



# Lake County Forest Preserves

General Offices  
1899 West Winchester Road  
Libertyville, Illinois 60048  
847-367-6640 • Fax: 847-367-6649  
www.LCFPD.org

**DATE:** June 6, 2022

**MEMO TO:** Terry Wilke, Chair  
Planning Committee

**Agenda Item#** 10.6

**FROM:** Randall L. Seebach  
Director of Planning and Land Preservation

**RECOMMENDATION:** Recommend approval of a Resolution approving a Temporary Easement Agreement with the County of Lake (County) for Sanitary Sewer Improvements at Rollins Savanna Forest Preserve.

**STRATEGIC DIRECTION SUPPORTED:** None

**FINANCIAL DATA:** The County will pay a \$1,000.00 Easement Fee and \$10,800.00 in Tree Replacement Fees, as well as costs and expenses incurred by the District related to the Project, as required by the District's License and Easement Ordinance.

**BACKGROUND:** The County, through its Department of Public Works (LCDPW), is in the process of preparing pre-final design plans for the repair and replacement of existing sanitary sewer lines along and near Linden Avenue in Unincorporated Avon Township at and adjacent to Rollins Savanna Forest Preserve. Some sections of the sewer lines are in dire condition, and there is a chance portions could fail in the near future.

As part of the improvements, LCDPW is requesting a 1,340 SF temporary easement within which it will create a 15'x30' pit from which it will replace the existing sewer lines to the north. A 9" Shagbark Hickory tree and a 9" Black Walnut tree will be removed during LCDPW's project. However, at the District's request, LCDPW's contractor will protect a 28" Bur Oak located partially within the easement area through (i) selective root and branch pruning, as approved by District staff, (ii) boarding its trunk (i.e., tying boards with wire to the trunk, to protect it), and (iii) installing wood or plastic matting to serve as a bridge over the root system for added protection. In addition, LCDPW's contractor will protect a 14" Box Elder tree located just outside of the easement area by boarding its trunk.

**REVIEW BY OTHERS:** Executive Director, Chief Operations Officer, Director of Finance, Corporate Counsel.

STATE OF ILLINOIS     )  
                                  ) SS  
COUNTY OF LAKE        )

**BOARD OF COMMISSIONERS  
LAKE COUNTY FOREST PRESERVE DISTRICT  
REGULAR JUNE MEETING  
JUNE 14, 2022**

**MISTER PRESIDENT AND MEMBERS OF THE BOARD OF COMMISSIONERS:**

Your **PLANNING COMMITTEE** presents herewith “A Resolution Approving an Easement Agreement with the County of Lake for Sanitary Sewer improvements at Rollins Savanna Forest Preserve,” and requests its approval.

**PLANNING COMMITTEE:**

Date: 6-6-2022    Roll Call Vote: Ayes: \_\_\_\_\_ Nays: \_\_\_\_\_  
                           Voice Vote Majority Ayes; Nays: 0

**LAKE COUNTY FOREST PRESERVE DISTRICT  
LAKE COUNTY, ILLINOIS**

**A RESOLUTION APPROVING AN EASEMENT AGREEMENT WITH  
THE COUNTY OF LAKE FOR SANITARY SEWER IMPROVEMENTS  
AT ROLLINS SAVANNA FOREST PRESERVE**

**WHEREAS**, the Lake County Forest Preserve District (the “District”) owns certain parcels of land within Rollins Savanna Forest Preserve (the “Property”) located north of Washington Street and west of Linden Avenue in Avon Township; and

**WHEREAS**, the County of Lake (the “County”) has proposed public sanitary sewer improvements along or near Linden Avenue and the Property (the “Project”); and

**WHEREAS**, the County, acting through its Department of Public Works (“LCDPW”), has requested that the District grant to the County a temporary easement within the Property for the repair and replacement of sanitary sewer lines, which are part of the Project and are public improvements (the “Easement”); and

**WHEREAS**, the District has adopted an Ordinance Regarding Licenses and Easements (the “License and Easement Ordinance”) which sets forth the general requirements for granting easements; and

**WHEREAS**, Section 6 of the Downstate Forest Preserve District Act, 70 ILCS 805/6, authorizes the District to grant easements under or across District property for the construction, operation, and maintenance of public services, including public sanitary sewer improvements; and

**WHEREAS**, the District staff has negotiated an easement agreement with LCDPW in the form attached hereto, pursuant to which the District will grant the Temporary Easement to the County and the County, among other obligations, will cause its contractor to undertake the tree protection measures outlined in such agreement (the “Temporary Easement Agreement”);

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Commissioners of the Lake County Forest Preserve District, Lake County, Illinois **THAT**:

**Section 1: Recitals.** The recitals set forth above are incorporated as a part of this Resolution by this reference.

**Section 2: Approval of Temporary Easement Agreement.** The Temporary Easement Agreement is hereby approved in substantially the form attached hereto. The President and Secretary of the District are hereby authorized and directed to execute and attest to, on behalf of the District, the Temporary Easement Agreement in substantially the form attached hereto. In the event that any provision of the Easement Agreement conflicts with the License and Easement Ordinance, the conflicting provision of the License and Easement Ordinance is hereby waived.

**Section 3: Effective Date.** This Resolution shall be in full force and effect from and after its passage and approval in the manner provided by law.

PASSED this \_\_\_\_ day of \_\_\_\_\_, 2022

AYES:

NAYS:

APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2022

---

Angelo D. Kyle, President  
Lake County Forest Preserve District

ATTEST:

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Julie Gragnani, Secretary  
Lake County Forest Preserve District

Exhibit No. \_\_\_\_\_

Prepared by:  
Matthew E. Norton  
Burke, Warren, MacKay  
& Serritella, P.C.  
330 North Wabash  
21<sup>st</sup> Floor  
Chicago, IL 60611

After recording return  
to:  
Ken Jones  
LCFPD  
1899 W Winchester Rd  
Libertyville, IL 60073

Above Space For Recorder's Use Only

**TEMPORARY EASEMENT AGREEMENT  
BY AND BETWEEN  
LAKE COUNTY FOREST PRESERVE DISTRICT  
AND  
COUNTY OF LAKE**

This Temporary Easement Agreement (this "Agreement") is dated and executed as of the \_\_\_\_ day of \_\_\_\_\_, 2022 (the "Effective Date"), and is by and between the LAKE COUNTY FOREST PRESERVE DISTRICT, a body politic and corporate organized and existing under the Downstate Forest Preserve District Act, 70 ILCS 805/0.001 et seq. (the "District"), and the COUNTY OF LAKE, a body politic and corporate, organized and existing under the Illinois Counties Code, 55 ILCS 5/1-1001, et seq. (the "County"). In consideration of the provisions below and other consideration, the receipt and sufficiency of which are hereby acknowledged, the District and the County (collectively, the "Parties") agree as follows:

1. BACKGROUND. The District holds fee simple title to property commonly known as Rollins Savanna Forest Preserve in Lake County, Illinois (the "Subject Property"). On approximately June 5, 1975, the District's predecessor in title to a portion of the Subject Property granted a permanent easement to the County within the Subject Property pursuant to a "Utility Easement" recorded with the office of the Recorder of Lake County, Illinois as document number 1762073, allowing the County to install and maintain sanitary sewers (the "Existing Sewer") within the easement premises legally described therein (the "Permanent Easement Premises"). The condition of the Existing Sewer line necessitates its repair and/or replacement (the "Project"). To perform the Project, the County must install, operate, and maintain a temporary pipe bursting pit (the "Facilities") within an area of the Subject Property that is approximately 1,340 square feet in area, is located directly south of and adjacent to the Permanent Easement Premises, and is more particularly described on Exhibit A and generally depicted on Exhibit B (the "Temporary Easement Area"). The County has requested that the District grant to the County a temporary construction easement within the Temporary Easement Area so that the County can install, operate, and maintain the Facilities.

2. GRANT OF EASEMENT. The District hereby grants to the County a non-exclusive temporary

easement in, on, over and under the Temporary Easement Area for the sole purpose of allowing the County to install, maintain, operate, and replace the Facilities (the “Easement”) in accordance with the construction and restoration plans attached to this Agreement as Exhibit C (the “Plans”). The County shall use the Easement in compliance with this Agreement and all applicable laws (the “Requirements of Law”).

3. TERM OF EASEMENT. The term of the Easement shall commence on the Effective Date and terminate on the earlier of (i) completion of the Project and Restoration Work (defined in Section 5) and (ii) 18 months after the Effective Date.

4. MONETARY FEE; TREE COMPENSATION FEE

A. Monetary Fee. Within seven (7) days after the Effective Date, the County shall pay the District a one-time monetary fee of \$1,000.00 for the Easement (“Monetary Fee”). The County shall also reimburse the District, promptly upon written notice thereof, for all costs and expenses incurred by the District related to the Project or this Agreement, including without limitation costs related to legal fees, expenses, inspection expenses, and the value of time spent by staff related to the Project (“District-Incurred Costs”). The County acknowledges that such costs and expenses may be incurred by the District throughout the term of the Easement.

B. Tree Compensation Fee. Within seven (7) days after the Effective Date, the County shall pay the District a one-time tree replacement fee of \$10,800.00 for the value of trees, shrubs, and plants that will be removed, damaged, or impacted as a result of the Project (the “Tree Compensation Fee”). The County shall pay the Tree Compensation Fee in addition to, and such payment will not diminish, its obligation to comply with the Tree Protection requirements of Section 4.D.

4. MAINTENANCE AND USE OF TEMPORARY EASEMENT AREA.

A. Temporary Easement Area. The County must maintain the Temporary Easement Area in a safe, good, and clean condition without hazard to public use. Additionally, the County must comply with all Requirements of Law that prohibit, restrict, or regulate any hazardous materials.

B. District Property. In addition to the County’s obligations to complete the Restoration Work pursuant to the Plans as provided in Section 5, if the County’s use of the Easement results in any damage to the Temporary Easement Area or any other property owned by the District that is not contemplated in the Plans, the County must repair such damage and restore the property to its condition prior to such damage to the satisfaction of the District’s Executive Director. If the County fails to commence such repair and restoration with due diligence, within 30 days after the District gives the County notice thereof, then the District shall have the right, but not the obligation, to cause the affected property to be repaired and restored and to recover from the County all costs incurred by the District to cause the affected property to be repaired or restored.

C. Abatement of Dangerous Condition. If the Facilities or any acts or omissions by or through the County threaten the public’s health or safety, (i) the County shall take all necessary action to abate the dangerous condition and (ii) if the County fails to undertake such abatement with due diligence, within 48 hours after the District gives the County notice thereof, the District shall have the right, but not the obligation, to take all necessary action to abate the dangerous condition, including restricting access near or installing barriers around the dangerous condition, and the County shall reimburse the District for all costs incurred by the District in the performance of such abatement.

D. Tree Protection. Without limiting the County’s obligations to install, maintain, and operate the Facilities, and to use the Temporary Easement Area, only in accordance with the Plans, the County, at

no cost to the District, shall (i) comply with the tree protection provisions in the Plans, including Sheet 5 of the Plans, (ii) with respect to the 28-inch Bur Oak tree depicted on Sheet 5 of the Plans, prune its branches only as approved in advance by the District, (iii) with respect to the 14-inch Box Elder tree depicted outside the Temporary Easement Area on Sheet 5 of the Plans, not prune its branches, and (iv) with respect to each such tree, board its trunk and tie the boards together to the trunk with wire to protect it from damage, in a manner approved in advance by the District.

5. RESTORATION AND VACATION. Upon termination or abandonment of the Easement for any reason, the County shall, at no cost to the District, (i) remove the Facilities from the Temporary Easement Area, (ii) restore the Temporary Easement Area in accordance with the Plans (the “Restoration Work”), and (iii) thereafter, vacate the Temporary Easement Area. If the County fails to remove the Facilities or complete the Restoration Work in accordance with the Plans, the District shall have the right, but not the obligation, to perform and complete the removal and Restoration Work, and to charge the County for all costs and expenses, including legal and administrative costs, incurred by the District for such work.

6. RESERVATION OF RIGHTS. The District reserves its right to: (i) use the Temporary Easement Area for any public use, in any manner that will not unreasonably prevent, impede, or interfere with the County’s use of the Temporary Easement Area and (ii) grant other non-exclusive licenses or easements within the Temporary Easement Area that do not unreasonably prevent, impede, or interfere with the County’s use of the Temporary Easement Area. The County will maintain the Facilities so that they do not unreasonably interfere with the District’s use and occupancy of the Temporary Easement Area.

7. NO ASSESSMENTS AND LIENS. The County represents and warrants that it will: (i) not assess or impose, or allow to be assessed or imposed, against the Temporary Easement Area or the Subject Property any special assessment, special service area tax, recapture fee, or similar assessment, tax, or fee (an “Assessment”), (ii) indemnify the District from any Assessment that is imposed, (iii) take all necessary action to keep the Temporary Easement Area free and clear of all liens, claims, and demands, including without limitation mechanic’s liens, in connection with the Facilities, and (iv) cause, at the County’s sole cost and expense, (a) any lien that is filed against the Temporary Easement Area in connection with the Facilities to be discharged and released, and (b) evidence of this discharge and release to be recorded against the Temporary Easement Area, all within 30 days after the date of filing of the lien.

8. SECURITY. If the County fails to comply with its obligations in Sections 4, 5, or 7, then the District may require the County to deposit with the District security in the form of cash or a certified or cashier’s check made payable to the District, in an amount determined by the District, as a guarantee that the County shall comply in the future with such obligations, including any required restoration and repair of any damage to the Temporary Easement Area or any other property owned by the District. Refund of such funds shall be in the manner prescribed by the District’s “Ordinance Regarding Licenses and Easements for Public Services” approved July 15, 2014, and as may be amended (the “License and Easement Ordinance”).

9. INDEMNITY. The County assumes sole and complete responsibility for any personal injury, including death and damage to property, that may arise directly or indirectly from the use of the Temporary Easement Area by the County, its officers, board members, employees, agents, representatives, and contractors. The County shall indemnify, hold harmless, defend, and release the District, its commissioners, officers, agents, representatives, and employees from and against any alleged loss, claim, damage, and expense (including, without limitation, attorneys’ fees and litigation costs) that may be alleged or asserted against any of those parties in connection with (i) the Facilities, the Easement, or the use of the Temporary Easement Area by the County or its officers, board members, employees, agents, representatives, or contractors or (ii) the County’s performance of, or failure to perform, its obligations under this Agreement (collectively, the “Indemnified Claims”), whether or not any such performance or failure to perform is

alleged to result from the County's breach of this Agreement, negligence, willful misconduct, or any other standard of conduct; however, this indemnity will not apply to the extent any Indemnified Claims are caused by the willful misconduct or gross negligence of the District.

10. INSURANCE. The County shall, and shall cause all of its contractors who perform any portion of the Project (each, a "Contractor") to, at no cost or expense to the District, procure and maintain insurance policies, coverages, and limits that the District determines, in its sole judgment, are sufficient to protect the District, the Temporary Easement Area, the Subject Property, and any other property owned by the District from the Indemnified Claims and all other actions by the County pursuant to this Agreement. The County will cause the District to be named as an additional insured on, and will provide to the District certificates of insurance acceptable to the District evidencing, the insurance required by this Section 10. Notwithstanding anything to the contrary in this Agreement, the County shall have the right to self-insure all risks required by this Agreement.

11. INTENTIONALLY OMITTED.

12. REVOCAION OF EASEMENT; REVERTER.

A. Revocation. If the County breaches any term or provision of this Agreement, and the County fails to cure such breach within the time provided for in this Agreement, or if no time is provided for in this Agreement, within a reasonable time, the District, in addition to any other remedy it may have, may: (i) terminate this Agreement, (ii) revoke the Easement, (iii) record with the office of the Recorder of Lake County, Illinois, a certified copy of a document revoking the Easement, and (iv) pursue any of the remedies set forth in this Agreement or otherwise available to the District at law or in equity.

B. Reverter. If the County ceases to use the Easement for the purposes set forth in Sections 1 and 2 of this Agreement for a period of eight months or more, the County will be deemed to have abandoned the Easement and all of the County's rights in the Temporary Easement Area shall revert to the District, and the District may prepare and record with the office of the Recorder of Lake County, Illinois, a certified copy of a document memorializing such abandonment.

13. COVENANTS RUNNING WITH THE LAND. The Easement shall be recorded against the Temporary Easement Area and, during the Term, the rights granted in this Agreement, the restrictions imposed by this Agreement, and the agreements and covenants contained in this Agreement shall run with the land and be binding upon and inure to the benefit of the District and the County and their respective mortgagees, lessees, heirs, executors, administrators, successors, assigns, agents, licensees, invitees, and representatives, including, without limitation, all subsequent owners of the Temporary Easement Area, or any portion thereof, and all persons claiming under them. Upon expiration of the Term or abandonment, reverter, or termination of the Easement, either party may record against the Temporary Easement Area a memorandum reciting such abandonment, reverter, or termination.

14. NOTICES. All notices required or permitted to be given under this Agreement shall be in writing and shall be delivered: (i) personally, (ii) by a reputable overnight courier, or by (iii) by certified mail, return receipt requested, and deposited in the U.S. Mail, postage prepaid. Unless otherwise expressly provided in this Agreement, notices shall be deemed received upon the earlier of: (i) actual receipt, (ii) one business day after deposit with an overnight courier, as evidenced by a receipt of deposit, or (iii) four business days following deposit in the U.S. mail, as evidenced by a return receipt. By notice complying with the requirements of this Section 14, each Party shall have the right to change the address or the addressee, or both, for all future notices and communications to the other Party, but no notice of a change of addressee or address shall be effective until actually received.



Notices and communications to the District shall be addressed and delivered to the following address:

Lake County Forest Preserve District  
1899 West Winchester Road  
Libertyville, IL 60048  
Attention: Executive Director

with a copy to:

Burke, Warren, MacKay & Serritella, P.C.  
330 North Wabash, 21<sup>st</sup> Floor  
Chicago, IL 60611  
Attention: Mathew E. Norton

Notices and communications to the County shall be addressed and delivered to the following address:

Lake County Public Works  
650 W Winchester Road  
Libertyville, IL 60048

Attention: Austin McFarlane

with a Copy to:

State's Attorney's Office  
18 N County Street  
Waukegan, IL 60085

Attention: Stephen Rice

15. GENERAL PROVISIONS.

A. Entire Agreement. This Agreement is the entire agreement between the Parties and supersedes all of their prior agreements and negotiations, written or oral, relating to the subject matter of this Agreement.

B. Governing Law. This Agreement is governed by the internal laws, but not the conflict of laws rules, of the State of Illinois.

C. No Waiver. Any act or omission by the District that may constitute a waiver of one or more its rights under this Agreement shall not constitute or be deemed to be a waiver of any other right that the District has or may have in the future under this Agreement.

D. Authority. Each person signing this Agreement hereby states and covenants that he or she has read, and understands, this Agreement, that he or she has the authority to execute this Agreement on behalf of the Party whom he or she represents, and that such Party intends to be legally bound by the provisions of this Agreement.

**COUNTY:**

**DISTRICT:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: Austin McFarlane

Name: \_\_\_\_\_

Its: Interim Director of Public Works

Its: \_\_\_\_\_

ATTEST

By: \_\_\_\_\_  
Name: David Humbert  
Its: Principal Engineer

ATTEST

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Its: \_\_\_\_\_

**ACKNOWLEDGMENTS**

STATE OF ILLINOIS            )  
  ) SS  
COUNTY OF LAKE            )

This instrument was acknowledged before me on \_\_\_\_\_, 2022, by \_\_\_\_\_, the \_\_\_\_\_ of the **LAKE COUNTY FOREST PRESERVE DISTRICT**, a body politic and corporate, and by \_\_\_\_\_, the \_\_\_\_\_ of said District.

\_\_\_\_\_  
Signature of Notary

SEAL

My Commission expires:

STATE OF ILLINOIS            )  
  ) SS  
COUNTY OF LAKE            )

This instrument was acknowledged before me on \_\_\_\_\_, 2022, by \_\_\_\_\_, the \_\_\_\_\_ of the **COUNTY OF LAKE**, a body politic and corporate, and by \_\_\_\_\_, the \_\_\_\_\_ of said County.

\_\_\_\_\_  
Signature of Notary

SEAL

My Commission expires: \_\_\_\_\_

**EXHIBIT A**

**LEGAL DESCRIPTION OF TEMPORARY EASEMENT AREA**

THAT PART OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 45, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LAKE COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

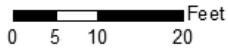
COMMENCING AT THE NORTHWEST CORNER OF LOT 1 IN DRUCE'S LINDEN SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED JUNE 20, 1918 AS DOCUMENT 178314, IN LAKE COUNTY, ILLINOIS. THENCE SOUTH 89 DEGREES 49 MINUTES 21 SECONDS WEST ALONG THE SOUTH LINE OF GOLDSMITH'S LINDEN SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED MAY 7, 1921 AS DOCUMENT 201740, IN LAKE COUNTY, ILLINOIS FOR 50.00 FEET TO THE WEST RIGHT OF WAY LINE OF LINDEN AVENUE; THENCE SOUTH 0 DEGREES 10 MINUTES 39 SECONDS EAST ALONG THE WEST RIGHT OF WAY LINE OF LINDEN AVENUE FOR 15.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING SOUTH 0 DEGREES 10 MINUTES 39 SECONDS EAST ALONG THE WEST RIGHT OF WAY LINE OF LINDEN AVENUE FOR 24.00 FEET; THENCE SOUTH 89 DEGREES 49 MINUTES 21 SECONDS WEST ALONG A LINE PARALLEL WITH THE SOUTH LINE OF SAID GOLDSMITH'S LINDEN SUBDIVISION FOR 55.61 FEET; THENCE NORTH 0 DEGREES 25 MINUTES 07 SECONDS WEST FOR 24.00 FEET TO A LINE THAT IS 15.00 FEET SOUTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID GOLDSMITH'S LINDEN SUBDIVISION; THENCE NORTH 89 DEGREES 49 MINUTES 21 SECONDS EAST FOR 55.72 FEET TO THE POINT OF BEGINNING, IN LAKE COUNTY, ILLINOIS.

