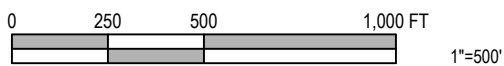


2012 IMAGERY FROM INDIANA STATE MAP.

LOCATION AND SCOPE OF WORK PLAN



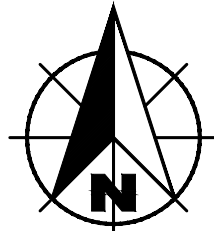
HORIZONTAL AND VERTICAL CONTROL INFORMATION

NOTES:

1. A FIELD SURVEY WAS PERFORMED IN MAY AND JUNE 2022.
2. COORDINATES (INDIANA STATE PLANE, EAST ZONE, NAD 83) AND ELEVATIONS (NAVD 88) ARE BASED ON INCORS.
3. UNITS ARE U.S. SURVEY FEET.
4. CONTROL POINTS WERE SET USING GPS.
5. A LEVEL LOOP WAS PERFORMED ON THE CONTROL POINTS AND TBMS.

BENCHMARK DESCRIPTION:

1. TBM NO. 19 RAILROAD SPIKE SET IN THE NORTH SIDE PWP ON THE SOUTH SIDE OF 156TH STREET @ LIFT STATION NO. 2 SITE
EL 818.52
2. TBM NO. 325 RAILROAD SPIKE SET IN THE EAST SIDE JOINT POLE @ HIGH POINT
EL 839.50
3. TBM NO. 327 RAILROAD SPIKE SET IN EASE SIDE JOINT POLE SOUTH WEST CORNER INTERSECTION OLIO RD AND 166TH STREET
EL 829.76
4. TBM NO. 305 RAILROAD SPIKE SET WEST LEG HIGH TENSION POWER POLE
EL 822.70
5. TBM NO. 307 RAILROAD SPIKE FOUND IN EAST FACE POWER POLE NO. 890-6290
EL 812.77
6. TBM NO. 34 RAILROAD SPIKE SET IN EAST FACE POWER POLE NO. 890-6299
EL 796.11
7. TBM NO. 35 RAILROAD SPIKE SET WEST FACE TEL. PED WEST OF EXISTING TREE LINE
EL 809.60
8. HAMILTON SOUTHEASTERN UTILITIES CONTROL MONUMENTS HSE 40 AND HSE 41



CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 1	1742028.98	253920.47	815.98	5/8" REBAR
CP 2	1742003.70	254355.63	817.02	5/8" REBAR
CP 3	1742030.96	255082.09	820.56	5/8" REBAR
CP 4	1742001.52	255613.66	823.16	5/8" REBAR
CP 5	1742002.21	256181.97	823.83	5/8" REBAR
CP 6	1742028.35	256931.53	824.28	5/8" REBAR
CP 7	1741776.54	257322.64	828.73	5/8" REBAR
CP 8	1741157.25	257289.78	828.54	5/8" REBAR
CP 9	1740473.12	257324.02	832.01	5/8" REBAR
CP 10	1739855.76	257298.61	834.05	5/8" REBAR
CP 11	1739171.75	257332.20	836.08	5/8" REBAR
CP 12	1738536.58	257307.30	836.05	5/8" REBAR
CP 13	1737784.48	257342.88	836.27	5/8" REBAR
CP 14	1737206.16	257346.42	834.91	5/8" REBAR
CP 15	1736749.73	257358.61	833.85	5/8" REBAR
CP 16	1736530.84	257353.71	831.03	HAM. CO. MKR 170
CP 17	1736705.93	253256.38	816.75	5/8" REBAR
CP 18	1736701.80	253503.40	818.32	MAGNAIL
CP 20	1742030.21	253274.27	813.18	5/8" REBAR
CP 21	1742003.65	252705.81	815.39	5/8" REBAR

CONTROL POINTS				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP 22	1742168.16	252103.50	810.23	5/8" REBAR
CP 23	1742722.75	252098.63	812.14	5/8" REBAR
CP 24	1743440.89	252059.55	800.57	5/8" REBAR
CP 25	1743686.37	252105.24	798.03	5/8" REBAR
CP 26	1744002.98	252152.00	798.26	5/8" REBAR
CP 27	1743749.92	252772.47	803.18	5/8" REBAR
CP 28	1743643.70	253348.84	805.98	5/8" REBAR
CP 29	1743590.12	253964.96	810.30	5/8" REBAR

UTILITY CONTACTS

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Citizens Energy Group
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Mobile: 614-985-3843
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Indiana American Water
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Greenwood, Indiana 46143

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Mobile:317-790-8475
Shawn.williams@centerpointenergy.com
Vectren-A CenterPoint Energy Company
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victor.koth@windstream.com
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Indianapolis, IN 46256

Communications
Waylon Higgins
765-341-1199
Waylon.Higgins@Zayo.com
Zayo Bandwidth
9209 Castlegate Dr.
Indianapolis, Indiana 46256

DRAWING INDEX

SHEET NO.	DESCRIPTION
GENERAL	
01	TITLE SHEET
02	LOCATION PLAN, DRAWING INDEX, UTILITY CONTACTS AND SURVEY INFO
03	GENERAL PLAN
PLAN SHEETS	
04	PLAN/PROFILE - LINE A
05	PLAN/PROFILE - LINE A
06	PLAN/PROFILE - LINE A
07	PLAN/PROFILE - LINE A
08	PLAN/PROFILE - LINE A
09	PLAN/PROFILE - LINE A
10	PLAN/PROFILE - LINE A
11	PLAN/PROFILE - LINE A
12	PLAN/PROFILE - LINE A
13	PLAN/PROFILE - LINE A
14	PLAN/PROFILE - LINE A
15	PLAN/PROFILE - LINE A
16	PLAN/PROFILE - LINE A
MISCELLANEOUS DETAILS	
17 - 18	MISCELLANEOUS DETAILS
EROSION CONTROL DETAILS	
19 - 20	EROSION CONTROL DETAILS

LOCATION PLAN, DRAWING INDEX, UTILITY CONTACTS AND SURVEY INFO

WAYNE TOWNSHIP SANITARY SEWER

HAMILTON SOUTHEASTERN UTILITIES, INC.

CERTIFIED BY:



Date APRIL 14, 2023

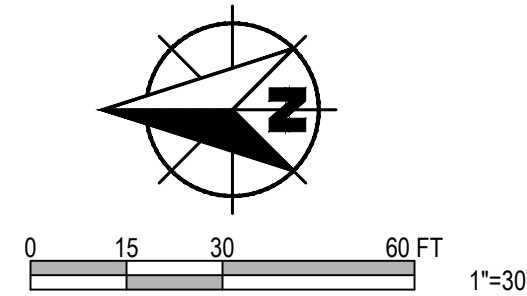
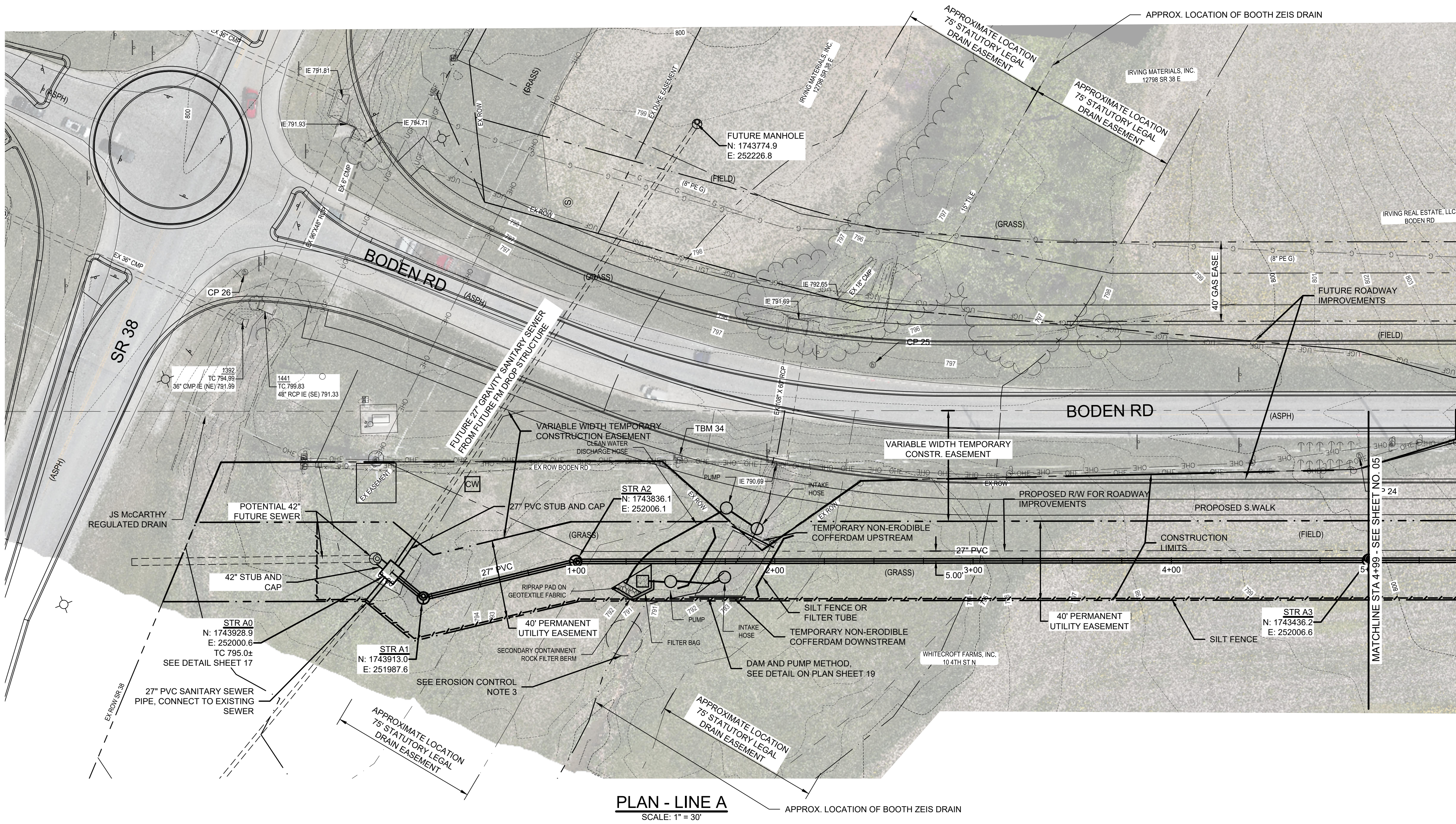


Drawn By: CLS
Checked By: KRCJ
Quality Assurance: RWH

Sheet 02
Date APRIL 2023
Project Number 238221-04-003

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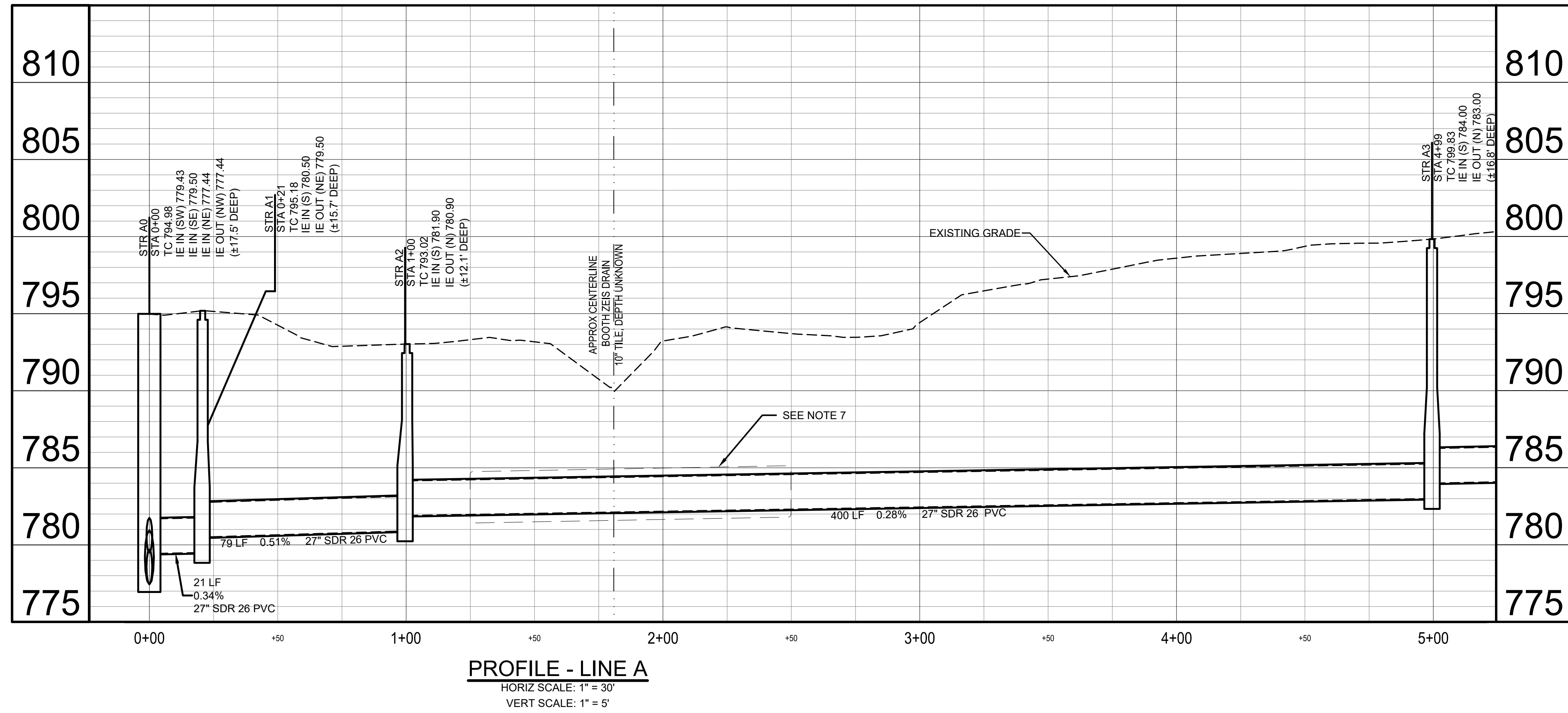


NOTES:

1. MANHOLE CASTINGS MAY NEED TO BE ELEVATED AFTER FINAL GRADING TO INSURE DRAINAGE AWAY FROM STRUCTURES.
2. CONTRACTOR TO CONSTRUCT MOUND WITH FIVE (5) FOOT RADIUS AROUND MANHOLE. SIDE SLOPES MUST BE 3:1.
3. ALL BENCH WALLS MUST EXTEND TO THE CROWN OF THE HIGHEST INFLUENT PIPE.
4. ALL MANHOLES ARE TO RECEIVE BITUMINOUS COATING PRIOR TO INSTALLATION.
5. DRAIN TILES WHERE DISCONNECTED VIA CONSTRUCTION ACTIVITY ARE TO BE RECONNECTED PER HAMILTON COUNTY STANDARDS.
6. REFER TO HAMILTON COUNTY SURVEYOR'S OFFICE FOR ENCASEMENT DETAIL. CONCRETE ENCASEMENT FROM STA. 1+25 TO STA. 2+50. SEE DETAIL C-5 ON SHEET 20.

EROSION CONTROL NOTES:

1. CONTRACTOR MUST CONTACT HAMILTON COUNTY SURVEYOR'S OFFICE 48 HOURS PRIOR TO CROSSING OF BOOTH ZEIS DRAIN TO SCHEDULE INSPECTION. CONTRACTOR MUST ALSO COMPLY WITH UTILITY INSTALLATION CROSS SECTION AND OPEN DRAIN CROSSING DETAILS ISSUED BY THE HAMILTON COUNTY SURVEYOR'S OFFICE.
2. PLACE RIP RAP PER HAMILTON COUNTY SURVEYOR'S OFFICE OPEN DRAIN CROSSING DETAIL.
3. LOCATION FOR STORMWATER DISCHARGE FROM THE PROJECT SITE PRIOR TO CONSTRUCTION; SAME LOCATION WHERE STORMWATER AND NON-STORMWATER DISCHARGES WILL LEAVE THE PROJECT SITE.



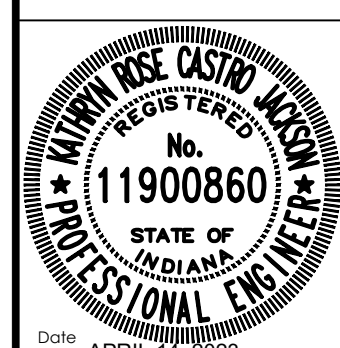
Revisions	Date	Description

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PLAN/PROFILE - LINE A
WAYNE TOWNSHIP SANITARY SEWER
HAMILTON SOUTHEASTERN UTILITIES, INC.

CERTIFIED BY:



Date: APRIL 14, 2023

Kathy Rose Castro



811 FOR CALLS IN INDIANA 1-800-382-5544

Drawn By: CLG

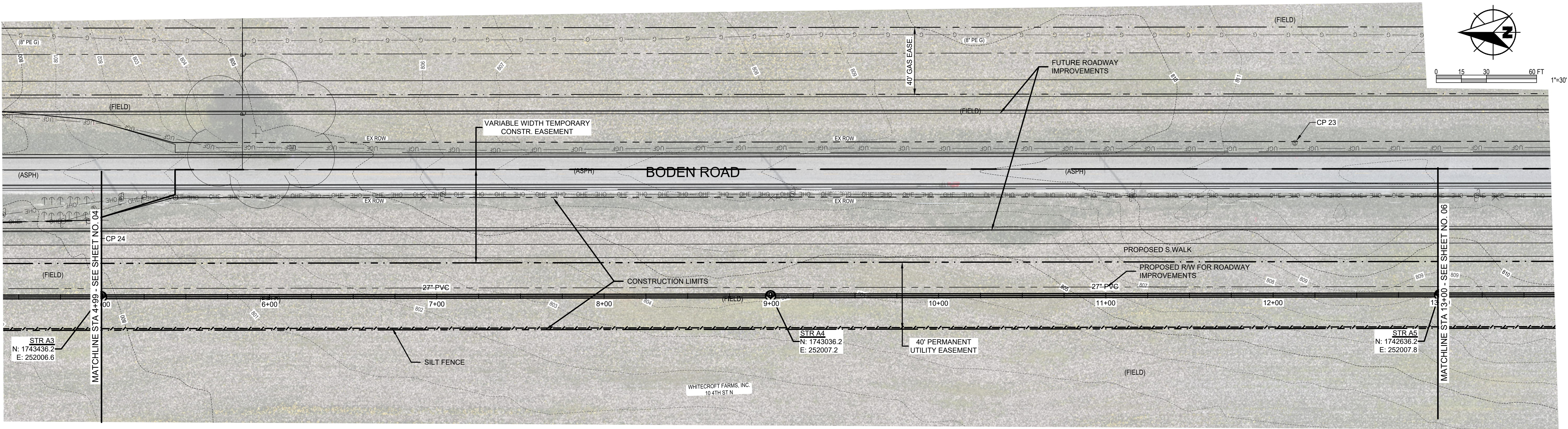
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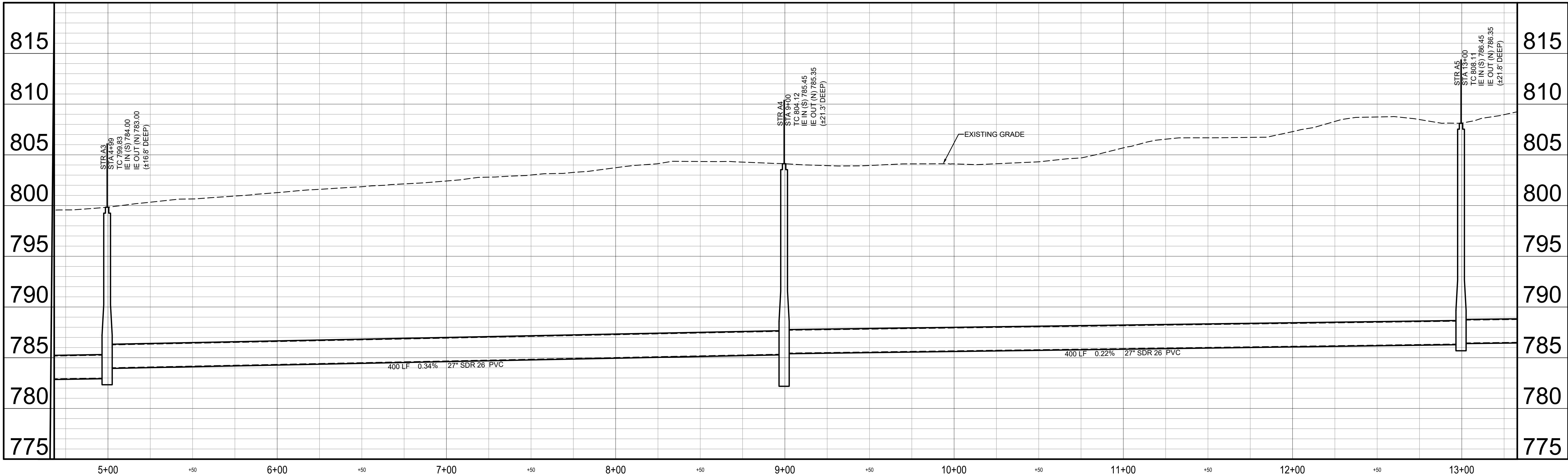
Sheet

Date: APRIL 2023

Project Number: 238221-04-003



PLAN - LINE A
SCALE: 1" = 30'



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
VERT SCALE: 1" = 5'

