Design Special Provisions

The Standard Specifications for Road and Bridge Construction prepared by the Department of Transportation of the State of Illinois (latest edition), Supplemental Specifications, the Standard Specifications for Water and Sewer Main Construction in Illinois (latest edition) and the Illinois Urban Manual (blue book) as published by the IEPA shall govern the construction of this project.

In addition, the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

It is the contractor's responsibility to obtain JCA's guidance with respect to any errors, ommisions, inconsistancies, ambiguities or conflicts which are detected in the field. The contractor shall assume all liability for the above should they not seek JCA's input.

1. Scope of Work

The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated "MTFPD Station #2 Sanitary Sewer Extension."

2. Construction Of Underground Utilities

A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used.

The slopes shall not extend below the top of the pipe, and the trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe.

Open-cut trenches shall be sheeted and braced as required by the governing state, federal laws and municipal ordinances, and as may be necessary to protect life, property or the work.

Where firm foundation is not encountered at the grade established, due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.

B. Width of Trenches: The maximum width of the trench at the top of the pipe shall be as follows:

Nominal Pipe Sizes (inches)	Trench Widths (inches)
12 or smaller	30
14-18	36
20-24	42
27-30	48
33 and larger	1-1/3 times pipe O.D.

C. Removal of Water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water, unless specifically approved by the City Engineer and then only if the trench water does not ultimately arrive at existing pumping or sewage treatment facilities.

D. Bedding of Pipe: All pipe shall be installed on a bedding of approved, compacted granular material unless otherwise approved by the City Engineer. The bedding material shall be installed as per the typical trench backfill detail.

E. Trench Backfill: Whenever the excavation is in or within 2 feet of existing or proposed streets, parking areas, driveways, sidewalks or other paved areas, the trench shall be backfilled with approved selected granular material compacted in place. The granular material shall consist of CA-6 crushed and extend away from the back of curb or any edge of pavement at a 1 to 1 slope. The top 12 inches of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area when the trench is in existing pavements.

F. Restoration of Drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practical after backfilling is complete.

G. Utilities: The contractor shall notify all utilities prior to the installation of any pipelines. Where conflicts exists between underground utilities and the proposed underground pipeline requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the City Engineer in writing.

3. Inspection

All improvements shall be subject to inspection by a duly authorized and qualified Owner's Representative both during the course of construction and after construction is complete. The Owner's Representative shall have authority over materials of construction, methods of construction and workmanship to ensure compliance with working drawings and specifications. The contractor shall provide for reasonable tests and proof of quality of materials as requested by the inspector. Upon due cause, which shall include weather conditions, workmanship or non-adherence to the approved plans and specifications, the inspector shall have the authority to stop construction.

4. Sanitary Sewer Service

Materials permitted for use in sanitary sewer service are as follows:

PVC sewer pipe conforming to ASTM D-3034. Joints shall be solvent welded joints per ASTM D-2855 or Flexible Elastomeric Seals per ASTM D-3212. The PVC pipe shall have a minimum SDR rating of 35(min).

5. Sanitary Monitoring Manhole Type A, 48-inch Diameter

Manholes shall be constructed of prefabricated concrete sections conforming to ASTM C-478. Sections shall be joined using either flexible rubber gaskets or performed bituminous plastic gaskets. The manhole bottom shall be precast with the first riser section. Manholes shall have the pipe cast in place through the manhole or a water tight joint cast in the manhole wall to receive the pipe. Manhole frames and lids shall be of self-sealing type, with Type B lid and concealed pickhole and the word "Sanitary" cast in the lid.

6. Sanitary Service Lines

Service lines shall be a minimum of 6 inches inside diameter and shall be extended from the mainline manhole to existing fire station connecting to existing building sanitary sewer lines.. The services shall be of adequate depth at the property line to gravity drain the lowest point in the building. Where necessary, riser pipes shall be installed to prevent the service line from being installed deeper than necessary. Required trench backfill shall be considered in the cost of the service being installed.

