LeBoeuf, Lamb, Greene & MacRae
L.L.P.

A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

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SAN FRANCISCO

GOODWIN SQUARE
225 ASYLUM STREET
HARTFORD, CT 06103
(860) 293-3500
FACSIMILE: (860) 293-3555

WRITER'S DIRECT DIAL:
(860) 293-3744

LONDON
(A LONDON-BASED MULTINATIONAL PARTNERSHIP)
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(PTY) LTD.
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(AFFILIATED OFFICE)
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BISHKEK
ALMATY
BEIJING

March 18, 2002

Mortimer A. Gelston, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Dear Mr. Chairman:

Omnipoint Communications, Inc. ("Omnipoint"), which provides wireless services in Connecticut through the brand of VoiceStream Wireless, is pleased to submit this Petition for a PCS antenna installation. Please find attached twenty five (25) copies of a Petition for a Declaratory Ruling that No Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing communications tower owned and operated by the National Railroad Passenger Corporation ("Amtrak"). A check in the amount of $500 to cover the filing fee for this Petition is also enclosed.

Omnipoint has received authorization from Amtrak for this project, which is designed to replace an existing communications structure with a new monopole which will carry antennas to be used for Amtrak train operations and signal control, along with a limited number of Omnipoint antennas to provide wireless communication service. The antennas related to train operations are elements of an improved communications infrastructure system, known as "Advanced Train Control." We have included architectural plans and specifications for the monopole facility along with a subsurface exploration and geotechnical evaluation. Although the chief elected official of Old Saybrook has been sent notice of this Petition by first class mail, the Town of Old Saybrook has already issued its building permit for the tower replacement project. Furthermore , the Old Saybrook Planning and Zoning Commission has disclaimed jurisdiction for the reasons set forth in its letter attached.

We look forward to your review and are happy to answer any questions you may have.

Very truly yours,

Stephen J. Humes

Enclosure

cc: Sally J. Bellet, Amtrak
Cindy Durst, Amtrak
Michael Fulton, Omnipoint
Michael A. Pace, First Selectman, Town of Old Saybrook

Petition of Omnipoint Communications, Inc. to the Connecticut Siting Council for a Declaratory Ruling That a Modification to an Existing National Railroad Passenger Corporation ("Amtrak") Communications Tower Structure in Old Saybrook, Connecticut, Does Not Require a Certificate of Environmental Compatibility and Public Need as the Proposed Modification Will Not Have a Substantial Adverse Environmental Effect.

Dated: March 18, 2002 in Hartford, Connecticut

Introduction

Please be advised that LeBoeuf, Lamb, Greene & MacRae, L.L.P. represents Omnipoint Communications, Inc. ("Omnipoint" or the "Petitioner"), a subsidiary of VoiceStream Wireless Corporation in the above-referenced matter. Omnipoint provides wireless services in Connecticut through the VoiceStream Wireless brand name. Omnipoint hereby Petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need ("Certificate") is not required pursuant to Section 16-50g *et seq.* of the General Statutes of Connecticut for the modification of an existing National Railroad Passenger Corporation ("Amtrak") communications tower facility described herein. The modification involves the replacement of an existing one hundred four foot (104'-0") monopole communications tower facility containing Amtrak antennas with a new one hundred fifty foot (150'-0") monopole communications tower facility. The new facility will support various antennas for Amtrak train operations and signal control as elements of an improved communications infrastructure system. The new facility is also supporting an Omnipoint antenna cluster of three (3) sectors with two antennas per sector for a total of six (6) antennas.[1] A small, existing equipment compound will be expanded at the base of the existing transmission tower

[1] Note that following the issuance of the building permit by the Town of Old Saybrook, Omnipoint already constructed the new tower, installed its antennas and the facility is operational. However, Omnipoint has not yet installed permanent power, removed the old tower or installed Amtrak's antennas on the new tower.

within the railroad right-of-way. A Nortel S8000 equipment cabinet is at the base of the transmission tower and secured on a concrete slab within the equipment compound. The utility routing is within the railroad right-of-way with electrical service provided from an underground conduit running from an existing electric utility pole and telecommunications service provided from an underground conduit currently connected to the existing communications tower facility. Omnipoint submits that no Certificate is required because the proposed modification will not have a substantial adverse environmental effect.

Omnipoint as Petitioner

Omnipoint has received authorization from Amtrak as a result of a Master License Agreement between Amtrak and Omnipoint, which applies generally to sites throughout the Northeast Corridor along the Amtrak right-of-way, and a License Supplement, which expressly provides for the project in Old Saybrook as described herein. Omnipoint was issued the "A block" "Wideband PCS" license for the 2-Gh_z PCS frequencies for the Greater New York City area and the entire State of Connecticut. The Omnipoint wireless service is a voice-data system that is capable of providing to the consumer state-of-the-art communications service with privacy to users, and the convenience of a pager, answering machine, and modem in one phone, and the proposed modification is in support of Omnipoint's PCS network. The public need for "Wideband PCS" facilities has been determined by the Federal Communications Commission to be sufficient to allow the operation of up to six competing companies with overlapping coverage areas.

Description of the Project

The site location of this project is south-southeast of Interstate 95 and is adjacent to Route 1 between River Street and Ford Drive at mile post 105.46 in Old Saybrook within the Amtrak railroad right-of-way. The coordinates for the site are **41°-18'-05" N and 72°-22'-29" S.** Access

to the site is from Ford Drive, which approaches from the south (see USGS & USC&GS map, attached as Exhibit A).

Omnipoint's proposal calls for the replacement of the existing one hundred four foot (104'-0") monopole with a new, Pirod, Inc., one hundred fifty foot (150'-0") monopole, slightly to the south on the same parcel. A building permit has been issued by the Town of Old Saybrook and much of this project is complete (see Building Permit attached as Exhibit C). As indicated above, Omnipoint's equipment is in place and its antennas are currently operating. The one hundred four foot (104'-0") monopole has yet to be removed and none of the Amtrak antennas have been taken down, nor have the new Amtrak antennas been installed on the new tower. A permanent power source still needs to be connected to the tower. Omnipoint initially considered this tower, which is within an Amtrak right-of-way, to be exempt from Connecticut Siting Council ("the Council") jurisdiction but potentially subject to the Old Saybrook Zoning Commission for approval of a Coastal Area Management Application. As the letter attached as Exhibit B shows, the Town of Old Saybrook has decided that it lacks jurisdiction for the reasons set forth therein.

Following the recent ruling by the United States Court of Appeals for the Second Circuit, *Sprint Spectrum, LP v. Connecticut Siting Council*, 274 F.3d 674 (2d Cir. 2001), confirming the establishment of jurisdiction over telecommunication towers by the Council, coupled with the Town of Old Saybrook's disclaimer of jurisdiction, Omnipoint has determined that it should seek the Council's approval of this project. This determination is consistent with current law in Connecticut that the Siting Council has exclusive jurisdiction over all telecommunication facilities.

Omnipoint's proposal includes the removal of all existing antennas from the original monopole as well as the pole itself and the placement of new Omnipoint and Amtrak antennas on the new tower. Omnipoint installed its own equipment, an antenna cluster of three

(3) sectors with two antennas per sector for a total of six (6) antennas at the one hundred fifty foot (150'-0") level centerline above ground level ("AGL"). These antennas are mounted on a new top-mount Pirod monopole platform. The top of the Omnipoint antennas are one hundred fifty-two feet four inches (152'-4") AGL. The model number for each Omnipoint antenna is EMS-RR90-17-02DP. A Nortel S8000 equipment cabinet is installed at the base of the tower and secured on a new ten foot by ten foot (10'-0" x 10'-0") concrete slab. In addition to the Nortel cabinet, the slab will accommodate a new Evergood electrical cabinet and a new Hoffman Telco box for Omnipoint's use. A back-up battery system is contained within the power cabinet, providing one hour of back-up service, but no generator will be placed at the site. This equipment cabinet requires no protective surrounding structures or air conditioning, and therefore will create no audible noise. A new cable bridge runs the cables from the cabinet to the tower (see site plan drawings A-1 through A-3a, attached as Exhibit D). The Amtrak equipment to be installed includes two new inverted Omni antennas to be mounted to the top-mount Pirod monopole platform. As these antennas are pointed downward, they do not extend above the top of the tower. The model numbers for these antennas are DB586 and DB616. In addition to the platform mounted antennas, Amtrak will place Decibel whip antennas at the fifty foot (50'-0"), seventy foot (70'-0"), and one hundred foot (100'-0") levels, AGL.

The original compound is comprised of a twenty-eight foot by forty eight foot six inch (28'-0" x 48'-6") rectangular parcel. Omnipoint's proposal expands the existing compound to include a twenty-two foot by eleven foot (22'-0" x 11-0") area within the Amtrak right-of-way located immediately south of the original compound. The original compound is approximately one thousand three hundred fifty-eight (1,358) square feet. The proposed expansion is approximately two hundred forty-two (242) square feet, making the total area of the new compound approximately sixteen hundred (1,600) square feet. The existing compound is surrounded by an eight foot high chain-link fence. The existing fence would be expanded at the

same height to encompass the new portion of the compound. Power routing is proposed to originate from existing Connecticut Light & Power ("CL&P") utility poles (CL&P 684 and 683) located on the east and west sides of Ford Drive respectively. Overhead lines will run to an existing pole within the compound and from there to the transformer via an underground conduit. Architectural plans and specifications confirming the details of the project for this tower have been prepared and are attached as Exhibit E. A subsurface exploration and geotechnical evaluation is attached as Exhibit F.

Surrounding Land Uses

As discussed above and shown in Exhibit B, the site location of this project is roughly two thousand two hundred feet (2,200) south-southeast of exit sixty-seven of Interstates 95. The site is adjacent to Route 1 between River Street and Ford Drive at mile post 105.46 in the north-northeastern portion of Old Saybrook, within the Amtrak railroad right-of-way. The project is adjacent to, and roughly thirty-five feet south of, the three sets of main Amtrak railway tracks that run along the Connecticut Shoreline. The site is located within a General Business Zoning District (B-4) of Old Saybrook. Areas to the immediate east of the site are located in either an Industrial Zoning District (I-1), a Residential Zoning District (B), or a Shopping Center Business district (B-2); areas to the immediate west are in either a B-4 or I-1 district; areas to the immediate south are in either a B-4 or B-2 district and areas to the immediate north are in a B-4 district (Zoning Map, Town of Old Saybrook, Planning and Zoning Commission, dated April 23, 1973, revised September 4, 1993).

Photos of the existing location and views of the proposed equipment site are included in Exhibit G.

Proposed Service Area

Omnipoint's antennas are being used to fill an existing gap in coverage along Interstates 95 and Boston Post Road (Route One). In addition, these antennas will serve train passengers passing through the area on Amtrak and MetroNorth Commuter Railroad trains.

The Project Will Not Have a Substantial Adverse Environmental Effect

The project involves the replacement of an existing tower with a new tower approximately forty-six (46) feet higher than the existing tower structure, but this increase will not cause a substantial adverse environmental effect. This site is in a developed area close to Interstate 95 and within the Amtrak right-of-way. Given that a railroad has been in operation for more than one hundred years, the project area is already a heavy industrial and transportation corridor with railroad-related facilities and equipment expected in this area. In addition to the three sets of tracks, the area contains a separate railway spur and several railroad catenary structures. In addition to increasing Omnipoint's wireless communications capacity in the area, the tower will provide an important service to Amtrak in the form of expanded communication and signal control for the Amtrak trains. The antennas related to train operations are elements of an improved communications infrastructure system, known as "Advanced Train Control." The Project will result in the expansion of a fenced-in equipment compound in the area. The associated equipment will be located directly underneath the proposed tower within the compound. As discussed above, the access will be from Ford Drive, and the utility routing will be brought from adjacent utility poles and underground conduits.

The operation of the antenna will not increase the total radio frequency electromagnetic power density at the site to a level at or above applicable standards, as demonstrated on the power density table attached as Exhibit H. Total calculated power density at the base of the

transmission tower will be 0.012432 mW/cm2, which is 1.2432% of the Maximum Permissible Emission (MPE) for the proposed facility at the tower base.

Conclusion

With the project described above, Omnipoint will not have a need to construct a new telecommunications facility to provide coverage for the target area. This Project is consistent with the legislative finding outlined in Section 16-50g of the General Statutes of Connecticut that seeks to avoid the unnecessary proliferation of towers in the State.

Section 16-50k(a) of the General Statutes of Connecticut provides that a Certificate of Environmental Compatibility and Public Need is not required for a proposed modification of a facility that the Council determines does not have a "substantial adverse environmental effect." The environmental effects of this proposed PCS antenna installation have been evaluated and it is submitted that the modifications will not result in a substantial adverse effect on the environment or ecology, nor will there be damage to the existing scenic, historical or recreational values. Accordingly, we request that the Council determine that the proposed modifications to an existing facility will have no such substantial adverse environmental effect and, therefore, that no Certificate is required.