HSEU BORING 2014-010 APPROX.
6.0 FT OF SOIL ON BEDROCK;
AUGER REFUSAL ELEVATION 786 FT

HSEU BORING 2014-011 APPROX.
17.0 FT OF SOIL ON BEDROCK;
AUGER REFUSAL ELEVATION 786 FT

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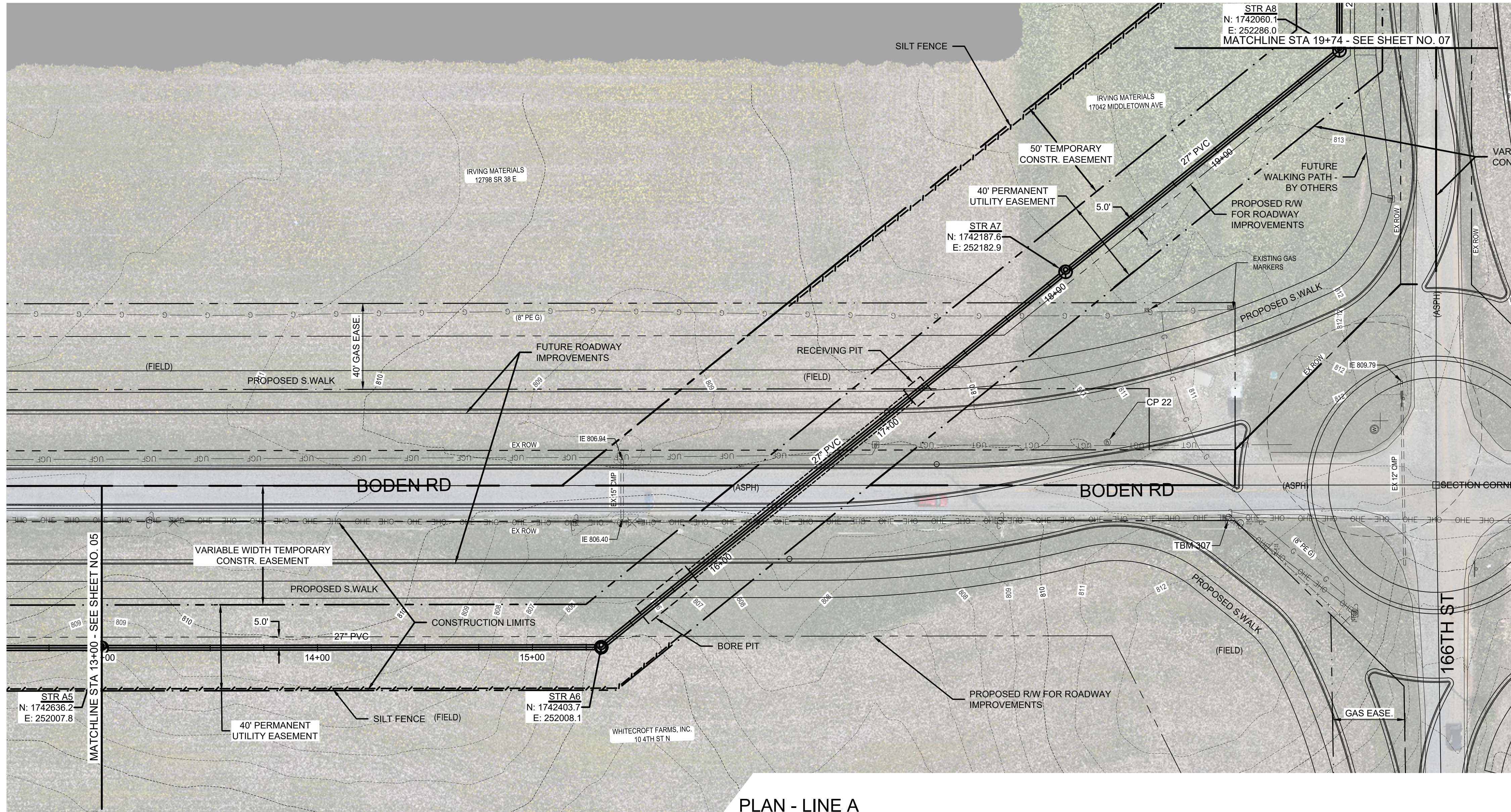
PLAN/PROFILE - LINE A
WAYNE TOWNSHIP SANITARY SEWER
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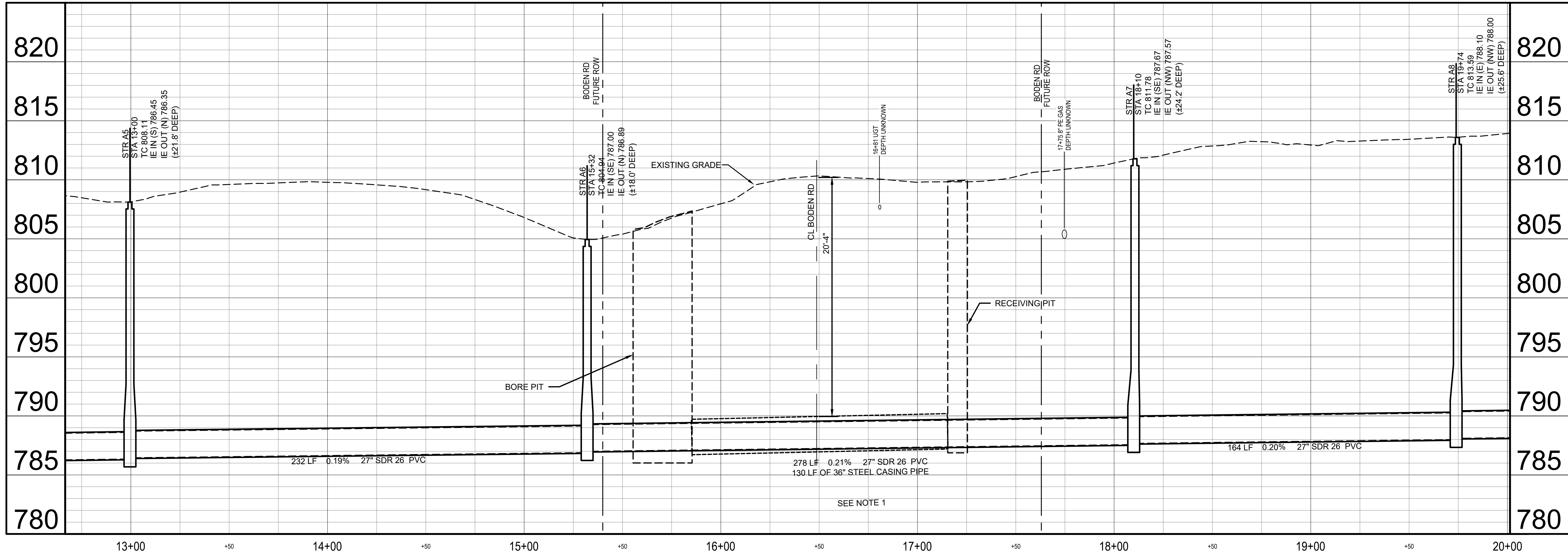
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Checked By:
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Quality Assurance:
RWH

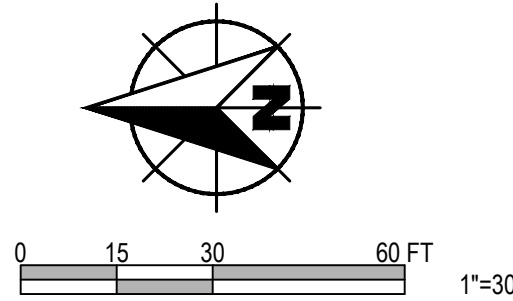


PLAN - LINE A
SCALE: 1" = 30'



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
VERT SCALE: 1" = 5'

- NOTES:
1. A 36" STEEL CASING IS REQUIRED FROM STA. 15+85 TO STA. 17+15. UPON COMPLETION OF BORE, INVERT ELEVATIONS MUST BE PROVIDED TO A SAMCO INSPECTOR.
 2. CONTRACTOR MUST MAINTAIN A MINIMUM VERTICAL SEPARATION OF TWO (2) FEET (FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) BETWEEN THE PIPELINE AND SANITARY SEWER INFRASTRUCTURE. CONTRACTOR MUST COORDINATE CROSSING WITH THE PIPELINE OWNER.
 3. CONTRACTOR MAY OPT TO OPEN CUT SEWER ACROSS BODEN ROAD IN LIEU OF TRENCHLESS INSTALLATION. ALL PROCEDURES, INSTALLATION, AND RESTORATION SHALL MEET CITY OF NOBLESVILLE REQUIREMENTS AND SPECIFICATIONS.



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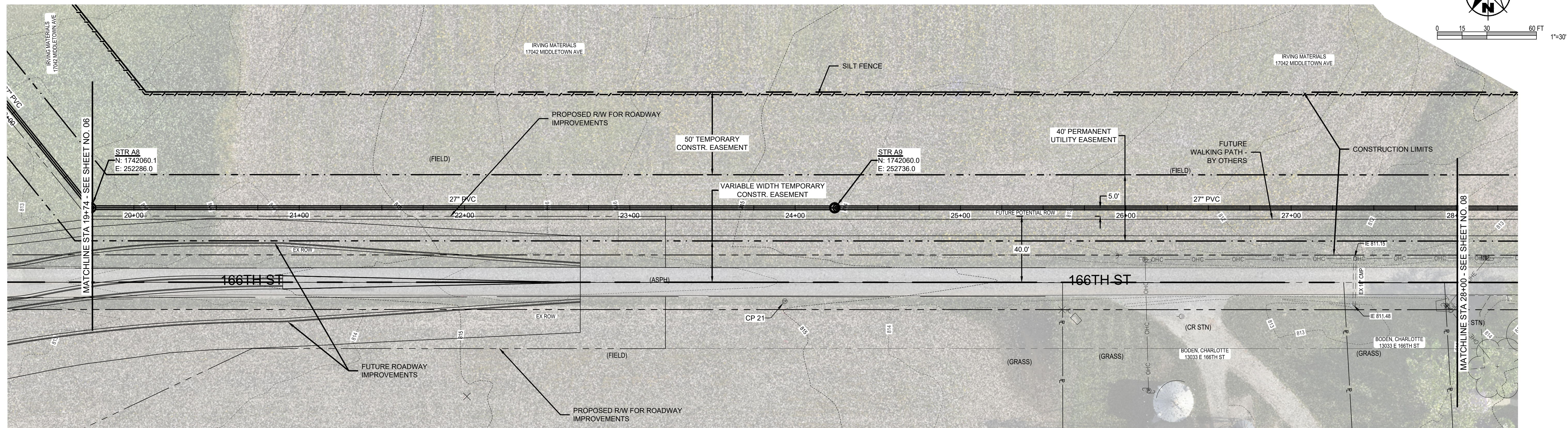
PLAN/PROFILE - LINE A
WAYNE TOWNSHIP SANITARY SEWER
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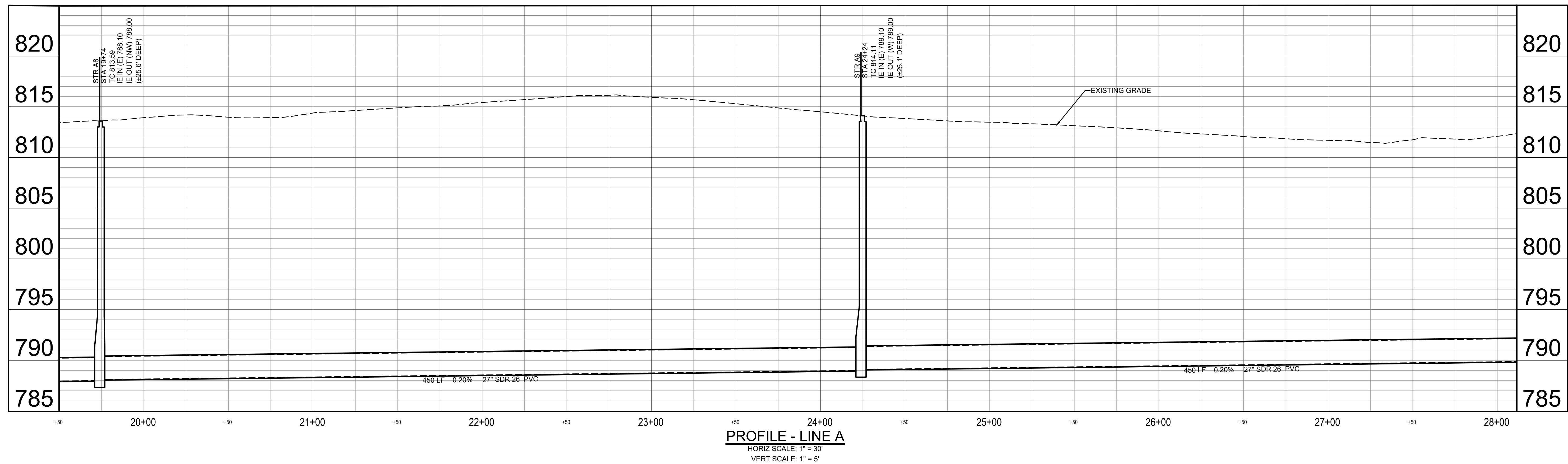
KRCJ
APRIL 14, 2023

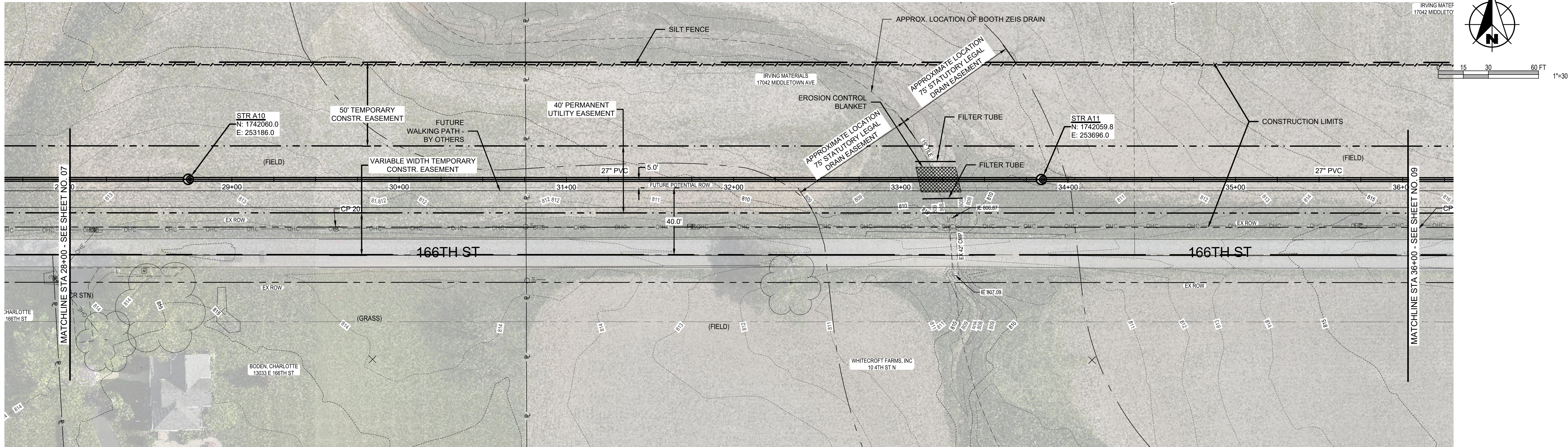
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Quality Assurance: RWH

Sheet: 06
Date: APRIL 2023
Project Number: 238221-04-003



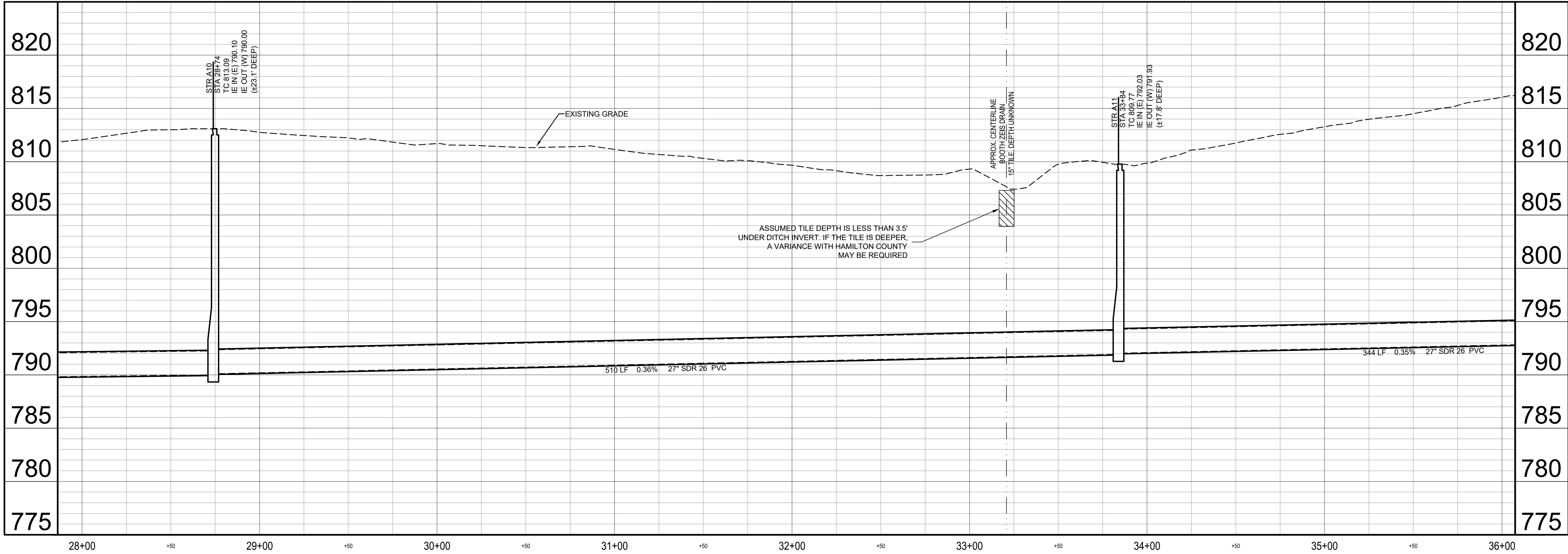
PLAN - LINE A
SCALE: 1" = 30'





PLAN - LINE A
SCALE: 1" = 30'

EROSION CONTROL NOTES:
1. CONTRACTOR MUST CONTACT HAMILTON COUNTY SURVEYOR'S OFFICE 48 HOURS PRIOR TO CROSSING OF BOOTH ZEIS DRAIN TO SCHEDULE INSPECTION. CONTRACTOR MUST ALSO COMPLY WITH UTILITY INSTALLATION CROSS SECTION AND OPEN DRAIN CROSSING DETAILS ISSUED BY THE HAMILTON COUNTY SURVEYOR'S OFFICE. SEE DETAIL C-5 ON SHEET 20.



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
VERT SCALE: 1" = 5'

Revisions	Number	Date	Description
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PLAN/PROFILE - LINE A
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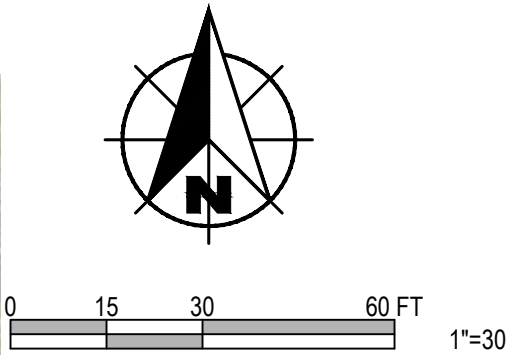
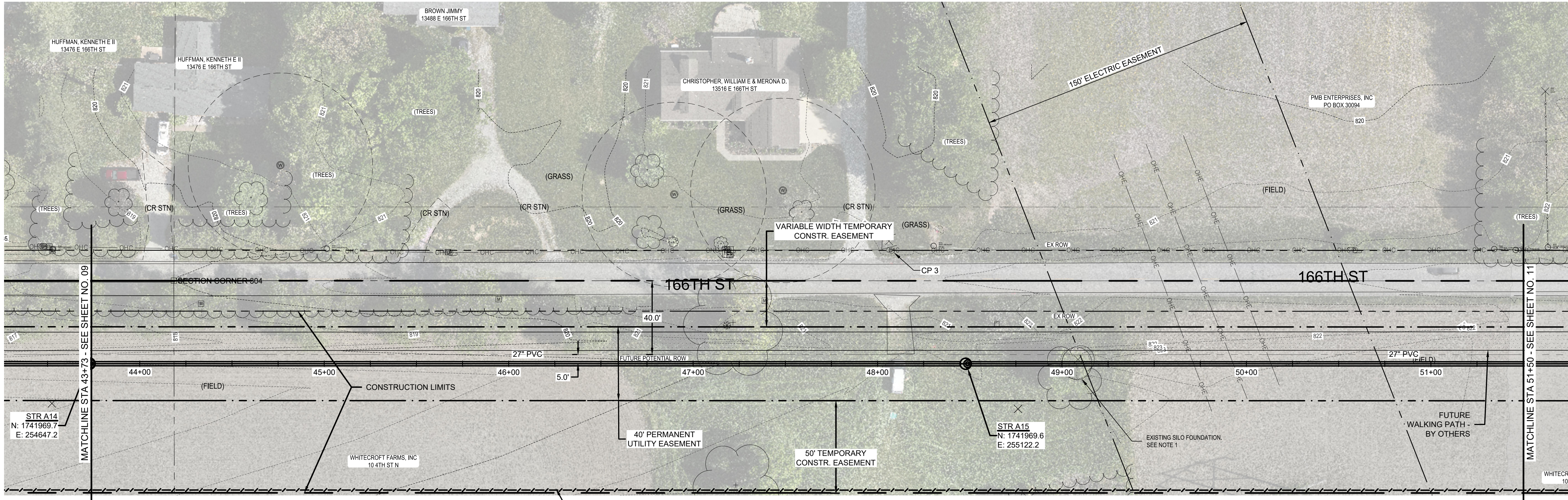


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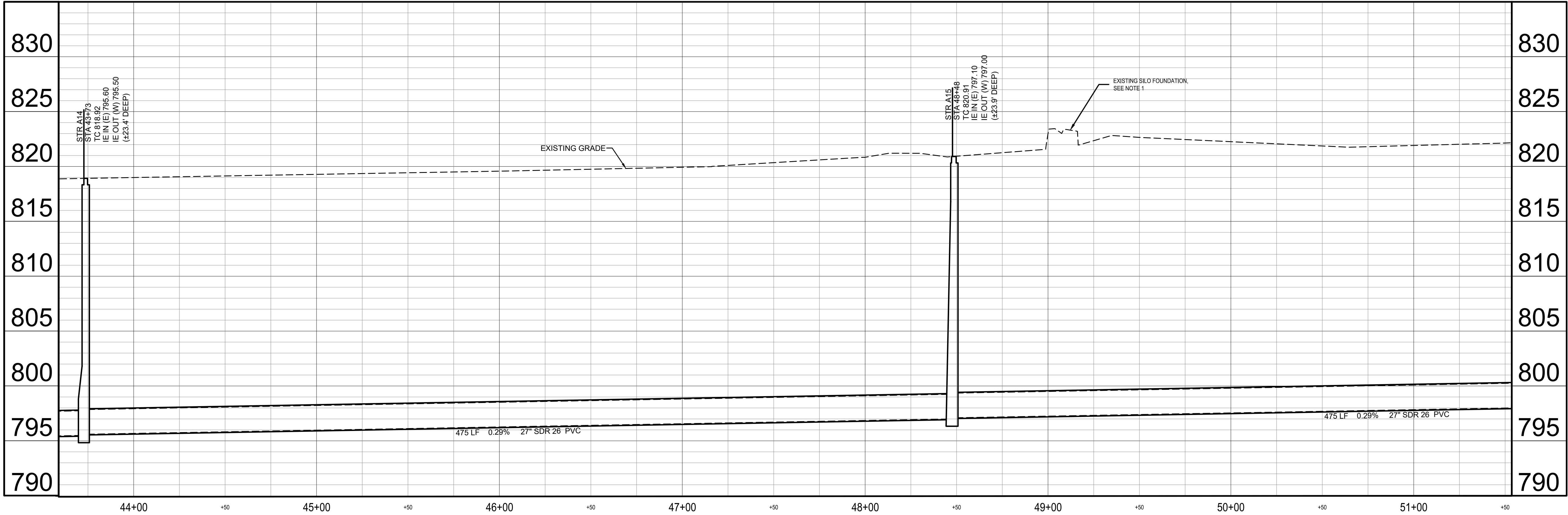
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Sheet: 08
Date: APRIL 2023
Project Number: 238221-04-003



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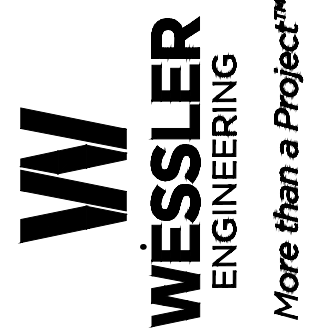
- NOTES:
- CONTRACTOR SHALL USE EXTREME CARE WHILE EXCAVATING NEAR THE EXISTING SILO FOUNDATION SO THAT NO CONCRETE DEBRIS WILL BE USED AS BACKFILL. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF SILO FOUNDATION AND DEBRIS.



