

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

Please Read
Application And
Notes, If Any,
Attached

BUILDING DEPARTMENT

PERMIT

Permit Number: 030130

This is to certify that Bayside I Llc /Entech Electronics
has permission to Placement of Satalite dishes for broadcast
AT 235 Oxford St 033 G012001

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Notification of inspection must
given and when permission procured
before this building or part thereof
leased or occupied. **48 HOUR NOTICE IS REQUIRED.**

Apply to Public Works for street line and grade if nature of work requires such information.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. *[Signature]*
Health Dept. _____
Appeal Board _____
Other _____
Department Name _____

[Signature] 3/10/13
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 03-0130	Issue Date:	CBL: 033 G012001
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Location of Construction: 235 Oxford St	Owner Name: Bayside I Llc	Owner Address: Po Box 266	Phone:
Business Name: n/a	Contractor Name: Entech Electronics	Contractor Address: PO Box 360085 Dallas	Phone: 8005653394
Lessee/Buyer's Name n/a	Phone: n/a	Permit Type: Alterations - Commercial	Zone: B-3

Past Use: Commercial / Parking Lot	Proposed Use: Parking Lot; placement of satalite dishes for broadcast	Permit Fee: \$128.00	Cost of Work: \$15,000.00	CEO District: 1
Proposed Project Description: Placement of Satalite dishes for broadcast		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: U Type: NA 3/10/03	
		Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Signature: _____ Date: _____	
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Permit Taken By: gg	Date Applied For: 02/24/2003	Zoning Approval	
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1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building permits do not include plumbing, septic or electrical work. 3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan - has site plan exemption Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: <i>3/24/03</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date: _____	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>[Signature]</i>
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CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

 SIGNATURE OF APPLICANT ADDRESS DATE PHONE

 RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHONE

City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 03-0130	Date Applied For: 02/24/2003	CBL: 033 G012001
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Location of Construction: 235 Oxford St	Owner Name: Bayside I Llc	Owner Address: Po Box 266	Phone:
Business Name: n/a	Contractor Name: Entech Electronics	Contractor Address: PO Box 360085 Dallas	Phone (800) 565-3394
Lessee/Buyer's Name n/a	Phone: n/a	Permit Type: Alterations - Commercial	

Proposed Use: Parking Lot; placement of satellite dishes for broadcast	Proposed Project Description: Placement of Satellite dishes for broadcast
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Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 02/26/2003

Note: **Ok to Issue:**

- 1) Separate permits shall be required for any new signage.
- 2) PLEASE NOTE: A separate permit application is required for the change of use and alterations for a communications and broadcasting studio in your new space (previously just office space). Scaled floor plans with details shall be required accompanying that applications.

Dept: Building **Status:** Approved **Reviewer:** Mike Nugent **Approval Date:** 03/10/2003

Note: **Ok to Issue:**

Dept: Fire **Status:** Approved **Reviewer:** Lt. McDougall **Approval Date:** 02/26/2003

Note: **Ok to Issue:**

Comments:

02/28/2003-mjn: Need snow load info, Heaters top be installed exempt from snow load per Code See Section 3109.3.2

Planner's Signature

Konnie Yocum

Date

2/26/03

Exemption Granted

Partial Exemption

Exemption Denied

Planning Office Use Only:

h) Adequate Utilities

g) Sufficient Property Screening

f) No Stormwater Problems

e) No Additional Parking / No Traffic Increase

d) Curbs and Sidewalks in Sound Condition/
Comply with ADA

c) No New Curb Cuts, Driveways, Parking Areas

b) Footprint Increase Less Than 500 Sq. Ft.

a) Within Existing Structures; No New Buildings,
Demolitions or Additions

See Section 14-523 (4)

Criteria for Exemptions:

Please Attach Sketch/Plan of Proposal/Development

Applicant's Assessment
(Yes, No, N/A)

*Concrete PAD only 10x10
- (in satellite dish*

100 #

N/A

yes

yes

No

yes

N/A

Planning Office
Use Only

101 2/26/03



Commercial Satellite Installations

Monday, March 03, 2003

Mike Nugent
City of Portland, ME

In Regards to:
WPFO
233 Oxford Ave.
Portland, ME 14101

Dear Mr. Nugent:

Pending permitting, we will be installing De-ice Heaters on the new satellite antennas at FOX Station WPFO.

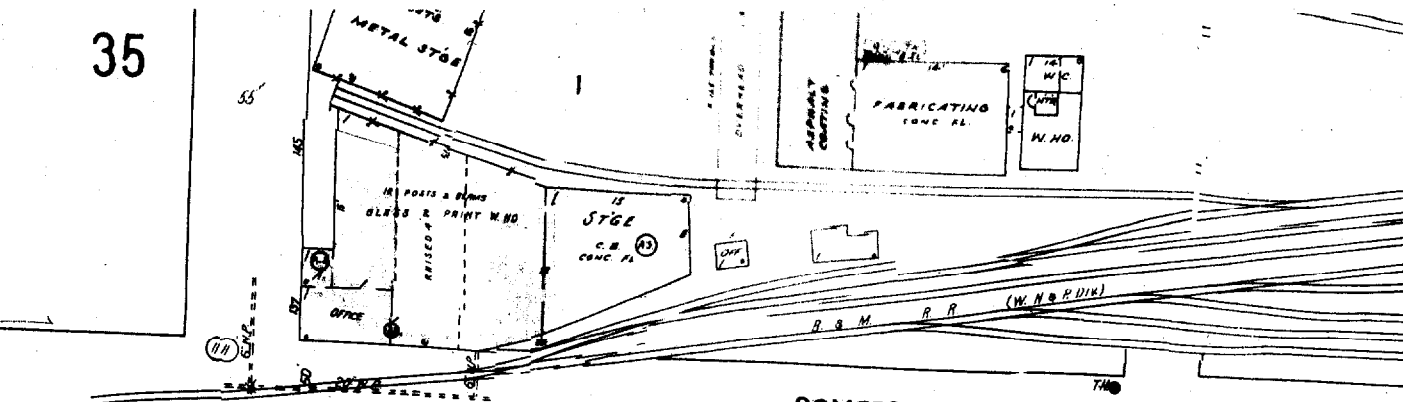
Thank you for your help.

