

NOTICE OF PUBLIC HEARING CITY OF CHESTERFIELD PLANNING COMMISSION

NOTICE IS HEREBY GIVEN that the Planning Commission of the City of Chesterfield will hold a Public Hearing on Monday, January 12, 2009 at 7:00 PM in the Council Chambers at the City Hall, 690 Chesterfield Parkway West, Chesterfield, Missouri 63017.

Said hearing will be as follows:

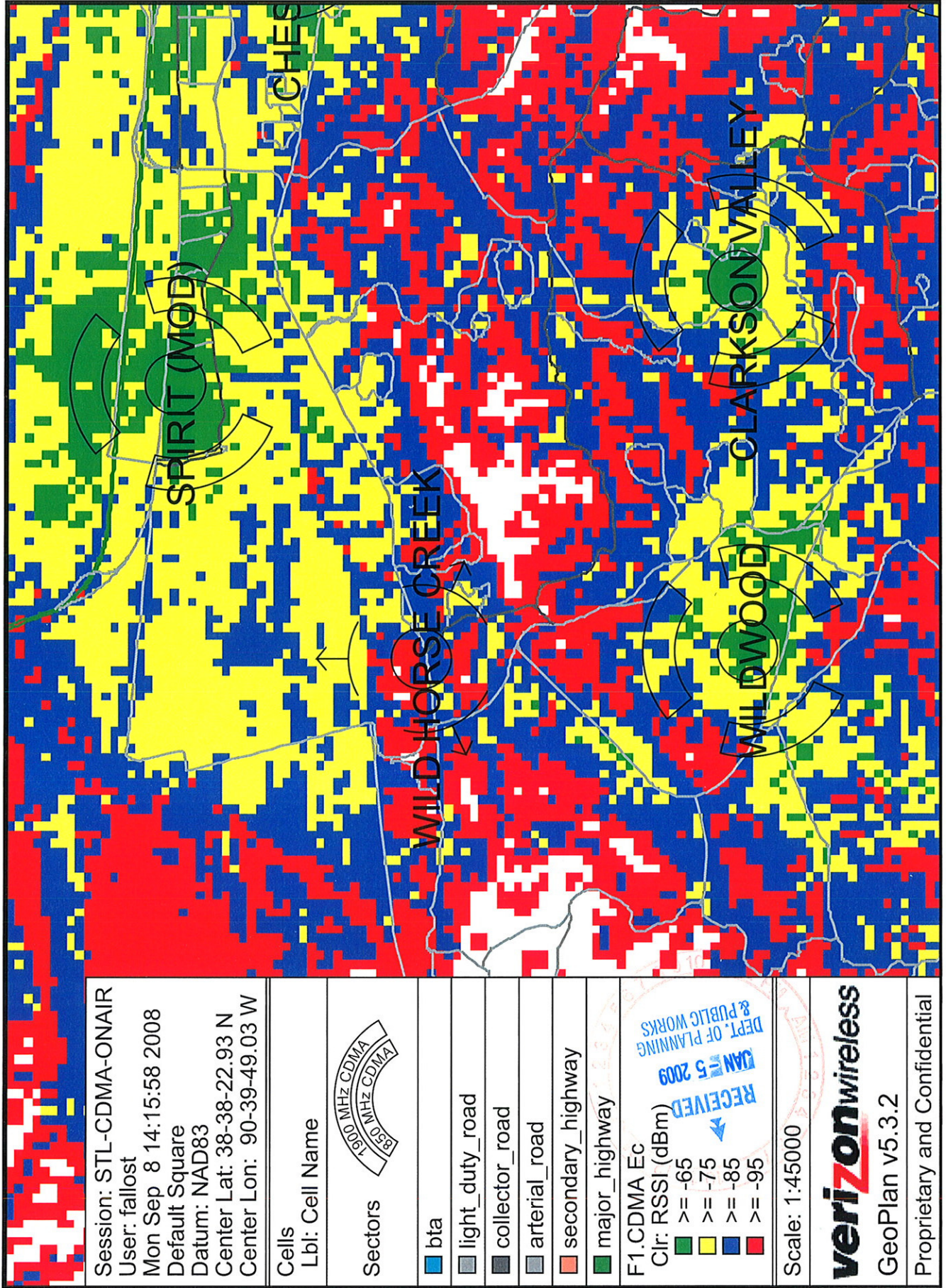
T.S.P. 06-2008 Verizon Wireless (18301 Wild Horse Creek Road): A request to obtain approval for a Telecommunication Facility Siting Permit on an "NU" Non-Urban District-zoned 1.47 acre tract of land located at 18301 Wild Horse Creek Road, northeast of the intersection of Wild Horse Creek Road and Eatherton Road. (19W510095).



Anyone interested in the proceedings will be given an opportunity to be heard. Copies of the request are available for review in the Department of Planning and Public Works at the Chesterfield City Hall, 690 Chesterfield Parkway West during weekdays between the hours of 8:30 a.m. and 4:30 p.m. If you should need additional information about this project, please contact Anissa McCaskill-Clay, Lead Senior Planner, by telephone at 636-537-4737 or by email at amccaskill@chesterfield.mo.us.

CITY OF CHESTERFIELD
Maurice L. Hirsch, Jr., Chair
Chesterfield Planning Commission

PROPAGATION OFF



Session: STL-CDMA-ONAIR
 User: fallost
 Mon Sep 8 14:15:58 2008
 Default Square
 Datum: NAD83
 Center Lat: 38-38-22.93 N
 Center Lon: 90-39-49.03 W

Cells
 Lbl: Cell Name

- Sectors
- 190MHz CDMA
 - 850MHz CDMA
 - bta
 - light_duty_road
 - collector_road
 - arterial_road
 - secondary_highway
 - major_highway

F1.CDMA Ec
 Cir: RSSI (dBm)

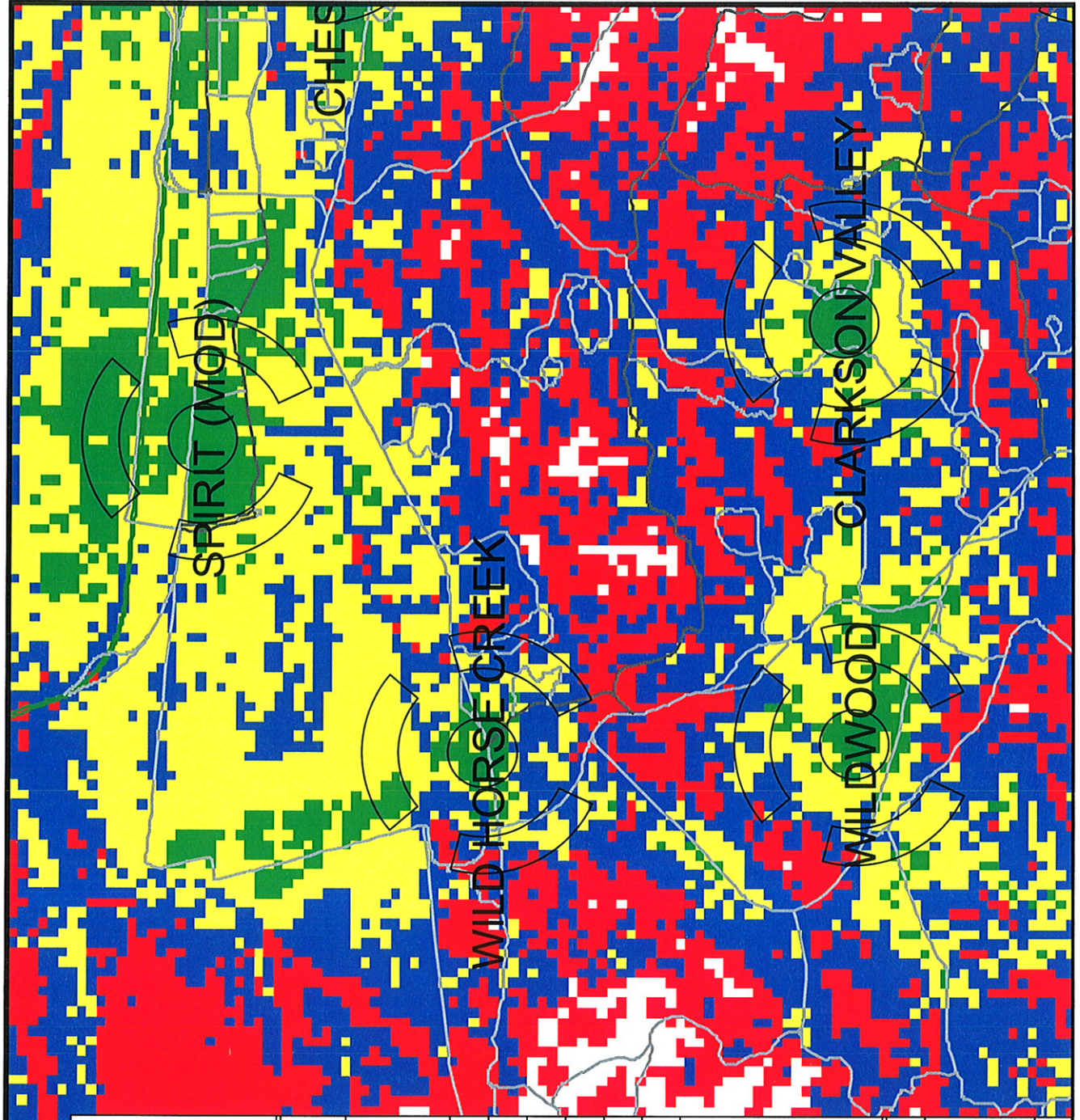
- >= -65
- >= -75
- >= -85
- >= -95

Scale: 1:45000

verizonwireless
 GeoPlan v5.3.2
 Proprietary and Confidential



PROPAGATION 35 FT



Session: STL-CDMA-ONAIR
 User: fallost
 Wed Oct 1 12:05:00 2008
 Default Square
 Datum: NAD83
 Center Lat: 38-38-22.93 N
 Center Lon: 90-39-49.03 W

Cells
 Lbi: Cell Name

Sectors

- bta
- light_duty_road
- collector_road
- arterial_road
- secondary_highway
- major_highway

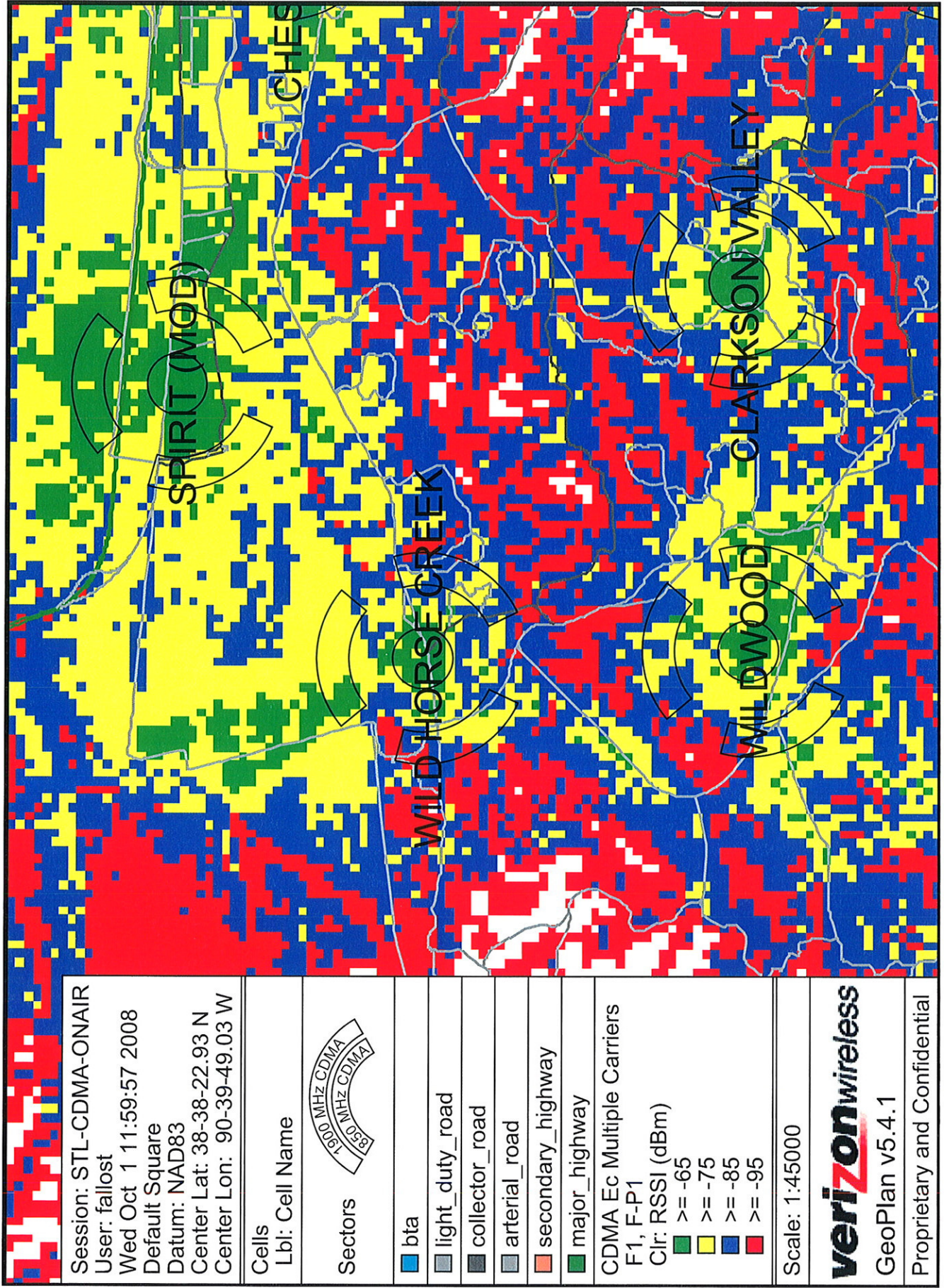
CDMA Ec Multiple Carriers
 F1, F-P1
 Clr: RSSI (dBm)

- >= -65
- >= -75
- >= -85
- >= -95

Scale: 1:45000

verizonwireless
 GeoPlan v5.4.1
 Proprietary and Confidential

PROPAGATION 45 FT



Session: STL-CDMA-ONAIR
 User: fallost
 Wed Oct 1 11:59:57 2008
 Default Square
 Datum: NAD83
 Center Lat: 38-38-22.93 N
 Center Lon: 90-39-49.03 W

Cells
 Lbl: Cell Name



Sectors

- bta
- light_duty_road
- collector_road
- arterial_road
- secondary_highway
- major_highway

CDMA Ec Multiple Carriers

F1, F-P1

- Clr: RSSI (dBm)
- >= -65
 - >= -75
 - >= -85
 - >= -95

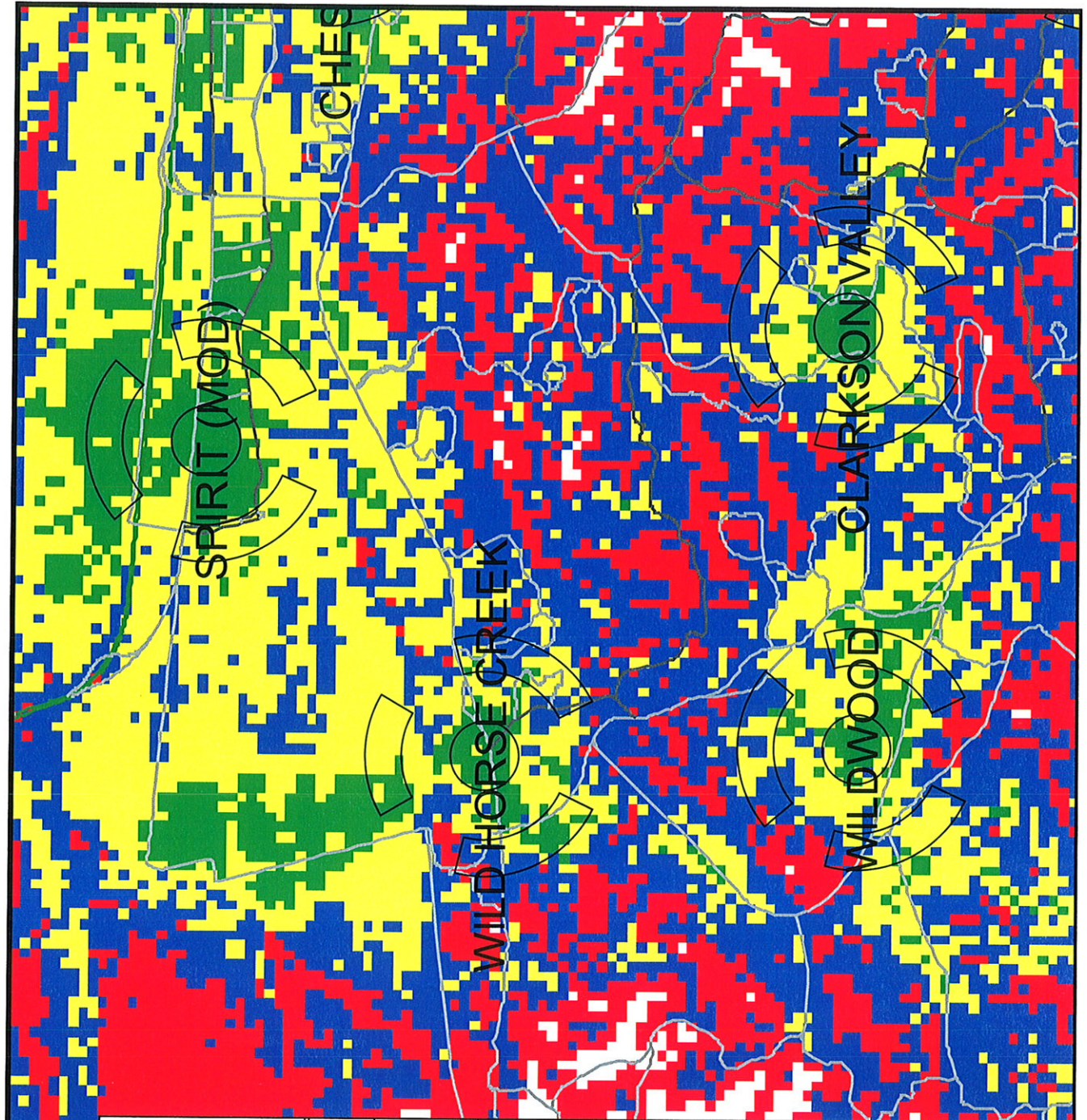
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GeoPlan v5.4.1







Proprietary and Confidential

PROPAGATION 55 FT



Session: STL-CDMA-ONAIR
 User: fallost
 Mon Sep 8 14:17:11 2008
 Default Square
 Datum: NAD83
 Center Lat: 38-38-22.93 N
 Center Lon: 90-39-49.03 W

Cells	
Lbi: Cell Name	
Sectors	 1900 MHz CDMA 850 MHz CDMA

	bta
	light_duty_road
	collector_road
	arterial_road
	secondary_highway
	major_highway

F1.CDMA Ec	
Clr: RSSI (dBm)	
	>= -65
	>= -75
	>= -85
	>= -95

Scale: 1:45000

verizonwireless
 GeoPlan v5.3.2
 Proprietary and Confidential

verizon wireless



STLC WILD HORSE CREEK CREEK CELL SITE

18301 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005



A/C	AIR CONDITIONING	MGR	MANAGER
ADJ	ADJUSTABLE	MIN	MINIMUM
APPROX	APPROXIMATELY	MISC	MISCELLANEOUS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	N	NORTH
AWG	AMERICAN WIRE GAUGE	N/A	NOT APPLICABLE
		NIC	NOT IN CONTRACT
		NTS	NOT TO SCALE
BLDG	BUILDING	OC/O	ON CENTER
BLK	BLOCK	OD	OUTSIDE DIAMETER
BNR	BASE MOBILE RADIO	OPG	OPENING
B/S	BUILDING STANDARD	OPP	OPPOSITE
CLG	CEILING	PLYWD	PLYWOOD
CLR	CLEAR	PR	PAIR
CND	CONDUIT	PROJ	PROJECT
COND	CONCRETE	PROP	PROPERTY
CONST	CONSTRUCTION	PT	PRESSURE TREATED
CONT	CONTINUOUS	REQ'D	REQUIRED
DBL	DOUBLE	RM	ROOM
DIA	DIAMETER	RO	ROUGH OPENING
DIAG	DIAGONAL	S	SOUTH
DIM	DIMENSION	SH	SHEET
DN	DOWN	SHL	SIMILAR
DTL	DETAIL	SPEC	SPECIFICATION
DWG	DRAWING	SQ	SQUARE
E	EAST	SS	STAINLESS STEEL
EA	EACH	STL	STEEL
ELEV	ELEVATION	STRUCT	STRUCTURAL
ELECT	ELECTRICAL	SUSP	SUSPENDED
EQ	EQUAL	SV	SHEET VINYL
EQUIP	EQUIPMENT	THRU	THROUGH
EW	EACH WAY	TRND	TINNED
EXT	EXISTING	TOP	TOP OF CONCRETE
EXT	EXTERIOR	TOM	TOP OF MASONRY
FIN	FINISH	TYP	TYPICAL
FLOR	FLUORESCENT	UBC	UNIFORM BUILDING CODE
FLR	FLOOR	UNO	UNLESS NOTED OTHERWISE
FT	FOOT	VERT	VERTICAL
GA	GAUGE	VT	VERIFY IN FIELD
GALV	GALVANIZED	VP	VINYL TILE
GC	GENERAL CONTRACTOR	W	WEST
GRND	GROUND	W/W	WITH WINDOW
GNB	Gypsum WALL BOARD	W/W	WITHOUT WINDOW
GYP	Gypsum BOARD	W/O	WITHOUT
		WP	WATERPROOF
HARD'WD	HARDWOOD		
HORIZ	HORIZONTAL		
HR	HOUR		
HT	HEIGHT		
HVAC	HEATING, VENTING & AIR CONDITIONING		
ID	INSIDE DIA		
IN	INCH		
INFO	INFORMATION		
INSL	INSULATION		
INT	INTERIOR		
LB(S)	POUND(S)		
MAX	MAXIMUM		
MECH	MECHANICAL		
METL	METAL		
MFR	MANUFACTURER		

△	REVISION	⊕	DETAIL REFERENCE
◊	KEY NOTE	⊖	ELEVATION REFERENCE
100	ROOM NUMBER	⊗	SECTION REFERENCE
⊠	KEYED NOTE		

ABBREVIATIONS AND SYMBOLS

THE PROJECT INCLUDES:
NEW 11'-6" x 30'-0" EQUIPMENT SHELTER TO BE PLACED IN EXISTING COMPOUND.
(3) NEW ANTENNAS, AND (6) NEW COAX LINES TO BE PLACED ON EXISTING MONOPINE.

