

CITY OF GRAND HAVEN
GRAND HAVEN, MICHIGAN

August 27, 2025

NOTICE TO BIDDERS

REQUEST FOR PROPOSALS

It is the intent of the City of Grand Haven to receive bids for “Grand Haven Communication Tower Replacement” for the City of Grand Haven.

Sealed proposals must be received by the City of Grand Haven, 519 Washington Avenue, Grand Haven, Michigan, 49417, ATTN: Ms. Maria Boersma, City Clerk, before **10:00 a.m. local time, Wednesday, September 17, 2025**, at which time the proposals will be publicly opened and read aloud. Proposals must be submitted on the official proposal form attached. Sealed proposal envelopes must be clearly marked on the outside “Grand Haven Communication Tower Replacement”.

Copies of the Requests for Proposals (RFP) that contain the minimum specifications and official proposal forms are available at the City Clerk’s office at City Hall, 519 Washington Avenue, Grand Haven, Michigan 49417; at the Department of Public Works, 1120 Jackson St. Grand Haven, MI. 49417; or online from the City’s Web site: www.grandhaven.org.

Any questions regarding this RFP or the minimum specifications shall be directed to **Derek Gajdos, Project Management Director, at 616-935-3210**

The City of Grand Haven reserves the right to reject any or all bids or any parts of the same, to waive any irregularities and to accept any bid in its own best interest.

Derek Gajdos
Project Management Director
City of Grand Haven,

CITY OF GRAND HAVEN GRAND HAVEN, MICHIGAN

August 27, 2025

INSTRUCTIONS TO BIDDERS

1. **SPECIAL CONDITIONS:** Special conditions included in the Bid Document shall take precedence over any provisions stipulated hereunder.
2. **APPLICABLE LAWS:** The revised code of the state of Michigan, Charter of the City of Grand Haven, and all city ordinances insofar as they apply to the laws of competitive bidding, contracts, and the purchases, are made a part hereof.
3. **WORKMEN'S COMPENSATION:** Insofar as Workmen's Compensation is concerned, the bidder or contractor agrees to furnish, upon request, certified copies of policies and adequate certificates pertaining thereto as evidence that bidder carries Workmen's Compensation Insurance.
4. **INFRINGEMENTS AND INDEMNIFICATIONS:** The bidder, if awarded an order or contract, agrees to protect, defend, and save the City harmless against any demand for payment for the use of any patented material, process, article, or device that may enter into the manufacture, construction, or form as part of the work covered by either order or contract. He/she further agrees to indemnify and save the City harmless from suits or actions of every nature and description brought against it, for or on account of any injuries or damages sustained by a party or parties, by or from any of the acts of the contractor, his/her servants, or agents.

To this extent, the bidder or contractor agrees to furnish adequate Public Liability and Property Damage Insurance, the amounts of which will be determined by the City whenever such insurance is deemed necessary. When so required, the types and amounts of insurance to be provided will be set forth in the Instructions to Bidders (See Item 21).

5. **DEFAULT PROVISIONS:** In case of default by the bidder or contractor, the City of Grand Haven may procure the articles of services from other sources and hold the bidder or contractor responsible for any excess costs occasioned thereby.

In case of an error by the bidder in making up a proposal, the City may reject such a proposal upon presentation of a petition accompanied by a sworn affidavit of error which sets forth the error, the cause thereof, and sufficient evidence to substantiate the claim.

6. **PRICING:** Prices should be stated in units of quantity specified in the Bid Document. In case of discrepancy in computing the amount of the bid, the unit prices quoted will govern.

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7. **QUANTITIES:** When approximate quantities are stated, the City reserves the right to increase or decrease the quantity as best fits its needs.
8. **DELIVERY:** Quotations should include all charges for delivery, packing, crating, containers, etc. Unless otherwise stated by the bidder, prices quoted will be considered as being based on delivery to the destination designated in the Bid Document and to include all delivery and packing charges.
9. **SPECIFICATIONS:** Unless otherwise stated by the bidder, the proposal will be considered as being in strict accordance with the specifications outlined in the Bid Document.

References to a particular trade name, manufacturer's catalog, or model number are made for descriptive purposes to guide the bidder in interpreting the requirements of the City. They should not be construed as excluding proposals on other types of materials, equipment and supplies. However, the bidder, if awarded a contract, will be required to furnish the particular item referred to in the specifications or description unless a departure or substitution is clearly noted and described in the proposal and approved by the City.

10. **SAMPLES:** Samples, when requested, shall be filed prior to the opening of bids and must be furnished free of expense to the City and if not destroyed, will upon request be returned at the bidder's expense.
11. **TAXES:** Contractor shall include and be deemed to have included in his bid and contract price, Michigan State Sales and Use Taxes currently imposed by Legislative enactment and as administered by the Michigan Department Treasury, Revenue Division, on the bid date. If the Contractor is not required to pay or bear the burden, or obtains a refund or drawback in whole or in part of any Michigan Sales or Use Tax, interest or penalty thereon, which was required to be, and was deemed to have been, included in the bid and contract price, the contract price shall be reduced by the amount thereof and the amount of such reduction, whether as a refund or otherwise, shall endure solely to the benefit of the City of Grand Haven.
12. **BID INFORMALITIES AND REJECTION:** The City reserves the right to waive any nonconformity, irregularity or informalities in any bid, to negotiate with the selected bidder, and to award the bid in its determination of its best interest.
13. **AWARD:** Unless otherwise specified in the Bid Document, the City reserves the right to accept or reject any item in the bid. Unless otherwise stated in the Bid Document, bidders may submit proposals on any item or group of items, provided however that the unit prices are shown as requested.

As soon as the award is made, an order or contract document will be sent to the successful bidder for execution and bond if necessary. If the contracts are not executed and returned to the City of Grand Haven within 10 days of the date of sending, the Bid Surety, if required,

CITY OF GRAND HAVEN GRAND HAVEN, MICHIGAN

will be declared forfeited as liquidated damages.

14. **PAYMENTS:** Partial payments may be made upon presentation of a properly executed claim voucher, unless otherwise stated in the Bid Document. The final payment will be made by the City when the materials, supplies or equipment have been fully delivered and accepted or the work completed to the full satisfaction of the City. Increases in contract costs shall be approved in writing, prior to excess expense being incurred. Approval of increases may require formal action by City Council.
15. **BIDDER'S SIGNATURE:** Each proposal and bid surety form must be signed by the bidder with his/her usual signature. All signatures should be in full.

Bids by partnership must be signed by one or more of the partners in the following manner: "John Jones and James Smith, D.B.A., Smith Jones Company, by John Jones, a partner".

Bids by corporations must be signed with the names of the corporation, followed by the signature and designation of the president, vice-president or person authorized to bind it in the matter.

16. **SUBMISSION AND RECEIPT OF BIDS:** Inquiries involving an expenditure exceeding the limits established in the City Charter usually require advertising over a period of at least five (5) days prior to the scheduled bid opening. Proposals of this nature are publicly read at 10 o'clock AM (unless otherwise noted) on the date bids are scheduled to be received.

Proposals to receive consideration must be received prior to the specified time of opening and reading as designated in the Notice to Bidders.

Bidder must use the Proposal Form furnished by the City as none other may be accepted.

The Proposal Form must be returned intact.

Removal of any Proposal Form thereof may invalidate the bid.

Specifications and plans referred to in this bid document by reference only, need not be returned with the Proposal Form, however, no excision of material physically incorporated in the bid document will be permitted.

Bids are to be submitted in sealed envelopes and identified as requested in the Notice to Bidders.

Separate proposals must be submitted on each reference number and proposals shall be typewritten or written in ink.

Proposals having any erasures or corrections thereon may be rejected unless explained or noted over the signature of the bidder.

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17. **INTERPRETATION OF BID AND/OR CONTRACT DOCUMENTS:** No oral interpretation will be made to any bidder as to the meaning of the bid and/or Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the City of Grand Haven. Any inquiry received within a reasonable time prior to the date fixed for the opening of bids will be given consideration. Every interpretation made to a bidder will be on file in the Clerks office of the City of Grand Haven. In addition, copies will be kept on file at the City Clerk's office and posted on the City website. All bidders shall be bound by such interpretations whether or not received by the bidders.

