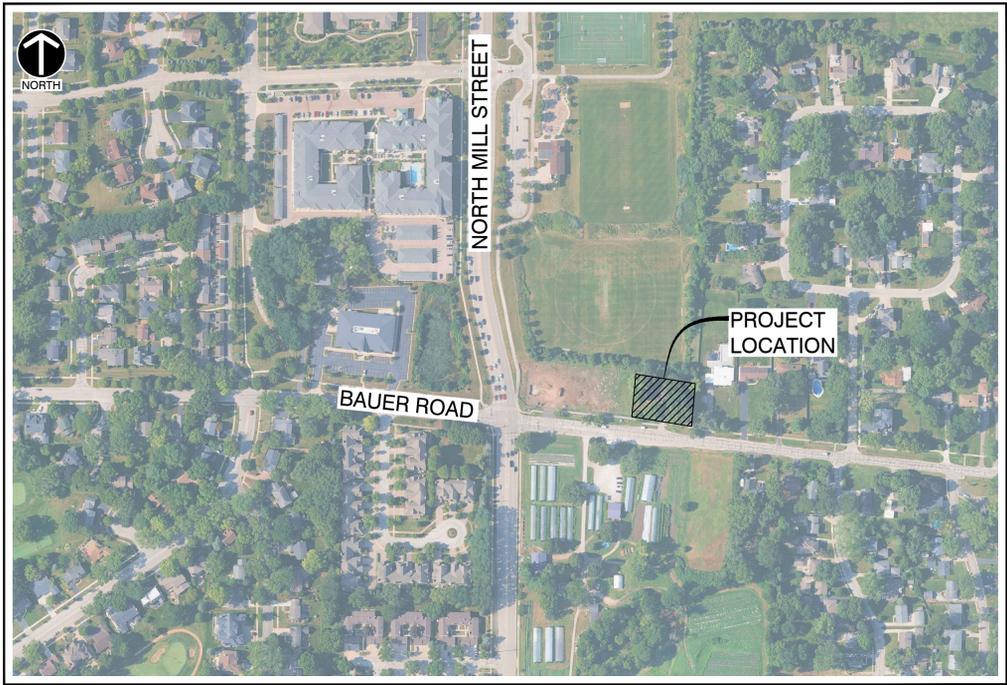


# FINAL ENGINEERING PLANS BAUER ROAD DUPLEXES NAPERVILLE, ILLINOIS 60563

PROPOSED	EXISTING	DESCRIPTIONS
		BOUNDARY PROPERTY LINE
		PROPERTY LINE
		RIGHT-OF-WAY
		UNDERLYING PROPERTY LINE
		CENTER LINE
		EASEMENT LINE
		SETBACK LINE
		SECTION LINE
		INDEX (MAJOR) CONTOUR
		INTERMEDIATE (MINOR) CONTOUR
		EXISTING FENCE LINE
		EXISTING WOOD FENCE LINE
		CURB
		EDGE OF PAVEMENT
		EDGE OF GRAVEL
		PAVEMENT SHOULDER
		STORM PIPE
		DOWNSPOUT SERVICE LINE
		WATER LINE
		SANITARY SEWER LINE
		PROPOSED FORCEMAIN
		GAS LINE
		OVERHEAD WIRE
		ELECTRIC LINE
		CABLE LINE
		FIBER OPTIC LINE
		TELEPHONE LINE
		GUIDE RAIL
		TREELINE
		PROPOSED TRENCH BACKFILL
		PROPOSED CONCRETE
		PROPOSED PAVEMENT
		PROPOSED RIPRAP
		PROPOSED STRIPING
		BUILDING
		PROPOSED SLOPE LABEL
		PROPOSED SPOT ELEVATION
		TOP OF WALL ELEVATION
		BOTTOM OF WALL ELEVATION
		TOP OF CURB ELEVATION
		FLOWLINE ELEVATION
		SANITARY MANHOLE
		CLEANOUT
		FLARED END SECTION
		STORM MANHOLE
		STORM CATCH BASIN (ROUND LID)
		STORM CATCH BASIN (CURB LID)
		STORM CURB INLET
		STORM INLET (CIRCULAR)
		STORM INLET (SQUARE)
		STORM BEEHIVE INLET
		STORM DRAIN OR DOWNSPOUT
		WATER VALVE VAULT
		WATER VALVE BOX
		FIRE HYDRANT
		ELECTRIC CONTROL CABINET (ABOVE GRADE)
		ELECTRIC HANDHOLE
		TRANSFORMER
		ELECTRIC METER
		LIGHT STANDARD
		UTILITY POLE
		TRAFFIC MANHOLE
		TELEPHONE PULL BOX (FLUSH WITH GRADE)
		TELEPHONE BOX/CABINET (ABOVE GRADE)
		CABLE MANHOLE
		FIBER OPTIC BOX/CABINET (ABOVE GRADE)
		FIBER OPTIC MANHOLE
		GAS LINE MARKER
		MANHOLE (UNKNOWN)



**SITE MAP**  
BASE IMAGE FROM GOOGLE EARTH  
DATED JUNE 2024  
SCALE 1" = 300'

- BENCHMARKS:**
- REFERENCE:**
- BERNTSEN MONUMENT IN 6" PVC PIPE WITH BMAC 6 ALUMINUM ACCESS COVER AT THE NORTHWEST CORNER OF 5TH AVENUE AND MILL STREET. (CITY OF NAPERVILLE BENCHMARK #1506)  
ELEVATION=690.61 (NAVD88)
  - CUT CROSS AT EAST END OF CURB SOUTH SIDE OF BAUER ROAD, 116'± WEST OF THE EAST PROPERTY LINE OF SUBJECT SITE EXTENDED.  
ELEVATION=719.55
  - MAGNAIL IN WEST EDGE OF ASPHALT PATH EAST SIDE OF MILL ROAD, 29'± NORTH OF THE NORTH PROPERTY LINE OF SUBJECT SITE.  
ELEVATION=717.60

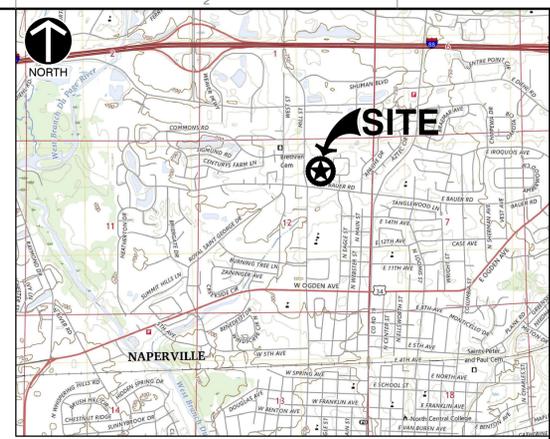
## PROJECT TEAM

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CONTACT: CRAIG HERNAN, RLA



**VICINITY MAP**  
BASE MAP IMAGE PROVIDED BY U.S. GEOLOGICAL SURVEY  
ARLINGTON HEIGHTS QUADRANGLE, DATED 2021  
NOT TO SCALE

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C000	COVER SHEET
C001	SITE SPECIFICATIONS - 1
C002	SITE SPECIFICATIONS - 2
C003	SITE SPECIFICATIONS - 3
C100	EXISTING CONDITIONS
C101	DEMOLITION AND STORMWATER POLLUTION & PREVENTION PLAN
C200	DIMENSION PLAN
C300	GRADING PLAN
C400	UTILITY PLAN
C800	DETAILS - 1
C801	DETAILS - 2
C802	DETAILS - 3

STATE OF ILLINOIS }  
COUNTY OF DUPAGE }SS

I, JAMES G. CANEFF, AN ILLINOIS PROFESSIONAL ENGINEER, HEREBY CERTIFY THAT THESE PLANS HAVE BEEN PREPARED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC., ILLINOIS LICENSED PROFESSIONAL DESIGN FIRM NO. 184-004002, LICENSE EXPIRES APRIL 30, 2027, UNDER MY PERSONAL DIRECTION FOR THE EXCLUSIVE USE OF THE CLIENT NOTED BELOW. REPRODUCTION OR USE BY THIRD PARTIES IS STRICTLY PROHIBITED WITHOUT THE WRITTEN PERMISSION OF THE UNDERSIGNED.

GIVEN UNDER MY HAND AND SEAL THIS 19TH OF JANUARY, 2026.

*James M. Caneff*

ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 46225  
REGISTRATION VALID THROUGH NOVEMBER 30, 2027  
(NOT VALID WITHOUT ORIGINAL SIGNATURE)

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**811**  
Know what's below.  
Call before you dig.

ILLINOIS LAW REQUIRES ANYONE DIGGING TO CALL JULIE AT 1-800-892-0123 AT LEAST 48 HOURS/TWO WORKING DAYS PRIOR TO THE START OF EXCAVATION AND THE PROJECT MUST BEGIN WITHIN 14 CALENDAR DAYS FROM THE CALL.

**REVISION RECORD**

NO.	DATE	DESCRIPTION
1	01/19/2026	REVISION PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 01/12/2025

1230 East Diehl Road  
Suite 200  
Naperville, IL 60563  
Ph: 630.963.6026  
www.cecinco.com

**Civil & Environmental Consultants, Inc.**

**REDSTART CONSTRUCTION, INC.**  
BAUER ROAD DUPLEXES  
27W/240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

**COVER SHEET**

DRAWING NO.: **C000**

SHEET 1 OF 12

DATE: OCTOBER 21, 2025 | DRAWN BY: ET  
DWG SCALE: NOT TO SCALE | CHECKED BY: MAJ  
PROJECT NO.: 347-703  
APPROVED BY: JJC

A:\140-001\147-701-0000\Drawings\147703-001-0000.dwg (10/21/2025) - LP: 1/21/2026 1:05 PM

# PROJECT TECHNICAL SPECIFICATIONS

## 1. GENERAL NOTES

### A. DEFINITIONS

- (1) Whenever in these Project Technical Specifications the following terms are used, the intent and meaning shall be interpreted as follows:
  - (a) Governing Agency: Government or regulatory entity with authority to implement and enforce specific laws, permit requirements, or construction requirements. City of Naperville Standard Specifications for Construction and Standard Details are available online at <https://www.naperville.il.us/projects-in-naperville/standard-specifications-for-construction/>.
  - (b) Owner: Entity or individual for whom the project is being performed.
  - (c) Contractor: Entity or individual responsible for performing construction activities and furnishing all labor, materials, equipment and other incidental work necessary for the successful completion of the project and for carrying out all duties and obligations imposed by the contract.
  - (d) Engineer: Licensed professional engineering entity, or licensed professional engineer and/or authorized agent(s), who represents the Owner during the construction phase of the project work.
  - (e) Geotechnical Engineer: Licensed professional engineering entity, or licensed professional engineer and/or authorized agent(s), who, in representing the Owner, is involved with the principles, properties and behavior of earth materials with regard to the project work.
  - (f) Project Drawings / Plans: The drawings that define the required site development activities and improvements.
  - (g) IDOT Standard Specifications: The current edition of the Illinois Department of Transportation's (IDOT) "Standard Specifications For Road & Bridge Construction" including all applicable current supplemental specifications and special provisions.

### B. GOVERNING REGULATIONS

- (1) All project activities and improvements shall be in accordance with the Governing Agency regulations. In the event of conflict with these Project Technical Specifications, or the indicated Reference Specifications, the Governing Agency regulations shall apply.

### C. REFERENCE STANDARDS AND SPECIFICATIONS

- (1) Site development activities and improvements, including site preparation and demolition, earthwork, sanitary sewers, storm drainage, water supply, pavement, lighting, landscape improvements, and erosion/sediment control measures shall be in accordance with the Reference Specifications indicated throughout these Project Technical Specifications. All Reference Specifications shall be incorporated into and made a part of the Project Technical Specifications. When the Reference Specifications conflict with Project Technical Specifications, Project Technical Specifications shall govern.

### D. CONTRACT GENERAL CONDITIONS

- (1) These Project Technical Specifications supplement the engineering plans, the Agreement between Owner and Contractor, and other supplemental documents that comprise the overall project Contract. These Project Technical Specifications address the technical requirements of the project design as indicated on the Project Drawings (Plans). Unless specifically addressed in the Plans or these Project Technical Specifications, general conditions such as bid items, quantities, unit prices, terms of payment, change management, construction schedule, submittals, and other conditions are defined in the Agreement between Owner and Contractor.
- (2) The Contractor shall be responsible for complying with applicable Federal, State, and local requirements, together with exercising precaution at all times for the protection of persons (including employees) and property. It is the sole responsibility of the contractor to initiate, maintain, and supervise all safety requirements, precautions, and programs in connection with the work.
- (3) The Contractor shall indemnify and hold harmless the Owner and Engineer for any and all injuries and/or damages to personnel, equipment, and/or existing facilities occurring in the course of the site improvement construction work described in the Plans and these Project Technical Specifications.
- (4) The Contractor shall obtain all required construction permits in accordance with local, state, and federal regulations.
- (5) The Contractor shall guarantee all materials and workmanship for a period of 1 year following final acceptance by the Owner and the Governing Agencies.

### E. QUALITY CONTROL OF MATERIALS

- (1) Materials shall be inspected, sampled, and tested before, during, and after they are incorporated into the work. The timing of these activities shall be as appropriate for the materials being placed and the properties (composition, gradation, density, strength, compaction, etc.) being examined. The requirements for quality testing are specified within the applicable sections of these Project Technical Specifications.
- (2) Materials not conforming to the requirements of the Project Technical Specifications at the time they are used or installed will be considered unacceptable and shall be removed and replaced with acceptable materials properly installed in place at the Contractor's expense.
- (3) When material test results are not within specification tolerances, the supplier shall make appropriate adjustments at its source to correct the issue.
- (4) Materials inspections, sampling, and testing shall be performed by an independent testing agency/laboratory with suitable capabilities and experience. The testing entity shall be retained by Contractor or Owner, as required or as specified in the Contract Documents.

## 2. EXISTING CONDITIONS & SITE PREPARATION

### A. EXISTING CONDITIONS

- (1) Existing conditions as depicted on the Plans are general and illustrative in nature. It is the responsibility of the Contractor to examine the site and be familiar with existing conditions prior to initiating construction. If conditions are encountered, before or during construction, that are significantly different than those shown on the Plans, Contractor shall notify the Engineer immediately.
- (2) It is not the Engineer's intent that any single plan sheet in the Plans fully depicts all work associated with the project. The Contractor shall be familiar with all sheets in the Plans for construction. Contractor shall familiarize himself with all structural, architectural, mechanical, electrical, or other plans, as necessary, for the construction of the overall project.
- (3) Contractor shall protect all property corner pins, permanent monuments, and permanent benchmarks during construction. If disturbed, Contractor shall have items reset by a licensed surveyor at Contractor expense.
- (4) Contractor shall protect all existing utilities, structures, and features to remain. Any items to remain that have been disturbed or damaged as a result of construction shall be repaired or replaced at Contractor expense.

### B. EXISTING UTILITIES

- (1) Underground utility information shown on the Plans may be based upon a combination of topographic survey data, field observations, historical utility maps, Owner provided information, or other available data for the Site. The Plans constitute a representation of utility locations from best known information available to the Engineer. There is no guarantee that the utilities shown comprise all such utilities in the area, either in service, or abandoned.
- (2) Contractor shall be responsible for contacting all agencies, utility companies, and pipeline companies known or suspected to have buried cable, duct, sewer, pipes, etc., which may conflict with the project improvements to determine the location and depth of the existing utilities.
- (3) If conflicts occur after the existing utility conditions have been determined by field investigations, Contractor shall immediately notify Engineer and either:
  - (a) Adjust the location and depth of the proposed improvements as directed by Engineer in cooperation with the Owner, or
  - (b) If relocation of proposed improvements is not feasible, Contractor shall work with Owner and Engineer to make arrangements with the affected utility companies to have their utilities protected or relocated.
- (4) All utility disconnection, removal, relocation, cutting, capping, and/or abandonment shall be coordinate with the appropriate utility company / agency.

### C. EROSION / SEDIMENTATION CONTROL

- (1) Erosion/sedimentation control measures, as indicated on the Plans and as required elsewhere in these Project Technical Specifications, shall be employed during the course of construction operations and until suitable ground covers are established on all construction site areas.
- (2) Erosion/sedimentation control measures shall be properly installed and functional prior to any earth disturbing activities.

### D. CONSTRUCTION ACCESS

- (1) Construction ingress-egress shall be limited to defined connections to adjacent driveways and public roadways, and as indicated on the plans and as required elsewhere in these Project Technical Specifications.

### E. TRAFFIC CONTROL

- (1) The Contractor shall provide necessary traffic control for work performed in active transportation areas, including any specific traffic control requirements as indicated on the Plans.

### F. TEMPORARY CONSTRUCTION FENCING

- (1) Temporary construction fences shall be installed where indicated on the Plans and where required by the Engineer to restrict access to and from certain areas. Such fences shall be maintained during construction and removed when all work activities are completed.
- (2) Temporary construction fences shall consist of 48-inch-high plastic fabric, metal fabric, or wood lathe fence material (approved by the Engineer, prior to placement) attached to suitable metal posts that are set at 6-foot (or less) intervals and anchored at least 18 inches into the ground.
- (3) Temporary chain link construction fences shall be provided where indicated on the Plans.

### G. TREE AND LANDSCAPE PROTECTION

- (1) Highly visible temporary fences shall be placed around trees and landscape areas designated for protection. Vehicles, equipment, and material storage shall not be allowed within the protection zone.

- (2) Vehicle and equipment parking and material storage shall not be permitted within the drip line of any tree, even if the tree is not enclosed in a protective barrier. Vehicles and equipment shall avoid travel within the drip line of trees whenever possible.
- (3) Overhanging tree branches within the construction zone that are expected to come in contact with construction equipment shall be properly removed (sawcut) prior to construction in the area. Engineer approval is required before a branch is removed.
- (4) Roots of trees that are to be preserved shall be pruned (cut) where indicated on the Plans or required by the Engineer. Tree roots shall be cut with appropriate root pruning equipment to a depth of 24 inches (minimum) before construction begins. The cut shall be made approximately 12 inches closer to the tree than the construction limit (edge of excavation).