Communications regarding this Petition for a Declaratory Ruling should be directed to:

Stephen J. Humes
LeBoeuf, Lamb, Greene & MacRae, LLP
Goodwin Square
225 Asylum Street
Hartford, CT 06103
Telephone: (860) 293-3744

EXHIBIT A

USGS Topo Map

EXHIBIT B

Letter, Old Saybrook Planning and Zoning Commission

TOWN OF OLD SAYBROOK

Land Use Department

302 Main Street • Old Saybrook, Connecticut 06475-1741
Telephone (860) 395-3131 • FAX (860) 395-3125

February 28, 2002

Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Attn: Charles H. Evans

Re: Review of Communications Tower on Amtrak Property in Old Saybrook

You have referred the above-referenced Coastal Management Area Application to the Old Saybrook Zoning Commission for action. Structures or plans for installations on Amtrak property come under federal jurisdiction and are exempt from all local zoning regulations. We have not had the opportunity to view or act upon a site plan for the above-referenced tower and, therefore, have insufficient information or authority to request sufficient information to act upon this application in a reasonable and rational manner.

The Old Saybrook Zoning Commission, by vote of it's membership at our meeting of therefore declined to take action on this application and are referring it back to you.

Very truly yours,

OLD SAYBROOK ZONING COMMISSION

David H Wight

David H. Wight, AIA
Chairman

xc: John Harrington, Esq.
527 Tunxis Hill Road
Fairfield, CT 06432

EXHIBIT C

Town of Old Saybrook Building Permit

MAP LOT

Permit # 16755

TOWN OF OLD SAYBROOK
Building & Environmental Health Department

302 Main Street • Old Saybrook, Connecticut 06475-1741
Telephone (860) 395-3130 FAX (860) 395-3125

Building Permit

DATE 07/18/2000 Permit # 16755

POST THIS CARD SO IT IS VISIBLE FROM STREET

APPLICANT John Harrington Lic#
527 Tunxis Hill Road PH (203) 331-1881
Fairfield CT 06430

CONTRACTOR Cont LIC # (800) 525-4628
Jrl Electric 0901268

Cont Address
4 Hamilton Road Whitehouse Station Nj 08889

Type of Imporvement | **Proposed Use** | **Location of Work**
Replace Tower, Rte 1 & River St | Communications Tower | Rte 1 & River St

Subdivision | **MAP** | **LOT** | **LOT SIZE** | **Building Width** | **Length**

HEIGHT | **TO TYPE** | **USE GROUP** U | **Type of Heat**

Total SQ Footage | **Cost of Improvement** $45,000 | **Building Permit Fee** 635.00

EHD | **FM#** | **ZC#**

Brief Description of Work
Replacement of existing communications tower.
NOTE: DESIGN CALCULATIONS APPEAR IN ORDER.

OWNER
VoiceStream Wireless 9738725186

11 Highpoint Drive Wayne NJ 07470

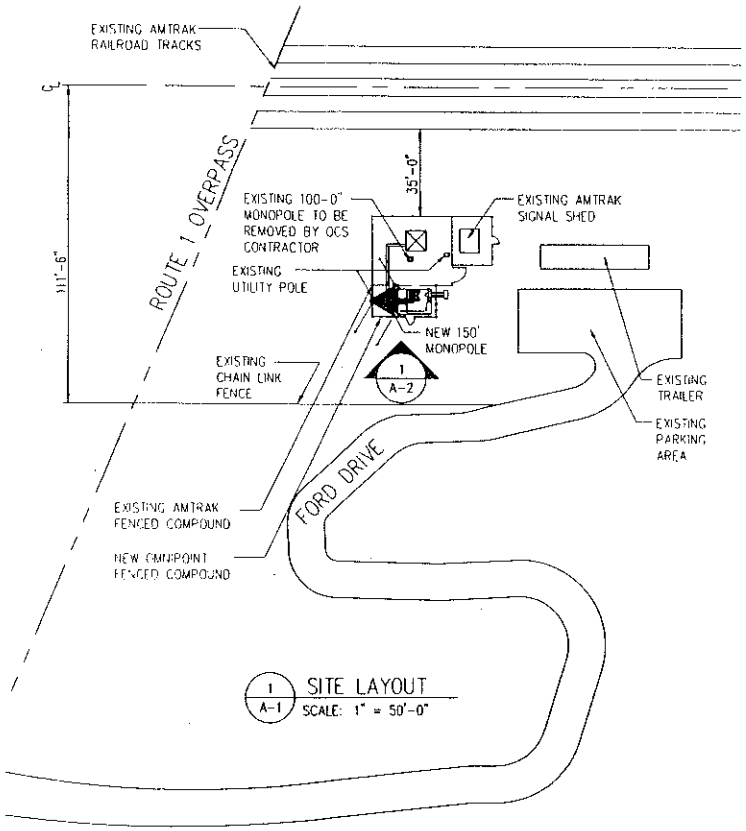
REVIEWED AND APPROVED BY: Building Official Date: 7-18-2000

EXHIBIT D

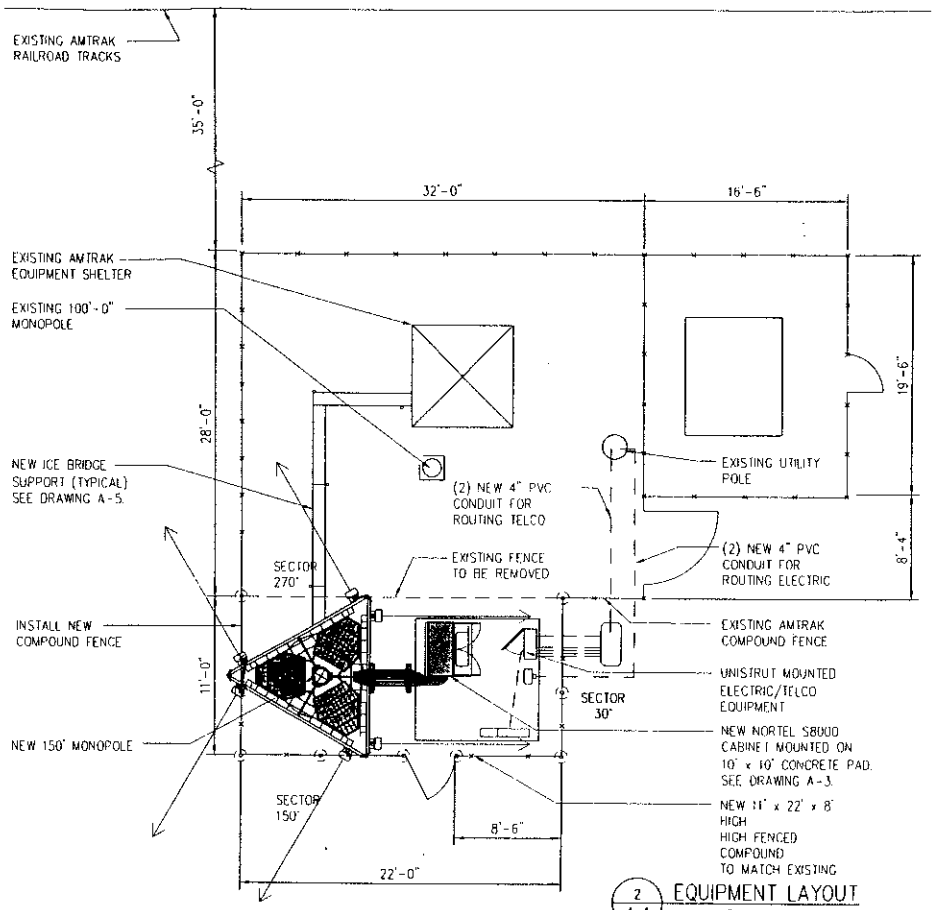
Site Plans and Elevation Drawings

NOTE:
NORTH TO BE VERIFIED
BY CIVIL ENGINEER PRIOR
TO CONSTRUCTION.

NORTH



1 / A-1 SITE LAYOUT
SCALE: 1" = 50'-0"



2 / A-1 EQUIPMENT LAYOUT
SCALE: 1" = 10'-0"

NOTE:
1. CONTRACTOR TO ERECT SAFETY FENCE AROUND EXCAVATION FOR CONDUITS AND PAD.

2. CONTRACTOR TO MAINTAIN CLEAR ACCESS TO SIGNAL BRIDGE AND PROPERTY DURING CONSTRUCTION FOR AMTRAK PERSONNEL.

3. CONTRACTOR TO PROTECT EXISTING FACILITIES & CABLING DURING CONSTRUCTION.

4. PRIOR TO CONSTRUCTION C&S DUCT LINE & UTILITIES SHALL BE MARKED OUT & EXPOSED BY HAND DIGGING IF IN CLOSE PROXIMITY OF CONSTRUCTION. COORDINATE WITH UTILITIES.

5. CONTRACTOR SHALL MAINTAIN 12'-0" CLEARANCE AROUND NEW COMPOUND.

ARCNET
876 Route 9 North, Building 4
Holmdel, New Jersey 07733
Tel. 739 3200 Fax. 739 0440

EXP 7/31/00
4208

ROBERT P. JUENGERT, AIA

DUB ASSOCIATES
Consulting Engineers, PC
Donald L. Dooly, P.E.

REVISIONS
NO. DATE

NO. DATE SUBMISSIONS

CLIENT
AMTRAK.
Omnipoint
COMMUNICATIONS

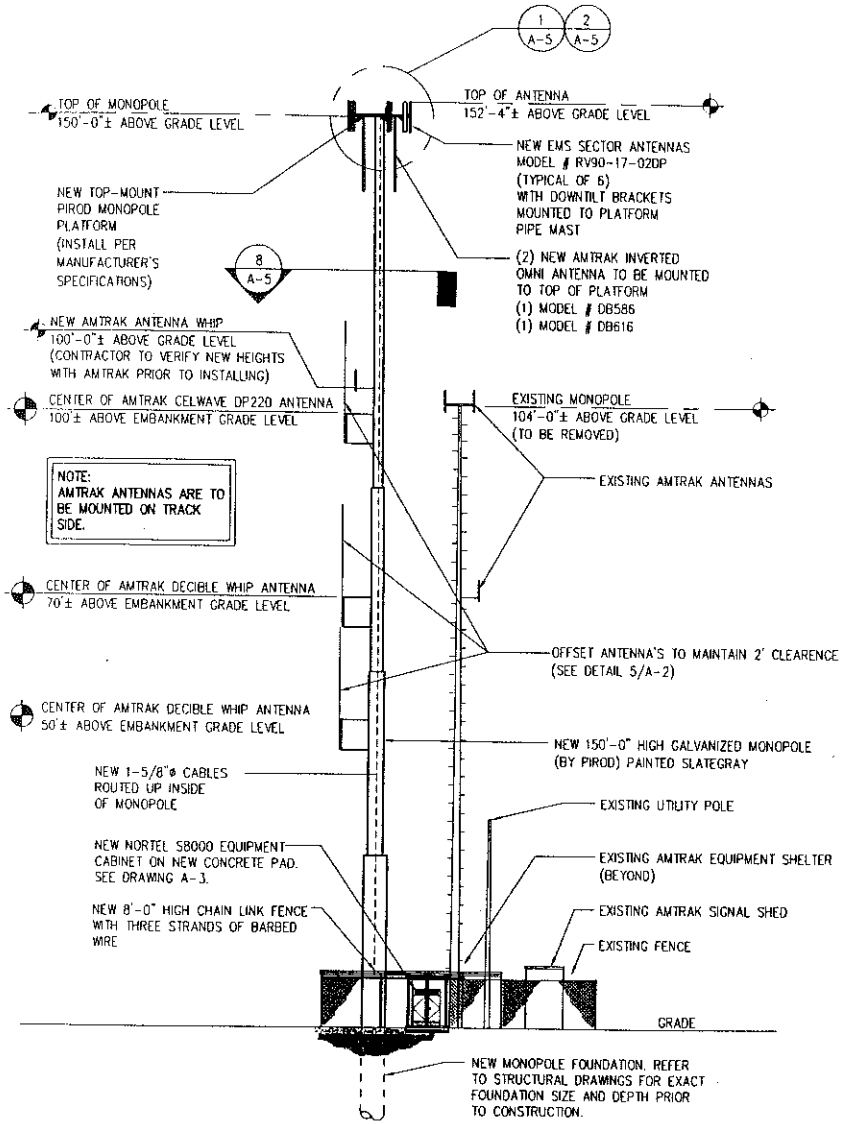
SITE ADDRESS
AMTRAK-OLD SAYBROOK
ROUTE 1 @ RIVER ST./ FORD DR.
MILE POST 105.46
OLD SAYBROOK, CT