PROJECT DESCRIPTION

SITE ACQUISITION FIRM: DOLAN REALTY ADVISORS MIKE TASSONE 7718 FORSYTH BLVD ST. LOUIS, MO 63105 PHONE: (314) 680-2671 FAX: 314-726-1821	SITE NAME: STLC WILD HORSE CREEK
SURVEYOR: LOVELACE & ASSOCIATES, LLC JEFFREY B. LOVELACE P.O. BOX 66 LET'S SUMMIT, MO 64082 PHONE: (816) 347-9997 FAX: TBO	SITE ADDRESS: 18301 WILD HORSE CREEK RD. CHESTERFIELD, MO 63005
ARCHITECTURAL AND ENGINEERING FIRM: MAGTECH SERVICES, INC. SHAWN WIRTH 8402 CORPORATE DR INDIANAPOLIS, IN 46278 PHONE: (317) 694-4939 FAX: (317) 471-1234	LOCATION NO.: 125500
UTILITIES - ELECTRICAL: AMEREN ME PHONE: (800) 522 7583	PROJECT NO.: 2004017072
UTILITIES - TELEPHONE: AT&T PHONE: (800) 288-2020	SITE LAT/LON ELEV.: LATITUDE - N 38° 38' 40.1" LONGITUDE - W 90° 39' 53.8" ELEVATION 660' AMSL.
POLICE DEPARTMENT: CHESTERFIELD POLICE DEPARTMENT PHONE: (636) 537-3000	LANDLORD: CHRIS PURICELLI ST. CHARLES TOWER PROGRAM MANAGER INVESTMENT CONSULTANT GROUP INC. C/O WILDHORSE PARTNERS LLC 18301 WILD HORSE CREEK ROAD CHESTERFIELD, MO 63005 CELL: (314) 409-3821
FIRE DEPARTMENT: MOUNARCH FIRE & PROTECTION DISTRICT PHONE: (314) 514-0900	APPLICANT: VERIZON WIRELESS MARION CRABLE REAL ESTATE MANAGER 10740 HALL, SUITE 400 OVERLAND PARK, KS 66211 OFFICE: (913) 344 2800
	TOWER MANUFACTURER: TBO



MISSOURI ONE CALL SYSTEM, INC.
1-(800)-344-7483

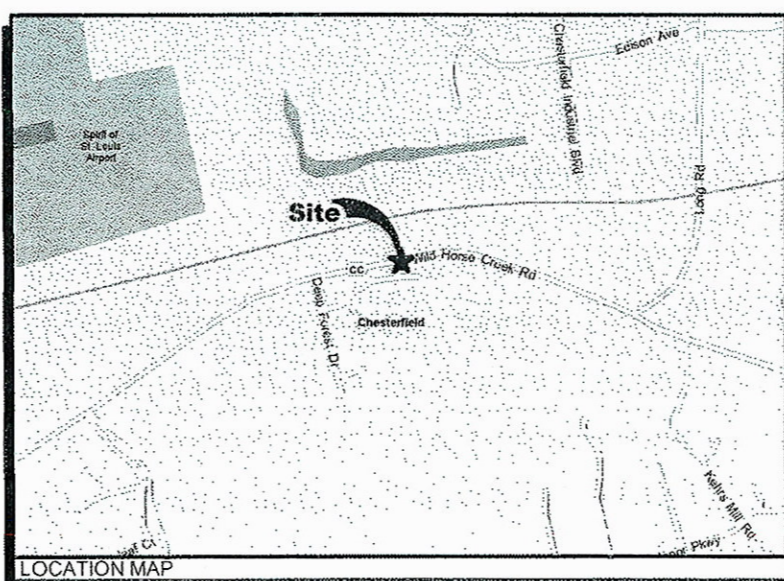
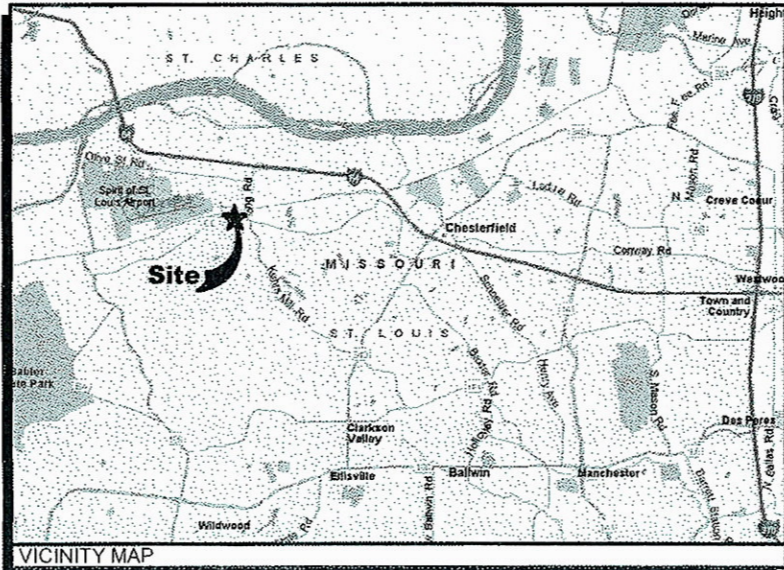
CONSULTANT TEAM

RF ENGINEER - STEVE FALLON	APPROVED REV A's ON 10/07/08
OPERATIONS MANAGER - SCOTT YOUNG	APPROVED REV A's ON 10/07/08
CONSTRUCTION ENGINEER - TIM MAULDIN	APPROVED OPTION B ON 11/04/08
CONSTRUCTION MANAGER	
REAL ESTATE MANAGER - MARION CRABLE	APPROVED REV A's ON 10/16/08
INITIALS	DATE

VERIZON WIRELESS DEPARTMENT APPROVALS

SIGNATURE	PRINTED NAME	DATE
LESSOR / LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW		
<input type="checkbox"/> NO CHANGES	<input type="checkbox"/> CHANGES NEEDED, SEE COMMENTS ON PLANS	

LESSOR / LICENSOR APPROVAL



DEPART V2W SWITCH: 1710 MARTIN LUTHER KING DRIVE. GO ON MARTIN LUTHER KING DRIVE FOR 0.2 MILES. TURN LEFT (SOUTH) ONTO N 20TH STREET FOR 0.4 MILES. TURN RIGHT (WEST) ONTO PINE STREET FOR 131 YARDS. KEEP LEFT ONTO RAMP FOR 0.2 MILES TOWARDS I-64 / US-40 / ILLINOIS / WENTZVILLE. TAKE RAMP (LEFT) ONTO I-64 [US-40] FOR 22.7 MILES TOWARDS I-64 / US-40 / ILLINOIS / WENTZVILLE. TURN RIGHT ONTO RAMP FOR 0.5 MILES TOWARDS CHESTERFIELD AIRPORT ROAD. KEEP STRAIGHT ONTO LONG ROAD FOR 0.4 MILES. KEEP STRAIGHT ONTO LONG ROAD [CHESTERFIELD TOWNE CENTER] FOR 0.4 MILES. TURN RIGHT (WEST) ONTO SR-CC [WILD HORSE CREEK ROAD] FOR 2.8 MILES. TURN RIGHT (NORTH) ONTO LOCAL DRIVE, ARRIVE AT SITE.

DIRECTIONS TO SITE

DRAWING INDEX

- T-1 PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX
- SITE SURVEY
- C-1 SITE PLAN
- C-2 PROPOSED ENLARGED SITE PLAN
- C-3 PROPOSED TOWER ELEVATION, ANTENNA INFORMATION, NOTES & DETAILS
- C-4 ANTENNA INFORMATION
- C-5 PROPOSED ICE BRIDGE DETAILS
- C-6 SITE CIVIL AND SHELTER DETAILS
- B-1 EQUIPMENT ENCLOSURE PLAN & SECTION
- B-2 EQUIPMENT ENCLOSURE ELEVATIONS
- S-0 STRUCTURAL NOTES
- S-1 PLATFORM PLAN AND SECTIONS
- E-0 PROPOSED UTILITY ROUTING PLAN
- E-1 PROPOSED GROUNDING PLAN, RISER DIAGRAM AND NOTES
- E-2 ELECTRICAL, GROUNDING SCHEMATICS AND DETAILS
- E-3 ELECTRICAL AND GROUNDING DETAILS
- E-4 ELECTRICAL AND GROUNDING NOTES
- L-1 LANDSCAPE PLAN
- SP-1 SPECIFICATIONS
- SP-2 SPECIFICATIONS
- SP-3 SPECIFICATIONS
- SP-4 SPECIFICATIONS
- SP-5 SITE NOTES REVISIONS

CERTIFICATION:

RELEASE	
DATE	
09/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD

REVISIONS

NO.	DATE

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DRAWN BY: BMW
CHECKED BY: SOW

SITE NAME:	STLC WILD HORSE CREEK
LOCATION #	125500
PROJECT #	2004017072
SITE ADDRESS:	18303 WILD HORSE CREEK RD. CHESTERFIELD, MO 63005
SHEET TITLE:	TITLE PAGE
AAE PROJECT No.:	
SHEET NUMBER:	T-1

DO NOT SCALE DRAWINGS

LEASE TRACT DESCRIPTION
 A TRACT OF LAND PARTLY IN U.S. SURVEY 163, AND PARTLY IN FRACTIONAL SECTION 15, TOWNSHIP 45 NORTH, RANGE 2 EAST, ST. LOUIS COUNTY, MISSOURI AND FURTHER DESCRIBED AS FOLLOWS:
 BEGINNING AT A POINT 73.50 FEET WEST AND 101.82 FEET NORTH OF THE SOUTHEAST CORNER OF A TRACT DESCRIBED IN BOOK 17765 PAGE 1387;
 THENCE, N10°24'57"W, 32.00 FEET;
 THENCE, N79°35'03"E, 21.00 FEET;
 THENCE, S10°24'57"E, 32.00 FEET;
 THENCE, S79°35'03"W, 21.00 FEET, TO THE POINT OF BEGINNING.

CONTAINING 0.02 ACRES, MORE OR LESS.

12' ACCESS EASEMENT DESCRIPTION
 A TRACT OF LAND 12 FEET IN WIDTH BEING 6 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE PARTLY IN U.S. SURVEY 163, AND PARTLY IN FRACTIONAL SECTION 15, TOWNSHIP 45 NORTH, RANGE 2 EAST, ST. LOUIS COUNTY, MISSOURI AND FURTHER DESCRIBED AS FOLLOWS:
 COMMENCING AT THE NORTHEASTERLY CORNER OF THE ABOVE DESCRIBED LEASE TRACT;
 THENCE, S10°24'57"E, 6.00 FEET, TO THE POINT OF BEGINNING;
 THENCE, N81°15'32"E, 21.92 FEET, TO A POINT ON THE WESTERLY EDGE OF AN EXISTING ACCESS EASEMENT FOR A TERMINUS.

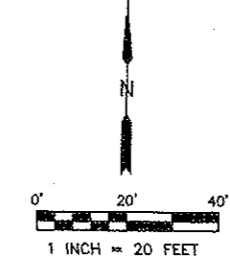
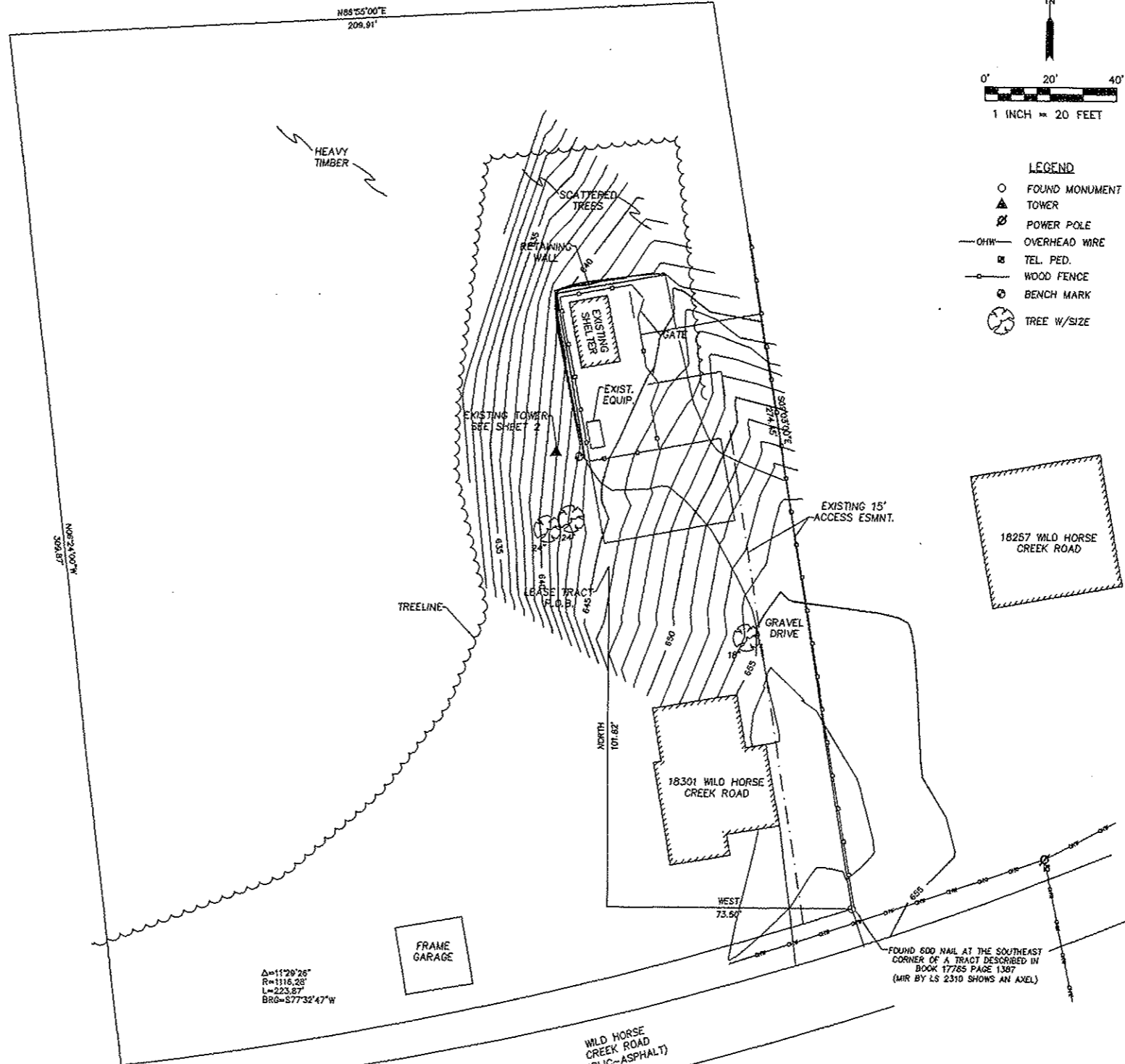
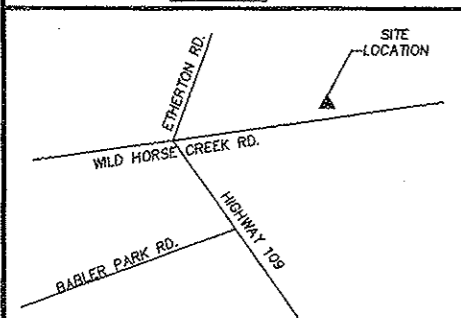
PARENT TRACT DESCRIPTION
 THE FOLLOWING DESCRIBED REAL ESTATE, SITUATED IN THE COUNTY OF ST. LOUIS AND STATE OF MISSOURI, TO WIT: A TRACT OF LAND PARTLY IN U.S. SURVEY 163, AND PARTLY IN FRACTIONAL SECTION 15, TOWNSHIP 45 NORTH, RANGE 2 EAST, ST. LOUIS COUNTY, MISSOURI AND FURTHER DESCRIBED AS FOLLOWS: BEGINNING AT AN OLD IRON ROD LOCATED IN THE NORTH RIGHT OF WAY OF WILD HORSE CREEK ROAD 60 FEET WIDE, SAID IRON ROD ALSO MARKING THE SOUTHEAST CORNER OF A TRACT OF LAND CONVEYED TO C.W. COMBS BY DEED RECORDED IN BOOK 6530 PAGE 2018 OF THE ST. LOUIS COUNTY RECORDS, THENCE LEAVING THE NORTH RIGHT OF WAY OF WILD HORSE CREEK ROAD AND ALONG THE EAST LINE OF THE AFOREMENTIONED COMBS PROPERTY, NORTH 06 DEGREES, 24 MINUTES WEST A DISTANCE OF 309.87 FEET TO A POINT; THENCE NORTH 86 DEGREES 55 MINUTES EAST 209.91 FEET TO AN OLD IRON ROD, SAID ROD ALSO MARKING THE NORTHWEST CORNER OF A TRACT OF LAND CONVEYED TO R. FARON AT BOOK 7216 PAGE 1335 OF THE ST. LOUIS COUNTY RECORDS; THENCE SOUTH 09 DEGREES 03 MINUTES EAST ALONG FARON'S WEST LINE A DISTANCE OF 274.45 FEET TO AN OLD IRON ROD IN THE NORTH RIGHT OF WAY LINE OF WILD HORSE CREEK ROAD; THENCE IN A WESTERLY DIRECTION AND ALONG THE NORTH RIGHT OF WAY OF WILD HORSE CREEK ROAD ON A CURVE TO THE RIGHT (NORTH) WITH A RADIUS OF 1116.28 FEET AN ARC DISTANCE OF 192.99 FEET TO A POINT OF TANGENCY; THENCE CONTINUING ALONG SAID NORTH RIGHT OF WAY SOUTH 81 DEGREES 49 MINUTES WEST A DISTANCE OF 34.40 FEET TO THE POINT OF BEGINNING, ACCORDING TO A SURVEY BY JOHN C. BERGH AND ASSOCIATES DURING JUNE 1979.

SURVEY NOTES

1. BASIS OF BEARINGS: MO SPCS - EAST ZONE
2. BENCHMARK: TOP OF EXISTING RETAINING WALL, SOUTH END. EL=644.4'(644' PER FCC INFORMATION)
3. THIS IS NOT A SURVEY OF THE PARENT TRACT. BOUNDARY INFORMATION OBTAINED BY AN MIR BY PLS 2310.
4. CURRENT ZONING: UNINC.-MUNICIPAL (PER ST. LOUIS COUNTY WEBSITE)



VICINITY MAP



- LEGEND**
- FOUND MONUMENT
 - ▲ TOWER
 - ⊗ POWER POLE
 - OHW— OVERHEAD WIRE
 - ⊠ TEL. PED.
 - WOOD FENCE
 - ⊙ BENCH MARK
 - ⊗ TREE W/SIZE

Δ=11°29'26"
 R=1116.28'
 L=223.97'
 BRG=S77°32'47"W

FOUND 500 NAIL AT THE SOUTHEAST CORNER OF A TRACT DESCRIBED IN BOOK 17765 PAGE 1387 (MIR BY LS 2310 SHOWS AN AXEL)

SURVEYOR'S DECLARATION
 I HEREBY DECLARE THAT THIS EXHIBIT WAS PREPARED UNDER MY DIRECT PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE THE CONDITIONS ARE AS SHOWN.

EXISTING SITE CONDITIONS

EXISTING SITE CONDITIONS

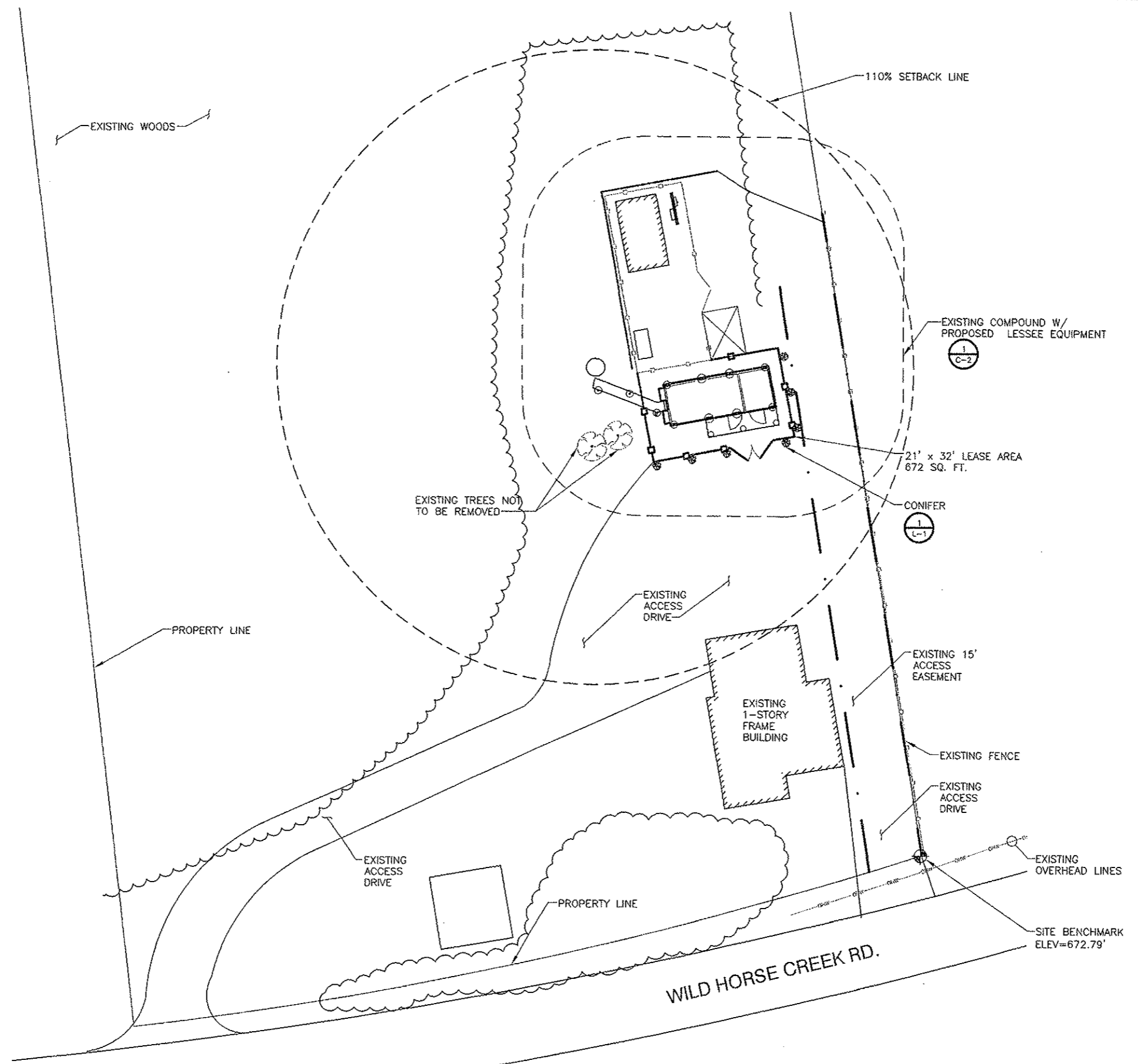
BRYANT
 SURVEYING & MAPPING, L.L.C.
 509-C SOUTH WALL AVENUE
 JOPLIN, MO 64801
 TEL: 417.623.8041
 FAX: 417.623.1231
 contact-us@bryantsurvey.com

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 ALL RIGHTS RESERVED © 2008
 Drawn By: DJA
 Approved By: PDB

REVISIONS	DATE	BY	DESCRIPTION
2	11-05-08	BOUNDARY SURVEY	
1	10-23-08	PRELIM.	

Project No. 08149.000

ST. CHARLES TOWER
 ST. LOUIS COUNTY, MISSOURI
 EXISTING SITE CONDITIONS
 LS-1.0
 SHEET 1 OF 2



1 SITE PLAN
SCALE: 1"=30'



MAGTECH SERVICES INC.
A SUBSIDIARY OF FORTUNE DIVERSIFIED INC.
D.B.A. MAGTECH MIDWEST, INC.
4402 CORPORATE DR. WINDYBUSH, INDIANA 46278
(317) 532-1374 • (317) 471-1234 FAX

James Westbrook Associates
1625 Alexander Drive
Suite 225
Alpharetta, GA 30022
(770) 753-9059
(770) 753-0356 Fax

CERTIFICATION:

RELEASE DATE
09/12/08 REV-A PRELIMINARY CD
12/09/08 REV-B PRELIMINARY CD

REVISIONS NO.	DATE

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DRAWN BY: BMW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

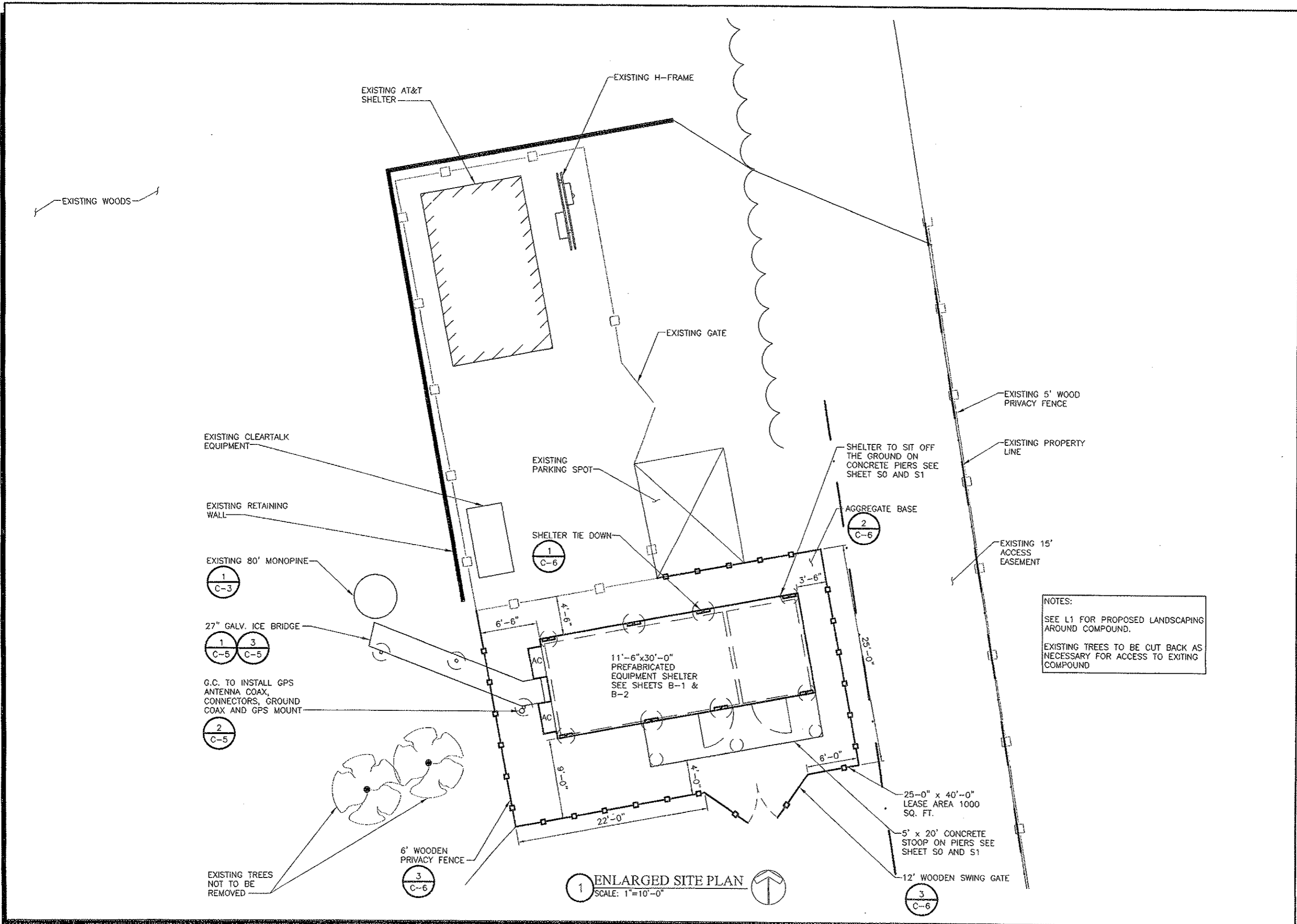
SHEET TITLE:

SITE PLAN

A&E PROJECT No.:

SHEET NUMBER:

C-1
DO NOT SCALE DRAWINGS



MAGTECH SERVICES INC.
 A SUBSIDIARY OF FORTUNE OVERSIPED INC.
 D.B.A. MAGTECH MIDWEST, INC.
 6402 CORPORATE DR., INDIANAPOLIS, INDIANA 46276
 (317) 552-1374 • (317) 471-1234 FAX

James Westbrook & Associates
 4025 Alexander Drive
 Suite 225
 Alpharetta, GA 30022
 (770) 753-9059
 (770) 753-0356 Fax

CERTIFICATION:

RELEASE

DATE	
09/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD

REVISIONS

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 CHECKED BY: SDW

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STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
 CHESTERFIELD, MO 63005

SHEET TITLE:

PROPOSED ENLARGED SITE PLAN

A&E PROJECT No.:

SHEET NUMBER:

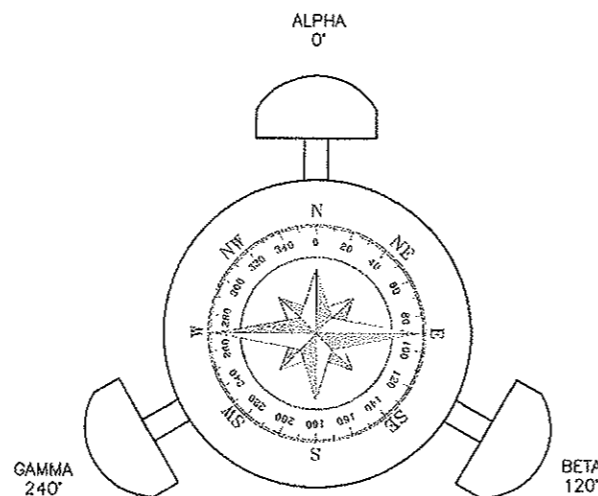
C-2
 DO NOT SCALE DRAWINGS

Antenna Specifications														
NO.	SECTOR	ANTENNA MFR.	ANTENNA MODEL	ELEV. (FT.)	AZ. (DEG.)	MECH. DT. (DEG.)	ELEC. DT. (DEG.)	DIMENSION (INCHES)			ANTENNA WT. (LB.)	FEEDLINE SIZE	NO. OF FEEDLINES	CABLE STRIPING
								HEIGHT	WIDTH	DEPTH				
A-1	ALPHA	ANTEL	BXA-80080/4 FP	55'	0°	0°	0°	48.2"	11.2"	5.9"	14.3	7/8"	1	1-- YLW
A-2	ALPHA		FUTURE											1--BL & 1--YLW
A-3	ALPHA													2--BL & 1--YLW
A-4	ALPHA													2-- YLW
B-1	BETA	ANTEL	BXA-80080/4 FP	55'	120°	0°	0°	48.2"	11.2"	5.9"	14.3	7/8"	1	1--RED
B-2	BETA		FUTURE											1--BL & 1--RED
B-3	BETA													2--BL & 1--RED
B-4	BETA													2--RED
C-1	GAMMA	ANTEL	BXA-80080/4 FP	55'	240°	0°	0°	48.2"	11.2"	5.9"	14.3	7/8"	1	1--OR
C-2	GAMMA		FUTURE											1--BL & 1--OR
C-3	GAMMA													2--BL & 1--OR
C-4	GAMMA													2--OR

NOTE:
IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO VERIFY ALL ANTENNA INFORMATION AGAINST FINAL RADIO ENGINEERING PLAN PROVIDED BY VERIZON WIRELESS.

