

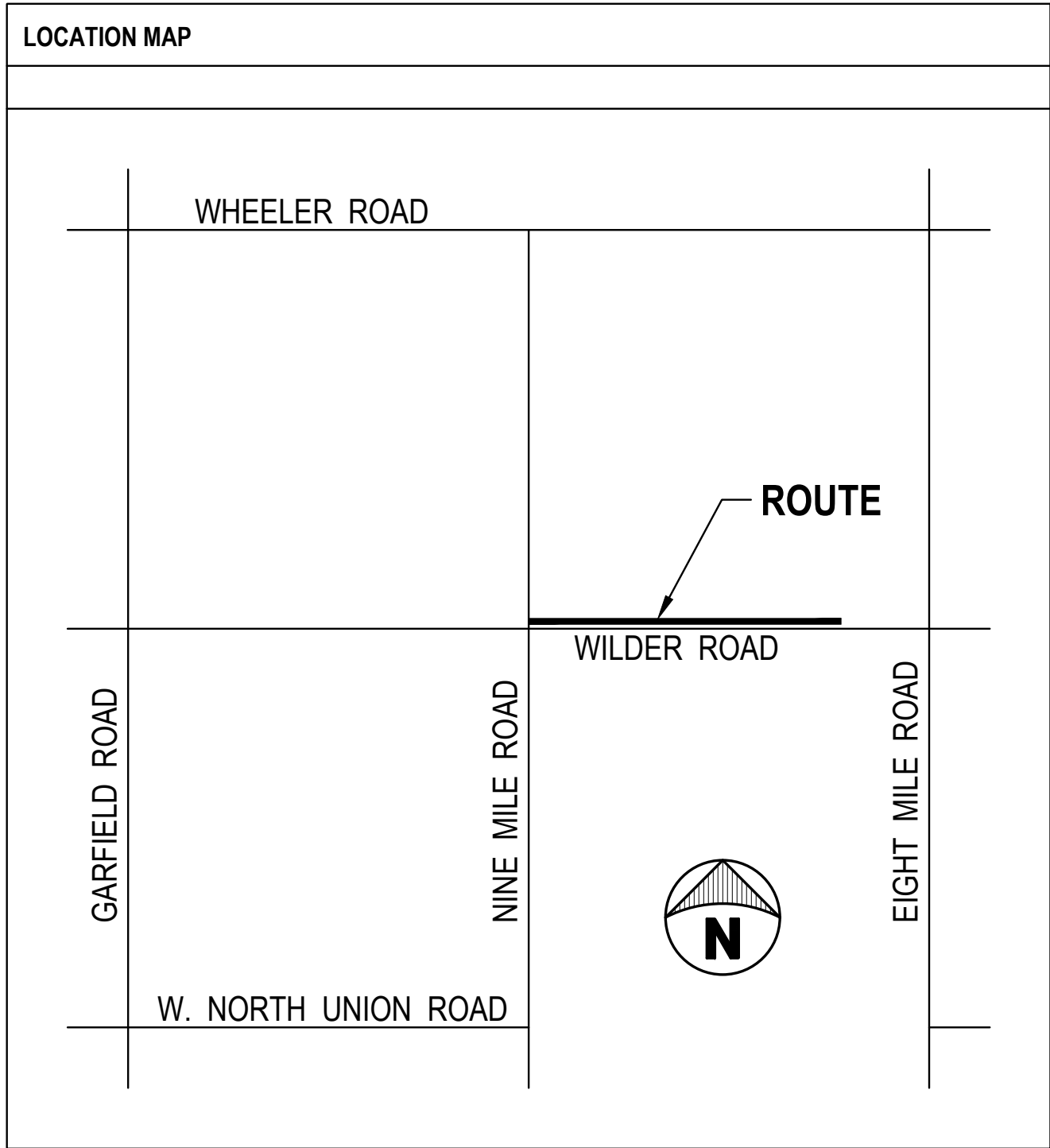
WILLIAMS CHARTER TOWNSHIP

WATERMAIN EXTENSION


WILDER ROAD FROM NINE MILE ROAD EAST

WILLIAMS CHARTER TOWNSHIP, BAY COUNTY, MI 48611

SHEET INDEX		
NUMBER	TITLE	MM-DD-YY ISSUANCE DESCRIPTION
TS	TITLE SHEET	X
C1.0	GENERAL NOTES AND LEGEND	X
C2.0	WATERMAIN PLAN & PROFILE STA. 0+00 TO STA. 3+75	X
C2.1	WATERMAIN PLAN & PROFILE STA. 3+75 TO STA. 8+25	X
C2.2	WATERMAIN PLAN & PROFILE STA. 8+25 TO STA. 12+75	X
C2.3	WATERMAIN PLAN & PROFILE STA. 12+75 TO STA. 17+25	X
C2.4	WATERMAIN PLAN & PROFILE STA. 17+25 TO STA. 20+31	X