## H. MATERIAL DISPOSAL

- (1) All demolition waste and construction debris shall become the property of the Contractor unless otherwise stated in the Agreement between Owner and Contractor.
- (2) The following shall be removed from the construction site and properly disposed of in a legal manner. Unless otherwise stated in the Agreement between Owner and Contractor, the cost of removal and disposal shall be included in the fixed or unit prices for the various contract pay items and no additional payment will be allowed therefor.
  - (a) All surplus excavated materials.
  - (b) Construction and demolition debris such as building materials, asphalt and concrete pavement materials, culvert and sewer pipe, utility and drainage structures, retaining walls (concrete, stone and timber), trees, shrubs, and miscellaneous landscape features removed during the installation of the project improvements.
- (3) If Contractor intends to dispose of generated construction / demolition debris materials or excavated soils at a regulated clean construction / demolition debris (CDD) or uncontaminated soil fill operation, the contractor shall be responsible for taking all actions and preparing all documents required by 35 Illinois Administrative Code 1100 prior to transport of the materials / soil to the disposal facility. Materials and soils that do not meet CDD and uncontaminated soil constituent limit requirements shall be disposed of at a permitted landfill facility. The cost of testing and documentation to evaluate the materials / soils and determine proper disposal requirements shall be as defined in the Agreement between Owner and Contractor.
- (4) See Earthwork Operations specification section for additional requirements.

## 3. EARTHWORK OPERATIONS

### A. GENERAL

- (1) Except where modified by the following Project Technical Specifications, all earthwork operation and compaction requirements shall be in conformance with the material, installation and testing requirements of the IDOT Standard Specifications.
- (2) Earthwork shall include site clearing, tree and hedge removal, topsoil and rootmat stripping and stockpiling, earth and fill material excavation, construction of embankments and slopes, placement and compaction of non-structural fill, pavement areas and structural fill areas, removal and disposal of surplus and unsuitable excavated materials, topsoil placement, and final shaping and trimming to the lines and grades indicated on the Plans.
- (3) Prior to commencement of earthwork operations, Contractor shall notify any Utility Protection Service or other Governing Agency, as may be required.

### B. SITE CLEARING

- (1) All construction site features and items such as structures, foundations, fences, pavements, rubbish/debris, trees, shrubs, and surface vegetation shall be removed where necessary and as indicated on the Plans for the construction of the project improvements.
- (2) No tree, shrub, or surface vegetation shall be removed unless it is marked for removal or the Engineer specifically authorizes its removal and hold harmless the Owner and Engineer for any and all injuries and/or damages to personnel, equipment, and/or existing facilities occurring in the course of the site improvement construction work described in the Plans and these Project Technical Specifications.
- (3) When indicated on the Plans, brush, shrubs, branches and small trees shall be shredded or chipped using suitable mechanical equipment. The resulting material shall be stockpiled on-site, as directed by the Engineer, for the Owner's future use. Tree trunks, branches, and removed stumps too large to be chipped shall be removed from the site and disposed of.
- (4) Tree stumps shall be removed by excavation or grinding to a depth of not less than 12 inches below ground surface. Material resulting from stump grinding shall be spread on the ground and excavated as part of topsoil or rootmat stripping.
- (5) All items and materials not specifically required to remain on-site shall be removed from the site and disposed of in a legal manner.

### C. TOPSOIL AND ROOTMAT REMOVAL

- (1) Existing topsoil shall be removed from proposed pavement and building areas, non-structural fill areas, and structural fill areas. Sufficient existing topsoil shall be stockpiled for future use as topsoil replacement. When approved by Geotechnical Engineer, stripped topsoil may be used as non-structural fill to design elevations. Topsoil not used for replacement or for non-structural fill shall be removed from the site and legally disposed of, unless directed by Owner to stockpile on-site for future use. Stockpile locations shall be as authorized by Owner.
- (2) Topsoil supplied from off-site sources shall be natural, fertile agricultural soil material capable of sustaining vigorous plant growth. It shall contain not less than 4% nor more than 10% organic matter, as determined in accordance with AASHTO T194. It shall contain not less than 12% nor more than 50% clay and the sand content shall not exceed 60%, both as determined in accordance with AASHTO T88. The pH shall be between 5.0 and 8.0. Topsoil material shall be relatively free from large roots, sticks, weeds, brush, stones larger than 1-inch in diameter, or other litter or waste products. It shall be a loamy mixture having at least 90% passing the No. 10 sieve.
- (3) Within proposed pavement and building areas where there is no existing topsoil, the surface layer of organic material (friable soil containing roots or other vegetative matter) shall be removed before starting fill and compaction operations. Such removed material may be used as non-structural fill. If this material is not used as non-structural fill, it shall be removed from the site and legally disposed of.

### D. EXCAVATION

- (1) Existing earth and fill materials within the project construction limits shall be excavated as necessary to establish the elevations, contours, and drainage patterns indicated on the Plans. Excavated materials classified by Geotechnical Engineer as suitable structural fill material shall be used to construct compacted subgrades within the project building and pavement areas. Excess materials not needed for filling or for the construction of berms or embankments shall be removed from the site and legally disposed of, unless directed by the Engineer or Owner to stockpile on-site for future use. Stockpile locations shall be as authorized by the Owner.
- (2) Rock materials within the project construction limits shall be excavated to a minimum of 6 inches below subgrade levels of proposed pavements and pipe bedding. Rock materials shall be removed to a minimum of 18 inches below building and structure foundations. Rock materials shall be defined as boulders one cubic yard or greater in volume and all materials in ledges, bedded deposits, and conglomerate deposits that exhibit the physical characteristics of rock, as determined by Geotechnical Engineer. Excavated rock materials not used for filling or for the construction of berms or embankments shall be removed from the site and disposed of, unless directed by the Engineer or Owner to stockpile on-site for future use. Stockpile locations shall be as authorized by the Owner.
- (3) Excavated materials classified by the Geotechnical Engineer as unstable or unsuitable for structural fill purposes and not needed for non-structural fill, shall be removed from the site and legally disposed of, unless directed by the Engineer or Owner to stockpile on-site for future use. Stockpile locations shall be as authorized by the Owner.
- (4) Excavations shall be maintained in a well-drained condition at all times. Temporary drainage (dewatering) facilities shall be provided where surface runoff is not possible or effective. Such facilities shall be operated during the entire course of earthwork operations. Dewatering facilities shall include appropriate erosion and sediment control measures, as indicated elsewhere in these Project Technical Specifications. Unless otherwise stated in the Agreement between Owner and Contractor, the cost of temporary drainage facilities and dewatering activities shall be considered incidental to the various pay items of the work.

### E. FILL PLACEMENT

- (1) Before placing any fill within pavement or structural areas, the existing subgrade shall be compacted as indicated in the "Compaction" section of these Project Technical Specifications. Pavement subgrade areas shall be proof-rolled to check for soft, unstable, or otherwise unsuitable materials and approved by a Geotechnical Engineer prior to paving operations. Where possible, proof-rolling shall be accomplished with at least four passes of a fully loaded tandem axle dump truck. Below-grade footing or foundation areas shall be inspected by a Geotechnical Engineer prior to foundation installation. Soft, unstable, or otherwise unsuitable materials shall be removed and replaced as directed by Geotechnical Engineer.
- (2) Structural fill materials shall be soil materials that can be compacted to develop a stability satisfactory to the Geotechnical Engineer. Structural fill materials shall not contain frozen material or any material which, by decay or otherwise, might result in site or foundation settlement.
- (3) Material Types For Structural Fill Purposes:
  - (a) Suitable Fine-Grained Soils - Soil materials that comply with ASTM D2487 Soil Classification Group CL and meet the following requirements:
    - (i.) Laboratory maximum dry density when determined in accordance with ASTM D698.
    - (ii.) Plasticity Index greater than 12.
    - (iii.) Liquid Limit less than 45.
    - (iv.) Particle size distribution with greater than 50% passing the No. 200 sieve.
  - (b) Suitable Coarse-Grained Soils - Soil materials that comply with ASTM D2487 soil classification groups GW, GP, GM, SW, SP and SC.
  - (c) Bituminous concrete and granular base materials removed from existing pavement areas may be used as structural fill, subject to gradation, placement, and compaction control by Geotechnical Engineer.
  - (d) Impervious clay layers (liners) shall be constructed of fine-grained soils within the CL classification that have a Plastic Index greater than 15 and a moisture content greater than optimum and are free of stones bigger than 1 inch average size.
- (4) Unsuitable Fill - Soil materials that are not in conformance with the stated criteria for structural fill material shall not be used as structural fill.
- (5) Installed fill layers softened or otherwise damaged by rain, ponded water, or construction activities shall be scarified, dried, and recompacted, or removed and replaced. This work, even if performed after lift or fill acceptance, shall be incidental to the various pay items of the work.

### (6) Unsuitable Subgrade Conditions:

- (a) Within areas of new or reconstructed pavements, specific requirements for removal and remedial procedures shall be as directed by Geotechnical Engineer. Soft or otherwise unacceptable subgrade materials shall typically be removed to a depth where the minimum in situ unconfined compressive strength is 2.0 tsf and the in situ moisture content is no more than 3 percentage points above the optimum moisture content per ASTM D1557. When the depth of unsuitable material is excessive and does not warrant complete removal, remedial procedures will typically require partial removal of unsuitable subgrade material, placement of a geotextile fabric (MIRAFI 600X or approved equal), and sufficient aggregate fill (IDOT CA-1 or alternate acceptable granular material) to the required subgrade level. Depths of unsuitable subgrade removal will be as directed by the Geotechnical Engineer. Alternate procedures may be required depending on the conditions encountered.
- (b) Removal of unsuitable materials and installation of replacement fill material under and adjacent to proposed buildings and structures shall be as specified by Geotechnical Engineer.
- (c) Payment for removal and replacement of unacceptable materials and the installation of geotextile fabric and aggregate fill shall be as indicated in the agreement between Owner and Contractor. Such payment shall include all work necessary for removal and disposal of unsuitable materials, supply and placement of fabric and aggregate materials, supply, placement and compaction of additional structural fill material, if required, and any dewatering required during these activities.
- (7) Where necessary, structural fill materials shall be placed and compacted under proposed pavements, buildings, and structures. Compacted structural fill shall be placed to required subgrade elevations.
- (8) Unsuitable materials may be placed within non-structural fill areas only where fill is required to obtain final subgrade levels. If borrow pits are used to obtain structural fill material, unsuitable materials may be used to bring the borrow areas to grade. Placement of such materials shall be limited to areas and depths authorized by the Geotechnical Engineer. If sufficient acceptable placement areas are not available, remaining unstable and unsuitable materials shall be removed from the site and legally disposed of.
- (9) If necessary, Contractor shall provide sufficient suitable structural fill material from off-site sources as necessary to complete earthwork operations to the required levels and elevations indicated on the Plans. Structural fill materials shall be in conformance with the stated criteria for structural fill. Contractor shall provide the Geotechnical Engineer access to the proposed off-site sources to take samples and evaluate materials.

### F. FILL COMPACTION

- (1) Fill materials shall be placed in layers (lifts) and compacted in accordance with the following specified requirements. Lift thickness shall not exceed 8 inches (loose condition) and the fill material (when compacted) shall have a moisture content within the limits of -1 to +3 percentage points of optimum value. Specific lift thickness and moisture content shall be as determined by the Geotechnical Engineer to obtain the required compaction and strength of material in place.
- (2) Cohesive soils and well-graded aggregate mixtures shall be sampled and tested to determine the laboratory maximum density and optimum moisture content (control values) of the material. The test method shall be the ASTM Standard as indicated below.
- (3) Free-draining cohesionless soils and aggregate mixtures shall be sampled and tested to determine the laboratory relative density (control value) of the material.
- (4) Laboratory density and moisture tests shall be performed to determine the control values for each type and source of material to be used. One test of laboratory maximum density and optimum moisture content shall be performed for each 300 cubic yards of fill and backfill material, and when any change in material occurs that may affect the maximum density or optimum moisture content values.
- (5) Aggregate supplier shall provide a written certification that the aggregate gradation and quality conforms to the project requirements. If a certification is not provided, gradation and quality tests shall be performed for each 300 cubic yards of stockpiled or in-place source material.
- (6) Non-Structural Areas: The top 6 inches of existing subgrade and all layers of cohesive soil and well-graded granular fill materials shall be compacted to at least 90% maximum dry density, as determined by the Standard Proctor Method (ASTM D698). Free-draining aggregate and soil materials (ASTM D4253 & D4254) shall be placed and compacted as specified by Geotechnical Engineer.
- (7) Pavement Areas: The top 6 inches of existing subgrade and all layers of cohesive soil and well-graded granular fill materials shall be compacted to at least 95% maximum dry density, as determined by the Standard Proctor Method (ASTM D698). Free-draining aggregate and soil materials (ASTM D4253 & D4254) shall be placed and compacted as specified by Geotechnical Engineer.
- (8) Building Areas: The top 6 inches of existing subgrade and all layers of cohesive soil and well-graded granular fill materials shall be compacted to at least 95% maximum dry density, as determined by the Standard Proctor Method (ASTM D698). Free-draining aggregate and soil materials (ASTM D4253 & D4254) shall be placed and compacted as specified by Geotechnical Engineer.
- (9) Impervious Clay Liners: All layers of clay fill material shall be compacted to at least 92% maximum dry density, as determined by the Standard Proctor Method (ASTM D698).
- (10) Soil and aggregate fill materials compacted in place shall be field tested to determine in-place density and moisture values. A nuclear density gauge shall be used in accordance with ASTM D6938 to measure in-place density/moisture values of cohesive soils and well-graded aggregate materials, unless Geotechnical Engineer determines other testing equipment is more suitable for the type of material being tested. The dry unit weight of the in-place compacted material shall be compared to its control value to determine the percent compaction achieved.
- (11) Frequency of fill material moisture content and compaction tests shall be as follows, unless otherwise adjusted by Geotechnical Engineer.
  - (a) When using materials from exposed stockpile, excavation, or borrow area sources, a minimum of two moisture content tests per day shall be performed for each type and source of material being placed during stable weather. During unstable weather, moisture content tests shall be performed as determined by Geotechnical Engineer.
  - (b) Within pavement areas, one in-place density test shall be performed for each 6,000 square feet, or fraction thereof, of each lift of material placed during each day.
  - (c) Under building/structure ground slabs and mat foundations, one in-place density test shall be performed for each 3,000 square feet, or fraction thereof, of each lift of material placed during each day.
  - (d) Under building/structure wall footings, one in-place density test shall be performed for each 100 lineal feet, or fraction thereof, of each lift of material placed during each day.
  - (e) Under building/structure column footings, one in-place density test shall be performed for each footing, of each lift of material placed during each day.

### G. MOISTURE CONTROL

- (1) Where the subgrade, or other layer of soil, must be moisture-conditioned before compaction, the top 12 inches of the material shall be scarified or disked and then dried or moistened as required to achieve compaction. Water shall be applied uniformly in a manner that prevents free water from appearing on the surface during, or subsequent to, compaction operations. Material that is too wet to air dry and compact to the specified density shall be removed and replaced.

### H. GRADING TOLERANCES

- (1) Surface elevations shall be within the following indicated tolerances.
  - (a) Under vehicle, pedestrian, and drainage control pavements, and building floor slabs: -0.08 to +0.04
  - (b) Drainage swales and stormwater basins: 0.10 to +0.10
  - (c) Embankments and slopes other than (b) above: -0.15 to +0.15
- (2) Unless otherwise noted, grades and contours shown on the Plans are final topsoil and pavement surface elevations. All excavated and filled areas not within the limits of buildings, structures, or pavements shall be graded to 6 inches below the indicated elevations to allow for topsoil placement, unless otherwise indicated on the Plans.

### I. RESTORATION

- (1) Previously prepared earth subgrade areas that are damaged by soil erosion or construction activities shall be repaired and graded to design contours and elevations before placement of pavement materials or topsoil.
- (2) Areas not otherwise subject to disturbance that are damaged by movement or storage of construction vehicles, equipment, or materials, or other construction activities such as the discharge of water from the construction site, shall be restored to original conditions.

### J. TOPSOIL PLACEMENT

- (1) Topsoil shall be placed on all of the following areas. Minimum topsoil depth shall be 6 inches unless otherwise indicated on the Plans. Topsoil placement shall include grading and shaping to required final contours and elevations.
  - (a) All project grass, landscape, or other vegetated areas indicated on the Plans.
  - (b) All unpaved off-site areas damaged by installation of project associated utilities or pavements.
  - (c) All unpaved off-site areas damaged by project associated activities.
- (2) Within new wetland areas, topsoil shall be placed in a manner to minimize compaction of the material. Minimum lift thickness shall be 12 inches unless otherwise indicated on the Plans. The placed material shall be disked or tilled to a depth of at least 8 inches. Once the topsoil is placed, no vehicles except the disk/tilling equipment shall be allowed on the material.
- (3) If required or as indicated on the Plans, Contractor shall obtain and provide necessary topsoil material from off-site sources (any stockpiled topsoil on the site shall also be used). The suitability of material supplied by Contractor shall be as defined elsewhere in these Earthwork Specifications. Contractor shall provide the Geotechnical Engineer access to proposed off-site sources to take samples and evaluate the materials.

### K. DISPOSAL OF MATERIALS

- (1) Surplus soil materials remaining after completion of fill placement and construction of berms shall be removed from the site and disposed of in legal manner, unless directed by the Owner to stockpile on-site for future use. Stockpile locations shall be as authorized by the Owner.
- (2) Removal and disposal of existing utility pipes and structures, construction debris, or other obstructions which interfere with proposed construction and which are not indicated in the Agreement between Owner and Contractor as a separate pay item shall be considered incidental to the earthwork operations.
- (3) Contractor shall be responsible for finding locations and obtaining approvals for the off-site disposal of demolition and construction debris, rubbish, pavement materials, shrubs, trees, and surplus, unsuitable excavated soil materials. Owner shall be advised, in writing, of the specific locations of all off-site disposal sites.