7. Earth Excavation

This item shall include stripping and stockpiling of all topsoil in areas designated by the Owner's Representative. All material deposited in embankment areas shall be compacted under the direction of the municipal inspector. Topsoil shall be stripped in all fill areas before placement of material. All excess material shall be disposed of off-site at an approved facility by the contractor unless otherwise directed by the Owner.

8. Topsoil Placement

The contractor shall place topsoil to a minimum depth of 6 inches over all unpaved disturbed areas ready for landscaping. The surface of the topsoil shall be free from clods, stones, sticks and debris. Placement shall include spreading, cultivating, lightly compacting, dragging and grading. Topsoil, when placed, shall be dry enough so as not to puddle or bond. Topsoil shall not be placed when the subgrade is frozen, excessively wet, or in any other condition detrimental to proper grading. Remove all foreign matter and soil clods larger than 1" in diameter. If undesirable vegetation is present prior to seeding, the topsoil shall be disked until all vegetation has been removed

9. Seeding

All disturbed unpaved areas outside of detention basins shall be seeded or sodded with Kentucky Bluegrass mixture or with another mixture approved by the owner's representative. All seeded areas shall be covered with the specified erosion control matting. All seeded areas shall have an adequate growth of grass before work is accepted. All seeded areas shall be stabilized within 24 hours after seeding operations have been completed. The owner's representative shall approve the seed bed prior to sowing any seeds. Prior to starting seed work, contractor shall submit the name of seed supplier for the project and labels from the bags. The seed shall be sown with a machine that mechanically places the seed in direct contact with the soil, packs, and covers the seed in one continuous operation. Broadcasting will be allowed as approved by owner's representative in inaccessible areas where the use of the equipment specified is physically impossible. Adequate growth will be defined as root depth into topsoil a minimum of 2" and dense, green, consistent turf void of any bare or patchy areas of more than 9 square inches. The contractor shall maintain the turf grass until final acceptance. Maintenance to include grade repair, reseeding, mowing, insect & weed control, trimming & edging. Each mowing shall occur when the grass has reached a height of 4 inches. Mow to a height of 3 inches, turf shall be mowed so as not to remove more than 1/3 of the total height. The cost of such maintenance shall be included in the turf grass installation cost. All seeded areas shall have an adequate growth of grass before work is accepted.

10. Traffic Control

The contractor shall obtain, erect, maintain and remove all signs, barricades, flagman, and other traffic control devices as may be necessary for the purpose of regulating, warning or guiding traffic. Placement and maintenance of all traffic control devices shall be as directed by the municipal inspector and in accordance with the applicable parts of Article 701 of the Standard Specifications for Road and Bridge Construction. All traffic protection will be considered incidental to the contract.

Prior to the start of construction, the contractor shall coordinate all construction operations and material storage requirements with the station commander. Station access shall be maintained at all times.

11. Engineer's Responsibility

The engineer shall be responsible for the following:

A. To visit the construction site in order to better carry out the duties and responsibilities assigned by the Owner and undertaken by the engineer;

B. The engineer shall not, during such visits or as a result of such observations of the contractor's work in progress, supervise, direct, have control over the contractor's work, nor shall the engineer have the authority over the responsibility for the means, methods, techniques, sequences, or procedures of construction selected by the contractor for safety precautions and programs incidental to the work of the contractor, or for any failure of the contractor to comply with the laws, rules, regulations, ordinances, codes or orders applicable to the contractor furnishing and performing his work. Accordingly, the engineer can neither guarantee the performance of the construction contracts by the contractor nor assume responsibility for the contractor's failure to furnish and perform his work in accordance with the contract documents.

12. Construction Drawings/Contractor's Responsibility

No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. In addition, the contractor must verify the engineer's line and grade stakes. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the engineer before doing any work, otherwise, the contractor assumes full responsibility. In the event of disagreement between the construction plans, Standard Specifications and/or special details, the contractor shall secure written instructions from the engineer prior to proceeding with any part of the work effected by omissions or discrepancies. Failing to secure such instructions, the contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question arising with respect to specifications, the decision of the engineer shall be final and conclusive.