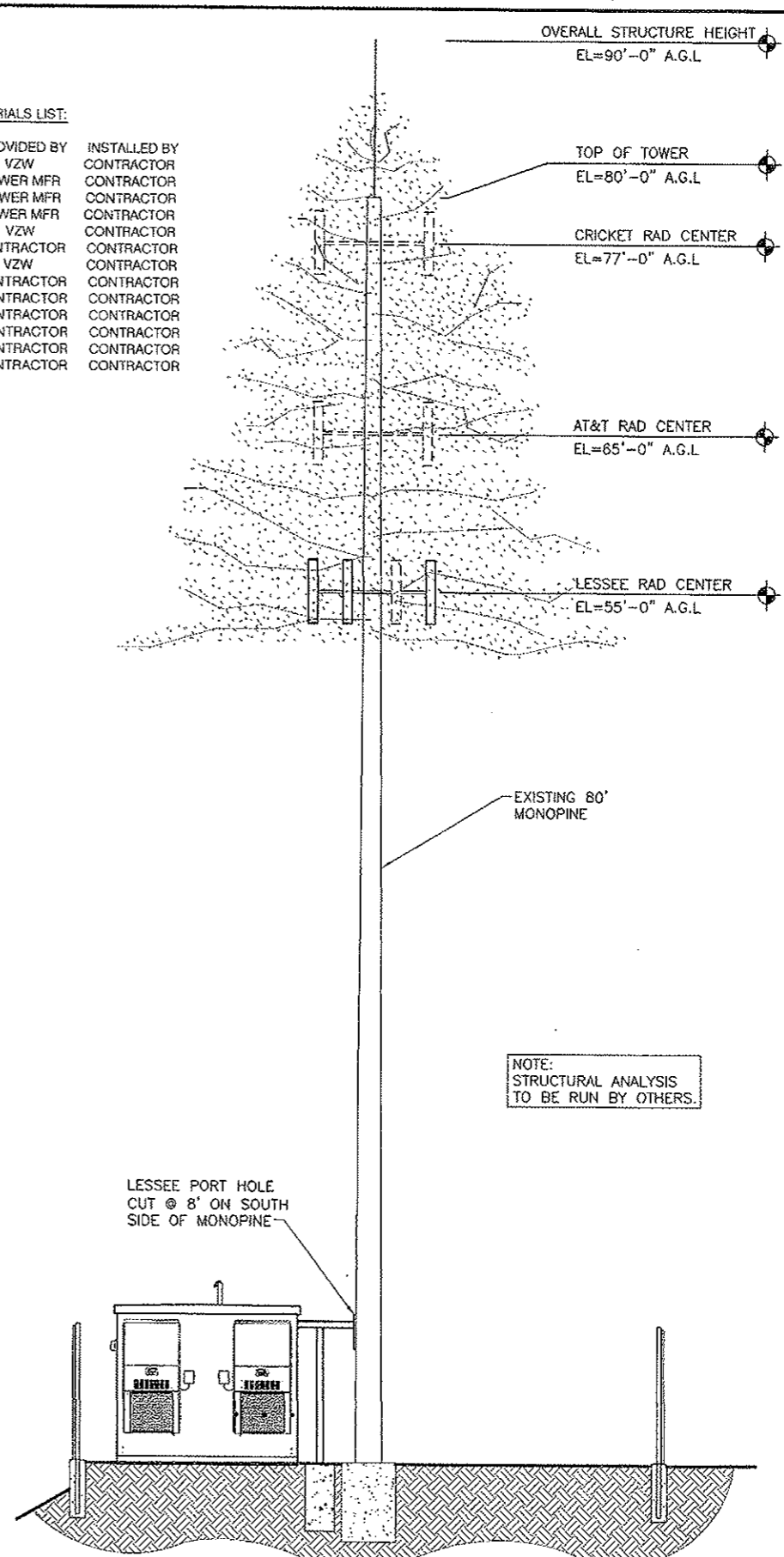
Notes:

1. THE MAXIMUM COAXIAL CABLE LENGTH HAS BEEN ESTIMATED AT 85 FEET WITH A CORRESPONDING CABLE DIAMETER OF 1 5/8". THIS CABLE LENGTH IS APPROXIMATE AND IS NOT TO BE USED FOR CONSTRUCTION. ACTUAL ANTENNA CABLE LENGTHS MAY VARY FROM ESTIMATED MAXIMUM LENGTH AND MUST BE VERIFIED.
2. TAG ALL MAIN CABLES (LABELED 1-12 TYPICAL, VERIFY WITH LESSEE PROJECT MANAGER) AT THREE (3) LOCATIONS:
 - A. TOP OF TOWER AT ANTENNAS
 - B. INSIDE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT
 - C. OUTSIDE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT
3. EACH COAX SHALL BE SUPPORTED WITH COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER, (10' ABOVE FOR LATTICE TOWER).
4. COAX TO BE GROUNDED EVERY 75' DOWN TOWER, TYPICALLY AT TOP, MIDPOINT, BOTTOM OF TOWER BEFORE TURNING UNDER ICE BRIDGE AND AT HATCHPLATE. DEPENDING ON HEIGHT, AND ADDITIONAL GROUND MAY BE NECESSARY BETWEEN BASE OF TOWER AND TOP OF TOWER.



MATERIALS LIST:

DESCRIPTION	PROVIDED BY	INSTALLED BY
TOWER	VZW	CONTRACTOR
ANTENNA MOUNTS	TOWER MFR	CONTRACTOR
CABLE LADDER	TOWER MFR	CONTRACTOR
TOWER BUSS BARS	TOWER MFR	CONTRACTOR
ANTENNAS	VZW	CONTRACTOR
JUMPERS	CONTRACTOR	CONTRACTOR
COAX	VZW	CONTRACTOR
CONNECTORS	CONTRACTOR	CONTRACTOR
HOIST GRIPS	CONTRACTOR	CONTRACTOR
GROUND KITS	CONTRACTOR	CONTRACTOR
HANGER KITS	CONTRACTOR	CONTRACTOR
ENTRY PORT BOOTS	CONTRACTOR	CONTRACTOR
ICE BRIDGE MATERIAL	CONTRACTOR	CONTRACTOR



LESSEE PORT HOLE CUT @ 8' ON SOUTH SIDE OF MONOPINE

1 TOWER ELEVATION
SCALE: N.T.S.



CERTIFICATION:

RELEASE DATE	REVISED
03/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD

REVISIONS NO.	DATE

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DRAWN BY: BMW
CHECKED BY: SDW

SITE NAME:
STLC WILD HORSE CREEK

LOCATION #:
125500

PROJECT #:
2004017072

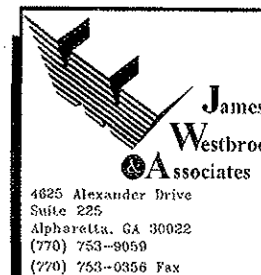
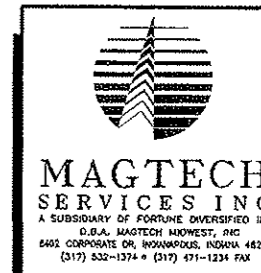
SITE ADDRESS:
18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:
PROPOSED TOWER
ELEVATION, ANTENNA
INFORMATION NOTES &
DETAILS

A&E PROJECT No.:

SHEET NUMBER:
C-3

DO NOT SCALE DRAWINGS



POSITION	ANTENNA DESIGNATION	COLOR CODE RX ONLY	COLOR CODE DX ANT.
1	ALPHA RX OR DX 0	1 YELLOW	1 BLUE / 1 YELLOW
2	ALPHA TX0 OR SPARE	1 YELLOW / 1 BLUE	1 WHITE / 1 YELLOW
3	N/U		
4	ALPHA RX OR DX 1	2 YELLOW	2 BLUE / 1 YELLOW
5	BETA RX OR DX 0	1 RED	1 BLUE / 1 RED
6	BETA TX0 OR SPARE	1 RED / 1 BLUE	1 WHITE / 1 RED
7	N/U		
8	BETA RX OR DX 1	2 RED	2 BLUE / 1 RED
9	GAMMA RX OR DX 0	1 ORANGE	1 BLUE / 1 ORANGE
10	GAMMA TX0 OR SPARE	1 ORANGE / 1 BLUE	1 WHITE / 1 ORANGE
11	N/U		
12	GAMMA RX OR DX 1	2 ORANGE	2 BLUE / 1 ORANGE
13	OMNI TX 0	1 BLUE	
14	OMNI RX 0	1 GREEN	
15	OMNI TX 1	2 BLUE	
16	OMNI RX 1	2 GREEN	
17	OMNI TX 3	3 BLUE	
18	OMNI RX 3	3 GREEN	

* ALPHA SECTOR WILL EITHER BE 0 DEGREES OR NEXT CLOSEST AZIMUTH TO 0 - E.G. - 60

** RX - RECEIVE ANTENNA

*** DX - DUPLEXED ANTENNA

1 ANTENNA INFORMATION
SCALE: N.T.S.

CERTIFICATION:

RELEASE DATE	REVISIONS
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12/09/08	REV-B PRELIMINARY CD

REVISIONS NO.	DATE

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DRAWN BY: BMW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:

ANTENNA INFORMATION

AGE PROJECT No.:

SHEET NUMBER:

C-4
DO NOT SCALE DRAWINGS

CERTIFICATION:

RELEASE

DATE	REV	DESCRIPTION
09/12/08	REV-A	PRELIMINARY CD
12/09/08	REV-B	PRELIMINARY CD

REVISIONS

NO.	DATE	

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DRAWN BY: BMW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

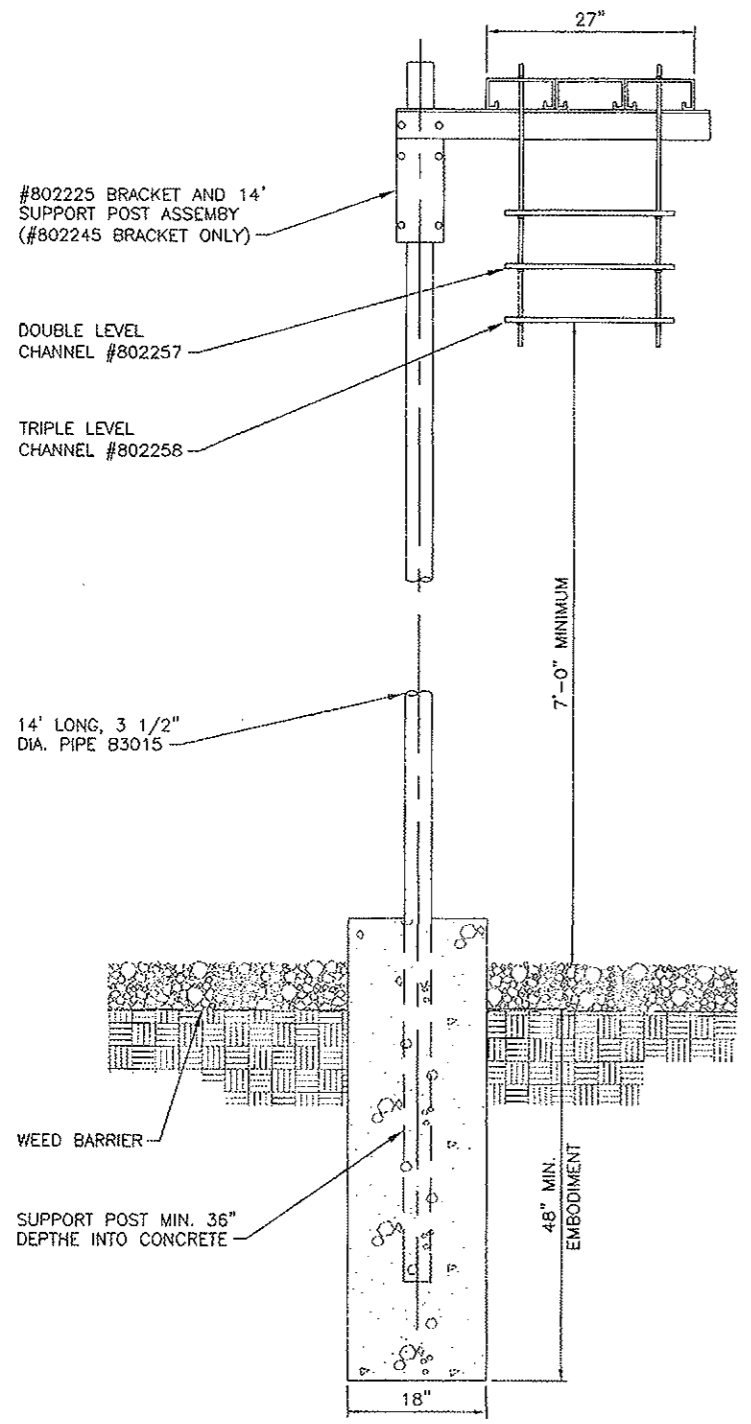
SHEET TITLE:

PROPOSED ICE BRIDGE
DETAILS

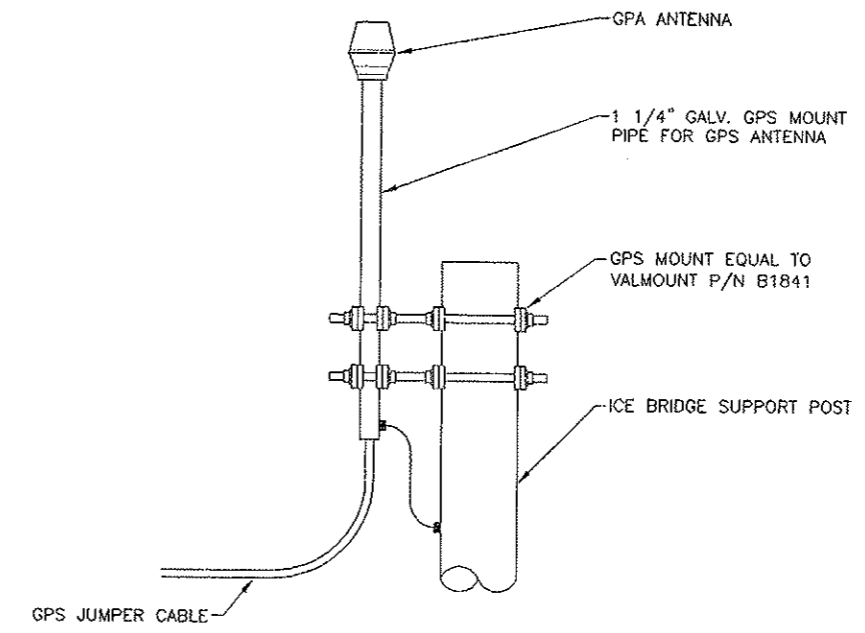
AGE PROJECT No.:

SHEET NUMBER:

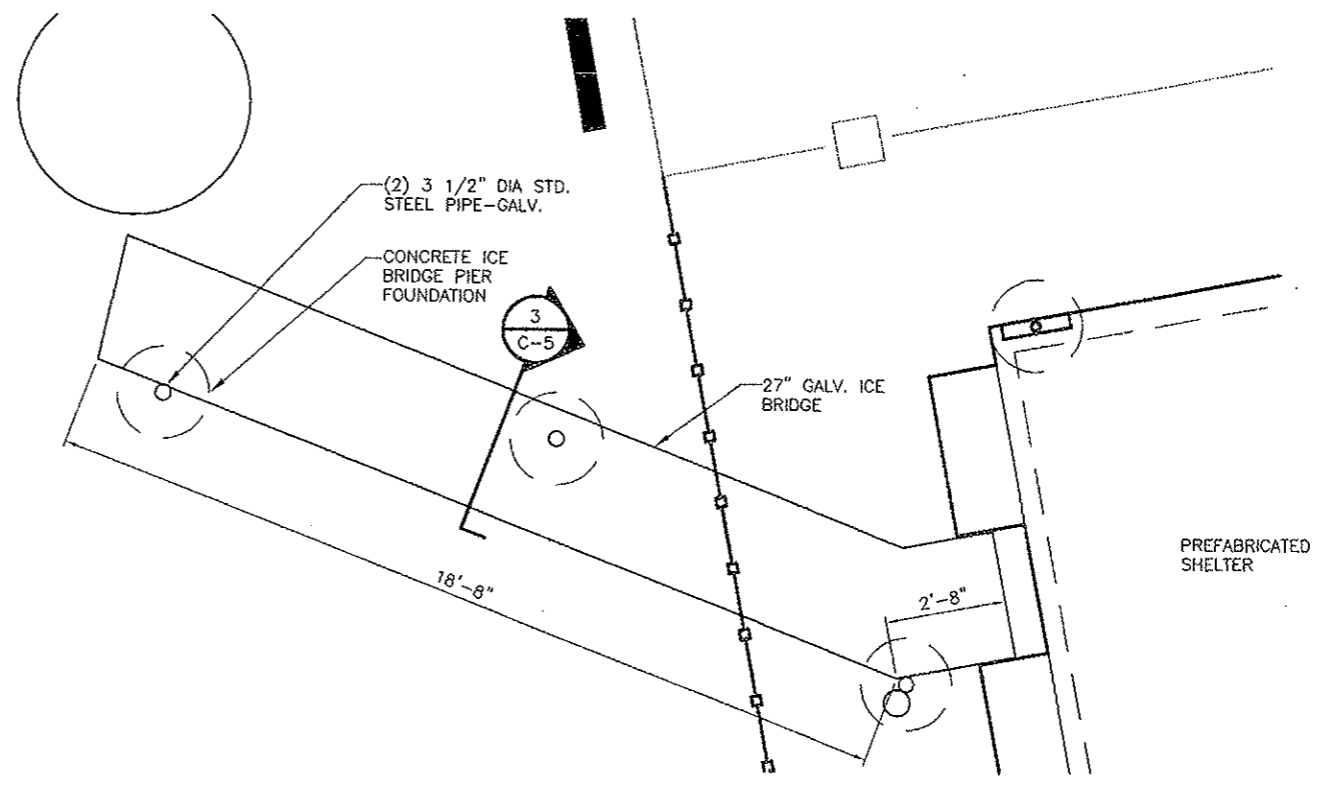
C-5
DO NOT SCALE DRAWINGS



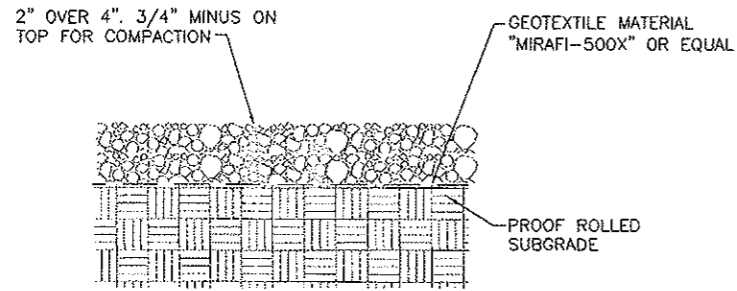
3 ICE BRIDGE SECTION
SCALE:N.T.S.



2 GPS DETAIL
SCALE:1"=10'-0"

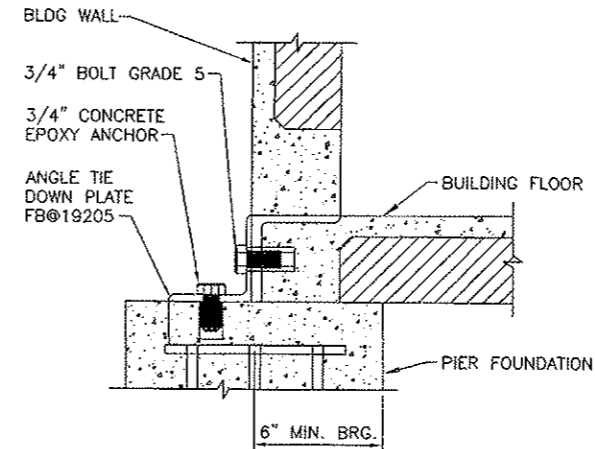


1 ICE BRIDGE PLAN
SCALE:N.T.S.

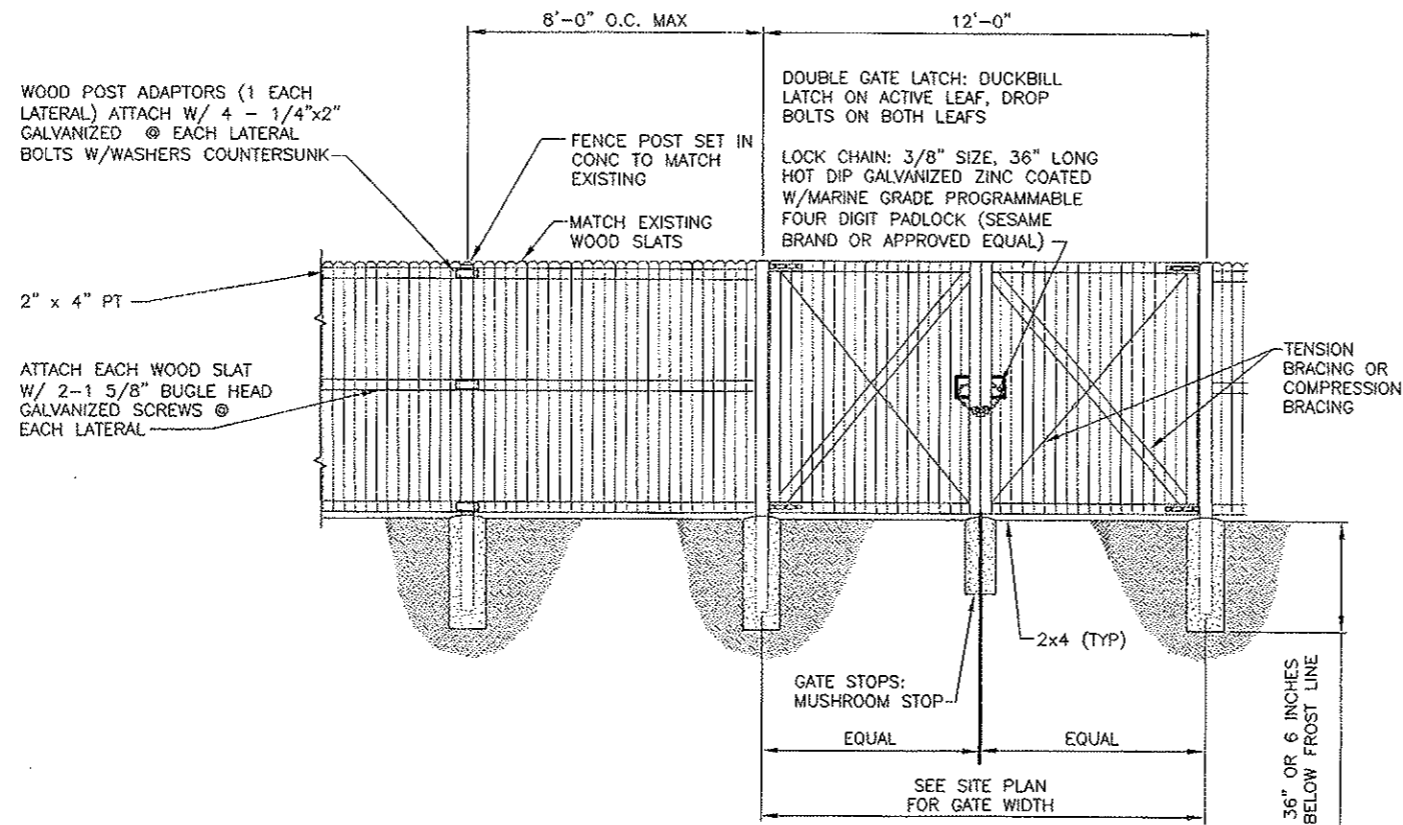


NOTE:
IT IS THE RESPONSIBILITY OF THE G.C. TO VERIFY THAT THE LIMESTONE IS UNIFORMLY WHITE IN COLOR AFTER PLACEMENT

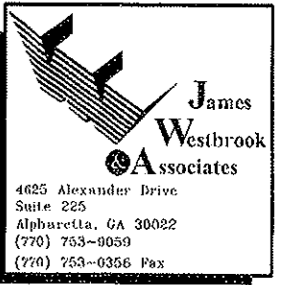
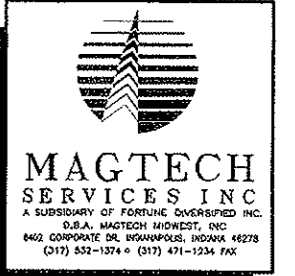
2 SITE SECTION
SCALE: N.T.S.