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
VERT SCALE: 1" = 5'

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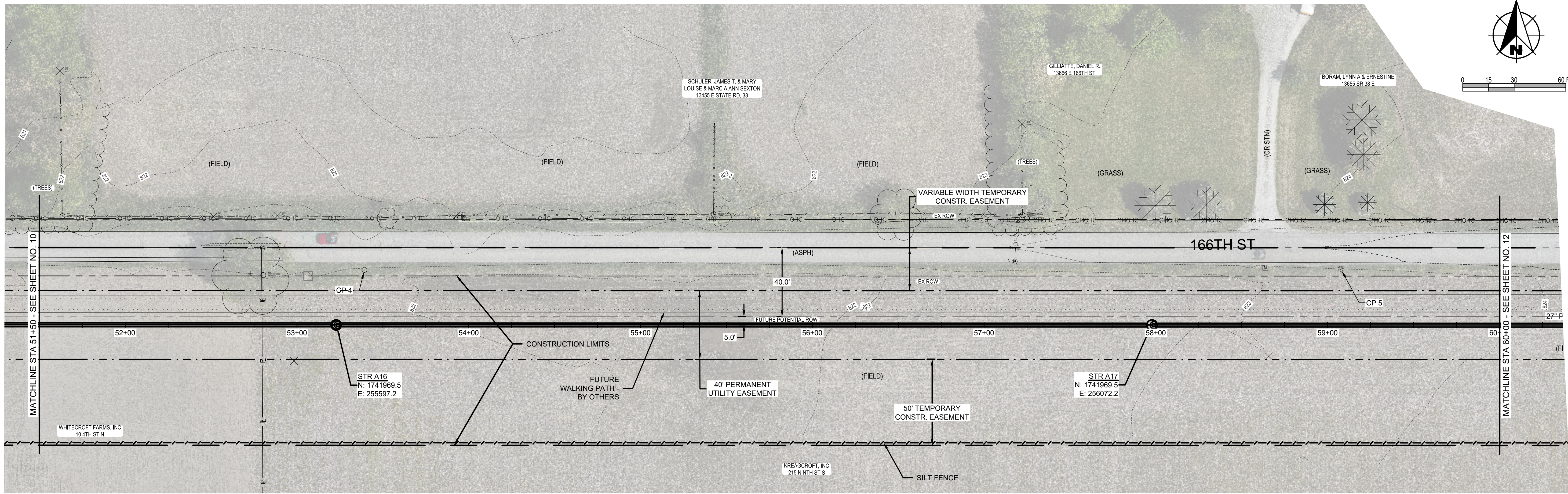


PLAN/PROFILE - LINE A
WAYNE TOWNSHIP SANITARY SEWER
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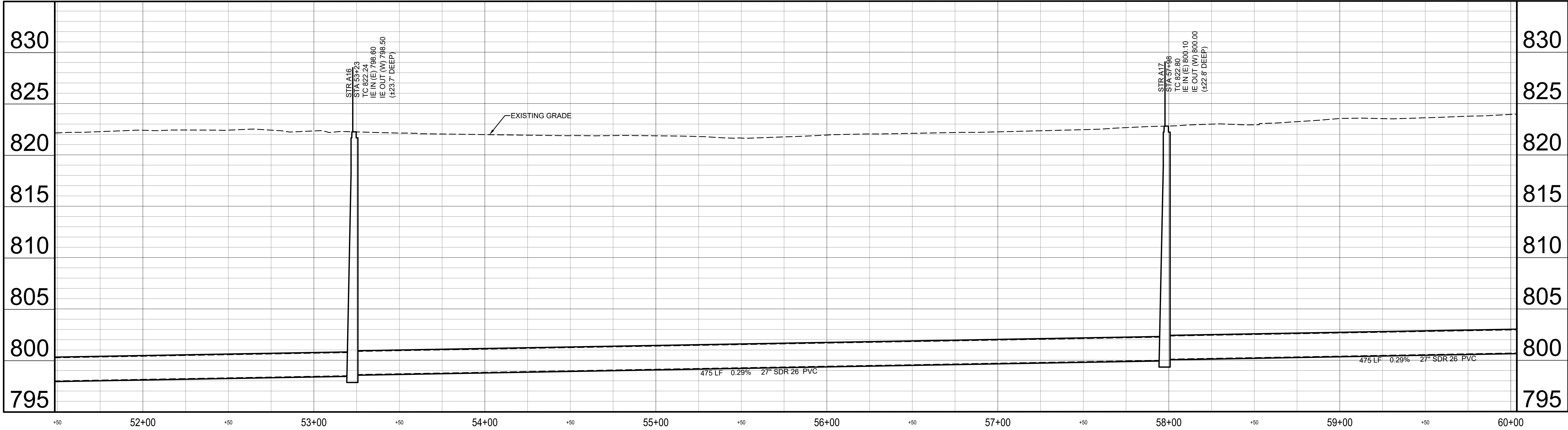


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Sheet 10
Date APRIL 2023
Project Number 238221-04-003



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SCALE: 1" = 30'



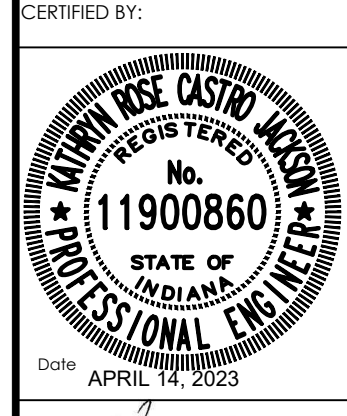
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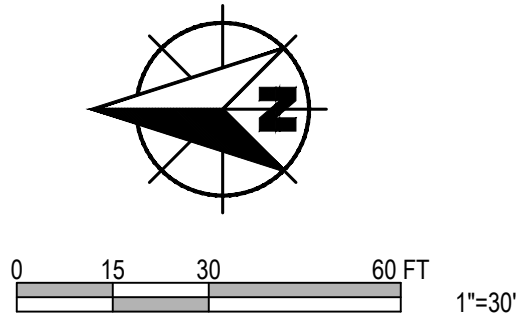
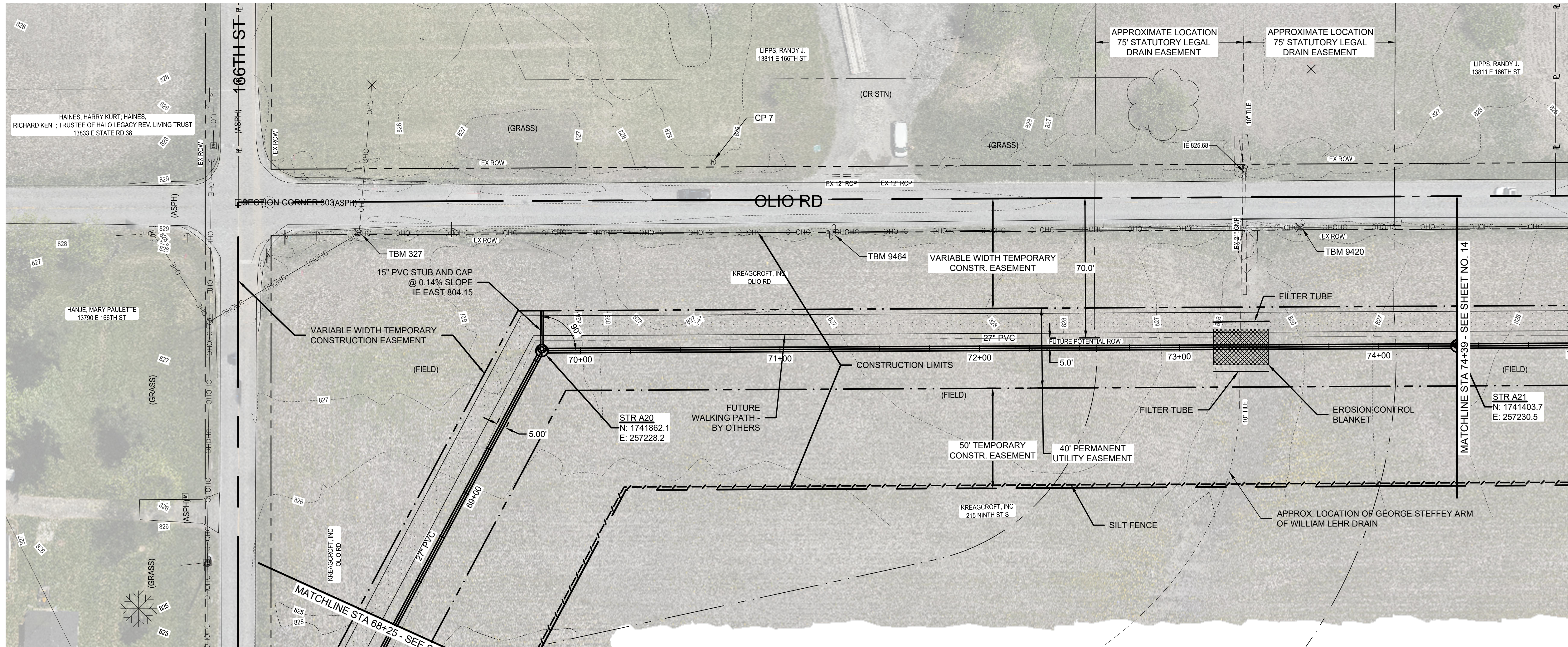
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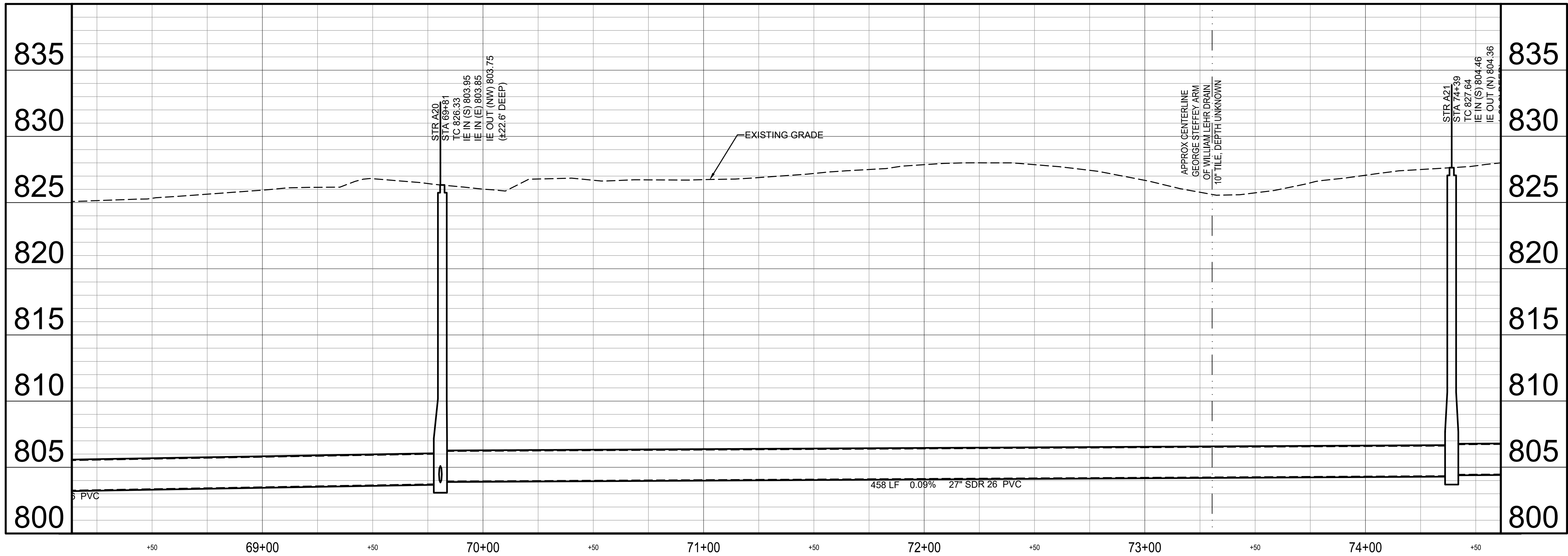


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Checked By: KRCJ
Quality Assurance: RWH



PLAN - LINE A
SCALE: 1" = 30'

- EROSION CONTROL NOTES:**
- CONTRACTOR MUST CONTACT HAMILTON COUNTY SURVEYOR'S OFFICE 48 HOURS PRIOR TO CROSSING OF BOOTH ZEIS DRAIN TO SCHEDULE INSPECTION. CONTRACTOR MUST ALSO COMPLY WITH UTILITY INSTALLATION CROSS SECTION AND OPEN DRAIN CROSSING DETAILS ISSUED BY THE HAMILTON COUNTY SURVEYOR'S OFFICE. SEE DETAIL C-5 ON SHEET 20.



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
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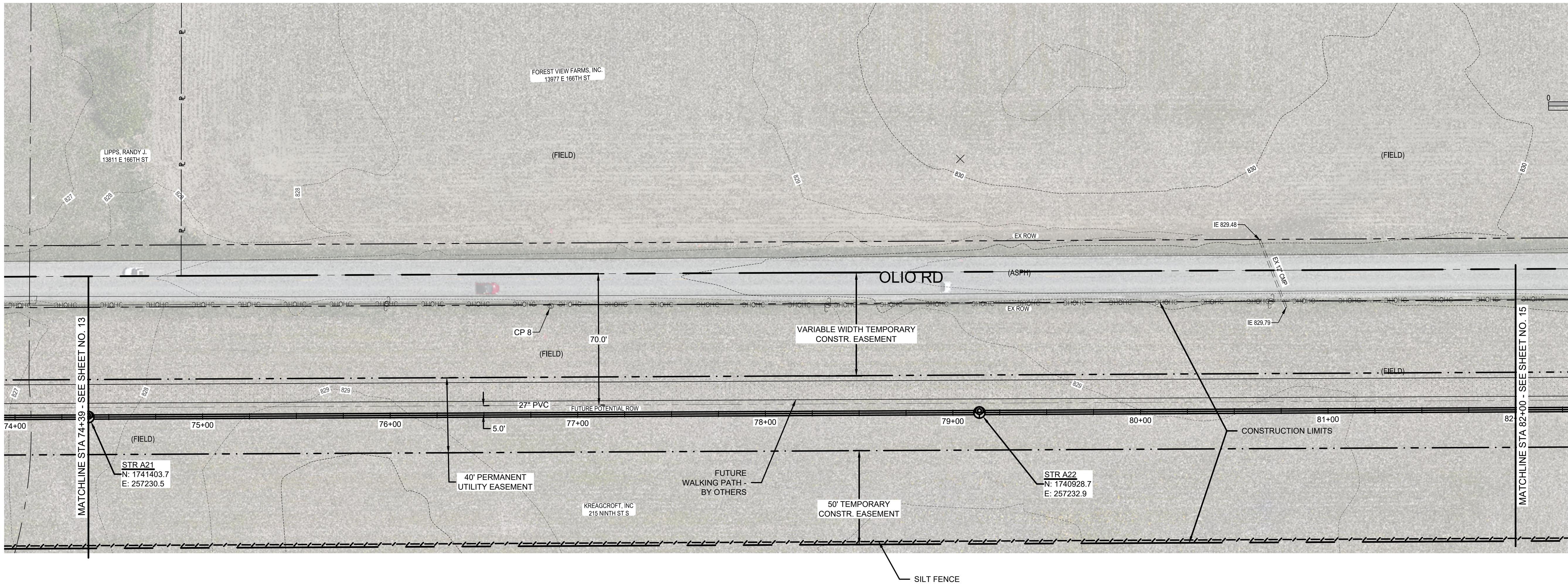


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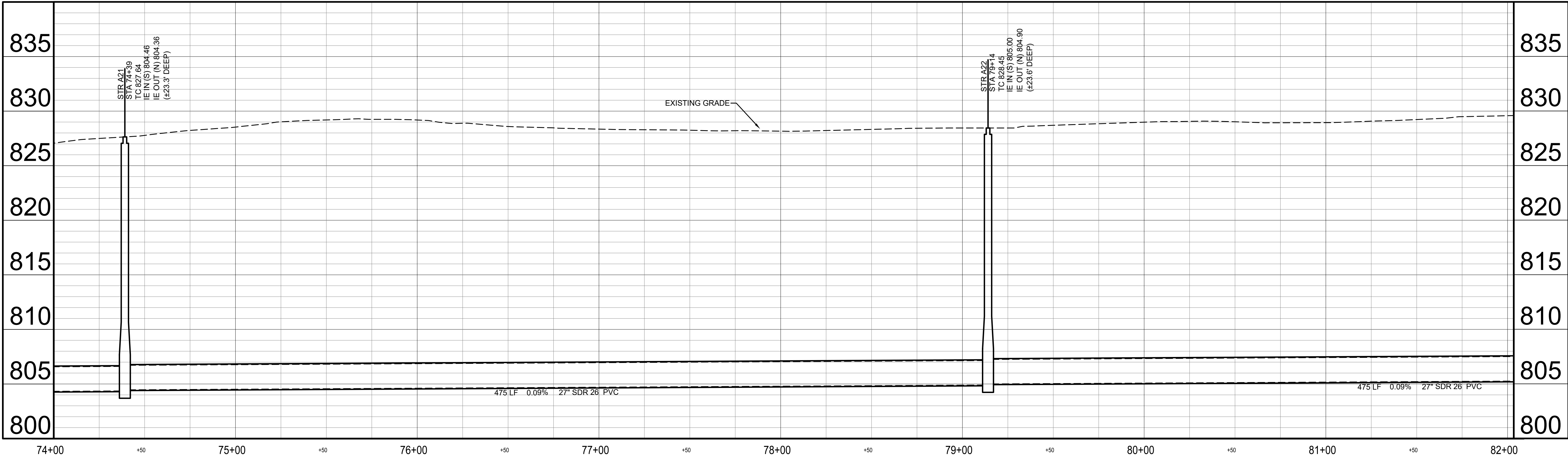


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Quality Assurance:
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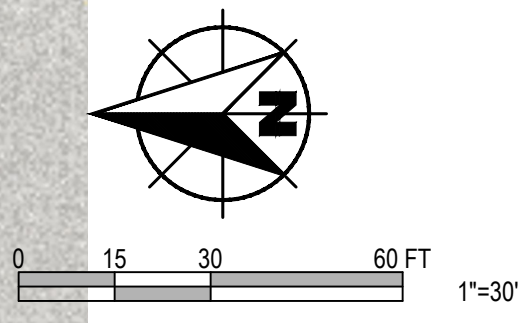
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Date
Project Number
238221-04-003



PLAN - LINE A
SCALE: 1" = 30'



PROFILE - LINE A
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	Date	By

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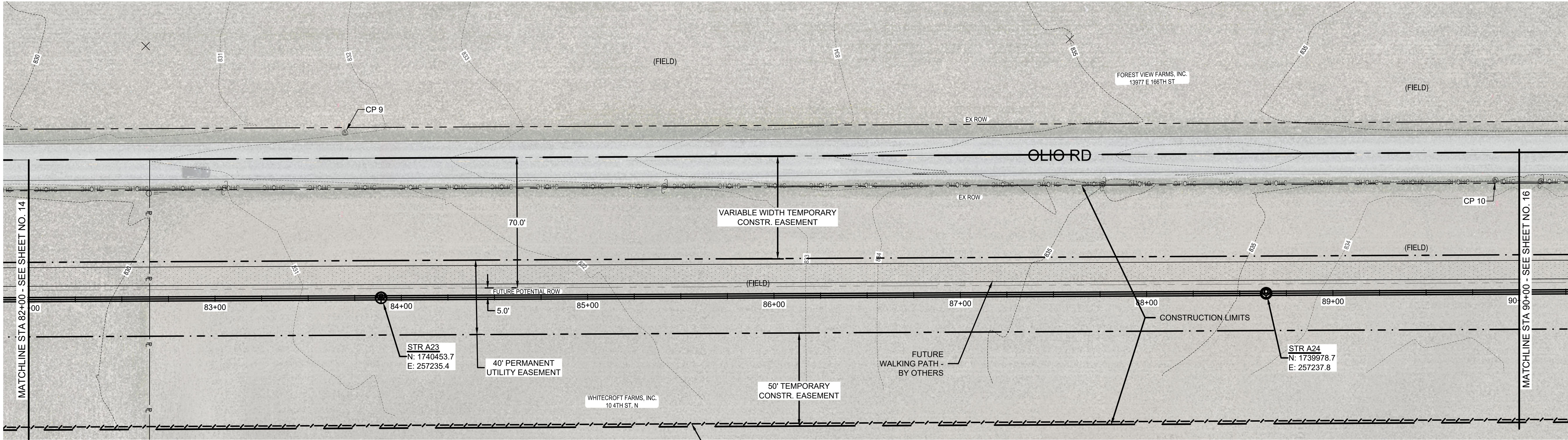
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HAMILTON SOUTHEASTERN UTILITIES, INC.

