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City of Portland

Planning Board

Public Hearing

Tuesday, July 9, 1996, 7:00 p.m.

KNOWLAND

By way of orientation, this is Elm Street over here, Cumberland Avenue, Preble Street. The applicant is proposing a 648 space parking garage which is supposed to be seven stories high, or a maximum height of 81 feet. Zoning in a B-3 zone allows a height of 85 feet. Access and egress to the parking garage are proposed on Preble Street as well as Elm Street. As you look at the site plan, you notice that the building was not built to the straight right of way line, and as a result, you will notice this overly large sidewalk along all three sides of the building. And this is due to the geometric interior ~~configuration requirements of the parking garage. In~~ the B-3 Zone there is a -- the normal standard is that a -- is that the building must be built within five feet of the property line. In this case that was not possible, but under the provisions of Section 14223, the Board may modify this requirement.

On Cumberland Avenue there is a setback of up to 10 feet from the property line, and the paving material for the said sidewalk is brick, with some paver

bands. Along Preble Street, the setback is approximately 24 feet and those paving materials will be again concrete, as well as with a paver band. In this case there was a requirement to abut an area on the side to store snow, and so this area in the corner will serve that function. Elm Street - concrete will be used as a sidewalk material, along with a continuation of some paver bands. The City will be responsible for the cost of curbing the sidewalk along all three sides of the project.

At your last workshop meeting, Bill Bray, the City Director of Public Works, was present to discuss traffic issues. And one of the things that was discussed, and it's not shown on one of these boards, is the need to have a delta island at Portland Street, at the intersection of Portland and Preble, because there was a concern that there would be conflicting traffic movement from Portland Street across Preble Street into the parking garage. The traffic report has been updated, and is shown in a traffic report. Since that time -- and I pass out a memo from Mr. Bray dated July 9, 1996 -- it was approved, this site, with respect to traffic concerns, but he would suggest a trial period for perhaps one year upon operation of the garage to serve whether actually the field conditions and use

of this parking garage would require that traffic island, and if it does, then the traffic island would need to be installed.

With respect to stormwater issues, two oil and grit separators are proposed to address water quality issues on this site. There are -- there is a catch basin proposed uphill of this driveway entrance, as well as a catch basin proposed uphill at that entrance, which would be handy during the winter time.

In the packet we have information on the lighting of the parking garage. Attachment F shows the luminaire that will be used on the parking garage walls.

Attachment G shows the type of fixtures that will be mounted on the top deck on poles, and Attachment H

~~_____ this interior inter-ceiling mounted lighting~~
fixtures. We will need, however, some additional, more specific information, but as to wattage and light exposure, Attachment F, and a wattage and mounting height for the poles on the parking garage. Generally however, the specific lighting fixtures do seem appropriate for this site, but as I said, we need more lighting details.

On page -- as we look at the exterior elevations of the building, a common feature of the site, and this is the Preble Street elevation, this is the Cumberland Avenue elevation over here, and this is the prospective -- along Preble Street. A prominent feature of the building, and really the anchor of the building, is a proposed elevator tower in the corner of Preble and Cumberland Avenue. The tower and its design provide a visual link to the Maine Bank & Trust Building, which is on Congress Street.

The basic facade itself will be constructed of pre-cast concrete, which is articulated by a series of horizontal and vertical joints that run along the pre-cast panels and columns. In addition, for security purposes, there is a grid. A metal grid system is proposed that goes along the first two ~~levels of the parking garage, and this treatment is~~ also proposed along Preble Street in front of the snow storage for the snow storage area.

On the bottom page of page 2 of the Staff Report and the top of page 3, we have outlined some Staff comments regarding the exterior elevation. The metal pipe frames that are shown in the elevation are in good position and provide some scale and rhythm to the large expanse of open areas between the concrete

panels. The color, however, is a dark green, which would seemingly make it disappear in the dark background, which would negate the use of this design feature. The exterior horizontal concrete panel, and that's labeled "concrete spandrel" in the elevations _____, basically these panels here, and the Board, I believe, was shown some samples at the last workshop. And there are four samples over there. One of the concerns that we had was that _____ is that it has an aggregate pebble stone surface. And although it does provide a contrast along the facade, perhaps there's a more appropriate treatment for that. One would be perhaps to use the smooth surface, which is the _____ for the main pre-cast concrete elements along the facade, perhaps some color could be added to the panels, or perhaps a lighter sandblasting treatment would be appropriate. We also suggest the use of tiles or medallions along the facade that could perhaps lighten up the facade a bit. Perhaps certain sections or architectural elements of the facade could be colored or painted. In a pedestrian environment, visual interest is always an important consideration. We reference the Jetport where certain architectural elements were painted, would seem to work out well in that specific context.

Why don't I get to the conditions -- proposed conditions for approval. This is on page 9. _____ conditions approved _____ the revised site plan be submitted for staff review and approval, reflecting the comments of the _____ review coordinator, I would view Mr. Seymour's comments which are shown as Attachment E. Those are basically technical in nature, and that can be very easily addressed in a revised site plan. That complete information on the light plan be submitted for staff review and approval. As we said, we think the fixtures are appropriate, however, some more information should be submitted on that for review.

And one thing that I did skip over was the landscaping plan. Unfortunately, Jeff Tarling has been on vacation last week, and I was not able to get comments from him. Landscaping - there are six street trees shown along here, along Cumberland Avenue, in planters. There are three trees shown in front of the snow storage area, and a cluster of trees shown in this area over here. The site plan has since been updated, and I believe that there are some street trees here. Again, the quantity would seem to be appropriate, but we want to have the comments of the City Arborist. And the fourth revised facade detail that gives any of these

submitted for staff review and approval. We outline some of the staff comments on that.

And then the second major motion that the Board determines that the setback -- the proposed setback of the building is appropriate, and there are some fin -- there are four findings that are shown below that motion. Are there any questions?

HAGGE The applicant may have additional presentations. So if you would like to ask to make your presentations, feel free.

MOONEY Thank you. My name is Alan Mooney. I am President of Criterium-Mooney Engineers, we're the project engineer on this project to date, and I know that in the interest of time we'll try to be as expeditious as possible, and just kind of update you since we've had the opportunity to be before this Board on two previous occasions, and I do want to start by thanking the Board for getting us on this particular agenda so that we can continue to move forward with the project. It continues to be our client's intent to -- and I think we've got the team onboard to do this, to get started on the project very soon, and in fact have it open and available to the public before the end of this year. A couple of things that I just

wanted to update the Board on since the last meeting, and basically the whole team is here, so any questions that might come up, we've got the Project Manager and Billy is here, and Paul Stevens, and other members of his staff are here, and S.M.R.T., and Morris Fisher is here for Boulos Management, so we'll have a chance to respond to any questions, but with regard to some of the highlights that have taken place since the last time. First of all, with the lighting -- and we're -- some of these things, we thought that we covered in total, but in fact there may be just a few gaps, so we did bring some copies tonight from S.M.R.T.'s office that I think address those two, couple of questions that Rick has, and we'll just send those around so that you have them and you know that they're being addressed and they can easily be incorporated in the final part of this process.

We also, with regard to the comments that Jim Seymour had, these were dated -- there was a memo that Rick put out on July 2nd, and another one from Jim on July 1st -- and I had summarized that information and put it together in terms of what we would do on the final site plan for submittal. And I think there should be enough for everybody to get one of those. This is a memo that went to Rick last Friday, and it's just

sort of filling in some of the gaps as we're trying to do in this whole process. The -- so with regard to the lighting and some other details which, as Rick said are pretty much technical details, but I think we have addressed those at this point, certainly have in essence accepted all of the requests and recommendations, and we will be incorporating those in the plans that will be submitted for final approval.

We have also in the interim, talked to the abutters. I know that they are here, as I understand it this evening, and will perhaps have their own comments. We have made modifications to the site plan that Rick is seen at this point that has responded to Doug Cardente's concerns about the space between this building and his building down at the hill, Government Center, which, as I understand it from Doug, are acceptable at this point. There are significant upgrades in the landscaping and fencing and everything in that area, and we have also, I think, done our best to respond to all the various comments that have come out of the workshop meetings and also the meeting that Rick had, which was very appreciated, right after the last workshop meeting when we made a list of everything, and we have responded to that in the last submittal to the City.

Rick had already touched on the traffic issue, and we did have -- if not everybody is it, I've got copies of the memo, that Bill Bray circulated this afternoon, saying that maybe it was just best to wait on the traffic island for a year or so, and we tend to agree to that, but, you know, we are willing to do either way as it might be the preference of the Board whether they can build now or have some time to test it and see how things work without it.

Beyond that, I think that the only other thing that we put together as a suggestion, and I'll circulate this, is just perhaps a little simpler version of the conditions that might be part of the approval for the project only because, you know, we believe that it's important to move forward if we're going to build it this year. We believe that we have presented a good project, one that you have color photos of the parent, if you will, of this project, and we are hopeful that we can move forward quickly with the actual construction, and we're certainly willing to work with the Board in every way we can. I think beyond that, if there is any -- if Bill, any updates, Bill, on the traffic that you might have --

BILL

No.

MOONEY Okay. So that Bill is here if there are any questions for that, and I'll let Paul Stevens talk about the design part of it at this point. We'll be brief, and then we'll go on to public comment. Paul.

STEVENS I'm Paul Stevens, and I'm President of SMRT. I think just to emphasize a couple of things. Rick covered the presentation, I think, well. But just to be clear that we have as street trees along Elm Street, which are the same size 6" Caliper trees that we have here, and the buffer area between the proposed building here and Mr. Cardente's property has been landscaped all the way through from Preble Street to Elm Street, so that not only is there a landscape buffer between the building and the garage, but there is also a landscape buffer between the garage and the Cardente parking lot to the rear, and I think everybody has that revised site plan in their packet. I am somewhat amused that this green color has become such an issue, and before we talk about that, I want you to know the great thought that went into selecting that color, and it was that we were doing a presentation which we were going to make to the owners to be selected as the design builder for this project, and we had about ten minutes to get there, and we said, what color are we going to color these

panels? And somebody said green. And we said that's a great idea, so that's how the green happened, and I guess what I would say is that we certainly accept Rick's comments that a brighter color would be more appropriate. I'm not sure exactly what that color is yet, and I think what we want to do is get the actual samples of the architectural metal screening there that we're going to use and pick a good color, but I do think that the note that particularly these elements in the upper levels, the verticals which were put in to break up the horizontality of the garage, are going to be much more effective in a brighter color than a dark green, and it might be a bright green rather than a dark green, but we certainly agree that the dark green isn't the right way to go. The second thing is though, I think we would perhaps take a little difference with the Planning Staff and with Rick on the concrete panels, and I think if you do refer to the photographs that you have of the Chestnut Hill parking garage for BU, there is a detailed photograph in there of the panel which gives, I think, a pretty accurate rendition of the light sandblast on the -- which would be on the columns and on the surrounds, and on the slightly heavier sand blast in the panel in the middle. And I think that the characterization of comparing this to the exposed aggregate on the Civic Center or the

Holiday Inn probably isn't accurate because -- I would agree a hundred percent with Rick that that aggregate is really terrible. It looks like Rice Krispies, and it is not our intent to do that to this building. And what we do want to do is with the use of the scoring reveals in the concrete panel, and a light sand -- a little bit darker sandblast or heavier sandblast on the center panels, to really create some interest and sort of architectural definition of those panels, and we think that this is going to be a very effective way to go. So our feeling is that we have a building that we're pretty happy with as designers would like to have, and ask you for the leeway, as architects to make the final decisions in terms of the actual colors that we use in making an intelligent decision about the depth of sandblasting. And I think it's both our feeling and our client's feeling that we definitely want to go on the lighter end of that sandblasting, but what we do want to end up with is a really handsome architectural panel here which we think we could get, which is, I think you will find will be in much in contrast with some of the other architectural or some of the other pre-cast panels that you see on some of the decks around town which really have no detailing on them whatsoever.

The other thing, just to make a point, is that if you have a plain concrete panel, what happens when that panel gets wet is it's splotchy looking, and it - it just -- you lose any character of the panel whatsoever. And with having some good architectural detail on these panels, I think they're going to look really good, and not look like a puddle on your garage floor. Thanks.

HAGGE Thank you. Sir, another presentation, or --

MOONEY I think that's it today.

HAGGE Okay. All righty. Open it up to the public. Public comment, if you'd please identify yourself for the record.

MAVADONNES Good evening. My name is Nicholas Mavadonnes. I am one of the three brothers that owns property at 66-68-70 Elm Street. Our parents purchased this property in 1935. Since then, five generations of our family have resided at that address. Currently it is a family residence. What is my four year old grandchild going to have to do to play. We have been paying residential taxes in the City of Portland for 61 years. We are one of the only three property owners on this block where this parking garage is

going to be built. We might be the smallest, but our concerns should not be overlooked by the City. I responded with a two-page letter dated 19 June 1996 to the notice we received on 6 June 1996 of the City of Portland Department of Planning and Urban Renewal concerning the seven-level parking garage. Our specific concerns are the permanent shade of a seven-story garage on our property, the added emissions problems generated from this parking garage, and pedestrian safety problems on the corner of Elm and Oxford Streets, which will increase the already dangerous and neglected situation. Finally, and most specific to us, the only residents on Elm Street, is a right to a reasonable safe chance to park, using the residential parking spaces in a reasonable proximity to the residence. Parking on Elm Street between Cumberland and Oxford and Elm Street will probably be terminated on one side during the construction phase. We are asking for our concerns to be addressed as we are part of this block. Thank you for your time.

HAGGE

Thank you very much. We'll get an answer to your questions. Any other public comments? Shall I -- yes?

BROWN

Thank you. For the record, my name is Kathleen Brown. I am the Acting Director for Economic Development of the City. I want to mention that Dick Ranaghan, who is the President of the Downtown Portland Corporation, was here earlier to testify, but because of a scheduling conflict, he had to leave. He would like me to say that the Downtown Portland Corporation would like to go on record as being in support of this project.

I am also here in support of the parking garage. I know there are other individuals in the audience who are going to speak about the demand for parking in Downtown Portland, so I'm not going to address that issue. What I'm going to do is hold my remarks to two items that were included in the Planning Staff memo. The first is the off-site public improvements that are proposed for the project, and the second issue I would like to address is the building facade recommendations. First, I know you're aware, and your memo indicates that the Downtown Portland Corporation approved funding for the public improvements in the area of the parking garage. The decision was made by the Downtown Portland Corporation because that organization believes it's in the best interests of the City of Portland to support private developer who is making a major

contribution to the Downtown, and I might add, without any public assistance. What may not be clear in your memo is that the application to the Downtown Portland Corporation was intended to include any public off-site improvements required to be associated with the project. So for clarification sake, I want to give the Board assurance that the Downtown Portland Corporation will provide funding for sidewalks, curbing, the traffic improvements that were mentioned, the street trees that have been identified on the plan, and would like to relate that the the potential condition that Jeff Tarling, the City Arborist, sign off on the street trees. I want to assure you that we will work with Jeff Tarling and the Downtown Portland Corporation will fund whatever street trees will be required by this plan. That may make that condition unnecessary.

Second, I want to address the comments made by the Staff regarding the proposed building facade. Rich mentioned earlier the color of the metal pipe -- the accent blocks, the texture of the concrete -- what I'd like to say is that I respect the Planning Staff's comments. I, myself, am a planner by training, so I understand the importance of allowing the development process to represent the full spectrum of public interests. What I would like to

say publicly for the record is that this particular development, and this particular developer is not willing to settle for anything that is not in the best interests of the entire community. I think the record speaks for itself on that interest. Time and time again, Mrs. Elizabeth Noyce has made investment decisions that have positively benefited Downtown Portland, and are motivated purely by her desire to better the community. I know you're all familiar with all of her investments. I'm not going to go through them, but I want to emphasize that her acquisition, her renovation and her leasing of three major office towers downtown have made a huge difference to the Congress Street corridor. Her willingness to buy the longest-standing, largest vacant retail building in our downtown and promise that we'll have high-quality retail centers in there by Christmas is significant. Her desire to develop an indoor year-round public market with total project money is significant. And I guess what I want to go on record as saying that, to simply say that Mrs. Noyce has been community-minded is really an understatement.

Now I'm going to bring it back to this building facade. So what I'd like to say is that if the Board has concerns about the building facade, I think they

may be unfounded. I think this developer, and particularly the owner, has clearly indicated a community-minded desire. I'm going to urge the Board to allow the development team to -- the discretion to design the building as the owner sees fit. It's my understanding that the proposal before you meets all of the ordinances. If that is the case, issues of taste and preference should be left to the owner's discretion. And with that, I'll say that I know the Planning Board has worked hard to develop the interests of all the members of this community. I think this property owner has demonstrated that same goal. I urge you to support this project unconditionally. Thank you for your time.

HAGGE Any other public comments?

~~CARDENTE~~ ~~My name is Doug Cardente, and I own the abutting~~
property as well a Government Center, which is a 6½ acre parcel, perhaps not as big as Mrs. Noyce's, but quite large, down on the other side of Bayside, and we have 400 employees and probably serve a thousand social service type people. I have talked with the staff of the developer about some landscaping and drainage issues along the common property line. I must say that they have been very attentive to our needs. I think they have addressed it and we still

have a little concern about some drainage, but I think they're going to take care of that, so as the immediate abutter problem, I think they've satisfied my concerns there.

As far as Government Center and the impact of this large building, I'm concerned. I think the depiction in this picture, even though quote, unquote, it was a quick drawing, underestimates how huge this project is going to be, and I'm sure it's going to be a quality project, but I agree with the Planning Department when they say that this is going to be there for 50 years and Bayside, which is the kind of the black sheep of the Portland area, there's a lot happening down there, there's a lot of agencies down there that deserve some attention, and they're walking up, not necessarily Preble Street, in fact, most of them walk up from down Government Center - walk up Elm Street which, until the most recent plan, had no trees along there, and I have Winton Scott here, who's helping us comment on it, and he will be addressing some of it. I think the project is probably going to go ahead, but it's the Planning Board's responsibility, I hope, to look at what is the best interest of Bayside where this is being located, and just give it fair consideration -- if there's a little extra touching up that could be done

at the pedestrian level so that Bayside is still connected to the City of Portland, it would be very much appreciated. Thank you.

HAGGE Thank you very much.

SCOTT My name is Winton Scott. I'm an architect with offices on Milk Street in Portland. As Doug said, he's retained me to help him take a look at this, to evaluate this particular proposal, and I began to do that in a letter to this Board on June 18th which outlined some broad concerns. And will all due respect to Mrs. Noyce, and to Paul Stevens, who I have a great deal of respect for, this parking garage -- I've been thinking about parking garages in the last few weeks and looking at garages around town that have been built recently, and have a very big one right near my own office, this parking garage is different from some of the other ones that have been built because it's exposed at the sidewalk level on three sides. This is virtually a free-standing parking garage, unadorned. This is -- and parking garages -- I don't -- you know, I don't take Paul's charge lightly here. It's very difficult to design a parking garage in the City anyway, and to be given a site that's exposed on three sides as essentially a schism in the City anyway. Cumberland Avenue has the

potential of being a dividing line that's sort of a barrier, or it can be a zone where the City is seemed back together. It can be a healing area or it can be a division. And the concern that I think Doug has and has asked me to help articulate, is that this building is actually a story higher than the Pearl Street parking garage, sets a new precedent for the lack of articulation between the upper floors of the building, the middle floors of the building and the lower floors of the building, compared with what's been expected of other developers in recent past, where there's been talks about this, I forget if it's in the ordinance in the urban design guidelines that talks about the virtues of buildings respecting the traditions of architecture in the City. They have a bottom, they have a middle, they have a top. Parking garages don't typically have these things, and ~~sometimes it's false to try to impose the same rules~~ on parking garages, but definitely, if the grillage or the grills or the screens are an attempt to give the building a bottom, in my eye it's a weak, feeble attempt to give the buildings a base. And I believe it's probably -- it was stated today that these grills are probably security measures, and I suppose that really is the fundamental reasons for the grills.

Retail was discussed at one of the earlier meetings. That's -- I agree, you know, with the developers. That's probably -- would be forcing the issue to try to integrate retail into this building. However, there have been other parking garages around that don't have retail and the base of the base of the buildings have been quite successful in articulating the base. The one across the street on Elm Street is the perfect example, with awnings and other details. The building definitely has a base. And having a base up against the sidewalk is what makes the -- it's what humanizes the building in the case of a parking garage, the one technique, and Alex articulated this quite well. I think there many different techniques that can be used to articulate the building and to these basic parts that we're used to identifying with that make the building human again and make it friendly in terms of walking back and forth on a day to day basis. And I think the basic issue here that we have is friendliness. Is this building a friendly neighbor or is it an obnoxious oversized neighbor. I think it's a question of neighborliness. If you think of it that way as a family -- is this a family, does it want to be part of this family in this particular neighborhood. And going back to what I said at first, the fact that it's exposed on three sides, I

think it has a tendency to be a brutal insertion into this neighborhood, it's going to seem even more so, I think, because of that. Some of these drawings I don't think clearly depict the discrepancy of the size between Doug Cardente's building and the parking garage. There's a little hint of it on the Preble Street elevation, and there's a hint of it here. But because of the -- as Doug said, because of the perspective and the foreshortening of the buildings in the background, that makes his building proportionately larger than it would seem. It's a daunting task and I don't, you know, want to make light of it. I appreciate the efforts that the architects have made to this point, but I think that if this garage is approved as is, it will forever lower the height of that hurdle that people have to jump over to build parking garages in the City. And I kind of worry about the precedent that this would set for future development. So I will leave you with that.

MAN Thank you very much. Other public comments?

HILDEBRAND Ladd Hildebrand. I happen to have two offices buildings within a block of this building and certainly be very desirous of more parking in the area. I would - to question the idea of asking the

designer to change such as panels in it or the color. My feeling is it's like saying to an artist I'd like you to paint a picture but I want to tell you what colors I want and things like that. If a fellow falls in the ocean and I throw him a life preserver and he says, wrong color, down you go. So my hope is that in your broad understanding you can see that -- let your designer and the architect put it together, and I'm sure, knowing a little about the owner, that she'll see that it's something that's compatible to our neighborhood.

Since I'm standing, I might as well say that while we were designing the Elm Street parking garage we missed one big factor. We created a whole bus waiting area there for a large number of people, but nowhere for people to wait. We just designed it for automobiles, and in a sense we're doing the same here. It's totally for automobiles. And apparently that's what we need in our downtown, so that's I guess that's what we'll certainly have. But I would hope that you let the artist and the architect and the owner make some of the decisions on their own. Thank you.

HAGGE

Thank you. Yes, ma'am.

HAGER I'm Barbara Hager. I'm Executive Director of Portland's District. But I'm here to emphasize, I believe, that you received letters from the Congress Street Advisory Committee and myself, and I sent along a copy of the actual report that the Congress Street Advisory Committee developed as a result of their analysis of the parking situation on Congress Street. And I would just emphasize to you that we think this is a very necessary project and we think the timeline should be short. We hope that you will allow it to be developed as quickly as possible because the need is very, very great in the Downtown area, for the parking that this provides. I'm here to answer any questions that you might have.

HAGGE Thank you very much. Any other public comment? Yes, sir.

PAVAROTTA My name is John Pavarotta. I'm the Parking Manager for the City of Portland. I would like to let you know that on a consistent basis you can imagine, I'm contacted by people, primarily employees and consumers in Downtown, looking for parking spaces. Sometimes we're pretty good at directing them in other areas to park. Right now, though, it seems we're running out of space. We've done a recent parking survey. Looks like the present vacancy rate

Downtown in the garages is about 1%. We strongly support this garage. It would be a welcome addition, will help control the parking rates downtown. To finish, the rates seem to inch up. We think this would be a welcome addition down there. Thank you.

HAGGE Any other public comments?

LORD My name is Kerri Lord, and I'm a resident of the City. I'm here to ask you to not approve this project. I guess I'm going to be the black sheep here _____ before. This project is, in my estimation, totally contrary to the public transportation policy of this City that was completed in July of 1993. And it's the essence of this policy - is about reducing or improving air quality in the City and encouraging more mass transit in the ~~Downtown area, reducing the number of cars in the~~ Downtown area, supporting our bus service, which the City also put a great deal of money into. I think that by approving this project the City is speaking out of both sides of its mouth. We have a transportation policy that says we're going to encourage more use of mass transit, and yet we're encou -- what we're going to approve a project that brings more cars to the Downtown area, and to me it doesn't make any sense. And I know that this owner

was also contacted by Metro and asked to participate -- we understand that the transportation -- the parking problems of Downtown need to accommodate people who need to work or come Downtown, and I'm not against that - I want to see Downtown grow and be prosperous. However, I am very disappointed that this owner was not interested in participating in a shuttle, parking lot and shuttle service. We would -- we, meaning Metro, would like to add another electric bus. We need the local share in order to do that. And I think it would be really wonderful if this owner would be interested in helping to fund that local share instead of building this building which, in addition, I think is way out of scale, it's way too large, and it is completely lacking, I think, in attractiveness. It's utilitarian, industrial looking building going to be built in our Downtown area, and while I appreciate all the wonderful things that Mrs. Noyce has done in her investing in Downtown, I don't think that she's perfect and that everything that she proposes to do should be okayed by the City. And I hope that you all think really long and hard about what the public policy of this City is, and what you're approving, and how we're going to attain all those goals in a far - farsighted way, not in a nearsighted way. We actually need parking in Downtown, but we have a mass transit

system in this town that is really lacking in public support, and could be a far more useful service if it got more support and more money. Thank you.

HAGGE Thank you. Yes, ma'am.

KATHY

MAVADONNES My name is Kathy Mavadonnes. I wasn't here to speak. I support Kerri Lord. I just wanted to say I think you should really think about what she said.

HAGGE Thank you. Last chance. Any other public comment?
Yes, sir. Identify yourself for the tape, please.

UNCLE JOHN My name is Uncle John N. Nadeau, and I live at __
Cumberland Ave., and I want you -- just to be -- I
~~know we're just about out of time - to tell me how~~
many parking spaces that the -- I have been going
past that parking area I don't know how many times
because buses go by there, too, but I need to know
how many parking spaces they have in the Elm Street
or any parking lot like -- we have a Preble Street
parking lot - I go by there often, and also there's
another parking lot which is down on High Street,
compared for business to that -- just an idea how
many parking spaces they have inside, that's counting

the -- I don't drive, thank you very much, but an idea. And also the handicapped parking, too, as well.

HAGGE Thank you. I will get those questions answered as soon as we conclude the comment portion.

UNCLE JOHN Thank you very much.

HAGGE Thank you. Any other public comment? Going, going, gone. I'll take it back to the Board for its consideration. Can I get a couple of questions answered first? Natalie, what role does the Transportation Plan play in our deliberations tonight?

BURNS As of now, the Transportation Plan is part of the Comprehensive Plan, but there is nothing any ordinance has been enacted to specifically carry out those policies. So what the Board will do is _____ under the _____ ordinance is take site plan ordinance _____ -5.6 that does incorporate the urban - the Downtown urban design guidelines that Rich has attached copies of _____ .

HAGGE Thank you. I don't know who can answer these questions. Mr. Mavadonnes raised concerns about shading, pedestrian safety at the Elm Street and Oxford Street intersection, the residential parking stickers is really not in our purview and I don't think auto emissions are something that we can get an answer on, and hopefully the size of the Elm Street garage, I hope somebody's done a little bit of leg work. We have our parking czar here, John Pavarotta.

PAVAROTTA I don't know about that. Elm Street has 400 spaces, Gateway is 610 approximately.

HAGGE Okay. And this lot has 648, so it's about the same size as the Gateway garage. So I don't know who can answer the shading and the pedestrian safety -- why don't we start with shading.

HAGGE C-27, the attachment - Alan do you want to elaborate on that?

MOONEY Well, we asked - Rick had asked us to look at the shading issue as it related to that whole area, and the primary request had to do with the Cumberland Avenue corridor and the impact on the pedestrian areas over near the Elm Street garage and also down toward the high school, and found that the shading

would not impact those areas because it had the sun, and the line at Cumberland Avenue. We also mentioned in that memo that as far as the properties that are on the down-hill side, the Government Center and that part of the north side of the building - in the winter sun, when the sun angle is low, there certainly will be shadows in those areas and that's - that's - during the long winter sun angles.

HAGGE Since you have your traffic engineer, I don't want Mr. Eaton to fall asleep. Bill, could you answer the question concerning the pedestrian safety at Elm Street and Oxford Street?

EATON Those two particular intersections did not come out as being significant in terms of pedestrian problems at Elm and Cumberland Street. The intersection does ~~have a problem that's fairly easily corrected.~~ Most of the accidents happen during the night when it's on flash, and it's obviously sight distance problems simply signal all night long. We can probably alleviate that. I realize that's not a great answer because a lot of times pedestrian safety issues are things that don't get done, until a pedestrian gets hit, generally a lack of safety in the area. It probably would warrant a review of the amount of time made available to pedestrians crossing that street to

make sure that it's long enough, and also to make sure that the signs the City of Portland has been using lately that explain how pedestrian signals work, so that people know that when it says walk, that simply you start leaving when its starts flashing don't walk, that means don't leave the curb, but if you're out in the road you have sufficient time to complete that. It helps a lot -- at least I understand from the Portland Traffic Engineering Department that it helps a lot except that complaint is that the print is too small for many of the elderly to read, so maybe it should be enlarged, but beyond that, I don't know of any specific pedestrian safety things that I can quote quantitatively on accident records. I am sure that there are anecdotal instances of close calls, etc.

~~HACCE Thank you. Mr. Mooney.~~

MOONEY I would just add to that, too. I think that relative to pedestrian safety around the garage, there has been a lot of effort put in and there will continue to be, and to appropriate lighting that is not only controlling spill-over so it's appropriate to sight, but also will illuminate the pedestrian areas, the walkways around that much better than they are now.

So I would -- just from a lighting standpoint see pedestrian safety improved by this project.

HAGGE Mr. Mavadonnes, we've closed the public portion of the hearing.

MAVADONNES He was referring to Elm and Cumberland. I'm referring to Elm and Oxford where there's a yield sign.

HAGGE Could you address Elm and Oxford, sir?

EATON Again, was another one that did not show up as being a major problem at all in the accident statistics I looked. Again, I have to admit that I'm sure there are instances where people have seen close calls (Mavadonnes interrupts). There is two instances right there

MAVADONNES I reported it to the police

EATON Enforcement is difficult. It makes me uneasy to sit here and tell you that it's an enforcement problem when I know full that the police department has resource problems in getting people out there to enforce that because for that one intersection, I'm sure there's a hundred more in the City of Portland

that people are having problems with - major crime areas.

That is one problem. Preble Street and Elm Street are major arterials, and once you clear Cumberland Street, the section between Marginal and Cumberland. It is essentially a speedway, even though the accident reports do cite speed as a problem _____ Cumberland, excuse me, at Preble and Elm Street.

_____ There are problems out there, particularly at intersections like Lancaster Street, and Elm Street show up as actual problems _____ accident at Lancaster Street has a very, very low _____. So it's very surprising _____.

EATON That could all be alleviated, though.

EATON _____ situation. Drivers are supposed to yield _____. It's very difficult to _____.

HAGGE Thank you. Comments from the Board? Questions of the applicant? Jamie.

CARON I have a question for staff. The garage turning has three signs on it, and I was curious, it seems to me

that there's one extra. Does that meets the sign ordinance?

JAEGERMAN I think you're allowed one on each of the sides. We'll verify that. We're looking at that.

John?

CARROLL I have a couple of questions. I guess I would echo Jamie's question. I couldn't find the entrance and exit sign - directional signage around the site. I'm assuming that you're going to want to have that, but that doesn't show up on any of the elevations. At least on the elevations we have, you can't make it out. There's no indication sign, so that it seems something is missing there. I had a question about the light fixtures at street level. And I remember going through the lighting design for Congress Street, Congress Street corridor and one of the thoughts was always that as sites were developed near Congress Street, this would become a standard that we would developers to use or use ourselves, the City would use itself. And I was curious why the developer didn't want to use a lighting standard that would be consistent with what the City's proposed for just the next block up. That's that.

STEVENS

I can address probably both of those questions. First, it may not show on the elevations, but in the package you have, and I think if we want, I can unroll - or someone back here has a larger copy, and show you that there is signage at both the Preble Street side and the Elm Street side that indicates exit and entrance to the garage. That is definitely in the plans to indicate those lanes coming and going. In regard to the City standard light fixture, we did look at that fixture in regard to -- and a serious look in regard to trying to place it on the building. And the problem is that it's really quite a large fixture, and it's a real street light kind of fixture, and doesn't lend itself well to being mounted on this particular building, both in terms of its relationship to the architectural elements on the building or in terms of the rhythm of the facade. It really is much more appropriate to be placed on a lighting pole standard, and I think that that fixture would look fine along Cumberland Avenue removed from the building, but we didn't feel -- we felt that it detracted from the building to put it on it, and it didn't buy us anything in terms of light that we weren't getting from the fixtures that we did incorporate. But we really did take a serious look at doing that, but it just didn't fit, in my opinion.

COLE Let me follow up, John, you're saying that you're going to attach your fixtures to the building, so did you then not give any thought then to putting street lights rather than attaching them to the building? Because when you do the business across the way, I'm sure we're going to insist on that being the same fixture, because that fixture on Congress Street -- we're going to want that to be tied into Congress Street.

STEVENS I guess - it really wasn't our intent to supply street lighting along Cumberland Avenue as far as this project, and it's not something that I was asked to do --

(KEN COLE AND PAUL STEVENS) UNINTELLIGIBLE

CARROLL Would they pay for the right light, then or the lights you've got?

COLE That's the point. If Downtown Portland Corporation is going to pay for these lights, I think we'd like to insist on the kind of lights we want.

MOONEY I think that's certainly your prerogative, if you want to do that, sure.

CARROLL

I was just wondering why that wasn't being done. You ought to link this to Congress Street that we have -- It's not just an overhead light, but it's a pedestrian type intermediate light, and might as well start here and work it up the block. And I don't expect you to pay for it. It's pretty clear who's going to pay for that, it's me, so I - it is a question I have, and I guess I have an answer, which is to say if we require it, that the City will install it. And the only question would be why wouldn't we require it now. Maybe Alex and Kathleen can answer that.

GRAY

Well -- the only issue why it isn't being installed at the present time is because the whole Downtown lighting is being done in phases. And Congress Street is a phase which everyone has been concentrating on. Whether or not the lighting is put in down here as part of Phase II or Phase III is really going to be tied the overall improvements which they are making, which as Ken said, includes the Farmers Market and the Parking Garage and the other improvements they're planning on. But the intention is to incorporate that idea and the phasing of it is really going to be dependent on when the timing is finalized on the market.

