

TECHNICAL SPECIFICATIONS
FOR
CITY OF GALENA, ILLINOIS
JUNE 2022 WATER TOWER DEMOLITION

PREPARED FOR: City of Galena
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Galena, Illinois 61036
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PROJECT NO: 20142

	FOR Origin Design Co.	
		11/4/2021
	Christopher A. Becklin, P.E. License Number 062-071513 Licensed Professional Engineer of Illinois My license renewal date is November 30, 2021 Pages or sheets covered by this seal: Specification 024116 & Plan Sheet No. C1.01	Date

CITY OF GALENA, ILLINOIS
JUNE 2022 WATER TOWER DEMOLITION

TECHNICAL SPECIFICATIONS

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REFERENCE DOCUMENTATION (NOT CERTIFIED BY ORIGIN DESIGN CO.)

1963 Water Tower Reference Plans

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes the specifications and requirements associated with the demolition of the existing City of Galena, Illinois, Franklin Street Water Tower.

1.2 SUBMITTALS

- A. Shop Drawings: Indicate:
 - 1. Demolition and removal sequence and location of salvageable items.
 - 2. Location and construction of barricades fences and temporary Work.

1.3 QUALIFICATIONS

- A. The work described in this section shall be performed by a company with experience in the demolition of steel structures. The company performing the demolition shall have a minimum of 10 years of experience in demolition of steel structures. Documentation of the Contractors experience may be required to be supplied to the Engineer and Owner prior to contract award.

1.4 EXISTING CONDITIONS

- A. The City will remove all of their existing controls equipment that they wish to salvage prior to the Contractor arriving on-site.
- B. The Owner assumes no responsibility for actual condition of the structure to be demolished.
- C. Notify the Engineer upon discovery of hazardous materials other than those identified below.
- D. Do not sell demolished materials on-site.

PART 2 - PRODUCTS

2.1 Not Used.

PART 3 - EXECUTION

3.1 UTILITIES

- A. Prior to the water tower being demolished the City will isolate the existing water tower from the distribution system and drain the tank. The Contractor will be required to drain the remaining water in the riser pipe. The power for the level control system and SCADA has been deactivated. There are no known telephone lines to the water tower. There are no sewer lines, gas lines, or drainage lines connected to the water tower.
- B. The water tower demolition contractor is responsible for portion of the foundation removal. The demolition contractor shall contact the Illinois Julie Locate System Call 811 to determine the location of any underground utilities in the vicinity of the water tower.

3.2 WATER TOWER INFORMATION

- A. The Franklin Street Water Tower that is to be demolished was built in 1963 by the Pittsburgh Des-Moines Steel Co. The Water Tower has a storage capacity of 500,000 gallons. The height of the water tower is 91 feet to the high water line above existing grade. The diameter of the water tower is 50 feet. Several plan copies of the plan sheets from the Water Tower erection plans from Pittsburgh Des-Moines Steel Co. are included in the contract documents for reference.
- B. KLM Engineering Inc. performed an inspection of the Franklin Street Water tower in May of 2020. The demolition contractor shall reference this inspection report for information on the existing coating system and additional information on the condition of the existing water tower. The inspection report generated by KLM Engineering Inc. may be requested by contacting the City of Galena.
- C. According to the KLM Engineering Inc. inspection report the exterior coating of the tower is classified as lead-based paints. Chromium levels in the test samples indicate levels from 0.0051 to 2.4 percent chromium. The water tower demolition contractor shall utilize procedures deemed necessary and appropriate in handling the lead painted steel including chromium in accordance with applicable local, state and Federal regulations. After the water tower has been removed the demolition contractor shall vacuum the site to remove any paint chips and cutting slag. The vacuum exhaust shall be filtered. The Contractor shall dispose of vacuumed material in a safe and legal manner. If applicable, the Contractor shall remobilize to vacuum the site if snow was present during the demolition work being completed. The costs of dealing with the lead paint with chromium, including the scrap steel, and site cleanup shall be included in the lump sum bid amount of the water tower demolition.