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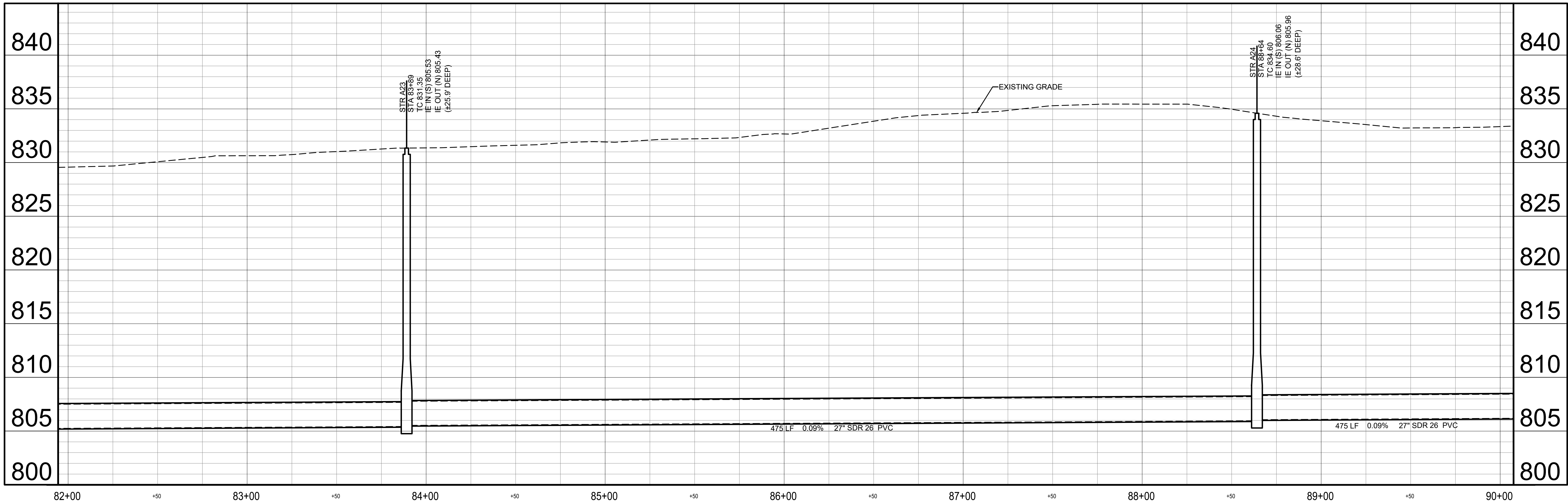
Adam Rose Castro
REGISTERED PROFESSIONAL ENGINEER
No. 11900860
STATE OF INDIANA
Date: APRIL 14, 2023

Drawn By: CLG
Checked By: KRCJ
Quality Assurance: RWH

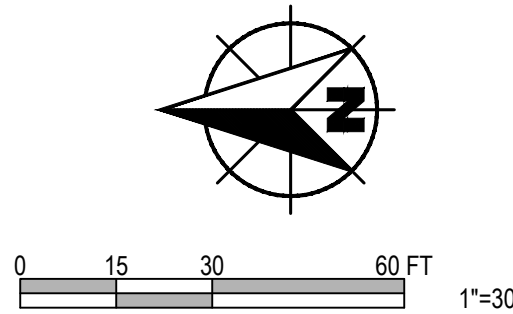
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Project Number: 238221-04-003



PLAN - LINE A
SCALE: 1" = 30'



PROFILE - LINE A
HORIZ SCALE: 1" = 30'
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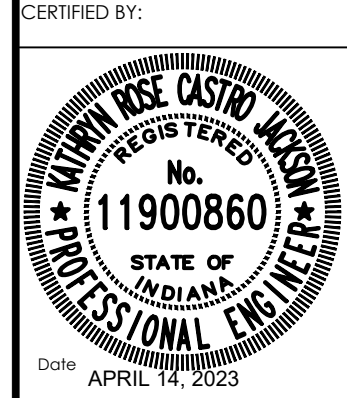


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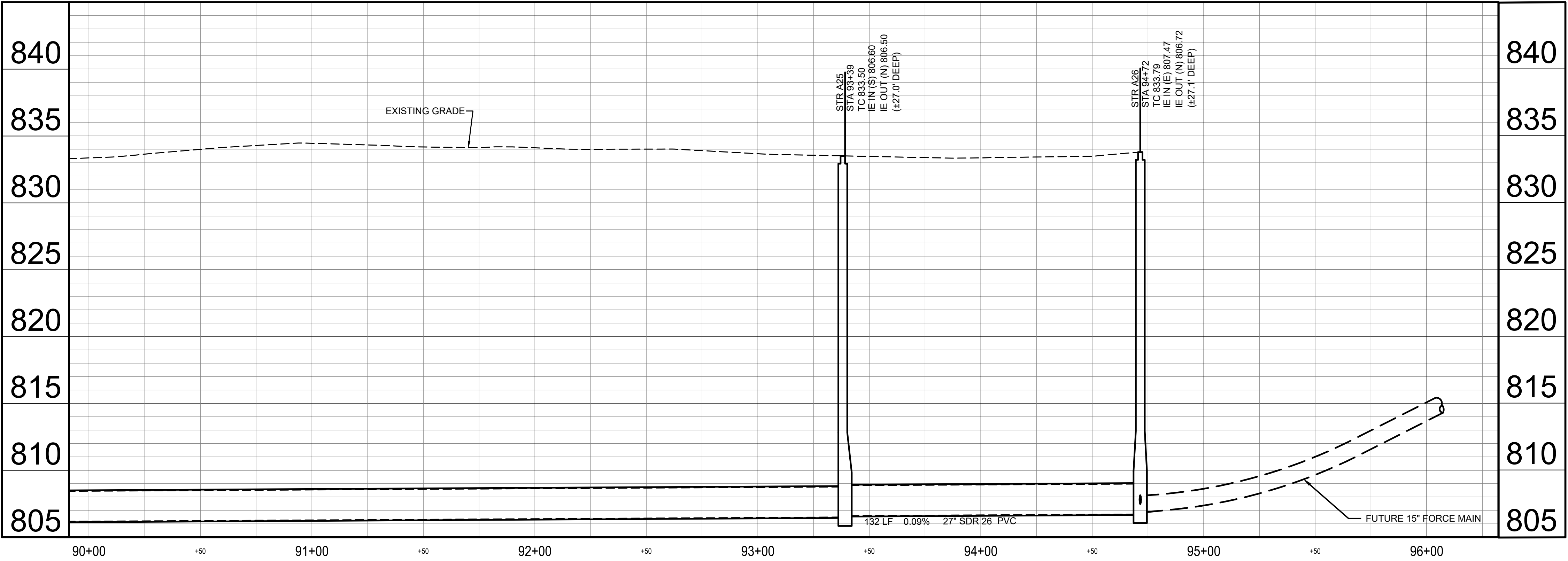
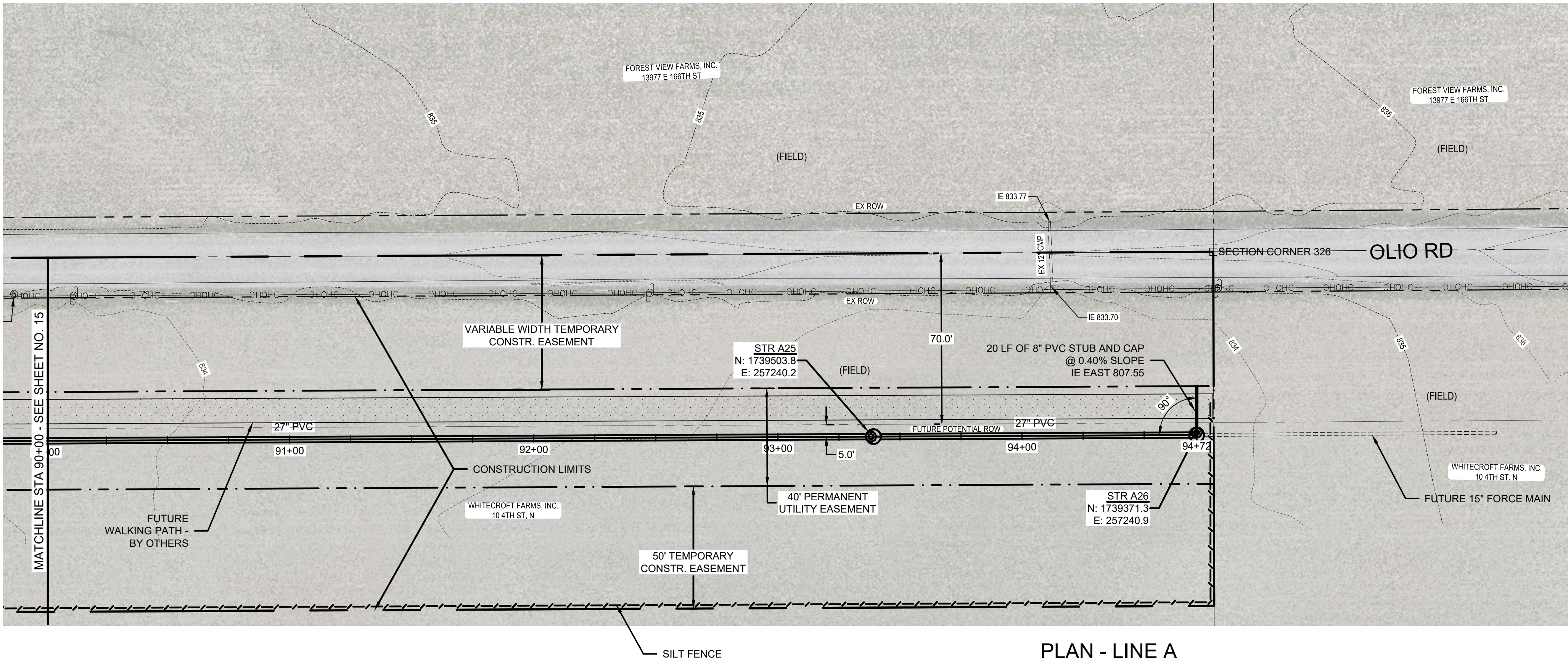
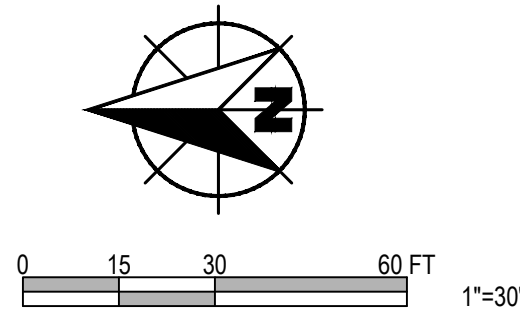


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CLG



Checked By:
KRCJ
Quality Assurance:
RWH

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Date
APRIL 2023
Project Number
238221-04-003



NOTE:
MANHOLE # A26 MUST BE INSTALLED WITHOUT A BENCH WALL.

Revisions	Description	
	Date	By

INDIANAPOLIS
6219 South East Street
Indianapolis, Indiana 46227
Phone: (317) 788-4551 - Fax: (317) 788-4553
www.wesslerengineering.com



PLAN/PROFILE - LINE A
WAYNE TOWNSHIP SANITARY SEWER
HAMILTON SOUTHEASTERN UTILITIES, INC.



Drawn By:
CLG



Checked By:
KRCJ
Quality Assurance:
RWH

(4) 3/8" STAINLESS STEEL ALL-THREAD RODS WITH STAINLESS STEEL NUTS AND STAINLESS STEEL WASHERS (FINGER TIGHTEN UNTIL ADHESIVE FULLY CURES, THEN TIGHTEN)

CAST IRON or COMPOSITE MANHOLE CASTING
NOTE:
IF AN EXISTING MANHOLE FRAME IS USED, WIRE BRUSH AND SCRAPE ANY LOOSE MATERIAL BEFORE PLACEMENT ONTO RINGS AND ADHESIVE

DRILL 1/2" ANCHOR HOLES THRU TO BASE ADJUSTMENT RINGS AND INTO THE CONE SECTION

34" ADJUSTMENT RING DIRECTLY BELOW MANHOLE CASTING. GROOVE TO BE FILLED WITH NON-SHRINK GROUT WHEN COMPOSITE CASTINGS ARE USED.

KENT SEAL BUTYL SEALANT WITH CONCRETE ADJUSTMENT RING

CONCRETE OR RUBBER COMPOSITE ADJUSTMENT RING

CLEAN LEVEL SURFACE OF MANHOLE, REPAIR ANY DEFECTS OF CONE SECTION USING NON-SHRINK GROUT, PENDING ENGINEERS APPROVAL

DRILL 1/2" ANCHOR HOLES THRU ADJUSTMENT RING.

CONCRETE CONE SECTION

NOTE:
DO NOT ATTEMPT TO ROTATE GRADE RINGS SUBSEQUENT TO PLACEMENT

NOTE:
CONFIGURATION SHOWN IS MEANT TO ILLUSTRATE AND IS NOT MEANT TO REPRESENT EVERY INSTALLATION

MANHOLE CASTING AND BOLT-DOWN LID ASSEMBLY DETAIL

(4) 3/8" STAINLESS STEEL ALL-THREAD RODS WITH STAINLESS STEEL NUTS AND STAINLESS STEEL WASHERS (FINGER TIGHTEN UNTIL ADHESIVE FULLY CURES, THEN TIGHTEN)

PLACE KENT SEAL ADHESIVE ON THE TOP SURFACE OF THE ADJUSTMENT RING PRIOR TO SETTING THE MANHOLE CASTING (TYPICAL ALL RINGS AND ANCHOR HOLES)

34" ADJUSTMENT RING MINIMUM (1) 4" or 6"

DRILL 1/2" ANCHOR HOLES 3" DEPTH INTO CONCRETE CONE SECTION. FILL CLEAN ANCHOR HOLES WITH EPOXY

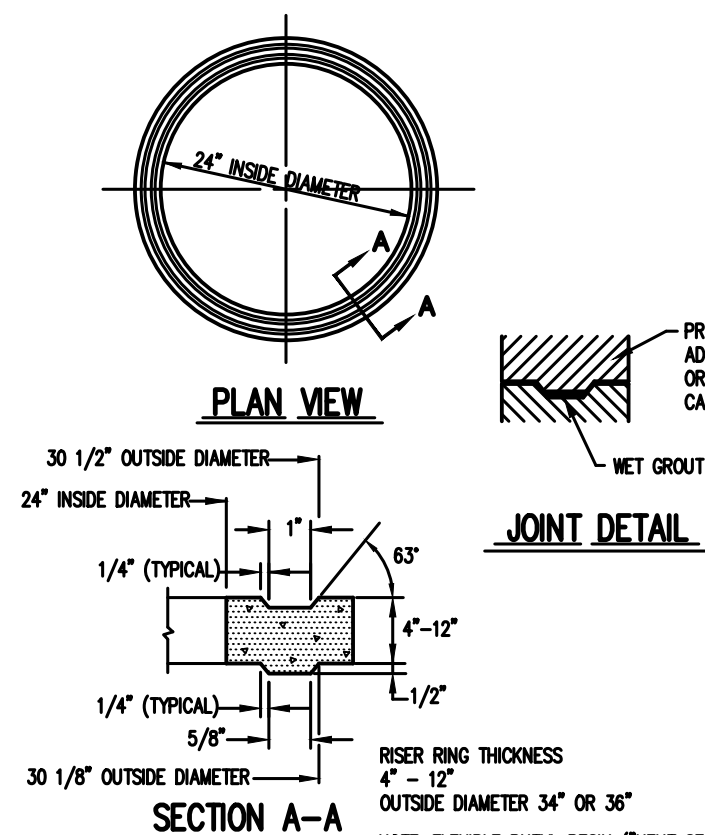
TOP PORTION OF CONCRETE CONE SECTION

3" DEPTH

BOLTED MANHOLE COVER CONFIGURATION

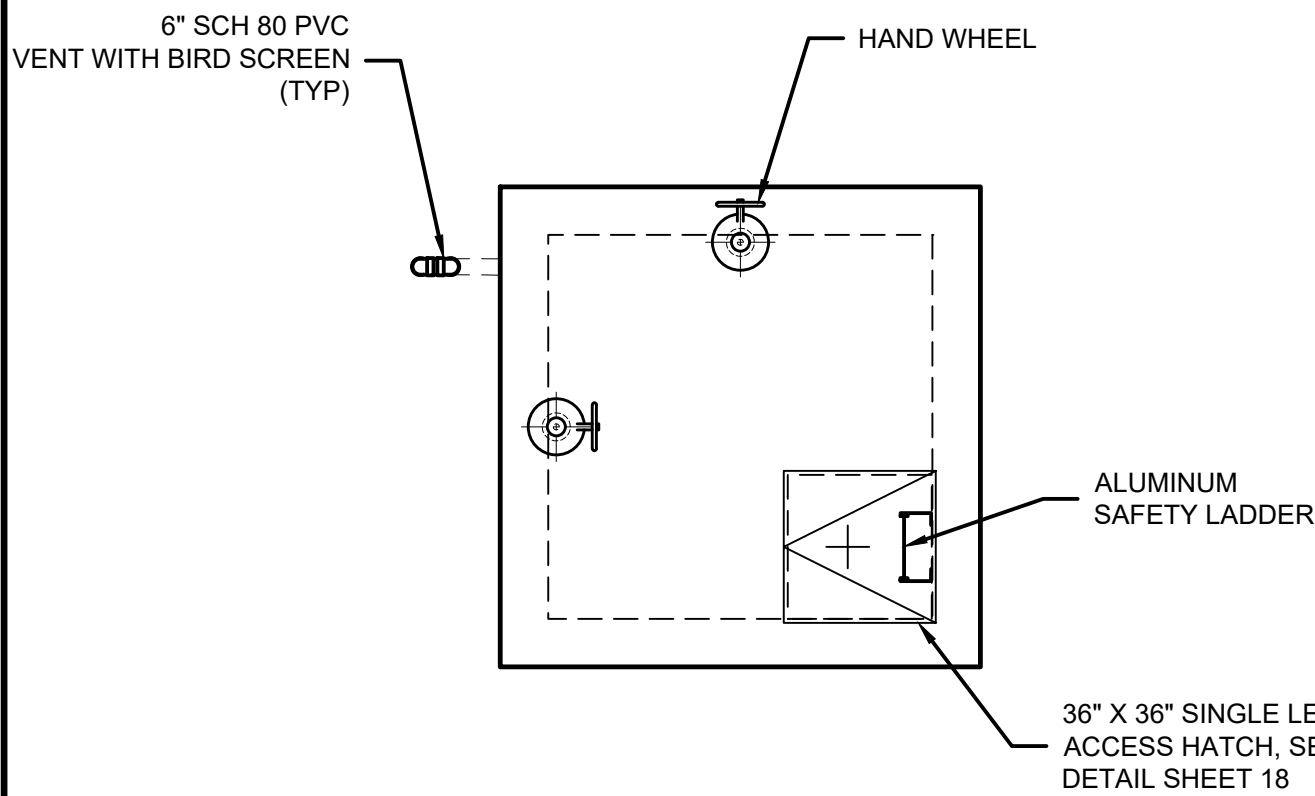
NOTE:
SPACING BETWEEN CONE SECTION, ADJUSTMENT RINGS, AND MANHOLE CASTING ARE EXAGGERATED TO DEPICT DETAILS OF ASSEMBLY

ADJUSTMENT RING ASSEMBLY DETAIL



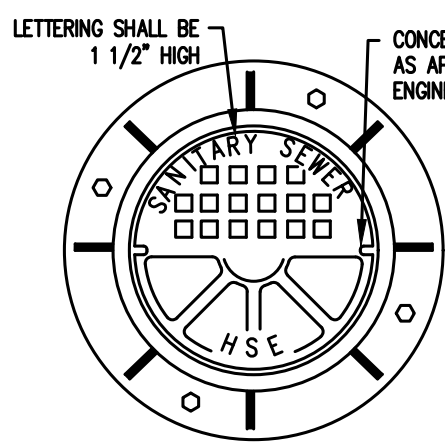
ADJUSTING RING DETAIL

NOTE: FLEXIBLE BUTYL RESIN ("KENT SEAL") IS NOT TO BE USED WHEN SETTING ADJUSTING RINGS. ONLY WET GROUT IS TO BE PLACED BETWEEN CASTING, ADJUSTING RINGS, AND MANHOLE CONE.