13. Indemnification

The contractor shall indemnify and hold harmless the Owner and J. Condon & Associates, Inc. from and against all claims, damages, losses and expenses, including attorney's fees arising out of or resulting from the performance of the contractor's work. In any and all claims against the owner or J. Condon & Associates, Inc., by any employee of the contractor, or anyone directly or indirectly employed by the contractor, or anyone for whose acts the contractor may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of damages, compensation or benefits payable by or for the contractor under Worker's Compensation acts, disability benefit acts or other employee benefit acts.

14. Insurance Requirements

The contractor shall purchase and maintain Comprehensive General Liability and other insurance set forth below which will provide protection from claims which may arise out of or resulting from the performance of work by anyone directly or indirectly employed by the contractor or by anyone for whose acts the contractor may be liable.

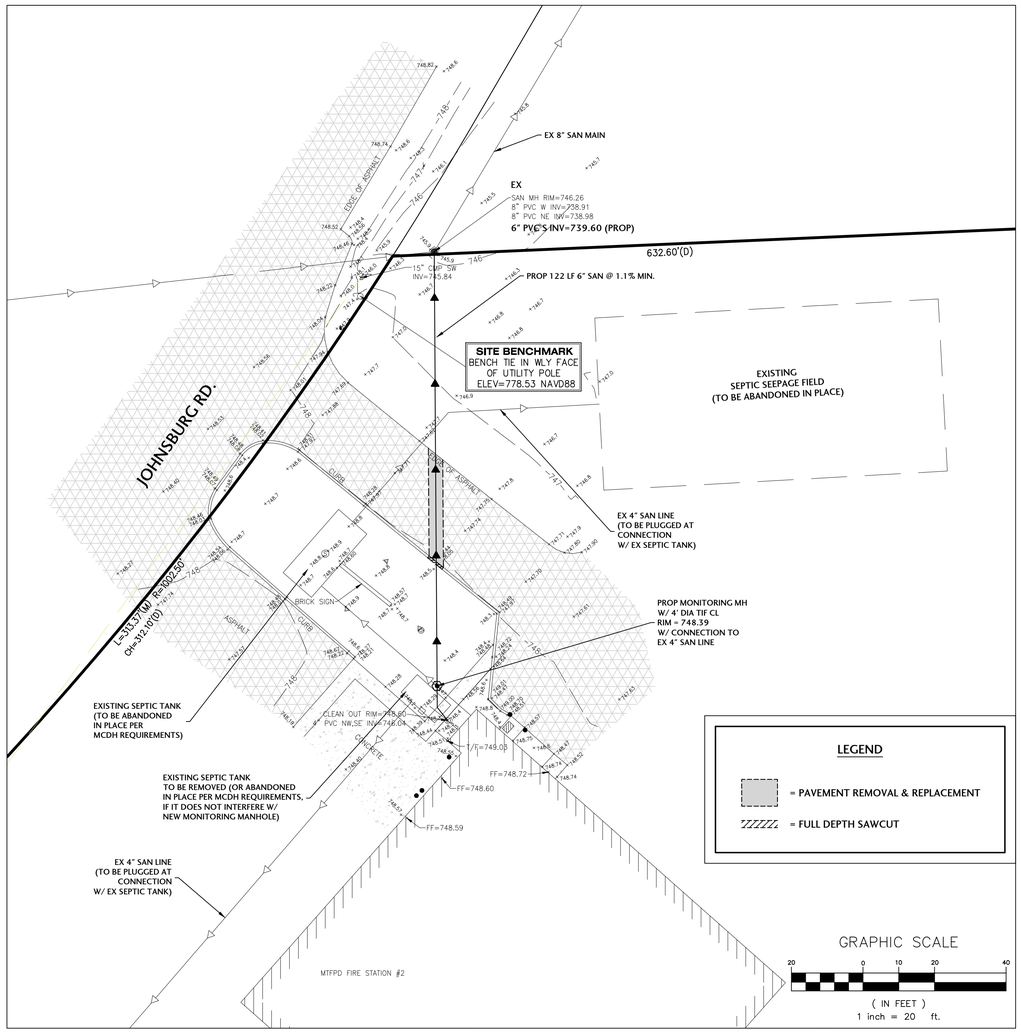
A. Worker's Compensation and Employer's Liability insurance in any amount not less than statutory limits required by law.

