



Department of Energy
Office of Science
Fermi Site Office
Post Office Box 2000
Batavia, Illinois 60510

January 6, 2025

Mr. Marc Clay
Chief Safety Officer, Interim
Fermilab
P.O. Box 500
Batavia, IL 60510

**SUBJECT: NATIONAL ENVIRONMENTAL POLICY ACT DETERMINATION AT
FERMI NATIONAL ACCELERATOR LABORATORY KIRK ROAD
SANITARY SEWER IMPROVEMENTS**

**Reference: Memorandum from M. Clay to R. Hersemann; Subject: National
Environmental Policy Act Environmental Evaluation Notification
form for Kirk Road Sanitary Sewer Improvements; Dated: December 12, 2024**

Dear Mr. Clay:

The Fermi Site Office (FSO) has reviewed the National Environmental Policy Act (NEPA) Environmental Evaluation Notification Form (EENF) for Kirk Road Sanitary Sewer Improvement. Based on the information provided in the EENF, the following categorical exclusion (CX) is approved.

<u>Project Name</u>	<u>Approved</u>	<u>CX</u>
Kirk Road Sanitary Sewer Improvements	12/17/2024	B1.31, B5.4

Enclosed is a signed copy of the EENF for your records. No further NEPA review is required. This project falls under categorical exclusions provided in 40 *CFR* 1021, as amended in November 2011.

If you have any questions, please contact Rick Hersemann, of my staff, at (630) 840-4122 or by email at rick.hersemann@science.doe.gov.

Sincerely,

ROGER SNYDER

Digitally signed by ROGER
SNYDER
Date: 2025.01.06 11:26:10 -06'00'

Roger E. Snyder
Manager, Fermi Site Office

Enclosure: As Stated

cc:

J. Sawyer, FFDG

M. Michels, FFDG

L. Huntoon, FFDG

S. Panock, FFDG

R. Hersemann, DOE-FSO

J. Scott, DOE-FSO

S. Wallace, DOE-FSO

**FERMILAB ENVIRONMENTAL EVALUATION NOTIFICATION FORM
(EENF) for documenting compliance with the National Environmental Policy
Act (NEPA), Department of Energy (DOE) NEPA Implementing Regulations,
and the DOE NEPA Compliance Program of DOE Policy 451.1**

Project/Activity Title: Kirk Road Sanitary Sewer Improvements
ES&H Tracking Number: 3-5-201A

I hereby verify, via my signature, the accuracy of information in the area of my contribution for this document and that every effort would be made throughout this action to comply with the commitments made in this document and to pursue cost-effective pollution prevention opportunities. Pollution prevention (source reduction and other practices that eliminate or reduce the creation of pollutants) is recognized as a good business practice which would enhance site operations thereby enabling Fermilab to accomplish its mission, achieve environmental compliance, reduce risks to health and the environment, and prevent or minimize future Department of Energy (DOE) legacy wastes.

Fermilab Action Owner: Ryan Johnson

Signature and Date Ryan Johnson

Digitally signed by Ryan Johnson
DN: C=US, E=ryanj@fnal.gov, O=Fermilab,
OU=FESS Engineering, CN=Ryan Johnson
Date: 2024.12.19 13:59:32-06'00'

I. Description of the Proposed Action and Need

Purpose and Need:

The purpose of this project is to remove and replace approximately 300 feet of obstructed sanitary sewer pipe located along Kirk Road at the site boundary of Fermi National Acceleratory Laboratory (Fermilab) in Batavia, IL. There is a need for this project because the existing line contains heavy mineral deposits and therefore is impacting sewer water transport. The pipe conveys wastewater from the Fermilab sanitary sewage system to the City of Batavia's publicly owned treatment works (POTW). A metering manhole also needs to be installed to accurately measure the amount of wastewater discharged from Fermilab to the POTW.

Proposed Action:

The scope of work for this project may include the following:

- The existing sanitary sewer pipe is 8" ductile iron. It will be replaced in-kind with PVC pipe from SMHT 200 to SMHT 201, and from SMHT 201 to SMHT 202, as indicated in the attached drawings. The pipe is to be replaced in same alignment and at same elevations. Existing manholes SMHT 200 and 202 are to remain and are watertight as they have previously been lined with cement. SMHT 201 is to remain and be repaired to eliminate any water infiltration. Unless a new flume-like device is needed to collect the samples, the existing flume in SMHT 201 is to remain.
- The existing autosampler sits on top of the sanitary sewer. The autosampler and hut are to be relocated. The existing concrete pad is to be removed, and a new pad to be poured to a nearby location. The autosampler and hut are to be relocated to the new pad, and sampling tubes to be installed to SMHT 201.
- A new prefabricated metering manhole is to be installed just upstream of SMHT 202. Electric service will be extended to this manhole.

Alternatives Considered:

The "Do Nothing" alternative would leave the current pipeline in its current condition, allowing continuous heavy mineral build-up and potentially significantly interrupting sewer water flow from Fermilab to the POTW. The alternative to install an entirely new pipeline at a new alignment is being considered, but this alternative has not been selected, because the existing pipe would be abandoned in-place and left in the ground.

II. Description of the Affected Environment

The attached drawings illustrate the location of the project and affected environment. Specific environmental effects are presented in Section III.

III. Potential Environmental Effects (If the answer to the questions below is "yes", provide comments for each checked item and where clarification is necessary.)

A. Sensitive Resources: Would the proposed action result in changes and/or disturbances to any of the following resources?

- Threatened or endangered species
- Other protected species
- Wetland/Floodplains
- Archaeological or historical resources
- Non-attainment areas

B. Regulated Substances/Activities: Would the proposed action involve any of the following regulated substances or activities?