Coen Enright
Partner
Entech Electronics

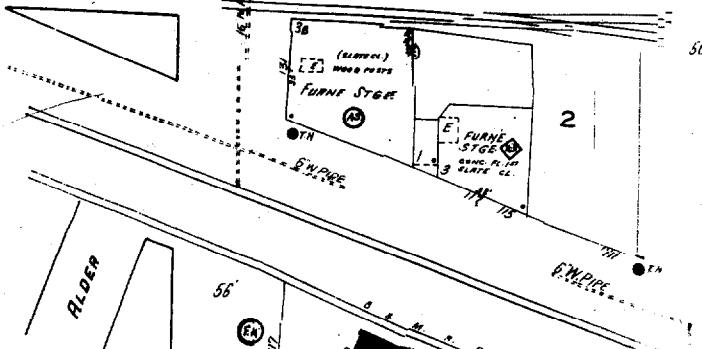
cc: Tom McArthur

Entech Electronics
P.O. Box 360085 • Dallas, TX 75336
(972) 286-9933 • (800) 568-3394
Fax (972) 286-4422

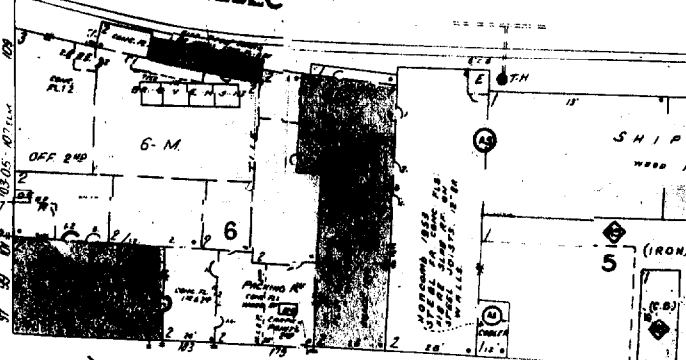
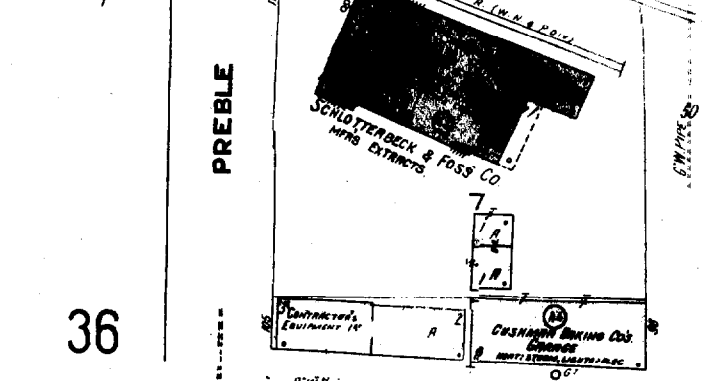
35



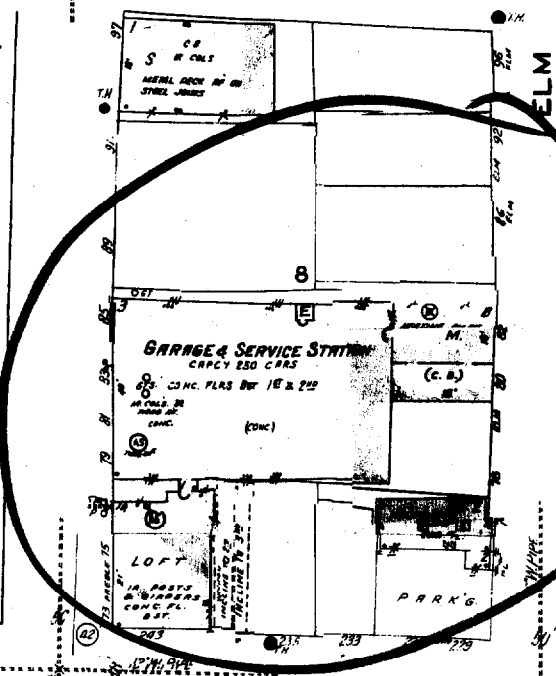
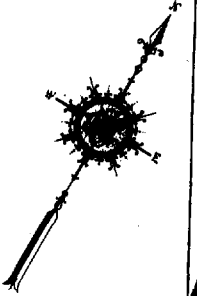
SOMERSET



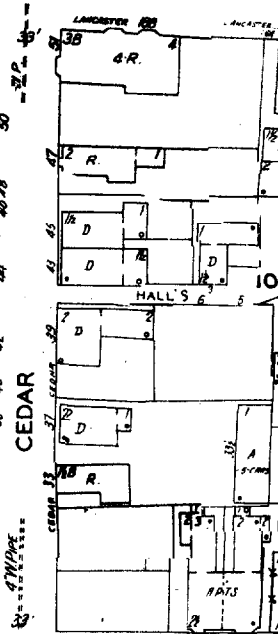
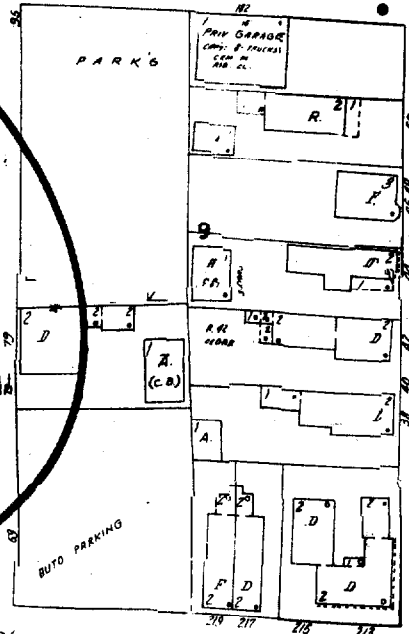
KENNEBEC



36



LANCASTER



OXFORD

36

23

030130

All Purpose Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 233 OXFORD ST. Portland, ME		
Total Square Footage of Proposed Structure 200 Sq.Ft.	Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Chart# 33 Block# 9 Lot# 12	Owner: Tom Toye	Telephone:
Lessee/Buyer's Name (if Applicable) WFO-FOX 23	Applicant name, address & telephone: 233 OXFORD ST Portland, ME 04101	Cost Of Work: \$15,000.00 Fee: \$128.00
Current use: <u>Parking Lot</u>		Owes. \$128.00
If the location is currently vacant, what was prior use: <u>N/A</u>		
Approximately how long has it been vacant: <u>N/A</u>		
Proposed use: <u>placement of satellite dishes for Broadcast</u> Project description: <u>TELEVISION STATION</u>		
Contractor's name, address & telephone: <u>ENTech Electronics 1-800-568-3394</u> <u>P.O. Box 360035</u> <u>DALLAS, TX 75336</u>		
Who should we contact when the permit is ready: <u>TOM McARTHUR</u>		
Mailing address: <u>151 North ST.</u> <u>APT 314</u> <u>Portland, ME 04101</u>		
We will contact you by phone when the permit is ready. You must come in and pick up the permit and review the requirements before starting any work, with a Plan Reviewer. A stop work order will be issued and a \$100.00 fee if any work starts before the permit is picked up. PHONE: <u>207-828-0023</u>		

IF THE REQUIRED INFORMATION IS NOT INCLUDED IN THE SUBMISSIONS THE PERMIT WILL BE DENIED AT THE DISCRETION OF THE BUILDING/PLANNING DEPARTMENT, WE MAY REQUIRE ADDITIONAL INFORMATION IN ORDER TO APPROVE THIS PERMIT.

