VIEWS OF NAPERVILLE CLUBHOUSE
SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

SECTION 13 TOWNSHIP 38 NORTH RANGE 9 EAST
NAPERVILLE, ILLINOIS
DuPAGE COUNTY

SITE COVERAGE SUMMARY
(STORMWATER MANAGEMENT)

Development Area	Area (sf) Existing Conditions	Proposed Conditions	Change
Impervious	32,673	34,813	2,140
Permeable	0	3,350	3,350
Pervious	35,451	29,961	-5,490
Subtotal	68,124	68,124	0

"Net New Impervious" = 2,140 S.F. < 2,500 S.F.
∴ PCBMPs Not Required

ARCHITECT:

Maemar P.C.
3996 Orchard Lane
Long Grove, IL 60047
Tel: 847-550-9805
Fax: 847-550-9815
www.maemarpc.com

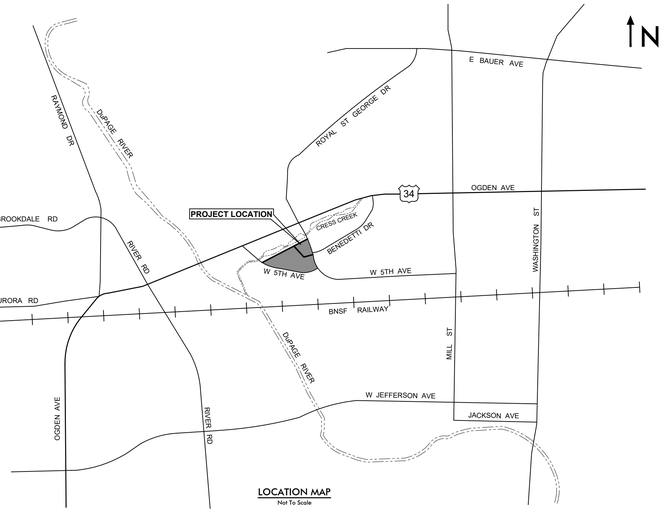
OWNER:

Views of Naperville
701 Royal Saint George Drive
Naperville, IL 60563
Tel: 630-796-7720

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway
Schaumburg, IL 60173
Tel: 847-394-6600
Fax: 847-394-6608
www.haegerengineering.com

CITY OF NAPERVILLE
400 S. Eagle Street
Naperville, IL 60540
Tel: 630-420-6111



LOCATION MAP
Not To Scale

BENCHMARKS:

City of Naperville Benchmark:

Station No. 1506 on the northest corner of 5th Avenue and Mill Street

Elevation = 690.61 NAVD 88

Site Benchmark

CP # 2279 (see survey)
Description: SW Bolt on Hydrant
Elevation: 692.68 NAVD 88 (Geoid 12A)

CP # 601 (see survey)
Description: MAG Nail
Elevation: 701.12 NAVD 88 (Geoid 12A)

CP # 604 (see survey)
Description: MAG Nail
Elevation: 700.96 NAVD 88 (Geoid 12A)

CP # 605 (see survey)
Description: MAG Nail
Elevation: 693.82 NAVD 88 (Geoid 12A)

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

INDEX TO SHEETS

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
B	B-Box	B
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
H	Hand Hole	H
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
GV	Gas Valve	GV
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
E	Electrical Pedestal	E
E	Electric Manhole	E
	Guy Wire	
	Utility Pole	
T	Telephone Pedestal	T
T	Telephone Manhole	T
T	Telephone Line	T
CATV	Cable TV Line	CATV
C	Cable TV Pedestal	C
	Flagpole	
M	Mailbox	M
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	T/W XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	B/W XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	
	Recommended Garage Hand With Driveway Slope	X.X%

PHILIP A. CZAR
062-070701
LICENSED PROFESSIONAL ENGINEER
OF ILLINOIS
EXPIRES 11-30-25

No.	Revision	Date
1	REVISED PER CITY REVIEW	05/02/2024

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Illinois Professional Design Firm License No.: 184-003152
www.haegerengineering.com

TITLE SHEET

VIEWS OF NAPERVILLE CLUBHOUSE
SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager:	P A C
Engineer:	C J B
Date:	03/22/2024
Project No.	22-028
Sheet	C1.0 / C8

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Plot Date: May 23, 2024 - 9:25am Plotted By: phil-c
File Name: P:\2022\22028\Drawings\Final Engineering\22028-PLANS.dwg

GENERAL NOTES

1. Definition of Terms:
    a. "Owner" shall mean the person or entity with which Haeger Engineering, LLC has been contracted with to prepare the Plans and Specifications.
    b. "Engineer" shall mean Haeger Engineering, LLC.
    c. "Contractor" shall mean the persons or entities responsible for performing and constructing the work described in the Plans, Specifications and other Construction Documents including but not limited to furnishing all labor, materials, tools, equipments, and other incidentals necessary.
    d. "Plans and Specifications" shall mean the Engineering Drawings and any Specifications prepared by Haeger Engineering, LLC, the Engineer.
    e. "Jurisdictional Agency" shall mean any local, municipal, county, township, state or federal entity of government or other entity having jurisdiction of some aspect of the project from whom approval, permit and/or review and approval was required.
2. The Specifications governing this project are as follows:
    a. All applicable Village/City and other applicable Jurisdictional Agency Ordinances, Codes, Regulations, Requirements, Policies, Specifications, Standards, etc.
    b. Roadway and Earthwork construction shall conform to the Illinois Department of Transportation (IDOT) "Standard Specifications for Road and Bridge Construction", latest edition and any subsequent "Supplemental Specifications and Recurring Special Provisions" as well as any applicable IDOT Highway Standards. Hereafter these items shall be collectively be referred to as the IDOT Standard Specifications.
    c. Water Main, Storm Sewer, and Sanitary Sewer construction shall conform to the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition.
    d. Soil Erosion and Sedimentation Control shall conform to the Illinois Environmental Protection Agency (IEPA) "Illinois Urban Manual" (IUM), latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition.
    e. Traffic Control shall conform to the "Manual of Uniform Traffic Control Devices" (MUTCD), latest edition, as well as the latest edition of the "Illinois Supplement to the MUTCD", and IDOT "Quality Standard for Work Zone Traffic Control Devices", latest edition.
    f. All handicap accessibility items shall conform to the Illinois Accessibility Code (IAC), latest edition.
    g. General Notes and Specifications contained herein or elsewhere as a separate document.

    If a conflict, contradiction, or discrepancy occurs between any of the above Specifications the more stringent requirement shall apply, unless directed otherwise by the applicable Jurisdictional Agency.
3. Contract Documents:
    a. The Engineer's Plans and Specifications shall be included as part of the Contract Documents.
    b. All Contractors shall carefully examine the Plans and Specifications, and other Contract Documents prepared for the work. They shall visit the site of the work and acquaint themselves with all local conditions, codes, and requirements affecting the contract. If awarded the contract, they shall not be allowed extra compensation by reason of any unforeseen difficulties or obstacles which the Contractor could have discovered or reasonably anticipated or inferred prior to bidding or start of construction.
    c. Should it appear that the work covered by the Plans and Specifications or other Contract Documents is not sufficiently detailed or explained, a Request For Information (RFI) Form shall be submitted to the Engineer for further explanations and drawings as may be necessary to clarify the point in question prior to the contract award. It is the intention of the Contract Documents to provide a job complete in every respect. Incidental items or accessories necessary to complete the work may not be specifically noted or shown but that are necessary to complete the project shall be considered incidental to the Contract. The Contractor is responsible for this result and to turn over the project in complete operating condition, irrespective of whether the contract documents cover every individual item in minute detail.
    d. The Contractor shall review the subsurface exploration and geotechnical report (a.k.a. soil boring report) prepared by ____________________ dated ___________________, to become familiar with the subsurface soil conditions for the site. Copies of all such soil boring reports for the property can be obtained from the Owner. If any additional soils data is needed to confirm the Contractor's opinions of the subsurface conditions, this shall be done at the Contractor's expense. The Contractor shall obtain the Owner's written authorization to access the site to conduct a supplemental soils investigation. The Owner and Engineer make no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof. Furthermore, the Owner and Engineer assume no responsibility for the possibility that during construction, the soil and groundwater conditions may vary between borings or are different than previously indicated. Any bracing, sheeting, dewatering or special construction methods deemed necessary by the Contractor in order to install the proposed improvements shall be considered incidental to the Contract and no additional compensation will be allowed.
4. Should any apparent errors, omissions, discrepancies or conflicts be discovered on the Plans, Specifications, Quantities or other Contract Documents by the Contractor, whether prior to or after the award of the contract, the Engineer's attention shall be called to the same before work is begun thereon, so that proper clarification can be provided or revision made. If any work is done without contacting the Engineer, it shall be considered that the Contractor has proceeded at their own risk and expense.
5. Whenever the performance of work is indicated on the Plans, and no specific item is included in the Contract for payment, the work shall be considered incidental to the Contract and no additional compensation will be allowed. The Contractor shall provide all necessary labor, material, equipment, etc. necessary to perform all the work required for construction of the proposed improvements.
6. The base plan/drawing for the Engineering Plans (existing conditions, site topography, utilities, rights-of-way, etc.) was obtained from the topographic survey prepared by:

    Haeger Engineering, LLC
    100 East State Parkway
    Schaumburg, IL 60173
    847-394-6600
    Job Number: #22-028

7. The Owner shall obtain the necessary approvals from the following Jurisdictional Agencies:
    a. City of Naperville
    b. Illinois Environmental Protection Agency (IEPA) - Notice of Intent (NOI) General Permit to Discharge Storm Water from Construction Site Activities
8. The Contractor, unless otherwise agreed upon in writing with the Owner prior to the start of Construction, shall at his own expense, obtain all other approvals including permits, licenses, etc., as may be required for the execution of this work as well as provide all necessary notices, pay all fees required, post bonds, obtain all necessary insurance, and comply with all laws, ordinances, rules, and regulations relating to the work and to the preservation of public health and safety. The Contractor shall also provide all required insurance and/or bonds as may be required by the Jurisdictional Agencies. In addition, the Contractor shall meet all of the requirements of any permits as might be issued for this work by other Agencies, and shall pay for at their sole expense any surety, insurance or bonds as may be required by the Jurisdictional Agencies.
9. No work shall proceed until the appropriate permit or permits have been obtained for the item or items to be constructed. If any work does proceed without the appropriate permits or approvals, it is being done without the permission or consent of the Engineer. The Contractor and Party authorizing the work to proceed shall be assumed to be proceeding at their own risk and the Engineer shall not be held liable or responsible for any work being performed without a permit.
10. The Contractor shall indemnify and hold harmless the Owner, Engineer, Village/City, and other Jurisdictional Agencies as well as all of their respective officers, employees, agents, and Engineers from and against all losses, claims, demands, payments, suits, actions, recoveries, and judgment of every nature and description brought or recovered against them, by reason of any act, error or omission of said Contractor, their agents or employees in the execution of the work or in the guarding of it.
11. The construction shall be under the general inspection and observation of the designated individual authorized by the Village/City or other applicable Jurisdictional Agencies. The Village/City, Jurisdictional Agencies, Owner, and Engineer shall be notified at least two working days prior to the commencement of work.
12. The location of existing underground utilities such as water mains, sewers, gas lines, electric lines, cable TV lines, fiber optic lines, etc., as shown on the Plans, has been determined from the best available information and has been provided for the convenience of the Contractor. However, the Owner and Engineer do not assume responsibility in the event that during construction, utilities other than those shown may be encountered and that the actual location of those which are shown may be different from the location as shown on the Plans. The Contractor is to verify the location of all utilities prior to the start of work and is responsible for damage to the same. The Contractor shall contact J.U.L.I.E. or Digger by dialing 811 (Outside the City of Chicago - J.U.L.I.E.: 1-800-892-0123 or within the City of Chicago - Digger: 312-744-7000) and the Village/City Public Works Department for utility locates at least 48 hours, excluding weekends and holidays, before digging. For any utility companies which are not members of JULIE or DIGGER, the Contractor shall contact the Owners of each respective utility directly for utility locates at least 48 hours, excluding weekends and holidays, before digging.
13. In some instances, the existing utilities are shown on the Plans according to information obtained from the utility companies (atlas information) and/or surveys performed By Others. The Owner and Engineer do not guarantee the accuracy or completeness of this information. The Contractor shall be aware of potential conflicts with existing or other proposed utilities as indicated on the Plans or that become apparent as the result of field locates By Others. The Contractor shall make their own investigations as necessary to determine the existence, nature, and location of all utility lines and related appurtenances within the limits or adjacent to the proposed improvements. The Contractor shall locate all utilities far enough in advance to avoid all conflicts between existing utilities and proposed improvements and make the Engineer aware of any such conflicts. If the Contractor encounters a conflict between the proposed improvements and existing utility that was not located in advance by the Contractor, then the Contractor shall at no cost to Owner, relocate the proposed improvements and/or utility to avoid the conflict.
14. The Contractor will be required to cooperate with all utility companies involved in connection with the removal, temporary relocation, construction, reconstruction or abandonment by these companies of any and all services or facilities owned or operated by them within the limits or general vicinity of the proposed improvements. Further, at the direction of the Owner and Utility Companies the Contractor shall coordinate the location and install PVC sleeves as necessary under the proposed pavement, curbs, walks, etc. for utility companies to run their proposed utility lines.
15. Before doing any work which will damage, disturb or leave unsupported, or unprotected any utility lines or related appurtenances encountered, the Contractor shall notify the respective Owner thereof, who will make all arrangements for relocating, adjusting, bracing, or otherwise maintaining or abandoning service on lines that fall within the limits of the proposed construction without cost to the Contractor, including the removal of all cables, manhole covers and other related appurtenances which the Owner desires to salvage. After such arrangements have been made, the Contractor will proceed with the work as directed by the Engineer. All utility lines and related appurtenances which are abandoned shall be removed if necessary and legally disposed of legally off-site by the Contractor.
16. No extra compensation will be allowed by the Contractor for any expense incurred for complying with all of these aforementioned utility coordination and cooperation requirements, or because of delays, inconvenience or interruptions in their work resulting from the failure of any utility company to remove, relocate, construct, reconstruct or abandon their services. The responsibility for prompt and timely removal, relocation, reconstruction or abandonment of their facilities by all utility companies involved, and the coordination of their own work with that of these companies to the end that work on this improvement is not delayed because of the necessary changes in the existing utilities, public or private, shall rest upon the Contractor.
17. Prior to commencing work, the Contractor is to field check and verify all critical locations, elevations, materials, sizes, dimensions, and conditions affecting the work, and notify the Engineer immediately if there are any suspected discrepancies. No work shall be performed until the suspected discrepancy has been resolved. The Contractor shall also call to the attention of the Engineer any errors or discrepancies which may be suspected in the lines and grades which are established by the Surveyor, and shall not proceed with the work until any lines and grades which are to believed to be in error have been verified or corrected by the Engineer.
18. The Contactor shall maintain positive drainage at all times during construction. Construction shall not block off-site drainage and the flow from any drainage ways, field tiles, storm sewers or similar draining off-site properties. All on-site existing field tiles, storm sewers, drainage ways or similar encountered or damaged during construction shall be maintained, restored to their original pre-construction condition or better, properly re-routed, and/or connected to the proposed stormwater drainage system. If this can't be accomplished then the field tile should be repaired or re-routed with new pipe of similar diameter to the original line and put back in service. The Contractor shall notify the Engineer if any such field tiles are encountered. Whenever during any construction activities any loose material is deposited in the flow line of gutters, ditches, drainage structures, etc. such that the natural flow of water is obstructed, this material shall be removed by the responsible party.
19. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
20. No construction activities, disturbance or fill shall occur within the limits of natural resources such as wetlands, floodplains, creeks, streams, ponds, lakes, basins, reservoirs, etc. or their respective buffers unless specifically specified on the Plans and further that the work has been permitted. The Contactor shall take sufficient precautions to protect these natural resources that are to remain, whether on-site or on adjacent property, to protect them from sediment, fuels, oils, bitumens, calcium chloride, or other harmful materials that may be a detriment. The Contractor shall conduct and schedule their Construction so as to avoid siltation, or other disturbance or impact to these natural resource areas. The Contractor shall not disturb or otherwise impact these designated natural resource areas, or areas that have been designated to be protected or as essential habitat for State or Federal listed endangered or threatened species, or Prairie or Savannah areas where the Owner has made commitments for protection of these areas. Also, if previously unidentified natural resource areas, prairies, savannahs, or areas or locations suspected of containing protected species are identified during construction, the Contractor shall not disturb them unless written permission to do so is granted by the Owner or applicable Jurisdictional Agency. If the Owner, Engineer, or applicable Jurisdictional Agency determines that additional measures are necessary to prevent or mitigate project effects on natural resource areas, prairies, savannahs, protected species, or essential habitat the Contractor shall cooperate in accomplishing these measures.
21. The Contractor shall confine their activities to within the project boundaries, work areas, or easements specified. No work shall be performed on adjacent private property or outside the project work areas without the written permission of each respective Owner. The Contractor shall be liable for damage caused to existing or newly installed improvements as well as any damage on adjacent property or areas outside designated work areas, provided damage us a result of Contractor action, or lack thereof.
22. The Contractor is responsible for returning all areas affected by equipment, materials and/or laborers to pre-construction condition or better. All existing utilities or improvements, including but not limited to pavements, curbs, drives, trees, and parkways damaged or removed during construction shall be promptly restored to their respective original pre-construction condition or better. The Contractor is also responsible for protecting all newly constructed work from damage until the project has been completed and has been approved and accepted by the Owner.
23. Clean-up and final restoration shall be performed immediately upon completion of each phase of the work or when directed to do so by the Owner, so that these areas will be restored as nearly as possible to their original pre-construction condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, landscaping, fences, mailboxes, storm sewers, drain tiles, sanitary sewers, water mains, etc. It shall also be the responsibility of the Contractor to remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner.
24. All proposed grades shown on the Plans shall be considered to be finished grade surface elevations unless noted otherwise.
25. Construction staking/layout shall be provided by the Contractor and shall be included in the Contract Price unless otherwise agreed upon in writing with the Owner prior to the start of Construction.
26. All Construction means and methods, techniques, procedures, scheduling, sequencing, and job site safety is the sole responsibility of the Contractor.
27. The Contractor shall observe and comply with all the Occupational Safety and Health Administration (OSHA) standards, rules and regulations, as well as any other applicable local, state and federal safety requirements.
28. All trenching, shoring, bracing and construction work performed shall be in accordance with the Occupational Safety and Health Administration (OSHA) standards.
29. The Contractor shall take whatever steps necessary to protect the public from open trenches, excavations, and other site obstructions or hazards. No trenches, excavations or holes in the pavement or parkway are to be left open over a holiday, weekend, or after 3 p.m. on the day preceding a holiday or weekend.
30. During construction the Contractor and their Sub-Contractors shall keep the premises clean by removing all rubbish, debris, waste material and other accumulations as necessary. The Contractor shall clean the premises to the satisfaction of the Village/City and Owner.
31. The Contractor shall have appropriate equipment and material including street sweepers and end loaders available on-site at all times when equipment or vehicles are using existing public or private roads and/or pavement. The Contractor shall immediately remove any sediment or debris including but not limited to dirt, mud, clay, sediment, concrete, gravel, sand, stones, plant material, refuse, garbage, oil, grease, etc. deposited on any roadway, street, walk, alley or other pavement by any equipment, vehicles or personnel associated with this project. This work shall be considered incidental to the Contract.
32. The Contractor shall at all times maintain proper dust control at the site and shall have a watering truck readily available during all working hours. The Contractor shall water the entire site whenever the site conditions become unhealthy due to blowing soil or dust. The site shall be watered as many times per day as necessary to maintain a healthy work site as determined by the Owner or Engineer. Water for non-emergency use shall not be obtained from any fire hydrant, unless the fire hydrant is metered with a proper backflow preventer in accordance with Village/City or Jurisdictional Agency requirements. The cost to furnish dust control shall be incidental to the cost of Construction.
33. Trees not marked for removal shall be protected as necessary by the Contractor. In the event that a tree is damaged by the Contractor during construction, the Contractor shall replace such tree with a tree or trees in accordance with Village/City requirements. If the Village/City does not have specific tree replacement requirements, the damaged existing or newly planted tree shall be replaced in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications. The Contractor shall ensure that they are familiar with the applicable tree preservation requirements and shall be held responsible for the replacement of all damaged trees not designed for removal, and any penalties associated with the unapproved removal of trees.
34. Where overhanging branches, limbs, or roots interfere with the required construction activities, said branches, limbs, or roots shall be trimmed or pruned as necessary in accordance with Section 201 of the IDOT Standard Specifications. This work shall be performed under the supervision of an approved arborist or landscape architect.
35. The Contractor is responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices, in accordance with the Plans, applicable IDOT Standard Specifications and the MUTCD Standards to inform and protect the public during all phases of construction. The Contractor shall provide all signage, barricades, devices, equipment, personnel, etc. necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. Roadways shall remain open to a degree satisfactory to the Owner or applicable Jurisdictional Agency which at their discretion may require the Contractor to furnish traffic control under these or other circumstances where in their opinion it is necessary for the protection of life and property. Emergency vehicle access along with access to fire hydrants shall be maintained at all times. Further, unless authorized by the Owner, all existing access points shall be maintained at all times by the Contractor.
36. Where noted in the Plans, the Contractor shall have Shop Drawings and any other required supporting documentation or calculations prepared and submitted for review and approval prior to any fabrication, placement, or construction. If structural elements such as retaining walls are required, the drawings and any required supporting design calculations must be prepared, and signed and sealed by an Illinois licensed Structural Engineer.
37. The Contractor is responsible for having a set of approved Plans and Specifications with the latest revision date on the job site at all times during the construction period.
38. The Contractor shall maintain a clean, legible, undamaged set of Field Marked Construction Plans. These Field Marked Construction Plans shall show the location of the actual installed location of all underground utilities including related appurtenances (sanitary, storm, water, service stubs, gas, telephone, electric, cable TV, etc.) giving particular attention to concealed elements that would be difficult to measure and record at a later date. Any approved modifications, deviations, or alterations from the approved Plans should also be noted and shown on these Field Marked Construction Plans. These Field Marked Construction Plans shall be provided to the Owner/Engineer at the completion of construction.
39. All work that is performed that is not in conformity with the Plans, Specifications or other Contract Documents or that is defective shall be removed and replaced, or otherwise corrected or remedied by and at the sole expense of the Contractor. Any unauthorized work or work performed beyond the limits or in excess of that shown on the Plans will not be measured or paid for.
40. All work performed under the Plans, Specifications or other Contract Documents shall be guaranteed against all defects in materials and workmanship of whatever nature by the Contractor and his surety for a minimum period of 12 months from the date of final acceptance of the work by the Village/City, other applicable Jurisdictional Agencies, and the Owner, unless otherwise agreed upon in writing with the Owner prior to the start of construction,.
41. Before acceptance by the Owner and prior to final payment all work shall be inspected and approved by the Owner or designated representative. Final payment will be made after the Contractor's work has been approved and accepted or as required by the Contract Documents.
42. If required, the Owner shall have As-built or Record Drawings prepared and submitted to the Village/City and all other applicable Jurisdictional Agencies for approval after the completion of construction. These drawings shall be prepared in accordance with the Village/City and other applicable Jurisdictional Agency requirements. The As-built or Record Drawings must be prepared, and signed and sealed by a registered professional Engineer in Illinois.

CITY OF NAPERVILLE GENERAL NOTES

(City of Naperville General Notes section shall override the General Notes section for any conflicts.)

1. The owner or their representative is responsible to obtain any and all permits required by applicable governmental agencies.
2. All work shall be performed in accordance with the City of Naperville design manual and standard specifications (current edition) and with the Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction" (current edition).
3. All contractors doing work in the public right-of-way must be licensed (when applicable) to make public improvements within the Naperville Corporate Limits.
4. The contractor/developer assumes all responsibility and liability for any action resulting from their work within the public right-of-way.
5. The contractor/developer shall indemnify and hold harmless the City of Naperville.
6. Prior to commencement of any off-site construction, the contractor shall secure written authorization that all off-site easements have been secured and that permission has been granted to enter onto private property.
7. The contractor and their on-site representatives will be required to attend a preconstruction meeting with the City of Naperville prior to any work being started. A preconstruction meeting will not be scheduled until the project has been approved by the City of Naperville development review team and the required surety has been posted.
8. A minimum of 48 hours notice shall be given to the City of Naperville TED business group (630-420-6100 option 1) prior to starting work or restarting work after some absence of work for any reason.
9. It shall be the contractor's responsibility to adequately identify and locate all existing utilities prior to excavation. Before starting construction, the contractor shall contact JULIE for the location of any and all utilities. The toll-free number is 800-892-0123. It is the responsibility of the contractor to locate any private facilities or non-JULIE member facilities.
10. The contractor can schedule all necessary site inspections with the City of Naperville by calling (630) 420-6100 option 1 between the hours of 8:00am and 4:00pm (closed 1:00pm to 2:00pm daily) on weekdays when the City is open for business. The contractor will be required to provide the site permit number for the project in order to schedule the inspection(s).
11. Record drawings are required to be submitted and approved by the City of Naperville prior to final occupancy being granted.
12. Final acceptance of public improvements shall be granted only after a final inspection has been completed and has revealed that all improvements have been satisfactorily completed in accordance with the Naperville Standard Specifications. Utilities are not considered accepted until they are formally accepted by the city council as required in accordance with the Naperville Municipal Code.

DEMOLITION AND CLEARING

1. The Contractor shall perform all demolition, clearing, grubbing, and tree removal and protection work in accordance with all applicable Federal, State, County and Local requirements or as noted in the Plans.
2. Prior to the commencement of any demolition or clearing activities, the Owner or Contractor shall obtain all applicable permits to disconnect the existing utility services to each building proposed for demolition.
3. The Contractor shall coordinate all demolition work with the Village/City, utility companies, and other Jurisdictional Agencies, so as to ensure the protection of all existing sewer, water main, and other utilities, and further to ensure that proper stormwater conveyance is attained until the proposed improvements can be installed and placed into operation.
4. Clearing shall consist of the removal and legal disposal of all obstructions such as trees, hedges, fences, walls, accumulations of rubbish of whatever nature, and all logs, shrubs, brush, grass, weeds, and other vegetation and stumps. These items shall be removed whenever they are found within the street right-of-ways or within the limits of construction. Trees to be saved or protected shall be identified by the Engineer on the Plans or in the field. All trees except those designated to be saved or protected, as well as all stumps and hedges within the limits of construction, shall be removed completely and legally disposed of off-site or as otherwise designated on the Plans or authorized by the Owner. Trees designated to be saved or protected as indicated on the Plans or as directed by the Engineer, shall be protected from damage in accordance with the procedures outlined in Section 201 of the IDOT Standard Specifications.
5. All items shown to be removed on the Plans including items not specifically noted but necessary to be removed to construct the proposed improvements shall be demolished or removed as necessary and disposed of legally off-site or as approved by the Owner.
6. Existing utilities to be disconnected shall be done so at the main or as directed by the applicable Jurisdictional Agency or as noted on the Plans.
7. Utilities marked to be abandoned shall be abandoned as required by the applicable Jurisdictional Agency or as noted on the Plans.
8. All existing pavement or concrete to be removed shall be saw-cut along the limits of the proposed removal to provide a clean vertical edge. The cost of saw-cutting shall be considered incidental to the removal of each item.
9. All voids left by any item removed under any proposed building, pavement walk or other structural areas or within zones of influence thereof shall be properly backfilled with suitable backfill material and/or compacted as necessary by the Contractor.
10. The Contractor shall implement a daily program for dust control as it relates to the demolition and clearing activities. This program is to be approved by the Village/City prior to the start of any demolition or clearing work.
11. All existing building services serving buildings that are to be removed shall be disconnected and removed as required by the applicable Jurisdictional Agency.
12. All existing wells shown on the Plans to be abandoned or that are discovered during the course of construction shall be exposed and cut-off three (3) feet below the proposed finished grade and sealed by the Contractor in accordance with Section 920 of the "Illinois Water Well Construction Code", latest edition, or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
13. All existing septic tanks, grease traps or similar shown on the Plans to be abandoned or that are discovered during the course of construction shall have all liquids and solids removed and disposed of legally off-site by a licensed commercial waste hauler in accordance with the requirements of the Health Department or as required by any Local, County, State or Federal rules and regulations. The structures shall then be removed and disposed legally off-site or broken in-place, so as not to hold liquid, and back-filled with suitable materials by the Contractor or as required by the Health Department or by any other Local, County, State or Federal rules and regulations.
14. Any material containing asbestos or other hazardous materials found within existing structures or other items shown to be removed in order to construct the proposed improvements shall be removed from the site and legally disposed of off-site by the Contractor in accordance with applicable County, State or Federal rules or regulations.
15. All fire access lanes or routes located within the existing project area shall remain in service, clean of debris, and accessible for use by emergency vehicles at all times while demolition and clearing work is being performed.
16. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their demolition or clearing operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

EARTHWORK AND GRADING

1. All earthwork and grading activities shall be performed in accordance with the IDOT Standard Specifications or as noted in the Plans. Included in this work, but not necessarily limited to the following are: stripping and stockpiling of topsoil, mass grading and fine grading of the site and roadways, excavation of unsuitable materials and adequate disposal of unsuitable materials and their replacement with suitable materials where required, construction of detention ponds, berm construction, and miscellaneous topsoil respread and seeding.
2. Any earthwork quantities, calculations, summaries that have been furnished by the Engineer are for information purposes only and are provided without any guarantee by the Owner or Engineer whatsoever as to their sufficiency or accuracy. They are intended to be used solely as a guide for the Contractor in determining the scope of the completed project. It is the responsibility of the Contractor to determine all material quantities and apprise themselves of all site conditions. The Contractor warrants that he has performed his own investigations as necessary and his own calculations to determine site soil conditions and earthwork quantities. The Engineer makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction tolerances and construction methods that are beyond the control of the Engineer. In the event that the Earthwork is indicated to be Lump Sum then the Contract Price submitted by the Contractor shall be considered as Lump Sum and shall include all items necessary for the complete project and no claims for extra work will be recognized unless authorized in writing by the Owner.
3. The soil boring reports for the subject property can be obtained from the Owner. The information presented in these reports is solely for the guidance of the Contractor. The Owner and the Engineer make no representation or warranty regarding the information contained in the boring logs or soils report. The Contractor shall make their own investigations and shall plan their work accordingly. Arrangements to enter the property during the bidding phase may be made upon request of the Owner. There will be no additional payment for expenses incurred by the Contractor resulting from adverse soil or ground water conditions.
4. The initial establishment of soil erosion and sediment control measures such as the placement of erosion control silt fence, stabilized construction entrance, inlet protection, etc. shall be installed by the Contractor prior to the start of demolition, clearing and mass grading.
5. All earthwork and grading operations are to be supervised and inspected by a qualified Geotechnical/Soils Engineer or their designated representative. All testing, inspection, observation, and supervision of soil quality, unsuitable soil removal and its replacement, compaction testing, ensuring ponds and retention areas hold/retain water and other soils related operations shall be entirely the responsibility of the Geotechnical/Soils Engineer. Furthermore, no undercut or other recommended remediation work shall be performed without authorization by the Owner and documentation of extent by the Geotechnical/Soils Engineer.
6. A qualified Geotechnical/Soils Engineer or their designated representative shall observe the construction of the retention and detention areas including berming to ensure the areas will be capable of holding the designated normal and high water levels. Gravel or sand seams, or other conditions which may be encountered and which might tend to dewater the area shall be remedied as directed by the Geotechnical/Soils Engineer.
7. Topsoil stripping or excavation shall initially consist of the removal of the uppermost layers of organic soil and stockpiling at a location shown on the Plans, in another area deemed appropriate by the Contractor and approved by the Owner, or at a location specified by the Owner or Engineer. No stockpile location shall be finalized without the explicit approval from the Owner. Further, stockpiles shall not be located within flood prone areas or within designated buffer areas.
8. Stripping of vegetation or ground cover, grading, or other soil disturbance activities shall be done in a manner which will minimize soil erosion. Further, the disturbance shall be kept to a minimum and all disturbed areas shall be stabilized with temporary or permanent measures within fourteen (14) days of active hydrologic disturbance or re-disturbance.
9. The Contractor shall take precautionary measures to minimize earthwork and other activities in the areas where trees are to be saved or protected as to not cause injury to roots or trunks.
10. Embankment placement including preparation of existing ground surface prior to embankment placement and compaction shall be in accordance with Section 205 of the IDOT Standard Specifications. All embankments located within structural fill areas or zones of influence thereof shall be constructed to a minimum 95% of the modified proctor density in accordance with ASTM D1557. Embankments located in non-structural fill areas shall be constructed to a minimum of 90% of the modified proctor density in accordance with ASTM D1557.
11. Topsoil respread shall consist of placing a minimum of a four (4) inch layer of topsoil or depth indicated on the Plans over the disturbed unpaved areas within the construction limits. These areas shall then be seeded, sodded, landscaped, stabilized, etc. as indicated on the Plans.
12. Sod shall be placed on all disturbed areas within the right-of-way and at other locations indicated on the Plans.
13. Refer to the Landscape Plans prepared By Others for additional information on the landscaping and ground cover requirements.
14. Completed subgrade grading and final finished grading for all proposed improvements shall be within a tolerance of plus or minus one-tenth (0.1) foot of the design elevation.
15. Contractor shall provide uniform slopes between proposed grades and smooth vertical curves/transitions through all high and low points. Smooth transitions shall be provided where any proposed improvements match into or abut existing improvements.
16. The subgrade for the proposed streets and other pavement areas shall be proof-rolled by the Contractor in the presence of the Village/City Engineer or applicable Jurisdictional Agency and the Geotechnical/Soils Engineer. Any unstable areas or failures encountered shall be removed and replaced or remediated as directed by the Village/City Engineer or applicable Jurisdictional Agency and Geotechnical/Soils Engineer. Any unstable areas or failures encountered and remediation method including approximate size, quantity, etc. shall be documented by the Geotechnical/Soils Engineer.
17. It shall be the responsibility of the Contractor to legally remove from the site any and all materials and debris which results from their construction operations at no additional expense to the Owner. Burning or incineration on the site is not permitted.