CONTACT INFORMATION



OWNER / CLIENT:
WILLIAMS CHARTER TOWNSHIP
1080 W. MIDLAND ROAD
AUBURN, MI 48611
(989) 662-4241
www.williamstwp.com

JERRY PUTT
TOWNSHIP SUPERVISOR
(989) 662-4241
supervisor@williamstwp.com



PROJECT MANAGER: J. WHEELER, P.E.
PHONE: (989) 752-5000
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WEB: www.kibbe.com

PROJECT DESIGNER: D.W. BANASZAK
PHONE: (989) 752-5000
EMAIL: dbanaszak@kibbe.com

CODE AUTHORITY:
BUILDING DEPARTMENT
1080 W. MIDLAND ROAD
AUBURN, MI 48611
(989) 662-4241

PATRICK MILLER
ZONING ADMINISTRATOR
zoning@williamstwp.com



Know what's below.
Call before you dig.



Jay C. Wheeler
MI. REG. P.E. NO: 43280
NOT VALID WITHOUT THE SIGNATURE AND
THE ORIGINAL SEAL OF A MICHIGAN
PROFESSIONAL ENGINEER.



WILDER ROAD FROM NINE MILE ROAD EAST
WATERMAIN EXTENSION
WILDER ROAD
CHARTER TOWNSHIP OF WILLIAMS, MI

PROPOSED WATERMAIN EXTENTION

DATE	STATUS / REVISIONS	NO.	CHECKED BY:
05-13-25	RELEASED FOR BID	#	J. WHEELER
			DESIGNED BY:
			D.W. BANASZAK
			DRAWN BY:
			D.W. BANASZAK
			PROJ #: 25-1247-0081

SHEET
TS

PRINTED: 5/23/2025 10:32:27 AM

1. THE CONTRACTOR SHALL CALL "MISS DIG", 811, A MINIMUM OF 3 WORKING DAYS BEFORE DIGGING INTO THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT NO. 451, PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
4. CLEANUP SHALL INCLUDE DEBRIS REMOVAL, ROUGH GRADING, MINIMUM 4" TOPSOIL PLACEMENT, SEEDING AND FERTILIZING OVER ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS.
5. CONTRACTOR TO SUPPLY ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.
6. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL COSTS FOR LOCATING, REMOVING, REPLACING OR RELOCATING THESE UTILITIES SHALL BE INCIDENTAL TO CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL NOTIFY PROPER GOVERNMENTAL INSPECTION AGENCY AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
8. THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP CONSTRUCTION FOR EXTENDED PERIODS ONCE CONSTRUCTION HAS BEGUN.
9. THE CONTRACTOR SHALL MAINTAIN IN SERVICE, ALL EXISTING SANITARY SEWER, WATER OR STORM SEWER SERVICE CONNECTIONS WHENEVER POSSIBLE. COORDINATE WITH LOCAL UTILITY COMPANY AND OWNER BEFORE ANY UTILITIES TO BE OUT OF SERVICE FOR A PERIOD OF TIME.
10. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.