COLE Isn't there going to be a conflict between all the wall-mounted lights and what you're talking about putting street lights?

GRAY In terms of what, design?

COLE Design, conflict, anything, I wonder. Isn't that why we're here, so we're supposed to try to figure out in advance. That's why we're asking the question.

JAEGERMAN The suggestion that we made is that since there are wall-mounted lights at a height similar to pedestrian lights -- along the sidewalk, that they could achieve the sidewalk lighting objective, and if they could coordinate with, and be the same style as the street lights.

COLE But Paul said they're not going to do that.

JAEGERMAN Paul just said, which is really the first response I've heard from Paul after making the suggestion, is that he doesn't feel it would be appropriate to the architectural style of the building, and that's his response to that suggestion. The other issue that is there are any street lights proposed along Cumberland Avenue or Congress Street, it's been the position of

the City that the DPC would fund public improvement including street lights. So the statement is whether the lights that are affixed to the building should coordinate with and part of lighting for Congress street lighting plan.

TAPE IS MESSED UP AT THIS POINT

CARROLL I guess I get the distinction or the picture which is we may not have the lights on the building. And the whole idea when we talked about the Downtown Lighting Plan. In order to avoid bankruptcy on the City, at least on a somewhat opportunistic basis when a site was being re-developed would say let's use this standard fixture, that at some point we would hopefully make enough improvements around the City that you would be filling in for less cost. So ~~couldn't we start now and make that choice.~~

FISHER Can I interrupt for just a minute?

HAGGE Excuse me, sir.

FISHER Just to add to what --

HAGGE Just be patient. I'm trying to maintain order here. I have a bunch of people who are about to fall off

their chairs, who started screaming before you did.
Kathleen.

BROWN

On behalf of the Downtown Portland Corporation, when we looked at the whole area for public improvements, one of the issues was where would the best location be for street lighting. Clearly, along Preble Street and the other side of Cumberland Avenue, the Downtown Portland Corporation felt that it was very important to carry the theme down Congress Street. When we were budgeting and looking at the site and we knew we would ultimately defer to the Planning Board, but one of the things that we factored into it was that on the side of Cumberland Avenue where the parking garage was located, the wires are above ground and ~~there are poles already running along that sidewalk,~~ and from a public works perspective, it was difficult to engineer the lighting along that side of the street so that it made sense for the existing above ground wire, not that it couldn't be done, but it wasn't the most logical approach. It seemed that the wall path on the building for that side of Cumberland Avenue made more sense than across the street the lighting would be carried down from Congress Street.

FISHER I don't know if this helps at all, John. Morris Fisher with Boulos Property Management.

HAGGE Now, I'm assuming you're part of applicant.

FISHER Right. Representing the applicant. At the time -- I thought it was pretty clear, but obviously it isn't -- if the City wants to put those lights in front on Cumberland Avenue, you are welcome to it. We like the lights that are on the parking garage as it is designed. I think we showed you they are the exact lights that are on the other garage we showed you. I think it looks good. I took Paul's advice on that. I went and saw them. In person it's a different animal than in those pictures. They're nicer than the pictures. If the City wants to put that fixture on Cumberland Avenue, and our light is too much -- is conflicting, we're happy to take that into account. We want to be cooperative on those things. I talked to Joe Gray very early on about this, and I don't want to speak for Joe, but he felt that the City ought to do Phase I and then progress to Phase II or III, or whatever they want to do, before insisting that a developer or the staff or Downtown Portland Corp. or the City or whomever put them out there -- but at the time that the City wants to put them out there, and if our lighting is inappropriate at the

time, we'll certainly work with them -- if there's too much light. And I guess the point that I'm trying to address from your perspective. There are some other issues, I know, but hopefully those will be addressed, too. We have quite a few lights here just because there is no other lighting along that street right now. We want to be safe. We want to have a lot of people using the garage and just want to be safe to have adequate light itself.

FISHER You can believe that there will be cooperation -- when the time comes, that's what I guess.

HAGGE Thank you. I guess, why don't we continue with lighting and then we're done, we'll move on.

CARROLL Kathleen kind of mentioned the question which is that ~~the City doesn't want to do it, a little memo said~~ the developer doesn't want to do it, if the city doesn't want to do it, okay?

BROWN No. DPC has been charged with the design for the downtown lighting. But when we originally looked at the proposal, we spoke with the engineers in public works and Bill Gray, and from a technical perspective, it seemed to make better sense and to be

less cluttered along that side of the street to have the wall lights.

CARROLL So, the City wants it that way?

BROWN That's right.

CARROLL Because the memo doesn't describe it that way. That's why I was unclear. If the developer didn't want to do it I wanted to know why. If he doesn't want to do it because the City doesn't want to do it, then that makes a lot of sense. It just took a while to get that answer.

BROWN But to reiterate what I said earlier, the Downtown Portland Corporation is prepared to fund all of the off-site improvements that are required by this project.

(JOHN CARROLL, KEN COLE AND ALAN MOONEY) UNINTELLIGIBLE

BROWN If down the road that becomes an issue, we will make it a non-issue. But right now it seems like (unintelligible)

COLE Kerry, I think you should send an application to the Downtown Portland Corporation for that bus.

KERRY For the bus, that's a lot of money.

HAGGE Jamie

CARON I just want to be clear, on the Preble Street side though, you have a 24 foot setback, and proposing wall-mounted lights to light up the sidewalk, and the Staff is comfortable we can light that space from 24 feet back through the trees, through the fence.

STEVENS I can address that. That's not the case, and the standards as you see here - probably best here seen in this elevation here. You see these black dots on these pre-cast concrete posts that go along there? Each one of those is a light. Probably at the face of the sidewalk, which is a light which throws its light down at the sidewalk. It's a cut-off fixture. It's a similar design to the fixtures that are on the building, but it's specifically designed to throw light on the sidewalk.

HAGGE I'm going to jump in. I'm very comfortable with the garage. I have one area that really nags at me, and I don't know how we're going to address it, whether in an amendment or whatever, and that is the -- we've continually been talking about the relationship to

pedestrian environment and particularly the condition of the first 35 feet, and I think Mr. Scott raised very clearly that most buildings have a bottom, middle and a top, and this building has either all top, all bottom, or all middle. And if we have a detailing that starts to appear on, I guess, this is the Cumberland elevation, we start, as we wind the corner on the Preble Street we have a series of columns that are coming down at a fairly even or regular. On the Cumberland elevation we have three large columns and then a series of short ones. And through the topography we essentially come down to a 10-foot high detailing that is essentially to the pedestrian scale, and it's too low. And I'm concerned about that, so it's my feeling that if that elevation is lifted at least on one level and we increase the length of the columns on Cumberland, we get back to at least we can say with a straight face that we addressed that pedestrian scale issue. And I'm going to propose or hopefully someone else will propose an amendment that will lift that detailing one level to at least get us up to two stories on the corner of Cumberland and Elm Street as we have now. As we head down the hill the building drops and we have gained higher scaling, so in a sense by lifting everything a level we will exceed probably the 35 foot rule if one corner will be a little below it on

another corner, but that effect will be there. I think it's critical to at least giving that building a comfortable feel. My guess is the the top and the middle, I think I'll leave it up to the architects, but it looks to me that we can do something up to that will delineate a top line and obviously it all falls into place. That is the only real design concern I have. I really have no trouble with relaxing the condition on the build to the lot line. When we designed or re-wrote the B-3, this was an item I was very concerned about, that we offer an applicant flexibility to build on odd sites. This is what this condition is for, and I think the adding of the trees, the pedestrian plaza, the ballard lighting, I think passes this test, and I think there should be hopefully no concerns on leaving that setback requirement. And I'm probably the only one on the Board who's that traffic island has disappeared. Because it seemed to me that the problem's not there now, yet everybody said it's a problem, and the problem -- and we're now going to try it for a year without it being a problem, then my guess is that we'll be old nd gray, and there will still not be a traffic island there. With that, I will conclude my comments. Any other comments?
Jamie?

CARON

I've got a question, and it concerns some of the pictures of the existing parking garages. You get a sense of the garage, and where this is so elevated as you approach the Downtown area, I was wondering if there was a way that we could somehow shield some of that interior lighting so that it's less visible as you approach the Downtown. As you look at it from the sidewalk.

STEVENS

That's the cutoff fixture, which is very different from a fixture that's been used in other decks around Portland, and the fixtures that you'll see in most of the parking decks with the exception of the Casco Bay Ferry Terminal deck, are the glass prism lights which do cast light out sideways. There is, I think, lighting information in a catalog on that particular fixture on the interior of the parking deck that we are proposing that ~~it does cut the light off in~~ the direction of going out. So you won't see that bright lens and the light coming out as you look into the deck.

CARON

But question I'm more relating to is that as you're looking up in to the garage, you'll be able to see the bottom of these lights, whether they're cutoff fixtures or not. I'm wondering if there's a way, as you're looking up into the garage, especially from

vantage points down farther --down the hill farther, if there were a way to arrange the lights so that you would be able to not see them -- they would not be s prominent.

STEVENS

The only thing I can say about that is that you probably can't alter the fixture or find a fixture that's going to alleviate that situation and still light the parking lanes inside the deck. However, one of the things that will be obvious here is that these fixtures -- we're building this deck of pre-cast concrete Ts which are 2'8 deep, and the lights are going to be up in between the Ts, so that when you look at the deck from the Cumberland Avenue side, which is vertical or 90 degrees to the Ts, the light will be very much shielded by those Ts. That won't be the case as you look in from either Elm Street or Preble Street because you'll be looking down the length of the Ts and see more of the lights. But there are not - there's a single row of lights down each parking lane, and you aren't probably going to see any deeper in because of the way the deck is built -- you aren't going to see any deeper in than one parking lane from both Preble and Elm Street. Short of that, I don't know what to do about that.

KRICHELS

I just want to say with regard to what Kerry said, I thought long and hard about the need for this garage, and I am at this point convinced that there is a need for parking, and that whether or not we built the parking garage that would still not improve the support for mass transit, so I am willing to support the garage. My one concern, and I think Cyrus already spoke well to it, is making it pedestrian friendly. And I agree with his comments and recommendations entirely that we need to make sure it is pedestrian friendly on all three sides. I am quite concerned about making sure there is a friendly connection between the downhill side of Bayside, up Cumberland, because I feel that the garage could have been a major barrier which would cut off that whole area. I think with the adding the trees and the planters on Elm Street and doing the landscaping ~~buffer between Government Services and the parking~~ garage as well as the plaza on Preble Street that you've made it as pedestrian friendly as you can, but on the facade I would still want to see that 35 foot addition to make that more pedestrian friendly.

CARROLL

I echo that. This is nice looking garage in Boston, and one thing that's really striking as you look at this is that it has a bottom, a middle and a top. The bottom of this garage -- the top -- well -- even

though this is set back from the street, it looks more suburban in some respects. I know it isn't, but it's very articulated on the bottom. The sides of the bays, even the longer bays are cut into thirds. And that doesn't happen -- it really doesn't happen anywhere, perhaps on the Cumberland side on one level, and so my feeling is that the level of articulation as shown here is really good and appropriate, and ought to be not only on the Cumberland side, but ought to be brought around onto the other two sides, because that's going to be a long walk up past a very stark building, and the size of those opening ought to be smaller. If you look at I think one of the reasons the Elm Street garage works, is that those openings are smaller, and the awnings there really change the scale of that building. It's unfortunate that unfortunately it's all garage, but I think many people that stand there don't even notice that when they're waiting for the bus because of the size of the openings and the size of the articulation of the awnings and the lighting, and I feel a little frustrated to be here now, because I've been saying this and I think we've all been saying it from the first time you came in, and I know you want to get out of here with an approval, so we're all sort of boxed in between Betty Noyce and a hard place, but I don't feel like we've really gotten

it yet, and I wonder how can we be certain that when you leave here tonight, whatever direction we can give to the Staff is going to be clear enough to see that this is a building that doesn't cut the downtown off, doesn't do a disservice to everyone who lives below the Betty Noyce and Congress Street, and it's a little frustrating to be here asking the question again, and still have the same reservations about the project, even though it's great to build this garage, it's a wonderful thing. I don't think there's anyone here who doesn't say this is wonderful act of philanthropy, but it doesn't waive standards and it doesn't waive the interest we have in the City. And that's what I feel we're being asked to do, so --

COLE

I would just second what Cyrus said. I would just think it needs something to carry around to at least, given the density and scale of the side streets. I would for Ladd Hildenbrand's benefit and especially add there's a certain irony to this building here, given the current program at the Art Museum, Winton Scott may have tried to infer to it, but it certainly seems to be a cubist design at work here. And I don't want to say that I would tell an artist to paint a picture and I would tell him what color, but I wouldn't want him to make a portrait of me in a cubist style. And I think that's --

HAGGE

Are you implying you're square?

(Laughter)

COLE

I'm sure I am, but I thought it was Cyrus' point, that a little more detailing on this would take away the stark rectangular effect that it in fact has. I don't think that's inappropriate, and probably you folks brought it on yourselves which like it or not, does have a bottom, a top and middle and does in fact bring it down to a more pedestrian scale on the face. I think that's what we're really asking for.

CARON

I just want to jump in and say that I agree with John's point, but I'm concerned about is cutting off the Cumberland Avenue side of the peninsula from the ~~rest of the peninsula and I'm one Board member who is~~ going to be looking particularly closely at the Farmers Market, to reach out across Cumberland Avenue and tie this part of Portland back together. So to the extent that you're getting a parking garage and we've sort of relaxed our standard on the pedestrian effects at grade levels, I'm going to be looking particularly closely at the next phase of your development to sort of soften that stark transition between the parking garage and the rest of the

peninsula - so while I'm willing to support it and I think it's a great project, it's going to put, I think, a bit more pressure on the applicant in the third phase of their development. So I want to go on record now that this is not going to be a surprise to the applicant as they approach us for this final phase. And I think both the City and the Planning Staff I would hope would look to try to soften this sort -- awkward transition between the two sides of Portland.

HAGGE Mr. Cole, would you like to pull up a chair?

MCQUINN I just want to -- INTERRUPTION IN TAPE

HAGGE Were you going to say something? We're back in business.

MCQUINN The comment I wanted to make is I do think along the same lines as John, it was unfortunate that - I know that SMRT came into the fold of a meeting after Alan made his presentation, which summed the basic engineering of the garage and so forth, and at that very first meeting we unanimously stated that our only concern was just the starkness of the design. You know, along with Ken said, I'm sitting here - I've been sitting here for the whole hour looking at

this garage that you've presented to us, and I know -- here we are in the 11th hour and we're sitting here trying to make a decision. I think we're all in support of this garage, but I think we represent the 60,000 people who live in the City, and as much faith and trust as I have in Mrs. Noyce and her goodwill, I would like to see something that we can be happy with, pleased with, and is inviting to the City. I don't only think of -- John's big thing is the pedestrian -- how it looks from the pedestrian view. I mean I drive into the City every day. I go to the Y every day and I drive up Portland Street, and I look right at that demolition site every day and right now, and I just keep seeing these drawings. To whatever extent we can dress this thing up, soften it, you know, I think, some type of -- I would be a big advocate for a different roof line, something that breaks it up so that we don't have that long straight run of off-white. I'm not an architect, I'm not a designer, my basic sense is that this is a project, let's get it done but make sure that it's something that we're all going to want to see once it's up. I look at that library every day driving in and out of - on Forest Avenue, and that's something that you know we know we're all going to have to live with for the next 20 or 30 years, and you know, I don't want to see something that people are -- you

know, that's the gateway to the City, this is a gateway to the City, and I really want it to be inviting. That's my only comment.

COLE? Paul, it's nice pink and greens in that library.

HAGGE Actually it brings to mind the USM Library.

COLE That's what I mean (unintelligible).

(laughter)

HAGGE The original colors were much better.

COLE Would you like a motion, sir?

HAGGE I'd love a motion.

COLE Based on the plans and the materials submitted by the applicant and on the information contained in Planning Report No. 36-96, The Planning Board finds as follows: (unintelligible) _____ performance of the site plan ordinance of land use code with the following conditions: (1) A revised plan be submitted for Staff review and approval reflecting the comments of Development Review Coordinator; (2) that complete information on the lighting plan be

submitted for staff review and approval, similar to that submitted this evening and make it clear that it is not more than what you've already got, but just wasn't in yet; (3) and that the landscaping plan be reviewed and approved by the City Arborist and; (4) that revised facade details be submitted for Staff review, carrying out for at least one level along the Preble and Elm Street, and an additional level along Cumberland, a pedestrian facade, and at some point, brighter paint on the piping, and let Paul decide if he wants to use the paint that's down at USM or something else. That's my motion.

HAGGE Do I have a second to that?

KRICHELS Second.

~~CARON I just want to follow up on a question asked originally it was to get back to it before action on the motion.~~

JAEGERMAN One per facade.

CARON The question was how many signs?

JAEGERMAN One per side.

CARON My concern was I didn't want to see this beacon crying out for parking in the middle of the Portland skyline, and it seems there's no way to reduce that, so (unintelligible).

HAGGE Any discussion or amendments. John?

CARROLL I think that the last condition is huge, and I don't -- I'm trying to think of what we can do -- of what I would like to do in terms of clarity.

COLE Clarity is what we discussed to the extent it's on the record, for the staff to work with Paul. I agree to a great degree with Ladd in letting the architect do the design, but I think what we're saying is that as a part of that design we want some additional pedestrian friendly scale, with a little more brightness. As Paul said, and we agree with him on the piping. I think that's not that difficult, can be worked out very expeditiously with some additional drawings. I'm not pretending to make it difficult, and I don't think anybody here intends to.

HAGGE Do you want to see that again, or do you --

COLE No, I don't. In fact, there are motions that the Staff review, and I fully intend that.

HAGGE One amendment what you addressed is as to color. What about the one year test period for the traffic island?

COLE I didn't include that because it's not a condition at this point.

HAGGE Do we need to make that a condition?

COLE You did have that, I thought that was just --

GRAY It would be a City improvement anyway.

COLE I figured that was Bill's office so I wasn't gong to worry about it.

~~HAGGE I didn't want to make --~~

CARON But it is important. You can also indicate in a letter that he wants the option to be able to put that in.

COLE He has that power. He can do it tomorrow.

CARON Sure, okay. It just seemed uncertain in the memo.

HAGGE Well, my amendment's been addressed by Mr. Cole's last item.

KRICHELS The rest of Ken's motion, has the color as well as the additional --

COLE Yes, whole show -- I sure painted the right color, but not -- (unintelligible)

HAGGE Any other amendments on this motion? All those in favor of the motion before us. It's unanimous. And the second item?

BURNS Before you start that, it should read 14.526A6B2.

? STATIC

~~COLE We've got a little setback issue under Section 14.526A6B2 before us, determine that the proposed development may increase maximum street wall built-to line showing the submitted site plan based on the following findings: That the developer provide substantial and viable publicly acceptable open spaces for other amenities at the street level that support pedestrian activities and interests, that the develop does not substantially detract from prevailing street wall character by introducing such~~

interesting setback elements as the pedestrian plaza discussed; that the development does not detract from existing publicly acceptable open space, given the fact that this is a parking lot; and that the area setback is of high quality character and design.

UNKNOWN

VOICE Second

HAGGE: I have a second to that. Discussion - All those in favor of this amendment motion. It's unanimous. You have your parking garage. Good luck with your pedestrian scale design.

? Thank you.

? Our last item is industrial zoning. We will discuss the merits of other issues -----

CUMBERLAND AVENUE PARKING GARAGE

PORTLAND/MAINE

OPEN PARKING STRUCTURE

DRAWING LIST

STRUCTURAL

COVER

- S1 TYPICAL DETAILS
 S2 PILE PLAN
 S3 PILE CAP/FOUNDATION PLAN
 S4 FIRST LEVEL PLAN
 S5 TYPICAL FLOOR PLAN
 S6 ROOF LEVEL PLAN
 S7 TYPICAL PRECAST UNITS

ARCHITECTURAL

- A1.0 FLOOR PLANS
 A1.1 TRAFFIC ISLAND AND GENERAL NOTES
 A1.2 SITE IMPROVEMENT PLAN
 A1.3 SITE DETAILS
 A2.0 BUILDING SECTIONS
 A3.1 PREBLE STREET ELEVATION
 A3.2 CUMBERLAND AVENUE ELEVATION
 A3.3 5th STREET ELEVATION
 A3.4 NORTH ELEVATION
 A4.0 CIRCULATION DIAGRAM

SURVEY

GENERAL SURVEY

DRAINAGE

DRAINAGE/UNDERGROUND UTILITY PLAN

OWNER

AUGUST CORPORATION

PROJECT ENGINEER

(207) 775-1999
 FAX 775-4405

CRITERIUM-MOONEY ENGINEERS

950 BRIGHTON AVE.
 PORTLAND, ME 04102

ARCHITECT/CONCEPTUAL DESIGN

(207) 846-7702
 FAX 846-5107

ORCUTT ASSOCIATES

25 BRIDGE STREET
 YARMOUTH, ME 04096

TRAFFIC ENGINEER

(207) 725-9905
 FAX 725-8414

EATON TRAFFIC ENGINEERING

2 MIRANDA STREET
 BRUNSWICK, ME 04011

GEOTECHNICAL ENGINEER

(207) 657-2966
 FAX 657-2940

S.W. COLE

P.O. BOX 379
 GRAY, ME 04039

PROPERTY MANAGER

(207) 871-1290
 FAX 773-5847

BOULOS PROPERTY MANAGEMENT

TWO CITY CENTER
 PORTLAND, ME 04101

SURVEYOR

(207) 774-0424
 FAX 774-0511

OWEN HASKELL, INC.

18 CASCO STREET
 PORTLAND, ME 04101-2979

DRAINAGE

(207) 822-0394
 FAX 822-6682

SQUAW BAY CORP.

P.O. BOX 904
 CUMBERLAND CENTER, ME 04021

DESIGN / BUILD TEAM

CONTRACTOR

(207) 772-2888
 FAX 886-5135

ALLIED CONSTRUCTION COMPANY, INC.

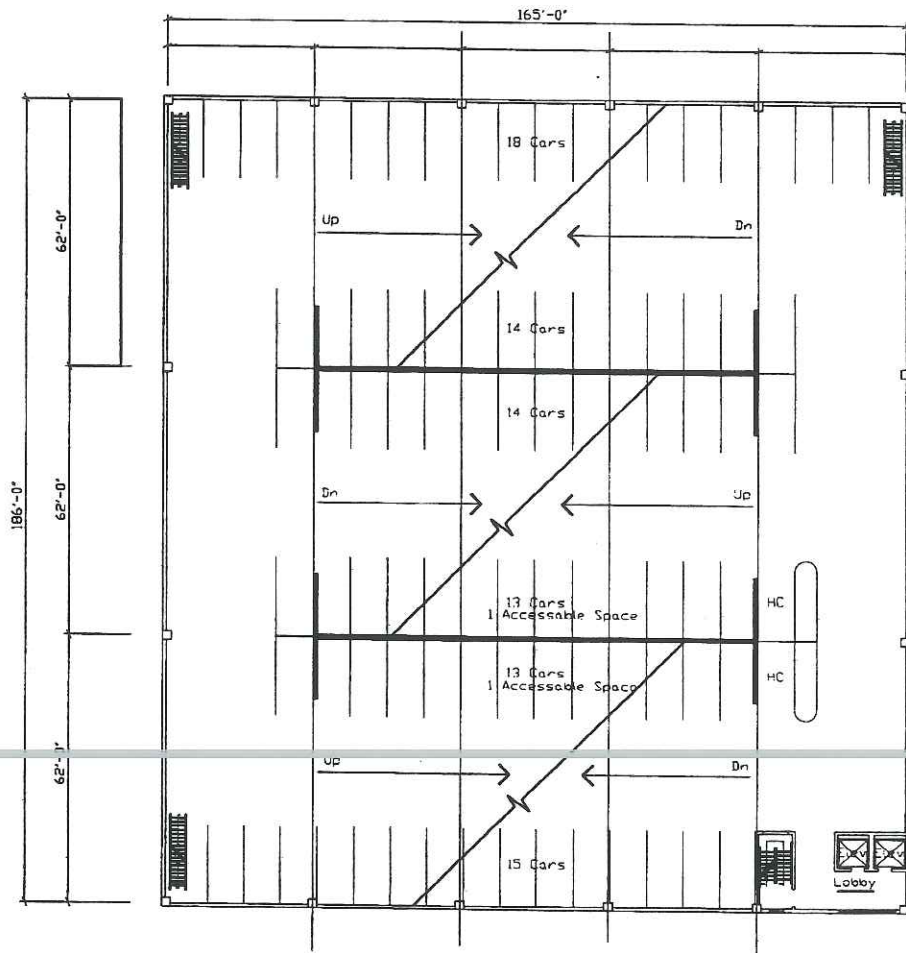
P.O. BOX 1999
 PORTLAND, ME 04104

ARCHITECT

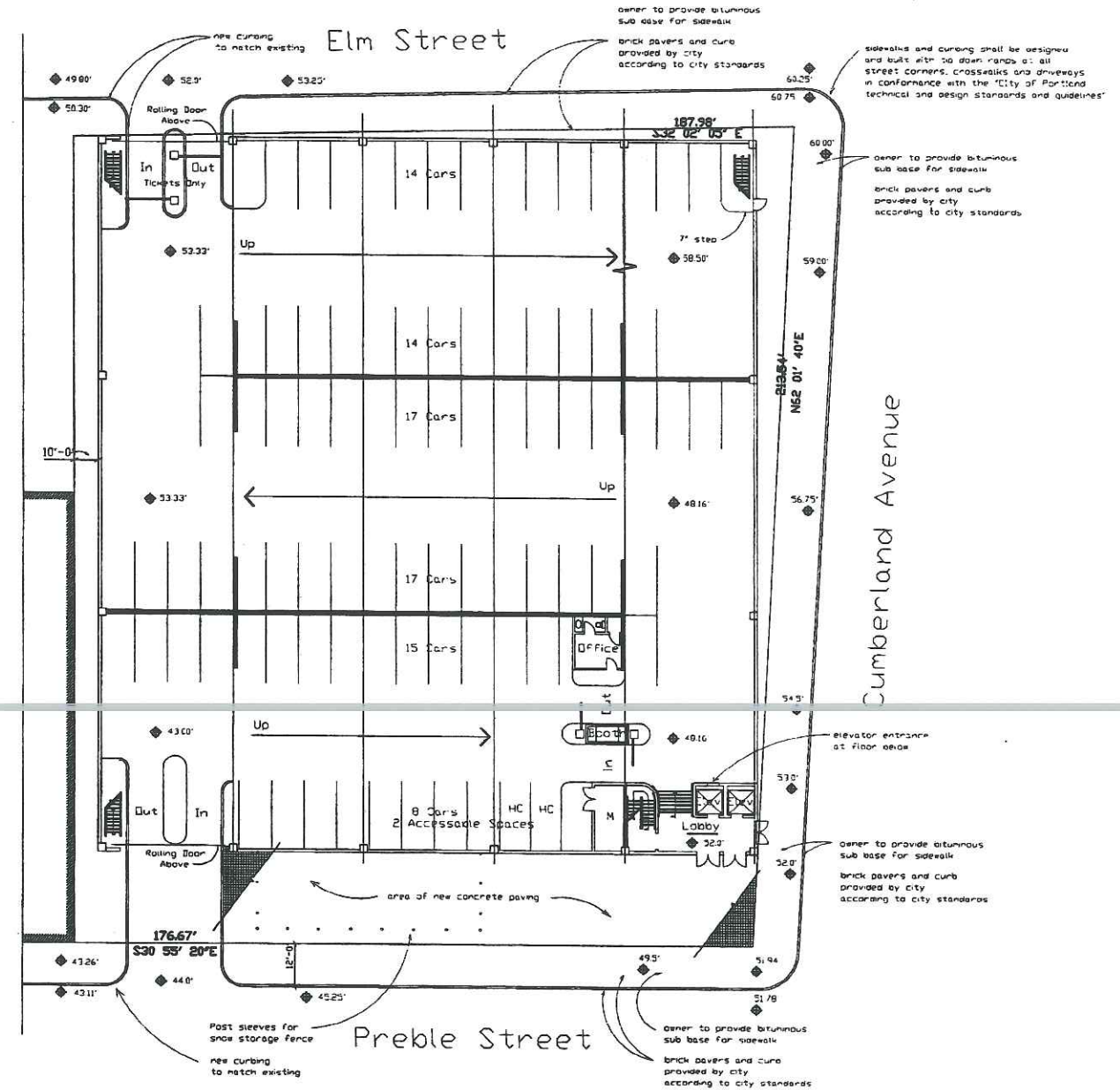
(207) 772-3848
 FAX 772-1070

SMRT/STEVENS, MORTON, ROSE & THOMPSON

144 FORE STREET / P.O. BOX 618
 PORTLAND, ME 04104



Typical Floor Plan
89 Cars Total



Grade Level / Site Plan
87 Cars Total

FOR FURTHER SITE PLAN REQUIREMENTS SEE DRAWINGS A1.1, A1.2, A1.3, AND DRAINAGE PLAN.

CRITERION ENGINEERS
TEL 837 25 0327
FAX 837 72 1425

Drcutt Associates
25 Bridge Street
Farmington, Maine
04938
Telephone 837 846 7702
Facsimile 837 846 3107

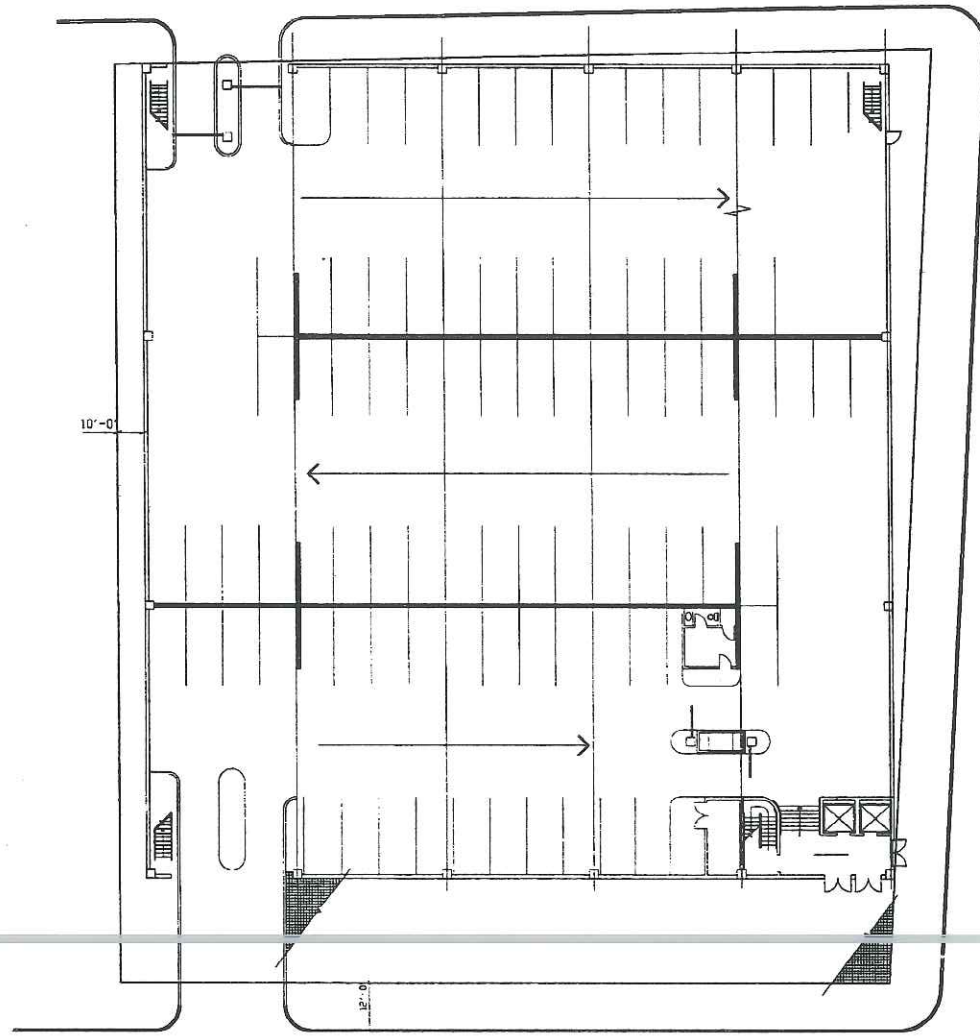
Cumberland Avenue Garage

DATE	SCALE	DRAWN BY	CHECKED BY	REVISIONS
JUNE 1996	1/8" = 1'-0"	HW	JMD	

Floor Plans

A1.0

Elm Street

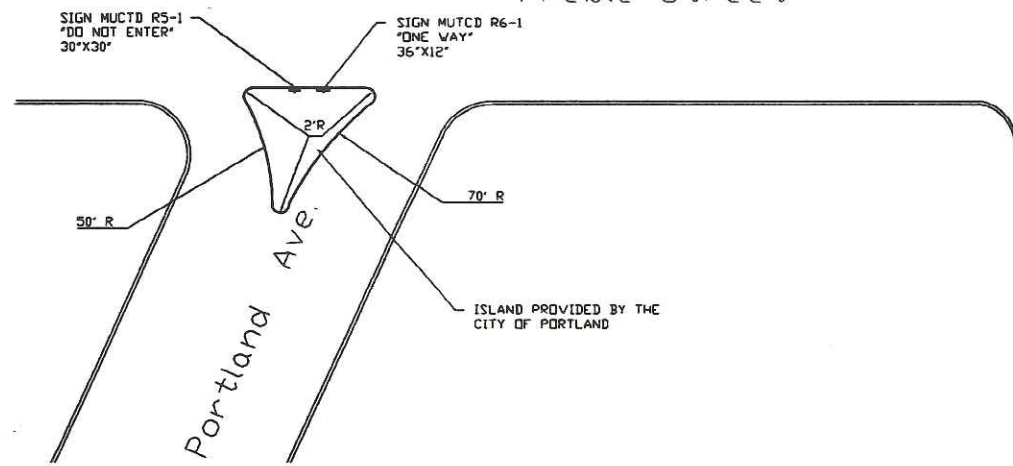


Cumberland Avenue

SITE PLAN GENERAL NOTES

1. Landscaping shall meet the "Arboricultural Specifications and Standards of Practice and Landscape Guidelines" of the City of Portland Technical and Design Standards and Guidelines.
2. The entire site shall be developed and/or maintained as depicted on the site plan. Approval of the Planning Authority or Planning Board shall be required for any alteration to or deviation from the approved site plan, including, without limitation: topography; drainage; landscaping; retention of wooded or lawn areas; access; size, location, and surfacing of parking areas; and location and size of buildings.
3. All powerline utilities shall be underground.
4. Sidewalks and curbing shall be designed and built with tip down ramps at all street corners, crosswalks and driveways in conformance with the City of Portland Technical and Design Standards and Guidelines.
5. 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 representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the preconstruction meeting.
6. Where paving is disrupted by building construction, contractor shall be responsible to

Preble Street



TRAFFIC ISLAND PLAN

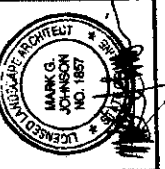
CRITERION ENGINEERS

205 BRIMLEY AVENUE
PORTLAND, OR 97208
TEL 503 757-1849
FAX 503 775-4485

Cumberland Avenue Garage

SCALE	1/16" = 1'-0"
DATE	JUNE 1996
DRAWN BY	INJ
CHECKED BY	JRD
REVISED	

TRAFFIC ISLAND & GENERAL NOTES



Cumberland Avenue
Parking Garage
Portland, Maine

Table with columns: REV., DESCRIPTION, DATE, PROJ. NAME, SHEET NO.

