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June 16, 2025

#### **VIA: ELECTRONIC MAIL**

City of Franklin, Ohio Building & Zoning Division 1 Benjamin Franklin Way Franklin, OH 45005 Attn: Christina Barry, PE

RE: Final Development Plan (PC 25-60) and Preliminary Plat (PC 25-61) Applications – Shaker Farms

Applicant's Response to City's Engineering Review Letters dated May 13, 2025

#### Ms. Barry:

I am in receipt of your letters dated May 13, 2025 (collectively, the "Review Letters") containing the City of Franklin's (the "City") comments to Forestar (USA) Real Estate Development Group Inc.'s ("Applicant") initial Final Development Plan (the "FDP") and Preliminary Plat (the "Plat") applications. Applicant is providing this letter ("Forestar's Response") in order to address the comments made by the City in the Review Letters. Enclosed herewith, please find copies of the FDP and the Plat, which have been revised as indicated below.

For purposes of convenience, Forestar's Response will track and respond to the City's comments in the Review Letters in the order set forth therein:

#### PC 25-60: Final Development Plan – Shaker Farms, Phases 1, 2 & 3

- 1. The FDP and the Plat have been revised to match the City's Construction Standards and Specifications typical section for Local Roads.
- 2. The street sections and utility layouts have been revised in the FDP and the Plat to meet the City's Standard Construction Drawings and Specifications, aside from storm sewer, which remains primarily under the curb per Applicant's discussion with the City on May 28<sup>th</sup>, 2025.
- 3. Perimeter sidewalks around amenities and ponds are being constructed as shown on the FDP and the Plat.

#### PC 25-61: Preliminary Plat – Shaker Farms

- 1. The FDP and the Plat have been revised to reflect Applicant's suggested street names.
- 2. A homeowner's association will be formed to maintain all open land and recreational spaces associated with the development. Enclosed herewith please find a draft of the Declaration of Covenants, Conditions and Restrictions for the Shaker Farms Homeowner's Association. No fee in lieu of parkland dedication is necessary here, as Applicant is dedicating more than the requisite amount of open space as parkland to the City, as seen in the FDP and the Plat.
- 3. The width of all public rights-of-way in the development is 50', per Applicant's discussion with the City on May 28th, 2025.
- 4. Except as noted above, sanitary sewers, storm sewers, and watermains have been relocated to comply with the City's Standard Construction Drawings and Specifications.

Please do not hesitate to contact me if there are further questions on the above. My client and I look forward to working with the City on this exciting project.

Very truly yours,

Michael A. Huber Counsel for Forestar

MAH enclosures 61864652.1

#### cc: <u>VIA: ELECTRONIC MAIL</u>

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Jon Buchanan (jon.buchanan@cesoinc.com)

Justin Elam (justin.elam@cesoinc.com)

Charles E. Baverman III (charlie.baverman@dinsmore.com)

OWNER: MARY L. WERLINE, ETAL

5764 SHAKER RD. FRANKLIN OH 45005

SURVEY PROVIDED BY:

**ENGINEER:** CESO, INC. 3601 RIGBY ROAD 3601 RIGBY ROAD, SUITE 300 MIAMISBURG, OH 45342 MIAMISBURG, OH 45342 PHONE: (937) 435-8584 PHONE: (937) 435-8584 CONTACT: SEAN BROOKS, P.S. CONTACT: JUSTIN ELAM, P.E.

CONTRACTOR TO VERIFY EXISTING CONDITIONS PRIOR TO BID AND CONSTRUCTION.

**GOVERNING AGENCIES AND UTILITY COMPANIES:** 

WATER & SEWER: GAS SERVICE: CITY OF FRANKLIN DUKE ENERGY 1 BENJAMIN FRANKLIN WAY, 139 E 4TH ST, CINCINNATI, OH 45202 FRANKLIN, OH 45005 PHONE: (800) 544-6900 PHONE: (937) 746-9921

ZONING: CITY OF FRANKLIN

1 BENJAMIN FRANKLIN WAY, FRANKLIN, 1525 GENNTOWN DR A1, OH 45005 LEBANON; OH 45036 PHONE: (937) 746-9921 PHONE: (513) 228-2111

109.50 AC

DUKE ENERGY 139 E. 4TH ST, CINCINNATI, OH 45202 PHONE: (800) 544-6900

SPECTRUM 4352 YOUNGSTOWN RD SE WARREN, OH 44484 PHONE: (866) 874-2389

PHONE SERVICES:

SITE DATA:

TOTAL ACREAGE:

PHASE 1 AREA: SINGLE FAMILY LOTS: OPEN SPACE LOTS: OPEN SPACE AREA: 0.17 AC

SINGLE FAMILY LOTS: OPEN SPACE LOTS: OPEN SPACE AREA: 4.77 AC

6.10 AC SINGLE FAMILY LOTS: 38 OPEN SPACE LOTS: OPEN SPACE AREA:

**BUILDING SETBACKS**:

FRONT: 25' MIN/ SIDE: 5', 10' TOTAL 25' MIN.

# BENCHMARKS (NAD 83): 4

A- CHISELED X ON FIRE HYDRANT BOLT. HYDRANT LOCATED ON THE EAST EDGE OF PAVEMENT OF SHAKER ROAD NEAR THE NORTHWEST CORNER OF THE SITE.

ELEV = 818.59 B- SPIKE IN A TELEPHONE POLE. POLE LOCATED ON THE WEST EDGE OF PAVEMENT OF SHAKER ROAD AT THE SOUTHWEST CORNER OF THE INTERSECTION OF MANCHESTER ROAD AND SHAKER

C- SPIKE IN A TELEPHONE POLE. POLE LOCATED ON THE SOUTH EDGE OF PAVEMENT OF MANCHESTER ROAD.

ELEV=889.37 D- CHISELD X ON FIRE HYDRANT BOLT. HYDRANT LOCATED ON THE WEST EDGE OF PAVEMENT AND GRAVEL SPLIT. BETWEEN HOUSES #4982 & #4990 ON ACCESS ROAD OFF MANCHESTER

ELEV=863.92

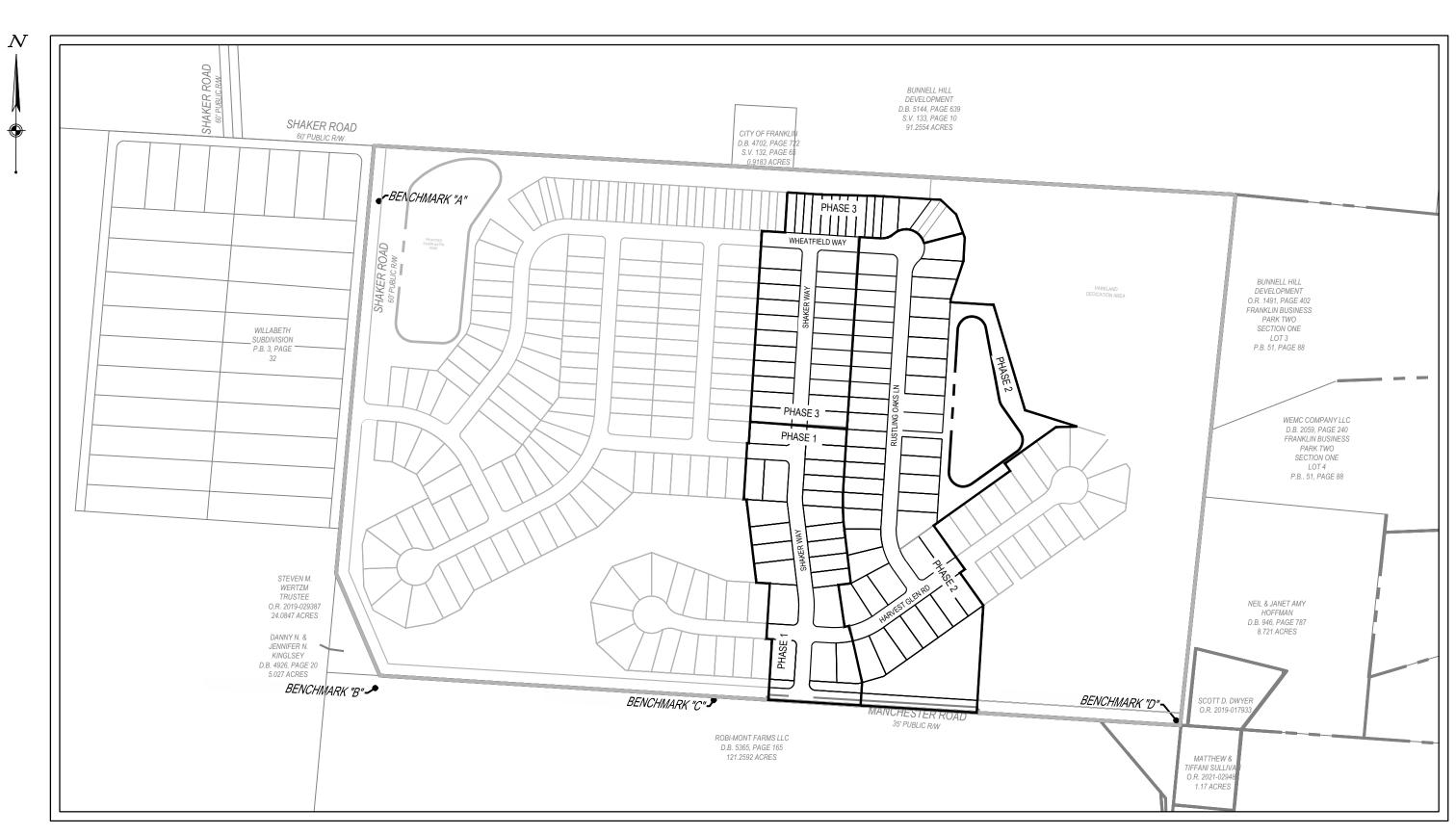


# SHAKER FARMS PHASES 1, 2 & 3

**JUNE 13 2025** 

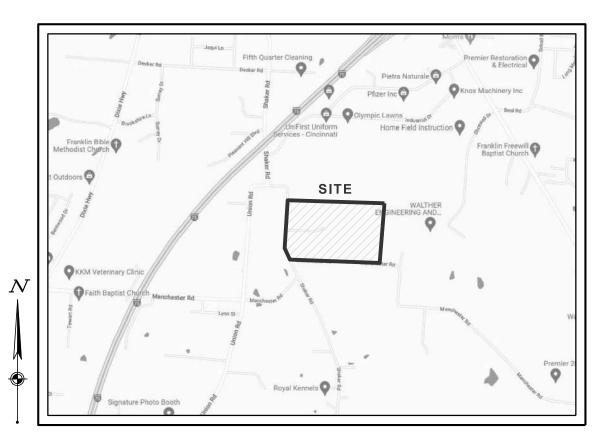
STATE OF OHIO, COUNTY OF WARREN, CITY OF FRANKLIN

SECTION 35, TOWN 3, RANGE 4 M.Rs.



INDEX MAP SCALE: 1"=300'

Sheet List Table

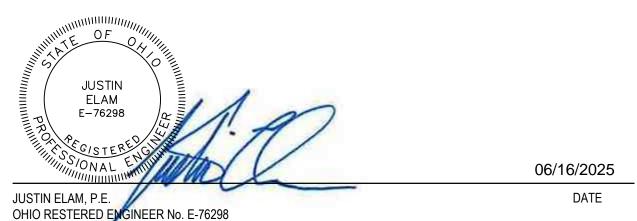




APPROVED BY:

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLAN

CITY OF FRANKLIN DATE



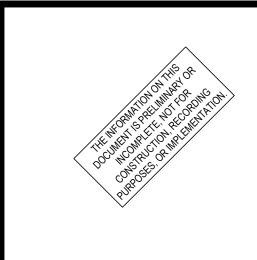
	I
Sheet Number	Sheet Title
1	COVER SHEET
2	DETAILS AND NOTES
3	DETAILS AND NOTES
4	DETAILS AND NOTES
5	DETAILS AND NOTES
6	EXISTING CONDITIONS & DEMO
7	EXISTING CONDITIONS & DEMO (2)
8	OVERALL UTILITY PLAN
9	UTILITY PLAN
10	UTILITY PLAN
11	UTILITY OFFSITE CONNECTION PLAN
12	HARVEST GLEN RD PLAN & PROFILE
13	SHAKER WAY PLAN & PROFILE
14	SHAKER WAY PLAN & PROFILE
15	RED BARN LANE PLAN & PROFILE
16	RUSTLING OAKS LN PLAN & PROFILE
17	RUSTLING OAKS LN PLAN & PROFILE
18	WHEATFIELD WAY PLAN & PROFILE
19	OFFSTREET PROFILES
20	OFFSTREET PROFILES
21	OFFSTREET PROFILES
22	OFFSTREET PROFILES
23	OFFSTREET PROFILES
24	OFFSTREET PROFILES
25	OFFSTREET PROFILES
26	OFFSTREET PROFILES
27	OFFSTREET PROFILES
28	GRADING & EROSION CONTROL PLAN - PH I
29	GRADING & EROSION CONTROL PLAN - PH I
30	GRADING & EROSION CONTROL PLAN - PH II
31	GRADING & EROSION CONTROL PLAN - PH II
32	BASIN DETAILS
33	SWPPP NOTES
34	SWPPP DETAILS
35	SWPPP DETAILS
36	LANDSCAPE PLAN
37	SIGNAGE DETAIL

PLANTING DETAILS AND NOTES



FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING AGENCIES: OHIO UTILITIES PROTECTION SERVICE AT 811 OR 800-362-2764 AND ALL OTHER AGENCIES WHICH MIGHT HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE UTILITIES PROTECTION SERVICE





# $\infty$

Revisions / Submissions

© 2025 CESO, INC. Project Number: AS SHOWN Drawn By: Checked By: JUNE 16, 2025

Issue: FINAL DEVELOPMENT PLAN Drawing Title:

Scale:

Date:

ID Description

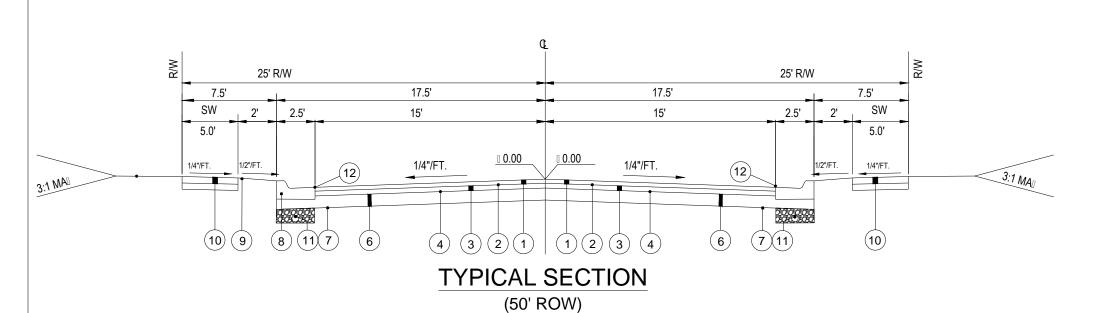
**COVER SHEET** 

#### **UTILITY DISCLAIMER:**

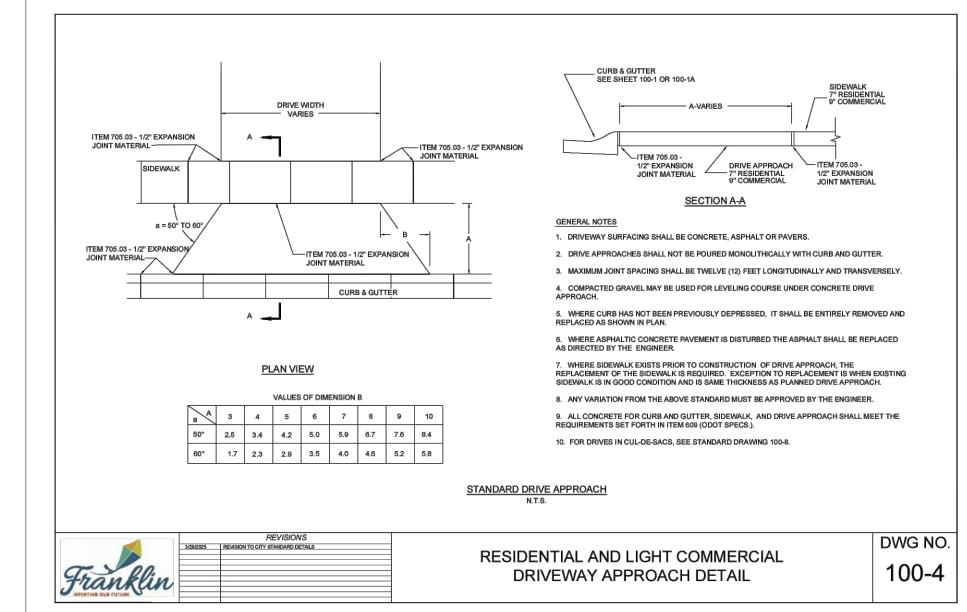
THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE OF DECEMBER 17, 2010 DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM

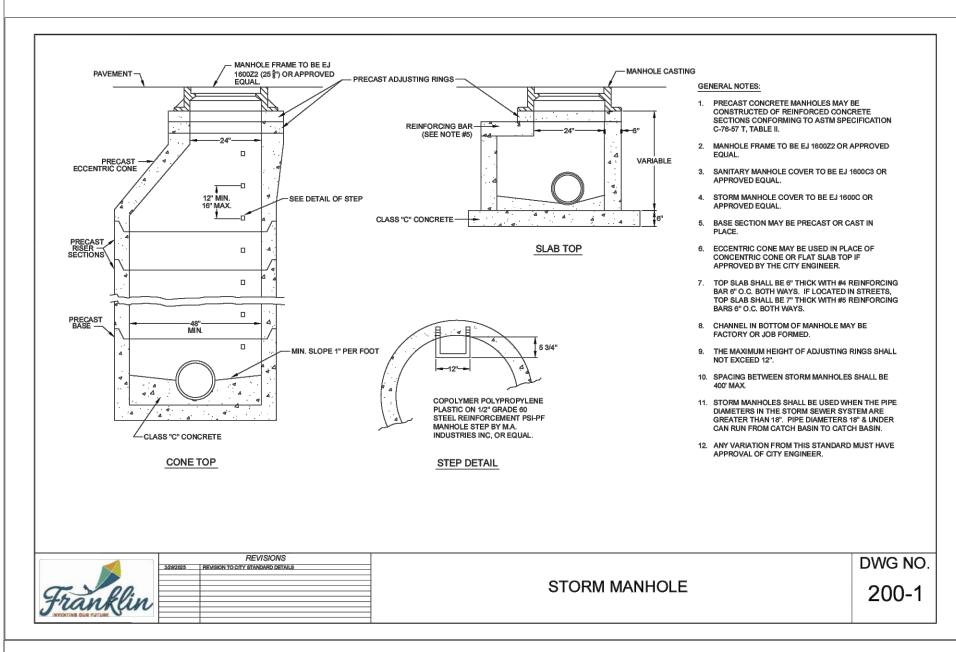
#### **FLOOD ZONE STATEMENT:**

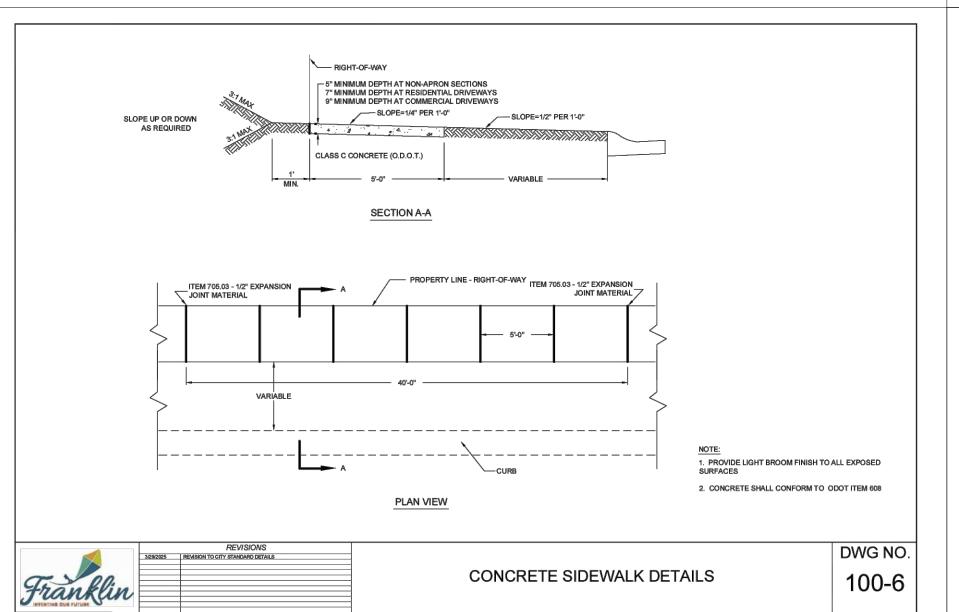
BY INFORMATION PROVIDED BY FEMA FLOOD MAP SERVICE CENTER, THIS PROPERTY WAS FOUND TO BE LOCATED WITHIN FLOOD ZONE X, AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN, BY THE FLOOD INSURANCE EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT RATE MAP, COMMUNITY PANEL NO. 39165C0018E, WHICH BEARS AN EFFECTIVE DATE

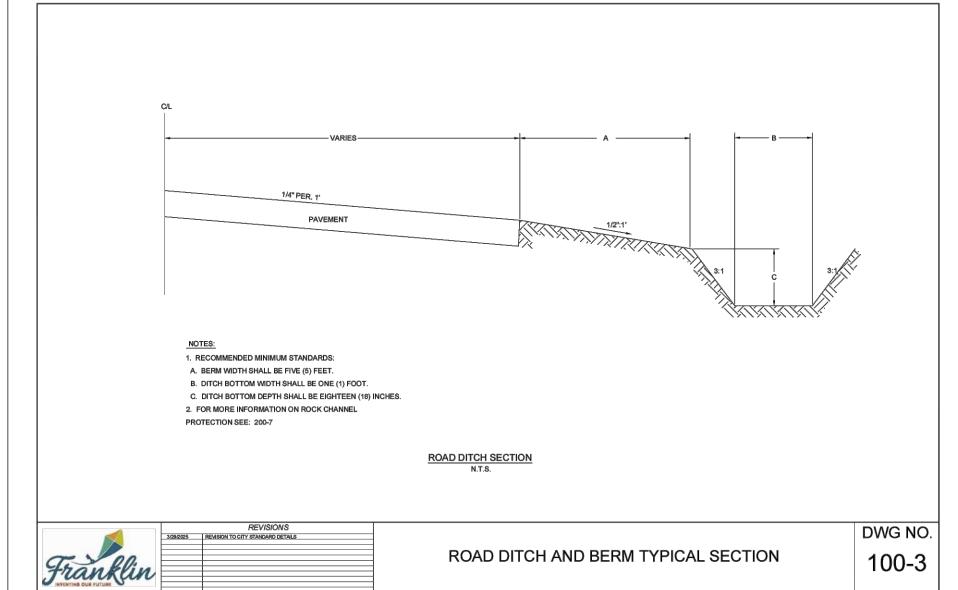


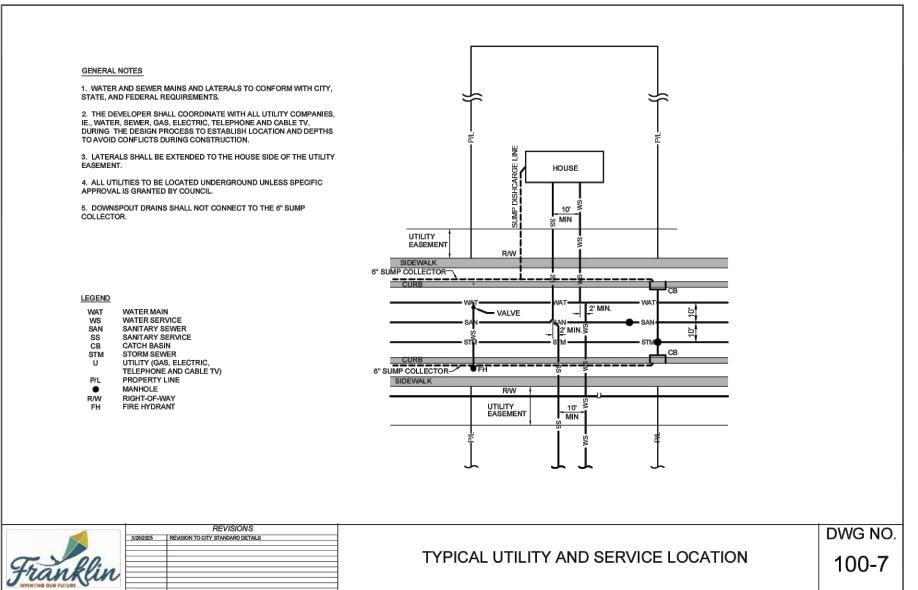
- ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE1
- (2) ITEM 407 ASPHALT TACK COAT @0.1 GAL./S.Y.
- ③ ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2
- (4) ITEM 408 PRIME COAT @0.4 GAL./S.Y.
- 5) ITEM 203 GRANULAR MATERIAL
- (6) ITEM 304 CRUSHED AGGREGATE BASE (10" MIN)
- 7 ITEM SPL WOVEN GEOTEXTILE, MORAFI 600X OR EQUIVALENT,
- ALL OVERLAPS TO BE 18"
- 8 ITEM 609 COMBINATION CURB AND GUTTER, ODOT TYPE 3
- (9) ITEM 659 6" TOPSOIL PLACED, SEEDING (80% FESCUE, 20% RYE) AND MULCHING.
- 10 ITEM 608 4" THICK CONCRETE WALK (7" AT DRIVES AND RAMPS FOR RESIDENTIAL)
- 11) ITEM 605 6" RIGID PVC PERFORATED PIPE UNDERDRAIN
- 12) ITEM SPL 3" WIDE HOT JOINT SEALER WHERE ASPHALT MEETS CURB PER ODOT MATERIAL SPEC 705.04

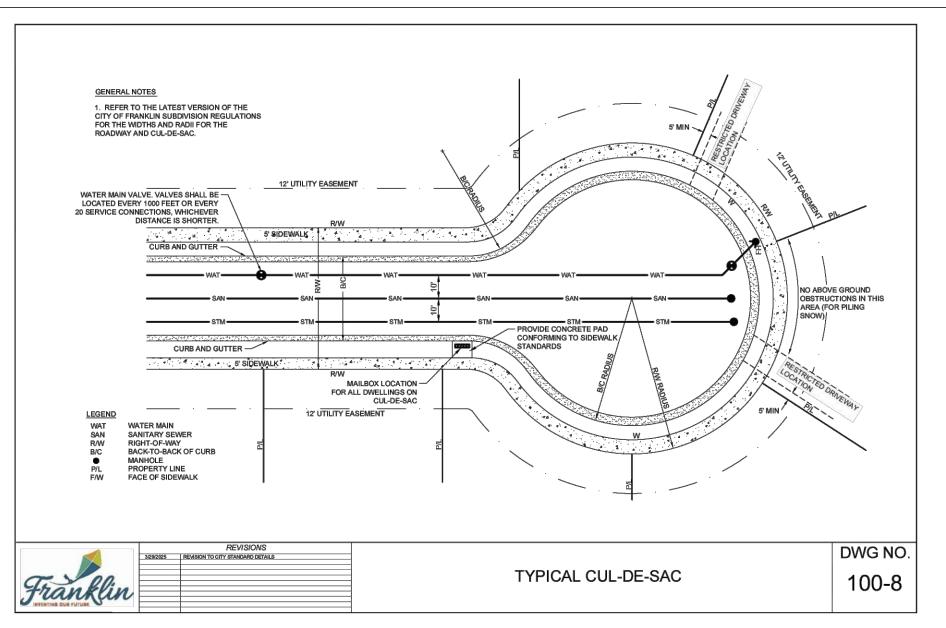


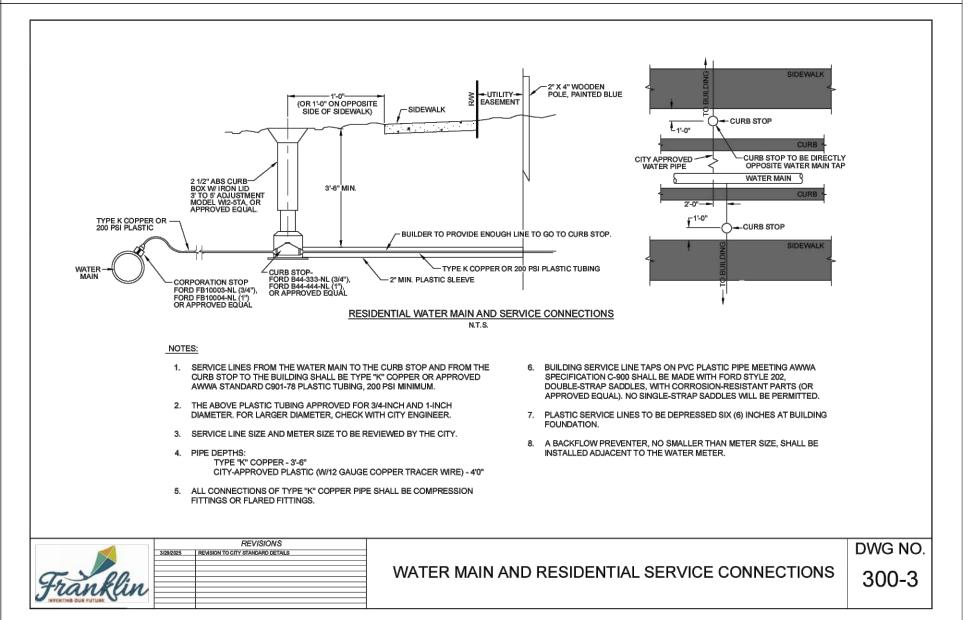




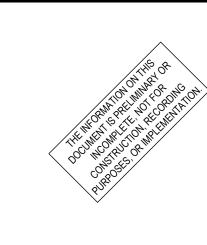












# SHAKER FARMS PH 1, 2 & 3

Revisions / Submissions

ID Description

Date

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Project Number: 763884

Scale: AS SHOWN

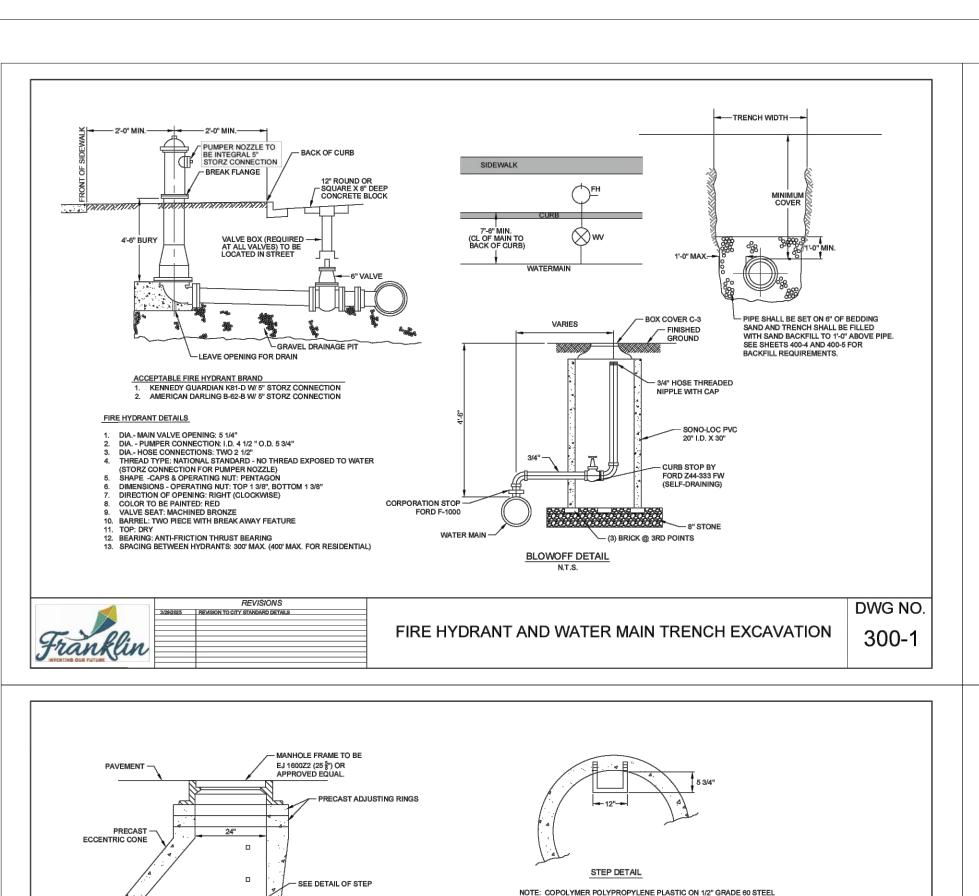
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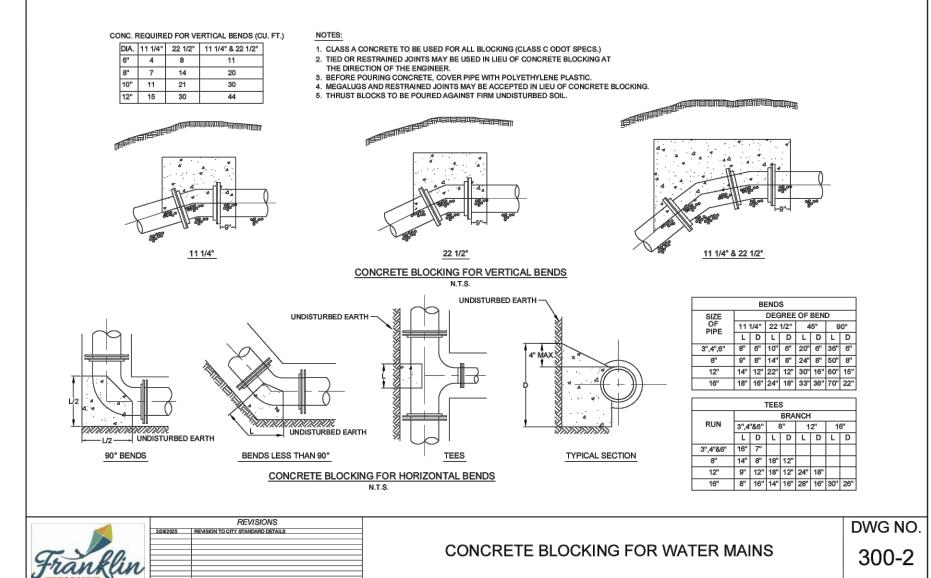
Checked By: JEE