SITE # CT-11-327A

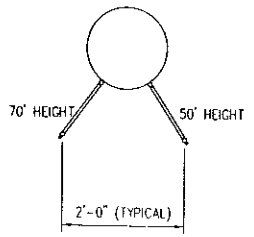
DRAWING TITLE
SITE LAYOUT AND
EQUIPMENT LAYOUT

PROJECT COORDINATOR: WSW	SCALE: AS NOTED
DRAWN BY: RSo	DATE: 11/3/99
CHECKED BY: JSu	PROJECT NO: A99-506-862A

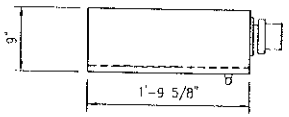
DRAWING NO.
A-1



1 A-2 ELEVATION
SCALE: 1"=20'-0"

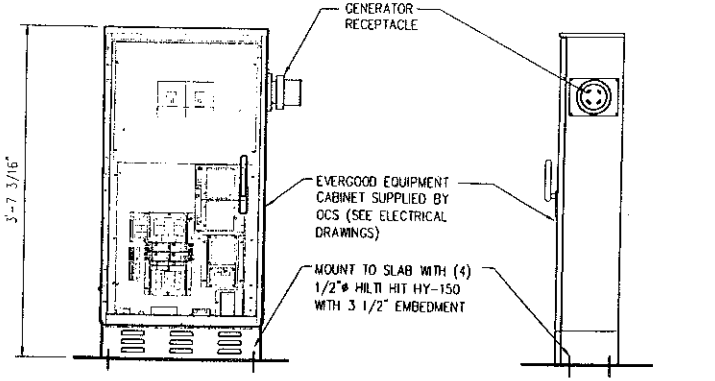


5 A-2 AMTRAK WHIP SECTION
SCALE: 1/2" = 1'-0"



2 A-2 EVERGOOD CABINET (PLAN)
SCALE: 3/4" = 1'-0"

NOTE:
1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION OF CABINET AND FABRICATION OF CONCRETE PAD
2. CONTRACTOR TO PURCHASE TEMPLATE FOR EVERGOOD CABINET CONDUIT LOCATIONS
3. FOR ADDITIONAL INFORMATION, REFER TO ELECTRICAL DRAWINGS
4. EVERGOOD CABINET SUPPLIED BY OCS



3 A-2 FRONT ELEVATION
SCALE: 3/4" = 1'-0"

4 A-2 SIDE ELEVATION
SCALE: 3/4" = 1'-0"

ARCNET
670 North Beers Street, Building 4
Holmdel, New Jersey 07733
Tel: 739 3200 Fax: 739 0440

EXP 7/31/00

4208

ROBERT P. JUENGERT, AIA

DLB ASSOCIATES
Donald L. Beets, P.E.

REVISIONS

SUBMISSIONS

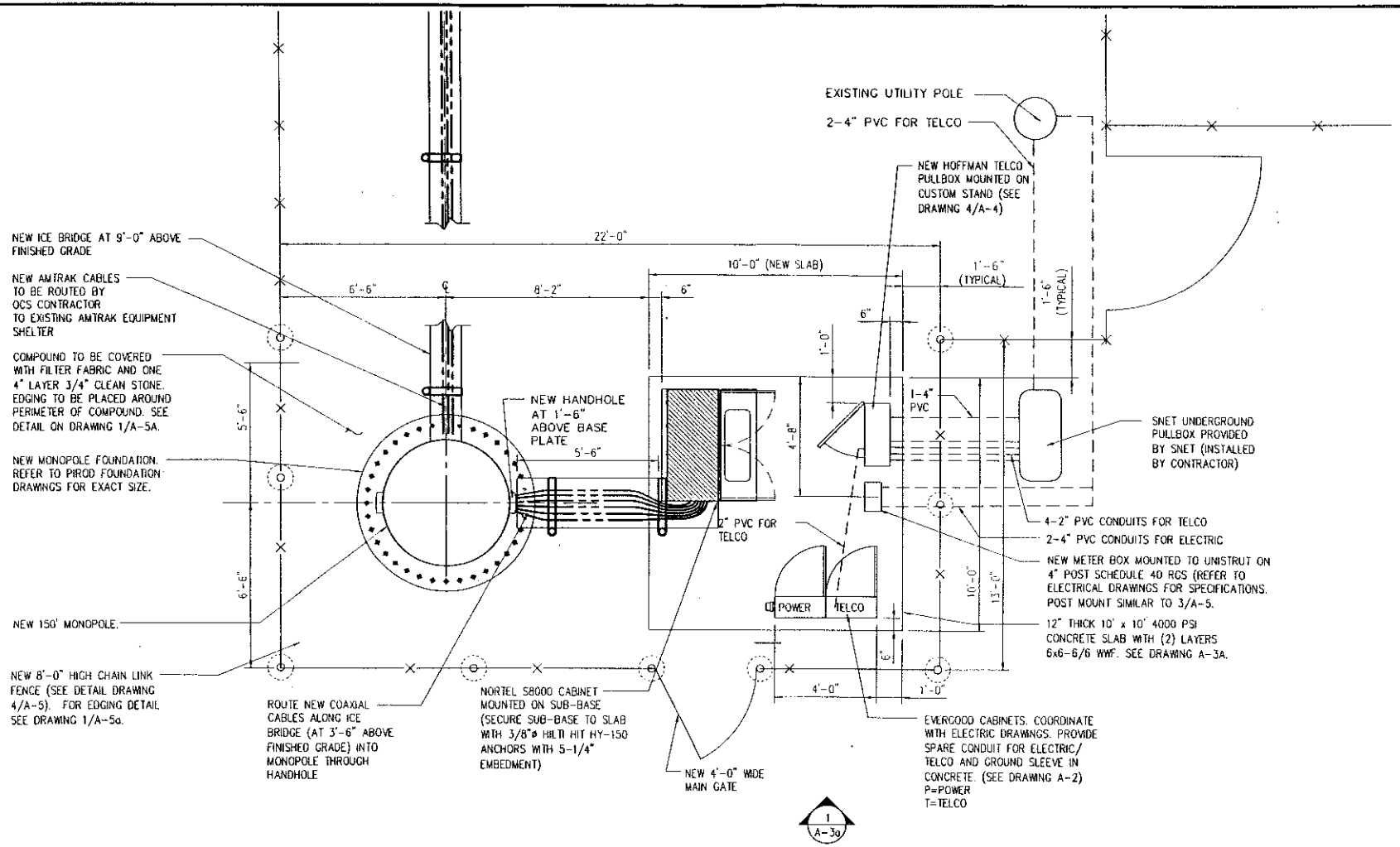
AMTRAK
Omnipoint
COMMUNICATIONS

AMTRAK-OLD SAYBROOK
ROUTE 1 @ RIVER ST./ FORD DR.
MILE POST 105.46
OLD SAYBROOK, CT

COMPOUND ELEVATION & EVERGOOD DETAILS

WSW | AS NOTED
RSa | 11/3/99
JSu | A99-506-862A

A-2



1 A-3 ENLARGED COMPOUND PLAN
SCALE: 1/4" = 1'-0"

NOTES:
COORDINATE ALL HANDHOLE LOCATIONS AND SIZES WITH MONOPOLE MANUFACTURER PRIOR TO INSTALLATION.

ARCNET
870 North Beers Street Building 2
Holmdel, New Jersey 07733
Tel. 739 3200 Fax 739 0440

EXP 7/31/00

4208

ROBERT P. JUERGERT, AIA

DLB ASSOCIATES
Consulting Engineers, P.C.
Woodbridge, N.J. 07095
Donald L. Busby, P.E.

REVISIONS

NO	DATE	SUBMISSIONS

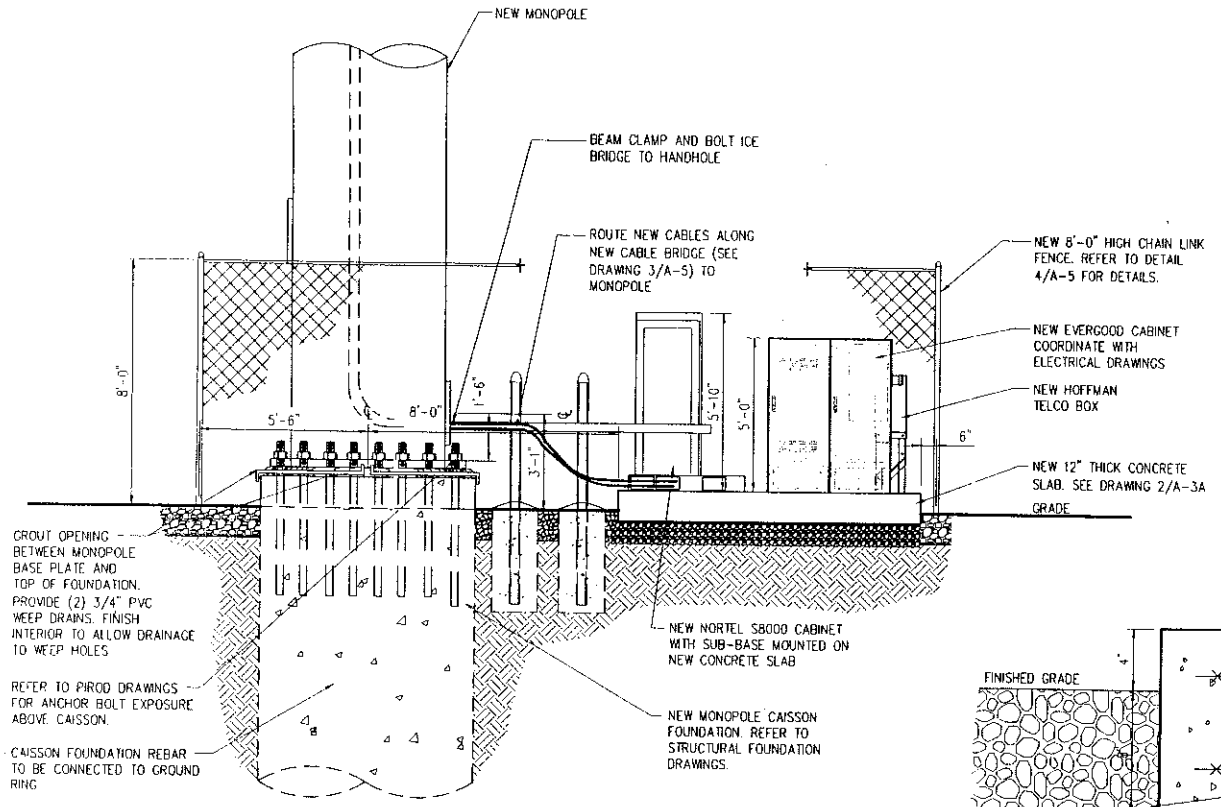
AMTRAK
Omnipoint
COMMUNICATIONS

SITE ADDRESS
AMTRAK-OLD SAYBROOK
ROUTE 1 @ RIVER ST / FORD DR
MILE POST 105.46
OLD SAYBROOK, CT

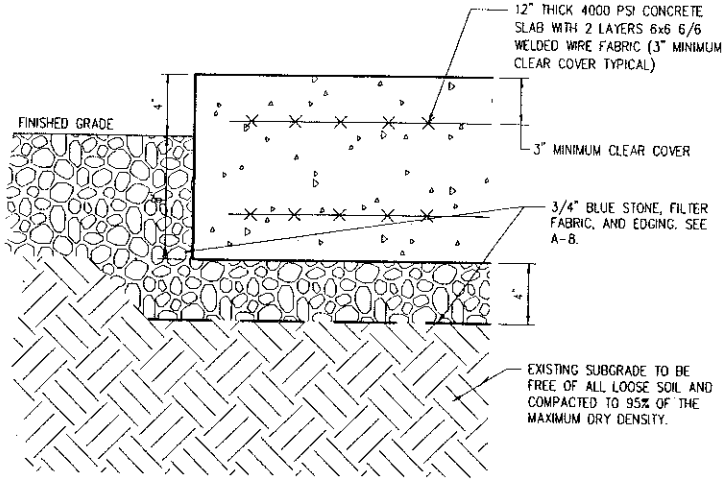
DRAWING TITLE
ENLARGED COMPOUND PLAN

PROJECT COORDINATOR: WSM	SCALE: AS NOTED
DRAWN BY: RSa	DATE: 11/3/99
CHECKED BY: JSu	PROJECT NO: A99-506-862A

DRAWING NO: A-3



1 / A-3A ENLARGED COMPOUND ELEVATION
SCALE: 1/4" = 1'-0"



2 / A-3A SLAB DETAIL
SCALE: 1-1/2" = 1'-0"

NOTES:

1. COORDINATE ALL HANDHOLE LOCATIONS AND SIZES WITH MONOPOLE MANUFACTURER PRIOR TO INSTALLATION.
2. REFER TO MONOPOLE FOUNDATION DRAWINGS FOR EXACT FOUNDATION TYPE & DIMENSIONS.
3. COORDINATE ALL CONDUIT LOCATIONS FOR EQUIPMENT CABINET WITH ELECTRICAL DRAWINGS
4. CONTRACTOR TO VERIFY POLE BASE ORIENTATION WITH CIVIL & STRUCTURAL ENGINEERS PRIOR TO POURING FOUNDATION.