1. THE CONTRACTOR SHALL CALL "MISS DIG", 811, A MINIMUM OF 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT NO. 451, PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
4. MATCH EXISTING BIT. PAVEMENT ALONG NEW WALKS AND PROPOSED NEW BIT. PAVEMENT AREAS WHERE APPLICABLE.
5. ALL UTILITY WORK SHALL CONFORM TO THE LATEST LOCAL MUNICIPALITY'S STANDARD SPECIFICATIONS AND DETAILS.
6. ALL WATER SERVICES SHALL BE TYPE "K" COPPER.
7. SAND FILL UNDER FLOOR SLABS SHALL BE MDTT CL-II GRANULAR BACKFILL. SAND SHALL BE SPREAD IN UNIFORM LAYERS NOT TO EXCEED 6" THICK BEFORE COMPACTION. EACH LAYER SHALL BE THOROUGHLY COMPACTED WITH A VIBRATING COMPACTOR AFTER EACH LAYER IS PLACED. FILL SAND SHALL NOT HAVE A MOISTURE CONTENT GREATER THAN 15%. COMPACTION SHALL MEET 95% OF MAXIMUM UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR TEST.
8. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS FOR WORK AT THE SITE. THIS SHALL INCLUDE MISSOURI REGULATIONS.
9. THE CONTRACTOR/DEVELOPER SHALL PAY FOR AND OBTAIN ALL BUILDING PERMITS, LOCAL PERMITS AND PAY ALL CHARGES FOR ANY INSPECTION AND TESTING.
10. THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM OF DUST CONTROL AND SHALL ALLOW NO ON-SITE BURNING.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE PREMISES AND UPON COMPLETION OF THE PROJECT LEAVE THE SITE IN AN ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER OR THE OWNER.

1. THE CONTRACTOR SHALL CALL "MISS DIG" (811) 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. CONTRACTOR TO INSTALL WATER SERVICE TO ROW LINE OF PROPERTY PER DETAIL.
3. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT NO. 451 PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
5. ALL UTILITY WORK SHALL CONFORM TO WILLIAMS TOWNSHIP AND BAY COUNTY DEPARTMENT OF WATER & SEWER AND BAY COUNTY ROAD COMMISSION LATEST STANDARD SPECIFICATIONS AND DETAILS WHERE APPLICABLE.
6. THE SITE EXCAVATION CONTRACTOR SHALL VERIFY THE EXISTING WATER MAIN CONNECTION DEPTH PRIOR TO ANY EXCAVATION.
7. ALL DISTURBED AREAS AND PROPERTY TO BE RETURNED TO EXISTING OR BETTER CONDITION UPON PROJECT COMPLETION.
8. BACKFILL ALL TRENCHES UNDER SLABS, WALKS AND PAVED AREAS WITH COMPACTED SAND. BACKFILL MDOT CL.II. COMPACTION SHALL BE 95% MAXIMUM UNIT WEIGHT PER MDOT REQUIREMENTS.
9. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS FOR WORK AT THE SITE. THIS SHALL INCLUDE MIOSHA REGULATIONS.
10. THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM OF DUST CONTROL AND SHALL ALLOW NO ON-SITE BURNING.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE PREMISES AND UPON COMPLETION OF THE PROJECT LEAVE THE SITE IN AN ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER OR THE OWNER.
12. ALL WATER MAIN AND WATER SERVICE CONSTRUCTION SHALL BE IN ACCORDANCE WITH WILLIAMS TOWNSHIP, BAY COUNTY DEPARTMENT OF WATER AND SEWER, AND BAY COUNTY ROAD COMMISSION SPECIFICATIONS FOR WATER MAIN INSTALLATION AND AS APPROVED BY THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY (EGLE), IF APPLICABLE. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS AND FEES PRIOR TO ANY CONSTRUCTION.
13. MAINTAIN A MINIMUM OF 10' OF HORIZONTAL SEPARATION BETWEEN WATER MAIN AND ANY SANITARY SEWER MAINLINE, WHERE APPLICABLE.
14. WATER MAIN PIPE MUST BE C900 PVC IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, IF APPLICABLE. MAINTAIN A MINIMUM OF 5.5' FEET OF COVER OVER ALL WATER MAIN PIPE. MAINTAIN A 18" SEPARATION FOR ANY UTILITY CROSSINGS. INSTALL BENDS AS REQUIRED.
15. WATER SERVICES 2" AND SMALLER SHALL BE TYPE K COPPER. 4" AND LARGER SHALL BE C900 DR18 PVC. MAINTAIN A MINIMUM OF 5.5' FEET OF COVER OVER ALL WATER SERVICE PIPE.
16. PRESSURE TESTING AND CHLORINATION SHALL BE IN ACCORDANCE WITH BAY COUNTY DWS AND AWWA STANDARDS.