- Clearing or Excavation
- Demolition or decommissioning
- Asbestos removal
- PCBs
- Chemical use or storage
- Pesticides
- Air emissions
- Liquid effluents
- Underground storage tanks
- Hazardous or other regulated waste (including radioactive or mixed)
- Radioactive exposures or radioactive emissions
- Radioactivation of soil or groundwater

C. Other Relevant Disclosures: Would the proposed action involve any of the following actions/disclosures?

- Threatened violation of ES&H permit requirements
- Siting/construction/major modification of waste recovery or TSD facilities
- Disturbance of pre-existing contamination
- New or modified permits
- Public controversy
- Action/involvement of another federal agency
- Public utilities/services
- Depletion of a non-renewable resource

IV. Comments on checked items in section III.

Clearing or Excavation

Excavation is required for installation of the new pipe, metering manhole, and placement of relocated autosampler. Approximately 300 linear feet of material to be excavated, and to be reused as cover for the new piping. The excavation trench is to be approximately 13 feet deep at upstream end. Any excess soils will be hauled to a stockpile on the Fermilab site. Soil erosion measures include a silt fence and a stabilized construction entrance from Kirk Road. The project is located within prairie area. A native seed mix will be used to restore the area and to try and keep the disturbance to a minimum.

Air emissions

Construction and installation of site improvements may require use of portable generators for powering construction equipment. Construction machinery and bypass equipment may utilize both gas and diesel. Noise may be generated from construction equipment.

Liquid effluents

This project does not involve new releases. There will be the same amount of wastewater discharge, with possible trench dewatering.

Hazardous or other regulated waste (including radioactive or mixed)

Maximum tritium concentrations in the sanitary sewer at this location are below 20-30 picocurie per milliliter (pCi/ml), typically 5-15 pCi/ml, which is well below the occupational level of 100 pCi/ml. Any piping removed will go through the release and clearance process.

New or modified permits

A stormwater pollution prevention plan (SWPPP) is not required as area of disturbance is less than one acre. Illinois Environmental Protection Agency (IEPA) has indicated that a construction permit would not be needed if sewer is replaced in-kind (same alignment), but drawings will be forwarded to IEPA for confirmation.

Public utilities/services

The pipe flows from Fermilab into the POTW. There are no predicted disturbances to public utilities or services. The subcontractor will be responsible to bypass pump the sewage to manhole SMHT 202.

V. NEPA Recommendation

Fermilab staff has evaluated the proposed action and believe that several Categorical Exclusions apply. It is believed that the proposed action meets the description found in DOE's NEPA Implementation Procedures, 10 CFR 1021, Subpart D, as follows.

B 1.31 Installation or relocation of machinery and equipment

Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure.

B 5.4 Repair or replacement of pipelines

Repair, replacement, upgrading, rebuilding, or minor relocation of pipelines within existing rights-of-way, provided that the actions are in accordance with applicable requirements

Fermilab NEPA Program Manager: Samantha Panock

Samantha Panock
Signature and Date

Digitally signed by Samantha Panock
Date: 2024.12.19 13:54:18 -06'00'

VI. DOE/Fermi Site Office (FSO) NEPA Review

Based upon my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Policy 451.1), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

FSO NEPA Compliance Officer: Rick Hersemann

RICK HERSEMANN
Signature and Date

Digitally signed by RICK HERSEMANN
Date: 2024.12.20 09:15:47 -06'00'

