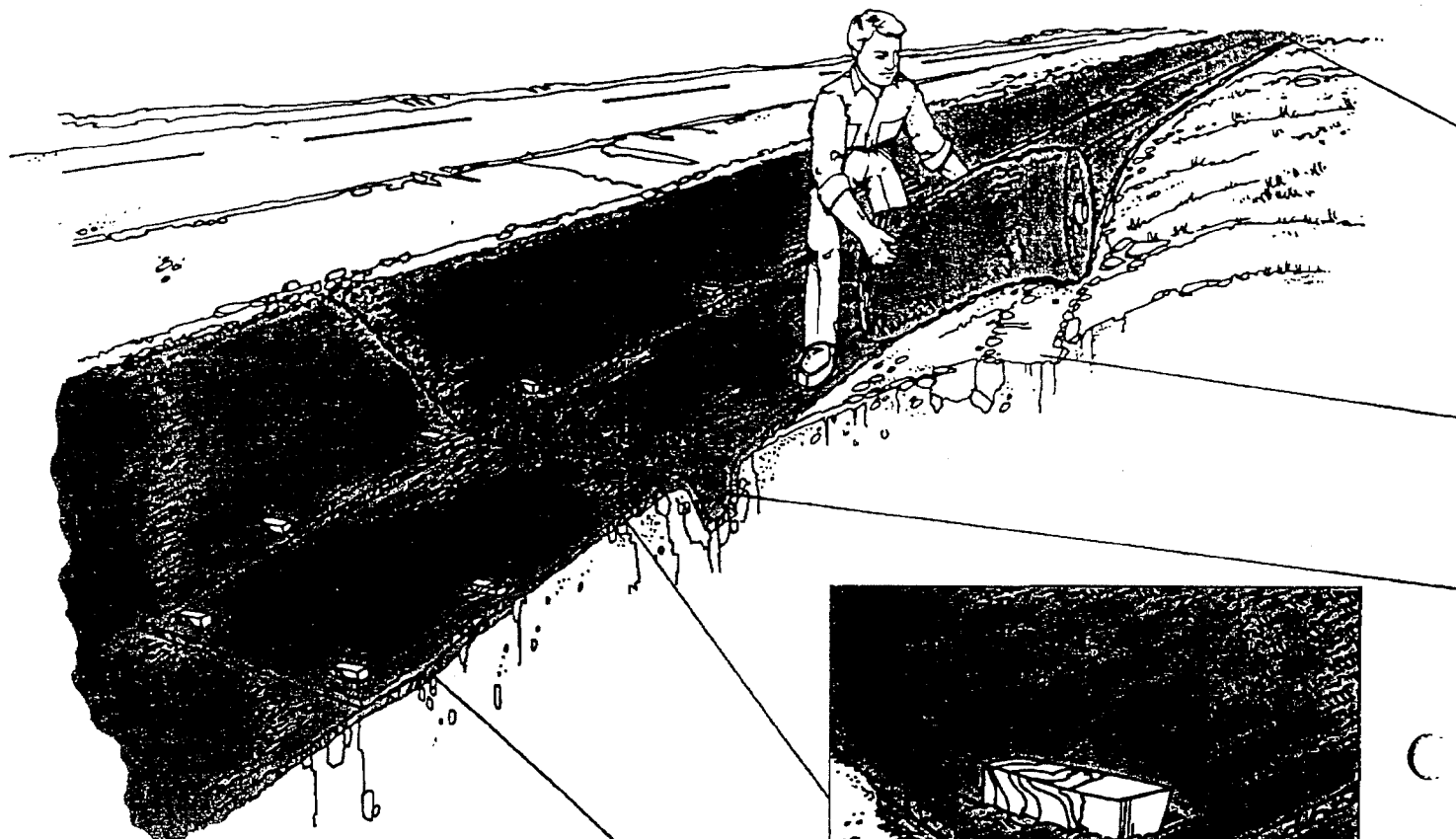


#### Ground Fastening

Wood stakes are recommended for pinning Miramat to the ground surface. Stakes should be 1" x 3" nominal stock cut in a triangular shape. Stakes should be 12" to 18" long depending on soil density.