18. **CHANGES AND ADDENDA TO BID DOCUMENTS:** Each change or addenda issued in relation to this bid document will be on file in the Clerks Office of the City of Grand Haven and posted on the City website. It shall be the bidder's responsibility to make inquiry as to the changes or addenda issued. All such changes or addenda shall become part of the contract and all bidders shall be bound by such changes or addenda. Information on all changes or addenda issued will be available at the City Clerk's office and the City website.

19. **PROJECT SCHEDULE AND COMPLETION:** In order to keep project impacts to neighboring properties to a minimum, once active construction begins, the contractor shall continue active construction activities unless weather delays occur, or agreed upon by the contractor and owner. The project must be substantially completed by or before **Friday, December 19, 2025** and, if not, \$100 per day will be assessed to the contractor for each day past said deadlines.

20. **INSURANCE REQUIREMENTS:** The Contractor will secure and maintain insurance during the term of the contract from an insurance company authorized to do business in the State of Michigan that will protect contractors and subcontractors and the City from all liability (public liability, personal injury and property damage) claims which may arise from operations under the contract. The Contractor may not start work until evidence of all required insurance has been submitted and approved by the City. The contractor must cease work if any of the required insurance is canceled or expires. Three (3) copies of certificates of insurance shall be submitted to be approved by the City prior to the execution of the contract. The Certificate shall specifically name the City as an additional insured party. The certificates must contain the agreement of the insurance company notifying the City in writing ten (10) days prior to any cancellation or material alteration of the policy. The Contractor shall not allow any work under the contract to be performed by a subcontractor unless evidence of similar insurance covering the activities of the subcontractor is submitted to and approved by the City. The limits of insurance shall not be less than the following:
 - A. Workers Compensation Insurance in the amount required by Michigan Law.
 - B. General Liability:
 - Bodily Injury and Property Damage combined:

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GRAND HAVEN, MICHIGAN**

	Each Occurrence	\$3,000,000.00
	Aggregate	\$3,000,000.00
	Personal Injury	\$3,000,000.00
C.	Automobile Insurance for Vehicles:	
	Bodily Injury Each Person	\$1,000,000.00
	Bodily Injury Each Accident	\$1,000,000.00
	Property Damage Each Accident	\$1,000,000.00

End of Instructions to Bidders Section

CITY OF GRAND HAVEN
GRAND HAVEN, MICHIGAN

**SPECIFICATIONS
FOR
GRAND HAVEN COMMUNICATION TOWER REPLACEMENT
207 EMMET ST.**

1. **Description.** Install one (1) 150' hot dipped galvanized communication tower with four (4) antenna platforms that conform with the approved engineered drawings and all ancillary site improvements outlined in this specification and approved site plan document. Additionally, complete removal of the existing communication tower and ancillary obsolete infrastructure.

2. **General Specifications:**
 - 2.1. Contractor shall provide all resources and services to completely design, engineer, fabricate, deliver and install communication tower in accordance with these specifications, approved site plan, approved oversight permits and all applicable EIA and manufacture-recommendation specifications.
 - 2.2. Contractor shall secure all necessary building permits.
 - 2.3. Owner will secure all zoning permits
 - 2.4. Owner will secure all necessary State of Michigan, Environment, Great Lakes and Energy (EGLE), Critical Dune Permits
 - 2.5. Owner will secure all necessary Soil Erosion and Sedimentation Control Permits
 - 2.6. Owner will secure all necessary FAA permits.
 - 2.7. All parts, materials and practices will meet at least the minimum generally published and publicly advertised standards of the vendor.
 - 2.8. Contractor shall warranty all work and materials for a minimum of one year. All warranties shall be submitted with bid.

3. **Communication Tower Design:**
 - 3.1. The tower shall be fabricated from steel material and shall be multi-flatted, tapered, slip-fit monopole design. Smooth round, round taper, stepped taper, and towers with bolted flanges are not acceptable.
 - 3.2. Tower shall be designed, engineered and fabricated according to ANSI/EIA RS-222-G, however, if any requirements of this specification is more stringent, then it shall apply.
 - 3.3. Tower shall be designed as a Class III Structure.
 - 3.4. Tower shall be designed for Exposure Category C.
 - 3.5. Tower shall be designed for Topographic Category I.
 - 3.6. Tower shall be designed for an ultimate wind speed of 100 or greater.
 - 3.7. Tower shall be designed for a maximum 75' fall radius.
 - 3.8. All tower components shall be hot dip galvanized after fabrication in accordance with ASTM A-123.
 - 3.9. All bolts shall conform to ASTM A-325 and shall be galvanized in accordance with ASTM A-153.
 - 3.10. Welds made during fabrication shall be x-ray quality and conform to AISC and AWS standards.

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3.11. Tower shall be 150' height from bottom plate to top of mono pole.

4. Loading and Attachments:

4.1. The tower shall be designed for the following loads as well as those outline in section 5:

4.1.1. 150' Low profile heavy duty 12' triangular cellular platform

4.1.1.1. 6 qty cellular panel antennas – EPBQ-654L8H8

4.1.1.2. 6 qty Radio's – 4415 B30

4.1.1.3. 2 qty HB158-21U6S24 Hybrid Cable

4.1.2. 135' Low profile heavy duty 12' triangular cellular platform

4.1.2.1. 6 qty cellular panel antennas – EPBQ-654L8H8

4.1.2.2. 6 qty Radio's – 4415 B30

4.1.2.3. 2 qty HB158-21U6S24 Hybrid Cable

4.1.3. 120' Low profile heavy duty 12' triangular cellular platform

4.1.3.1. 6 qty cellular panel antennas – EPBQ-654L8H8

4.1.3.2. 6 qty Radio's – 4415 B30

4.1.3.3. 2 qty HB158-21U6S24 Hybrid Cable

4.1.4. 105' Low profile heavy duty 12' cellular platform

4.1.4.1. 6 qty cellular panel antennas – EPBQ-654L8H8

4.1.4.2. 6 qty Radio's – 4415 B30

4.1.4.3. 2 qty HB158-21U6S24 Hybrid Cable

4.1.5. 90' Future

4.2. 6' lightning Rod and all necessary grounding appurtenances, or approved alternatives.

4.3. Furnish tower climbing bolts/pegs.

4.4. Furnish and install 12' diameter platforms or approved alternatives.

4.5. Furnish safety cable kit for climbing area, no harness.

4.6. Furnish Vanguard Medium FTS372 Obstruction Lighting System to FAA recommendations.

4.7. Furnish feedline entry ports as follows:

4.7.1. To service top platform and top antenna – furnish 3 each 8" x 12"

4.7.2. To service 135' platform furnish three each 8" x 12"

4.7.3. To service 120' platform – furnish three each 8' x 12"

4.7.4. To service 105' platform – furnish three each 8" x 12"

4.7.5. At base of tower, furnish two large ports placed at specified locations on site drawings - 12" x 26"

5. Provide New Cabling and Antenna for the Following:

5.1. The following items need to be provided for and / or transferred and installed:

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- 5.1.1. 150' Level
 - 5.1.1.1. 1 qty SD212-SF2P2SNM VHF Antenna
 - 5.1.1.2. 2 qty SD314-HF2P4SNM UHF Antenna
 - 5.1.1.3. 3 Runs AVA5-50A 7/8 Helix
 - 5.1.1.4. 1 qty Video Camera & CAT6 (Provide CAT6, Transfer Camera)
- 5.1.2. 135' Level
 - 5.1.2.1. 1 qty SD212-SF2P2SNM VHF Antenna
 - 5.1.2.2. 1 qty SD314-HF2P4SNM UHF Antenna
 - 5.1.2.3. 3 qty Microwave Radio and CAT6 (Provide CAT6, Transfer Microwave)
 - 5.1.2.4. 2 qty AVA5-50A 7/8 Helix
- 5.1.3. 120' Level
 - 5.1.3.1. 1 qty SD212-SF2P2SNM VHF Antenna
 - 5.1.3.2. 1 qty SD314-HF2P4SNM UHF Antenna
 - 5.1.3.3. 2 qty AVA5-50A 7/8 Helix
- 5.1.4. 105' Level
 - 5.1.4.1. 1 qty SD212-SF2P2SNM VHF Antenna
 - 5.1.4.2. 1 qty SD314-HF2P4SNM UHF Antenna
 - 5.1.4.3. 2 qty AVA5-50A Helix

6. Removal of Existing Tower:

- 6.1. Contractor will remove the existing tower in its entirety
- 6.2. Tower shall be removed within 30 calendar days after new tower is fully operational.
- 6.3. Tower foundation must be removed to a minimum depth of 8 feet. It is the preference of the owner that the entire foundation be removed. This decision will be made based on field conditions and preference of the owner.