SEWER AND WATER MAIN GENERAL NOTES

1. All sanitary sewers, storm sewers and water mains as well as their services and other related appurtenances shall be constructed and tested in accordance with the "Standard Specifications for Water and Sewer Construction in Illinois", latest edition, the requirements of the applicable Jurisdictional Agency, and the applicable Typical Details.
2. Rough grading shall be within one (1) foot of finished subgrade elevation shall be completed prior to the commencement of the underground utility construction.
3. Trench excavation, bedding and backfill, and compaction for sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances shall be in accordance with applicable Trench Section Details.
4. When in the opinion of the Geotechnical/Soils Engineer, unsuitable soil conditions are encountered within utility trenches which require the removal of unsuitable materials below the depth of the bedding specified, the Contractor shall remove the unsuitable soils and replace the material with granular compacted bedding material as directed by the Geotechnical/Soils Engineer, Village/City or other applicable Jurisdictional Agency. The depth of the required removal and replacement shall be documented by the Geotechnical/Soils Engineer and witnessed by the Contractor. This work, when approved by the Owner and Geotechnical/Soils Engineer, will be measured and paid for at the contract unit price per cubic yard in place for unsuitable soil which price shall include the removal and off-site disposal of unsuitable soil, the additional bedding material, and all labor, materials and equipment required to perform the work as specified.
5. All utility trenches for the proposed sanitary sewer, storm sewer, water main and services lying under or where the inner edge of the trench is within two (2) feet of any pavement area, curb, curb and gutter, stabilized shoulder, sidewalk, building, utility crossing or other structural area shall be backfilled with select granular backfill material and compacted as noted on the Plans.
6. The Contractor shall be responsible for dewatering any excavation for the installation of sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances. Any dewatering required to construct the proposed underground improvements shall be considered incidental to the respective underground improvement.
7. Connections to an existing sewer main shall be to an existing service stub, wye, tee, or manhole where possible. Sewer connections to existing sanitary manholes shall be machine cored. All pipe connections to sanitary structures shall be made with flexible waterstop gasket/boot (resilient connector) conforming to ASTM C923.
8. When connecting to an existing sewer main by means other than an existing service stub, wye, tee, or manhole, one of the following methods shall be used:
    a. Circular saw-cut of sewer main by proper tools ("shewer-tap" machine or similar) and proper installation of a suitable hub-wye saddle or hub-tee saddle.
    b. Remove the entire Section of pipe breaking only the top of one bell and replace with a wye or tee branch Section.
    c. With pipe cutter, neatly and accurately cut out the desired length of pipe for insertion of proper fittings, using "Band-Seal" or similar flexible type couplings to hold it firmly in place.
    d. Other method approved by Jurisdictional Agency.
9. "Band-Seal" or similar flexible type couplings shall be used in the connection of sewer pipe of dissimilar materials.
10. The Contractor shall mark the locations of the ends of the service stubs with 4"x4" wood posts extending a minimum of three (3) feet above the ground. The top twelve (12) inches of post shall be painted green for sanitary, white for storm, and blue for water. The Contractor shall keep accurate records of all service connection locations.
11. All structures including but not limited to frames and lids or grates, cleanouts, b-boxes, etc. shall be adjusted as necessary by the Contractor to final finished grade elevation.
12. All sanitary sewers, storm sewers, water mains as well as their services and other related appurtenances shall be thoroughly cleaned to the satisfaction of the Village/City, Owner, and Engineer as necessary during construction, prior to inspection and testing, and at the end of the project.
13. The Contractor shall coordinate the testing and televising so that it can be witnessed by the applicable Jurisdiction Agency.
14. The cost of the cleaning, televising, and testing shall be considered incidental to the Contract.
15. All deficiencies and defects observed as well as any necessary corrective work required as the result of testing or television inspection shall be performed by the Contractor at no additional cost to the Owner and without delay. All dips, cracks, leaks, improperly sealed joints and departures from the approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and/or re-televised and such further inspection made as may appear warranted by the Owner or as required by the Jurisdictional Agency.
16. Refer to Sanitary Sewer, Storm Sewer, Water Main and Water Main Protection Requirements for additional requirements.

SANITARY SEWER

(Refer to Department of Public Utilities - Water/Wastewater General Notes for Additional Specifications)

1. All sanitary sewer piping shall be PVC pipe meeting the requirements of ASTM D-2241 with joints conforming to ASTM D-3139. All sanitary sewer fittings shall be PVC meeting the following requirements: 4" to 12" shall be Injection Molded Fittings meeting ASTM D-2241. Greater than 12" shall be Fabricated Fittings meeting ASTM D-2241 or C905. Minimum pressure rating shall be 150 psi.

CITY OF NAPERVILLE DEPARTMENT OF PUBLIC UTILITIES - WATER UTILITIES GENERAL NOTES:

1. New water main valves, including pressure tap valves, adjacent to an existing water main, and existing water main valves shall only be operated by the City of Naperville, Department of Public Utilities CEE/CM Division personnel with 48-hour notice (Monday-Friday). Contact Naperville TED Business Group at 630-420-6082 for scheduling.
2. Any existing utility structures requiring adjustment or reconstruction shall be completed by the contractor to the satisfaction of the utility owner. Adjustments and/or reconstructions not called for on the plans shall be considered incidental to the contract. No more than a total of 12 inches of adjusting rings and/or 2 adjusting rings shall be allowed. All structure frames shall be flush with final grade.
3. Trees shall be installed a minimum of five (5) feet horizontally from underground electrical feeders, sanitary sewers, sanitary services, water mains, and water services. Trees shall be installed a minimum of ten (10) feet horizontally from utility structures and appurtenances, including, but not limited to, manholes, valve vaults, valve boxes and fire hydrants. No trees, shrubs or obstacles will be allowed 10' in front of, 5' on the sides, and 7' to the rear of the electrical transformer.
4. All retainer glands when required to restrain valves, fittings, hydrants, and pipe joints shall be mechanical joint wedge action type MEGALUG 1100 Series as manufactured by EBBA Iron, Inc. or UNI-FLANGE BLOCKBUSTER 1400 SERIES as manufactured by Ford Meter Box Co. and shall be for use on ductile iron pipe conforming to ANSI/AWWA C151/A21.51, for nominal pipe sizes 3" through 48".
5. Existing ductile iron systems for restraining push-on pipe bells shall be MEGALUG SERIES 1100HD or FORD SERIES 1390.
6. Existing ductile iron systems requiring restraint shall be MEGALUG SERIES 1100SD (split MEGALUG) for mechanical joints.
7. Ductile iron water main to be Class 52. All ductile iron pipe is to be encased in polyethylene film Polyethylene encasement to be installed in accordance with ANSI/AWWA C105/A21.5-05.
8. A set of as-built record drawing shall be given to the City of Naperville upon completion of improvements showing the elevation and location (tied to two points) of all new and existing structures including fire hydrants, valve boxes and vaults, linestop sleeves, water service corporation stops, water main fittings/bends, manholes, sanitary service wyes (measured from downstream manhole), and abandoned water or sanitary service lines. All elevations should be referenced to the same benchmark datum as the original design plans. Horizontal ties shall be referenced to lot lines, back of curb, or property corners.
9. All sanitary sewer piping shall be PVC pipe meeting the requirements of ASTM D-2241 with joints conforming to ASTM D-3139. All sanitary sewer fittings shall be PVC meeting the following requirements: 4" to 12" shall be Injection Molded Fittings meeting ASTM D-2241. Greater than 12" shall be Fabricated Fittings meeting ASTM D-2241 or C905. Minimum pressure rating shall be 150 psi.
10. The valves less than 16" shall be standard pattern, gate valves and shall have the name or mark of the manufacturer, size and working pressure plainly cast in raised letters on the valve body. Valves may be approved from one of the following manufacturers: American, Clow, Waterous or Kennedy.
11. Stainless steel nuts, bolts/T-bolts, and washers, Type 304 or better, will be required on all water main installations. This would apply to hydrants, tapping sleeves, valves, fittings, restraint, and other appurtenances buried or in valve vaults. Mechanical joints and restraint glands require 304 stainless steel T-bolts. An anti-seize compound shall be factory applied to nuts or bolts - any damage to this coating shall be repair with field applied approved anti-seize compound that is a molybdenum-base lubricant, Bostik Never-Seez or approved equal.
12. The contractor shall rotate and/or adjust any existing and/or new hydrant to the satisfaction of the Department of Public Utilities.
13. Water mains shall be subjected to a hydrostatic/leakage test in accordance with Naperville Standard Specifications. Test pressure shall be no less than 150 psi for a period of 4 hours and not vary by more than + 5 psi. during the test. The test gauge shall be approved by the City and shall be glycerin or oil filled, with a range of not more than 200 psi and increments not greater than 5 psi, 4 " minimum dial size. Water recovery test shall be completed at the end of the testing period to show actual leaking and that the water main did not have too much trapped air in the tested section.
14. The City of Naperville Public Utilities does not guarantee that any valve or fitting in the existing water distribution system will hold against a hydrostatic/leakage test. The Contractor is solely responsible for providing and acceptable pressure test which shall include provisions around existing valves and fittings.
15. Fire hydrant should be bagged "NOT IN SERVICE" until all testing and disinfection has been completed and new water main section is service.
16. Sanitary sewer and water shall be constructed, tested, and placed into service in accordance with City of Naperville Standard Specification and Specifications for Water and Sewer Main Construction in Illinois, Latest Edition.
17. All valve boxes, vaults, hydrants, and manholes shall not be covered with construction debris and shall remain accessible to the respective utility company.
18. Water service line smaller than 3" shall be type K copper. If joints are required due to length of service, then only compression type coupling shall be permitted. No soldered or flared type joints are allowed.
19. All sanitary manholes shall be tested for leakage by vacuum testing. The manhole frame and adjusting rings shall be in place when testing. Any leaks shall be repaired from exterior of manhole - patching inside of manhole shall not be acceptable. A vacuum of 10" (254 mm) Hg shall be place on the manhole and the time shall be measured for the vacuum to drop to 9" (229 mm) Hg. The vacuum shall not drop below 9" (229 mm) Hg for the following time periods for each size of manhole:
    a) 48-inch diameter - 60 seconds
    b) 60-inch diameter - 75 seconds
    c) 72-inch diameter - 90 seconds
    d) 84-inch diameter - 105 seconds

    Any manholes that fail the test shall be sealed and re-tested until acceptable.
20. The contractor shall provide internal televised inspection of all installed sanitary sewer, laterals, manholes and connections to the public system. Following completion of televising work, the contractor shall submit video recordings on DVD or flash drive along with a comprehensive televising report which will indicate the location, footages and nature of any defects. Prior to final acceptance, these defects shall be repaired to the satisfaction of the Water/Wastewater Utility and re-televised.
21. Contractor work hours are only allowed from 7:00 a.m. to 5:00 p.m., Monday through Saturday. No work shall be permitted on Sundays.
22. Sanitary pipes with less than 4 feet or more than 25 feet of cover shall be constructed of ductile iron piping (Class 50, minimum) and encased in polywrap.
23. All excavations more than 20 feet deep must be protected by a system designed by a registered professional engineer.
24. Contractor shall maintain 2' minimum clearance between existing utilities and new foundations and underground facilities. In areas where foundations and underground facilities are proposed adjacent to existing utilities, the contractor shall pot hole by vacuum excavation or hand excavation to locate the existing utility to verify minimum clearance requirement.
25. Fences shall be installed a minimum of 5 feet from any water or sanitary mains when running parallel with them. Where fences are installed crossing water or sanitary mains, the posts shall be located to have the main between them.
26. All brass components shall be certified to be lead free in compliance with NSF 61 and NSF 372 and identified with applicable markings.
27. Sanitary Force Main - Force man shall be tested a minimum of 1 hour at 1.5 the shut off head of the pump, 2.5 times the operating pressure, or 20 psi whichever is greatest. Allowable leakage shall be in accordance with section 41-2.14C of the standard specifications for water and sewer construction.

No.	Date	Revision

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GENERAL NOTES
& SPECIFICATIONS

VIEWS OF NAPERVILLE CLUBHOUSE
SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: PAC
Engineer: CJB
Date: 03/22/2024
Project No. 22-028
Sheet C2.0 / C8

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Plot Date: May 23, 2024 - 9:25am Plotted By: phil-c
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STORM SEWER

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Storm Sewer Pipe shall be constructed from one or more of the following materials as specified on the Plans:
    a. Reinforced Concrete Pipe (RCP) conforming to ASTM C76 with O-Ring gasket joints conforming to ASTM C443. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
    b. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D3034 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3212.
    c. High Density Polyethylene (HDPE) Pipe with smooth wall interior conforming to ASTM D3350 with joints conforming to ASTM D3212 and ASTM D3350.
    d. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
3. Where water main quality pipe and joints are required to meet the water main protection requirements the storm sewer pipe shall be constructed from one or more of the following materials as specified on the:
    a. Reinforced Concrete Pipe (RCP) conforming to ASTM C361 with O-Ring gasket joints conforming to ASTM C443 and C361. Pipe class shall be per Section 550 of IDOT Standard Specifications, except that pipe shall be a minimum Class III in non-structural areas (i.e., grass, parkway, etc.) and a minimum of Class IV in or within zone of influence of all structural areas (i.e., roadways, parking lots, curbs, walks, etc.).
    b. Polyvinyl Chloride (PVC) Pipe conforming to ASTM D2241 with a Standard Dimension Ratio (SDR) of 26 unless noted otherwise on the Plans with elastomeric gasket joints conforming to ASTM D3139 and F477.
    c. High Density Polyethylene (HDPE) pressure pipe with smooth wall interior and joints conforming to AWWA C-906.
    d. Ductile Iron Pipe (DIP), Class 52, conforming to ANSI A21.51 and AWWA C151 with rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings.
4. Non-circular reinforced concrete pipe shall be constructed from one or more of the following materials as specified on the Plans:
    a. Reinforced Concrete Arch Pipe in accordance with ASTM C506 and AASHTO M206.
    b. Reinforced Concrete Elliptical Pipe in accordance with ASTM C507 and AASHTO M207.
    c. Reinforced Concrete Box Culvert Sections in accordance with ASTM C1433.
5. All storm structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478. If the structure diameter is not specified in the Plans the required manhole diameter shall be determined by size of pipes and their orientation. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Benches and defined channel invert flow lines shall be provided at bottom of structures to provide smooth defined flow path between all inlet and outlet pipe inverts. Storm manholes and catch basins shall have eccentric offset cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Catch Basins shall have the sump depth as specified in the Plans. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar.
6. Manhole steps shall be furnished and installed in all Sanitary and Storm structures in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and as shown on the Plans. Steps shall be polypropylene coated steel core reinforced steps with slip, load, and pullout ratings in accordance with ASTM C478 and OSHA requirements. The steps shall be placed uniformly at twelve (12) to sixteen (16) inches on-center and shall be located directly below the manhole frame opening and shall not be located directly over a pipe opening with the alignment of the steps generally perpendicular to the pipe flow direction wherever possible.
7. Open lid storm structures are designated with "Gr" on the Plans and closed lid storm structures are designated with "Rim" on the Plans.
8. Closed lid storm structures frames and lids shall be Neenah R-1713 with Type B lid, or approved equal, unless noted otherwise in the Plans. Closed lid storm lids shall be imprinted with the word "STORM" cast into the lid.
9. Open lid storm structures frames and lids shall be Neenah R-2504-D, or approved equal, unless noted otherwise in the Plans.
10. Yard area drain structures shall be Nyloplast inline drains or drain basin structures, or approved equal, unless noted otherwise in the Plans.
11. Concrete flared end sections shall be precast reinforced concrete with an end block cast separate to anchor flared end section in place in accordance with IDOT Standard 542301 for circular concrete pipe and IDOT Standard 542306 for elliptical concrete pipe. Grating for flared end sections shall be in accordance with IDOT Standard 542311 and shall be provided at all flared end sections twelve (12) inches or greater.
12. Rip-Rap with filter fabric in accordance with Section 281 of the IDOT Standard Specifications shall be provided at locations shown on the Plans.
13. Cleanouts shall be provided in locations shown on the Plans or as required by the Jurisdictional Agency.
14. All downspouts, footing drains, and outside storm drains shall discharge to the storm sewer or discharge at grade. No stormwater shall be discharged into the sanitary sewer system.
15. Perforated pipe underdrains shall be corrugated flexible HDPE pipe conforming to AASHTO M252 or M294, perforated polyethylene pipe of diameter specified on the Plans with a smooth interior and wrapped in a soil filter fabric sock supplied and installed by the Contractor.
16. Elevations of structures located in curb and gutter are flow line elevations.
17. Elevations of flared end sections are provided at the extreme outer end of the flared end section.

CITY OF NAPERVILLE STORM SEWER NOTES

(City of Naperville Storm Sewer Notes section shall override the Storm Sewer section for any conflicts.)

1. No connection to an existing public storm sewer may be made without permission of the city engineer.
2. The contractor shall repair any existing field drainage tile damaged during construction and properly reroute and/or connect said tile to the nearest storm sewer outlet. All locations of encountered field drainage tile shall be properly indicated on the contractor's record drawings.
3. The following materials are permitted for storm sewer and pipe culverts. Where a particular material is specified in the plans or special provisions, no other kind of material will be permitted:
    a. Reinforced concrete pipe (RCP) - Reinforced concrete pipe shall conform to ASTM designation C 76, classes I, II, III, IV or V. Bituminous joints shall conform to ASTM designations C 14 or C 76 as may be applicable. Bituminous material shall consist of a homogeneous blend of bitumen, inert filler, and suitable solvent approved by the city engineer. Rubber gasket joints shall conform to ASTM C 433. Reinforced concrete pipe shall also be permitted as round, elliptical, or box shaped or as reinforced concrete arch culvert.
    b. Polyvinyl chloride pipe (PVC) - Polyvinyl chloride (PVC) pipe shall conform to ASTM D 3034, Type PSM. The minimum standard dimension ratio (SDR) shall be 26. The pipe shall be made of PVC plastic having a minimum cell classification of 12454-C, and shall have a minimum pipe stiffness of forty-six (46) lbs. per inch (317 kPa). Joints for PVC pipe shall be flexible elastometric seals per ASTM D 3212.
4. Bedding, other than concrete embedment, shall consist of gravel, crushed gravel, or crushed stone 1/4 inch to 1 inch in size. As a minimum, the material shall conform to the requirements of IDOT Standard Specifications. The gradation shall conform to gradation CA-7 or CA-11 of the Standard Specifications.
5. Backfill material shall conform to the requirements of IDOT Standard Specifications. The gradation shall conform to gradation CA-6 of the Standard Specifications. Backfill material shall be compacted to 95% standard proctor density.
6. Joints connecting dissimilar pipe materials shall be made with sewer clamp non-shear type couplings; cascade css, romac lss, fernco, inc. Shear ring, or approved equal. When available, a standard joint with a transition gasket may be used. The name of the manufacturer, class, and date of issue shall be clearly identified on all sections of pipe. The contractor shall also submit bills of lading, or other quality assurance documentation when requested by the city engineer. All nuts and bolts for couplings shall be stainless steel.
7. Manholes for storm sewers shall have a minimum inside diameter of 48 inches and shall be constructed of precast concrete units in accordance with ASTM C478-05 (or latest edition) and shall conform to the city of Naperville standard detail. All manholes shall be water-tight. All visible leaks shall be sealed in a manner acceptable to the city engineer.
8. Manholes shall be furnished with a self-sealing frame and solid cover (East Jordan Iron Works 1022 with type a solid cover, or approved equal) with the word "STORM" imprinted on the cover in raised letters. All frames and lids shall meet or exceed AASHTO H-20 loading specifications. Frames shall be shop painted with asphaltic base paint. Both the manhole frame and cover shall have machined horizontal and vertical bearing surfaces. Inverted manhole frames are not allowed. Pick holes shall not create openings in the manhole cover.
9. Manhole steps on maximum 16 inch center shall be furnished with each manhole, securely anchored in place, true to vertical alignment, in accordance with the Naperville standard details. Steps shall be copolymer polypropylene reinforced with 1/2 inch A615/A615M-05A (or latest edition) grade 60 steel reinforcement, meeting or exceeding ASTM C 478-05 (or latest edition) and OSHA standards.
10. Catch basins and inlets shall have a minimum inside diameter of 24 inches and shall be constructed of precast concrete units in accordance with ASTM D478-05 (or latest edition) and shall conform to the city of Naperville standard detail. All catch basins and inlets shall be water-tight at all points below grade. All visible leaks shall be sealed in a manner acceptable to the city engineer. Catch basins and inlets shall be furnished with a frame and grate based upon the location of the installation as listed below. All frames and grates shall meet or exceed AASHTO H-20 loading specifications. Frames shall be shop painted with asphaltic base paint.
    a. Non-paved areas: East Jordan Iron Works 6527 beehive grate, or approved equal. Alternately, in areas where there is the likelihood of pedestrian traffic, East Jordan Iron Works 1022 frame with type M1 radial flat grate, or approved equal may be used.
11. All pipe shall be laid true to line and grade. Dirt and other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations. All storm sewer pipe to pipe connections shall be sealed with butyl mastic to ensure water tightness. Lift holes to be sealed using butyl mastic and concrete plugs. At no time shall connections between the sworm sewer and sanitary sewer be allowed.
12. All storm sewer structure frames without inside flanges shall be shaped with non-shrinking hydraulic cement to form a fillet to the structure or adjusting ring.

WATER MAIN

1. Refer to Sewer and Water Main General Notes for additional requirements.
2. Water Main Pipe shall be constructed from one or more of the following materials as specified on the Plans:
    a. Ductile Iron Pipe (DIP), Class 52 conforming to ANSI A21.51 and AWWA C151 with a 150 psi working pressure, with push-on double sealing rubber gasket joints conforming to ANSI A21.11 and AWWA C111. The interior of the pipe and fittings shall be cement-mortar lined in accordance with ANSI A21.4 and AWWA C104. The exterior of all pipes and fittings shall be coated with an asphaltic coating per ANSI A21.51 and AWWA C151 for ductile iron pipe, and ANSI A21.10/A21.53 and AWWA C110/C153 for fittings. If specified, the ductile iron pipe and fittings shall be encased by a polyethylene encasement with an 8 mil thickness, Class C (Black) conforming to ANSI A21.5 and AWWA C105. Installation of DIP and fittings shall be in accordance with AWWA C600.
    b. Polyvinyl Chloride (PVC) Pipe, SDR 18 conforming to AWWA C900 (4"-12" diameters) and AWWA C905 (14"-48" diameters) with a pressure rating of 235 conforming to ASTM D2241 and joints in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477. Installation of PVC pipe and fittings shall be in accordance with AWWA C605.
    c. High Density Polyethylene (HDPE) pressure pipe and fittings for water main in accordance with AWWA C906, DR 11, 160 psi, with ductile iron pipe outside dimension.
3. Ductile iron fittings or cast iron fittings shall conform to ANSI A21.10 and AWWA C111; and compact ductile iron fittings shall conform to ANSI A21.53 and AWWA C153.
4. All water structures shall be constructed of precast reinforced concrete sections with tongue and groove joints conforming to ASTM C478 and shall have a minimum inside diameter of 48-inches. If structure diameter is not specified in the Plans the required structure diameter shall be determined by size of pipes and appurtenances that need to be located within said structure. The precast reinforced concrete base and bottom section shall be monolithically cast. All pipe openings in the structure shall be precast into the structure walls at the proper invert elevation and orientation. Water structures shall have concentric cones, except where necessary due to height and opening restrictions, where a precast reinforced concrete flat top slab section shall be provided in-lieu of an eccentric cone section. Flat top slabs shall conform to IDOT Standard Detail 602601 as well as meet the H-20/HS-20 loading requirement. Concrete adjusting rings will be permitted where necessary and shall be limited to two (2) adjusting rings totaling not more than eight (8) inches in height. All joints between structure sections, adjusting rings and frames shall be securely sealed to one another using a resilient, flexible, non-hardening bituminous mastic or butyl sealing compound in accordance with ASTM C990, or flexible rubber gasket in accordance with ASTM C443 in order to provide a watertight joint. The Contractor shall remove all excess mastic on inside of structure and butter joints with mortar. All water structures shall be watertight.
5. Valve vaults shall have minimum inside diameter of forty-eight (48) inches for eight (8) inch diameter and smaller valves, and have a minimum inside diameter of sixty (60) inches for ten (10) inch and larger valves.
6. Water services 2 ½ inches in diameter and smaller shall be Type K Copper for underground services conforming to ASTM B88 and ASTM B251. Larger diameter water services shall be of same pipe and joint materials as the mainline water main or as noted on the Plans.
7. The minimum cover from finished grade to the top of the water main and water services shall be 5.5 feet.
8. Water main fittings (i.e., bends, elbows, tees, reducers, etc.) may not be specifically referenced on the Plans and are to be considered incidental and included in the linear footage cost of the watermain.
9. The standards for maximum deflection at pipe joints and laying radius for the various pipe types and lengths shall be per the following:
    a. Ductile Iron Pipe (DIP) - AWWA C600.
    b. Polyvinyl Chloride (PVC) Pipe - AWWA C900.
    c. High Density Polyethylene (HDPE) - Per Manufacturer's requirements.
10. Thrust blocking shall be installed on water mains at all tees, elbows, plugs, and bends 11 ¼ degrees or greater etc. per the "Standard Specifications for Water and Sewer Construction", latest edition. Thrust blocking shall be poured in place Portland Cement Concrete.
11. All bends greater than 10 degrees, hydrants, tees, and fittings shall be mechanical joint with Mega-Lug retaining glands or Field Lok gasket in casings, between fittings and at grade changes.
12. All bolts and nuts shall be stainless steel.
13. A tracer wire shall be installed on all non-metallic water mains. The wire shall be continuous from valve vault to valve vault.
14. Frame and lids for water structures shall be Neenah R-1713 or approved equal and lids shall be imprinted with the word "WATER" cast into the lid.
15. All water valves, fire hydrants, b-boxes, corporation stops, curb stops, ground key stops, service boxes, tapping sleeves, and other water main related appurtenances shall conform to Village/City or applicable Jurisdictional Agency Requirements and shall furnish and install the same. Contractor shall verify exact model, style, type, and manufacturer required prior to ordering. All fire hydrants shall be painted in accordance with the applicable Jurisdictional Agency requirements.
16. Valves shall be non-rising stem type and shall close by turning clockwise. All valves shall be resilient wedge gate or ball valves, except that butterfly valves shall be installed on all water mains 16" diameter and larger, conforming to AWWA C500 with a minimum rated working pressure of 200 psi and in accordance with applicable Jurisdictional Agency requirements. Specialty valves and fittings such as cut-in-valves, tapping sleeves and valves, pressure reducing valves, insertion valves, and air release valves shall conform to the requirements of the applicable Jurisdictional Agency requirements and shall be installed at locations indicated on the Plans.
17. When making connections to existing water mains requires a shutdown that requires an interruption in service, the Contractor shall contact the Owner of the water main and they shall mutually agree upon a date and a time for connections which will allow ample time to perform the work required in order to make the required connection. Notifications of all users to be affected by the interruption shall be provided a minimum of twenty-four (24) hours prior to the service interruption. All water mains opened to atmosphere must be disinfected prior to returning the water main to service.
18. Water Main and related appurtenances shall be tested in accordance with the following:
    a. All water mains shall be tested by means of a pressure test and leakage test, in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition, AWWA C600, and in accordance with applicable Jurisdictional Agency requirements.
    b. All water structures (i.e., valve vaults) shall be subject to a leakage test in accordance with IEPA guidelines and Jurisdictional Agency requirements.
19. After completion of the water main testing, the water mains and related appurtenances shall be flushed clean and disinfected (chlorinated) in accordance with the "Standard Specifications for Water and Sewer Construction", latest edition and in accordance with applicable Jurisdictional Agency requirements.

WATER MAIN PROTECTION REQUIREMENTS

Water mains, water services and related appurtenances shall be protected from any existing or proposed drains, sanitary sewers, storm sewers, combined sewers, force mains, and sewer services. All these previously mentioned items shall collectively be referred to as "sewer(s)" for the remainder of this section. Horizontal and vertical separation requirements between water mains and sewers as well as other water main protection requirements shall be in accordance with "Standard Specifications for Water and Sewer Construction in Illinois", latest edition and per the following:

1. Horizontal Separation:
    a. Whenever possible, an existing or proposed water main must be at least ten (10) feet horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service.
    b. Should local conditions exist which would prevent a lateral separation of ten (10) feet, an existing or proposed water main may be closer than ten (10) feet to a sewer provided that the water main invert is at least eighteen (18) inches above the crown of the sewer, and is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.
    c. If it is impossible to obtain proper horizontal and vertical separation as described in Items 1a and 1b above, both the water main and sewer must be constructed of pipe and joint material that conforms to water main quality pipe and joint standards, and be pressure tested to the maximum expected surcharge head to assure water tightness before backfilling.
2. Vertical Separation:
    a. Whenever water mains cross sewers, the water main shall be laid at such an elevation that the invert of the water main is at least eighteen (18) inches above the crown of the sewer. This vertical separation shall be maintained for that portion of the water main located within ten (10) feet horizontally of any sewer crossed. This must be measured as the perpendicular distance from the water main to the sewer. A length of water main pipe shall be centered over the sewer to be crossed with joints placed equidistant from the sewer.
    b. Where conditions exist that the minimum vertical separation set forth in Item 2a above cannot be maintained, or it is necessary for the water main to pass under a sewer, one of the following two measures must be taken:
    i. The water main shall be installed within a PVC casing pipe that conforms to water main quality pipe and joint standards and the casing pipe shall extend on each side of the crossing until the normal distance from the water main to the sewer is at least ten (10) feet.
    ii. The involved sewer shall be constructed of pipe and joint material which would conform to water main quality pipe and joint standards until the normal distance on either side of the crossing from the water main to the sewer is at least ten (10) feet.
    c. In making such crossings, a length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer. Where a water main must cross under a sewer, a vertical separation of eighteen (18) inches between the invert of the sewer and the crown of the water main shall be maintained, along with means to support the sewer to prevent their settling and breaking the water main.
3. The horizontal and vertical separation between water service lines and sewers or related service lines should be the same as for water mains, as detailed above, except that when minimum horizontal and vertical separation cannot be maintained, water main quality pipe and joints as described under Vertical Separation above, may be used for sewer or related service lines.
4. Water mains or services shall not be allowed to pass through or come into contact with sewer structures.
5. Water mains shall be separated from septic tanks, disposal fields, seepage beds, and sewage lift stations by a minimum of twenty-five (25) feet.
6. Water mains shall be separated from sanitary sewer force mains by a minimum of at least ten (10) feet horizontally and there shall be an eighteen (18) inch vertical separation at crossings.
7. The Contractor shall protect water mains and service lines from the entrance of hydrocarbons through diffusion through any material used in the construction of the line.
8. Casing pipe shall be installed in locations and of material specified on the Plans or where necessary to meet the water main protection requirements. The carrier pipe shall be securely blocked and banded with appropriately spaced spacers, and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the voids between the casing and carrier pipe shall be filled with sand, pea gravel or flowable fill and the ends shall be sealed.

PAVEMENT, CURB & GUTTER, AND WALKS

1. All work under this Section shall be performed in accordance the IDOT Standard Specifications or as specified in the Plans.
2. Concrete curb or curb and gutter shall be constructed in accordance with the Plans and Section 606 of the IDOT Standard Specifications. A ¾" pre-molded fiber joint filler along with two (2) 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps, centered on joint, shall be provided at expansion joints. Expansion joints shall be provided at a maximum of sixty (60) foot intervals and at all points of curvature and tangency, curb returns, five (5) feet either side of edge of structures, and at the end of each pour. Construction joints shall be provided at maximum twenty (20) foot intervals.
3. Where proposed curb or curb and gutter connects to an existing curb or curb and gutter, the existing curb or curb and gutter shall be saw-cut and then two 18" long x ½" (#4) epoxy coated smooth round dowel bars with greased end caps shall be drilled and installed nine (9) inches into the existing and proposed curb. Bars shall be installed in a location similar to that of the expansion joint in the curb or curb and gutter as applicable.
4. All curb and curb and gutter constructed over a utility trench shall be reinforced with two (2) #4 epoxy coated reinforcing bars for a length of ten (10) feet centered over the trench or as shown on the plans.
5. Reversed pitched curb and gutter shall be installed in areas where pavement slopes away from the curb.
6. Sidewalks and walks shall be constructed in accordance with the Plans and Section 424 of the IDOT Standard Specifications. Concrete sidewalks and walks shall be thickened to a minimum of 6" at all driveways. All sidewalks and walks shall be IDOT Portland Cement Concrete, Class SI, on compacted aggregate base course as shown on the Plans. Scored contraction joints shall be provided at five (5) foot intervals or as specified in the Plans. Expansion joints consisting of a ½" pre-molded fiber joint filler shall be provided at maximum fifty (50) foot intervals, and adjacent to concrete curbs, drives, foundations, ramps, etc. as well as when meeting existing concrete walks.
7. Sidewalks and walks constructed over a utility trench shall be reinforced with three (3) #4 round epoxy coated reinforcing bars for a length of ten (10) feet centered over the utility trench or as shown on the plans.
8. Curb ramps accessible to the disabled with raised truncated dome detectable warning surface of standard brick red color or other contrasting color shall be provided at all locations where sidewalk meets curb and at other locations shown on the Plans in accordance with the Illinois Accessibility Code (IAC), latest edition and IDOT Standard 424001, latest revision.
9. Curing and protection of all exposed concrete surfaces shall be in accordance with the IDOT Standard Specifications. No "honey-combing" or other similar failures of the concrete surfaces will be accepted.
10. Aggregate base course shall be in accordance with the Plans and Section 351 of the IDOT Standard Specifications. Aggregate base course material shall be CA-6, Type B, 100% crushed gravel conforming to Section 1004 of the IDOT Standard Specifications.
11. Bituminous binder and surface courses shall be Hot Mix Asphalt (HMA) of type and compacted thickness as specified in the Plans and shall be constructed in accordance with Section 406 of the IDOT Standard Specifications. The surface course shall be made with virgin materials; no recycled materials shall be allowed unless specified otherwise on the Plans. The Contractor shall provide and pay for the services of a competent paving laboratory to design and supervise the control of the paving mixture. All paving materials and mixes shall be IDOT certified.
12. Portland cement concrete (PCC) pavement shall be Class PV with reinforcement as specified on Plans and be constructed in accordance with Section 420 of the IDOT Standard Specifications.
13. All concrete work shall be finished with a broom finish unless specified otherwise in the Plans.
14. The Contractor shall saw-cut the exposed edges of all existing pavement adjacent to any proposed pavement, apron, sidewalk, curb and gutter or similar to provide a smooth, clean edge that is free of loose material. A proper transition butt joint and/or taper shall also be provided as necessary. Refer to butt joint detail for additional information.
15. The testing of the subgrade, aggregate base course, bituminous aggregate material, binder course, surface course, and concrete work shall be required and be performed in accordance with the IDOT Standard Specifications and requirements of the applicable Jurisdictional Agency. A qualified testing firm shall be employed to perform the required tests, ensure quality and conformance, and provide the results to the Engineer, Owner, and Jurisdictional Agency. The Contractor shall provide the Owner with a construction schedule and shall coordinate all required testing with the testing firm.
16. Prior to the commencement of any paving activities, a proof-roll must be performed by the Contractor and approved by the Village/City or applicable Jurisdictional Agency, and the Owner. All areas not passing the proof-roll shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner. Any remediate areas shall be re-tested.
17. Prior to installation of the aggregate base course:
    a. The subgrade shall be prepared in accordance with Section 301 of the IDOT Standard Specifications.
    b. The Contractor shall be responsible for all subgrade compaction and preparation to within 0.1-ft of the proposed subgrade elevation. Subgrade shall be compacted to a minimum 95% of the modified proctor density in accordance with ASTM D1557.
    c. Sub-grade shall pass a proof-roll and any unsuitable areas in the subgrade shall be remediated as recommended by the Soils/Geotechnical Engineer and approved by the Owner.
18. Prior to the installation of the binder course:
    a. The aggregate base course shall be prepared in accordance with Section 351 of the IDOT Standard Specifications.
    b. The aggregate base course shall be clean and dry.
    c. The bituminous priming material shall be prepared and applied according to Section 403 of the IDOT Standard Specifications.
    d. The Contractor shall prime the aggregate base course at a rate of 0.25 gallons per square yard prior to the placement of the binder course.
    e. The binder course shall be placed only when the temperature in the shade is at least 40º F and the forecast is for rising temperatures.
19. Prior to the installation of the surface course:
    a. The Contractor shall patch and repair all damaged and failed areas in the binder course to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
    b. The Contractor shall repair all damaged curb and gutter or other concrete pavement to the satisfaction of the Village/City or applicable Jurisdictional Agency, and the Owner.
    c. Structures within pavement shall be adjusted to final surface grade.
    d. The Contractor shall clean and prime the binder course at a rate of 0.05 gallons per square yard prior to the placement of the surface course.
    e. The surface course shall be placed only when the air temperature in the shade is at least 45º F and the forecast is for rising temperatures.
20. Pavement marking/striping:
    a. All Pavement markings shall be in accordance with Section 780 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size and color specified on the Plans.
    b. Pavement marking on freeways shall be placed with truck-mounted equipment. Markings on roads other than freeways may be placed with either truck-mounted or hand-operated equipment.
    c. Before applying the pavement marking material, the pavement shall be clean, dry, and free of debris or any other material that would reduce the adhesion of the markings on the pavement.
    d. Pavement markings shall be applied in accordance with the manufacturer's recommended instructions.
    e. Pavement markings shall be uniform and have clean, straight edges.
    f. Pavement marking words and symbols shall conform closely to the dimensions and spacing specified in the MUTCD, IDOT Standard Details, and the Plans.
    g. Deviations from the required dimensions and spacing or other departures from reasonable standards of professionalism will be cause for rejection by the Engineer.
21. Handicapped stalls shall be striped and signed in accordance with the Illinois Accessibility Code (IAC), latest edition and any other applicable ADA guidelines. Handicapped stalls shall be a minimum of sixteen (16) feet wide and signage shall be affixed to a post permanently mounted in the ground or wall and located in the center of the space no further than five (5) feet from the front of the accessible space. The minimum height to the bottom of the fine sign shall be four (4) feet. Handicapped stall striping shall be yellow in color.
22. All signs shall be in accordance with Section 720 of the IDOT Standard Specifications and the MUTCD, and be of the material type, size, and color specified on the Plans.
23. Raised reflective pavement markers shall be in accordance with Section 781 of the IDOT Standard Specifications and be recessed into the pavement as required by the applicable Jurisdictional Agency.
24. Pavement marking and marker removal shall be in accordance with Section 783 of the IDOT Standard Specifications.
25. All pavements, curb, curb and gutters, walks, etc. shall be cleaned to the satisfaction of the Village/City or applicable Jurisdictional Agency, Owner, and Engineer as necessary during construction and at the end of the project prior to the final acceptance.

