PERMIT ISSUED

City of Portland, Maine - Building or Use Permit Application

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

Permit No:	Issue Date:	CBL:
04-1579	NOV 18 2004	421 B005002

CITY OF PORTLAND

Location of Construction:	Owner Name:	Owner Address:	Phone:
189 Presumpscot St	St Lawrence Cement Inc	3 Columbia Cir	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Cianbro Corp.	328 W. Commercial Street Portland	2077735852
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	**Zone:**
		Radio/Telecommunications Tower	I-M

Past Use:	Proposed Use:	Permit Fee:	Cost of Work:	CEO District:
commercial	commercial erect telecommunication tower	$5,919.00	$647,000.00	4

FIRE DEPT: ☑ Approved ☐ Denied

Signature:

INSPECTION: Use Group: U Type: 2B

11/12/04

Signature:

Proposed Project Description:
erect WGMX telicommunication tower

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

Permit Taken By:	Date Applied For:
dmartin	10/20/2004

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..

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
☐ Shoreland	☐ Variance	☑ Not in District or Landmark
☐ Wetland	☐ Miscellaneous	☐ Does Not Require Review
☐ Flood Zone	☐ Conditional Use	☐ Requires Review
☐ Subdivision	☐ Interpretation	☐ Approved
☐ Site Plan	☐ Approved	☐ Approved w/Conditions
Maj ☐ Minor ☐ MM ☐	☐ Denied	☐ Denied
Date:	Date:	Date:

original tower collapsed on 12/11/03
can rebuild within 1 year of collapse
to be No taller than the original 540'
OK with conditions
11/10/04

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

Form # P 04

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING INSPECTION

PERMIT

Please Read Application And Notes, If Any, Attached

Permit Number: 041579

This is to certify that ~~R & M Properties Llc /Cianbro Corp~~ St. Lawrence Cement INC.

has permission to erect WGMX telicommunication tower

AT 189 Presumpscot St 421-B-5 CBL: ~~426-A005001~~

PERMIT ISSUED
NOV 18 2004
CITY OF PORTLAND

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.

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

Notification of inspection must be given and written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

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

OTHER REQUIRED APPROVALS

Fire Dept. 10 Hr. S

Health Dept. _____

Appeal Board _____

Other _____
Department Name

11/12/04
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit

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

Permit No:	Date Applied For:	CBL:
04-1579	10/20/2004	421 B005002

Location of Construction:	Owner Name:	Owner Address:	Phone:
189 Presumpscot St	St Lawrence Cement Inc	3 Columbia Cir	
Business Name:	**Contractor Name:**	**Contractor Address:**	**Phone**
	Cianbro Corp.	328 W. Commercial Street Portland	(207) 773-5852
Lessee/Buyer's Name	**Phone:**	**Permit Type:**	
		Radio/Telecommunications Tower	

Proposed Use:	Proposed Project Description:
commercial erect telecommunication tower	erect WGMX telicommunication tower

Dept: Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 11/10/2004

Note: **Ok to Issue:** ☑

1) It is noted that this tower collapsed on 12/11/03. Rebuilding SHALL begin within one (1) year of the collapse in order to preserve legal nonconforming rights. The tower shall be no taller than the 540' originally approved.

Dept: Building **Status:** Approved with Conditions **Reviewer:** Mike Nugent **Approval Date:** 11/17/2004

Note: **Ok to Issue:** ☑

1) Schedule of future routine maintenance Inspections must be provided for review and approval.

2) Final Inspection reports reflecting all required Special inspections and a statement of complaince must be provided from the Project Engineer.

Dept: Fire **Status:** Approved **Reviewer:** Lt. MacDougal **Approval Date:** 11/10/2004

Note: **Ok to Issue:** ☑

Comments:

11/15/2004-mjn: 1)☐We need completed Certification forms and stamped plans for the Tower.
2)☐Is the steel source from an AISC Certified source , please provide a copy of their latest certification.

Done

BUILDING PERMIT INSPECTION PROCEDURES
Please call 874-8703 or 874-8693 to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

✓	**Footing/Building Location Inspection:**	Prior to pouring concrete
✓	**Re-Bar Schedule Inspection:**	Prior to pouring concrete
N/A	**Foundation Inspection:**	Prior to placing ANY backfill
✓	**~~Framing/Rough Plumbing~~/Electrical:**	Prior to any insulating or drywalling
✓	**Final/Certificate of Occupancy:**	Prior to any occupancy of the structure or use. NOTE: There is a $75.00 fee per inspection at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects DO require a final inspection

_____ **If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.**

✓ **CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED**

Signature of Applicant/Designee — Date: 7/18/09

Signature of Inspections Official — Date: 11/18/09

CBL: 421-13-5 Building Permit #: 09/1589

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: 167 Presupscot Street Portland, Me		
Total Square Footage of Proposed Structure 511.25	Square Footage of Lot 588480	
Tax Assessor's Chart, Block & Lot Chart# 421 426 Block# B Lot# 1;7 5;6	Owner: St. Lawrence Cement Inc.	Telephone: 401-467-8411
Lessee/Buyer's Name (If Applicable) Saga Communications	Applicant name, address & telephone: Saga Communications of New England 420 Western Ave South Portland, Me	Cost Of Work: $ 647,000.00 Fee: $ 5,844.00

Current use: Cement storage/Radio Tower

If the location is currently vacant, what was prior use: ______

Approximately how long has it been vacant: ______

Proposed use: Cement Storage/Radio Tower

Project description:

Contractor's name, address & telephone: Cianbro ... ercial Street Portland, Me ... Corporation 04102

Who should we contact when the permit is ...

Mailing address: 366 Commercial St ... Portland, ...

We will contact you by phone when ... the permit and review the requirements before starting ... will be issued and a $100.00 fee if any work starts befo...

2856

Wait for Site Plan Exemption? Owes for C of O! How do you "occupy" A Radio tower?

IF THE REQUIRED INFORMATION IS NOT INCLUD... ATICALLY DENIED AT THE DISCRETION OF THE BUILDING/PL... ITIONAL INFORMATION IN ORDER TO APROVE THIS PERMIT.

I hereby certify that I am the Owner of record of the named prop... authorizes the proposed work and that I have been authorized by the owner to make this application as h... agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this applica... that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at a... hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant: Robert Sozzanielli	**Date:** 10/20/04

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

OCT 2 0 2004

RECEIVED

CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: BOB ARLEDGE, ASSOCIATED DESIGN PARTNERS

RE: Certificate of Design

DATE: 14 OCT 2004

These plans and / or specifications covering construction work on:

WMGX TOWER REPLACEMENT

167 PRESUMPSCOT STREET

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the ***2003 International Building Code*** and local amendments.

STATE OF MAINE
ROBERT
(SEAL)
ARLEDGE, JR.
8708
REGISTERED
PROFESSIONAL ENGINEER

Signature: Robert Arledge Jr.

Title: STRUCTURAL ENGINEER

Firm: ASSOCIATED DESIGN PARTNERS

Address: 80 LEIGHTON ROAD
FALMOUTH, ME 04105

As per Maine State Law:

$50,000.00 or more in new construction, repair expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.

CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

ACCESSIBILITY CERTIFICATE

Designer: BOB ARLEDGE

Address of Project: 167 PRESUMPSCOT STREET

Nature of Project: RADIO TOWER REPLACEMENT (NO OCCUPIED SPACES)

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.

Signature:

Title: STRUCTURAL ENGINEER

(SEAL)

STATE OF MAINE
ROBERT C. ARLEDGE, JR. 8708
REGISTERED PROFESSIONAL ENGINEER

Firm: ASSOCIATED DESIGN PARTNERS

Address: 80 LEIGHTON ROAD
FALMOUTH, ME 04105

Phone: (207) 878-1751

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road, Falmouth, ME. 04105

FAX MEMO

DATE: 10/21/04

TO: MIKE NUGENT FAX: 874-8716

FROM: AARON WILSON

PHONE: 207-878-1751 FAX: 207-878-1788

RE: WMGX TOWER DESIGN LOADS.

Number of pages including cover sheet: 2

Message

MIKE,

HERE IS A LETTER FROM THE TOWER ENGINEER REGARDING THE DESIGN LOADS MARKED "N.A." ON THE LOAD CRITERIA SHEET OF THE PERMIT APPLICATION. PLEASE CALL IF YOU REQUIRE ADDITIONAL INFORMATION.

- AARON WILSON, P.E.

CC. BOB SEEGMILLER FX: 773-7047

ELECTRONICS RESEARCH, INC.
7777 Gardner Road • Chandler, Indiana 47610 • (812) 925-6000 • Fax: (812) 925-4030 • Home Page: www.ERIinc.com

10-19-2004

To: Aaron Wilson of ADP Engineering

From: Ernest R. Jones, P.E.

Re: Portland Maine Steel Broadcast Tower
2003 IBC Construction Project Building Code Criteria

Aaron,

This letter is to confirm the N/A (non applicable) portions of the Building Code Criteria Project sheet dated 10-18-2004 for the tower.

This is a steel broadcast tower without floors so the floor live load section is marked N/A.

The earthquake design section was marked N/A since the earthquake requirements for this area produce forces well below those required to govern this design. I can provide calculations for this if they are preferred to justify my statement that earthquake forces will simply not govern any part of this structures design.

Snow loads are insignificant on towers and this is why this section is marked N/A. My design does include a maximum wind criteria and a high wind with ice criteria and calculations have been provided with the tower engineering submittal.

I did not use any flood loads for this structure so this section was marked N/A. Verification that this area is not in a flood area, or is high enough for high water concerns is the responsibility of others.

"Other loads" section was also marked N/A since they are not required by code.

Sincerely,

Ernest R. Jones, P.E.
ERI V.P. of Structural Division

STATE OF MAINE
ERNEST R. JONES
5322
REGISTERED PROFESSIONAL ENGINEER
10-19-04

60 Years 1945-2005

This page contains a detailed description of the Parcel ID you selected. Press the **New Search** button at the bottom of the screen to submit a new query.

Current Owner Information

Card Number	1 of 1
Parcel ID	421 B005002
Location	189 PRESUMPSCOT ST
Land Use	WAREHOUSE & STORAGE
Owner Address	ST LAWRENCE CEMENT INC 3 COLUMBIA CIR ALBANY NY 12203
Book/Page	
Legal	421-B-5-6 426-B-1-7 R PRESUMPSCOT ST 167-269 308417 SF 326161 SF

original tower
WAS 540' tall

Valuation Information

Land	Building	Total
$330,960	$351,650	$682,610

Building Information

Bldg #	Year Built	# Units	Bldg Sq. Ft.	Identical Units
1	1981	1	1452	1

Total Acres	Total Buildings Sq. Ft.	Structure Type	Building Name
14.568	1452	WAREHOUSE	INDEPENDENT CEMENT

Exterior/Interior Information

Section	Levels	Size	Use
1	01/01	1452	WAREHOUSE

Height	Walls	Heating	A/C
13	CONC. BLOCK	UNIT HEAT	CENTRAL

Building Other Features

Line	Structure Type	Identical Units

Yard Improvements

Year Built	Structure Type	Length or Sq. Ft.	# Units
1981	ASPHALT PARKING	30000	1
1940	TRACK RAILROAD	660	1
1981	TRUCK SCALE	1000	1
1981	TRUCK SCALE	60	1

Permit No.	8751
Location	60 Oakwood [illegible]
Owner	[illegible]
Date of permit	5-30-85
Approved	5-31-85
Dwelling	One family
Garage	
Alteration	

NOTES

7/17 [illegible] given 5% relief
with wishes of
2/28/86 Don Dulac
[illegible signature]
[illegible] Complete

Permit No: GP-39

Effective Date: Sept. 29, 2000
Expiration Date: Sept. 29, 2005

Applicant: General Public, State of Maine

DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT
STATE OF MAINE

The New England District of the U.S. Army Corps of Engineers hereby issues a programmatic general permit (PGP) that expedites review of minimal impact work in coastal and inland waters and wetlands within the State of Maine. Activities with minimal impacts, as specified by the terms and conditions of this general permit and on the attached DEFINITION OF CATEGORIES sheets, are either non-reporting (provided required local and state permits are received), or are reporting, to be screened by the Corps and Federal Resource Agencies for applicability under the general permit. This general permit does not affect the Corps individual permit review process or activities exempt from Corps jurisdiction.

Activities Covered: work and structures that are located in, or that affect, navigable waters of the United States (regulated by the Corps under Section 10 of the Rivers and Harbors Act of 1899) and the discharge of dredged of fill material into waters of the United States (regulated by the Corps under Section 404 of the Clean Water Act), and the transportation of dredged material for the purpose of disposal in the ocean (regulated by the Corps under Section 103 of the Marine Protection, Research and Sanctuaries Act).

PROCEDURES:

A. State Approvals

For projects authorized pursuant to this general permit that are also regulated by the State of Maine, the following state approvals are also required and must be obtained in order for this general permit authorization to be valid (applicants are responsible for ensuring that all required state permits and approval have been obtained):

(a) Maine Department of Environmental Protection (DEP): Natural Resources Protection Act permit, including permit-by-rule and general permit authorizations; Site Location and Development Act permit; and Maine Waterway Development and Conservation Act.
(b) Maine Department of Conservation: Land Use Regulation Commission (LURC) permit.
(c) Maine Department of Marine Resources: Lease.
(d) Bureau of Public Lands, Submerged Lands: Lease.

Note that projects not regulated by the State of Maine (e.g., seasonal floats or moorings) may still be authorized by this general permit.

There are also restrictions on other national lands or concerns which must be met in order for projects to be eligible for authorization under this PGP. Refer to special conditions 6-14 under Paragraph E below.

Category II applicants shall submit a copy of their application materials to the Maine Historic Preservation Commission and/or applicable Indian tribe(s) at the same time, or before, they apply to the DEP, LURC, or the Corps so that the project can be reviewed for the presence of historic/archaeological resources in the project area that may be affected by the proposed work. **Applications to the DEP or the Corps should include information to indicate that this has been done (applicant's statement or copy of cover letter to Maine Historic Preservation Commission and/or Indian tribe(s)).**

The Corps may require additional information on a case-by-case basis as follows:

(a) purpose of project;

(b) 8 1/2" by 11" plan views of the entire property including property lines and project limits with existing and proposed conditions **(legible, reproducible plans required)**;

(c) wetland delineation for the site, information on the basis of the delineation, and calculations of waterway and wetland impact areas (see special condition 2);

(d) typical cross-section views of all wetland and waterway fill areas and wetland replication areas;

(e) delineation of submerged aquatic vegetation, e.g., eel grass beds, in tidal waters;

(f) area, type and source of fill material to be discharged into waters and wetlands, including the volume of fill below ordinary high water in inland waters and below the high tide line in coastal waters;

(g) mean low, mean high water and high tide elevations in navigable waters;

(h) limits of any Federal navigation project in the vicinity and State Plane coordinates for the limits of the proposed work closest to the Federal project;

(i) on-site alternatives analysis (contact Corps for guidance);

(j) identify and describe potential impacts to Essential Fish Habitat (contact Corps for guidance);

(k) for dredging projects, include:

1) the volume of material and area in square feet to be dredged below mean high water,
2) existing and proposed water depths,
3) type of dredging equipment to be used,
4) nature of material (e.g., silty sand),

MINERALS MANAGEMENT SERVICE (MMS) REVIEW

For Category II projects which involve construction of solid fill structures or discharge of fills along the coast which may extend the coastline or baseline from which the territorial sea is measured, coordination between the Corps and Minerals Management Service (MMS), Continental Shelf (OCS) Survey Group, will be needed (pursuant to the Submerged Lands Act, 43 U.S.C., Section 1301-1315, 33 CFR 320.4(f). During the screening period, the Corps will forward project information to MMS for their review. MMS will coordinate their determination with the Department of the Interior (DOI) Solicitor's Office. The DOI will have 15 calendar days from the date MMS is in receipt of project information to determine if the baseline will be affected. No notification to the Corps within 15 day review period will constitute a "no affect" determination. Otherwise, the solicitor's notification to the Corps may be verbal but must be followed with a written confirmation within 10 business days from the date of the verbal notification. This procedure will be eliminated if the State of Maine provides a written waiver of interest in any increase in submerged lands caused by a change in the baseline resulting from solid fill structure or fills authorized under this general permit.

D. Corps Authorization: Category III (Individual Permit)

Work that is in the INDIVIDUAL PERMIT category on the attached DEFINITION OF CATEGORIES sheets, or that does not meet the terms and conditions of this general permit, will require an application for an individual permit from the Corps of Engineers (see 33 CFR Part 325.1). The screening procedures outlined above will only serve to delay project review in such cases. The applicant should submit the appropriate application materials (including the Corps application form) at the earliest possible date. General information and application forms can be obtained at (207) 623-8367 (Maine Field Office), (800) 343-4789, or (800) 362-4367 in Massachusetts. Individual water quality certification and coastal zone management consistency concurrence will be required from the State of Maine before Corps permit issuance.

E. Programmatic General Permit Conditions:

The following conditions apply to activities authorized under the PGP, including all Category I (non-reporting) and Category II (reporting – requiring screening) activities:

GENERAL REQUIREMENTS:

1. **Other Permits.** Authorization under this general permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

2. **Applicability of this general permit shall be evaluated with reference to Federal jurisdictional boundaries.** Applicants are responsible for ensuring that the boundaries used satisfy the federal criteria defined at 33 CFR 328-329.

3. **Minimal Effects.** Projects authorized by this general permit shall have minimal individual and cumulative adverse environmental impacts as determined by the Corps.

Tribe within 10 days if there are State and/or tribal concerns that the proposed work will have an effect on historic resources. The applicant should include with their application to the State or the Corps either a copy of their cover letter or a statement of having sent their application material to the Commission and Tribe(s).

If the permittee, either prior to construction or during construction of the work authorized herein, encounters a previously unidentified archaeological or other cultural resource, within the area subject to Department of the Army jurisdiction, that might be eligible for listing in the National Register of Historic Places, he/she shall stop work and immediately notify the District Engineer and the Maine Historic Preservation Commission and/or applicable Tribe(s).

8. **National Lands.** Activities authorized by this general permit shall not impinge upon the value of any National Wildlife Refuge, National Forest, or any area administered by the National Park Service.

9. **Endangered Species.** No activity is authorized under this general permit which
   - may affect a threatened or endangered species or a species proposed for such designation as identified under the Federal Endangered Species Act (ESA),
   - is likely to destroy or adversely modify the critical habitat or proposed critical habitat of such species,
   - would result in a 'take' of any threatened or endangered species of fish or wildlife, or
   - would result in any other violation of Section 9 of the ESA protecting threatened or endangered species of plants.

   Applicants shall notify the Corps if any listed species or critical habitat, or proposed species or critical habitat, is in the vicinity of the project and shall not begin work until notified by the District Engineer that the requirements of the Endangered Species Act have been satisfied and that the activity is authorized. Information on the location of threatened and endangered species and their critical habitat can be obtained from the U.S. Fish and Wildlife Service and National Marine Fisheries Service (addresses attached, page 14).

10. **Essential Fish Habitat.** As part of the PGP screening process, the Corps will coordinate with the National Marine Fisheries Service (NMFS) in accordance with the 1996 amendments to the Magnuson-Stevens Fishery and Conservation Management Act to protect and conserve the habitat of marine, estuarine and anadromous finfish, mollusks, and crustaceans. This habitat is termed "essential fish habitat (EFH)", and is broadly defined to include "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Applicants may be required to describe and identify potential impacts to EFH based upon the location of the project, the activity proposed, and the species present. Conservation recommendations made by NMFS will normally be included as a permit requirement by the Corps. Information on the location of EFH can be obtained from the NMFS regulations (50 CFR Part 600) (address listed on page 14) and on their web site (http://www.nero.nmfs.gov/ro/doc/webintro.html).

or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

14. **Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.

MINIMIZATION OF ENVIRONMENTAL IMPACTS:

15. **Minimization.** Discharges of dredged or fill material into waters of the United States shall be avoided and minimized to the maximum extent practicable, regardless of review category.

16. **Work in Wetlands.** Heavy equipment working in wetlands shall be avoided if possible, and **if required, shall be placed on mats or other measures taken** to minimize soil and vegetation disturbance. Disturbed areas in wetlands shall be restored to preconstruction contours and conditions upon completion of the work.

17. **Temporary Fill.** Temporary fill in waters and wetlands authorized by this general permit (e.g., access roads, cofferdams) shall be properly stabilized during use to prevent erosion. Temporary fill in wetlands shall be placed on geotextile fabric laid on existing wetland grade. Temporary fills shall be disposed of at an upland site, suitably contained to prevent erosion and transport to a waterway or wetland. Temporary fill areas shall be restored to their approximate original contours but not higher. No temporary fill shall be placed in waters or wetlands unless specifically authorized by the Corps.

18. **Sedimentation and Erosion Control.** Adequate sedimentation and erosion control management measures, practices and devices, such as phased construction, vegetated filter strips, geotextile silt fences or other devices, shall be installed and properly maintained to reduce erosion and retain sediment on-site during and after construction. They shall be capable of preventing erosion, of collecting sediment, suspended and floating materials, and of filtering fine sediment. These devices shall be removed upon completion of work and the disturbed areas shall be stabilized. The sediment collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. All exposed soil and other fills shall be permanently stabilized at the earliest practicable date.

PROCEDURAL CONDITIONS:

25. **Cranberry Development Projects.** For Cranberry development projects authorized under the PGP, the following conditions apply:

    1. If a cranberry bog is abandoned for any reason, the area must be allowed to convert to natural wetlands unless an individual permit is obtained from the Corps of Engineers allowing the discharge of fill for an alternate use.
    2. No stream diversion shall be allowed under this permit.
    3. No impoundment of perennial streams shall be allowed under this permit.
    4. The project shall be designed and constructed to not cause flood damage on adjacent properties.

26. **Inspections.** The permittee shall permit the District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to ensure that the work is being performed in accordance with the terms and conditions of this permit. The District Engineer may also require post-construction engineering drawings for completed work, and post-dredging survey drawings for any dredging work. **To facilitate these inspections, the attached work notification form should be filled out and returned to the Corps for all Category II projects.**

27. **Maintenance.** The permittee shall maintain the work or structures authorized herein in good condition, including maintenance, to ensure public safety. Dredging projects: note that this does not include maintenance of dredging projects. Maintenance dredging is subject to the review thresholds described on the attached DEFINITION OF CATEGORIES sheets and/or any conditions included in a written Corps authorization.

28. **Property Rights.** This permit does not convey any property rights, either in real estate or material, or any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations. **If property associated with work authorized by the PGP is sold, the PGP authorization is automatically transferred to the new property owner. The new property owner should provide this information to the Corps in writing. No acknowledgement from the Corps is necessary.**

29. **Modification, Suspension, and Revocation.** This permit may be either modified, suspended, or revoked, in whole or in part, pursuant to the policies and procedures of 33 CFR 325.7 and any such action shall not be the basis for any claim for damages against the United States.

30. **Restoration.** The permittee, upon receipt of a notice of revocation of authorization under this permit, shall restore the wetland or waterway to its former condition without expense to the United States and as directed by the Secretary of the Army or his authorized representative. If the permittee fails to comply with such a directive, the Secretary or his designee may restore the wetland or waterway to its former condition, by contract or otherwise, and recover the cost from the permittee.

37. **Previously Authorized Activities.**

(a) Activities which have commenced (i.e., are under construction or are under contract to commence) prior to the issuance date of this general permit, in reliance upon the terms and conditions of the non-reporting category of the previous Maine PGP shall remain authorized provided the activity is completed within twelve months of the date of issuance of this general permit, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with special condition 4. The applicant must be able to document to the Corps satisfaction that the project was under construction or contract by the appropriate date.

(b) Projects that have received written verification or approval from the Corps, based on applications made to the Corps prior to issuance of this general permit, for the previous Maine SPGP and PGP, Nationwide permits, regional general permits, or letters of permission shall remain authorized as specified in each authorization.

(c) This general permit does not affect activities authorized pursuant to 33 CFR Part 330.3 (activities occurring before certain dates).

for DISTRICT ENGINEER Christine Godfrey DATE 9/26/00

Maine Department of Environmental Protection
(For State Permits and Water Quality Certifications)
Natural Resources Division
Bureau of Land and Water Quality Control
State House Station 17
Augusta, Maine 04333
207-287-2111

Eastern Maine Regional Office
106 Hogan Road
Bangor, Maine 04401
207-941-4570

Southern Maine Regional Office
312 Canco Road
Portland, Maine 04103
201-822-6300

Northern Maine Regional Office
1235 Central Drive
Skyway Park
Presque Isle, Maine 04769
207-764-0477

Maine Land Use Regulation Commission (LURC) offices
22 State House Station
Augusta, ME 04333-0022
207-287-2631
800-452-8711 (call to obtain appropriate LURC office)
Fax # 207-287-7439

45 Radar Road
Ashland, ME 04732-3600
207-435-7963
Fax # 207-435-7184

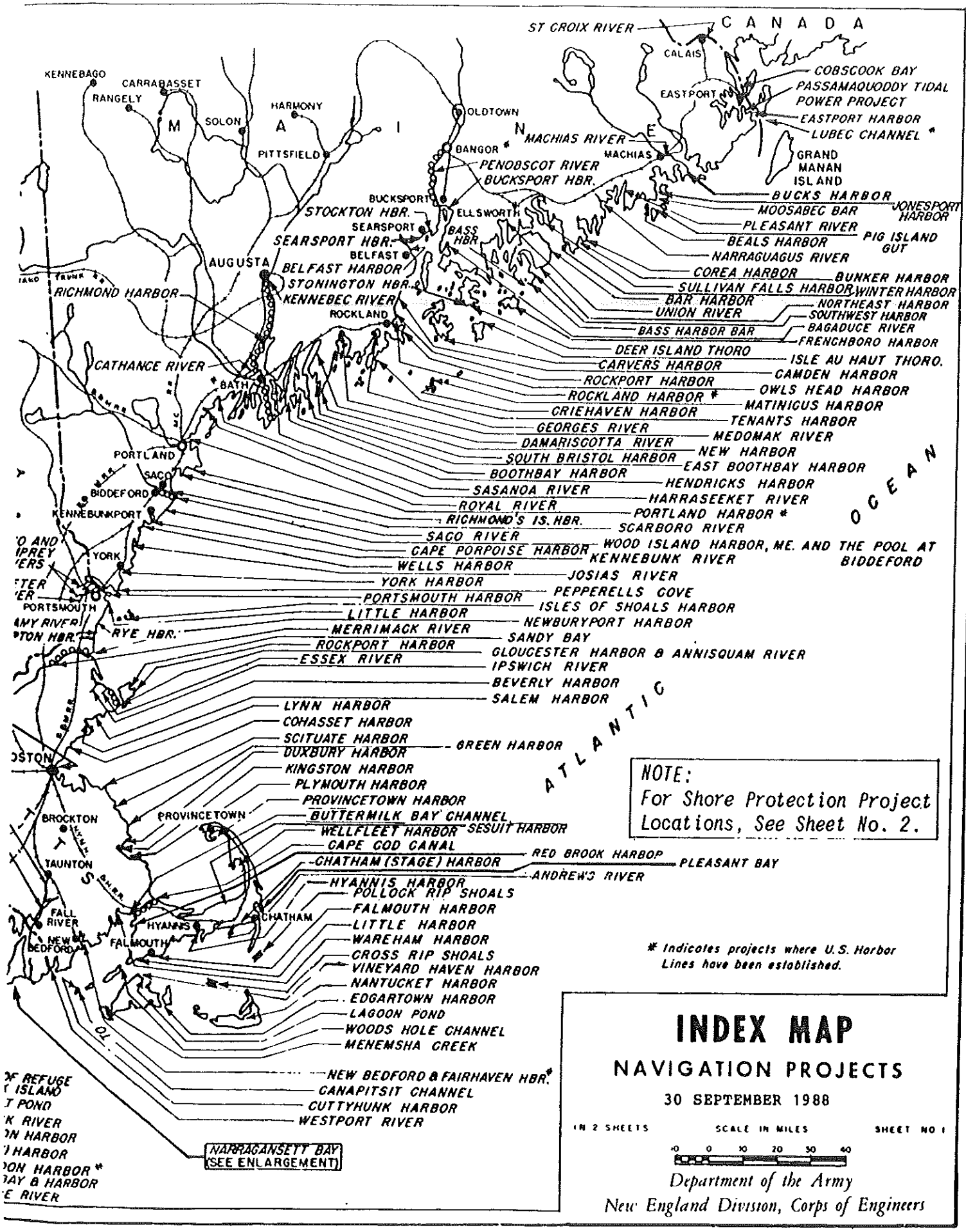
Lakeview Drive
P.O. Box 1107
Greenville, ME 04441
207-695-2466
Fax # 207-695-2380

191 Main Street
East Millinocket, ME 04430
207-746-2244
Fax # 207-746-2243

(For CZM Determinations)
State Planning Office
Coastal Program
184 State Street
State House Station 38
Augusta, Maine 04333
207-287-1009

Maine Department of Marine Resources
(For Aquaculture Leases)
McKown Point
Boothbay Harbor, Maine 04575
207-633-9500

(For Submerged Lands Leases)
Maine Department of Conservation
Bureau of Parks and Lands
22 State House Station
207-287-3061



NOTE:
For Shore Protection Project Locations, See Sheet No. 2.

* Indicates projects where U.S. Harbor Lines have been established.

INDEX MAP

NAVIGATION PROJECTS

30 SEPTEMBER 1988

IN 2 SHEETS — SCALE IN MILES — SHEET NO 1

0 0 10 20 30 40

Department of the Army
New England Division, Corps of Engineers

A. INLAND WETLANDS (WATERS OF THE U.S.)[1]	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(a) NEW FILL/ EXCAVATION DISCHARGES	Less than 4,300 sf inland waterway and/or wetland fill and secondary impacts (e.g., areas drained, flooded or cleared). -- Includes projects covered by a State Tier One permit with no cumulative impacts over 15,000 sf in inland wetlands from previous permits, unauthorized work, and/or other state permits. --Includes crossing of perennial waterways designated as Essential Fish Habitat (EFH) for Atlantic salmon[2] if the waterway is crossed with a span and footprints of the span abutments are outside ordinary high water with no more than 4,300 sf of associated wetland impact. --Includes in-stream work of up to 4,300 sf of fill below ordinary high water in waterways not designated as EFH for Atlantic salmon[2] and performed in accordance with Maine Permit By Rule standards or a LURC permit.	4,300 sf to 3 acres inland waterway and/or wetland fill and secondary impacts (e.g., areas drained, flooded or cleared). --Impact area includes all temporary and permanent fill and excavation discharges except for incidental fallback. --Includes in-stream work, including crossings (other than spanned crossing as described in Category I) with any discharge of fill below ordinary high water in perennial waterways designated as EFH for Atlantic salmon[2]. --Time of year restrictions determined case-by-case.	Greater than 3 acres inland waterway and/or wetland fill and secondary impacts (e.g., areas drained, flooded or cleared). --Impact area includes all temporary and permanent fill and excavation discharges except for incidental fallback[3]. In-stream work exceeding Category II limits. If EIS required by the Corps.

[1] Waters of the U.S. in inland areas: inland rivers, streams, lakes, ponds and wetlands.

[2] Essential Fish Habitat for Atlantic salmon includes all aquatic habitats in the watersheds of the following rivers and streams, including all tributaries to the extent that they are currently or were historically accessible for salmon migration: St. Croix, Boyden, Dennys, Hobart Stream, Aroostook, East Machias, Machias, Pleasant, Narraguagus, Tunk Stream, Patten Stream, Orland, Penobscot, Passagassawaukeag, Union, Ducktrap, Sheepscot, Kennebec, Androscoggin, Presumpscot, and Saco River.

[3] The larger the impacts, the more likely an individual permit will be required. Projects involving widening, expansion or impacts to degraded or low value wetlands between 1-3 acres may be approved under Category II, subject to the Federal screening. The Corps recognizes and endorses the DEP Tier 2 upper thresholds of 1 acre. Compensatory mitigation is likely to be required at this level of impact.

B. TIDAL WATERS AND NAVIGABLE WATERS[6]	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(a) FILL		Up to 1 acre waterway or wetland fill and secondary impacts (e.g., areas drained, flooded or cleared). Includes temporary and permanent waterway fill. --Temporary tidal marsh impacts up to 1 acre. --Permanent tidal marsh, mudflat, or vegetated shallows[7] fill up to 1,000 sf. -- Proactive restoration projects with any amount of impact can be reviewed under Cat. II. The Corps, in consultation with State and Federal agencies, must determine that net adverse effects are not more than minimal.	Greater than 1 acre waterway fill and secondary impacts (e.g., areas drained, flooded or cleared). Includes temporary and permanent waterway fill. --Temporary tidal marsh impacts over 1 acre. --Permanent tidal marsh, mudflat, or vegetated shallows[6] fill over 1,000 sf.
(b) REPAIR AND MAINTENANCE WORK	Repair or maintenance of existing, currently serviceable, authorized structure or fill with no substantial expansion or change in use. --Work must be in same footprint as original structure or fill.	Repair or replacement of any non-serviceable structure or fill, or repair or maintenance of serviceable fills, with expansion of any amount up to 1 acre, or with a change in use.	Replacement of non-serviceable structures or fill or repair or maintenance of serviceable structures or fill with expansion greater than 1 acre.

[6] Navigable Waters: waters that are subject to the ebb and flow of the tide and Federally designated navigable waters (Penobscott River to Medway, Kennebec River to Moosehead Lake, and the portion of Umbagog Lake in Maine).

[7] Vegetated Shallows: subtidal areas that support rooted aquatic vegetation such as eelgrass.

	CATEGORY I	CATEGORY II	INDIVIDUAL PERMIT
(e) PILE-SUPPORTED STRUCTURES AND FLOATS	Reconfiguration of existing authorized docks, provided structures are not positioned over vegetated shallows[6] or salt marsh and provided floats are supported off substrate at low tide. No dredging, additional slips or expansion allowed.	Private piers and floats for navigational access to waterway (seasonal and permanent).	Structures, piers or floats that extend, or with docked/moored vessels that extend, into the horizontal limits of a Federal Navigation Project. Structures, including piers and floats, associated with a new or previously unauthorized boating facility[8].
(f) MISCELLANEOUS	--Temporary buoys, markers, floats, etc., for recreational use during specific events, provided they are removed within 30 days after use is discontinued. --Coast Guard approved aids to navigation. --Oil spill clean-up temporary structures or fill. --Fish/wildlife harvesting structures/fill (as defined by 33 CFR 330, App. A-4) --Scientific measurement devices and survey activities such as exploratory drilling, surveying or sampling. --Shellfish seeding (brushing the flats) projects[11] --Does not include oil or gas exploration and fills for roads or construction pads. --This category excludes work in National Wildlife Refuges.	--Structures or work in or affecting tidal or navigable waters that are not defined under any of the previous headings. Includes, but is not limited to, utility lines, aerial transmission lines, pipelines, outfalls, boat ramps, bridge fills/abutments, etc. --Shellfish/finfish (other than Atlantic salmon), or other aquaculture facilities which are consistent with the Corps revised standard siting requirements and standard permit conditions dated 7/6/94, or as revised.	If EIS required by Corps.

[11] Brushing the flats: the placement of tree boughs, wooden lath structures, or small-mesh fencing on mudflats for the purpose of enhancing recruitment of soft-shell clams (*Mya arenaria*).

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

SAGA COMMUNICATIONS, DBA
PORTLAND RADIO GROUP
C/O SEBAGO TECHNICS, INC.
P.O. BOX 1339
WESTBROOK, MAINE 04098-1339

CORPS PERMIT # NAE-2004-1616
CORPS PGP ID# 04-262
STATE ID# 21879-4E

DESCRIPTION OF WORK:
Install and maintain a 9'x 25' pile supported concrete anchor platform in Presumpscot Bay at Portland, Maine in order to support a new 528' high radio tower. The new tower will be located on the upland and is a replacement for a similar structure that unexpectedly collapsed in 2003. The concrete platform will support one of three guy wire anchors, the other two being located on the upland. Temporary fill in the form of
Project Description Continued on Next Page

LAT/LONG COORDINATES : 43.6882473° N 69.2572289° W USGS QUAD: PORTLAND WEST, ME

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine Programmatic General Permit (PGP).**

You must perform the activity authorized herein in compliance with all the terms and conditions of the PGP [including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation]. Please review the enclosed PGP carefully, including the PGP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the PGP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 36 of the PGP (page 12) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the PGP on September 29, 2005. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by September 29, 2006.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.** Also, this permit requires you to notify us before beginning work and allow us to inspect the project. Hence, you must complete and return the attached Work Start Notification Form(s) to this office no later than 2 weeks before the anticipated starting date. (For projects requiring mitigation, be sure to include the MITIGATION WORK START FORM).

II. STATE ACTIONS: PENDING [ ], ISSUED[X], DENIED [ ] DATE 9/14/04

APPLICATION TYPE: PBR:___, TIER 1:___, TIER 2:___, TIER 3: X , LURC:___ DMR LEASE:___ NA:___

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 6/10/04 LEVEL OF REVIEW: CATEGORY 1:___ CATEGORY 2: X

AUTHORITY: SEC 10___, 404___ 10/404 X , 103___

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

ESSENTIAL FISH HABITAT (EFH): EFH PRESENT (Y) N (CIRCLE ONE)
IF YES: Based on the terms and conditions of the PGP, which are intended to ensure that authorized projects cause no more than minimal environmental impacts, the Corps of Engineers has preliminary determined that this project will not cause more than minimal adverse effects to EFH identified under the Magnunson-Stevens Fisheries Conservation and Management Act.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO , USF&WS NO , NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

FRANK J. DELGIUDICE DATE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

Project Description Continued from Page 1

timber mats will be placed below the high tide line and on saltmarsh to provide construction access to the anchor site. They will also provide access for the removal of the stone fill associated with the former anchor. The mats as well as the stone fill will be removed in their entirety. Permanent

ADDITIONAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT
NO. NAE-2004-1616

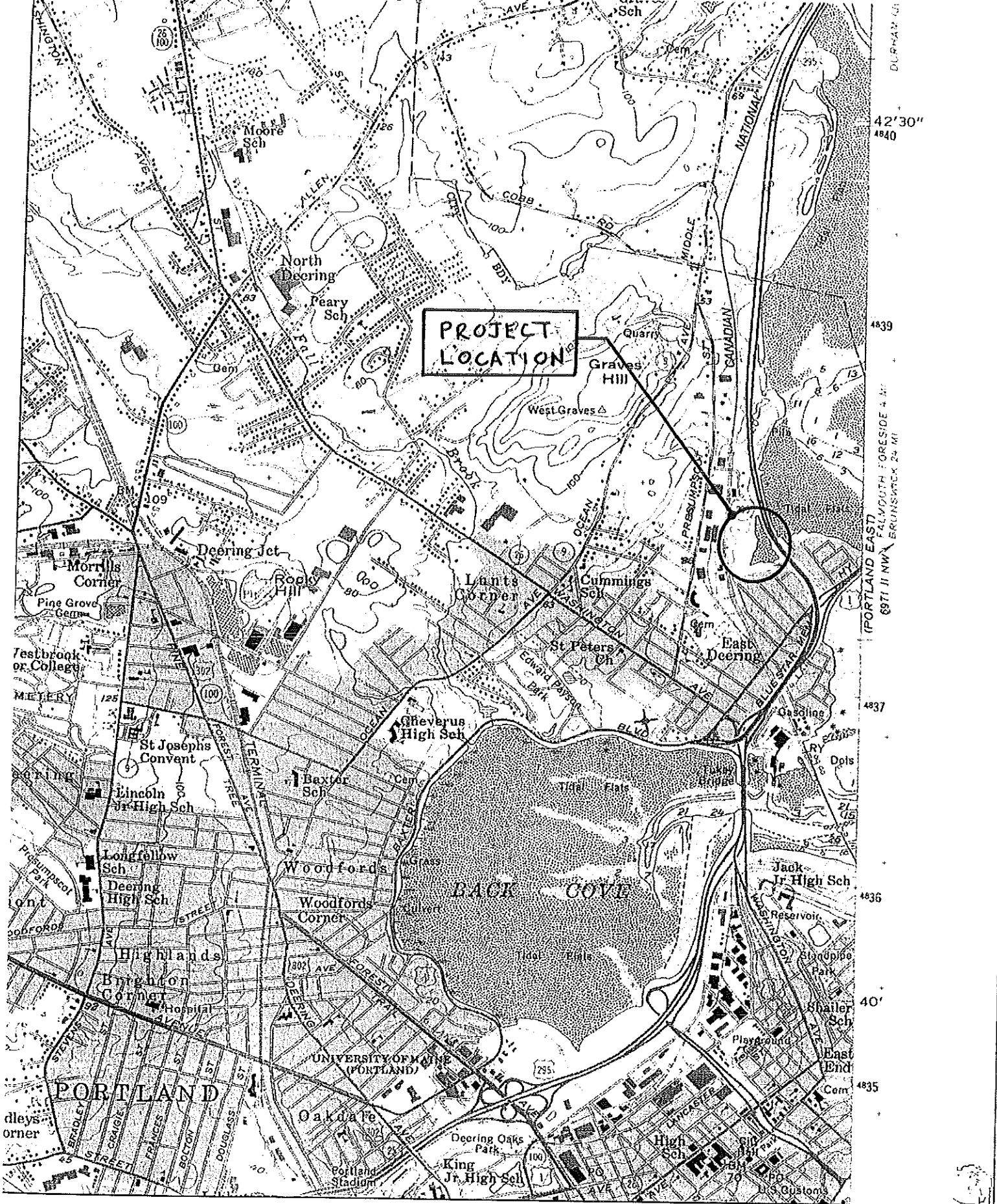
1. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

3. All areas of temporary fill shall be restored to their original condition and contour upon completion of the project.

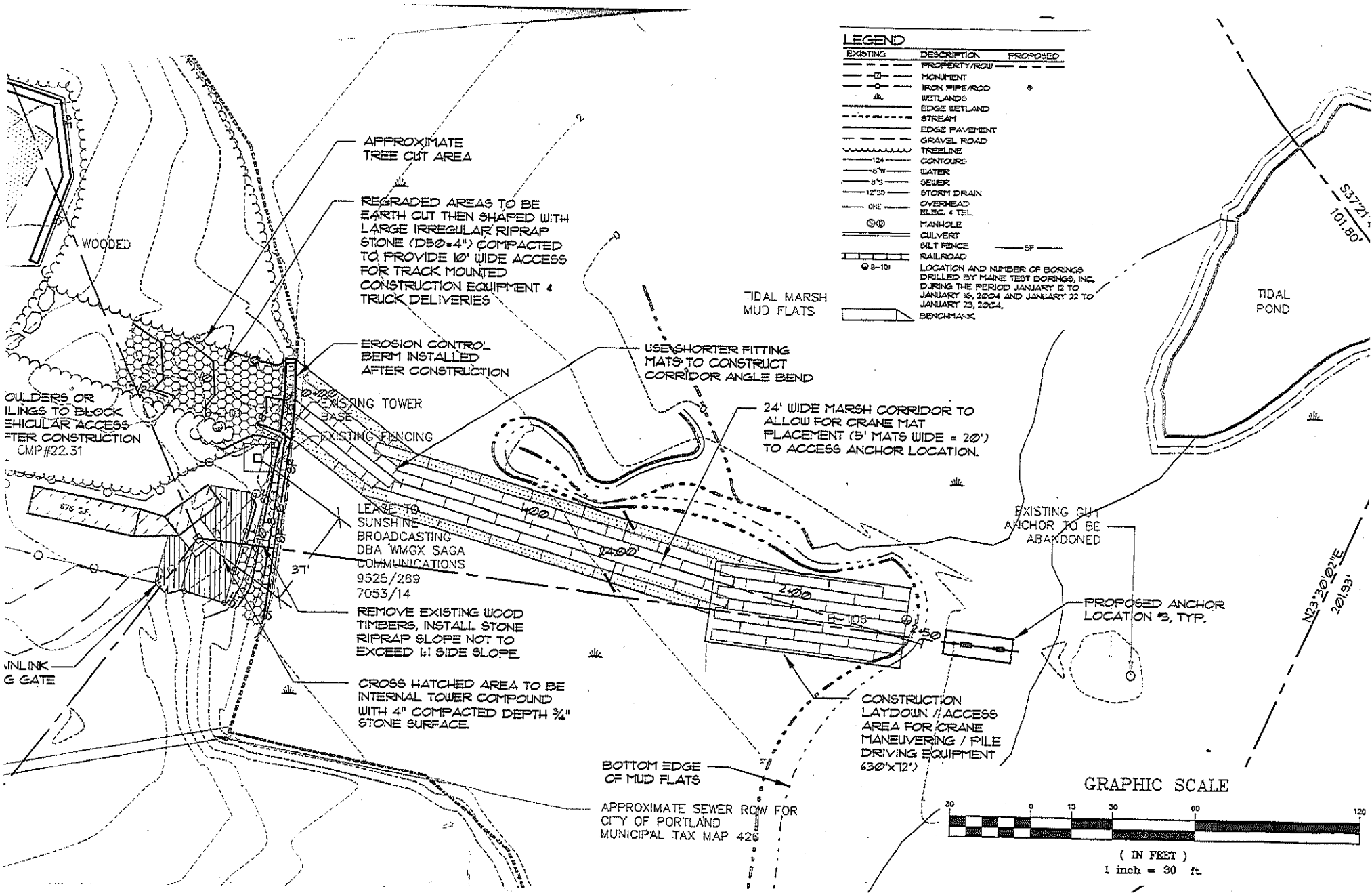
4. The stone remains of the former guy wire anchor, located below the high tide line, shall be removed to an upland location and the tidal bottom restored to original condition and contour.