# EXHIBIT B

## GENERAL DEPICTION OF TEMPORARY EASEMENT AREA

### Exhibit B

Lake County Forest Preserve District  
Land Preservation and Special Projects  
1899 W Winchester Rd  
Libertyville, Illinois 60048  
847-968-3351



### Legend

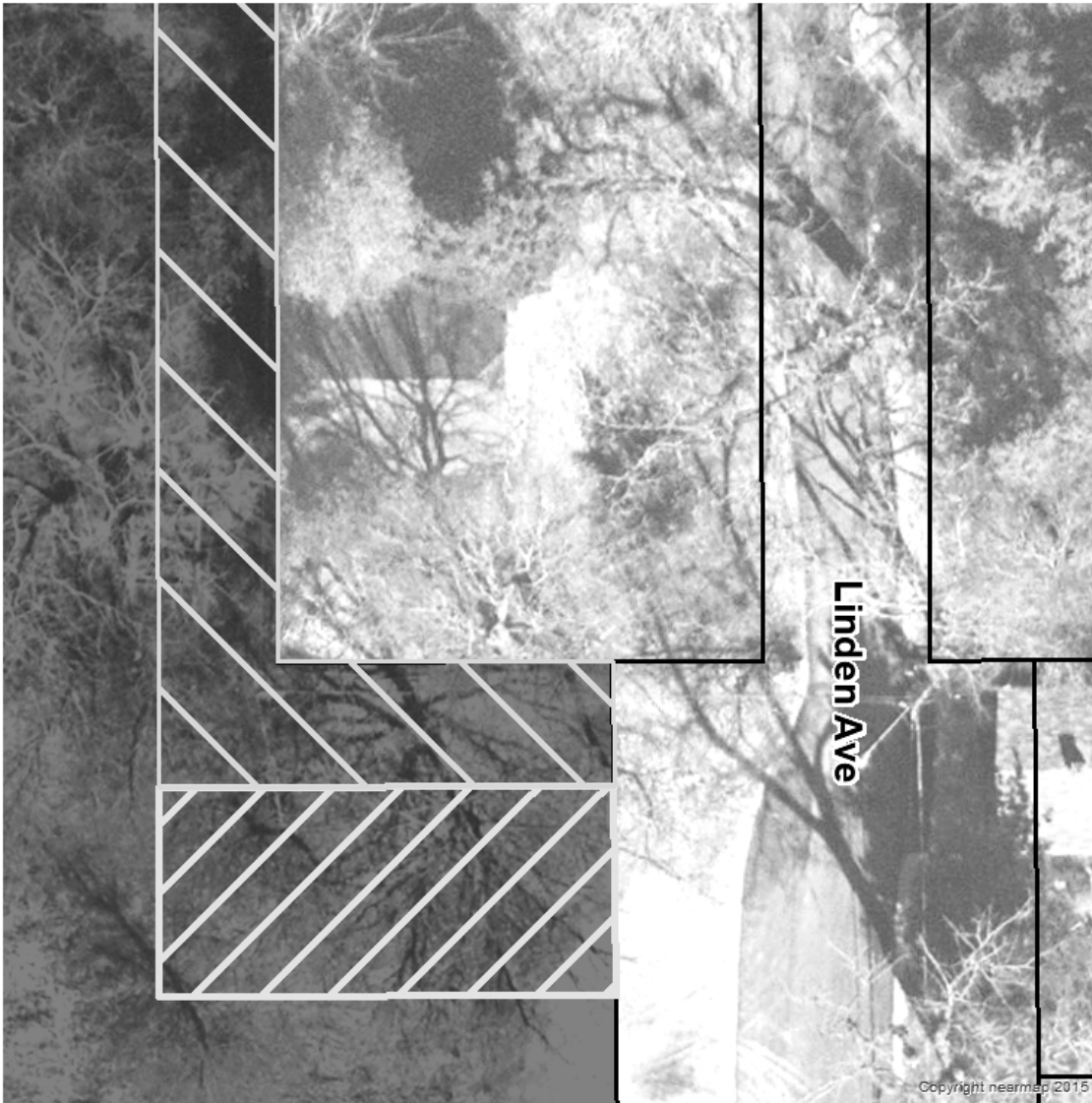
-  Subject Property
-  Temporary Easement Area
-  Permanent Easement Premises

Courtesy Copy Only.  
Property boundaries indicated are provided for general location purposes. Wetland and flood limits shown are approximate and should not be used to determine setbacks for structure or as a basis for purchasing property.

2020 Aerial Photo

Prepared using information from:  
Lake County Department of Information & Technology: GIS/Mapping Division  
18 North County Street  
Waukegan, Illinois 60085-4357  
847-377-2373

Map Prepared 15 April 2022



Copyright neermap 2015

**EXHIBIT C**

**THE PLANS**

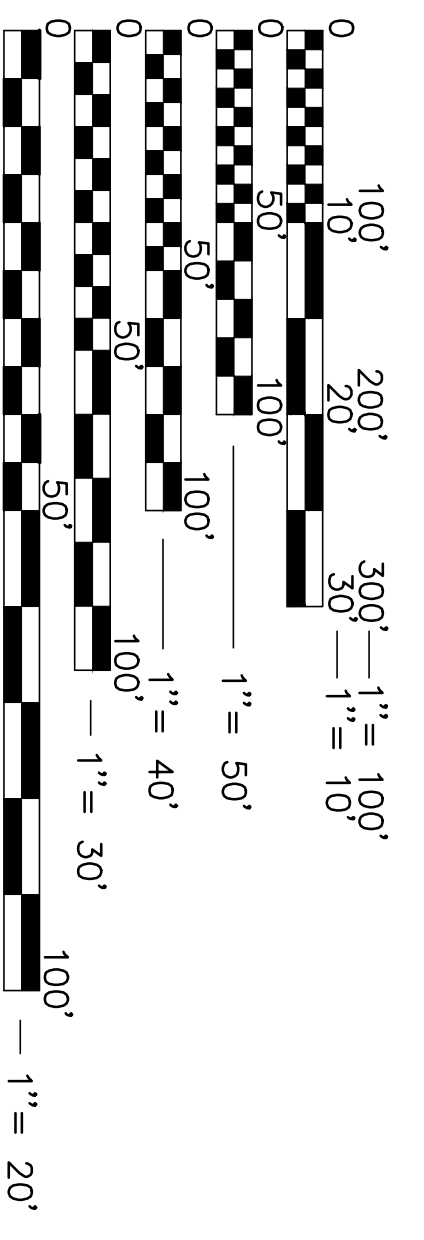
# LINDEN AVENUE SANITARY SEWER REHABILITATION LAKE COUNTY PUBLIC WORKS

## STANDARD SYMBOLS

FEATURE	EXISTING	PROPOSED
BUFFALO BOX		
BUSH/SHRUB		
CATCH BASIN		
CLEANOUT		
COMBINE SEWER LINE		
CONTOUR		
CULVERT		
DITCH/SWALE		
ELECTRIC LINE		
ELECTRIC MANHOLE		
FENCE		
FIRE HYDRANT		
FLARED END SECTION		
GAS LINE		
GAS MANHOLE		
GAS VALVE		
INLET		
LIGHT POLE		
OVERHEAD WIRES		
POWER POLE		
R.O.W LINE		
R.O.W MARKER		
SANITARY FORCEMAIN LINE		
SANITARY SEWER LINE		
SANITARY SEWER MANHOLE		
SIGN		
SPOT ELEVATION		
STORM SEWER LINE		
STORM SEWER MANHOLE		
TELEPHONE LINE		
TELEPHONE MANHOLE		
TELEPHONE BOX/PEDESTAL		
TREE—CONIFEROUS (SIZE/TAG#)		
TREE—DECIDUOUS (SIZE/TAG#)		
VALVE BOX		
VALVE VAULT		
WATER VALVE		
WATERMAIN LINE		

**JULIE**  
JOINT  
UTILITY  
LOCATION  
INFORMATION FOR  
EXCAVATION  
CALL 811

Know what's below.  
Call before you dig.



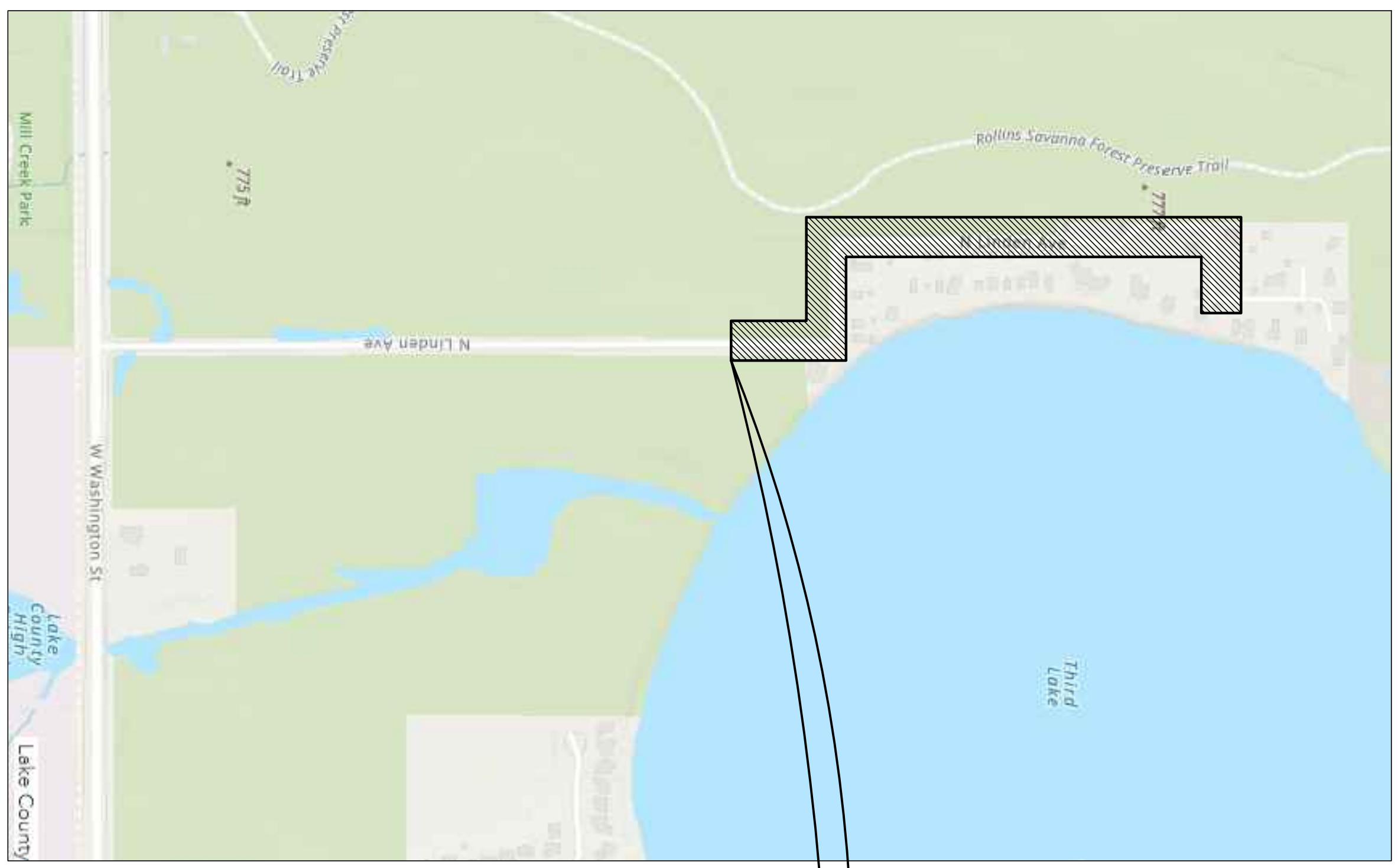
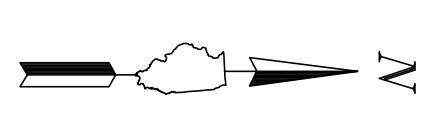
**FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.**

**NOTE: CONSTRUCTION MEANS, METHODS AND JOB SITE SAFETY IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR**

**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
625 Forest Edge Drive  
TEL 847.478.9700

**COPYRIGHT NOTICE**  
This drawing is the property of Gewalt-Hamilton Assoc., Inc. and is not to be used for any purpose other than the specific project and site named herein, and cannot be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without the prior written permission from Gewalt-Hamilton Associates, Inc.

**BENCHMARK:**  
ELEVATIONS SHOWN HEREON ARE OBTAINED VIA GPS USING TRIMBLE VRS@NOW™ (NO PUBLISHED MONUMENT VERIFIED) DATUM: NAD83



**PROJECT LOCATION**  
LINDEN AVENUE SANITARY SEWER REPLACEMENT  
LINDEN AVENUE  
LAKE COUNTY, ILLINOIS

**ENGINEER:**  
GEWALT HAMILTON ASSOCIATES, INC.  
625 FOREST EDGE DRIVE  
VERNON HILLS, ILLINOIS 60061  
TELEPHONE: 847-478-9700

**TOPOGRAPHIC SURVEY BY:**  
GEWALT HAMILTON ASSOCIATES, INC.  
625 FOREST EDGE DRIVE  
VERNON HILLS, ILLINOIS 60061  
TELEPHONE: 847-478-9700

**COORDINATING/PERMITTING AGENCIES:**  
Lake County Public Works Department 847.377.7145  
Avon Township Highway Department 847.546.1446  
Lake County Forest Preserve 847.367.6640  
Village of Third Lake 847.223.8422  
Avon Township Highway Department 847.546.7480

**UTILITY AGENCIES:**  
ComEd 847.816.5239  
Comcast 630.600.6347  
AT&T 630.573.6464  
North Shore Gas Co. 847.263.4678  
Nicor Gas Co. 630.388.5830

## SHEET INDEX

1. TITLE SHEET
2. GENERAL NOTES, 1 OF 2
3. GENERAL NOTES, 2 OF 2
4. DEMOLITION / EROSION CONTROL PLAN STA: 0+00 to 10+00
5. DEMOLITION / EROSION CONTROL PLAN STA: 10+00 to 20+00
6. DEMOLITION / EROSION CONTROL PLAN STA: 20+00 to 29+00
7. PLAN AND PROFILE STA: 0+00 to 4+50
8. PLAN AND PROFILE STA: 4+50 to 7+50
9. PLAN AND PROFILE STA: 7+50 to 11+14
10. PLAN AND PROFILE STA: 11+14 to 16+10
11. PLAN AND PROFILE STA: 16+10 to 19+00
12. PLAN AND PROFILE STA: 19+00 to 24+50
13. PLAN AND PROFILE STA: 24+50 to 29+00
14. STANDARD DETAILS
15. EROSION CONTROL DETAILS



PLANS PREPARED BY:

**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
625 Forest Edge Drive  
TEL 847.478.9700

SIGNED: BRIAN J. WESOLOWSKI P.E.  
DATE: \_\_\_\_\_  
ILLINOIS LICENSE NO.: 062-066656  
EXPIRATION DATE: NOVEMBER 30, 2021

**NOT FOR CONSTRUCTION**

**TITLE SHEET**  
LINDEN AVENUE SANITARY SEWER REHABILITATION  
LAKE COUNTY PUBLIC WORKS DEPARTMENT  
LAKE COUNTY, ILLINOIS

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION	SHEET NUMBER
1				1				1

**GENERAL NOTES**

1. ALL CONSTRUCTION SHALL BE PERFORMED ACCORDING TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" LATEST EDITION, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" LATEST EDITION, THE DETAILS IN THESE PLANS, THE CONTRACT DOCUMENTS, ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION, THE IEPA AND ORDINANCES OF AUTHORITIES HAVING JURISDICTION AND ALL ADDENDA THERETO.
2. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
3. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT HEREOF.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE PRIOR TO ORDERING MATERIALS. IN ADDITION, THE CONTRACTOR MUST VERIFY THE LINE AND GRADES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSION OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT THEIR OWN RISK AND EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ANY COSTS INCURRED.
5. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
7. IF DURING CONSTRUCTION THE CONTRACTOR ENCOUNTERS OR OTHERWISE BECOMES AWARE OF ANY SEWERS OR UNDERDRAINS OTHER THAN THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL INFORM THE ENGINEER, WHO SHALL DIRECT THE WORK NECESSARY TO MAINTAIN OR REPLACE THE FACILITIES IN SERVICE AND TO PROTECT THEM FROM DAMAGE DURING CONSTRUCTION IF MAINTAINED. EXISTING FACILITIES TO BE MAINTAINED THAT ARE DAMAGED BECAUSE OF NON-COMPLIANCE WITH THIS PROVISION SHALL BE REPLACED AT THE CONTRACTOR'S OWN EXPENSE.
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY TOILET FACILITIES AND HAND SANITIZING STATIONS FOR THE USE OF ALL THE CONTRACTORS PERSONNEL EMPLOYED ON THE WORK SITE. THE FACILITIES SHALL BE MAINTAINED IN PROPER SANITARY CONDITION THROUGHOUT THE PROJECT. THE LOCATION OF THE TEMPORARY FACILITIES SHALL BE APPROVED BY THE ENGINEER.
9. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE NPDES PERMIT AND SWPPP MANUAL. IF NO NPDES PERMIT OR SWPPP MANUAL IS NEEDED FOR THE PROJECT THE CONTRACTOR SHALL PERFORM SOIL EROSION SEDIMENT CONTROL BEST PRACTICES OR AS DIRECTED BY THE OWNER TO PREVENT ILLICIT DISCHARGES FROM THE SITE.

**PROJECT SPECIFIC NOTES**

1. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF 12 MONTHS FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE WORK BY THE OWNER AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE.
2. ALL CONSTRUCTION WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY AS WELL AS THE STANDARD SPECIFICATIONS.
3. CONTRACTOR SHALL NOTIFY THE LAKE COUNTY DEPARTMENT OF PUBLIC WORKS (847-377-7145), VILLAGE OF THIRD LAKE (847-223-8422), AVON TOWNSHIP HIGHWAY DEPARTMENT (847-546-7480), AND THE PROJECT ENGINEER (847-478-9700) AT LEAST 72 HOURS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.
4. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, THE MUNICIPALITY AND THEIR AGENTS, FROM ALL LIABILITY INVOLVED IN CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK ON THIS PROJECT.
5. THE CONTRACTOR MUST CARRY INSURANCE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. ALL OFFICIALS, EMPLOYEES AND AGENTS OF GEWALT HAMILTON ASSOCIATES, AVON TOWNSHIP HIGHWAY DEPARTMENT, VILLAGE OF THIRD LAKE, AND LAKE COUNTY FOREST PRESERVE DISTRICT MUST BE LISTED AS ADDITIONAL INSURED.
6. ALL ELEVATIONS ARE ON NAVD 88 VERTICAL DATUM.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL TO ADEQUATELY INFORM AND PROTECT THE PUBLIC OF ALL CONSTRUCTION OPERATIONS.
8. STOCKPILING MATERIAL WITHIN THE 100 YEAR FLOOD PLAIN AND OR THE FLOODWAY IS STRICTLY PROHIBITED. STOCKPILING MATERIAL WITHIN LOTPD PROPERTY IS STRICTLY PROHIBITED WITHOUT PRIOR APPROVAL.
9. ALL STONE USED ON THE PROJECT SHALL BE CRUSHED UNLESS SPECIFICALLY NOTED OTHERWISE.
10. ALL CONCRETE SHALL HAVE A LIGHT BROOM FINISH APPLIED WITHIN 1 HOUR OF FINAL STRIKING.
11. ALL CONCRETE SHALL HAVE A WHITE, DOT TYPE 3 CURING COMPOUND APPLIED TO THE SURFACE WITHIN 1 HOUR OF FINAL STRIKING AT THE MANUFACTURER RECOMMENDED APPLICATION RATE.
12. ALL PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY (ASTM D-1557). ALL SUBGRADE IN LAWN AREAS SHALL BE COMPACTED TO 90% MODIFIED PROCTOR DENSITY (ASTM D-1557). ALL TOPSOIL AND SUBGRADE 6" BELOW TOPSOIL SHALL BE COMPACTED TO 80% STANDARD PROCTOR DENSITY (ASTM D-698)
13. SPREAD SCREENED TOPSOIL ON ALL DISTURBED AREAS AND PROPOSED GREEN AREAS. TOPSOIL SHALL COMPLY WITH REQUIREMENTS OF ARTICLE 1081.05.

**UTILITY NOTES**

1. UNDERGROUND WORK SHALL INCLUDE TRENCHING, DISPOSAL OF EXCESS MATERIAL, DEMATERING, INSTALLATION OF PIPE, CASINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS, FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK. MAY NOT BE SPECIFIED BUT SHALL BE CONSIDERED AS INCLUDED TO THE COST OF THE CONTRACT. ALL SEWERS SHALL BE INSTALLED USING A LASER AND BEGN AT THE DOWNSSTREAM END.
2. MACHINE CORE ALL CONNECTIONS TO EXISTING STRUCTURES USING A CORE DRILL. HAMMERING OR SAWING OF STRUCTURES WILL NOT BE ALLOWED.
3. ALL CONNECTIONS TO EXISTING OR DISSIMILAR STORM/SANITARY LINES SHALL BE DONE WITH STAINLESS STEEL NON-SHEAR COUPLINGS.
4. ALL CONNECTIONS TO EXISTING SANITARY MANHOLES SHALL BE INSTALLED WITH A NEOPRENE BOOT SECURED WITH DOUBLE STAINLESS STEEL STRAPS MEETING THE REQUIREMENTS OF ASTM C-923.

SANITARY SEWERS	MODEL/SPECIFICATION	STANDARDS/REQUIREMENTS
PIPE MATERIAL	PVC SDR 26 PVC C900 DR18	PIPE ASTM D-3034 JOINT ASTM D-3199 GASKET ASTM F-477
ADJUSTMENT RINGS	HDPE	2" MINIMUM, 8" MAXIMUM
PIPE BEDDING MATERIAL	CA/7CA-11	
TRENCH BACKFILL	CA/7CA-11	
CHIMNEY SEAL	CRETEX CLASSIC	ASTM C-923
MANHOLE CONNECTIONS	ASTM C-923	ASTM C-923
JOINT WRAP	MAC WRAP	ASTM C-877 TYPE II
FRAME & GRATE/LID	PAVED AREAS GRASS AREAS	CLOSED LID: N/A CLOSED LID: N/A

**TESTING REQUIREMENTS**  
 ALL SANITARY SEWER SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS. ALL RIGID SANITARY SEWER PIPE SHALL BE TESTED BY EITHER METHOD A B OR C AS OUTLINED IN SECTION 31-112. ALL FLEXIBLE SANITARY SEWER PIPE SHALL BE TESTED BY METHOD D AND EITHER METHOD A B OR C. ALL SANITARY SEWER MUST BE TESTED BY METHOD E. THE CONTRACTOR SHALL PROVIDE THE ENGINEER A COPY OF THE VIDEO ON A DIGITAL VIDEO DISC. THE VIDEO MUST BE IN COLOR AND PROCEED NO FASTER THAN 1 FOOT PER SECOND.



**GEWALT HAMILTON ASSOCIATES, INC.**  
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**GENERAL NOTES, 1 OF 2**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008-DT1.dwg	SHEET NUMBER:
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DATE: 2-24-22	5600.008
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	OF 15 SHEETS
	<b>2</b>





**STORMWATER MANAGEMENT COMMISSION**

**TYPICAL CONSTRUCTION SEQUENCING**

- 1.) Installation of soil erosion and sediment control SE/SC measures
    - a.) Selective vegetation removal for silt fence installation
    - b.) Silt fence installation
    - c.) Construction fencing around areas not to be disturbed
    - d.) Stabilized construction entrance
  - 2.) Tree removal where necessary (clear & grub)
  - 3.) Construct sediment trapping devices (sediment traps, basins...)
  - 4.) Construct detention facilities and outlet control structure with restrictor & temporary perforated riser
  - 5.) Strip topsoil, stockpile topsoil and grade site
  - 6.) Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
  - 7.) Install storm sewer, sanitary sewer, water and associated inlet & outlet protection
  - 8.) Permanently stabilize detention basins with seed and erosion control blanket
  - 9.) Temporarily stabilize all areas including lots that have reached temporary grade
  - 10.) Install roadways
  - 11.) Permanently stabilize all outlet areas
  - 12.) Install structures and grade individual lots
  - 13.) Permanently stabilize lots
  - 14.) Remove all temporary SE/SC measures after the site is stabilized with vegetation
- \* Soil erosion and sediment control maintenance must occur every two weeks and after every ½ or greater rainfall event

**LAKE COUNTY STORMWATER MANAGEMENT COMMISSION  
SOIL EROSION AND SEDIMENT CONTROL CONSTRUCTION NOTES**

- A. SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- B. FOR THOSE DEVELOPMENTS THAT REQUIRE A DESIGNATED EROSION CONTROL INSPECTOR (DEC), INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
  - UPON COMPLETION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
  - AFTER EVERY SEVEN (7) CALENDAR DAYS OR STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- C. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- D. A STABILIZED MAT OF CRUSHED STONE MEETING IDOT GRADATION CA-1 UNDERLAIN WITH FILTER FABRIC AND IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL, OR OTHER APPROPRIATE MEASURE(S) AS APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- E. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN.
- F. DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE OR REDISTURBANCE.
- G. ALL STOCKPILES SHALL HAVE APPROPRIATE MEASURES TO PREVENT EROSION. STOCKPILES SHALL NOT BE PLACED IN FLOOD PRONE AREAS OR WETLANDS AND DESIGNATED BUFFERS.
- H. SLOPES STEEPER THAN 3H:1V SHALL BE STABILIZED WITH APPROPRIATE MEASURES AS APPROVED BY THE ENFORCEMENT OFFICER.
- I. APPROPRIATE EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN THE NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- J. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- K. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DISCHARGES SHALL BE ROUTED THROUGH AN APPROVED ANIONIC POLYMER DEWATERING SYSTEM OR A SIMILAR MEASURE AS APPROVED BY THE ENFORCEMENT OFFICER. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE ENFORCEMENT OFFICER, OR APPROVED REPRESENTATIVE, MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- L. IF INSTALLED SOIL EROSION AND SEDIMENT CONTROL MEASURES DO NOT MINIMIZE SEDIMENT LEAVING THE DEVELOPMENT SITE, ADDITIONAL MEASURES SUCH AS ANIONIC POLYMERS OR FILTRATION SYSTEMS MAY BE REQUIRED BY THE ENFORCEMENT OFFICER.
- M. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- N. ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- O. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, ENFORCEMENT OFFICER, OR OTHER GOVERNING AGENCY.

