

RESOLUTION NO. _____

**A RESOLUTION AUTHORIZING A LICENSE AGREEMENT BETWEEN THE
VILLAGE OF DOWNERS GROVE AND T-MOBILE CENTRAL, LLC TO INSTALL,
MAINTAIN AND OPERATE AN ANTENNA ON VILLAGE PROPERTY
(HIGHLAND AVENUE WATER TANK)**

BE IT RESOLVED by the Village Council of the Village of Downers Grove, DuPage County, Illinois, as follows:

1. That the form and substance of a certain License Agreement (the “Agreement”), between the Village of Downers Grove (the “Village”) and T-Mobile Central, LLC (the “Licensee”), for the installation, maintenance and operation of an antenna on Village property located at 3801 Highland Avenue, as set forth in the form of the Agreement submitted to this meeting with the recommendation of the Village Manager, is hereby approved.

2. That the Mayor and Village Clerk are hereby respectively authorized and directed for and on behalf of the Village to execute, attest, seal and deliver the Agreement, substantially in the form approved in the foregoing paragraph of this Resolution, together with such changes as the Manager shall deem necessary.

3. That the proper officials, agents and employees of the Village are hereby authorized and directed to take such further action as they may deem necessary or appropriate to perform all obligations and commitments of the Village in accordance with the provisions of the Agreement.

4. That all resolutions or parts of resolutions in conflict with the provisions of this Resolution are hereby repealed.

5. That this Resolution shall be in full force and effect from and after its passage as provided by law.

Mayor

Passed:

Attest: _____
Village Clerk

**LICENSE AGREEMENT BETWEEN THE VILLAGE OF DOWNERS
GROVE AND T-MOBILE CENTRAL LLC TO INSTALL,
MAINTAIN AND OPERATE ANTENNAS ON VILLAGE PROPERTY**

WITNESSETH

WHEREAS, the Village of Downers Grove (hereinafter referred to as the “Village”) is an Illinois municipal corporation and a home rule unit, pursuant to the laws of the State of Illinois; and

WHEREAS, the Village is the owner of certain real estate located at 3801 Highland Avenue, Downers Grove, Illinois, upon which is located the Downers Grove Water Tank (hereinafter referred to as the “Tower”); and

WHEREAS, T-MOBILE CENTRAL LLC, a Delaware limited liability company (hereinafter referred to as the “Licensee”) has requested permission to install an antenna on the top of the Tower and its related equipment on ground space near the Tower (hereinafter referred to as the “Antenna”); and

NOW, THEREFORE, in consideration of the mutual promises, covenants and conditions, the Village and the Licensee agree as follows:

1. CONTRACT DOCUMENTS:

The provisions set forth in the preamble and the following exhibits are incorporated into and made a part of this Agreement:

a. Group Exhibit 1 - Site Plan, Site Details, Site Elevation & Antenna Details, Antenna/Coax Details, Utility Site Plan, Utility Details and Grounding Details titled “Downers Grove Water Tank”, dated 9/28/06, and approved by the Village on 12/4/06, showing the plans and specifications of the Tower Space and Ground Space, together with the areas on the Property licensed to Licensee to provide access and utility service to the Ground Space (collectively the “Licensed Premises”) which includes location of any proposed underground utilities necessary for operation of the Antenna together with any cables or utility lines to be installed on the Licensed Premises and used or housing of the related Antenna equipment (collectively “Licensee’s Improvements”).

2. GRANT OF LICENSE:

The Village hereby grants to the Licensee the right, permission and authority to install, operate and maintain Licensee’s Improvements upon the terms and conditions hereinafter specified. This Agreement shall not terminate upon the sale, assignment or transfer of the property, but shall run with the land.

3. SPECIFICATIONS: The Licensee shall comply with the following specifications:

a. *In general:* During the term of this Agreement, there shall be no substantial variations, modifications, or upgrades from the plans and specifications of Exhibit 1 without the prior written approval of the Village, which approval shall not be unreasonably withheld or delayed.

b. *Antenna:* The Antenna shall be for the operation of radio frequency: receive 1895.4 MHz-

1909.6 MHz; transmit 1975.4 MHz-1989.6 MHz. The Antenna shall be installed, attached to the Tower, and maintained in conformance with Exhibit 1 and any applicable State and federal requirements. The Antenna shall be located more than ten (10) feet from any existing antenna equipment and shall not exceed seventy-two (72) inches in height.

4. **CONSTRUCTION, INSTALLATION AND MAINTENANCE:**

The Licensee may install, repair, maintain, or replace the Antenna, subject to the following conditions:

a. Licensee shall obtain all required permits and authorizations from the Village, in accordance with the applicable ordinances, prior to commencing any work under this Agreement. Such work shall comply with applicable codes and regulations and shall be conducted in a workmanlike manner.

b. Licensee shall obtain all necessary approvals from any regulatory authorities for the operation of the Antenna. Further, the Licensee shall comply with all applicable laws and regulations of such regulatory authorities including, but not limited to the Federal Communications Commission.

c. All costs connected with the installation, maintenance, repair, use and removal of Licensee's Improvements and any related equipment shall be the responsibility of the Licensee.

d. Licensee shall not take any action or allow any action to be done which may impair the use of or damage the Tower.

e. The Licensee may not interfere with the use by the Village, its officers, agents and employees, of the Tower or the property on which it is located.

f. Except for emergency situations, the Village shall provide reasonable advance notice to Licensee when it conducts any Tower repair or maintenance work that affects the Antenna or function of the Antenna. Except for emergency situations, the Village shall not physically disturb Licensee's equipment without Licensee's permission; Licensee shall be entitled to access their equipment Monday through Friday 7:00 a.m. to 3:30 p.m. by contacting the Water Manager at 630/434-5462 or 630/434-5460. If access is needed after hours or in the event of an emergency, Licensee shall contact the Village Operations Center by calling 630/434-5706 or 630/434-5707.

g. The Licensee shall maintain Licensee's Improvements in good repair, and in a clean and sightly condition.

h. Upon termination of this Agreement by either party, the Licensee shall, within thirty (30) days and at its expense, remove the Licensee Improvements and restore the Licensed Premises to substantially its original condition, reasonable wear and tear excepted.

i. If Licensee abandons its use of Licensee's Improvements, Licensee shall, within thirty (30) days of receipt of written notice from the Village notifying the Licensee of such abandonment and at its expense, remove the Licensee's Improvements and restore the Tower to substantially its original condition. Licensee's Improvements will be presumed abandoned if it is not operated

for a period of one month or more. If Licensee's Improvements are not removed within thirty (30) days, the Village may remove Licensee's Improvements and the Licensee shall reimburse the Village for the costs of such removal.

5. NON-INTERFERENCE WITH VILLAGE OPERATIONS:

Neither this Agreement nor Licensee's Improvements shall interfere or obstruct the functioning of the Village's operations and services. Licensee warrants that Licensee's Improvements shall be constructed, installed, maintained and operated in such a manner as to not interfere or obstruct any radio or electronic equipment or signals of the Village's radio and data systems. In the event such interference occurs, and the interference cannot be eliminated by Licensee after reasonable efforts, the Village may terminate this Agreement, in accordance with Paragraph 8(b) of this Agreement. Provided after notice to Licensee, the Village may immediately terminate this Agreement, or require that operation of the Antenna or any of Licensee's Improvements be immediately ceased where it determines that the Antenna or Licensee's Improvements present an immediate and serious danger to the public health, welfare or safety due to interference with the operation of the Village's radio and data systems.

6. TERM:

a. This Agreement shall have an Initial Term beginning March 1, 2007 (or upon the issuance of a building permit), and ending February 28, 2012, and two (2) five-year Extension Terms beginning March 1, 2012, and March 1, 2017, respectively. Such renewal terms shall automatically commence unless Licensee provides the Village with written notice of its election not to renew the License at least one hundred and twenty (120) days prior to the expiration of the current term.

b. After March 1, 2017, Licensee may request the Village to enter into negotiations towards renewing or extending this Agreement. Any renewal or extension shall be according to terms that are mutually agreeable and the Village shall not be bound to accept any particular terms or to renew any or all of the rights granted by this Agreement.

7. COMPENSATION:

Upon execution of this Agreement, Licensee shall pay to the Village a license fee of \$2,350.00 per month for the first year of the Agreement. Thereafter, effective on the first day of the subsequent years of the agreement, the monthly license fee shall increase in an amount equal to the fee for the preceding year multiplied by 4%. The amount shall be prorated for any fractional month at the beginning or at the end of a term. The fee shall be paid to the Village of Downers Grove, Village Hall, 801 Burlington Avenue, Downers Grove, IL 60515.

8. TERMINATION:

This Agreement may be terminated as follows:

a. Licensee may terminate this Agreement at any time upon sixty (60) days written notice to the Village without further liability if Licensee does not obtain all permits or other approvals required from any governmental authority or any easements required from any third party to operate the PCS system, or if any such approval is canceled, expires or is withdrawn or

terminated, or if the Village fails to have proper ownership of the site or authority to enter into this Agreement, or if Licensee, for any other reason, in its sole discretion, determines that it will be unable to use the Property, however, if Licensee terminates this Agreement without cause, it shall pay the Village a termination penalty equal to three months of the current rental amount.

b. In the event either party fails to comply with the terms of this Agreement such party shall be considered in default and the non-defaulting party may serve written notice of its intent to terminate this Agreement. Except where the public health or safety is threatened, the notice shall give the defaulting party not less than thirty (30) days to correct such non-compliance. In the event the default is not corrected within thirty (30) days of such notice, the non-defaulting party may terminate this Agreement by serving a written notice of termination. Notwithstanding the preceding, if any default cannot be cured within thirty (30) days and the defaulting party has diligently commenced and continues to take reasonable action necessary to cure the default, the defaulting party shall be entitled to a reasonable extended period of time in order to cure the default.

c. In the event the Tower is destroyed or substantially damaged so as to substantially effect Licensee's use of the property, this Agreement shall be considered terminated.

9. TOWER REPAIR/MAINTENANCE:

Upon receiving ninety (90) days notice from the Village that it intends to repair or perform maintenance to the Tower, Licensee shall, at its own expense and in such manner as the Village shall reasonably request, immediately remove, relocate, change or alter the position of Licensee's Improvements. During the term of this Agreement, the Tower may be refurbished and/or painted. Refurbishment and/or painting will take several months to complete (approximately five to eight months). Prior to beginning refurbishment and/or painting, Licensee understands that its Antenna shall be removed from the Tower upon notice from the Village and that the Antenna shall not be reinstalled until the refurbishment and/or painting is completed and the Village has approved such reinstallation. During such period, Licensee may, at its sole cost and expense, install the Antenna on a temporary telephone pole or bring a cell on wheels outside the shrouded area of the tower in a location approved by the Village. However, such temporary arrangement shall not interfere with the refurbishment and/or painting of the tower or with other Village operations on the site. The Village shall not be responsible for any costs of removal, relocation, and reinstallation of the Antenna as a result of the refurbishment and/or painting.

10. RESTORATION:

When the Licensee does any work on or affecting the Licensed Premises, it shall, at its own expense, restore the Licensed Premises to as good a condition as existed before the work was undertaken, unless otherwise directed by the Village. If the Licensee fails to restore the Licensed Premises, the Village may, after communications with the Licensee and after affording the Licensee a reasonable opportunity to correct the situation, restore the Licensed Premises, or remove the obstruction therefrom. No such prior written notice shall be required in the event that the Village determines that an emergency situation exists. The Licensee shall pay the Village for any reasonable costs of such restoration within fourteen (14) days after receiving a bill from the Village for such work.

11. UTILITIES:

Licensee shall be responsible for obtaining adequate utilities for operation of Licensee's Improvements, including electricity from any source available on the Property as long as the electricity for Licensee's Improvements are separately metered. Any utilities to be installed must be underground and at a location approved by the Village. Licensee shall pay for the electricity or any other utility it consumes in its operations at the rate charged by the servicing utility company and the Village shall not be liable for such charges.

12. TAXES:

Licensee shall either pay, or reimburse the Village, for any personal or real property taxes which are assessed as a result of Licensee's Improvements and directly attributable to its use of the Property under the terms of this Agreement. The Village shall provide to Licensee all assessment notices or tax bills received by the Village from any applicable taxing authority, within thirty (30) days after the Village's receipt of the same, but in no event later than fifteen (15) days prior to the deadline date for the filing of any objection or protest thereto. Licensee shall have the right, at its own expense and without expense to the Village, to contest by appropriate proceedings, conducted with due diligence and in good faith, the validity of the amount of any taxes or reassessment as applicable to the Licensed Premises or the Licensee Improvements.

13. INDEMNIFICATION:

Licensee shall indemnify, become responsible for and hold harmless the Village, its boards, committees, commissions, officers, agents and employees from any and all liability arising out of the existence of this Agreement; the installation, existence, maintenance or repair of Licensee's Improvements; or any act or omission of Licensee, its officers, agents and employees, except for liability which arises from the Village's or its employees' or agents' negligence or intentional misconduct. For purposes of this Agreement, the term "liability" includes, but is not limited to: actual or claimed loss or damage to property or injury to or death of persons; actual or claimed responsibility for such loss, damage, injury or death; and any and all judgments, decrees, costs and expenses of every sort and kind of incident to such loss, damage, injury, death or responsibility, including, but not limited to, court costs, fines and attorney's fees.

14. INSURANCE:

At all times while this Agreement remains in effect, and in recognition of the indemnification provided in the foregoing Paragraph 13, the Licensee shall, at its own cost and expense, maintain a program of third party liability insurance and/or self-insurance to protect the Village, its officers, employees and agents from any liability for bodily injury, death, and property damage occasioned by the activities of the Licensee under this Agreement.

a. During the Term of the Agreement. Licensee shall procure, pay for and maintain in full force and effect during the entire term of the agreement (i) worker's compensation insurance as required by law and which insures Village against worker's compensation claims arising out of Licensee's activities on the Tower; (ii) fire and casualty insurance covering Licensee's Improvements in an amount not less than one hundred percent (100%) of their actual replacement cost; and (iii) commercial general liability insurance, including broad form property damage insurance, for bodily injuries and property damage, in amounts not less than One Million

Dollars (\$1,000,000.00) per occurrence and Five Million Dollars (\$5,000,000.00) in the aggregate covering bodily injuries or property damage occurring on the Tower.

b. During Construction/Installation. During construction/installation, Licensee's contractor shall also maintain and provide Village with evidence of each of the insurance coverages specified in subparagraph (a) and in the amounts so specified. In addition, the contractor shall provide builder's risk insurance on an "all risks" basis for one hundred percent (100%) of the insurable value of all construction work in place or in progress from time to time, insuring the project, including materials in storage and while in transit, against loss or damage by fire or other casualty, with extended coverage, vandalism and malicious mischief coverage, bearing a replacement cost agreed amount endorsement.

c. Policies. The policy or policies of insurance required by subparagraphs (a) and (b) shall be underwritten by a company or companies authorized to do business in the State of Illinois, shall be reasonably satisfactory to Village, shall name Village as an additional insured and shall be delivered to the Village, together with evidence of the payment of the premiums, prior to the commencement of the term of this Agreement. Licensee or, where applicable, Licensee's contractors shall furnish Village with a written notice of any cancellation, reduction or modification of insurance required under this Section.

15. LIENS:

Licensee agrees that it will not permit or suffer any lien to be put upon or arise or accrue against the Property in favor of any person or persons, individual or corporate, furnishing either labor or material in any work herein proposed, and the Licensee further covenants and agrees to hold the Village and its property free from any and all liens, or rights or claim of lien, which may or might arise or accrue under or be based upon any mechanic's lien law of the State of Illinois. If any such lien or claim for lien is filed or recorded against the Property, the Village shall give Licensee notice thereof and demand that Licensee remove the same, or post adequate security to insure the removal of the same following the resolution of any dispute between Licensee and the lienholder, within thirty (30) days after such notice. Nothing in this provision shall restrict Licensee from granting a security interest in all or any part of Licensee's Improvements and to file of record UCC financing statements and/or fixture filings to perfect the same.

16. ASSIGNMENT AND SUBLEASING:

This Agreement may not be assigned or transferred without the express written consent of the Village, which shall not be unreasonably withheld, conditioned or delayed. The Village agrees to respond to any such request within thirty (30) days from receipt of the request. Any assignment or transfer without such written consent shall, at the option of the Village, be deemed to be void and of no effect. Provided, however, this Agreement may be assigned or transferred to Licensee's parent or an affiliate of Licensee without the Village's written consent as long as the Village is given written notice of the assignment or transfer within 30 days thereof.

17. HAZARDOUS SUBSTANCES:

a. The Village represents and warrants that it has no knowledge of any hazardous substance existing on the Property in violation of any applicable federal, State or local law, regulation or ordinance. The Village further agrees to hold Licensee harmless from and indemnify Licensee

against any damage, loss or expense or liability resulting from the existence on the Property of any such hazardous substance, including all attorney's fees and consultant fees, costs and penalties, incurred as a result thereof, unless caused by Licensee or any of its employees or agents.

b. Licensee represents and warrants that its use of the Licensed Premises will not generate any hazardous substance, and that it will not store or dispose on the Licensed Premises, nor transport to or over the Licensed Premises, any hazardous substance in violation of any applicable federal, State or local law, regulation or ordinance. Licensee further agrees to hold the Village harmless from and against and indemnify the Village against any release of such hazardous substance and any damage, loss, or expense or liability resulting from such release, including attorney's fees and consultant fees, costs and penalties, incurred as a result thereof, which was caused by Licensee or any of its employees or agents.

c. "Hazardous Substance" as used herein shall mean any substance or material defined or designated as hazardous or toxic waste, hazardous or toxic materials, hazardous or toxic radioactive substance, or other similar term by any federal, State or local environmental law, regulation or ordinance presently in effect or promulgated in the future.

18. COST OF ENFORCEMENT:

Should the Village prevail in an action or legal proceeding in court or mutually agreed upon arbitration proceeding to enforce the terms of this Agreement, it shall be entitled to receive its reasonable attorney's fees and other reasonable enforcement costs and expenses from the Licensee.

19. INVALIDITY:

If any section, paragraph, clause or provision of this Agreement shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the other provisions of this Agreement.

20. FORCE MAJEURE:

Neither party shall be deemed in violation of this Agreement for the delay in performance or failure to perform in whole or in part its obligations under this Agreement due to strike, war or act of war (whether an actual declaration is made or not), insurrection, riot, act of public enemy, fire, flood or other act of God or by other events to the extent that such events are caused by circumstances beyond such party's control.