Site Improvement Plan

SHEET NO.

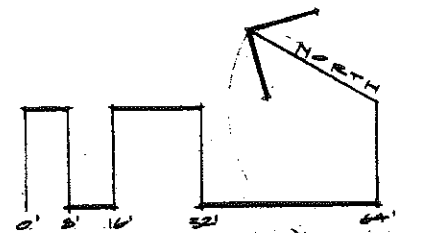
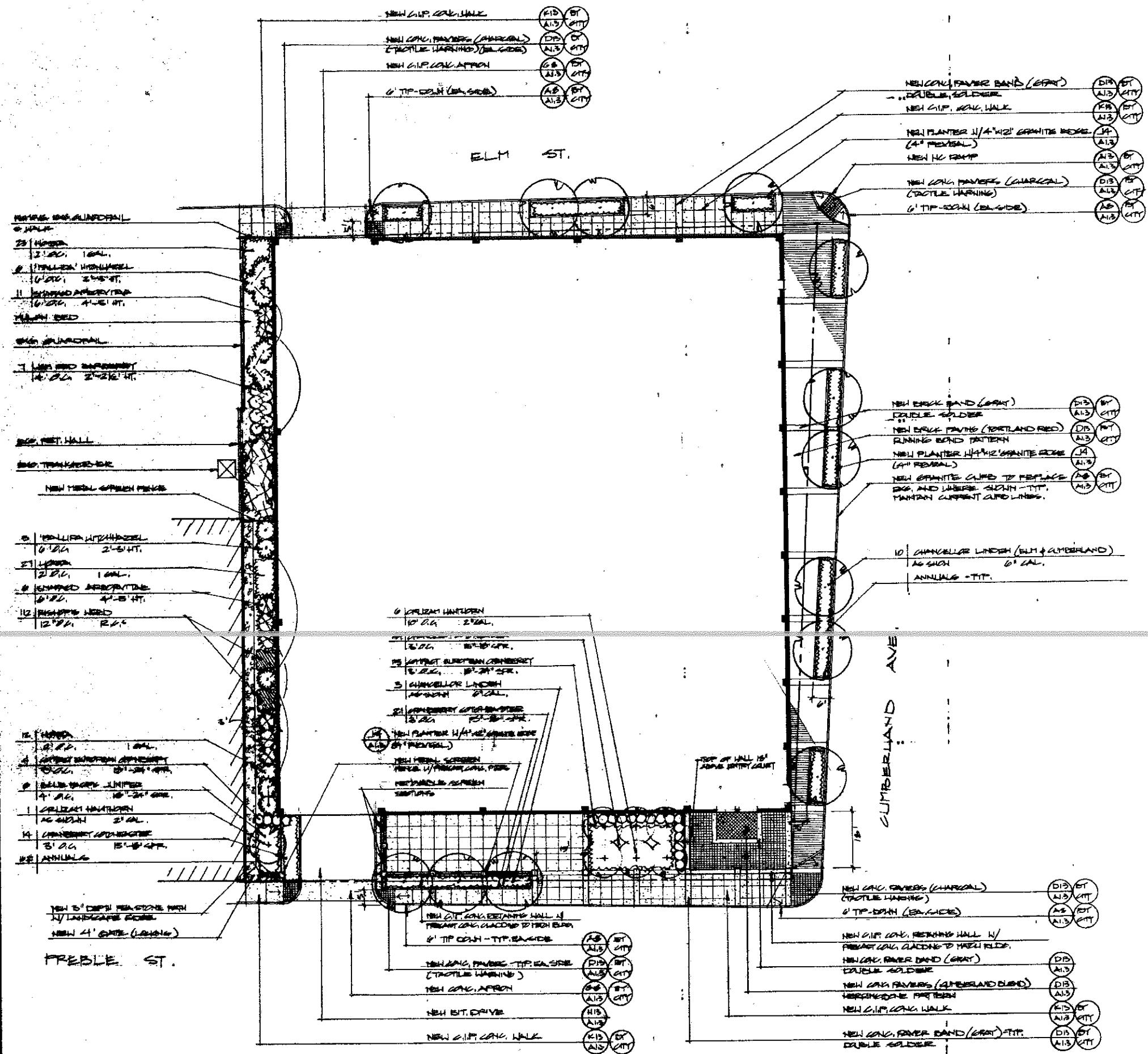
A1.2

GENERAL NOTES:

- 1. All dimensions shall be verified in the field by the Contractor prior to construction. Any discrepancies shall be reported immediately to the Architect for direction and resolution prior to any further work. Status report prior to construction for approval.
2. Do not scale the drawings. Any corrections in dimensioning shall be reported immediately to the Architect for approval. Any discrepancies between drawings, details, notes and specifications shall immediately be reported to the Architect for further direction and resolution before any additional work proceeds.
3. All angles are 90 degrees unless otherwise noted.
4. All paving, curbs, and structures shall be staked out by the Contractor and approved by the Architect prior to construction.
5. All dimensions from building are to face of building foundation. All dimensions from curb are to face of curb.
6. Provide a smooth transition where new work meets existing work.
7. Utility locations shown are approximate and shall be verified by Contractor prior to construction.
8. Existing conditions not topographic data are based upon drawings prepared by Cross Hightell, Inc., Portland, Maine, entitled "Standard Boundary Survey on Cumberland Ave., Franklin Street and Elm Street, Portland, Maine, for Monument Square Addition" (July 28, 1989).
9. Contractor shall notify Dig - Safe (1-800-225-4977) and verify location of all existing utilities prior to excavation.
10. Contractor shall secure all necessary permits for work shown on these plans.
12. All work shall comply with all local, state, and federal safety regulations and meet or exceed City of Portland standards.
13. See Sht. A1.0 for Notes.

PLANT NOTES:

- 1. The Landscape Contractor shall supply and install all plants in sufficient quantities to complete the work as shown on the drawings. Discrepancies between quantities shown on the drawings and the plant list shall be reported immediately to the Architect and shall not be the contractor's responsibility for additional procurement.
2. The Landscape Contractor is advised that both above and below ground utilities exist on the site, the locations of which shall be verified by the contractor prior to commencement of operations. Should the location of any proposed planting conflict with any utility, the Architect shall be notified immediately for decision.
3. Any and all paving, curbing, utilities, leaves, etc., damaged as a result of the Landscape Contractor's operations shall be replaced or repaired by the contractor at no additional cost to the owner.
4. All planting beds including tree and shrub pits or as indicated shall receive 4" approved clean, uniformly graded or screened pine or hardwood bark mulch.
5. Locations of proposed plantings and bed lines shall be reviewed by the Architect prior to installation.
6. The Landscape Contractor shall relocate any plant according to the direction of the Architect.
7. All plant materials called for and installed shall meet or exceed specifications of the "American Standards for Nursery Stock" (most edition) as set forth by the American Association of Nurserymen.
8. All planting beds shall be defined by a neat, staked-out bed line. Bed lines shall be true to form as shown on the drawings, consisting of smooth curves and sharp lines and corners.
9. If because of culture requirements, availability, or other circumstances, the Landscape Contractor believes a particular plant called for is inappropriate, the Landscape Contractor shall report the situation immediately to the architect for decision.
10. All trees and shrubs noted for transplanting shall be dug and banded-in in a protected area as directed by the Architect for future planting.



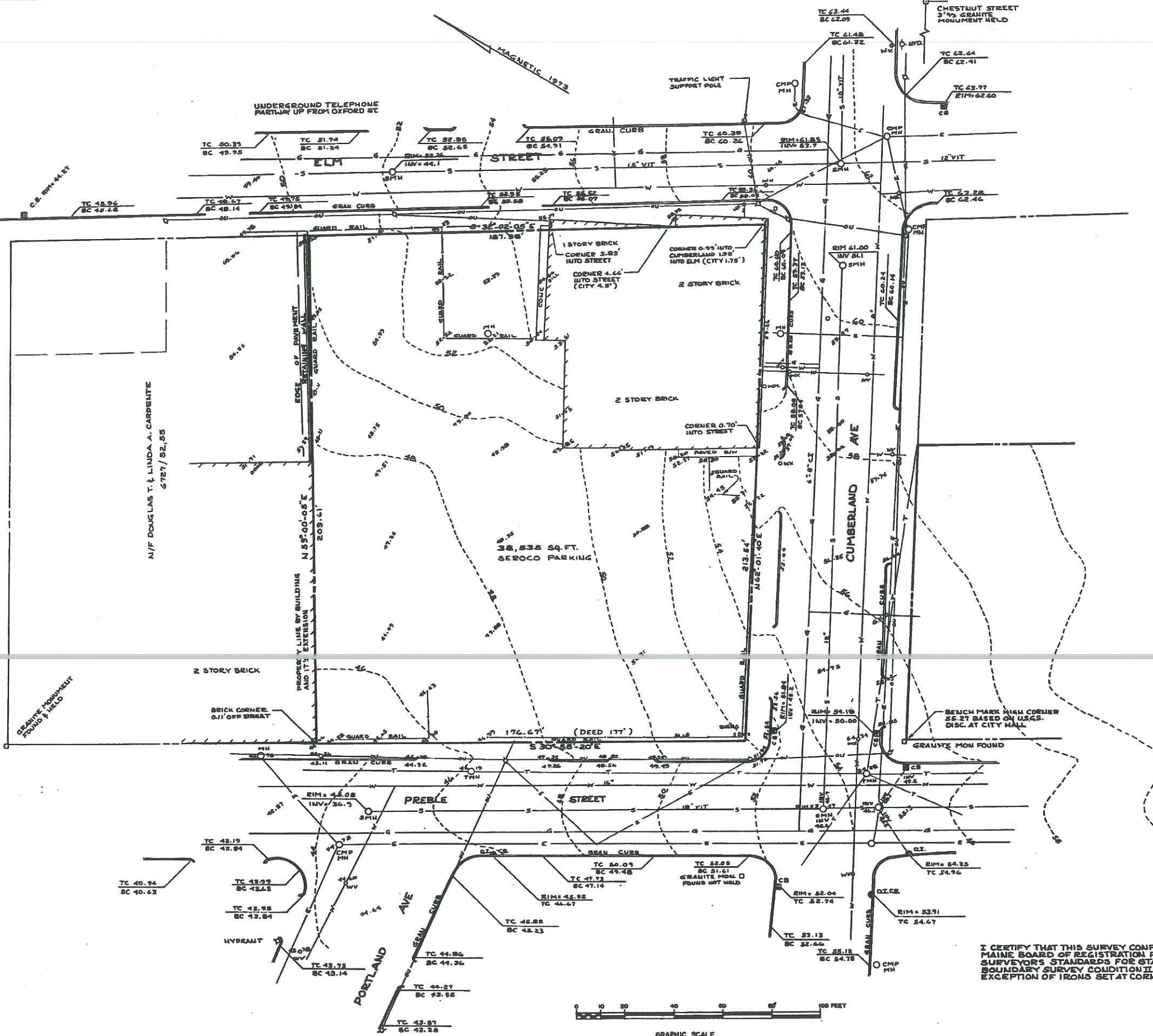
MAGNETIC 1973

UNDERGROUND TELEPHONE PARTWAY UP FROM OXFORD ST

CHESTNUT STREET 3 3/8 GRANITE MONUMENT HELD

OXFORD STREET

N/F DOUGLAS T. & LINDA A. CARDENTE 6727/52,55



PLAN REFERENCES:
 1) CITY OF PORTLAND ENGINEERING DEPT. 476/28 PROPOSED PORTLAND STREET EXTN. WORKING DRAWINGS 43, 134, 147, 186, 409/84 SOCONY OIL COMPANY

NOTES:
 1) OWNER OF RECORD: ATLAS CORPORATION C.C.R.D. 1947/84; 2053/18; 2150/15; 2251/295; 2870/464; 3391/168
 2) LOCUS IS SHOWN AS LOT 33-M-1 ON THE CITY OF PORTLAND ASSESSOR'S MAPS
 3) UNDERGROUND UTILITIES ARE APPROXIMATE AND SHOULD BE MARKED PRIOR TO EXCAVATION

I CERTIFY THAT THIS SURVEY CONFORMS TO THE MAINE BOARD OF REGISTRATION FOR LAND SURVEYORS STANDARDS FOR STANDARD BOUNDARY SURVEY CONDITION II, WITH THE EXCEPTION OF IRONS SET AT CORNERS.



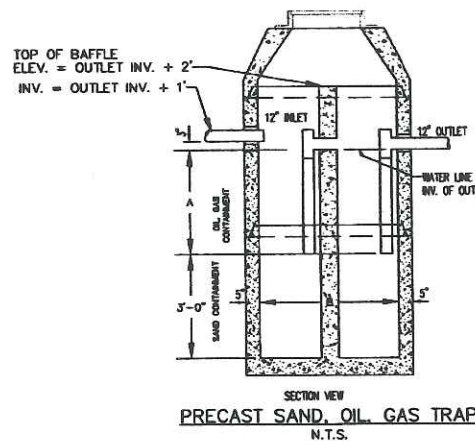
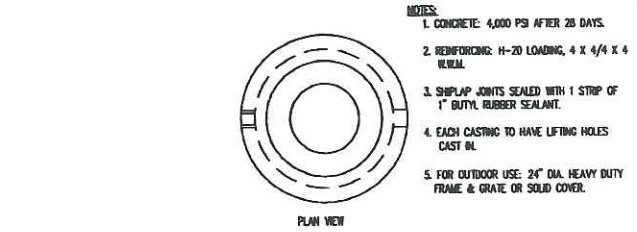
STANDARD BOUNDARY SURVEY
 ON CUMBERLAND AVE., PREBLE STREET AND ELM STREET PORTLAND, MAINE FOR
MONUMENT SQUARE ASSOC.
Owen Haskell, Inc.
 Civil Engineers Land Surveyors
 South Portland - Westbrook, Maine

Drawn By JCS	Date JULY 25, 1989	Job No. 89048 P
Trans By DBP		
Check By JCS	Scale 1" = 20 FEET	Sheet No. 2 OF 2
File No 488P		

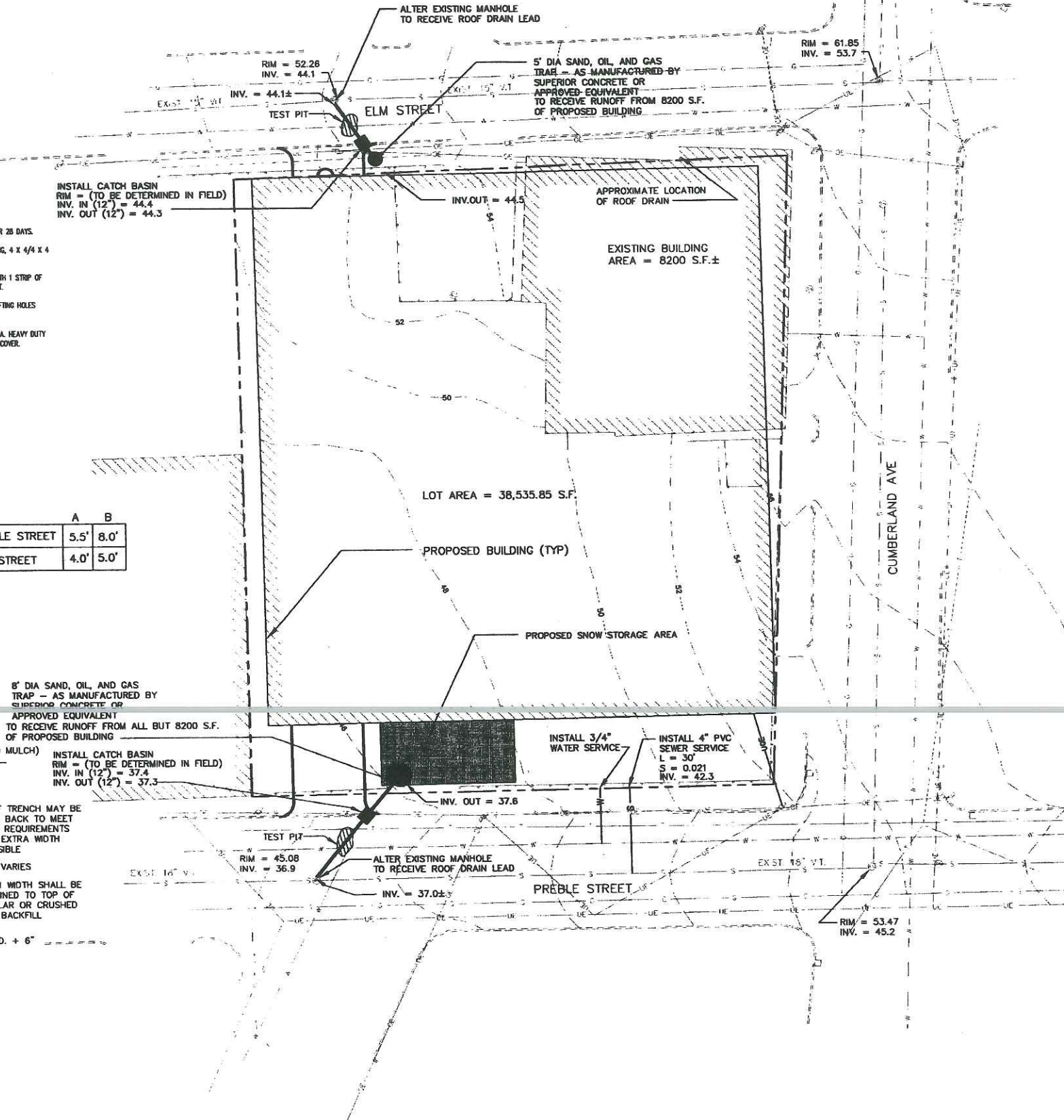
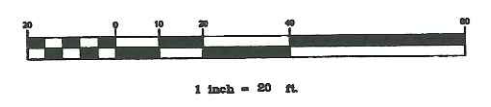
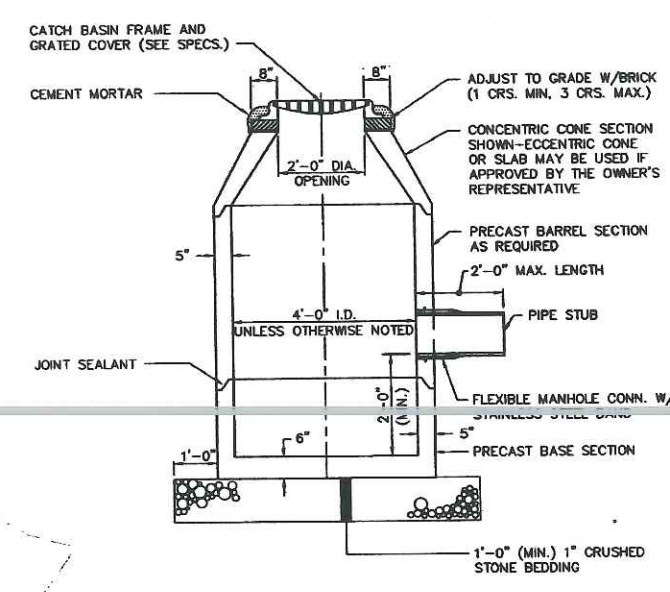
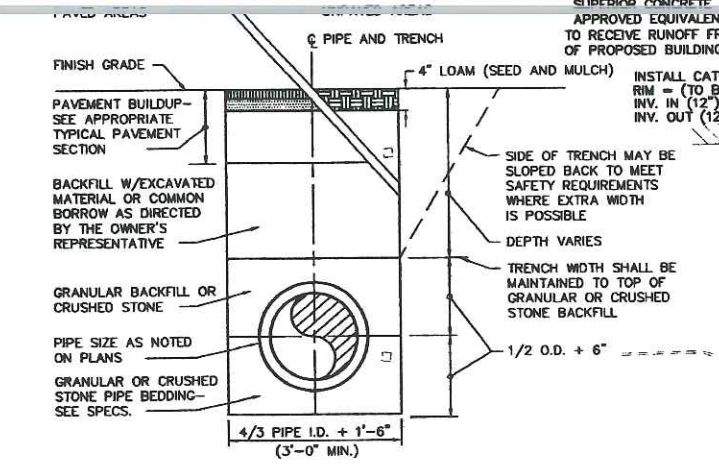
LEGEND

	EXISTING	PROPOSED
PROPERTY LINE	---	---
GAS	---	---
UNDERGROUND ELECTRIC	---	---
OVERHEAD UTILITIES	---	---
SEWER	---	---
WATER	---	---
BUILDING	---	---
CONTOUR	---	---
UTILITY POLE	---	---
MANHOLE	---	---
CATCH BASIN	---	---
STORMDRAIN	---	---
CURB	---	---
GUARD RAIL	---	---

- NOTES:
- 1) INVERTS OF PROPOSED ROOF DRAIN LEADS AND SEWER SERVICE SUBJECT TO CHANGE BASED UPON TEST PIT RESULTS.
 - 2) ROOF DRAIN LEAD MATERIAL TO BE RCP CL. III, PVC. (MIN STRENGTH SDR-35), OR DUCTILE IRON.
 - 3) BUILDING LOCATION SHOWN FOR PLANNING PURPOSES ONLY.



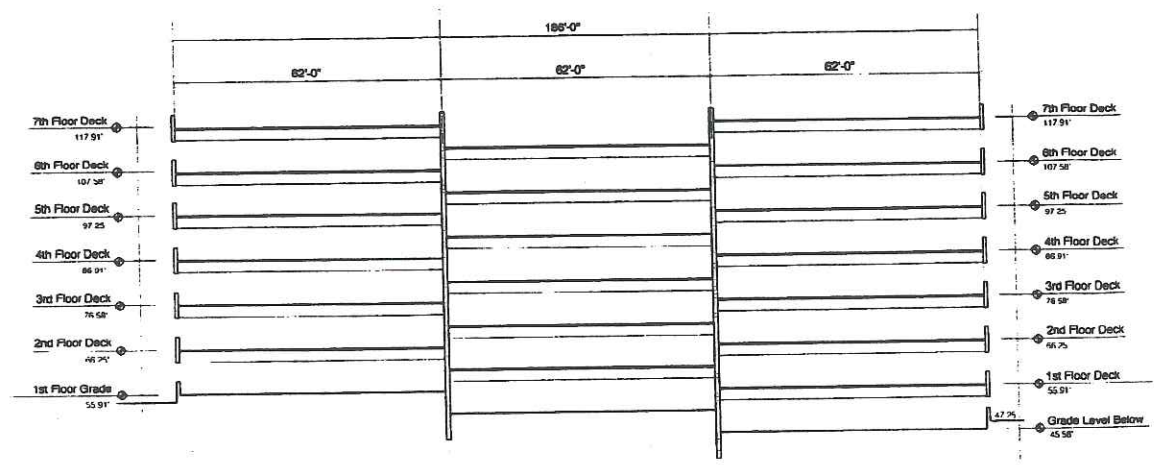
	A	B
PREBLE STREET	5.5'	8.0'
ELM STREET	4.0'	5.0'



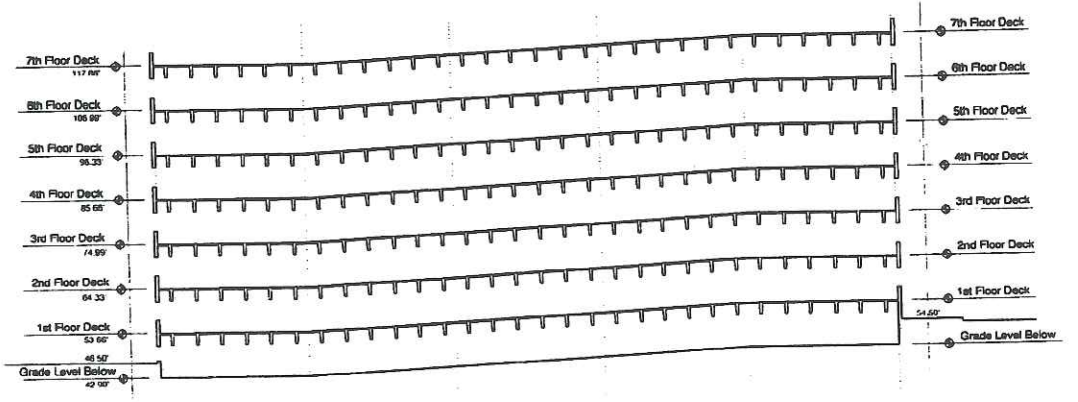
D:\98-216\ACAD\101 Mon Jul 1 08:36:44 1996

SQUAW BAY CORP. Consulting Engineers P.O. BOX 68A, CUMBERLAND CENTER, ME. 04021		FIELD BOOK # XX	DESIGN: TWS	PROJECT: PARKING GARAGE CUMBERLAND AVE, PREBLE ST., ELM ST.
CLIENT: CRITERIUM - MOONEY ENGINEERS PORTLAND, MAINE		FIELD BOOK PAGE XX	DRAWN: TWS	DRAINAGE/UNDERGROUND UTILITY PLAN
		FLAT FILE INDEX NUMBER XX	CHKD: WSD	
		PROJECT DIR. 96-216	DATE: MAY 1996	PROJ. NO. 96-216-00
		DRAWING NAME D-101	SCALE: 1" = 20'	DWG. NO. D-101
NO.	REFERENCE DRAWINGS	REV.	DATE	STATUS
1	STANDARD BOUNDARY SURVEY ON CUMBERLAND AVE., PREBLE STREET AND ELM STREET	C	7/1/96	REVISED AND RESUBMITTED TO PORTLAND PLANNING BOARD
	PORTLAND, MAINE FOR MONUMENT SQUARE ASSOC., BY OWEN HASKELL, INC., DATED	B	6/28/96	TO PORTLAND PLANNING BOARD
	JULY 25, 1998.	A	5/23/98	TO CLIENT
				BY TWS TWS WSD
				BY TWS TWS WSD
				BY TWS TWS WSD

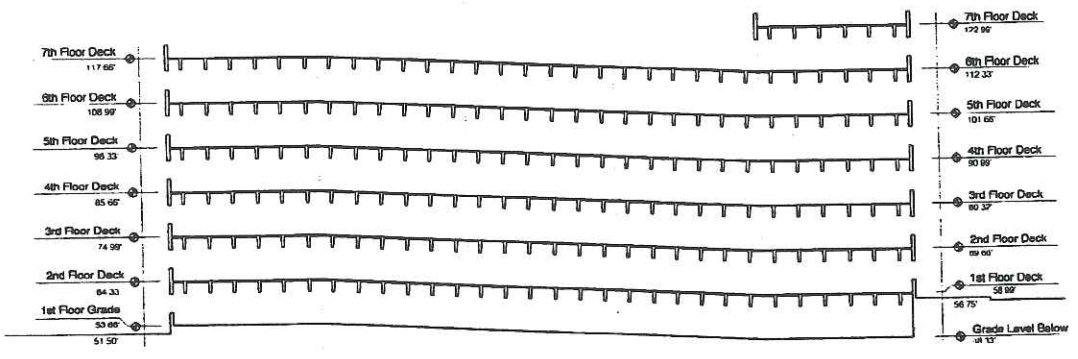




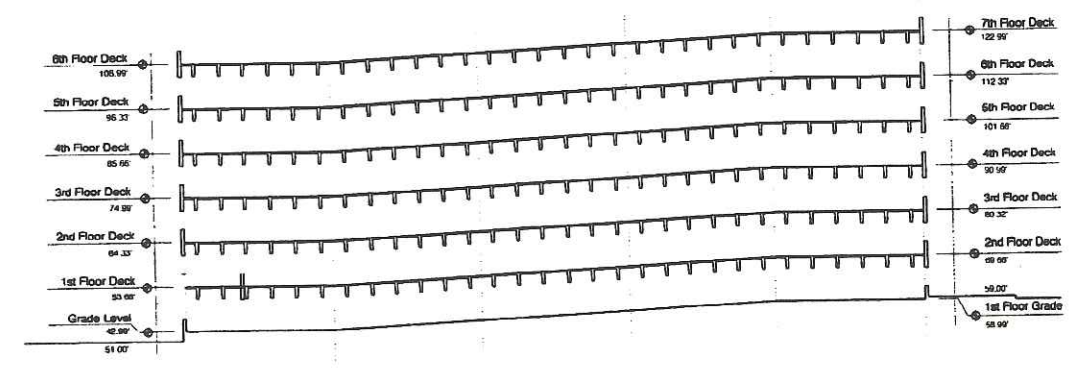
4 Building Section
1/16"=1'-0"



1 Building Section
1/16"=1'-0"



2 Building Section
1/16"=1'-0"



3 Building Section
1/16"=1'-0"

CRITERION ENGINEERS
TEL 202 775-1455
FAX 202 775-1450
630 BRIDGEMAN AVENUE
FORT LINDA, MD 20626

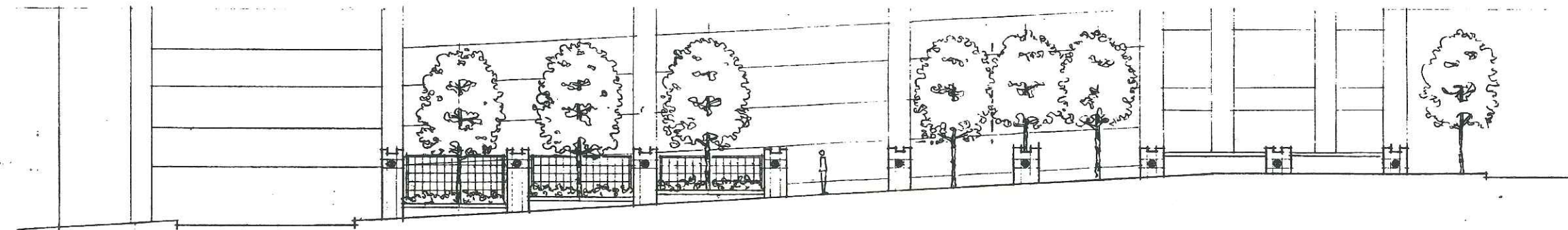
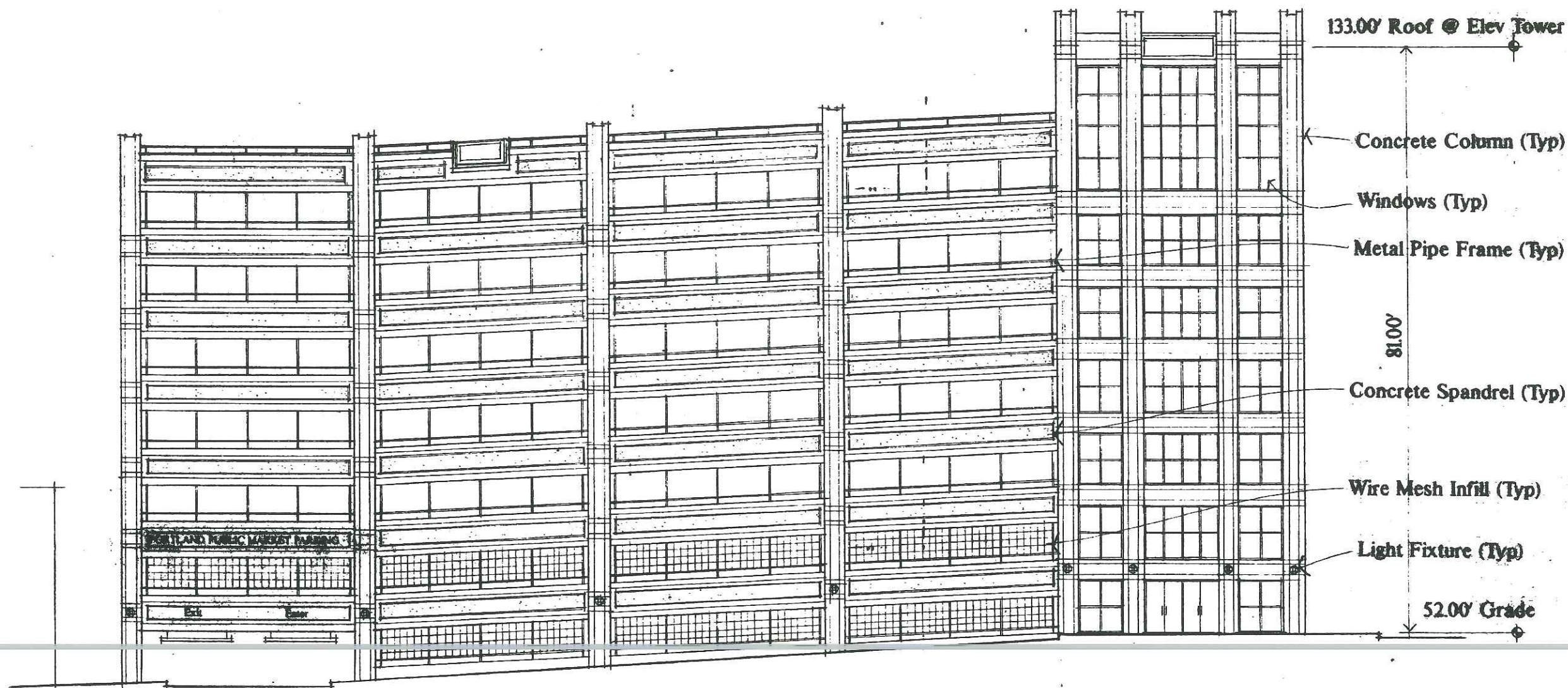
Orcutt Associates
25 BRIDGE STREET
BALTIMORE, MARYLAND 21201
TELEPHONE 301 646 7203
FACSIMILE 301 646 3107

Cumberland Avenue Garage

DATE	SCALE	BY	CHECKED BY
	1/16"=1'-0"		

Building Sections

B-2



Preble Street Elevation



STEVENS MORTON ROSE & THOMPSON
 Architecture
 Engineering
 Planning
 144 Park Street/P.O. Box 400
 Portland, Maine 04104
 tel. (603) 775-3000
 fax (603) 775-5000

100 Cumberland Avenue
 Parking Garage
 Portland, Maine

REV.	DESCRIPTION	DATE	BY	CHKD.