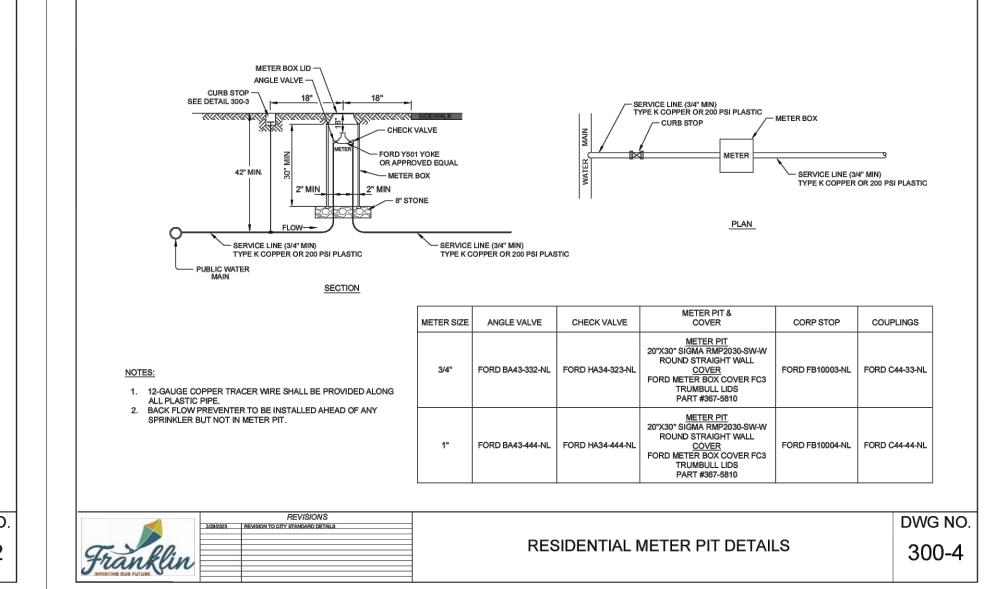
Date: JUNE 16, 2025

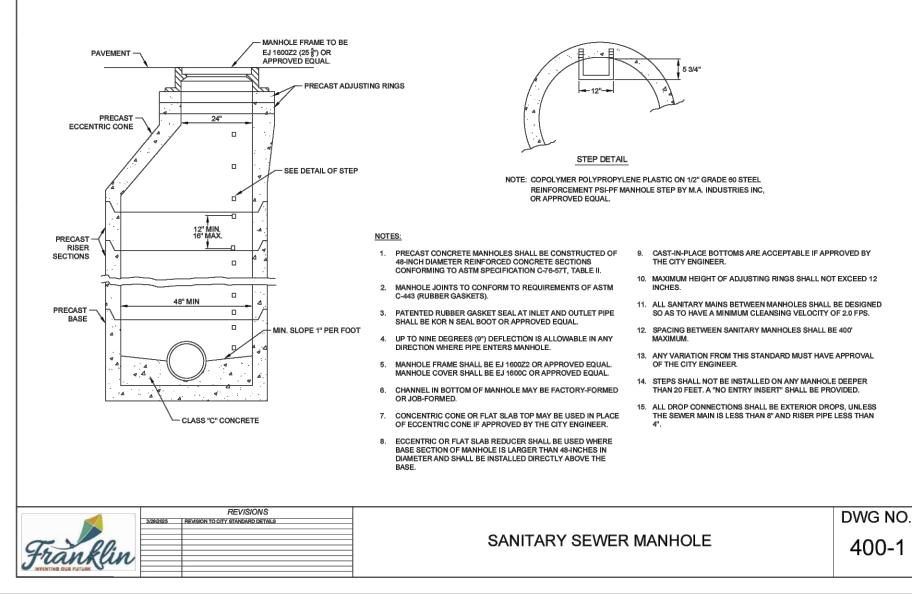
Issue: FINAL DEVELOPMENT PLAN

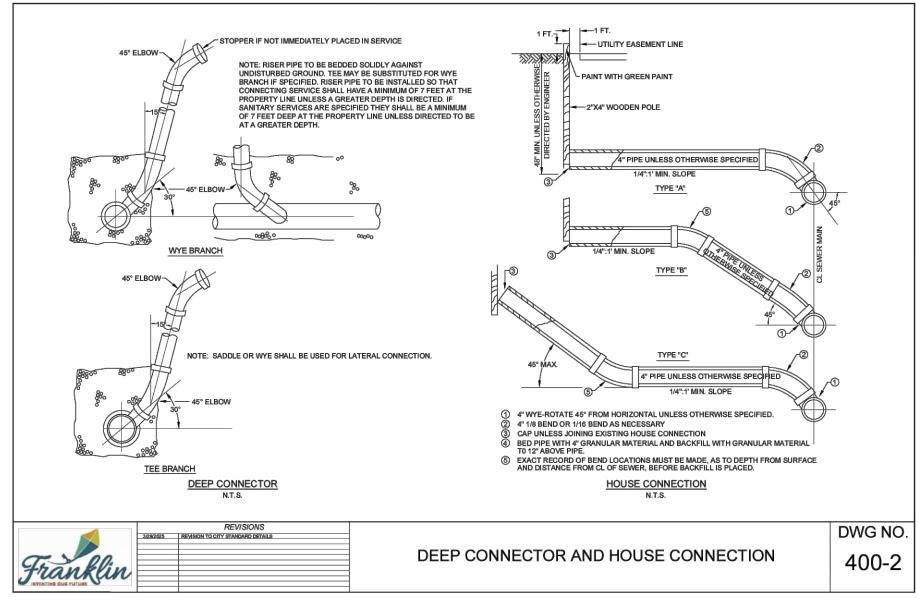
Drawing Title: **DETAILS AND NOTES** 

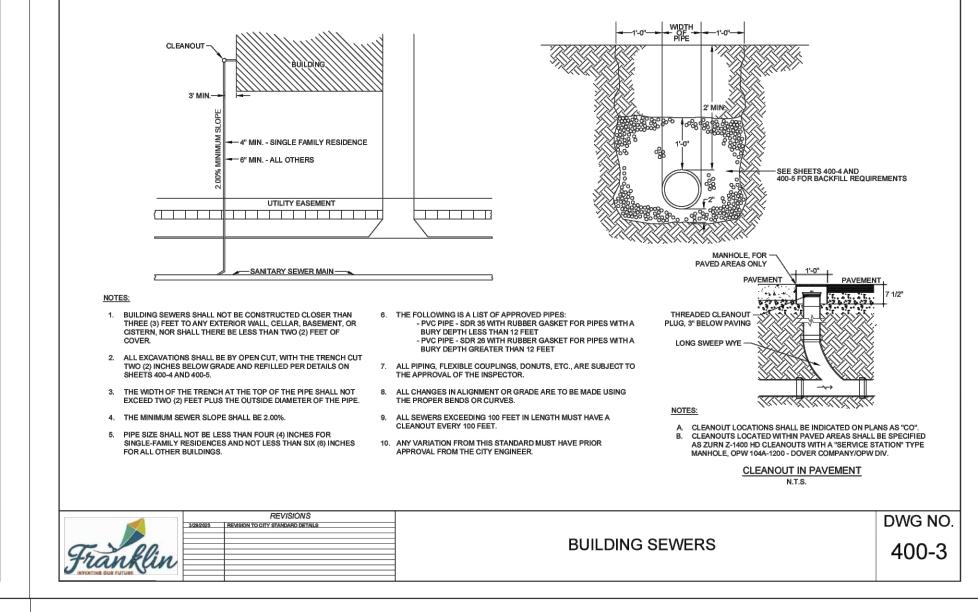


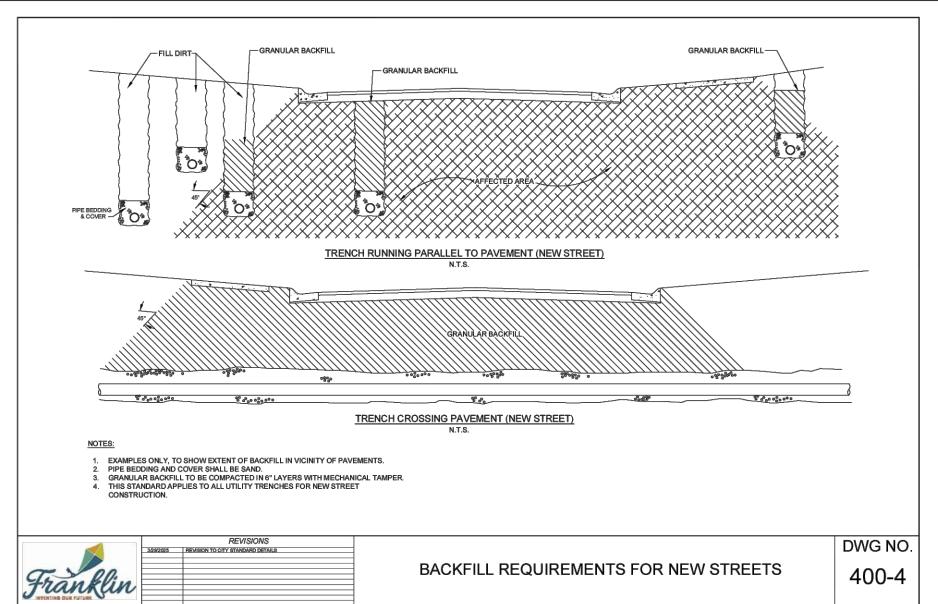


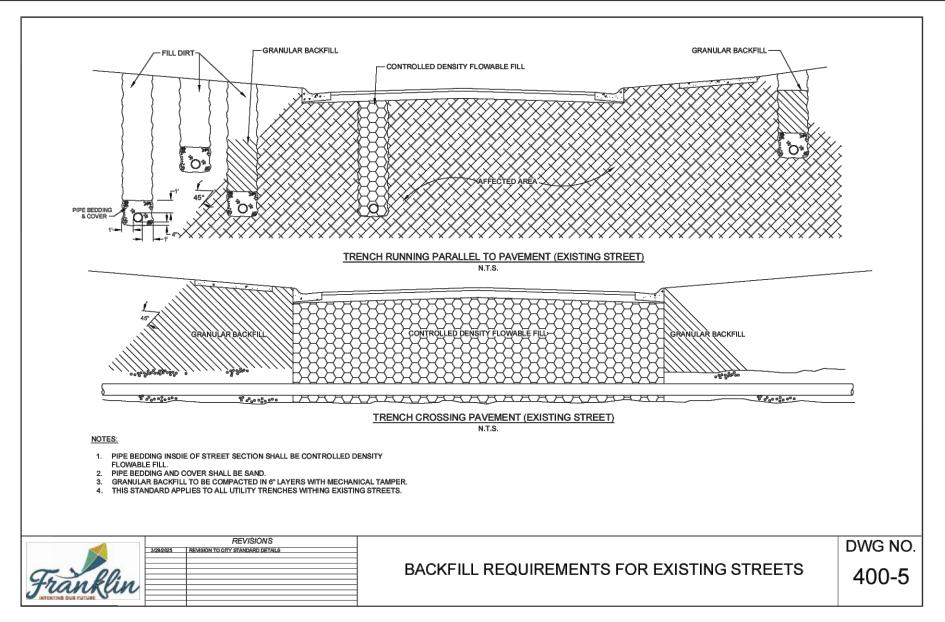


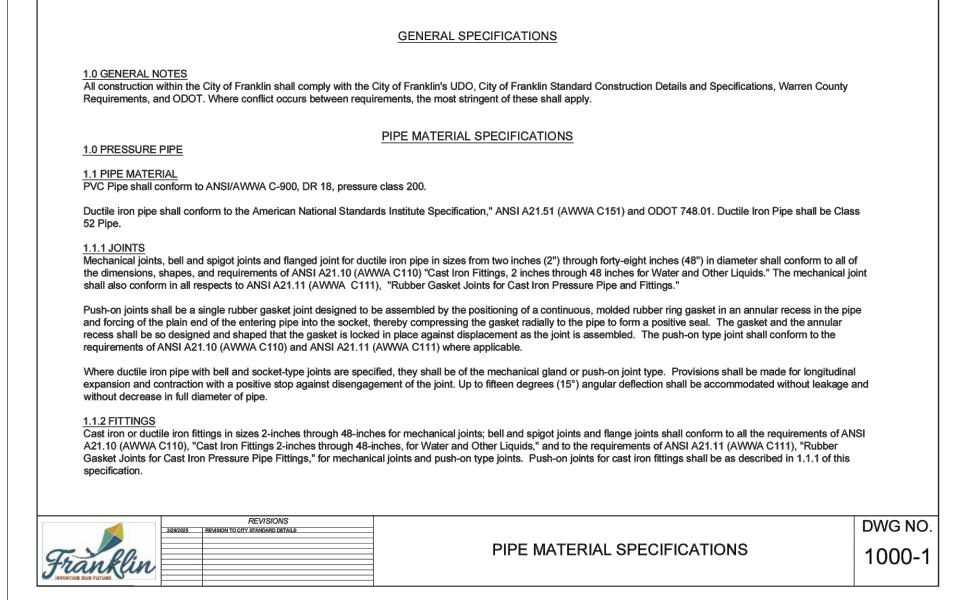














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HAKER FARMS H 1, 2 & 3

Revisions / Submissions

ID Description

Date

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Project Number:

Project Number: 763884
Scale: AS SHOWN
Drawn By: SCR
Checked By: JEE
Date: JUNE 16, 2025

Issue: FINAL DEVELOPMENT PLAN
Drawing Title:

Drawing Title: **DETAILS AND NOTES** 

1.1.3 COATING FOR DUCTILE IRON PIPE AND FITTINGS The ductile iron pipe and cast iron or ductile iron fittings shall be furnished with cement mortar lining in accordance with ANSI Specification A21.4 (AWWA C104), "Cement Mortar Lining for Cast Iron Pipe Fittings." The lining will be one-sixteenth (1/16) inch thick for pipe sizes four inches (4") through twelve inches (12") in diameter and three thirty-seconds (3/32) inch thick for sizes fourteen inches (14") through twenty-four inches (24") in diameter. A bituminous seal coat shall be applied to the lining surface

protective bituminous coating.

Special anchoring may be required at places along the pipe lines. Where the construction drawings call for special anchoring, it shall include the use of mechanical joint anchoring fittings, couplings and pipe or positively restrained push-on joint-type pipe and fittings which allow for deflection at the joint after assembly, EBAA Iron Works,

immediately following the lining operation to prevent loss of moisture and ensure proper curing of the cement mortar. The outside of the iron pipe shall be furnished with a

"Megalug", or approved equal.

2.0 GRAVITY PIPE

2.1 REINFORCED CONCRETE PIPE STORM SEWER

Reinforced concrete pipe shall conform in all respects to the requirements of ASTM C76, "Reinforced Concrete Culvert, Storm Drain and Sewer Pipe." Wall "B" thickness designs shall be supplied.

Table V of ASTM C76 shall be modified as specified in ODOT 706.02.

Class for the reinforced concrete pipe shall be as shown on the construction drawings, but no less than Class IV.

Bituminous plastic cement, which meets with the requirements of ODOT Specification 706.10, and which is applied in conformance with the requirement of ODOT Specification 603.06, will be accepted as a joining material. (Storm Sewer Only) Sanitary sewer joints shall conform to ASTM C443, "Joints for Circular Concrete and Culvert Pipe, Using Flexible, Watertight, Rubber Gaskets." Lubricants and/or adhesives shall be used as recommended by the manufacturer of the pipe and shall be supplied in quantities sufficient to assemble all of the concrete sewer pipe joints.

Service connections to a non-reinforced concrete sewer shall be made through a wye pipe saddle. Each wye shall be furnished with a stopper, which shall be sealed and banded into the branch opening until the service line is installed. The stopper joint shall be suitable to withstand an internal pressure of five (5) psi without leaking.

PIPE MATERIAL SPECIFICATIONS

DWG NO. 1000-2

#### CONSTRUCTION SPECIFICATIONS

proposed street grade, if shown on the construction drawings. Excavation for depths greater or less than the minimum are shown on profile on the construction drawings.

provided at each joint to permit the jointing to be made properly. Rock, if present in the trench bottom, shall be excavated to a minimum depth four (4) inches below the outermost dimension of the pipeline. Excavated rock shall be disposed of by the Contractor and not used for backfilling.

The specifications for the installation of pressure pipelines are intended to conform with AWWA Specification C600. The City shall require compliance with the specification contained in AWWA C600, the same as if they were totally incorporated herein, except where these specifications direct otherwise.

final position. Spigot ends shall be examined with particular care. Defective pipe or fittings shall be removed from the construction site.

Precautions shall be taken to prevent dirt from entering the annular joint space.

Pipe shall be laid with bell ends facing in the direction of laying, unless directed otherwise by the City Inspector. Where pipe is laid on a grade of ten percent (10%), or greater, the laying shall start at the bottom and shall proceed upwards with the bell ends of the pipes upgrade.

CONSTRUCTION SPECIFICATIONS

DWG NO.

2.0 GRAVITY PIPELINES

2.1 TRENCH EXCAVATION

2.2 INSTALLING GRAVITY PIPELINES

2.3.1 PIPE BEDDING - ALL PIPE (BEDDING SAND)

Frenches for underground gravity pipelines shall be excavated so that the pipes and appurtenances can be installed to the alignments and grades required. The

Special installation instructions, issued by the manufacturer of the pipe, relative to making pipe joints shall be adhered to by the Contractor.

the trench bottom, shall be excavated to a minimum depth five (5) inches below the outermost dimensions of the pipeline

sand between the outermost dimension of the pipe and the bottom of the excavation in areas of rock excavation.

specifications for the installation of gravity pipelines are intended to conform with ASTM D-2321, "Underground installation of Flexible Thermo-Plastic Sewer Pipe," excepting

therefrom Section 7, and as further modified by Appendix A1, ASTM D-2680, "ABS Composite Pipe." The City Engineer shall require compliance with the applicable stated

The trench shall be excavated to a minimum depth of four (4) inches below the outermost dimension of the pipe barrel or pipe bell to be installed therein. Rock, if present in

The trench for lateral service gravity pipelines shall be excavated to a minimum depth of four (4) inches below the outermost dimension of the pipe barrel or pipe bell to be

The gravity pipelines shall be laid in a finished trench commencing at the low point with the spigot ends pointing in the direction of flow. All gravity pipe, including service laterals, shall be placed on a dry, stable bedding sand shaped to receive the barrel support for the full length of the pipe, and form a straight gravity pipeline with a uniform

grade true to the established line and grade. If the open end of the pipe section is low, the individual pipe must be removed and the bed prepared to the proper grade.

Line and grade for the gravity pipeline may be established by the Contractor using batter boards, grade strings, plumb lines and grade rods. The batter boards shall be

A cradle pipe bedding sand shall be furnished for all gravity pipelines. The bedding sand shall be thoroughly compacted by hand-placing under the pipeline and

hand-tamping to produce a dense cradle free from voids to completely support the pipeline throughout its entire length. There shall be a minimum of four (4) inches of

bedding between the outermost dimension of the pipe and the bottom of the excavation areas for normal excavation. There shall be a minimum of five (5) inches of bedding

placed at each grade stake. Three (3) consecutive batter boards shall be in place at all ties unless otherwise approved by the Director of Public Works. Distance between grade stakes shall not exceed twenty-five (25) feet or by the use of a laser beam, with a minimum of stakes placed at each manhole and 100 feet upstream of each branch.

installed therein. Rock, if present in the lateral service gravity pipeline trench bottom, shall be excavated to a minimum depth four (4) inches below the outermost dimensions

The thermoplastic material utilized for the manufacturer of the pipe walls shall be virgin, rigid acrylonitrice-butadiene-styrene (ABS). The material shall conform to the

requirements of Type One, Grade One or Two, or Type Four, Grade One, ASTM D-1788, except that the minimum heat deflection temperature ASTM D648 shall be 180

Composite pipe consisting of two (2) ABS tubes integrally braced across the annulus with ABS webbing and with the resultant annular space filled with an inert filler the equal

of Portland Cement Perlite Concrete, shall conform to the requirements of ASTM D-2680, except as specifically modified herein. The ends of manufactured sections of pipe

Eight-inch (8") thru fifteen inch (15") nominal inside diameter pipe shall conform to the dimensions and tolerances given in Table 1, "Pipe Dimensions" of ASTM D-2680.

Solid wall pipe of ABS material shall conform to the requirements of ASTM D-2751. Wall thickness, however, shall not be less than 0.180 inches for four-inch (4") diameter

The sections of pipe shall be joined by chemically-welded couplings. Couplings shall be solid wall, molded of the same material as the pipe. Primer for chemical welding

The service lateral connections to the main line shall be made by use of saddles with stainless steel bands. The fittings shall be molded from the same material as the pipe.

Each service shall be furnished with a spigot end cap, which shall be chemically welded onto the branch opening until the service line is installed. The joint shall be suitable

The material used for unplasticized polyvinyl chloride (PVC) plastic pipe shall be clean, virgin Type 1, Grade 1 PVC compound conforming to ASTM D-1784. All PVC plastic

Whenever the construction drawings require the deflection of mechanical joint or push-on joint pipe in order to form a long radius curve, the amount of the deflection shall not

Pipeline fittings, plugs, and caps of the required size and type shall be furnished and installed at the locations shown on the construction drawings or as directed by the City

Inspector. It shall be the responsibility of the Contractor to furnish and install all proper size fittings for both horizontal and vertical deflections, which are required to construct

the pressure main to the line and grade shown on the construction drawings, or as established in the field by the City Inspector. The fittings, plugs, and caps shall be set and

The Contractor shall subject the completed pressure pipeline to a leakage test. The test shall be performed on all newly-laid pipe in lengths not to exceed 1000 feet. The

length of the test section shall not exceed the specified maximum without explicit approval of the Director of Public Works. The test may be conducted after the trench has

The completed pipeline shall be flushed with clean water until all dirt has been washed free. Sufficient pressure and volume of water shall be furnished by the Contractor to

The Contractor shall furnish the pump, pipe connection, temporary testing plugs and caps, and all necessary apparatus, including pressure gauges, meters, and a supply of approved water. The Contractor shall make all necessary taps into the pressure pipelines. The Contractor shall be responsible for all labor and equipment necessary to

The completed pipeline shall be slowly filled with water. All air shall be expelled from the pipe at high points by means of test plus in valve bonnets, fire hydrants, or through

corporation stops installed by the Contractor for this purpose. After all air has been expelled, the opening shall be closed and the test pressure applied by means of a test

Test pressure for the leakage tests shall be 1.5 times the normal operating pressure at the lowest point in the section of line under test, as corrected to the elevation of the

atisfactory results are obtained. The Contractor is responsible for the location, excavation, and backfilling of a pressure pipeline trench at no cost to the Owner, in addition to replacing the defective material, if the leakage test is conducted on a backfilled pressure pipeline. At all times during the leakage test, the Contractor shall maintain the

hydrants, joints, etc. discovered in consequence of the leakage tests, shall be removed and replaced by the Contractor with sound material, and the test repeated until

ed piping and/or surface of the backfilled trench shall be carefully inspected during the test for any signs of leakage. Any cracked or defective pipe, fittings, valves

been backfilled, but must be completed before replacement of pavements and final restoration. All testing shall be done in the presence of the City Inspector.

PIPE MATERIAL SPECIFICATIONS

used in the manufacture of pipe for this project shall be all new material and shall not include any rework or scrap PVC material from previous manufacturing processes.

shall be Methyl-Ethyl-Keytone (MEK). Cement shall be MEK containing a minimum of twenty (20) percent dissolved ABS. Primer and cement shall be provided by the

The service connection shall include such adapters as may be approved by the City Engineer to provide connection to the service line.

exceed the maximum limits specified in Table 1, Mechanical Joint Pipe, and Table 2, Push-On Joint Pipe, contained in AWWA C600.

conduct the tests, including excavating and backfilling the test pit at the location selected by the Director of Public Works.

Solid wall PVC plastic pipe and fittings for gravity sewer installation shall conform to ASTM D-3034, SDR 35 for pipes buried at a depth less than 12 feet and D-3034, SDR 26 for pipes buried at a depth greater than 12 feet.

4-inch Diameter 0.125-inch Minimum Wall Thickness 6-inch Diameter 0.180-inch Minimum Wall Thickness 8-inch Diameter 0.240-inch Minimum Wall Thickness 10-inch Diameter 0.300-inch Minimum Wall Thickness 12-inch Diameter 0.360-inch Minimum Wall Thickness

15-inch Diameter 0.437-inch Minimum Wall Thickness For pipe larger than 15", material and specifications shall be approved by City Engineer.

Pipe shall be bell and spigot, the bells being formed integrally with the pipe. The bells shall contain two (2) PVC retainer rings, which accurately and securely contain the solid rubber joint sealing ring. Joint design shall permit expansion and contraction of the pipeline as well as flexibility at the joint.

The service lateral connections to the main line shall be made by the use of wyes or saddles. Fittings shall be manufactured of the same material as the main line pipe and have similar style joints. The service connection shall include such adapters as may be approved by the City Engineer to provide connection to the service line.

Each branch or tee shall be furnished with a suitable stopper which shall be sealed into the branch opening until the service line is installed. The stopper joint shall be suitable to withstand an internal pressure of five (5) psi without leaking.

Roof drains, foundation drains, and all other clean water connections to the sanitary sewer system are prohibited.

AVG. TEST

Sanitary lift station shall be aluminum, no vault type pump station with appropriately sized chopper pumps, such as Excel Fluid Group, LLC, EX-ALNV2 or approved equal.

Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section therof to maintain pressure within 5 psi of the specified

test pressure after the pipe has been filled with water and the air has been expelled. Leakage shall not be measured by a drop in pressure in a test section over a period of

ALLOWABLE LEAKAGE / AWWA C600

PIPE SIZE-IN

ALLOWABLE LEAKAGE PER 1,000 FT-GPH

3 4 6 8 10 12 14 16 18 20 24 30 36 42 48 54

time. No pipe installation will be accepted if the leakage is greater than the values in Table 3.

material. Controlled density flowable fill is to be used for trenches in existing street sections.

PIPE MATERIAL SPECIFICATIONS

**DWG NO** 1000-4

1.0 PRESSURE PIPELINES

1.1 TRENCH EXCAVATION

Trenches for buried pressure pipelines shall be excavated so that the pipes and appurtenances may be installed and joined to the alignments and grades required.

The depth of pressure pipeline trenches shall be a minimum of four (4) feet plus the outside diameter of the pipelines measured from the existing street grade or the

Pressure pipeline trenches shall be excavated in a manner that will provide a uniform and continuous bearing and support for the barrels of pipe on solid and undisturbed ground at every point between bellholes, except for that area near the mid-section of the pipe disturbed by the withdrawal of pipe slings or other lifting tackle. Bellholes will be

1.2 INSTALLING PRESSURE PIPELINES

Pressure pipelines shall be laid and maintained to the required lines and grades with fittings and valves set at the required locations, spigots, centered in bells, and all valves and hydrant stems plumb. All pipe and fittings shall be carefully examined for cracks and other defects while suspended above the trench immediately prior to installation in

As each length of pipe is placed in the trench, the spigot end shall be centered accurately in the bell and the pipe forced home and brought to correct line and grade.

At times when pipe laying is not in progress, the open ends of the pipe shall be closed by a water-tight plug or other means approved by the City Inspector. If ground water rises in the trench, such a seal shall remain in place until the trench is pumped completely dry, ready for continued pipe laying operations. The cutting of the pipe for the es shall be done in a neat and workmanlike manner without damage to the pipe or lining so as to leave a smooth end cut at righ angles to main axis of the pipe.

1000-5

2.2 ABS DOUBLE WALL PIPE STORM SEWER

pipe or 0.265 inch for six-inch (6") diameter pipe.

to withstand an internal pressure of five (5) psi without leaking.

joined to the pipe in the manner hertofore specified for installation.

ensure that a thorough cleaning job has been accomplished.

pump connect to the pipe in a manner satisfactory to the Director of Public Works.

test gauge. The duration of each leakage test shall be two (2) hours. Minimum test pressure 100 psi.

specified hydrostatic pressure through his test pump. Maximum variation in pressure during the test is 5 psi.

2.2.5 SERVICE CONNECTIONS

2.3 PVC PIPE SANITARY SEWER

Franklin

1.4 PIPELINE FITTINGS

1.6 FLUSHING AND CLEANING

shall be square and smoothly finished to prevent the rupture and/or loss of the concrete filler material.

Rubber compounds for the joint sealing ring shall conform to the requirements of ASTM D-1869.

degrees Fahrenheit.

1000-6

DWG NO.

DWG NO.