1 TIE DOWN DETAIL
SCALE: N.T.S.



3 WOOD FENCE & GATE DETAIL
SCALE: N.T.S.



CERTIFICATION:

RELEASE

DATE	
09/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD

REVISIONS

NO.	DATE	

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DRAWN BY: BMW
CHECKED BY: SDH

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125600

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

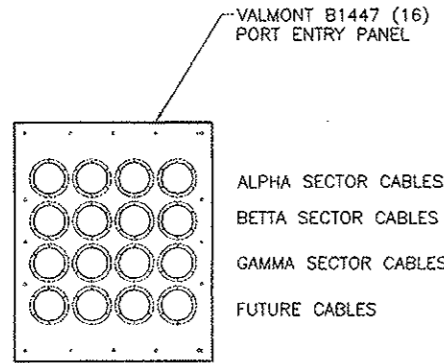
SHEET TITLE:

SITE CIVIL AND SHELTER
DETAILS

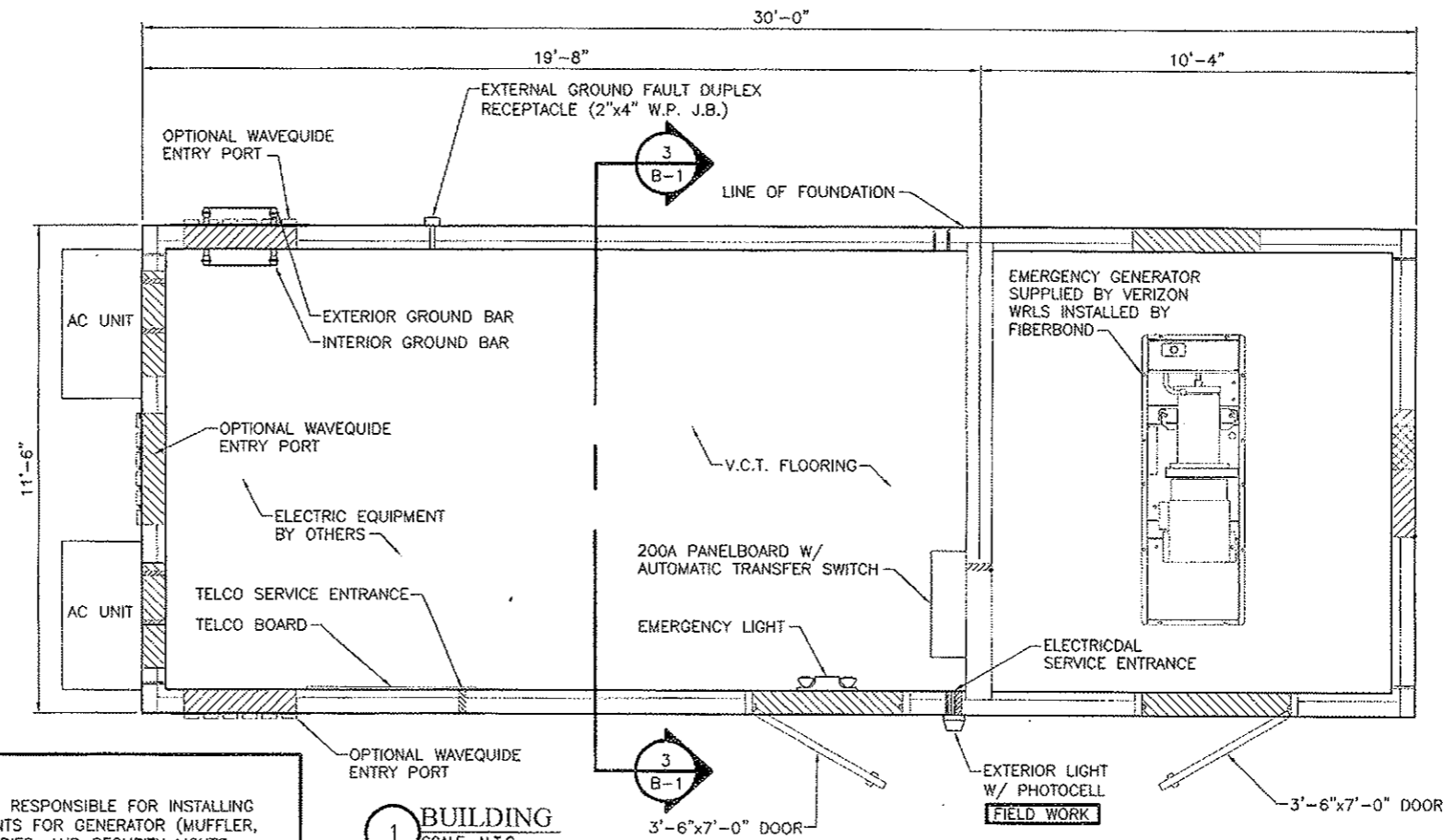
A&E PROJECT No.:

SHEET NUMBER:

C-6
DO NOT SCALE DRAWINGS

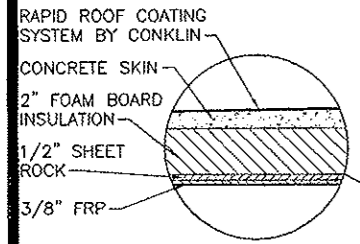


3 WAVE GUIDE ENTRY
SCALE: N.T.S.

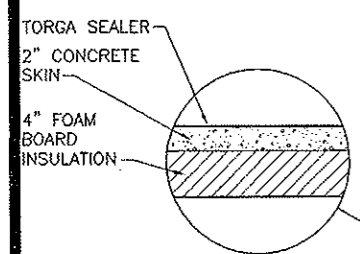


NOTE:
GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EXTERIOR ATTACHMENTS FOR GENERATOR (MUFFLER, VENT, ETC.), DOOR CANOPIES, AND SECURITY LIGHTS

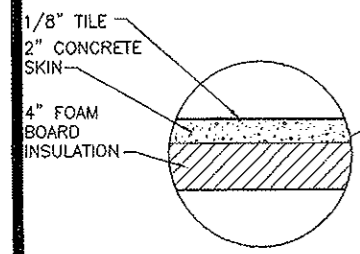
1 BUILDING
SCALE: N.T.S.



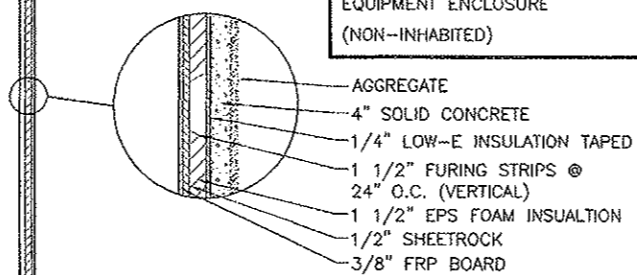
TYPICAL ROOF SECTION



TYPICAL FLOOR SECTION (GENERATOR SIDE)



TYPICAL FLOOR SECTION (EQUIPMENT SIDE)



TYPICAL WALL SECTION

2 BUILDING SECTION
SCALE: N.T.S.

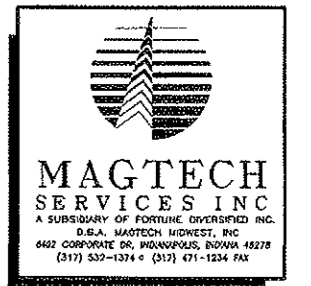
ROOM PURPOSE	AREA	VENTILATION				REMARKS
		NATURAL		MECHANICAL		
		ACTUAL	REQUIRED	ACTUAL	REQUIRED	
WIRELESS TELEPHONE EQUIPMENT ENCLOSURE (NON-INHABITED)	342.5 S.F.	0 CFM	0 CFM	2600 CFM	0 CFM	SEE NOTE 1

NOTES

- EQUIPMENT ENCLOSURE IS MANUFACTURED BY VFP INC., 176 EASTPARK DR., ROANOKE, VA 24019.
- THIS ENCLOSURE IS CLASSIFIED AS USE GROUP B, TYPE 5B CONSTRUCTION PER 2002 BOCA AND IS IN COMPLIANCE WITH 1997 UNIFORM BUILDING CODE (UBC), 2000 INTERNATIONAL BUILDING CODE (IBC), 2002 NATIONAL ELECTRIC CODE (NEC).
- DESIGN CRITERIA
UNIFORM ROOF LIVE LOAD = 100 PSF
UNIFORM FLOOR LIVE LOAD = 125 PSF
WIND VELOCITY = 150 MPH
SEISMIC = GROUP 1, CAT "D"
- $F_c = 5000$ PSI @ 28 DAYS (EQUIPMENT ENCLOSURE)
- ENCLOSURE AND ASSOCIATED EQUIPMENT IS PROVIDED BY OWNER UNDER SEPARATE CONTRACT. EQUIPMENT ENCLOSURE INFORMATION INDICATED HEREIN IS PROVIDED FOR REFERENCE ONLY AND IS TAKEN FROM MANUFACTURER'S AVAILABLE DATA. REFER TO CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR WORK TO BE PERFORMED UNDER THIS CONTRACT.

VENTILATION NOTES

- AIR CONDITIONING IS PROVIDED BY A BARD WALL MOUNTED SELF-CONTAINED ENERGY EFFICIENT COOLING SYSTEM, MODEL #WA602-A05XWXXXJ, 5 TON, 120/240 VOLT, 30 AMP, SINGLE PHASE, 57,500 BTUH COOLING CAPACITY, 10.20 SEER, 24" DIA. FAN, 2600 CFM WITH FILTER
- ELECTRIC HEAT IS PROVIDED BY 5 KW, 18,840 BTUH, 240 VOLT, SINGLE PHASE HEAT STRIP, WITHIN BARD UNIT LISTED ABOVE.



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FOR REFERENCE ONLY

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09/12/09	REV-A PRELIMINARY CD
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DRAWN BY: BHW
CHECKED BY: SOW

SITE NAME:
STLC WILD HORSE CREEK

LOCATION #
125500

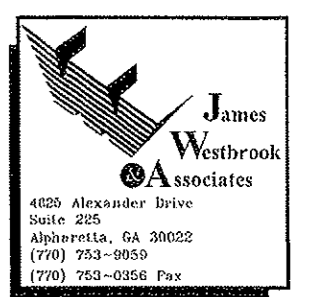
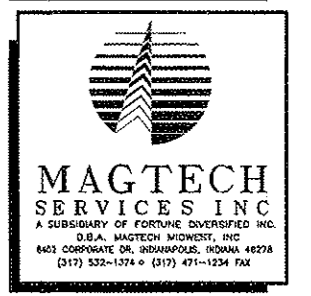
PROJECT #
2004017072

SITE ADDRESS:
18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:
EQUIPMENT ENCLOSURE
PLAN & SECTION

ASE PROJECT No.:

SHEET NUMBER:
B-1
DO NOT SCALE DRAWINGS



CERTIFICATION: FOR REFERENCE ONLY

RELEASE	
DATE	REVISION
09/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD
REVISIONS	
NO.	DATE

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DRAWN BY: BVM
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

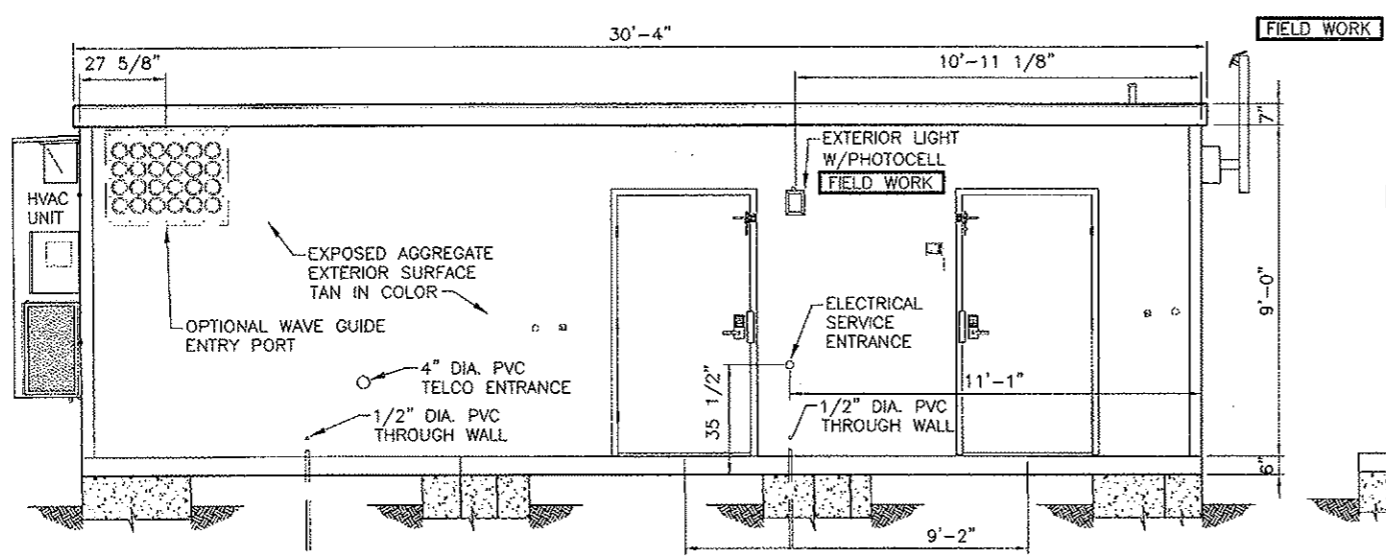
SHEET TITLE:

EQUIPMENT ENCLOSURE ELEVATIONS

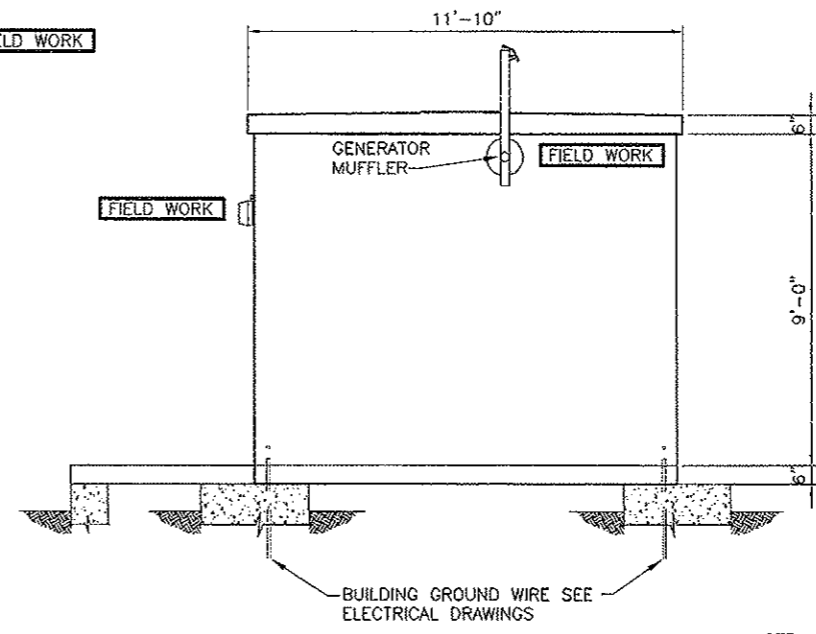
AGE PROJECT No.:

SHEET NUMBER:

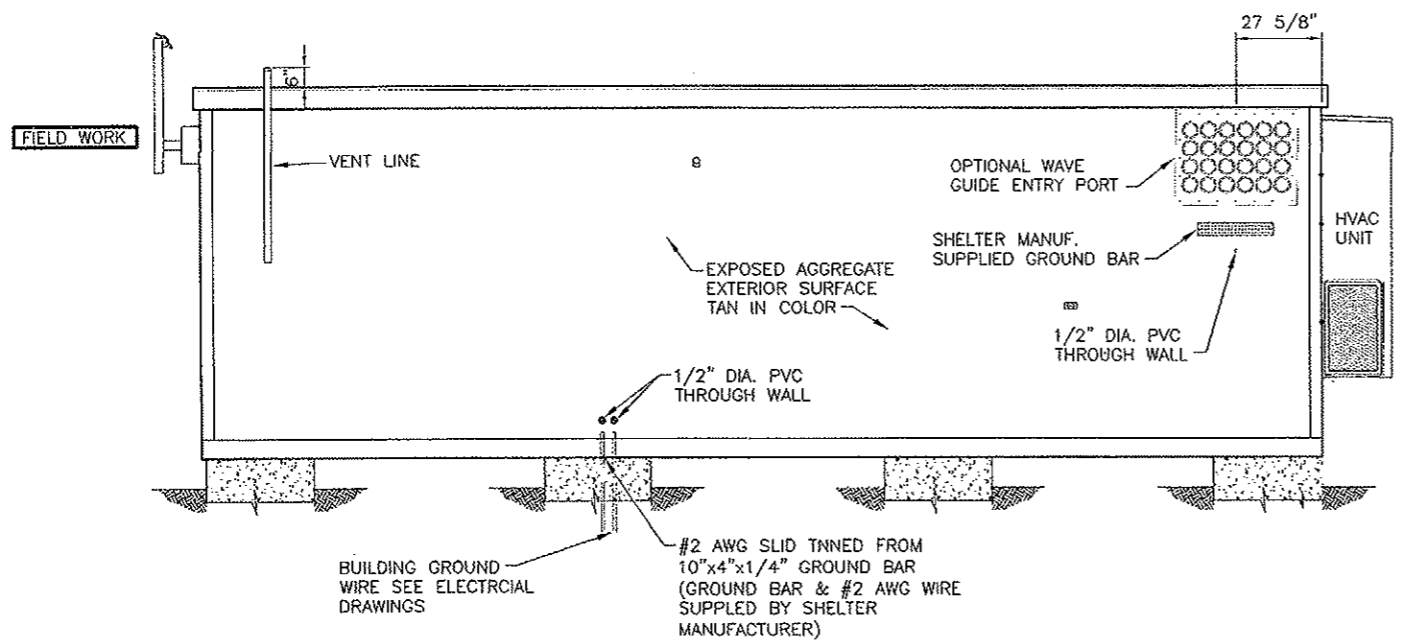
B-2
DO NOT SCALE DRAWINGS



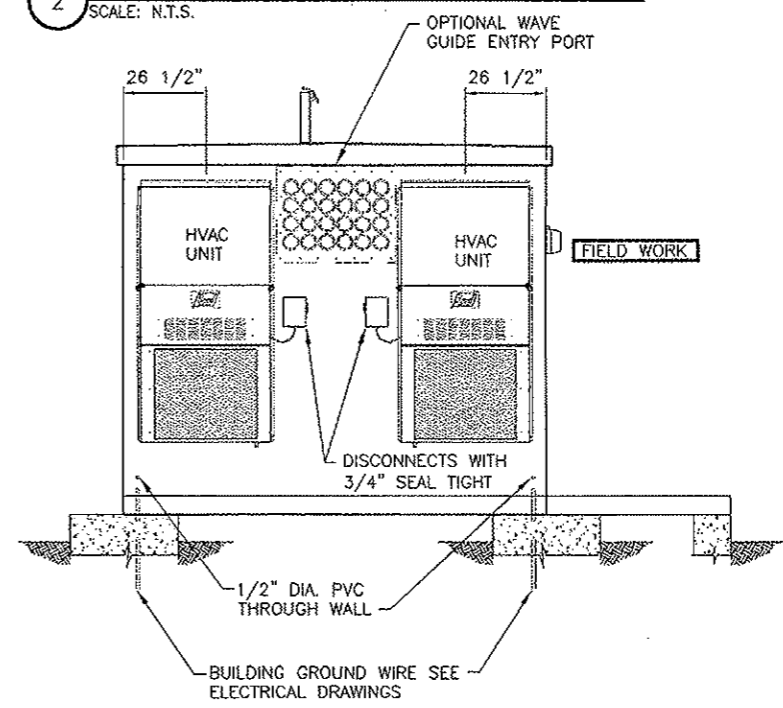
1 ELEVATION A-EQUIPMENT ENCLOSURE
SCALE: N.T.S.



2 ELEVATION B-EQUIPMENT ENCLOSURE
SCALE: N.T.S.

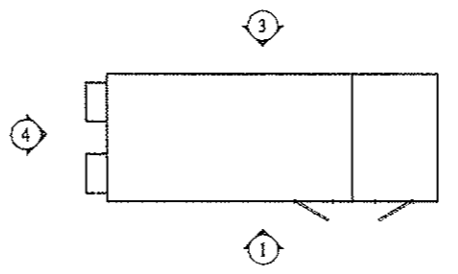


3 ELEVATION C-EQUIPMENT ENCLOSURE
SCALE: N.T.S.



4 ELEVATION D-EQUIPMENT ENCLOSURE
SCALE: N.T.S.

NOTE:
SITE IS LOCATED OUTSIDE OF
FLOOD PLAIN. SHELTER TO BE AS
CLOSE TO GRADE AS POSSIBLE
SEE SHEET S0 AND S1 FOR
DETAILS



GENERAL NOTES

- ALL REFERENCED STANDARDS REFERRED TO BE ENFORCED AT THE TIME THESE PLANS AND SPECIFICATIONS ARE ISSUED FOR BID.
- WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED AND INCLUDED IN THE PROJECT.
- IN THE CASE OF CONFLICTS BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS, THE MOST RIGID REQUIREMENTS SHALL GOVERN.
- THE CONTRACTOR SHALL NOT MAKE DEVIATIONS FROM THE DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS/MEASURES TO PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM DAMAGES. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGES THAT MAY OCCUR DURING CONSTRUCTION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS REQUIRED BY HIM TO PERFORM HIS WORK BEFORE STARTING CONSTRUCTION.
- REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF CHASES, INSERTS, OPENINGS, SLEEVES, DRIPS, REVEALS, FINISHES, DEPRESSIONS, DOORS, EXPANSION JOINT MATERIAL AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTIONS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND ALL OTHER CONTRACT DRAWINGS RELATED TO OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE TO CHECK AND COORDINATE DIMENSIONS, CLEARANCES, ETC., WITH THE WORK OF OTHER TRADES.
- JOB SAFETY, CONSTRUCTION PROCEDURES AND CONSTRUCTION MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF ALL APPLICABLE SPECIALTY ITEMS INCLUDING BUT NOT LIMITED TO CURTAINWALL GLAZING SYSTEMS AND LIGHTGAUGE STEEL FRAMING SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

FOUNDATION

- THE ALLOWABLE BEARING PRESSURE FOR INDIVIDUAL SPREAD FOOTINGS IS 3,000 PSF.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SUBSURFACE AND EXISTING CONDITIONS BEFORE COMMENCING WORK.
- ALL CONCRETE SHALL BE CONTROLLED CONCRETE AND ALL CONCRETING PRACTICES SHALL CONFORM WITH ACI-318-99, "AMERICAN CONCRETE INSTITUTE, BUILDING CODE FOR REINFORCED CONCRETE." CONCRETE DETAILS SHALL BE IN ACCORDANCE WITH ACI-135, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONCRETE TESTS FOR THE PRELIMINARY DESIGN MIX PREPARED BY AN APPROVED LABORATORY MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PLACE NO CONCRETE WITHOUT THE APPROVED DESIGN MIX.
- A RIGID TEMPLATE SHALL BE USED TO INSTALL ALL ANCHOR BOLTS.
- UNLESS OTHERWISE NOTED ON PLAN, ALL CONCRETE SHALL BE NORMAL WEIGHT WITH 28 DAYS COMPRESSIVE STRENGTH AS FOLLOWS:

A. FOOTINGS	3000 PSI
B. CONCRETE SLAB ON GRADE	3000 PSI
- ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 ($f_y=60,000$ PSI) ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A-706. THE REINFORCING BARS SUPPLIER SHALL PROVIDE THE ENGINEER WITH AN AFFIDAVIT OF THE PRODUCER OF STEEL CERTIFYING THAT THE STEEL MEETS THE REQUIREMENTS OF THE ASTM.
- ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE ADDITIONAL BARS OR STIRRUPS NECESSARY TO SUPPORT ALL BARS AS REQUIRED TO COMPLETE HIS WORK.
- UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS, PROVIDE MINIMUM CONCRETE COVER FOR REINFORCING BARS AS FOLLOWS:

CAST AGAINST EARTH	3"
EXPOSED TO EARTH OR WEATHER	
#5 AND SMALLER	1 1/2"
#6 AND LARGER	2"
NOT EXPOSED TO EARTH OR WEATHER	
SLAB AND WALL	
#11 AND SMALLER	3/4"
- GROUT SHALL BE NON-METALLIC NO SHRINK WITH A MINIMUM STRENGTH OF 5,000 PSI AT 28 DAYS.