21. NOTICES:

Unless otherwise specified herein, all notices under this agreement shall be made in writing and delivered to:

Village Manager
Village of Downers Grove
801 Burlington Avenue
Downers Grove, IL 60515-4776

T-MOBILE CENTRAL LLC
c/o T-Mobile USA, Inc.
12920 SE 38th Street
Bellevue, WA 98006
Attn: PCS Lease Administrator

With copies to:

T-MOBILE CENTRAL LLC
c/o T-Mobile USA, Inc.
12920 SE 38th Street
Bellevue, WA 98006
Attn: Legal Dept.

T-MOBILE CENTRAL LLC
c/o T-Mobile USA, Inc.
8550 W. Bryn Mawr
Chicago, IL 60631
Attn: Market Director

and

and

T-MOBILE CENTRAL LLC c/o T-Mobile
USA, Inc.
8550 W. Bryn Mawr Avenue
Chicago, Illinois, 60631
Attn: Lease Administration Manager

22. GOVERNING LAW:

This Agreement shall be governed by the laws of the State of Illinois.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the ____ day of _____, 2007.

T-MOBILE CENTRAL LLC

VILLAGE OF DOWNERS GROVE

By _____

By: _____

Mayor

Title: _____

ATTEST:

Subscribed and sworn to
this ____ day of _____, 2007.

Village Clerk

Notary Public

EXHIBIT 1

See attached plans

PREPARED BY: AG
CHECKED BY: AG
APPROVED BY: HMB

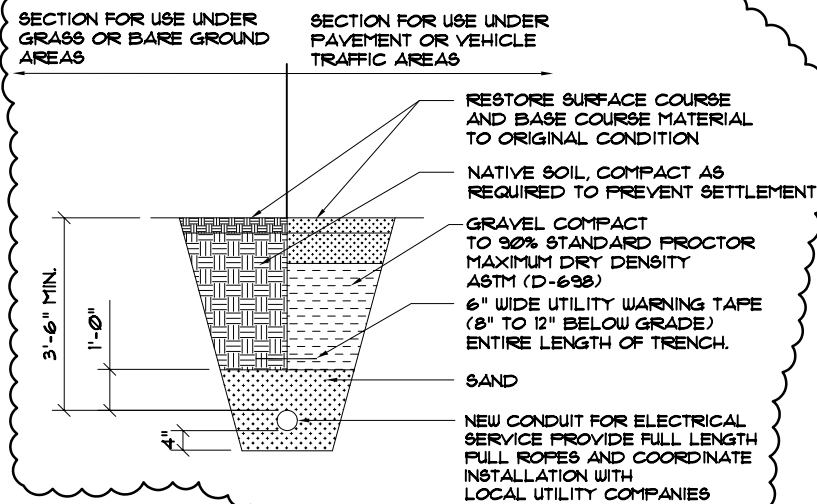
#	DATE	REVISIONS
	9/5/06	30% REVIEW
	9/28/06	PERMIT/CONSTRUCTION

DATE SIGNED: 9/28/06

SITE NAME DOWNERS GROVE WATER TANK
SITE NUMBER CH45-623A
SITE ADDRESS 3801 HIGHLAND AVE DOWNERS GROVE, IL 60515

SHEET TITLE UTILITY DETAILS

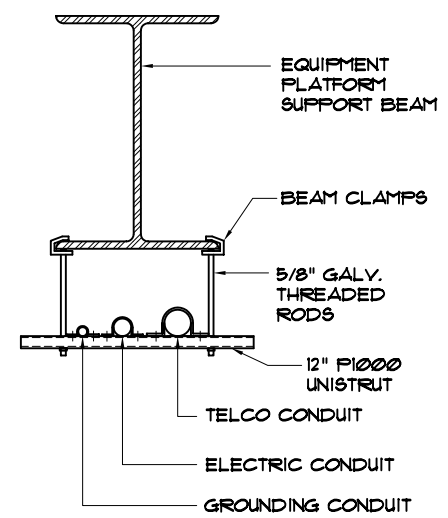
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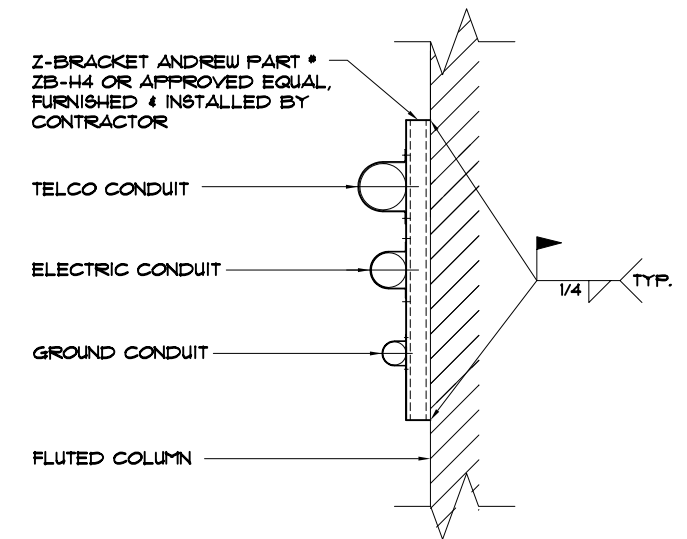
- CONTRACTOR TO VERIFY LOCAL UTILITY REQUIREMENTS FOR DEPTH, SIZE & SEPARATION OF CONDUITS PRIOR TO INSTALLATION. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR TO CALL JULIE (800) 892-0123 48 HRS PRIOR TO EXCAVATING FOR UNDERGROUND UTILITY LOCATIONS. LOCATION SURROUNDING EXCAVATED AREA MUST BE PRIVATELY LOCATED FOR NON-PUBLIC UTILITIES.



1 JOINT UTILITY TRENCH DETAIL
NTS

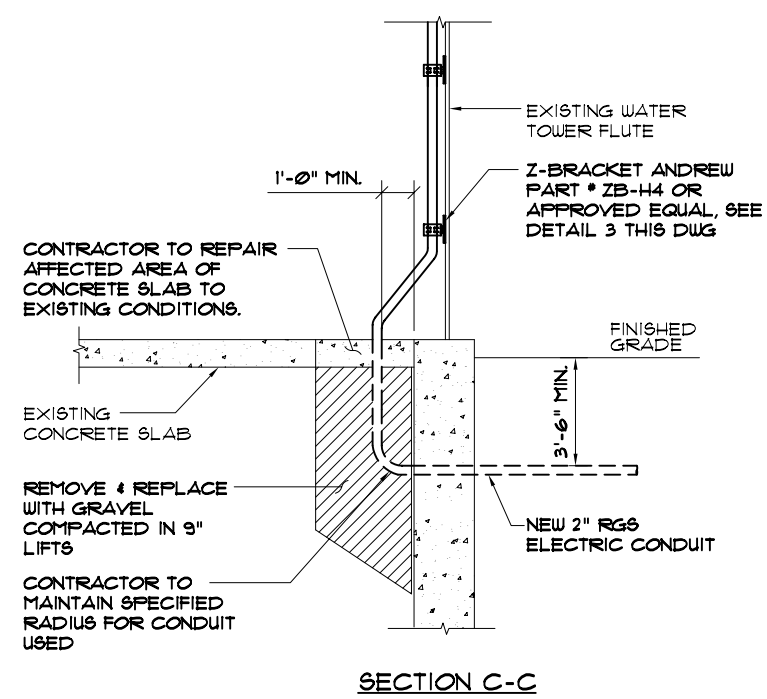
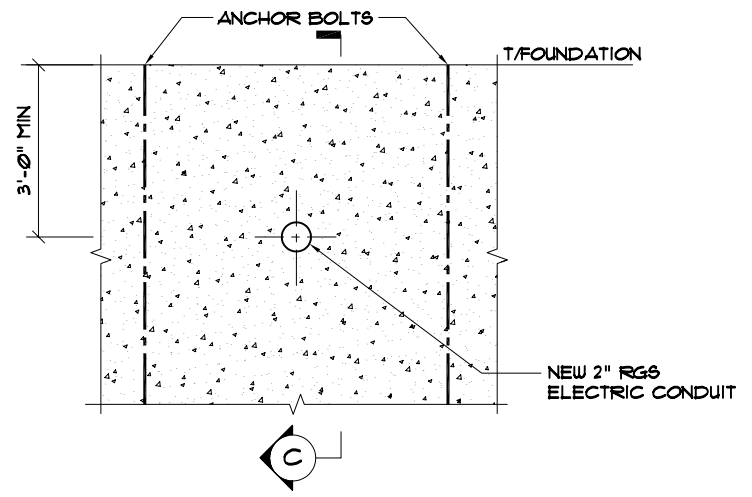


2 CONDUIT ATTACH. @ PL. BEAM
N.T.S.



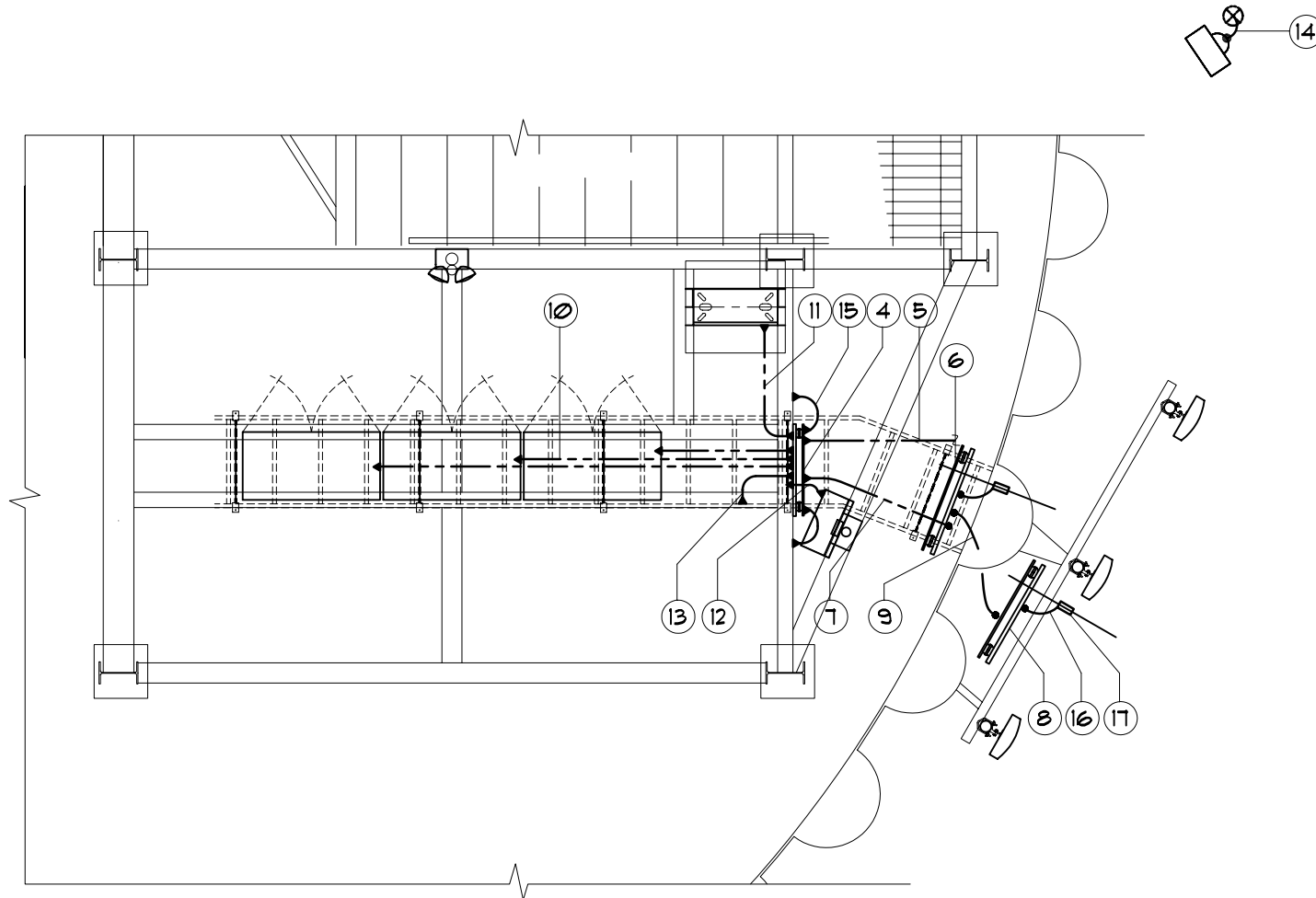
3 TYP. CONDUIT SUPPORT @ FLUTES
NTS

NOTE:
CONTRACTOR TO FIELD VERIFY REBAR LOCATION. REBAR IS NOT TO BE CUT



4 TOWER FOUNDATION PENETRATION
NTS

LEGEND	
	GROUND BAR
	5/8"φ x 10'-0" GROUND ROD
	GROUND SYSTEM TEST WELL
	CADWELDED OR APPROVED CONNECTION
	SPARE GROUND LEAD
	MECHANICAL CONNECTION
	EXISTING GROUNDING
	NEW GROUNDING



KEY NOTES:

1. NOT USED
2. NOT USED
3. NOT USED
4. COLLECTOR GROUND BAR ATTACHED TO PLATFORM
5. NEW #2/0 GROUND WIRE IN RGS CONDUIT FROM COLLECTOR GROUND BAR TO EXISTING WATER TANK GROUNDING RING
6. LOWER GROUND BAR (4"x24") COPPER GROUND BAR LOCATED @ WATER TANK SHAFT

7. #2 SOLID, TINNED BARE COPPER GROUND WIRE FROM LOWER GROUND BAR TO COLLECTOR GROUND BAR
8. SECTOR GROUND BAR (4"x24") COPPER GROUND BAR LOCATED BELOW ANTENNA MOUNTS (TYP. OF 3)
9. #2 SOLID, TINNED BARE COPPER GROUND WIRE FROM SECTOR GROUND BAR TO LOWER GROUND BAR
10. #2 AWG GROUND WIRE FROM BTS CABINETS TO COLLECTOR GROUND BAR
11. #2 AWG GROUND WIRE FROM INDOOR POWER RACK TO COLLECTOR GROUND BAR
12. #2 AWG GROUND WIRE FROM LOAD CENTER TO COLLECTOR GROUND BAR
13. #2 AWG GROUND WIRE FROM CABLE TRAY TO COLLECTOR GROUND BAR
14. 5/8"φ x 10'-0" COPPER CLAD GROUND ROD FOR INDEPENDENT ELECTRICAL SERVICE
15. #2 AWG GROUND WIRE FROM EQUIPMENT PLATFORM TO COLLECTOR GROUND BAR (2 REQUIRED)
16. #6 AWG STRANDED INSULATED GROUND WIRE FROM GROUNDING KIT TO GROUND BAR (TYPICAL ALL CABLES)
17. NEW GROUND KIT (TYP.)

SITE GROUNDING PLAN

NTS



GENERAL NOTES:

1. PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB.
2. IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE MORE RESTRICTIVE NOTE, SPECIFICATION OR CODE SHALL PREVAIL.
3. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS & AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.
4. ELECTRICAL WORK SHALL INCLUDE, BUT NOT LIMITED TO, ALL LABOR MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANEL BOARDS, CONDUITS, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS OR AS REQUIRED BY CODE.
5. ALL WORK SHALL COMPLY WITH ANY LOCAL ORDINANCES, CODES, AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION.
6. ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE (U.L.) LISTED, NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS & LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.
7. ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, AND SHALL RESTORE ALL EXISTING LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS, WIRING, PIPING, ETC. DAMAGED BY THE ELECTRICAL WORK TO ORIGINAL OR BETTER CONDITION.
8. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, & FALL OF POTENTIAL GROUND TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO P. M. CLEAN SITE OF ALL DEBRIS RESULTING FROM WORK AND LEAVE IN A COMPLETE AND UNDAMAGED CONDITION.
9. ALL BROCHURES, MANUALS, CATALOGS, SHOP DRAWINGS, ETC., SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION.

SERVICE EQUIPMENT NOTES:

1. SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT RATING EQUAL TO OR EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL.
2. ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO WITHSTAND 80 M.P.H. WIND SPEED, EXPOSURE C.
3. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT UV STABLE, WEATHER PROOF, ENGRAVED PLASTIC LABELS.
4. REPAIR ANY EQUIPMENT PAINT SURFACE THAT HAS BEEN DAMAGED IN THE COURSE OF INSTALLATION.

GROUNDING NOTES:

1. GROUND RODS SHALL BE INSTALLED NOT MORE THAN 10 FOOT APART.
2. GROUND RODS SHALL BE INSTALLED 42" MIN. BELOW GRADE.
3. ALL BELOW GRADE GROUND RINGS AND GROUND LEADS SHALL BE #2 AWG SOLID, TINNED BARE COPPER WIRE.
4. ALL BELOW GRADE CONNECTIONS SHALL BE EXOTHERMIC WELDS.
5. UNLESS PROVIDED W/ A FACTORY APPLIED LEAD, ALL CONNECTIONS TO GROUND BARS SHALL BE BURNDY HYGROUND COMPRESSION LUGS OR EQUAL.
6. STEEL SHALL BE TO BARE METAL. GRIND GALV. FINISH OR PAINT OFF PRIOR TO WELDING, REPAIR GALV. FINISH OR PAINT AS REQUIRED, MATCH PAINT COLOR.
7. ALL LUG CONNECTORS SHALL BE 2 HOLE LONG BARREL COMPRESSION TYPE OR APPROVED EQUAL.
8. ALL HARDWARE TO ATTACH MECHANICAL GROUND CONNECTIONS SHALL BE STAINLESS STEEL.
9. ALL MECHANICAL CONNECTIONS SHALL HAVE NOAX OR APPROVED EQUAL APPLIED BETWEEN COMPRESSION LUG AND FIXTURE.

T-Mobile

8550 West Bryn Maur Ave.
Suite 100, Chicago, IL 60631
Office: (773) 444-5400
Fax: (773) 444-5521

THIS DOCUMENT AND INFORMATION HEREIN IS THE PROPERTY OF T-MOBILE. THE DOCUMENT AND INFORMATION SHALL NOT BE REPRODUCED, USED OR DISCLOSED WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF T-MOBILE.