1000-3

CONSTRUCTION SPECIFICATIONS

The construction drawings indicate trenches which shall be completely backfilled per Standard Drawings 400-4 and 400-5. In these cases, the excavated material from the

backfill is indicated on the construction drawings, all of the material used to backfill the trench, excluding the pipe bedding and cover material, shall be of the gravel type

1000-7

DWG NO.

Revisions / Submissions

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Date

Miamisburg, OH 45342 Phone: 937.435.8584 Fax: 888.208.4826

Project Number 763884 AS SHOWN Scale: Drawn By: **JEE** Checked By: JUNE 16, 2025 Date:

Issue: FINAL DEVELOPMENT PLAN Drawing Title:

1.9 BEDDING (SAND)

All trenches shall be backfilled by hand from the bottom of the trench to the centerline of the pipe with material placed in three (3) inch layers and compacted by tamping in a manner which shall not disturb the alignment of the pipe or fittings. The bedding shall be constructed of select bedding sand free from stones, refuse or organic material. Each individual length of pipe shall be bedded after installation and prior to the connection of an additional length of pipe.

The trench shall be backfilled by hand or approved mechanical methods from the centerline of the pipe to a height one (1) foot above the top of the pipe. The material used shall be the equal of the sand specified for bedding. The Contractor shall use special care in placing this portion of the backfill so as to avoid injuring or displacing the pipeline. Mechanized equipment, such as bulldozers, front-end loaders, etc., shall, under no condition, be used to push excavated material directly into the open trench as backfill between the bottom of the trench and a point one (1) foot above the top of the pipe.

Where granular trench backfill is specified, the backfill material from one (1) foot above the pipe to the street or shoulder grade (or subgrade of pavement) shall consist of gravel that shall be puddled with hose and pipe nozzle after the trench is backfilled. The Contractor shall furnish the necessary tank trucks, water pumps, and all equipment required to settle the gravel backfill by the puddling method.

Where backfill with excavated materials is indicated on the construction drawings, the Contractor may backfill the trench from one (1) foot above the top of the pipe to the top of the trench with excavated material, provided that such material consists of loam, clay, sand, gravel, or other materials that, in the opinion of the Director of Public Works, are suitable for backfilling. Care should be taken to carry the backfill up evenly in the trench. Backfill shall be neatly rounded over the top of the trench to a sufficient height to allow for settlement to grade after consolidation

The Contractor shall anchor all deflections in excess of ten (10) degrees by use of restrained joints or concrete blocking to prevent movement of any portion of the pipe due

The length of pipe with restrained joints called for on the construction drawings shall be considered as a minimum for the stated test pressure and stated minimum

If the pipeline is tested at a higher than stated internal pressure and/or without the stated minimum compacted pipe cover, additional restrained joints will be required and shall be furnished and installed.

1.13 WATER SERVICE LINE POLE The Contractor shall install a 2" x 4" wooden pole at the end of all water service lines. The pole shall be painted blue.

DWG NO.

ASTM Specification for installation, except where modified by these specifications.

As soon as possible after joint is made, the balance of the bedding sand shall be placed up to the spring line of the pipe to offset conditions that might tend to move the pipe off from line or grade. Disturbing the pipe in any manner after the joints have been made shall not be permitted. The balance of the bedding sand shall be thoroughly compacted by hand-placing and hand-tamping to produce a dense fill around the pipeline. The pipe bedding shall extend laterally to the outermost limits of the trench

shall be the equal of the sand specified for bedding. The Contractor shall use special care in placing this portion of the backfill so as to avoid injuring or displacing the pipeline. Mechanized equipment, such as bulldozers, front-end loaders, etc., shall, under no condition, be used to push excavated material directly into the open trench as backfill between the bottom of the trench and a point one (1) foot above the top of the pipe.

Gravity service connections to main line gravity pipes shall not be installed until their location has been approved by the City Engineer. No service lines to be backfilled until checked by the City Inspector.

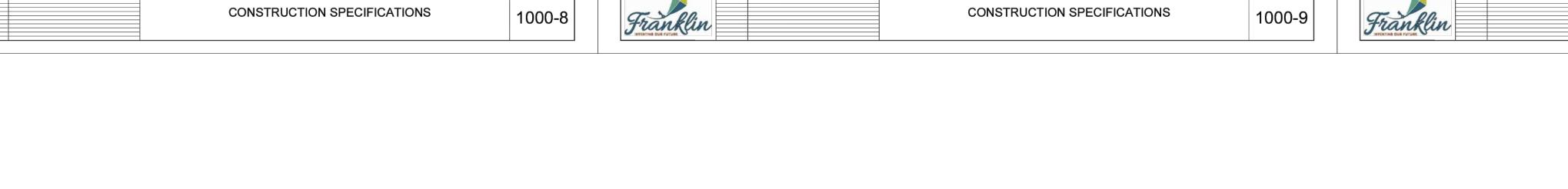
Appropriate sections of this Specification for trench excavation, pipeline installation, flushing, cleaning and testing, pipe bedding, initial backfill and balance of backfill shall apply to the installation of the specific type of material used for the gravity service lines. The balance of backfill material shall be gravel for all gravity service lines installed within the street tor roadway.

The Contractor shall install a 2" x 4" wooden pole at the intermediate upper end of all gravity service lines. The pole shall be installed in a vertical plane extending from the bottom of the service pipe to a point twelve (12) inches above ground elevation. The pole shall be painted green. Care should be exercised to keep the pole plumb during backfilling operations and to preserve the above-ground extension during clean up and restoration operations.

The Contractor shall clean out the completed gravity pipeline of all sand, gravel, stones, or other debris by proper flushing. Other methods may be used if approved by the Director of Public Works. Particular care shall be taken at the location where a connection is made to an existing system to prevent any foreign materials from entering an operating pipeline. The outlet for a new gravity pipeline shall be bulkheaded at the existing manhole and bulkhead shall not be removed until the project is completed.

4	REVISIONS	
	3/29/2025 REVISION TO CITY STANDARD DETAILS	
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BEFORE DIGGING IS TO AGENCIES: OHIO UTILITIES UNDERGROUND UTILITIES UTILITIES PROTECTION SERVICE



DWG NO.

CONSTRUCTION SPECIFICATIONS

1. IF THE PIPELINE UNDER TEST CONTAINS SECTIONS OF VARIOUS DIAMETERS, THE ALLOWABLE LEAKAGE WILL BE THE SUM OF THE COMPUTED LEAKAGE FOR EACH SIZ 2. WHEN TESTING AGAINST CLOSED METAL-SEATED VALVES, AN ADDITIONAL LEAKAGE PER CLOSED VALVE OF 0.0078 GPH/IN OF NOMINAL SIZE SHALL BE ALLOWED. 3. ALL VISIBLE LEAKS ARE TO BE REPAIRED, REGARDLESS OF THE AMOUNT OF LEAKAGE.

2.3.2 INITIAL BACKFILL (SAND)

The trench shall be backfilled by hand or approved mechanical methods from the spring line of the pipe to a height one (1) foot above the top of the pipe. The material used

2.4 INSTALLING GRAVITY SERVICE LINES

Gravity service lines shall terminate at a point one (1) foot behind the utility easement on the property to be served, unless otherwise indicated by the Director of Public

or approved by the City Engineer. No sewer line may be cut or broken in the field to permit the installation of a service wye.

FORTY-EIGHT (48) HOURS

DWG NO.

1000-10

COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING PROTECTION SERVICE AT 811 OR 800-362-2764 AND ALL OTHER AGENCIES WHICH MIGHT HAVE INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE

ID Description Works. Gravity service lines will be fitted with a stopper into the upper end. The slope of service line from upper end toward the main line gravity pipeline shall be two (2) feet per 100 linear feet of service line, unless otherwise authorized or approved by the City Engineer. The service lines shall be laid on a straight grade unless otherwise directed

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**DETAILS AND NOTES** 

The Contractor and the Director of Public Works will then check the pipeline between manholes for alignment by means of mandrel testing. If the test shows any misalignment, displaced pipe, or any other defects, the defects designated by the Director of Public Works shall be remedied by the Contractor.

#### 2.6 TESTING

2.6.1 LEAKAGE
The Contractor shall furnish all labor, equipment, and materials which are required to test the sections of the gravity pipeline and manholes for tightness. Either the infiltration test or the hydrostatic test will be ordered by the Director of Public Works. All tests shall be conducted under the supervision of the City.

The Contractor shall determine the locations where excess water is entering or leaving the pipeline. If the amount of leakage exceeds the allowable, the gravity pipeline and/or manholes shall be repaired and retested until the leakage of the system is within the allowable limits as specified. The tests for leakage shall include portions of the service lines to be installed by the Contractor.

All visible leaks shall be repaired by the Contractor whether amount of leakage exceeds the allowable or not.

2.6.2 INFILTRATION TEST
The infiltration test will be conducted on that portion of the pipeline where the top of the pipe at the upper manhole is a minimum of one (1) foot below the level of the ground

The infiltration test shall be made by installing a weir or other measuring device approved by the Director of Public Works in the lower end of the pipeline section to be tested. The incoming pipe or pipes in the upper end of the test section shall be securely sealed. The quantity of ground water infiltrating into the test section shall be measured. The allowable leakage for gravity pipelines shall not exceed one-hundred (100) gallons per day per mile of pipe per inch of pipe diameter.

The following formulae are given for the ease of calculations: Gallons per Minute Allowed = 0.000131\*L\*d

Cubic Feet per Second Allowed = 0.00016\*L\*d Where L = Length of 100-Foot Stations of Sewer Being Tested and

d = Nominal Diameter in Inches of Sewer Being Tested

Each size of main sewer pipe shall be tested separately. Each test section shall not exceed 1,000 feet of sewer pipe.

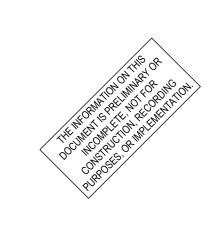
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The exfiltration test shall be conducted over a twenty (20) minute period. Water for testing shall be supplied by the Contractor. The elevation of the level of water in the manhole and the drop in the level of the water in the upper manhole shall be carefully measured during the duration of the test. The allowable leakage for the hydrostatic test shall not exceed 100 gallons per day per mile of pipe per inch of inside diameter of the pipe tested.

The exfiltration test shall be conducted between two (2) successive manholes. The lower end of the pipeline and all inlet pipes of the upper manhole shall be sealed with pipe stoppers. The span of gravity pipeline to be tested shall be filled with water to a point four (4) feet above the top of the crown of the pipeline in the upper manhole, or the outside water table, whichever is higher. The water shall stand in the pipe and manhole so that absorption can take place if the concrete in the manhole or pipeline is dry.

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	329/2025 REVISION TO CITY STANDARD DETAILS		DWG NO.
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Revisions / Submissions Date

ID Description

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763884 Project Number: AS SHOWN Scale: Drawn By: Checked By: JUNE 16, 2025

Issue: FINAL DEVELOPMENT PLAN

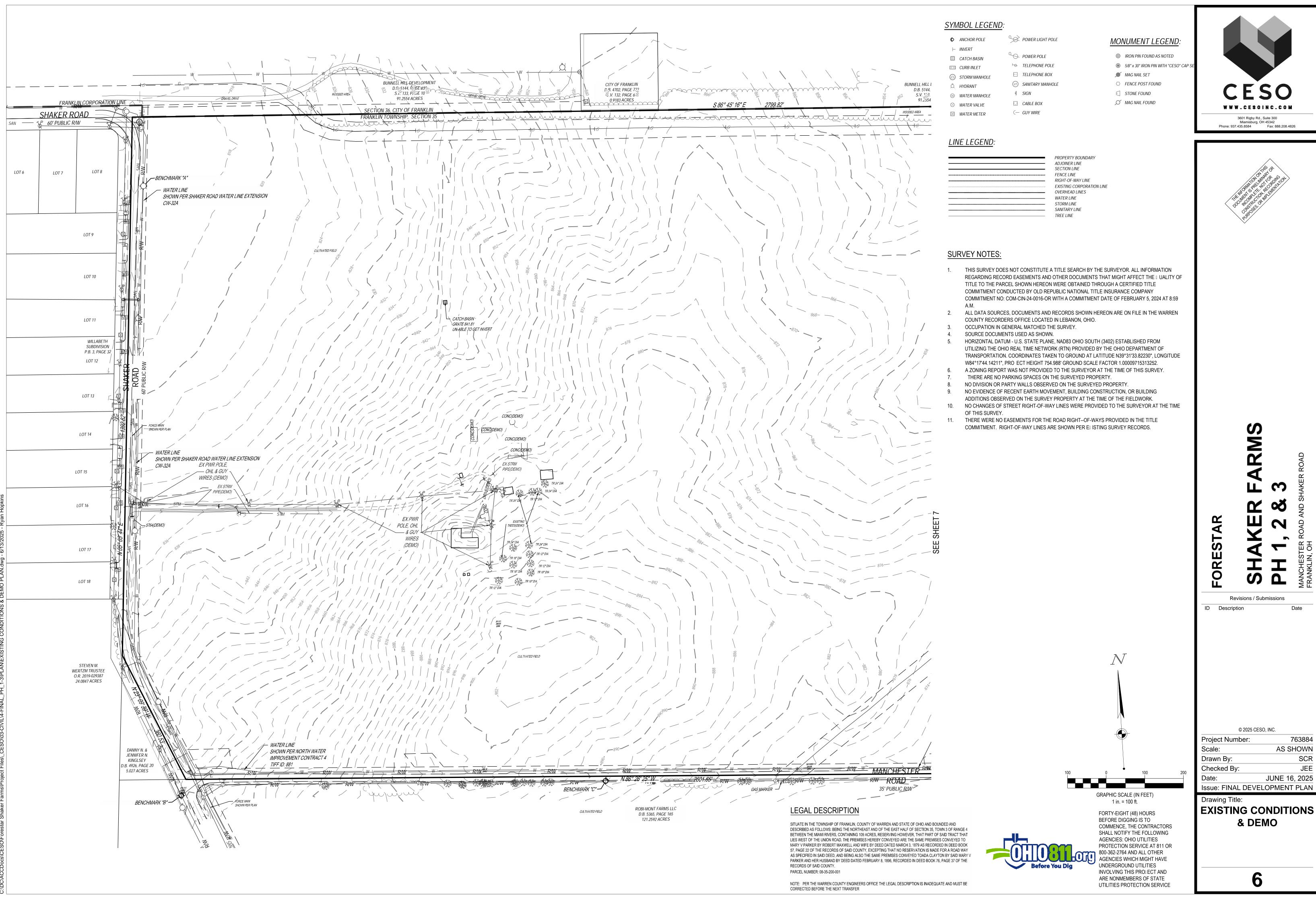
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**DETAILS AND NOTES** FORTY-EIGHT (48) HOURS

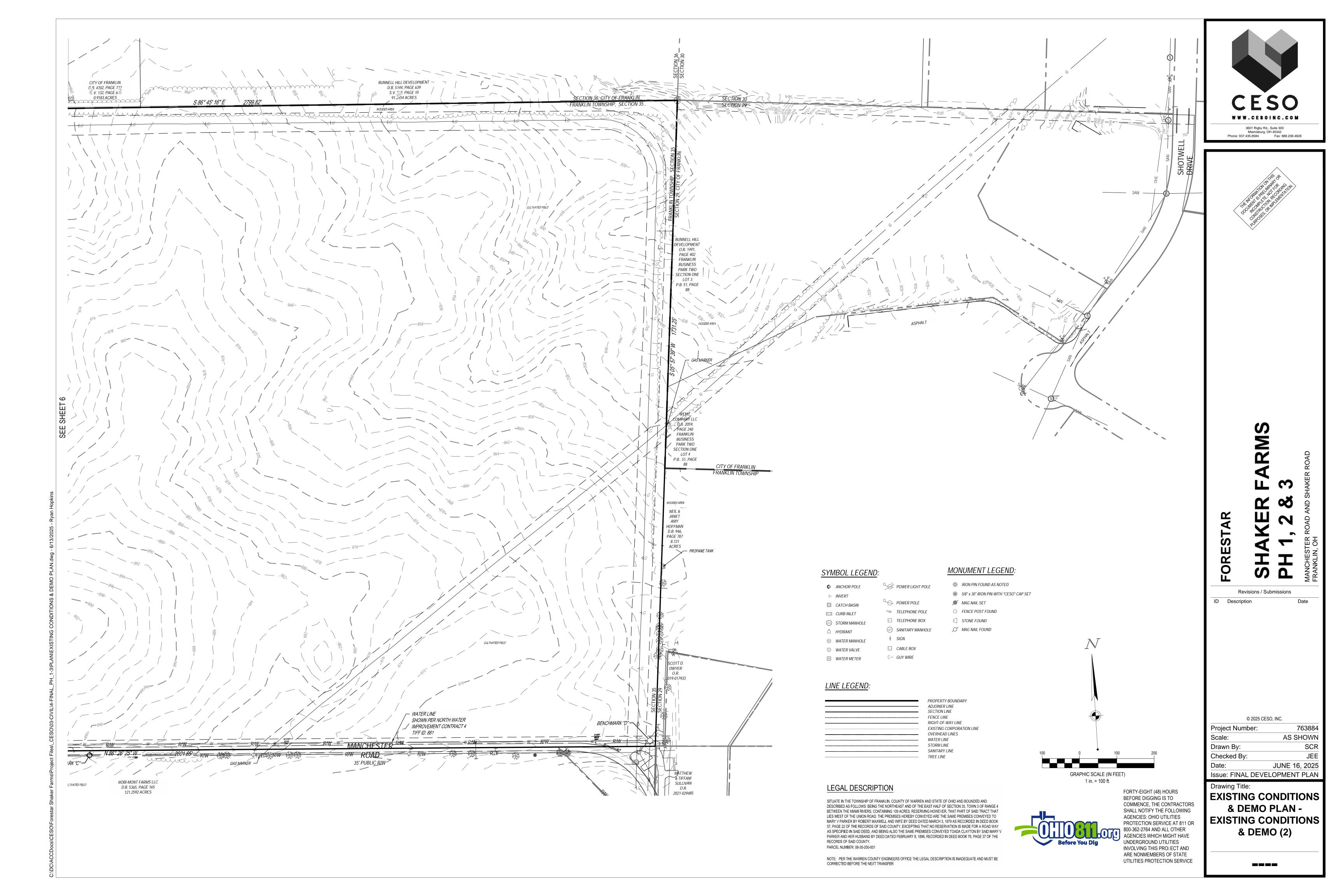


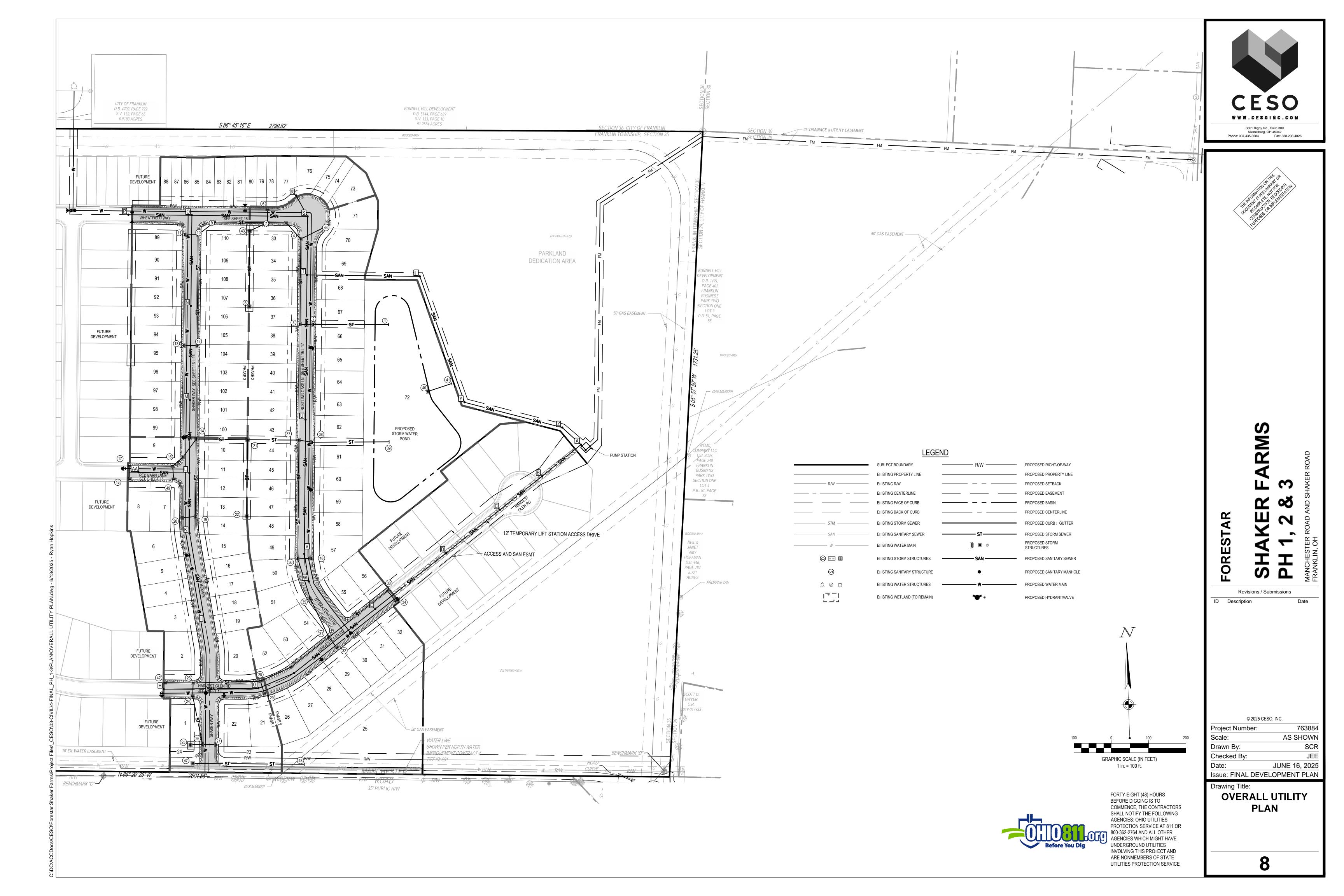
BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS COMMENCE, THE CONTRACTORS
SHALL NOTIFY THE FOLLOWING
AGENCIES: OHIO UTILITIES
PROTECTION SERVICE AT 811 OR
800-362-2764 AND ALL OTHER
AGENCIES WHICH MIGHT HAVE
UNDERGROUND UTILITIES
INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE

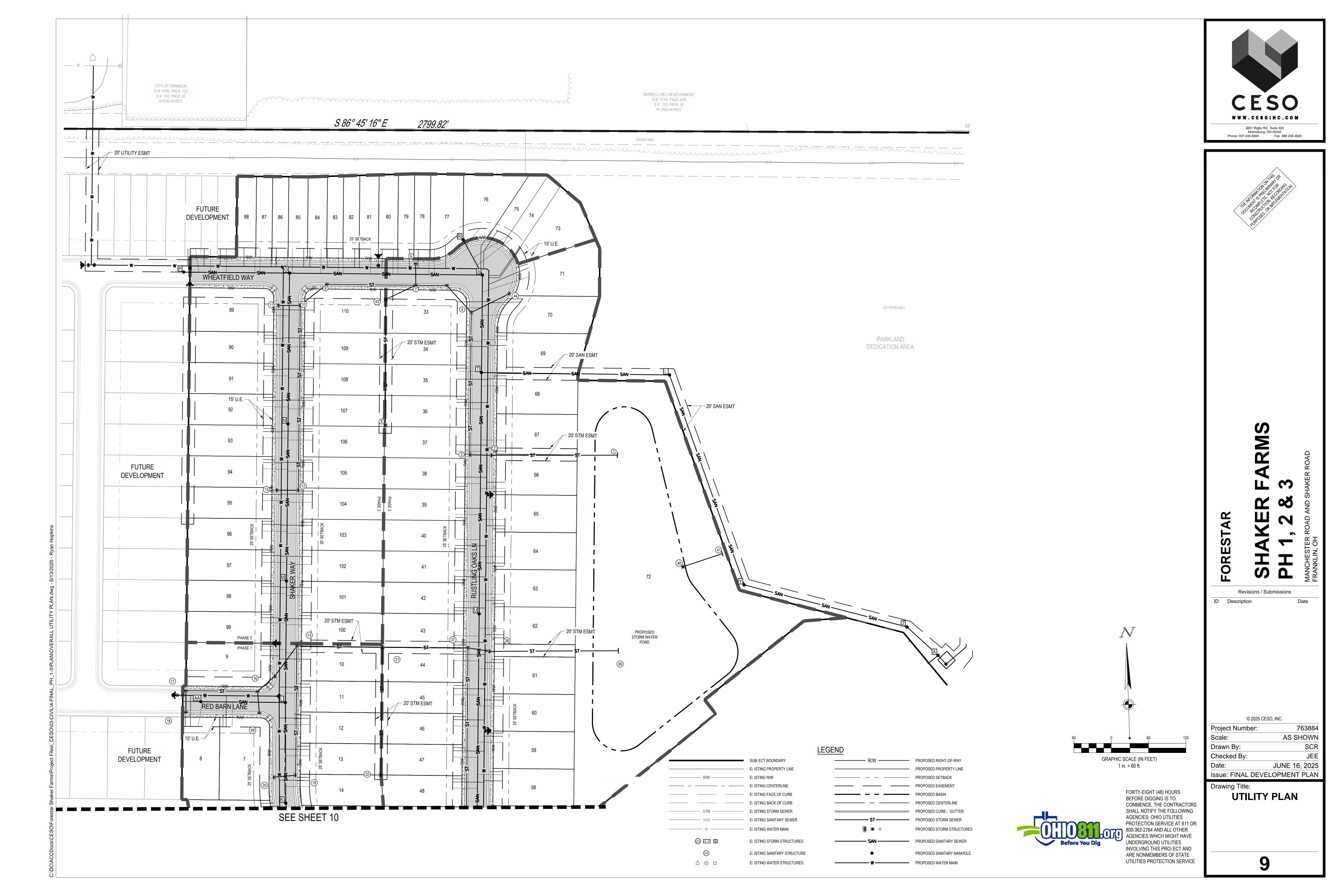
UTILITIES PROTECTION SERVICE

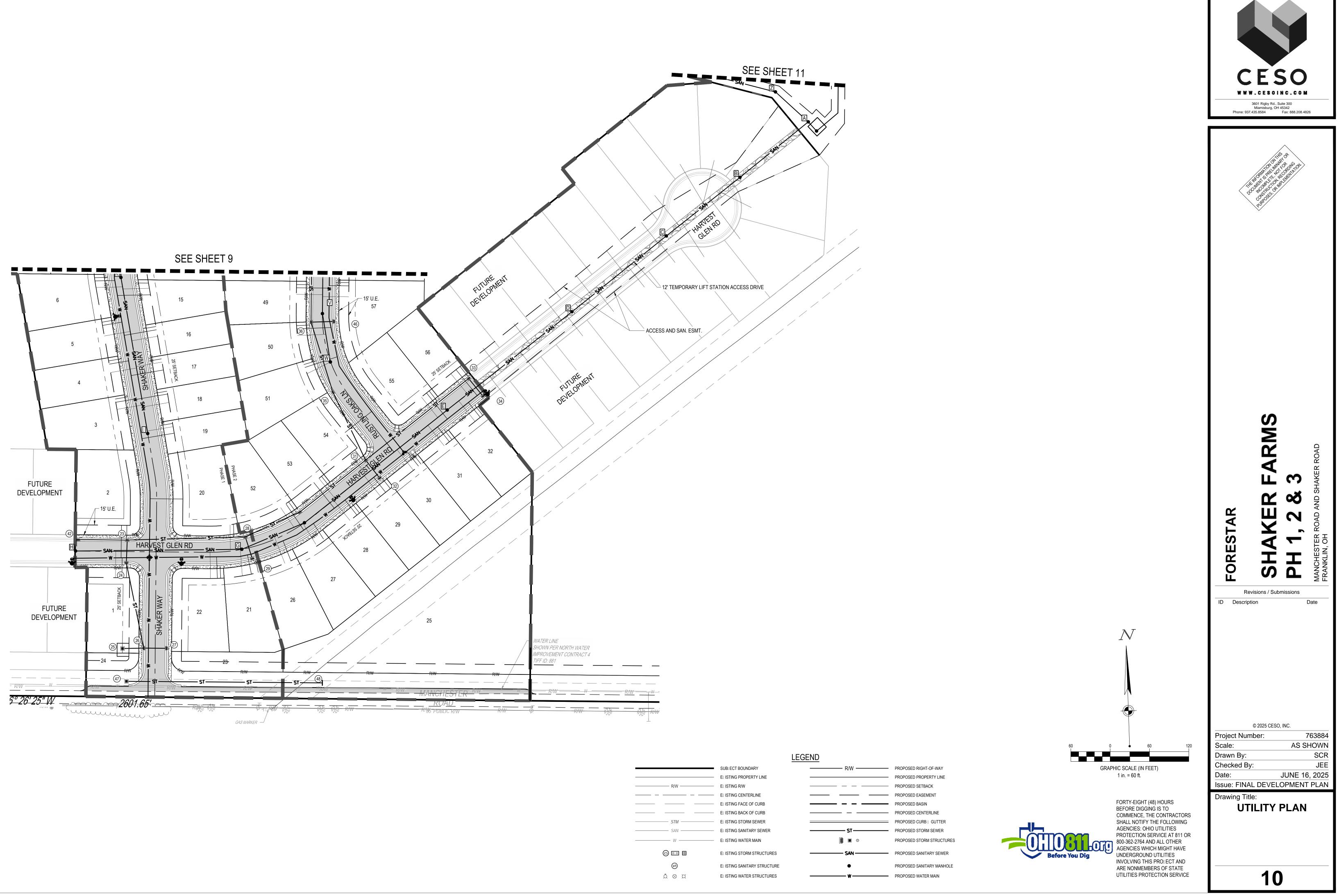


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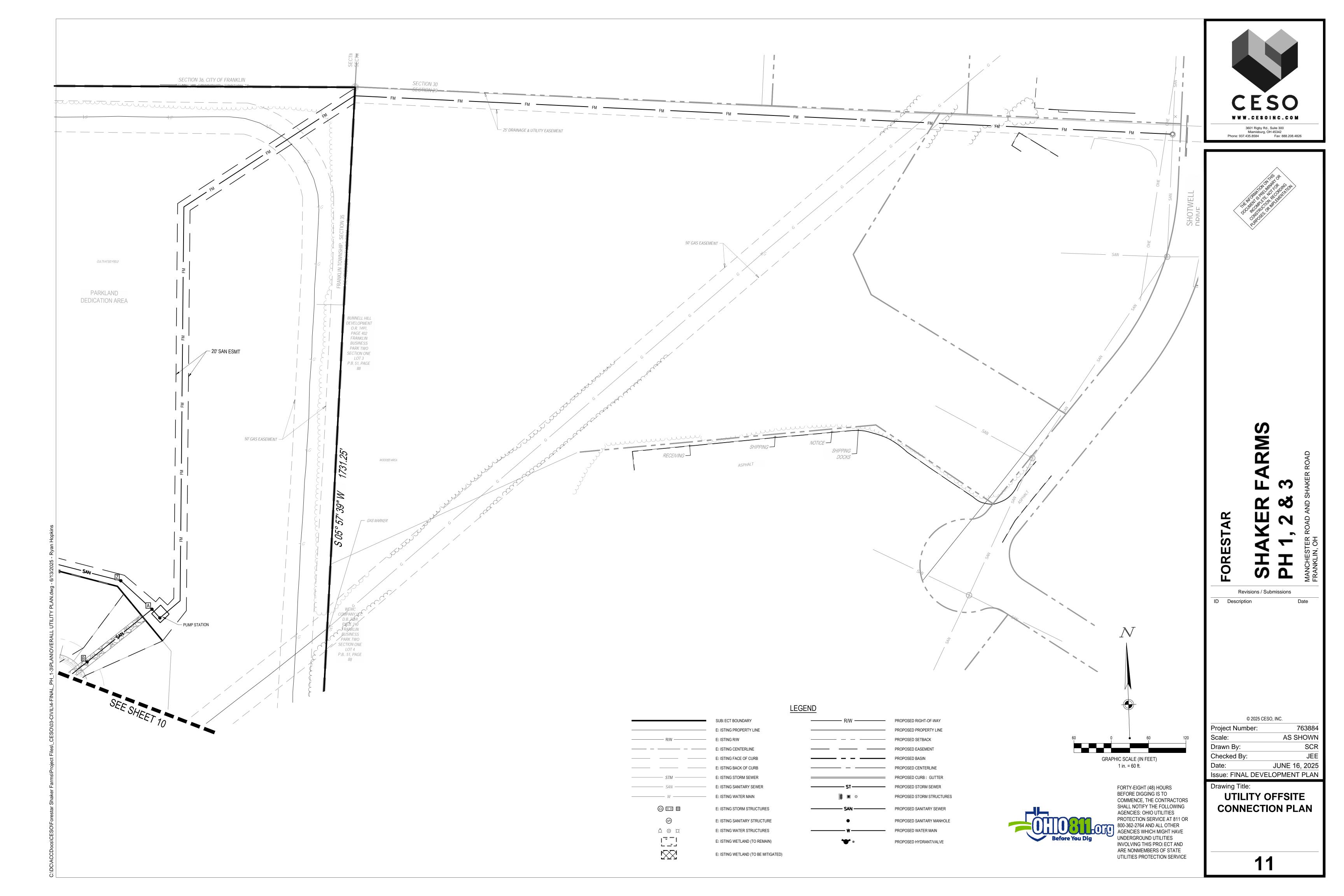