7. Pre-Construction. The City of Grand Haven's representative will hold a preconstruction meeting before beginning of the work to discuss the following:

- 7.1. The contractors detailed work schedule
- 7.2. The traffic control plan
- 7.3. Required project documentation
- 7.4. Review of all oversight agency permit requirements

8. Progress Meetings:

- 8.1. Progress meetings shall be held at an agreed upon date and time with city staff, the vendor and any subcontractors weekly.

9. Construction Hours and Site Security:

- 9.1. The vendor is required secure the existing communication tower site at all times.
- 9.2. Construction hours are Monday through Saturday 7am until 7pm.

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10. Payment Applications:

- 10.1. Payment applications are due on the 1st and 15th of each month. Once payment applications are approved city staff and City Council, payment will be sent via ACH within 7 days.

11. Traffic Control and Staging Plan:

- 11.1. Vendor shall submit for approval to city staff, a traffic control and staging plan prior to the Notice to Proceed being issued.
- 11.2. City staff will approve, deny or recommend alterations to the traffic control and staging plans within seven (7) days after submittal.
- 11.3. Vendor shall strictly follow City approved traffic control and staging plans.

12. Bid Submittals:

- 12.1. The following submittals shall be submitted with the bid:
 - 12.1.1. Plan View and elevation of proposed communication tower
 - 12.1.2. Tower section drawings showing all members, slip joint configuration, base flange details, reinforced entry points and any additional information required to identify and evaluate each component.
 - 12.1.3. Drawings to include dimensions and weights of sections and weight of complete tower assembly.
 - 12.1.4. Drawings of miscellaneous details including antenna mounts, top-mounted platform and standoff brackets.
 - 12.1.5. Plan view and elevation of proposed foundation. To include reinforcing bar size, quantity and position, concrete quantities and finishing techniques, and all other pertinent information. Vendor is encouraged to offer alternative foundation designs based on local conditions.
 - 12.1.6. Structural analysis of tower. Such analyses to be certified by a registered engineer, state of registry Michigan. Furnish complete details of analyses showing calculations and stresses.
 - 12.1.7. Foundation design(s). Such designs to be certified by a registered professional engineer, state of registry: Michigan. Furnish complete details of design(s) showing calculations and stresses.
 - 12.1.8. Upon award of tower bid, Vendor shall furnish key erection drawings, fabrication and design drawings all certified by a registered engineer, state of registry: Michigan.
 - 12.1.9. Sample printed warranty.

13. Acceptance of Work.

- 13.1. All work shall be in accordance to this specification, the manufactures specifications or general industry standards
- 13.2. The Owner will submit a final acceptance of work once the project has been fully completed and inspected.

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GRAND HAVEN, MICHIGAN**

14. Measurement and Payment

14.1. Contract Item (Pay Item)	Pay Unit
14.1.1. Mobilization	Lump Sum
14.1.2. Communication Tower, design, engineering, fabrication & delivery	Lump Sum
14.1.3. Tower foundation	Lump Sum
14.1.4. Tower Construction	Lump Sum
14.1.5. Installation of Antenna	Each
14.1.6. Security Fence installation	Per Foot
14.1.7. Site/Landscaping removals and installation	Lump Sum
14.1.8. Removal of existing communication tower	Lump Sum
14.1.9. Removal of existing communication tower foundations	Per Foot
14.2. A 10% retainage shall apply to any payment applications. Retainage will be paid once all items have been successfully constructed, installed, completed, received and accepted by the Owner.	

15. Final Construction Documents

- 15.1. Contractor shall submit to owner 1 set of electronic (PDF) As-Built drawings which shall include all bid submittals included in the bid and any subsequent submittals delivered to owner over the course of the project. As-Built drawings and submittals shall be received prior to final payment.

**CITY OF GRAND HAVEN
GRAND HAVEN, MICHIGAN
DEPARTMENT OF PUBLIC WORKS**

August 27, 2025

BID FORM

Ms. Maria Boersma, City Clerk
519 Washington Avenue

_____ Date

Grand Haven, Michigan 49417

Dear Ms. Boersma:

Completely in accordance with your notice, instructions and specifications dated August 27, 2025, the undersigned declares that they have carefully examined the requirements of specifications contained herein, and propose to furnish and deliver to the City of Grand Haven the apparatus listed below. The City of Grand Haven may, at its sole discretion, buy the proposed product that is in the best interest of the City of Grand Haven.

Item No.	Description	Estimated Quantity	Unit	Unit Price	Item Total
1	Mobilization	1	Lump Sum		
2	Communication Tower, design, engineering, fabrication & delivery	1	Lump Sum		
3	Tower Foundation	1	Lump Sum		
4	Tower Installation	1	Lump Sum		
5	Installation of antenna	12	Each		
6	Security fence installation	1	Lump Sum		
7	Site/Landscaping removals and installation	1	Lump Sum		
8	Removal of existing tower	1	Lump Sum		
9	Removal of existing tower foundations	32	Per Foot		

NET TOTAL

: _____

**CITY OF GRAND HAVEN
GRAND HAVEN, MICHIGAN
DEPARTMENT OF PUBLIC WORKS**

Attached are complete specifications and warranty information on the equipment quoted above. All changes to the specifications are attached. All Federal and State taxes have been deducted and all prices reflect the NET PRICE.

(Bidder's Company Name)

(Bidder's Telephone Number)

(Street/Mailing Address)

(City/State/Zip)

(Bidder's Signature)

(Print Bidder's Name)

INDEX OF SHEETS	
SHT NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS AND REMOVALS PLAN
3	PROPOSED SITE PLAN
4	SITE RESTORATION PLAN
5	ANTENNA BASE DETAILS
6	STACKWALL AND GATES DETAILS
7	RESTORATION DETAILS AND NOTES

CITY OF GRAND HAVEN COMMUNICATION TOWER REPLACEMENT

GRAND HAVEN, MI

OWNER

CITY OF GRAND HAVEN
519 WASHINGTON AVENUE
GRAND HAVEN, MI 49417

SURVEYOR & CIVIL ENGINEER

ABONMARCHE MILANOWSKI & ENGLERT
ATTN: BRIAN FORD, PS
ATTN: LEAH BECTEL, PE
11 NORTH 6TH ST
GRAND HAVEN, MI 49417
616-847-4070

