

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.

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 "SHERMAN BOULEVARD & RIVERSIDE DRIVE STORM SEWER."

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.

D. Bedding of Pipe: All pipe shall be installed on a bedding of approved, compacted granular material unless otherwise approved by the NTRD. 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 exist 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 NTRD in writing.

3. Inspection

All improvements shall be subject to inspection by a duly authorized and qualified NTRD inspector both during the course of construction and after construction is complete. NTRD 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. Storm Sewers

Storm sewers shall be of reinforced concrete pipe meeting the requirements of ASTM C-76. Pipe shall be Class III for depths less than or equal to 14 feet and Class IV for depths exceeding 14 feet or less than 3 feet under paved surfaces. All joints shall be completed with mastic joint materials.

OR

Corrugated Polyethylene (HDPE) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-294 (12" and larger), Type 5 (corrugated outside smooth inside, 4" - 48"). The joints shall be bell and spigot having a factory installed Elastomeric rubber

"O-ring" gasket which meets ASTM F-477.

OR

Corrugated Polypropylene (CPP) Pipe with Smooth Interior. Pipes and fittings shall meet the requirements of AASHTO M-330 (12" and larger). The joints shall be bell and spigot having meeting the requirements of ASTM F2881 or AASHTO M330 with a factory installed Elastomeric rubber "O-ring" gasket which meets ASTM F-477.

OR

PVC storm sewer shall be SDR 26 ASTM D3034 with ASTM D3212 joints.

5. Storm Sewer Frames And Grates

All frames and grates shall be as listed below:
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6. Earth Excavation

This item shall include stripping and stockpiling of all topsoil in areas designated by the NTRD. 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.

7. 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.

8. Seeding

All disturbed unpaved areas shall be seeded or sodded with Kentucky Bluegrass mixture or with another mixture approved by the NTRD. 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 NTRD 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. Broadcast seeding will be allowed as approved by NTRD 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.

9. Bituminous Materials (Prime Coat)

Prime shall be MC-30 applied at a rate of 0.35 GAL/SY of pavement for all aggregate areas.

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.

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 NTRD 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. Preconstruction Conference

A preconstruction conference for representatives of the developer, municipality and contractor will be held before the contractor proceeds with construction, at a time and place convenient for all parties, for review of the contractor's construction schedules, to establish procedures for handling shop drawing and other submittals and to establish a working understanding among the parties to the contract work.

15. 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.

16. Certificate of Insurance

The contractor shall not commence work until he has filed with the NTRD 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 NTRD. The contractor shall name the Owner & J. Condon & Associates, Inc. as additional insureds on the Comprehensive General Liability and Automobile Liability policies.

17. Erosion Control

It shall be the contractor's responsibility to properly control erosion on the job site through the use of siltation ponds, filter fabrics, etc. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the contractor until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the contractor.

The contractor's responsibility for erosion control shall extend throughout the construction process. The contractor shall be responsible for clean-up of paved surfaces within and outside of the project.

All erosion control practices shall comply with the latest revision of the Illinois Urban Manual (Blue Book) as published by the IEPA.

STANDARD SOIL EROSION AND SEDIMENT CONTROL

- Control measures shall meet the minimum standards and specifications of the *Illinois Urban Manual* (www.aiswcd.org/IUM) unless stated otherwise.
- Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
- Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
- Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
- Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
- Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
- Sediment control measures shall be installed prior to the disturbance of tributary areas.
- Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:
 - Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and
 - In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.
- Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure.
- Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles.
- The stormwater management system shall be protected from erosion and sedimentation downslope from disturbed areas. Inlet protection that reduces sediment loading, while allowing runoff to enter the inlet shall be required for all storm sewers. Check dams, or an equivalent control measure, shall be required for all channels. Filter fabric inlet protection and straw bale ditch checks are not acceptable control measures.
- If dewatering services are used, discharges shall be routed through an effective sediment control measure (e.g., sediment trap or an equivalent control measure). The Enforcement Officer shall be notified prior to the commencement of dewatering activities.
- All temporary soil erosion and sediment control measures shall be removed within 30 days after final stabilization of the development site is achieved or after the temporary measures are no longer necessary. Trapped sediment shall be removed and disturbed areas shall be permanently stabilized.
- Stockpiled soil and materials shall be removed from flood hazard areas at the end of each work day. Soil and materials stockpiled in IWMC or buffer areas shall be placed on timber mats, or an equivalent control measure.
- Effective control measures shall be utilized to minimize the discharge of pollutants from the development site. At a minimum, control measures shall be implemented in order to:
 - Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash water; and
 - Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, vehicle fluids, sanitary waste, and other materials present on the development site to precipitation and to stormwater.
- Adequate receptacles shall be provided for the depositing of all construction material debris generated during the development process. The applicant shall not cause or permit the dumping, depositing, dropping, throwing, discarding or leaving of construction material debris upon or into any development site, channel, or IWMC. The development site shall be maintained free of construction material debris.
- The Enforcement Officer may require additional or alternate soil erosion and sediment control measures, based on development site specific considerations and the effectiveness of the installed control measures.