5. Stone riprap, placed along approximately 100 linear feet of eroding upland shoreline, shall not be placed below the high tide line or in vegetated tidal wetland without written approval from the Corps of Engineers.



Name: PORTLAND WEST
Date: 4/20/104
Scale: 1 inch equals 2000 feet

Location: 043° 41' 09.7" N 070° 16' 16.6" W
Caption: PORTLAND RADIO GROUP
Location Map



SHEET 1 OF 2

DATE	SCALE
05-28-04	1"=30'

SITE PLAN

OF THE:

528' TOWER REPLACEMENT PROJECT

167 PRESUMPSCOT STREET
PORTLAND, MAINE

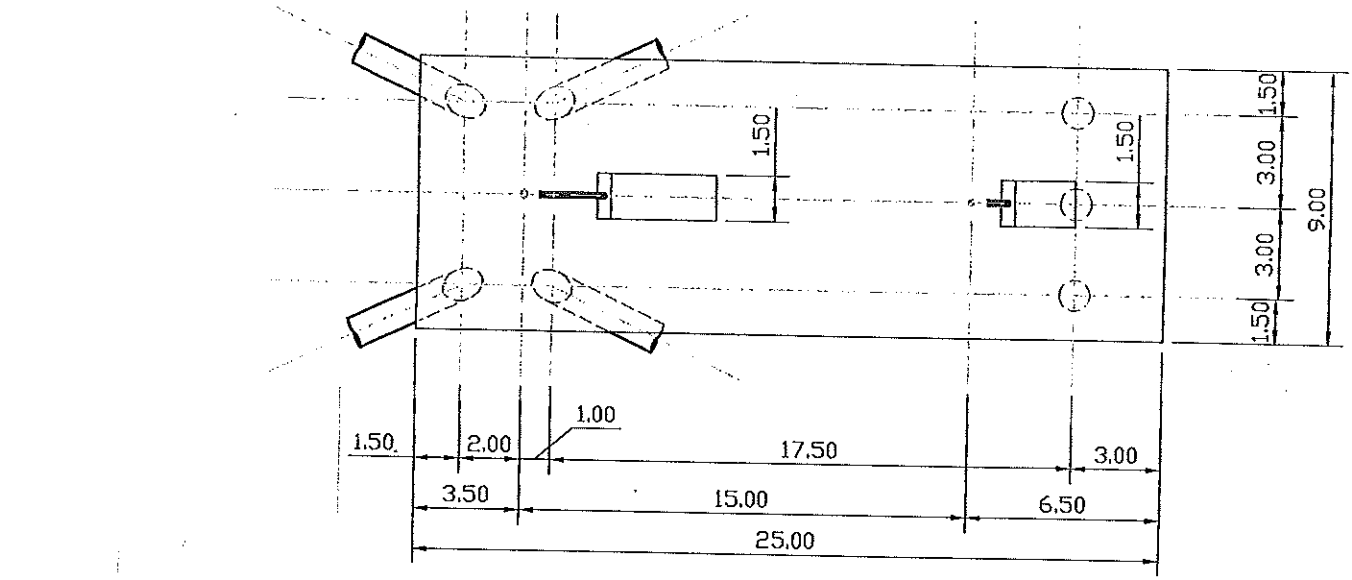
FOR:

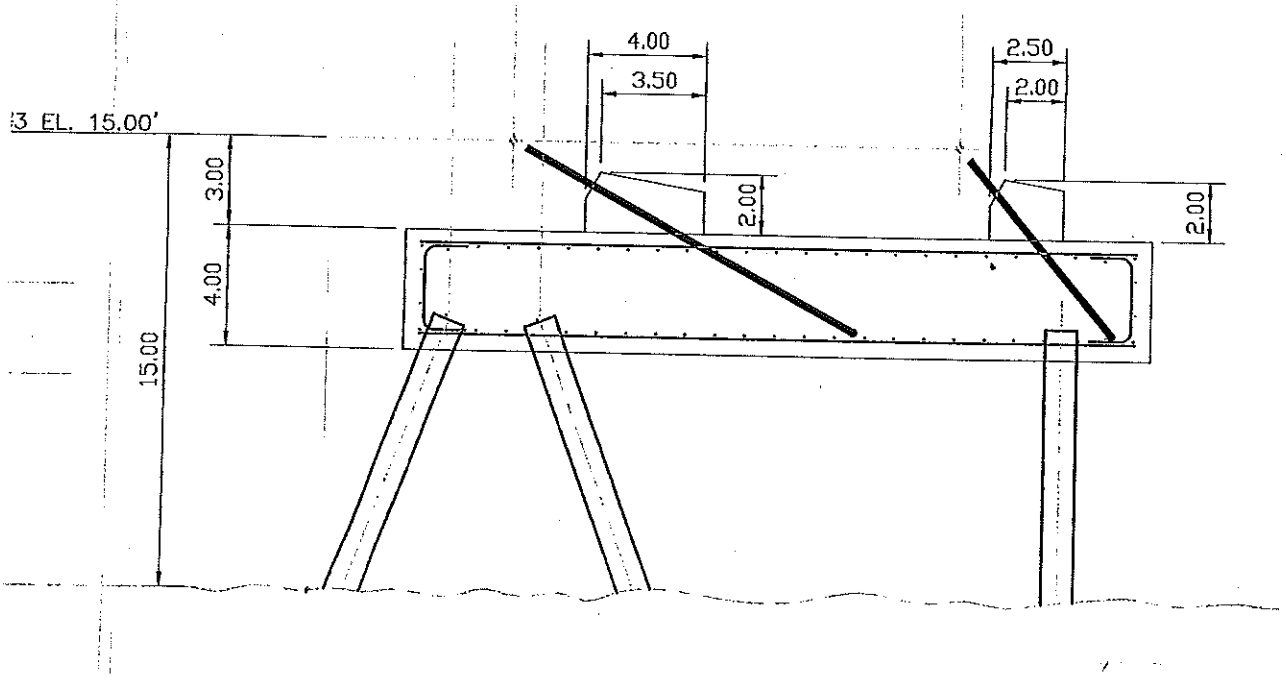
SAGA COMMUNICATIONS,
40 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

RECORD OWNER:
ST. LAWRENCE CEMENT, INC.
3 COLUMBIA CIR.
ALBANY, NY 12203

Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		CLB	CLB	JNB





ANCHOR #3

SHEET OF 2

DATE	SCALE
05-28-04	

528' TOWER REPLACEMENT PROJECT
167 PRESUMPSCOT STREET
PORTLAND, MAINE
FOR:
SAGA COMMUNICATIONS,
40 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

RECORD OWNER:
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ALBANY, NY 12203

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One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		CLB	CLB	JNB

Statement of Special Inspections

Project:

Location:

Owner:

Owner's Address:

Architect of Record:

Structural Engineer of Record:

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, Structural Engineer and Architect of Record. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official, Structural Engineer and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official, Owner, Structural Engineer and Architect of Record.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

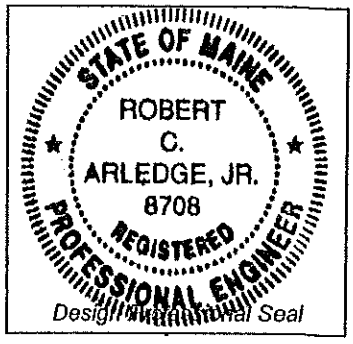
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: or ☐ per attached schedule.

Prepared by:

Robert Arledge, P.E.
(type or print name)

Robert Arledge 11 OCT 04
Signature Date



Design Professional Seal

Owner's Authorization:

Signature Date

Building Official's Acceptance:

Signature Date

Project:

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- [x] Soils and Foundations
- [x] Cast-in-Place Concrete
- [ ] Precast Concrete
- [ ] Masonry
- [ ] Structural Steel
- [ ] Cold-Formed Steel Framing
- [ ] Spray Fire Resistant Material
- [ ] Wood Construction
- [ ] Exterior Insulation and Finish System
- [ ] Mechanical & Electrical Systems
- [ ] Architectural Systems
- [ ] Special Cases

Inspection Agents	Firm	Address
1. Special Inspector Associated Design Partners, Inc.		80 Leighton Rd. Falmouth, Me. 04105
2. Inspector Robert Arledge, P.E. (SE)	Associated Design Partners, Inc.	
3. Inspector Jim Thibodeau,P.E. (SE)	Associated Design Partners, Inc.	80 Leighton Rd. Falmouth, Me. 04105
4. Testing Laboratory S.W. Cole, Inc.		286 Portland Road GraY, Me 04039
5. Testing Laboratory GRL Engineering, INC		4256 N. Arlington Height Road Arlington Heights ~~IL 60004~~
6. Other ERNEST R. JONES	Electronics Research Inc.	7777 Gardner Rd. Chandler, IN 47610

Note: The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Seismic Performance Category

Basic Wind Speed

Wind Exposure Category

Project:

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Structural Engineer or a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents:

When the Structural Engineer of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agent Number* on the *Schedule of Special Inspections*.

SE **Structural Engineer** – a licensed SE or PE specializing in the design of building structures. This may be required for the inspection of critical structural elements.

GE **Geotechnical Engineer** – a licensed PE specializing in soil mechanics and foundations. This may be required for the inspection of difficult soil conditions or deep foundations.

EIT **Engineer-In-Training** – a graduate engineer who has passed the Fundamentals of Engineering examination. This may be required for the inspection of elements that require some engineering training to properly evaluate.

ACI **American Concrete Institute - Level I Certified Concrete Field Testing Technician.** This certification is appropriate for individuals performing concrete sampling, slump tests, air-content tests, temperature tests, unit weight tests, and casting compression test cylinders.

AWS **American Welding Society - Certified Welding Inspector** (CWI). This certification is appropriate for individuals performing visual inspection of welds.

ASNT **American Society of Non-Destructive Testing** – Level II or III. This certification is appropriate for individuals performing ultra-sonic testing of welds.

SMSI **Structural Masonry Special Inspector** – certification by ICBO.

SWSI **Structural Steel and Welding Special Inspector** – certification by ICBO.

SFSI **Spray-Applied Fireproofing Special Inspector** – certification by ICBO.

PCSI **Prestressed Concrete Special Inspector** – certification jointly sponsored by ICBO, BOCA and SBCCI with participation form PCI and PTI.

RCSI **Reinforced Concrete Special Inspector** – certification jointly sponsored by ACI, ICBO, BOCA and SBCCI.

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations		
2. Controlled Structural Fill		
3. Deep Foundations Piles	1 & 2 5.	1. Material Certifications 2. Verify Installation per drawings 3. Verify pile capacity with Pile Driving Analyzer Equipment
4. Other Grout for rock anchors	4. 1 & 2	1. Test for slump 2. Test for comprssive Strength 1. Monitor placement 2. Monitor Proof Testing

Cast-in-Place Concrete

Project:

Item	Agent No. (Qualif.)	Scope
1. Mix Design	1, 2&4	1. Compressive Strength 2. Water Cement Ratio 3. Additives
2. Material Certification	1, 2&4	1. cement 2. Air Entraining Agent 3. Corrosion Inhibitor 4. Reinforcing Steel
3. Reinforcement Installation	1 & 2	1. Per Drawings
4. Post-Tensioning Operations	1 & 2	1. Rock Anchor Proof Test 2. Rock Anchor Pre-Tensioning
5. Batching Plant	1 & 2	1. Quality control program
6. Formwork Geometry	1 & 2	1. Per Drawings
7. Concrete Placement	1 & 2	1. Per ACI 301-99
8. Evaluation of Concrete Strength	1 & 2 4	
9. Curing and Protection	1 & 2	
10. Other	4. 1 & 2	1. Inspect facility & Quality Control 2. Verify Construction & Placement

Schedule of Special Inspection Services
Special Cases

Project:

Item	Agent No. (Qualif.)	Scope
Tower	6. 1 & 2	1. Quality Control Program 2. Qualification of Welder's 3. Material Certifications 4. Condition of tower as Delivered 5. Erection

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP Portland, Cumberland County RADIO TOWER L-21939-A-N (approval)	) NATURAL RESOURCES PROTECTION) COASTAL WETLAND) WATER QUALITY CERTIFICATION) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP, with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. Summary: The applicant proposes to replace a 528-foot high guyed radio tower and three anchors in and adjacent to a tidal marsh and mudflat off Presumpscot Street in Portland. The new tower and anchors will be located adjacent to the old tower and anchors. The site is the location of a radio tower that collapsed after an anchor failed in December 2003. The tower replacement is necessary to restore the broadcasting capability of a local FM radio station. The project includes the construction of two new double anchors in upland locations approximately 30 feet from the upland/wetland edge and one new anchor in a tidal mudflat. Each anchor will be capped with a 225 square foot concrete cap. The concrete cap for anchor #3 located in the mudflat will be elevated on support piles approximately 8 feet above the substrate to minimize the impact on the mudflat. The applicant also proposes to restore approximately 900 square of mudflat by removing the rock rubble fill at the original site of anchor #3. To access the mudflat to drive piles and construct the concrete pile cap for anchor #3, the applicant proposes to construct a 10-foot wide rock filled upland access road and a 20-foot wide temporary access road across the vegetated salt marsh using wooden crane mats. No equipment will operate in the mudflat, and construction will be limited to periods when the tidal flat is exposed during low tide. In addition, the applicant also proposes to stabilize a 100-foot long section of eroded slope by installing rock riprap adjacent to the site of the proposed tower. The proposed project is shown on a set of plans the first of which is entitled "Existing Conditions Survey, Sunshine Broadcasting WMGX Tower," prepared by Sebago Technics, with a last revision date of May 28, 2004. The applicant proposes to complete the project during a three week period in early fall 2004.

B. Current Use of the Site: The applicant leases the 13.6 acre site that is located adjacent to a coastal wetland in an industrial zone on Presumpscot Street between I-295

and the St. Lawrence Railroad tracks. Development adjacent to the project site includes a lumberyard, warehouse complex, and cement storage facility.

2. WATER QUALITY AND EROSION CONTROL CONSIDERATIONS:

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters. The applicant proposes to install and maintain adequate erosion control measures to protect water quality until the project site is stabilized.

3. HABITAT CONSIDERATIONS:

The Department of Marine Resources (DMR) reviewed the proposed project. In comments dated July 12, 2004, DMR stated that the project site is a low energy consolidated shore. The upper and mid intertidal area are vegetated with *Spartina patens* (salt hay grass) and *Spartina alternaflora* (smooth cordgrass) respectively. The lower intertidal is mud. DMR recommends that the salt marsh be monitored after the crane mat access road is removed to insure that the substrate and vegetation recovers during the growing season following construction. DMR also recommends that the existing pile of rock rubble is removed and the mudflat restored at the existing location of anchor #3. The applicant has agreed to these two requirements.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that the coastal wetland is part of a large wetland complex associated with the Presumpscot River. This complex is designated as Coastal Wading Bird and Waterfowl Habitat and qualifies as Significant Wildlife Habitat, but the project site is outside the critical habitat areas of open water and emergent vegetation used by nesting and feeding waterfowl. To minimize the impact to waterfowl, MDIFW recommends no work in the coastal wetland during the waterfowl-breeding season from July to September, if possible.

4. WETLANDS AND WATERBODIES PROTECTION RULES:

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

a. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternatives analysis for the project prepared by Sebago Technics and dated May 27, 2004 that demonstrated that, based on Federal Communications Commission licensing requirements, zoning standards in the City of Portland, and the design and engineering specifications for the new radio tower, the tower and its anchors must be located adjacent to the original tower and anchors.

b. Minimal Alteration. The alteration to the coastal wetland will be limited to seven piles driven into the substrate and the temporary impacts to the salt marsh from the installation of approximately 5,360 square feet of crane mats during the construction of anchor #3. This anchor will be a pile supported concrete pile cap elevated 8 feet above the substrate to minimize the impact to the tidal mudflat. To further minimize impacts to salt marsh vegetation, the Department recommends that the applicant construct anchor #3 after October 1, when *Spartina* is dormant.

c. Compensation. Although the applicant demonstrated that the proper use of crane mats at the construction site for anchor #3 should result in no permanent loss of wetland functions and values, the Department finds that the applicant must photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The Department will assess the recovery of the salt marsh vegetation in the year following construction and may require restoration or enhancement of the access area if salt marsh vegetation is not the same density as that in the adjacent undisturbed areas.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

5. EXISITING SCENIC AND AESTHETIC USES:

The applicant evaluated the impact of the proposed project on existing scenic and aesthetic uses in the vicinity of the proposed project by submitting photographs of the existing conditions at the project site and by completing a visual evaluation and field survey checklist. The proposed radio tower and supporting guy wires and anchors will be located in the same area as the former tower and be the same height. The new tower will have the same visual impact as the old tower and will be located within a highly developed industrial zone in Portland adjacent to an interstate highway. Based on information in the application and a site visit, the Department finds that the proposed project will not unreasonably interfere with existing scenic and aesthetic uses.

6. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing navigational uses, soil erosion, the natural transfer of soil, natural flow of water, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant photographs the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction and restores or enhances the access area, if necessary.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP to construct a radio tower with anchors and install riprap, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. The applicant shall photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The photographs shall be submitted to the Bureau of Land and Water Quality one week after installing and removing the mats and by June 22.

4. The applicant shall enhance or restore salt marsh vegetation in the access area if the plant density is not the same as that in adjacent undisturbed areas.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED AT AUGUSTA, MAINE, THIS 14TH DAY OF SEPTEMBER, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

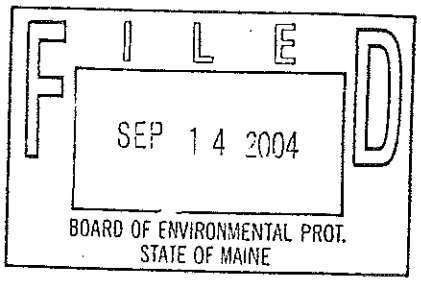
By: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application May 28, 2004
Date of application acceptance June14, 2004

Date filed with Board of Environmental Protection

DBB/ATS52615/L21939AN



NATURAL RESOURCE PROTECTION ACT (NRPA)
STANDARD CONDITIONS

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation form these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Initiation of Activity Within Two Years. If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. Reexamination After Five Years. If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

H. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

I. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92)

DEP LW0428

Erosion Control

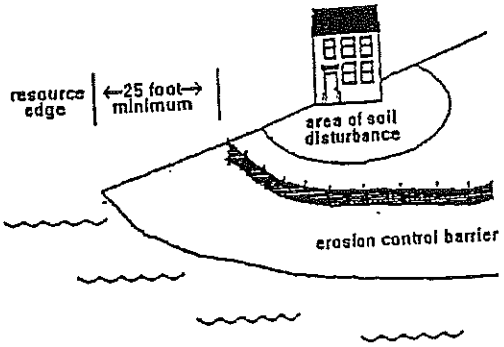
Before Construction

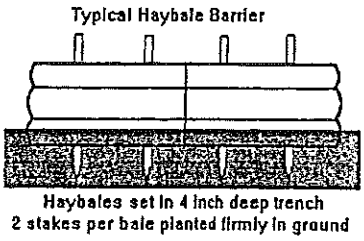
1. If you have hired a contractor, make sure you have discussed your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is and where it is located. Most people could identify the edge of a lake or a river. The edges of wetlands, however, are often not obvious. Your contractor may be the person actually pushing dirt around but you are both responsible for complying with the permit.

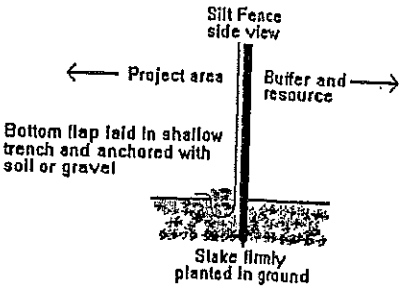
2. Call around and find sources for your erosion controls. You will probably need silt fence, hay bales and grass seed or conservation mix. Some good places to check are feed stores, hardware stores, landscapers and contractor supply houses. It is not always easy to find hay or straw during late winter and early spring. It may also be more expensive during those times of year. Plan ahead. Purchase a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the activity.

4. If a contractor is installing the barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level along the land slope, whenever possible. This keeps stormwater from flowing to the lowest point of the barrier where it builds up and overflows or destroys it.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops striking the soil that causes a lot of erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. In that situation, stop work and figure out what can be done to prevent more soil from getting past the barrier.

After Construction

1. After the project is complete, replant the area. All ground covers are not equal. For instance, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high maintenance areas. The same mix would not be a good choice for stabilizing a road shoulder or a cut bank that you don't intend to mow.

2. If you finish your project after September 15, then do not spread grass seed. There is a very good chance that the seed will germinate and be killed by a frost before it has a chance to become established. Instead, mulch the site with a thick layer of hay or straw. In the spring, rake off the mulch and seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away.

3. Keep your erosion control barrier up and maintained until the area is permanently stabilized.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004 Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status.* Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II. Appeals to Maine Superior Court

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

Additional Information

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

Johanna ? Receivables ?

ST.LAWRENCE CEMENT

August 9, 2000

Mr. Warren S. Lada
Vice President of Operations
SAGA COMMUNICATIONS OF NEW ENGLAND, INC.
Portland Radio Group
420 Western Avenue
South Portland, ME 04106

Dear Mr. Lada:

St. Lawrence Cement is willing to renew for an additional five year term the lease Agreement, dated August 14, 1985 between St. Lawrence Cement, Inc., as landlord and SAGA Communications of New England, Inc., as tenant, relating to the property located at 189 Presumpscot Street, Portland, ME.

The terms of the Lease during the five year renewal period shall include an initial rental of $14,000 per annum and increasing yearly thereafter at the rate of 4% per annum until the end of the five year renewal period. Tenant will continue to pay 5% of the real estate taxes assessed against the St. Lawrence property.

All other terms of the Lease during this second five year renewal period, and during any additional renewal periods thereafter, shall continue to be in full force.

St. Lawrence Cement is not interested in selling the property at this time.

Please indicate your acceptance of the continuation of the above lease by signing in the appropriate space below. Return both signed copies to St. Lawrence Cement, Inc., #3 Columbia Circle, Albany, NY 12203. A fully executed copy will be returned to you.

AGREED TO BY:
SAGA COMMUNICATIONS
OF NEW ENGLAND, INC.

Name CARY L. PAHIGIAN
Title VP/GM

Date 8-10-00

ST. LAWRENCE CEMENT, INC.

Name: Dennis W. Skidmore
Title: Sr. Vice President, U.S. Division

Date 8-21-00

3 Columbia Circle, Albany, New York 12203
Telephone (518) 452-3001 Fax (518) 452-3045

Brian

LEASE AGREEMENT

The parties agree as follows:

Date of this Lease: 19

Parties to this Lease and addresses:

Landlord: St. Lawrence Cement, Inc.
Address for notices: c/o Independent Cement Corporation
P.O. Box 12-310
Albany, New York 12212

You, the Tenant: Sunshine Broadcasting, Inc.
Address: 200 High Street
Portland, Maine 04101

If there are more than one Landlord or Tenant the words "Landlord" and "Tenant" used in this Lease includes them.

Term: 1. Five years; months; beginning: August 15, 19 85 ending: August 14, 1990; tenant shall have the option of renewing this lease under the same terms and conditions except the rent for nine successive five year terms. Tenant shall exercise such options by notifying landlord at the above address by certified mail at least 90 days before the expiration of the then current term.

Premises rented: 2. 189 Presumpscott Street, Portland, Maine 04103 as further described in Exhibit A annexed hereto and made a part hereof.

Rent: 3. The first year's rent ~~xxxxxxxxx~~ is $ 5,000.00 the ~~xxxxxxxxx~~. You, the Tenant, will pay ~~this~~ yearly Rent to the Landlord, ~~xxxxxxxxx~~ on or before August 15, of each year in advance. The rent shall be increased by 4% for each successive year which increase shall be cumulative. e.g. 8/15/86 $5,200.00; 8/15/87 $5,408.00; 8/15/88 $5,624.82 etc. The tenant shall be entitled to no services except those which it provides at its own cost and expense. The 4% per annum escalator shall also apply during any renewal term.

Agreement to lease and pay rent: 4. Landlord leases the Premises to you, the Tenant, for the Term. You, the Tenant, agree to pay the Rent and other charges as required in the Lease. You, the Tenant, agree to do everything required of you in the Lease.

Default: 5. If you, the Tenant, fail to pay the Rent, or any part of the Rent when it becomes due, the Landlord may sue you for it, or re-enter the Premises, or use any legal remedy.

Taxes: 6. The tenant agrees to pay ~~xx~~ 5% of the taxes to be assessed on the Premises during the Term.
If the landlord shall make a substantial improvement to the property the parties shall adjust the above percentage.

APPLICATION FOR EXEMPTION FROM SITE PLAN REVIEW

SAGA COMMUNICATIONS dba PORTLAND RADIO GROUP
Applicant

5/11/04
Application Date

420 WESTERN AVE
SOUTH PORTLAND, ME 04106
Applicant's Mailing Address

Presumpscot St. Tower Replacement
Project Name/Description

SEBAGO TECHNICS INC c/o JAMES SEYMOUR
856-0277
Consultant/Agent/Phone Number

167 Presumpscot St.
Address of Proposed Site

CBL: 421-B-1 and 7
426-B-5 and 6

Description of Proposed Development:

SEE ATTACHED LETTER.

Please Attach Sketch/Plan of Proposal/Development

Criteria for Exemptions:
See Section 14-523 (4) on back side of form

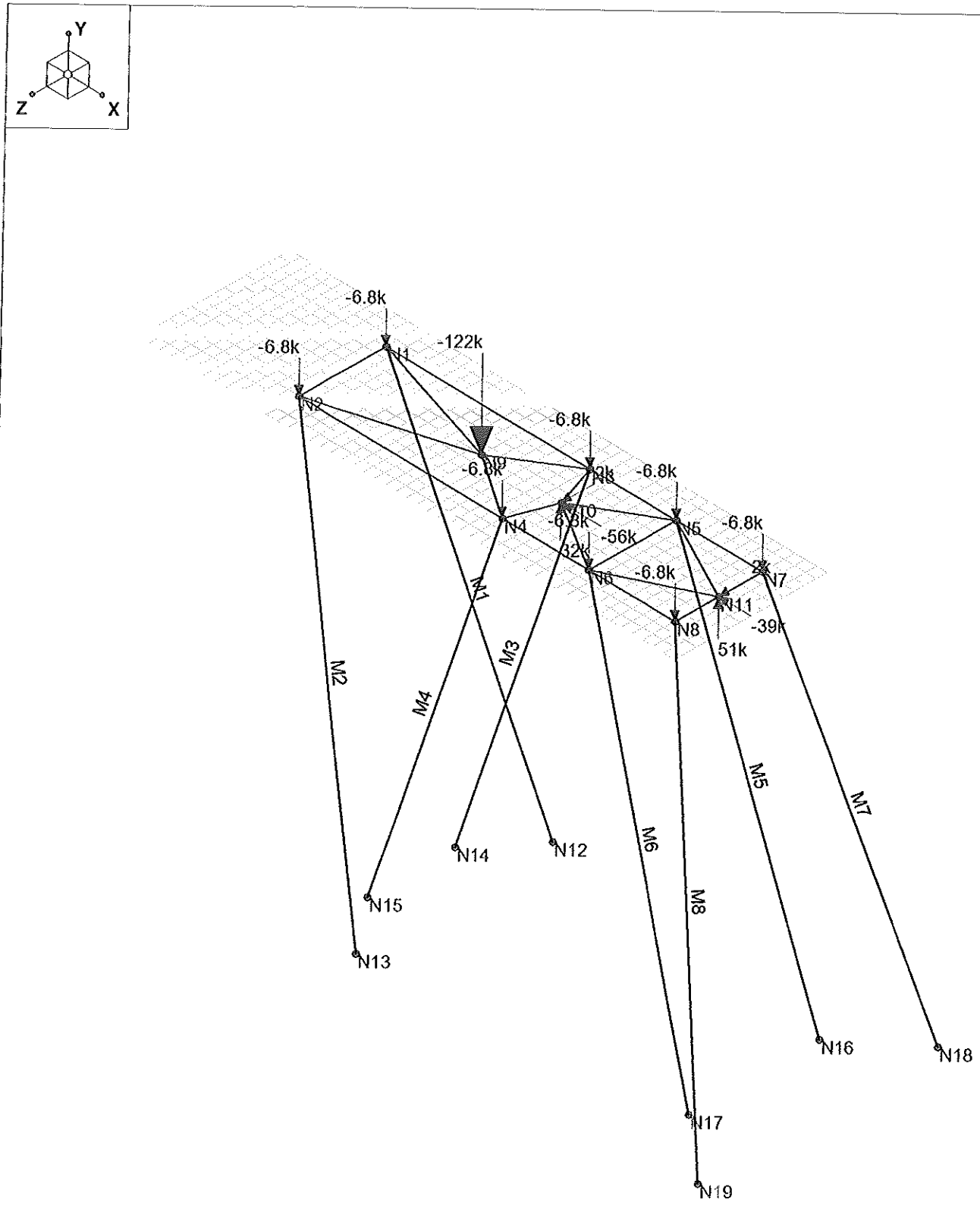
	Applicant's Assessment (Yes, No, N/A)	Planning Office Use Only
a) Within Existing Structures; No New Buildings, Demolitions or Additions	YES	✓
b) Footprint Increase Less Than 500 Sq. Ft.	YES	✓
c) No New Curb Cuts, Driveways, Parking Areas	N/A	✓
d) Curbs and Sidewalks in Sound Condition/Comply with ADA	N/A	✓
e) No Additional Parking/ No Traffic Increase	YES	✓
f) No Stormwater Problems	YES	✓
g) Sufficient Property Screening	YES	✓
h) Adequate Utilities	YES	✓

Planning Division Use Only

Exemption Granted ✓ Partial Exemption _____ Exemption Denied _____

Planner's Signature _____ Date 5/12/04

White - Planning Office Pink - Inspections Yellow - Applicant



Loads: LC 2, D + R + V + T + SW

Associated Design Partner...	Anchor 3 - 040921_1600	
Bob Arledge		Oct 13, 2004 at 11:02 AM
04053		Anchor 3.r3d

Statement of Special Inspections

Project:

Location:

Owner:

Owner's Address:

Architect of Record:

Structural Engineer of Record:

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, Structural Engineer and Architect of Record. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official, Structural Engineer and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official, Owner, Structural Engineer and Architect of Record.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

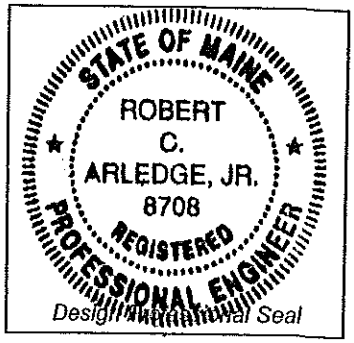
Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: or ☐ per attached schedule.

Prepared by:

Robert Arledge, P.E.
(type or print name)

Robert Arledge 11 OCT 04
Signature Date



Design Professional Seal

Owner's Authorization:

Signature Date

Building Official's Acceptance:

Signature Date

Project:

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- [X] Soils and Foundations
- [X] Cast-in-Place Concrete
- [ ] Precast Concrete
- [ ] Masonry
- [ ] Structural Steel
- [ ] Cold-Formed Steel Framing
- [ ] Spray Fire Resistant Material
- [ ] Wood Construction
- [ ] Exterior Insulation and Finish System
- [ ] Mechanical & Electrical Systems
- [ ] Architectural Systems
- [ ] Special Cases

Inspection Agents	Firm	Address
1. Special Inspector Associated Design Partners, Inc.		80 Leighton Rd. Falmouth, Me. 04105
2. Inspector Robert Arledge, P.E. (SE)	Associated Design Partners, Inc.	
3. Inspector Jim Thibodeau,P.E. (SE)	Associated Design Partners, Inc.	80 Leighton Rd. Falmouth, Me. 04105
4. Testing Laboratory S.W. Cole, Inc.		286 Portland Road GraY, Me 04039
5. Testing Laboratory GRL Engineering, INC		4256 N. Arlington Height Road Arlington Heights IL 60004
6. Other ERNEST R. JONES	Electronics Research Inc.	7777 Gardner Rd. Chandler, IN 47610

Note: The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Seismic Performance Category

Basic Wind Speed

Wind Exposure Category

Project:

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Structural Engineer or a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents:

When the Structural Engineer of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agent Number* on the *Schedule of Special Inspections*.

SE **Structural Engineer** – a licensed SE or PE specializing in the design of building structures. This may be required for the inspection of critical structural elements.

GE **Geotechnical Engineer** – a licensed PE specializing in soil mechanics and foundations. This may be required for the inspection of difficult soil conditions or deep foundations.

EIT **Engineer-In-Training** – a graduate engineer who has passed the Fundamentals of Engineering examination. This may be required for the inspection of elements that require some engineering training to properly evaluate.

ACI **American Concrete Institute - Level I Certified Concrete Field Testing Technician.** This certification is appropriate for individuals performing concrete sampling, slump tests, air-content tests, temperature tests, unit weight tests, and casting compression test cylinders.

AWS **American Welding Society - Certified Welding Inspector** (CWI). This certification is appropriate for individuals performing visual inspection of welds.

ASNT **American Society of Non-Destructive Testing** – Level II or III. This certification is appropriate for individuals performing ultra-sonic testing of welds.

SMSI **Structural Masonry Special Inspector** – certification by ICBO.

SWSI **Structural Steel and Welding Special Inspector** – certification by ICBO.

SFSI **Spray-Applied Fireproofing Special Inspector** – certification by ICBO.

PCSI **Prestressed Concrete Special Inspector** – certification jointly sponsored by ICBO, BOCA and SBCCI with participation form PCI and PTI.

RCSI **Reinforced Concrete Special Inspector** – certification jointly sponsored by ACI, ICBO, BOCA and SBCCI.

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations		
2. Controlled Structural Fill		
3. Deep Foundations Piles	1 & 2 5.	1. Material Certifications 2. Verify Installation per drawings 3. Verify pile capacity with Pile Driving Analyzer Equipment
4. Other Grout for rock anchors	4. 1 & 2	1. Test for slump 2. Test for comprssive Strength 1. Monitor placement 2. Monitor Proof Testing

Item	Agent No. (Qualif.)	Scope
1. Mix Design	1, 2&4	1. Compressive Strength 2. Water Cement Ratio 3. Additives
2. Material Certification	1, 2&4	1. cement 2. Air Entraining Agent 3. Corrosion Inhibitor 4. Reinforcing Steel
3. Reinforcement Installation	1 & 2	1. Per Drawings
4. Post-Tensioning Operations	1 & 2	1. Rock Anchor Proof Test 2. Rock Anchor Pre-Tensioning
5. Batching Plant	1 & 2	1. Quality control program
6. Formwork Geometry	1 & 2	1. Per Drawings
7. Concrete Placement	1 & 2	1. Per ACI 301-99
8. Evaluation of Concrete Strength	1 & 2 4	
9. Curing and Protection	1 & 2	
10. Other	4. 1 & 2	1. Inspect facility & Quality Control 2. Verify Construction & Placement

Schedule of Special Inspection Services
Special Cases

Project:

Item	Agent No. (Qualif.)	Scope
Tower	6. 1 & 2	1. Quality Control Program 2. Qualification of Welder's 3. Material Certifications 4. Condition of tower as Delivered 5. Erection

Statement of Special Inspections

Project:

Location:

Owner:

Owner's Address:

Architect of Record:

Structural Engineer of Record:

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection requirements of the Building Code. It includes a Schedule of Special Inspection Services applicable to this project as well as the name of the Special Inspector and the identity of other approved agencies intended to be retained for conducting these inspections.

The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official, Structural Engineer and Architect of Record. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official, Structural Engineer and Architect of Record. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official, Owner, Structural Engineer and Architect of Record.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency: or ☐ per attached schedule.

Prepared by:

Robert Arledge, P.E.
(type or print name)

STATE OF MAINE
ROBERT
C.
ARLEDGE, JR.
8708
REGISTERED
PROFESSIONAL ENGINEER
Design Professional Seal

Robert Arledge 11 OCT 04
Signature Date

Owner's Authorization:

Signature Date

Building Official's Acceptance:

Signature Date

Project:

Schedule of Special Inspection Services

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

- [X] Soils and Foundations
- [X] Cast-in-Place Concrete
- [ ] Precast Concrete
- [ ] Masonry
- [ ] Structural Steel
- [ ] Cold-Formed Steel Framing
- [ ] Spray Fire Resistant Material
- [ ] Wood Construction
- [ ] Exterior Insulation and Finish System
- [ ] Mechanical & Electrical Systems
- [ ] Architectural Systems
- [ ] Special Cases

Inspection Agents	Firm	Address
1. Special Inspector Associated Design Partners, Inc.		80 Leighton Rd. Falmouth, Me. 04105
2. Inspector Robert Arledge, P.E. (SE)	Associated Design Partners, Inc.	
3. Inspector Jim Thibodeau,P.E. (SE)	Associated Design Partners, Inc.	80 Leighton Rd. Falmouth, Me. 04105
4. Testing Laboratory S.W. Cole, Inc.		286 Portland Road GraY, Me 04039
5. Testing Laboratory GRL Engineering, INC		4256 N. Arlington Height Road Arlingbon Heights ~~IL 60004~~
6. Other ERNEST R. JONES	Electronics Research Inc.	7777 Gardner Rd. Chandler, IN 47610

Note: The inspection and testing agent shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

Seismic Performance Category

Basic Wind Speed

Wind Exposure Category

Project:

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

It is recommended that the person administering the Special Inspections program be a Structural Engineer or a Professional Engineer experienced in the design of buildings.

Key for Minimum Qualifications of Inspection Agents:

When the Structural Engineer of Record deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agent Number* on the *Schedule of Special Inspections*.

SE **Structural Engineer** – a licensed SE or PE specializing in the design of building structures. This may be required for the inspection of critical structural elements.

GE **Geotechnical Engineer** – a licensed PE specializing in soil mechanics and foundations. This may be required for the inspection of difficult soil conditions or deep foundations.

EIT **Engineer-In-Training** – a graduate engineer who has passed the Fundamentals of Engineering examination. This may be required for the inspection of elements that require some engineering training to properly evaluate.

ACI **American Concrete Institute - Level I Certified Concrete Field Testing Technician.** This certification is appropriate for individuals performing concrete sampling, slump tests, air-content tests, temperature tests, unit weight tests, and casting compression test cylinders.

AWS **American Welding Society - Certified Welding Inspector** (CWI). This certification is appropriate for individuals performing visual inspection of welds.

ASNT **American Society of Non-Destructive Testing** – Level II or III. This certification is appropriate for individuals performing ultra-sonic testing of welds.

SMSI **Structural Masonry Special Inspector** – certification by ICBO.

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SFSI **Spray-Applied Fireproofing Special Inspector** – certification by ICBO.

PCSI **Prestressed Concrete Special Inspector** – certification jointly sponsored by ICBO, BOCA and SBCCI with participation form PCI and PTI.

RCSI **Reinforced Concrete Special Inspector** – certification jointly sponsored by ACI, ICBO, BOCA and SBCCI.