STRUCTURAL STEEL

- FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS. STRUCTURAL FABRICATOR SHALL BE AISC CERTIFIED.
- STRUCTURAL STEEL SHALL BE AS SPECIFIED BELOW, UNLESS OTHERWISE NOTED:
 - CHANNELS, ANGLES AND PLATES : ASTM A36 WITH MIN. YIELD STRENGTH OF 36 KSI OR ASTM A572 GRADE 50 WITH MIN. YIELD STRENGTH OF 50 KSI.
- THE FRAME SHALL BE CARRIED UP TRUE AND PLUMB AND TEMPORARY BRACING SHALL BE INTRODUCED WHEREVER NECESSARY TO ACCOUNT FOR ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING EQUIPMENT AND OPERATION OF SAME. SUCH BRACING SHALL BE THE RESPONSIBILITY OF THE STEEL CONTRACTOR AND SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR SAFETY.
- ALL BOLTS SHALL CONFORM TO THE FOLLOWING ASTM. DESIGNATION, LATEST EDITION: HIGH STRENGTH BOLTS A325-N, U.O.N.
- ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- ALL SHOP OR FIELD CONNECTIONS SHALL BE HIGH STRENGTH BOLTED OR WELDED. BOLTED CONNECTIONS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC-2000 (SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS). ALL STRUCTURAL WELDED JOINTS SHALL CONFORM TO THE PROVISIONS OF AWS D1.1, STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY.
- PROVISIONS SHALL BE MADE FOR CONNECTIONS OF OTHER TRADES INCLUDING CUTTING AND PUNCHING OF STRUCTURAL MEMBERS, WHERE REQUIRED BY THE DRAWING OR FOR WHICH INFORMATION IS FURNISHED PRIOR TO FABRICATION.
- OVERSIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER.
- THE USE OF A CUTTING TORCH IN THE FIELD WILL NOT BE PERMITTED.
- WELDING ELECTRODES SHALL BE CONFORM TO E70XX ELECTRODES, AND SHALL HAVE COMPATIBLE CHARY-V-NOTCH WHEN WELDING TO THE BASE METAL WITH CHARY-V-NOTCH REQUIREMENT.
- PROOF OF WELDER CERTIFICATION SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.
- ALL STRUCTURAL STEEL NOT RECEIVING SPRAY-ON FIREPROOFING SHALL BE PRIME PAINTED. STRUCTURAL STEEL SHALL RECEIVE ONE COAT OF PAINT, ZINC OR BITUMINOUS COATING OR EQUIVALENT METAL PROTECTION BEFORE ERECTION AS SPECIFIED. PARTS OF STRUCTURAL STEEL LEFT UNPAINTED BECAUSE OF WELDING, OR BOLTING SHALL RECEIVE A FIELD APPLICATION OF METAL PROTECTION.
- STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.
- DESIGN OF SPECIAL CONNECTIONS BETWEEN STEEL FRAMING COMPONENTS BY OTHER THAN THE PROJECT STRUCTURAL ENGINEER-OF-RECORD SHALL BE PERFORMED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI INCLUDING BUT NOT LIMITED TO BRACE END CONNECTIONS, MOMENT-RESISTING CONNECTIONS, MODIFIED BEAM SEAT CONNECTIONS, AND MEMBER SPLICE CONNECTIONS.
- ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
- ALL BOLTS, ANCHORS, AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.

DESIGN STANDARD

- ASCE 7-02 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- MANUAL OF STEEL CONSTRUCTION AISC LRFD 3rd EDITION
- MANUAL OF STEEL CONSTRUCTION AISC ASD 7th EDITION
- MANUAL OF CONCRETE PRACTICE ACI 318-99

DESIGN LOADS

TOTAL SHELTER WEIGHT = 80,000 LBS
 LIVE LOAD = 40 PSF
 DEAD LOAD = 20 PSF
 GRATING DEAD LOAD = 10 PSF
 WIND LOAD = 12.8 PSF ($V = 90$ MPH)

verizon
wireless



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 4626 Alexander Drive
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DRAWN BY: BMW
 CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
 CHESTERFIELD, MO 63005

SHEET TITLE:

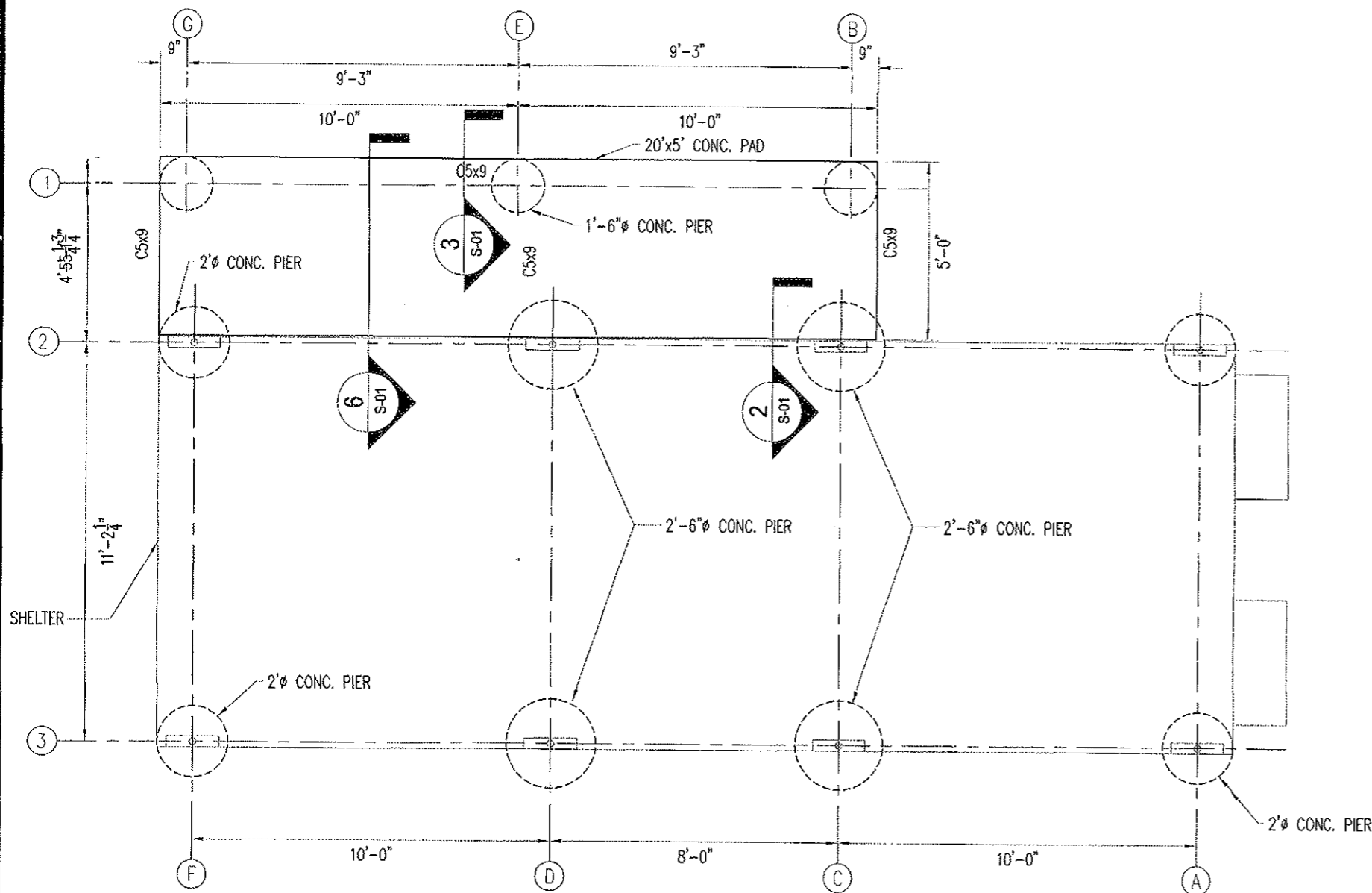
STRUCTURAL NOTES

A&E PROJECT No.:

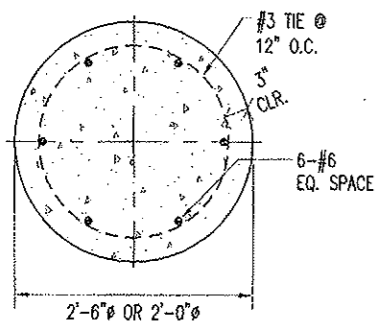
SHEET NUMBER:

S-0

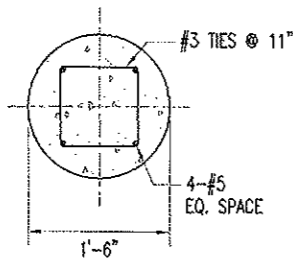
DO NOT SCALE DRAWINGS



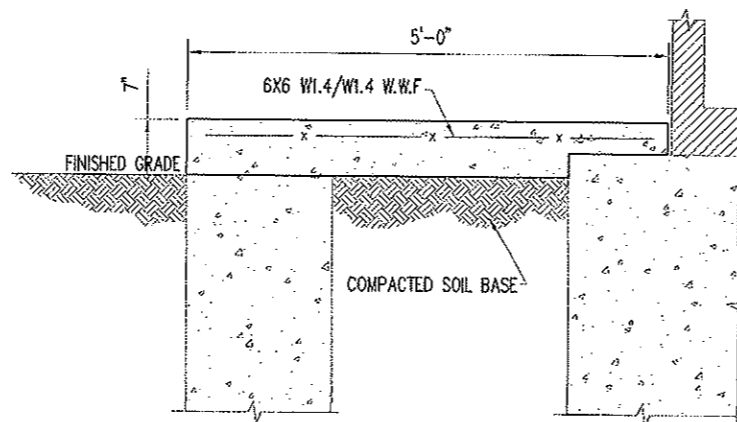
1 PLATFORM PLAN
SCALE: 1/4" = 1'-0"



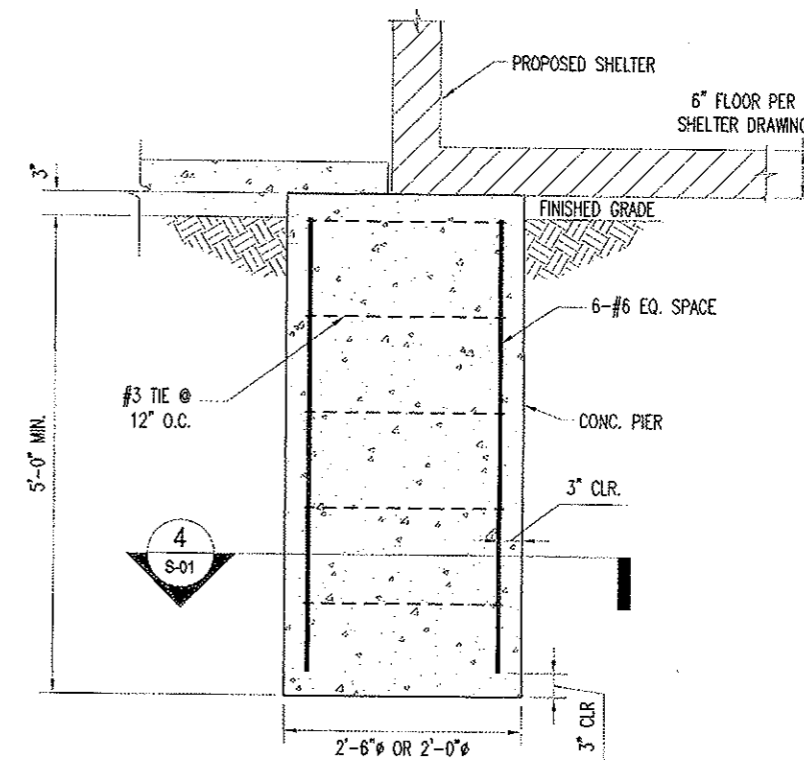
4 SECTION
SCALE: 1/2" = 1'-0"



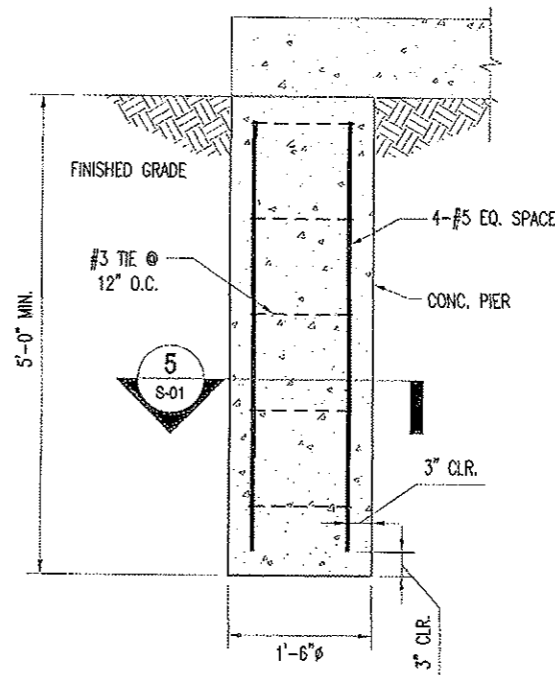
5 SECTION
SCALE: 1/2" = 1'-0"



6 20'x5' CONC. PAD SECTION
SCALE: 1/2" = 1'-0"

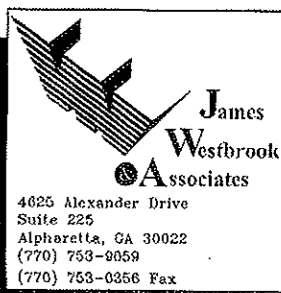


2 SECTION
SCALE: 1/2" = 1'-0"



3 SECTION
SCALE: 1/2" = 1'-0"

NOTE: SOIL ALLOWABLE SOIL BEARING PRESSURE IS 3,000 PSF



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DRAWN BY: BAW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

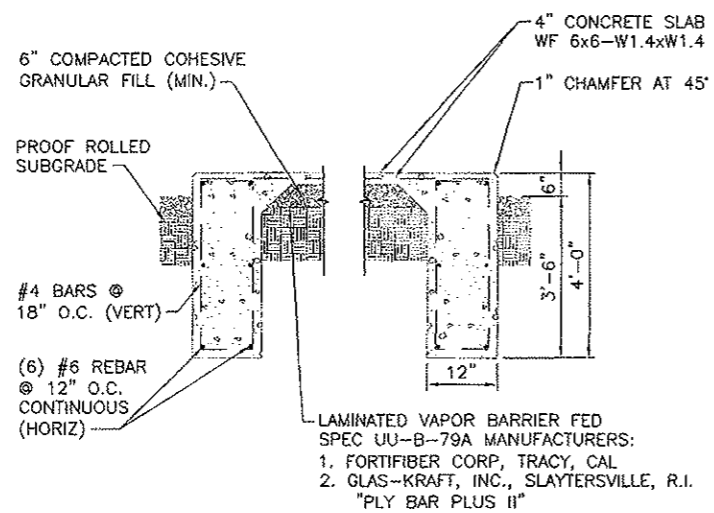
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PLATFORM PLAN AND SECTIONS

A&E PROJECT No.:

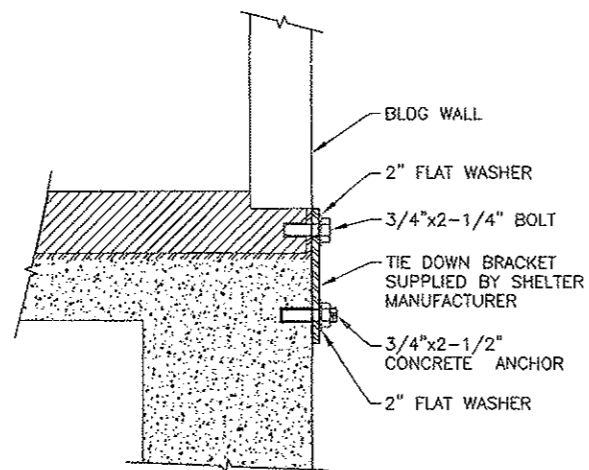
SHEET NUMBER:

S-1
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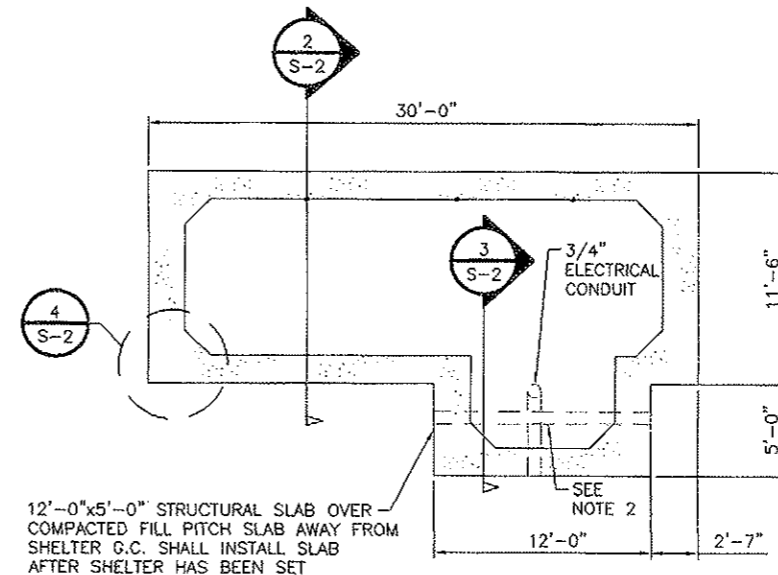


2 FOUNDATION SECTION
SCALE: N.T.S.

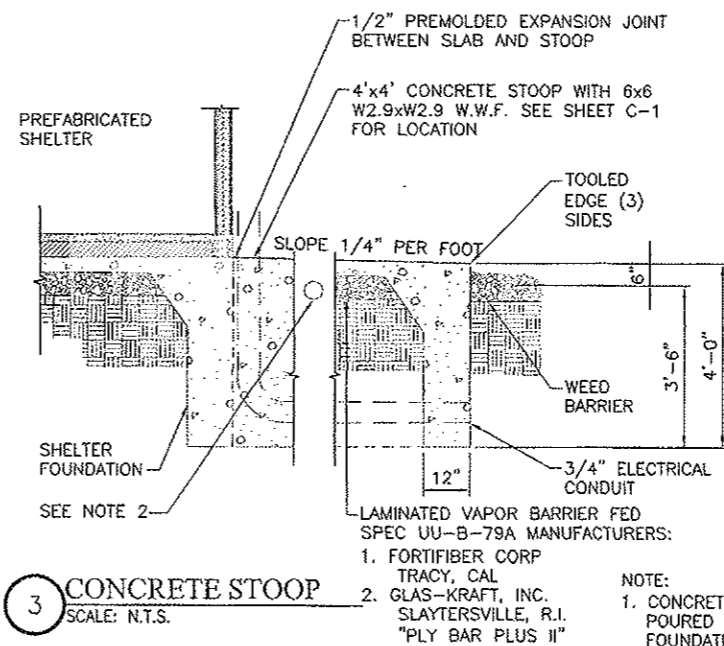
NOTE:
G.C. TO DETERMINE WHICH STRUCTURAL DESIGN TO INCORPORATE.



4 SHELTER CORNER REINFORCING
SCALE: N.T.S.



NOTE:
1. CONCRETE STOOP FOOTER/FOUNDATION POURED AS PART OF THE SHELTER FOUNDATION.
2. GROUND LEAD ENTERING SHELTER BY THE SERVICE ENTRY TO BE SLEEVED GOING THROUGH STOOP AND STOOP FOOTER/FOUNDATION.



3 CONCRETE STOOP
SCALE: N.T.S.

NOTE:
1. CONCRETE STOOP FOOTER/FOUNDATION POURED AS PART OF THE SHELTER FOUNDATION.
2. GROUND LEAD ENTERING SHELTER BY THE SERVICE ENTRY TO BE SLEEVED GOING THROUGH STOOP AND STOOP FOOTER/FOUNDATION.

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DRAWN BY: BMH
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

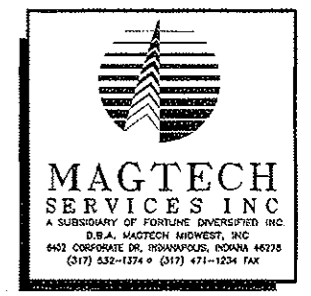
SHEET TITLE:

HANDRAIL SECTIONS AND DETAILS

A/E PROJECT No.:

SHEET NUMBER:

S-2
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DRAWN BY: BMW
 CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

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PROJECT #

2004017072

SITE ADDRESS:

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 CHESTERFIELD, MO 63005

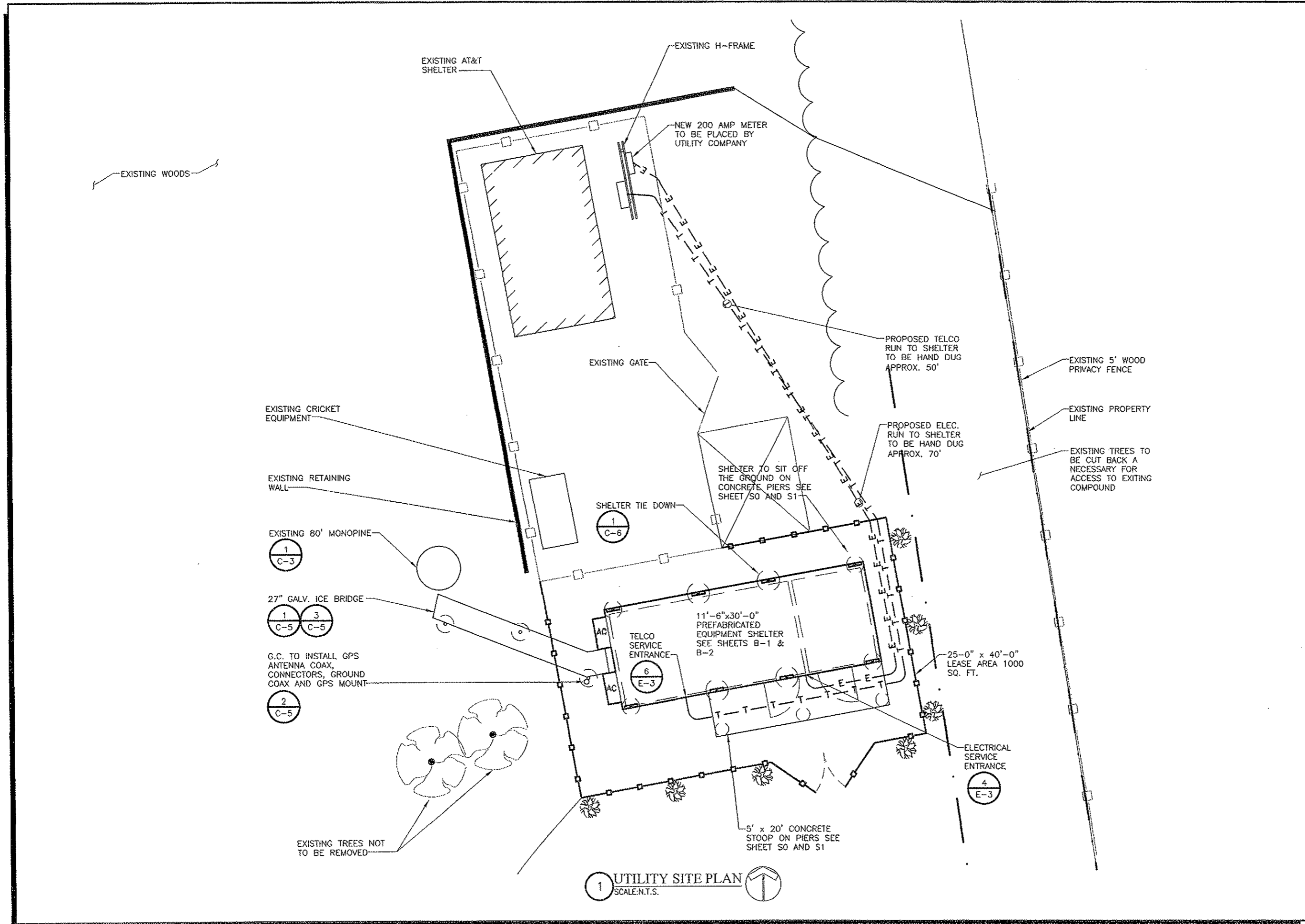
SHEET TITLE:

PROPOSED UTILITY SITE PLAN

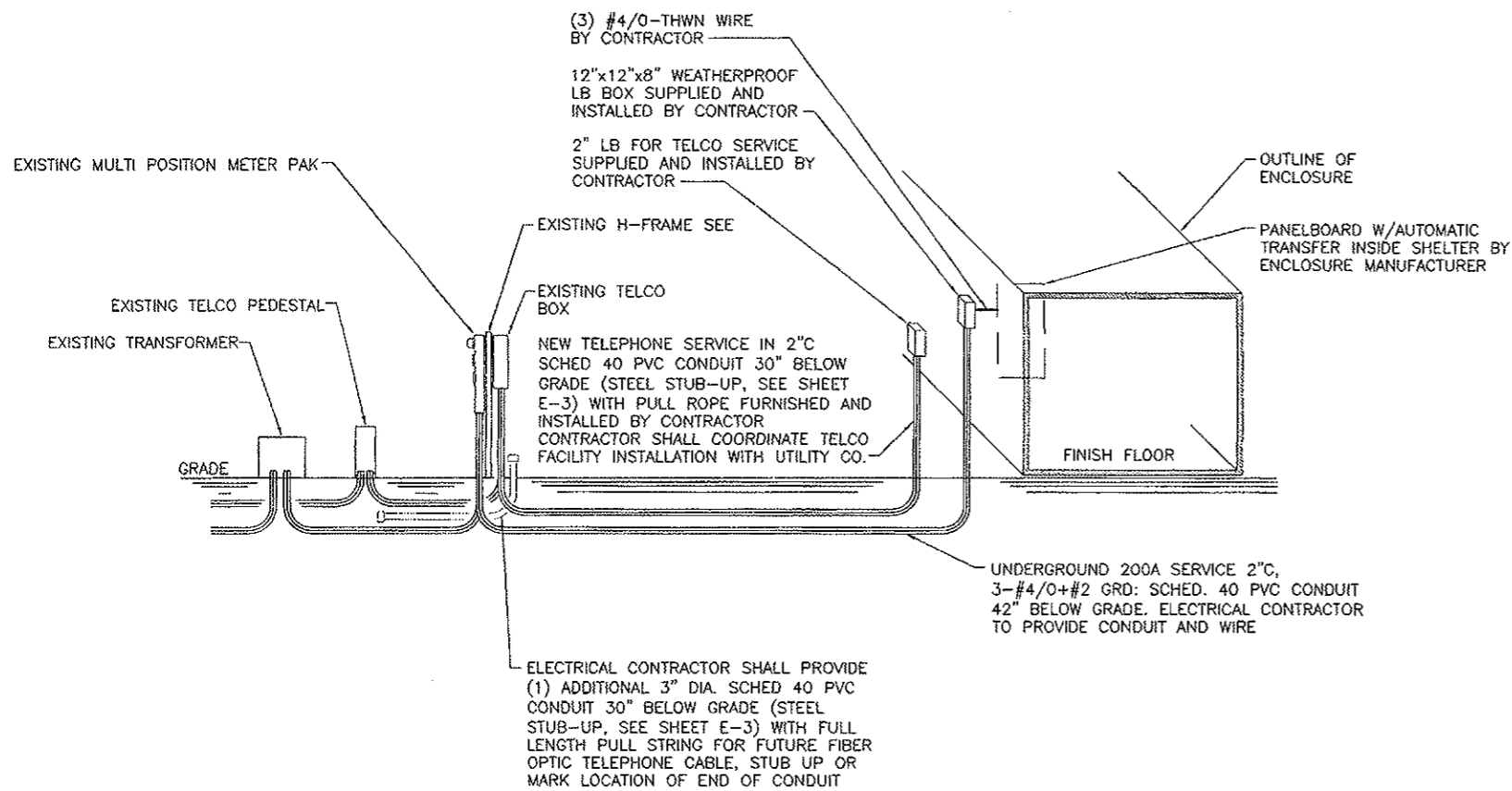
AME PROJECT No.:

SHEET NUMBER:

E-0
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1 UTILITY SITE PLAN
 SCALE: N.T.S.