Standard Drain Tile Notes

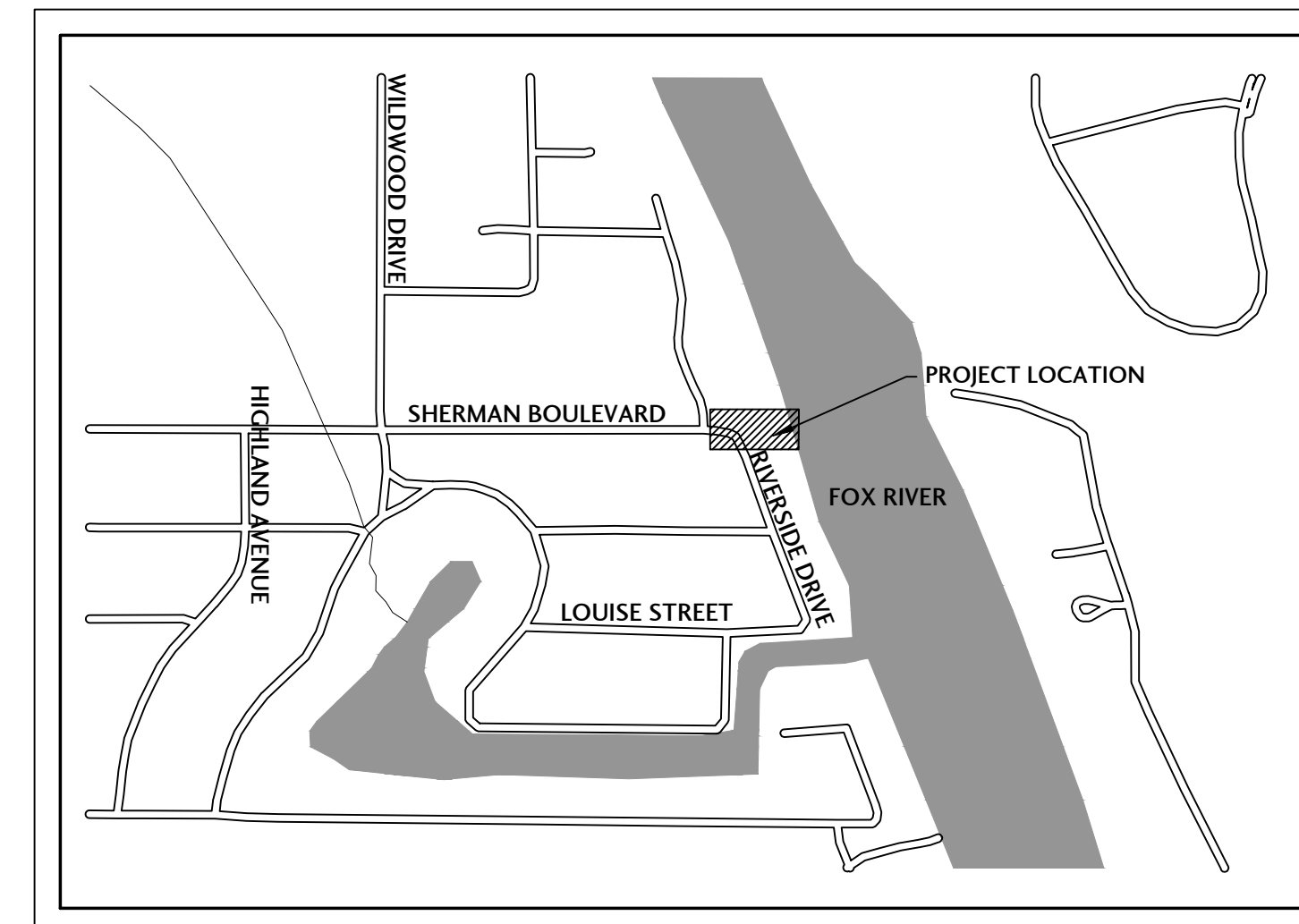
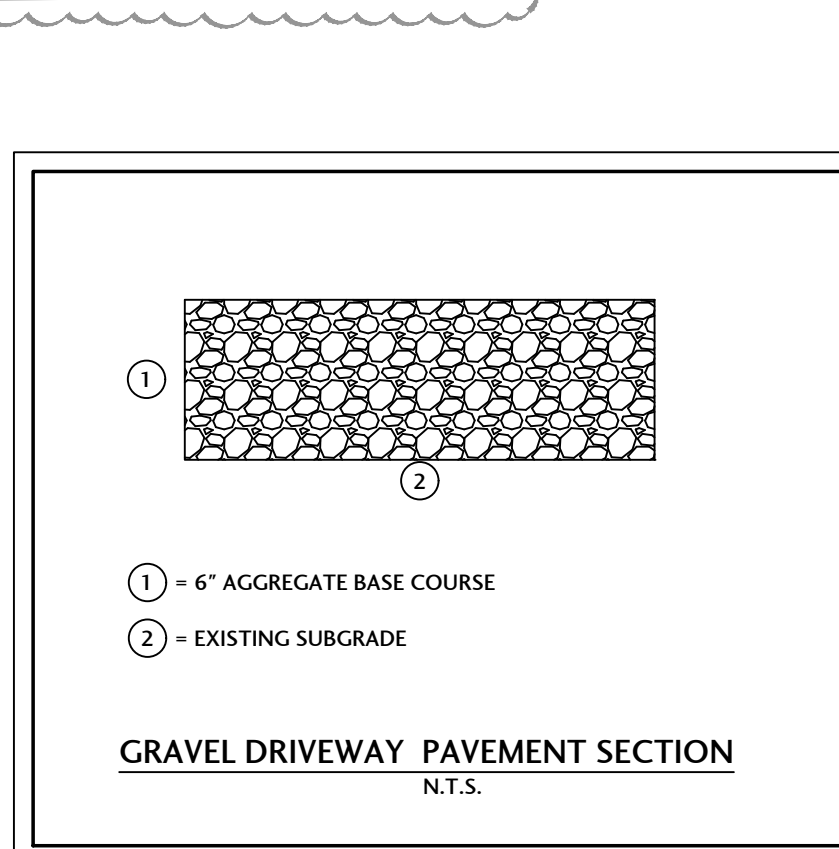
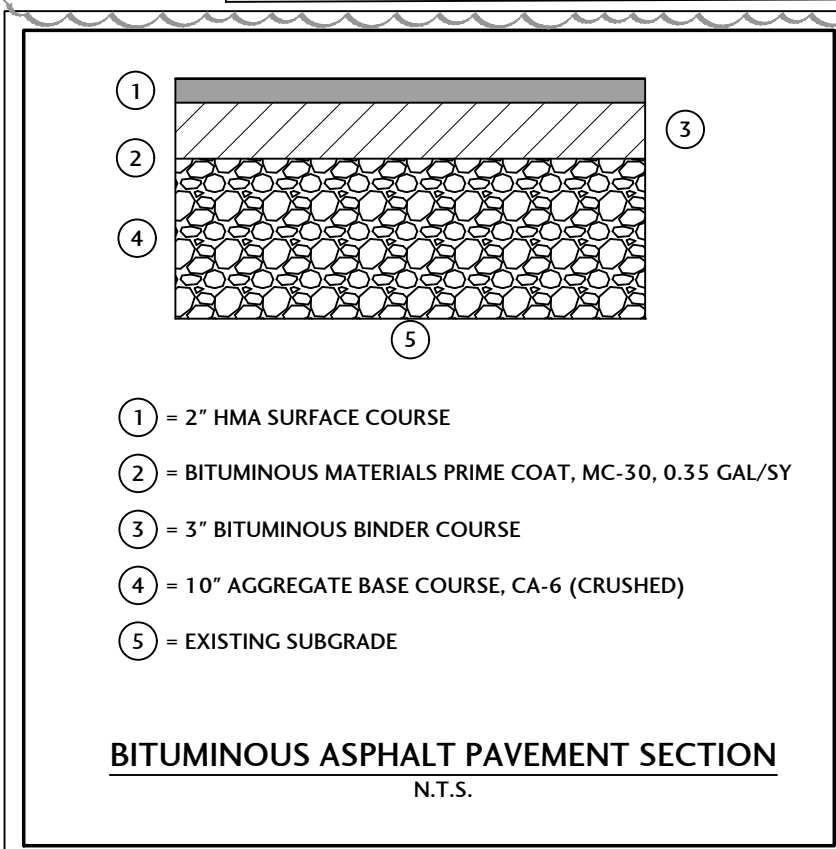
- Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
- All abandoned drain tiles within disturbed areas shall be removed in their entirety.
- Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