Item	Agent No. (Qualif.)	Scope
1. Shallow Foundations		
2. Controlled Structural Fill		
3. Deep Foundations Piles	1 & 2 5.	1. Material Certifications 2. Verify Installation per drawings 3. Verify pile capacity with Pile Driving Analyzer Equipment
4. Other Grout for rock anchors	4. 1 & 2	1. Test for slump 2. Test for comprssive Strength 1. Monitor placement 2. Monitor Proof Testing

Schedule of Special Inspection Services

Cast-in-Place Concrete

Project:

Item	Agent No. (Qualif.)	Scope
1. Mix Design	1,2&4	1. Compressive Strength 2. Water Cement Ratio 3. Additives
2. Material Certification	1,2&4	1. cement 2. Air Entraining Agent 3. Corrosion Inhibitor 4. Reinforcing Steel
3. Reinforcement Installation	1 & 2	1. Per Drawings
4. Post-Tensioning Operations	1 & 2	1. Rock Anchor Proof Test 2. Rock Anchor Pre-Tensioning
5. Batching Plant	1 & 2	1. Quality control program
6. Formwork Geometry	1 & 2	1. Per Drawings
7. Concrete Placement	1 & 2	1. Per ACI 301-99
8. Evaluation of Concrete Strength	1 & 2 4	
9. Curing and Protection	1 & 2	
10. Other	4. 1 & 2	1. Inspect facility & Quality Control 2. Verify Construction & Placement

Schedule of Special Inspection Services
Special Cases

Project:

Item	Agent No. (Qualif.)	Scope
Tower	6. 1 & 2	1. Quality Control Program 2. Qualification of Welder's 3. Material Certifications 4. Condition of tower as Delivered 5. Erection

Statement of Special Inspections

Project:

Location:

Owner:

Owner's Address:

Architect of Record:

Structural Engineer of Record:

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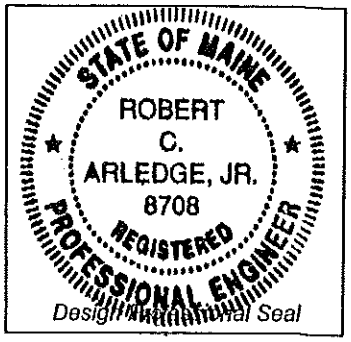
Prepared by:

Robert Arledge, P.E.
(type or print name)

Robert Arledge 11 OCT 04
Signature Date



Design Professional Seal

Owner's Authorization:

Signature Date

Building Official's Acceptance:

Signature Date

Project:

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Basic Wind Speed

Wind Exposure Category

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Schedule of Special Inspection Services
Cast-in-Place Concrete

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2. Material Certification	1, 2&4	1. cement 2. Air Entraining Agent 3. Corrosion Inhibitor 4. Reinforcing Steel
3. Reinforcement Installation	1 & 2	1. Per Drawings
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5. Batching Plant	1 & 2	1. Quality control program
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9. Curing and Protection	1 & 2	
10. Other	4. 1 & 2	1. Inspect facility & Quality Control 2. Verify Construction & Placement

Item	Agent No. (Qualif.)	Scope
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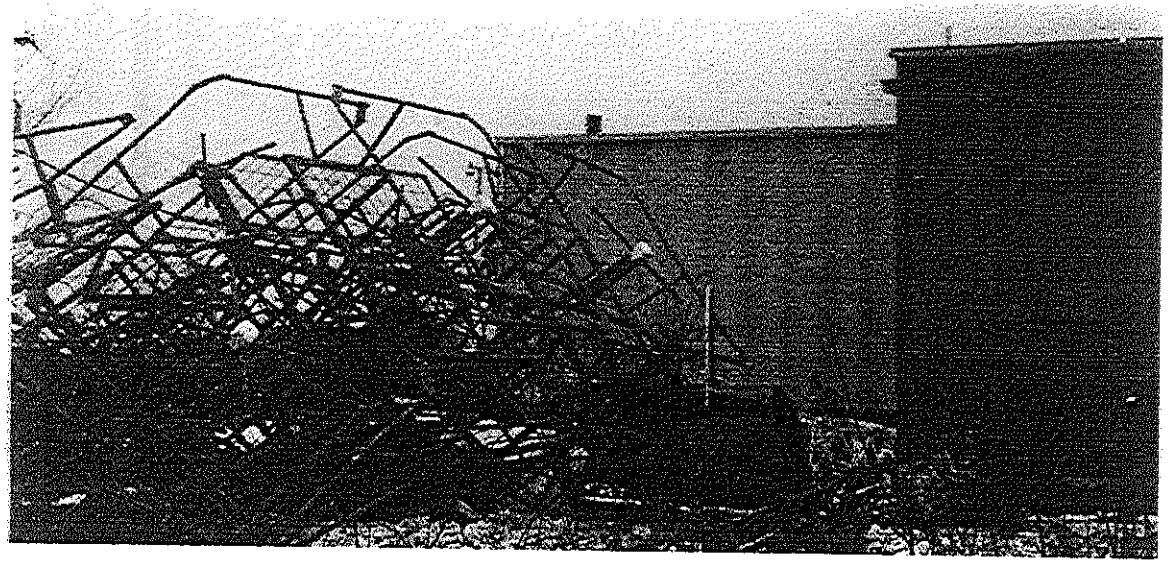
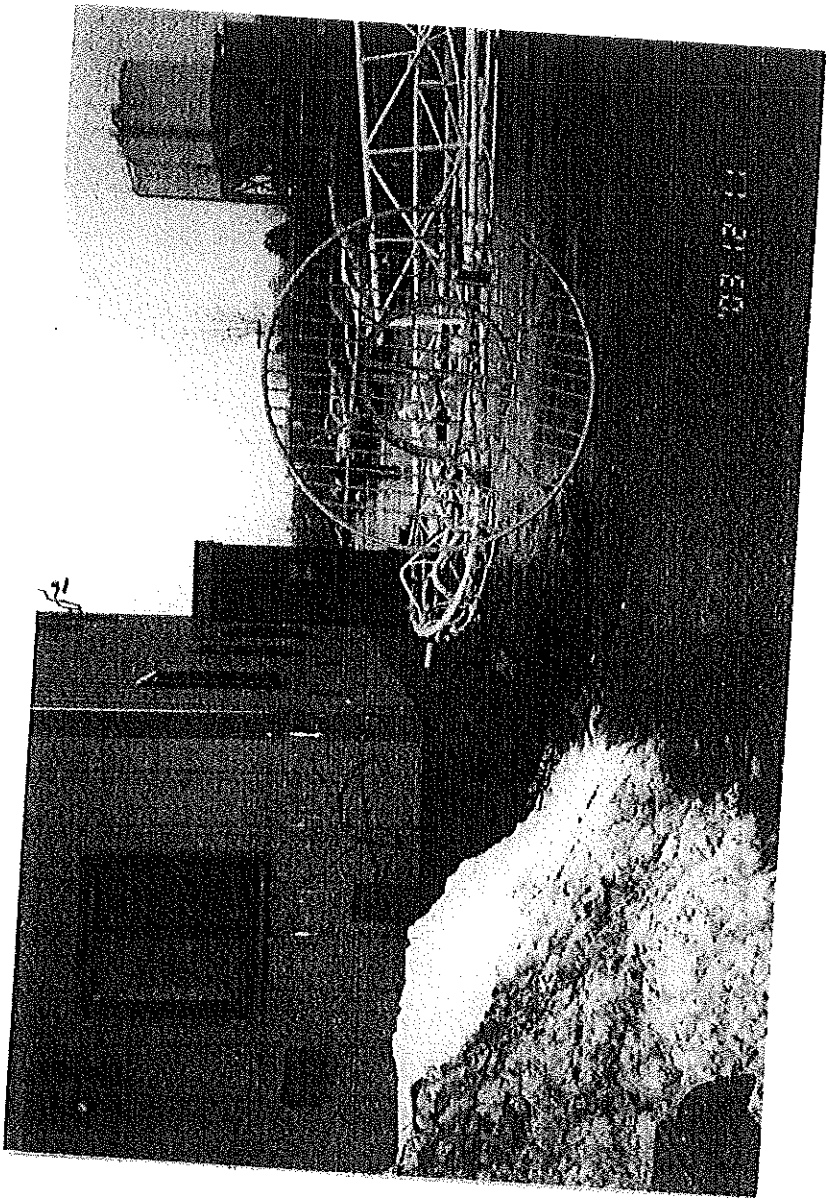
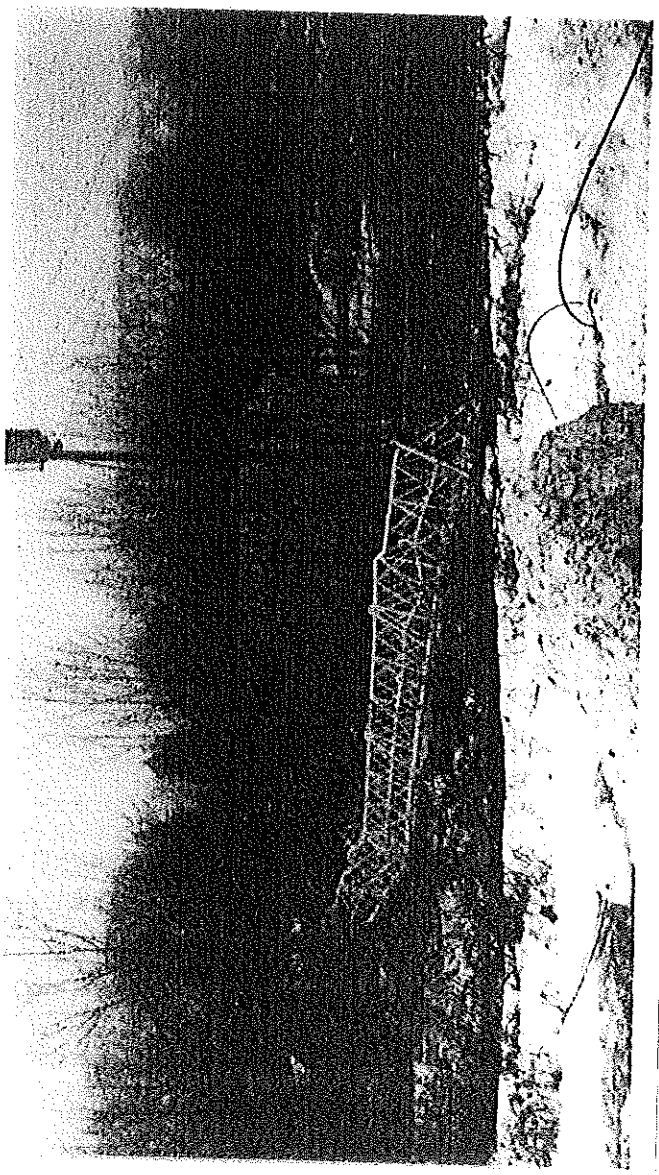
03 12 11







DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

MAINE PROGRAMMATIC GENERAL PERMIT (PGP)
AUTHORIZATION LETTER AND SCREENING SUMMARY

SAGA COMMUNICATIONS, DBA
PORTLAND RADIO GROUP
C/O SEBAGO TECHNICS, INC.
P.O. BOX 1339
WESTBROOK, MAINE 04098-1339

CORPS PERMIT # NAE-2004-1616
CORPS PGP ID# 04-262
STATE ID# 21879-4E

DESCRIPTION OF WORK:
Install and maintain a 9'x 25' pile supported concrete anchor platform in Presumpscot Bay at Portland, Maine in order to support a new 528' high radio tower. The new tower will be located on the upland and is a replacement for a similar structure that unexpectedly collapsed in 2003. The concrete platform will support one of three guy wire anchors, the other two being located on the upland. Temporary fill in the form of
Project Description Continued on Next Page

LAT/LONG COORDINATES : 43.6882473° N 69.2572289° W USGS QUAD: PORTLAND WEST, ME

I. CORPS DETERMINATION:
Based on our review of the information you provided, we have determined that your project will have only minimal individual and cumulative impacts on waters and wetlands of the United States. **Your work is therefore authorized by the U.S. Army Corps of Engineers under the enclosed Federal Permit, the Maine Programmatic General Permit (PGP).**

You must perform the activity authorized herein in compliance with all the terms and conditions of the PGP (including any attached Additional Conditions and any conditions placed on the State 401 Water Quality Certification including any required mitigation). Please review the enclosed PGP carefully, including the PGP conditions beginning on page 5, to familiarize yourself with its contents. You are responsible for complying with all of the PGP requirements; therefore you should be certain that whoever does the work fully understands all of the conditions. You may wish to discuss the conditions of this authorization with your contractor to ensure the contractor can accomplish the work in a manner that conforms to all requirements.

If you change the plans or construction methods for work within our jurisdiction, please contact us immediately to discuss modification of this authorization. This office must approve any changes before you undertake them.

Condition 36 of the PGP (page 12) provides one year for completion of work that has commenced or is under contract to commence prior to the expiration of the PGP on September 29, 2005. You will need to apply for reauthorization for any work within Corps jurisdiction that is not completed by September 29, 2006.

No work may be started unless and until all other required local, State and Federal licenses and permits have been obtained. **This includes but is not limited to a Flood Hazard Development Permit issued by the town if necessary.** Also, this permit requires you to notify us before beginning work and allow us to inspect the project. Hence, you must complete and return the attached Work Start Notification Form(s) to this office no later than 2 weeks before the anticipated starting date. (For projects requiring mitigation, be sure to include the MITIGATION WORK START FORM).

II. STATE ACTIONS: PENDING [ ], ISSUED[X], DENIED [ ] DATE 9/14/04

APPLICATION TYPE: PBR:___, TIER 1:___, TIER 2:___, TIER 3: X , LURC:___ DMR LEASE:___ NA:___

III. FEDERAL ACTIONS:

JOINT PROCESSING MEETING: 6/10/04 LEVEL OF REVIEW: CATEGORY 1:___ CATEGORY 2: X

AUTHORITY: SEC 10___, 404___ 10/404 X , 103___

EXCLUSIONS: The exclusionary criteria identified in the general permit do not apply to this project.

ESSENTIAL FISH HABITAT (EFH): EFH PRESENT (Y) N (CIRCLE ONE)
IF YES: Based on the terms and conditions of the PGP, which are intended to ensure that authorized projects cause no more than minimal environmental impacts, the Corps of Engineers has preliminary determined that this project will not cause more than minimal adverse effects to EFH identified under the Magnunson-Stevens Fisheries Conservation and Management Act.

FEDERAL RESOURCE AGENCY OBJECTIONS: EPA NO , USF&WS NO , NMFS NO

If you have any questions on this matter, please contact my staff at 207-623-8367 at our Manchester, Maine Project Office.

Jay L. Clement
JAY L. CLEMENT
SENIOR PROJECT MANAGER
MAINE PROJECT OFFICE

10-21-04
FRANK J. DELGIUDICE DATE
CHIEF, PERMITS & ENFORCEMENT BRANCH
REGULATORY DIVISION

Project Description Continued from Page 1

timber mats will be placed below the high tide line and on saltmarsh to provide construction access to the anchor site. They will also provide access for the removal of the stone fill associated with the former anchor. The mats as well as the stone fill will be removed in their entirety. Permanent

ADDITIONAL CONDITIONS FOR
DEPARTMENT OF THE ARMY
PROGRAMMATIC GENERAL PERMIT
NO. NAE-2004-1616

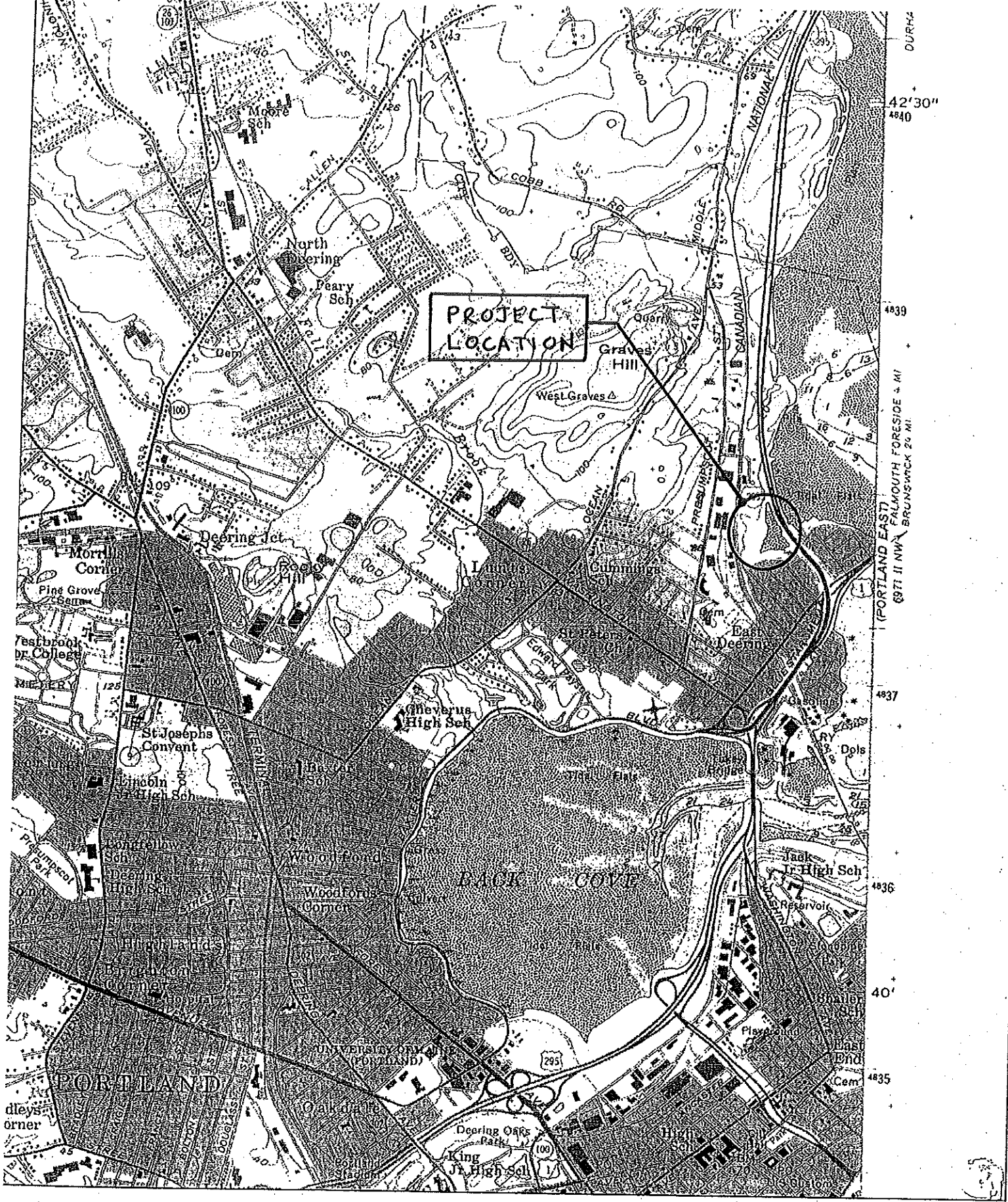
1. The permittee shall assure that a copy of this permit is at the work site whenever work is being performed and that all personnel performing work at the site of the work authorized by this permit are fully aware of the terms and conditions of the permit. This permit, including its drawings and any appendices and other attachments, shall be made a part of any and all contracts and sub-contracts for work which affects areas of Corps of Engineers' jurisdiction at the site of the work authorized by this permit. This shall be done by including the entire permit in the specifications for the work. If the permit is issued after construction specifications but before receipt of bids or quotes, the entire permit shall be included as an addendum to the specifications. The term "entire permit" includes permit amendments. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions of the entire permit, and no contract or sub-contract shall require or allow unauthorized work in areas of Corps of Engineers jurisdiction.

2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

3. All areas of temporary fill shall be restored to their original condition and contour upon completion of the project.

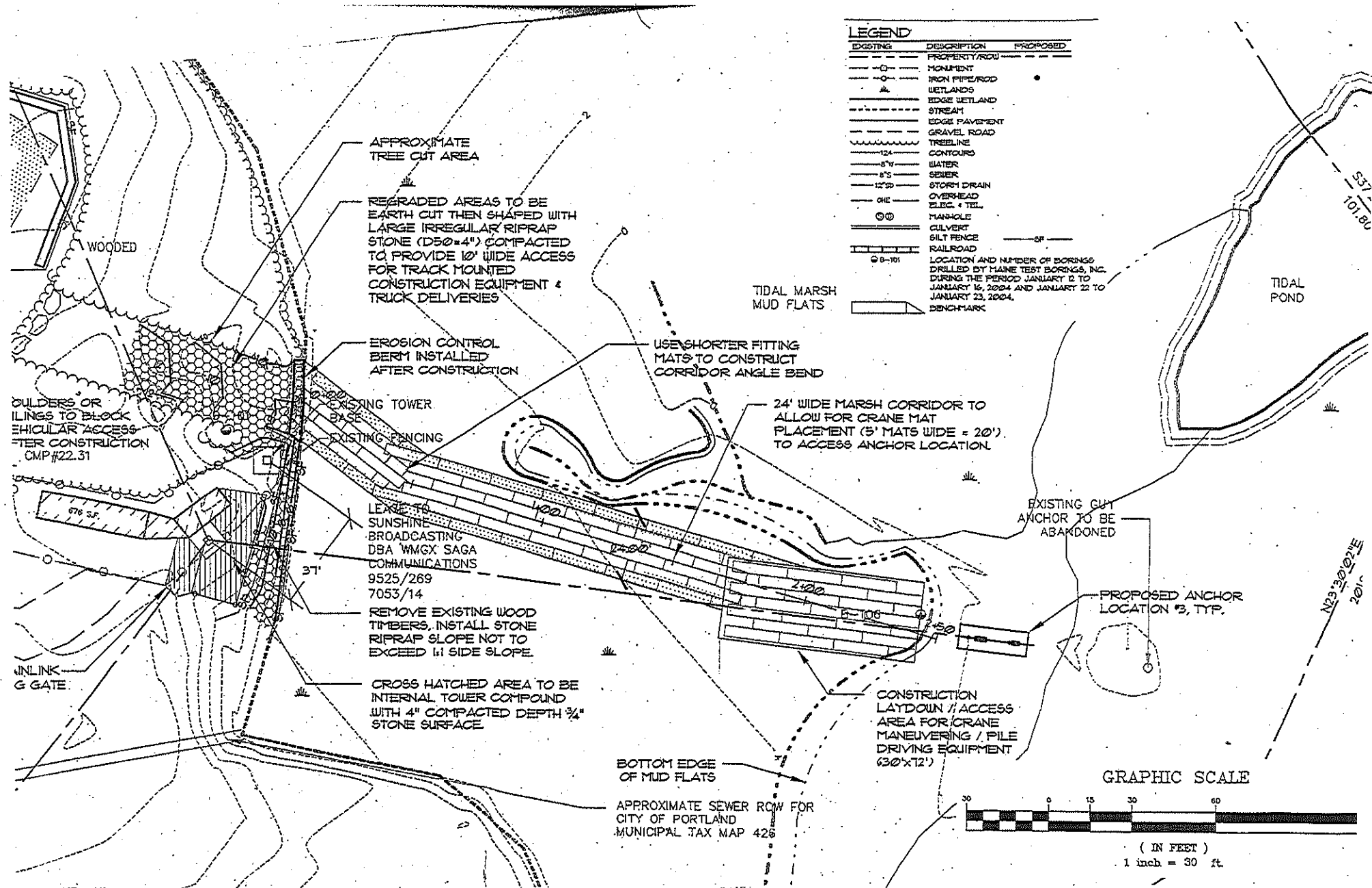
4. The stone remains of the former guy wire anchor, located below the high tide line, shall be removed to an upland location and the tidal bottom restored to original condition and contour.

5. Stone riprap, placed along approximately 100 linear feet of eroding upland shoreline, shall not be placed below the high tide line or in vegetated tidal wetland without written approval from the Corps of Engineers.



Name: PORTLAND WEST
Date: 4/20/104
Scale: 1 inch equals 2000 feet

Location: 043° 41' 09.7" N 070° 16' 16.6" W
Caption: PORTLAND RADIO GROUP
Location Map



SHEET 1 OF 2

SITE PLAN

OF THE:

528' TOWER REPLACEMENT PROJECT

167 PRESUMPSCOT STREET
PORTLAND, MAINE

FOR:

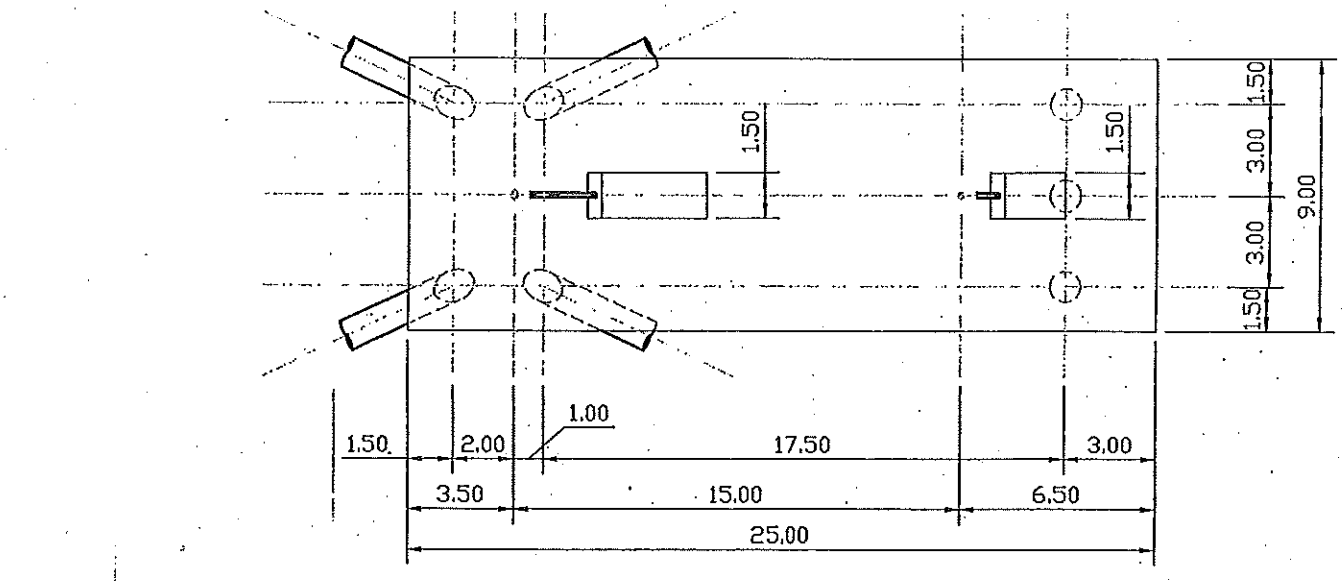
SAGA COMMUNICATIONS,
40 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

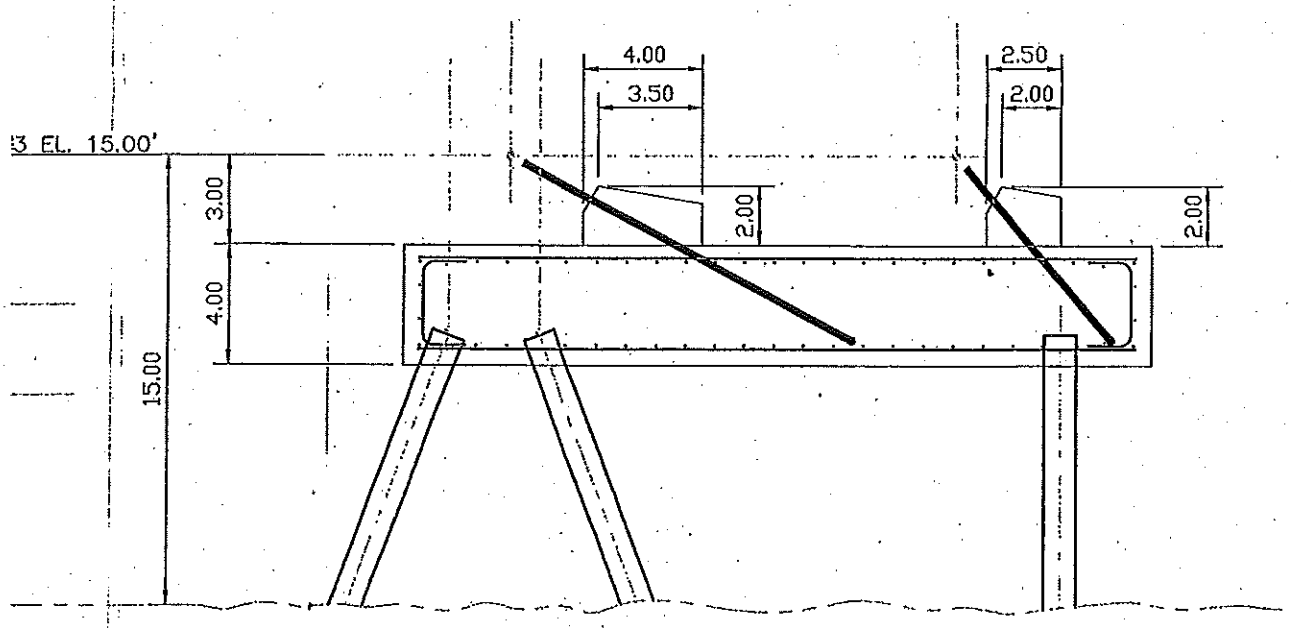
RECORD OWNER:
ST. LAWRENCE CEMENT, INC.
3 COLUMBIA CIR.
ALBANY, NY 12203

DATE: 05-28-04
SCALE: 1"=30'

Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRA
03497		CLB	CLB	JN





ANCHOR #3

SHEET OF 2

DATE	SCALE
05-28-04	

528' TOWER REPLACEMENT PROJECT
167 PRESUMPSCOT STREET
PORTLAND, MAINE
FOR:
SAGA COMMUNICATIONS;
40 WESTERN AVE
RECORD OWNER:
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3 COLUMBIA CIR.

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Engineering Expertise You Can Build On
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Westbrook, Me 04098-1339
Tel (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03407		CLR	CLR	JNB

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

SAGA COMMUNICATIONS, DBA	) NATURAL RESOURCES PROTECTION
PORTLAND RADIO GROUP	) COASTAL WETLAND
Portland, Cumberland County	) WATER QUALITY CERTIFICATION
RADIO TOWER	) FINDINGS OF FACT AND ORDER
L-21939-A-N (approval)	

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP, with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. Summary: The applicant proposes to replace a 528-foot high guyed radio tower and three anchors in and adjacent to a tidal marsh and mudflat off Presumpscot Street in Portland. The new tower and anchors will be located adjacent to the old tower and anchors. The site is the location of a radio tower that collapsed after an anchor failed in December 2003. The tower replacement is necessary to restore the broadcasting capability of a local FM radio station. The project includes the construction of two new double anchors in upland locations approximately 30 feet from the upland/wetland edge and one new anchor in a tidal mudflat. Each anchor will be capped with a 225 square foot concrete cap. The concrete cap for anchor #3 located in the mudflat will be elevated on support piles approximately 8 feet above the substrate to minimize the impact on the mudflat. The applicant also proposes to restore approximately 900 square of mudflat by removing the rock rubble fill at the original site of anchor #3. To access the mudflat to drive piles and construct the concrete pile cap for anchor #3, the applicant proposes to construct a 10-foot wide rock filled upland access road and a 20-foot wide temporary access road across the vegetated salt marsh using wooden crane mats. No equipment will operate in the mudflat, and construction will be limited to periods when the tidal flat is exposed during low tide. In addition, the applicant also proposes to stabilize a 100-foot long section of eroded slope by installing rock riprap adjacent to the site of the proposed tower. The proposed project is shown on a set of plans the first of which is entitled "Existing Conditions Survey, Sunshine Broadcasting WMGX Tower," prepared by Sebago Technics, with a last revision date of May 28, 2004. The applicant proposes to complete the project during a three week period in early fall 2004.

B. Current Use of the Site: The applicant leases the 13.6 acre site that is located adjacent to a coastal wetland in an industrial zone on Presumpscot Street between I-295

and the St. Lawrence Railroad tracks. Development adjacent to the project site includes a lumberyard, warehouse complex, and cement storage facility.

2. WATER QUALITY AND EROSION CONTROL CONSIDERATIONS:

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters. The applicant proposes to install and maintain adequate erosion control measures to protect water quality until the project site is stabilized.

3. HABITAT CONSIDERATIONS:

The Department of Marine Resources (DMR) reviewed the proposed project. In comments dated July 12, 2004, DMR stated that the project site is a low energy consolidated shore. The upper and mid intertidal area are vegetated with *Spartina patens* (salt hay grass) and *Spartina alternaflora* (smooth cordgrass) respectively. The lower intertidal is mud. DMR recommends that the salt marsh be monitored after the crane mat access road is removed to insure that the substrate and vegetation recovers during the growing season following construction. DMR also recommends that the existing pile of rock rubble is removed and the mudflat restored at the existing location of anchor #3. The applicant has agreed to these two requirements.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that the coastal wetland is part of a large wetland complex associated with the Presumpscot River. This complex is designated as Coastal Wading Bird and Waterfowl Habitat and qualifies as Significant Wildlife Habitat, but the project site is outside the critical habitat areas of open water and emergent vegetation used by nesting and feeding waterfowl. To minimize the impact to waterfowl, MDIFW recommends no work in the coastal wetland during the waterfowl-breeding season from July to September, if possible.

4. WETLANDS AND WATERBODIES PROTECTION RULES:

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

a. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternatives analysis for the project prepared by Sebago Technics and dated May 27, 2004 that demonstrated that, based on Federal Communications Commission licensing requirements, zoning standards in the City of Portland, and the design and engineering specifications for the new radio tower, the tower and its anchors must be located adjacent to the original tower and anchors.

b. Minimal Alteration. The alteration to the coastal wetland will be limited to seven piles driven into the substrate and the temporary impacts to the salt marsh from the installation of approximately 5,360 square feet of crane mats during the construction of anchor #3. This anchor will be a pile supported concrete pile cap elevated 8 feet above the substrate to minimize the impact to the tidal mudflat. To further minimize impacts to salt marsh vegetation, the Department recommends that the applicant construct anchor #3 after October 1, when *Spartina* is dormant.

c. Compensation. Although the applicant demonstrated that the proper use of crane mats at the construction site for anchor #3 should result in no permanent loss of wetland functions and values, the Department finds that the applicant must photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The Department will assess the recovery of the salt marsh vegetation in the year following construction and may require restoration or enhancement of the access area if salt marsh vegetation is not the same density as that in the adjacent undisturbed areas.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

5. EXISITING SCENIC AND AESTHETIC USES:

The applicant evaluated the impact of the proposed project on existing scenic and aesthetic uses in the vicinity of the proposed project by submitting photographs of the existing conditions at the project site and by completing a visual evaluation and field survey checklist. The proposed radio tower and supporting guy wires and anchors will be located in the same area as the former tower and be the same height. The new tower will have the same visual impact as the old tower and will be located within a highly developed industrial zone in Portland adjacent to an interstate highway. Based on information in the application and a site visit, the Department finds that the proposed project will not unreasonably interfere with existing scenic and aesthetic uses.

6. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing navigational uses, soil erosion, the natural transfer of soil, natural flow of water, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant photographs the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction and restores or enhances the access area, if necessary.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP to construct a radio tower with anchors and install riprap, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. The applicant shall photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The photographs shall be submitted to the Bureau of Land and Water Quality one week after installing and removing the mats and by June 22.

4. The applicant shall enhance or restore salt marsh vegetation in the access area if the plant density is not the same as that in adjacent undisturbed areas.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED AT AUGUSTA, MAINE, THIS 14TH DAY OF September, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application May 28, 2004
Date of application acceptance June14, 2004

Date filed with Board of Environmental Protection

DBB/ATS52615/L21939AN

FILED
SEP 14 2004
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

NATURAL RESOURCE PROTECTION ACT (NRPA)
STANDARD CONDITIONS

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation form these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Initiation of Activity Within Two Years. If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. Reexamination After Five Years. If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

H. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

I. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92)

DEP LW0428

Erosion Control

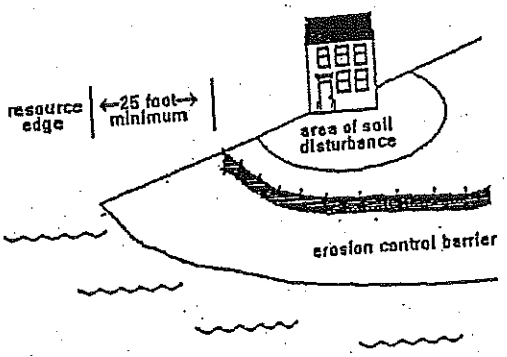
Before Construction

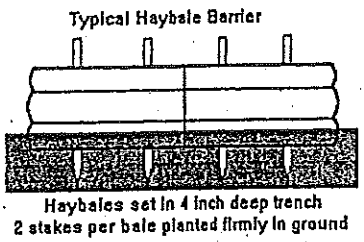
1. If you have hired a contractor, make sure you have discussed your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is and where it is located. Most people could identify the edge of a lake or a river. The edges of wetlands, however, are often not obvious. Your contractor may be the person actually pushing dirt around but you are both responsible for complying with the permit.

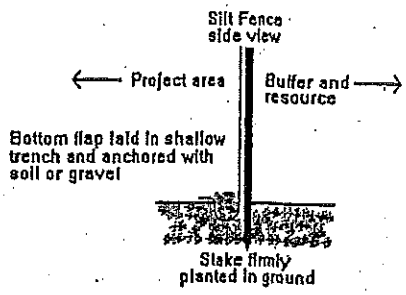
2. Call around and find sources for your erosion controls. You will probably need silt fence, hay bales and grass seed or conservation mix. Some good places to check are feed stores, hardware stores, landscapers and contractor supply houses. It is not always easy to find hay or straw during late winter and early spring. It may also be more expensive during those times of year. Plan ahead. Purchase a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the activity.

4. If a contractor is installing the barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level along the land slope, whenever possible. This keeps stormwater from flowing to the lowest point of the barrier where it builds up and overflows or destroys it.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops striking the soil that causes a lot of erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. In that situation, stop work and figure out what can be done to prevent more soil from getting past the barrier.

After Construction

1. After the project is complete, replant the area. All ground covers are not equal. For instance, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high maintenance areas. The same mix would not be a good choice for stabilizing a road shoulder or a cut bank that you don't intend to mow.

2. If you finish your project after September 15, then do not spread grass seed. There is a very good chance that the seed will germinate and be killed by a frost before it has a chance to become established. Instead, mulch the site with a thick layer of hay or straw. In the spring, rake off the mulch and seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away.

3. Keep your erosion control barrier up and maintained until the area is permanently stabilized.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004

Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096.CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status.* Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

II. Appeals to Maine Superior Court

Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

Additional Information

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

Form # P 01

ELECTRICAL PERMIT
City of Portland, Me.

To the Chief Electrical Inspector, Portland Maine:
The undersigned hereby applies for a permit to make electrical installations in accordance with the laws of Maine, the City of Portland Electrical Ordinance, National Electrical Code and the following specifications:

Date 2/7/05
Permit # 054107
CBL# 421 B 005

LOCATION: 189 Presum Scott St.
METER MAKE & #
CMP ACCOUNT # 44110596 81-001
OWNER
TENANT Portland Radio Group
PHONE #

								TOTAL	EACH FEE
OUTLETS		Receptacles		Switches		Smoke Detector			.20
FIXTURES		Incandescent		Fluorescent		Strips			.20
SERVICES	X	Overhead		Underground		TTL AMPS	<800		15.00
		Overhead		Underground			>800		25.00
Temporary Service		Overhead		Underground		TTL AMPS			25.00
									25.00
METERS	X	(number of)							1.00
MOTORS		(number of)							2.00
RESID/COM		Electric units							1.00
HEATING		oil/gas units		Interior		Exterior			5.00
APPLIANCES		Ranges		Cook Tops		Wall Ovens			2.00
		Insta-Hot		Water heaters		Fans			2.00
		Dryers		Disposals		Dishwasher			2.00
		Compactors		Spa		Washing Machine			2.00
		Others (denote)							2.00
MISC. (number of)		Air Cond/win							3.00
		Air Cond/cent				Pools			10.00
		HVAC		EMS		Thermostat			5.00
		Signs							10.00
		Alarms/res							5.00
		Alarms/com							15.00
		Heavy Duty(CRKT)							2.00
		Circus/Carnv							25.00
		Alterations							5.00
		Fire Repairs							15.00
		E Lights							1.00
		E Generators							20.00
PANELS		Service		Remote	X	Main			4.00
TRANSFORMER		0-25 Kva							5.00
		25-200 Kva							8.00
		Over 200 Kva							10.00
						TOTAL AMOUNT DUE			
		MINIMUM FEE/COMMERCIAL 45.00				**MINIMUM FEE**		**35.00**	

DEPT. OF BUILDING INSPECTION
CITY OF PORTLAND, ME
FEB 7 2005
RECEIVED

CONTRACTORS NAME Electrical Maint. and Installation
MASTER LIC. # MC 60017571
ADDRESS P.O. Box 6807, Scarborough Me
LIMITED LIC. #
TELEPHONE 754-4354

SIGNATURE OF CONTRACTOR [signature] ck# 2000

White Copy - Office • Yellow Copy - Applicant

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	SHACKLES TOWER	SHACKLES ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	INITIAL TENSION LBS. @0°F
1" EHS	121.0'	10' X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450
5/8" EHS	241.0'	10' X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
5/8" EHS	241.0'	10' X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
7/8" EHS	361.0'	10' X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	- - -	- -	*	7,970
1" EHS	470.0'	10' X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450

*REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

MATERIAL LIST

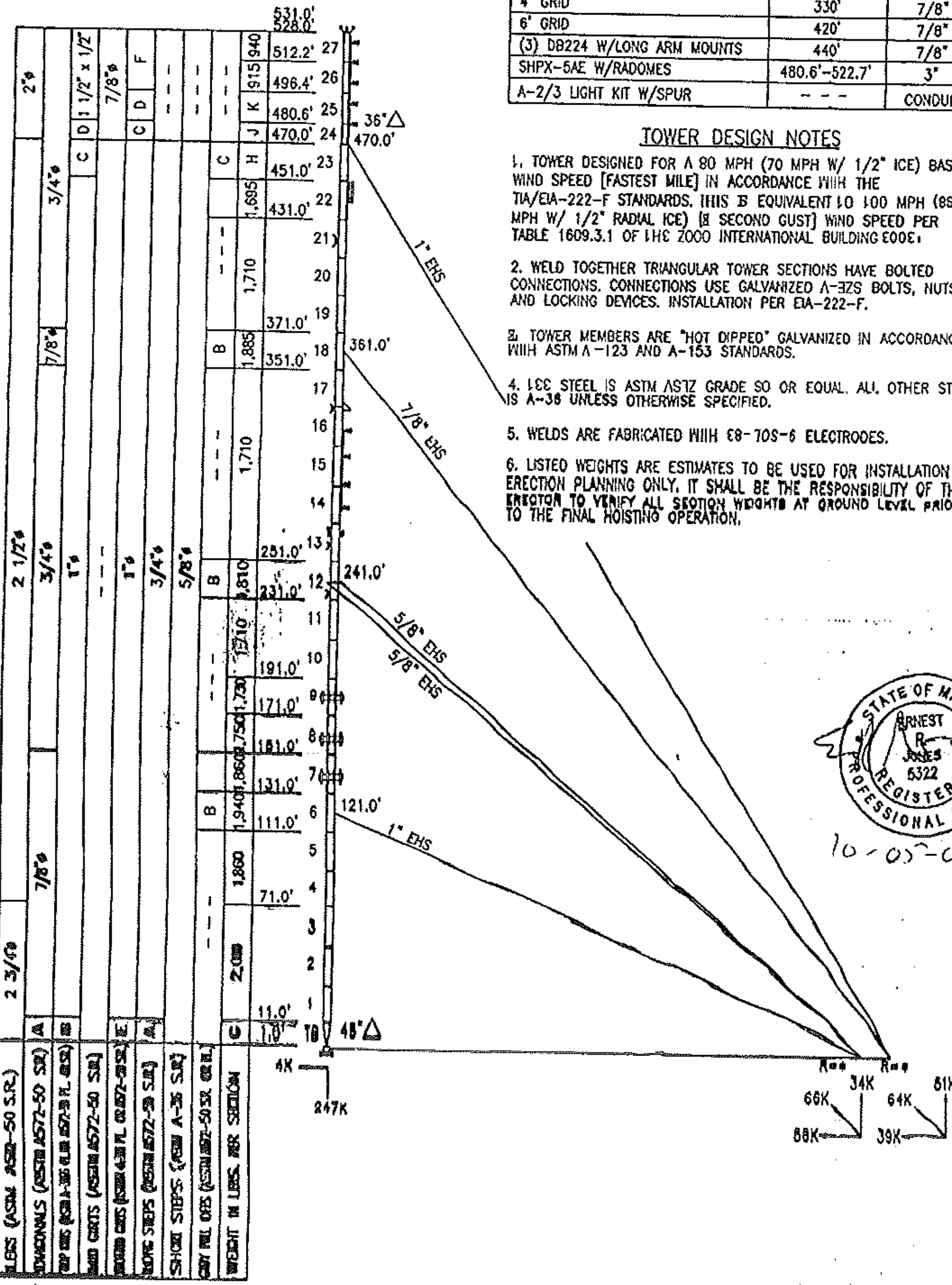
MARK	SIZE
A	1 1/8"ø S.R.
B	1 1/4"ø S.R.
C	12" x 1" PL.
D	7/8"ø S.R.
E	N/A
F	1 1/2" x 1/2"

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	180'	(12) 1-5/8"
4' GRID	235'	7/8"
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' x 6' ICE SHIELD	329.2'	- - -
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-6AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	- - -	CONDUIT



TOWER DESIGN NOTES

1. TOWER DESIGNED FOR A 80 MPH (70 MPH W/ 1/2" ICE) BASIC WIND SPEED [FASTEST MILE] IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (85 MPH W/ 1/2" RADIAL ICE) [3 SECOND GUST] WIND SPEED PER TABLE 1609.3.1 OF THE 2000 INTERNATIONAL BUILDING CODE.

2. WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE BOLTED CONNECTIONS. CONNECTIONS USE GALVANIZED A-325 BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.

3. TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.

4. LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.

5. WELDS ARE FABRICATED WITH E8-70S-6 ELECTRODES.

6. LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.

STATE OF MAINE ERNEST R. JONES 5322 REGISTERED PROFESSIONAL ENGINEER

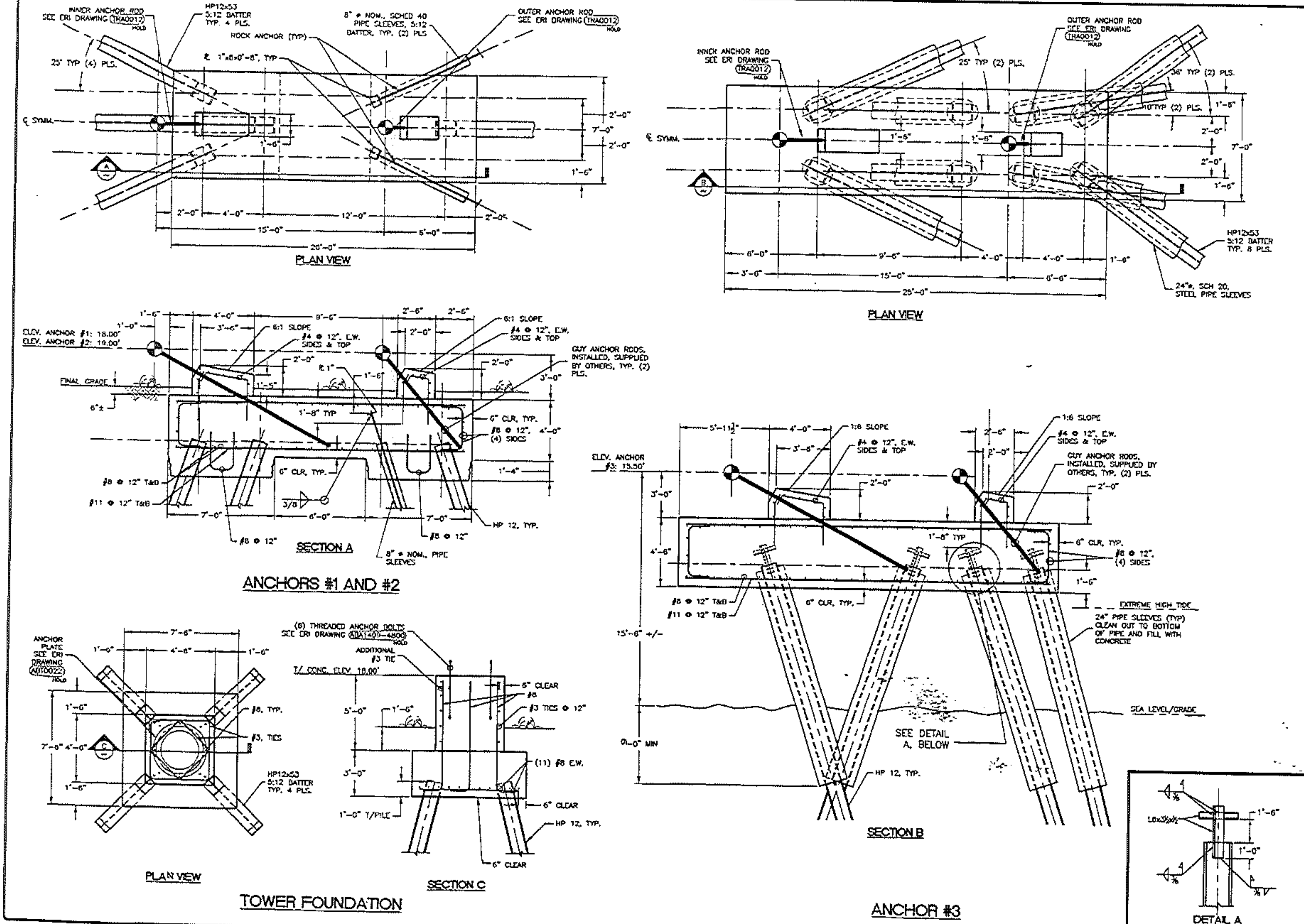
10-05-04

421-B-5

ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4026

NO	REVISION	APP'D	DATE
1			
2			
3			
4			
5			
6			

NAME: TOWER ELEVATION
FOR: PORTLAND, ME
FILE: G:\DRAFTING\ALL\PROJECTS\12590
FACTOR: 1/70 DRAWN: SDA NAME: E-1
DATE: 08/25/04 ENG APPR: [illegible]
SCALE: AS NOTED DRAWING NO. E-1 SIZE NO. 2



ASSOCIATED DESIGN PARTNERS INC.