DRAWING NAME: Preble Street Elevation
 SCALE: 1/8" = 1'-0" (OR AS NOTED)
 SHEET NO:

A3.1

B-3



STEVENS MORTON ROSE & THOMPSON
Architects
201 West Broadway, 10th Fl
Portland, Maine 04101
Tel: 581-7200
Fax: 581-7200

Cumberland Avenue
Parking Garage
Portland, Maine

Cumberland Avenue
Elevation

SHEET NO.

A3.2

133.00' Roof @ Elev Tower

123.00' 7th Deck

Concrete Column (Typ)

Concrete Spandrel (Typ)

Windows (Typ)

Metal Pipe Frame (Typ)

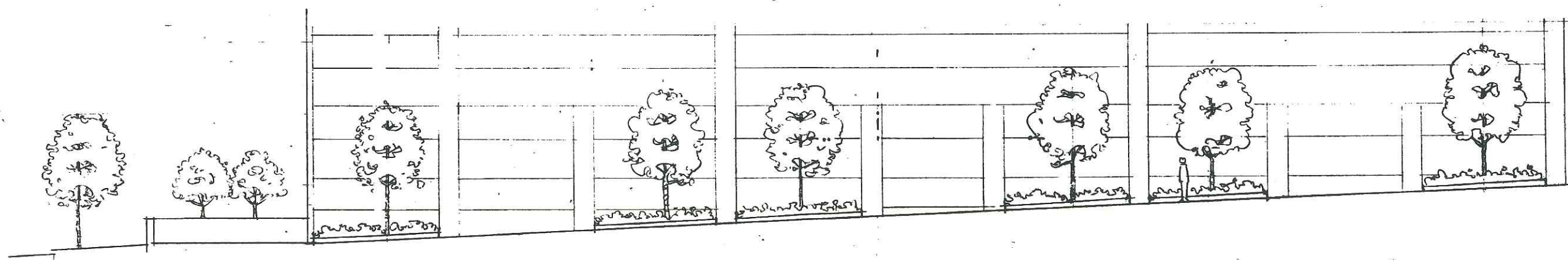
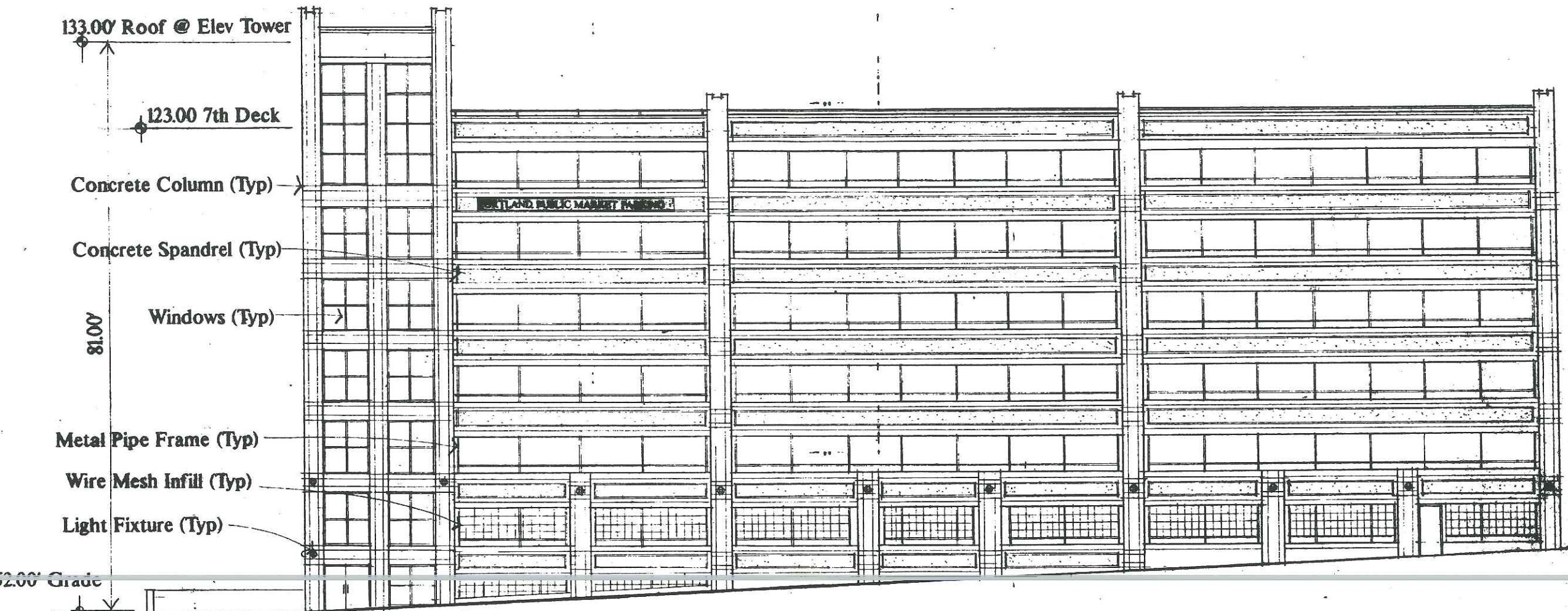
Wire Mesh Infill (Typ)

Light Fixture (Typ)

81.8'

52.00' Grade

PORTLAND PUBLIC MARKET FASINO



Cumberland Avenue Elevation

ISSUED FOR REVIEW ONLY - NOT FOR CONSTRUCTION

B-4

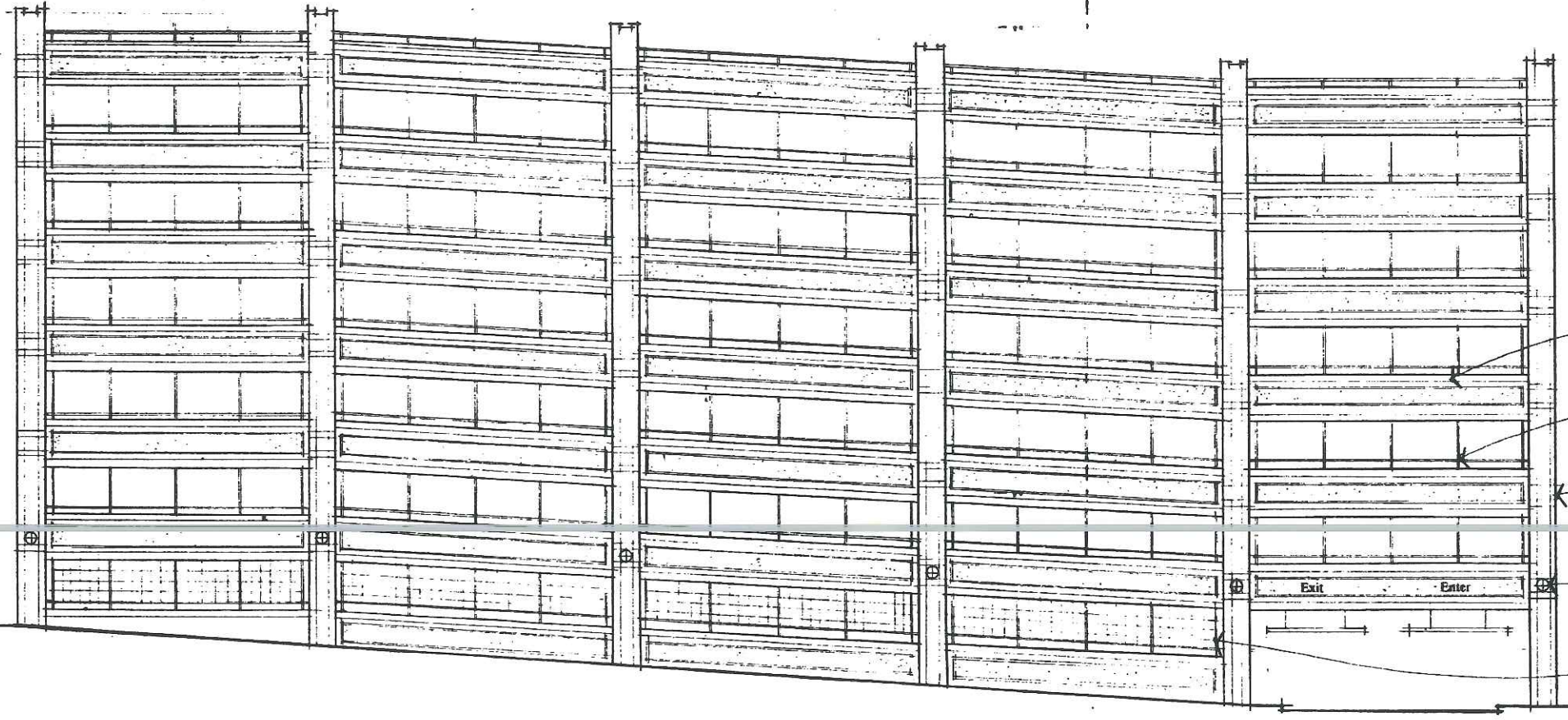


STEVENS MORTON ROSE & THOMPSON
Architectural
Engineering
Planning
144 Park Street/P.O. Box 618
Portland, Maine 04104
Tel. (207) 772-3946
Fax (207) 772-1070

123.00' 7th Deck

63.00'

60.00' Grade



- Concrete Spandrel (Typ)
- Metal Pipe Frame (Typ)
- Concrete Column (Typ)
- Light Fixture (Typ)
- Wire Mesh Infill (Typ)

Elm Street Elevation

Cumberland Avenue
Parking Garage
Portland, Maine

REV.	DESCRIPTION	DATE	BY	CHECKED BY

Elm Street Elevation

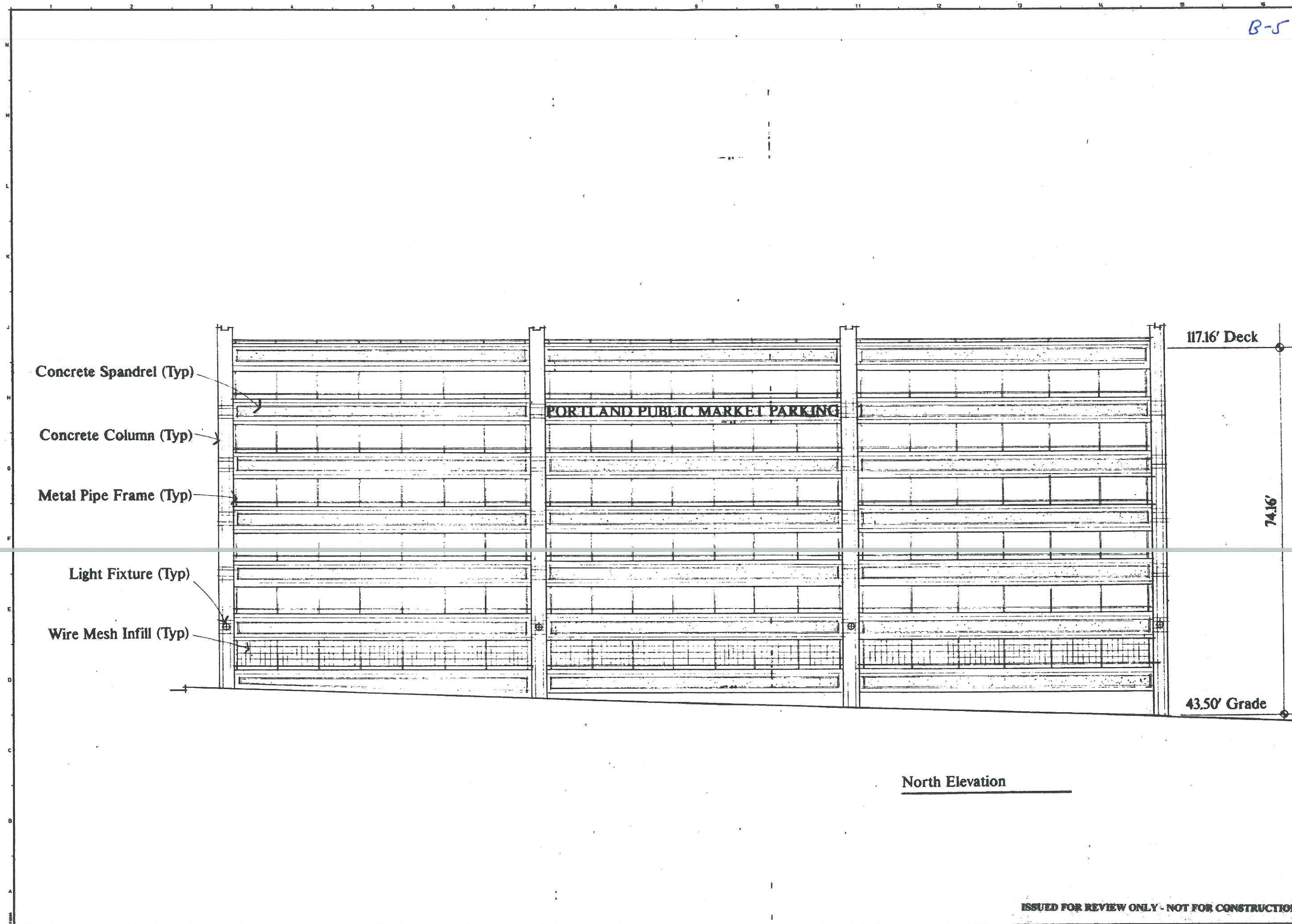
SHEET 35

A3.3

B-5



STEVENS MORTON ROSE & THOMPSON
Architects
244 New Street, 2nd Floor
Portland, Maine 04101
Tel: (603) 775-3000
Fax: (603) 775-1070



Concrete Spandrel (Typ)

Concrete Column (Typ)

Metal Pipe Frame (Typ)

Light Fixture (Typ)

Wire Mesh Infill (Typ)

117.16' Deck

74.16'

43.50' Grade

PORTLAND PUBLIC MARKET PARKING

North Elevation

Cumberland Avenue
Parking Garage
Portland, Maine

REV.	DESCRIPTION	DATE	BY	CHECKED

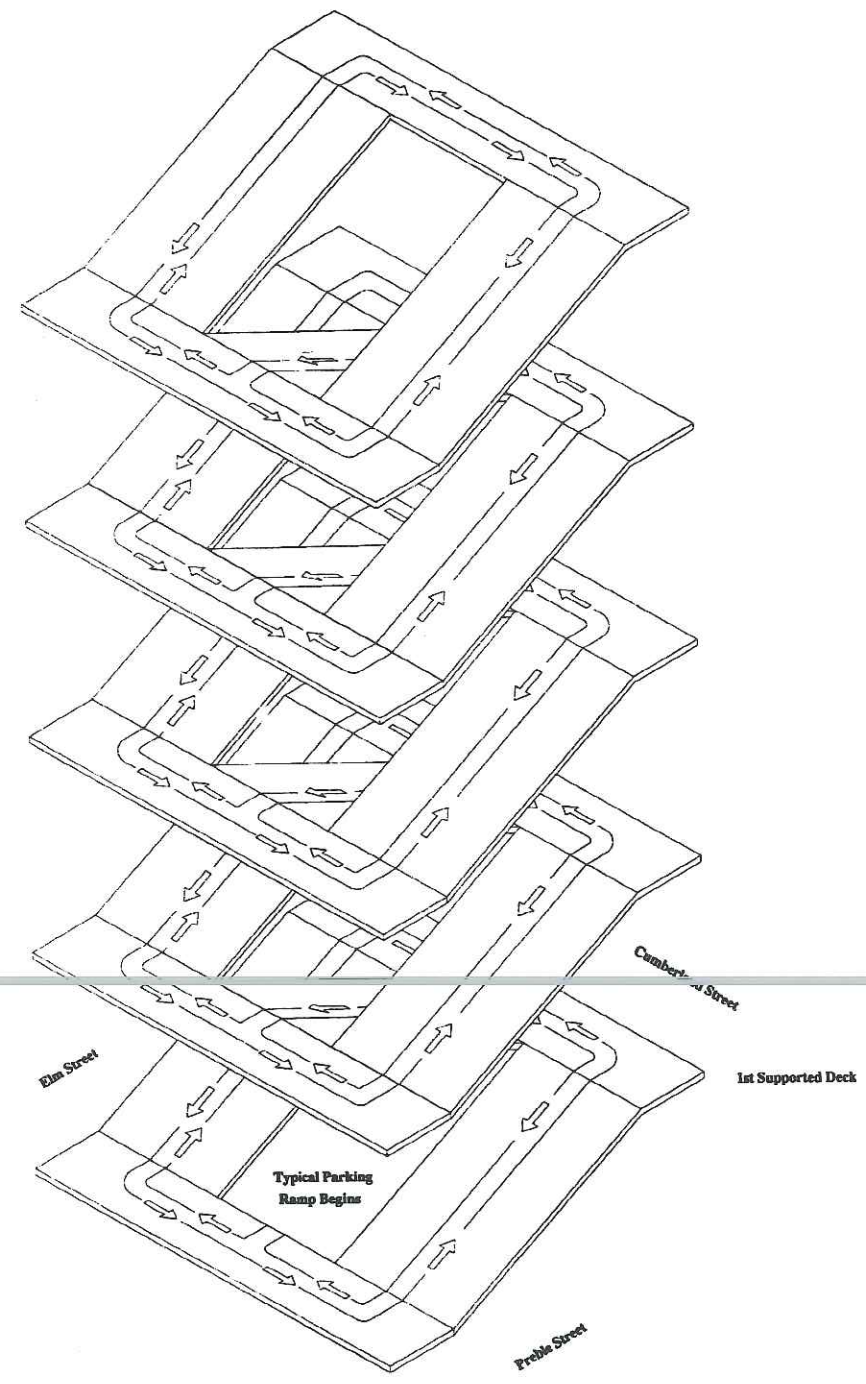
North Elevation

SHEET NO.

A3.4

ISSUED FOR REVIEW ONLY - NOT FOR CONSTRUCTION

B-6

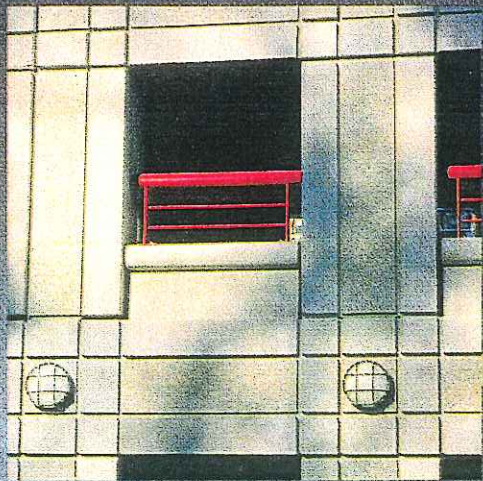


**Typical Parking Ramp Circulation
Diagram**

		<p>CRITERION ENGINEERS 628 BRIMINGTON AVENUE PORTLAND, ME 04106 TEL: 207 277-1000 FAX: 207 775-1100</p>
<p><i>Orcutt Associates</i> 27 BULLOCK STREET PORTLAND, MAINE 04106 Telephone: 207 846 7102 Facsimile: 207 846 5107</p>	<p>Cumberland Avenue Garage</p>	<p>DATE: MAY 1986 SCALE: 1/4" = 1'-0" DRAWN BY: JMD CHECKED BY: JMD REVISIONS:</p>
<p>Circulation Diagram</p>	<p>A4.0</p>	

pci JOURNAL

PRECAST / PRESTRESSED CONCRETE INSTITUTE



**THE BOSTON COLLEGE
PARKING STRUCTURE**
Chestnut Hill, Massachusetts

*PCI Design
Award Winner
for Best Parking Structure*



Fig. 1. The new Boston College parking structure was built into a 70 ft (21 m) hillside to create a transition space between the different styles of architecture of the lower and middle campuses.

team, headed by Architectural Resources Cambridge, Inc. (ARC), met these objectives by concentrating not only on planning issues but also in developing a functional, durable and architecturally attractive building; above all, the structure had to be built within a tight budget and on a fast-track schedule. For these reasons, precast concrete offered the ideal solution.

Three specific concepts were addressed by the structure's siting and design. First, the siting and design provide for the future addition of a three-story academic building that may be added to the parking structure's top deck. Secondly, the College's master plan calls for the space saved as a result of the structure's siting to be used for sports practice fields and open space. Lastly, the facility provides much needed parking for the Boston College campus. Located adjacent to the College's existing sports facilities and a site for a new recre-

ation complex, the parking structure will accommodate parking for events at these popular facilities.

Another of the structure's attributes is that it provides a more logical pedestrian path between the upper and lower levels of the campus. Previously, pedestrian circulation moved haphazardly up the hillside, cutting across a parking lot, driveways and areas of natural vegetation. To address this problem and provide a link between the upper and lower campuses, the parking structure includes a pedestrian stair that provides faster and safer access between the two levels of the campus. The structure's elevator provides handicapped access between the lower and middle campuses.

In order to provide a durable structure and to maintain the aesthetic spirit of the campus, the architect selected precast concrete for the building frame and its facade. The new parking structure is an entirely precast/prestressed

Table 1. Number and description of precast concrete components.

55	columns: 7980 sq ft of architectural finished surface area
192	spandrels: 29760 sq ft of architectural finished surface area
107	wall panels at stair tower: 7807 sq ft of architectural finished surface area
401	double tees
88	inverted tees
46	shear wall panels
30	filler pieces
6	light piers
55	slab/stair sections
960	total number of precast/prestressed components

Note: 1 sq ft = 0.093 m.²

concrete building comprised of precast columns and beams with precast spandrels accented by metal railings that surround its perimeter. Prestressed double tee parking decks, precast paneled



Fig. 6. Front view of parking structure shows distinctive pattern of architectural precast columns and spandrels.

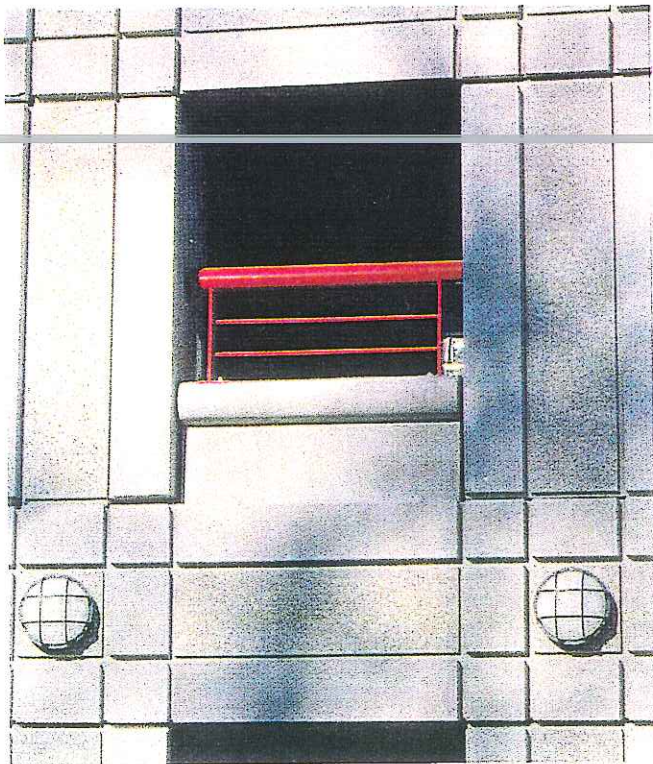


Fig. 7. Closeup of architectural precast concrete detail at openings. Photo courtesy: Northeast Concrete Products.

exposing bands of warm reddish-brown color in the facade. The Manchester red sand concrete mix blends sympathetically with the stone and granite of the middle campus, but also comfortably merges with the more eclectic lower campus.

Many of the precast components required several casting sequences due to the many returns in the pieces. Each of the exposed surfaces was cast exposed-surface side down in the mold to ensure a superior dense surface with uniform mix distribution and no surface voids. Once removed from the molds, the components were given a light to medium sand-blast finish. Altogether, 26 molds were required to cast the 960 precast components.

The precast concrete products were manufactured by Northeast Concrete Products, a PCI Certified Producer Member, with many years of high quality service.

Production of the precast concrete components began in June of 1993. The field erection of the precast frame started in February 1994 and took about 3 months to finish. The structure was fully completed and ready for service in September 1994.

Fig. 8 is an early construction shot of the parking structure showing the erection of the precast/prestressed concrete frame. Figs. 9 and 10 show various views of the completed structure. Fig. 11 is a night-time view of the finished parking structure showing the dramatic, open, airy look and light mass of the building.

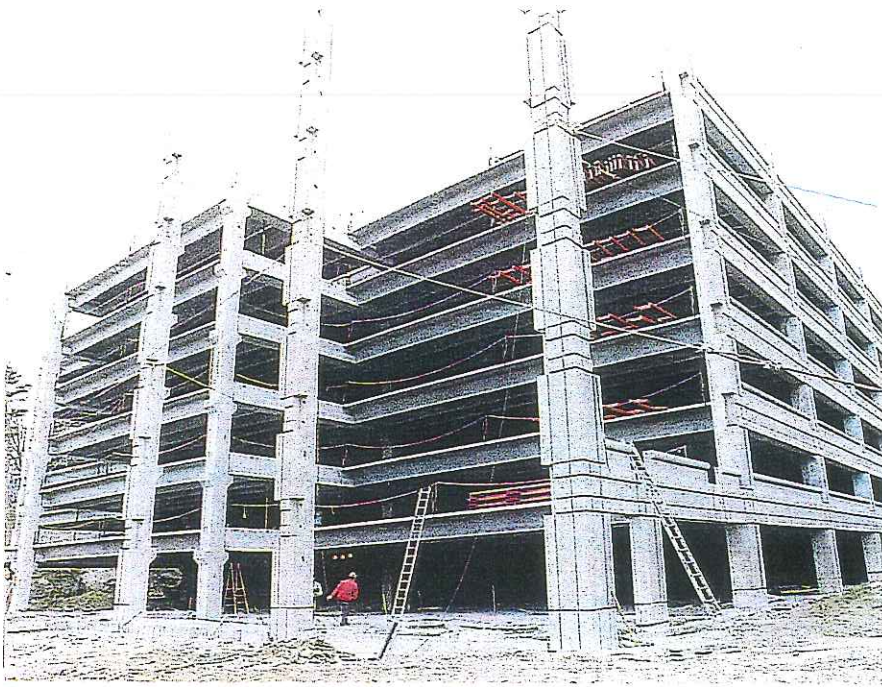


Fig. 8. Erection of precast/prestressed concrete frame of parking structure.

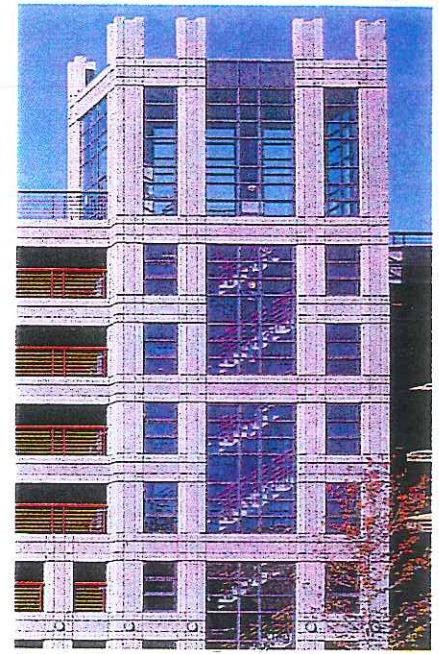


Fig. 9. Closeup of tower portion of parking structure.



Fig. 10. Overall view of completed parking structure.



Fig. 11. Night-time view of parking structure shows how open bays, glass-encased towers, and voids create a light, airy atmosphere that reduces the building's apparent mass and gives a distinctively open feeling.

The total cost of the parking facility was \$12 million. The precast contract amounted to \$4.3 million.

Since completion, the parking structure has received high praise from the college administration and several accolades from the design community. Last year, the project was selected as the recipient of the "Best Parking Structure" award in the 1995 PCI Design Awards Program. In making their selection, the jury made the following comments:

"The structure displays a good balance between sobriety and details. It blends nicely with the campus because of its detailing, yet it does not simply replicate the older buildings. The structure is obviously a parking garage, but at the same time, the scale of the huge building is broken up with different design elements and the proportions of the openings within the precast concrete. It

makes a very successful adaptation to this campus."

Boston College's new parking structure is a striking and harmonious addition to the campus. The building has already become a popular landmark on campus, providing the faculty, students and visitors with an efficient and safe place to walk and park their vehicles.

Lastly, and most importantly, this parking structure could not have been completed without close cooperation between the Boston College administrators, ARC, LeMessurier, Victor Stango, J.F. White & Sons and Northeast Concrete Products. Because of this "partnering" during the planning, programming and design phases of the project, the construction progressed very smoothly and the parking structure was completed below budget on a fast-track schedule. Ready for use in the fall of 1994, the parking facility enabled the College

to begin its fall semester with a stunning and much needed addition to its campuses.

CREDITS

Owner: Boston College, Chestnut Hill, Massachusetts

Architect: Architectural Resources Cambridge, Inc. (ARC), Cambridge, Massachusetts

Structural Engineer: LeMessurier Consultants, Cambridge, Massachusetts

Consulting Engineer: Victor O. Stango, Portland, Maine

General Contractor: J.F. White Contracting Company, Newton, Massachusetts

Precast Concrete Manufacturer: Northeast Concrete Products, Plainville, Massachusetts

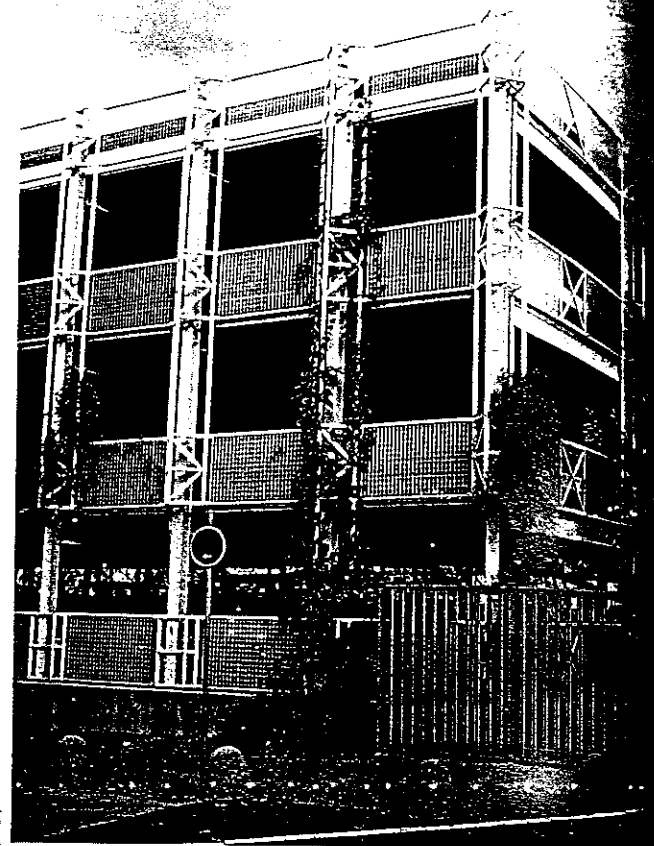
Photographer: Nick Wheeler, Wheeler Photographics, Cambridge, Massachusetts



B-12



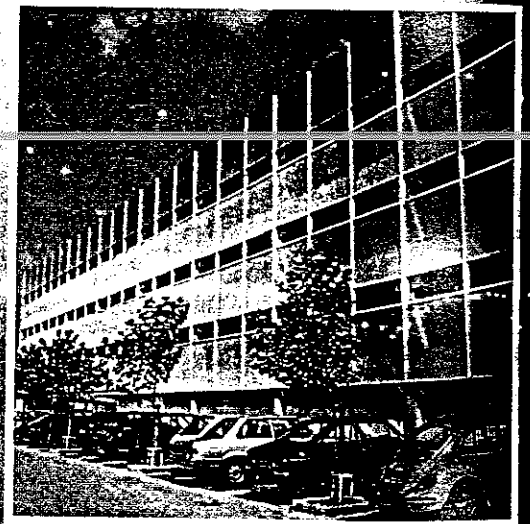
● MODEL GRIGLIATO II Balcony Railings



● MODEL GRIGLIATO II Parking Garage Screen & Railing



● MODEL HALLEY Balcony Railings



● MODEL GRIGLIATO II Parking Garage Screen & Railing





● **MODEL HALLEY** Balcony Railings, Stairwell Railings, Fencing, Gates



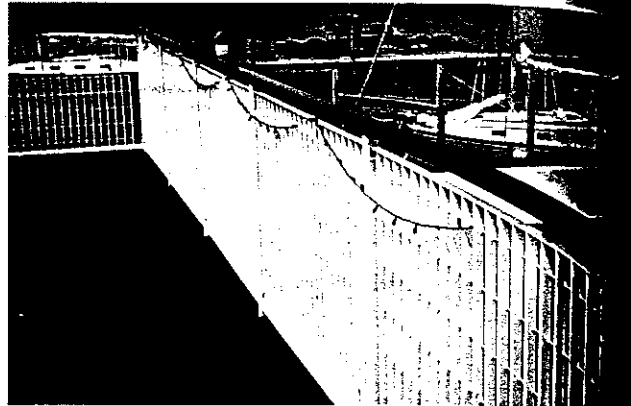
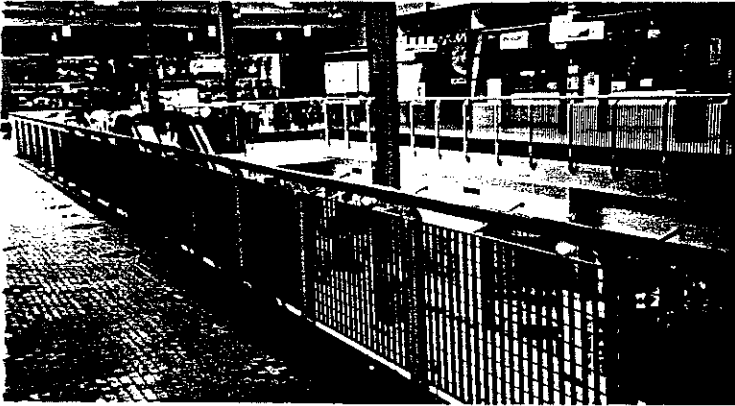
● **MODEL HALLEY** Balcony Railings, Fencing



● **MODEL GRIGLIATO** Balcony Railings, Fencing, Gates

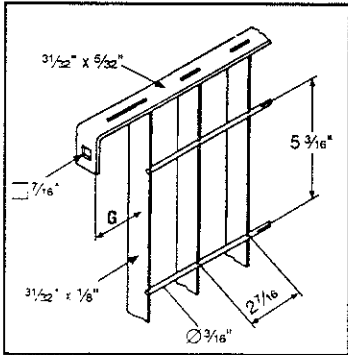
ORSOGRIL® INFILL PANELS FOR RAILINGS

B-14



STEROPE®

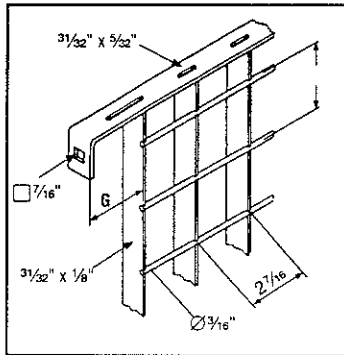
Design: Giacomo Donato



Specify:
Electro-forged welded steel fencing. Orsogrill Sterope design— $3\frac{1}{32}'' \times \frac{1}{8}''$ main bar, $\frac{3}{16}''$ round cross bar, $2\frac{7}{16}'' \times 5\frac{3}{16}''$ mesh. Galvanized to ASTM 123 and/or powder polyester coated.