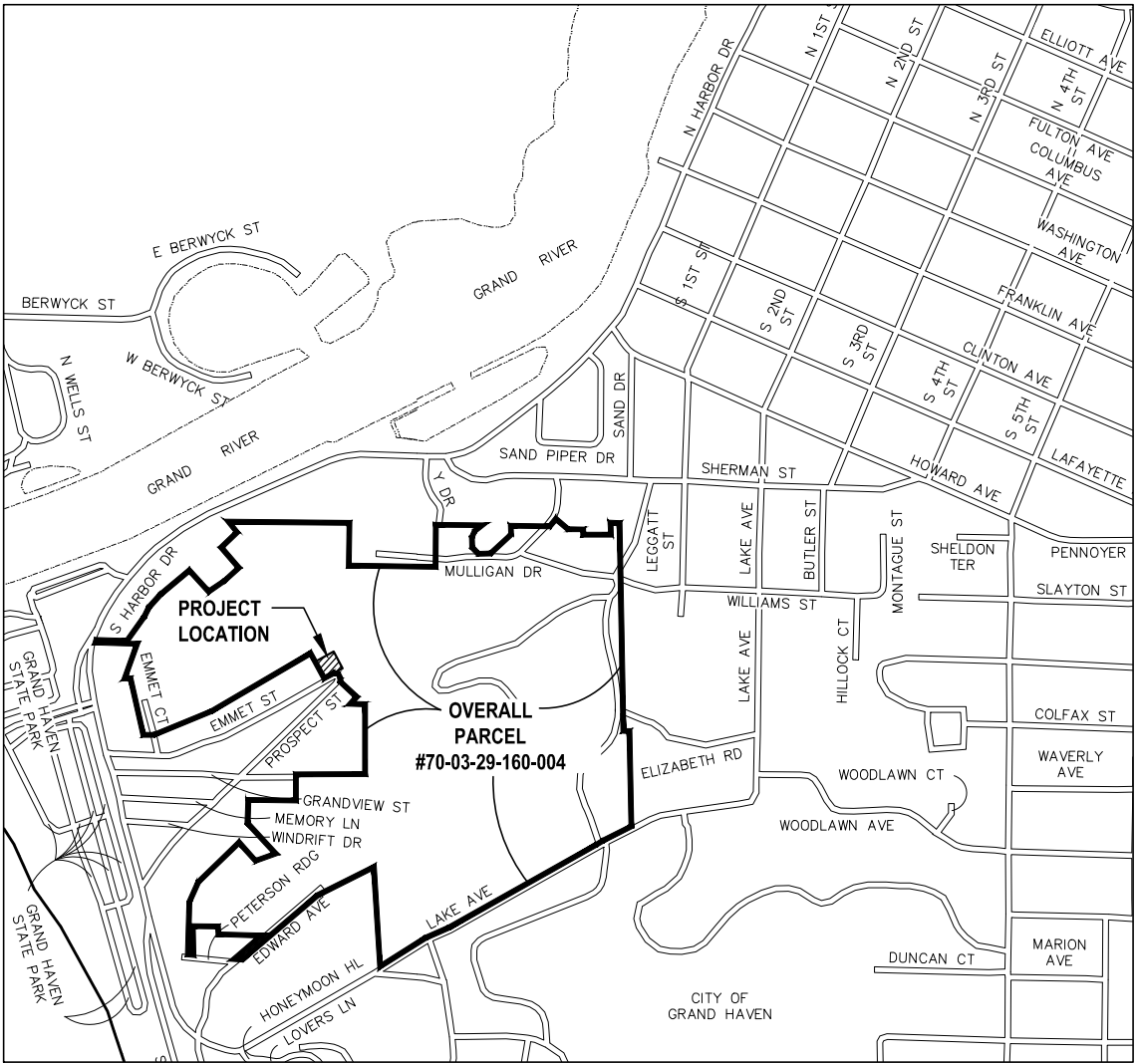
CITY OF GRAND HAVEN OFFICIALS

MAYOR	BOB MONETZA
COUNCILMEMBER	KEVIN MCLAUGHLIN
COUNCILMEMBER	MIKE FRITZ
COUNCILMEMBER	KAREN LOWE
COUNCILMEMBER	VACANT
CITY MANAGER	ASHLEY LATSCH
PUBLIC WORKS DIRECTOR	MICHAEL ENGLAND
CLERK	MARIA BOERSMA
PROJECT MANAGER	DEREK GAJDOS



COUNTY KEY

NOT TO SCALE



PROJECT LOCATION MAP

NOT TO SCALE

LOCAL UTILITIES

SEWER & WATER CITY OF GRAND HAVEN PUBLIC WORKS 1120 JACKSON STREET GRAND HAVEN, MI 49417 MIKE ENGLAND (616) 847-3493	ELECTRIC: GRAND HAVEN BOARD OF LIGHT AND POWER 1700 EATON DRIVE GRAND HAVEN, MI 49417 ROBERT SHELLEY (616) 607-1263
CABLE: CHARTER COMMUNICATIONS 1433 FULTON ST GRAND HAVEN, MI 49417 BRAD KULICAMP (616) 607-2356	GAS: MICHIGAN GAS 1708 EATON DRIVE GRAND HAVEN, MI 49417 TODD SUBKA (616) 844-7519
TELEPHONE: AT&T 245 EAST 24TH STREET HOLLAND, MI 49423 RICK ARENDSSEN (616) 392-7017	FIBER: COMCAST RACHEL GENTRY (248) 514-8613 RACHEL_GENTRY@COMCAST.NET

CALL MISS DIG

1-800-482-7171 OR 811



FOR PROTECTION OF THE UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING CONSTRUCTION OPERATIONS. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.

1	PER CLIENT REVIEW COMMENTS	STAFF	6/24/2025
NO.	REVISION DESCRIPTION:	BY:	DATE:

ABONMARCHE
11 North 6th Street
Grand Haven, MI 49417
T 616.847.4070
abonmarcche.com

South Bend
Goshen
Valparaiso
Hobart
Ft. Wayne

Benton Harbor
Grand Haven
Grand Rapids
Kalamazoo
Lafayette

Engineering - Architecture - Land Surveying
COPYRIGHT 2024 - ABONMARCHE CONSULTANTS, INC.

PROJECT:
**CITY OF GRAND HAVEN
COMMUNICATION TOWER
REPLACEMENT
OTTAWA COUNTY, MI**

SHEET TITLE:
TITLE SHEET

DRAWN BY:
TMV

DESIGNED BY:
SJC

PM REVIEW:
PM

QA/QC REVIEW:
QA/QC

DATE:
JUNE 2025

SCALE:
HORZ: N/A
VERT: N/A

ACI JOB #
25-0719

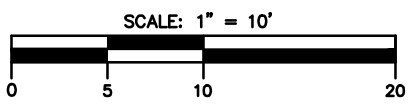
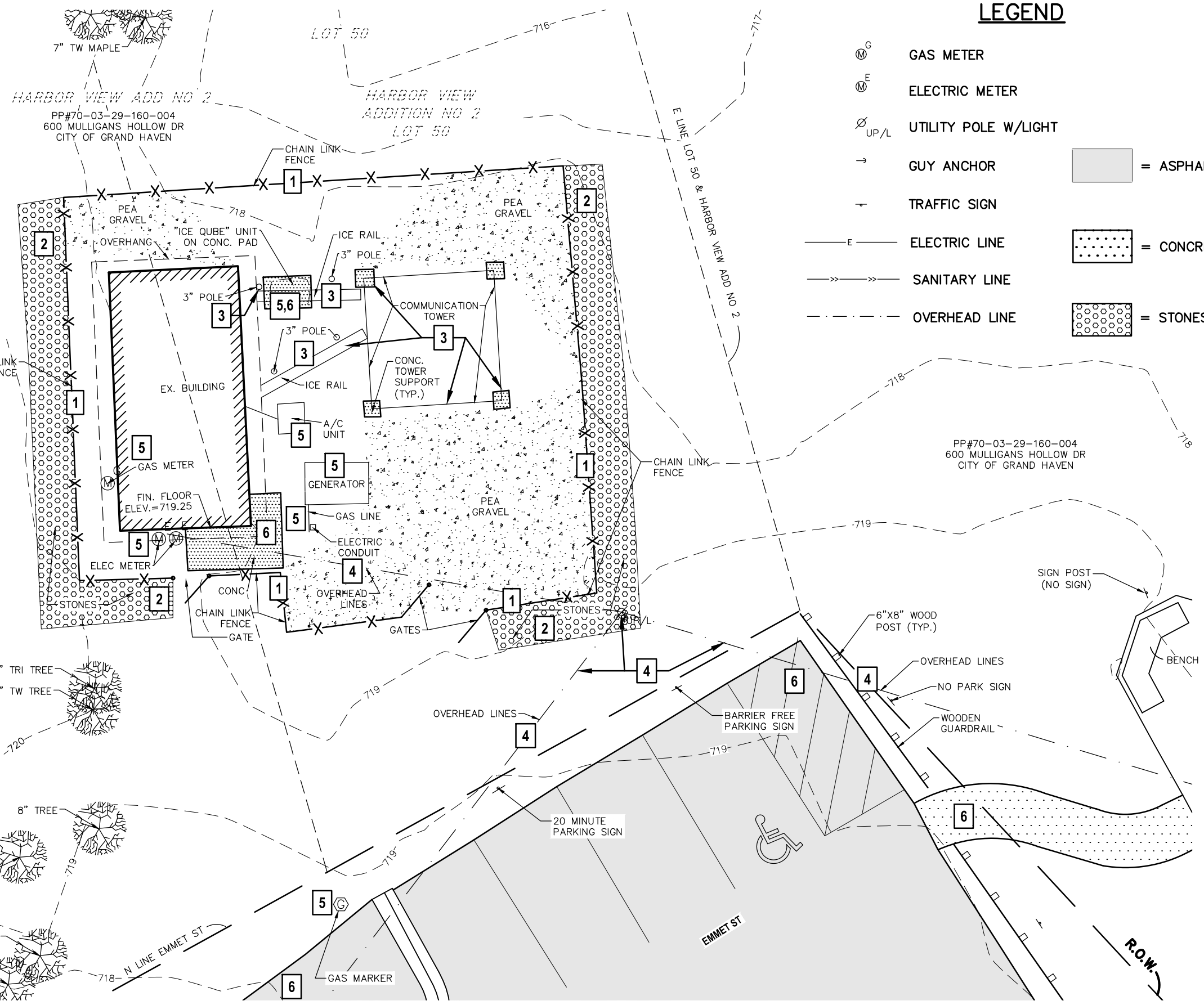
SHEET NO.
1 of 7