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME

FEB 21 2003

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the City Officer's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: Thomas E McArthur Date: 2-21-03

This is NOT a permit, you may not commence ANY work until the permit is issued. If you are in a Historic District you may be subject to additional permitting and fees with the Planning Department on the 4th floor of City Hall

4.5M E.S.A. DISH WIND PRESSURESite **WPFO-TV Site, Cumberland County, Portland, ME**MEI Job # **02-0068**Client **Entech Electronics / Andrew Corporation**

Defined Units and Constants

$\text{psf} = \frac{\text{lb}}{\text{ft}^2}$	$\text{plf} = \frac{\text{lb}}{\text{ft}}$	$\text{kip} = 1000 \cdot \text{lb}$	$\text{kips} = 1000 \cdot \text{lb}$	$\text{plf} = \frac{\text{lb}}{\text{ft}}$	$\text{ft_lb} = \text{ft} \cdot \text{lb}$	$\text{ksi} = \frac{\text{kip}}{\text{in}^2}$
$\text{ksf} = \frac{\text{kip}}{\text{ft}^2}$	$\text{pcf} = \frac{\text{lb}}{\text{ft}^3}$	$\text{kcf} = \frac{\text{kip}}{\text{ft}^3}$	$\text{ft_K} = 1000 \cdot \text{ft} \cdot \text{lb}$	$\text{psi} = \frac{\text{lb}}{\text{in}^2}$	$\text{cy} = \text{ft}^3 \cdot 27$	$\text{kft} = \frac{1000 \cdot \text{lb}}{\text{ft}}$

The following calculations for wind load are based on **IBC 2000 / ASCE 7-98** to evaluate the loading involved and to evaluate mount connections

4.5 M Dish Antenna - Wind Load Calculations

D := 14.764·ft Diameter of Dish

ASCE 7-98/ IBC 2000 INPUT WIND LOAD PARAMETERS

Exposure "C" -section 6.5.3 - ASCE7-98

V := 100 mph - Basic wind speed (3 sec gust at 33') Fig 6-1 ASCE 7-98

Kz := 0.9 Velocity pressure coefficient - table 6-5 ASCE 7-98. H := 20·ft

Kzt := 1 Wind speed over hills & escarpments section 6.5.7.2 ASCE 7-98

Kd := 0.95 Wind Directionality Factor Table 6-6 ASCE 7-98

I := 1.15 Importance factor Table 6-1 ASCE 7-98 - Category III

qz := 0.00256Kz·Kd·Kzt·V²·I·psf Velocity Pressure Eqn 6-13 ASCE 7-98 qz = 25.17 psf**Dish Wind Loads Check:**

The Andrew dish base reactions were based on Wind velocity of 125 mph gust winds or 60 psf (approx.) pressure which are higher than the county wind requirements per IBC2000 / ASCE 7-98 [REDACTED].
Therefore, Andrew Foundation Reactions are used for the design.

Approximate frost depth based on county. d := 36·in

FOUNDATION DESIGN PRINTOUT

Version: FDN2-D70/AO

 * FOUNDATION ANALYSIS PROGRAM *
 * Spread Footing Analysis *
 * (c) 1999, Malouf Engineering Intl., Inc. *

 MEI JOB NUMBER = 03-0068
 DESCRIPTION = 4.5 METER E.S.A DISH FOUNDATION
 SITE NAME = WPFO-TV SITE, PORTLAND, ME
 CLIENT NAME = ENTECH ELECTRONICS / ANDREW CORPORATION
 TIME/DATE/FILE = 16:43:26 / 02-11-2003 / 030068-1.dat

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INPUT DATA

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LOADS

COMPRESSION FORCE (1 PEDESTAL) = 10.200 KIPS
 UPLIFT FORCE (1 PEDESTAL) = .000 KIPS
 SHEAR FORCE (1 PEDESTAL) = 11.300 KIPS
 MOMENT = 82.200 KIP-FT
 ECCENTRICITY OF AXIAL LOADS = .000 FT

FOOTING DIMENSIONS AND PROPERTIES

DEPTH OF FOOTING = 5.000 FT
 FOOTING DIMENSIONS (L X B) = 10.000 x 10.000 FT
 THICKNESS OF FOOTING = 1.500 FT (FOOTING HAS NO TOE)
 NUMBER OF PEDESTALS / TYPE = 1 / SQUARE
 PEDESTAL WIDTH = 3.000 FT
 EXTENSION ABOVE GRADE = .500 FT
 CONCRETE DENSITY = .150 KCF
 GROUNDWATER LEVEL BELOW BOTTOM OF FOUNDATION

FACTOR OF SAFETY VALUES

F.O.S. BEARING PRESSURE = 2.000
 F.O.S. CONCRETE WEIGHT = 1.250 / 1.500
 F.O.S. SOIL WEIGHT = 2.000 / 1.500
 F.O.S. UPLIFT = 2.000

SOIL PROPERTIES

ULTIMATE BEARING CAPACITY = 4.000 KSF
 SOIL DENSITY = .100 KCF
 INTERNAL ANGLE OF FRICTION = 28.000 DEG
 SOIL COHESION (FOR UPLIFT) = .000 KSF (PAD PERIMETER)
 PASSIVE PRESSURE = .277 KCF (Kp= 2.77)
 DEPTH NEGLECTED FOR PASSIVE PR.= 3.000 FT
 BASE SOIL/CONCRETE FRICTION = .275

*** COMMENTS ***

REACTIONS AS PER ANDREW FOUNDATION SPECIFICATIONS PER 4.5 METER DISH.
 CONSERVATIVE SOIL PARAMETERS USED.