Office: (207) 878-1751
Fax: (207) 878-1755
E-Mail: ...@adpengineering.com

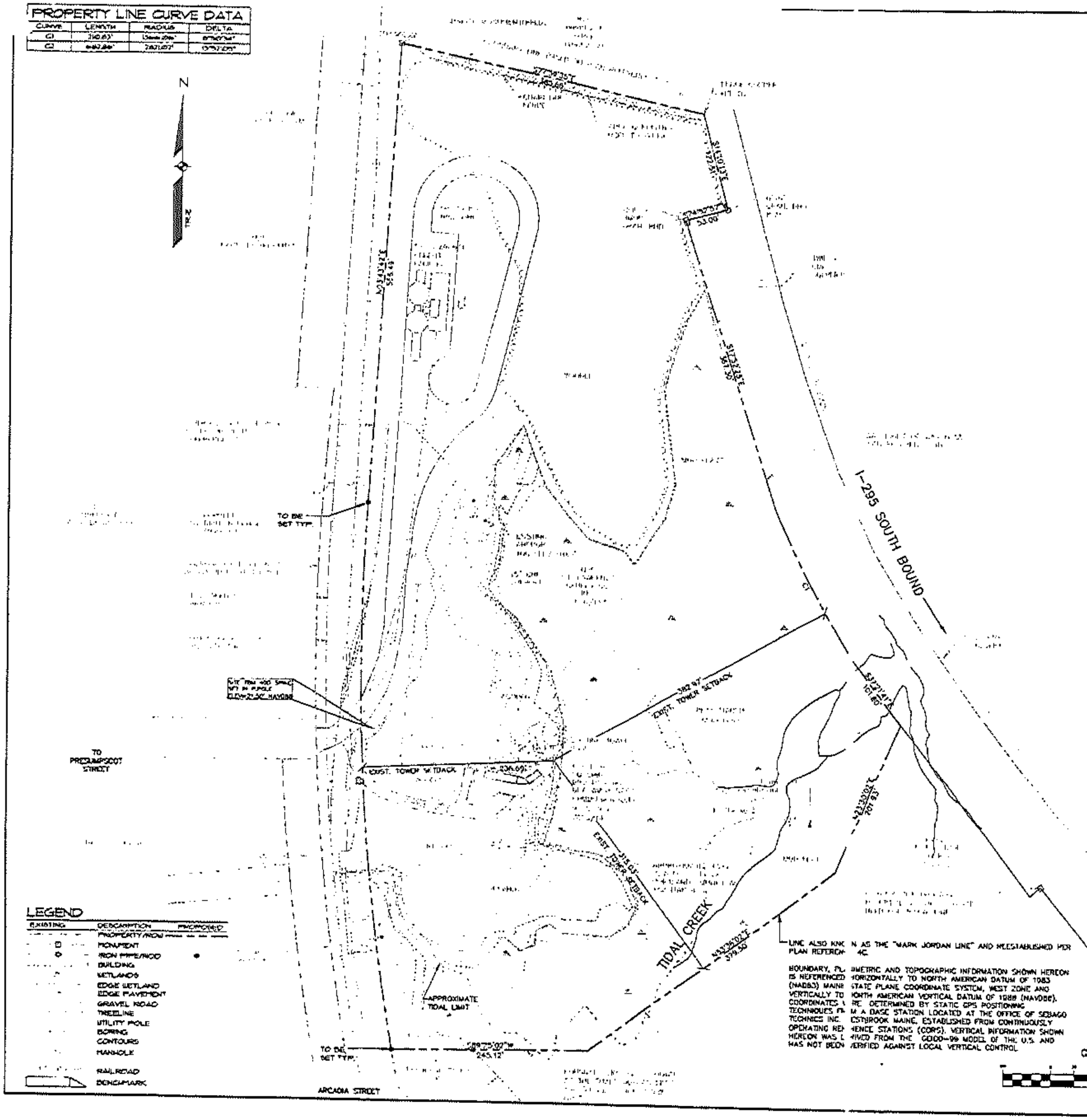
PROJECT: **WMGX TOWER**
PORTLAND, ME
FOR PORTLAND RADIO GROUP

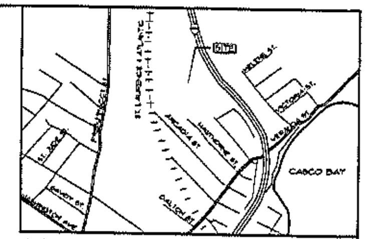
SHEET TITLE: TOWER BASE AND *ANCHOR* DETAILS

REVISIONS

No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	7/06/04
3	RCA	LONGITUDINAL REINFORCING	7/13/04

DATE: 06-22-04
SCALE: 3/8" = 1'-0" (UNO)
DESIGN BY: ARLEDGE
DRAWN BY: BENNETT
PROJECT NUMBER: 04053
SHEET NO: 102





LOCATION MAP

N.T.A.

GENERAL NOTES

1. RECORD OWNER OF THE PROPERTY IS ST. LAWRENCE CEMENT INC. AS DESCRIBED IN BOOK 4676 PAGE 147 AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS. LEASE TO SAGA COMMUNICATIONS LIMITED PARTNERSHIP RECORDED IN BOOK 9525 PAGE 209 BY DEED DATED 1991 AND RECORDED IN SAID REGISTRY OF DEEDS.

2. [illegible]

3. THIS LOT IS LOCATED IN THE MODERATE IMPACT INDUSTRIAL (I-M) & SHORELAND ZONING DISTRICT
ACTUAL CONDITIONS: 588480 S.F. 13.5 Ac.
WETLAND AREA: 252540 S.F. 5.8 Ac.

SPACE AND BULK REQUIREMENTS:

MIN. LOT SIZE: 10,000 S.F.

MIN. FRONTAGE: 60 FT.

FRONT SETBACK: EACH STRUCTURE SHALL BE SETBACK 1 FOOT FROM THE FRONT PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT.

SIDE SETBACK: EACH STRUCTURE SHALL BE SET BACK 1 FOOT FROM EACH SIDE PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT UP TO 25 FEET, EXCEPT THAT THE MINIMUM SIDE YARD SHALL BE 35 FEET WHEN THE SIDE PROPERTY LINE ABUTS A RESIDENTIAL ZONE.

[illegible] SETBACK: EACH STRUCTURE SHALL BE SET BACK 1 FOOT FROM EACH REAR PROPERTY LINE FOR EACH FOOT OF BUILDING HEIGHT UP TO 25 FEET, EXCEPT THAT THE MINIMUM SIDE YARD SHALL BE 35 FEET WHEN THE SIDE PROPERTY LINE ABUTS A RESIDENTIAL ZONE.

[illegible] BUILDING HEIGHT: 75 FT.

MAX. IMPERVIOUS SURFACE RATIO: 75%

4. [illegible]

A. PLAN ENTITLED "LAND IN PORTLAND, MAINE BELONGING TO EDWIN F. SMITH AND RUDOLPH L VIOLETTE" PREPARED BY A.W.I. ENGINEERING CO. DATED NOVEMBER 1984.

B. PLAN ENTITLED "RIGHT OF WAY MAP STATE HIGHWAY 295" PREPARED BY THE MAINE STATE HIGHWAY COMMISSION DATED OCTOBER 1958. SHEET 5 OF 18 SITE FILE 3-137

C. PLAN ENTITLED " DEERING STATION MAP, ATLANTIC & ST. LAWRENCE RAILROAD" VALUATION 26, SHEET 21 DATED JUNE 20, 1917.

D. PLAN ENTITLED "PLAN OF LOTS ARCADIA PARK, EAST DEERING DISTRICT FOR F.A. MERRIAM & CO. BY ILSLEY & CUMMING, FOUND IN THE CCRD PLAN BOOK 10 PAGE 101.

E. PLAN ENTITLED "FOUNDATION BASES FOR WMGX RADIO TOWER" DEARBORN/WHITED NOT DATED.

F. PLAN ENTITLED "TOPOGRAPHIC SURVEY FOR HASCALL & HALL" BY OWEN HASKELL, INC. DATED OCTOBER 13, 1999.

G. PLAN ENTITLED "CEMENT DISTRIBUTION FACILITY, PORTLAND, MAINE" PREPARED FOR THE ST. LAWRENCE CEMENT CO. BY E.C. JORDAN CO., INC. DATED JULY 23, 1980

H. PLAN ENTITLED "WMGX TOWER" BY J.R. CHESEBRO, DATED SEPTEMBER 19, 1972.

I. PLAN ENTITLED "SITE PLAN FOR MAINE BEVERAGE COMPANY SERVICE INC, CUMBERLAND & YORK DISTRIBUTORS WAREHOUSE ADDITION" PREPARED BY BROWN CONSTRUCTION, INC. DATED OCTOBER 17, 1977.

J. CITY OF PORTLAND TAX MAPS 421, 426 AND 427

K. PLAN ENTITLED "PORTLAND WATER DISTRICT ARCADIA STREET PUMP STATION", PREPARED BY H.I. & E.C. JORDAN, DATED NOVEMBER 15, 1972.

L. PLAN ENTITLED "CUMBERLAND & YORK DISTRIBUTORS", PREPARED BY H.I. & E.C. JORDAN, DATED MAY 12, 1970.

M. EXISTING CONDITION PLAN-OCTOBER CORPORATION INTERMEDIAL TRANSFER FACILITY PRESUMPSCOT STREET BY SEVEE & MAHER ENGINEER, INC., DATED MAY 4, 2001.

N. TOWER ORIENTATION SURVEY FOR WMGX RADIO TOWER BY SQUAW BAY CORP, DATED MARCH, 1994

O. PLAN OF VERANDA PARK BY FESSENDEN PARK CO, DATED JANUARY 30, 1904 AND RECORDED IN THE CCRD IN PLAN BOOK 10, PAGE 55.

BOUNDARY, PL[illegible]METRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS REFERENCED HORIZONTALLY TO NORTH AMERICAN DATUM OF 1983 (NAD83) MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE AND VERTICALLY TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). COORDINATES [illegible] DETERMINED BY STATIC GPS POSITIONING TECHNIQUES [illegible] A BASE STATION LOCATED AT THE OFFICE OF SEBAGO TECHNICS INC. [illegible] ESTBROOK MAINE, ESTABLISHED FROM CONTINUOUSLY OPERATING [illegible] STATIONS (CORS). VERTICAL INFORMATION SHOWN HEREON WAS [illegible] FROM THE GEOID-99 MODEL OF THE U.S. AND HAS NOT BEEN [illegible] AGAINST LOCAL VERTICAL CONTROL.

REV.	BY	DATE	STATUS

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Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

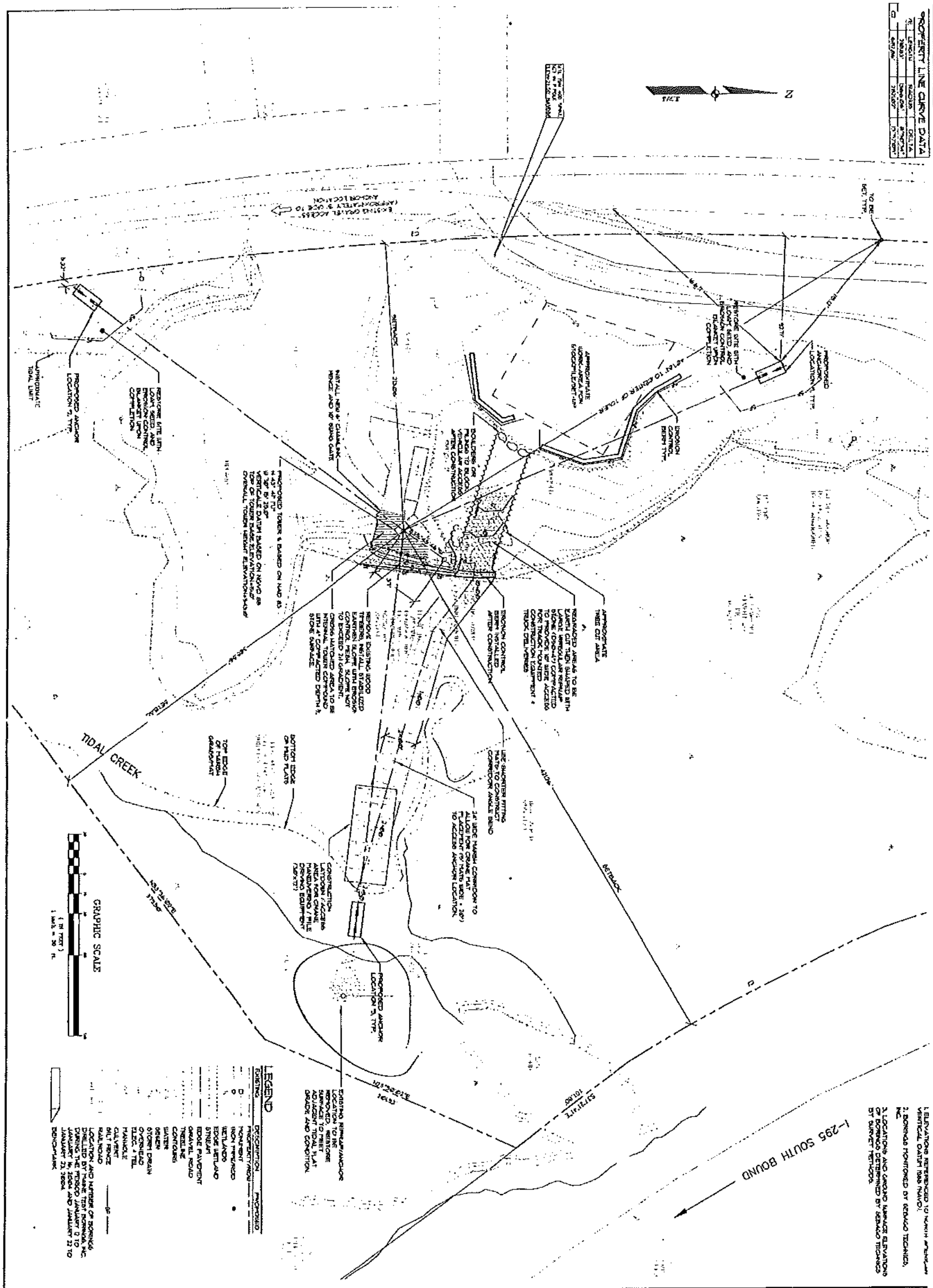
PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		CLB	CLB	JAB

EXISTING CONDITIONS SURVEY
OF THE
SUNSHINE BROADCASTING WMGX TOWER
187 PRESUMPSCOT STREET
PORTLAND, MAINE
FOR
SAGA COMMUNICATIONS, INC.
420 WESTERN AVE
SOUTH PORTLAND, MAINE 04106

RECORD OWNER:
ST. LAWRENCE CEMENT, INC
3 COLUMBIA CIR
ALBANY, NY 12203

DATE	SCALE
03-03-04	1"=60'

SHEET 1 OF 1



SHEET 1 OF 2	DATE 05-28-04	SITE PLAN OF THE 528' TOWER REPLACEMENT PROJECT 787 PRESUMPSCOT STREET PORTLAND, MAINE FOR SAGA COMMUNICATIONS, 40 WESTERN AVE SOUTH PORTLAND, MAINE 04106	RECORD OWNER: ST. LAWRENCE CEMENT, INC 3 COLUMBIA DR ALBANY, NY 12203	Sebago Technics Engineering Expertise You Can Build On One Chabot Street Westbrook, Me 04098-1339
	SCALE 1"=30'			

PROJECT NO	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		CLB	CLB	JNB

REV	BY	DATE	STATUS
B	JRS	8-30-04	BANK & RIPRAP ANCHOR REMOVAL PER D.E.P. COMMENTS
A	JRS	5-28-04	NRPA/DEP APPLICATION SUBMISSION

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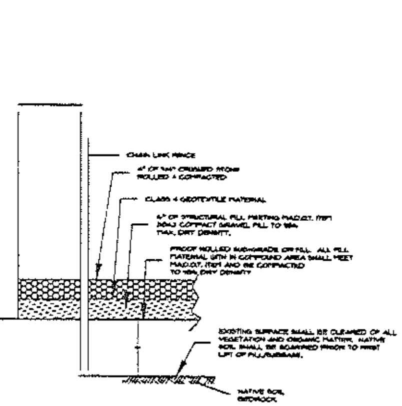
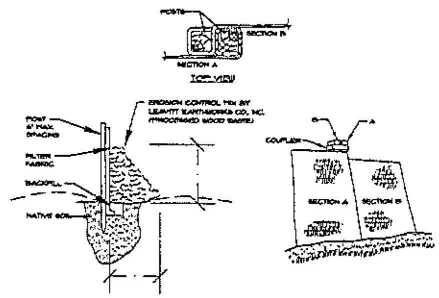
STATE OF MAINE
PROFESSIONAL ENGINEER

10-19-04

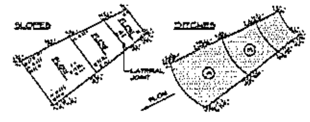


SITE AREA SURFACING
NOT TO SCALE



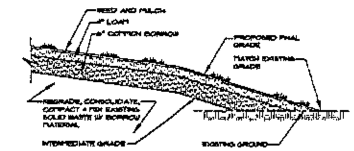
INSTALLATION:
1. EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION AS SHOWN ABOVE.
6. BARRIER SHALL BE [illegible] SILT FENCE OR EQUAL.

FILTER BARRIER / EROSION CONTROL BERM

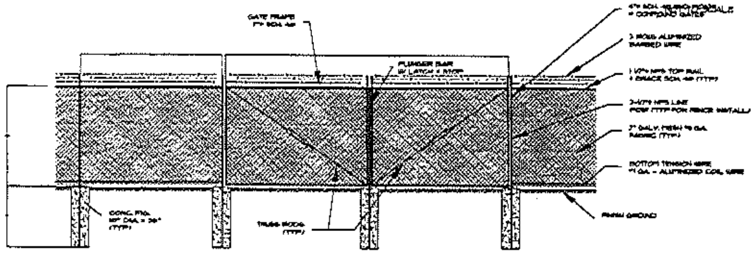


NOTES:
1. BUTT THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCH AND SECURE END WITH STAPLES AT 4" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP IS OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS, STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2' ON CENTER.
5. MAKE STAPLES TO BE [illegible] LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN [illegible] OR APPROVED EQUAL.

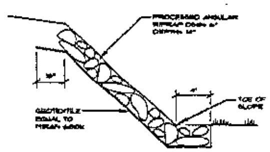
EROSION CONTROL BLANKET
NOT TO SCALE



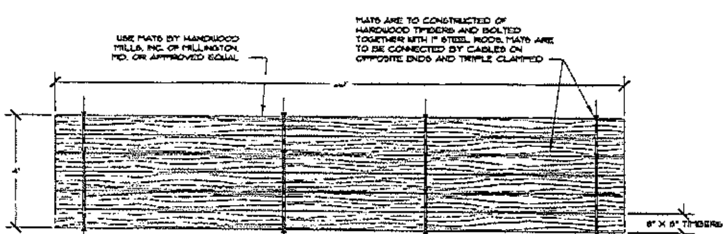
TYPICAL COVER SECTION
NOT TO SCALE



TYPICAL FENCE SECTION
NOT TO SCALE



SIDE SLOPE RIPRAP
NOT TO SCALE



CRANE MAT DETAIL

EROSION AND SEDIMENTATION CONTROL PLAN

A. PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, FILTER FABRIC FENCING WILL BE STAKED ACROSS THE SLOPE(S) ON THE CONTOUR, AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SILT FENCES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN & DETAILS IN THE PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST [illegible] VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT THE INTERSECTION WITH THE PROPOSED ACCESS DRIVE AND THE EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

THE FOLLOWING EROSION CONTROL MEASURES SHALL BE FOLLOWED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION OF THIS PROJECT.

B. CONSTRUCTION AND POST-CONSTRUCTION PHASE

1. A) AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION AND SHALL NOT EXCEED 14 DAYS. AREAS THAT WILL NOT BE COMPLETED (COVERED AND/OR FINISH GRADED) WITHIN FOURTEEN (14) DAYS OF DISTURBANCE SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL MEASURES WITHIN FOURTEEN (14) DAYS OF DISTURBANCE. TEMPORARY EROSION CONTROL SHALL INCLUDE EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE INSPECTING ENGINEER AND AS SHOWN ON THE DESIGN PLANS. IF MULCH IS USED, HAY OR STRAW MULCH SHALL BE APPLIED AT THE RATE OF 2 BALES PER 1,000 SQUARE FEET. APPLICATION AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE. MULCH SHALL BE KEPT MOIST TO AVOID LOSS DUE TO WIND. MULCH AND NETTING SHALL BE APPLIED IN THE BASE OF ALL GRASSED WATERWAYS, [illegible] DITCHES AND IN SLOPES WHICH EXCEED [illegible] AND ANY DISTURBED AREAS WITHIN 100' OF WETLANDS OR STREAMS.

B) IF DISTURBED AREAS DO NOT RECEIVE FINAL SEEDING BY SEPTEMBER 15TH OF THE YEAR OF CONSTRUCTION, THEN ALL DISTURBED AREAS SHALL BE SEEDED WITH A WINTER COVER CROP OF RYE AT THE RATE OF 3 LBS/1,000 SF. TO PROVIDE WINTER PROTECTION. WINTER SEEDINGS SHALL BE COVERED WITH EROSION CONTROL MESH (MULCH AND NETTING). HEAVY GRADE MATS SHALL BE USED IN THE BASE OF ALL GRASSED WATERWAYS, ON SLOPES EQUAL TO OR GREATER THAN [illegible], AND ANY DISTURBED AREAS WITHIN 100' OF WETLANDS OR STREAMS. MULCH AND NETTING SHALL ALSO BE APPLIED FOR ADDITIONAL WINTER PROTECTION ALONG SIDE SLOPES OF GRASSED WATERWAYS AND IN ALL AREAS EQUAL TO OR GREATER THAN [illegible] SLOPE.

C) DURING WINTER CONDITIONS, AREAS THAT WILL NOT BE COMPLETED (COVERED AND/OR FINISH GRADED) WITHIN SEVEN (7) DAYS OF DISTURBANCE SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL MEASURES WITHIN SEVEN (7) DAYS OF DISTURBANCE. TEMPORARY EROSION CONTROL SHALL INCLUDE EROSION CONTROL MESH, NETTING OR MULCH AS DIRECTED BY THE INSPECTING ENGINEER AND AS SHOWN ON THE DESIGN PLANS. IF MULCH IS USED, HAY OR STRAW MULCH SHALL BE APPLIED TO PROVIDE A MINIMUM UNIFORM MULCH DEPTH OF 4". THE APPLICATION AREA SHALL BE SUFFICIENTLY COVERED WITH MULCH TO AVOID ANY VISIBLE SOIL EXPOSURE.

2. ALL TOPSOIL SHALL BE COLLECTED, STOCKPILED, SEEDED WITH RYE AT 3 LBS/1,000 SF. AND MULCHED, AND RE-USED AS REQUIRED. SILTATION FENCING SHALL BE PLACED DOWN GRADIENT FROM STOCKPILED LOAM. LOAM SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE OWNER AND INSPECTING ENGINEER.

3. ALL SILT FENCES AND EROSION CONTROL MEASURES SHALL BE INSTALLED ACCORDING TO THIS PLAN. THESE SHALL BE MAINTAINED DURING DEVELOPMENT TO REMOVE SEDIMENT FROM RUNOFF WATER. ALL THE SILT FENCES AND EROSION CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER ANY RAINFALL OR RUNOFF EVENT, MAINTAINED AND CLEANED UNTIL ALL AREAS HAVE AT LEAST [illegible] VIGOROUS PERENNIAL VEGETATIVE COVER OF GRASSES.

4. A CONSTRUCTION ENTRANCE SHALL BE BUILT AT THE INTERSECTION OF THE EXISTING ROAD AND THE ACCESS DRIVE. ROADWAY AREAS SHALL BE PERIODICALLY SWEPT OR WASHED TO AVOID TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS.

5. STONE CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALES ARE ESTABLISHED WITH AT LEAST [illegible] OF VIGOROUS PERENNIAL GROWTH.

6. ALL AREAS SHALL BE SEEDED AND STABILIZED IN ACCORDANCE WITH THE FOLLOWING VEGETATION PLAN.

C. VEGETATION PLAN: REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF CONSTRUCTION OF THE ROADWAY IMPROVEMENTS. DISTURBED AREAS SHALL ALSO BE MULCHED AND ANCHORED PRIOR TO ANY STORM EVENT. SEE MULCHING REQUIREMENTS IN SECTION B(1A) ABOVE. IF FINAL SEEDING CANNOT BE ACCOMPLISHED BY SEPTEMBER 15TH, THEN ALL DISTURBED AREAS SHALL BE SEEDED WITH A WINTER COVER CROP OF RYE AT THE RATE OF 3 LBS/1,000 SQ. FT. TO PROVIDE WINTER PROTECTION. SEEDED AREAS SHALL BE COVERED WITH EROSION CONTROL MESH. SEE WINTER PROTECTION REQUIREMENTS IN SECTION B (1B) ABOVE.

REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

1. FOUR INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 1" IN DIAMETER, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

2. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TEST SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14 DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P2O5-K2O) OR EQUAL	[illegible] LBS/1,000 SF
GROUND LIMESTONE (50% CALCIUM + MAGNESIUM OXIDE)	[illegible] LBS/1,000 SF

3. FOLLOWING SEED BED PREPARATION, SWALE AREAS, FILL AREAS AND BACK SLOPES SHALL BE SEEDED AT A RATE OF 3 LBS/1,000 SF. WITH A MIXTURE OF 35% CREEPING RED FESCUE, 6% RED TOP, 24% KENTUCKY BLUEGRASS, 10% PERENNIAL RYEGRASS, 20% ANNUAL RYEGRASS AND 5% WHITE DUTCH CLOVER.

4. EROSION CONTROL MESH SHALL BE APPLIED IN ACCORDANCE WITH THE PLANS OVER ALL FINISH SEEDED AREAS AS SPECIFIED ON THE DESIGN PLANS.

5. ALL HAY BALE AND/OR FILTER FABRIC BARRIERS WILL REMAIN IN PLACE UNTIL SEEDINGS HAVE BECOME [illegible] ESTABLISHED AND THEN REMOVED WITHIN 10 DAYS.

6. THE INSPECTING ENGINEER AT HIS/HER DISCRETION MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES AND/OR SUPPLEMENTAL VEGETATIVE PROVISIONS TO MAINTAIN STABILITY OF EARTHWORKS AND FINISH GRADED AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SUPPLEMENTAL MEASURES AS DIRECTED BY THE INSPECTING ENGINEER. FAILURE TO COMPLY WITH THE ENGINEER'S DIRECTIONS WILL RESULT IN DISCONTINUATION OF CONSTRUCTION ACTIVITIES.

D. INSPECTION/MONITORING: MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS AS NEEDED TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE MUNICIPALITY WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA [illegible] UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF [illegible] OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

REV.	BY:	DATE:	STATUS
A	JRS	5-28-04	

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10-14-04

Sebago Technics
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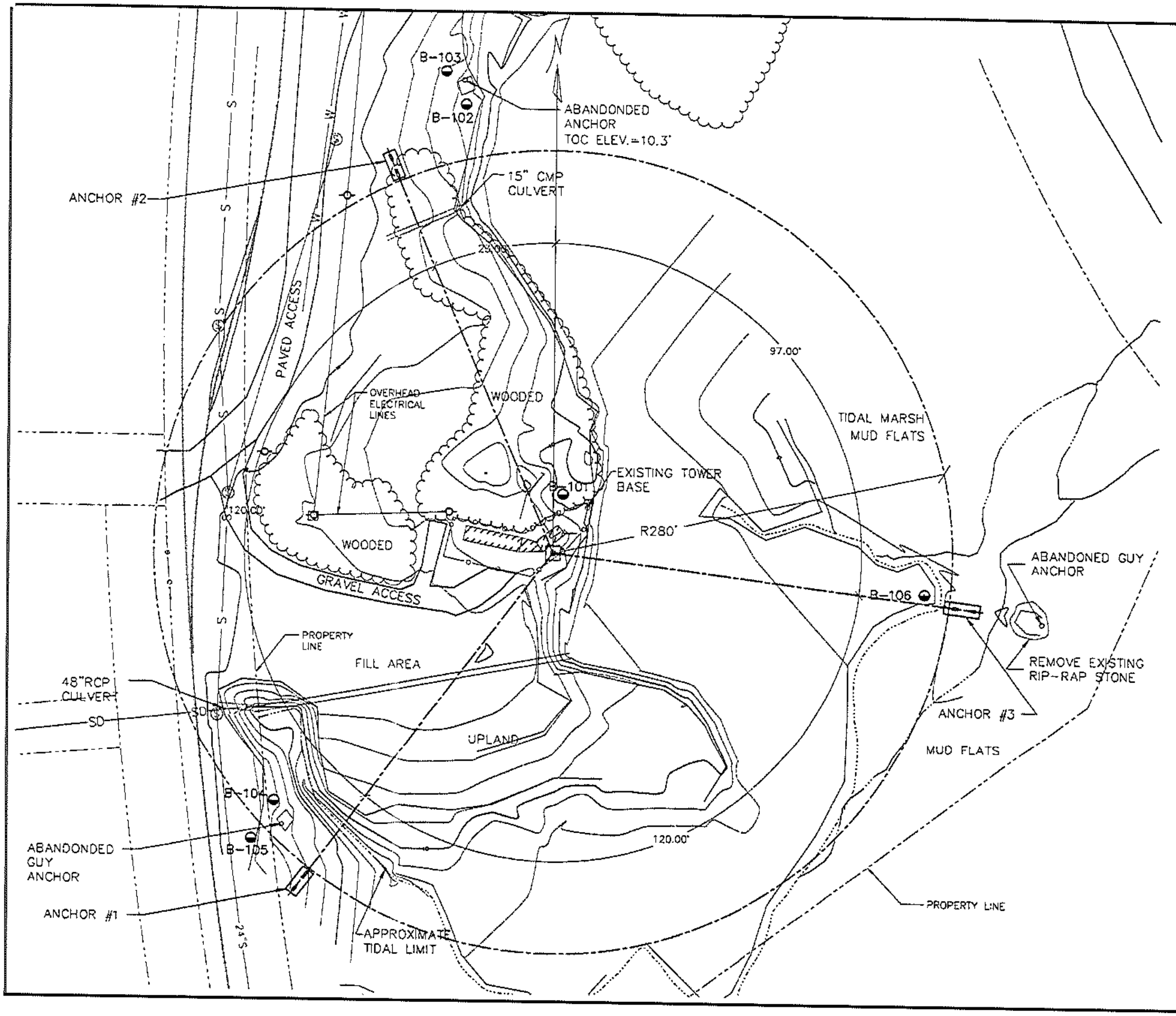
One Chabot Street
Westbrook, ME 04098-1339
T (207) 856-0277

PROJECT NO.	FIELD BOOK	DESIGN	CHKD	DRAWN
03497		JRS	CLB	EGY

DETAILS OF THE 528' TOWER REPLACEMENT PROJECT
187 PRESUMPSCOT STREET
PORTLAND, MAINE
FOR SAGA COMMUNICATIONS, 420 WESTERN AVE, SOUTH PORTLAND, MAINE 04106
RECORD OWNER: ST. LAWRENCE CEMENT, INC, 3 COLUMBIA CIR, ALBANY, NY 12203

DATE	SCALE
05-28-04	AS NOTED

SHEET 2 OF 2



CONCRETE

1. ALL CONCRETE WORK AND MATERIAL SHALL CONFORM TO ACI 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-99 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER CEMENT RATIO OF 0.45

3. CONCRETE IN ANCHOR #3 SHALL HAVE 3 GALLONS PER CUBIC YARD OF DCI-S CORROSION INHIBITOR BY W.R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURERS SUGGESTED PRACTICES. ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF DCI-S.

4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.

5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.

6. CONTRACTOR TO SUBMIT MILL CERTIFICATION FOR REINFORCING STEEL AND DESIGN MIX FOR CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

PILES

1. PILES SHALL BE HP12x53 WITH A MINIMUM YIELD STRESS OF 50 KSI, AND SHALL CONFORM TO ASTM A 572 GRADE 50, A 242 GRADE 50, OR A 588 GRADE 50.

2. PILES SHALL BE FITTED WITH DRIVING POINTS.

3. PILES SHALL BE DRIVEN TO BEARING IN GLACIAL TILL OR BEDROCK WITH A HAMMER DELIVERING A MINIMUM OF 25,000 FT. LBS OF ENERGY PER BLOW. A FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSAL IS ENCOUNTERED, DRIVING MAY BE TERMINATED WHEN THE PILE PENETRATION IS LESS THAN ½" FOR TEN SUCCESSIVE BLOWS.

4. AT ANCHOR #3, DRIVE 24" DIA., SCH. 20 PIPE CONCENTRIC WITH PILES, TO 3'-0" BELOW MUD LINE; CLEAN SOIL FROM INSIDE PIPE AND FILL WITH CONCRETE.

5. ONE PILE SHOULD BE LOAD TESTED TO 300 KIPS. IN LIEU OF A PILE LOAD TEST, THE CONTRACTOR MAY MONITOR THE INSTALLATION OF THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-GOBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACHIEVE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER IN LIEU OF LOAD TEST WILL REQUIRE APPROVAL OF THE LOCAL BUILDING OFFICIAL.

6. WHERE INDICATED ON THE DRAWING, ROCK ANCHORS SHALL BE INSTALLED INSIDE THE WEB OF THE PILES TO RESIST UPLIFT. ANCHORS SHALL BE 1 3/8" DIAMETER UPSET THREADED STEEL BARS CONFORMING TO ASTM A722, TYPE II, GRADE 150 KSI.

7. ROCK ANCHORS SHALL BE SHALL HAVE A MINIMUM BOND LENGTH INTO BEDROCK OF 26 FEET. THE HOLE SHOULD BE OVER-BORED AT LEAST 4". THE HOLE INTO BEDROCK SHALL BE AT LEAST 4" DIAMETER MADE WITH AIR PERCUSSION DRILLING TECHNIQUES TO PROVIDE A ROUGH SURFACE.

8. ROCK ANCHORS SHALL BE GROUTED INTO THE BEDROCK WITH EITHER PORTLAND CEMENT GROUT OR EPOXY RESIN. CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000. EPOXY GROUT MUST BE TREMIED OR PUMPED INTO THE HOLE.

9. ROCK ANCHORS SHALL BE PROOF TESTED TO 189 KIPS (150% OF DESIGN CAPACITY) AND LOCKED OFF AT 71 KIPS (50% OF DESIGN CAPACITY.)

10. THE TOP 15 FEET OF 8" DIAMETER PIPE SLEEVES, AND THE ENTIRE LENGTH OF 24" DIAMETER PIPE SLEEVES, WITH CARBOLINE BITUMASTIC 300M, COAL TAR EPOXY, OR EQUAL APPROVED IN WRITING BY THE ENGINEER. COATING SHALL BE A MINIMUM OF 20 MILS, DRY FILM THICKNESS.

SURFACE PREPARATION FOR COATING: FIRST REMOVE VISIBLE OIL, GREASE, AND DRAWING AND CUTTING COMPOUNDS BY SOLVENT CLEANING PER SSPC SP 1. THEN, COMPLETE SURFACE PREPARATION BY NEAR-WHITE BLAST CLEANING. REMOVE RESIDUAL DUST FROM BLASTED SURFACE BY BLOWING WITH DRY, OIL-FREE AIR, VACUUMING, OR SWEEPING. PROVIDE SURFACE PROFILE OF AT LEAST 2 MIL THICKNESS, PER SSPC SP 10.

DESIGN LOADS

TOWER BASE DESIGN BASED ON LOADING INFORMATION PROVIDED BY ELECTRONICS RESEARCH, INC. (E.R.I.) 7777 GARDNER RD, CHANDLER, INDIANA. E.R.I. LOADS GENERATED UTILIZING TIC DESIGN CRITERIA.

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road, Falmouth, Maine 04105
Office: (207) 878-1751
Fax: (207) 878-1788
E-Mail: adp@adpengineering.com

PROJECT: **WMGX TOWER**
PORTLAND, ME
FOR PORTLAND RADIO GROUP

SHEET TITLE: **TOWER BASE AND ANCHOR LOCATIONS**

REVISIONS

No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	4/22/04
2	RCA	PILE AND FOOTING REVISIONS & CONCRETE NOTE REVISION	5/06/04
3	RCA	PILE NOTE #9	5/11/04
4			

DATE: 04-22-04
SCALE: 1" = 30'
DESIGN BY: ARLEDGE
DRAWN BY: BONNETT
FILE #: 04053-PR-R3-C1XX.DWG
PROJECT NUMBER: 04053
SHEET NO: 101

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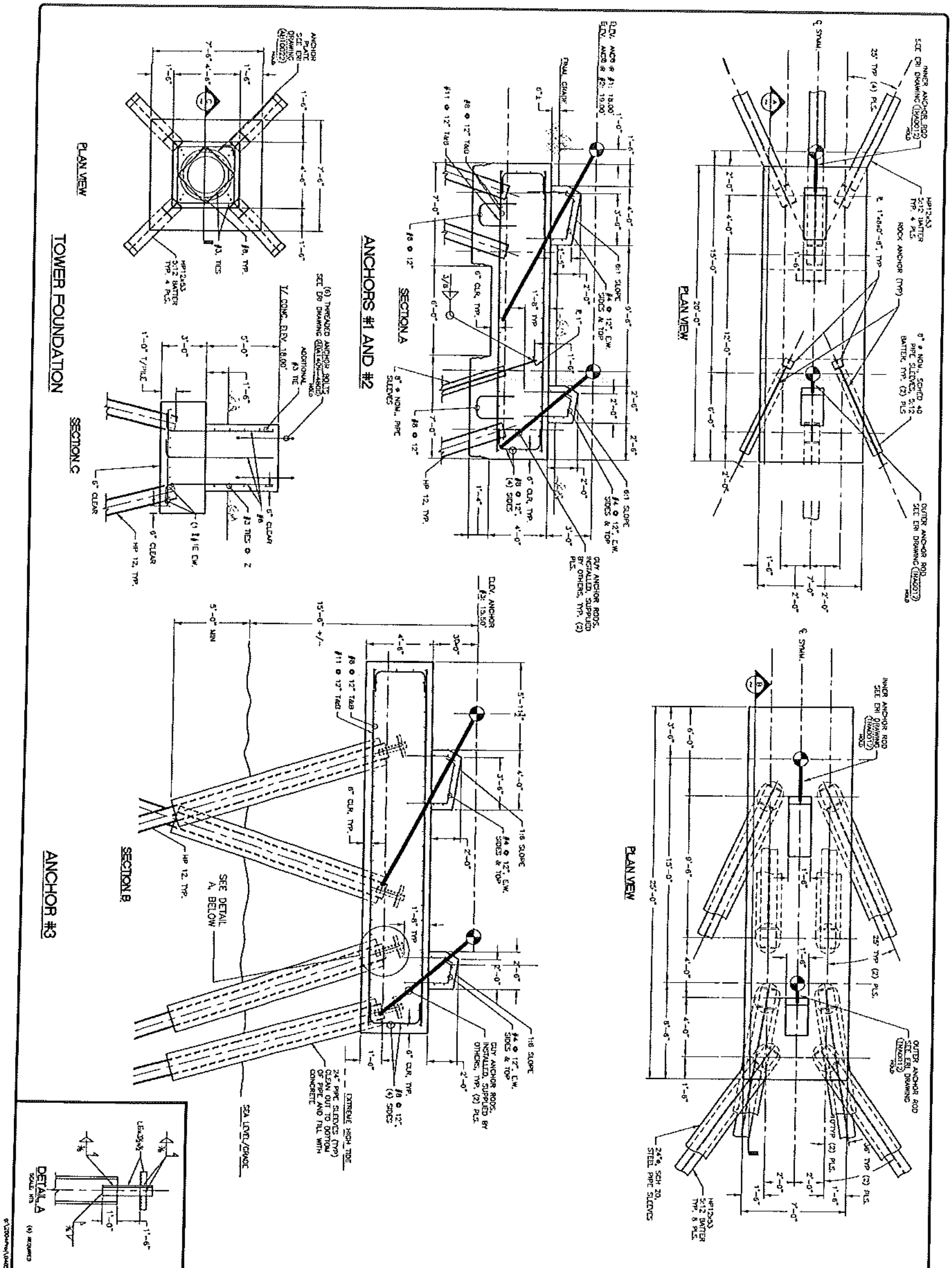

REVISIONS			
No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	8/05/04
3	RCA	LONGITUDINAL REINFORCING	8/13/04
4			

PROJECT NUMBER
04053
SHEET NO.
102

WMGX TOWER
PORTLAND, ME
FOR PORTLAND RADIO GROUP

SHEET TITLE:
TOWER BASE
AND *ANCHOR* DETAILS

ASSOCIATED DESIGN PARTNERS INC.
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Falmouth, Maine 04105
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E-Mail: adp@adpengineering.com

:\Drafting\ALL\PROJECTS\12590\E-1.dwg, 10/12/2004 02:39:35 PM, Theresa Webster, Electronics Research Inc.