DEMOLITION KEY NOTES

- 1 REMOVE CHAIN LINK FENCE, GATES, POSTS, FOOTINGS, AND ALL APPURTENANCES.
- 2 REMOVE EXISTING STONE MAINTENANCE STRIP. REMOVE ALL UNUSED MATERIAL FROM SITE
- 3 REMOVE EXISTING TOWER, FOOTINGS, ICE RAIL, CONDUCTOR, ETC. COORDINATE WITH INSTALLATION OF NEW ANTENNA
- 4 REMOVE OR RELOCATE EXISTING POWER POLE AND SERVICE DROPS. COORDINATE WITH G.H. BOARD OF LIGHT AND POWER
- 5 EXISTING MECHANICAL OR UTILITY TO REMAIN
- 6 EX GRAVEL, CONCRETE, OR ASPHALT TO REMAIN

LEGEND

- GAS METER
- ELECTRIC METER
- UTILITY POLE W/LIGHT
- GUY ANCHOR
- TRAFFIC SIGN
- ELECTRIC LINE
- SANITARY LINE
- OVERHEAD LINE
- = ASPHALT
- = CONCRETE
- = STONES



NOTE:
THIS SHEET IS DESIGNED TO BE PLOTTED
AT 11"x17" TO THE SCALE ABOVE.

ABONMARCHÉ
 South Bend
 Grand Haven, MI 49417
 T 616.847.4070
 abonmarche.com

Benton Harbor
 Grand Haven
 Grand Rapids
 Kalamazoo
 Lafayette
 Ft. Wayne

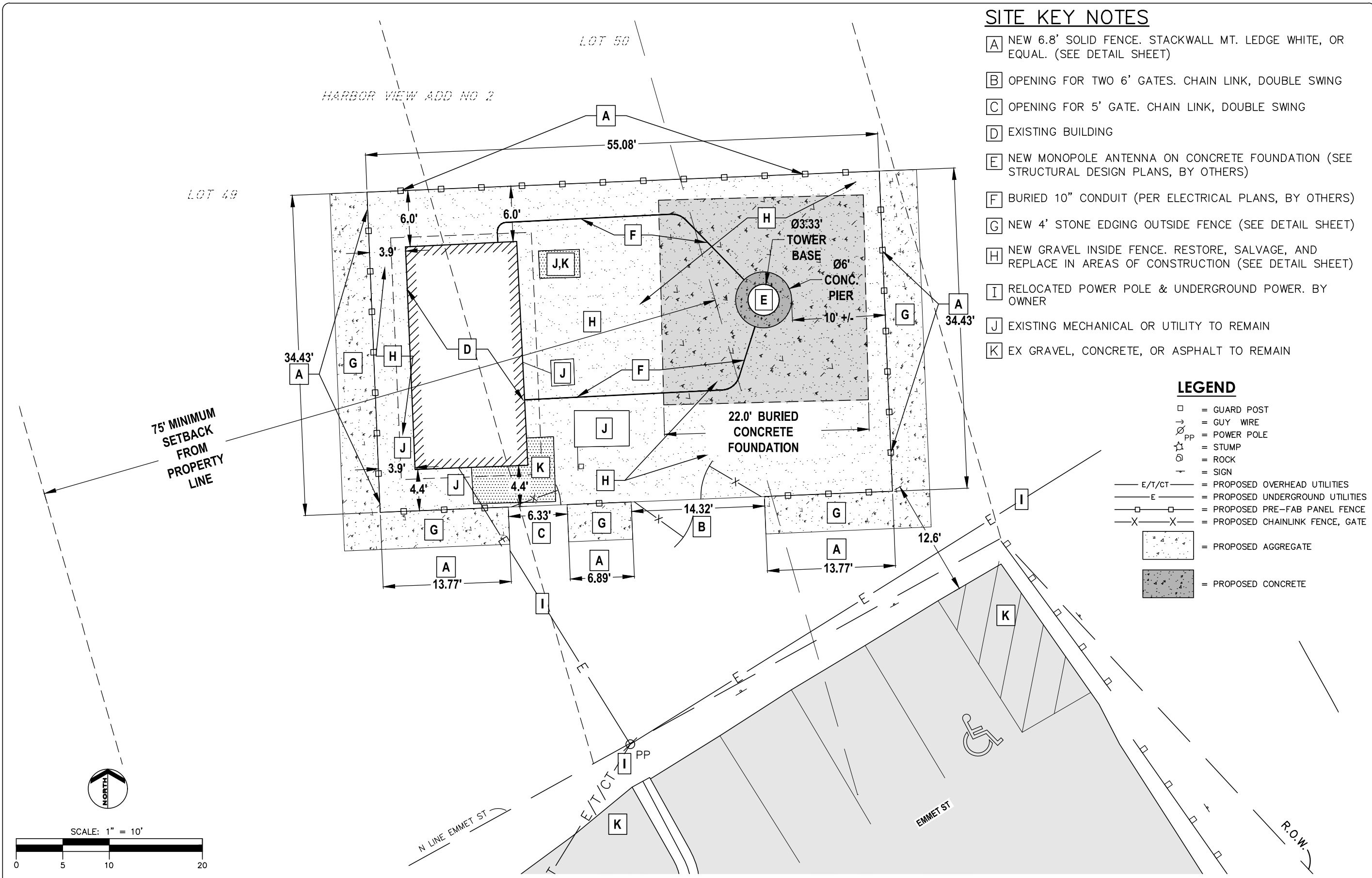
Engineering - Architecture - Land Surveying

PROJECT:
**CITY OF GRAND HAVEN
 COMMUNICATION TOWER
 REPLACEMENT
 OTTAWA COUNTY, MI**

SHEET TITLE:
**EXISTING CONDITIONS
 AND REMOVALS PLAN**

DRAWN BY: **TMV**
 DESIGNED BY: **SJC**
 PM REVIEW: **PM**
 QA/QC REVIEW: **QA/QC**
 DATE: **JUNE 2025**
 SCALE:
 HORZ: 1"=10'
 VERT: N/A
 ACI JOB # **25-0719**

1	PER CLIENT REVIEW COMMENTS	STAFF	6/24/2025
NO.	REVISION DESCRIPTION:	BY:	DATE:

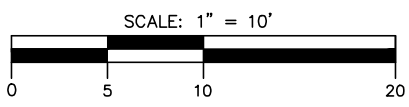


SITE KEY NOTES

- A** NEW 6.8' SOLID FENCE. STACKWALL MT. LEDGE WHITE, OR EQUAL. (SEE DETAIL SHEET)
- B** OPENING FOR TWO 6' GATES. CHAIN LINK, DOUBLE SWING
- C** OPENING FOR 5' GATE. CHAIN LINK, DOUBLE SWING
- D** EXISTING BUILDING
- E** NEW MONOPOLE ANTENNA ON CONCRETE FOUNDATION (SEE STRUCTURAL DESIGN PLANS, BY OTHERS)
- F** BURIED 10" CONDUIT (PER ELECTRICAL PLANS, BY OTHERS)
- G** NEW 4' STONE EDGING OUTSIDE FENCE (SEE DETAIL SHEET)
- H** NEW GRAVEL INSIDE FENCE. RESTORE, SALVAGE, AND REPLACE IN AREAS OF CONSTRUCTION (SEE DETAIL SHEET)
- I** RELOCATED POWER POLE & UNDERGROUND POWER. BY OWNER
- J** EXISTING MECHANICAL OR UTILITY TO REMAIN
- K** EX GRAVEL, CONCRETE, OR ASPHALT TO REMAIN

LEGEND

- = GUARD POST
- = GUY WIRE
- = POWER POLE
- = STUMP
- = ROCK
- = SIGN
- = PROPOSED OVERHEAD UTILITIES
- = PROPOSED UNDERGROUND UTILITIES
- = PROPOSED PRE-FAB PANEL FENCE
- = PROPOSED CHAINLINK FENCE, GATE
- = PROPOSED AGGREGATE
- = PROPOSED CONCRETE



NOTE:
THIS SHEET IS DESIGNED TO BE PLOTTED
AT 11"x17" TO THE SCALE ABOVE.