B. Comprehensive General Liability insurance including coverage in the amount of $500,000 per accident for property damage and $1,000,000 per person and $2,000,000 aggregate per accident for bodily injury, sickness or disease, or death of any person.

C. Comprehensive Automobile Liability insurance covering all automobiles, trucks, trailers and any other motorized equipment owned or leased by the contractor.

15. Certificate of Insurance

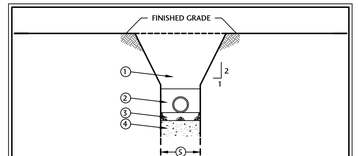
The contractor shall not commence work until he has filed with the Owner's Representative a certificate of insurance showing complete coverage of all insurance required, signed by the insurance companies or their authorized agents. Each certificate shall provide that coverage shall not be terminated or reduced without 30 days advance written notice to the Owner's Representative. The contractor shall name the Owner & J. Condon & Associates, Inc. as additional insureds on the Comprehensive General Liability and Automobile Liability policies.



LEGEND

= PAVEMENT REMOVAL & REPLACEMENT

= FULL DEPTH SAWCUT

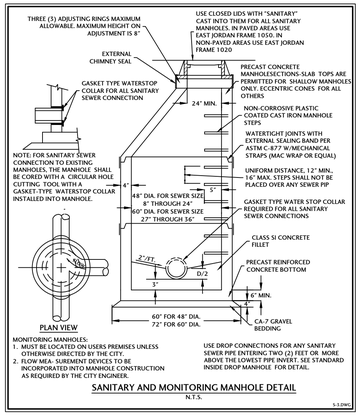


1. TRENCH BACKFILL UNDER PAVEMENT, CURB AND GUTTER AS INDICATED IN ROAD SUBGRADES AND WITHIN 2 FEET OF ANY PROPOSED CURB AND GUTTER OR SIDEWALK, MECHANICALLY COMPACTED BACKFILL OF EXCAVATED MATERIALS IN OTHER LOCATIONS IF APPROVED BY THE CITY ENGINEER. REFER TO TRENCH BACKFILL SPECIAL PROVISIONS FOR MATERIALS AND COMPACTION REQUIREMENTS.
2. SANITARY SEWER (PVC) COMPACTED GRANULAR MATERIAL CA-6 TO 12" ABOVE TOP OF PIPE (ALSO SEE NOTE BELOW)
3. 4" COMPACTED GRANULAR BEDDING, CA-6 GRADATION
4. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY ENGINEER AND REPLACED WITH SUITABLE MATERIAL AND COMPACTED
5. TRENCH WIDTH - Pipe O.D. + 12" MINIMUM
Pipe O.D. + 18" MAXIMUM

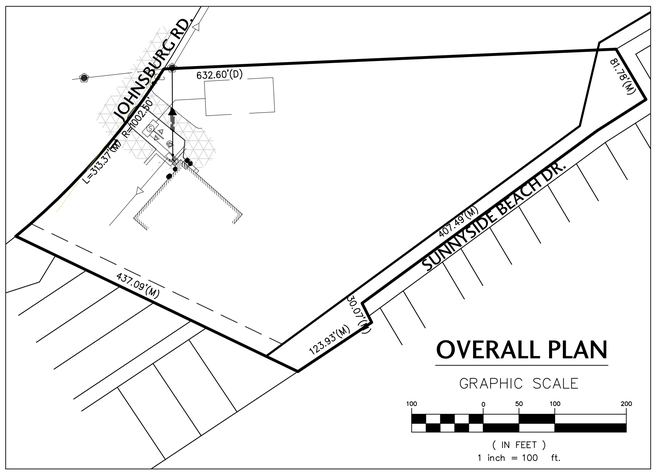
NOTE:

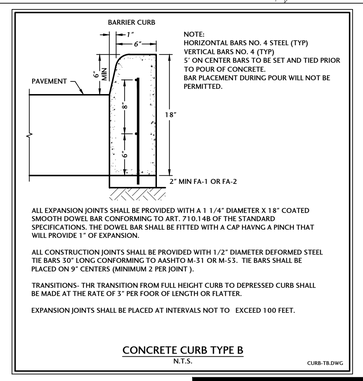
PVC PIPE CONFORMING TO THE SDR SPECIFIED IN THE PLANS SHALL BE INSTALLED TO THE LATEST REVISED SPECIFICATION REQUIREMENTS OF ASTM D-2321 USING EITHER COMPACTED CLASS I OR CLASS II GRANULAR EMBEDMENT MATERIALS FOR BEDDING, HAUNCHING AND INITIAL BACKFILL OF 12 INCHES OVER THE TOP OF PIPE TO PROVIDE THE NECESSARY SUPPORT FOR THE PIPE SO THAT THE MAXIMUM DEFLECTION DOES NOT EXCEED 5% OF THE PIPE'S ORIGINAL INTERNAL DIAMETER

TYPICAL TRENCH CROSS SECTION
N.T.S.
TRENCH1.DWG

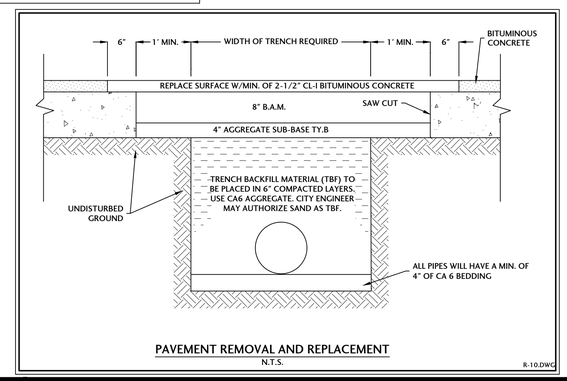


SANITARY AND MONITORING MANHOLE DETAIL
N.T.S.
S-1.DWG





CONCRETE CURB TYPE B
N.T.S.
CURB-TB.DWG



PAVEMENT REMOVAL AND REPLACEMENT
N.T.S.
R-10.DWG

I HEREBY CERTIFY THAT THE PLANS WITH THE FIRM'S NAME LISTED BELOW WERE PREPARED UNDER MY DIRECT SUPERVISION. FURTHERMORE, THE PROPOSED PROJECT WILL NOT RESULT IN DRAINAGE, EROSION OR RUNOFF WHICH ADVERSELY IMPACTS ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY. THE PLANS PREPARED MEET THE MINIMUM REQUIREMENTS OF THE MCHENRY COUNTY STORMWATER MANAGEMENT ORDINANCE. DATED AT RINGWOOD, ILLINOIS THIS 16th DAY OF AUGUST, 2023

James E. Condon

JAMES E. CONDON, P. E., J. CONDON & ASSOCIATES, INC.
ILLINOIS REG. PROF. ENGINEER No. 062-044555 EXPIRATION DATE 11-30-2023
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION FIRM NUMBER: 184-006759

J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815.728.0068
IL DESIGN FIRM # 184-006759

McHENRY TWP. FIRE PROTECTION DISTRICT
McHENRY, ILLINOIS

N W E S

SCALE
VARIES

ISSUE DATE
08/16/2023

PROJECT MANAGER
JEC

DESIGNER
LRT

QUALITY CONTROL
MAM

MTFPD STATION #2 SANITARY SEWER EXTENSION
McHENRY, ILLINOIS

NO.	DATE	DESCRIPTION

PROJECT NUMBER
MTFP-23048-3

SHEET TITLE
UTILITY PLAN

SHEET NUMBER
C1.0

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