3.3 WATER TOWER DEMOLITION

- A. The project shall include the demolition of the steel structure (tank, ladder, etc.). The Contractor is responsible for removing a portion of the existing concrete foundation. The Contractor shall remove three of the six outer legs shall be removed to a minimum depth of 60" from existing grade. The remaining three outer legs and center riser footing shall be removed to a minimum depth of 24" from existing grade. The Contractor shall coordinate with the City to determine which of the three outer legs are required to be removed to the 60" depth to accommodate the proposed Galena Public Schools building expansion project. The Contractor will be required to plug the buried riser pipes with concrete, non-shrink grout or an Engineer approved alternate method.
- B. All portions of the existing steel water tower including the tank, ladders, and all portions of the existing water tower materials are to become property of the Contractor. The Contractor shall remove all materials from the site and dispose of them in accordance with the applicable laws and regulations. The Contractor will be responsible of any costs associated with the disposal of materials. Recycling of materials is encouraged to the greatest extents.
- C. The City has received approval from the property owned directly north of the water tower for the Contractor to utilize for staging or tipping of the water tower. The Contractor shall not cause damage to any of the existing trees around the existing water tower, unless approved by the Engineer and Owner.
- D. The City will provide, install and maintain traffic control necessary to close Franklin Street in the vicinity of the water tower location to allow for the demolition of the structure, if deemed necessary by the Contractor. The maximum length of time that Franklin Street will be allowed to be closed will be five (5) days. Any traffic control measures outside of the Franklin Street closure for the demolition of the tower shall be at the Contractor's expense and shall be considered incidental to the project.

3.4 SITE ACCESS

- A. The existing water tower is located northwest of Galena Middle School and is located along Franklin Street approximately 750 feet southeast of the intersection of Highway 20 and Franklin Street.

3.5 RESTORATION

- A. The Contractor shall level, scarify and seed any disturbed areas due to the tank demolition process. Seeding, mulching and fertilizing shall be completed in accordance with Section 21 of the Standard Specifications for Water and Sewer Construction in Illinois, 7th Edition.
- B. The Contractor shall replace any pavement that is damaged during the tower demolition process. The pavement shall be replaced in accordance with applicable sections of the Standard Specifications for Water and Sewer Construction in Illinois, 7th Edition and Illinois DOT requirements.