EXCAVATED MATERIAL
(OUTLAWN AND REARLOT AREAS)
AS SPECIFIED

TRENCH SHALL BE BACKFILLED COMPLETELY
WITH APPROVED SAND (ROADWAY AREAS)
COMPACTED TO 95% MAX. DENSITY PLACED
IN MAX. 12" LAYERS

MIRAFI 140 N FILTER FABRIC
(WHERE SAND BACKFILL
ABOVE PIPE IS USED)

PROVIDE A MIN. OF 4" MDOT 6A
STONE FOR PIPE BEDDING AND
EXTENDED HAUNCHING WITH 6A
STONE TO TOP OF SEWER PIPE

UNDERCUT STORM SEWER TRENCH
MINIMUM 42" BELOW FINISH GRADE
WHERE DEPTH OF COVER OVER PIPE IS
LESS THAN 36"

UNDISTURBED EARTH

12" MIN.

4" MIN.

UP TO 12" I.D. - MAX. 30"

15" - 30" I.D. - MAX O.D. + 18"

36" - 42" I.D. - MAX O.D. + 24"

NOT TO SCALE

B.M.#1 NORTHEAST FLANGE BOLT ON HYDRANT ON
NINE MILE ROAD 180' NORTH OF W. WILDER ROAD
EL. 608.41


B.M.#2 SPIKE IN POWER POLE 49' EAST OF NINE MILE
ROAD AND 33' SOUTH OF W. WILDER ROAD
EL. 609.89

B.M.#3 ARROW ON HYDRANT IN FRONT OF 312 W. WILDE
ROAD
EL. 607.98

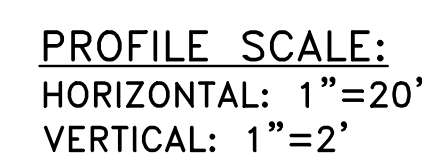
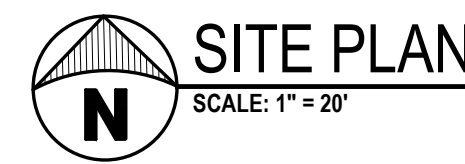
ALL ELEVATIONS ARE NAVD88

LOCATION MAP
NOT TO SCALE

GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.



W&A
WILLIAM A. KIBBE & ASSOCIATES, INC.
ENGINEERS | ARCHITECTS | SURVEYORS

WILDER ROAD FROM NINE MILE ROAD EAST
WATERMAIN EXTENSION
WILDER ROAD

PROPOSED WATERMAIN
PLAN & PROFILE STA. 3+75 TO STA. 8+25

NO.	#	STATUS / REVISIONS RELEASED FOR BID	DATE
CHECKED BY:	J. WHEELER		
DESIGNED BY:	O.W.BANASZAK		
DRAWN BY:	O.W.BANASZAK		
PROJ #:	25-1247-0081		