PLEIONE®

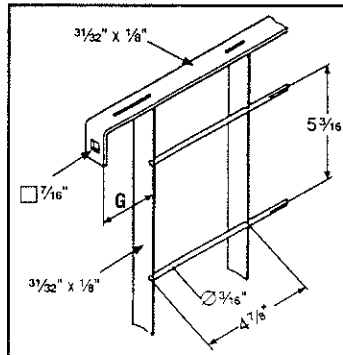
Design: Jean-Jacques



Specify:
Electro-forged welded steel fencing. Orsogrill Pleione design— $3\frac{1}{32}'' \times \frac{1}{8}''$ main bar, $\frac{3}{16}''$ round cross bar, $2\frac{7}{16}'' \times 2\frac{1}{16}''$ mesh. Galvanized to ASTM 123 and/or powder polyester coated.

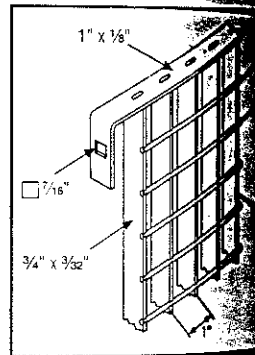
ALCIONE®

Design: Albert Barokas



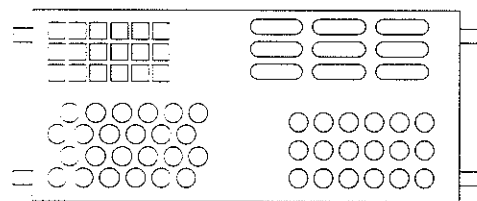
Specify:
Electro-forged welded steel fencing. Orsogrill Alcione design— $3\frac{1}{32}'' \times \frac{1}{8}''$ main bar, $\frac{3}{16}''$ round cross bar, $1\frac{7}{16}'' \times 5\frac{3}{16}''$ mesh. Galvanized to ASTM 123 and/or powder polyester coated.

SQUARE MESH



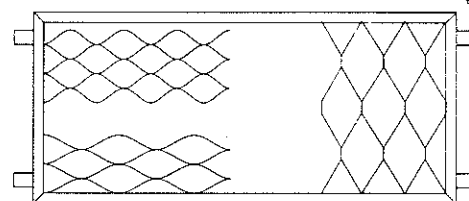
Specify:
Electro-forged welded steel fencing. Orsogrill Square Mesh design— $\frac{3}{4}'' \times \frac{3}{32}''$ main bar, $1'' \times 1''$ round cross bar, $1'' \times 1''$ mesh. Galvanized to ASTM 123 and/or powder polyester coated.

PERFORATED METAL



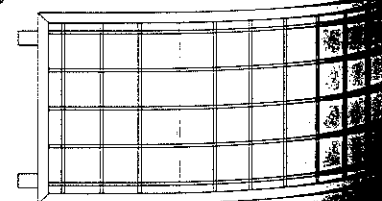
Perforated infills are the most versatile of the infills. Round, square, slotted, hexagon and diamond shape perforation in steel, aluminum, stainless or brass material.

EXPANDED METAL



Expanded infills are framed in a 1" U-edging. They are available in any of the standard expanded metal patterns in steel, aluminum or stainless.

WELDED WIRE MESH



Available in steel and stainless. Wire infills can be made with just the opening size you might require.

SEND FOR COMPLETE AMETCO/ORSOGRIL® PRODUCTS CATALOG



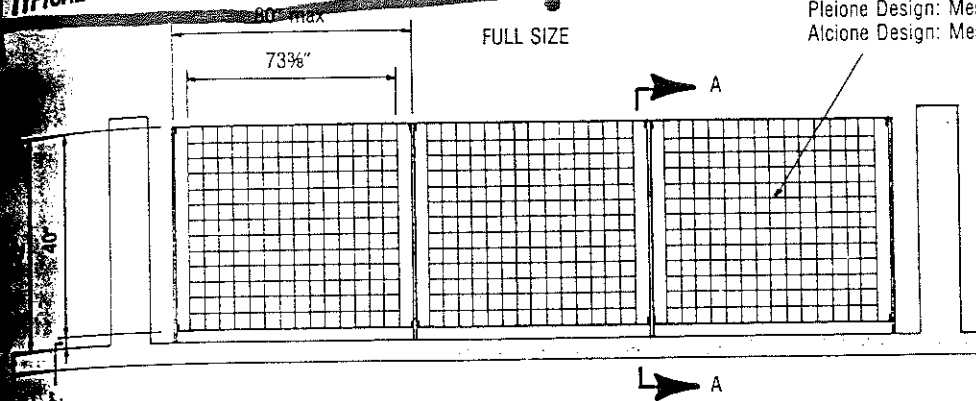
4326 HAMANN PARKWAY
P.O. BOX 1210
WILLOUGHBY, OHIO 44094

PHONE (216) 951-4300
FAX (216) 951-2542
TOLL FREE 800-362-1360

4326 Hamann Parkway
P.O. Box 1210
Willoughby, Ohio 44094

216-951-4300
FAX 216-951-2542
Toll Free: 800-362-1360

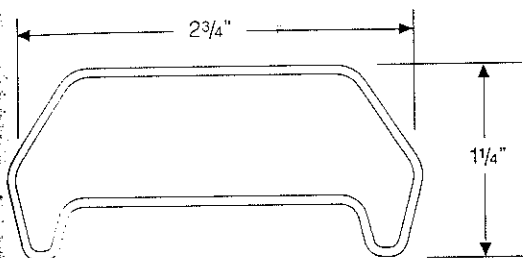
TYPICAL RAILING INSTALLATION



Sterope Design: Mesh 2 7/16" x 5 3/16" - Main Bar 3 1/2" x 1/8"
Pleione Design: Mesh 2 7/16" x 2 1 9/32" - Main Bar 3 1/2" x 1/8"
Alcione Design: Mesh 4 7/8" x 5 3/16" - Main Bar 3 1/2" x 1/8"

NOTE: MAX. POST SPACING IS CONTROLLED BY POST ANCHORAGE DESIGN TO MAINTAIN 200 LB. RATING.

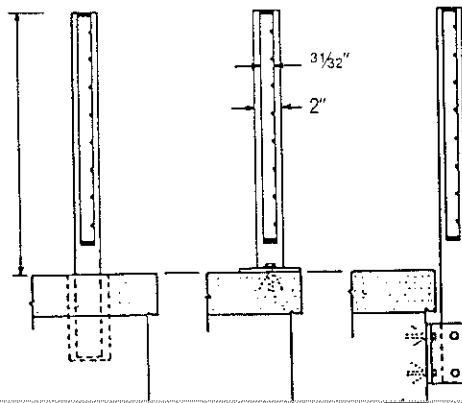
TOP RAIL:



OPTIONAL TOP RAILS:

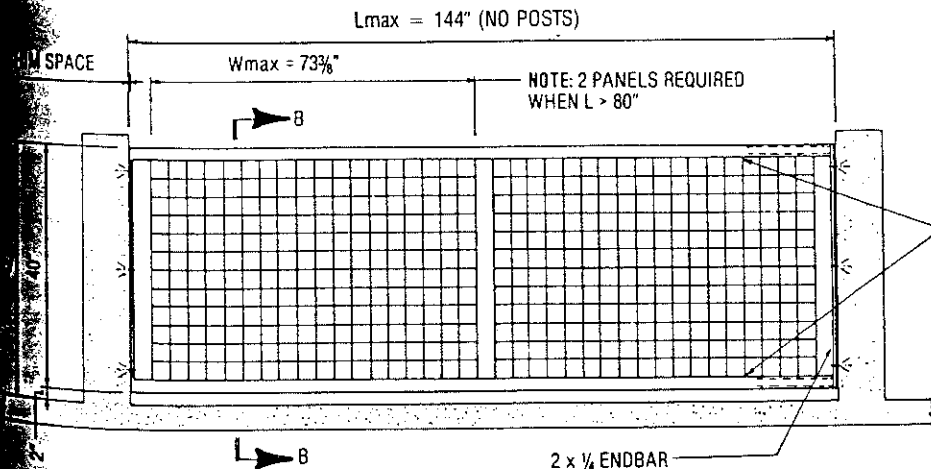
- CHANNELS
- SQUARE TUBE
- RECTANGULAR TUBE

OPTIONAL MOUNTINGS:



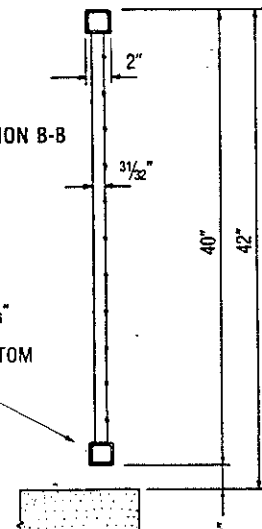
SECTION A-A OPTIONS

ADDITIONAL ORSOGRIL® DESIGN:



SECTION B-B

2" x 2" x 3/16"
SQ. TUBE
TOP & BOTTOM
RAILS



ORSOGRIL® RAILING SYSTEMS ARE DESIGNED TO WITHSTAND A 200 LB. LOADING IN ANY DIRECTION. THE INTEGRITY OF THE RAILING SYSTEM IS DEPENDENT ON THE INTEGRITY OF THE ANCHORING SYSTEM. SEE AMETCO/ORSOGRIL® FENCING CATALOG FOR ADDITIONAL INFORMATION.

1.0 INTRODUCTION

The August Corporation is proposing the construction of a 650 car (approximate) parking garage on the site bounded by Cumberland Avenue, Preble Street and Elm Street in Portland. This submittal, along with the accompanying documents, will serve as application to the City of Portland for approval of this project.

2.0 SUMMARY CHECKLIST

The following was prepared and submitted to Rick Knowland on June 21, 1996 following a meeting on June 26, 1996 when Rick summarized the remaining items required for site plan submittal. This list is now annotated with the status of each item as of this submittal.

The following is based on our meeting with Rick Knowland and Jim Seymour from the city of Portland on June 27, 1996. I have defined the action items needed. To the extent possible, some items should be submitted today, by 10:00 AM. The complete package will be assembled and submitted on Monday, July 1.

As Rick said at our meeting, the objective is to provide a submittal that can be approved with a minimum number of conditions.

- XX 1. [by CME] Evaluate use of hydrobrake for storm water discharging on Elm Street side. This will be included with detailing by Squaw Bay. Scott Decker of Squaw Bay will discuss further with Jim Seymour.

Discussed and resolved with Jim Seymour, no hydrobrakes required

- XX 2. [by CME] Catch basin to be provided for snow storage area. This was included in 6/27 drawings.

Done, shown on drainage plan

- XX 3. [by CME & SMRT] All utility connections to be shown on site plan. Electrical entrance to be defined on site plan. This will be on site plan update to be submitted on 7/1.

Done, shown on drainage/underground utility plan



XX 4. [by CME] All documents to be combined into one package, with 6 full size sets and one 11x17 set of drawings. The full size sets will be provided on 7/1 and the 11x17 no later than 7/3.

Done

XX 5. [by SMRT] All four elevations to be provided. Materials to be labeled and samples provided where possible. Building height to be shown. This will be included in 7/1 submittal set. Concrete samples have been left with planning office. Other samples will be dropped off as soon as possible.

Done, Drawings A3.1, 3.2, 3.3, 3.4. Samples provided to Planning Department

XX 6. [by SMRT] Landscaping and fencing to be provided in alleyway between garage and Government center. This will be part of 7/1 submittal. Alan Mooney will review design with Doug Cardente.

Drawings done, Drawings A1.2 and A1.3, Cardente meeting pending

XX 7. [by SMRT] Site/Landscaping plans will show height and details of plaza area retaining wall, fencing, bollards, sidewalk paving details, vehicle paving details and ADA compliance. Samples/catalog cuts to be provided where applicable, as soon as possible. Drawing details will be a part of 7/1 submittal.

Done, Drawings A1.0, A1.2 and A1.3. Samples submitted directly to Planning Department

~~XX 8. [by CME] Oil/grit separator details will be further discussed with Jim Seymour. Scott Decker of Squaw Bay will contact Jim after review of Jim's suggestions. Also, Jim and Scott will discuss public works concerns about waste line connections, whether into manhole structure or line. Modifications and details will be included in 7/1 submittal.~~

~~*Done - discussed with Jim Seymour, shown on site utility drawing*~~

XX 9. [by BPM] Maintenance agreement for oil/grit separators to be provided. Sample to be reviewed by BPM and proposed agreement to be submitted with 7/1 material.

Shown in Appendix F



- XX 10. [by CME & SMRT] Narrative discussion of basis for building setback and waiver of 5 foot "build to" line to be included in 7/1 submittal.

Shown in Appendix G

- XX 11. [by CME] Squaw Bay to discuss gutter flow along Preble and Elm with Jim Seymour to determine if any catch basin modifications are needed. Modifications to be included in 7/1 submittal.

Discussed with Jim Seymour, shown on drainage plan

- XX 12. [by CME] Following agreement by Bill Bray and Bill Eaton, Portland Street traffic control island to be shown on site plan. This island will be provided by the City of Portland and so noted on the drawing. This will be included in 7/1 submittal.

Done, shown on A1.1

- XX 13. [by SMRT] Dennis Jud and Jeff Tarling (city arborist) to meet and discuss trees and landscaping. Results to be detailed on landscaping plan to be submitted on 7/1.

Done, shown on A1.2 and A1.3

- XX 14. [by SMRT] Construction debris and erosion control procedures to be noted on landscaping/site plan. This will be included in 7/1 submittal.

Done, shown on A1.2

- XX 15. [by SMRT & CME] City responsibility for sidewalk and traffic island construction will be noted on drawings. Completion of the traffic island and sidewalks will not be a condition of project approval. This note will be included in 7/1 submittal.

Done

- XX 16. [by SMRT & CME] General notes provided by Rick Knowland will be included on drawings. Some of these are on the drawings now. All will be included for the 7/1 submittal.

Done



XX 17. [by SMRT] Interior and exterior lighting details will be provided including fixture type, size, mounting height and photometrics plan (where appropriate). Samples/catalog cuts will be submitted as soon as possible. Further details will be part of 7/1 submittal.

Done, Samples/catalog cuts submitted directly to Planning Department

XX 18. [by SMRT] Signage concept to be shown on elevations and in details. This includes major "PORTLAND PUBLIC MARKET PARKING" signs on three facades as well as general traffic/parking control signs.

Done, in concept, more details to be presented at public hearing

XX 19. [by SMRT] Where appropriate, city specs for sidewalk, vehicular paving and ADA compliance will be included on drawings. These details were obtained from Rick at the meeting and will be included in the 7/1 submittal.

Done

XX 20. [by SMRT] Facade detailing at lower levels will include further study of grillage in response to Rick Knowland comments. Also, color of metal elements will be further explored. The results of this work will be included in the 7/1 submittal.

Done, plus graphics and samples to be presented at public hearing

XX 21. [by CME & SMRT] Where paving is disrupted by building construction, drawings will not that contractor will be responsible to CUT AND PATCH these areas. This will be on the 7/1 submittal.

Done, shown on A1.1

3.0 PRIMARY CONSULTANTS

The following are the primary consultants for this project:

Project Management and Structural Engineering

Criterion - Mooney Engineers
650 Brighton Avenue
Portland, Maine 04102
(207) 775-1696



Architectural Design

Orcutt and Associates
Bridge Street
Yarmouth, Maine 04096
(207) 846-7702

Traffic Analysis

Eaton Traffic Engineering
2 Miranda Street
Brunswick, Maine 04011
(207) 725-9805

Soils Investigation and Foundation Recommendations

S. W. Cole Engineering
Gray Plaza
Gray, Maine 04039
(207) 657-2866

Site Drainage

Squaw Bay Corporation
Blanchard Road
Cumberland Center, Maine 04021

Design Build Team/Contractor

Allied Construction
208 Forest Avenue
Portland, Maine 04104
(207) 772-2088

Design Build Team/Architect

Stevens, Morton, Rose & Thompson
144 Fore Street
Portland, Maine 04104
(207) 772-3846

4.0 ACCOMPANYING DOCUMENTS



The following documents are included with this narrative as part of the submittal package:

- 4.1 Soils investigation and foundation feasibility dated March 22, 1996 by S. W. Cole Engineers (Appendix A).
- 4.2 Traffic Study and Addenda prepared by Eaton Traffic Engineering dated May 28, June 20 and June 29, 1996 (Appendices C, D and E).
- 4.3 Drainage Study and updates prepared by Squaw Bay Corporation dated Mary 23, 1996 (Appendix B).
- 4.4 Architectural Drawings number A1.0 through A4.0.
- 4.5 Survey by Owen Haskell & Associates.
- 4.6 Drainage and underground utility plan by Squaw Bay.
- 4.7 Maintenance Agreement (Appendix F).
- 4.8 Building Setback Memo (Appendix G).

5.0 DESCRIPTION

This project involves the construction of a seven-level parking garage on the site bounded by Cumberland Avenue, Preble Street and Elm Street. Most of this site is currently being used for grade level parking. There are two old buildings on this site which are already scheduled for demolition.

The new garage will essentially occupy the entire site with a pedestrian area along the Preble Street side.

The total land area of the site is 38,600 square feet. The ground coverage of the parking structure will be 32,300 square feet (or approximately 84%).

To the best of our knowledge, there are no existing easements or other burdens on this property. There are no proposed easements.

The only solid waste to be generated by this project would be the sanitary waste from one half bath to be included in the project.

We have confirmed with the City the availability of sewer and water.

Access to the adjacent streets is discussed in the Eaton Traffic Engineers Report.



Existing and proposed surface drainage and storm water management are discussed in the accompanying report by Squaw Bay Corporation; please see Appendix B.

6.0 OWNER

The owner of this project is The August Corporation. The address is in care of Boulos Property Management, 2 City Center, Portland, Maine 04101.

The estimated cost of this project is \$5,000,000.

A copy of the deed confirming ownership of this site has been provided directly to the City by the owner.

7.0 CONSTRUCTION PLAN

Construction of this garage is a straightforward process. Piles will be used for the foundation system. A precast concrete garage structure is proposed, which is a straightforward rapid construction procedure.

Most construction equipment and activities could be contained within the site. Only minimal traffic disruption on the adjacent streets is anticipated at certain predetermined and pre-approved times.

At this point, assuming timely approval by the City, a construction start in July 1996 is anticipated. The goal for this project is to be complete and have the garage open by late Fall 1996. This is feasible and has been confirmed by contractors submitting proposals for this project assuming an early July construction start.

~~8.0 STATE AND FEDERAL REGULATIONS~~

To our knowledge, there are no state or federal regulatory approvals required except the City of Portland.

9.0 UNUSUAL CONDITIONS

To the best of our knowledge and investigation to date, there are no unusual natural areas, wildlife or fishery habitats, or archaeological sites on or near this project site that would be affected by this construction.



10.0 SIGNAGE

In addition to the normal advisory signage typical of this type of project noting entrances, the north, east and west facades have proposed large signage (as shown on elevation) intended to identify the location of the proposed adjacent public market. This would be visible from the interstate.

11.0 CONTACT

Any questions or comments regarding this project should be directed to:

H. Alan Mooney, P.E.
Criterium - Mooney Engineers
(207) 775-1969



SQUAW BAY CORP
Consulting Engineers

C-9



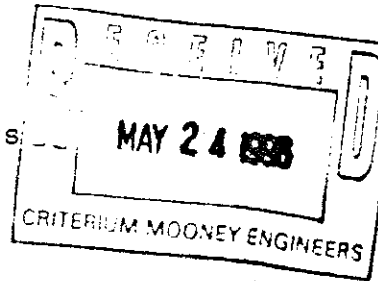
P.O. BOX 86A, CUMBERLAND CENTER, ME 04021 (207) 829-6994

PRINCIPALS:

Robert D. Arsenault, P.E.
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.

May 23, 1996

Mr. H. Alan Mooney, P.E.
Criterium - Mooney Engineers
650 Brighton Ave
Portland, ME 04102



**RE: Cumberland Avenue/Preble Street Parking Garage
Portland, Maine**

Dear Alan:

Per your request we have undertaken a stormwater runoff analysis of the above referenced project site. Based upon our site reconnaissance, our review of relevant plans, and our discussions with Portland Department of Public Works personnel, we offer the following conclusions regarding stormwater runoff.

It appears that stormwater runoff from approximately 75% (30000+ s.f.) of the existing site drains to the city's Preble Street combined sewer and storm system. This is virtually the entire site exclusive of the existing building. Based upon our on-site observations, it appears runoff from the existing building (8200± s.f.) is conveyed to the Elm Street combined system via roof drains.

City personnel indicated that stormwater runoff calculations should be required which verify the peak rate of stormwater runoff to the city system will not increase subsequent to construction of the project. As we previously discussed with you, this will require that approximately 8200 s.f. of proposed roof drainage be discharged to the Elm Street system, with runoff from the remainder of the site being conveyed to the Preble Street system. Preliminary indications from your office indicate this is possible. We have enclosed calculations which reflect this concept along with design calculations and a preliminary plan for the enclosed roof drain leads.

If you or the city has any questions regarding the enclosed information, please contact me.

Sincerely,

SQUAW BAY CORP

A handwritten signature in cursive script that reads "Scott Decker".

W. Scott Decker, P.E.
Principal

WSD/bak

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO PREBLE STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 2 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd.'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
PAVEMENT	0.900	0.70						
			5.00	0.900	0.900	3.900	0.70	2.46

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO PREBLE STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 10 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd. 'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
PAVEMENT	0.900	0.70						
			5.00	0.900	0.900	5.300	0.70	3.34

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO PREBLE STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$Q = \text{adj} * C * I * A$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres.
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 25 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd.'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
PAVEMENT	0.900	0.70	5.00	0.900	0.900	6.200	0.70	3.91

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO ELM STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 2 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd.'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
BUILDING	0.900	0.19						
			5.00	0.900	0.900	3.900	0.19	0.67

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO ELM STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 10 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd. 'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
BUILDING	0.900	0.19						
			5.00	0.900	0.900	5.300	0.19	0.91

CUMBERLAND AVE./PREBLE STREET PARKING GARAGE
 PORTLAND
 EXISTING/PROPOSED CONDITIONS TO ELM STREET SYSTEM

* * * * * SUMMARY OF RATIONAL METHOD PEAK DISCHARGES * * * * *

$$Q = \text{adj} * C * I * A$$

Where: Q=cfs, C=Weighted Runoff Coefficient, I=in/hour, A=acres
 adj = 'C' adjustment factor for each return frequency

RETURN FREQUENCY = 25 years
 'C' adjustment, k = 1
 Adj. 'C' = Wtd. 'C' x 1

Subarea Descr.	Runoff 'C'	Area acres	Tc (min)	Wtd. 'C'	Adj. 'C'	I in/hr	Total acres	Peak Q (cfs)
BUILDING	0.900	0.19						
			5.00	0.900	0.900	6.200	0.19	1.06

Circular Channel Analysis & Design
Solved with Manning's Equation

Open Channel - Uniform flow

Worksheet Name: PREBLE ST. GARAGE

Comment: 25YEAR STORM/ROOF DRAINS TO ELM STREET

Solve For Full Flow Slope

Given Input Data:

Diameter.....	1.00 ft
Manning's n.....	0.013
Discharge.....	1.10 cfs

Computed Results:

Full Flow Channel Slope	0.0010 ft/ft
Full Flow Depth.....	1.00 ft
Velocity.....	1.40 fps
Flow Area.....	0.79 sf
Critical Depth....	0.44 ft
Critical Slope....	0.0059 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	1.10 cfs
QMAX @.94D.....	1.18 cfs
Froude Number.....	FULL

Circular Channel Analysis & Design
Solved with Manning's Equation

C-18

Open Channel - Uniform flow

Worksheet Name: PREBLE ST. GARAGE

Comment: 25YEAR STORM/ROOF DRAINS TO PREBLE STREET

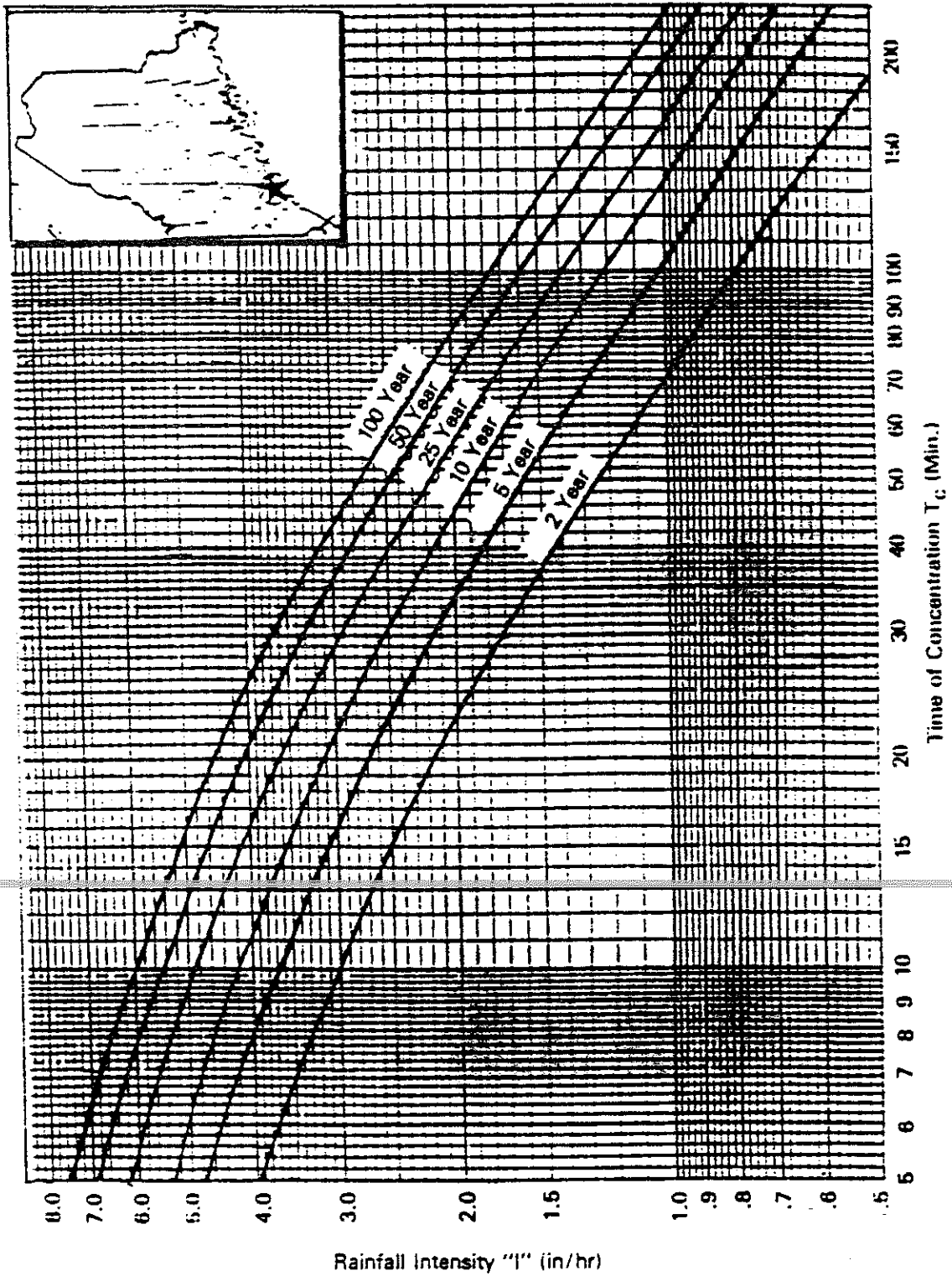
Solve For Full Flow Slope

Given Input Data:

Diameter.....	1.00 ft
Manning's n.....	0.013
Discharge.....	4.00 cfs

Computed Results:

Full Flow Channel Slope	0.0126 ft/ft
Full Flow Depth.....	1.00 ft
Velocity.....	5.09 fps
Flow Area.....	0.79 sf
Critical Depth....	0.85 ft
Critical Slope....	0.0119 ft/ft
Percent Full.....	100.00 %
Full Capacity.....	4.00 cfs
QMAX @.94D.....	4.30 cfs
Froude Number.....	FULL



IDF CURVE FOR CITY OF PORTLAND
(Rational Method)

Figure 12-12

>>>> I-D-F Curve <<<<<

PORTLAND IDF CURVE
2 YEAR FREQUENCY

Recurrence Frequency = 2

DURATION minutes	INTENSITY inches/hour
-----	-----
5	3.9
6	3.7
7	3.5
8	3.3
9	3.15
10	3.0
11	2.9
12	2.8
13	2.7
14	2.6
15	2.5

>>>> I-D-F Curve <<<<<

PORTLAND IDF CURVE
10YEAR FREQUENCY

Recurrence Frequency = 10

DURATION minutes -----	INTENSITY inches/hour -----
5	5.3
6	5.0
7	4.8
8	4.6
9	4.4
10	4.2
11	4.0
12	3.9
13	3.8
14	3.65
15	3.6

>>>> I-D-F Curve <<<<<

PORTLAND IDF CURVE
25YEAR FREQUENCY

Recurrence Frequency = 25

DURATION minutes -----	INTENSITY inches/hour -----
5	6.2
6	5.9
7	5.6
8	5.4
9	5.1
10	4.9
11	4.7
12	4.55
13	4.4
14	4.2
15	4.1

SQUAW BAY CORP
Consulting Engineers



P.O. BOX 86A, CUMBERLAND CENTER, ME 04021 (207) 829-6994

PRINCIPALS:

Robert D. Arsenault, P.E.
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.

May 4, 1994

Mr. H. Alan Mooney, P.E.
Criterium - Mooney Engineers
650 Brighton Avenue
Portland, Maine 04102

**RE: Parking Garage
Cumberland Avenue, Portland**

Dear Al:

Enclosed is a mylar of the "Drainage/Underground Utility Plan" and design calculations to support the sizing of the oil/gas/sand traps for the Portland Parking Garage project.

Also, you will note that we have located one of oil/gas/sand traps within the Elm Street right-of-way for ease of maintenance and cleaning. This structure should receive stormwater runoff from approximately 8200 square feet of building area. The other trap is located within the proposed snow storage area to receive flow from snow melt and rainfall from this area as well as approximately three quarters of the building area. The Portland Public Works Department will likely provide some guidance with respect to the final location of these structures.

Please call if you have any questions or you need additional information.

Sincerely,

SQUAW BAY CORP

W. Scott Decker, P.E.
Principal

WSD/rlh

SQUAW BAY CORP.
Consulting Engineers



P.O. BOX 192, CUMBERLAND CENTER, ME 04021

SEVEE & MAHER

JOB NO.

76-216

SHEET NO.

OF

CALCULATED BY

WSP

DATE

6/24/96

CHECKED BY

DATE

SUBJECT

SCALE

1" =

Oil, Gas, Sand Trap Sizing Calculations

Permanent Pool Storage Volume - Use 400 C.F. / ACRE of drainage area *

Preble St.

$$\text{Contributing area} = 38,535.85 \text{ SF} - 8200 \text{ SF} = 30,335$$

$$\frac{30,335}{43560} = .70 \text{ AC.}$$

$$\frac{400}{.7}$$

280 C.F. Regd Storage

Use 8'φ x 5.5' deep

$$4' \times 4' \times 3.14 \times 5.5 = 276 \text{ C.F. OK}$$

Elm St.

$$\text{Contributing Area} = 8200 \text{ SF}$$

$$\frac{8200}{43560} = .19 \text{ AC.}$$

$$\frac{400}{.19}$$

$$2100$$

$$\frac{2100}{4}$$

Use 5'φ x 4' deep

$$2.5 \times 2.5 \times 3.14 \times 4 = 78.5 \text{ C.F.}$$



* "Stormwater Best Management Practices Training", prepared by the Maine Nonpoint Source Training and Resource Center pg. 191

PROPOSED GRIT/OIL SEPARATOR MAINTENANCE SCHEDULE

AUGUST CORPORATION
CUMBERLAND AVENUE PARKING GARAGE
June 26, 1996

August Corporation proposes to install a Grit/Oil Separator at the subject site as part of the proposed storm drain system. As a consideration in providing for the maximum effectiveness of the separator, August Corporation proposes the following maintenance schedule for inspecting the separator and for removing any accumulated sediment and oils.

The Manager of Maintenance for August Corporation or Its' Management Agent will be the contact person and will be responsible for ensuring that the maintenance schedule proposed herein will be adhered to.

The sediment level in the separator shall be observed and measured once every two months during the months between November and April, inclusive, and once every three months during the months between May and October, inclusive, and if the trapped sediment has reached a depth of one-foot or more, the separator shall be cleaned out and the removed materials shall be disposed of in a manner conforming with all applicable state and local ordinances. The separator shall be also be inspected following any 10 year rainfall event (4.7-inched of precipitation in a 24-hour period, as determined by the U.S. Weather Service) and any floatables which could plug the debris screen of the separator shall be removed.

As evidence of August Corporation's compliance with this maintenance schedule, August Corporation shall submit copies of invoices for each cleaning of the separator to the City of Portland, Wastewater Division of Public Works.

In the event that an oil spill occurs at the site the separator shall be cleaned out as part of the overall spill cleanup effort. A reference to this maintenance schedule shall be incorporated into the required Spill Prevention Plan for this project.