- Drive wood stakes to within 3" of ground surface. Do not drive flush to surface.
- In all transverse terminal trenches and check slots stake each mat at its center and at overlapped edges before backfilling and compacting.
- Stake overlaps longitudinally at 3' to 5' intervals.

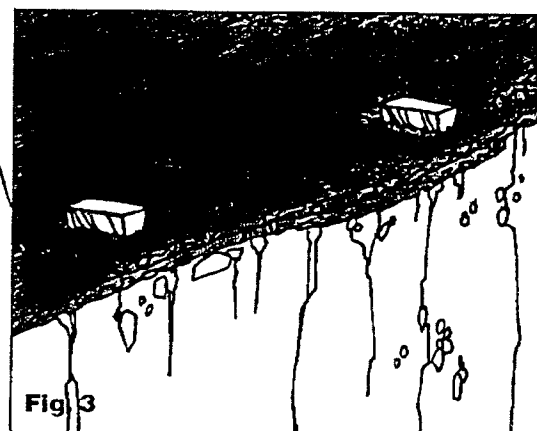
### Installation Guidelines for Ditches/Channels



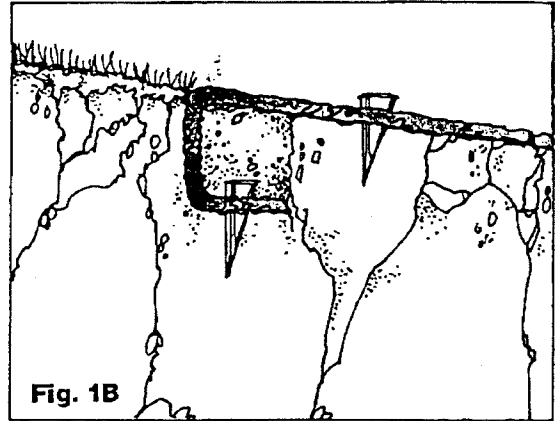
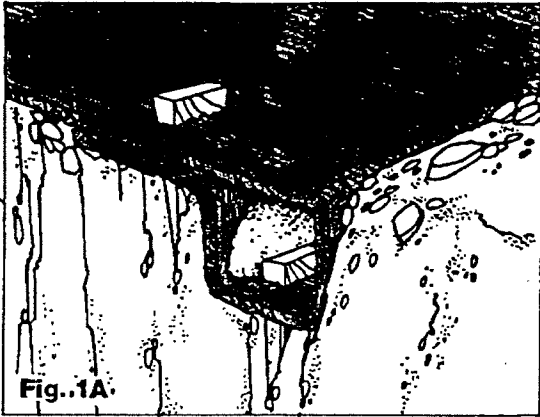
**OVERLAP ADJACENT EDGES**

When installing Miramat in ditches or channels, special steps in addition to the preceding guidelines must be followed.