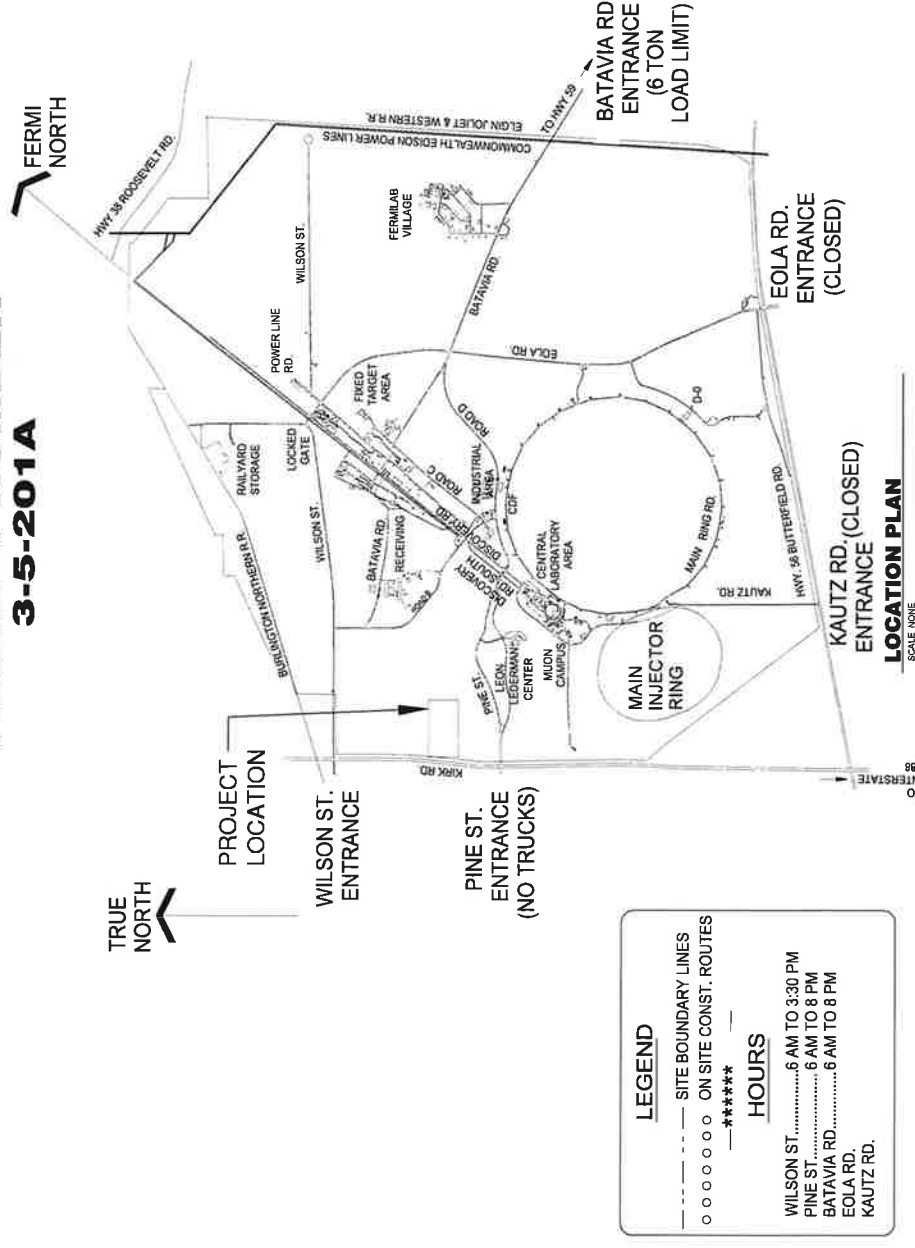
VII. Diagrams

Kirk Road Sanitary Sewer Improvements drawings

KIRK ROAD PRAIRIE SANITARY SEWER IMPROVEMENTS

**PROJECT NUMBER
3-5-201A**

- DRAWING LIST:**
- G-1 LOCATION PLAN & DRAWING LIST
 - G-2 GENERAL NOTES
 - C-1 SITE PLAN & PROFILE
 - C-2 SITE OVERVIEW & PHOTOS
 - C-3 DETAILS
 - C-4 DETAILS
 - C-5 METERING MANHOLE & EQUIPMENT
 - C-6 EXISTING DRAWINGS
 - U-1 ELECTRICAL & COMMUNICATION



LEGEND

- SITE BOUNDARY LINES
- o o o o o ON SITE CONST. ROUTES
- *****

HOURS

- WILSON ST. 6 AM TO 3:30 PM
- PINE ST. 6 AM TO 8 PM
- BATAVIA RD. 6 AM TO 8 PM
- EOLA RD.
- KAUTZ RD.

TO INTERSTATE 88

DESIGNED	DRAWN	CHECKED	APPROVED	SUBMITTED

DATE	REVISIONS

DATE	DESCRIPTION

SCALE	PROJECT NORTH

LOCATION PLAN

SCALE NONE

FERMI NATIONAL ACCELERATOR LABORATORY
UNIFIED FACILITY DEVELOPMENT OF LINAC/CRY

SANITARY SEWER IMPROVEMENTS

LOCATION PLAN & DRAWING LIST

DRAWING NO. **3-5-201A** REV. **G-1**

23 OCT. 2024

SCALE:

1" = 50'