SHEET
C2.1

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BENCH MARKS


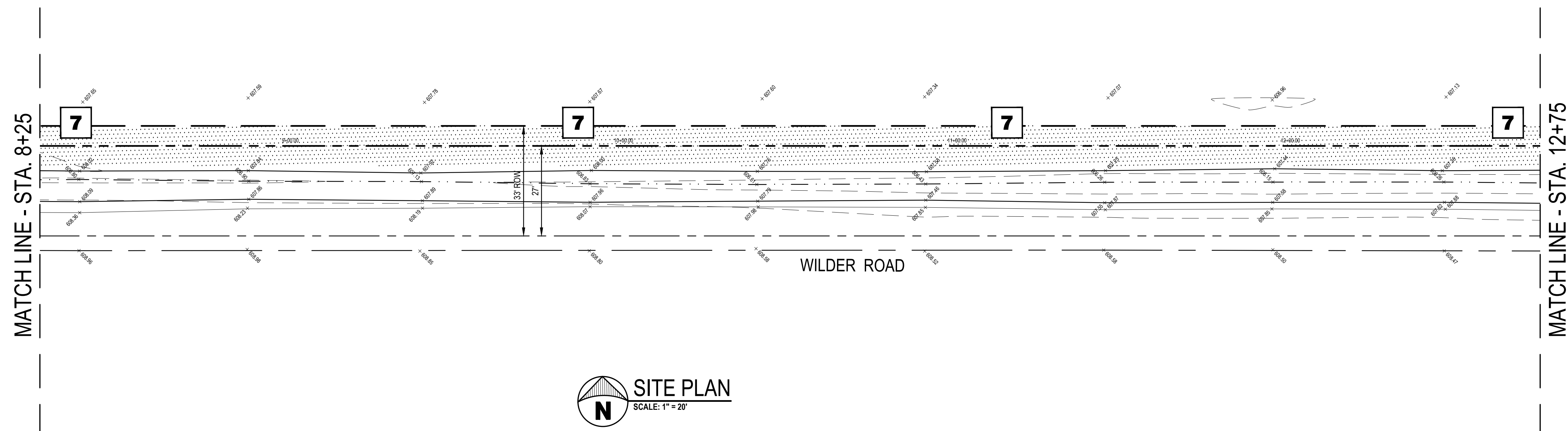
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ROAD
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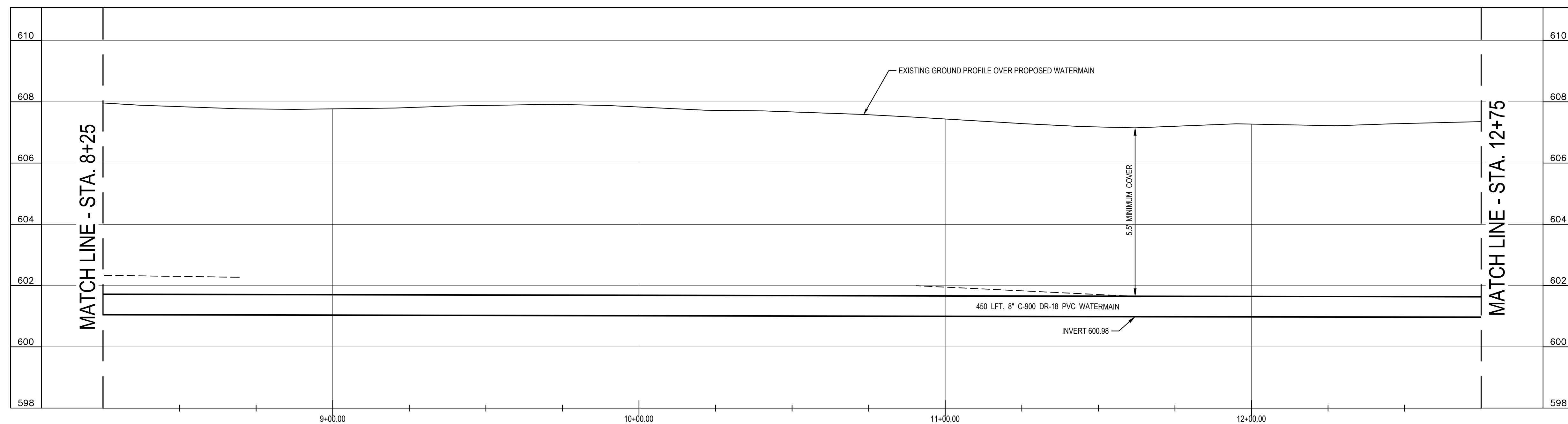
ALL ELEVATIONS ARE NAVD.88

NOTE: CONTRACTOR SHALL PRESERVE OR RESTORE
EXISTING PIPES, CULVERTS AND HEADWALLS
INCIDENTAL TO CONSTRUCTION (TYPICAL)