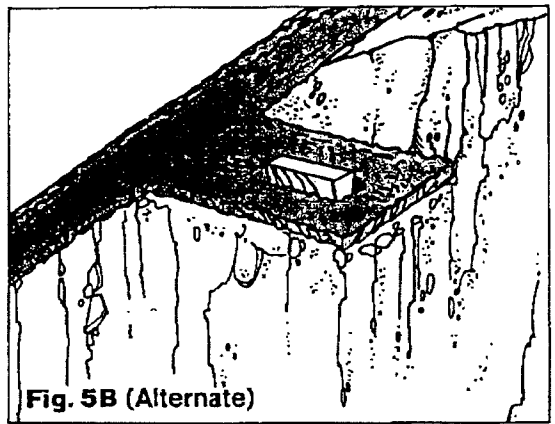
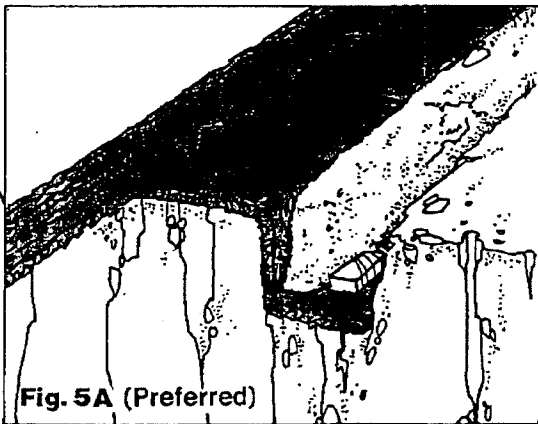
- Cut check slots across bottom and up the sides of the ditch... see "Mat Anchor Trenches" (Fig. 2A and 2B.)
- Cut 4" (min.) ledge or trench at top of side slope. (Fig. 5A and 5B.)
- Center mat in ditch bottom and unroll starting at upper end of ditch.
- Roll adjacent widths of mat, overlapping side edges of mat by 3". (Fig. 4.)
- Lay outside edge of mat on ledge or into trench at top of side slope. (Fig. 5A and 5B.) Stake at 3'-5' intervals along ledge or in trench.
- Backfill ledge or trench and compact.
- In check slots stake each mat at its center at overlapped edges, and outside edges. (Fig. 2A and 2B.)
- Overlap each roll end of mat by 3' with upslope mat on top. (Fig. 3.)
- Backfill all check slots and anchor trenches with soil or stone and compact.



**OVERLAP ROLL ENDS**

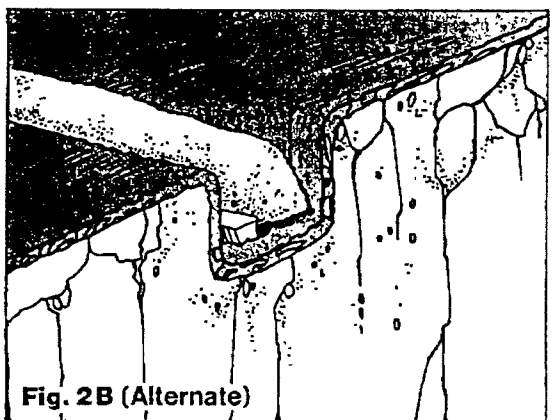
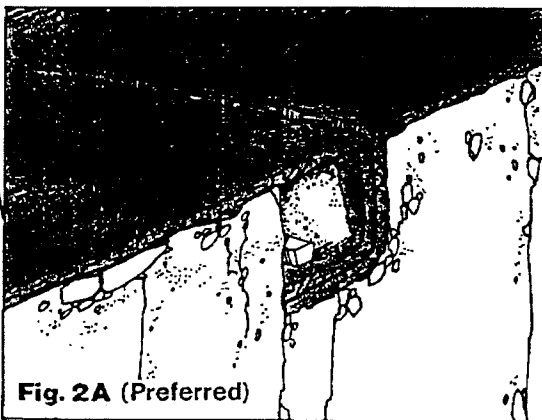


**BURIAL OF TRANSVERSE TERMINAL END**



**EDGE ANCHOR IN TRENCH**

**EDGE ANCHOR ON LEDGE**



**SECURE MAT IN CHECK SLOTS**

# City of Portland, Maine Planning Department

City Hall  
389 Congress Street, 4th Floor  
Portland, Maine 04101  
Fax Number: 756-8258

## FAX TRANSMISSION COVER SHEET

TO: PAUL GRAY

COMPANY: \_\_\_\_\_

FROM: RICK KNOWLSON

FAX #: 871-6212

# OF PAGES: 2

DATE: 1-22-98

RE: PAUL- THANKS FOR FAXING YOUR FLYER, LOOKS GOOD

BUT I WOULD SUGGEST THAT IT MENTION THE CHANGE IN THE  
PARKING SCHEDULES OTHERWISE THE PUBLIC IS NOT BEING INFORMED  
OF THE PARKING CHANGES. PLEASE FAX OVER WHAT YOU ULTIMATELY  
SEND OUT. ATTACHED FYI IS A COPY OF OUR NOTICE THAT  
GOING TO PROPERTY OWNERS

THANKS

RK

If you do not receive all of the pages, please call 874-8721 or 874-8719.