PROJECT NORTH

DATE

NAME

RECORDED

DRAWN

CHECKED

APPROVED

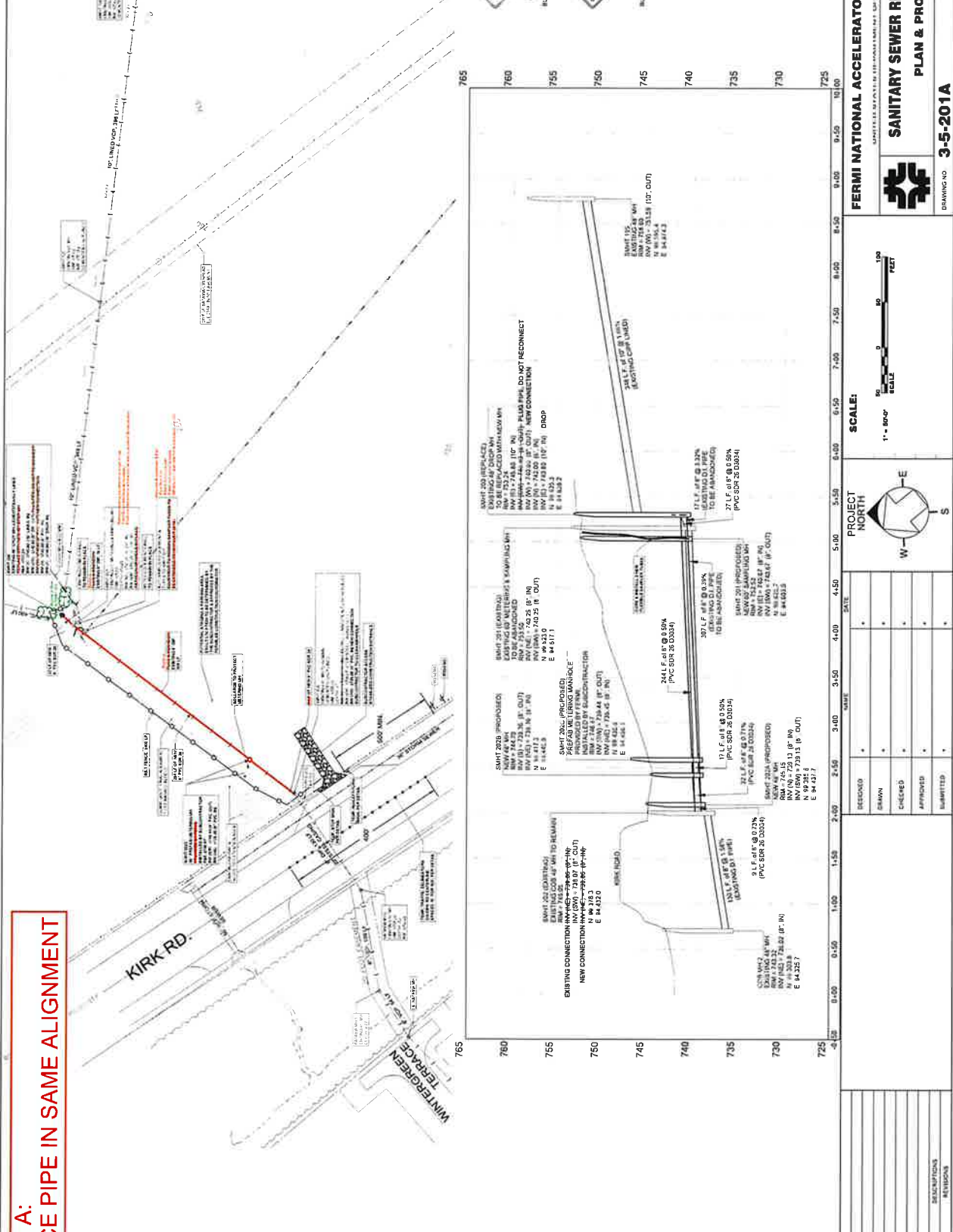
SUBMITTED

DESCRIPTIONS

REVISIONS

725 730 735 740 745 750 755 760 765

725 730 735 740 745 750 755 760 765



**OPTION A:
REPLACE PIPE IN SAME ALIGNMENT**

SMWT 200B (PROPOSED)
 NEW CONSTRUCTION
 150' LF OF 12" DIA. 1.5% SLOPE
 PVC SDR 26 (30394)
 IN (SW) = 734.07 (8' OUT)
 IN (NW) = 734.48 (8' OUT)
 IN (SE) = 734.89 (8' OUT)
 IN (NE) = 735.30 (8' OUT)
 E = 84 437.7

SMWT 200 (PROPOSED)
 EXISTING CONSTRUCTION
 150' LF OF 12" DIA. 1.5% SLOPE
 PVC SDR 26 (30394)
 IN (SW) = 734.07 (8' OUT)
 IN (NW) = 734.48 (8' OUT)
 IN (SE) = 734.89 (8' OUT)
 IN (NE) = 735.30 (8' OUT)
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 IN (NE) = 735.30 (8' OUT)
 E = 84 437.7

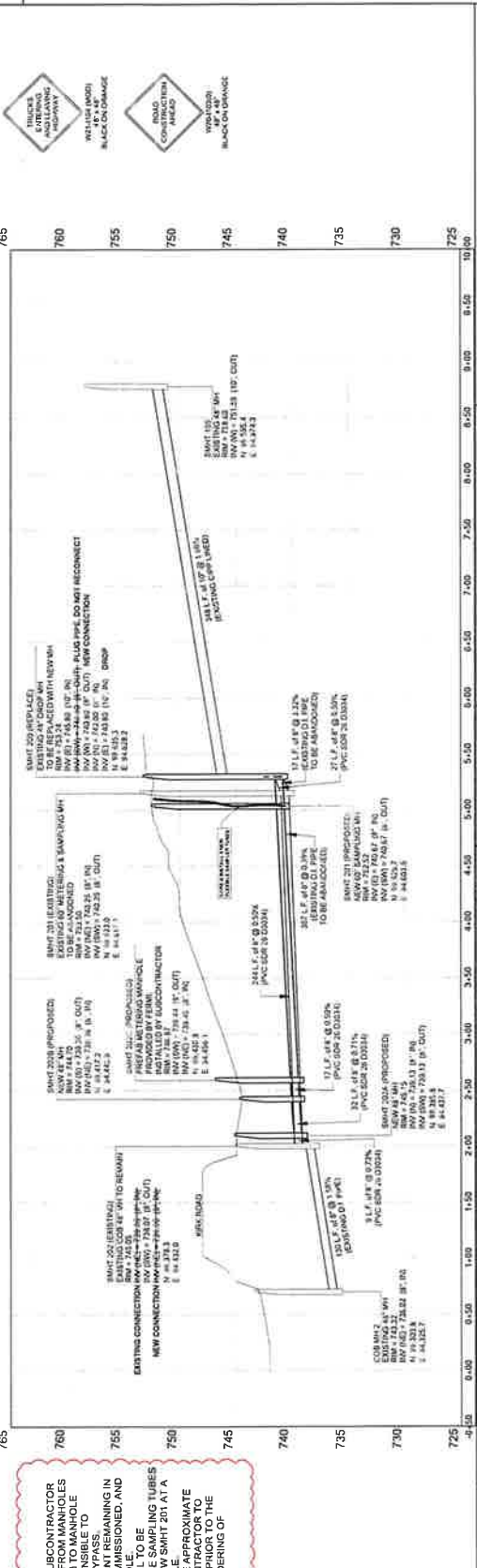
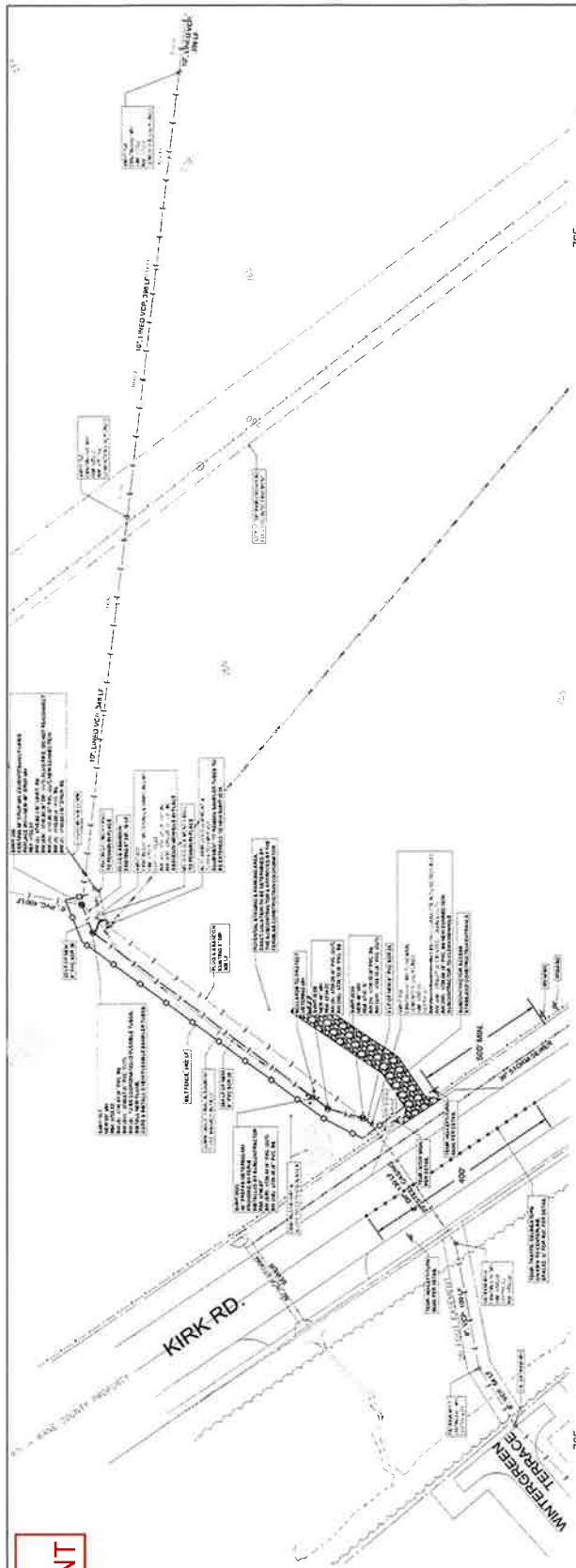
SMWT 200 (PROPOSED)
 EXISTING CONSTRUCTION
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 IN (SW) = 734.07 (8' OUT)
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 IN (SE) = 734.89 (8' OUT)
 IN (NE) = 735.30 (8' OUT)
 E = 84 437.7