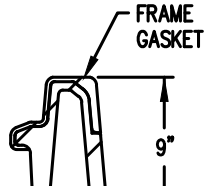


UPPER LEVEL

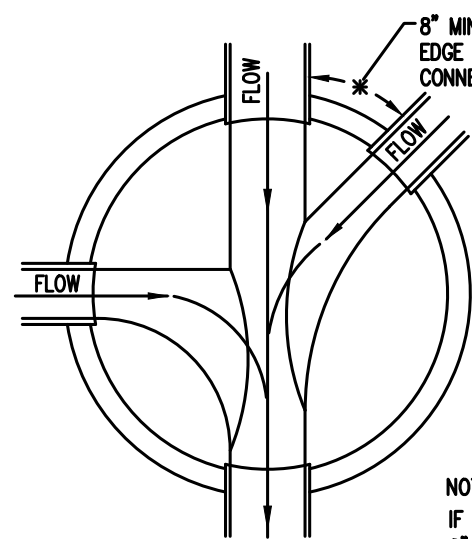
SCALE: 1/4" = 1'-0"



*SEE MANHOLE CASTING TABLE ON SHEET 18
NOTE:
SEE DETAIL B FOR FRAME DEPTH

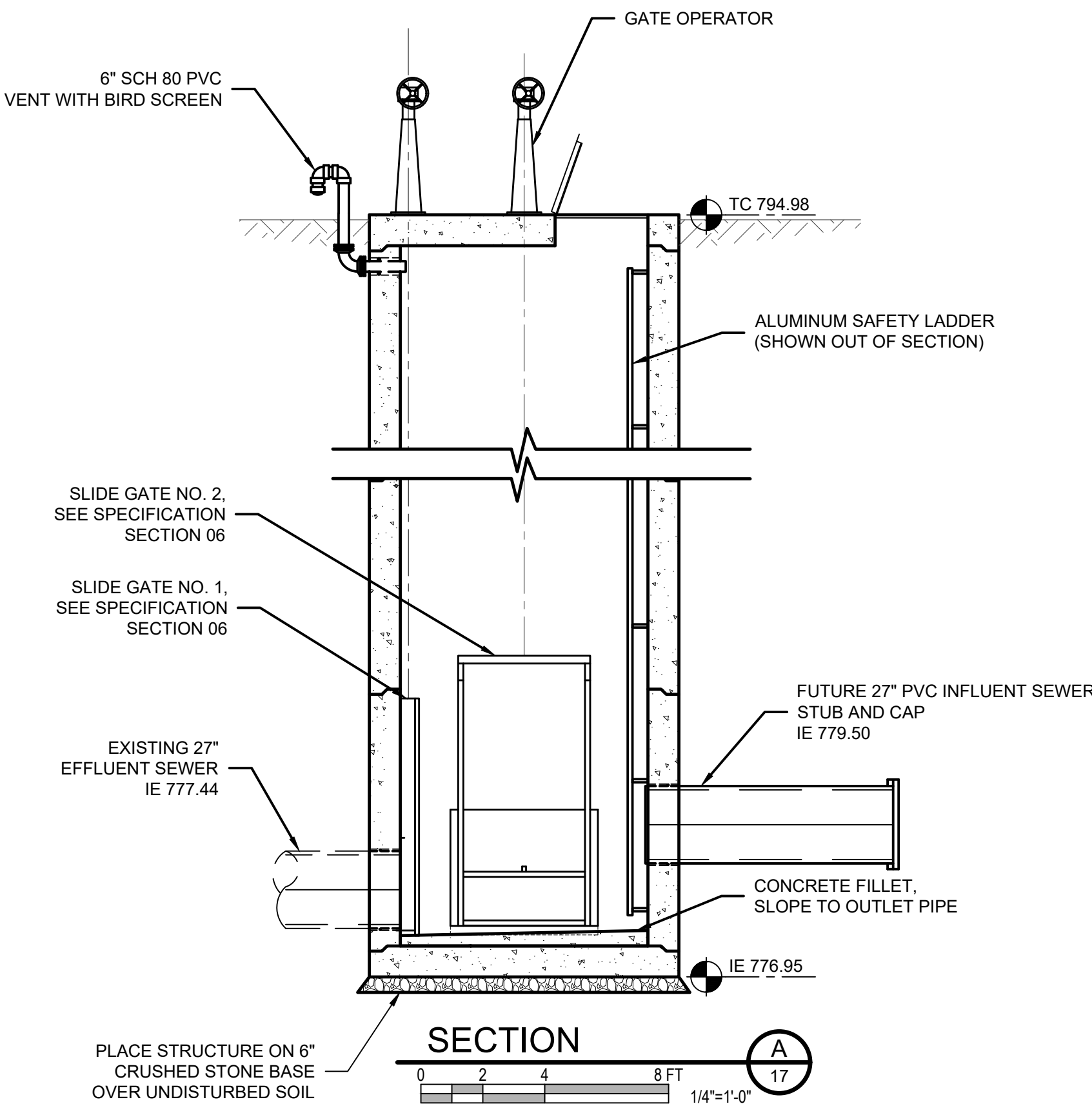


CAST IRON MANHOLE COVER DETAIL



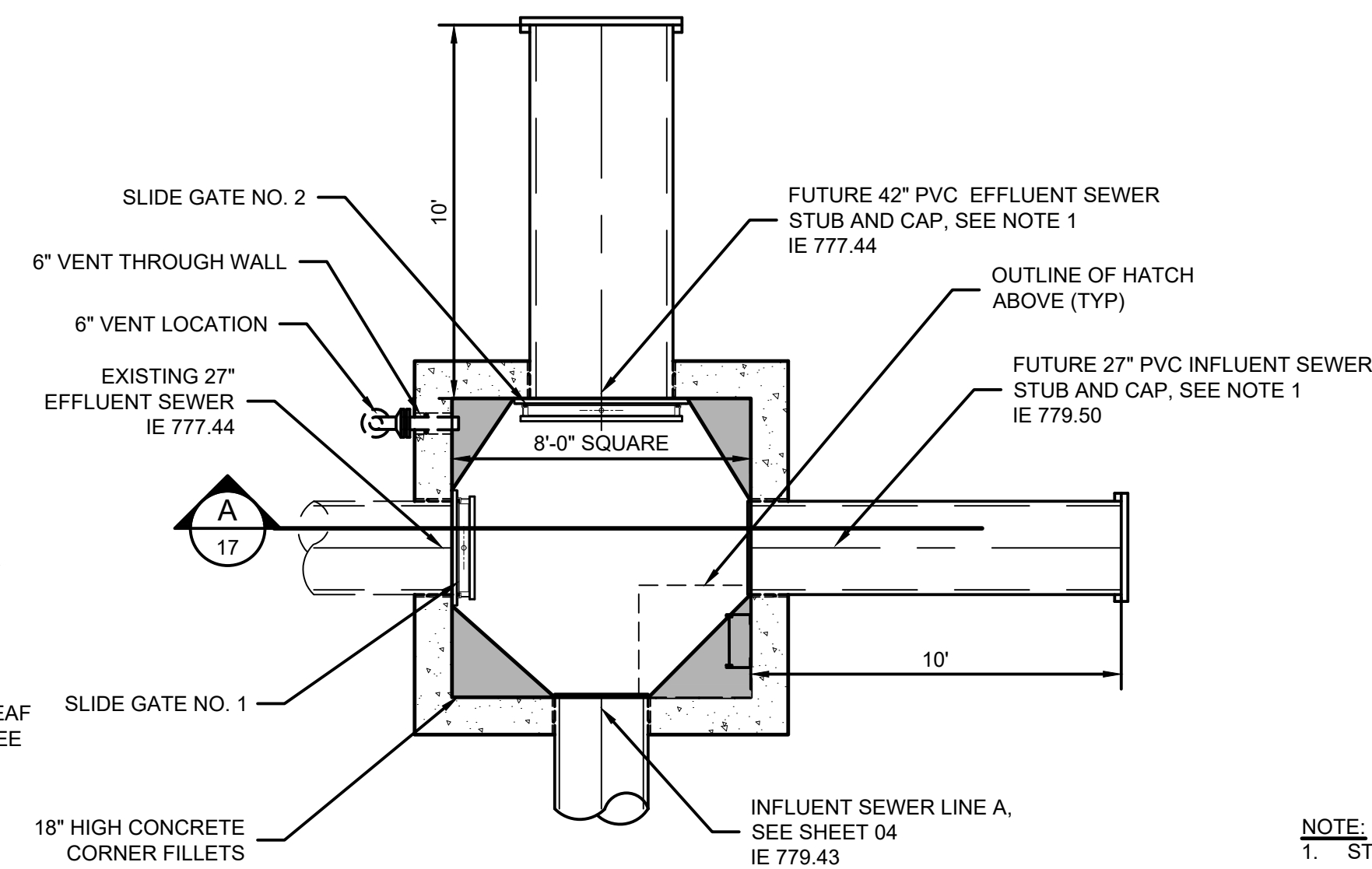
NOTE:
IF SEPARATION IS BETWEEN 8" AND 10", THEN A LARGER DIAMETER MANHOLE SHALL BE USED AS DEEMED NECESSARY BY ENGINEER

FLOW CHANNEL DETAIL



SECTION

0 2 4 8 FT
1/4" = 1'-0"



STRUCTURE A0

SCALE: AS SHOWN

PLAN VIEW

SCALE: 1/4" = 1'-0"

DISCLAIMER:
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REVISED: 06/14/2022

NOTE:
1. STUB OUT WITH ONE FULL STICK OF PIPE AND CAP END. MARK END OF STUB WITH 4"x4" PRESSURE TREATED WOOD POST FOR FUTURE LOCATION.

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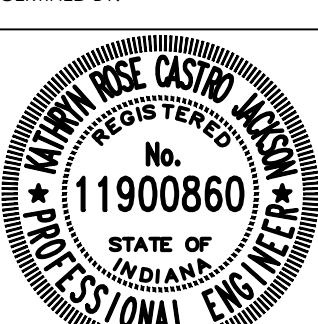
MISCELLANEOUS DETAILS
WAYNE TOWNSHIP SANITARY SEWER

HAMILTON SOUTHEASTERN UTILITIES, INC.

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CERTIFIED BY:



Date: APRIL 14, 2023

KRCJ



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Drawn By: CLG
Checked By: KRCJ
Quality Assurance: RWH