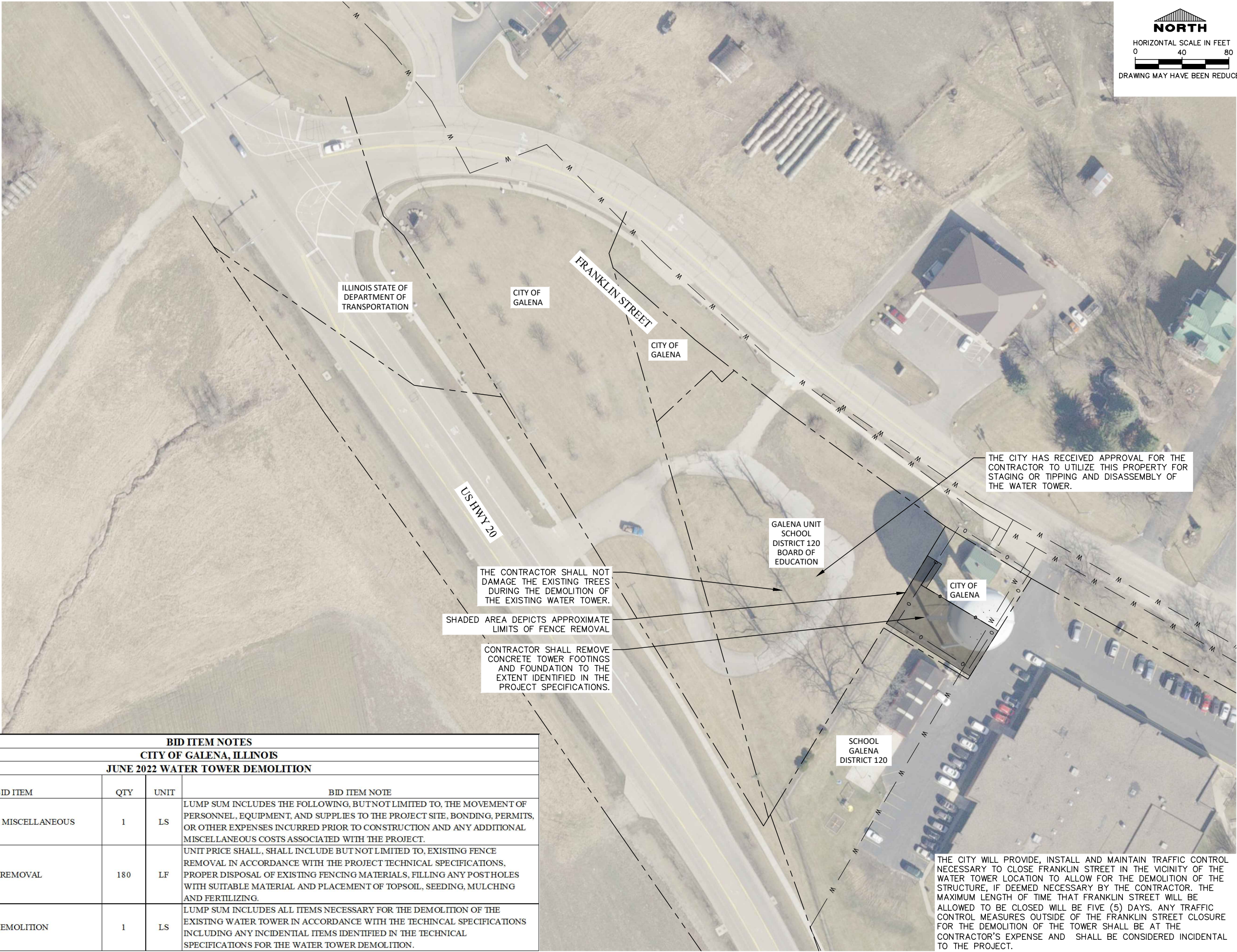
3.6 PAYMENT

- A. All work associated with the water tower demolition including but not limited to: traffic control, surface restoration (including pavement replacement, if applicable), site cleanup, etc. shall be considered incidental to the water tower demolition except for the items specifically identified in the bid schedule and bid item notes. Water tower demolition shall be paid for by the lump sum.

END OF SECTION 024116

PLAN SHEET

Water Tower Demolition Plan..... C1.01



NORTH
HORIZONTAL SCALE IN FEET
0 40 80
DRAWING MAY HAVE BEEN REDUCED

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**WATER TOWER DEMOLITION
PLAN**

CITY OF GALENA, ILLINOIS

JUNE 2022 WATER TOWER DEMOLITION

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BID ITEM NOTES				
CITY OF GALENA, ILLINOIS				
JUNE 2022 WATER TOWER DEMOLITION				
BID ITEM NO.	BID ITEM	QTY	UNIT	BID ITEM NOTE
1	MOBILIZATION & MISCELLANEOUS	1	LS	LUMP SUM INCLUDES THE FOLLOWING, BUT NOT LIMITED TO, THE MOVEMENT OF PERSONNEL, EQUIPMENT, AND SUPPLIES TO THE PROJECT SITE, BONDING, PERMITS, OR OTHER EXPENSES INCURRED PRIOR TO CONSTRUCTION AND ANY ADDITIONAL MISCELLANEOUS COSTS ASSOCIATED WITH THE PROJECT.
2	EXISTING FENCE REMOVAL	180	LF	UNIT PRICE SHALL, SHALL INCLUDE BUT NOT LIMITED TO, EXISTING FENCE REMOVAL IN ACCORDANCE WITH THE PROJECT TECHNICAL SPECIFICATIONS, PROPER DISPOSAL OF EXISTING FENCING MATERIALS, FILLING ANY POST HOLES WITH SUITABLE MATERIAL AND PLACEMENT OF TOPSOIL, SEEDING, MULCHING AND FERTILIZING.
3	WATER TOWER DEMOLITION	1	LS	LUMP SUM INCLUDES ALL ITEMS NECESSARY FOR THE DEMOLITION OF THE EXISTING WATER TOWER IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS INCLUDING ANY INCIDENTAL ITEMS IDENTIFIED IN THE TECHNICAL SPECIFICATIONS FOR THE WATER TOWER DEMOLITION.