**OPTION B:
NEW ALIGNMENT**



NOTES:

- IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO BYPASS FLOW, AS NECESSARY, FROM MANHOLES SMHT195 & SMHT196, DOWNSTREAM TO MANHOLE SMHT197, PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL DETERMINE THE AMOUNT OF FLOW TO BYPASS.
- SAMPLING AND METERING EQUIPMENT REMAINING IN SMHT 201 TO BE CONFIRMED DECOMMISSIONED, AND COORDINATED WITH FCC. 3 FLEXIBLE SAMPLING TUBES TO BE CORED AND INSTALLED IN NEW SMHT 201 AT A DEPTH OF 18" BELOW THE TOP OF THE MANHOLE. UTILITY ELEVATIONS PROVIDED ARE APPROXIMATE FROM RECORD DRAWINGS. SUBCONTRACTOR TO CONFIRM ALL ELEVATIONS ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND ORDERING OF MATERIALS.

FERMI NATIONAL ACCELERATOR LABORATORY
 15000 FERMILAB RD., BLDG. 360, BATAVIA, IL 60193
SANITARY SEWER IMPROVEMENTS
SITE PLAN & PROFILE

DRAWING NO. **3-5-201A** REV. **C-1**

DATE: 23 OCT. 2024

SCALE: 1" = 30'-0"

PROJECT NORTH

DATE: _____ NAME: _____

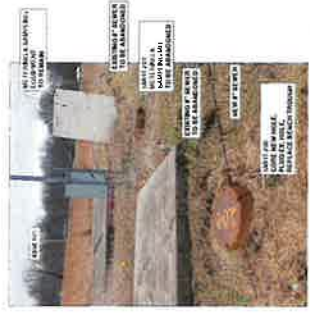
DESIGNED	DATE: _____
DRAWN	DATE: _____
CHECKED	DATE: _____
APPROVED	DATE: _____
SUBMITTED	DATE: _____

REVISIONS

NO.	DATE	DESCRIPTION



SMHT 202
EXISTING CONDITIONS, LOOKING NORTH - N.T.S.



EXISTING SMHT 200 & 201
EXISTING CONDITIONS, LOOKING WEST - N.T.S.



EXISTING SMHT 201
EXISTING CONDITIONS - N.T.S.



SITE ACCESS
EXISTING CONDITIONS, LOOKING EAST FROM KIRK RD. - N.T.S.



SITE OVERVIEW
EXISTING CONDITIONS - N.T.S.



PIPE REPLACEMENT PLAN
SCALE 1" = 100'-0"