NOTES:
 CONTRACTOR TO COORDINATE ALL INSPECTIONS ALL CONDUIT FROM AND INCLUDING 90° ELBOW UP TO ABOVE GRADE TO BE STAINLESS STEEL

CONTRACTOR SHALL BUILD INTO PRICE OF THE BID THE COST OF TWO (2) MOBILIZATIONS:

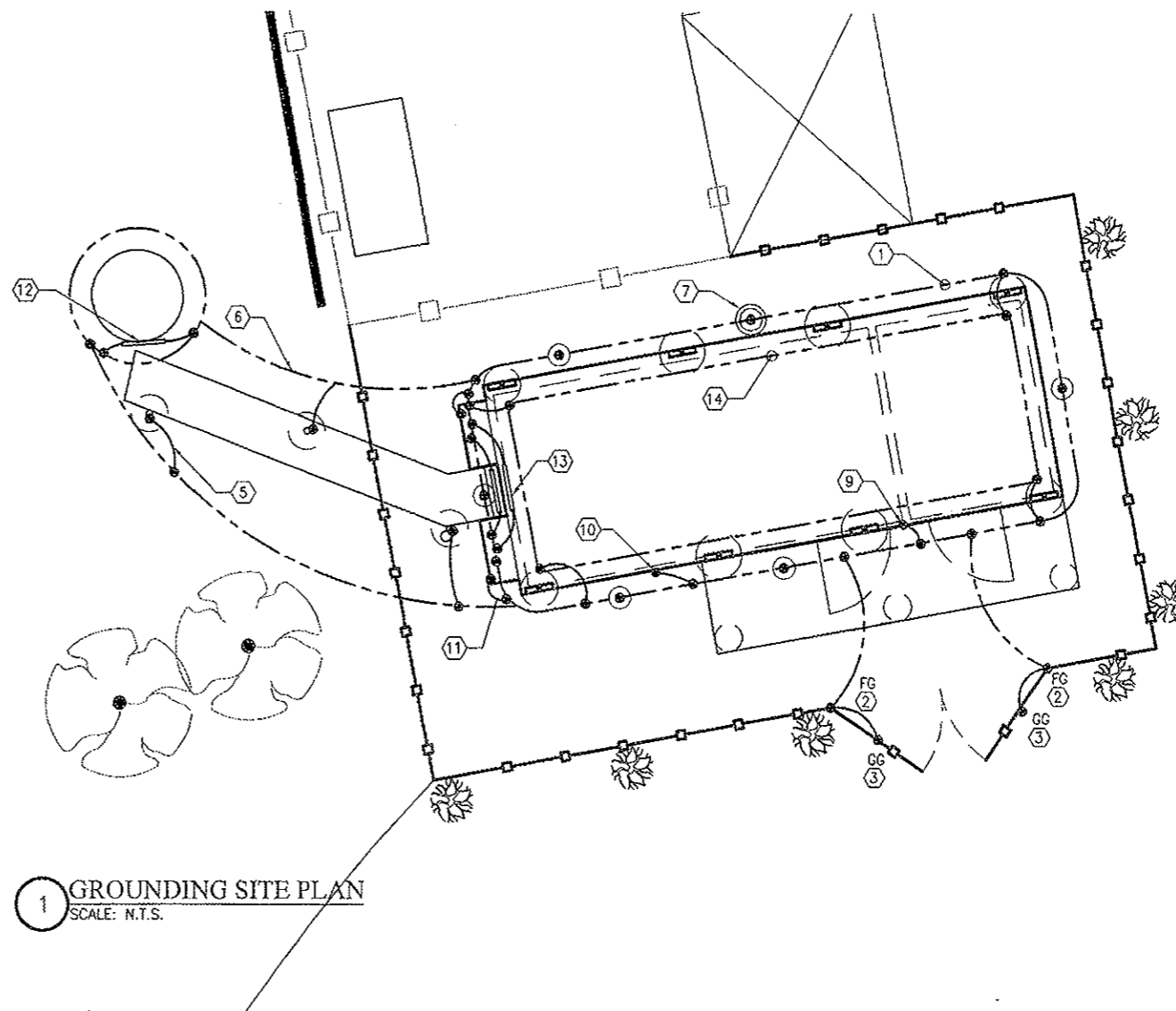
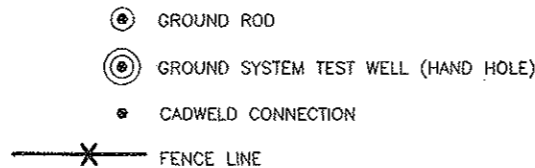
1. POWER/TELCO PERMIT PULLED PRIOR TO BUILDING PERMIT AND PRELIMINARY WORK (SMART JACK ON A STICK ETC.)
2. RETURN TO COMPLETE GENERAL ELECTRICAL CONSTRUCTION

NOTE:
 BOND ALL FENCE POSTS TO GROUND RING WITHIN 6' OF SHELTER PER NSTD46 GROUNDING STANDARDS

2 ELECTRICAL RISER DIAGRAM
 SCALE: N.T.S.

Legend

- ① #2 BARE, TINNED, SOLID COPPER GROUND 42" BELOW GRADE SEE DETAIL 1/E-2
- ② CADWELD TO FENCE POST. SEE DETAIL 5/E-2
- ③ BOND GATE LEAF TO GATE POST WITH A FLEXIBLE GATE JUMPER
- ④ PERIMETER GROUND RING. SEE DETAIL 5/E-2
- ⑤ ICE BRIDGE SUPPORT POST GROUNDING. SEE DETAIL 2/E-2
- ⑥ TIE SHELTER GROUND RING AND TOWER GROUND RING TOGETHER IN TWO PLACES. SEE DETAIL 2/E-2
- ⑦ GROUNDING ROD (GR) EXOTHERMIC CONNECTION TYPE GT-TYPICAL. SEE DETAIL 8/E-2
- ⑧ SERVICE ENTRANCE GROUNDING ROD. SEE DETAIL 8/E-2
- ⑨ ELECTRICAL SERVICE GROUNDING. SEE DETAIL 5/E-3
- ⑩ TELCO SERVICE GROUNDING. SEE DETAIL 7/E-3
- ⑪ HVAC GROUNDING. SEE DETAIL 9/E-3
- ⑫ TOWER GROUND BAR. SEE DETAIL 4/E-2
- ⑬ INTERIOR MASTER GROUND BAR. SEE DETAIL 3/E-2
- ⑭ #2 TINNED INTERIOR HALO GROUND RING. SEE DETAIL 8/E-3
- ⑮ (2) SPARE FOR FUTURE TIE-IN CONTRACTOR TO NEATLY COIL TAILS ABOVE GRADE TO PREVENT POSSIBLE INJURY OR DAMAGE



1 GROUNDING SITE PLAN
 SCALE: N.T.S.



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 (770) 753-0356 Fax

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DRAWN BY: BWH
 CHECKED BY: SDW

SITE NAME: **STLC WILD HORSE CREEK**

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
 CHESTERFIELD, MO 63005

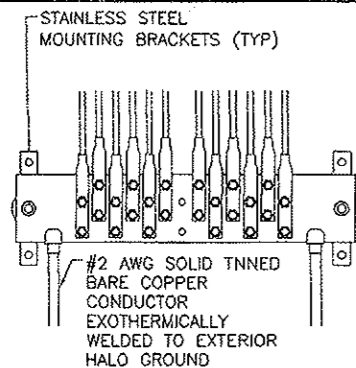
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PROPOSED GROUNDING SITE PLAN, RISER DIAGRAM AND NOTES

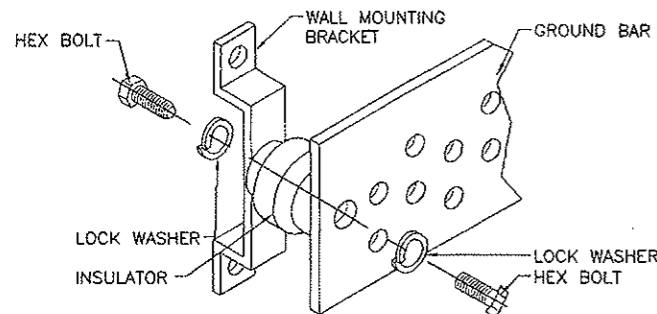
ASR PROJECT No:

SHEET NUMBER:

E-1

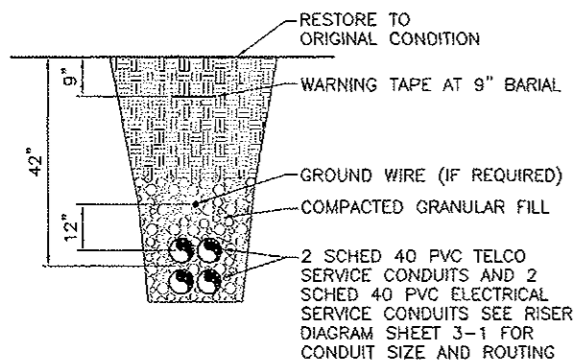


5 TOWER GROUND BAR (TGB)
SCALE: N.T.S.

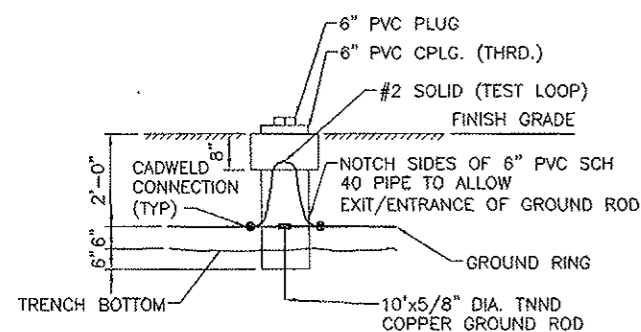


6 GROUND BAR INSTALLATION
SCALE: N.T.S.

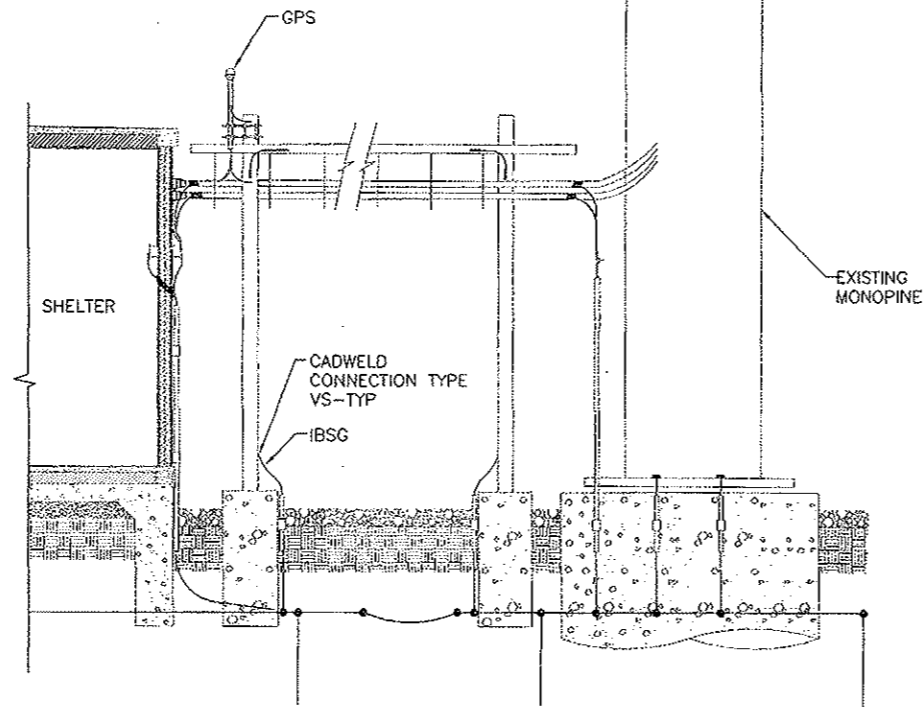
NOTE:
FOR NEW ELECTRICAL AND TELEPHONE SERVICE--SEE UTILITY AND SITE PLANS PROVIDE APPROVED PULL BOXES AS REQUIRED AND COORDINATE INSTALLATION WITH ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS PROVIDE FULL LENGTH PULL ROPES.



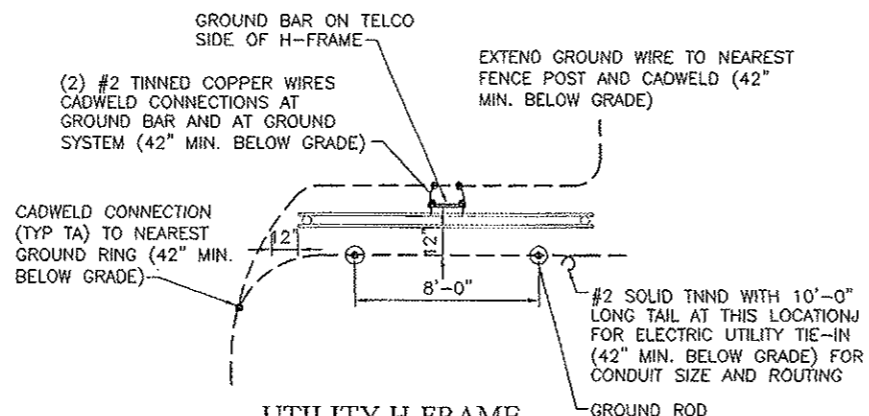
7 BURIED UTILITY DETAIL
SCALE: N.T.S.



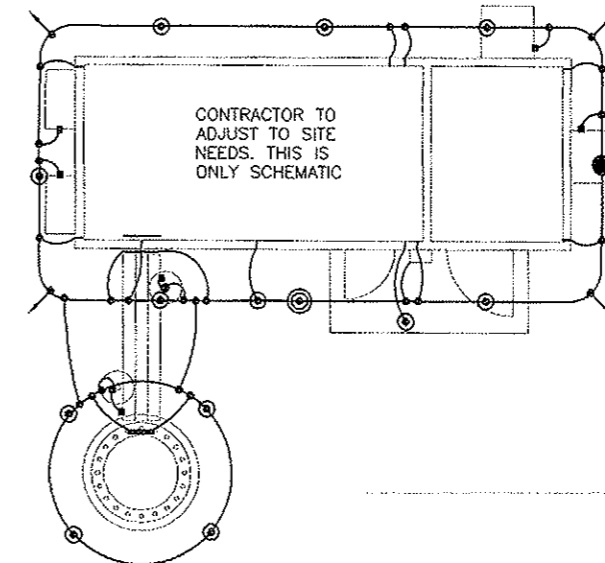
8 INSPECTION PORT DETAIL
SCALE: N.T.S.



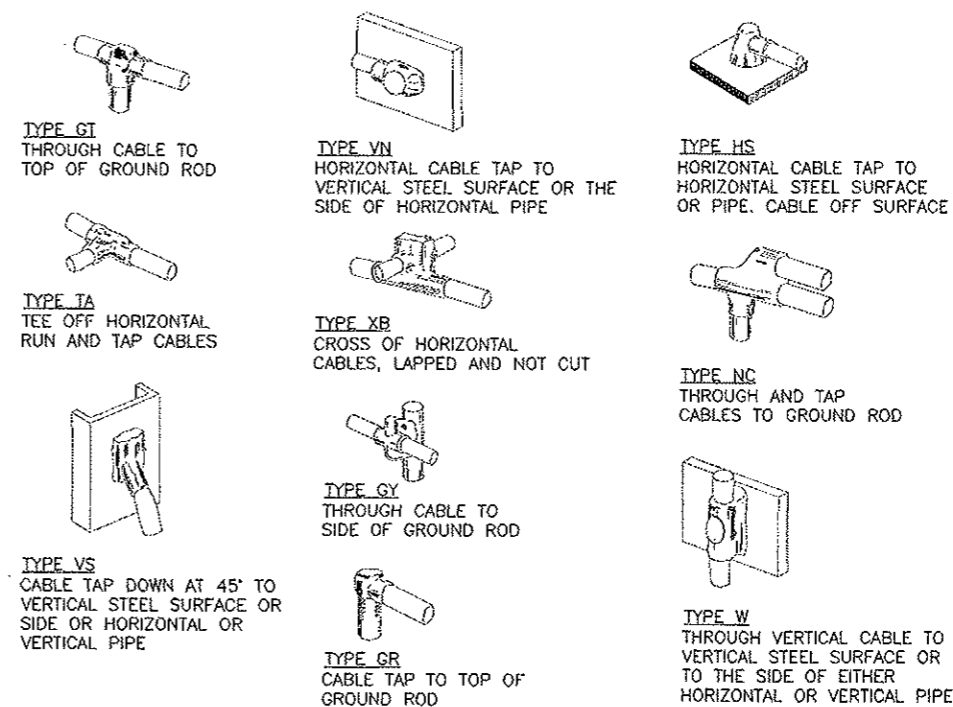
2 ICE BRIDGE/TOWER GROUNDING SCHEMATIC
SCALE: N.T.S.



4 UTILITY H-FRAME GROUNDING SCHEMATIC
SCALE: N.T.S.



1 (TYP) SHELTER AND TOWER GROUNDING SCHEMATIC
SCALE: N.T.S.



3 EXOTHERMIC WELD DETAILS
SCALE: N.T.S.

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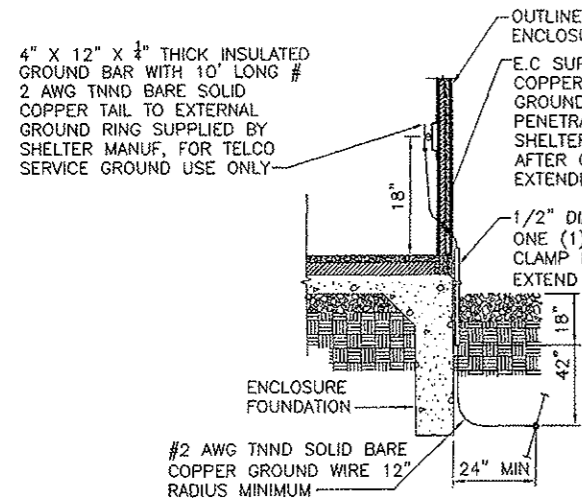
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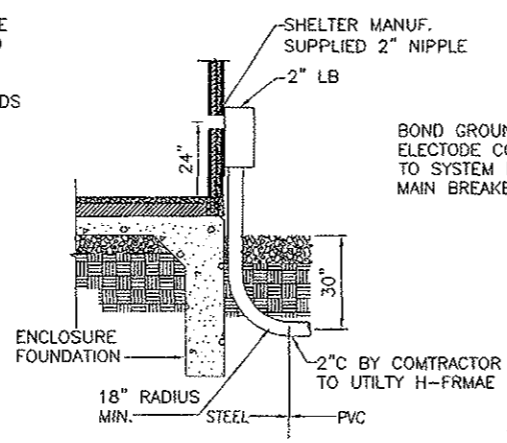
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DRAWN BY: EMM
CHECKED BY: SDH

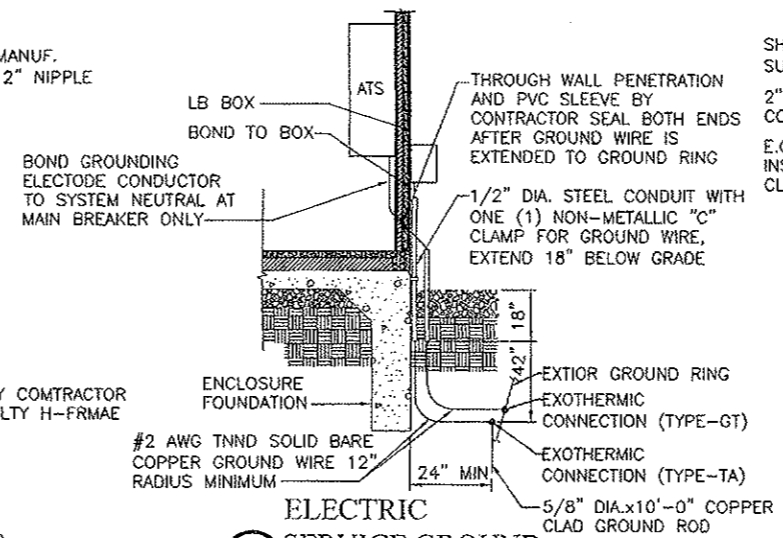
SITE NAME:	STLC WILD HORSE CREEK
LOCATION #	125500
PROJECT #	2004017072
SITE ADDRESS:	18303 WILD HORSE CREEK RD. CHESTERFIELD, MO 63005
SHEET TITLE:	ELECTRICAL AND GROUNDING SCHEMATICS AND DETAILS
A&E PROJECT No.:	
SHEET NUMBER:	E-2



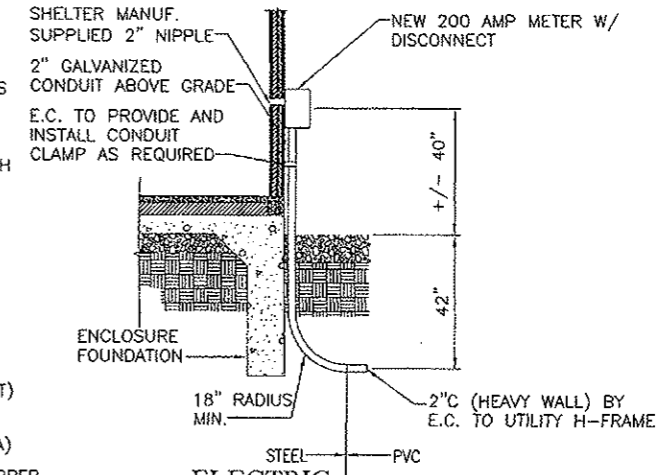
4 TELCO SERVICE GROUND
SCALE: N.T.S.



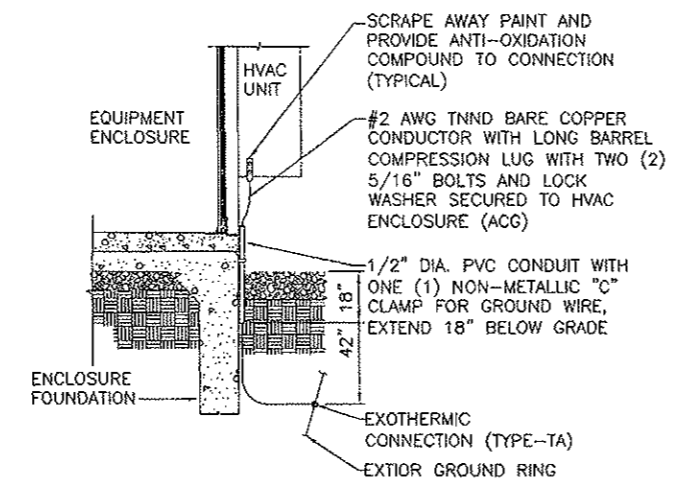
3 TELCO SERVICE ENTRANCE
SCALE: N.T.S.



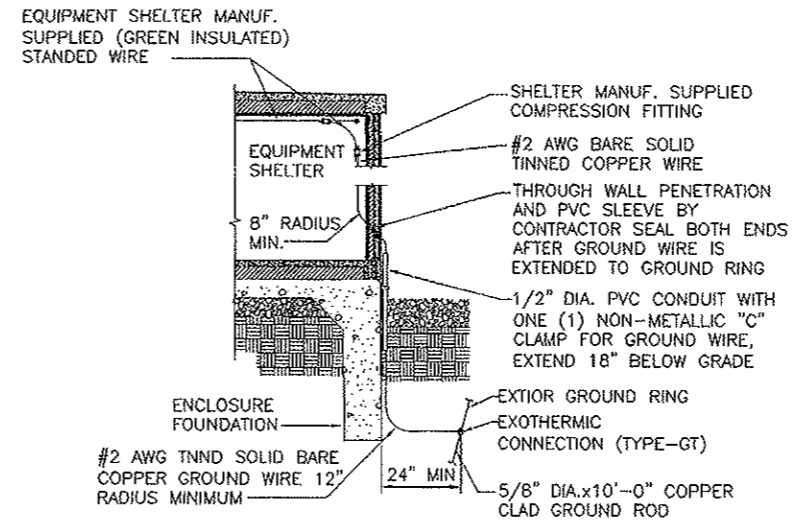
2 ELECTRIC SERVICE GROUND
SCALE: N.T.S.



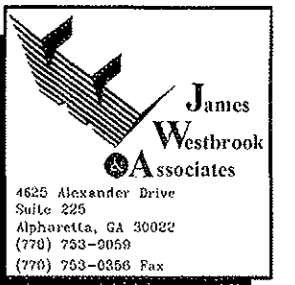
1 ELECTRIC SERVICE ENTRANCE
SCALE: N.T.S.