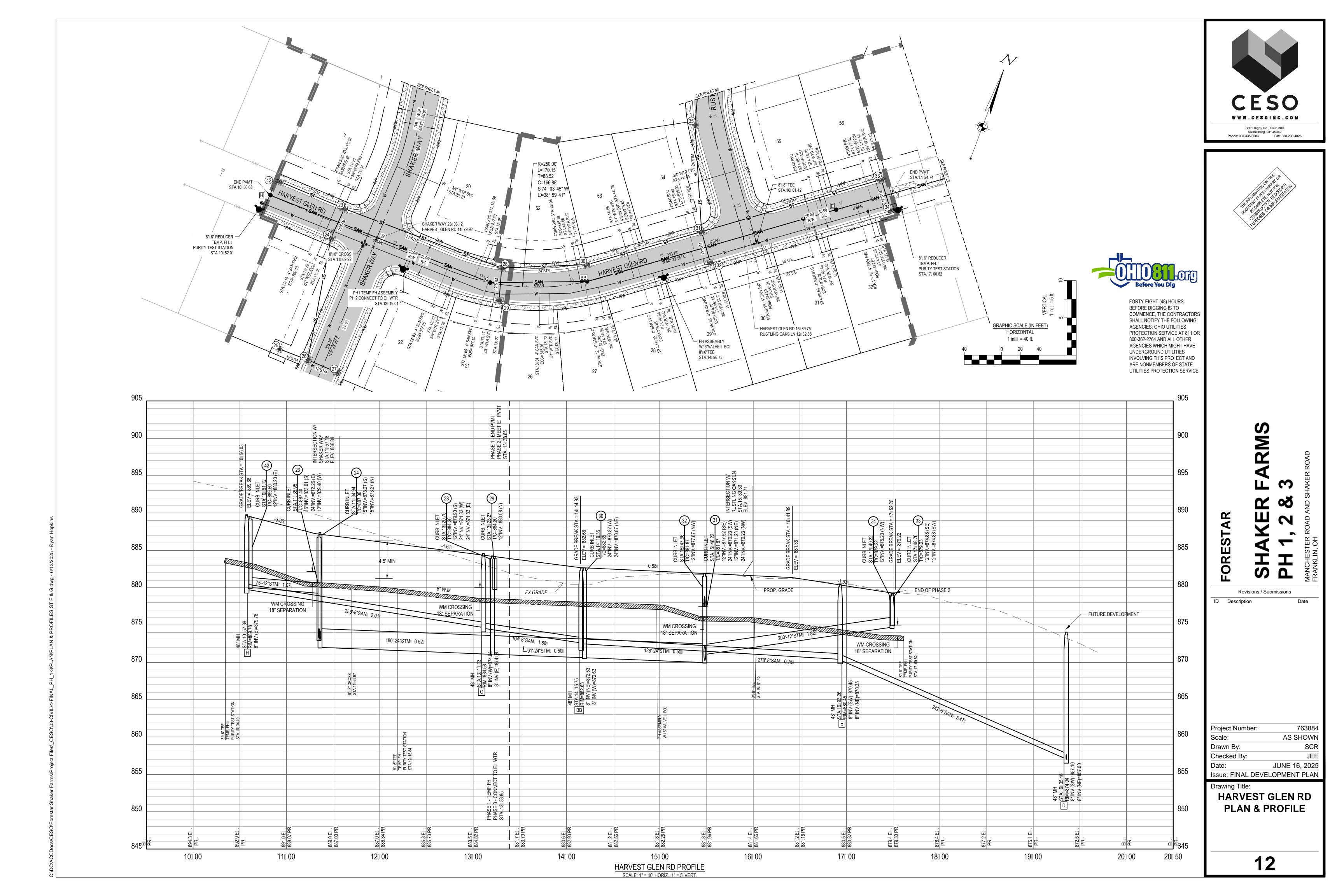


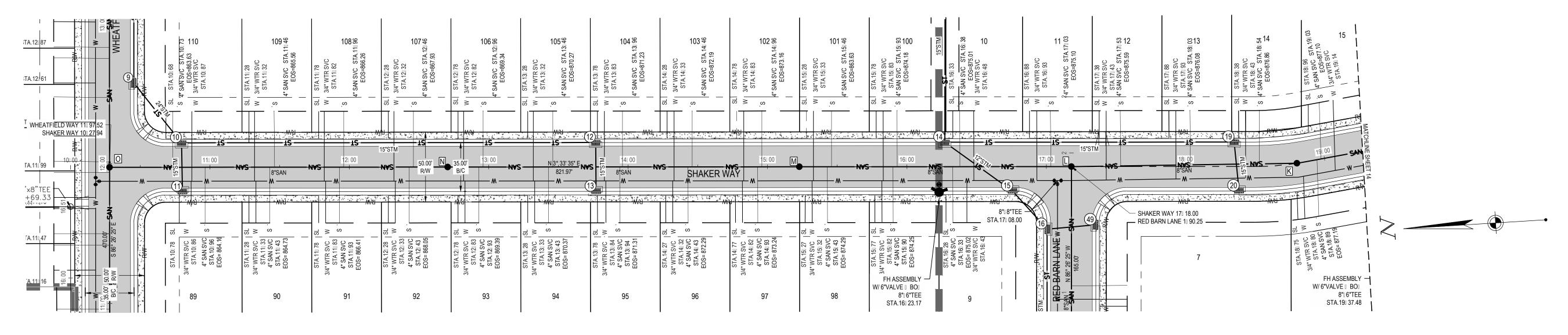




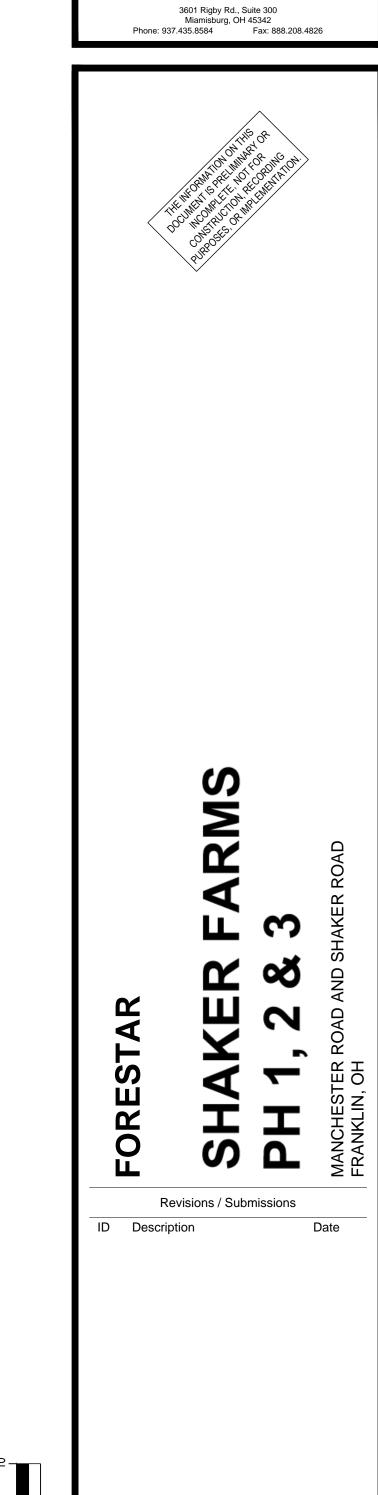






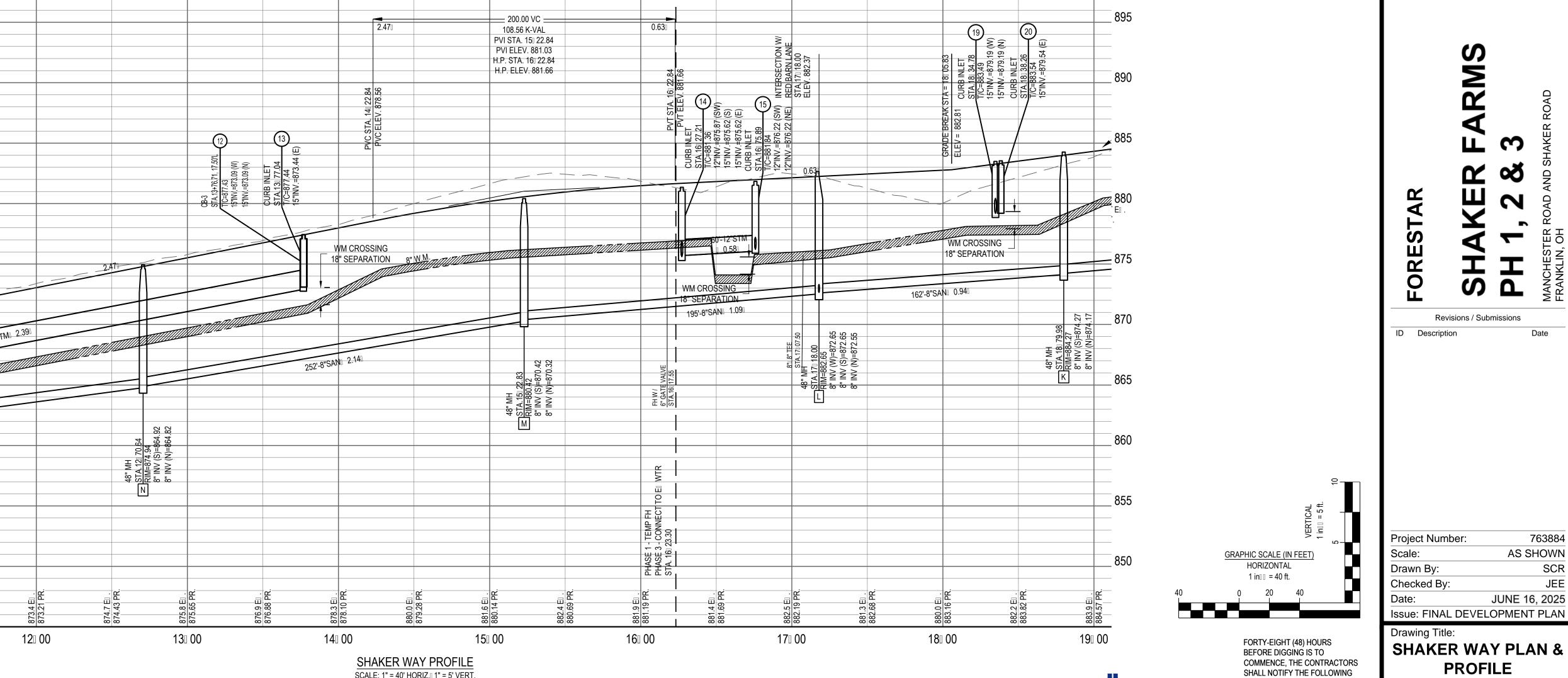


SCALE: 1" = 40' HORIZ. 1" = 5' VERT.



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870

855

WHEATFIELD STA.0I 85.50 ELEV. 871.13

100 00

WM CROSSING 18" SEPARATION

11000

243'-8"SANE 1.66E

13

AGENCIES: OHIO UTILITIES PROTECTION SERVICE AT 811 OR 800-362-2764 AND ALL OTHER AGENCIES WHICH MIGHT HAVE

UNDERGROUND UTILITIES
INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE

UTILITIES PROTECTION SERVICE

**PROFILE** 

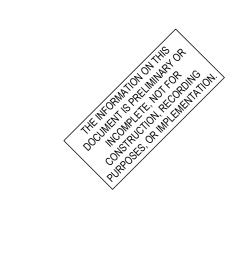
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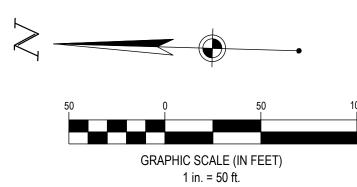
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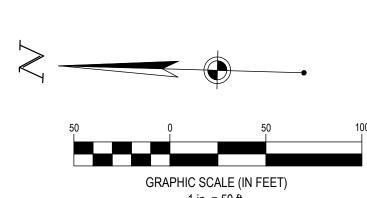
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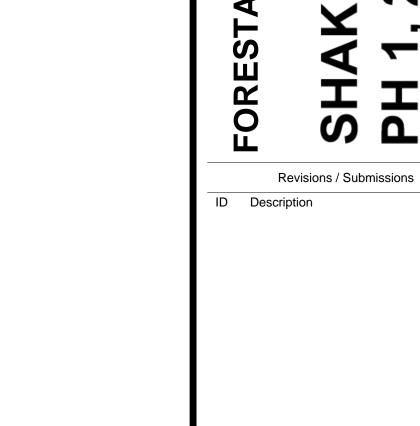
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Project Number:	763884
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Drawn By:	SCR
Checked By:	JEE
Date:	JUNE 16, 2025
Issue: FINAL DEVE	LOPMENT PLAN

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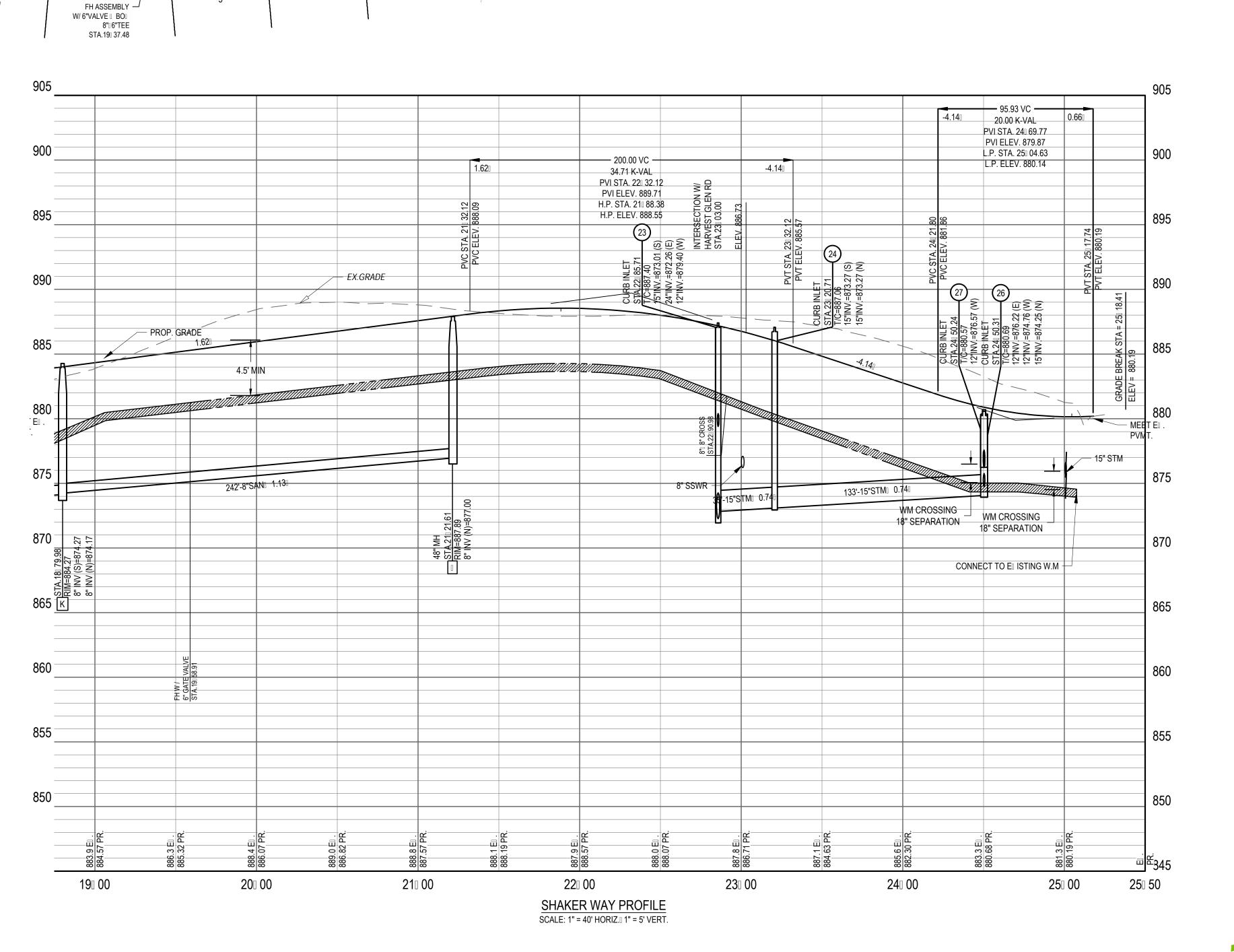
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Date

Drawing Title:

SHAKER WAY PLAN & **PROFILE** 

14



L=170.15' T=88.52'

SL STA.13: 05 4"SAN SVC \$TAS2: 99 EOS=877.30

SHAKER WAY 23 03.12 — HARVEST GLEN RD 11 79.92

STA.11# 28 W 3/4" WTR SVC

4"SAN SVC STAS1116

SHAKER WAY

STA.13 05 4" SAN SV21 EOS= 877.19

STA.120 72 3/4" WTR SVC W

- PH1 TEMP FH ASSEMBLY PH 2 CONNECT TO ED WTR STA.12D 19.01

SHAKER WAY

8" 8" CROSS STA.11 69.92

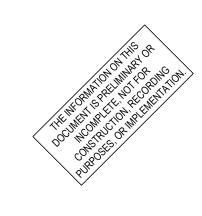
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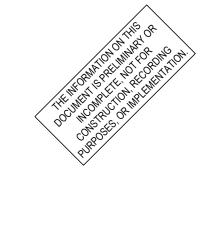
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**GRAPHIC SCALE (IN FEET)** HORIZONTAL FORTY-EIGHT (48) HOURS

BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING AGENCIES: OHIO UTILITIES PROTECTION SERVICE AT 811 OR 4 AND ALL OTHER AGENCIES WHICH MIGHT HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE UTILITIES PROTECTION SERVICE









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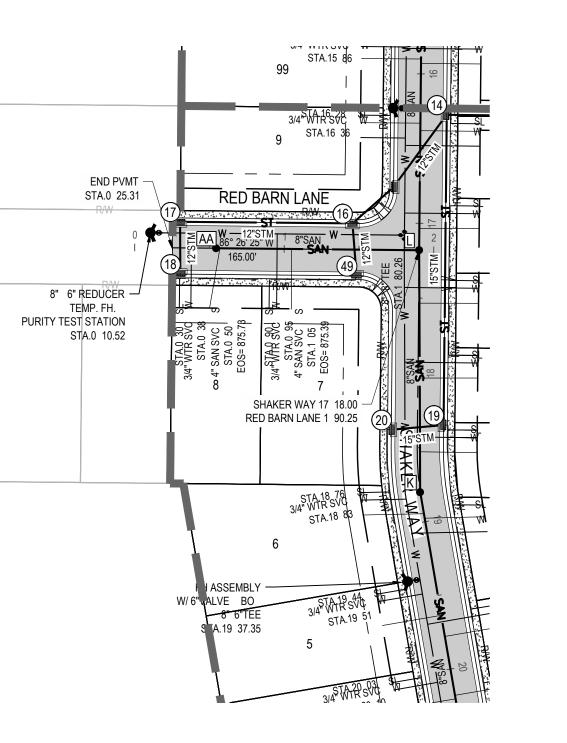
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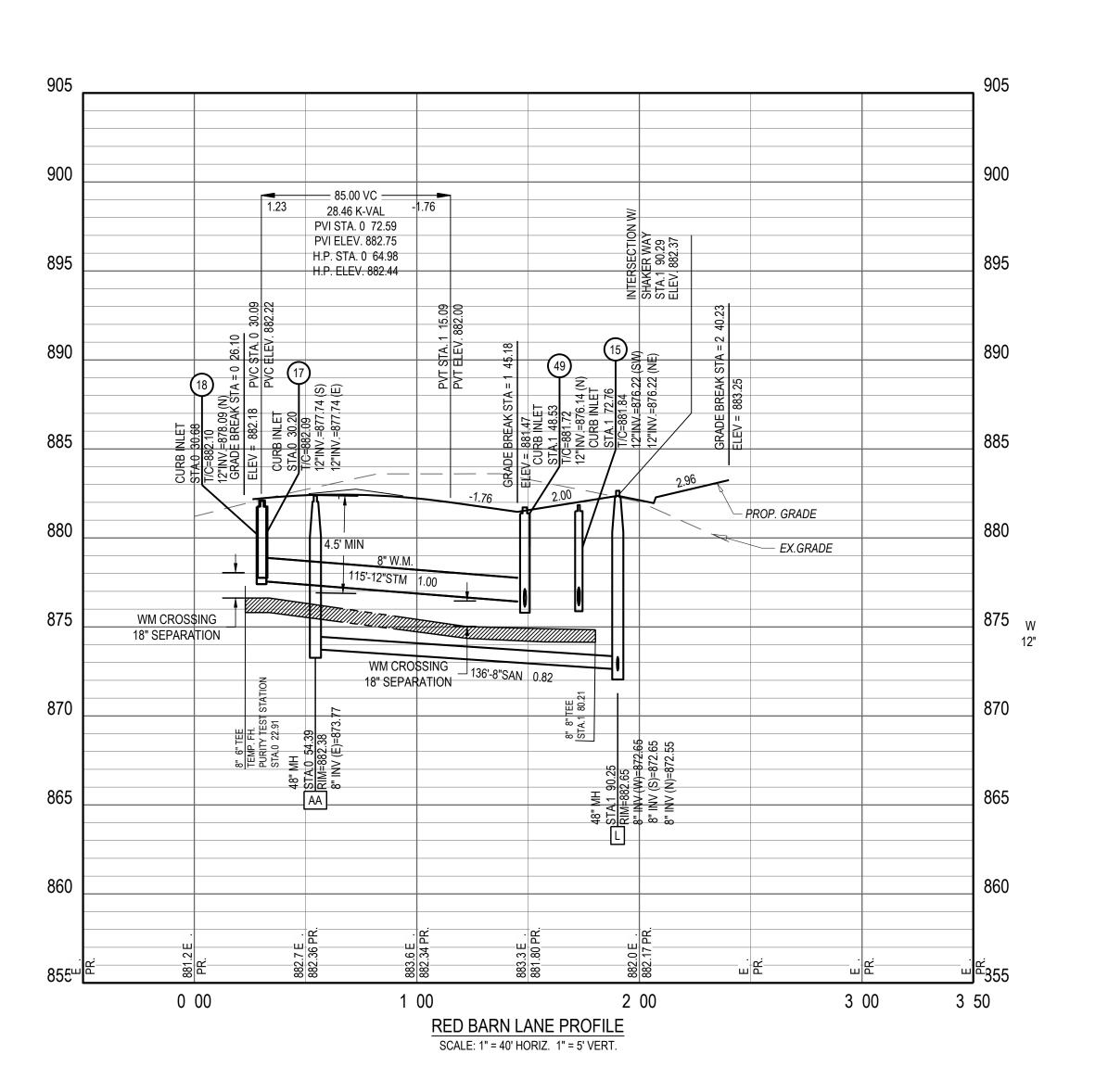
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Issue: FINAL DEVELOPMENT PLAN Drawing Title:

RED BARN LANE PLAN & PROFILE

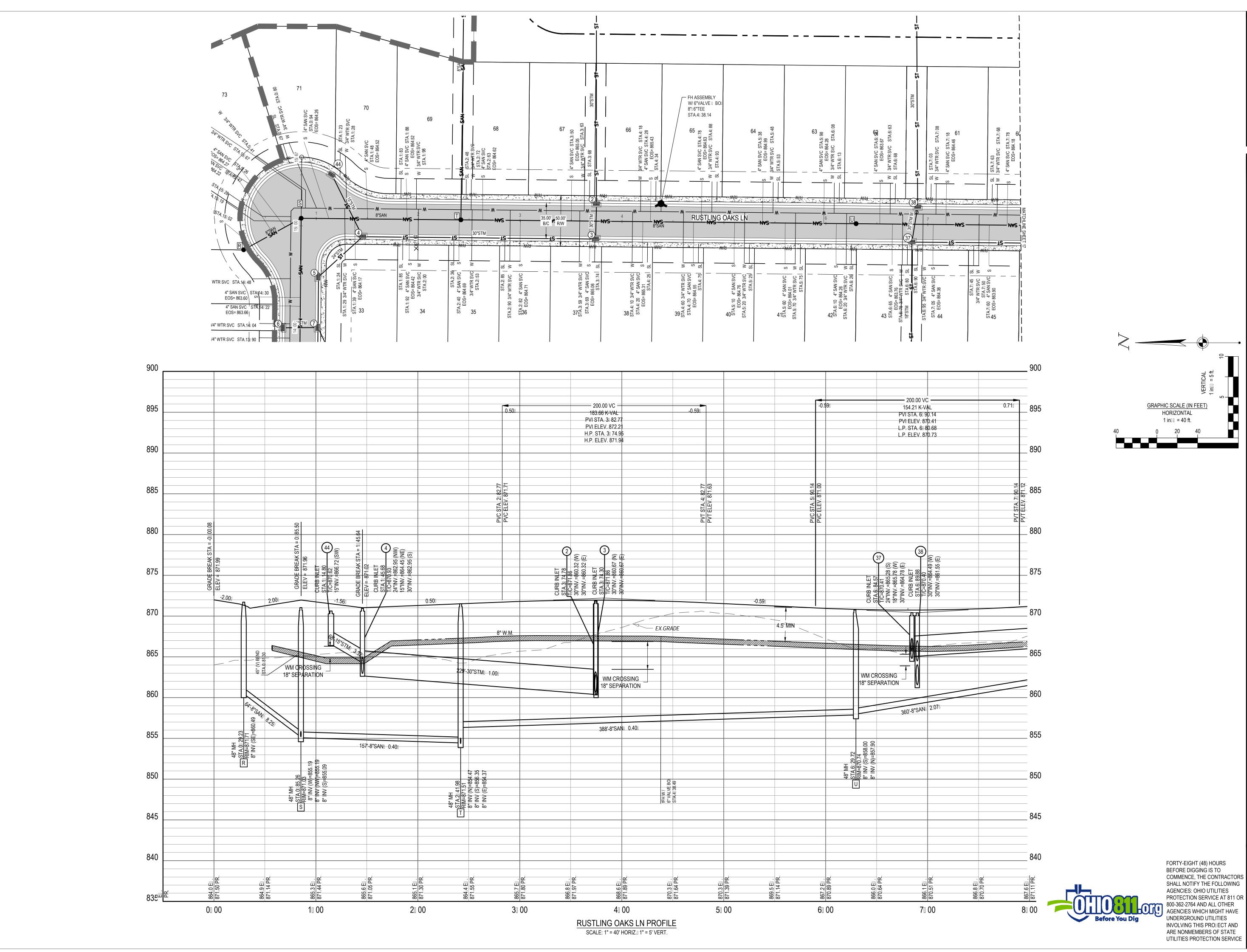
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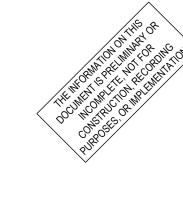


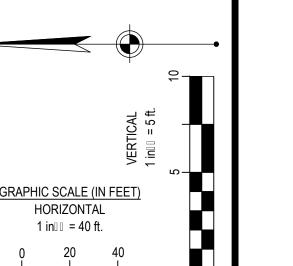
FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS COMMENCE, THE CONTRACTORS
SHALL NOTIFY THE FOLLOWING
AGENCIES: OHIO UTILITIES
PROTECTION SERVICE AT 811 OR
800-362-2764 AND ALL OTHER
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ARE NONMEMBERS OF STATE UTILITIES PROTECTION SERVICE