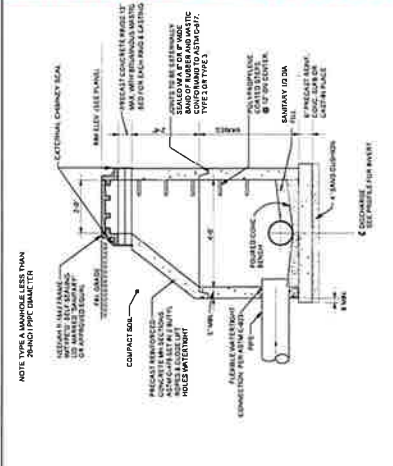


SCALE:
1" = 100'-0"
100 0 150 300
FEET

DESIGNED	NAME	DATE

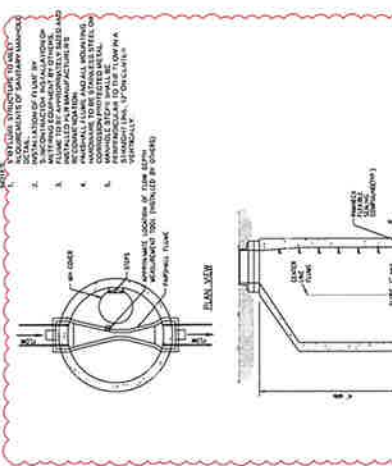
DESIGNED	NAME	DATE

REV	DATE	DESCRIPTION	REVISIONS



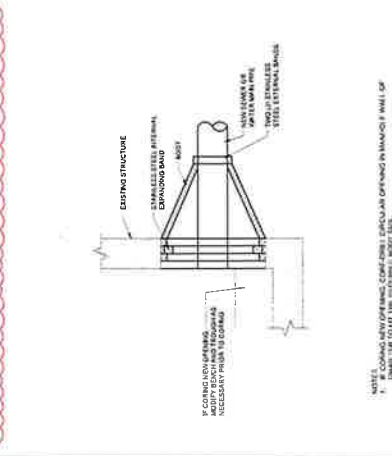
SANITARY MANHOLE
 N.T.S.

NOTE: THIS SECTION IS FOR SANITARY MANHOLE OF THE FOLLOWING TYPE:
 1. TYPE AND DIMENSIONS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.



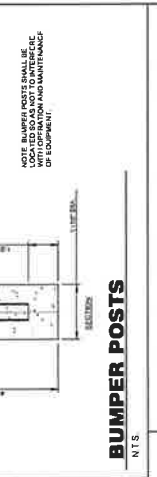
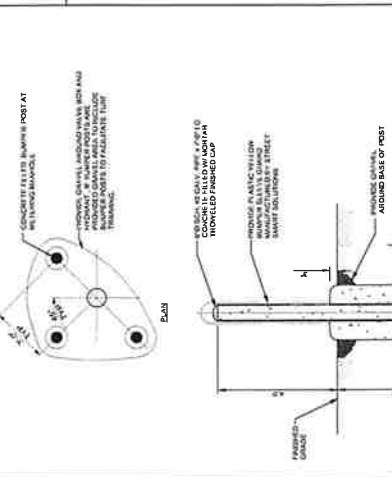
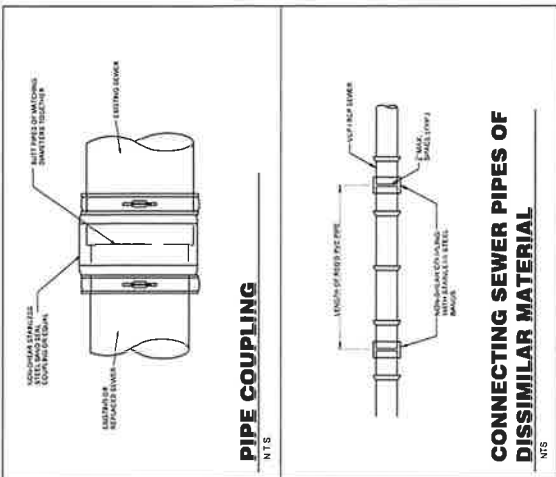
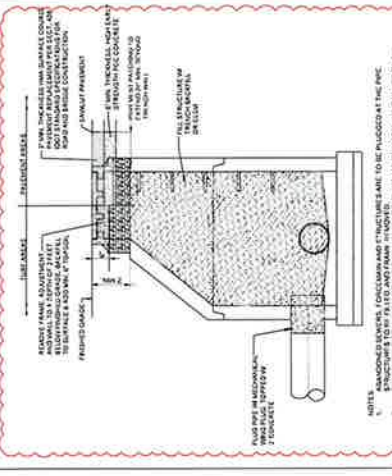
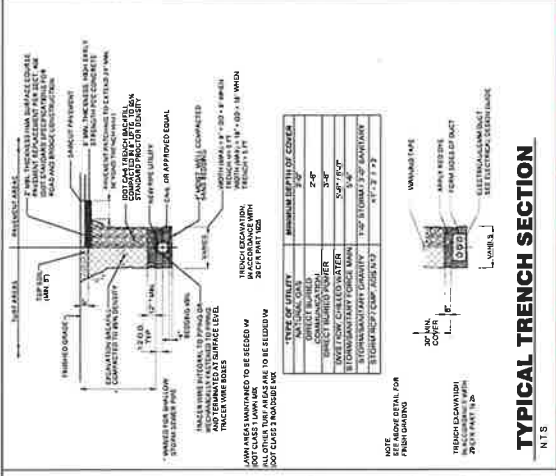
FLUME MANHOLE
 N.T.S.

NOTE: THIS SECTION IS FOR FLUME MANHOLE OF THE FOLLOWING TYPE:
 1. TYPE AND DIMENSIONS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.



MANHOLE ABANDONMENT
 N.T.S.

NOTE: THIS SECTION IS FOR MANHOLE ABANDONMENT OF THE FOLLOWING TYPE:
 1. TYPE AND DIMENSIONS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS SHALL BE TO CENTERLINE UNLESS OTHERWISE SPECIFIED.