Fullerton
Engineering Consultants

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APPROVED BY: HMB

#	DATE	REVISIONS
	9/5/06	90% REVIEW
	9/28/06	PERMIT/CONSTRUCTION

DATE SIGNED: 9/28/06

SITE NAME
**DOWNERS GROVE
WATER TANK**

SITE NUMBER
CH45-623A

SITE ADDRESS
3801 HIGHLAND AVE
DOWNERS GROVE, IL 60515

SHEET TITLE
**SITE GROUNDING
PLAN & NOTES**

SHEET NUMBER

EG-1

T-Mobile

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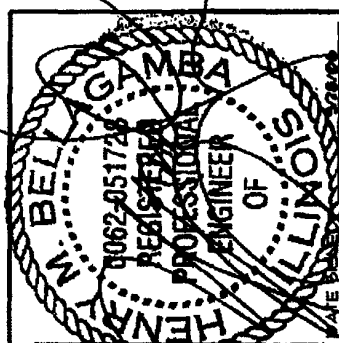
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#	DATE	REVISIONS
1	9/5/06	90% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
**3901 HIGHLAND AVE
DOWNERS GROVE, IL 60515**

SHEET TITLE
**ANTENNA /
COAX DETAILS**

SHEET NUMBER
ANT-2

ANTENNA SCHEDULE

SECTOR	A	B	C
INITIAL ANTENNAS PER SECTOR	3	3	3
RESERVED ANTENNAS PER SECTOR	0	0	0
ANTENNA MFR	EM9	EM9	EM9
ANTENNA MODEL NO.	DR65-15-0215G	DR65-15-0215G	DR65-15-0215G
AZIMUTH	30°	170°	240°
ELECTRICAL DOWNTILT	2°	2°	2°
MECHANICAL DOWNTILT	0°	0°	0°
DOWNTILT BRACKET MODEL NO.	DOWNTILT BRACKET	DOWNTILT BRACKET	DOWNTILT BRACKET

NOTES:

- LABEL EACH ANTENNA FRONT & BACK W/ BLACK LETTERING AS SHOWN IN ANTENNA PLATFORM ELEVATION. LETRASET BRAND, 3" HIGH, OUT-DOOR LETTERING OR APPROVED EQUAL, TO BE USED. LETTERING TO BE VISIBLE FROM GROUND USING BINOCULARS.
- CONTRACTOR TO VERIFY W/ T-MOBILE RF ENGINEER, ANTENNA TYPE, FINAL AZIMUTH AND DOWNTILT PRIOR TO INSTALLATION.

COAX SCHEDULE

SECTOR	FUNCTION	DIAMETER	LENGTH
A	LNA JUMPER (TO ANTENNA)	1/2"	3'-0"
	LNA JUMPER (FROM COAX)	1/2"	6'-0"
	ANTENNA JUMPER	1/2"	6'-0"
B	MAIN COAX	1/8"	15'-0"
	BT9 JUMPER	1/2"	8'-0"
	LNA JUMPER (TO ANTENNA)	1/2"	3'-0"
C	LNA JUMPER (FROM COAX)	1/2"	6'-0"
	ANTENNA JUMPER	1/2"	6'-0"
	MAIN COAX	1/8"	30'-0"

* FIELD FABRICATE BT9 JUMPERS

MAIN COAX COLOR CODE SCHEDULE

SECTOR	FUNCTION	REFERENCE	ANTENNA	# OF RINGS COLOR
A	TX/RX MAIN TX2/RX DIVERSITY	MAIN	A1	1 RED
		SECONDARY	A2	2 RED
		RESERVE	A1	3 RED
		RESERVE	A2	4 RED
		RESERVE	A1	5 RED
		RESERVE	A2	6 RED
		RESERVE	A1	7 RED
		RESERVE	A2	8 RED
		RESERVE	A3	9 RED
		RESERVE	A3	10 RED
		RESERVE	A3	11 RED
		RESERVE	A3	12 RED
B	TX/RX MAIN TX2/RX DIVERSITY	MAIN	B1	1 BLUE
		SECONDARY	B2	2 BLUE
		RESERVE	B1	3 BLUE
		RESERVE	B2	4 BLUE
		RESERVE	B1	5 BLUE
		RESERVE	B2	6 BLUE
		RESERVE	B1	7 BLUE
		RESERVE	B2	8 BLUE
		RESERVE	B3	9 BLUE
		RESERVE	B3	10 BLUE
		RESERVE	B3	11 BLUE
		RESERVE	B3	12 BLUE
C	TX/RX MAIN TX2/RX DIVERSITY	MAIN	C1	1 WHITE
		SECONDARY	C2	2 WHITE
		RESERVE	C1	3 WHITE
		RESERVE	C2	4 WHITE
		RESERVE	C1	5 WHITE
		RESERVE	C2	6 WHITE
		RESERVE	C1	7 WHITE
		RESERVE	C2	8 WHITE
		RESERVE	C3	9 WHITE
		RESERVE	C3	10 WHITE
		RESERVE	C3	11 WHITE
		RESERVE	C3	12 WHITE

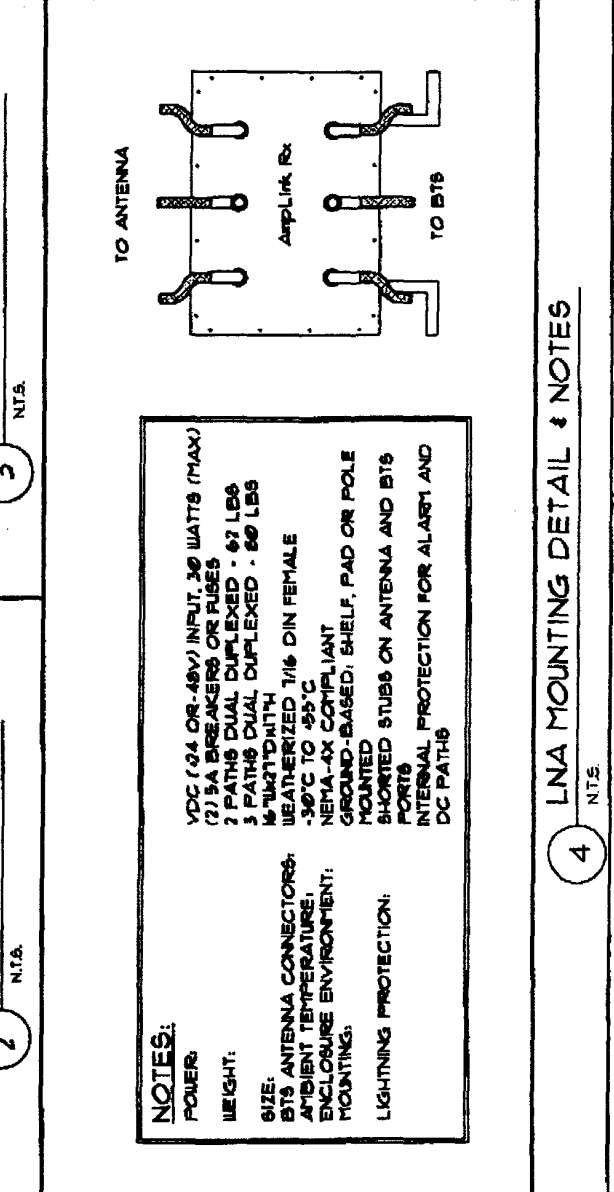
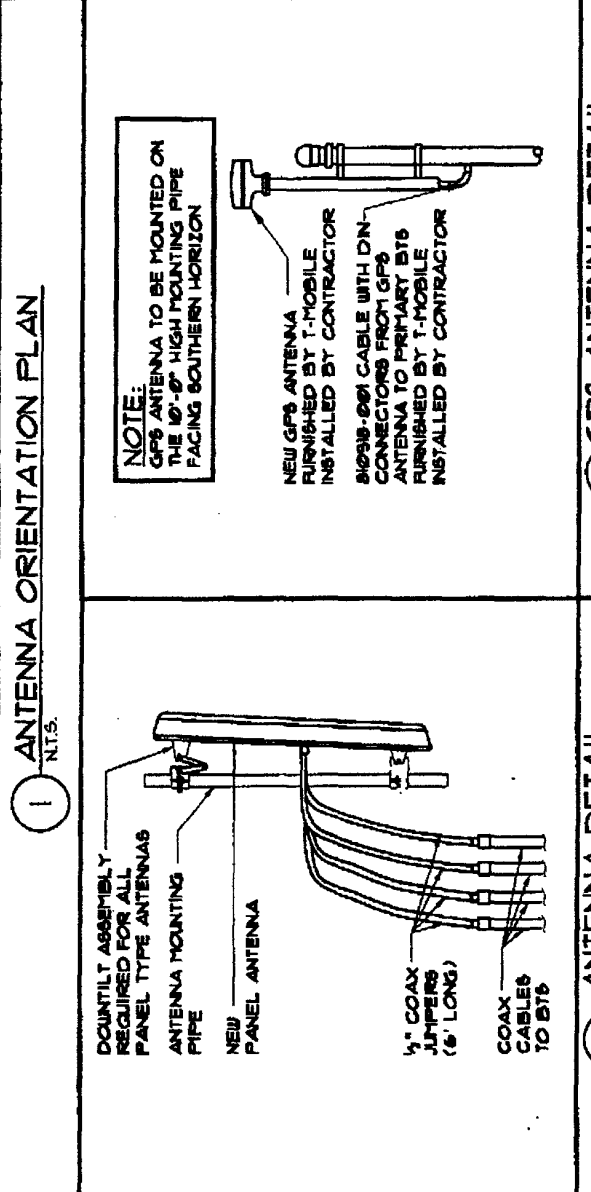
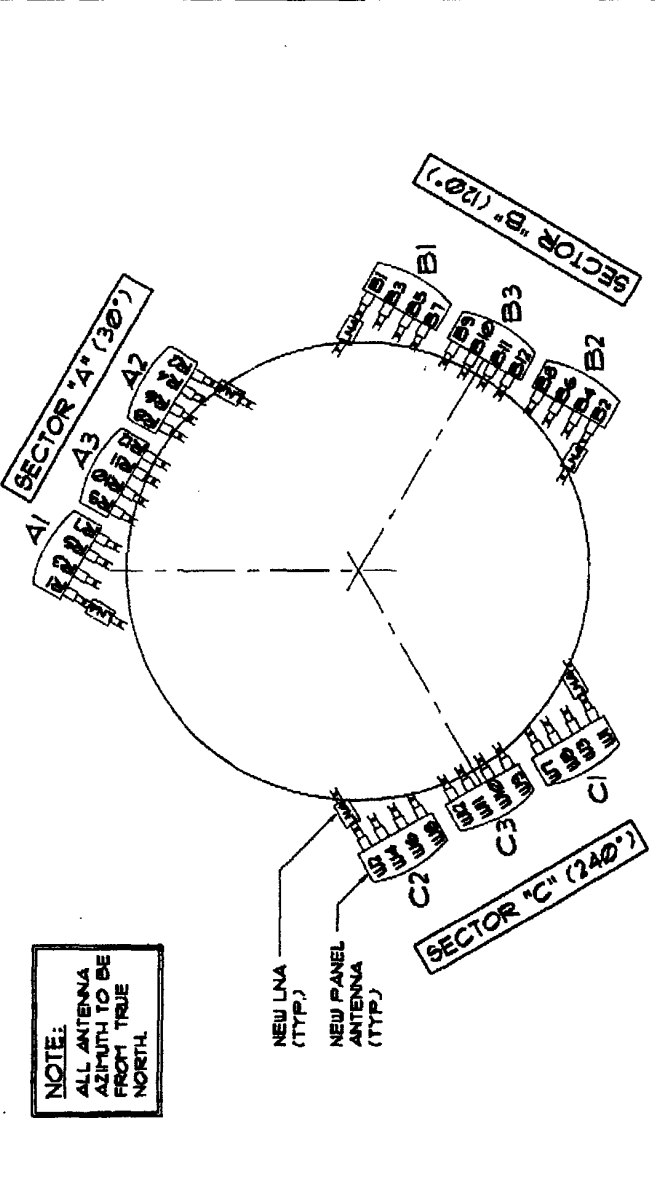
NOTES:

- COAX CABLE AND JUMPERS SHALL BE MARKED AT BOTH THE TOP AND THE BOTTOM, 10' FROM EACH END.
- TAPES RINGS MUST BE VISIBLE (WITH BINOCULARS) FROM GROUND AND BE COLORED IN ACCORDANCE WITH THE ABOVE TABLE.

COAX MATERIAL TABLE

ITEM	QTY	AVAIL
MAIN FEEDER COAX RUN LENGTH	656'	AVAIL-50
ANTENNA JUMPER LENGTH	6'-0"	AVAIL-50
LNA JUMPER LENGTH FROM COAX	6'-0"	AVAIL-50
ANTENNA JUMPER LENGTH TO ANTENNA	3'-0"	AVAIL-50
BT9 JUMPER LENGTH	8'-0"	AVAIL-50

ANTENNA SPECIFICATION & NOTES



DOM 10-20-06
10-20-06

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SITE NAME

DOWNERS GROVE WATER TANK

SITE NUMBER

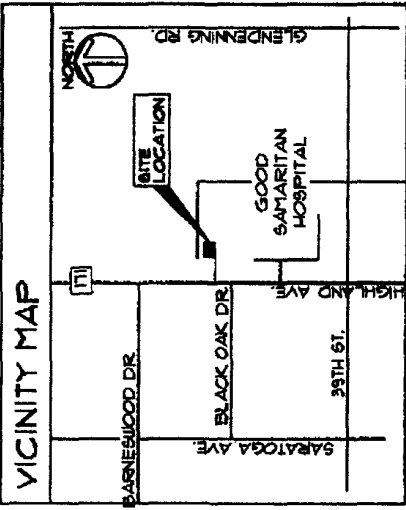
CH45-623A

SITE ADDRESS

**3801 HIGHLAND AVE.
DOWNERS GROVE, IL 60515**

PROJECT TYPE

**(9) NEW ANTENNAS WITH (36) COAX RUNS
ON EXISTING 128' HIGH WATER TANK
& (3) NEW INDOOR 51200 CABINETS INSIDE WATER TANK
ON NEW ELEVATED STEEL PLATFORM**



DIRECTIONS TO SITE

FROM T-MOBILE OFFICE (8550 W. BERTN MAUR AVENUE)
TURN LEFT ONTO SR-171, TAKE RAMP ONTO I-55
TOWARDS I-55/10 HARE/ROCKFORD KEEP RIGHT
ONTO I-55, AT EXIT 10, TURN LEFT ONTO RAMP
TOWARDS I-294/INDIANA TURN RIGHT ONTO RAMP
TOWARDS I-89/AURORA, MERGE ONTO I-89, TURN
RIGHT ONTO RAMP TOWARDS HIGHLAND AVE, TURN
LEFT (SOUTH) ONTO HIGHLAND AVE FOR 1 MILE AND
ARRIVE @ SITE.

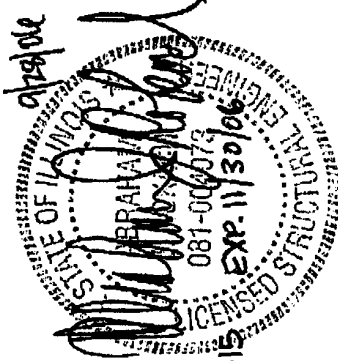
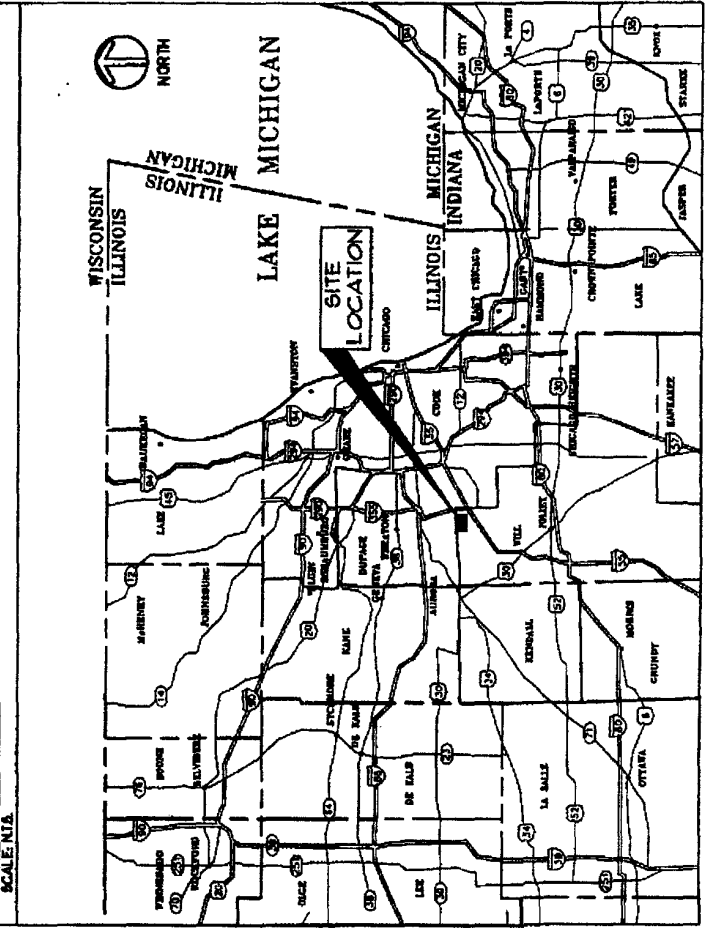
SITE COORDINATES

EXISTING WATER TANK LOCATION:
(FROM 2C LETTER)
LATITUDE: NORTH 41° 49' 12.24" NAD 83
LONGITUDE: WEST 88° 00' 34.33" NAD 83
GROUND ELEVATION AT TANK BASE = 145' A.M.S.L.

HANDICAPPED REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN
HABITATION. HANDICAP ACCESS REQUIREMENTS
NOT REQUIRED.
PLUMBING REQUIREMENTS
FACILITY HAS NO PLUMBING.