Drawing Issue Information		Project Description	
Project Mgr: CAB	Drawn By: LEN	Description	Date
Issued For Bidding: 11-05-21	Issued For Construction: .		
		Rev	By

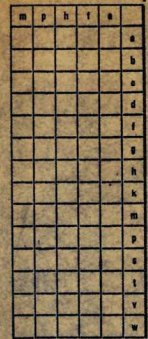
Sheet No:

C1.01

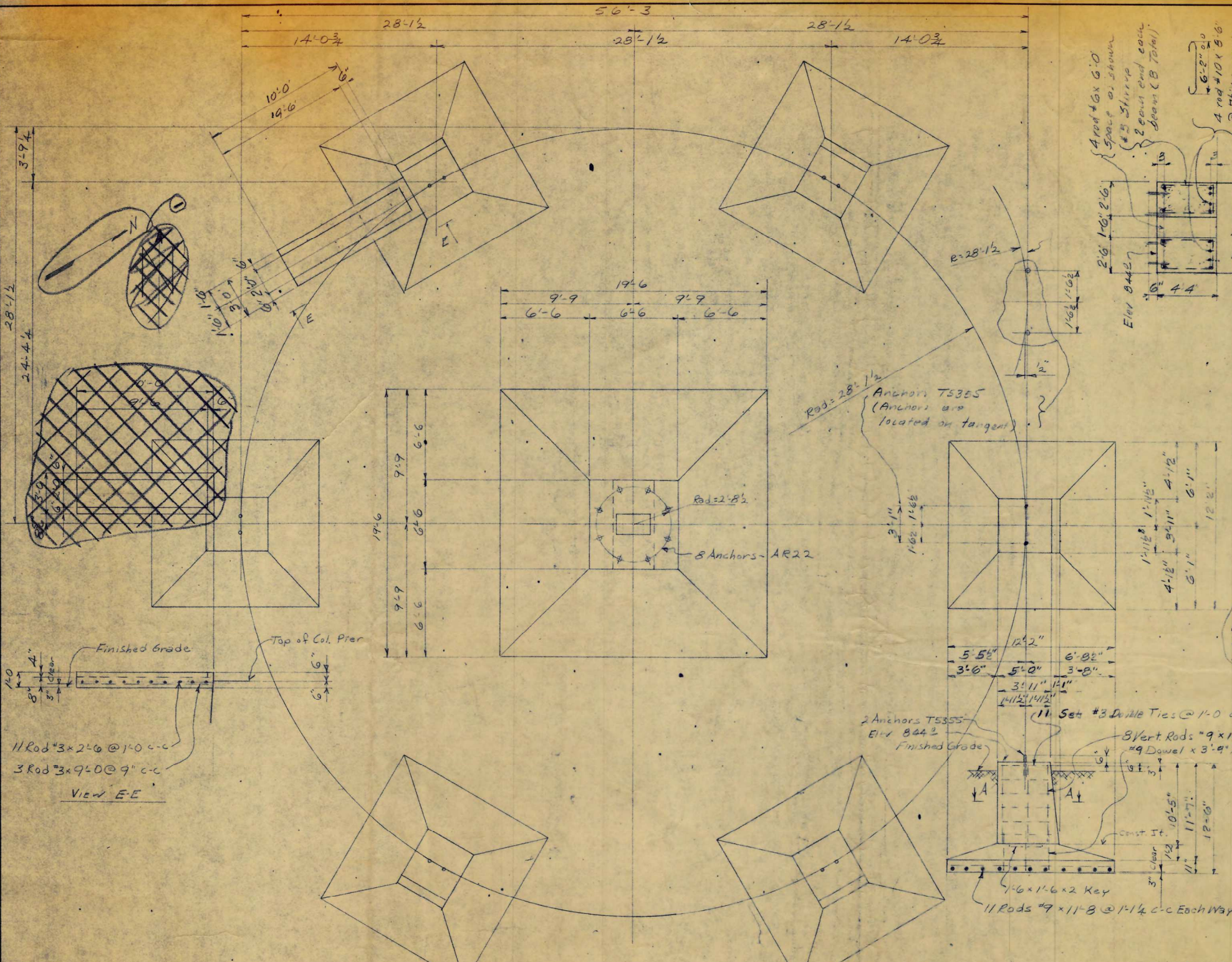
Project No: 20142

**REFERENCE DOCUMENTATION
(NOT CERTIFIED BY ORIGIN DESIGN CO.)**

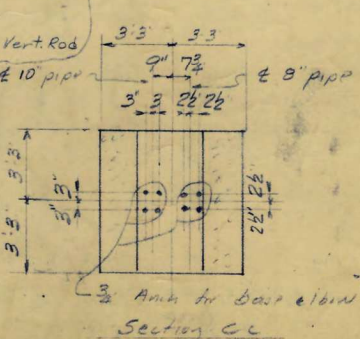
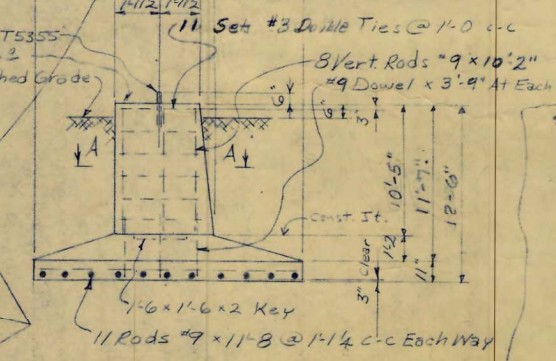
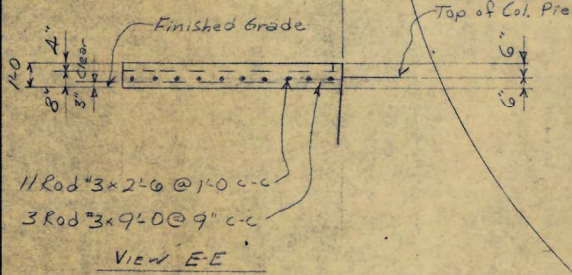
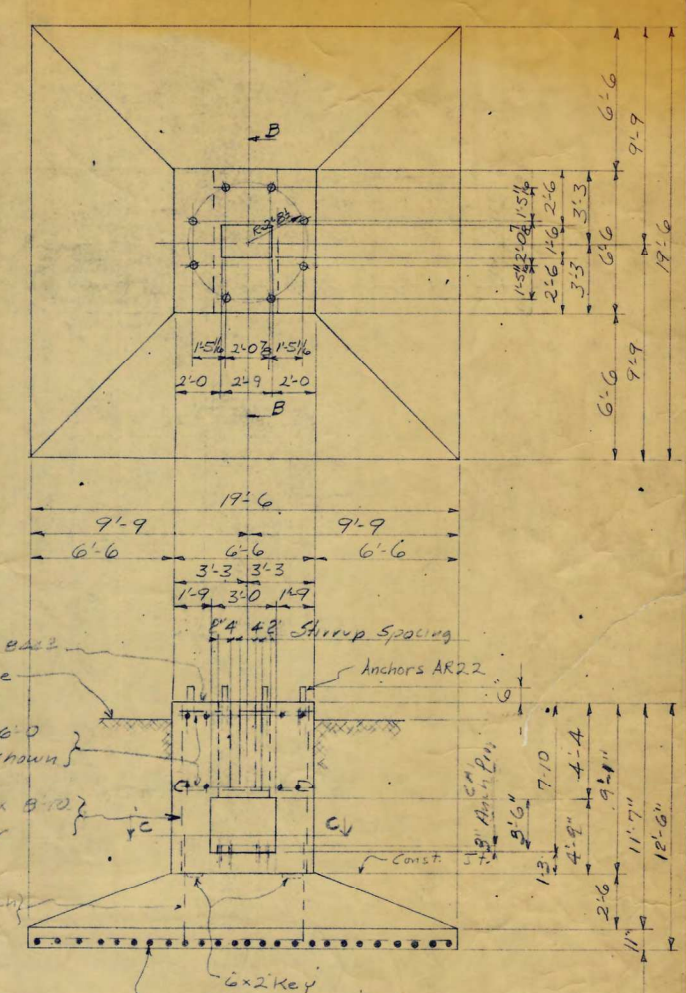
1963 Water Tower Reference Plans



A B C D E F G H I J K L M N P R S T V W X Y Z



Section B-B



NOTE
Do not scale this drawing.
Check all dimensions on the ground.
If any dimensions do not check do not proceed until they are verified or corrected.
Build all piers at same level and one inch below finished elevation.
Finish tops of piers smooth.
Do not permit weight of concrete on anchors to pull them out of position while pouring.
CONCRETE: 3500# OR BETTER @ 28 DAYS (Class A per Engr Spec)
Pour piers monolithically, except for construction shown.
All reinforcing rods straight and deformed (A305), of intermediate grade steel, A15.