CITY OF NAPERVILLE GEOMETRIC AND PAVING NOTES

(City of Naperville Geometric and Paving Notes section shall override the Pavement, Curb & Gutter, and Walks section for any conflicts.)

1. The developer and contractor shall have the responsibility to adequately protect the pavement and property, curb and gutter and other right-of-way improvements, whether newly constructed or existing, from any and all damage. Sufficient means shall be employed by the contractor to protect against such damage to the satisfaction of the City Engineer.
2. Any new or existing improvements that are damaged shall be repaired or replaced in a manner that is satisfactory to the City Engineer.
3. The contractor and/or developer shall secure all necessary rights and permissions to perform any work on private property not within the ownership rights of the developer. The developer shall bear the sole responsibility for damages that may occur as a result of work performed under contracts they initiate.
4. The contractor/developer will be responsible for bringing pavements (street, curb and gutter, sidewalk, driveway) on the property up to City standards including any repairs to substandard pavements that existed prior to or occurred during construction.
5. Wherever new work will meet existing conditions other than lawn areas, regardless of whether the new or existing work is asphalt or concrete, the existing adjacent sidewalk, driveways, pavement or curb shall be neatly saw cut. The saw cut shall be in a neat straight line sufficiently deep so that it renders a smooth vertical face to match to. If the contractor is not careful or does not saw deep enough and the cut line breaks out or chips to an imperfect edge, then the existing side must be re-cut square and done over until it is correct.
6. All pavement patches within the public right-of-way must conform to city standards. Reference Naperville Standard Details 590.12 and 590.13.

SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES

1. All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
2. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
3. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
4. Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
5. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
6. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
7. After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent surface waters from flowing onto adjacent property.
8. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
9. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
10. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
11. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
12. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
13. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
14. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
15. All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
16. Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
17. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
18. The Contractor shall water the site, as required during dry weather to control dust.
19. Erosion Control Maintenance and Replacement Notes:
    a. Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
    b. Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
    c. Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
    d. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
    e. Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
20. The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
21. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).
22. The work shall generally follow the following typical Construction Sequencing:
    a. Installation of them soil erosion and sediment control (SE/SC) measures:
        1. Selective vegetation removal for silt fence installation
        2. Silt fence installation
        3. Construction fencing around areas not to be disturbed
        4. Stabilized construction entrance
    b. Install tree protection fencing and tree removal where necessary (clear & grub)
    c. Construct sediment trapping devices (sediment traps, basins, etc.)
    d. Construct detention facilities and outlet control structure with restrictor.
    e. Strip and stockpile topsoil and mass grade the site
    f. Temporarily stabilize topsoil stockpiles (seed and silt fence around toe of slope)
    g. Install sanitary sewer, storm sewer, watermain and associated inlet & outlet protection
    h. Permanently stabilize detention basins with seed and erosion control blanket
    i. Temporarily stabilize all areas including lots that have reached temporary grade
    j. Install roadways, parking areas, etc.
    k. Final grade and permanently stabilize all outlot areas with topsoil and seed
    l. Install structures and grade individual lots
    m. Permanently stabilize site with topsoil and seed
    n. Remove all temporary SE/SC measures after the site is stabilized with vegetation

CITY OF NAPERVILLE EROSION CONTROL AND DRAINAGE NOTES

(City of Naperville Erosion Control and Drainage Notes section shall override the Soil Erosion and Sedimentation Control General Notes section for any conflicts.)

1. The contractor shall maintain proper drainage at all times during the course of construction and prevent storm water from running into or standing in excavated areas.
2. During extended dry periods, the construction area(s) may need to be watered down to prevent the blowing of soil from the site.
3. During construction, a stabilized construction entrance shall be utilized to minimize the tracking of dirt onto the public streets. It is the contractor's responsibility to keep public street pavement clean of dirt and debris. Any dirt that is tracked onto the public streets shall be removed the same day. If the amount tracked on the public street is excessive, cleaning may be required more frequently.
4. All erosion control measures shall be properly installed, as permitted, prior to any land disturbance activities. All erosion control shall be maintained until turf is established.
5. Stockpiles not being disturbed for more than 14 days shall be seeded.
6. All erosion control measures shall be inspected weekly, after any 0.5 inch rainfall, or more frequently as necessary to maintain their function.

CITY OF NAPERVILLE TRAFFIC CONTROL AND PROTECTION NOTES

1. All developers and contractors shall provide suitable traffic control for their construction activities in accordance with part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Traffic control must be provided for any activity that impacts traffic flow. this includes, but is not limited to, road closures requiring detours, daily lane closures, long term lane closures, narrow lanes, and construction vehicles entering and exiting the public roadway. All traffic control set-ups may be inspected by the City of Naperville to ensure that they are providing positive guidance to motorists and are not in themselves presenting a hazardous situation. A representative of the developer or contractor must provide phone numbers at which they can be reached 24 hours a day and on weekends so that they can maintain traffic control devices.
2. Pedestrians must be provided with a safe alternate route if pedestrian facilities are to be closed as a result of construction activities. Guidance must be provided to pedestrians so that they may avoid the work zone. Said pedestrian Detour Plan (with signage) is to be reviewed and accepted by the City in writing, prior to the commencement of the work.
3. The contractor shall employ the appropriate methods of traffic control in accordance with the plans, specifications and the Manual on Uniform Traffic Control Devices, such that the safety of vehicles, and pedestrians is preserved at all times. The erection and maintenance of the traffic control devices shall be to the satisfaction of the agency of jurisdiction and the City Engineer.
4. Any temporary open holes should be barricaded and protected in accordance with applicable standards.

DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC GENERAL NOTES:

1. **The developer SHALL supply the DPU-E engineer with catalog cuts for all CT/meter equipment (including but not limited to meter sockets, PT cabinet, CT cabinet, disconnect cabinet) and transformer pad/vault. The catalog cuts SHALL be approved by DPU-E prior to purchasing.**
2. **The CT/meter cabinet SHALL be top fed.**
3. **CT/meter equipment are long lead time items and DPU-E shall not be held responsible for delays resulting from non-compliant CT/meter equipment.**
4. **Please provide name and contact information for Electrical Contractor for this project.**
5. **DPUE will provide, install, and maintain the transformers, all primary (15kV) cable and conduit, and the meters and instrument transformers. DPUE will also make the final connections in the transformers once the inspection is complete and the building is ready to be energized.**
6. **The developer is responsible for providing, installing, and maintaining the transformer pad/vault, all service lateral (480V) cable and conduit, the service entrance equipment including the CT/meter cabinet and all banked meter sockets.**
7. **The developer SHALL coordinate site construction with DPU-E to allow electric facilities to be installed prior paving and curbing. DPU-E requires 30 working days advance written notice prior to pavement installation to allow for the installation of electric facilities. Grade elevation must be within 4" of final grading before electric facilities can be installed.**
8. **Electric facilities SHALL be installed pursuant to Section 8-1C-3 of the City of Naperville Municipal Code, which requires a construction fee payment for installation of electric facilities.**
9. **At all times, the Customer shall be solely responsible for maintaining a suitable approach to the meter location, with no obstructions within four (4') feet of the front and two (2') feet of the sides of the Meter. Per NAPERVILLE SERVICE RULES AND POLICIES 22.2.F.**
10. **Clearance to transformer pad SHALL be 5' from all sides, 10' from front, and the area above must be completely clear of obstruction. No trees, shrubs, or other obstacles will be allowed within this area. Transformer pad SHALL maintain minimum clearance of 20' from egress points. Per DPUE specifications C10-2130 AND C30-0016.**
11. **DPU-E requires a minimum 5' of separation between its electric facilities and any fire hydrants storm drains, storm sewers, water mains, gas mains, etc. that run parallel to its facilities.**
12. **To have an existing service disconnected call the City Dispatch office at 630-420-6187. Please allow at least 24 hours notice. Meters and meter seals are to be removed only by DPU-E personnel. The location and type of new or replacement meter related equipment must be pre-approved in writing by DPU-E. An electric service must be inspected by the Development Services Team electrical inspector prior to connection.**
13. **Approval of metering equipment by DPU-E does not remove your responsibility to comply with the latest version of the National Electrical Code as adopted by the City of Naperville. Determination of compliance with the National Electrical Code will be made by the Transportation, Engineering and Development department.**
14. **A customer's grounding conductor shall not be connected to DPU-E distribution equipment.**
15. **Due to supply chain issues DPU-E is experiencing long lead times (+400 days) on transformers. Please take this into consideration when planning construction.**
16. **Please identify preferred voltage level. 1-phase 120/240, 1-phase 120/208, 3-phase 120/208V or, 3-phase 277/480V? Please completed a service loading spreadsheet for each building and return to the DPUE engineer.**
17. **The transformer must be shown on the site plan and should be located between 8' and 50' from commercial buildings. Meters, instrumental transformers, and main disconnect shall be located within 50' of the transformer and shall be installed on the exterior of the building. If the transformer will be located at a distance greater than 50', then the metering cabinet and main disconnect must be free standing and located between 10' and 15' of the transformer. The instrument transformers and main disconnect may be installed inside the building if the service entrance capacity is 1200 amps or greater. Meters shall be installed on the building exterior.**
18. **The developer is responsible for the construction and installation of a transformer pad and vault. The DPU-E engineer must be informed prior to the installation of the and vault. A main disconnect or circuit breaker is required for DPU-E access in case of a need for service or in an emergency. DPU-E shall make the final connections of the customer's service to the transformer terminals. A minimum of eight feet of additional conductor length must be left on the customer's service cables.**
19. **Additional easements are required. All DPU-E owned primary/secondary cable and equipment (transformers, switches, etc…) must be installed inside of a public utility easement.**

No.	Date	Revision

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GENERAL NOTES & SPECIFICATIONS

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet C2.1 / C8

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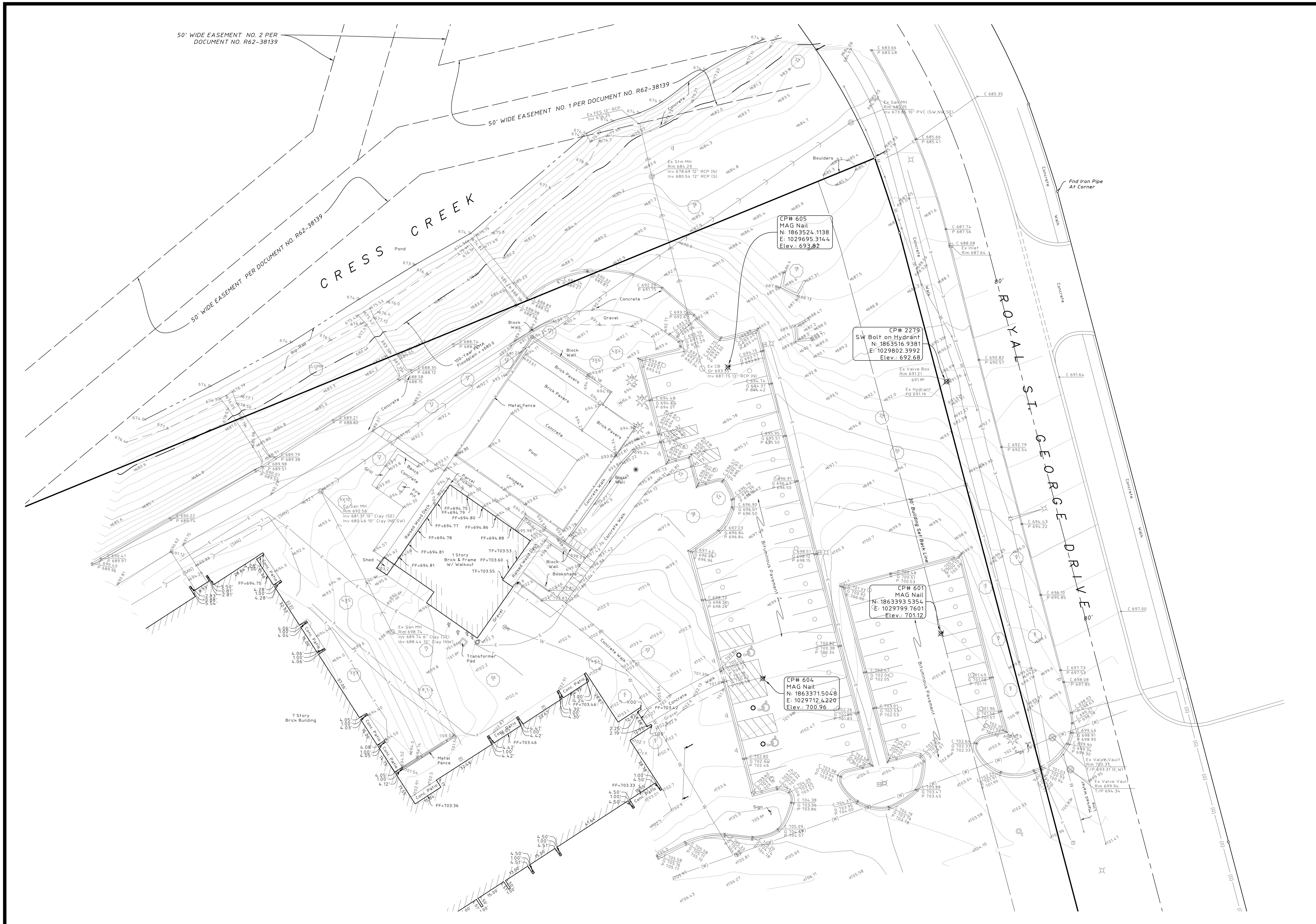
50' WIDE EASEMENT NO. 2 PER DOCUMENT NO. R62-38139
50' WIDE EASEMENT NO. 1 PER DOCUMENT NO. R62-38139
50' WIDE EASEMENT PER DOCUMENT NO. R62-38139
CRESS CREEK
Pond
100-Year FEMA Floodplain = 680.0
ROYAL ST. GEORGE DRIVE
80'
Fnd Iron Pipe At Corner
CP# 605
MAG Nail
N: 1863524.1138
E: 1029695.3144
Elev.: 693.82
CP# 2279
SW Bolt on Hydrant
N: 1863516.9381
E: 1029802.3992
Elev.: 692.68
CP# 601
MAG Nail
N: 1863393.5354
E: 1029799.7601
Elev.: 701.12
CP# 604
MAG Nail
N: 1863371.5048
E: 1029712.4220
Elev.: 700.96
Ex Stm MH
Rim 684.29
Inv 678.69 12" RCP (N)
Inv 680.54 12" RCP (S)
Ex San MH
Rim 692.56
Inv 681.31 10" Clay (SE)
Inv 680.46 10" Clay (NE,SW)
Ex San MH
Rim 698.74
Inv 689.74 6" Clay (SE)
Inv 688.44 10" Clay (NW)
1 Story Brick & Frame W/ Walkout
7 Story Brick Building
Pool
Brick Pavers
Concrete
Metal Fence
Bituminous Pavement
30' Building Set Back Line
Transformer Pad
Shed
Raised Wood Deck
Block Wall
Boulders
Ex Valve Vault
Ex Hydrant
Ex Inlet
Walk
Gravel
Sign
NORTH
Scale: 1" = 20'

EXISTING CONDITIONS PLAN

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

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Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
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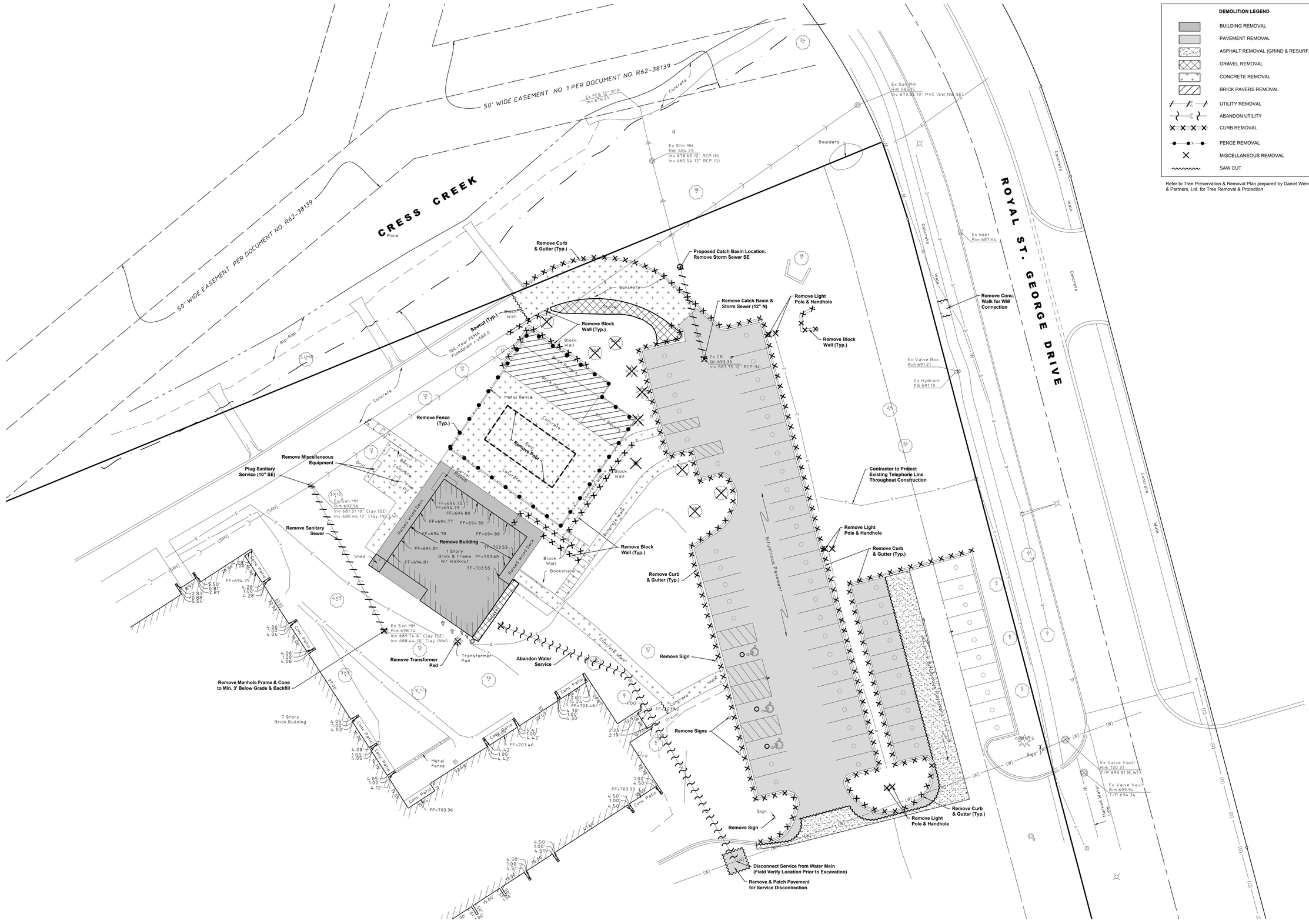

DEMOLITION LEGEND

- BUILDING REMOVAL
- PAVEMENT REMOVAL
- ASPHALT REMOVAL (GRIND & RESURFACE)
- GRAVEL REMOVAL
- CONCRETE REMOVAL
- BRICK PAVERS REMOVAL
- UTILITY REMOVAL
- ABANDON UTILITY
- CURB REMOVAL
- FENCE REMOVAL
- MISCELLANEOUS REMOVAL
- SAW CUT

Refer to Tree Preservation & Removal Plan prepared by Daniel Weinbach & Partners, Ltd. for Tree Removal & Protection

NORTH

10 0 20

Scale: 1" = 20'

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DEMOLITION PLAN

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet C4.0/ C8

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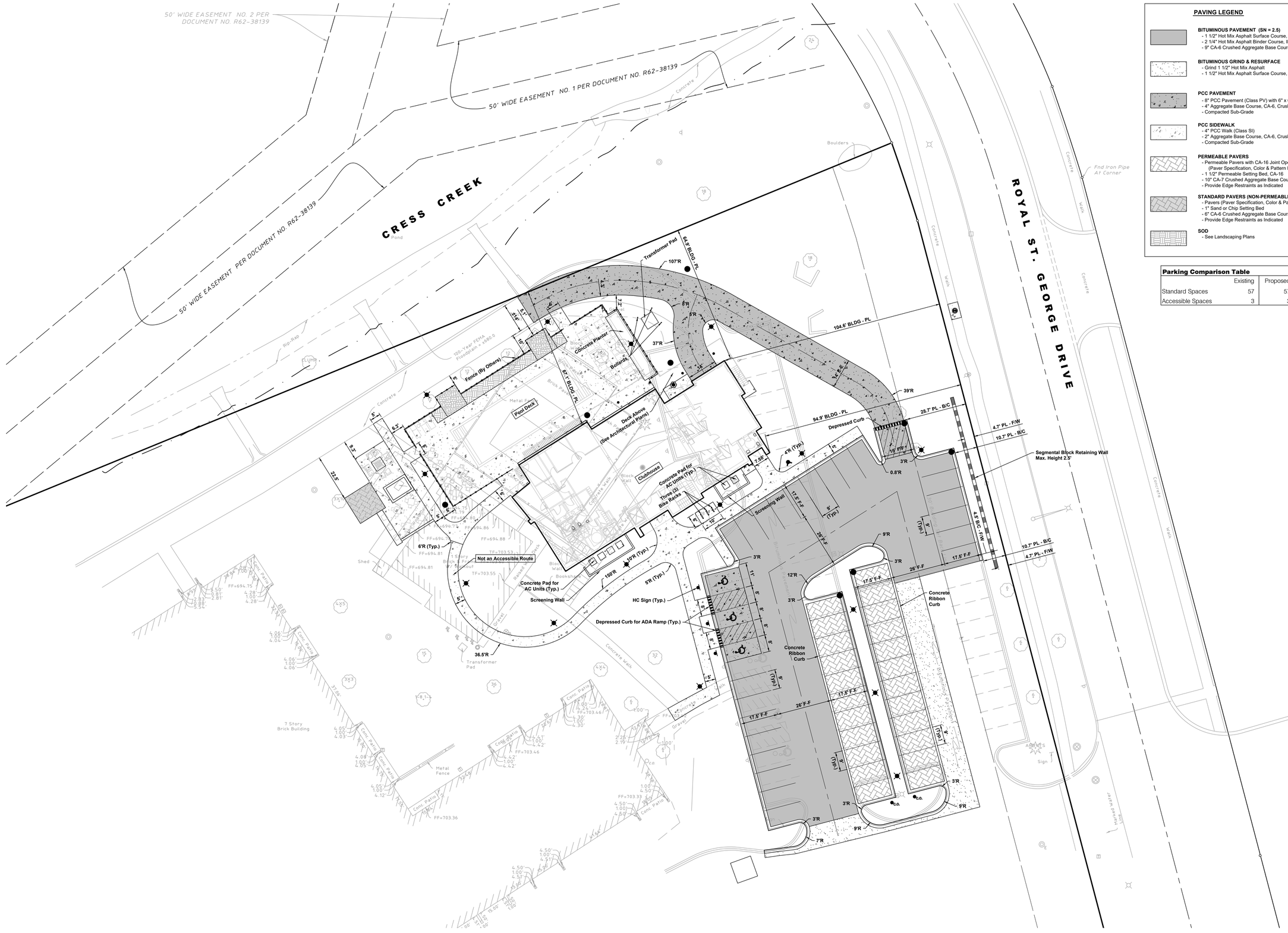

NORTH

Scale: 1" = 20'

PAVING LEGEND

▨ **BITUMINOUS PAVEMENT (SN = 2.5)**
- 1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50
- 2 1/4" Hot Mix Asphalt Binder Course, IL-19.0, N50
- 9" CA-6 Crushed Aggregate Base Course

▨ **BITUMINOUS GRIND & RESURFACE**
- Grind 1 1/2" Hot Mix Asphalt
- 1 1/2" Hot Mix Asphalt Surface Course, Mix D, N50

▨ **PCC PAVEMENT**
- 8" PCC Pavement (Class PV) with 6" x 6" #6 Rigid Wire Mesh
- 4" Aggregate Base Course, CA-6, Crushed
- Compacted Sub-Grade

▨ **PCC SIDEWALK**
- 4" PCC Walk (Class SI)
- 2" Aggregate Base Course, CA-6, Crushed
- Compacted Sub-Grade

▨ **PERMEABLE PAVERS**
- Permeable Pavers with CA-16 Joint Openings (Paver Specification, Color & Pattern by Others)
- 1 1/2" Permeable Setting Bed, CA-16
- 10" CA-7 Crushed Aggregate Base Course
- Provide Edge Restraints as Indicated

▨ **STANDARD PAVERS (NON-PERMEABLE)**
- Pavers (Paver Specification, Color & Pattern by Others)
- 1" Sand or Chip Setting Bed
- 6" CA-6 Crushed Aggregate Base Course
- Provide Edge Restraints as Indicated

▨ **SOD**
- See Landscaping Plans

Parking Comparison Table

	Existing	Proposed	Change
Standard Spaces	57	57	0
Accessible Spaces	3	3	0

No.	Date	Revision
3	05/24/2024	REVISED PER CITY REVIEW
1	05/02/2024	REVISED PER CITY REVIEW

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VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

GEOMETRY PLAN

Project Manager:	P A C
Engineer:	C J B
Date:	03/22/2024
Project No.	22-028
Sheet	C5.0 / C8

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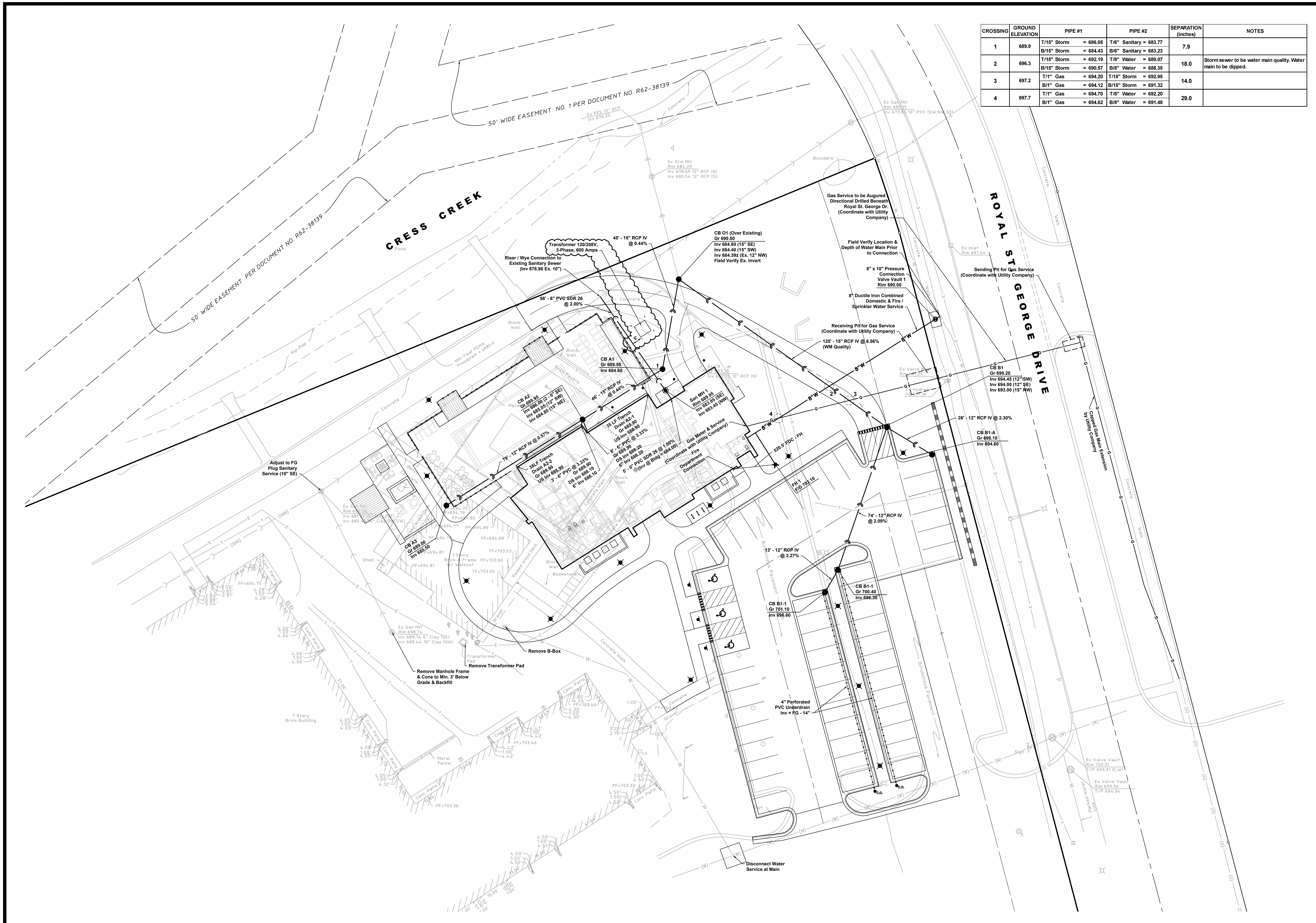

NORTH
Scale: 1" = 20'
CRESS CREEK
ROYAL ST. GEORGE DRIVE
50' WIDE EASEMENT NO. 1 PER DOCUMENT NO. R62-38139
50' WIDE EASEMENT PER DOCUMENT NO. R62-38139
Transformer 120/208V, 3-Phase, 600 Amps
45' - 15" RCP IV @ 0.44%
Riser / Wye Connection to Existing Sanitary Sewer (Inv 676.98 Ex. 10")
CB O1 (Over Existing) Gr 690.50 Inv 684.80 (15" SE) Inv 684.40 (15" SW) Inv 684.39± (Ex. 12" NW) Field Verify Ex. Invert
56' - 6" PVC SDR 26 @ 2.00%
CB A1 Gr 689.50 Inv 684.60
CB A2 Gr 689.85 Inv 686.00 (2 - 6" SE) Inv 685.05 (12" SW) Inv 684.80 (15" NE)
46' - 15" RCP IV @ 0.44%
San MH 1 Rim 689.95 Inv 683.95 (SE) Inv 683.45 (NW)
38 LF Trench Drain A2-1 Gr 689.90 US Inv 688.90
38LF Trench Drain A2-2 Gr 689.90 US Inv 688.90
79' - 12" RCP IV @ 0.57%
Gas Meter & Service (Coordinate with Utility Company)
Fire Department Connection
120.5' FDC - FH
FH 1 F/G 702.10
CB A3 Gr 689.00 Inv 685.50
Adjust to FG Plug Sanitary Service (10" SE)
Remove B-Box
Remove Manhole Frame & Cone to Min. 3' Below Grade & Backfill
Remove Transformer Pad
Gas Service to be Augured Directional Drilled Beneath Royal St. George Dr. (Coordinate with Utility Company)
Field Verify Location & Depth of Water Main Prior to Connection
8" x 10" Pressure Connection Valve Vault 1 Rim 690.00
8" Ductile Iron Combined Domestic & Fire / Sprinkler Water Service
Sending Pit for Gas Service (Coordinate with Utility Company)
Receiving Pit for Gas Service (Coordinate with Utility Company)
125' - 15" RCP IV @ 6.56% (WM Quality)
CB B1 Gr 698.20 Inv 694.45 (12" SW) Inv 694.00 (12" SE) Inv 693.00 (15" NW)
26' - 12" RCP IV @ 2.30%
CB B1-A Gr 698.10 Inv 694.60
Capped Gas Main Extension by Utility Company
74' - 12" RCP IV @ 2.09%
13' - 12" RCP IV @ 2.27%
CB B1-1 Gr 700.40 Inv 696.30
CB B1-1 Gr 701.10 Inv 696.60
4" Perforated PVC Underdrain Inv = FG - 14"
Disconnect Water Service at Main

CROSSING	GROUND ELEVATION	PIPE #1	PIPE #2	SEPARATION (inches)	NOTES
1	689.9	T/15" Storm = 686.05	T/6" Sanitary = 683.77	7.9	
		B/15" Storm = 684.43	B/6" Sanitary = 683.23		
2	696.3	T/15" Storm = 692.19	T/8" Water = 689.07	18.0	Storm sewer to be water main quality. Water main to be dipped.
		B/15" Storm = 690.57	B/8" Water = 688.35		
3	697.2	T/1" Gas = 694.20	T/15" Storm = 692.95	14.0	
		B/1" Gas = 694.12	B/15" Storm = 691.32		
4	697.7	T/1" Gas = 694.70	T/8" Water = 692.20	29.0	
		B/1" Gas = 694.62	B/8" Water = 691.48		

No.	Date	Revision
3	05/24/2024	REVISED PER CITY REVIEW
2	05/20/2024	REVISED PER CITY REVIEW
1	05/02/2024	REVISED PER CITY REVIEW

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UTILITY PLAN

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet C6.0 / C8

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NORTH

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No.	Date	Revision
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GRADING PLAN

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager:	P A C
Engineer:	C J B
Date:	03/22/2024
Project No.	22-028
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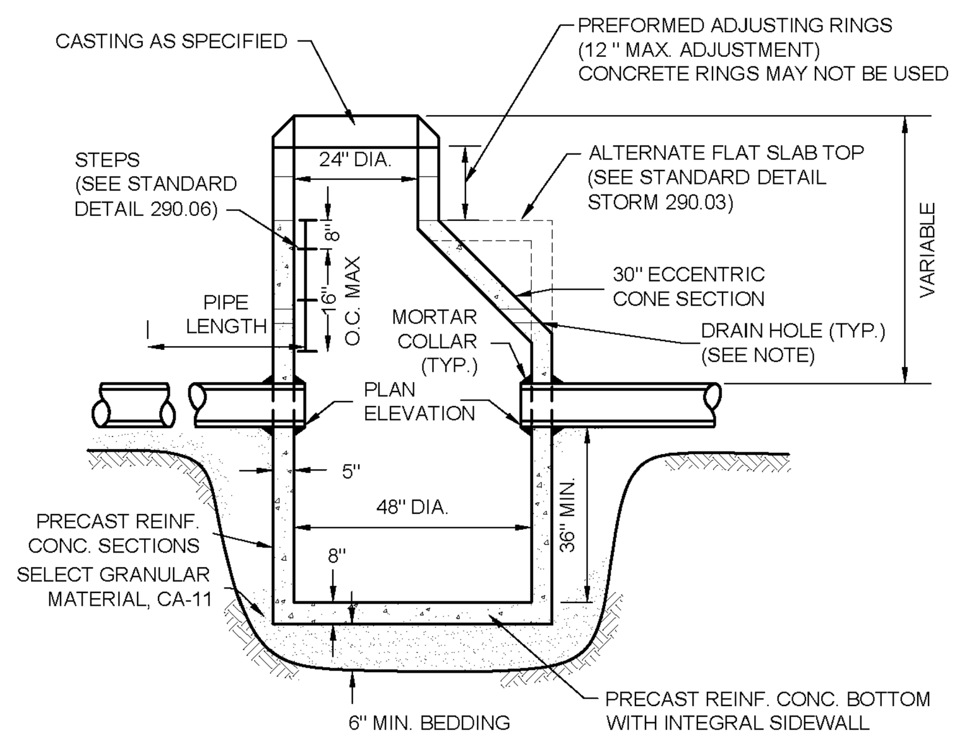
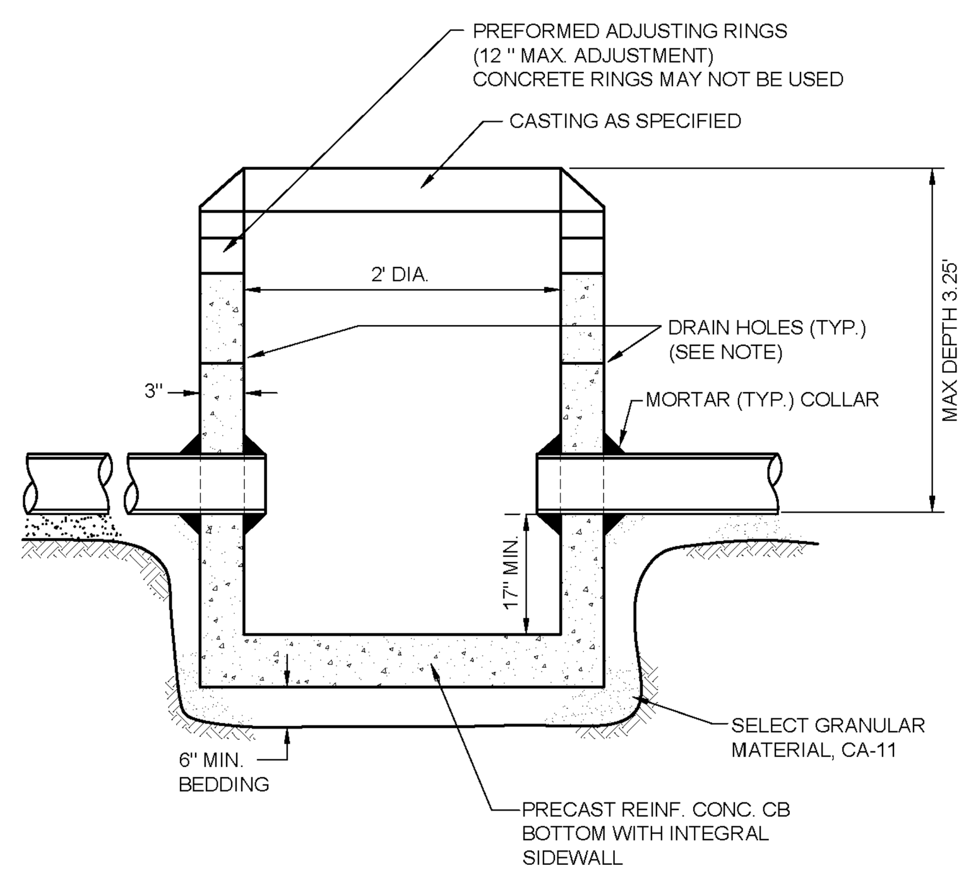


NOTE:

A MINIMUM OF 4 PRECAST OR DRILLED 1" DIAMETER HOLES SHALL BE PROVIDED WITHIN 1' OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1' BY 1' SQUARE OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE FIXED OVER EACH DRAIN HOLE ON THE OUTSIDE OF THE STRUCTURE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING BACKFILLING.