SITE LOCATION



SHEET INDEX

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
T-2	BILL OF MATERIALS
86	SITE SURVEY (1 OF 2)
86	SITE SURVEY (2 OF 2)
C-1	SITE PLAN
C-2	ENLARGED SITE PLAN & DETAILS
C-3	GENERAL NOTES & CONDITIONS
C-4	SITE DETAILS
ANT-1	SITE ELEVATION & ANTENNA DETAILS
ANT-2	ANTENNA / COAX DETAILS
ANT-3	ANTENNA MOUNTING DETAILS
8-1	PLATFORM PLAN & NOTES
8-2	STRUCTURAL DETAILS
8-3	CONNECTION DETAILS
E-1	UTILITY SITE PLAN
E-2	UTILITY DETAILS
E-3	ONE-LINE DIAGRAM & ELECTRICAL NOTES
EG-1	SITE GROUNDING PLAN & NOTES
EG-2	GROUNDING DETAILS
EG-3	GROUNDING DETAILS

PROJECT SUMMARY

SITE NO.	CH45-623A
SITE NAME	DOWNERS GROVE WATER TANK
SITE ADDRESS	3801 HIGHLAND AVE. DOWNERS GROVE, IL 60515
PIN	9-20-356-014
COUNTY	DUPAGE
JURISDICTION	VILLAGE OF DOWNERS GROVE
ZONING	FUD
BUILDING CODE	IBC, INTERNATIONAL BUILDING CODE, 2003 EDITION
PROPERTY OWNER	VILLAGE OF DOWNERS GROVE DAVE YELTON (630) 371-6148
APPLICANT	T-MOBILE 8550 W. BERTN MAUR, SUITE 100 CHICAGO, IL 60631
T-MOBILE CONSTRUCTION MANAGER	TIM MICHALIK TEL: (773) 444-5404
RF ENGINEER	SATISH BHAT TEL: (773) 444-5400

APPROVALS

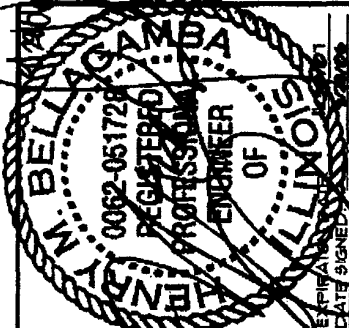
REAL ESTATE	DATE
ZONING	DATE
CONSTRUCTION	DATE
RF	DATE
NETWORK	DATE
OPERATIONS	DATE
LANDLORD	DATE

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#	DATE	REVISIONS
1	9/20/06	10% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
**3801 HIGHLAND AVE
DOWNERS GROVE, IL 60515**

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1



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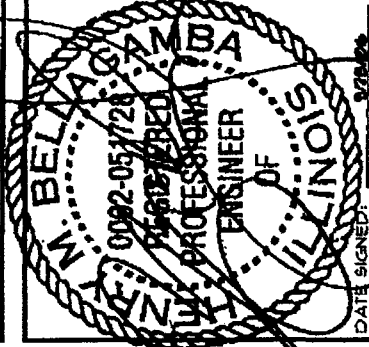
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#	DATE	REVISIONS
	5/2/04	50% REVIEW
	5/28/04	PERMIT/CONSTRUCTION



SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
**3801 HIGHLAND AVE
DOWNERS GROVE, IL 60919**

SHEET TITLE

BILL OF MATERIALS

SHEET NUMBER

T-2

BILL OF MATERIALS

QTY	DESCRIPTION	MODEL *	MANUFACTURER	QUANTITY
	512000 5000 0D MAIN, AXK CSU, NO RADIOS B15	NTD5 25AB	NORTEL	N/A
	512000 5000 0D EXT, AXIU CSU, NO RADIOS B15	NTD5 25AB	NORTEL	N/A
	512000 EXP. B15	NTD5 25CB	NORTEL	N/A
	512000 INDOOR MAIN B15	NTD5 259A	NORTEL	3
	50AMP RECTIFIER	IFR170040VNR		
	4194 ASCU CONTROLLER - US R2 VER	DCPUR48V50 AYAL		
	1M CABLE ASSEMBLY FOR R2 ANTENNA	ATC200-LITE	ANDREW	
	3M CABLE ASSEMBLY FOR R2 ANTENNA	ATCB-B01-001	ANDREW	
	6M CABLE ASSEMBLY FOR R2 ANTENNA	ATCB-B01-003	ANDREW	N/A
	9M CABLE ASSEMBLY FOR R2 ANTENNA	ATCB-B01-006	ANDREW	N/A
	12M CABLE ASSEMBLY FOR R2 ANTENNA	ATCB-B01-009	ANDREW	N/A
	15M CABLE ASSEMBLY FOR R2 ANTENNA	ATCB-B01-012	ANDREW	N/A
	JUNCTION BOX (4 WAY) FOR R2 ANTENNA	ATCB-B01-015	ANDREW	N/A
	LIGHTNING PROTECTION KIT FOR R2 ANTENNA	ATL7100-001	ANDREW	N/A
	Y-SPLITTER FOR R2 ANTENNA	AT5-A01-002	ANDREW	N/A
	3-WAY SPLITTER (QUAD PORTS) FOR R2 ANTENNA	AT5-A01-003	ANDREW	N/A
	ANTENNA 65' 10.5 DBI 2' EDT DUAL POL	DR65102DFQ	ENH5	5
	ANTENNA 65' 10.5 DBI 4' EDT QUAD	DR65104DFQ	ENH5	N/A
	ANTENNA 65' 19.0 DBI 0' DT CROSSPOL	RR1902DF5	ENH5	N/A
	ANTENNA 65' 19.5 DBI 2' EDT CROSS	RR1902DF5	ENH5	N/A
	1/2" AYA COAX CABLE 50 OHM	AVAS-50	ANDREW	4260
	1-1/2" AYA COAX CABLE 50 OHM	AVAT-50	ANDREW	N/A
	CONNECTOR AYA 1/2" DF POSITIVE STOP	A5DF-F5	ANDREW	12
	TOP/BOTTOM BUSS BAR KIT WITH ATTACHMENTS	A1DF-F5	ANDREW	N/A
	TOP BUSS BAR KIT WITH ATTACHMENTS	MITC611	ANDREW	3
	GROUNDING KIT FOR CONTROL CABLE RI VER	MITC6114	ANDREW	3
	GROUND KIT 1/2" HOLE LUG	602299	ANDREW	N/A
	GROUND KIT 1/4" HOLE LUG	94L5-0652	ANDREW	108
	HANGERS, BUTTERFLY 1/2" GTY 10	25219	ANDREW	N/A
	HANGERS, SNAP-IN 1/2" KIT OF 10	55H-12	ANDREW	18
	1-1/2" SNAP STACK HANGERS, KIT OF 10	55H-15	ANDREW	N/A
	HANGERS, SNAP-IN 1/4" KIT OF 10	55H-18	ANDREW	80
	HOIST GRIP FOR 1/2" CABLE	192565	ANDREW	N/A
	HOIST GRIP FOR 1-1/2" CABLE	24312A	ANDREW	N/A
	JUMPER 3' SUPERFLEX DIN MALE	F4A-FD10M-0-1MB	ANDREW	36
	JUMPER 3' SUPERFLEX DM TO DM LOW VSUR	L4A-FD10M-3-1BA	ANDREW	3
	JUMPER 6' SUPERFLEX DM TO DM LOW VSUR	L4A-FD10M-6-1BA	ANDREW	36
	NTI PFC BASE FOR OVER AND UNDER PFC	0602061-00	NTI	N/A
	200 AMP OVER AND UNDER PFC AND TELCO	C5157 10336	NTI	
	THREE SECTOR FULLBAND INDOOR NORTEL LNA KIT	P1WAYFB-3NT80000BP-3		
	WEATHERPROOFING KIT FOR CONNECTORS	21213	ANDREW	1
	110 AMP IIR BATTERIES	BC-1V10 FT4	ANDREW	36
	MONOPOLE MOUNTING PLATFORM FOR 30"-60" *	MC-PA12L-9-12	ANDREW	0
	MONOPOLE MOUNTING PLATFORM FOR 10"-30" *	MC-PA12S-9-12	ANDREW	N/A
	FLAT ROOFTOP BALLST MOUNTD SECTOR FRAME	RF-N12-4-12	ANDREW	N/A
	FLAT ROOFTOP BALLST MOUNTD SECTOR FRAME	RF-N12-3-12	ANDREW	N/A
	WAVEGUIDE BRIDGE 45' CORNER FILLER	WB-CF45	ANDREW	N/A
	WAVEGUIDE BRIDGE 90' CORNER FILLER	WB-CF90	ANDREW	N/A
	WAVEGUIDE BRIDGE KIT DIRECT BURIAL POST	WB-K10-B	ANDREW	N/A

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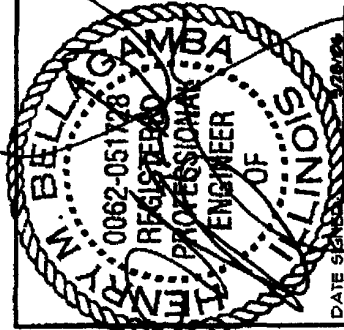
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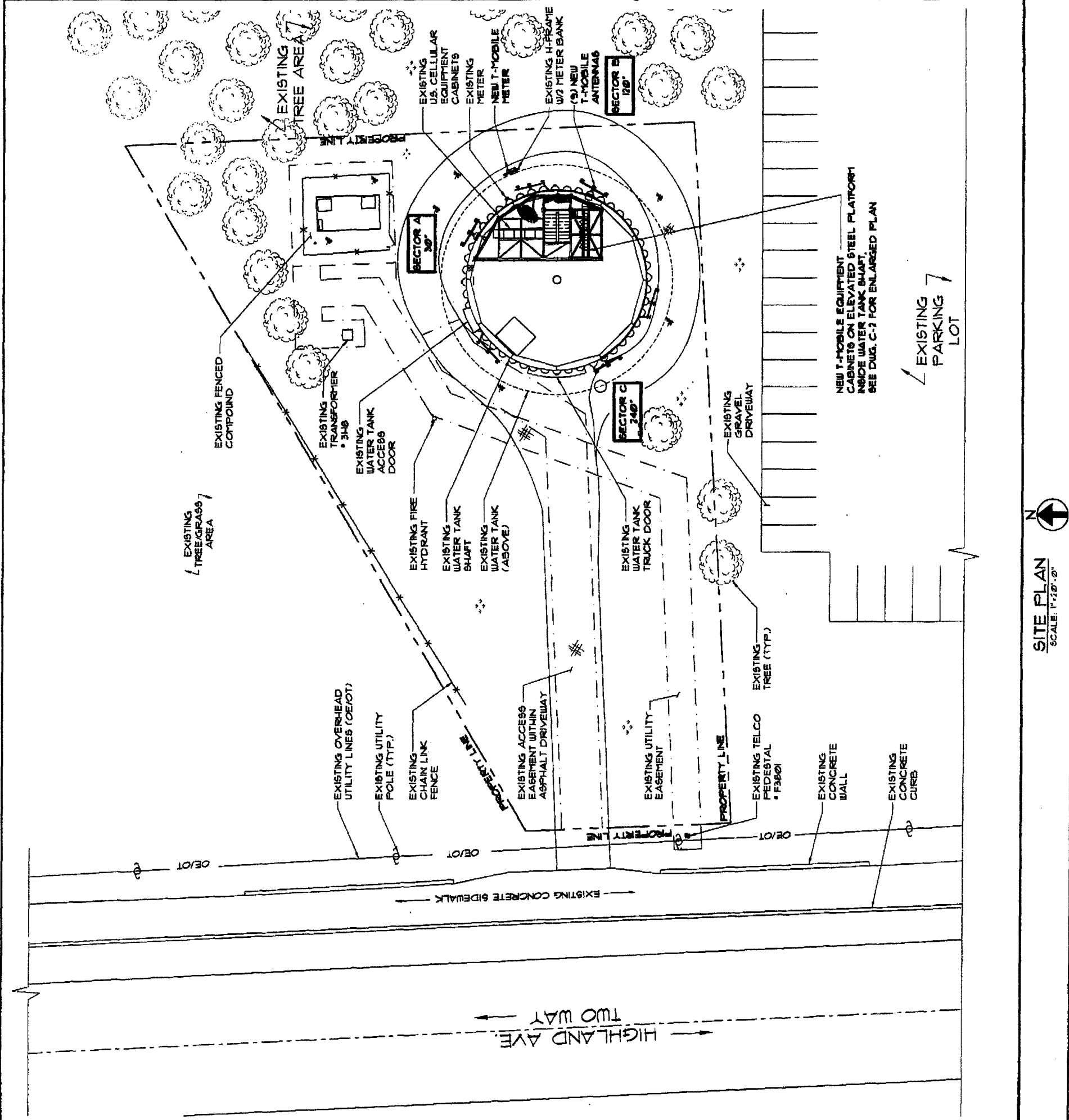
#	DATE	REVISIONS
1	9/15/06	50% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



SITE NAME DOWNERS GROVE WATER TANK
SITE NUMBER CH45-623A
SITE ADDRESS 3001 HIGHLAND AVE DOWNERS GROVE, IL 60015

SHEET TITLE SITE PLAN

SHEET NUMBER C-1



ABBREVIATIONS

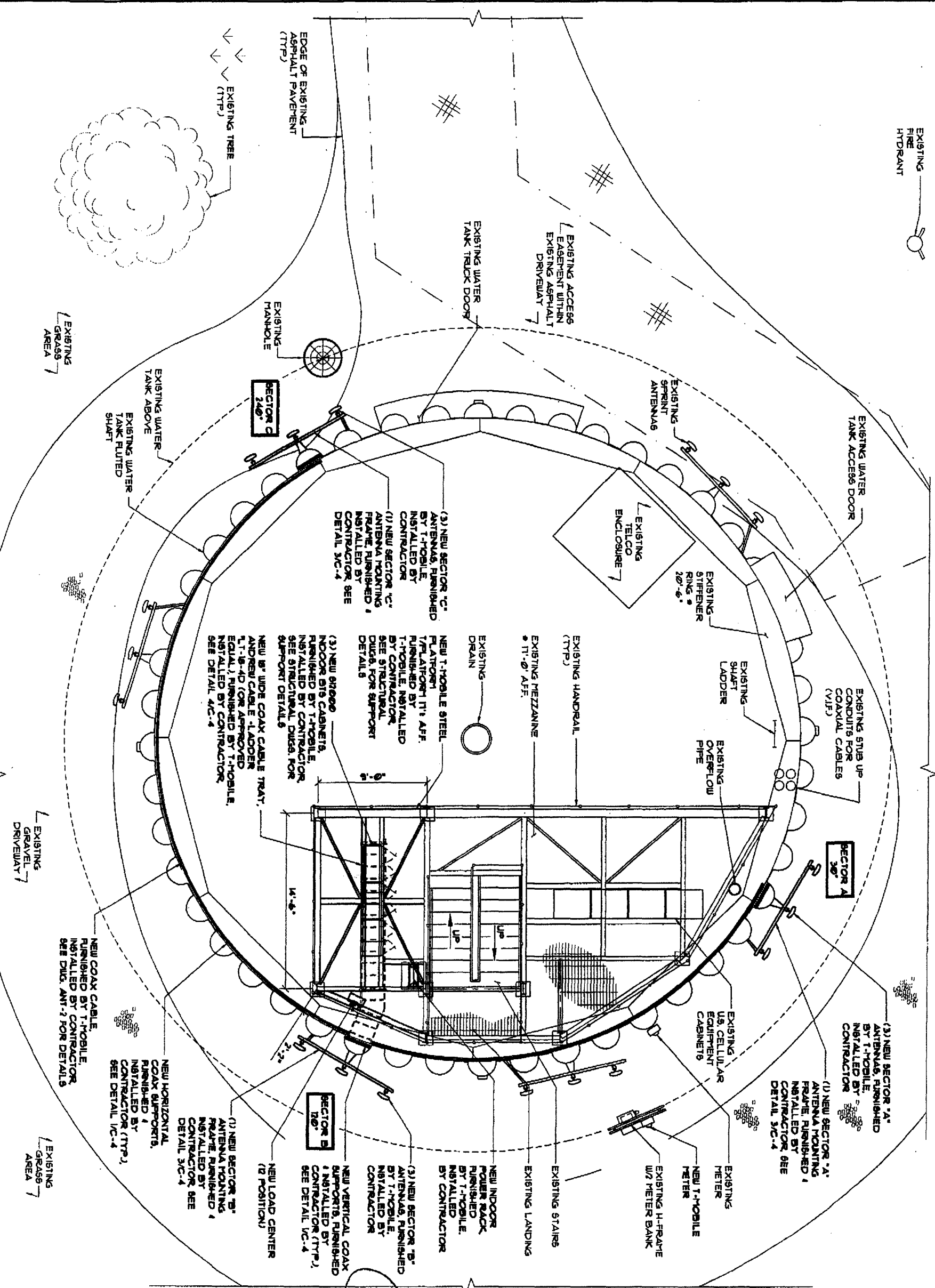
AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GRADE LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
AUG	AMERICAN WIRE GAUGE
BLDG	BUILDING
BTB	BASE TRANSMISSION STATION
CCD	CITY OF CHICAGO DATA
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
DWG	DRAWING
FT	FOOT(FEET)
EGG	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXIST	EXISTING
EXT	EXTERIOR
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
MAX	MAXIMUM
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
NTS	NOT TO SCALE
O.C.	ON CENTER
OE/OT	OVERHEAD ELECTRIC/TELCO
PCS	PERSONAL COMMUNICATIONS SERVICES
RGS	RIGID GALVANIZED STEEL
N	INCHES
INT	INTERIOR
LB/FT	POUNDS/FOOT
BF	SQUARE FOOT
STL	STEEL
TYP	TYPICAL
UNGT	UNDERGROUND ELECTRIC/TELCO
UNL	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W	WITH
XTR	TRANSFORMER
CL	CENTERLINE
PL	PLATE

SYMBOLS

○	UTILITY POLE
●	WORK POINT
△	REVISION
▨	MASONRY
▩	BRICK
▧	CONCRETE
▦	EARTH
▨	STEEL
▩	GRAVEL
---	CENTER LINE
---	PROPERTY LINE
---	LEASE LINE
---	EASEMENT LINE
-X-	CHAIN LINK FENCE
-D-	WOOD FENCE
-UE-	BELLOU GRADE ELECTRIC
-UT-	BELLOU GRADE TELEPHONE
-OE/OT	OVERHEAD ELECTRIC/TELEPHONE
⬅	SECTION REFERENCE

SITE PLAN
SCALE: 1"=20'-0"

EXISTING FIRE HYDRANT



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APPROVED BY: HTB

#	DATE	REVISIONS
5/24/06	5/24/06	5/24/06
5/24/06	5/24/06	5/24/06

REGISTERED PROFESSIONAL ENGINEER
OF ILLINOIS
8092-051128-0000
DATE SIGNED: 5/24/06

SITE NAME: DOWNERS GROVE WATER TANK
SITE NUMBER: CH45-623A
SITE ADDRESS: 3601 HIGHLAND AVE, DOWNERS GROVE, IL 60515

SHEET TITLE: ENLARGED SITE PLAN

SHEET NUMBER: C-2

ENLARGED SITE PLAN
SCALE: 1/8"=1'-0"

GENERAL NOTES:

HEALTH AND SAFETY
 CONTRACTOR SHALL PROVIDE ALL SAFETY EQUIPMENT AND FALL PROTECTION TO INSURE THE SAFETY OF ON-SITE PERSONNEL DURING CONSTRUCTION. ACCESS TO THE TANK INTERIOR WATER COMPARTMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE WATER DEPARTMENT SUPERVISOR. PRECAUTIONS SHALL BE TAKEN TO PREVENT WATER CONTAMINATION. THE PAINT SYSTEM SHALL BE CHECKED FOR HAZARDOUS METALS. WHERE HAZARDOUS METALS ARE FOUND IN THE PAINT SYSTEM, THE ENVIRONMENT AND WORKERS MUST BE PROTECTED FROM CONTAMINATION.