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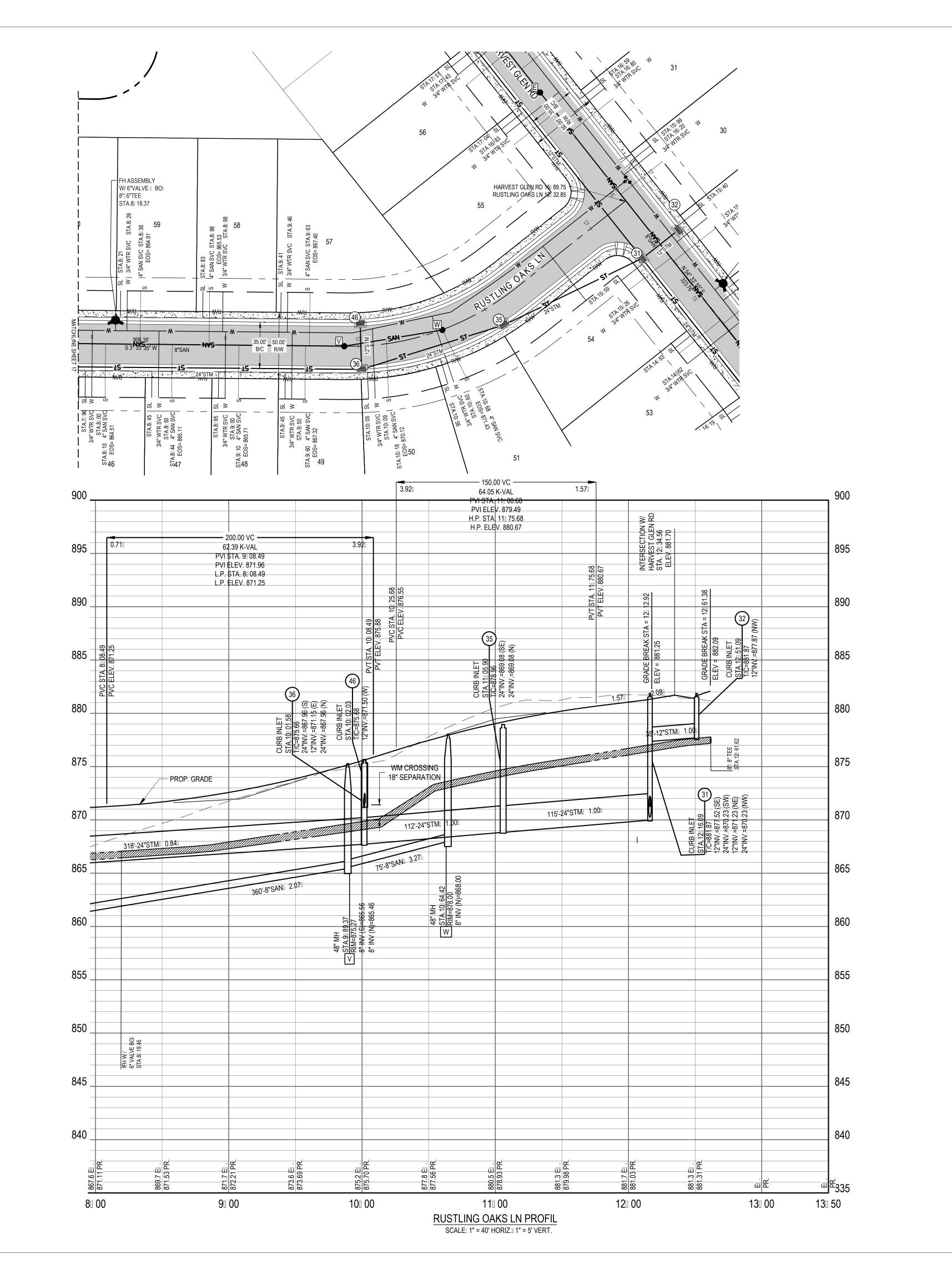
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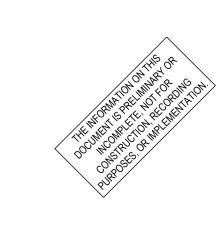
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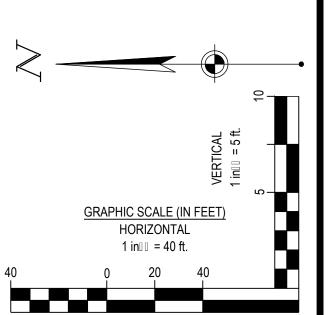
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**RUSTLING OAKS LN PLAN & PROFILE** 









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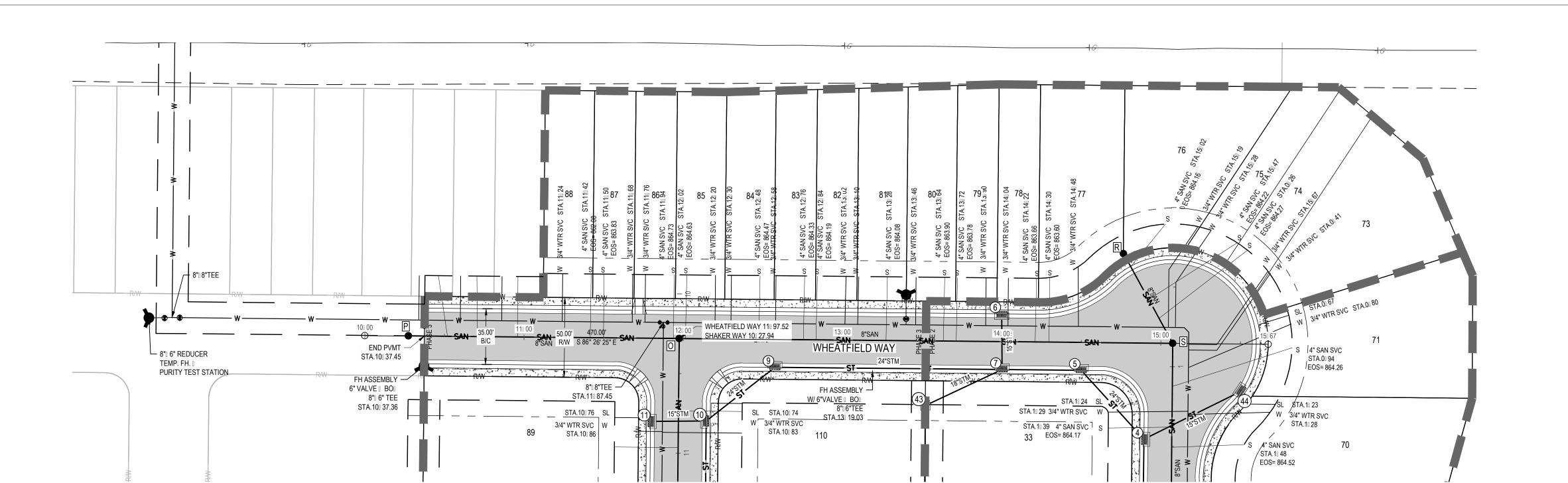
Date:

Drawing Title: **RUSTLING OAKS LN PLAN & PROFILE** 

JUNE 16, 2025

FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING AGENCIES: OHIO UTILITIES PROTECTION SERVICE AT 811 OR 800-362-2764 AND ALL OTHER AGENCIES WHICH MIGHT HAVE UNDERGROUND UTILITIES
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UTILITIES PROTECTION SERVICE



15.25 K-VAL

PVI STA. 11: 85.06 PVI ELEV. 871.80 H.P. STA. 121 22 62 H.P. ELEV. 871.45

INTERSECTION SHAKER WAY STA.110 96.49 ELEV. 871.12

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12000

PROP. GRADE

\_\_\_170'-8"SAN\_\_0.40

11000

38.42 K-VAL

PVI STA. 14 00.28

PVI ELEV. 870.05 L.P. STA. 131 81.65

L.P. ELEV. 870.33

WM CROSSING 18" SEPARATION

1400

310'-8"SAN 0.40

13000

WHEATFIELD WAY PROFILE

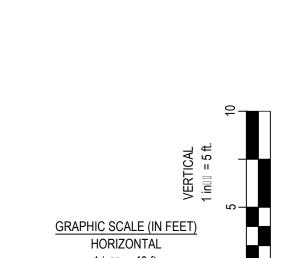
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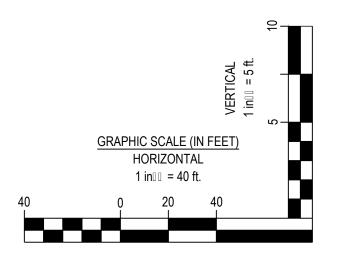
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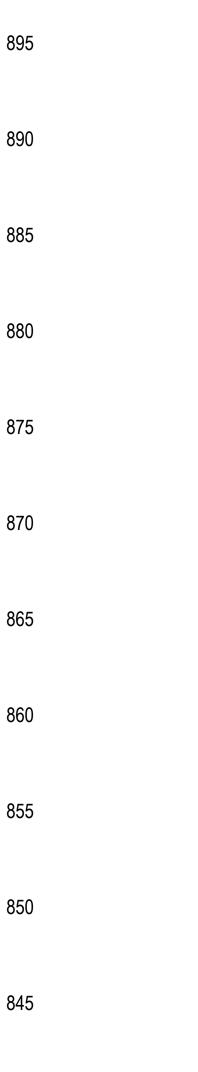
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WM CROSSING 18" SEPARATION

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Revisions / Submissions Date

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763884 Project Number: AS SHOWN Scale: Drawn By: Checked By: JUNE 16, 2025 Date:

Issue: FINAL DEVELOPMENT PLAN Drawing Title:

**WHEATFIELD WAY PLAN & PROFILE** 

FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTORS SHALL NOTIFY THE FOLLOWING AGENCIES: OHIO UTILITIES PROTECTION SERVICE AT 811 OR 800-362-2764 AND ALL OTHER AGENCIES WHICH MIGHT HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NONMEMBERS OF STATE

UTILITIES PROTECTION SERVICE

890

880

875

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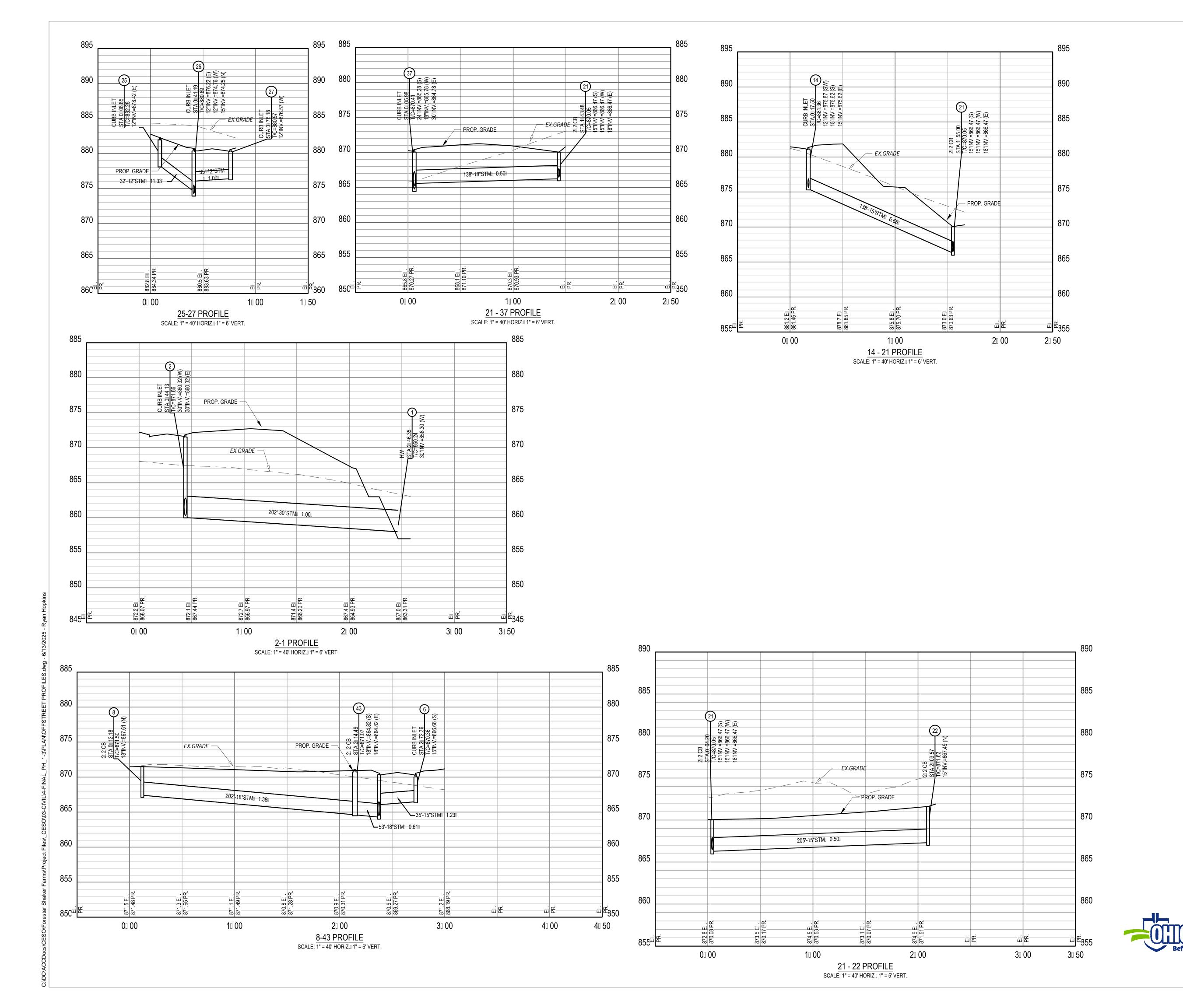
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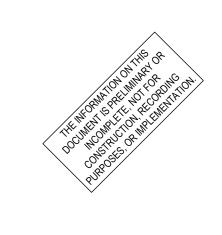
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EX.GRADE

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HAKER FARM: H 1. 2 & 3

Revisions / Submissions

ID Description Date

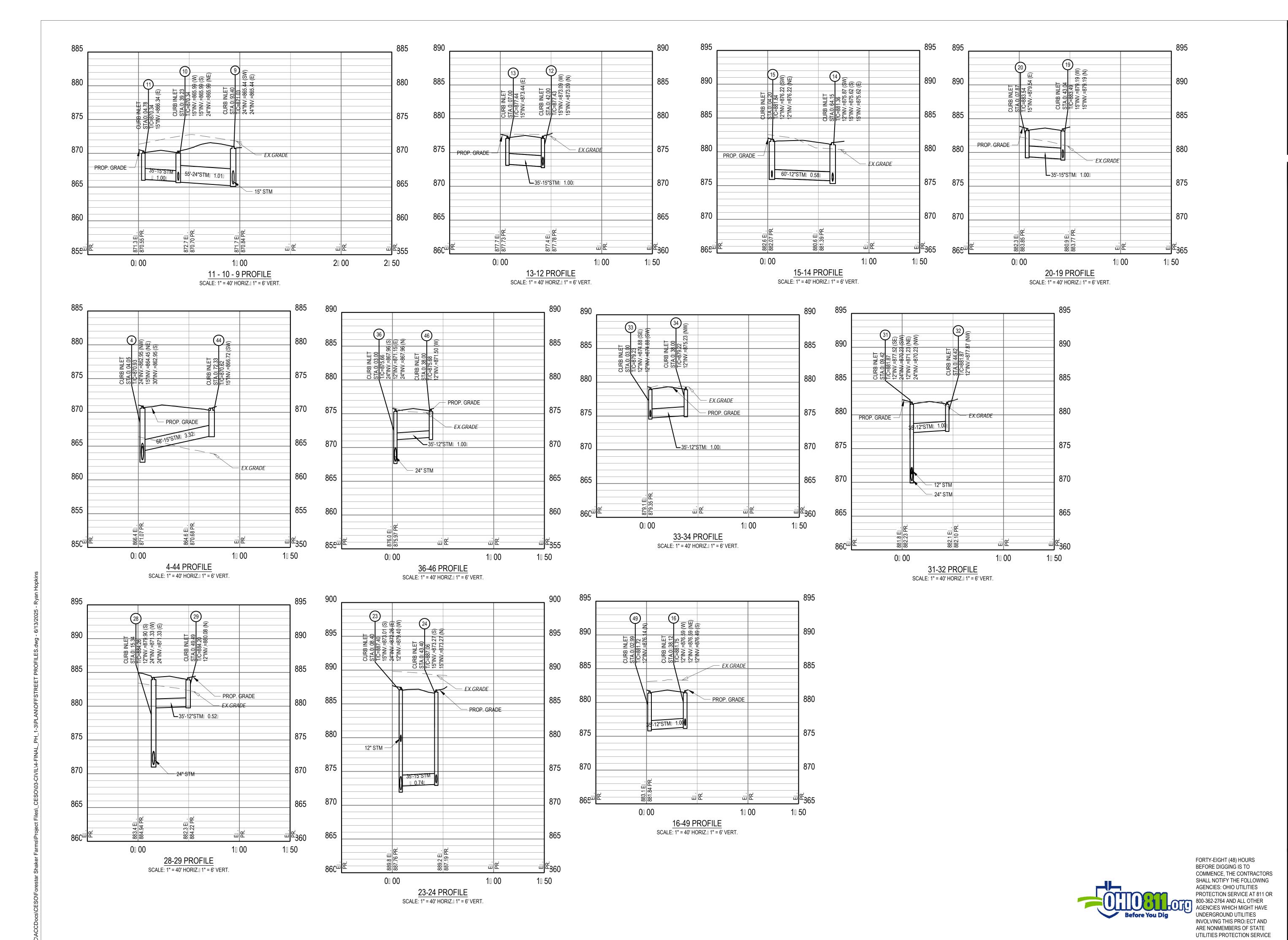
Project Number: 763884
Scale: AS SHOWN
Drawn By: SCR
Checked By: JEE
Date: JUNE 16, 2025

Issue: FINAL DEVELOPMENT PLAN
Drawing Title:

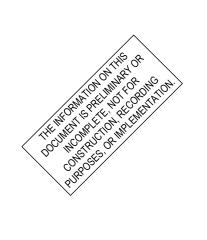
OFFSTREET PROFILES

19

FORTY-EIGHT (48) HOURS
BEFORE DIGGING IS TO
COMMENCE, THE CONTRACTORS
SHALL NOTIFY THE FOLLOWING
AGENCIES: OHIO UTILITIES
PROTECTION SERVICE AT 811 OR
800-362-2764 AND ALL OTHER
AGENCIES WHICH MIGHT HAVE
UNDERGROUND UTILITIES
INVOLVING THIS PROJECT AND
ARE NONMEMBERS OF STATE
UTILITIES PROTECTION SERVICE







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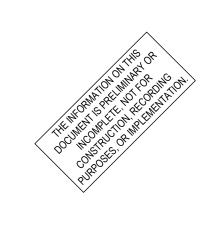
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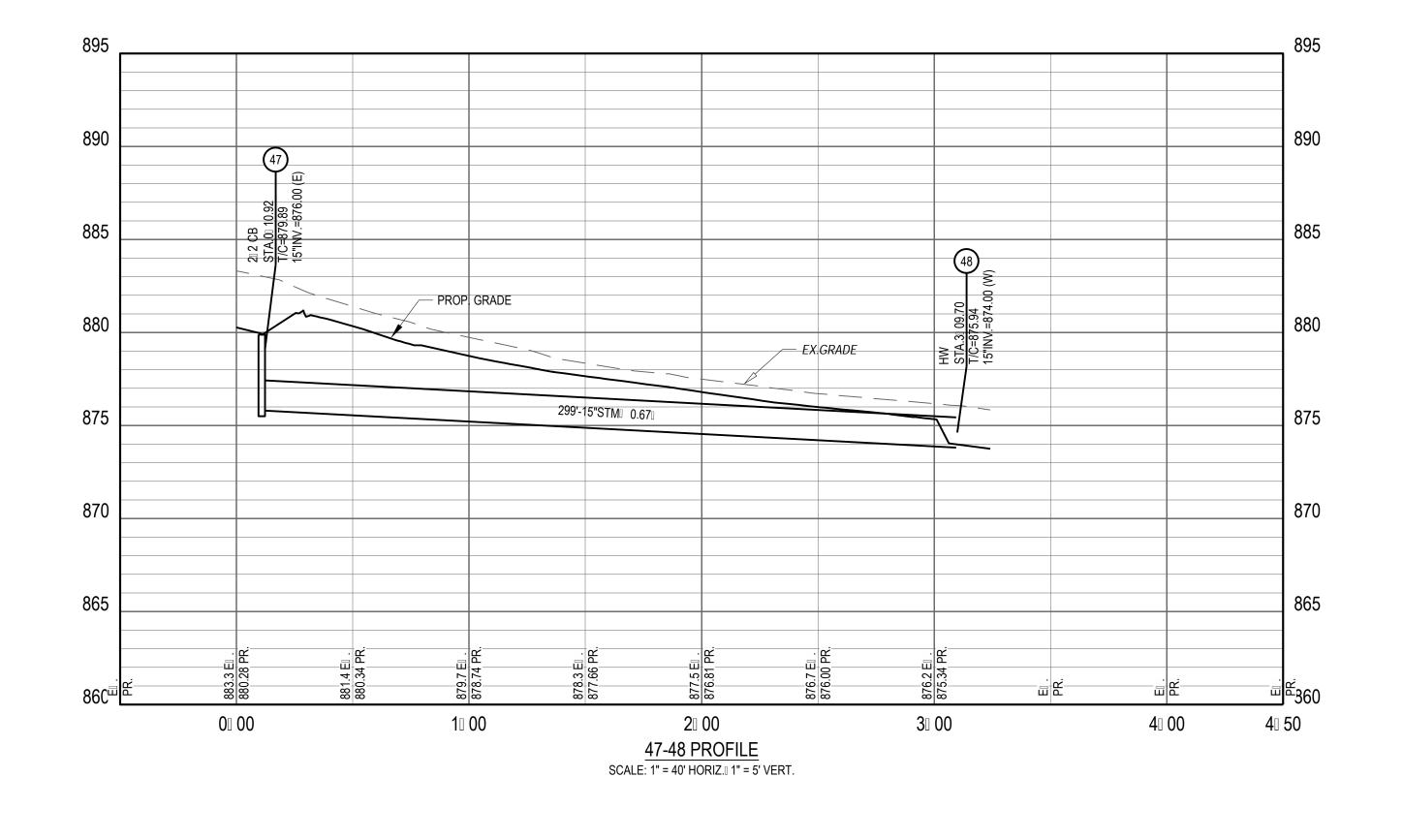
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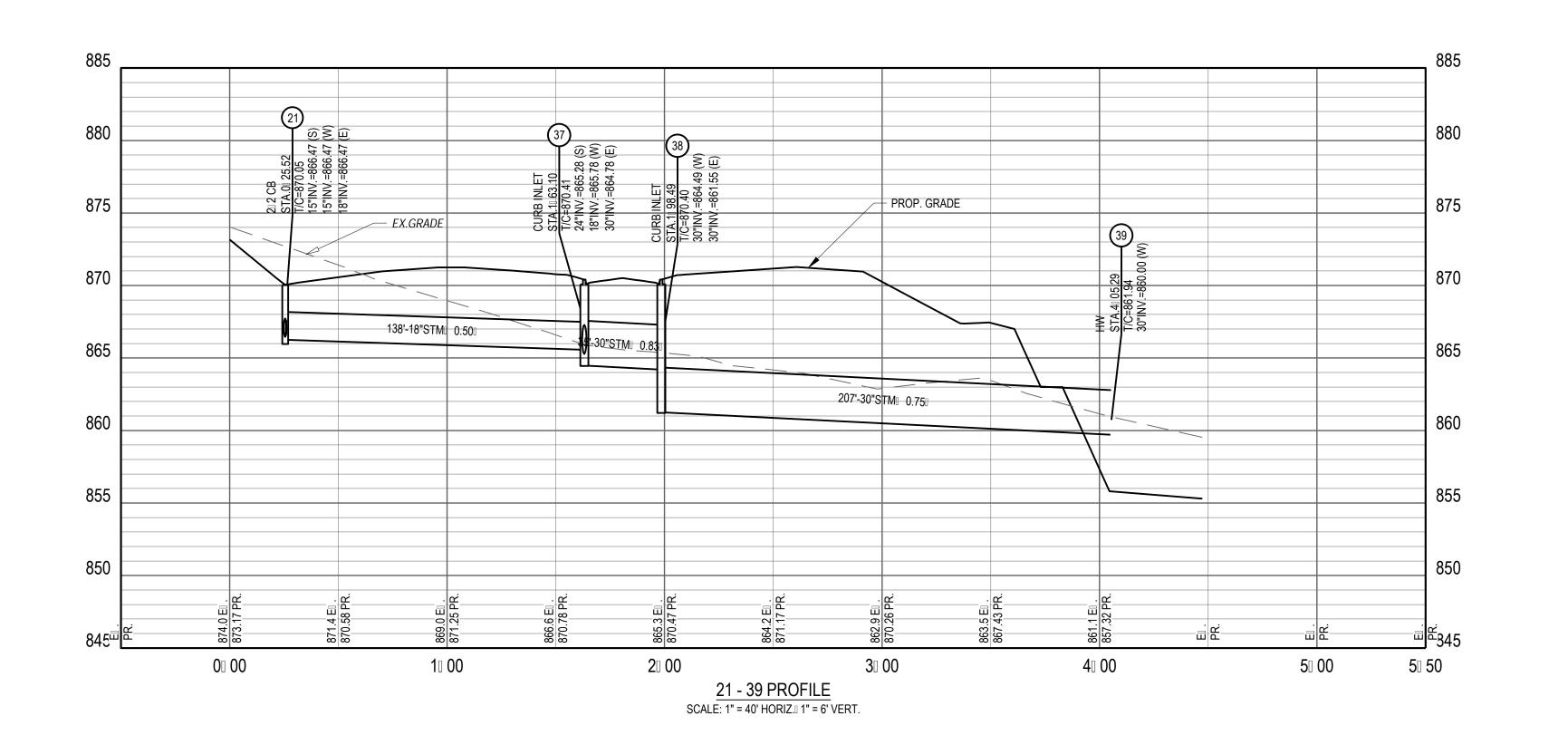
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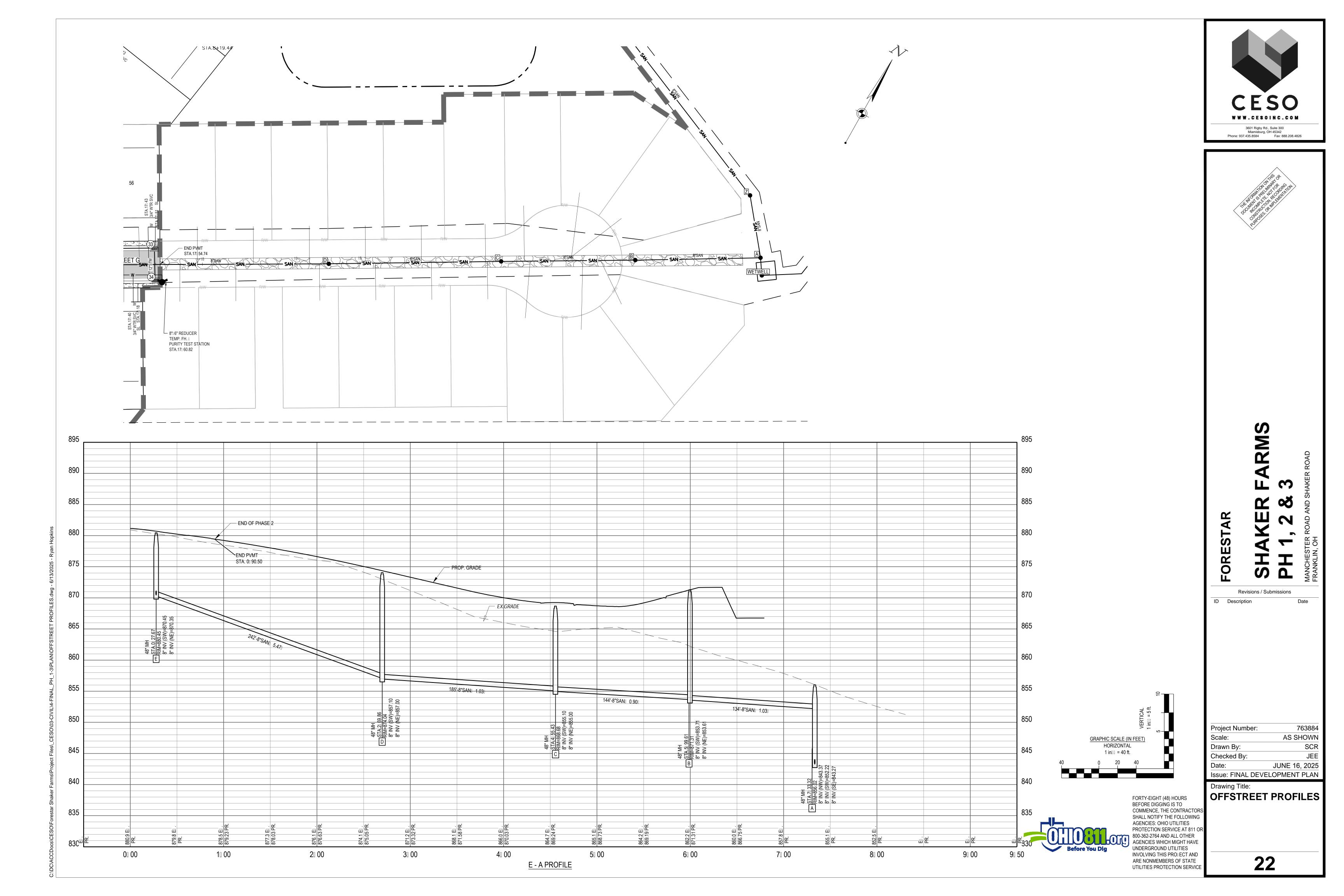
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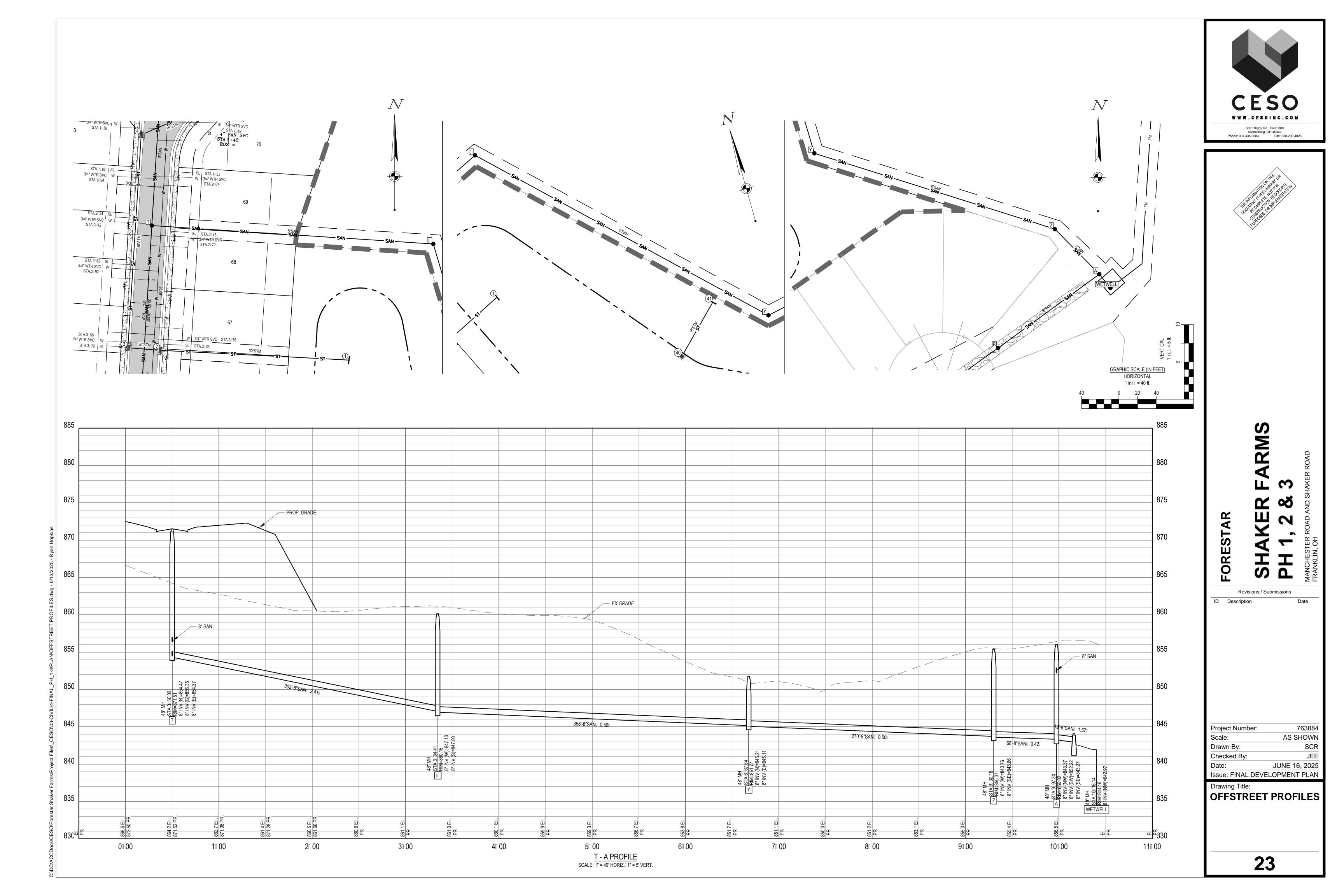