## 4. SANITARY SEWERS, STORM DRAINAGE AND WATER SUPPLY SYSTEMS

### A. GENERAL

#### (1) REFERENCE SPECIFICATIONS

- (a) Sanitary sewers, storm drainage, and water supply improvements shall be constructed in accordance with the material, installation and testing requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois," current edition; except where said requirements are modified by these Project Technical Specifications.
- (b) References to "IDOT" requirements or standards shall mean in conformance to the material, installation, and testing requirements of the current edition of the IDOT Standard Specifications.

#### (2) UNSUITABLE SOIL CONDITIONS

- (a) When unsuitable soil conditions are encountered under pipes or structures that require the removal of unsuitable materials below the depth of the standard bedding, the Contractor shall replace the material removed with granular material approved by the Geotechnical Engineer. Depth and extent of removal shall be as determined by the Geotechnical Engineer.
  - (b) Unless defined otherwise in the Agreement between Owner and Contractor, payment for unsuitable soil removal shall be made at the contract unit price per cubic yard of soil removed and replaced with granular material. Unless defined otherwise in the Agreement between Owner and Contractor, the cost of removing and disposing of the unsuitable material and supplying and placing the granular fill and any dewatering required during these activities shall be considered incidental to the various pay items of the work.
- (3) PIPE BEDDING, HAUNCH SUPPORT & INITIAL BACKFILL
    - (a) Concrete pipe, clay pipe, ductile iron pipe, cast iron pipe, and other types of pipe classified as rigid shall be placed on a 4-inch layer of compacted granular bedding material. This granular material shall also be placed on each side of the pipe (haunch support) from the top of bedding up to the horizontal midpoint of the pipe. Granular bedding and haunch material shall consist of graded crushed stone 1/4 inch to 3/4 inch in size (IDOT equivalent CA-11), unless otherwise specified on the Plans.
    - (b) Thermoplastic pipe (e.g., PVC and HDPE), corrugated metal pipe, and other types of pipe classified as flexible shall be supported with granular bedding, haunching, and initial backfill in accordance with ASTM D2321, except as hereby modified. Class I embedment material (angular graded stone) 1/4 inch to 3/4 inch in size (IDOT equivalent CA-11) shall be used as bedding, haunching, and initial backfill material and initial backfill material shall be installed to 12 inches above the top of the pipe.
    - (c) Where a pipe projects from an embankment or natural ground, the last 3 feet of bedding and backfill at the pipe end shall be impervious material compacted in place.
    - (d) Unless otherwise stated in the Agreement between Owner and Contractor, the cost of providing and placing granular bedding, haunch support, and initial backfill material shall be included as part of the fixed price or unit prices for sewer / culvert or main construction of the sizes and types specified.

#### (4) GRANULAR BACKFILL

- (a) Selected granular material shall be used to backfill excavated trenches under all existing and proposed vehicle pavements and sidewalks, trenches with edges closer than 2 feet from edges of existing and proposed vehicle pavements and where specifically indicated on the Plans. Selected granular material for backfilling trenches shall be IDOT Gradation CA-6, unless otherwise indicated.
  - (b) Selected granular backfill material placed in trenches under existing and proposed pavements shall be placed in uniform layers not exceeding 6 inches (loose measured) and compacted with mechanical equipment to 95% of the standard proctor density in accordance with the applicable AASHTO or ASTM requirements.
- (5) STRUCTURE ADJUSTMENT
    - (a) Adjustments may be necessary to ensure that frames and grates match the elevation of the surrounding pavement or ground surface. Preformed adjusting rings of the proper dimensions needed to mate the frame to the precast structure shall be used. No more than 12 inches of vertical adjustment may be made using the minimum practical number of individual rings.
    - (b) All rings shall be High Density Polyethylene Plastic (HDPE), Recycled Rubber, High Density Expanding Polystyrene, Expanded CA-11 styrene (EPP), or other material as approved by the City Engineer. Precast concrete rings, bricks, rocks, shims, or concrete blocks will not be allowed. Tapered adjusting rings shall be required when the frame will need to match the slope of the roadway.
    - (c) A resilient, flexible, non-hardening, preformed bituminous mastic material, Consol 102B or approved equal, shall be used between the cone or top barrel section of the structure and the adjusting rings. A thick bead of non-hardening elastomeric joint sealant conforming to ASTM C-920, Type S, Grade NS, shall be applied between all individual rings, and between the adjusting rings and the frame. The sealant or mastic material shall be applied in such a manner that no surface water or ground water inflow can enter the structure.
    - (d) All storm sewer structure frames without inside flanges shall be shaped with hydraulic cement or elastomeric joint sealant to form a fillet to the structure or adjusting rings and to maintain water-tightness.
    - (e) Frame adjustments shall be completed in accordance with Sections 602 and 603 of Standard Specifications for Road and Bridge Construction, prepared by the Illinois Department of Transportation, latest edition, except as noted herein.
    - (f) Structure adjustments shall be included in the prices of the utility structures being installed or modified and will not be paid for separately.
- (6) MARKER POSTS
    - (a) Sewer and water main structures, valve boxes, and the end location of sewer stubs and building services shall be marked with a 4 x 4 x 8' wood post. Four feet of the post shall stand above ground. The top 6 inches of the post shall be painted to identify the type of utility (sanitary - orange; storm - yellow; water - blue).
    - (b) Providing and installing marker posts shall be incidental to the cost of sewer and water main construction.

### B. SEPARATION OF WATER MAINS AND SEWERS

#### (1) HORIZONTAL SEPARATION

- (a) Water mains shall be located at least 10 feet horizontally (edge to edge) from existing or proposed sanitary sewers and storm sewers.
- (b) Water mains may be located closer than 10 feet to a sewer when:
  - (i.) Local conditions prevent a lateral separation of 10 feet and
  - (ii.) The bottom of the water main is at least 18 inches above the top of the sewer and
  - (iii.) The water main is either in a separate trench or in the same trench on an earth shelf located to one side of the sewer.
- (c) When it is impossible to meet (i) or (ii) above, the sewer shall be encased in a water-tight pipe or constructed of pressure pipe meeting water main standards. The sewer shall also be pressure tested to maximum expected surcharge head before backfilling.
- (d) These requirements shall also apply to water service lines.

#### (2) VERTICAL SEPARATION

- (a) Whenever a water main crosses a sanitary sewer or a storm sewer, the water main shall be separated from the sewer so that the bottom of the water main is at least 18 inches above the top of the sewer. This vertical separation shall be maintained for that portion of the water main located within 10 feet horizontally (measured perpendicular, either direction) of the O.D. of the sewer crossed.
- (b) Whenever the required 18-inch vertical separation cannot be maintained between a sewer and a water main, the water main shall be protected by means of one of the following methods:
  - (i.) Construct the sewer of pressure pipe meeting water main standards for a distance of 10 feet each side (measured perpendicular) of the O.D. of the water main.
  - (ii.) Install either the sewer or water main within a watertight casing pipe for a distance of 10 feet each side of the crossing (measured perpendicular to the line not provided with the casing pipe). Seal both ends of the casing with hydraulic gROUT.
  - (iii.) The method to be used at each specific location shall be as indicated on the Plans. In the event that a clearance problem is not discovered until after construction is underway, Engineer shall determine which method to use.
- (c) A vertical separation of 18 inches between the bottom of the sewer and the top of the water main shall be maintained wherever a water main crosses under a sewer.
- (d) Construction requirements regarding vertical separation, materials and structural support at sewer-water main crossings shall be in conformance with the Standard Specifications for Water and Sewer Main Construction in Illinois.
- (e) These requirements shall also apply for water service lines.

### C. SANITARY SEWERS SYSTEMS

- (1) See City of Naperville Department of Public Utilities (DPU) Water/Wastewater General Notes.

### D. STORM DRAINAGE SYSTEMS

- (1) See City of Naperville - Transportation, Engineering, and Development (TED) Business Group Plan Notes for Development Projects.

### E. WATER SUPPLY SYSTEMS

- (1) See City of Naperville - Department of Public Utilities (DPU) Water/Wastewater General Notes.

## 5. PAVEMENT CONSTRUCTION

### A. GENERAL

- (1) All roadway, driveway, parking area, storage area, and sidewalk pavements (including curbs and shoulders) shall be constructed in accordance with the material and installation requirements of the current edition of the IDOT Standard Specifications, except where said requirements are modified by the following Project Technical Specifications.
- (2) Pavement markings and markers, and traffic control signs and devices, shall be provided, installed, and removed in accordance with the requirements of the IDOT Standard Specifications, except where said requirements are modified by the following Project Technical Specifications.

### B. PAVEMENT REPLACEMENT/REPAIR

- (1) Existing pavements removed for excavation purposes or damaged by construction operations shall be removed and replaced in conformance to the material and construction requirements of the IDOT Standard Specifications and the requirements of the subsequent portions of this specification section.

## REVISION RECORD

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TRANSPORTATION, ENGINEERING AND DEVELOPMENT BUSINESS GROUP STANDARD  
CONSTRUCTION PLAN NOTES FOR DEVELOPMENT PROJECTS

CITY OF NAPERVILLE - DEPARTMENT OF PUBLIC UTILITIES  
WATER/WASTEWATER GENERAL NOTES

- a. 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 DPU-WWW (630) 420-4122 for scheduling.
b. 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.
c. 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.
d. 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".
e. Existing ductile iron systems for restraining push-on pipe bells shall be MEGALUG SERIES 1100HD or FORD SERIES 1390.
f. Existing ductile iron systems requiring restraint shall be MEGALUG SERIES 1100SD (split MEGALUG) for mechanical joints.
g. 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.
h. 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.
i. 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.
j. 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, Watertous or Kennedy.
k. 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 - a ny damage to this coating shall be repaired with field applied approved anti-seize compound that is a molybdenum-base lubricant, Nikel-Seer or approved equal.
l. The contractor shall rotate and/or adjust any existing and/or new hydrant to the satisfaction of the Department of Public Utilities.
m. 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.
n. The City of Naperville DPU-WWW 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 an acceptable pressure test which shall include provisions around existing valves and fittings.
o. Fire hydrant should be bagged "NOT IN SERVICE" until all testing and disinfection has been completed and new water main section is in service.
p. 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.
q. All valve boxes, vaults, hydrants, and manholes shall not be covered with construction debris and shall remain accessible to the respective utility company.
r. 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.
s. 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 placed 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:
i. 48-inch diameter - 60 seconds
ii. 60-inch diameter - 75 seconds
iii. 72-inch diameter - 90 seconds
iv. 84-inch diameter - 105 seconds
Any manholes that fail the test shall be sealed and re-tested until acceptable.
t. 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. All defects shall be repaired to the satisfaction of the Water/Wastewater Utility and re-televised.
u. 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.
v. 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.
w. All excavations more than 20 feet deep must be protected by a system designed by a registered professional engineer.
x. 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.
y. 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.
z. All brass components shall be certified to be lead free in compliance with NSF 61 and NSF 372 and identified with applicable markings.

OTHER NOTES:

- A. Manholes shall be furnished with a self-sealing frame and solid cover (Necnah Foundry R-1772-CVH, East Jordan Iron Works 1022-3, or equal approved by the City Engineer) with the word "Sanitary" imprinted on the cover in raised letters (see Standard Detail SAN 3). Frames and lids shall meet or exceed AASHTO H-20 loading specifications.
B. Both the manhole frame and cover shall have machined horizontal and vertical bearing surfaces. Inverted manhole frames are not allowed.
C. Pick holes shall not create openings in the manhole cover.
D. Bolt-down frames and covers shall be Necnah Foundry R-1916-F1, East Jordan Iron Works 1040 ZPT or equal approved by the City Engineer. Frames are to be bolted to cone. Bolt-down frames shall be used where indicated on the plans.
E. Manhole frames shall be adjusted to proper grade using reinforced, precast concrete or fiberized rings. Brick or concrete blocks will not be allowed. Fiberized adjusting rings shall be required when frame will be with a roadway area. Final frame adjustment for manholes within the roadway area shall be in accordance with Sections 602 and 603 of Standard Specifications for Road and Bridge Construction, prepared by the Illinois Department of Transportation, latest edition.
F. All manhole frames and adjusting rings shall be securely sealed to the cone section or top barrel section of the manhole using resilient, flexible, non-hardening, preformed bituminous mastic material, Con Seal 102 B or approved equal. The mastic shall be applied in such a manner that no surface water or ground water inflow can enter the manhole through gaps between the top barrel section or cone section and the first adjusting ring, between adjusting rings, or between the last adjusting ring and the manhole frame. Up to 12 inches (300 mm) of adjusting rings may be installed on a given manhole. No more than one 2-inch (50 mm) adjusting ring, and no more than two adjusting rings in total shall be used.
G. A continuous layer of non-hardening, preformed bituminous mastic material, Con Seal 102 B or approved equal shall be applied to each manhole barrel cone and top section to provide a watertight seal.
H. All brass components shall be certified to be lead free in compliance with NSF 61 and NSF 372 and identified with applicable markings.
I. The sanitary forcemain shall be tested a minimum of one (1) hour at 1.5 times 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.

GENERAL NOTES

- 1. THE OWNER OR HIS/HER/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 TRANSPORTATIONS "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 PRE-CONSTRUCTION MEETING WITH THE CITY OF NAPERVILLE PRIOR TO ANY WORK BEING STARTED. A PRE-CONSTRUCTION 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 (630-420-6082) 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) 420-6082 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 INSPECTIONS(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.

STORM SEWER NOTES (GENERAL)

- 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 S/D TILE TO THE NEAREST STORM SEWER OUTLET. ALL LOCATIONS OF ENCOUNTERED FIELD DRAINAGE TILE SHALL BE PROPERLY INDICATED ON THE CONTRACTOR'S RECORD DRAWINGS.

STORM SEWER NOTES (STORM SEWER WORK IN PLANS)

- 1. 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. NON-REINFORCED CONCRETE PIPE - NON-REINFORCED CONCRETE PIPE SHALL BE ALLOWED FOR PIPES WITH A 10 INCH OR SMALLER DIAMETER. NON-REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C 12, CLASS 3. 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 443.
c. DUCTILE IRON PIPE (DIP) - DUCTILE IRON PIPE SHALL CONFORM TO ANSI A 21.51 (AWWA C-151), CLASS THICKNESS DESIGNED PER ANSI A 21-50 (AWWA C-150), TAR (SEAL) COATED AND CEMENT LINING PER ANSI A 21.4 (AWWA C-104), WITH MECHANICAL OR RUBBER RING (SLIP SEAL OR PUSH ON) JOINTS. ALL DUCTILE IRON PIPE SHALL BE WRAPPED WITH POLYETHYLENE.
d. 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.
e. HIGH DENSITY POLYETHYLENE PIPE (HDPE) - HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 252 AND M 294. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM TO THE REQUIREMENTS OF CELL CLASS 324420C AS DEFINED AND DESCRIBED IN ASTM D 3550. RUBBER GASKET JOINTS SHALL BE USED.
f. FULLY GALVANIZED CORRUGATED STEEL PIPE - FULLY GALVANIZED CORRUGATED STEEL PIPE MAY BE USED FOR RESIDENTIAL DRIVEWAY CROSSINGS ONLY WHEN A DITCH SECTION IS PRESENT. THE MINIMUM CULVERT SIZE IS 12" DIAMETER.
2. 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.
3. 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.
4. JOINTS CONNECTING DISSIMILAR PIPE MATERIALS SHALL BE MADE WITH SEWER CLAMP NON-SHEAR TYPE COUPLINGS; CASCADE CSS, ROMAC LSS, FERNO, 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.
5. 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.
6. 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.
7. 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.

- 8. 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 C478-05 (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. PAVEMENT: EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL.
b. BARRIER CURB AND GUTTER: EAST JORDAN IRON WORKS 7220 FRAME WITH TYPE M1 GRATE AND T1 CURB BOX, OR APPROVED EQUAL.
c. DEPRESSED CURB: EAST JORDAN IRON WORKS 5120 FRAME AND GRATE, OR APPROVED EQUAL.
d. MOUNTABLE CURB: EAST JORDAN IRON WORKS 7525 FRAME AND GRATE, OR APPROVED EQUAL.
e. 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.

- 9. 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 STORM SEWER AND SANITARY SEWER BE ALLOWED.

- 10. FOR STRUCTURES LOCATED IN PAVED AREAS, A MINIMUM OF FOUR, 2-INCH DIAMETER HOLES SHALL BE DRILLED OR PRECAST INTO THE STRUCTURE WITHIN 1 FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1-FOOT BY 1-FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING

ADJUSTMENTS MAY BE NECESSARY TO ENSURE THAT FRAMES AND GRATES MATCH THE ELEVATION OF THE SURROUNDING PAVEMENT OR GROUND SURFACE. PREFORMED ADJUSTING RINGS OF THE PROPER DIMENSIONS NEED TO BE MADE TO MATCH THE PRECAST STRUCTURE SHALL BE USED. NO MORE THAN 12 INCHES OF VERTICAL ADJUSTMENT MAY BE MADE USING THE MINIMUM PRACTICAL NUMBER OF INDIVIDUAL RINGS.

ALL RINGS SHALL BE HIGH DENSITY POLYETHYLENE PLASTIC (HDPE), RECYCLED RUBBER, HIGH DENSITY EXPANDING POLYSTYRENE, EXPANDED POLYPROPYLENE (EPP), OR OTHER MATERIAL AS APPROVED BY THE CITY ENGINEER. PRECAST CONCRETE RINGS, BRICKS, ROCKS, SHIMS, OR CONCRETE BLOCKS WILL NOT BE ALLOWED. TAPERED ADJUSTING RINGS SHALL BE REQUIRED WHEN THE FRAME WILL NEED TO MATCH THE SLOPE OF THE ROADWAY.

A RESILIENT, FLEXIBLE, NON-HARDENING, PREFORMED BITUMINOUS MASTIC MATERIAL, CONSEAL 102 B OR APPROVED EQUAL, SHALL BE USED BETWEEN THE CONE OR TOP BARREL SECTION OF THE STRUCTURE AND THE ADJUSTING RINGS. A THICK BEAD OF NON-HARDENING ELASTOMERIC JOINT SEALANT CONFORMING TO ASTM C-920, TYPE S, GRADE NS, SHALL BE APPLIED BETWEEN ALL INDIVIDUAL RINGS, AND BETWEEN THE ADJUSTING RINGS AND THE FRAME. THE SEALANT OR MASTIC MATERIAL SHALL BE APPLIED IN SUCH A MANNER THAT NO SURFACE WATER OR GROUND WATER INFLOW CAN ENTER THE STRUCTURE.