GENERAL WELDING

1. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D100 SEC. 8, WELDING, SEC. 10, ERECTION AND SEC. 11, INSPECTION AND TESTING.
2. ALL WELDS TO THE TANK SURFACE SHALL BE MADE WITH E7018 LOW HYDROGEN ROD AND SHALL BE SHOOT AND FREE OF BURRS AND UNDERCUTS. UNACCEPTABLE WELDS SHALL BE REPAIRED AS REQUIRED TO MEET AWS D100 REQUIREMENTS.
3. NO WELDING SHALL BE DONE WHEN THE AMBIENT TEMPERATURE IS BELOW 32 DEGREE FAHRENHEIT UNLESS THE REQUIREMENTS OF AWS D100, SEC 10.2.1 ARE FOLLOWED.
4. WELDING MAY CAUSE BLISTERS OF THE INTERIOR PAINT OPPOSITE THE WELD. DAMAGED PAINT SURFACES SHOULD BE REPAIRED PER WATER TANK OWNER SPECIFICATIONS. CONTRACTOR SHALL COORDINATE ALL PAINT MATERIALS & METHODS WITH OWNER PRIOR TO WORK BEING DONE.
5. GALVANIZED COMPONENTS SHALL NOT BE WELDED DIRECTLY TO THE TANK SURFACE.
6. ALL WELDS IN THE TANK AND STRUCTURAL ATTACHMENTS SHALL BE MADE IN A MANNER TO ENSURE COMPLETE FUSION WITH THE BASE METAL WITHIN THE LIMITS SPECIFIED FOR EACH JOINT, AND IN STRICT ACCORDANCE WITH THE QUALIFIED WELDING PROCEDURE SPECIFICATIONS.

1. ALL WELDS FOR ANTENNA INSTALLATION SHALL BE SEAL WELDS.
 2. CONTRACTOR SHALL REPAIR ALL DAMAGED PAINT AREAS OF TANK DUE TO CUTTING, WELDING AND GRINDING, DUE TO THE GENERATION OF METAL FILINGS WHICH WILL STAIN THE TANK SURFACES IF NOT CLEANED OFF IN A TIMELY MANNER. CONTRACTOR SHALL REMOVE ALL METAL FILINGS IMMEDIATELY. DAMAGED PAINT SURFACES SHOULD BE REPAIRED PER WATER TANK OWNER SPECIFICATIONS. CONTRACTOR SHALL COORDINATE ALL PAINT MATERIALS & METHODS WITH TANK OWNER PRIOR TO WORK BEING DONE.

PAINING

SURFACE PREPARATION (EXTERIOR & DRY INTERIOR)

- ABRASIVE BLAST CLEAN ALL NEW STEEL COMPONENTS TO AN SSPC-SP9 "COMMERCIAL BLAST CLEANING" CONDITION PRIOR TO APPLICATION OF PRIMER COAT.
- AFTER WELDING OR CUTTING, CLEAN ALL DAMAGED SURFACES IN ACCORDANCE WITH SSPC-SP3 "POWER TOOL CLEANING" CONDITION PRIOR TO APPLICATION OF PRIMER COAT.

COATING (EXTERIOR)

- THE EXTERIOR PAINT REPAIR SYSTEM WILL BE ONE PRIME COAT OF THEPEC SERIES 20, ONE INTERMEDIATE COAT OF THEPEC SERIES 20, AND ONE COAT OF THEPEC SERIES 107A. PAINT THE EXTERIOR TO MATCH THE EXISTING TOP-COAT COLOR.
- THE THREE-COAT SYSTEM WILL BE APPLIED AT 2.0 - 3.0 MILS PER COAT, TO A THICKNESS OF 6.0 - 9.0 MILS.

COATING (DRY INTERIOR)

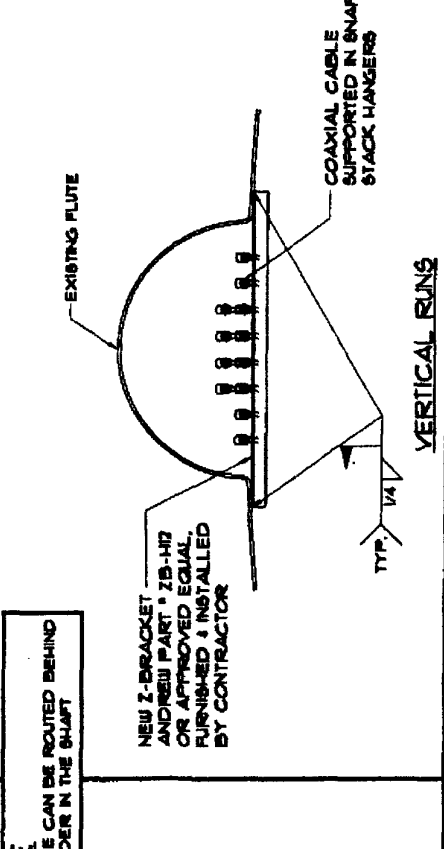
- THE DRY INTERIOR PAINT REPAIR SYSTEM WILL BE TWO COATS OF THEPEC SERIES 20. PAINT THE DRY INTERIOR TO MATCH THE EXISTING TOP-COAT COLOR.
- THE TWO-COAT SYSTEM WILL BE APPLIED AT 3.0 - 4.0 MILS PER COAT, TO A THICKNESS OF 6.0 - 9.0 MILS.

NOTES

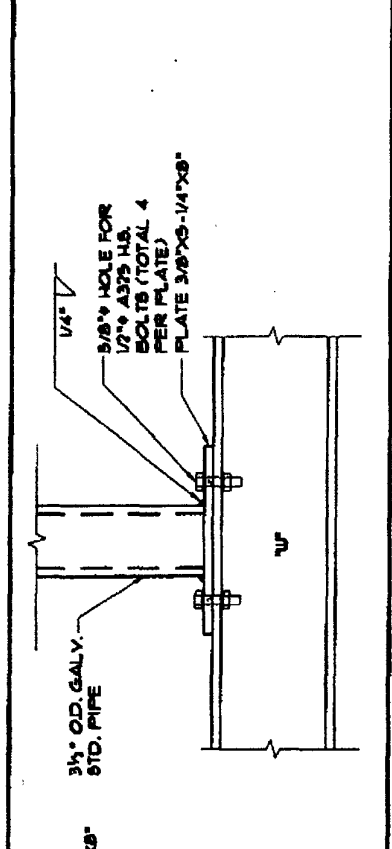
1. ALL STEEL ANTENNA INSTALLATION COMPONENTS MUST BE PAINTED TO MATCH EXISTING PAINT SYSTEMS ON THE EXTERIOR AND DRY INTERIOR.
2. NO COMPONENTS CAN REMAIN GALVANIZED OR STAINLESS STEEL. THE SPECIFIED PAINT SYSTEMS WILL NOT HAVE GOOD ADHESION ON GALVANIZED OR STAINLESS STEEL SURFACES.
3. CONTACT THEPEC TO OBTAIN A SUITABLE SURFACE PREPARATION SYSTEM FOR GALVANIZED AND STAINLESS STEEL SURFACES. THE SYSTEM MUST MAKE PREVIOUSLY GALVANIZED AND STAINLESS STEEL SURFACES COMPATIBLE WITH THE SPECIFIED PAINT SYSTEMS THAT WILL BE APPLIED.
4. IF APPLICABLE, PAINT ALL NEW STEEL IN A SHOP SETTING, PRIOR TO DELIVERY TO THE SITE.
5. WELDING ON ONE SIDE OF A STEEL SHEET MAY RESULT IN BURNED PAINT ON THE OPPOSITE SIDE. IF THIS OCCURS, THE BURNED PAINT ON THE OPPOSITE SIDE WILL NEED TO BE PAINT REPAIRED.
6. FOLLOW ALL PAINT MANUFACTURERS' RECOMMENDATIONS WHEN USING THEIR PRODUCTS.

NOTE

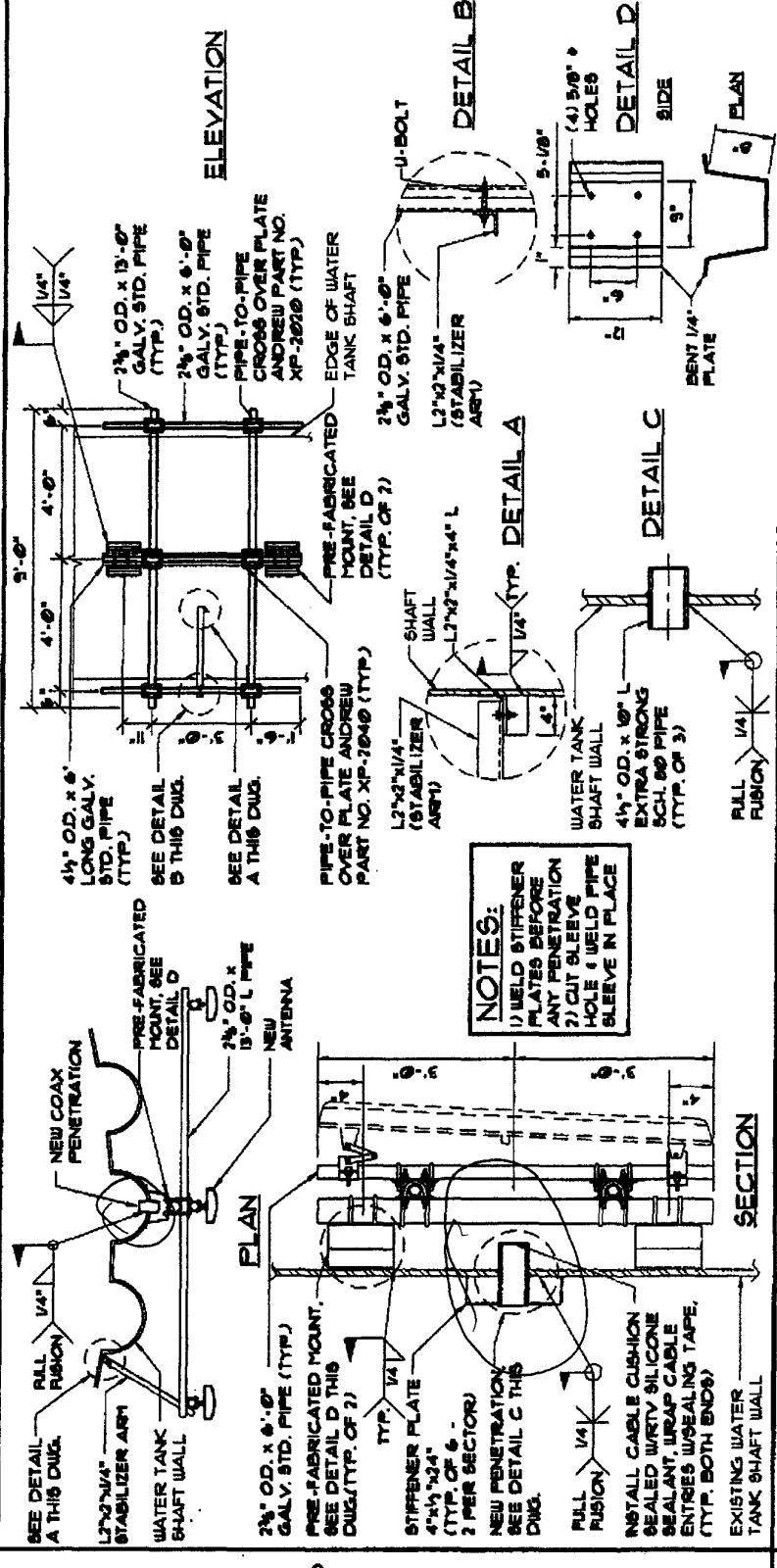
NO CABLE CAN BE ROUTED BEHIND THE LADDER IN THE SHAFT



1 COAX CABLE SUPPORT AT WATER TANK FLUTES



2 COAX CABLE SUPPORT POST CONNECTION



3 TYPICAL ANTENNA MOUNTING & COAX PENETRATION

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 Rosemont, Illinois 60018
 Tel: 847-792-0200
 Fax: 847-792-0205

PREPARED BY: AG
 CHECKED BY: AG
 APPROVED BY: HMB

#	DATE	REVISIONS
1	9/2/06	90% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION

DATE: 9/28/06
 0062-05728
 REGISTERED PROFESSIONAL ENGINEER
 OF ILLINOIS

SITE NAME
DONNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
 3901 HIGHLAND AVE
 DONNERS GROVE, IL 60918

SHEET TITLE
SITE DETAILS

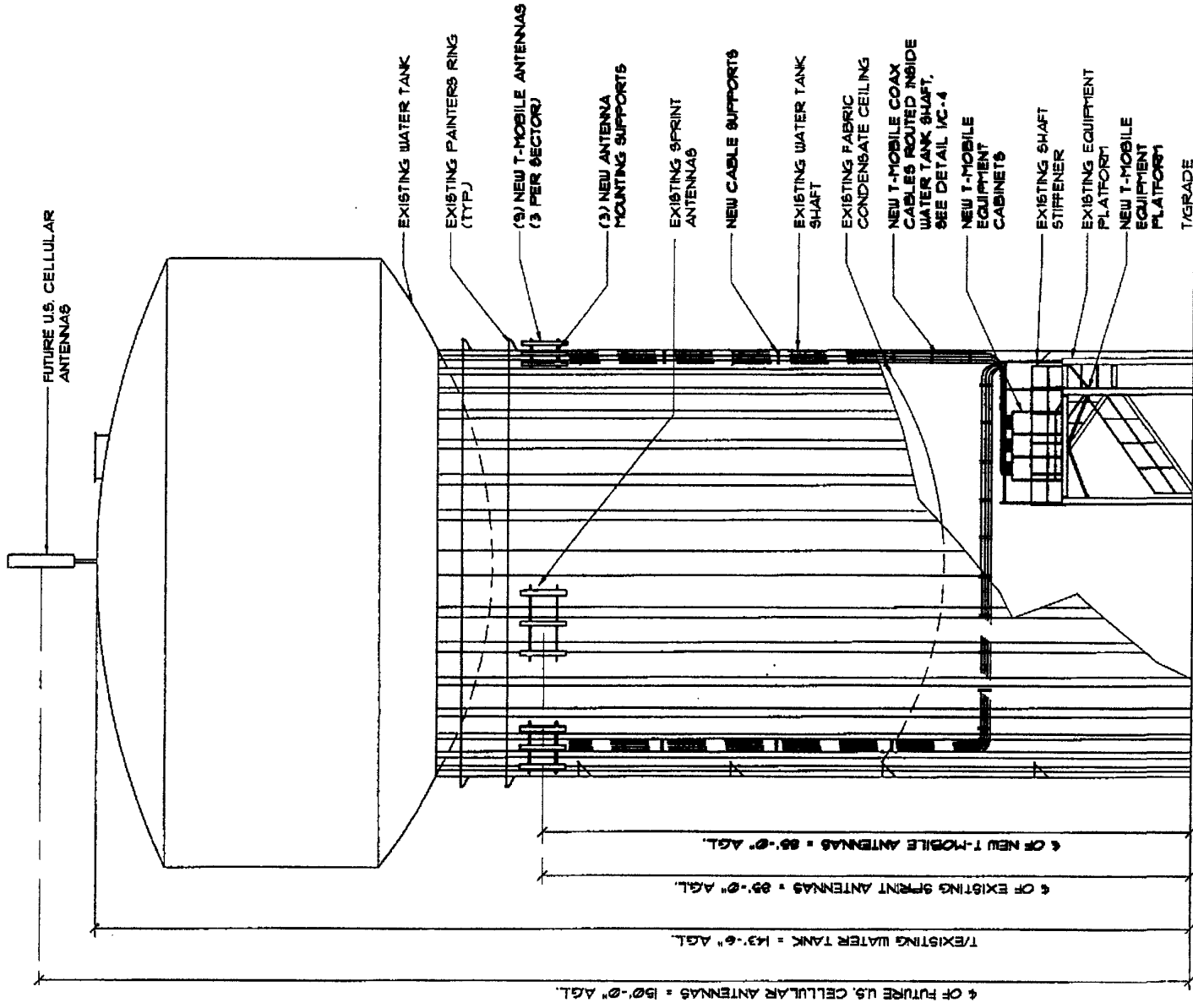
SHEET NUMBER
C-4

ANTENNA NOTES:

- 1- THE SIZE, HEIGHT, AND DIRECTION OF THE ANTENNA SHALL BE ADJUSTED TO MEET SYSTEM REQUIREMENTS.
- 2- CONTRACTOR SHALL VERIFY HEIGHT OF ANTENNA WITH T-MOBILE PROJECT MANAGER.
- 3- ALL ANTENNA AZIMUTH TO BE FROM TRUE NORTH.