ARCNET
620 North Brews Street, Building 2
Holmdel, New Jersey 07733
Tel 739.3200 Fax 739.0440

EXP 7/31/00
4208
ROBERT P. JUENGERT, AIA

DLB ASSOCIATES
Donald L. Beaty, P.E.

REVISIONS
NO DATE

SUBMISSIONS
NO DATE

CLIENT
AMTRAK
Omnipoint
COMMUNICATIONS

SITE ADDRESS
AMTRAK-OLD SAYBROOK
ROUTE 1 @ RIVER ST./ FORD DR.
MILE POST 105.46
OLD SAYBROOK, CT
SITE # CT-11-327A

DRAWING TITLE
ENLARGED COMPOUND ELEVATION

PROJECT COORDINATOR WSW
SCALE AS NOTED
DESIGN BY RSG
DATE 11/3/99
CHECKED BY JSG
PROJECT NO A99-506-862A

DRAWING NO
A-3a

EXHIBIT E

Architectural Plans and Specifications

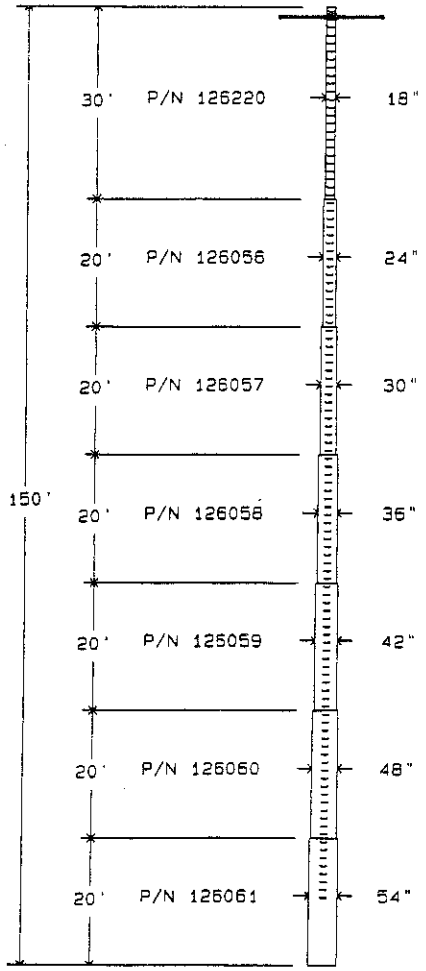
MONOPOLE SECTION DATA

(ALL BOLTS ARE FOR BOTTOM OF SECTION)

SECTION					CONNECT BOLT			PILOT BOLT		
LENGTH	PART#	SIZE	WALL	WT.*	DIAM	LENGTH	#	DIAM	LENGTH	#
30'	126220	18"	0.375"	2433#	1"	4-1/2"	13	1"	5"	3
20'	126056	24"	0.375"	2204#	1"	4-1/2"	17	1"	5"	3
20'	126057	30"	0.375"	2747#	1"	4-1/2"	21	1"	5"	3
20'	126058	36"	0.375"	3290#	1"	4-1/2"	25	1"	5"	3
20'	126059	42"	0.375"	3833#	1"	4-1/2"	29	1"	5"	3
20'	126060	48"	0.375"	4376#	1"	4-1/2"	33	1"	5"	3
20'	126061	54"	0.375"	4918#						

*THE WEIGHTS LISTED ARE THEORETICAL. THE ACTUAL WEIGHTS WILL VARY. ALL WEIGHTS SHOULD BE CONFIRMED IN THE FIELD PRIOR TO ERECTION.

CLAMP-ON PLATFORM TO BE PLACED AT 149' (C/L). SEE DWG # 135945-B FOR INSTALLATION DETAILS.



SEE TABLE ABOVE FOR SIZE & QTY FOR ALL CONNECT BOLTS.

TYPICAL FLUSH FLANGE CONNECTION

VIEW A

SEE PAGE 2 OF THIS DRAWING FOR OPENING INFORMATION.

SEE PAGE 4 OF THIS DRAWING FOR CONNECTION BOLT TIGHTENING SPECIFICATIONS.

SEE PAGE 9 OF THIS DRAWING FOR BASE SECTION INSTALL.

REMOVABLE CLIMBING RUNGS

REV	DESCRIPTION OF REVISIONS	INI	DATE
E	ADDED FOUNDATION PER SOIL REPORT	TAG	07/10/2000
D	HEIGHT CHANGE	KWD	07/07/2000
C	HEIGHT CHANGE	KWD	07/07/2000
B	ADDED FOUNDATION PER SOIL REPORT	WAH	02/25/2000
A	NEW SECTIONS - ALL PAGES	KWD	02/21/2000

VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' ASSEMBLY DRAWING

APPROVED/ENG.	WBR	07/11/2000
APPROVED/FOUND		
DRAWN BY	KWD	

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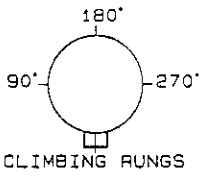
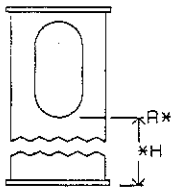
DRAWING NO. 206047-B
PAGE 1 OF 9

OPENINGS & BRACKETS WELDED TO POLE

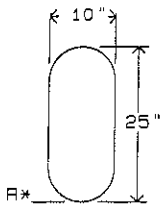
HEIGHT *H	TYP	DESCRIPTION	ANGL	ASSEMBLY DRAWING#
149'-6"	13	SAFETY CLIMB BRACKET	0°	
148'-3"	11	PLATFORM MOUNTING ANGLES (4)	SEE>	121975-B
145'-9"	21	4" x 16" OVAL PORTHOLE	60°	
145'-9"	21	4" x 16" OVAL PORTHOLE	180°	
145'-9"	21	4" x 16" OVAL PORTHOLE	300°	
143'-9"	19	PAD EYES FOR FUTURE PLATFORM	SEE>	121975-B
139'	11	PLATFORM MOUNTING ANGLES (4)	SEE>	121975-B
136'-9"	21	4" x 16" OVAL PORTHOLE	60°	
136'-9"	21	4" x 16" OVAL PORTHOLE	180°	
136'-9"	21	4" x 16" OVAL PORTHOLE	300°	
134'-9"	19	PAD EYES FOR FUTURE PLATFORM	SEE>	121975-B
130'	11	PLATFORM MOUNTING ANGLES (4)	SEE>	121975-B
127'-9"	21	4" x 16" OVAL PORTHOLE	60°	
127'-9"	21	4" x 16" OVAL PORTHOLE	180°	
127'-9"	21	4" x 16" OVAL PORTHOLE	300°	
125'-9"	19	PAD EYES FOR FUTURE PLATFORM	SEE>	121975-B
97'	9	4" X 6" PORTHOLE EXITING UP	90°	
97'	9	4" X 6" PORTHOLE EXITING UP	270°	
73'	9	4" X 6" PORTHOLE EXITING UP	90°	
73'	9	4" X 6" PORTHOLE EXITING UP	270°	
48'	9	4" X 6" PORTHOLE EXITING UP	90°	
48'	9	4" X 6" PORTHOLE EXITING UP	270°	
9'-10"	8	TRANS. LINE BRIDGE ATTACH BRACKET	90°	
9'-10"	8	TRANS. LINE BRIDGE ATTACH BRACKET	180°	
9'-10"	8	TRANS. LINE BRIDGE ATTACH BRACKET	270°	
9'-6"	13	SAFETY CLIMB BRACKET	0°	
7'-4"	2	10" X 25" OVAL PORTHOLE	90°	
7'-4"	2	10" X 25" OVAL PORTHOLE	180°	
7'-4"	2	10" X 25" OVAL PORTHOLE	270°	
6'-9"	7	GROUNDING PLATE	90°	
6'-9"	7	GROUNDING PLATE	180°	
6'-9"	7	GROUNDING PLATE	270°	
1'-6"	2	10" X 25" OVAL PORTHOLE	180°	
1'	18	GROUNDING ANGLES (3)	SEE>	131093-B



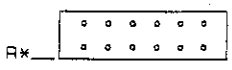
THE ANGLE TO THE OPENING IS MEASURED CLOCKWISE FROM THE CENTER-LINE OF THE CLIMBING RUNGS WHEN LOOKING DOWN.



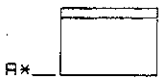
* THE HEIGHT IN THE TABLE IS THE DISTANCE FROM THE BASE OF THE BOTTOM SECTION OF THE POLE TO THE OPENING REFERENCE (R*) AS SHOWN ON PAGES 2 - 3 OF THIS DRAWING.



TYPE 2 OPENING



GROUNDING PLATE



LINE BRIDGE BRACKET

REV	DESCRIPTION OF REVISIONS	INI	DATE
E	ADDED FOUNDATION PER SOIL REPORT	TAG	07/10/2000
D	HEIGHT CHANGE	KWD	07/07/2000
C	HEIGHT CHANGE	KWD	07/07/2000
B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000
A	NEW SECTIONS - ALL PAGES	KWD	02/21/2000

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VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' OPENINGS

APPROVED/ENG.	WBR	07/11/2000
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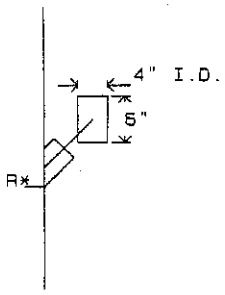
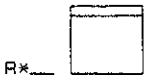
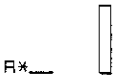
PAGE 2 OF 9



TYPE 9
OPENING

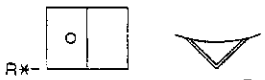


PLATFORM MOUNTING
ANGLE

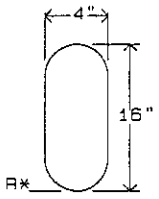


SAFETY CLIMB
BRACKET

FRONT VIEW TOP VIEW



GROUNDING ANGLE



TYPE 21
OPENING

REV	DESCRIPTION OF REVISIONS	INI	DATE
E	ADDED FOUNDATION PER SOIL REPORT	TAG	07/10/2000
D	HEIGHT CHANGE	KWD	07/07/2000
C	HEIGHT CHANGE	KWD	07/07/2000
B	ADDED FOUNDATION PER SOIL REPORT	WAH	02/25/2000
A	NEW SECTIONS - ALL PAGES	KWD	02/21/2000

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VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' OPENINGS

APPROVED/ENG.	WBR	07/11/2000
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DRAWING NO. 206047-B
PAGE 3 OF 9