ALL STORM SEWER STRUCTURE FRAMES WITHOUT INSIDE FLANGES SHALL BE SHAPED WITH HYDRAULIC CEMENT OR ELASTOMERIC JOINT SEALANT TO FORM A FILLET TO THE STRUCTURE OR ADJUSTING RINGS AND TO MAINTAIN WATER-TIGHTNESS. FRAME ADJUSTMENTS SHALL BE COMPLETED IN ACCORDANCE WITH SECTIONS 602 AND 603 OF STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, PREPARED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION, EXCEPT AS NOTED HEREIN.

EROSION CONTROL AND DRAINAGE NOTES (GENERAL)

- 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.

EROSION CONTROL AND DRAINAGE NOTES (PROJECT SPECIFIC)

- 1. 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.
2. ACCEPTABLE PERIMETER EROSION CONTROL INCLUDES SILT FENCE, SILT WORM AND ANY OTHER APPLICATION APPROVED BY THE CITY ENGINEER.
3. ALL OPEN GRATE STRUCTURES SHALL HAVE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS. INLET BASKETS ARE THE PREFERRED METHOD; STRAW BALES SHALL NOT BE USED.
4. STOCKPILES NOT BEING DISTURBED FOR MORE THAN 14 DAYS SHALL BE SEEDED.
5. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY, AFTER ANY 0.5 INCH RAINFALL, OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN THEIR FUNCTION.
6. IT IS THE RESPONSIBILITY OF THE OWNER OR HIS DESIGNEE TO INSPECT ALL TEMPORARY EROSION CONTROL MEASURES PER THE REQUIREMENTS OF THE NPDES PERMIT AND CORRECT ANY DEFICIENCIES AS NEEDED.

GEOMETRIC AND PAVING NOTES (GENERAL)

- 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 AT AN IMPROPER EDGE, THEN THE EXISTING SIDE MUST BE RE-CUT SQUARE AND DONE OVER UNTIL IT IS CORRECT.

TRAFFIC CONTROL AND PROTECTION NOTES (GENERAL)

- 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.
5. A MINIMUM 72 HOUR NOTICE IS REQUIRED FOR TRAFFIC CONTROL THAT REDUCES THE WIDTH OF A TRAVEL LANE LESS THAN 12 FEET OR CLOSURE OF A LANE. LATELY APPROVED BY THE CITY ENGINEER WILL BE REQUIRED PRIOR TO THE IMPLEMENTATION OF SUCH TRAFFIC CONTROL LAYOUT.
6. LANE CLOSURES ON ARTERIAL ROADWAYS WITHIN THE CITY OF NAPERVILLE ARE NOT PERMITTED BETWEEN THE HOURS OF 6AM-9AM AND 3PM-7PM MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. LANE CLOSURES ON ARTERIAL STREETS ARE PERMITTED BETWEEN 7AM AND 7PM ON WEEKENDS, UNLESS OTHERWISE PERMITTED BY THE CITY ENGINEER. ARTERIAL ROADWAYS ARE DEFINED AS BOTH MAJOR AND MINOR ARTERIAL ROADWAYS AS DESIGNATED ON THE CITY'S MASTER THOROUGHFARE PLAN, LATEST EDITION.
7. ANY WORK THAT IMPACTS A TRAFFIC LANE ON AN ARTERIAL ROADWAY REQUIRES AN ARROWBOARD AS PART OF THE TRAFFIC CONTROL.
8. AT THE END OF EACH DAY OF WORK, THE ROADWAY MUST BE COMPLETELY REOPENED TO TRAFFIC. ANY OPEN HOLES MUST BE PLATED OR COLD PATCHED; THE CITY WILL NOT ALLOW THE HOLES TO BE FILLED WITH GRAVEL.

DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC GENERAL NOTES

- 1. 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.
2. PLEASE PROVIDE NAME AND CONTACT INFORMATION FOR ELECTRICAL CONTRACTOR FOR THIS PROJECT.
3. DPU-E WILL PROVIDE, INSTALL, AND MAINTAIN THE TRANSFORMERS, ALL PRIMARY (15KV) CABLE AND CONDUIT, AND THE METERS AND INSTRUMENT TRANSFORMERS. DPU-E WILL ALSO MAKE THE FINAL CONNECTIONS IN THE TRANSFORMERS ONCE THE INSPECTION IS COMPLETE AND THE BUILDING IS READY TO BE ENERGIZED.
4. 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.
5. 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.
6. 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.
7. 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 DPU-E SPECIFICATIONS C10-2130 AND C30-0016.
8. 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.
9. 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.
10. LABEL ALL METER SOCKETS WITH THE COMPLETE ADDRESS IN 1" LETTERS USING PERMANENT STICKERS. IN MULTIPLE METER BANKS, THE COMPLETE ADDRESS MAY BE ON THE DISCONNECT SWITCH AND THE SUITE NUMBERS ON THE METER SOCKETS. THE ELECTRICAL SERVICE EQUIPMENT WILL NOT PASS INSPECTION WITHOUT APPROPRIATE ADDRESS LABELING.
11. 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.
12. A CUSTOMER'S GROUNDING CONDUCTOR SHALL NOT BE CONNECTED TO DPU-E DISTRIBUTION EQUIPMENT.
13. DPU-E WILL INSTALL AND ENERGIZE ALL METERS IN A MULTIPLE METER BANK AT ONE TIME, PROVIDED ALL METER SOCKETS PASS INSPECTION. IN THE EVENT OF AN INCOMPLETE INSTALLATION, ONLY THE INSPECTED AND APPROVED EQUIPMENT SHALL BE ENERGIZED AND A METER INSTALLED. INDIVIDUAL TENANT PERMITS WILL BE REQUIRED FOR INSTALLATION OF THE OTHER METERS IN THE METER BANK.
14. DUE TO SUPPLY CHAIN ISSUES DPU-E IS EXPERIENCING LONG LEAD TIMES (+400 DAYS) ON TRANSFORMERS. PLEASE TAKE THIS INTO CONSIDERATION WHEN PLANNING CONSTRUCTION.

REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/10/2025	REVISION PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 01/10/2025

1230 East Diehl Road  
Suite 200  
Naperville, IL 60563  
Ph: 630.963.6026  
www.cecinco.com



REDSTART CONSTRUCTION, INC.  
BAUER ROAD DUPLEXES  
27W240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

SITE SPECIFICATIONS - 3

DATE:	DRAWN BY:	ET
OCTOBER 21, 2025	MAJ	
DWG SCALE:	NOT TO SCALE	CHECKED BY:
		347-703
PROJECT NO.:	APPROVED BY:	J/C

DRAWING NO. C003  
SHEET 4 OF 12

A:\140-0001\1472-7001-C003\DWG\1472-7001-C003.dwg (PLOT) - FNAL - EXTERNALS\1472-7001-C003.dwg (PLOT) LS(1/25/2025) - RPN(2025) - LP: 1/25/2025 1:03 PM



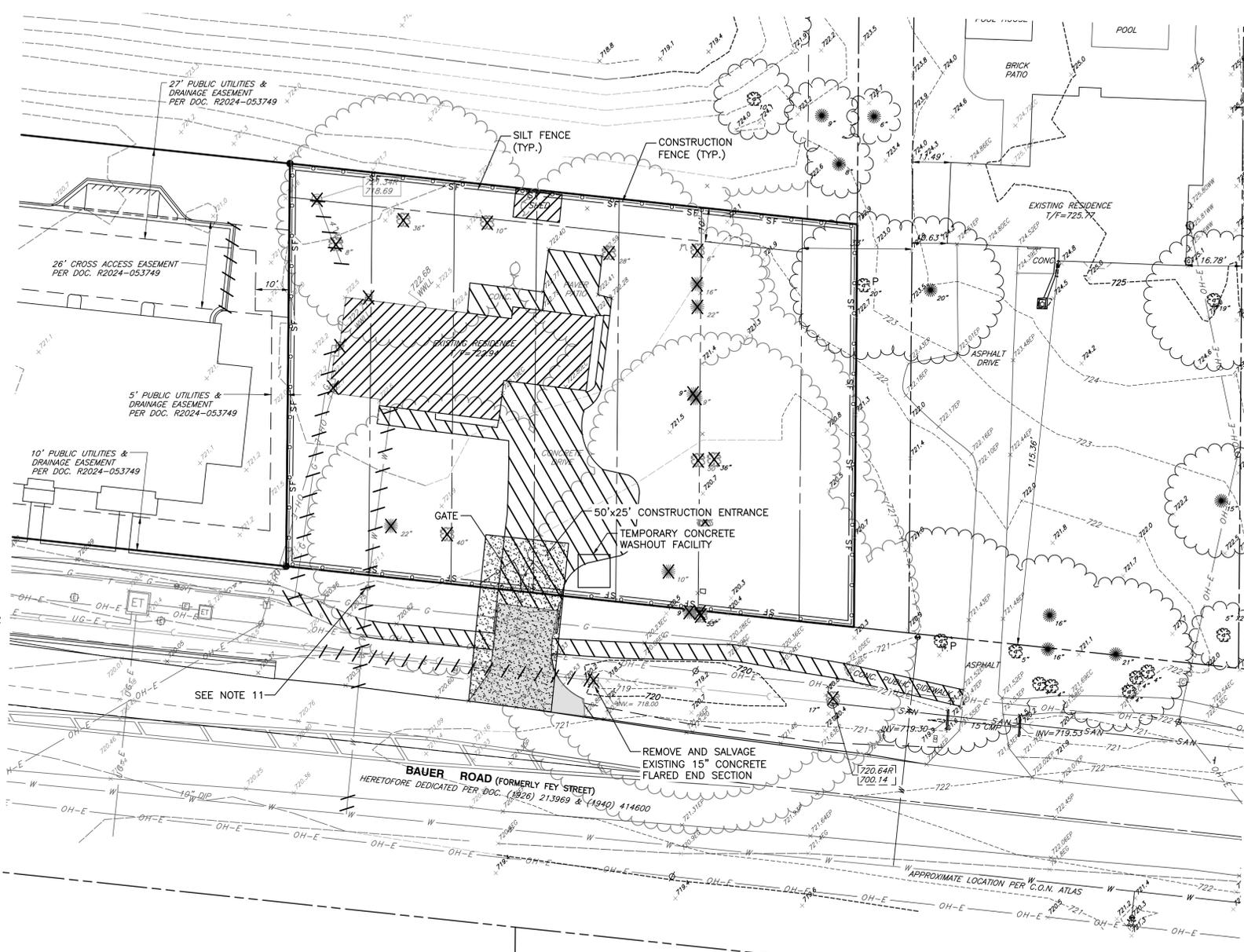


### DEMOLITION LEGEND

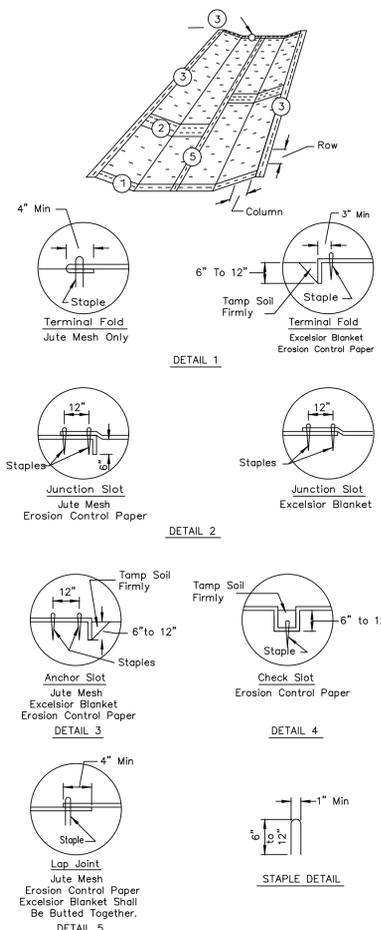
- BITUMINOUS PAVEMENT REMOVAL
- INDICATES CONCRETE ITEM, RETAINING/STONE WALL OR UTILITY SERVICE TO BE REMOVED
- BUILDING TO BE REMOVED
- INDICATES NON-CONCRETE ITEM, STRUCTURE, OR TREE TO BE REMOVED
- TREES TO BE PROTECTED WITH FENCING
- SILT FENCE
- CONSTRUCTION FENCE (CHAIN LINK)

### DEMOLITION NOTES:

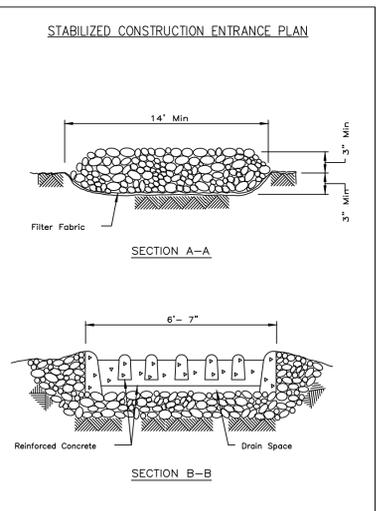
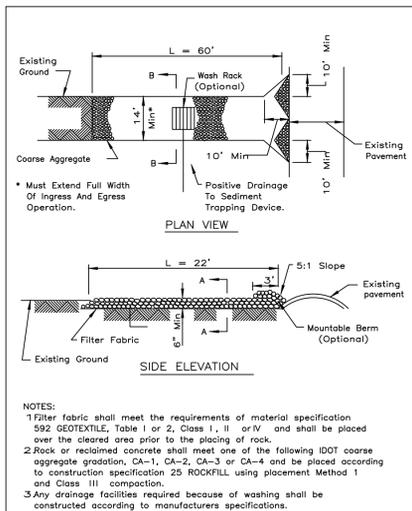
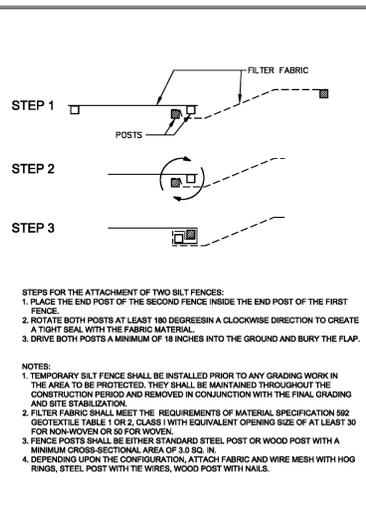
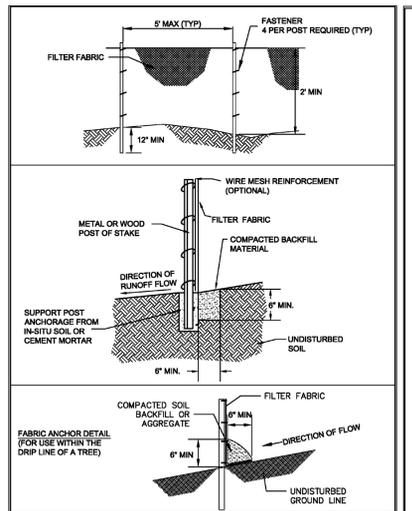
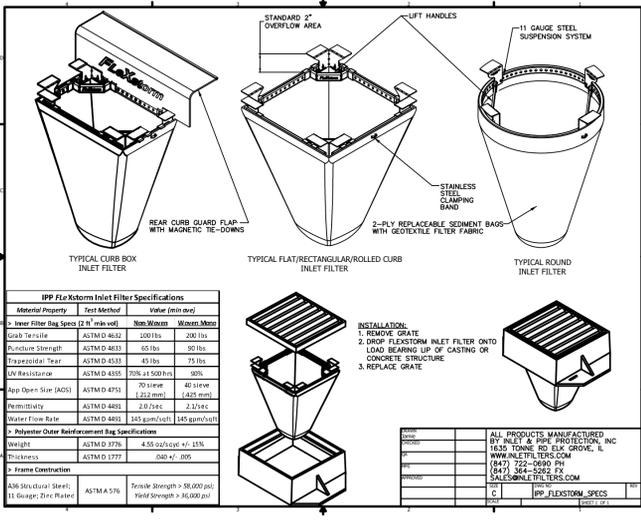
- ALL PAVEMENTS, UTILITIES, TREES, ETC. WITHIN THE SUBJECT PROPERTY SHALL BE COMPLETELY REMOVED. REMOVAL ITEMS SHOWN OUTSIDE OF THE PROPERTY LIMITS ARE APPROXIMATE AND MAY OR MAY NOT CONSTITUTE ALL WORK NECESSARY TO CONSTRUCT THE PROJECT. REMOVAL OF PUBLIC SIDEWALKS, ROADWAYS, DRIVEWAYS, CURB & GUTTER, PUBLIC UTILITIES, ETC., SHALL BE STAGED BY THE CONTRACTOR WITH CONCURRENCE FROM THE OWNER, ENGINEER, AND THE CITY OF NAPERVILLE STAFF.
- TRENCHES, WITHIN PROPOSED PAVED OR BUILDING PAD AREAS, RESULTING FROM THE REMOVAL OF EXISTING UTILITIES SHALL BE BACKFILLED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ART. 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- ALL EXISTING PAVEMENT WITHIN THE CONSTRUCTION LIMITS, INCLUDING BITUMINOUS PAVEMENT, DRIVEWAYS, CONCRETE SLABS, AND SIDEWALKS SHALL BE COMPLETELY REMOVED. AGGREGATE MATERIALS APPROVED AS SUITABLE FILL BY THE SOILS ENGINEER SHALL BE SET ASIDE FOR FUTURE PLACEMENT.
- ALL TREES, LANDSCAPE MATERIALS AND BRUSH WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED. TREE STUMPS AND/OR ROOT BALLS SHALL BE COMPLETELY REMOVED. TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO FINALIZING HIS BID FOR TREE REMOVAL.
- EXISTING UTILITY LOCATIONS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLANS OR NOT. THIS SHALL INCLUDE PRIVATE SERVICES AS WELL.
- ALL DEBRIS FROM DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF BY LEGAL MEANS.
- ALL WORK SHALL BE DONE IN GENERAL ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS CONTAINED IN THE MUNICIPAL "SOIL EROSION AND SEDIMENTATION CONTROL" ORDINANCE. THE CONTRACTOR SHALL INSTALL THE NECESSARY EROSION AND SEDIMENTATION CONTROL DEVICES THAT WILL PROTECT THE EXISTING STORM SEWERS, PUBLIC ROADWAYS, AND ADJACENT PROPERTIES FROM SEDIMENT THAT MAY ARISE FROM THE PROPOSED DEMOLITION AND/OR CONSTRUCTION. DEVICES SHALL INCLUDE SILT FENCE, FILTER BASKETS INSERTED INTO DRAINAGE STRUCTURES, CONSTRUCTION ENTRANCE, PAVEMENT CLEANING, ETC. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- DURING Dewatering operations, water will be pumped into sediment basins or silt traps. CONCRETE TRUCKS SHALL NOT BE PERMITTED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON SITE. SPECIFIC AREAS FOR THIS ACTIVITY SHALL BE DESIGNATED BY THE CONTRACTOR AND PROVIDED WITH ADEQUATE SILTATION BASINS AND OTHER FACILITIES TO ASSURE THAT DISCHARGE IS CONTAINED AND CLEANSSED BEFORE ENTERING THE RECEIVING STORM SEWER SYSTEM.
- ALL ADJACENT STREETS SHOULD BE KEPT CLEAR OF MUD/DEBRIS. THE CONTRACTOR SHALL INSPECT THE STREETS DAILY AND CLEAN THEM AS NECESSARY.
- A TEMPORARY CHAINLINK CONSTRUCTION FENCE AND GATE ARE SHOWN AT THE PROPOSED CONSTRUCTION ENTRANCE. THE FENCE WILL BE REMOVED AND REPLACED AS REQUIRED TO ALLOW FOR UTILITY INSTALLATIONS, ROADWAY WORK, ETC. DURING WORKING HOURS BUT SHALL BE REINSTALLED AT THE END OF EACH DAY TO PROVIDE A SECURE CONSTRUCTION SITE.
- THE EXISTING B-BOX SHALL BE REMOVED. SHUT OFF SERVICE AT THE MAIN AND ABANDON PER CITY REQUIREMENTS.
- EXISTING SEPTIC SYSTEM/SEPTIC FIELD (NOT SHOWN) SHALL BE ABANDONED IN ACCORDANCE WITH DUPAGE COUNTY HEALTH DEPARTMENT REGULATIONS WITH DOCUMENTATION PROVIDED TO THE CITY OF NAPERVILLE.
- FOR COMPLETE SPECIFICATIONS FOR SEDIMENT CONTROL AND SITE RESTORATION MEASURES, SEE SHEET 3.