STRUCTURAL NOTES:

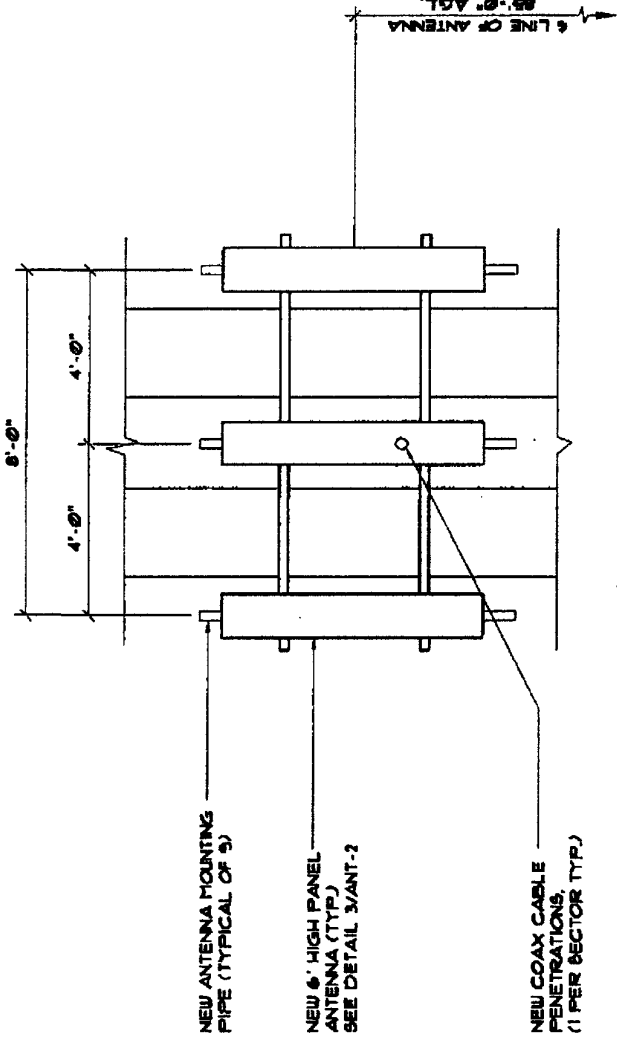
- 1- STRUCTURAL CALCULATION PREPARED BY FULLERTON ENGINEERING CONSULTANTS, INC. DATED SEPTEMBER 28, 2004. CONTRACTOR TO VERIFY WITH T-MOBILE PROJECT MANAGER TO OBTAIN A COPY.
- 2- CONTRACTOR TO REFER TO STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TANK SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.



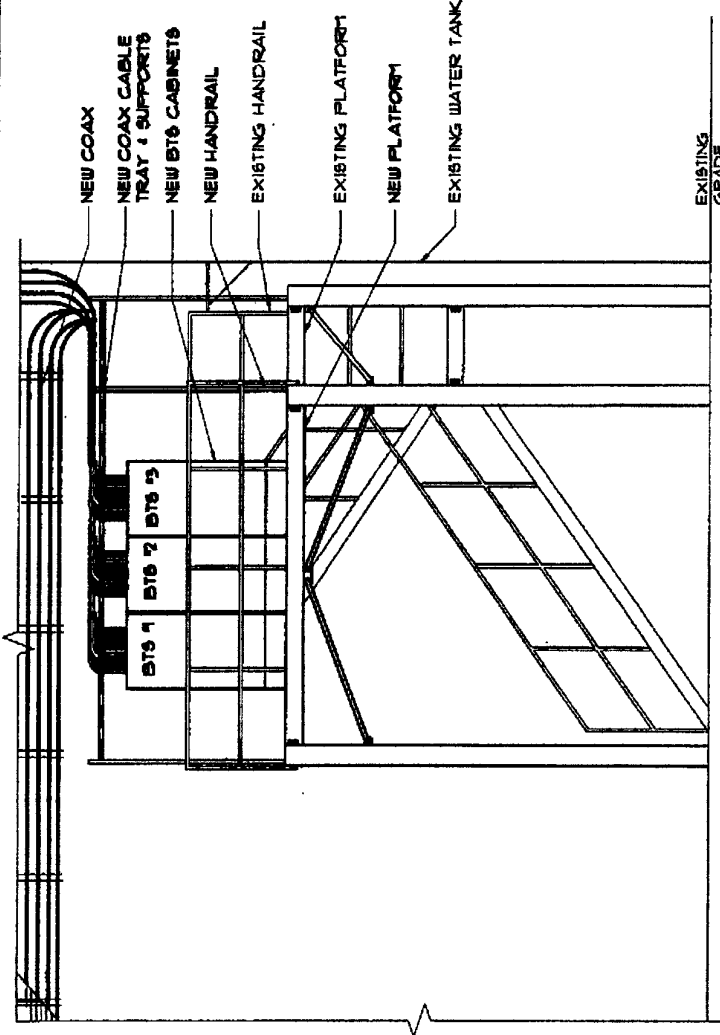
1 SITE ELEVATION
SCALE: 1" = 20'-0"

NOTE:

1) ALL ANTENNAS, COAX CABLES, MOUNTS AND ANTENNAS FRAMING SHALL BE PAINTED TO MATCH WATER TANK EXTERIOR.



2 ELEVATION DETAIL
NTS



NOTE:
COAX CABLE FURNISHED BY T-MOBILE. INSTALLED BY CONTRACTOR PER T-MOBILE SPECIFICATION. SEE CUG. ANT-2

3 TYPICAL ELEVATION
NTS

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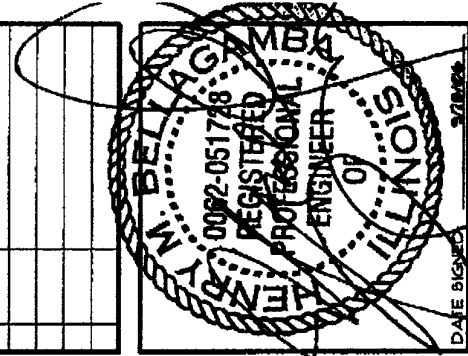
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APPROVED BY: HMB

#	DATE	REVISIONS
1	9/24/04	90% REVIEW
2	9/28/04	PERMIT/CONSTRUCTION



DATE SIGNED: 9/28/04

SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
**3801 HIGHLAND AVE
DOWNERS GROVE, IL 60515**

SHEET TITLE
SITE ELEVATION & ANTENNA DETAILS

SHEET NUMBER

ANT-1

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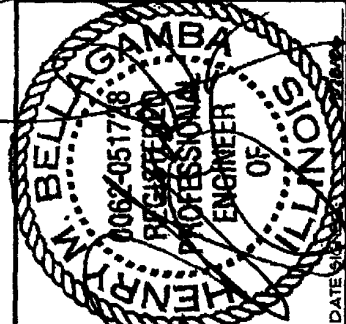
9100 W. Higgins Rd, Suite 800
Rosemont, Illinois 60018
Tel: 847-292-0200
Fax: 847-292-0205

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CHECKED BY: AG

APPROVED BY: HMB

#	DATE	REVISIONS
1	9/28/06	SUPP. REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



SITE NAME
**DOWNERS GROVE
WATER TANK**

SITE NUMBER
CH45-623A

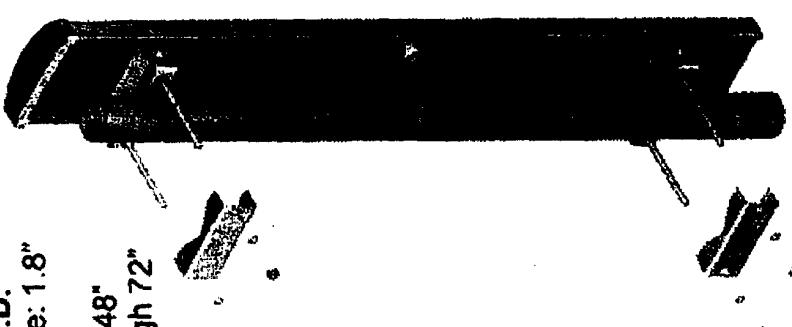
SITE ADDRESS
**3001 HIGHLAND AVE
DOWNERS GROVE, IL 60515**

SHEET TITLE
**ANTENNA MOUNTING
DETAILS**

SHEET NUMBER
ANT-3

Standard Mount

Antenna Length: 72" or less
Pole Diameter: 1.5" - 5" O.D.
Mounted distance from pole: 1.8"
Bracket Spacing:
26" for antennas less than 48"
42" for antennas 48" through 72"
Weight: 6.5 lbs (3 kg)

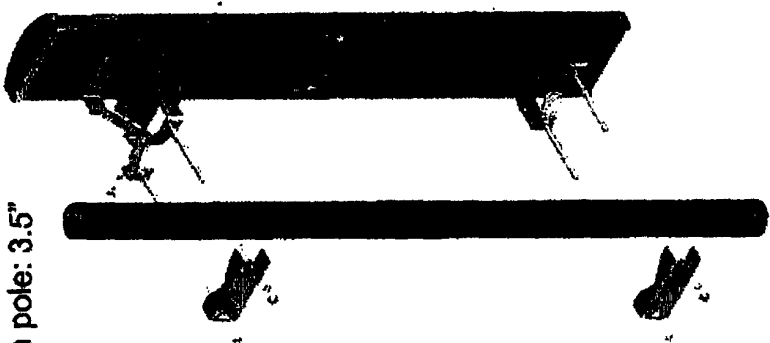


MTG-P00-10

STANDARD MOUNT MTG-P00-10

0° - 10° Downtilt

Antenna Lengths: 48" through 72"
Pole Diameter: 1.5" - 5" O.D.
Mounted distance from pole: 3.5"
Bracket Spacing: 42"
Weight: 5 lbs (2.3 kg)

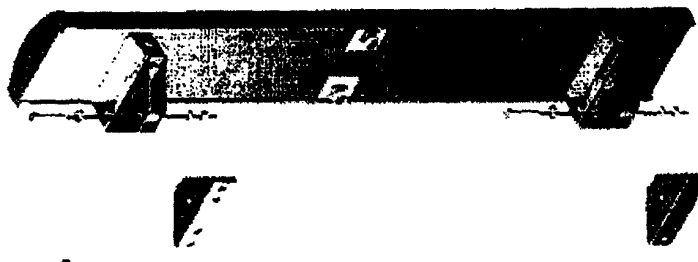


MTG-D10-20

DOWNTILT MOUNT MTG-D10-20

Swivel Mount

Antenna Length: 72" or less
Mounted distance from wall: 6.2"
Bracket Spacing:
26" for antennas less than 48"
42" for antennas 48" through 72"
Angle of Rotation:
8" width antennas: ± 40°
10" width antennas: ± 35°
12" width antennas: ± 30°
Weight: 7 lbs (3.2 kg)



Compatible with cluster mount and cluster mount (u-bolt) kits

MTG-S02-10

SWIVEL MOUNT MTG-S02-20

ANTENNA MOUNTING DETAILS
NTS

STRUCTURAL NOTES

1.0 APPLICABLE CODES
 1.1 DESIGN & CONSTRUCTION OF ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:

INTERNATIONAL BUILDING CODE, 2003 EDITION.

2.0 DESIGN LOADS

- 2.1 ANTENNAS:
 12 L x 12 W x 4 D - 5 x 37 LB. • 280 LB.
 2.2 EQUIPMENT CABINET(S):
 16.8" H x 35.8" W x 17.1" D - 3 x 161 LB. • 2283 LB.
 2.3 BATTERY RACK & BATTERIES: 84" H x 26" W x 24" D - 1 x 1761 LB. • 1761 LB.
 2.4 PPC CABINET:
 66" H x 30" W x 10" D - 1 x 150 LB. • 150 LB.
 100 PSF.

3.0 GENERAL NOTES

- 3.1 STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF ALL DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW.
- 3.2 NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- 3.3 THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND/OR SUPPORTS REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
- 3.4 DO NOT SCALE THESE DRAWINGS. USE DIMENSIONS.
- 3.5 THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ENGINEER'S APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ENGINEER OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ENGINEER HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- 3.6 ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS AND AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.

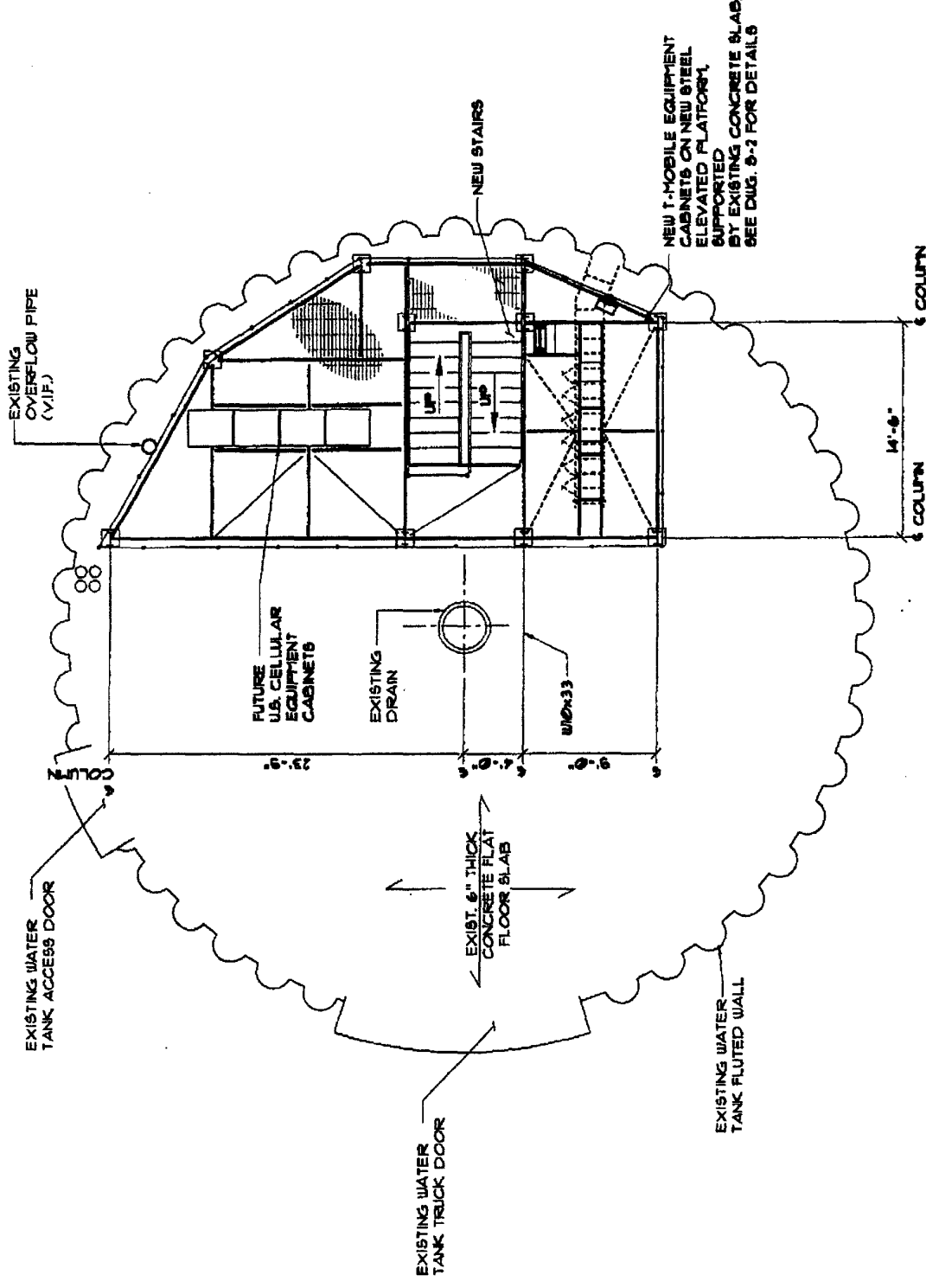
4.0 STRUCTURAL STEEL NOTES

- 4.1 ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 1989 EDITION, THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION.
- 4.2 ALL STRUCTURAL STEEL PLATES, SHAPES AND BARS SHALL CONFORM TO ASTM A36 OR A572, UNLESS NOTED OTHERWISE. COLD FORMED TUBING SHALL CONFORM TO ASTM A500 GRADE B. PIPES SHALL CONFORM TO ASTM A53 TYPE E OR S. ANCHOR BOLTS SHALL CONFORM TO ASTM A307 OR ASTM A36.
- 4.3 ALL BOLTS (OTHER THAN ANCHOR BOLTS), NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A375. ALL BOLTS SHALL BE 3/4 INCH DIAMETER. MINIMUM BOLTS USED IN LATERAL LOAD RESISTING CONNECTIONS SHALL BE FRICTION TYPE, DESIGNED FOR INDICATED FORCES WITHOUT STRESS INCREASES.
- 4.4 ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AISC D11 "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E100XX.
- 4.5 ALL BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.
- 4.6 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- 4.7 GRATING SHALL BE CAPABLE OF SUPPORTING INDICATED LOADS. USE STANDARD J-BOLTS AND CLIPS FOR ATTACHMENT. GRATING SADDLE CLIP FASTENERS SHALL BE ASTM A510 GRADE 36 WITH MIN. THICKNESS OF 1/4 GA. BELT TAPPING FASTENERS BOLTS MIN. THICKNESS OF 1/4 GA. BELT TAPPING GRATING FASTENERS BOLTS SHALL BE STAINLESS STEEL PER ASTM A240, TYPE 410.
- 4.8 GUARD RAILS, LADDERS/STAIRS SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA AND LOCAL REQUIREMENTS.
- 4.9 A. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
 B. FIELD TOUCH UP ALL, PAINTED AND GALVANIZED SURFACES.
 C. GRIND ALL WELDS TO A SMOOTH FINISH.
- 4.10 MINIMUM SHEAR CAPACITIES: PROVIDE AT LEAST ONE HALF OF THE UNIFORM LOAD CARRYING CAPACITY OF THE BEAM WITH THE ASSUMPTION OF FULLY BRACED COMPRESSION FLANGE.
- 4.11 THE DEPTH OF A SIMPLE SHEAR CONNECTION SHALL NOT BE LESS THAN ONE HALF OF THE NOMINAL DEPTH OF THE BEAM. THE MINIMUM NUMBER OF BOLTS PER CONNECTION SHALL BE TWO (2).

NOTE:
 ALL EXISTING DIMENSIONS AND CONDITIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION.

NOTES:

- COLUMNS ARE W6X27, UNLESS OTHERWISE NOTED
- VERTICAL & HORIZONTAL BRACING ARE L3x3x1/4
- GUSSET PLATES FOR BRACING ARE 1/4" THICK PLATE



NEW I-MOBILE EQUIPMENT CABINETS ON NEW STEEL ELEVATED PLATFORM, SUPPORTED BY EXISTING CONCRETE SLAB. SEE DUG. 8-1 FOR DETAILS.