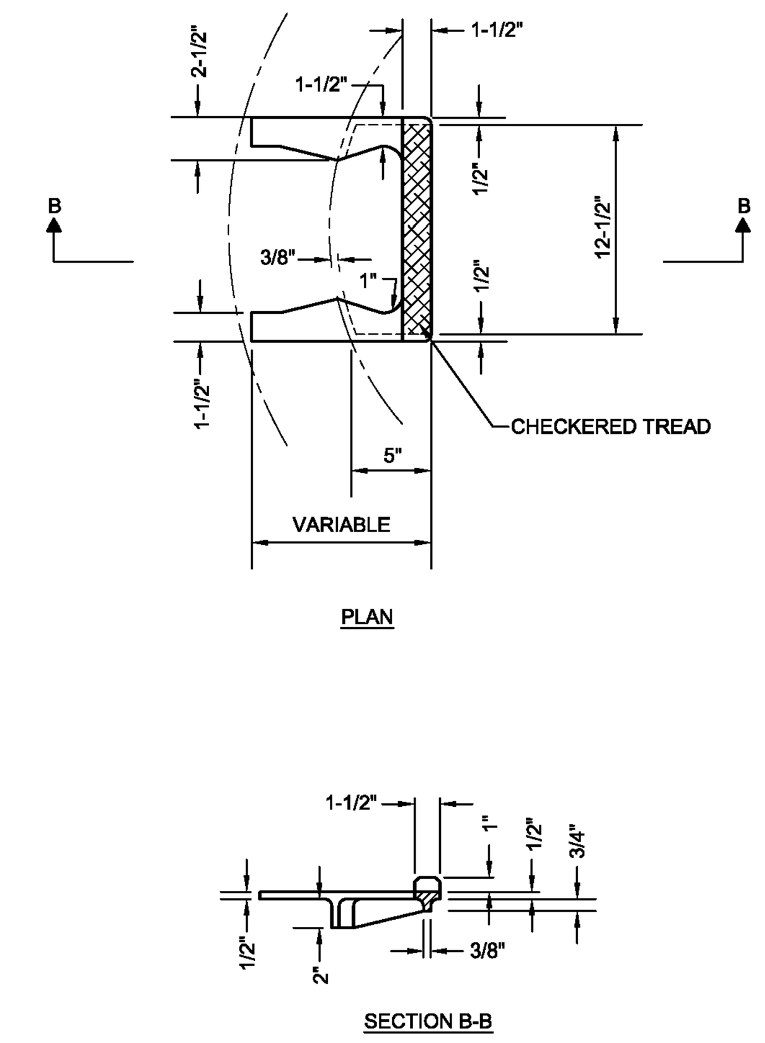
City of Naperville STANDARD DETAIL | CATCH BASIN - TYPE A | STORM 2 | 290.02
REVISED: 08/01/2018 | SHEET 1 OF 1



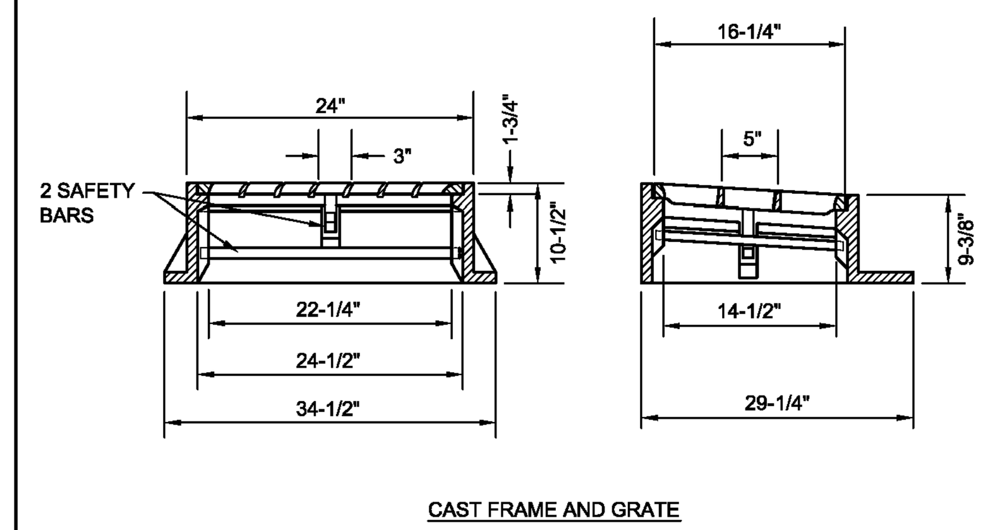
NOTE:

A MINIMUM OF 4 PRECAST OR DRILLED 1" DIAMETER HOLES SHALL BE PROVIDED WITHIN 1' OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1' BY 1' SQUARE OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE FIXED OVER EACH DRAIN HOLE ON THE OUTSIDE OF THE STRUCTURE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING BACKFILLING.

City of Naperville STANDARD DETAIL | CATCH BASIN - TYPE C | STORM 4 | 290.04
REVISED: 08/01/2018 | SHEET 1 OF 1

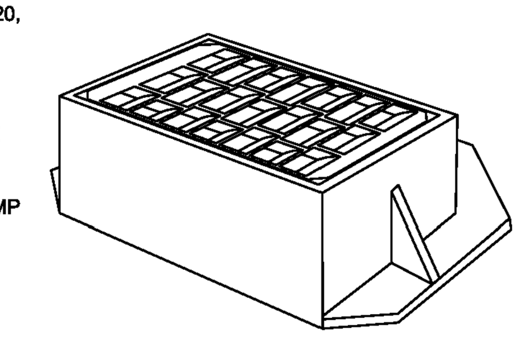


City of Naperville STANDARD DETAIL | CAST IRON STEPS | STORM 6 | 290.06
REVISED: 01/01/2013 | SHEET 1 OF 1

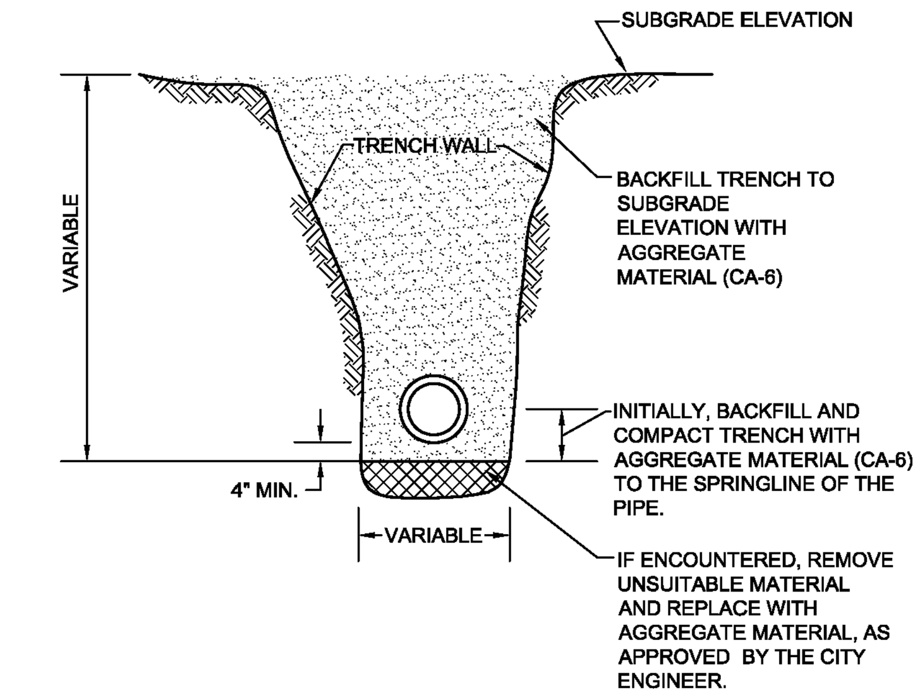


NOTES:

1. FRAME AND GRATE SHALL BE NEENAH R-3525-L, EAST JORDAN 5120, OR EQUAL APPROVED BY THE CITY ENGINEER.
2. ALL CASTING SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.
3. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".



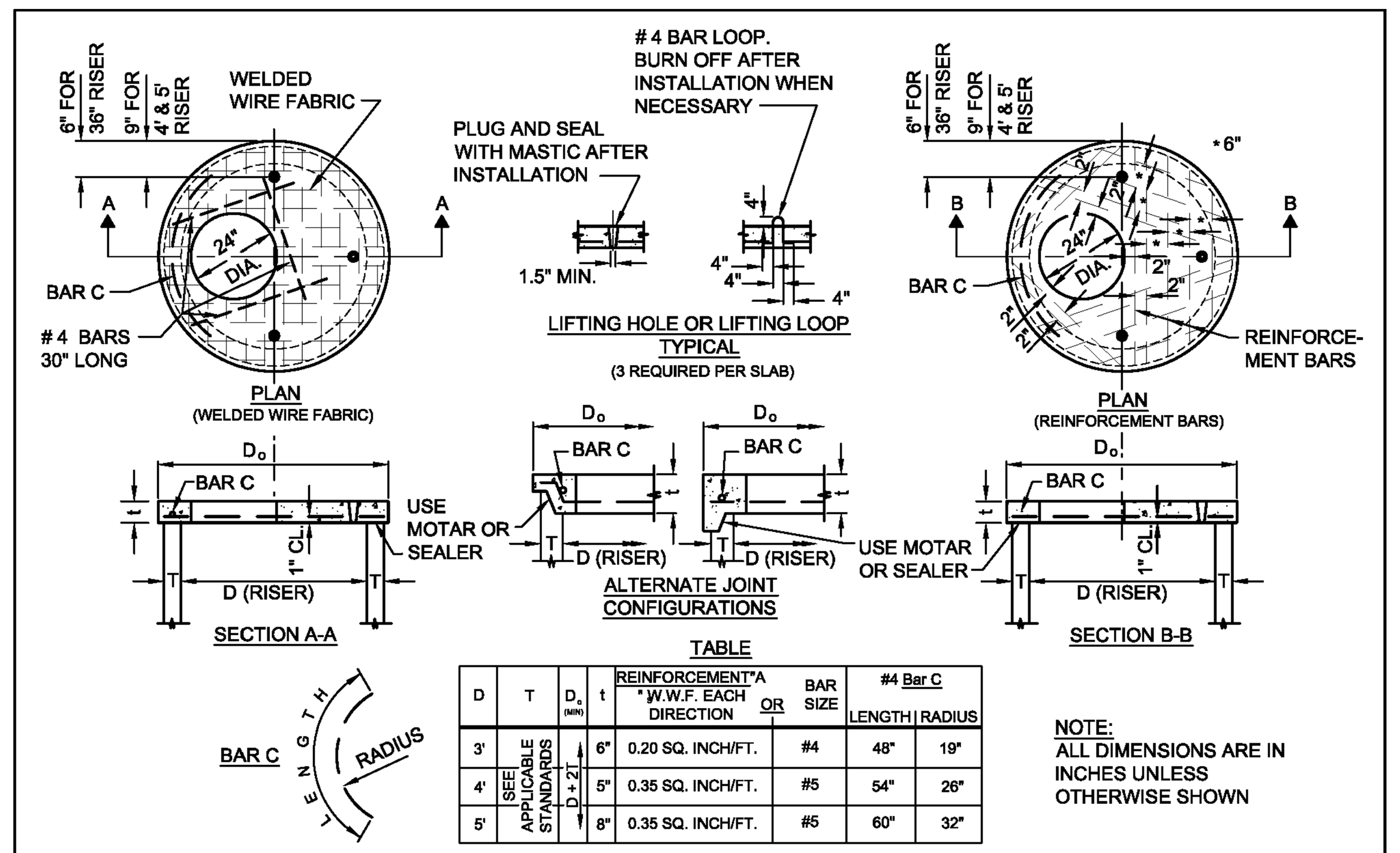
City of Naperville STANDARD DETAIL | FRAME & GRATE FOR B-6.12 CURB & GUTTER (DEPRESSED) | STORM 12 | 290.12
REVISED: 05/15/2015 | SHEET 1 OF 1



NOTES:

1. TRENCH BACKFILL MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. THIS DETAIL SHALL BE USED WHEREVER THE TRENCH IS MADE IN THE PROPOSED ROADWAY SUBGRADE, AND WHEREVER THE INNER EDGE OF THE TRENCH IS CLOSER THAN 2' TO THE EDGE OF THE PROPOSED PAVEMENT, CURB AND GUTTER, AND SIDEWALK.

City of Naperville STANDARD DETAIL | STORM SEWER TRENCH SECTION IN PAVED AREAS | STORM 20 | 290.20
REVISED: 01/01/2013 | SHEET 1 OF 1

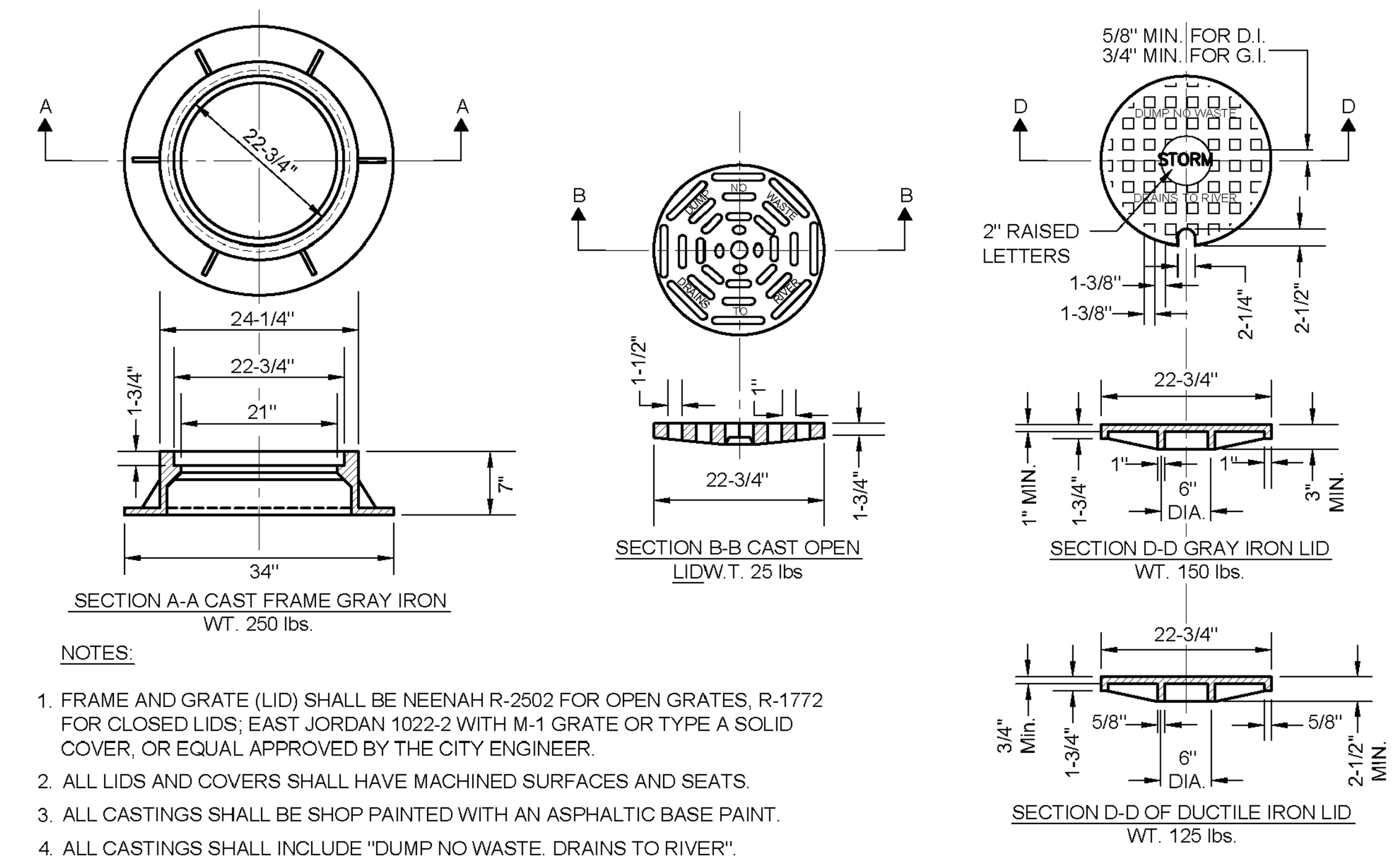


TABLE

D	T	D_o (MIN)	t	REINFORCEMENT "A" W.W.F. EACH DIRECTION	OR BAR SIZE	#4 Bar C LENGTH	#4 Bar C RADIUS
3'	SEE APPLICABLE STANDARDS	D + 2T	6"	0.20 SQ. INCH/FT.	#4	48"	19"
4'			5"	0.35 SQ. INCH/FT.	#5	54"	26"
5'			8"	0.35 SQ. INCH/FT.	#5	60"	32"

NOTE:
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN

City of Naperville STANDARD DETAIL | FLAT SLAB TOP PRECAST REINFORCED CONCRETE | STORM 3 | 290.03
REVISED: 01/01/2013 | SHEET 1 OF 1



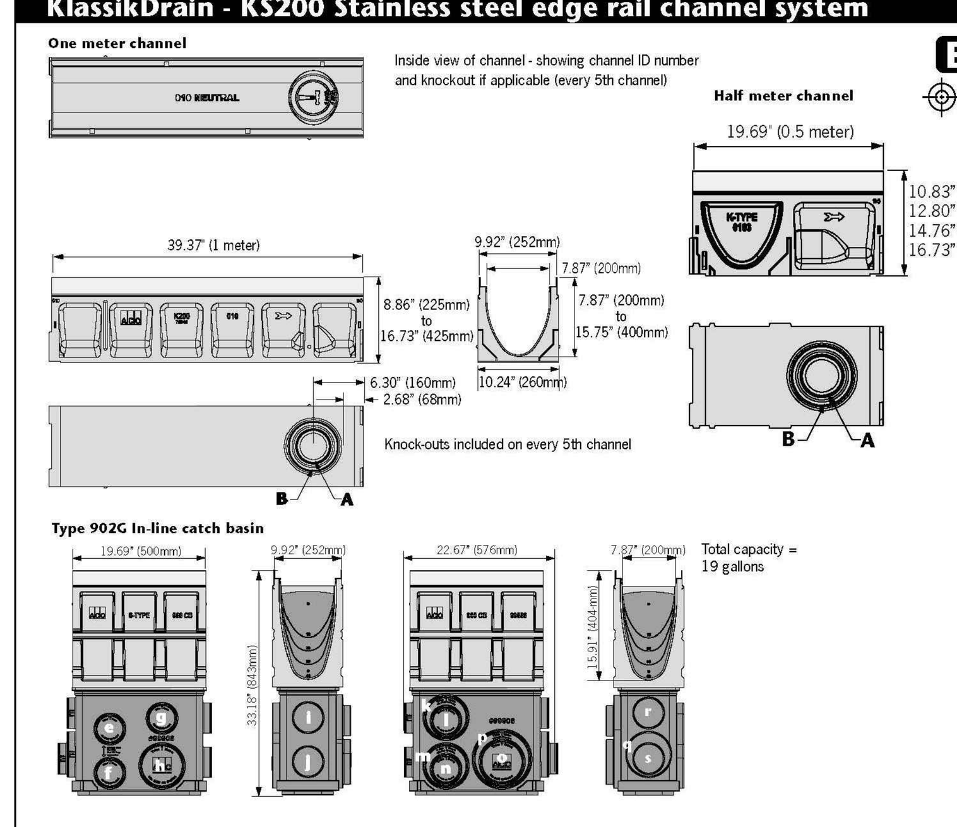
NOTES:

1. FRAME AND GRATE (LID) SHALL BE NEENAH R-2502 FOR OPEN GRATES, R-1772 FOR CLOSED LIDS; EAST JORDAN 1022-2 WITH M-1 GRATE OR TYPE A SOLID COVER, OR EQUAL APPROVED BY THE CITY ENGINEER.
2. ALL LIDS AND COVERS SHALL HAVE MACHINED SURFACES AND SEATS.
3. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.
4. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".

City of Naperville STANDARD DETAIL | FRAME & LID OR GRATE | STORM 10 | 290.10
REVISED: 05/15/2015 | SHEET 1 OF 1

ACO DRAIN

KlassikDrain - KS200 Stainless steel edge rail channel system



Outlet flow rates

Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - KS2-00	4" round	7.87"	153	0.34
A	Bottom outlet - KS2-040	4" round	15.75"	216	0.48
B	Bottom outlet -KS2-00	6" round	7.87"	344	0.77
B	Bottom outlet - KS2-040	6" round	15.75"	486	1.08
C	End outlet - KS2-00	4" round	7.87"	132	0.29
C	End outlet - KS2-40	4" round	15.75"	202	0.45
D	End outlet - KS2-10	6" round	9.84"	320	0.71
D	End outlet - KS2-40	6" round	15.75"	437	0.97
E	Type KS2-902S	4" round	25.33"	263	0.59
F	Type KS2-902S	4" round	31.83"	297	0.66
G	Type KS2-902S	4" round	23.76"	254	0.57
H	Type KS2-902S	6" round	31.83"	658	1.47
I	Type KS2-902S	4" round	23.91"	255	0.57
J	Type KS2-902S	4" round	30.40"	290	0.65
K	Type KS2-902S	6" round	24.68"	570	1.27
L	Type KS2-902S	4" round	24.13"	256	0.57
M	Type KS2-902S	6" round	31.82"	658	1.47
N	Type KS2-902S	4" round	31.26"	294	0.66
O	Type KS2-902S	6" round	31.26"	651	1.45
P	Type KS2-902S	8" round	31.82"	1149	2.56
Q	Type KS2-902S	6" round	30.32"	640	1.43
R	Type KS2-902S	4" round	23.19"	251	0.56
S	Type KS2-902S	4" round	29.90"	288	0.64

Note: These are the pipe rates at the specified outlet. **NOT** channel flow rates. Catch basin flow rates are without trash bucket - using trash bucket reduces flow.

April 2018 www.ACODrain.us

ACO Specification Information

ACO DRAIN

Type 647D/648D Longitudinal stainless steel grate (ADA)

Product Features

- Certified to EN 1433 Load Class B - 28,000 lbs - 483 psi
- Uses 'DrainLok' boltless locking system
- Suitable for use with K200, KS200, and H200K-13 channels
- Manufactured from 16 gauge, grade 304
- Complies with ADA - American Disabilities Act of 1990 Section 4.5.4
- Bicycle Tire Penetration Resistant to AS 3996 - 2006

Specifications

General
The surface drainage system shall be ACO Drain K200, KS200, and H200K-13 channels*, complete with ACO Type 647D/648D longitudinal stainless steel grate (ADA) with 'DrainLok' locking as manufactured by ACO Polymer Products, Inc. or similar approved.

Materials
The covers shall be manufactured from stainless steel and have ***minimum*** properties as follows:

- ***Independently certified to meet Load Class B to EN 1433 - 28,000 lbs - 483 psi***
- ***16 gauge, Grade 304 stainless steel***
- ***Intake area of 89.1 sq. in. (574.84 cm²) per half meter***

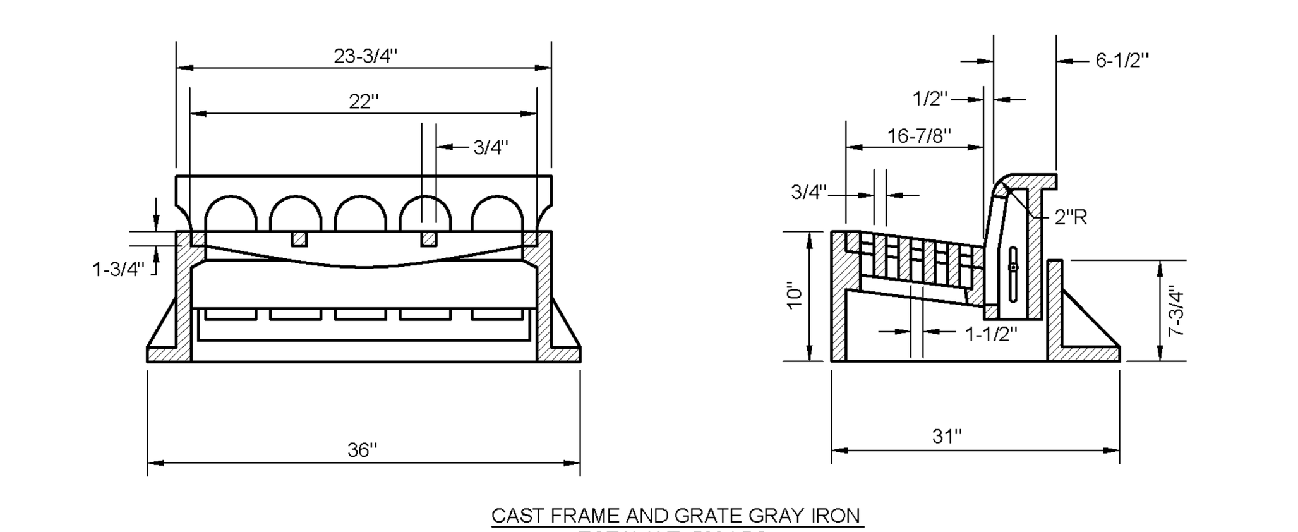
The overall width of 9.37" (238mm) and overall length of 39.37" (1000mm) (Type 647D) and overall length of 19.69" (500mm) (Type 648D). Slots measure at a 1.61" (40.89mm) by 0.24" (6.09mm).

Installation
The trench drain system and grates shall be installed in accordance with the manufacturer's installation instructions and recommendations.

* delete as appropriate

August 2017 www.ACODrain.us

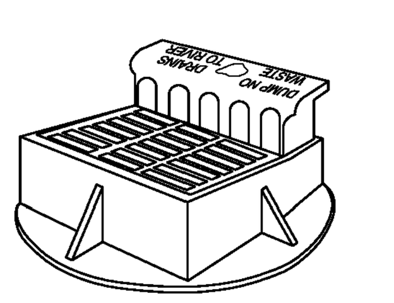
ACO Specification Information



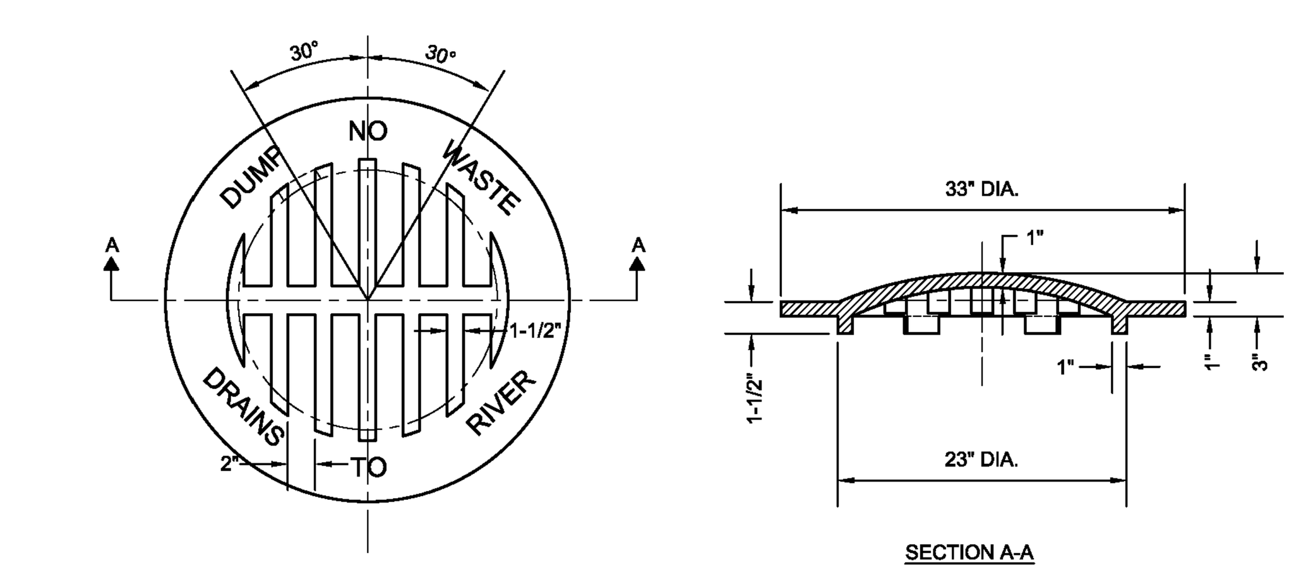
CAST FRAME AND GRATE GRAY IRON
TOTAL WT. 500 LBS.

NOTES:

1. FRAME AND GRATE SHALL BE NEENAH R-3278-A, EAST JORDAN IRON 7220, OR EQUAL APPROVED BY THE CITY ENGINEER.
2. ALL CASTING SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.
3. SEE STANDARD DETAIL 590.20 FOR CORRESPONDING CURB.
4. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".



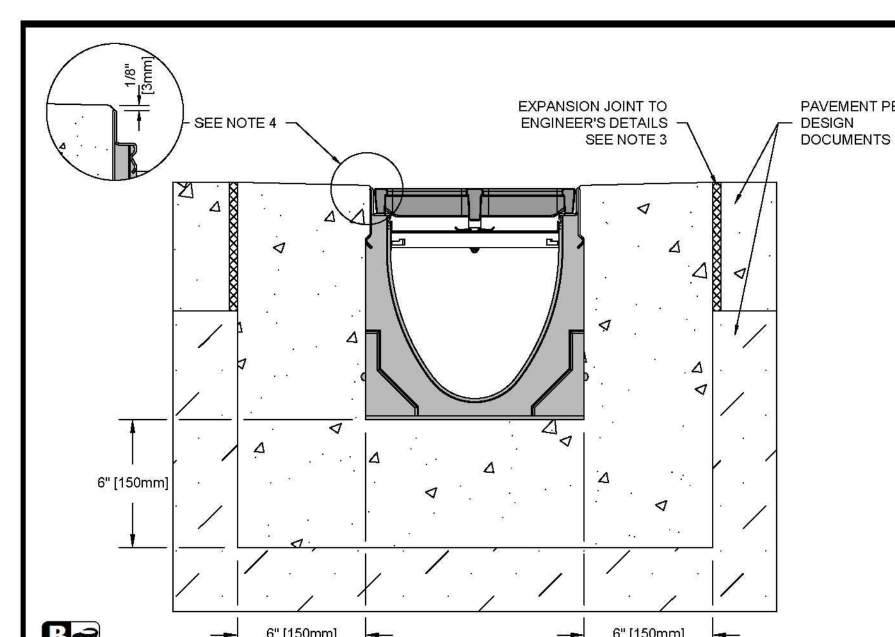
City of Naperville STANDARD DETAIL | FRAME & GRATE FOR B-6.12 CURB & GUTTER | STORM 11 | 290.11
REVISED: 05/15/2015 | SHEET 1 OF 1



NOTES:

1. BEEHIVE GRATE SHALL BE NEENAH R4340B, EAST JORDAN 6527, OR EQUAL APPROVED BY THE CITY ENGINEER.
2. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.
3. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".