6 HVAC (ACG)/METALLIC COMPONENTS GROUNDING
SCALE: N.T.S.



5 HALO GROUNDING
SCALE: N.T.S.



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DRAWN BY: BLR
CHECKED BY: SOW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:

ELECTRICAL AND GROUNDING DETAILS

AS E PROJECT No.:

SHEET NUMBER:

E-3
DO NOT SCALE DRAWINGS

General Notes

WORK INCLUDES

THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS VERIZON WIRELESS SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION, AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH A BUILDING AND SECONDARY GROUNDING, CELLULAR TELEPHONE COMMUNICATIONS TOWER AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION, INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL TELEPHONE SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT WITHIN THE ENCLOSURE.
5. TWO INCH (2") AND THREE INCH (3") DIAMETER PVC CONDUITS SCHEDULE 40.
6. ALL PVC CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
7. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S), AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS, AND FEES

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRIC CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

GROUNDING ELECTRODE SYSTEM

1. CONNECTIONS
ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE "CADWELD" PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE BY "CADWELD" PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM 24" BENDING RADIUS.
2. ALL CADWELD CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) TWO COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN-WILLIAMS SILVERBRITE (ALUMINUM) B59S11 (OR EQUAL).
3. ALL ELECTRICAL & MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTI-OXIDANT COMPOUND APPLIED TO CONNECTION
4. FENCE/GATE:
GROUND FENCE POSTS WITHIN 6 FEET OF ENCLOSURE AND 25 FEET OF TOWER AS INDICATED ON DRAWINGS. GROUND EACH GATE POST AND CORNER POST. GROUND CONNECTIONS TO FENCE POSTS SHALL BE MADE BY THE "CADWELD" PROCESS AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES. ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY THE "CADWELD" PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.
5. UTILITY COMPANY COORDINATION:
ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.

6. GROUND TEST:

GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY VERIZON STANDARD PROCEDURES. GROUND GRID RESISTANCE SHALL NOT EXCEED 5 OHMS. CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:

1. ONE (1) COPY TO OWNER REPRESENTATIVE
2. ONE (1) COPY TO ENGINEER
3. ONE (1) COPY TO KEEP INSIDE EQUIPMENT ENCLOSURE

RACEWAYS AND WIRING

1. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ELECTRICAL PANELBOARD SHALL BE FURNISHED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION.
7. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVERCURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY. ALL GROUNDING RODS PROVIDED BY THE POWER OR TELEPHONE UTILITY COMPANIES MUST BE TIED INTO THE MAIN EXTERNAL GROUND RING.



CERTIFICATION:

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DATE	REV.
02/12/08	REV-A PRELIMINARY CD
12/09/08	REV-B PRELIMINARY CD

REVISIONS	
NO.	DATE

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DRAWN BY: BMW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:

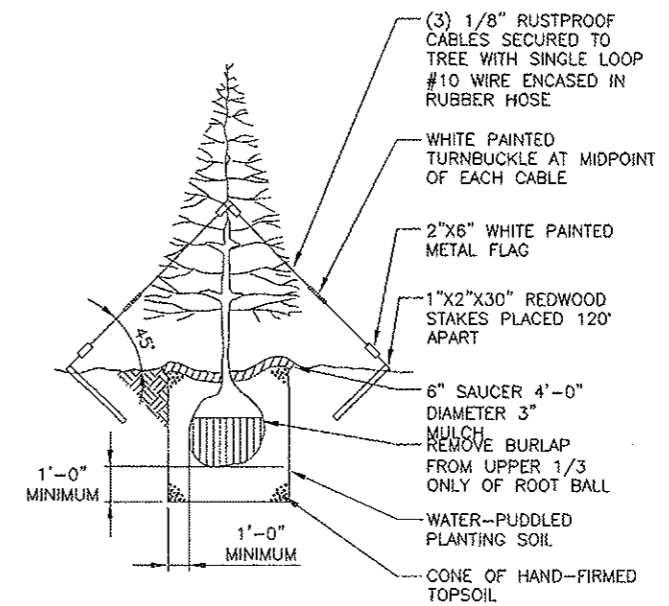
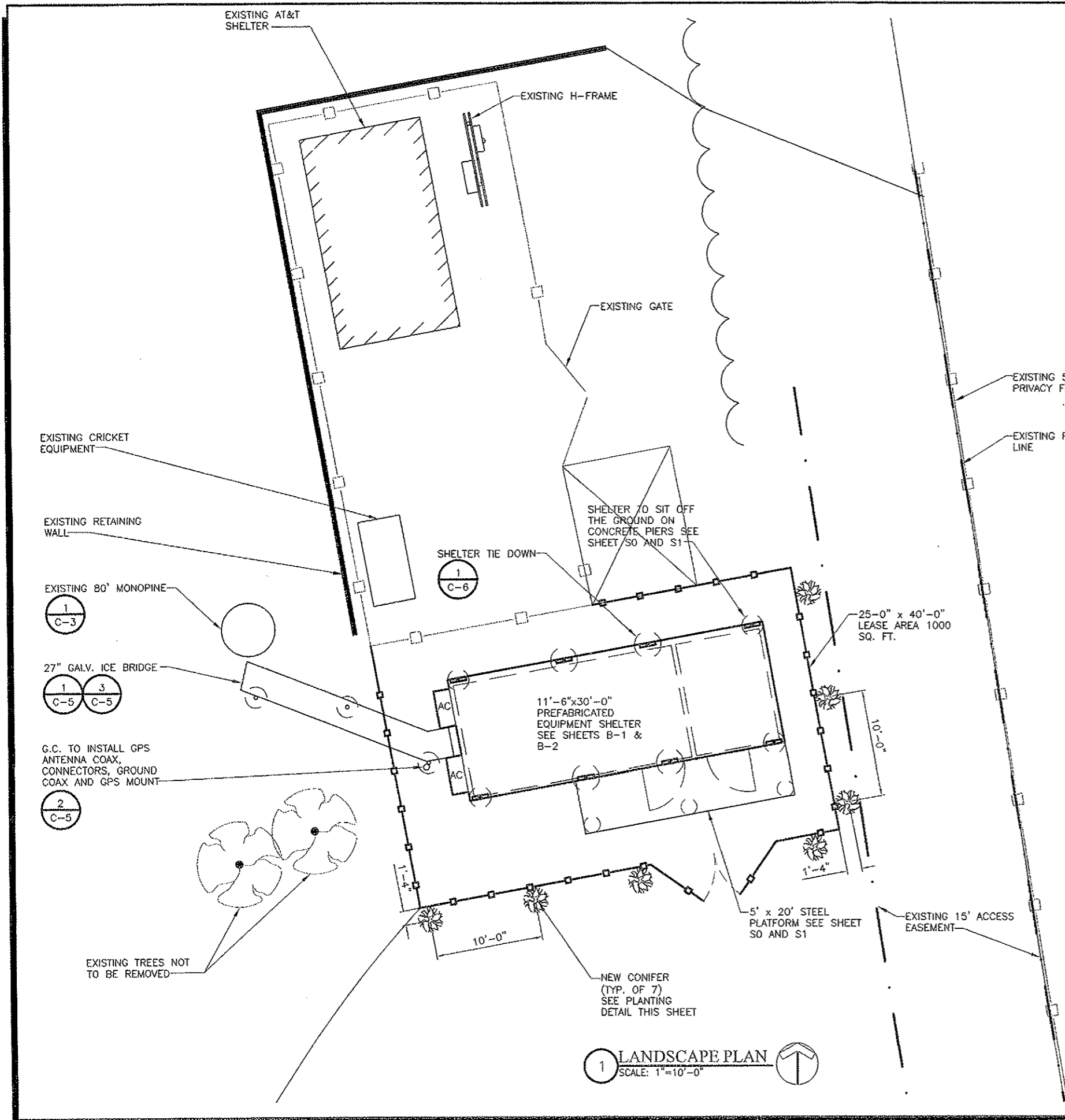
ELECTRICAL AND GROUNDING NOTES

SEE PROJECT No.:

SHEET NUMBER:

E-4

DO NOT SCALE DRAWINGS



NOTE:
 PROVIDE 6' ARBORVITAE MISSION EVERGREEN TREE OR EQUIVALENT,
 SUBCONTRACTOR SHALL COORDINATE WITH TREE SUPPLIER AND PLANT
 PER NURSERY SPECIFICATIONS.

WARRANTY: CONTRACTOR SHALL WARRANT ALL TREES AND SHRUBS FOR A
 PERIOD OF ONE YEAR AFTER DATE OF SUBSTANTIAL COMPLETION, AGAINST
 DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH AND EXCEPT
 FOR DEFECTS RESULTING FROM NEGLIGENCE BY OWNER, ABUSE BY OTHERS
 OR NATURAL PHENOMENA. REPLACE UNSATISFACTORY PLANT MATERIAL AT
 THE END OF THE WARRANTY PERIOD AT NO ADDITIONAL EXPENSE TO THE
 OWNER. ONE REPLACEMENT IS REQUIRED. ANY PRECEDING AGREEMENT BY
 CONTRACTOR WITH OWNER SHALL SUPERSEDE THIS WARRANTY.

TREE PLANTING DETAIL
 SCALE: N.T.S.

1 LANDSCAPE PLAN
 SCALE: 1"=10'-0"



CERTIFICATION:

RELEASE:

DATE
09/12/08 REV-A PRELIMINARY CD
12/09/08 REV-B PRELIMINARY CD

REVISIONS:

NO.	DATE

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DRAWN BY: BMW
 CHECKED BY: SDW

SITE NAME:
STLC WILD HORSE CREEK

LOCATION #
 125500

PROJECT #
 2004017072

SITE ADDRESS:
 18303 WILD HORSE CREEK RD.
 CHESTERFIELD, MO 63005

SHEET TITLE:
 LANDSCAPE PLAN

ASC PROJECT No.:

SHEET NUMBER:
L-1

DO NOT SCALE DRAWINGS

GENERAL

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

DIVISION 1: GENERAL REQUIREMENTS

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

1. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES.
2. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
3. COMPLETE FINAL CLEAN UP REQUIREMENTS, INCLUDING TOUCH-UP PAINTING, TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 - FINAL CLEANING

1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF COMPLETION.
 - A. CLEAN THE PROJECT SITE, YARD AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH EVEN-TEXTURED SURFACE.
 - B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
 - C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
 - D. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
 - E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING ROOFS, EQUIPMENT ENCLOSURE, MANHOLES, AND SIMILAR SPACES.
 - F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
 - G. TOUCH-UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CAN NOT SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.
 - H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
 - I. DUST-OFF ALL EQUIPMENT, INCLUDING BATTERY PACKS, WITHIN EQUIPMENT ENCLOSURE.
 - J. STRIP, WASH AND WAX FLOOR WITHIN EQUIPMENT ENCLOSURE WITH NON-STATIC WAX.
2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

DIVISION 2: SITE WORK

SECTION 02200 - EARTHWORK AND DRAINAGE

PART 1 - GENERAL

1. WORK INCLUDED: SEE SITE PLAN
2. DESCRIPTIONS

ACCESS DRIVE W/ TURNAROUND AREA, LEASE AREA, AND IF APPLICABLE UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.
3. QUALITY ASSURANCE
 - A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).

- B. APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
 - C. PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
4. SEQUENCING
- A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
 - B. COMPLETELY GRUB THE ACCESS DRIVE W/ TURNAROUND, UNDERGROUND UTILITY EASEMENTS, (IF APPLICABLE) AND LEASE AREA PRIOR TO FOUNDATION CONSTRUCTION, PLACEMENT OF BACKFILL AND SUB-BASE MATERIAL.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION AREA ALONG ACCESS DRIVE.
 - D. BRING THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION PRIOR TO INSTALLING FOUNDATION.
 - E. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
 - F. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH.
 - G. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER.
 - H. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.
5. SUBMITTALS
- A. BEFORE CONSTRUCTION

IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN UNDER NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD (REFER TO PLANS FOR LANDSCAPING REQUIREMENTS).
 - B. AFTER CONSTRUCTION
 1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZED.
 2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER
 3. LANDSCAPING WARRANTY STATEMENT.
6. WARRANTY
- A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
 - B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE ROAD AND SITE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
 - C. DISTURBED AREAS WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
 - D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 - PRODUCTS

1. MATERIALS

- A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

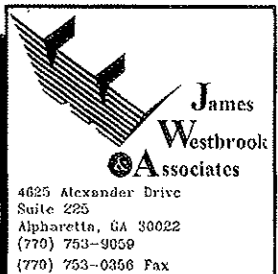
TOTAL KILL	PHASAR CORPORATION
PRODUCT 910	P.O. BOX 5123
EPA 10292-7	DEARBORN, MI 48128
	(313) 563-8000
- B. ROAD AND SITE MATERIALS SHALL CONFORM TO MDOT SPECIFICATIONS FILL MATERIAL (UNLESS OTHERWISE NOTED) - ACCEPTABLE SELECT FILL SHALL BE IN ACCORDANCE WITH STATE DEPARTMENT OF HIGHWAY AND TRANSPORTATION STANDARD SPECIFICATIONS..

AMBUSH HERBICIDE	FRAMAR INDUSTRIAL PRODUCTS
EPA REGISTERED	1435 MORRIS AVE.
	UNION, NJ 07083
	(800) 526-4924
- C. SOIL STABILIZER FABRIC SHALL BE MIRAFI - 500X.

PART 3 - EXECUTION

1. INSPECTIONS

LOCAL BUILDING INSPECTORS SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION.
2. PREPARATION
 - A. CLEAR TREES, BRUSH AND DEBRIS FROM LEASE AREA, ACCESS DRIVE W/ TURN-AROUND AND UNDER GROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
 - B. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX (6) INCHES BELOW GRADE.
 - C. UNLESS OTHERWISE INSTRUCTED BY VERIZON WIRELESS, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
 - D. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
 - E. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
3. INSTALLATION
 - A. GRADE OR FILL THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND AS REQUIRED IN ORDER THAT UPON DISTRIBUTION OF SPOILS, RESULTING FROM EXCAVATIONS, THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM BENCHMARK, FINISHED GRADES, OR INDICATED SLOPES.
 - B. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
 - C. BRING THE ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION TO FACILITATE CONSTRUCTION AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
 - D. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
 - E. THE CONTRACT SHALL INCLUDE GRADING, BANKING, AND DITCHING, UNLESS OTHERWISE INDICATED.
 - F. WHEN IMPROVING AN EXISTING ACCESS DRIVE, GRADE THE EXISTING DRIVE TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
 - G. PLACE FILL OR STONE IN SIX (6) INCH MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
 - H. THE TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE (1) FOOT BEYOND THE SITE FENCE (UNLESS OTHERWISE NOTED) AND SHALL COVER THE AREA AS INDICATED.
 - I. APPLY RIPRAP TO THE SIDE SLOPES OF ALL FENCED SITE AREAS, PARKING AREAS, AND ALL OTHER SLOPES GREATER THAN 2:1.
 - J. APPLY RIPRAP TO THE SIDES OF DITCHES OR DRAINAGE SWALES.
 - K. RIPRAP ENTIRE DITCH FOR SIX (6) FEET IN ALL DIRECTIONS AT CULVERT OPENINGS.
 - L. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
 - M. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIGNS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
 - N. IN DITCHES WITH SLOPES GREATER THAN 10%, MOUND DIVERSIONARY HEADWALLS IN THE DITCH AT CULVERT ENTRANCES. POSITION THE HEADWALL AT AN ANGLE NO GREATER THAT 60° OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX (6) FEET ABOVE THE CULVERT ENTRANCE.
 - O. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
 - P. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
 - Q. ENSURE GROWTH OF SEEDED AND LANDSCAPED AREAS, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.



CERTIFICATION:

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12/09/08	REV-B PRELIMINARY CD
REVISIONS	
NO.	DATE

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DRAWN BY: BWV
CHECKED BY: SDW

SITE NAME:
STLC WILD HORSE CREEK

LOCATION #:
125500

PROJECT #:
2004017072

SITE ADDRESS:
18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:
SPECIFICATIONS

AKE PROJECT No.:

SHEET NUMBER:
SP-1

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4. FIELD QUALITY CONTROL

COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.

5. PROTECTION

- A. PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATE.
- B. ALL TREES PLACED IN CONJUNCTION WITH A LANDSCAPE CONTRACT WILL BE WRAPPED, TIED WITH HOSE PROTECTED WIRE, AND SECURED TO 2" X 2" X 4'-0" WOODEN STAKES EXTENDING TWO- FEET INTO THE GROUND ON FOUR SIDES OF THE TREE.
- C. PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS.

SECTION 02830 - FENCING AND GATE(S)

PART 1 - GENERAL

- 1. WORK INCLUDED
SEE PLAN FOR SITE AND LOCATION OF FENCE AND GATE(S).
- 2. QUALITY ASSURANCE
ALL STEEL MATERIALS UTILIZED IN CONJUNCTION WITH THIS SPECIFICATION WILL BE GALVANIZED OR STAINLESS STEEL. WEIGHT OF ZINC COATING ON THE FABRIC SHALL NOT BE LESS THAN 12 OUNCES PER SQUARE FOOT OF MATERIAL COVERED. POSTS SHALL BE HOT-DIPPED IN GRADE 'E' ZINC, 18 OUNCES PER SQUARE FOOT.
- 3. SEQUENCING
IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE ELEVATION (PRIOR TO THE FENCE CONSTRUCTION), FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SAID SURFACE COURSE.
- 4. SUBMITTALS
 - A. MANUFACTURER'S DESCRIPTIVE LITERATURE.
 - B. CERTIFICATE OR STATEMENT OF COMPLIANCE WITH THE SPECIFICATIONS.

PART 2 - PRODUCTS

- 1. FENCE MATERIAL
 - A. ALL FABRIC WIRE, RAILS, HARDWARE, AND OTHER STEEL MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
 - B. FABRIC SHALL BE SEVEN-FOOT HIGH OR TO MATCH EXISTING FENCE TWO-INCH CHAIN LINK MESH OF NO. 9 GAUGE (0.148") WIRE. THE FABRIC SHALL HAVE A KNUCKLED FINISH FOR THE TOP SELVAGES. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
 - C. BARBED WIRE SHALL BE DOUBLE-STRAND, 12-1/2 GAUGE TWISTED WIRE, WITH 14-GAUGE, 4-POINT ROUND BARBS SPACED ON FIVE-INCH CENTERS.
 - D. ALL POSTS SHALL BE SCHEDULE - 40 MECHANICAL SERVICE PIPE AND SHALL BE TYPE 1 ASTM A-128 AND OF THE FOLLOWING DIAMETER

LINE	2" SCHEDULE 40 (2 3/8" O.D.)
CORNER	3" SCHEDULE 40 (3 1/2" O.D.)
GATE	3" SCHEDULE 40 (3 1/2" O.D.)
 - E. GATE POSTS SHALL BE EXTENDED 12 INCHES, INCLUDING DOME CAP, TO PROVIDE FOR ATTACHMENT OF BARBED WIRE.
 - F. ALL TOP AND BRACE RAILS SHALL BE 1" DIAMETER SCHEDULE - 40 MECHANICAL-SERVICE PIPE.
 - G. GATE FRAMES AND BRACES SHALL BE 1.90 INCH DIAMETER SCHEDULE 40 MECHANICAL-SERVICE PIPE. FRAMES SHALL HAVE WELDED CORNERS.

- H. GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE, AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
- I. GATE HINGES SHALL BE MERCHANTS METAL MODEL 64386 HINGE ADAPTER WITH MODEL 6409, 188-DEGREE ATTACHMENT.
- J. THE GUIDE (LATCH ASSEMBLY) SHALL BE HEAVY INDUSTRIAL DOUBLE GATE LATCH. SEE DETAIL.
- K. LATCHES AND STOPS SHALL BE PROVIDED FOR ALL GATES.
- L. PLUNGER ROD COMPLETE WITH RECEPTOR TO BE PROVIDED AT THE INACTIVE LEAF OF ALL DOUBLE GATE INSTALLATIONS.
- M. ALL STOPS SHALL HAVE KEEPERS CAPABLE OF HOLDING THE GATE LEAF IN THE OPEN POSITION
- N. A NO. 7 GAUGE ZINC COATED TENSION WIRE SHALL BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
- O. A SIX-INCH BY 1/2-INCH DIAMETER EYEBOLT TO HOLD TENSION WIRE SHALL BE PLACED AT LINE POSTS.
- P. STRETCHER BARS SHALL BE 3/16-INCH BY 3/4-INCH OR HAVE EQUIVALENT CROSS-SECTIONAL AREA.
- Q. ALL CORNER GATE AND PANELS SHALL HAVE A 3/8-INCH TRUSS ROD WITH TURNBUCKLES.
- R. ALL POSTS EXCEPT GATE POSTS SHALL HAVE A COMBINATION CAP AND BARBED WIRE SUPPORTING ARM. GATE POSTS SHALL HAVE A DOME CAP.
- S. OTHER HARDWARE INCLUDES BUT MAY NOT BE LIMITED TO TIE CLIPS, BAND CLIPS AND TENSION BAND CLIPS.
- T. BARBED WIRE GATE GUARDS SHALL BE FITTED WITH DOME CAPS.
- U. BARBED WIRE SUPPORT ARMS SHALL BE PRESSED STEEL COMPLETE WITH SET BOLT AND LOCK WIRE IN THE ARM.
- V. ALL CAPS SHALL BE MALLEABLE IRON, DOME OR ACORN SHAPED AS REQUIRED BY PIPE SIZE.
- W. WHERE THE USE OF CONCERTINA HAS BEEN SPECIFIED, 24-INCH DIAMETERS COIL BARBED TAPE, STAINLESS STEEL, CYCLONE FENCE MODEL 68P TO TYPE III SHALL BE FURNISHED. IT SHALL BE SUPPORTED ABOVE THE TOP RAIL BY USE OF SIX(6) WIRE BARBED WIRE ARMS POSITIONED ATOP EACH LINE/CORNER POST.

PART 3 - EXECUTION

- 1. INSPECTION
TO CONFIRM PROPER DEPTH AND DIAMETER OF POST HOLE EXCAVATIONS. ALL POST HOLES WILL BE EXCAVATED AS PER CONSTRUCTION DOCUMENTS.
- 2. INSTALLATION
 - A. FOUNDATIONS SHALL HAVE A MINIMUM SIX (6) INCH CONCRETE COVER UNDER POST.
 - B. ALL FENCE POSTS SHALL BE VERTICALLY PLUMB ; ONE QUARTER (1/4) INCH
 - C. AT CORNER POSTS, GATE POSTS, AND SIDES OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND-CLIPS AT FIFTEEN(15) INCH INTERVALS.
 - D. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH BAND-CLIPS AT FIFTEEN (15) INCH INTERVALS.
 - E. FABRIC SHALL BE ATTACHED TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH TIE-CLIPS AT TWO (2) FOOT INTERVALS.
 - F. A MAXIMUM GAP OF ONE INCH WILL BE PERMITTED BETWEEN THE CHAIN LINE FABRIC AND THE FINAL GRADE.
 - G. GATE SHALL BE INSTALLED SO LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
 - H. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
 - I. CONCRETE TO BE A MINIMUM OF 4,000 PSI AT 7DAYS. CEMENT SHALL EXCEED ASTM C150, TYPE IIIA.
- 3. PROTECTION
UPON COMPLETION OF ERECTION, INSPECT FENCE MATERIAL AND PAINT FIELD CUTS OR GALVANIZING BREAKS WITH ZINC-BASED PAINT, COLOR TO MATCH THE GALVANIZED METAL. APPLICABLE STANDARDS

ASTM-A120	SPECIFICATION FOR PIPE, STEEL BLACK AND HOT-DIPPED ZINC COATED (GALVANIZED) WELDED AND SEAMLESS, FOR ORDINARY USES.
ASTM-A123	ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.

- ASTM-A153 STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
- ASTM-A392 SPECIFICATION FOR ZINC-COATED STEEL CHAIN LINK FENCE FABRIC.
- ASTM-A491 SPECIFICATION FOR ALUMINUM-COATED STEEL CHAIN LINK FENCE FABRIC
- ASTM-A525 STANDARD SPECIFICATION FOR STEEL SHEET ZINC COATED (GALVANIZED) BY THE HOT-DIPPED PROCESS.
- ASTM-A570 SPECIFICATION FOR HOT-ROLLED CARBON STEEL SHEET AND STRIP. STRUCTURAL QUALITY.
- ASTM-A535 SPECIFICATION FOR ALUMINUM COATED STEEL BARBED WIRE.
- FEDERAL SPECIFICATION RR-F-191- FENCING, WIRE AND POST METAL (AND GATES, CHAIN LINK FENCE FABRIC, AND ACCESSORIES)

DIVISION 3: CONCRETE

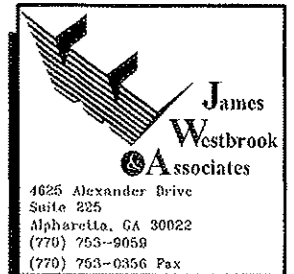
SECTION 03000 - BASIC CONCRETE MATERIALS AND METHODS

PART 1 - GENERAL

- 1. WORK INCLUDED
FORMWORK, REINFORCEMENT, ACCESSORIES, CAST-IN-PLACE CONCRETE, FINISHING, AND CURING.
- 2. INSPECTIONS
 - A. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING BUILDING DEPARTMENT INSPECTIONS REQUIRED FOR HIS SCOPE OF WORK.
 - B. ALL REINFORCING STEEL SHALL BE INSPECTED AND APPROVED BY THE VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR AND MES TO PLACEMENT OF CONCRETE.
 - C. THE VERIZON WIRELESS CONSTRUCTION MANAGER SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS.
- 3. QUALITY ASSURANCE
 - A. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH ACI 301 AND ACI 318.
 - B. PERFORM CONCRETE REINFORCING WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ASTM A184.
 - C. PERFORM CAST-IN-PLACE CONCRETE WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ACI 117-90.
 - D. OPEN FOUNDATION TRENCHES SHALL BE INSPECTED BY MES PRIOR TO CONCRETE INSTALLATION.
- 4. SUBMITTALS
SUBMIT CONCRETE MIX AND REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL BY VERIZON WIRELESS CONSTRUCTION MANAGER/ENGINEER. THE SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF TWO (2) CONCRETE MIX DESIGN INFORMATION SHEETS AND TWO (2) BLUELINE DRAWINGS FOR REINFORCING STEEL.