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	SHACKLES TOWER	SHACKLES ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	INITIAL TENSION LBS. 60°F
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	- - -	- -	*	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450

*REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

MATERIAL LIST

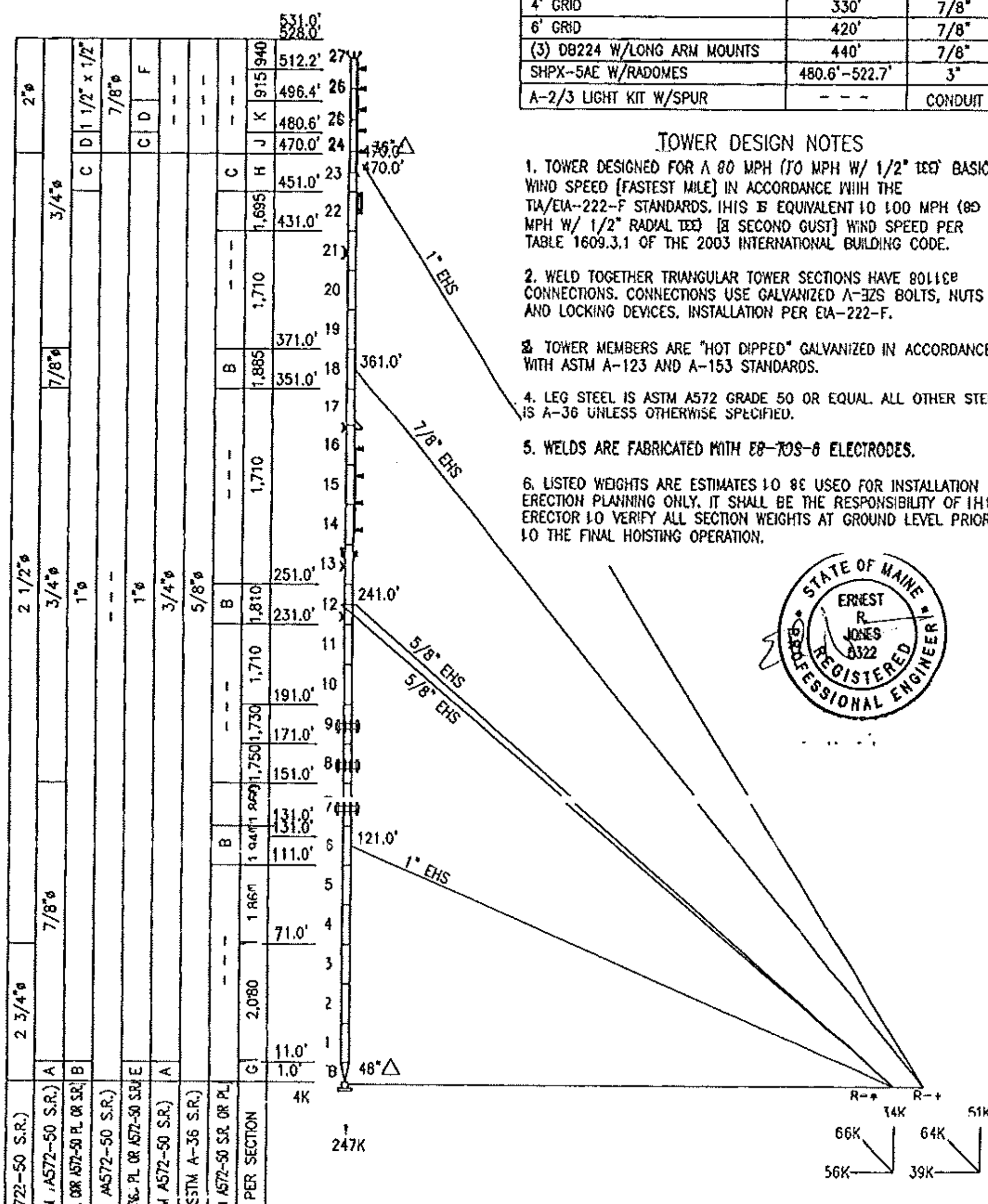
MARK	SIZE
A	1 1/8"ø S.R.
B	1 1/4"ø S.R.
C	12" x 1" PL.
D	7/8"ø S.R.
E	N/A
F	1 1/2" x 1/2"

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	180'	(12) 1-5/8"
4' GRID	235'	7/8"
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' x 6' ICE SHIELD	329.2'	- - -
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	- - -	CONDUIT



TOWER DESIGN NOTES

1. TOWER DESIGNED FOR A 80 MPH (70 MPH W/ 1/2" ICE) BASIC WIND SPEED (FASTEST MILE) IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (90 MPH W/ 1/2" RADIAL ICE) (3 SECOND GUST) WIND SPEED PER TABLE 1609.3.1 OF THE 2003 INTERNATIONAL BUILDING CODE.

2. WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE 8011CE CONNECTIONS. CONNECTIONS USE GALVANIZED A-325 BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.

3. TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.

4. LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.

5. WELDS ARE FABRICATED WITH E8-70S-6 ELECTRODES.

6. LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.

STATE OF MAINE
ERNEST R. JONES
6322
REGISTERED PROFESSIONAL ENGINEER

ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4030

NO	REVISION	APP'D	DATE
1	UPDATED NOTE TO 2003 IBC	TAW	10-12-04

NAME: TOWER ELEVATION
FOR: PORTLAND, ME
DATE: 08/24/04
SCALE: AS NOTED
DRAWING NO. E-1

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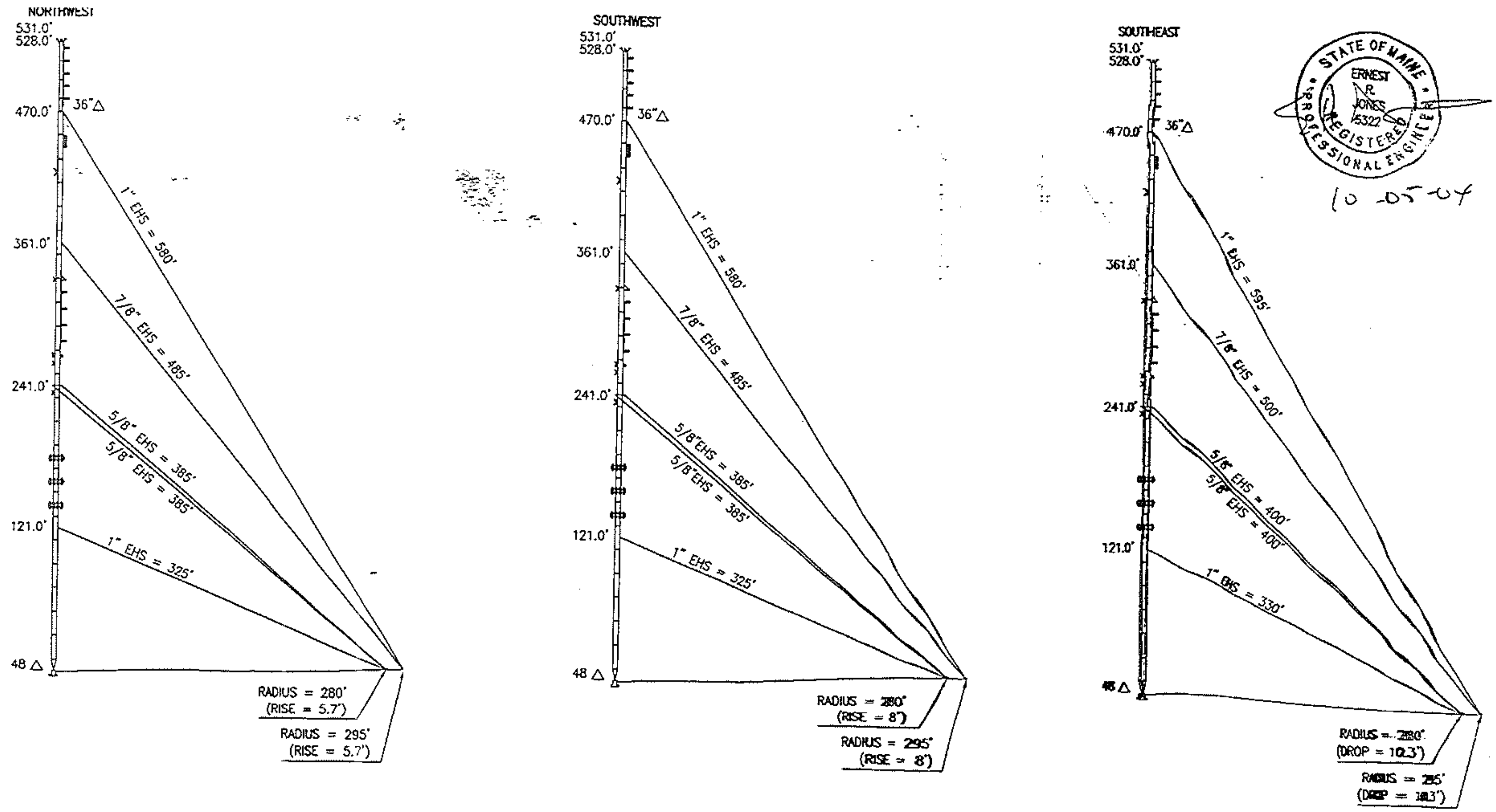

ERI

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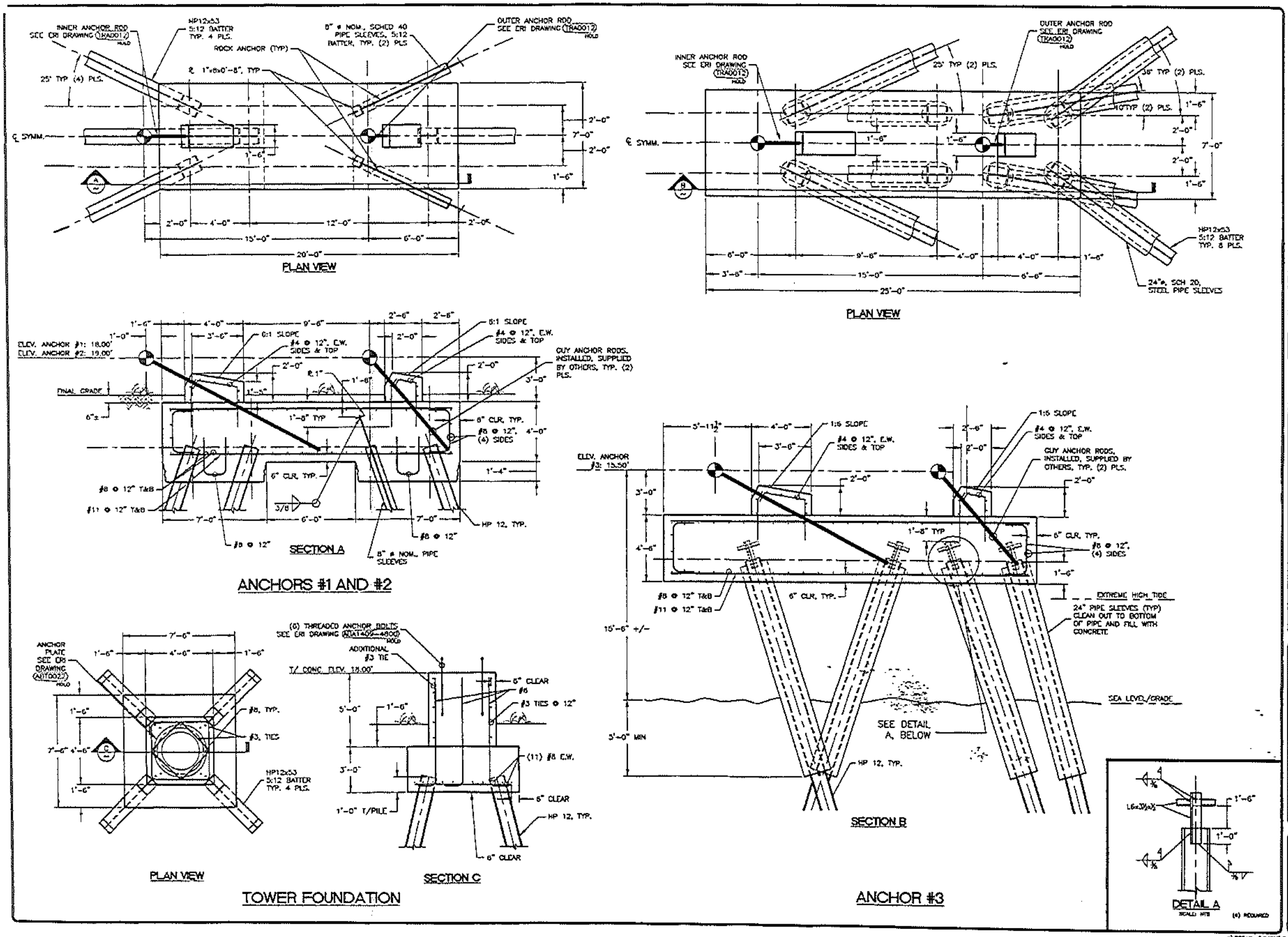
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4026

NO.	REVISION	APP'D	DATE
6			
5			
4			
3			
2			
1			

NAME: GUY WIRE DEVIATIONS & CUT LENGTHS
FOR: PORTLAND, ME
SHEET NO.: 2
PATH: C:\DRAFTING\ALL\PROJECTS\12590
FACTOR: 1/1600
DRAWN: SDM
DWG: E-1A
DATE: 08/26/04
SCALE: AS NOTED
DRAWING NO.: E-1A



PROJECT: WMGX TOWER
PORTLAND, ME
FOR: FORTLAND RADIO GROUP

SHEET TITLE: TOWER BASE AND ANCHOR DETAILS

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road, Falmouth, Maine 04105
Office (207) 878-1751
Fax (207) 878-1788
E-Mail: adp@adpengineering.com

REVISIONS

No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	8/27/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	10/25/04
3	RCA	LONGITUDINAL REINFORCING	2/13/04
4			

DATE: 08-22-04
SCALE: 3/32" = 1'-0" (UNO)
DESIGN BY: ARLEDGE
DRAWN BY: REMNETT
PROJECT NUMBER: 04053
SHEET NO: 102

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	SHACKLES TOWER	SHACKLES ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	INITIAL TENSION LBS. 60°F
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	- - -	- -	*	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450

REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT
* LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

MATERIAL LIST

MARK	SIZE
A	1 1/8"φ S.R.
B	1 1/4"φ S.R.
C	12" x 1" PL.
D	7/8"φ S.R.
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WEIGHT LIST

MARK	WEIGHT
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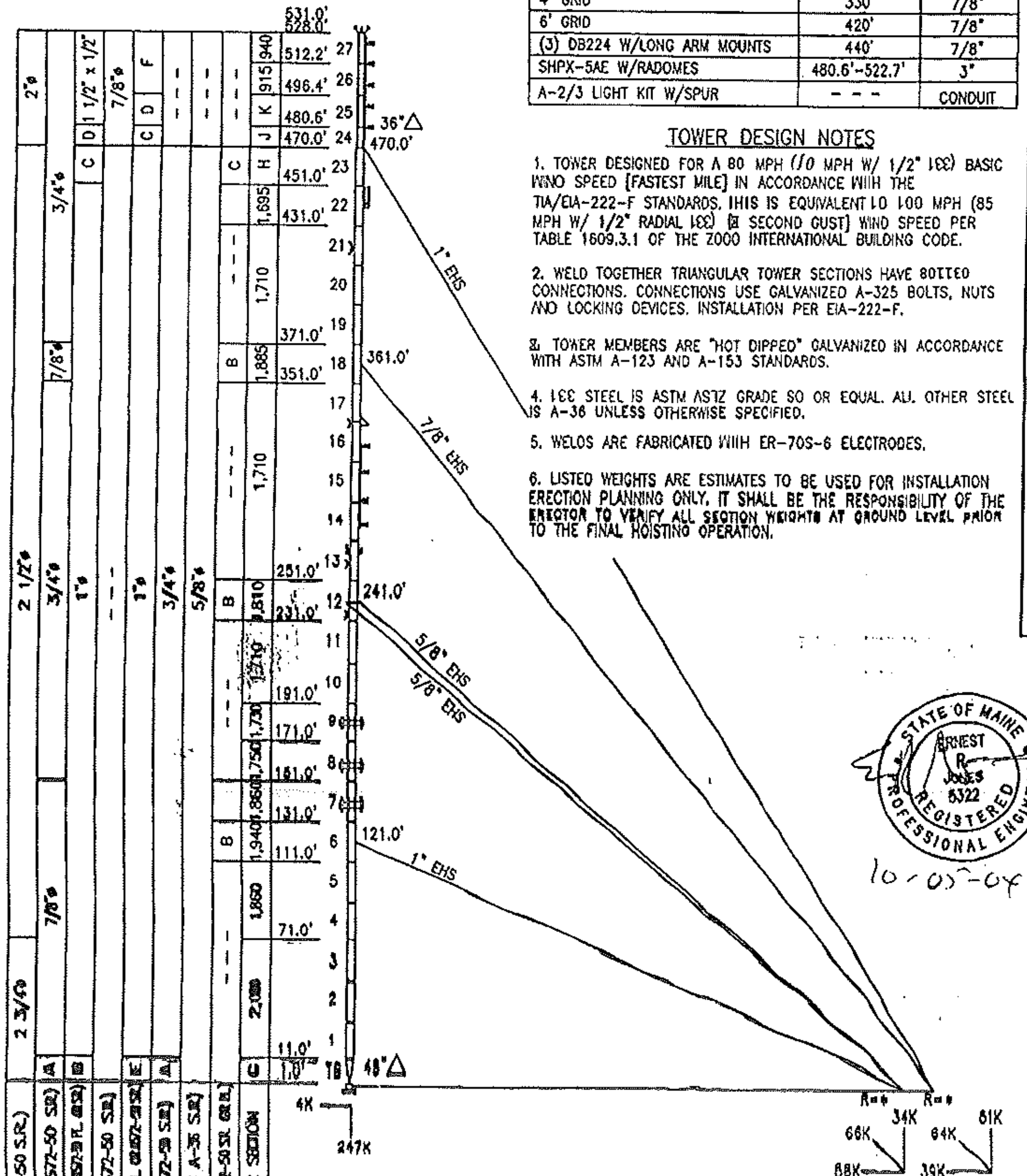
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' x 6' ICE SHIELD	329.2'	- - -
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	- - -	CONDUIT



TOWER DESIGN NOTES

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2. WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE BOLTED CONNECTIONS. CONNECTIONS USE GALVANIZED A-325 BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.

3. TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.

4. LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.

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STATE OF MAINE
ERNEST R. JONES
5322
REGISTERED PROFESSIONAL ENGINEER

10-05-04

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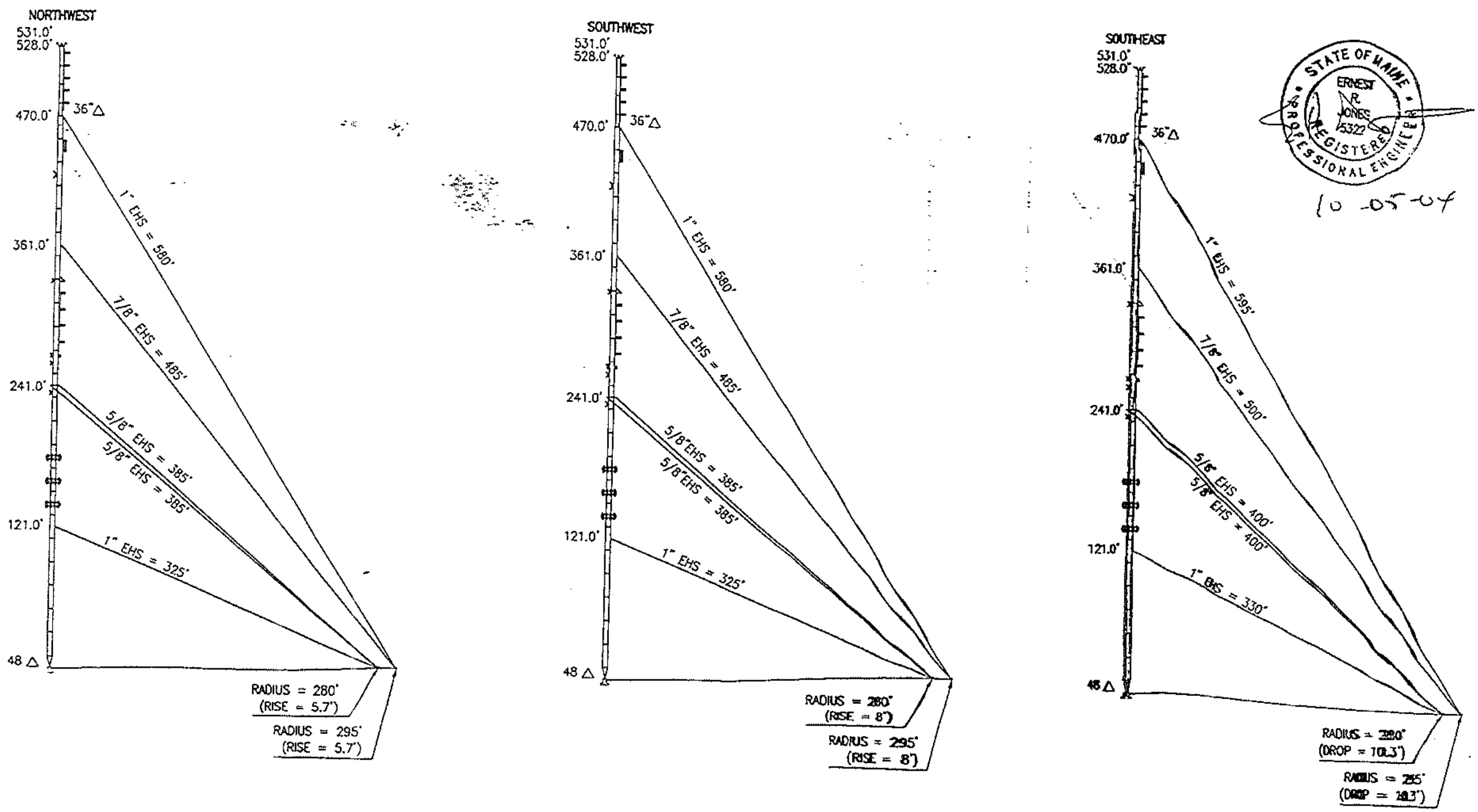
ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4028

NO	REVISION	APP'D	DATE
1			
2			
3			
4			
5			
6			

NAME: TOWER ELEVATION
FOR: PORTLAND, ME
PATH: G:\DRAFTING\ALL\PROJECTS\12590
FACTOR: 1/700 DRAWN: SDA NAME: E-1
DATE: 08/24/04
MAT'L: AS NOTED
DRAWING NO. E-1
REV NO. 2

rafting\ALL\PROJECTS\12590\E-1A.dwg, 08/31/2000 8:01:42 AM, sarnold



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7777 GARDNER RD.
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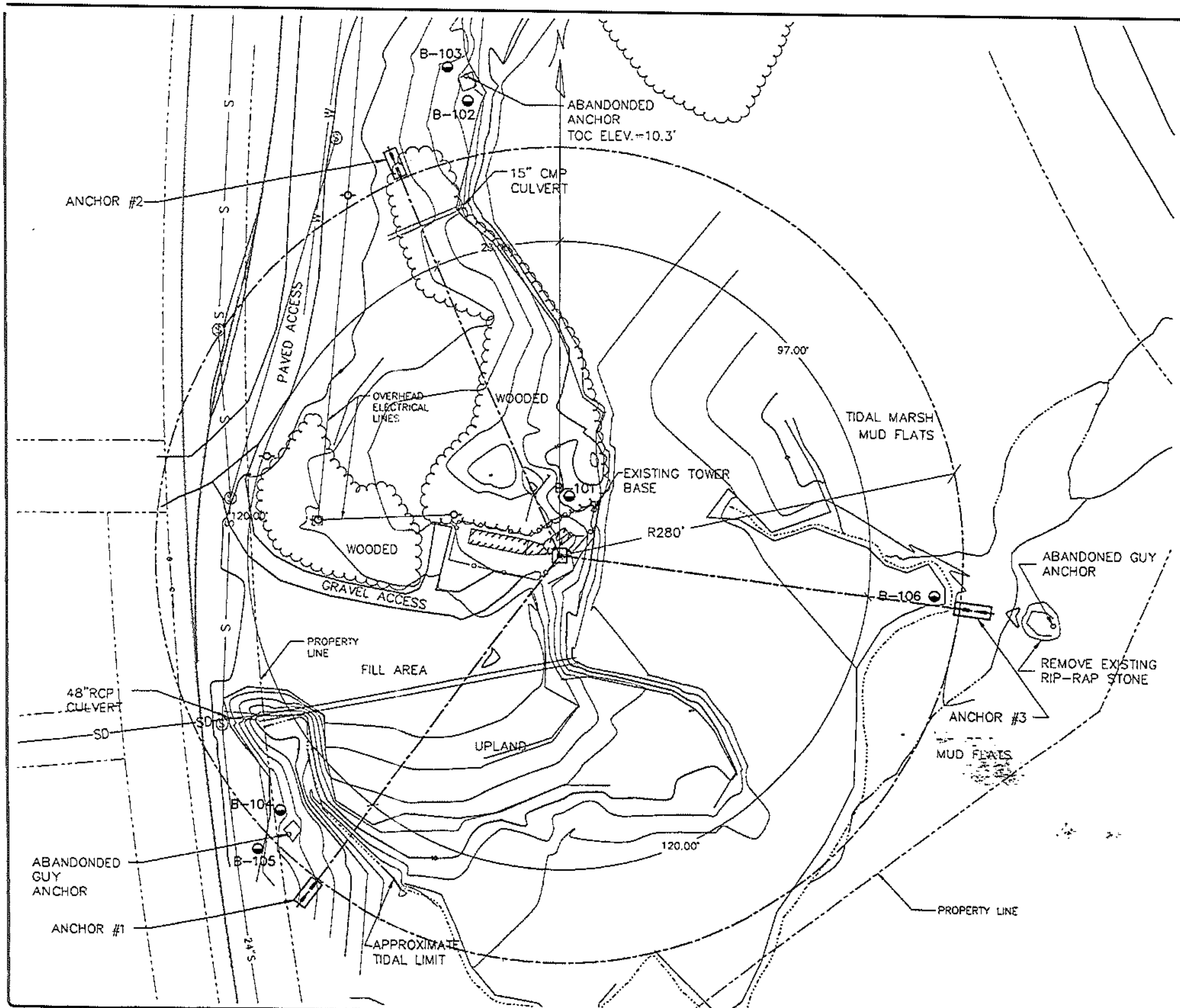
PHONE: (812) 925-6000
FAX: (812) 925-4026

NO	REVISIONS	APP'D	DATE
6			
5			
4			
3			
2			
1			

NAME: GUY WIRE DEVIATIONS & CUT LENGTHS
FOR: PORTLAND, ME — SHEET NO. 2
PATH: C:\DRAWING\ALL\PROJECTS\12590
FACTOR: 1/1600 — E-1A
DATE: 08/26/04
SCALE: AS NOTED
DRAWING NO. E-1A



CONCRETE

1. ALL CONCRETE WORK AND MATERIAL SHALL CONFORM TO ACI 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-99 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

2. CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER/CEMENT RATIO OF 0.45.

3. CONCRETE IN ANCHOR #3 SHALL HAVE 3 GALLONS PER CUBIC YARD OF DCI-S CORROSION INHIBITOR BY W.R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED PRACTICES. ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF DCI-S.

4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.

5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.

6. CONTRACTOR TO SUBMIT MILL CERTIFICATION FOR REINFORCING STEEL AND DESIGN MIX FOR CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

PILES

1. PILES SHALL BE HP12x53 WITH A MINIMUM YIELD STRESS OF 50 KSI, AND SHALL CONFORM TO ASTM A 572 GRADE 50, A 242 GRADE 50, OR A 588 GRADE 50.

2. PILES SHALL BE FITTED WITH DRIVING POINTS.

3. PILES SHALL BE DRIVEN TO BEARING IN GLACIAL TILL OR BEDROCK WITH A HAMMER DELIVERING A MINIMUM OF 25,000 FT. LBS OF ENERGY PER BLOW. A FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSAL IS ENCOUNTERED, DRIVING MAY BE TERMINATED WHEN THE PILE PENETRATION IS LESS THAN ½" FOR TEN SUCCESSIVE BLOWS.

4. AT ANCHOR #3, DRIVE 24" DIA., SCH. 20 PIPE CONCENTRIC WITH PILES, TO 5'-0" BELOW MUD LINE; CLEAN SOIL FROM INSIDE PIPE AND FILL WITH CONCRETE.

5. ONE PILE SHOULD BE LOAD TESTED TO 300 KIPS. IN LIEU OF A PILE LOAD TEST, THE CONTRACTOR MAY MONITOR THE INSTALLATION OF THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-GOBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACHIEVE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER IN LIEU OF LOAD TEST WILL REQUIRE APPROVAL OF THE LOCAL BUILDING OFFICIAL.

6. WHERE INDICATED ON THE DRAWING, ROCK ANCHORS SHALL BE INSTALLED INSIDE THE WEB OF THE PILES TO RESIST UPLIFT. ANCHORS SHALL BE 1 3/4" DIAMETER UPSET THREADED STEEL BARS CONFORMING TO ASTM A722, TYPE II, GRADE 150 KSI.

7. ROCK ANCHORS SHALL BE SHALL HAVE A MINIMUM BOND LENGTH INTO BEDROCK OF 26 FEET; THE HOLE SHOULD BE OVER-BORED AT LEAST 6". THE HOLE INTO BEDROCK SHALL BE AT LEAST 4" DIAMETER MADE WITH AIR PERCUSSION DRILLING TECHNIQUES TO PROVIDE A ROUGH SURFACE.

8. ROCK ANCHORS SHALL BE GROUTED INTO THE BEDROCK WITH EITHER PORTLAND CEMENT GROUT OR EPOXY RESIN. CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6,000. EPOXY GROUT MUST BE TREMIED OR PUMPED INTO THE HOLE.

9. ROCK ANCHORS SHALL BE PROOF TESTED TO 189 KIPS (150% OF DESIGN CAPACITY) AND LOCKED OFF AT 71 KIPS (50% OF DESIGN CAPACITY.)

10. THE TOP 15 FEET OF 8" DIAMETER PIPE SLEEVES, AND THE ENTIRE LENGTH OF 24" DIAMETER PIPE SLEEVES, WITH CARBOLINE BITUMASTIC 300M, COAL TAR EPOXY, OR EQUAL APPROVED IN WRITING BY THE ENGINEER. COATING SHALL BE A MINIMUM OF 20 MILS, DRY FILM THICKNESS.

SURFACE PREPARATION FOR COATING: FIRST REMOVE VISIBLE OIL, GREASE, AND DRAWING AND CUTTING COMPOUNDS BY SOLVENT CLEANING PER SSPC SP 1. THEN, COMPLETE SURFACE PREPARATION BY NEAR-WHITE BLAST CLEANING. REMOVE RESIDUAL DUST FROM BLASTED SURFACE BY BLOWING WITH DRY, OIL-FREE AIR, VACUUMING, OR SWEEPING. PROVIDE SURFACE PROFILE OF AT LEAST 2 MIL THICKNESS, PER SSPC SP 10.

DESIGN LOADS

TOWER BASE DESIGN BASED ON LOADING INFORMATION PROVIDED BY ELECTRONICS RESEARCH, INC. (E.R.I.) 7777 GARDNER RD. CHANDLER, INDIANA. E.R.I. LOADS GENERATED UTILIZING IBC DESIGN CRITERIA.

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road, Falmouth, Maine 04105
Office: (207) 878-1751
Fax: (207) 878-1788
E-Mail: adp@adpengineering.com

PROJECT: WMGX TOWER
PORTLAND, ME
FOR PORTLAND RADIO GROUP

SHEET TITLE: TOWER BASE AND ANCHOR LOCATIONS

REVISIONS

No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS & CONCRETE NOTE REVISION	10/05/04
3	RCA	PILE NOTE #4	10/11/04

DATE: 06-22-04
SCALE: 1" = 30'
DESIGN BY: ARLEDGE
DRAWN BY: BENNETT
FILE: #04053-PR-R3-C1XX.DWG
PROJECT NUMBER: 04053
SHEET NO: 101

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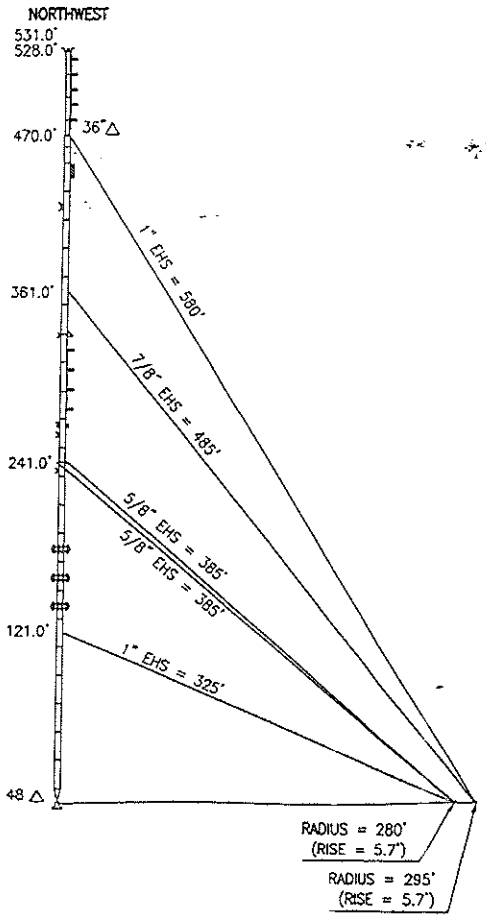
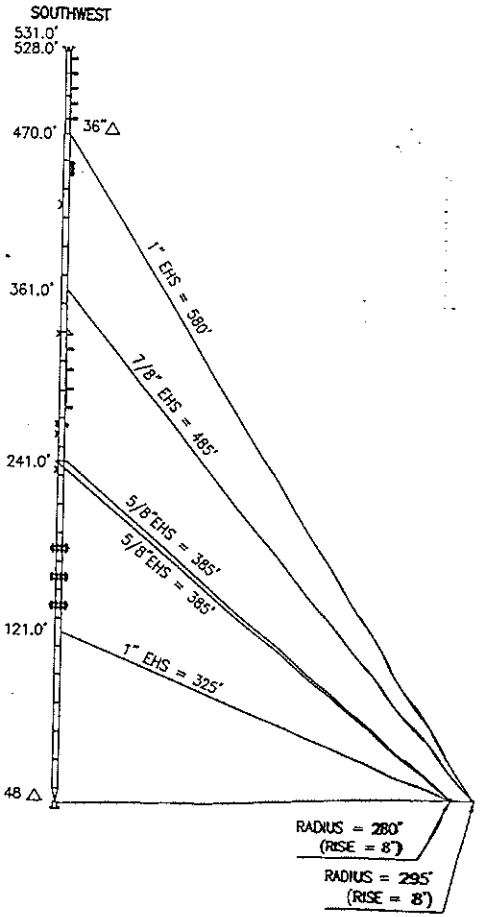
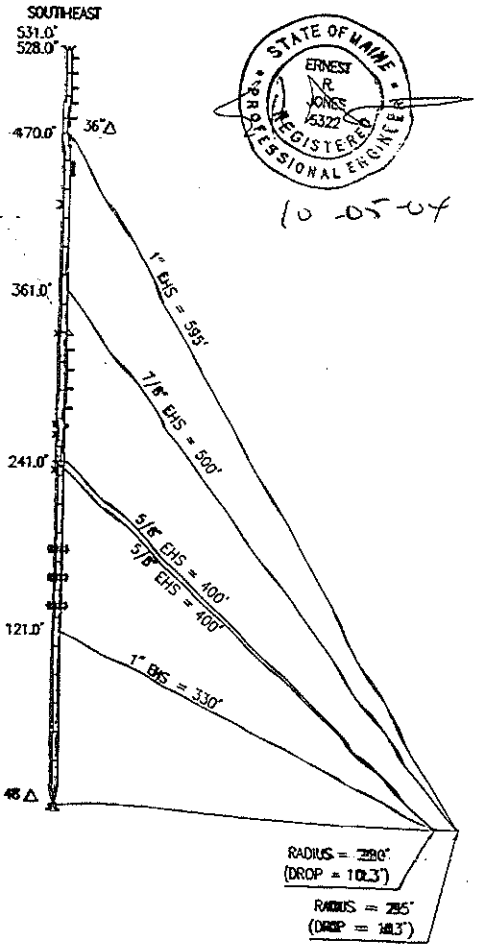




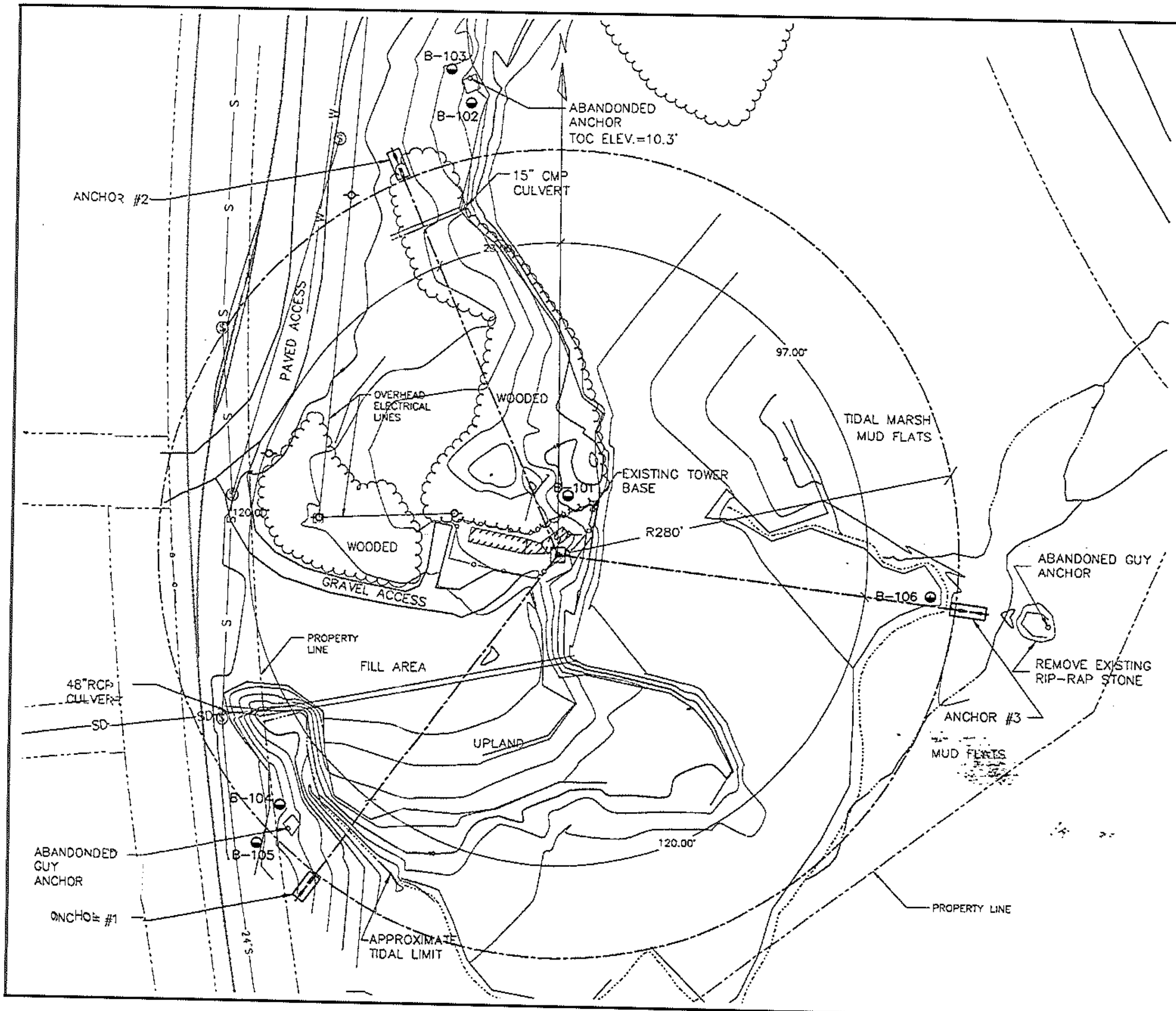


10-05-04

ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4026

NO	REVISION	APP'D	DATE
6			
5			
4			
3			
2			
1			

NAME: GUY WIRE DIMENSIONS & CUT LENGTHS
FOR: PORTLAND, ME
ISSUE NO.: 2
PATH: G:\DRAWING\ABK\PROJECTS\12590
FACTOR: 1/1000
DATE: 08/26/04
DRWG. NO.: E-1A



1. ALL CONCRETE WORK AND MATERIAL SHALL CONFORM TO ACI 318-02 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-99 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

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3. CONCRETE IN ANCHOR #3 SHALL HAVE 3 GALLONS PER CUBIC YARD OF DCI-S CORROSION INHIBITOR BY W.R. GRACE, ADDED IN ACCORDANCE WITH THE MANUFACTURER'S SUGGESTED PRACTICES; ALL OTHER CONCRETE SHALL HAVE 2 GALLONS PER CUBIC YARD OF DCI-S.

4. ENTRAINED AIR IN THE CONCRETE SHALL BE 6% ± 1%.

5. REINFORCING STEEL SHALL BE GRADE 60, DEFORMED BARS CONFORMING TO ASTM A-615.

6. CONTRACTOR TO SUBMIT MILL CERTIFICATION FOR REINFORCING STEEL AND DESIGN MIX FOR CONCRETE SEVEN DAYS PRIOR TO CONSTRUCTION.

PILES

1. PILES SHALL BE HP12x53 WITH A MINIMUM YIELD STRESS OF 50 KSI, AND SHALL CONFORM TO ASTM A 572 GRADE 50, A 242 GRADE 50, OR A 588 GRADE 50.

2. PILES SHALL BE FITTED WITH DRIVING POINTS.

3. PILES SHALL BE DRIVEN TO BEARING IN GLACIAL TILL OR BEDROCK WITH A HAMMER DELIVERING A MINIMUM OF 25,000 FT. LBS OF ENERGY PER BLOW. A FINAL PENETRATION RESISTANCE EQUAL TO 10 BLOWS PER INCH FOR THE FINAL 6 INCHES OF DRIVING IS REQUIRED. IF ABRUPT REFUSAL IS ENCOUNTERED, DRIVING MAY BE TERMINATED WHEN THE PILE PENETRATION IS LESS THAN ¼" FOR TEN SUCCESSIVE BLOWS.

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5. ONE PILE SHOULD BE LOAD TESTED TO 300 KIPS. IN LIEU OF A PILE LOAD TEST, THE CONTRACTOR MAY MONITOR THE INSTALLATION OF THREE PRODUCTION PILES AT SEPARATE LOCATIONS USING CASE-GOBLE PILE DRIVING ANALYZER EQUIPMENT TO VERIFY THAT THE PILES ACHIEVE 300 KIP CAPACITY. MONITORING WITH PILE DRIVING ANALYZER IN LIEU OF LOAD TEST WILL REQUIRE APPROVAL OF THE LOCAL BUILDING OFFICIAL.

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SHEET TITLE: TOWER BASE AND ANCHOR LOCATIONS

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No.	BY	DESCRIPTION	DATE
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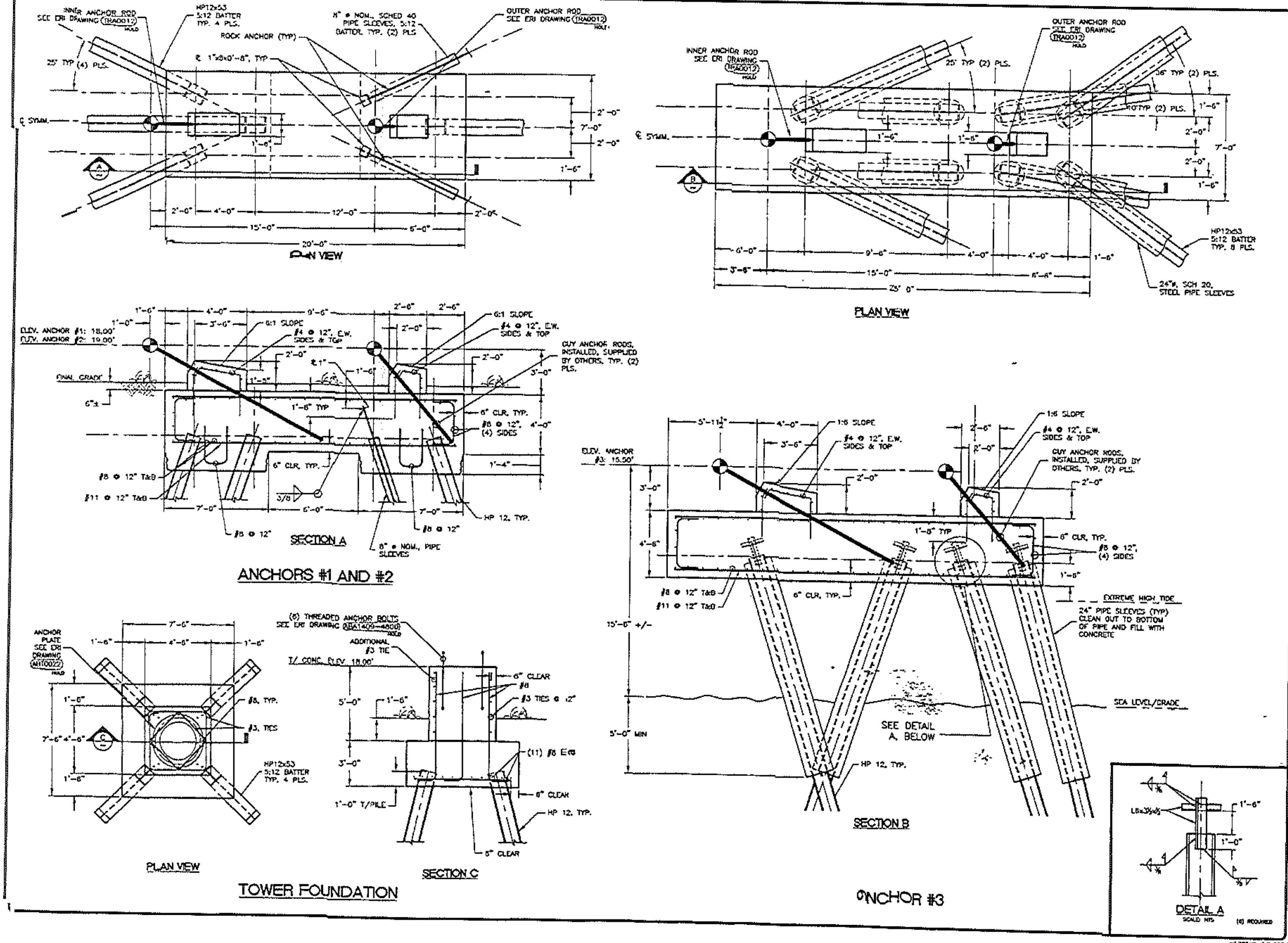
3	RCA	PILE NOTE #9	11/11/04
4			

DATE: 04-22-04
SCALE: 1" = 30'
DESIGN BY: ARLEDGE
DRAWN BY: BENNETT
FILE #: 04053-PR-R3-C1(X).DWG
PROJECT NUMBER: 04053
SHEET NO: 101

04053-PR-R3-C1(X).DWG



ASSOCIATED DESIGN PARTNERS INC.