City of Naperville STANDARD DETAIL | BEEHIVE GRATE | STORM 14 | 290.14
REVISED: 05/15/2015 | SHEET 1 OF 1



NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

K200 KLASSIKDRAIN 'QUICKLOK' LOAD CLASS B

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K200 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 8" (200mm) NOMINAL INTERNAL WIDTH WITH A 10.2" (260mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

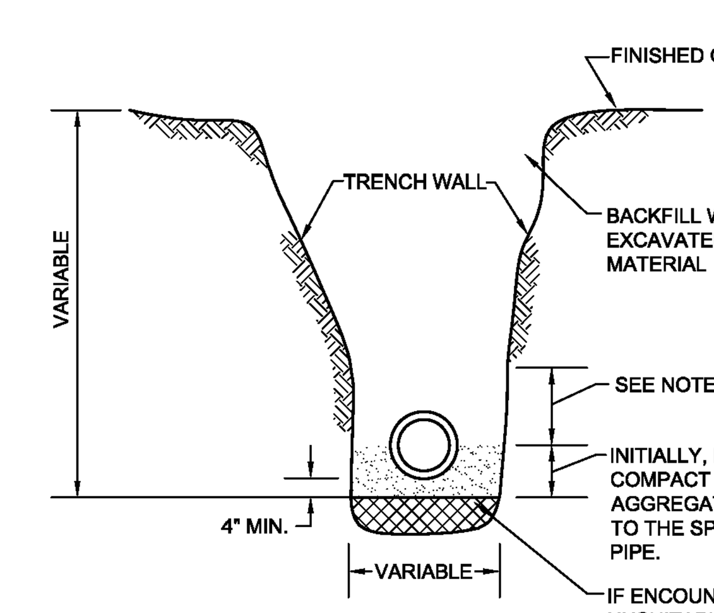
CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'QUICKLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

K2Q-B-ECP | K200 - KLASSIKDRAIN - LOAD CLASS: B / Exposed Concrete Pavement | ACO Polymer Products, Inc.
DATE: 08/17/16 | INSTALLATION DRAWING - ACO DRAIN

825 W. Beechcraft St, Casa Grande, AZ 85122, Tel: 520-421-9988, Fax: 520-421-9899
9470 Pinecone Dr., Mentor, OH 44060, Tel: 440-639-7230, Fax: 440-639-7235
4211 Pleasant Rd., Fort Mill, SC 29708, Tel: 440-639-7230, Fax: 803-802-1063

Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

Alternate Product Note:
Detail provided for reference only. Contractor shall provide shop drawings of proposed trench drain for approval by Owner prior to construction.



NOTE:

FOR PVC AND HDPE PIPE, BACKFILL WITH AGGREGATE MATERIAL (CA-6) TO 6" ABOVE THE TOP OF PIPE.

City of Naperville STANDARD DETAIL | STORM SEWER TRENCH SECTION IN NON-PAVED AREAS | STORM 21 | 290.21
REVISED: 01/01/2013 | SHEET 1 OF 1

CITY OF NAPERVILLE
STANDARD DETAILS

VIEWS OF NAPERVILLE CLUBHOUSE
SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173 •Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

No.	Date	Revision

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet C8.0 / C8

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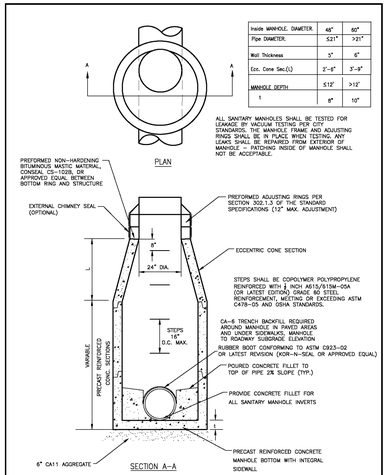
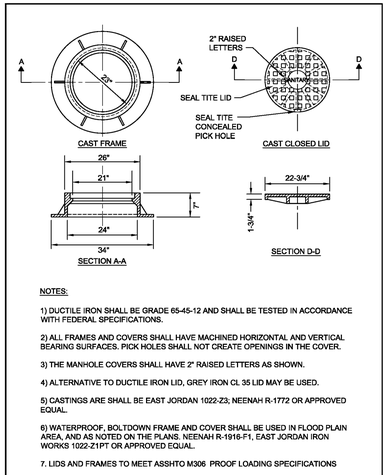


City of Naperville STANDARD DETAIL | SANITARY SEWER MANHOLE | SANITARY 1 | 390.01
REVISED: 08/01/2018 | SHEET 1 OF 1



NOTES:

1) DUCTILE IRON SHALL BE GRADE 65-45-12 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.

2) ALL FRAMES AND COVERS SHALL HAVE MACHINED HORIZONTAL AND VERTICAL BEARING SURFACES. PICK HOLES SHALL NOT CREATE OPENINGS IN THE COVER.

3) THE MANHOLE COVERS SHALL HAVE 2" RAISED LETTERS AS SHOWN.

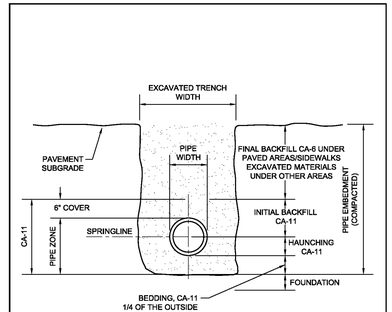
4) ALTERNATIVE TO DUCTILE IRON LID, GREY IRON CL 35 LID MAY BE USED.

5) CASTINGS ARE SHALL BE EAST JORDAN 1022-Z3; NEENAH R-1772 OR APPROVED EQUAL.

6) WATERPROOF, BOLTDOWN FRAME AND COVER SHALL BE USED IN FLOOD PLAIN AREA, AND AS NOTED ON THE PLANS. NEENAH R-1916-F1, EAST JORDAN IRON WORKS 1022-Z1PT OR APPROVED EQUAL.

7. LIDS AND FRAMES TO MEET ASSHTO M306 PROOF LOADING SPECIFICATIONS

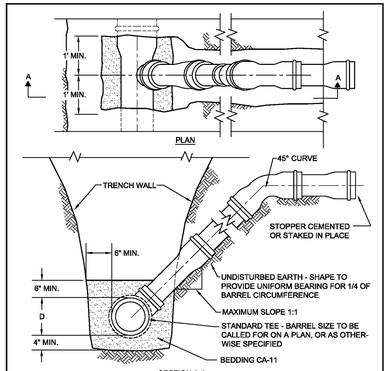
City of Naperville STANDARD DETAIL | SANITARY MANHOLE - FRAME & COVER | SANITARY 6 | 390.06
REVISED: 01/01/2013 | SHEET 1 OF 1



NOTES:

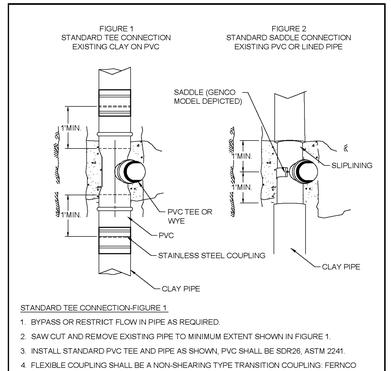
1. IN PAVED AREAS, ALL TRENCHES MUST BE COMPACTED IN CONFORMANCE WITH SECTION 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
2. IF FOUNDATION IS UNSUITABLE TO BED PIPE, UNDERCUTS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

City of Naperville STANDARD DETAIL | TRENCH SECTION FOR PVC PIPE | SANITARY 10 | 390.10
REVISED: 01/01/2013 | SHEET 1 OF 1



1. THE OPEN ENDS SHALL BE PROTECTED FROM DEBRIS AND GROUNDWATER ENTERING THE LATERAL WITH AN APPROVED PLUG.
2. MAXIMUM SLOPE SHALL BE LESS THAN 1:1 WHEN IT IS NECESSARY TO SECURE BEDDING IN UNDISTURBED EARTH.
3. WHEN A SERVICE CONNECTION IS TAPPED INTO PVC MAIN, THEN A SEWER SADDLE SHALL BE USED. GENECO TYPE "SEALTITE" OR APPROVED EQUAL. BANDS, NUTS AND BOLTS MUST BE 304 STAINLESS STEEL.
4. SDR 26 PVC PIPE MEETING REQUIREMENTS OF ASTM D-2241-05 AND JOINTS CONFORMING TO ASTM D-3139-98(2005) OR LATEST EDITIONS.

City of Naperville STANDARD DETAIL | RISE FOR SERVICE LATERAL | SANITARY 20 | 390.20
REVISED: 01/01/2013 | SHEET 1 OF 1



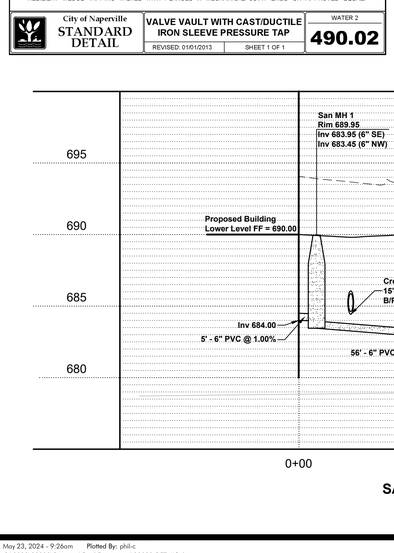
STANDARD TEE CONNECTION-FIGURE 1

1. BYPASS OR RESTRICT FLOW IN PIPE AS REQUIRED.
2. SAW CUT AND REMOVE EXISTING PIPE TO MINIMUM EXTENT SHOWN IN FIGURE 1.
3. INSTALL STANDARD PVC TEE AND PIPE AS SHOWN, PVC SHALL BE SDR26, ASTM 2241.
4. FLEXIBLE COUPLING SHALL BE A NON-SHEARING TYPE TRANSITION COUPLING: FERNCO STRONG BACK RC 1000 SERIES, CASCADE STYLE CSS COUPLING, OR APPROVED EQUAL.

STANDARD SADDLE CONNECTION FIGURE 2

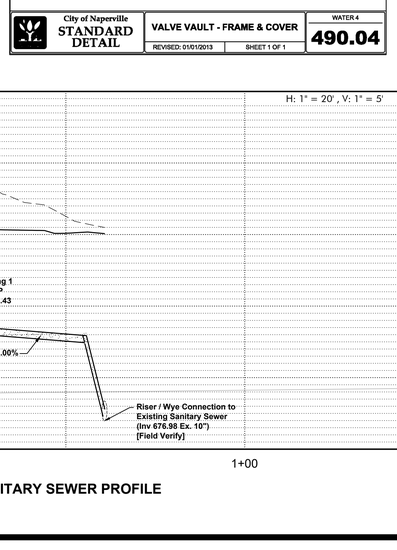
1. FOR LINED PIPE CAREFULLY REMOVE OLD CLAY PIPE TO MINIMUM EXTENT SHOWN WITHOUT DAMAGING LINER PIPE.
2. HOLES FOR SADDLE INLET SHALL BE LAID OUT USING SADDLE AS TEMPLATE AND CUT WITH APPROPRIATE EQUIPMENT NOT DAMAGE THE PIPE TO REMAIN. HOLE TO BE BE DE BURRED AND BEVELED WHERE REQUIRED TO PROVIDE HOLE SLOPE TO CONFORM TO THE FITTING.
3. SADDLE SHALL BE SEALTITE TEE "U" MODEL 40 BY GENCO, CASCADE STYLE CSWRY OR CSWRT, OR APPROVED EQUAL.

City of Naperville STANDARD DETAIL | SANITARY SEWER SERVICE CONNECTION | SANITARY 21 | 390.21
REVISED: 08/01/2018 | SHEET 1 OF 1



1.) USE MEGALUG SERIES 1100 OR FORD UNI-FLANGE SERIES 1400 RETAINER GLANDS WITH STAINLESS STEEL T-BOLTS COATED WITH ANTI-SIEZE COMPOUND.
2) TAPPING SLEEVES SHALL BE CAST OR DUCTILE IRON MECHANICAL JOINT CONFORMING TO ANSI/AWWA C110/A21.10-82 (TYLER/UNION OR APPROVED EQUAL). EXISTING PIPE TO BE DISINFECTED PRIOR TO INSTALLATION OF TAPPING SLEEVE. TAPPING SLEEVE TO BE PRESSURE TESTED HYDROSTATICALLY TO OPERATING PRESSURE PLUS 50 PERCENT PRIOR TO MAKING PRESSURE CONNECTION.
3) EXISTING PIPE TO BE DISINFECTED PRIOR TO INSTALLATION OF TAPPING SLEEVE AND TAPPING SLEEVE IS TO BE PRESSURE TESTED TO OPERATING PRESSURE PLUS 50 PERCENT PRIOR TO MAKING PRESSURE CONNECTION.
4) DO NOT USE STAINLESS STEEL SLEEVE ON SIZE TAPS OR PIPES LARGER THAN 12" DIAMETER
5) IN THE EVENT IT IS NECESSARY TO USE A PRECAST SPLIT BOTTOM FLOOR DUE TO SPACE CONSTRAINTS THE FLOOR MUST BE GROUTED WATER TIGHT.
6) TAPPING VALVES SHALL CONFORM TO C515-09 OR LATEST REVISION: AMERICAN SERIES 2500 RESILIENT WEDGE TAPPING VALVES WITH FLANGED X MECHANICAL JOINT ENDS OR APPROVED EQUAL.

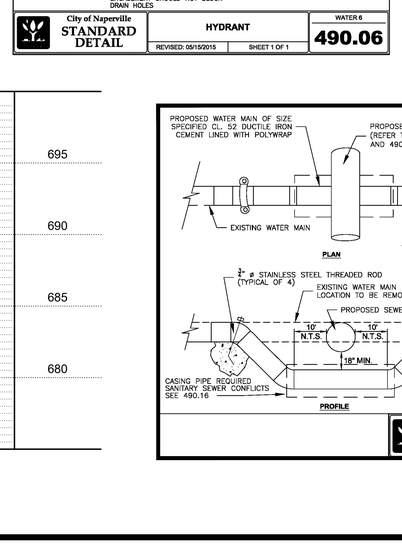
City of Naperville STANDARD DETAIL | VALVE VAULT WITH CAST/DUCTILE IRON SLEEVE PRESSURE TAP | WATER 2 | 490.02
REVISED: 01/01/2013 | SHEET 1 OF 1



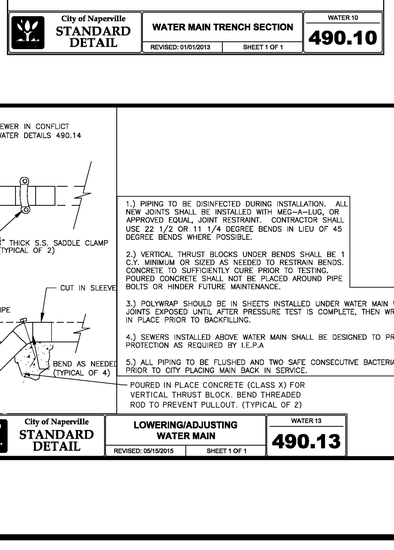
NOTES:

1. DUCTILE IRON SHALL BE GRADE 65-45-12 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL FRAMES AND COVERS SHALL HAVE MACHINED HORIZONTAL AND VERTICAL BEARING SURFACES. PICK HOLES SHALL NOT CREATE OPENINGS IN THE COVER.
3. THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GREY IRON CL 35 LID MAY BE USED.
5. DIMENSIONS FOR CASTINGS ARE COMPARABLE TO EAST JORDAN 1022 OR NEENAH R-1772-C, HEAVY DUTY.
6. LIDS AND FRAMES TO MEET AASHTO M306 PROOF LOADING SPECIFICATIONS.

City of Naperville STANDARD DETAIL | VALVE VAULT - FRAME & COVER | WATER 4 | 490.04
REVISED: 01/01/2013 | SHEET 1 OF 1



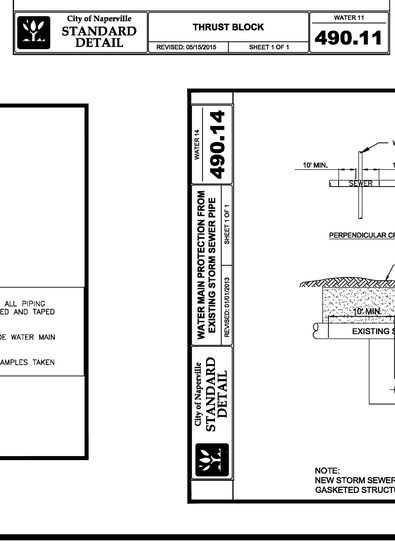
City of Naperville STANDARD DETAIL | HYDRANT | WATER 6 | 490.06
REVISED: 05/15/2015 | SHEET 1 OF 1



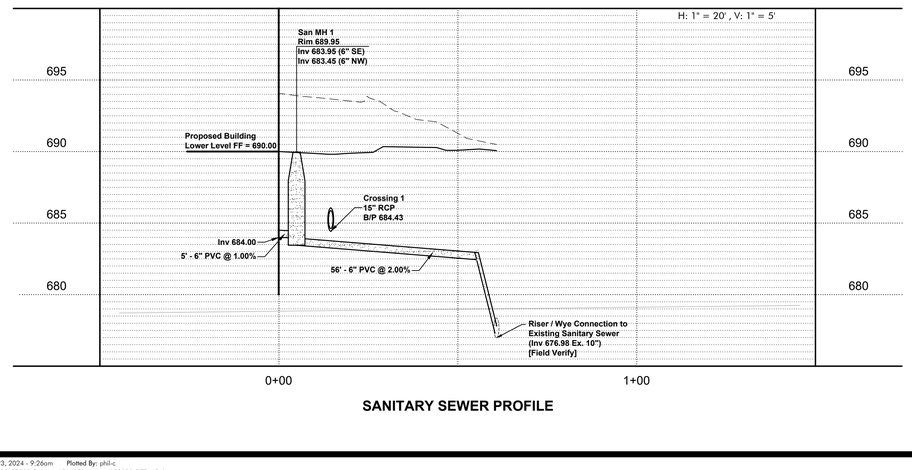
NOTES:

1. IN PAVED AREAS ALL TRENCHES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. METHOD 1. 95% MINIMUM STANDARD PROCTOR.
2. DUCTILE IRON WATER MAIN TO BE CLASS 52. ALL DUCTILE IRON PIPE IS TO BE ENCASED IN POLYETHYLENE FILM. POLYETHYLENE ENCASEMENT TO BE INSTALLED IN ACCORDANCE WITH AWWAC105A21.5-99.(OR LATEST EDITION)
3. STAINLESS STEEL NUTS, BOLTS/T-BOLTS, AND WASHERS, TYPE 304 OR BETTER, WILL BE REQUIRED ON ALL WATER MAIN INSTALLATIONS. THIS WOULD APPLY TO HYDRANTS, TAPPING SLEEVES, VALVES, FITTINGS, RESTRAINT, AND OTHER APPURTENANCES BURIED OR IN VALVE VAULTS. MECHANICAL JOINTS AND RESTRAINT GLANDS REQUIRE 304 STAINLESS STEEL T-BOLTS. AN ANTI-SEIZE COMPOUND SHALL BE FACTORY APPLIED TO NUTS OR BOLTS - ANY DAMAGE TO THIS COATING SHALL BE REPAIRED WITH FIELD-APPLIED, APPROVED ANTI-SEIZE COMPOUND THAT IS A MOLYBDENUM-BASE LUBRICANT, BOSTIK NEVER-SEEZ OR APPROVED EQUAL.

City of Naperville STANDARD DETAIL | WATER MAIN TRENCH SECTION | WATER 10 | 490.10
REVISED: 01/01/2013 | SHEET 1 OF 1



City of Naperville STANDARD DETAIL | THRUST BLOCK | WATER 11 | 490.11
REVISED: 05/15/2015 | SHEET 1 OF 1



SANITARY SEWER PROFILE

1.) PIPING TO BE DISINFECTED DURING INSTALLATION. ALL NEW JOINTS SHALL BE INSTALLED WITH MEG-A-LUG, OR APPROVED EQUAL, JOINT RESTRAINT. CONTRACTOR SHALL USE 22 1/2 OR 11 1/4 DEGREE BENDS IN LIEU OF 45 DEGREE BENDS WHERE POSSIBLE.

2.) VERTICAL THRUST BLOCKS UNDER BENDS SHALL BE 1 C.Y. MINIMUM OR SIZED AS NEEDED TO RESTRAIN BENDS. CONCRETE TO SUFFICIENTLY CURE PRIOR TO TESTING. POURED CONCRETE SHALL NOT BE PLACED AROUND PIPE BOLTS OR HINDER FUTURE MAINTENANCE.

3.) POLYWRAP SHOULD BE IN SHEETS INSTALLED UNDER WATER MAIN WITH ALL PIPING JOINTS EXPOSED UNTIL AFTER PRESSURE TEST IS COMPLETE, THEN WRAPPED AND TAPED IN PLACE PRIOR TO BACKFILLING.

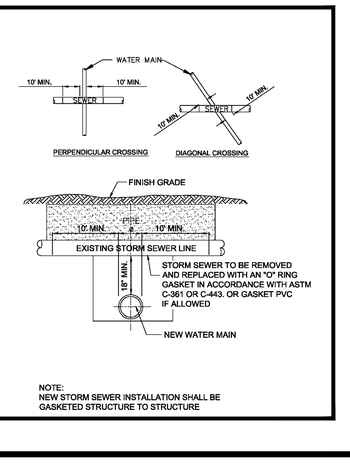
4.) SEWERS INSTALLED ABOVE WATER MAIN SHALL BE DESIGNED TO PROVIDE WATER MAIN PROTECTION AS REQUIRED BY I.E.P.A

5.) ALL PIPING TO BE FLUSHED AND TWO SAFE CONSECUTIVE BACTERIAL SAMPLES TAKEN PRIOR TO CITY PLACING MAIN BACK IN SERVICE.

POURED IN PLACE CONCRETE (CLASS X) FOR VERTICAL THRUST BLOCK. BEND THREADED ROD TO PREVENT PULLOUT. (TYPICAL OF 2)

City of Naperville STANDARD DETAIL | LOWERING/ADJUSTING WATER MAIN | WATER 13 | 490.13
REVISED: 05/15/2015 | SHEET 1 OF 1

WATER 14 | 490.14
WATER MAIN PROTECTION FROM EXISTING STORM SEWER PIPE
SHEET 1 OF 1
REVISED: 01/01/2013



NOTE:
NEW STORM SEWER INSTALLATION SHALL BE GASKETED STRUCTURE TO STRUCTURE

CITY OF NAPERVILLE
STANDARD DETAILS

VIEWS OF NAPERVILLE CLUBHOUSE
SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

No. | Revision | Date

HAEGER ENGINEERING
consulting engineers • • land surveyors
100 East State Parkway, Schaumburg, IL 60173 Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No.: 184.003152
www.haegerengineering.com

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet C8.1/ C8

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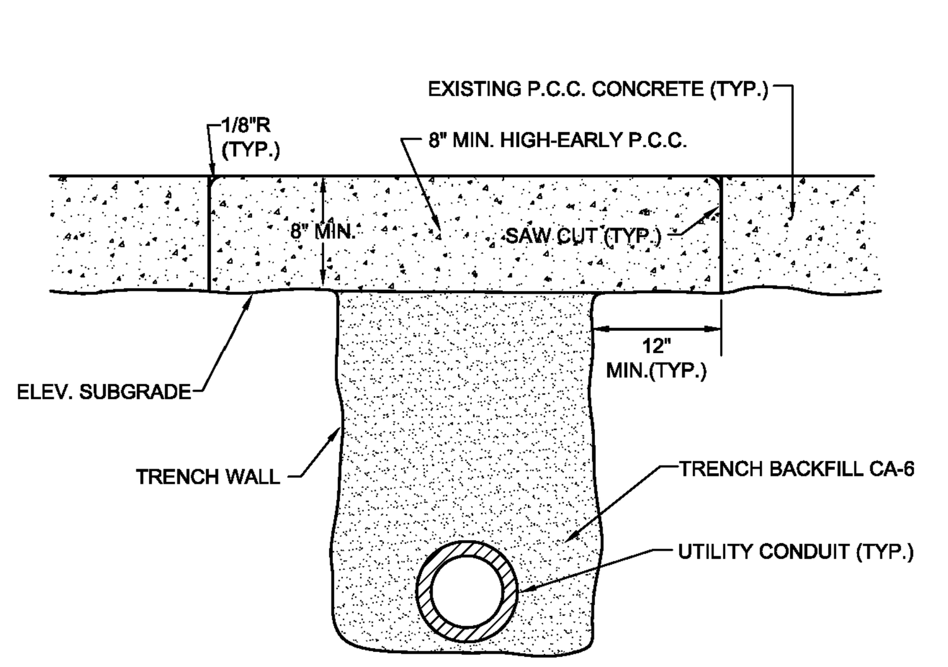
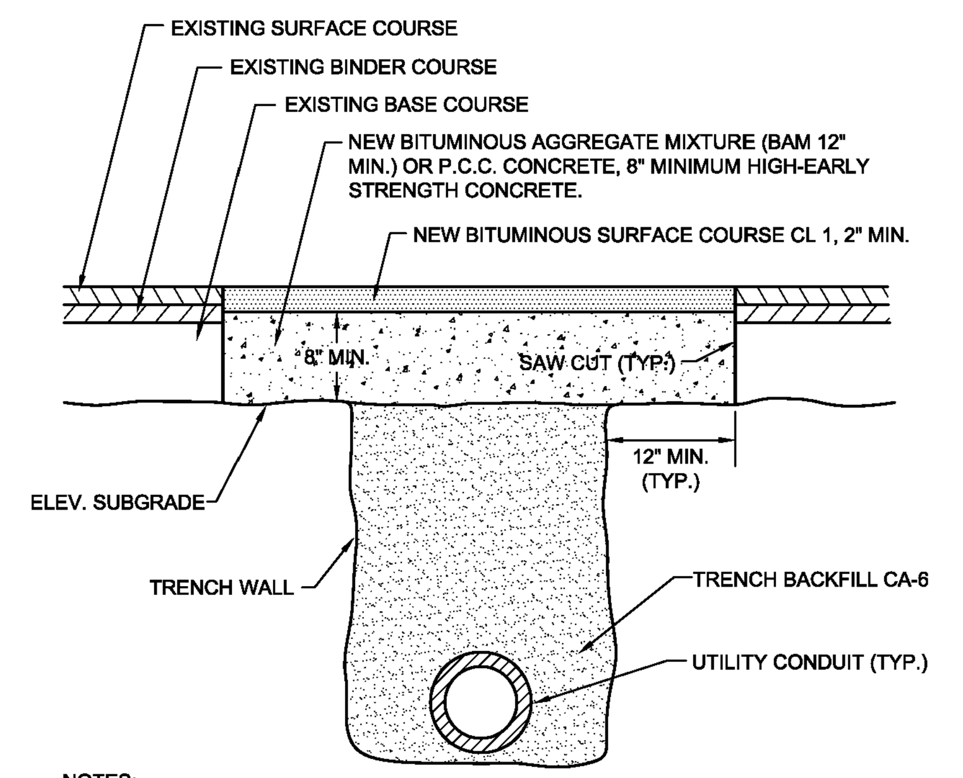
Plot Date: May 23, 2024 - 9:26am Plotted By: phil-c
File Name: P:\2022\22028\Drawings\Final Engineering\22028-DETAILS.dwg



NOTES:

1. THE TRENCH SHALL BE BACKFILLED WITH AGGREGATE (CA-6) AND COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY. TRENCH SPOILS OR EXCAVATED MATERIAL SHALL BE DISCARDED BY THE CONTRACTOR, AT HIS EXPENSE, AT DUMP SITES OR IN A SUITABLE FASHION AS APPROVED BY THE CITY ENGINEER.
2. PRIOR TO PLACING OF P.C.C. CONCRETE, THE EXPOSED EDGES OF ALL EXISTING PAVEMENT SHALL BE SAW CUT TO PROVIDE A SMOOTH, CLEAN EDGE, FREE OF LOOSE MATERIAL.
3. EXCAVATIONS SHALL BE PROTECTED BY BARRICADES WITH FLASHING LIGHTS. A 1" STEEL PLATE SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT LOCATIONS WHERE ADJUSTMENTS ARE LOCATED IN TRAVEL LANES UNTIL THE SURFACE RESTORATION IS COMPLETE. THE PLATE SHALL BE PROTECTED FROM SLIDING AND PROVIDED WITH BITUMINOUS RAMPS.
4. TRENCH TO BE COMPACTED IN CONFORMANCE WITH ARTICLE 603.08 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

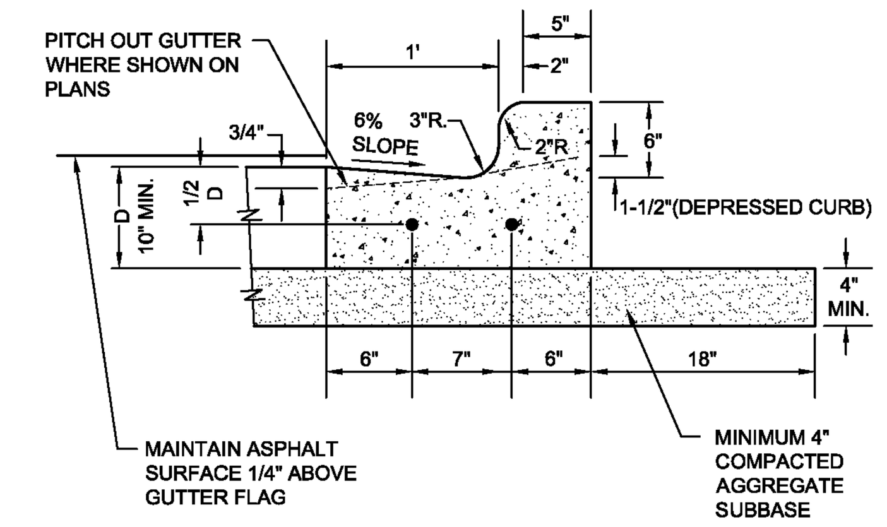
City of Naperville STANDARD DETAIL | UTILITY TRENCH PAVING SECTION (RIGID PAVEMENTS) | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 12 | **590.12**



NOTES:

1. THE TRENCH SHALL BE BACKFILLED WITH AGGREGATE (CA-6) AND COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY. TRENCH SPOILS OR EXCAVATED MATERIAL SHALL BE DISCARDED BY THE CONTRACTOR, AT HIS EXPENSE, AT DUMP SITES OR IN A SUITABLE FASHION AS APPROVED BY THE CITY ENGINEER.
2. PRIOR TO PLACING OF P.C.C. CONCRETE, THE EXPOSED EDGES OF ALL EXISTING PAVEMENT SHALL BE SAW CUT TO PROVIDE A SMOOTH, CLEAN EDGE, FREE OF LOOSE MATERIAL.
3. EXCAVATIONS SHALL BE PROTECTED BY BARRICADES WITH FLASHING LIGHTS. A 1" STEEL PLATE SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT LOCATIONS WHERE ADJUSTMENTS ARE LOCATED IN TRAVEL LANES UNTIL THE SURFACE RESTORATION IS COMPLETE. THE PLATE SHALL BE PROTECTED FROM SLIDING AND PROVIDED WITH BITUMINOUS RAMPS.
4. TRENCH TO BE COMPACTED IN CONFORMANCE WITH ARTICLE 603.08(METHOD 3) OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

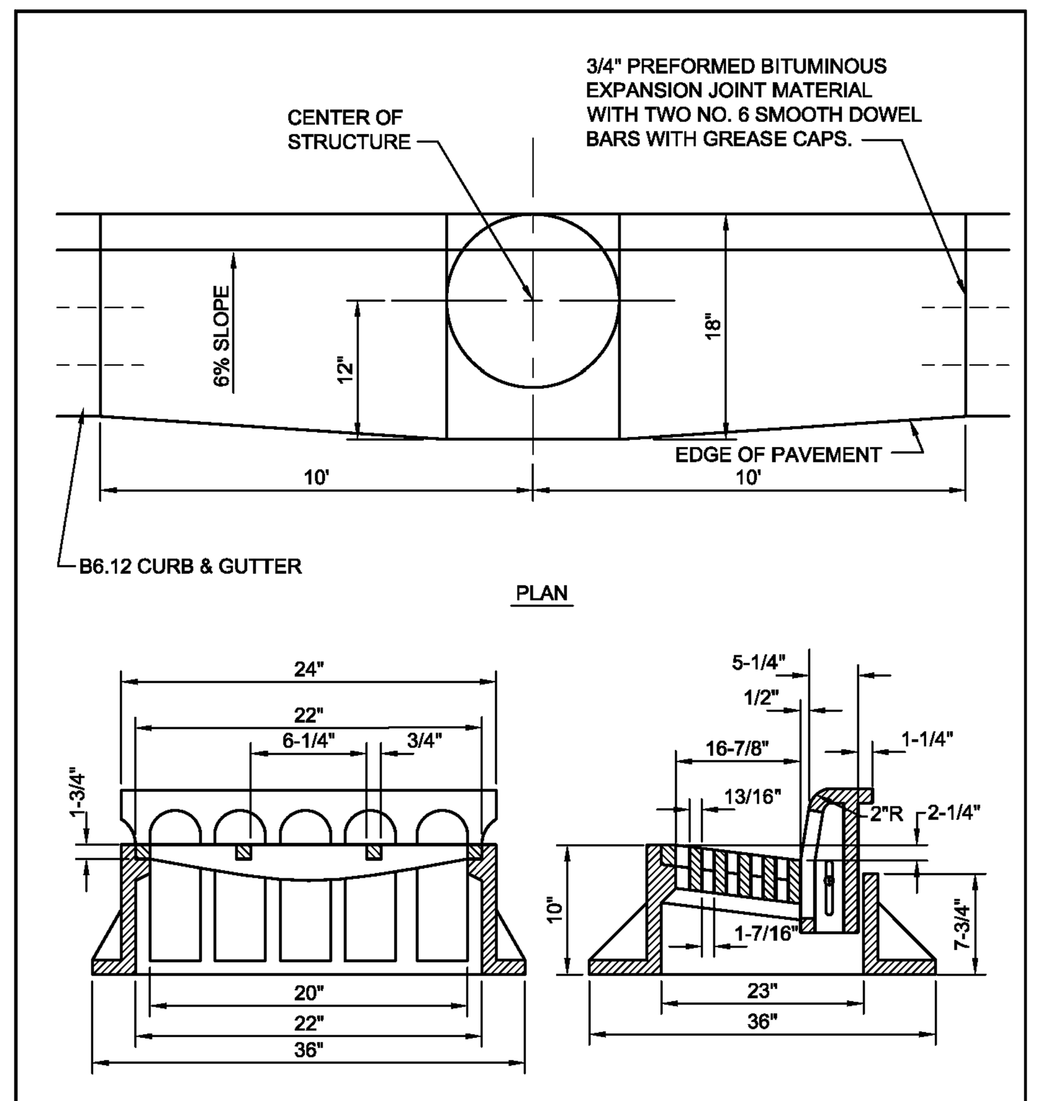
City of Naperville STANDARD DETAIL | UTILITY TRENCH PAVING SECTION (FLEXIBLE PAVEMENTS) | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 13 | **590.13**



NOTES:

1. 3/4" PREFORMED BITUMINOUS EXPANSION JOINT WITH TWO (2) NUMBER 6 COATED SMOOTH DOWEL BARS (3/4" DIA. X 18") WITH GREASE CAPS SHALL BE PLACED EVERY 150', 10' EITHER SIDE OF DRAINAGE STRUCTURES, P.C.'S, RADIUS POINTS AND BACK OF CUL-DE-SACS. WHEN EXPANSION JOINTS ARE CONSTRUCTED ADJACENT TO EXISTING CURB & GUTTER THE EXISTING CURB SHALL BE DRILLED AND TWO (2) NUMBER 6 COATED SMOOTH DOWEL BARS (3/4" X 18") GROUTED IN PLACE. GREASE CAPS SHALL BE PLACED ON THE SIDE OF THE NEW CURB AND GUTTER SHALL HAVE A PINCHED STOP THAT WILL PROVIDE A MINIMUM 1" EXPANSION.
2. TOOLED CONTROL JOINTS OR SAWCUTS SHALL BE MADE EVERY 15'.
3. SAWCUTS SHALL BE MADE WITHIN TWENTY-FOUR (24) HOURS AND SEALED WITH A CITY APPROVED JOINT SEALANT. JOINTS SHALL BE CLEAN AND DRY PRIOR TO APPLICATION OF SEALANT.
4. FOR CURB AND GUTTER CONSTRUCTED OVER UTILITY TRENCHES, TWO (2) EPOXY COATED REINFORCING BARS (NO. 4) SHALL BE PLACED IN THE CURB AND GUTTER, CENTERED OVER THE TRENCH.