23 OCT. 2024

REV. C-3

FERMILAB NATIONAL ACCELERATOR LABORATORY
 SANITARY SEWER IMPROVEMENTS
 DETAILS

DRAWING NO. **3-5-201A**

DATE: _____

DESIGNED: _____

DRAWN: _____

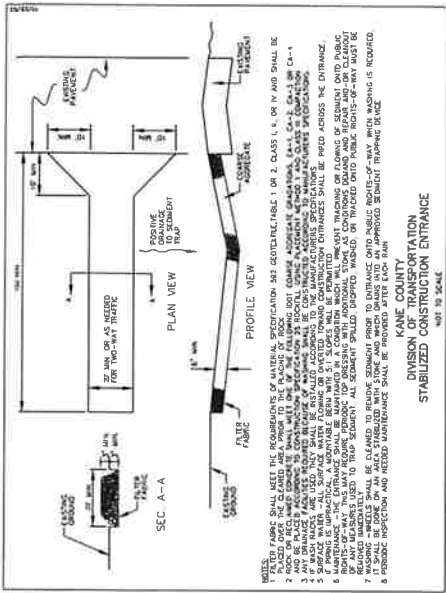
CHECKED: _____

APPROVED: _____

SUBMITTED: _____

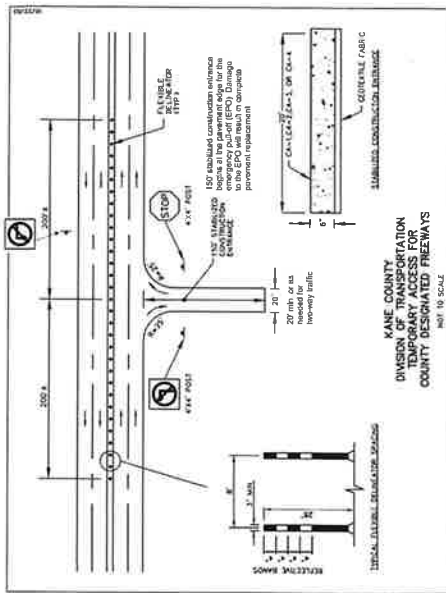
DATE: _____

SCALE: _____



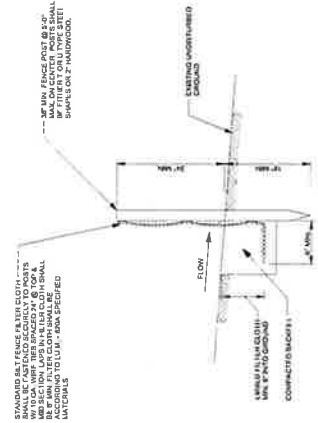
STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



TEMPORARY SITE ACCESS

N.T.S.



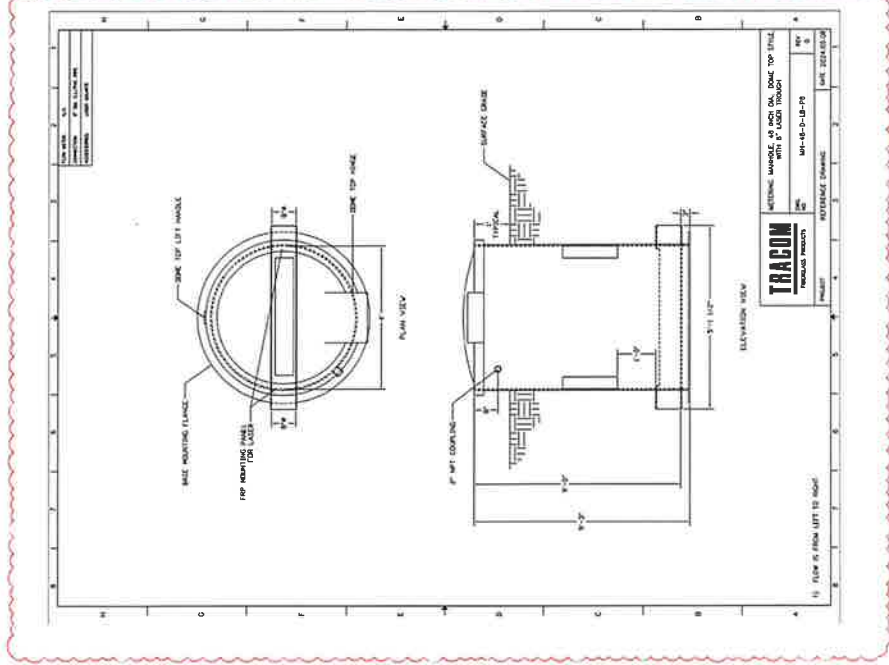
SILT FENCE

N.T.S.

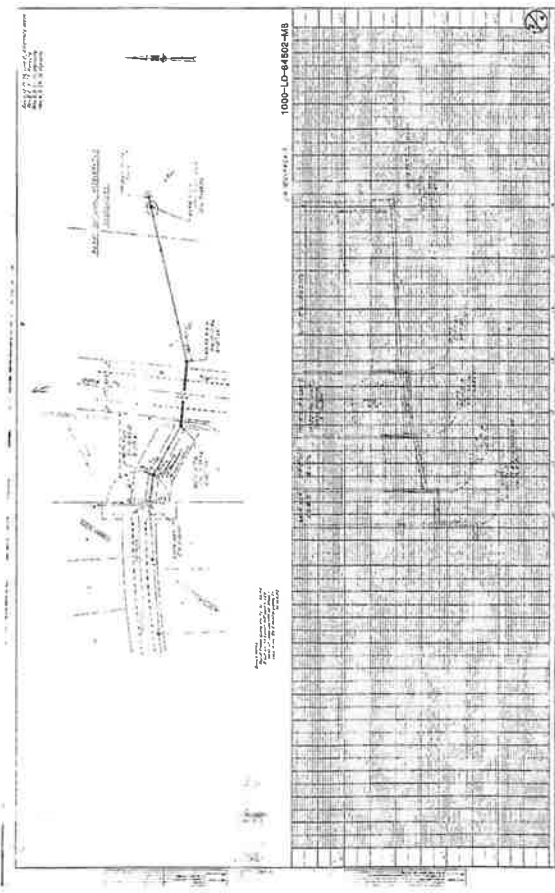
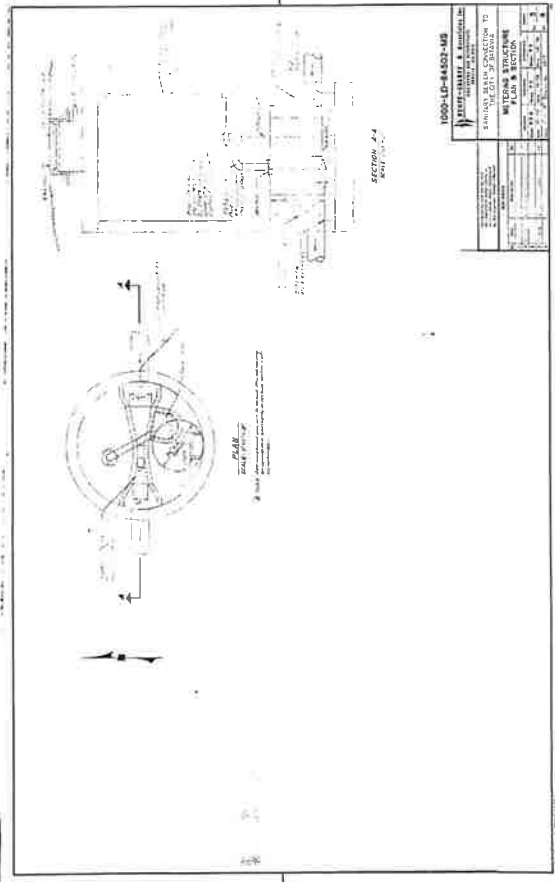
- NOTES
1. STABILIZED CONSTRUCTION ENTRANCE SHALL BE 12' X 12'.
 2. TEMPORARY SITE ACCESS SHALL BE 200' X 200'.
 3. SILT FENCE SHALL BE 100' X 100'.