**EROSION CONTROL NOTES**

1. AT A MINIMUM, THE CONTRACTOR SHALL INSTALL AND MAINTAIN SOIL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE LATEST EDITION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S URBAN MANUAL.
2. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS.
3. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY ROAD OF MATERIAL THAT IS FROM THE PROJECT. THIS WILL BE DONE AT THE CLOSE OF EACH DAY OF WORK OR MORE FREQUENTLY AS FIELD CONDITIONS WARRANT.
4. ALL STORM WATER STRUCTURES WITH OPEN LIDS SHALL BE PROTECTED WITH INLET FILTER BASKETS. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED AS NEEDED, AND BASKETS SHALL BE REPAIRED OR REPLACED AS NEEDED.
5. AFTER ACHIEVING PERMANENT VEGETATION, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED, AND THE DRAINAGE STRUCTURES SHALL BE CLEANED.
6. THE CONTRACTOR SHALL KEEP A WATER SOURCE AT THEIR DISPOSAL FOR THE PURPOSE OF WATERING DOWN SOIL ON SITE AND ADJACENT ROADWAYS WHICH OTHERWISE MAY BECOME AIRBORNE.
7. THE CONTRACTOR SHALL STABILIZE ALL IDLE, DISTURBED AREAS WITHIN SEVEN DAYS OF CESSATION OF THE CONSTRUCTION ACTIVITIES IN THAT AREA.
8. THE CONTRACTOR IS EXPRESSLY ADVISED NOT TO DISTURB AREAS WHICH ARE OUTSIDE THOSE NECESSARY TO PROVIDE THE IMPROVEMENTS AS CALLED FOR IN THE PLANS.
9. ALL EROSION CONTROL MEASURES SHALL BE REPLACED IF DAMAGED OR MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
10. ALL BYPASS CHANNELS, MUST BE CONSTRUCTED SO THAT CHANNEL FLOWS WILL NOT CAUSE EROSION OF EXCAVATED MATERIAL IN EACH CASE A SEDIMENTATION BASIN MUST BE CONSTRUCTED SO AS TO ALLOW THE SEDIMENT TO SETTLE PRIOR TO THE DOWNSTREAM OUTLET OF THE PROJECT AREA.
11. PUMPS MAY BE USED AS BYPASS DEVICES, BUT IN NO CASE WILL THE WATER BE DIVERTED OUTSIDE THE PROJECT LIMIT. ALL PUMPED WATER SHALL BE FREE OF SILT. PUMPING MAY REQUIRE THE USE OF A SEDIMENT CONTAINMENT FILTER BAG AND OTHER SUPPLEMENTAL SEDIMENT CONTROL MEASURES.
12. CONCRETE WASHOUT FACILITIES SHALL BE MADE AVAILABLE IF NEEDED, AND PROPERLY MAINTAINED THROUGHOUT THE PROJECT.
13. PROPERLY MANAGE ALL MATERIAL STORAGE AREAS, PORTABLE TOILETS, AND EQUIPMENT FUELING, CLEANING, AND MAINTENANCE AREAS TO ENSURE THESE AREAS ARE FREE OF SPILLS, LEAKS, OR OTHER POTENTIAL POLLUTANTS.
14. WASTE, CONSTRUCTION DEBRIS, AND BUILDING MATERIALS SHALL BE COLLECTED AND PLACED IN APPROVED RECEPTACLES.

**LAKE COUNTY PUBLIC WORKS NOTES FOR SANITARY SEWER IMPROVEMENTS**

- GENERAL**
1. ALL SEWER AND WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND ORDINANCES OF LAKE COUNTY PUBLIC WORKS (LCPW), ILLINOIS RECOMMENDED STANDARDS FOR SEWAGE WORKS, LATEST EDITION, AND THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN ILLINOIS, LATEST EDITION, AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS, LATEST EDITION.
  2. CONTRACTOR SHALL NOTIFY LCPW AT LEAST TWO (2) WORKING DAYS (48 HOURS) PRIOR TO THE START OF WATER AND/OR SEWER CONSTRUCTION AT #47-377-7145.
  3. LCPW SHALL BE GRANTED ACCESS TO ALL PARTS OF THE CONSTRUCTION SITE AND SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND/OR REJECT ALL WATER MAIN, WATER SERVICE, SANITARY SEWER AND SANITARY SERVICE IMPROVEMENTS.
  4. ALL SANITARY SEWER AND WATER MAIN SHALL BE INSPECTED AND APPROVED BY LCPW PRIOR TO BACKFILL.



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**GENERAL NOTES, 2 OF 2**

**LINDEN AVENUE SANITARY SEWER REHABILITATION**

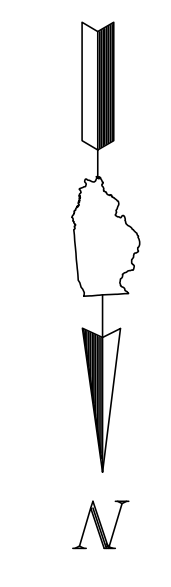
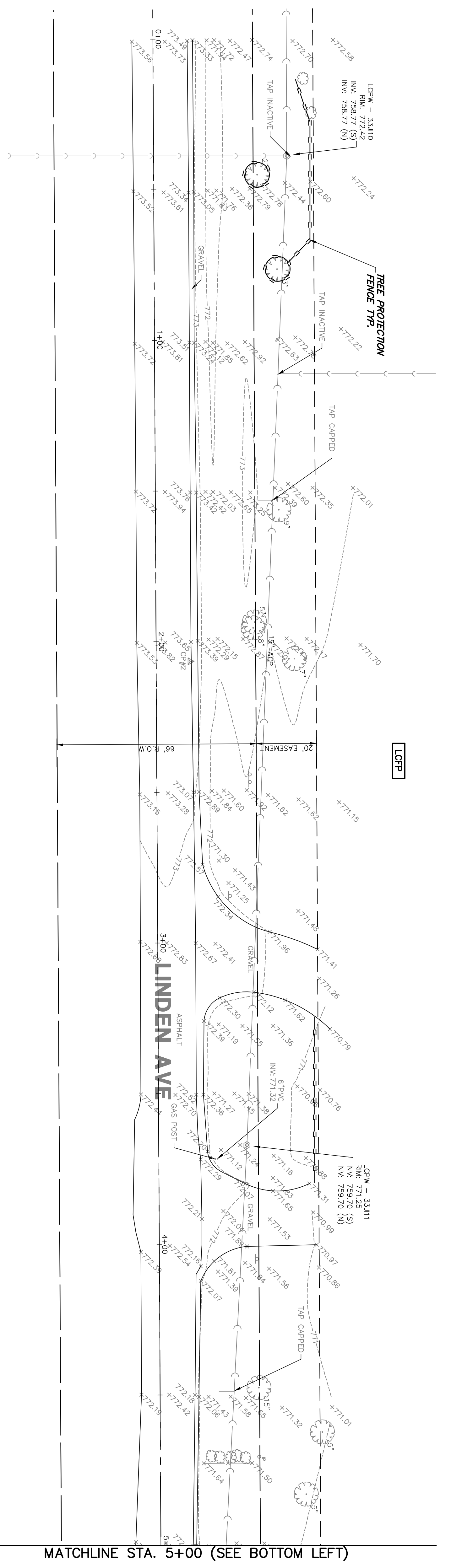
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**

**LAKE COUNTY, ILLINOIS**

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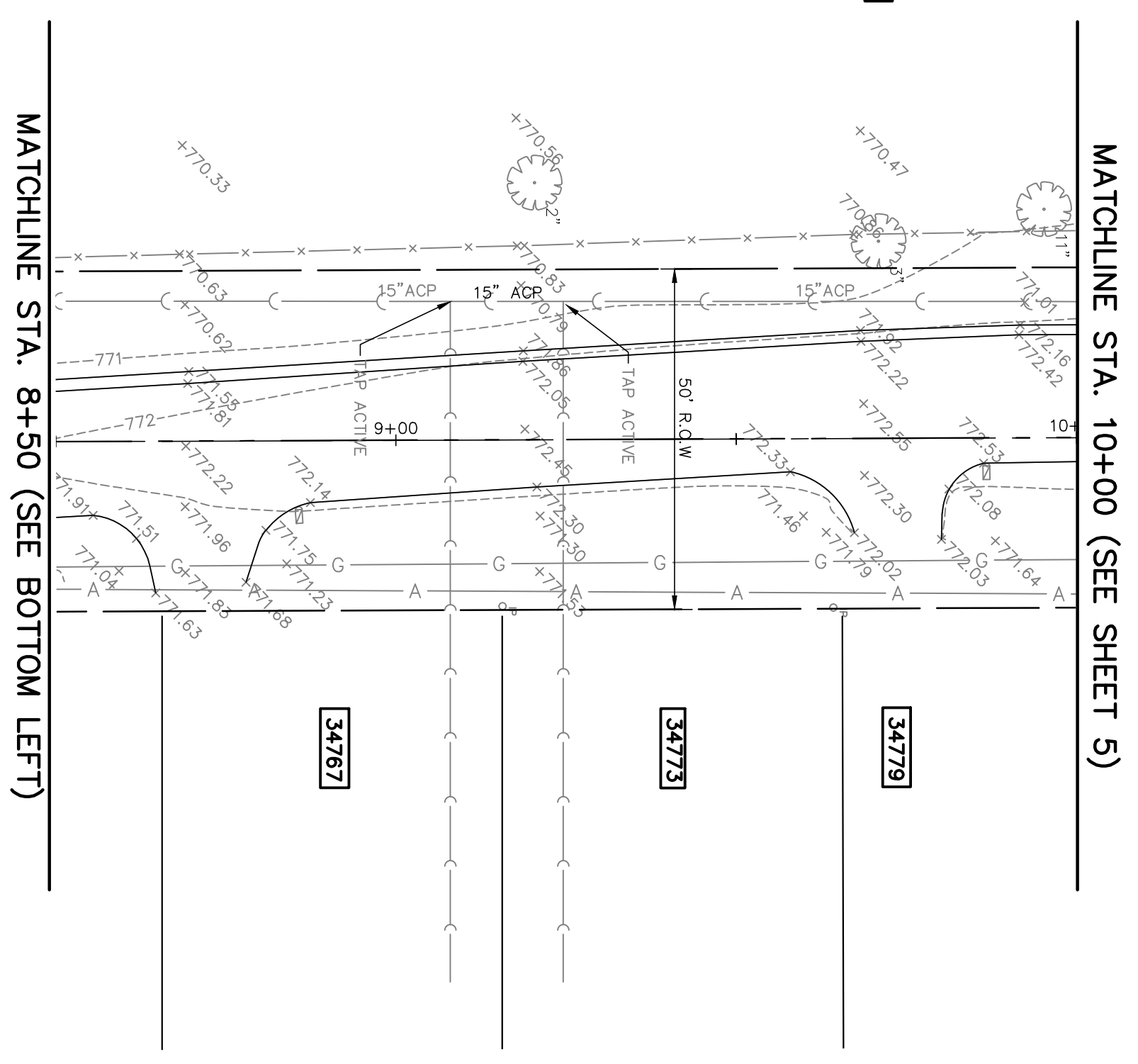
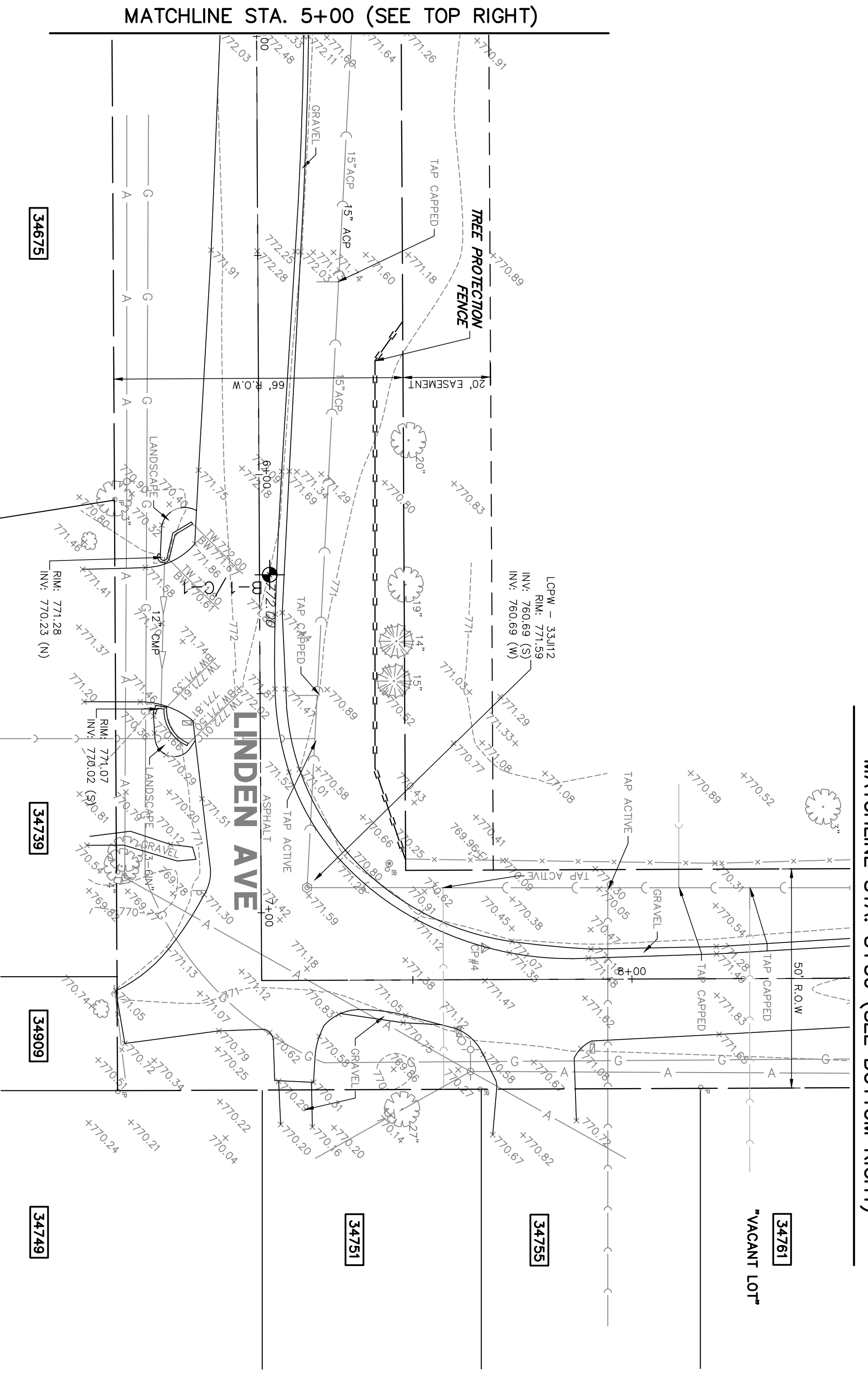
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DATE: 2-24-22	5600.008
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**DEMOLITION/EROSION LEGEND**

- AGGREGATE REMOVAL (AS REQUIRED)
- DRIVEWAY PAVEMENT REMOVAL
- PAVEMENT REMOVAL FULL DEPTH
- CLEARING AND GRUBBING
- WOOD/PLASTIC MATTING
- STRUCTURE REMOVAL
- UTILITY TO BE REMOVED
- TREE ROOT PRUNING
- TREE/SHRUB REMOVAL
- SILT FENCE INSTALLATION
- TEMPORARY TREE FENCE
- SIGN REMOVAL
- PAVEMENT SAWCUT
- CONSTRUCTION FENCE
- ROLLED EROSION CONTROL PRODUCT (COIR ROLL)
- STRUCTURE TO BE REMOVED



**LINDEN AVENUE**

**LINDEN AVENUE**

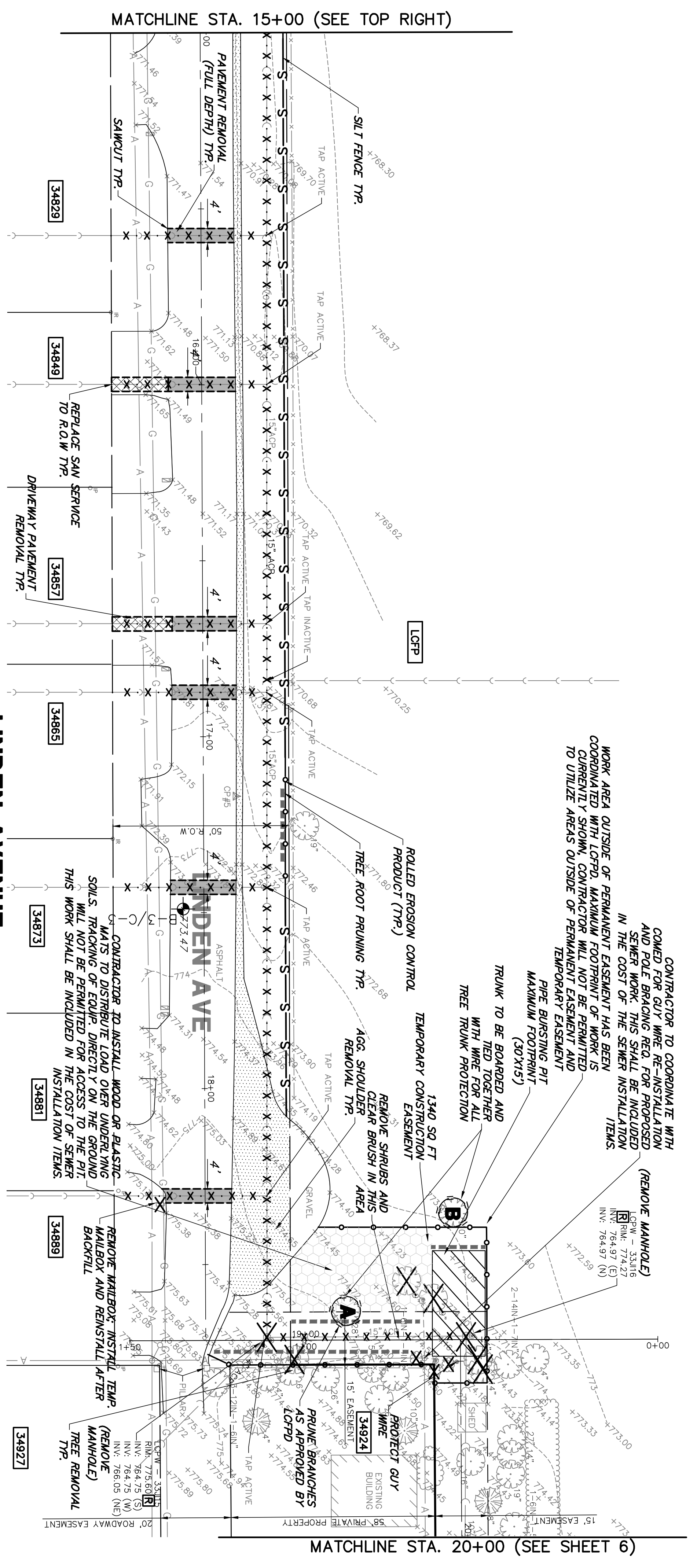
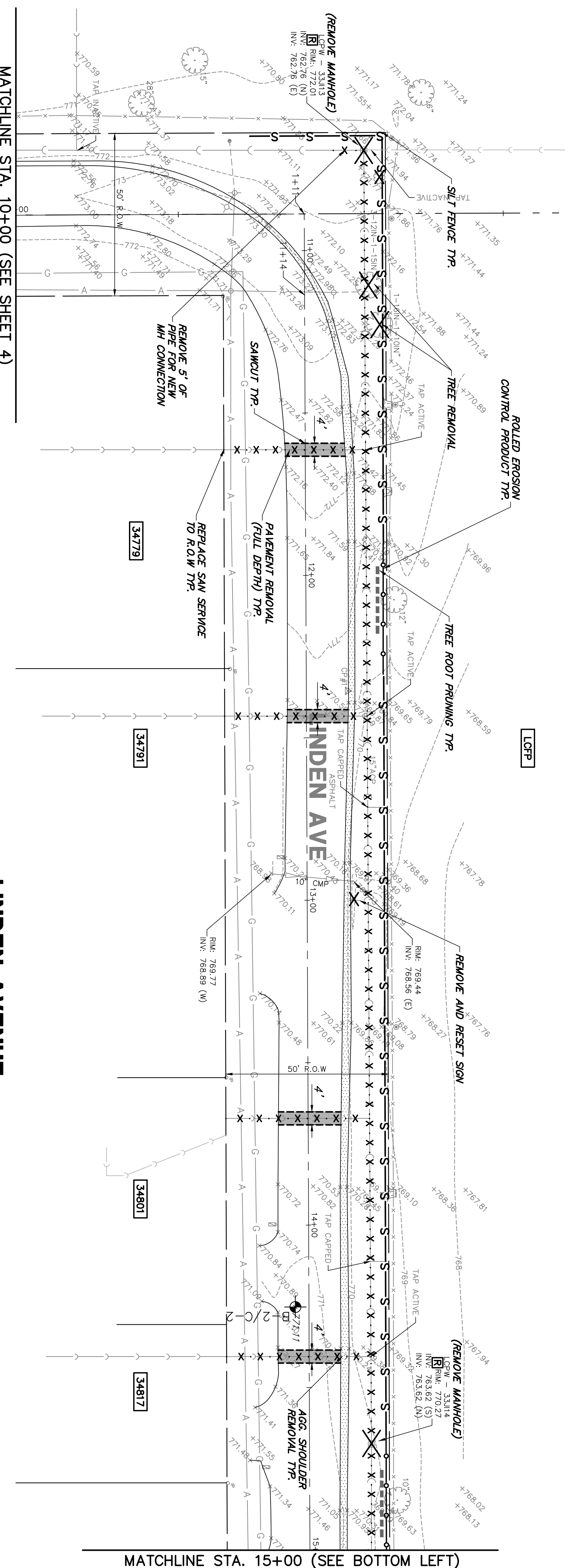
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**DEMOLITION PLAN (STA. 0+00 TO 10+00)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008_PR4.dwg	SHEET NUMBER: <b>4</b>
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DATE: 2-24-22	