### EROSION BLANKET PLAN



- NOTES:
- On erosion control paper, check slots in ditch channel shall be spaced so that one occurs within each 50' on slopes of more than 4% and less than 6%. On slopes of 6% or more, they shall be spaced so that one occurs within each 25'.
  - Staples are to be placed alternately in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4' x 225' roll of material and 125 staples are required per 4' x 150' roll of material.
  - Erosion control material shall be placed loosely over ground surface. Do not stretch.
  - All terminal ends and transverse laps shall be stapled at approximately 12' intervals.



- ### REFERENCE
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  - FIELD DATUM: ILLINOIS STATE PLANE NRS 2011, EAST ZONE - US SURVEY FOOT CITY OF NAPERVILLE DATUM NAVD 88.
  - UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON FIELD OBSERVATIONS, ATLAS MAPS PROVIDED BY THE CITY OF NAPERVILLE AND THOSE PUBLIC UTILITY COMPANIES OPERATING UNDER FRANCHISE OR CONTRACT WITH THE CITY OF NAPERVILLE.

City of Naperville  
**STANDARD DETAIL**  
 TEMPORARY EROSION CONTROL MEASURE - SILT FENCE  
 REVISION: 01/01/2013  
 SHEET 1 OF 2  
**790.03**

City of Naperville  
**STANDARD DETAIL**  
 TEMPORARY EROSION CONTROL MEASURE - SILT FENCE  
 REVISION: 01/01/2013  
 SHEET 2 OF 2  
**790.03**

NO.	DATE	DESCRIPTION
1	01/10/2025	REVISION PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 01/10/2025

1230 East Diehl Road  
 Suite 200  
 Naperville, IL 60563  
 Ph: 630.963.6026  
 www.cecinco.com

**Civil & Environmental Consultants, Inc.**

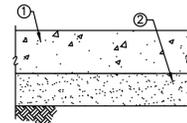
**REDSTART CONSTRUCTION, INC.**  
**BAUER ROAD DUPLEXES**  
**27W240 BAUER ROAD**  
**NAPERVILLE, ILLINOIS 60563**

**POLLUTION & PREVENTION PLAN**

DATE: OCTOBER 21, 2025  
 DRAWN BY: [Signature]  
 PROJECT NO: 347-703  
 DWG SCALE: 1" = 20'  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]

DRAWING NO: **C101**

SHEET 6 OF 12



**SIDWALK**  
 4" PORTLAND CEMENT CONCRETE, CLASS SI (BAUER ROAD)  
 5" PORTLAND CEMENT CONCRETE, CLASS SI (PRIVATE)  
 2" COMPACTED CA-6 AGGREGATE BASE COURSE (BAUER ROAD)  
 4" COMPACTED CA-6 AGGREGATE BASE COURSE (PRIVATE)



**CONCRETE PAVEMENT (NTS)**

1 1/2" HOT MIX ASPHALT SURFACE COURSE, IL-9.5  
 (0.40 X 1.5 = 0.60)  
 2 1/4" (MINIMUM) HOT MIX ASPHALT BINDER COURSE IL-19.0  
 (0.33 X 2.25 = 0.74)  
 PRIME AGGREGATE @ 0.25 GAL/SY

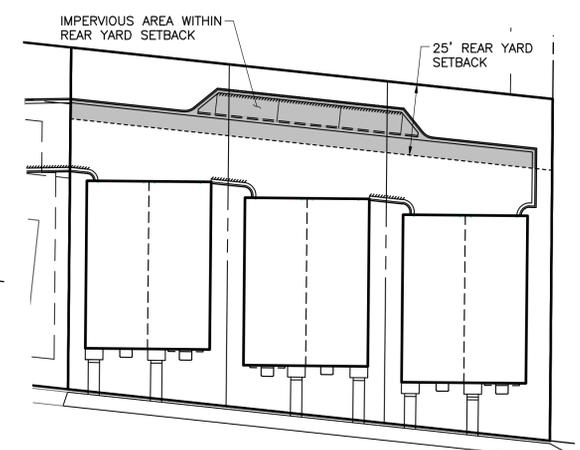
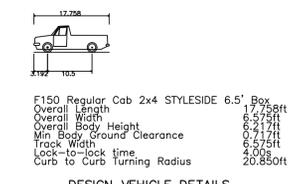
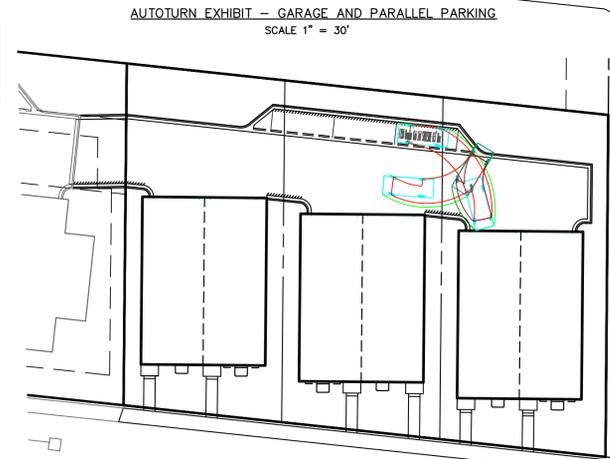
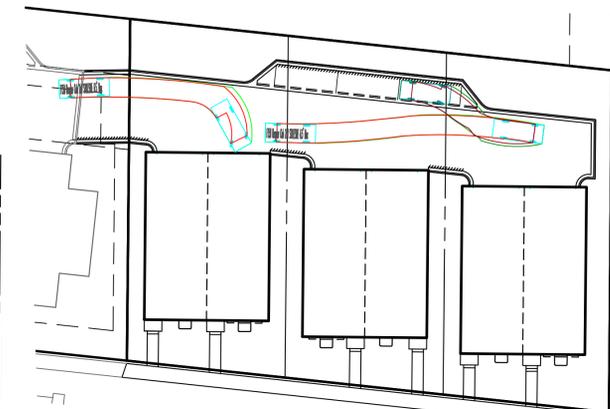
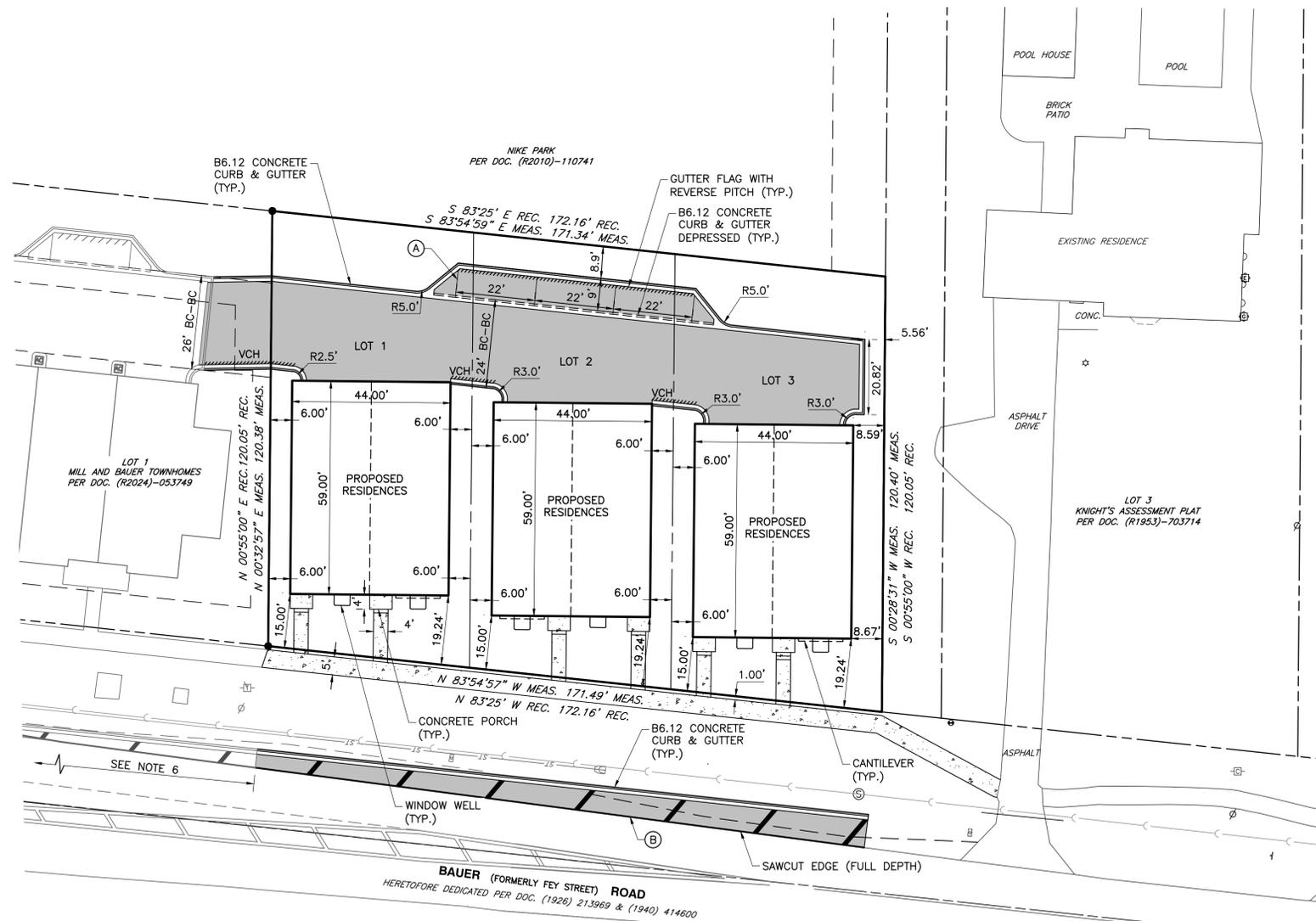
10" AGGREGATE BASE COURSE TYPE B (CA-6)  
 (0.13 X 10 = 1.30)  
 COMPACTED SUBGRADE (95% STANDARD PROCTOR DENSITY)

STRUCTURAL NUMBER = 0.60 + 0.74 + 1.30 = 2.64  
**ASPHALT PAVEMENT (PRIVATE ROAD)**  
 (NTS)

2" HOT MIX ASPHALT SURFACE COURSE, IL-9.5  
 (0.40 X 2 = 0.80)  
 5" (2 LIFTS) HOT MIX ASPHALT BINDER COURSE IL-19.0  
 (0.33 X 5 = 1.65)  
 PRIME AGGREGATE @ 0.25 GAL/SY

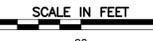
12" AGGREGATE BASE COURSE TYPE B (CA-6)  
 (0.13 X 12 = 1.56)  
 COMPACTED SUBGRADE (95% STANDARD PROCTOR DENSITY)

STRUCTURAL NUMBER = 0.80 + 1.65 + 1.56 = 4.01  
**ASPHALT PAVEMENT (BAUER ROAD)**  
 (NTS)



**REAR YARD COVERAGE NOTE:**

TOTAL REAR YARD AREA: 4,284 SQ. FT.  
 IMPERVIOUS AREA WITHIN REAR YARD SETBACK: 1,864 SQ. FT.  
 TOTAL PERCENTAGE COVERED: 43.5%



**YARD REQUIREMENTS NOTES**

- SECTION 6-2-3.3.1: IN ALL REQUIRED YARDS, EXCEPT INTERIOR SIDE YARDS, THE ORDINARY PROJECTION OF SILLS, BELT COURSES, CORNICES, CANTILEVERED BAY WINDOWS, BUTTRESSES, CHIMNEYS, ORNAMENTAL FEATURES, AND EAVES MAY EXTEND THREE (3) FEET INTO THE REQUIRED YARD EXCEPT AS PROVIDED IN SUBSECTION 6-2-3.3.1.1. IN ALL REQUIRED INTERIOR SIDE YARDS, THE ORDINARY PROJECTION OF SILLS, BELT COURSES, CORNICES, CHIMNEYS, AND EAVES MAY EXTEND THREE (3) FEET INTO THE REQUIRED SIDE YARD AND CANTILEVERED BAY WINDOWS MAY EXTEND ONE FOOT INTO THE REQUIRED SIDE YARD. STEPS OR SIDEWALKS WHICH PROVIDE ACCESS TO A BUILDING OR STRUCTURE OR ACCESS TO A LOT FROM A STREET OR ALLEY MAY BE LOCATED IN ANY REQUIRED YARD.
- SECTION 3.1.1.NO OBSTRUCTION PERMITTED BY THIS SUBSECTION 6-2-3.3 SHALL BE INSTALLED SO THAT ANY PORTION IS ABOVE, ACROSS, UNDER OR OVER A FIVE-FOOT INTERIOR SIDE YARD DRAINAGE OR UTILITY EASEMENT FROM GROUND LEVEL TO THE SKY.
- SECTION 3.1.2.CANTILEVERED BAY WINDOWS AS PERMITTED IN THIS SECTION SHALL INCLUDE PROJECTING WINDOWS WITH ANY NUMBER OF SIDES, PROVIDED THAT (A) FOR EACH STORY OF EACH BUILDING ELEVATION, THE TOTAL COMBINED WIDTH OF ALL CANTILEVERED BAY WINDOWS SHALL NOT EXCEED THIRTY PERCENT (30%) OF THAT ELEVATION'S FACADE LENGTH; AND (B) THE PREDOMINANT MATERIAL OF THE CANTILEVERED BAY WINDOW IS WINDOW GLASS.

**REFERENCE**

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**DIMENSION NOTES**

- UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TO THE BACK OF CURB, FACE OF BUILDING, EDGE OF SIDEWALK OR PROPERTY LINE.
- FOR PROPOSED BUILDING DIMENSIONS SEE ARCHITECTURAL PLANS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND SHALL BE AS FOLLOWS:  
 (A) PARKING SPACES - 4" SOLID YELLOW  
 (B) EDGE LINE - 4" SOLID, WHITE WITH 12" SOLID WHITE (20" C-C) AT 45'
- 'VCH' INDICATES B6.12 CONCRETE CURB AND GUTTER WITH VARIABLE CURB HEIGHT. THE CONTRACTOR SHALL REVIEW THE PROPOSED GRADING PLAN AND TAKE NOTE WHERE PROPOSED CURB VARIES IN HEIGHT.
- TRASH/RECYCLE CONTAINERS SHALL BE PLACED ADJACENT TO THE GARAGE DOOR SOUTH OF THE 24' DRIVE AISLE. THE TRASH/RECYCLE CONTAINERS SHALL NOT BE PLACED IN GRASS AREA ON THE NORTH SIDE OF THE DRIVE AISLE.
- SCRUB EXISTING 12" SOLID WHITE LINES AT 45' AND RESTRIPE AS SHOWN.

**SITE DATA**

GROSS BOUNDARY AREA	=	20,540 SQUARE FEET (0.472 ACRES)
NUMBER OF LOTS	=	3
CURRENT ZONING	=	R3 (SINGLE-FAMILY RESIDENCE DISTRICT, DUPAGE COUNTY)
PROPOSED ZONING	=	TU (TRANSITIONAL USE DISTRICT)
PROPOSED SETBACKS:	REQUIRED (TU)	PROPOSED
FRONT YARD (SOUTH)	= 15 FEET	15 AND VARIES TO 19.24 FEET
INTERIOR SIDE YARD (EAST & WEST)	= 6 FEET	6, 8.59 AND 8.67 FEET
REAR YARD (NORTH)	= 25 FEET	41.86 AND VARIES TO 46.10 FEET
BUILDING AREA:	=	7,788 SQUARE FEET
NUMBER OF RESIDENTIAL UNITS:	=	6
PARKING PROVIDED:		
6 UNITS X 2 SPACES/UNIT (IN GARAGE)	=	12 SPACES
VISITOR	=	3 SPACES
TOTAL	=	15 SPACES

**REVISION RECORD**

NO.	DATE	DESCRIPTION
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**C&E**  
 Civil & Environmental  
 Consultants, Inc.