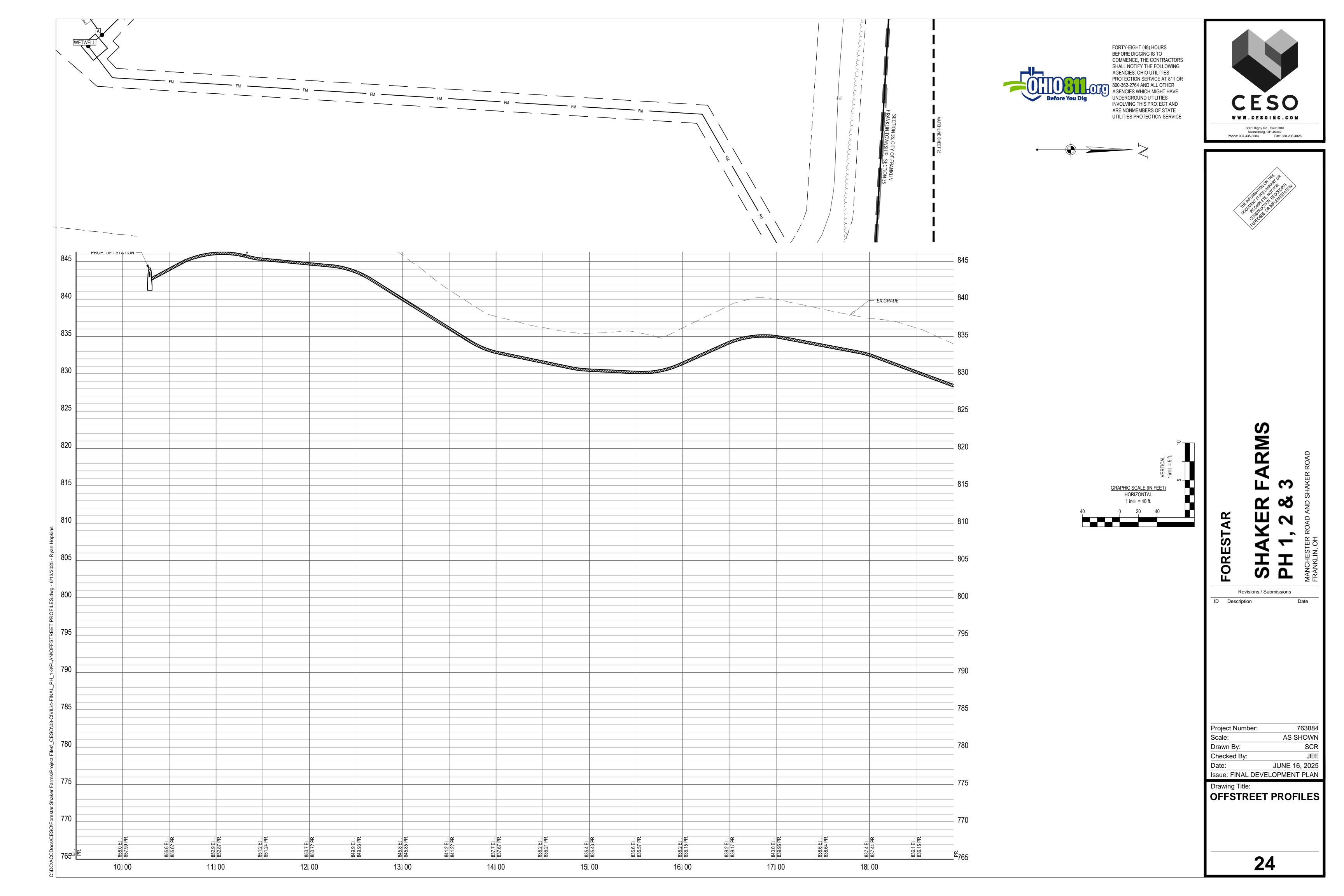


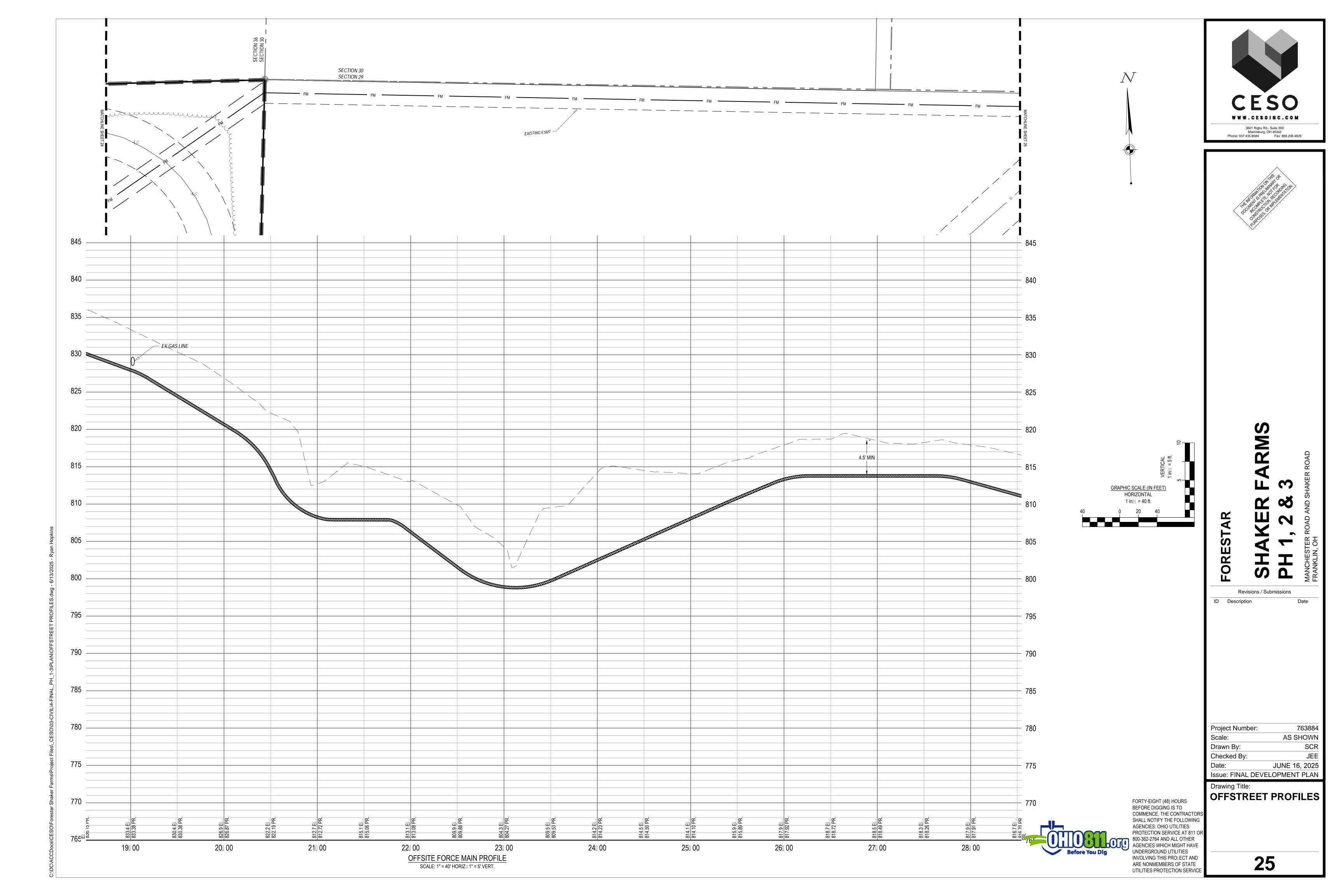


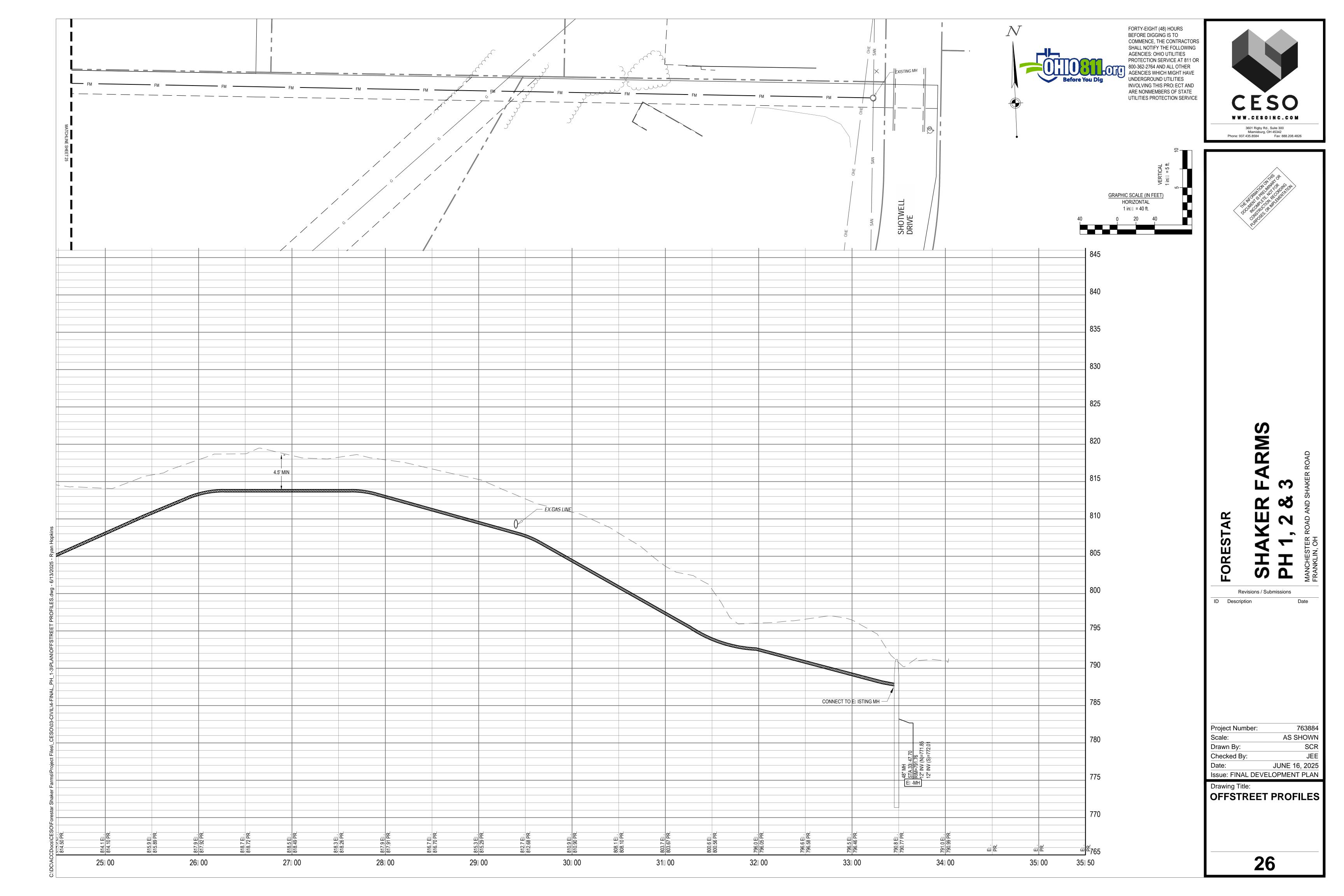
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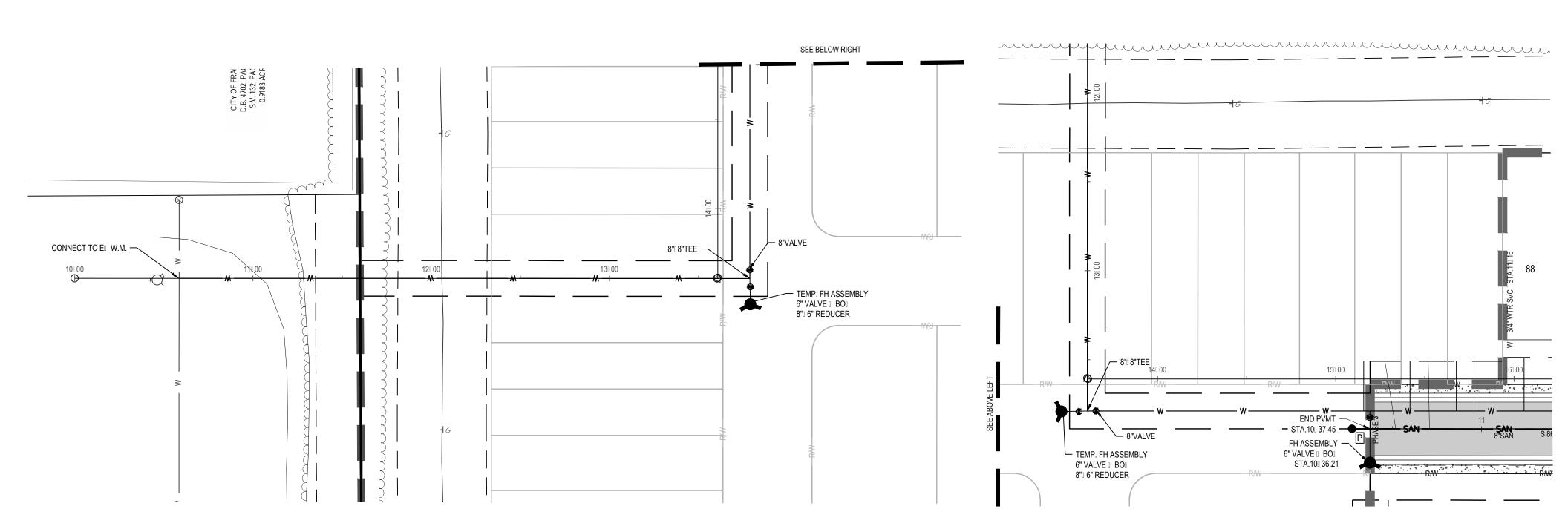


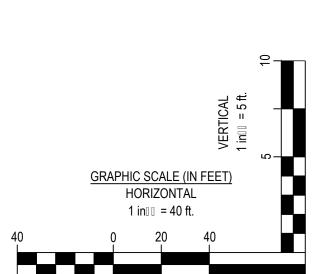


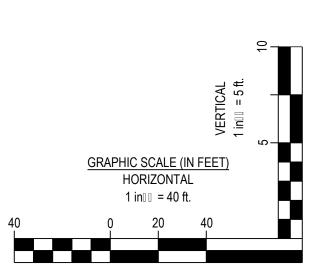
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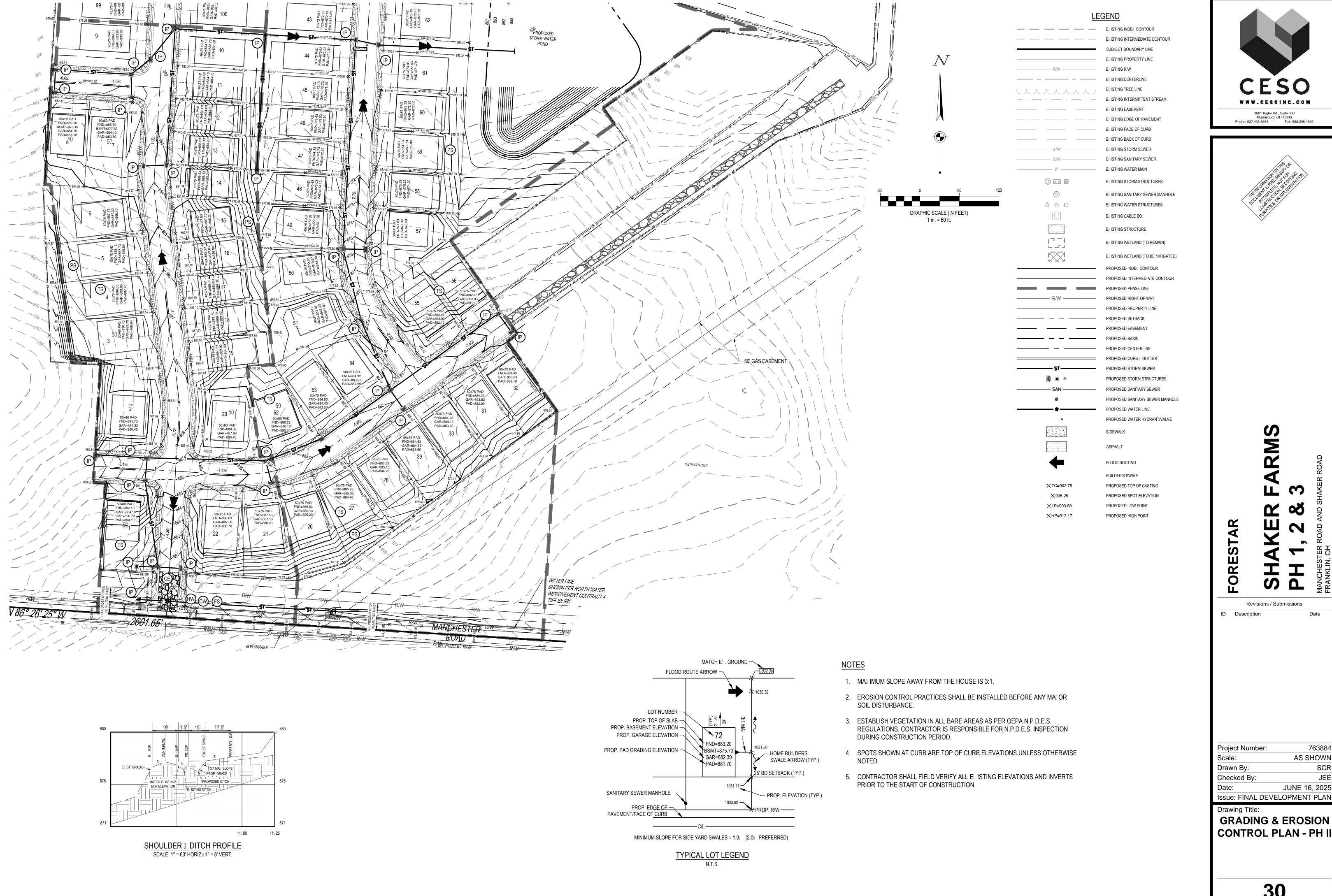
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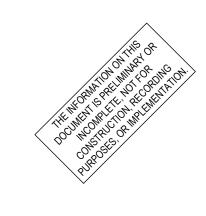












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**GRADING & EROSION** CONTROL PLAN - PH II



BASIN#	VOLUME (CF)	DAYS TO DRAIN	SKIMMER SIZE (IN.)	BARREL LENGTH (FT.)	ORIFICE RADIUS (IN.)
BASIN A	48492	2	4	4	0.9000

NOTES:

1. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING

IN A CORRECT MANNER.

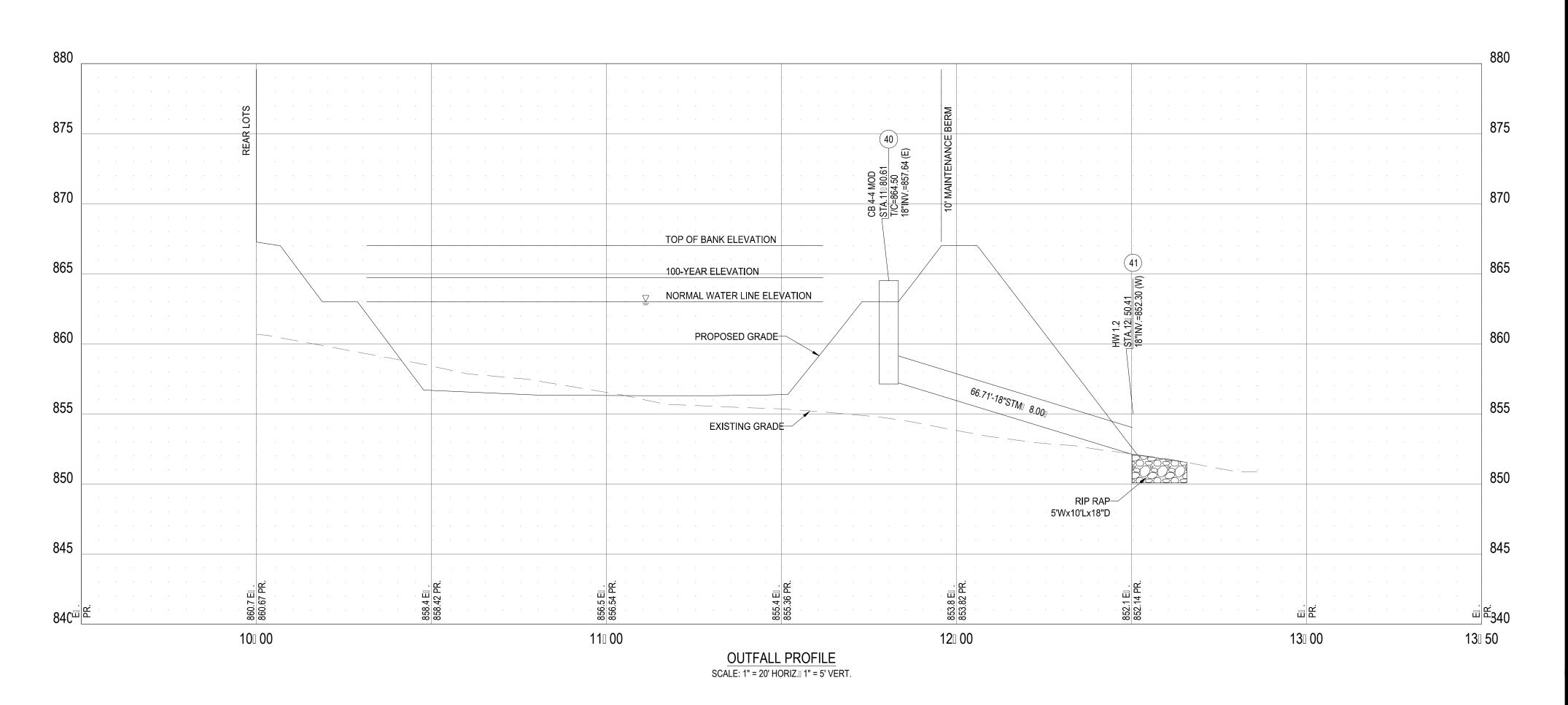
2. USE FAIRCLOTH SKIMMER OR APPROVED OTHER.

### SEDIMENT BASIN SKIMMER

NTS

	SEDIMENT CONTROL VOLUMES								
POND	DRAINAGE AREA (AC)	DISTURBED AREA (AC)	REI UIRED DEWATERING ZONE VOLUME (CF)	REI UIRED SEDIMENT ZONE VOLUME (CF)	PROVIDED DEWATERING ZONE VOLUME (CF)	PROVIDED SEDIMENT ZONE VOLUME(CF)	DEWATERING ZONE (FT)	SEDIMENT STORAGE ZONE (FT)	BOTTOM (FT)
BASIN A	26.94	26.94	48,492	26,940	285,190	261,172	862.00 - 865.00	856.50 - 862.00	856.50

TYPICAL MAINTENANCE ACTIVITIES FOR BASINS								
SCHEDULE	INSPECTION ITEM	ACTIVITY						
MONTHLY	INLET/OUTLET STRUCTURE () SIDE SLOPES	- DO NOT FERTILIZE VEGETATION SURROUNDING BASIN MOW SIDE SLOPES.						
ANNUALLY (AND AFTER LARGE STORM EVENTS)	INLET/OUTLET STRUCTURE () SIDE SLOPES	- REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM INLET AND OUTLET STRUCTURES.						
BI-ANNUALLY	STORMWATER BASIN	- CHECK FOR SIGNS OF EUTROPHIC CONDITIONS (ALGAE BUILD-UP) NOTE SIGNS OF HYDROCARBON BUILD-UP, REMOVE APPROPRIATELY.						
ANNUALLY (AND AFTER LARGE STORM EVENTS)	STORMWATER BASIN	- INSPECT FOR DAMAGE, PAYING PARTICULAR ATTENTION TO THE OUTLET CONTROL STRUCTURE MONITOR SEDIMENT ACCUMULATION IN THE FACILITY EII AMINE TO ENSURE INLET AND OUTLET DEVICES ARE FREE OF DEBRIS AND ARE OPERATIONAL INSPECT FOR INVASIVE VEGETATION IF WETLAND COMPONENTS INCLUDED.						
ANNUALLY	STORMWATER BASIN SEDIMENT ACCUMULATION	- MONITOR SEDIMENT ACCUMULATIONS, AND REMOVE SEDIMENT WHEN THE POOL VOLUME HAS BECOME REDUCED SIGNIFICANTLY (25) OF PERMANENT POOL VOLUME LOST), OR THE POND BECOMES EUTROPHIC						
ANNUALLY	BASIN EMBANKMENT	- REPAIR UNDERCUT/ERODED AREAS AND STABILIZE.						
ANNUALLY (AND AFTER LARGE STORM EVENTS)	STORM SEWER SYSTEM	- REMOVE DEBRIS FROM THE SEWER SYSTEM TO ENSURE POSITIVE FLOW TO THE BASIN.						





ORIFICE PLATE W/8" ORIFICE

24"INV.=862.00 —

- ORIFICE PLATE -

SEE DTL ABOVE RT

BASIN A OUTLET DETAIL

/— 8"□ 8" PVC TEE

8" PVC END

- 8" PVC PIPE

CATCH BASIN

**GROUTED INTO** 

INV.=86100

8" CAP
 ACCESS FOR DEBRIS REMOVAL

BEFORE ENTIRE SITE IS STABILIZED
 SKIMMER SHALL BE ATTACHED

6"OPENING -

T/GR=864.50

3' WINDOW=863.50

WI ELEV.=863.33 W.S.=862.00 (8"ORIFICE)

BOTTOM=862.00

24"PIPE -



# SHAKER FARMS PH 1, 2 & 3

Revisions / Submissions

ID Description Date

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Project Number: 763884

Scale: AS SHOWN

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Drawing Title:

BASIN DETAILS

5764 SHAKER RD. FRANKLIN OH 45005

FORESTAR (USA) REAL ESTATE INC. **DEVELOPER:** 2221 E. LAMAR BLVD. SUITE 790 ARLINGTON, TX 76006

CESO, INC. PLAN 3601 RIGBY ROAD, STE 300 **DESIGNER:** MIAMISBURG, OHIO 45342

**DEVELOPMENT NAME AND DESCRIPTION:** 

SHAKER FARMS PHASE 1-3 IS A LOW DENSITY RESIDENTIAL SUBDIVISION THAT WILL CONSIST OF 106 SINGLE FAMILY HOMES.

SITE ACREAGE:

26.94 TOTAL ACRES WILL BE DISTURBED BY CONSTRUCTION.

RUNOFF COEFFICIENT:

PRE-CONSTRUCTION RUNOFF COEFFICIENT, C=0.40 POST-CONSTRUCTION RUNOFF COEFFICIENT, C=0.50

IMPERVIOUS AREA:

PRE-CONSTRUCTION - 0 ACRE, 0% POST-CONSTRUCTION - 9.43 ACRE, 35.0%

PRIOR LAND USE

THE SITE WAS PREVIOUSLY OCCUPIED BY A COMBINATION OF DENSE WOODS AND MEADOWS.

**SOIL TYPES:** 

Map unit sysalist	Mep witness	Rothing	Azum in AO	Percent of AOI
Br .	Processor stify stay learn, the stify, 9 to 2 persons stopes	30	4.4	2.0%
타기	Processor, tire alloy Lither lend complex C to 2 percent depen	5:0	1.e	9.75
Dia B	Cana sittisert. 250 6 genna 6 alopag	c	27.1	16.6 a
HREX	Hondreps a bill prison controller. 12 to 13 percent allepea. severally erochel	ŝ	7.8	2.13.
lAnD2	Mention Henropin sit learns, 12 to 18 percent stopes, moderately eroded	s .	6.0	2.2%
Mick	iffizmian Russell sit learns, § is (2 percent slepss, scotled	c	72,6	22,2%
<b>R</b> a))	Russell-Mismisa silt leams, 21o 6 parcent sieppa	ç	70.5	Ser se s
Fx62	Russen klismism sir rugur, z to 4 persent siopen, moderately engled	c	22.5	16.2%
RVUE	Pluoball-Michigan-Urban land complex, 2 to 6 percent steps:	c.	12.7	485
UN462	U tran taur -Migintar - Ricesell complex, 6 to 12 gergent dopes, existed		2.6	1.8%
Хел	Xenin sittleshin, Bouttern Oxio Till Platti, 0 to 2 processi a opus	Crit	2.1	9.5%
Totals for Area of brie	reed	•	225.0	100,0%

#### **ADJACENT AREAS:**

THE SITE IS BOUND BY DEVELOPED SINGLE FAMILY HOMES TO THE WEST, UNDEVELOPED LAND TO THE NORTH COMMERICAL BUILDING TO THE EAST, AND THE SITE IS NORTH OF MANCHESTER ROAD AND WEST OF SHAKER ROAD.

STORM WATER MANAGEMENT:

THE SITE DRAINS TO AN EXISTING UNNAMED TRIBUTARY THAT OUTLETS INTO THE GREAT MIAMI RIVER WEST OF THE SITE.

# SEQUENCE OF CONSTRUCTION

- INSTALL CONSTRUCTION ENTRANCE, HAZARDOUS WASTE STORAGE AREA, VEHICLE REFUELING AREA, AND CONCRETE WASH PIT.
- 2. CLEAR & GRUB SITE CONSTRUCT BASINS
- 4. ROUGH GRADE SITE
- 5. CONSTRUCT SANITARY, DISTURBING TRENCH AREA ONLY
- 6. INSTALL STORM & WATER LINE, PLACING INLET PROTECTION AS INLETS ARE CONSTRUCTED
- 7. GRADE STREETS FIXING INLET PROTECTION AS NEEDED
- 8. PAVE STREETS 9. FINAL GRADE LOTS
- 10. SEED & MULCH ALL DISTURBED AREAS 11. REMOVE ALL EROSION CONTROL PRACTICES

#### **GOOD HOUSEKEEPING**

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT:

AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.

ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR

APPROPRIATE CONTAINERS, AND IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.

MANUFACTURER'S LABEL.

PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL

SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE

CONTAINER.

FOLLOWED.

MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE

THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

#### SWPPP NOTES

- ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED ACCORDING TO: SWPPP AND DETAIL PLANS; ACCORDING TO THE LATEST OHIO EPA AUTHORIZATION FOR CONSTRUCTION ACTIVITY UNDER THE "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" (NPDES); ANY AND ALL REQUIRED PERMITS. REPORTS, AND RELATED DOCUMENTS. SEE OHIO EPA PERMIT NO. OHC000005 FOR SWPPP RULES AND REGULATIONS. ALL CONTRACTORS AND SUBCONTRACTORS MUST BECOME FAMILIAR WITH ALL OF THE
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AND GRADE CHANGES TO THE SITE AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- CONTRACTOR SHALL MINIMIZE CLEARING AND DISTURBANCE TO THE ENVIRONMENT TO THE MAXIMUM EXTENT POSSIBLE OR AS REQUIRED BY THE GENERAL PERMIT. EVERY EFFORT SHALL BE MADE TO PRESERVE THE NATURAL RIPARIAN SETBACK ADJACENT TO STREAMS OR OTHER SURFACE WATER BODIES.
- SEDIMENT STRUCTURE AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING WITHIN SEVEN (7) DAYS FROM THE START OF CLEARING AND GRUBBING, AND SHALL CONTINUE TO FUNCTION UNTIL THE SLOPE DEVELOPMENT AREA IS RESTABILIZED. SEDIMENT CONTROL DEVICES SHALL BE IMPLEMENTED FOR ALL AREAS REMAINING DISTURBED FOR OVER 14 DAYS.
- TEMPORARY SOIL STABILIZATION OF DISTURBED AREAS BY MEANS OF TEMPORARY VEGETATION, MULCHING, GEOTEXTILES, SOD, PRESERVATION OF EXISTING VEGETATION, AND OTHER APPROVED TECHNIQUES TO BE

APPLIED AS FOLLOWS: WITHIN TWO (2) DAYS OF ANY AREA WITHIN 50 FEET OF A STREAM NOT AT FINAL GRADE REMAINING

DORMANT FOR OVER FOURTEEN (14) DAYS. WITHIN SEVEN (7) DAYS OF ANY AREA THAT WILL BE DORMANT FOR MORE THAN FOURTEEN (14) DAYS. PRIOR TO THE ONSET OF WINTER WEATHER FOR AREAS THAT WILL BE IDLE OVER WINTER. FOR RESIDENTIAL SUBDIVISIONS. DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN (7) DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR INDIVIDUALS.