**DEMOLITION/EROSION LEGEND**

- AGGREGATE REMOVAL (AS REQUIRED)
- DRIVEWAY PAVEMENT REMOVAL
- PAVEMENT REMOVAL FULL DEPTH
- CLEARING AND GRUBBING
- WOOD/PLASTIC MATTING
- STRUCTURE REMOVAL
- UTILITY TO BE REMOVED
- TREE ROOT PRUNING
- TREE/SHRUB REMOVAL
- SILT FENCE INSTALLATION
- TEMPORARY TREE FENCE
- SIGN REMOVAL
- PAVEMENT SAWCUT
- CONSTRUCTION FENCE
- ROLLED EROSION CONTROL PRODUCT (COIR ROLL)
- STRUCTURE TO BE REMOVED

TREE REMOVAL INVENTORY LIST	
TREE NUMBER	DIAMETER (IN)
1	9" (LCFPD)
2	9" (LCFPD)
3	14"
4	14"
5	14"
TREE PROTECTION DETAIL	
TREE NUMBER	DIAMETER (IN)
A	28-INCH BUR OAK
B	14-INCH BOX ELDER

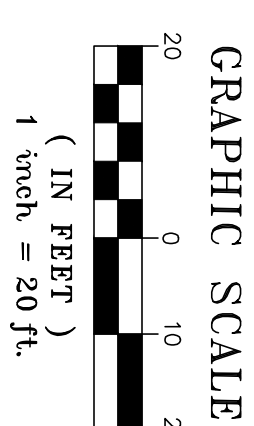
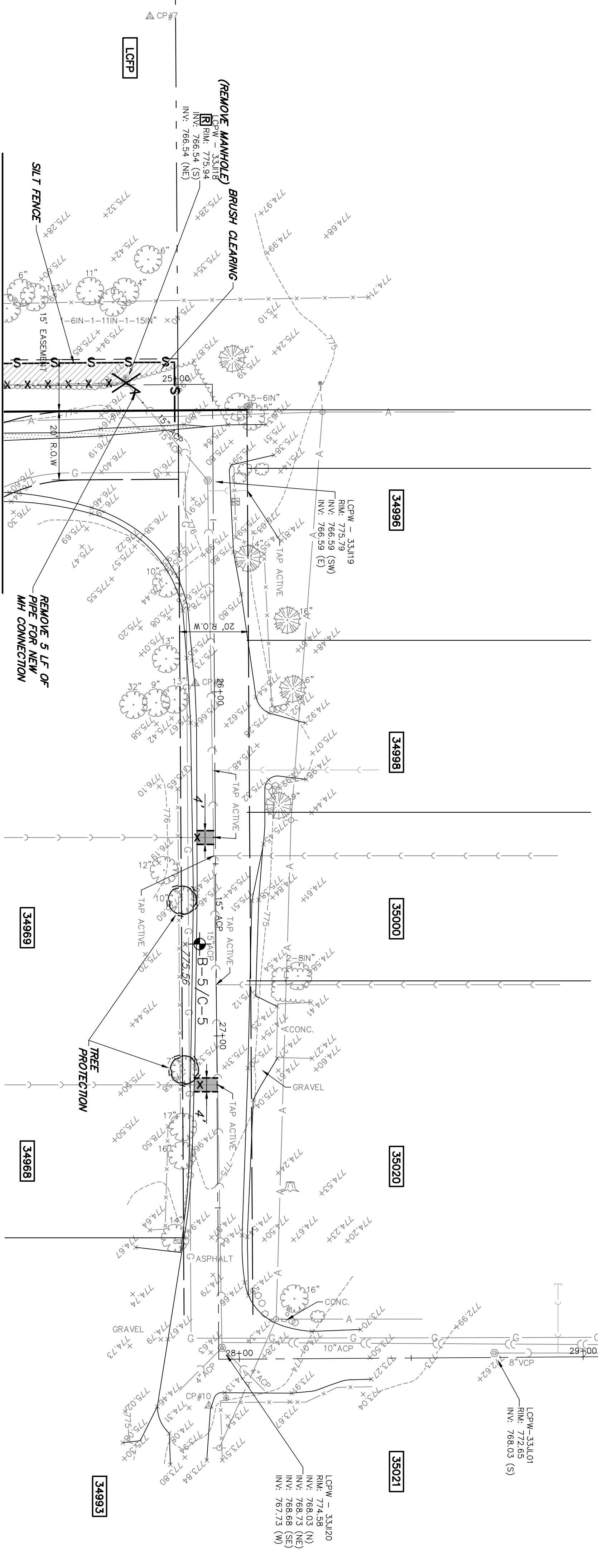
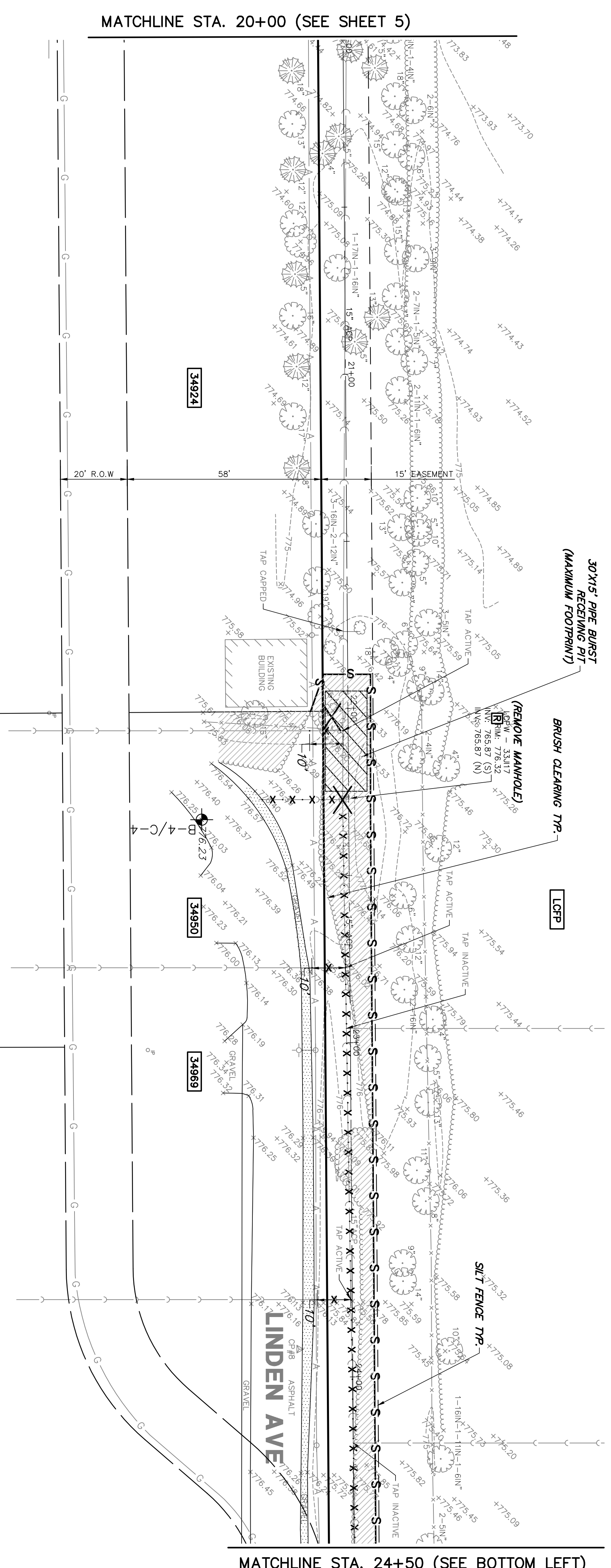
**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
 625 Forest Edge Drive  
 Vernon Hills, IL 60061  
 TEL 847.478.9700 FAX 847.478.9701

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**DEMOLITION PLAN (STA: 10+00 TO 20+00)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
 LAKE COUNTY PUBLIC WORKS DEPARTMENT  
 LAKE COUNTY, ILLINOIS

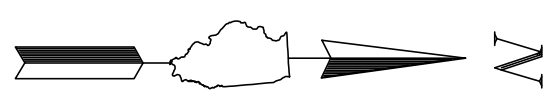
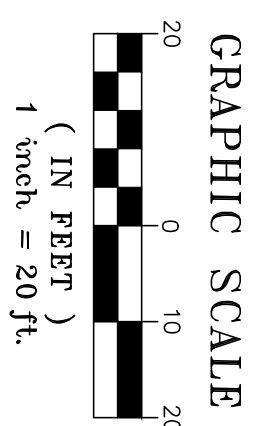
NO.	BY	DATE	REVISION

FILE: 5600.008_PR4.DWG	SHEET NUMBER: <b>5</b>
DRAWN BY: WR	GHA PROJECT #
DATE: 2-24-22	5600.008
CHECKED BY: BLW	SCALE: 1"=20'
DATE: 2-24-22	OF 15 SHEETS



**DEMOLITION/EROSION LEGEND**

- AGGREGATE REMOVAL (AS REQUIRED)
- DRIVEWAY PAVEMENT REMOVAL
- PAVEMENT REMOVAL FULL DEPTH
- CLEARING AND GRUBBING
- WOOD/PLASTIC MATTING STRUCTURE REMOVAL
- UTILITY TO BE REMOVED
- TREE ROOT PRUNING
- TREE/SHRUB REMOVAL
- SILT FENCE INSTALLATION
- TEMPORARY TREE FENCE
- SIGN REMOVAL
- PAVEMENT SAWCUT
- CONSTRUCTION FENCE
- ROLLED EROSION CONTROL PRODUCT (COIR ROLL) STRUCTURE TO BE REMOVED



MATCHLINE STA. 24+50 (SEE TOP RIGHT)

MATCHLINE STA. 20+00 (SEE SHEET 5)

**LINDEN AVENUE**

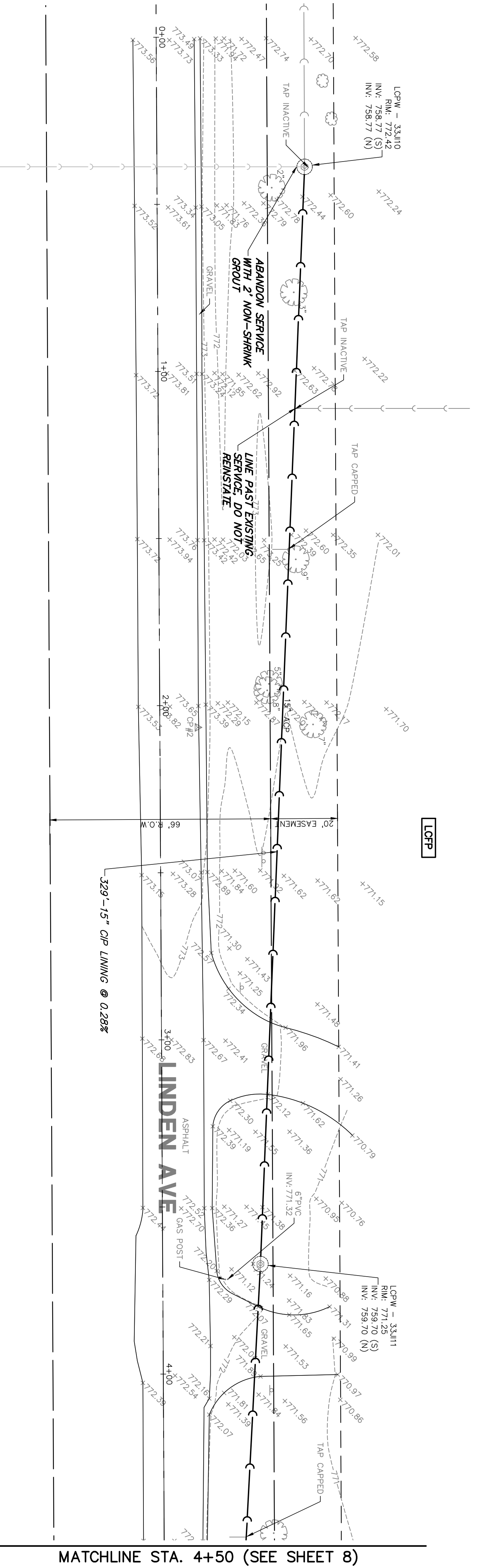
**GHAM** GEWALT HAMILTON ASSOCIATES, INC.  
625 Forest Edge Drive  
Vernon Hills, IL, 60061  
TEL 847.478.9700 FAX 847.478.9701

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**DEMOLITION PLAN (STA. 20+00 TO 29+00)**  
LINDEN AVENUE SANITARY SEWER REHABILITATION  
LAKE COUNTY PUBLIC WORKS DEPARTMENT  
LAKE COUNTY, ILLINOIS

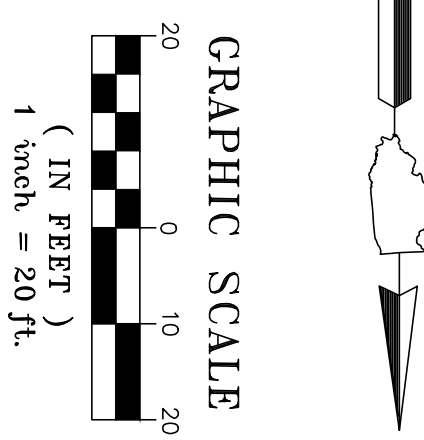
NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008.PR4.dwg	SHEET NUMBER: <b>6</b>
DRAWN BY: WR	GHA PROJECT # 5600.008
DATE: 2-24-22	SCALE: 1"=20'
CHECKED BY: BAW	OF 15 SHEETS
DATE: 2-24-22	



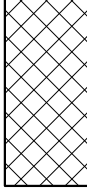

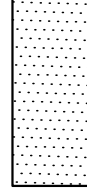
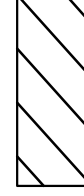
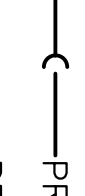


MATCHLINE STA. 4+50 (SEE SHEET 8)

LCPM



N

**PROPOSED LEGEND**

-  HMA DRIVEWAY PAVEMENT
-  CLASS D PATCH
-  AGGREGATE SHOULDER (AS REQUIRED)
-  PIPE BURST DRILL PIT
-  PROPOSED SANITARY SEWER
-  PROPOSED SANITARY SERVICE
-  PROPOSED CLEANOUT

**LINDEN AVENUE**



H. 1" = 20ft. V. 1" = 5ft.

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION
780				780				780			
775				775				775			
770				770				770			
765				765				765			
760				760				760			
755				755				755			
750				750				750			
745				745				745			

15" ACP SANITARY  
329'-15" CIP LINING @ 0.28%

LCPM - 33410  
RIM: 772.42  
INV: 758.77 (S)  
INV: 758.77 (N)

LCPM - 33411  
RIM: 771.25  
INV: 759.70 (S)  
INV: 759.70 (N)

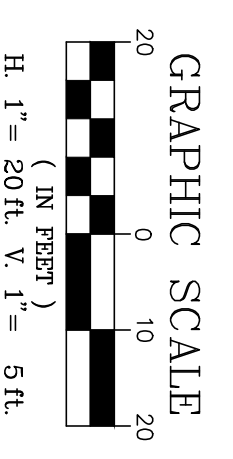
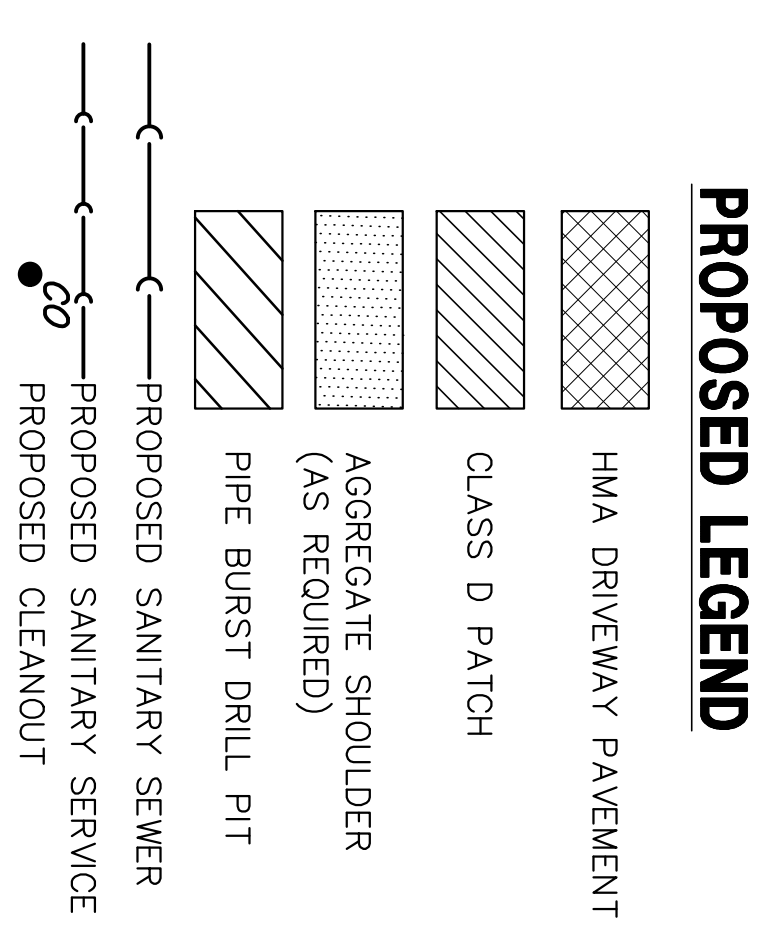
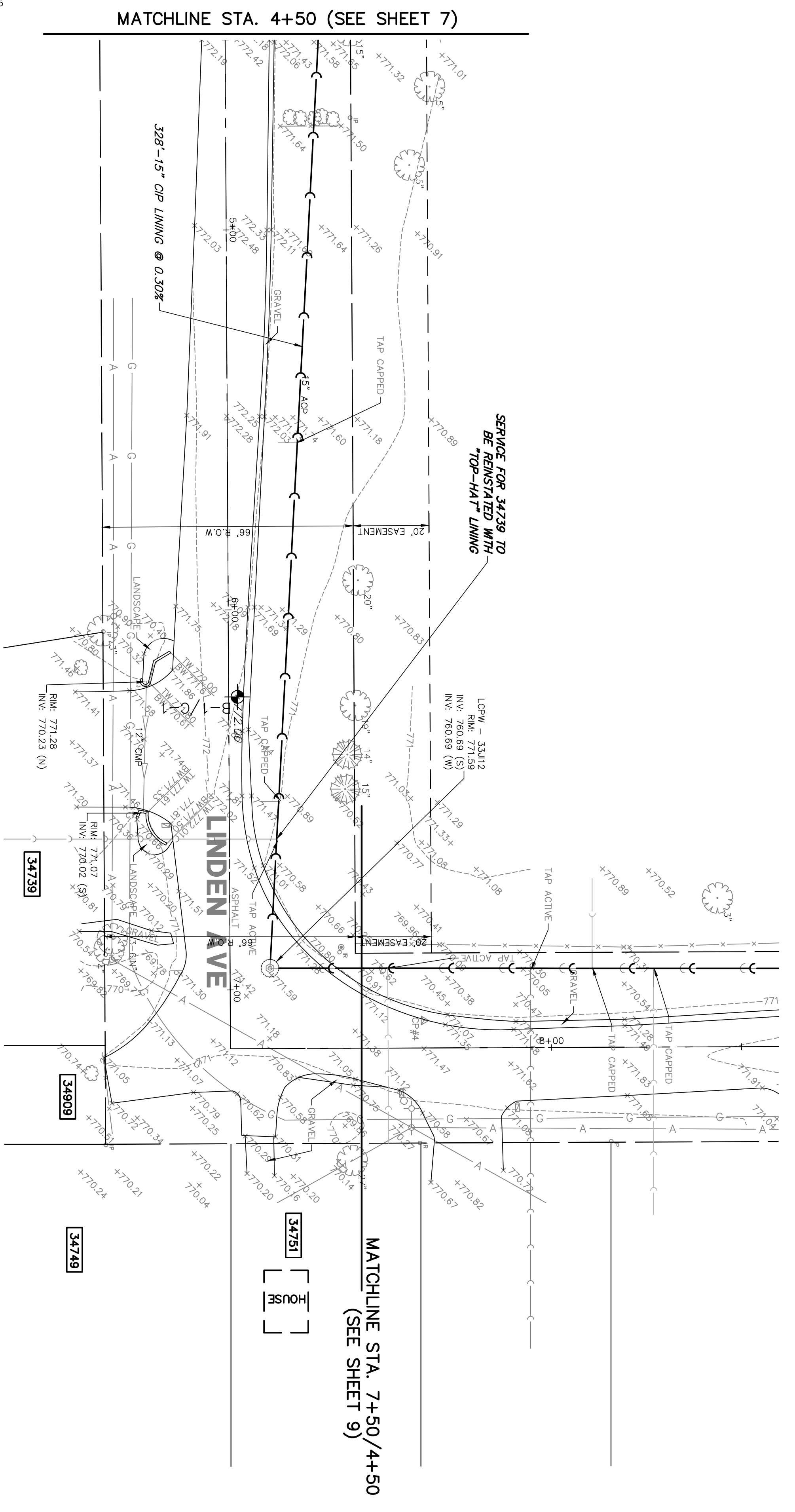
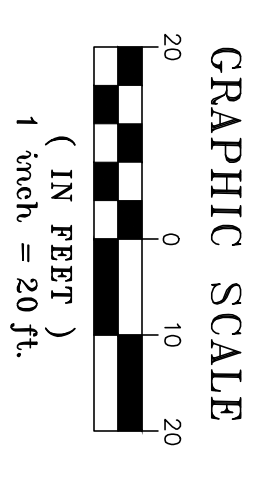
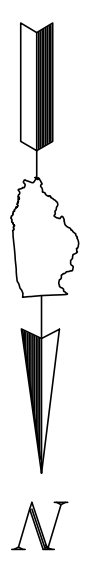
**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
625 Forest Edge Drive ■ Vernon Hills, IL 60061  
TEL 847.478.9700 ■ FAX 847.478.9701

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**SITE PLAN (STA: 0+00 TO 4+50)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008\_PR4.dwg  
DRAWN BY: WR  
DATE: 2-24-22  
GHA PROJECT # 5600.008  
CHECKED BY: BLW  
DATE: 2-24-22  
SCALE: AS NOTED  
SHEET NUMBER: **7**  
OF 15 SHEETS



LINDEN AVENUE

780	772.34	4+50	772.40	5+00	772.27	5+50	772.14	6+00	771.88	6+50	771.39	7+00	780
775													775
770													770
765													765
760													760
755													755
750													750
745													745

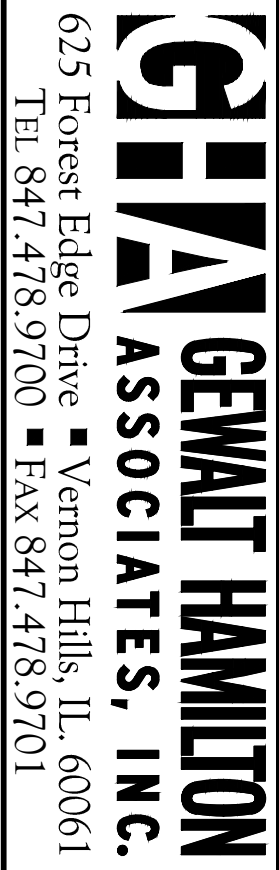
**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
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**SITE PLAN (STA: 4+50 TO 7+50)**  
 LINDEN AVENUE SANITARY SEWER REHABILITATION  
 LAKE COUNTY PUBLIC WORKS DEPARTMENT  
 LAKE COUNTY, ILLINOIS