GENERAL NOTES

1. TOWER DESIGN CONFORMS TO STANDARD EIA/TIA-222-F FOR 85 MPH BASIC WIND SPEED WITH NO ICE. TOWER DESIGN CONFORMS TO STANDARD EIA/TIA-222-F FOR 85 MPH BASIC WIND SPEED WITH 0.50" RADIAL ICE WITH LOAD DUE TO WIND REDUCED BY 25% WHEN CONSIDERED SIMULTANEOUSLY WITH ICE.
2. MATERIAL: (A) SOLID RODS CONFORM TO ASTM A-572 GRADE 50 REQUIREMENTS.
   (B) ANGLES CONFORM TO ASTM A-36 REQUIREMENTS.
   (C) PIPE CONFORMS TO ASTM A-53 TYPE E, GRADE B REQUIREMENTS. (MIN YIELD STRENGTH=42 KSI)
   (D) ALL STEEL PLATES CONFORM TO ASTM A-36 REQUIREMENTS.
   (E) ANCHOR BOLTS CONFORM TO ASTM A-687 REQUIREMENTS.
3. BASE REACTIONS PER EIA/TIA-222-F FOR 85 MPH BASIC WIND SPEED WITH NO ICE.
   TOTAL WEIGHT= 36.3 KIPS.
   MOMENT= 1960.3 KIP-FT.
   MAXIMUM SHEAR= 18.5 KIPS TOTAL.
4. BASE REACTIONS PER EIA/TIA-222-F FOR 85 MPH BASIC WIND SPEED WITH 0.50" RADIAL ICE:
   TOTAL WEIGHT= 41.1 KIPS.
   MOMENT= 1622.7 KIP-FT.
   MAXIMUM SHEAR= 14.9 KIPS TOTAL.
5. FINISH: HOT DIPPED GALVANIZED AFTER FABRICATION.
6. ANTENNAS: 149' (9) EMSAA90-17-XXDP USING 1-5/8" LINES MOUNTED ON A LOW PROFILE PLATFORM.
   139' (9) EMSAA90-17-XXDP USING 1-5/8" LINES MOUNTED ON A LOW PROFILE PLATFORM.
   130' (9) EMSAA90-17-XXDP USING 1-5/8" LINES MOUNTED ON A LOW PROFILE PLATFORM.
   100' (1) PD220 USING 1-5/8" LINE MOUNTED ON 2' CLAMP-ON SIDE ARM.
   75' (1) PD220 USING 1-5/8" LINE MOUNTED ON 2' CLAMP-ON SIDE ARM.
   50' (1) PD220 USING 1-5/8" LINE MOUNTED ON 2' CLAMP-ON SIDE ARM.
7. INSTALL BASE SECTION WITH MINIMUM OF 2" CLEARANCE ABOVE CONCRETE. SEE BASE SECTION PLACEMENT PAGE OF THIS DRAWING FOR MORE INFORMATION.
8. MIN. WELDS 5/16" UNLESS OTHERWISE SPECIFIED. ALL WELDING TO CONFORM TO AWS SPECIFICATIONS.
9. ALL BOLTS MUST BE IN PLACE WITH JAM NUTS PRIOR TO ERECTION OF THE STRUCTURE. ALL BOLTS AND NUTS MUST BE IN PLACE AND TIGHTENED BEFORE THE ADJOINING SECTION(S) ARE PLACED.
10. ALL STRUCTURAL BOLTS ARE TO BE TIGHTENED TO A SNUG TIGHT CONDITION AS DEFINED BY AISC SPECIFICATION UNLESS OTHERWISE NOTED. A MORE QUANTITATIVE ALTERNATIVE APPROACH TO ACHIEVING A SNUG TIGHT CONDITION IS TO TIGHTEN USING THE TORQUE VALUES FROM DRAWING 123107-A.
11. EIA GROUNDING FOR TOWER.
12. OUTSIDE CLIMB RUNGS WITH SAFETY CLIMB.
13. MONOPOLE TO BE PAINTED SLATE GRAY.

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B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000
A	NEW SECTIONS - ALL PAGES	KWD	02/21/2000

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VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' NOTES

APPROVED/ENG.	WBR	07/11/2000
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ARCHIVE	F-0091443	

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DRAWING NO. 206047-B
PAGE 4 OF 9

FOUNDATION NOTES

1. SOIL AS PER REPORT BY FRENCH & PARRELLO ASSOC., PA., DATED 1/20/00, FILE #00N007AR1
2. CONCRETE TO BE 3000 PSI @ 28 DAYS. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. CONCRETE INSTALLATION TO CONFORM TO ACI-318 BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF THREE INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. WELDING OF REBAR NOT PERMITTED.
3. A COLD JOINT IS PERMISSIBLE UPON CONSULTATION WITH PIROD. ALL COLD JOINTS SHALL BE COATED WITH BONDING AGENTS PRIOR TO SECOND POUR.
4. ALL REINFORCING STEEL TO BE FORMED INTO A CAGE PRIOR TO SETTING INTO POSITION IN THE EXCAVATED PIER.
5. PERMANENT STEEL CASING SHALL NOT BE USED WITHOUT CONSENT FROM FOUNDATION DESIGNERS.
6. GROUTING OF MONOPOLE BASE IS OPTIONAL. IF GROUT IS USED, DRAINAGE MUST BE PROVIDED FROM THE INTERIOR OF THE POLE. REFER TO DRAWING # 118492-B FOR BASE SECTION INSTALLATION.
7. BENDING, STRAIGHTENING OR REALIGNING (HOT OR COLD) OF THE ANCHOR BOLTS BY ANY METHOD IS PROHIBITED.
8. CROWN TOP OF FOUNDATION FOR PROPER DRAINAGE.
9. INSTALL BASE SECTION WITH MINIMUM OF 2" CLEARANCE ABOVE CONCRETE. SEE PAGE 9 OF THIS DRAWING FOR MORE INFORMATION.
10. A TEMPORARY STEEL CASING IS REQUIRED DURING INSTALLATION.
11. A SUMP PUMP OR OTHER DEWATERING SYSTEM MAY BE REQUIRED TO LOWER THE WATER TABLE TO FACILITATE THE INSTALLATION OF THE FOUNDATION.
12. TREMIE METHODS OF CONCRETE PLACEMENT MAY BE REQUIRED IF DEWATERING DOES NOT ADEQUATELY LOWER THE GROUNDWATER LEVEL.
13. ADEQUATE CONCRETE IS TO BE MAINTAINED IN THE STEEL CASING SO AS TO OFFSET THE HYDROSTATIC HEAD OF THE GROUNDWATER.

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B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000
A	NEW SECTIONS - ALL PAGES	KWD	02/21/2000

VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' NOTES

APPROVED/ENG.	WBR	07/11/2000
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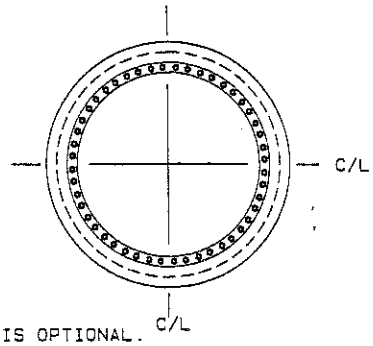
TOP VIEW

TOP AND SIDE VIEWS ARE DRAWN TO DIFFERENT SCALE

BASE FLANGE MUST BE CENTERED IN PIER WITHIN +/- 10% OF PIER DIAMETER

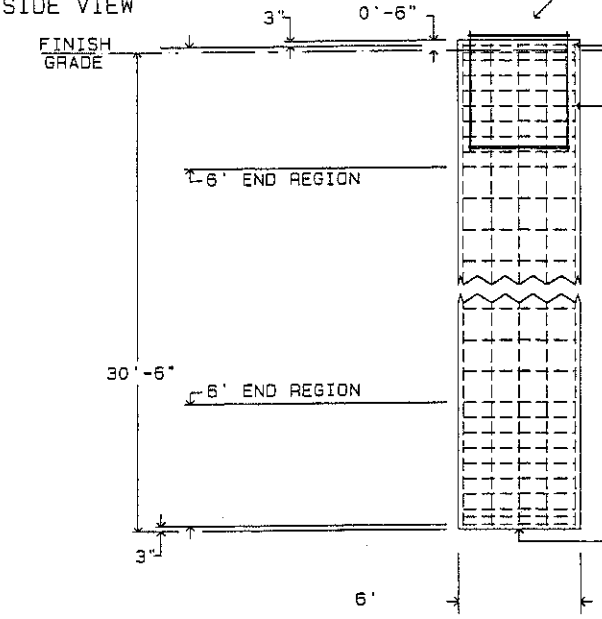


GROUTING OF MONOPOLE BASE IS OPTIONAL. IF GROUT IS USED, DRAINAGE MUST BE PROVIDED FROM THE INTERIOR OF POLE.

CROWN TOP OF FOUNDATION TO FACILITATE DRAINAGE.

FOR ANCHOR STEEL IDENTIFICATION AND PLACEMENT INFORMATION, SEE PAGE 8.
FOR BASE SECTION INSTALLATION, SEE PAGE 9.

SIDE VIEW



FOR DETAIL VIEW OF REBAR CAGE END AREA, SEE PAGE 7. (E)

5 HORIZONTAL TIES - SEE (B) ON PAGE 7.
32 PIECES REQUIRED.
PLACE RINGS AT 0'-9" NOMINAL SPACING WITHIN END REGIONS, AND 1'-6" NOMINAL SPACING IN REMAINDER OF PIER.

9 VERTICAL REBAR - SEE (A) ON PAGE 7.
23 PIECES REQUIRED, EQUALLY SPACED, TO BE PLACED INSIDE TIES.

TOWER FOUNDATION

32.5 CUBIC YARDS CONCRETE REQUIRED

FOR INSTALLATION SPECIFICATIONS AND ADDITIONAL INFORMATION, SEE PAGE 5 OF THIS DRAWING.

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VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' FOUNDATION

APPROVED/ENG.	WBR	07/11/2000
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ARCHIVE

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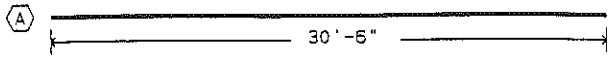
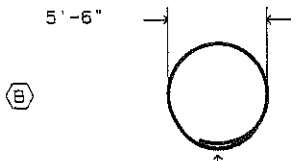


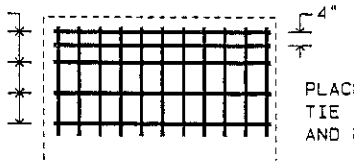
9 REBAR - 23 PIECES REQ. TOTAL
APPROX WT = 103.7# EACH, 2385# TOTAL



5 REBAR - 32 PIECES REQUIRED TOTAL
APPROX UNBENT LENGTH = 19'- 6- 1/8"
APPROX WT = 20.3# EACH, 650# TOTAL

LAP DIMENSION: 2'- 2- 3/4"
PLACE REBAR RINGS SO THAT LAPS ON ADJACENT RINGS ARE 180 DEGREES APART.
SEE PAGE 6 FOR RING PLACEMENT.

PLACE 9 CIRCULAR TIES WITHIN EACH END REGION (TOP AND BOTTOM). PLACE FIRST TIE AT END OF VERTICAL BARS AND CONTINUE SPACING AS SHOWN. SEE PAGE 6 FOR REGION DEFINITION.



DETAIL OF REBAR CAGE END
E

PLACE AN ADDITIONAL CIRCULAR TIE 4" FROM THE END TIE (TOP AND BOTTOM) AS SHOWN.

REBAR DETAIL

TOTAL APPROX REBAR WEIGHT = 3035#
REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS.

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VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' REBAR DETAIL

APPROVED/ENG.	WBR	07/11/2000
APPROVED/FOUND	WBR	07/11/2000
DRAWN BY	KWD	

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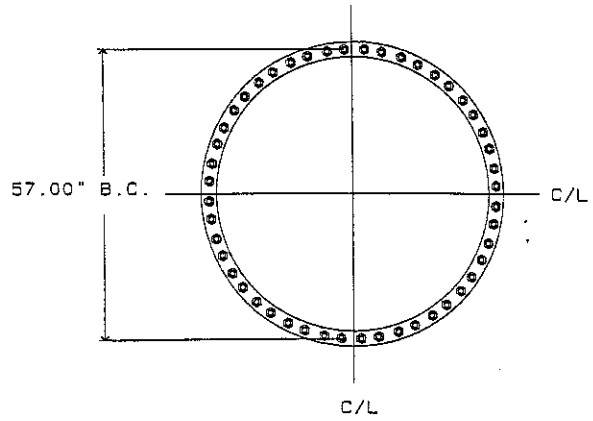
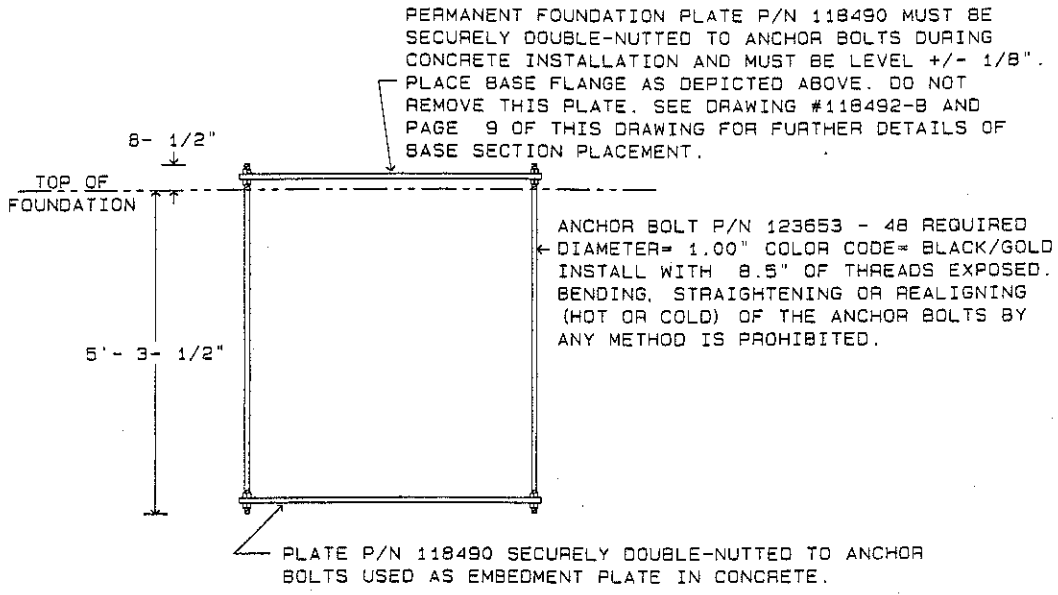
PAGE 7 OF 9

BASE FLANGE MUST BE CENTERED IN PIER
WITHIN +/- 10% OF PIER DIAMETER.