# City of Portland, Maine Planning Department

City Hall  
389 Congress Street, 4th Floor  
Portland, Maine 04101  
Fax Number: 756-8258

## FAX TRANSMISSION COVER SHEET

TO: JEFF PROBLE

COMPANY: \_\_\_\_\_

FROM: RICK KNOWLAND

FAX #: 775-6434

# OF PAGES: 3

DATE: 12-18-97

RE: ATTACHED IS A SUBJECTS AGENDA FOR THE MMC  
SITE PLAN REVIEW MEETING ON FRIDAY, DEC. 19TH AT 10:00 AM  
IN THE PLANNING OFFICE. ADDITIONAL ITEMS CAN BE ADDED  
TO THE AGENDA.

CC: SCOTT DECKON, SQUAW BAY  
JIM MORRISON, MMC

If you do not receive all of the pages, please call 874-8721 or 874-8719.

PAUL GRAY, MMC

TOM GORNILL, DELUCA HOFFMAN

TONY LOMBARDO, CITY ENGINEER

LARRY ASH, CITY TRAFFIC ENGINEER

JEFF PROBLE, DUFRENE-HENRY

**CITY OF PORTLAND, MAINE  
DEPARTMENT OF PUBLIC WORKS  
OPERATIONS/ENGINEERING - INSPECTIONS  
M E M O R A N D U M**

**TO:** Rick Knowland, Senior Planner  
**FROM:** Larry Ash, Traffic Engineer *LA*  
**DATE:** November 4, 1997  
**SUBJECT:** Proposed Maine Medical Center Office Facility

I have reviewed the Traffic Impact Study and Parking Analysis relative to the above-referenced project. I have also reviewed parts of the studies with Tom Gorrill of DeLuca-Hoffman and have the following comments (these comments are in addition to all previously made and do not exempt DeLuca-Hoffman from existing obligations).

- For the Park Ave./St. John intersection, DeLuca-Hoffman has not yet prepared a signal timing plan that will revise plan timings and cycle length. I have reservations that their proposed 60 second cycle is adequate. Since this intersection experiences a high level of accidents and has a high critical rate factor (CRF) DeLuca-Hoffman should prepare a safety analysis of their proposed signal timing changes. I also indicated to Tom Gorrill that northbound vehicle loop detectors need to be installed at this location.
- For the Congress/St. John intersection DeLuca-Hoffman needs to further explain their recommendation for the elimination of some signal phases during peak hours. A signal timing plan for implementation after build-out of the project has not yet been prepared for City review. No mention has been made of the existing exclusive pedestrian phase and whether or not DeLuca-Hoffman has any recommendations for this phase. Finally, DeLuca-Hoffman has not yet submitted for City review a detailed evaluation of accident conditions at this intersection.
- At the Congress/Valley, DeLuca-Hoffman needs to submit for City review an evaluation of accident history. Also, no mention has been made of the existing pedestrian phase at this location.
- The Congress/Gilman and Congress/Weymouth intersections meet criteria for high accident locations (HAL). I requested DeLuca-Hoffman submit a more detailed evaluation of accident conditions at these locations using the most recently available accident data. The City will provide accident records as necessary. Further, a reevaluation of Warrant 6, accident experience, in the MUTCD should be performed.



The elimination of parking on the north side of Congress adjacent to these intersections should be addressed to improve sight distance.