NO.	BY	DATE	REVISION

FILE: 5600.008_PR4.dwg	SHEET NUMBER:
DRAWN BY: WR	GHA PROJECT #
DATE: 2-24-22	5600.008
CHECKED BY: BLW	SCALE:
DATE: 2-24-22	1" = 20'
	OF 15 SHEETS



625 Forest Edge Drive  
Vernon Hills, IL 60061  
TEL 847.478.9700 FAX 847.478.9701

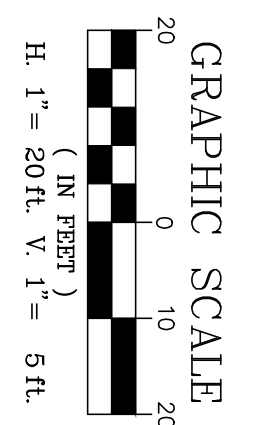
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**SITE PLAN (STA: 7+50 TO 11+14)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

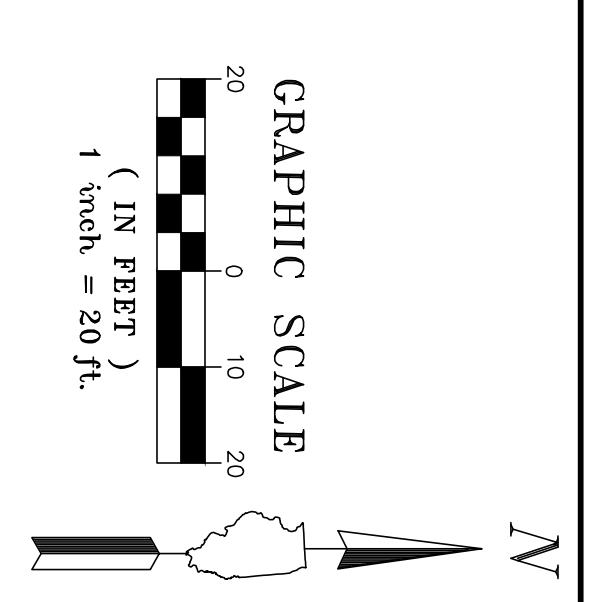
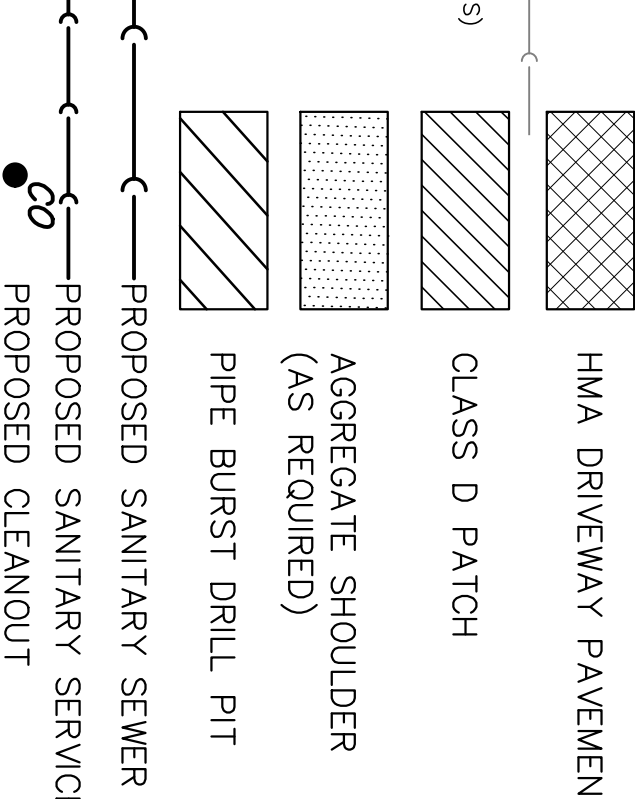
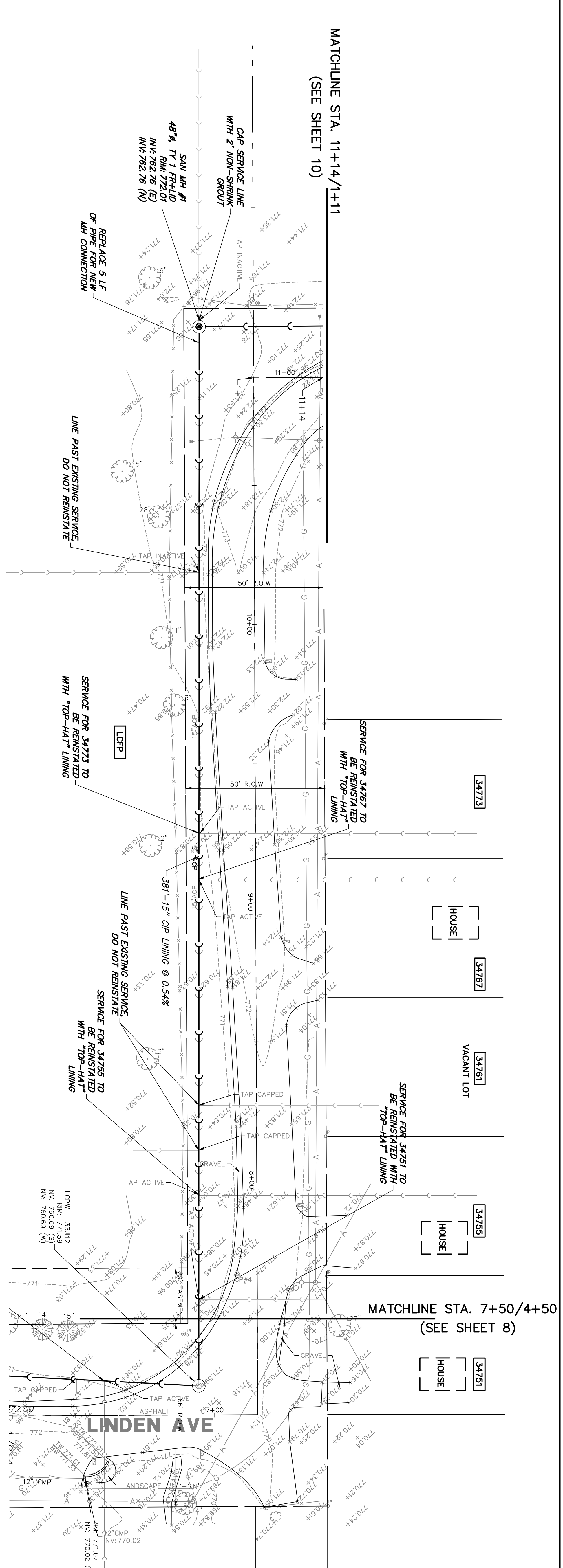
NO.	BY	DATE	REVISION

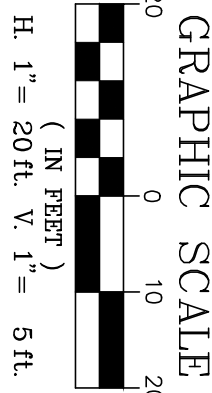
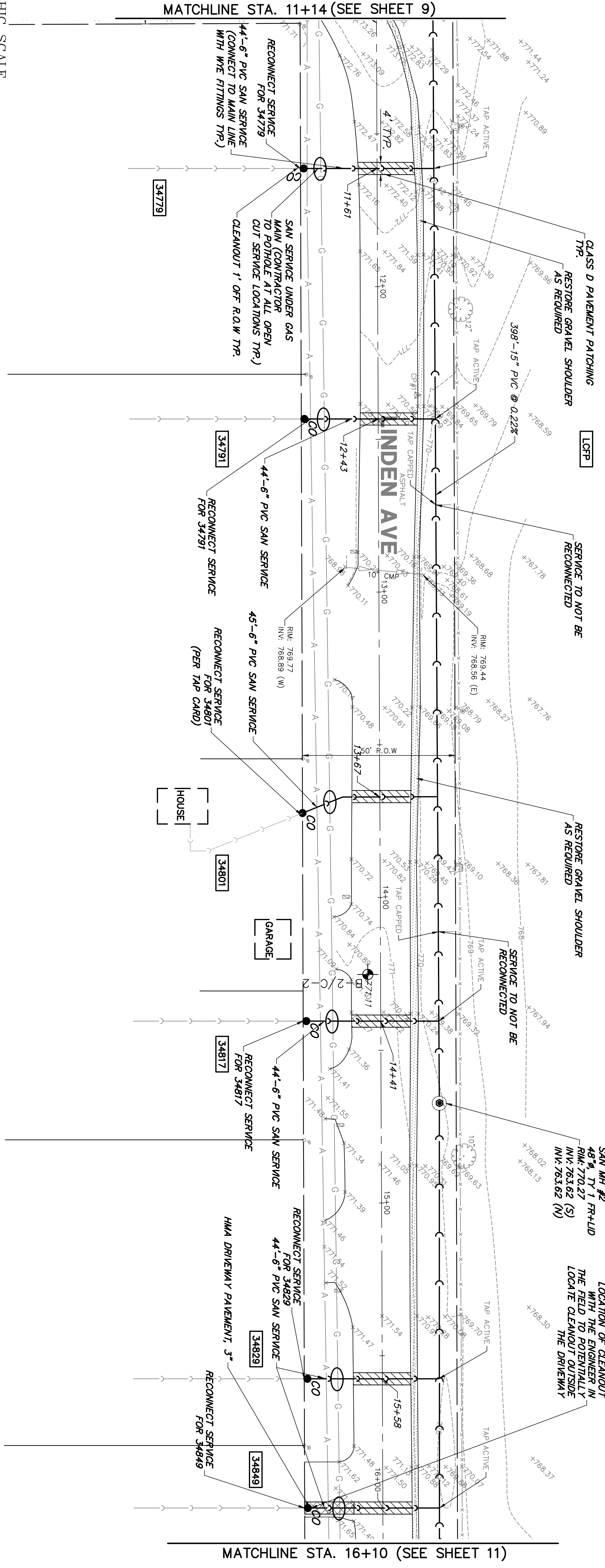
FILE	DRAWN BY	DATE	CHECKED BY	DATE	SCALE	SHEET NUMBER
5600\008.PR4.dwg	WR	2-24-22	BLW	2-24-22	1"=20'	9 OF 15 SHEETS

STATION	GROUND ELEVATION (E)	GROUND ELEVATION (N)	PROPOSED SANITARY SEWER ELEVATION (S)	PROPOSED SANITARY SEWER ELEVATION (N)
780				
775				
770				
765				
760				
755				
750				
745				



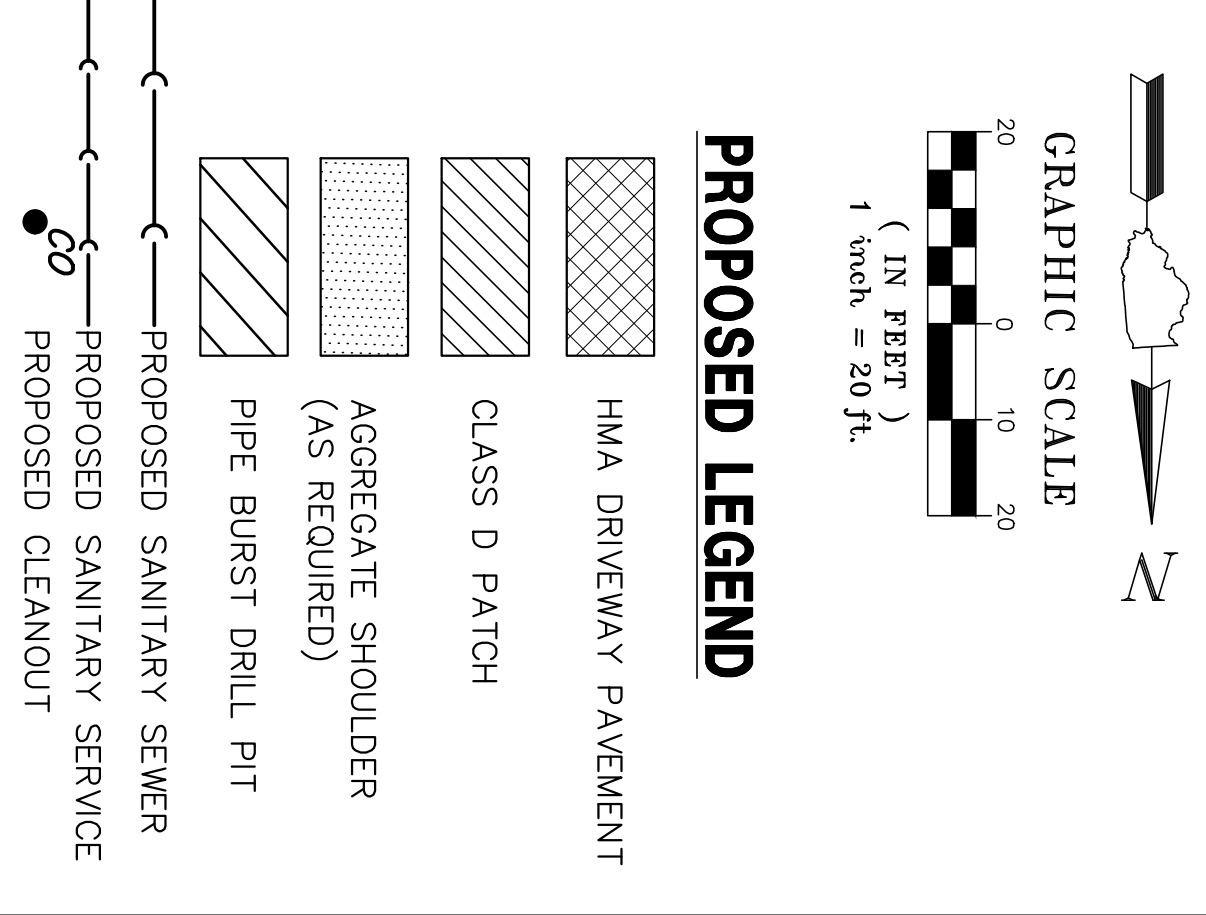
### LINDEN AVENUE





**LINDEN AVENUE**

780	11+00	11+50	12+00	12+50	13+00	13+50	14+00	14+50	15+00	15+50	16+00
	772.42	772.69	771.50	770.56	770.40	770.65	770.91	771.29	771.47	771.53	771.32
775											
770											
765											
760											
755											
750											
745											



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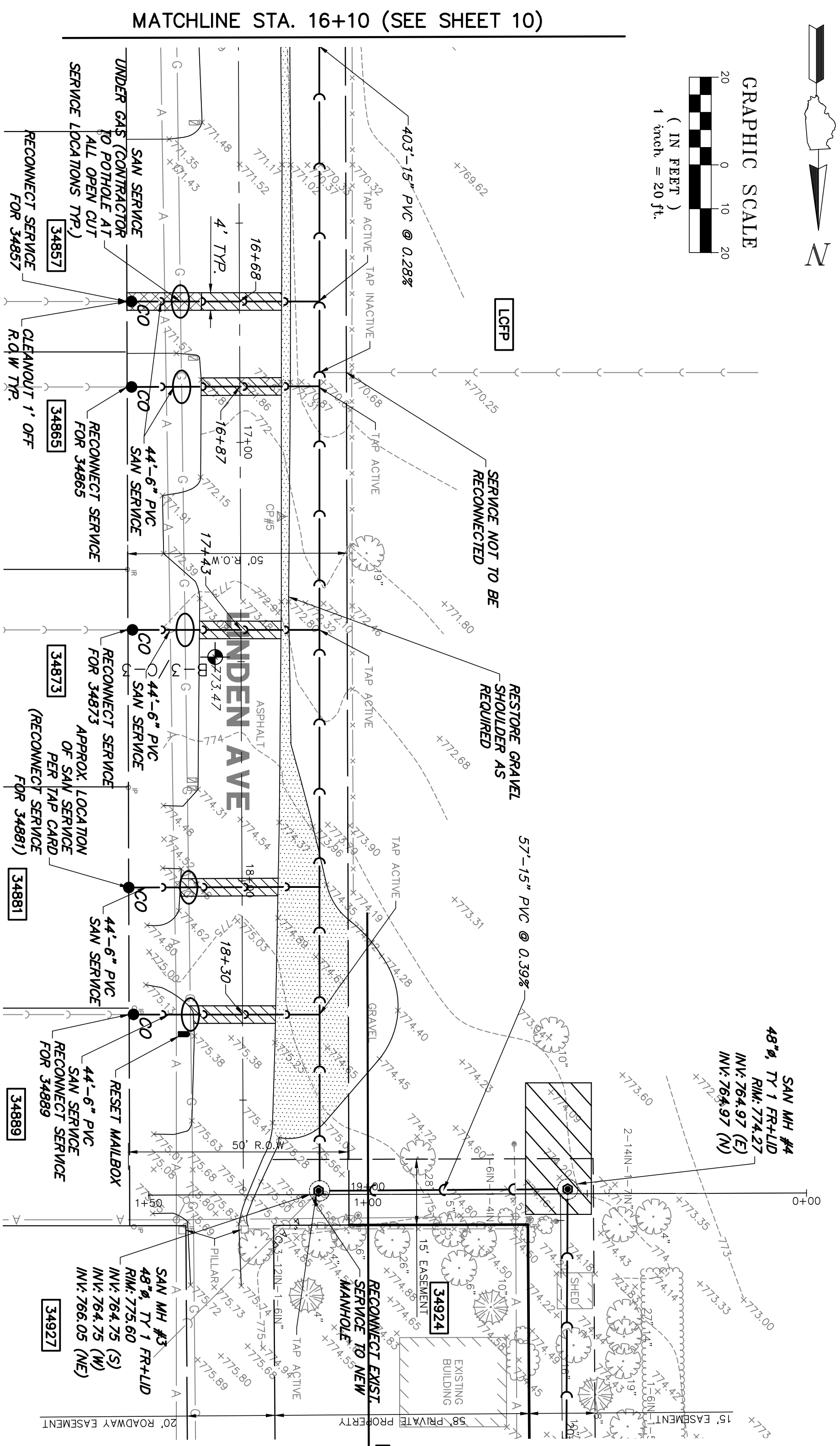
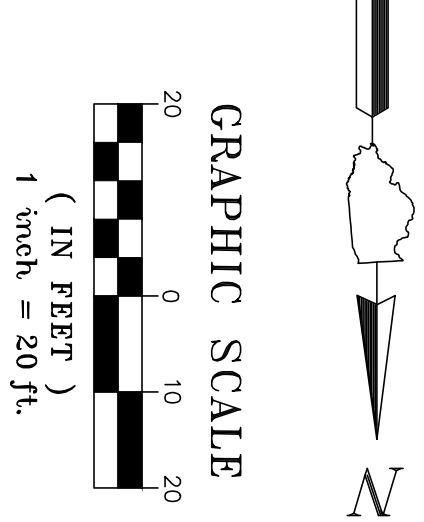
**SITE PLAN (STA: 11+14 TO 16+10)**

**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

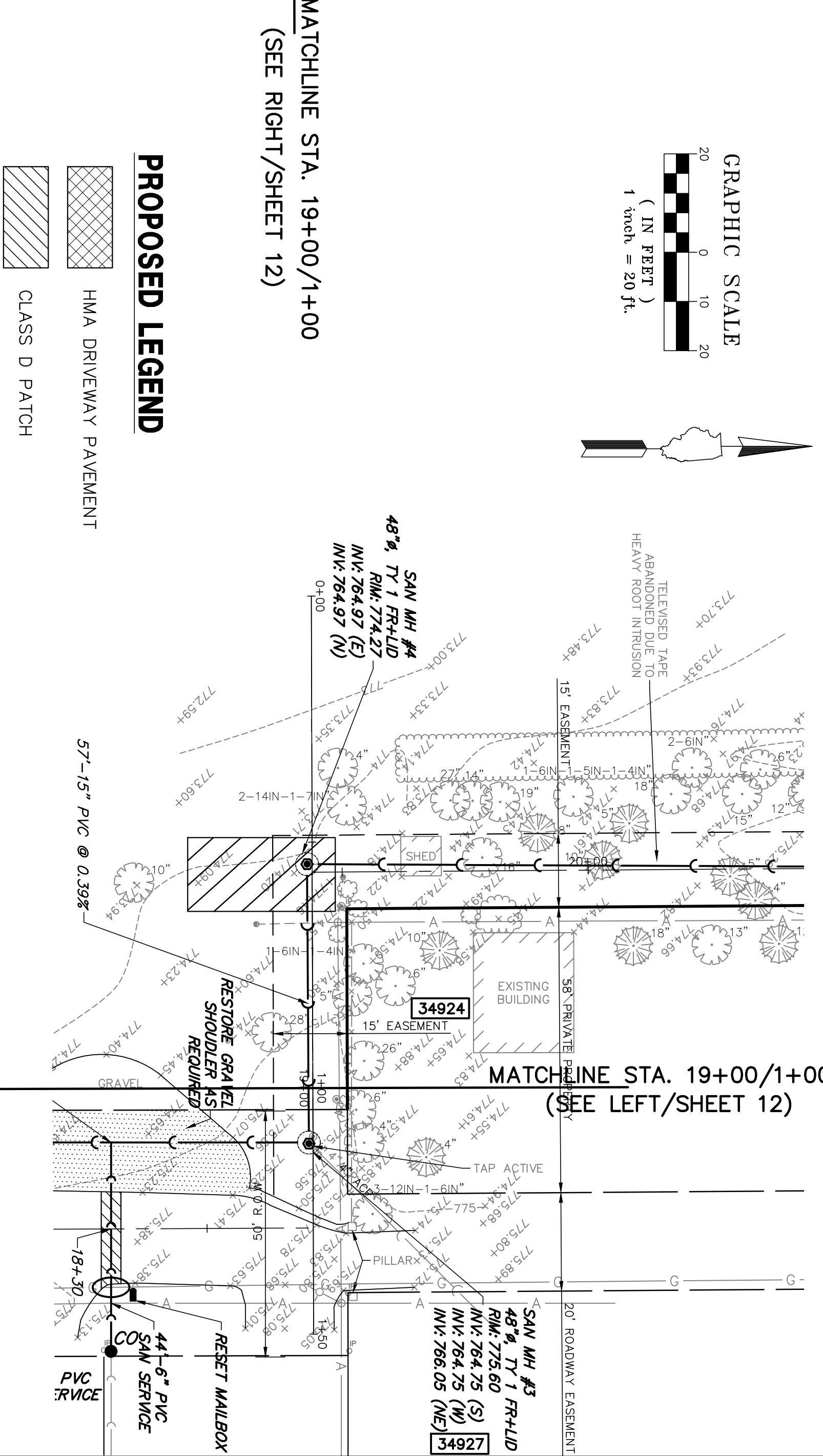
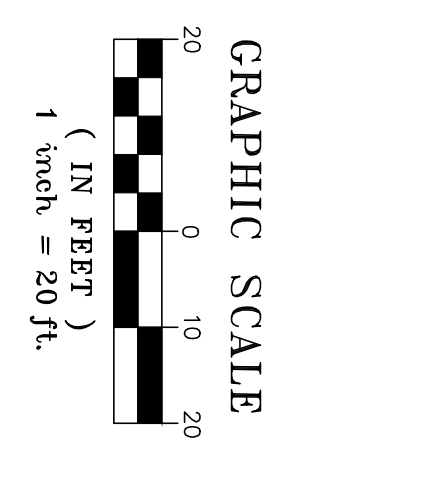
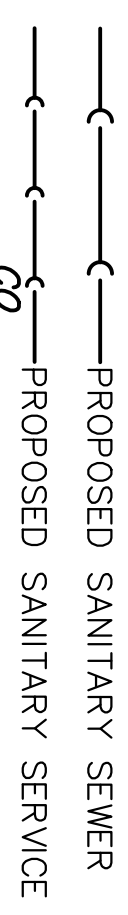
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FILE: 5600.008-PR4.dwg	SHEET NUMBER: <b>10</b>
DRAWN BY: WR	GHA PROJECT # 5600.008
DATE: 2-24-22	SCALE: 1"=20'
CHECKED BY: BLW	OF 15 SHEETS
DATE: 2-24-22	