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RESULTS

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VOL./WT. OF SOIL ABOVE = 318.5 FT3 / 31.850 KIPS
 VOL./WT. OF SOIL WEDGE = 32.6 FT3 / 3.257 KIPS (FOR OVERTURNING)
 = 143.0 FT3 / 14.296 KIPS (FOR UPLIFT)
 VOL./WT. OF PEDESTAL(S) = 36.0 FT3 / 5.400 KIPS
 VOL./WT. OF FOOTING = 150.0 FT3 / 22.500 KIPS

TOTAL RESISTING MOMENT = 387.8 KIP-FT
 TOTAL OVERTURNING MOMENT = 144.3 KIP-FT
 F.O.S. OVERTURNING = 2.687 > 1.500 (OK) R= .558

SOIL PRESSURES (KSF) = 1.612 GROSS / .533 IN-SITU / .000 PMIN
 FRICTION RESISTANCE(ALLW) = .000 KIPS (SKF= .000KSF)
 TOTAL DOWNLOAD CAPACITY = 2.000 KSF > 1.079 KSF (OK) R= .540
 SHEAR CAPACITY = 5.19 (PASSIVE) + 7.92 (FRICTION)
 = 13.1 KIPS > 11.3 KIPS (OK) R= .862
 UPLIFT CAPACITY = 45.4 KIPS > .0 KIPS (OK) R= .000

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REINFORCEMENT CHECK (SQUARE PEDESTAL) L= 4.00' WID= 36.0" FC= 4000 PSI

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FACTORED MOMENT LOAD = 184.02 KIP-FT
 FACTORED COMPRESSION LOAD = 17.68 KIPS (ECC=149.88")
 REINFD. COMPR. CAPACITY = 18.51 KIPS (COMPR. & MOMENT: TENSION CONTROLS)

REQUIRED STEEL AREA = 2.65 IN2 (COMPR. AND MOMENT)
 REQUIRED STEEL AREA = 6.48 IN2 (ACI MIN.= 0.005A)

PROVIDE A TOTAL BAR AREA = 7.07 IN2 (16 x NO. 6 BARS) /FY= 60.KSI,C= 3.0"
 VERT. BAR CLEAR SPACING = 5.14 IN

FACTORED SHEAR LOAD = 17.28 KIPS
 SHEAR CAPACITY = 200.06 KIPS
 THE TOTAL TIE BAR AREA PROVIDED IS SUFFICIENT.

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REINFORCEMENT CHECK (FOOTING) W= 10.00' THK=18.00" FC= 4000 PSI

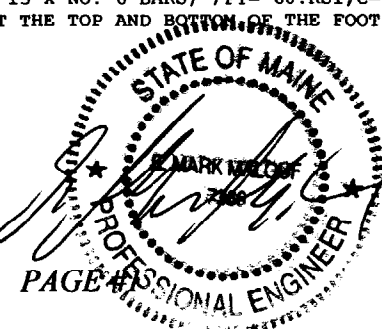
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FACTORED MOMENT LOAD = 137.84 KIP-FT (UPLIFT)
 FACTORED MOMENT LOAD = 208.51 KIP-FT (DOWNLOAD)

REQUIRED STEEL AREA = 2.82 IN2 (DUE TO MAXIMUM MOMENT)
 REQUIRED STEEL AREA = 3.89 IN2 (ACI MIN. = 0.0018Bd)

PROVIDE A TOTAL BAR AREA = 5.74 IN2 (13 x NO. 6 BARS) /FY= 60.KSI,C= 3.0"
 EACH WAY AT THE TOP AND BOTTOM OF THE FOOTING
 BAR SPACING C/C (3" COVER)= 9.50 IN

VOLUME OF CONCRETE (YD3) = 6.89
 NUMBER OF ANCHOR BOLTS = 8
 ANCHOR BOLT DIAMETER (IN) = .88
 ANCHOR BOLT LENGTH (IN) = 17.00
 ANCHOR BOLT TEMPLATE DIA. (IN) = 18.00
 ANCHOR BOLT PROJ. LENGTH (IN) = 3.25



4.5M E.S.A. DISH WIND PRESSURE

Site **WPFO-TV Site, Cumberland County, Portland, ME**

MEI Job # **02-0068**

Client **Entech Electronics / Andrew Corporation**

Defined Units and Constants $\text{psf} = \frac{\text{lb}}{\text{ft}^2}$ $\text{plf} = \frac{\text{lb}}{\text{ft}}$ $\text{kip} = 1000 \cdot \text{lb}$ $\text{kips} = 1000 \cdot \text{lb}$ $\text{plf} = \frac{\text{lb}}{\text{ft}}$ $\text{ft_lb} = \text{ft} \cdot \text{lb}$ $\text{ksi} = \frac{\text{kip}}{\text{in}^2}$
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Dish Wind Loads Check:

The Andrew dish base reactions were based on Wind velocity of 125 mph gust winds or 60 psf (approx.) pressure which are higher than the county wind requirements per IBC2000 / ASCE 7-98. XXXXXXXXXX
Therefore, Andrew Foundation Reactions are used for the design.

Approximate frost depth d := 36·in
 based on county.

FOUNDATION DESIGN PRINTOUT

Version: FDN2-D70/AO

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*****
*           FOUNDATION ANALYSIS PROGRAM           *
*           Spread Footing Analysis               *
*           (c) 1999, Malouf Engineering Intl., Inc. *
*****
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DESCRIPTION   = 4.5 METER E.S.A DISH FOUNDATION
SITE NAME    = WPFO-TV SITE, PORTLAND, ME
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SHEAR FORCE (1 PEDESTAL)      = 11.300 KIPS
MOMENT                         = 82.200 KIP-FT
ECCENTRICITY OF AXIAL LOADS    = .000 FT
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```
*FOOTING DIMENSIONS AND PROPERTIES*
DEPTH OF FOOTING                = 5.000 FT
FOOTING DIMENSIONS (L X B)      = 10.000 x 10.000 FT
THICKNESS OF FOOTING           = 1.500 FT (FOOTING HAS NO TOE)
NUMBER OF PEDESTALS / TYPE     = 1 / SQUARE
PEDESTAL WIDTH                  = 3.000 FT
EXTENSION ABOVE GRADE          = .500 FT
CONCRETE DENSITY                = .150 KCF
GROUNDWATER LEVEL BELOW BOTTOM OF FOUNDATION
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```
*FACTOR OF SAFETY VALUES*
F.O.S. BEARING PRESSURE        = 2.000
F.O.S. CONCRETE WEIGHT         = 1.250 / 1.500
F.O.S. SOIL WEIGHT             = 2.000 / 1.500
F.O.S. UPLIFT                  = 2.000
```

```
*SOIL PROPERTIES*
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SOIL DENSITY                   = .100 KCF
INTERNAL ANGLE OF FRICTION     = 28.000 DEG
SOIL COHESION (FOR UPLIFT)    = .000 KSF (PAD PERIMETER)
PASSIVE PRESSURE               = .277 KCF (Kp= 2.77)
DEPTH NEGLECTED FOR PASSIVE PR.= 3.000 FT
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*** COMMENTS ***
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CONSERVATIVE SOIL PARAMETERS USED.
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```
REQUIRED STEEL AREA        = 2.82 IN2 (DUE TO MAXIMUM MOMENT)
REQUIRED STEEL AREA        = 3.89 IN2 (ACI MIN. = 0.0018Bd)
```