<p>FERMI NATIONAL ACCELERATOR LABORATORY</p> <p>DEPARTMENT OF PHYSICS, UNIVERSITY OF MICHIGAN</p> <p>SANITARY SEWER IMPROVEMENTS</p> <p>DETAILS</p> <p>DRAWING NO. 3-5-201A</p>		<p>SCALE</p>	<p>DATE</p>	<p>NAME</p>	<p>SANITARY SEWER REPLACEMENT</p>
<p>DESIGNED</p>	<p>DRAWN</p>	<p>CHECKED</p>	<p>APPROVED</p>	<p>SUBMITTED</p>	<p>REVISIONS</p>

- NOTES:**
1. SIMILAR TO PROVIDE PREFABRICATED FIBERGLASS METERS, MANHOLE AND LASER FLOW METER. SUBCONTRACTOR TO INSTALL EQUIPMENT PER MANUFACTURER'S SPECS AS PROVIDED IN THE NOTES.
 2. COORDINATE THIS WORK WITH VENDOR, AND PERFORM ANY ADJUSTMENTS TO PROVIDE A FULLY WORKING SYSTEM.
 3. SUBCONTRACTOR TO EXTEND ELECTRIC AND COMMUNICATION SYSTEMS TO THE EQUIPMENT. THE FOLLOWING EQUIPMENT IS TO BE PROVIDED BY FERMI, AND INSTALLED BY THE SUBCONTRACTOR:
- | QTY | Description |
|-----|---|
| 1 | Packaged Dome Top Fiberglass Manhole, 4'-0" with, 9'-0" deep inlet (vent to grade +1'2") Dome Top, 48" FRP, 1000 PSF, non-traffic area. Piano hinge and Hesp, 304 SS. Hinge back, solid FRP. Support bar, telescoping, with locking pin on chain. Ladder, FRP, 1.5" reinforced rungs, non-slip top surface. S.S. hardware |
| 1 | 2" NPT fitting / coupling / tap |
| 1 | Integral 8" pipe for Laser Flow Metering manhole with, Mounting plate embedded in manhole wall or FRP. Unleak across channel-Open cavity for on-site fill around channel |
| 2 | Pipe Stub, 8" x 6' L, Soli 40 PVC. Coupling, concentric, 8" for C1 /PVC, flexible PVC with S.S. clamps |
| 1 | The Signature® LaserFlow system uses a non-contact TIENet® laser Doppler sensor to measure liquid velocity. This sensor has an integral non-contact ultrasonic level sensor to measure liquid level. Flow rate and total flow are calculated and displayed on a 240 pixel display, or relayed from the front panel USB port or transmitted via communication options such as an internal cellular modem or Ethernet. Flowink software (5.10.8 or newer) is recommended if data analysis and advanced reporting is required. Power cord, 8 foot (2.5 m) long, for North America. Includes cord grip fitting. |
| 1 | Remnant wall mount for TIENet® 360 LaserFlow™ sensor. |
| 1 | Sensor Retrieval Tool |
| 1 | TIENet® 300 analog 4-20 mA output option card, two independent channels |
| 1 | Battery backup kit for Signature® meter. Includes model 940 lead-acid battery, adapter cable, and mounting hardware |



REV	DATE	DESCRIPTIONS	REVISIONS	SANITARY SEWER REPLACEMENT			
				DESIGNED	CHECKED	APPROVED	SUBMITTED
				DRAWN			
				DATE			
				NAME			
SCALE:				SCALE:			
FERMI NATIONAL ACCELERATOR LABORATORY				FERMI NATIONAL ACCELERATOR LABORATORY			
SANITARY SEWER IMPROVEMENTS				SANITARY SEWER IMPROVEMENTS			
METERING MANHOLE & EQUIPMENT				METERING MANHOLE & EQUIPMENT			
DRAWING NO. 3-5-201A				DRAWING NO. 3-5-201A			
REV. C-5				REV. C-5			
23 OCT. 2024				23 OCT. 2024			



REV.	DATE	DESCRIPTIONS REVISIONS

DESIGNED	DATE

SCALE:

FERNI NATIONAL ACCELERATOR LABORATORY
UNIVERSITY OF MICHIGAN

SANITARY SEWER IMPROVEMENTS
EXISTING DRAWINGS

DRAWING NO. **3-5-201A** REV. **C-6**

23 OCT 2024