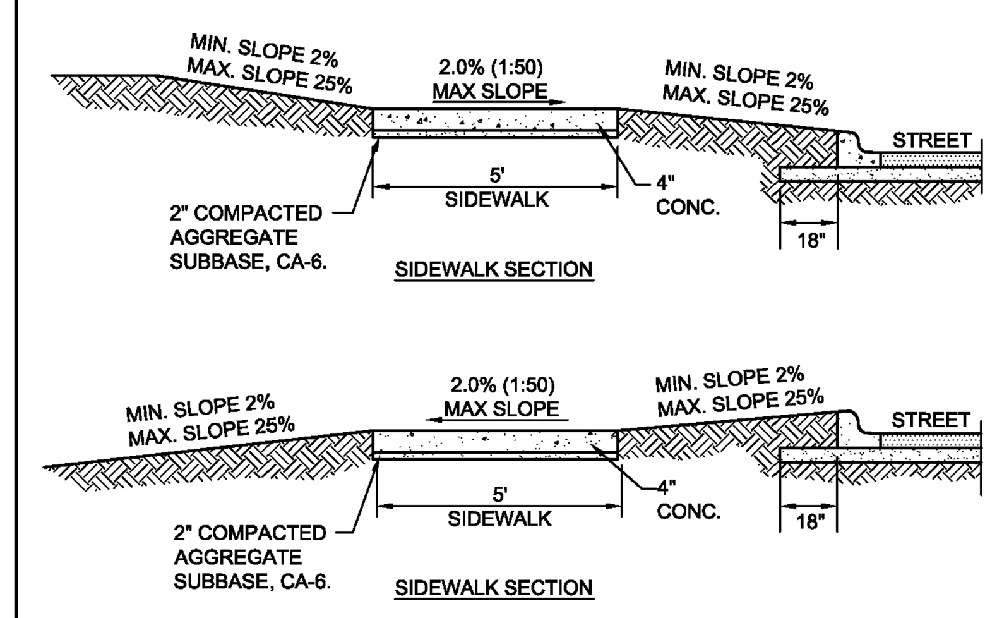
City of Naperville STANDARD DETAIL | B6.12 BARRIER CURB & GUTTER | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 20 | **590.20**



NOTES:

1. GRATE & CASTING SHALL BE EAST JORDAN 7220 OR NEENAH R-3278-A OR AS APPROVED BY THE CITY ENGINEER.
2. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE.

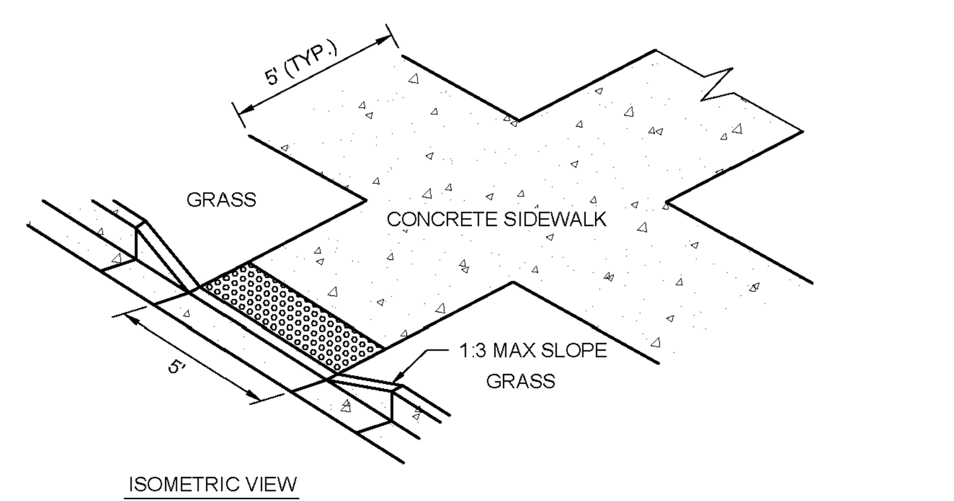
City of Naperville STANDARD DETAIL | B6.12 BARRIER CURB & GUTTER AT CURB INLETS | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 21 | **590.21**



NOTES:

1. CONCRETE SHALL BE IDOT CLASS SI.
2. MINIMUM SIDEWALK THICKNESS SHALL BE 4".
3. SIDEWALK THICKNESS ACROSS DRIVEWAYS SHALL BE AT A MINIMUM 6" FOR RESIDENTIAL DRIVEWAYS AND 8" FOR COMMERCIAL DRIVEWAYS.
4. MAXIMUM LONGITUDINAL SLOPE SHALL NOT EXCEED 5% (20:1). FOR ANY SLOPE IN EXCESS OF 5%, ALL REQUIREMENTS OF THE ILLINOIS ACCESSIBILITY CODE (LATEST EDITION) SHALL BE MET.
5. MINIMUM TRANSVERSE SLOPE SHALL BE 1.0% (1:100). MAXIMUM TRANSVERSE SLOPE SHALL BE 2.0% (1:50).
6. A MINIMUM 2" AGGREGATE SUBBASE (CA-6) SHALL BE PROVIDED. (4" THROUGH COMMERCIAL DRIVEWAYS).
7. AGGREGATE SUBBASE SHALL BE MECHANICALLY COMPACTED.
8. ALL SIDEWALKS SHALL BE PROMPTLY BACKFILLED AND PROTECTED FROM DAMAGE.
9. SIDEWALK CONSTRUCTION SHALL FOLLOW APPLICABLE IDOT STANDARDS.
10. SIDEWALKS SHALL FOLLOW CURRENT ADA GUIDELINES.

City of Naperville STANDARD DETAIL | SIDEWALK | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 30 | **590.30**



NOTES:

1. ALL AGGREGATE SUB-BASE SHALL BE MECHANICALLY COMPACTED.
2. SIDEWALK THICKNESS AT CURB RAMPS SHALL BE A MINIMUM OF 6" PCC ON 2" AGGREGATE SUB BASE.
3. SIDEWALK CONSTRUCTION SHALL FOLLOW APPLICABLE IDOT STANDARDS.
4. SIDEWALKS SHALL FOLLOW CURRENT ADA GUIDELINES.

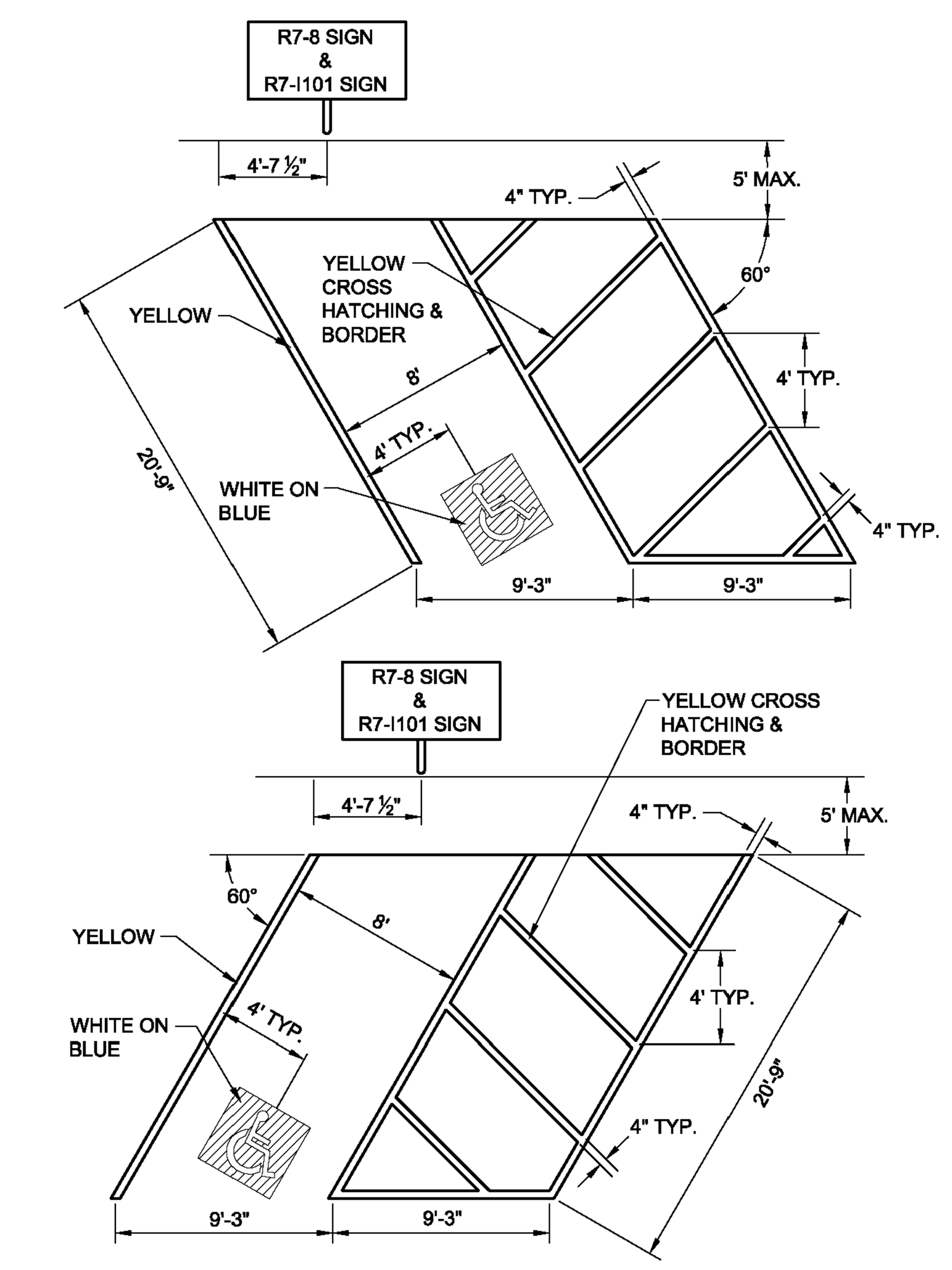
APPLICABLE IDOT STANDARD DETAILS (USE LATEST REVISION:

424001-XX	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006-XX	DIAGONAL CURB RAMPS FOR SIDEWALKS
424011-XX	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424016-XX	MID-BLOCK CURB RAMPS FOR SIDEWALKS
424021-XX	DEPRESSED CORNER FOR SIDEWALKS
424026-XX	ENTRANCE/ALLEY PEDESTRIAN CROSSINGS
424031-XX	MEDIAN PEDESTRIAN CROSSINGS
606001-XX	CONCRETE CURB TYPE B AND COMB CONCRETE CURB AND GUTTER

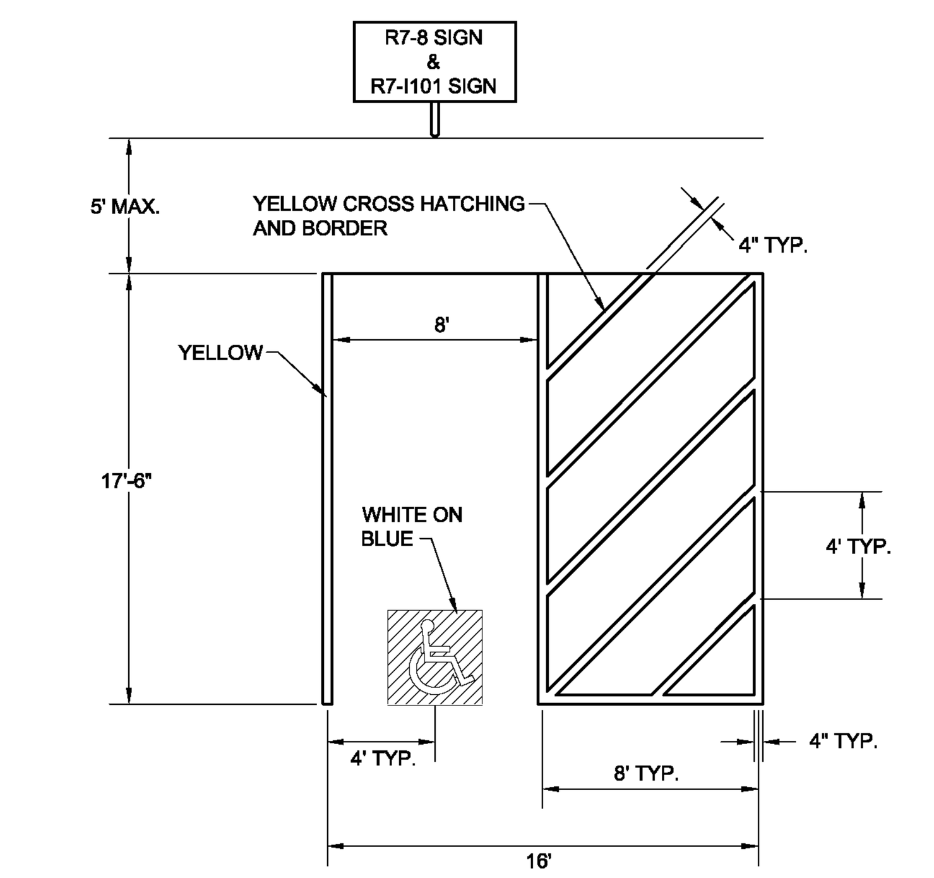
APPROVED ADA DETECTABLE WARNING TILES:

1. ADA SOLUTIONS - CAST IN PLACE REPLACEABLE
2. ARMOR TILE - CAST IN PLACE
3. DETECTILE - SLIMTEK II
4. TUFTILE - POLYMER WET-SET

City of Naperville STANDARD DETAIL | CURB RAMPS | REVISED: 08/01/2018 | SHEET 1 OF 1 | PAVEMENT 32 | **590.32**



City of Naperville STANDARD DETAIL | ACCESSIBLE PARKING SPACE MARKINGS | REVISED: 10/04/2023 | SHEET 1 OF 3 | PAVEMENT 35 | **590.35**



NOTE:

FOR MULTIPLE ACCESSIBLE PARKING SPACES IN A ROW, THE DESIGN ENGINEER HAS THE OPTION OF USING THE ABOVE SHOWN UNIT IN A COMBINATION OF LEFT-HANDED AND RIGHT-HANDED LAYOUTS IF IT PROVIDES FOR BETTER SITE DESIGN.

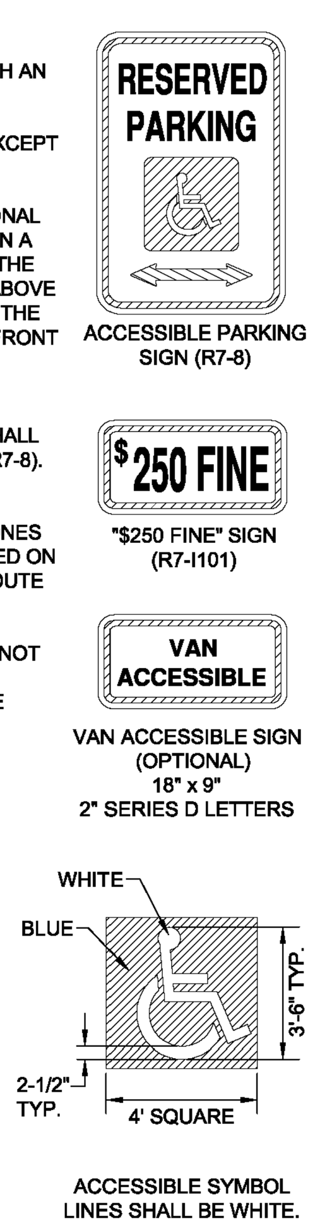
City of Naperville STANDARD DETAIL | ACCESSIBLE PARKING SPACE MARKINGS | REVISED: 10/04/2023 | SHEET 2 OF 3 | PAVEMENT 35 | **590.35**

NOTES FOR ACCESSIBLE PARKING SPACES:

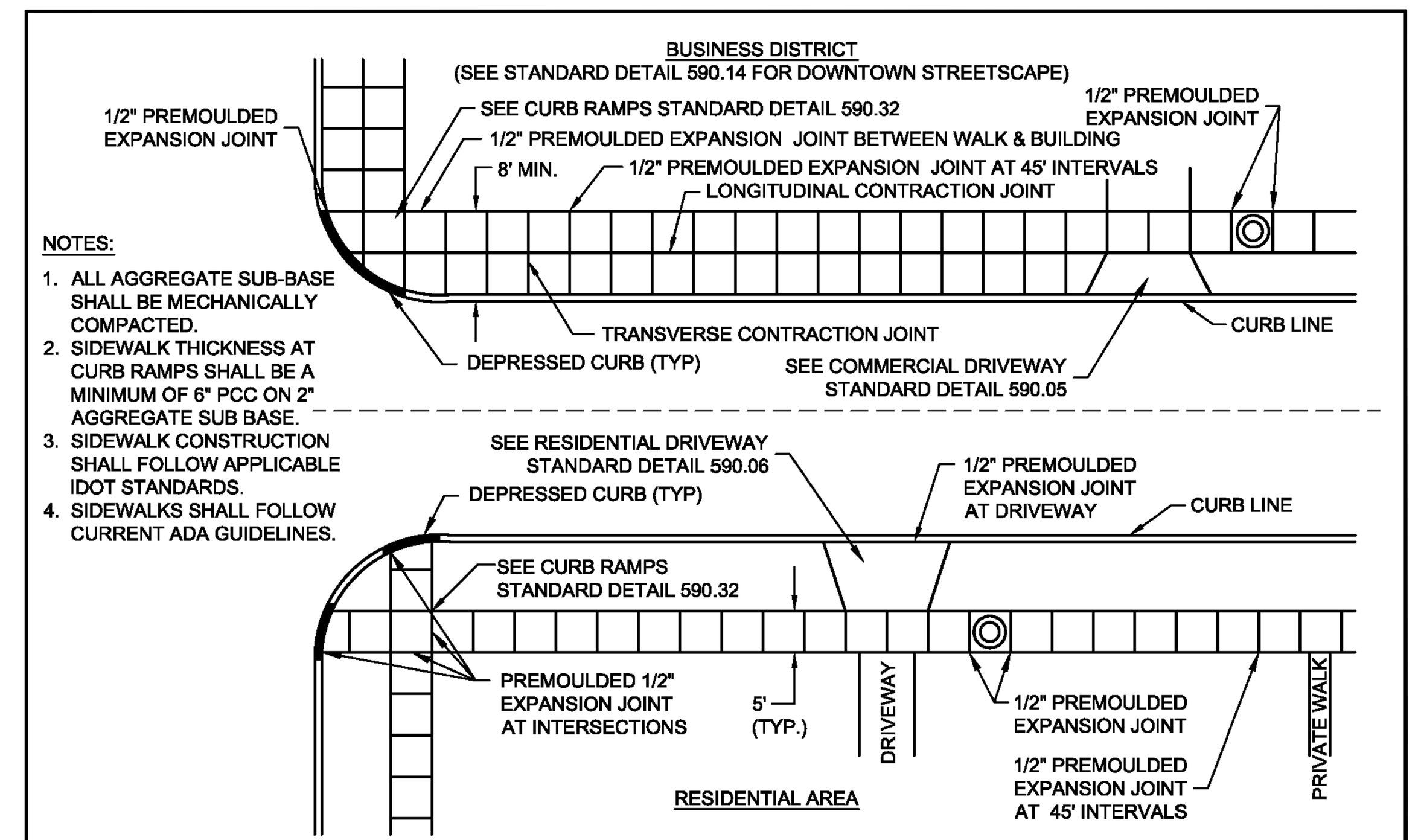
1. EACH PARKING SPACE SHALL BE AT LEAST 16' WIDE, WITH AN 8' WIDE ACCESS AISLE.
2. TWO PARKING SPACES MAY SHARE AN ACCESS AISLE EXCEPT FOR ANGLED PARKING SPACES.
3. PARKING SPACE IDENTIFICATION SIGN WITH INTERNATIONAL SYMBOL OF ACCESSIBILITY (R7-8) SHALL BE MOUNTED ON A PERMANENT POST OR WALL AT THE FRONT CENTER OF THE ACCESSIBLE PARKING SPACE, SET AT A MINIMUM OF 5' ABOVE THE GROUND SURFACE MEASURED TO THE BOTTOM OF THE SIGN AND NO MORE THAN 5' HORIZONTALLY FROM THE FRONT OF A PARKING SPACE.
4. ACCESSIBLE PARKING SIGNS SHALL ALSO EXHIBIT THE WORDS "$250 FINE" OR THE "$250 FINE" SIGN (R7-I101) SHALL BE PLACED BENEATH THE ACCESSIBLE PARKING SIGN (R7-8).
5. PARKING SPACES DESIGNED FOR PERSONS WITH DISABILITIES AND ACCESSIBLE PASSENGER LOADING ZONES THAT SERVE A PARTICULAR BUILDING, SHALL BE LOCATED ON THE SHORTEST POSSIBLE ACCESSIBLE CIRCULATION ROUTE TO AN ACCESSIBLE ENTRANCE OF THE BUILDING.
6. IN SEPARATE PARKING STRUCTURES OR LOTS THAT DO NOT SERVE A PARTICULAR BUILDING, PARKING SPACES FOR PERSONS WITH DISABILITIES SHALL BE LOCATED ON THE SHORTEST POSSIBLE CIRCULATION ROUTE TO AN ACCESSIBLE PEDESTRIAN ENTRANCE OF THE PARKING FACILITY.

OF ACCESSIBLE SPACES REQUIRED PER # OF OFF STREET PARKING

TOTAL OFF STREET PARKING SPACES REQUIRED	REQUIRED MINIMUM NUMBER OF ACCESSIBLE PARKING SPACES
1 TO 25	1
26 TO 50	2
51 TO 75	3
76 TO 100	4
101 TO 150	5
151 TO 200	6
201 TO 300	7
301 TO 400	8
401 TO 500	9
501 TO 1000	2% OF TOTAL NUMBER
OVER 1000	20 PLUS 1 FOR EACH 100 OVER 1000



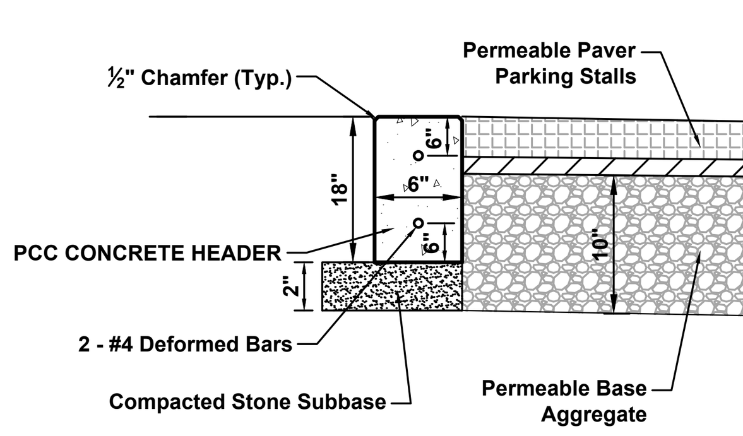
City of Naperville STANDARD DETAIL | ACCESSIBLE PARKING SPACE MARKINGS | REVISED: 10/04/2023 | SHEET 3 OF 3 | PAVEMENT 35 | **590.35**



NOTES:

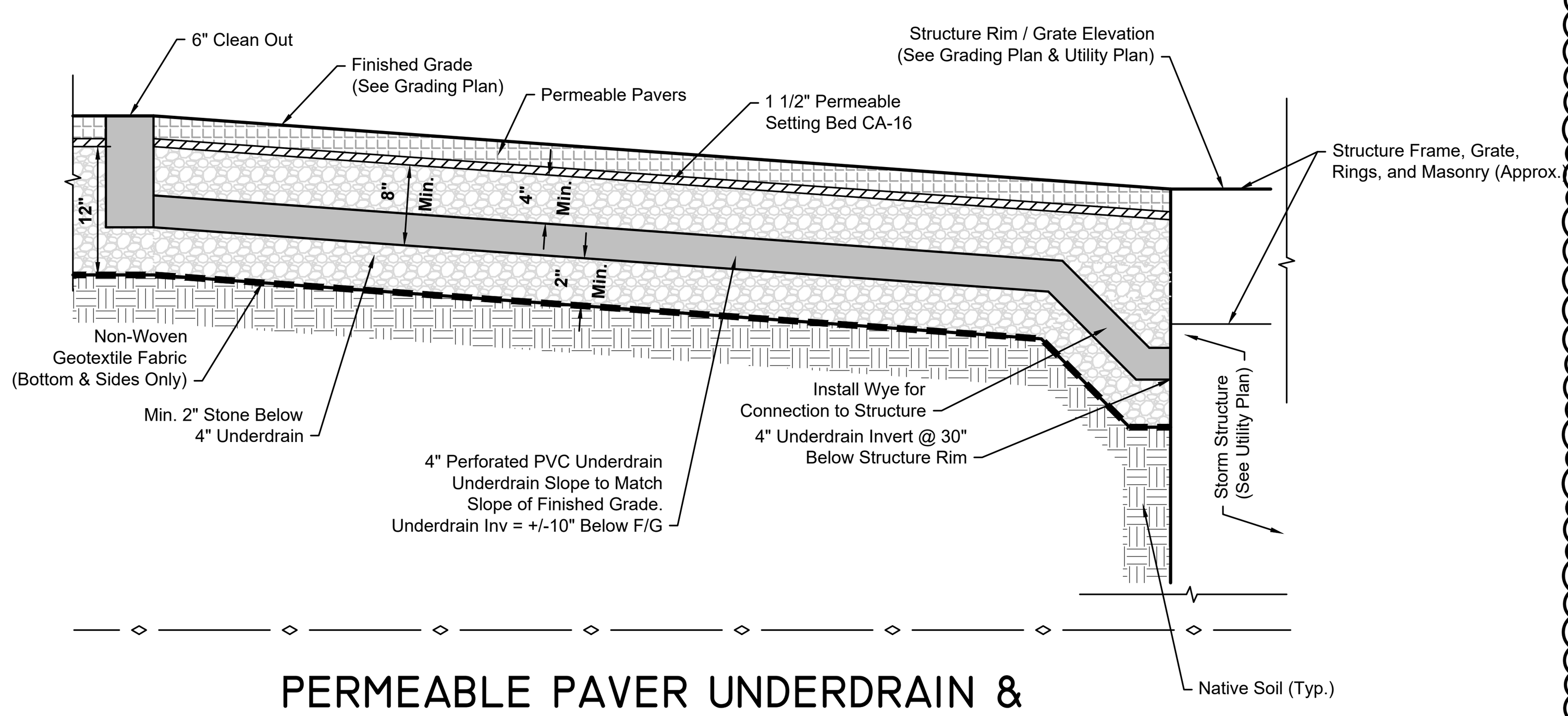
1. ALL AGGREGATE SUB-BASE SHALL BE MECHANICALLY COMPACTED.
2. SIDEWALK THICKNESS AT CURB RAMPS SHALL BE A MINIMUM OF 6" PCC ON 2" AGGREGATE SUB BASE.
3. SIDEWALK CONSTRUCTION SHALL FOLLOW APPLICABLE IDOT STANDARDS.
4. SIDEWALKS SHALL FOLLOW CURRENT ADA GUIDELINES.

City of Naperville STANDARD DETAIL | SIDEWALK CONSTRUCTION | REVISED: 01/01/2013 | SHEET 1 OF 1 | PAVEMENT 31 | **590.31**

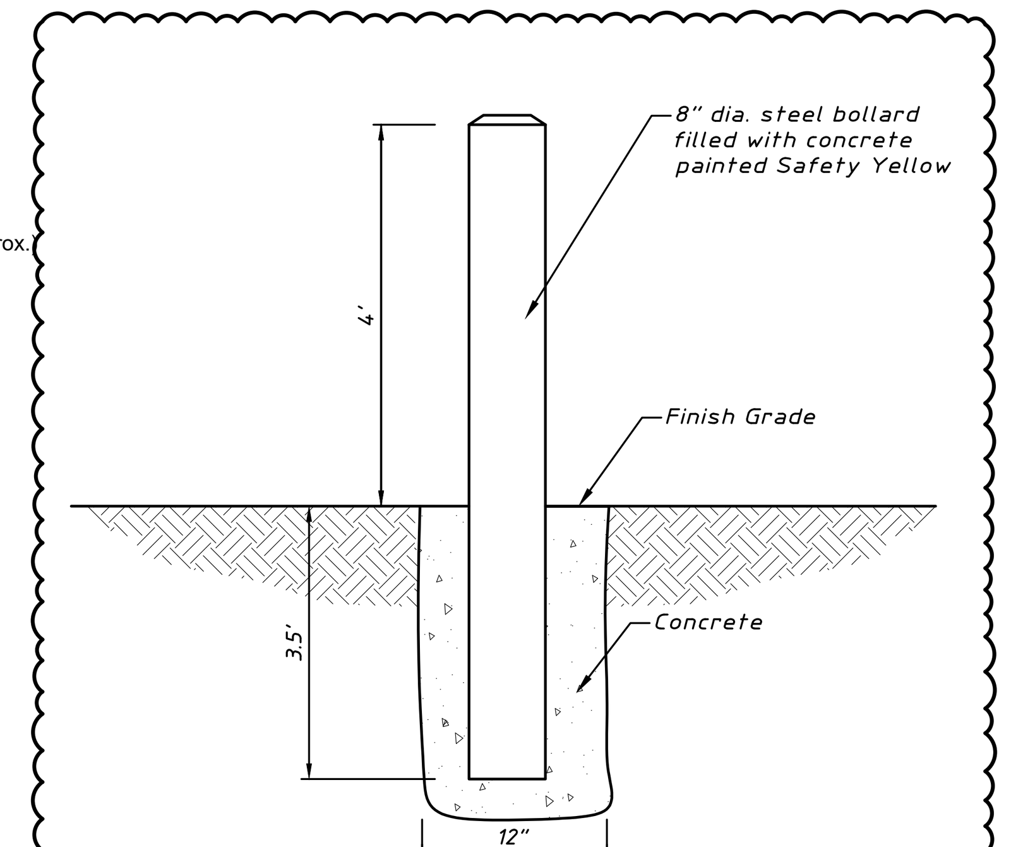


NOTE
Contraction joints are to be saw cut 2" deep at 10' intervals.

CONCRETE HEADER (RIBBON CURB)
(Not to Scale)



PERMEABLE PAVER UNDERDRAIN & STRUCTURE CONNECTION DETAIL
(Not to Scale)



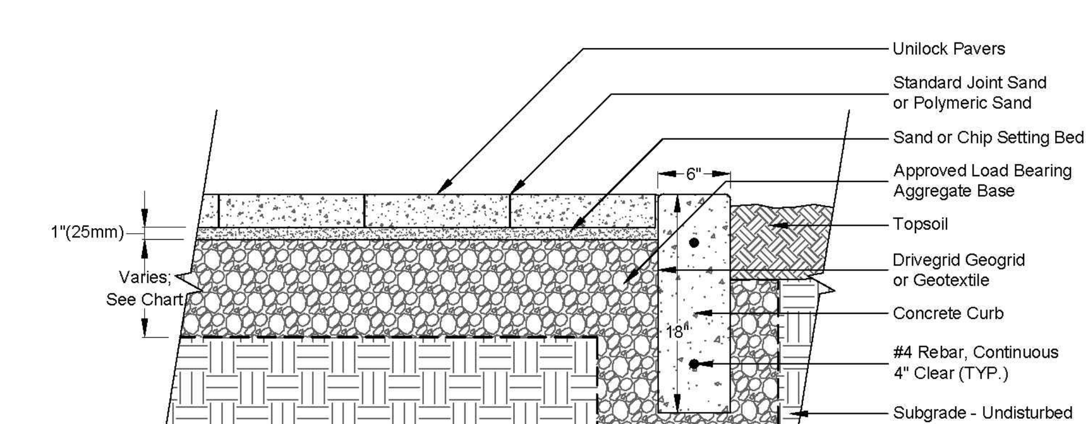
BOLLARD DETAIL

PAVING STONE

REF: CS_COM_Paver_Granular_Base_Flush_Concrete_Curb

CROSS SECTION

Pavers on Granular Base w/ Flush Concrete Curb



Commercial Use	Minimum Base Thickness
Sidewalk	6"(100mm)
Plaza	10" (250mm)
Other	Contact Unilock

Alternate Product Note:
Detail provided for reference only. Contractor shall provide shop drawings of proposed paver product, pattern and color for approval by Owner prior to construction.