August Corporation
c/o Mr. Paul Ureneck
Boulos Property Management
Two City Center
Portland, ME 04101

Telephone number: (207) 871-1290

MEMO

TO: Rick Knowland, City Planning Department

FROM: H. Alan Mooney, Criterium - Mooney Engineers

RE: Cumberland Avenue Parking Garage
Building Setback, "Build To" Waiver

As noted in your memo to the planning board, the B-3 zoning requires that all buildings should be located within 5 feet of the property line along street frontages. At your suggestion, we have reviewed the appropriate sections of the Site Plan Ordinance in Downtown Urban Design Guidelines and offer the following justification in requesting a waiver of this "build to" requirement.

First, along the abutting property line, Government Center, if we were to build within 5 feet of the property line applicable codes would require a solid fire wall for the full height of our building. This would dramatically alter the appearance of that facade as well as being, we believe, an unattractive presence for the abutting property owner. For this reason, we chose to set the building 10 feet from that property line to eliminate the need for a fire wall.

Second, the plaza area we have developed on the Preble Street side of this building was to provide more visibility for Government Center (as viewed down Preble Street from Congress Street) and to provide an eventual link to the proposed market place. We believe this pedestrian plaza area will soften the impact of the garage on the neighboring area.

Third, given the site configuration, snow removal and storage are only practical along the Preble Street side. An attractively screened area has been provided for this purpose.

Fourth, the shape of the garage has been optimized for practical, economical construction. The size and shape of a parking structure is quite limited to accommodate traffic flow and parking. The site is not rectangular. The parking garage must be rectangular to accommodate a precast concrete system. As has been evidenced with other parking garages in Portland, using steel and cast in place concrete is not wise. There are inherent maintenance and deterioration problems. A precast system avoids these problems. However a precast system also is less flexible as it relates to the size and shape of the structure. We believe that the slight deviations from being parallel with Elm, Preble and Cumberland are justified to accommodate an efficient, quality precast garage system.

Fifth, the space remaining along Preble Street is also guided by what is optimum geometry for a parking garage. The travel lanes in the garage are actually about two feet wider than minimum standards would require. This garage will be comfortable for traffic flow. To widen it significantly to use up the space between Preble Street and the garage would make the garage quite inefficient for traffic flow as well as being unreasonably expensive to construct.

Traffic Impact Study

MONUMENT SQUARE ASSOCIATES PARKING GARAGE

CUMBERLAND STREET @ PREBLE & ELM STREETS ■ Portland, Maine

Prepared for
Criterion-Mooney Engineers
Portland, Maine



EATON
TRAFFIC
ENGINEERING

Brunswick, Maine

April 1996

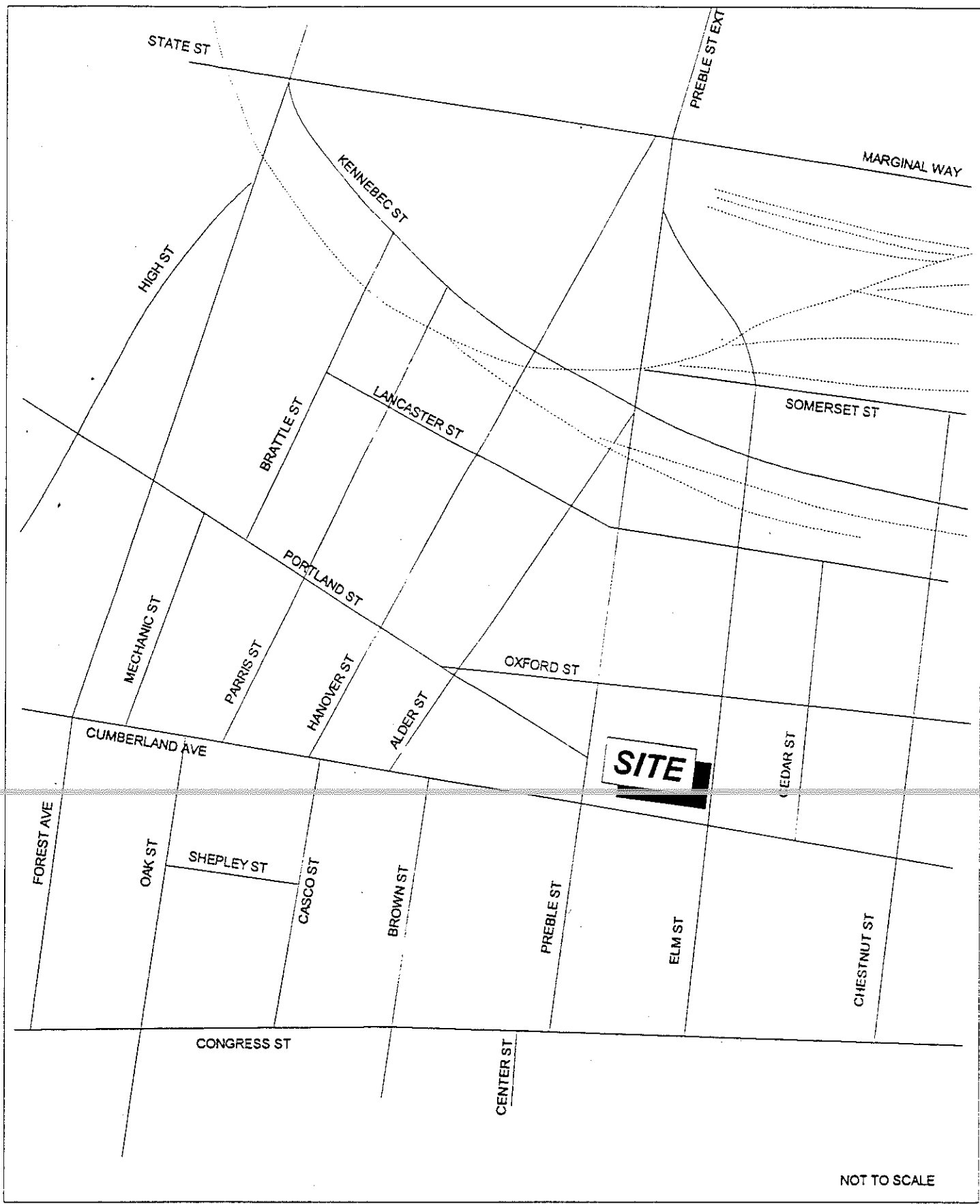
MONUMENT SQUARE ASSOCIATES PARKING GARAGE
Portland, Maine
Traffic Impact Study

Introduction

Monument Square Associates proposes to construct a 648± space parking garage on the north side of Cumberland Street between Preble and Elm Streets (see Figure 1 on the following page). Proposed access to the facility will be provided via two-way access drives on both Preble and Elm Streets. The access points will be located at the northerly end of the property, and are constrained to these points due to structural column spacing and the circulation plan for the garage. The Preble Street access drive is essentially aligned with Portland Street.

The construction of the parking garage will replace existing buildings along Cumberland Street and a surface parking lot (Seroco Parking). To serve drop-off and pick-up activities associated with the garage, two on-street parking spaces are proposed on the east side of Preble Street south of the Preble Street entrance to the garage. On-street parking currently is allowed on the west side of Preble Street north of the Preble Street/ Portland Street intersection. Of the 648 ± spaces planned for this garage, approximately 498 are expected to be leased spaces to serve employees in the immediate area. The remaining 150 spaces are to be "live" parking, available to the general public.

The purpose of this traffic impact study is to assess the impact of additional traffic associated with the increase in parking supply at the site. Clearly this parking is primarily intended to support the occupancy of existing vacant office and retail space in the immediate area. Accordingly, parking/traffic demand will be based upon increased employment in the area, less the traffic already associated with the existing surface parking lot. Discussions with the City Traffic Engineer and Deputy Public Works Director indicated that this was a reasonable approach to the study, and that the study should focus analysis on the intersections of Cumberland Street @ Preble Street, Cumberland Street @ Elm Street, and Preble Street @ Marginal Way. In addition, City staff indicated a concern with the Preble Street garage access being located at the Preble/ Portland Streets intersection, and tentatively indicated that through movements between Portland Street and the Preble Street garage access may need to be prohibited through use of a properly designed median island on Portland Street @ Preble Street.



NOT TO SCALE

Subsequent review of the accident history at this location, discussed more fully in the **Safety** section of this report, indicates that there is currently no safety problem associated with vehicle movements between Portland Street and the existing surface parking lot. Accordingly, this study will proceed on the basis that such movements could be safely allowed to continue, which, in addition to providing flexibility and convenience to garage users, also should help disperse traffic entering and exiting the facility.

Existing AM and PM Peak Hour Traffic

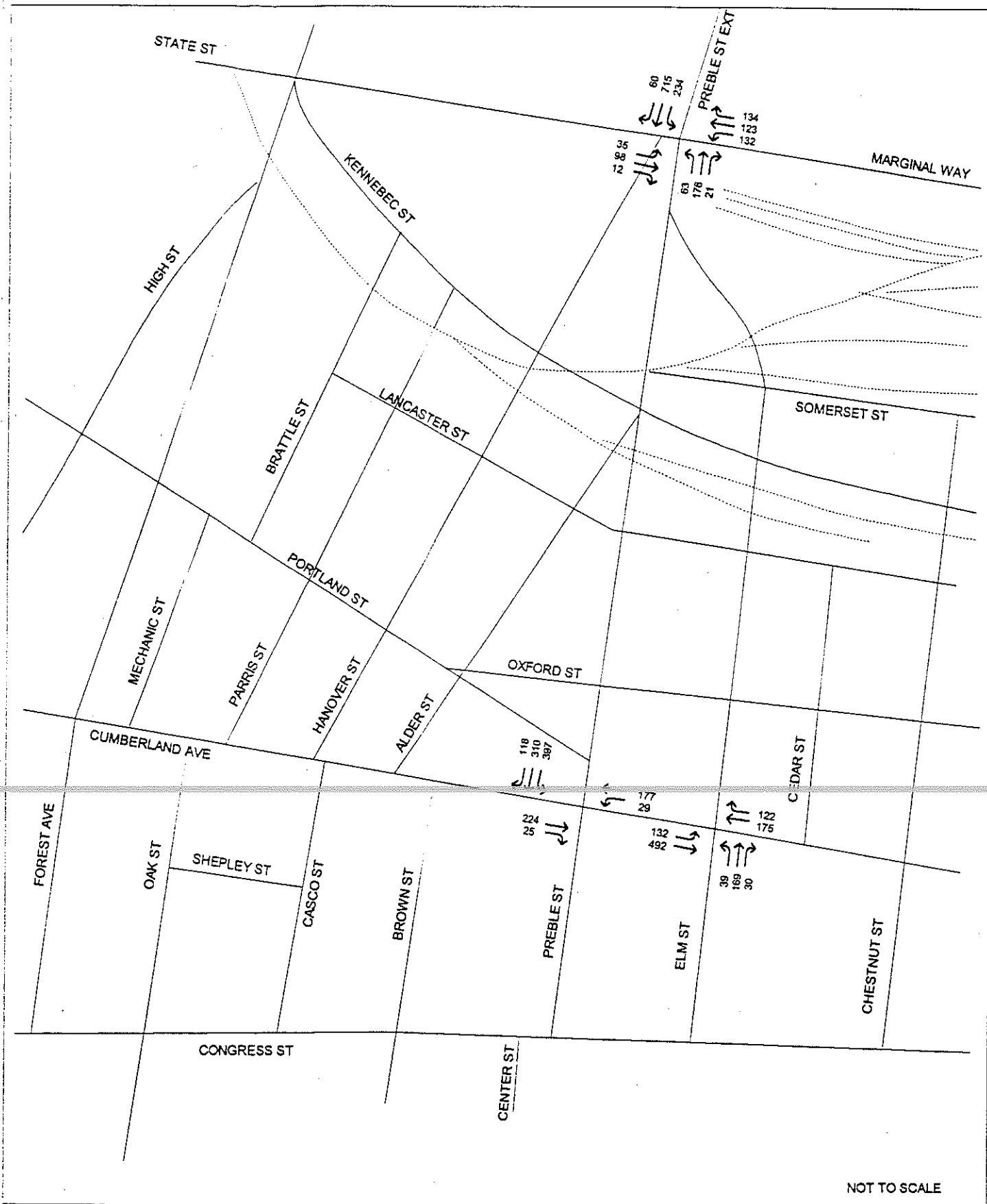
Manual turning movement counts were performed for the periods 6:00 - 9:00 AM and 3:00 - 6:00 PM during February 1996 for the following locations:

- Cumberland @ Preble
- Cumberland @ Elm
- Preble @ Marginal Way
- Preble @ Portland/Existing Seroco Parking Lot

Figures 2 and 3 on the following pages present the AM and PM peak hour traffic volumes for the first three locations noted above respectively. Figure 4 presents AM and PM traffic volumes at the Portland/Preble/Seroco Lot intersection, and includes information on the pattern of traffic entering and exiting the existing Seroco Lot, which can be used to assist in assigning access routes for the proposed facility. As can be seen in Figure 4, the Portland Street access pattern serves a significant proportion of traffic to/from the existing surface lot, with 40 percent of the vehicles entering from this route in the AM peak hour, and 55 percent exiting via this route during the PM peak hour.

Projected 1996 AM and PM Design Hour Traffic Volumes

Typically, traffic volumes vary seasonally, with the highest volumes occurring during the summer months of July and August. Traffic impact analysis generally evaluates peak traffic flows for the seasonal high (usually referred to as the "design hour"), thus it was necessary to "adjust" the February AM and PM peak hour traffic volumes shown in Figures 2 and 3 to reflect summer conditions. Factors provided by MDOT, based upon their statewide continuous traffic



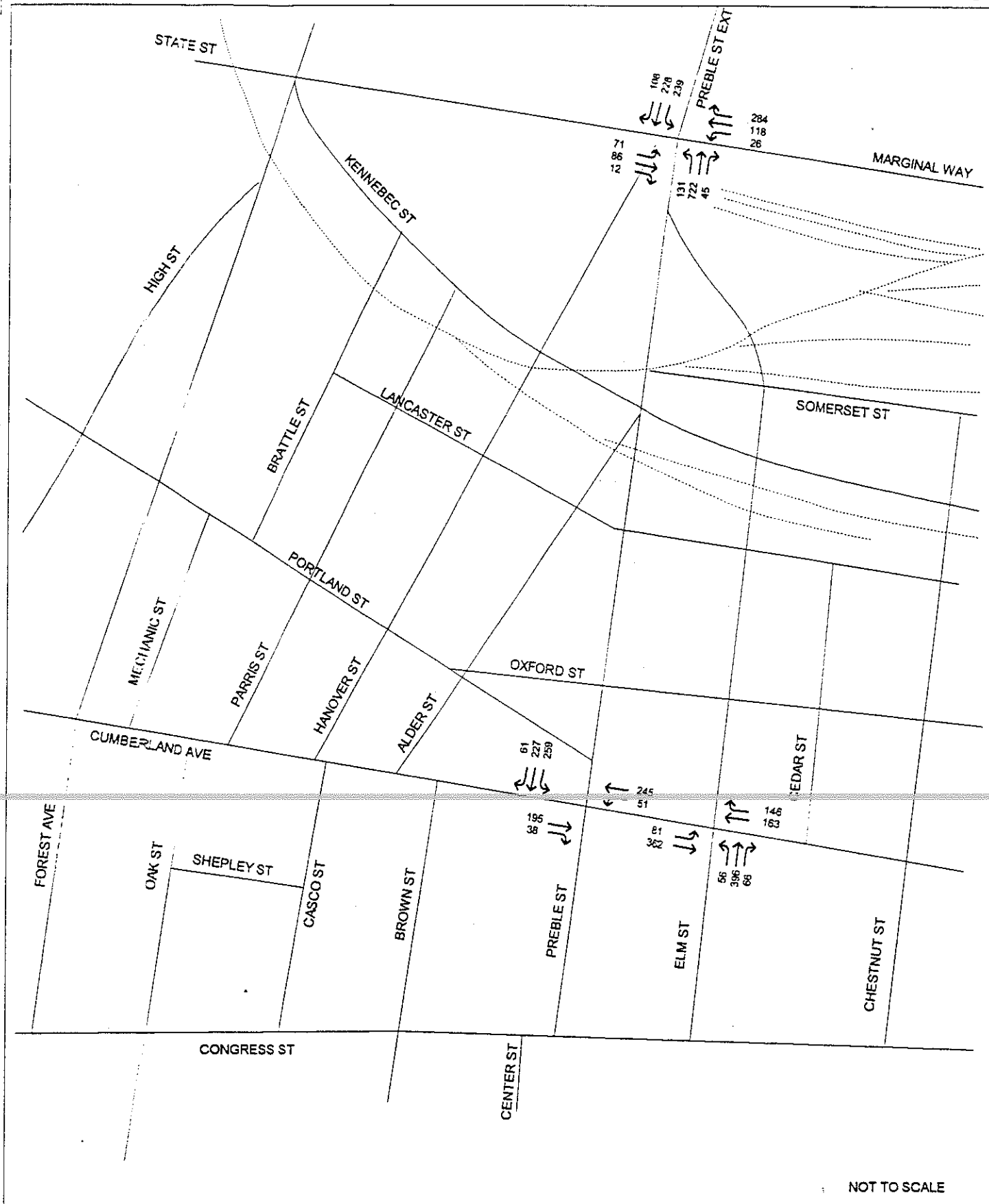
NOT TO SCALE



Figure 2
1996 AM PEAK HOUR TRAFFIC - FEBRUARY 1996

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

2 Miranda St - Brunswick, Maine
(207) 725-9805 Fax (207) 725-9773



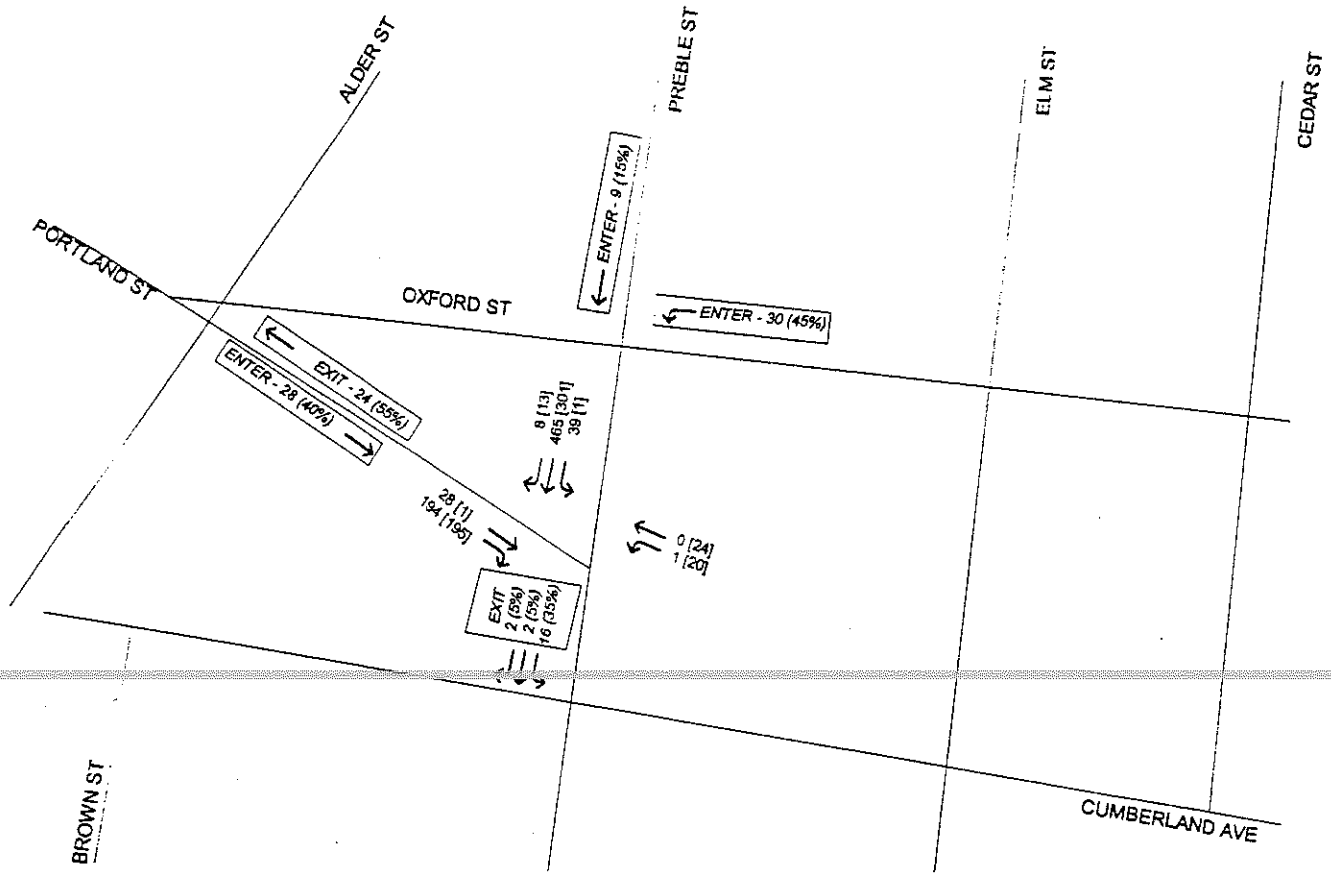
NOT TO SCALE

Figure 3
1996 PM PEAK HOUR TRAFFIC - FEBRUARY 1996

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE



2 Mirroo St. - Brunswick, Maine
(207) 725-9805 Fax (207) 725-4773



XX - AM PEAK HOUR
 [XX] - PM PEAK HOUR

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 2 Miranda St - Brunswick, Maine
 (207) 725-9805 Fax (207) 725-8773

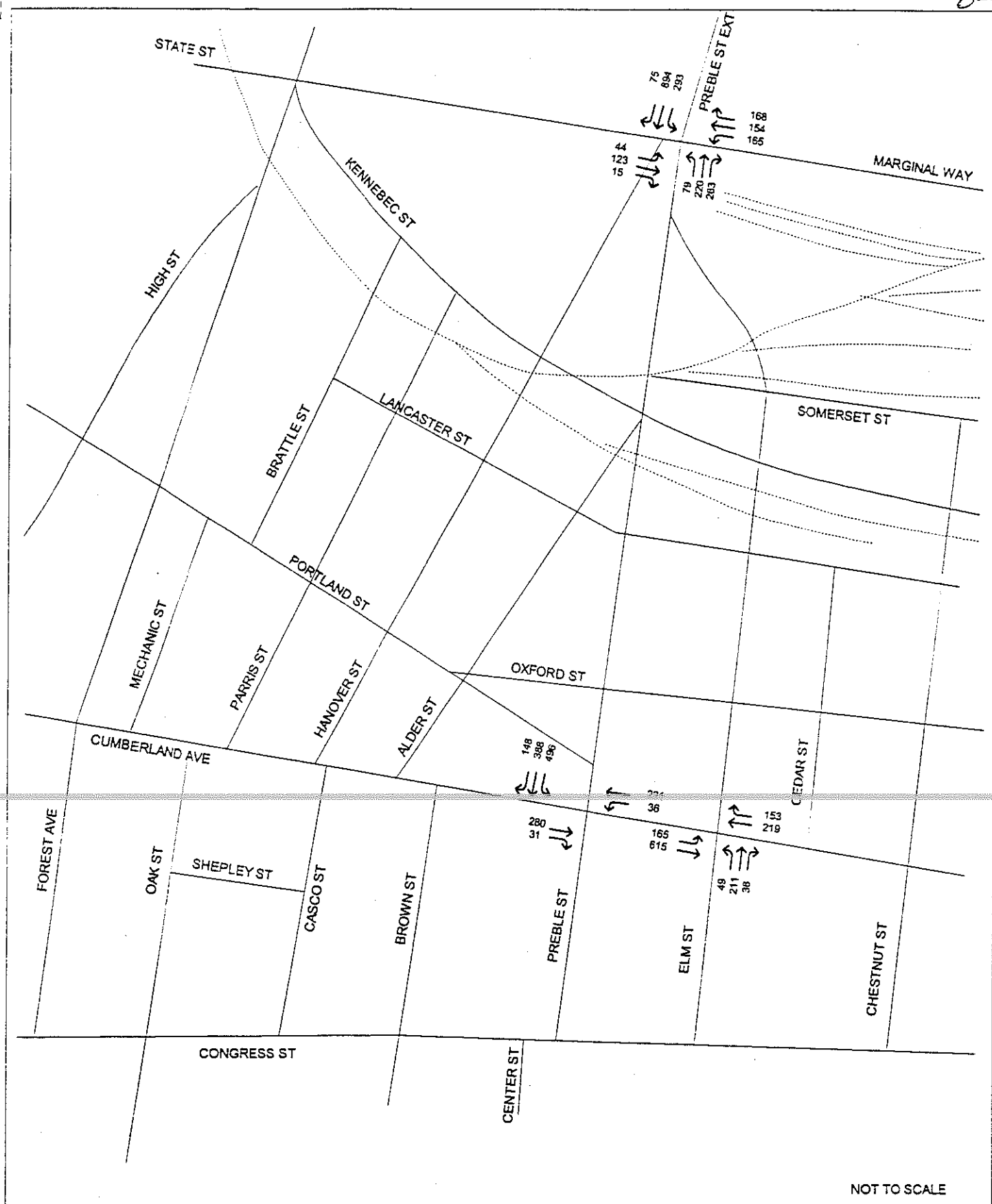
Figure 4
 AM & PM PEAK HOUR TRAFFIC TO/FROM EXISTING SURFACE PARKING LOT
 MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

counting program, indicate that the February traffic volumes collected for this study would have to be increased by 25± percent to reflect peak seasonal volumes. Because the area of Portland in the vicinity of the proposed garage is not particularly likely to be travelled by tourists (one of the key factors in higher summer traffic), this level of increase is likely to result in traffic volumes higher than will actually be experienced; however, to provide a conservative assessment of potential impacts, the February AM and PM peak hour traffic volumes were increased by 25± percent to estimate AM and PM design hour volumes. In addition to the seasonal adjustment, the projected PM peak hour traffic volumes also incorporate the PM peak hour traffic associated with the proposed Maine Bank and Trust project (addition of drive through teller and ATM facilities) on the corner of Preble Street and Congress Street (it was assumed that this project would have little if any impact on AM peak hour traffic). Figures 5 and 6 present the estimated AM and PM design hour traffic volumes for the pre-development condition.

Site Generated AM and PM Peak Hour Traffic Volumes

The development of estimated AM and PM peak hour traffic associated with the proposed parking garage was accomplished using trip rates for the land uses to be served by the facility, combined with observation of the existing surface lot and its entering and exiting characteristics. Site generated peak hour traffic was first estimated using the statistics contained in the publication Trip Generation - Fifth Edition¹. For the AM peak hour (typically 7:00 - 8:00 AM) it was assumed that the traffic to/from the garage would be restricted to the 498 spaces to be leased to employees in the area. Retail and other service related trips to the facility was assumed to be insignificant during the AM peak hour. The 498 leased spaces would support approximately 200,000 square feet of office type use at a parking demand rate of 2.5 spaces per 1000 square feet of office floor area. This translates into estimated AM peak hour traffic generation (for ITE Land Use Code 710 - General Office Building) of 327 trips - 291 entering and 36 exiting. The existing surface parking lot (all leased spaces) evidenced only one vehicle exiting the lot during the AM peak hour, and it is considered unlikely that any significant exiting parking would occur at the proposed garage. The exiting trips reflected in the ITE trip generation estimate may well represent drop-off trips or employees leaving for early

¹ Institute of Transportation Engineers, 1991 and February 1995 Update



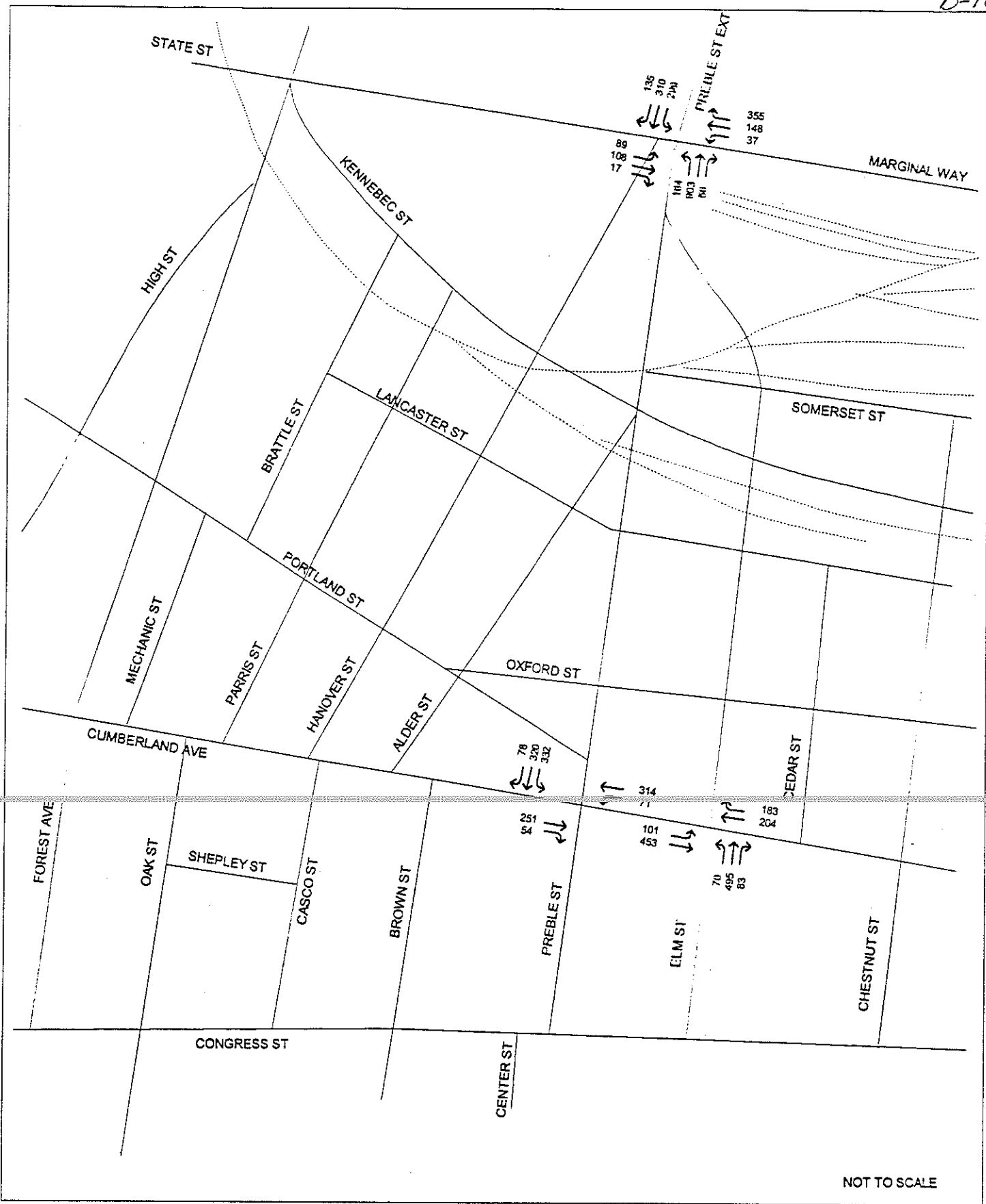
NOT TO SCALE



2 Miranda St - Brunswick, Maine
(207) 725-9605 Fax (207) 725-9773

Figure 5
ESTIMATED AM PEAK HOUR TRAFFIC - PRE-DEVELOPMENT

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE



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2 Miranda St. - Brunswick, Maine
(207) 725-9805 Fax (207) 725-9773

Figure 6
ESTIMATED 1996 PM PEAK HOUR TRAFFIC - PRE-DEVELOPMENT

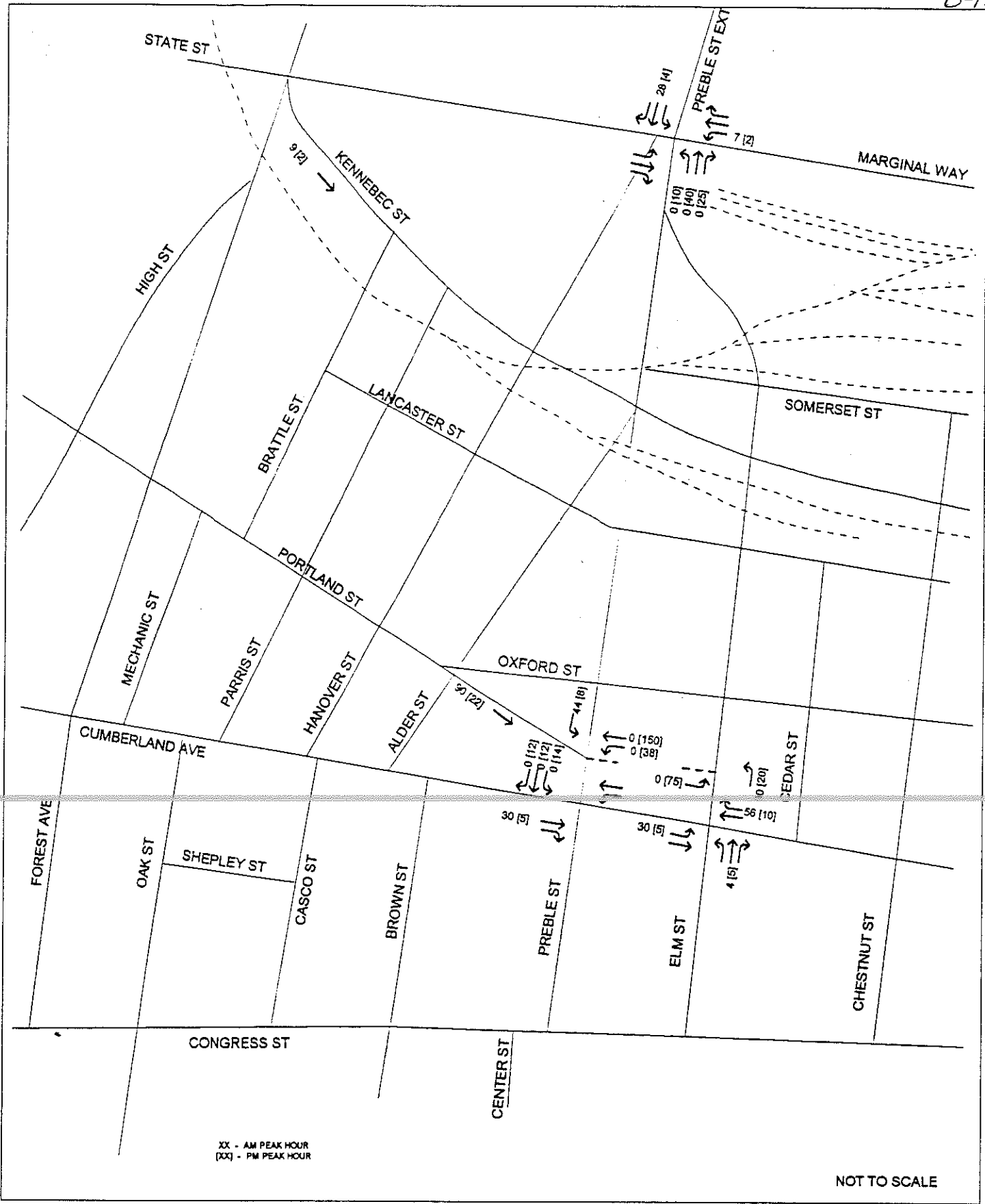
MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE


appointments. These would generally not be significant for the proposed facility, thus AM peak hour traffic generation for the facility is estimated at 219± trips entering.