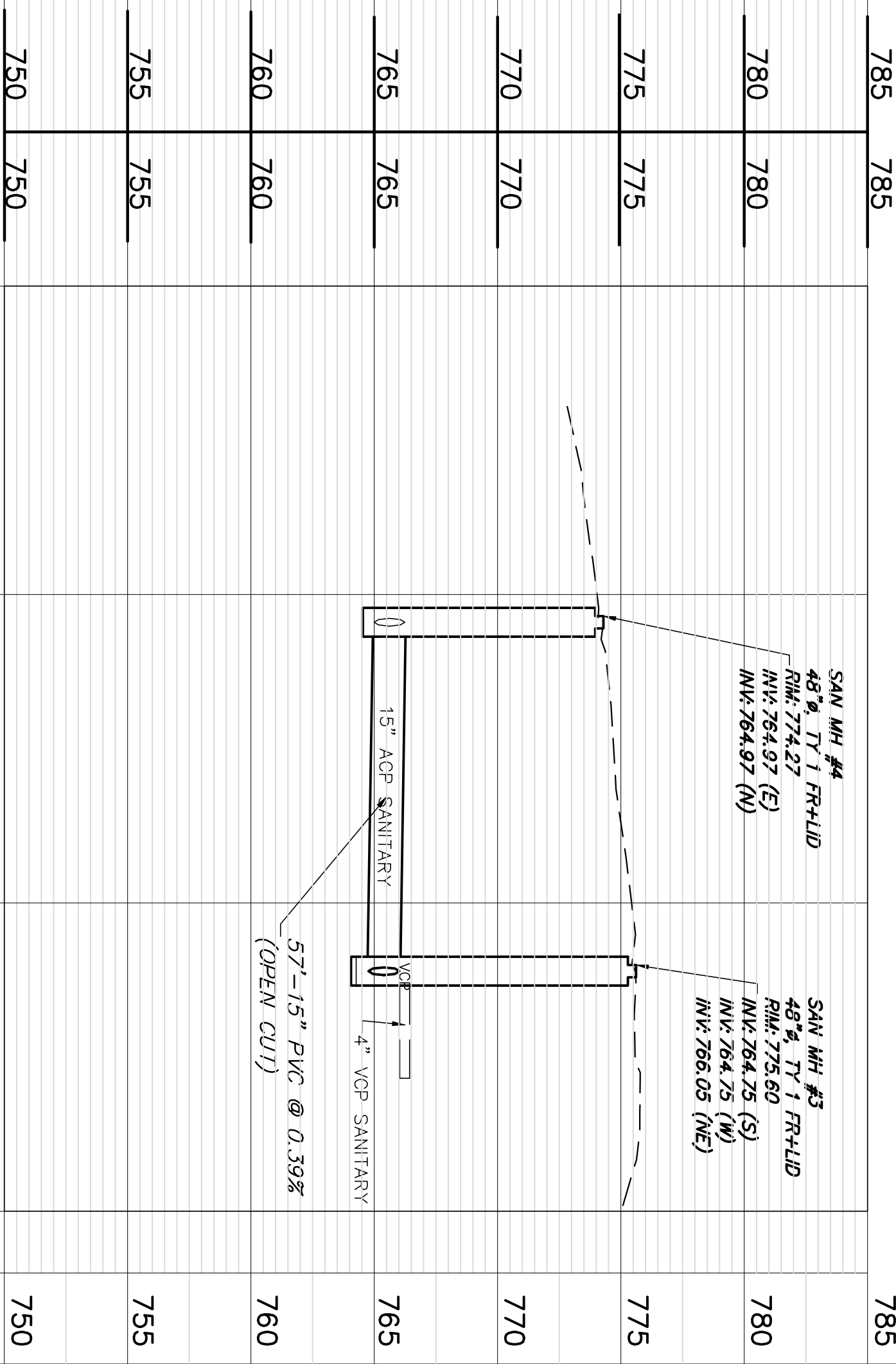


**LINDEN AVENUE (STA: 16+10 - 20+00)**



**LINDEN AVENUE (STA: 0+00 - 1+50)**

785	16+00	16+50	17+00	17+50	18+00	18+50	19+00	19+50	20+00	0+00	0+50	1+00	1+50
780	771.32	771.47	772.11	773.55	774.83	775.45	775.41	774.25	774.71	774.01	775.41		
775													
770													
765													
760													
755													
750													



**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
 625 Forest Edge Drive  
 Vernon Hills, IL 60061  
 TEL 847.478.9700 FAX 847.478.9701

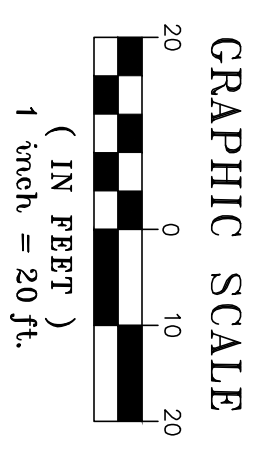
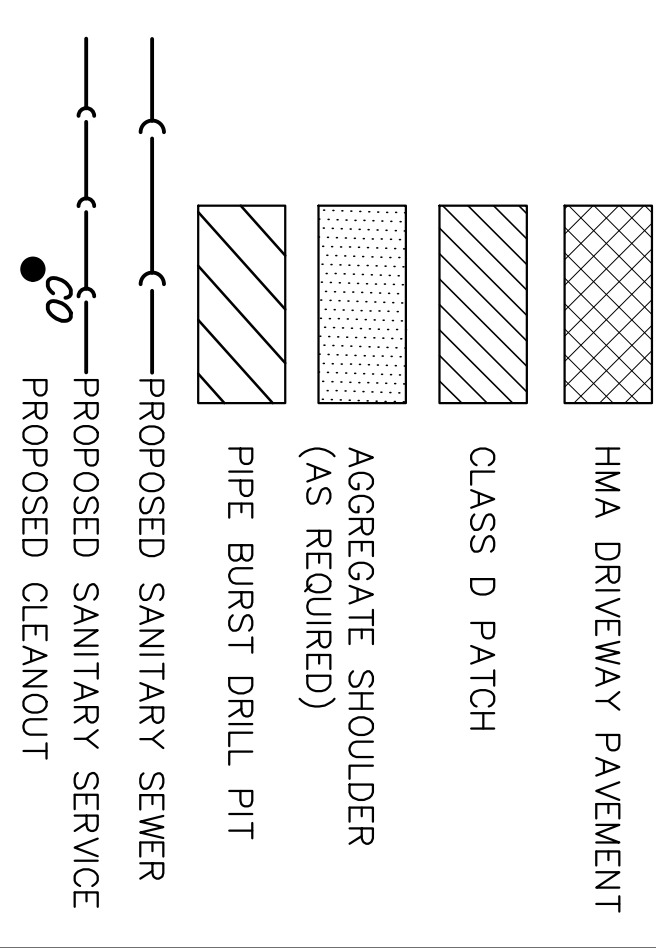
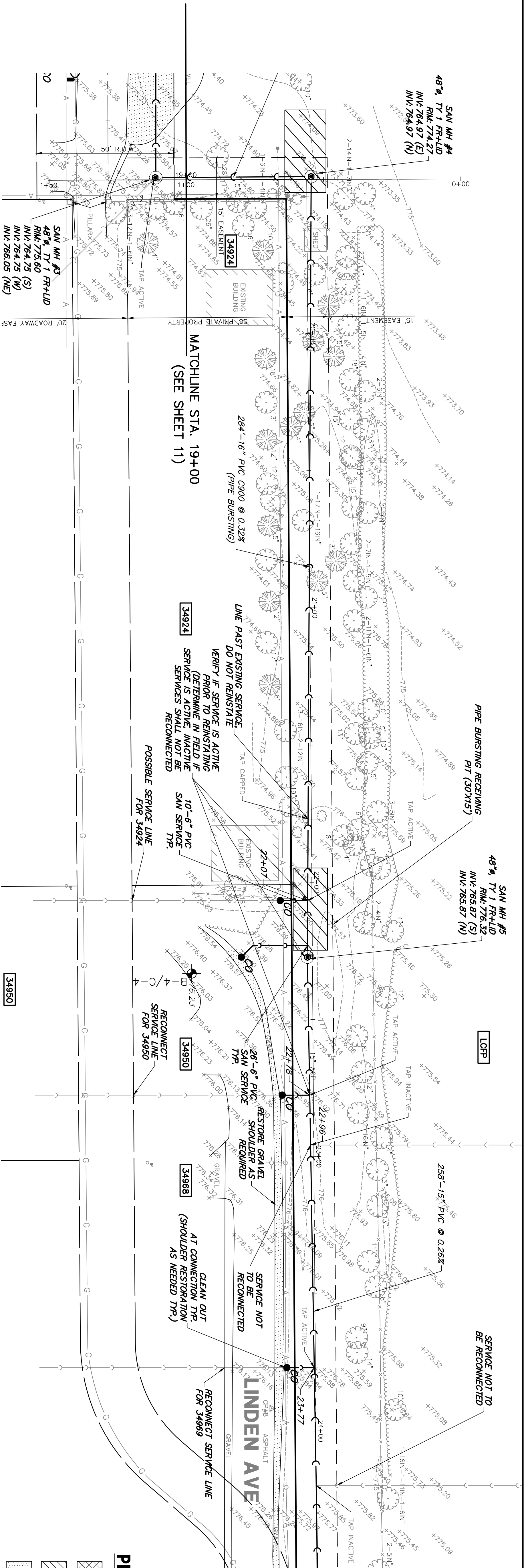
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**SITE PLAN (STA: 16+10 TO 19+00)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY DEPARTMENT OF PUBLIC WORKS**  
**LAKE COUNTY, ILLINOIS**

NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008-PR4.dwg	DRAWN BY: WR	GHA PROJECT #	SHEET NUMBER:
DATE: 2-24-22	DATE: 2-24-22	5600.008	<b>11</b>
CHECKED BY: BLW	SCALE: 1"=20'		OF 15 SHEETS



785	19+00	19+50	20+00	20+50	21+00	21+50	22+00	22+50	23+00	23+50	24+00	24+50
	775.41	774.25	774.71	775.20	775.30	775.55	776.38	776.47	775.91	775.88	775.67	775.80
780	<p>SAN MH #4                      48" TY 1 FR+LD                      RIM: 774.27                      INV: 764.97 (E)                      INV: 764.97 (N)</p>											
775	<p>SAN MH #3                      48" TY 1 FR+LD                      RIM: 775.60                      INV: 764.75 (S)                      INV: 764.75 (W)                      INV: 766.05 (NE)</p>											
770	<p>SAN MH #5                      48" TY 1 FR+LD                      RIM: 776.32                      INV: 765.87 (S)                      INV: 765.87 (N)</p>											
765	<p>284'-16" PVC C900 @ 0.32%                      PIPE BURST</p>											
760	<p>8" PVC SAN SERVICE</p>											
755	<p>8" PVC SAN SERVICE</p>											
750	<p>258'-15" PVC @ 0.26%                      OPEN CUT</p>											
	<p>6" PVC SAN SERVICE</p>											
	<p>15" ACP SANITARY</p>											

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**SITE PLAN (STA. 19+00 TO 24+50)**  
**LINDEN AVENUE SANITARY SEWER REHABILITATION**  
**LAKE COUNTY PUBLIC WORKS DEPARTMENT**  
**LAKE COUNTY, ILLINOIS**

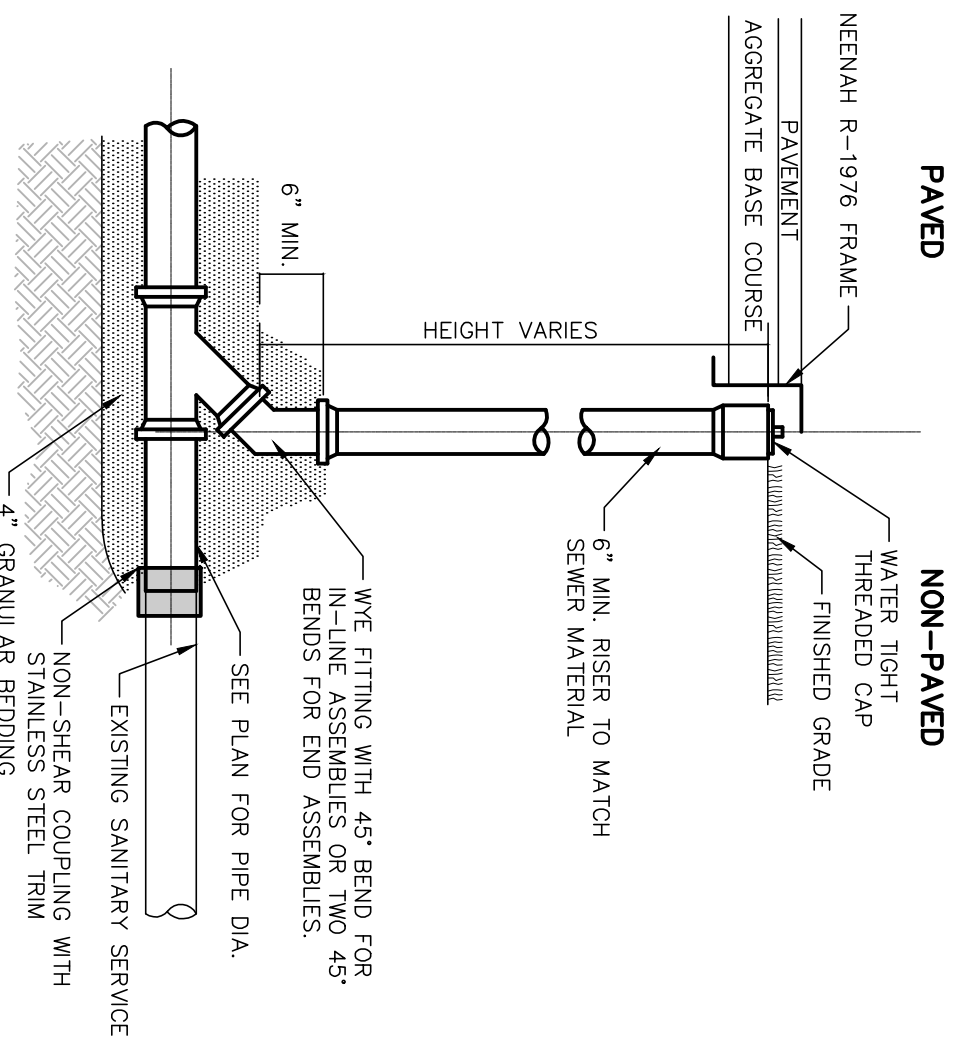
NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION

FILE: 5600.008-PR4.dwg	SHEET NUMBER:
DRAWN BY: WR	GHA PROJECT #
DATE: 2-24-22	5600.008
CHECKED BY: BLW	SCALE:
DATE: 2-24-22	1" = 20'
	OF 15 SHEETS

**12**

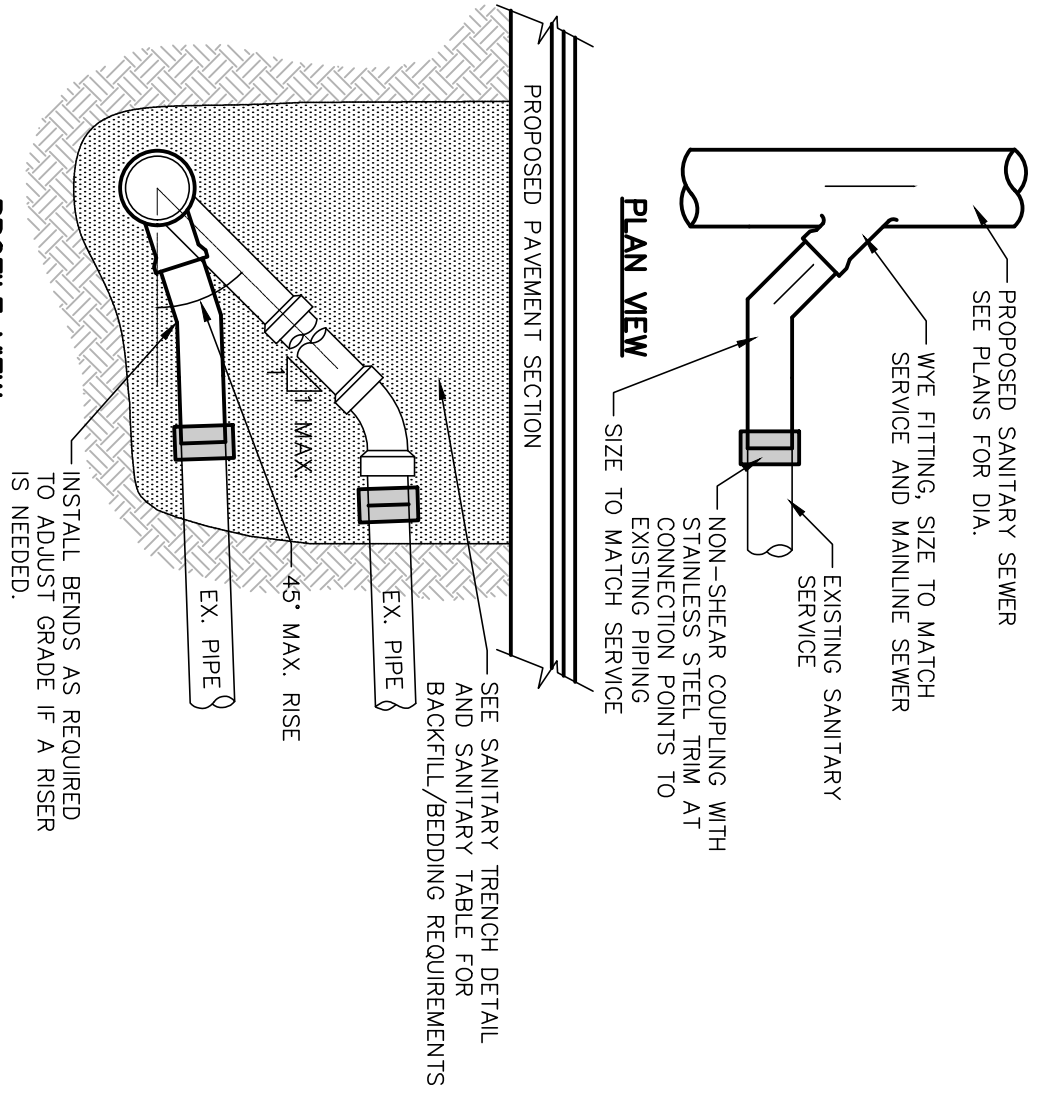


NOTE:  
SEE SANITARY TABLE FOR  
MATERIAL REQUIREMENTS.