SITE PLAN

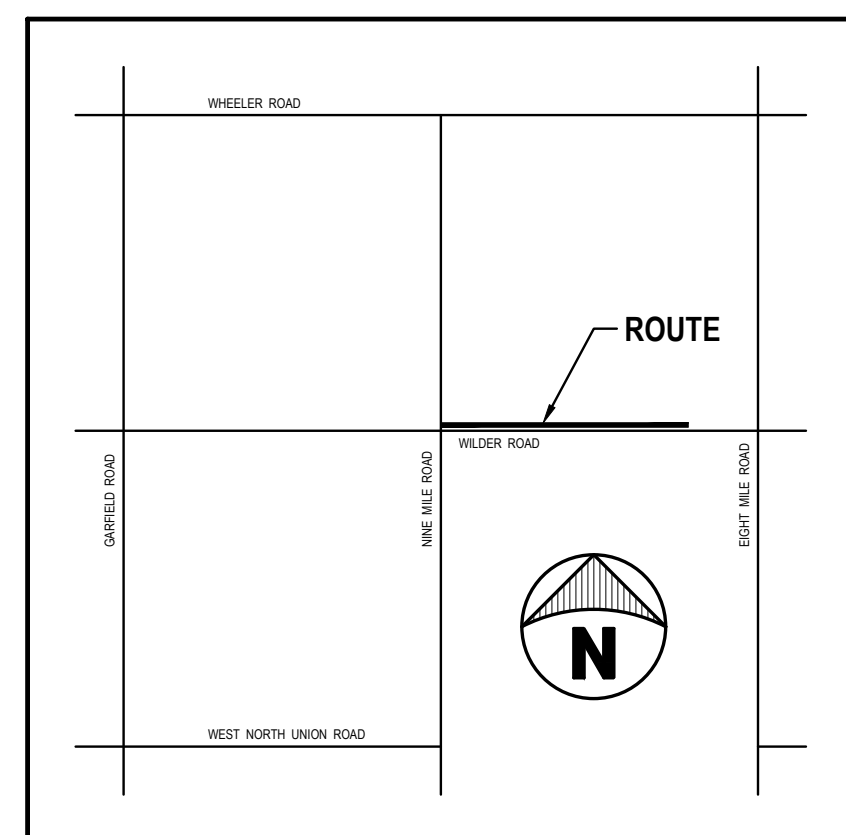
SCALE: 1" = 20'



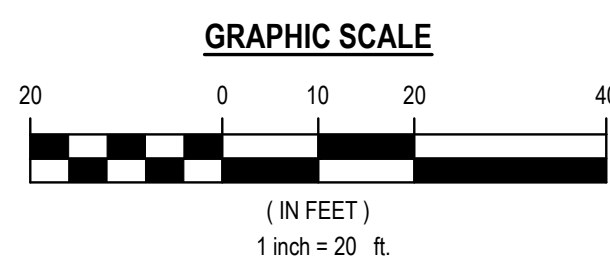
PROFILE SCALE:
HORIZONTAL: 1"=20'
VERTICAL: 1"=2'



Know what's **below**.
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LOCATION MAP
NOT TO SCALE



B.M.#1 NORTHEAST FLANGE BOLT ON HYDRANT ON
NINE MILE ROAD 180' NORTH OF W. WILDER ROAD
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Wilder Road

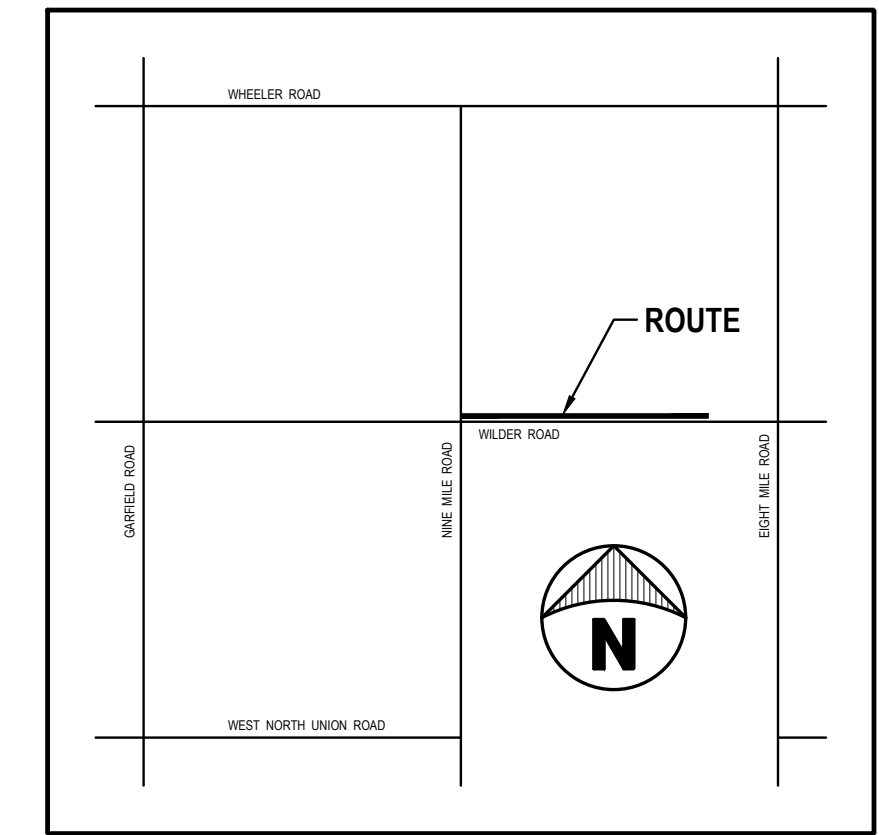
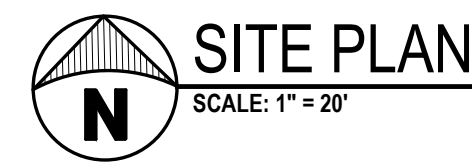
33' ROW