For the PM peak hour, all 648 spaces would be in use for trips associated with office and retail/service land uses in the area. For this analysis it was assumed that the ITE rate for general office buildings would apply again to the 498 leased spaces, and a generic retail/service rate based upon typical land uses in the ITE manual would be applied for the 150 live parking spaces. The office component of the PM peak hour (200,000 square feet) is projected to generate 310 trips - 53 entering and 257 exiting. Again, assuming the entering proportion would not apply for leased parking, the office component would generate 257 trips exiting the facility. For the retail/service component of demand, an average parking demand of 3.00 spaces per 1000 square feet of floor area would indicate that the 150 live spaces serve approximately 50,000 square feet of floor area. A review of a number of retail/service land uses contained in the ITE manual was conducted. Based upon this review, a generic average rate of 2 trips per 1000 square feet of floor area was used to estimate PM peak hour traffic generation of 100 trips - 50 entering and 50 exiting. This yields estimated PM peak hour traffic generation of 357± trips, 50 entering and 307 exiting.

In reviewing the trip generation estimates above and comparing them to the existing surface parking lot, the projected AM peak hour compares quite well with existing patterns of arrival, with about 60 percent of the capacity of each facility arriving during the AM peak hour. For the PM peak hour, the existing lot indicates a much less pronounced rate of departure, with approximately 40 percent of capacity departing during the PM peak hour. The projected PM peak hour based upon all 648 spaces and ITE office and retail/service trip rates would empty over 55 percent of the capacity of the proposed garage. While this estimate may be somewhat high, it will be carried through the analysis to provide a conservative measure of impacts during the PM peak hour.

Projected site generated AM and PM peak hour traffic was assigned to the roadway system in the vicinity of the proposed garage on the basis of the general arrival/departure patterns for the existing surface lot, as depicted in Figure 4. Figure 7 presents the net new traffic generated to the proposed facility (i.e. traffic to the existing surface lot is not included).



 EATON TRAFFIC ENGINEERING <small>21 Main St. - Brunswick, Maine (207) 725-8825 Fax: (207) 725-8773</small>	Figure 7 ESTIMATED NET AM & PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES
	MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

Operational Assessment of Pre- and Post-Development Conditions

Projected post-development AM and PM peak hour traffic volumes were estimated by combining pre-development volumes with net site generated traffic. Figures 8, 9, and 10 present these projections.

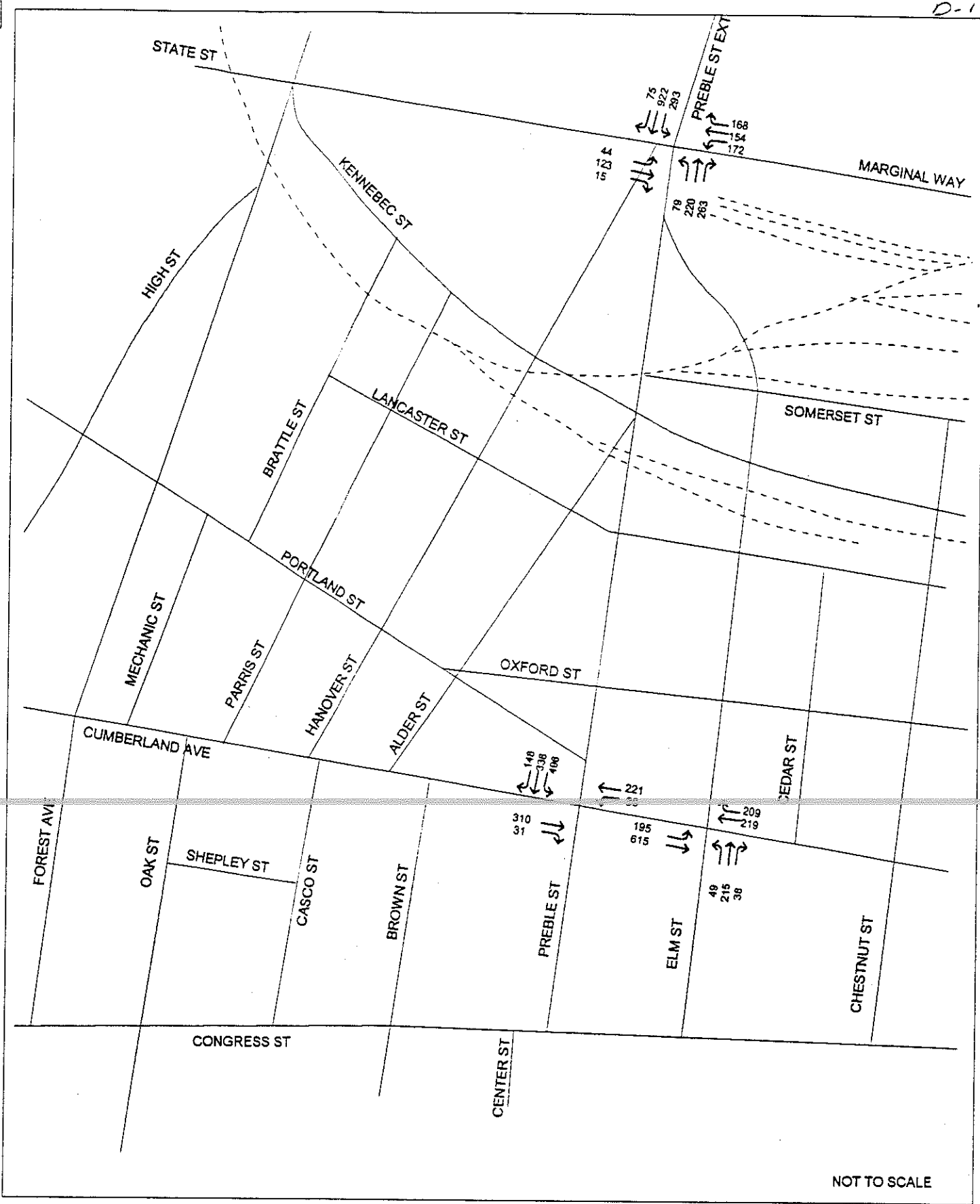
Capacity analysis was performed for the 1996 pre- and post-development PM peak hour condition for the study area signalized (Cumberland @ Preble, Cumberland @ Elm, Preble @ Marginal Way) and unsignalized intersection (Garage Access @ Preble/Portland) per the procedures contained in the Highway Capacity Manual². Capacity analysis provides a quantitative assessment of the quality of traffic flow at an intersection, and "rates" this quality in terms of its Level of Service (LOS). LOS ratings range from A to F, and much like a school rank card, A indicates very good conditions, and F indicates extremely congested conditions. LOS for signalized intersections is based upon the average stopped delay for all vehicles using the intersection. The relationship between LOS and average stopped delay is shown in the table below.

Signalized Intersection Level of Service Measures

Level of Service	Average Stopped Delay Per Vehicle
A	≤ 5.0 Seconds
B	5.1 - 15.0 Seconds
C	15.1 - 25.0 Seconds
D	25.1 - 40.0 Seconds
E	40.1 - 60.0 Seconds
F	≥ 60.0 Seconds

For unsignalized intersections, such as the proposed access driveways, analysis procedures are different than those used for signalized intersections, and have recently been updated. LOS for unsignalized intersections is based upon average total delay, which takes into account the

² Special Report 209, Highway Capacity Manual, Transportation Research Board, 1994

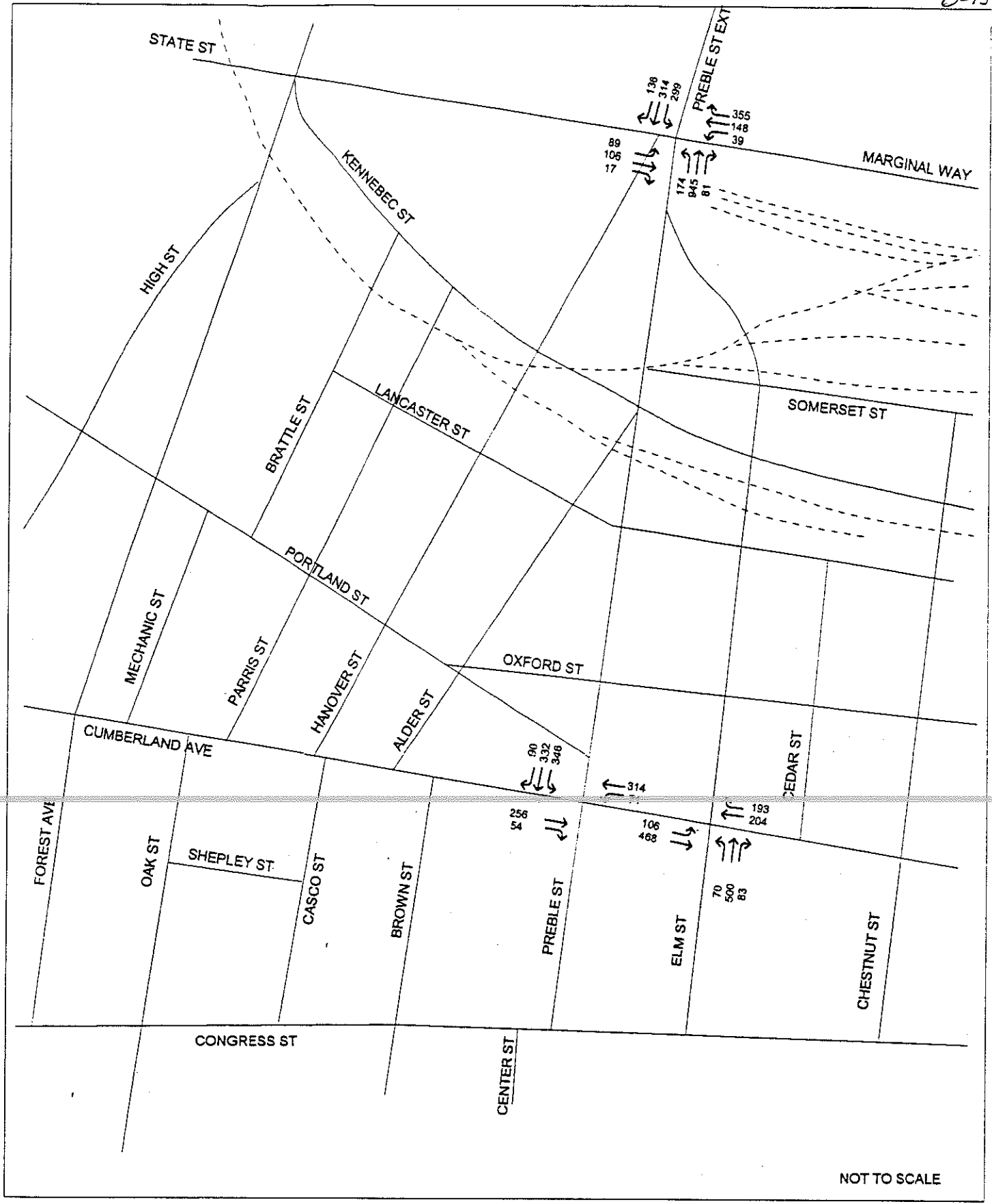


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2 Mirrois St. - Brunswick, Maine
0071 725-8806 Fax 0071 725-8773

Figure 8
PROJECTED AM PEAK HOUR TRAFFIC - POST-DEVELOPMENT
MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE



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2 Merrimack St. - Brunswick, Maine
207.725-8806 Fax: 207.725-9773

Figure 9
PROJECTED PM PEAK HOUR TRAFFIC - POST-DEVELOPMENT
MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

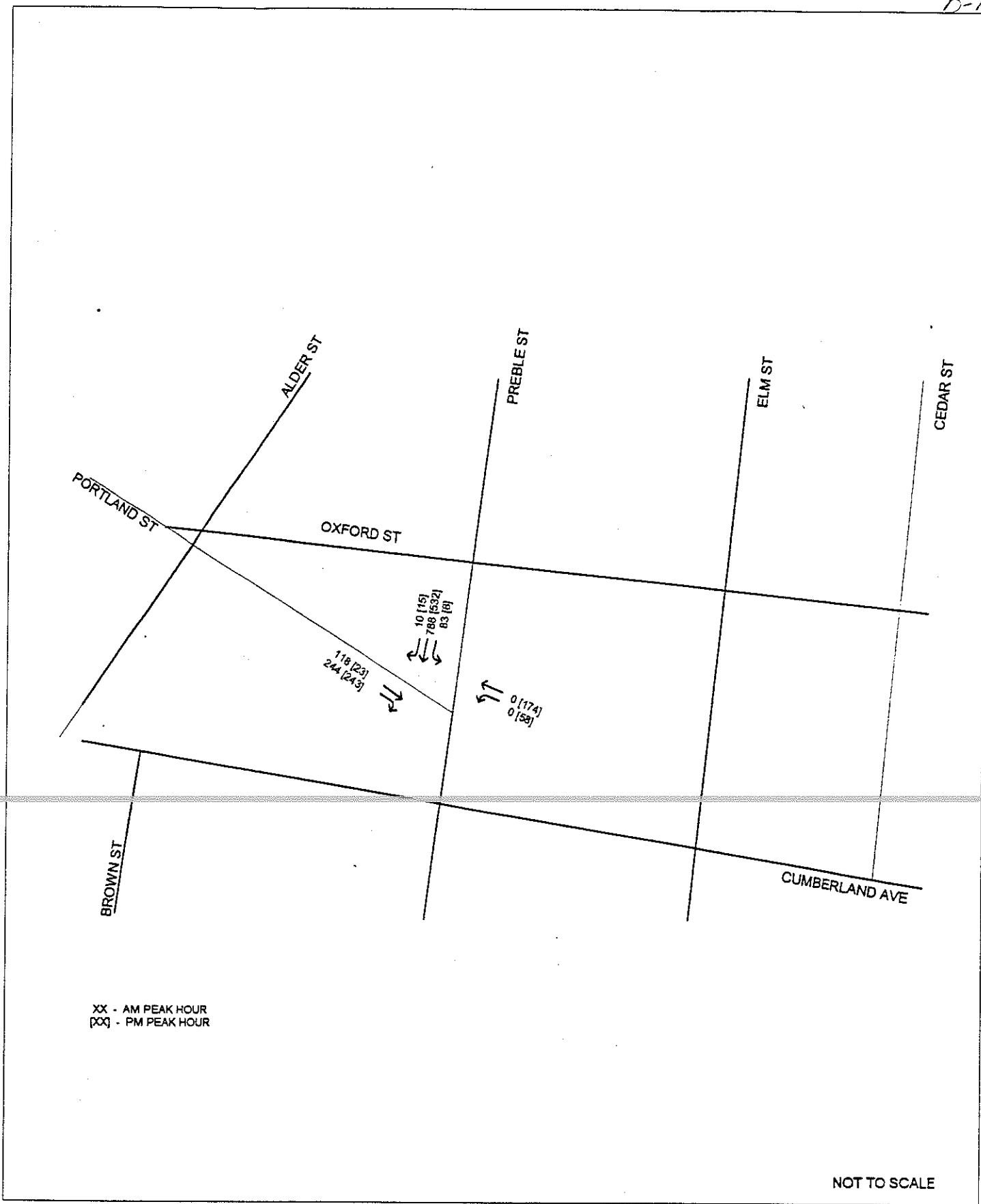


Figure 10
 PROJECTED AM & PM PEAK HOUR TRAFFIC AT PREBLE STREET ACCESS - POST-DEVELOPMENT
 MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

delay involved in waiting in a vehicle queue. The relationship between LOS and average total delay is shown below:

Level of Service Measurement for Unsignalized Intersections

Level of Service	Average Total Delay Per Vehicle
A	≤ 5.0 Seconds
B	5.1 - 10.0 Seconds
C	10.1 - 20.0 Seconds
D	20.1 - 30.0 Seconds
E	30.1 - 45.0 Seconds
F	≥ 45.0 Seconds

To establish basic conditions for analysis of the three signalized intersections in the study area analyzed, current phasing and timing was observed in the field, and average phase timing during the AM and PM peak period was used as a starting point for this analysis. The results of the analysis for pre- and post-development traffic are summarized below.

Signalized Intersection Analysis

Location	Pre-Development		Post-Development	
	LOS	Stopped Delay (sec)	LOS	Stopped Delay (sec)
AM Peak Hour				
Cumberland @ Preble	C	16.2	C	16.1
Cumberland @ Elm	B	14.5	B	14.4
Preble @ Marginal	C	18.6	C	18.7
PM Peak Hour				
Cumberland @ Preble	B	13.1	B	13.3
Cumberland @ Elm	B	12.4	B	12.5
Preble @ Marginal	D	26.8	D	27.1

As can be seen, the impact of site generated traffic on the Cumberland/Preble and Cumberland/Elm intersections is minimal. At Marginal Way @ Preble Street, the impact is also quite small - an increase in delay of under 0.5 seconds per vehicle - but the intersection is experiencing low levels of service on some of the movements. While it is felt that the adjusted peak hour volumes used in this analysis are somewhat higher than will actually occur (see **Projected 1996 AM and PM Design Hour Traffic Volumes**), there are clear indications that the intersection is heavily loaded for short periods of time during the PM peak hour. This is perhaps a supplementary reason to provide direct access between the Preble Street access to the proposed garage and Portland Street. If this access route were not available, vehicles bound for I-295 would likely exit via the Elm Street access and further increase traffic at the Marginal Way @ Preble Street Intersection.

Unsignalized intersection analysis was performed for the proposed entrance/exit drive from the site to Preble Street @ Portland Street. The table below summarizes the results of the analysis.

**Unsignalized Intersection Analysis
Preble @ Portland Street/Garage Access**

Movement	Pre-Development		Post-Development	
	LOS	Total Delay (sec)	LOS	Total Delay (sec)
AM Peak Hour				
Portland St Thru	C	11.5	D	19.6
Portland St Right	B	6.0	B	6.0
Preble St Left	A	2.2	A	2.2
Total Intersection		6.7		8.0
PM Peak Hour				
Portland St Thru	B	6.8	B	7.3
Portland St Right	A	4.9	A	4.9
Preble St Left	A	2.1	A	2.1
Garage Exit	B	9.8	D	26.2
Total Intersection		8.4		12.6

As would be expected, the LOS and delay associated with movements into the garage during the AM peak hour, and movements out of the garage during the PM peak hour increases significantly. While delay increases and LOS is reduced, these operational measures are felt to be acceptable for the short periods of time involved. Overall, the Preble/Portland/Garage intersection is projected to operate with reasonable delay and LOS.

Safety

Safety data for the most recent available 3 year period (1992-94) was obtained from the Accident Records Section of the MDOT Bureau of Planning for roadways in the vicinity of the site. A summary of the accident history in the area is presented in the table on the next page.

MDOT guidelines for identification of a High Accident Location (HAL - indicating a potential safety deficiency) is that a location must experience 8 or more accidents in a 3 year period and have a Critical Rate Factor of 1.00 or greater. Seven locations in the study area satisfy these criteria. Detailed accident collision diagrams for these locations were prepared from accident records on file at MDOT and analyzed. The findings of the analysis are summarized below:

Preble Street @ Kennebec Street: Of the 13 accidents occurring at this location, 10 involved cross traffic collisions between eastbound Kennebec Street and southbound Preble. Failure to yield the right of way (Kennebec Street is stop sign controlled) and disregarding a traffic control device were the primarily contributing factors cited in the reports. It is likely that speed on Preble Street might also be a factor. Given the number of cross traffic collisions, this location may warrant an intersection hazard beacon (flashing red and yellow).

Preble Street @ Lancaster Street: Of the 8 accidents at this location, 6 were cross traffic collisions, similar to those occurring at Preble @ Kennebec. Failure to yield the right of way was most commonly cited as the primary contributing factor. This location is a "borderline" HAL, but accident frequency has been increasing - from 2 in 1992, to 3 in 1993, to 4 in 1994. It is suggested that accident occurrence be monitored to determine if this trend on increasing accident frequency continues.

1992-94 Accident History in Site Vicinity

LOCATION	1992-94 ACCIDENTS	ANNUAL AVERAGE	CRITICAL RATE FACTOR ³
Preble Street @ Marginal Way	30*	10.00	0.73
Preble Street/Marginal to Somerset	0	0	0
Preble Street @ Somerset	0	0	0
Preble Street/ Somerset to Kennebec/Alder	2	0.67	2.33
Preble Street @ Kennebec	13	4.33	2.51
Preble Street/Kennebec to Lancaster	0	0	0
Preble Street @ Lancaster	8	2.67	1.60
Preble Street/Lancaster to Oxford	3	1.00	0.68
Preble Street @ Oxford	13	4.33	0.80
Preble Street/Oxford to Portland	0	0	0
Preble Street @ Portland	6	2.00	0.80
Preble Street/Portland to Cumberland	0	0	0
Preble Street @ Cumberland	16	5.33	0.71
Preble Street/Cumberland to Congress	8	2.67	2.50
Elm Street/Congress to Cumberland	4	1.33	1.33
Elm Street @ Cumberland	25	8.33	1.29
Elm Street/Cumberland to Oxford	6	2.00	3.54
Elm Street @ Oxford	0	0	0
Elm Street/Oxford to Lancaster	2	0.67	1.18
Elm Street @ Lancaster	8	2.67	3.36
Elm Street/Lancaster to Kennebec	3	1.00	2.32
Elm Street @ Kennebec	18	6.00	8.25
Elm Street/Kennebec to Somerset	3	1.00	4.85
Elm Street @ Somerset	1	0.33	0.46
Elm Street/Somerset to Marginal	2	na	na
Cumberland Ave/Brown to Preble	2	0.67	0.69
Cumberland Ave/Preble to Elm	2	0.67	0.59
Cumberland Ave/Elm to Cedar	1	0.33	0.21

³ The Critical Rate Factor is a statistical measure which compares the accident frequency at a location to similar locations throughout the State. A Critical Rate Factor of 1.00 or greater indicates that the location has a higher frequency of accidents than would be expected due to random occurrence, with a 99 percent level of confidence.

1992-94 Accident History in Site Vicinity (cont)

LOCATION	1992-94 ACCIDENTS	ANNUAL AVERAGE	CRITICAL RATE FACTOR
Portland Street @ Forest Ave*	30	10.00	0.93
Portland Street/Forest to Mechanic*	6	2.00	2.85
Portland Street @ Mechanic*	0	0	0
Portland Street/Mechanic to Brattle*	1	0.33	0.65
Portland Street @ Brattle*	1	0.33	0.23
Portland Street/Brattle to Parris*	3	1.00	1.64
Portland Street @ Parris*	8	2.67	1.78
Portland Street/Parris to Hanover*	0	0	0
Portland Street @ Hanover*	6	2.00	1.27
Portland Street/Hanover to Oxford*	2	0.67	0.95
Portland Street @ Oxford*	2	0.67	0.52
Portland Street/Oxford to Preble*	5	1.67	0.94

* 1993-95 Data

Preble Street/ Cumberland to Congress Street: Of the 8 accidents on this segment of Preble Street, 4 clearly involve collisions with vehicles entering or exiting an on-street parking space. Two of the remaining accidents are lane change/sideswipe accidents that could also be related to on street parking. The primary trend indicates that on-street parking activity is a major contributing factor. ~~Other than prohibiting on-street parking, which is not likely to be feasible, no recommendation can be made to address this section of Preble Street.~~

Elm Street @ Cumberland Street: Cross traffic collisions between eastbound Cumberland Street and northbound Elm Street constitute the primary accident pattern at this location, with 15 of the 24 accidents being of this type. The remainder of the accidents are generally disparate in nature and indicate no pattern. All but two of the 15 cross traffic collisions occurred during the late night or early morning when the traffic signal was operating in a flashing mode. To address this problem it is recommended that the traffic signal at this location be operated in full "stop and go" mode 24 hours a day.

Elm Street @ Lancaster Street: Of the eight accidents at this location, 6 were cross traffic collisions between eastbound Lancaster Street and northbound Elm Street. The remaining two accidents were lane change sideswipe collisions on Elm Street northbound. As was the case for the Preble/Kennebec and Preble/Lancaster intersections, disregard of the traffic control device (stop sign control on Lancaster) was cited as the primary contributing factor. It is somewhat strange that no accidents occurred at this location in 1993, with 4 occurring for both 1992 and 1994. Because of the cross traffic collision pattern, this intersection may be a candidate for an intersection hazard beacon.

Elm Street @ Kennebec Street: The primary collision pattern at this intersection is lane change/sideswipe accidents on Elm Street northbound, with 13 of the 18 total accidents being this type. The remaining 5 accidents were cross traffic collisions, 4 of these between eastbound Kennebec and northbound Elm Street. The major contributing factors cited included driver inattention, unsafe/improper turn, and unsafe lane change. It is recommended that pavement markings be improved in this area, and that overhead lane assignment signs be considered to address the lane change/sideswipe pattern.

Portland Street @ Parris Street: Of the 8 accidents occurring at this location, 4 accidents were cross traffic collisions, 3 of these occurring during icy conditions. An additional 3 accidents were rear-end collisions, with 2 of these occurring on an icy roadway. Overall it appears that environmental conditions are the prime contributing factor in accident occurrence at this location.

Although not meeting the criteria for a HAL, the intersection of Forest Avenue @ ParkAve/Portland Street was analyzed due to the number of accidents (30) that occurred.

Forest Avenue @ Park-Portland: The primary collision patterns at this location include cross traffic collisions (7), left turn collisions (7) and rear-end collisions (9). In addition, two accidents involving pedestrians occurred (1 involving a pedestrian violation). Overall the accident experience at this heavily travelled intersection is fairly typical. It is interesting that 12 of the 30 accidents occurred after 6:00 PM, after peak traffic flow periods have subsided. Cross traffic and rear-end collisions were most common for these evening accidents (4 each). Accident frequency is increasing (6 in 1993, 9 in 1994

and 15 in 1995), and this location should be monitored. In addition, it is suggested that vehicle clearance intervals be reviewed and modified if necessary.

An overall pattern that seems to emerge from the accident analysis is that unsignalized intersections on both Preble and Elm Streets are experiencing a significant number of cross traffic collisions. While failure to yield, disregarding traffic control devices and driver inattention were cited as primary contributing factors, it is likely that vehicle speeds on Preble and Elm Street are also factors. Both streets are one-way facilities that serve as a direct north/south routing to/from downtown Portland. Once a vehicle on Elm Street clears the Elm/Cumberland intersection it has "clear sailing" to Marginal Way. The same is true - in the opposite direction - for Preble Street (the Preble/Oxford signal does not typically stop traffic on Preble very often due to low vehicle demand on Oxford). To compound the potential speed problem, the locations of cross street intersections on Elm and Preble are often difficult to see due to the closeness of adjacent buildings and/or on-street parking. Overall, it appears that improving the visibility of cross streets would assist or at least help warn drivers on Elm and Preble that a potential conflict is present.

Access and Circulation

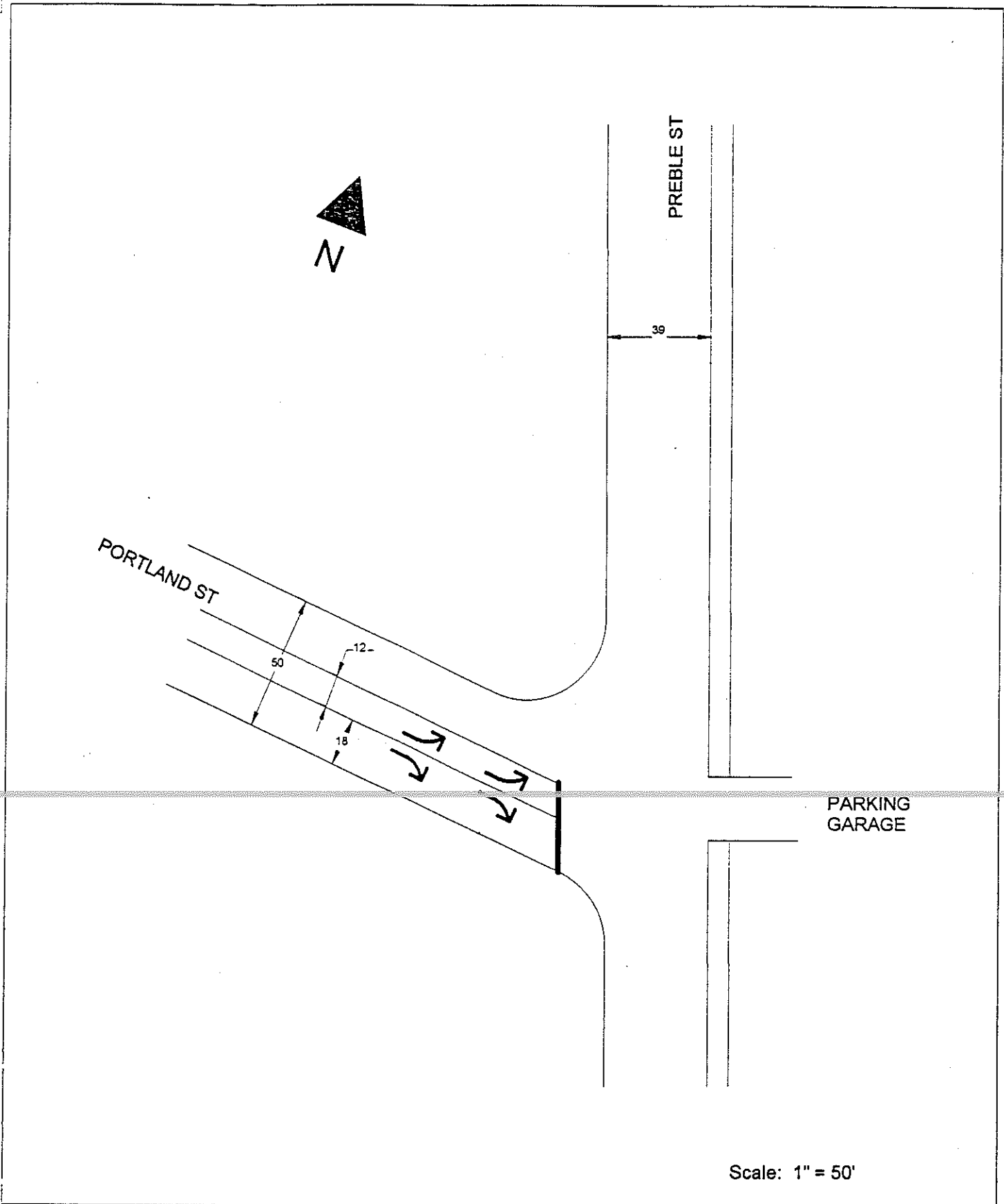
As noted in the introduction of this report, preliminary discussions with City of Portland staff raised the issue as to whether vehicles entering and exiting the Preble Street access should be allowed to do so to/from Portland Street. AM and PM peak period traffic counts at the intersection of Preble @ Portland/Seroco Lot indicates that a significant proportion of existing parking lot traffic uses a Portland Street routing. A review of accident history at this location reveals that only 6 accidents occurred at this location over the 3 year period 1992-94. Three of the accidents were collisions with bicyclists. The accident reports did not specify whether the bicyclists were travelling in the wrong direction on Preble Street, but it is a likely explanation for the accidents, since drivers would be looking north (left) to see oncoming traffic, and would not expect any traffic to be approaching from the south. The remaining accidents included 2 rear-end collisions, and 1 lane change/sideswipe collision. No cross traffic accidents involving traffic entering or exiting the existing access to the Seroco parking lot were recorded.

Portland Street is approximately 50 feet in width near Preble Street. It is suggested that two approach lanes be provided on Portland Street at its intersection with Preble Street to provide a through lane for access into the garage, and a right turn lane for vehicles turning on to Preble Street. Figure 11 on the following page provides a schematic layout of the suggested lane configuration.

Summary of Findings

The proposed Monument Square Associates parking garage will provide 648 parking spaces in the Portland Central Business District. Access to the facility will be provided by two-way entrance/exits on Preble Street and Elm Street. The facility is projected to generate 291 vehicle trips during the AM peak hour, and 357 trips during the PM peak hour. Analysis of the impact of the net increase in AM and PM peak hour traffic indicates that the key intersections in the study area (Cumberland @ Preble, Cumberland @ Elm, and Preble @ Marginal Way) will operate at acceptable levels of service. The capacity analysis did indicate that the Preble @ Marginal Way intersection is heavily loaded during the PM peak hour, and that maintaining access to the Preble Street entrance/exit via Portland Street will help minimize the impact of exiting PM peak hour traffic on that intersection.

Safety analysis indicates that there are currently 7 High Accident Locations in the study area. Detailed review of these locations is contained in the Safety section of this report, and will not be repeated here.



Scale: 1" = 50'



2 Miranda St. - Brunswick, Maine
207.725-9805 Fax: 207.725-9773

Figure 11
PROPOSED LANE MARKINGS - PORTLAND STREET ACCESS

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

MONUMENT SQUARE ASSOCIATES PARKING GARAGE
Portland, Maine
Traffic Impact Study Addendum - 6/20/96

Introduction

At the June 11, 1996 Portland Planning Board Workshop, two major traffic-related issues were raised by Board members. The first concerned the safety of the proposed entry movement that would involve traffic crossing Preble Street from Portland Street to the Preble Street entrance to the garage during the PM peak hour. The second issue related to traffic impacts at the intersection of Forest Avenue @ Portland Street/Park Avenue as a result of the high levels of traffic projected to exit from the Preble Street access to Portland Street westbound during the PM peak hour.

In addition, a discussion of traffic impacts associated with the garage with William J. Bray, P.E. of the City Public Works Department indicated that he shared the Board's concern regarding traffic entering from Portland Street during the AM peak hour, and had additional concerns regarding traffic exiting the Preble Street access during the PM peak hour. The latter concern was based upon possible sight obstructions caused by on-street parking on the easterly side of Preble Street just north of the Preble Street access.