```
PROVIDE A TOTAL BAR AREA   = 5.74 IN2 ( 13 x NO. 6 BARS) /FY= 60.KSI,C= 3.0"
                               EACH WAY AT THE TOP AND BOTTOM OF THE FOOTING
BAR SPACING C/C (3" COVER)= 9.50 IN
```

```
VOLUME OF CONCRETE (YD3)   = 6.89
NUMBER OF ANCHOR BOLTS     = 8
ANCHOR BOLT DIAMETER (IN)  = .88
ANCHOR BOLT LENGTH (IN)    = 17.00
ANCHOR BOLT TEMPLATE DIA. (IN) = 18.00
ANCHOR BOLT PROJ. LENGTH (IN) = 3.25
```

FEB 11 2003

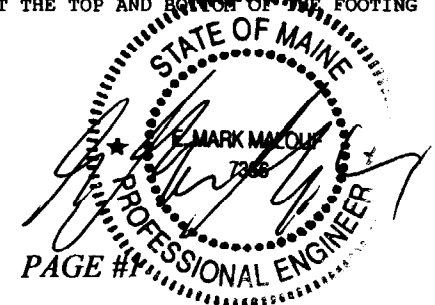
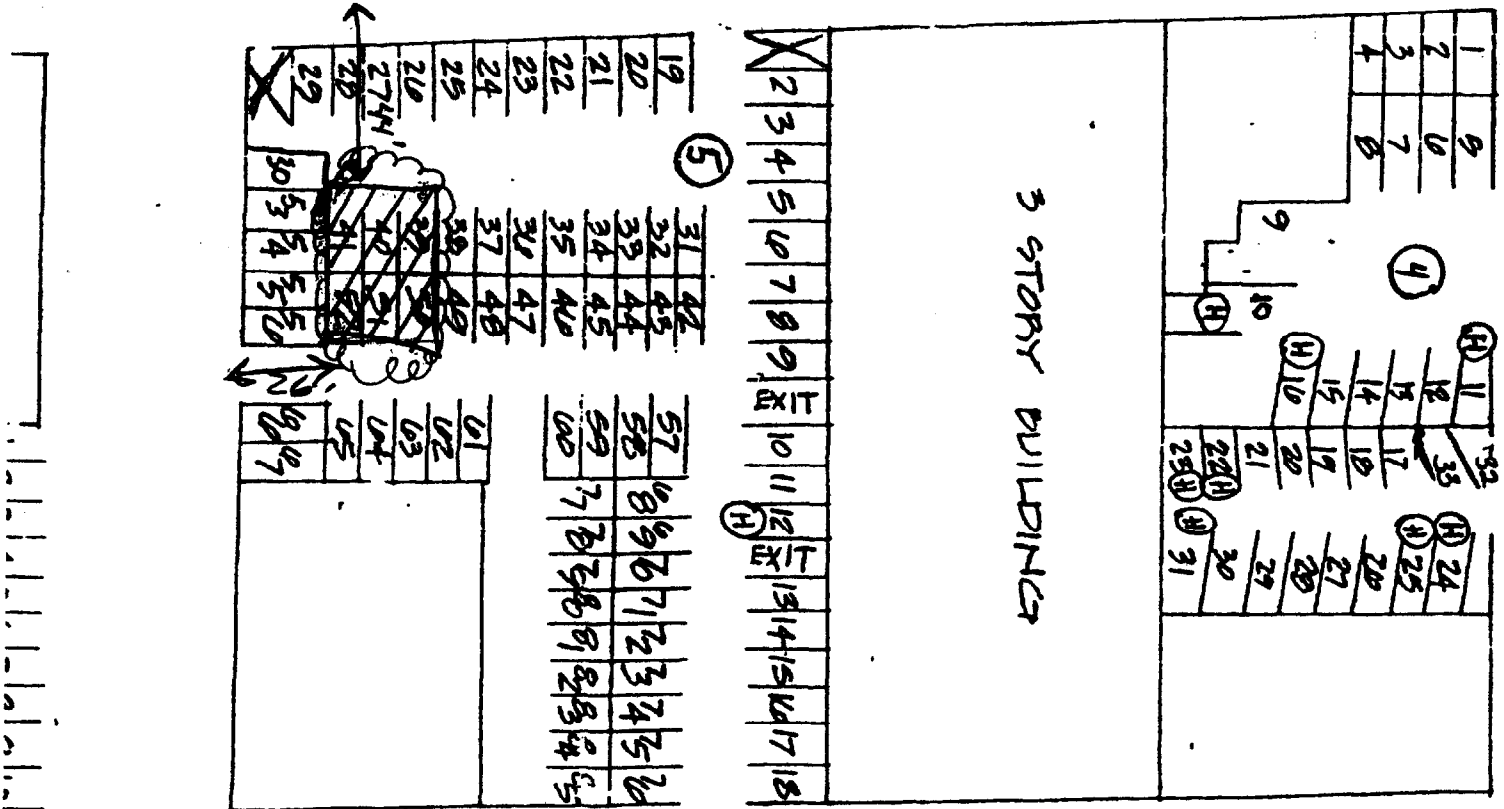


Exhibit C

B-3 Zone.
No setbacks
req.

ELM STREET



PREBLE STREET

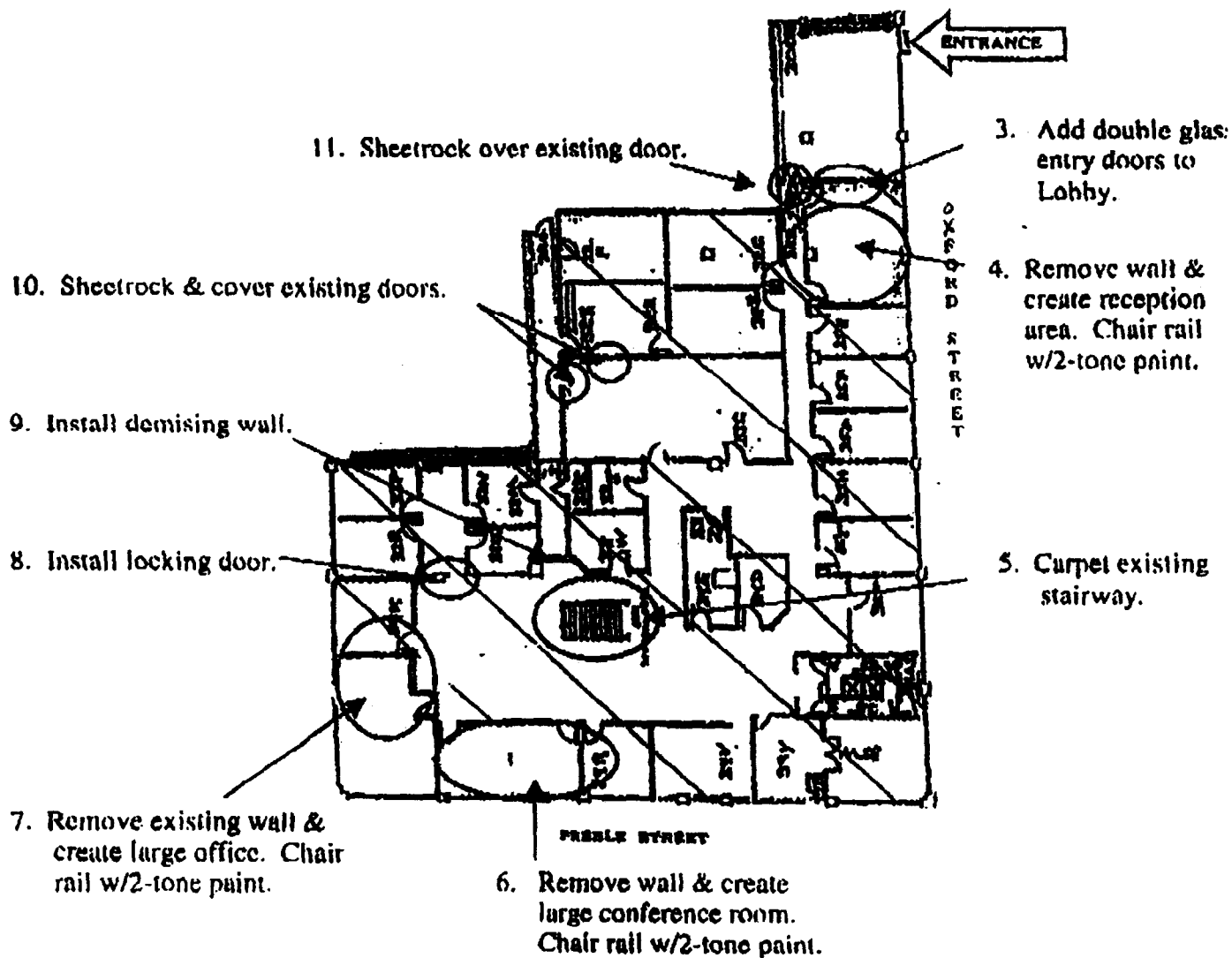
67x100 21

233 Oxford Street

EXHIBIT B

1. New carpet & paint throughout entire space.
Color to be selected by Tenant.
2. Install new ceiling tiles.
- 3-11 Miscellaneous additional Landlord's work.

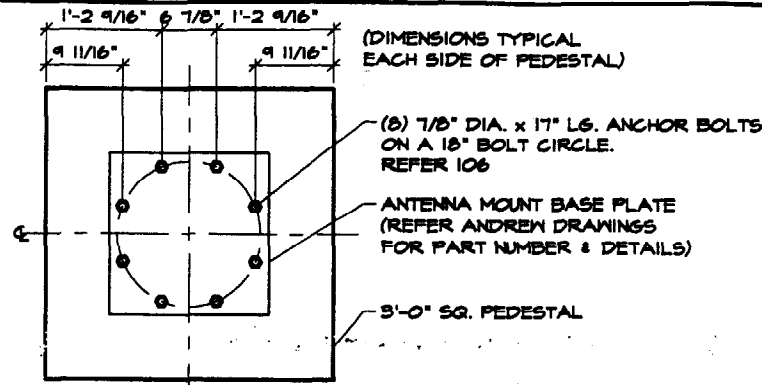
elm st



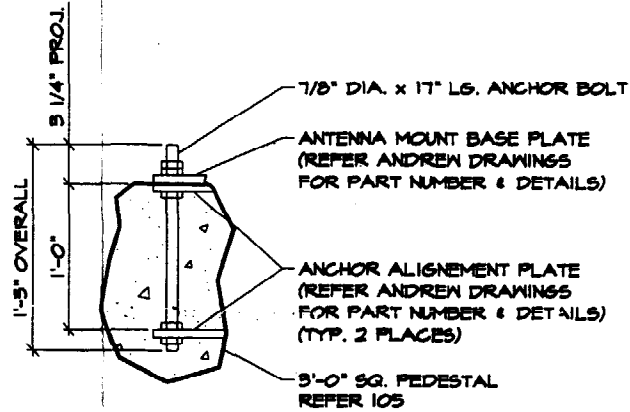
BILL OF MATERIAL			
DESCRIPTION	QTY	SIZE	LENGTH
VERTICAL BAR	16	#6	6'-0"
PEDESTAL TIES	11	#4	11'-10"
TOP LAYER REBAR	26	#6	9'-6"
BOTTOM LAYER REBAR	26	#6	9'-6"
U-BAR AT PAD EDGE	24	#5	3'-0"

APPROX. CONCRETE VOLUME: 6.9± CUBIC YARDS

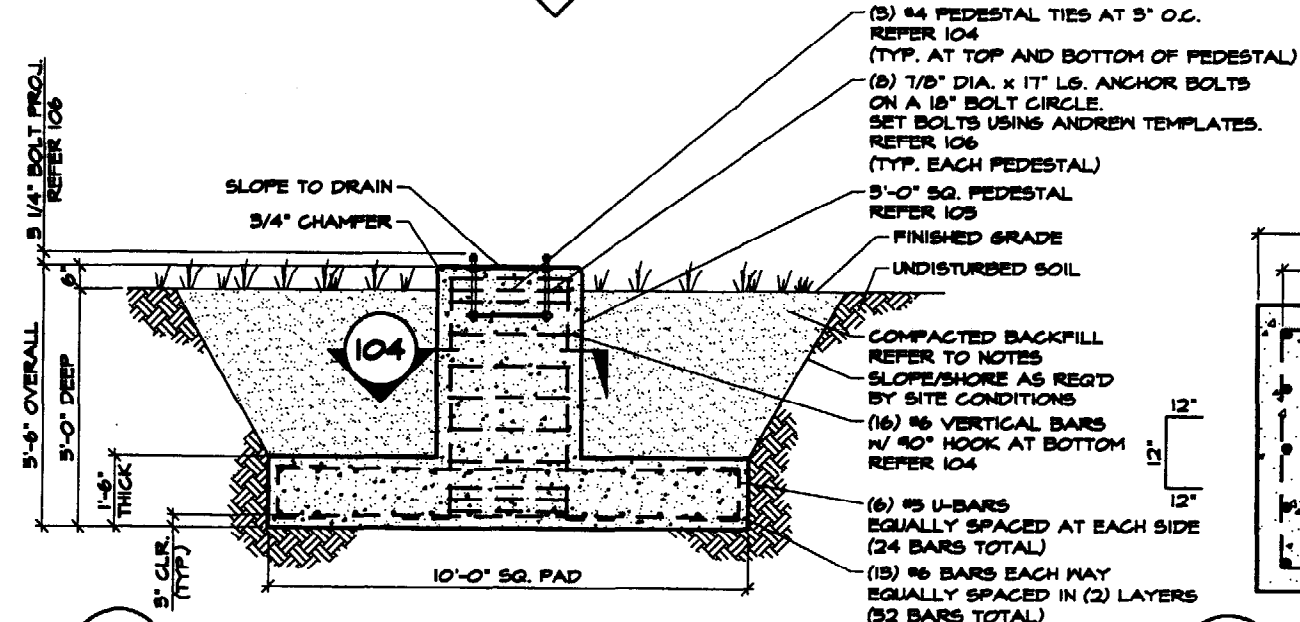
NOTE:
 1. REFER TO SITE PLAN FOR DISH LOCATION AND ORIENTATION.
 2. REFER TO ANDREX DETAILS FOR ANCHOR BOLT ORIENTATION, CONDUIT LOCATIONS, AND GROUNDING REQUIREMENTS.



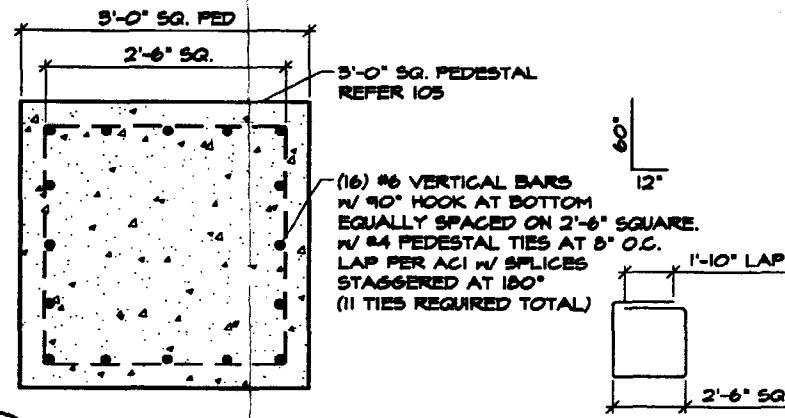
105 DETAIL: PEDESTAL
 SCALE: 1/2" = 1'-0"



106 DETAIL: TYP. ANCHOR BOLT
 SCALE: 3/4" = 1'-0" (TYP. 8 PLACES)