**REDSTART CONSTRUCTION, INC.**  
 BAUER ROAD DUPLEXES  
 27W240 BAUER ROAD  
 NAPERVILLE, ILLINOIS 60563

**DIMENSIONS PLAN**

DATE: OCTOBER 21, 2025 | DRAWN BY: [Signature]  
 DWG SCALE: 1" = 20' | CHECKED BY: [Signature]  
 PROJECT NO: 347-703  
 APPROVED BY: [Signature]

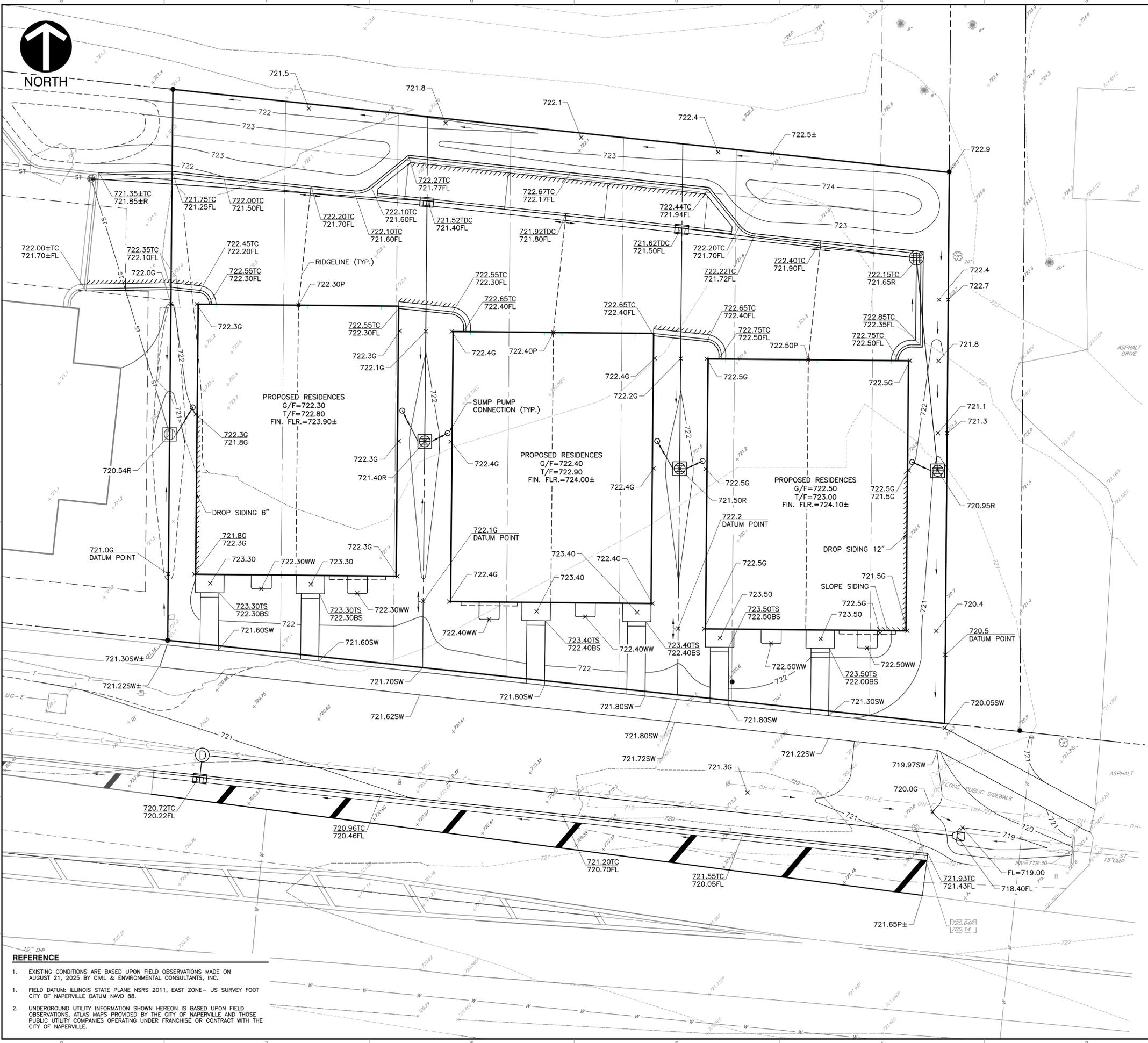
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SHEET 7 OF 12

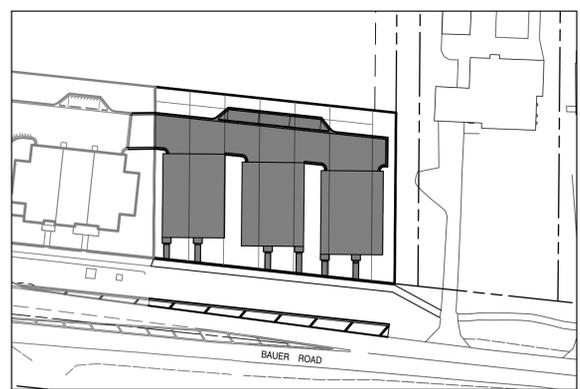
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NORTH



EXISTING PERVIOUS/IMPERVIOUS CONDITIONS  
1"=60'



PROPOSED PERVIOUS/IMPERVIOUS CONDITIONS  
1"=60'

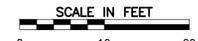
PERVIOUS/IMPERVIOUS CALCULATIONS			
	IMPERVIOUS AREA	PERVIOUS AREA	PROJECT AREA
EXISTING	4,788 S.F.	15,752 S.F.	20,540 S.F.
PROPOSED	13,178 S.F.	7,362 S.F.	
NET INCREASE.	8,390 S.F.		

DUE TO GROUNDWATER PROHIBITION FOR THE SURROUNDING PROPERTIES, A FEE IN LIEU WILL BE PROVIDED INSTEAD OF A POST CONSTRUCTION BEST MANAGEMENT PRACTICE.

**GRADING NOTES:**

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATION IN THE ILLINOIS URBAN MANUAL, LATEST EDITION.
- ALL GRADES DEPICTED ARE FINISHED GRADES. IN NON-PAVED AREAS, THE CONTRACTOR SHALL SUBTRACT 6 INCHES (0.5 FEET) TO ALLOW FOR TOPSOIL/MULCH MATERIAL PLACEMENT. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE SIX (6) INCHES BELOW THE FINISHED FLOOR ELEVATION.
- PROPOSED SIDEWALK SHALL HAVE CROSS SLOPE OF 1% MINIMUM AND 2% MAXIMUM.
- DRAINAGE SWALES HAVE BEEN DESIGNED WITH A 2% MINIMUM LONGITUDINAL SLOPE.
- ALL SUMP PUMP DISCHARGE SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM.
- THE CONTRACTOR SHALL REVIEW THE PROPOSED GRADING PLAN AND TAKE NOTE WHERE PROPOSED CURB VARIES IN HEIGHT.

- REFERENCE**
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SCALE IN FEET

REVISION RECORD	
NO.	DATE
1	01/10/2025

REVISION RECORD

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Ph: 630.963.6026  
www.cecinc.com

Civil & Environmental Consultants, Inc.

**REDSTART CONSTRUCTION, INC.**  
**BAUER ROAD DUPLEXES**  
**27W240 BAUER ROAD**  
**NAPERVILLE, ILLINOIS 60563**

**GRADING PLAN**

DATE: OCTOBER 21, 2025 | DRAWN BY: ET  
 DWG SCALE: 1" = 10' | CHECKED BY: MAJ  
 PROJECT NO: 347-703  
 APPROVED BY: JJC

DRAWING NO: **C300**

SHEET 8 OF 12

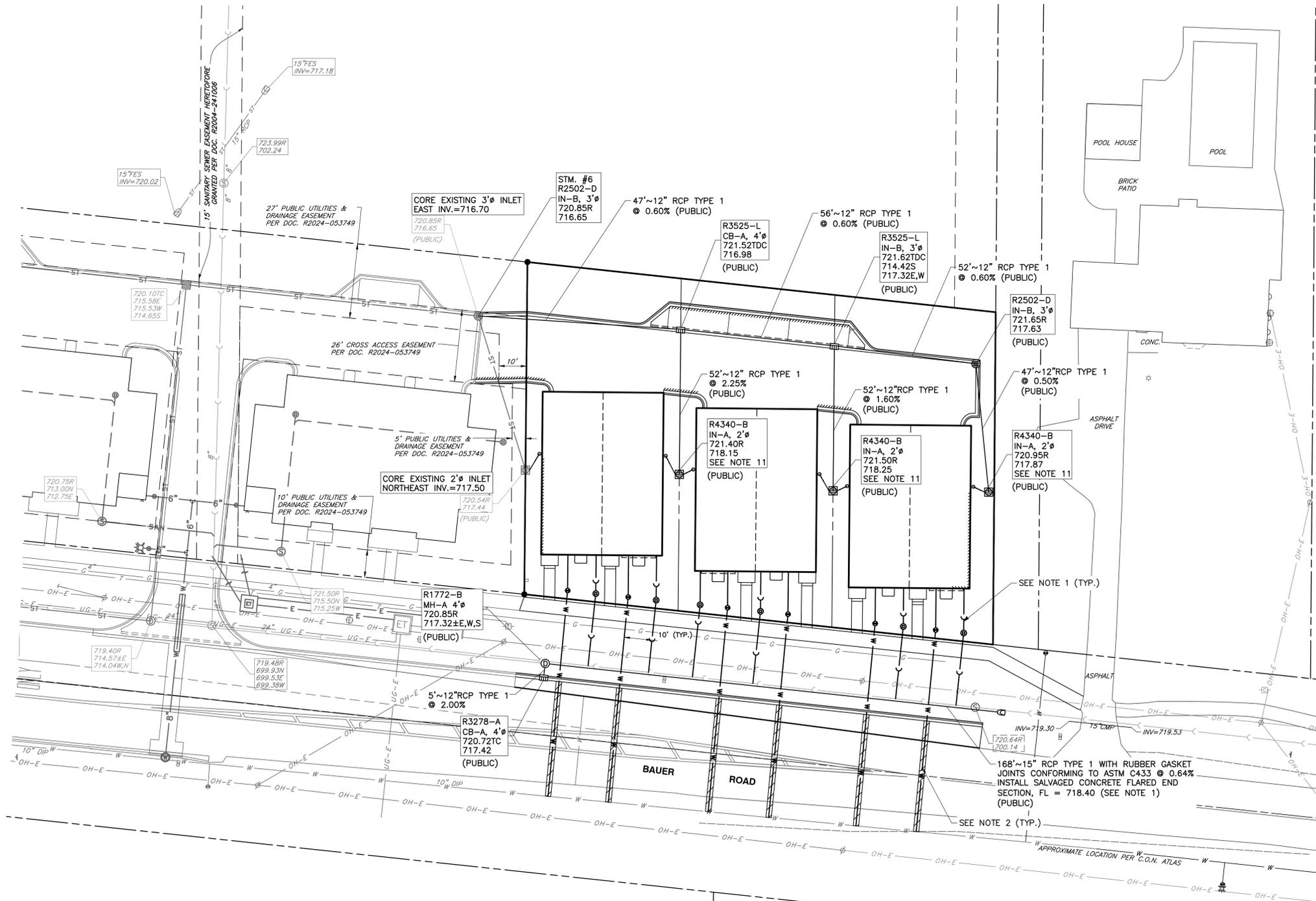
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NORTH

UTILITY NOTES:

1. THE PROPOSED SANITARY SEWER SERVICES SHALL BE 6-INCH DIAMETER, PVC SDR 26 ASTM D2241 @ 2.00% MINIMUM. THE SERVICE SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 5 FEET AND SHALL INCLUDE A CLEAN OUT AND RISER INTO THE EXISTING 8-INCH SANITARY SEWER. THE SERVICES SHALL BE INSTALLED BELOW ALL EXISTING UTILITIES TO AVOID POTENTIAL CONFLICT. THE CONTRACTOR SHALL NOTE THAT THE EXISTING SANITARY SEWER IS 20± FEET DEEP AND THAT THE EXISTING 15-INCH STORM SEWER WILL BE REMOVED AND REPLACED TO FACILITATE THE RISER CONNECTION. EACH DUPLEX UNIT SHALL INCLUDE AN OVERHEAD SANITARY SEWER AND EJECTOR PIT. CONNECTION TO THE EXISTING SANITARY SEWER SHALL BE DONE WITH A CORE AND SERVICE SADDLE, INSERT A TEE, OR BY CUTTING IN A TEE OR WYE.
2. THE PROPOSED WATER SERVICE SHALL BE 1 1/2 INCH DIAMETER, TYPE "K" COPPER WITH B.BOX AND CORPORATION STOP IN ACCORDANCE WITH CITY REQUIREMENTS. THE SERVICES SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 5 FEET AND SHALL BE INSTALLED BELOW THE PROPOSED 15-INCH STORM SEWER (18-INCH MINIMUM VERTICAL SEPARATION), BELOW EXISTING GAS MAIN, AND ABOVE THE EXISTING 24-INCH SANITARY SEWER TO AVOID POTENTIAL CONFLICT. THE SERVICES SHALL BE PUSHED BENEATH BAUER ROAD WITH A 5 FOOT CLEARANCE NORTH AND SOUTH OF THE EXISTING EDGE OF PAVEMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING WATERMAIN TO INSURE AMPLE ROOM TO MAKE THE CONNECTION WITHOUT PAVEMENT REMOVAL. EXCAVATIONS SHALL BE BACKFILLED WITH COMPACTED AGGREGATE (CA-6) AND THE GRAVEL SHOULDER RESTORED TO ITS ORIGINAL CONDITION.
3. THE CONTRACTOR SHALL PROVIDE INLET FILTER BASKETS BENEATH ALL OPEN LID STRUCTURES TO MINIMIZE INTRUSION OF DEBRIS/SILT INTO THE STORM SEWER SYSTEM.
4. UPON COMPLETION OF THE UTILITY INSTALLATIONS, THE PUBLIC RIGHT OF WAY SHALL BE RESTORED TO ITS ORIGINAL CONDITION. THIS SHALL INCLUDE BUT NOT BE LIMITED TO 6 INCH TOPSOIL PLACEMENT, HYDROSEED, AGGREGATE SHOULDER REMOVAL AND REPLACEMENT, SIDEWALK REMOVAL AND REPLACEMENT, AND LANDSCAPING REMOVAL AND REPLACEMENT.
5. ALL CASTINGS SHALL BE SHOP PAINTED WITH ASPHALTIC BASE PAINT.
6. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN INSTALLING PROPOSED INFRASTRUCTURE NEAR THE OVERHEAD UTILITIES LOCATED IN THE NORTH PARKWAY OF BAUER ROAD.
7. A CONCRETE WASHOUT AREA SHOULD BE PROVIDED ON-SITE. CONCRETE CANNOT BE WASHED OUT INTO THE PUBLIC RIGHT-OF-WAY OR STORM SEWER SYSTEM.
8. EXISTING AND PROPOSED STORM SEWER STRUCTURES MUST BE PROTECTED FROM DEBRIS AND SEDIMENT DURING CONSTRUCTION WITH FLEX STORM/INLET FILTERS.
9. ANY OPEN EXCAVATIONS, OR POTENTIALLY DANGEROUS AREAS SHALL BE FENCED OR GUARDED IN AN ACCEPTABLE MANNER AT THE END OF EACH DAY FOR THE PROTECTION OF THE CONTRACTOR'S EMPLOYEES AND GENERAL PUBLIC SAFETY.
10. CONTRACTOR SHALL ENSURE ADJACENT ROADS REMAIN CLEAR AND FREE OF CONSTRUCTION DEBRIS AT ALL TIMES.
11. WHERE SUMP PUMP CONNECTIONS ARE TO CONNECT TO PROPOSED DRAINAGE STRUCTURES, A 6" PVC SDR 35 STUB SHALL BE CAST INTO THE STRUCTURE AT A MINIMUM DEPTH OF 3 FEET (RIM-INVERT). PROVIDE WATERTIGHT PLUG AND STUB.