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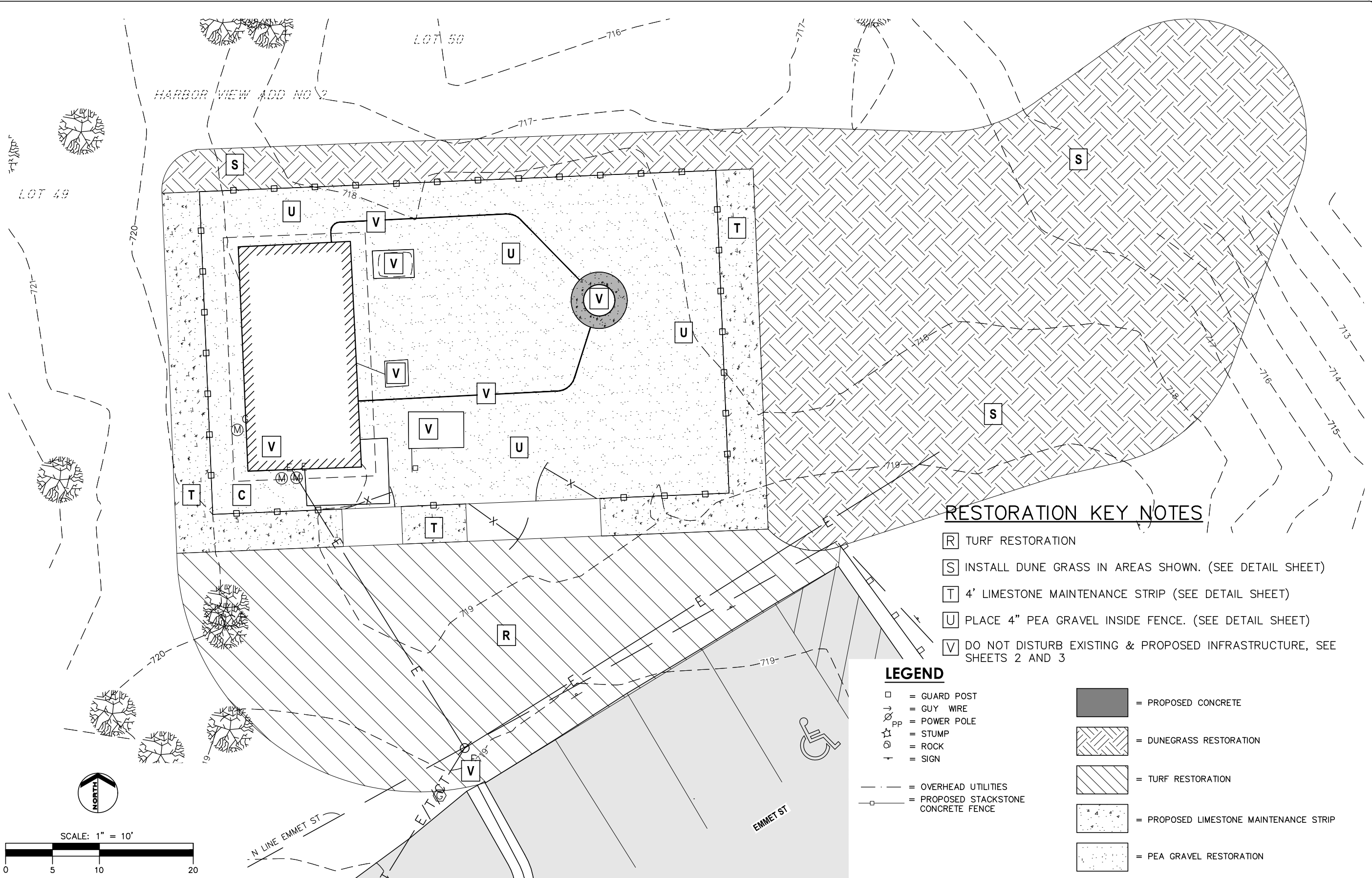
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**CITY OF GRAND HAVEN
 COMMUNICATION TOWER
 REPLACEMENT
 OTTAWA COUNTY, MI**

PROPOSED SITE PLAN

DRAWN BY: **TMV**
 DESIGNED BY: **SJC**
 PM REVIEW: **PM**
 QA/QC REVIEW: **QA/QC**
 DATE: **JUNE 2025**
 SCALE: **HORZ: 1"=10'**
VERT: N/A
 ACI JOB # **25-0719**



RESTORATION KEY NOTES

- [R] TURF RESTORATION
- [S] INSTALL DUNE GRASS IN AREAS SHOWN. (SEE DETAIL SHEET)
- [T] 4' LIMESTONE MAINTENANCE STRIP (SEE DETAIL SHEET)
- [U] PLACE 4" PEA GRAVEL INSIDE FENCE. (SEE DETAIL SHEET)
- [V] DO NOT DISTURB EXISTING & PROPOSED INFRASTRUCTURE, SEE SHEETS 2 AND 3

LEGEND

- = GUARD POST
- ↓ = GUY WIRE
- PP = POWER POLE
- ☆ = STUMP
- ⊙ = ROCK
- ↑ = SIGN
- = OVERHEAD UTILITIES
- = PROPOSED STACKSTONE CONCRETE FENCE
- = PROPOSED CONCRETE
- ▨ = DUNEGRASS RESTORATION
- ▩ = TURF RESTORATION
- ▧ = PROPOSED LIMESTONE MAINTENANCE STRIP
- ▦ = PEA GRAVEL RESTORATION

NOTE:
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PROJECT:
**CITY OF GRAND HAVEN
 COMMUNICATION TOWER
 REPLACEMENT
 OTTAWA COUNTY, MI**

SHEET TITLE:
SITE RESTORATION PLAN

DRAWN BY:
TMV

DESIGNED BY:
SJC

PM REVIEW:
PM

QA/QC REVIEW:
QA/QC

DATE:
JUNE 2025

SCALE:
 HORZ: 1"=10'
 VERT: N/A

ACI JOB #
25-0719

SHEET NO.
4 of 7



Quote Number: 92896
 Tower Model: Drew Wireless
 Company: 5 Mile Hill / Pole
 Site Name: Ottawa
 County: MI
 State: MI
 Date: 06/12/25



PIER - PAD FOUNDATION ESTIMATE
 Preliminary Design - Do Not Install

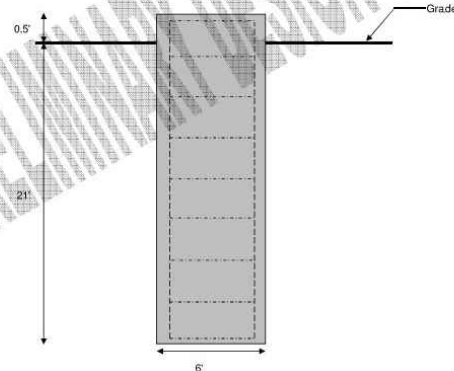
Quote Number: 92896
 Tower Model: NTP 40" X 150"
 Company: Drew Wireless
 Site Name: 5 Mile Hill / Pole
 County: Ottawa
 State: MI
 Date: 06/12/25

Preliminary Design Summary

Foundation Dimensions	
Depth	21'
Pier Extension	0.5'
Pier Diameter	6"
Clear Cover	3"
Rebar Circle Diameter	46.5"
Volume	22.5 cubic yards
Pier Reinforcement	
Quantity	30
Size	#8
Length	252"
Weight	1682.0 lb
Tie Reinforcement	
Quantity	18
Size	#5
Total Length	222.8"
Weight Total	368.0 lb