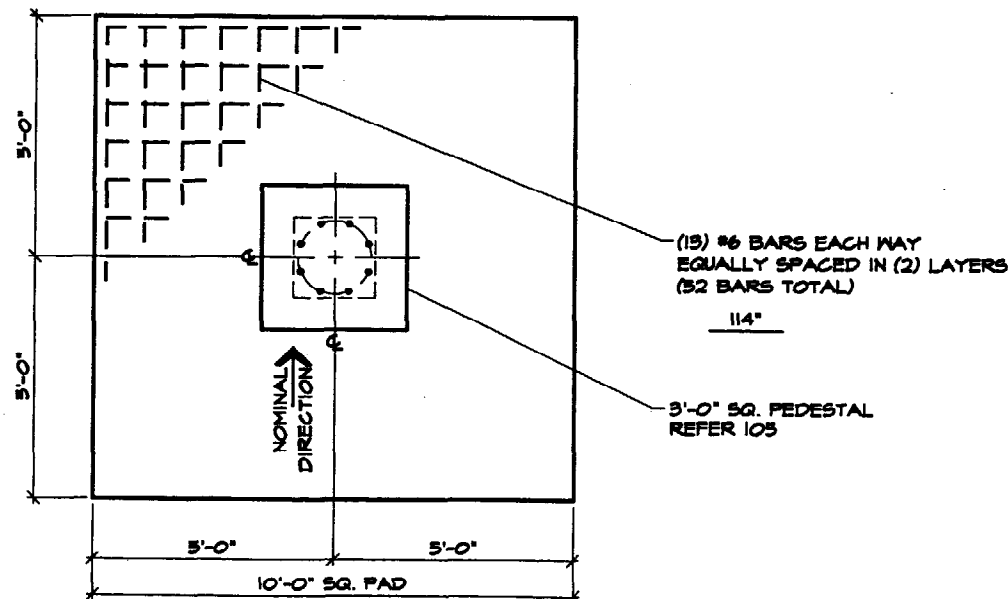


102 ELEVATION: E.S.A. DISH FOUNDATION
 SCALE: 1/4" = 1'-0"

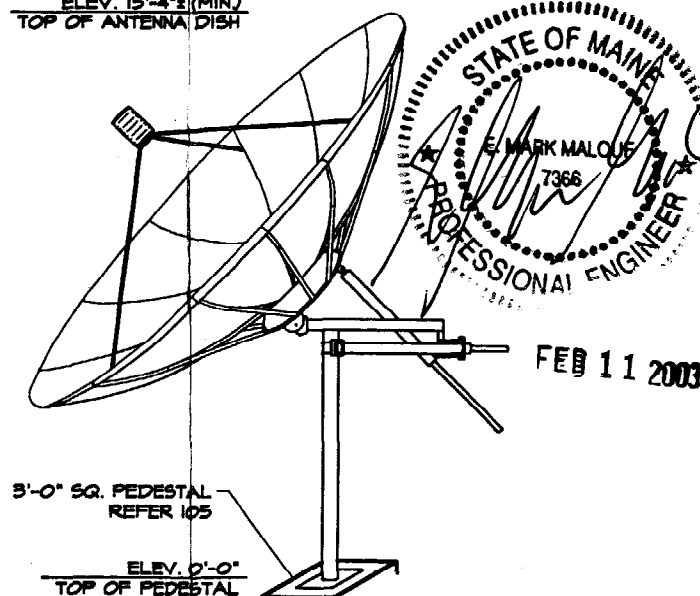


104 SECTION: PEDESTAL REBAR
 SCALE: 1/2" = 1'-0"

ELEV. 16'-11 1/2" (MAX)
 ELEV. 15'-4" (MIN)
 TOP OF ANTENNA DISH



101 PLAN: E.S.A. DISH FOUNDATION LAYOUT
 SCALE: 1/4" = 1'-0"



103 ISOMETRIC: ANDREW 4.5m E.S.A. PEDESTAL
 SCALE: NOT TO SCALE

STATION:	WPFO-TV
ADDRESS:	1335 WASHINGTON AVENUE
CITY & STATE:	PORTLAND, MAINE
ANTENNA MODEL:	ANDREX 4.5m E.S.A. PEDESTAL

TECHNICAL SPECIFICATION NOTES

GENERAL

- THIS FOUNDATION HAS BEEN DESIGNED FOR 4.5 METER DISH FOR 100 MPH (IBC2000 / ASCE 7-16) WIND SPEED. BASE REACTIONS AS FURNISHED BY ANDREX SPECIFICATIONS AS PROVIDED BY ENTECH ELECTRONICS.
 HORIZONTAL = 11.5 KIIPS (TOTAL)
 OT MOMENT = 82.2 FT-KIIPS (TOTAL)
- FOUNDATION HAS BEEN DESIGNED BASED ON CONSERVATIVE SOIL PARAMETERS. ALLOWABLE BEARING PRESSURE OF 2000 PSF AT 3' DEPTH WITH GROUND WATER BELOW FOUNDATION BOTTOM.
- CONTACT THE ENGINEER CONCERNING ANY CHANGES IN THE INSTALLATION DUE TO ANY DIFFERENCE OF THE ON SITE EXISTING CONDITIONS.
- CHECK AREA FOR LOCATION OF UNDERGROUND PIPES, CABLES CONDUIT, ETC. PRIOR TO STARTING EXCAVATION. CONTRACTOR SHOULD BE FAMILIAR TO GEOTECHNICAL REPORT PRIOR TO EXCAVATION.
- ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS REQUIREMENTS. PROCEDURES FOR PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO START OF FOUNDATION WORK. FOLLOW OSHA 29CFR, PART 1926, SUBPART P GUIDELINES.