GROUTING OF MONOPOLE BASE IS OPTIONAL.
IF GROUT IS USED, DRAINAGE MUST BE
PROVIDED FROM THE INTERIOR OF POLE.



TOWER ANCHOR STEEL PLACEMENT

REV	DESCRIPTION OF REVISIONS	INI	DATE
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B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000

VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' ANCHOR STEEL

APPROVED/ENG.	WBR	07/11/2000	
APPROVED/FOUND	WBR	07/11/2000	
DRAWN BY	KWO		

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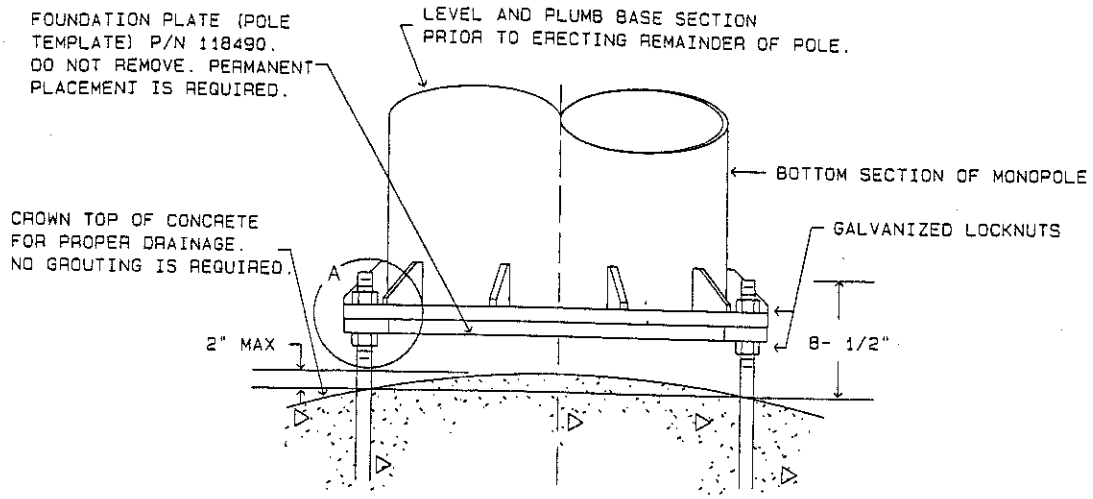
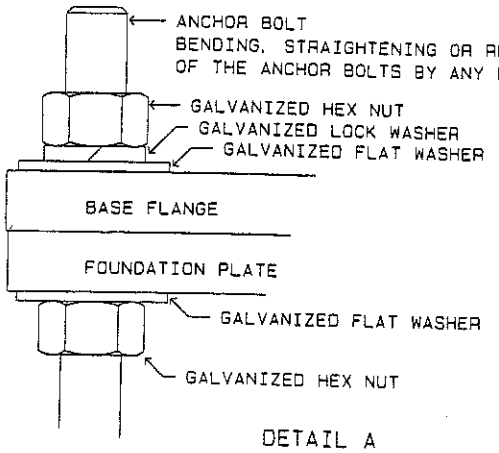
PAGE 8 OF 9





DETAIL A

TOWER BASE SECTION PLACEMENT

REV	DESCRIPTION OF REVISIONS	INI	DATE
E	ADDED FOUNDATION PER SOIL REPORT	TAG	07/10/2000
B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000

From: F0091443.DFT - 07/10/2000 14:56
Printed from: 2060479E.DWG - 07/11/2000 14:15 @ 08/22/2000 13:32

VOICESTREAM WIRELESS
OLD SAYBROOK CT-11-327A, CT
MP54 X 150' BASE SECTION PLACEMENT

APPROVED/ENG.	WBR	07/11/2000
APPROVED/FOUND	WBR	07/11/2000
DRAWN BY	KWD	
ENG. FILE NO.	A-117281-	
ARCHIVE	F-0091443	

PIDCO INC.
1545 Pidco Dr.
Plymouth, IN 46563-0128
219-936-4221

DRAWING NO. 206047-B
PAGE 9 OF 9

EXHIBIT F

Subsurface Exploration and Geotechnical Evaluation

FRENCH & PARRELLO
ASSOCIATES, P.A.
CONSULTING ENGINEERS
Since 1974

670 NORTH BEERS STREET BLDG. #3
HOLMDEL, NEW JERSEY 07733
(732) 888-7700
http://www.fpawww.com
email: fpa@fpawww.com

LAURENCE E. FRENCH, P.E.
ARGO T. PARRELLO, P.E.
JAMES B. HELLER, P.E.
JOSEPH M. EDWARDS, P.E.
SCOTT D. WATKINS, P.E.

January 20, 2000

Mr. Joe Di Bernardo
ARCNET ARCHITECTS INC.
670 North Beers Street – Bldg. 2
Holmdel, New Jersey 07733

Re: Report of Subsurface Exploration
and Geotechnical Evaluation
Amtrak – Old Saybrook
Route 1 and Ford Drive; Milepost 105.46
Old Saybrook, CT
Arcnet No. A99.506-862A
FPA No. 00N007AR1

Dear Mr. Di Bernardo:

INTRODUCTION

Pursuant to your authorization, we have performed a subsurface exploration and geotechnical engineering evaluation in connection with the proposed 150 foot monopole at the above referenced site. The project site is located adjacent to the railroad tracks at milepost ±105.46, Old Saybrook, Connecticut. The location of the project site is presented on Drawing No. 1, "Regional Location Plan." The generalized site configuration is presented on Drawing No. 2, "Site Layout."

The purpose of our participation on the project at this time was to explore the subsurface conditions in the vicinity of the proposed monopole and to develop geotechnical engineering recommendations toward the design and construction of the pole foundation. Our scope of work has been performed in accordance with the standard Arcnet specifications, and included the advancement of one test boring, engineering evaluation, and the generation of our recommendations.

DESIGN CONSIDERATIONS

It is our understanding that the proposed steel monopole will be approximately 150 feet high. Based on preliminary planning, it is anticipated that the proposed monopole will be founded on a drilled shaft. Design loads for the monopole foundation were unavailable at the time this report was prepared.

SUBSURFACE EXPLORATION

French & Parrello Associates (FPA) performed one test boring on January 14, 2000 to characterize subsurface conditions in the vicinity of the proposed monopole location. The field work was accomplished by a test boring subcontractor while under the full-time technical observation by a representative of FPA. The as-drilled boring location is presented on Drawing No. 3, "Test Boring Location Plan."

Test boring B-1 was advanced to a depth of 42'0" feet below grade utilizing hollow stem auger and rotary drilling procedures. Soil samples were obtained by advancing a standard 2-inch diameter split-spoon sampler in accordance with ASTM Test Method D-1586, The Standard Penetration Test. All soil samples were classified in the field using the Burmister Soil Classification System and were returned to our laboratory for further review. The samples will be stored for a period of 30 days from the date of this report. Details of the drilling procedures, as well as sample classifications, groundwater depths, and Standard Penetration Test results are presented on the attached boring logs.

SUBSURFACE CONDITIONS

From the ground surface to the terminating depth of the boring, the encountered soils consisted of a coarse to fine sand with varying fractions of silt and gravel. Based upon the results of the Standard Penetration Tests, the soil from the ground surface to the terminating depth of the boring is in a medium to dense state of relative density.

Groundwater was encountered at an approximate depth of 8 feet during our subsurface exploration. Seasonal fluctuations can be anticipated. For a more detailed description of the subsurface soil and groundwater conditions encountered, please refer to the attached boring logs.

FOUNDATION RECOMMENDATIONS

Based upon the results of our subsurface exploration and geotechnical engineering evaluation, it is our opinion that the proposed monopole may be supported on a drilled shaft foundation. Design of the foundation should be performed by an engineer licensed to practice in the state of Connecticut and should conform to all governing regulations. We recommend that the project specifications be written on a performance basis and that means and methods for installing the foundation be left to the discretion of the contractor.

The proposed tower foundation will be located adjacent to existing structures and the existing rail line. Responsibility for protecting any adjacent structures and the rail line during installation should be stipulated to be with the contractor. We recommend that the contractor perform a pre-

construction survey to detail the condition of existing structures, and that a temporary steel casing should be utilized during the construction to reduce the risk of the hole caving in. To facilitate the design of the monopole foundation, we offer the following soil parameters.

	0-42 ft
Total Unit Weight of Soil (γ)	120 pcf
Submerged Unit Weight of Soil (γ')	60 pcf
Angle of Internal Friction (ϕ)	34°
Cohesion	--
Coefficient of Lateral Earth Pressure	
Active Earth Pressure (K_a)	.28
At Rest Earth Pressure (K_o)	.44
Passive Earth Pressure (K_p)	3.54
Allowable Bearing Pressure	6,000 psf

CLOSING

The recommendations contained herein are contingent upon subsurface conditions remaining consistent with those encountered during our subsurface exploration. It is understood that actual subsurface conditions may vary from those which were encountered at the locations of the test borings. French & Parrello will base interpretations and recommendations upon conditions, inferred from the conditions encountered. It should be recognized that any future determination of conditions different than those which were encountered at the sampling locations may significantly impact the interpretation and recommendations provided by French & Parrello. Any such variation of conditions should be brought to the prompt attention of French & Parrello to assess the impact of the variations on the previously provided interpretations and recommendations. French & Parrello will take no responsibility for any interpretation or recommendation others may make based upon subsurface data provided by French & Parrello.

LIMITATIONS

The scope of our work did not include an environmental assessment or investigation for the presence or absence of wetlands or hazardous and toxic materials in the soil, air, or groundwater. Services performed by FPA for the project have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in the services provided.

Should you have any questions or comments, please feel free to contact us.

Very truly yours,

FRENCH & PARRELLO ASSOCIATES, P.A.

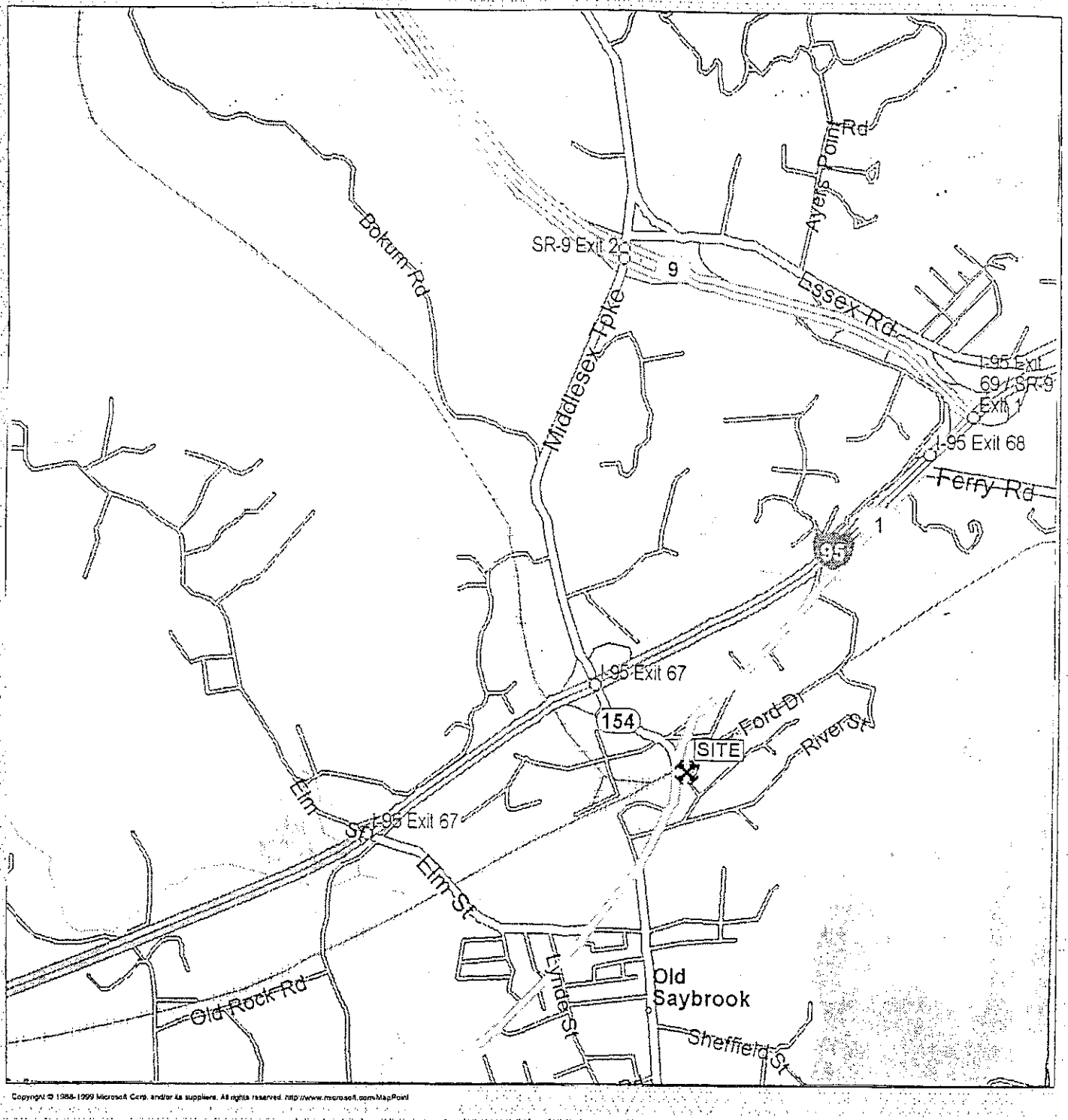
John W. Colagrande
Project Manager

R. Raymond Mankbadi, P.E.
Senior Project Manager

RRM/JWC/clt

R. Raymond Mankbadi, P.E.
CT Professional License No. 16547

L:\CM\ARCNET\2000\00N007A-Amtrak Old Saybrook\00N007A-D1.dwg Thu Jan 20 13:11:49 2000 J.W.C.