Sheet: 17

Date: APRIL 2023

Project Number: 238221-04-003

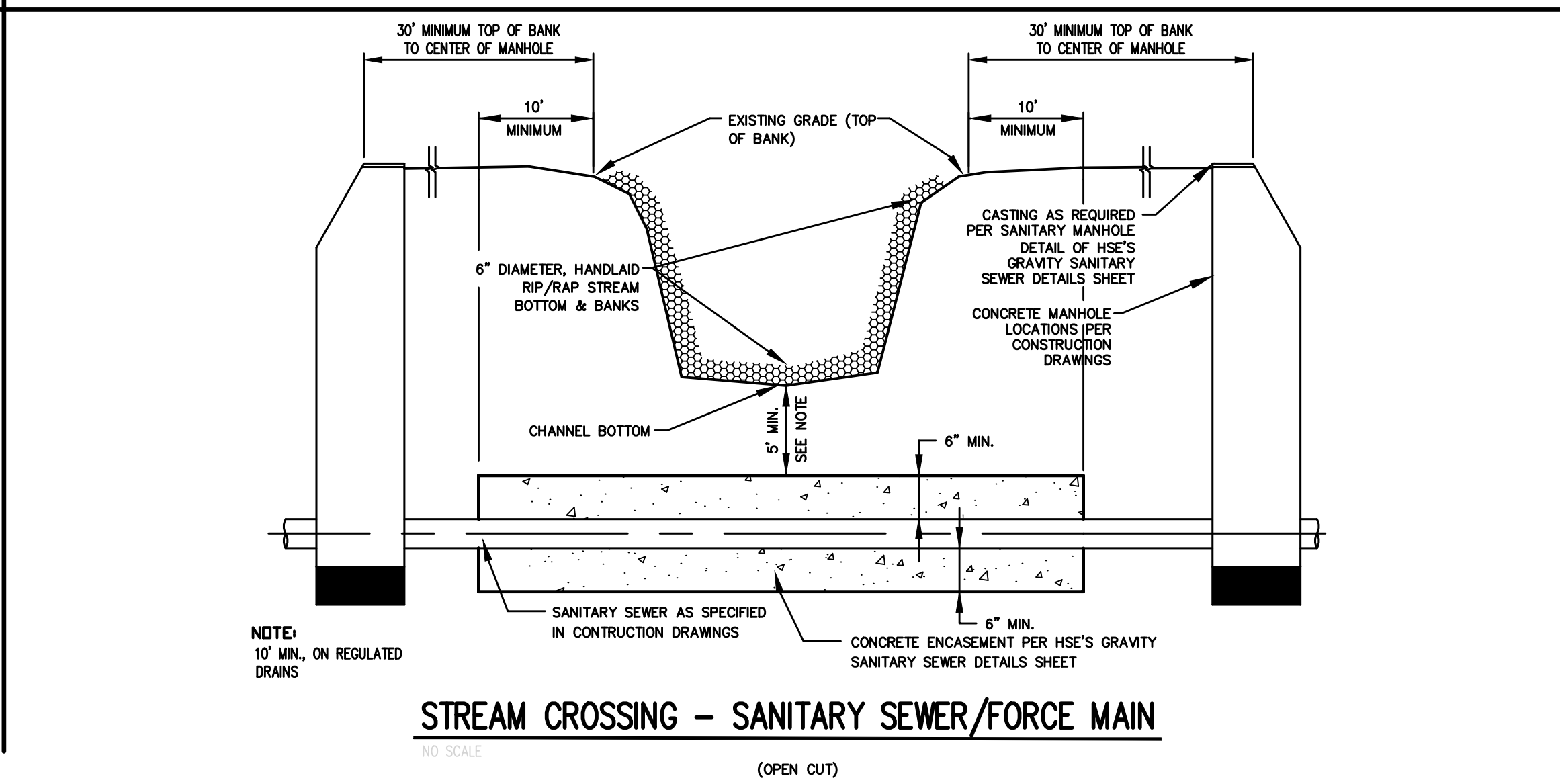
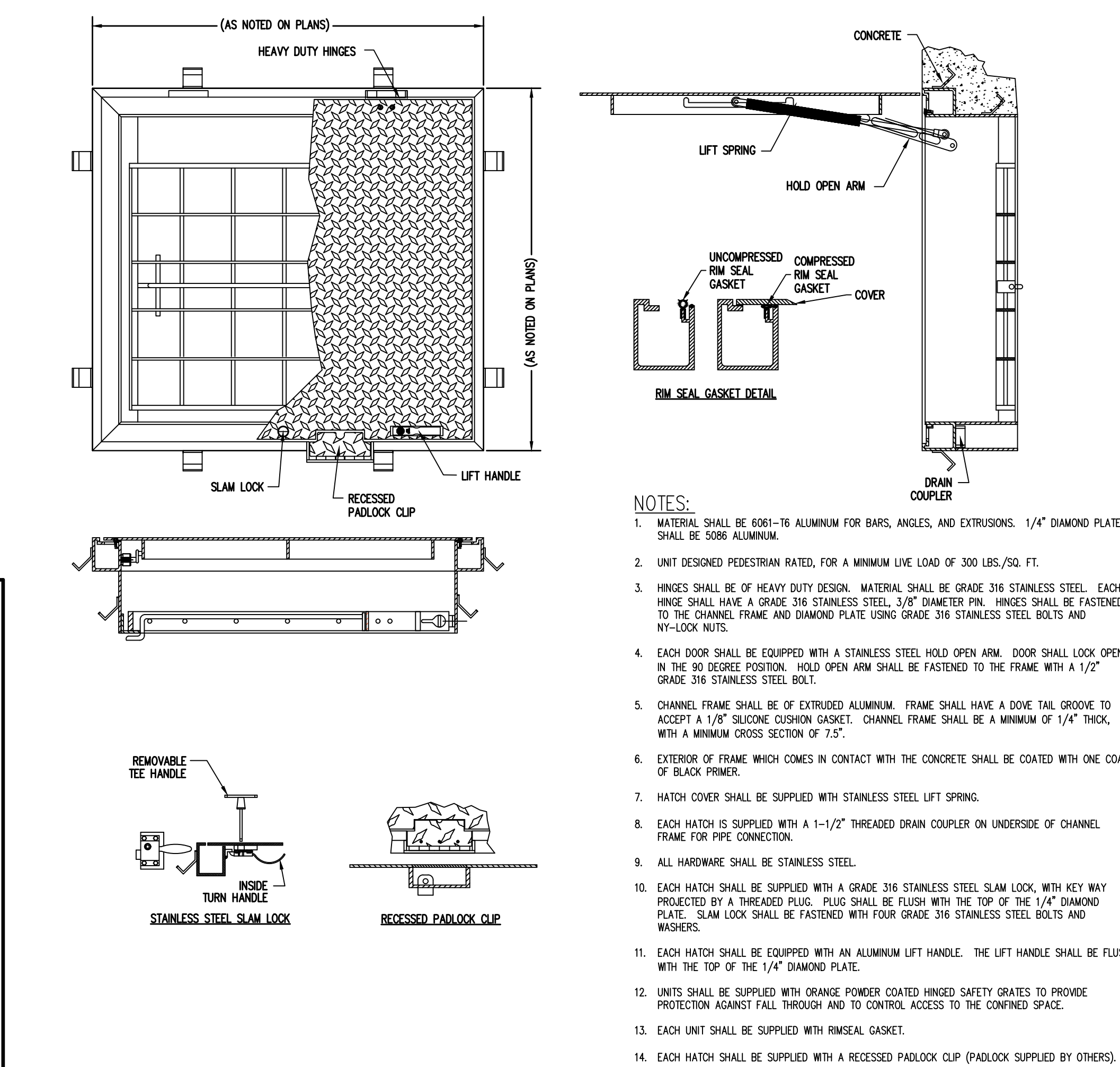
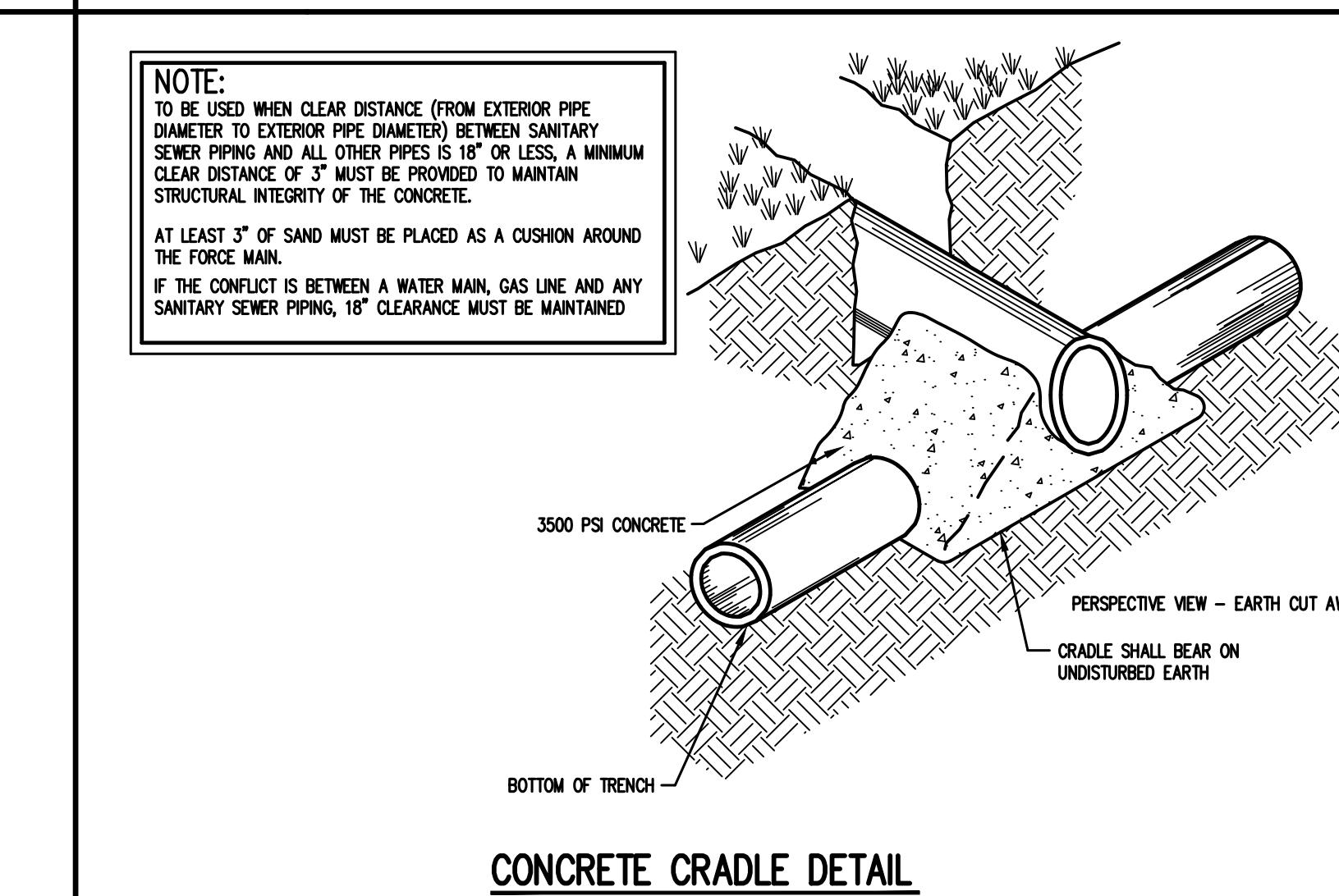
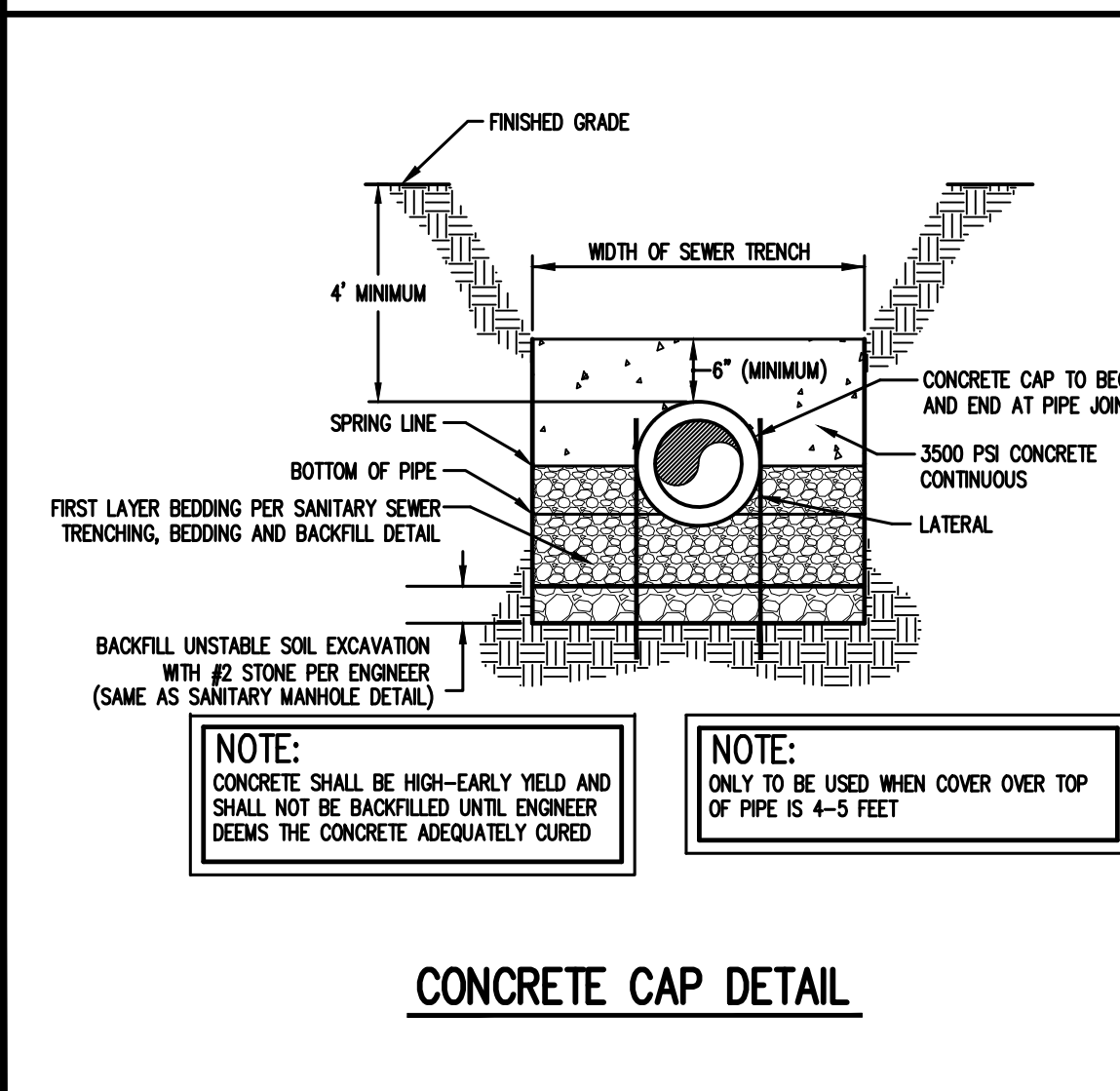
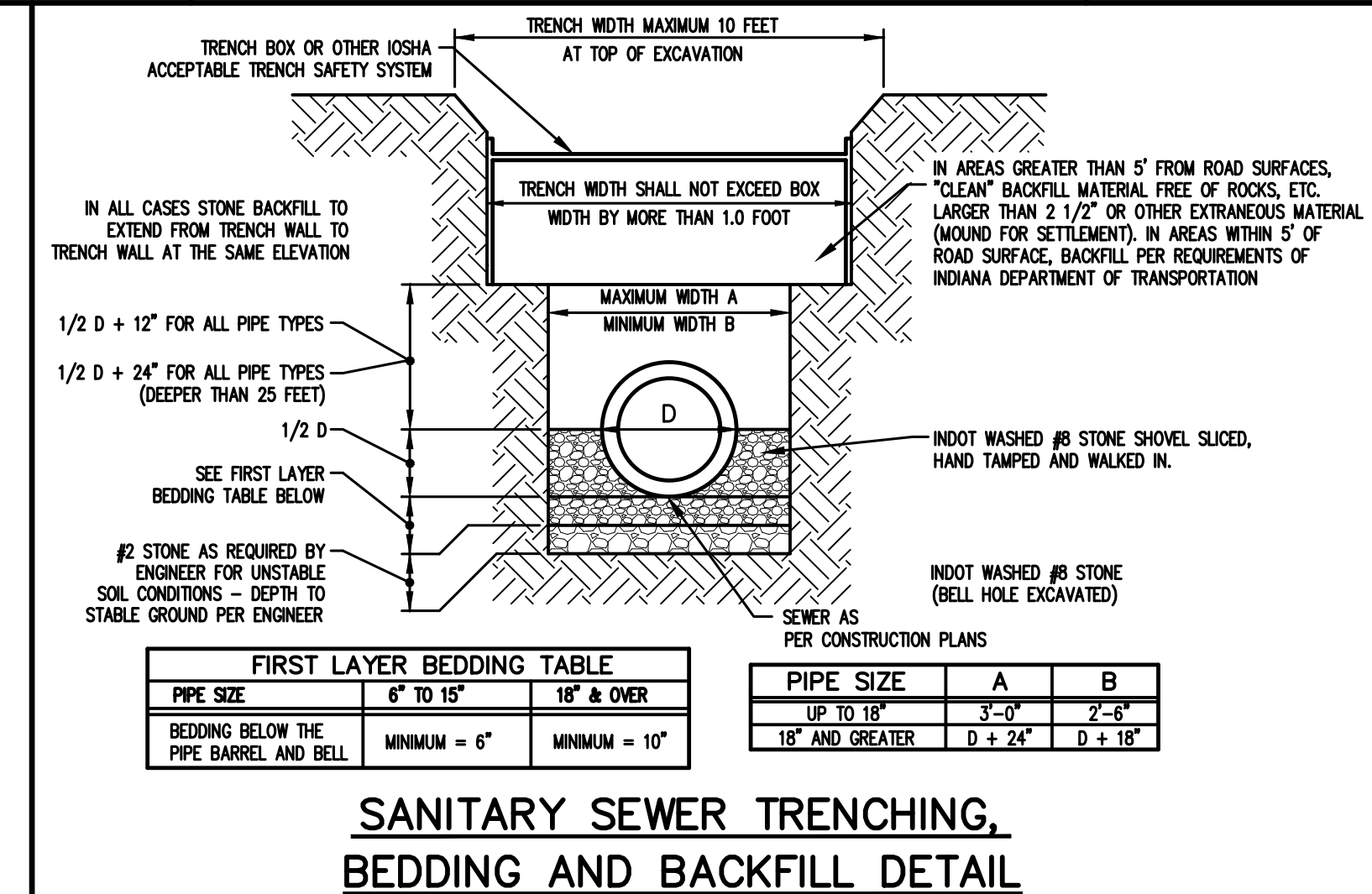
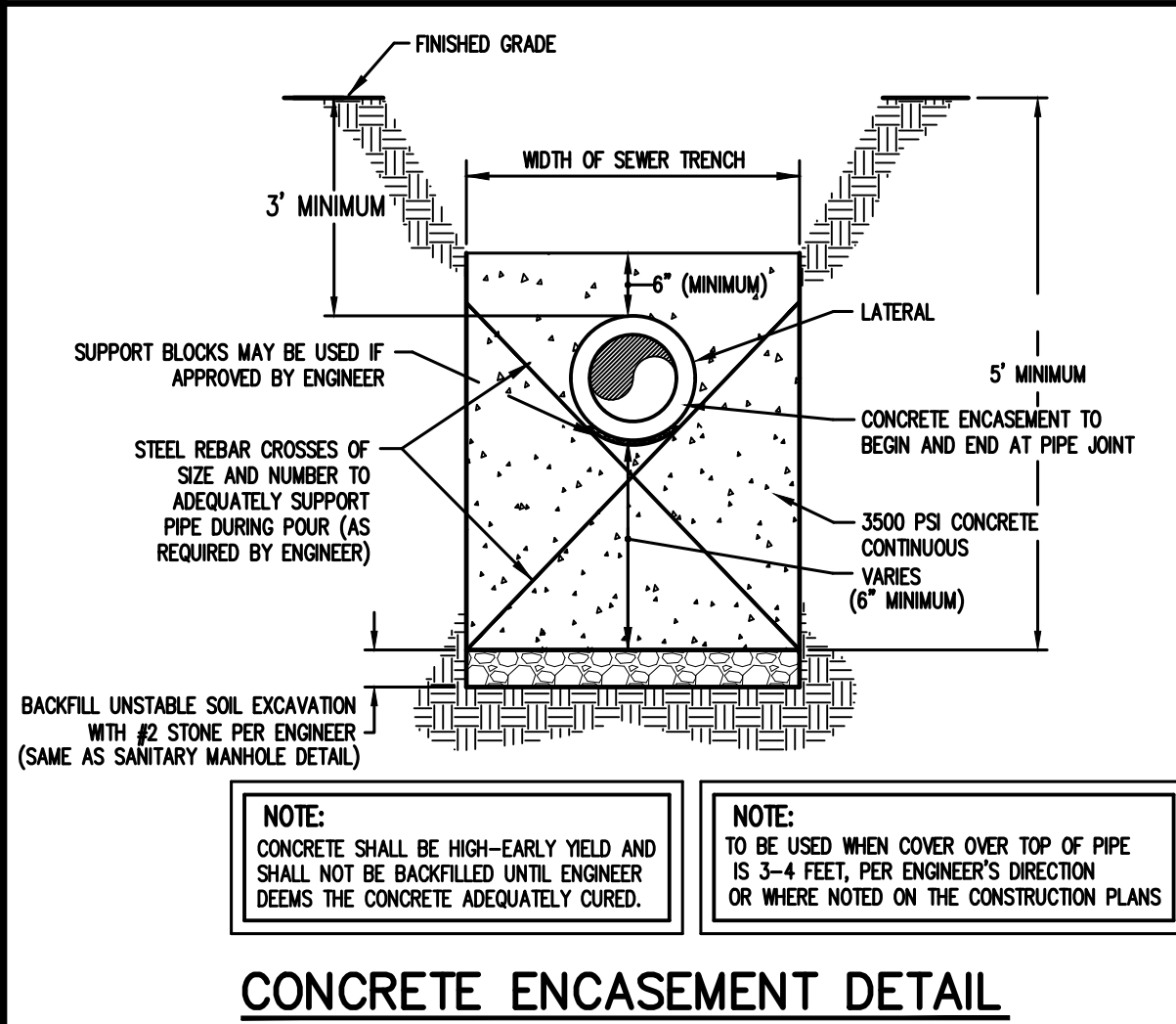
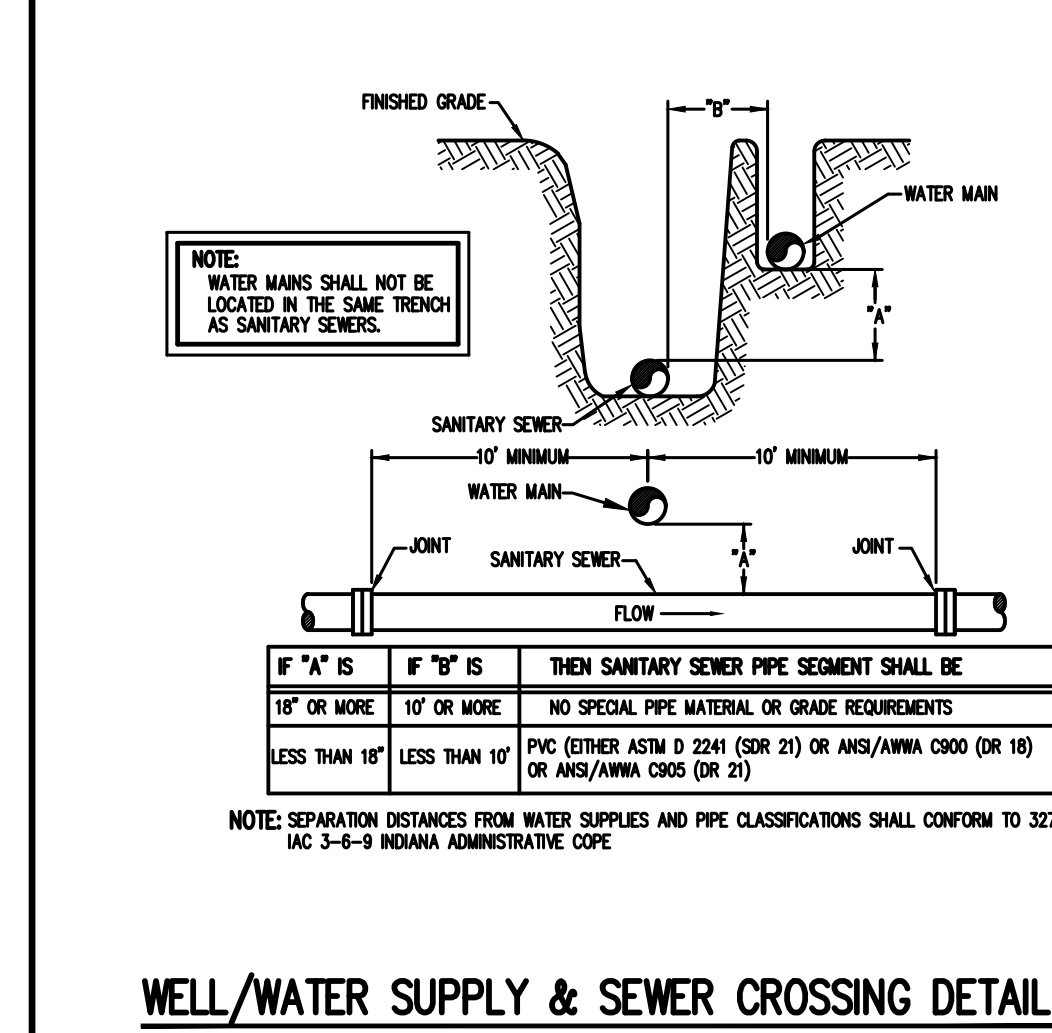
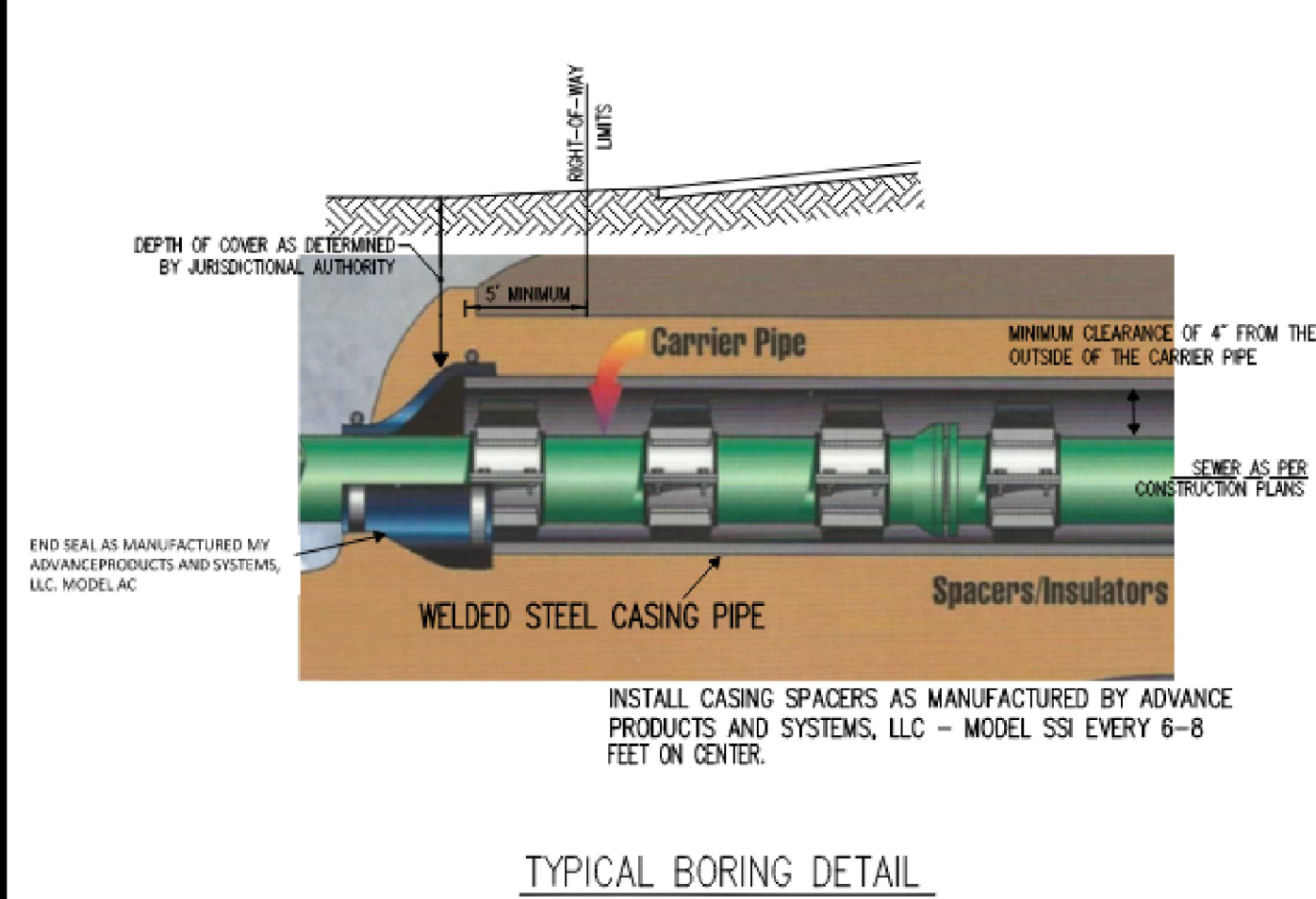
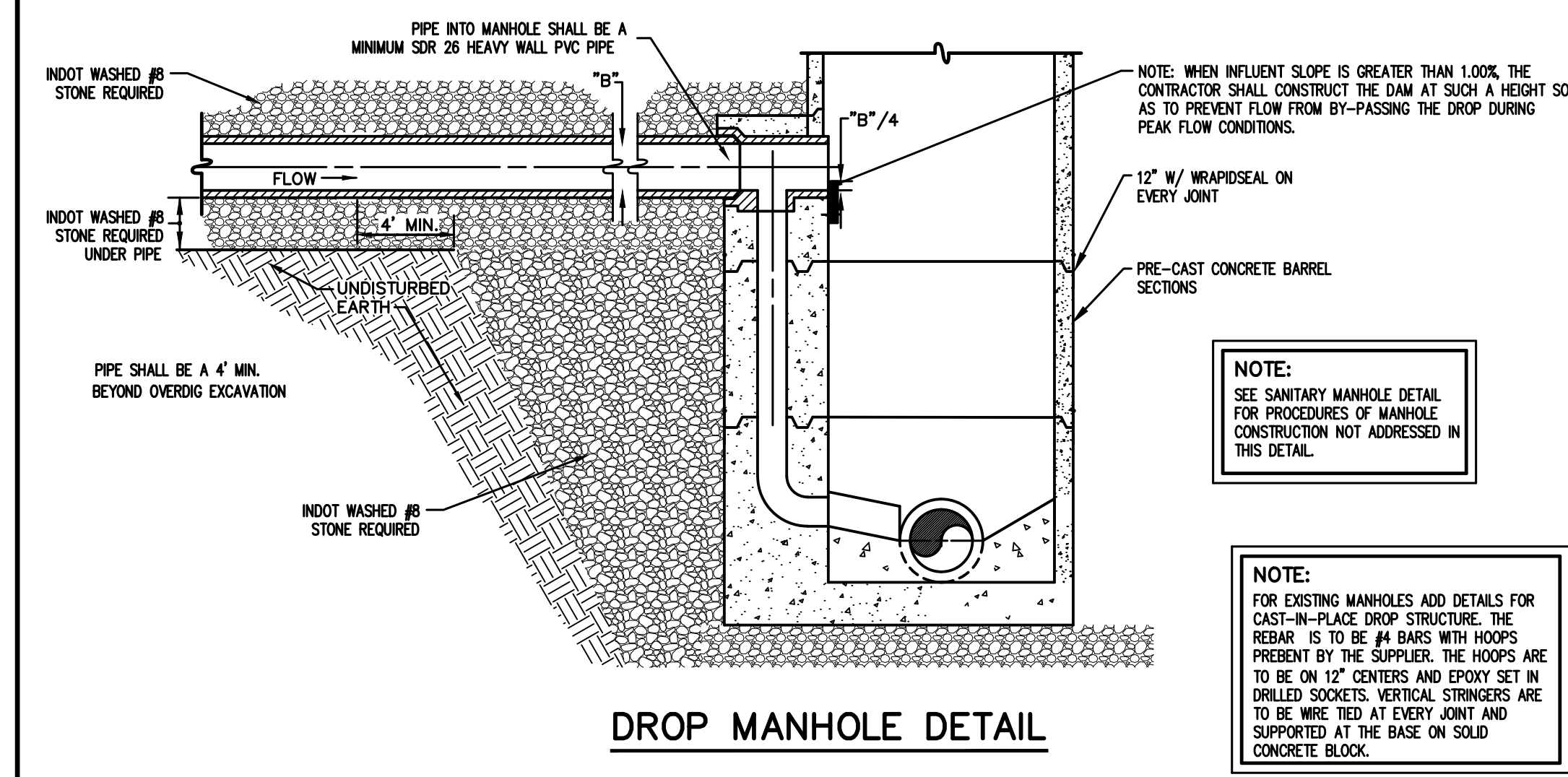
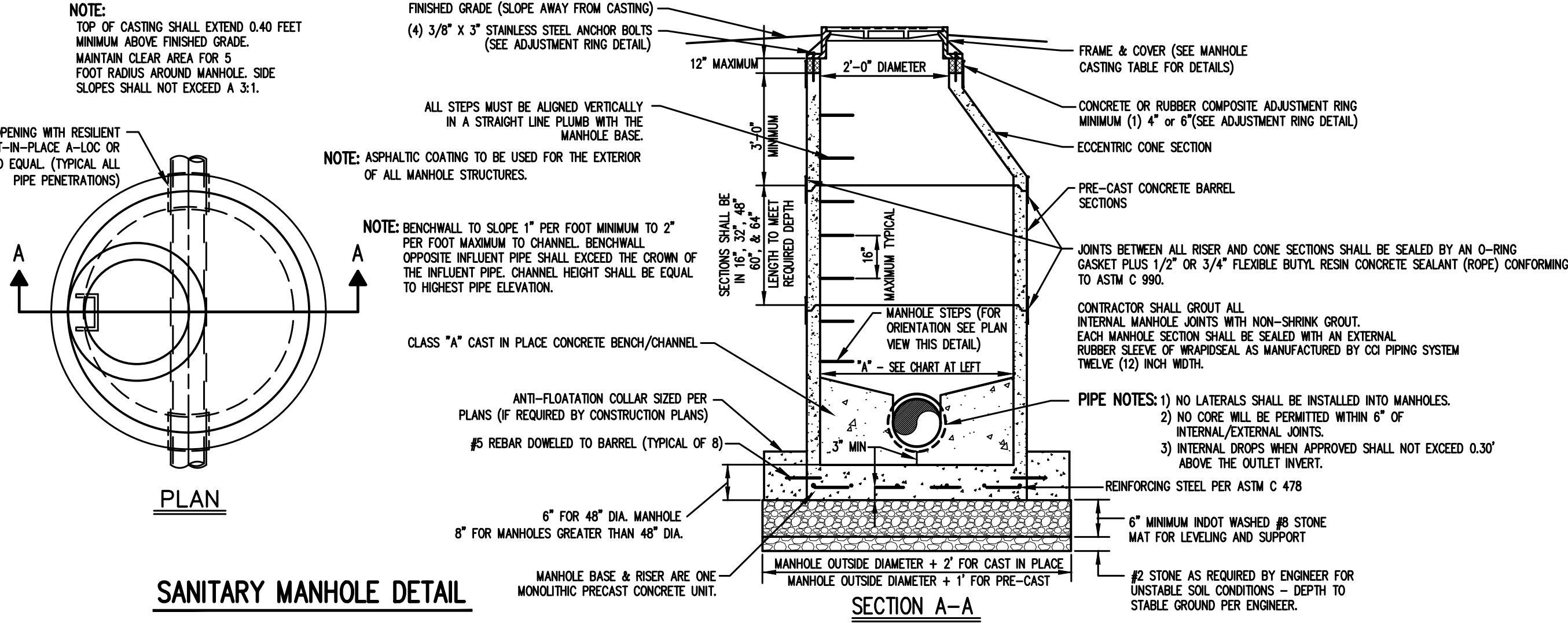
NOTE: MANHOLE SECTIONS SHALL CONFORM TO ASTM C 478, UTILIZING 4,000 PSI CONCRETE WITH PENETRON ADMIXTURE. JOINTS SHALL CONFORM TO ASTM C 443.