Preliminary Design, DO NOT INSTALL
 Concrete compressive strength, f_c : 4500 psi
 Normal sand soils as defined by ANS/TIA-222-G

* Not to scale, shown with typical reinforcement pattern

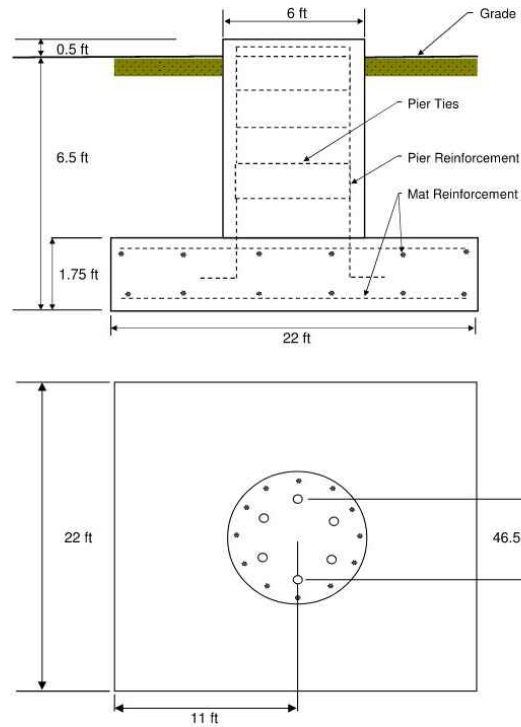


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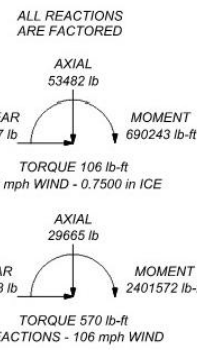
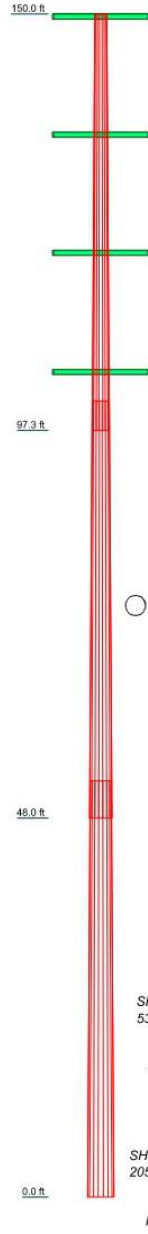
Foundation estimate for NTP 40" X 150" based on Normal sand soils as defined by ANS/TIA-222-G.

Mat Foundation with Raised Pier

- Concrete Dimensions: 22.0 ft x 22.0 ft x 1.75 ft thick block bearing at 6.5 ft deep with one 6.0 ft diameter raised pier extending 0.5 ft above grade. (36.9 cu yd concrete)
- Mat Reinforcement: 25 #7 rebar per direction per layer, 100 total (4395# total)
- Pier Reinforcement: 25 #9 rebar with hooks per pier, 25 total (654# total)
- Pier Ties: 6 #5 standard ties per pier, 6 total (116# total)
- Concrete Strength: 4500 psi



Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	52.75	18	0.1875	3.75	18.0000	26.0000	2563.1	
2	53.00	18	0.3125	4.75	25.0563	33.0942	A072-05 5699.7	
3	52.75	18	0.2750	4.75	31.7488	39.7488	6313.2	
								16536.0



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
6' Lightning Rod	150	(2) Radio 4415 B30	135
Low-Profile Platform 12'	150	(2) Radio 4415 B30	120
(2) Radio 4415 B30	150	(2) EPBQ-654L8H8	120
(2) EPBQ-654L8H8	150	(2) Radio 4415 B30	120
(2) Radio 4415 B30	150	(2) EPBQ-654L8H8	120
(2) EPBQ-654L8H8	150	(2) Radio 4415 B30	120
(2) Radio 4415 B30	150	Low-Profile Platform 12'	120
(2) EPBQ-654L8H8	150	(2) EPBQ-654L8H8	120
(2) EPBQ-654L8H8	135	(2) Radio 4415 B30	105
Low-Profile Platform 12'	135	(2) EPBQ-654L8H8	105
(2) Radio 4415 B30	135	(2) Radio 4415 B30	105
(2) EPBQ-654L8H8	135	(2) EPBQ-654L8H8	105
(2) Radio 4415 B30	135	(2) Radio 4415 B30	105
(2) EPBQ-654L8H8	135	Low-Profile Platform 12'	105

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

- TOWER DESIGN NOTES**
1. Tower designed for Exposure C to the TIA-222-G Standard.
 2. Tower designed for a 106 mph ultimate wind in accordance with the TIA-222-G Standard.
 3. Tower is also designed for a 40 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
 4. Deflections are based upon a 60 mph wind.
 5. Tower Risk Category II.
 6. Topographic Category 1 with Crest Height of 0.00 ft
 7. TOWER RATING: 95.3%

**PRELIMINARY STRUCTURAL DETAILS
 NOT FOR CONSTRUCTION**

MONOPOLE BASE AND FOUNDATION DETAILS
 NOT TO SCALE

NO.	REVISION DESCRIPTION:	STAFF	DATE:
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		BY:	
		DATE:	