60 Leighton Road, Falmouth, Maine 04105
Office: (207) 878-1751
Fax: (207) 878-1788
E-Mail: adp@adpengineering.com

PROJECT: WMGX TOWER
PORTLAND, ME
FOR PORTLAND RADIO GROUP

SHEET TITLE: TOWER BASE AND ANCHOR DETAILS

REVISIONS

No.	BY	DESCRIPTION	DATE
1	RCA	CLIENT REVIEW	6/22/04
2	RCA	PILE AND FOOTING REVISIONS CONCRETE NOTE REVISION	10/26/04
3	RCA	LONGITUDINAL REINFORCING	1/13/04
4			

DATE: 06-22-04
SCALE: 3/8" = 1'-0" (UNO)
DESIGN BY: ARLEDGE
DRAWN BY: BENNETT
PROJECT NUMBER: 04053
SHEET NO: 102

:\Drafting\ALL\PROJECTS\12590\E-1.dwg, 10/12/2004 02:39:35 PM, Theresa Webster, Electronics Research Inc.

GUY DATA CHART

GUY WIRE SIZE	ELEVATION	GUY EAR PLATE (A-572)	THIMBLE HD/ END FITTING	PREFORM	TURN-BUCKLE	SHACKLES TOWER	SHACKLES ANCHOR	PRIMARY INSULATOR	SECONDARY INSULATOR	GUY WIRE CUT LGTH	INITIAL TENSION LBS. 60°F
1" EHS	121.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
5/8" EHS	241.0'	10" X 4-1/2" X 1"	5/8"	5/8"	1"	7/8"	3/4"	- - -	- -	*	4,240
7/8" EHS	361.0'	10" X 4-1/2" X 1"	7/8"	7/8"	1-1/2"	1"	1"	- - -	- -	*	7,970
1" EHS	470.0'	10" X 5-3/4" X 1 1/4"	1"	1"	1-1/2"	1-1/4"	1-1/8"	- - -	- -	*	10,450

* REFERENCE E-1A FOR ANCHOR RADIUS AND GUY WIRE CUT LENGTH DUE TO DROPS AND RISES IN SURFACE GRADE.

MATERIAL LIST

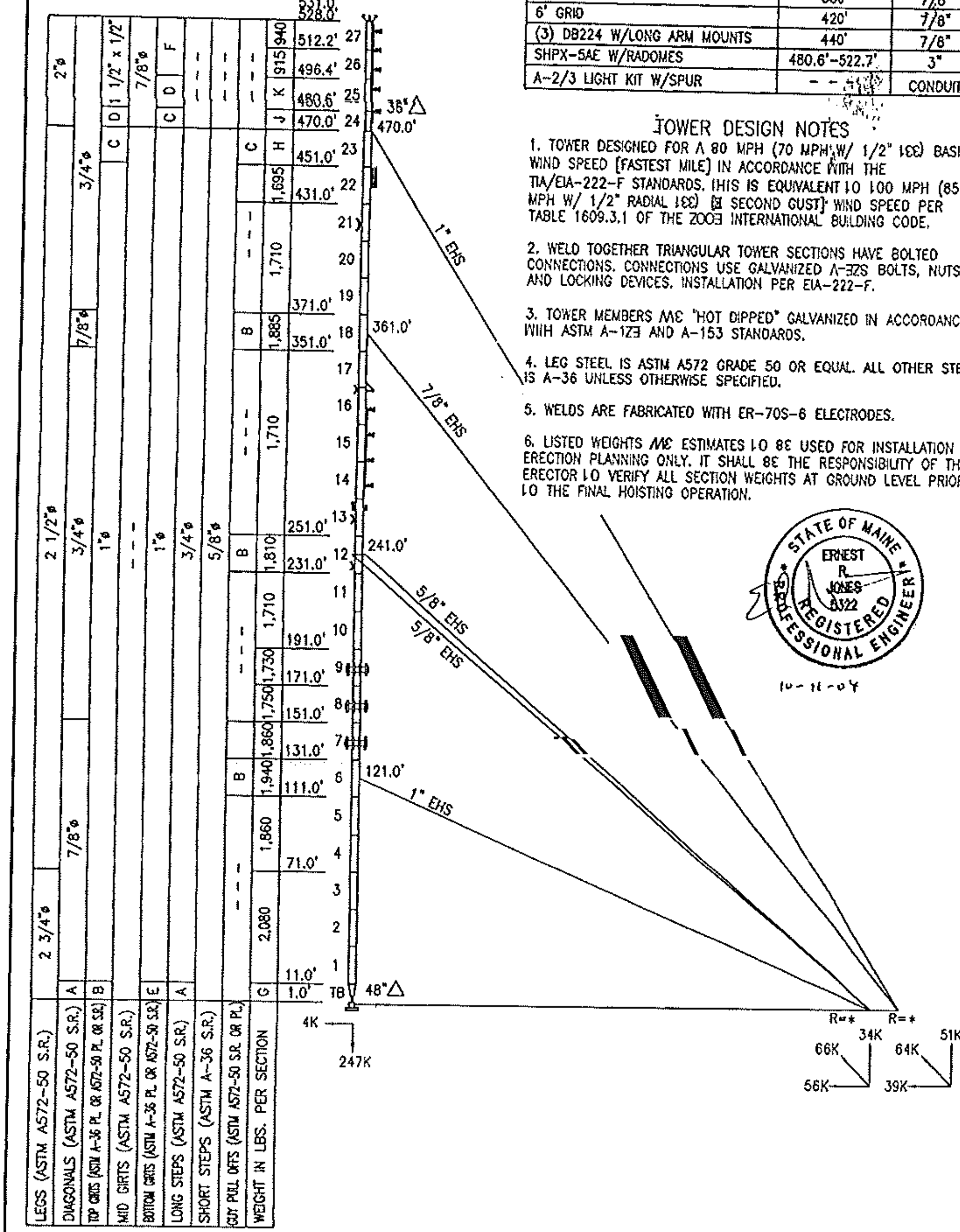
MARK	SIZE
A	1 1/8"ø S.R.
B	1 1/4"ø S.R.
C	12" x 1" PL.
D	7/8"ø S.R.
E	N/A
F	1 1/2" x 1/2"

WEIGHT LIST

MARK	WEIGHT
G	1,475 LBS.
H	3,100 LBS.
J	1,770 LBS.
K	1,005 LBS.

DESIGNED ANTENNA LOADING

ANTENNA TYPE	ELEVATION	LINE
(12) 5' X 1' PCS PANELS	140'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
(12) 5' X 1' PCS PANELS	160'	(12) 1-5/8"
4' GRID	235'	7/8"
4' GRID	260'	7/8"
DRC-C 4 BAY W/RADOMES	280.8'-319.2'	3"
4' x 6' ICE SHIELD	329.2'	- - -
4' GRID	330'	7/8"
6' GRID	420'	7/8"
(3) DB224 W/LONG ARM MOUNTS	440'	7/8"
SHPX-5AE W/RADOMES	480.6'-522.7'	3"
A-2/3 LIGHT KIT W/SPUR	- - -	CONDUIT



TOWER DESIGN NOTES

1. TOWER DESIGNED FOR A 80 MPH (70 MPH W/ 1/2" ICE) BASIC WIND SPEED (FASTEST MILE) IN ACCORDANCE WITH THE TIA/EIA-222-F STANDARDS. THIS IS EQUIVALENT TO 100 MPH (85 MPH W/ 1/2" RADIAL ICE) (3 SECOND GUST) WIND SPEED PER TABLE 1609.3.1 OF THE 2003 INTERNATIONAL BUILDING CODE.

2. WELD TOGETHER TRIANGULAR TOWER SECTIONS HAVE BOLTED CONNECTIONS. CONNECTIONS USE GALVANIZED A-325 BOLTS, NUTS AND LOCKING DEVICES. INSTALLATION PER EIA-222-F.

3. TOWER MEMBERS ARE "HOT DIPPED" GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 STANDARDS.

4. LEG STEEL IS ASTM A572 GRADE 50 OR EQUAL. ALL OTHER STEEL IS A-36 UNLESS OTHERWISE SPECIFIED.

5. WELDS ARE FABRICATED WITH ER-70S-6 ELECTRODES.

6. LISTED WEIGHTS ARE ESTIMATES TO BE USED FOR INSTALLATION ERECTION PLANNING ONLY. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO VERIFY ALL SECTION WEIGHTS AT GROUND LEVEL PRIOR TO THE FINAL HOISTING OPERATION.

STATE OF MAINE
ERNEST R. JONES 5322
REGISTERED PROFESSIONAL ENGINEER

10-11-04

ERI.
ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4030

NO	REVISION	APP'D	DATE
1	UPDATED NOTE TO 2003 IBC	MW	10-12-04

NAME: TOWER ELEVATION
FOR: PORTLAND, ME
PATH: G:\DRAFTING\ALL\PROJECTS\12590
FACTOR: 1/700 | DATE: 08/24/04 | DRAWN: SDH | MAT'L: AS NOTED
DRAWING NO. E-1 | SIZE: 2

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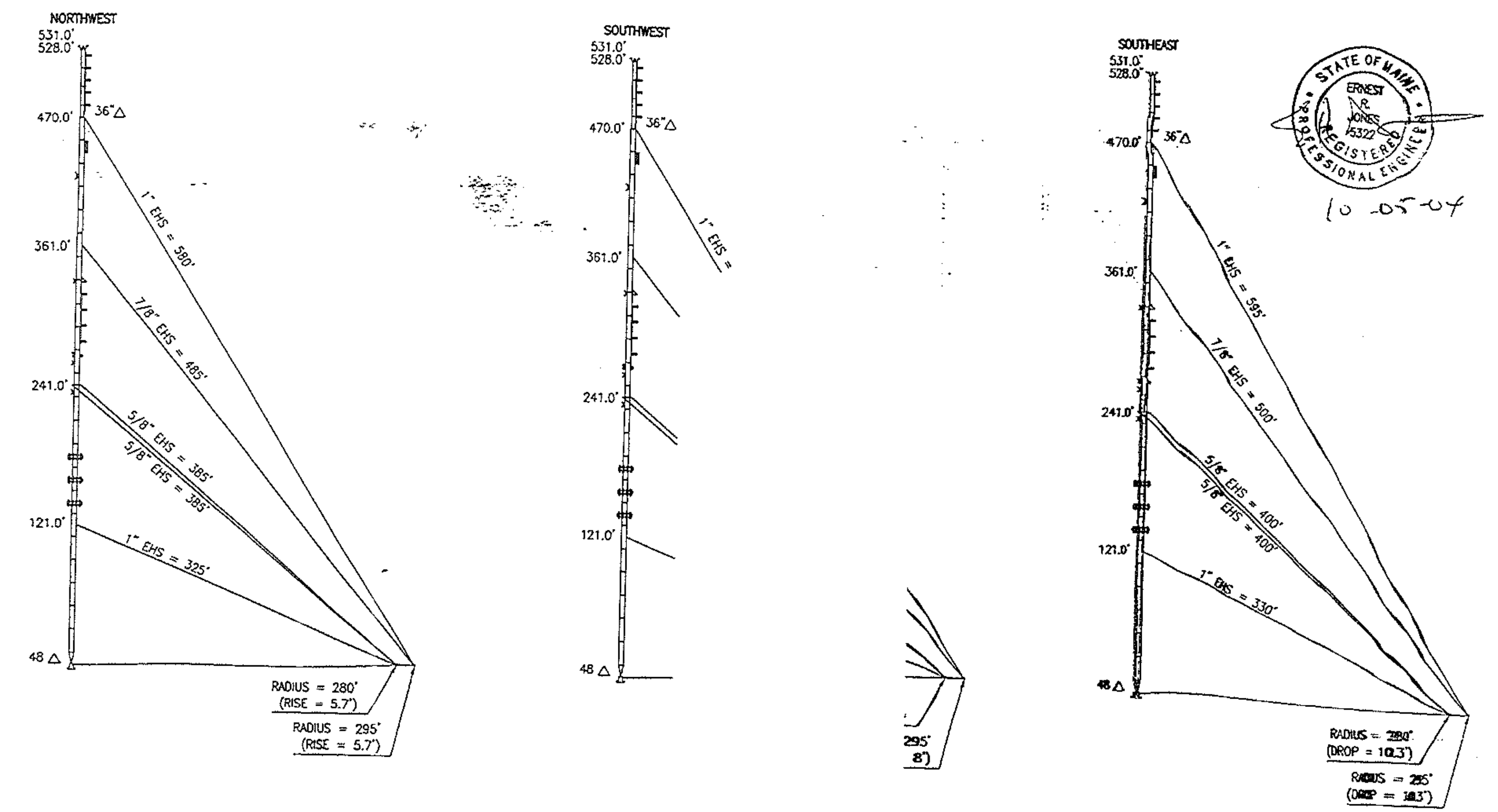

STATE OF MAINE
ERNEST R. JONES
5322
REGISTERED
PROFESSIONAL ENGINEER

10-05-04

ERI

ELECTRONICS RESEARCH, INC.
Established 1943
7777 GARDNER RD.
CHANDLER, IN 47610-9637
PHONE: (812) 925-6000
FAX: (812) 925-4026

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NO	REVISIONS	APP'D	DATE
6			
5			
4			
3			
2			
1			

NAME: GUY WIRE ELEVATIONS & CUT LENGTHS
FOR: PORTLAND, ME
E-1A

CY Group
193 Presumpscot Street
Portland, ME 04103-5202

421 DS
Permit #
04/579

November 18, 2004

Chris Mack
Operations Manager, WMGX
420 Western Ave.
South Portland, ME 04106-1704

Dear Mr. Mack,

My mother, Anna R. Bourque, owns the building that was nearly struck when the WMGX tower fell last December.

I have met with Mr. Nugent, Inspection Services Manager, City of Portland. During our meeting he shared with me some information he has regarding the new tower. He is very confident the new tower will be far superior to the old because of advances in technology, a comprehensive review process and periodic inspections.

In spite of these reassurances it is difficult to forget the scene last December of the fallen tower and crushed vehicles, but easy to imagine the potential for personal injury and additional property damage. With this in mind, I am asking that CY Group be named as an additional insured on your insurance coverage and be provided with a certificate of insurance indicating general liability and umbrella limits.

I look forward to hearing from you. I can be reached at the above address or by phone at 774-0324, extension 1010. Thank you for your time.

Sincerely,

Anna R. Bourque
Anna R. Bourque

Joseph W. Bourque
Joseph W. Bourque

James R. Bourque
James R. Bourque

cc: Morse Payson & Noyes
Nappi Distributors, Inc.
Nicholas Bull, esq.
Michael Nugent

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road, Falmouth, ME. 04105

FAX MEMO

421-B-5

DATE: 16 November 2004

TO: Mike Nugent FAX: 207-874-8716

FROM: Bob Arledge

PHONE: 207-878-1751 FAX: 207-878-1788

RE: WMGX TOWER REPLACEMENT BUILDING PERMIT APPLICATION

Number of pages including cover sheet: 3

Message

Mike,

Here is the design certification from Ernest Jones for the tower together with his letter explaining the reason he marked several of the blanks on the certification as N/A. I called the tower manufacturer, Electronics Research, Inc., and they are sending me a copy of their AISC certification and the documentation for the steel. I will send them to you as soon as I receive them. Please call, email or fax me if you have any other questions.

Bob Arledge
Associated Design Partners, Inc.
80 Leighton Road
Falmouth, ME 04105
Email: arledge@adpengineering.com
Phone: (207) 878-1751
Fax: (207) 878-1788
Cell: (207) 415-1567

ELECTRONICS RESEARCH, INC.

7777 Gardner Road • Chandler, Indiana 47610 • (812) 925-6000 • Fax: (812) 925-4030 • Home Page: www.ERIinc.com

10-19-2004

To: Aaron Wilson of ADP Engineering

From: Ernest R. Jones, P.E.

Re: Portland Maine Steel Broadcast Tower
2003 IBC Construction Project Building Code Criteria

Aaron,

This letter is to confirm the N/A (non applicable) portions of the Building Code Criteria Project sheet dated 10-18-2004 for the tower.

This is a steel broadcast tower without floors so the floor live load section is marked N/A.

The earthquake design section was marked N/A since the earthquake requirements for this area produce forces well below those required to govern this design. I can provide calculations for this if they are preferred to justify my statement that earthquake forces will simply not govern any part of this structures design.

Snow loads are insignificant on towers and this is why this section is marked N/A. My design does include a maximum wind criteria and a high wind with ice criteria and calculations have been provided with the tower engineering submittal.

I did not use any flood loads for this structure so this section was marked N/A. Verification that this area is not in a flood area, or is high enough for high water concerns is the responsibility of others.

"Other loads" section was also marked N/A since they are not required by code.

Sincerely,

Ernest R. Jones, P.E.
ERI V.P. of Structural Division

STATE OF MAINE ERNEST R. JONES 6322 REGISTERED PROFESSIONAL ENGINEER

10-19-04

60 Years 1945-2005

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road • Falmouth, Maine 04105
Office: 207.878.1751
Fax: 207.878.1788
e-mail: adp@adpengineering.com

October 14, 2004

City of Portland
Inspection Services Program
389 Congress Street
Portland, Maine 04101

Description of the Project

Portland Radio Group proposes to replace the 535-foot high guyed radio tower that failed on December 11, 2003 with a new 528-foot high guyed radio tower. The structures in this project include three pile supported concrete anchors, one pile supported concrete tower base, and a 528-foot, space-frame truss, steel tower.

The new tower will be located adjacent to the tidal marsh and mudflat off Presumpscot Street in Portland, 37 feet south-southwest from the location of the old tower. The tower foundation will consist of a pile cap extending below frost and founded on four driven piles. A concrete pier on top of the pile cap will support the tower. Anchors #1 and #2 will be located away from the marsh on the western side of the site. They are identical to each other and consist of 52 ton, concrete pile caps founded on four driven piles and incorporating two rock anchors drilled into bedrock to resist uplift. These anchors will be set in the ground and covered with soil. Anchor #3 will be located in the marsh eight feet above the mudflat to minimize the impact on the mudflat. It consists of a 59 ton pile cap founded on eight driven piles. The piles on Anchor #3 will be driven significantly deeper than the piles on the other anchors which will allow them to develop significantly greater resistance to uplift. The design permits six of the piles on Anchor #3 to resist the uplift forces. 24 inch diameter steel sleeves filled with concrete will protect the exposed portion of the piles at Anchor #3 from corrosion. A factor of safety of 3.0 was used for designing all piles for compression and uplift.

Each anchor will have two steel rods anchored in the pile cap to support two separate systems of guys. If either set of guys fails, the other guy system would prevent the tower from falling near any occupied structures.

Sincerely,

Robert Arledge, P.E.
Structural Engineer of Record

ASSOCIATED DESIGN PARTNERS INC.
80 Leighton Road • Falmouth, Maine 04105
Office: 207.878.1751
Fax: 207.878.1788
e-mail: adp@adpengineering.com

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Sincerely,

Robert Arledge, P.E.
Structural Engineer of Record

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER
IN THE MATTER OF

SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP Portland, Cumberland County RADIO TOWER L-21939-A-N (approval)	) NATURAL RESOURCES PROTECTION) COASTAL WETLAND) WATER QUALITY CERTIFICATION) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP, with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. Summary: The applicant proposes to replace a 528-foot high guyed radio tower and three anchors in and adjacent to a tidal marsh and mudflat off Presumpscot Street in Portland. The new tower and anchors will be located adjacent to the old tower and anchors. The site is the location of a radio tower that collapsed after an anchor failed in December 2003. The tower replacement is necessary to restore the broadcasting capability of a local FM radio station. The project includes the construction of two new double anchors in upland locations approximately 30 feet from the upland/wetland edge and one new anchor in a tidal mudflat. Each anchor will be capped with a 225 square foot concrete cap. The concrete cap for anchor #3 located in the mudflat will be elevated on support piles approximately 8 feet above the substrate to minimize the impact on the mudflat. The applicant also proposes to restore approximately 900 square of mudflat by removing the rock rubble fill at the original site of anchor #3. To access the mudflat to drive piles and construct the concrete pile cap for anchor #3, the applicant proposes to construct a 10-foot wide rock filled upland access road and a 20-foot wide temporary access road across the vegetated salt marsh using wooden crane mats. No equipment will operate in the mudflat, and construction will be limited to periods when the tidal flat is exposed during low tide. In addition, the applicant also proposes to stabilize a 100-foot long section of eroded slope by installing rock riprap adjacent to the site of the proposed tower. The proposed project is shown on a set of plans the first of which is entitled "Existing Conditions Survey, Sunshine Broadcasting WMGX Tower," prepared by Sebago Technics, with a last revision date of May 28, 2004. The applicant proposes to complete the project during a three week period in early fall 2004.

B. Current Use of the Site: The applicant leases the 13.6 acre site that is located adjacent to a coastal wetland in an industrial zone on Presumpscot Street between I-295

and the St. Lawrence Railroad tracks. Development adjacent to the project site includes a lumberyard, warehouse complex, and cement storage facility.

2. WATER QUALITY AND EROSION CONTROL CONSIDERATIONS:

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters. The applicant proposes to install and maintain adequate erosion control measures to protect water quality until the project site is stabilized.

3. HABITAT CONSIDERATIONS:

The Department of Marine Resources (DMR) reviewed the proposed project. In comments dated July 12, 2004, DMR stated that the project site is a low energy consolidated shore. The upper and mid intertidal area are vegetated with *Spartina patens* (salt hay grass) and *Spartina alternaflora* (smooth cordgrass) respectively. The lower intertidal is mud. DMR recommends that the salt marsh be monitored after the crane mat access road is removed to insure that the substrate and vegetation recovers during the growing season following construction. DMR also recommends that the existing pile of rock rubble is removed and the mudflat restored at the existing location of anchor #3. The applicant has agreed to these two requirements.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that the coastal wetland is part of a large wetland complex associated with the Presumpscot River. This complex is designated as Coastal Wading Bird and Waterfowl Habitat and qualifies as Significant Wildlife Habitat, but the project site is outside the critical habitat areas of open water and emergent vegetation used by nesting and feeding waterfowl. To minimize the impact to waterfowl, MDIFW recommends no work in the coastal wetland during the waterfowl-breeding season from July to September, if possible.

4. WETLANDS AND WATERBODIES PROTECTION RULES:

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, require that the applicant meet the following standards:

a. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternatives analysis for the project prepared by Sebago Technics and dated May 27, 2004 that demonstrated that, based on Federal Communications Commission licensing requirements, zoning standards in the City of Portland, and the design and engineering specifications for the new radio tower, the tower and its anchors must be located adjacent to the original tower and anchors.

b. Minimal Alteration. The alteration to the coastal wetland will be limited to seven piles driven into the substrate and the temporary impacts to the salt marsh from the installation of approximately 5,360 square feet of crane mats during the construction of anchor #3. This anchor will be a pile supported concrete pile cap elevated 8 feet above the substrate to minimize the impact to the tidal mudflat. To further minimize impacts to salt marsh vegetation, the Department recommends that the applicant construct anchor #3 after October 1, when *Spartina* is dormant.

c. Compensation. Although the applicant demonstrated that the proper use of crane mats at the construction site for anchor #3 should result in no permanent loss of wetland functions and values, the Department finds that the applicant must photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The Department will assess the recovery of the salt marsh vegetation in the year following construction and may require restoration or enhancement of the access area if salt marsh vegetation is not the same density as that in the adjacent undisturbed areas.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

5. EXISITING SCENIC AND AESTHETIC USES:

The applicant evaluated the impact of the proposed project on existing scenic and aesthetic uses in the vicinity of the proposed project by submitting photographs of the existing conditions at the project site and by completing a visual evaluation and field survey checklist. The proposed radio tower and supporting guy wires and anchors will be located in the same area as the former tower and be the same height. The new tower will have the same visual impact as the old tower and will be located within a highly developed industrial zone in Portland adjacent to an interstate highway. Based on information in the application and a site visit, the Department finds that the proposed project will not unreasonably interfere with existing scenic and aesthetic uses.

6. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing navigational uses, soil erosion, the natural transfer of soil, natural flow of water, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that the applicant photographs the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction and restores or enhances the access area, if necessary.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of SAGA COMMUNICATIONS, DBA PORTLAND RADIO GROUP to construct a radio tower with anchors and install riprap, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. The applicant shall photograph the access area prior to installing the mats, immediately after removing the mats, and prior to June 15 in the year following construction. The photographs shall be submitted to the Bureau of Land and Water Quality one week after installing and removing the mats and by June 22.

NATURAL RESOURCE PROTECTION ACT (NRPA)
STANDARD CONDITIONS

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. **Approval of Variations From Plans.** The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation form these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. **Compliance With All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. **Erosion Control.** The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. **Compliance With Conditions.** Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. **Initiation of Activity Within Two Years.** If construction or operation of the activity is not begun within two years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. **Reexamination After Five Years.** If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. **No Construction Equipment Below High Water.** No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

H. **Permit Included In Contract Bids.** A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

I. **Permit Shown To Contractor.** Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92)

DEP LW0428

Erosion Control

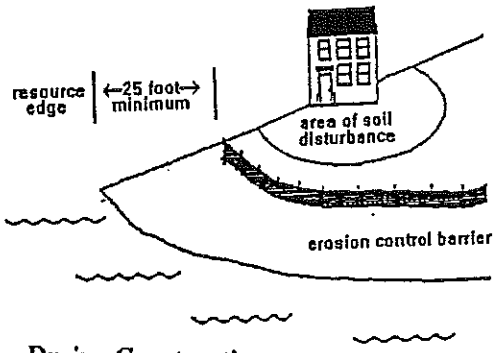
Before Construction

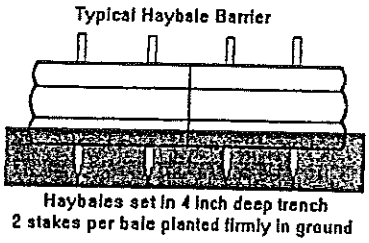
1. If you have hired a contractor, make sure you have discussed your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is and where it is located. Most people could identify the edge of a lake or a river. The edges of wetlands, however, are often not obvious. Your contractor may be the person actually pushing dirt around but you are both responsible for complying with the permit.

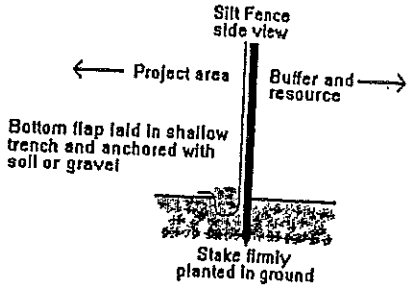
2. Call around and find sources for your erosion controls. You will probably need silt fence, hay bales and grass seed or conservation mix. Some good places to check are feed stores, hardware stores, landscapers and contractor supply houses. It is not always easy to find hay or straw during late winter and early spring. It may also be more expensive during those times of year. Plan ahead. Purchase a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the activity.

4. If a contractor is installing the barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level along the land slope, whenever possible. This keeps stormwater from flowing to the lowest point of the barrier where it builds up and overflows or destroys it.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops striking the soil that causes a lot of erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. In that situation, stop work and figure out what can be done to prevent more soil from getting past the barrier.

After Construction

1. After the project is complete, replant the area. All ground covers are not equal. For instance, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high maintenance areas. The same mix would not be a good choice for stabilizing a road shoulder or a cut bank that you don't intend to mow.

2. If you finish your project after September 15, then do not spread grass seed. There is a very good chance that the seed will germinate and be killed by a frost before it has a chance to become established. Instead, mulch the site with a thick layer of hay or straw. In the spring, rake off the mulch and seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away.

3. Keep your erosion control barrier up and maintained until the area is permanently stabilized.

DEP INFORMATION SHEET

Appealing a Commissioner's Licensing Decision

Dated: May 2004

Contact: (207) 287-2811

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) in an administrative process before the Board of Environmental Protection (Board); or (2) in a judicial process before Maine's Superior Court. This INFORMATION SHEET, in conjunction with consulting statutory and regulatory provisions referred to herein, can help aggrieved persons with understanding their rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

DEP's *General Laws*, 38 M.R.S.A. § 341-D(4), and its *Rules Concerning the Processing of Applications and Other Administrative Matters* (Chapter 2), 06-096 CMR 2.24 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written notice of appeal within 30 calendar days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner and the applicant a copy of the documents. All the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

The materials constituting an appeal must contain the following information at the time submitted:

1. *Aggrieved Status.* Standing to maintain an appeal requires the appellant to show they are particularly injured by the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.

5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.

6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.

7. *New or additional evidence to be offered.* The Board may allow new or additional evidence as part of an appeal only when the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or show that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2, Section 24(B)(5).

Other Considerations in Appealing a Decision to the Board

1. *Be familiar with all relevant material in the DEP record.* A license file is public information made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.

2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.

3. *The filing of an appeal does not operate as a stay to any decision.* An applicant proceeding with a project pending the outcome of an appeal runs the risk of the decision being reversed or modified as a result of the appeal.

What to Expect Once You File a Timely Appeal with the Board

The Board will formally acknowledge initiation of the appeals procedure, including the name of the DEP project manager assigned to the specific appeal, within 15 days of receiving a timely filing. The notice of appeal, all materials accepted by the Board Chair as additional evidence, and any materials submitted in response to the appeal will be sent to Board members along with a briefing and recommendation from DEP staff. Parties filing appeals and interested persons are notified in advance of the final date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision. The Board will notify parties to an appeal and interested persons of its decision.

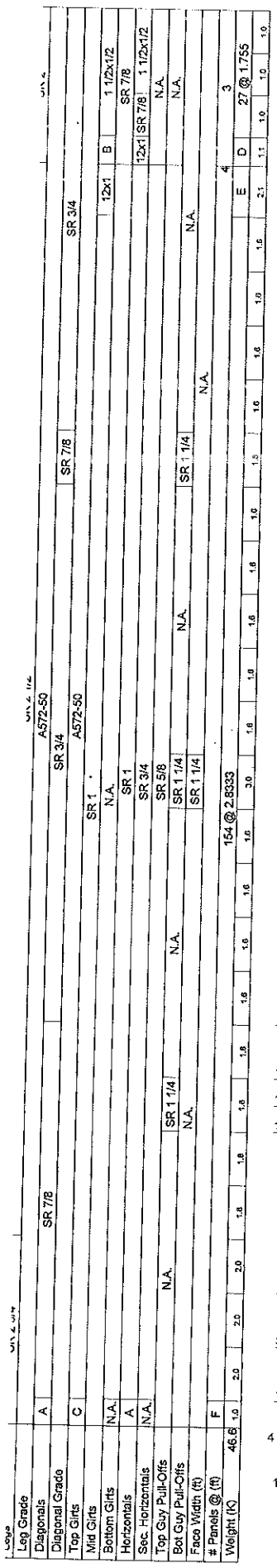
II. Appeals to Maine Superior Court

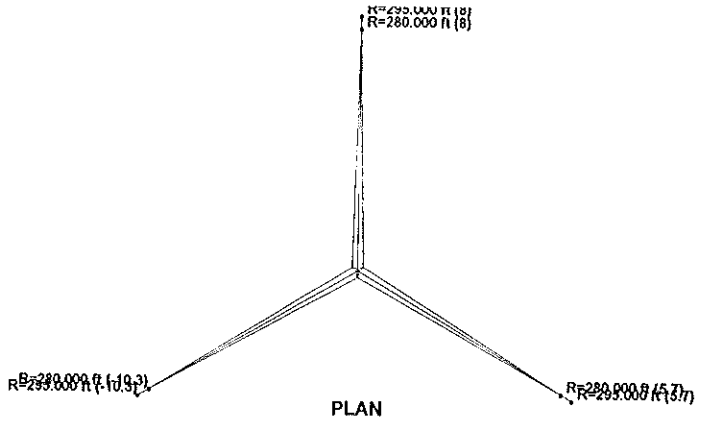
Maine law allows aggrieved persons to appeal final Commissioner licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2.26; 5 M.R.S.A. § 11001; & MRCivP 80C. Parties to the licensing decision must file a petition for review within 30 days after receipt of notice of the Commissioner's written decision. A petition for review by any other person aggrieved must be filed within 40-days from the date the written decision is rendered. The laws cited in this paragraph and other legal procedures govern the contents and processing of a Superior Court appeal.

Additional Information

If you have questions or need additional information on the appeal process, contact the DEP's Director of Procedures and Enforcement at (207) 287-2811.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Red A-2/3 lighting Kit w/ A-3 Spur (Conduit)	528	DCR-C 4 Bay w/ domes (3" Coax)	319.2 - 280.8
SHPX-5AE-Radomes (3" Coax)	522.7 - 480.6	Mid Beacon Level (Conduit)	265
(3) DB224 w/ Long Arm Mounts (7/8" Coax)	440	ERI--A-3 Lightning Spur	265
6' Grid (7/8" Coax)	420	4' Grid (7/8" Coax)	260
4' Grid (7/8" Coax)	330	4' Grid (7/8" Coax)	235
Ice Shield (4' x 6')	329.2	(12) 5' x 1' Panels (1 5/8" Coax)	180
		(12) 5' x 1' Panels (1 5/8" Coax)	160
		(12) 5' x 1' Panels (1 5/8" Coax)	140

SYMBOL LIST

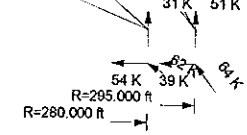
MARK	SIZE	MARK	SIZE
A	SR 1 1/8	D	6 @ 1.76917
B	SR 7/8	E	7 @ 2.83333
C	SR 1 1/4	F	5 @ 1.96667

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

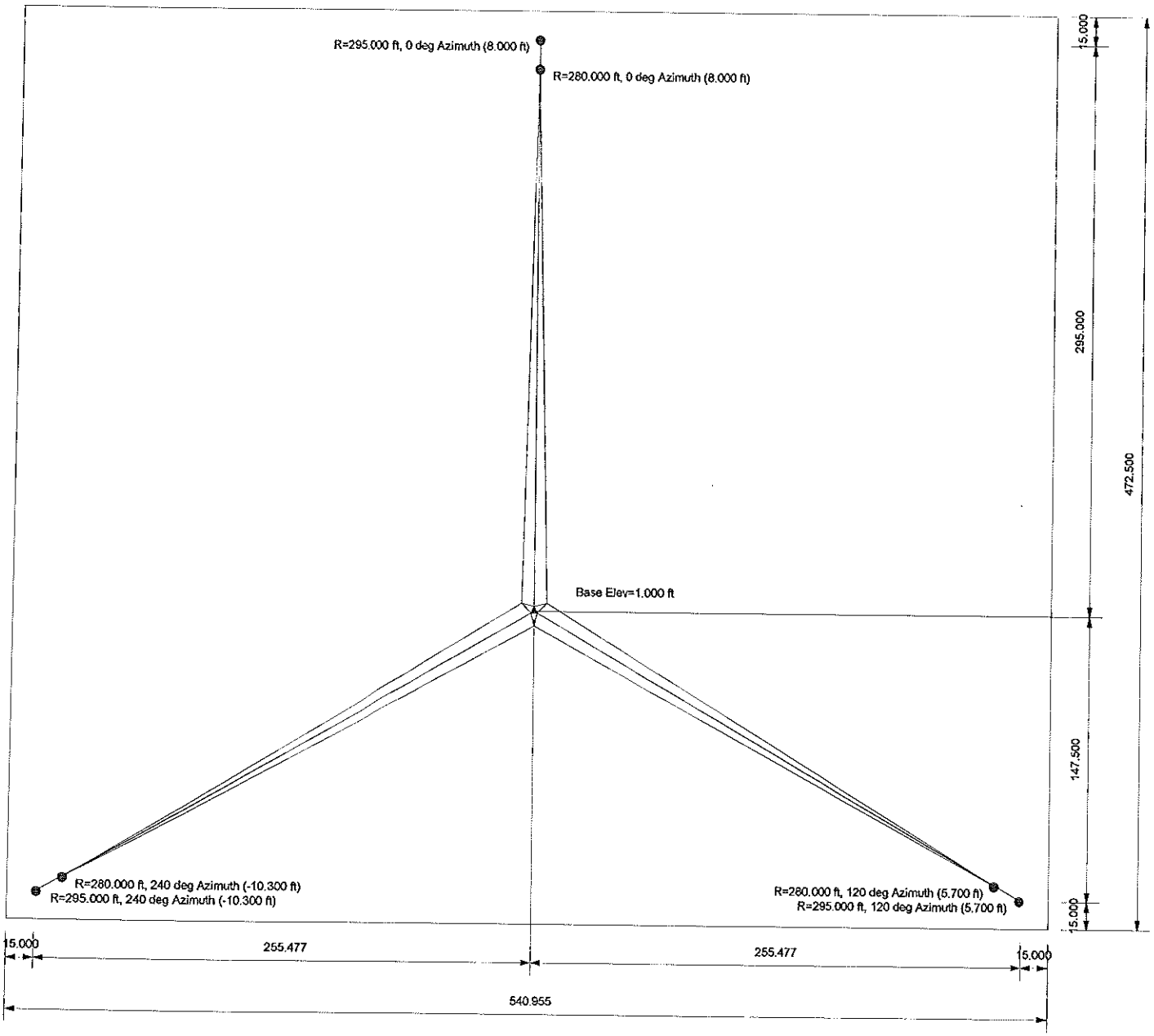
1. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
2. Tower is also designed for a 70 mph basic wind with 0.50 in ice.
3. Equivalent to 100 mph 3-second gust wind speed and 85 mph 3 sec peak gust wind with 1/2 radial ice.
4. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222-F Standard.
5. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
6. Welds are fabricated with ER-70S-6 electrodes.