*IN GENERAL, ONLY THE BOTTOM 8 FEET OF THE MANHOLE TRANSITION FROM 5 FEET AND LARGER DIAMETER BARREL SECTIONS TO 4 FEET BARREL SECTIONS AND/OR CASTING SHALL BE THROUGH USE OF 1 OR MORE CONE SECTIONS.

LARGEST SEWER SIZE	A
UP TO 21"	4'-0"
OVER 21"	5'-0" *

MANHOLE CASTING TABLE		
LOCATION	MODEL	COVER
18" INCHES OR MORE ABOVE 100 YEAR FLOOD ELEVATION OF ALL WATERWAYS	EAST JORDAN FRAME 1050-21 (P/N: #00105018) LID 1020APT (P/N: #00102072)	HEAVY DUTY SOLID SHURE-LOK ALIGNMENT SYSTEM
LESS THAN 18" ABOVE 100 YEAR FLOOD ELEVATION OF ALL WATERWAYS	EAST JORDAN 1050-21PT ASSEMBLY (P/N: #00102119w01) FRAME 1050Z1 (P/N: #00105022) LID 1020APT (P/N: #00102072)	HEAVY DUTY SOLID SHURE-LOK ALIGNMENT SYSTEM
LID		
OWNERSHIP	LETTERING	
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PRIVATE	"SANITARY SEWER"	

ALL CASTINGS TO BE SUPPLIED WITH FOUR (4) ANCHOR BOLT HOLES



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REVISED 06/14/2022

Revisions	Issue	Date	Description

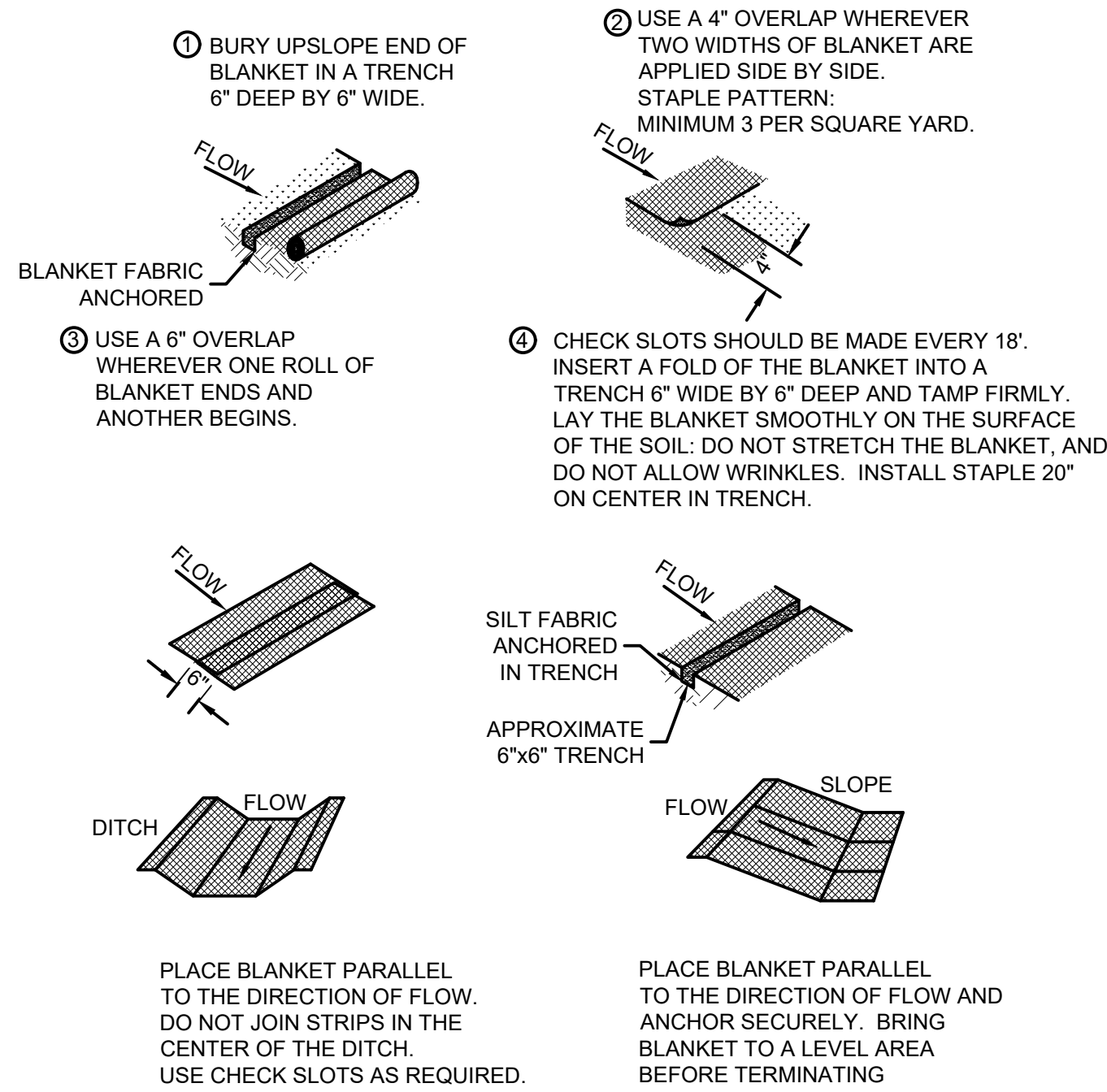
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MISCELLANEOUS DETAILS
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HAMILTON SOUTHEASTERN UTILITIES, INC.

CERTIFIED BY:
KEVIN ROSE CASTRO, P.E.
REGISTERED PROFESSIONAL ENGINEER
No. 11900860
STATE OF INDIANA
Date: APRIL 14, 2023

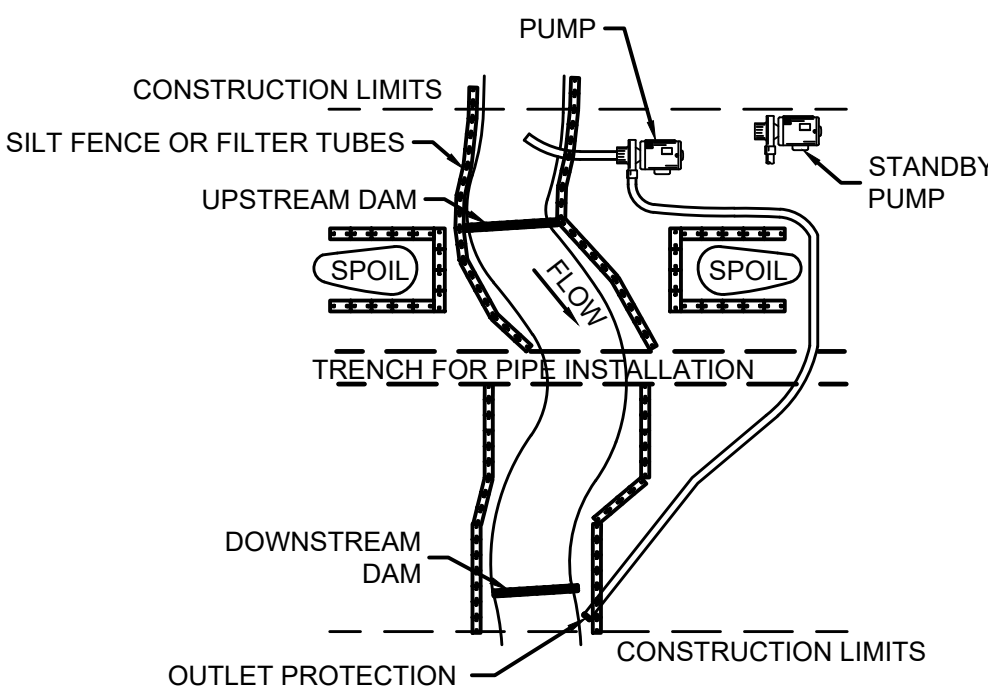
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811 FOR CALLS IN INDIANA
TOWN BY: CLG
CHECKED BY: KRCJ
QUALITY ASSURANCE: RWH
Sheet: 18
Date: APRIL 2023
Project Number: 238221-04-003



- PRODUCT:**
1. NORTH AMERICAN GREEN SC150, OR EQUAL.
- NOTES:**
1. PROTECT THE SLOPES WITH AN EROSION CONTROL BLANKET WHERE CONSTRUCTION DISTURBS SLOPES EQUAL OR STEEPER THAN 3:1.
- MAINTENANCE:**
1. INSPECT FOR EROSION AFTER EACH STORM EVENT DURING VEGETATION ESTABLISHMENT, AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.
2. IF ANY AREAS SHOW EROSION, PULL BACK THAT PORTION OF THE BLANKET, ADD SOIL, RESEED, RELAY AND STAPLE THE BLANKET.
3. CHECK AREAS PERIODICALLY AFTER VEGETATION ESTABLISHMENT.

EROSION CONTROL BLANKET

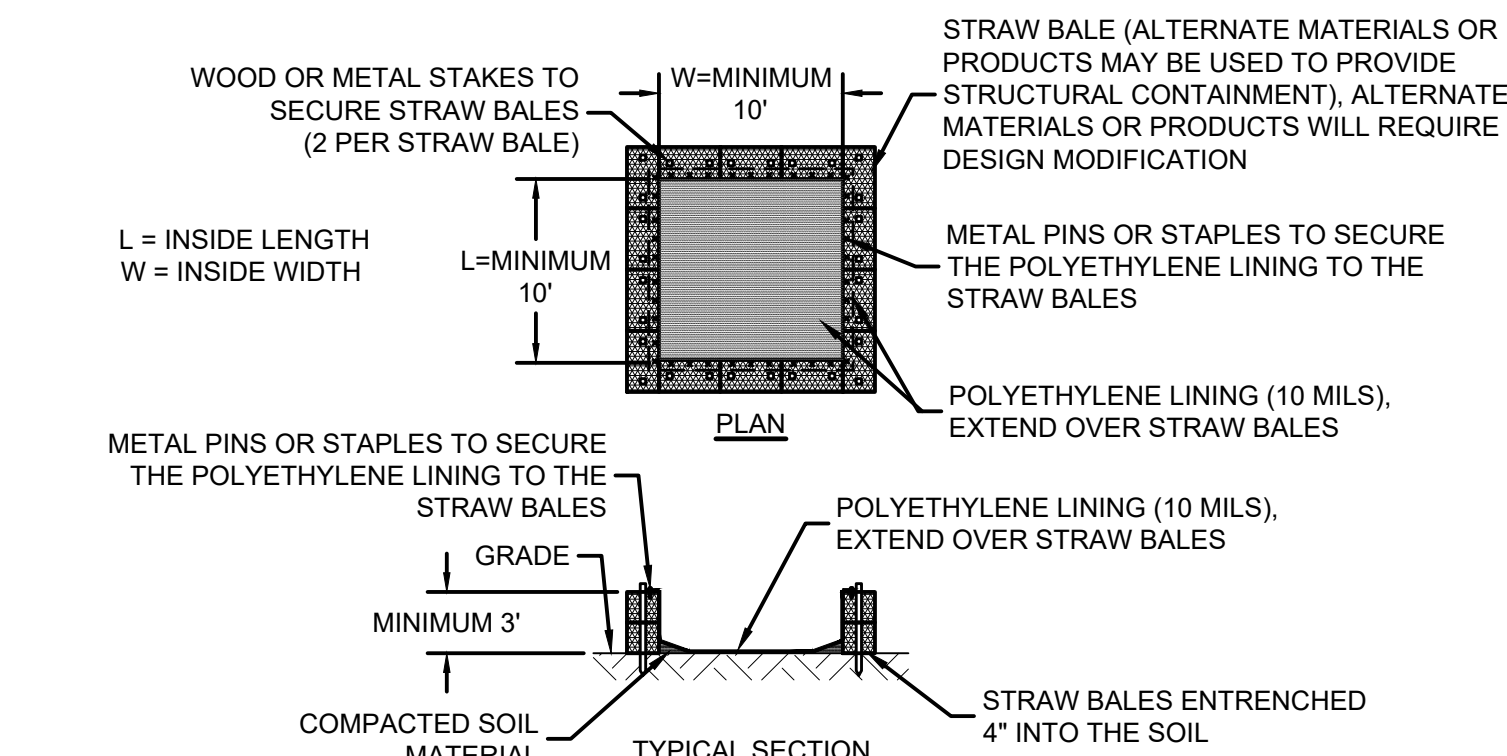
SCALE: NONE



- INSTALLATION:**
- USE THE DAM AND PUMP METHOD ON NARROW WATER COURSES WITH LOW STREAM FLOW. THE DAM AND PUMP METHOD IS NOT REQUIRED WHEN NO STREAM FLOW IS PRESENT OR ANTICIPATED.
 - THE INTAKE OF THE HOSE SHALL BE SCREENED WITH OPENINGS <3/32\"/>

DAM AND PUMP METHOD

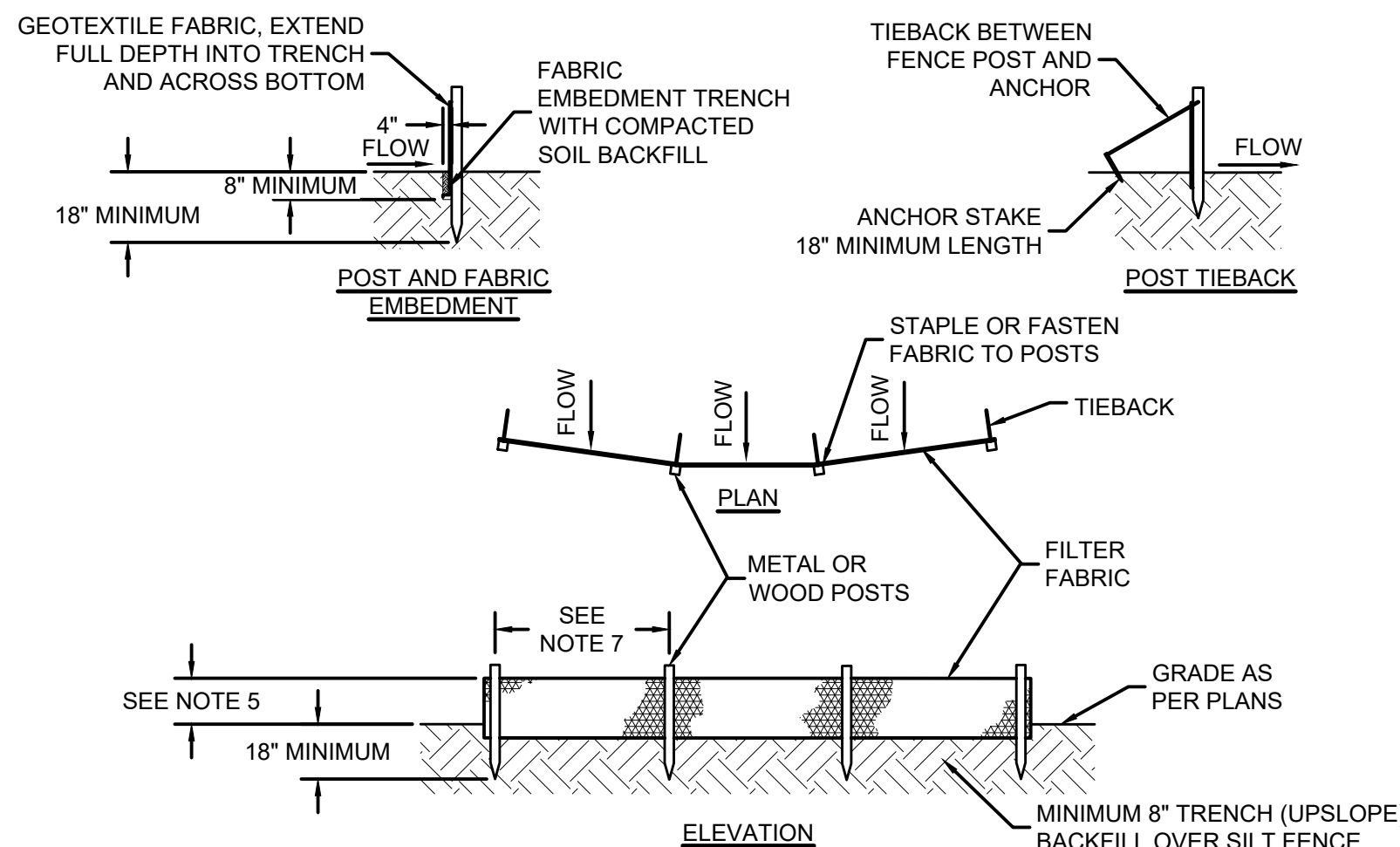
SCALE: NONE



- NOTES:**
1. LOCATE WASHOUTS AT LEAST 50' FROM ANY CREEKS, WETLANDS, DITCHES, KARST FEATURES, OR STORM DRAIN/CONVEYANCES.
- WASHOUT PROCEDURES:**
1. DO NOT LEAVE EXCESS MUD IN THE CHUTES OR HOPPER AFTER POURING CONCRETE. MAKE EVERY EFFORT TO EMPTY THE CHUTE AND HOPPER AT THE POUR. THE LESS MATERIAL LEFT IN THE CHUTES AND HOPPER, THE QUICKER AND EASIER THE CLEANOUT. SMALL AMOUNTS OF EXCESS CONCRETE (NOT WASHOUT WATER) MAY BE DISPOSED OF IN AREAS THAT WILL NOT FLOW TO AN AREA THAT IS TO BE PROTECTED.
2. SCRAPE AS MUCH MATERIAL FROM THE CHUTES AS POSSIBLE BEFORE WASHING THEM. USE NON-WATER CLEANING METHODS TO MINIMIZE THE CHANCE FOR WASTE TO FLOW OFF SITE.
3. STOP WASHING OUT IN AN AREA IF YOU OBSERVE WATER RUNNING OFF THE DESIGNATED AREA OR IF THE WATER IS NOT BEING CONTAINED WITHIN THE WASHOUT AREA.
4. DO NOT BACK FLUSH EQUIPMENT AT THE PROJECT SITE.
5. DO NOT USE ADDITIVES WITH WASH WATER.
6. DO NOT WASH OUT OR DRAIN WASTE WATERS TO STORM DRAINS, WETLANDS, STREAMS, RIVERS, CREEKS, DITCHES OR STREETS.
- MAINTENANCE:**
1. MAINTENANCE REQUIREMENTS PROVIDED IN SPECIFICATIONS.

CONCRETE WASHOUT

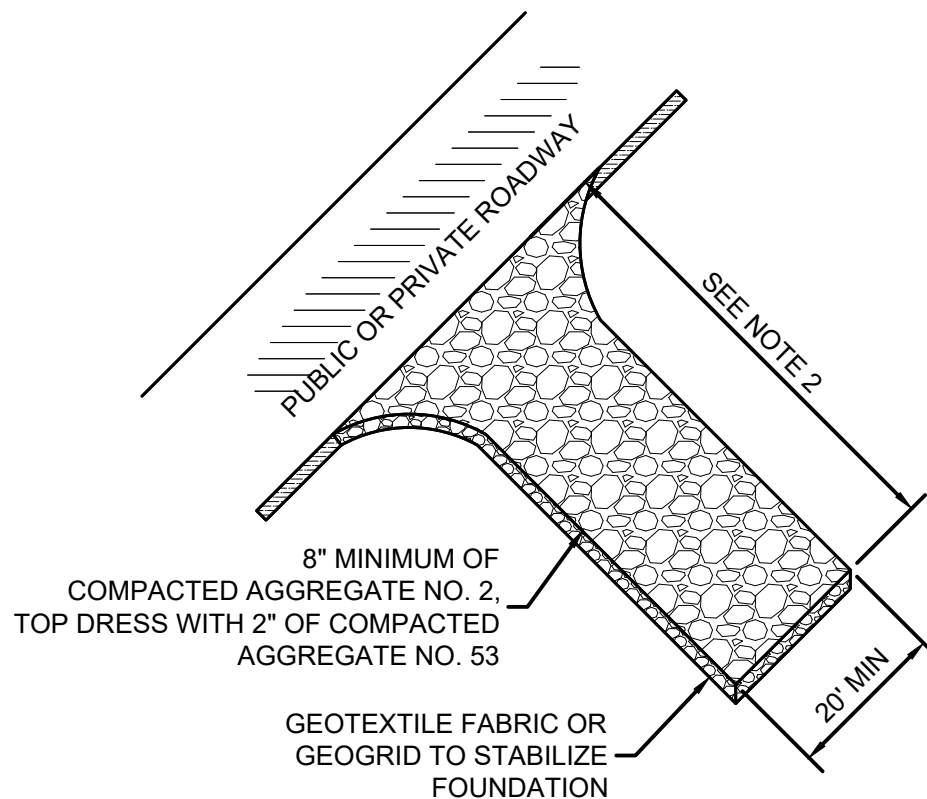
SCALE: NONE



- NOTES:**
1. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN OR NON-WOVEN GEOTEXTILE FABRIC AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:
a. TEXTILE STRENGTH AT 20% (MAXIMUM) ELONGATION, PER ASTM D4632.
b. WOVEN EXTRA STRENGTH - 50 LB/LINEAR INCH (MINIMUM), NON-WOVEN EXTRA STRENGTH - 70 LB/INCH (MINIMUM).
c. WOVEN STANDARD STRENGTH - 30 LB/LINEAR INCH (MINIMUM), NON-WOVEN STANDARD STRENGTH - 50 LB/INCH (MINIMUM).
d. APPARENT OPENING SIZE (AOS) (U.S. SIEVE) - NO. 30 PARTICLE SIZE OF 0.6 mm (MAXIMUM), ASTM D4571.
e. PERMITTIVITY - 0.05 S\"/>

SILT FENCE

SCALE: NONE



- NOTES:**
1. PLACE CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS AND AT ALL TEMPORARY CONSTRUCTION DRIVES THAT ARE INSTALLED.
2. FOR LARGE SITES (2 ACRES OR LARGER) THE MINIMUM LENGTH IS 150'. FOR SMALLER SITES (LESS THAN 2 ACRES) THE MINIMUM LENGTH IS 50'.
3. PROVIDE CULVERT OR OTHER METHODS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
- MAINTENANCE:**
1. INSPECT DAILY AND REPLACE DISPLACED STONE.
2. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED ONTO ADJACENT ROADWAY.
3. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
4. AT COMPLETION OF PROJECT COMPLETELY REMOVE AND RESTORE SITE TO ORIGINAL CONDITIONS, OR AS APPLICABLE USE FOR BASE OF NEW PERMANENT DRIVE, MAINTAINING DESIGN ELEVATIONS AND SECTION.