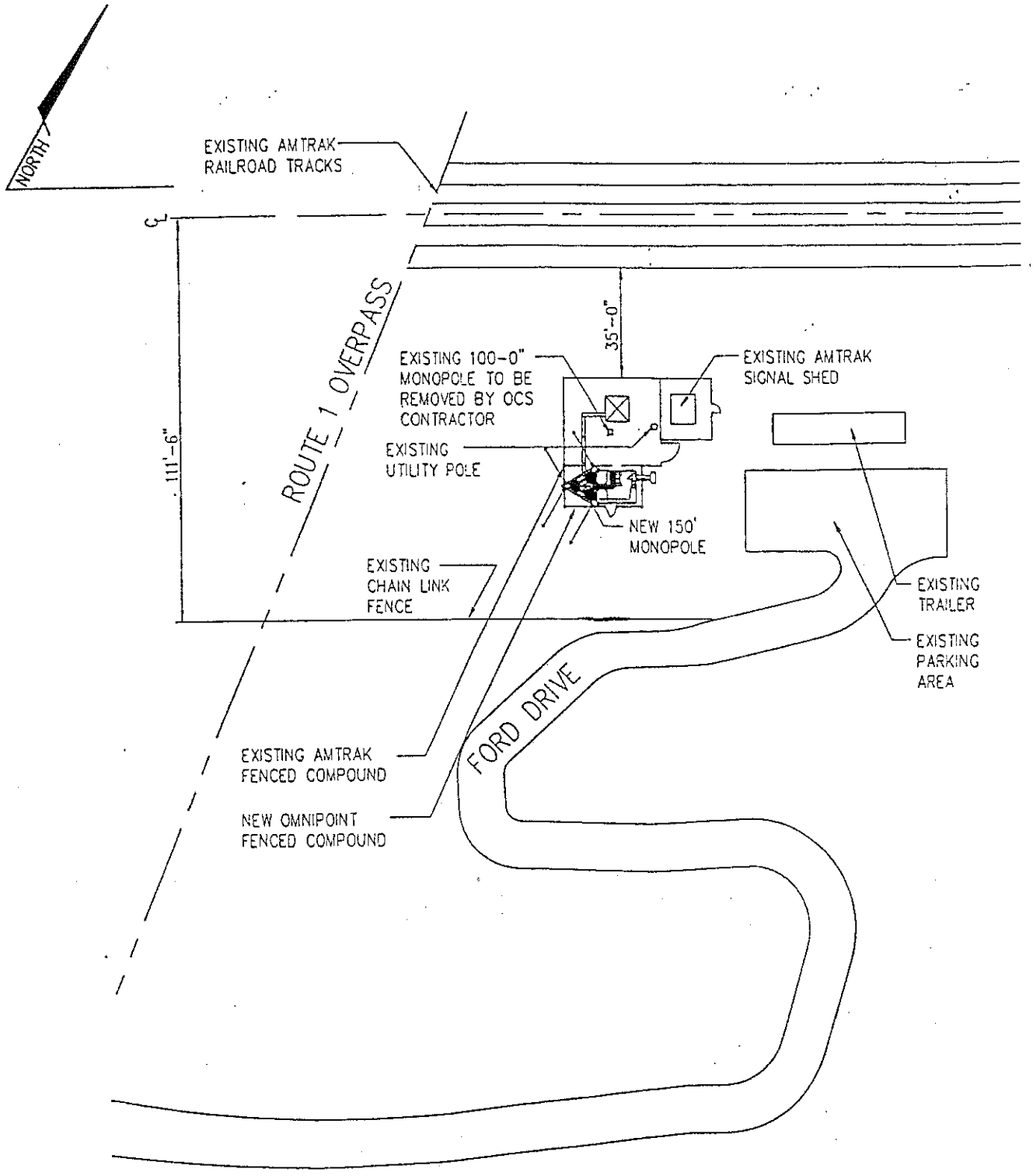


REGIONAL LOCATION PLAN

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
70 NORTH BEERS STREET BLDG. #3 HOLMDEL, NEW JERSEY 07733
TEL: (732) 888-7700 FAX: (732) 888-7622

PROJECT:
AMTRAK-OLD SAYBROOK
ROUTE 1 @ FORD DRIVE
OLD SAYBROOK, CONNECTICUT

DRAWN BY:	CHECKED BY:	SCALE:	DATE:	JOB NO.:	DRAWING NO.:
J.W.C.	J.W.C.	N.T.S.	01/19/00	00N007A	1

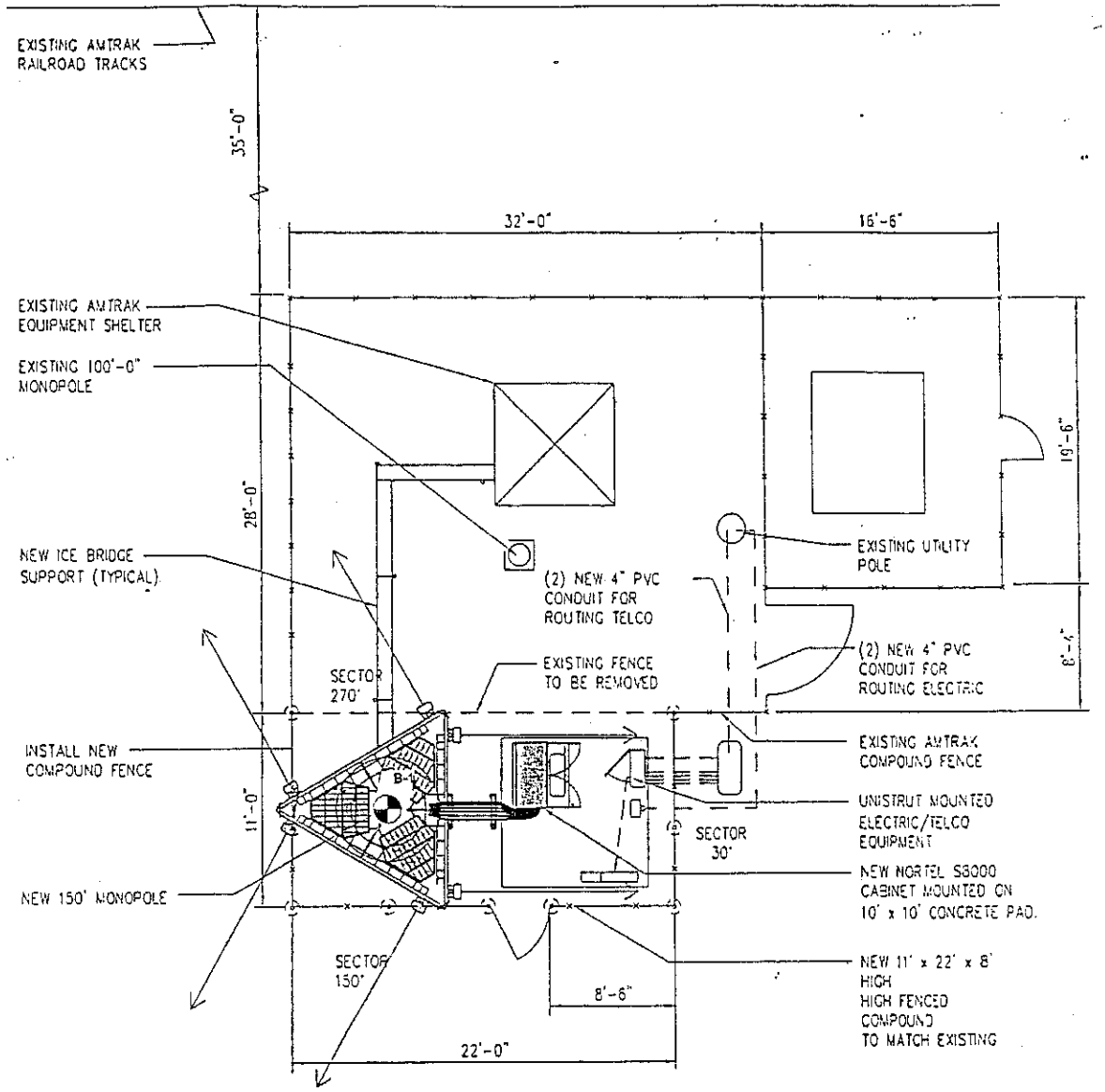


SITE LAYOUT

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
670 NORTH BEERS STREET BLDG. #3 HOLMDEL, NEW JERSEY 07733
TEL: (732) 888-7700 FAX: (732) 888-7622

PROJECT:
AMTRAK-OLD SAYBROOK
ROUTE 1 @ FORD DRIVE
OLD SAYBROOK, CONNECTICUT

DRAWN BY:	CHECKED BY:	SCALE:	DATE:	JOB NO.:	DRAWING NO.:
J.W.C.	J.W.C.	N.T.S.	01/19/00	00N007A	2



KEY

APPROXIMATE BORING LOCATION

TEST BORING LOCATION PLAN

FRENCH & PARRELLO ASSOCIATES, P.A.
CONSULTING ENGINEERS
670 NORTH BEERS STREET BLDG. #3 HOLMDEL, NEW JERSEY 07733
TEL: (732) 888-7700 FAX: (732) 888-7622

PROJECT: AMTRAK-OLD SAYBROOK
ROUTE 1 @ FORD DRIVE
OLD SAYBROOK, CONNECTICUT

DRAWN BY:	CHECKED BY:	SCALE:	DATE:	JOB NO.:	DRAWING NO.:
K.G.	J.C.	N.T.S.	01/19/00	00N007A	3

FRENCH & PARRELLO ASSOCIATES, P.A.
670 North Beers Street, Building No. 3
Holmdel, New Jersey 07733

TEST BORING LOG

AMTRACK – OLD SAYBROOK
OLD SAYBROOK, CT FPA NO. 00N007A

BORING NO.: B-1
SHEET 1 OF 2

DATE STARTED: 1-14-00
DATE FINISHED: 1-14-00

DEPTH OF WATER: 8.0'
LOCATION: SEE PLAN

GROUND ELEVATION: N/A
GROUND WATER ELEV.: N/A

DRILLING TECHNIQUE: HOLLOW STEM AUGER

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL	
	S-1 0-2'	3 – 5 – 7 – 5		S-1	Light Brown cm^{+} f **SAND**, little^{-} Silt.
	S-2 2-4'	5 – 5 – 6 – 5		S-2	Same as **S-1**.
--- 5'---	S-3 4-6'	6 – 9 – 18 – 26		S-3	Light Brown cm^{-} **SAND**, some^{+} c^{-} mf Gravel, trace^{+} Silt.
	S-4 6-8'	18 – 16 – 15 – 13		S-4	Same as **S-3**.
---10'---	S-5 8-10'	19 – 22 – 23 – 32		S-5	Brown cm^{+} f **SAND**, some c^{-} mf Gravel, little Silt. (wet)
	S-6 10-12'	21 – 18 – 21 – 30		S-6	Brown cm **SAND**, little^{+} mf Gravel, little^{-} Silt.
---15'---	S-7 15-17'	11 – 13 – 17 – 18		S-7	Same as **S-6**.
---20'---	S-8 20-22'	7 – 7 – 10 – 12		S-8	Tan m^{+} f **SAND**, little Silt.
---25'---	S-9 25-27'	7 – 12 – 10 – 10		S-9	Tan cm^{+} **SAND**, little mf^{+} Gravel, trace^{+} Silt.
---30'---	S-10 30-32'	3 – 5 – 7 – 10		S-10	Tan m^{+} f **SAND**, little^{-} Silt.
---35'---	S-11 35-37'	11 – 13 – 35 – 65		S-11	Tan cm^{+} f **SAND**, little^{-} mf Gravel w/ 1" layer of Clayey Silt.
---40'---					

SOILS ENGINEER: R. MANKBADI, P.E.
TEST BORING OBSERVER: M. GIZZI

CONTRACTOR: NEW ENGLAND BORING CO.
DRILLER: T. ROE

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.