Electronics Research Inc.
7777 Gardner Road
Chandler, IN
Established 1945
Phone: 812-925-6000
FAX: 812-925-4026

Job: Portland, ME	531' Guyed Tower		
Project: 12590	48" Face	Run#2	
Client: SAGA Communications	Drawn by: M. Maurer		App'd:
Code: TIA/EIA-222-F	Date: 10/18/04		Scale:
Path: J:\mmaurer\Job\12590_PortlandME\12590v2_531_48_60.eri			Dwg N

Plot Plan
Total Area - 5.87 Acres



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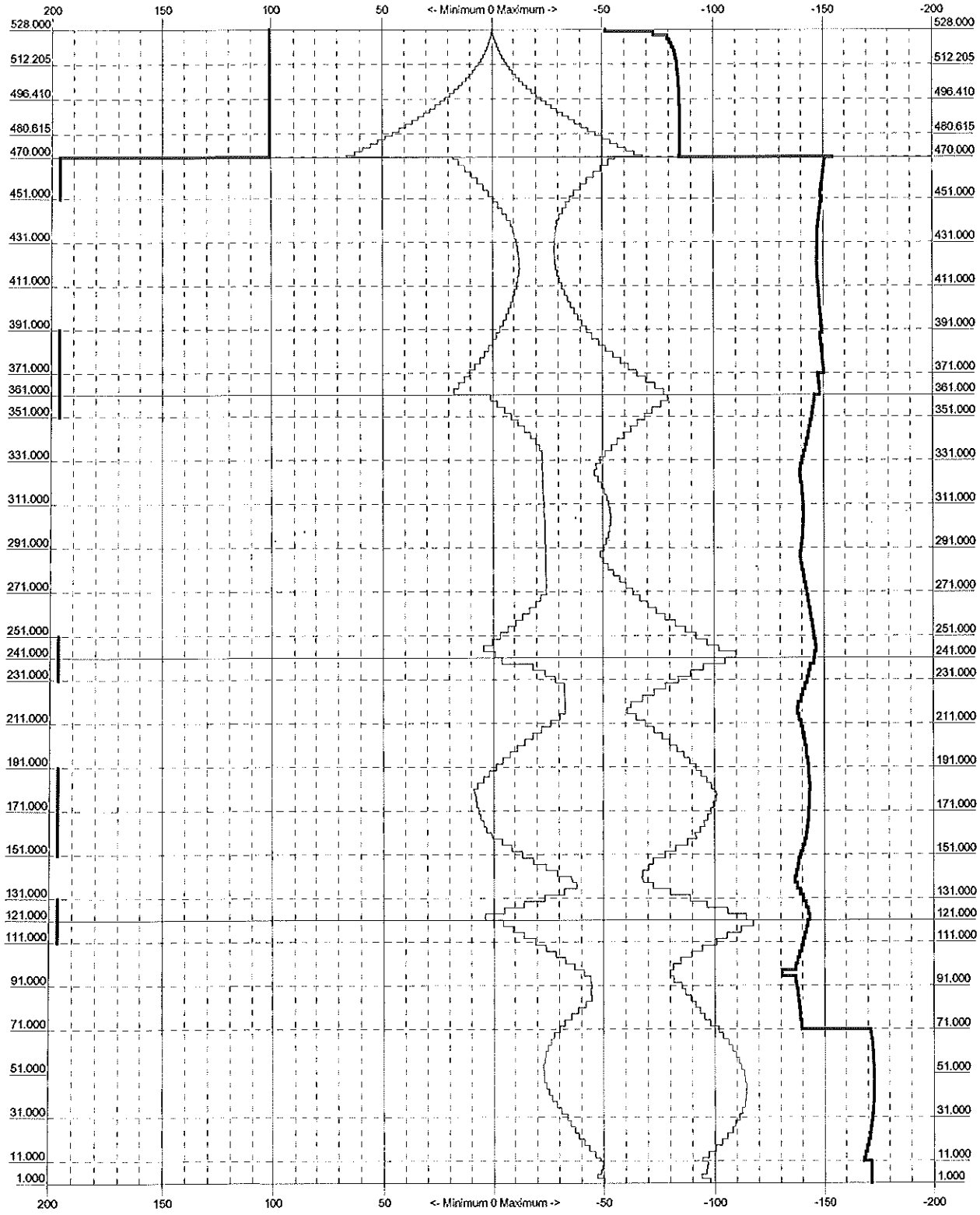
Path: J:\mmaurer\Job\12590_Portland\ME\12590v2_531_48_60.eri		Dwg N	

TIA/EIA-222-F - 80 mph/70 mph 0.500 in Ice

Leg Capacity ——— Leg Compression (K)



Elevation (ft)

Electronics Research Inc.
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Chandler, IN
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Phone: 812-925-6000
FAX: 812-925-4026

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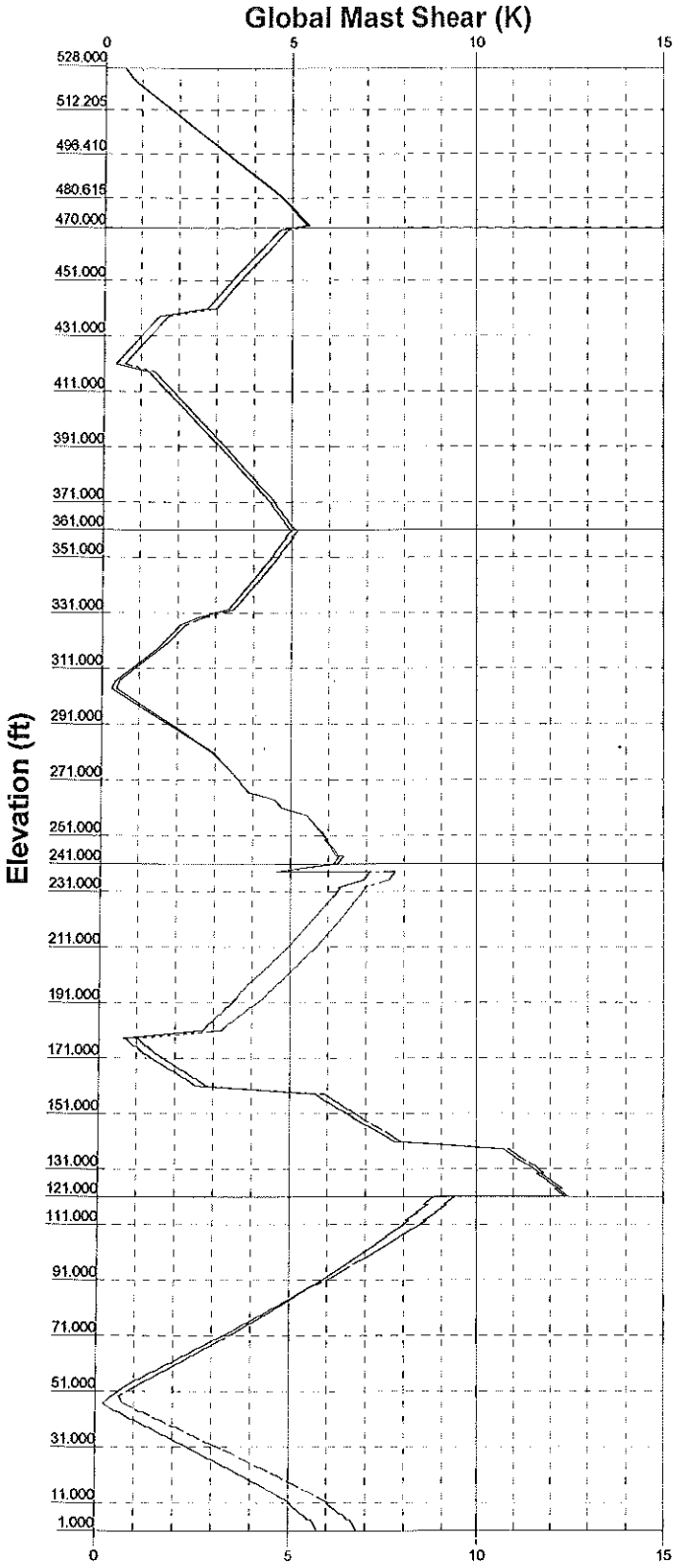
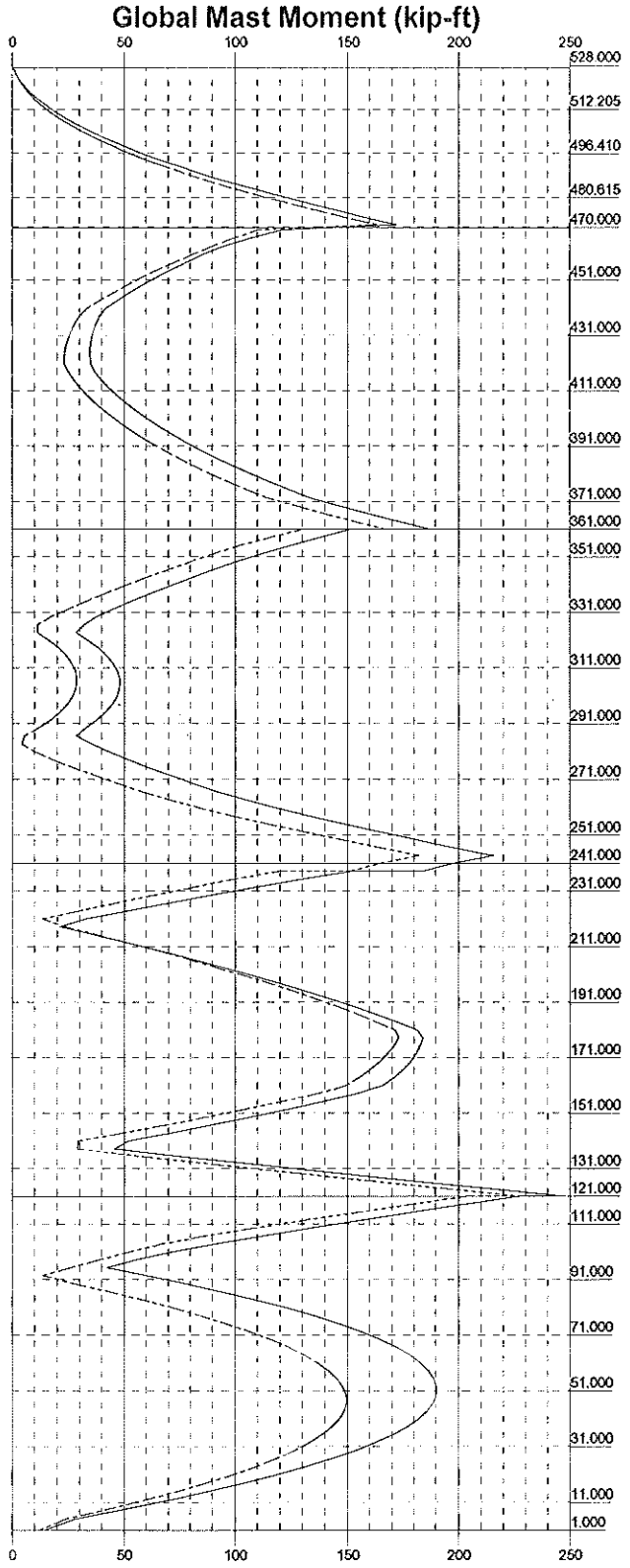
Project: 12590	48" Face	Run#2	
Client: SAGA Communications	Drawn by: M. Maurer	App'd:	
Code: TIA/EIA-222-F	Date: 10/18/04	Scale:	
Path: J:\mmaurer\Job\12590 PortlandME\12590v2 531 48 60.eri		Dwg N	

Vx Vz

Mx Mz



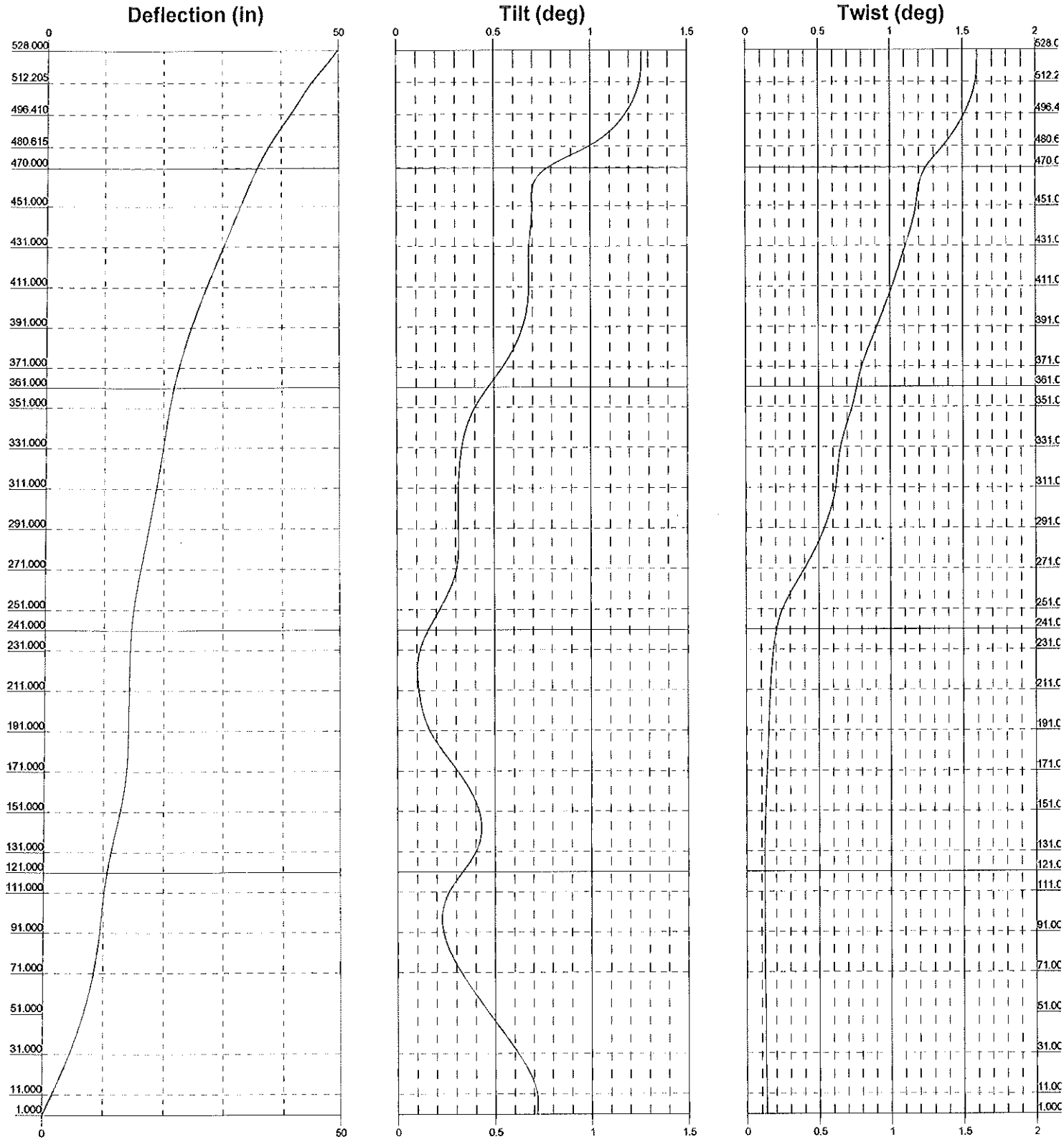


Electronics Research Inc.
7777 Gardner Road
Chandler, IN
Established 1945
Phone: 812-925-6000
FAX: 812-925-4026

Job: Portland, ME 531' Guyed Tower			
Project: 12590 48" Face Run#2			
Client: SAGA Communications		Drawn by: M. Maurer	App'd:
Code: TIA/EIA-222-F		Date: 10/18/04	Scale:
Path: J:\mmaurer\Job\12590_PortlandME\12590v2_531_48_80.eri			Dwg N

TIA/EIA-222-F - 80 mph/70 mph 0.500 in Ice

Maximum Values



Electronics Research Inc.
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Chandler, IN
Established 1945
Phone: 812-925-6000
FAX: 812-925-4026

Job: *Portland, ME*	*531' Guyed Tower*		
Project: *12590*	*48" Face*	*Run#2*	
Client: SAGA Communications	Drawn by: M. Maurer	App'd:	
Code: TIA/EIA-222-F	Date: 10/18/04	Scale:	
Path: J:\mmaurer\Job\12590_PortlandME\12590v2_531_48_80.eri		Dwg N	

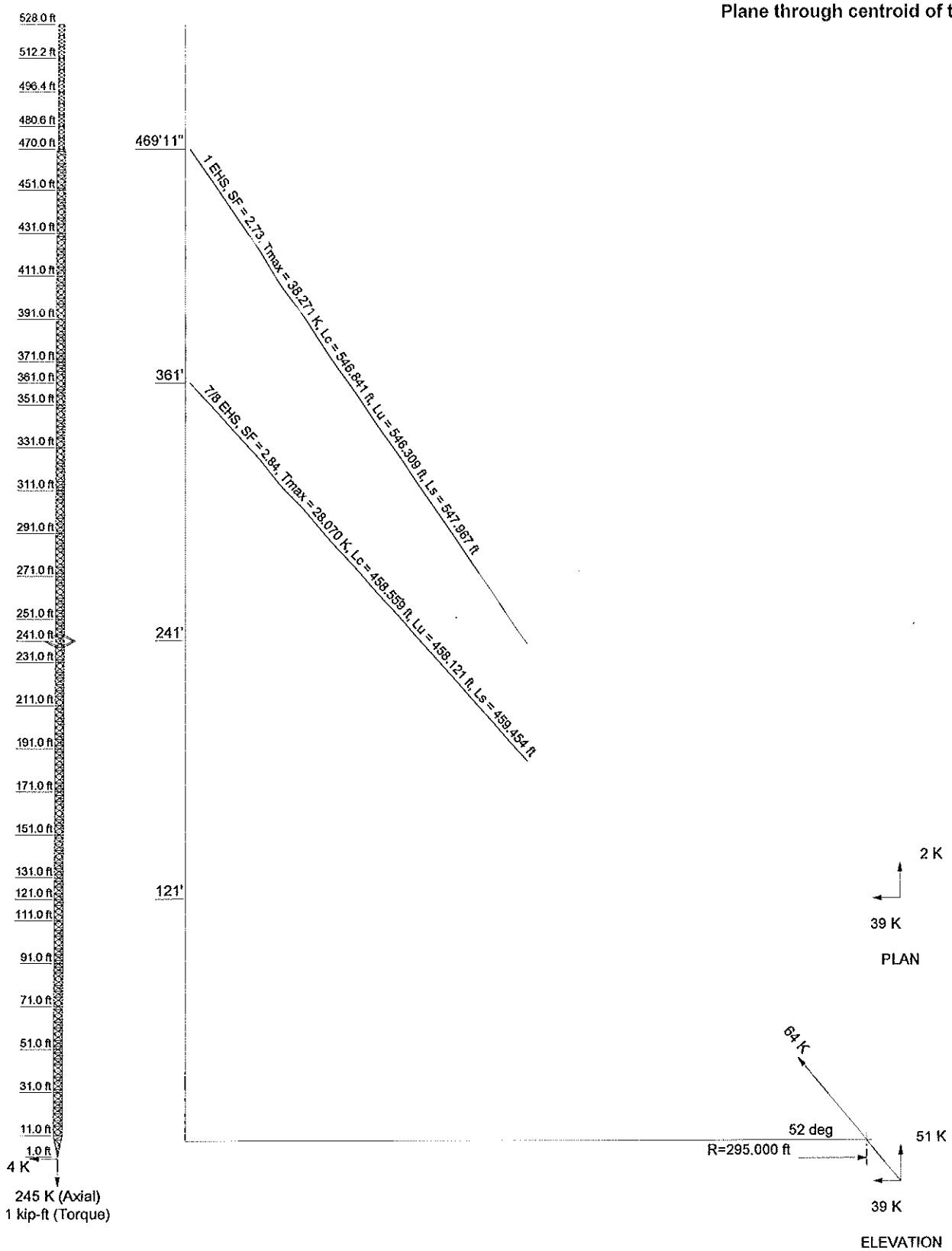
Guy Tensions and Tower Reactions

TIA/EIA-222-F - 80 mph/70 mph 0.500 in Ice

Maximum Values

Anchor 'A'@295 ft Azimuth 0 deg Elev 8 ft

Plane through centroid of tower



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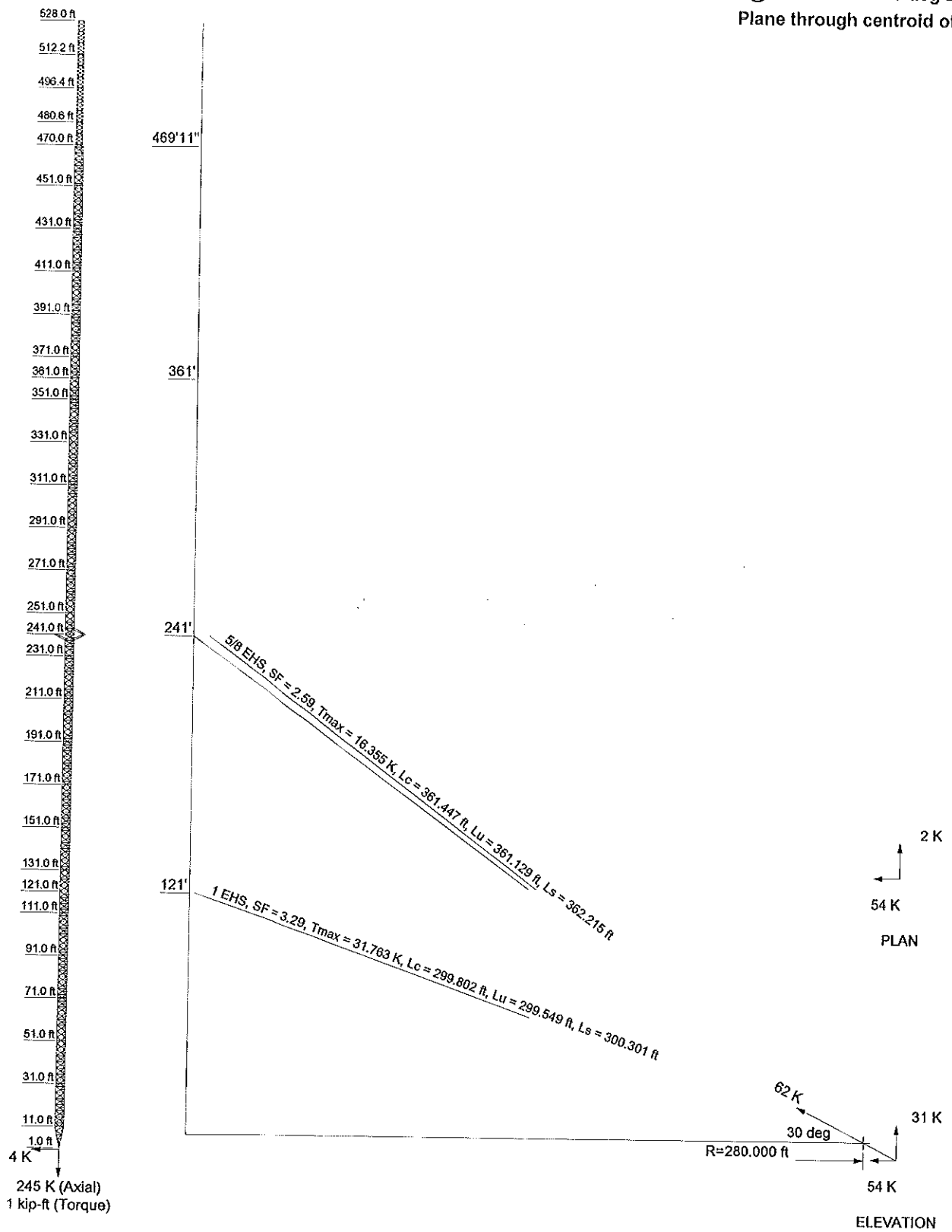
Guy Tensions and Tower Reactions

TIA/EIA-222-F - 80 mph/70 mph 0.500 in Ice

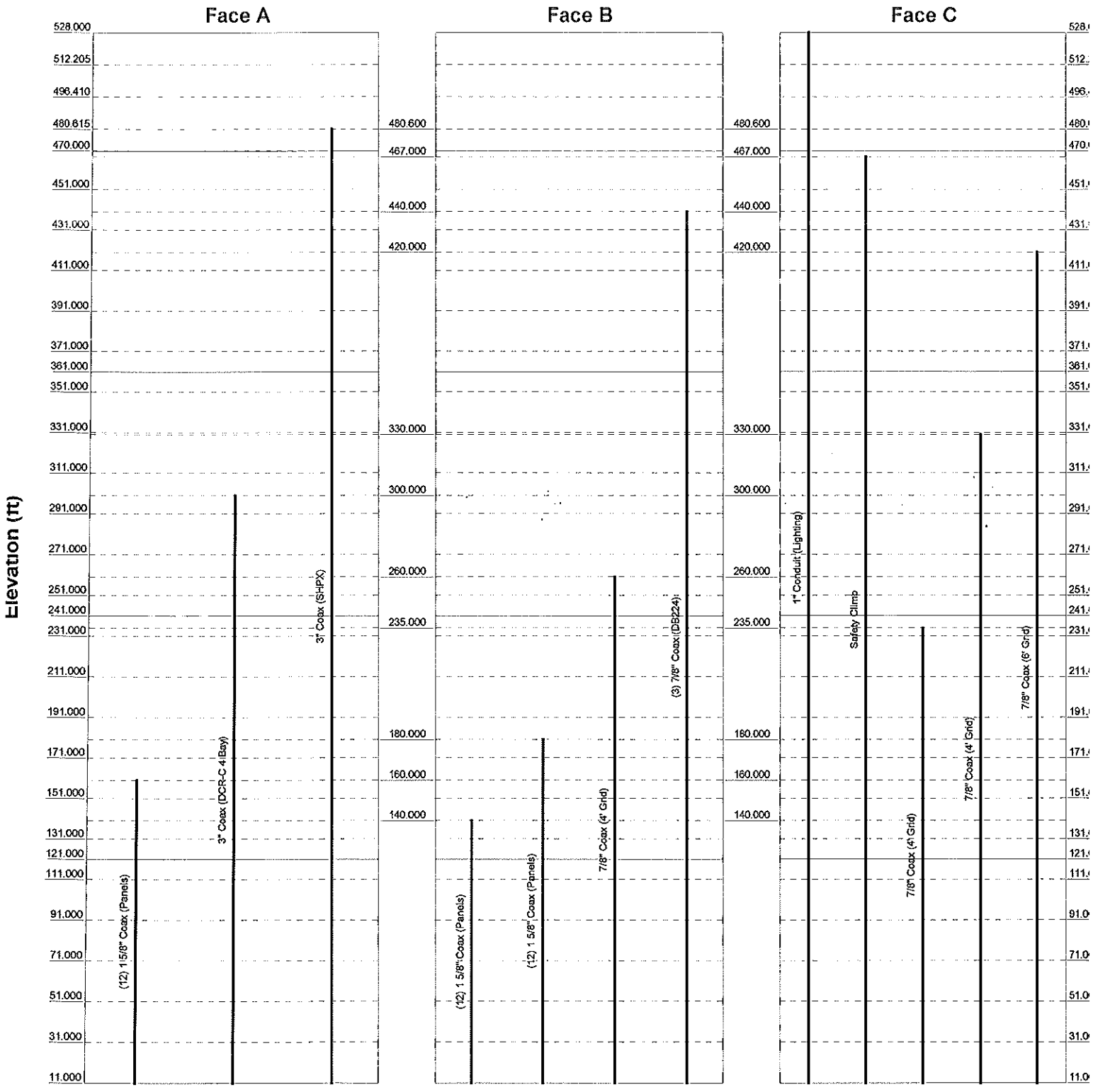
Maximum Values
Anchor 'A'@280 ft Azimuth 0 deg Elev 8 ft
Plane through centroid of tower



Electronics Research Inc.	Job: Portland, ME	531' Guyed Tower	
7777 Gardner Road	Project: 12590	48" Face	Run#2
Chandler, IN	Client: SAGA Communications	Drawn by: M. Maurer	App'd:
Established 1945	Code: TIA/EIA-222-F	Date: 10/18/04	Scale:
Phone: 812-925-6000 FAX: 812-925-4026	Path: J:\mmaurer\Job\12590 Portland\ME\12590v2_531_48_80.eri		Dwg N

11' - 528'

Round ___ Flat ___ App In Face ___ App Out Face ___ Truss Leg



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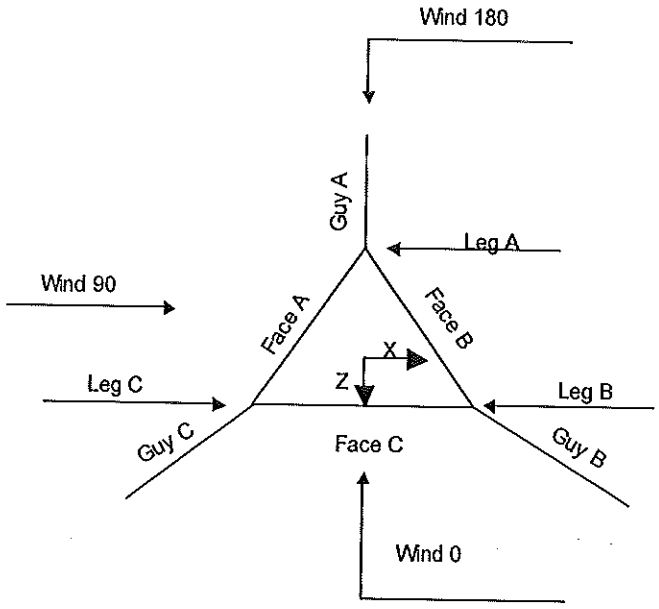
FAX: 812-925-4026
Established 1945

Job: Portland, ME	531' Guyed Tower		
Project: 12590	48" Face	Run#2	
Client: SAGA Communications	Drawn by: M. Maurer	App'd:	
Code: TIA/EIA-222-F	Date: 10/18/04	Scale:	
Path: J:\mmaurer\Job\12590_PortlandME\12590v2_531_48_60.eri		Dwg N	

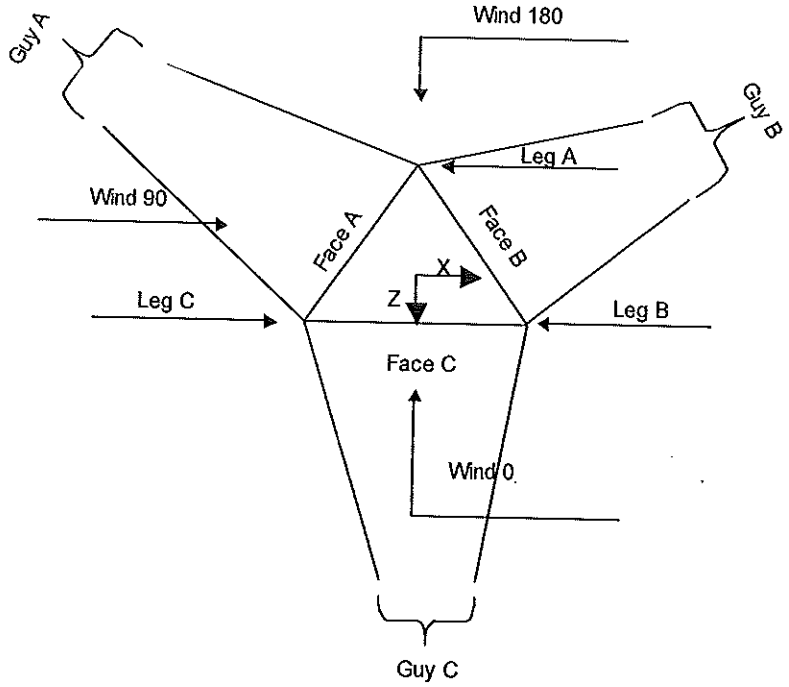
Tower Input Data

The main tower is a 3x guyed tower with an overall height of 528.000 ft above the ground line.
The base of the tower is set at an elevation of 1.000 ft above the ground line.
The face width of the tower is 4.000 ft at the top and tapered at the base.
An index plate is provided at the lambda-tower connection.
There is a lambda mast with a face width of 3.000 ft and a lambda length of 10.530 ft.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Basic wind speed of 80 mph.
Nominal ice thickness of 0.500 in.
Ice density of 56 pcf.
A wind speed of 70 mph is used in combination with ice.
Temperature drop of 40 °F.
Equivalent to 100 mph 3-second gust wind speed and 85 mph 3 sec peak gust wind with 1/2" radial ice..
Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222-F Standard..
Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..
Welds are fabricated with ER-70S-6 electrodes..
User specified elevation for calculation of G_h is 469.000 ft.
Pressures are calculated between guys.
Stress ratio used in latticed pole member design is 1.0664.
Safety factor used in guy design is 2.5.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.



Corner & Starmount Guyed Tower



Face Guyed

ERI Lambda Latticed Pole Section Geometry

Tower Section	*Tower Elevation*	*Assembly Database*	*Description*	*Section Width*	*Number of Sections*	*Section Length*
	ft			*ft*		*ft*
L1	528.000-512.205			3.000	1	15.795
L2	512.205-496.410			3.000	1	15.795
L3	496.410-480.615			3.000	1	15.795
L4	480.615-470.000			3.000	1	10.615

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Section	*Tower Elevation*	*Diagonal Spacing*	*Bracing Type*	*Has K Brace End Panels*	*Has Horizontals*	*Top Girt Offset*	*Bottom Girt Offset*
	ft	*ft*				*in*	*in*
L1	528.000-512.205	1.755	X Brace	Yes	No	0.000	1.000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
L2	512.205-496.410	1.755	X Brace	Yes	No	1.000	1.000
L3	496.410-480.615	1.755	X Brace	Yes	No	1.000	1.000
L4	480.615-470.000	1.769	X Brace	Yes	No	1.000	1.000

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
L1 528.000-512.205	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
L2 512.205-496.410	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
L3 496.410-480.615	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
L4 480.615-470.000	Solid Round	2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
L1 528.000-512.205	Flat Bar	1 1/2x1/2	A36 (36 ksi)	Flat Bar	1 1/2x1/2	A36 (36 ksi)
L2 512.205-496.410	Flat Bar	1 1/2x1/2	A36 (36 ksi)	Flat Bar	1 1/2x1/2	A36 (36 ksi)
L3 496.410-480.615	Flat Bar	1 1/2x1/2	A36 (36 ksi)	Solid Round	7/8	A572-50 (50 ksi)
L4 480.615-470.000	Solid Round	7/8	A572-50 (50 ksi)	Flat Bar	12x1	A572-50 (50 ksi)

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
L1 528.000-512.205	2	Solid Round	7/8	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)
L2 512.205-496.410	2	Solid Round	7/8	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)
L3 496.410-480.615	2	Solid Round	7/8	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)
L4 480.615-470.000	1	Solid Round	7/8	A572-50 (50 ksi)	Flat Bar		A36 (36 ksi)

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
L1 528.000-512.205	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
L2 512.205-496.410	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
L3 496.410-480.615	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
L4 480.615-470.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
L1 528.000-512.205	No	Yes	1	1 1	1 1	1 1	0.8 0.8	1 1	1 1	1 1
L2 512.205-496.410	No	Yes	1	1 1	1 1	1 1	0.8 0.8	1 1	1 1	1 1
L3 496.410-480.615	No	Yes	1	1 1	1 1	1 1	0.8 0.8	1 1	1 1	1 1
L4 480.615-470.000	No	Yes	1	1 1	1 1	1 1	0.8 1	1 1	1 1	1 1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

ERI Lambda Latticed Pole Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
L1 528.000-512.205	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
L2 512.205-496.410	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
L3 496.410-480.615	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
L4 480.615-470.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	470.000-451.000			4.000	1	19.000
T2	451.000-431.000			4.000	1	20.000
T3	431.000-411.000			4.000	1	20.000
T4	411.000-391.000			4.000	1	20.000
T5	391.000-371.000			4.000	1	20.000
T6	371.000-351.000			4.000	1	20.000
T7	351.000-331.000			4.000	1	20.000
T8	331.000-311.000			4.000	1	20.000
T9	311.000-291.000			4.000	1	20.000
T10	291.000-271.000			4.000	1	20.000
T11	271.000-251.000			4.000	1	20.000
T12	251.000-231.000			4.000	1	20.000
T13	231.000-211.000			4.000	1	20.000
T14	211.000-191.000			4.000	1	20.000
T15	191.000-171.000			4.000	1	20.000
T16	171.000-151.000			4.000	1	20.000
T17	151.000-131.000			4.000	1	20.000
T18	131.000-111.000			4.000	1	20.000
T19	111.000-91.000			4.000	1	20.000
T20	91.000-71.000			4.000	1	20.000
T21	71.000-51.000			4.000	1	20.000
T22	51.000-31.000			4.000	1	20.000
T23	31.000-11.000			4.000	1	20.000
T24	11.000-1.000			4.000	1	10.000

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	470.000-451.000	2.833	X Brace	Yes	Steps	1.000	1.000
T2	451.000-431.000	2.833	X Brace	Yes	Steps	1.000	1.000
T3	431.000-411.000	2.833	X Brace	Yes	Steps	1.000	1.000
T4	411.000-391.000	2.833	X Brace	Yes	Steps	1.000	1.000
T5	391.000-371.000	2.833	X Brace	Yes	Steps	1.000	1.000
T6	371.000-351.000	2.833	X Brace	Yes	Steps	1.000	1.000
T7	351.000-331.000	2.833	X Brace	Yes	Steps	1.000	1.000
T8	331.000-311.000	2.833	X Brace	Yes	Steps	1.000	1.000
T9	311.000-291.000	2.833	X Brace	Yes	Steps	1.000	1.000
T10	291.000-271.000	2.833	X Brace	Yes	Steps	1.000	1.000
T11	271.000-251.000	2.833	X Brace	Yes	Steps	1.000	1.000
T12	251.000-231.000	2.833	X Brace	Yes	Steps	1.000	1.000
T13	231.000-211.000	2.833	X Brace	Yes	Steps	1.000	1.000
T14	211.000-191.000	2.833	X Brace	Yes	Steps	1.000	1.000
T15	191.000-171.000	2.833	X Brace	Yes	Steps	1.000	1.000
T16	171.000-151.000	2.833	X Brace	Yes	Steps	1.000	1.000
T17	151.000-131.000	2.833	X Brace	Yes	Steps	1.000	1.000
T18	131.000-111.000	2.833	X Brace	Yes	Steps	1.000	1.000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T19	111.000-91.000	2.833	X Brace	Yes	Steps	1.000	1.000
T20	91.000-71.000	2.833	X Brace	Yes	Steps	1.000	1.000
T21	71.000-51.000	2.833	X Brace	Yes	Steps	1.000	1.000
T22	51.000-31.000	2.833	X Brace	Yes	Steps	1.000	1.000
T23	31.000-11.000	2.833	X Brace	Yes	Steps	1.000	1.000
T24	11.000-1.000	1.967	K Brace Left	No	Yes	1.000	1.000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 470.000-451.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T2 451.000-431.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T3 431.000-411.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T4 411.000-391.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T5 391.000-371.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T6 371.000-351.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T7 351.000-331.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T8 331.000-311.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T9 311.000-291.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T10 291.000-271.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T11 271.000-251.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T12 251.000-231.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T13 231.000-211.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T14 211.000-191.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T15 191.000-171.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T16 171.000-151.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	3/4	A572-50 (50 ksi)
T17 151.000-131.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T18 131.000-111.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T19 111.000-91.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T20 91.000-71.000	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T21 71.000-51.000	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T22 51.000-31.000	Solid Round	2 3/4	A572-50 (50 ksi)	Solid Round	7/8	A572-50 (50 ksi)
T23 31.000-	Solid Round	2 3/4	A572-50	Solid Round	7/8	A572-50

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
11.000 T24 11.000-1.000	Solid Round	2 3/4	(50 ksi) A572-50 (50 ksi)	Solid Round	1 1/8	(50 ksi) A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 470.000-451.000	Flat Bar	12x1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T2 451.000-431.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T3 431.000-411.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T4 411.000-391.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T5 391.000-371.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T6 371.000-351.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T7 351.000-331.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T8 331.000-311.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T9 311.000-291.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T10 291.000-271.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T11 271.000-251.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T12 251.000-231.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T13 231.000-211.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T14 211.000-191.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T15 191.000-171.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T16 171.000-151.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T17 151.000-131.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T18 131.000-111.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T19 111.000-91.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T20 91.000-71.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T21 71.000-51.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T22 51.000-31.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T23 31.000-11.000	Solid Round	1	A572-50 (50 ksi)	Solid Round	1	A572-50 (50 ksi)
T24 11.000-1.000	Solid Round	1 1/4	A572-50	Flat Bar	8x3/4	A572-50

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
			(50 ksi)			(50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 470.000-451.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T2 451.000-431.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T3 431.000-411.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T4 411.000-391.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T5 391.000-371.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T6 371.000-351.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T7 351.000-331.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T8 331.000-311.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T9 311.000-291.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T10 291.000-271.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T11 271.000-251.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T12 251.000-231.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T13 231.000-211.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T14 211.000-191.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T15 191.000-171.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T16 171.000-151.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T17 151.000-131.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T18 131.000-111.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T19 111.000-91.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T20 91.000-71.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T21 71.000-51.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T22 51.000-31.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T23 31.000-11.000	None	Solid Round		A36 (36 ksi)	Solid Round	3/4	A570-50 (50 ksi)
T24 11.000-1.000	None	Solid Round		A36 (36 ksi)	Solid Round	1 1/8	A570-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation	*Secondary Horizontal Type*	*Secondary Horizontal Size*	*Secondary Horizontal Grade*	*Inner Bracing Type*	*Inner Bracing Size*	*Inner Bracing Grade*
ft						
T1 470.000-451.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T2 451.000-431.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T3 431.000-411.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T4 411.000-391.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T5 391.000-371.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T6 371.000-351.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T7 351.000-331.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T8 331.000-311.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T9 311.000-291.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T10 291.000-271.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T11 271.000-251.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T12 251.000-231.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T13 231.000-211.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T14 211.000-191.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T15 191.000-171.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T16 171.000-151.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T17 151.000-131.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T18 131.000-111.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T19 111.000-91.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T20 91.000-71.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T21 71.000-51.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T22 51.000-31.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T23 31.000-11.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T24 11.000-1.000	Solid Round	5/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in
T1 470.000-451.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T2 451.000-431.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T3 431.000-411.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T4 411.000-391.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T5 391.000-371.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T6 371.000-351.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T7 351.000-331.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T8 331.000-311.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T9 311.000-291.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T10 291.000-271.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T11 271.000-251.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T12 251.000-231.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T13 231.000-211.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T14 211.000-191.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T15 191.000-171.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T16 171.000-151.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T17 151.000-131.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T18 131.000-111.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T19 111.000-91.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T20 91.000-71.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T21 71.000-51.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T22 51.000-31.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T23 31.000-11.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000
T24 11.000-1.000	0.000	0.000	A36 (36 ksi)	1	1	1.15	36.000	36.000

Tower Section Geometry *(cont'd)*

K Factors[1]

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 470.000-451.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T2 451.000-431.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T3 431.000-411.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T4 411.000-391.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T5 391.000-371.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T6 371.000-351.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T7 351.000-331.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T8 331.000-311.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T9 311.000-291.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T10 291.000-271.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T11 271.000-251.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T12 251.000-231.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T13 231.000-211.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T14 211.000-191.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T15 191.000-171.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T16 171.000-151.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T17 151.000-131.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T18 131.000-111.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T19 111.000-91.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T20 91.000-71.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T21 71.000-51.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T22 51.000-31.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T23 31.000-11.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1
T24 11.000-1.000	No	Yes	1	1	1	1	1	1	1	1
				1	1	1	1	1	1	1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 470.000-451.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T2 451.000-431.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T3 431.000-411.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T4 411.000-391.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T5 391.000-371.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T6 371.000-351.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T7 351.000-331.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T8 331.000-311.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T9 311.000-291.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T10 291.000-271.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T11 271.000-251.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T12 251.000-231.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T13 231.000-211.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T14 211.000-191.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T15 191.000-171.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T16 171.000-151.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T17 151.000-131.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T18 131.000-111.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T19 111.000-91.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T20 91.000-71.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T21 71.000-51.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T22 51.000-31.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T23 31.000-11.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75
T24 11.000-1.000	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75	0.000	0.75

Guy Data

Guy Elevation ft	Guy Grade		Guy Size	Initial Tension K	%	Guy Modulus ksi	Guy Weight plf	L_u ft	Anchor Radius ft	Anchor Azimuth Adj. °	Anchor Elevation ft	End Fitting Efficiency %
469.917	EHS	A	1	10.450	10%	19000.000	2.100	546.389	295.000	0.0000	8.000	100%
		B	1	10.450	10%	19000.000	2.100	548.331	295.000	0.0000	5.700	100%
		C	1	10.450	10%	19000.000	2.100	561.918	295.000	0.0000	-10.300	100%
361	EHS	A	7/8	7.970	10%	19000.000	1.581	458.186	295.000	0.0000	8.000	100%
		B	7/8	7.970	10%	19000.000	1.581	459.958	295.000	0.0000	5.700	100%
		C	7/8	7.970	10%	19000.000	1.581	472.405	295.000	0.0000	-10.300	100%
241	EHS	A	5/8	4.240	10%	21000.000	0.813	361.171	280.000	0.0000	8.000	100%
		B	5/8	4.240	10%	21000.000	0.813	362.656	280.000	0.0000	5.700	100%
		C	5/8	4.240	10%	21000.000	0.813	373.220	280.000	0.0000	-10.300	100%
121	EHS	A	1	10.450	10%	19000.000	2.100	299.562	280.000	0.0000	8.000	100%
		B	1	10.450	10%	19000.000	2.100	300.436	280.000	0.0000	5.700	100%
		C	1	10.450	10%	19000.000	2.100	306.921	280.000	0.0000	-10.300	100%

Guy Data(cont'd)

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
469.917	Corner						
361	Corner						
241	Torque Arm	13.000	21.0000	Wing	A36 (36 ksi)	Single Angle	L4x4x1/2
121	Corner						

Guy Data (cont'd)

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
469.917	A36 (36 ksi)	Solid Round				A36 (36 ksi)	Solid Round	
361.000	A36 (36 ksi)	Solid Round			No	A572-50 (50 ksi)	Solid Round	1 1/4
241.000	A36 (36 ksi)	Solid Round			No	A572-50 (50 ksi)	Solid Round	1 1/4
121.000	A36 (36 ksi)	Solid Round			No	A572-50 (50 ksi)	Solid Round	1 1/4

Guy Data (cont'd)

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
469.917	1.147	1.151	1.180		28.703	28.901	30.305	

Guy Elevation ft	Cable Weight A K	Cable Weight B K	Cable Weight C K	Cable Weight D K	Tower Intercept A ft	Tower Intercept B ft	Tower Intercept C ft	Tower Intercept D ft
					9.3 sec/pulse	9.3 sec/pulse	9.5 sec/pulse	
361	0.724	0.727	0.747		20.143	20.295	21.375	
					7.7 sec/pulse	7.8 sec/pulse	8.0 sec/pulse	
241	0.294	0.295	0.303		12.247	12.345	13.055	
					6.0 sec/pulse	6.1 sec/pulse	6.2 sec/pulse	
121	0.629	0.631	0.645		8.926	8.976	9.353	
					5.2 sec/pulse	5.2 sec/pulse	5.3 sec/pulse	

Guy Data *(cont'd)*

Guy Elevation ft	Calc K Single Angles	Calc K Solid Rounds	Torque Arm K_x	Torque Arm K_y	Pull Off K_x	Pull Off K_y	Diagonal K_x	Diagonal K_y
469.917	No	No			1	1	1	1
361	No	No			1	1	1	1
241	No	No	1	1	1	1	1	1
121	No	No			1	1	1	1

Guy Data *(cont'd)*

Guy Elevation ft	Torque-Arm Bolt Size in	Torque-Arm Number	Torque-Arm Net Width Deduct in	Torque-Arm U	Pull Off Bolt Size in	Pull Off Number	Pull Off Net Width Deduct in	Pull Off U	Diagonal Bolt Size in	Diagonal Number	Diagonal Net Width Deduct in	Diagonal U
469.917	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
361	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
241	0.000 A325N	0	0.000	1	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75
121	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75	0.625 A325N	0	0.000	0.75

Guy Pressures

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
469.917	A	238.958	28.846	22.085	0.500
	B	237.808	28.806	22.054	0.500
	C	229.808	28.526	21.840	0.500
361	A	184.500	26.791	20.512	0.500
	B	183.350	26.743	20.475	0.500
	C	175.350	26.404	20.216	0.500
241	A	124.500	23.943	18.331	0.500
	B	123.350	23.880	18.283	0.500
	C	115.350	23.426	17.936	0.500

Guy Elevation ft	Guy Location	z ft	q_z psf	q_z Ice psf	Ice Thickness in
121	A	64.500	19.842	15.191	0.500
	B	63.350	19.740	15.113	0.500
	C	55.350	18.993	14.541	0.500

Guy-Mast Forces (Excluding Wind) - No Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top / Bottom K	F_x K	F_y K	F_z K	M_x kip-ft	M_y kip-ft	M_z kip-ft
469.917	A	57.6399	11.419 / 10.450	0.000	9.809	-5.846	-22.653	0.000	0.000
	B	57.7684	11.424 / 10.450	5.046	9.826	2.913	11.346	0.000	-19.652
	C	58.6378	11.457 / 10.450	-4.932	9.942	2.847	11.480	0.000	19.884
			Sum:	**0.115**	29.577	**-0.086**	**0.174**	0.000	**0.232**
361	A	50.3361	8.528 / 7.970	0.000	6.711	-5.261	-15.499	0.000	0.000
	B	50.5188	8.531 / 7.970	4.540	6.731	2.621	7.772	0.000	-13.462
	C	51.7518	8.556 / 7.970	-4.427	6.862	2.556	7.924	0.000	13.724
			Sum:	**0.113**	20.304	**-0.084**	**0.197**	0.000	**0.262**
241	A	40.1381	4.429 / 4.240	-0.078	2.941	-3.311	-11.036	21.816	-19.115
	A	40.1381	4.429 / 4.240	0.078	2.941	-3.311	-11.036	-21.816	19.115
	B	40.4156	4.431 / 4.240	2.895	2.958	1.582	22.201	21.731	0.000
	B	40.4156	4.431 / 4.240	2.818	2.958	1.716	-11.101	-21.731	-19.227
	C	42.2847	4.444 / 4.240	-2.742	3.073	1.670	-11.531	21.147	19.973
	C	42.2847	4.444 / 4.240	-2.818	3.073	1.539	23.063	-21.147	0.000
			Sum:	**0.154**	17.943	**-0.114**	**0.560**	0.000	**0.746**
121	A	22.1428	10.687 / 10.450	0.000	4.297	-9.785	-9.925	0.000	0.000
	B	22.5487	10.692 / 10.450	8.451	4.369	4.879	5.044	0.000	-8.737
	C	25.3061	10.725 / 10.450	-8.286	4.847	4.784	5.597	0.000	9.695
			Sum:	**0.166**	13.514	**-0.122**	**0.717**	0.000	**0.958**