EROSION CONTROL SEQUENCE OF CONSTRUCTION/EROSION CONTROL MEASURES

- Installation of sedimentation and erosion control measures.
- Construction of detention basins and sediment traps.
- Site clearing and topsoil stripping.
- Excavation and grading.
- Placement of topsoil on disturbed areas.
- Seeding, landscaping and final stabilization Seeding to be completed within 7 days of final grading.
- All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed.

EROSION CONTROL NOTES

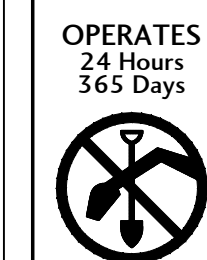
- Construction on this site shall comply with all CITY/VILLAGE/COUNTY ordinances pertaining to erosion control.
- All disturbed areas shall be stabilized within 7 days of active disturbance.
- All roadways shall be cleaned at the end of each day.
- Silt Sack/approved equal measure shall be placed between all open frame and grates.
- All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
- All temporary erosion control measures shall be removed and disposed of within 30 days of final stabilization. All trapped sediment is required to be stabilized or disposed.
- All erosion and sediment control work shall conform to the Illinois Urban Manual for erosion control.



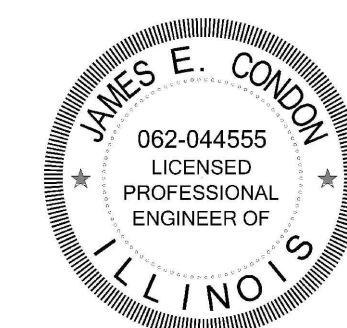
LOCATION MAP
N.T.S.

BENCHMARKS

SITE BENCHMARK:
BENCH TIE IN NORTH FACE OF UTILITY POLE
ELEV=737.91 NAVD88



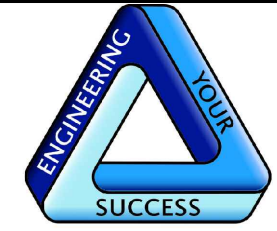
OPERATES 24 Hours 365 Days
CALL JULIE 1-800-892-0123
WITH THE FOLLOWING:
COUNTY MCHENRY
CITY-TOWNSHIP NUNDA TOWNSHIP
SEC. & 1/2 SEC. NO. # NE 1/4 SEC 30, T48N, R9E
48 Hours Before You Dig.
EXCLUDING SAT., SUN., & HOLIDAYS