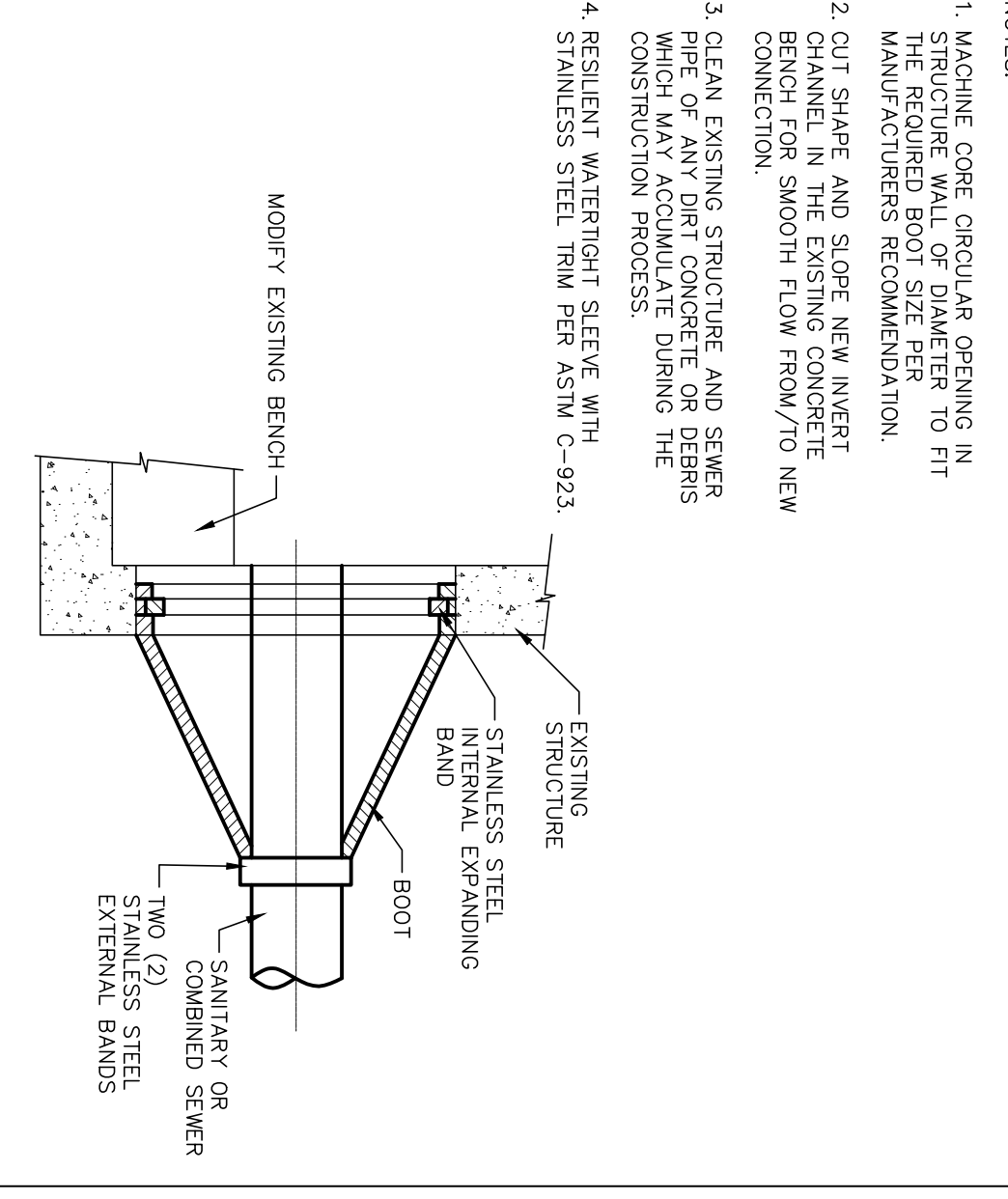
03.15.2016

**GHA GEWALT HAMILTON ASSOCIATES, INC.** SANITARY SEWER CLEAN-OUT DETAIL



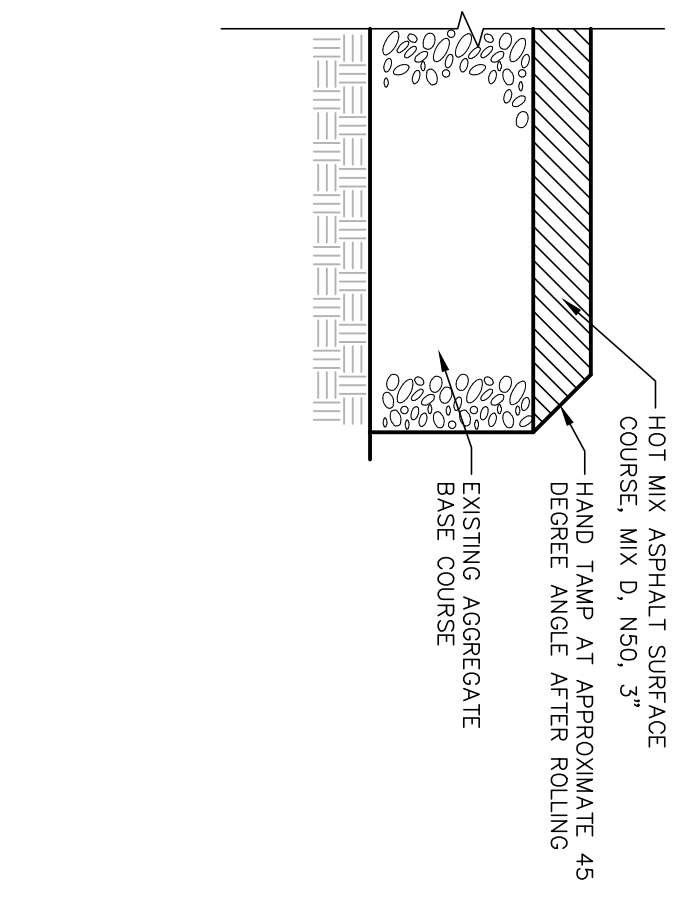
12.08.2018

**GHA GEWALT HAMILTON ASSOCIATES, INC.** SANITARY SERVICE RECONNECTION DETAIL



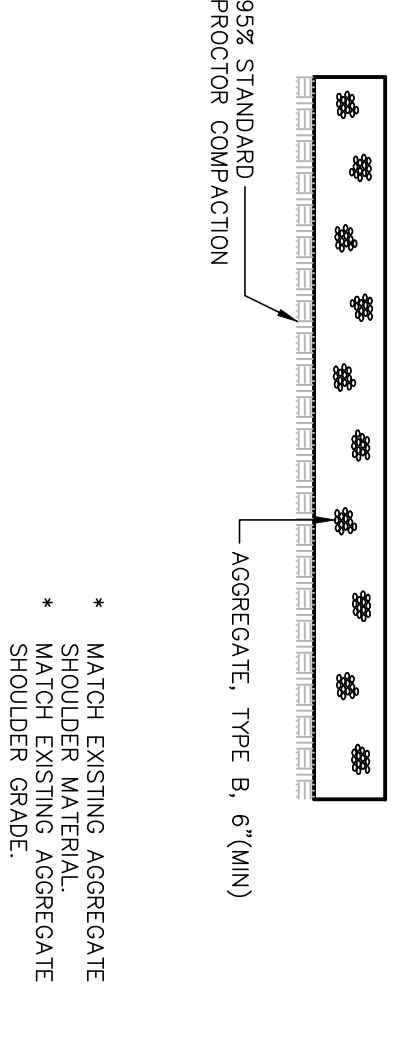
03.15.2016

**GHA GEWALT HAMILTON ASSOCIATES, INC.** SANITARY OR COMBINED SEWER PIPE CONNECTION TO EXISTING STRUCTURE DETAIL



02.01.2021

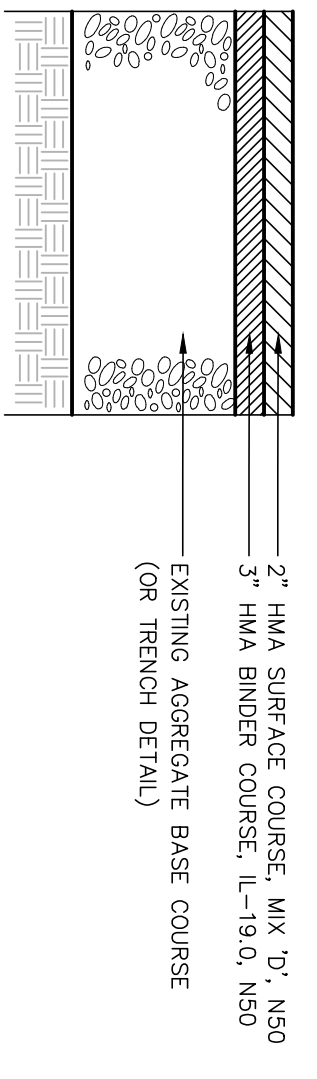
**GHA GEWALT HAMILTON ASSOCIATES, INC.** HMA DRIVEWAY PAVEMENT DETAIL



- \* MATCH EXISTING AGGREGATE
- \* SHOULDER MATERIAL
- \* MATCH EXISTING AGGREGATE SHOULDER GRADE.

10.12.2018

**GHA GEWALT HAMILTON ASSOCIATES, INC.** AGGREGATE SHOULDER DETAIL



02.01.2021

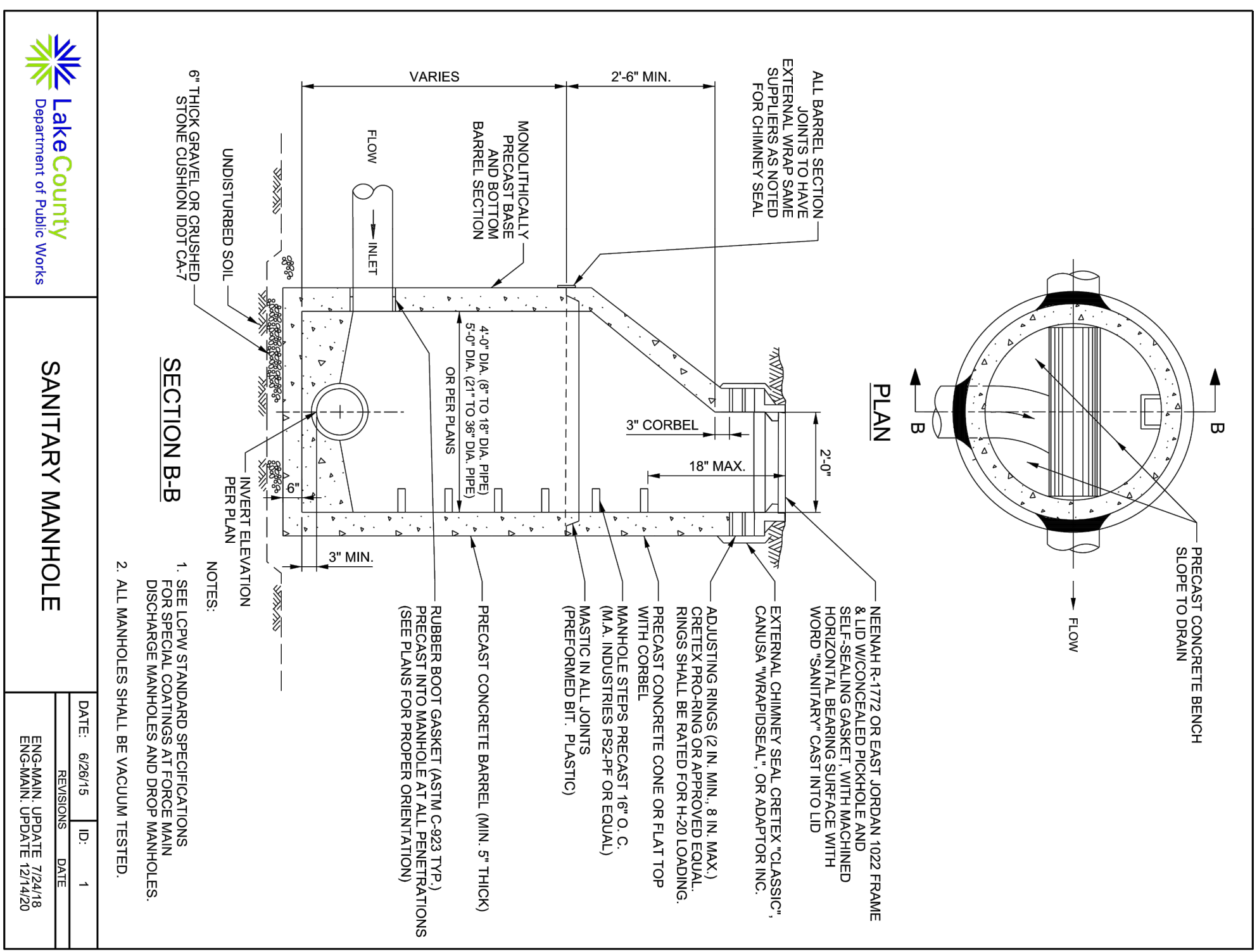
**GHA GEWALT HAMILTON ASSOCIATES, INC.** PAVEMENT PATCHING DETAIL

**GHA GEWALT HAMILTON ASSOCIATES, INC.**  
625 Forest Edge Drive  
TEL 847.478.9700  
Vernon Hills, IL 60061  
FAX 847.478.9701

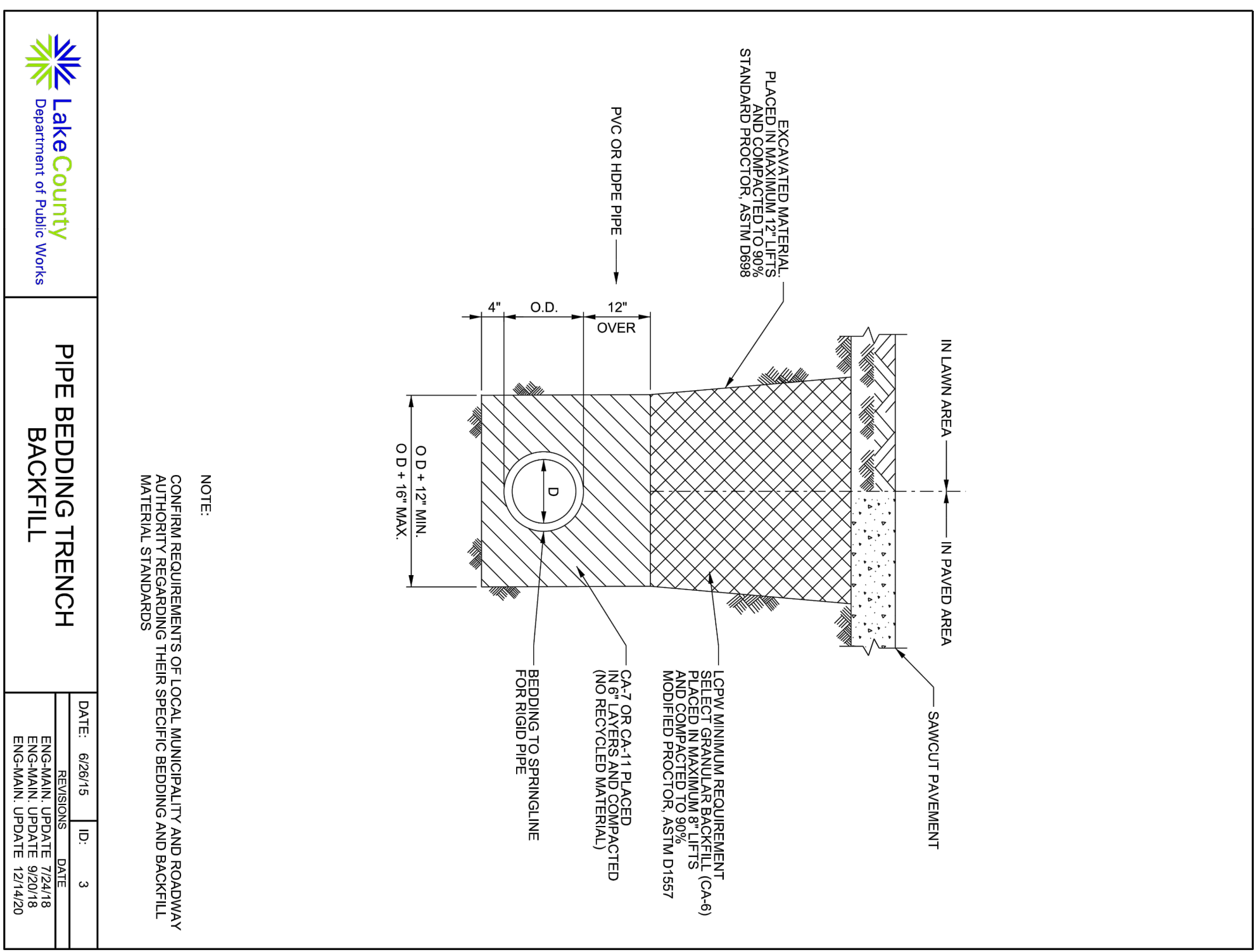
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**STANDARD DETAILS**  
LINDEN AVENUE SANITARY SEWER REHABILITATION  
LAKE COUNTY PUBLIC WORKS DEPARTMENT  
LAKE COUNTY, ILLINOIS

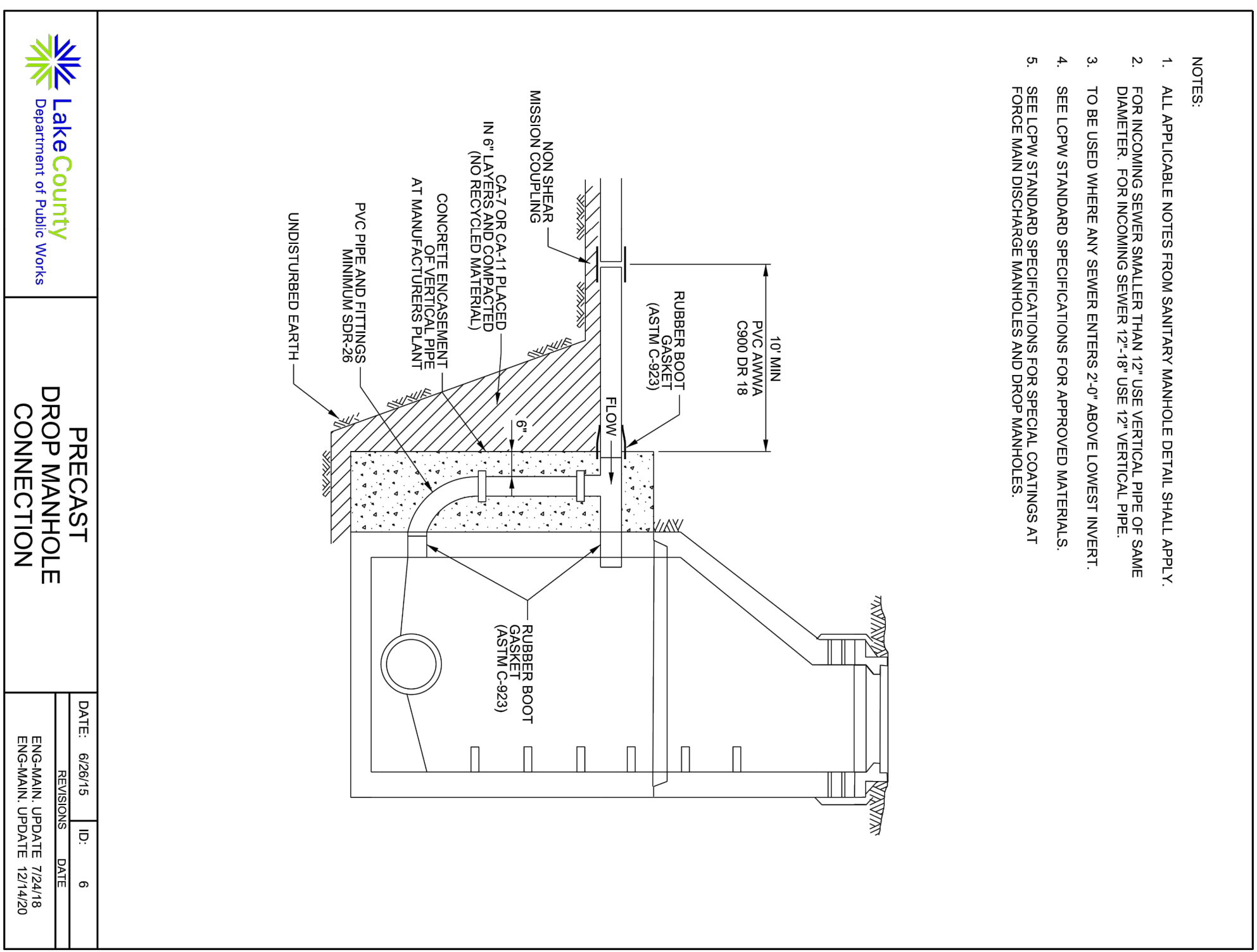
NO.	BY	DATE	REVISION	NO.	BY	DATE	REVISION



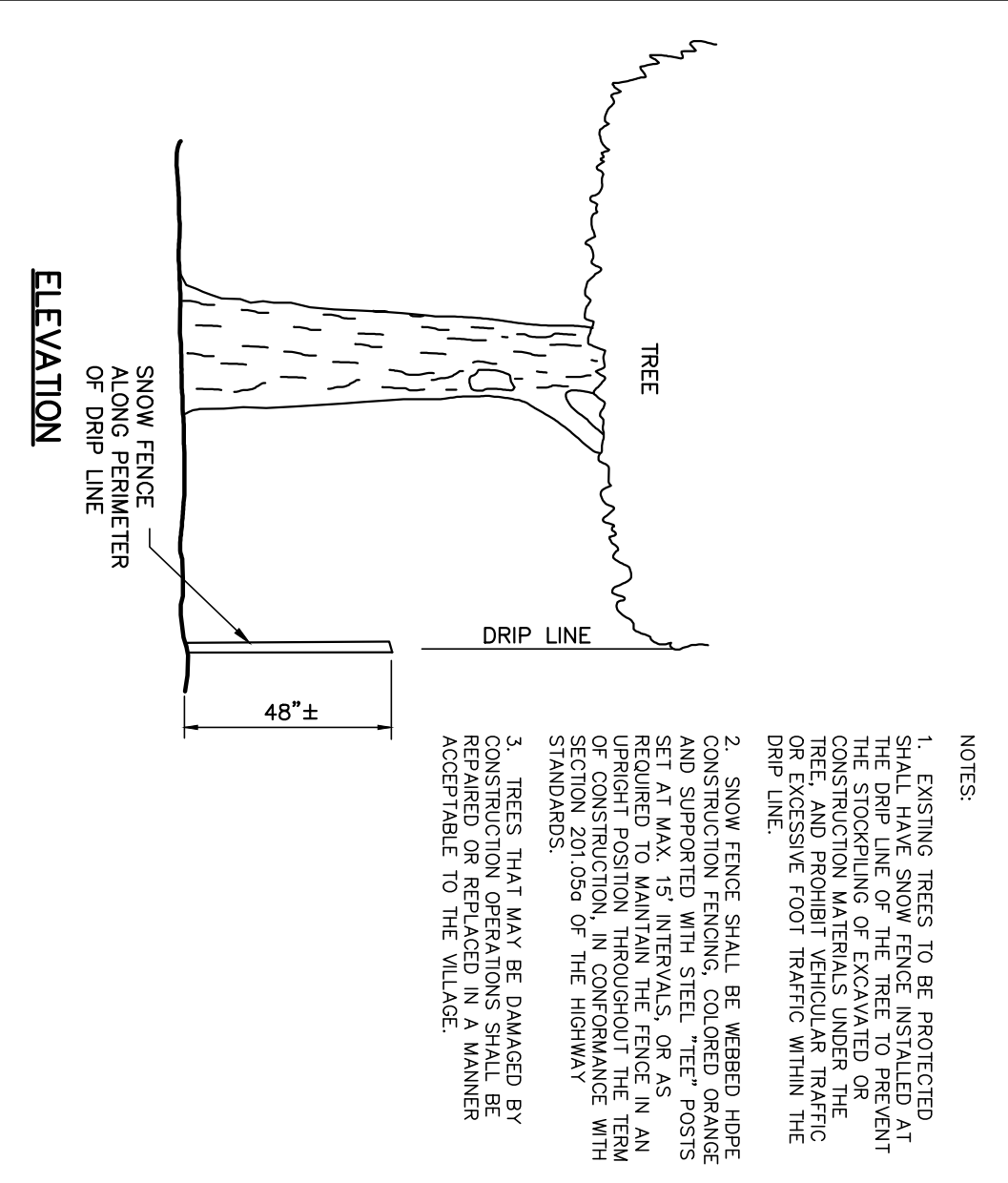
DATE:	02/09/15	ID:	1
REVISIONS:			
ENGINEER:	ENGELMANN, UPRATE	DATE:	02/20/18
	ENGELMANN, UPRATE	DATE:	12/14/20



DATE:	02/09/15	ID:	3
REVISIONS:			
ENGINEER:	ENGELMANN, UPRATE	DATE:	02/20/18
	ENGELMANN, UPRATE	DATE:	12/14/20



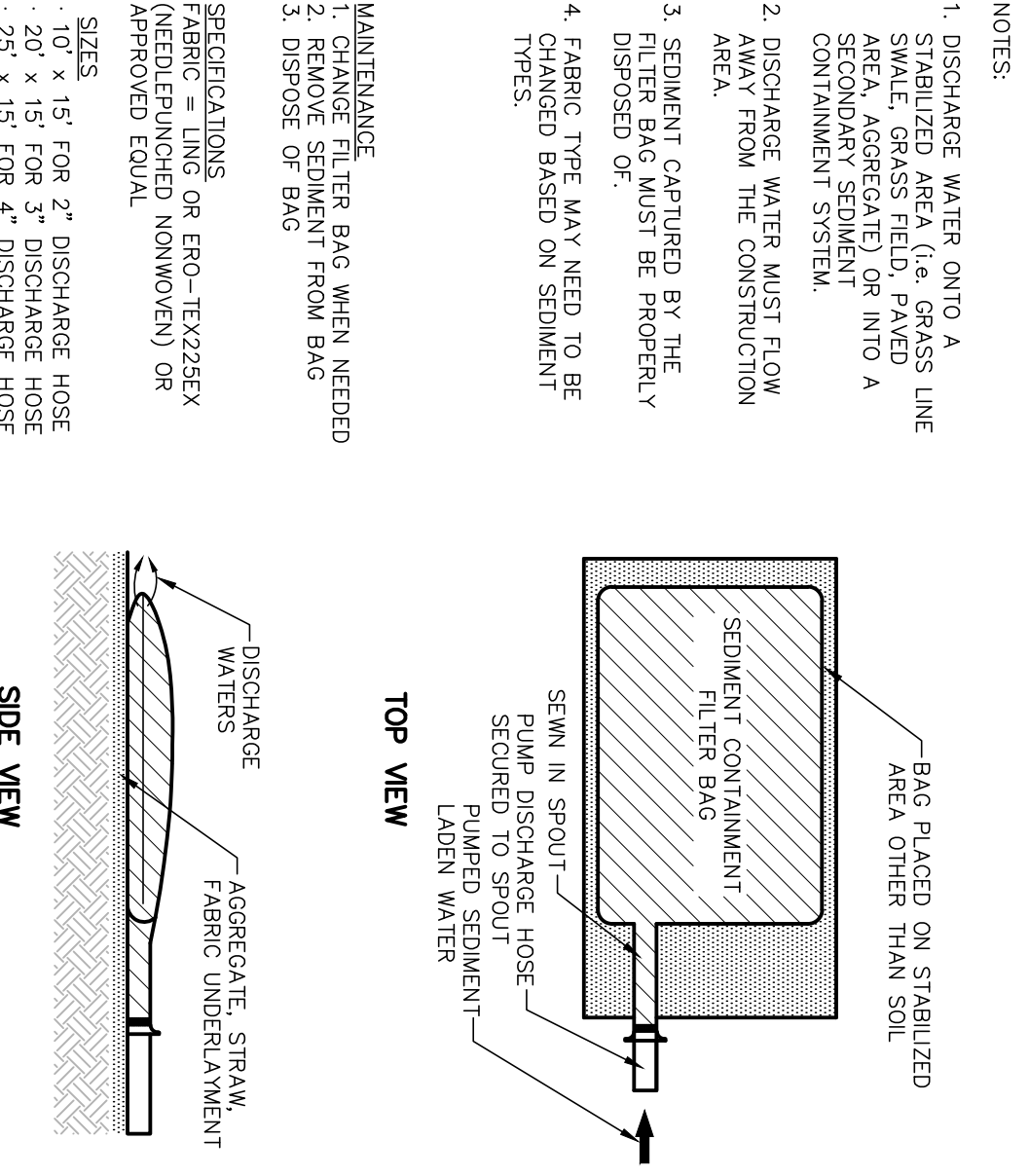
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REVISIONS:			
ENGINEER:	ENGELMANN, UPRATE	DATE:	02/20/18
	ENGELMANN, UPRATE	DATE:	12/14/20