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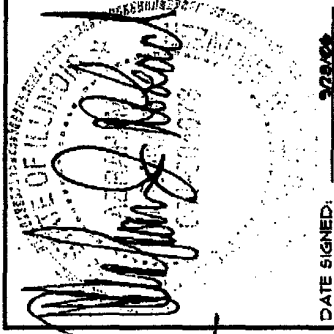
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 Tel. 847-731-0100
 Fax 847-731-0105

PREPARED BY: AG

CHECKED BY: AG

APPROVED BY: LHM

#	DATE	REVISIONS
1	9/2/06	30% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



DATE SIGNED: 9/28/06

SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
 3801 HIGHLAND AVE
 DOWNERS GROVE, IL 60515

SHEET TITLE

PLATFORM PLAN & NOTES

SHEET NUMBER

9-1

PLATFORM PLAN
 SCALE: 3/32"=1'-0"



8950 West Bryn Mawr Ave.
Suite 100, Chicago, IL 60631
Office: (773) 444-3400
Fax: (773) 444-9521

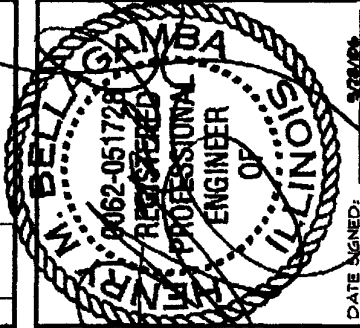
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PREPARED BY: AG
CHECKED BY: AG
APPROVED BY: LHB

#	DATE	REVISIONS
1	9/5/06	90% REVIEW
2	9/28/06	PERMIT CONSTRUCTION



DATE SIGNED: 9/28/06

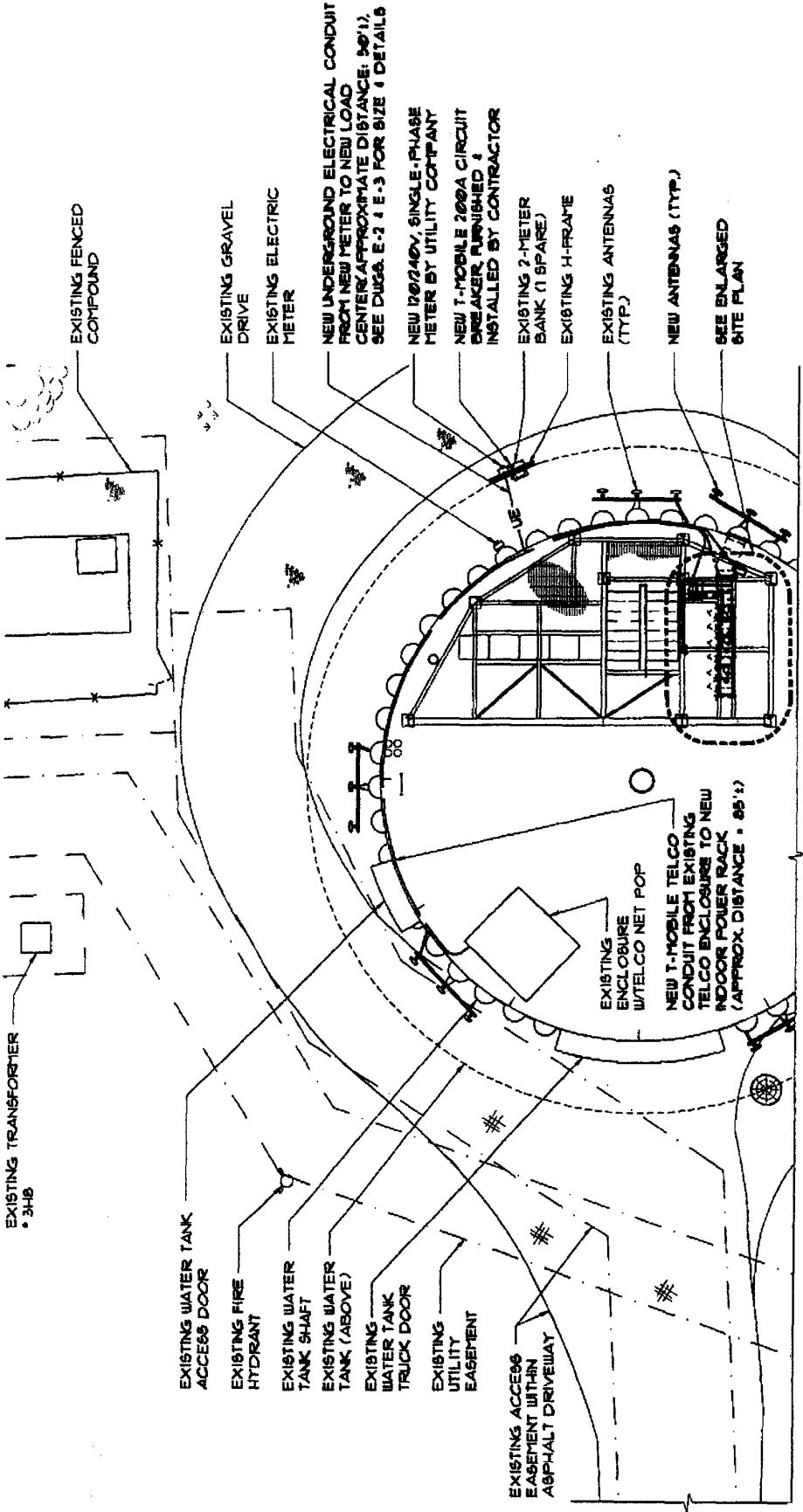
SITE NAME
**DOWNERS GROVE
WATER TANK**

SITE NUMBER
CH45-623A

SITE ADDRESS
3801 HIGHLAND AVE
DOWNERS GROVE, IL 60515

SHEET TITLE
**UTILITY SITE
PLAN**

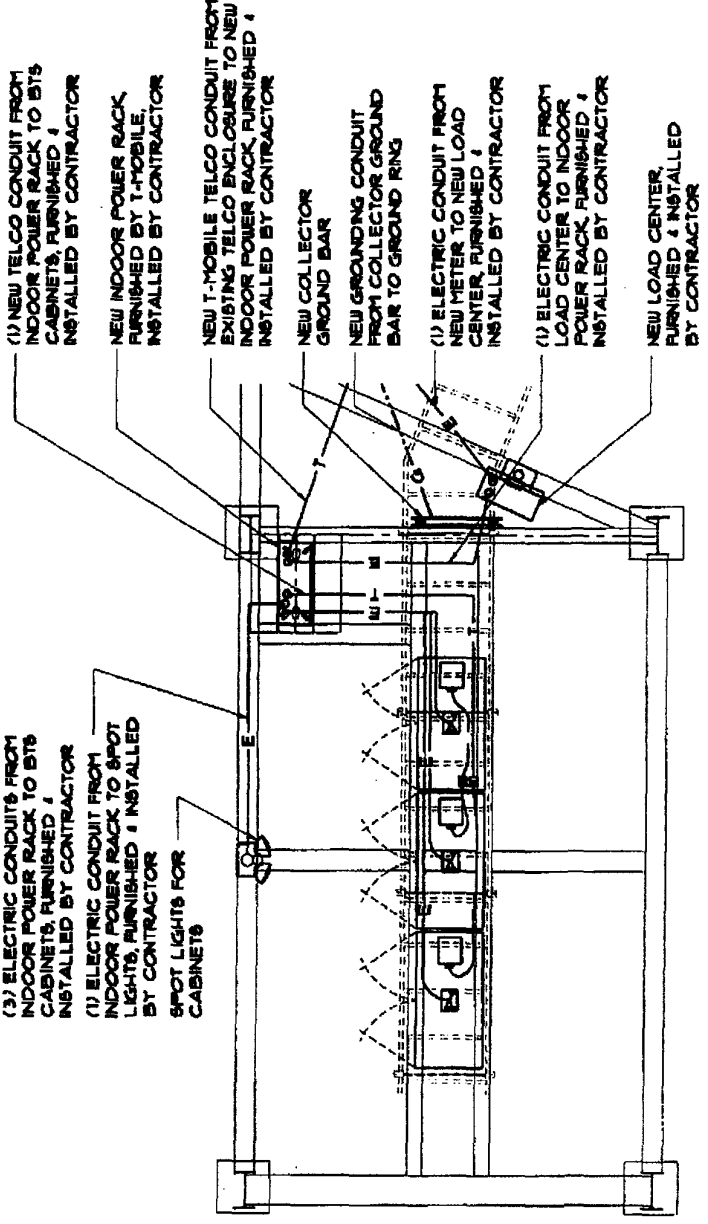
SHEET NUMBER
E-1



1 UTILITY SITE PLAN
SCALE: 1/8"=1'-0"

NOTES:

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROPERTY OWNER & NECESSARY UTILITY COMPANIES FOR THE LOCATION OF ALL EXISTING BELOW GRADE UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE COSTS ASSOCIATED WITH EXISTING BELOW GRADE UTILITIES.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.
- CONTRACTOR TO VERIFY LOCAL UTILITY REQUIREMENTS FOR DEPTH, SIZE & SEPARATION OF CONDUITS PRIOR TO INSTALLATION. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR TO CALL JULLIE (800)-893-0233 48 HRS PRIOR TO EXCAVATING FOR UNDERGROUND UTILITY LOCATIONS. LOCATION SURROUNDING EXCAVATED AREA MUST BE PRIVATELY LOCATED FOR NON-PUBLIC UTILITIES.
- PROPOSED UTILITY SERVICES SHOWN NEED TO BE VERIFIED & APPROVED BY UTILITY COMPANIES BEFORE START OF CONSTRUCTION. CONTRACTOR TO VERIFY WITH T-MOBILE PROJECT MANAGER TO OBTAIN FINAL APPROVAL.
- ALL LINES SHOWN DO NOT REPRESENT THE EXACT LOCATION OF THE CONDUIT RUNS. CONTRACTOR TO VERIFY SERVICE LOCATIONS W/ACTUAL FIELD CONDITIONS.
- CONTRACTOR TO NOTE POTENTIAL INTERFERENCES WITH EXISTING UTILITIES, AND HAND DIG IN VICINITY OF ALL UTILITY CROSSINGS.



2 ENLARGED UTILITY SITE PLAN
SCALE: 1/4"=1'-0"

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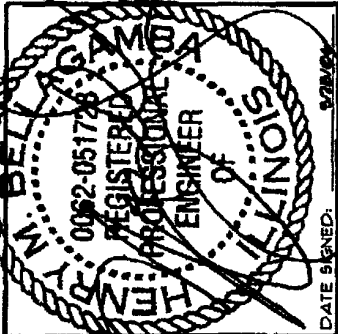
Fullerton

Engineering Consultants

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Rosemont, Illinois 60018
Tel: 847-292-0100
Fax: 847-292-0105

PREPARED BY: AG
CHECKED BY: AG
APPROVED BY: HFB

#	DATE	REVISIONS
1	9/28/06	50% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



DATE SIGNED: 9/28/06
SITE NAME
DOWNERS GROVE WATER TANK

SITE NUMBER
CH45-623A

SITE ADDRESS
**3801 HIGHLAND AVE
DOWNERS GROVE, IL 60515**

SHEET TITLE
SITE GROUNDING PLAN & NOTES

SHEET NUMBER
EG-1

GENERAL NOTES:

- PRIOR TO INSTALLING ANY ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY EXISTING SITE LOCATIONS AND CONDITIONS AND UTILITY SERVICE REQUIREMENTS OF THE JOB.
- IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS, THE MORE RESTRICTIVE NOTE, SPECIFICATION OR CODE SHALL PREVAIL.
- ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS & AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER, PLANS AND/OR SPECIFICATIONS WILL BE CORRECTED OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.
- ELECTRICAL WORK SHALL INCLUDE, BUT NOT LIMITED TO, ALL LABOR MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE POWER AND LIGHTING SYSTEMS, TELEPHONE AND COMMUNICATION SYSTEMS, PANEL BOARDS, CONDUITS, GROUNDING, ETC. AS INDICATED ON ELECTRICAL DRAWINGS OR AS REQUIRED BY CODE.
- ALL WORK SHALL COMPLY WITH ANY LOCAL ORDINANCES, CODES, AND ALL OTHER ADMINISTRATIVE AUTHORITIES HAVING JURISDICTION.
- ALL EQUIPMENT AND MATERIAL FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE (UL) LISTED, NEW, FREE FROM DEFECTS, AND SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT, THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS & LABOR TO CORRECT THE TROUBLE WITHOUT COST TO THE OWNER.
- ALL WORK SHALL BE EXECUTED IN A WORKMAN LIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK AND SHALL RESTORE ALL EXISTING LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS, WIRING, PIPING, ETC. DAMAGED BY THE ELECTRICAL WORK TO ORIGINAL OR BETTER CONDITION.
- UPON COMPLETION OF WORK, CONTACT CONTINUITY, SHORT CIRCUIT, & FALL OF POTENTIAL GROUND TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO P. M. CLEAN SITE OF ALL DEBRIS RESULTING FROM WORK AND LEAVE IN A COMPLETE AND UNDAUNTED CONDITION.
- ALL BROCHURES, MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION.

SERVICE EQUIPMENT NOTES:

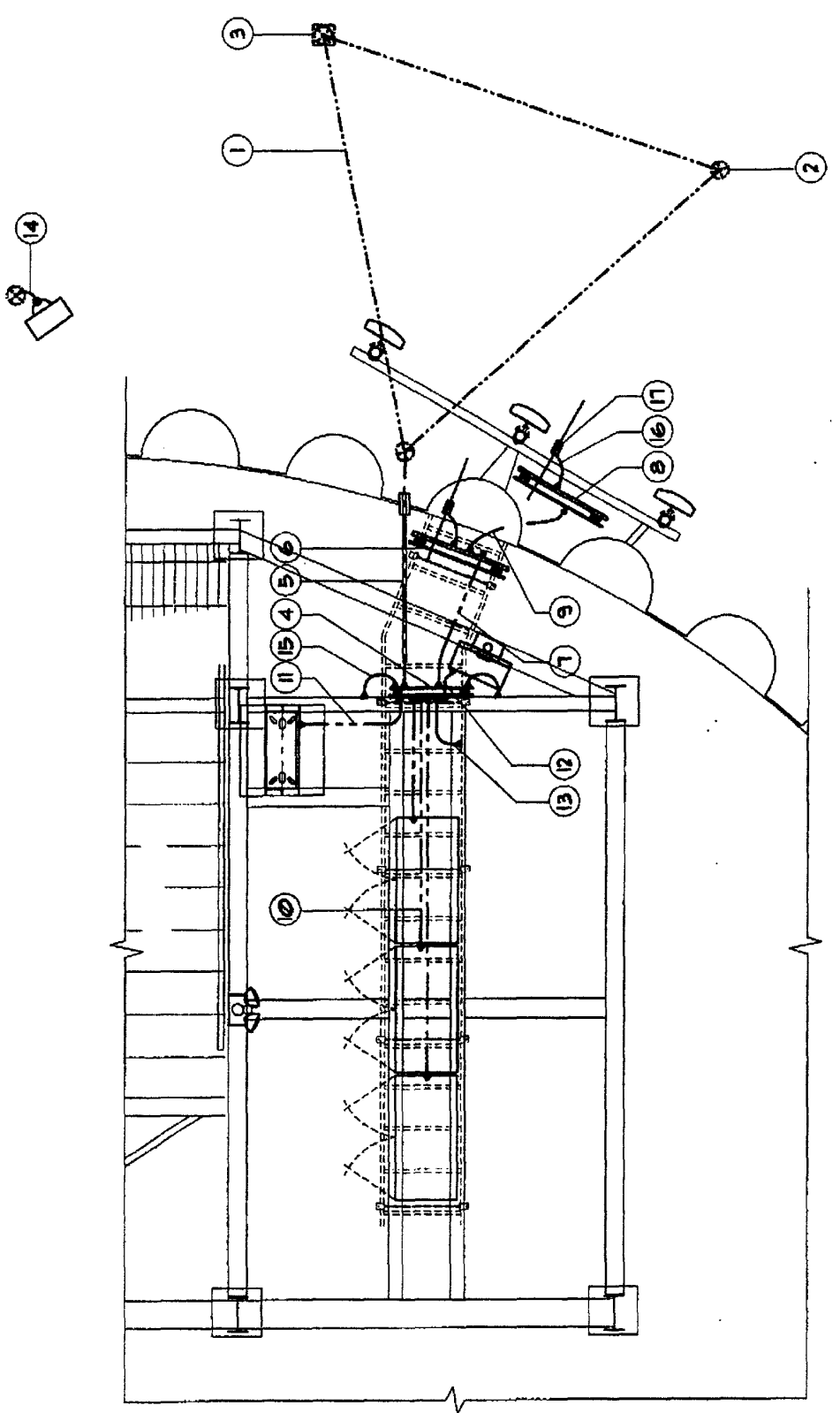
- SERVICE EQUIPMENT SHALL HAVE A SHORT CIRCUIT RATING EQUAL TO OR EXCEEDING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SUPPLY TERMINAL.
- ALL ELECTRICAL EQUIPMENT SHALL BE ANCHORED TO WITHSTAND 80 MPH WIND SPEED, EXPOSURE C.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT UV STABLE, WEATHER PROOF, ENGRAVED PLASTIC LABELS.
- REPAIR ANY EQUIPMENT PAINT SURFACE THAT HAS BEEN DAMAGED IN THE COURSE OF INSTALLATION.

GROUNDING NOTES:

- GROUND RODS SHALL BE INSTALLED NOT MORE THAN 19 FOOT APART.
- GROUND RODS SHALL BE INSTALLED 42" MIN. BELOW GRADE.
- ALL BELOW GRADE GROUND RINGS AND GROUND LEADS SHALL BE #2 AWG SOLID, TINNED BARE COPPER WIRE.
- ALL BELOW GRADE CONNECTIONS SHALL BE EXOTHERMIC WELDS.
- UNLESS PROVIDED BY A FACTORY APPLIED LEAD, ALL CONNECTIONS TO GROUND BARS SHALL BE BURIED HYBRID COMPRESSION LUGS OR EQUAL.
- STEEL SHALL BE TO BARE METAL GRIND GALV. FINISH OR PAINT OFF PRIOR TO WELDING, REPAIR GALV. FINISH OR PAINT AS REQUIRED, MATCH PAINT COLOR.
- ALL LUG CONNECTORS SHALL BE 2 HOLE LONG BARREL COMPRESSION TYPE OR APPROVED EQUAL.
- ALL HARDWARE TO ATTACH MECHANICAL GROUND CONNECTIONS SHALL BE STAINLESS STEEL.
- ALL MECHANICAL CONNECTIONS SHALL HAVE NOXAL OR APPROVED EQUAL APPLIED BETWEEN COMPRESSION LUG AND FIXTURE.