CONCRETE QUANTITIES

Columns	=	89.7
Riser	=	4.9
Splash Block	=	1.9
Total	=	131.5

FOR APPROVAL
PITTSBURGH-DES MOINES STEEL CO.
DES MOINES, IOWA
MAY 24 1963
PLEASE RETURN WITH YOUR APPROVAL OR CORRECTIONS DESIRED NOTED ON THIS PRINT.

RIVETS
SHOP ASSEMBLE AND MATCHMARK Yes ☐ NO ☐
FOR MATCHMARK DIAGRAM SEE SHEET
HOLES FOR FIELD CONNECTIONS
PAINT CONTACT SURFACES Yes ☐ NO ☐
GRIT BLAST Yes ☐ NO ☐
SHOP PAINT

PITTSBURGH-DES MOINES STEEL CO.
ENGINEERS-FABRICATORS-CONTRACTORS
PITTSBURGH, PA. - WARREN, PA. - BRISTOL, PA. - BALTIMORE, MD.
BIRMINGHAM, ALA. - DES MOINES, IOWA - PROVO, UTAH
STOCKTON, CALIF. - SANTA CLARA, CALIF. - FRESNO, CALIF.

500 MGAL T.S.T. & T
GALENA - ILLINOIS
Foundation
BY DATE
JAH 3-18-63
DRAWING NO. E1
CHECKED JAH 4-30-63 CONTRACT NO. 23-633

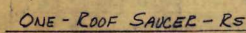
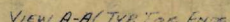
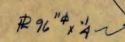
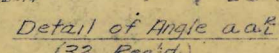
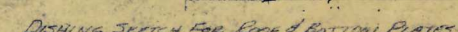
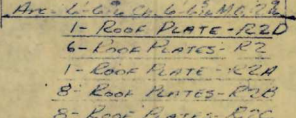
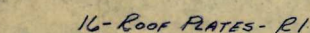
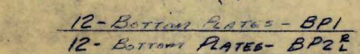
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2	5/27/68							1	5/27/68	Constant North

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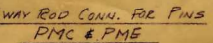
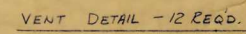
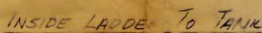
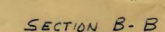
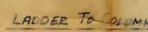
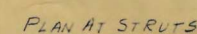
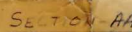
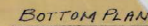
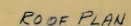
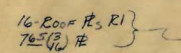
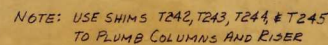
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FOR APPROVAL
PITTSBURGH-DES MOINES STEEL CO.
DES MOINES APR 26 1963 IOWA U.S.A.
PLEASE RETURN WITH YOUR APPROVAL
OR CORRECTIONS DESIRED NOTED
ON THIS PRINT.

Clean steel by gritblast		GIVETS.	
No paint within 2" of field welded edges		SHOP ASSEMBLY AND MATCHMARK. YES OR NO	
Weld Specs AWWA D100-97		FOR MATCHMARK DIAGRAM SEE SHEET	
		HOLES FOR FIELD CONNECTIONS All Notes	
		PAINT CONTACT SURFACES. YES OR NO	
		SHOP PAINT See Sheet P1 GIVE SPECIFICATIONS	
		PITTSBURGH-DES MOINES STEEL CO. DES MOINES, IOWA 500MAGAL Toro Special HT	
		GALENA L-LINE LS Bottom & Roof RT's & Roof Save	
KEY NO.	DATE	DESCRIPTION OF REVISION	SHEET NO. --- 6
FOR LOCATION OF DETAILS ON THIS SHEET SEE ERECTION PLANS:			SHOP NO.
		DRAWN BY SHIP	23 235
		CHECKED BY JAN	
		BILL PAGE	

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REVISED
MAY 17 1963
DESTROY
PREVIOUS PRINTS

DRAWING NO. E 3

DRAWINGS PREPARED AT

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