Guy-Mast Forces (Excluding Wind) - Ice

Guy Elevation ft	Guy Location	Chord Angle °	Guy Tension Top / Bottom K	F_x K	F_y K	F_z K	M_x kip-ft	M_y kip-ft	M_z kip-ft

Guy Elevation	Guy Location	Chord Angle	Guy Tension Top / Bottom	F_x	F_y	F_z	M_x	M_y	M_z
ft		°	K	K	K	K	kip-ft	kip-ft	kip-ft
469.917	A	57.6399	14.923	0.000	12.840	-7.605	-29.653	0.000	0.000
			13.531						
	B	57.7684	14.929	6.564	12.862	3.790	14.852	0.000	-25.724
			13.531						
	C	58.6378	14.972	-6.413	13.012	3.703	15.025	0.000	26.024
			13.525						
			Sum:	**0.151**	38.714	**-0.113**	**0.224**	0.000	**0.300**
361	A	50.3361	11.338	0.000	8.952	-6.957	-20.675	0.000	0.000
			10.484						
	B	50.5188	11.342	6.003	8.978	3.466	10.367	0.000	-17.956
			10.483						
	C	51.7518	11.374	-5.851	9.150	3.378	10.566	0.000	18.301
			10.476						
			Sum:	**0.152**	27.081	**-0.113**	**0.258**	0.000	**0.345**
241	A	40.1381	6.219	-0.109	4.167	-4.616	-15.637	30.411	-27.085
			5.870						
	A	40.1381	6.219	0.109	4.167	-4.616	-15.637	-30.411	27.085
			5.870						
	B	40.4156	6.222	4.036	4.191	2.205	31.454	30.290	0.000
			5.869						
	B	40.4156	6.222	3.928	4.191	2.392	-15.727	-30.290	-27.240
			5.869						
	C	42.2847	6.239	-3.820	4.350	2.327	-16.325	29.457	28.277
			5.863						
	C	42.2847	6.239	-3.925	4.350	2.144	32.651	-29.457	0.000
			5.863						
			Sum:	**0.219**	25.416	**-0.163**	**0.778**	0.000	**1.037**
121	A	22.1428	13.987	0.000	5.659	-12.791	-13.068	0.000	0.000
			13.646						
	B	22.5487	13.993	11.048	5.752	6.378	6.641	0.000	-11.503
			13.646						
	C	25.3061	14.038	-10.830	6.378	6.253	7.365	-0.000	12.756
			13.643						
			Sum:	**0.217**	17.788	**-0.160**	**0.938**	0.000	**1.253**

Guy-Tensioning Information

Guy Elevation		H	V	Temperature At Time Of Tensioning: 0 F Initial Tension	0 F Intercept	20 F Initial Tension	20 F Intercept	40 F Initial Tension	40 F Intercept	60 F Initial Tension	60 F Intercept	80 F Initial Tension	80 F Intercept	100 F Initial Tension	100 F Intercept	120 F Initial Tension	120 F Intercept
ft		ft	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft	K	ft
469.917	A	292.69	461.92	14.228	21.32	12.914	23.41	11.650	25.86	10.450	28.70	9.316	32.03	8.297	35.76	7.390	39.89
	B	292.69	464.22	14.228	21.47	12.915	23.58	11.650	26.04	10.450	28.90	9.316	32.25	8.297	36.00	7.390	40.16
	C	292.69	480.22	14.230	22.52	12.916	24.73	11.651	27.30	10.450	30.30	9.319	33.80	8.297	37.73	7.387	42.10
361	A	292.69	353.00	10.858	14.91	9.854	16.39	8.887	18.12	7.970	20.14	7.116	22.48	6.337	25.13	5.645	28.07
	B	292.69	355.30	10.858	15.02	9.854	16.52	8.887	18.26	7.970	20.29	7.116	22.64	6.337	25.31	5.645	28.28
	C	292.69	371.30	10.860	15.83	9.855	17.40	8.888	19.23	7.970	21.38	7.115	23.85	6.335	26.66	5.641	29.79
241	A	276.32	233.00	5.909	8.84	5.329	9.78	4.770	10.91	4.240	12.25	3.747	13.82	3.302	15.64	2.910	17.68
	B	276.32	235.30	5.909	8.91	5.329	9.86	4.770	11.00	4.240	12.34	3.747	13.93	3.301	15.76	2.910	17.82
	C	276.32	251.30	5.910	9.42	5.330	10.43	4.771	11.63	4.240	13.05	3.747	14.73	3.300	16.67	2.908	18.85
121	A	277.69	113.00	14.238	6.57	12.921	7.23	11.653	8.01	10.450	8.93	9.330	9.99	8.312	11.20	7.379	12.59
	B	277.69	115.30	14.239	6.60	12.921	7.27	11.653	8.06	10.450	8.98	9.330	10.04	8.311	11.26	7.379	12.66
	C	277.69	131.30	14.241	6.88	12.923	7.58	11.654	8.40	10.450	9.35	9.329	10.46	8.276	11.78	7.380	13.18

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
1" Conduit (Lighting)	C	No	Ar (CfAe)	528.000 - 1.000	1	1	1.000	1.000		0.001
Safety Climb	C	No	Ar (CfAe)	467.000 - 1.000	1	1	1.500	0.600		0.000
1 5/8" Coax (Panels)	B	No	Ar (CfAe)	140.000 - 1.000	12	4	0.250 2.000	2.000		0.001
1 5/8" Coax (Panels)	A	No	Ar (CfAe)	160.000 - 1.000	12	6	0.250 2.000	2.000		0.001
1 5/8" Coax (Panels)	B	No	Ar (CfAe)	180.000 - 1.000	12	6	0.250 2.000	2.000		0.001
7/8" Coax (4' Grid)	C	No	Ar (CfAe)	235.000 - 1.000	1	1	1.500	1.150		0.001
7/8" Coax (4' Grid)	B	No	Ar (CfAe)	260.000 - 1.000	1	1	1.500	1.150		0.001
3" Coax (DCR-C 4 Bay)	A	No	Ar (CfAe)	300.000 - 1.000	1	1	3.050	3.050		0.002
7/8" Coax (4' Grid)	C	No	Ar (CfAe)	330.000 - 1.000	1	1	1.500	1.150		0.001
7/8" Coax (6' Grid)	C	No	Ar (CfAe)	420.000 - 1.000	1	1	1.500	1.150		0.001
7/8" Coax (DB224)	B	No	Ar (CfAe)	440.000 - 1.000	3	3	1.500	1.150		0.001
3" Coax (SHPX)	A	No	Ar (CfAe)	480.600 - 1.000	1	1	3.050	3.050		0.002

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	528.000-512.205	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	1.316	0.000	0.000	0.000	0.009
L2	512.205-496.410	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	1.316	0.000	0.000	0.000	0.009
L3	496.410-480.615	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	1.316	0.000	0.000	0.000	0.009
L4	480.615-470.000	A	2.694	0.000	0.000	0.000	0.019
		B	0.000	0.000	0.000	0.000	0.000
		C	0.885	0.000	0.000	0.000	0.006
T1	470.000-451.000	A	4.829	0.000	0.000	0.000	0.034
		B	0.000	0.000	0.000	0.000	0.000
		C	2.383	0.000	0.000	0.000	0.015
T2	451.000-431.000	A	5.083	0.000	0.000	0.000	0.036
		B	2.587	0.000	0.000	0.000	0.015
		C	2.667	0.000	0.000	0.000	0.017
T3	431.000-411.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033
		C	3.529	0.000	0.000	0.000	0.022
T4	411.000-391.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033
		C	4.583	0.000	0.000	0.000	0.028
T5	391.000-371.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	4.583	0.000	0.000	0.000	0.028
T6	371.000-351.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033
		C	4.583	0.000	0.000	0.000	0.028
T7	351.000-331.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033
		C	4.583	0.000	0.000	0.000	0.028
T8	331.000-311.000	A	5.083	0.000	0.000	0.000	0.036
		B	5.750	0.000	0.000	0.000	0.033
		C	6.404	0.000	0.000	0.000	0.038
T9	311.000-291.000	A	7.371	0.000	0.000	0.000	0.052
		B	5.750	0.000	0.000	0.000	0.033
		C	6.500	0.000	0.000	0.000	0.039
T10	291.000-271.000	A	10.167	0.000	0.000	0.000	0.072
		B	5.750	0.000	0.000	0.000	0.033
		C	6.500	0.000	0.000	0.000	0.039
T11	271.000-251.000	A	10.167	0.000	0.000	0.000	0.072
		B	6.612	0.000	0.000	0.000	0.038
		C	6.500	0.000	0.000	0.000	0.039
T12	251.000-231.000	A	10.167	0.000	0.000	0.000	0.072
		B	7.667	0.000	0.000	0.000	0.044
		C	6.883	0.000	0.000	0.000	0.041
T13	231.000-211.000	A	10.167	0.000	0.000	0.000	0.072
		B	7.667	0.000	0.000	0.000	0.044
		C	8.417	0.000	0.000	0.000	0.050
T14	211.000-191.000	A	10.167	0.000	0.000	0.000	0.072
		B	7.667	0.000	0.000	0.000	0.044
		C	8.417	0.000	0.000	0.000	0.050
T15	191.000-171.000	A	10.167	0.000	0.000	0.000	0.072
		B	16.667	0.000	0.000	0.000	0.157
		C	8.417	0.000	0.000	0.000	0.050
T16	171.000-151.000	A	19.167	0.000	0.000	0.000	0.185
		B	27.667	0.000	0.000	0.000	0.296
		C	8.417	0.000	0.000	0.000	0.050
T17	151.000-131.000	A	30.167	0.000	0.000	0.000	0.324
		B	33.667	0.000	0.000	0.000	0.409
		C	8.417	0.000	0.000	0.000	0.050
T18	131.000-111.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T19	111.000-91.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T20	91.000-71.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T21	71.000-51.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T22	51.000-31.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T23	31.000-11.000	A	30.167	0.000	0.000	0.000	0.324
		B	41.000	0.000	0.000	0.000	0.548
		C	8.417	0.000	0.000	0.000	0.050
T24	11.000-1.000	A	15.083	0.000	0.000	0.000	0.162
		B	20.500	0.000	0.000	0.000	0.274
		C	4.208	0.000	0.000	0.000	0.025

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	528.000-512.205	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		2.632	0.000	0.000	0.000	0.024
L2	512.205-496.410	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		2.632	0.000	0.000	0.000	0.024
L3	496.410-480.615	A	0.500	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		2.632	0.000	0.000	0.000	0.024
L4	480.615-470.000	A	0.500	3.578	0.000	0.000	0.000	0.042
		B		0.000	0.000	0.000	0.000	0.000
		C		1.769	0.000	0.000	0.000	0.016
T1	470.000-451.000	A	0.500	6.412	0.000	0.000	0.000	0.075
		B		0.000	0.000	0.000	0.000	0.000
		C		5.300	0.000	0.000	0.000	0.044
T2	451.000-431.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		4.838	0.000	0.000	0.000	0.042
		C		6.000	0.000	0.000	0.000	0.049
T3	431.000-411.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		7.613	0.000	0.000	0.000	0.063
T4	411.000-391.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		9.583	0.000	0.000	0.000	0.080
T5	391.000-371.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		9.583	0.000	0.000	0.000	0.080
T6	371.000-351.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		9.583	0.000	0.000	0.000	0.080
T7	351.000-331.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		9.583	0.000	0.000	0.000	0.080
T8	331.000-311.000	A	0.500	6.750	0.000	0.000	0.000	0.079
		B		10.750	0.000	0.000	0.000	0.093
		C		12.988	0.000	0.000	0.000	0.110
T9	311.000-291.000	A	0.500	9.787	0.000	0.000	0.000	0.115
		B		10.750	0.000	0.000	0.000	0.093
		C		13.167	0.000	0.000	0.000	0.111
T10	291.000-271.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		10.750	0.000	0.000	0.000	0.093
		C		13.167	0.000	0.000	0.000	0.111
T11	271.000-251.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		12.363	0.000	0.000	0.000	0.107
		C		13.167	0.000	0.000	0.000	0.111
T12	251.000-231.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		14.333	0.000	0.000	0.000	0.125
		C		13.883	0.000	0.000	0.000	0.117
T13	231.000-211.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		14.333	0.000	0.000	0.000	0.125
		C		16.750	0.000	0.000	0.000	0.142
T14	211.000-191.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		14.333	0.000	0.000	0.000	0.125
		C		16.750	0.000	0.000	0.000	0.142
T15	191.000-171.000	A	0.500	13.500	0.000	0.000	0.000	0.159
		B		16.583	8.438	0.000	0.000	0.392
		C		16.750	0.000	0.000	0.000	0.142
T16	171.000-151.000	A	0.500	15.750	8.438	0.000	0.000	0.426

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		19.333	18.750	0.000	0.000	0.718
		C		16.750	0.000	0.000	0.000	0.142
T17	151.000-131.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		21.583	23.813	0.000	0.000	0.987
		C		16.750	0.000	0.000	0.000	0.142
T18	131.000-111.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T19	111.000-91.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T20	91.000-71.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T21	71.000-51.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T22	51.000-31.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T23	31.000-11.000	A	0.500	18.500	18.750	0.000	0.000	0.752
		B		24.333	30.000	0.000	0.000	1.315
		C		16.750	0.000	0.000	0.000	0.142
T24	11.000-1.000	A	0.500	9.250	9.375	0.000	0.000	0.376
		B		12.167	15.000	0.000	0.000	0.657
		C		8.375	0.000	0.000	0.000	0.071

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Red A-2/3 lighting Kit w/ A-3 Spur (Conduit)	C	None		0.0000	528.000	No Ice	12.000	12.000	0.175
						1/2" Ice	17.000	17.000	0.000
Mid Beacon Level (Conduit)	C	None		0.0000	265.000	No Ice	6.000	6.000	0.200
						1/2" Ice	8.000	8.000	0.250
ERI---A-3 Lightning Spur	C	None		0.0000	265.000	No Ice	8.000	8.000	0.150
						1/2" Ice	13.000	13.000	0.225
SHPX-5AE-Radomes (3" Coax)	C	From Leg	2.500 0.000 0.000	0.0000	480.600 - 522.700	No Ice	48.000	48.000	0.810
						1/2" Ice	56.000	56.000	1.585
(3) DB224 w/ Long Arm Mounts (7/8" Coax)	C	None		0.0000	440.000	No Ice	27.000	27.000	0.630
						1/2" Ice	39.000	39.000	0.885
Ice Shield (4' x 6')	A	From Leg	0.500 0.000 0.000	0.0000	329.200	No Ice	10.000	10.000	0.250
						1/2" Ice	12.000	12.000	0.350
DCR-C 4 Bay w/ domes (3" Coax)	B	From Leg	2.500 0.000 0.000	0.0000	280.800 - 319.200	No Ice	50.000	50.000	0.425
						1/2" Ice	67.000	67.000	0.565
(12) 5' x 1' Panels (1 5/8" Coax)	C	None		0.0000	180.000	No Ice	109.000	109.000	2.400
						1/2" Ice	128.000	128.000	3.600
(12) 5' x 1' Panels (1 5/8"	C	None		0.0000	160.000	No Ice	109.000	109.000	2.400

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Coax)									
(12) 5' x 1' Panels (1 5/8" Coax)	C	None		0.0000	140.000	1/2" Ice No Ice 1/2" Ice	128.000 109.000 128.000	128.000 109.000 128.000	3.600 2.400 3.600

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
6' Grid (7/8" Coax)	B	Grid	From Leg	1.000 0.000 0.000	Worst		420.000	6.000	No Ice 1/2" Ice	28.274 29.065	0.130 0.275
4' Grid (7/8" Coax)	A	Grid	From Leg	1.000 0.000 0.000	Worst		330.000	4.000	No Ice 1/2" Ice	12.566 13.095	0.100 0.175
4' Grid (7/8" Coax)	C	Grid	From Leg	1.000 0.000 0.000	Worst		260.000	4.000	No Ice 1/2" Ice	12.566 13.095	0.100 0.175
4' Grid (7/8" Coax)	B	Grid	From Leg	1.000 0.000 0.000	Worst		235.000	4.000	No Ice 1/2" Ice	12.566 13.095	0.100 0.175

Tower Pressures - No Ice

$G_H = 1.061$

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 528.000-512.205	498.958	2.173	35.599	50.017	A	0.750	9.608	5.265	50.83	0.000	0.000
					B	0.750	9.608		50.83		
					C	0.750	10.924		45.10		
L2 512.205-496.410	498.958	2.173	35.599	50.017	A	0.750	9.602	5.265	50.86	0.000	0.000
					B	0.750	9.602		50.86		
					C	0.750	10.919		45.12		
L3 496.410-480.615	498.958	2.173	35.599	50.017	A	0.375	9.821	5.265	51.64	0.000	0.000
					B	0.375	9.821		51.64		
					C	0.375	11.137		45.73		
L4 480.615-470.000	498.958	2.173	35.599	33.614	A	3.000	9.272	3.538	28.83	0.000	0.000
					B	3.000	6.578		36.94		
					C	3.000	7.462		33.82		
T1 470.000-451.000	415.458	2.062	33.784	79.958	A	4.000	17.306	7.917	37.16	0.000	0.000
					B	4.000	12.476		48.05		
					C	4.000	17.235		37.28		

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T2 451.000-431.000	415.458	2.062	33.784	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	15.877		52.49		
					C	0.000	18.331		45.46		
T3 431.000-411.000	415.458	2.062	33.784	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	19.193		43.42		
T4 411.000-391.000	415.458	2.062	33.784	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	20.247		41.16		
T5 391.000-371.000	415.458	2.062	33.784	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	20.247		41.16		
T6 371.000-351.000	301.000	1.881	30.812	84.167	A	0.000	19.504	8.333	42.73	0.000	0.000
					B	0.000	20.171		41.31		
					C	0.000	21.129		39.44		
T7 351.000-331.000	301.000	1.881	30.812	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	20.247		41.16		
T8 331.000-311.000	301.000	1.881	30.812	84.167	A	0.000	18.372	8.333	45.36	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	22.068		37.76		
T9 311.000-291.000	301.000	1.881	30.812	84.167	A	0.000	20.660	8.333	40.34	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	22.164		37.60		
T10 291.000-271.000	301.000	1.881	30.812	84.167	A	0.000	23.456	8.333	35.53	0.000	0.000
					B	0.000	19.039		43.77		
					C	0.000	22.164		37.60		
T11 271.000-251.000	301.000	1.881	30.812	84.167	A	0.000	23.456	8.333	35.53	0.000	0.000
					B	0.000	19.902		41.87		
					C	0.000	22.164		37.60		
T12 251.000-231.000	181.000	1.626	26.645	84.167	A	0.000	24.289	8.333	34.31	0.000	0.000
					B	0.000	21.789		38.25		
					C	0.000	22.881		36.42		
T13 231.000-211.000	181.000	1.626	26.645	84.167	A	0.000	23.456	8.333	35.53	0.000	0.000
					B	0.000	20.956		39.77		
					C	0.000	24.081		34.61		
T14 211.000-191.000	181.000	1.626	26.645	84.167	A	0.000	23.456	8.333	35.53	0.000	0.000
					B	0.000	20.956		39.77		
					C	0.000	24.081		34.61		
T15 191.000-171.000	181.000	1.626	26.645	84.167	A	0.000	23.456	8.333	35.53	0.000	0.000
					B	0.000	29.956		27.82		
					C	0.000	24.081		34.61		
T16 171.000-151.000	181.000	1.626	26.645	84.167	A	0.000	32.456	8.333	25.68	0.000	0.000
					B	0.000	40.956		20.35		
					C	0.000	24.081		34.61		
T17 151.000-131.000	181.000	1.626	26.645	84.167	A	0.000	44.171	8.333	18.87	0.000	0.000
					B	0.000	47.671		17.48		
					C	0.000	24.796		33.61		
T18 131.000-111.000	61.000	1.192	19.528	84.167	A	0.000	44.587	8.333	18.69	0.000	0.000
					B	0.000	55.421		15.04		
					C	0.000	24.962		33.38		
T19 111.000-91.000	61.000	1.192	19.528	84.167	A	0.000	44.171	8.333	18.87	0.000	0.000
					B	0.000	55.004		15.15		
					C	0.000	24.796		33.61		
T20 91.000-71.000	61.000	1.192	19.528	84.167	A	0.000	44.171	8.333	18.87	0.000	0.000
					B	0.000	55.004		15.15		
					C	0.000	24.796		33.61		
T21 71.000-51.000	61.000	1.192	19.528	84.583	A	0.000	45.004	9.167	20.37	0.000	0.000
					B	0.000	55.837		16.42		
					C	0.000	25.629		35.77		

Section Elevation ft	z ft	K_Z	q_t psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
T22 51.000-31.000	61.000	1.192	19.528	84.583	A	0.000	45.004	9.167	20.37	0.000	0.000
					B	0.000	55.837		16.42		
					C	0.000	25.629		35.77		
T23 31.000-11.000	61.000	1.192	19.528	84.583	A	0.000	45.004	9.167	20.37	0.000	0.000
					B	0.000	55.837		16.42		
					C	0.000	25.629		35.77		
T24 11.000-1.000	61.000	1.192	19.528	22.337	A	0.000	22.135	4.704	21.25	0.000	0.000
					B	0.000	27.552		17.07		
					C	0.000	11.260		41.77		

Tower Pressure - With Ice

$G_H = 1.061$

Section Elevation ft	z ft	K_Z	q_t psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 528.000-512.205	498.958	2.173	27.255	0.500	51.334	A	1.083	17.947	7.898	41.50	0.000	0.000
						B	1.083	17.947		41.50		
						C	1.083	20.579		36.46		
L2 512.205-496.410	498.958	2.173	27.255	0.500	51.334	A	1.083	17.935	7.898	41.53	0.000	0.000
						B	1.083	17.935		41.53		
						C	1.083	20.567		36.48		
L3 496.410-480.615	498.958	2.173	27.255	0.500	51.334	A	0.542	18.404	7.898	41.69	0.000	0.000
						B	0.542	18.404		41.69		
						C	0.542	21.036		36.60		
L4 480.615-470.000	498.958	2.173	27.255	0.500	34.499	A	3.167	15.894	5.308	27.85	0.000	0.000
						B	3.167	12.316		34.28		
						C	3.167	14.085		30.76		
T1 470.000-451.000	415.458	2.062	25.866	0.500	81.542	A	4.222	28.024	11.083	34.37	0.000	0.000
						B	4.222	21.612		42.90		
						C	4.222	32.620		30.08		
T2 451.000-431.000	415.458	2.062	25.866	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	27.845		41.90		
						C	0.000	34.716		33.61		
T3 431.000-411.000	415.458	2.062	25.866	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	36.329		32.11		
T4 411.000-391.000	415.458	2.062	25.866	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	38.300		30.46		
T5 391.000-371.000	415.458	2.062	25.866	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	38.300		30.46		
T6 371.000-351.000	301.000	1.881	23.590	0.500	85.833	A	0.000	31.223	11.667	37.37	0.000	0.000
						B	0.000	35.223		33.12		
						C	0.000	39.181		29.78		
T7 351.000-331.000	301.000	1.881	23.590	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	38.300		30.46		
T8 331.000-311.000	301.000	1.881	23.590	0.500	85.833	A	0.000	29.758	11.667	39.21	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	41.704		27.98		
T9 311.000-291.000	301.000	1.881	23.590	0.500	85.833	A	0.000	32.795	11.667	35.57	0.000	0.000
						B	0.000	33.758		34.56		

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	0.000	41.883		27.86		
T10 291.000-271.000	301.000	1.881	23.590	0.500	85.833	A	0.000	36.508	11.667	31.96	0.000	0.000
						B	0.000	33.758		34.56		
						C	0.000	41.883		27.86		
T11 271.000-251.000	301.000	1.881	23.590	0.500	85.833	A	0.000	36.508	11.667	31.96	0.000	0.000
						B	0.000	35.370		32.98		
						C	0.000	41.883		27.86		
T12 251.000-231.000	181.000	1.626	20.400	0.500	85.833	A	0.000	38.008	11.667	30.70	0.000	0.000
						B	0.000	38.841		30.04		
						C	0.000	42.933		27.17		
T13 231.000-211.000	181.000	1.626	20.400	0.500	85.833	A	0.000	36.508	11.667	31.96	0.000	0.000
						B	0.000	37.341		31.24		
						C	0.000	45.466		25.66		
T14 211.000-191.000	181.000	1.626	20.400	0.500	85.833	A	0.000	36.508	11.667	31.96	0.000	0.000
						B	0.000	37.341		31.24		
						C	0.000	45.466		25.66		
T15 191.000-171.000	181.000	1.626	20.400	0.500	85.833	A	0.000	36.508	11.667	31.96	0.000	0.000
						B	8.438	39.591		24.29		
						C	0.000	45.466		25.66		
T16 171.000-151.000	181.000	1.626	20.400	0.500	85.833	A	8.438	38.758	11.667	24.72	0.000	0.000
						B	18.750	42.341		19.10		
						C	0.000	45.466		25.66		
T17 151.000-131.000	181.000	1.626	20.400	0.500	85.833	A	18.750	42.223	11.667	19.13	0.000	0.000
						B	23.813	45.306		16.88		
						C	0.000	46.181		25.26		
T18 131.000-111.000	61.000	1.192	14.951	0.500	85.833	A	18.750	42.973	11.667	18.90	0.000	0.000
						B	30.000	48.806		14.80		
						C	0.000	46.348		25.17		
T19 111.000-91.000	61.000	1.192	14.951	0.500	85.833	A	18.750	42.223	11.667	19.13	0.000	0.000
						B	30.000	48.056		14.95		
						C	0.000	46.181		25.26		
T20 91.000-71.000	61.000	1.192	14.951	0.500	85.833	A	18.750	42.223	11.667	19.13	0.000	0.000
						B	30.000	48.056		14.95		
						C	0.000	46.181		25.26		
T21 71.000-51.000	61.000	1.192	14.951	0.500	86.250	A	18.750	43.056	12.500	20.22	0.000	0.000
						B	30.000	48.889		15.84		
						C	0.000	47.014		26.59		
T22 51.000-31.000	61.000	1.192	14.951	0.500	86.250	A	18.750	43.056	12.500	20.22	0.000	0.000
						B	30.000	48.889		15.84		
						C	0.000	47.014		26.59		
T23 31.000-11.000	61.000	1.192	14.951	0.500	86.250	A	18.750	43.056	12.500	20.22	0.000	0.000
						B	30.000	48.889		15.84		
						C	0.000	47.014		26.59		
T24 11.000-1.000	61.000	1.192	14.951	0.500	23.187	A	9.375	20.063	6.415	21.79	0.000	0.000
						B	15.000	22.980		16.89		
						C	0.000	19.188		33.43		

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1 528.000-512.205	0.009	1.002	A	0.207	2.573	0.592	1	1	6.436	0.684	0.043	C
			B	0.207	2.573	0.592	1	1	6.436			
			C	0.233	2.488	0.598	1	1	7.280			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L2 512.205-496.410	0.009	1.001	A	0.207	2.573	0.592	1	1	6.433	0.684	0.043	C
			B	0.207	2.573	0.592	1	1	6.433			
			C	0.233	2.489	0.598	1	1	7.277			
L3 496.410-480.615	0.009	0.996	A	0.204	2.583	0.591	1	1	6.181	0.663	0.042	C
			B	0.204	2.583	0.591	1	1	6.181			
			C	0.23	2.498	0.597	1	1	7.024			
L4 480.615-470.000	0.025	1.072	A	0.365	2.137	0.638	1	1	8.915	0.719	0.068	A
			B	0.285	2.337	0.611	1	1	7.022			
			C	0.311	2.267	0.619	1	1	7.622			
T1 470.000-451.000	0.050	2.109	A	0.266	2.389	0.606	1	1	14.491	1.241	0.065	A
			B	0.206	2.576	0.592	1	1	11.382			
			C	0.266	2.392	0.606	1	1	14.444			
T2 451.000-431.000	0.068	1.645	A	0.218	2.536	0.594	1	1	10.919	0.992	0.050	A
			B	0.189	2.634	0.588	1	1	9.338			
			C	0.218	2.538	0.594	1	1	10.892			
T3 431.000-411.000	0.091	1.645	A	0.218	2.536	0.594	1	1	10.919	1.028	0.051	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.228	2.505	0.597	1	1	11.449			
T4 411.000-391.000	0.097	1.645	A	0.218	2.536	0.594	1	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.241	2.466	0.6	1	1	12.139			
T5 391.000-371.000	0.097	1.645	A	0.218	2.536	0.594	1	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.241	2.466	0.6	1	1	12.139			
T6 371.000-351.000	0.097	1.824	A	0.232	2.493	0.597	1	1	11.651	1.012	0.051	C
			B	0.24	2.469	0.599	1	1	12.088			
			C	0.251	2.434	0.602	1	1	12.723			
T7 351.000-331.000	0.097	1.645	A	0.218	2.536	0.594	1	1	10.919	0.978	0.049	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.241	2.466	0.6	1	1	12.139			
T8 331.000-311.000	0.107	1.645	A	0.218	2.536	0.594	1	1	10.919	1.048	0.052	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.262	2.401	0.605	1	1	13.353			
T9 311.000-291.000	0.124	1.645	A	0.245	2.451	0.601	1	1	12.411	1.052	0.053	C
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.263	2.398	0.605	1	1	13.417			
T10 291.000-271.000	0.144	1.645	A	0.279	2.354	0.61	1	1	14.299	1.100	0.055	A
			B	0.226	2.511	0.596	1	1	11.349			
			C	0.263	2.398	0.605	1	1	13.417			
T11 271.000-251.000	0.149	1.645	A	0.279	2.354	0.61	1	1	14.299	1.100	0.055	A
			B	0.236	2.479	0.599	1	1	11.911			
			C	0.263	2.398	0.605	1	1	13.417			
T12 251.000-231.000	0.157	1.746 TA 1.274	A	0.289	2.327	0.612	1	1	14.876	0.978	0.049	A
			B	0.259	2.411	0.604	1	1	13.165			
			C	0.272	2.374	0.608	1	1	13.904			
T13 231.000-211.000	0.166	1.645	A	0.279	2.354	0.61	1	1	14.299	0.972	0.049	C
			B	0.249	2.441	0.602	1	1	12.607			
			C	0.286	2.334	0.612	1	1	14.731			
T14 211.000-191.000	0.166	1.645	A	0.279	2.354	0.61	1	1	14.299	0.972	0.049	C
			B	0.249	2.441	0.602	1	1	12.607			
			C	0.286	2.334	0.612	1	1	14.731			
T15 191.000-171.000	0.279	1.645	A	0.279	2.354	0.61	1	1	14.299	1.159	0.058	B
			B	0.356	2.158	0.635	1	1	19.010			
			C	0.286	2.334	0.612	1	1	14.731			
T16 171.000-151.000	0.531	1.645	A	0.386	2.093	0.646	1	1	20.961	1.533	0.077	B
			B	0.487	1.918	0.691	1	1	28.291			
			C	0.286	2.334	0.612	1	1	14.731			
T17 151.000-131.000	0.783	1.774	A	0.525	1.87	0.71	1	1	31.382	1.807	0.090	B
			B	0.566	1.829	0.734	1	1	34.971			
			C	0.295	2.31	0.614	1	1	15.231			

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T18 131.000-111.000	0.922	1.824	A	0.53	1.864	0.713	1	1	31.796	1.616	0.081	B
			B	0.658	1.779	0.791	1	1	43.844			
			C	0.297	2.305	0.615	1	1	15.348			
T19 111.000-91.000	0.922	1.774	A	0.525	1.87	0.71	1	1	31.382	1.598	0.080	B
			B	0.654	1.781	0.788	1	1	43.333			
			C	0.295	2.31	0.614	1	1	15.231			
T20 91.000-71.000	0.922	1.774	A	0.525	1.87	0.71	1	1	31.382	1.598	0.080	B
			B	0.654	1.781	0.788	1	1	43.333			
			C	0.295	2.31	0.614	1	1	15.231			
T21 71.000-51.000	0.922	2.016	A	0.532	1.862	0.714	1	1	32.150	1.630	0.082	B
			B	0.66	1.779	0.792	1	1	44.237			
			C	0.303	2.288	0.617	1	1	15.809			
T22 51.000-31.000	0.922	2.016	A	0.532	1.862	0.714	1	1	32.150	1.630	0.082	B
			B	0.66	1.779	0.792	1	1	44.237			
			C	0.303	2.288	0.617	1	1	15.809			
T23 31.000-11.000	0.922	2.016	A	0.532	1.862	0.714	1	1	32.150	1.630	0.082	B
			B	0.66	1.779	0.792	1	1	44.237			
			C	0.303	2.288	0.617	1	1	15.809			
T24 11.000-1.000	0.461	1.014	A	0.991	2.081	1	1	1	22.135	0.925*	0.093	B
			B	1	2.1	1	1	1	27.552			
			C	0.504	1.895	0.7	1	1	7.878			
Sum Weight:	9.251	46.616			*$2A_g$ limit					32.495		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1 528.000-512.205	0.009	1.002	A	0.207	2.573	0.592	0.8	1	6.286	0.670	0.042	C
			B	0.207	2.573	0.592	0.8	1	6.286			
			C	0.233	2.488	0.598	0.8	1	7.130			
L2 512.205-496.410	0.009	1.001	A	0.207	2.573	0.592	0.8	1	6.283	0.670	0.042	C
			B	0.207	2.573	0.592	0.8	1	6.283			
			C	0.233	2.489	0.598	0.8	1	7.127			
L3 496.410-480.615	0.009	0.996	A	0.204	2.583	0.591	0.8	1	6.106	0.656	0.042	C
			B	0.204	2.583	0.591	0.8	1	6.106			
			C	0.23	2.498	0.597	0.8	1	6.949			
L4 480.615-470.000	0.025	1.072	A	0.365	2.137	0.638	0.8	1	8.315	0.671	0.063	A
			B	0.285	2.337	0.611	0.8	1	6.422			
			C	0.311	2.267	0.619	0.8	1	7.022			
T1 470.000-451.000	0.050	2.109	A	0.266	2.389	0.606	0.8	1	13.691	1.172	0.062	A
			B	0.206	2.576	0.592	0.8	1	10.582			
			C	0.266	2.392	0.606	0.8	1	13.644			
T2 451.000-431.000	0.068	1.645	A	0.218	2.536	0.594	0.8	1	10.919	0.992	0.050	A
			B	0.189	2.634	0.588	0.8	1	9.338			
			C	0.218	2.538	0.594	0.8	1	10.892			
T3 431.000-411.000	0.091	1.645	A	0.218	2.536	0.594	0.8	1	10.919	1.028	0.051	C
			B	0.226	2.511	0.596	0.8	1	11.349			
			C	0.228	2.505	0.597	0.8	1	11.449			
T4 411.000-391.000	0.097	1.645	A	0.218	2.536	0.594	0.8	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	0.8	1	11.349			
			C	0.241	2.466	0.6	0.8	1	12.139			
T5 391.000-371.000	0.097	1.645	A	0.218	2.536	0.594	0.8	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	0.8	1	11.349			

ERITowerBeta	Job: Portland, ME 531' Guyed Tower	Page: 28 of 82
Electronics Research Inc. 7777 Gardner Road Chandler, IN Phone: 812-925-6000 FAX: 812-925-4026	Project: 12590 48" Face Run#2	Date: 11:18:49 10/18/04
	Client: SAGA Communications	Designed by: M. Maurer

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
T6 371.000-351.000	0.097	1.824	C	0.241	2.466	0.6	0.8	1	12.139	1.012	0.051	C
			A	0.232	2.493	0.597	0.8	1	11.651			
			B	0.24	2.469	0.599	0.8	1	12.088			
T7 351.000-331.000	0.097	1.645	C	0.251	2.434	0.602	0.8	1	12.723	0.978	0.049	C
			A	0.218	2.536	0.594	0.8	1	10.919			
			B	0.226	2.511	0.596	0.8	1	11.349			
T8 331.000-311.000	0.107	1.645	C	0.241	2.466	0.6	0.8	1	12.139	1.048	0.052	C
			A	0.218	2.536	0.594	0.8	1	10.919			
			B	0.226	2.511	0.596	0.8	1	11.349			
T9 311.000-291.000	0.124	1.645	C	0.262	2.401	0.605	0.8	1	13.353	1.052	0.053	C
			A	0.245	2.451	0.601	0.8	1	12.411			
			B	0.226	2.511	0.596	0.8	1	11.349			
T10 291.000-271.000	0.144	1.645	C	0.263	2.398	0.605	0.8	1	13.417	1.100	0.055	A
			A	0.279	2.354	0.61	0.8	1	14.299			
			B	0.226	2.511	0.596	0.8	1	11.349			
T11 271.000-251.000	0.149	1.645	C	0.263	2.398	0.605	0.8	1	13.417	1.100	0.055	A
			A	0.279	2.354	0.61	0.8	1	14.299			
			B	0.236	2.479	0.599	0.8	1	11.911			
T12 251.000-231.000	0.157	1.746 TA 1.274	C	0.263	2.398	0.605	0.8	1	13.417	0.978	0.049	A
			A	0.289	2.327	0.612	0.8	1	14.876			
			B	0.259	2.411	0.604	0.8	1	13.165			
T13 231.000-211.000	0.166	1.645	C	0.272	2.374	0.608	0.8	1	13.904	0.972	0.049	C
			A	0.279	2.354	0.61	0.8	1	14.299			
			B	0.249	2.441	0.602	0.8	1	12.607			
T14 211.000-191.000	0.166	1.645	C	0.286	2.334	0.612	0.8	1	14.731	0.972	0.049	C
			A	0.279	2.354	0.61	0.8	1	14.299			
			B	0.249	2.441	0.602	0.8	1	12.607			
T15 191.000-171.000	0.279	1.645	C	0.286	2.334	0.612	0.8	1	14.731	1.159	0.058	B
			A	0.279	2.354	0.61	0.8	1	14.299			
			B	0.356	2.158	0.635	0.8	1	19.010			
T16 171.000-151.000	0.531	1.645	C	0.286	2.334	0.612	0.8	1	14.731	1.533	0.077	B
			A	0.386	2.093	0.646	0.8	1	20.961			
			B	0.487	1.918	0.691	0.8	1	28.291			
T17 151.000-131.000	0.783	1.774	C	0.286	2.334	0.612	0.8	1	14.731	1.807	0.090	B
			A	0.525	1.87	0.71	0.8	1	31.382			
			B	0.566	1.829	0.734	0.8	1	34.971			
T18 131.000-111.000	0.922	1.824	C	0.295	2.31	0.614	0.8	1	15.231	1.616	0.081	B
			A	0.53	1.864	0.713	0.8	1	31.796			
			B	0.658	1.779	0.791	0.8	1	43.844			
T19 111.000-91.000	0.922	1.774	C	0.297	2.305	0.615	0.8	1	15.348	1.598	0.080	B
			A	0.525	1.87	0.71	0.8	1	31.382			
			B	0.654	1.781	0.788	0.8	1	43.333			
T20 91.000-71.000	0.922	1.774	C	0.295	2.31	0.614	0.8	1	15.231	1.598	0.080	B
			A	0.525	1.87	0.71	0.8	1	31.382			
			B	0.654	1.781	0.788	0.8	1	43.333			
T21 71.000-51.000	0.922	2.016	C	0.295	2.31	0.614	0.8	1	15.231	1.630	0.082	B
			A	0.532	1.862	0.714	0.8	1	32.150			
			B	0.66	1.779	0.792	0.8	1	44.237			
T22 51.000-31.000	0.922	2.016	C	0.303	2.288	0.617	0.8	1	15.809	1.630	0.082	B
			A	0.532	1.862	0.714	0.8	1	32.150			
			B	0.66	1.779	0.792	0.8	1	44.237			
T23 31.000-11.000	0.922	2.016	C	0.303	2.288	0.617	0.8	1	15.809	1.630	0.082	B
			A	0.532	1.862	0.714	0.8	1	32.150			
			B	0.66	1.779	0.792	0.8	1	44.237			
T24 11.000-1.000	0.461	1.014	C	0.303	2.288	0.617	0.8	1	15.809	0.925*	0.093	B
			A	0.991	2.081	1	0.8	1	22.135			
			B	1	2.1	1	0.8	1	27.552			
			C	0.504	1.895	0.7	0.8	1	7.878			
Sum Weight:	9.251	46.616			*$2A_g$ limit					32.343		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C_F	R_R	D_F	D_R	A_E ft²	F K	w klf	Ctrl. Face
L1 528.000-512.205	0.009	1.002	A	0.207	2.573	0.592	0.85	1	6.324	0.673	0.043	C
			B	0.207	2.573	0.592	0.85	1	6.324			
			C	0.233	2.488	0.598	0.85	1	7.168			
L2 512.205-496.410	0.009	1.001	A	0.207	2.573	0.592	0.85	1	6.321	0.673	0.043	C
			B	0.207	2.573	0.592	0.85	1	6.321			
			C	0.233	2.489	0.598	0.85	1	7.164			
L3 496.410-480.615	0.009	0.996	A	0.204	2.583	0.591	0.85	1	6.125	0.657	0.042	C
			B	0.204	2.583	0.591	0.85	1	6.125			
			C	0.23	2.498	0.597	0.85	1	6.968			
L4 480.615-470.000	0.025	1.072	A	0.365	2.137	0.638	0.85	1	8.465	0.683	0.064	A
			B	0.285	2.337	0.611	0.85	1	6.572			
			C	0.311	2.267	0.619	0.85	1	7.172			
T1 470.000-451.000	0.050	2.109	A	0.266	2.389	0.606	0.85	1	13.891	1.189	0.063	A
			B	0.206	2.576	0.592	0.85	1	10.782			
			C	0.266	2.392	0.606	0.85	1	13.844			
T2 451.000-431.000	0.068	1.645	A	0.218	2.536	0.594	0.85	1	10.919	0.992	0.050	A
			B	0.189	2.634	0.588	0.85	1	9.338			
			C	0.218	2.538	0.594	0.85	1	10.892			
T3 431.000-411.000	0.091	1.645	A	0.218	2.536	0.594	0.85	1	10.919	1.028	0.051	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.228	2.505	0.597	0.85	1	11.449			
T4 411.000-391.000	0.097	1.645	A	0.218	2.536	0.594	0.85	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.241	2.466	0.6	0.85	1	12.139			
T5 391.000-371.000	0.097	1.645	A	0.218	2.536	0.594	0.85	1	10.919	1.073	0.054	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.241	2.466	0.6	0.85	1	12.139			
T6 371.000-351.000	0.097	1.824	A	0.232	2.493	0.597	0.85	1	11.651	1.012	0.051	C
			B	0.24	2.469	0.599	0.85	1	12.088			
			C	0.251	2.434	0.602	0.85	1	12.723			
T7 351.000-331.000	0.097	1.645	A	0.218	2.536	0.594	0.85	1	10.919	0.978	0.049	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.241	2.466	0.6	0.85	1	12.139			
T8 331.000-311.000	0.107	1.645	A	0.218	2.536	0.594	0.85	1	10.919	1.048	0.052	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.262	2.401	0.605	0.85	1	13.353			
T9 311.000-291.000	0.124	1.645	A	0.245	2.451	0.601	0.85	1	12.411	1.052	0.053	C
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.263	2.398	0.605	0.85	1	13.417			
T10 291.000-271.000	0.144	1.645	A	0.279	2.354	0.61	0.85	1	14.299	1.100	0.055	A
			B	0.226	2.511	0.596	0.85	1	11.349			
			C	0.263	2.398	0.605	0.85	1	13.417			
T11 271.000-251.000	0.149	1.645	A	0.279	2.354	0.61	0.85	1	14.299	1.100	0.055	A
			B	0.236	2.479	0.599	0.85	1	11.911			
			C	0.263	2.398	0.605	0.85	1	13.417			
T12 251.000-231.000	0.157	1.746	A	0.289	2.327	0.612	0.85	1	14.876	0.978	0.049	A
		TA 1.274	B	0.259	2.411	0.604	0.85	1	13.165			
			C	0.272	2.374	0.608	0.85	1	13.904			
T13 231.000-211.000	0.166	1.645	A	0.279	2.354	0.61	0.85	1	14.299	0.972	0.049	C
			B	0.249	2.441	0.602	0.85	1	12.607			
			C	0.286	2.334	0.612	0.85	1	14.731			
T14 211.000-191.000	0.166	1.645	A	0.279	2.354	0.61	0.85	1	14.299	0.972	0.049	C
			B	0.249	2.441	0.602	0.85	1	12.607			