PART 2 - PRODUCTS

- 1. REINFORCEMENT MATERIALS
 - A. REINFORCEMENT STEEL, ASTM A615, 60 ksi YIELD GRADE, DEFORMED BILLET STEEL BARS, PLAIN FINISH.
 - B. WELDED STEEL WIRE FABRIC ASTM A185 PLAIN TYPE, IN FLAT SHEETS, PLAIN FINISH.
 - C. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS. SIZED AND SHAPED FOR SUPPORTS OF REINFORCING.
 - D. FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH ACI 315, ACI 318, ASTM A184
- 2. CONCRETE MATERIALS
 - A. CEMENT: ASTM C150, PORTLAND TYPE
 - B. FINE AND COURSE AGGREGATES: ASTM C33 - MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED ; ONE (1) INCH SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR ONE-THIRD CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING.
 - C. WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE
 - D. AIR ENTRAINING ADMIXTURE: ASTM C260
 - E. BONDING AGENT: LATEX EMULSION FOR BONDING NEW TO OLD CONCRETE AS MANUFACTURED BY DAYTON SUPERIOR.
 - F. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICISING AGENTS.



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CHECKED BY: SDW

SITE NAME: STLC WILD HORSE CREEK

LOCATION / 125500

PROJECT # 2004017072

SITE ADDRESS: 18303 WILD HORSE CREEK RD. CHESTERFIELD, MO 63005

SHEET TITLE: SPECIFICATIONS

AGE PROJECT No.:

SHEET NUMBER: SP-2

3. CONCRETE MIX

- A. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE A.C.I. REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
- B. MIX AND DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94, ALT. 3.
- C. PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. PROVIDE CONCRETE AS FOLLOWS:
 - 1. COMPRESSIVE STRENGTH: 4000 psi AT 7 DAYS.
SEE SHEET S-1 FOR CAISSON CONCRETE COMPRESSIVE STRENGTH
 - 2. SLUMP: 3 INCHES

PART 3 -- EXECUTION

- 1. INSERTS, EMBEDDED COMPONENTS AND OPENINGS
 - A. THE CONTRACTOR SHALL COORDINATE AND CROSS-CHECK ARCHITECTURAL, BUILDING & ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, AND OTHER ITEMS RELATED TO CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THE PROPER LOCATION BEFORE PLACING CONCRETE.
 - B. PROVIDE FORMED OPENINGS WHERE REQUIRED FOR WORK TO BE EMBEDDED IN AND PASSING THROUGH CONCRETE MEMBERS.
 - C. COORDINATE WORK OF OTHER SECTIONS IN FORMING AND SETTING OPENING, SLOTS, RECESSES, CHASES, SLEEVES, BOLTS, ANCHORS, AND OTHER INSERTS.
 - D. INSTALL CONCRETE ACCESSORIES STRAIGHT, LEVEL AND PLUMB.
- 2. REINFORCEMENT PLACEMENT
 - A. PLACE REINFORCEMENT, SUPPORTED AND SECURED AGAINST DISPLACEMENT.
 - B. ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATINGS.
 - C. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
 - D. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
 - E. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES NOR BE LESS THAN 2 INCHES.
- 3. PLACING CONCRETE
 - A. VIBRATE ALL CONCRETE.
 - B. ALL CONCRETE WORK SHALL ADHERE TO THE LATEST A.C.I. STANDARDS FOR WINTER POURING AND CURING PROCEDURES IF SEASONAL CONDITIONS APPLY
- 4. CURING
 - A. AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING.
 - B. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
- 5. PROVIDE HAND RUBBED SMOOTH FINISH TO ALL EXPOSED VERTICAL FORMED CONCRETE SURFACES.
- 6. FIELD QUALITY CONTROL
 - A. SUBMIT THREE (3) CONCRETE TEST CYLINDERS - TAKEN FOR EVERY 15 CUBIC YARD OR LESS. SUBMIT CONCRETE TESTS TO THE PROJECT MANAGER IN ACCORDANCE WITH ASTM, C-31 AND C-39.
 - B. SUBMIT ONE (1) ADDITIONAL TEST CYLINDER - TAKEN DURING COLD WEATHER POURS, AND CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.
 - C. SUBMIT ONE (1) SLUMP TEST - TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.
 - D. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL COSTS INCURRED ASSOCIATED WITH CONCRETE TESTING.
- 7. DEFECTIVE CONCRETE

MODIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LINES, DETAILS OR ELEVATIONS AT COST OF GC, AS DIRECTED BY ARCHITECT/ENGINEER.

DIVISION 5 - METALS

SECTION 05000 -- METALS

PART 1 -- GENERAL

- 1. SECTION INCLUDES:

STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS AND GROUTING UNDER BASE PLATES.
- 2. SUBMITTALS:

SHOP DRAWINGS: INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS, AND WELDED SECTIONS.

3. QUALITY ASSURANCE

- A. FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- B. PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

PART 2 -- PRODUCTS

1. MATERIALS:

- A. STRUCTURAL STEEL MEMBERS: ASTM A572, GRADE 50
- B. STRUCTURAL TUBING: ASTM A500, GRADE B
- C. PIPE: ASTM A53, TYPE E OR S, GRADE B
- D. BOLTS, NUTS, AND WASHERS: ASTM A325
- E. ANCHOR BOLTS: ASTM A307
- F. WELDING MATERIALS: AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED
- G. GROUT: NON-SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 psi AT 28 DAYS.
- H. SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE
- I. TOUCH-UP PRIMER FOR GALV. SURFACES: ZINC RICH TYPE

2. FABRICATION:

CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. GRIND EXPOSED WELDS SMOOTH.

3. FINISH:

- A. PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC
- B. SP-1 TO SP-10 PROCEDURES.
- C. STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

PART 3 -- EXECUTION

1. EXAMINATION AND PREPARATION:

VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.

2. ERECTION:

- A. ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
- B. FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.
- C. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
- D. AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH TOUCH-UP PRIMERS AS SPECIFIED UNDER SECTION 05000--METALS, PART 2 - PRODUCTS, H & I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.

3. FIELD QUALITY CONTROL:

FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND TORQUING.

DIVISION 16 - ELECTRICAL

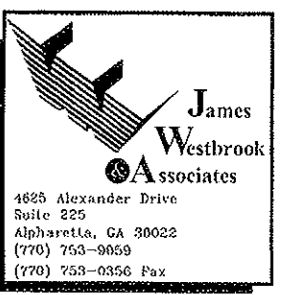
SECTION 16050 -- BASIC ELECTRICAL MATERIALS AND METHODS

- 1. CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ANY DISCREPANCIES OR CONFLICTING INFORMATION.
- 2. ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.

- 3. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.).
- 4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "J" WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- 5. ALL CONDUIT SHALL HAVE A PULL CORD.
- 6. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- 7. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- 8. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY UBC, NEC AND ALL APPLICABLE CODES.
- 9. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- 10. PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE SIERRA #WPD-8 LIFT COVERPLATES.

SECTION 16400 -- SERVICE AND DISTRIBUTION

- 1. WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V, TYPE THHN OR THWN, WITH A MIN. SIZE OF #12 AWG, COLOR CODED. ALL RECTIFIER DROPS SHALL BE STRANDED TO ACCEPT CRIMP CONNECTORS.
- 2. ALL CHEMICAL GROUND RODS SHALL BE "UL" APPROVED.
- 3. METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.
- 4. CONDUIT:
 - A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
 - B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTING SHALL BE GLAND RING COMPRESSION TYPE.
 - C. FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE FULL LENGTH GROUND WIRE.
 - D. ALL UNDERGROUND CONDUIT SHALL BE AS NOTED ON THE DRAWINGS AT A MINIMUM DEPTH OF 42" BELOW GRADE.
- 5. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR.
- 6. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE 1/4-INCH). NAMEPLATES SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
- 7. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.



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CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:

SPECIFICATIONS

A&E PROJECT No.:

SHEET NUMBER:

SP-3

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8. GROUNDING ELECTRODE SYSTEM

A. PREPARATION

1. SURFACE PREPARATION:

ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT APPLIED PRIOR TO INSTALLATION.

2. GROUND BAR PREPARATION:

ALL COPPER GROUND BARS SHALL BE CLEANED, POLISHED AND A NON-OXIDIZING AGENT APPLIED. NO FINGERPRINTS OR DISCOLORED COPPER WILL BE PERMITTED.

3. SLEEVES:

ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES WHEREVER CONDUCTORS RUN THROUGH WALLS, FLOORS OR CEILINGS. IF CONDUCTORS MUST RUN THROUGH EMT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.

B. GROUND BARS

1. ALL GROUND BARS SHALL BE 1/4-INCH THICK TINNED COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.

2. ALL CONNECTIONS TO THE GROUND BAR SHALL OBSERVE THE FOLLOWING SEQUENCE:

- A. BOLT-HEAD
- B. 2-HOLE LUG
- C. TINNED COPPER BUSS BAR
- D. STAR WASHER
- E. NUT

C. EXTERNAL CONNECTIONS

1. ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, CROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "CADWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.

2. ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.

D. GROUND RODS

ALL GROUND RODS SHALL BE 5/8-INCH DIAMETER X 8'-0" LONG "COPPERWELD" OR APPROVED EQUAL, OF THE NUMBER AND LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH.

E. GROUND CONDUCTORS

ALL GROUND CONDUCTORS SHALL BE STANDARD TINNED SOLID BARE COPPER ANNEALED, AND OF SIZE INDICATED ON DRAWINGS UNLESS NOTED OTHERWISE.

F. LUGS

1. LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #548 BE OR EQUIVALENT

A. 535 MCM DLO	54880BE
B. 262 MCM DLO	54872BE
C. #1/0 DLO	54862BE
D. #4/0 THWN AND BARE	54866BE
E. #2/0 THWN	54862BE
F. #2 THHN	54207BE
G. #6 DLO	54205BE

2. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART:

GROUNDING CONDUCTOR SIZE	RADIUS TO INSIDE EDGE
NO. 6 AWG TO NO. 4 AWG	6 INCHES
NO. 2 AWG TO NO. 1/0 AWG	8 INCHES
NO. 2/0 AWG TO 4/0 MCM	12 INCHES
250 MCM TO 750 MCM	24 INCHES

G. GROUND RING

1. THE EXTERNAL GROUND RING ENCIRCLING THE TOWER (IF APPLICABLE) AND BETWEEN THE EQUIPMENT SHELTER PLATFORM ANCHORS SHALL BE MINIMUM NO. 2 A.W.G. SOLID TINNED BARE COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT THE DEPTH INDICATED ON THE DRAWINGS. CONDUCTOR BENDS SHALL HAVE A MINIMUM BENDING RADIUS OF EIGHT (8) INCHES.
2. ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS MUST BE CADWELDED. NO LUGS OR CLAMPS WILL BE ACCEPTED.

H. FENCE/GATE

GROUND EACH GATE POST, CORNER POST AND GATE AS INDICATED ON DRAWING GROUND CONNECTIONS TO FENCE POSTS AND ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY EXOTHERMIC WELD PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES, AND SPRAYED WITH COLD-GALVANIZED PAINT.

I.E.E.E. FALL POTENTIAL TESTS

A. FOR RAW LAND SITE

1. GROUND TESTS SHALL BE PERFORMED AS INDICATED ON DRAWINGS. A BIDDLE GROUND OHMMER OR THE METHOD OF USING TWO AUXILIARY GROUND RODS (AS DESCRIBED IN I.E.E.E. STANDARDS NO. 81-1983, PART 1) MAY BE USED. THE I.E.E.E. METHOD REQUIRES THE USE OF AN A.C. TEST CURRENT. THE AUXILIARY TEST RODS MUST BE SUFFICIENTLY FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH THEIR RESISTANCE IS LOCALIZED DO NOT OVERLAP. THE TEST POINT WILL BE THE GROUND ROD AND WILL CONSIST OF THE THREE POINT FALL OF POTENTIAL MEGGER TEST METHOD, USING THE BIDDLE NULL-BALANCE EARTH TESTER (MEGGER #250220-2 OR EQUIVALENT)
2. CONTRACTOR TO CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS:

B. EQUIPMENT PAD

1. FIRST TEST -- SHALL BE WITH FOUR GROUND RODS INSTALLED, ONE AT EACH CORNER OF THE PAD BUT NOT CONNECTED TO THE MAIN GROUNDING BUS. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL FOUR GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL FOUR RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
2. SECOND TEST -- SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN (10) DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

C. TOWER

1. FIRST TEST -- SHALL BE WITH THREE GROUND RODS INSTALLED (MINIMUM), EQUALLY SPACED AROUND THE TOWER FOUNDATION, BUT NOT CONNECTED TO THE SHELTER PAD EXTERNAL GROUND RING. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL THREE GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL THREE (3) RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
2. SECOND TEST -- SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN (10) DAYS, THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT EITHER ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

D. EQUIPMENT PAD AND TOWER

1. AFTER THE EQUIPMENT PAD AND TOWER GROUND RESISTANCE TEST IS COMPLETED, CONTRACTOR SHALL TIE EQUIPMENT PAD EXTERNAL GROUND RING AND TOWER EXTERNAL GROUND RING TOGETHER. AFTER FIRST AND SECOND TEST ALL CONNECTIONS MUST BE MADE USING EXOTHERMIC WELD. NO LUGS OR CLAMPS WILL BE ACCEPTED.
2. AFTER ALL THE EXTERNAL GROUND RINGS ARE TIED TOGETHER, COMPLETE A MEGGER CHECK OF THE GROUND SYSTEM SHOULD BE DONE. THE MAXIMUM ALLOWABLE LEADING IS 5 OHMS TO GROUND.

10. GROUNDING RESISTANCE TEST REPORT

UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS WITH AUXILIARY POTENTIAL ELECTRODES AT 5 FEET AND 10 FEET INTERVALS UNTIL THE AVERAGE RESISTANCE STARTS INCREASING AND ALSO NOTE THAT 10-15 PHOTOS MUST BE TAKEN TO PROOF ENTIRE EXTERNAL GROUND RING SYSTEM BEFORE BACKFILL. TWO (2) SETS OF TEST DOCUMENTS ARE OF THE INDEPENDENT TESTING SERVICE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

SECTION 16503 -- POLES, POSTS, AND STANDARDS

(SINGLE MAST AND SELF SUPPORTING TOWERS)

1. GENERAL

- A. LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED.
- B. PROVIDE TEMPORARY LIGHTING FOR TOWER AS PER FAA REGULATIONS DURING CONSTRUCTION, IF REQUIRED.
- C. GROUNDING:
GROUND TOWER WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE. TWO (2) GROUNDING LEADS PER TOWER BASE PLATE.
NO EXOTHERMIC WELDS SHALL BE ATTACHED DIRECTLY TO THE MONOPOLE TOWER SHAFT.

SECTION 16745 - TELECOMMUNICATIONS WIRING COMPONENTS

(COAXIAL ANTENNA CABLE)

1. GENERAL

- A. ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
- B. CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE ITEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS
- C. ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.

2. MATERIALS:

- A. COAXIAL CABLE:
 1. INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURERS' REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
 2. ALL COAX RUN LENGTHS GREATER THAN 175 FEET SHALL BE 1-5/8", ALL COAX. RUN LENGTH BETWEEN 101 FEET AND 174 FEET SHALL BE 1-1/4", AND IN LENGTH LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".

3. ANTENNA AND COAXIAL CABLE GROUNDING

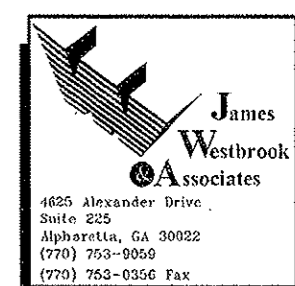
- A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

4. COAXIAL CABLE IDENTIFICATION

- A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
 1. FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
 2. SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.
- B. USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS.

5. TESTING

VERIZON WIRELESS SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT. THE CONTRACTOR IS TO PROVIDE ONE CLIMBER / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE VERIZON WIRELESS WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST.



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DRAWN BY: BAW
CHECKED BY: SDW

SITE NAME:

STLC WILD HORSE CREEK

LOCATION #

125500

PROJECT #

2004017072

SITE ADDRESS:

18303 WILD HORSE CREEK RD.
CHESTERFIELD, MO 63005

SHEET TITLE:

SPECIFICATIONS

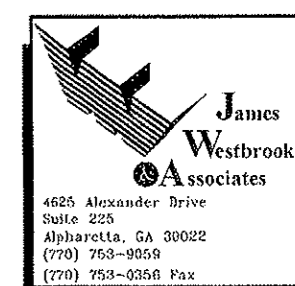
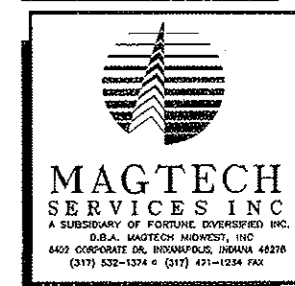
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SHEET NUMBER:

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General Notes

1. SCHEDULE: THE CONSTRUCTION OF THE SITE REQUIRES A CERTAIN SEQUENCE OF EVENTS TO MINIMIZE CONSTRUCTION TIME REQUIRED UNTIL AVAILABILITY OF CELLULAR TELEPHONE SERVICE.
2. CONSTRUCTION STAKING: THE GENERAL CONTRACTOR SHALL CONTACT THE SURVEYOR TO SCHEDULE CONSTRUCTION STAKING. SURVEYOR TO STAKE LEASE AREA CORNERS, SHELTER CORNERS, CENTER OF THE 3 TOWER LEGS (VERIFY LEG CENTER LINE DIMENSION WITH TOWER DRAWINGS) AND CENTERLINE OF ALL ACCESS AND UTILITY EASEMENTS.
3. SITE CLEARING - EXCAVATION AND FILL: ALL NEW SHELTER AND TOWER LOCATIONS SHALL BE CLEARED OF ALL TOPSOIL AND VEGETATION. CONTRACTOR SHALL USE EXCAVATED MATERIAL FROM FOUNDATION EXCAVATION AND SHALL PROVIDE, SPREAD AND COMPACT BANK RUN GRAVEL AS REQUIRED TO BRING SHELTER UP TO ELEVATIONS AS INDICATED BY THE FINAL SUB-GRADE ELEVATIONS AS SHOWN ON THE PLANS.
4. EQUIPMENT SHELTER FOUNDATION: THE CONTRACTOR SHALL CONTACT ECS LLC ILLINOIS (ECS) (847) 279-0366 FOR ON SITE INSPECTIONS PRIOR TO POURING CONCRETE. CONCRETE CORES (3 CYLINDERS PER TRUCK) TO BE TAKEN AND TESTED BY ECS. ECS SHALL PROVIDE THREE (3) COPIES OF THE TESTING RESULTS TO THE VERIZON WIRELESS PROJECT MANAGER. THE GENERAL CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY COSTS IN TESTING DUE TO DELAYS BY HIMSELF OR HIS SUB-CONTRACTORS.
5. PREFABRICATED SHELTER: THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS FOR THE PROPER LIFTING OF THE SHELTER FROM THE TRANSPORT TRUCK BED TO THE FINAL POSITION ON THE CONCRETE FOUNDATION. THE SHELTER SHALL BE LIFTED INTO PLACE BY USING EIGHT (8) LIFTING EYELETS PROVIDED BY THE SHELTER MANUFACTURER. THE SHELTER MANUFACTURER REQUIRES EIGHT (8) 3/4" DIA., 15' LONG STEEL CABLES CONNECTED THE SPREADER BAR. IF THE SPREADER BAR IS AT LEAST TWO FEET WIDER THAN THE SHELTER, CORNER PROTECTORS WILL NOT NEED TO BE USED. THE APPROXIMATE WEIGHT OF THE SHELTER WITH THE TELEPHONE EQUIPMENT IS 72,000 LBS (REFER TO SHELTER LIFTING INSTRUCTIONS ON SHEET B-1). THE CONTRACTOR SHALL ANCHOR THE SHELTER TO THE CONCRETE SLAB WITH STEEL PLATES AND ANCHOR BOLTS PROVIDED BY THE SHELTER MANUFACTURER. THE VERIZON WIRELESS SHELTER SHALL NOT BE USED FOR THE STORAGE OF ANY MATERIALS, TOOLS, ETC. USED BY THE CONTRACTOR OR SUB-CONTRACTORS.
6. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE ELECTRICAL DISCONNECT, EXTERIOR LIGHT FIXTURE, DOOR CANOPIYS (WITH CAULKING), MUFFLER AND LOOSE SHIP MATERIALS, INCLUDING FUELING, START UP AND TESTING (COORDINATE WITH OPERATIONS TO SET GENERATOR ROUTINE RUN DATE).
7. THE GENERAL CONTRACTOR SHALL INSTALL THE TOWER FOUNDATION, INCLUDING THE ANCHOR BOLTS AS FURNISHED BY THE TOWER MANUFACTURER. TOWER FABRICATION, ERECTION, AND ANTENNA INSTALLATION SHALL BE BY OTHERS.
8. ACCESS DRIVEWAY: THE GENERAL CONTRACTOR SHALL CONSTRUCT THE ACCESS DRIVEWAY PER THE ALIGNMENT AND CROSS SECTION ON THE DRAWINGS. IF ANY AREA OF CONSTRUCTION REQUIRES MORE FILL OF AGGREGATE STONE THAN SHOWN ON THE DRAWINGS, THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR APPROVAL OF THE SIZE, TYPE AND QUANTITY OF STONE/FILL NECESSARY, AND SHALL NOT BE USED UNTIL APPROVAL BY THE ARCHITECT/ENGINEER.
9. UTILITIES: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXCAVATION AND PROPER BACK FILLING OF TRENCHES REQUIRED FOR UNDERGROUND TELEPHONE AND ELECTRICAL UTILITIES. REFER TO ELECTRICAL SHEETS FOR THE UTILITY TRENCH PLAN AND DETAILS COORDINATE, SERVICE DATE WITH THE RESPECTIVE UTILITY COMPANIES.
10. ANTENNAS INSTALLATION: ALL ANTENNAS AND LINES AND ICE BRIDGE SHALL BE INSTALLED BY ANTENNA CONTRACTOR. DURING THIS WORK THE GENERAL CONTRACTOR SHALL BE LIMITED TO THE WORK WHICH CAN BE PERFORMED IN THE VICINITY OF THE WATER TOWER.
11. HERBICIDE: AFTER PLACEMENT AND COMPACTING OF FILL AROUND THE PREFABRICATED SHELTER AND BEFORE PLACEMENT OF LIMESTONE SURFACE, A WEED BARRIER SHALL BE PLACED AND HERBICIDE SHALL BE SPRAYED OVER ALL DISTURBED AREAS.
12. TRASH REMOVAL: THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AS CREATED BY HIMSELF AND HIS SUBCONTRACTORS AND ALSO BY OTHER CONTRACTORS INCLUDING CABLE REELS, CARDBOARD BOXES, AND PACKAGING. THE GENERAL CONTRACTOR SHALL PROVIDE A TRASH DUMPSTER (40 YARD ROLL OFF) ON THE SITE UNTIL ALL CONSTRUCTION WORK AND EQUIPMENT INSTALLATION WORK HAS BEEN COMPLETED. ALL TRASH SHALL BE REMOVED FROM THE SITE IN A TIMELY FASHION TO A LEGAL DISPOSAL AREA. FAILURE TO PROVIDE A DUMPSTER ON SITE WILL RESULT IN A \$1000.00 REDUCTION IN THE CONTRACT AMOUNT.
13. FINAL CLEAN UP: UPON COMPLETION OF ALL WORK BY THE GENERAL CONTRACTOR AND ALL OTHER CONTRACTORS ON THIS PROJECT, THE GENERAL CONTRACTOR SHALL STRIP AND CLEAN THE FLOOR OF THE SHELTER, USING AN INDUSTRIAL STRIPPING MACHINE. THE FINISHED FLOOR SHALL BE CLEAN AND DUST FREE. NO SURFACE FINISHES SHALL BE APPLIED. THE GENERAL CONTRACTOR IS ALSO RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIALS FROM INSIDE THE SHELTER ALONG WITH SHIPMENT OF NOTED MATERIALS BACK TO THE OWNER.
14. GENERAL CONTRACTOR SHALL REQUEST DELIVERY OF VERIZON WIRELESS ANTENNAS AND MISCELLANEOUS MATERIALS WHEN READY TO RECEIVE AND INVENTORY. ANY SHORTAGES MUST BE REPORTED TO THE VERIZON WIRELESS PROJECT MANAGER WITHIN 48 HOURS OF DELIVERY. REQUEST FOR FINAL CLEAN UP WILL BE AT THE DIRECTION OF THE VERIZON WIRELESS PROJECT MANAGER.
15. THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A PORTABLE TOILET ON SITE DURING THE DURATION OF THE CONSTRUCTION PROJECT.
16. UNDERGROUND UTILITY LOCATION: CONTACT IUPS (800) 382-5544 IN INDIANA OR (800) 428-5200 OUTSIDE INDIANA 48 HOURS PRIOR TO DIGGING.
17. THE GENERAL CONTRACTOR SHALL NOTIFY THE PROJECT ADMINISTRATOR 48 HOURS PRIOR TO POURING CONCRETE FOR SHELTER FOUNDATION.
18. THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY TO PERMIT VERIFICATION OF THE CONDITIONS, AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.
19. BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCHBASINS (WHEN PRESENT) SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK.
20. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVED, CONCRETE, OR GRAVEL PARKING AREAS AND DRIVES. CONTRACTORS SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PARKING AREAS AND DRIVES PRIOR TO CONSTRUCTION, ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.
21. GRADE ALL AREAS DISTURBED DURING CONSTRUCTION TO MATCH EXISTING SURROUNDINGS AFTER WORK IS COMPLETE OR AS WEATHER PERMITS WITH APPROVAL FROM THE PROPERTY



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SITE ADDRESS:

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CHESTERFIELD, MO 63005

SHEET TITLE:

SITE NOTES

ASE PROJECT No.:

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