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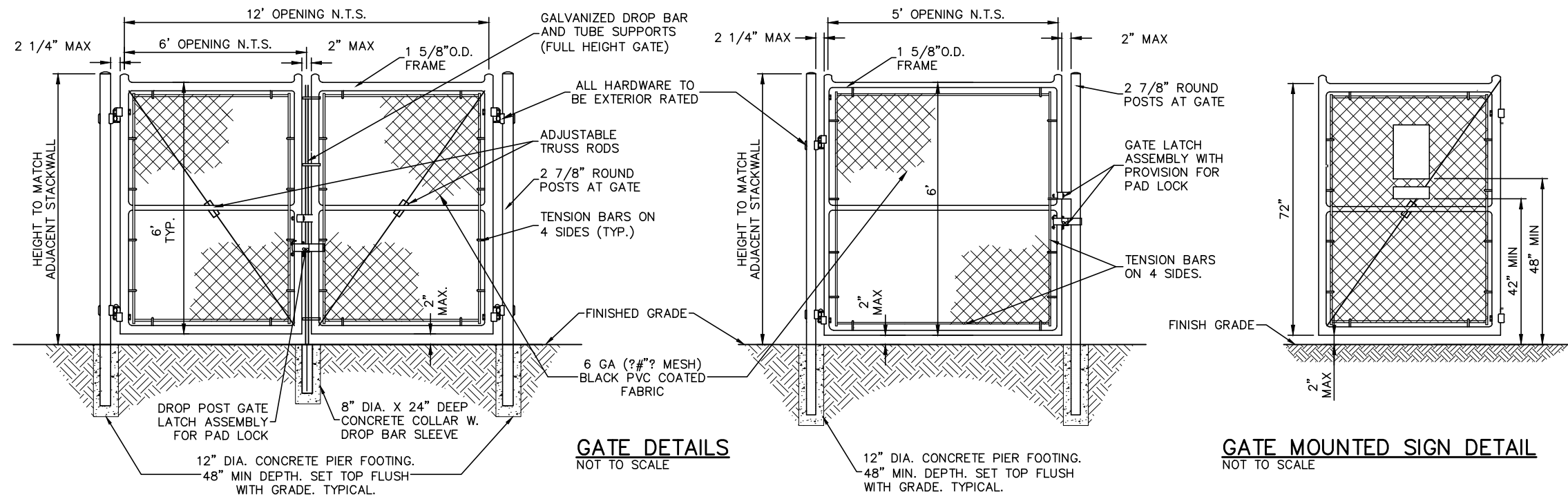
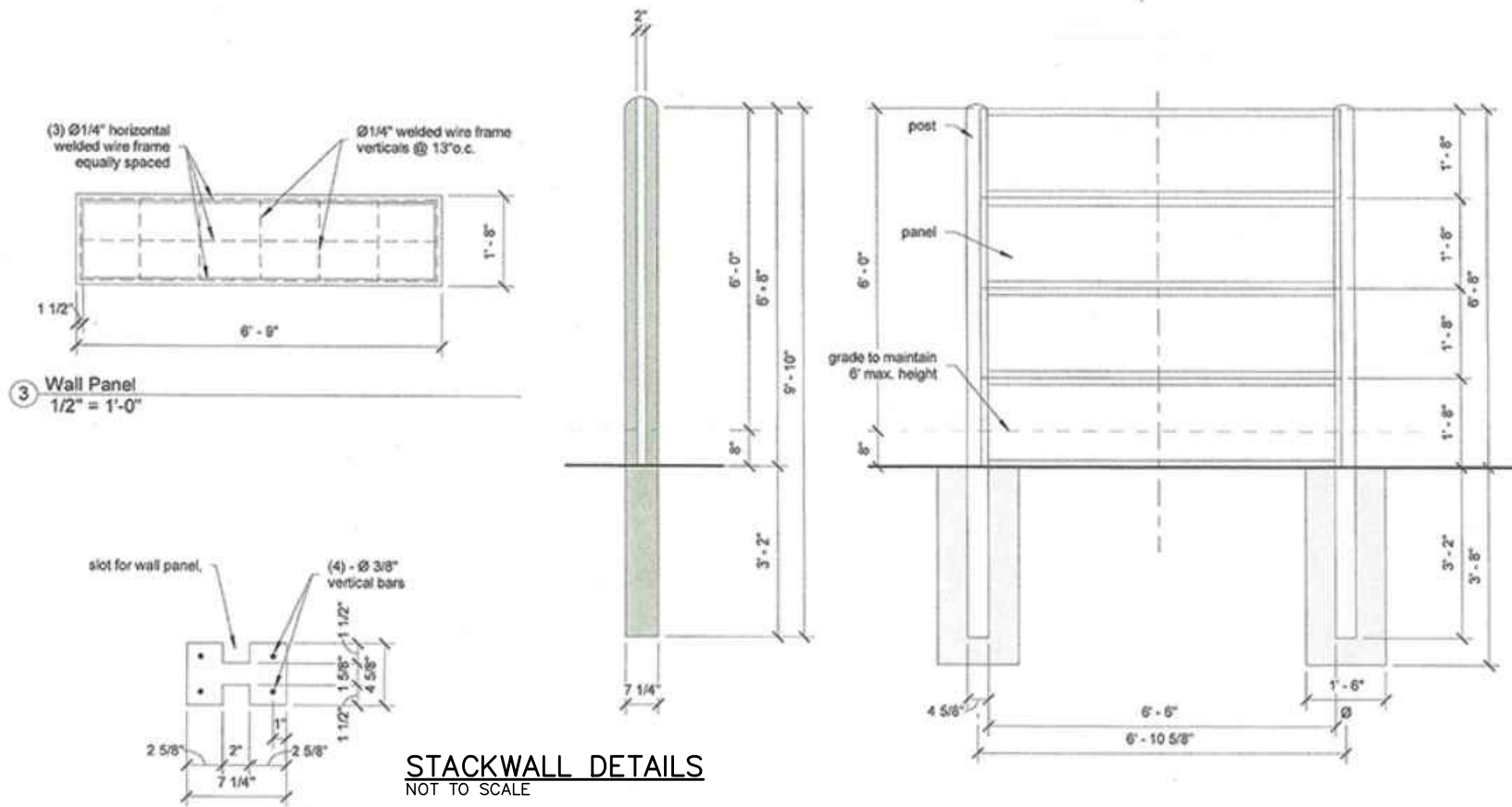
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PROJECT: **CITY OF GRAND HAVEN
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 OTTAWA COUNTY, MI**

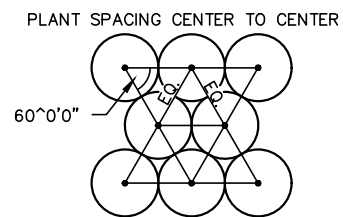
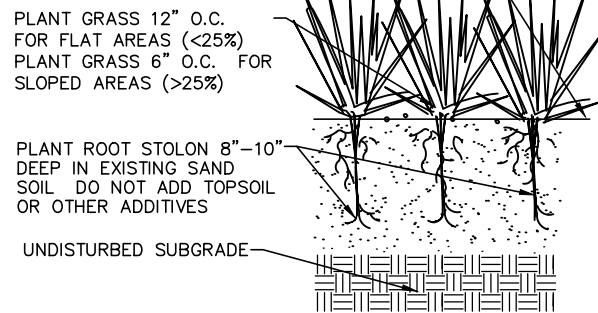
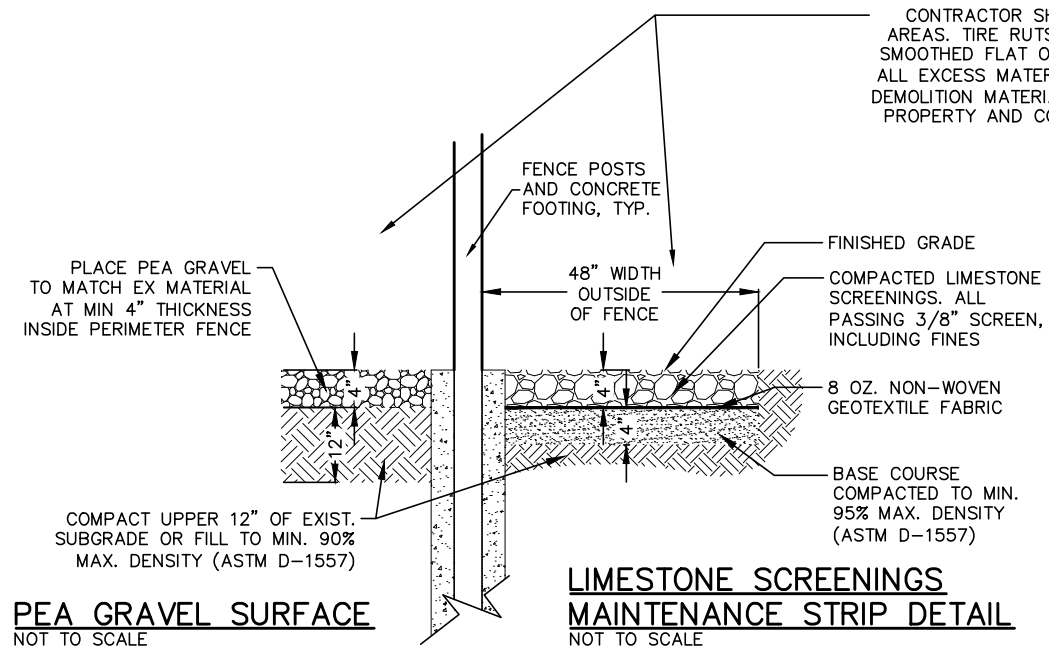
SHEET TITLE: **ANTENNA BASE
 STANDARD SUPPLIER DETAILS**

DRAWN BY: **TMV**
 DESIGNED BY: **SJC**
 PM REVIEW: **PM**
 QA/QC REVIEW: **QA/QC**
 DATE: **JUNE 2025**
 SCALE: **HORZ: AS NOTED
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SHEET NO. **5 of 7**



1	PER CLIENT REVIEW COMMENTS	STAFF	6/24/2025
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RESTORATION NOTES

CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS.

TIRE RUTS, EXCAVATIONS, ETC. SHALL BE SMOOTHED FLAT OR FILLED WITH NATIVE MATERIAL.

ALL EXCESS MATERIAL (STONES, GRAVEL, ETC) AND DEMOLITION MATERIAL SHALL BECOME CONTRACTOR'S PROPERTY AND COMPLETELY REMOVED FROM SITE.

CONTRACTOR SHALL CONTACT OWNER FOR A GRADE INSPECTION BEFORE FINAL RESTORATION AND OBTAIN OWNER'S WRITTEN ACCEPTANCE BEFORE PLACING ANY AGGREGATE OR PLANT MATERIAL.



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CITY OF GRAND HAVEN
COMMUNICATION TOWER
REPLACEMENT
OTTAWA COUNTY, MI

RESTORATION DETAILS
AND NOTES

PROJECT:

SHEET TITLE:

DRAWN BY:

TMV

DESIGNED BY:

SJC

PM REVIEW:

PM

QA/QC REVIEW:

QA/QC

DATE:

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ACI JOB #

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SHEET NO.

7 of 7

1	PER CLIENT REVIEW COMMENTS	STAFF	6/24/2025
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