- A conceptual sketch of the proposed elimination of on-street parking on the south side of Congress Street from Gilman to Weymouth has not yet been submitted by DeLuca-Hoffman for City review. I question whether the parking restriction might serve all concerned if only during the peak hours or peak a.m. hours.
- Signal improvements at Bramhall/Congress are supposedly being made due to the Holt Hall renovation project and DeLuca-Hoffman has not been asked to do any additional work at this location at this time.
- I expressed concern to Tom Gorrill that parking by MMC employees and visitors in residential neighborhoods would continue and that residents in these neighborhoods may wish to eliminate as much of this as possible. Tom Gorrill said that MMC is preparing a parking management plan which will address this question.

cc: Tom Gorrill, DeLuca-Hoffman Associates, Inc.  
William J. Bray, P.E., Acting Director Portland Public Works  
Bruce A. Bell, Operations Manager



CITY OF PORTLAND - TRAFFIC SECTION  
MEMORANDUM

**Date:** 03/18/97  
**To:** Richard Knowland, Senior Planner  
**From:** Thomas A. Errico, P.E., Traffic Engineer  
**Subject:** Maine Medical Office Facility - Congress Street

In conjunction with the above project, I have reviewed the traffic impact study prepared by DeLuca-Hoffman Associates, Inc. dated March 1997. In addition, I have reviewed the Parking Analysis also prepared by DeLuca-Hoffman Associates, Inc. dated March 11, 1997. My specific comments are summarized below.

- The Parking Analysis performed indicates the parking supply will exceed demand following the construction of the proposed project. In reviewing the data available, the proposed parking garage supply will be absorbed by the parking requirements of the proposed 49,156 square feet medical office building, and the elimination of parking spaces at the Gateway Garage. As indicated by John Peverada, in his Memorandum to you dated March 11, 1997, parking availability in the vicinity of the Maine Medical Center is poor. If the conclusions of the Parking Analysis are in fact accurate, supply is greater than demand, than improvements in the management of parking should be considered. While this project should not worsen parking conditions, it is recommended that improved parking measures (i.e. increasing supply or improved management) be considered.
- According to the traffic impact study, 62% of the traffic will enter the parking garage via the Forest Street driveway. An explanation should be provided that supports the trip distribution assumptions.
- At the Congress Street/Bramhall Street/Deering Avenue intersection, it is recommended that a lead phase be provided from Bramhall Street and the signal timing revised. In conjunction with the lead phase, a five-section signal head will be required. In conjunction with the Holt Hall project, the installation of a five-section head was a condition of approval, and therefore may not be needed for this project. It is recommended that a proposed traffic signal timing plan be provided for implementation after build-out of the project.
- I concur with the recommendation to restripe the northbound Valley Street approach to consist of an exclusive right-turn lane and a shared left/through lane.
- At the Park Avenue/St. John Street intersection, northbound movements from St. John Street currently operate poorly, and will continue to operate poorly following build-out of the project. To help improve conditions, it is recommended that the cycle length be reduced from 90 to 60 seconds. It is recommended that a proposed traffic signal timing plan be provided for implementation after build-out of the project. It should be noted that while the intersection is expected to operate at an acceptable level of service following build-out of the project and revisions to the cycle length, movements from northbound St. John Street will continue to operate poorly.