PERMANENT SOIL STABILIZATION OF DISTURBED AREAS BY MEANS OF VEGETATION, LANDSCAPE TYPE MULCHING, MATTING, SOD, RIP RAP, AND OTHER APPROVED LANDSCAPING TECHNIQUES TO BE APPLIED AS **FOLLOWS** 

WITHIN SEVEN (7) DAYS OF ANY AREA THAT WILL BE DORMANT FOR ONE (1) YEAR OR MORE. WITHIN TWO (2) DAYS OF ANY AREA WITHIN 50 FEET OF A STREAM AT FINAL GRADE. WITHIN SEVEN (7) DAYS FOR ANY OTHER AREA AT FINAL GRADE.

TEMPORARY SEEDING, MULCHING, AND FERTILIZER SPECIFICATIONS:

SEEDING: ANNUAL RYEGRASS AT 2.02 #/1,000 S.F. MULCHING: STRAW MATERIAL SHALL BE UNROTTED SMALL GRAIN STRAW APPLIED AT A RATE OF TWO (2) TON/ACRE, OR 80-100 POUNDS PER 1,000 S.F. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE FREE OF PROHIBITIVE NOXIOUS WEEDS. MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICAL MEANS. FROM NOVEMBER 01 THRU MARCH 15 INCREASE THE RATE OF STRAW MULCH TO THREE (3) TON/ACRE.

FERTILIZER: APPLY FERTILIZER AT HALF THE RATE OF PERMANENT APPLICATION AND AS PER STATE DOT SPECIFICATIONS. IF PROJECT CONDITIONS PREVENT FERTILIZING THE SOIL, THEN THIS ITEM MAY BE WAIVED.

- PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. ALL SLOPES 3:1 OR GREATER THAN 3:1 SHALL BE FERTILIZED, SEEDED, AND CURLEX BLANKETS BY AMERICAN EXCELSIOR COMPANY, NORTH AMERICAN GREEN, INC. OR AN APPROVED EQUAL AS SPECIFIED IN THE PLANS SHALL BE INSTALLED ON THE SLOPES.
- OHIO EPA SWPPP REGULATIONS REQUIRES THAT A SEDIMENT TRAP OR POND BE SIZED TO PROVIDE AT LEAST 104 CUBIC YARDS (67 CY FOR DEWATERING AND 37 CY FOR SEDIMENT STORAGE) OF STORAGE PER ACRE OF TOTAL CONTRIBUTING AREA. MAXIMUM DEPTH OF SEDIMENT SETTLING POND SHALL BE EQUAL OR LESS THAN 5-FEET WITH A LENGTH TO WIDTH RATIO GREATER THAN OR EQUAL TO 2:1)
- OUTLET STRUCTURES IN SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT MUST BE REMOVED FROM BASINS AND OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 40% (APPROXIMATELY ONE-HALF OF POND DEPTH).
- NO SOLID (OTHER THAN SEDIMENT) OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE
- ALL TOXIC WASTES, HAZARDOUS WASTES AND NON-SEDIMENT POLLUTANTS MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL GUIDELINES. WASH OUT OF CEMENT TRUCKS SHOULD OCCUR IN DESIGNATED PIT OR DIKED AREAS, WHERE WASHINGS CAN BE REMOVED AND PROPERLY DISPOSED OFF-SITE WHEN THEY HARDEN. STORAGE TANKS SHOULD ALSO BE LOCATED IN PIT OR DIKED AREAS. IN ADDITION, SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CLEAN AND CONTAIN FUEL AND CHEMICAL SPILLS MUST BE KEPT ON SITE. NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED INTO STORM DRAINS, SEPTIC TANKS OR BY BURYING, BURNING OR MIXING THE WASTES.
- CONTAINERS SHALL BE AVAILABLE FOR DISPOSAL OF DEBRIS, TRASH, HAZARDOUS OR PETROLEUM WASTES. ALL CONTAINERS MUST BE COVERED AND LEAK-PROOF. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THE PERTINENT MATERIAL.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DISPOSED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE SITE THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- BRICKS, HARDENING CONCRETE AND SOIL WASTE SHALL BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE.
- CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY SHALL BE SUBJECT TO ANY LOCAL PROHIBITIONS FROM THIS TYPE OF DISPOSAL.
- ALL CONSTRUCTION AND DEMOLITION DEBRIS (C&DD) WASTE SHALL BE DISPOSED OF IN AN OHIO EPA APPROVED C&DD LANDFILL AS REQUIRED BY OHIO REVISED CODE 3714. CONSTRUCTION DEBRIS MAY BE DISPOSED OF ON-SITE, BUT DEMOLITION DEBRIS MUST BE DISPOSED IN AN OHIO EPA APPROVED LANDFILL. ALSO, MATERIALS WHICH CONTAIN ASBESTOS MUST COMPLY WITH AIR POLLUTION REGULATIONS (SEE OHIO ADMINISTRATIVE CODE 3745-20).
- AREA SHALL BE DESIGNATED FOR MIXING OR STORAGE OF COMPOUNDS SUCH AS FERTILIZERS, LIME ASPHALT, OR CONCRETE, THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS, OR OTHER STORMWATER DRAINAGE AREA.
- EQUIPMENT FUELING & MAINTENANCE SHALL BE IN DESIGNATED AREAS ONLY, THESE DESIGNATED AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS, OR OTHER STORMWATER DRAINAGE AREA.
- A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN MUST BE DEVELOPED FOR SITES WITH ONE ABOVE-GROUND STORAGE TANK OF 660 GALLONS OR MORE, TOTAL ABOVE-GROUND STORAGE OF 1,330 GALLONS OR BELOW-GROUND STORAGE OF 4,200 GALLONS OF FUEL.
- ALL DESIGNATED CONCRETE CHUTE OR WASHOUT AREAS SHALL BE LOCATED AWAY FROM WATERCOURSES, DRAINAGE DITCHES, FIELD DRAINS OR OTHER STORMWATER DRAINAGE AREAS.

DISCHARGE OF WATER WITH POTENTIAL SEDIMENT FROM THE SITE SHALL BE THROUGH A FILTER BAG, SUMP

- THERE IS A POTENTIAL FOR HIGH GROUND WATER AT THIS SITE. CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND IMPLEMENTING A PLAN TO CONTROL BOTH SURFACE AND GROUND WATER DURING THE COURSE OF CONSTRUCTION.
- PIT OR OTHER SEDIMENT REMOVAL DEVICE. ALL CONTAMINATED SOIL MUST BE TREATED AND/OR DISPOSED IN AN OHIO EPA APPROVED SOLID WASTE
- MANAGEMENT FACILITY OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES (TSDFs).
- FROM BEING RELEASED: 1. BERMS, TRENCHES AND PITS TO COLLECT CONTAMINATED RUNOFF AND PREVENT DISCHARGES. 2. PUMPING RUNOFF INTO A SANITARY SEWER (WITH PRIOR APPROVAL OF THE SANITARY SYSTEM OPERATOR) OR INTO A CONTAINER FOR TRANSPORT TO AN APPROPRIATE TREATMENT/DISPOSAL FACILITY.

FROM COMING INTO CONTACT WITH THE MATERIAL.

26. IF THE SITE CONTAINS CONTAMINATED SOIL, THE FOLLOWING SHALL BE USED TO PREVENT CONTAMINATION

3. COVERING AREAS OF CONTAMINATION WITH TARPS OR OTHER METHODS THAT PREVENT STORM WATER

### SWPPP NOTES (CONT.)

- 27. IN THE EVENT OF AN ACCIDENTAL SPILL, IMMEDIATE ACTION WILL BE UNDERTAKEN BY THE GENERAL CONTRACTOR TO CONTAIN AND REMOVE THE SPILLED MATERIAL. ALL HAZARDOUS MATERIALS, INCLUDING CONTAMINATED SOIL AND LIQUID CONCRETE WASTE, WILL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY FEDERAL, STATE AND LOCAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. AS SOON AS POSSIBLE, THE SPILL WILL BE REPORTED TO THE APPROPRIATE AGENCIES. AS REQUIRED UNDER THE PROVISIONS OF THE CLEAN WATER ACT, ANY SPILL OR DISCHARGE ENTERING WATERS OF THE UNITED STATES WILL BE PROPERLY REPORTED. THE GENERAL CONTRACTOR WILL PREPARE A WRITTEN RECORD OF ANY SPILL AND ASSOCIATED CLEAN-UP ACTIVITIES OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIALS IN EXCESS OF 1 GALLON OR REPORTABLE QUANTITIES, WHICH EVER IS LESS.
- THE CONTRACTOR SHALL CONTACT THE OHIO EPA AT 800.282.9378, THE LOCAL FIRE DEPARTMENT AND THE LOCAL EMERGENCY PLANNING COMMITTEE IN THE EVENT OF A PETROLEUM SPILL (>25 GALLONS) OR THE PRESENCE OF SHEEN.
- OPEN BURNING IS NOT PERMITTED ON THE SITE.
- DUST CONTROL USING APPROVED MATERIALS MUST BE PERFORMED AT ALL TIMES. DUST SUPPRESSANTS SHALL NOT BE APPLIED NEAR CATCH BASINS FOR STORM SEWERS OR OTHER DRAINAGE WAYS. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION IS PROHIBITED.
- APPROPRIATE MEASURES MUST BE TAKEN TO ENSURE THAT ALL PROPER AIR POLLUTION PERMITS ARE OBTAINED.
- PROCESS WASTEWATERS (EQUIPMENT WASHING, LEACHATE ASSOCIATED WITH ON-SITE WASTE DISPOSAL AND CONCRETE WASH-OUTS) SHALL BE COLLECTED AND DISPOSED OF PROPERLY.
- SANITARY AND WATER PTI FORMS SHALL BE FILED WITH THE OHIO EPA AS REQUIRED.
- PROTECTED STORAGE AREAS SHALL BE USED FOR INDUSTRIAL AND CONSTRUCTION MATERIALS IN ORDER TO MINIMIZE THE EXPOSURE OF SUCH MATERIALS TO STORMWATER.
- ALL CONTROL MEASURES STATED IN THE SWPPP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL TEMPORARY OR PERMANENT STABILIZATION OF THE SITE IS ACHIEVED. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED BY A QUALIFIED PERSON IN ACCORDANCE TO THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED ACCORDING TO THE FOLLOWING:
- INSPECTIONS OF BMPS SHALL BE PERFORMED BY QUALIFIED PERSONS PROVIDED BY THE PERMITTEE AND THE INSPECTION LOGS ARE TO BECOME A PART OF THIS PLAN. INSPECTIONS RECORDS SHALL BE SIGNED BY THE INSPECTOR AND WILL BE KEPT FOR 3 YEARS AFTER THE NOTICE OF TERMINATION IS SUBMITTED.
- INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE IN EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD, FROM THE BEGINNING OF CONSTRUCTION THROUGH THE FINAL INSPECTION PRIOR TO THE NOTICE OF TERMINATION.
- NON-SEDIMENT POND BMPS TO BE REPAIRED WITHIN 3 DAYS OF INSPECTION AND SEDIMENT POND BMPS WITHIN 10 DAYS OF INSPECTION. BMPS NOT MEETING THE INTENDED FUNCTION SHALL BE REPLACED WITHIN 10 DAYS OF INSPECTION. MISSING BMPS SHALL BE INSTALLED WITHIN 10 DAYS OF INSPECTION.
- IF THE SITE IS STABILIZED AND WILL BE DORMANT FOR A LONG PERIOD OF TIME, LESS FREQUENT INSPECTIONS MAY BE REQUESTED OF THE OEPA VIA A WAIVER REQUEST.
- INLET PROTECTION DEVICES AND CONTROLS SHALL BE REPAIRED OR REPLACED WHEN THEY SHOW SIGNS OF UNDERMINING AND OR DETERIORATION.
- ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STANDING OF GRASS IS MAINTAINED, AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
- SILT FENCES, INLET PROTECTION, SILT DIKES AND PERVIOUS LOGS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION IF DAMAGED. SEDIMENT ACCUMULATION MUST BE REMOVED WHEN SEDIMENT HEIGHT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE, INLET PROTECTION, SILT DIKE AND PERVIOUS LOG.
- MINIMIZE OFF-SITE SEDIMENT TRACKING OF VEHICLES BY THE USE OF STONE MATERIAL IN ALL CONSTRUCTION ENTRANCES. ALONG WITH REGULARLY SCHEDULED SWEEPING/GOOD HOUSEKEEPING. STABILIZED CONSTRUCTION ENTRANCES TO BE PROPERLY MAINTAINED AND IN GOOD WORKING ORDER AT ALL TIMES; THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE STONE AS CONDITIONS DEMAND.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE STABILIZED CONSTRUCTION ENTRANCE DOES NOT SUFFICIENTLY REMOVE MOST OF THE DIRT AND MUD, THEN THE TIRES MUST BE WASHED BEFORE VEHICLES ENTER A PUBLIC ROAD. PROVISIONS MUST BE MADE TO INTERCEPT THE WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE ROADWAYS OR INTO THE STORM 45. SEWERS MUST BE REMOVED IMMEDIATELY.
- THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- CONTRACTORS AND SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ALL SEDIMENT FROM THE SITE, INCLUDING DETENTION PONDS, AND STORM SEWER SYSTEMS. SEDIMENT DEPOSITION DURING SITE STABILIZATION MUST ALSO BE REMOVED.
- ALL RIP RAP MUST BE PLACED OVER GEOTEXTILE FILTER.
- STONE CONSTRUCTION ENTRANCE TO BE MAINTAINED BY CONTRACTOR UNTIL SITE HAS BEEN PAVED OR IS NO LONGER REQUIRED.
- ALL CATCH BASIN GRATES ARE TO BE PROTECTED WITH INLET BAGS AFTER THEY ARE INSTALLED. THEY SHOULD BE ROUTINELY CLEANED AND MAINTAINED.
- ROCK CHECK DAMS SHOULD BE ROUTINELY CLEANED ONCE SEDIMENT BEGINS TO APPEAR ON THE UPSTREAM SIDE OF THE ROCK.
- ON-SITE AND OFF-SITE STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION BY THE USE OF BEST MANAGEMENT PRACTICES. THESE AREAS MUST BE SHOWN IN THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- CONTRACTOR TO DELINEATE STOCK PILE LOCATION ON PLANS TO BE KEPT ON SITE DURING CONSTRUCTION.
- CONSTRUCT STOCKPILES IN ACCESSIBLE LOCATIONS THAT DO NOT INTERFERE WITH NATURAL DRAINAGE. INSTALL APPROPRIATE SEDIMENT CONTROLS TO TRAP SEDIMENT SUCH AS SILT FENCE IMMEDIATELY ADJACENT TO THE STOCKPILE OR SEDIMENT TRAPS OR BASINS DOWNSTREAM OF STOCKPILE. STOCKPILE SIDE SLOPES SHALL NOT EXCEED A RATIO OF 2:1.
- IF STOCKPILE IS STORED FOR MORE THAN 14 DAYS, IT SHOULD BE TEMPORARY SEEDED, OR COVERED WITH A TARP.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH DAY; THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR ASPHALT FOR ROAD CONSTRUCTION.
- THE LAST LAYER OF SOIL, INCLUDING TOP SOIL SHOULD BE COMPACTED TO 80% 85% OF THE MAXIMUM STANDARD PROCTOR DENSITY, IN AREAS OUTSIDE THE PARKING LOT THAT WILL RECEIVE VEGETATION. THIS IS PARTICULARLY IMPORTANT IN CUT SLOPE AND EMBANKMENT AREAS. IN PAVEMENT AND ISLAND AREAS, IT IS RECOMMENDED THAT THE SOIL BE COMPACTED TO 98% AND 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY RESPECTIVELY; THE LAST COMPACTED LAYER MAY BE SCARIFIED TO IMPROVE THE SOIL GROWTH CHARACTERISTICS.
- 58. THE POST CONSTRUCTION WATER QUALITY REQUIREMENTS OF OHIO EPA PERMIT OHC000006 SHALL BE MET BY THE EXISTING WATER QUALITY BASIN.
- ALL WATER FROM DEWATERING ACTIVITES SHALL BE PROCESSED THROUGH A BMP PRIOR TO LEAVING THE SITE.

# STRUCTURAL BMP LONG-TERM MAINTENANCE (GENERAL NOTES)

- THE OWNER AGREES TO MAINTAIN IN PERPETUITY THE STORM WATER MANAGEMENT PRACTICES IN ACCORDANCE WITH APPROVED MAINTENANCE PLANS LISTED IN #2 BELOW AND IN A MANNER THAT WILL PERMIT THE STORM WATER MANAGEMENT PRACTICES TO PERFORM THE PURPOSES FOR WHICH THEY WERE DESIGNED AND CONSTRUCTED. THIS INCLUDES ALL PIPES, STRUCTURES, IMPROVEMENTS, AND VEGETATION PROVIDED TO CONTROL THE QUANTITY OF THE STORM WATER.
- 2. NO ALTERATIONS TO THE WATER QUALITY/DETENTION BASINS WITHOUT APPROVAL FROM THE JURISDICTIONAL REVIEWING AUTHORITY.
- 3. THE OWNER SHALL PROVIDE A MAINTENANCE PLAN FOR EACH STORM WATER MANAGEMENT PRACTICE. THE MAINTENANCE PLANS SHALL INCLUDE A SCHEDULE FOR MONTHLY AND ANNUAL MAINTENANCE. THE OWNER SHALL MAINTAIN, UPDATE AND STORE THE MAINTENANCE RECORDS FOR THE STORM WATER MANAGEMENT PRACTICES. THE SPECIFIC MAINTENANCE PLANS FOR EACH STORM WATER MANAGEMENT PRACTICE ARE AS FOLLOWS.

#### MAINTENANCE TO BE COMPLETED EVERY 3 MONTHS

- REMOVE TRASH AND/OR ACCUMULATED SEDIMENT FROM POND AREA. REMOVE OBSTRUCTIONS IN ORIFICES AND/OR OUTLETS WITHIN POND.
- REMOVE DEBRIS AND SEDIMENT FROM INLET PIPES, OUTLET PIPES AND STRUCTURES.

#### MAINTENANCE TO BE COMPLETED YEARLY

- REPAIR EROSION TO OUTFALL OR SPILLWAY OF THE POND REPAIR AND/OR REPLACE DAMAGED STRUCTURES, SUCH AS CATCH BASINS, RISERS, PIPES AND HEADWALLS.
- MOW EMBANKMENTS AND REMOVE WOODY VEGETATION ON EMBANKMENTS

SKETCH SHOWING GENERAL AREA OF BMP'S, SUMMARY OF ALL MAINTENANCE ACTIVITIES SINCE LAST ANNUAL INSPECTION, PHOTOS AND DESCRIPTION OF ALL BMP DESIGN FEATURES, INDICATION OF ANY DEVIATION FROM APPROVED PLAN FOR BMP, IDENTIFICATION OF IMPROVEMENTS NECESSARY TO RESTORE ORIGINAL DESIGN FUNCTION. MAINTENANCE ACTIVITIES REQUIRED IN THE NEXT 6 MONTHS, IDENTIFICATION AND CONTACT INFORMATION OF ENTITY RESPONSIBLE FOR BMP, AND IDENTIFICATION AND CONTACT INFORMATION FOR ENGINEER PREPARING THE REPORT INCLUDING SIGNATURE AND SEAL.

# GENERAL LAND CONSERVATION

NO DISTURBED AREA WILL BE DENUDED FOR MORE THAN 30 DAYS IF IT IS TO REMAIN DORMANT FOR MORE THAN 45 DAYS UNLESS AUTHORIZED BY THE STATE GOVERNING JURISDICTION'S INSPECTOR. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

ALL STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING FOR ALL SITES.

ALL STORM SEWER, SANITARY SEWER, WATER MAIN AND SERVICE TRENCHES SHALL BE MULCHED AND SEEDED WITHIN 14 DAYS AFTER BACK FILL IF INSTALLATION IS THROUGH STABILIZED AREAS. NO MORE THAN 500 FEET OF TRENCH WILL BE OPEN AT ANY ONE TIME.

ELECTRIC POWER, TELEPHONE, CATV AND GAS SUPPLY TRENCHES SHALL BE COMPACTED SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACK FILL, IF INSTALLATION IS THROUGH STABILIZED AREAS.

ALL TEMPORARY DIVERSIONS, SEDIMENT BASIN EMBANKMENTS AND EARTH STOCKPILES SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER WITHIN 7 DAYS AFTER GRADING. STRAW, HAY MULCH OR EQUIVALENT IS REQUIRED.

ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS (INLET PROTECTION) WHICH WILL BE MAINTAINED AND MODIFIED AS REQUIRED AS CONSTRUCTION PROGRESSES. ANY DISTURBED AREA NOT STABILIZED WITH SEEDING, SODDING, PAVING OR BUILT UPON BY

NOVEMBER 1ST. OR AREAS DISTURBED AFTER THAT DATE. SHALL BE MULCHED IMMEDIATELY

WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED BY APRIL 15TH.

AT THE COMPLETION OF CONSTRUCTION, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

HOA SHALL MAINTAIN AND KEEP RECORD OF ANY MAINTENANCE/INSPECTIONS OF COMMON



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Revisions / Submissions

Date

ID Description

Project Number 763884 AS SHOWN Scale: Drawn By: Checked By:

**SWPPP NOTES** 

JUNE 16, 2025

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Issue: FINAL DEVELOPMENT PLAN Drawing Title:

**Utilities Protection** SERVICE 1-800-362-2764 Call Before You Dig

#### Mulching

- 1. Mulch and other appropriate vegetative practices shall be 3. Mulch Anchoring Mulch shall be anchored immediately applied to disturbed areas within 7 days of grading if the to minimize loss by wind or runoff. The following are area is to remain dormant (undisturbed) for more than 21 days or on areas and portions of the site which can be brought to final grade.
- 2. Mulch shall consist of one of the following: Straw - Straw shall be unrotted small grain straw applied
- at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide
- two 45-lb. bales of straw in each section. Hydroseeders - Wood cellulose fiber should be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.

area into approximately 1,000 sq.ft. sections and place

- Other Acceptable mulches include mulch mattings and rolled erosion control products applied according to manufacturer's recommendations or wood mulch/chips applied at 10-20 tons/ac.
- acceptable methods for anchoring mulch. Mechanical - Use a disk, crimper, or similar type tool
- set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 inches. . Mulch Nettings - Use according to the manufacturer's recommendations, following all placement and anchoring

requirements. Use in areas of water concentration and

steep slopes to hold mulch in place.

with waters of the state.

good working condition.

- Synthetic Binders For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer. All applications of Sythetic Binders must be conducted in such a manner where there is no contact
- Wood Cellulose Fiber Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

#### Specifications

#### **Small Construction Site Controls**

- 1. Preexisting vegetation shall be retained on idle portions of the building lot for as long as construction operations allow. Clearing shall be done so only active working areas are bare.
- 2. Temporary seed and/or mulch shall be applied to areas, 5. Construction vehicle access shall be limited to one route, such as stockpiles and rough graded areas, that are bare and not actively being worked. This shall apply to areas that will not be reworked for 21 days or more.
- 3. Stockpiles created from basement excavation and grading shall be situated away from streets, swales, or other waterways and shall be seeded and/or mulched immedi-
- 4. Silt fence or other sediment barriers shall control sheet flow runoff from the building lot. These shall not be constructed in channels or areas of concentrated flow. Other sediment controls such as sediment traps and

- inlet protection shall also be used as needed to control sediment runoff. Sediment control practices shall be inspected weekly after storm events, and maintained in
- to the greatest extent practical. The access shall be gravel or crushed rock underlain with geotextile.
- 6. Mud tracked onto streets or sediment settled around curb inlet protection shall be removed daily or as needed to prevent it from accumulating. It shall be removed by shoveling and scraping and shall NOT be washed off paved surfaces or Into storm drains. Sediment removed shall be placed where it will not be subject to erosion or concentrated runoff.

#### Specifications

#### **⚠** Temporary Seeding

#### Table 7.8.1 Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1000 ft2	Lb/Acre
March 1 to August 15	Oats Tall Fescue Annual Ryegrass	3 1 1	128 (4 Bushel) 40 40
	Perennial Ryegrass Tall Fescue Annual Ryegrass	1 1 1	40 40 40
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	55 142 17 17
	Oats Tall Fescue Annual Ryegrass	3 1 1	128 (3 bushel) 40 40
August 16th to November	Rye Tall Fescue Annual Ryegrass	3 1 1	112 (2 bushel) 40 40
	Wheat Tall Fescue Annual Ryegrass	3 1 1	120 (2 bushel) 40 40
	Perennial Rye Tall Fescue Annual Ryegrass	1 1 1	40 40 40
	Annual Ryegrass Perennial Ryegrass Creeping Red Fescue Kentucky Bluegrass	1.25 3.25 0.4 0.4	40 40 40
November 1 to Feb. 29	Use mulch only or dormant see	ding	

Note: Other approved species may be substituted.

- 1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.
- Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater. These idle areas shall be seeded within 7 days after grading.
- 3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is

#### 4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.

5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without

#### Specifications

#### **Temporary Seeding**

#### Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.

#### Materials:

not possible.

- Straw—If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2-3 bales)
- Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000-sq.-ft.
- Other—Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 ton/ ac.
- 3. Straw Mulch shall be anchored immediately to minimize loss by wind or water. Anchoring methods:
- Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
- Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.
- Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

#### Specifications

### A Permanent Seeding

#### Site Preparation

- 1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
- ventional equipment for seedbed preparation and seeding.
- 3. Topsoil shall be applied where needed to establish vegetation.

#### **Seedbed Preparation**

- 1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.
- 2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analyses.
- 3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

#### Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the abovespecified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

#### **Dormant Seedings**

- 1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
- The following methods may be used for "Dormant Seeding":

## Straw and Mulch Anchoring Methods

- wind or water. Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into
- Mulch Netting—Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- Asphalt Emulsion—Asphalt shall be applied as recommended by the manufacture or at the rate of 160 gallons per growth.

# tions permit, prepare the seedbed, lime and fertilize, apply

From October 1 through November 20, prepare the seedbed,

and anchor. After November 20, and before March 15,

add the required amounts of lime and fertilizer, then mulch

broadcast the selected seed mixture. Increase the seeding

- rates by 50% for this type of seeding. moisture is low enough to allow the soil to crack or fracture. • From November 20 through March 15, when soil condi
  - the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- 2. The site shall be graded as needed to permit the use of con- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
  - Where feasible, except when a cultipacker type seeder. Is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where

 Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an

#### Materials

approved material.

- Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft, sections
- and spread two 45-lb. bales of straw in each section. Hydroseeders—If wood cellulose fiber is used, it shall be
- applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft. for seedbed preparation should be done when the soil is dry

  • Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.

- Straw mulch shall be anchored immediately to minimize loss by
- the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.

#### Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.

 Wood Cellulose Fiber—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

#### Table 7.10.2 Permanent Seeding

Seed Mix	Seeding Rate		Water
	Lbs./acre	Lbs./1,000 Sq. Feet	Notes:
		General Use	
Creeping Red Fescue Domestic Ryegrass Kentucky Bluegrass	20-40 10-20 20-40	1/2-1 1/4-1/2 1/2-1	For close mowing & for waterways with <2.0 ft/sec velocity
Tall Fescue	40-50	1-1 1/4	
Turf-type (dwarf) Fescue	90	2 1/4	
		teep Banks or Cut Slopes	
Tall Fescue	40-50	1-1 1/4	
Crown Vetch Tall Fescue	10-20 20-30	1/4-1/2 1/2-3/4	Do not seed later than August
Flat Pea Tall Fescue	20-25 20-30	1/2-3/4 1/2-3/4	Do not seed later than August
		Road Ditches and Swales	
Tall Fescue	40-50	1-11/4	
Turf-type (Dwarf) Fescue Kentucky Bluegrass	90 5	2 1/4 0.1	
		Lawns	
Kentucky Bluegrass Perennial Ryegrass	100-120	2 2	
Kentucky Bluegrass Creeping Red Fescue	100-120	2 1-1/2	For shaded areas

Note: Other approved seed species may be substituted.

#### Specifications

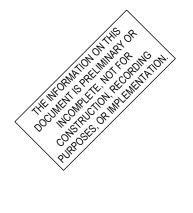
#### **Additional Construction Site Pollution Controls**

- 1. Construction personnel, including subcontractors who may use or handle hazardous or toxic materials, shall be made aware of the following general guidelines regarding disposal and handling of hazardous and construction wastes:
  - Prevent spills
- Use products up
- Follow label directions for disposal
- Remove lids from empty bottles and cans when disposing in trash
- Recycle wastes whenever possible
- Don't pour into waterways, storm drains or onto the ground
- Don't pour down the sink, floor drain or septic tanks
- Don't bury chemicals or containers
- Don't burn chemicals or containers
- Don't mix chemicals together
- 2. Containers shall be provided for the proper collection of all waste material including construction debris, trash, petroleum products and any hazardous materials used on-site. Containers shall be covered and not leaking. All waste material shall be disposed of at facilities approved for that material. Construction Demolition and Debris (CD&D) waste must be disposed of at an Ohio EPA approved CD&D landfill.
- 3. No construction related waste materials are to be buried on-site. By exception, clean fill (bricks, hardened concrete, soil) may be utilized in a way which does not encroach upon natural wetlands, streams or floodplains or result in the contamination of waters of the state.
- 4. Handling Construction Chemicals. Mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials shall be performed in an area away from any watercourse, ditch or storm drain.
- 5. Equipment Fueling and Maintenance, oil changing, etc., shall be performed away from watercourses, ditches or storm drains, in an area designated for that purpose. The designated area shall be equipped for recycling oil and catching spills. Secondary containment shall be provided for all fuel oil storage tanks. These areas must be inspected every seven days and within 24 hrs. of a 0.5 inch or greater rain event to ensure there are no exposed materials which would contaminate storm water. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one single above ground tank of 660
- gallons or more, accumulative above ground storage of 1330 gallons or more, or 42,000gallons of underground storage. Contaminated soils must be disposed of in accordance with Item 8.
- 6. Concrete Wash Water shall not be allowed to flow to streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete wash water. Field tile or other subsurface drainage structures within 10 ft. of the sump shall be cut and plugged. For small projects, truck chutes may be rinsed away from any water conveyances.
- 7. Spill Reporting Requirements: Spills on pavement shall be absorbed with sawdust or kitty litter and disposed of with the trash at a licensed sanitary landfill. Hazardous or industrial wastes such as most solvents, gasoline, oil-based paints, and cement curing compounds require special handling. Spills shall be reported to Ohio EPA (1-800-282-9378). Spills of 25 gallons or more of petroleum products shall be reported to Ohio EPA, the local fire department, and the Local Emergency Planning Committee within 30 min. of the discovery of the release. All spills which contact waters of the state must be reported to Ohio EPA.
- 8. Contaminated Soils. If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil should be dug up and disposed of at licensed sanitary landfill or other approved petroleum contaminated soil remediation facility. (not a construction/demolition debris landfill). Note that storm water run off associated with contaminated soils are not be authorized under Ohio EPA's General Storm Water Permit associated with Construction Activities.
- 9. Open Burning. No materials containing rubber, grease, asphalt, or petroleum products, such as tires, autoparts, plastics or plastic coated wire may be burned (OAC 3745-19). Open burning is not allowed in restricted areas, which are defined as: 1) within corporation limits; 2) within 1000 feet outside a municipal corporation having a population of 1000 to 10,000; and 3) a one mile zone outside of a corporation of 10, 000 or more. Outside of restricted areas, no open burning is allowed within a 1000 feet of an inhabited building on another property. Open burning is permissible in a restricted area for: heating tar, welding, smudge pots and similar occupational needs, and heating for warmth or outdoor barbeques. Outside of restricted areas, open burning is permissible for landscape or land-clearing wastes (plant material, with prior written permission from Ohio EPA), and agricultural wastes, excluding buildings.
- 10. Dust Control or dust suppressants shall be used to prevent nuisance conditions, in accordance with the manufacturer's specifications and in a manner, which prevent a discharge to waters of the state. Sufficient distance must be provided between applications and nearby bridges, catch basins, and other waterways. Application (excluding water) may not occur when rain is imminent as noted in the short term forecast. Used oil may not be applied for dust control.
- 11. Other Air Permitting Requirements: Certain activities associated with construction will require air permits including but not limited to: mobile concrete batch plants, mobile asphalt plants, concrete crushers, large generators, etc. These activities will require specific Ohio EPA Air Permits for installation and operation. Operators must seek authorization from the corresponding district of Ohio EPA. For demolition of all commercial sites, a Notification for Restoration and Demolition must be submitted to Ohio EPA to determine if asbestos corrective actions are required.
- 12. Process Waste Water/Leachate Management. Ohio EPA's Construction General Permit only allows the discharge of storm water and does not include other waste streams/discharges such as vehicle and/or equipment washing, on-site septic leachate concrete wash outs, which are considered process wastewaters. All process wastewaters must be collected and properly disposed at an approved disposal facility. In the event, leachate or septage is discharged; it must be isolated for collection and proper disposal and corrective actions taken to eliminate the source of waste water.
- 13. A Permit To Install (PTI) is required prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one, two, and three family dwellings) and potable water lines. Plans must be submitted and approved by Ohio EPA. Issuance of an Ohio EPA Construction General Storm Water Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI.