REFERENCE

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REVISION RECORD

NO.	DATE	DESCRIPTION
1	01/19/2025	REVISED PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 01/12/2025

1230 East Diehl Road  
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**REDSTART CONSTRUCTION, INC.**  
BAUER ROAD DUPLEXES  
27W240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

UTILITY PLAN

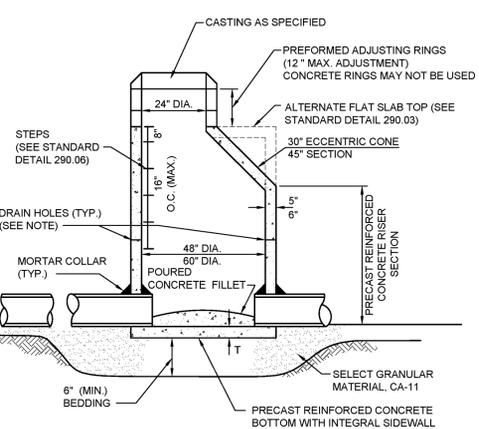
DATE:	OCTOBER 21, 2025	DRAWN BY:	ET
DWG SCALE:	1" = 20'	CHECKED BY:	MAJ
PROJECT NO.:	347-703	APPROVED BY:	JJGC

DRAWING NO. **C400**  
SHEET 9 OF 12

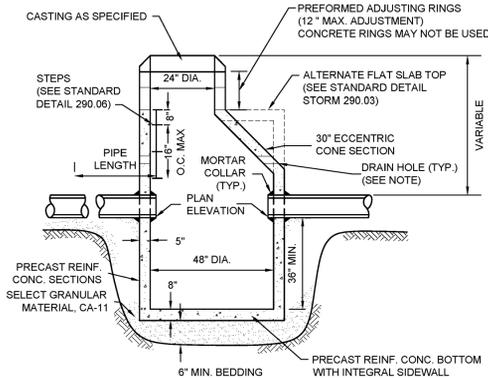


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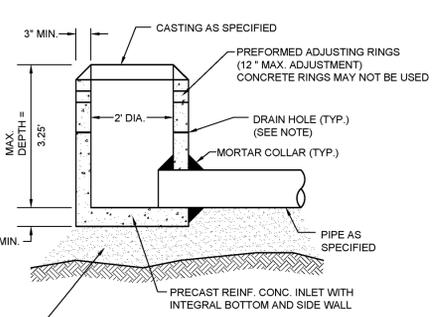
WHEN MANHOLE DEPTH IS 12 FT OR LESS T = 8 INCHES  
WHEN MANHOLE DEPTH IS OVER 12 FT, T = 10 INCHES



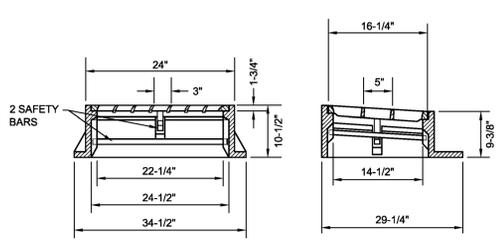
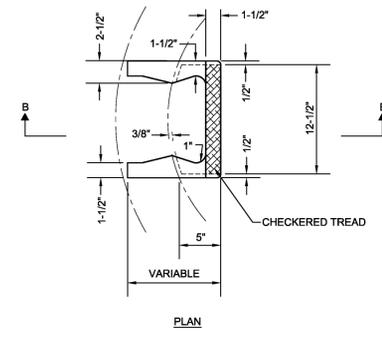
**NOTE:**  
A MINIMUM OF 4 PRECAST OR DRILLED 1" DIAMETER HOLES SHALL BE PROVIDED WITHIN 1' OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1' BY 1' SQUARE OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE FIXED OVER EACH DRAIN HOLE ON THE OUTSIDE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



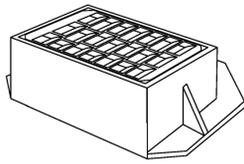
**NOTE:**  
A MINIMUM OF 4 PRECAST OR DRILLED 1" DIAMETER HOLES SHALL BE PROVIDED WITHIN 1' OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1' BY 1' SQUARE OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE FIXED OVER EACH DRAIN HOLE ON THE OUTSIDE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



**NOTE:**  
IN PAVED AREAS 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.



**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".



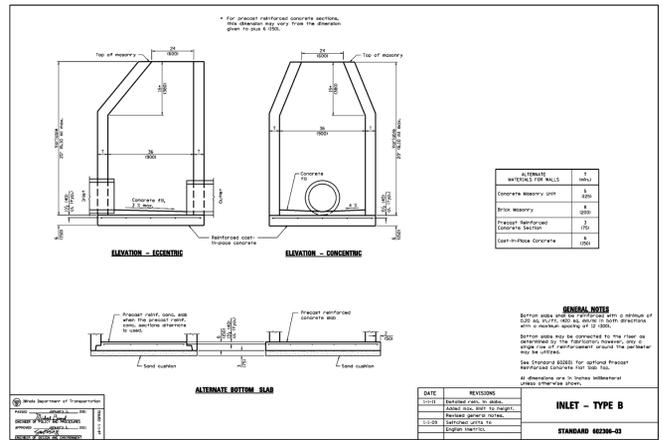
City of Naperville  
**STANDARD DETAIL**  
STORM MANHOLE - TYPE A  
REVISED: 08/01/2018 SHEET 1 OF 1  
**290.01**

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

City of Naperville  
**STANDARD DETAIL**  
INLET - TYPE A  
REVISED: 08/01/2018 SHEET 1 OF 1  
**290.05**

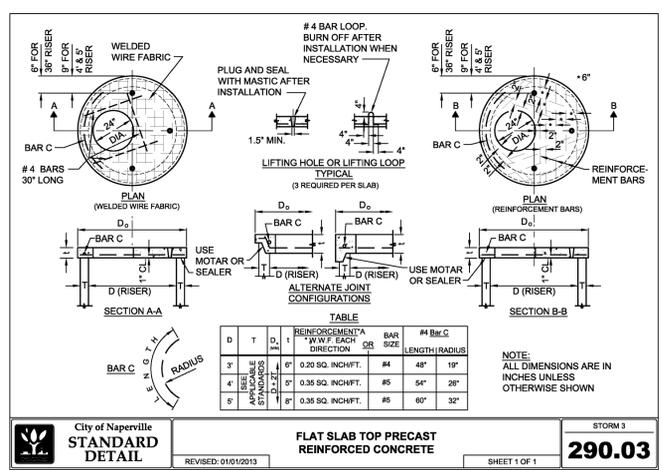
City of Naperville  
**STANDARD DETAIL**  
CAST IRON STEPS  
REVISED: 01/01/2013 SHEET 1 OF 1  
**290.06**

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



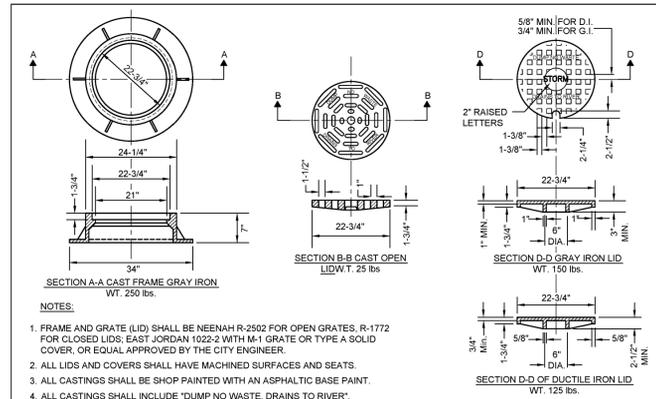
ALTERNATE BOTTOM SLAB	REVISION
Concrete Material	1
Reinforcement	2
Cast-in-place concrete	3

**GENERAL NOTES:**  
Bottom slab shall be cast in place with a minimum of 4" concrete thickness. The slab shall be cast in place with a minimum of 4" concrete thickness. The slab shall be cast in place with a minimum of 4" concrete thickness.



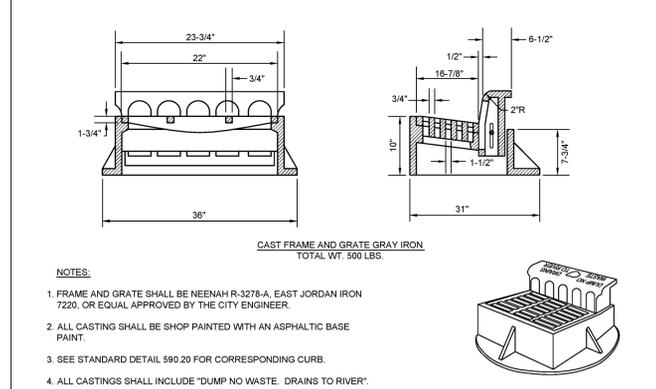
D	T	O	R	REINFORCEMENT	BAR	#4 BAR
3"	4"	6"	8"	0.20 SQ. INCH/FT.	#4	48"
4"	6"	8"	10"	0.35 SQ. INCH/FT.	#5	54"
6"	8"	10"	12"	0.35 SQ. INCH/FT.	#5	60"

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



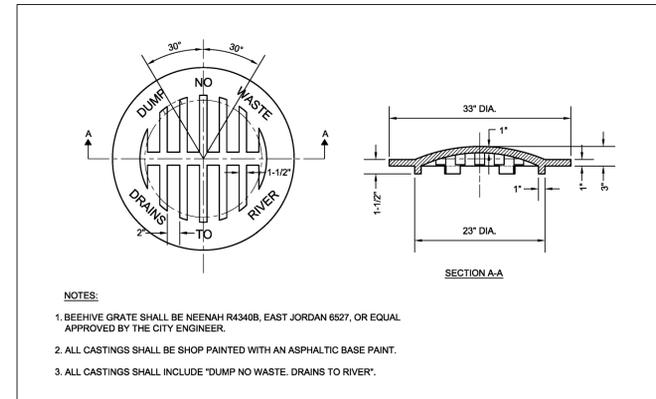
**NOTES:**  
1. FRAME AND GRATE (LID) SHALL BE NEENAH R-2502 FOR OPEN GRATES, R-1772 FOR CLOSED LIDS, EAST JORDAN 1022-2 WITH M-1 GRATE OR TYPE A SOLID COVER, OR EQUAL APPROVED BY THE CITY ENGINEER.  
2. ALL LIDS AND COVERS SHALL HAVE MACHINED SURFACES AND SEATS.  
3. ALL CASTINGS SHALL BE SHOP PAINTED 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  
REVISED: 05/15/2015 SHEET 1 OF 1  
**290.10**



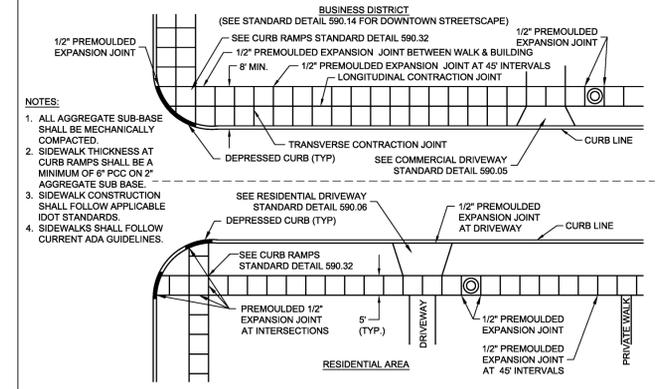
**NOTES:**  
1. FRAME AND GRATE SHALL BE NEENAH R-3278-A, EAST JORDAN IRON 7220, OR EQUAL APPROVED BY THE CITY ENGINEER.  
2. ALL CASTING SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.  
3. SEE STANDARD DETAIL 590.20 FOR CORRESPONDING CURB.  
4. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS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

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



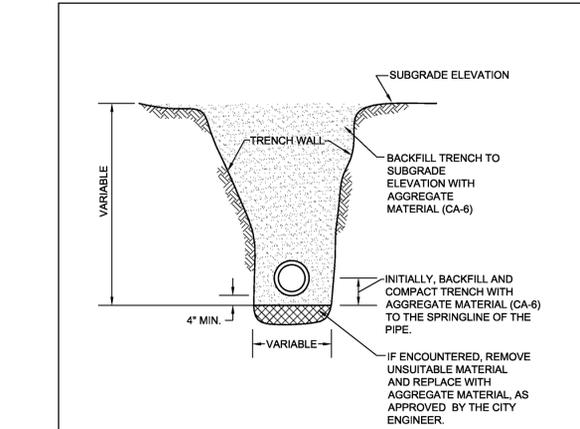
**NOTES:**  
1. BEEHIVE GRATE SHALL BE NEENAH R4340B, EAST JORDAN 6527, OR EQUAL APPROVED BY THE CITY ENGINEER.  
2. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE PAINT.  
3. ALL CASTINGS SHALL INCLUDE "DUMP NO WASTE. DRAINS TO RIVER".

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



**NOTES:**  
1. ALL AGGREGATE SUB-BASE SHALL BE MECHANICALLY COMPACTED.  
2. SIDEWALK THICKNESS AT CURB RAMPS SHALL BE A MINIMUM OF 6" FCC 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  
**590.31**



**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  
REVISED: 01/01/2013 SHEET 1 OF 1  
**290.20**

**REVISION RECORD**

NO.	DATE	DESCRIPTION
1	01/19/2009	REVISED PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 01/19/2009

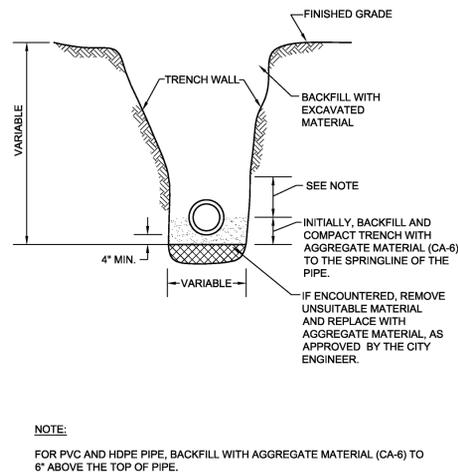
1230 East Diehl Road  
Suite 200  
Naperville, IL 60563  
Ph: 630.963.6026  
www.cecinco.com

**CECINCO**  
Civil & Environmental Consultants, Inc.

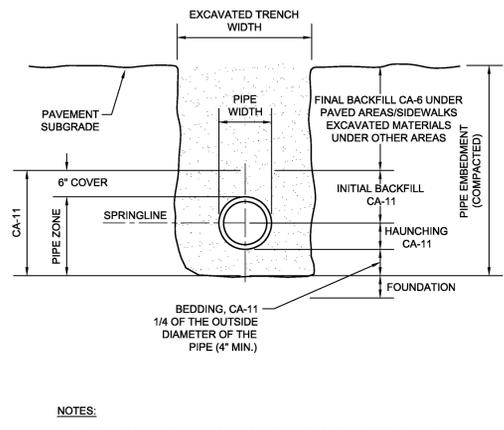
**REDSTART CONSTRUCTION, INC.**  
BAUER ROAD DUPLEXES  
27W240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

**DETAILS - 1**

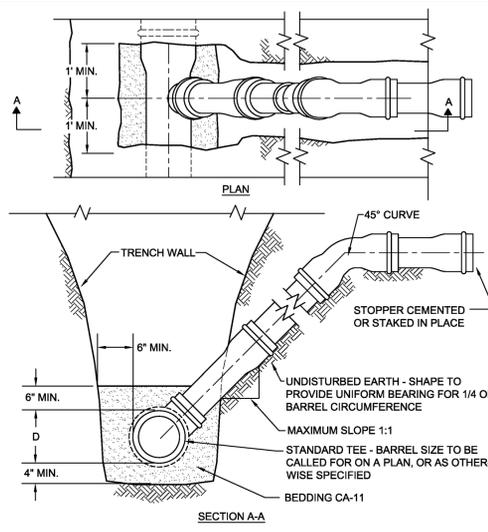
DATE: OCTOBER 21, 2025  
DRAWN BY: ET  
CHECKED BY: MAJ  
PROJECT NO: 347-703  
APPROVED BY: JJC



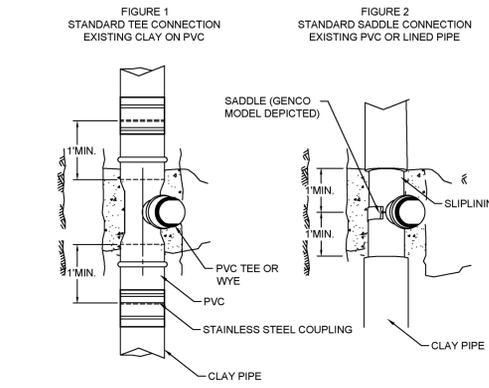
**NOTE:**  
FOR PVC AND HDPE PIPE, BACKFILL WITH AGGREGATE MATERIAL (CA-6) TO 6" ABOVE THE TOP OF PIPE.



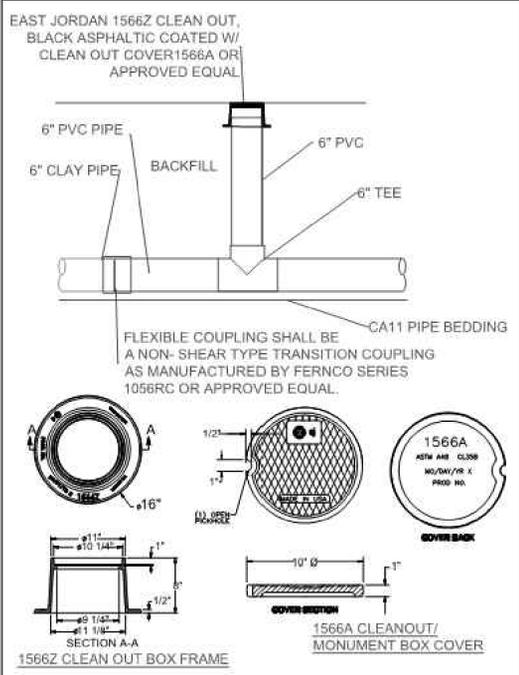
- NOTES:**
1. IN PAVED AREAS, ALL TRENCHES MUST BE COMPACTED IN CONFORMANCE WITH SECTION 550.07 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION.
  2. IF FOUNDATION IS UNSUITABLE TO BED PIPE, UNDERCUTS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.



- NOTES:**
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. GENCO 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.



- 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 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.