FRENCH & PARRELLO ASSOCIATES, P.A.
670 North Beers Street, Building No. 3
Holmdel, New Jersey 07733

TEST BORING LOG

AMTRACK – OLD SAYBROOK
OLD LAYBROOK, CT FPA NO. 00N007A

BORING NO.: B-1
SHEET 2 OF 2

DATE STARTED: 1-14-00
DATE FINISHED: 1-14-00

DEPTH OF WATER: 8.0'
LOCATION: SEE PLAN

GROUND ELEVATION: N/A
GROUND WATER ELEV.: N/A

DRILLING TECHNIQUE: HOLLOW STEM AUGER

DEPTH FEET	SAMPLE DEPTH	SPT BLOW COUNTS (PER 6")	STRATA	DESCRIPTION OF SOIL
	S-12 40-42'	6 – 8 – 9 – 11		S-12 Tan f SAND, some Silt.
				END OF BORING AT 42.0'
--- 45'--				
---50'---				
---55'---				
---60'---				
---65'---				
---70'---				
---75'---				
---80'---				

SOILS ENGINEER: R. MANKBADI, P.E.
TEST BORING OBSERVER: M. GIZZI

CONTRACTOR: NEW ENGLAND BORING CO.
DRILLER: T. ROE

The information shown hereon indicates the subsurface conditions encountered at the specific boring location on the date(s) of drilling. Subsurface conditions are likely to vary across the project site. Interpretation of the subsurface data shall be at the discretion of the user.

BURMISTER SOIL CLASSIFICATION SYSTEM

A. Cohesionless Soils: Particle Size Definitions

Soil	Fraction	U.S. Standard Sieve	Actual Sizes
Gravel	coarse	3 in. to 1 in.	76 mm to 25 mm
	medium	1 in. to 3/8 in.	25 mm to 9.5 mm
	fine	3/8 in. to No. 10	9.5 mm to 2.0 mm
Sand	coarse	No. 10 to No. 30	2.0 mm to 0.6 mm
	medium	No. 30 to No. 60	0.6 mm to 0.25 mm
	fine	No. 60 to No. 200	0.25 mm to 0.75 mm
Silt		< No. 200	< 0.075 mm

B. Terms Describing Gradation of Cohesionless Soils

Written Description	Symbol/Designation	Defining Proportions
coarse, medium to fine	cmf	all fractions > 10%
coarse to medium	cm	< 10% fine
medium to fine	mf	< 10% coarse
coarse	c	< 10% medium and fine
medium	m	< 10% coarse and fine
fine	f	< 10% coarse and medium

Note: Use (+) for upper limit and (-) for lower limit.

C. Cohesive Soils: Terms Describing Plasticity

Soil	Plasticity Index	Workability	Plasticity Description
SILT	0	--	Non-Plastic
Clayey SILT	1 to 5	1/4 in. thread	Slightly Plastic
SILT & CLAY	5 to 10	1/8 in. thread	Low Plasticity
CLAY & SILT	10 to 20	1/16 in. thread	Medium Plasticity
Silty CLAY	20 to 40	1/32 in. thread	High Plasticity
CLAY	>40	1/64 in. thread	Very High Plasticity

D. Terms Describing Overall Composition of Soil

Written Proportion	Proportion Symbol	Proportion Percent by Weight
and	a	35 to 50
some	s	20 to 35
little	l	10 to 20
trace	t	1 to 10

Note: Use (+) for upper limit and (-) for lower limit.

EXHIBIT G

Photo Views

View from the tower looking northeast.

View of the equipment compound looking to the west. The Route One overpass is in the background and the old Amtrak tower is visible to the right of the new monopole. The Railroad tracks are to the north under the catenary structure.

Views of the tower and equipment compound looking west along the railroad tracks.

View of the equipment compound looking to the south.

EXHIBIT H

Power Density Calculations

VOICESTREAM WIRELESS CORPORATION
100 Filley St, Bloomfield, CT 06002-1853
Phone: 860-692-7131
Fax: 860-692-7159

Technical Memo

To: **Steve Humes**
From: **Haider Syed**
cc: **Mike Fulton**
Subject: Power Density Report for CT-11-327A
Date: 5-Mar-02

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the Voicestream Wireless Corporation PCS antenna installation on a Monopole at Route 1 @ River St / Ford Drive, Old Saybrook, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from several locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

1) The emissions from Voicestream Wireless transmitters are in the 1930-1950 MHz frequency band.
2) The antenna cluster consists of three sectors, with 2 antennas per sector. The model number for each antenna is EMS-RR90-17-02DP.
3) The antenna height is 150 Feet center line.
4) The maximum transmit power from each sector is 1274.94 W Effective Isotropic Radiated Power (EiRP) assuming 4 channels per sector.
5) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
6) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
7) The average ground level of the studied area does not significantly change with respect to the transmitting location.

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worse case assumptions, the power density calculations from the VoiceStream Wireless PCS antenna installation are on the order of 1,000 to 10,000 times less then the FCC/ANSI/IEEE C95.1-1991 standard of 1000 microwatts per square centimeter (uw/cm2). Details are shown in the attachment. Furthermore, the proposed antenna location for VoiceStream Wireless Corporation on the Monopole at Route 1 @ River St / Ford Drive, Old Saybrook, CT will not interfere with existing public safety telecommunications, AM band, and FM band radio broadcast, TV, Police Communication, HAM radio communications and other signals in the area.

Power Density (Worst Case)

Region 11 - Connecticut
Power Density Calculation

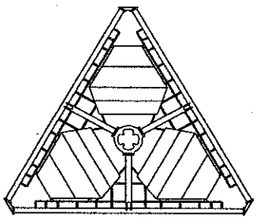
Site: CT-11-327A
Site Address: Route 1 @ River St / Ford Drive
Town: Old Saybrook
Pole Height: 150FT
Tower Style: Monopole

Base Station TX output	20	W
Number of channels	4	
Antenna Model	EMS-RR90-17-02DP	
Cable Size	1-5/8	"
Cable Length	160.0	ft
Antenna Height	150.0	ft
Ground Reflection	1.6	
Frequency	1930.00	MHz
Jumper & Connector loss	2.62	dB
Antenna Gain	16.5	dBi
Cable Loss per foot	0.0116	dB (loss per ft)
Total Cable Loss	1.856	dB
Total Attenuation	4.476	dB
Total EIRP per channel	55.03	dB
(In Watts)	318.74	W
Total EIRP per sector	61.05	dB
(In Watts)	1274.94	W
nsg	12.024	
Power Density (S) =	**0.012432**	**mW / cm^2**
% MPE =	**1.2432%**	

Equation Used :

$$S = \frac{(1000)(grf)^2(Power)*10^{(nsg/10)}}{4\pi(R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997



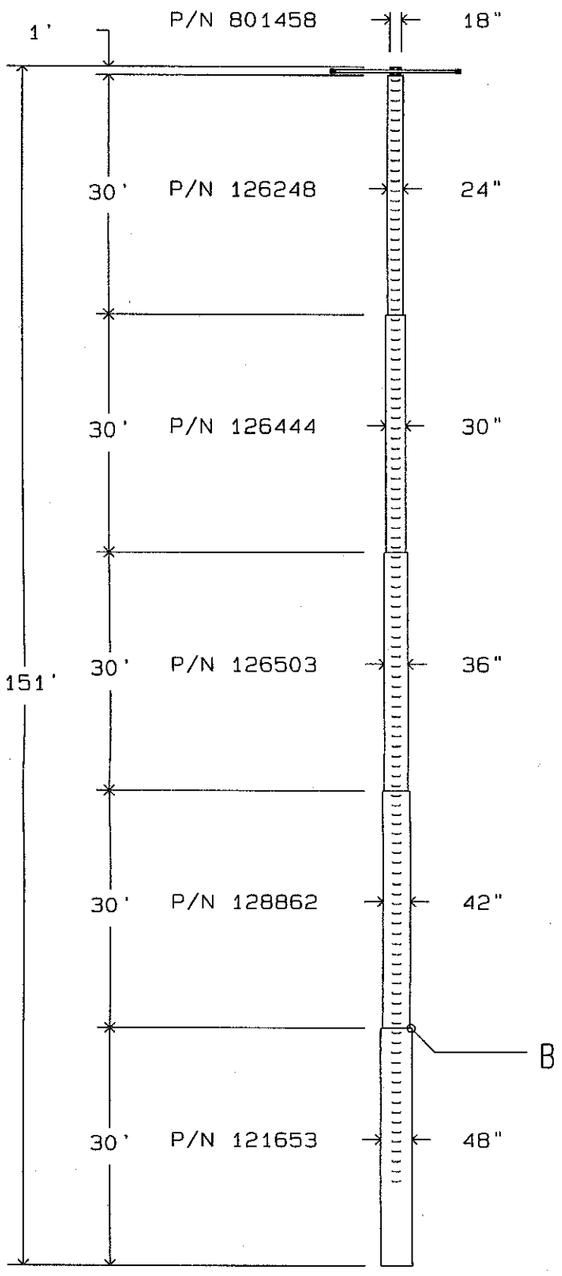
ROTATABLE TOP - TOP VIEW

MONOPOLE SECTION DATA

(ALL BOLTS ARE FOR BOTTOM OF SECTION)

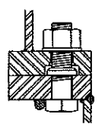
SECTION					CONNECT BOLT			PILOT BOLT		
LENGTH	PART#	SIZE	WALL	WT.*	DIAM	LENGTH	#	DIAM	LENGTH	#
1'	801458	18"	N/A		1"	4-1/2"	8			
30'	126248	24"	0.375"	3226#	1"	4-1/2"	17	1"	5"	3
30'	126444	30"	0.375"	4021#	1"	4-1/2"	21	1"	5"	3
30'	126503	36"	0.375"	4816#	1"	4-1/2"	25	1"	5"	3
30'	128862	42"	0.375"	5610#	1"	4-1/2"	29	1"	5"	3
30'	121653	48"	0.375"	6405#						

*THE WEIGHTS LISTED ARE THEORETICAL. THE ACTUAL WEIGHTS WILL VARY. ALL WEIGHTS SHOULD BE CONFIRMED IN THE FIELD PRIOR TO ERECTION.



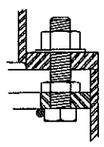
TOP 1' CONSISTS OF ROTATABLE TOP ASSEMBLY. SEE DWG # 130555-B FOR INSTALLATION DETAILS. JAM NUTS NOT REQUIRED.

SEE TABLE ABOVE FOR SIZE & QTY FOR ALL CONNECT BOLTS.



TYPICAL FLUSH FLANGE CONNECTION

VIEW A



TYPICAL INTERNAL FLANGE CONNECTION

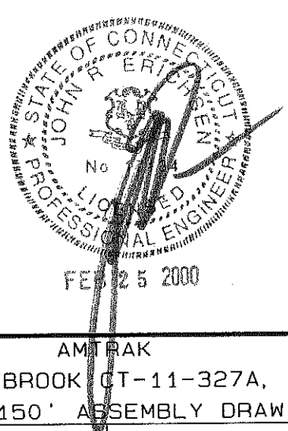
VIEW B

SEE PAGE 2 OF THIS DRAWING FOR OPENING INFORMATION.

SEE PAGE 4 OF THIS DRAWING FOR CONNECTION BOLT TIGHTENING SPECIFICATIONS.

SEE PAGE 9 OF THIS DRAWING FOR BASE SECTION INSTALL.

REMOVABLE CLIMBING RUNGS.



REV	DESCRIPTION OF REVISIONS	INI	DATE
B	ADDED FOUNDATION PER SOIL REPORT	WRH	02/25/2000
A	MODEL CHANGED - ALL PAGES	KWD	02/22/2000

From: 91443.DFT - 02/25/2000 14:31
Printed from: 20604818.DWG - 02/25/2000 14:36 @ 02/25/2000 14:39

AMTRAK
OLD SAYBROOK CT-11-327A, CT
MP48 X 150' ASSEMBLY DRAWING

APPROVED/ENG.	TSD	02/25/2000
APPROVED/FOUND	N/A	
DRAWN BY	KWD	

PIROD INC.
1545 Pidco Dr.
Plymouth, IN 46563-0128
219-936-4221

ENG. FILE NO. A-P2002313
ARCHIVE Q-91443

DRAWING NO. 206048-B
PAGE 1 OF 9