- THIS DESIGN ASSUMES FINISH GRADE AT SITE TO BE SAME AS EXISTING GRADE. STRUCTURAL ENGINEER MUST BE NOTIFIED IF ANY CUT OR FILL IS REQUIRED TO ACHIEVE FINAL GRADE REQUIREMENTS.
- REFER TO THE SOIL REPORT FOR SUBGRADE PREPARATION.
- ALL GROUNDING REQUIRED SHALL BE BY OTHERS.

FOUNDATION

- ALL CONCRETE WORK SHALL CONFORM TO ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150 - TYPE I UNLESS OTHERWISE APPROVED.
- ALL REINFORCING STEEL BARS SHALL BE DOMESTIC, NEW BILLET STEEL, ASTM A615, GRADE 60. REINFORCING SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH MANUAL OF STANDARD FOR DETAILING REINFORCED CONCRETE. (ACI 318-Latest Edition)
- WELDING OF REINFORCING STEEL AND EMBEDMENTS IS PROHIBITED UNLESS OTHERWISE APPROVED BY ENGINEER.
- CONSTRUCTION JOINTS MAY BE USED AT THE BASE OF PEDESTALS AS LONG AS CONCRETE SURFACE IS PROPERLY CLEANED AND BONDING AGENTS ARE APPLIED PRIOR TO SECOND POUR. USE STO EPOXY ADHESIVE #CR691 BY STO CORP, ATLANTA, GA, 800-342-3051, OR APPROVED EQUIVALENT.
- CONCRETE COVERAGE OVER ALL STEEL SHALL CONFORM TO ACI 318 BUILDING CODE MINIMUM REQUIREMENTS AND AS SHOWN ON STRUCTURAL DETAILS.
- INSPECT BOTTOM OF EXCAVATION PRIOR TO PLACING STEEL CASE AND CONCRETE TO INSURE NO LARGE AMOUNTS OF LOOSE DIRT OR FOREIGN MATERIAL REMAINS.
- SPACING DEVICES SHALL BE USED AS REQUIRED TO MAINTAIN THE SIDE CLEARANCE BETWEEN THE STEEL REINFORCEMENT AND EXCAVATION WALL.