3/18/97

## CITY OF PORTLAND - TRAFFIC DIVISION

- At the Congress Street/St. John Street intersection, improvements to the traffic signal phasing and timing are recommended to improve operating conditions. It is suggested that a traffic signal phasing and timing plan be prepared for implementation following build-out of the project. In addition, an assessment into the safety implications of eliminating the existing protected phases should be documented.
- An evaluation of signal warrants was performed at the Congress Street/Gilman Street and Forest Avenue/Park Avenue intersections. It appears that all eleven warrants were reviewed, although the study does not reference the data (i.e. delay, eight hour volumes, etc.) needed to evaluate all warrants. An explanation should be provided summarizing the data used in the evaluation of signal warrants.
- Poor levels of service were projected at the unsignalized intersection of Park Avenue and Valley Street. The study did not develop mitigation measures at this location.
- An evaluation of the need for left-turn lanes at the Congress Street/Forest Street and Congress Street/Proposed Project Driveway intersections were performed. Results indicate left-turn lanes are warranted. It is suggested that a conceptual sketch be prepared outlining the proposed roadway configuration. In addition, determination on the number of on-street parking spaces to be removed, as a result of the proposed left-turn lanes, should be estimated. Additionally, recommendations should be developed in respect to the existing Bus Stop located on Congress Street, and whether the proposed left-turn lanes will compromise safety and mobility.
- Although the intersections of Congress Street/St. John Street and Congress Street/Valley Street do not meet the criteria for a potentially hazardous location, the frequency of accidents is significant. It is recommended that a detailed evaluation of accident conditions be performed at these locations.
- Significant pedestrian activity is expected between the proposed Medical Office Building and Maine Medical Center. Provisions should be investigated relative to the crossing of pedestrians on Congress Street.
- The traffic impact study recommends the installation of a traffic signal at the Park Avenue/Forest Street intersection. It is suggested that the intersection be monitored following build-out of the project, and if actual field conditions warrant, a traffic signal should be installed. Accordingly, funds should be provided in an escrow account to ensure a follow-up study is performed and installation of a traffic signal is accomplished, if necessary.

CC: Bruce Bell, Operation Manager of Public Works

Bill Bray, Deputy Director of Public Works



DeLUCA-HOFFMAN ASSOCIATES, INC.  
CONSULTING ENGINEERS

778 MAIN STREET  
SUITE 8  
SOUTH PORTLAND, MAINE 04106  
TEL. 207 775 1121  
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

December 22, 1997

Mr. Roland Roy  
Planning Division  
Maine Department of Transportation  
State House Station 16  
Augusta, ME 04333

**Re: Maine Medical Center's Proposed Congress St. Office Building**

Dear Roland:

During the traffic permit preapplication meeting for the above-referenced project, the need for a left turn bypass lane on Congress Street at Forest Street and at the development driveway was discussed. Maine Medical Center and Larry Ash, the City traffic engineer, propose to accommodate the bypass lane by restricting parking on the southerly side of Congress Street from 6:00 AM to 6:00 PM. This will allow room for through vehicles to maneuver around left turning traffic into the site during the day while allowing parking after 6:00 PM when left turn treatment is not needed. The area merchants and restaurants are opposed to losing this parking during the evening. However, during the day all the 26 parking spaces proposed to be restricted are currently utilized by Maine Medical Center who will now park in the garage. A copy of the expected turning movements at Forest Street and the proposed Congress Street driveway and a plan showing the affected parking are included for your review. This distribution is based on the trip generation information previously submitted to you for the preapplication meeting.

DeLuca-Hoffman Associates, Inc. is requesting an expedited review of this issue to assist us in planning the project. Should you have any questions regarding this issue, please contact Larry Ash or myself.

Sincerely,

DeLUCA-HOFFMAN ASSOCIATES, INC.

Thomas L. Gorrill, P.E.  
Vice President

TLG/sq/JN1471/Roy12-22

Enclosure

C: Linda Kokemuller, MeDEP  
Larry Ash, Traffic Engineer – City of Portland  
Rick Knowland, Planning – City of Portland  
Paul Gray, MMC  
Jim Morrison, MMC

**MAINE MEDICAL CENTER**  
**INVITES YOU TO ATTEND**  
**AN INFORMATIONAL MEETING**  
**REGARDING OUR PROPOSED**  
**MEDICAL OFFICE BUILDING AND**  
**PARKING GARAGE**  
**AT THE CORNER OF CONGRESS STREET**  
**AND FOREST STREET**  
**AND RECOMMENDED PARKING CHANGES**  
**ON THE SOUTH SIDE OF CONGRESS STREET**

**THURSDAY, JANUARY 29, 1998**  
**5:30 PM**

**SPORTSMAN'S GRILL**  
**NEW BANQUET ROOM**  
**911 CONGRESS STREET**