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 13th DAY OF JANUARY, 2025

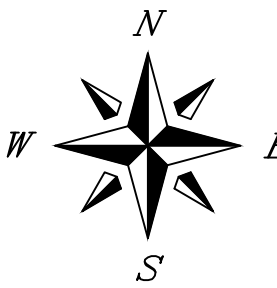
James E. Condon

JAMES E. CONDON, P. E., J. CONDON & ASSOCIATES, INC.
ILLINOIS REG. PROF. ENGINEER No. 062-044555 EXPIRATION DATE 11-30-2025
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

NUNDA TWP.
ROAD DIST.
NUNDA TOWNSHIP,
ILLINOIS



SCALE	N/A
ISSUE DATE	09/09/2024
PROJECT MANAGER	JEC
DESIGNER	LRT
QUALITY CONTROL	JEC

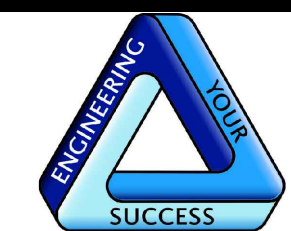
SHERMAN BLVD. &
RIVERSIDE DR.
STORM SEWER
NUNDA TOWNSHIP,
ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/24	PER COUNTY COMMENTS
2	12/2/24	PER COUNTY REVIEW COMMENTS 11/7/24
3	01/13/25	ISSUED FOR CONSTRUCTION

PROJECT NUMBER
NTRD-24035-3

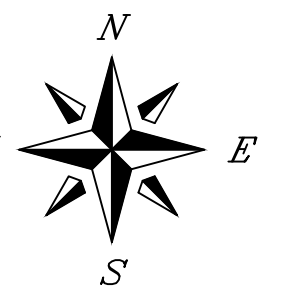
SHEET TITLE
SPECIFICATIONS AND TYPICAL SECTIONS

SHEET NUMBER
C0.0



J. CONDON & ASSOCIATES, INC.
CONSULTING ENGINEERS
5415 BUSINESS PARKWAY
RINGWOOD, ILLINOIS 60072
815-728-0068
IL DESIGN FIRM # 184-006759

NUNDA TWP.
ROAD DIST.
NUNDA TOWNSHIP,
ILLINOIS



SCALE
1" = 10'
ISSUE DATE
09/09/2024
PROJECT MANAGER
JEC
DESIGNER
LRT
QUALITY CONTROL
JEC

SHERMAN BLVD. &
RIVERSIDE DR.
STORM SEWER
NUNDA TOWNSHIP,
ILLINOIS

NO.	DATE	DESCRIPTION
1	10/14/24	PER COUNTY COMMENTS
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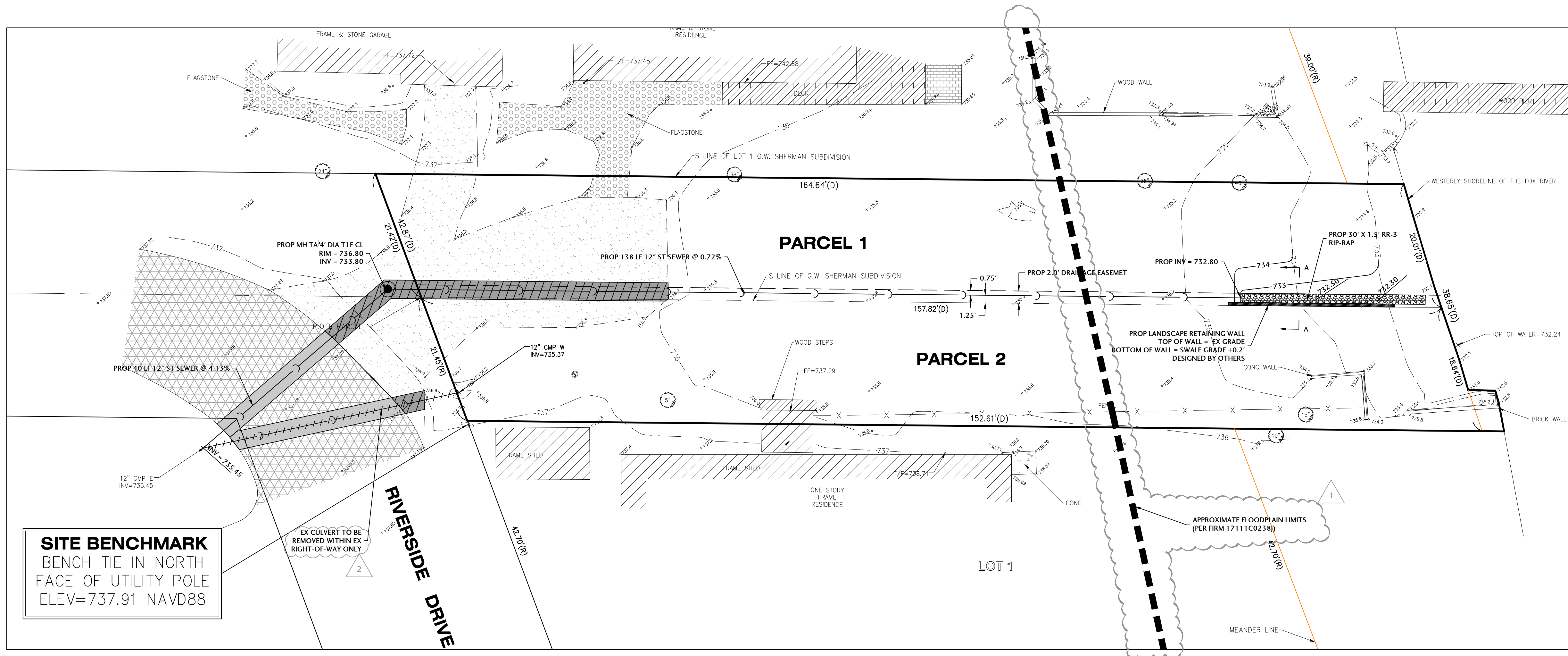
PROJECT NUMBER
NTRD-24035-3

SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

C1.0



LEGEND

- = EXISTING BITUMINOUS PAVEMENT
- = EXISTING GRAVEL
- = EXISTING CONCRETE
- = EXISTING BRICK
- = EXISTING FLAGSTONE
- = EXISTING BUILDING
- = EXISTING DECK
- = REMOVE/REPLACE PAVEMENT
- = REMOVE/REPLACE GRAVEL
- = UTILITY PIPE REMOVAL

BASE FLOOD ELEVATION = 738.20 (NAVD88)
FLOODING SOURCE: FOX RIVER BASE FLOOD ELEVATION (BFE) DETERMINED FROM FIRM PANEL 17111C0238 WITH AN EFFECTIVE DATE OF 11/16/2006

NOTE:
ALL MATERIAL EXCAVATED IN THE FLOODPLAIN SHALL BE DISPOSED OF OFFSITE AND OUTSIDE OF THE FLOODPLAIN.

GRADING & EROSION CONTROL NOTES:

- ALL DISTURBED AREAS SHALL BE STABILIZED WITH NA GREEN DS75 EROSION BLANKET OR APPROVED EQUAL OR HYDROSEEDED UNLESS OTHERWISE NOTED WITHIN THE PLAN SET.
- CONTRACTOR RESPONSIBLE FOR MAINTENANCE/REPAIR OF EROSION CONTROL MEASURES UNTIL ADEQUATE VEGETATION GROWTH HAS OCCURRED. MAINTENANCE/REPAIR WORK SHALL BE INCIDENTAL TO THE INSTALLATION COSTS.
- CONTRACTOR RESPONSIBLE FOR ADDITIONAL EROSION CONTROL MEASURES AS RECOMMENDED BY THE ENFORCEMENT OFFICER OR THE DESIGNATED EROSION INSPECTOR AS SITE CONDITIONS WARRANT.
- IF CONTRACTOR NEEDS TO DEWATER WHEN EXCAVATING, THEY MUST PUMP TO A "DIRT BAG" OR APPROVED EQUAL.
- CONTRACTOR IS RESPONSIBLE TO EMPLOY DUST CONTROL METHODS TO REDUCE & PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. IN ADDITION TO MINIMIZATION OF SOIL DISTURBANCE, CONTRACTOR SHALL UTILIZE MULCHING METHODS (IDOT 251.03 OR 251.04), IRRIGATION AND BARRIERS.