3601 Rigby Rd., Suite 300 Miamisburg, OH 45342 Phone: 937.435.8584 Fax: 888.208.4826



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Revisions / Submissions

Date

OR

ID Description

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**Project Number:** 763884 AS SHOWN Scale: Drawn By: **JEE** Checked By: JUNE 16, 2025

**SWPPP DETAILS** 

Issue: FINAL DEVELOPMENT PLAN Drawing Title:

Date:

SERVICE

(Not to Scale)

Level contour

No slope

**ELEVATION** 

of barrier

around stakes

before driving

Trench to be

backfilled and compacted

SECTION

sections of silt fence Specifications

#### **Silt Fence**

- 1. Silt fence shall be constructed before upslope land distur- 9. Seams between sections of silt fence shall be spliced bance begins.
- 2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry small concentrated flows to the silt fence are dissipated along its length.
- 3. Ends of the silt fences shall be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.

(or as much as possible) upslope from the silt fence. If

vegetation is removed, it shall be reestablished within 7

- 4. Silt fence shall be placed on the flattest area available. 5. Where possible, vegetation shall be preserved for 5 feet
- 6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.

days from the installation of the silt fence.

- 7. The silt fence shall be placed in an excavated or sliced trench cut a minimum of 6 inches deep. The trench shall be made with a trencher, cable laying machine, slicing machine, or other suitable device that will ensure an adequately uniform trench depth.
- 8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6-inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.

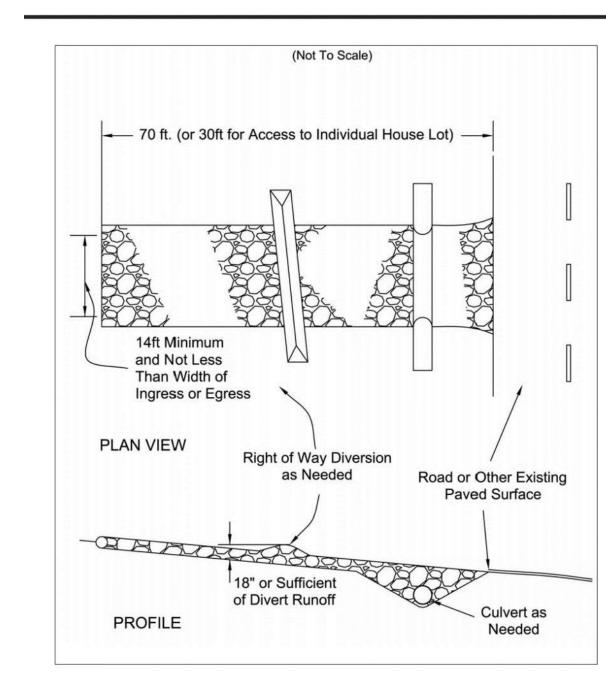
- together only at a support post with a minimum 6-in. overlap prior to driving into the ground, (see details).
- 10. Maintenance—Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.
- Sediment deposits shall be routinely removed when the deposit reaches approximately one-half of the height of
- Silt fences shall be inspected after each rainfall and at least daily during a prolonged rainfall. The location of existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.
- Criteria for silt fence materials
- . Fence post The length shall be a minimum of 32 inches. Wood posts will be 2-by-2-in. nominal dimensioned hardwood of sound quality. They shall be free of knots, splits and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence due to sediment/water loading.
- 2. Silt fence fabric See chart below.

#### Table 6.3.2 Minimum criteria for Silt Fence Fabric (0D0T, 2002)

FABRIC PROPERTIES	VALUES	TEST METHO
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 463
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 483
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 475
Minimum Permittivity	1X10-2 sec1	ASTM D 449
UV Exposure Strength Retention	70%	ASTM G 4358

#### Specifications

#### **Construction Entrance**



Specifications

#### **Construction Entrance**

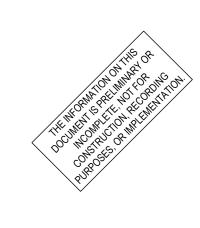
- 1. Stone Size—ODOT # 2 (1.5-2.5 inch) stone shall be used, or 6. Timing—The construction entrance shall be installed as recycled concrete equivalent.
- 2. Length—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single
- residence lots). 3. Thickness -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty
- 4. Width -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress

  9. Maintenance -Top dressing of additional stone shall be
- 5. Geotextile -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:

Geotexille Specification for Construction Entrance		
Minimum Tensile Strength	200 lbs.	
Minimum Puncture Strength	80 psi.	
Minimum Tear Strength	50 lbs.	
Minimum Burst Strength	320 psi.	
Minimum Elongation	20%	
Equivalent Opening Size	EOS < 0.6 mm.	
Permittivity	1×10-3 cm/sec.	

- soon as is practicable before major grading activities.
- 7. Culvert -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
- 8. Water Bar -A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
- applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
- 10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
- 11. Removal—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.





Revisions / Submissions Date ID Description

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Issue: FINAL DEVELOPMENT PLAN

**Utilities Protection** 

1-800-362-2764 Call Before You Dig

**SERVICE** 

Drawing Title: SWPPP - 34 SWPPP **DETAILS** 

WOOD FRAME SECURELY FASTENED STAPLES - AROUND ENTIRE PERIMETER WITH (2 PER -BALE) TWO WOOD STAKES 10 🛭 i 🖟 PLASTIC LINING – 10 🛭 i🗈 MATERIAL -PLYWOOD PLASTIC  $\neg$ (OPTIONAL) - PAINTED WHITE SIDE SLOPES TO BE LINING WOOD OR METAL (4' 🛭 2') STAKES (2 PER -- 10 🛭 i 🛮 PLASTIC LINÏNG BALE) **BLACK LETTERS** SECTION "A-A" SECTION "A-A" 6" HEIGHT) SECTION "A-A" CONCRETE LAG LATH AND WASHOUT SCREWS FLAGGING -(0.5")ON 3 SIDES WOOD POST (3.5" [ 3.5" [ 8') CONCRETE WASHOUT SIGN DETAIL 10 mil PLASTIC LINING PLASTIC LINING PLASTIC LINING 0.115" DIA. TWO STACKED STAKE (TYP.) STAPLE DETAIL \_\_ 212 ROUGH ∽ STAKE (TYP.) STRAW BALE (TYP.) WOOD FRAME BELOW GRADE ABOVE GRADE WITH WOOD PLANKS ABOVE GRADE W/ HAYBALES

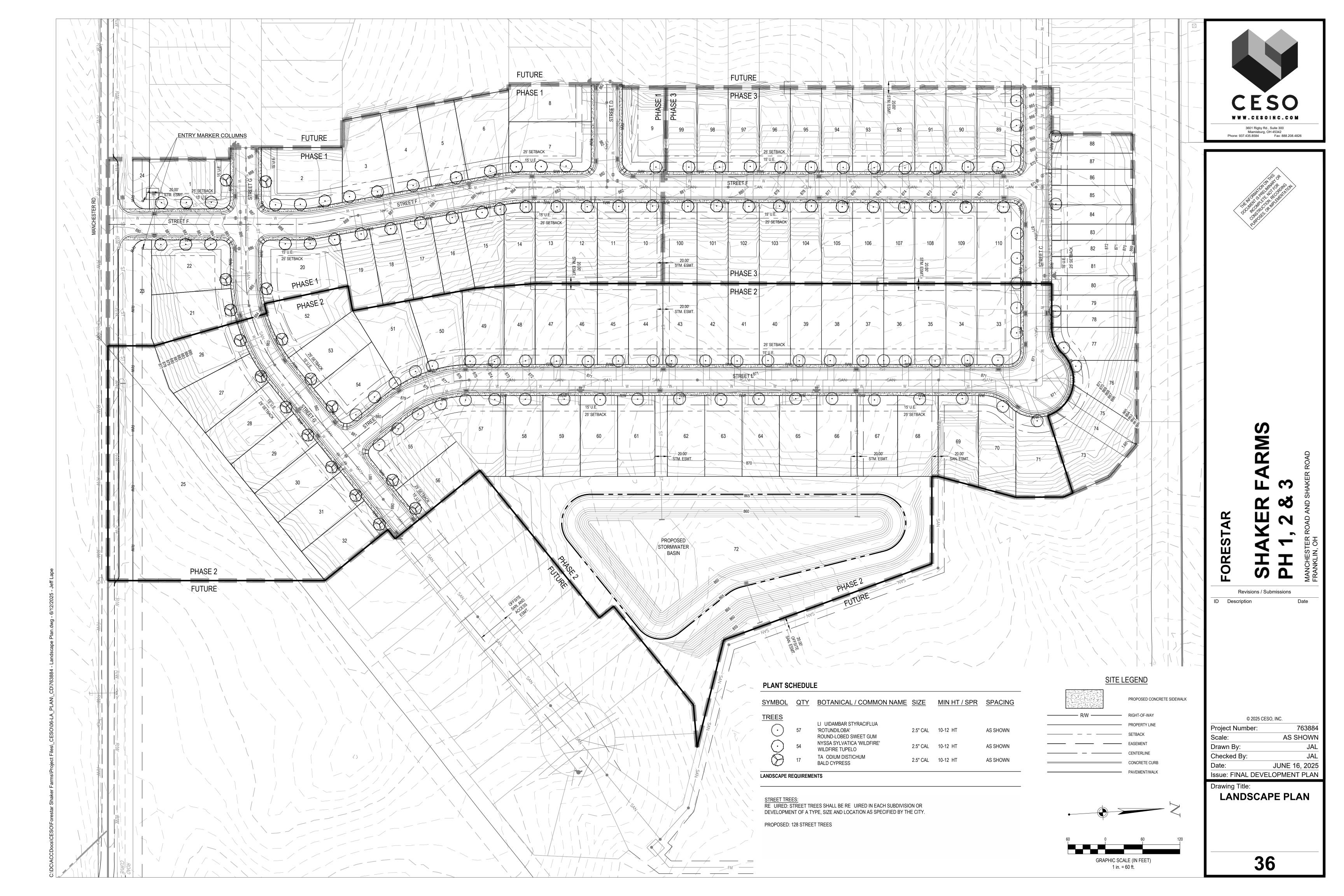
NOTES:

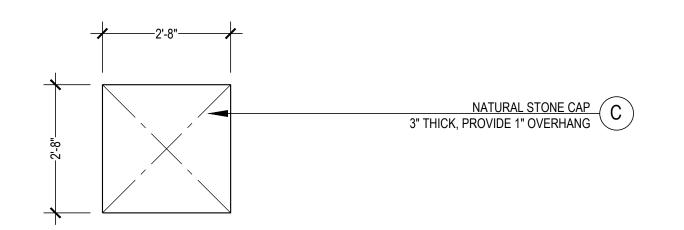
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.

2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

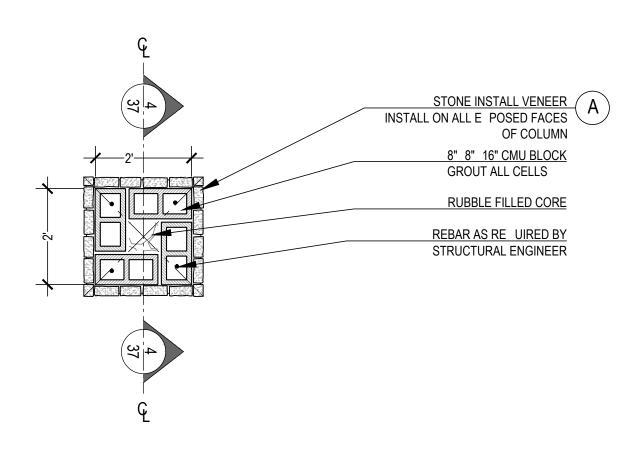
3. THE WASHOUT MUST HAVE SUFFICIENT VOLUME TO CONTAIN ALL LID UID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS INCLUDING BUT NOT LIMITED TO OPERATIONS ASSOCIATED WITH GROUT AND MORTAR.

**CONCRETE WASHOUT** 

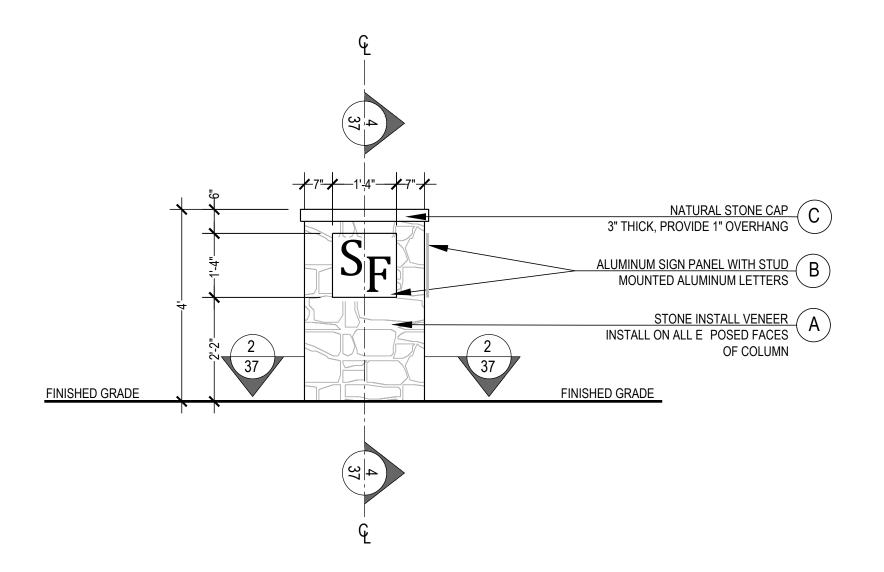




#### MARKER COLUMN - PLAN



MARKER COLUMN - PLAN SECTION SCALE: 1/2"=1'-0"



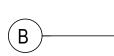
3 MARKER COLUMN - ELEVATION

SCALE: 1/2"=1'-0"

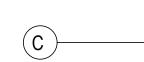
STRUCTURAL NOTE: DESIGN AND DETAILS HAVE NOT BEEN REVIEWED BY STRUCTURAL ENGINEER. MONUMENT WILL NOT BE ACCEPTED BY OWNER IF BUILT WITHOUT SEALED DRAWINGS FROM STRUCTURAL ENGINEER.

#### HARDSCAPE SCHEDULE LEGEND AND NOTES:

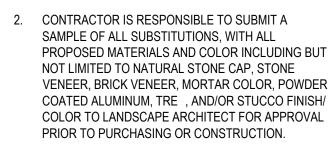
MANUFACTURED STONE VENEER MFG: CENTURION STYLE: FIELDSTONE COLOR: PENNSYLVANIA

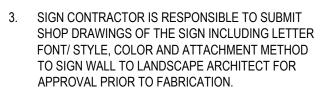


NATURAL STONE CAP COLOR: CRAB ORCHARD

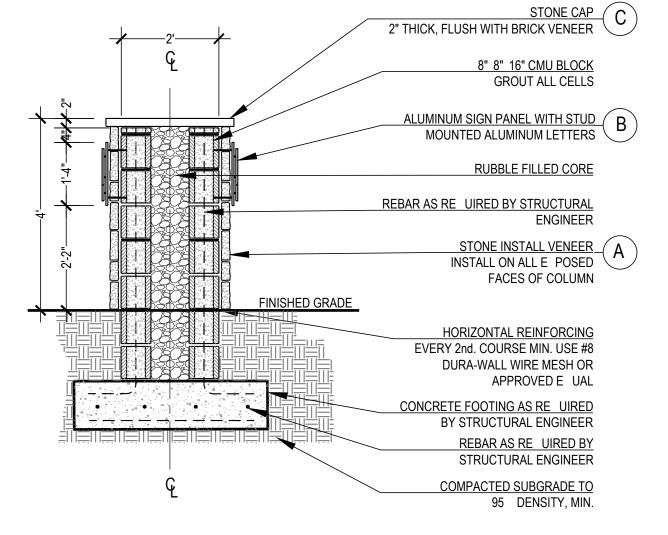


WHITE ALUMINUM PLATE MOUNTED 1" OFF MANUFACTURED STONE FACE WITH METAL DOWELS 1. ACTUAL STRUCTURAL DESIGN AND DETAIL TO BE PROVIDED BY STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. MONUMENT WILL NOT BE ACCEPTED BY OWNER UNTIL CONTRACTOR HAS RECEIVED SEALED PLANS FROM STRUCTURAL ENGINEER. CONTRACTOR IS RESPONSIBLE TO INCLUDE STRUCTURAL ENGINEERING SERVICES WITHIN THEIR SCOPE.

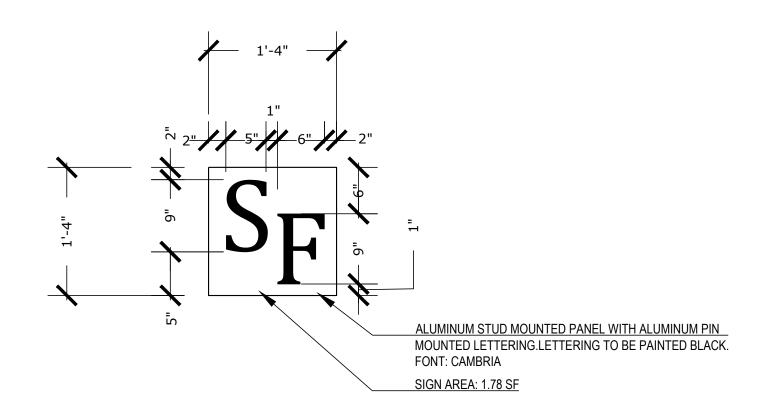




- 4. CONTACT LANDSCAPE ARCHITECT ONCE MONUMENTS HAVE BEEN STAKED IN THE FIELD FOR FINAL APPROVAL AND DISCUSSION TO DETERMINE FINISHED GRADE ELEVATION.
- 5. SOIL UNDERNEATH ALL FOOTINGS SHOULD REMAIN UNDISTURBED. IF DISTURBED THEN COMPACT STRUCTURAL FILL TO 95 OF PROCTOR COMPACTION USING LIFTS UNTIL DESIRED ELEVATION IS ACHIEVED. 2000 PSF MIN BEARING OR STRUCTURAL ENGINEER RECOMMENDATION.
- 6. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI OR STRUCTURAL ENGINEER RECOMMENDATION.
- 7. ALL CMU FILL SHALL BE 3000 PSI GROUT (TYP. OF



MARKER COLUMN - SECTION



SIGN - DETAIL



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Revisions / Submissions

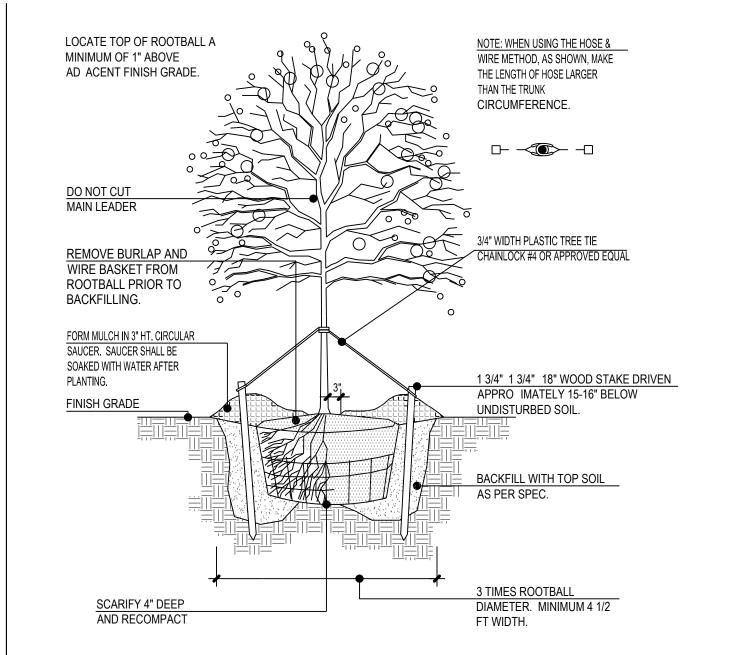
ID Description

AS SHOWN

SIGNAGE DETAIL

FINAL DEVELOPMENT PLAN

JUNE 16, 2025



DECIDUOUS TREE STAKING

#### GENERAL NOTES: LANDSCAPE PLAN

- CONTRACTOR TO VERIFY WITH OWNER AND UTILITY COMPANIES THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION, TO DETERMINE IN THE FIELD THE ACTUAL LOCATIONS AND ELEVATIONS OF ALL E ISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL CALL UTILITY LOCATE SERVICE 72 HOURS PRIOR TO CONSTRUCTION.
- SITE CONDITIONS BASED UPON SURVEY PROVIDED BY OWNER. CONTRACTOR TO FIELD VERIFY E ISTING CONDITIONS BY DETAILED INSPECTION PRIOR TO SUBMITTING BID AND BEGINNING CONSTRUCTION.
- REFER TO SITE CIVIL DRAWINGS FOR ADDITIONAL RE UIREMENTS AND COORDINATE WORK WITH OTHER SITE RELATED DEVELOPMENT DRAWING AS NEEDED.
- 4. REESTABLISH E ISTING TURF IN AREAS DISTURBED BY GRADING OR UTILITY TRENCHING, INCLUDING AREAS IN RIGHT-OF-WAY, TO MATCH E ISTING SPECIES.
- 5. CONTRACTOR SHALL E AMINE FINISH SURFACE, GRADES, TOPSOIL UALITY AND DEPTH. DO NOT START ANY WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. VERIFY LIMITS OF WORK BEFORE STARTING.
- 6. CONTRACTOR TO REPORT ALL DAMAGES TO E ISTING CONDITIONS AND INCONSISTENCIES WITH PLANS TO LANDSCAPE ARCHITECT.
- 7. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN ALL LANDSCAPE BEDS AND ALL LAWN AREAS.
- 8. CONTRACTOR TO FINE GRADE AND ROCK-HOUND ALL TURF AREAS PRIOR TO SEEDING, TO PROVIDE A SMOOTH AND CONTINUAL SURFACE, FREE OF IRREGULARITIES (BUMPS OR DEPRESSIONS) E TRANEOUS MATERIAL OR DEBRIS.
- 9. REMOVE E ISTING WEEDS FROM PRO ECT SITE PRIOR TO THE ADDITION OF ORGANIC AMENDMENTS AND FERTILIZER. APPLY AMENDMENTS AND FERTILIZER AS NEEDED.
- 10. UANTITIES SHOWN ARE INTENDED TO ASSIST CONTRACTOR IN EVALUATING THEIR OWN TAKE OFFS AND ARE NOT GUARANTEED AS ACCURATE REPRESENTATIONS OF RE UIRED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS BID UANTITIES AS RE UIRED BY THE PLANS AND SPECIFICATIONS. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER LABELED ON THE PLANT LEGEND AND THE UANTITY OF GRAPHIC SYMBOLS SHOWN, THE GREATER UANTITY SHALL GOVERN.
- 11. COORDINATE LANDSCAPE INSTALLATION WITH INSTALLATION OF UNDERGROUND SPRINKLER AND DRAINAGE SYSTEMS.
- 12. ALL SIZES AND UALITY OF PLANT MATERIAL SHALL MEET THE MINIMUM SPECIFICATIONS OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014). THE LANDSCAPE CONTRACTOR SHALL INSTALL ALL PLANT MATERIAL IN SIZE AS INDICATED IN THE PLANT SCHEDULE UNLESS OTHERWISE SPECIFIED ON THE PLAN SET. ALL PLANTS THAT DO NOT MEET THE SIZE AND SPECIFICATIONS SET FORTH BY THE AMERICAN STANDARD FOR NURSERY STOCK WILL BE RE ECTED BY LANDSCAPE ARCHITECT AT NO COST TO OWNER.
- 13. ONCE PRO ECT IS AWARDED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE TO SECURE ALL PLANT MATERIAL IN THE SIZE SPECIFIED ON PLAN PRIOR TO INSTALLATION. IN THE EVENT THE PLANT MATERIAL IS NOT AVAILABLE IN THE SIZE SPECIFIED, THE CONTRACTOR SHALL INSTALL LARGER AT NO COST TO OWNER.
- 14. THE LANDSCAPE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FOR ALL PLANT MATERIAL SUBSTITUTIONS FROM THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. PLANT SUBSTITUTIONS WITHOUT PRIOR WRITTEN APPROVAL THAT DO NOT COMPLY WITH THE DRAWINGS AND SPECIFICATIONS MAY BE RE ECTED BY THE LANDSCAPE ARCHITECT AND REPLACED BY CONTRACTOR AT NO COST TO THE OWNER.
- 15. PRIOR TO MOBILIZATION THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IN WRITING, IF HE/SHE BELIEVES ANY OF THE PLANT MATERIAL IDENTIFIED ON THE PLAN MAY NOT BE SUITABLE FOR THE SITE OR MAY DIE. SUBSTITUTION RE UESTS WILL BE GRANTED BY THE LANDSCAPE ARCHITECT PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IF NOTIFICATION IS NOT GIVEN TO THE LANDSCAPE ARCHITECT ALL PLANTING WHICH FAILS TO GROW (E CEPT FOR DEFECTS RESULTING FROM LACK OF ADE UATE MAINTENANCE AS DETERMINED BY THE OWNER, NEGLECT, OR VANDALISM) SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S E PENSE.
- 16. WHERE PROPOSED TREE LOCATIONS OCCUR UNDER E ISTING OVERHEAD UTILITIES OR CROWD E ISTING TREES, NOTIFY LANDSCAPE ARCHITECT TO AD UST TREE LOCATIONS.
- 17. ALL PLANT MASSES TO BE TOP DRESSED WITH MULCH AS SPECIFIED IN PLANT SCHEDULE, SPREAD UNIFORMLY IN DEPTH OVER THE PLANTING BEDS AS DELINEATED ON THE PLANS UNLESS OTHERWISE NOTED.
- 18. BED EDGE TO BE NO LESS THAN 12" AND NO MORE THAN 18" FROM OUTER EDGE OF PLANT MATERIAL BRANCHING. WHERE GROUND-COVER OCCURS, PLANT TO LIMITS OF AREA AS SHOWN.
- 19. ALL PLANTS SHALL BE GUARANTEED FOR 1 YEAR AFTER SUBSTANTIAL COMPLETION OCCURS AND FINAL ACCEPTANCE BY OWNER.
- 20. LANDSCAPE MAINTENANCE PERIOD BEGINS IMMEDIATELY AFTER THE COMPLETION OF ALL PLANTING OPERATIONS AND WRITTEN ACCEPTANCE FROM THE OWNER AND LANDSCAPE ARCHITECT. MAINTAIN TREES, SHRUBS, LAWNS, AND OTHER PLANTS AS PER THE PRO ECT MANUAL AND/OR WRITTEN SPECIFICATIONS, IF APPLICABLE. LANDSCAPE MAINTENANCE IS THE LANDSCAPING CONTRACTORS RESPONSIBILITY UNTIL FINAL ACCEPTANCE BY THE OWNER.
- 21. ALL LANDSCAPE MAINTENANCE SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING STANDARDS.
- 22. REFER TO PRO ECT MANUAL OR WRITTEN SPECIFICATIONS, IF AVAILABLE, FOR ADDITIONAL RE UIREMENTS.

#### SOIL PLANTING MI TURE (MI ONSITE)

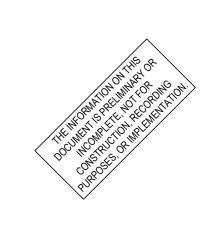
- 1. THE LANDSCAPE CONTRACTOR SHALL FURNISH FROM THEIR SOURCE A GOOD CLEAN, NATIVE SOIL WHICH SHALL MEET THE APPROVAL OF THE OWNER'S REPRESENTATIVE. THIS SOIL SHALL BE USED FOR THE PLANTING MI TURE AS
- A. ONE PART COMPOST/MANURE PLANTING MI , TOPSOIL OR APPROVED E UAL
- B. ONE PART NATIVE SOIL

N.T.S.

2. SOILS WITHIN PLANTING AREAS MUST BE SUITABLE FOR PROPOSED PLANTED MATERIAL SOD WITH REGARD TO: H, SOIL TE TURE, SOIL STRUCTURE, AND SEASONAL HIGH WATER TABLE. THE CONTRACTOR SHALL ANALYZE E ISTING SOILS LOCATED IN PRO IMITY TO PROPOSED PLANT MATERIAL AND BE RESPONSIBLE TO AMEND THE SOIL TO OBTAIN ESSENTIAL RE UIREMENTS NECESSARY FOR THE ESTABLISHMENT AND GROWTH OF PLANT LIFE. LANDSCAPE CONTRACTOR TO PROVIDE SOILS REPORT AND APPROPRIATE RECOMMENDATIONS PRIOR TO INSTALLATION TO OWNER'S REPRESENTATIVE FOR REVIEW. FAILURE TO PROVIDE REPORT MAY RESULT IN PLANT MATERIAL BEING RE ECTED BY OWNER'S REPRESENTATIVE AND REPLACED AT NO COST TO OWNER.

3. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING PRIOR TO PLANTING, WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, POOR PLANTING SOIL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS.





# 3 ∞

Revisions / Submissions ID Description

> **AS SHOWN** JUNE 16, 2025

**PLANTING DETAILS** 

FINAL DEVELOPMENT PLAN

38

**AND NOTES** 