- ALL ANCHOR BOLTS SHALL BE FURNISHED BY THE DISH MANUFACTURER. ANCHOR BOLTS SHALL BE SET WITH TEMPLATES FURNISHED BY THE DISH MANUFACTURER. TEMPLATE MUST BE SECURELY DOUBLE-NUTTED TO ANCHOR BOLTS DURING CONCRETE INSTALLATION AND MUST BE LEVEL ±1/4". INSTALL TEMPLATE WITH SUFFICIENT SPACE BENEATH TO PERMIT FINISHING OF CONCRETE AND TO FACILITATE TEMPLATE REMOVAL PRIOR TO TOWER ERECTION.
- CONCRETE SHALL BE PLACED INTO EXCAVATION WITHIN 6 TO 8 HOURS OF EXCAVATION WITH THE USE OF A CHUTE OR HOPPER DEVICE TO DIRECT THE CONCRETE TO FALL WITHIN THE CENTER OF THE STEEL CASE. CONCRETE SLUMP SHALL NOT BE LESS THAN 4" NOR MORE THAN 6". CONCRETE SHALL NOT BE ALLOWED TO HIT THE STEEL CASE WHICH MIGHT CAUSE SEGREGATION OF THE MATERIAL.
- VIBRATE THE TOP 3 FT. OF CONCRETE IN ORDER TO ACHIEVE PROPER COMPACTION. SLOPE TOP OF CONCRETE AS REQUIRED FOR PROPER DRAINAGE AWAY FROM TOWER LEGS.
- BACKFILL SHALL BE PLACED IN 6" - 9" HORIZONTAL LIFTS AND COMPACTED TO A MINIMUM 98 PERCENT OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM TEST DESIGNATION D-1557 (MODIFIED PROCTOR). THE FILL MATERIALS SHALL BE FREE FROM LARGE ROCKS, WASTE, AND DEBRIS, AND SHALL BE PLACED AT OR NEAR THE OPTIMUM MOISTURE CONTENT.

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 Tel: 972-763-2578 Fax: 972-763-2583

MALOUF ENGINEERING INT'L, INC.
 STRUCTURAL CONSULTANTS

FOUNDATION DETAILS & TECHNICAL SPECIFICATION NOTES
 4.5m E.S.A. DISH FOUNDATION - WPFO-TV SITE
 ENTECH ELECTRONICS / ANDREX CORPORATION
 DALLAS, TEXAS

DRAWN BY: CRM
 ENG'D. BY: KMM
 APP'D. BY: MM

REVISIONS

JOB NO.
 03-0068

DATE
 02/11/03

SHEET NO
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 OF 1

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