CONSTRUCTION ENTRANCE

SCALE: NONE

CONSTRUCTION ACTIVITY	SCHEDULE CONSIDERATION
PRECONSTRUCTION ACTIVITIES: POST THE FOLLOWING INFORMATION NEAR THE MAIN ENTRANCE OF THE PROJECT SITE OR AT A PUBLICLY ACCESSIBLE LOCATION: NOTICE OF INTENT (NOI) DOCUMENT, COPY OF THE PUBLIC NOTICE, NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NUMBER, NAME, ADDRESS, AND PHONE NUMBER OF THE LOCAL CONTACT PERSON, AND LOCATION OF A COPY OF THE CONSTRUCTION DRAWINGS AND STORMWATER POLLUTION PREVENTION PLAN (SWP3).	AUTHORIZATION UNDER THE CSGP IS EFFECTIVE 48-HOURS AFTER SUBMITTAL OF THE NOTICE OF INTENT TO IDEM AND LOCAL AUTHORITY BY THE OWNER.
MAINTAIN DOCUMENTATION ON-SITE PER SPECIFICATION 02101 FOR THE PROJECT MANAGEMENT LOG. THE SWPPP SHOULD BE ONSITE AND SELF-MONITORING INSPECTION REPORTS MUST BE AVAILABLE WITHIN 48 HOURS OF REQUEST. INFORM OR TRAIN PERSONNEL ASSOCIATED WITH THE PROJECT OF THE TERMS AND CONDITIONS OF THE CSGP AND THE SWPPP REQUIREMENTS.	
REVIEW THE EROSION CONTROL SCHEDULE ON THE DRAWINGS AND REVISE AS NEEDED TO PHASE CONSTRUCTION ACTIVITIES TO MINIMIZE THE FOOTPRINT OF DISTURBED UNSTABLE AREAS. SUBMIT A REVISED EROSION CONTROL SCHEDULE AS NEEDED FOR TEMPORARY AND PERMANENT EROSION CONTROL WORK AS APPLICABLE.	COMPLETE BEFORE CONSTRUCTION BEGINS.
CONSTRUCTION ACCESS - ENTRANCE TO SITE, CONSTRUCTION ROUTES, AREAS DESIGNATED FOR EQUIPMENT PARKING OR MATERIAL STAGING AND WASTE HANDLING.	THIS IS THE FIRST LAND-DISTURBING ACTIVITY. AS SOON AS CONSTRUCTION BEGINS, STABILIZE ANY BARE AREAS WITH AGGREGATE AND TEMPORARY VEGETATION.
SEDIMENT TRAPS AND BARRIERS - BASIN TRAPS, SILT FENCE AND PERIMETER PROTECTION.	AFTER CONSTRUCTION IS ACCESSED, BASINS SHALL BE INSTALLED, WITH THE ADDITION OF MORE TRAPS AND BARRIERS AS NEEDED DURING GRADING. SET UP PROTECTION FOR NATURAL FEATURES, TREES AND BUFFERS.
RUNOFF CONTROL - DIVERSIONS, PERIMETER PROTECTION, CHECK DAMS, OUTLET PROTECTION.	RUNOFF CONTROL PRACTICES SHALL BE INSTALLED AFTER THE INSTALLATION OF SEDIMENT TRAPS AND BEFORE LAND GRADING. ADDITIONAL RUNOFF CONTROL MEASURES MAY BE INSTALLED DURING GRADING.
RUNOFF CONVEYANCE SYSTEM - STABILIZE STREAM BANKS, STORM DRAINS, CHANNELS, INLET AND OUTLET PROTECTION, SLOPE DRAINS.	AS NECESSARY, STABILIZE STREAM BANKS AND SIDE SLOPES OF RUNOFF SYSTEMS AS SOON AS POSSIBLE. USE EROSION CONTROL BLANKETS OR SLOPE DRAINS TO PREVENT EROSION. INSTALL INLET PROTECTION TO PREVENT SEDIMENTS FROM ENTERING STORM DRAINAGE SYSTEMS. PROTECT STORM OUTLETS TO PREVENT EROSION.
LAND CLEARING AND GRADING - SITE PREPARATION (CUTTING, FILLING, AND GRADING, SEDIMENT TRAPS, BARRIERS, DIVERSIONS, DRAINS, SURFACE ROUGHENING).	IMPLEMENT CLEARING AND GRADING AFTER INSTALLATION OF SEDIMENT TRAPS AND RUNOFF CONTROL MEASURES, AND INSTALL ADDITIONAL CONTROL MEASURES AS GRADING CONTINUES. CLEAR BORROW AND DISPOSAL AREAS AS NEEDED.
INSTALL PUMP AROUND SYSTEM	SEE DAM AND PUMP METHOD DETAIL ON PLAN SHEETS FOR SEQUENCE
SURFACE STABILIZATION - TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIPRAP, EROSION CONTROL BLANKET.	APPLY TEMPORARY OR PERMANENT STABILIZING MEASURES IMMEDIATELY TO ANY DISTURBED AREAS WHERE WORK HAS BEEN EITHER COMPLETED OR DELAYED.
CONSTRUCTION - STRUCTURES, UTILITIES, PAVING, CONCRETE WASHOUT, AND CONSTRUCTION ENTRANCES.	DURING CONSTRUCTION, INSTALL ANY EROSION AND SEDIMENTATION CONTROL MEASURES THAT ARE NEEDED.
LANDSCAPING AND FINAL STABILIZATION - TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.	THIS IS THE LAST CONSTRUCTION PHASE. STABILIZE ALL DISTURBED AREAS, INCLUDING BORROW AND SPOIL AREAS, AND REMOVE ALL TEMPORARY CONTROL MEASURES. FINAL STABILIZATION IS WHEN A UNIFORM DENSITY OF 70% VEGETATION COVER IS MET. PROVIDE NOTIFICATION TO THE OWNER WHEN THE ENTIRE SITE HAS BEEN STABILIZED AND ALL CONSTRUCTION MATERIALS, WASTES, AND EQUIPMENT HAVE BEEN REMOVED.

EROSION CONTROL SCHEDULE

SCALE: NONE

Revisions	Date	Description

INDIANAPOLIS
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EROSION CONTROL DETAILS
WAYNE TOWNSHIP SANITARY SEWER
HAMILTON SOUTHEASTERN UTILITIES, INC.

CERTIFIED BY:
KEVIN RICE CASTRO
No. 11900860
STATE OF INDIANA
PROFESSIONAL ENGINEER
Date: APRIL 14, 2023

Kevin Rice Castro
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Drawn By: CLG
Checked By: KRCJ
Quality Assurance: RWH

Sheet: 19
Date: APRIL 2023
Project Number: 238221-04-003

OFFICE OF THE HAMILTON COUNTY SURVEYOR

PIPELINE & UTILITY INSTALLATION
CROSS SECTION: TILE DRAIN

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

UTILITY INSTALLATION CROSS SECTION

(DRAWING NOT TO SCALE)

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

GRADE

15' MIN.

15' MIN.

GRADE

PIPELINE INSTALLATION CROSS SECTION

(DRAWING NOT TO SCALE)

When installing a utility across regulated drain, the utility contractor will adhere to the following procedure.

1. Utility not to be installed above existing tile.

2. No grade alteration above existing tile.

3. If utility is to be installed using directional boring methods. The utility installation shall be a minimum of ten (10') feet below tile drain.

4. All petroleum pipelines and/or high pressure transmission lines are to be installed a minimum of ten (10') feet below existing invert of tile drains.

5. If sanitary sewer is installed under drain, sewer shall be encased with concrete. Minimal distance shall be measured from top of concrete encasement.

6. Utility contractor shall adhere to open drain crossing standard during construction process.

7. Notify Surveyor's Office at (317) 776-8495, two working days prior to installation and backfilling.

8. No structures, i.e., poles, transformers, manholes, switch gears, are to be placed in the statutory regulated drain easement.

HAMILTON COUNTY SURVEYOR'S OFFICE

APPROVED:

KENTON C. WARD, HAMILTON COUNTY SURVEYOR

REVISOR:

JUNE 2021

STANDARD PLAN

C-5

OFFICE OF THE HAMILTON COUNTY SURVEYOR

PIPELINE & UTILITY INSTALLATION
CROSS SECTION - OPEN

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

UTILITY INSTALLATION CROSS SECTION

(DRAWING NOT TO SCALE)

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

GRADE

35' MIN.

35' MIN.

GRADE

PIPELINE INSTALLATION CROSS SECTION

(DRAWING NOT TO SCALE)

When installing a utility in, through or across an open regulated drain, the utility contractor will adhere to the following procedure.

1. Utility to be installed a minimum of ten (10') feet below existing flow line of drain. All petroleum pipelines and/or high pressure transmission lines are to be installed a minimum of ten (10') feet below existing flow line of drain.

2. If sanitary sewer is installed under drain, sewer shall be encased with concrete. Minimal distance shall be measured from top of concrete encasement.

3. Utility contractor shall adhere to open drain crossing standard during construction process.

4. Notify Surveyor's Office at (317) 776-8495 two working days prior to installation and backfilling.

5. No structures are to be placed in the statutory regulated drain easement.

HAMILTON COUNTY SURVEYOR'S OFFICE

APPROVED:

KENTON C. WARD, HAMILTON COUNTY SURVEYOR

REVISOR:

JUNE 2021

STANDARD PLAN

C-6

BORE PIT

BORE RIG

SOIL STOCKPILE

SILT FENCE

RECEIVING PIT

WORKING AREA

SOIL STOCKPILE

SILT FENCE

PLAN

ROAD/RAILWAY OR WATERCOURSE

BORE PIT

RECEIVING PIT

BORE RIG

PROFILE

NOTES:

1. INSTALL SILT FENCE PRIOR TO ANY EXCAVATION.

2. FILTER WATER FROM BORE PIT DEWATERING. AND DO NOT DIRECTLY DISCHARGE TO ANY DITCH, STREAM, WETLAND OR STORM WATER CONVEYANCE. REFER TO PUMPING BAG DETAIL.

3. PLACE SOIL STOCKPILES WITHIN THE SILT FENCE BOUNDARY.

4. SOIL FROM STOCKPILES SHALL BE USED FOR BACKFILL OR DISPOSED OF PROPERLY.

5. RESEED AND MULCH ALL DISTURBED SOIL SURFACES.

6. PROVIDE ENVIRONMENTAL PROTECTION AS NECESSARY TO CONTAIN ANY DRILLING FLUID SPILLS.

MAINTENANCE:

1. INSPECT SILT FENCE BARRIERS AFTER EACH RAINFALL. REPAIR OR REPLACE IMMEDIATELY.

2. REMOVE SEDIMENT DEPOSITS FROM THE SILT FENCE AFTER STORM EVENTS.

FIBER FILTRATION TUBE

WOOD STAKE

WOOD STAKE TO ONLY PENETRATE NETTING

TOP EROSION CONTROL BLANKET

STAKE DEPTH PER MANUFACTURER'S INSTRUCTIONS

DOWN SLOPE

SLOPE SURFACE

STAKE DETAILS

WOOD STAKE

WOOD STAKE TO ONLY PENETRATE NETTING

TOP EROSION CONTROL BLANKET

STAKE DEPTH PER MANUFACTURER'S INSTRUCTIONS

DOWN SLOPE

SLOPE SURFACE

SLOPE DETAIL

FIBER FILTRATION TUBES

VIEW OF OVERLAPPED TUBES

FIBER FILTRATION TUBE

WOOD STAKE

WOOD STAKE TO ONLY PENETRATE NETTING

TOP EROSION CONTROL BLANKET

STAKE DEPTH PER MANUFACTURER'S INSTRUCTIONS

DOWN SLOPE

SLOPE SURFACE

SEDIMENT LADEN FLOW

FIBER FILTRATION TUBE

WOOD STAKE

WOOD STAKE TO ONLY PENETRATE NETTING

TOP EROSION CONTROL BLANKET

STAKE DEPTH PER MANUFACTURER'S INSTRUCTIONS

DOWN SLOPE

SLOPE SURFACE

SCALE: NONE

APPLICATIONS:

1. TOP OF SLOPES.

2. AT PROJECT PERIMETER.

INSTALLATION:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

2. USE THE APPROPRIATE SIZE, LENGTH AND DISTANCE BETWEEN TUBES AS SPECIFIED BY THE MANUFACTURER.

3. ENTRENCH PER MANUFACTURER'S INSTRUCTIONS.

MAINTENANCE:

1. REMOVE ALL ACCUMULATED SEDIMENT WHEN IT REACHES 1/4 THE HEIGHT OF THE TUBE.

2. REPAIR ERODED AND DAMAGED AREAS.

3. IF PONDING BECOMES EXCESSIVE DUE TO REDUCED FILTERING CAPACITY, REMOVE THE TUBE AND EITHER RECONSTRUCT OR REPLACE WITH NEW PRODUCT.

4. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.

MECHANICAL PROPERTIES	TEST METHOD	UNITS	INDUSTRY STANDARD
GRAB TENSILE STRENGTH	ASTM D4632	kN (LB)	0.9 (205) X 0.9 (205)
GRAB TENSILE ELONGATION	ASTM D4632	%	50 X 50
PUNCTURE STRENGTH	ASTM D4833	kN (LB)	0.58 (130)
MULLEN BURST STRENGTH	ASTM D3786	kPa (PSI)	2618 (380)
TRAPEZOID TEAR STRENGTH	ASTM D4533	kN (LB)	0.36 (80) X 0.36 (80)
UV RESISTANCE	ASTM D4355	%	70
APPARENT OPENING SIZE	ASTM D4751	Mm (US STD SIEVE)	0.180 (80)
FLOW RATE	ASTM D4491	1/MIN/M ² (GAL/MIN/FT ²)	3866 (95)
PERMITTIVITY	ASTM D4491	S ⁻¹	1.2

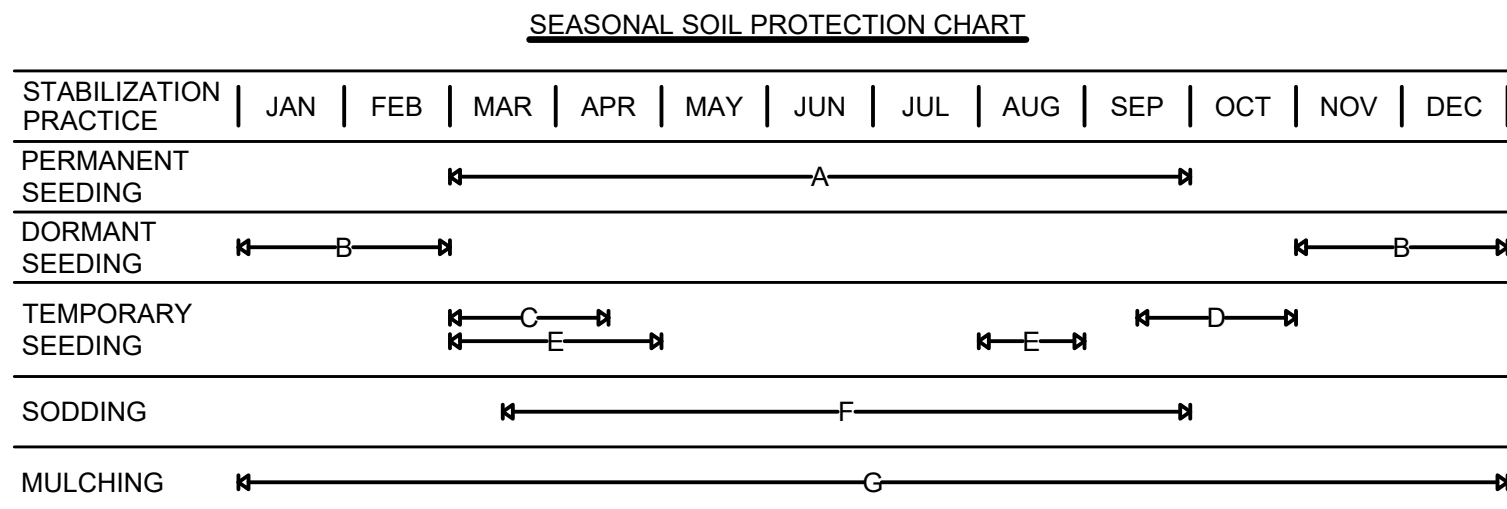
MAINTENANCE:

- DURING THE ACTIVE DEWATERING PROCESS, INSPECTION OF THE PUMPING BAG SHOULD BE REVIEWED FREQUENTLY. SPECIAL ATTENTION SHOULD BE PAID TO THE BUFFER AREA FOR ANY SIGN OF EROSION AND CONCENTRATION OF FLOW. OBSERVE WHERE POSSIBLE THE VISUAL QUALITY OF THE EFFLUENT AND DETERMINE IF ADDITIONAL TREATMENT CAN BE PROVIDED.
- DISPOSE OF ACCUMULATED SEDIMENT REMOVED DURING PUMPING OPERATIONS IN CONFORMANCE WITH THE SPECIFICATIONS.
- REPLACE THE BAG OR DISPOSE OF SILT WHEN HALF FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE TO AN IMPRACTICAL RATE.

SOURCE:
KRISTAR
DANDY DEWATERING BAG
SEDCATCH

PUMPING BAG

SCALE: NONE



NOTES:

- IRRIGATION NEEDED DURING MAY THROUGH SEPTEMBER.
- IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD.
- ANCHORED MULCH IS REQUIRED FOR PERMANENT, DORMANT AND TEMPORARY SEEDING.
- OPTIMUM SEEDING DATES PROVIDED. DATES MAY BE EXTENDED OR SHORTENED BASED ON PROJECT LOCATION.
- SEED MIXTURES PROVIDED FOR LAWNS AND HIGH MAINTENANCE AREAS.

MAINTENANCE:

- INSPECT WITHIN 24 HOURS OF EACH RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.
- CHECK FOR EROSION AND MOVEMENT OF MULCH AND REPAIR IMMEDIATELY.
- MONITOR FOR EROSION DAMAGE AND ADEQUATE COVER (70% DENSITY).
- RESEED, FERTILIZE OR APPLY MULCH WHERE NECESSARY.

FIBER FILTRATION TUBE

WOOD STAKE

WOOD STAKE TO ONLY PENETRATE NETTING

TOP EROSION CONTROL BLANKET

STAKE DEPTH PER MANUFACTURER'S INSTRUCTIONS

DOWN SLOPE

SLOPE SURFACE

STAKE DETAILS

VIEW OF OVERLAPPED TUBES

CHANNEL DETAIL

FLOW

APPLICATIONS:

1. DOWN-GRADIENT OF A PROJECT LIMITS.

2. ACROSS DITCHES OR SWALES.

3. TO SLOW FLOWS AND FILTER SEDIMENTS.

INSTALLATION:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

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MAINTENANCE:

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4. INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY 7 CALENDAR DAYS.

FIBER FILTRATION TUBES - CHANNEL

SCALE: NONE

OFFICE OF THE HAMILTON COUNTY SURVEYOR

OPEN DRAIN CROSSING

When excavating in, across, or through an open drain, the utility contractor will adhere to the following procedure:

1. Excavate silt basin:

Silt basin location & length to be determined in field by Hamilton County Surveyor or designated representative.

Contractor shall maintain silt basin throughout work duration

2. Riprap shall be keyed or pressed into ditch bank at location of excavation on bank and slope. Riprap stone shall be 9 inches graded. Riprap area will be one foot in depth, 4 feet minimum in height from flow line, 4 feet minimum in width. No riprap will be placed in flow line of drain.

3. All disturbed areas, other than bank slope are to be seeded and mulched. The contractor has the option of using an erosion control fabric if desired.

4. Notify the Hamilton County Surveyors office at (317) 776-8495, two working days prior to back-filling.

HAMILTON COUNTY SURVEYOR'S OFFICE

APPROVED:

KENTON C. WARD, HAMILTON COUNTY SURVEYOR

REVISOR:

JAN 2000

STANDARD PLAN

C-7

INDIANAPOLIS

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Indianapolis, Indiana 46227

Phone: (317) 788-4551 - Fax: (317) 788-4553

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EROSION CONTROL DETAILS

WAYNE TOWNSHIP SANITARY SEWER

HAMILTON SOUTHEASTERN UTILITIES, INC.

CERTIFIED BY:

KEVIN ROSE CASTRO

REGISTERED

No.

11900860

STATE OF INDIANA

PROFESSIONAL ENGINEER

Date

APRIL 14, 2023

Know what's below.

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CLG

Checked By:

KRCJ

Quality Assurance:

RWH

Sheet

20

Date

APRIL 2023

Project Number

238221-04-003