UNILOCK.COM | 1-800-UNILOCK

UNILOCK® PAVERS & WALLS

No.	Date	Revision
1	05/02/2024	REVISED PER CITY REVIEW

HAEGER ENGINEERING
consulting engineers • land surveyors
100 East State Parkway, Schaumburg, IL 60173 •Tel: 847.394.6600 Fax: 847.394.6608
Illinois Professional Design Firm License No. 184-003152
www.haegerengineering.com

CITY OF NAPERVILLE STANDARD DETAILS

VIEWS OF NAPERVILLE CLUBHOUSE SITE IMPROVEMENT PLANS
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager:	PAC
Engineer:	CJB
Date:	03/22/2024
Project No.	22-028
Sheet	C8.2 / C8

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VIEWS OF NAPERVILLE CLUBHOUSE
STORM WATER POLLUTION PREVENTION PLAN
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

SECTION 13 TOWNSHIP 38 NORTH RANGE 9 EAST
NAPERVILLE, ILLINOIS
DuPAGE COUNTY

ARCHITECT:

Maemar P.C.
3996 Orchard Lane
Long Grove, IL 60047
Tel: 847-550-9805
Fax: 847-550-9815
www.maemarpc.com

OWNER:

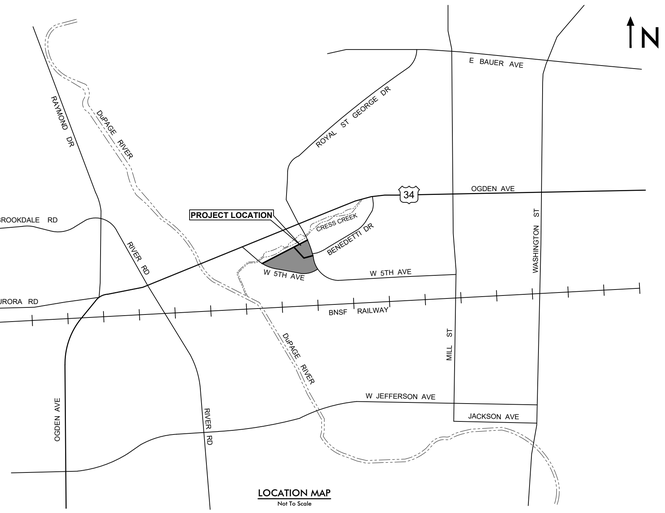
Views of Naperville
701 Royal Saint George Drive
Naperville, IL 60563
Tel: 630-796-7720

PREPARED BY:

Haeger Engineering LLC
Illinois Prof. Design Firm #184-003152
100 E. State Parkway
Schaumburg, IL 60173
Tel: 847-394-6600
Fax: 847-394-6608
www.haegerengineering.com

CITY OF NAPERVILLE

400 S. Eagle Street
Naperville, IL 60540
Tel: 630-420-6111



LOCATION MAP
Not To Scale

BENCHMARKS:

City of Naperville Benchmark:

Station No. 1506 on the northest corner of
5th Avenue and Mill Street

Elevation = 690.61 NAVD 88

Site Benchmark

CP # 2279 (see survey)
Description: SW Bolt on Hydrant
Elevation: 692.68 NAVD 88 (Geoid 12A)

CP # 601 (see survey)
Description: MAG Nail
Elevation: 701.12 NAVD 88 (Geoid 12A)

CP # 604 (see survey)
Description: MAG Nail
Elevation: 700.96 NAVD 88 (Geoid 12A)

CP # 605 (see survey)
Description: MAG Nail
Elevation: 693.82 NAVD 88 (Geoid 12A)

Know what's **below.**
Call before you dig.

Note:
Call 811 at least 48 hours, excluding weekends and holidays, before you dig.

INDEX TO STORM WATER POLLUTION PREVENTION PLAN SHEETS

LEGEND

Existing Symbol	Description	Proposed Symbol
	Storm Sewer Manhole	
	Catch Basin	
	Inlet	
	Flared End Section	
	Headwall	
	Area Drain	
	Sanitary Sewer Manhole	
C.O.	Clean Out	C.O.
	Storm Sewer	
	Storm Sewer Service	
	Perforated Underdrain	
	Sanitary Sewer	
	Sanitary Sewer Service	
	Combined Sewer	
FM	Force Main	FM
W	Water Main	W
	Water Main Service	
	Fire Hydrant	
	Valve Vault	
	Valve Box	
B	B-Box	B
	Well Head	
	Light Pole	
	Light Pole With Mast Arm	
	Traffic Signal	
	Traffic Signal With Mast Arm	
H	Hand Hole	H
	Fence	
	Guardrail	
	Pipe Bollard	
	Sign	
G	Gas Valve	G
G	Gas Line	G
E	Electric Line	E
OHW	Overhead Utility Line	OHW
FO	Fiber Optic Line	FO
E	Electrical Pedestal	E
E	Electric Manhole	E
	Guy Wire	
	Utility Pole	
T	Telephone Pedestal	T
T	Telephone Manhole	T
T	Telephone Line	T
CATV	Cable TV Line	CATV
C	Cable TV Pedestal	C
	Flagpole	
M	Mailbox	M
	Handicapped Parking Stall	
X	Number of Parking Stalls	X
	Curb & Gutter	
	Reverse Pitch Curb & Gutter	
	Depressed Curb	
	Retaining Wall	
C XXX.XX	Curb Elevation and	C XXX.XX
G/P XXX.XX	Gutter/Pavement Elevation	G XXX.XX
XXX.XX	Pavement Elevation	P XXX.XX
XXX.XX	Sidewalk Elevation	W XXX.XX
XXX.X +	Ground Elevation	XXX.X
T/W XXX.XX	Top of Wall Elevation	T/W XXX.XX
B/W XXX.XX	Bottom of Wall Elevation	B/W XXX.XX
Gr XXX.XX	Open Lid Frame & Grate	Gr XXX.XX
Rim XXX.XX	Closed Lid Frame & Lid	Rim XXX.XX
FG XXX.XX	Finish Grade	FG XXX.XX
GF XXX.XX	Garage Floor	GF XXX.XX
TF XXX.XX	Top of Foundation	TF XXX.XX
	Swale	
	Hardscape Flow	
	Softscape Flow	
XXX	Contour Line	XXX
	Wetland	
	Wetland Buffer	
	Normal Water Level	
	High Water Level	
	Flood Plain	
	Flood Way	
	Deciduous Tree	
	Coniferous Tree	
	Bush	
	Brushline	
B-1	Soil Boring	B-1
	Over Land Flow Route	
	Recommended Garage Hand With Driveway Slope	X.X%

PHILIP A. CRAFT
062-070701
LICENSED PROFESSIONAL ENGINEER
OF
STATE OF ILLINOIS
EXPIRES 11-30-25

No.	Date	Revision
1	05/02/2024	REVISED PER CITY REVIEW

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Illinois Professional Design Firm License No. 184.003152
www.haegerengineering.com

SWPPP
TITLE SHEET

VIEWS OF NAPERVILLE CLUBHOUSE
SWPPP
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet EC1.0 / EC4

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Plot Date: May 23, 2024 - 9:26am Plotted By: phil-c
File Name: P:\2022\22028\Drawings\Final Engineering\22028-SWPPP.dwg

Stormwater Pollution Prevention Plan

This plan has been prepared to comply with the provisions of the NPDES Permit Number _____, issued by the Illinois Environmental Protection Agency for storm water discharges from Construction Site Activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ _____
Owner's Name *Signature*

_____ _____
Title *Date*

_____
Name of Firm/Company

I. Site Description:

A. The following is a description of the project location:

The project is located at 701 Royal Saint George Drive in Naperville, Illinois, in Section 13, Township 38 North, Range 9 East all in DuPage County. (See Location Map on Title Sheet for additional information).

B. The following is a description of the construction activity which is the subject of this plan:

Demolition of existing clubhouse, pool, and parking lot. Construction of proposed clubhouse and pool with improvements to parking lots, underground utilities, and related improvements

C. The following is a description of the intended sequence of major activities which will disturb soils for major portions of the construction site, such as grubbing, excavation and grading:

Exact phasing and sequencing has yet to be determined. Generally, pavement and trees will be removed as required, and then clearing and grubbing will occur. Next, mass grading will commence for the building pad and parking areas. Then the underground utilities will be constructed. Finally, the buildings, parking lots, etc. will be constructed, followed by the installation of landscaping.

D. The total area of the construction site is estimated to be approximately ± 1.6 acres.

E. The following is a weighted average of the runoff coefficient for this project after construction activities are completed:

The weighted runoff coefficient after completion of all construction activities is approximately 0.69.

F. The following is a description of the soil types found at the project site followed by information regarding their erosivity:

Please refer to the geotechnical report prepared by _____, dated _____.

G. The following is a description of potentially erosive areas associated with this project:
Areas with side slopes exceeding 3:1 slopes. These slope areas on the site shall be stabilized with a turf reinforcement mat and hydroseeded growing media system.

H. The following is a description of soil disturbing activities, their locations, and their erosive factors (e.g. steepness of slopes, length of slopes, etc):

The soil disturbing activities consist of grading and general infrastructure improvements over the entire site. The Contractor shall be responsible for maintaining all disturbances within the site, and shall protect all off-site areas as needed.

I. See the erosion control plans and/or drainage plans for this contract for information regarding drainage patterns, approximate slopes anticipated before and after major grading activities, locations where vehicles enter or exit the site and controls to prevent offsite sediment tracking (to be added after contractor identifies locations), areas of soil disturbance, the location of major structural and non-structural controls identified in the plan, the location of areas where stabilization practices are expected to occur, surface waters (including wetlands) and locations where storm water is discharged to surface water including wetlands.

J. The following is a list of receiving water(s) and the ultimate receiving water(s), and aerial extent of wetland acreage at the site. The location of the receiving waters can be found on the erosion and sediment control plans:

The closest receiving water is Cress Creek.

K. The following pollutants of concern will be associated with this construction project:

Soil sediment and dust, and construction of bituminous pavement.

II. Controls:

This section of the plan addresses the controls that will be implemented for each of the major construction activities described in I.C. above and for all use areas, borrow sites, and waste sites. For each measure discussed, the contractor will be responsible for its implementation as indicated. The contractor shall provide to the resident engineer a plan for the implementation of the measures indicated. The contractor, and subcontractors, will notify the resident engineer of any proposed changes, maintenance and modifications to keep construction activities compliant with the permit. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan:

A. Erosion and Sediment Controls

1. **Stabilized Practices:** Provided below is a description of interim and permanent stabilization practices, including site specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices may include but are not limited to: temporary seeding, permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees, preservation of mature vegetation, and other appropriate measures. Except as provided below in II(A)(1)(a) and II(A)(3), stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceases on all disturbed portions of the site where construction will not occur for a period of 14 or more calendar days.

   a. Where the initiation of stabilization measures by the 7th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

      The following Stabilization Practices will be used for this project: Temporary blanket & seeding, permanent seeding,as shown on the Plans.

      Describe how the Stabilization Practices listed above will be utilized: Seed & blanket.

      See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

2. **Structural Practices:** Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Such practices may include but are not limited to: perimeter erosion barrier, earth dikes, drainage swales, sediment traps, ditch checks, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   The following Structural Practices will be used for this project: Perimeter erosion control (silt) fence and inlet protection.

   Describe how the Structural Practices listed above will be utilized:

   See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site.

3. **Storm Water Management:** Provided below is a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

   Such practices may include but are not limited to: storm water detention structures (including wet ponds), storm water retention structures, flow attenuation by use of open vegetated swales and natural depressions, infiltration of runoff on site, and sequential systems (which combine several practices).

   The practices selected for implementation were determined on the basis of the technical guidance in Chapter 41 (Construction Site Stormwater Pollution Control) of the Illinois Department of Transportation Bureau of Design and Environment Manual. If practices other than those discussed in Chapter 41 are selected for implementation or if practices are applied to situations different from those covered in Chapter 41, the technical basis for such decisions will be explained below.

   b. Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g. maintenance of hydrologic conditions such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

   Description of Storm Water Management Controls: Installation of a storm sewer system. All inlets will be protected with silt baskets.

4. **Other Controls:**

   a. Vehicle Entrances and Exits - Stabilized construction entrances and exits must be constructed to prevent tracking of sediments onto roadways.

      The contractor will provide the resident engineer with a written plan identifying the location of stabilized entrances and exits and the procedures (s)he will use to construct and maintain them.

   b. Material Delivery, Storage, and Use - The following BMPs shall be implemented to help prevent discharges of construction materials during delivery, storage, and use:
      - All products delivered to the project site must be properly labeled.
      - Water tight shipping containers and/or semi trailers shall be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
      - A storage/containment facility should be chosen for larger items such as drums and items shipped or stored on pallets. Such material is to be covered by a tin roof or large sheets of plastic to prevent precipitation from coming in contact with the products being stored.
      - Large items such as light stands, framing materials and lumber shall be stored in the open in a general storage area. Such material shall be elevated with wood blocks to minimize contact with storm water runoff.
      - Spill clean-up materials, material safety data sheets, an inventory of materials, and emergency contact numbers shall be maintained and stored in one designated area and each Contractor is to inform his/her employees and the resident engineer of this location.

   c. Stockpile Management - BMPs shall be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as but not limited to portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate sub base, and pre-mixed aggregate. The following BMPs may be considered:
      - Perimeter Erosion Barrier
      - Temporary Seeding
      - Temporary Mulch
      - Plastic Covers
      - Soil Binders
      - Storm Drain Inlet Protection

      The contractor will provide the resident engineer with a written plan of the procedures (s)he will use on the project and how they will be maintained.

   d. Waste Disposal. No materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

   e. The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

   f. The contractor shall provide a written and graphic plan to the resident engineer identifying where each of the above areas will be located and how they are to be managed.

5. **Approved State or Local Laws**

   The management practices, controls and provisions contained in this plan will be in accordance with IDOT specifications, which are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Illinois Urban Manual, 1995. Procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials shall be described or incorporated by reference in the space provided below. Requirements specified in sediment and erosion site plans, site permits, storm water management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI, to be authorized to discharge under permit ILR10 incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

   Description of procedures and requirements specified in applicable sediment and erosion site plans or storm water management plans approved by local officials:

   See Storm Water Pollution Prevention (SWPP) Plan. SWPP Plan shall be modified as necessary by the Contractor during construction to prevent sediment from leaving the site or entering the offsite storm sewer.

III. Maintenance:

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, the vegetation, erosion and sediment control measures and other protective measures identified in this plan. The resident engineer will provide maintenance guides to the contractor for the practices associated with this project.

All disturbed areas shall be graded to keep runoff and sediment on-site to the greatest extent possible. Site shall be graded in such a matter to direct runoff to storm structures with catch-all inlet protection. Contractor shall maintain, replace, clean, and add additional measures as needed during the progression of construction to prevent sediment, debris, etc from leaving the site.

IV. Inspections:

Qualified personnel shall inspect disturbed areas of the construction site which have not yet been finally stabilized, structural control measures, and locations where vehicles and equipment enter and exit the site. Such inspections shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

A. Disturbed areas, use areas (storage of materials, stockpiles, machine maintenance, fueling, etc.), borrow sites, and waste sites shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Discharge locations or points that are accessible, shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

B. Based on the results of the inspection, the description of potential pollutant sources identified in section I above and pollution prevention measures identified in section II above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within ½ hour to 1 week based on the urgency of the situation. The resident engineer will notify the contractor of the time required to implement such actions through the weekly inspection report.

C. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with section IV(B) shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI. G of the general permit.

D. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the resident engineer shall notify the appropriate IEPA Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of the incident. The resident Engineer shall then complete and submit an "Incidence of Noncompliance" (ION) report for the identified violation within 5 days of the incident. The resident engineer shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit.

The Incidence of Non-Compliance shall be mailed to the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn: Compliance Assurance Section
1021 North Grand East
Post Office Box 19276
Springfield, Illinois 62794-9276

V. Non-Storm Water Discharges:

Except for flows from fire fighting activities, sources of non-storm water that is combined with storm water discharges associated with the industrial activity addressed in this plan must be described below. Appropriate pollution prevention measures, as described below, will be implemented for the non-storm water component(s) of the discharge.

A. Spill Prevention and Control - BMPs shall be implemented to contain and clean-up spills and prevent material discharges to the storm drain system. The contractor shall produce a written plan stating how his/her company will prevent, report, and clean up spills and provide a copy to all of his/her employees and the resident engineer. The contractor shall notify all of his/her employees on the proper protocol for reporting spills. The contractor shall notify the resident engineer of any spills immediately.

B. Concrete Residuals and Washout Wastes - The following BMPs shall be implemented to control residual concrete, concrete sediments, and rinse water:
   - Temporary Concrete Washout Facilities shall be constructed for rinsing out concrete trucks. Signs shall be installed directing concrete truck drivers where designated washout facilities are located.
   - The contractor shall have the location of temporary concrete washout facilities approved by the resident engineer.
   - All temporary concrete washout facilities are to be inspected by the contractor after each use and all spills must be reported to the resident engineer and cleaned up immediately.
   - Concrete waste solids/liquids shall be disposed of properly.

C. Litter Management - A proper number of dumpsters shall be provided on site to handle debris and litter associated with the project. The Contractor is responsible for ensuring his/her employees place all litter including marking paint cans, soda cans, food wrappers, wood lathe, marking ribbon, construction string, and all other construction related litter in the proper dumpsters.

D. Vehicle and Equipment Cleaning - Vehicles and equipment are to be cleaned in designated areas only, preferably off site.

E. Vehicle and Equipment Fueling - A variety of BMPs can be implemented during fueling of vehicles and equipment to prevent pollution. The contractor shall inform the resident engineer as to which BMPs will be used on the project. The contractor shall inform the resident engineer how (s)he will be informing his/her employees of these BMPs (i.e. signs, training, etc.). Below are a few examples of these BMPs:
   - Containment
   - Spill Prevention and Control
   - Use of Drip Pans and Absorbents
   - Automatic Shut-Off Nozzles
   - Topping Off Restrictions
   - Leak Inspection and Repair

F. Vehicle and Equipment Maintenance - On site maintenance must be performed in accordance with all environmental laws such as proper storage and no dumping of old engine oil or other fluids on site.

VI. Failure to Comply:

Failure to comply with any provisions of this Storm Water Pollution Prevention Plan will result in the implementation of an Erosion and Sediment Control Deficiency Deduction against the contractor and/or penalties under the NPDES permit which could be passed onto the contractor.

SUPPLEMENTARY SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. All soil erosion and sedimentation control (SESC) measures shall be installed and properly maintained in accordance with the Illinois Environmental Protection Agency's (IEPA) "Illinois Urban Manual", latest edition and "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control", latest edition, and shall be followed as directed by the Village/City and Engineer. In addition, on sites that will ultimately result in the disturbance of one (1) acre or more the provisions outlined in the General National Pollutant Discharge Elimination System (NPDES) General Permit No. ILR10, latest edition, shall also be followed.
2. Prior to commencement of construction, on sites that will ultimately result in the disturbance of one (1) acre or more, the Contractor shall be responsible for obtaining a copy of the notice of coverage letter and the IEPA National Pollutant Discharge Elimination System (NPDES) General Permit ILR10 from the Owner. The Owner together along with the Contractor and/or other entities if so designated by the Owner, shall be responsible for ensuring that all the requirements of the General Permit and the Storm Water Pollution Prevention Plan (SWPPP) including but not limited to the installation, maintenance as well as the installation of any additional measures necessary that may be required, and inspections of the soil erosion and sediment control measures as well as completing all of the necessary applicable certifications, reports, logs, etc. Inspections are required to be performed at least once every seven (7) calendar days and within 24 hours of the end of a storm event of 0.5 inches of rain (or equivalent snowfall) or greater. The SWPPP and all the required paperwork shall be kept on-site and be organized and ready for viewing.
3. All erosion control measures are to be installed prior to any demolition, earth moving activities or other disturbance.
4. Soil Erosion Control measures shall include the provision of an erosion control fence as required along the area of disturbance, a stabilized construction entrance, and sediment traps or other inlet protection method at each inlet or catch basin.
5. Contractor to establish a temporary stabilized construction entrance as well as install all perimeter silt fence prior to the start of any clearing or grading activities.
6. Temporary gravel stabilized construction entrance shall be maintained, adjusted, and/or relocated as necessary to prevent mud and other debris from being tracked onto adjacent public roadways. Any mud or other debris that is tracked onto a public road shall be properly removed as soon as practical, but before the end of each working day.
7. After the start of mass grading and before all storm water conveyance improvements are in place and functional, all on-site storm water shall be temporarily diverted into the detention basin or a properly constructed temporary sedimentation basin or collection device, as per local requirements, so as to prevent surface waters from flowing onto adjacent property.
8. Disturbed areas shall be stabilized by seeding within seven (7) calendar days of the completion of disturbance. If construction activity on a portion of the site is to resume within fourteen (14) calendar days of the end of the last disturbance, then stabilization measures do not have to be initiated on that portion of the site by the 7th day after the completion of said disturbance. Areas with slopes 3H:1V or greater shall be stabilized with erosion control blanket or mat in addition to seeding.
9. The Contractor shall provide adequate planning and supervision during the project construction period for implementing construction methods, processes and cleanup procedures necessary to prevent water pollution and control erosion.
10. No sediment or debris shall be allowed to enter the existing storm sewer system or flow off-site.
11. All temporary and permanent erosion and sedimentation control measures shall be maintained, repaired and/or replaced as necessary to ensure effective performance. If required, a designated erosion control inspector shall inspect all measures every seven (7) calendar days, or within twenty-four (24) hours of a 0.5-inch rain event or equivalent snowfall, and report where items are in non-compliance. Otherwise, the Contractor shall be responsible for the inspection as well as maintenance of all measures and shall be subject to the terms of Federal, State, and local requirements.
12. All temporary erosion and sedimentation control measures are to remain in place and be functioning until final stabilization. After final stabilization, the Contractor is to remove and properly dispose of all erosion and sedimentation measures according to Jurisdictional Agency requirements within thirty (30) days. All disturbed areas or trapped sediment that accumulates from said measures shall be permanently stabilized.
13. Topsoil stockpiles shall not be located in flood prone areas or buffers protecting wetlands, or waters of the United States or County. Stockpiles shall be protected from erosion by installing silt fence around the perimeter of the stockpile(s). Stockpiles shall be seeded within seven (7) calendar days of completion.
14. If dewatering services are used, adjoining properties and discharge locations shall be protected from erosion. Discharges shall be routed through an effective sediment control measure (i.e., sediment Trap, sediment Basin, or other appropriate measure).
15. All storm sewers, drainage structures, catch basin sumps and/or retention/detention/sedimentation basins provided within this project are to be cleaned at the end of construction and prior to final acceptance. Cleaning may also be required during the course of construction if it is determined that the structures are not properly functioning and their performance is impaired.
16. Storm water conveyance swales, channels, streams or similar, if disturbed, are to be stabilized within 48 hours after the end of active disturbance.
17. Extreme caution shall be taken by the Contractor to prevent erosion and siltation during construction. The Contractor shall inspect catch basins and clean out if necessary. The contractor shall use silt/erosion control fence staked in place to prevent siltation of all drainage structures.
18. The Contractor shall water the site, as required during dry weather to control dust.
19. Erosion Control Maintenance and Replacement Notes:
    a. Silt fences are to be cleaned as required during the course of the construction of the project or if the Engineer determines that they are not properly functioning and their performance is impaired.
    b. Sediment traps and basins shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
    c. Should the fabric decomposed or become ineffective prior to the end of the expected life and the barrier still be necessary, the fabric shall be replaced promptly.
    d. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
    e. Mud or dust which is deposited on adjacent roadways shall be removed at the end of each day.
20. The sediment and erosion control measures indicated on the plans are the minimum requirements. Additional measures may be required, as directed by the Engineer or Jurisdictional Agency.
21. The Contractor shall assume responsibility for maintenance of all soil erosion and sedimentation control measures during and after construction. However, the Contractor shall not transfer these improvements for the purpose of maintenance until they have completed with the above and until they have received final inspection and approval from the Jurisdictional Agency or designated erosion control inspector and a Notice of Termination has been filed (NOT).

CITY OF NAPERVILLE EROSION CONTROL AND DRAINAGE NOTES
(City of Naperville Erosion Control and Drainage Notes section shall override the Soil Erosion and Sedimentation Control General Notes section for any conflicts.)

1. The contractor shall maintain proper drainage at all times during the course of construction and prevent storm water from running into or standing in excavated areas.
2. During extended dry periods, the construction area(s) may need to be watered down to prevent the blowing of soil from the site.
3. During construction, a stabilized construction entrance shall be utilized to minimize the tracking of dirt onto the public streets. It is the contractor's responsibility to keep public street pavement clean of dirt and debris. Any dirt that is tracked onto the public streets shall be removed the same day. If the amount tracked on the public street is excessive, cleaning may be required more frequently.
4. All erosion control measures shall be properly installed, as permitted, prior to any land disturbance activities. All erosion control shall be maintained until turf is established.
5. Stockpiles not being disturbed for more than 14 days shall be seeded.
6. All erosion control measures shall be inspected weekly, after any 0.5 inch rainfall, or more frequently as necessary to maintain their function.

Owner/Contractor Certification Statement

This certification statement is part of the Storm Water Pollution Prevention Plan for the Views of Naperville Clubhouse project, in accordance with General NPDES Permit No. _____ issued by the Illinois Environmental Protection Agency.

I certify under penalty of law that I understand the terms of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR 10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

In addition, I have read and understand all of the information and requirements stated in the Storm Water Pollution Prevention Plan for the above mentioned project; I have provided all documentation required to be in compliance with the ILR10 and Storm Water Pollution Prevention Plan and will provide timely updates to these documents as necessary.

_____ _____
Name *Signature*

_____ _____
Title *Date*

_____ _____
Name of Firm/Company *Telephone*

_____ _____
Address *City/State/Zip*

The Owner, and all Contractor's and Sub-Contractor's performing work on this site are required to sign the above illustrated Certification Statement. The signed Certifications shall be maintained on the site with the SWPPP.

No.	Revision	Date

HAEGER ENGINEERING
consulting engineers • • land surveyors
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Illinois Professional Design Firm License No.: 184.003152
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SWPPP GENERAL NOTES & SPECIFICATIONS

VIEWS OF NAPERVILLE CLUBHOUSE
SWPPP
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager:	P A C
Engineer:	C J B
Date:	03/22/2024
Project No.	22-028
Sheet	EC2.0 / EC4

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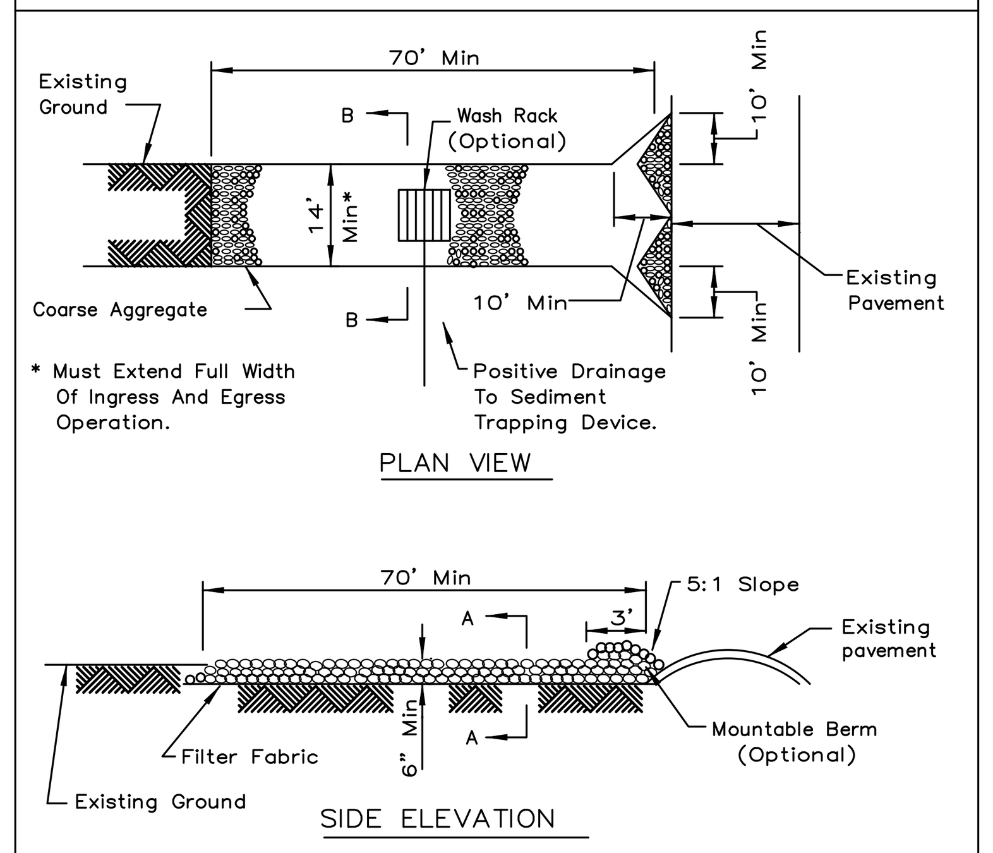
Plot Date: May 23, 2024 - 9:26am Plotted By: phil-c
File Name: P:\2022\22028\Drawings\Final Engineering\22028-SWPPP.dwg

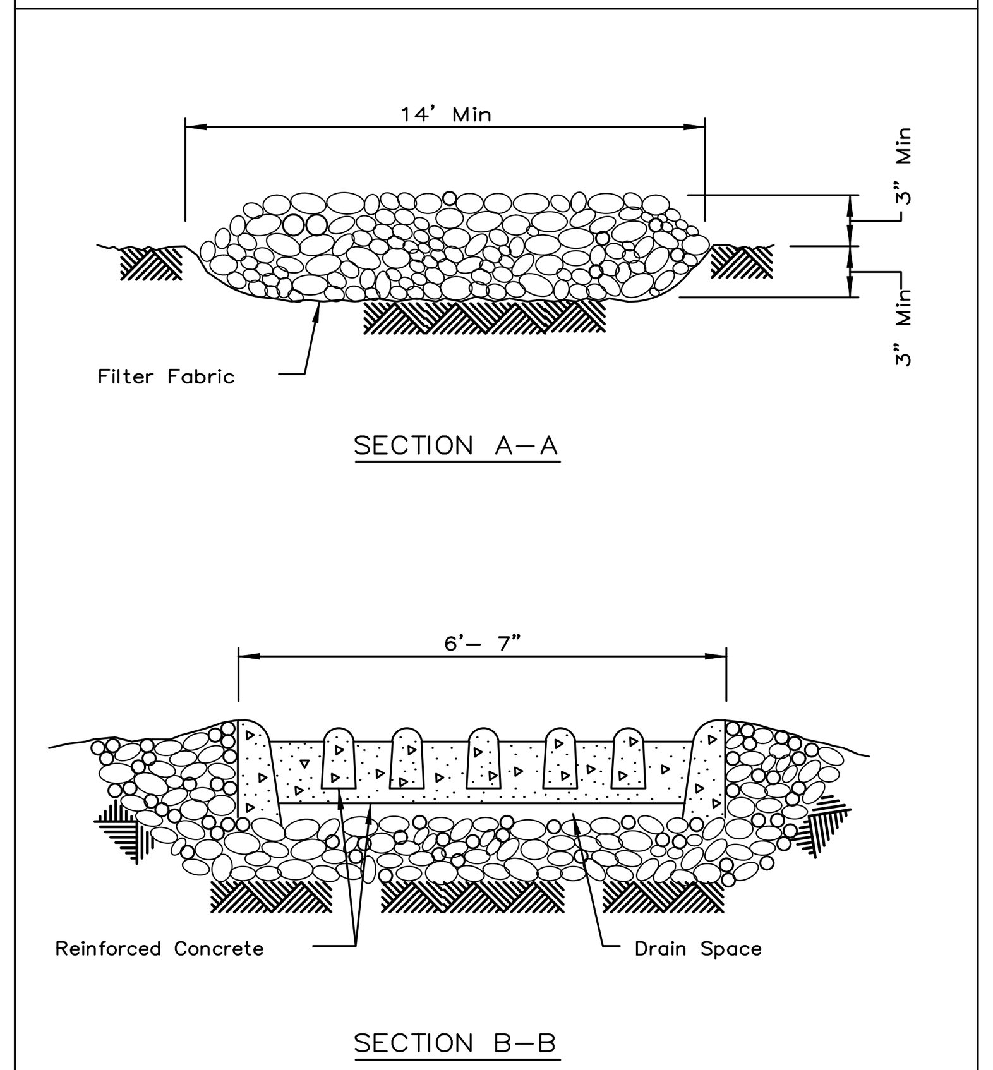
STABILIZED CONSTRUCTION ENTRANCE PLAN



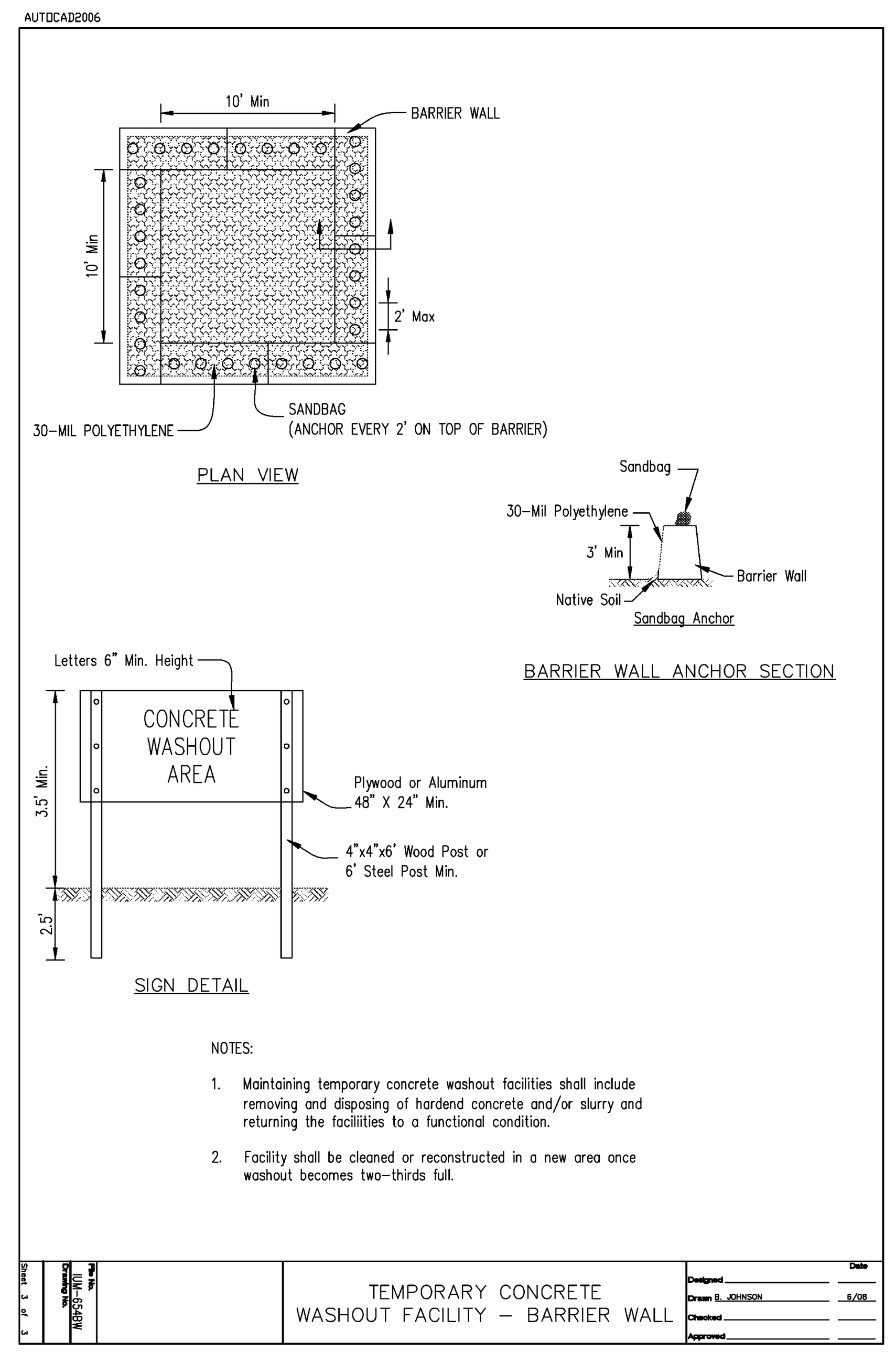
NOTES:
1 Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class , I orII dnd shall be placed over the cleared area prior to the placing of rock.
2.Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA–1, CA–2, CA–3 or CA–4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3.Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4.If wash racks are used they shall be installed according to the manufactures specifications.