LEGEND

	GROUND BAR
	5/8" x 10'-0" GROUND ROD
	GROUND SYSTEM TEST WELL
	CABLED OR APPROVED CONNECTION
	SPARE GROUND LEAD
	MECHANICAL CONNECTION
	EXISTING GROUNDING
	NEW GROUNDING



KEY NOTES:

- GROUND RING, 2 SOLID, TINNED BARE COPPER WIRE. CONSTRUCT RING FROM ONE CONTINUOUS PIECE (NO EXCEPTIONS ALLOWED).
- 5/8" x 10'-0" COPPER CLAD GROUND ROD
- GROUND SYSTEM TEST WELL
- COLLECTOR GROUND BAR ATTACHED TO PLATFORM
- NEW 2"Ø GROUND WIRE IN RGS CONDUIT FROM COLLECTOR GROUND BAR TO NEW GROUND RING
- LOWER GROUND BAR (4"x24") COPPER GROUND BAR LOCATED @ WATER TANK SHAFT
- 2 SOLID, TINNED BARE COPPER GROUND WIRE FROM LOWER GROUND BAR TO COLLECTOR GROUND BAR
- 5/8" x 10'-0" COPPER CLAD GROUND ROD
- 2 AWG GROUND WIRE FROM 819 CABINETS TO COLLECTOR GROUND BAR
- 2 AWG GROUND WIRE FROM INDOOR POWER RACK TO COLLECTOR GROUND BAR
- 2 AWG GROUND WIRE FROM LOAD CENTER TO COLLECTOR GROUND BAR
- 2 AWG GROUND WIRE FROM CABLE TRAY TO COLLECTOR GROUND BAR
- 5/8" x 10'-0" COPPER CLAD GROUND ROD FOR INDEPENDENT ELECTRICAL SERVICE PLATFORM TO COLLECTOR GROUND BAR (2 REQUIRED)
- 2 AWG STRANDED INSULATED GROUND WIRE FROM GROUNDING KIT TO GROUND BAR (TYPICAL ALL CABLES)
- NEW GROUND KIT (TYP)

SITE GROUNDING PLAN

NTS



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Fullerton

Engineering Consultants

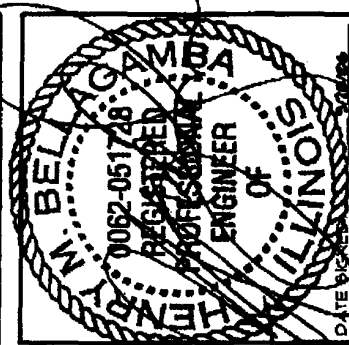
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PREPARED BY: AG

CHECKED BY: AG

APPROVED BY: HMB

#	DATE	REVISIONS
1	9/3/06	10% REVIEW
2	9/28/06	PERMIT/CONSTRUCTION



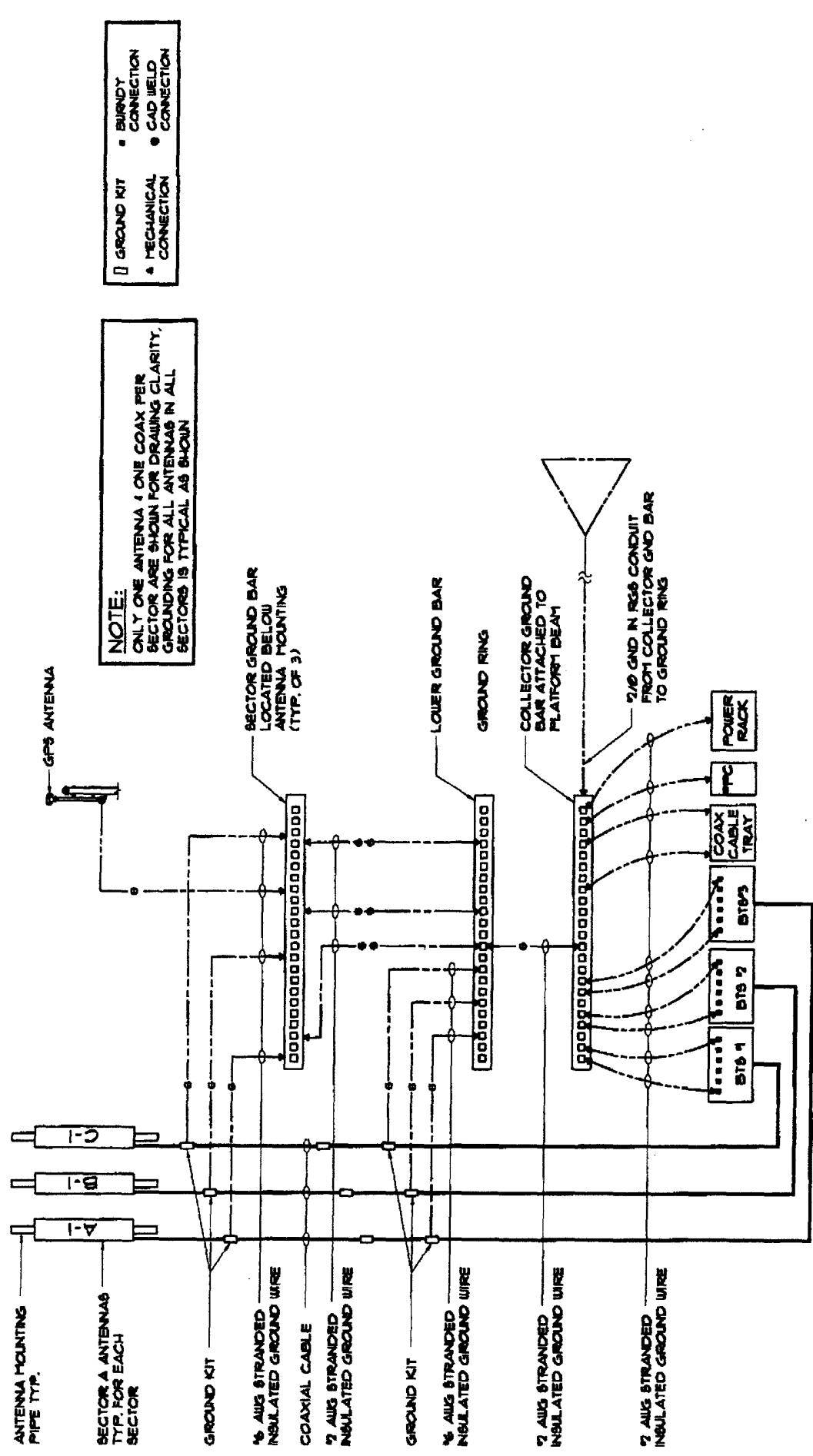
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PROJECT: DOWNS GROVE WATER TANK

SITE NUMBER: CH45-623A

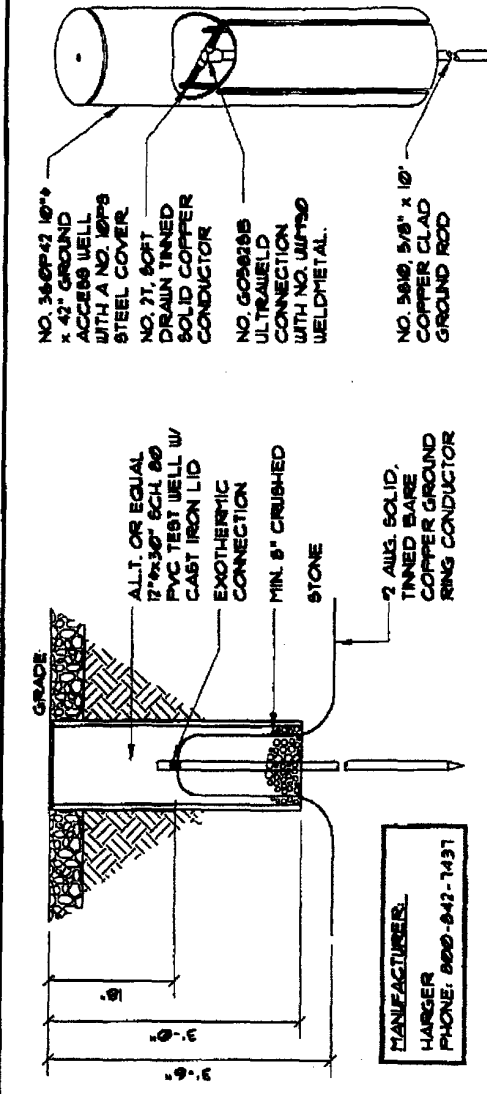
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SHEET TITLE: GROUNDING DETAILS

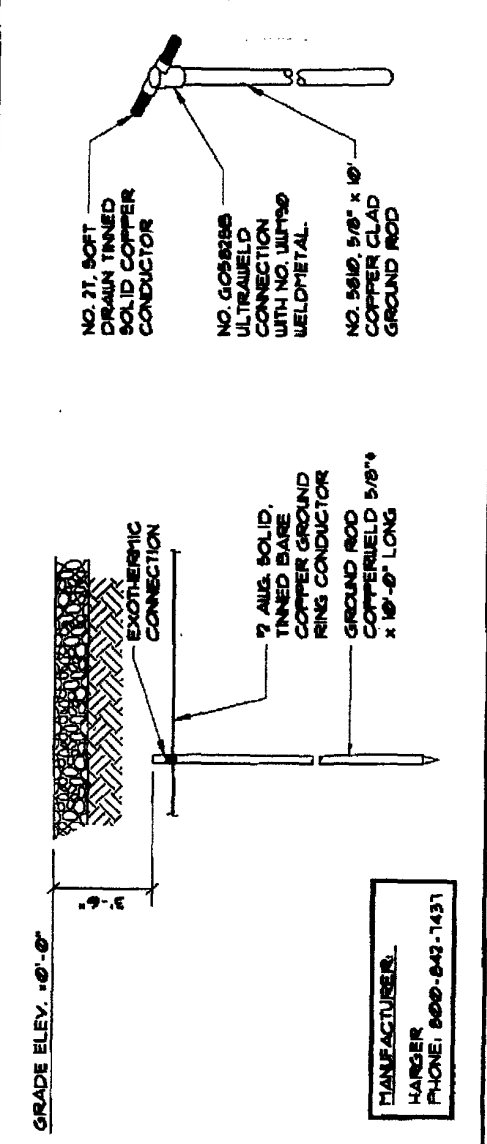
SHEET NUMBER: EG-2



1 TYPICAL GROUNDING RISER DIAGRAM
NTS



3 ACCESS WELL DETAIL
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2 GROUND ROD DETAIL
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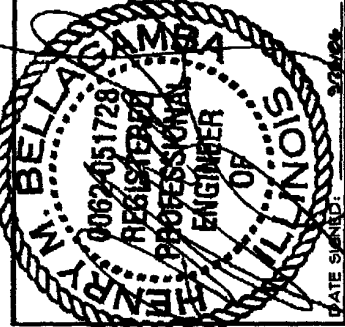
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PREPARED BY: AG
CHECKED BY: AG
APPROVED BY: HTB

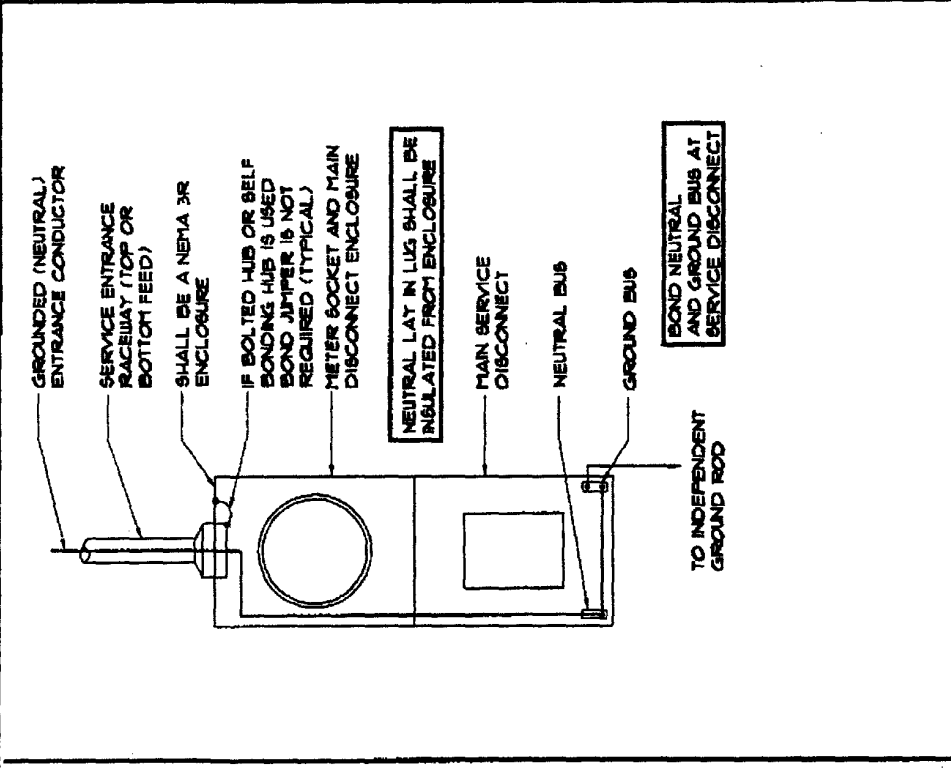
#	DATE	REVISIONS
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	9/28/06	PERMIT/CONSTRUCTION



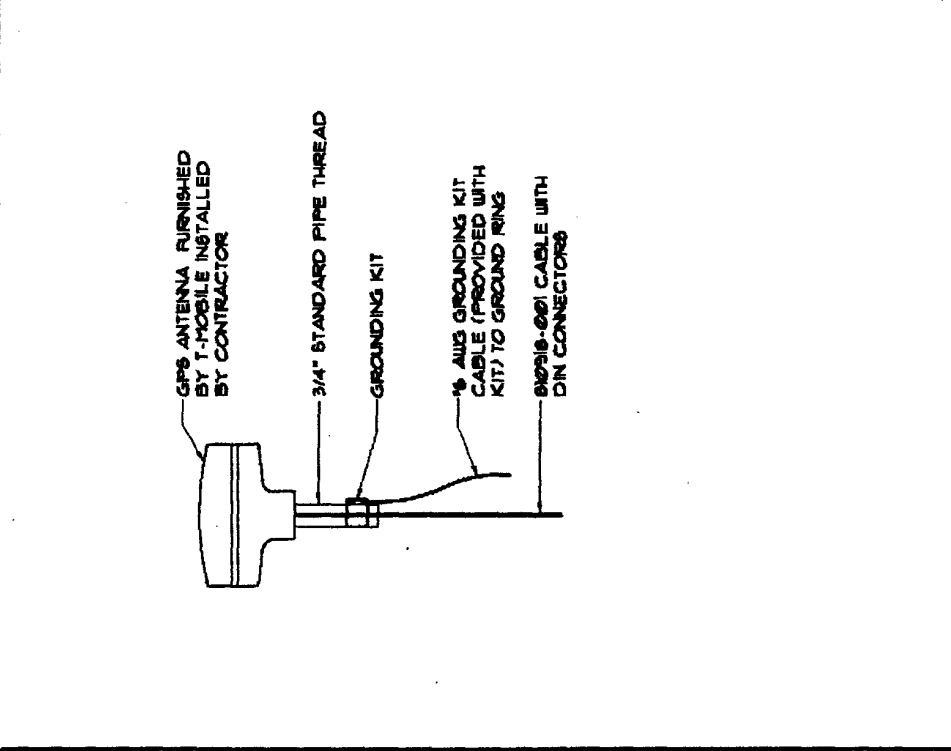
DATE SIGNED: 9/28/06
SITE NAME:
DOWNERS GROVE WATER TANK
SITE NUMBER:
CH45-623A
SITE ADDRESS:
**3801 HIGHLAND AVE
DOWNERS GROVE, IL 60519**

SHEET TITLE:
GROUNDING DETAILS

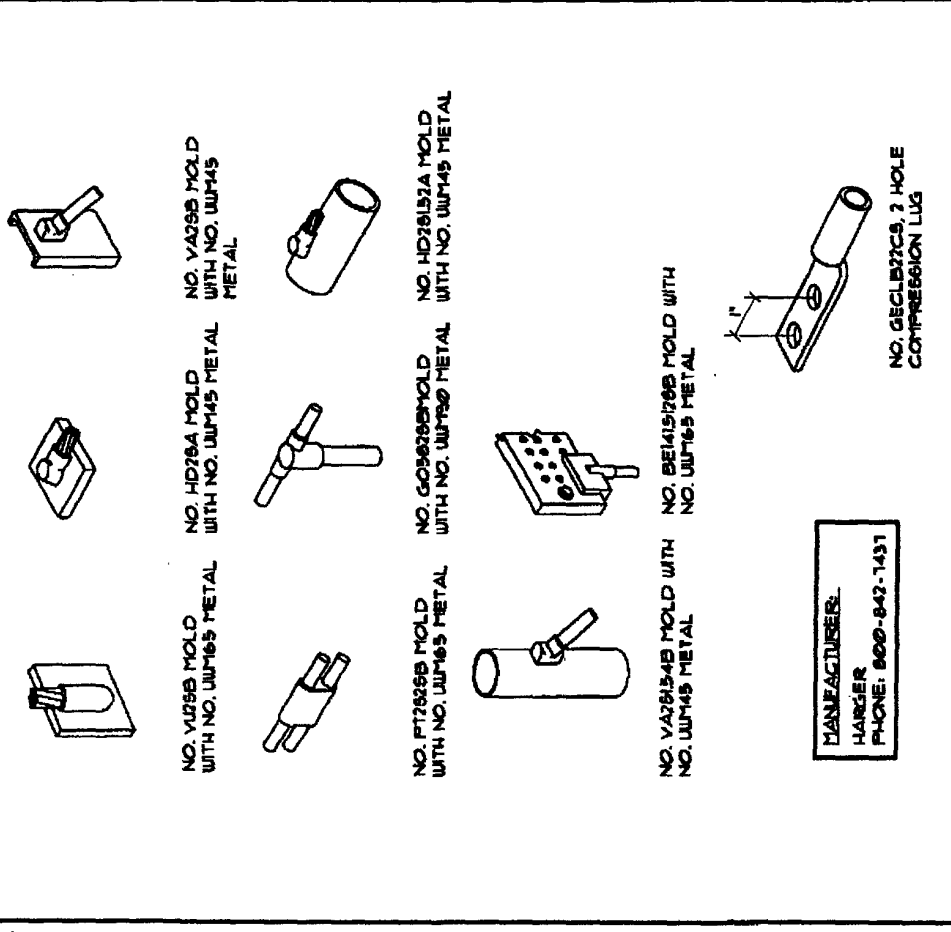
SHEET NUMBER:
EG-3



3 SERVICE ENTRANCE GROUNDING
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2 GPS ANTENNA GROUNDING DETAIL
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1 TYPICAL BONDING DETAILS
NTS