This addendum summarizes the additional data collection and analyses performed to address the issues noted above.

Alternative Preble Street Access Alternatives

To address the concerns raised by the Planning Board and by Mr. Bray, two revised Preble Street access scenarios were developed. The first (Alternative 1) would involve denying the through movement from Portland Street to the Preble Street access. This would be accomplished through construction of a raised median on Preble Street that would effectively block the entrance for traffic approaching on Portland Street. A second raised median would be located on Portland Street to restrict eastbound vehicles from attempting to travel around the north end of the Preble Street median to gain access. Entry for vehicles approaching from the west would be provided by a Portland Street to Oxford Street to Preble Street route, as was

suggested by a Planning Board Member. This route would be encouraged through signing on Portland Street west of Oxford Street. Exit movements from the Preble Street access directly to Portland Street would continue to be allowed in this alternative. Overall, the distribution of AM and PM peak hour traffic approaching the garage would not be significantly affected - the primary impact would be in eliminating the through movement from Portland Street to the garage, and increasing the left turn entry movement from Preble Street. Figure 7-1 presents the revised site generated traffic pattern for Alternative 1.

Alternative 2 would continue to prohibit through movements from Portland Street, and would additionally prohibit the exit movement from the Preble Street access to Portland Street. This would be accomplished using a raised median on Preble Street that extends across both the entrance and exit to the garage. This alternative would have little impact on the distribution of site traffic during the AM peak hour. During the PM peak hour the impact of this alternative is more significant. As a result of the prohibition of through movements from the Preble Street access to Portland Street, it is projected that substantially more traffic would exit via the Elm Street access, and that the left turn volumes exiting on Preble Street would increase as well. The result of this alteration in exiting traffic patterns would increase traffic demand at the intersections of Preble @ Cumberland and Preble @ Marginal Way, and decrease impacts at the intersection of Forest @ Portland/Park. Figure 7-2 presents the revised site generated traffic pattern for Alternative 2.

Operational Assessment - Area Intersections

Alternative 1

As noted in the previous section, site generated traffic patterns for the AM and PM peak hours for Alternative 1 do not vary significantly. The capacity/Level of Service findings presented in the original traffic impact study for the Cumberland @ Preble, Cumberland @ Elm and Preble @ Marginal Way intersections remain valid for this Alternative. To evaluate the intersection of Forest @ Portland/Park, a manual turning movement count was conducted on Friday, June 14, 1996 for the PM peak traffic period. The PM peak hour was found to occur from 4:30 - 5:30 PM, which is generally consistent with other intersections in the area. The PM peak hour traffic volumes were adjusted to reflect

peak seasonal conditions, and are presented on Figure 9-1 (Including site generated traffic from the garage travelling west on Portland Street).

Based upon signal phasing and timing observed in the field, the Intersection of Forest Avenue @ Portland Street/Park Avenue was analyzed for capacity and level of service. For Alternative 1 (which still allows some 150 additional vehicles to exit the garage to Portland Street during the PM peak hour) the projected level of service is LOS C, with an average stopped delay of 18.8 seconds. Because the Forest @ Portland/Park traffic signal is "linked" to the signal at High Street @ Park Avenue, the traffic at High/Park can sometimes control the timing at Forest @ Portland/Park and cause less than efficient operations at Forest @ Portland/Park for short periods of time. Specifically, the high traffic volumes on High Street during the PM peak hour can "hold" the green phase for Forest Avenue, and provide somewhat less green time on Portland Street westbound than would be desired. The capacity analysis generally reflects this condition.

Alternative 2

Alternative 2 results in fairly significant changes in site generated traffic patterns during the PM peak hour. Accordingly, capacity and level of service were reassessed for all signalized intersections in the study area. Figure 9-2 presents the revised PM peak hour traffic for study area intersections for Alternative 2. The results of capacity analysis for Alternative 2 is summarized as follows:

Location	LOS	Delay
Preble @ Cumberland	B	14.2
Elm @ Cumberland	B	12.6
Preble @ Marginal	D	28.3
Forest @ Portland/Park	C	15.2

All intersections are projected to operate at satisfactory levels of service, although it should be noted that several movements at the Preble @ Marginal Way Intersection are projected to operate with fairly significant delays. In discussing this issue with Mr. Bray of

Portland Public Works, he noted that he felt that the seasonal adjustment factors used at this location (25 percent increase to adjust February data to reflect peak summer conditions) was much too high, and that the Preble @ Marginal Way Intersection did not have significant seasonal variation and was part of a route that primarily served commuters. With volumes perhaps 20 percent lower than those used for analysis, the Preble @ Marginal Way Intersection would clearly operate satisfactorily.

Operational Assessment - Preble Street Access

A summary of capacity/level of service analysis for the Preble Street access for both Alternatives 1 and 2 is summarized below. Figures 10-1 and 10-2 present the projected AM and PM peak hour volumes for Alternative 1 and Alternative 2 respectively.

Movement	Alternative 1		Alternative 2	
	LOS	Total Delay (sec)	LOS	Total Delay (sec)
AM Peak Hour				
Portland St Right	B	6.4	B	6.4
Preble St Left	A	2.4	A	2.4
Total Intersection		1.7		1.7
PM Peak Hour				
Portland St Right	B	5.1	B	5.1
Preble St Left	A	2.1	A	2.1
Garage Exit	D	29.9	D	26.2
Total Intersection		8.4		5.0

The capacity/level of service findings noted above are very similar to the findings of the original study for the previously proposed access plan for the Preble Street entrance/exit. Overall, the Preble Street access is projected to operate satisfactorily for either access Alternative; however, the vehicle queues during the PM peak hour for Alternative 1 are projected to be higher than those for Alternative 2 due to the higher volumes exiting to Preble Street.

Summary of Findings

Access Alternatives 1 and 2 are intended to address concerns raised by the Portland Planning Board and the Public Works Department. Both alternatives appear workable in terms of traffic impacts in the vicinity of the proposed parking garage. Conceptual designs of the proposed street modifications to implement Alternative 1 and Alternative 2 are presented in Figures 11-1 and 11-2 respectively.

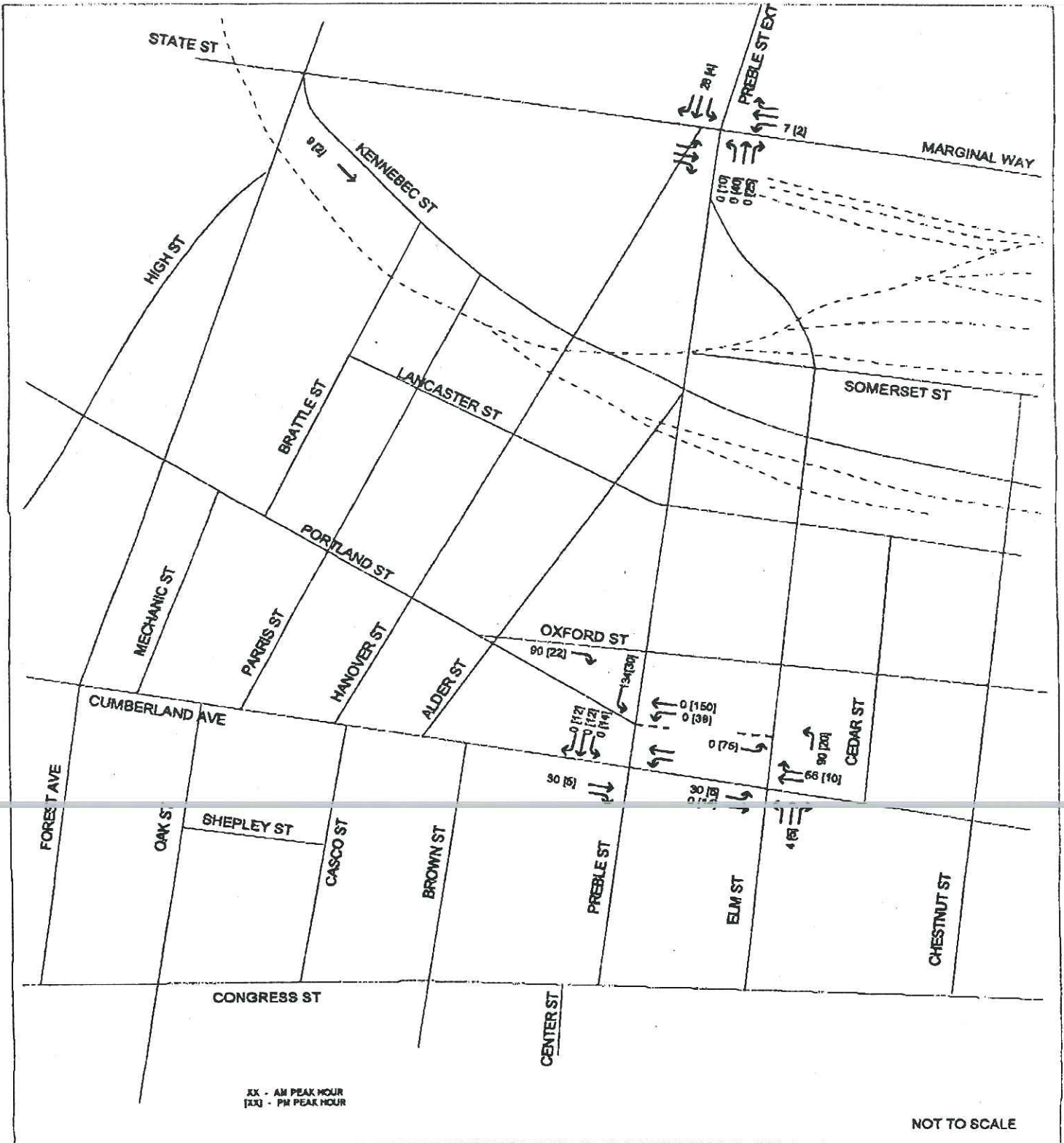


Figure 7-1 Alternative 1 - No Thru Entry From Portland Street
 ESTIMATED NET AM & PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES

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2 Minerva St - Portland, Maine
 607 725-0000 Fax 607 725-0773

0-33

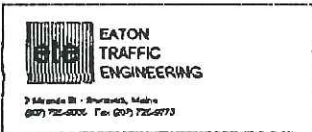
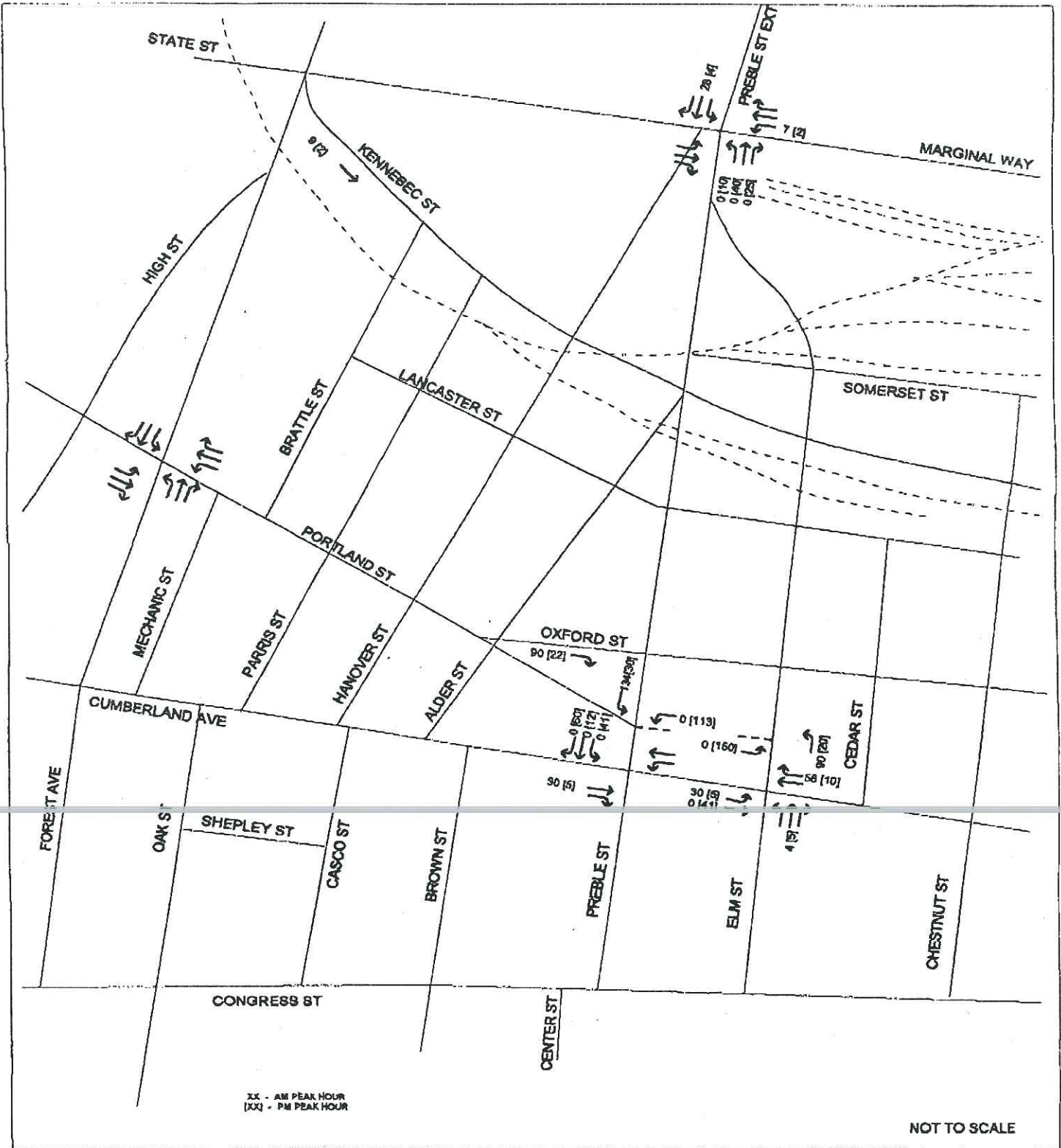
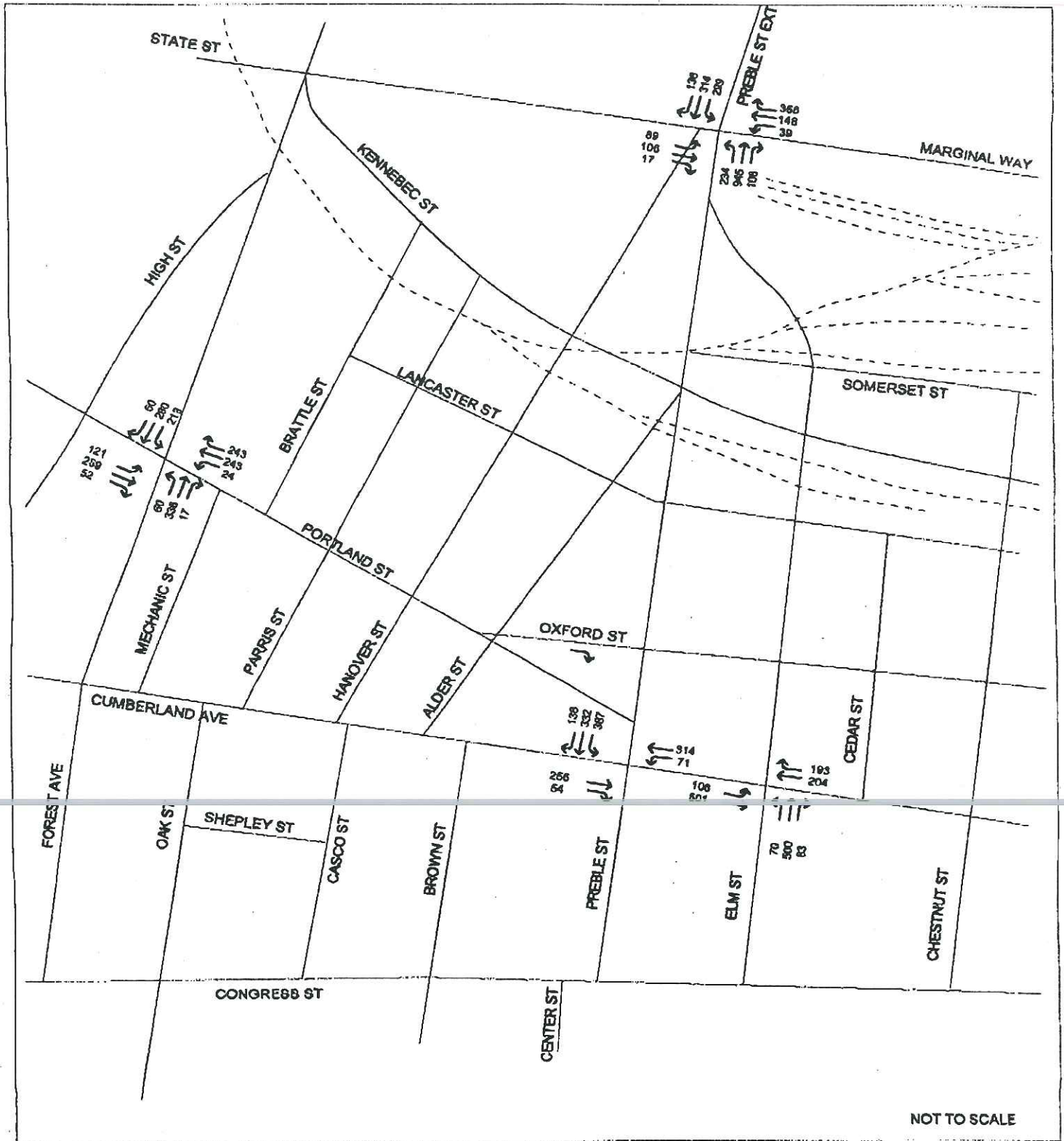


Figure 7-2 Alternative 2 - No Thru Entry/Exit To/From Portland Street
 ESTIMATED NET AM & PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

0-34



NOT TO SCALE

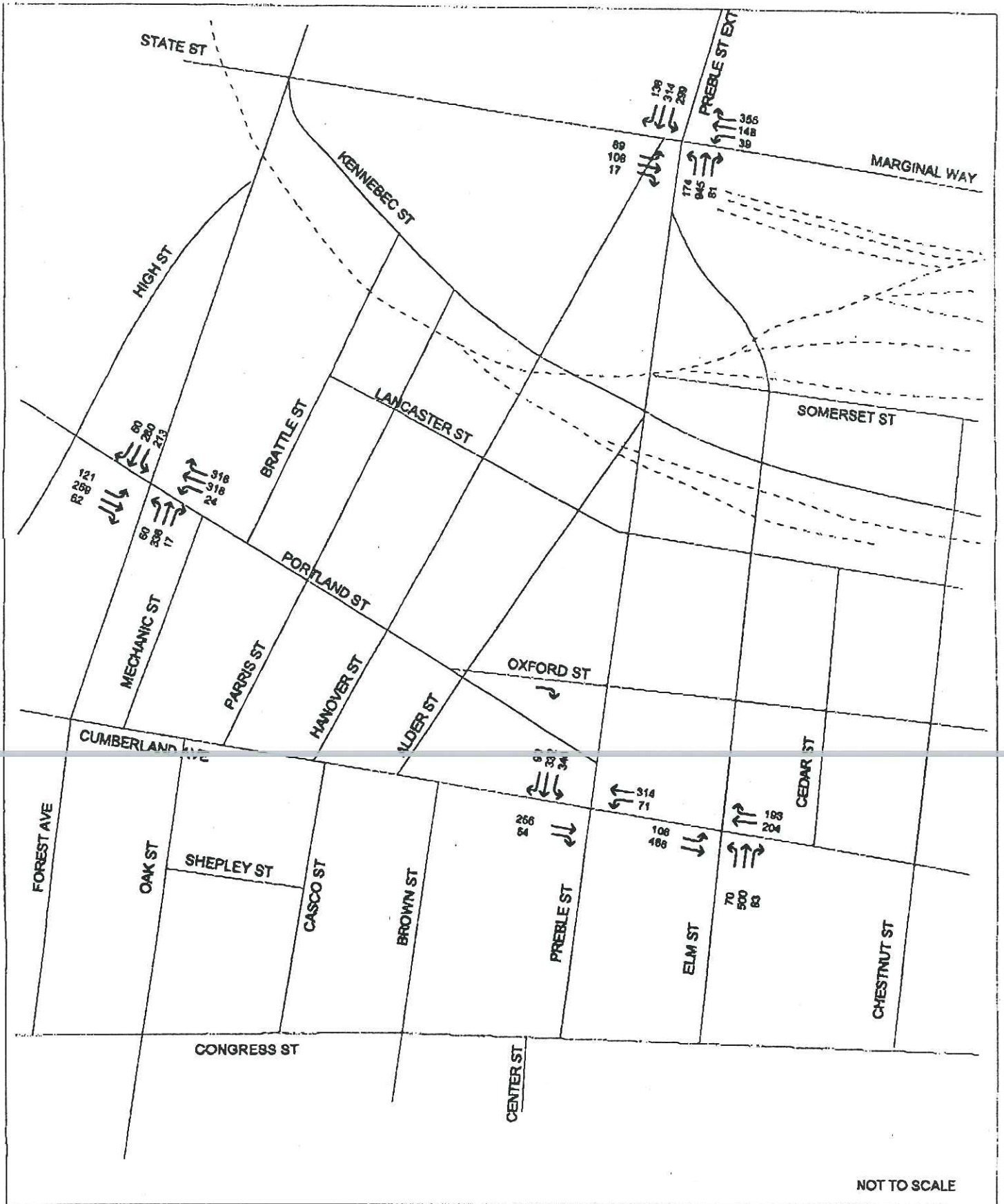


2 Merrimack St., Portland, Maine
207 725-9815 Fax 207 725-9773

Figure 9-2 - Alternative 2 - No Thru Entry/Exit To/From Portland Street
PROJECTED PM PEAK HOUR TRAFFIC - POST-DEVELOPMENT

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

D-35



NOT TO SCALE



Figure 9-1 - Alternative 1 - No Thru Entry From Portland Street
PROJECTED PM PEAK HOUR TRAFFIC - POST-DEVELOPMENT

MONUMENT SQUARE ASSOCIATED PARKING GARAGE, PORTLAND, MAINE

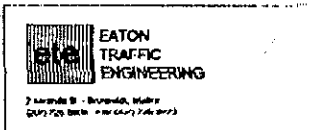
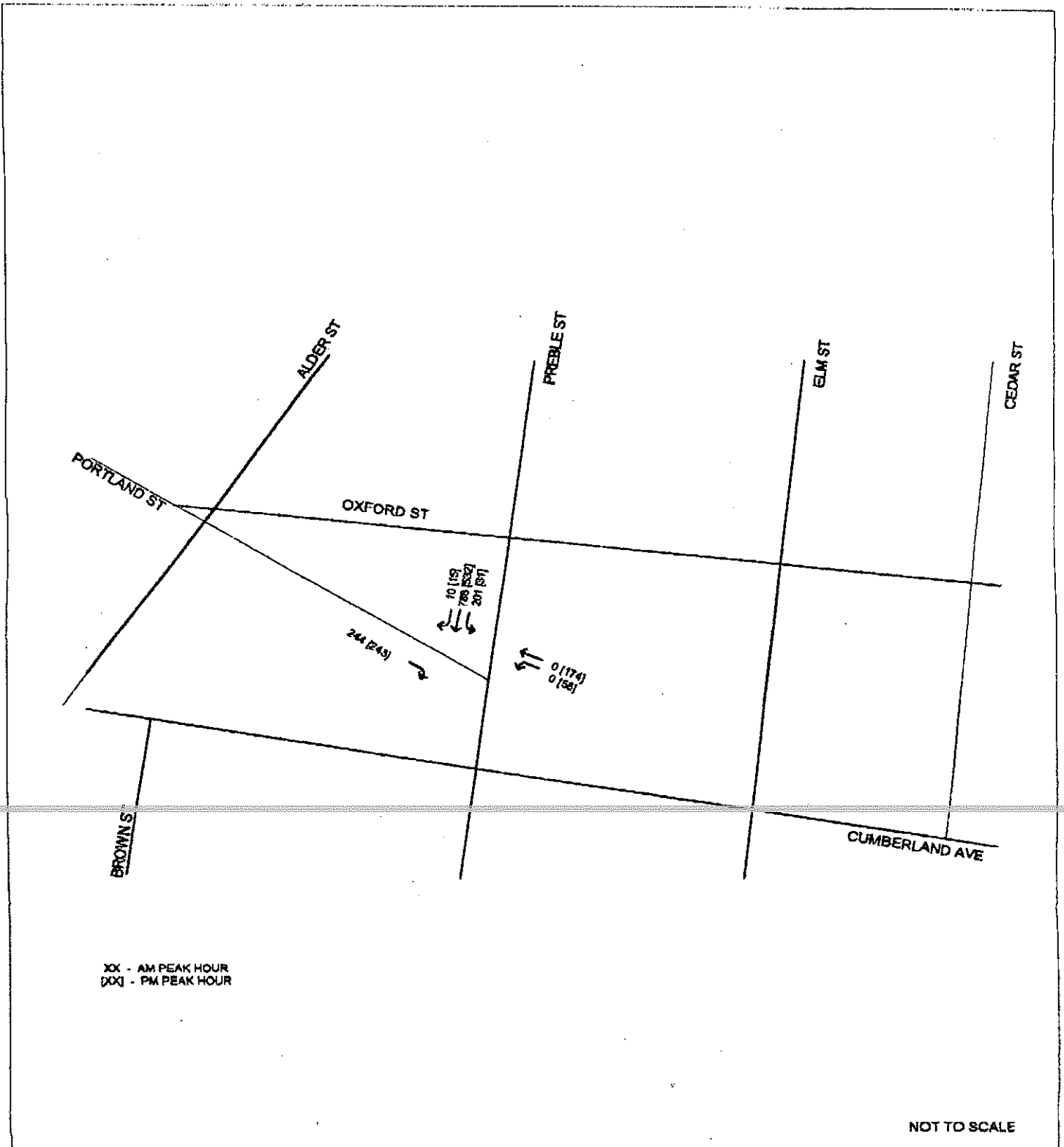


Figure 10-1 - Alternative 1 No Thru Entry From Portland Street
 PROJECTED AM & PM PEAK HOUR TRAFFIC AT PREBLE STREET ACCESS - POST-DEVELOPMENT
MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

0-36

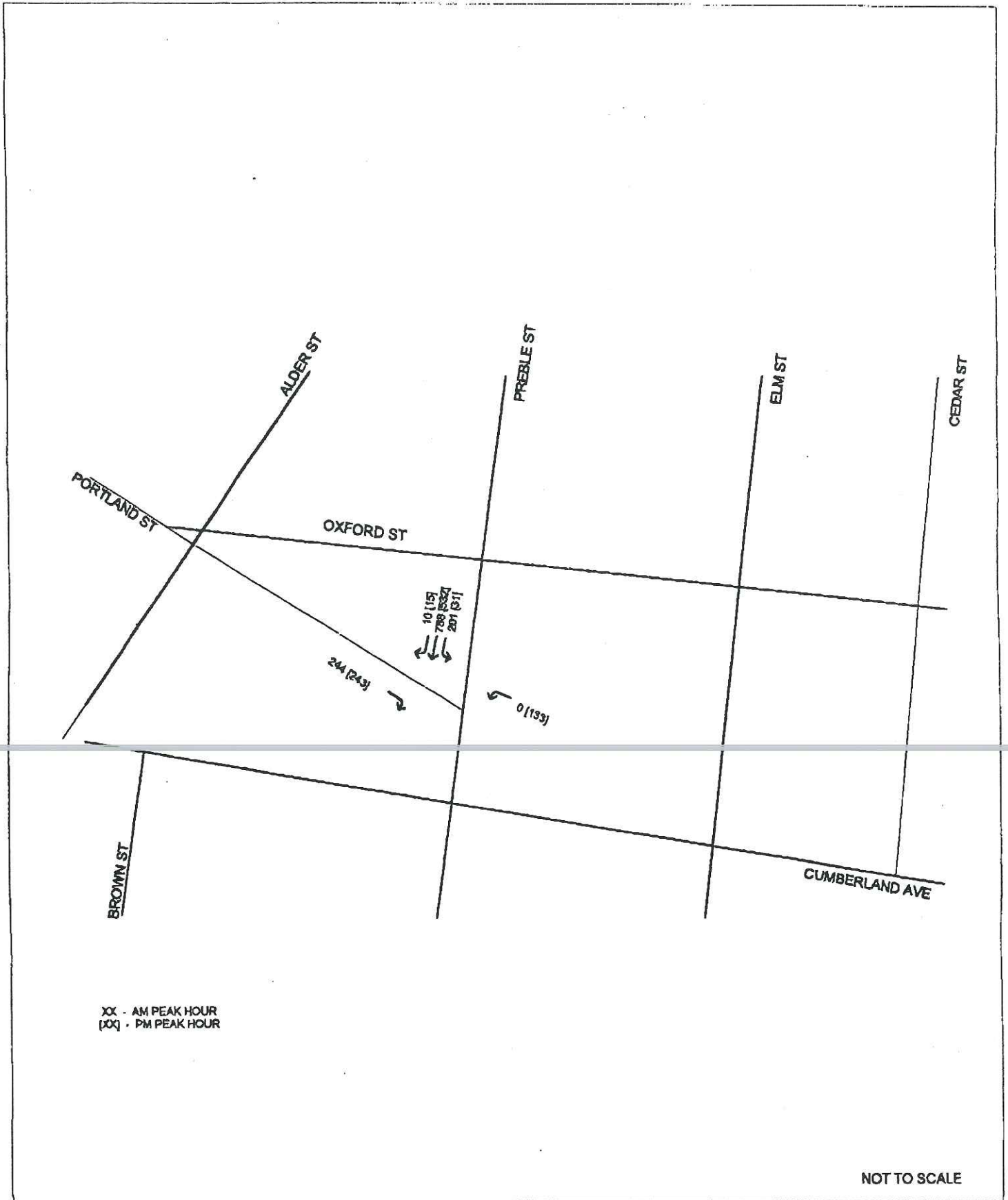
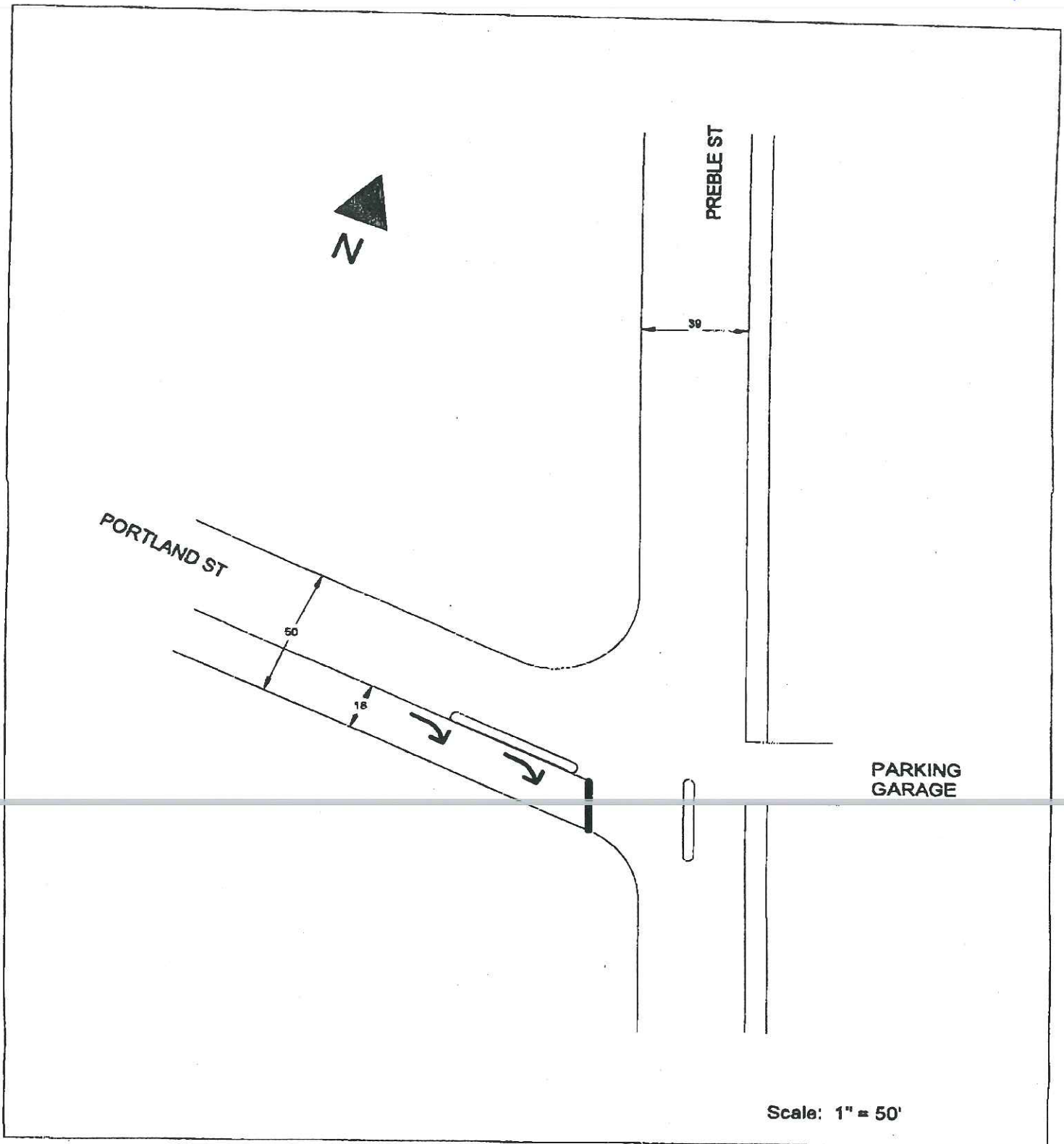


Figure 10-2 - Alternative 2 - No Thru Entry/Exit To/From Portland Street
PROJECTED AM & PM PEAK HOUR TRAFFIC AT PREBLE STREET ACCESS - POST-DEVELOPMENT



0-37



Scale: 1" = 50'

PARKING GARAGE

PREBLE ST

PORTLAND ST



Figure 11-1 Alternative 1 - No Thru Entry From Portland Street
PROPOSED RAISED MEDIANS - PORTLAND STREET ACCESS

MONUMENT SQUARE ASSOCIATES PARKING GARAGE - PORTLAND, MAINE

 EATON
TRAFFIC
ENGINEERING

2 Miranda Dr - Brunswick, Maine
207 725 9805 Fax 207 725 9773