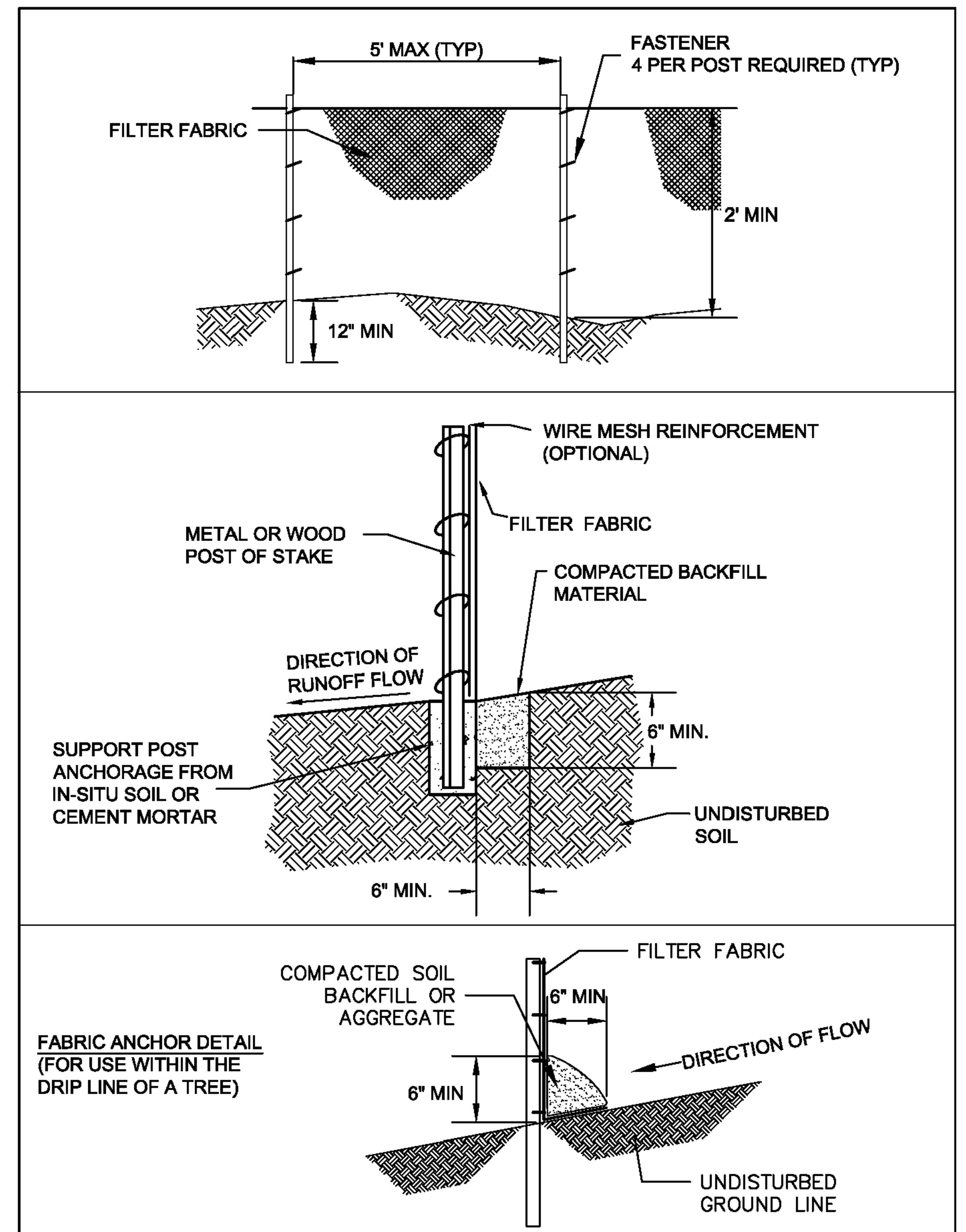
REFERENCE	U.S. DEPARTMENT OF AGRICULTURE	STANDARD DWG. NO.
Project ____	SOIL CONSERVATION SERVICE	IL–630
Designed ____ Date ____	ILLINOIS	SHEET 1 OF 2
Checked ____ Date ____		DATE 8–18–94
Approved ____ Date ____		

STABILIZED CONSTRUCTION ENTRANCE PLAN

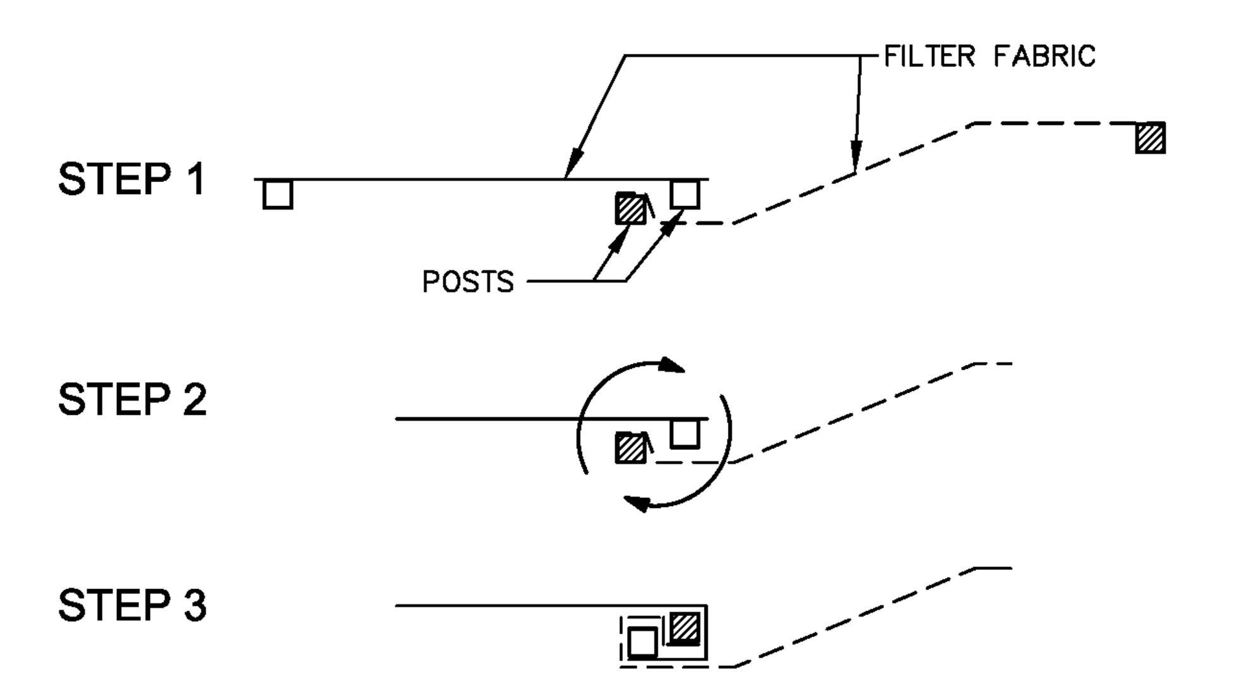


REFERENCE	U.S. DEPARTMENT OF AGRICULTURE	STANDARD DWG. NO.
Project ____	SOIL CONSERVATION SERVICE	IL–630
Designed ____ Date ____	ILLINOIS	SHEET 2 OF 2
Checked ____ Date ____		DATE 8–18–94
Approved ____ Date ____		





City of Naperville STANDARD DETAIL	TEMPORARY EROSION CONTROL MEASURE - SILT FENCE	LANDSCAPE 3
	REVISED: 01/01/2013 — SHEET 1 OF 2	790.03

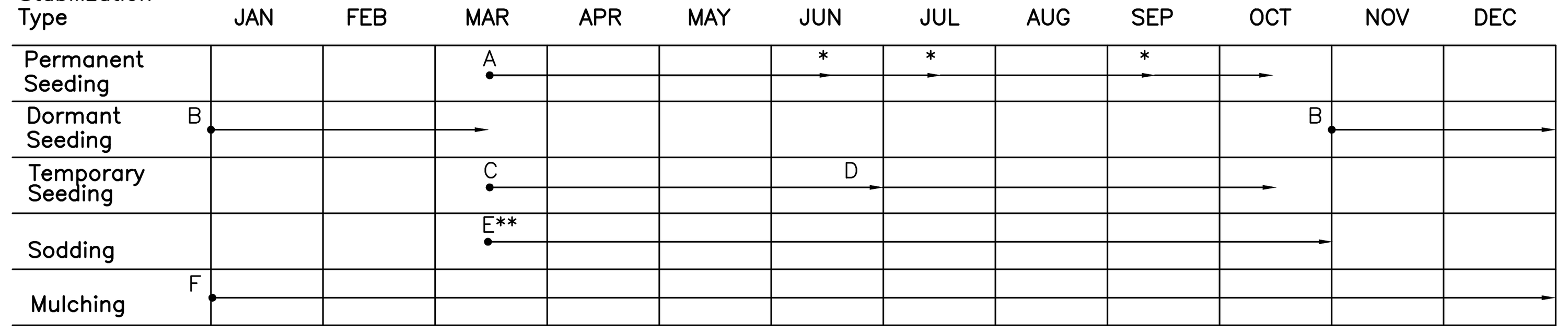


STEPS FOR THE ATTACHMENT OF TWO SILT FENCES:
1. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREESIN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL.
3. DRIVE BOTH POSTS A MINIMUM OF 18 INCHES INTO THE GROUND AND BURY THE FLAP.

NOTES:
1. TEMPORARY SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. THEY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD AND REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFICATION 592 GEOTEXTILE TABLE 1 OR 2, CLASS I WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NON-WOVEN OR 50 FOR WOVEN.
3. FENCE POSTS SHALL BE EITHER STANDARD STEEL POST OR WOOD POST WITH A MINIMUM CROSS-SECTIONAL AREA OF 3.0 SQ. IN.
4. DEPENDING UPON THE CONFIGURATION, ATTACH FABRIC AND WIRE MESH WITH HOG RINGS, STEEL POST WITH TIE WIRES, WOOD POST WITH NAILS.

City of Naperville STANDARD DETAIL	TEMPORARY EROSION CONTROL MEASURE - SILT FENCE	LANDSCAPE 3
	REVISED: 01/01/2013 — SHEET 2 OF 2	790.03

SOIL PROTECTION CHART



A KENTUCKY BLUEGRASS 90 LBS/AC MIXED WITH PERENNIAL RYE GRASS 30 LBS/AC

B KENTUCKY BLUEGRASS 135 LBS/AC MIXED WITH PERENNIAL RYE GRASS 45 LBS/AC + 2 TONS STRAW MULCH PER AC

C SPRING OATS 100 LBS/AC

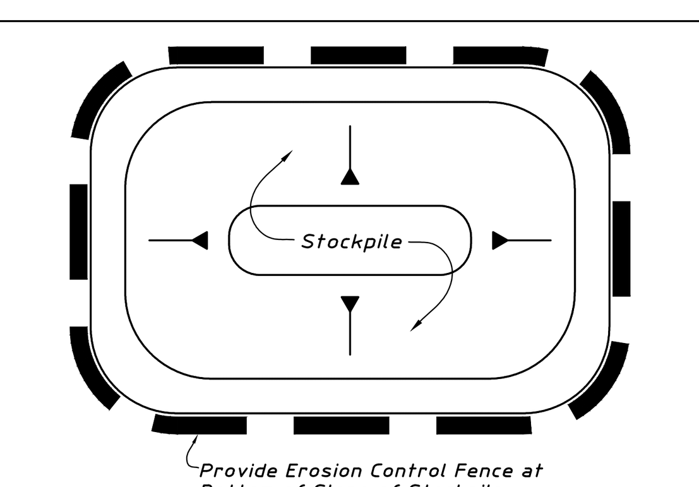
D WHEAT OR CEREAL RYE 150 LBS/AC

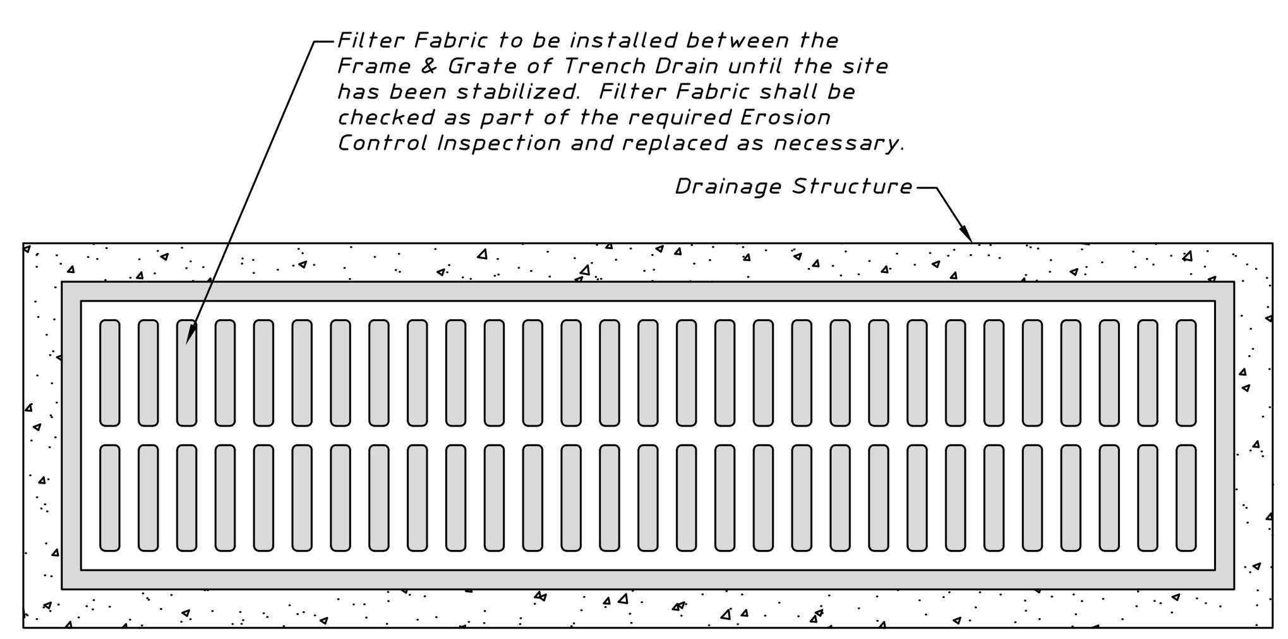
E SOD

F STRAW MULCH 2 TONS/AC

* IRRIGATION NEEDED DURING JUNE, JULY AND SEPTEMBER
** IRRIGATION NEEDED FOR 2–3 WEEKS AFTER SODDING

STOCKPILE PROTECTION DETAIL

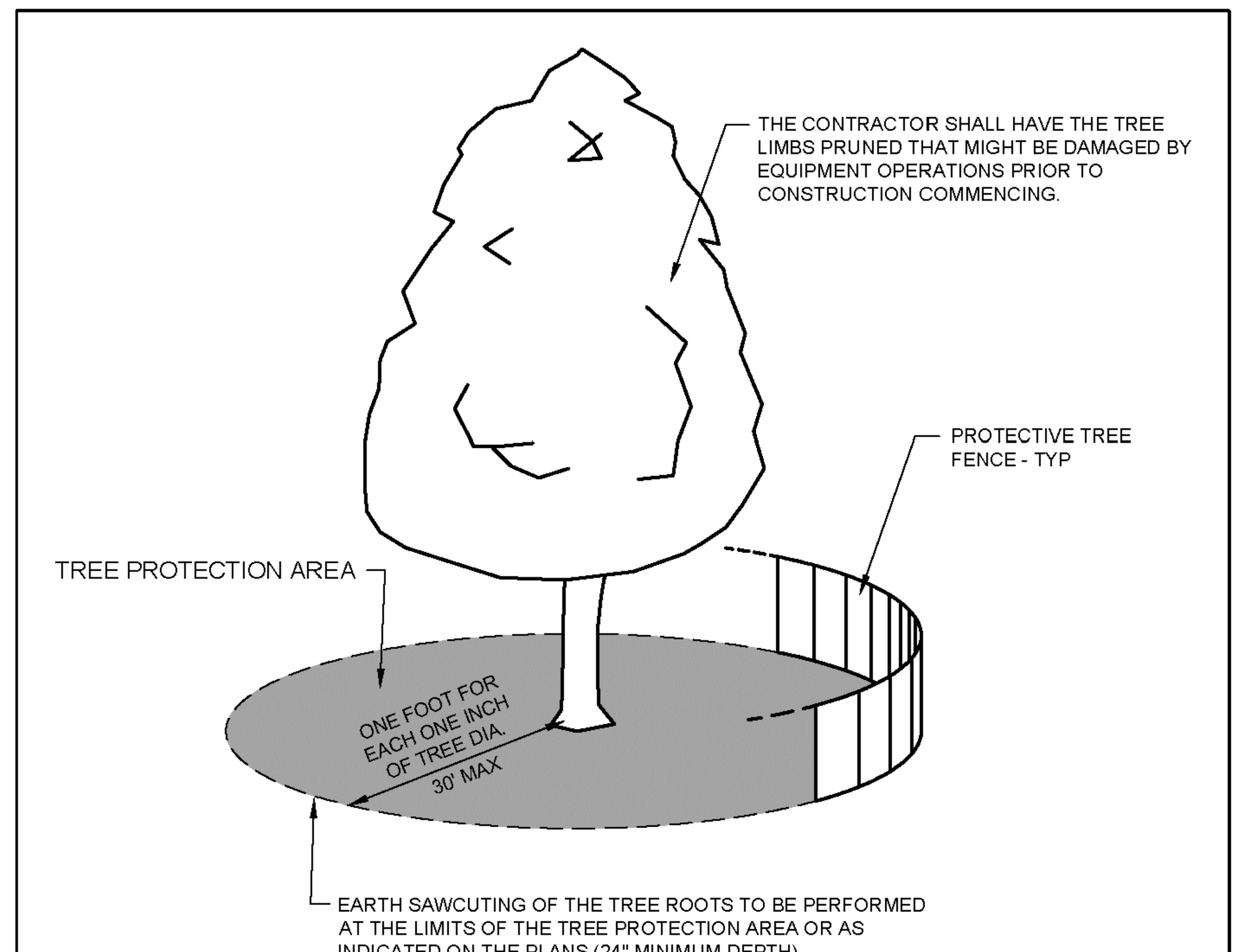




TRENCH DRAIN INLET PROTECTION

CONSTRUCTION SEQUENCE

CONSTRUCTION SEQUENCE AND RESPONSIBLE CONTRACTOR	GRADING CONTRACTOR	UNDERGROUND CONTRACTOR	PAVING CONTRACTOR	LANDSCAPE CONTRACTOR
1. INSTALL SEDIMENT CONTROL MEASURES –DITCH CHECKS –EROSION CONTROL FENCE –SEDIMENT BASIN –STABILIZED CONSTRUCTION ENTRANCE –TEMPORARY SWALES –SPECIFIED STORM SEWER LINES	▬ ▬ ▬ ▬ ▬	▬		
2. GRADE SITE/STOCKPILE TOPSOIL	▬			
3. INSTALL STORMWATER MANAGEMENT MEASURES –STORM SEWER –SEDIMENT TRAP (INLET PROTECTION) –DITCH/SWALES	▬	▬ ▬		
4. TEMPORARY VEGETATIVE STABILIZATION –CONTROL MEASURES –TEMPORARY SEEDING –MULCHING				▬ ▬ ▬
5. INSTALL ROAD SUBGRADE –AGGREGATE COVER			▬	
6. SITE CONSTRUCTION WORK –CURB AND GUTTER –PAVING (WALKS & BIKEPATHS)			▬ ▬	
7. VEGETATIVE COVER ON ALL AREAS TO BE EXPOSED LONGER THAN 60 DAYS –TEMPORARY SEEDING				▬
8. SURFACE ROADS –PAVING			▬	
9. PERMANENT VEGETATIVE STABILIZATION OF ALL EXPOSED AREAS –PERMANENT SEEDING –SODDING				▬ ▬
10. INSTALL PERMANENT LANDSCAPING				▬
11. PERFORM CONTINUING MAINTENANCE	▬	▬	▬	▬

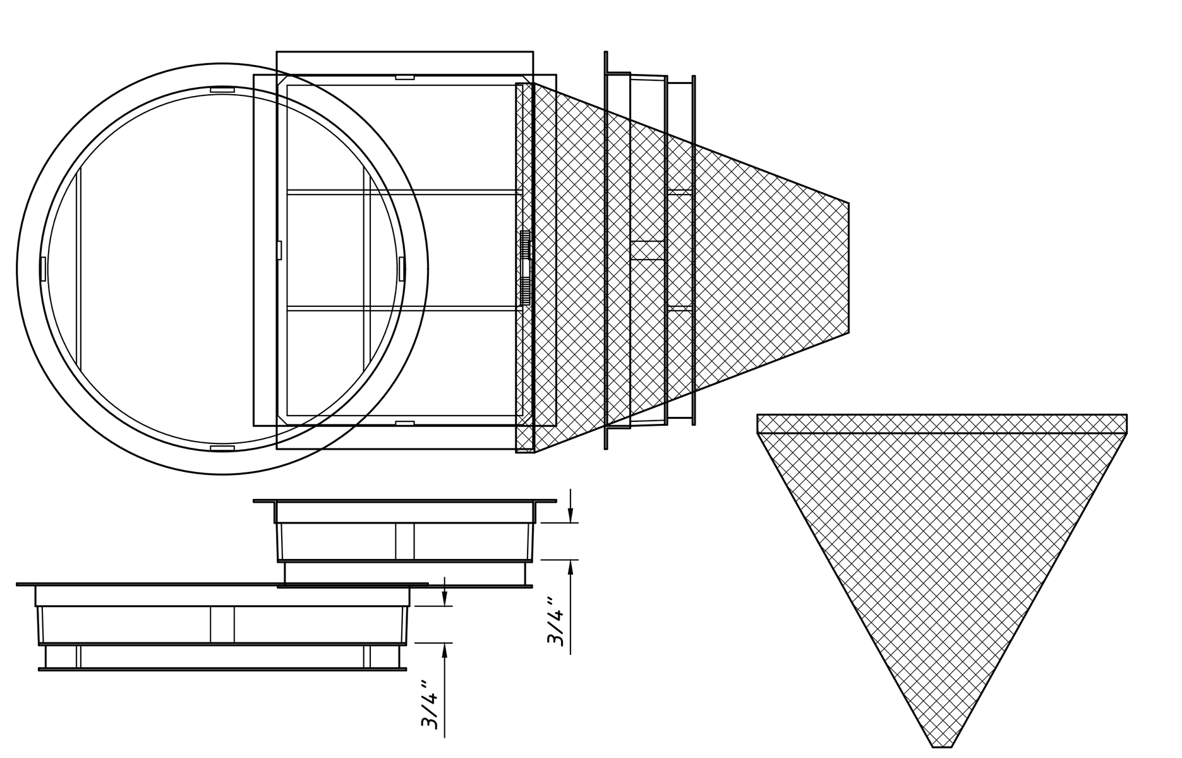


NOTES:

1. A TREE PROTECTION AREA SHALL BE ESTABLISHED AROUND A TREE A DISTANCE OF ONE FOOT FOR EACH ONE INCH OF TREE DIAMETER, UP TO A MAXIMUM OF 30 FEET.
2. PROTECTIVE TREE FENCE SHALL BE INSTALLED AT THE LIMITS OF THE TREE PROTECTION AREA. THE FENCE SHALL BE HIGH ENOUGH SO AS TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL.
3. GRADE CHANGES, UTILITY TRENCHES, STORAGE OF CONSTRUCTION MATERIAL, DUMPING OF WASTE, OR OPERATION OR STORAGE OF ANY EQUIPMENT SHALL NOT BE ALLOWED WITHIN THE TREE PROTECTION AREA.
4. AUGURING IS REQUIRED IF A UTILITY MUST BE INSTALLED WITHIN THE TREE PROTECTION AREA. AUGURED UTILITIES MUST BE A MINIMUM OF 24 INCHES BELOW GRADE.
5. ALL TREES TO BE SAVED WHICH HAVE BEEN SUBJECTED TO CONSTRUCTION ACTIVITY WITHIN THE TREE PROTECTION AREA SHOULD BE SELECTIVELY THINNED 10% BY AN ARBORIST SKILLED AT THE SELECTIVE THINNING PROCEDURE. NONE OF THE TREES SHALL BE TOPPED, HEADED BACK, SKINNED (REMOVAL OF THE INTERIOR BRANCHES), OR CLIMBED WITH SPIKES. ALL DEAD WOOD SHOULD BE REMOVED TO AVOID HAZARD.
6. IT IS RECOMMENDED THAT FOLLOWING CONSTRUCTION, TREES BE MAINTAINED IN THEIR NATIVE CONDITION. NO LAWN SHOULD BE PLACED AROUND THE TREES. IT IS RECOMMENDED THAT THE AREA BE MULCHED WITH 2 INCHES OF DECOMPOSED LEAVES AND 2 INCHES OF WOOD CHIPS OR BARK.

City of Naperville STANDARD DETAIL	TREE PROTECTION	LANDSCAPE 10
	REVISED: 08/01/2018 — SHEET 1 OF 1	790.10

INLET SILT BASKET CATCH-ALL



GENERAL NOTES:

FRAME: Top flange fabricated from 1¼"x1¼"x⅛" angle. Base rim fabricated from 1½"x½"x⅛" channel. Handles and suspension brackets fabricated from 1¼"x¼" flat stock. All domestic steel conforming to ASTM-A36.

SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel strap and lock. All storm structures must have either a curb silt basket cath-all or an inlet silt basket cath-all inserted prior to construction.

TEMPORARY SEEDING NOTES (ILLINOIS URBAN MANUAL CODE 965)

This practice applies to all cleared, unvegetated, or sparsely vegetated soil surfaces where vegetative cover is needed for less than 1 year. Applications of this practice include diversions, dams, temporary sediment basins, temporary road banks, topsoil/clay stockpiles and any other exposed areas of a construction site.

Plant selection – Select plants appropriate to the season and site conditions from Table 1.

Site preparation – Prior to seeding, install necessary erosion control and sediment control practices if possible. Remove large rocks or other debris that may interfere with seedbed preparation or seeding operations.

Seedbed preparation:
1. Liming: Where the pH of the soil is below 5.5, apply one and one half to two tons per acre of finely ground agricultural limestone. If the seeding period is less than 30 days liming will not be required.
2. Fertilizer: Apply 500 pounds per acre of 10–10–10 fertilizer or equivalent. Incorporate lime and fertilizer into the top 2 – 4 inches of soil. If the seeding period is less than 30 days fertilizer will not be required.
3. Prepare a seedbed of loose soil to a depth of 3 to 4 inches. If recent tillage or grading operations have resulted in a loose surface, additional tillage or roughening may not be required except to break up large clods. If rainfall caused the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Grove or furrow slopes steeper than 3:1 on the contour before seeding.

Seeding – Seed shall be evenly applied with a cyclone seeder, drill, cultipacker seeder or hydroseeder. Small grains shallbe planted no more than one inch deep. Grasses shall be planted no more than one half inch deep.

Cover broadcast seedings by cultipacking, dragging a harrow, or raking.

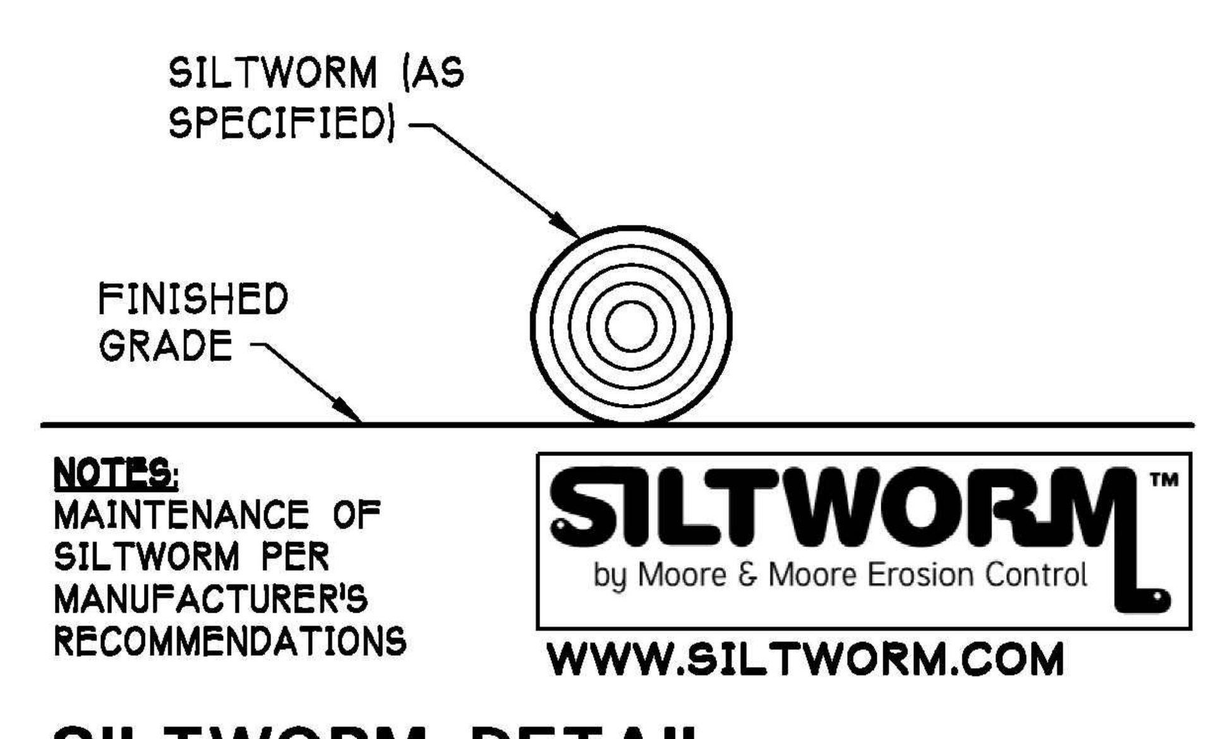
Temporary seeding provides protection for no more than 1 year, during which time permanent stabilization should be initiated.
Permanent seeding shall conform the to Permanent Seeding (Code 880) of the Illinois Urban Manual Practice Standards.

Reseed areas where seedling emergence is poor, or where erosion occurs, as soon as possible. Protect from vehicular and foot traffic. Control weeds by mowing.

TABLE 1

TEMPORARY SEEDING SPECIES, RATES AND DATES

Species	Lbs./Acre	Lbs./1000 sq. ft.	Seeding Dates
Oats	90	2	Early spring – July 1
Cereal Rye	90	2	Early spring – Sept. 30
Wheat	90	2	Early spring – Sept. 30
Perennial Ryegrass	25	0.6	Early spring – Sept. 30



NOTES:
MAINTENANCE OF SILTWORM PER MANUFACTURER'S RECOMMENDATIONS

SILTWORM DETAIL

1" = 1'-0"

No. | Date | Revision

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SWPPP
TYPICAL DETAILS

VIEWS OF NAPERVILLE CLUBHOUSE
SWPPP
701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager: P A C
Engineer: C J B
Date: 03/22/2024
Project No. 22-028
Sheet EC3.0 / EC4

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Plot Date: May 23, 2024 - 9:26am Plotted By: phil-c
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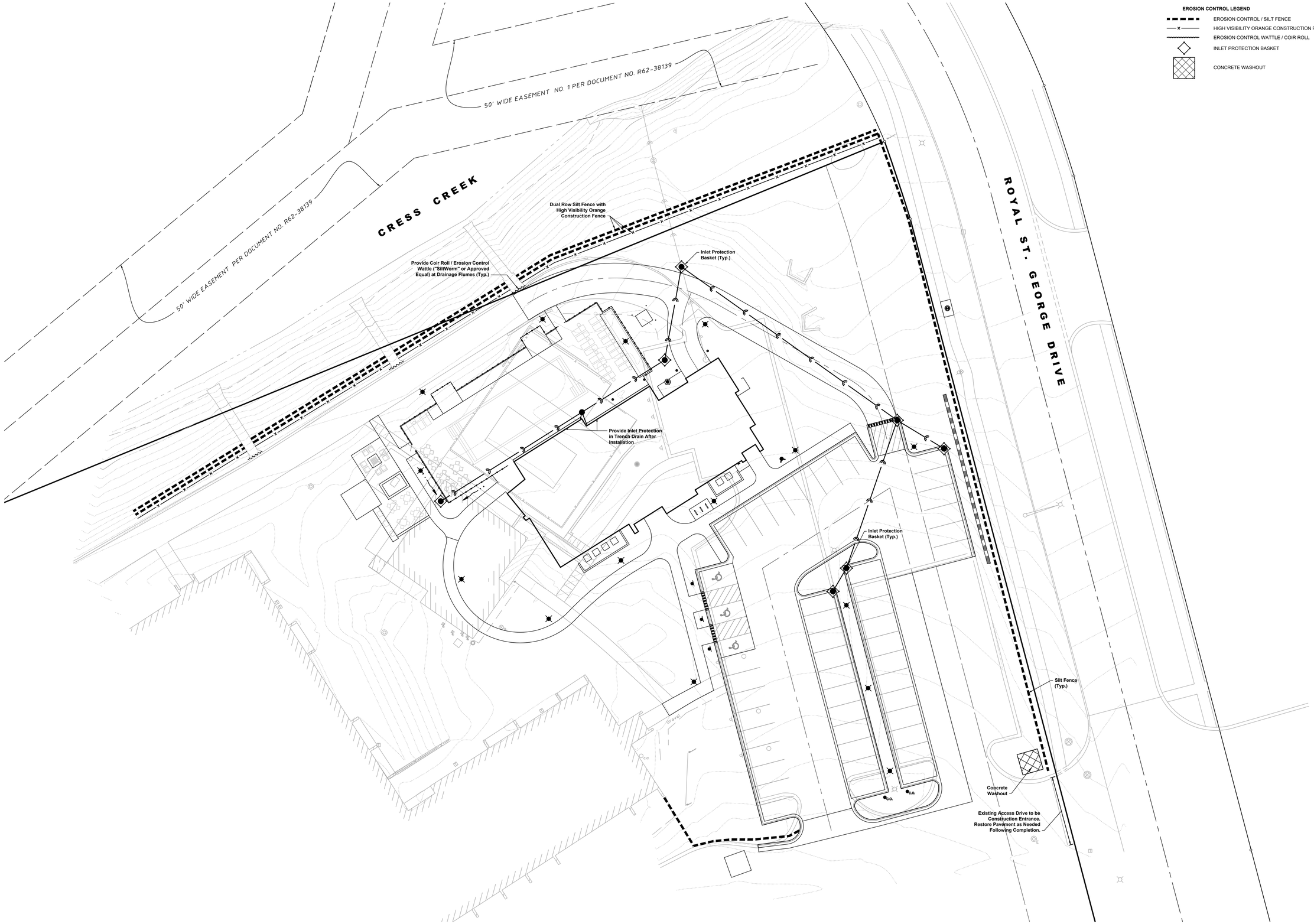

EROSION CONTROL LEGEND

- EROSION CONTROL / SILT FENCE
- HIGH VISIBILITY ORANGE CONSTRUCTION FENCE
- EROSION CONTROL WATTLE / COIR ROLL
- INLET PROTECTION BASKET
- CONCRETE WASHOUT

NORTH

10 0 20

Scale: 1" = 20'

No.	Date	Revision
1	05/02/2024	REVISED PER CITY REVIEW

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STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

VIEWS OF NAPERVILLE CLUBHOUSE SWPPP

701 ROYAL SAINT GEORGE DRIVE, NAPERVILLE, ILLINOIS

Project Manager:	P A C
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