**STANDARD TEE CONNECTION**  
REVISOR: 08/01/2018 SHEET 1 OF 1 **390.21**

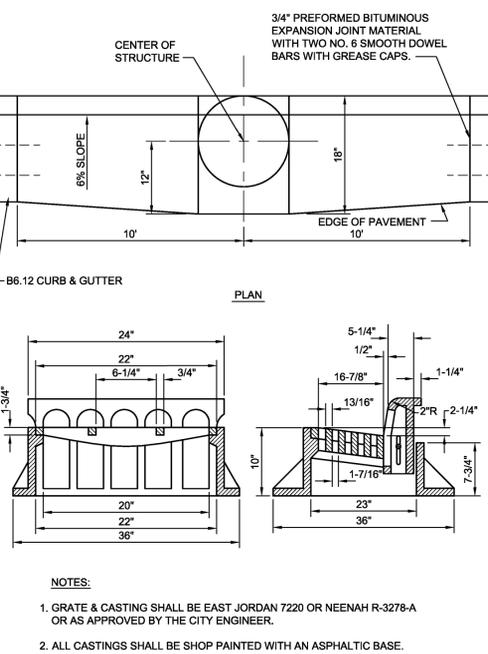
**City of Naperville STANDARD DETAIL**  
STORM SEWER TRENCH SECTION IN NON-PAVED AREAS  
REVISOR: 01/01/2013 SHEET 1 OF 1 **290.21**

**City of Naperville STANDARD DETAIL**  
TRENCH SECTION FOR PVC PIPE  
REVISOR: 01/01/2013 SHEET 1 OF 1 **390.10**

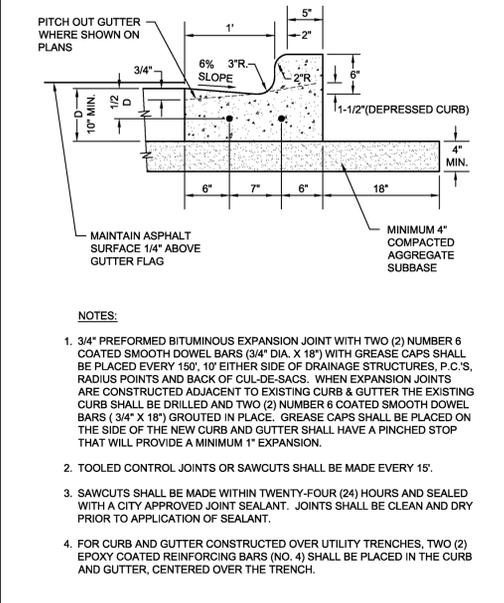
**City of Naperville STANDARD DETAIL**  
RISE FOR SERVICE LATERAL  
REVISOR: 01/01/2013 SHEET 1 OF 1 **390.20**

**City of Naperville STANDARD DETAIL**  
SANITARY SEWER SERVICE CONNECTION  
REVISOR: 08/01/2018 SHEET 1 OF 1 **390.21**

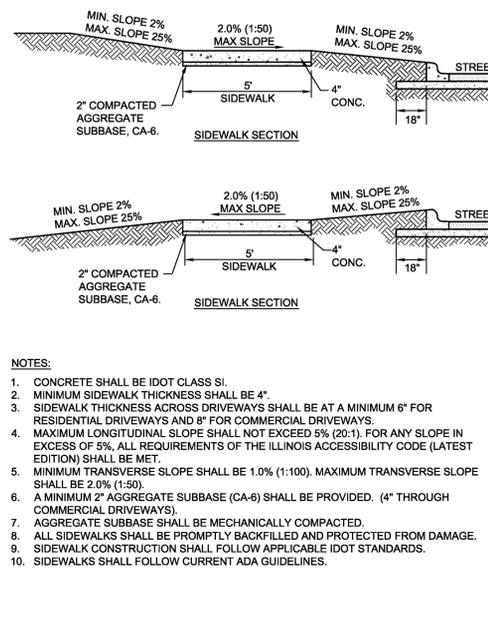
**City of Naperville STANDARD DETAIL**  
SANITARY SEWER CLEANOUT  
EFFECTIVE: 1/15/2020 SHEET 1 OF 1 **390.23**



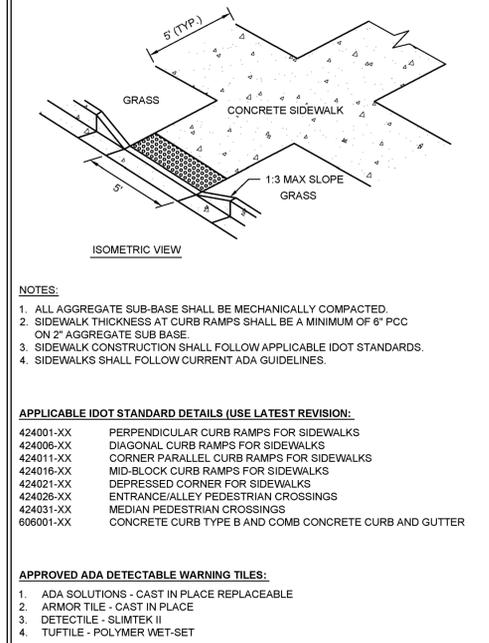
- NOTES:**
1. GRATE & CASTING SHALL BE EAST JORDAN 7220 OR NEENAH R-3278-A OR AS APPROVED BY THE CITY ENGINEER.
  2. ALL CASTINGS SHALL BE SHOP PAINTED WITH AN ASPHALTIC BASE.



- 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.



- NOTES:**
1. CONCRETE SHALL BE IDOT CLASS Sl.
  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.



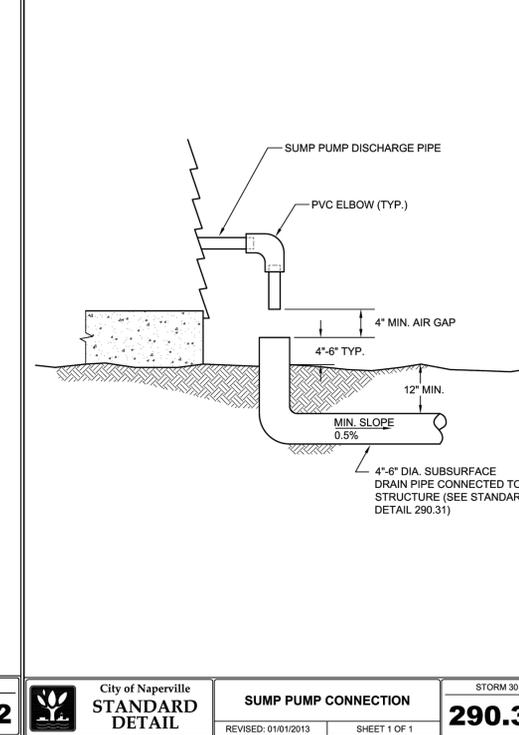
- NOTES:**
1. ALL AGGREGATE SUB-BASE SHALL BE MECHANICALLY COMPACTED.
  2. SIDEWALK THICKNESS AT CURB RAMPS SHALL BE A MINIMUM OF 6" PCC ON 2" AGGREGATE SUB BASE.
  3. SIDEWALK CONSTRUCTION SHALL FOLLOW APPLICABLE IDOT STANDARDS.
  4. SIDEWALKS SHALL FOLLOW CURRENT ADA GUIDELINES.
- APPLICABLE IDOT STANDARD 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                            |
| 686001-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. TUFFILE - POLYMER WET-SET

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

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

**City of Naperville STANDARD DETAIL**  
SIDEWALK  
REVISOR: 01/01/2013 SHEET 1 OF 1 **590.30**

**City of Naperville STANDARD DETAIL**  
CURB RAMPS  
REVISOR: 08/01/2018 SHEET 1 OF 1 **590.32**



**City of Naperville STANDARD DETAIL**  
SUMP PUMP CONNECTION  
REVISOR: 01/01/2013 SHEET 1 OF 1 **290.30**

NO.	DATE	DESCRIPTION
1	01/10/2009	REVISION PER CITY OF NAPERVILLE REVIEW COMMENTS DATED 12/12/2008

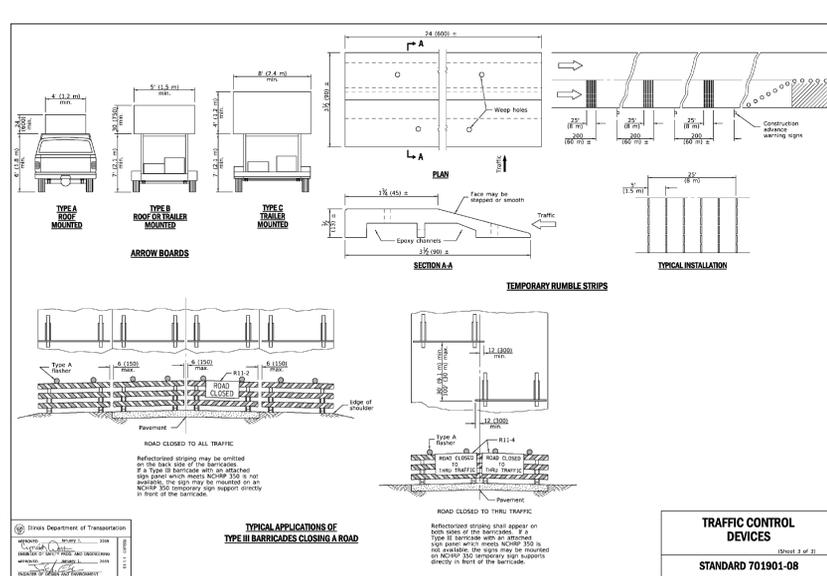
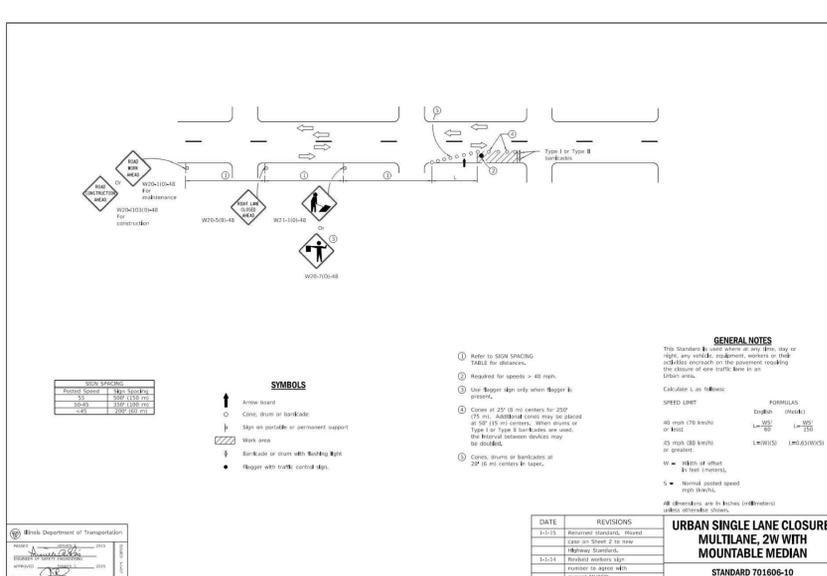
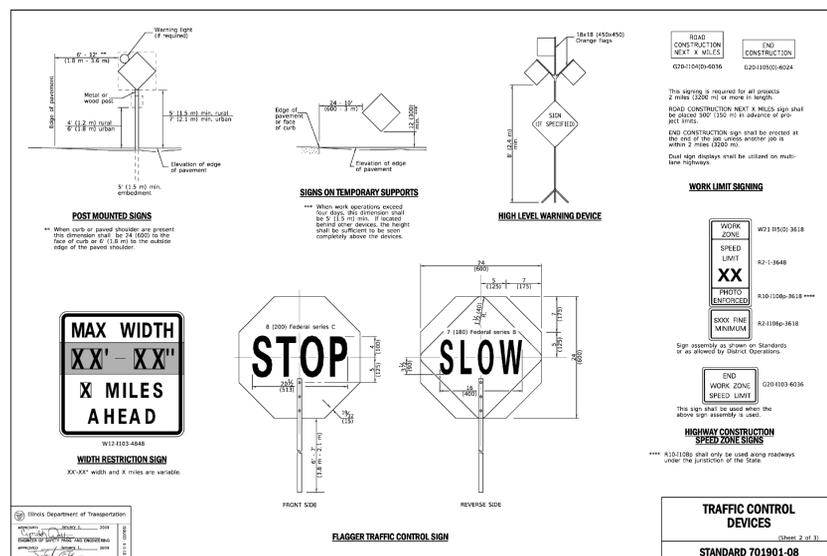
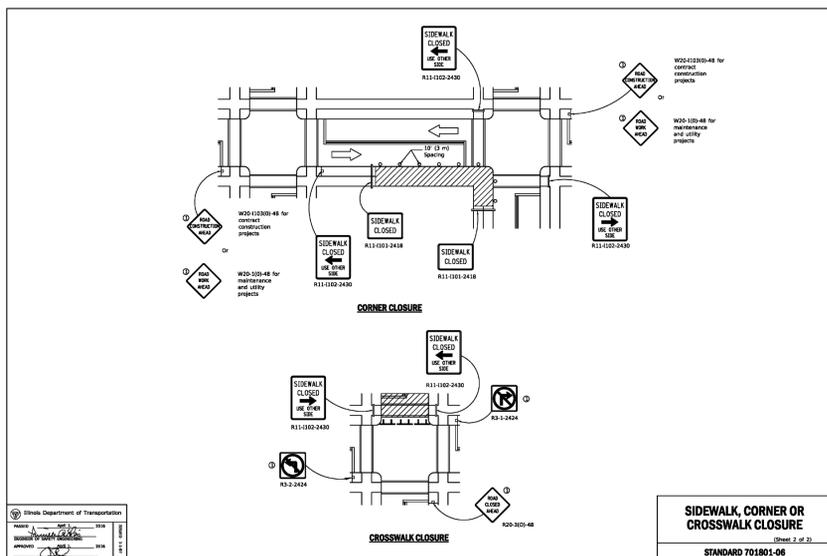
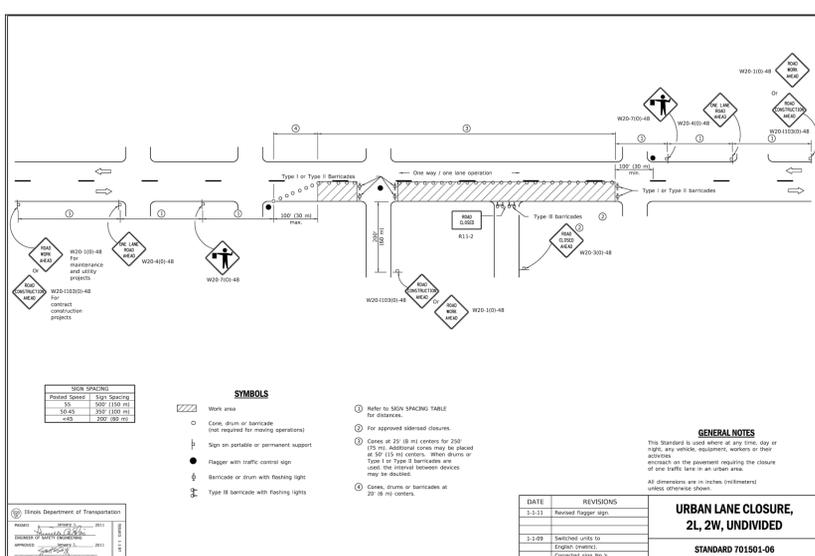
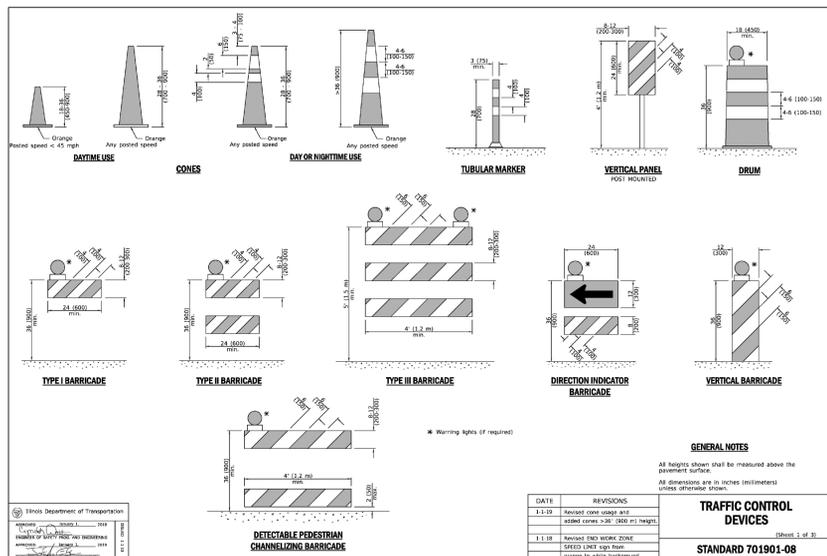
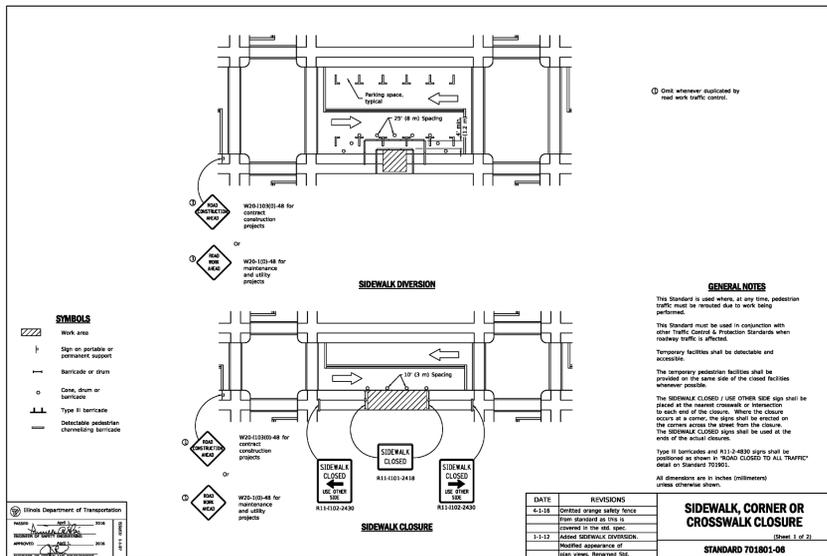
1230 East Diehl Road  
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www.cecinc.com

**CEC**  
Civil & Environmental Consultants, Inc.

**REDSTART CONSTRUCTION, INC.**  
BAUER ROAD DUPLEXES  
27W240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

**DETAILS - 2**

DATE: OCTOBER 21, 2025 [DRAWN BY: ET]  
DWG SCALE: NOT TO SCALE [CHECKED BY: MAJ]  
PROJECT NO: 347-703  
APPROVED BY: J/GC



**REVISION RECORD**

NO.	DATE	DESCRIPTION
1	01/19/2009	REVISED PER CITY OF NAPERVILLE COMMENTS DATED 12/12/2008

**1230 East Diehl Road**  
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**REDSTART CONSTRUCTION, INC.**  
BAUER ROAD DUPLEXES  
27W240 BAUER ROAD  
NAPERVILLE, ILLINOIS 60563

**DETAILS - 3**

DATE: OCTOBER 21, 2025 [DRAWN BY: ET]  
DWG SCALE: NOT TO SCALE [CHECKED BY: MAJ]  
PROJECT NO: 347-703  
APPROVED BY: JIGC

DRAWING NO: **C802**  
SHEET 12 OF 12

A:\100-0001\147-703-0000\DWG\1001-C802.dwg (10/21/2025 1:07 PM) - LP: 1/21/2025 1:07 PM - ENHANCEDWORKSPACE\147703-0001-C802.dwg (10/21/2025 1:07 PM) - emhahay