**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**TREE PROTECTION FENCING DETAIL**

03.15.2016



**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**SEDIMENT CONTAINMENT FILTER BAG**

03.15.2016

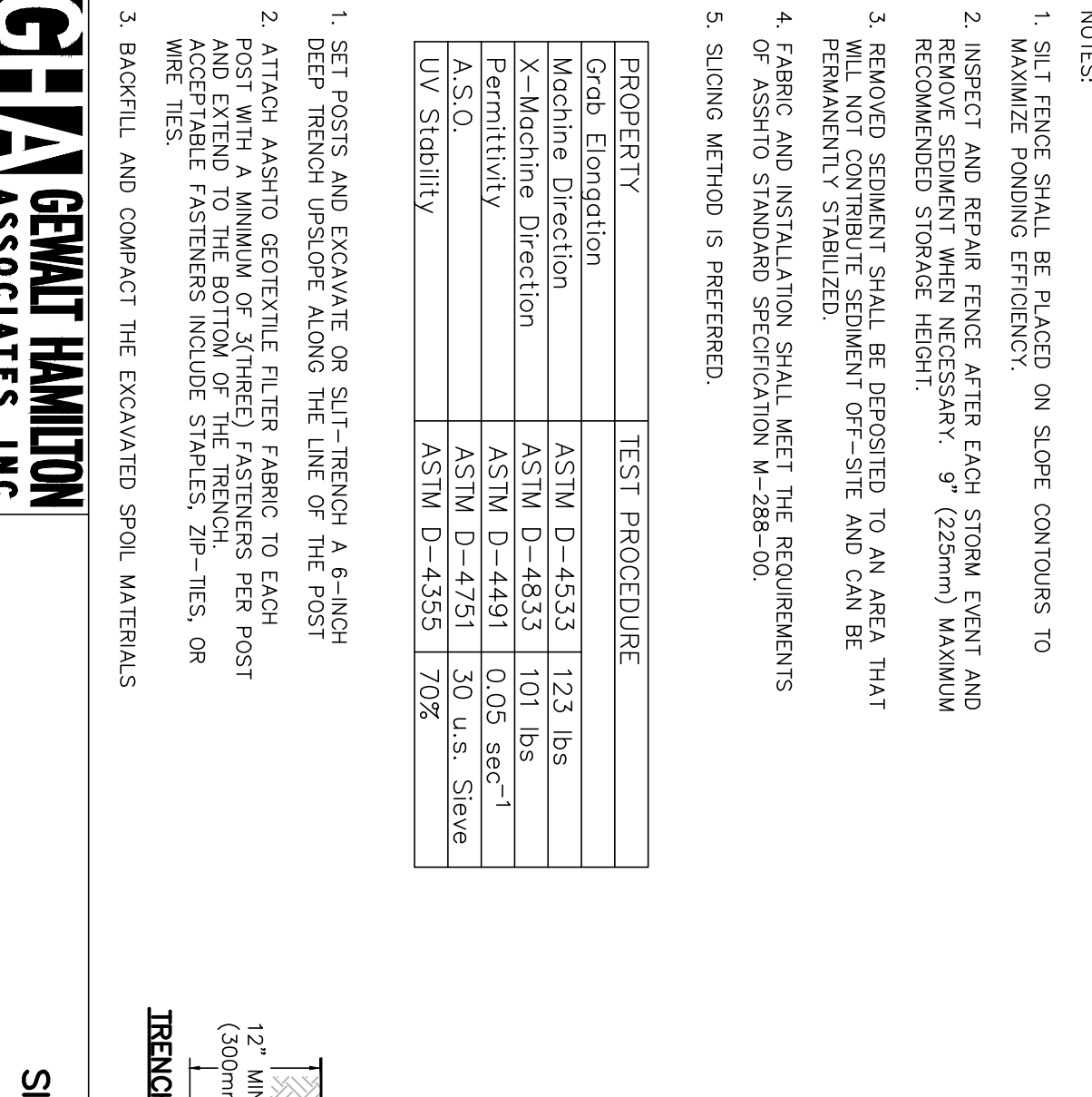
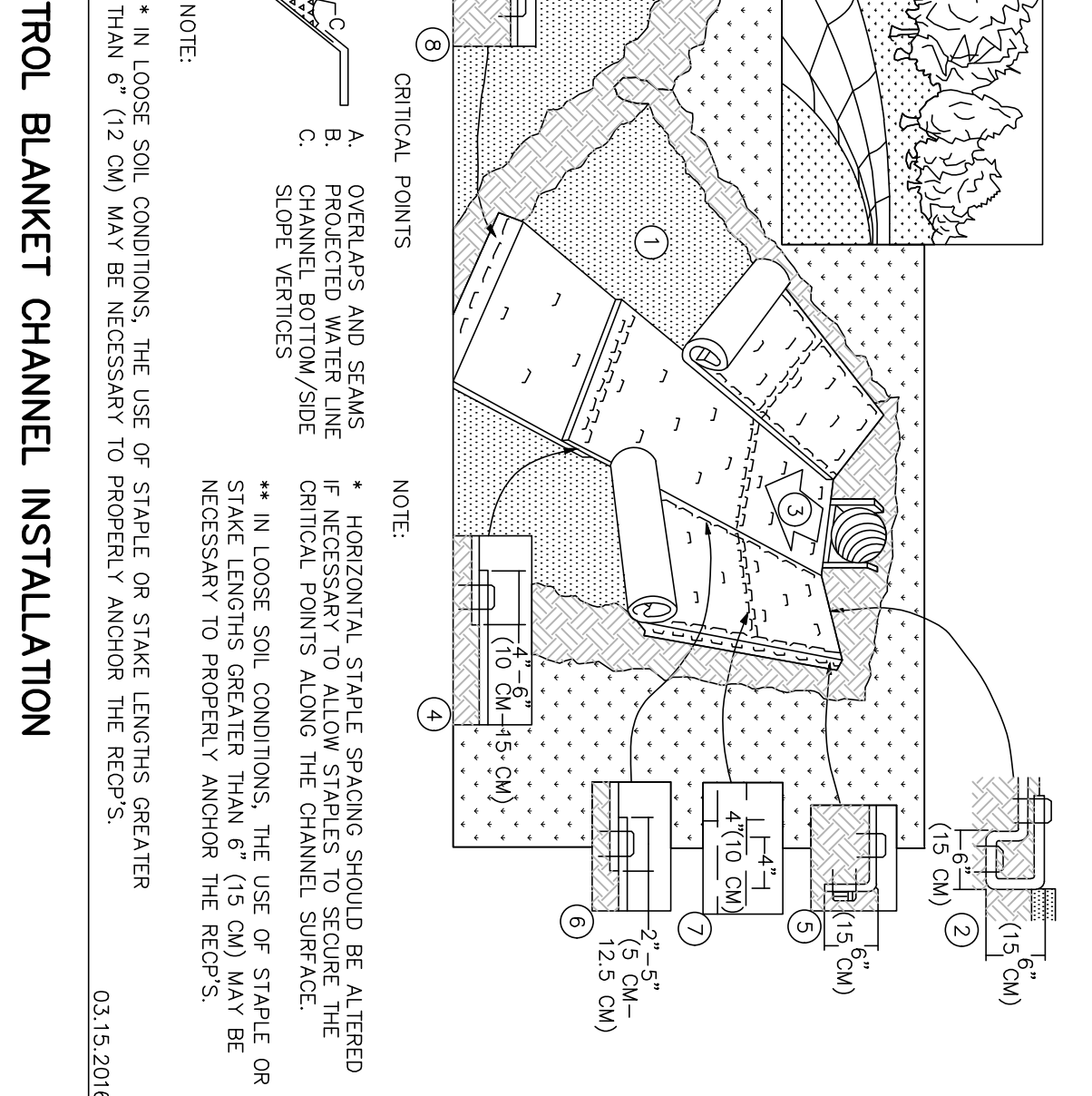
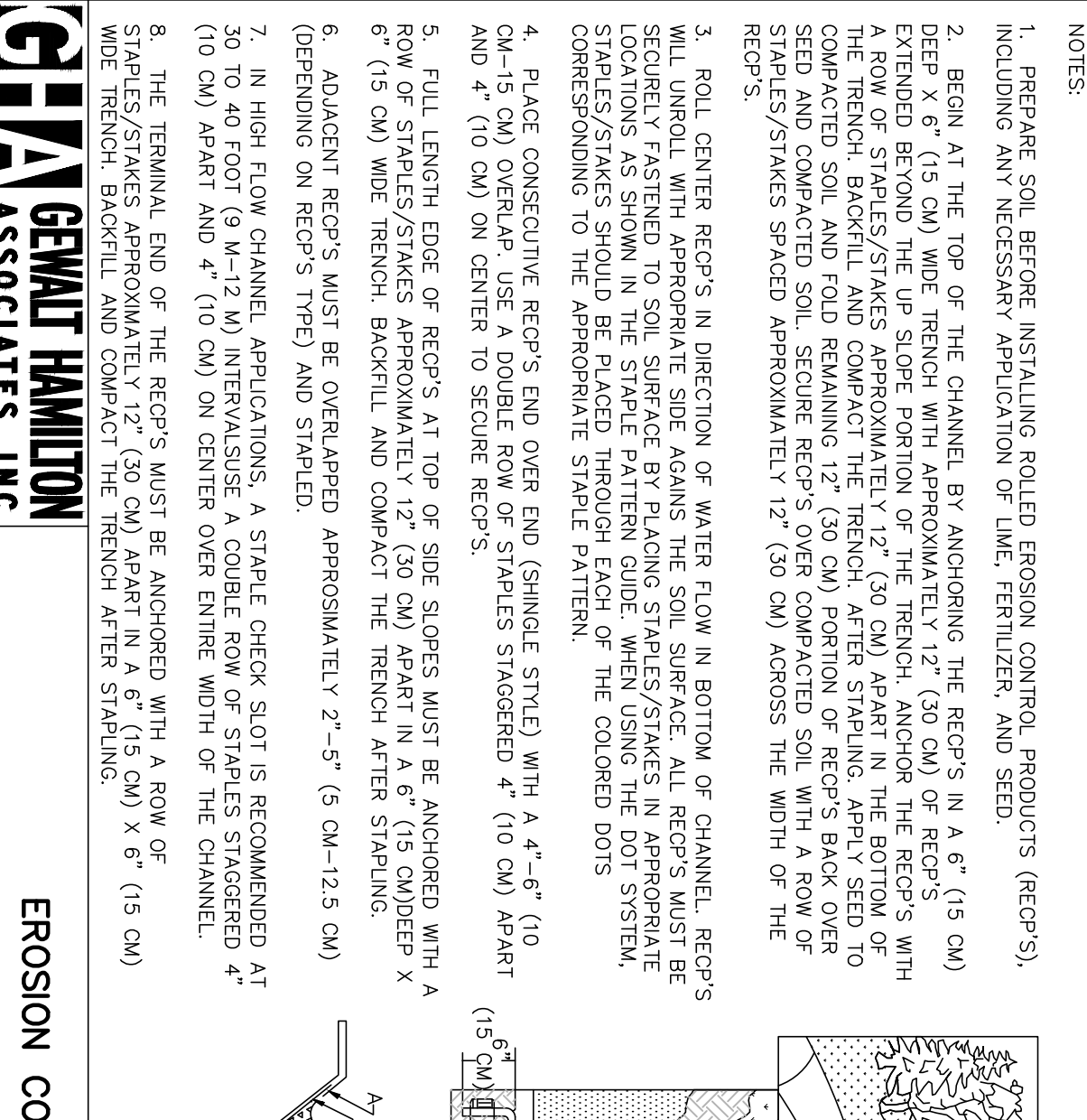
Stabilization Type	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Permanent Seeding			A			X	X	X	X	X	X	X
Dormant Seeding			B									
Temporary Seeding			C			X	X	X	X	X	X	X
Sodding			E			X	X	X				
Mulching			F			X	X	X	X	X	X	X

A = KENTUCKY BLUEGRASS @ 90 LBS./AC. MIXED WITH PERENNIAL PERGRASS @ 30 LBS./AC.  
 B = KENTUCKY BLUEGRASS @ 135 LBS./AC. MIXED WITH PERENNIAL PERGRASS @ 45 LBS./AC.  
 C = SPRING OATS @ 100 LBS./AC.  
 D = WHEAT OR CEREAL RYE @ 150 LBS./AC.  
 E = SOD  
 F = STRAW MULCH (HYDROKULCH OR USE STRAW BLANKET) @ 2 TONS/AC.  
 XXX = IRRIGATION NEEDED  
 IRRIGATION SHOULD BE PROVIDED AS NECESSARY TO THOROUGHLY ESTABLISH INTENDED GROWTH.  
 NOTE: SPREAD ON PRODUCTS CANNOT BE USED NOV.-FEB.

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**TYPICAL SOIL PROTECTION CHART**

03.15.2016



**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**EROSION CONTROL BLANKET CHANNEL INSTALLATION**

03.15.2016

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**SILT FENCE INSTALLATION DETAIL**

03.15.2016

PROPERTY	TEST PROCEDURE
Grab Elongation	ASTM D-4533 123 lbs
Machine Direction	ASTM D-4833 101 lbs
X-Machine Direction	ASTM D-4491 0.05 sec <sup>-1</sup>
Permeability	ASTM D-4751 3.0 u.s. Sieve
A.S.O.	ASTM D-4355 70%
UV Stability	

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

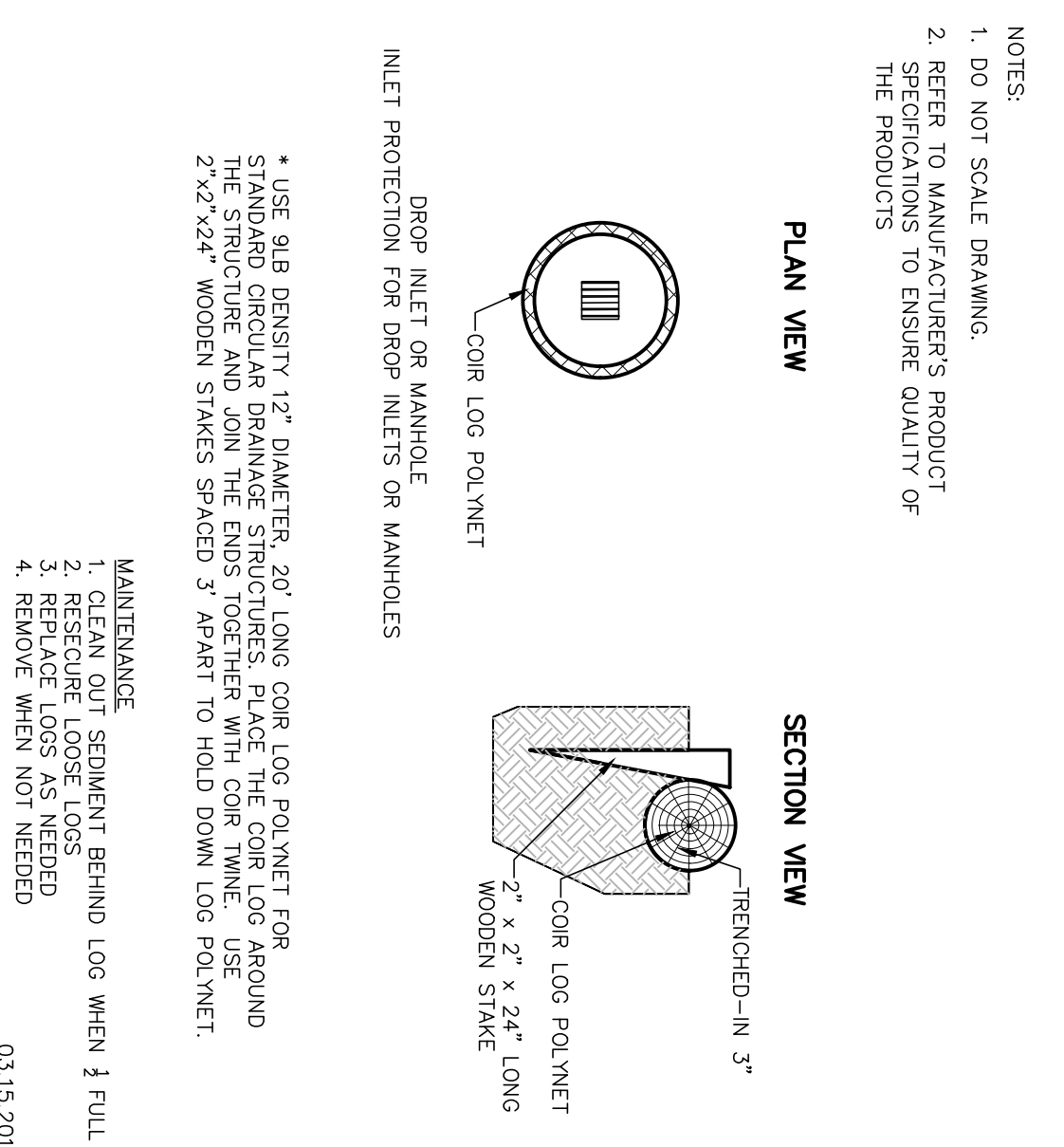
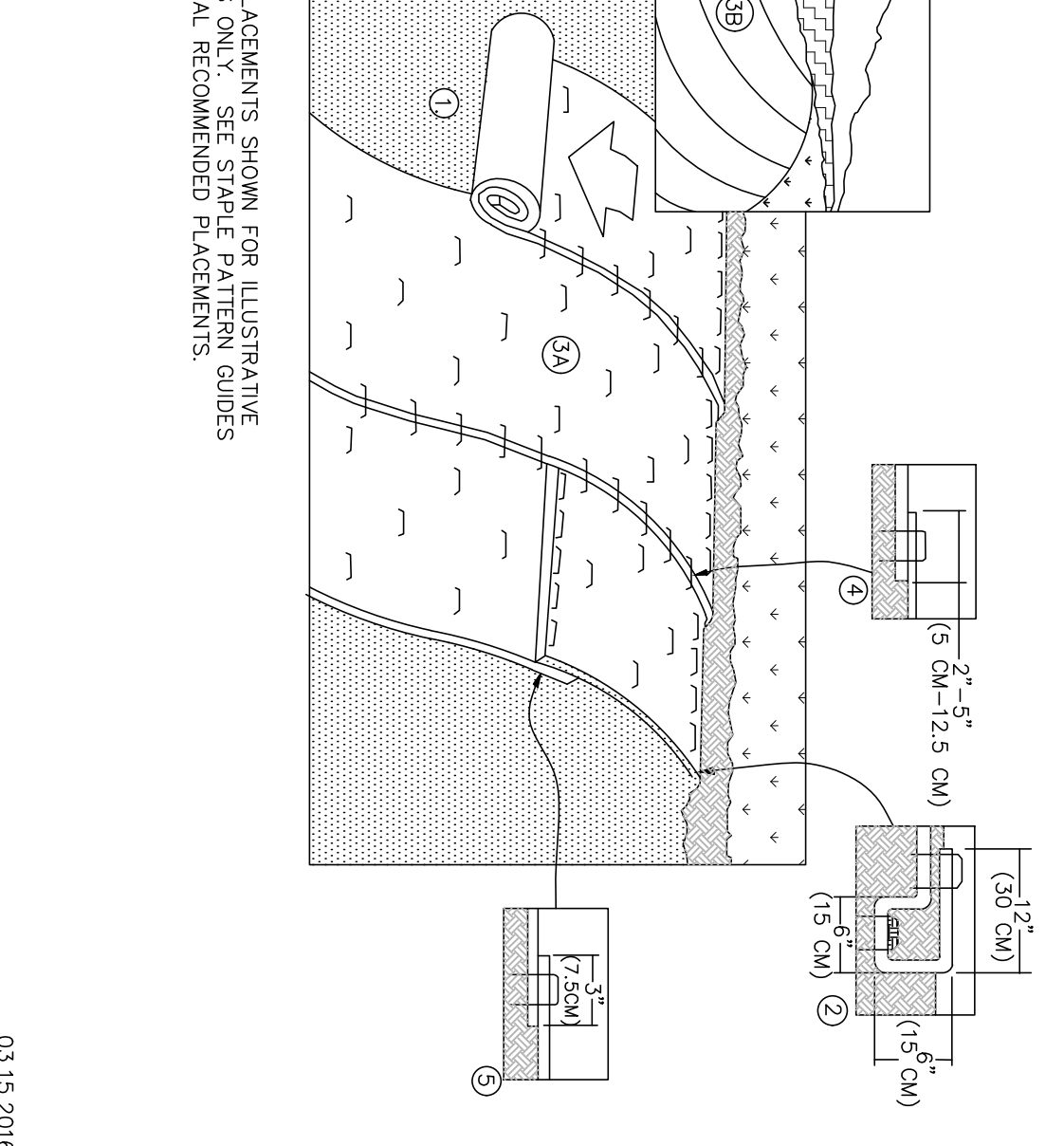
**EROSION CONTROL BLANKET CHANNEL INSTALLATION**

03.15.2016

NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) SPACING AND 12" (30 CM) OVERLAP. SECURE RECP'S WITH STAPLES AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE TENSION AGAINST SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH THE DOT CIRCLES TO BE CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPliced DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA. APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.



**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**COIR ROLL DETAIL INLET PROTECTION**

03.15.2016

NOTES:

1. DO NOT SCALE DRAWINGS.
2. REFER TO MANUFACTURER'S PRODUCT SPECIFICATIONS TO ENSURE QUALITY OF THE PRODUCTS.

**PLAN VIEW**

**SECTION VIEW**

\* USE 9/16 DENSITY 12" DIAMETER 20' LONG COIR LOG POLYNET FIBER. STAPLES SHOULD BE PLACED AT THE END OF EACH LOG TO HOLD THE STRUCTURE AND JOIN THE ENDS TOGETHER WITH COIR TWINE. 2"X2"X24" WOODEN STAPLES SPACED 3' APART TO HOLD DOWN LOG POLYNET.

NOTE: MAINTENANCE: 1. CLEAN OUT SEDIMENT BEHIND LOG WHEN 1/2 FULL. 2. RESCUE LOGS AS NEEDED. 3. REPLACE LOGS AS NEEDED. 4. REMOVE WHEN NOT NEEDED.

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**EROSION CONTROL BLANKET SLOPE INSTALLATION**

03.15.2016

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**EROSION CONTROL BLANKET SLOPE INSTALLATION**

03.15.2016

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**EROSION CONTROL DETAILS**

03.15.2016

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**LINDEN AVENUE SANITARY SEWER REHABILITATION LAKE COUNTY PUBLIC WORKS DEPARTMENT LAKE COUNTY, ILLINOIS**

NO. BY DATE REVISION NO. BY DATE REVISION

**CHA GEWALT HAMILTON ASSOCIATES, INC.**

**LINDEN AVENUE SANITARY SEWER REHABILITATION LAKE COUNTY PUBLIC WORKS DEPARTMENT LAKE COUNTY, ILLINOIS**

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