10' WIDE FIRE HYDRANT ACCESS WITH 20' LFT, 12" CMP CULVERT

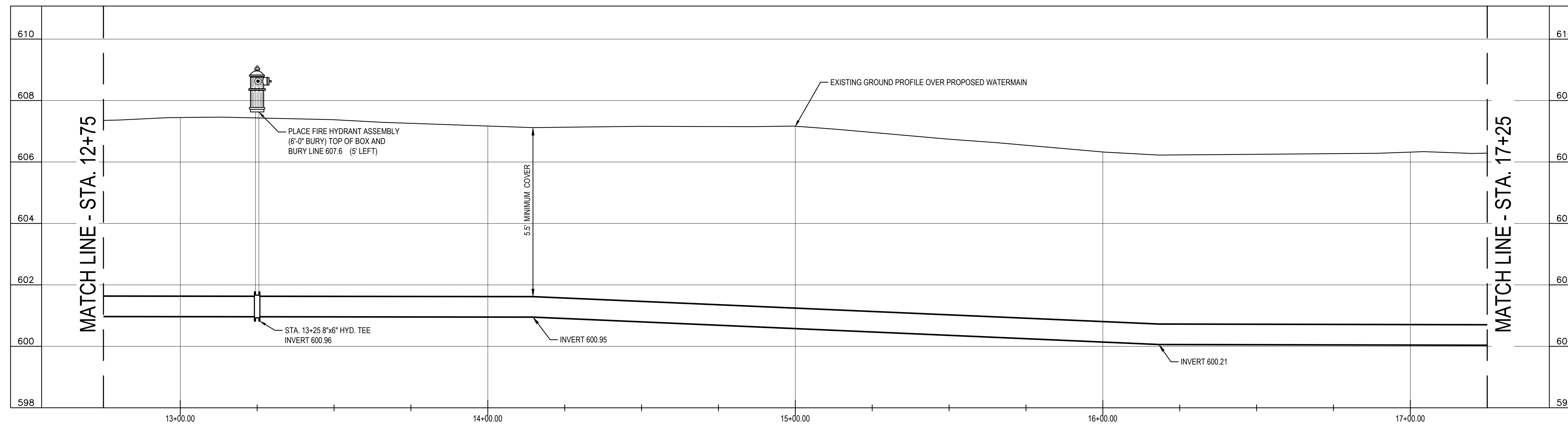
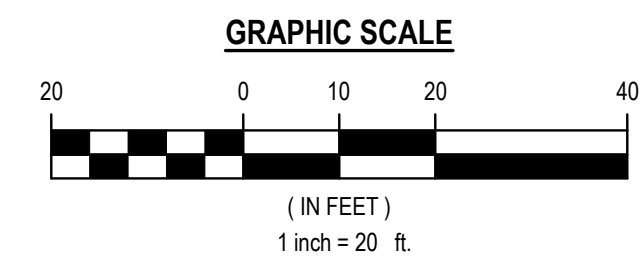
SITE PLAN

MATCH LINE - STA. 12+75

MATCH LINE - STA. 17+25



LOCATION MAP
NOT TO SCALE



PROFILE SCALE:
HORIZONTAL: 1"=20'
VERTICAL: 1"=2'



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ENGINEERS | ARCHITECTS | SURVEYORS

WILDER ROAD FROM NINE MILE ROAD EAST
WATERMAIN EXTENSION
WILDER ROAD
UNLATER TOWNSHIP OF MILLIAMO, MI

PROPOSED WATERMAIN
PLAN & PROFILE STA. 12+75 TO STA. 17+25

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SHEET
C2.3

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